Prepared by

Renew Harbor Island

Work today, protect tomorrow.

2023 Annual Groundwater Monitoring and Corrective Action Report

For Compliance with the Coal Combustion Residual (CCR) Rule

Former J.B. Sims Generating Station

January 31, 2024

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40 CFR Section § 257.90(e)(6) Requirement		**CCR Impoundment Status Inactive Units 1/2 Impoundment**	**CCR Impoundments Status Excavated Unit 3A/B Impoundments**
§ 257.90(e)(6) *A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all the following:*			
§257.90(e)(6)(i)	*At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95.*	Assessment Monitoring Program and Evaluation of Potential Remedies	Assessment Monitoring Program and Evaluation of Potential Remedies
§257.90(e)(6)(ii)	*At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95.*	Assessment Monitoring Program and Evaluation of Potential Remedies	Assessment Monitoring Program and Evaluation of Potential Remedies
§257.90(e)(6)(iii)	*If it was determined that there was a statistically significant increase over background for one or more constituents listed in appendix III to this part pursuant to § 257.94(e):*	Yes	Yes
§257.90(e)(6)(iii) (A)	*Identify those constituents listed in appendix III to this part and the names of the monitoring wells associated with such an increase.* (These are the updated 2023 SSIs based on updated background)	• Boron – MW-06, MW-08, MW-31 • Calcium – MW-18, MW-19, MW-30 • Fluoride – MW-06, MW-08, MW-18, MW-19, MW-30, MW-31 • Sulfate – MW-18, MW-19, MW-30 • TDS – MW-06, MW-18, MW-19, MW-30	• Boron – MW-02, MW-03, MW-04, MW-11 • Calcium – MW-03, MW-04 • Chloride – MW-02, MW-03, MW-04 • Fluoride – MW-02, MW-03, MW-04, MW-11 • Sulfate – MW-03, MW-04, MW-12 • TDS – MW-02, MW-03, MW-04, MW-11
§257.90(e)(6)(iii) (B)	*Provide the date when the assessment monitoring program was initiated for the CCR unit.*	February 2, 2019	April 9, 2018
§257.90(e)(6)(iv)	*If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in appendix IV to this part pursuant to § 257.95(g) include all of the following:*	Yes	Yes
§257.90(e)(6)(iv) (A)	*Identify those constituents listed in appendix IV to this part and the names of the monitoring wells associated with such an increase.* (These are the updated 2023 SSLs based on updated background)	• Arsenic – MW-08, MW-18 • Fluoride – MW-10, MW-31 • Lithium –MW-06, MW-10, MW-30, MW-32	• Fluoride – MW-01R, MW-02, MW-10 • Lithium – MW-01R, MW-02, MW-9, MW-10
§257.90(e)(6)(iv) (B)	*Provide the date when the assessment of corrective measures was initiated for the CCR unit.*	October 15, 2018*	October 15, 2018*
§257.90(e)(6)(iI(C)	*Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit.*	Required 30 days prior to remedy selection	Required 30 days prior to remedy selection
§257.90(e)(6)(iv) (D)	*Provide the date when the assessment of corrective measures was completed for the CCR unit.*	--*	--*
§257.90(e)(6)(v)	*Whether a remedy was selected pursuant to § 257.97 during the current annual reporting period, and if so, the date of remedy selection.*	Evaluation of potential remedies ongoing	Evaluation of potential remedies ongoing
§257.90(e)(6)(vi)	*(vi) Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.*	Evaluation of potential remedies ongoing	Evaluation of potential remedies ongoing

*The Golder (2022) groundwater flow study showed the potential for MW-07 to be an inappropriate location as a background well due to the potential forgroundwater flow from Units 1/2 towards MW-07. As a result, new background groundwater well locations were presented in a 2022 CCR Work Plan that was reviewed by EPA and EGLE. Background data collection from the new background well locations was completed in2022 and 2023. New background values were developed in January 2023 (HDR, 2024).

1.0 Introduction

The U.S. Environmental Protection Agency's (EPA) final Coal Combustion Residuals (CCR) Rule 40 CFR §257 and Michigan's Part 115 Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451 (Part 115), establish requirements for the management and disposal of CCR (or coal ash) in surface impoundments by electric utilities. The former J.B. Sims Generating Station (facility or Site) was a coal-fired power generation facility operated by Grand Haven Board of Light & Power (GHBLP) that ceased operations in February 2020. The facility is located at 1231 North 3rd Street, on Harbor Island, in Grand Haven, Michigan (**Figure 1**). The CCR generated at the former generating station were stored in two CCR units that are subject to the CCR Rule and Part 115 Solid Waste regulations: (1) the inactive Units 1/2 Impoundment and (2) the Unit 3A/B Impoundments (**Figure 2**).

The inactive CCR Units1/2 Impoundment was a depression in the ground where sluiced ash was disposed and ceased receiving CCR material in 2012. The former Unit 3A/B Impoundments were engineered, clay-lined, above-ground units and ceased receiving CCR material in July 2020. Excavation of CCR material from Unit 3A/B Impoundments was conducted in December 2020. In 2017, the *Groundwater Monitoring System Certification* was developed for the 3A/B Impoundments, which consisted of one background well (MW-07), four (4) downgradient detection monitoring wells (MW-01R, MW-02, MW-03, and MW-04), and an additional assessment monitoring well (MW-09) (ERM, 2017). Groundwater monitoring conducted in 2017 by GHBLP identified statistically significant increases (SSI) of constituents in groundwater, and therefore the GHBLP implemented assessment monitoring (Golder, 2018a). Assessment monitoring identified statistically significant levels (SSLs) of constituents over groundwater protection standards (GPS) at the Site, and therefore GHBLP stated that they were initiating an assessment of corrective measures for the Site; however, that document was completed prior to the inclusion of Units 1/2 Impoundment and therefore represents the status only of Unit 3A/B Impoundments (Golder, 2018b). On July 22, 2021, the *Updated Notice of Groundwater Protection Standard Exceedance* was issued to document SSLs over GPS for both Units 1/2 Impoundment and Unit 3A/B Impoundments.

In 2021, to better understand the groundwater flow around the entire Island and verify that the monitoring network in place at the time was adequate, 22 piezometers, six (6) staff gauges, and 3 stilling wells were installed. With this larger scale understanding of groundwater flow, the *Field Summary Report of Results from Approved Work Plan - Piezometer Installation and Additional Data Collection* suggested that MW-07 may be an inappropriate location for a background well due to the potential for groundwater to flow from Units 1/2 Impoundment towards MW-07 (Golder, 2022b). Therefore, a new groundwater monitoring network has been selected for the CCR units, including new background wells. Background data collection began in November 2022 and is continuing, as described in the 2022 CCR Work Plan that was submitted to the EPA and Michigan Department of Environment, Great Lakes, and Energy (EGLE) on June 23, 2022 (HDR, 2022).

The status of the groundwater monitoring program for both CCR Units is assessment monitoring, and evaluation of potential remedies based on the GPS exceedances identified in 2019; however, the monitoring conducted from November 2022 through August 2023 represents background monitoring due to the revised monitoring well network. The background monitoring events were conducted at five week intervals for CCR constituents of interest (COIs) to evaluate background groundwater quality and develop background threshold values (BTVs). The first detection/assessment monitoring event was conducted in October 2023, and will continue on a quarterly basis through 2024.

This Annual Groundwater Monitoring Report presents the activities completed in 2023:

- The status of the groundwater monitoring program for the Units 1/2 Impoundment at the end of 2023 is assessment monitoring, and evaluation of potential remedies.
- The status of the groundwater monitoring program for the Unit 3A/B Impoundments at the end of 2023 is assessment monitoring, and evaluation of potential remedies.

1.1 Background and Program Status

In 2017, the Groundwater Monitoring System Certification was developed for the 3A/B Impoundments, which consisted of 1 background well (MW-07), four (4) downgradient detection monitoring wells (MW-1R, MW-02, MW-03, and MW-04), and an additional assessment monitoring well (MW-09) (ERM, 2017). Groundwater monitoring conducted in 2017 by GHBLP identified statistically significant increases (SSI) of constituents in groundwater, and therefore the GHBLP implemented assessment monitoring (Golder, 2018a). Assessment monitoring identified statistically significant levels (SSLs) of constituents exceeding groundwater protection standards at the Site and, therefore, GHBLP initiated an assessment of corrective measures for the Site for both CCR units (Golder, 2018b).

On July 22, 2021, the Updated Notice of Groundwater Protection Standard Exceedance was issued to document SSLs over GPS for both Units 1/2 impoundment and Unit 3A/B impoundments. In 2021, to better understand the groundwater flow around the entire island and verify that the monitoring network that was in place at the time was adequate, 22 piezometers, six (6) staff gauges, and three (3) stilling wells were installed. The Field Summary Report of Results from Approved Work Plan - Piezometer Installation and Additional Data Collection suggested that MW-07 may be an inappropriate location for a background well due to the potential for groundwater to flow from Units 1/2 impoundment towards MW-07 (Golder, 2022). Therefore, a new groundwater monitoring network has been selected for the CCR units, including new background groundwater wells. Background data collection began in November 2022 and is continuing, as described in the 2022 CCR Work Plan that was submitted to the EPA and Michigan Department of Environment, Great Lakes, and Energy (EGLE) on June 23, 2022 (HDR, 2022).

Figure 1 | Site Vicinity Map

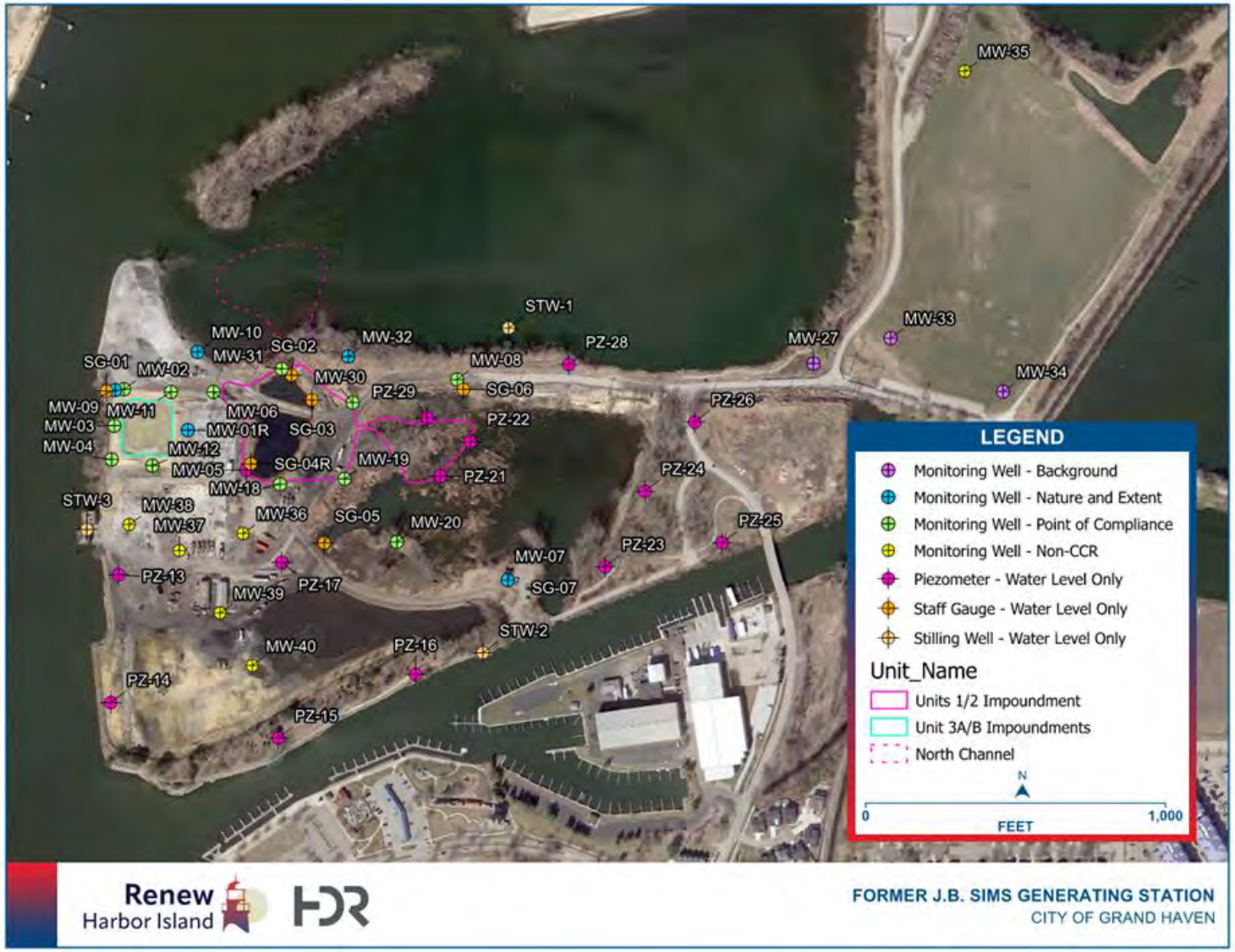


Figure 2 | Former J.B. Sims CCR Units and Monitoring Wells

2.0 Facility Description

The former CCR Unit 3A/B Impoundments were engineered, clay-lined, above-ground units built over a field of ash from Boiler Units 1 & 2. Although the former coal-fired power generation facility ceased operations in February 2020, the Site continued to use the Unit 3A/B Impoundments to clean out the hoppers, vessels, etc. prior to demolition of the buildings. In July 2020, following the facility clean out, the Site ceased accepting CCR materials in the Unit 3A/B Impoundments. CCR materials were cleaned from the Unit 3A/B impoundments in December 2020.

The inactive CCR Units 1/2 Impoundment was a depression in the ground where sluiced ash wasdisposed. The inactive Units 1/2 Impoundment ceased receiving CCR materials in 2012. The monitoring network for Units 1/2 impoundment consisted of 1 background monitoring well (MW-07), four (4) downgradient detection monitoring wells (MW-1R, MW-05, MW-06, MW-08), and an additional five (5) assessment monitoring wells (MW-02, MW-03, MW-04, MW-09, and MW-10). Based on information provided to HDR, it appears that GHBLP, EPA, and EGLE discussed the boundary for the inactive Units 1/2 Impoundment on January 14, 2021. During that discussion, a boundary of the inactive Units 1/2 Impoundment was agreed upon that includes an area of sluiced ash disposal further to the east than the original boundary (**Figure 2**). It was also agreed between all parties that the former northern outlet channel from the Units 1/2 Impoundment would be evaluated for potential inclusion in the revised boundary for the Units 1/2 Impoundment (**Figure 2**).

2.1 Hydrogeology

The uppermost aquifer across Harbor Island consists of fine sand with gravel and silt lenses, clay, peat, ash, and municipal solid waste located between the surface and 39 feet below surface. The bottom of the aquifer is believed to consist of a continuous clay observed between 20.8 and 39.0 feet below surface. The clay is observed at depth in borings MW-12, MW-17, PZ-16, PZ-26, PZ-24, PZ-25, and MW-30.

The regional general direction of groundwater flow across the Harbor Island is west to southwest towards Lake Michigan (Western Michigan University, 1981). The Grand River is located on the northern and western side of the Site, and the South Channel is located on the south side of Harbor Island. Internal to the Island there are several influences to groundwater flow. Specifically, the following features:

- Various fill materials observed in boring logs
- Surface water features, such as the inactive Units 1/2 Impoundment and internal wetland,
- Former coal yard area which may have lower infiltration rates due to compaction from heavy equipment and stockpiling (HDR, 2022).

These features influence the groundwater velocity and direction and are very localized. Boring logs contained in the *Field Summary Report of Results from Approved Work Plan - Piezometer*

Installation and Additional Data Collection show the observed fill materials encountered during well installation (Golder, 2022b).

During the water level monitoring events conducted between September 2022 and June 2023, groundwater mounding is shown around monitoring well MW-01R, consistent with observations made by Golder between October and December 2021 (Golder, 2022b). Groundwater flow in the area east of the internal wetland is consistent with regional groundwater flow and the flow of the Grand River toward the west. Groundwater contour maps from the Q1 2023 Groundwater Monitoring Report (HDR, 2023), Q2 2023 Groundwater Monitoring Report (HDR, 2023b), Q3 2023 Groundwater Monitoring Report (HDR, 2023c) as well as the October 2023 detection monitoring event are shown in **Appendix A**. The maps show groundwater flow beneath Unit 3A/B Impoundments is consistently west toward the Grand River. Groundwater flow beneath Units 1/2 Impoundment is seasonably and spatially variable; flow is generally northward toward the North Channel (**Figure 2**), east from the ponds of Units 1/2 Impoundment toward the wetland, and potentially south near MW-05. The presence of the wetland east of the Units 1/2 Impoundment appears to provide a hydraulic sink between the CCR impoundments and the wells situated to the east (PZ-23 through PZ-26, MW-27, MW-33, and MW-34).

Groundwater was encountered between 5 and 15 feet below ground surface within the unconsolidated fill material. As described in the *Groundwater Monitoring System Certification*, (ERM, 2017), the fine sand has an estimated hydraulic conductivity of 27 to 53 feet per day. This wide range of variability is the result of the varying fill materials that form Harbor Island. In 2021, Golder performed slug tests at monitoring wells MW-01R, MW-02, MW-04, MW-05, MW-07, MW-08, PZ-17, PZ-20, PZ-26, and MW-31. Consistent results were observed in 25 of the 29 tests performed.

Hydraulic conductivity values observed across the Site range from 0.19 feet per day at MW-02 to 18.76 feet per day at MW-05. Higher than average conductivity values were observed in tests completed at 172.51 feet per day at PZ-17 and 242.25 feet per day at PZ-20 (Golder, 2022b). In 2024 additional slug testing will be performed.

2.2 Monitoring Well Network

The original Groundwater Monitoring System Certification was developed for the 3A/B Impoundments, which consisted of 1 background well (MW-07), four (4) downgradient detection monitoring wells (MW-1R, MW-02, MW-03, and MW-04), and an additional assessment monitoring well (MW-09) (ref). Golder completed a groundwater flow study based on piezometers and stilling wells installed in August 2021. This Golder (2022) study is called the *Field Summary Report of Results from Approved Work Plan - Piezometer Installation and Additional Data Collection*. Based on the study results, a new groundwater monitoring network was included in the 2022 CCR Work Plan that was submitted to the EPA and EGLE on June 23, 2022.

The CCR Rule requires, at a minimum, one upgradient and three downgradient monitoring wells per CCR unit to be completed in the uppermost aquifer. Section §257.90 of the Rule states that the operator: "…may install a multiunit groundwater monitoring system instead of separate

groundwater monitoring systems for each CCR unit." In addition, the Rule states that downgradient monitoring wells should be installed to: "accurately represent the quality of groundwater passing the waste boundary of the CCR unit. The downgradient monitoring system must be installed at the waste boundary that ensures detection of groundwater contamination in the uppermost aquifer."

The monitoring well network is based on the groundwater flow monitoring conducted after the installation of 22 piezometers and 3 stilling wells in August 2021 to further evaluate the groundwater flow under the CCR units and the Island (Golder, 2022). The monitoring well network consists of the monitoring wells (MW-#) and piezometers (PX-#) listed in **Table 1** and shown in **Figure 2**. The monitoring wells are sampled for water quality and water levels are monitored. The piezometers are monitored only for water levels. As of November 2022, the monitoring network is composed of the following:

Background

The following three (3) wells are proposed as the background monitoring well network for the Units 1/2 Impoundment and Unit 3A/B Impoundments. Potentiometric contour maps provided in **Appendix A** indicate the groundwater flow direction across the Site is complex. Background monitoring well locations MW-27, MW-33 and MW-34 are on the eastern side of the Island in or near the soccer fields. A review of groundwater contour maps indicates groundwater does not flow from the CCR units towards the background wells. Therefore, the groundwater monitored at these locations appears to represent groundwater at Harbor Island that has not been impacted by CCR materials.

- MW-27
- MW-33
- MW-34

Inactive Units 1/2 Impoundment

The following seven (7) wells are proposed as the downgradient monitoring well network for the Units 1/2 Impoundment. The compliance well locations are spaced along the waste boundary such that if contaminants were present in the groundwater passing the waste boundary, they would be detected by one or more of the wells. (**Figure 2**):

- MW-06
- MW-08
- MW-18
- MW-19
- MW-20
- MW-30
- MW-31

Former Unit 3A/B

The following five (5) wells are proposed as the monitoring well network for the former Unit 3A/B. Downgradient compliance well locations are spaced along the waste boundary such that if

contaminants were present in the groundwater passing the waste boundary, they would be detected by one or more of the wells (**Figure 2**):

- MW-02
- MW-03
- MW-04
- MW-11
- MW-12

Nature and Extent Wells

The following five (5) wells have been part of the monitoring network at the island for the last several years (**Figure 2**). These wells will not be used to determine if there is an SSI at an individual CCR unit; however, these wells will continue to be included in the water quality data set used to evaluate groundwater flow and transport at the island, and therefore are considered nature and extent wells.

Unit 3A/B

- MW-01R
- MW-09
- MW-10

Units 1/2

- MW-07
- MW-10
- MW-32

Water Level Wells

The following monitoring wells and piezometers will be monitored for water levels to continue to monitor the groundwater flow across the island (**Figure 2**):

- PZ-13
- PZ-14
- PZ-15
- PZ-16
- PZ-17
- PZ-21
- PZ-22
- PZ-23
- PZ-24
- PZ-25
- PZ-26
- PZ-28
- PZ-29
- MW-36
- MW-37
- MW-38
- MW-39
- MW-40

The following piezometers surround the Units 1/2 impoundment on the east side. Since they were installed in an area of standing water within the wetland that often requires a boat for access, these piezometers may be sampled less frequently:

- PZ-21
- PZ-22
- PZ-29

Monitoring wells MW-35, MW-36, MW-37, MW-38, MW-39, and MW-40 were installed in January 2023 as a part of a non-CCR groundwater monitoring investigation. These well locations were chosen based on the sampling results from the non-CCR investigation and are monitored for water levels in order to provide additional information related to groundwater flow direction.

A groundwater flow study, consisting of 17 dedicated pressure transducers to monitor hourly groundwater measurements in select wells, staff gauges, and stilling wells, was proposed and approved. Installation of the transducers began on December 21, 2023, however, due to weather conditions, the installation has yet to be completed and no data has been collected but is anticipated for February 2024. The purpose of the flow study is to collect data from paired surface water and groundwater locations to study the groundwater-surface water interaction on the sides of the island.

The Groundwater Monitoring System Certification will be updated in 2024 to reflect the revised monitoring network.

3.0 Monitoring

3.1 Groundwater Monitoring

Background groundwater sample collection was conducted between November 2022 and August 2023 on a 5-week sample interval to achieve statistical strength in the water quality data. Following completion of background monitoring, the sampling data was used to develop updated background values for the Site. The first sampling event following background monitoring is considered Detection Monitoring and Initial Assessment Monitoring as the site was in Assessment Monitoring. **Table 1** provides well identification numbers, well locations, the dates samples were collected, and whether a sample was required by the CCR Rule for the background sampling, detection monitoring or assessment monitoring programs. Deviations from sample collection procedures outlined in the *2022 Harbor Island Work Plan for CCR Compliance* are outlined in **Section 3.3**.

Table 1. Dates of Groundwater Samples Collected for each Well in 2023 and the Monitoring Purpose (§257.90(e)(3))

Monitoring Well I.D.	Date Monitored	Monitoring Purpose
Background Monitoring Wells		
MW-27	1/5/2023	Background Monitoring
	2/7/2023	
	3/13/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/7/2023	
	10/23/2023	Detection Monitoring/Initial Assessment Monitoring
MW-33	1/5/2023	Background Monitoring
	2/8/2023	
	3/14/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/7/2023	

Monitoring Well I.D.	Date Monitored	Monitoring Purpose
	10/23/2023	Detection Monitoring/Initial Assessment Monitoring
MW-34	1/5/2023	Background Monitoring
	2/8/2023	
	3/14/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/7/2023	
	10/23/2023	Detection Monitoring/Initial Assessment Monitoring
Units 1/2 Compliance Monitoring Wells		
MW-06	1/3/2023	Background Monitoring
	2/6/2023	
	3/14/2023	
	4/18/2023	
	5/23/2023	
	6/28/2023	
	8/8/2023	
	10/24/2023	Detection Monitoring/Initial Assessment Monitoring
MW-08	1/5/2023	Background Monitoring
	2/7/2023	
	3/14/2023	
	4/18/2023	
	5/23/2023	
	6/27/2023	
	8/8/2023	
	10/24/2023	Detection Monitoring/Initial Assessment Monitoring
MW-18	1/5/2023	Background Monitoring
	2/8/2023	
	3/13/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/8/2023	
	10/24/2023	Detection Monitoring/Initial Assessment Monitoring
MW-19	1/3/2023	Background Monitoring
	2/8/2023	
	3/14/2023	
	4/18/2023	
	5/22/2023	
	6/28/2023	
	8/7/2023	

Monitoring Well I.D.	Date Monitored	Monitoring Purpose
	10/24/2023	Detection Monitoring/Initial Assessment Monitoring
MW-20[1]	1/4/2023	Background Monitoring
	2/7/2023	
	3/13/2023	
	4/18/2023	
	5/23/2023	
	6/28/2023	
	8/7/2023	
	10/24/2023	Detection Monitoring/Initial Assessment Monitoring
MW-30	1/3/2023	Background Monitoring
	2/6/2023	
	3/13/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/8/2023	
	10/23/2023	Detection Monitoring/Initial Assessment Monitoring
MW-31	1/4/2023	Background Monitoring
	2/7/2023	
	3/14/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/8/2023	
	10/23/2023	Detection Monitoring/Initial Assessment Monitoring
Unit 3A/B Compliance Monitoring Wells		
MW-02	1/4/2023	Background Monitoring
	2/8/2023	
	3/14/2023	
	4/18/2023	
	5/23/2023	
	6/27/2023	
	8/8/2023	
	10/24/2023	Detection Monitoring/Initial Assessment Monitoring
MW-03	1/4/2023	Background Monitoring
	2/7/2023	
	3/14/2023	
	4/18/2023	
	5/23/2023	
	6/28/2023	
	8/7/2023	

Monitoring Well I.D.	Date Monitored	Monitoring Purpose
	10/24/2023	Detection Monitoring/Initial Assessment Monitoring
MW-04	1/4/2023	Background Monitoring
	2/7/2023	
	3/14/2023	
	4/19/2023	
	5/23/2023	
	6/28/2023	
	8/7/2023	
	10/24/2023	Detection Monitoring/Initial Assessment Monitoring
MW-11	1/3/2023	Background Monitoring
	2/8/2023	
	3/14/2023	
	4/18/2023	
	5/23/2023	
	6/28/2023	
	8/8/2023	
	10/24/2023	Detection Monitoring/Initial Assessment Monitoring
MW-12	1/3/2023	Background Monitoring
	2/7/2023	
	3/13/2023	
	4/19/2023	
	5/23/2023	
	6/27/2023	
	8/7/2023	
	10/23/2023	Detection Monitoring/Initial Assessment Monitoring
Nature and Extent Wells		
MW-01R	1/3/2023	Background Monitoring
	2/8/2023	
	3/14/2023	
	4/18/2023	
	5/23/2023	
	6/28/2023	
	8/8/2023	
	10/24/2023	Detection Monitoring/Initial Assessment Monitoring
MW-07	1/4/2023	Background Monitoring
	2/7/2023	
	3/13/2023	
	4/18/2023	
	5/23/2023	
	6/27/2023	
	8/7/2023	

Monitoring Well I.D.	Date Monitored	Monitoring Purpose
	10/24/2023	Detection Monitoring/Initial Assessment Monitoring
MW-09	1/4/2023	Background Monitoring
	2/6/2023	
	3/14/2023	
	4/18/2023	
	5/23/2023	
	6/27/2023	
	8/8/2023	
	10/24/2023	Detection Monitoring/Initial Assessment Monitoring
MW-10	1/4/2023	Background Monitoring
	2/6/2023	
	3/14/2023	
	4/18/2023	
	5/23/2023	
	6/27/2023	
	8/8/2023	
	10/23/2023	Detection Monitoring/Initial Assessment Monitoring
MW-32	1/4/2023	Background Monitoring
	2/8/2023	
	3/14/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/8/2023	
	10/23/2023	Detection Monitoring/Initial Assessment Monitoring
Water Level Only Wells		
MW-05	1/5/2023	Water Level Only
	2/6/2023	
	3/13/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/7/2023	
	10/23/2023	
PZ-13	1/5/2023	Water Level Only
	2/6/2023	
	3/13/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/7/2023	

Monitoring Well I.D.	Date Monitored	Monitoring Purpose
	10/23/2023	
PZ-14	1/5/2023	Water Level Only
	2/6/2023	
	3/13/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/7/2023	
	10/23/2023	
PZ-15	1/5/2023	Water Level Only
	2/6/2023	
	3/13/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/7/2023	
	10/23/2023	
PZ-16	1/5/2023	Water Level Only
	2/6/2023	
	3/13/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/7/2023	
	10/23/2023	
PZ-17	1/5/2023	Water Level Only
	2/6/2023	
	3/13/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/7/2023	
	10/23/2023	
PZ-21	1/5/2023[1]	--
	2/6/2023[1]	
	3/13/2023[1]	
	4/18/2023[1]	
	5/22/2023[1]	
	6/27/2023[1]	
	8/7/2023[1]	
	10/23/2023[1]	

Monitoring Well I.D.	Date Monitored	Monitoring Purpose
PZ-22	1/5/2023[1]	--
	2/6/2023[1]	
	3/13/2023[1]	
	4/18/2023[1]	
	5/22/2023[1]	
	6/27/2023[1]	
	8/7/2023[1]	
	10/23/2023[1]	
PZ-23	1/5/2023	Water Level Only
	2/6/2023	
	3/13/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/7/2023	
	10/23/2023	
PZ-24	1/5/2023	Water Level Only
	2/6/2023	
	3/13/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/7/2023	
	10/23/2023	
PZ-25	1/5/2023	Water Level Only
	2/6/2023	
	3/13/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/7/2023	
	10/23/2023	
PZ-26	1/5/2023	Water Level Only
PZ-28	1/5/2023	Water Level Only
	2/6/2023	
	3/13/2023	
	4/18/2023	
	5/22/2023	
	6/27/2023	
	8/7/2023	
	10/23/2023	

Monitoring Well I.D.	Date Monitored	Monitoring Purpose
PZ-29	2/6/2023	Water Level Only
	3/13/2023	
	8/7/2023	
MW-35	5/22/2023	Water Level Only
	6/27/2023	
	8/7/2023	
	10/23/2023	
MW-36	5/22/2023	Water Level Only
	6/27/2023	
	8/7/2023	
MW-37	5/22/2023	Water Level Only
	6/27/2023	
	8/7/2023	
	10/23/2023	
MW-38	5/22/2023	Water Level Only
	6/27/2023	
	8/7/2023	
	10/23/2023	
MW-39	5/22/2023	Water Level Only
	6/27/2023	
	8/7/2023	
	10/23/2023	
MW-40	5/22/2023	Water Level Only
	6/27/2023	
	8/7/2023	
	10/23/2023	

3.2 Surface Water Monitoring

Surface water monitoring coincides with the groundwater sampling. Stilling wells (STW-1, STW-2, and STW-3) and SG-01 are monitored for water levels. Staff gauges (SG-02, SG-03 SG-04R SG-05, and SG-06) are monitored for water levels and a surface water sample is collected at these locations (**Figure 2**). Surface water elevations are mapped with the groundwater elevations to evaluate the flow of groundwater under the Island and in connection with the Grand River and wetland surface waters. Surface water monitoring dates are shown in **Table 2**. Deviations from the work plan are outlined in **Section 3.3**.

Table 2. Dates of Surface Water Monitoring in 2023

Well ID	Water Level Date		Sample Date	
SG-01[1]	1/5/2023[2] 2/6/2023[2] 3/13/2023[2] 4/18/2023[2]	5/22/2023 6/27/2023 8/7/2023 10/24/2023[2]	Water Level Only	
SG-02	1/5/2023 2/6/2023 3/13/2023 4/18/2023	5/22/2023 6/27/2023 8/7/2023 10/24/2023	1/5/2023 2/6/2023[2] 3/14/2023 4/19/2023	5/23/2023 6/28/2023 8/8/2023 10/24/2023
SG-03	1/5/2023 2/6/2023 3/13/2023 4/18/2023	5/22/2023 6/27/2023[2] 8/7/2023[2] 10/24/2023	1/5/2023 2/6/2023[2] 3/14/2023 4/19/2023	5/23/2023 6/28/2023 8/8/2023 10/24/2023
SG-04R	1/5/2023 2/6/2023 3/13/2023 4/18/2023	5/22/2023 6/27/2023[2] 8/7/2023[2] 10/24/2023	1/5/2023 2/6/2023[2] 3/14/2023 4/19/2023	5/23/2023 6/28/2023 8/8/2023 10/24/2023
SG-05	1/5/2023 2/6/2023[2] 3/13/2023[2] 4/18/2023[2]	5/22/2023 6/27/2023 8/7/2023 10/24/2023[2]	1/5/2023 2/6/2023[2] 3/14/2023 4/19/2023	5/23/2023 6/28/2023 8/8/2023 10/24/2023
SG-06	1/5/2023[2] 2/6/2023[2] 3/13/2023[2] 4/18/2023[2]	5/22/2023[2] 6/27/2023[2] 8/7/2023[2] 10/24/2023[2]	1/5/2023[2] 2/6/2023[2] 3/14/2023[2] 4/19/2023[2]	5/23/2023[2] 6/28/2023[2] 8/8/2023 10/24/2023
STW-1[1]	1/5/2023[3] 2/6/2023[3] 3/13/2023[3] 4/18/2023	5/22/2023 6/27/2023 8/7/2023 10/24/2023	Water Level Only	
STW-2[1]	1/5/2023[3] 2/6/2023[3] 3/13/2023[3] 4/18/2023	5/22/2023 6/27/2023 8/7/2023 10/24/2023	Water Level Only	
STW-3[1]	1/5/2023[3] 2/6/2023[3] 3/13/2023[3] 4/18/2023	5/22/2023 6/27/2023 8/7/2023 10/24/2023	Water Level Only	

1 – Location is not sampled under Work Plan.
2 – Monitoring location was dry, no surface water sample or water level was collected.
3 – Gauge location was damaged; no water level measurement was collected.

3.3 Water Level and Sample Collection

Water elevations are provided in **Table 4** pursuant to the *2022 Harbor Island Work Plan for CCR Compliance* (HDR, 2022). Monitoring wells were purged with a peristaltic pump until field parameters (pH, turbidity, conductivity, dissolved oxygen, temperature, and oxidation reduction potential) stabilized. The results of field measurements were recorded on a field data form, which is maintained as part of the field records. After water quality parameters stabilized, samples were collected and tested for the parameters listed in **Table 5**. For quality control, one

field duplicate sample was collected for each CCR unit per sampling event (two duplicate samples total per event). The deviations from *the 2022 Harbor Island Work Plan for CCR Compliance* are listed in **Table 3**.

Table 3. Work Plan Deviations

Work Plan Deviation	Months Deviation Occurred
Water levels were not collected from PZ-21, PZ-22, or PZ-23 due to deep water limiting access.	January, February, March, April, May, June, August, October
Water Levels unable to be collected from STW-1, STW-2, or STW-3 due to deep water or damage gauge locations.	January, February, March
Gauge Location SG-06 was dry – no water level or sample was collected	January, February, March, April, May, June, August
Surface water gauge location was dry, preventing water level collection.	January (SG-01), February (SG-01, SG-05), March (SG-01), April (SG-01), June (SG-03, SG-04R), August (SG-03, SG-04R), October (SG-01, SG-05)
Surface water gauge location was dry, sample collection wasn't possible or was moved.	February (surface water bodies were frozen, and no samples were able to be collected), June (SG-03, SG-04R sample locations were within 30 feet of original location), August (SG-03, SG-04R sample locations were within 30 feet of original location), October (SG-05 sample collected 25 feet north of gauge, SG-06 sample collected 340 feet east of gauge location)

Surface water samples were collected using a clean container affixed to a pole. Before samples were collected, the following water quality parameters were measured: pH, turbidity, conductivity, dissolved oxygen, temperature, and oxidation reduction potential. The results of field measurements were recorded on a field data form, which is maintained as part of the field records. Surface water samples were delivered under Chain of Custody to Trace Analytical Laboratories in Muskegon, Michigan.

Table 4. Groundwater Elevations Measured in 2023

Well ID	1/3/2023	2/6/2023	3/13/2023	4/18/2023	5/22/2023	6/27/2023	8/7/2023	10/23/2023
MW-01R	581.85	581.35	582.33	582.13	581.35	580.61	581.15	581.27
MW-02	579.89	579.42	579.90	580.40	580.41	580.50	580.48	579.91
MW-03	579.94	579.46	579.99	580.18	580.50	580.44	580.45	579.83
MW-04	580.09	579.68	580.26	580.46	580.55	580.44	580.52	580.04
MW-05	580.97	580.82	581.24	581.32	580.83	580.28	580.61	580.68
MW-06	581.50	580.83	581.50	581.38	580.85	580.20	580.55	580.82

Well ID	1/3/2023	2/6/2023	3/13/2023	4/18/2023	5/22/2023	6/27/2023	8/7/2023	10/23/2023
MW-07	579.98	579.47	579.93	580.08	580.46	580.46	580.47	579.86
MW-08	580.05	579.57	579.98	580.18	580.47	580.50	580.46	579.92
MW-09	579.93	579.53	580.14	580.27	580.51	580.49	580.47	579.89
MW-10	580.40	579.86	580.11	580.22	580.47	580.48	580.40	580.04
MW-11	581.29	580.89	581.58	581.61	581.12	580.59	580.65	580.71
MW-12	581.19	581.20	582.35	581.69	580.10	580.67	581.14	580.81
PZ-13	580.09	579.52	580.16	580.30	580.56	580.56	580.61	580.06
PZ-14	580.21	579.86	580.47	580.53	580.51	580.45	580.66	580.31
PZ-15	580.32	579.91	580.42	580.58	580.72	580.62	580.69	580.25
PZ-16	579.88	579.39	579.89	580.07	580.41	580.37	580.38	579.81
PZ-17	580.50	580.17	580.70	580.75	580.58	580.40	580.64	580.48
MW-18	580.43	580.03	580.44	580.64	580.55	580.44	580.55	580.24
MW-19	580.22	579.82	580.14	580.29	580.39	580.46	580.49	580.10
MW-20	580.02	579.84	579.97	580.14	580.43	580.43	580.42	579.97
PZ-21[1]	--	--	--	--	--	--	--	--
PZ-22[1]	--	--	--	--	--	--	--	--
PZ-23	580.19	579.59	579.93	580.30	580.31	580.26	580.36	580.02
PZ-24	580.67	580.10	580.54	580.56	580.46	580.10	580.14	579.98
PZ-25	579.89	579.49	579.94	580.05	580.54	580.54	580.49	579.88
PZ-26	580.76	580.11	580.72	580.59	580.33	580.02	580.25	580.24
MW-27	580.94	580.04	580.64	580.55	580.20	580.12	580.76	580.45
PZ-28	579.90	579.44	579.88	580.12	580.47	580.47	581.47	579.90
PZ-29[1]	--	579.70	--	--	--	--	--	--
MW-30	580.75	579.79	580.35	580.40	580.19	580.21	580.56	580.30
MW-31	580.96	580.57	579.81	581.04	580.56	579.25	580.45	580.56
MW-32	580.55	579.93	580.38	580.39	580.36	580.30	580.44	580.33
MW-33	581.99	582.23	582.12	581.64	580.88	580.56	580.66	580.11
MW-34	580.21	580.02	580.49	580.63	580.47	580.38	580.47	579.75
MW-35	Not yet installed				582.07	581.41	581.10	580.52
MW-36	Not yet installed				580.61	580.87	581.13	--
MW-37	Not yet installed				580.62	580.40	580.73	580.53
MW-38	Not yet installed				580.61	580.48	580.69	580.47
MW-39	Not yet installed				580.57	580.35	580.66	580.54
MW-40	Not yet installed				580.60	579.83	580.72	581.21
SG-01	--	--	--	--	580.29	580.20	580.20	--
SG-02	580.96	580.71	581.06	581.09	580.64	579.81	580.06	579.41
SG-03	580.89	580.84	581.02	581.07	580.62	--	--	580.47
SG-04R	580.76	580.69	580.99	580.98	580.66			580.37
SG-05	579.60	--	--	--	580.29	580.25	580.25	--
SG-06	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
STW-1[1]	--	--	--	--	580.44	579.97	579.71	580.40
STW-2	--	--	--	579.75	580.31	580.43	580.42	579.71

Well ID	1/3/2023	2/6/2023	3/13/2023	4/18/2023	5/22/2023	6/27/2023	8/7/2023	10/23/2023
STW-3	--	--	--	579.79	580.30	580.29	580.29	579.62

Note: "-- "denotes no measurement was taken.
[1]Deep water prevented access to well to collect measurement.

3.4 Analytical Testing

Samples from the wells listed in **Table 1** were analyzed for the constituents listed in **Table 5** during sample events.

Table 5. Constituents of Interest

Appendix III Constituents	Appendix IV Constituents
Boron	Antimony
Calcium	Arsenic
Chloride	Barium
Fluoride	Beryllium
pH	Cadmium
Sulfate	Chromium
Total Dissolved Solids (TDS)	Cobalt
Additional Parameters	Fluoride
Total Suspended Solids (TSS)	Lead
	Lithium
	Mercury
	Molybdenum
	Selenium
	Thallium
	Radium 226 and 228 combined

3.5 Data Validation and Management

Data validation and data management tasks were performed per the *2022 Harbor Island Work Plan for CCR Compliance* (HDR, 2022). Data validation was performed for sampling dates provided in **Table 1**. Data validation was conducted to eliminate any data that did not meet validation criteria and designate a data qualifier for any data quality limitation discovered.

Samples and quality control (QC) data for the reporting period were reviewed and evaluated, and no samples were rejected. Most QC analyses were within reportable limits; however, when QC was outside control limits, samples were reported as estimated. Data analyses required minimal qualifications, and the data were usable, even when qualified. Data validation reports are contained in **Appendix B**.

4.0 Monitoring Results

4.1 Water Levels and Groundwater Flow Direction

The water levels are provided in **Table 4**. Potentiometric surface maps were developed for each sampling event. The maps display the groundwater elevations as well as the potentiometric contours, the maps are provided in **Appendix A**. Beneath the Units 1/2 Impoundment, groundwater was observed between 2.59 and 13.25 feet below ground surface or 579.42 and 582.35 feet above mean sea level. Beneath Unit 3A/B Impoundments, groundwater was observed between 3.31 and 3.99 feet below ground surface or between 579.25 and 581.32 feet above mean sea level. Non-CCR monitoring program wells MW-35 through MW-40 are included on the provided potentiometric contour map to provide additional data points increase accuracy.

Potentiometric contours created from the groundwater elevations in **Table 4** show north and northwestern flow beneath Unit 3A/B Impoundments toward the Grand River, consistent with previous observations. Flow beneath Units 1/2 Impoundment is generally eastward toward the internal wetland, with the exception of flow near the North Channel outlet where groundwater flow is south from MW-31 toward SG-02. The internal wetland has consistently shown to be a sink for Harbor Island.

Groundwater flow observed at background wells MW-27, MW-33, and MW-34 was consistent with previous observations. Flow is southward from MW-35, in the northern corner of the eastern island, toward MW-33 and MW-34. The potentiometric contours indicate groundwater from under the CCR impoundments does not flow toward background monitoring wells and are determined to be appropriate background monitoring locations.

4.2 Water Quality

The eighth background sampling event was completed in August 2023 and the first detection monitoring event was completed in October 2023. The October 2023 sample events is considered both a detection and assessment monitoring event. During each background and detection monitoring event, the monitoring well network shown in **Table 1**, was sampled for COIs contained in **Table 5**. The water quality data collected to date is in tabular form presented in **Appendix C**, and laboratory reports are provided in **Appendix D**.

Following the completion of background sampling, as specified under CCR Rule Part §257.94, the *Background Water Quality Statistical Certification* was submitted (HDR, 2023d). The document outlines the approach and selection of the statistical method for each Appendix III and IV constituent of interest (COI) for each CCR unit. The water quality data collected from the monitoring wells located upgradient of the CCR units has been compiled and statistically analyzed to develop the original background threshold values (BTVs) for the impoundments. The statistical method chosen to represent background water quality is the upper prediction limit (UPL) and is one of the methods described in the CCR Rule Part §257.93 (f)(3).

4.2.1 Identification of Statistically Significant Increases

Following the completion of the *Background Water Quality Statistical Certification*, the memo *Former J.B. Sims Generating Station Determination of Statistically Significant Increases over Background per §257.93(h)(2) and R 299.4440(8) of the Michigan Part 115 Rules* was published (HDR, 2024a). The memorandum documented the statistically significant increases (SSIs) over the background values (UPLs) (HDR, 2024a). The SSIs identified for Units 1/2 are contained in **Table 6**, and include boron, calcium, fluoride, sulfate, and total dissolved solids (TDS). The SSIs identified for Unit 3A/B are contained in **Table 7**, and include boron, calcium, chloride, fluoride, sulfate, and TDS. The following list of Appendix III SSIs that were identified after the October 2023 sample event are considered "new" SSIs because they were not previously identified in 2019. Note monitoring well MW-05 is not sampled as a part of the updated network and monitoring wells MW-11 through MW-40 were not yet installed at the time of the 2019 SSI memorandum:

- Boron observed in MW-03, MW-04, MW-06, MW-08, MW-11, and MW-31
- Calcium observed in MW-18, MW-19, MW-30
- Chloride observed in MW-08, MW-19, MW-30
- Fluoride observed in MW-08, MW-11, MW-18, MW-19, MW-30, MW-31
- Sulfate observed in MW-11, MW-18, MW-19, MW-30
- TDS observed in MW-11, MW-18, MW-19, MW-30

Table 6. October 2023 SSIs for Units 1/2 Impoundment

Well ID	Constituent	October 2023 Concentration (mg/L)	Federal and State Program BTV (UPL) (mg/L)
MW-06	Boron	11	4.0
MW-08		4.1	
MW-31		5.1	
MW-18	Calcium	360	250
MW-19		470	
MW-30		390	
MW-06	Fluoride	1.2	0.44
MW-08		0.55	
MW-18		4.5	
MW-19		2.0	
MW-30		1.2	
MW-31		4.6	
MW-18	Sulfate (as SO4)	800	100
MW-19		1,100	
MW-30		610	
MW-06	Total Dissolved Solids	1,100	940
MW-18		1,400	
MW-19		1,900	
MW-30		1,800	

Table 7. October 2023 SSIs for Unit 3A/B Impoundments

Well ID	Constituent	October 2023 Sampling Result (mg/L)	Federal and State Program BTV (UPL) (mg/L)
MW-02	Boron	110	4.0
MW-03		4.3	
MW-04		4.7	
MW-11		12	
MW-03	Calcium	380	250
MW-04		360	
MW-02	Chloride (as Cl)	140	120
MW-03		180	
MW-04		150	
MW-02	Fluoride	9.7	0.44
MW-03		0.60	
MW-04		1.9	
MW-11		1.2	
MW-03	Sulfate (as SO4)	380	100
MW-04		630	
MW-12		130	
MW-02	Total Dissolved Solids	1,600	940
MW-03		2,200	
MW-04		1,800	
MW-11		1,800	

4.2.2 Calculation of Groundwater Protection Standards

As stated in *Notice of Initiating Assessment of Corrective Measures 40 CFR §257.95(g)(3)(i) and 40 CFR §257.95(g)(5)*, both Units 1/2 Impoundment and Unit 3A/B Impoundments entered assessment monitoring on February 2, 2019 (Golder, 2019). As stated above, revisions to the background monitoring wells resulted in a reevaluation of background values in Background Statistical Certification Report (HDR, 2024). Per 40 CFR §257.95, under the assessment monitoring program monitoring results are compared to BTVs. The Unified Guidance recommends the upper tolerance limit (UTL) to develop the GPS. Per 40 CFR §257.95(h) the groundwater protection standard shall be:

1. the maximum contaminant level (MCL) for that constituent;
2. for constituents for which an MCL has not been established, the background concentration for the constituent established from background wells; or,
3. for constituents for which the background level is higher than the MCL, the background concentration.

The upper tolerance limits (UTLs) or background value, maximum contaminant level (MCLs), and resulting site GPS for both CCR units are provided in **Table 8**.

Table 8. Background Values and Groundwater Protection Standards for Unit 1/2 and Unit 3A/B

Parameter	Site-Specific Background Level	Federal Maximum Contaminant Level (mg/L)	Federal Groundwater Protection Standards for Site (mg/L)
	Upper Tolerance Limit (UTL) (mg/L)		
Antimony	0.0012	0.0060	0.0060
Arsenic	0.0040	0.010	0.010
Barium	0.58	2.0	2.0
Beryllium	0.000059	0.0040	0.0040
Cadmium	0.00015	0.0050	0.0050
Chromium	0.042	0.10	0.10
Cobalt	0.0021	0.0060*	0.0060
Fluoride	0.45	4.0	4.0
Lead	0.0016	0.015*	0.015
Lithium	0.10	0.040*	0.10
Mercury	0.00016	0.0020	0.0020
Molybdenum	0.0093	0.10*	0.10
Radium 226 & 228 combined	2.6	5.0	5.0
Selenium	0.00089	0.050	0.050
Thallium	0.000075	0.0020	0.0020

*EPA adopted health-based value for constituents with no MCL.

4.2.3 Exceedances of Groundwater Protection Standards

The October 2023 sampling data from compliance wells was compared to the GPS values provided in **Table 8**, and several COIs were found to exceed GPS at both CCR units. To determine if an exceedance of a GPS value was statistically significant, the 95% lower confidence limit (95LCL) was calculated for each of the downgradient wells. The statistical output files are in **Appendix E**.

Units 1/2 Impoundment

Concentrations that exceeded GPS at statistically significant levels (SSLs) are provided in **Table 9** for the Units 1/2 Impoundment. SSLs identified in 2021 for Units 1/2 Impoundments included arsenic, cobalt, fluoride, and lithium: this is mostly consistent with the updated SSLs. The updated SSLs for Units 1/2 exclude cobalt which was not previously identified. Note monitoring wells installed after MW-10 (MW-11 through MW-40) were not yet installed at the time of the 2021 SSI memo and therefore were not sampled.

2021 Identified SSLs (Golder, 2022)	October 2023 SSLs
• Arsenic – MW-05 • Cobalt – MW-01R • Fluoride – MW-01R, MW-10 • Lithium –MW-06, MW-09, MW-10	• Arsenic – MW-08, MW-18 • Cobalt – No SSL • Fluoride –MW-10, MW-31 • Lithium –MW-06, MW-10, MW-30, MW-32

Table 9. October 2023 LCLs that Exceed GPS for the Units 1/2 Impoundment

Well I.D.	Constituent	Unit	95 % LCL	Federal GPS
MW-06	Lithium	mg/L	0.18	0.10
MW-08	Arsenic	mg/L	0.022	0.010
MW-10	Fluoride	mg/L	4.7	4.0
MW-10	Lithium	mg/L	0.81	0.10
MW-18	Arsenic	mg/L	0.020	0.010
MW-30	Lithium	mg/L	0.11	0.10
MW-31	Fluoride	mg/L	4.7	4.0
MW-32	Lithium	mg/L	0.11	0.10

Unit 3A/B Impoundments

Concentrations that exceeded GPS at statistically significant levels (SSLs) are provided in **Table 10** for the Unit 3A/B Impoundments. SSLs identified in 2021 for the Unit 3A/B Impoundments included arsenic, chromium, cobalt, fluoride and lithium, which is partially consistent with the October 2023 SSLs. The updated SSLs for Unit 3A/B do not include arsenic, chromium, or cobalt which were previously identified.

2021 Identified SSLs (Golder, 2022)	October 2023 SSLs
• Arsenic – MW-05 • Chromium – MW-02 • Cobalt – MW-02 • Fluoride – MW-02, MW-10 • Lithium – MW-02, MW-05, MW-09, MW-10	• Arsenic – No SSL • Chromium – No SSL • Cobalt – No SSL • Fluoride – MW, 01R, MW-02, MW-10 • Lithium – MW, 01R, MW-09, MW-02, MW-10

Table 10. October 2023 LCLs that Exceed GPS for the Unit 3A/B Impoundments

Well I.D.	Constituent	Unit	95 % LCL	Federal GPS
MW-01R	Fluoride	mg/L	8.8	4.0
MW-01R	Lithium	mg/L	2.0	0.10
MW-02	Fluoride	mg/L	8.7	4.0
MW-02	Lithium	mg/L	1.2	0.10
MW-09	Lithium	mg/L	0.29	0.10
MW-10	Fluoride	mg/L	4.7	4.0
MW-10	Lithium	mg/L	0.81	0.10

5.0 Remedy Selection Progress Update

In accordance with §257.97(a), a semiannual progress report is required describing the progress made towards remedy selection and design for the ash impoundments. Background monitoring of the monitoring wells was conducted from November 2022 through August 2023, and the first detection monitoring event was completed in October 2023.

In 2024, assessment monitoring will continue on a quarterly schedule. Concurrent with the assessment monitoring at Harbor Island, a non-CCR investigation is being conducted to evaluate the potential presence of per- and polyfluoroalkyl substances (PFAS) in groundwater at the Site. Given the shallow groundwater at the Site, potential CCR unit corrective measure alternatives also will address PFAS that may be present in the same groundwater.

As stated above, with the identification of SSLs above GPS, the initiation of Assessment of Corrective Measures (ACM) is in process. The following activities are proposed to be completed or initiated in the next 6-month period:

- The Groundwater Monitoring Network Certification is scheduled to be published in Q1 2024,
- Initiate the Assessment of Corrective Measures,
- Development an ACM Data Collection Work Plan for use in assessing corrective measures using Site specific data,
- Continued quarterly groundwater assessment monitoring,
- Execution of the transducer installation to identify the groundwater flow direction on an hourly basis. The installation of the transducers began in December 2023, however inclement weather has delayed completion of the installation and data has yet to be collected. The anticipated installation and initial data collection event is planned for the first quarter 2024.

6.0 Summary

The following observations are based on CCR Rule compliance groundwater monitoring program development during 2023:

- Background sampling was conducted in the updated background monitoring network from November 2022 through August 2023, which represented the eighth background monitoring event.
- The first detection and assessment monitoring event was completed in October 2023. This same event is being considered both detection and assessment monitoring.
- Groundwater flow beneath Units 1/2 Impoundment flows generally eastward toward the wetland and south near MW-31 toward SG-02.
- Groundwater flow measured beneath Unit 3A/B Impoundments is primarily west northwest toward the Grand River.
- Monitoring wells MW-35, MW-36, MW-37, MW-38, MW-39, and MW-40 were installed in January 2023 as a part of a non-CCR groundwater monitoring investigation. The well locations were chosen based on the sampling results from the non-CCR investigation and are monitored for water levels in order to provide additional information related to groundwater flow direction. Repairs to stilling wells and staff gauges have been documented outside this report.

- The proposal to install 17 dedicated pressure transducers to monitor hourly groundwater measurements in select wells, staff gauges, and stilling wells was approved and installation began December 21, 2023. Due to weather conditions, the installation has yet to be completed and no data has been collected but is anticipated for February 2024.
- The background water quality was updated for the Site and documented in the *Background Statistical Certification Report* (HDR, 2024).
- October 2023 data was compared to detection monitoring UPLs and SSIs were identified in *Former J.B. Sims Generating Station Determination of Statistically Significant Increases over Background per §257.93(h)(2) and R 299.4440(8) of the Michigan Part 115 Rules* (HDR, 2024a).
    - SSIs identified for Units 1/2 Impoundments after the October 2023 sample event include:
        - Boron - MW-06, MW-08, MW-31
        - Calcium - MW-18, MW-19, MW-30
        - Chloride - MW-08, MW-19, MW-30
        - Fluoride - MW-08, MW-18, MW-19, MW-30, MW-31
        - Sulfate - MW-18, MW-19, M-30
        - TDS - MW-18, MW-19, MW-30
    - SSIs identified for Unit 3A/B Impoundments after the October 2023 sample event include:
        - Boron - MW-03, MW-04, MW-06
        - Fluoride - MW-11
        - Sulfate - M-11
        - TDS - MW-11
- The LCLs were calculated after the October 2023 assessment monitoring event and were compared to GPS values. The following SSLs were identified for the Units 1/2 Impoundment:
    - Arsenic - MW-08, MW-18
    - Fluoride –MW-10, MW-31
    - Lithium –MW-06, MW-10, MW-30, MW-32

  An SSL memorandum, *Determination of Statistically Significant Levels over Groundwater Protection Standards per §257.95(g) and Michigan Rule R 299.4441*, documenting the selection of GPS values and determination of SSLs will be published in January 2024.
- The LCLs were calculated after the October 2023 assessment monitoring event and were compared to GPS values. The following SSLs were identified for the Unit 3A/B Impoundments:
    - Fluoride – MW-01R, MW-02, MW-10
    - Lithium – MW-01R, MW-02, MW-09, MW-10

An SSL memorandum, *Determination of Statistically Significant Levels over Groundwater Protection Standards per §257.95(g) and Michigan Rule R 299.4441*, documenting the selection of GPS values and determination of SSLs will be published in January 2024.

7.0 References

ERM, 2017. Groundwater Monitoring System Certification for the Grand Haven Board of Light and Power, Environmental Resources Management Michigan, Inc. November 2017.

Golder Associates, Inc., 2018a. 2017 Annual Groundwater Monitoring and Corrective Action Report. January 30, 2018.

Golder Associates, Inc., 2018b. Notice of Groundwater Protection Standard Exceedance. October 15, 2018.

Golder Associates, Inc., 2019. Notice Initiating Assessment of Corrective Measures CFR §257.95(g)(3)(i) and 40 CFR §257.95(g)(5). February 8, 2019.

Golder Associates, Inc., 2022. 2021 Annual Groundwater Monitoring & Corrective Action Report. January 28, 2022.

Golder Associates, Inc., 2022a. Field Summary Report of Results from Approved Work Plan -Piezometer Installation and Additional Data Collection. February 15, 2022.HDR Inc, 2022. 2022 Harbor Island Work Plan for CCR Compliance. April 8, 2022. Amended June 23, 2022.

HDR, 2022, 2022. Harbor Island Work Plan for CCR Compliance. April 8, 2022. Revised June 23, 2022.

HDR, 2023. 1st Quarter 2023 Groundwater Monitoring Report. April 28, 2023.

HDR, 2023a. 2nd Quarter 2023 Groundwater Monitoring Report. July 31, 2023.

HDR, 2023b. 3rd Quarter 2023 Groundwater Monitoring Report. October 30, 2023.

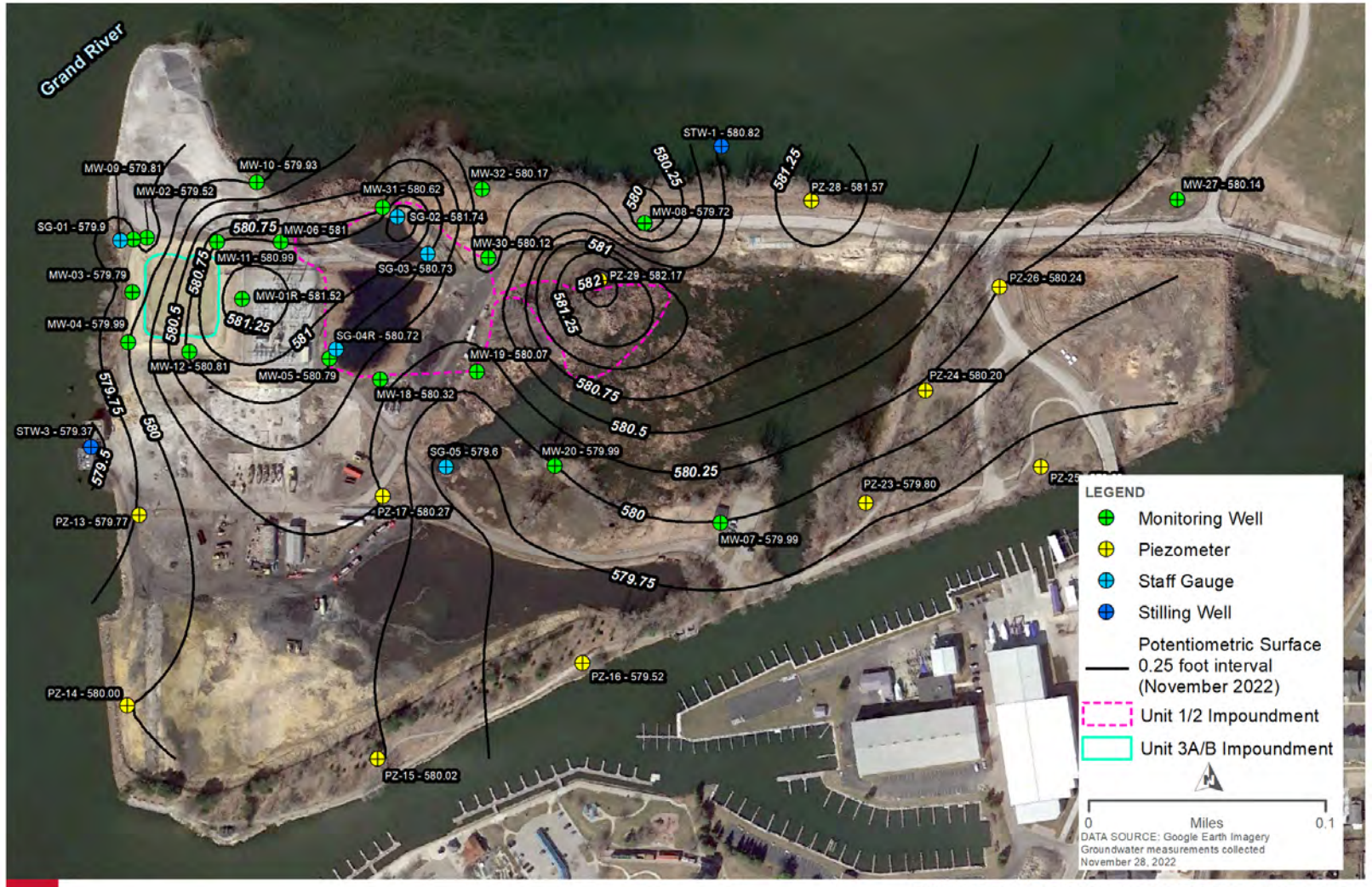
HDR, 2024, Background Statistical Certification Report. December 11, 2023. Revised January 24, 2024.

HDR, 2024a. Former J.B. Sims Generating Station Determination of Statistically Significant Increases over Background per §257.93(h)(2) and R 299.4440(8) of the Michigan Part 115 Rules. January 24, 2024.

Western Michigan University, Department of Geology, 1981. Hydrogeologic Atlas of Michigan, Volume 1. The Department of Geology, Kalamazoo, Michigan. 1981.

Appendix A

Potentiometric Surface Maps



FORMER J.B. SIMS GENERATING STATION

CITY OF GRAND HAVEN

FORMER J.B. SIMS GENERATING STATION

CITY OF GRAND HAVEN

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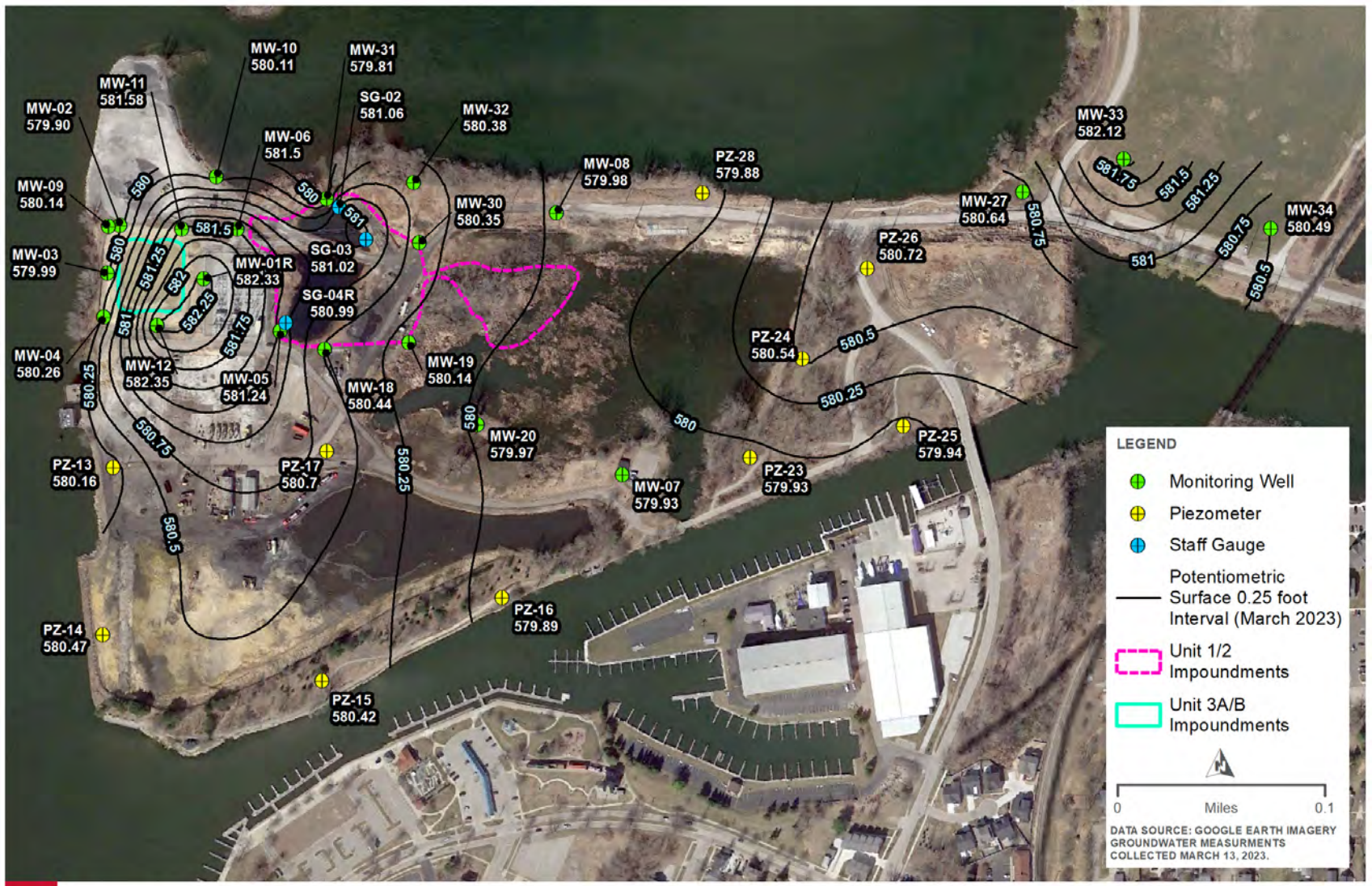

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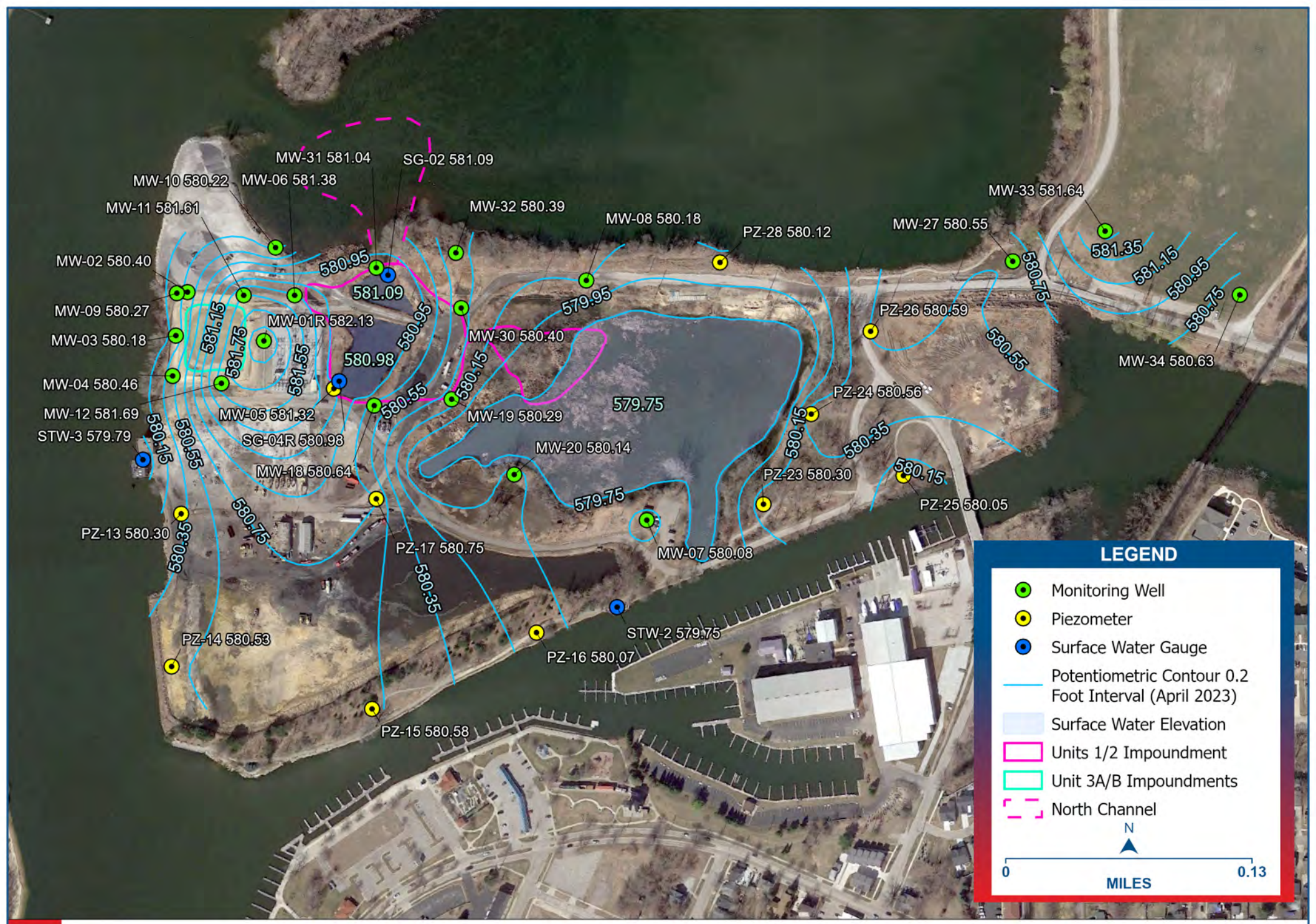

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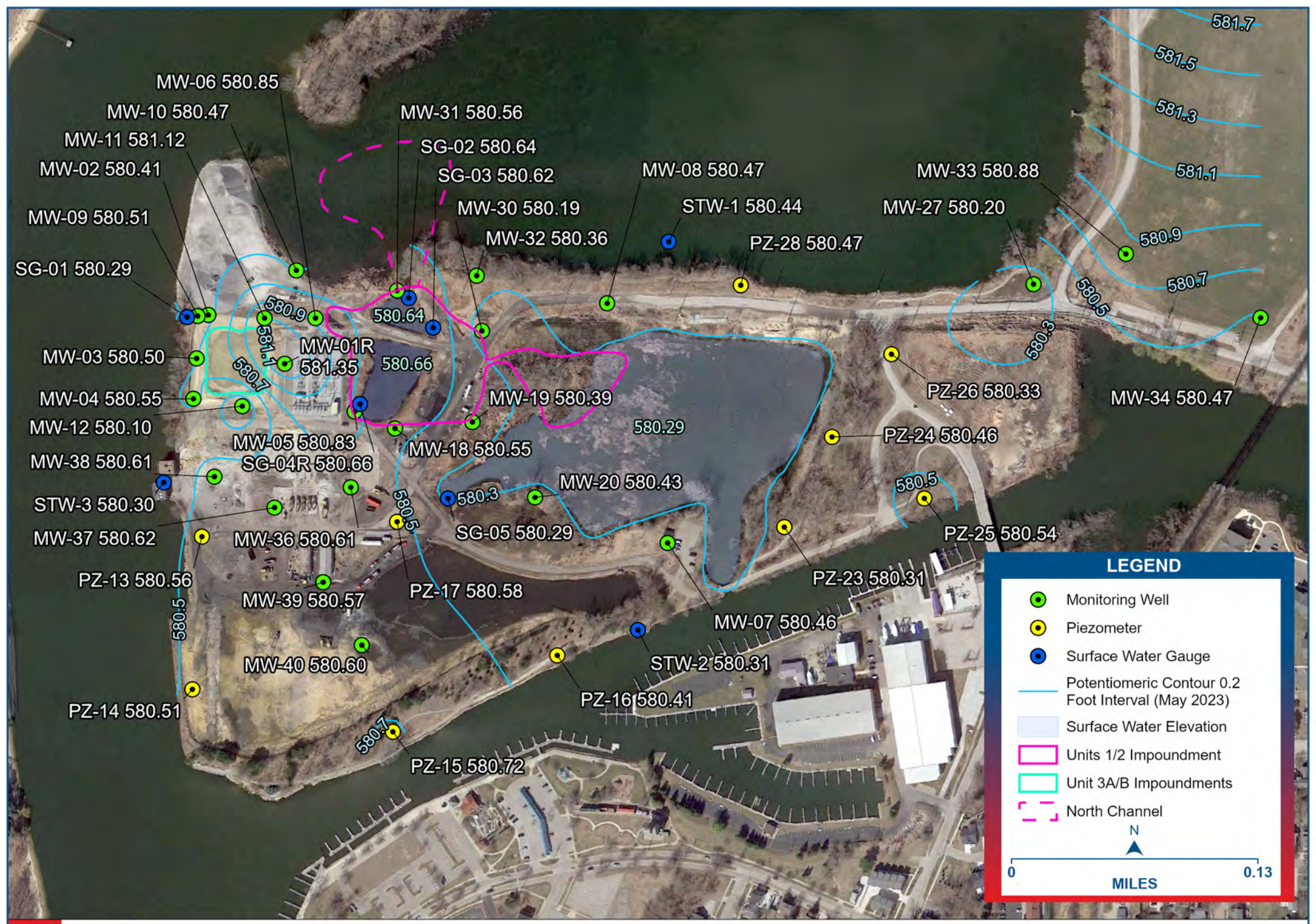

Renew Harbor Island

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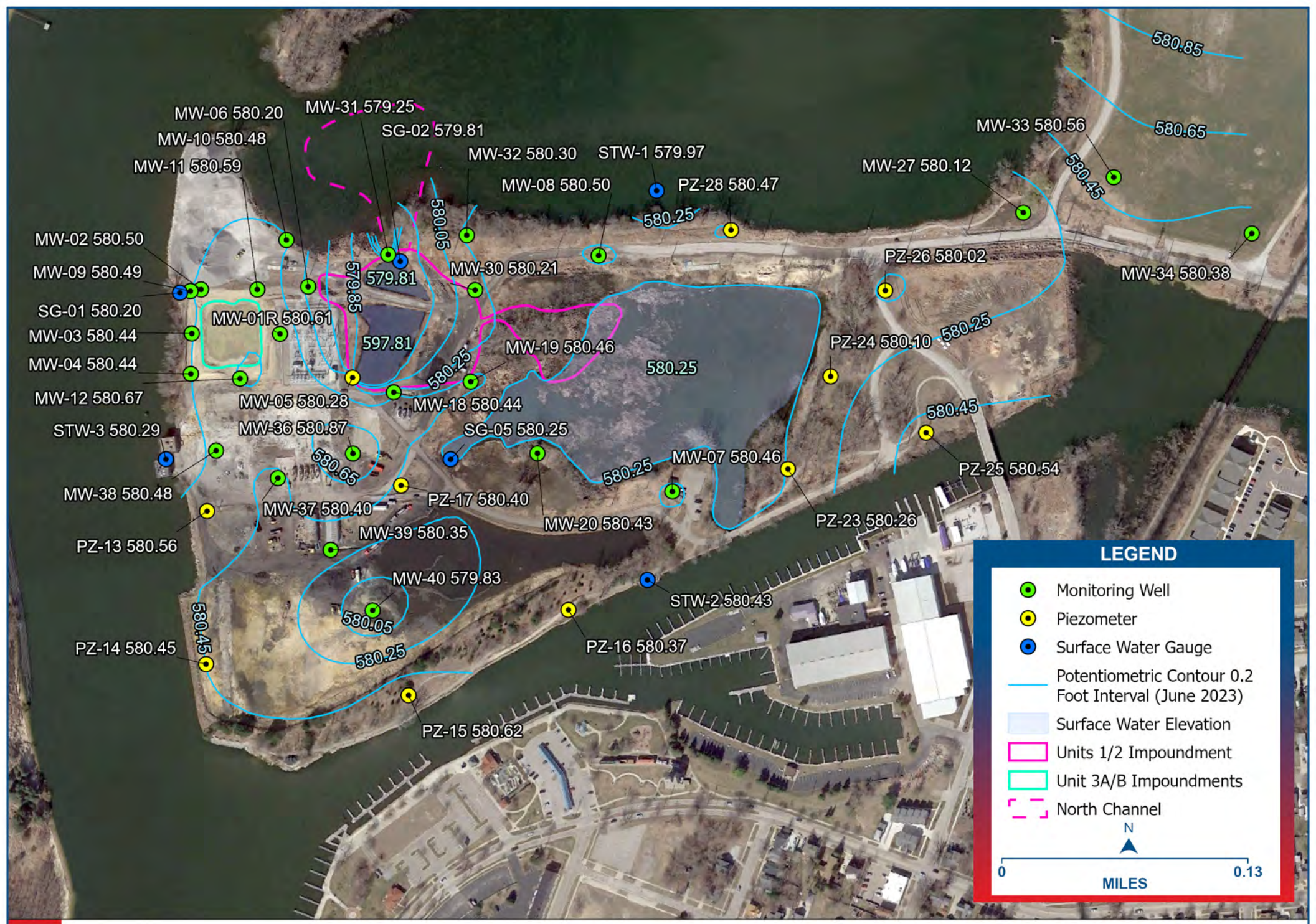

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Renew Harbor Island

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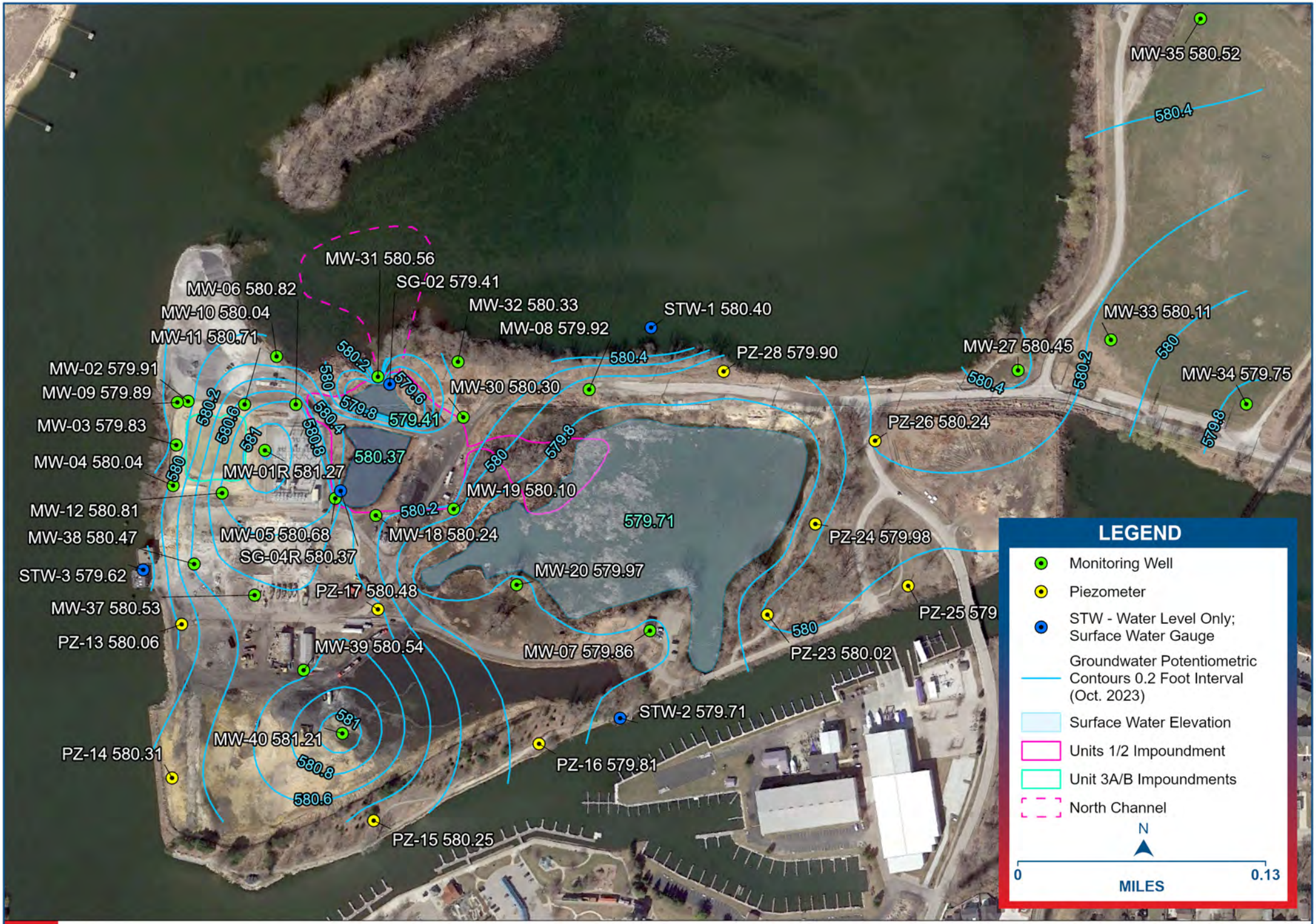
CITY OF GRAND HAVEN



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Appendix B

Data Validation Reports

Data Verification & Validation Report

Grand Haven-Harbor Island

Sampling Event (dates and purpose): Background Round 1 – November/December 2022

Data Package Number: 22L0089
Data Validator: Aryka Thomson

Lab Report Date: 12/27/2022
Data Validation Completion Date: 03/07/2023

General Overall Assessment:
_____ Data are usable without qualification.
__X__ Data are usable with qualification (as noted below).
_____ Some or all data are unusable (as noted below).

Wells planned for sampling:

Unit 3A/B	Unit 1/2	Well Designation	Well ID	Planned for Sampling
✓	✓	Nature & Extent	MW-01R	X
✓		Point of Compliance	MW-02	X
✓		Point of Compliance	MW-03	X
✓		Point of Compliance	MW-04	X
	✓	Point of Compliance	MW-06	X
✓	✓	Nature & Extent	MW-07	X
	✓	Point of Compliance	MW-08	X
✓	✓	Nature & Extent	MW-09	X
✓	✓	Nature & Extent	MW-10	X
✓		Point of Compliance	MW-11	X
✓		Point of Compliance	MW-12	X
	✓	Point of Compliance	MW-18	X
	✓	Point of Compliance	MW-19	X
	✓	Point of Compliance	MW-20	X
✓	✓	Background	MW-27	X
	✓	Point of Compliance	MW-30	X
	✓	Point of Compliance	MW-31	X
✓	✓	Nature & Extent	MW-32	X
✓	✓	Background	MW-33	X
✓	✓	Background	MW-34	X
✓	✓	Surface Water	SG-02	X
✓	✓	Surface Water	SG-03	X
✓	✓	Surface Water	SG-04R	X
✓	✓	Surface Water	SG-05	X
✓	✓	Surface Water	SG-06	X

Data Summary

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-1R	GW	22L0089-01	11/29/2022	X	X	X	X	X	X	
MW-2	GW	22L0089-03	11/28/2022	X	X	X	X	X	X	
MW-03	GW	22L0089-19	11/28/2022	X	X	X	X	X	X	
MW-04	GW	22L0089-21	11/28/2022	X	X	X	X	X	X	
MW-6	GW	22L0089-04	11/29/2022	X	X	X	X	X	X	
MW-07	GW	22L0089-22	11/30/2022	X	X	X	X	X	X	
MW-8	GW	22L0089-06	12/01/2022	X	X	X	X	X	X	
MW-9	GW	22L0089-05	11/28/2022	X	X	X	X	X	X	

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-10	GW	22L0089-07	11/29/2022	X	X	X	X	X	X	
MW-11	GW	22L0089-08	11/29/2022	X	X	X	X	X	X	
MW-12	GW	22L0089-09	11/28/2022	X	X	X	X	X	X	
MW-18	GW	22L0089-10	11/30/2022	X	X	X	X	X	X	
MW-19	GW	22L0089-11	11/30/2022	X	X	X	X	X	X	
MW-20	GW	22L0089-20	11/30/2022	X	X	X	X	X	X	
MW-27	GW	22L0089-18	11/30/2022	X	X	X	X	X	X	
MW-30	GW	22L0089-12	11/30/2022	X	X	X	X	X	X	
MW-31	GW	22L0089-14	12/01/2022	X	X	X	X	X	X	
MW-32	GW	22L0089-15	11/30/2022	X	X	X	X	X	X	
MW-33	GW	22L0089-16	12/01/2022	X	X	X	X	X	X	
MW-34	GW	22L0089-17	12/01/2022	X	X	X	X	X	X	
SG-02	SW	22L0089-23	12/02/2022	X	X	X	X	X	X	
SG-03	SW	22L0089-24	12/02/2022	X	X	X	X	X	X	
SG-04R	SW	22L0089-25	12/02/2022	X	X	X	X	X	X	
SG-05	SW	22L0089-26	12/02/2022	X	X	X	X	X	X	
MW-1RD	QC	22L0089-02	11/29/2022	X	X	X	X	X	X	
MW-30D	QC	22L0089-13	11/30/2022	X	X	X	X	X	X	

Other analytes requested for analysis: Na, Mg, K, HCO_3, CO_3, hardness (not requested on COC but requested after samples were received)

Any planned sampling or analysis NOT completed? If yes, explain: SG-06 was not sampled because “area near SG-06 is dry, nearest water approximately 50-60 feet SE”.

Data Verification & Validation Checklist

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Field Data							
Sample Collection Field Forms	X		Purging performed as required in the Groundwater Monitoring Plan	X			
Field Calibration Records		X	Field instruments calibrated daily according to manufacturer specifications			X	Field calibration documentation not stored for record. Field samplers have been notified to do so for future events.
Chain of Custody	X		Accurately reflect samples, collection dates/times, analyses, bottles, etc.	X			
Field decontamination documentation	N/A		Record of decontamination for non-dedicated sampling equipment			X	
Drilling logs	X		N/A	-	-	-	
Well construction logs	X		N/A	-	-	-	
Well development field forms	X		N/A	-	-	-	
Analytical Data Package							
Cover Sheet	X		N/A	-	-	-	
Case Narrative	X		Summarizes sample receipt and any exceptions to QC acceptance criteria	X			
Internal Laboratory Chain of Custody forms	X		Analyses as requested; accurate transcription of field COC	X			
Sample Chronology and Consistency	X		Accurate representation of dates, times of receipt, preparation, and analysis	X			
Communication Records with Lab	X		N/A	-	-	-	
EDD Format Consistency	X		EDD format and content as requested	X			
Sample Identification, Results Nomenclature, and Data Qualifier Consistency	X		All included in final report	X			
Method Detection Limit Consistency	X		MDLs consistent between samples		X		Dilution varies between samples
Instrument Calibration Records	X		Present and no nonconformance noted	X			
Laboratory Report Complete	X		Includes QC component	X			
Holding Times	X		Analyses performed within allowed holding time		X		TDS in MW-1R, MW-1RD, MW-03, MW-19, and MW-

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
							30 were analyzed outside the 7-day hold time
Method	X		Method as requested	X			
Reporting Limits	X		RLs as requested		X		RLs for Ca and Fe were not met
			MDLs<RLs		X		RL=MDL for Ag, Zn
			MDLs<GPS			X	Background sampling (no GPS to compare against)
QC Validation							
Evaluate Accuracy							
Matrix Spike (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table		X		MS recoveries outside control limits for B, Ca, Mg, and Na
Laboratory Control Sample (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Evaluate Precision							
Matrix Spike Duplicate (RPD)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Field Duplicate (RPD)	X		RPD ≤ 20%		X		Cu was detected in MW-1R and not detected in MW-1RD. Combined Radium RPD was 61% in MW-1R/MW-1RD pair and 38% in MW-30/MW-30D pair
Evaluate Representativeness							
Equipment Blanks (if applicable)	N/A		Non-detect (<RL)			X	
QC Verification							
Verify Instrument Calibration & Analytical Process							
Initial Calibration Verification	X		Laboratory-determined	-	-	-	
Continuing Calibration Verification	X		Laboratory-determined	-	-	-	
Initial Calibration Blank	X		Laboratory-determined	-	-	-	
Continuing Calibration Blank	X		Laboratory-determined	-	-	-	
Serial Dilutions	X		Laboratory-determined	-	-	-	
Post-Digestion Spikes	X		Laboratory-determined	-	-	-	
Internal Standards	X		Laboratory-determined	-	-	-	
Laboratory Duplicate (RPD)	X		Laboratory-determined	-	-	-	TSS duplicate RPDs outside control limits affecting one project sample; TDS duplicate RPDs outside control limits affecting one project sample
Method Blanks	X		Laboratory-determined	-	-	-	
Evaluate Completeness (# usable measurements/ # unusable measurements)							
Completeness	X		100%	X			

Other instances of nonconformance to QC control limits noted on case narrative:

Boron, calcium, and sodium matrix spikes were outside control limits in T130269-MS1. Boron, calcium, and potassium matrix spikes were outside control limits in T130269-MS2. Calcium matrix spikes were outside control limits in T130418-MS1. Calcium and magnesium matrix spikes were outside control limits in T130418-MS2. Because the background concentration of these analytes was greater than four times the spike amount, qualification was not required.

Comments:

TDS in MW-1R, MW-1RD, MW-03, MW-19, and MW-30 were analyzed outside the 7-day hold time and required qualification as estimated with low bias (J-).

Cu was detected in parent sample MW-1R and not detected in field duplicate MW-1RD. Cu in MW-1R required qualification as estimated with high bias (J+) and as estimated but not detected (UJ) in the MW-1RD.

The TSS results in laboratory duplicate T130210-DUP1 had RPD outside control limits. TSS in MW-11 required qualification as estimated (J).

The TDS results in laboratory duplicate T130291-DUP1 had RPD outside control limits. TDS in MW-33 required qualification as estimated (J).

pH in all samples required qualification as estimated (J) due to analysis outside the EPA-established 24-hour hold time.

Combined radium RPD was outside control limits in both parent/field duplicate pairs. The RPD between combined radium in MW-1R and MW-1RD was 61%. The RPD between combined radium in MW-30 and MW-30D was 38%. Rad-226, Rad-228, and Combined Rad 226+228 required qualification as estimated (UJ) in MW-1R, MW-1RD, MW-30, and MW-30D.

Data Verification & Validation Report

Grand Haven-Harbor Island

Sampling Event (dates and purpose): Background Round 2 – January 2023

Data Package Number: 23A0179
Data Validator: Aryka Thomson

Lab Report Date: 01/26/2023
Data Validation Completion Date: 03/07/2023

General Overall Assessment:
_____ Data are usable without qualification.
__X__ Data are usable with qualification (as noted below).
_____ Some or all data are unusable (as noted below).

Wells planned for sampling:

Unit 3A/B	Unit 1/2	Well Designation	Well ID	Planned for Sampling
✓	✓	Nature & Extent	MW-01R	X
✓		Point of Compliance	MW-02	X
✓		Point of Compliance	MW-03	X
✓		Point of Compliance	MW-04	X
	✓	Point of Compliance	MW-06	X
✓	✓	Nature & Extent	MW-07	X
	✓	Point of Compliance	MW-08	X
✓	✓	Nature & Extent	MW-09	X
✓	✓	Nature & Extent	MW-10	X
✓		Point of Compliance	MW-11	X
✓		Point of Compliance	MW-12	X
	✓	Point of Compliance	MW-18	X
	✓	Point of Compliance	MW-19	X
	✓	Point of Compliance	MW-20	X
✓	✓	Background	MW-27	X
	✓	Point of Compliance	MW-30	X
	✓	Point of Compliance	MW-31	X
✓	✓	Nature & Extent	MW-32	X
✓	✓	Background	MW-33	X
✓	✓	Background	MW-34	X
✓	✓	Surface Water	SG-02	X
✓	✓	Surface Water	SG-03	X
✓	✓	Surface Water	SG-04R	X
✓	✓	Surface Water	SG-05	X
✓	✓	Surface Water	SG-06	X

Data Summary

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-01R	GW	23A0179-07	01/03/2023	X	X	X	X	X	X	
MW-02	GW	23A0179-09	01/04/2023	X	X	X	X	X	X	
MW-03	GW	23A0179-12	01/04/2023	X	X	X	X	X	X	
MW-04	GW	23A0179-11	01/04/2023	X	X	X	X	X	X	
MW-06	GW	23A0179-06	01/03/2023	X	X	X	X	X	X	
MW-07	GW	23A0179-23	01/04/2023	X	X	X	X	X	X	
MW-08	GW	23A0179-24	01/05/2023	X	X	X	X	X	X	
MW-09	GW	23A0179-10	01/04/2023	X	X	X	X	X	X	

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-10	GW	23A0179-08	01/04/2023	X	X	X	X	X	X	
MW-11	GW	23A0179-05	01/03/2023	X	X	X	X	X	X	
MW-12	GW	23A0179-04	01/03/2023	X	X	X	X	X	X	
MW-18	GW	23A0179-17	01/05/2023	X	X	X	X	X	X	
MW-19	GW	23A0179-03	01/03/2023	X	X	X	X	X	X	
MW-20	GW	23A0179-22	01/04/2023	X	X	X	X	X	X	
MW-27	GW	23A0179-25	01/05/2023	X	X	X	X	X	X	
MW-30	GW	23A0179-01	01/03/2023	X	X	X	X	X	X	
MW-31	GW	23A0179-13	01/04/2023	X	X	X	X	X	X	
MW-32	GW	23A0179-14	01/04/2023	X	X	X	X	X	X	
MW-33	GW	23A0179-15	01/05/2023	X	X	X	X	X	X	
MW-34	GW	23A0179-16	01/05/2023	X	X	X	X	X	X	
SG-02	GW	23A0179-21	01/05/2023	X	X	X	X	X	X	
SG-03	GW	23A0179-20	01/05/2023	X	X	X	X	X	X	
SG-04R	GW	23A0179-19	01/05/2023	X	X	X	X	X	X	
SG-05	GW	23A0179-18	01/05/2023	X	X	X	X	X	X	
MWT-27	QC	23A0179-26	01/05/2023	X	X	X	X	X	X	
MWT-30	QC	23A0179-02	01/03/2023	X	X	X	X	X	X	

Other analytes requested for analysis: Na, Mg, K, HCO_3, CO_3, hardness (not requested on COC but requested after samples were received)

Any planned sampling or analysis NOT completed? If yes, explain: SG-06 was not sampled because "Area is dry; nearest surface water ~50-60 ft away".

Data Verification & Validation Checklist

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Field Data							
Sample Collection Field Forms	X		Purging performed as required in the Groundwater Monitoring Plan	X			
Field Calibration Records		X	Field instruments calibrated daily according to manufacturer specifications			X	Field calibration documentation not stored for record. Field samplers have been notified to do so for future events.
Chain of Custody	X		Accurately reflect samples, collection dates/times, analyses, bottles, etc.	X			
Field decontamination documentation	N/A		Record of decontamination for non-dedicated sampling equipment			X	
Drilling logs	X		N/A	-	-	-	
Well construction logs	X		N/A	-	-	-	
Well development field forms	X		N/A	-	-	-	
Analytical Data Package							
Cover Sheet	X		N/A	-	-	-	
Case Narrative	X		Summarizes sample receipt and any exceptions to QC acceptance criteria	X			
Internal Laboratory Chain of Custody forms	X		Analyses as requested; accurate transcription of field COC	X			
Sample Chronology and Consistency	X		Accurate representation of dates, times of receipt, preparation, and analysis	X			
Communication Records with Lab	X		N/A	-	-	-	
EDD Format Consistency	X		EDD format and content as requested	X			
Sample Identification, Results Nomenclature, and Data Qualifier Consistency	X		All included in final report	X			
Method Detection Limit Consistency	X		MDLs consistent between samples		X		Dilution varies between samples
Instrument Calibration Records	X		Present and no nonconformance noted	X			
Laboratory Report Complete	X		Includes QC component	X			
Holding Times	X		Analyses performed within allowed holding time		X		pH required qualification in 13 samples

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Method	X		Method as requested	X			
Reporting Limits	X		RLs as requested		X		RLs for the following were not met B – 4 samples (results>RL) Ca – all samples (results>RL) Cl^- – 1 sample (results>RL) Fe – all samples (results>RL) SO4 – 14 samples (results>RL) TDS – 14 samples (results>RL)
			MDLs<RLs		X		RL=MDL for Ag, Zn
			MDLs<GPS			X	Background sampling (no GPS to compare against)
QC Validation							
Evaluate Accuracy							
Matrix Spike (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table		X		MS recoveries outside control limits for Na
Laboratory Control Sample (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Evaluate Precision							
Matrix Spike Duplicate (RPD)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Field Duplicate (RPD)	X		RPD ≤ 20%		X		Cu was detected in MW-30 and not detected in MWT-30. Combined radium had RPD > 20% in both parent/field duplicate pairs
Evaluate Representativeness							
Equipment Blanks (if applicable)	N/A		Non-detect (<RL)			X	
QC Verification							
Verify Instrument Calibration & Analytical Process							
Initial Calibration Verification	X		Laboratory-determined	-	-	-	
Continuing Calibration Verification	X		Laboratory-determined	-	-	-	
Initial Calibration Blank	X		Laboratory-determined	-	-	-	
Continuing Calibration Blank	X		Laboratory-determined	-	-	-	
Serial Dilutions	X		Laboratory-determined	-	-	-	
Post-Digestion Spikes	X		Laboratory-determined	-	-	-	
Internal Standards	X		Laboratory-determined	-	-	-	
Laboratory Duplicate (RPD)	X		Laboratory-determined	-	-	-	TDS duplicate RPDs outside control limits affecting one project sample.

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Method Blanks	X		Laboratory-determined	-	-	-	
Evaluate Completeness (# usable measurements/ # unusable measurements)							
Completeness	X		100%	X			

Other instances of nonconformance to QC control limits noted on case narrative:

Sodium matrix spikes were outside control limits in T131230-MS1. Because the background concentration of these analytes was greater than four times the spike amount, qualification was not required.

Vanadium matrix spikes were outside control limits in T131230-MS1. Because there was no positive result in the non-spiked version of the sample, no data required qualification.

“The LCS recovered at (135%). The limits in our LIMS system at 75-125 reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (62-148%) per method requirements. The LCS passes, no further action is required (LCS 160-598535/2-A).” No qualification was required.

“The LCS recovered at (128%). The limits in our LIMS system at 75-125 reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (62-148%) per method requirements. The LCS passes, no further action is required (LCS 160-598539/2-A).” No qualification was required.

Comments:

Cu was detected in parent sample MW-30 and not detected in field duplicate MWT-30. Cu in MW-30 required qualification as estimated with high bias (J+) and as estimated but not detected (UJ) in the MWT-30.

The TDS results in laboratory duplicate T131189-DUP1 had RPD outside control limits. TDS in MW-31 required qualification as estimated (J).

pH in samples MW-01R, MW-06, MW-07, MW-10, MW-11, MW-12, MW-18, MW-19, MW-20, MW-30, MWT-30, MW-31, and MW-32 required qualification as estimated (J) due to analysis outside the EPA-established 24-hour hold time.

Rad-228 MB 160-598539/1-A was detected above the MDC but below the RL. Rad-228 and consequently combined radium required qualification as estimated with high bias (J+) in associated samples MW-07, MW-08, MW-20, MW-27, MWT-27, and SG-02.

Combined radium had an RPD of 37% in the MW-27/MWT-27 parent/field duplicate pair. Rad-228 and combined radium in both MW-27 and MWT-27 required qualification as estimated (J). The J+ qualifier resulting from the MB detection has been replaced by estimated with no bias (J).

Combined radium had an RPD of 31% in the MW-30/MWT-30 parent/field duplicate pair. Rad-226, Rad-228, and combined radium in both MW-30 and MWT-30 required qualification as estimated (J) or (UJ) if non-detect.

Data Verification & Validation Report

Grand Haven-Harbor Island

Sampling Event (dates and purpose): Background Round 3 – February 2023

Data Package Number: 23B0260
Data Validator: Aryka Thomson

Lab Report Date: 03/20/2023
Data Validation Completion Date: 04/10/2023

General Overall Assessment:
_____ Data are usable without qualification.
__X__ Data are usable with qualification (as noted below).
_____ Some or all data are unusable (as noted below).

Wells planned for sampling:

Unit 3A/B	Unit 1/2	Well Designation	Well ID	Planned for Sampling
✓	✓	Nature & Extent	MW-01R	X
✓		Point of Compliance	MW-02	X
✓		Point of Compliance	MW-03	X
✓		Point of Compliance	MW-04	X
	✓	Point of Compliance	MW-06	X
✓	✓	Nature & Extent	MW-07	X
	✓	Point of Compliance	MW-08	X
✓	✓	Nature & Extent	MW-09	X
✓	✓	Nature & Extent	MW-10	X
✓		Point of Compliance	MW-11	X
✓		Point of Compliance	MW-12	X
	✓	Point of Compliance	MW-18	X
	✓	Point of Compliance	MW-19	X
	✓	Point of Compliance	MW-20	X
✓	✓	Background	MW-27	X
	✓	Point of Compliance	MW-30	X
	✓	Point of Compliance	MW-31	X
✓	✓	Nature & Extent	MW-32	X
✓	✓	Background	MW-33	X
✓	✓	Background	MW-34	X
✓	✓	Surface Water	SG-02	X
✓	✓	Surface Water	SG-03	X
✓	✓	Surface Water	SG-04R	X
✓	✓	Surface Water	SG-05	X
✓	✓	Surface Water	SG-06	X

Data Summary

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-01R	GW	23B0260-19	02/08/2023	X	X	X	X	X	X	
MW-02	GW	23B0260-20	02/08/2023	X	X	X	X	X	X	
MW-03	GW	23B0260-13	02/07/2023	X	X	X	X	X	X	
MW-04	GW	23B0260-12	02/07/2023	X	X	X	X	X	X	
MW-06	GW	23B0260-11	02/06/2023	X	X	X	X	X	X	
MW-07	GW	23B0260-06	02/07/2023	X	X	X	X	X	X	
MW-08	GW	23B0260-07	02/07/2023	X	X	X	X	X	X	
MW-09	GW	23B0260-01	02/06/2023	X	X	X	X	X	X	

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-10	GW	23B0260-10	02/06/2023	X	X	X	X	X	X	
MW-11	GW	23B0260-21	02/08/2023	X	X	X	X	X	X	
MW-12	GW	23B0260-14	02/07/2023	X	X	X	X	X	X	
MW-18	GW	23B0260-17	02/08/2023	X	X	X	X	X	X	
MW-19	GW	23B0260-16	02/08/2023	X	X	X	X	X	X	
MW-20	GW	23B0260-05	02/07/2023	X	X	X	X	X	X	
MW-27	GW	23B0260-09	02/07/2023	X	X	X	X	X	X	
MW-30	GW	23B0260-03	02/06/2023	X	X	X	X	X	X	
MW-31	GW	23B0260-08	02/07/2023	X	X	X	X	X	X	
MW-32	GW	23B0260-15	02/08/2023	X	X	X	X	X	X	
MW-33	GW	23B0260-18	02/08/2023	X	X	X	X	X	X	
MW-34	GW	23B0260-22	02/08/2023	X	X	X	X	X	X	
MWT-09	QC	23B0260-02	02/06/2023	X	X	X	X	X	X	
MWT-30	QC	23B0260-04	02/06/2023	X	X	X	X	X	X	

Other analytes requested for analysis: Na, Mg, K, HCO_3, CO_3, hardness

Any planned sampling or analysis NOT completed? If yes, explain: SG-02, SG-03, and SG-04R were not sampled because the surface water was frozen solid. SG-05 was not sampled because the area was dry with the nearest surface water ~20-30 feet northeast. SG-06 was not sampled because the area was dry with the nearest surface water ~50-60 ft away.

Data Verification & Validation Checklist

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Field Data							
Sample Collection Field Forms	X		Purging performed as required in the Groundwater Monitoring Plan	X			
Field Calibration Records	X		Field instruments calibrated daily according to manufacturer specifications	X			
Chain of Custody	X		Accurately reflect samples, collection dates/times, analyses, bottles, etc.	X			
Field decontamination documentation	N/A		Record of decontamination for non-dedicated sampling equipment			X	
Drilling logs	X		N/A	-	-	-	
Well construction logs	X		N/A	-	-	-	
Well development field forms	X		N/A	-	-	-	
Analytical Data Package							
Cover Sheet	X		N/A	-	-	-	
Case Narrative	X		Summarizes sample receipt and any exceptions to QC acceptance criteria	X			
Internal Laboratory Chain of Custody forms	X		Analyses as requested; accurate transcription of field COC	X			
Sample Chronology and Consistency	X		Accurate representation of dates, times of receipt, preparation, and analysis	X			
Communication Records with Lab	X		N/A	-	-	-	
EDD Format Consistency	X		EDD format and content as requested	X			
Sample Identification, Results Nomenclature, and Data Qualifier Consistency	X		All included in final report	X			
Method Detection Limit Consistency	X		MDLs consistent between samples		X		Dilution varies between samples
Instrument Calibration Records	X		Present and no nonconformance noted	X			
Laboratory Report Complete	X		Includes QC component	X			
Holding Times	X		Analyses performed within allowed holding time		X		pH required qualification in 11 samples

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Method	X		Method as requested	X			
Reporting Limits	X		RLs as requested		X		RLs for the following were not met B – 3 samples (results > RL) Be – 4 samples (ND) Ca – 22 samples (results > RL) Fe – 20 samples (results > RL except 1 sample) Mo – 4 samples (ND except 1 sample) Ni – 4 samples (ND) SO4 – 15 samples (results < RL) TDS – 2 samples (results > RL) V – 4 samples (ND) Zn – 4 samples (ND)
			MDLs<RLs		X		RL=MDL for Ag, Zn
			MDLs<GPS			X	Background sampling (no GPS to compare against)
QC Validation							
Evaluate Accuracy							
Matrix Spike (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table		X		MS recoveries outside control limits for F
Laboratory Control Sample (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Evaluate Precision							
Matrix Spike Duplicate (RPD)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Field Duplicate (RPD)	X		RPD ≤ 20%		X		Zn was not detected in MW-09 and detected in MWT-09. TSS was not detected in MW-30 and detected in MWT-30. Combined radium had RPD > 20% in both parent/field duplicate pairs
Evaluate Representativeness							
Equipment Blanks (if applicable)	N/A		Non-detect (<RL)			X	
QC Verification							
Verify Instrument Calibration & Analytical Process							
Initial Calibration Verification	X		Laboratory-determined	-	-	-	
Continuing Calibration Verification	X		Laboratory-determined	-	-	-	
Initial Calibration Blank	X		Laboratory-determined	-	-	-	

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Continuing Calibration Blank	X		Laboratory-determined	-	-	-	
Serial Dilutions	X		Laboratory-determined	-	-	-	
Post-Digestion Spikes	X		Laboratory-determined	-	-	-	
Internal Standards	X		Laboratory-determined	-	-	-	
Laboratory Duplicate (RPD)	X		Laboratory-determined	-	-	-	
Method Blanks	X		Laboratory-determined	-	-	-	
Evaluate Completeness (# usable measurements/ # unusable measurements)							
Completeness	X		100%	X			

Other instances of nonconformance to QC control limits noted on case narrative:

Reporting limits were raised on the following samples and constituents due to sample matrix interferences with the internal standards. No qualification was required.

Constituent	**Samples**
Antimony	MW-30, MWT-30, MW-10, MW-06, MW-04, MW-03, MW-19, MW-18, MW-01R, MW-02
Arsenic	MW-30, MWT-30
Beryllium	MW-30, MWT-30, MW-03, MW-19
Cadmium	MW-30, MWT-30, MW-10, MW-06, MW-04, MW-03, MW-19, MW-18, MW-01R, MW-02
Chromium	MW-19
Copper	MW-30, MWT-30, MW-03, MW-19
Lead	MW-09, MWT-09, MW-30, MWT-30, MW-10, MW-06, MW-04, MW-03, MW-19, MW-18, MW-01R, MW-02, MW-11
Molybdenum	MW-30, MWT-30, MW-03, MW-19
Nickel	MW-30, MWT-30, MW-03, MW-19
Silver	MW-30, MWT-30, MW-10, MW-06, MW-04, MW-03, MW-19, MW-18, MW-01R, MW-02
Thallium	MW-09, MWT-09, MW-30, MWT-30, MW-10, MW-06, MW-04, MW-03, MW-19, MW-18, MW-01R, MW-02, MW-11

Fluoride matrix spike was outside control limits in T132475-MS1. Fluoride in MW-33 required qualification as estimated (J).

Calcium matrix spikes were outside control limits in T132721-MS2 and T132722-MS1. Because the background concentration of these analytes was greater than four times the spike amount, qualification was not required.

Vanadium matrix spikes were outside control limits in T132722-MS1. Because there was no positive result in the non-spiked version of the sample, no data required qualification.

Boron was found in the method blank T132722-BLK1. Because the concentration in the blank was less than 10% of the sample concentration, no qualification was required.

Comments:

Zinc was not detected in parent sample MW-09 and detected in field duplicate MWT-09. Zinc in MW-09 required qualification as estimated but not detected (UJ) and MWT-09 required qualification as estimated with high bias (J+).

TSS was not detected in parent sample MW-30 and detected in field duplicate MWT-30. TSS in MW-30 required qualification as estimated but not detected (UJ) and MWT-30 required qualification as estimated with high bias (J+).

pH in samples MW-02, MW-09, MWT-09, MW-10, MW-11, MW-18, MW-19, MW-20, MW-30, MWT-30, and MW-32 required qualification as estimated (J) due to analysis outside the EPA-established 24-hour hold time.

Combined radium had an RPD of 37% in the MW-09/MWT-09 parent/field duplicate pair. Rad-226 required qualification as estimated with low bias (J-) in MW-09 and as estimated with high bias (J+) in MWT-09. Rad-228 required qualification as estimated with high bias (J+) in MW-09 and as estimated with low bias (J-) in MWT-09. Combined radium required qualified as estimated (J) in both MW-09 and MWT-09. Since all results were non-detect, these qualifiers have been resolved to estimated but not detected (UJ).

Combined radium had an RPD of 35% in the MW-30/MWT-30 parent/field duplicate pair. Rad-226, Rad-228, and combined radium required qualification as estimated with low bias (J-) in MW-30 and with high bias (J+) in MWT-30. MW-30 results and Rad-226 in MWT-30 were non-detect, so required qualifiers have been resolved to estimated but not detected (UJ).

Data Verification & Validation Report

Grand Haven-Harbor Island

Sampling Event (dates and purpose): Background Round 4 – March 2023

Data Package Number: 23C0625
Data Validator: Andrew Byks

Lab Report Date: 04/20/2023
Data Validation Completion Date: 04/21/2023

General Overall Assessment:
_____ Data are usable without qualification.
__X__ Data are usable with qualification (as noted below).
_____ Some or all data are unusable (as noted below).

Wells planned for sampling:

Unit 3A/B	Unit 1/2	Well Designation	Well ID	Planned for Sampling
✓	✓	Nature & Extent	MW-01R	X
✓		Point of Compliance	MW-02	X
✓		Point of Compliance	MW-03	X
✓		Point of Compliance	MW-04	X
	✓	Point of Compliance	MW-06	X
✓	✓	Nature & Extent	MW-07	X
	✓	Point of Compliance	MW-08	X
✓	✓	Nature & Extent	MW-09	X
✓	✓	Nature & Extent	MW-10	X
✓		Point of Compliance	MW-11	X
✓		Point of Compliance	MW-12	X
	✓	Point of Compliance	MW-18	X
	✓	Point of Compliance	MW-19	X
	✓	Point of Compliance	MW-20	X
✓	✓	Background	MW-27	X
	✓	Point of Compliance	MW-30	X
	✓	Point of Compliance	MW-31	X
✓	✓	Nature & Extent	MW-32	X
✓	✓	Background	MW-33	X
✓	✓	Background	MW-34	X
✓	✓	Surface Water	SG-02	X
✓	✓	Surface Water	SG-03	X
✓	✓	Surface Water	SG-04R	X
✓	✓	Surface Water	SG-05	X
✓	✓	Surface Water	SG-06	X

Data Summary

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-01R	GW	23C0625-01	03/14/2023	X	X	X	X	X	X	
MW-02	GW	23C0625-02	03/14/2023	X	X	X	X	X	X	
MW-03	GW	23C0625-03	03/14/2023	X	X	X	X	X	X	
MW-04	GW	23C0625-04	03/14/2023	X	X	X	X	X	X	
MW-06	GW	23C0625-05	03/14/2023	X	X	X	X	X	X	
MW-07	GW	23C0625-06	03/13/2023	X	X	X	X	X	X	
MW-08	GW	23C0625-07	03/14/2023	X	X	X	X	X	X	
MW-09	GW	23C0625-08	03/14/2023	X	X	X	X	X	X	

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-10	GW	23C0625-09	03/14/2023	X	X	X	X	X	X	
MW-11	GW	23C0625-10	03/14/2023	X	X	X	X	X	X	
MW-12	GW	23C0625-11	03/13/2023	X	X	X	X	X	X	
MW-18	GW	23C0625-12	03/13/2023	X	X	X	X	X	X	
MW-19	GW	23C0625-13	03/13/2023	X	X	X	X	X	X	
MW-20	GW	23C0625-14	03/13/2023	X	X	X	X	X	X	
MW-27	GW	23C0625-15	03/13/2023	X	X	X	X	X	X	
MW-30	GW	23C0625-16	03/13/2023	X	X	X	X	X	X	
MW-31	GW	23C0625-17	03/14/2023	X	X	X	X	X	X	
MW-32	GW	23C0625-18	03/14/2023	X	X	X	X	X	X	
MW-33	GW	23C0625-25	03/15/2023	X	X	X	X	X	X	
MW-34	GW	23C0625-26	03/15/2023	X	X	X	X	X	X	
MWT-12	QC	23C0625-19	03/13/2023	X	X	X	X	X	X	
MWT-27	QC	23C0625-20	03/13/2023	X	X	X	X	X	X	
SG-02	SW	23C0625-21	03/14/2023	X	X	X	X	X	X	
SG-03	SW	23C0625-22	03/14/2023	X	X	X	X	X	X	
SG-04R	SW	23C0625-23	03/14/2023	X	X	X	X	X	X	
SG-05	SW	23C0625-24	03/14/2023	X	X	X	X	X	X	

Other analytes requested for analysis: Na, Mg, K, HCO_3, CO_3, hardness

Any planned sampling or analysis NOT completed? If yes, explain: SG-06 was not sampled because the area was dry.

Data Verification & Validation Checklist

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Field Data							
Sample Collection Field Forms	X		Purging performed as required in the Groundwater Monitoring Plan	X			
Field Calibration Records	X		Field instruments calibrated daily according to manufacturer specifications	X			
Chain of Custody	X		Accurately reflect samples, collection dates/times, analyses, bottles, etc.	X			
Field decontamination documentation	N/A		Record of decontamination for non-dedicated sampling equipment			X	
Drilling logs	X		N/A	-	-	-	
Well construction logs	X		N/A	-	-	-	
Well development field forms	X		N/A	-	-	-	
Analytical Data Package							
Cover Sheet	X		N/A	-	-	-	
Case Narrative	X		Summarizes sample receipt and any exceptions to QC acceptance criteria	X			
Internal Laboratory Chain of Custody forms	X		Analyses as requested; accurate transcription of field COC	X			
Sample Chronology and Consistency	X		Accurate representation of dates, times of receipt, preparation, and analysis	X			
Communication Records with Lab	X		N/A	-	-	-	
EDD Format Consistency	X		EDD format and content as requested	X			
Sample Identification, Results Nomenclature, and Data Qualifier Consistency	X		All included in final report	X			
Method Detection Limit Consistency	X		MDLs consistent between samples		X		Dilution varies between samples
Instrument Calibration Records	X		Present and no nonconformance noted	X			
Laboratory Report Complete	X		Includes QC component	X			
Holding Times	X		Analyses performed within allowed holding time		X		pH required qualification in 18 samples

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Method	X		Method as requested	X			
Reporting Limits	X		RLs as requested		X		RLs for the following were not met B – 7 samples (results > RL) Ca – 26 samples (results > RL) Fe – 26 samples (results > RL except 2 samples) Li – 5 samples (results > RL) Mg – 21 samples (results > RL) Na – 19 samples (results > RL) K – 9 samples (results > RL except 2 samples) SO4 – 17 samples (results < RL) Tl – 4 samples (results < RL)
			MDLs<RLs		X		RL=MDL for Ag, Zn
			MDLs<GPS			X	Background sampling (no GPS to compare against)
QC Validation							
Evaluate Accuracy							
Matrix Spike (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table		X		MS recoveries outside control limits for B, Ca, Mg, K, Na, SO4
Laboratory Control Sample (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table		X		LCS recoveries outside control limits for Rad-228
Evaluate Precision							
Matrix Spike Duplicate (RPD)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Field Duplicate (RPD)	X		RPD ≤ 20%		X		Combined radium had RPD > 20% in both parent/field duplicate pairs; Li was detected in a parent sample and non-detect in the field duplicate
Evaluate Representativeness							
Equipment Blanks (if applicable)	N/A		Non-detect (<RL)			X	
QC Verification							
Verify Instrument Calibration & Analytical Process							
Initial Calibration Verification	X		Laboratory-determined	-	-	-	
Continuing Calibration Verification	X		Laboratory-determined	-	-	-	
Initial Calibration Blank	X		Laboratory-determined	-	-	-	
Continuing Calibration Blank	X		Laboratory-determined	-	-	-	

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Serial Dilutions	X		Laboratory-determined	-	-	-	
Post-Digestion Spikes	X		Laboratory-determined	-	-	-	
Internal Standards	X		Laboratory-determined	-	-	-	
Laboratory Duplicate (RPD)	X		Laboratory-determined	-	-	-	
Method Blanks	X		Laboratory-determined	-	-	-	
Evaluate Completeness (# usable measurements/ # unusable measurements)							
Completeness	X		100%	X			

Other instances of nonconformance to QC control limits noted on case narrative:

Reporting limits were raised on the following samples and constituents due to sample matrix interferences with the internal standards. No qualification was required.

Constituent	**Samples**
Lead	MW-03, MW-10, MW-19, MW-30
Thallium	MW-03, MW-10, MW-19, MW-30

Sulfate matrix spike was outside control limits in T133757-MS1. Sulfate in sample SG-05 required qualification as estimated (J).

Boron, calcium, magnesium, potassium, and sodium matrix spikes were outside of control limits in T133771-MS1 and T133771-MS2. Because the background concentration of these analytes was greater than four times the spike amount, qualification was not required.

“The Ra-228 laboratory control sample and/or laboratory control sample duplicate (LCS) associated with the following samples recovered at 68%: (LCS 160-604779/2-A). The limits in our LIMS system at (75-125%) reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (62-148%) per method requirements. The LCS is within criteria and no further action is required.” No qualification was required.

Comments:

pH in samples MW-02, MW-03, MW-04, MW-07, MW-08, MW-11, MW-12, MW-18, MW-19, MW-20, MW-27, MW-30, MW-31, MW-32, MWT-12, MWT-27, SG-02 and SG-03 required qualification as estimated (J) due to analysis outside the EPA-established 24-hour hold time.

Lithium was detected in parent sample MW-12 and non-detect in field duplicate MWT-12. Parent sample MW-12 required qualification as estimated with high bias (J+) and field duplicate MWT-12 required qualification as estimated but not detected (UJ).

Rad-228 in MB 160-604804/1-A was detected above the MDC but below the RL. Rad-228 and consequently combined radium required qualification as estimated with high bias (J+) or estimated but non detect (UJ) is associated samples MW-01R, MW-02, MW-03, MW-04, MW-06, MW-07, MW-08, MW-09, MW-10, MW-11, MW-12, MW-18, MW-19, MW-20, and MW-27.

Radium 228 and combined radium had RPDs of 44% and 25%, respectively in the MW-27/MWT-27 parent/field duplicate pair. Rad-228 and combined radium required qualification as estimated but non detect (UJ) in the parent/field duplicate pair.

Rad-226, Rad-228, and combined radium had RPDs of 34%, 121%, and 77%, respectively in the MW-12/MWT-12 parent/field duplicate pair. Rad-226, Rad-228, and combined radium required qualification as estimated but non detect (UJ) in the parent/field duplicate pair.

Data Verification & Validation Report

Grand Haven-Harbor Island

Sampling Event (dates and purpose): Background Round 5 – April 2023

Data Package Number: 23D0863
Data Validator: Aryka Thomson

Lab Report Date: 06/02/2023
Data Validation Completion Date: 06/12/2023

General Overall Assessment:
_____ Data are usable without qualification.
__X__ Data are usable with qualification (as noted below).
_____ Some or all data are unusable (as noted below).

Wells planned for sampling:

Unit 3A/B	Unit 1/2	Well Designation	Well ID	Planned for Sampling
✓	✓	Nature & Extent	MW-01R	X
✓		Point of Compliance	MW-02	X
✓		Point of Compliance	MW-03	X
✓		Point of Compliance	MW-04	X
	✓	Point of Compliance	MW-06	X
✓	✓	Nature & Extent	MW-07	X
	✓	Point of Compliance	MW-08	X
✓	✓	Nature & Extent	MW-09	X
✓	✓	Nature & Extent	MW-10	X
✓		Point of Compliance	MW-11	X
✓		Point of Compliance	MW-12	X
	✓	Point of Compliance	MW-18	X
	✓	Point of Compliance	MW-19	X
	✓	Point of Compliance	MW-20	X
✓	✓	Background	MW-27	X
	✓	Point of Compliance	MW-30	X
	✓	Point of Compliance	MW-31	X
✓	✓	Nature & Extent	MW-32	X
✓	✓	Background	MW-33	X
✓	✓	Background	MW-34	X
✓	✓	Surface Water	SG-02	X
✓	✓	Surface Water	SG-03	X
✓	✓	Surface Water	SG-04R	X
✓	✓	Surface Water	SG-05	X
✓	✓	Surface Water	SG-06	X

Data Summary

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-01R	GW	23D0863-01	04/18/2023	X	X	X	X	X	X	
MW-02	GW	23D0863-02	04/18/2023	X	X	X	X	X	X	
MW-03	GW	23D0863-03	04/18/2023	X	X	X	X	X	X	
MW-04	GW	23D0863-04	04/19/2023	X	X	X	X	X	X	
MW-06	GW	23D0863-05	04/18/2023	X	X	X	X	X	X	
MW-07	GW	23D0863-06	04/18/2023	X	X	X	X	X	X	
MW-08	GW	23D0863-07	04/18/2023	X	X	X	X	X	X	
MW-09	GW	23D0863-08	04/18/2023	X	X	X	X	X	X	

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-10	GW	23D0863-09	04/18/2023	X	X	X	X	X	X	
MW-11	GW	23D0863-11	04/18/2023	X	X	X	X	X	X	
MW-12	GW	23D0863-12	04/19/2023	X	X	X	X	X	X	
MW-18	GW	23D0863-13	04/18/2023	X	X	X	X	X	X	
MW-19	GW	23D0863-14	04/18/2023	X	X	X	X	X	X	
MW-20	GW	23D0863-15	04/18/2023	X	X	X	X	X	X	
MW-27	GW	23D0863-17	04/18/2023	X	X	X	X	X	X	
MW-30	GW	23D0863-18	04/18/2023	X	X	X	X	X	X	
MW-31	GW	23D0863-19	04/18/2023	X	X	X	X	X	X	
MW-32	GW	23D0863-20	04/18/2023	X	X	X	X	X	X	
MW-33	GW	23D0863-21	04/18/2023	X	X	X	X	X	X	
MW-34	GW	23D0863-22	04/18/2023	X	X	X	X	X	X	
MWT-10	QC	23D0863-10	04/18/2023	X	X	X	X	X	X	
MWT-20	QC	23D0863-16	04/18/2023	X	X	X	X	X	X	
SG-02	SW	23D0863-23	04/19/2023	X	X	X	X	X	X	
SG-03	SW	23D0863-24	04/19/2023	X	X	X	X	X	X	
SG-04R	SW	23D0863-25	04/19/2023	X	X	X	X	X	X	
SG-05	SW	23D0863-26	04/19/2023	X	X	X	X	X	X	
SG-05	SW	23D0863-27	04/19/2023							X

Other analytes requested for analysis: Na, Mg, K, HCO_3, CO_3, hardness

Any planned sampling or analysis NOT completed? If yes, explain: SG-06 was not sampled because the area was dry.

Data Verification & Validation Checklist

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Field Data							
Sample Collection Field Forms	X		Purging performed as required in the Groundwater Monitoring Plan	X			
Field Calibration Records	X		Field instruments calibrated daily according to manufacturer specifications	X			
Chain of Custody	X		Accurately reflect samples, collection dates/times, analyses, bottles, etc.	X			
Field decontamination documentation	N/A		Record of decontamination for non-dedicated sampling equipment			X	
Drilling logs	X		N/A	-	-	-	
Well construction logs	X		N/A	-	-	-	
Well development field forms	X		N/A	-	-	-	
Analytical Data Package							
Cover Sheet	X		N/A	-	-	-	
Case Narrative	X		Summarizes sample receipt and any exceptions to QC acceptance criteria	X			
Internal Laboratory Chain of Custody forms	X		Analyses as requested; accurate transcription of field COC	X			
Sample Chronology and Consistency	X		Accurate representation of dates, times of receipt, preparation, and analysis	X			
Communication Records with Lab	X		N/A	-	-	-	
EDD Format Consistency	X		EDD format and content as requested	X			
Sample Identification, Results Nomenclature, and Data Qualifier Consistency	X		All included in final report	X			
Method Detection Limit Consistency	X		MDLs consistent between samples		X		Dilution varies between samples
Instrument Calibration Records	X		Present and no nonconformance noted	X			
Laboratory Report Complete	X		Includes QC component	X			
Holding Times	X		Analyses performed within allowed holding time		X		pH required qualification in 7 samples 07, 13, 17, 19, 20, 21, 22

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Method	X		Method as requested	X			
Reporting Limits	X		RLs as requested		X		RLs for the following were not met B – 3 samples (results > RL) Be – 7 samples (results < RL) Ca – 27 samples (results > RL) Cr – 27 samples (results < RL in 18 samples) Fe – 27 samples (results < RL in 1 sample) Li – 1 sample (results > RL) Mo – 17 samples (results < RL in 10 samples) Ni – 7 samples (results < RL in 6 samples) SO4 – 17 samples (results > RL) V – 7 samples (results < RL in 7 samples) Zn – 7 samples (results < RL in 3 samples)
			MDLs<RLs	X			
			MDLs<GPS			X	Background sampling (no GPS to compare against)
QC Validation							
Evaluate Accuracy							
Matrix Spike (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table		X		MS recoveries outside control limits for B, Ca, K, Na
Laboratory Control Sample (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Evaluate Precision							
Matrix Spike Duplicate (RPD)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Field Duplicate (RPD)	X		RPD ≤ 20%		X		Combined radium had RPD 72% in one parent/field duplicate pair; TSS had RPD 23% in one parent/field duplicate pair
Evaluate Representativeness							
Equipment Blanks (if applicable)	N/A		Non-detect (<RL)			X	
QC Verification							
Verify Instrument Calibration & Analytical Process							
Initial Calibration Verification	X		Laboratory-determined	-	-	-	
Continuing Calibration Verification	X		Laboratory-determined	-	-	-	
Initial Calibration Blank	X		Laboratory-determined	-	-	-	

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Continuing Calibration Blank	X		Laboratory-determined	-	-	-	
Serial Dilutions	X		Laboratory-determined	-	-	-	
Post-Digestion Spikes	X		Laboratory-determined	-	-	-	
Internal Standards	X		Laboratory-determined	-	-	-	
Laboratory Duplicate (RPD)	X		Laboratory-determined	-	-	-	
Method Blanks	X		Laboratory-determined	-	-	-	
Evaluate Completeness (# usable measurements/ # unusable measurements)							
Completeness	X		100%	X			

Other instances of nonconformance to QC control limits noted on case narrative:

Reporting limits were raised on the following samples and constituents due to sample matrix interferences with the internal standards. No qualification was required.

Constituent	**Samples**
Antimony	MW-02, MW-03, MW-04, MW-06, MW-09, MW-10, MWT-10, MW-11, MW-19, MW-30
Cadmium	MW-01R, MW-02, MW-03, MW-04, MW-06, MW-09, MW-10, MWT-10, MW-11, MW-19, MW-30
Lead	MW-01R, MW-02, MW-03, MW-04, MW-06, MW-09, MW-10, MWT-10, MW-11, MW-19, MW-30
Molybdenum	MW-01R, MW-03, MW-04, MW-06, MW-10, MWT-10, MW-30
Thallium	MW-01R, MW-02, MW-03, MW-04, MW-06, MW-09, MW-10, MWT-10, MW-11, MW-19, MW-30

Boron, calcium, and sodium matrix spikes were outside of control limits in T135349-MS1 and T135349-MS2. Because the background concentration of these analytes was greater than four times the spike amount, qualification was not required.

Potassium was outside of control limits in T135349-MS1. MW-01R required qualification as estimated (J).

Comments:

pH in samples MW-08, MW-18, MW-27, MW-31, MW-32, MW-33, and MW-34 required qualification as estimated (J) due to analysis outside the EPA-established 24-hour hold time.

TSS had an RPD of 23% in the MW-10/MWT-10 parent/field duplicate pair. Parent sample MW-10 required qualification as estimated with high bias (J+) and field duplicate MWT-10 required qualification as estimated with low bias (J-).

Rad-226, Rad-228, and combined radium had RPDs of 62%, 72%, and 72%, respectively in the MW-10/MWT-10 parent/field duplicate pair. Rad-226, Rad-228, and combined radium required qualification as estimated but non detect (UJ) in MW-10, Rad-226 required qualification as estimated but non detect (UJ) in MWT-10 and Rad-228 and combined radium required qualification as estimated with high bias (J+).

Data Verification & Validation Report

Grand Haven-Harbor Island

Sampling Event (dates and purpose): Background Round 6 – May 2023

Data Package Number: 23E1107
Data Validator: Aryka Thomson

Lab Report Date: 07/05/2023
Data Validation Completion Date: 07/08/2023

General Overall Assessment:
_____ Data are usable without qualification.
__X__ Data are usable with qualification (as noted below).
_____ Some or all data are unusable (as noted below).

Wells planned for sampling:

Unit 3A/B	Unit 1/2	Well Designation	Well ID	Planned for Sampling
✓	✓	Nature & Extent	MW-01R	X
✓		Point of Compliance	MW-02	X
✓		Point of Compliance	MW-03	X
✓		Point of Compliance	MW-04	X
	✓	Point of Compliance	MW-06	X
✓	✓	Nature & Extent	MW-07	X
	✓	Point of Compliance	MW-08	X
✓	✓	Nature & Extent	MW-09	X
✓	✓	Nature & Extent	MW-10	X
✓		Point of Compliance	MW-11	X
✓		Point of Compliance	MW-12	X
	✓	Point of Compliance	MW-18	X
	✓	Point of Compliance	MW-19	X
	✓	Point of Compliance	MW-20	X
✓	✓	Background	MW-27	X
	✓	Point of Compliance	MW-30	X
	✓	Point of Compliance	MW-31	X
✓	✓	Nature & Extent	MW-32	X
✓	✓	Background	MW-33	X
✓	✓	Background	MW-34	X
✓	✓	Surface Water	SG-02	X
✓	✓	Surface Water	SG-03	X
✓	✓	Surface Water	SG-04R	X
✓	✓	Surface Water	SG-05	X
✓	✓	Surface Water	SG-06	X

Data Summary

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-01R	GW	23E1107-22	05/23/2023	X	X	X	X	X	X	
MW-02	GW	23E1107-19	05/23/2023	X	X	X	X	X	X	
MW-03	GW	23E1107-15	05/23/2023	X	X	X	X	X	X	
MW-04	GW	23E1107-08	05/23/2023	X	X	X	X	X	X	
MW-06	GW	23E1107-18	05/23/2023	X	X	X	X	X	X	
MW-07	GW	23E1107-13	05/23/2023	X	X	X	X	X	X	
MW-08	GW	23E1107-16	05/23/2023	X	X	X	X	X	X	
MW-09	GW	23E1107-17	05/23/2023	X	X	X	X	X	X	

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-10	GW	23E1107-21	05/23/2023	X	X	X	X	X	X	
MW-11	GW	23E1107-20	05/23/2023	X	X	X	X	X	X	
MW-12	GW	23E1107-07	05/23/2023	X	X	X	X	X	X	
MW-18	GW	23E1107-05	05/22/2023	X	X	X	X	X	X	
MW-19	GW	23E1107-12	05/22/2023	X	X	X	X	X	X	
MW-20	GW	23E1107-14	05/23/2023	X	X	X	X	X	X	
MW-27	GW	23E1107-02	05/22/2023	X	X	X	X	X	X	
MW-30	GW	23E1107-04	05/22/2023	X	X	X	X	X	X	
MW-31	GW	23E1107-10	05/22/2023	X	X	X	X	X	X	
MW-32	GW	23E1107-11	05/22/2023	X	X	X	X	X	X	
MW-33	GW	23E1107-03	05/22/2023	X	X	X	X	X	X	
MW-34	GW	23E1107-01	05/22/2023	X	X	X	X	X	X	
MWT-04	QC	23E1107-09	05/23/2023	X	X	X	X	X	X	
MWT-18	QC	23E1107-06	05/22/2023	X	X	X	X	X	X	
SG-02	SW	23E1107-23	05/23/2023	X	X	X	X	X	X	
SG-03	SW	23E1107-24	05/23/2023	X	X	X	X	X	X	X
SG-04R	SW	23E1107-25	05/23/2023	X	X	X	X	X	X	
SG-05	SW	23E1107-26	05/23/2023	X	X	X	X	X	X	

Other analytes requested for analysis: Na, Mg, K, HCO_3, CO_3, hardness

Any planned sampling or analysis NOT completed? If yes, explain: SG-06 was not sampled because the area was dry.

Data Verification & Validation Checklist

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Field Data							
Sample Collection Field Forms	X		Purging performed as required in the Groundwater Monitoring Plan	X			
Field Calibration Records	X		Field instruments calibrated daily according to manufacturer specifications	X			
Chain of Custody	X		Accurately reflect samples, collection dates/times, analyses, bottles, etc.	X			
Field decontamination documentation	N/A		Record of decontamination for non-dedicated sampling equipment			X	
Drilling logs	X		N/A	-	-	-	
Well construction logs	X		N/A	-	-	-	
Well development field forms	X		N/A	-	-	-	
Analytical Data Package							
Cover Sheet	X		N/A	-	-	-	
Case Narrative	X		Summarizes sample receipt and any exceptions to QC acceptance criteria	X			
Internal Laboratory Chain of Custody forms	X		Analyses as requested; accurate transcription of field COC	X			
Sample Chronology and Consistency	X		Accurate representation of dates, times of receipt, preparation, and analysis	X			
Communication Records with Lab	X		N/A	-	-	-	
EDD Format Consistency	X		EDD format and content as requested	X			
Sample Identification, Results Nomenclature, and Data Qualifier Consistency	X		All included in final report	X			
Method Detection Limit Consistency	X		MDLs consistent between samples		X		Dilution varies between samples
Instrument Calibration Records	X		Present and no nonconformance noted	X			
Laboratory Report Complete	X		Includes QC component	X			
Holding Times	X		Analyses performed within allowed holding time		X		pH required qualification in 20 samples

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Method	X		Method as requested	X			
Reporting Limits	X		RLs as requested		X		RLs for the following were not met B – all samples (results > RL) Cd – 14 samples (results < RL in 14 samples) Ca – 1 sample (results > RL) Fe – all samples (results < RL in 1 sample) Li – 20 samples (results > RL) SO4 – 17 samples (results > RL)
			MDLs<RLs	X			
			MDLs<GPS			X	Background sampling (no GPS to compare against)
QC Validation							
Evaluate Accuracy							
Matrix Spike (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table		X		MS recoveries outside control limits for B and Ca
Laboratory Control Sample (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Evaluate Precision							
Matrix Spike Duplicate (RPD)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Field Duplicate (RPD)	X		RPD ≤ 20%		X		Combined radium had RPD 38% in one parent/field duplicate pair; chromium was detected in the parent and non-detect in the field duplicate of one parent/field duplicate pair
Evaluate Representativeness							
Equipment Blanks (if applicable)	N/A		Non-detect (<RL)			X	
QC Verification							
Verify Instrument Calibration & Analytical Process							
Initial Calibration Verification	X		Laboratory-determined	-	-	-	
Continuing Calibration Verification	X		Laboratory-determined	-	-	-	
Initial Calibration Blank	X		Laboratory-determined	-	-	-	
Continuing Calibration Blank	X		Laboratory-determined	-	-	-	
Serial Dilutions	X		Laboratory-determined	-	-	-	
Post-Digestion Spikes	X		Laboratory-determined	-	-	-	
Internal Standards	X		Laboratory-determined	-	-	-	

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Laboratory Duplicate (RPD)	X		Laboratory-determined	-	-	-	
Method Blanks	X		Laboratory-determined	-	-	-	
Evaluate Completeness (# usable measurements/ # unusable measurements)							
Completeness	X		100%	X			

Other instances of nonconformance to QC control limits noted on case narrative:

Reporting limits were raised on the following samples and constituents due to sample matrix interferences with the internal standards. No qualification was required.

Constituent	**Samples**
Antimony	MW-01R, MW-02, MW-03, MW-04, MWT-04, MW-06, MW-09, MW-10, MW-11, MW-18, MWT-18, MW-19, MW-30, SG-04R
Cadmium	MW-01R, MW-02, MW-03, MW-04, MWT-04, MW-06, MW-09, MW-10, MW-11, MW-18, MWT-18, MW-19, MW-30, SG-04R
Lead	MW-01R, MW-03, MW-04, MWT-04, MW-06, MW-09, MW-10, MW-11, MW-18, MWT-18, MW-19, MW-30, SG-04R
Silver	MW-01R, MW-02, MW-03, MW-04, MWT-04, MW-06, MW-09, MW-10, MW-11, MW-18, MWT-18, MW-19, MW-30, SG-04R
Thallium	MW-01R, MW-02, MW-03, MW-04, MWT-04, MW-06, MW-09, MW-10, MW-11, MW-18, MWT-18, MW-19, MW-30, SG-04R

Boron and calcium matrix spikes were outside of control limits in T136871-MS1 and T136809-MS2. Because the background concentration of these analytes was greater than four times the spike amount, qualification was not required.

TSS had an RPD of 12% in the laboratory duplicate of MW-08. The RPD falls within the project RPD limit of 20%, so no qualification was required.

Comments:

pH in samples MW-02, MW-03, MW-04, MWT-04, MW-06, MW-07, MW-08, MW-09, MW-11, MW-12, MW-18, MWT-18, MW-19, MW-20, MW-27, MW-30, MW-31, MW-32, MW-33, and MW-34 required qualification as estimated (J) due to analysis outside the EPA-established 24-hour hold time.

Chromium was detected in parent sample MW-18 and non-detect in field duplicate MWT-18. MW-18 required qualification as estimated with high bias (J+) and MWT-18 required qualification as estimated but not detected (UJ).

Rad-226, Rad-228, and combined radium had RPDs of 34%, 43%, and 38%, respectively in the MW-18/MWT-18 parent/field duplicate pair. Rad-226, Rad-228, and combined radium required qualification as estimated but non detect (UJ) in MW-18 and MWT-18.

Data Verification & Validation Report

Grand Haven-Harbor Island

Sampling Event (dates and purpose): Background Round 7 – June 2023

Data Package Number: 23F1319
Data Validator: Aryka Thomson

Lab Report Date: 07/28/2023*
Data Validation Completion Date: 09/18/2023

General Overall Assessment:
_____ Data are usable without qualification.
__X__ Data are usable with qualification (as noted below).
_____ Some or all data are unusable (as noted below).

Wells planned for sampling:

Unit 3A/B	Unit 1/2	Well Designation	Well ID	Planned for Sampling
✓	✓	Nature & Extent	MW-01R	X
✓		Point of Compliance	MW-02	X
✓		Point of Compliance	MW-03	X
✓		Point of Compliance	MW-04	X
	✓	Point of Compliance	MW-06	X
✓	✓	Nature & Extent	MW-07	X
	✓	Point of Compliance	MW-08	X
✓	✓	Nature & Extent	MW-09	X
✓	✓	Nature & Extent	MW-10	X
✓		Point of Compliance	MW-11	X
✓		Point of Compliance	MW-12	X
	✓	Point of Compliance	MW-18	X
	✓	Point of Compliance	MW-19	X
	✓	Point of Compliance	MW-20	X
✓	✓	Background	MW-27	X
	✓	Point of Compliance	MW-30	X
	✓	Point of Compliance	MW-31	X
✓	✓	Nature & Extent	MW-32	X
✓	✓	Background	MW-33	X
✓	✓	Background	MW-34	X
✓	✓	Surface Water	SG-02	X
✓	✓	Surface Water	SG-03	X
✓	✓	Surface Water	SG-04R	X
✓	✓	Surface Water	SG-05	X
✓	✓	Surface Water	SG-06	X

Data Summary

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-01R	GW	23F1319-01	06/28/2023	X	X	X	X	X	X	
MW-02	GW	23F1319-02	06/27/2023	X	X	X	X	X	X	
MW-03	GW	23F1319-03	06/28/2023	X	X	X	X	X	X	
MW-04	GW	23F1319-04	06/28/2023	X	X	X	X	X	X	
MW-06	GW	23F1319-05	06/28/2023	X	X	X	X	X	X	
MW-07	GW	23F1319-06	06/27/2023	X	X	X	X	X	X	
MW-08	GW	23F1319-07	06/27/2023	X	X	X	X	X	X	
MW-09	GW	23F1319-08	06/27/2023	X	X	X	X	X	X	

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-10	GW	23F1319-09	06/27/2023	X	X	X	X	X	X	
MW-11	GW	23F1319-10	06/28/2023	X	X	X	X	X	X	
MW-12	GW	23F1319-11	06/27/2023	X	X	X	X	X	X	
MW-18	GW	23F1319-12	06/27/2023	X	X	X	X	X	X	
MW-19	GW	23F1319-13	06/28/2023	X	X	X	X	X	X	
MW-20	GW	23F1319-14	06/28/2023	X	X	X	X	X	X	
MW-27	GW	23F1319-15	06/27/2023	X	X	X	X	X	X	
MW-30	GW	23F1319-16	06/27/2023	X	X	X	X	X	X	
MW-31	GW	23F1319-17	06/27/2023	X	X	X	X	X	X	
MW-32	GW	23F1319-18	06/27/2023	X	X	X	X	X	X	
MW-33	GW	23F1319-19	06/27/2023	X	X	X	X	X	X	
MW-34	GW	23F1319-20	06/27/2023	X	X	X	X	X	X	
MWT-12	QC	23F1319-21	06/27/2023	X	X	X	X	X	X	
MWT-30	QC	23F1319-22	06/27/2023	X	X	X	X	X	X	
SG-02	SW	23F1319-23	06/28/2023	X	X	X	X	X	X	
SG-03	SW	23F1319-24	06/28/2023	X	X	X	X	X	X	
SG-04R	SW	23F1319-25	06/28/2023	X	X	X	X	X	X	
SG-05	SW	23F1319-26	06/28/2023	X	X	X	X	X	X	

Other analytes requested for analysis: Na, Mg, K, HCO_3, CO_3, hardness

Any planned sampling or analysis NOT completed? If yes, explain: SG-06 was not sampled because the area was dry.

*Report was revised 9/6/23 to include the definition of the 'J' flag used in the report.

Data Verification & Validation Checklist

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Field Data							
Sample Collection Field Forms	X		Purging performed as required in the Groundwater Monitoring Plan	X			
Field Calibration Records	X		Field instruments calibrated daily according to manufacturer specifications	X			
Chain of Custody	X		Accurately reflect samples, collection dates/times, analyses, bottles, etc.	X			
Field decontamination documentation	N/A		Record of decontamination for non-dedicated sampling equipment			X	
Drilling logs	X		N/A	-	-	-	
Well construction logs	X		N/A	-	-	-	
Well development field forms	X		N/A	-	-	-	
Analytical Data Package							
Cover Sheet	X		N/A	-	-	-	
Case Narrative	X		Summarizes sample receipt and any exceptions to QC acceptance criteria	X			
Internal Laboratory Chain of Custody forms	X		Analyses as requested; accurate transcription of field COC	X			
Sample Chronology and Consistency	X		Accurate representation of dates, times of receipt, preparation, and analysis	X			
Communication Records with Lab	X		N/A	-	-	-	
EDD Format Consistency	X		EDD format and content as requested	X			
Sample Identification, Results Nomenclature, and Data Qualifier Consistency	X		All included in final report	X			
Method Detection Limit Consistency	X		MDLs consistent between samples		X		Dilution varies between samples for Sb, Ba, B, Ca, Cl, F, Pb, Li, SO4, Th, TDS,
Instrument Calibration Records	X		Present and no nonconformance noted	X			
Laboratory Report Complete	X		Includes QC component	X			

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Holding Times	X		Analyses performed within allowed holding time		X		pH required qualification in 18 samples
Method	X		Method as requested	X			
Reporting Limits	X		RLs as requested		X		RLs for the following were not met B – all samples (results > RL) Ca – 5 samples (results > RL) Li – 8 samples (results > RL except 1 sample)
			MDLs<RLs	X			
			MDLs<MCLs	X			
			MDLs<GPS			X	Background sampling (no GPS to compare against)
QC Validation							
Evaluate Accuracy							
Matrix Spike (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table		X		MS recoveries outside control limits for B, Ca, K, Mg, Na, and Se
Laboratory Control Sample (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Evaluate Precision							
Matrix Spike Duplicate (RPD)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Field Duplicate (RPD)	X		RPD ≤ 20%		X		TSS non-detect in parent and detected in field duplicate; Rad-228 and combined radium had RPDs 88% and 69% Rad-226, Rad-228, and combined radium had RPD 30%, 37%, 36% in one parent/field duplicate pair
Evaluate Representativeness							
Equipment Blanks (if applicable)	N/A		Non-detect (<RL)			X	
QC Verification							
Verify Instrument Calibration & Analytical Process							
Initial Calibration Verification	X		Laboratory-determined	-	-	-	
Continuing Calibration Verification	X		Laboratory-determined	-	-	-	
Initial Calibration Blank	X		Laboratory-determined	-	-	-	
Continuing Calibration Blank	X		Laboratory-determined	-	-	-	
Serial Dilutions	X		Laboratory-determined	-	-	-	
Post-Digestion Spikes	X		Laboratory-determined	-	-	-	
Internal Standards	X		Laboratory-determined	-	-	-	

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Laboratory Duplicate (RPD)	X		Laboratory-determined	-	-	-	
Method Blanks	X		Laboratory-determined	-	-	-	
Evaluate Completeness (# usable measurements/ # unusable measurements)							
Completeness	X		100%	X			

Other instances of nonconformance to QC control limits noted on case narrative:

Even after multiple heating cycles, the sample was unable to reach a constant weight. TDS in MW-30 required qualification as estimated (J).

Boron, calcium, potassium, magnesium, and sodium recovered outside control limits in matrix spikes T138479-MS1 and T138479-MS2. Associated samples MW-01R and MW-02 required qualification as estimated (J) for these parameters. Because the background concentration of these analytes was greater than four times the spike amount, qualification was not required except for potassium in MW-02, which required qualification as estimated (J).

Selenium recovered outside control limits in matrix spike T138479-MS1. Associated sample MW-01R required qualification as estimated (J) for selenium.

The RPD between T138109-DUP1 and MW-02 was outside control limits for TDS. TDS in MW-02 required qualification as estimated (J).

Comments:

pH in samples MW-01R, MW-02, MW-04, MW-07, MW-08, MW-09, MW-10, MW-12, MWT-12, MW-18, MW-20, MW-27, MW-30, MWT-30, MW-31, MW-32, MW-33, and MW-34 required qualification as estimated (J) due to analysis outside the EPA-established 24-hour hold time.

Boron was detected above the reporting limit in method blanks T138479-BLK1 and T138527-BLK1. All samples required qualification as estimated with high bias (J+).

Arsenic, beryllium, cadmium, cobalt, molybdenum, lead, selenium, and thallium were detected above the reporting limit in method blank T138479-BLK1. These constituents required qualification as estimated with high bias (J+) or as estimated but not detected (UJ) in samples MW-01R, MW-02, MW-03, MW-04, MW-06, MW-07, MW-08, MW-09, MW-10, MW-11, MW-12, MW-18, MW-19, MW-20, MW-27, MW-30, MW-31, MW-32, MW-33, and MW-34.

TSS was not detected in parent sample MW-12 and detected in field duplicate MWT-12. MW-12 required qualification as estimated but not detected (UJ) and MWT-12 required qualification as estimated with high bias (J+).

pH had an RPD of 54% in the MW-30/MWT-30 parent/field duplicate pair. pH required qualification as estimated with low bias (J-) in MW-30 and with high bias (J+) in MWT-30. It is possible that there was nitric acid in the MW-30 bottle that would result in a low pH.

Rad-228 and combined radium had RPDs of 88% and 69%, respectively in the MW-12/MWT-12 parent/field duplicate pair. Rad-228 and combined radium required qualification as estimated but non-detect (UJ) in MW-12 and MWT-12.

Rad-226, Rad-228, and combined radium had RPDs of 30%, 37%, and 36%, respectively in the MW-30/MWT-30 parent/field duplicate pair. Rad-228 in MW-30 and Rad-226, Rad-228, and combined radium

in MWT-30 required qualification as estimated but non detect (UJ). Rad-226 and combined radium in MW-30 required qualification as estimated with high bias (J+).

Data Verification & Validation Report

Grand Haven-Harbor Island

Sampling Event (dates and purpose): Background Round 8 – August 2023

Data Package Number: 23H0444
Data Validator: Andrew Byks

Lab Report Date: 08/22/2023
Data Validation Completion Date: 9/19/2023

General Overall Assessment:
_____ Data are usable without qualification.
__X__ Data are usable with qualification (as noted below).
_____ Some or all data are unusable (as noted below).

Wells planned for sampling:

Unit 3A/B	Unit 1/2	Well Designation	Well ID	Planned for Sampling
✓	✓	Nature & Extent	MW-01R	X
✓		Point of Compliance	MW-02	X
✓		Point of Compliance	MW-03	X
✓		Point of Compliance	MW-04	X
	✓	Point of Compliance	MW-06	X
✓	✓	Nature & Extent	MW-07	X
	✓	Point of Compliance	MW-08	X
✓	✓	Nature & Extent	MW-09	X
✓	✓	Nature & Extent	MW-10	X
✓		Point of Compliance	MW-11	X
✓		Point of Compliance	MW-12	X
	✓	Point of Compliance	MW-18	X
	✓	Point of Compliance	MW-19	X
	✓	Point of Compliance	MW-20	X
✓	✓	Background	MW-27	X
	✓	Point of Compliance	MW-30	X
	✓	Point of Compliance	MW-31	X
✓	✓	Nature & Extent	MW-32	X
✓	✓	Background	MW-33	X
✓	✓	Background	MW-34	X
✓	✓	Surface Water	SG-02	X
✓	✓	Surface Water	SG-03	X
✓	✓	Surface Water	SG-04R	X
✓	✓	Surface Water	SG-05	X
✓	✓	Surface Water	SG-06	X

Data Summary

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-01R	GW	23H0444-01	08/08/2023	X	X	X	X	X	X	
MW-02	GW	23H0444-02	08/08/2023	X	X	X	X	X	X	
MW-03	GW	23H0444-03	08/07/2023	X	X	X	X	X	X	
MW-04	GW	23H0444-04	08/07/2023	X	X	X	X	X	X	
MW-06	GW	23H0444-05	08/08/2023	X	X	X	X	X	X	
MW-07	GW	23H0444-06	08/07/2023	X	X	X	X	X	X	
MW-08	GW	23H0444-07	08/08/2023	X	X	X	X	X	X	
MW-09	GW	23H0444-08	08/08/2023	X	X	X	X	X	X	

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-10	GW	23H0444-09	08/08/2023	X	X	X	X	X	X	
MW-11	GW	23H0444-10	08/08/2023	X	X	X	X	X	X	
MW-12	GW	23H0444-11	08/07/2023	X	X	X	X	X	X	
MW-18	GW	23H0444-12	08/08/2023	X	X	X	X	X	X	
MW-19	GW	23H0444-13	08/07/2023	X	X	X	X	X	X	
MW-20	GW	23H0444-14	08/07/2023	X	X	X	X	X	X	
MW-27	GW	23H0444-15	08/07/2023	X	X	X	X	X	X	
MW-30	GW	23H0444-16	08/08/2023	X	X	X	X	X	X	
MW-31	GW	23H0444-17	08/08/2023	X	X	X	X	X	X	
MW-32	GW	23H0444-18	08/08/2023	X	X	X	X	X	X	
MW-33	GW	23H0444-19	08/07/2023	X	X	X	X	X	X	
MW-34	GW	23H0444-20	08/07/2023	X	X	X	X	X	X	
MWT-04	QC	23H0444-21	08/07/2023	X	X	X	X	X	X	
MWT-12	QC	23H0444-22	08/07/2023	X	X	X	X	X	X	
SG-02	SW	23H0444-23	08/08/2023	X	X	X	X	X	X	
SG-03	SW	23H0444-24	08/08/2023	X	X	X	X	X	X	
SG-04R	SW	23H0444-25	08/08/2023	X	X	X	X	X	X	
SG-05	SW	23H0444-26	08/08/2023	X	X	X	X	X	X	
SG-06	SW	23H0444-27	08/08/2023	X	X	X	X	X	X	

Other analytes requested for analysis: Na, Mg, K, HCO_3, CO_3, hardness

Any planned sampling or analysis NOT completed? If yes, explain: N/A

Data Verification & Validation Checklist

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Field Data							
Sample Collection Field Forms	X		Purging performed as required in the Groundwater Monitoring Plan	X			
Field Calibration Records	X		Field instruments calibrated daily according to manufacturer specifications	X			
Chain of Custody	X		Accurately reflect samples, collection dates/times, analyses, bottles, etc.	X			
Field decontamination documentation	N/A		Record of decontamination for non-dedicated sampling equipment			X	
Drilling logs	X		N/A	-	-	-	
Well construction logs	X		N/A	-	-	-	
Well development field forms	X		N/A	-	-	-	
Analytical Data Package							
Cover Sheet	X		N/A	-	-	-	
Case Narrative	X		Summarizes sample receipt and any exceptions to QC acceptance criteria	X			
Internal Laboratory Chain of Custody forms	X		Analyses as requested; accurate transcription of field COC	X			
Sample Chronology and Consistency	X		Accurate representation of dates, times of receipt, preparation, and analysis	X			
Communication Records with Lab	X		N/A	-	-	-	
EDD Format Consistency	X		EDD format and content as requested	X			
Sample Identification, Results Nomenclature, and Data Qualifier Consistency	X		All included in final report	X			
Method Detection Limit Consistency	X		MDLs consistent between samples		X		Dilution varies between samples
Instrument Calibration Records	X		Present and no nonconformance noted	X			
Laboratory Report Complete	X		Includes QC component	X			
Holding Times	X		Analyses performed within allowed holding time		X		pH required qualification in 13 samples

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Method	X		Method as requested	X			
Reporting Limits	X		RLs as requested		X		RLs for the following were not met B – all samples (results > RL) Ca – 26 samples (results > RL) Co – all samples (results > RL in all but 5 samples where results > MDL) Fe – all samples (results > RL) Mg – 21 samples (results > RL) K – 9 samples (results > RL) Na – 22 samples (results > RL) SO4 – 15 samples (results > RL) TDS – all samples (results > RL)
			MDLs<RLs	X			
			MDLs<GPS			X	Background sampling (no GPS to compare against)
QC Validation							
Evaluate Accuracy							
Matrix Spike (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table		X		MS recoveries outside control limits for Ca, Na, K
Laboratory Control Sample (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table		X		LCSD recovery outside control limits for Rad-226 (5 samples)
Evaluate Precision							
Matrix Spike Duplicate (RPD)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Field Duplicate (RPD)	X		RPD ≤ 20%		X		MW-04/MWT-04: TSS and Zn non-detect in parent sample and detected in FD; Sb detected in parent sample and non-detect in FD; Se and Rad 226 RPDs of 24% and 33%, respectively MW-12/MWT-12: TSS detect in parent sample and non-detect in FD; Rad 226, Rad 228, and Combined Rad RPDs of 40%, 91% and 65%, respectively
Evaluate Representativeness							
Equipment Blanks (if applicable)	N/A		Non-detect (<RL)			X	
QC Verification							
Verify Instrument Calibration & Analytical Process							

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Initial Calibration Verification	X		Laboratory-determined	-	-	-	
Continuing Calibration Verification	X		Laboratory-determined	-	-	-	
Initial Calibration Blank	X		Laboratory-determined	-	-	-	
Continuing Calibration Blank	X		Laboratory-determined	-	-	-	
Serial Dilutions	X		Laboratory-determined	-	-	-	
Post-Digestion Spikes	X		Laboratory-determined	-	-	-	
Internal Standards	X		Laboratory-determined	-	-	-	
Laboratory Duplicate (RPD)	X		Laboratory-determined	-	-	-	
Method Blanks	X		Laboratory-determined	-	-	-	
Evaluate Completeness (# usable measurements/ # unusable measurements)							
Completeness	X		100%	X			

Other instances of nonconformance to QC control limits noted on case narrative:

Reporting limits were raised on the following samples and constituents due to sample matrix interferences with the internal standards. No qualification was required.

Constituent	**Samples**
Lead	MW-03, MW-30
Thallium	MW-01R, MW-03, MW-30, SG-04R

Calcium in the sample collected from SG-04R was estimated due to the amount of the constituent detected being above the linear range of the calibration curve. No qualification was required.

Calcium, potassium, and sodium matrix spikes were outside of control limits in T140107-MS1. Because the background concentration of these analytes was greater than four times the spike amount, qualification was not required.

Potassium and sodium matrix spikes were outside of control limits in T140104-MS2. Because the background concentration of these analytes was greater than four times the spike amount, qualification was not required.

Comments:

pH in samples MW-02, MW-03, MW-04, MW-07, MW-09, MW-12, MW-19, MW-20, MW-30, MW-33, MW-34, MWT-04, and MWT-12 required qualification as estimated (J) due to analysis outside the EPA-established 24-hour hold time.

TSS and zinc were not detected in parent sample MW-04 and detected in field duplicate MWT-04. TSS and zinc required qualification in parent sample MW-04 as estimated but not detected (UJ) and in field duplicate MWT-04 as estimated with high bias (J+).

Antimony was not detected in parent sample MW-04 and detected in field duplicate MWT-04. Antimony required qualification in parent sample MW-04 as estimated but not detected (UJ) and in field duplicate MWT-04 as estimated with high bias (J+).

Selenium had a RPD of 24% in the MW-04/MWT-04 parent/field duplicate pair. Selenium required qualification as estimated with high bias (J+) in parent sample MW-04 and as estimated with low bias (J-) in field duplicate MWT-04.

Radium 226 had a RPD of 33% in the MW-04/MWT-04 parent/field duplicate pair. Radium 226 required qualification as estimated with low bias (J-) in parent sample MW-04 and as estimated with high bias (J+) in field duplicate MWT-04.

TSS was detected in parent sample MW-12 and non-detect in field duplicate MWT-12. TSS required qualification in parent sample MW-12 as estimated with high bias (J+) and as estimated but not detected in field duplicate MWT-12.

Radium 226, Radium 228, and combined radium had RPDs of 40%, 91% and 65%, respectively in the MW-12/MWT-12 parent/field duplicate pair. Radium 226 required qualification as estimated but non detect in all parent/field duplicate pair MW-12/MWT-12.

The LCS/LCSD associated with radium-226 prep batch 160-624323 recovered outside of control limits. Radium 226 in affected samples MW-30, MW-31, MW-32, MW-33, and MW-34 required qualification as estimated with high bias (J+) or estimated but non-detect (UJ).

Data Verification & Validation Report

Grand Haven-Harbor Island

Sampling Event (dates and purpose): Detection Monitoring / Quarterly Assessment Monitoring – October 2023

Data Package Number: 23J1216
Data Validator: Andrew Byks

Lab Report Date: 12/4/2023
Data Validation Completion Date: 12/5/2023

General Overall Assessment:
_____ Data are usable without qualification.
__X__ Data are usable with qualification (as noted below).
_____ Some or all data are unusable (as noted below).

Wells planned for sampling:

Unit 3A/B	Unit 1/2	Well Designation	Well ID	Planned for Sampling
✓	✓	Nature & Extent	MW-01R	X
✓		Point of Compliance	MW-02	X
✓		Point of Compliance	MW-03	X
✓		Point of Compliance	MW-04	X
	✓	Point of Compliance	MW-06	X
✓	✓	Nature & Extent	MW-07	X
	✓	Point of Compliance	MW-08	X
✓	✓	Nature & Extent	MW-09	X
✓	✓	Nature & Extent	MW-10	X
✓		Point of Compliance	MW-11	X
✓		Point of Compliance	MW-12	X
	✓	Point of Compliance	MW-18	X
	✓	Point of Compliance	MW-19	X
	✓	Point of Compliance	MW-20	X
✓	✓	Background	MW-27	X
	✓	Point of Compliance	MW-30	X
	✓	Point of Compliance	MW-31	X
✓	✓	Nature & Extent	MW-32	X
✓	✓	Background	MW-33	X
✓	✓	Background	MW-34	X
✓	✓	Surface Water	SG-02	X
✓	✓	Surface Water	SG-03	X
✓	✓	Surface Water	SG-04R	X
✓	✓	Surface Water	SG-05	X
✓	✓	Surface Water	SG-06	X

Data Summary

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-01R	GW	23J1216-01	08/08/2023	X	X	X	X	X	X	
MW-02	GW	23J1216-02	08/08/2023	X	X	X	X	X	X	
MW-03	GW	23J1216-03	08/07/2023	X	X	X	X	X	X	
MW-04	GW	23J1216-04	08/07/2023	X	X	X	X	X	X	
MW-06	GW	23J1216-05	08/08/2023	X	X	X	X	X	X	
MW-07	GW	23J1216-06	08/07/2023	X	X	X	X	X	X	
MW-08	GW	23J1216-07	08/08/2023	X	X	X	X	X	X	

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-09	GW	23J1216-08	08/08/2023	X	X	X	X	X	X	
MW-10	GW	23J1216-09	08/08/2023	X	X	X	X	X	X	
MW-11	GW	23J1216-10	08/08/2023	X	X	X	X	X	X	
MW-12	GW	23J1216-11	08/07/2023	X	X	X	X	X	X	
MW-18	GW	23J1216-12	08/08/2023	X	X	X	X	X	X	
MW-19	GW	23J1216-13	08/07/2023	X	X	X	X	X	X	
MW-20	GW	23J1216-14	08/07/2023	X	X	X	X	X	X	
MW-27	GW	23J1216-15	08/07/2023	X	X	X	X	X	X	
MW-30	GW	23J1216-16	08/08/2023	X	X	X	X	X	X	
MW-31	GW	23J1216-17	08/08/2023	X	X	X	X	X	X	
MW-32	GW	23J1216-18	08/08/2023	X	X	X	X	X	X	
MW-33	GW	23J1216-19	08/07/2023	X	X	X	X	X	X	
MW-34	GW	23J1216-20	08/07/2023	X	X	X	X	X	X	
MWT-10	QC	23J1216-21	08/07/2023	X	X	X	X	X	X	
MWT-33	QC	23J1216-22	08/07/2023	X	X	X	X	X	X	
SG-02	SW	23J1216-23	08/08/2023	X	X	X	X	X	X	
SG-03	SW	23J1216-24	08/08/2023	X	X	X	X	X	X	
SG-04R	SW	23J1216-25	08/08/2023	X	X	X	X	X	X	
SG-05	SW	23J1216-26	08/08/2023	X	X	X	X	X	X	
SG-06	SW	23J1216-27	08/08/2023	X	X	X	X	X	X	

Other analytes requested for analysis: Na, Mg, K, HCO_3, CO_3, hardness

Any planned sampling or analysis NOT completed? If yes, explain: N/A

Data Verification & Validation Checklist

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Field Data							
Sample Collection Field Forms	X		Purging performed as required in the Groundwater Monitoring Plan	X			
Field Calibration Records	X		Field instruments calibrated daily according to manufacturer specifications	X			
Chain of Custody	X		Accurately reflect samples, collection dates/times, analyses, bottles, etc.	X			
Field decontamination documentation	N/A		Record of decontamination for non-dedicated sampling equipment			X	
Drilling logs	X		N/A	-	-	-	
Well construction logs	X		N/A	-	-	-	
Well development field forms	X		N/A	-	-	-	
Analytical Data Package							
Cover Sheet	X		N/A	-	-	-	
Case Narrative	X		Summarizes sample receipt and any exceptions to QC acceptance criteria	X			
Internal Laboratory Chain of Custody forms	X		Analyses as requested; accurate transcription of field COC	X			
Sample Chronology and Consistency	X		Accurate representation of dates, times of receipt, preparation, and analysis	X			
Communication Records with Lab	X		N/A	-	-	-	
EDD Format Consistency	X		EDD format and content as requested	X			
Sample Identification, Results Nomenclature, and Data Qualifier Consistency	X		All included in final report	X			
Method Detection Limit Consistency	X		MDLs consistent between samples		X		Dilution varies between samples
Instrument Calibration Records	X		Present and no nonconformance noted	X			
Laboratory Report Complete	X		Includes QC component	X			
Holding Times	X		Analyses performed within allowed holding time		X		pH required qualification in 17 samples

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Method	X		Method as requested	X			
Reporting Limits	X		RLs as requested		X		RLs for the following were not met Bicarbonate alkalinity – 25 samples (results > RL) B – all samples (results > RL) Ca – all samples (results > RL) Carbonate alkalinity – 25 samples (results > RL) Chloride – 6 samples (results > RL) Fe – all samples (results > RL) Li – 15 samples (results > RL) Mg – 21 samples (results > RL) K – 24 samples (results > RL) Na – all samples (results > RL) SO4 – 12 samples (results > RL) Total alkalinity – 25 samples (results > RL) TDS – all samples (results > RL)
			MDLs<RLs	X			
			MDLs<GPS	X			
QC Validation							
Evaluate Accuracy							
Matrix Spike (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table		X		MS recoveries outside control limits for B, Ca, Mg
Laboratory Control Sample (Recovery)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Evaluate Precision							
Matrix Spike Duplicate (RPD)	X		See "Minimum QC Procedures for Project Parameters" table	X			
Field Duplicate (RPD)	X		RPD ≤ 20%		X		MW-10/MWT-10: Sb and Hg non-detect in parent sample and detected in FD; Be, Co, Cu, Ni, Zn, Rad RPDs >20% MW-33/MWT-33: Hg non-detect in parent sample and detect in FD; Rad 226 and Rad 228 RPDs > 20%
Evaluate Representativeness							
Equipment Blanks (if applicable)	N/A		Non-detect (<RL)			X	
QC Verification							

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Verify Instrument Calibration & Analytical Process							
Initial Calibration Verification	X		Laboratory-determined	-	-	-	
Continuing Calibration Verification	X		Laboratory-determined	-	-	-	
Initial Calibration Blank	X		Laboratory-determined	-	-	-	
Continuing Calibration Blank	X		Laboratory-determined	-	-	-	
Serial Dilutions	X		Laboratory-determined	-	-	-	
Post-Digestion Spikes	X		Laboratory-determined	-	-	-	
Internal Standards	X		Laboratory-determined	-	-	-	
Laboratory Duplicate (RPD)	X		Laboratory-determined	-	-	-	
Method Blanks	X		Laboratory-determined	-	-	-	
Evaluate Completeness (# usable measurements/ # unusable measurements)							
Completeness	X		100%	X			

Other instances of nonconformance to QC control limits noted on case narrative:

Boron, calcium, and magnesium matrix spikes were outside of control limits in T143162-MS1. Boron in associated sample MW-04 required qualification as estimated with high bias. The background concentration of calcium and magnesium was greater than four times the spike amount, additional qualification was not required.

Boron and calcium matrix spikes were outside of control limits in T143162-MS2. Because the background concentration of these analytes was greater than four times the spike amount, qualification was not required.

Comments:

pH in samples seventeen required qualification as estimated (J) due to analysis outside the EPA-established 24-hour hold time.

Antimony and mercury were not detected in parent sample MW-10 and detected in field duplicate MWT-10. Antimony and mercury required qualification in parent sample MW-10 as estimated but not detected (UJ) and in field duplicate MWT-10 as estimated with high bias (J+).

Beryllium, cobalt, copper, nickel, and zinc had RPDs > 20% in the MW-10/MWT-10 parent/field duplicate pair. All analytes required qualification as estimated with low bias (J-) in parent sample MW-10 and as estimated with high bias (J+) in field duplicate MWT-10.

Radium 226, Radium 228, and combined radium had RPDs >20% MW-10/MWT-10 parent/field duplicate pair. Radium 226 required qualification as estimated with high bias (J+) in parent sample MW-10 and as estimated with low bias (J-) in field duplicate MWT-10. Radium 228 and combined radium required qualification as estimated with low bias (J-) in parent sample MW-10 and as estimated with high bias (J+) in field duplicate MWT-10.

Mercury was non-detect in parent sample MW-33 and detected in field duplicate MWT-33. Mercury required qualification in parent sample MW-33 as estimated but not detected (UJ) and as estimated with high bias (J+) in MWT-33.

Radium 226 and Radium 228 had RPDs > 20% in the MW-33/MWT-33 parent/field duplicate pair. Radium 226 required qualification as estimated with low bias (J-) in parent sample MW-33 and as estimated with high bias (J+) in field duplicate MWT-33. Radium 228 required qualification as estimated with high bias (J+) in parent sample MW-33 and as estimated with low bias (J-) in field duplicate MWT-33.

Appendix C

Analytical Data Reporting Tables

			Sample Location:	MW-01R								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/29/2022	1/3/2023	2/8/2023	3/14/2023	4/18/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	3.06	2.731	2.595	3 .00	3.10	3.23	3.22	3.13
Dissolved Oxygen	mg/L	N	--	0.08	0.05	0.07	0.28	0.11	0.03	0.01	0.01	0.03
Oxidation Reduction Potential	mV	N	--	42.3	3.6	-155.6	-185.5	-202.3	-210.1	-163.8	-165.1	-126.2
pH	su	N	--	7.74	6.02	7.75	7.76	7.75	7.8	7.81	7.68	7.71
Temperature	deg c	N	--	12.5	9.00	6.9	5.9	7.2	10.7	13.5	17.2	16.1
Turbidity	NTU	N	--	0.02	0.26	0.17	0.02	0.02	0.02	0.02	1.33	0.95
Appendix III												
Boron	mg/L	T	--	100	110	73	70	78	110	150 J+	140 D	160 D
Calcium	mg/L	T	--	240	200	290	310	280	240	210 D	160 D	130 D
Chloride	mg/L	T	--	150	160	52	120	130	150	170 D	180 D	210 D
Fluoride	mg/L	T	--	14	14	9.5	8.1	8.8	10	15 D	14 D	14 D
Sulfate (as SO4)	mg/L	T	--	590	400	350	780	780	540	290 D	110 D	8.8 D
Total Dissolved Solids	mg/L	T	--	2400 J-	2300	2200	2100	2400	2400	2400 D	2400 D	2600 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.00033	0.00023 J	< 0.00025 U	0.00034	0.0012	< 0.00050 U	0.00071 JD	0.00025	0.00022 J
Arsenic	mg/L	T	0.010	0.0020	0.0015	0.0013	0.0013	0.00077	0.00073	0.0019 J+	0.0017	0.0013
Barium	mg/L	T	2.0	0.30	0.30	0.25	0.22	0.21	0.29	0.29 D	0.38	0.56
Beryllium	mg/L	T	0.0040	0.00021 J	0.00032	0.00020 J	0.00020 J	0.00012 J	0.00020 J	0.00036 J+	0.00035	0.00026
Cadmium	mg/L	T	0.0050	0.00011 J	0.000062 J	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	0.00034 J+	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.0013	0.0024	0.0016	0.0016	0.0013	0.0019	0.0043	0.0037	0.0022
Cobalt	mg/L	T	0.0060	0.0011	0.0012	0.0011	0.0023	0.0017	0.00081	0.0045 J+	0.0016	0.001
Fluoride	mg/L	T	**4.0**	**14**	**14**	**9.5**	**8.1**	**8.8**	**10**	**15 D**	**14 D**	**14 D**
Lead	mg/L	T	0.015	0.0014	0.00082	< 0.0011 U	0.00044 J	< 0.0011 U	0.00080 J	0.0053 J+	0.0010 JD	0.00074
Lithium	mg/L	T	**0.10**	**2.2**	**2.8**	**1.6**	**1.7**	**1.5**	**2.3**	**3.2 D**	**3.3**	**3.4 D**
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0011 J	0.00062 J	0.00076 J	0.0020	< 0.0031 U	0.00033 J	0.00077 J+	0.00082 J	0.00074 J
Radium 226 and 228	pCi/L	T	5.0	< 0.656 UJ	< 0.828 U	1.06	1.28	< 0.737 U	< 1.1 U	0.601	1.26	< 0.674 U
Radium-226	pCi/L	T	--	< 0.176 UJ	< 0.125 U	< 0.139 U	< 0.212 U	< 0.233 U	< 0.322 U	< 0.164 U	0.152	< 0.182 U
Radium-228	pCi/L	T	--	< 0.656 UJ	< 0.828 U	0.982	1.23	< 0.737 U	< 1.1 UJ	< 0.534 U	1.11	< 0.674 U
Selenium	mg/L	T	0.050	0.00060	0.00059	0.00058	0.00097	0.00056	0.00030 J	0.00076 J+	0.00066	0.00073
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 UJ	< 0.00038 UD	< 0.000075 U
Total Suspended Solids	mg/L	T	--	3.0 J	2.0 J	5.0	2.0 J	2.0 J	< 4.0 U	2.0 J	3.0 J	< 4 UD

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-02								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/28/2022	1/4/2023	2/8/2023	3/14/2023	4/18/2023	5/23/2023	6/27/2023	8/8/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	4.1	3.07	2.616	3.66	3.524	4.17	4.07	4.21
Dissolved Oxygen	mg/L	N	--	0.28	0.49	0.2	0.41	0.08	0.06	0.07	0.1	0.03
Oxidation Reduction Potential	mV	N	--	89.4	-215.7	-185.2	-169.9	-135.7	-138.9	-137.4	-133.8	-166.8
pH	su	N	--	7.11	7.06	7.33	7.35	7.13	7.45	7.29	7.21	7.11
Temperature	deg c	N	--	12.8	12	11.2	9.6	10.2	11.7	12.1	14	15
Turbidity	NTU	N	--	0.02	0.02	0.02	0.49	3.66	5.05	6.89	3.3	8.78
Appendix III												
Boron	mg/L	T	--	88	86	100	98	73	95	110 J+	99 D	110 D
Calcium	mg/L	T	--	210	180	210	240	190	210	210 D	180 D	190 D
Chloride	mg/L	T	--	150	140	67	140	150	140	140 D	130 D	140 D
Fluoride	mg/L	T	--	9.2	10	4.5	9.4	8.7	9.2	10 D	9.7 D	9.7 D
Sulfate (as SO4)	mg/L	T	--	0.86 J	2.2 J	< 0.41 U	1.1 J	< 0.41 U	< 0.41 U	< 0.41 UD	0.93 JD	< 0.41 UD
Total Dissolved Solids	mg/L	T	--	1700	1800	1900	1700	1700	1800	2100 J	1900 D	1600 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.00015 J	0.00016 J	< 0.00025 U	0.00019 J	0.00063 J	< 0.00050 U	0.00024 J	0.00018 J	0.00029
Arsenic	mg/L	T	**0.010**	0.0082	0.0076	0.0086	0.0078	0.0083	**0.012**	0.0096 J+	0.0086	0.0074
Barium	mg/L	T	2.0	0.51	0.53	0.55	0.51	0.38	0.48	0.47	0.45	0.42
Beryllium	mg/L	T	0.0040	0.00028	0.00034	0.00042	0.00029	0.00015 J	0.00021 J	0.00032 J+	0.00043	0.00052
Cadmium	mg/L	T	0.0050	< 0.000032 U	0.000046 J	< 0.00016 U	0.000041 J	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	0.00049
Chromium, Total	mg/L	T	0.10	0.022	0.054	0.057	0.046	0.019	0.030	0.068	0.054	0.032
Cobalt	mg/L	T	**0.0060**	0.0038	**0.0060**	**0.0080**	**0.0066**	0.0031	0.0039	**0.0089 J+**	**0.0076**	**0.0063**
Fluoride	mg/L	T	**4.0**	**9.2**	**10**	**4.5**	**9.4**	**8.7**	**9.2**	**10 D**	**9.7 D**	**9.7 D**
Lead	mg/L	T	0.015	0.0010	0.0024	0.0030	0.0027	0.0018 J	0.0041	0.0039 J+	0.0017	0.002
Lithium	mg/L	T	**0.10**	**1.2**	**1.5**	**1.5**	**1.6**	**0.87**	**1.2**	**1.7**	**1.4**	**1.2 D**
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0052	0.0062	0.011	0.011	0.0088	0.0064	0.0062 J+	0.0052	0.0051
Radium 226 and 228	pCi/L	T	5.0	< 2.18 U	< 2.8 U	3.35	1.56	< 0.686 U	1.67	1.67	2.45	1.16
Radium-226	pCi/L	T	--	< 0.547 U	0.781	0.642	0.398	< 0.302 U	0.58	0.714	0.743	< 0.354 U
Radium-228	pCi/L	T	--	< 2.18 UJ	< 2.8 UG	< 3.21 UG	< 1.24 UG	< 0.686 U	< 1.2 UJ	0.957	1.71 G	< 0.897 U
Selenium	mg/L	T	0.050	0.0010	0.0012	0.0012	0.00095	0.00050	0.0010	0.0014 J+	0.0012	0.0018
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	0.00062
Total Suspended Solids	mg/L	T	--	67	58	58	56	100	90	20 D	16 D	6.1 D

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-03								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/28/2022	1/4/2023	2/7/2023	3/14/2023	4/18/2023	5/23/2023	6/28/2023	8/7/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	3.52	3.43	2.459	3.15	3.08	3.19	3.19	3.03
Dissolved Oxygen	mg/L	N	--	0.16	0.26	0.2	0.21	0.03	0.01	0.05	0.09	0.06
Oxidation Reduction Potential	mV	N	--	-180	-139.7	-212.9	-184.2	-92.8	-194.3	-129.6	-110.7	-116.1
pH	su	N	--	7.31	7.32	7.2	7.45	7.26	7.59	7.44	7.31	7.28
Temperature	deg c	N	--	13.3	11.4	9.2	7.3	9.3	11.8	12.5	14.9	14.9
Turbidity	NTU	N	--	0.02	0.68	2.4	0.02	1.4	0.02	0.02	0.21	0.26
Appendix III												
Boron	mg/L	T	--	4.4	3.3	4.2	4.3	3.9	4.1	4.3 J+	4.1	4.3 D
Calcium	mg/L	T	--	390	290	400	410	360	400	430 D	350 D	380 D
Chloride	mg/L	T	--	300	190	240	190	150	140	160 D	170 D	180 D
Fluoride	mg/L	T	--	0.65	1.6	0.62	0.52	0.60	0.54	0.54 D	0.61 D	0.6 D
Sulfate (as SO4)	mg/L	T	--	42	460	230	550	760	690	510 D	480 D	380 D
Total Dissolved Solids	mg/L	T	--	2200 J-	1700	2300	2300	2300	2300	2300 D	2300 D	2200 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.000087 J	0.000092 J	< 0.00025 U	0.00011 J	0.00045 J	< 0.00050 U	< 0.00050 UD	< 0.00010 U	< 0.0001 U
Arsenic	mg/L	T	0.010	0.00084	0.0011	0.0012 J	0.0011	0.00050 J	0.00049 J	0.00091 J+	0.00076	0.0011
Barium	mg/L	T	2.0	0.43	0.13	0.50	0.30	0.34	0.43	0.38 D	0.38	0.41
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.00026 U	0.000053 J	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	0.00015 J
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	0.00011 J
Chromium, Total	mg/L	T	0.10	0.0046	0.0061	0.0049	0.0073	0.0033	0.0037	0.0060	0.0053	0.003
Cobalt	mg/L	T	0.0060	0.00088	0.00044 J	0.00081 J	0.00097	0.00044 J	0.00050 J	0.0012 J+	0.0011	0.0013
Fluoride	mg/L	T	4.0	0.65	1.6	0.62	0.52	0.60	0.54	0.54 D	0.61 D	0.6 D
Lead	mg/L	T	0.015	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.00050 U	< 0.00050 UJ	< 0.00050 UD	0.00022 J
Lithium	mg/L	T	0.10	0.044	0.065	0.039	0.045	0.037	0.035	0.050	0.041	0.035
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	0.00024
Molybdenum	mg/L	T	0.10	< 0.00062 U	0.00072 J	< 0.0031 U	< 0.00062 U	< 0.0031 U	< 0.00025 U	< 0.00025 UJ	< 0.00025 U	0.00085 J
Radium 226 and 228	pCi/L	T	5.0	1.92	< 1.32 U	0.75	1.76	0.81	1.38	1.26	0.996	1.34
Radium-226	pCi/L	T	--	0.583	0.526	0.242	< 0.217 U	0.268	0.574	< 0.209 U	0.417	< 0.312 U
Radium-228	pCi/L	T	--	1.34	< 1.32 UG	< 0.67 U	1.55	< 0.767 U	< 1.15 UJ	1.18	< 0.763 U	1.08
Selenium	mg/L	T	0.050	0.00042 J	< 0.00022 U	< 0.0011 U	0.00040 J	< 0.00022 U	0.00017 J	0.00042 J+	0.00034 J	0.00053
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 UJ	< 0.00038 UD	0.00018 J
Total Suspended Solids	mg/L	T	--	4.0	15	4.0	1.0 J	< 4.0 U	< 4.0 U	< 4.0 U	3.0 JD	< 4 U

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-04								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/28/2022	1/4/2023	2/7/2023	3/14/2023	4/19/2023	5/23/2023	6/28/2023	8/7/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	2.47	2.56	2.044	2.81	2.82	2.81	2.74	2.52
Dissolved Oxygen	mg/L	N	--	0.15	0.1	0.07	0.79	0.15	0.06	0.05	0.16	0.14
Oxidation Reduction Potential	mV	N	--	-137.4	-113.2	-175.9	-126.6	43.2	-91.9	-113.3	-130.1	-133.3
pH	su	N	--	7.34	7.39	7.23	7.45	7.35	7.66	7.43	7.34	7.26
Temperature	deg c	N	--	13.1	10.5	8.7	6.5	7.2	10.5	13.1	16.4	16.1
Turbidity	NTU	N	--	1.95	0.02	0.02	0.02	0.02	0.02	0.28	2.98	1.42
Appendix III												
Boron	mg/L	T	--	4.0	3.9	3.8	3.8	3.5	4.3	4.1 J+	4.0	4.7 DJ
Calcium	mg/L	T	--	310	360	350	390	340	400	410 D	330 D	360 D
Chloride	mg/L	T	--	180	300	200	220	220	200	190 D	160 D	150 D
Fluoride	mg/L	T	--	1.2	0.76	1.3	1.4	1.3	1.3	1.2 D	1.4 D	1.9 D
Sulfate (as SO4)	mg/L	T	--	410	1.8 J	530	580	700	690	610 D	610 D	630 D
Total Dissolved Solids	mg/L	T	--	1700	2100	1700	1800	1900	2100	2000 D	1900 D	1800 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.000071 J	< 0.000050 U	< 0.00025 U	< 0.000050 U	0.00041 J	< 0.00050 U	< 0.00050 UD	0.00012 J+	< 0.0001 U
Arsenic	mg/L	T	0.010	0.0012	0.00078	0.0012	0.0012	0.00060	0.00047 J	0.00092 J+	0.00088	0.001
Barium	mg/L	T	2.0	0.11	0.46	0.13	0.12	0.10	0.12	0.15 D	0.12	0.12
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.0027	0.0060	0.0047	0.0049	0.0026	0.0031	0.0046	0.0044	0.0027
Cobalt	mg/L	T	0.0060	0.00035 J	0.00093	0.00062	0.00065	0.00031 J	0.00036 J	0.00074 J+	0.00062	0.00045 J
Fluoride	mg/L	T	4.0	1.2	0.76	1.3	1.4	1.3	1.3	1.2 D	1.4 D	1.9 D
Lead	mg/L	T	0.015	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.0011 U	< 0.00050 U	< 0.00050 UJ	< 0.00010 U	< 0.0001 U
Lithium	mg/L	T	0.10	0.067	0.047	0.061	0.074	0.054	0.061	0.074	0.074	0.066 D
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0013	< 0.00062 U	0.00074 J	0.00086 J	< 0.0031 U	0.00041 J	0.00044 J+	0.0012	0.0015
Radium 226 and 228	pCi/L	T	5.0	1.43	1.08	1.55	1.23	< 0.752 U	1.49	1.2	1.29	1.2
Radium-226	pCi/L	T	--	< 0.206 U	0.159	0.175	< 0.198 U	< 0.189 U	< 0.214 U	0.232	0.152 J-	0.275
Radium-228	pCi/L	T	--	1.28	0.916	1.38	1.16	< 0.752 U	1.33 J	0.963	1.14	0.924
Selenium	mg/L	T	0.050	< 0.00022 U	0.00041 J	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	0.00017 J+	0.00021 J+	0.00024 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	10	8.0	11	10	11	12	8.1 D	< 4.0 UJ	8

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-06								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/29/2022	1/3/2023	2/6/2023	3/14/2023	4/18/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	2.13	2.16	1.973	2	2.05	2.04	2	2.02
Dissolved Oxygen	mg/L	N	--	0.1	0.6	0.07	0.14	0.35	0.08	0.24	0.38	0.24
Oxidation Reduction Potential	mV	N	--	38.1	-139	-193.2	-148.9	-173.5	-184.3	-182.7	-80.3	-176.8
pH	su	N	--	7.33	7.26	6.42	7.21	7.28	7.36	7.27	7.17	7.26
Temperature	deg c	N	--	13.9	10.9	7.6	8.1	8.4	11.2	13.4	16.8	16.6
Turbidity	NTU	N	--	0.02	1.13	2.02	0.02	0.02	0.02	0.02	0.02	0.02
Appendix III												
Boron	mg/L	T	--	12	9.5	10	9.5	7.5	8.6	9.7 J+	9.9	11 D
Calcium	mg/L	T	--	220	230	250	310	250	270	290 D	230 D	240 D
Chloride	mg/L	T	--	160	120	110	82	57	73	71 D	76 D	79 D
Fluoride	mg/L	T	--	1.3	1.4	1.1	1.0	1.1	1.0	1.1 D	1.4 D	1.2 D
Sulfate (as SO4)	mg/L	T	--	16	9.6	20	7.3	9.4	20	16 D	0.98 JD	< 0.41 UD
Total Dissolved Solids	mg/L	T	--	1300	1200	1300	1200	1200	1200	1300 D	1200 D	1100 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.000075 J	< 0.000050 U	< 0.00025 U	< 0.000050 U	0.00036 J	< 0.00050 U	< 0.00010 U	< 0.00010 U	< 0.0001 U
Arsenic	mg/L	T	0.010	0.00080	0.00065	0.00058	0.00054 J	0.00047 J	0.00065	0.00062 J+	0.00082	0.001
Barium	mg/L	T	2.0	1.5	1.5	1.6	1.4	0.99	1.3	1.4 D	1.4 D	1.5 D
Beryllium	mg/L	T	0.0040	< 0.000054 U	< 0.000052 U	0.000052 J	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.0015	0.0021	0.0021	0.0030	0.0014	0.0012	0.0020	0.0023	0.0015
Cobalt	mg/L	T	0.0060	0.00048 J	0.00057	0.00067	0.00073	0.00050 J	0.00046 J	0.00080 J+	0.00067	0.00047 J
Fluoride	mg/L	T	4.0	1.3	1.4	1.1	1.0	1.1	1.0	1.1 D	1.4 D	1.2 D
Lead	mg/L	T	0.015	0.00035 J	0.00025 J	< 0.0011 U	< 0.00022 U	< 0.0011 U	< 0.00050 U	0.00027 J+	< 0.00010 U	< 0.0001 U
Lithium	mg/L	T	**0.10**	**0.23**	**0.22**	**0.20**	**0.23**	**0.15**	**0.15**	**0.19**	**0.22**	**0.19 D**
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	< 0.00064 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.0031 U	0.00026 J	0.00027 J+	< 0.00025 U	0.00025 J
Radium 226 and 228	pCi/L	T	5.0	0.864	0.637	< 0.715 U	1.91	< 0.646 U	0.92	0.824	0.938	1.58
Radium-226	pCi/L	T	--	0.419	0.238	0.24	< 0.212 U	0.402	0.259	0.331	0.465	0.432
Radium-228	pCi/L	T	--	< 0.449 U	< 0.631 U	< 0.715 U	1.7	< 0.646 U	< 0.772 U	< 0.606 U	< 0.735 U	1.15
Selenium	mg/L	T	0.050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00020 J	0.00022 J+	0.00019 J	0.0002 J
Thallium	mg/L	T	0.0020	< 0.000076 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	36	45	42	65	53	43	41 D	37 D	48

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-07								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/30/2022	1/4/2023	2/7/2023	3/13/2023	4/18/2023	5/23/2023	6/27/2023	8/7/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	1.21	1.206	1.209	1.25	1.24	1.25	1.25	1.23
Dissolved Oxygen	mg/L	N	--	0.12	0.3	0.08	0.21	0.03	0.23	0.43	0.72	0.22
Oxidation Reduction Potential	mV	N	--	57.2	-88	-103.1	-143.9	-68	-109.4	-140.5	-15.7	-141
pH	su	N	--	6.88	7.04	6.93	6.58	6.86	6.93	6.88	6.65	6.88
Temperature	deg c	N	--	12.2	11	10	8.6	9.6	11.3	13	14.8	14.6
Turbidity	NTU	N	--	5.89	4.2	4.07	0.02	2.94	1.5	0.02	0.72	0.74
Appendix III												
Boron	mg/L	T	--	13	11	12	11	10	12	11 J+	11	12 D
Calcium	mg/L	T	--	140	140	140	150	130	150	160 D	120 D	150 D
Chloride	mg/L	T	--	15	15	14	14	14	13	13 D	13 D	14 D
Fluoride	mg/L	T	--	0.14	0.070 J	0.12	< 0.055 U	0.14	0.11	0.080 JD	0.083 JD	0.14 D
Sulfate (as SO4)	mg/L	T	--	29	30	33	20	17	15	18 D	19 D	26 D
Total Dissolved Solids	mg/L	T	--	660	470	650	500	620	660	720 D	620 D	620 D
Appendix IV												
Antimony	mg/L	T	0.0060	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	0.000071 J	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.0001 U
Arsenic	mg/L	T	0.010	0.00023 J	0.00021 J	0.00023 J	0.00018 J	0.00013 J	0.00023 J	0.00020 J+	0.00020 J	0.00029 J
Barium	mg/L	T	2.0	0.33	0.34	0.36	0.30	0.25	0.34	0.35	0.34	0.38
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	0.000062 J	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	0.000066 J	0.000055 J
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.00038	0.00030	0.00037	0.00042	0.00028	0.00029	0.00033	0.00032	0.00036
Cobalt	mg/L	T	0.0060	0.00071	0.00088	0.00099	0.00099	0.00087	0.00095	0.0011 J+	0.00098	0.00098
Fluoride	mg/L	T	4.0	0.14	0.070 J	0.12	< 0.055 U	0.14	0.11	0.080 JD	0.083 JD	0.14 D
Lead	mg/L	T	0.015	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	< 0.00010 UJ	< 0.00010 U	< 0.0001 U
Lithium	mg/L	T	0.10	0.0054	0.0070	0.0052	0.0067	0.0083	0.0055	0.010	0.0042	0.0062
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00025 U	< 0.00025 UJ	< 0.00025 U	< 0.00025 U
Radium 226 and 228	pCi/L	T	5.0	1.12	1.26 J+	1.03	1.12	0.674	< 0.928 U	< 0.697 U	2.36	1.76
Radium-226	pCi/L	T	--	0.444	0.53	0.333	0.38	0.475	0.309	0.341	0.665	0.475
Radium-228	pCi/L	T	--	0.676	0.729 J+	0.693	< 0.835 U	< 0.559 U	< 0.928 U	< 0.697 U	1.7	1.28
Selenium	mg/L	T	0.050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00010 J	< 0.00010 UJ	< 0.00010 U	< 0.0001 U
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	44	36	35	33	33	39	39	41 D	38

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

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J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-08								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	12/1/2022	1/5/2023	2/7/2023	3/14/2023	4/18/2023	5/23/2023	6/27/2023	8/8/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	1.13	1.133	0.787	1.03	0.99	1.03	1.02	0.87
Dissolved Oxygen	mg/L	N	--	0.2	0.09	0.05	0.55	0.06	0.09	0.04	0.09	1.53
Oxidation Reduction Potential	mV	N	--	-159.3	-119.3	-133.9	-149.9	-121.2	-145.3	-103.6	-127.6	-180.6
pH	su	N	--	7.17	6.21	7.16	7.51	7.25	7.33	7.24	7.26	7.27
Temperature	deg c	N	--	9.6	6.9	6.2	5.2	7.3	11.6	14	16.7	14.7
Turbidity	NTU	N	--	0.02	0.02	0.66	0.02	1.04	0.02	2.11	5.63	0.02
Appendix III												
Boron	mg/L	T	--	2.5	4.4	9.3	7.1	6.6	7.0	7.8 J+	7.1	4.1 D
Calcium	mg/L	T	--	150	160	150	150	130	140	150 D	120 D	130 D
Chloride	mg/L	T	--	17	23	35	30	28	25	29 D	30 D	17 D
Fluoride	mg/L	T	--	0.40	0.56	1.1	1.3	1.1	0.92	1.0 D	1.0 D	0.55 D
Sulfate (as SO4)	mg/L	T	--	13	25	5.3	26	2.0 J	< 0.41 U	< 0.41 UD	< 0.41 UD	1.7 JD
Total Dissolved Solids	mg/L	T	--	560	480	630	480	560	550	610 D	530 D	440 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.000095 J	0.000054 J	0.00020 J	0.00016 J	0.00028	< 0.00010 U	0.00011 J	< 0.00010 U	< 0.0001 U
Arsenic	mg/L	T	0.010	0.0069	**0.021**	**0.049**	**0.045**	**0.050**	**0.041**	**0.038 J+**	**0.029**	**0.011**
Barium	mg/L	T	2.0	1.2	1.3	1.5	1.4	1.1	1.2	1.4 D	1.2 D	0.98
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.00067	0.00093	0.0015	0.0011	0.00084	0.0011	0.00094	0.00087	0.00061
Cobalt	mg/L	T	0.0060	0.00034 J	0.00045 J	0.00070	0.00060	0.00051 J	0.00059	0.00062 J+	0.00058	0.00034 J
Fluoride	mg/L	T	4.0	0.40	0.56	1.1	1.3	1.1	0.92	1.0 D	1.0 D	0.55 D
Lead	mg/L	T	0.015	< 0.00022 U	< 0.00022 U	0.00086	< 0.00022 U	0.00022 J	< 0.00010 U	< 0.00010 UJ	< 0.00010 U	< 0.0001 U
Lithium	mg/L	T	0.10	0.063	**0.11**	**0.14**	**0.14**	**0.11**	**0.11**	**0.13**	**0.12**	0.076 D
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0024	0.0018	0.0015	0.0028	0.00095 J	0.00068 J	0.00039 J+	0.00036 J	0.0016
Radium 226 and 228	pCi/L	T	5.0	1.43	1.62 J+	< 0.836 U	1.13	1.18	1.14	< 0.606 U	2.1	0.891
Radium-226	pCi/L	T	--	0.277	0.31	0.286	< 0.255 U	0.32	0.396	0.19	0.358	< 0.234 U
Radium-228	pCi/L	T	--	1.16	1.31 J+	< 0.836 U	< 1 UG	0.858	< 0.835 U	< 0.606 U	1.74 G	< 0.744 U
Selenium	mg/L	T	0.050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00016 J	0.00014 J+	0.00014 J	0.00015 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	62	55	49	42	36	31	30	20	43

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-09								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/28/2022	1/4/2023	2/6/2023	3/14/2023	4/18/2023	5/23/2023	6/27/2023	8/8/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	1.49	1.593	1.472	2.02	1.95	1.95	1.92	1.63
Dissolved Oxygen	mg/L	N	--	0.19	0.2	1.89	0.35	0.08	0.07	0.05	0.17	0.07
Oxidation Reduction Potential	mV	N	--	42	-183.9	-138.4	-131.5	-112.3	-107.1	-117	-114.7	-69.3
pH	su	N	--	7.2	7.22	7.22	7.4	7.22	7.52	7.28	7.21	7.16
Temperature	deg c	N	--	12.7	10.5	8.5	6.8	7.7	10.6	12.1	15	15.7
Turbidity	NTU	N	--	0.02	0.02	1.04	0.02	0.55	0.66	0.71	2.01	0.49
Appendix III												
Boron	mg/L	T	--	6.0	5.8	6.1	5.1	4.9	5.9	6.3 J+	5.7	6.9 D
Calcium	mg/L	T	--	270	230	300	400	390	410	430 D	330 D	310 D
Chloride	mg/L	T	--	15	17	18	16	12	11	11 D	12 D	12 D
Fluoride	mg/L	T	--	2.1	2.4	2.6	2.5	2.5	2.7	2.9 D	2.9 D	2.8 D
Sulfate (as SO4)	mg/L	T	--	110	83	210	480	650	580	500 D	450 D	210 D
Total Dissolved Solids	mg/L	T	--	960	740	1100	1400	1600	1600	1500 D	1400 D	1100 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.000073 J	< 0.000050 U	0.00023 J	0.000092 J	0.00037 J	< 0.00050 U	< 0.00010 U	< 0.00010 U	< 0.0001 U
Arsenic	mg/L	T	0.010	0.0025	0.0023	0.0023	0.0023	0.0013	0.0013	0.0027 J+	0.0024	0.0023
Barium	mg/L	T	2.0	0.59	**2.4**	0.36	0.38	0.18	0.20	0.17	0.20	0.28
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	0.000058 J	< 0.000052 UJ	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.0022	0.0028	0.0032	0.0030	0.0018	0.0019	0.0031	0.0027	0.0018
Cobalt	mg/L	T	0.0060	0.00035 J	0.00046 J	0.00058	0.00099	0.00053	0.00037 J	0.00069 J+	0.00075	0.00024 J
Fluoride	mg/L	T	4.0	2.1	2.4	2.6	2.5	2.5	2.7	2.9 D	2.9 D	2.8 D
Lead	mg/L	T	0.015	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.0011 U	< 0.00050 U	< 0.00010 UJ	< 0.00010 U	< 0.0001 U
Lithium	mg/L	T	0.10	**0.29**	**0.34**	**0.33**	**0.31**	**0.26**	**0.29**	**0.34**	**0.33**	**0.29 D**
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	**0.0024**
Molybdenum	mg/L	T	0.10	0.028	0.033	0.029	0.021	0.020	0.012	0.019 J+	0.019	0.021
Radium 226 and 228	pCi/L	T	5.0	0.789	< 0.678 U	< 0.642 UJ	< 0.796 U	< 0.688 U	< 0.912 U	< 0.742 U	< 0.821 U	< 0.688 U
Radium-226	pCi/L	T	--	< 0.16 U	< 0.0959 U	< 0.125 UJ	< 0.223 U	< 0.184 U	< 0.22 U	< 0.186 U	< 0.163 U	< 0.237 U
Radium-228	pCi/L	T	--	0.69	< 0.678 U	< 0.642 UJ	< 0.796 U	< 0.688 U	< 0.912 U	< 0.742 U	< 0.821 U	< 0.688 U
Selenium	mg/L	T	0.050	0.00026 J	< 0.00022 U	0.00028 J	0.00024 J	< 0.00022 U	0.00012 J	0.00027 J+	0.00026 J	0.00023 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	45	51	52	50	56	52	46	48	39

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-10								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/29/2022	1/4/2023	2/6/2023	3/14/2023	4/18/2023	5/23/2023	6/27/2023	8/8/2023	10/23/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	2.48	2.34	2.16	2.51	2.18	2.83	3.19	2.68
Dissolved Oxygen	mg/L	N	--	0.08	0.04	0.07	0.05	0.02	0.03	0.11	0.02	0.07
Oxidation Reduction Potential	mV	N	--	-20.3	-245.6	-222.9	-200.2	-189.2	-197.6	-216.2	-168	-149.1
pH	su	N	--	7.85	7.79	7.05	8.19	7.96	8.81	7.85	7.74	7.47
Temperature	deg c	N	--	11.1	7.7	5.9	4.6	6.5	10.3	13.4	17	14.8
Turbidity	NTU	N	--	0.02	0.02	0.65	0.02	0.29	2.21	0.02	1.01	0.02
Appendix III												
Boron	mg/L	T	--	25	14	9.7	4.5	9.2	17	26 J+	28 D	23 D
Calcium	mg/L	T	--	220	220	280	460	280	210	210 D	160 D	190 D
Chloride	mg/L	T	--	220	170	130	92	140	160	320 D	430 D	310 D
Fluoride	mg/L	T	--	7.1	5.7	4.0	2.7	4.6	6.5	7.3 D	7.7 D	6 D
Sulfate (as SO4)	mg/L	T	--	490	620	880	360	950	410	200 D	140 D	330 D
Total Dissolved Solids	mg/L	T	--	1700	1800	1800	2400	1900	1500	1700 D	1900 D	1600 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.00013 J	< 0.000050 U	< 0.00025 U	< 0.000050 U	0.00034 J	< 0.00050 U	0.00011 J	0.00011 J	< 0.0001 UJ
Arsenic	mg/L	T	0.010	0.00049 J	0.00034 J	0.00038 J	0.00037 J	0.00020 J	0.00055	0.00073 J+	0.0011	0.00094
Barium	mg/L	T	2.0	0.32	0.57	0.28	0.23	0.14	0.16	0.23	0.28	0.46
Beryllium	mg/L	T	0.0040	< 0.000054 U	0.000071 J	< 0.000052 U	0.000054 J	< 0.000052 U	0.00022 J	0.000092 J+	0.00015 J	0.000052 J-
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.0040	0.0050	0.0026	0.0018	0.0019	0.0042	0.0070	0.0085	0.0042
Cobalt	mg/L	T	0.0060	0.00038 J	0.00040 J	0.00041 J	0.00053	0.00030 J	0.0018	0.00068 J+	0.00090	0.00038 J-
Fluoride	mg/L	T	4.0	**7.1**	**5.7**	**4.0**	2.7	**4.6**	**6.5**	**7.3 D**	**7.7 D**	**6.0 D**
Lead	mg/L	T	0.015	< 0.00023 U	< 0.00022 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.00050 U	< 0.00010 UJ	0.00012 J	0.00017 J
Lithium	mg/L	T	0.10	**0.92**	**0.83**	**0.54**	**1.6**	**0.99**	**0.83**	**1.1**	**1.2**	**0.94 D**
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 UJ
Molybdenum	mg/L	T	0.10	0.0072	0.0033	0.0048	0.0036	0.0035 J	0.0056	0.0019 J+	0.0028	0.0027
Radium 226 and 228	pCi/L	T	5.0	< 0.775 U	< 0.645 U	1.36	< 1.09 U	< 0.605 UJ	< 0.801 U	< 0.752 U	< 0.736 U	< 0.897 UJ
Radium-226	pCi/L	T	--	< 0.171 U	< 0.119 U	< 0.121 U	< 0.231 U	< 0.155 UJ	< 0.248 U	< 0.179 U	< 0.142 U	< 0.229 UJ
Radium-228	pCi/L	T	--	< 1 U	< 0.645 U	1.31	< 1.09 UG	< 0.605 UJ	< 0.801 U	< 0.752 U	< 0.736 U	< 0.897 UJ
Selenium	mg/L	T	0.050	0.00031 J	0.00028 J	0.00031 J	0.00046 J	< 0.00022 U	0.00039 J	0.00036 J+	0.00041 J	0.00036 J
Thallium	mg/L	T	0.0020	< 0.000076 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	4.0	4.0	1.0 J	9.0	8.0 J+	2.0 J	< 4.0 U	2.0 J	< 4 U

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-11								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/29/2022	1/3/2023	2/8/2023	3/14/2023	4/18/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	1.4	1.9	1.413	1.77	1.76	1.85	1.68	1.4
Dissolved Oxygen	mg/L	N	--	0.1	0.31	0.25	0.19	0.23	0.09	0.13	0.22	0.31
Oxidation Reduction Potential	mV	N	--	76.8	-142.4	-161.7	-121	-157.9	-136.5	-64.7	-27.6	-179.4
pH	su	N	--	7.28	7.32	7.4	7.47	7.33	7.34	7.31	7.22	7.44
Temperature	deg c	N	--	13.6	11.7	9.9	7.5	7.8	10.6	13.2	15.3	15.9
Turbidity	NTU	N	--	0.02	1.53	0.02	0.02	0.02	1.25	5.01	0.02	0.02
Appendix III												
Boron	mg/L	T	--	8.5	13	4.8 B	2.8	1.5	2.0	3.0 J+	7.2	12 D
Calcium	mg/L	T	--	240	130	300	380	320	320	350 D	240 D	150 D
Chloride	mg/L	T	--	95	84	78	62	52	53	72 D	73 D	88 D
Fluoride	mg/L	T	--	0.81	1.4	0.37	0.32	0.21	0.22	0.25 D	0.69 D	1.2 D
Sulfate (as SO4)	mg/L	T	--	13 J	10	42	180	210	87	17 D	1.8 JD	< 0.41 UD
Total Dissolved Solids	mg/L	T	--	970 J-	680	1200	1100	1200	1200	1100 D	930 D	1800 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.000082 J	0.00069	< 0.000050 U	< 0.000050 U	0.00028 J	< 0.00050 U	< 0.00010 U	< 0.00010 U	< 0.0001 U
Arsenic	mg/L	T	0.010	0.0017	0.0041	0.0016	0.0011	0.00061	0.0010	0.0012 J+	0.0019	0.0023
Barium	mg/L	T	2.0	0.74	1.2	0.59	0.60	0.36	0.41	0.50	0.57	0.87
Beryllium	mg/L	T	0.0040	< 0.000052 U	0.000091 J	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	0.00073	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.00080	0.0086	0.0010	0.00087	0.00045	0.00052	0.0012	0.0018	0.00063
Cobalt	mg/L	T	0.0060	0.00036 J	0.0012	0.00061	0.00072	0.00040 J	0.00040 J	0.00066 J+	0.00061	0.00023 J
Fluoride	mg/L	T	4.0	0.81	1.4	0.37	0.32	0.21	0.22	0.25 D	0.69 D	1.2 D
Lead	mg/L	T	0.015	**0.0025**	**0.068**	**0.0018 J**	< 0.00022 U	< 0.0011 U	< 0.00050 U	**0.0038 J+**	0.00017 J	0.00036 J
Lithium	mg/L	T	0.10	**0.10**	**0.22**	0.052	0.028	0.0059	0.0084	0.022	0.095	**0.15 D**
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0017	0.0029	0.0015	< 0.00062 U	< 0.00062 U	0.00043 J	0.00066 J+	0.0013	0.0015
Radium 226 and 228	pCi/L	T	5.0	1.19	1.32	< 0.91 U	1.07	1.67	0.812	< 1 U	1.76	0.764
Radium-226	pCi/L	T	--	0.445	0.422	0.352	0.304	0.406	0.228	0.243	0.409	0.469
Radium-228	pCi/L	T	--	0.75	0.903	< 0.91 U	< 0.84 U	1.26	< 0.721 U	< 1 U	1.35	< 0.624 U
Selenium	mg/L	T	0.050	0.00022 J	0.00031 J	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00014 J	0.00016 J+	0.00021 J	0.0002 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	21	35	10	11	4.0	< 4.0 U	4.0	6.0	19

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-12								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/28/2022	1/3/2023	2/7/2023	3/13/2023	4/19/2023	5/23/2023	6/27/2023	8/7/2023	10/23/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	0.387	0.542	0.311	0.52	0.44	0.55	0.67	0.64
Dissolved Oxygen	mg/L	N	--	1.62	8.72	8.46	10.31	1.03	2.93	0.12	0.08	0.16
Oxidation Reduction Potential	mV	N	--	93.4	47.4	-14.8	87.6	26.2	131	54.9	-30.1	-118.7
pH	su	N	--	7.67	7	7.8	8.16	7.92	7.77	7.52	7.47	7.46
Temperature	deg c	N	--	8.8	3.3	1.3	3	9.7	13.9	17.5	20.9	15.9
Turbidity	NTU	N	--	0.02	0.02	0.02	0.02	0.02	1.92	0.02	0.02	0.31
Appendix III												
Boron	mg/L	T	--	0.39	0.24	0.26	0.19	0.20	0.27	0.33 J+	0.36	0.42 D
Calcium	mg/L	T	--	77	46	78	77	55	63	64	95 D	95 D
Chloride	mg/L	T	--	24	16	27	18	16	15	17 D	22 D	26 D
Fluoride	mg/L	T	--	0.54	0.43	0.23	0.48	0.23	0.22	0.26 D	0.28 D	0.26 D
Sulfate (as SO4)	mg/L	T	--	180	130	180	120	110	99	110 D	130 D	130 D
Total Dissolved Solids	mg/L	T	--	360	210	340	200	260	270	330 D	420	200
Appendix IV												
Antimony	mg/L	T	0.0060	0.00071	0.0011	0.00076	0.00053	0.00094	0.00092	0.00064	0.00040	0.00041
Arsenic	mg/L	T	0.010	0.0028	0.0019	0.0018	0.0014	0.0019	0.0024	0.0029 J+	0.0034	0.0031
Barium	mg/L	T	2.0	0.030	0.017	0.024	0.025	0.022	0.032	0.043	0.053	0.06
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	0.00067	0.00078	0.0014	0.00062	0.0012	0.0016	0.0024 J+	0.0022	0.0011
Chromium, Total	mg/L	T	0.10	0.00034	0.00048	0.00046	0.00067	0.00054	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.0002 U
Cobalt	mg/L	T	0.0060	0.00019 J	< 0.00010 U	0.00014 J	< 0.00010 U	< 0.00010 U	0.00026 J	0.00050 J+	0.00053	0.00038 J
Fluoride	mg/L	T	4.0	0.54	0.43	0.23	0.48	0.23	0.22	0.26 D	0.28 D	0.26 D
Lead	mg/L	T	0.015	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00015 J	0.00014 J+	0.00021 J	0.00021 J
Lithium	mg/L	T	0.10	0.0037	0.0033	0.0022 J	0.0025 J+	0.0037	0.0043	0.0064	0.0042	0.0048
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	0.00016 J
Molybdenum	mg/L	T	0.10	0.0087	0.0072	0.0067	0.0056	0.0057	0.0069	0.0082 J+	0.0088	0.0096
Radium 226 and 228	pCi/L	T	5.0	< 0.543 U	< 0.459 U	< 0.685 U	< 0.619 U	0.809	1.09	< 0.59 UJ	< 0.578 UJ	< 0.517 U
Radium-226	pCi/L	T	--	< 0.13 U	< 0.0702 U	< 0.0727 U	< 0.126 U	< 0.129 U	< 0.136 U	< 0.124 U	< 0.106 UJ	< 0.212 U
Radium-228	pCi/L	T	--	< 0.543 U	< 0.459 U	< 0.685 U	< 0.619 U	0.793	1.07	< 0.59 UJ	< 0.578 UJ	< 0.517 U
Selenium	mg/L	T	0.050	0.0015	0.0022	0.0023	0.00093	0.0017	0.00076	0.00021 J+	0.00013 J	0.00029 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	< 4.0 U	< 4.0 U	2.0 J	< 4.0 U	1.0 J	< 4.0 U	< 4.0 UJ	0.98 J+	< 4 U

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-18								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/30/2022	1/5/2023	2/8/2023	3/13/2023	4/18/2023	5/22/2023	6/27/2023	8/8/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	2.06	1.788	1.554	1.4	1.52	1.62	1.46	1.6
Dissolved Oxygen	mg/L	N	--	0.09	0.19	0.72	0.22	0.34	0.15	0.29	0.05	0.3
Oxidation Reduction Potential	mV	N	--	66.8	-126.8	-70.8	-69.8	-31.3	-22.1	-88.4	-92.8	-80
pH	su	N	--	7.05	7.02	7.2	7.12	7.19	7.16	7.16	7.25	7.16
Temperature	deg c	N	--	9.9	6.5	5.2	3.8	6.3	11.3	17.2	17.8	15.3
Turbidity	NTU	N	--	0.02	0.02	0.09	0.02	0.52	0.02	0.02	7.06	0.59
Appendix III												
Boron	mg/L	T	--	2.2	2.0	2.3	1.9	1.8	2.6	2.7 J+	2.3	3 D
Calcium	mg/L	T	--	450	410	380	330	270	340	240 D	250 D	360 D
Chloride	mg/L	T	--	28	26	22	19	16	19	24 D	27 D	22 D
Fluoride	mg/L	T	--	3.5	3.3	3.5	3.8	3.8	3.9	4.4 D	5.1 D	4.5 D
Sulfate (as SO4)	mg/L	T	--	1200	1200	480	740	660	780	760 D	620 D	800 D
Total Dissolved Solids	mg/L	T	--	1800	1700	1600	1200	1200	1400	1400 D	1100 D	1400 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.00012 J	0.00013 J	0.00032 J	0.00014 J	0.00030	< 0.00050 U	0.00012 J	< 0.00010 U	0.00013 J
Arsenic	mg/L	T	0.010	**0.029**	**0.020**	**0.023**	**0.019**	**0.021**	**0.015**	**0.029 J+**	**0.030**	**0.041**
Barium	mg/L	T	2.0	0.021	0.018	0.015	0.012	0.013	0.023	0.024	0.023	0.025
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	0.00022 J	0.00030	< 0.00016 U	0.00018 J	0.00018 J	0.00044 J	0.00030 J+	0.000089 J	< 0.000075 U
Chromium, Total	mg/L	T	0.10	< 0.00018 U	< 0.00018 U	< 0.00018 U	< 0.00018 U	< 0.00018 U	0.00025 J+	< 0.00020 U	< 0.00020 U	< 0.0002 U
Cobalt	mg/L	T	0.0060	**0.0060**	0.0054	0.0048	0.0032	0.0020	0.0019	0.0032 J+	0.0023	0.0017
Fluoride	mg/L	T	4.0	3.5	3.3	3.5	3.8	3.8	3.9	**4.4 D**	**5.1 D**	**4.5 D**
Lead	mg/L	T	0.015	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.00022 U	< 0.00050 U	0.00016 J+	0.00032 J	0.00014 J
Lithium	mg/L	T	0.10	0.044	0.042	0.029	0.027	0.026	0.029	0.041	0.045	0.039 D
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.013	0.012	0.011	0.013	0.014	0.0090	0.019 J+	0.021	0.02
Radium 226 and 228	pCi/L	T	5.0	0.618	< 0.478 U	< 0.501 U	< 0.592 U	1.27	< 0.701 UJ	< 0.872 U	0.73	< 0.625 U
Radium-226	pCi/L	T	--	< 0.131 U	< 0.0981 U	< 0.083 U	< 0.202 U	< 0.137 U	< 0.122 UJ	< 0.124 U	< 0.105 U	< 0.209 U
Radium-228	pCi/L	T	--	0.584	< 0.478 U	< 0.501 U	< 0.592 U	1.24	< 0.701 UJ	< 0.872 U	0.713	< 0.625 U
Selenium	mg/L	T	0.050	0.00031 J	0.00041 J	0.00034 J	0.00086	0.00079	0.00016 J	0.00018 J+	0.00016 J	0.00082
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	12	4.0	13	2.0 J	6.0	6.0	11	7.9 D	11 D

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-19								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/30/2022	1/3/2023	2/8/2023	3/13/2023	4/18/2023	5/22/2023	6/28/2023	8/7/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	2.56	2.493	2.196	2.31	2.29	1.98	20.4	2.2
Dissolved Oxygen	mg/L	N	--	0.12	0.41	1.03	0.13	0.02	0.09	0.32	0.4	0.26
Oxidation Reduction Potential	mV	N	--	68.7	-134.8	-70.2	-77.1	-7.9	-118.4	-112.9	-36.8	-109.1
pH	su	N	--	7	6.39	6.98	6.9	6.92	7.07	6.9	6.82	6.88
Temperature	deg c	N	--	9.2	7.3	6.3	5.7	8	11.4	13.9	16.7	15.8
Turbidity	NTU	N	--	0.02	1.6	2.27	0.02	2.59	0.02	0.02	0.02	0.02
Appendix III												
Boron	mg/L	T	--	2.6	2.0	2.2	1.5	1.6	1.8	2.3 J+	1.9	2.6 D
Calcium	mg/L	T	--	530	510	550	510	450 E	480	460 D	360 D	470 D
Chloride	mg/L	T	--	75	64	66	46	42	40	37 D	38 D	50 D
Fluoride	mg/L	T	--	2.2	2.3	1.9	1.7	1.8	1.9	1.9 D	2.2 D	2 D
Sulfate (as SO4)	mg/L	T	--	1300	1300	600	1100	1200	1100	800 D	830 D	1100 D
Total Dissolved Solids	mg/L	T	--	2200 J-	2200	2200	2100	2000	2000	1600 D	1600 D	1900 D
Appendix IV												
Antimony	mg/L	T	0.0060	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	0.00072 J	< 0.00050 U	< 0.00010 U	< 0.00010 U	< 0.0001 U
Arsenic	mg/L	T	0.010	0.0061	0.0055	0.0055	0.0043	0.0032	0.0031	0.0069 J+	0.0073	0.0067
Barium	mg/L	T	2.0	0.046	0.050	0.047	0.036	0.030	0.040	0.040	0.037	0.044
Beryllium	mg/L	T	0.0040	< 0.000052 U	0.000063 J	< 0.00026 U	0.000061 J	0.000057 J	0.000071 J	0.000077 J+	0.000072 J	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.00027	0.00053	< 0.00088 U	0.00037	< 0.00018 U	< 0.00020 U	0.00031	0.00029	< 0.0002 U
Cobalt	mg/L	T	0.0060	0.00046 J	0.00069	0.00078 J	0.00096	0.00069	0.00042 J	0.00050 J+	0.00044 J	0.00013 J
Fluoride	mg/L	T	4.0	2.2	2.3	1.9	1.7	1.8	1.9	1.9 D	2.2 D	2 D
Lead	mg/L	T	0.015	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.00050 U	< 0.00010 UJ	< 0.00010 U	< 0.0001 U
Lithium	mg/L	T	0.10	0.099	**0.11**	0.099	0.090	**0.11**	0.085	0.090	0.098	0.089 D
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.013	0.011	0.0095	0.011	0.0090	0.0051	0.012 J+	0.013	0.01
Radium 226 and 228	pCi/L	T	5.0	< 0.589 U	0.626	1.03	1.08	0.933	0.904	< 0.561 U	1.17	< 1.13 U
Radium-226	pCi/L	T	--	0.235	0.222	0.266	0.171	< 0.183 U	0.216	< 0.129 U	0.179	< 0.156 U
Radium-228	pCi/L	T	--	< 0.589 U	< 0.503 U	0.761	0.911	0.818	0.688	< 0.561 U	0.993	< 1.13 UG
Selenium	mg/L	T	0.050	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	< 0.00010 UJ	< 0.00010 U	< 0.0001 U
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	27	25	16	6.0	23	19	29	33	26

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

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J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-20								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/30/2022	1/4/2023	2/7/2023	3/13/2023	4/18/2023	5/23/2023	6/28/2023	8/7/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	1.24	1.232	1.218	1.37	1.41	1.17	1.18	1.26
Dissolved Oxygen	mg/L	N	--	0.24	0.1	0.02	0.12	0.16	0.05	0.32	0.26	0.72
Oxidation Reduction Potential	mV	N	--	-142	-148.2	-153.3	-153	-162.4	-159.7	-174.4	-105.9	-179.7
pH	su	N	--	7.23	7.5	7.29	7.2	7.44	7.45	7.3	7.14	7.33
Temperature	deg c	N	--	9.7	7.2	6.7	5.7	7.2	10.8	13.1	19.6	14.8
Turbidity	NTU	N	--	0.02	0.02	1.91	0.02	0.02	0.02	0.02	0.02	0.02
Appendix III												
Boron	mg/L	T	--	1.1	0.83	0.87	0.82	0.80	0.92	1.1 J+	1.1	1.1 D
Calcium	mg/L	T	--	130	120	140	170	130	130	58	110 D	130 D
Chloride	mg/L	T	--	70	66	62	60	88	92	71 D	70 D	70 D
Fluoride	mg/L	T	--	0.55	0.26	0.24	0.26	0.21	0.21	0.22 D	0.23 D	0.23 D
Sulfate (as SO4)	mg/L	T	--	42	78	120	110	85	76	30 D	19 D	33 D
Total Dissolved Solids	mg/L	T	--	660	660	690	680	760	770	650 D	570 D	650 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.000096 J	0.000054 J	0.000066 J	0.000062 J	0.00016 J	< 0.00010 U	0.00011 J	0.00014 J	< 0.0001 U
Arsenic	mg/L	T	0.010	0.0015	0.0012	0.0012	0.0012	0.0013	0.0015	0.0016 J+	0.0017	0.0017
Barium	mg/L	T	2.0	0.94	0.61	0.47	0.37	0.31	0.42	0.43	0.49	0.53
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.00019 J	< 0.00018 U	0.00025	0.00029	0.00021 J	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.0002 U
Cobalt	mg/L	T	0.0060	0.0013	0.0013	0.0016	0.0016	0.0014	0.0013	0.0014 J+	0.0011	0.00095
Fluoride	mg/L	T	4.0	0.55	0.26	0.24	0.26	0.21	0.21	0.22 D	0.23 D	0.23 D
Lead	mg/L	T	0.015	**0.0023**	**0.0016**	**0.0016**	**0.0016**	**0.0028**	**0.0023**	**0.0028 J+**	**0.0023**	**0.0018**
Lithium	mg/L	T	0.10	0.074	0.065	0.049	0.055	0.060	0.062	0.083	0.079	0.071 D
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0041	0.0039	0.0041	0.0038	0.0036	0.0048	0.0048 J+	0.0051	0.0047
Radium 226 and 228	pCi/L	T	5.0	1.47	0.822 J+	< 0.499 U	< 0.536 U	0.591	< 0.59 U	< 0.467 U	1.08	< 0.581 U
Radium-226	pCi/L	T	--	< 0.153 U	0.198	0.134	0.161	< 0.166 U	0.193	< 0.122 U	0.118	< 0.19 U
Radium-228	pCi/L	T	--	1.32	0.624 J+	< 0.499 U	< 0.536 U	0.541	< 0.59 U	< 0.467 U	0.958	< 0.581 U
Selenium	mg/L	T	0.050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00013 J	0.00011 J+	0.00010 J	0.00011 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	40	42	33	37	44	42	37 D	37	38 D

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-27								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/30/2022	1/5/2023	2/7/2023	3/13/2023	4/18/2023	5/22/2023	6/27/2023	8/7/2023	10/23/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	2.01	1.651	1.047	1.04	1.65	2.5	2.57	2.99
Dissolved Oxygen	mg/L	N	--	1.35	0.17	0.24	0.93	0.07	0.19	0.04	0.23	0.05
Oxidation Reduction Potential	mV	N	--	-87.3	-137.6	-79.1	-134.3	-52.1	-80.9	-89	-104.5	-191.3
pH	su	N	--	6.86	6.92	6.81	6.95	6.81	6.77	6.86	6.78	6.77
Temperature	deg c	N	--	8.7	6.7	5	4.5	7.2	11.7	16.5	20.8	15.2
Turbidity	NTU	N	--	0.02	0.73	1.33	0.02	4.08	3.32	3.55	8.15	9.71
Appendix III												
Boron	mg/L	T	--	0.31	0.17	0.16	0.14	0.14	0.20	0.45 J+	0.44	0.32 D
Calcium	mg/L	T	--	200	180	180	180	100	130	180 D	150 D	190 D
Chloride	mg/L	T	--	120	84	69	60	38	52	110 D	100 D	110 D
Fluoride	mg/L	T	--	0.37	0.29	0.31	0.41	0.42	0.35	0.36 D	0.41 D	0.43 D
Sulfate (as SO4)	mg/L	T	--	6.8	41	58	47	14	1.8 J	0.56 JD	3.0 D	2.4 JD
Total Dissolved Solids	mg/L	T	--	920	710	790	620	460	590	790 D	690 D	870 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.00013 J	0.000075 J	0.000099 J	0.000060 J	0.00028	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.0001 U
Arsenic	mg/L	T	0.010	0.00086	0.00070	0.00069	0.00069	0.00095	0.00096	0.0010 J+	0.0012	0.0011
Barium	mg/L	T	2.0	0.21	0.17	0.16	0.12	0.074	0.15	0.25	0.25	0.31
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.018	0.016	0.0097	0.0099	0.0083	0.025	0.027	0.034	0.028
Cobalt	mg/L	T	0.0060	0.00063	0.00056	0.00052	0.00043 J	0.00024 J	0.00063	0.00092 J+	0.00083	0.00075
Fluoride	mg/L	T	4.0	0.37	0.29	0.31	0.41	0.42	0.35	0.36 D	0.41 D	0.43 D
Lead	mg/L	T	0.015	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	< 0.00010 UJ	< 0.00010 U	< 0.0001 U
Lithium	mg/L	T	0.10	0.0086	0.0088	0.0067	0.0073	0.0075	0.0073	0.017 D	0.0093	0.0099
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.00041 J	< 0.00025 UJ	< 0.00025 U	< 0.00025 U
Radium 226 and 228	pCi/L	T	5.0	0.823	< 0.639 UJ	< 0.729 U	< 0.889 U	1.15	1.61	0.84	1.76	< 0.857 U
Radium-226	pCi/L	T	--	0.367	0.23	< 0.127 U	< 0.197 U	< 0.171 U	< 0.325 U	0.458	0.477	0.464
Radium-228	pCi/L	T	--	< 0.679 U	< 0.639 UJ	< 0.729 U	< 0.889 U	1.03	1.47 J	< 0.578 U	1.28	< 0.857 U
Selenium	mg/L	T	0.050	0.00023 J	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00016 J	0.00021 J+	0.00022 J	0.0002 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	34	27	22	14	5.0	11	19 D	11	22

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-30								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/30/2022	1/3/2023	2/6/2023	3/13/2023	4/18/2023	5/22/2023	6/27/2023	8/8/2023	10/23/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	3.18	3.025	2.273	2.73	2.66	2.85	2.67	2.21
Dissolved Oxygen	mg/L	N	--	0.12	0.39	0.04	0.35	0.29	0.05	0.01	0.12	0.41
Oxidation Reduction Potential	mV	N	--	-55.7	-281.2	-134.9	-148.7	-151.8	-86.8	-105.6	-92.7	-301.7
pH	su	N	--	7.07	6.48	7.16	7.25	7.17	7.16	7.21	6.94	7.05
Temperature	deg c	N	--	10.1	7.2	6.4	4.8	6.6	10.7	13.6	17	15
Turbidity	NTU	N	--	0.02	0.02	1.21	0.02	0.02	0.5	0.02	0.02	0.02
Appendix III												
Boron	mg/L	T	--	2.2	1.7	2.1	3.5	1.7	1.9	1.9 J+	1.8	2.1 D
Calcium	mg/L	T	--	470	460 E	480	960	430	430	460 D	400 D	390 D
Chloride	mg/L	T	--	190	190	190	140	120	98	110 D	98 D	97 D
Fluoride	mg/L	T	--	1.0	1.4	1.0	1.2	1.1	1.1	0.91 D	1.1 D	1.2 D
Sulfate (as SO4)	mg/L	T	--	780	1000	830	940	970	850	940 D	860 D	610 D
Total Dissolved Solids	mg/L	T	--	2200 J	2400	2000	2300	2200	2100	2800 J	2300 D	1800
Appendix IV												
Antimony	mg/L	T	0.0060	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	0.00040 J	< 0.00050 U	< 0.00050 UD	< 0.00010 U	< 0.0001 U
Arsenic	mg/L	T	0.010	0.00046 J	0.00070	< 0.00050 U	0.00039 J	< 0.00010 U	0.00012 J	0.00027 J+	0.00043 J	0.00063
Barium	mg/L	T	2.0	0.10	0.089	0.10	0.045	0.047	0.058	0.066 D	0.048	0.058
Beryllium	mg/L	T	0.0040	< 0.000052 U	0.000053 J	< 0.00026 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.014	0.012	0.0087	0.010	0.0058	0.0052	0.012	0.013	0.0081
Cobalt	mg/L	T	0.0060	0.00091	0.0044	0.00096 J	0.0028	0.0011	0.00054	0.0013 J+	0.0011	0.00053
Fluoride	mg/L	T	4.0	1.0	1.4	1.0	1.2	1.1	1.1	0.91 D	1.1 D	1.2 D
Lead	mg/L	T	0.015	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.00050 U	< 0.00050 UJ	< 0.00050 UD	< 0.0001 U
Lithium	mg/L	T	0.10	**0.13**	**0.15**	**0.12**	**0.27**	**0.11**	**0.11**	**0.12 D**	**0.14**	**0.12 D**
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	< 0.00062 U	0.0036	< 0.0031 U	0.0017	< 0.0031 U	0.00032 J	0.00082 J+	0.0011 J	0.00061 J
Radium 226 and 228	pCi/L	T	5.0	< 0.873 UJ	0.445 J	< 0.624 UJ	< 0.659 U	0.875	< 0.783 U	0.586 J+	0.911	< 0.526 U
Radium-226	pCi/L	T	--	< 0.238 UJ	0.139 J	< 0.0915 UJ	< 0.2 U	< 0.141 U	< 0.194 U	0.0986 J+	< 0.163 UJ	< 0.228 U
Radium-228	pCi/L	T	--	< 0.873 UJ	< 0.443 UJ	< 0.624 UJ	< 0.659 U	0.844	< 0.783 U	< 0.566 UJ	0.82	< 0.526 U
Selenium	mg/L	T	0.050	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	0.00011 J+	0.00012 J	0.00013 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 UJ	< 0.00038 UD	< 0.000075 U
Total Suspended Solids	mg/L	T	--	4.0	11	< 4.0 UJ	5.0	6.0	4.0	< 4.0 UD	5.0	4 D

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

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J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-31								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	12/1/2022	1/4/2023	2/7/2023	3/14/2023	4/18/2023	5/22/2023	6/27/2023	8/8/2023	10/23/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	1.4	1.327	1.23	1.28	1.21	1.24	1.41	1.23
Dissolved Oxygen	mg/L	N	--	1.65	0.09	0.21	0.11	0.11	0.09	1.39	0.05	0.15
Oxidation Reduction Potential	mV	N	--	-150	-262.2	-129.3	-214.9	-274.4	-220	-113.9	-55.8	-82.4
pH	su	N	--	7.84	7.7	7.85	7.76	7.87	7.85	8	7.78	7.67
Temperature	deg c	N	--	8.7	7.6	6.3	4	6.5	13.2	14.4	17.8	14.9
Turbidity	NTU	N	--	2.61	0.02	1.27	0.02	0.02	0.02	0.02	0.02	0.02
Appendix III												
Boron	mg/L	T	--	4.8	3.8	4.2	4.0	3.6	4.5	5.4 J+	4.8	5.1 D
Calcium	mg/L	T	--	180	190	170	200	170	160	130 D	150 D	170 D
Chloride	mg/L	T	--	120	100	110	97	94	92	110 D	110 D	100 D
Fluoride	mg/L	T	--	4.6	4.9	4.7	4.6	5.1	5.2	4.7 D	5.1 D	4.6 D
Sulfate (as SO4)	mg/L	T	--	180	250	200	250	250	160	120 D	100 D	72 D
Total Dissolved Solids	mg/L	T	--	850	940 J	780	860	810	760	760 D	860 D	730 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.000069 J	< 0.000050 U	0.000080 J	0.00012 J	0.00013 J	< 0.00010 U	< 0.00010 U	0.00012 J	< 0.0001 U
Arsenic	mg/L	T	0.010	0.0018	0.0013	0.0012	0.0010	0.0011	0.0014	0.0016 J+	0.0016	0.0012
Barium	mg/L	T	2.0	0.21	0.14	0.19	0.15	0.12	0.13	0.23	0.16	0.16
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.0021	0.0018	0.0024	0.0019	0.0019	0.0029	0.0023	0.0023	0.0025
Cobalt	mg/L	T	0.0060	0.00015 J	0.00015 J	0.00020 J	0.00018 J	0.00016 J	0.00021 J	0.00018 J+	0.00018 J	0.00013 J
Fluoride	mg/L	T	4.0	**4.6**	**4.9**	**4.7**	**4.6**	**5.1**	**5.2**	**4.7 D**	**5.1 D**	**4.6 D**
Lead	mg/L	T	0.015	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00031 J	< 0.00010 UJ	< 0.00010 U	< 0.0001 U
Lithium	mg/L	T	0.10	0.052	0.048	0.052	0.054	0.046	0.053	0.056 D	0.054	0.049
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0021	0.0013	0.0013	0.0011 J	0.0011 J	0.0012	0.0018 J+	0.0011 J	0.0013
Radium 226 and 228	pCi/L	T	5.0	0.753	< 0.641 U	0.717	< 0.725 U	0.592	1.14	0.58	1.23	< 0.497 U
Radium-226	pCi/L	T	--	0.187	0.203	0.187	< 0.189 U	0.254	0.184	0.27	0.262 J+	< 0.208 U
Radium-228	pCi/L	T	--	0.566	< 0.641 U	0.53	< 0.725 U	< 0.527 U	0.959	< 0.489 U	0.97	< 0.497 U
Selenium	mg/L	T	0.050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00011 J	0.00012 J+	0.00015 J	0.00014 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	2.0 J	4.0	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	1.0 J	< 4 U

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-32								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	11/30/2022	1/4/2023	2/8/2023	3/14/2023	4/18/2023	5/22/2023	6/27/2023	8/8/2023	10/23/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	1.29	1.258	1.175	1.29	1.2	1.05	0.99	1.14
Dissolved Oxygen	mg/L	N	--	0.07	0.08	0.08	0.1	0.1	0.33	0.12	0.13	0.29
Oxidation Reduction Potential	mV	N	--	-184.5	-222.8	-184.7	-188.5	-199.5	-221.7	-209.8	-141.4	-186.3
pH	su	N	--	7.69	7.5	7.57	7.53	7.67	7.75	7.65	7.52	7.53
Temperature	deg c	N	--	10.2	8.3	6.6	6.3	7.4	11.1	13	15.9	14.9
Turbidity	NTU	N	--	0.02	0.02	2.17	0.02	0.02	0.02	0.02	0.02	0.02
Appendix III												
Boron	mg/L	T	--	3.8	3.0	3.0	2.9	2.6	3.1	3.9 J+	3.7	5 D
Calcium	mg/L	T	--	200	180	190	220	190	190	150 D	130 D	150 D
Chloride	mg/L	T	--	47	50	50	50	45	42	41 D	44 D	47 D
Fluoride	mg/L	T	--	1.5	1.5	1.4	1.6	1.4	1.5	1.4 D	1.6 D	1.8 D
Sulfate (as SO4)	mg/L	T	--	100	110	54	170	190	140	48 D	17 D	17 D
Total Dissolved Solids	mg/L	T	--	790	700	730	770	800	790	600 D	550 D	640 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.000067 J	< 0.000050 U	< 0.000050 U	0.000072 J	0.00014 J	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.0001 U
Arsenic	mg/L	T	0.010	0.00061	0.00045 J	0.00052 J	0.00047 J	0.00044 J	0.00055	0.00058 J+	0.00062	0.00058
Barium	mg/L	T	2.0	0.62	0.60	0.57	0.41	0.29	0.34	0.37	0.41	0.85
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.00046	0.00065	0.00057	0.00055	0.00039	0.00038	0.00032	0.00031	0.00031
Cobalt	mg/L	T	0.0060	0.00034 J	0.00036 J	0.00039 J	0.00041 J	0.00031 J	0.00037 J	0.00068 J+	0.00058	0.00038 J
Fluoride	mg/L	T	4.0	1.5	1.5	1.4	1.6	1.4	1.5	1.4 D	1.6 D	1.8 D
Lead	mg/L	T	0.015	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00012 J	0.00014 J+	< 0.00010 U	< 0.0001 U
Lithium	mg/L	T	0.10	**0.15**	**0.14**	**0.12**	**0.11**	0.094	**0.10**	**0.13 D**	**0.14**	**0.19 D**
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0051	0.0043	0.0038	0.0032	0.0034	0.0045	0.0047 J+	0.0046	0.0045
Radium 226 and 228	pCi/L	T	5.0	0.614	< 0.497 U	< 0.601 U	< 0.732 U	0.877	0.847	< 0.607 U	0.985	< 0.589 U
Radium-226	pCi/L	T	--	< 0.184 U	0.219	0.152	< 0.195 U	< 0.164 U	0.206	< 0.0916 U	0.403 J+	< 0.18 U
Radium-228	pCi/L	T	--	0.492	< 0.497 U	< 0.601 U	< 0.732 U	0.773	0.641	< 0.607 U	< 0.848 U	< 0.589 U
Selenium	mg/L	T	0.050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	< 0.00010 UJ	< 0.00010 U	< 0.0001 U
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	42	43	39	40	39	31	29 D	11	23

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-33								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	12/1/2022	1/5/2023	2/8/2023	3/15/2023	4/18/2023	5/22/2023	6/27/2023	8/7/2023	10/23/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	0.99	0.949	0.859	0.91	0.92	0.901	0.98	1
Dissolved Oxygen	mg/L	N	--	0.81	1.02	0.75	0.2	0.23	0.06	0.05	0.01	0.02
Oxidation Reduction Potential	mV	N	--	-28.5	-72.8	-61.2	-37.4	-63.6	-86.2	-106.6	-121.9	-107.1
pH	su	N	--	7.12	6.49	7.14	6.96	7.04	7.02	7.03	6.98	6.86
Temperature	deg c	N	--	8.3	4.8	2.4	3.6	8.8	10.7	13.7	17.2	15.8
Turbidity	NTU	N	--	0.02	0.02	1.17	0.02	3.44	0.55	0.02	1.07	3.25
Appendix III												
Boron	mg/L	T	--	0.18	0.091	0.086	0.067	0.082	0.085	0.11 J+	0.12	0.16 D
Calcium	mg/L	T	--	200	170	170	190	150	160	150 D	150 D	180 D
Chloride	mg/L	T	--	58	51	50	39	27	17	20 D	23 D	45 D
Fluoride	mg/L	T	--	0.29	0.24	0.21 J	0.23	0.28	0.25	0.26 D	0.27 D	0.24 D
Sulfate (as SO4)	mg/L	T	--	100	58	65	42	23	1.9 J	4.3 D	1.6 JD	69 D
Total Dissolved Solids	mg/L	T	--	750 J	630	680	590	580	600	600 D	570 D	690 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.00098	0.00088	0.00079	0.00059	0.0012	0.00017 J	0.00020 J	0.00015 J	0.00048
Arsenic	mg/L	T	0.010	0.0031	0.0014	0.0016	0.0017	0.0040	0.0038	0.0032 J+	0.0027	0.0027
Barium	mg/L	T	2.0	0.084	0.086	0.092	0.076	0.073	0.095	0.088	0.098	0.09
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.00026 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	0.000049 J	0.00010 J	0.00014 J	0.00015 J	< 0.00016 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	0.00023 J
Chromium, Total	mg/L	T	0.10	0.0021	0.0028	0.0029	0.0027	0.0029	0.0039	0.0050	0.0059	0.0029
Cobalt	mg/L	T	0.0060	0.00075	0.00049 J	0.00082	0.0017	0.0020 J	0.00083	0.00039 J+	0.00041 J	0.00053
Fluoride	mg/L	T	4.0	0.29	0.24	0.21 J	0.23	0.28	0.25	0.26 D	0.27 D	0.24 D
Lead	mg/L	T	0.015	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.0011 U	0.00026 J	0.00015 J+	0.00015 J	0.00037 J
Lithium	mg/L	T	0.10	0.0051	0.0069	0.0043	0.0047	0.0061	0.0052	< 0.0094 UD	0.0041	0.0054
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 UJ
Molybdenum	mg/L	T	0.10	0.0047	0.0037	0.0031	0.0031	0.0060 J	0.0026	0.00068 J+	0.00052 J	0.0032
Radium 226 and 228	pCi/L	T	5.0	0.825	< 0.587 U	0.949	< 0.852 U	< 0.815 U	1.61	0.828	1.15	< 0.621 U
Radium-226	pCi/L	T	--	< 0.267 U	< 0.14 U	< 0.125 U	< 0.204 U	< 0.232 U	< 0.256 U	0.154	0.276 J+	< 0.282 UJ
Radium-228	pCi/L	T	--	0.794	< 0.587 U	0.833	< 0.852 U	< 0.815 U	1.48 J	< 0.768 U	0.875	< 0.621 UJ
Selenium	mg/L	T	0.050	0.00089	0.00076	0.00055	0.00038 J	< 0.0011 U	0.00033 J	0.00033 J+	0.00029 J	0.00059
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	2.0 J	5.0	10	1.0 J	9.0	17	21	22	10

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	MW-34								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	12/1/2022	1/5/2023	2/8/2023	3/15/2023	4/18/2023	5/22/2023	6/27/2023	8/7/2023	10/23/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well
			Sample Matrix:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	2.39	1.07	1.96	1.49	1.86	1.89	2.05	2.05	1.93
Dissolved Oxygen	mg/L	N	--	0.87	1.19	0.29	0.45	1.05	2.73	0.09	0.97	0.7
Oxidation Reduction Potential	mV	N	--	-120.5	-104.4	-119.7	-95	-63.4	-100.5	-113.8	-124.6	-163.1
pH	su	N	--	6.65	7.66	6.78	6.68	6.53	6.6	6.75	6.69	6.62
Temperature	deg c	N	--	12.9	4.9	9.4	7.8	8	10.3	12.4	14.6	14.8
Turbidity	NTU	N	--	4.96	0.02	5.58	2.11	5.87	0.02	0.02	3.15	1.77
Appendix III												
Boron	mg/L	T	--	3.2	2.7	1.9 B	1.8	1.6	2.5	4.0 J+	3.6	4.1 D
Calcium	mg/L	T	--	220	190	220	210	210	210	220 D	190 D	220 D
Chloride	mg/L	T	--	33	27	24	23	23	22	23 D	24 D	25 D
Fluoride	mg/L	T	--	0.35	0.20	0.23	0.24	0.21	0.23	0.26 D	0.29 D	0.28 D
Sulfate (as SO4)	mg/L	T	--	2.5 J	1.9 J	< 0.41 U	0.87 J	0.56 J	< 0.41 U	< 0.41 UD	< 0.41 UD	< 0.41 UD
Total Dissolved Solids	mg/L	T	--	820	750	800	790	700	760	820 D	770 D	800 D
Appendix IV												
Antimony	mg/L	T	0.0060	0.00023 J	0.00011 J	0.000095 J	0.00013 J	0.00091 J	0.00010 J	0.00016 J	0.00015 J	0.00014 J
Arsenic	mg/L	T	0.010	0.0016	0.0010	0.00088	0.00090	0.00089 J	0.0010	0.0013 J+	0.0012	0.0013
Barium	mg/L	T	2.0	0.54	0.54	0.58	0.50	0.17	0.49	0.53	0.49	0.52
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.00026 U	0.000059 J	< 0.000052 UJ	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	0.000036 J	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.024	0.022	0.025	0.029	< 0.00088 U	0.027	0.034	0.028	0.019
Cobalt	mg/L	T	0.0060	0.0015	0.0013	0.0013	0.0013	< 0.00050 U	0.0014	0.0018 J+	0.0016	0.0013
Fluoride	mg/L	T	4.0	0.35	0.20	0.23	0.24	0.21	0.23	0.26 D	0.29 D	0.28 D
Lead	mg/L	T	0.015	0.0069	0.0016	0.00059	0.00094	< 0.0011 U	0.00074	0.00087 J+	0.00091	0.00063
Lithium	mg/L	T	0.10	0.077	0.086	0.053	0.012	0.046	0.065	0.088 D	0.10	0.099 D
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0018	0.00081 J	< 0.00062 U	< 0.00062 U	0.0079	0.0018	0.00030 J+	< 0.00025 U	< 0.00025 U
Radium 226 and 228	pCi/L	T	5.0	2.02	1.15	1.28	1.34	1.99	1.81	2.79	1.24	2.4
Radium-226	pCi/L	T	--	0.57	0.534	0.654	0.558	0.396	0.561	0.357	0.637 J+	0.699
Radium-228	pCi/L	T	--	1.45	< 0.849 U	< 0.918 U	0.78	1.59	1.25 J	2.44	< 0.862 U	1.7
Selenium	mg/L	T	0.050	0.00034 J	0.00025 J	0.00027 J	0.00023 J	< 0.0011 U	0.00029 J	0.00030 J+	0.00027 J	0.00031 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	110	52	83	44	160	160	170 D	130	150

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

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J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	SG-02								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	12/2/2022	1/5/2023	2/6/2023	3/14/2023	4/19/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
			Sample Matrix:	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	1.42	1.0	--	0.898	0.93	1.03	1.56	1.66	1.47
Dissolved Oxygen	mg/L	N	--	5.28	9.57	--	4.27	10.32	7.83	8.9	9.54	8.29
Oxidation Reduction Potential	mV	N	--	147.3	-25.2	--	131.1	13.3	16.1	25.6	69.3	-44.9
pH	su	N	--	8.02	8.38	--	8	8.23	9.14	8.52	8.7	8.15
Temperature	deg c	N	--	2.8	3.5	--	2.7	8.9	26.6	26.2	29.6	17.5
Turbidity	NTU	N	--	1.62	0.02	--	1.2	2.41	6.62	4.2	3.26	6.09
Appendix III												
Boron	mg/L	T	--	4.0	2.2	--	2.1	2.0	2.8	5.6 J+	6.9	7 D
Calcium	mg/L	T	--	210	140	--	140	130	150	210 D	170 D	180 D
Chloride	mg/L	T	--	75	46	--	41	37	40	86 D	120 D	99 D
Fluoride	mg/L	T	--	2.6	1.9	--	2.3	2.6	3.3	4.6 D	5.1 D	3.6 D
Sulfate (as SO4)	mg/L	T	--	620	360	--	350	400	430	620 D	640 D	530 D
Total Dissolved Solids	mg/L	T	--	1100	660	--	580	680	740	1200 D	1400 D	1100
Appendix IV												
Antimony	mg/L	T	0.0060	0.00051	0.00043	--	0.00066	0.00058 J	0.0012	0.00085	0.0011	0.00061
Arsenic	mg/L	T	0.010	0.0019	0.0012	--	0.0018	0.0017 J	0.0032	0.0037	0.0091	0.0023
Barium	mg/L	T	2.0	0.049	0.033	--	0.034	0.22	0.080	0.13	0.11	0.06
Beryllium	mg/L	T	0.0040	0.000060 J	< 0.000052 U	--	< 0.000052 U	< 0.00027 U	< 0.000052 U	0.00029	0.00014 J	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	--	< 0.000032 U	< 0.00017 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.00038	0.00024 J	--	0.00057	< 0.00091 U	0.00046	0.00091	0.00080	0.00036
Cobalt	mg/L	T	0.0060	0.00021 J	0.00022 J	--	0.00028 J	< 0.00052 U	0.00035 J	0.00040 J	0.00057	0.00015 J
Fluoride	mg/L	T	4.0	2.6	1.9	--	2.3	2.6	3.3	4.6 D	5.1 D	3.6 D
Lead	mg/L	T	0.015	0.0013	0.00081	--	0.0012	0.0020 J	0.0011	0.00050 J	0.0012	0.00064
Lithium	mg/L	T	0.10	0.046	0.032	--	0.035	0.038	0.053	0.067	0.085	0.058
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	--	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	0.00022
Molybdenum	mg/L	T	0.10	0.0069	0.0060	--	0.011	0.0062 J	0.016	0.0072	0.012	0.0081
Radium 226 and 228	pCi/L	T	5.0	< 0.342 U	0.712 J+	--	< 0.551 U	1.42	1.49	1.44	1.28	< 0.532 U
Radium-226	pCi/L	T		0.151	< 0.121 U	--	< 0.177 U	0.266	0.229	0.456	0.329	< 0.265 U
Radium-228	pCi/L	T		< 0.342 U	0.627 J+	--	< 0.551 U	1.15	1.26	0.981	0.954	< 0.532 U
Selenium	mg/L	T	0.050	0.00073	0.00059	--	0.0010	< 0.0011 U	0.0013	0.0013	0.0014	0.0008
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	--	< 0.000075 U	< 0.00039 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T		< 4.0 U	3.0 J	--	1.0 J	0.99 J	1.0 J	30	14	< 3.9 UD

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	SG-03								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	12/2/2022	1/5/2023	2/6/2023	3/14/2023	4/19/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
			Sample Matrix:	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	1.45	1	--	0.896	1.15	1.05	1.53	1.66	1.49
Dissolved Oxygen	mg/L	N	--	5.23	9.58	--	3.98	9.77	7.37	8.71	9.56	8.26
Oxidation Reduction Potential	mV	N	--	138.3	-32.4	--	-50.1	8	10	17	71.4	-42.1
pH	su	N	--	8	8.42	--	7.82	6.24	8.91	8.63	8.67	8.14
Temperature	deg c	N	--	2	3.3	--	0.9	8.3	28.6	25.9	29.5	17.7
Turbidity	NTU	N	--	1.2	0.36	--	0.02	4.45	38.1	5.36	4.27	5.56
Appendix III												
Boron	mg/L	T	--	3.9	2.0	--	2.1	2.0	2.9	5.8 J+	7.5	6.9 D
Calcium	mg/L	T	--	200	120	--	150	140	160	220 D	180 D	180 D
Chloride	mg/L	T	--	72	42	--	43	37	41	86 D	120 D	100 D
Fluoride	mg/L	T	--	2.5	1.8	--	2.5	2.7	3.6	4.6 D	5.0 D	3.6 D
Sulfate (as SO4)	mg/L	T	--	600	350	--	350	400	450	620 D	640 D	550 D
Total Dissolved Solids	mg/L	T	--	1100	480	--	630	660	740	1200 D	1400 D	1100
Boron	mg/L	D	--	--	--	--	--	--	2.7	--	--	--
Calcium	mg/L	D	--	--	--	--	--	--	150	--	--	--
Appendix IV												
Antimony	mg/L	T	0.0060	0.00049	0.00038	--	0.00067	0.0010 J	0.0013	0.00088	0.0012	0.00063
Arsenic	mg/L	T	0.010	0.0018	0.0011	--	0.0020	0.0016 J	0.0041	0.0040	0.0094	0.0024
Barium	mg/L	T	2.0	0.049	0.031	--	0.036	0.027	0.097	0.13	0.13	0.061
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	--	0.000078 J	< 0.00026 U	0.00056	0.00040	0.000091 J	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	--	0.000038 J	< 0.00016 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.00043	0.00025	--	0.00092	< 0.00088 U	0.0025	0.0012	0.00069	0.00049
Cobalt	mg/L	T	0.0060	0.00017 J	0.00017 J	--	0.00033 J	0.00050 J	0.00058	0.00043 J	0.00055	0.0003 J
Fluoride	mg/L	T	4.0	2.5	1.8	--	2.5	2.7	3.6	4.6 D	5.0 D	3.6 D
Lead	mg/L	T	0.015	0.0012	0.00060	--	0.0020	< 0.0011 U	0.0033	0.00076	0.00091	0.00066
Lithium	mg/L	T	0.10	0.046	0.028	--	0.0056	0.037	0.051	0.067	0.090	0.059
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	--	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0066	0.0052	--	0.010	0.0097	0.020	0.0069	0.013	0.0083
Radium 226 and 228	pCi/L	T	5.0	< 0.443 U	< 0.506 U	--	< 0.531 U	1.21	< 0.658 U	< 0.653 U	0.969	0.594
Radium-226	pCi/L	T	--	0.14	0.129	--	< 0.193 U	0.199	0.363	0.353	0.253	< 0.236 U
Radium-228	pCi/L	T	--	< 0.443 U	< 0.506 U	--	< 0.531 U	1.01	< 0.658 U	< 0.653 U	< 0.842 U	< 0.58 U
Selenium	mg/L	T	0.050	0.00070	0.00056	--	0.0010	0.0021 J	0.0018	0.0012	0.0016	0.00081
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	--	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	9.0	1.0 J	--	6.0	3.0 J	33	34	16	< 4 U
Antimony	mg/L	D	0.0060	--	--	--	--	--	< 0.000038 U	--	--	--
Arsenic	mg/L	D	0.010	--	--	--	--	--	0.0035	--	--	--
Barium	mg/L	D	2.0	--	--	--	--	--	0.073	--	--	--
Beryllium	mg/L	D	0.0040	--	--	--	--	--	< 0.000078 U	--	--	--
Cadmium	mg/L	D	0.0050	--	--	--	--	--	< 0.000018 U	--	--	--
Chromium, Total	mg/L	D	0.10	--	--	--	--	--	< 0.00012 U	--	--	--
Cobalt	mg/L	D	0.0060	--	--	--	--	--	< 0.000028 U	--	--	--
Lead	mg/L	D	0.015	--	--	--	--	--	< 0.00012 U	--	--	--
Lithium	mg/L	D	0.10	--	--	--	--	--	0.039	--	--	--
Molybdenum	mg/L	D	0.10	--	--	--	--	--	0.018	--	--	--
Selenium	mg/L	D	0.0050	--	--	--	--	--	0.0020	--	--	--
Thallium	mg/L	D	0.0020	--	--	--	--	--	< 0.000015 U	--	--	--

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	SG-04R								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	12/2/2022	1/5/2023	2/6/2023	3/14/2023	4/19/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
			Sample Matrix:	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	1	1.64	--	1.404	1.96	1.79	2.56	2.56	2.12
Dissolved Oxygen	mg/L	N	--	6.42	9.64	--	10.26	10.46	7.17	6.62	8.21	8.36
Oxidation Reduction Potential	mV	N	--	125.3	-34.8	--	-34	91.5	29.9	368	58.7	-33.8
pH	su	N	--	8.03	8.44	--	8.05	8.21	8.3	8.24	8.68	8.36
Temperature	deg c	N	--	3.3	4	--	5.9	8.2	25.6	25.9	23.8	17.1
Turbidity	NTU	N	--	7.25	1.1	--	3.22	1.04	5.27	10.6	2.28	5.92
Appendix III												
Boron	mg/L	T	--	3.0	2.1	--	2.6	2.4	3.2	5.0 J+	5.4	5.4 D
Calcium	mg/L	T	--	430	300	--	370	310	390	600 D	580 DE	500 D
Chloride	mg/L	T	--	27	22	--	21	20	22	33 D	38 D	35 D
Fluoride	mg/L	T	--	2.6	2.0	--	2.3	2.7	3.5	5.0 D	5.3 D	3.7 D
Sulfate (as SO4)	mg/L	T	--	1200	890	--	750	880	1000	1600 D	1800 D	820 D
Total Dissolved Solids	mg/L	T	--	1800	1200	--	1200	1400	1600	2500 D	2700 D	2200
Appendix IV												
Antimony	mg/L	T	0.0060	0.00059	0.00052	--	0.00069	0.0011 J	0.00064 J	0.0013 D	0.0011	0.00089
Arsenic	mg/L	T	0.010	0.00099	0.00091	--	0.0016	0.0026 J	0.0012	0.0043	0.0058	0.0017
Barium	mg/L	T	2.0	0.022	0.019	--	0.023	0.040	0.039	0.040 D	0.029	0.029
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	--	< 0.000052 U	< 0.00026 U	< 0.000052 U	0.00012 J	0.000066 J	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	--	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.00019 J	0.00028	--	0.00035	< 0.00088 U	0.00040	0.0010	0.00028	0.00063
Cobalt	mg/L	T	0.0060	0.00024 J	0.00028 J	--	0.00037 J	< 0.00050 U	0.00032 J	0.0011	0.00083	0.00063
Fluoride	mg/L	T	4.0	2.6	2.0	--	2.3	2.7	3.5	5.0 D	5.3 D	3.7 D
Lead	mg/L	T	0.015	0.00033 J	0.00027 J	--	0.00047 J	0.0011 J	0.0013 J	0.0025 JD	0.00054 JD	0.00022 J
Lithium	mg/L	T	0.10	0.044	0.039	--	0.0089	0.043	0.056	0.072	0.084	0.064
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	--	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0078	0.0066	--	0.0073	0.010	0.0072	0.013	0.016	0.016
Radium 226 and 228	pCi/L	T	5.0	< 0.408 U	< 0.497 U	--	< 0.672 U	< 0.809 U	< 0.803 U	1.82	< 0.788 U	< 0.641 U
Radium-226	pCi/L	T		< 0.11 U	< 0.109 U	--	< 0.167 U	< 0.213 U	0.264	0.233	< 0.133 U	< 0.2 U
Radium-228	pCi/L	T		< 0.408 U	< 0.497 U	--	< 0.672 U	< 0.809 U	< 0.803 U	1.59	< 0.788 U	< 0.641 U
Selenium	mg/L	T	0.050	0.0015	0.0014	--	0.0016	0.0013 J	0.0012	0.0023	0.0028	0.0024
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	--	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 UD	< 0.00038 UD	< 0.000075 U
Total Suspended Solids	mg/L	T		5.0	< 4.0 U	--	3.0 J	1.0 J	5.0	23	9.0	< 4 U

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met, or to the concentration of the analyte being below the RL).

J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	SG-05								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	12/2/2022	1/5/2023	2/6/2023	3/14/2023	4/19/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
			Sample Matrix:	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	0.731	0.98	--	0.742	1.11	0.75	0.61	0.359	0.91
Dissolved Oxygen	mg/L	N	--	6.85	13.1	--	15.74	6.77	7.83	11.25	11.39	11.73
Oxidation Reduction Potential	mV	N	--	142	-44.6	--	6.4	18.3	16.3	153.3	39.2	-28.7
pH	su	N	--	7.44	8.02	--	8.28	7.88	8.31	6.73	9.19	7.87
Temperature	deg c	N	--	4.1	4	--	9.8	7.6	27.8	23.4	28.9	19.5
Turbidity	NTU	N	--	9.38	8.02	--	9.83	26.6	6.8	7.84	4.36	29.3
Appendix III												
Boron	mg/L	T	--	0.59	0.60	--	0.48	0.57	0.36	0.46 J+	0.39	0.72 D
Calcium	mg/L	T	--	140	120	--	120	120	81	34	34	120 D
Chloride	mg/L	T	--	79	51	--	61	50	54	64 D	29 D	54 D
Fluoride	mg/L	T	--	0.73	0.98	--	0.94	0.69	0.30	0.42 D	0.45 D	0.79 D
Sulfate (as SO4)	mg/L	T	--	8.4 J	150	--	38 J	110	43	38 D	11 D	12 D
Total Dissolved Solids	mg/L	T	--	620	630	--	460	570	400	320 D	210 D	510 D
Boron	mg/L	D	--	--	--	--	--	0.68	--	--	--	--
Calcium	mg/L	D	--	--	--	--	--	120	--	--	--	--
Appendix IV												
Antimony	mg/L	T	0.0060	0.00018 J	0.000093 J	--	0.00030	0.0010 J	0.00029	0.0010	0.00044	0.00016 J
Arsenic	mg/L	T	0.010	0.00084	0.00056	--	0.00071	0.0026 J	0.0017	0.0024	0.0013	0.00088
Barium	mg/L	T	2.0	0.58	0.23	--	0.35	0.039	0.20	0.11	0.16	0.51
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	--	< 0.000052 U	< 0.00026 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	< 0.000032 U	< 0.000032 U	--	< 0.000032 U	< 0.00016 U	< 0.000075 U	0.00011 J	0.00075	0.000094 J
Chromium, Total	mg/L	T	0.10	0.00036	0.00024 J	--	0.00048	< 0.00088 U	0.00035	0.00049	0.0017	0.00039
Cobalt	mg/L	T	0.0060	0.00037 J	0.00025 J	--	0.00029 J	< 0.00050 U	0.00025 J	0.00032 J	0.00033 J	0.00027 J
Fluoride	mg/L	T	4.0	0.73	0.98	--	0.94	0.69	0.30	0.42 D	0.45 D	0.79 D
Lead	mg/L	T	0.015	0.00023 J	0.00038 J	--	0.00045 J	0.0012 J	0.0022	0.0040	0.0095	0.0031
Lithium	mg/L	T	0.10	0.038	0.033	--	0.0045	0.029	0.016	0.022	0.027	0.039
Mercury	mg/L	T	0.0020	< 0.00016 U	< 0.00016 U	--	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	0.00017 J
Molybdenum	mg/L	T	0.10	0.00077 J	0.0029	--	0.0013	0.0090	0.0083	0.0087	0.0015	0.00085 J
Radium 226 and 228	pCi/L	T	5.0	0.851	< 0.537 U	--	< 0.776 U	0.858	< 0.758 U	< 0.818 U	< 0.82 U	< 0.771 U
Radium-226	pCi/L	T	--	0.308	< 0.122 U	--	< 0.188 U	0.306	< 0.219 U	< 0.154 U	< 0.147 U	< 0.286 U
Radium-228	pCi/L	T	--	0.543	< 0.537 U	--	< 0.776 U	< 0.798 U	< 0.758 U	< 0.818 U	< 0.82 U	< 0.771 U
Selenium	mg/L	T	0.050	< 0.00022 U	< 0.00022 U	--	< 0.00022 U	0.0013 J	0.00022 J	0.00038 J	0.00027 J	0.00017 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	--	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	5.0	7.9	--	8.0	17	6.0	14	73	12
Antimony	mg/L	D	0.0060	--	--	--	--	0.00047 J	--	--	--	--
Arsenic	mg/L	D	0.010	--	--	--	--	0.00063 J	--	--	--	--
Barium	mg/L	D	2.0	--	--	--	--	0.37	--	--	--	--
Beryllium	mg/L	D	0.0040	--	--	--	--	< 0.00026 U	--	--	--	--
Cadmium	mg/L	D	0.0050	--	--	--	--	< 0.00016 U	--	--	--	--
Chromium, Total	mg/L	D	0.10	--	--	--	--	0.025	--	--	--	--
Cobalt	mg/L	D	0.0060	--	--	--	--	0.0012 J	--	--	--	--
Lead	mg/L	D	0.015	--	--	--	--	< 0.0011 U	--	--	--	--
Lithium	mg/L	D	0.10	--	--	--	--	0.032	--	--	--	--
Mercury	mg/L	D	0.0013	--	--	--	--	< 0.00016 U	--	--	--	--
Molybdenum	mg/L	D	0.10	--	--	--	--	< 0.0031 U	--	--	--	--
Selenium	mg/L	D	0.0050	--	--	--	--	< 0.0011 U	--	--	--	--
Thallium	mg/L	D	0.0020	--	--	--	--	< 0.00038 U	--	--	--	--

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

Qualifiers:

U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.

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J+ Same as J, and the reported concentration is potentially biased high.

J– Same as J, and the reported concentration is potentially biased low.

UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

			Sample Location:	SG-06								
			Compliance Phase:	Background Monitoring								Initial Assessment Monitoring
			Sample Date:	12/2/2022	1/5/2023	2/6/2023	3/13/2023	4/19/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023
			Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
			Unit:	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
			Sample Matrix:	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result
Field Parameters												
Conductivity	mS/cm	N	--	--	--	--	--	--	--	--	0.69	0.74
Dissolved Oxygen	mg/L	N	--	--	--	--	--	--	--	--	4.93	6.01
Oxidation Reduction Potential	mV	N	--	--	--	--	--	--	--	--	60.2	-40.4
pH	su	N	--	--	--	--	--	--	--	--	7.37	7.98
Temperature	deg c	N	--	--	--	--	--	--	--	--	24.3	19.1
Turbidity	NTU	N	--	--	--	--	--	--	--	--	7.35	4.89
Appendix III												
Boron	mg/L	T	--	--	--	--	--	--	--	--	0.21	0.24 D
Calcium	mg/L	T	--	--	--	--	--	--	--	--	69 D	82 D
Chloride	mg/L	T	--	--	--	--	--	--	--	--	53 D	56 D
Fluoride	mg/L	T	--	--	--	--	--	--	--	--	0.18 D	0.18 D
Sulfate (as SO4)	mg/L	T	--	--	--	--	--	--	--	--	15 D	30 D
Total Dissolved Solids	mg/L	T	--	--	--	--	--	--	--	--	380 D	410 D
Appendix IV												
Antimony	mg/L	T	0.0060	--	--	--	--	--	--	--	< 0.00010 U	0.00014 J
Arsenic	mg/L	T	0.010	--	--	--	--	--	--	--	0.0016	0.0016
Barium	mg/L	T	2.0	--	--	--	--	--	--	--	0.10	0.092
Beryllium	mg/L	T	0.0040	--	--	--	--	--	--	--	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0050	--	--	--	--	--	--	--	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	--	--	--	--	--	--	--	0.00088	0.00044
Cobalt	mg/L	T	0.0060	--	--	--	--	--	--	--	0.00019 J	0.00018 J
Fluoride	mg/L	T	4.0	--	--	--	--	--	--	--	0.18 D	0.18 D
Lead	mg/L	T	0.015	--	--	--	--	--	--	--	0.00071	0.00053 J
Lithium	mg/L	T	0.10	--	--	--	--	--	--	--	0.0061	0.0087
Mercury	mg/L	T	0.0020	--	--	--	--	--	--	--	< 0.00016 U	0.0002
Molybdenum	mg/L	T	0.10	--	--	--	--	--	--	--	0.00039 J	0.0034
Radium 226 and 228	pCi/L	T	5.0	--	--	--	--	--	--	--	< 0.926 U	< 0.838 U
Radium-226	pCi/L	T	--	--	--	--	--	--	--	--	< 0.16 U	< 0.288 U
Radium-228	pCi/L	T	--	--	--	--	--	--	--	--	< 0.926 U	< 0.838 U
Selenium	mg/L	T	0.050	--	--	--	--	--	--	--	0.00015 J	0.00012 J
Thallium	mg/L	T	0.0020	--	--	--	--	--	--	--	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	--	--	--	--	--	--	--	120	< 4 UD

Notes:

ug/l - micrograms per liter.

mg/l = milligrams per liter.

su - standard pH units (pH is a field parameter)

pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

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R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.

D The sample was diluted before analysis, this does not effect results.

Appendix D

Laboratory Reports

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

TRACE ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

January 26, 2023

Ms. Molly Reeves
HDR Michigan Inc.
5405 Data Court
Ann Arbor, MI 48108

RE: Trace Project 23A0179
Client Project City of Grand Haven - Harbor Island

Dear Ms. Reeves:

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report.

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

For clients that require NELAP Accreditation, Trace certifies that these test results meet all requirements of the NELAP Standard, except for those analytes with a "N" notation. These analytes have not been evaluated by NELAP at Trace's discretion and will not be reported unless requested by client.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at jmink@trace-labs.com.

Sincerely,

Jon Mink
Senior Project Manager
Enclosures

NELAP ACCREDITED TNI LABORATORY

NJDEP Accreditation No. MI008

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

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SAMPLE SUMMARY

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
23A0179-01	MW-30	Ground Water	TB	01/03/23 17:20	01/04/23 16:07
23A0179-02	MWT-30	Ground Water	TB	01/03/23 17:40	01/04/23 16:07
23A0179-03	MW-19	Ground Water	TB	01/03/23 15:30	01/04/23 16:07
23A0179-04	MW-12	Ground Water	TB	01/03/23 12:20	01/04/23 16:07
23A0179-05	MW-11	Ground Water	TB	01/03/23 18:10	01/04/23 16:07
23A0179-06	MW-06	Ground Water	TB	01/03/23 13:30	01/04/23 16:07
23A0179-07	MW-01R	Ground Water	TB	01/03/23 15:25	01/04/23 16:07
23A0179-08	MW-10	Ground Water	TB	01/04/23 09:30	01/04/23 16:07
23A0179-09	MW-02	Ground Water	TB	01/04/23 11:40	01/04/23 16:07
23A0179-10	MW-09	Ground Water	TB	01/04/23 13:30	01/04/23 16:07
23A0179-11	MW-04	Ground Water	TB	01/04/23 13:00	01/04/23 16:07
23A0179-12	MW-03	Ground Water	TB	01/04/23 15:10	01/04/23 16:07
23A0179-13	MW-31	Ground Water	TB	01/04/23 17:00	01/05/23 18:45
23A0179-14	MW-32	Ground Water	TB	01/04/23 19:20	01/05/23 18:45
23A0179-15	MW-33	Ground Water	TB	01/05/23 16:20	01/05/23 18:45
23A0179-16	MW-34	Ground Water	TB	01/05/23 13:10	01/05/23 18:45
23A0179-17	MW-18	Ground Water	TB	01/05/23 09:00	01/05/23 18:45
23A0179-18	SG-05	Ground Water	TB	01/05/23 14:00	01/05/23 18:45
23A0179-19	SG-04R	Ground Water	TB	01/05/23 14:25	01/05/23 18:45
23A0179-20	SG-03	Ground Water	TB	01/05/23 14:50	01/05/23 18:45
23A0179-21	SG-02	Ground Water	TB	01/05/23 15:20	01/05/23 18:45
23A0179-22	MW-20	Ground Water	TB	01/04/23 17:20	01/05/23 18:45
23A0179-23	MW-07	Ground Water	TB	01/04/23 19:20	01/05/23 18:45
23A0179-24	MW-08	Ground Water	TB	01/05/23 10:00	01/05/23 18:45
23A0179-25	MW-27	Ground Water	TB	01/05/23 12:10	01/05/23 18:45
23A0179-26	MWT-27	Ground Water	TB	01/05/23 12:10	01/05/23 18:45

CERTIFICATE OF ANALYSIS

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AN EXPLANATION OF TERMS AND SYMBOLS WHICH MAY OCCUR IN THIS REPORT

DEFINITIONS

LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
DUP	Matrix Duplicate
RDL	Reporting Detection Limit
MCL	Maximum Contamination Limit
TIC	Tentatively Identified Compound
<, ND or U	Indicates the compound was analyzed for but not detected
*	Indicates a result that exceeds its associated MCL or Surrogate control limits
N	Indicates that the laboratory is not accredited by NELAP for this compound
NA	Indicates that the compound is not available.

NOTE: Samples for volatiles that have been extracted with a water miscible solvent were corrected for the total volume of the solvent/water mixture.
Solid matrices Method Blanks are at 100% solids as such results are the same wet or dry.

DATA QUALIFIERS

Trace ID: 23A0179-01

Analysis: SM 4500-H+ B-11

pH	Note 503 : The sample result and reporting limit must be considered estimated. The analysis was performed beyond the EPA established 24-hour hold time.
pH	Note pH : The pH was analyzed at 9:37

Trace ID: 23A0179-02

Analysis: SM 4500-H+ B-11

pH	Note 503 : The sample result and reporting limit must be considered estimated. The analysis was performed beyond the EPA established 24-hour hold time.
pH	Note pHb : The pH was analyzed at 9:41

Trace ID: 23A0179-03

Analysis: SM 4500-H+ B-11

pH	Note 511 : The sample was received and, therefore, analyzed beyond the established EPA hold time. The result must be considered estimated.
pH	Note pHc : The pH was analyzed at 9:42

Trace ID: 23A0179-04

Analysis: SM 4500-H+ B-11

pH	Note 511 : The sample was received and, therefore, analyzed beyond the established EPA hold time. The result must be considered estimated.

CERTIFICATE OF ANALYSIS

pH	Note pHd : The pH was analyzed at 9:43

Trace ID: 23A0179-05

Analysis: SM 4500-H+ B-11

pH	Note 503 : The sample result and reporting limit must be considered estimated. The analysis was performed beyond the EPA established 24-hour hold time.
pH	Note pHe : The pH was analyzed at 9:45

Trace ID: 23A0179-06

Analysis: SM 4500-H+ B-11

pH	Note 511 : The sample was received and, therefore, analyzed beyond the established EPA hold time. The result must be considered estimated.
pH	Note pHf : The pH was analyzed at 9:46

Trace ID: 23A0179-07

Analysis: SM 4500-H+ B-11

pH	Note 511 : The sample was received and, therefore, analyzed beyond the established EPA hold time. The result must be considered estimated.
pH	Note pHg : The pH was analyzed at 9:47

Trace ID: 23A0179-08

Analysis: SM 4500-H+ B-11

pH	Note 503 : The sample result and reporting limit must be considered estimated. The analysis was performed beyond the EPA established 24-hour hold time.
pH	Note pHh : The pH was analyzed at 9:48

Trace ID: 23A0179-09

Analysis: SM 4500-H+ B-11

pH	Note pHi : The pH was analyzed at 9:49

Trace ID: 23A0179-10

Analysis: SM 4500-H+ B-11

pH	Note pHi : The pH was analyzed at 9:49

Trace ID: 23A0179-11

Analysis: SM 4500-H+ B-11

pH	Note pHj : The pH was analyzed at 9:50

Trace ID: 23A0179-12

Analysis: SM 4500-H+ B-11

pH	Note pHk : The pH was analyzed at 9:51

CERTIFICATE OF ANALYSIS

Trace ID: 23A0179-13

Analysis: SM 4500-H+ B-11

pH	Note 511 : The sample was received and, therefore, analyzed beyond the established EPA hold time. The result must be considered estimated.
pH	Note pHd : The pH was analyzed at 9:43

Trace ID: 23A0179-14

Analysis: SM 4500-H+ B-11

pH	Note 511 : The sample was received and, therefore, analyzed beyond the established EPA hold time. The result must be considered estimated.
pH	Note pHe : The pH was analyzed at 9:45

Trace ID: 23A0179-15

Analysis: SM 4500-H+ B-11

pH	Note pHf : The pH was analyzed at 9:46

Trace ID: 23A0179-16

Analysis: SM 4500-H+ B-11

pH	Note pHg : The pH was analyzed at 9:47

Trace ID: 23A0179-17

Analysis: SM 4500-H+ B-11

pH	Note 503 : The sample result and reporting limit must be considered estimated. The analysis was performed beyond the EPA established 24-hour hold time.
pH	Note pHh : The pH was analyzed at 9:48

Trace ID: 23A0179-18

Analysis: SM 4500-H+ B-11

pH	Note pHi : The pH was analyzed at 9:49

Trace ID: 23A0179-19

Analysis: SM 4500-H+ B-11

pH	Note pHj : The pH was analyzed at 9:50

Trace ID: 23A0179-20

Analysis: SM 4500-H+ B-11

pH	Note pHk : The pH was analyzed at 9:51

Trace ID: 23A0179-21

Analysis: SM 4500-H+ B-11

pH	Note pHl : The pH was analyzed at 9:52

Trace ID: 23A0179-22

Analysis: SM 4500-H+ B-11

pH	Note 511 : The sample was received and, therefore, analyzed beyond the established EPA hold time. The result must be considered estimated.
pH	Note pHm : The pH was analyzed at 9:53

Trace ID: 23A0179-23

Analysis: SM 4500-H+ B-11

pH	Note 511 : The sample was received and, therefore, analyzed beyond the established EPA hold time. The result must be considered estimated.
pH	Note pHn : The pH was analyzed at 9:54

Trace ID: 23A0179-24

Analysis: SM 4500-H+ B-11

pH	Note pHo : The pH was analyzed at 9:55

Trace ID: 23A0179-25

Analysis: SM 4500-H+ B-11

pH	Note pHp : The pH was analyzed at 9:56

Trace ID: 23A0179-26

Analysis: SM 4500-H+ B-11

pH	Note pHq : The pH was analyzed at 9:57

Trace ID: T131186-DUP1

Analysis: SM 4500-H+ B-11

pH	Note pHa : The pH was analyzed at 9:38

Trace ID: T131189-DUP1

Analysis: SM 2540 C-15

Total Dissolved Solids	Note 623 : The relative percent difference between the sample and sample duplicate is out of control. The sample result should be considered estimated.

Trace ID: T131191-DUP1

Analysis: SM 4500-H+ B-11

pH	Note pHd : The pH was analyzed at 9:43

Trace ID: T131230-MS1

Analysis: EPA 200.7 Rev. 4.4

Sodium	Note 243 : The MS recovery was out of control. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.

CERTIFICATE OF ANALYSIS

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-01 Matrix: Ground Water Date Collected: 01/03/23 17:20
Sample ID: MW-30 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131157										
Mercury	<0.00020	mg/L	0.00020	1	01/11/23	bjv	01/12/23	jma	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**1.7**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**460**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.15**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**120**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**15**	**mg/L**	**0.25**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**110**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	**0.00070**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.089**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.012**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	**0.0044**	**mg/L**	**0.00052**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	**0.0036**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	<0.00050	mg/L	0.00050	1	01/12/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-01 Matrix: Ground Water Date Collected: 01/03/23 17:20
Sample ID: MW-30 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**1.4**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**190**	**mg/L**	**3.8**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**1000**	**mg/L**	**60**	**100**	**01/06/23**	**ans**	**01/09/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131086										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**760**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/05/23	jh	01/05/23	jh	N	
Total Alkalinity as CaCO3 at pH 4.5	**760**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**		
Analysis Method: SM 2540 C-15										
Batch: T131107										
Total Dissolved Solids	**2400**	**mg/L**	**20**	**2**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 2540 D-15										
Batch: T131087										
Total Suspended Solids	**11**	**mg/L**	**4.0**	**1**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131186										
pH	**7.02**	**pH Units**		**1**	**01/03/23**	**kb**	**01/05/23**	**kb**	**503, pH, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-02 Matrix: Ground Water Date Collected: 01/03/23 17:40
Sample ID: MWT-30 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131157										
Mercury	<0.00020	mg/L	0.00020	1	01/11/23	bjv	01/12/23	jma	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**1.7**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**460**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.15**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**120**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**15**	**mg/L**	**0.25**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**110**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	**0.00068**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.086**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.011**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	**0.0041**	**mg/L**	**0.00052**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	**0.0030**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	<0.00050	mg/L	0.00050	1	01/12/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-02 Matrix: Ground Water Date Collected: 01/03/23 17:40
Sample ID: MWT-30 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**1.3**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**200**	**mg/L**	**15**	**100**	**01/06/23**	**ans**	**01/09/23**	**ans**		
Sulfate as SO4	**1000**	**mg/L**	**60**	**100**	**01/06/23**	**ans**	**01/09/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131086										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**750**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/05/23	jh	01/05/23	jh	N	
Total Alkalinity as CaCO3 at pH 4.5	**750**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**		
Analysis Method: SM 2540 C-15										
Batch: T131107										
Total Dissolved Solids	**2300**	**mg/L**	**38**	**3.846154**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 2540 D-15										
Batch: T131087										
Total Suspended Solids	**13**	**mg/L**	**4.0**	**1**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131186										
pH	**7.03**	**pH Units**		**1**	**01/03/23**	**kb**	**01/05/23**	**kb**	**503, pHb, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-03 Matrix: Ground Water Date Collected: 01/03/23 15:30
Sample ID: MW-19 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131157										
Mercury	<0.00020	mg/L	0.00020	1	01/11/23	bjv	01/12/23	jma	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**2.0**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**510**	**mg/L**	**6.4**	**25**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.11**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**42**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**22**	**mg/L**	**0.25**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**40**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	**0.0055**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.050**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.00053**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	**0.00069**	**mg/L**	**0.00052**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	**0.011**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	<0.00050	mg/L	0.00050	1	01/12/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-03 Matrix: Ground Water Date Collected: 01/03/23 15:30
Sample ID: MW-19 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**2.3**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**64**	**mg/L**	**3.8**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**1300**	**mg/L**	**60**	**100**	**01/06/23**	**ans**	**01/09/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131086										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**340**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/05/23	jh	01/05/23	jh	N	
Total Alkalinity as CaCO3 at pH 4.5	**340**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**		
Analysis Method: SM 2540 C-15										
Batch: T131107										
Total Dissolved Solids	**2200**	**mg/L**	**100**	**10**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 2540 D-15										
Batch: T131087										
Total Suspended Solids	**25**	**mg/L**	**4.0**	**1**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131186										
pH	**6.92**	**pH Units**		**1**	**01/03/23**	**kb**	**01/05/23**	**kb**	**511, pHc, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-04 Matrix: Ground Water Date Collected: 01/03/23 12:20
Sample ID: MW-12 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131157										
Mercury	<0.00020	mg/L	0.00020	1	01/11/23	bjv	01/12/23	jma	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**0.24**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**46**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.0033**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**12**	**mg/L**	**0.10**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**0.70**	**mg/L**	**0.25**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**11**	**mg/L**	**0.12**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	**0.0011**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Arsenic	**0.0019**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.017**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	**0.00078**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Chromium	**0.00048**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	<0.00052	mg/L	0.00052	1	01/12/23	bjv	01/17/23	acs		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	**0.0072**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	**0.0022**	**mg/L**	**0.00050**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-04 Matrix: Ground Water Date Collected: 01/03/23 12:20
Sample ID: MW-12 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**0.43**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**16**	**mg/L**	**0.75**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**130**	**mg/L**	**15**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131086										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**55**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/05/23	jh	01/05/23	jh	N	
Total Alkalinity as CaCO3 at pH 4.5	**55**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**		
Analysis Method: SM 2540 C-15										
Batch: T131107										
Total Dissolved Solids	**210**	**mg/L**	**20**	**2**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 2540 D-15										
Batch: T131087										
Total Suspended Solids	<4.0	mg/L	4.0	1	01/05/23	aeo	01/05/23	aeo		
Analysis Method: SM 4500-H+ B-11										
Batch: T131186										
pH	**7.56**	**pH Units**		**1**	**01/03/23**	**kb**	**01/05/23**	**kb**	**511, pHd, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-05 Matrix: Ground Water Date Collected: 01/03/23 18:10
Sample ID: MW-11 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131157										
Mercury	<0.00020	mg/L	0.00020	1	01/11/23	bjv	01/12/23	jma	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**13**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**130**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.22**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**55**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**19**	**mg/L**	**2.5**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**70**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	**0.00069**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Arsenic	**0.0041**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**1.2**	**mg/L**	**0.012**	**5**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	**0.00073**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Chromium	**0.0086**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	**0.0012**	**mg/L**	**0.00052**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Lead	**0.068**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Molybdenum	**0.0029**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	<0.00050	mg/L	0.00050	1	01/12/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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231-773-5998 Phone
888-979-4469 Fax
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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-05 Matrix: Ground Water Date Collected: 01/03/23 18:10
Sample ID: MW-11 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**1.4**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**84**	**mg/L**	**3.8**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**10**	**mg/L**	**3.0**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131086										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**600**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/05/23	jh	01/05/23	jh	N	
Total Alkalinity as CaCO3 at pH 4.5	**600**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**		
Analysis Method: SM 2540 C-15										
Batch: T131107										
Total Dissolved Solids	**680**	**mg/L**	**40**	**4**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 2540 D-15										
Batch: T131087										
Total Suspended Solids	**35**	**mg/L**	**4.0**	**1**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131186										
pH	**7.30**	**pH Units**		**1**	**01/03/23**	**kb**	**01/05/23**	**sb**	**503, pHe, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-06 Matrix: Ground Water Date Collected: 01/03/23 13:30
Sample ID: MW-06 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131157										
Mercury	<0.00020	mg/L	0.00020	1	01/11/23	bjv	01/12/23	jma	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**9.5**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**230**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.22**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**95**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**24**	**mg/L**	**2.5**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**78**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	**0.00065**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**1.5**	**mg/L**	**0.012**	**5**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.0021**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	**0.00057**	**mg/L**	**0.00052**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	<0.0012	mg/L	0.0012	1	01/12/23	bjv	01/17/23	acs		
Selenium	<0.00050	mg/L	0.00050	1	01/12/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-06 Matrix: Ground Water Date Collected: 01/03/23 13:30
Sample ID: MW-06 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**1.4**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**120**	**mg/L**	**3.8**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**9.6**	**mg/L**	**3.0**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131086										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**1100**	**mg/L**	**50**	**10**	**01/05/23**	**jh**	**01/05/23**	**jh**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<50	mg/L	50	10	01/05/23	jh	01/05/23	jh	N	
Total Alkalinity as CaCO3 at pH 4.5	**1100**	**mg/L**	**50**	**10**	**01/05/23**	**jh**	**01/05/23**	**jh**		
Analysis Method: SM 2540 C-15										
Batch: T131107										
Total Dissolved Solids	**1200**	**mg/L**	**40**	**4**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 2540 D-15										
Batch: T131087										
Total Suspended Solids	**45**	**mg/L**	**4.0**	**1**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131186										
pH	**7.14**	**pH Units**		**1**	**01/03/23**	**kb**	**01/05/23**	**sb**	**511, pHf, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-07 Matrix: Ground Water Date Collected: 01/03/23 15:25
Sample ID: MW-01R Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131157										
Mercury	<0.00020	mg/L	0.00020	1	01/11/23	bjv	01/12/23	jma	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**110**	**mg/L**	**0.088**	**10**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**200**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**2.8**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**92**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**66**	**mg/L**	**2.5**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**370**	**mg/L**	**3.1**	**25**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	**0.0015**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.30**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	**0.00032**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.0024**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	**0.0012**	**mg/L**	**0.00052**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Lead	**0.00082**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Molybdenum	<0.0012	mg/L	0.0012	1	01/12/23	bjv	01/17/23	acs		
Selenium	**0.00059**	**mg/L**	**0.00050**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-07 Matrix: Ground Water Date Collected: 01/03/23 15:25
Sample ID: MW-01R Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**14**	**mg/L**	**0.50**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**160**	**mg/L**	**3.8**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**400**	**mg/L**	**15**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131086										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**1200**	**mg/L**	**50**	**10**	**01/05/23**	**jh**	**01/05/23**	**jh**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<50	mg/L	50	10	01/05/23	jh	01/05/23	jh	N	
Total Alkalinity as CaCO3 at pH 4.5	**1200**	**mg/L**	**50**	**10**	**01/05/23**	**jh**	**01/05/23**	**jh**		
Analysis Method: SM 2540 C-15										
Batch: T131107										
Total Dissolved Solids	**2300**	**mg/L**	**40**	**4**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 2540 D-15										
Batch: T131087										
Total Suspended Solids	<4.0	mg/L	4.0	1	01/05/23	aeo	01/05/23	aeo		
Analysis Method: SM 4500-H+ B-11										
Batch: T131186										
pH	**7.70**	**pH Units**		**1**	**01/03/23**	**kb**	**01/05/23**	**sb**	**511, pHg, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-08 Matrix: Ground Water Date Collected: 01/04/23 09:30
Sample ID: MW-10 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131157										
Mercury	<0.00020	mg/L	0.00020	1	01/11/23	bjv	01/12/23	jma	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**14**	**mg/L**	**0.088**	**10**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**220**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.83**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**86**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**33**	**mg/L**	**2.5**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**160**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Barium	**0.57**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.0050**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	<0.00052	mg/L	0.00052	1	01/12/23	bjv	01/17/23	acs		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	**0.0033**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	<0.00050	mg/L	0.00050	1	01/12/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-08 Matrix: Ground Water Date Collected: 01/04/23 09:30
Sample ID: MW-10 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**5.7**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**170**	**mg/L**	**7.5**	**50**	**01/06/23**	**ans**	**01/09/23**	**ans**		
Sulfate as SO4	**620**	**mg/L**	**30**	**50**	**01/06/23**	**ans**	**01/09/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131086										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**580**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/05/23	jh	01/05/23	jh	N	
Total Alkalinity as CaCO3 at pH 4.5	**580**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**		
Analysis Method: SM 2540 C-15										
Batch: T131107										
Total Dissolved Solids	**1800**	**mg/L**	**20**	**2**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 2540 D-15										
Batch: T131142										
Total Suspended Solids	**4.0**	**mg/L**	**4.0**	**1**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131186										
pH	**7.84**	**pH Units**		**1**	**01/04/23**	**kb**	**01/05/23**	**sb**	**503, pHh, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-09 Matrix: Ground Water Date Collected: 01/04/23 11:40
Sample ID: MW-02 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131157										
Mercury	<0.00020	mg/L	0.00020	1	01/11/23	bjv	01/12/23	jma	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**86**	**mg/L**	**0.088**	**10**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**180**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**1.5**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**59**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**44**	**mg/L**	**6.2**	**25**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**250**	**mg/L**	**3.1**	**25**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	**0.0076**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.53**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	**0.00034**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.054**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	**0.0060**	**mg/L**	**0.00052**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Lead	**0.0024**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Molybdenum	**0.0062**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	**0.0012**	**mg/L**	**0.00050**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-09 Matrix: Ground Water Date Collected: 01/04/23 11:40
Sample ID: MW-02 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**10**	**mg/L**	**0.50**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**140**	**mg/L**	**3.8**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	<3.0	mg/L	3.0	5	01/06/23	ans	01/07/23	ans		
Analysis Method: SM 2320 B-11										
Batch: T131086										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**2000**	**mg/L**	**50**	**10**	**01/05/23**	**jh**	**01/05/23**	**jh**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<50	mg/L	50	10	01/05/23	jh	01/05/23	jh	N	
Total Alkalinity as CaCO3 at pH 4.5	**2000**	**mg/L**	**50**	**10**	**01/05/23**	**jh**	**01/05/23**	**jh**		
Analysis Method: SM 2540 C-15										
Batch: T131107										
Total Dissolved Solids	**1800**	**mg/L**	**100**	**10**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 2540 D-15										
Batch: T131142										
Total Suspended Solids	**58**	**mg/L**	**4.0**	**1**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131186										
pH	**7.09**	**pH Units**		**1**	**01/04/23**	**kb**	**01/05/23**	**sb**	**pHi, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-10 Matrix: Ground Water Date Collected: 01/04/23 13:30
Sample ID: MW-09 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131157										
Mercury	<0.00020	mg/L	0.00020	1	01/11/23	bjv	01/12/23	jma	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**5.8**	**mg/L**	**0.088**	**10**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**230**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.34**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**36**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**16**	**mg/L**	**0.25**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**28**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	**0.0023**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**2.4**	**mg/L**	**0.012**	**5**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.0028**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	<0.00052	mg/L	0.00052	1	01/12/23	bjv	01/17/23	acs		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	**0.033**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	<0.00050	mg/L	0.00050	1	01/12/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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Muskegon, MI 49444-2673

231-773-5998 Phone
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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-10 Matrix: Ground Water Date Collected: 01/04/23 13:30
Sample ID: MW-09 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**2.4**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**17**	**mg/L**	**0.75**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**83**	**mg/L**	**3.0**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131086										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**710**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/05/23	jh	01/05/23	jh	N	
Total Alkalinity as CaCO3 at pH 4.5	**710**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**		
Analysis Method: SM 2540 C-15										
Batch: T131107										
Total Dissolved Solids	**740**	**mg/L**	**40**	**4**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 2540 D-15										
Batch: T131142										
Total Suspended Solids	**51**	**mg/L**	**4.0**	**0.990099**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131186										
pH	**7.07**	**pH Units**		**1**	**01/04/23**	**kb**	**01/05/23**	**sb**	**pHi, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-11 Matrix: Ground Water Date Collected: 01/04/23 13:00
Sample ID: MW-04 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131157										
Mercury	<0.00020	mg/L	0.00020	1	01/11/23	bjv	01/12/23	jma	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**3.9**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**360**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.047**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**200**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**20**	**mg/L**	**2.5**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**110**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	**0.00078**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.46**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.0060**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	**0.00093**	**mg/L**	**0.00052**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	<0.0012	mg/L	0.0012	1	01/12/23	bjv	01/17/23	acs		
Selenium	<0.00050	mg/L	0.00050	1	01/12/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-11 Matrix: Ground Water Date Collected: 01/04/23 13:00
Sample ID: MW-04 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**0.76**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**300**	**mg/L**	**7.5**	**50**	**01/06/23**	**ans**	**01/09/23**	**ans**		
Sulfate as SO4	<3.0	mg/L	3.0	5	01/06/23	ans	01/07/23	ans		
Analysis Method: SM 2320 B-11										
Batch: T131086										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**1800**	**mg/L**	**50**	**10**	**01/05/23**	**jh**	**01/05/23**	**jh**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<50	mg/L	50	10	01/05/23	jh	01/05/23	jh	N	
Total Alkalinity as CaCO3 at pH 4.5	**1800**	**mg/L**	**50**	**10**	**01/05/23**	**jh**	**01/05/23**	**jh**		
Analysis Method: SM 2540 C-15										
Batch: T131107										
Total Dissolved Solids	**2100**	**mg/L**	**40**	**4**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 2540 D-15										
Batch: T131142										
Total Suspended Solids	**8.0**	**mg/L**	**4.0**	**1**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131186										
pH	**7.19**	**pH Units**		**1**	**01/04/23**	**kb**	**01/05/23**	**sb**	**pHj, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-12 Matrix: Ground Water Date Collected: 01/04/23 15:10
Sample ID: MW-03 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131157										
Mercury	<0.00020	mg/L	0.00020	1	01/11/23	bjv	01/12/23	jma	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**3.3**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**290**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.065**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**91**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**18**	**mg/L**	**2.5**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**74**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	**0.0011**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.13**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.0061**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	<0.00052	mg/L	0.00052	1	01/12/23	bjv	01/17/23	acs		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	<0.0012	mg/L	0.0012	1	01/12/23	bjv	01/17/23	acs		
Selenium	<0.00050	mg/L	0.00050	1	01/12/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-12 Matrix: Ground Water Date Collected: 01/04/23 15:10
Sample ID: MW-03 Date Received: 01/04/23 16:07

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**1.6**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**190**	**mg/L**	**3.8**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**460**	**mg/L**	**15**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131086										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**690**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/05/23	jh	01/05/23	jh	N	
Total Alkalinity as CaCO3 at pH 4.5	**690**	**mg/L**	**5.0**	**1**	**01/05/23**	**jh**	**01/05/23**	**jh**		
Analysis Method: SM 2540 C-15										
Batch: T131107										
Total Dissolved Solids	**1700**	**mg/L**	**40**	**4**	**01/05/23**	**aeo**	**01/05/23**	**aeo**		
Analysis Method: SM 2540 D-15										
Batch: T131142										
Total Suspended Solids	**15**	**mg/L**	**4.0**	**1**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131186										
pH	**7.27**	**pH Units**		**1**	**01/04/23**	**kb**	**01/05/23**	**sb**	**pHk, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-13 Matrix: Ground Water Date Collected: 01/04/23 17:00
Sample ID: MW-31 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131157										
Mercury	<0.00020	mg/L	0.00020	1	01/11/23	bjv	01/12/23	jma	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**3.8**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**190**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.048**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**36**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**11**	**mg/L**	**0.25**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**46**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	**0.0013**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.14**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.0018**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	<0.00052	mg/L	0.00052	1	01/12/23	bjv	01/17/23	acs		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	**0.0013**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	<0.00050	mg/L	0.00050	1	01/12/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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231-773-5998 Phone
888-979-4469 Fax
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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-13 Matrix: Ground Water Date Collected: 01/04/23 17:00
Sample ID: MW-31 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**4.9**	**mg/L**	**0.50**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**100**	**mg/L**	**3.8**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**250**	**mg/L**	**15**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131187										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**340**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/09/23	mr	01/09/23	mr	N	
Total Alkalinity as CaCO3 at pH 4.5	**340**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**		
Analysis Method: SM 2540 C-15										
Batch: T131189										
Total Dissolved Solids	**940**	**mg/L**	**20**	**2**	**01/09/23**	**jh**	**01/09/23**	**jh**		
Analysis Method: SM 2540 D-15										
Batch: T131154										
Total Suspended Solids	**4.0**	**mg/L**	**4.0**	**1**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131191										
pH	**7.69**	**pH Units**		**1**	**01/04/23**	**kb**	**01/06/23**	**kb**	**511, pHd, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-14 Matrix: Ground Water Date Collected: 01/04/23 19:20
Sample ID: MW-32 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131391										
Mercury	<0.00020	mg/L	0.00020	1	01/17/23	bjv	01/19/23	acs	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**3.0**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**180**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.14**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**34**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**13**	**mg/L**	**0.25**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**29**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Barium	**0.60**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.00065**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	<0.00052	mg/L	0.00052	1	01/12/23	bjv	01/17/23	acs		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	**0.0043**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	<0.00050	mg/L	0.00050	1	01/12/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-14 Matrix: Ground Water Date Collected: 01/04/23 19:20
Sample ID: MW-32 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**1.5**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**50**	**mg/L**	**0.75**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**110**	**mg/L**	**15**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131187										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**490**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/09/23	mr	01/09/23	mr	N	
Total Alkalinity as CaCO3 at pH 4.5	**490**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**		
Analysis Method: SM 2540 C-15										
Batch: T131189										
Total Dissolved Solids	**700**	**mg/L**	**40**	**4**	**01/09/23**	**jh**	**01/09/23**	**jh**		
Analysis Method: SM 2540 D-15										
Batch: T131154										
Total Suspended Solids	**43**	**mg/L**	**4.0**	**1**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131191										
pH	**7.29**	**pH Units**		**1**	**01/04/23**	**kb**	**01/06/23**	**kb**	**511, pHe, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-15 Matrix: Ground Water Date Collected: 01/05/23 16:20
Sample ID: MW-33 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131391										
Mercury	<0.00020	mg/L	0.00020	1	01/17/23	bjv	01/19/23	acs	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**0.091**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**170**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.0069**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**19**	**mg/L**	**0.10**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**5.4**	**mg/L**	**0.25**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**25**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	**0.00088**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Arsenic	**0.0014**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.086**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.0028**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	<0.00052	mg/L	0.00052	1	01/12/23	bjv	01/17/23	acs		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	**0.0037**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	**0.00076**	**mg/L**	**0.00050**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-15 Matrix: Ground Water Date Collected: 01/05/23 16:20
Sample ID: MW-33 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**0.24**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**51**	**mg/L**	**3.8**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**58**	**mg/L**	**3.0**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131187										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**430**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/09/23	mr	01/09/23	mr	N	
Total Alkalinity as CaCO3 at pH 4.5	**430**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**		
Analysis Method: SM 2540 C-15										
Batch: T131189										
Total Dissolved Solids	**630**	**mg/L**	**20**	**2**	**01/09/23**	**jh**	**01/09/23**	**jh**		
Analysis Method: SM 2540 D-15										
Batch: T131154										
Total Suspended Solids	**5.0**	**mg/L**	**4.0**	**1**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131191										
pH	**7.11**	**pH Units**		**1**	**01/05/23**	**kb**	**01/06/23**	**kb**	**pHf, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-16 Matrix: Ground Water Date Collected: 01/05/23 13:10
Sample ID: MW-34 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131391										
Mercury	<0.00020	mg/L	0.00020	1	01/17/23	bjv	01/19/23	acs	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**2.7**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**190**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.086**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**23**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**13**	**mg/L**	**0.25**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**30**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	**0.0010**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.54**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.022**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	**0.0013**	**mg/L**	**0.00052**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Lead	**0.0016**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Molybdenum	<0.0012	mg/L	0.0012	1	01/12/23	bjv	01/17/23	acs		
Selenium	<0.00050	mg/L	0.00050	1	01/12/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-16 Matrix: Ground Water Date Collected: 01/05/23 13:10
Sample ID: MW-34 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**0.20**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**27**	**mg/L**	**0.75**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	<3.0	mg/L	3.0	5	01/06/23	ans	01/07/23	ans		
Analysis Method: SM 2320 B-11										
Batch: T131187										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**950**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/09/23	mr	01/09/23	mr	N	
Total Alkalinity as CaCO3 at pH 4.5	**950**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**		
Analysis Method: SM 2540 C-15										
Batch: T131189										
Total Dissolved Solids	**750**	**mg/L**	**40**	**4**	**01/09/23**	**jh**	**01/09/23**	**jh**		
Analysis Method: SM 2540 D-15										
Batch: T131154										
Total Suspended Solids	**52**	**mg/L**	**4.0**	**1**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131191										
pH	**6.61**	**pH Units**		**1**	**01/05/23**	**kb**	**01/06/23**	**kb**	**pHg, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-17 Matrix: Ground Water Date Collected: 01/05/23 09:00
Sample ID: MW-18 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131391										
Mercury	<0.00020	mg/L	0.00020	1	01/17/23	bjv	01/19/23	acs	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**2.0**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**410**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.042**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**36**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**12**	**mg/L**	**0.25**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**20**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	**0.020**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.018**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	**0.00030**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Chromium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cobalt	**0.0054**	**mg/L**	**0.00052**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	**0.012**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	<0.00050	mg/L	0.00050	1	01/12/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-17 Matrix: Ground Water Date Collected: 01/05/23 09:00
Sample ID: MW-18 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**3.3**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**26**	**mg/L**	**0.75**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**1200**	**mg/L**	**60**	**100**	**01/06/23**	**ans**	**01/09/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131187										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**110**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/09/23	mr	01/09/23	mr	N	
Total Alkalinity as CaCO3 at pH 4.5	**110**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**		
Analysis Method: SM 2540 C-15										
Batch: T131189										
Total Dissolved Solids	**1700**	**mg/L**	**20**	**2**	**01/09/23**	**jh**	**01/09/23**	**jh**		
Analysis Method: SM 2540 D-15										
Batch: T131154										
Total Suspended Solids	**4.0**	**mg/L**	**4.0**	**1.010101**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131191										
pH	**6.94**	**pH Units**		**1**	**01/05/23**	**kb**	**01/06/23**	**kb**	**503, pHh, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-18 Matrix: Ground Water Date Collected: 01/05/23 14:00
Sample ID: SG-05 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131391										
Mercury	<0.00020	mg/L	0.00020	1	01/17/23	bjv	01/19/23	acs	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**0.60**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**120**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.033**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**23**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**6.5**	**mg/L**	**0.25**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**30**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Arsenic	**0.00056**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.23**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cobalt	<0.00052	mg/L	0.00052	1	01/12/23	bjv	01/17/23	acs		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	**0.0029**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	<0.00050	mg/L	0.00050	1	01/12/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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2241 Black Creek Road
Muskegon, MI 49444-2673

TRACE ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-18 Matrix: Ground Water Date Collected: 01/05/23 14:00
Sample ID: SG-05 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**0.98**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**51**	**mg/L**	**3.8**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**150**	**mg/L**	**15**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131187										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**270**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/09/23	mr	01/09/23	mr	N	
Total Alkalinity as CaCO3 at pH 4.5	**270**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**		
Analysis Method: SM 2540 C-15										
Batch: T131189										
Total Dissolved Solids	**630**	**mg/L**	**20**	**2**	**01/09/23**	**jh**	**01/09/23**	**jh**		
Analysis Method: SM 2540 D-15										
Batch: T131154										
Total Suspended Solids	**7.9**	**mg/L**	**4.0**	**0.990099**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131191										
pH	**7.77**	**pH Units**		**1**	**01/05/23**	**kb**	**01/06/23**	**kb**	**pHi, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-19 Matrix: Ground Water Date Collected: 01/05/23 14:25
Sample ID: SG-04R Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131391										
Mercury	<0.00020	mg/L	0.00020	1	01/17/23	bjv	01/19/23	acs	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**2.1**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**300**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.039**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**30**	**mg/L**	**0.10**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**10**	**mg/L**	**0.25**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**20**	**mg/L**	**0.12**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	**0.00052**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Arsenic	**0.00091**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.019**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.00028**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	<0.00052	mg/L	0.00052	1	01/12/23	bjv	01/17/23	acs		
Lead	<0.00055	mg/L	0.00055	1	01/12/23	bjv	01/17/23	acs		
Molybdenum	**0.0066**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	**0.0014**	**mg/L**	**0.00050**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-19 Matrix: Ground Water Date Collected: 01/05/23 14:25
Sample ID: SG-04R Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**2.0**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**22**	**mg/L**	**0.75**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**890**	**mg/L**	**30**	**50**	**01/06/23**	**ans**	**01/09/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131187										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**87**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/09/23	mr	01/09/23	mr	N	
Total Alkalinity as CaCO3 at pH 4.5	**87**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**		
Analysis Method: SM 2540 C-15										
Batch: T131189										
Total Dissolved Solids	**1200**	**mg/L**	**20**	**2**	**01/09/23**	**jh**	**01/09/23**	**jh**		
Analysis Method: SM 2540 D-15										
Batch: T131154										
Total Suspended Solids	<4.0	mg/L	4.0	1	01/06/23	aeo	01/06/23	aeo		
Analysis Method: SM 4500-H+ B-11										
Batch: T131191										
pH	**7.70**	**pH Units**		**1**	**01/05/23**	**kb**	**01/06/23**	**kb**	**pHj, N**	

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231-773-5998 Phone
888-979-4469 Fax
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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-20 Matrix: Ground Water Date Collected: 01/05/23 14:50
Sample ID: SG-03 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131391										
Mercury	<0.00020	mg/L	0.00020	1	01/17/23	bjv	01/19/23	acs	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131230										
Boron	**2.0**	**mg/L**	**0.0088**	**1**	**01/12/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**120**	**mg/L**	**2.6**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.028**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**	**N**	
Magnesium	**26**	**mg/L**	**0.50**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**8.1**	**mg/L**	**0.25**	**1**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Sodium	**20**	**mg/L**	**1.2**	**10**	**01/12/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131230										
Antimony	**0.00038**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Arsenic	**0.0011**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.031**	**mg/L**	**0.0025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/12/23	bjv	01/17/23	acs		
Chromium	**0.00025**	**mg/L**	**0.00025**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	<0.00052	mg/L	0.00052	1	01/12/23	bjv	01/17/23	acs		
Lead	**0.00060**	**mg/L**	**0.00055**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Molybdenum	**0.0052**	**mg/L**	**0.0012**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Selenium	**0.00056**	**mg/L**	**0.00050**	**1**	**01/12/23**	**bjv**	**01/17/23**	**acs**		
Thallium	<0.00038	mg/L	0.00038	1	01/12/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-20 Matrix: Ground Water Date Collected: 01/05/23 14:50
Sample ID: SG-03 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131167										
Fluoride	**1.8**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**42**	**mg/L**	**0.75**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**350**	**mg/L**	**15**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131187										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**71**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/09/23	mr	01/09/23	mr	N	
Total Alkalinity as CaCO3 at pH 4.5	**71**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**		
Analysis Method: SM 2540 C-15										
Batch: T131189										
Total Dissolved Solids	**480**	**mg/L**	**20**	**2**	**01/09/23**	**jh**	**01/09/23**	**jh**		
Analysis Method: SM 2540 D-15										
Batch: T131154										
Total Suspended Solids	<4.0	mg/L	4.0	1	01/06/23	aeo	01/06/23	aeo		
Analysis Method: SM 4500-H+ B-11										
Batch: T131191										
pH	**7.77**	**pH Units**		**1**	**01/05/23**	**kb**	**01/06/23**	**kb**	**pHk, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-21 Matrix: Ground Water Date Collected: 01/05/23 15:20
Sample ID: SG-02 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131391										
Mercury	<0.00020	mg/L	0.00020	1	01/17/23	bjv	01/19/23	acs	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131427										
Boron	**2.2**	**mg/L**	**0.0088**	**1**	**01/13/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**140**	**mg/L**	**2.6**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.032**	**mg/L**	**0.0025**	**1**	**01/13/23**	**bjv**	**01/18/23**	**acs**	**N**	
Magnesium	**31**	**mg/L**	**0.50**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**9.1**	**mg/L**	**0.25**	**1**	**01/13/23**	**bjv**	**01/18/23**	**acs**		
Sodium	**24**	**mg/L**	**1.2**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131427										
Antimony	**0.00043**	**mg/L**	**0.00025**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Arsenic	**0.0012**	**mg/L**	**0.00055**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.033**	**mg/L**	**0.0025**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Chromium	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Cobalt	<0.00052	mg/L	0.00052	1	01/13/23	bjv	01/17/23	acs		
Lead	**0.00081**	**mg/L**	**0.00055**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Molybdenum	**0.0060**	**mg/L**	**0.0012**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Selenium	**0.00059**	**mg/L**	**0.00050**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Thallium	<0.00038	mg/L	0.00038	1	01/13/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-21 Matrix: Ground Water Date Collected: 01/05/23 15:20
Sample ID: SG-02 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131168										
Fluoride	**1.9**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**46**	**mg/L**	**0.75**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**360**	**mg/L**	**15**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131187										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**76**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/09/23	mr	01/09/23	mr	N	
Total Alkalinity as CaCO3 at pH 4.5	**76**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**		
Analysis Method: SM 2540 C-15										
Batch: T131189										
Total Dissolved Solids	**660**	**mg/L**	**20**	**2**	**01/09/23**	**jh**	**01/09/23**	**jh**		
Analysis Method: SM 2540 D-15										
Batch: T131154										
Total Suspended Solids	<4.0	mg/L	4.0	1	01/06/23	aeo	01/06/23	aeo		
Analysis Method: SM 4500-H+ B-11										
Batch: T131191										
pH	**7.54**	**pH Units**		**1**	**01/05/23**	**kb**	**01/06/23**	**kb**	**pHI, N**	

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TRACE ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-979-4469 Fax
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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-22 Matrix: Ground Water Date Collected: 01/04/23 17:20
Sample ID: MW-20 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131391										
Mercury	<0.00020	mg/L	0.00020	1	01/17/23	bjv	01/19/23	acs	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131427										
Boron	**0.83**	**mg/L**	**0.0088**	**1**	**01/13/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**120**	**mg/L**	**2.6**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.065**	**mg/L**	**0.0025**	**1**	**01/13/23**	**bjv**	**01/18/23**	**acs**	**N**	
Magnesium	**53**	**mg/L**	**0.50**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**13**	**mg/L**	**0.25**	**1**	**01/13/23**	**bjv**	**01/18/23**	**acs**		
Sodium	**59**	**mg/L**	**1.2**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131427										
Antimony	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Arsenic	**0.0012**	**mg/L**	**0.00055**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.61**	**mg/L**	**0.0025**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Chromium	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Cobalt	**0.0013**	**mg/L**	**0.00052**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Lead	**0.0016**	**mg/L**	**0.00055**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Molybdenum	**0.0039**	**mg/L**	**0.0012**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Selenium	<0.00050	mg/L	0.00050	1	01/13/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/13/23	bjv	01/17/23	acs		

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-22 Matrix: Ground Water Date Collected: 01/04/23 17:20
Sample ID: MW-20 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131168										
Fluoride	**0.26**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**66**	**mg/L**	**3.8**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**78**	**mg/L**	**3.0**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131187										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**470**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/09/23	mr	01/09/23	mr	N	
Total Alkalinity as CaCO3 at pH 4.5	**470**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**		
Analysis Method: SM 2540 C-15										
Batch: T131189										
Total Dissolved Solids	**660**	**mg/L**	**40**	**4**	**01/09/23**	**jh**	**01/09/23**	**jh**		
Analysis Method: SM 2540 D-15										
Batch: T131154										
Total Suspended Solids	**42**	**mg/L**	**4.0**	**1**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131191										
pH	**7.17**	**pH Units**		**1**	**01/04/23**	**kb**	**01/06/23**	**kb**	**511, pHm, N**	

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Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

TRACE ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-23 Matrix: Ground Water Date Collected: 01/04/23 19:20
Sample ID: MW-07 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131391										
Mercury	<0.00020	mg/L	0.00020	1	01/17/23	bjv	01/19/23	acs	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131427										
Boron	**11**	**mg/L**	**0.0088**	**1**	**01/13/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**140**	**mg/L**	**2.6**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.0070**	**mg/L**	**0.0025**	**1**	**01/13/23**	**bjv**	**01/18/23**	**acs**	**N**	
Magnesium	**37**	**mg/L**	**0.50**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**5.4**	**mg/L**	**0.25**	**1**	**01/13/23**	**bjv**	**01/18/23**	**acs**		
Sodium	**47**	**mg/L**	**1.2**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131427										
Antimony	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Arsenic	<0.00055	mg/L	0.00055	1	01/13/23	bjv	01/17/23	acs		
Barium	**0.34**	**mg/L**	**0.0025**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Chromium	**0.00030**	**mg/L**	**0.00025**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	**0.00088**	**mg/L**	**0.00052**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Lead	<0.00055	mg/L	0.00055	1	01/13/23	bjv	01/17/23	acs		
Molybdenum	<0.0012	mg/L	0.0012	1	01/13/23	bjv	01/17/23	acs		
Selenium	<0.00050	mg/L	0.00050	1	01/13/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/13/23	bjv	01/17/23	acs		

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Muskegon, MI 49444-2673

231-773-5998 Phone
888-979-4469 Fax
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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-23 Matrix: Ground Water Date Collected: 01/04/23 19:20
Sample ID: MW-07 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131168										
Fluoride	<0.10	mg/L	0.10	5	01/06/23	ans	01/07/23	ans		
Chloride	**15**	**mg/L**	**0.75**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**30**	**mg/L**	**3.0**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131187										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**580**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/09/23	mr	01/09/23	mr	N	
Total Alkalinity as CaCO3 at pH 4.5	**580**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**		
Analysis Method: SM 2540 C-15										
Batch: T131189										
Total Dissolved Solids	**470**	**mg/L**	**40**	**4**	**01/09/23**	**jh**	**01/09/23**	**jh**		
Analysis Method: SM 2540 D-15										
Batch: T131154										
Total Suspended Solids	**36**	**mg/L**	**4.0**	**0.990099**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131191										
pH	**6.95**	**pH Units**		**1**	**01/04/23**	**kb**	**01/06/23**	**kb**	**511, pHn, N**	

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888-979-4469 Fax
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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-24 Matrix: Ground Water Date Collected: 01/05/23 10:00
Sample ID: MW-08 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131391										
Mercury	<0.00020	mg/L	0.00020	1	01/17/23	bjv	01/19/23	acs	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131427										
Boron	**4.4**	**mg/L**	**0.0088**	**1**	**01/13/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**160**	**mg/L**	**2.6**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.11**	**mg/L**	**0.0025**	**1**	**01/13/23**	**bjv**	**01/18/23**	**acs**	**N**	
Magnesium	**30**	**mg/L**	**0.50**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**12**	**mg/L**	**0.25**	**1**	**01/13/23**	**bjv**	**01/18/23**	**acs**		
Sodium	**27**	**mg/L**	**1.2**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131427										
Antimony	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Arsenic	**0.021**	**mg/L**	**0.00055**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Barium	**1.3**	**mg/L**	**0.012**	**5**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Chromium	**0.00093**	**mg/L**	**0.00025**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	<0.00052	mg/L	0.00052	1	01/13/23	bjv	01/17/23	acs		
Lead	<0.00055	mg/L	0.00055	1	01/13/23	bjv	01/17/23	acs		
Molybdenum	**0.0018**	**mg/L**	**0.0012**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Selenium	<0.00050	mg/L	0.00050	1	01/13/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/13/23	bjv	01/17/23	acs		

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-24 Matrix: Ground Water Date Collected: 01/05/23 10:00
Sample ID: MW-08 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131168										
Fluoride	**0.56**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**23**	**mg/L**	**0.75**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**25**	**mg/L**	**3.0**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131187										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**510**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/09/23	mr	01/09/23	mr	N	
Total Alkalinity as CaCO3 at pH 4.5	**510**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**		
Analysis Method: SM 2540 C-15										
Batch: T131189										
Total Dissolved Solids	**480**	**mg/L**	**40**	**4**	**01/09/23**	**jh**	**01/09/23**	**jh**		
Analysis Method: SM 2540 D-15										
Batch: T131154										
Total Suspended Solids	**55**	**mg/L**	**4.0**	**1**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131191										
pH	**6.95**	**pH Units**		**1**	**01/05/23**	**kb**	**01/06/23**	**kb**	**pHo, N**	

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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-25 Matrix: Ground Water Date Collected: 01/05/23 12:10
Sample ID: MW-27 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131391										
Mercury	<0.00020	mg/L	0.00020	1	01/17/23	bjv	01/19/23	acs	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131427										
Boron	**0.17**	**mg/L**	**0.0088**	**1**	**01/13/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**180**	**mg/L**	**2.6**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Lithium	**0.0088**	**mg/L**	**0.0025**	**1**	**01/13/23**	**bjv**	**01/18/23**	**acs**	**N**	
Magnesium	**45**	**mg/L**	**0.50**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**7.3**	**mg/L**	**0.25**	**1**	**01/13/23**	**bjv**	**01/18/23**	**acs**		
Sodium	**68**	**mg/L**	**1.2**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131427										
Antimony	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Arsenic	**0.00070**	**mg/L**	**0.00055**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.17**	**mg/L**	**0.0025**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Chromium	**0.016**	**mg/L**	**0.00025**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	**0.00056**	**mg/L**	**0.00052**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Lead	<0.00055	mg/L	0.00055	1	01/13/23	bjv	01/17/23	acs		
Molybdenum	<0.0012	mg/L	0.0012	1	01/13/23	bjv	01/17/23	acs		
Selenium	<0.00050	mg/L	0.00050	1	01/13/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/13/23	bjv	01/17/23	acs		

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2241 Black Creek Road
Muskegon, MI 49444-2673

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-25 Matrix: Ground Water Date Collected: 01/05/23 12:10
Sample ID: MW-27 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131168										
Fluoride	**0.29**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**84**	**mg/L**	**3.8**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**41**	**mg/L**	**3.0**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131187										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**880**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/09/23	mr	01/09/23	mr	N	
Total Alkalinity as CaCO3 at pH 4.5	**880**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**		
Analysis Method: SM 2540 C-15										
Batch: T131189										
Total Dissolved Solids	**710**	**mg/L**	**20**	**2**	**01/09/23**	**jh**	**01/09/23**	**jh**		
Analysis Method: SM 2540 D-15										
Batch: T131154										
Total Suspended Solids	**27**	**mg/L**	**4.0**	**0.990099**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131191										
pH	**6.84**	**pH Units**		**1**	**01/05/23**	**kb**	**01/06/23**	**kb**	**pHp, N**	

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231-773-5998 Phone
888-979-4469 Fax
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ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-26 Matrix: Ground Water Date Collected: 01/05/23 12:10
Sample ID: MWT-27 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T131391										
Mercury	<0.00020	mg/L	0.00020	1	01/17/23	bjv	01/19/23	acs	N	
METALS, TOTAL										
Analysis Method: EPA 200.7 Rev. 4.4										
Batch: T131427										
Boron	**0.16**	**mg/L**	**0.0088**	**1**	**01/13/23**	**bjv**	**01/24/23**	**jma**		
Calcium	**180**	**mg/L**	**2.6**	**10**	**01/13/23**	**bjv**	**01/18/23**	**acs**		
Lithium	**0.0094**	**mg/L**	**0.0025**	**1**	**01/13/23**	**bjv**	**01/18/23**	**acs**	**N**	
Magnesium	**45**	**mg/L**	**0.50**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Potassium	**7.5**	**mg/L**	**0.25**	**1**	**01/13/23**	**bjv**	**01/18/23**	**acs**		
Sodium	**68**	**mg/L**	**1.2**	**10**	**01/13/23**	**bjv**	**01/18/23**	**jma**		
Analysis Method: EPA 200.8 Rev. 5.4										
Batch: T131427										
Antimony	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Arsenic	**0.00069**	**mg/L**	**0.00055**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Barium	**0.17**	**mg/L**	**0.0025**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Beryllium	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Cadmium	<0.00025	mg/L	0.00025	1	01/13/23	bjv	01/17/23	acs		
Chromium	**0.016**	**mg/L**	**0.00025**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Cobalt	**0.00058**	**mg/L**	**0.00052**	**1**	**01/13/23**	**bjv**	**01/17/23**	**acs**		
Lead	<0.00055	mg/L	0.00055	1	01/13/23	bjv	01/17/23	acs		
Molybdenum	<0.0012	mg/L	0.0012	1	01/13/23	bjv	01/17/23	acs		
Selenium	<0.00050	mg/L	0.00050	1	01/13/23	bjv	01/17/23	acs		
Thallium	<0.00038	mg/L	0.00038	1	01/13/23	bjv	01/17/23	acs		

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Muskegon, MI 49444-2673

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231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

ANALYTICAL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 23A0179-26 Matrix: Ground Water Date Collected: 01/05/23 12:10
Sample ID: MWT-27 Date Received: 01/05/23 18:45

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 300.0 Rev. 2.1										
Batch: T131168										
Fluoride	**0.27**	**mg/L**	**0.10**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Chloride	**83**	**mg/L**	**3.8**	**25**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Sulfate as SO4	**43**	**mg/L**	**3.0**	**5**	**01/06/23**	**ans**	**01/07/23**	**ans**		
Analysis Method: SM 2320 B-11										
Batch: T131187										
Bicarbonate Alkalinity as CaCO3 at pH 4.5	**880**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**	**N**	
Carbonate Alkalinity as CaCO3 at pH 8.2	<5.0	mg/L	5.0	1	01/09/23	mr	01/09/23	mr	N	
Total Alkalinity as CaCO3 at pH 4.5	**880**	**mg/L**	**5.0**	**1**	**01/09/23**	**mr**	**01/09/23**	**mr**		
Analysis Method: SM 2540 C-15										
Batch: T131189										
Total Dissolved Solids	**810**	**mg/L**	**20**	**2**	**01/09/23**	**jh**	**01/09/23**	**jh**		
Analysis Method: SM 2540 D-15										
Batch: T131154										
Total Suspended Solids	**26**	**mg/L**	**4.0**	**1**	**01/06/23**	**aeo**	**01/06/23**	**aeo**		
Analysis Method: SM 4500-H+ B-11										
Batch: T131191										
pH	**6.84**	**pH Units**		**1**	**01/05/23**	**kb**	**01/06/23**	**kb**	**pHq, N**	

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QUALITY CONTROL RESULTS

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131157
QC Batch Method: EPA 7470A Prep
Analysis Description: Mercury, Total, EPA 7470/7471
Analysis Method: EPA 7470A

METHOD BLANK: T131157-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/L	<0.00020	0.00020	

LABORATORY CONTROL SAMPLE: T131157-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/L	0.00200	0.00204	102	77-122	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T131157-MSD1 Original: **23A0179-01**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Mercury	mg/L	0	0.00200	0.00242	0.00200	121	100	76-123	19	20	

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131391
QC Batch Method: EPA 7470A Prep
Analysis Description: Mercury, Total, EPA 7470/7471
Analysis Method: EPA 7470A

METHOD BLANK: T131391-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/L	<0.00020	0.00020	

LABORATORY CONTROL SAMPLE: T131391-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/L	0.00200	0.00192	96	77-122	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T131391-MSD1 Original: **23A0179-14**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Mercury	mg/L	0	0.00200	0.00194	0.00195	97	98	76-123	0.8	20	

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Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131230
QC Batch Method: EPA 200.2
Analysis Description: Calcium, Total
Analysis Method: EPA 200.7 Rev. 4.4

METHOD BLANK: T131230-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Boron	mg/L	<0.050	0.050	
Calcium	mg/L	<1.0	1.0	
Potassium	mg/L	<1.0	1.0	
Lithium	mg/L	<0.025	0.025	
Magnesium	mg/L	<1.0	1.0	
Sodium	mg/L	<1.0	1.0	

LABORATORY CONTROL SAMPLE: T131230-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Boron	mg/L	1.60	1.49	93	85-115	
Calcium	mg/L	16.0	18.0	112	85-115	
Potassium	mg/L	16.0	16.2	101	85-115	
Lithium	mg/L	1.60	1.67	104	85-115	
Magnesium	mg/L	16.0	16.4	103	85-115	
Sodium	mg/L	16.0	16.0	100	85-115	

MATRIX SPIKE: T131230-MS1 Original: **23A0179-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Boron	mg/L	1.99	1.60	3.49	94	70-130	
Calcium	mg/L	512	16.0	529	106	70-130	
Potassium	mg/L	22.1	16.0	37.4	96	70-130	
Lithium	mg/L	0.112	1.60	1.97	116	70-130	
Magnesium	mg/L	42.4	16.0	58.8	102	70-130	
Sodium	**mg/L**	**40.0**	**16.0**	51.0	**69**	**70-130**	**243**

MATRIX SPIKE: T131230-MS2 Original: **23A0179-04**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Boron	mg/L	0.239	1.60	1.73	93	70-130	
Calcium	mg/L	46.3	16.0	63.4	107	70-130	
Potassium	mg/L	0.702	16.0	17.5	105	70-130	
Lithium	mg/L	0	1.60	1.68	105	70-130	

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MATRIX SPIKE: T131230-MS2 Original: **23A0179-04**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Magnesium	mg/L	12.1	16.0	28.4	102	70-130	
Sodium	mg/L	10.8	16.0	27.1	102	70-130	

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131427
QC Batch Method: EPA 200.2
Analysis Description: Sodium, Total
Analysis Method: EPA 200.7 Rev. 4.4

METHOD BLANK: T131427-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Boron	mg/L	<0.050	0.050	
Calcium	mg/L	<0.26	0.26	
Potassium	mg/L	<0.25	0.25	
Lithium	mg/L	<0.0025	0.0025	
Magnesium	mg/L	<0.050	0.050	
Sodium	mg/L	<0.12	0.12	

LABORATORY CONTROL SAMPLE: T131427-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Boron	mg/L	1.60	1.51	95	85-115	
Calcium	mg/L	16.0	17.5	109	85-115	
Potassium	mg/L	16.0	15.8	99	85-115	
Lithium	mg/L	1.60	1.61	101	85-115	
Magnesium	mg/L	16.0	15.9	99	85-115	
Sodium	mg/L	16.0	15.6	98	85-115	

MATRIX SPIKE: T131427-MS1 Original: **23A0179-21**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Boron	mg/L	2.20	1.60	3.67	92	70-130	
Calcium	mg/L	141	16.0	155	85	70-130	
Potassium	mg/L	9.09	16.0	25.6	103	70-130	
Lithium	mg/L	0.0318	1.60	1.72	105	70-130	
Magnesium	mg/L	30.8	16.0	44.4	85	70-130	
Sodium	mg/L	23.6	16.0	41.3	111	70-130	

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

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QC Batch: T131230
QC Batch Method: EPA 200.2

Analysis Description: Thallium, Total
Analysis Method: EPA 200.8 Rev. 5.4

METHOD BLANK: T131230-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Arsenic	mg/L	<0.0022	0.0022	
Barium	mg/L	<0.050	0.050	
Beryllium	mg/L	<0.0040	0.0040	
Cadmium	mg/L	<0.0010	0.0010	
Cobalt	mg/L	<0.010	0.010	
Chromium	mg/L	<0.0050	0.0050	
Molybdenum	mg/L	<0.010	0.010	
Lead	mg/L	<0.0030	0.0030	
Antimony	mg/L	<0.0020	0.0020	
Selenium	mg/L	<0.0020	0.0020	
Thallium	mg/L	<0.0020	0.0020	

LABORATORY CONTROL SAMPLE: T131230-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Arsenic	mg/L	0.100	0.0965	97	85-115	
Barium	mg/L	1.60	1.60	100	85-115	
Beryllium	mg/L	0.200	0.195	98	85-115	
Cadmium	mg/L	0.0500	0.0505	101	85-115	
Cobalt	mg/L	1.60	1.56	98	85-115	
Chromium	mg/L	0.0500	0.0494	99	85-115	
Molybdenum	mg/L	1.60	1.64	103	85-115	
Lead	mg/L	0.100	0.0985	99	85-115	
Antimony	mg/L	0.100	0.0974	97	85-115	
Selenium	mg/L	0.100	0.0924	92	85-115	
Thallium	mg/L	0.100	0.0974	97	85-115	

MATRIX SPIKE: T131230-MS1 Original: **23A0179-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Arsenic	mg/L	0.00553	0.100	0.108	103	70-130	
Barium	mg/L	0.0502	1.60	1.73	105	70-130	
Beryllium	mg/L	0	0.200	0.198	99	70-130	
Cadmium	mg/L	0	0.0500	0.0476	95	70-130	
Cobalt	mg/L	0.000693	1.60	1.72	108	70-130	
Chromium	mg/L	0	0.0500	0.0618	124	70-130	

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MATRIX SPIKE: T131230-MS1 Original: **23A0179-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Molybdenum	mg/L	0.0114	1.60	1.77	110	70-130	
Lead	mg/L	0	0.100	0.0861	86	70-130	
Antimony	mg/L	0	0.100	0.0958	96	70-130	
Selenium	mg/L	0	0.100	0.0920	92	70-130	
Thallium	mg/L	0	0.100	0.0884	88	70-130	

MATRIX SPIKE: T131230-MS2 Original: **23A0179-04**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Arsenic	mg/L	0.00191	0.100	0.0996	98	70-130	
Barium	mg/L	0.0168	1.60	1.64	102	70-130	
Beryllium	mg/L	0	0.200	0.191	95	70-130	
Cadmium	mg/L	0.000782	0.0500	0.0505	99	70-130	
Cobalt	mg/L	0	1.60	1.61	100	70-130	
Chromium	mg/L	0	0.0500	0.0511	102	70-130	
Molybdenum	mg/L	0.00718	1.60	1.69	105	70-130	
Lead	mg/L	0	0.100	0.0971	97	70-130	
Antimony	mg/L	0.00110	0.100	0.0976	97	70-130	
Selenium	mg/L	0.00221	0.100	0.0942	92	70-130	
Thallium	mg/L	0	0.100	0.0976	98	70-130	

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131427
QC Batch Method: EPA 200.2
Analysis Description: Molybdenum, Total
Analysis Method: EPA 200.8 Rev. 5.4

METHOD BLANK: T131427-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Arsenic	mg/L	<0.0022	0.0022	
Barium	mg/L	<0.050	0.050	
Beryllium	mg/L	<0.0040	0.0040	
Cadmium	mg/L	<0.0010	0.0010	
Cobalt	mg/L	<0.010	0.010	
Chromium	mg/L	<0.0050	0.0050	
Molybdenum	mg/L	<0.010	0.010	
Lead	mg/L	<0.0030	0.0030	
Antimony	mg/L	<0.0020	0.0020	
Selenium	mg/L	<0.0020	0.0020	

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METHOD BLANK: T131427-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Thallium	mg/L	<0.0020	0.0020	

LABORATORY CONTROL SAMPLE: T131427-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Arsenic	mg/L	0.100	0.0947	95	85-115	
Barium	mg/L	1.60	1.64	102	85-115	
Beryllium	mg/L	0.200	0.177	88	85-115	
Cadmium	mg/L	0.0500	0.0508	102	85-115	
Cobalt	mg/L	1.60	1.47	92	85-115	
Chromium	mg/L	0.0500	0.0449	90	85-115	
Molybdenum	mg/L	1.60	1.60	100	85-115	
Lead	mg/L	0.100	0.101	101	85-115	
Antimony	mg/L	0.100	0.0993	99	85-115	
Selenium	mg/L	0.100	0.0939	94	85-115	
Thallium	mg/L	0.100	0.100	100	85-115	

MATRIX SPIKE: T131427-MS1 Original: **23A0179-21**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Arsenic	mg/L	0.00122	0.100	0.0975	96	70-130	
Barium	mg/L	0.0327	1.60	1.68	103	70-130	
Beryllium	mg/L	0	0.200	0.170	85	70-130	
Cadmium	mg/L	0	0.0500	0.0499	100	70-130	
Cobalt	mg/L	0	1.60	1.49	93	70-130	
Chromium	mg/L	0	0.0500	0.0477	95	70-130	
Molybdenum	mg/L	0.00595	1.60	1.68	105	70-130	
Lead	mg/L	0	0.100	0.0986	99	70-130	
Antimony	mg/L	0.000431	0.100	0.100	100	70-130	
Selenium	mg/L	0	0.100	0.0903	90	70-130	
Thallium	mg/L	0	0.100	0.0984	98	70-130	

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131167
QC Batch Method: IC Prep W

Analysis Description: Chloride
Analysis Method: EPA 300.0 Rev. 2.1

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METHOD BLANK: T131167-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Chloride	mg/L	<0.15	0.15	
Fluoride	mg/L	<0.020	0.020	
Sulfate as SO4	mg/L	<1.0	1.0	

LABORATORY CONTROL SAMPLE: T131167-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Chloride	mg/L	5.00	5.26	105	90-110	
Fluoride	mg/L	1.00	0.974	97	90-110	
Sulfate as SO4	mg/L	5.00	5.42	108	90-110	

MATRIX SPIKE: T131167-MS1 Original: **23A0179-13**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Chloride	mg/L	100	125	225	100	80-120	
Fluoride	mg/L	4.86	25.0	28.7	95	80-120	
Sulfate as SO4	mg/L	249	125	385	109	80-120	

MATRIX SPIKE: T131167-MS2 Original: **23A0179-16**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Chloride	mg/L	26.6	25.0	52.4	103	80-120	
Fluoride	mg/L	0.198	5.00	5.23	101	80-120	
Sulfate as SO4	mg/L	1.89	25.0	28.2	105	80-120	

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131168
QC Batch Method: IC Prep W
Analysis Description: Chloride
Analysis Method: EPA 300.0 Rev. 2.1

METHOD BLANK: T131168-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Chloride	mg/L	<0.15	0.15	
Fluoride	mg/L	<0.020	0.020	
Sulfate as SO4	mg/L	<1.0	1.0	

LABORATORY CONTROL SAMPLE: T131168-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes

LABORATORY CONTROL SAMPLE: T131168-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Chloride	mg/L	5.00	5.26	105	90-110	
Fluoride	mg/L	1.00	0.974	97	90-110	
Sulfate as SO4	mg/L	5.00	5.42	108	90-110	

MATRIX SPIKE: T131168-MS1 Original: **23A0179-23**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Chloride	mg/L	15.1	25.0	40.7	102	80-120	
Fluoride	mg/L	0.0698	5.00	4.91	97	80-120	
Sulfate as SO4	mg/L	30.2	25.0	57.2	108	80-120	

MATRIX SPIKE: T131168-MS2 Original: **23A0179-24**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Chloride	mg/L	23.1	25.0	48.4	101	80-120	
Fluoride	mg/L	0.563	5.00	5.51	99	80-120	
Sulfate as SO4	mg/L	25.4	25.0	50.9	102	80-120	

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131086
QC Batch Method: SM 2320 B-11
Analysis Description: Alkalinity, Bicarbonate
Analysis Method: SM 2320 B-11

LABORATORY CONTROL SAMPLE: T131086-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	100	93.8	94	88-112	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	100	90.8	91	88-112	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	100	93.8	94	88-112	

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131187
QC Batch Method: SM 2320 B-11
Analysis Description: Alkalinity, Total
Analysis Method: SM 2320 B-11

LABORATORY CONTROL SAMPLE: T131187-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes

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LABORATORY CONTROL SAMPLE: T131187-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	100	91.8	92	88-112	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	100	91.8	92	88-112	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	100	91.8	92	88-112	

LABORATORY CONTROL SAMPLE: T131187-BS2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	100	90.7	91	88-112	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	100	90.7	91	88-112	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	100	90.7	91	88-112	

LABORATORY CONTROL SAMPLE: T131187-BS3

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	100	92.0	92	88-112	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	100	92.0	92	88-112	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	100	92.0	92	88-112	

LABORATORY CONTROL SAMPLE: T131187-BS4

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	100	90.6	91	88-112	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	100	90.6	91	88-112	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	100	90.6	91	88-112	

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131107
QC Batch Method: SM 2540 C-15
Analysis Description: Total Dissolved Solids
Analysis Method: SM 2540 C-15

METHOD BLANK: T131107-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes

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METHOD BLANK: T131107-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Dissolved Solids	mg/L	<10	10	

LABORATORY CONTROL SAMPLE: T131107-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Dissolved Solids	mg/L	500	569	114	80-120	

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131189
QC Batch Method: SM 2540 C-15
Analysis Description: Total Dissolved Solids
Analysis Method: SM 2540 C-15

METHOD BLANK: T131189-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Dissolved Solids	mg/L	<10	10	

LABORATORY CONTROL SAMPLE: T131189-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Dissolved Solids	mg/L	500	496	99	80-120	

SAMPLE DUPLICATE: T131189-DUP1 Original: **23A0179-13**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Total Dissolved Solids	**mg/L**	**942**	**764**	**21**	**10**	**623**

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131087
QC Batch Method: SM 2540 D-15
Analysis Description: Total Suspended Solids
Analysis Method: SM 2540 D-15

METHOD BLANK: T131087-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Suspended Solids	mg/L	<10	10	

LABORATORY CONTROL SAMPLE: T131087-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes

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Muskegon, MI 49444-2673

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LABORATORY CONTROL SAMPLE: T131087-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Suspended Solids	mg/L	100	92.2	92	85-115	

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131142
QC Batch Method: SM 2540 D-15
Analysis Description: Total Suspended Solids
Analysis Method: SM 2540 D-15

METHOD BLANK: T131142-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Suspended Solids	mg/L	<10	10	

LABORATORY CONTROL SAMPLE: T131142-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Suspended Solids	mg/L	100	86.9	87	85-115	

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131154
QC Batch Method: SM 2540 D-15
Analysis Description: Total Suspended Solids
Analysis Method: SM 2540 D-15

METHOD BLANK: T131154-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Suspended Solids	mg/L	<10	10	

LABORATORY CONTROL SAMPLE: T131154-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Suspended Solids	mg/L	100	86.0	86	85-115	

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131186
QC Batch Method: *** DEFAULT PREP ***
Analysis Description: pH, SM 4500
Analysis Method: SM 4500-H+ B-11

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SAMPLE DUPLICATE: T131186-DUP1 Original: **23A0179-01**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
pH	**pH Units**	**7.02**	**7.04**	**0.3**	**20**	**pHa**

Trace Project ID: 23A0179
Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T131191
QC Batch Method: *** DEFAULT PREP ***
Analysis Description: pH, SM 4500
Analysis Method: SM 4500-H+ B-11

SAMPLE DUPLICATE: T131191-DUP1 Original: **23A0179-13**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
pH	**pH Units**	**7.69**	**7.70**	**0.1**	**20**	**pHd**

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www.trace-labs.com

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Muskegon, MI 49444-2673

Phone 231.773.5998
Fax 888.979.4469
www.trace-labs.com

Page 1 of 2

Trace ID No.: 23A0179

Report Results To:

Company Name:	HDR Inc.
Report To:	Molly Reeves
Mailing Address:	
City, State, Zip Code:	
Office Phone:	Cell Phone: 734 263 7138
Email Address:	Molly.Reeves@hdrinc.com

Bill To:

PO #:	
Contact Name:	Lisa Zawideh
Billing Address (if different):	On File
City, State, Zip Code:	
Phone Number:	734 332 6405
Billing Email Address:	Lisa.Zawideh@HDRinc.com

Trace Use:

Logged By:	NC
Checked By:	SB
Soil Volatiles Preserved (circle if applicable):	MeOH / Low Level / Lab
Sample Collection Time (Hrs):	

Requested Turnaround Times (TAT)

- ☑ Standard: 5-10 Business days
- ☐ 3 Business Days*
- ☐ 1 Business Day*

**Rush TAT Requires Prior Approval*

Matrix Key:

WW = Wastewater	O = Oil	A = Air	
DW = Drinking Water	WI = Wipes	U = Unknown	
GW = Groundwater	S = Solid		
LW = Liquid Waste	SL = Sludge		

Project Name: City of Grand Haven - Harbor Island

Sampled By (print): Tristen Bussche

Trace No.	Sample Collection Date	Sample Collection Time	Sample ID/Name	Metals Field Filterd (Y or N)	Matrix - see above →	Number of Containers	Preservation: Cool ≤ 4°C	Hydrochloric Acid (HCl)	Nitric Acid (HNO3)	Sulfuric Acid (H2SO4)	Sodium Thiosulfate	Sodium Hydroxide (NaOH)	Ascorbic Acid	Trizma	Other	Analysis Requested	Remarks/Notes	Possible Health Hazards?
1	11/3/23	17:20	MW-30	N	GW	6	1		5							Total Metals		
2	11/3/23	17:40	MWT-30	N	GW	6	1		5							TSS, TDS, F, Cl, SO4, pH		
3	11/3/23	15:30	MW-19	N	GW	6	1		5							Rad 226/228		
4	11/3/23	12:20	MW-12	N	GW	6	1		5							~~Arsenic~~ 1/K		
5	11/3/23	16:10	MW-11	N	GW	6	1		5									
6	11/3/23	15:30	MW-06	N	GW	6	1		5									
7	11/3/23	15:25	MW-01R	N	GW	6	1		5									
8	11/4/23	9:30	MW-10	N	GW	6	1		5									
9	11/4/23	11:40	MW-02	N	GW	6	1		5									
10	11/4/23	13:30	MW-09	N	GW	6	1		5									

Please Sign	Released By	Date	Time	Received By	Date	Time
1)	[signature]	11/4/23	16:01	[signature]		
2)	[signature]			[signature]	11/4/23	17:00
3)						
4)						

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☐ Check this box if you would not like your samples analyzed if received outside of the conditions outlined in the Trace Sample Acceptance Policy at www.trace-labs.com/downloads.

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2241 Black Creek Road
Muskegon, MI 49444-2673

TRACE
ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

CHAIN-OF-CUSTODY RECORD

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

Phone 231.773.5998
Fax 888.979.4469
www.trace-labs.com

Trace ID No. 23A0179

Report Results To:

Company Name: HDR inc
Report To: Molly Reeves
Mailing Address: On File
City, State, Zip Code:
Office Phone: Cell Phone: 734 263 7138
Email Address: Molly.Reeves@HDRinc.com

Bill To:

PO #:
Contact Name: Laura Zawadzki
Billing Address (if different): On File
City, State, Zip Code:
Phone Number: 734 332 6905
Billing Email Address: Laura.Zawadzki@HDRinc.com

Trace Use:

Logged By: NC
Checked By: SB
Soil Volatiles Preserved (circle if applicable): MeOH Low Level Lab
Sample Collection Time (Hrs):

Requested Turnaround Times (TAT)

☑ Standard: 5-10 Business days
☐ 3 Business Days*
☐ 1 Business Day*
** Rush TAT Requires Prior Approval*

Matrix Key:

WW = Wastewater, DW = Drinking Water, GW = Groundwater, LW = Liquid Waste, O = Oil, WI = Wipes, S = Solid, SL = Sludge, A = Air, U = Unknown

Project Name: City of Grand Haven - Harbor Island
Sampled By (print): Tamara Buszka

Trace No.	Sample Collection Date	Sample Collection Time	Sample ID/Name	Metals Field Filterd (Y or N)	Matrix - see above	Number of Containers	Preservation: Cool ≤ 4°C	Hydrochloric Acid (HCl)	Nitric Acid (HNO3)	Sulfuric Acid (H2SO4)	Sodium Thiosulfate	Sodium Hydroxide (NaOH)	Ascorbic Acid	Trizma	Other	Total Metals	TSS, TDS, F, Cl, SO4, pH	Rad 226/228	AIL	Remarks/Notes	Possible Health Hazards?
11	1/4/23	13:00	MW-04	N	GW	6	1		5							1	1	1	1		
12	1/4/23	15:10	MW-03	N	GW	6	1		5							1	1	1	1		

Analysis Requested

	Released By	Date	Time	Received By
1)		1/4/23	16:07	
2)				
3)				
4)				

Please Sign

Released By	Date	Time	Received By
	1/4/23	17:00	

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TRACE ANALYTICAL LABORATORIES, INC.

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2241 Black Creek Road
Muskegon, MI 49444-2673

Phone 231.773.5998
Fax 888.979.4469
www.trace-labs.com

Trace ID No. 23A0179

Report Results To:

Company Name:	HDR Inc
Report To:	Molly Reeves
Mailing Address:	On File
City, State, Zip Code:	
Office Phone:	Cell Phone: 734 765 1138
Email Address:	Molly.Reeves@HDRinc.com

Bill To:

PO #:	
Contact Name:	Laura Tomaszek
Billing Address (if different):	On File
City, State, Zip Code:	
Phone Number:	734 332 6105
Billing Email Address:	Laura.Tomaszek@HDRinc.com

Trace Use:

Logged By:	NC
Checked By:	JCB

Soil Volatiles Preserved (circle if applicable): MeOH | Low Level | Lab

Sample Collection Time (Hrs):

Requested Turnaround Times (TAT)

- ☑ Standard: 5-10 Business days
- ☐ 3 Business Days*
- ☐ 1 Business Day*

**Rush TAT Requires Prior Approval*

Matrix Key:

WW = Wastewater, DW = Drinking Water, GW = Groundwater, LW = Liquid Waste, O = Oil, WI = Wipes, S = Solid, SL = Sludge, A = Air, U = Unknown

Project Name: City of Grand Haven - Harbor Island

Sampled By (print): Taunten Buszka

Trace No.	Sample Collection Date	Sample Collection Time	Sample ID/Name	Metals Field Filterd (Y or N)	Matrix - see above →	Number of Containers	Preservation: Cool ≤ 4°C	Hydrochloric Acid (HCl)	Nitric Acid (HNO3)	Sulfuric Acid (H2SO4)	Sodium Thiosulfate	Sodium Hydroxide (NaOH)	Ascorbic Acid	Trizma	Other	Analysis Requested	Remarks/Notes	Possible Health Hazards?
13	1/4/23	17:00	MW-31	N	GW	6	X									Total Metals		
14	1/4/23	19:20	MW-32						X							TSS, TDS, FL, Cl, SO4, pH		
15	1/5/23	16:20	MW-33													Rad 226/228		
16	1/5/23	13:10	MW-34													Alk		
17	1/5/23	9:00	MW-18															
18	1/5/23	14:00	SG-05															
19	1/5/23	14:25	SG-04R															
20	1/5/23	14:50	SG-03															
21	1/5/23	15:20	SG-02															

Please Sign	Released By	Date	Time	Received By	Released By	Received By	Date	Time
1)		1/5/23	8:45	2)				
3)				4)			1/6/23	8:00

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CHAIN-OF-CUSTODY RECORD

Trace Analytical Laboratories, Inc.
2241 Black Creek Road
Muskegon, MI 49444-2673

Phone 231.773.5998
Fax 888.979.4469
www.trace-labs.com

Trace ID No. 23A0179

Report Results To:

Company Name: HDR Inc
Report To: Molly Reeves
Mailing Address: On File
City, State, Zip Code:
Office Phone: Cell Phone: 734 755 7138
Email Address: Molly.Reeves@HDRinc.com

Bill To:

PO #:
Contact Name: Laura Zawideh
Billing Address (if different): On File
City, State, Zip Code:
Phone Number: 734 332 6405
Billing Email Address: Laura.Zawideh

Trace Use:

Logged By: NC
Checked By: JLB
Soil Volatiles Preserved (circle if applicable): MeOH Low Level Lab
Sample Collection Time (Hrs):

Requested Turnaround Times (TAT)

☑ Standard: 5-10 Business days
☐ 3 Business Days*
☐ 1 Business Day*
** Rush TAT Requires Prior Approval*

Matrix Key:

WW = Wastewater
DW = Drinking Water
GW = Groundwater
LW = Liquid Waste
O = Oil
WI = Wipes
S = Solid
SL = Sludge
A = Air
U = Unknown

Project Name: City of Grand Haven - Harbor Island
Sampled By (print): Tamten Basch

Trace No.	Sample Collection Date	Sample Collection Time	Sample ID/Name	Metals Field Filterd (Y or N)	Matrix - see above →	Number of Containers	Preservation: Cool ≤ 4°C	Hydrochloric Acid (HCl)	Nitric Acid (HNO3)	Sulfuric Acid (H2SO4)	Sodium Thiosulfate	Sodium Hydroxide (NaOH)	Ascorbic Acid	Trizma	Other	Analysis Requested	Remarks/Notes	Possible Health Hazards?
22	1/4/23	17:20	MW-20	N	GW	6	1		3							Total Metals		
23	1/4/23	19:20	MW-07													TSS, TDS, Fl, Cl, SO4, pH		
24	1/5/23	10:00	MW-08													Rad 226/228		
25	1/5/23	12:10	MW-27													Alk		
26	1/5/23	12:10	MWT-27															

Please Sign

	Released By	Received By	Date	Time
1)			1/5/23	18:45
2)				
3)				
4)			1/6/23	8:00

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888-979-4469 Fax
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23A0179
HDR Michigan Inc.
Project Manager: Jon Mink

Sample Log In Checklist

	Original Observation	Corrected Temperature	IR-9 (CF: +0.1°C)	IR-10 (CF: 0.0°C)	IR-11 (CF: -0.7°C)	SR1 (CF: -0.2°C)	SR2 (CF: 0.0°C)	Temp Blank	Client Sample
Date: 1/5/23									
Time: 8:59									
Logged by: SB									
Package Description: Cooler									
Package Temp °C	1.6	1.6		✓					
Representative Sample Temp °C	3.4	3.2				✓		✓	

Sample Receipt

Yes No
- ☒ ☐ Received on ice or other coolant
- ☒ ☐ Ice still present upon receipt
- ☐ ☒ Custody seals present ☐ Yes ☐ No Custody seals intact (if applicable)
- ☒ Trace Courier ☐ Client Drop-off ☐ UPS ☐ Fed Ex ☐ US Mail ☐ Other

Sample Condition

Yes No N/A
- ☒ ☐ ☐ All sample containers arrived unbroken and labeled
- ☒ ☐ ☐ Sufficient sample to run requested analyses
- ☒ ☐ ☐ Correct chemical preservative added to samples
- ☒ ☐ ☐ Samples preserved at Trace ~~NaOH~~ SB 1/5/23 HNO_3 added 1/5/23 @ 9:11
- ☒ ☐ ☐ Chemical preservation verified, check EMD pH test strip used (if applicable)
  - ☒ pH 0-2.5 (Lot: HC291593) ☐ pH 11.0-13.0 (Lot: HC022540) ☐ Other
- ☐ ☐ ☒ Air bubbles absent from VOAs

Chain of Custody (COC)

Yes No
- ☒ ☐ All bottle labels agree with COC
- ☒ ☐ COC filled out properly
- ☒ ☐ COC signed by client

Notes:

Form 70-A.45
Effective 1/2/23

TRACE Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

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Muskegon, MI 49444-2673

TRACE ANALYTICAL LABORATORIES, INC.

231-773-5998 Phone
888-979-4469 Fax
www.trace-labs.com

23A0179

HDR Michigan Inc.
Project Manager: Jon Mink

Sample Log In Checklist

	Original Observation	Corrected Temperature	IR-9 (CF: +0.1°C)	IR-10 (CF: 0.0°C)	IR-11 (CF: -0.7°C)	SR1 (CF: -0.2°C)	SR2 (CF: 0.0°C)	Temp Blank	Client Sample
Date: 1/6/23									
Time: 9:31									
Logged by: KB									
Package Description: Cooler									
Package Temp °C	-0.9	-0.9		✓					
Representative Sample Temp °C	3.4	3.2				✓		✓	

Sample Receipt

Yes / No

- ☑ / ☐ Received on ice or other coolant
- ☑ / ☐ Ice still present upon receipt
- ☐ / ☑ Custody seals present — ☐ Yes ☐ No Custody seals intact (if applicable)
- ☑ Trace Courier ☐ Client Drop-off ☐ UPS ☐ Fed Ex ☐ US Mail ☐ Other

Sample Condition

Yes / No / N/A

- ☑ / ☐ / ☐ All sample containers arrived unbroken and labeled
- ☑ / ☐ / ☐ Sufficient sample to run requested analyses
- ☑ / ☐ / ☐ Correct chemical preservative added to samples
- ☑ / ☐ / ☐ Samples preserved at Trace — HNO3 added at 10:05 on 1/6/23
- ☑ / ☐ / ☐ Chemical preservation verified, check EMD pH test strip used (if applicable)
  - ☑ pH 0-2.5 (Lot: HC291593) ☐ pH 11.0-13.0 (Lot: HC022540) ☐ Other
- ☐ / ☐ / ☑ Air bubbles absent from VOAs

Chain of Custody (COC)

Yes / No

- ☑ / ☐ All bottle labels agree with COC
- ☑ / ☐ COC filled out properly
- ☑ / ☐ COC signed by client

Notes:

Form 70-A.45
Effective 1/2/23

TRACE Analytical Laboratories, Inc.

Appendix E

Statistical Evaluation

Table 1: Summary Statistics, Non-Detects Included

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	9	2	22%	2022-11-29 to 2023-10-24	Gamma; Lognormal	Gamma	0.00045	0.00033	0.00022	0.0012	0.00032	0.72	0.00015	1.9	3.5
1_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0014	0.0013	0.00073	0.0020	0.00045	0.32	0.00059	-0.24	-0.80
1_11_5_103	MW-01R	Appendix IV	Barium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal	Gamma	0.31	0.29	0.21	0.56	0.11	0.34	0.059	1.8	4
1_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00025	0.00021	0.00012	0.00036	0.000081	0.33	0.000074	0.17	-1.0
1_11_5_106	MW-01R	Appendix IV	Cadmium	mg/L	9	6	67%	2022-11-29 to 2023-10-24		Nonparametric	0.00015	0.00011	0.000032	0.00038	0.00012	0.80	0.000074	1.2	0.070
1_11_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0023	0.0019	0.0013	0.0043	0.0011	0.47	0.00074	1.2	0.37
1_11_5_110	MW-01R	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal	Gamma	0.0017	0.0012	0.00081	0.0045	0.0011	0.67	0.00058	2.2	5.2
1_11_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Nonparametric	Nonparametric	12	14	8.1	15	2.8	0.23	1.5	-0.34	-2.1
1_11_5_115	MW-01R	Appendix IV	Lead	mg/L	9	2	22%	2022-11-29 to 2023-10-24	Gamma; Lognormal	Gamma	0.0014	0.0010	0.00044	0.0053	0.0015	1.1	0.00030	2.8	8.2
1_11_5_116	MW-01R	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	2.4	2.3	1.5	3.4	0.76	0.31	1.0	0.037	-1.9
1_11_5_117	MW-01R	Appendix IV	Mercury	mg/L	9	9	100%	2022-11-29 to 2023-10-24		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
1_11_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	9	1	11%	2022-11-29 to 2023-10-24	Gamma; Lognormal	Gamma	0.0011	0.00077	0.00033	0.0031	0.00087	0.76	0.00022	1.8	2.9
1_11_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	2022-11-29 to 2023-10-24		Nonparametric	0.91	0.83	0.60	1.3	0.27	0.29	0.34	0.32	-1.8
1_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00064	0.00060	0.00030	0.00097	0.00018	0.28	0.000089	-0.026	1.8
1_11_5_125	MW-01R	Appendix IV	Thallium	mg/L	9	9	100%	2022-11-29 to 2023-10-24		Nonparametric	0.00024	0.00038	0.000075	0.00038	0.00016	0.66	0	-0.27	-2.6
1_15_5_101	MW-06	Appendix IV	Antimony	mg/L	9	7	78%	2022-11-29 to 2023-10-24		Nonparametric	0.00018	0.00010	0.000050	0.00050	0.00016	0.91	0.000074	1.4	0.76
1_15_5_102	MW-06	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00068	0.00065	0.00047	0.0010	0.00016	0.24	0.00016	0.85	0.38
1_15_5_103	MW-06	Appendix IV	Barium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Nonparametric	Nonparametric	1.4	1.4	0.99	1.6	0.18	0.13	0.15	-1.7	3.8
1_15_5_104	MW-06	Appendix IV	Beryllium	mg/L	9	8	89%	2022-11-29 to 2023-10-24		Nonparametric	0.000052	0.000052	0.000052	0.000054	0.00000067	0.013	0	3	9
1_15_5_106	MW-06	Appendix IV	Cadmium	mg/L	9	9	100%	2022-11-29 to 2023-10-24		Nonparametric	0.00011	0.000075	0.000032	0.00038	0.00011	0.98	0.000064	2.0	4.4
1_15_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0019	0.0020	0.0012	0.0030	0.00056	0.30	0.00074	0.74	0.41
1_15_5_110	MW-06	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00059	0.00057	0.00046	0.00080	0.00013	0.21	0.00015	0.42	-1.4
1_15_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.2	1.1	1.0	1.4	0.16	0.13	0.15	0.47	-1.3
1_15_5_115	MW-06	Appendix IV	Lead	mg/L	9	6	67%	2022-11-29 to 2023-10-24		Nonparametric	0.00044	0.00027	0.00010	0.0011	0.00039	0.88	0.00025	1.2	0.032
1_15_5_116	MW-06	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.20	0.20	0.15	0.23	0.031	0.16	0.030	-0.69	-0.85
1_15_5_117	MW-06	Appendix IV	Mercury	mg/L	9	9	100%	2022-11-29 to 2023-10-24		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
1_15_5_118	MW-06	Appendix IV	Molybdenum	mg/L	9	6	67%	2022-11-29 to 2023-10-24		Nonparametric	0.00074	0.00062	0.00025	0.0031	0.00091	1.2	0.00052	2.8	8
1_15_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	2022-11-29 to 2023-10-24	Lognormal	Lognormal	0.90	0.82	0.62	1.9	0.40	0.44	0.17	2.5	6.7
1_15_5_122	MW-06	Appendix IV	Selenium	mg/L	9	5	56%	2022-11-29 to 2023-10-24		Nonparametric	0.00021	0.00022	0.00019	0.00022	0.000012	0.057	0	-1.1	-0.59
1_15_5_125	MW-06	Appendix IV	Thallium	mg/L	9	9	100%	2022-11-29 to 2023-10-24		Nonparametric	0.00018	0.000075	0.000075	0.00038	0.00015	0.86	0	0.86	-1.7
1_17_5_101	MW-08	Appendix IV	Antimony	mg/L	9	3	33%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00013	0.00010	0.000054	0.00028	0.000069	0.52	0.000015	1.4	1.6
1_17_5_102	MW-08	Appendix IV	Arsenic	mg/L	9	0	0%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.032	0.038	0.0069	0.050	0.016	0.50	0.016	-0.55	-1.3
1_17_5_103	MW-08	Appendix IV	Barium	mg/L	9	0	0%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.3	1.2	0.98	1.5	0.16	0.13	0.15	-0.11	-0.49
1_17_5_104	MW-08	Appendix IV	Beryllium	mg/L	9	9	100%	2022-12-01 to 2023-10-24		Nonparametric	0.000052	0.000052	0.000052	0.000052	0	0	0	NA	NA
1_17_5_106	MW-08	Appendix IV	Cadmium	mg/L	9	9	100%	2022-12-01 to 2023-10-24		Nonparametric	0.000051	0.000032	0.000032	0.000075	0.000023	0.44	0	0.27	-2.6
1_17_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00095	0.00093	0.00061	0.0015	0.00026	0.28	0.00025	0.94	1.5
1_17_5_110	MW-08	Appendix IV	Cobalt	mg/L	9	0	0%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00053	0.00058	0.00034	0.00070	0.00013	0.24	0.00010	-0.50	-0.88
1_17_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.88	1.0	0.40	1.3	0.31	0.35	0.15	-0.47	-1.1
1_17_5_115	MW-08	Appendix IV	Lead	mg/L	9	7	78%	2022-12-01 to 2023-10-24		Nonparametric	0.00024	0.00022	0.00010	0.00086	0.00024	1.0	0.00018	2.6	7.5
1_17_5_116	MW-08	Appendix IV	Lithium	mg/L	9	0	0%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.11	0.11	0.063	0.14	0.027	0.24	0.030	-0.83	-0.091
1_17_5_117	MW-08	Appendix IV	Mercury	mg/L	9	9	100%	2022-12-01 to 2023-10-24		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
1_17_5_118	MW-08	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0014	0.0015	0.00036	0.0028	0.00087	0.62	0.0012	0.36	-1.0

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_17_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.2	1.1	0.61	2.1	0.47	0.39	0.45	0.74	0.39
1_17_5_122	MW-08	Appendix IV	Selenium	mg/L	9	5	56%	2022-12-01 to 2023-10-24		Nonparametric	0.00019	0.00022	0.00014	0.00022	0.000039	0.21	0	-0.35	-2.4
1_17_5_125	MW-08	Appendix IV	Thallium	mg/L	9	9	100%	2022-12-01 to 2023-10-24		Nonparametric	0.000075	0.000075	0.000075	0.000075	0	0	0	NA	NA
1_18_5_101	MW-09	Appendix IV	Antimony	mg/L	9	5	56%	2022-11-28 to 2023-10-24		Nonparametric	0.00018	0.00010	0.000050	0.00050	0.00016	0.87	0.000040	1.4	0.98
1_18_5_102	MW-09	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Nonparametric	Nonparametric	0.0022	0.0023	0.0013	0.0027	0.00050	0.23	0.00015	-1.3	0.37
1_18_5_103	MW-09	Appendix IV	Barium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Lognormal	Lognormal	0.53	0.28	0.17	2.4	0.71	1.4	0.15	2.8	8.1
1_18_5_104	MW-09	Appendix IV	Beryllium	mg/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.000053	0.000052	0.000052	0.000058	0.0000020	0.038	0	3.0	9.0
1_18_5_106	MW-09	Appendix IV	Cadmium	mg/L	9	9	100%	2022-11-28 to 2023-10-24		Nonparametric	0.000099	0.000075	0.000032	0.00038	0.00011	1.1	0.000064	2.3	5.8
1_18_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0025	0.0027	0.0018	0.0032	0.00058	0.23	0.00074	-0.18	-2.0
1_18_5_110	MW-09	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00055	0.00053	0.00024	0.00099	0.00023	0.42	0.00024	0.64	0.15
1_18_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	2.6	2.6	2.1	2.9	0.26	0.100	0.30	-0.66	0.26
1_18_5_115	MW-09	Appendix IV	Lead	mg/L	9	9	100%	2022-11-28 to 2023-10-24		Nonparametric	0.00041	0.00022	0.00010	0.0011	0.00041	1.0	0.00018	1.3	0.014
1_18_5_116	MW-09	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.31	0.31	0.26	0.34	0.028	0.091	0.030	-0.42	-0.95
1_18_5_117	MW-09	Appendix IV	Mercury	mg/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.00041	0.00016	0.00016	0.0024	0.00075	1.8	0	3.0	9.0
1_18_5_118	MW-09	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.022	0.021	0.012	0.033	0.0064	0.29	0.0030	0.24	-0.21
1_18_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.75	0.74	0.64	0.91	0.086	0.11	0.080	0.64	-0.18
1_18_5_122	MW-09	Appendix IV	Selenium	mg/L	9	2	22%	2022-11-28 to 2023-10-24	Nonparametric	Nonparametric	0.00023	0.00024	0.00012	0.00028	0.000048	0.20	0.000030	-1.9	4.4
1_18_5_125	MW-09	Appendix IV	Thallium	mg/L	9	9	100%	2022-11-28 to 2023-10-24		Nonparametric	0.00018	0.000075	0.000075	0.00038	0.00015	0.86	0	0.86	-1.7
1_22_5_101	MW-18	Appendix IV	Antimony	mg/L	9	2	22%	2022-11-30 to 2023-10-24	Nonparametric	Nonparametric	0.00021	0.00013	0.00010	0.00050	0.00014	0.66	0.000015	1.5	1.5
1_22_5_102	MW-18	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.025	0.023	0.015	0.041	0.0079	0.31	0.0089	0.86	0.81
1_22_5_103	MW-18	Appendix IV	Barium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.019	0.021	0.012	0.025	0.0050	0.26	0.0044	-0.45	-1.6
1_22_5_104	MW-18	Appendix IV	Beryllium	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.000052	0.000052	0.000052	0.000052	0	0	0	NA	NA
1_22_5_106	MW-18	Appendix IV	Cadmium	mg/L	9	2	22%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00022	0.00018	0.000075	0.00044	0.00012	0.53	0.00013	0.77	0.44
1_22_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	9	8	89%	2022-11-30 to 2023-10-24		Nonparametric	0.00019	0.00018	0.00018	0.00025	0.000023	0.12	0	2.1	4.8
1_22_5_110	MW-18	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0034	0.0032	0.0017	0.0060	0.0016	0.48	0.0019	0.62	-1.3
1_22_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	4	3.8	3.3	5.1	0.58	0.15	0.44	0.90	0.17
1_22_5_115	MW-18	Appendix IV	Lead	mg/L	9	6	67%	2022-11-30 to 2023-10-24		Nonparametric	0.00034	0.00022	0.00014	0.0011	0.00030	0.88	0.000089	2.4	6
1_22_5_116	MW-18	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.036	0.039	0.026	0.045	0.0079	0.22	0.0089	-0.16	-2.2
1_22_5_117	MW-18	Appendix IV	Mercury	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
1_22_5_118	MW-18	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.015	0.013	0.0090	0.021	0.0043	0.29	0.0030	0.47	-1.3
1_22_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	9	6	67%	2022-11-30 to 2023-10-24		Nonparametric	0.71	0.62	0.48	1.3	0.24	0.34	0.16	1.8	3.6
1_22_5_122	MW-18	Appendix IV	Selenium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00045	0.00034	0.00016	0.00086	0.00029	0.66	0.00027	0.57	-1.7
1_22_5_125	MW-18	Appendix IV	Thallium	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.00014	0.000075	0.000075	0.00038	0.00013	0.94	0	1.6	0.73
1_23_5_101	MW-19	Appendix IV	Antimony	mg/L	9	8	89%	2022-11-30 to 2023-10-24		Nonparametric	0.00021	0.00010	0.000050	0.00072	0.00024	1.1	0.000074	1.6	1.6
1_23_5_102	MW-19	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0054	0.0055	0.0031	0.0073	0.0016	0.29	0.0018	-0.48	-1.2
1_23_5_103	MW-19	Appendix IV	Barium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.041	0.040	0.030	0.050	0.0063	0.15	0.0059	-0.34	-0.37
1_23_5_104	MW-19	Appendix IV	Beryllium	mg/L	9	3	33%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.000085	0.000063	0.000052	0.00026	0.000066	0.78	0.000013	2.9	8.5
1_23_5_106	MW-19	Appendix IV	Cadmium	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.00011	0.000075	0.000032	0.00038	0.00011	0.98	0.000064	2.0	4.4
1_23_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	9	4	44%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00036	0.00029	0.00018	0.00088	0.00022	0.62	0.00013	1.9	3.7
1_23_5_110	MW-19	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00056	0.00050	0.00013	0.00096	0.00024	0.43	0.00028	-0.12	0.26
1_23_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	2	1.9	1.7	2.3	0.20	0.10	0.15	0.31	-1.1
1_23_5_115	MW-19	Appendix IV	Lead	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.00050	0.00022	0.00010	0.0011	0.00046	0.92	0.00018	0.63	-1.8

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_23_5_116	MW-19	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.097	0.098	0.085	0.11	0.0090	0.093	0.012	0.47	-0.97
1_23_5_117	MW-19	Appendix IV	Mercury	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
1_23_5_118	MW-19	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.010	0.011	0.0051	0.013	0.0024	0.24	0.0022	-1.2	2.1
1_23_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.89	0.93	0.56	1.2	0.24	0.27	0.29	-0.44	-1.7
1_23_5_122	MW-19	Appendix IV	Selenium	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.00026	0.00022	0.00010	0.0011	0.00032	1.2	0.00018	2.8	8.1
1_23_5_125	MW-19	Appendix IV	Thallium	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.00021	0.000075	0.000075	0.00038	0.00016	0.76	0	0.27	-2.6
1_24_5_101	MW-20	Appendix IV	Antimony	mg/L	9	2	22%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.000099	0.00010	0.000054	0.00016	0.000035	0.36	0.000050	0.47	-0.47
1_24_5_102	MW-20	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0014	0.0015	0.0012	0.0017	0.00021	0.15	0.00030	0.045	-1.9
1_24_5_103	MW-20	Appendix IV	Barium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.51	0.47	0.31	0.94	0.18	0.36	0.089	1.8	4.0
1_24_5_104	MW-20	Appendix IV	Beryllium	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.000052	0.000052	0.000052	0.000052	0	0	0	NA	NA
1_24_5_106	MW-20	Appendix IV	Cadmium	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.000051	0.000032	0.000032	0.000075	0.000023	0.44	0	0.27	-2.6
1_24_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	9	5	56%	2022-11-30 to 2023-10-24		Nonparametric	0.00021	0.00020	0.00018	0.00029	0.000035	0.16	0.000015	1.7	2.5
1_24_5_110	MW-20	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0013	0.0013	0.00095	0.0016	0.00021	0.16	0.00015	-0.42	0.052
1_24_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Nonparametric	Nonparametric	0.27	0.23	0.21	0.55	0.11	0.40	0.030	2.8	8.2
1_24_5_115	MW-20	Appendix IV	Lead	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0021	0.0023	0.0016	0.0028	0.00049	0.23	0.00074	0.24	-1.6
1_24_5_116	MW-20	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.066	0.065	0.049	0.083	0.011	0.17	0.013	-0.014	-0.94
1_24_5_117	MW-20	Appendix IV	Mercury	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
1_24_5_118	MW-20	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0043	0.0041	0.0036	0.0051	0.00053	0.12	0.00074	0.13	-1.7
1_24_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	2022-11-30 to 2023-10-24		Nonparametric	0.74	0.59	0.47	1.5	0.34	0.45	0.13	1.6	2.1
1_24_5_122	MW-20	Appendix IV	Selenium	mg/L	9	5	56%	2022-11-30 to 2023-10-24		Nonparametric	0.00017	0.00022	0.00010	0.00022	0.000057	0.33	0	-0.33	-2.4
1_24_5_125	MW-20	Appendix IV	Thallium	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.000075	0.000075	0.000075	0.000075	0	0	0	NA	NA
1_25_5_101	MW-30	Appendix IV	Antimony	mg/L	9	8	89%	2022-11-30 to 2023-10-23		Nonparametric	0.00022	0.00010	0.000050	0.00050	0.00020	0.88	0.000074	0.64	-1.6
1_25_5_102	MW-30	Appendix IV	Arsenic	mg/L	9	2	22%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00040	0.00043	0.00010	0.00070	0.00021	0.52	0.00024	-0.19	-0.84
1_25_5_103	MW-30	Appendix IV	Barium	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.068	0.058	0.045	0.10	0.023	0.33	0.016	0.63	-1.5
1_25_5_104	MW-30	Appendix IV	Beryllium	mg/L	9	8	89%	2022-11-30 to 2023-10-23		Nonparametric	0.000075	0.000052	0.000052	0.00026	0.000069	0.92	0	3	9
1_25_5_106	MW-30	Appendix IV	Cadmium	mg/L	9	9	100%	2022-11-30 to 2023-10-23		Nonparametric	0.00011	0.000075	0.000032	0.00038	0.00011	0.98	0.000064	2.0	4.4
1_25_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0099	0.010	0.0052	0.014	0.0031	0.32	0.0030	-0.29	-1.3
1_25_5_110	MW-30	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal	Gamma	0.0015	0.0011	0.00053	0.0044	0.0013	0.84	0.00030	1.8	3
1_25_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	1.1	1.1	0.91	1.4	0.14	0.13	0.15	0.77	1.1
1_25_5_115	MW-30	Appendix IV	Lead	mg/L	9	9	100%	2022-11-30 to 2023-10-23		Nonparametric	0.00059	0.00050	0.00010	0.0011	0.00041	0.68	0.00041	0.39	-1.7
1_25_5_116	MW-30	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal	Gamma	0.14	0.12	0.11	0.27	0.050	0.36	0.015	2.6	7.3
1_25_5_117	MW-30	Appendix IV	Mercury	mg/L	9	9	100%	2022-11-30 to 2023-10-23		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
1_25_5_118	MW-30	Appendix IV	Molybdenum	mg/L	9	3	33%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0017	0.0011	0.00032	0.0036	0.0013	0.76	0.00089	0.60	-1.6
1_25_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	2022-11-30 to 2023-10-23		Nonparametric	0.70	0.66	0.44	0.91	0.17	0.24	0.20	-0.066	-1.5
1_25_5_122	MW-30	Appendix IV	Selenium	mg/L	9	6	67%	2022-11-30 to 2023-10-23		Nonparametric	0.00027	0.00022	0.00010	0.0011	0.00032	1.2	0.00013	2.8	8.3
1_25_5_125	MW-30	Appendix IV	Thallium	mg/L	9	9	100%	2022-11-30 to 2023-10-23		Nonparametric	0.00028	0.00038	0.000075	0.00038	0.00015	0.55	0	-0.86	-1.7
1_26_5_101	MW-31	Appendix IV	Antimony	mg/L	9	4	44%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.000097	0.00010	0.000050	0.00013	0.000026	0.27	0.000030	-0.57	-0.42
1_26_5_102	MW-31	Appendix IV	Arsenic	mg/L	9	0	0%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0014	0.0013	0.0010	0.0018	0.00027	0.20	0.00030	0.41	-0.91
1_26_5_103	MW-31	Appendix IV	Barium	mg/L	9	0	0%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.17	0.16	0.12	0.23	0.037	0.22	0.044	0.66	-0.63
1_26_5_104	MW-31	Appendix IV	Beryllium	mg/L	9	9	100%	2022-12-01 to 2023-10-23		Nonparametric	0.000052	0.000052	0.000052	0.000052	0	0	0	NA	NA
1_26_5_106	MW-31	Appendix IV	Cadmium	mg/L	9	9	100%	2022-12-01 to 2023-10-23		Nonparametric	0.000051	0.000032	0.000032	0.000075	0.000023	0.44	0	0.27	-2.6
1_26_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0022	0.0023	0.0018	0.0029	0.00035	0.16	0.00030	0.61	0.13

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_26_5_110	MW-31	Appendix IV	Cobalt	mg/L	9	0	0%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00017	0.00018	0.00013	0.00021	0.000026	0.15	0.000030	-0.044	-0.73
1_26_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	4.8	4.7	4.6	5.2	0.24	0.051	0.15	0.49	-1.8
1_26_5_115	MW-31	Appendix IV	Lead	mg/L	9	8	89%	2022-12-01 to 2023-10-23		Nonparametric	0.00019	0.00022	0.00010	0.00031	0.000073	0.39	0	-0.13	-0.82
1_26_5_116	MW-31	Appendix IV	Lithium	mg/L	9	0	0%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.052	0.052	0.046	0.056	0.0032	0.063	0.0030	-0.53	-0.65
1_26_5_117	MW-31	Appendix IV	Mercury	mg/L	9	9	100%	2022-12-01 to 2023-10-23		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
1_26_5_118	MW-31	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-12-01 to 2023-10-23	Nonparametric	Nonparametric	0.0014	0.0013	0.0011	0.0021	0.00035	0.26	0.00030	1.5	1.5
1_26_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.76	0.72	0.50	1.2	0.25	0.33	0.19	1.2	0.30
1_26_5_122	MW-31	Appendix IV	Selenium	mg/L	9	5	56%	2022-12-01 to 2023-10-23		Nonparametric	0.00018	0.00022	0.00011	0.00022	0.000049	0.27	0	-0.46	-2.0
1_26_5_125	MW-31	Appendix IV	Thallium	mg/L	9	9	100%	2022-12-01 to 2023-10-23		Nonparametric	0.000075	0.000075	0.000075	0.000075	0	0	0	NA	NA
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	9	2	22%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00029	0.00024	0.00015	0.00063	0.00017	0.58	0.000089	1.5	1.2
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal	Gamma	0.0087	0.0083	0.0074	0.012	0.0014	0.16	0.00074	1.9	4.1
2_12_5_103	MW-02	Appendix IV	Barium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.48	0.48	0.38	0.55	0.054	0.11	0.044	-0.56	-0.32
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00033	0.00032	0.00015	0.00052	0.00011	0.35	0.00015	0.13	-0.34
2_12_5_106	MW-02	Appendix IV	Cadmium	mg/L	9	6	67%	2022-11-28 to 2023-10-24		Nonparametric	0.00016	0.000075	0.000032	0.00049	0.00016	1.0	0.000064	1.4	0.83
2_12_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.042	0.046	0.019	0.068	0.017	0.41	0.021	-0.050	-1.5
2_12_5_110	MW-02	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0060	0.0063	0.0031	0.0089	0.0020	0.34	0.0025	-0.19	-1.3
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Nonparametric	Nonparametric	8.9	9.4	4.5	10	1.7	0.19	0.44	-2.7	7.5
2_12_5_115	MW-02	Appendix IV	Lead	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0025	0.0024	0.0010	0.0041	0.0010	0.41	0.00089	0.35	-0.70
2_12_5_116	MW-02	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.4	1.4	0.87	1.7	0.26	0.19	0.30	-0.55	0.0021
2_12_5_117	MW-02	Appendix IV	Mercury	mg/L	9	9	100%	2022-11-28 to 2023-10-24		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Lognormal	Lognormal	0.0072	0.0062	0.0051	0.011	0.0024	0.33	0.0015	0.93	-0.87
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.9	1.7	0.69	3.4	0.87	0.45	1.1	0.19	-0.60
2_12_5_122	MW-02	Appendix IV	Selenium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0011	0.0012	0.00050	0.0018	0.00035	0.31	0.00030	0.13	1.7
2_12_5_125	MW-02	Appendix IV	Thallium	mg/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.00024	0.000075	0.000075	0.00062	0.00021	0.87	0	0.80	-0.67
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	9	5	56%	2022-11-28 to 2023-10-24		Nonparametric	0.00024	0.00011	0.000087	0.00050	0.00019	0.77	0.000034	0.66	-1.8
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00089	0.00091	0.00049	0.0012	0.00026	0.30	0.00028	-0.57	-1.1
2_13_5_103	MW-03	Appendix IV	Barium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.37	0.38	0.13	0.50	0.11	0.29	0.074	-1.4	3
2_13_5_104	MW-03	Appendix IV	Beryllium	mg/L	9	7	78%	2022-11-28 to 2023-10-24		Nonparametric	0.000086	0.000052	0.000052	0.00026	0.000073	0.85	0	2.2	4.4
2_13_5_106	MW-03	Appendix IV	Cadmium	mg/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.00012	0.000075	0.000032	0.00038	0.00011	0.94	0.000064	1.9	4.2
2_13_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0049	0.0049	0.0030	0.0073	0.0014	0.29	0.0018	0.20	-0.80
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00085	0.00088	0.00044	0.0013	0.00033	0.39	0.00047	-0.12	-1.5
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Nonparametric	Nonparametric	0.70	0.60	0.52	1.6	0.34	0.49	0.074	2.9	8.6
2_13_5_115	MW-03	Appendix IV	Lead	mg/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.00061	0.00050	0.00022	0.0011	0.00039	0.64	0.00041	0.50	-1.7
2_13_5_116	MW-03	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.043	0.041	0.035	0.065	0.0095	0.22	0.0059	1.6	3.0
2_13_5_117	MW-03	Appendix IV	Mercury	mg/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.00017	0.00016	0.00016	0.00024	0.000027	0.16	0	3.0	9
2_13_5_118	MW-03	Appendix IV	Molybdenum	mg/L	9	7	78%	2022-11-28 to 2023-10-24		Nonparametric	0.0011	0.00062	0.00025	0.0031	0.0012	1.1	0.00055	1.5	0.48
2_13_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	9	1	11%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.2	1.3	0.75	1.9	0.41	0.33	0.51	0.54	-0.81
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	9	3	33%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00042	0.00040	0.00017	0.0011	0.00028	0.66	0.00019	2.0	5
2_13_5_125	MW-03	Appendix IV	Thallium	mg/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.00029	0.00038	0.000075	0.00038	0.00014	0.48	0	-1.0	-1.1
2_14_5_101	MW-04	Appendix IV	Antimony	mg/L	9	6	67%	2022-11-28 to 2023-10-24		Nonparametric	0.00023	0.00012	0.000050	0.00050	0.00019	0.85	0.00010	0.62	-1.7
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00092	0.00092	0.00047	0.0012	0.00027	0.29	0.00041	-0.46	-0.87
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Nonparametric	Nonparametric	0.16	0.12	0.10	0.46	0.11	0.72	0.015	2.9	8.6

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
2_14_5_104	MW-04	Appendix IV	Beryllium	mg/L	9	9	100%	2022-11-28 to 2023-10-24		Nonparametric	0.000052	0.000052	0.000052	0.000052	0	0	0	NA	NA
2_14_5_106	MW-04	Appendix IV	Cadmium	mg/L	9	9	100%	2022-11-28 to 2023-10-24		Nonparametric	0.00011	0.000075	0.000032	0.00038	0.00011	0.98	0.000064	2.0	4.4
2_14_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0040	0.0044	0.0026	0.0060	0.0012	0.31	0.0019	0.24	-1.3
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00056	0.00062	0.00031	0.00093	0.00021	0.37	0.00025	0.44	-0.56
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.3	1.3	0.76	1.9	0.29	0.22	0.15	0.28	3.1
2_14_5_115	MW-04	Appendix IV	Lead	mg/L	9	9	100%	2022-11-28 to 2023-10-24		Nonparametric	0.00045	0.00022	0.00010	0.0011	0.00040	0.88	0.00018	1.1	-0.28
2_14_5_116	MW-04	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.064	0.066	0.047	0.074	0.0095	0.15	0.012	-0.64	-0.38
2_14_5_117	MW-04	Appendix IV	Mercury	mg/L	9	9	100%	2022-11-28 to 2023-10-24		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	9	2	22%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0011	0.00086	0.00041	0.0031	0.00083	0.74	0.00062	1.9	4.2
2_14_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	9	1	11%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.2	1.2	0.66	1.6	0.31	0.26	0.30	-0.73	-0.51
2_14_5_122	MW-04	Appendix IV	Selenium	mg/L	9	5	56%	2022-11-28 to 2023-10-24		Nonparametric	0.00022	0.00022	0.00010	0.00041	0.000082	0.37	0.000015	1.3	4.2
2_14_5_125	MW-04	Appendix IV	Thallium	mg/L	9	9	100%	2022-11-28 to 2023-10-24		Nonparametric	0.00021	0.000075	0.000075	0.00038	0.00016	0.76	0	0.27	-2.6
2_16_5_101	MW-07	Appendix IV	Antimony	mg/L	9	8	89%	2022-11-30 to 2023-10-24		Nonparametric	0.000075	0.000071	0.000050	0.00010	0.000025	0.34	0.000031	0.068	-2.4
2_16_5_102	MW-07	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00021	0.00021	0.00013	0.00029	0.000043	0.21	0.000030	-0.11	1.7
2_16_5_103	MW-07	Appendix IV	Barium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.33	0.34	0.25	0.38	0.038	0.11	0.015	-1.4	2.4
2_16_5_104	MW-07	Appendix IV	Beryllium	mg/L	9	6	67%	2022-11-30 to 2023-10-24		Nonparametric	0.000055	0.000052	0.000052	0.000066	0.0000053	0.096	0	1.6	1.4
2_16_5_106	MW-07	Appendix IV	Cadmium	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.000051	0.000032	0.000032	0.000075	0.000023	0.44	0	0.27	-2.6
2_16_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00034	0.00033	0.00028	0.00042	0.000047	0.14	0.000059	0.40	-0.79
2_16_5_110	MW-07	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00094	0.00098	0.00071	0.0011	0.00011	0.12	0.000044	-0.98	2
2_16_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	9	1	11%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.10	0.11	0.055	0.14	0.033	0.32	0.044	-0.18	-1.7
2_16_5_115	MW-07	Appendix IV	Lead	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.00017	0.00022	0.00010	0.00022	0.000063	0.38	0	-0.27	-2.6
2_16_5_116	MW-07	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0065	0.0062	0.0042	0.010	0.0018	0.27	0.0012	0.93	0.72
2_16_5_117	MW-07	Appendix IV	Mercury	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
2_16_5_118	MW-07	Appendix IV	Molybdenum	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.00046	0.00062	0.00025	0.00062	0.00020	0.43	0	-0.27	-2.6
2_16_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.1	1.0	0.67	2.4	0.52	0.48	0.34	2.0	5.0
2_16_5_122	MW-07	Appendix IV	Selenium	mg/L	9	8	89%	2022-11-30 to 2023-10-24		Nonparametric	0.00017	0.00022	0.00010	0.00022	0.000063	0.38	0	-0.27	-2.6
2_16_5_125	MW-07	Appendix IV	Thallium	mg/L	9	9	100%	2022-11-30 to 2023-10-24		Nonparametric	0.000075	0.000075	0.000075	0.000075	0	0	0	NA	NA
2_19_5_101	MW-10	Appendix IV	Antimony	mg/L	9	5	56%	2022-11-29 to 2023-10-23		Nonparametric	0.00018	0.00011	0.000050	0.00050	0.00015	0.84	0.000089	1.4	1.2
2_19_5_102	MW-10	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00057	0.00049	0.00020	0.0011	0.00030	0.53	0.00022	0.80	-0.41
2_19_5_103	MW-10	Appendix IV	Barium	mg/L	9	0	0%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.30	0.28	0.14	0.57	0.14	0.47	0.074	1.1	0.65
2_19_5_104	MW-10	Appendix IV	Beryllium	mg/L	9	3	33%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.000089	0.000054	0.000052	0.00022	0.000059	0.67	0.0000030	1.8	2.6
2_19_5_106	MW-10	Appendix IV	Cadmium	mg/L	9	9	100%	2022-11-29 to 2023-10-23		Nonparametric	0.00011	0.000075	0.000032	0.00038	0.00011	0.98	0.000064	2.0	4.4
2_19_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0044	0.0042	0.0018	0.0085	0.0022	0.52	0.0024	0.75	-0.028
2_19_5_110	MW-10	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00064	0.00041	0.00030	0.0018	0.00047	0.74	0.00016	2.2	5.2
2_19_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	5.7	6.0	2.7	7.7	1.7	0.29	1.9	-0.69	-0.44
2_19_5_115	MW-10	Appendix IV	Lead	mg/L	9	7	78%	2022-11-29 to 2023-10-23		Nonparametric	0.00052	0.00023	0.00010	0.0011	0.00045	0.88	0.00019	0.65	-1.8
2_19_5_116	MW-10	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.99	0.94	0.54	1.6	0.29	0.30	0.16	0.82	1.9
2_19_5_117	MW-10	Appendix IV	Mercury	mg/L	9	9	100%	2022-11-29 to 2023-10-23		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
2_19_5_118	MW-10	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0039	0.0035	0.0019	0.0072	0.0017	0.42	0.0012	1.0	0.58
2_19_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	9	8	89%	2022-11-29 to 2023-10-23		Nonparametric	0.85	0.78	0.60	1.4	0.24	0.28	0.18	1.4	1.8
2_19_5_122	MW-10	Appendix IV	Selenium	mg/L	9	1	11%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00034	0.00036	0.00022	0.00046	0.000073	0.21	0.000074	-0.15	-0.14
2_19_5_125	MW-10	Appendix IV	Thallium	mg/L	9	9	100%	2022-11-29 to 2023-10-23		Nonparametric	0.00021	0.000076	0.000075	0.00038	0.00016	0.76	0.0000015	0.27	-2.6

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
2_20_5_101	MW-11	Appendix IV	Antimony	mg/L	9	6	67%	2022-11-29 to 2023-10-24		Nonparametric	0.00022	0.00010	0.000050	0.00069	0.00023	1.1	0.000074	1.5	1.1
2_20_5_102	MW-11	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0017	0.0016	0.00061	0.0041	0.0010	0.60	0.00074	1.7	3.6
2_20_5_103	MW-11	Appendix IV	Barium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.65	0.59	0.36	1.2	0.26	0.40	0.22	1.3	1.7
2_20_5_104	MW-11	Appendix IV	Beryllium	mg/L	9	8	89%	2022-11-29 to 2023-10-24		Nonparametric	0.000056	0.000052	0.000052	0.000091	0.000013	0.23	0	3.0	9.0
2_20_5_106	MW-11	Appendix IV	Cadmium	mg/L	9	8	89%	2022-11-29 to 2023-10-24		Nonparametric	0.00018	0.000075	0.000032	0.00073	0.00023	1.3	0.000064	2.1	4
2_20_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Lognormal	Lognormal	0.0018	0.00087	0.00045	0.0086	0.0026	1.5	0.00049	2.9	8.4
2_20_5_110	MW-11	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00058	0.00061	0.00023	0.0012	0.00028	0.49	0.00031	1.3	2.4
2_20_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.61	0.37	0.21	1.4	0.45	0.74	0.24	0.91	-0.61
2_20_5_115	MW-11	Appendix IV	Lead	mg/L	9	3	33%	2022-11-29 to 2023-10-24	Gamma; Lognormal	Gamma	0.0087	0.0011	0.00017	0.068	0.022	2.6	0.0013	3	8.9
2_20_5_116	MW-11	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Gamma	0.076	0.052	0.0059	0.22	0.073	0.96	0.065	1.0	0.41
2_20_5_117	MW-11	Appendix IV	Mercury	mg/L	9	9	100%	2022-11-29 to 2023-10-24		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
2_20_5_118	MW-11	Appendix IV	Molybdenum	mg/L	9	2	22%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0012	0.0013	0.00043	0.0029	0.00078	0.63	0.00095	1.1	1.5
2_20_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.2	1.1	0.62	1.8	0.38	0.33	0.37	0.50	-0.62
2_20_5_122	MW-11	Appendix IV	Selenium	mg/L	9	3	33%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00021	0.00022	0.00014	0.00031	0.000047	0.22	0.000015	0.72	2.3
2_20_5_125	MW-11	Appendix IV	Thallium	mg/L	9	9	100%	2022-11-29 to 2023-10-24		Nonparametric	0.00018	0.000075	0.000075	0.00038	0.00015	0.86	0	0.86	-1.7
2_21_5_101	MW-12	Appendix IV	Antimony	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00071	0.00071	0.00040	0.0011	0.00024	0.34	0.00031	0.16	-1.1
2_21_5_102	MW-12	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0024	0.0024	0.0014	0.0034	0.00069	0.29	0.00074	0.033	-1.4
2_21_5_103	MW-12	Appendix IV	Barium	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.034	0.030	0.017	0.060	0.015	0.44	0.012	0.83	-0.58
2_21_5_104	MW-12	Appendix IV	Beryllium	mg/L	9	9	100%	2022-11-28 to 2023-10-23		Nonparametric	0.000052	0.000052	0.000052	0.000052	0	0	0	NA	NA
2_21_5_106	MW-12	Appendix IV	Cadmium	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0013	0.0012	0.00062	0.0024	0.00064	0.48	0.00062	0.66	-0.73
2_21_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	9	4	44%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00037	0.00034	0.00020	0.00067	0.00018	0.49	0.00021	0.50	-1.2
2_21_5_110	MW-12	Appendix IV	Cobalt	mg/L	9	3	33%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00026	0.00019	0.00010	0.00053	0.00017	0.68	0.00013	0.74	-1.2
2_21_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Lognormal	Lognormal	0.33	0.26	0.22	0.54	0.12	0.38	0.044	0.96	-0.89
2_21_5_115	MW-12	Appendix IV	Lead	mg/L	9	5	56%	2022-11-28 to 2023-10-23		Nonparametric	0.00020	0.00022	0.00014	0.00022	0.000032	0.16	0	-1.6	0.77
2_21_5_116	MW-12	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0039	0.0037	0.0022	0.0064	0.0013	0.32	0.00089	0.70	1.1
2_21_5_117	MW-12	Appendix IV	Mercury	mg/L	9	8	89%	2022-11-28 to 2023-10-23		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
2_21_5_118	MW-12	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0075	0.0072	0.0056	0.0096	0.0014	0.19	0.0022	0.035	-1.3
2_21_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	9	7	78%	2022-11-28 to 2023-10-23		Nonparametric	0.65	0.59	0.46	1.1	0.19	0.29	0.11	1.7	3.0
2_21_5_122	MW-12	Appendix IV	Selenium	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Gamma	0.0011	0.00093	0.00013	0.0023	0.00084	0.76	0.0011	0.25	-1.6
2_21_5_125	MW-12	Appendix IV	Thallium	mg/L	9	9	100%	2022-11-28 to 2023-10-23		Nonparametric	0.000075	0.000075	0.000075	0.000075	0	0	0	NA	NA
2_27_5_101	MW-32	Appendix IV	Antimony	mg/L	9	6	67%	2022-11-30 to 2023-10-23		Nonparametric	0.000087	0.00010	0.000050	0.00014	0.000029	0.34	0.000041	0.35	-0.16
2_27_5_102	MW-32	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00054	0.00055	0.00044	0.00062	0.000069	0.13	0.000089	-0.29	-1.6
2_27_5_103	MW-32	Appendix IV	Barium	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.50	0.41	0.29	0.85	0.18	0.36	0.18	0.92	0.43
2_27_5_104	MW-32	Appendix IV	Beryllium	mg/L	9	9	100%	2022-11-30 to 2023-10-23		Nonparametric	0.000052	0.000052	0.000052	0.000052	0	0	0	NA	NA
2_27_5_106	MW-32	Appendix IV	Cadmium	mg/L	9	9	100%	2022-11-30 to 2023-10-23		Nonparametric	0.000051	0.000032	0.000032	0.000075	0.000023	0.44	0	0.27	-2.6
2_27_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00044	0.00039	0.00031	0.00065	0.00013	0.29	0.00012	0.57	-1.2
2_27_5_110	MW-32	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Lognormal	Lognormal	0.00042	0.00038	0.00031	0.00068	0.00012	0.29	0.000044	1.6	1.5
2_27_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	1.5	1.5	1.4	1.8	0.13	0.086	0.15	1.2	1.7
2_27_5_115	MW-32	Appendix IV	Lead	mg/L	9	7	78%	2022-11-30 to 2023-10-23		Nonparametric	0.00017	0.00022	0.00010	0.00022	0.000057	0.33	0	-0.42	-2.2
2_27_5_116	MW-32	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.13	0.13	0.094	0.19	0.029	0.23	0.030	0.85	1.0
2_27_5_117	MW-32	Appendix IV	Mercury	mg/L	9	9	100%	2022-11-30 to 2023-10-23		Nonparametric	0.00016	0.00016	0.00016	0.00016	0	0	0	NA	NA
2_27_5_118	MW-32	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0042	0.0045	0.0032	0.0051	0.00063	0.15	0.00030	-0.59	-0.73

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
2_27_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	2022-11-30 to 2023-10-23		Nonparametric	0.71	0.61	0.50	0.98	0.16	0.23	0.17	0.60	-0.94
2_27_5_122	MW-32	Appendix IV	Selenium	mg/L	9	9	100%	2022-11-30 to 2023-10-23		Nonparametric	0.00017	0.00022	0.00010	0.00022	0.000063	0.38	0	-0.27	-2.6
2_27_5_125	MW-32	Appendix IV	Thallium	mg/L	9	9	100%	2022-11-30 to 2023-10-23		Nonparametric	0.000075	0.000075	0.000075	0.000075	0	0	0	NA	NA

[a] Non-detects are excluded from goodness-of-fit tests.

Table 2: Summary Statistics, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	9	2	22%	2022-11-29 to 2023-10-24	Gamma; Lognormal	Gamma	0.00047	0.00033	0.00022	0.0012	0.00036	0.78	0.00015	1.7	2.6
1_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0014	0.0013	0.00073	0.0020	0.00045	0.32	0.00059	-0.24	-0.80
1_11_5_103	MW-01R	Appendix IV	Barium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal	Gamma	0.31	0.29	0.21	0.56	0.11	0.34	0.059	1.8	4
1_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00025	0.00021	0.00012	0.00036	0.000081	0.33	0.000074	0.17	-1.0
1_11_5_106	MW-01R	Appendix IV	Cadmium	mg/L	9	6	67%	2022-11-29 to 2023-10-24		Nonparametric	0.00017	0.00011	0.000062	0.00034	0.00015	0.87	0.000071	1.5	NA
1_11_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0023	0.0019	0.0013	0.0043	0.0011	0.47	0.00074	1.2	0.37
1_11_5_110	MW-01R	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal	Gamma	0.0017	0.0012	0.00081	0.0045	0.0011	0.67	0.00058	2.2	5.2
1_11_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Nonparametric	Nonparametric	12	14	8.1	15	2.8	0.23	1.5	-0.34	-2.1
1_11_5_115	MW-01R	Appendix IV	Lead	mg/L	9	2	22%	2022-11-29 to 2023-10-24	Gamma; Lognormal	Gamma	0.0015	0.00082	0.00044	0.0053	0.0017	1.1	0.00027	2.5	6.4
1_11_5_116	MW-01R	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	2.4	2.3	1.5	3.4	0.76	0.31	1.0	0.037	-1.9
1_11_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	9	1	11%	2022-11-29 to 2023-10-24	Gamma; Lognormal	Gamma	0.00089	0.00076	0.00033	0.0020	0.00050	0.56	0.00015	1.8	4.2
1_11_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	2022-11-29 to 2023-10-24		Nonparametric	1.1	1.2	0.60	1.3	0.32	0.30	0.16	-1.5	1.8
1_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00064	0.00060	0.00030	0.00097	0.00018	0.28	0.000089	-0.026	1.8
1_15_5_101	MW-06	Appendix IV	Antimony	mg/L	9	7	78%	2022-11-29 to 2023-10-24		Nonparametric	0.00022	0.00022	0.000075	0.00036	0.00020	0.93	0.00021	NA	NA
1_15_5_102	MW-06	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00068	0.00065	0.00047	0.0010	0.00016	0.24	0.00016	0.85	0.38
1_15_5_103	MW-06	Appendix IV	Barium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Nonparametric	Nonparametric	1.4	1.4	0.99	1.6	0.18	0.13	0.15	-1.7	3.8
1_15_5_104	MW-06	Appendix IV	Beryllium	mg/L	9	8	89%	2022-11-29 to 2023-10-24		Nonparametric	0.000052	0.000052	0.000052	0.000052	NA	NA	0	NA	NA
1_15_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0019	0.0020	0.0012	0.0030	0.00056	0.30	0.00074	0.74	0.41
1_15_5_110	MW-06	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00059	0.00057	0.00046	0.00080	0.00013	0.21	0.00015	0.42	-1.4
1_15_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.2	1.1	1.0	1.4	0.16	0.13	0.15	0.47	-1.3
1_15_5_115	MW-06	Appendix IV	Lead	mg/L	9	6	67%	2022-11-29 to 2023-10-24		Nonparametric	0.00029	0.00027	0.00025	0.00035	0.000053	0.18	0.000030	1.5	NA
1_15_5_116	MW-06	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.20	0.20	0.15	0.23	0.031	0.16	0.030	-0.69	-0.85
1_15_5_118	MW-06	Appendix IV	Molybdenum	mg/L	9	6	67%	2022-11-29 to 2023-10-24		Nonparametric	0.00026	0.00026	0.00025	0.00027	0.000010	0.038	0.000015	0.000000000000025	NA
1_15_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	2022-11-29 to 2023-10-24	Lognormal	Lognormal	0.96	0.86	0.62	1.9	0.44	0.46	0.11	2.2	5.3
1_15_5_122	MW-06	Appendix IV	Selenium	mg/L	9	5	56%	2022-11-29 to 2023-10-24		Nonparametric	0.00020	0.00020	0.00019	0.00022	0.000013	0.062	0.0000074	1.1	2.2
1_17_5_101	MW-08	Appendix IV	Antimony	mg/L	9	3	33%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00015	0.00014	0.000054	0.00028	0.000082	0.54	0.000078	0.67	-0.12
1_17_5_102	MW-08	Appendix IV	Arsenic	mg/L	9	0	0%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.032	0.038	0.0069	0.050	0.016	0.50	0.016	-0.55	-1.3
1_17_5_103	MW-08	Appendix IV	Barium	mg/L	9	0	0%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.3	1.2	0.98	1.5	0.16	0.13	0.15	-0.11	-0.49
1_17_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00095	0.00093	0.00061	0.0015	0.00026	0.28	0.00025	0.94	1.5
1_17_5_110	MW-08	Appendix IV	Cobalt	mg/L	9	0	0%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00053	0.00058	0.00034	0.00070	0.00013	0.24	0.00010	-0.50	-0.88
1_17_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.88	1.0	0.40	1.3	0.31	0.35	0.15	-0.47	-1.1
1_17_5_115	MW-08	Appendix IV	Lead	mg/L	9	7	78%	2022-12-01 to 2023-10-24		Nonparametric	0.00054	0.00054	0.00022	0.00086	0.00045	0.84	0.00047	NA	NA
1_17_5_116	MW-08	Appendix IV	Lithium	mg/L	9	0	0%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.11	0.11	0.063	0.14	0.027	0.24	0.030	-0.83	-0.091
1_17_5_118	MW-08	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0014	0.0015	0.00036	0.0028	0.00087	0.62	0.0012	0.36	-1.0
1_17_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	2022-12-01 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.3	1.2	0.74	2.1	0.43	0.32	0.37	0.70	0.86
1_17_5_122	MW-08	Appendix IV	Selenium	mg/L	9	5	56%	2022-12-01 to 2023-10-24		Nonparametric	0.00015	0.00014	0.00014	0.00016	0.0000096	0.065	0.0000074	0.85	-1.3
1_18_5_101	MW-09	Appendix IV	Antimony	mg/L	9	5	56%	2022-11-28 to 2023-10-24		Nonparametric	0.00019	0.00016	0.000073	0.00037	0.00014	0.72	0.00012	0.79	-1.5
1_18_5_102	MW-09	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Nonparametric	Nonparametric	0.0022	0.0023	0.0013	0.0027	0.00050	0.23	0.00015	-1.3	0.37
1_18_5_103	MW-09	Appendix IV	Barium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Lognormal	Lognormal	0.53	0.28	0.17	2.4	0.71	1.4	0.15	2.8	8.1
1_18_5_104	MW-09	Appendix IV	Beryllium	mg/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.000058	0.000058	0.000058	0.000058	NA	NA	0	NA	NA
1_18_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0025	0.0027	0.0018	0.0032	0.00058	0.23	0.00074	-0.18	-2.0
1_18_5_110	MW-09	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00055	0.00053	0.00024	0.00099	0.00023	0.42	0.00024	0.64	0.15
1_18_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	2.6	2.6	2.1	2.9	0.26	0.100	0.30	-0.66	0.26

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_18_5_116	MW-09	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.31	0.31	0.26	0.34	0.028	0.091	0.030	-0.42	-0.95
1_18_5_117	MW-09	Appendix IV	Mercury	mg/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.0024	0.0024	0.0024	0.0024	NA	NA	0	NA	NA
1_18_5_118	MW-09	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.022	0.021	0.012	0.033	0.0064	0.29	0.0030	0.24	-0.21
1_18_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.79	0.79	0.79	0.79	NA	NA	0	NA	NA
1_18_5_122	MW-09	Appendix IV	Selenium	mg/L	9	2	22%	2022-11-28 to 2023-10-24	Nonparametric	Nonparametric	0.00024	0.00026	0.00012	0.00028	0.000054	0.23	0.000030	-2.1	4.9
1_22_5_101	MW-18	Appendix IV	Antimony	mg/L	9	2	22%	2022-11-30 to 2023-10-24	Nonparametric	Nonparametric	0.00018	0.00013	0.00012	0.00032	0.000089	0.50	0.000015	1.2	-0.75
1_22_5_102	MW-18	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.025	0.023	0.015	0.041	0.0079	0.31	0.0089	0.86	0.81
1_22_5_103	MW-18	Appendix IV	Barium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.019	0.021	0.012	0.025	0.0050	0.26	0.0044	-0.45	-1.6
1_22_5_106	MW-18	Appendix IV	Cadmium	mg/L	9	2	22%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00024	0.00022	0.000089	0.00044	0.00011	0.47	0.00012	0.57	0.49
1_22_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	9	8	89%	2022-11-30 to 2023-10-24		Nonparametric	0.00025	0.00025	0.00025	0.00025	NA	NA	0	NA	NA
1_22_5_110	MW-18	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0034	0.0032	0.0017	0.0060	0.0016	0.48	0.0019	0.62	-1.3
1_22_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	4	3.8	3.3	5.1	0.58	0.15	0.44	0.90	0.17
1_22_5_115	MW-18	Appendix IV	Lead	mg/L	9	6	67%	2022-11-30 to 2023-10-24		Nonparametric	0.00021	0.00016	0.00014	0.00032	0.000099	0.48	0.000030	1.7	NA
1_22_5_116	MW-18	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.036	0.039	0.026	0.045	0.0079	0.22	0.0089	-0.16	-2.2
1_22_5_118	MW-18	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.015	0.013	0.0090	0.021	0.0043	0.29	0.0030	0.47	-1.3
1_22_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	9	6	67%	2022-11-30 to 2023-10-24		Nonparametric	0.87	0.73	0.62	1.3	0.35	0.40	0.17	1.5	NA
1_22_5_122	MW-18	Appendix IV	Selenium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00045	0.00034	0.00016	0.00086	0.00029	0.66	0.00027	0.57	-1.7
1_23_5_101	MW-19	Appendix IV	Antimony	mg/L	9	8	89%	2022-11-30 to 2023-10-24		Nonparametric	0.00072	0.00072	0.00072	0.00072	NA	NA	0	NA	NA
1_23_5_102	MW-19	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0054	0.0055	0.0031	0.0073	0.0016	0.29	0.0018	-0.48	-1.2
1_23_5_103	MW-19	Appendix IV	Barium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.041	0.040	0.030	0.050	0.0063	0.15	0.0059	-0.34	-0.37
1_23_5_104	MW-19	Appendix IV	Beryllium	mg/L	9	3	33%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.000067	0.000067	0.000057	0.000077	0.0000077	0.11	0.0000081	0.037	-1.7
1_23_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	9	4	44%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00035	0.00031	0.00027	0.00053	0.00011	0.30	0.000059	1.6	2.5
1_23_5_110	MW-19	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00056	0.00050	0.00013	0.00096	0.00024	0.43	0.00028	-0.12	0.26
1_23_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	2	1.9	1.7	2.3	0.20	0.10	0.15	0.31	-1.1
1_23_5_116	MW-19	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.097	0.098	0.085	0.11	0.0090	0.093	0.012	0.47	-0.97
1_23_5_118	MW-19	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.010	0.011	0.0051	0.013	0.0024	0.24	0.0022	-1.2	2.1
1_23_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.96	0.98	0.63	1.2	0.19	0.20	0.13	-1.1	1.6
1_24_5_101	MW-20	Appendix IV	Antimony	mg/L	9	2	22%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.000098	0.000096	0.000054	0.00016	0.000041	0.42	0.000050	0.48	-1.3
1_24_5_102	MW-20	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0014	0.0015	0.0012	0.0017	0.00021	0.15	0.00030	0.045	-1.9
1_24_5_103	MW-20	Appendix IV	Barium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.51	0.47	0.31	0.94	0.18	0.36	0.089	1.8	4.0
1_24_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	9	5	56%	2022-11-30 to 2023-10-24		Nonparametric	0.00023	0.00023	0.00019	0.00029	0.000044	0.19	0.000044	0.48	-1.7
1_24_5_110	MW-20	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0013	0.0013	0.00095	0.0016	0.00021	0.16	0.00015	-0.42	0.052
1_24_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Nonparametric	Nonparametric	0.27	0.23	0.21	0.55	0.11	0.40	0.030	2.8	8.2
1_24_5_115	MW-20	Appendix IV	Lead	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0021	0.0023	0.0016	0.0028	0.00049	0.23	0.00074	0.24	-1.6
1_24_5_116	MW-20	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.066	0.065	0.049	0.083	0.011	0.17	0.013	-0.014	-0.94
1_24_5_118	MW-20	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0043	0.0041	0.0036	0.0051	0.00053	0.12	0.00074	0.13	-1.7
1_24_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	2022-11-30 to 2023-10-24		Nonparametric	0.99	0.95	0.59	1.5	0.38	0.38	0.36	0.52	-0.41
1_24_5_122	MW-20	Appendix IV	Selenium	mg/L	9	5	56%	2022-11-30 to 2023-10-24		Nonparametric	0.00011	0.00011	0.00010	0.00013	0.000013	0.11	0.0000074	1.1	2.2
1_25_5_101	MW-30	Appendix IV	Antimony	mg/L	9	8	89%	2022-11-30 to 2023-10-23		Nonparametric	0.00040	0.00040	0.00040	0.00040	NA	NA	0	NA	NA
1_25_5_102	MW-30	Appendix IV	Arsenic	mg/L	9	2	22%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00043	0.00043	0.00012	0.00070	0.00020	0.46	0.00024	-0.16	-0.39
1_25_5_103	MW-30	Appendix IV	Barium	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.068	0.058	0.045	0.10	0.023	0.33	0.016	0.63	-1.5
1_25_5_104	MW-30	Appendix IV	Beryllium	mg/L	9	8	89%	2022-11-30 to 2023-10-23		Nonparametric	0.000053	0.000053	0.000053	0.000053	NA	NA	0	NA	NA
1_25_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0099	0.010	0.0052	0.014	0.0031	0.32	0.0030	-0.29	-1.3

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_25_5_110	MW-30	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal	Gamma	0.0015	0.0011	0.00053	0.0044	0.0013	0.84	0.00030	1.8	3
1_25_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	1.1	1.1	0.91	1.4	0.14	0.13	0.15	0.77	1.1
1_25_5_116	MW-30	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal	Gamma	0.14	0.12	0.11	0.27	0.050	0.36	0.015	2.6	7.3
1_25_5_118	MW-30	Appendix IV	Molybdenum	mg/L	9	3	33%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0014	0.00096	0.00032	0.0036	0.0012	0.88	0.00073	1.7	3
1_25_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	2022-11-30 to 2023-10-23		Nonparametric	0.70	0.73	0.44	0.91	0.23	0.32	0.24	-0.30	-4.0
1_25_5_122	MW-30	Appendix IV	Selenium	mg/L	9	6	67%	2022-11-30 to 2023-10-23		Nonparametric	0.00012	0.00012	0.00011	0.00013	0.000010	0.083	0.000015	-0.0000000000000059	NA
1_26_5_101	MW-31	Appendix IV	Antimony	mg/L	9	4	44%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00010	0.00012	0.000069	0.00013	0.000027	0.26	0.000015	-0.59	-2.6
1_26_5_102	MW-31	Appendix IV	Arsenic	mg/L	9	0	0%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0014	0.0013	0.0010	0.0018	0.00027	0.20	0.00030	0.41	-0.91
1_26_5_103	MW-31	Appendix IV	Barium	mg/L	9	0	0%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.17	0.16	0.12	0.23	0.037	0.22	0.044	0.66	-0.63
1_26_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0022	0.0023	0.0018	0.0029	0.00035	0.16	0.00030	0.61	0.13
1_26_5_110	MW-31	Appendix IV	Cobalt	mg/L	9	0	0%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00017	0.00018	0.00013	0.00021	0.000026	0.15	0.000030	-0.044	-0.73
1_26_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	4.8	4.7	4.6	5.2	0.24	0.051	0.15	0.49	-1.8
1_26_5_115	MW-31	Appendix IV	Lead	mg/L	9	8	89%	2022-12-01 to 2023-10-23		Nonparametric	0.00031	0.00031	0.00031	0.00031	NA	NA	0	NA	NA
1_26_5_116	MW-31	Appendix IV	Lithium	mg/L	9	0	0%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.052	0.052	0.046	0.056	0.0032	0.063	0.0030	-0.53	-0.65
1_26_5_118	MW-31	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-12-01 to 2023-10-23	Nonparametric	Nonparametric	0.0014	0.0013	0.0011	0.0021	0.00035	0.26	0.00030	1.5	1.5
1_26_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	2022-12-01 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.84	0.73	0.58	1.2	0.28	0.34	0.22	0.77	-1.6
1_26_5_122	MW-31	Appendix IV	Selenium	mg/L	9	5	56%	2022-12-01 to 2023-10-23		Nonparametric	0.00013	0.00013	0.00011	0.00015	0.000018	0.14	0.000022	0.0000000000000022	-3.3
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	9	2	22%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00026	0.00019	0.00015	0.00063	0.00017	0.64	0.000059	2.2	5.2
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal	Gamma	0.0087	0.0083	0.0074	0.012	0.0014	0.16	0.00074	1.9	4.1
2_12_5_103	MW-02	Appendix IV	Barium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.48	0.48	0.38	0.55	0.054	0.11	0.044	-0.56	-0.32
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00033	0.00032	0.00015	0.00052	0.00011	0.35	0.00015	0.13	-0.34
2_12_5_106	MW-02	Appendix IV	Cadmium	mg/L	9	6	67%	2022-11-28 to 2023-10-24		Nonparametric	0.00019	0.000046	0.000041	0.00049	0.00026	1.3	0.0000074	1.7	NA
2_12_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.042	0.046	0.019	0.068	0.017	0.41	0.021	-0.050	-1.5
2_12_5_110	MW-02	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0060	0.0063	0.0031	0.0089	0.0020	0.34	0.0025	-0.19	-1.3
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Nonparametric	Nonparametric	8.9	9.4	4.5	10	1.7	0.19	0.44	-2.7	7.5
2_12_5_115	MW-02	Appendix IV	Lead	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0025	0.0024	0.0010	0.0041	0.0010	0.41	0.00089	0.35	-0.70
2_12_5_116	MW-02	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.4	1.4	0.87	1.7	0.26	0.19	0.30	-0.55	0.0021
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Lognormal	Lognormal	0.0072	0.0062	0.0051	0.011	0.0024	0.33	0.0015	0.93	-0.87
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.9	1.7	0.90	3.4	0.85	0.44	0.65	0.87	0.78
2_12_5_122	MW-02	Appendix IV	Selenium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0011	0.0012	0.00050	0.0018	0.00035	0.31	0.00030	0.13	1.7
2_12_5_125	MW-02	Appendix IV	Thallium	mg/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.00062	0.00062	0.00062	0.00062	NA	NA	0	NA	NA
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	9	5	56%	2022-11-28 to 2023-10-24		Nonparametric	0.00018	0.00010	0.000087	0.00045	0.00018	0.96	0.000017	2	3.9
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00089	0.00091	0.00049	0.0012	0.00026	0.30	0.00028	-0.57	-1.1
2_13_5_103	MW-03	Appendix IV	Barium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.37	0.38	0.13	0.50	0.11	0.29	0.074	-1.4	3
2_13_5_104	MW-03	Appendix IV	Beryllium	mg/L	9	7	78%	2022-11-28 to 2023-10-24		Nonparametric	0.00010	0.00010	0.000053	0.00015	0.000069	0.68	0.000072	NA	NA
2_13_5_106	MW-03	Appendix IV	Cadmium	mg/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.00011	0.00011	0.00011	0.00011	NA	NA	0	NA	NA
2_13_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0049	0.0049	0.0030	0.0073	0.0014	0.29	0.0018	0.20	-0.80
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00085	0.00088	0.00044	0.0013	0.00033	0.39	0.00047	-0.12	-1.5
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Nonparametric	Nonparametric	0.70	0.60	0.52	1.6	0.34	0.49	0.074	2.9	8.6
2_13_5_115	MW-03	Appendix IV	Lead	mg/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.00022	0.00022	0.00022	0.00022	NA	NA	0	NA	NA
2_13_5_116	MW-03	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.043	0.041	0.035	0.065	0.0095	0.22	0.0059	1.6	3.0
2_13_5_117	MW-03	Appendix IV	Mercury	mg/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.00024	0.00024	0.00024	0.00024	NA	NA	0	NA	NA
2_13_5_118	MW-03	Appendix IV	Molybdenum	mg/L	9	7	78%	2022-11-28 to 2023-10-24		Nonparametric	0.00078	0.00078	0.00072	0.00085	0.000092	0.12	0.000096	NA	NA

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
2_13_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	9	1	11%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.2	1.1	0.75	1.9	0.44	0.36	0.42	0.63	-1.1
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	9	3	33%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00038	0.00041	0.00017	0.00053	0.00012	0.32	0.000059	-1.0	2.1
2_13_5_125	MW-03	Appendix IV	Thallium	mg/L	9	8	89%	2022-11-28 to 2023-10-24		Nonparametric	0.00018	0.00018	0.00018	0.00018	NA	NA	0	NA	NA
2_14_5_101	MW-04	Appendix IV	Antimony	mg/L	9	6	67%	2022-11-28 to 2023-10-24		Nonparametric	0.00020	0.00012	0.000071	0.00041	0.00018	0.91	0.000073	1.6	NA
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00092	0.00092	0.00047	0.0012	0.00027	0.29	0.00041	-0.46	-0.87
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Nonparametric	Nonparametric	0.16	0.12	0.10	0.46	0.11	0.72	0.015	2.9	8.6
2_14_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0040	0.0044	0.0026	0.0060	0.0012	0.31	0.0019	0.24	-1.3
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00056	0.00062	0.00031	0.00093	0.00021	0.37	0.00025	0.44	-0.56
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.3	1.3	0.76	1.9	0.29	0.22	0.15	0.28	3.1
2_14_5_116	MW-04	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.064	0.066	0.047	0.074	0.0095	0.15	0.012	-0.64	-0.38
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	9	2	22%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00092	0.00086	0.00041	0.0015	0.00043	0.46	0.00062	0.055	-1.7
2_14_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	9	1	11%	2022-11-28 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.2	1.3	0.66	1.6	0.28	0.23	0.26	-1.2	2
2_14_5_122	MW-04	Appendix IV	Selenium	mg/L	9	5	56%	2022-11-28 to 2023-10-24		Nonparametric	0.00026	0.00022	0.00017	0.00041	0.00011	0.41	0.000052	1.6	2.7
2_16_5_101	MW-07	Appendix IV	Antimony	mg/L	9	8	89%	2022-11-30 to 2023-10-24		Nonparametric	0.000071	0.000071	0.000071	0.000071	NA	NA	0	NA	NA
2_16_5_102	MW-07	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00021	0.00021	0.00013	0.00029	0.000043	0.21	0.000030	-0.11	1.7
2_16_5_103	MW-07	Appendix IV	Barium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.33	0.34	0.25	0.38	0.038	0.11	0.015	-1.4	2.4
2_16_5_104	MW-07	Appendix IV	Beryllium	mg/L	9	6	67%	2022-11-30 to 2023-10-24		Nonparametric	0.000061	0.000062	0.000055	0.000066	0.0000056	0.091	0.0000059	-0.78	NA
2_16_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00034	0.00033	0.00028	0.00042	0.000047	0.14	0.000059	0.40	-0.79
2_16_5_110	MW-07	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00094	0.00098	0.00071	0.0011	0.00011	0.12	0.000044	-0.98	2
2_16_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	9	1	11%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.11	0.12	0.070	0.14	0.029	0.27	0.037	-0.27	-1.9
2_16_5_116	MW-07	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0065	0.0062	0.0042	0.010	0.0018	0.27	0.0012	0.93	0.72
2_16_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	2022-11-30 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.2	1.1	0.67	2.4	0.57	0.48	0.21	1.8	3.9
2_16_5_122	MW-07	Appendix IV	Selenium	mg/L	9	8	89%	2022-11-30 to 2023-10-24		Nonparametric	0.00010	0.00010	0.00010	0.00010	NA	NA	0	NA	NA
2_19_5_101	MW-10	Appendix IV	Antimony	mg/L	9	5	56%	2022-11-29 to 2023-10-23		Nonparametric	0.00017	0.00012	0.00011	0.00034	0.00011	0.65	0.000015	2	3.9
2_19_5_102	MW-10	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00057	0.00049	0.00020	0.0011	0.00030	0.53	0.00022	0.80	-0.41
2_19_5_103	MW-10	Appendix IV	Barium	mg/L	9	0	0%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.30	0.28	0.14	0.57	0.14	0.47	0.074	1.1	0.65
2_19_5_104	MW-10	Appendix IV	Beryllium	mg/L	9	3	33%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00011	0.000082	0.000052	0.00022	0.000066	0.62	0.000042	1.2	0.55
2_19_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0044	0.0042	0.0018	0.0085	0.0022	0.52	0.0024	0.75	-0.028
2_19_5_110	MW-10	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00064	0.00041	0.00030	0.0018	0.00047	0.74	0.00016	2.2	5.2
2_19_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	5.7	6.0	2.7	7.7	1.7	0.29	1.9	-0.69	-0.44
2_19_5_115	MW-10	Appendix IV	Lead	mg/L	9	7	78%	2022-11-29 to 2023-10-23		Nonparametric	0.00014	0.00014	0.00012	0.00017	0.000035	0.24	0.000037	NA	NA
2_19_5_116	MW-10	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.99	0.94	0.54	1.6	0.29	0.30	0.16	0.82	1.9
2_19_5_118	MW-10	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0039	0.0035	0.0019	0.0072	0.0017	0.42	0.0012	1.0	0.58
2_19_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	9	8	89%	2022-11-29 to 2023-10-23		Nonparametric	1.4	1.4	1.4	1.4	NA	NA	0	NA	NA
2_19_5_122	MW-10	Appendix IV	Selenium	mg/L	9	1	11%	2022-11-29 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00036	0.00036	0.00028	0.00046	0.000060	0.17	0.000074	0.35	-0.52
2_20_5_101	MW-11	Appendix IV	Antimony	mg/L	9	6	67%	2022-11-29 to 2023-10-24		Nonparametric	0.00035	0.00028	0.000082	0.00069	0.00031	0.88	0.00029	0.97	NA
2_20_5_102	MW-11	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0017	0.0016	0.00061	0.0041	0.0010	0.60	0.00074	1.7	3.6
2_20_5_103	MW-11	Appendix IV	Barium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.65	0.59	0.36	1.2	0.26	0.40	0.22	1.3	1.7
2_20_5_104	MW-11	Appendix IV	Beryllium	mg/L	9	8	89%	2022-11-29 to 2023-10-24		Nonparametric	0.000091	0.000091	0.000091	0.000091	NA	NA	0	NA	NA
2_20_5_106	MW-11	Appendix IV	Cadmium	mg/L	9	8	89%	2022-11-29 to 2023-10-24		Nonparametric	0.00073	0.00073	0.00073	0.00073	NA	NA	0	NA	NA
2_20_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Lognormal	Lognormal	0.0018	0.00087	0.00045	0.0086	0.0026	1.5	0.00049	2.9	8.4
2_20_5_110	MW-11	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00058	0.00061	0.00023	0.0012	0.00028	0.49	0.00031	1.3	2.4
2_20_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.61	0.37	0.21	1.4	0.45	0.74	0.24	0.91	-0.61

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
2_20_5_115	MW-11	Appendix IV	Lead	mg/L	9	3	33%	2022-11-29 to 2023-10-24	Gamma; Lognormal	Gamma	0.013	0.0022	0.00017	0.068	0.027	2.1	0.0025	2.4	5.9
2_20_5_116	MW-11	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Gamma	0.076	0.052	0.0059	0.22	0.073	0.96	0.065	1.0	0.41
2_20_5_118	MW-11	Appendix IV	Molybdenum	mg/L	9	2	22%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.0014	0.0015	0.00043	0.0029	0.00080	0.56	0.00030	0.80	1.4
2_20_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	1.2	1.2	0.62	1.8	0.42	0.35	0.56	0.028	-1.1
2_20_5_122	MW-11	Appendix IV	Selenium	mg/L	9	3	33%	2022-11-29 to 2023-10-24	Gamma; Lognormal; Normal	Normal	0.00021	0.00020	0.00014	0.00031	0.000059	0.29	0.000044	1.0	1.6
2_21_5_101	MW-12	Appendix IV	Antimony	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00071	0.00071	0.00040	0.0011	0.00024	0.34	0.00031	0.16	-1.1
2_21_5_102	MW-12	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0024	0.0024	0.0014	0.0034	0.00069	0.29	0.00074	0.033	-1.4
2_21_5_103	MW-12	Appendix IV	Barium	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.034	0.030	0.017	0.060	0.015	0.44	0.012	0.83	-0.58
2_21_5_106	MW-12	Appendix IV	Cadmium	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0013	0.0012	0.00062	0.0024	0.00064	0.48	0.00062	0.66	-0.73
2_21_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	9	4	44%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00050	0.00048	0.00034	0.00067	0.00012	0.24	0.000089	0.28	0.92
2_21_5_110	MW-12	Appendix IV	Cobalt	mg/L	9	3	33%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00033	0.00032	0.00014	0.00053	0.00016	0.49	0.00023	0.12	-2.1
2_21_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Lognormal	Lognormal	0.33	0.26	0.22	0.54	0.12	0.38	0.044	0.96	-0.89
2_21_5_115	MW-12	Appendix IV	Lead	mg/L	9	5	56%	2022-11-28 to 2023-10-23		Nonparametric	0.00018	0.00018	0.00014	0.00021	0.000038	0.21	0.000044	-0.060	-5.7
2_21_5_116	MW-12	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0039	0.0037	0.0022	0.0064	0.0013	0.32	0.00089	0.70	1.1
2_21_5_117	MW-12	Appendix IV	Mercury	mg/L	9	8	89%	2022-11-28 to 2023-10-23		Nonparametric	0.00016	0.00016	0.00016	0.00016	NA	NA	0	NA	NA
2_21_5_118	MW-12	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0075	0.0072	0.0056	0.0096	0.0014	0.19	0.0022	0.035	-1.3
2_21_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	9	7	78%	2022-11-28 to 2023-10-23		Nonparametric	0.95	0.95	0.81	1.1	0.20	0.21	0.21	NA	NA
2_21_5_122	MW-12	Appendix IV	Selenium	mg/L	9	0	0%	2022-11-28 to 2023-10-23	Gamma; Lognormal; Normal	Gamma	0.0011	0.00093	0.00013	0.0023	0.00084	0.76	0.0011	0.25	-1.6
2_27_5_101	MW-32	Appendix IV	Antimony	mg/L	9	6	67%	2022-11-30 to 2023-10-23		Nonparametric	0.000093	0.000072	0.000067	0.00014	0.000041	0.44	0.0000074	1.7	NA
2_27_5_102	MW-32	Appendix IV	Arsenic	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00054	0.00055	0.00044	0.00062	0.000069	0.13	0.000089	-0.29	-1.6
2_27_5_103	MW-32	Appendix IV	Barium	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.50	0.41	0.29	0.85	0.18	0.36	0.18	0.92	0.43
2_27_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.00044	0.00039	0.00031	0.00065	0.00013	0.29	0.00012	0.57	-1.2
2_27_5_110	MW-32	Appendix IV	Cobalt	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Lognormal	Lognormal	0.00042	0.00038	0.00031	0.00068	0.00012	0.29	0.000044	1.6	1.5
2_27_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	1.5	1.5	1.4	1.8	0.13	0.086	0.15	1.2	1.7
2_27_5_115	MW-32	Appendix IV	Lead	mg/L	9	7	78%	2022-11-30 to 2023-10-23		Nonparametric	0.00013	0.00013	0.00012	0.00014	0.000014	0.11	0.000015	NA	NA
2_27_5_116	MW-32	Appendix IV	Lithium	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.13	0.13	0.094	0.19	0.029	0.23	0.030	0.85	1.0
2_27_5_118	MW-32	Appendix IV	Molybdenum	mg/L	9	0	0%	2022-11-30 to 2023-10-23	Gamma; Lognormal; Normal	Normal	0.0042	0.0045	0.0032	0.0051	0.00063	0.15	0.00030	-0.59	-0.73
2_27_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	2022-11-30 to 2023-10-23		Nonparametric	0.83	0.86	0.61	0.98	0.16	0.19	0.10	-1.1	2.1

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
1_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	9	2	22%	0.74	0.011	0.35	0.0090	0.84	0.10	0.29	0.082	0.32	0.01 <= p < 0.05	0.69	0.05 <= p < 0.10	0.64	Gamma; Lognormal	Gamma
1_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	9	0	0%	0.93	0.46	0.20	0.39	0.88	0.17	0.26	0.073	0.24	>= 0.10	0.45	>= 0.10	0.36	Gamma; Lognormal; Normal	Normal
1_11_5_103	MW-01R	Appendix IV	Barium	mg/L	9	0	0%	0.80	0.021	0.32	0.0090	0.90	0.23	0.27	0.059	0.29	0.01 <= p < 0.05	0.56	>= 0.10	0.30	Gamma; Lognormal	Gamma
1_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	9	0	0%	0.91	0.30	0.23	0.19	0.91	0.29	0.22	0.26	0.20	>= 0.10	0.45	>= 0.10	0.35	Gamma; Lognormal; Normal	Normal
1_11_5_106	MW-01R	Appendix IV	Cadmium	mg/L	9	6	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.87		Nonparametric
1_11_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.84	0.053	0.22	0.22	0.91	0.29	0.17	0.64	0.19	>= 0.10	0.48	>= 0.10	0.43	Gamma; Lognormal; Normal	Normal
1_11_5_110	MW-01R	Appendix IV	Cobalt	mg/L	9	0	0%	0.73	0.0030	0.28	0.043	0.90	0.23	0.21	0.31	0.23	>= 0.10	0.63	0.05 <= p < 0.10	0.52	Gamma; Lognormal	Gamma
1_11_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.81	0.028	0.33	0.0060	0.81	0.031	0.33	0.0050	0.34	< 0.01	0.93	0.01 <= p < 0.05	0.24	Nonparametric	Nonparametric
1_11_5_115	MW-01R	Appendix IV	Lead	mg/L	9	2	22%	0.61	0	0.38	0.0030	0.85	0.12	0.25	0.22	0.30	0.05 <= p < 0.10	0.87	0.01 <= p < 0.05	0.79	Gamma; Lognormal	Gamma
1_11_5_116	MW-01R	Appendix IV	Lithium	mg/L	9	0	0%	0.89	0.22	0.17	0.60	0.89	0.22	0.17	0.63	0.18	>= 0.10	0.44	>= 0.10	0.32	Gamma; Lognormal; Normal	Normal
1_11_5_117	MW-01R	Appendix IV	Mercury	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_11_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	9	1	11%	0.80	0.032	0.31	0.024	0.92	0.47	0.23	0.27	0.26	>= 0.10	0.51	>= 0.10	0.51	Gamma; Lognormal	Gamma
1_11_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.35		Nonparametric
1_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	9	0	0%	0.94	0.58	0.22	0.24	0.88	0.14	0.28	0.045	0.25	>= 0.10	0.47	>= 0.10	0.32	Gamma; Lognormal; Normal	Normal
1_11_5_125	MW-01R	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_15_5_101	MW-06	Appendix IV	Antimony	mg/L	9	7	78%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.1		Nonparametric
1_15_5_102	MW-06	Appendix IV	Arsenic	mg/L	9	0	0%	0.94	0.55	0.24	0.14	0.97	0.90	0.20	0.34	0.22	>= 0.10	0.26	>= 0.10	0.23	Gamma; Lognormal; Normal	Normal
1_15_5_103	MW-06	Appendix IV	Barium	mg/L	9	0	0%	0.83	0.043	0.28	0.040	0.78	0.011	0.30	0.017	0.30	0.01 <= p < 0.05	0.85	0.01 <= p < 0.05	0.14	Nonparametric	Nonparametric
1_15_5_104	MW-06	Appendix IV	Beryllium	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_15_5_106	MW-06	Appendix IV	Cadmium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_15_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.93	0.44	0.21	0.33	0.95	0.70	0.20	0.39	0.21	>= 0.10	0.34	>= 0.10	0.29	Gamma; Lognormal; Normal	Normal
1_15_5_110	MW-06	Appendix IV	Cobalt	mg/L	9	0	0%	0.89	0.21	0.22	0.26	0.89	0.22	0.21	0.29	0.23	>= 0.10	0.49	>= 0.10	0.21	Gamma; Lognormal; Normal	Normal
1_15_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.88	0.15	0.25	0.12	0.89	0.19	0.23	0.17	0.25	>= 0.10	0.48	>= 0.10	0.13	Gamma; Lognormal; Normal	Normal
1_15_5_115	MW-06	Appendix IV	Lead	mg/L	9	6	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.18		Nonparametric
1_15_5_116	MW-06	Appendix IV	Lithium	mg/L	9	0	0%	0.86	0.10	0.21	0.32	0.84	0.059	0.21	0.30	0.22	>= 0.10	0.61	>= 0.10	0.17	Gamma; Lognormal; Normal	Normal
1_15_5_117	MW-06	Appendix IV	Mercury	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_15_5_118	MW-06	Appendix IV	Molybdenum	mg/L	9	6	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.038		Nonparametric
1_15_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	0.71	0.0050	0.38	0.0030	0.83	0.076	0.31	0.042	0.33	0.01 <= p < 0.05	0.72	0.01 <= p < 0.05	0.37	Lognormal	Lognormal
1_15_5_122	MW-06	Appendix IV	Selenium	mg/L	9	5	56%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.061		Nonparametric
1_15_5_125	MW-06	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_17_5_101	MW-08	Appendix IV	Antimony	mg/L	9	3	33%	0.96	0.84	0.19	0.73	0.99	0.98	0.13	0.98	0.16	>= 0.10	0.16	>= 0.10	0.59	Gamma; Lognormal; Normal	Normal
1_17_5_102	MW-08	Appendix IV	Arsenic	mg/L	9	0	0%	0.90	0.28	0.19	0.44	0.84	0.053	0.24	0.15	0.24	>= 0.10	0.57	>= 0.10	0.71	Gamma; Lognormal; Normal	Normal
1_17_5_103	MW-08	Appendix IV	Barium	mg/L	9	0	0%	0.96	0.82	0.18	0.51	0.96	0.76	0.17	0.62	0.18	>= 0.10	0.28	>= 0.10	0.13	Gamma; Lognormal; Normal	Normal
1_17_5_104	MW-08	Appendix IV	Beryllium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_17_5_106	MW-08	Appendix IV	Cadmium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_17_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.93	0.47	0.18	0.52	0.97	0.86	0.14	0.84	0.15	>= 0.10	0.25	>= 0.10	0.27	Gamma; Lognormal; Normal	Normal
1_17_5_110	MW-08	Appendix IV	Cobalt	mg/L	9	0	0%	0.91	0.33	0.22	0.22	0.87	0.13	0.24	0.13	0.25	>= 0.10	0.53	>= 0.10	0.26	Gamma; Lognormal; Normal	Normal
1_17_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.91	0.30	0.22	0.25	0.87	0.11	0.27	0.053	0.26	0.05 <= p < 0.10	0.62	0.05 <= p < 0.10	0.40	Gamma; Lognormal; Normal	Normal
1_17_5_115	MW-08	Appendix IV	Lead	mg/L	9	7	78%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.96		Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
1_17_5_116	MW-08	Appendix IV	Lithium	mg/L	9	0	0%	0.89	0.20	0.26	0.073	0.85	0.067	0.31	0.013	0.30	0.01 <= p < 0.05	0.60	>= 0.10	0.27	Gamma; Lognormal; Normal	Normal
1_17_5_117	MW-08	Appendix IV	Mercury	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_17_5_118	MW-08	Appendix IV	Molybdenum	mg/L	9	0	0%	0.94	0.57	0.14	0.89	0.92	0.37	0.21	0.31	0.19	>= 0.10	0.29	>= 0.10	0.75	Gamma; Lognormal; Normal	Normal
1_17_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	0.95	0.71	0.21	0.45	0.96	0.86	0.21	0.44	0.19	>= 0.10	0.26	>= 0.10	0.33	Gamma; Lognormal; Normal	Normal
1_17_5_122	MW-08	Appendix IV	Selenium	mg/L	9	5	56%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.064		Nonparametric
1_17_5_125	MW-08	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_18_5_101	MW-09	Appendix IV	Antimony	mg/L	9	5	56%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.76		Nonparametric
1_18_5_102	MW-09	Appendix IV	Arsenic	mg/L	9	0	0%	0.75	0.0060	0.39	0	0.70	0.0010	0.41	0	0.41	< 0.01	1.4	< 0.01	0.27	Nonparametric	Nonparametric
1_18_5_103	MW-09	Appendix IV	Barium	mg/L	9	0	0%	0.55	0	0.36	0.0010	0.80	0.023	0.23	0.19	0.30	0.01 <= p < 0.05	1.1	< 0.01	0.84	Lognormal	Lognormal
1_18_5_104	MW-09	Appendix IV	Beryllium	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_18_5_106	MW-09	Appendix IV	Cadmium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_18_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.87	0.12	0.19	0.45	0.86	0.088	0.22	0.24	0.22	>= 0.10	0.59	>= 0.10	0.24	Gamma; Lognormal; Normal	Normal
1_18_5_110	MW-09	Appendix IV	Cobalt	mg/L	9	0	0%	0.97	0.88	0.12	0.98	0.99	0.99	0.10	1.0	0.12	>= 0.10	0.13	>= 0.10	0.44	Gamma; Lognormal; Normal	Normal
1_18_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.94	0.56	0.13	0.94	0.92	0.41	0.15	0.83	0.13	>= 0.10	0.30	>= 0.10	0.10	Gamma; Lognormal; Normal	Normal
1_18_5_115	MW-09	Appendix IV	Lead	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_18_5_116	MW-09	Appendix IV	Lithium	mg/L	9	0	0%	0.90	0.23	0.22	0.25	0.89	0.20	0.22	0.24	0.23	>= 0.10	0.52	>= 0.10	0.093	Gamma; Lognormal; Normal	Normal
1_18_5_117	MW-09	Appendix IV	Mercury	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_18_5_118	MW-09	Appendix IV	Molybdenum	mg/L	9	0	0%	0.93	0.49	0.26	0.092	0.92	0.40	0.22	0.22	0.22	>= 0.10	0.42	>= 0.10	0.30	Gamma; Lognormal; Normal	Normal
1_18_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_18_5_122	MW-09	Appendix IV	Selenium	mg/L	9	2	22%	0.74	0.010	0.30	0.048	0.66	0.0020	0.36	0.0070	0.34	0.01 <= p < 0.05	1.1	< 0.01	0.29	Nonparametric	Nonparametric
1_18_5_125	MW-09	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_22_5_101	MW-18	Appendix IV	Antimony	mg/L	9	2	22%	0.68	0.0020	0.39	0.0020	0.71	0.0050	0.36	0.0070	0.38	< 0.01	1.1	< 0.01	0.44	Nonparametric	Nonparametric
1_22_5_102	MW-18	Appendix IV	Arsenic	mg/L	9	0	0%	0.93	0.47	0.17	0.67	0.97	0.88	0.17	0.65	0.17	>= 0.10	0.28	>= 0.10	0.30	Gamma; Lognormal; Normal	Normal
1_22_5_103	MW-18	Appendix IV	Barium	mg/L	9	0	0%	0.89	0.20	0.21	0.28	0.87	0.14	0.22	0.26	0.23	>= 0.10	0.54	>= 0.10	0.28	Gamma; Lognormal; Normal	Normal
1_22_5_104	MW-18	Appendix IV	Beryllium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_22_5_106	MW-18	Appendix IV	Cadmium	mg/L	9	2	22%	0.95	0.77	0.17	0.79	0.95	0.74	0.20	0.51	0.17	>= 0.10	0.24	>= 0.10	0.51	Gamma; Lognormal; Normal	Normal
1_22_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_22_5_110	MW-18	Appendix IV	Cobalt	mg/L	9	0	0%	0.88	0.15	0.21	0.28	0.91	0.32	0.17	0.64	0.19	>= 0.10	0.44	>= 0.10	0.48	Gamma; Lognormal; Normal	Normal
1_22_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.92	0.36	0.22	0.24	0.94	0.55	0.20	0.40	0.21	>= 0.10	0.36	>= 0.10	0.14	Gamma; Lognormal; Normal	Normal
1_22_5_115	MW-18	Appendix IV	Lead	mg/L	9	6	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.44		Nonparametric
1_22_5_116	MW-18	Appendix IV	Lithium	mg/L	9	0	0%	0.84	0.065	0.25	0.11	0.84	0.055	0.24	0.14	0.26	0.05 <= p < 0.10	0.75	0.01 <= p < 0.05	0.23	Gamma; Lognormal; Normal	Normal
1_22_5_117	MW-18	Appendix IV	Mercury	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_22_5_118	MW-18	Appendix IV	Molybdenum	mg/L	9	0	0%	0.90	0.25	0.23	0.19	0.93	0.48	0.18	0.55	0.20	>= 0.10	0.42	>= 0.10	0.29	Gamma; Lognormal; Normal	Normal
1_22_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	9	6	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.38		Nonparametric
1_22_5_122	MW-18	Appendix IV	Selenium	mg/L	9	0	0%	0.82	0.038	0.22	0.25	0.87	0.12	0.20	0.37	0.22	>= 0.10	0.57	>= 0.10	0.70	Gamma; Lognormal; Normal	Normal
1_22_5_125	MW-18	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_23_5_101	MW-19	Appendix IV	Antimony	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_23_5_102	MW-19	Appendix IV	Arsenic	mg/L	9	0	0%	0.91	0.33	0.19	0.44	0.87	0.13	0.24	0.13	0.23	>= 0.10	0.49	>= 0.10	0.32	Gamma; Lognormal; Normal	Normal
1_23_5_103	MW-19	Appendix IV	Barium	mg/L	9	0	0%	0.97	0.92	0.13	0.95	0.96	0.76	0.14	0.91	0.14	>= 0.10	0.23	>= 0.10	0.16	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
1_23_5_104	MW-19	Appendix IV	Beryllium	mg/L	9	3	33%	0.95	0.72	0.21	0.58	0.95	0.72	0.22	0.51	0.23	>= 0.10	0.29	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
1_23_5_106	MW-19	Appendix IV	Cadmium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_23_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	9	4	44%	0.83	0.15	0.26	0.31	0.88	0.33	0.25	0.40	0.27	>= 0.10	0.44	>= 0.10	0.27	Gamma; Lognormal; Normal	Normal
1_23_5_110	MW-19	Appendix IV	Cobalt	mg/L	9	0	0%	0.96	0.85	0.17	0.66	0.84	0.057	0.27	0.057	0.22	>= 0.10	0.44	>= 0.10	0.58	Gamma; Lognormal; Normal	Normal
1_23_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.93	0.44	0.22	0.21	0.93	0.51	0.21	0.28	0.23	>= 0.10	0.40	>= 0.10	0.10	Gamma; Lognormal; Normal	Normal
1_23_5_115	MW-19	Appendix IV	Lead	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_23_5_116	MW-19	Appendix IV	Lithium	mg/L	9	0	0%	0.90	0.23	0.21	0.27	0.90	0.28	0.21	0.28	0.22	>= 0.10	0.46	>= 0.10	0.092	Gamma; Lognormal; Normal	Normal
1_23_5_117	MW-19	Appendix IV	Mercury	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_23_5_118	MW-19	Appendix IV	Molybdenum	mg/L	9	0	0%	0.89	0.22	0.17	0.62	0.80	0.022	0.24	0.16	0.20	>= 0.10	0.58	>= 0.10	0.29	Gamma; Lognormal; Normal	Normal
1_23_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	0.93	0.58	0.22	0.46	0.88	0.25	0.26	0.21	0.24	>= 0.10	0.39	>= 0.10	0.22	Gamma; Lognormal; Normal	Normal
1_23_5_122	MW-19	Appendix IV	Selenium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_23_5_125	MW-19	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_24_5_101	MW-20	Appendix IV	Antimony	mg/L	9	2	22%	0.92	0.46	0.21	0.43	0.93	0.55	0.21	0.49	0.23	>= 0.10	0.31	>= 0.10	0.42	Gamma; Lognormal; Normal	Normal
1_24_5_102	MW-20	Appendix IV	Arsenic	mg/L	9	0	0%	0.85	0.084	0.20	0.40	0.85	0.073	0.20	0.35	0.22	>= 0.10	0.62	0.05 <= p < 0.10	0.15	Gamma; Lognormal; Normal	Normal
1_24_5_103	MW-20	Appendix IV	Barium	mg/L	9	0	0%	0.84	0.052	0.23	0.19	0.94	0.63	0.16	0.69	0.18	>= 0.10	0.38	>= 0.10	0.32	Gamma; Lognormal; Normal	Normal
1_24_5_104	MW-20	Appendix IV	Beryllium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_24_5_106	MW-20	Appendix IV	Cadmium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_24_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	9	5	56%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.19		Nonparametric
1_24_5_110	MW-20	Appendix IV	Cobalt	mg/L	9	0	0%	0.93	0.45	0.22	0.21	0.91	0.31	0.26	0.092	0.24	>= 0.10	0.42	>= 0.10	0.17	Gamma; Lognormal; Normal	Normal
1_24_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.55	0	0.42	0	0.64	0	0.36	0.0010	0.39	< 0.01	1.6	< 0.01	0.30	Nonparametric	Nonparametric
1_24_5_115	MW-20	Appendix IV	Lead	mg/L	9	0	0%	0.85	0.072	0.20	0.40	0.85	0.067	0.23	0.19	0.23	>= 0.10	0.65	0.05 <= p < 0.10	0.23	Gamma; Lognormal; Normal	Normal
1_24_5_116	MW-20	Appendix IV	Lithium	mg/L	9	0	0%	0.98	0.96	0.11	0.99	0.98	0.94	0.12	0.96	0.13	>= 0.10	0.16	>= 0.10	0.17	Gamma; Lognormal; Normal	Normal
1_24_5_117	MW-20	Appendix IV	Mercury	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_24_5_118	MW-20	Appendix IV	Molybdenum	mg/L	9	0	0%	0.92	0.35	0.22	0.26	0.92	0.38	0.21	0.28	0.22	>= 0.10	0.46	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
1_24_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.39		Nonparametric
1_24_5_122	MW-20	Appendix IV	Selenium	mg/L	9	5	56%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.11		Nonparametric
1_24_5_125	MW-20	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_25_5_101	MW-30	Appendix IV	Antimony	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_25_5_102	MW-30	Appendix IV	Arsenic	mg/L	9	2	22%	0.97	0.92	0.15	0.90	0.89	0.30	0.23	0.28	0.20	>= 0.10	0.29	>= 0.10	0.60	Gamma; Lognormal; Normal	Normal
1_25_5_103	MW-30	Appendix IV	Barium	mg/L	9	0	0%	0.84	0.059	0.22	0.21	0.87	0.13	0.19	0.46	0.21	>= 0.10	0.58	>= 0.10	0.32	Gamma; Lognormal; Normal	Normal
1_25_5_104	MW-30	Appendix IV	Beryllium	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_25_5_106	MW-30	Appendix IV	Cadmium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_25_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.94	0.57	0.20	0.41	0.91	0.32	0.20	0.36	0.21	>= 0.10	0.36	>= 0.10	0.35	Gamma; Lognormal; Normal	Normal
1_25_5_110	MW-30	Appendix IV	Cobalt	mg/L	9	0	0%	0.74	0.0040	0.34	0.0030	0.90	0.25	0.23	0.20	0.28	0.05 <= p < 0.10	0.66	0.05 <= p < 0.10	0.69	Gamma; Lognormal	Gamma
1_25_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.94	0.55	0.20	0.37	0.96	0.76	0.18	0.56	0.19	>= 0.10	0.31	>= 0.10	0.13	Gamma; Lognormal; Normal	Normal
1_25_5_115	MW-30	Appendix IV	Lead	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_25_5_116	MW-30	Appendix IV	Lithium	mg/L	9	0	0%	0.62	0	0.32	0.0090	0.72	0.0020	0.25	0.12	0.27	0.05 <= p < 0.10	1.2	< 0.01	0.28	Gamma; Lognormal	Gamma
1_25_5_117	MW-30	Appendix IV	Mercury	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_25_5_118	MW-30	Appendix IV	Molybdenum	mg/L	9	3	33%	0.83	0.12	0.25	0.27	0.99	1.0	0.13	0.99	0.18	>= 0.10	0.22	>= 0.10	0.84	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
1_25_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.34		Nonparametric
1_25_5_122	MW-30	Appendix IV	Selenium	mg/L	9	6	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.084		Nonparametric
1_25_5_125	MW-30	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_26_5_101	MW-31	Appendix IV	Antimony	mg/L	9	4	44%	0.84	0.17	0.32	0.095	0.83	0.15	0.33	0.075	0.35	0.05 <= p < 0.10	0.56	>= 0.10	0.28	Gamma; Lognormal; Normal	Normal
1_26_5_102	MW-31	Appendix IV	Arsenic	mg/L	9	0	0%	0.95	0.70	0.17	0.68	0.96	0.84	0.16	0.73	0.17	>= 0.10	0.25	>= 0.10	0.19	Gamma; Lognormal; Normal	Normal
1_26_5_103	MW-31	Appendix IV	Barium	mg/L	9	0	0%	0.94	0.54	0.23	0.20	0.96	0.79	0.19	0.46	0.20	>= 0.10	0.26	>= 0.10	0.22	Gamma; Lognormal; Normal	Normal
1_26_5_104	MW-31	Appendix IV	Beryllium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_26_5_106	MW-31	Appendix IV	Cadmium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_26_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.94	0.59	0.16	0.70	0.95	0.71	0.17	0.64	0.18	>= 0.10	0.28	>= 0.10	0.15	Gamma; Lognormal; Normal	Normal
1_26_5_110	MW-31	Appendix IV	Cobalt	mg/L	9	0	0%	0.96	0.77	0.19	0.45	0.95	0.72	0.21	0.30	0.21	>= 0.10	0.30	>= 0.10	0.15	Gamma; Lognormal; Normal	Normal
1_26_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.84	0.052	0.26	0.074	0.84	0.054	0.26	0.083	0.27	0.05 <= p < 0.10	0.71	0.05 <= p < 0.10	0.050	Gamma; Lognormal; Normal	Normal
1_26_5_115	MW-31	Appendix IV	Lead	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_26_5_116	MW-31	Appendix IV	Lithium	mg/L	9	0	0%	0.94	0.63	0.22	0.23	0.94	0.55	0.23	0.18	0.23	>= 0.10	0.36	>= 0.10	0.064	Gamma; Lognormal; Normal	Normal
1_26_5_117	MW-31	Appendix IV	Mercury	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_26_5_118	MW-31	Appendix IV	Molybdenum	mg/L	9	0	0%	0.76	0.0080	0.35	0.0020	0.80	0.022	0.32	0.0080	0.34	< 0.01	0.90	0.01 <= p < 0.05	0.23	Nonparametric	Nonparametric
1_26_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	0.84	0.13	0.28	0.14	0.87	0.21	0.24	0.35	0.26	>= 0.10	0.50	>= 0.10	0.32	Gamma; Lognormal; Normal	Normal
1_26_5_122	MW-31	Appendix IV	Selenium	mg/L	9	5	56%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.14		Nonparametric
1_26_5_125	MW-31	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	9	2	22%	0.70	0.0040	0.29	0.069	0.84	0.098	0.23	0.34	0.25	>= 0.10	0.69	0.05 <= p < 0.10	0.50	Gamma; Lognormal; Normal	Normal
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	9	0	0%	0.80	0.019	0.30	0.019	0.85	0.072	0.27	0.049	0.28	0.01 <= p < 0.05	0.65	0.05 <= p < 0.10	0.15	Gamma; Lognormal	Gamma
2_12_5_103	MW-02	Appendix IV	Barium	mg/L	9	0	0%	0.96	0.85	0.17	0.66	0.95	0.69	0.17	0.62	0.19	>= 0.10	0.25	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	9	0	0%	0.98	0.98	0.13	0.94	0.96	0.80	0.17	0.60	0.14	>= 0.10	0.19	>= 0.10	0.38	Gamma; Lognormal; Normal	Normal
2_12_5_106	MW-02	Appendix IV	Cadmium	mg/L	9	6	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.4		Nonparametric
2_12_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.93	0.49	0.19	0.43	0.91	0.34	0.21	0.32	0.22	>= 0.10	0.41	>= 0.10	0.45	Gamma; Lognormal; Normal	Normal
2_12_5_110	MW-02	Appendix IV	Cobalt	mg/L	9	0	0%	0.94	0.55	0.18	0.50	0.91	0.30	0.22	0.21	0.21	>= 0.10	0.42	>= 0.10	0.37	Gamma; Lognormal; Normal	Normal
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.62	0	0.34	0.0040	0.55	0	0.38	0	0.37	< 0.01	1.7	< 0.01	0.25	Nonparametric	Nonparametric
2_12_5_115	MW-02	Appendix IV	Lead	mg/L	9	0	0%	0.96	0.76	0.14	0.91	0.96	0.80	0.13	0.92	0.13	>= 0.10	0.18	>= 0.10	0.44	Gamma; Lognormal; Normal	Normal
2_12_5_116	MW-02	Appendix IV	Lithium	mg/L	9	0	0%	0.94	0.59	0.17	0.66	0.90	0.28	0.20	0.38	0.18	>= 0.10	0.40	>= 0.10	0.21	Gamma; Lognormal; Normal	Normal
2_12_5_117	MW-02	Appendix IV	Mercury	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	9	0	0%	0.80	0.019	0.30	0.018	0.83	0.048	0.26	0.069	0.28	0.01 <= p < 0.05	0.76	0.01 <= p < 0.05	0.31	Lognormal	Lognormal
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	0.92	0.51	0.29	0.12	0.95	0.75	0.22	0.45	0.26	>= 0.10	0.31	>= 0.10	0.45	Gamma; Lognormal; Normal	Normal
2_12_5_122	MW-02	Appendix IV	Selenium	mg/L	9	0	0%	0.94	0.60	0.21	0.31	0.89	0.18	0.24	0.13	0.21	>= 0.10	0.45	>= 0.10	0.35	Gamma; Lognormal; Normal	Normal
2_12_5_125	MW-02	Appendix IV	Thallium	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	9	5	56%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.78		Nonparametric
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	9	0	0%	0.89	0.18	0.23	0.18	0.84	0.065	0.22	0.22	0.24	>= 0.10	0.60	>= 0.10	0.34	Gamma; Lognormal; Normal	Normal
2_13_5_103	MW-03	Appendix IV	Barium	mg/L	9	0	0%	0.88	0.17	0.22	0.26	0.74	0.0040	0.26	0.086	0.25	>= 0.10	0.83	0.01 <= p < 0.05	0.40	Gamma; Lognormal; Normal	Normal
2_13_5_104	MW-03	Appendix IV	Beryllium	mg/L	9	7	78%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.74		Nonparametric
2_13_5_106	MW-03	Appendix IV	Cadmium	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_13_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.96	0.85	0.14	0.90	0.96	0.79	0.13	0.92	0.14	>= 0.10	0.22	>= 0.10	0.30	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	9	0	0%	0.91	0.32	0.19	0.46	0.87	0.13	0.19	0.42	0.20	>= 0.10	0.49	>= 0.10	0.43	Gamma; Lognormal; Normal	Normal
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.51	0	0.44	0	0.59	0	0.39	0	0.42	< 0.01	1.8	< 0.01	0.34	Nonparametric	Nonparametric
2_13_5_115	MW-03	Appendix IV	Lead	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_13_5_116	MW-03	Appendix IV	Lithium	mg/L	9	0	0%	0.84	0.057	0.21	0.28	0.89	0.22	0.17	0.63	0.18	>= 0.10	0.44	>= 0.10	0.20	Gamma; Lognormal; Normal	Normal
2_13_5_117	MW-03	Appendix IV	Mercury	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_13_5_118	MW-03	Appendix IV	Molybdenum	mg/L	9	7	78%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.12		Nonparametric
2_13_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	9	1	11%	0.91	0.36	0.20	0.46	0.94	0.58	0.17	0.73	0.19	>= 0.10	0.30	>= 0.10	0.35	Gamma; Lognormal; Normal	Normal
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	9	3	33%	0.91	0.44	0.23	0.39	0.82	0.081	0.28	0.16	0.27	>= 0.10	0.56	>= 0.10	0.39	Gamma; Lognormal; Normal	Normal
2_13_5_125	MW-03	Appendix IV	Thallium	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_14_5_101	MW-04	Appendix IV	Antimony	mg/L	9	6	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.90		Nonparametric
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	9	0	0%	0.91	0.32	0.19	0.46	0.89	0.18	0.17	0.63	0.19	>= 0.10	0.41	>= 0.10	0.33	Gamma; Lognormal; Normal	Normal
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	9	0	0%	0.50	0	0.42	0	0.61	0	0.34	0.0030	0.37	< 0.01	1.9	< 0.01	0.46	Nonparametric	Nonparametric
2_14_5_104	MW-04	Appendix IV	Beryllium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_14_5_106	MW-04	Appendix IV	Cadmium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_14_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.88	0.18	0.20	0.34	0.87	0.13	0.23	0.16	0.23	>= 0.10	0.61	>= 0.10	0.32	Gamma; Lognormal; Normal	Normal
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	9	0	0%	0.93	0.48	0.17	0.62	0.93	0.50	0.22	0.21	0.22	>= 0.10	0.36	>= 0.10	0.38	Gamma; Lognormal; Normal	Normal
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.87	0.12	0.26	0.070	0.85	0.072	0.29	0.031	0.27	0.05 <= p < 0.10	0.72	0.01 <= p < 0.05	0.24	Gamma; Lognormal; Normal	Normal
2_14_5_115	MW-04	Appendix IV	Lead	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_14_5_116	MW-04	Appendix IV	Lithium	mg/L	9	0	0%	0.91	0.29	0.18	0.53	0.89	0.21	0.17	0.60	0.19	>= 0.10	0.42	>= 0.10	0.16	Gamma; Lognormal; Normal	Normal
2_14_5_117	MW-04	Appendix IV	Mercury	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	9	2	22%	0.93	0.55	0.17	0.76	0.91	0.37	0.19	0.61	0.20	>= 0.10	0.33	>= 0.10	0.52	Gamma; Lognormal; Normal	Normal
2_14_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	9	1	11%	0.90	0.32	0.19	0.53	0.82	0.051	0.24	0.18	0.22	>= 0.10	0.52	>= 0.10	0.27	Gamma; Lognormal; Normal	Normal
2_14_5_122	MW-04	Appendix IV	Selenium	mg/L	9	5	56%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.38		Nonparametric
2_14_5_125	MW-04	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_16_5_101	MW-07	Appendix IV	Antimony	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_16_5_102	MW-07	Appendix IV	Arsenic	mg/L	9	0	0%	0.94	0.60	0.22	0.23	0.91	0.33	0.22	0.26	0.20	>= 0.10	0.42	>= 0.10	0.22	Gamma; Lognormal; Normal	Normal
2_16_5_103	MW-07	Appendix IV	Barium	mg/L	9	0	0%	0.88	0.16	0.25	0.097	0.84	0.058	0.28	0.046	0.27	0.05 <= p < 0.10	0.68	0.05 <= p < 0.10	0.12	Gamma; Lognormal; Normal	Normal
2_16_5_104	MW-07	Appendix IV	Beryllium	mg/L	9	6	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.093		Nonparametric
2_16_5_106	MW-07	Appendix IV	Cadmium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_16_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.96	0.75	0.13	0.93	0.96	0.81	0.14	0.90	0.14	>= 0.10	0.22	>= 0.10	0.14	Gamma; Lognormal; Normal	Normal
2_16_5_110	MW-07	Appendix IV	Cobalt	mg/L	9	0	0%	0.90	0.26	0.21	0.31	0.87	0.12	0.22	0.21	0.22	>= 0.10	0.59	>= 0.10	0.12	Gamma; Lognormal; Normal	Normal
2_16_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	9	1	11%	0.86	0.11	0.22	0.31	0.86	0.11	0.21	0.40	0.23	>= 0.10	0.57	>= 0.10	0.28	Gamma; Lognormal; Normal	Normal
2_16_5_115	MW-07	Appendix IV	Lead	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_16_5_116	MW-07	Appendix IV	Lithium	mg/L	9	0	0%	0.94	0.57	0.17	0.67	0.98	0.96	0.14	0.86	0.16	>= 0.10	0.22	>= 0.10	0.26	Gamma; Lognormal; Normal	Normal
2_16_5_117	MW-07	Appendix IV	Mercury	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_16_5_118	MW-07	Appendix IV	Molybdenum	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_16_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	0.80	0.037	0.30	0.059	0.89	0.28	0.22	0.40	0.24	>= 0.10	0.50	>= 0.10	0.43	Gamma; Lognormal; Normal	Normal
2_16_5_122	MW-07	Appendix IV	Selenium	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_16_5_125	MW-07	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
2_19_5_101	MW-10	Appendix IV	Antimony	mg/L	9	5	56%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.54		Nonparametric
2_19_5_102	MW-10	Appendix IV	Arsenic	mg/L	9	0	0%	0.92	0.40	0.19	0.47	0.97	0.90	0.14	0.89	0.17	>= 0.10	0.24	>= 0.10	0.54	Gamma; Lognormal; Normal	Normal
2_19_5_103	MW-10	Appendix IV	Barium	mg/L	9	0	0%	0.90	0.25	0.21	0.27	0.96	0.83	0.14	0.90	0.16	>= 0.10	0.28	>= 0.10	0.45	Gamma; Lognormal; Normal	Normal
2_19_5_104	MW-10	Appendix IV	Beryllium	mg/L	9	3	33%	0.85	0.16	0.25	0.26	0.91	0.46	0.17	0.83	0.20	>= 0.10	0.37	>= 0.10	0.58	Gamma; Lognormal; Normal	Normal
2_19_5_106	MW-10	Appendix IV	Cadmium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_19_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.92	0.38	0.19	0.42	0.94	0.59	0.20	0.42	0.16	>= 0.10	0.29	>= 0.10	0.54	Gamma; Lognormal; Normal	Normal
2_19_5_110	MW-10	Appendix IV	Cobalt	mg/L	9	0	0%	0.71	0.0020	0.26	0.079	0.86	0.11	0.25	0.11	0.26	0.05 <= p < 0.10	0.76	0.01 <= p < 0.05	0.56	Gamma; Lognormal; Normal	Normal
2_19_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.94	0.59	0.16	0.74	0.89	0.18	0.21	0.28	0.20	>= 0.10	0.39	>= 0.10	0.34	Gamma; Lognormal; Normal	Normal
2_19_5_115	MW-10	Appendix IV	Lead	mg/L	9	7	78%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.25		Nonparametric
2_19_5_116	MW-10	Appendix IV	Lithium	mg/L	9	0	0%	0.94	0.56	0.18	0.58	0.96	0.76	0.20	0.34	0.18	>= 0.10	0.28	>= 0.10	0.30	Gamma; Lognormal; Normal	Normal
2_19_5_117	MW-10	Appendix IV	Mercury	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_19_5_118	MW-10	Appendix IV	Molybdenum	mg/L	9	0	0%	0.92	0.40	0.25	0.12	0.98	0.95	0.18	0.54	0.21	>= 0.10	0.25	>= 0.10	0.41	Gamma; Lognormal; Normal	Normal
2_19_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_19_5_122	MW-10	Appendix IV	Selenium	mg/L	9	1	11%	0.96	0.84	0.17	0.67	0.97	0.88	0.17	0.68	0.19	>= 0.10	0.23	>= 0.10	0.16	Gamma; Lognormal; Normal	Normal
2_19_5_125	MW-10	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_20_5_101	MW-11	Appendix IV	Antimony	mg/L	9	6	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.1		Nonparametric
2_20_5_102	MW-11	Appendix IV	Arsenic	mg/L	9	0	0%	0.85	0.076	0.21	0.30	0.98	0.98	0.12	0.98	0.14	>= 0.10	0.25	>= 0.10	0.55	Gamma; Lognormal; Normal	Normal
2_20_5_103	MW-11	Appendix IV	Barium	mg/L	9	0	0%	0.90	0.25	0.24	0.14	0.97	0.91	0.18	0.52	0.21	>= 0.10	0.25	>= 0.10	0.37	Gamma; Lognormal; Normal	Normal
2_20_5_104	MW-11	Appendix IV	Beryllium	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_20_5_106	MW-11	Appendix IV	Cadmium	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_20_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.53	0	0.38	0	0.83	0.044	0.23	0.19	0.30	0.01 <= p < 0.05	1.1	< 0.01	0.89	Lognormal	Lognormal
2_20_5_110	MW-11	Appendix IV	Cobalt	mg/L	9	0	0%	0.89	0.20	0.20	0.41	0.96	0.85	0.18	0.51	0.18	>= 0.10	0.30	>= 0.10	0.48	Gamma; Lognormal; Normal	Normal
2_20_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.85	0.068	0.26	0.086	0.90	0.23	0.19	0.45	0.23	>= 0.10	0.49	>= 0.10	0.74	Gamma; Lognormal; Normal	Normal
2_20_5_115	MW-11	Appendix IV	Lead	mg/L	9	3	33%	0.54	0	0.46	0	0.94	0.67	0.22	0.51	0.35	0.05 <= p < 0.10	0.64	>= 0.10	2.1	Gamma; Lognormal	Gamma
2_20_5_116	MW-11	Appendix IV	Lithium	mg/L	9	0	0%	0.88	0.18	0.19	0.47	0.94	0.62	0.18	0.56	0.16	>= 0.10	0.22	>= 0.10	1.3	Gamma; Lognormal; Normal	Gamma
2_20_5_117	MW-11	Appendix IV	Mercury	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_20_5_118	MW-11	Appendix IV	Molybdenum	mg/L	9	2	22%	0.92	0.47	0.22	0.36	0.93	0.53	0.25	0.19	0.22	>= 0.10	0.34	>= 0.10	0.63	Gamma; Lognormal; Normal	Normal
2_20_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	0.96	0.82	0.15	0.90	0.95	0.75	0.15	0.92	0.16	>= 0.10	0.21	>= 0.10	0.37	Gamma; Lognormal; Normal	Normal
2_20_5_122	MW-11	Appendix IV	Selenium	mg/L	9	3	33%	0.92	0.51	0.24	0.32	0.96	0.83	0.20	0.64	0.20	>= 0.10	0.27	>= 0.10	0.28	Gamma; Lognormal; Normal	Normal
2_20_5_125	MW-11	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_21_5_101	MW-12	Appendix IV	Antimony	mg/L	9	0	0%	0.95	0.72	0.14	0.90	0.94	0.57	0.14	0.88	0.15	>= 0.10	0.25	>= 0.10	0.36	Gamma; Lognormal; Normal	Normal
2_21_5_102	MW-12	Appendix IV	Arsenic	mg/L	9	0	0%	0.94	0.61	0.21	0.29	0.94	0.56	0.19	0.48	0.21	>= 0.10	0.34	>= 0.10	0.30	Gamma; Lognormal; Normal	Normal
2_21_5_103	MW-12	Appendix IV	Barium	mg/L	9	0	0%	0.90	0.28	0.22	0.24	0.96	0.77	0.15	0.81	0.17	>= 0.10	0.31	>= 0.10	0.42	Gamma; Lognormal; Normal	Normal
2_21_5_104	MW-12	Appendix IV	Beryllium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_21_5_106	MW-12	Appendix IV	Cadmium	mg/L	9	0	0%	0.92	0.35	0.14	0.89	0.94	0.63	0.14	0.86	0.16	>= 0.10	0.26	>= 0.10	0.49	Gamma; Lognormal; Normal	Normal
2_21_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	9	4	44%	0.98	0.94	0.18	0.88	0.98	0.92	0.21	0.65	0.19	>= 0.10	0.21	>= 0.10	0.25	Gamma; Lognormal; Normal	Normal
2_21_5_110	MW-12	Appendix IV	Cobalt	mg/L	9	3	33%	0.92	0.50	0.18	0.78	0.93	0.58	0.17	0.82	0.19	>= 0.10	0.29	>= 0.10	0.54	Gamma; Lognormal; Normal	Normal
2_21_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.80	0.021	0.31	0.012	0.83	0.043	0.27	0.053	0.29	0.01 <= p < 0.05	0.84	0.01 <= p < 0.05	0.35	Lognormal	Lognormal
2_21_5_115	MW-12	Appendix IV	Lead	mg/L	9	5	56%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.22		Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
2_21_5_116	MW-12	Appendix IV	Lithium	mg/L	9	0	0%	0.95	0.71	0.15	0.79	0.97	0.90	0.16	0.74	0.14	>= 0.10	0.21	>= 0.10	0.32	Gamma; Lognormal; Normal	Normal
2_21_5_117	MW-12	Appendix IV	Mercury	mg/L	9	8	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_21_5_118	MW-12	Appendix IV	Molybdenum	mg/L	9	0	0%	0.94	0.61	0.14	0.89	0.94	0.55	0.15	0.77	0.16	>= 0.10	0.31	>= 0.10	0.19	Gamma; Lognormal; Normal	Normal
2_21_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	9	7	78%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.21		Nonparametric
2_21_5_122	MW-12	Appendix IV	Selenium	mg/L	9	0	0%	0.91	0.29	0.17	0.65	0.89	0.22	0.19	0.49	0.19	>= 0.10	0.38	>= 0.10	1.1	Gamma; Lognormal; Normal	Gamma
2_21_5_125	MW-12	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_27_5_101	MW-32	Appendix IV	Antimony	mg/L	9	6	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.41		Nonparametric
2_27_5_102	MW-32	Appendix IV	Arsenic	mg/L	9	0	0%	0.91	0.30	0.18	0.50	0.90	0.25	0.19	0.45	0.20	>= 0.10	0.45	>= 0.10	0.13	Gamma; Lognormal; Normal	Normal
2_27_5_103	MW-32	Appendix IV	Barium	mg/L	9	0	0%	0.91	0.32	0.24	0.14	0.95	0.72	0.21	0.32	0.23	>= 0.10	0.34	>= 0.10	0.35	Gamma; Lognormal; Normal	Normal
2_27_5_104	MW-32	Appendix IV	Beryllium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_27_5_106	MW-32	Appendix IV	Cadmium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_27_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.89	0.21	0.20	0.35	0.90	0.26	0.17	0.64	0.19	>= 0.10	0.43	>= 0.10	0.28	Gamma; Lognormal; Normal	Normal
2_27_5_110	MW-32	Appendix IV	Cobalt	mg/L	9	0	0%	0.79	0.014	0.32	0.0070	0.85	0.067	0.28	0.037	0.30	0.01 <= p < 0.05	0.82	0.01 <= p < 0.05	0.26	Lognormal	Lognormal
2_27_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.85	0.080	0.23	0.16	0.87	0.12	0.22	0.22	0.23	>= 0.10	0.54	>= 0.10	0.083	Gamma; Lognormal; Normal	Normal
2_27_5_115	MW-32	Appendix IV	Lead	mg/L	9	7	78%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.11		Nonparametric
2_27_5_116	MW-32	Appendix IV	Lithium	mg/L	9	0	0%	0.94	0.60	0.15	0.81	0.97	0.91	0.12	0.97	0.12	>= 0.10	0.20	>= 0.10	0.22	Gamma; Lognormal; Normal	Normal
2_27_5_117	MW-32	Appendix IV	Mercury	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_27_5_118	MW-32	Appendix IV	Molybdenum	mg/L	9	0	0%	0.92	0.41	0.22	0.24	0.90	0.26	0.23	0.17	0.24	>= 0.10	0.49	>= 0.10	0.16	Gamma; Lognormal; Normal	Normal
2_27_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.20		Nonparametric
2_27_5_122	MW-32	Appendix IV	Selenium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_27_5_125	MW-32	Appendix IV	Thallium	mg/L	9	9	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 4: Autocorrelation Tests, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
1_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	9	2	22%	0.19	0.55	
1_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	9	0	0%	0.20	0.47	
1_11_5_103	MW-01R	Appendix IV	Barium	mg/L	9	0	0%	0.38	0.19	
1_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	9	0	0%	0.30	0.30	
1_11_5_106	MW-01R	Appendix IV	Cadmium	mg/L	9	6	67%	-0.27	0.46	
1_11_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.36	0.20	
1_11_5_110	MW-01R	Appendix IV	Cobalt	mg/L	9	0	0%	-0.24	0.41	
1_11_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.52	0.069	
1_11_5_115	MW-01R	Appendix IV	Lead	mg/L	9	2	22%	-0.15	0.62	
1_11_5_116	MW-01R	Appendix IV	Lithium	mg/L	9	0	0%	0.53	0.061	
1_11_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	9	1	11%	-0.41	0.17	
1_11_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	-0.65	0.065	
1_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	9	0	0%	-0.19	0.50	
1_15_5_101	MW-06	Appendix IV	Antimony	mg/L	9	7	78%	-0.50	0.16	
1_15_5_102	MW-06	Appendix IV	Arsenic	mg/L	9	0	0%	0.41	0.15	
1_15_5_103	MW-06	Appendix IV	Barium	mg/L	9	0	0%	0.29	0.32	
1_15_5_104	MW-06	Appendix IV	Beryllium	mg/L	9	8	89%	NA	NA	
1_15_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.083	0.77	
1_15_5_110	MW-06	Appendix IV	Cobalt	mg/L	9	0	0%	-0.081	0.77	
1_15_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.27	0.34	
1_15_5_115	MW-06	Appendix IV	Lead	mg/L	9	6	67%	-0.29	0.43	
1_15_5_116	MW-06	Appendix IV	Lithium	mg/L	9	0	0%	0.21	0.47	
1_15_5_118	MW-06	Appendix IV	Molybdenum	mg/L	9	6	67%	-0.50	0.17	
1_15_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	-0.26	0.40	
1_15_5_122	MW-06	Appendix IV	Selenium	mg/L	9	5	56%	-0.49	0.17	
1_17_5_101	MW-08	Appendix IV	Antimony	mg/L	9	3	33%	-0.087	0.79	
1_17_5_102	MW-08	Appendix IV	Arsenic	mg/L	9	0	0%	0.38	0.19	
1_17_5_103	MW-08	Appendix IV	Barium	mg/L	9	0	0%	0.14	0.62	
1_17_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.12	0.66	
1_17_5_110	MW-08	Appendix IV	Cobalt	mg/L	9	0	0%	0.10	0.72	
1_17_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.34	0.23	
1_17_5_115	MW-08	Appendix IV	Lead	mg/L	9	7	78%	-0.50	0.16	
1_17_5_116	MW-08	Appendix IV	Lithium	mg/L	9	0	0%	0.12	0.68	
1_17_5_118	MW-08	Appendix IV	Molybdenum	mg/L	9	0	0%	0.30	0.28	
1_17_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	-0.51	0.10	
1_17_5_122	MW-08	Appendix IV	Selenium	mg/L	9	5	56%	-0.20	0.56	
1_18_5_101	MW-09	Appendix IV	Antimony	mg/L	9	5	56%	-0.46	0.20	
1_18_5_102	MW-09	Appendix IV	Arsenic	mg/L	9	0	0%	0.20	0.48	
1_18_5_103	MW-09	Appendix IV	Barium	mg/L	9	0	0%	0.075	0.79	
1_18_5_104	MW-09	Appendix IV	Beryllium	mg/L	9	8	89%	NA	NA	
1_18_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.060	0.83	
1_18_5_110	MW-09	Appendix IV	Cobalt	mg/L	9	0	0%	-0.085	0.77	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
1_18_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.52	0.068	
1_18_5_116	MW-09	Appendix IV	Lithium	mg/L	9	0	0%	0.10	0.72	
1_18_5_117	MW-09	Appendix IV	Mercury	mg/L	9	8	89%	NA	NA	
1_18_5_118	MW-09	Appendix IV	Molybdenum	mg/L	9	0	0%	0.61	0.032	*
1_18_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	9	8	89%	NA	NA	
1_18_5_122	MW-09	Appendix IV	Selenium	mg/L	9	2	22%	-0.14	0.65	
1_22_5_101	MW-18	Appendix IV	Antimony	mg/L	9	2	22%	-0.39	0.21	
1_22_5_102	MW-18	Appendix IV	Arsenic	mg/L	9	0	0%	0.26	0.35	
1_22_5_103	MW-18	Appendix IV	Barium	mg/L	9	0	0%	0.57	0.044	*
1_22_5_106	MW-18	Appendix IV	Cadmium	mg/L	9	2	22%	-0.14	0.64	
1_22_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	9	8	89%	NA	NA	
1_22_5_110	MW-18	Appendix IV	Cobalt	mg/L	9	0	0%	0.59	0.038	*
1_22_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.67	0.018	*
1_22_5_115	MW-18	Appendix IV	Lead	mg/L	9	6	67%	-0.66	0.071	
1_22_5_116	MW-18	Appendix IV	Lithium	mg/L	9	0	0%	0.53	0.061	
1_22_5_118	MW-18	Appendix IV	Molybdenum	mg/L	9	0	0%	0.42	0.14	
1_22_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	9	6	67%	-0.65	0.075	
1_22_5_122	MW-18	Appendix IV	Selenium	mg/L	9	0	0%	0.078	0.78	
1_23_5_101	MW-19	Appendix IV	Antimony	mg/L	9	8	89%	NA	NA	
1_23_5_102	MW-19	Appendix IV	Arsenic	mg/L	9	0	0%	0.48	0.091	
1_23_5_103	MW-19	Appendix IV	Barium	mg/L	9	0	0%	0.41	0.15	
1_23_5_104	MW-19	Appendix IV	Beryllium	mg/L	9	3	33%	0.46	0.16	
1_23_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	9	4	44%	-0.22	0.51	
1_23_5_110	MW-19	Appendix IV	Cobalt	mg/L	9	0	0%	0.43	0.13	
1_23_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.38	0.18	
1_23_5_116	MW-19	Appendix IV	Lithium	mg/L	9	0	0%	-0.21	0.45	
1_23_5_118	MW-19	Appendix IV	Molybdenum	mg/L	9	0	0%	0.036	0.90	
1_23_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	-0.16	0.63	
1_24_5_101	MW-20	Appendix IV	Antimony	mg/L	9	2	22%	0.17	0.59	
1_24_5_102	MW-20	Appendix IV	Arsenic	mg/L	9	0	0%	0.67	0.018	*
1_24_5_103	MW-20	Appendix IV	Barium	mg/L	9	0	0%	0.36	0.20	
1_24_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	9	5	56%	-0.21	0.56	
1_24_5_110	MW-20	Appendix IV	Cobalt	mg/L	9	0	0%	0.43	0.13	
1_24_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.087	0.76	
1_24_5_115	MW-20	Appendix IV	Lead	mg/L	9	0	0%	0.21	0.46	
1_24_5_116	MW-20	Appendix IV	Lithium	mg/L	9	0	0%	0.50	0.076	
1_24_5_118	MW-20	Appendix IV	Molybdenum	mg/L	9	0	0%	0.54	0.057	
1_24_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	-0.12	0.74	
1_24_5_122	MW-20	Appendix IV	Selenium	mg/L	9	5	56%	0.039	0.91	
1_25_5_101	MW-30	Appendix IV	Antimony	mg/L	9	8	89%	NA	NA	
1_25_5_102	MW-30	Appendix IV	Arsenic	mg/L	9	2	22%	0.25	0.42	
1_25_5_103	MW-30	Appendix IV	Barium	mg/L	9	0	0%	0.38	0.18	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
1_25_5_104	MW-30	Appendix IV	Beryllium	mg/L	9	8	89%	NA	NA	
1_25_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.20	0.48	
1_25_5_110	MW-30	Appendix IV	Cobalt	mg/L	9	0	0%	-0.27	0.34	
1_25_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.43	0.13	
1_25_5_116	MW-30	Appendix IV	Lithium	mg/L	9	0	0%	-0.27	0.35	
1_25_5_118	MW-30	Appendix IV	Molybdenum	mg/L	9	3	33%	0.18	0.57	
1_25_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	-0.58	0.10	
1_25_5_122	MW-30	Appendix IV	Selenium	mg/L	9	6	67%	0	1.0	
1_26_5_101	MW-31	Appendix IV	Antimony	mg/L	9	4	44%	0.43	0.20	
1_26_5_102	MW-31	Appendix IV	Arsenic	mg/L	9	0	0%	0.27	0.34	
1_26_5_103	MW-31	Appendix IV	Barium	mg/L	9	0	0%	-0.22	0.44	
1_26_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.12	0.68	
1_26_5_110	MW-31	Appendix IV	Cobalt	mg/L	9	0	0%	-0.072	0.80	
1_26_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.22	0.44	
1_26_5_115	MW-31	Appendix IV	Lead	mg/L	9	8	89%	NA	NA	
1_26_5_116	MW-31	Appendix IV	Lithium	mg/L	9	0	0%	-0.15	0.60	
1_26_5_118	MW-31	Appendix IV	Molybdenum	mg/L	9	0	0%	-0.083	0.77	
1_26_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	-0.54	0.092	
1_26_5_122	MW-31	Appendix IV	Selenium	mg/L	9	5	56%	0.20	0.57	
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	9	2	22%	-0.096	0.76	
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	9	0	0%	0.18	0.53	
2_12_5_103	MW-02	Appendix IV	Barium	mg/L	9	0	0%	0.26	0.36	
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	9	0	0%	0.42	0.14	
2_12_5_106	MW-02	Appendix IV	Cadmium	mg/L	9	6	67%	-0.17	0.64	
2_12_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.020	0.94	
2_12_5_110	MW-02	Appendix IV	Cobalt	mg/L	9	0	0%	0.14	0.63	
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.21	0.46	
2_12_5_115	MW-02	Appendix IV	Lead	mg/L	9	0	0%	0.052	0.86	
2_12_5_116	MW-02	Appendix IV	Lithium	mg/L	9	0	0%	-0.10	0.72	
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	9	0	0%	0.52	0.066	
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	-0.28	0.38	
2_12_5_122	MW-02	Appendix IV	Selenium	mg/L	9	0	0%	0.21	0.45	
2_12_5_125	MW-02	Appendix IV	Thallium	mg/L	9	8	89%	NA	NA	
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	9	5	56%	-0.041	0.91	
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	9	0	0%	0.28	0.33	
2_13_5_103	MW-03	Appendix IV	Barium	mg/L	9	0	0%	-0.60	0.034	*
2_13_5_104	MW-03	Appendix IV	Beryllium	mg/L	9	7	78%	-0.50	0.16	
2_13_5_106	MW-03	Appendix IV	Cadmium	mg/L	9	8	89%	NA	NA	
2_13_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.24	0.39	
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	9	0	0%	0.20	0.49	
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.021	0.94	
2_13_5_115	MW-03	Appendix IV	Lead	mg/L	9	8	89%	NA	NA	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
2_13_5_116	MW-03	Appendix IV	Lithium	mg/L	9	0	0%	-0.13	0.64	
2_13_5_117	MW-03	Appendix IV	Mercury	mg/L	9	8	89%	NA	NA	
2_13_5_118	MW-03	Appendix IV	Molybdenum	mg/L	9	7	78%	-0.50	0.16	
2_13_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	9	1	11%	-0.60	0.043	*
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	9	3	33%	-0.27	0.40	
2_13_5_125	MW-03	Appendix IV	Thallium	mg/L	9	8	89%	NA	NA	
2_14_5_101	MW-04	Appendix IV	Antimony	mg/L	9	6	67%	-0.65	0.073	
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	9	0	0%	0.088	0.76	
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	9	0	0%	-0.15	0.60	
2_14_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.11	0.70	
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	9	0	0%	-0.16	0.58	
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.15	0.59	
2_14_5_116	MW-04	Appendix IV	Lithium	mg/L	9	0	0%	-0.013	0.96	
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	9	2	22%	0.23	0.46	
2_14_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	9	1	11%	-0.23	0.44	
2_14_5_122	MW-04	Appendix IV	Selenium	mg/L	9	5	56%	-0.25	0.48	
2_16_5_101	MW-07	Appendix IV	Antimony	mg/L	9	8	89%	NA	NA	
2_16_5_102	MW-07	Appendix IV	Arsenic	mg/L	9	0	0%	-0.040	0.89	
2_16_5_103	MW-07	Appendix IV	Barium	mg/L	9	0	0%	0.17	0.54	
2_16_5_104	MW-07	Appendix IV	Beryllium	mg/L	9	6	67%	-0.40	0.27	
2_16_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.11	0.69	
2_16_5_110	MW-07	Appendix IV	Cobalt	mg/L	9	0	0%	0.20	0.49	
2_16_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	9	1	11%	-0.21	0.47	
2_16_5_116	MW-07	Appendix IV	Lithium	mg/L	9	0	0%	-0.55	0.053	
2_16_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	-0.60	0.050	
2_16_5_122	MW-07	Appendix IV	Selenium	mg/L	9	8	89%	NA	NA	
2_19_5_101	MW-10	Appendix IV	Antimony	mg/L	9	5	56%	-0.36	0.30	
2_19_5_102	MW-10	Appendix IV	Arsenic	mg/L	9	0	0%	0.64	0.024	*
2_19_5_103	MW-10	Appendix IV	Barium	mg/L	9	0	0%	0.27	0.34	
2_19_5_104	MW-10	Appendix IV	Beryllium	mg/L	9	3	33%	-0.40	0.22	
2_19_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.49	0.087	
2_19_5_110	MW-10	Appendix IV	Cobalt	mg/L	9	0	0%	-0.13	0.66	
2_19_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.57	0.046	*
2_19_5_115	MW-10	Appendix IV	Lead	mg/L	9	7	78%	-0.50	0.16	
2_19_5_116	MW-10	Appendix IV	Lithium	mg/L	9	0	0%	-0.29	0.31	
2_19_5_118	MW-10	Appendix IV	Molybdenum	mg/L	9	0	0%	-0.15	0.61	
2_19_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	9	8	89%	NA	NA	
2_19_5_122	MW-10	Appendix IV	Selenium	mg/L	9	1	11%	0.24	0.41	
2_20_5_101	MW-11	Appendix IV	Antimony	mg/L	9	6	67%	-0.60	0.10	
2_20_5_102	MW-11	Appendix IV	Arsenic	mg/L	9	0	0%	0.19	0.50	
2_20_5_103	MW-11	Appendix IV	Barium	mg/L	9	0	0%	0.25	0.38	
2_20_5_104	MW-11	Appendix IV	Beryllium	mg/L	9	8	89%	NA	NA	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
2_20_5_106	MW-11	Appendix IV	Cadmium	mg/L	9	8	89%	NA	NA	
2_20_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.14	0.62	
2_20_5_110	MW-11	Appendix IV	Cobalt	mg/L	9	0	0%	-0.20	0.49	
2_20_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.29	0.31	
2_20_5_115	MW-11	Appendix IV	Lead	mg/L	9	3	33%	-0.22	0.50	
2_20_5_116	MW-11	Appendix IV	Lithium	mg/L	9	0	0%	0.31	0.27	
2_20_5_118	MW-11	Appendix IV	Molybdenum	mg/L	9	2	22%	0.33	0.28	
2_20_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	-0.77	0.013	*
2_20_5_122	MW-11	Appendix IV	Selenium	mg/L	9	3	33%	-0.15	0.65	
2_21_5_101	MW-12	Appendix IV	Antimony	mg/L	9	0	0%	0.25	0.39	
2_21_5_102	MW-12	Appendix IV	Arsenic	mg/L	9	0	0%	0.64	0.025	*
2_21_5_103	MW-12	Appendix IV	Barium	mg/L	9	0	0%	0.63	0.026	*
2_21_5_106	MW-12	Appendix IV	Cadmium	mg/L	9	0	0%	0.41	0.15	
2_21_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	9	4	44%	0.073	0.83	
2_21_5_110	MW-12	Appendix IV	Cobalt	mg/L	9	3	33%	0.54	0.093	
2_21_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.049	0.86	
2_21_5_115	MW-12	Appendix IV	Lead	mg/L	9	5	56%	0.20	0.57	
2_21_5_116	MW-12	Appendix IV	Lithium	mg/L	9	0	0%	0.46	0.11	
2_21_5_117	MW-12	Appendix IV	Mercury	mg/L	9	8	89%	NA	NA	
2_21_5_118	MW-12	Appendix IV	Molybdenum	mg/L	9	0	0%	0.57	0.045	*
2_21_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	9	7	78%	-0.50	0.16	
2_21_5_122	MW-12	Appendix IV	Selenium	mg/L	9	0	0%	0.56	0.049	*
2_27_5_101	MW-32	Appendix IV	Antimony	mg/L	9	6	67%	-0.13	0.72	
2_27_5_102	MW-32	Appendix IV	Arsenic	mg/L	9	0	0%	0.24	0.40	
2_27_5_103	MW-32	Appendix IV	Barium	mg/L	9	0	0%	0.25	0.38	
2_27_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.65	0.022	*
2_27_5_110	MW-32	Appendix IV	Cobalt	mg/L	9	0	0%	0.29	0.31	
2_27_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.013	0.96	
2_27_5_115	MW-32	Appendix IV	Lead	mg/L	9	7	78%	-0.50	0.16	
2_27_5_116	MW-32	Appendix IV	Lithium	mg/L	9	0	0%	0.40	0.16	
2_27_5_118	MW-32	Appendix IV	Molybdenum	mg/L	9	0	0%	0.47	0.097	
2_27_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	-0.092	0.79	

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 5: Outlier Counts by Date

Date	Count
2022-11-30	1
2023-01-03	2
2023-01-04	3
2023-02-08	1
2023-03-13	1
2023-03-14	1
2023-04-18	3
2023-05-23	1
2023-06-28	1
2023-08-07	1
2023-10-24	2

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
1_11_5_115	MW-01R	Appendix IV	Lead	mg/L	9	2	22%	7	2023-06-28	5	0.0053
1_15_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	7	2023-03-14	NA	1.9
1_18_5_103	MW-09	Appendix IV	Barium	mg/L	9	0	0%	9	2023-01-04	5	2.4
1_18_5_122	MW-09	Appendix IV	Selenium	mg/L	9	2	22%	7	2023-05-23	1	0.00012
1_24_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	9	2022-11-30	25	0.55
1_25_5_116	MW-30	Appendix IV	Lithium	mg/L	9	0	0%	9	2023-03-13	50	0.27
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	9	2	22%	7	2023-04-18	5	0.00063
2_12_5_106	MW-02	Appendix IV	Cadmium	mg/L	9	6	67%	3	2023-10-24	1	0.00049
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	9	2023-02-08	50	4.5
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	9	5	56%	4	2023-04-18	5	0.00045
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	9	2023-01-04	5	1.6
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	9	0	0%	9	2023-01-04	1	0.46
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	9	2023-10-24	5	1.9
2_16_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	7	2023-08-07	1	2.4
2_19_5_101	MW-10	Appendix IV	Antimony	mg/L	9	5	56%	4	2023-04-18	5	0.00034
2_20_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	9	0	0%	9	2023-01-03	1	0.0086
2_20_5_115	MW-11	Appendix IV	Lead	mg/L	9	3	33%	6	2023-01-03	1	0.068

Table 7: Seasonality Tests

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
1_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	22%	2	3	2	2	9	0.19	0.47	0.34	1	2	2	2	7	0.30 NA	0.63	0.60
1_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	0%	2	3	2	2	9	0.15	0.094	0.092	2	3	2	2	9	0.15 NA	0.094	0.092
1_11_5_103	MW-01R	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.17	0.26	0.21	2	3	2	2	9	0.17 NA	0.26	0.21
1_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	0%	2	3	2	2	9	0.094	0.053	0.097	2	3	2	2	9	0.094 NA	0.053	0.097
1_11_5_106	MW-01R	Appendix IV	Cadmium	mg/L	67%	2	3	2	2	9	0.91	0.80	0.94	1	0	1	1	3	0.37 NA	NA	NA
1_11_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	0%	2	3	2	2	9	0.18	0.0096 **	0.037 *	2	3	2	2	9	0.18 NA	0.0096 **	0.037 *
1_11_5_110	MW-01R	Appendix IV	Cobalt	mg/L	0%	2	3	2	2	9	0.36	0.30	0.30	2	3	2	2	9	0.36 NA	0.30	0.30
1_11_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	0%	2	3	2	2	9	0.11	0.036 *	0.038 *	2	3	2	2	9	0.11 NA	0.036 *	0.038 *
1_11_5_115	MW-01R	Appendix IV	Lead	mg/L	22%	2	3	2	2	9	0.57	0.36	0.36	1	2	2	2	7	0.33 NA	0.56	0.47
1_11_5_116	MW-01R	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.25	0.17	0.19	2	3	2	2	9	0.25 NA	0.17	0.19
1_11_5_117	MW-01R	Appendix IV	Mercury	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
1_11_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	11%	2	3	2	2	9	0.67	0.51	0.82	2	2	2	2	8	0.76 NA	0.87	0.98
1_11_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	56%	2	3	2	2	9	0.41	0.58	0.55	1	1	2	0	4	0.41 NA	0.85	0.85
1_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	0%	2	3	2	2	9	0.51	0.93	0.87	2	3	2	2	9	0.51 NA	0.93	0.87
1_11_5_125	MW-01R	Appendix IV	Thallium	mg/L	100%	2	3	2	2	9	0.28	0.32	0.32	NA	NA	NA	NA	NA	NA NA	NA	NA
1_15_5_101	MW-06	Appendix IV	Antimony	mg/L	78%	2	3	2	2	9	0.80	0.46	0.73	0	1	0	1	2	0.32 NA	NA	NA
1_15_5_102	MW-06	Appendix IV	Arsenic	mg/L	0%	2	3	2	2	9	0.19	0.071	0.079	2	3	2	2	9	0.19 NA	0.071	0.079
1_15_5_103	MW-06	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.070	0.16	0.21	2	3	2	2	9	0.070 NA	0.16	0.21
1_15_5_104	MW-06	Appendix IV	Beryllium	mg/L	89%	2	3	2	2	9	0.32	0.37	0.37	1	0	0	0	1	NA NA	NA	NA
1_15_5_106	MW-06	Appendix IV	Cadmium	mg/L	100%	2	3	2	2	9	0.74	0.61	0.77	NA	NA	NA	NA	NA	NA NA	NA	NA
1_15_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	0%	2	3	2	2	9	0.52	0.73	0.64	2	3	2	2	9	0.52 NA	0.73	0.64
1_15_5_110	MW-06	Appendix IV	Cobalt	mg/L	0%	2	3	2	2	9	0.26	0.21	0.20	2	3	2	2	9	0.26 NA	0.21	0.20
1_15_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	0%	2	3	2	2	9	0.21	0.31	0.28	2	3	2	2	9	0.21 NA	0.31	0.28
1_15_5_115	MW-06	Appendix IV	Lead	mg/L	67%	2	3	2	2	9	0.53	0.52	0.42	1	0	1	1	3	0.37 NA	NA	NA
1_15_5_116	MW-06	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.80	0.65	0.58	2	3	2	2	9	0.80 NA	0.65	0.58
1_15_5_117	MW-06	Appendix IV	Mercury	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
1_15_5_118	MW-06	Appendix IV	Molybdenum	mg/L	67%	2	3	2	2	9	0.55	0.65	0.55	0	1	1	1	3	0.37 NA	NA	NA
1_15_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	22%	2	3	2	2	9	0.40	0.63	0.60	1	2	2	2	7	0.30 NA	0.45	0.37
1_15_5_122	MW-06	Appendix IV	Selenium	mg/L	56%	2	3	2	2	9	0.67	0.74	0.73	0	1	2	1	4	1.0 NA	0.97	0.98
1_15_5_125	MW-06	Appendix IV	Thallium	mg/L	100%	2	3	2	2	9	0.50	0.40	0.40	NA	NA	NA	NA	NA	NA NA	NA	NA
1_17_5_101	MW-08	Appendix IV	Antimony	mg/L	33%	3	3	2	1	9	0.57	0.64	0.67	3	2	1	0	6	0.38 NA	0.41	0.46
1_17_5_102	MW-08	Appendix IV	Arsenic	mg/L	0%	3	3	2	1	9	0.28	0.26	0.28	3	3	2	1	9	0.28 NA	0.26	0.28
1_17_5_103	MW-08	Appendix IV	Barium	mg/L	0%	3	3	2	1	9	0.36	0.33	0.26	3	3	2	1	9	0.36 NA	0.33	0.26
1_17_5_104	MW-08	Appendix IV	Beryllium	mg/L	100%	3	3	2	1	9	NA	0.67	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
1_17_5_106	MW-08	Appendix IV	Cadmium	mg/L	100%	3	3	2	1	9	0.13	0.089	0.089	NA	NA	NA	NA	NA	NA NA	NA	NA
1_17_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	0%	3	3	2	1	9	0.46	0.63	0.50	3	3	2	1	9	0.46 NA	0.63	0.50
1_17_5_110	MW-08	Appendix IV	Cobalt	mg/L	0%	3	3	2	1	9	0.47	0.40	0.31	3	3	2	1	9	0.47 NA	0.40	0.31
1_17_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	0%	3	3	2	1	9	0.36	0.24	0.23	3	3	2	1	9	0.36 NA	0.24	0.23
1_17_5_115	MW-08	Appendix IV	Lead	mg/L	78%	3	3	2	1	9	0.13	0.44	0.19	1	1	0	0	2	0.32 NA	NA	NA

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
1_17_5_116	MW-08	Appendix IV	Lithium	mg/L	0%	3	3	2	1	9	0.55	0.50	0.48	3	3	2	1	9	0.55 NA	0.50	0.48
1_17_5_117	MW-08	Appendix IV	Mercury	mg/L	100%	3	3	2	1	9	NA	0.67	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
1_17_5_118	MW-08	Appendix IV	Molybdenum	mg/L	0%	3	3	2	1	9	0.21	0.31	0.067	3	3	2	1	9	0.21 NA	0.31	0.067
1_17_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	22%	3	3	2	1	9	0.66	0.80	0.80	2	3	1	1	7	0.14 NA	0.0038 **	0.0027 **
1_17_5_122	MW-08	Appendix IV	Selenium	mg/L	56%	3	3	2	1	9	0.071	0.034 *	0.027 *	0	1	2	1	4	0.22 NA	0.00000000000000031 ***	0.00000000000000044 ***
1_17_5_125	MW-08	Appendix IV	Thallium	mg/L	100%	3	3	2	1	9	NA	0.67	0.67	NA	NA	NA	NA	NA	NA NA	NA	NA
1_18_5_101	MW-09	Appendix IV	Antimony	mg/L	56%	2	3	2	2	9	0.56	0.32	0.42	1	2	0	1	4	0.41 NA	0.82	0.74
1_18_5_102	MW-09	Appendix IV	Arsenic	mg/L	0%	2	3	2	2	9	0.12	0.14	0.15	2	3	2	2	9	0.12 NA	0.14	0.15
1_18_5_103	MW-09	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.20	0.32	0.21	2	3	2	2	9	0.20 NA	0.32	0.21
1_18_5_104	MW-09	Appendix IV	Beryllium	mg/L	89%	2	3	2	2	9	0.57	0.67	0.67	0	1	0	0	1	NA NA	NA	NA
1_18_5_106	MW-09	Appendix IV	Cadmium	mg/L	100%	2	3	2	2	9	0.34	0.45	0.41	NA	NA	NA	NA	NA	NA NA	NA	NA
1_18_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	0%	2	3	2	2	9	0.24	0.20	0.20	2	3	2	2	9	0.24 NA	0.20	0.20
1_18_5_110	MW-09	Appendix IV	Cobalt	mg/L	0%	2	3	2	2	9	0.16	0.31	0.17	2	3	2	2	9	0.16 NA	0.31	0.17
1_18_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	0%	2	3	2	2	9	0.22	0.34	0.38	2	3	2	2	9	0.22 NA	0.34	0.38
1_18_5_115	MW-09	Appendix IV	Lead	mg/L	100%	2	3	2	2	9	0.13	0.41	0.17	NA	NA	NA	NA	NA	NA NA	NA	NA
1_18_5_116	MW-09	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.097	0.041 *	0.054	2	3	2	2	9	0.097 NA	0.041 *	0.054
1_18_5_117	MW-09	Appendix IV	Mercury	mg/L	89%	2	3	2	2	9	0.32	0.37	0.37	0	0	0	1	1	NA NA	NA	NA
1_18_5_118	MW-09	Appendix IV	Molybdenum	mg/L	0%	2	3	2	2	9	0.096	0.056	0.12	2	3	2	2	9	0.096 NA	0.056	0.12
1_18_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	89%	2	3	2	2	9	0.19	0.38	0.35	0	0	0	1	1	NA NA	NA	NA
1_18_5_122	MW-09	Appendix IV	Selenium	mg/L	22%	2	3	2	2	9	0.33	0.40	0.45	1	2	2	2	7	0.20 NA	0.42	0.47
1_18_5_125	MW-09	Appendix IV	Thallium	mg/L	100%	2	3	2	2	9	0.34	0.40	0.40	NA	NA	NA	NA	NA	NA NA	NA	NA
1_22_5_101	MW-18	Appendix IV	Antimony	mg/L	22%	2	3	2	2	9	0.11	0.36	0.27	2	2	1	2	7	0.25 NA	0.68	0.64
1_22_5_102	MW-18	Appendix IV	Arsenic	mg/L	0%	2	3	2	2	9	0.088	0.031 *	0.025 *	2	3	2	2	9	0.088 NA	0.031 *	0.025 *
1_22_5_103	MW-18	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.22	0.22	0.23	2	3	2	2	9	0.22 NA	0.22	0.23
1_22_5_104	MW-18	Appendix IV	Beryllium	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
1_22_5_106	MW-18	Appendix IV	Cadmium	mg/L	22%	2	3	2	2	9	0.79	0.79	0.72	1	3	2	1	7	0.86 NA	0.92	0.87
1_22_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	89%	2	3	2	2	9	0.45	0.78	0.77	0	1	0	0	1	NA NA	NA	NA
1_22_5_110	MW-18	Appendix IV	Cobalt	mg/L	0%	2	3	2	2	9	0.46	0.31	0.37	2	3	2	2	9	0.46 NA	0.31	0.37
1_22_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	0%	2	3	2	2	9	0.15	0.080	0.077	2	3	2	2	9	0.15 NA	0.080	0.077
1_22_5_115	MW-18	Appendix IV	Lead	mg/L	67%	2	3	2	2	9	0.45	0.46	0.49	0	0	2	1	3	0.22 NA	0.60	0.57
1_22_5_116	MW-18	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.14	0.043 *	0.038 *	2	3	2	2	9	0.14 NA	0.043 *	0.038 *
1_22_5_117	MW-18	Appendix IV	Mercury	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
1_22_5_118	MW-18	Appendix IV	Molybdenum	mg/L	0%	2	3	2	2	9	0.17	0.076	0.10	2	3	2	2	9	0.17 NA	0.076	0.10
1_22_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	67%	2	3	2	2	9	0.14	0.41	0.26	0	1	1	1	3	0.37 NA	NA	NA
1_22_5_122	MW-18	Appendix IV	Selenium	mg/L	0%	2	3	2	2	9	0.45	0.46	0.41	2	3	2	2	9	0.45 NA	0.46	0.41
1_22_5_125	MW-18	Appendix IV	Thallium	mg/L	100%	2	3	2	2	9	0.57	0.67	0.67	NA	NA	NA	NA	NA	NA NA	NA	NA
1_23_5_101	MW-19	Appendix IV	Antimony	mg/L	89%	2	3	2	2	9	0.69	0.36	0.59	0	1	0	0	1	NA NA	NA	NA
1_23_5_102	MW-19	Appendix IV	Arsenic	mg/L	0%	2	3	2	2	9	0.055	0.0017 **	0.0042 **	2	3	2	2	9	0.055 NA	0.0017 **	0.0042 **
1_23_5_103	MW-19	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.077	0.032 *	0.052	2	3	2	2	9	0.077 NA	0.032 *	0.052

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
1_23_5_104	MW-19	Appendix IV	Beryllium	mg/L	33%	2	3	2	2	9	0.10	0.36	0.32	1	3	2	0	6	0.17 NA	0.25	0.27
1_23_5_106	MW-19	Appendix IV	Cadmium	mg/L	100%	2	3	2	2	9	0.74	0.61	0.77	NA	NA	NA	NA	NA	NA NA	NA	NA
1_23_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	44%	2	3	2	2	9	0.17	0.040 *	0.046 *	1	1	2	1	5	0.28 NA	0.085	0.11
1_23_5_110	MW-19	Appendix IV	Cobalt	mg/L	0%	2	3	2	2	9	0.31	0.21	0.21	2	3	2	2	9	0.31 NA	0.21	0.21
1_23_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	0%	2	3	2	2	9	0.20	0.29	0.27	2	3	2	2	9	0.20 NA	0.29	0.27
1_23_5_115	MW-19	Appendix IV	Lead	mg/L	100%	2	3	2	2	9	0.099	0.14	0.043 *	NA	NA	NA	NA	NA	NA NA	NA	NA
1_23_5_116	MW-19	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.53	0.68	0.68	2	3	2	2	9	0.53 NA	0.68	0.68
1_23_5_117	MW-19	Appendix IV	Mercury	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
1_23_5_118	MW-19	Appendix IV	Molybdenum	mg/L	0%	2	3	2	2	9	0.21	0.29	0.37	2	3	2	2	9	0.21 NA	0.29	0.37
1_23_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	33%	2	3	2	2	9	0.99	0.94	0.91	2	3	1	0	6	0.30 NA	0.41	0.45
1_23_5_122	MW-19	Appendix IV	Selenium	mg/L	100%	2	3	2	2	9	0.21	0.28	0.19	NA	NA	NA	NA	NA	NA NA	NA	NA
1_23_5_125	MW-19	Appendix IV	Thallium	mg/L	100%	2	3	2	2	9	0.10	0.045 *	0.045 *	NA	NA	NA	NA	NA	NA NA	NA	NA
1_24_5_101	MW-20	Appendix IV	Antimony	mg/L	22%	2	3	2	2	9	0.24	0.34	0.24	2	2	2	1	7	0.43 NA	0.54	0.46
1_24_5_102	MW-20	Appendix IV	Arsenic	mg/L	0%	2	3	2	2	9	0.096	0.033 *	0.033 *	2	3	2	2	9	0.096 NA	0.033 *	0.033 *
1_24_5_103	MW-20	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.086	0.15	0.099	2	3	2	2	9	0.086 NA	0.15	0.099
1_24_5_104	MW-20	Appendix IV	Beryllium	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
1_24_5_106	MW-20	Appendix IV	Cadmium	mg/L	100%	2	3	2	2	9	0.28	0.32	0.32	NA	NA	NA	NA	NA	NA NA	NA	NA
1_24_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	56%	2	3	2	2	9	0.47	0.70	0.70	1	2	0	1	4	0.41 NA	0.74	0.70
1_24_5_110	MW-20	Appendix IV	Cobalt	mg/L	0%	2	3	2	2	9	0.38	0.36	0.35	2	3	2	2	9	0.38 NA	0.36	0.35
1_24_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	0%	2	3	2	2	9	0.39	0.39	0.40	2	3	2	2	9	0.39 NA	0.39	0.40
1_24_5_115	MW-20	Appendix IV	Lead	mg/L	0%	2	3	2	2	9	0.24	0.29	0.27	2	3	2	2	9	0.24 NA	0.29	0.27
1_24_5_116	MW-20	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.088	0.021 *	0.037 *	2	3	2	2	9	0.088 NA	0.021 *	0.037 *
1_24_5_117	MW-20	Appendix IV	Mercury	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
1_24_5_118	MW-20	Appendix IV	Molybdenum	mg/L	0%	2	3	2	2	9	0.24	0.25	0.27	2	3	2	2	9	0.24 NA	0.25	0.27
1_24_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	56%	2	3	2	2	9	0.85	0.60	0.68	1	1	1	1	4	0.39 NA	NA	NA
1_24_5_122	MW-20	Appendix IV	Selenium	mg/L	56%	2	3	2	2	9	0.16	0.22	0.18	0	1	2	1	4	0.32 NA	0.32	0.36
1_24_5_125	MW-20	Appendix IV	Thallium	mg/L	100%	2	3	2	2	9	NA	0.37	0.37	NA	NA	NA	NA	NA	NA NA	NA	NA
1_25_5_101	MW-30	Appendix IV	Antimony	mg/L	89%	2	3	2	2	9	0.56	0.58	0.67	0	1	0	0	1	NA NA	NA	NA
1_25_5_102	MW-30	Appendix IV	Arsenic	mg/L	22%	2	3	2	2	9	0.087	0.083	0.12	1	2	2	2	7	0.17 NA	0.22	0.37
1_25_5_103	MW-30	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.15	0.086	0.084	2	3	2	2	9	0.15 NA	0.086	0.084
1_25_5_104	MW-30	Appendix IV	Beryllium	mg/L	89%	2	3	2	2	9	0.049 *	0.37	0.36	1	0	0	0	1	NA NA	NA	NA
1_25_5_106	MW-30	Appendix IV	Cadmium	mg/L	100%	2	3	2	2	9	0.74	0.61	0.77	NA	NA	NA	NA	NA	NA NA	NA	NA
1_25_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	0%	2	3	2	2	9	0.28	0.25	0.23	2	3	2	2	9	0.28 NA	0.25	0.23
1_25_5_110	MW-30	Appendix IV	Cobalt	mg/L	0%	2	3	2	2	9	0.33	0.55	0.58	2	3	2	2	9	0.33 NA	0.55	0.58
1_25_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	0%	2	3	2	2	9	0.67	0.68	0.68	2	3	2	2	9	0.67 NA	0.68	0.68
1_25_5_115	MW-30	Appendix IV	Lead	mg/L	100%	2	3	2	2	9	0.19	0.26	0.13	NA	NA	NA	NA	NA	NA NA	NA	NA
1_25_5_116	MW-30	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.86	0.88	0.94	2	3	2	2	9	0.86 NA	0.88	0.94
1_25_5_117	MW-30	Appendix IV	Mercury	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
1_25_5_118	MW-30	Appendix IV	Molybdenum	mg/L	33%	2	3	2	2	9	0.20	0.098	0.26	1	2	2	1	6	0.46 NA	0.20	0.55

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
1_25_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	56%	2	3	2	2	9	0.44	0.54	0.48	1	1	2	0	4	0.41 NA	0.59	0.53
1_25_5_122	MW-30	Appendix IV	Selenium	mg/L	67%	2	3	2	2	9	0.25	0.29	0.21	0	0	2	1	3	0.22 NA	0.33	0.35
1_25_5_125	MW-30	Appendix IV	Thallium	mg/L	100%	2	3	2	2	9	0.11	0.058	0.058	NA	NA	NA	NA	NA	NA NA	NA	NA
1_26_5_101	MW-31	Appendix IV	Antimony	mg/L	44%	3	3	2	1	9	0.10	0.037 *	0.044 *	2	2	1	0	5	0.19 NA	0.037 *	0.044 *
1_26_5_102	MW-31	Appendix IV	Arsenic	mg/L	0%	3	3	2	1	9	0.27	0.32	0.29	3	3	2	1	9	0.27 NA	0.32	0.29
1_26_5_103	MW-31	Appendix IV	Barium	mg/L	0%	3	3	2	1	9	0.20	0.29	0.25	3	3	2	1	9	0.20 NA	0.29	0.25
1_26_5_104	MW-31	Appendix IV	Beryllium	mg/L	100%	3	3	2	1	9	NA	0.67	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
1_26_5_106	MW-31	Appendix IV	Cadmium	mg/L	100%	3	3	2	1	9	0.13	0.089	0.089	NA	NA	NA	NA	NA	NA NA	NA	NA
1_26_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	0%	3	3	2	1	9	0.63	0.85	0.83	3	3	2	1	9	0.63 NA	0.85	0.83
1_26_5_110	MW-31	Appendix IV	Cobalt	mg/L	0%	3	3	2	1	9	0.33	0.36	0.28	3	3	2	1	9	0.33 NA	0.36	0.28
1_26_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	0%	3	3	2	1	9	0.49	0.58	0.58	3	3	2	1	9	0.49 NA	0.58	0.58
1_26_5_115	MW-31	Appendix IV	Lead	mg/L	89%	3	3	2	1	9	0.072	0.011 *	0.0012 **	0	1	0	0	1	NA NA	NA	NA
1_26_5_116	MW-31	Appendix IV	Lithium	mg/L	0%	3	3	2	1	9	0.25	0.43	0.46	3	3	2	1	9	0.25 NA	0.43	0.46
1_26_5_117	MW-31	Appendix IV	Mercury	mg/L	100%	3	3	2	1	9	NA	0.67	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
1_26_5_118	MW-31	Appendix IV	Molybdenum	mg/L	0%	3	3	2	1	9	0.24	0.57	0.53	3	3	2	1	9	0.24 NA	0.57	0.53
1_26_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	33%	3	3	2	1	9	0.49	0.66	0.60	2	2	2	0	6	1.0 NA	0.88	0.94
1_26_5_122	MW-31	Appendix IV	Selenium	mg/L	56%	3	3	2	1	9	0.28	0.23	0.29	0	1	2	1	4	0.41 NA	0.67	0.64
1_26_5_125	MW-31	Appendix IV	Thallium	mg/L	100%	3	3	2	1	9	NA	0.67	0.67	NA	NA	NA	NA	NA	NA NA	NA	NA
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	22%	2	3	2	2	9	0.49	0.33	0.40	1	2	2	2	7	0.59 NA	0.67	0.70
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	0%	2	3	2	2	9	0.34	0.66	0.64	2	3	2	2	9	0.34 NA	0.66	0.64
2_12_5_103	MW-02	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.23	0.39	0.45	2	3	2	2	9	0.23 NA	0.39	0.45
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	0%	2	3	2	2	9	0.23	0.23	0.18	2	3	2	2	9	0.23 NA	0.23	0.18
2_12_5_106	MW-02	Appendix IV	Cadmium	mg/L	67%	2	3	2	2	9	0.98	0.74	0.94	1	1	0	1	3	0.37 NA	NA	NA
2_12_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	0%	2	3	2	2	9	0.11	0.042 *	0.087	2	3	2	2	9	0.11 NA	0.042 *	0.087
2_12_5_110	MW-02	Appendix IV	Cobalt	mg/L	0%	2	3	2	2	9	0.22	0.16	0.21	2	3	2	2	9	0.22 NA	0.16	0.21
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	0%	2	3	2	2	9	0.45	0.52	0.48	2	3	2	2	9	0.45 NA	0.52	0.48
2_12_5_115	MW-02	Appendix IV	Lead	mg/L	0%	2	3	2	2	9	0.51	0.56	0.43	2	3	2	2	9	0.51 NA	0.56	0.43
2_12_5_116	MW-02	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.35	0.41	0.44	2	3	2	2	9	0.35 NA	0.41	0.44
2_12_5_117	MW-02	Appendix IV	Mercury	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	0%	2	3	2	2	9	0.11	0.27	0.20	2	3	2	2	9	0.11 NA	0.27	0.20
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	33%	2	3	2	2	9	0.13	0.096	0.23	1	2	2	1	6	0.23 NA	0.13	0.11
2_12_5_122	MW-02	Appendix IV	Selenium	mg/L	0%	2	3	2	2	9	0.16	0.28	0.28	2	3	2	2	9	0.16 NA	0.28	0.28
2_12_5_125	MW-02	Appendix IV	Thallium	mg/L	89%	2	3	2	2	9	0.60	0.68	0.69	0	0	0	1	1	NA NA	NA	NA
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	56%	2	3	2	2	9	0.27	0.50	0.51	1	2	0	1	4	0.26 NA	0.78	0.74
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	0%	2	3	2	2	9	0.26	0.32	0.32	2	3	2	2	9	0.26 NA	0.32	0.32
2_13_5_103	MW-03	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.76	0.86	0.71	2	3	2	2	9	0.76 NA	0.86	0.71
2_13_5_104	MW-03	Appendix IV	Beryllium	mg/L	78%	2	3	2	2	9	0.63	0.46	0.48	0	1	0	1	2	0.32 NA	NA	NA
2_13_5_106	MW-03	Appendix IV	Cadmium	mg/L	89%	2	3	2	2	9	0.82	0.66	0.86	0	0	0	1	1	NA NA	NA	NA
2_13_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	0%	2	3	2	2	9	0.41	0.64	0.55	2	3	2	2	9	0.41 NA	0.64	0.55

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis		ANOVA	Log ANOVA
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	0%	2	3	2	2	9	0.17	0.16	0.20	2	3	2	2	9	0.17	NA	0.16	0.20
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	0%	2	3	2	2	9	0.16	0.32	0.28	2	3	2	2	9	0.16	NA	0.32	0.28
2_13_5_115	MW-03	Appendix IV	Lead	mg/L	89%	2	3	2	2	9	0.22	0.31	0.22	0	0	0	1	1	NA	NA	NA	NA
2_13_5_116	MW-03	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.54	0.52	0.54	2	3	2	2	9	0.54	NA	0.52	0.54
2_13_5_117	MW-03	Appendix IV	Mercury	mg/L	89%	2	3	2	2	9	0.32	0.37	0.37	0	0	0	1	1	NA	NA	NA	NA
2_13_5_118	MW-03	Appendix IV	Molybdenum	mg/L	78%	2	3	2	2	9	0.25	0.60	0.38	1	0	0	1	2	0.32	NA	NA	NA
2_13_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	11%	2	3	2	2	9	0.77	0.84	0.88	1	3	2	2	8	0.48	NA	0.72	0.68
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	33%	2	3	2	2	9	0.33	0.56	0.57	0	2	2	2	6	0.21	NA	0.35	0.39
2_13_5_125	MW-03	Appendix IV	Thallium	mg/L	89%	2	3	2	2	9	0.14	0.12	0.19	0	0	0	1	1	NA	NA	NA	NA
2_14_5_101	MW-04	Appendix IV	Antimony	mg/L	67%	2	3	2	2	9	0.56	0.57	0.69	0	1	1	1	3	0.37	NA	NA	NA
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	0%	2	3	2	2	9	0.58	0.63	0.55	2	3	2	2	9	0.58	NA	0.63	0.55
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.16	0.33	0.29	2	3	2	2	9	0.16	NA	0.33	0.29
2_14_5_104	MW-04	Appendix IV	Beryllium	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2_14_5_106	MW-04	Appendix IV	Cadmium	mg/L	100%	2	3	2	2	9	0.74	0.61	0.77	NA	NA	NA	NA	NA	NA	NA	NA	NA
2_14_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	0%	2	3	2	2	9	0.23	0.10	0.095	2	3	2	2	9	0.23	NA	0.10	0.095
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	0%	2	3	2	2	9	0.26	0.15	0.15	2	3	2	2	9	0.26	NA	0.15	0.15
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	0%	2	3	2	2	9	0.67	0.43	0.41	2	3	2	2	9	0.67	NA	0.43	0.41
2_14_5_115	MW-04	Appendix IV	Lead	mg/L	100%	2	3	2	2	9	0.41	0.59	0.49	NA	NA	NA	NA	NA	NA	NA	NA	NA
2_14_5_116	MW-04	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.19	0.20	0.21	2	3	2	2	9	0.19	NA	0.20	0.21
2_14_5_117	MW-04	Appendix IV	Mercury	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	22%	2	3	2	2	9	0.47	0.76	0.74	1	2	2	2	7	0.27	NA	0.35	0.49
2_14_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	11%	2	3	2	2	9	0.91	0.89	0.85	2	2	2	2	8	0.84	NA	0.80	0.73
2_14_5_122	MW-04	Appendix IV	Selenium	mg/L	56%	2	3	2	2	9	0.20	0.34	0.42	1	0	2	1	4	0.26	NA	0.15	0.23
2_14_5_125	MW-04	Appendix IV	Thallium	mg/L	100%	2	3	2	2	9	0.57	0.67	0.67	NA	NA	NA	NA	NA	NA	NA	NA	NA
2_16_5_101	MW-07	Appendix IV	Antimony	mg/L	89%	2	3	2	2	9	0.26	0.29	0.29	0	1	0	0	1	NA	NA	NA	NA
2_16_5_102	MW-07	Appendix IV	Arsenic	mg/L	0%	2	3	2	2	9	0.21	0.24	0.29	2	3	2	2	9	0.21	NA	0.24	0.29
2_16_5_103	MW-07	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.33	0.28	0.29	2	3	2	2	9	0.33	NA	0.28	0.29
2_16_5_104	MW-07	Appendix IV	Beryllium	mg/L	67%	2	3	2	2	9	0.55	0.55	0.56	1	0	1	1	3	0.37	NA	NA	NA
2_16_5_106	MW-07	Appendix IV	Cadmium	mg/L	100%	2	3	2	2	9	0.28	0.32	0.32	NA	NA	NA	NA	NA	NA	NA	NA	NA
2_16_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	0%	2	3	2	2	9	0.67	0.83	0.81	2	3	2	2	9	0.67	NA	0.83	0.81
2_16_5_110	MW-07	Appendix IV	Cobalt	mg/L	0%	2	3	2	2	9	0.51	0.43	0.44	2	3	2	2	9	0.51	NA	0.43	0.44
2_16_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	11%	2	3	2	2	9	0.33	0.38	0.50	2	2	2	2	8	0.19	NA	0.13	0.16
2_16_5_115	MW-07	Appendix IV	Lead	mg/L	100%	2	3	2	2	9	0.28	0.32	0.32	NA	NA	NA	NA	NA	NA	NA	NA	NA
2_16_5_116	MW-07	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.87	0.91	0.95	2	3	2	2	9	0.87	NA	0.91	0.95
2_16_5_117	MW-07	Appendix IV	Mercury	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2_16_5_118	MW-07	Appendix IV	Molybdenum	mg/L	100%	2	3	2	2	9	0.28	0.32	0.32	NA	NA	NA	NA	NA	NA	NA	NA	NA
2_16_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	22%	2	3	2	2	9	0.67	0.65	0.77	2	2	1	2	7	0.39	NA	0.065	0.20
2_16_5_122	MW-07	Appendix IV	Selenium	mg/L	89%	2	3	2	2	9	0.28	0.32	0.32	0	1	0	0	1	NA	NA	NA	NA
2_16_5_125	MW-07	Appendix IV	Thallium	mg/L	100%	2	3	2	2	9	NA	0.37	0.37	NA	NA	NA	NA	NA	NA	NA	NA	NA

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
2_19_5_101	MW-10	Appendix IV	Antimony	mg/L	56%	2	3	2	2	9	0.84	0.54	0.84	0	1	2	1	4	0.22 NA	0.000000000000000070 ***	0 ***
2_19_5_102	MW-10	Appendix IV	Arsenic	mg/L	0%	2	3	2	2	9	0.16	0.11	0.13	2	3	2	2	9	0.16 NA	0.11	0.13
2_19_5_103	MW-10	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.094	0.15	0.081	2	3	2	2	9	0.094 NA	0.15	0.081
2_19_5_104	MW-10	Appendix IV	Beryllium	mg/L	33%	2	3	2	2	9	0.41	0.64	0.52	1	2	2	1	6	0.46 NA	0.84	0.80
2_19_5_106	MW-10	Appendix IV	Cadmium	mg/L	100%	2	3	2	2	9	0.74	0.61	0.77	NA	NA	NA	NA	NA	NA NA	NA	NA
2_19_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	0%	2	3	2	2	9	0.16	0.030 *	0.087	2	3	2	2	9	0.16 NA	0.030 *	0.087
2_19_5_110	MW-10	Appendix IV	Cobalt	mg/L	0%	2	3	2	2	9	0.32	0.66	0.55	2	3	2	2	9	0.32 NA	0.66	0.55
2_19_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	0%	2	3	2	2	9	0.13	0.19	0.29	2	3	2	2	9	0.13 NA	0.19	0.29
2_19_5_115	MW-10	Appendix IV	Lead	mg/L	78%	2	3	2	2	9	0.10	0.16	0.047 *	0	0	1	1	2	0.32 NA	NA	NA
2_19_5_116	MW-10	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.18	0.35	0.24	2	3	2	2	9	0.18 NA	0.35	0.24
2_19_5_117	MW-10	Appendix IV	Mercury	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
2_19_5_118	MW-10	Appendix IV	Molybdenum	mg/L	0%	2	3	2	2	9	0.36	0.52	0.40	2	3	2	2	9	0.36 NA	0.52	0.40
2_19_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	89%	2	3	2	2	9	0.82	0.82	0.89	1	0	0	0	1	NA NA	NA	NA
2_19_5_122	MW-10	Appendix IV	Selenium	mg/L	11%	2	3	2	2	9	0.48	0.73	0.78	2	2	2	2	8	0.13 NA	0.082	0.071
2_19_5_125	MW-10	Appendix IV	Thallium	mg/L	100%	2	3	2	2	9	0.14	0.045 *	0.045 *	NA	NA	NA	NA	NA	NA NA	NA	NA
2_20_5_101	MW-11	Appendix IV	Antimony	mg/L	67%	2	3	2	2	9	0.94	0.62	0.84	1	1	0	1	3	0.37 NA	NA	NA
2_20_5_102	MW-11	Appendix IV	Arsenic	mg/L	0%	2	3	2	2	9	0.12	0.21	0.11	2	3	2	2	9	0.12 NA	0.21	0.11
2_20_5_103	MW-11	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.18	0.20	0.15	2	3	2	2	9	0.18 NA	0.20	0.15
2_20_5_104	MW-11	Appendix IV	Beryllium	mg/L	89%	2	3	2	2	9	0.32	0.37	0.37	1	0	0	0	1	NA NA	NA	NA
2_20_5_106	MW-11	Appendix IV	Cadmium	mg/L	89%	2	3	2	2	9	0.82	0.57	0.80	1	0	0	0	1	NA NA	NA	NA
2_20_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	0%	2	3	2	2	9	0.11	0.34	0.20	2	3	2	2	9	0.11 NA	0.34	0.20
2_20_5_110	MW-11	Appendix IV	Cobalt	mg/L	0%	2	3	2	2	9	0.16	0.16	0.092	2	3	2	2	9	0.16 NA	0.16	0.092
2_20_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	0%	2	3	2	2	9	0.13	0.22	0.14	2	3	2	2	9	0.13 NA	0.22	0.14
2_20_5_115	MW-11	Appendix IV	Lead	mg/L	33%	2	3	2	2	9	0.49	0.36	0.34	2	0	2	2	6	0.65 NA	0.46	0.47
2_20_5_116	MW-11	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.13	0.21	0.072	2	3	2	2	9	0.13 NA	0.21	0.072
2_20_5_117	MW-11	Appendix IV	Mercury	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
2_20_5_118	MW-11	Appendix IV	Molybdenum	mg/L	22%	2	3	2	2	9	0.067	0.059	0.024 *	2	1	2	2	7	0.17 NA	0.27	0.13
2_20_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	22%	2	3	2	2	9	0.75	0.75	0.73	1	3	1	2	7	0.36 NA	0.53	0.58
2_20_5_122	MW-11	Appendix IV	Selenium	mg/L	33%	2	3	2	2	9	0.33	0.35	0.42	1	1	2	2	6	0.28 NA	0.12	0.16
2_20_5_125	MW-11	Appendix IV	Thallium	mg/L	100%	2	3	2	2	9	0.34	0.40	0.40	NA	NA	NA	NA	NA	NA NA	NA	NA
2_21_5_101	MW-12	Appendix IV	Antimony	mg/L	0%	2	3	2	2	9	0.23	0.29	0.31	2	3	2	2	9	0.23 NA	0.29	0.31
2_21_5_102	MW-12	Appendix IV	Arsenic	mg/L	0%	2	3	2	2	9	0.10	0.026 *	0.048 *	2	3	2	2	9	0.10 NA	0.026 *	0.048 *
2_21_5_103	MW-12	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.14	0.11	0.074	2	3	2	2	9	0.14 NA	0.11	0.074
2_21_5_104	MW-12	Appendix IV	Beryllium	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
2_21_5_106	MW-12	Appendix IV	Cadmium	mg/L	0%	2	3	2	2	9	0.21	0.052	0.17	2	3	2	2	9	0.21 NA	0.052	0.17
2_21_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	44%	2	3	2	2	9	0.27	0.29	0.27	2	2	0	1	5	0.17 NA	0.15	0.099
2_21_5_110	MW-12	Appendix IV	Cobalt	mg/L	33%	2	3	2	2	9	0.12	0.017 *	0.051	1	1	2	2	6	0.23 NA	0.20	0.24
2_21_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	0%	2	3	2	2	9	0.70	0.83	0.86	2	3	2	2	9	0.70 NA	0.83	0.86
2_21_5_115	MW-12	Appendix IV	Lead	mg/L	56%	2	3	2	2	9	0.28	0.58	0.58	0	1	2	1	4	0.63 NA	0.76	0.77

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
2_21_5_116	MW-12	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.20	0.20	0.20	2	3	2	2	9	0.20 NA	0.20	0.20
2_21_5_117	MW-12	Appendix IV	Mercury	mg/L	89%	2	3	2	2	9	NA	0.37	NA	0	0	0	1	1	NA NA	NA	NA
2_21_5_118	MW-12	Appendix IV	Molybdenum	mg/L	0%	2	3	2	2	9	0.087	0.0078 **	0.011 *	2	3	2	2	9	0.087 NA	0.0078 **	0.011 *
2_21_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	78%	2	3	2	2	9	0.18	0.25	0.22	0	2	0	0	2	NA NA	NA	NA
2_21_5_122	MW-12	Appendix IV	Selenium	mg/L	0%	2	3	2	2	9	0.084	0.041 *	0.033 *	2	3	2	2	9	0.084 NA	0.041 *	0.033 *
2_21_5_125	MW-12	Appendix IV	Thallium	mg/L	100%	2	3	2	2	9	NA	0.37	0.37	NA	NA	NA	NA	NA	NA NA	NA	NA
2_27_5_101	MW-32	Appendix IV	Antimony	mg/L	67%	2	3	2	2	9	0.15	0.20	0.092	0	2	0	1	3	0.22 NA	0.63	0.61
2_27_5_102	MW-32	Appendix IV	Arsenic	mg/L	0%	2	3	2	2	9	0.11	0.069	0.083	2	3	2	2	9	0.11 NA	0.069	0.083
2_27_5_103	MW-32	Appendix IV	Barium	mg/L	0%	2	3	2	2	9	0.077	0.014 *	0.010 *	2	3	2	2	9	0.077 NA	0.014 *	0.010 *
2_27_5_104	MW-32	Appendix IV	Beryllium	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
2_27_5_106	MW-32	Appendix IV	Cadmium	mg/L	100%	2	3	2	2	9	0.28	0.32	0.32	NA	NA	NA	NA	NA	NA NA	NA	NA
2_27_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	0%	2	3	2	2	9	0.12	0.061	0.069	2	3	2	2	9	0.12 NA	0.061	0.069
2_27_5_110	MW-32	Appendix IV	Cobalt	mg/L	0%	2	3	2	2	9	0.23	0.0053 **	0.0094 **	2	3	2	2	9	0.23 NA	0.0053 **	0.0094 **
2_27_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	0%	2	3	2	2	9	0.61	0.53	0.54	2	3	2	2	9	0.61 NA	0.53	0.54
2_27_5_115	MW-32	Appendix IV	Lead	mg/L	78%	2	3	2	2	9	0.34	0.39	0.41	0	1	1	0	2	0.32 NA	NA	NA
2_27_5_116	MW-32	Appendix IV	Lithium	mg/L	0%	2	3	2	2	9	0.069	0.023 *	0.015 *	2	3	2	2	9	0.069 NA	0.023 *	0.015 *
2_27_5_117	MW-32	Appendix IV	Mercury	mg/L	100%	2	3	2	2	9	NA	0.37	NA	NA	NA	NA	NA	NA	NA NA	NA	NA
2_27_5_118	MW-32	Appendix IV	Molybdenum	mg/L	0%	2	3	2	2	9	0.14	0.18	0.19	2	3	2	2	9	0.14 NA	0.18	0.19
2_27_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	56%	2	3	2	2	9	0.16	0.19	0.15	0	2	1	1	4	0.26 NA	0.078	0.070
2_27_5_122	MW-32	Appendix IV	Selenium	mg/L	100%	2	3	2	2	9	0.28	0.32	0.32	NA	NA	NA	NA	NA	NA NA	NA	NA
2_27_5_125	MW-32	Appendix IV	Thallium	mg/L	100%	2	3	2	2	9	NA	0.37	0.37	NA	NA	NA	NA	NA	NA NA	NA	NA

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 8: Trend Tests: Lognormal MLE and MK

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
1_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	9	2	22%	Parametric	Lognormal MLE	0.00023	0.91	↔
1_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00043	0.70	↔
1_11_5_103	MW-01R	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0018	0.010	↔
1_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00098	0.35	↔
1_11_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0022	0.047	↔
1_11_5_110	MW-01R	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00068	0.68	↔
1_11_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Nonparametric	MK	0.0024	0.58	↔
1_11_5_115	MW-01R	Appendix IV	Lead	mg/L	9	2	22%	Parametric	Lognormal MLE	0.0011	0.65	↔
1_11_5_116	MW-01R	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0017	0.036	↔
1_11_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	9	1	11%	Parametric	Lognormal MLE	-0.0010	0.51	↔
1_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00029	0.77	↔
1_15_5_102	MW-06	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00097	0.14	↔
1_15_5_103	MW-06	Appendix IV	Barium	mg/L	9	0	0%	Nonparametric	MK	-0.00019	0.59	↔
1_15_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00037	0.68	↔
1_15_5_110	MW-06	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0000098	0.99	↔
1_15_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.000095	0.82	↔
1_15_5_116	MW-06	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00050	0.31	↔
1_15_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	Parametric	Lognormal MLE	-0.00013	0.92	↔
1_17_5_101	MW-08	Appendix IV	Antimony	mg/L	9	3	33%	Parametric	Lognormal MLE	-0.0022	0.39	↔
1_17_5_102	MW-08	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00035	0.88	↔
1_17_5_103	MW-08	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00066	0.065	↔
1_17_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00082	0.31	↔
1_17_5_110	MW-08	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.000028	0.97	↔
1_17_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00073	0.55	↔
1_17_5_116	MW-08	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.000049	0.95	↔
1_17_5_118	MW-08	Appendix IV	Molybdenum	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0040	0.043	↔
1_17_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	Parametric	Lognormal MLE	-0.0011	0.47	↔
1_18_5_102	MW-09	Appendix IV	Arsenic	mg/L	9	0	0%	Nonparametric	MK	0	0.83	↔
1_18_5_103	MW-09	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0050	0.014	↔
1_18_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00071	0.32	↔
1_18_5_110	MW-09	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00063	0.64	↔
1_18_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00083	0.0000010	↑
1_18_5_116	MW-09	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.000063	0.83	↔
1_18_5_118	MW-09	Appendix IV	Molybdenum	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0016	0.030	↔
1_18_5_122	MW-09	Appendix IV	Selenium	mg/L	9	2	22%	Nonparametric	MK	-0.000000058	0.75	↔
1_22_5_102	MW-18	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0014	0.089	↔
1_22_5_103	MW-18	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0014	0.073	↔
1_22_5_106	MW-18	Appendix IV	Cadmium	mg/L	9	2	22%	Parametric	Lognormal MLE	-0.0033	0.10	↔
1_22_5_110	MW-18	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0038	0.0000025	↓
1_22_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0012	0.000000015	↑
1_22_5_116	MW-18	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00028	0.69	↔
1_22_5_118	MW-18	Appendix IV	Molybdenum	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0018	0.0072	↑
1_22_5_122	MW-18	Appendix IV	Selenium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00035	0.87	↔

(Table continues on next page)

Table 8: Trend Tests: Lognormal MLE and MK *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
1_23_5_102	MW-19	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00070	0.48	↔
1_23_5_103	MW-19	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00046	0.33	↔
1_23_5_104	MW-19	Appendix IV	Beryllium	mg/L	9	3	33%	Parametric	Lognormal MLE	0.00033	0.61	↔
1_23_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	9	4	44%	Parametric	Lognormal MLE	-0.0025	0.13	↔
1_23_5_110	MW-19	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0039	0.0024	↓
1_23_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00014	0.65	↔
1_23_5_116	MW-19	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00044	0.083	↔
1_23_5_118	MW-19	Appendix IV	Molybdenum	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00031	0.73	↔
1_23_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	Parametric	Lognormal MLE	0.00089	0.48	↔
1_24_5_101	MW-20	Appendix IV	Antimony	mg/L	9	2	22%	Parametric	Lognormal MLE	0.0012	0.33	↔
1_24_5_102	MW-20	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0010	0.0015	↑
1_24_5_103	MW-20	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0011	0.24	↔
1_24_5_110	MW-20	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0011	0.0067	↓
1_24_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Nonparametric	MK	-0.00017	0.14	↔
1_24_5_115	MW-20	Appendix IV	Lead	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00055	0.44	↔
1_24_5_116	MW-20	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00068	0.17	↔
1_24_5_118	MW-20	Appendix IV	Molybdenum	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00080	0.0046	↑
1_25_5_102	MW-30	Appendix IV	Arsenic	mg/L	9	2	22%	Parametric	Lognormal MLE	0.000083	0.97	↔
1_25_5_103	MW-30	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0019	0.019	↔
1_25_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00080	0.46	↔
1_25_5_110	MW-30	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0033	0.080	↔
1_25_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.000062	0.88	↔
1_25_5_116	MW-30	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00062	0.47	↔
1_25_5_118	MW-30	Appendix IV	Molybdenum	mg/L	9	3	33%	Parametric	Lognormal MLE	-0.0017	0.54	↔
1_26_5_101	MW-31	Appendix IV	Antimony	mg/L	9	4	44%	Parametric	Lognormal MLE	0.0010	0.44	↔
1_26_5_102	MW-31	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.000070	0.91	↔
1_26_5_103	MW-31	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00018	0.80	↔
1_26_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00075	0.069	↔
1_26_5_110	MW-31	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00018	0.71	↔
1_26_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Parametric	Lognormal MLE	0.000071	0.65	↔
1_26_5_116	MW-31	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.000072	0.72	↔
1_26_5_118	MW-31	Appendix IV	Molybdenum	mg/L	9	0	0%	Nonparametric	MK	-0.00000083	0.45	↔
1_26_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	Parametric	Lognormal MLE	0.000027	0.98	↔
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	9	2	22%	Parametric	Lognormal MLE	0.0017	0.25	↔
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00015	0.74	↔
2_12_5_103	MW-02	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00070	0.014	↔
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0012	0.29	↔
2_12_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00048	0.73	↔
2_12_5_110	MW-02	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0010	0.36	↔
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Nonparametric	MK	0.0019	0.40	↔
2_12_5_115	MW-02	Appendix IV	Lead	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00094	0.49	↔
2_12_5_116	MW-02	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00014	0.83	↔
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0011	0.24	↔

(Table continues on next page)

Table 8: Trend Tests: Lognormal MLE and MK *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	Parametric	Lognormal MLE	-0.00049	0.82	↔
2_12_5_122	MW-02	Appendix IV	Selenium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0013	0.18	↔
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00040	0.70	↔
2_13_5_103	MW-03	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0012	0.32	↔
2_13_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0012	0.18	↔
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0020	0.087	↔
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Nonparametric	MK	-0.00022	0.25	↔
2_13_5_116	MW-03	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00089	0.10	↔
2_13_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	9	1	11%	Parametric	Lognormal MLE	-0.00100	0.33	↔
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	9	3	33%	Parametric	Lognormal MLE	0.0016	0.31	↔
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00065	0.52	↔
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	9	0	0%	Nonparametric	MK	0	0.91	↔
2_14_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00072	0.45	↔
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00024	0.84	↔
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0015	0.0043	↑
2_14_5_116	MW-04	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00060	0.18	↔
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	9	2	22%	Parametric	Lognormal MLE	0.0011	0.51	↔
2_14_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	9	1	11%	Parametric	Lognormal MLE	-0.0014	0.12	↔
2_16_5_102	MW-07	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00047	0.48	↔
2_16_5_103	MW-07	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00033	0.38	↔
2_16_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00021	0.62	↔
2_16_5_110	MW-07	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00072	0.019	↔
2_16_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	9	1	11%	Parametric	Lognormal MLE	0.00041	0.73	↔
2_16_5_116	MW-07	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.000014	0.99	↔
2_16_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	Parametric	Lognormal MLE	-0.00092	0.54	↔
2_19_5_102	MW-10	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0034	0.0060	↑
2_19_5_103	MW-10	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00026	0.85	↔
2_19_5_104	MW-10	Appendix IV	Beryllium	mg/L	9	3	33%	Parametric	Lognormal MLE	0.0031	0.18	↔
2_19_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0019	0.22	↔
2_19_5_110	MW-10	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0017	0.32	↔
2_19_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00097	0.34	↔
2_19_5_116	MW-10	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00077	0.39	↔
2_19_5_118	MW-10	Appendix IV	Molybdenum	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0024	0.013	↔
2_19_5_122	MW-10	Appendix IV	Selenium	mg/L	9	1	11%	Parametric	Lognormal MLE	0.00078	0.28	↔
2_20_5_102	MW-11	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00044	0.80	↔
2_20_5_103	MW-11	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00070	0.54	↔
2_20_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0025	0.35	↔
2_20_5_110	MW-11	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0021	0.12	↔
2_20_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00014	0.95	↔
2_20_5_115	MW-11	Appendix IV	Lead	mg/L	9	3	33%	Parametric	Lognormal MLE	-0.0097	0.13	↔
2_20_5_116	MW-11	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.00074	0.85	↔
2_20_5_118	MW-11	Appendix IV	Molybdenum	mg/L	9	2	22%	Parametric	Lognormal MLE	-0.0015	0.52	↔
2_20_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	Parametric	Lognormal MLE	-0.00099	0.41	↔

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Table 8: Trend Tests: Lognormal MLE and MK *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
2_20_5_122	MW-11	Appendix IV	Selenium	mg/L	9	3	33%	Parametric	Lognormal MLE	-0.00075	0.32	↔
2_21_5_101	MW-12	Appendix IV	Antimony	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0022	0.0088	↓
2_21_5_102	MW-12	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0016	0.039	↔
2_21_5_103	MW-12	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0033	0.0000048	↑
2_21_5_106	MW-12	Appendix IV	Cadmium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0028	0.025	↔
2_21_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	9	4	44%	Parametric	Lognormal MLE	-0.0065	0.021	↔
2_21_5_110	MW-12	Appendix IV	Cobalt	mg/L	9	3	33%	Parametric	Lognormal MLE	0.0056	0.010	↔
2_21_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0019	0.027	↔
2_21_5_116	MW-12	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0019	0.021	↔
2_21_5_118	MW-12	Appendix IV	Molybdenum	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00077	0.16	↔
2_21_5_122	MW-12	Appendix IV	Selenium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0084	0.0000082	↓
2_27_5_102	MW-32	Appendix IV	Arsenic	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00050	0.19	↔
2_27_5_103	MW-32	Appendix IV	Barium	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.000045	0.97	↔
2_27_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	9	0	0%	Parametric	Lognormal MLE	-0.0023	0.0000020	↓
2_27_5_110	MW-32	Appendix IV	Cobalt	mg/L	9	0	0%	Parametric	Lognormal MLE	0.0011	0.12	↔
2_27_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00043	0.048	↔
2_27_5_116	MW-32	Appendix IV	Lithium	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00062	0.34	↔
2_27_5_118	MW-32	Appendix IV	Molybdenum	mg/L	9	0	0%	Parametric	Lognormal MLE	0.00023	0.64	↔

Table 9: Trend Tests: Piecewise Linear-Linear

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
1_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	9	2	22%	0.0000047	0.13	↔	-0.0000033	0.25	↔	2023-04-18	0.49	↔
1_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	9	0	0%	-0.0000066	0.28	↔	0.0000035	0.28	↔	2023-04-13	0.42	↔
1_11_5_103	MW-01R	Appendix IV	Barium	mg/L	9	0	0%	-0.00074	0.026	↔	0.0019	0.00046	↑	2023-04-23	0.96	↔
1_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	9	0	0%	-0.00000043	0.72	↔	0.00000074	0.27	↔	2023-04-15	0.27	↔
1_11_5_106	MW-01R	Appendix IV	Cadmium	mg/L	9	6	67%	0.0000012	0.17	↔	-0.0000020	0.20	↔	2023-06-16	0.49	↔
1_11_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.0000021	0.89	↔	0.0000064	0.45	↔	2023-03-14	0.28	↔
1_11_5_110	MW-01R	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000093	0.29	↔	-0.000016	0.28	↔	2023-06-27	0.37	↔
1_11_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.064	0.15	↔	0.031	0.031	↔	2023-03-07	0.71	↔
1_11_5_115	MW-01R	Appendix IV	Lead	mg/L	9	2	22%	0.000010	0.39	↔	-0.000018	0.38	↔	2023-06-27	0.27	↔
1_11_5_116	MW-01R	Appendix IV	Lithium	mg/L	9	0	0%	-0.0077	0.28	↔	0.0096	0.039	↔	2023-03-16	0.72	↔
1_11_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	9	1	11%	0.0000080	0.53	↔	-0.0000080	0.26	↔	2023-04-16	0.29	↔
1_11_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	0.0057	0.36	↔	-0.0014	0.42	↔	2023-02-18	0.29	↔
1_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	9	0	0%	-0.00000054	0.79	↔	0.0000012	0.54	↔	2023-05-22	0.096	↔
1_11_5_125	MW-01R	Appendix IV	Thallium	mg/L	9	9	100%	0.0000016	0.066	↔	-0.0000040	0.14	↔	2023-07-21	0.63	↔
1_15_5_101	MW-06	Appendix IV	Antimony	mg/L	9	7	78%	0.0000017	0.28	↔	-0.0000020	0.19	↔	2023-05-22	0.44	↔
1_15_5_102	MW-06	Appendix IV	Arsenic	mg/L	9	0	0%	-0.0000024	0.013	↔	0.0000027	0.00052	↑	2023-04-05	0.94	↔
1_15_5_103	MW-06	Appendix IV	Barium	mg/L	9	0	0%	-0.0028	0.088	↔	0.0017	0.25	↔	2023-04-18	0.55	↔
1_15_5_104	MW-06	Appendix IV	Beryllium	mg/L	9	8	89%	-0.000000020	0.087	↔	0.0000000015	0.58	↔	2023-02-24	0.71	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
1_15_5_106	MW-06	Appendix IV	Cadmium	mg/L	9	9	100%	0.0000012	0.26	↔	-0.0000013	0.23	↔	2023-05-22	0.43	↔
1_15_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.000017	0.54	↔	-0.0000023	0.47	↔	2023-01-11	0.18	↔
1_15_5_110	MW-06	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000027	0.66	↔	-0.00000044	0.53	↔	2023-02-05	0.20	↔
1_15_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.0034	0.28	↔	0.0012	0.18	↔	2023-03-13	0.53	↔
1_15_5_115	MW-06	Appendix IV	Lead	mg/L	9	6	67%	0.0000088	0.59	↔	-0.0000031	0.13	↔	2023-02-05	0.43	↔
1_15_5_116	MW-06	Appendix IV	Lithium	mg/L	9	0	0%	-0.00043	0.16	↔	0.00023	0.40	↔	2023-05-05	0.47	↔
1_15_5_118	MW-06	Appendix IV	Molybdenum	mg/L	9	6	67%	0.0000077	0.41	↔	-0.0000088	0.34	↔	2023-04-18	0.31	↔
1_15_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	0.0054	0.56	↔	-0.0028	0.29	↔	2023-03-13	0.28	↔
1_15_5_122	MW-06	Appendix IV	Selenium	mg/L	9	5	56%	-0.0000000000000046	1.0	↔	-0.00000011	0.11	↔	2023-03-02	0.56	↔
1_15_5_125	MW-06	Appendix IV	Thallium	mg/L	9	9	100%	0.0000017	0.27	↔	-0.0000016	0.28	↔	2023-04-18	0.39	↔
1_17_5_101	MW-08	Appendix IV	Antimony	mg/L	9	3	33%	0.00000098	0.31	↔	-0.00000069	0.19	↔	2023-04-06	0.42	↔
1_17_5_102	MW-08	Appendix IV	Arsenic	mg/L	9	0	0%	0.00062	0.0021	↑	-0.00016	0.0021	↓	2023-02-21	0.94	↔
1_17_5_103	MW-08	Appendix IV	Barium	mg/L	9	0	0%	0.0034	0.58	↔	-0.0015	0.068	↔	2023-02-06	0.53	↔
1_17_5_106	MW-08	Appendix IV	Cadmium	mg/L	9	9	100%	0.00000000000028	1.0	↔	0.00000021	0.024	↔	2023-02-03	0.75	↔
1_17_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.0000093	0.22	↔	-0.0000026	0.019	↔	2023-02-06	0.75	↔
1_17_5_110	MW-08	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000051	0.19	↔	-0.00000091	0.063	↔	2023-02-06	0.72	↔
1_17_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.010	0.012	↔	-0.0028	0.012	↔	2023-03-02	0.89	↔
1_17_5_115	MW-08	Appendix IV	Lead	mg/L	9	7	78%	0.0000042	0.67	↔	-0.0000020	0.12	↔	2023-02-06	0.43	↔
1_17_5_116	MW-08	Appendix IV	Lithium	mg/L	9	0	0%	0.0013	0.078	↔	-0.00020	0.034	↔	2023-01-29	0.80	↔
1_17_5_118	MW-08	Appendix IV	Molybdenum	mg/L	9	0	0%	-0.0000091	0.046	↔	0.000016	0.22	↔	2023-07-31	0.67	↔
1_17_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	-0.0069	0.77	↔	0.00022	0.93	↔	2023-02-06	0.11	↔
1_17_5_122	MW-08	Appendix IV	Selenium	mg/L	9	5	56%	0.0000000000011	1.0	↔	-0.00000037	0.021	↔	2023-02-06	0.76	↔
1_18_5_101	MW-09	Appendix IV	Antimony	mg/L	9	5	56%	0.0000018	0.22	↔	-0.0000020	0.16	↔	2023-05-18	0.49	↔
1_18_5_102	MW-09	Appendix IV	Arsenic	mg/L	9	0	0%	-0.0000065	0.20	↔	0.0000046	0.33	↔	2023-04-18	0.40	↔
1_18_5_103	MW-09	Appendix IV	Barium	mg/L	9	0	0%	-0.0079	0.28	↔	0.00060	0.93	↔	2023-04-27	0.37	↔
1_18_5_104	MW-09	Appendix IV	Beryllium	mg/L	9	8	89%	0.000000018	0.27	↔	-0.000000020	0.46	↔	2023-05-23	0.30	↔
1_18_5_106	MW-09	Appendix IV	Cadmium	mg/L	9	9	100%	0.0000013	0.21	↔	-0.0000012	0.25	↔	2023-05-22	0.48	↔
1_18_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.000016	0.53	↔	-0.0000033	0.31	↔	2023-01-13	0.26	↔
1_18_5_110	MW-09	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000042	0.39	↔	-0.0000019	0.18	↔	2023-03-13	0.43	↔
1_18_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.0030	0.0063	↑	-0.0013	0.59	↔	2023-07-24	0.86	↔
1_18_5_115	MW-09	Appendix IV	Lead	mg/L	9	9	100%	0.000010	0.53	↔	-0.0000032	0.13	↔	2023-02-05	0.44	↔
1_18_5_117	MW-09	Appendix IV	Mercury	mg/L	9	8	89%	-0.00000097	0.36	↔	0.000024	0.00082	↑	2023-07-17	0.96	↔
1_18_5_118	MW-09	Appendix IV	Molybdenum	mg/L	9	0	0%	-0.000096	0.033	↔	0.000039	0.28	↔	2023-05-22	0.79	↔
1_18_5_122	MW-09	Appendix IV	Selenium	mg/L	9	2	22%	-0.00000037	0.36	↔	0.00000037	0.58	↔	2023-05-23	0.21	↔
1_18_5_125	MW-09	Appendix IV	Thallium	mg/L	9	9	100%	0.0000017	0.42	↔	-0.0000016	0.18	↔	2023-04-17	0.39	↔
1_22_5_101	MW-18	Appendix IV	Antimony	mg/L	9	2	22%	0.0000012	0.37	↔	-0.0000018	0.18	↔	2023-05-21	0.40	↔
1_22_5_102	MW-18	Appendix IV	Arsenic	mg/L	9	0	0%	-0.000049	0.22	↔	0.00015	0.0061	↑	2023-05-15	0.85	↔
1_22_5_103	MW-18	Appendix IV	Barium	mg/L	9	0	0%	-0.000086	0.26	↔	0.000059	0.024	↔	2023-02-27	0.72	↔
1_22_5_106	MW-18	Appendix IV	Cadmium	mg/L	9	2	22%	0.00000063	0.44	↔	-0.0000017	0.25	↔	2023-05-23	0.43	↔
1_22_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	9	8	89%	0.00000025	0.16	↔	-0.00000010	0.71	↔	2023-05-22	0.41	↔
1_22_5_110	MW-18	Appendix IV	Cobalt	mg/L	9	0	0%	-0.000028	0.015	↔	-0.0000019	0.65	↔	2023-04-17	0.92	↔
1_22_5_115	MW-18	Appendix IV	Lead	mg/L	9	6	67%	0.0000065	0.62	↔	-0.0000021	0.21	↔	2023-02-07	0.34	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
1_22_5_116	MW-18	Appendix IV	Lithium	mg/L	9	0	0%	-0.00021	0.12	↔	0.000078	0.051	↔	2023-03-02	0.69	↔
1_22_5_118	MW-18	Appendix IV	Molybdenum	mg/L	9	0	0%	0.0000076	0.81	↔	0.000058	0.090	↔	2023-05-21	0.65	↔
1_22_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	9	6	67%	0.0036	0.29	↔	-0.0016	0.35	↔	2023-04-17	0.43	↔
1_22_5_122	MW-18	Appendix IV	Selenium	mg/L	9	0	0%	-0.0000010	0.57	↔	0.0000066	0.31	↔	2023-08-02	0.28	↔
1_22_5_125	MW-18	Appendix IV	Thallium	mg/L	9	9	100%	0.00000062	0.59	↔	-0.0000012	0.54	↔	2023-05-22	0.17	↔
1_23_5_101	MW-19	Appendix IV	Antimony	mg/L	9	8	89%	0.0000036	0.12	↔	-0.0000025	0.24	↔	2023-04-18	0.51	↔
1_23_5_102	MW-19	Appendix IV	Arsenic	mg/L	9	0	0%	-0.000018	0.32	↔	0.000021	0.054	↔	2023-04-17	0.60	↔
1_23_5_103	MW-19	Appendix IV	Barium	mg/L	9	0	0%	-0.00011	0.12	↔	0.000049	0.18	↔	2023-04-17	0.66	↔
1_23_5_104	MW-19	Appendix IV	Beryllium	mg/L	9	3	33%	0.0000014	0.34	↔	-0.00000044	0.30	↔	2023-02-08	0.33	↔
1_23_5_106	MW-19	Appendix IV	Cadmium	mg/L	9	9	100%	0.0000012	0.26	↔	-0.0000013	0.23	↔	2023-05-21	0.44	↔
1_23_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	9	4	44%	0.0000068	0.48	↔	-0.0000017	0.14	↔	2023-01-14	0.43	↔
1_23_5_110	MW-19	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000046	0.10	↔	-0.0000032	0.0036	↓	2023-02-25	0.87	↔
1_23_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.0052	0.14	↔	0.0015	0.11	↔	2023-03-12	0.68	↔
1_23_5_115	MW-19	Appendix IV	Lead	mg/L	9	9	100%	0.000013	0.088	↔	-0.0000052	0.025	↔	2023-02-19	0.74	↔
1_23_5_116	MW-19	Appendix IV	Lithium	mg/L	9	0	0%	-0.000062	0.40	↔	-0.000016	0.90	↔	2023-05-22	0.27	↔
1_23_5_118	MW-19	Appendix IV	Molybdenum	mg/L	9	0	0%	-0.000023	0.37	↔	0.000023	0.36	↔	2023-05-17	0.30	↔
1_23_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	0.0055	0.29	↔	0.00037	0.78	↔	2023-02-08	0.43	↔
1_23_5_122	MW-19	Appendix IV	Selenium	mg/L	9	9	100%	0.0000057	0.68	↔	-0.0000025	0.14	↔	2023-02-07	0.39	↔
1_23_5_125	MW-19	Appendix IV	Thallium	mg/L	9	9	100%	0.0000044	0.094	↔	-0.0000017	0.031	↔	2023-02-27	0.73	↔
1_24_5_101	MW-20	Appendix IV	Antimony	mg/L	9	2	22%	0.00000039	0.30	↔	-0.000000010	0.98	↔	2023-04-18	0.33	↔
1_24_5_102	MW-20	Appendix IV	Arsenic	mg/L	9	0	0%	-0.0000086	0.052	↔	0.0000023	0.0017	↑	2023-01-11	0.90	↔
1_24_5_103	MW-20	Appendix IV	Barium	mg/L	9	0	0%	-0.0068	0.00088	↓	0.00089	0.019	↔	2023-02-24	0.96	↔
1_24_5_106	MW-20	Appendix IV	Cadmium	mg/L	9	9	100%	0.00000000000024	1.0	↔	0.00000021	0.024	↔	2023-02-03	0.75	↔
1_24_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	9	5	56%	0.00000086	0.24	↔	-0.00000029	0.16	↔	2023-02-22	0.49	↔
1_24_5_110	MW-20	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000043	0.079	↔	-0.0000027	0.0037	↓	2023-02-21	0.87	↔
1_24_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.0083	0.00011	↓	-0.000058	0.53	↔	2023-01-06	0.98	↔
1_24_5_115	MW-20	Appendix IV	Lead	mg/L	9	0	0%	0.0000042	0.17	↔	-0.0000067	0.48	↔	2023-06-28	0.39	↔
1_24_5_116	MW-20	Appendix IV	Lithium	mg/L	9	0	0%	-0.00030	0.43	↔	0.00011	0.044	↔	2023-02-06	0.62	↔
1_24_5_118	MW-20	Appendix IV	Molybdenum	mg/L	9	0	0%	-0.00000089	0.93	↔	0.0000052	0.087	↔	2023-03-12	0.57	↔
1_24_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	-0.019	0.081	↔	0.00090	0.39	↔	2023-01-21	0.75	↔
1_24_5_122	MW-20	Appendix IV	Selenium	mg/L	9	5	56%	0.00000000000062	1.0	↔	-0.00000057	0.026	↔	2023-02-12	0.79	↔
1_25_5_101	MW-30	Appendix IV	Antimony	mg/L	9	8	89%	0.0000026	0.049	↔	-0.0000030	0.14	↔	2023-06-02	0.66	↔
1_25_5_102	MW-30	Appendix IV	Arsenic	mg/L	9	2	22%	-0.0000030	0.051	↔	0.0000033	0.033	↔	2023-05-18	0.76	↔
1_25_5_103	MW-30	Appendix IV	Barium	mg/L	9	0	0%	-0.00045	0.067	↔	0.000023	0.83	↔	2023-03-28	0.73	↔
1_25_5_104	MW-30	Appendix IV	Beryllium	mg/L	9	8	89%	0.0000014	0.67	↔	-0.00000046	0.23	↔	2023-02-05	0.30	↔
1_25_5_106	MW-30	Appendix IV	Cadmium	mg/L	9	9	100%	0.0000012	0.26	↔	-0.0000013	0.23	↔	2023-05-21	0.43	↔
1_25_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.000045	0.31	↔	0.000020	0.38	↔	2023-04-17	0.41	↔
1_25_5_110	MW-30	Appendix IV	Cobalt	mg/L	9	0	0%	-0.0000072	0.50	↔	-0.0000035	0.84	↔	2023-05-22	0.23	↔
1_25_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.00077	0.43	↔	0.0016	0.63	↔	2023-06-27	0.18	↔
1_25_5_115	MW-30	Appendix IV	Lead	mg/L	9	9	100%	0.000013	0.039	↔	-0.0000045	0.016	↔	2023-02-21	0.81	↔
1_25_5_116	MW-30	Appendix IV	Lithium	mg/L	9	0	0%	0.00048	0.70	↔	-0.00033	0.35	↔	2023-03-12	0.20	↔
1_25_5_122	MW-30	Appendix IV	Selenium	mg/L	9	6	67%	0.0000058	0.68	↔	-0.0000024	0.16	↔	2023-02-05	0.37	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
1_25_5_125	MW-30	Appendix IV	Thallium	mg/L	9	9	100%	0.0000026	0.029	↔	-0.0000020	0.058	↔	2023-05-02	0.76	↔
1_26_5_101	MW-31	Appendix IV	Antimony	mg/L	9	4	44%	0.00000054	0.069	↔	-0.000000085	0.52	↔	2023-04-02	0.71	↔
1_26_5_102	MW-31	Appendix IV	Arsenic	mg/L	9	0	0%	-0.000015	0.19	↔	0.0000012	0.31	↔	2023-01-15	0.52	↔
1_26_5_103	MW-31	Appendix IV	Barium	mg/L	9	0	0%	-0.00038	0.53	↔	0.00018	0.56	↔	2023-04-07	0.17	↔
1_26_5_106	MW-31	Appendix IV	Cadmium	mg/L	9	9	100%	0.00000000000027	1.0	↔	0.00000021	0.024	↔	2023-02-03	0.75	↔
1_26_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.0000026	0.35	↔	0.00000034	0.94	↔	2023-05-22	0.29	↔
1_26_5_110	MW-31	Appendix IV	Cobalt	mg/L	9	0	0%	0.00000026	0.14	↔	-0.00000045	0.13	↔	2023-05-31	0.58	↔
1_26_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.0026	0.30	↔	-0.0026	0.28	↔	2023-05-21	0.38	↔
1_26_5_115	MW-31	Appendix IV	Lead	mg/L	9	8	89%	0.000000022	0.97	↔	-0.0000011	0.099	↔	2023-05-21	0.58	↔
1_26_5_118	MW-31	Appendix IV	Molybdenum	mg/L	9	0	0%	-0.000024	0.089	↔	0.00000052	0.69	↔	2023-01-08	0.63	↔
1_26_5_122	MW-31	Appendix IV	Selenium	mg/L	9	5	56%	-0.00000052	0.045	↔	0.000000057	0.93	↔	2023-06-27	0.67	↔
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	9	2	22%	0.0000026	0.23	↔	-0.0000013	0.25	↔	2023-04-17	0.50	↔
2_12_5_102	MW-02	Appendix IV	Arsenic	mg/L	9	0	0%	0.000016	0.11	↔	-0.000018	0.25	↔	2023-05-23	0.53	↔
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	9	0	0%	-0.00000087	0.29	↔	0.0000020	0.038	↔	2023-05-11	0.69	↔
2_12_5_106	MW-02	Appendix IV	Cadmium	mg/L	9	6	67%	0.00000050	0.81	↔	0.0000012	0.33	↔	2023-03-14	0.41	↔
2_12_5_110	MW-02	Appendix IV	Cobalt	mg/L	9	0	0%	0.000059	0.53	↔	0.0000022	0.85	↔	2023-01-04	0.18	↔
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.033	0.64	↔	0.012	0.19	↔	2023-02-07	0.35	↔
2_12_5_115	MW-02	Appendix IV	Lead	mg/L	9	0	0%	0.000011	0.15	↔	-0.000014	0.28	↔	2023-06-03	0.47	↔
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	9	0	0%	0.000080	0.029	↔	-0.000025	0.020	↔	2023-02-08	0.81	↔
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	-0.0089	0.32	↔	-0.00052	0.95	↔	2023-04-18	0.33	↔
2_12_5_122	MW-02	Appendix IV	Selenium	mg/L	9	0	0%	-0.0000029	0.22	↔	0.0000053	0.048	↔	2023-04-18	0.73	↔
2_12_5_125	MW-02	Appendix IV	Thallium	mg/L	9	8	89%	0.0000021	0.82	↔	0.00000069	0.54	↔	2023-02-07	0.24	↔
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	9	5	56%	0.0000024	0.045	↔	-0.0000029	0.12	↔	2023-05-28	0.68	↔
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	9	0	0%	-0.0000027	0.20	↔	0.0000028	0.40	↔	2023-05-23	0.38	↔
2_13_5_104	MW-03	Appendix IV	Beryllium	mg/L	9	7	78%	-0.00000021	0.66	↔	0.0000013	0.45	↔	2023-08-06	0.16	↔
2_13_5_106	MW-03	Appendix IV	Cadmium	mg/L	9	8	89%	0.0000012	0.29	↔	-0.0000010	0.32	↔	2023-05-22	0.38	↔
2_13_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.0000064	0.85	↔	-0.0000094	0.34	↔	2023-03-13	0.21	↔
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	9	0	0%	-0.0000010	0.70	↔	0.0000041	0.15	↔	2023-04-24	0.54	↔
2_13_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.0033	0.37	↔	0.00045	0.89	↔	2023-04-29	0.27	↔
2_13_5_115	MW-03	Appendix IV	Lead	mg/L	9	8	89%	0.000012	0.047	↔	-0.0000040	0.027	↔	2023-02-21	0.78	↔
2_13_5_116	MW-03	Appendix IV	Lithium	mg/L	9	0	0%	-0.000081	0.56	↔	-0.000012	0.88	↔	2023-04-17	0.26	↔
2_13_5_117	MW-03	Appendix IV	Mercury	mg/L	9	8	89%	-0.000000033	0.35	↔	0.00000085	0.00052	↑	2023-07-18	0.97	↔
2_13_5_118	MW-03	Appendix IV	Molybdenum	mg/L	9	7	78%	0.000023	0.65	↔	-0.0000075	0.24	↔	2023-02-06	0.30	↔
2_13_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	9	1	11%	-0.016	0.33	↔	-0.00065	0.73	↔	2023-01-10	0.43	↔
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	9	3	33%	-0.0000015	0.64	↔	0.0000014	0.64	↔	2023-05-22	0.10	↔
2_13_5_125	MW-03	Appendix IV	Thallium	mg/L	9	8	89%	0.0000042	0.041	↔	-0.00000078	0.13	↔	2023-03-03	0.80	↔
2_14_5_101	MW-04	Appendix IV	Antimony	mg/L	9	6	67%	0.0000025	0.054	↔	-0.0000030	0.14	↔	2023-06-04	0.65	↔
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	9	0	0%	-0.0000029	0.16	↔	0.0000024	0.47	↔	2023-05-23	0.40	↔
2_14_5_103	MW-04	Appendix IV	Barium	mg/L	9	0	0%	-0.00092	0.60	↔	0.000027	0.98	↔	2023-04-18	0.18	↔
2_14_5_106	MW-04	Appendix IV	Cadmium	mg/L	9	9	100%	0.0000012	0.26	↔	-0.0000013	0.23	↔	2023-05-22	0.43	↔
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	9	0	0%	-0.00000081	0.81	↔	0.00000014	0.94	↔	2023-04-18	0.037	↔
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.0011	0.38	↔	0.0064	0.15	↔	2023-07-31	0.68	↔

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Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
2_14_5_115	MW-04	Appendix IV	Lead	mg/L	9	9	100%	0.000010	0.22	↔	-0.0000030	0.21	↔	2023-02-07	0.45	↔
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	9	2	22%	0.0000039	0.78	↔	-0.0000016	0.83	↔	2023-04-18	0.046	↔
2_14_5_122	MW-04	Appendix IV	Selenium	mg/L	9	5	56%	-0.00000092	0.14	↔	0.00000061	0.54	↔	2023-05-23	0.42	↔
2_14_5_125	MW-04	Appendix IV	Thallium	mg/L	9	9	100%	0.0000017	0.23	↔	-0.0000023	0.13	↔	2023-05-22	0.51	↔
2_16_5_101	MW-07	Appendix IV	Antimony	mg/L	9	8	89%	0.00000028	0.0076	↑	-0.0000000000000050	1.0	↔	2023-07-09	0.86	↔
2_16_5_102	MW-07	Appendix IV	Arsenic	mg/L	9	0	0%	-0.00000054	0.13	↔	0.00000061	0.083	↔	2023-04-18	0.65	↔
2_16_5_103	MW-07	Appendix IV	Barium	mg/L	9	0	0%	-0.00039	0.40	↔	0.00049	0.079	↔	2023-04-17	0.54	↔
2_16_5_104	MW-07	Appendix IV	Beryllium	mg/L	9	6	67%	-0.00000000017	1.0	↔	0.000000030	0.61	↔	2023-05-14	0.10	↔
2_16_5_106	MW-07	Appendix IV	Cadmium	mg/L	9	9	100%	0.00000000000025	1.0	↔	0.00000021	0.024	↔	2023-02-03	0.75	↔
2_16_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.00000037	0.35	↔	0.00000032	0.63	↔	2023-05-23	0.21	↔
2_16_5_110	MW-07	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000049	0.16	↔	0.00000013	0.71	↔	2023-01-21	0.72	↔
2_16_5_115	MW-07	Appendix IV	Lead	mg/L	9	9	100%	-0.00000062	0.033	↔	-0.00000000000017	1.0	↔	2023-07-30	0.76	↔
2_16_5_116	MW-07	Appendix IV	Lithium	mg/L	9	0	0%	0.000014	0.62	↔	-0.0000091	0.55	↔	2023-04-17	0.14	↔
2_16_5_118	MW-07	Appendix IV	Molybdenum	mg/L	9	9	100%	-0.0000000000021	1.0	↔	-0.0000018	0.024	↔	2023-02-03	0.75	↔
2_16_5_122	MW-07	Appendix IV	Selenium	mg/L	9	8	89%	-0.00000062	0.033	↔	-0.00000000000017	1.0	↔	2023-07-30	0.76	↔
2_19_5_101	MW-10	Appendix IV	Antimony	mg/L	9	5	56%	0.0000015	0.33	↔	-0.0000019	0.21	↔	2023-05-22	0.40	↔
2_19_5_102	MW-10	Appendix IV	Arsenic	mg/L	9	0	0%	-0.00000093	0.70	↔	0.0000040	0.021	↔	2023-04-04	0.78	↔
2_19_5_103	MW-10	Appendix IV	Barium	mg/L	9	0	0%	-0.0020	0.094	↔	0.0019	0.093	↔	2023-05-08	0.63	↔
2_19_5_104	MW-10	Appendix IV	Beryllium	mg/L	9	3	33%	0.00000043	0.22	↔	-0.0000013	0.29	↔	2023-08-07	0.41	↔
2_19_5_106	MW-10	Appendix IV	Cadmium	mg/L	9	9	100%	0.0000012	0.16	↔	-0.0000013	0.36	↔	2023-05-23	0.43	↔
2_19_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.000020	0.70	↔	0.000019	0.20	↔	2023-03-06	0.34	↔
2_19_5_110	MW-10	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000052	0.16	↔	-0.0000044	0.46	↔	2023-05-23	0.41	↔
2_19_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.045	0.18	↔	0.015	0.11	↔	2023-02-10	0.55	↔
2_19_5_115	MW-10	Appendix IV	Lead	mg/L	9	7	78%	0.000012	0.11	↔	-0.0000049	0.037	↔	2023-02-19	0.70	↔
2_19_5_116	MW-10	Appendix IV	Lithium	mg/L	9	0	0%	0.0036	0.63	↔	-0.00061	0.76	↔	2023-03-13	0.17	↔
2_19_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	9	8	89%	0.0049	0.66	↔	-0.0012	0.37	↔	2023-02-05	0.23	↔
2_19_5_122	MW-10	Appendix IV	Selenium	mg/L	9	1	11%	0.00000066	0.56	↔	0.000000090	0.88	↔	2023-03-14	0.18	↔
2_19_5_125	MW-10	Appendix IV	Thallium	mg/L	9	9	100%	0.0000043	0.11	↔	-0.0000017	0.034	↔	2023-02-28	0.72	↔
2_20_5_101	MW-11	Appendix IV	Antimony	mg/L	9	6	67%	0.00000020	0.92	↔	-0.0000015	0.67	↔	2023-05-23	0.10	↔
2_20_5_102	MW-11	Appendix IV	Arsenic	mg/L	9	0	0%	-0.000015	0.15	↔	0.0000089	0.34	↔	2023-04-21	0.45	↔
2_20_5_103	MW-11	Appendix IV	Barium	mg/L	9	0	0%	-0.0039	0.088	↔	0.0030	0.15	↔	2023-05-08	0.61	↔
2_20_5_104	MW-11	Appendix IV	Beryllium	mg/L	9	8	89%	-0.00000011	0.57	↔	0.0000000000000088	1.0	↔	2023-04-17	0.21	↔
2_20_5_106	MW-11	Appendix IV	Cadmium	mg/L	9	8	89%	-0.00000031	0.88	↔	-0.00000097	0.78	↔	2023-05-23	0.078	↔
2_20_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.000023	0.57	↔	0.0000019	0.93	↔	2023-04-17	0.20	↔
2_20_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.0065	0.064	↔	0.0068	0.051	↔	2023-05-08	0.71	↔
2_20_5_115	MW-11	Appendix IV	Lead	mg/L	9	3	33%	-0.00021	0.53	↔	-0.0000051	0.98	↔	2023-04-09	0.23	↔
2_20_5_116	MW-11	Appendix IV	Lithium	mg/L	9	0	0%	-0.0011	0.079	↔	0.00098	0.097	↔	2023-05-05	0.65	↔
2_20_5_118	MW-11	Appendix IV	Molybdenum	mg/L	9	2	22%	-0.000013	0.059	↔	0.0000073	0.21	↔	2023-05-05	0.66	↔
2_20_5_122	MW-11	Appendix IV	Selenium	mg/L	9	3	33%	-0.00000055	0.12	↔	0.00000028	0.60	↔	2023-06-02	0.50	↔
2_20_5_125	MW-11	Appendix IV	Thallium	mg/L	9	9	100%	0.0000017	0.26	↔	-0.0000016	0.27	↔	2023-04-18	0.40	↔
2_21_5_101	MW-12	Appendix IV	Antimony	mg/L	9	0	0%	-0.00000016	0.94	↔	-0.0000031	0.17	↔	2023-05-22	0.49	↔
2_21_5_102	MW-12	Appendix IV	Arsenic	mg/L	9	0	0%	-0.000014	0.13	↔	0.0000083	0.012	↔	2023-02-17	0.80	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
2_21_5_103	MW-12	Appendix IV	Barium	mg/L	9	0	0%	-0.000024	0.74	↔	0.00021	0.0027	↑	2023-04-02	0.92	↔
2_21_5_106	MW-12	Appendix IV	Cadmium	mg/L	9	0	0%	0.0000067	0.029	↔	-0.000014	0.12	↔	2023-08-05	0.74	↔
2_21_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	9	4	44%	0.0000017	0.56	↔	-0.0000020	0.044	↔	2023-03-10	0.63	↔
2_21_5_110	MW-12	Appendix IV	Cobalt	mg/L	9	3	33%	-0.0000025	0.65	↔	0.0000016	0.046	↔	2023-01-14	0.64	↔
2_21_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.0033	0.42	↔	-0.00024	0.61	↔	2023-02-06	0.61	↔
2_21_5_115	MW-12	Appendix IV	Lead	mg/L	9	5	56%	-0.00000033	0.075	↔	0.00000045	0.42	↔	2023-06-27	0.54	↔
2_21_5_116	MW-12	Appendix IV	Lithium	mg/L	9	0	0%	-0.000014	0.77	↔	0.000011	0.084	↔	2023-02-06	0.50	↔
2_21_5_118	MW-12	Appendix IV	Molybdenum	mg/L	9	0	0%	-0.000028	0.0050	↓	0.000020	0.0014	↑	2023-03-15	0.93	↔
2_21_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	9	7	78%	0.0023	0.080	↔	-0.0028	0.18	↔	2023-05-23	0.60	↔
2_21_5_122	MW-12	Appendix IV	Selenium	mg/L	9	0	0%	0.000011	0.65	↔	-0.0000081	0.025	↔	2023-01-13	0.73	↔
2_27_5_101	MW-32	Appendix IV	Antimony	mg/L	9	6	67%	0.00000045	0.091	↔	-0.000000044	0.84	↔	2023-04-18	0.59	↔
2_27_5_102	MW-32	Appendix IV	Arsenic	mg/L	9	0	0%	-0.0000013	0.34	↔	0.00000068	0.100	↔	2023-02-23	0.51	↔
2_27_5_103	MW-32	Appendix IV	Barium	mg/L	9	0	0%	-0.0021	0.0083	↓	0.0043	0.0037	↑	2023-06-12	0.90	↔
2_27_5_106	MW-32	Appendix IV	Cadmium	mg/L	9	9	100%	0.00000000000029	1.0	↔	0.00000021	0.024	↔	2023-02-04	0.75	↔
2_27_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.0000012	0.060	↔	-0.0000000000066	1.0	↔	2023-08-01	0.69	↔
2_27_5_110	MW-32	Appendix IV	Cobalt	mg/L	9	0	0%	0.00000069	0.71	↔	0.00000043	0.67	↔	2023-03-27	0.20	↔
2_27_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.00026	0.57	↔	0.0031	0.093	↔	2023-06-27	0.77	↔
2_27_5_115	MW-32	Appendix IV	Lead	mg/L	9	7	78%	0.00000000000044	1.0	↔	-0.00000059	0.016	↔	2023-02-19	0.82	↔
2_27_5_116	MW-32	Appendix IV	Lithium	mg/L	9	0	0%	-0.00041	0.00026	↓	0.00056	0.000046	↑	2023-04-29	0.98	↔
2_27_5_118	MW-32	Appendix IV	Molybdenum	mg/L	9	0	0%	-0.000019	0.095	↔	0.0000062	0.056	↔	2023-02-24	0.69	↔
2_27_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	9	5	56%	0.0022	0.19	↔	-0.0010	0.49	↔	2023-05-01	0.42	↔
2_27_5_122	MW-32	Appendix IV	Selenium	mg/L	9	9	100%	-0.00000062	0.035	↔	-0.00000000000018	1.0	↔	2023-07-31	0.76	↔

Table 10: Trend Tests: Piecewise Linear-Linear-Linear

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
1_11_5_101	MW-01R	Appendix IV	Antimony	mg/L	9	2	22%	-0.0000051	0.70	↔	0.000010	0.47	↔	-0.0000041	0.13	↔	2023-01-26	2023-04-17	0.69	↔
1_11_5_102	MW-01R	Appendix IV	Arsenic	mg/L	9	0	0%	-0.0000076	0.013	↔	0.000032	0.014	↔	-0.0000052	0.17	↔	2023-05-19	2023-06-28	0.95	↔
1_11_5_103	MW-01R	Appendix IV	Barium	mg/L	9	0	0%	-0.00083	0.065	↔	0.0011	0.090	↔	0.0023	0.011	↔	2023-04-03	2023-07-13	0.98	↔
1_11_5_104	MW-01R	Appendix IV	Beryllium	mg/L	9	0	0%	-0.00000086	0.22	↔	0.0000044	0.16	↔	-0.0000012	0.38	↔	2023-05-07	2023-07-04	0.79	↔
1_11_5_106	MW-01R	Appendix IV	Cadmium	mg/L	9	6	67%	-0.00000062	0.78	↔	0.0000041	0.14	↔	-0.0000021	0.19	↔	2023-03-11	2023-05-23	0.74	↔
1_11_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.0000023	0.65	↔	0.000067	0.042	↔	-0.000019	0.12	↔	2023-05-15	2023-06-30	0.92	↔
1_11_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.064	0.035	↔	0.085	0.22	↔	-0.0029	0.87	↔	2023-04-02	2023-06-27	0.91	↔
1_11_5_116	MW-01R	Appendix IV	Lithium	mg/L	9	0	0%	-0.0077	0.25	↔	0.024	0.066	↔	0.0013	0.88	↔	2023-04-15	2023-06-30	0.88	↔
1_11_5_122	MW-01R	Appendix IV	Selenium	mg/L	9	0	0%	0.0000016	0.79	↔	-0.0000016	0.68	↔	0.0000018	0.74	↔	2023-03-13	2023-07-04	0.14	↔
1_11_5_125	MW-01R	Appendix IV	Thallium	mg/L	9	9	100%	0.0000028	0.68	↔	0.0000010	0.52	↔	-0.0000041	0.25	↔	2023-02-07	2023-07-31	0.66	↔
1_15_5_101	MW-06	Appendix IV	Antimony	mg/L	9	7	78%	0.0000012	0.77	↔	0.0000020	0.82	↔	-0.0000020	0.31	↔	2023-02-08	2023-05-19	0.45	↔
1_15_5_102	MW-06	Appendix IV	Arsenic	mg/L	9	0	0%	-0.0000024	0.060	↔	0.0000024	0.41	↔	0.0000028	0.033	↔	2023-04-03	2023-06-23	0.94	↔
1_15_5_104	MW-06	Appendix IV	Beryllium	mg/L	9	8	89%	-0.000000033	0.13	↔	0.0000000019	0.63	↔	-0.00000000099	0.90	↔	2023-01-27	2023-07-13	0.86	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
1_15_5_106	MW-06	Appendix IV	Cadmium	mg/L	9	9	100%	0.00000066	0.91	↔	0.0000014	0.64	↔	-0.0000013	0.35	↔	2023-01-26	2023-05-22	0.44	↔
1_15_5_110	MW-06	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000026	0.73	↔	0.00000016	0.92	↔	-0.0000023	0.51	↔	2023-01-21	2023-08-06	0.32	↔
1_15_5_115	MW-06	Appendix IV	Lead	mg/L	9	6	67%	0.0000040	0.54	↔	-0.0000091	0.39	↔	-0.00000010	0.99	↔	2023-04-17	2023-07-11	0.49	↔
1_15_5_118	MW-06	Appendix IV	Molybdenum	mg/L	9	6	67%	0.000012	0.44	↔	-0.000025	0.32	↔	0.0000043	0.84	↔	2023-04-17	2023-07-08	0.51	↔
1_15_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	9	2	22%	0.0062	0.44	↔	-0.0043	0.72	↔	-0.00068	0.95	↔	2023-03-14	2023-07-12	0.30	↔
1_15_5_122	MW-06	Appendix IV	Selenium	mg/L	9	5	56%	0.000000058	0.83	↔	-0.00000014	0.42	↔	0.000000019	0.94	↔	2023-02-14	2023-08-07	0.61	↔
1_15_5_125	MW-06	Appendix IV	Thallium	mg/L	9	9	100%	0.0000017	0.32	↔	-0.0000074	0.33	↔	0.00000056	0.86	↔	2023-05-22	2023-07-09	0.58	↔
1_17_5_101	MW-08	Appendix IV	Antimony	mg/L	9	3	33%	0.0000012	0.27	↔	-0.0000021	0.22	↔	0.00000017	0.90	↔	2023-04-17	2023-06-28	0.64	↔
1_17_5_102	MW-08	Appendix IV	Arsenic	mg/L	9	0	0%	0.00062	0.0088	↑	-0.000057	0.60	↔	-0.00023	0.028	↔	2023-02-11	2023-06-09	0.97	↔
1_17_5_103	MW-08	Appendix IV	Barium	mg/L	9	0	0%	0.0029	0.49	↔	-0.0011	0.67	↔	-0.0027	0.47	↔	2023-02-07	2023-07-28	0.57	↔
1_17_5_106	MW-08	Appendix IV	Cadmium	mg/L	9	9	100%	-0.000000017	0.86	↔	0.00000084	0.056	↔	-0.000000057	0.53	↔	2023-04-10	2023-06-09	0.97	↔
1_17_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.0000096	0.35	↔	-0.0000028	0.24	↔	-0.0000023	0.60	↔	2023-02-06	2023-06-30	0.75	↔
1_17_5_110	MW-08	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000044	0.25	↔	-0.00000025	0.74	↔	-0.0000029	0.14	↔	2023-02-06	2023-08-02	0.86	↔
1_17_5_115	MW-08	Appendix IV	Lead	mg/L	9	7	78%	0.0000079	0.40	↔	-0.0000075	0.16	↔	0.00000012	0.95	↔	2023-02-06	2023-04-26	0.74	↔
1_17_5_118	MW-08	Appendix IV	Molybdenum	mg/L	9	0	0%	-0.00000023	0.98	↔	-0.000018	0.28	↔	0.000015	0.30	↔	2023-03-14	2023-07-08	0.78	↔
1_17_5_122	MW-08	Appendix IV	Selenium	mg/L	9	5	56%	0.0000000082	0.94	↔	-0.0000012	0.029	↔	0.00000014	0.23	↔	2023-04-12	2023-06-21	0.98	↔
1_18_5_101	MW-09	Appendix IV	Antimony	mg/L	9	5	56%	0.0000023	0.14	↔	-0.0000073	0.26	↔	0.00000085	0.74	↔	2023-05-22	2023-07-15	0.74	↔
1_18_5_103	MW-09	Appendix IV	Barium	mg/L	9	0	0%	-0.0079	0.42	↔	-0.00083	0.98	↔	0.0010	0.96	↔	2023-04-18	2023-07-04	0.37	↔
1_18_5_104	MW-09	Appendix IV	Beryllium	mg/L	9	8	89%	-0.000000011	0.84	↔	0.000000045	0.68	↔	-0.000000026	0.31	↔	2023-02-27	2023-05-22	0.44	↔
1_18_5_106	MW-09	Appendix IV	Cadmium	mg/L	9	9	100%	-0.00000087	0.86	↔	0.0000022	0.43	↔	-0.0000014	0.27	↔	2023-01-27	2023-05-22	0.58	↔
1_18_5_110	MW-09	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000042	0.51	↔	-0.00000059	0.88	↔	-0.0000040	0.48	↔	2023-02-28	2023-07-26	0.47	↔
1_18_5_115	MW-09	Appendix IV	Lead	mg/L	9	9	100%	0.0000049	0.32	↔	-0.000012	0.57	↔	0.000000086	0.99	↔	2023-04-18	2023-06-27	0.54	↔
1_18_5_116	MW-09	Appendix IV	Lithium	mg/L	9	0	0%	-0.00025	0.46	↔	0.0014	0.37	↔	-0.00052	0.46	↔	2023-05-16	2023-07-03	0.47	↔
1_18_5_122	MW-09	Appendix IV	Selenium	mg/L	9	2	22%	-0.00000055	0.34	↔	0.0000018	0.47	↔	-0.00000069	0.54	↔	2023-05-22	2023-07-24	0.51	↔
1_18_5_125	MW-09	Appendix IV	Thallium	mg/L	9	9	100%	0.0000017	0.32	↔	-0.0000075	0.33	↔	0.00000058	0.86	↔	2023-05-22	2023-07-08	0.58	↔
1_22_5_101	MW-18	Appendix IV	Antimony	mg/L	9	2	22%	0.0000017	0.27	↔	-0.0000047	0.44	↔	0.0000011	0.69	↔	2023-05-21	2023-08-02	0.63	↔
1_22_5_103	MW-18	Appendix IV	Barium	mg/L	9	0	0%	-0.000087	0.0018	↓	0.00029	0.0015	↑	0.000011	0.25	↔	2023-04-07	2023-05-22	0.99	↔
1_22_5_106	MW-18	Appendix IV	Cadmium	mg/L	9	2	22%	-0.0000011	0.49	↔	0.0000032	0.52	↔	-0.0000022	0.18	↔	2023-03-15	2023-05-22	0.68	↔
1_22_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	9	8	89%	-0.00000015	0.78	↔	0.00000064	0.53	↔	-0.00000019	0.41	↔	2023-03-01	2023-05-21	0.62	↔
1_22_5_115	MW-18	Appendix IV	Lead	mg/L	9	6	67%	0.0000082	0.62	↔	-0.0000041	0.47	↔	-0.00000026	0.96	↔	2023-02-07	2023-06-04	0.41	↔
1_22_5_116	MW-18	Appendix IV	Lithium	mg/L	9	0	0%	-0.00019	0.027	↔	0.00022	0.056	↔	-0.000078	0.31	↔	2023-04-05	2023-07-26	0.93	↔
1_22_5_122	MW-18	Appendix IV	Selenium	mg/L	9	0	0%	0.0000046	0.22	↔	-0.0000086	0.15	↔	0.0000086	0.13	↔	2023-04-02	2023-07-12	0.78	↔
1_22_5_125	MW-18	Appendix IV	Thallium	mg/L	9	9	100%	0.0000028	0.52	↔	-0.00000078	0.85	↔	-0.00000057	0.82	↔	2023-02-08	2023-06-26	0.24	↔
1_23_5_101	MW-19	Appendix IV	Antimony	mg/L	9	8	89%	0.0000039	0.16	↔	-0.000010	0.32	↔	0.00000038	0.93	↔	2023-05-12	2023-07-03	0.66	↔
1_23_5_102	MW-19	Appendix IV	Arsenic	mg/L	9	0	0%	-0.000020	0.013	↔	0.00010	0.0075	↑	-0.0000077	0.38	↔	2023-05-19	2023-07-04	0.97	↔
1_23_5_103	MW-19	Appendix IV	Barium	mg/L	9	0	0%	0.00011	0.55	↔	-0.00031	0.16	↔	0.000056	0.13	↔	2023-01-22	2023-03-26	0.85	↔
1_23_5_104	MW-19	Appendix IV	Beryllium	mg/L	9	3	33%	0.0000020	0.59	↔	-0.0000011	0.38	↔	0.00000015	0.88	↔	2023-02-07	2023-06-08	0.47	↔
1_23_5_106	MW-19	Appendix IV	Cadmium	mg/L	9	9	100%	0.00000061	0.92	↔	0.0000015	0.63	↔	-0.0000013	0.34	↔	2023-01-27	2023-05-21	0.44	↔
1_23_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	9	4	44%	0.0000095	0.12	↔	-0.0000100	0.12	↔	0.00000038	0.64	↔	2023-02-02	2023-04-10	0.91	↔
1_23_5_110	MW-19	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000059	0.088	↔	-0.0000051	0.35	↔	-0.0000022	0.12	↔	2023-02-23	2023-05-20	0.91	↔
1_23_5_115	MW-19	Appendix IV	Lead	mg/L	9	9	100%	0.000010	0.039	↔	-0.000015	0.20	↔	0.00000026	0.93	↔	2023-03-30	2023-06-22	0.91	↔
1_23_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	0.0064	0.23	↔	-0.0030	0.54	↔	0.0040	0.21	↔	2023-02-28	2023-06-27	0.71	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
1_23_5_122	MW-19	Appendix IV	Selenium	mg/L	9	9	100%	0.000010	0.18	↔	-0.0000090	0.48	↔	0.00000057	0.83	↔	2023-02-08	2023-05-06	0.70	↔
1_23_5_125	MW-19	Appendix IV	Thallium	mg/L	9	9	100%	0.0000027	0.057	↔	-0.0000074	0.14	↔	0.00000034	0.86	↔	2023-05-05	2023-07-04	0.86	↔
1_24_5_102	MW-20	Appendix IV	Arsenic	mg/L	9	0	0%	-0.0000044	0.065	↔	0.0000039	0.025	↔	-0.000000037	0.98	↔	2023-02-18	2023-07-22	0.95	↔
1_24_5_106	MW-20	Appendix IV	Cadmium	mg/L	9	9	100%	-0.000000017	0.87	↔	0.00000082	0.065	↔	-0.000000058	0.54	↔	2023-04-10	2023-06-10	0.96	↔
1_24_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	9	5	56%	0.00000095	0.20	↔	-0.00000093	0.20	↔	0.00000013	0.72	↔	2023-03-11	2023-06-11	0.75	↔
1_24_5_110	MW-20	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000045	0.18	↔	-0.0000030	0.32	↔	-0.0000026	0.17	↔	2023-02-21	2023-05-23	0.87	↔
1_24_5_115	MW-20	Appendix IV	Lead	mg/L	9	0	0%	-0.000020	0.30	↔	0.000017	0.12	↔	-0.0000045	0.28	↔	2023-01-25	2023-04-24	0.76	↔
1_24_5_116	MW-20	Appendix IV	Lithium	mg/L	9	0	0%	-0.00036	0.053	↔	0.00024	0.042	↔	-0.00010	0.39	↔	2023-02-17	2023-07-13	0.90	↔
1_24_5_118	MW-20	Appendix IV	Molybdenum	mg/L	9	0	0%	-0.0000020	0.65	↔	0.000017	0.073	↔	-0.0000051	0.43	↔	2023-04-17	2023-07-11	0.87	↔
1_24_5_122	MW-20	Appendix IV	Selenium	mg/L	9	5	56%	0.000000000000027	1.0	↔	-0.0000015	0.019	↔	0.00000013	0.70	↔	2023-04-10	2023-06-30	0.97	↔
1_25_5_101	MW-30	Appendix IV	Antimony	mg/L	9	8	89%	0.00000074	0.85	↔	0.0000045	0.28	↔	-0.0000032	0.21	↔	2023-03-01	2023-05-25	0.72	↔
1_25_5_102	MW-30	Appendix IV	Arsenic	mg/L	9	2	22%	-0.0000030	0.14	↔	0.0000042	0.57	↔	0.0000026	0.45	↔	2023-05-21	2023-07-29	0.76	↔
1_25_5_103	MW-30	Appendix IV	Barium	mg/L	9	0	0%	-0.00045	0.15	↔	0.00032	0.70	↔	-0.000044	0.85	↔	2023-04-13	2023-05-30	0.75	↔
1_25_5_104	MW-30	Appendix IV	Beryllium	mg/L	9	8	89%	0.0000018	0.64	↔	-0.00000088	0.33	↔	0.00000049	0.78	↔	2023-02-05	2023-07-20	0.44	↔
1_25_5_106	MW-30	Appendix IV	Cadmium	mg/L	9	9	100%	0.0000015	0.24	↔	-0.0000037	0.48	↔	0.00000057	0.81	↔	2023-05-21	2023-07-24	0.59	↔
1_25_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.000053	0.023	↔	0.00019	0.037	↔	-0.000064	0.082	↔	2023-05-19	2023-07-11	0.93	↔
1_25_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.00060	0.83	↔	-0.0023	0.61	↔	0.0021	0.60	↔	2023-03-22	2023-06-27	0.29	↔
1_25_5_115	MW-30	Appendix IV	Lead	mg/L	9	9	100%	0.000014	0.084	↔	-0.0000067	0.31	↔	-0.0000033	0.38	↔	2023-02-21	2023-05-22	0.83	↔
1_25_5_116	MW-30	Appendix IV	Lithium	mg/L	9	0	0%	0.00072	0.64	↔	-0.00079	0.42	↔	0.00028	0.84	↔	2023-03-12	2023-07-09	0.34	↔
1_25_5_118	MW-30	Appendix IV	Molybdenum	mg/L	9	3	33%	0.000079	0.19	↔	-0.000014	0.26	↔	0.0000022	0.92	↔	2023-01-04	2023-08-02	0.71	↔
1_25_5_122	MW-30	Appendix IV	Selenium	mg/L	9	6	67%	0.000011	0.41	↔	-0.0000100	0.17	↔	0.00000046	0.86	↔	2023-02-05	2023-04-24	0.71	↔
1_25_5_125	MW-30	Appendix IV	Thallium	mg/L	9	9	100%	0.0000045	0.058	↔	0.0000000039	1.0	↔	-0.0000040	0.058	↔	2023-02-17	2023-08-07	0.92	↔
1_26_5_101	MW-31	Appendix IV	Antimony	mg/L	9	4	44%	0.00000051	0.19	↔	-0.00000022	0.66	↔	0.0000000057	0.99	↔	2023-04-16	2023-07-10	0.72	↔
1_26_5_102	MW-31	Appendix IV	Arsenic	mg/L	9	0	0%	-0.0000088	0.028	↔	0.0000060	0.022	↔	-0.0000052	0.077	↔	2023-03-04	2023-07-17	0.94	↔
1_26_5_106	MW-31	Appendix IV	Cadmium	mg/L	9	9	100%	-0.000000019	0.86	↔	0.00000083	0.070	↔	-0.000000059	0.54	↔	2023-04-09	2023-06-09	0.96	↔
1_26_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.0000017	0.76	↔	0.000014	0.45	↔	-0.0000014	0.78	↔	2023-04-03	2023-05-22	0.52	↔
1_26_5_110	MW-31	Appendix IV	Cobalt	mg/L	9	0	0%	0.00000060	0.59	↔	0.0000000061	0.98	↔	-0.00000066	0.24	↔	2023-02-06	2023-07-31	0.67	↔
1_26_5_115	MW-31	Appendix IV	Lead	mg/L	9	8	89%	0.00000028	0.58	↔	-0.0000030	0.23	↔	0.00000048	0.64	↔	2023-05-21	2023-07-25	0.83	↔
1_26_5_116	MW-31	Appendix IV	Lithium	mg/L	9	0	0%	-0.000016	0.66	↔	0.000097	0.55	↔	-0.000069	0.39	↔	2023-04-18	2023-07-02	0.53	↔
1_26_5_118	MW-31	Appendix IV	Molybdenum	mg/L	9	0	0%	-0.000026	0.15	↔	0.0000018	0.69	↔	-0.0000016	0.69	↔	2023-01-09	2023-06-26	0.68	↔
1_26_5_122	MW-31	Appendix IV	Selenium	mg/L	9	5	56%	0.00000016	0.54	↔	-0.0000024	0.051	↔	0.00000018	0.47	↔	2023-04-03	2023-05-22	0.95	↔
2_12_5_101	MW-02	Appendix IV	Antimony	mg/L	9	2	22%	0.0000028	0.12	↔	-0.0000074	0.30	↔	0.0000014	0.63	↔	2023-05-16	2023-07-10	0.71	↔
2_12_5_103	MW-02	Appendix IV	Barium	mg/L	9	0	0%	0.0012	0.57	↔	-0.0014	0.25	↔	-0.0000042	0.99	↔	2023-01-21	2023-04-18	0.69	↔
2_12_5_104	MW-02	Appendix IV	Beryllium	mg/L	9	0	0%	0.0000033	0.19	↔	-0.0000030	0.061	↔	0.0000021	0.018	↔	2023-01-20	2023-04-21	0.93	↔
2_12_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.053	0.52	↔	0.044	0.34	↔	0.00072	0.97	↔	2023-02-07	2023-04-24	0.54	↔
2_12_5_118	MW-02	Appendix IV	Molybdenum	mg/L	9	0	0%	0.000080	0.025	↔	-0.000064	0.047	↔	-0.0000076	0.55	↔	2023-02-27	2023-05-28	0.94	↔
2_12_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	3	33%	-0.012	0.25	↔	0.010	0.81	↔	-0.018	0.39	↔	2023-04-18	2023-08-03	0.54	↔
2_12_5_125	MW-02	Appendix IV	Thallium	mg/L	9	8	89%	0.0000017	0.30	↔	-0.0000087	0.26	↔	0.0000071	0.091	↔	2023-05-22	2023-07-15	0.78	↔
2_13_5_101	MW-03	Appendix IV	Antimony	mg/L	9	5	56%	0.00000063	0.85	↔	0.0000060	0.40	↔	-0.0000031	0.10	↔	2023-03-07	2023-05-11	0.76	↔
2_13_5_102	MW-03	Appendix IV	Arsenic	mg/L	9	0	0%	0.0000080	0.33	↔	-0.0000097	0.078	↔	0.0000033	0.13	↔	2023-01-30	2023-04-26	0.82	↔
2_13_5_104	MW-03	Appendix IV	Beryllium	mg/L	9	7	78%	0.0000017	0.63	↔	-0.00000087	0.33	↔	0.0000016	0.37	↔	2023-02-06	2023-07-26	0.49	↔
2_13_5_106	MW-03	Appendix IV	Cadmium	mg/L	9	8	89%	0.00000075	0.90	↔	0.0000014	0.67	↔	-0.0000011	0.44	↔	2023-02-01	2023-05-22	0.39	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
2_13_5_110	MW-03	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000018	0.81	↔	-0.0000057	0.71	↔	0.0000045	0.23	↔	2023-02-24	2023-04-18	0.58	↔
2_13_5_115	MW-03	Appendix IV	Lead	mg/L	9	8	89%	0.000010	0.045	↔	-0.000013	0.30	↔	-0.0000020	0.53	↔	2023-03-24	2023-05-23	0.85	↔
2_13_5_118	MW-03	Appendix IV	Molybdenum	mg/L	9	7	78%	0.000011	0.44	↔	-0.000035	0.57	↔	0.0000087	0.75	↔	2023-04-18	2023-06-28	0.46	↔
2_13_5_122	MW-03	Appendix IV	Selenium	mg/L	9	3	33%	0.0000054	0.73	↔	-0.0000032	0.42	↔	0.0000039	0.61	↔	2023-02-06	2023-07-15	0.32	↔
2_13_5_125	MW-03	Appendix IV	Thallium	mg/L	9	8	89%	0.0000042	0.066	↔	0.0000000047	1.0	↔	-0.0000026	0.16	↔	2023-02-19	2023-08-06	0.89	↔
2_14_5_101	MW-04	Appendix IV	Antimony	mg/L	9	6	67%	0.00000054	0.88	↔	0.0000045	0.27	↔	-0.0000032	0.20	↔	2023-03-01	2023-05-26	0.73	↔
2_14_5_102	MW-04	Appendix IV	Arsenic	mg/L	9	0	0%	0.0000013	0.92	↔	-0.0000047	0.33	↔	0.0000029	0.49	↔	2023-01-30	2023-05-23	0.47	↔
2_14_5_106	MW-04	Appendix IV	Cadmium	mg/L	9	9	100%	0.0000015	0.24	↔	-0.0000037	0.47	↔	0.00000054	0.82	↔	2023-05-22	2023-07-23	0.59	↔
2_14_5_110	MW-04	Appendix IV	Cobalt	mg/L	9	0	0%	-0.0000014	0.63	↔	0.0000078	0.55	↔	-0.0000030	0.61	↔	2023-05-22	2023-07-06	0.26	↔
2_14_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.0031	0.38	↔	-0.0014	0.79	↔	0.0064	0.24	↔	2023-03-22	2023-07-07	0.74	↔
2_14_5_115	MW-04	Appendix IV	Lead	mg/L	9	9	100%	0.0000047	0.35	↔	-0.0000074	0.71	↔	-0.00000067	0.94	↔	2023-04-19	2023-07-27	0.47	↔
2_14_5_118	MW-04	Appendix IV	Molybdenum	mg/L	9	2	22%	0.0000095	0.53	↔	-0.000029	0.56	↔	0.000011	0.43	↔	2023-04-18	2023-06-17	0.41	↔
2_14_5_125	MW-04	Appendix IV	Thallium	mg/L	9	9	100%	0.0000027	0.72	↔	0.0000012	0.63	↔	-0.0000023	0.36	↔	2023-01-29	2023-05-29	0.52	↔
2_16_5_101	MW-07	Appendix IV	Antimony	mg/L	9	8	89%	0.000000025	0.70	↔	0.00000073	0.028	↔	-0.000000049	0.42	↔	2023-03-25	2023-06-06	0.99	↔
2_16_5_102	MW-07	Appendix IV	Arsenic	mg/L	9	0	0%	-0.00000049	0.43	↔	0.00000043	0.64	↔	0.00000085	0.33	↔	2023-04-17	2023-07-25	0.67	↔
2_16_5_106	MW-07	Appendix IV	Cadmium	mg/L	9	9	100%	-0.000000016	0.87	↔	0.00000084	0.056	↔	-0.000000057	0.53	↔	2023-04-10	2023-06-10	0.97	↔
2_16_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.000000083	0.93	↔	-0.00000073	0.80	↔	0.00000056	0.51	↔	2023-03-19	2023-06-21	0.27	↔
2_16_5_110	MW-07	Appendix IV	Cobalt	mg/L	9	0	0%	0.0000040	0.36	↔	0.00000037	0.77	↔	-0.00000027	0.82	↔	2023-01-26	2023-06-26	0.73	↔
2_16_5_115	MW-07	Appendix IV	Lead	mg/L	9	9	100%	0.000000045	0.87	↔	-0.0000023	0.056	↔	0.00000016	0.53	↔	2023-04-10	2023-06-10	0.97	↔
2_16_5_118	MW-07	Appendix IV	Molybdenum	mg/L	9	9	100%	0.00000014	0.87	↔	-0.0000072	0.056	↔	0.00000049	0.53	↔	2023-04-10	2023-06-10	0.97	↔
2_16_5_122	MW-07	Appendix IV	Selenium	mg/L	9	8	89%	0.000000045	0.87	↔	-0.0000023	0.056	↔	0.00000016	0.53	↔	2023-04-10	2023-06-10	0.97	↔
2_19_5_101	MW-10	Appendix IV	Antimony	mg/L	9	5	56%	0.0000020	0.27	↔	-0.0000062	0.41	↔	0.00000067	0.84	↔	2023-05-22	2023-07-17	0.59	↔
2_19_5_102	MW-10	Appendix IV	Arsenic	mg/L	9	0	0%	-0.0000016	0.11	↔	0.0000076	0.088	↔	-0.0000018	0.29	↔	2023-04-18	2023-08-05	0.98	↔
2_19_5_104	MW-10	Appendix IV	Beryllium	mg/L	9	3	33%	-0.000000030	0.98	↔	0.00000079	0.45	↔	-0.0000013	0.40	↔	2023-03-06	2023-07-25	0.46	↔
2_19_5_106	MW-10	Appendix IV	Cadmium	mg/L	9	9	100%	0.0000015	0.25	↔	-0.0000038	0.48	↔	0.00000058	0.81	↔	2023-05-22	2023-07-23	0.59	↔
2_19_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.000026	0.10	↔	0.000073	0.024	↔	-0.000057	0.038	↔	2023-04-10	2023-07-27	0.95	↔
2_19_5_110	MW-10	Appendix IV	Cobalt	mg/L	9	0	0%	0.00000051	0.97	↔	0.0000057	0.52	↔	-0.0000067	0.60	↔	2023-02-23	2023-06-30	0.36	↔
2_19_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.045	0.0091	↓	0.045	0.0023	↑	-0.022	0.045	↔	2023-03-08	2023-07-12	0.98	↔
2_19_5_115	MW-10	Appendix IV	Lead	mg/L	9	7	78%	0.0000097	0.050	↔	-0.000016	0.20	↔	0.00000085	0.78	↔	2023-04-01	2023-06-22	0.90	↔
2_19_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	9	8	89%	0.0070	0.57	↔	-0.0033	0.29	↔	0.0029	0.61	↔	2023-02-05	2023-07-14	0.48	↔
2_19_5_125	MW-10	Appendix IV	Thallium	mg/L	9	9	100%	0.0000026	0.062	↔	-0.0000078	0.15	↔	0.00000039	0.85	↔	2023-05-06	2023-07-04	0.85	↔
2_20_5_102	MW-11	Appendix IV	Arsenic	mg/L	9	0	0%	-0.000015	0.28	↔	0.000012	0.82	↔	0.0000063	0.80	↔	2023-04-29	2023-08-02	0.46	↔
2_20_5_104	MW-11	Appendix IV	Beryllium	mg/L	9	8	89%	-0.00000011	0.67	↔	0.000000000000077	1.0	↔	-0.0000000000000017	1.0	↔	2023-04-17	2023-05-27	0.21	↔
2_20_5_106	MW-11	Appendix IV	Cadmium	mg/L	9	8	89%	-0.0000013	0.79	↔	0.00000012	0.99	↔	-0.0000010	0.89	↔	2023-03-14	2023-07-08	0.084	↔
2_20_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	9	0	0%	-0.000024	0.53	↔	0.000019	0.91	↔	-0.000015	0.84	↔	2023-05-06	2023-08-02	0.22	↔
2_20_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.0072	0.24	↔	0.00029	0.99	↔	0.0079	0.18	↔	2023-04-03	2023-06-19	0.72	↔
2_20_5_118	MW-11	Appendix IV	Molybdenum	mg/L	9	2	22%	-0.000013	0.26	↔	-0.0000034	0.92	↔	0.0000072	0.47	↔	2023-04-10	2023-05-23	0.66	↔
2_20_5_122	MW-11	Appendix IV	Selenium	mg/L	9	3	33%	0.0000014	0.46	↔	-0.00000098	0.16	↔	0.00000039	0.48	↔	2023-01-11	2023-05-27	0.72	↔
2_20_5_125	MW-11	Appendix IV	Thallium	mg/L	9	9	100%	0.0000018	0.31	↔	-0.0000073	0.33	↔	0.00000056	0.86	↔	2023-05-21	2023-07-09	0.59	↔
2_21_5_102	MW-12	Appendix IV	Arsenic	mg/L	9	0	0%	-0.000014	0.032	↔	0.000014	0.0091	↑	-0.0000039	0.33	↔	2023-03-06	2023-08-02	0.97	↔
2_21_5_103	MW-12	Appendix IV	Barium	mg/L	9	0	0%	-0.000023	0.65	↔	0.00031	0.23	↔	0.000091	0.41	↔	2023-04-20	2023-07-25	0.95	↔
2_21_5_106	MW-12	Appendix IV	Cadmium	mg/L	9	0	0%	0.0000026	0.48	↔	0.000023	0.22	↔	-0.000014	0.12	↔	2023-05-03	2023-07-07	0.88	↔

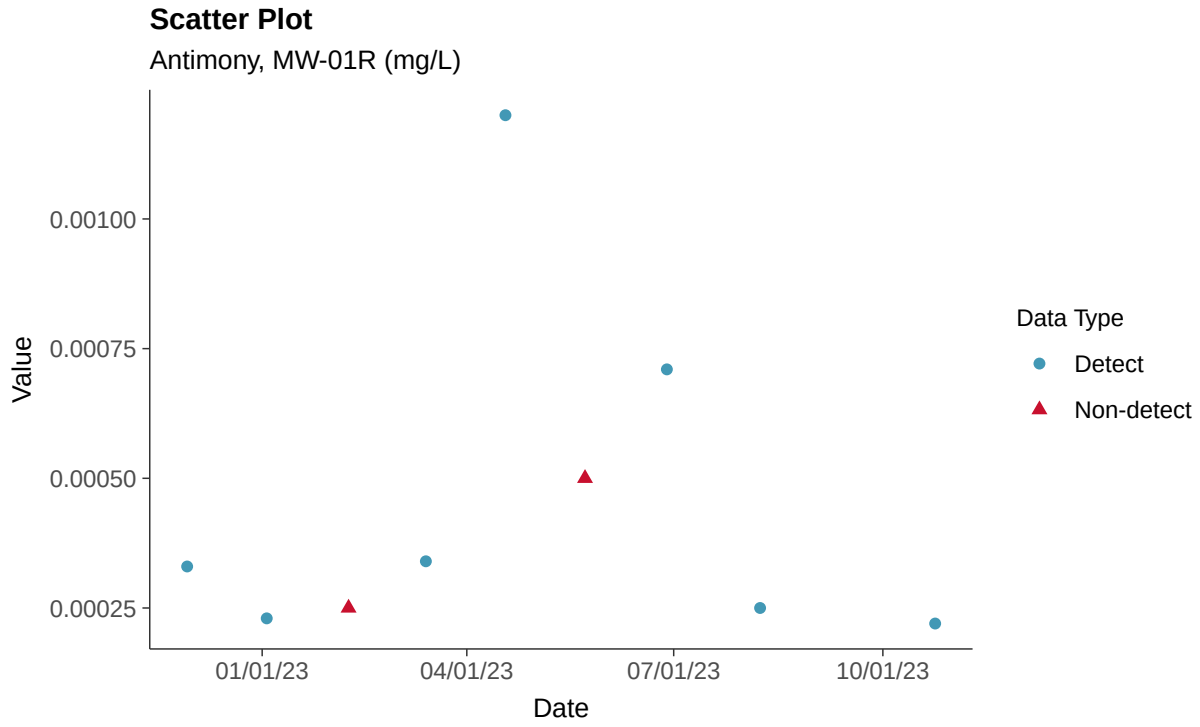
(Table continues on next page)

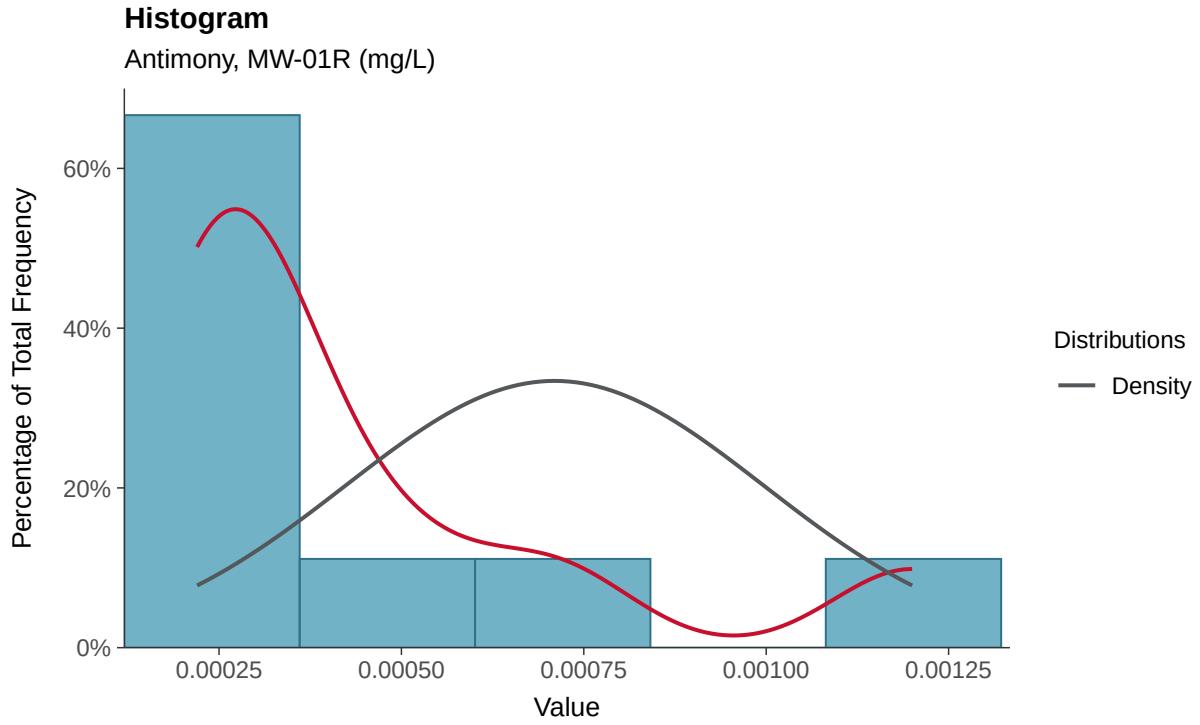
Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
2_21_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	9	4	44%	0.0000030	0.067	↔	-0.0000058	0.19	↔	0.00000031	0.77	↔	2023-03-17	2023-06-10	0.92	↔
2_21_5_110	MW-12	Appendix IV	Cobalt	mg/L	9	3	33%	-0.00000051	0.17	↔	0.0000069	0.013	↔	-0.0000019	0.045	↔	2023-04-27	2023-07-09	0.99	↔
2_21_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	-0.0033	0.54	↔	-0.00077	0.77	↔	0.00011	0.93	↔	2023-01-27	2023-05-22	0.63	↔
2_21_5_115	MW-12	Appendix IV	Lead	mg/L	9	5	56%	0.000000088	0.78	↔	-0.0000017	0.16	↔	0.00000052	0.15	↔	2023-04-08	2023-05-27	0.82	↔
2_21_5_116	MW-12	Appendix IV	Lithium	mg/L	9	0	0%	-0.000022	0.26	↔	0.000029	0.17	↔	-0.0000096	0.39	↔	2023-02-21	2023-06-26	0.85	↔
2_21_5_118	MW-12	Appendix IV	Molybdenum	mg/L	9	0	0%	-0.000028	0.0024	↓	0.000036	0.0046	↑	0.000010	0.091	↔	2023-04-01	2023-07-04	0.99	↔
2_21_5_122	MW-12	Appendix IV	Selenium	mg/L	9	0	0%	0.000020	0.41	↔	-0.000012	0.083	↔	0.0000019	0.86	↔	2023-01-10	2023-07-15	0.85	↔
2_27_5_101	MW-32	Appendix IV	Antimony	mg/L	9	6	67%	0.00000047	0.19	↔	-0.00000013	0.92	↔	0.000000017	0.98	↔	2023-04-18	2023-06-30	0.60	↔
2_27_5_102	MW-32	Appendix IV	Arsenic	mg/L	9	0	0%	-0.0000010	0.27	↔	0.0000020	0.19	↔	-0.00000053	0.66	↔	2023-04-08	2023-07-16	0.73	↔
2_27_5_103	MW-32	Appendix IV	Barium	mg/L	9	0	0%	-0.0024	0.017	↔	0.00083	0.73	↔	0.0058	0.012	↔	2023-04-23	2023-08-06	0.96	↔
2_27_5_106	MW-32	Appendix IV	Cadmium	mg/L	9	9	100%	-0.000000017	0.86	↔	0.00000083	0.071	↔	-0.000000059	0.54	↔	2023-04-09	2023-06-10	0.96	↔
2_27_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	9	0	0%	0.0000053	0.044	↔	-0.0000020	0.012	↔	0.000000064	0.94	↔	2023-01-04	2023-06-28	0.96	↔
2_27_5_110	MW-32	Appendix IV	Cobalt	mg/L	9	0	0%	-0.000000029	0.95	↔	0.0000086	0.017	↔	-0.0000026	0.054	↔	2023-05-20	2023-06-27	0.95	↔
2_27_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	9	0	0%	0.00024	0.91	↔	-0.00068	0.63	↔	0.0034	0.17	↔	2023-03-13	2023-06-30	0.78	↔
2_27_5_115	MW-32	Appendix IV	Lead	mg/L	9	7	78%	-0.00000000000038	1.0	↔	-0.0000011	0.15	↔	0.000000000000032	1.0	↔	2023-03-30	2023-07-14	0.90	↔
2_27_5_118	MW-32	Appendix IV	Molybdenum	mg/L	9	0	0%	-0.000019	0.0037	↓	0.000022	0.057	↔	-0.0000024	0.33	↔	2023-03-21	2023-06-12	0.97	↔
2_27_5_122	MW-32	Appendix IV	Selenium	mg/L	9	9	100%	0.000000049	0.86	↔	-0.0000023	0.071	↔	0.00000016	0.54	↔	2023-04-09	2023-06-10	0.96	↔

Appendix IV: Antimony, MW-01R

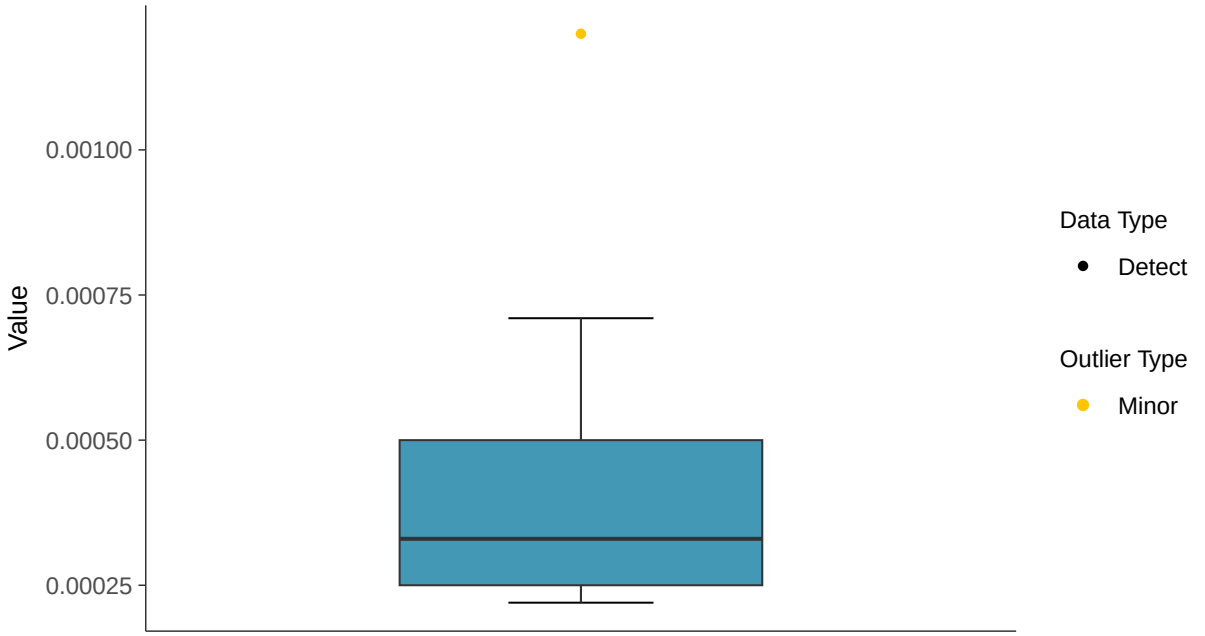
ID: 1_11_5_101





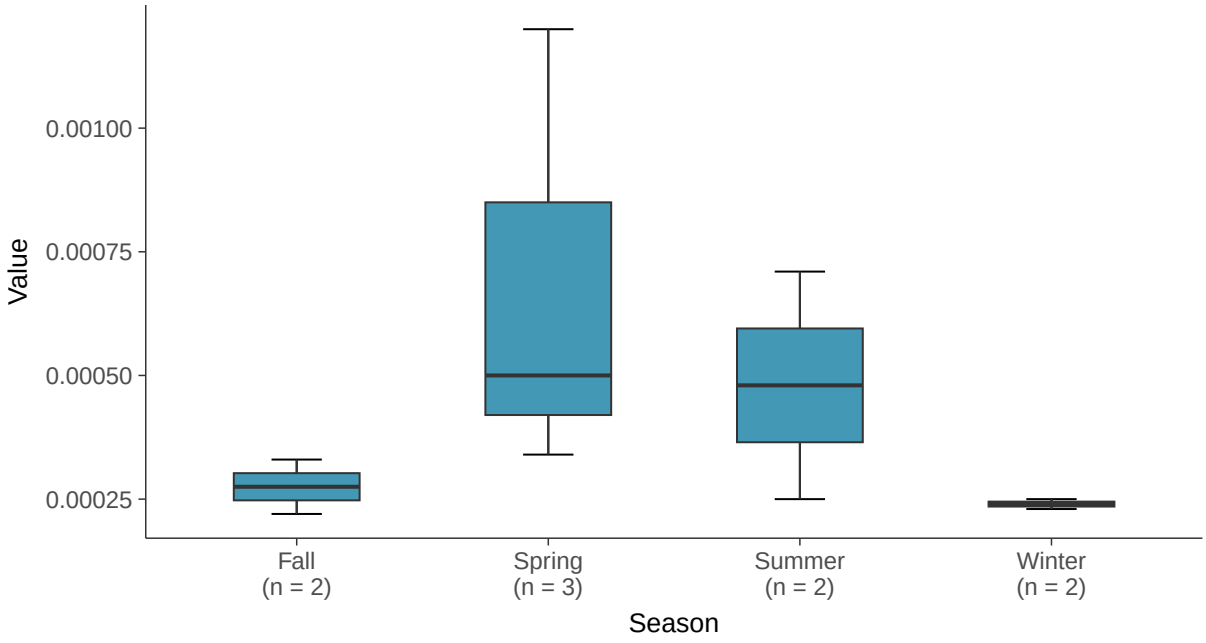
Boxplot

Antimony, MW-01R (mg/L)



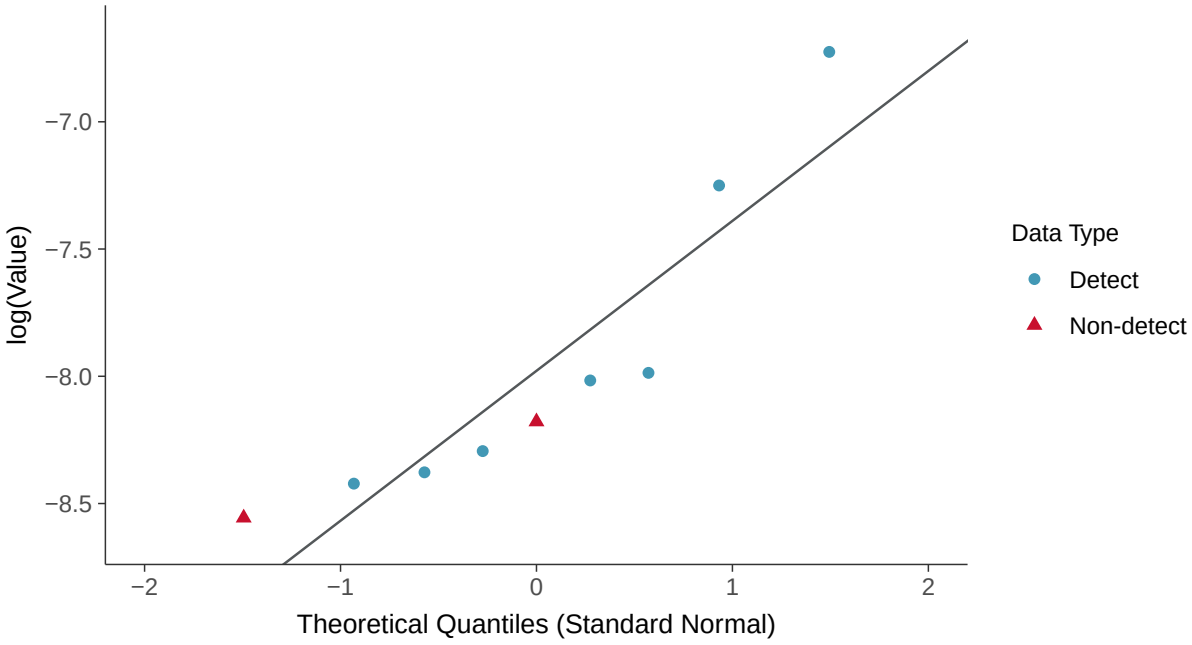
Boxplot by Season

Antimony, MW-01R (mg/L)



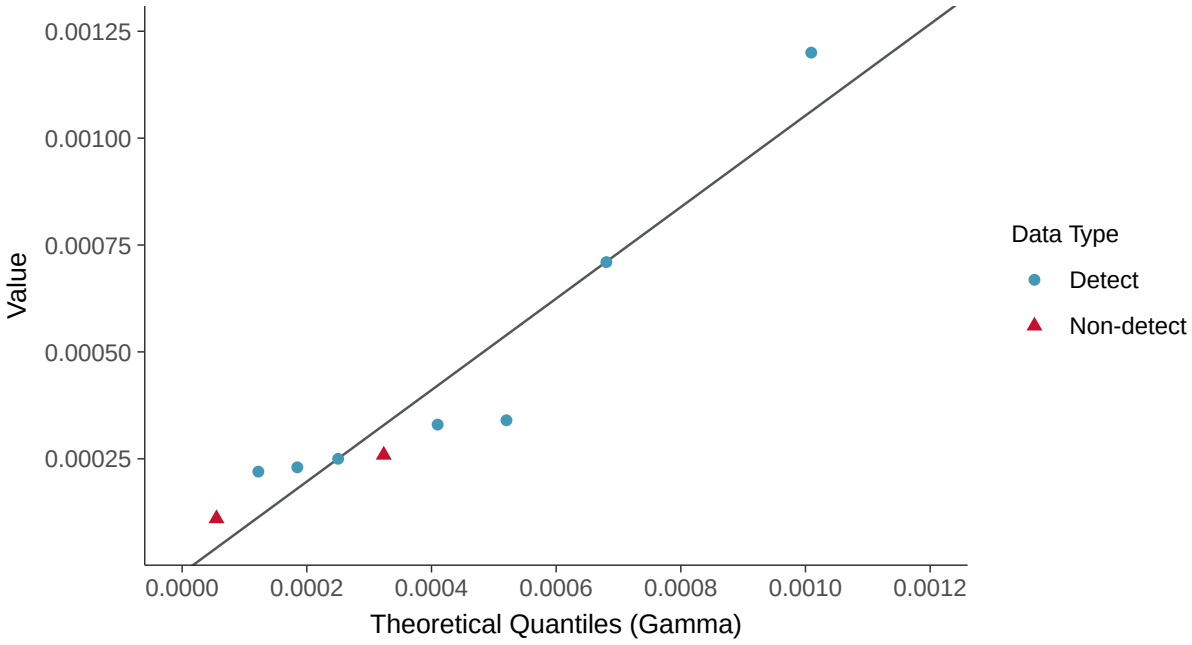
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-01R (mg/L)



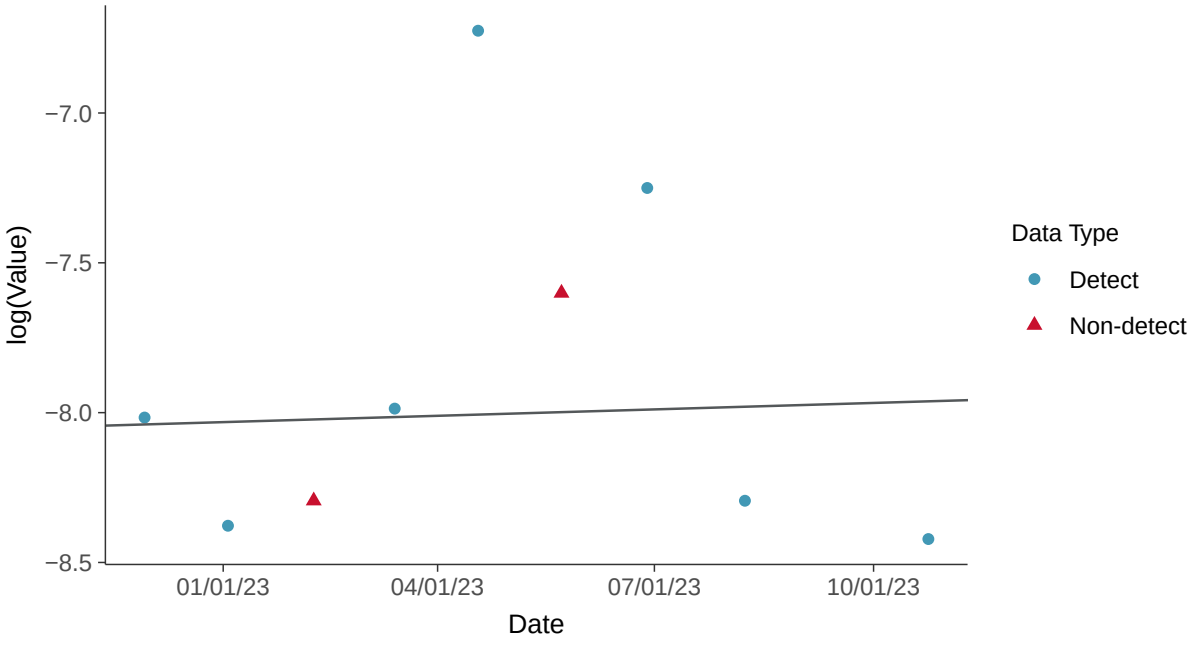
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-01R (mg/L)



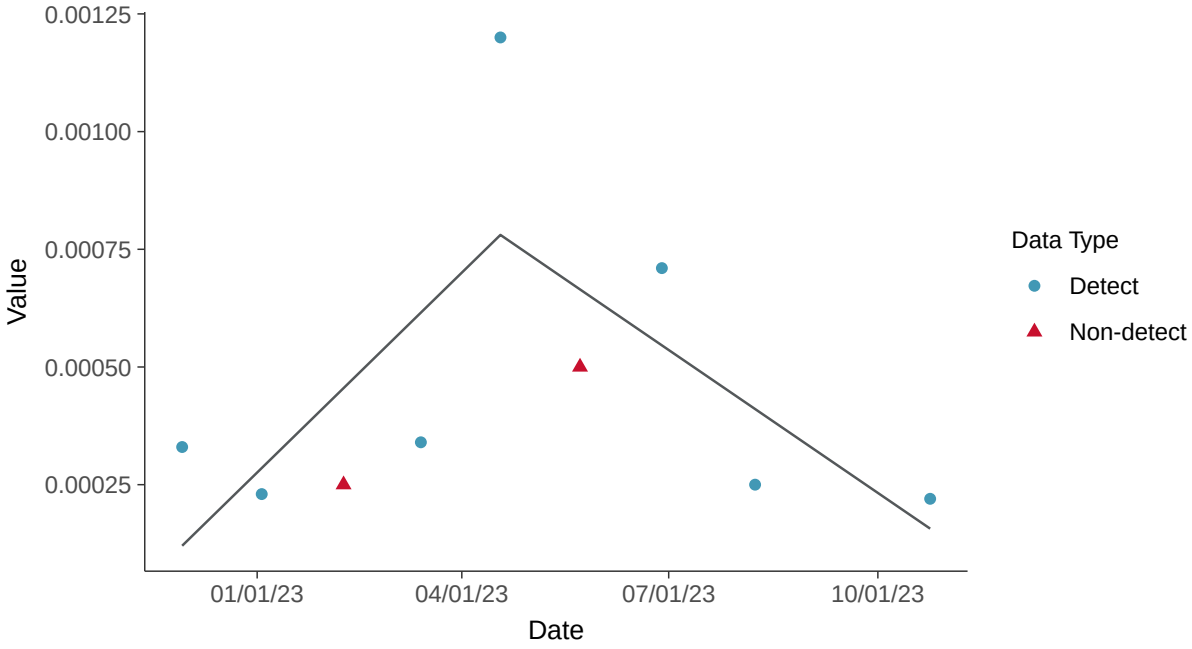
Trend Regression: Lognormal MLE

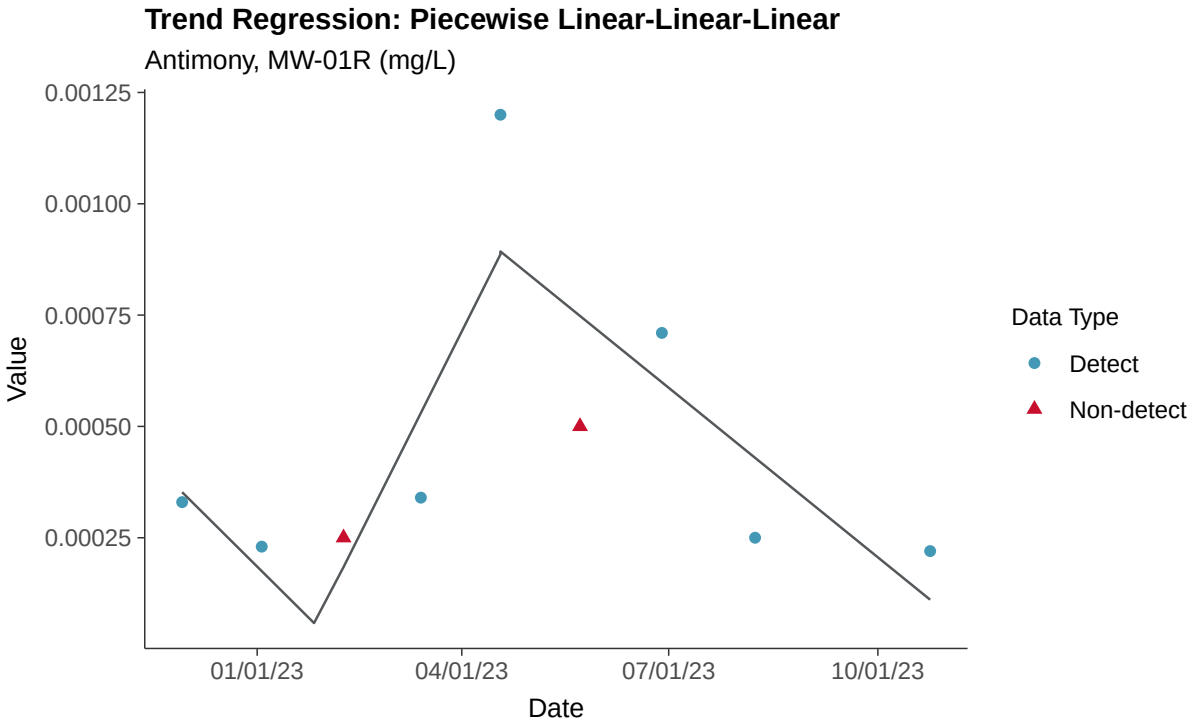
Antimony, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear

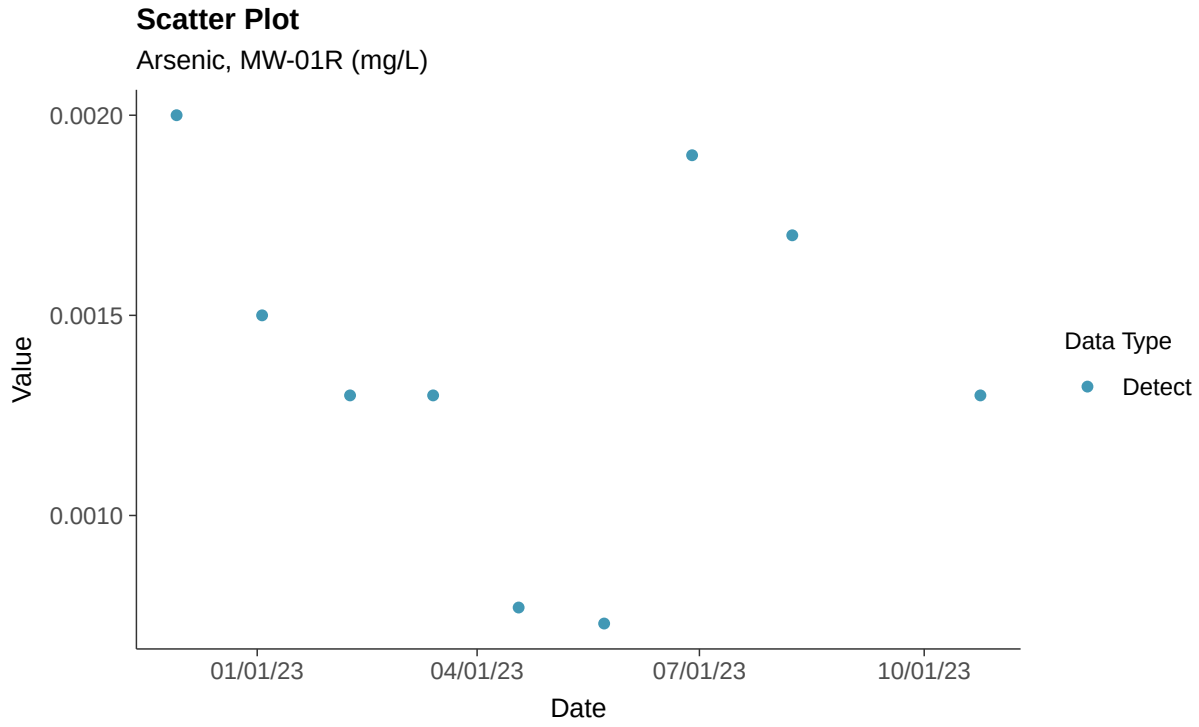
Antimony, MW-01R (mg/L)

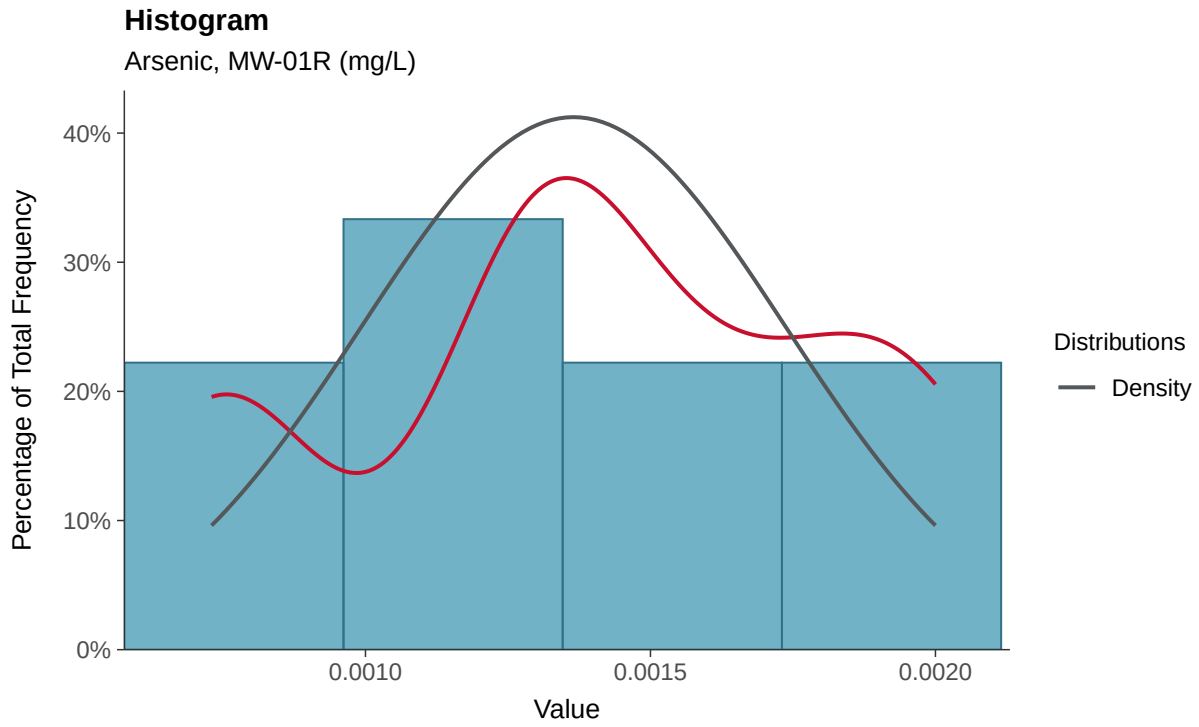



Trend Regression: Piecewise Linear-Linear-Linear
Antimony, MW-01R (mg/L)
0.00125
0.00100
0.00075
0.00050
0.00025
Value
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect
Non-detect

Appendix IV: Arsenic, MW-01R

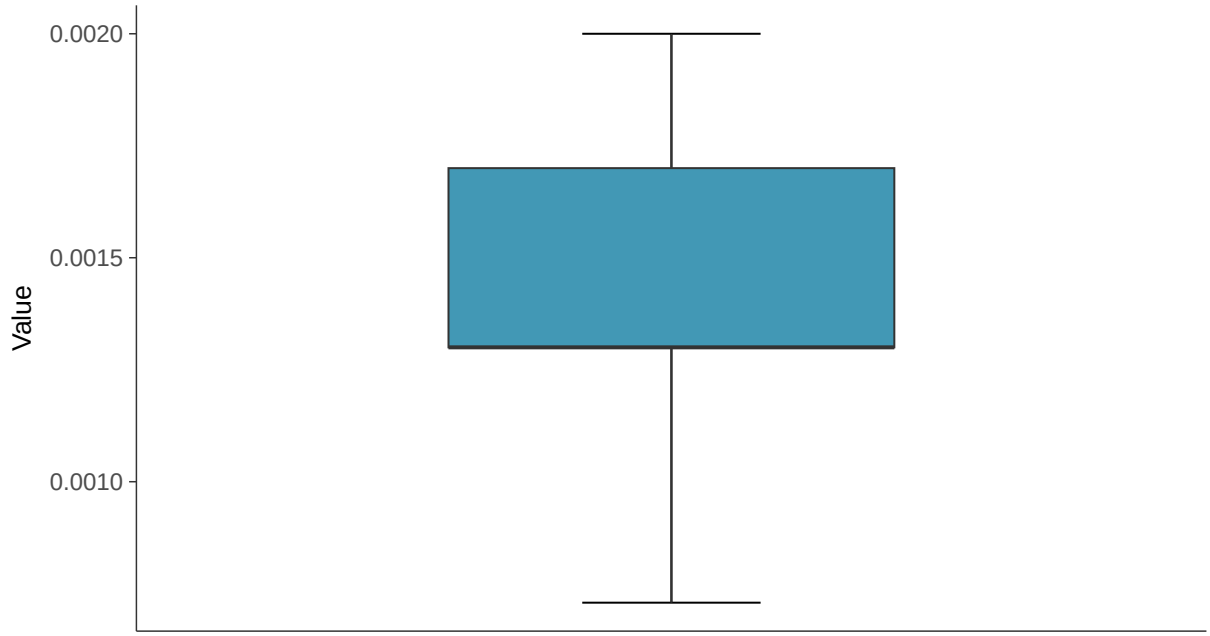
ID: 1_11_5_102





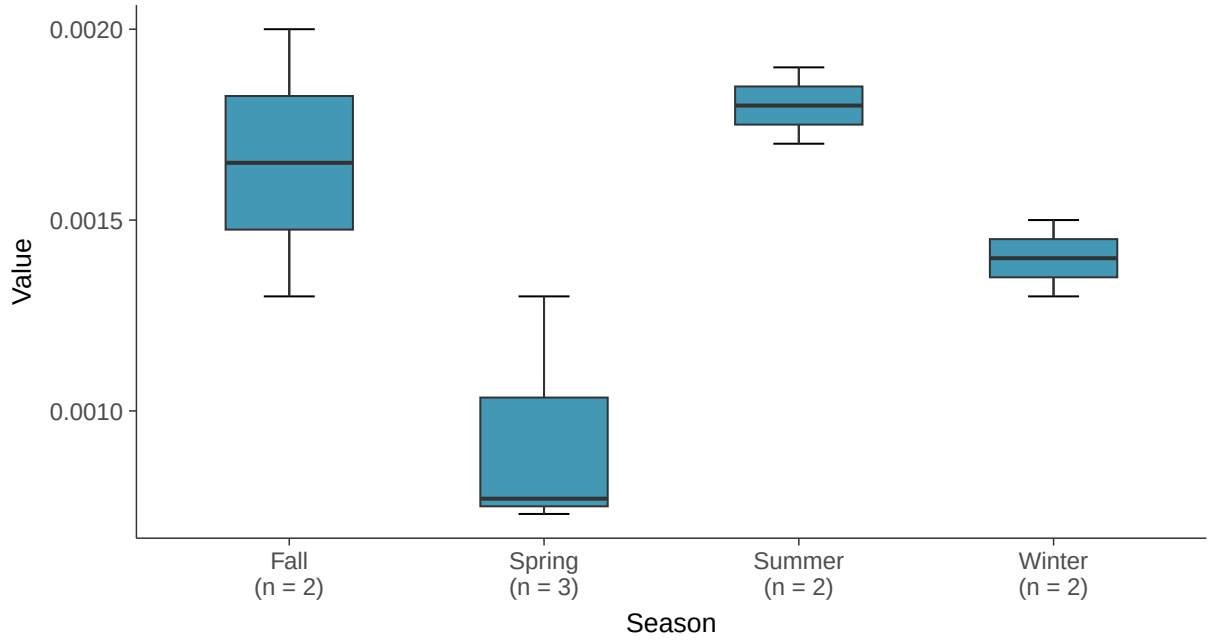
Boxplot

Arsenic, MW-01R (mg/L)



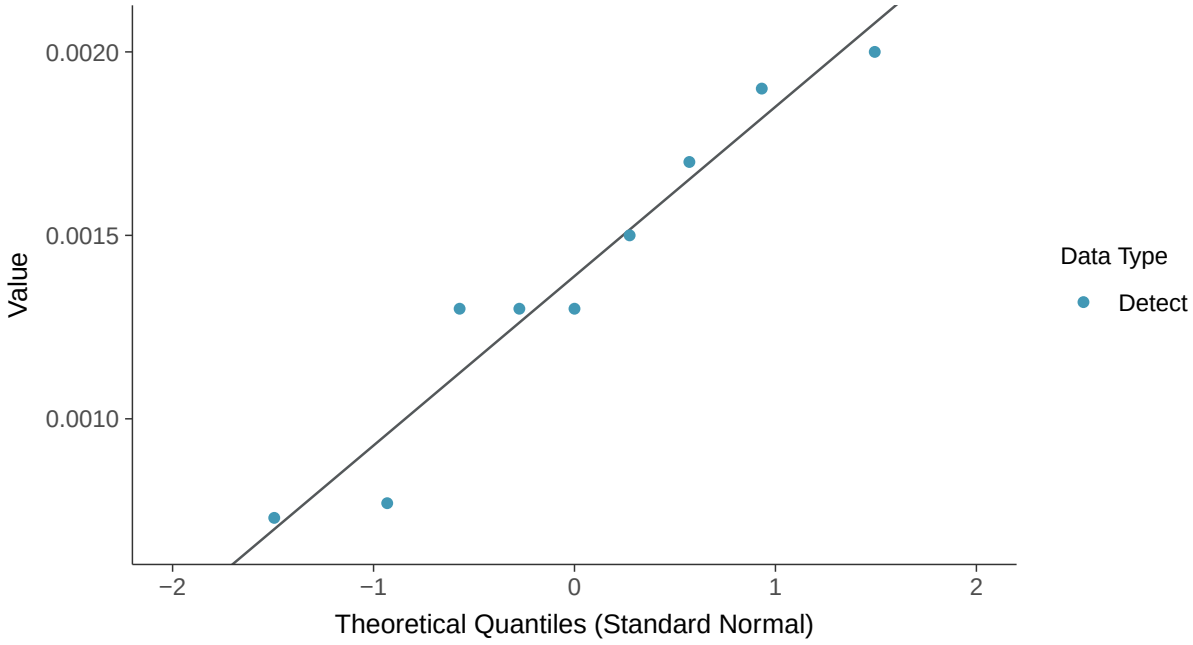
Boxplot by Season

Arsenic, MW-01R (mg/L)



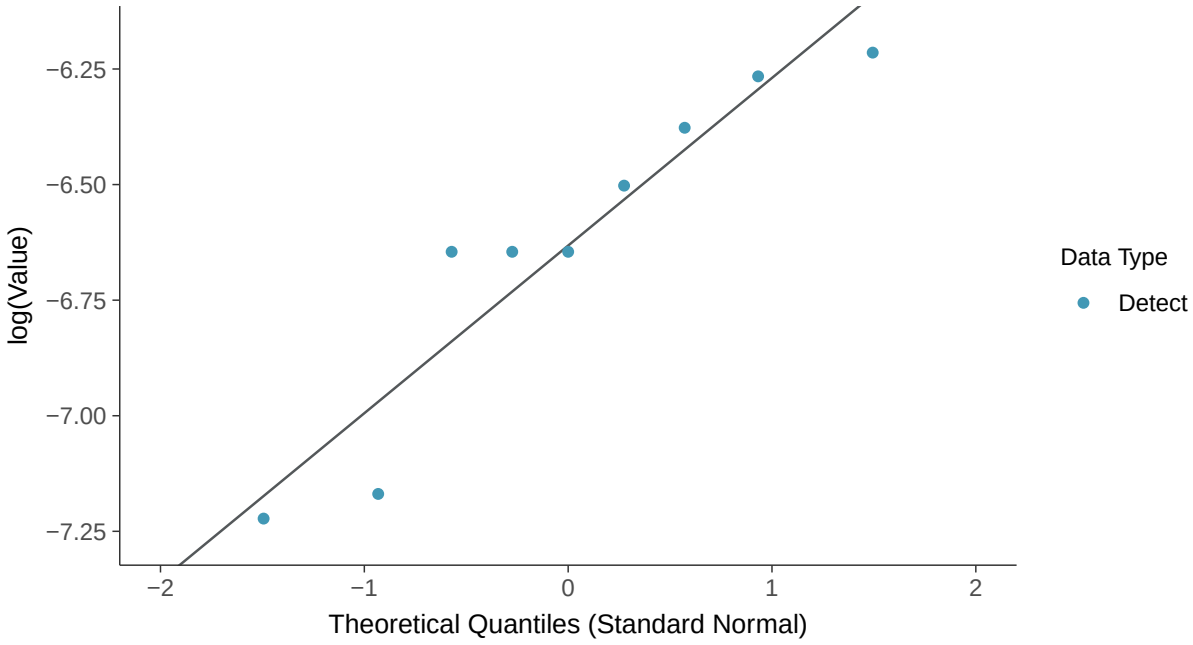
Normal Q-Q plot

Arsenic, MW-01R (mg/L)



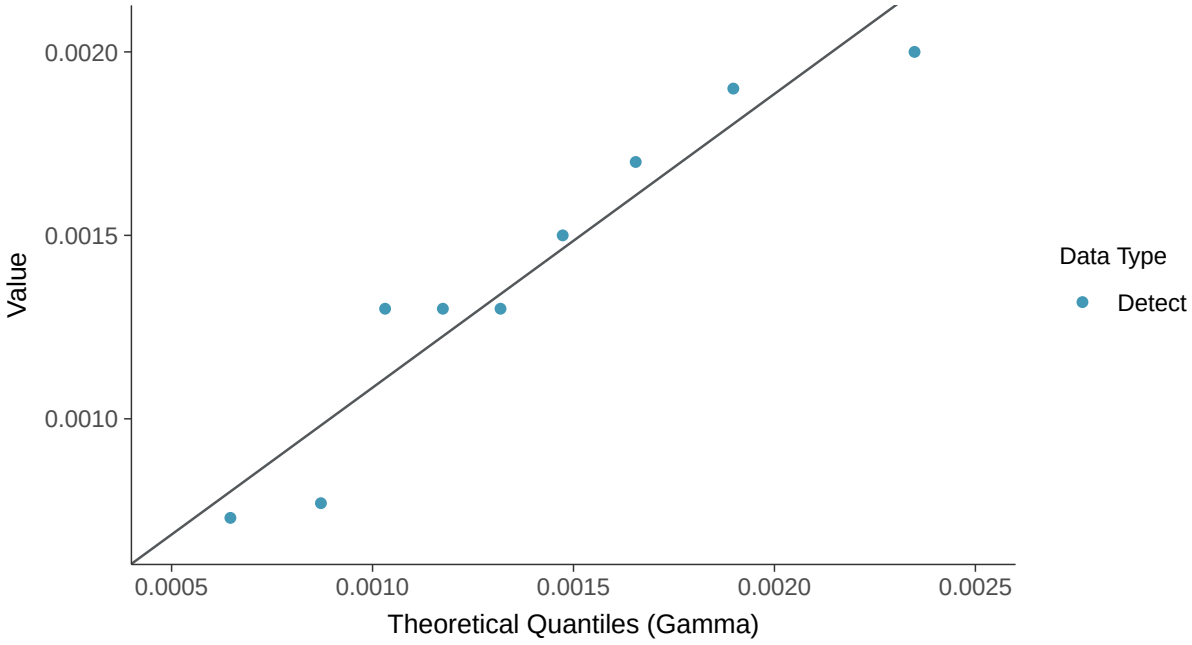
Lognormal Q-Q plot

Arsenic, MW-01R (mg/L)



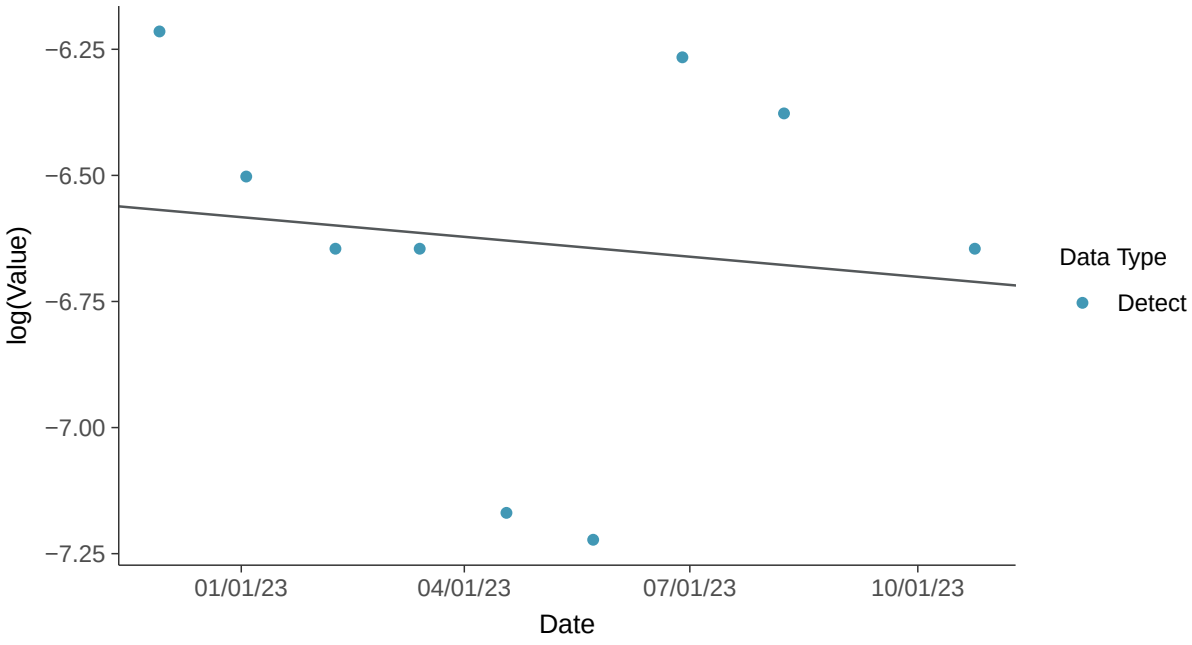
Gamma Q-Q plot

Arsenic, MW-01R (mg/L)



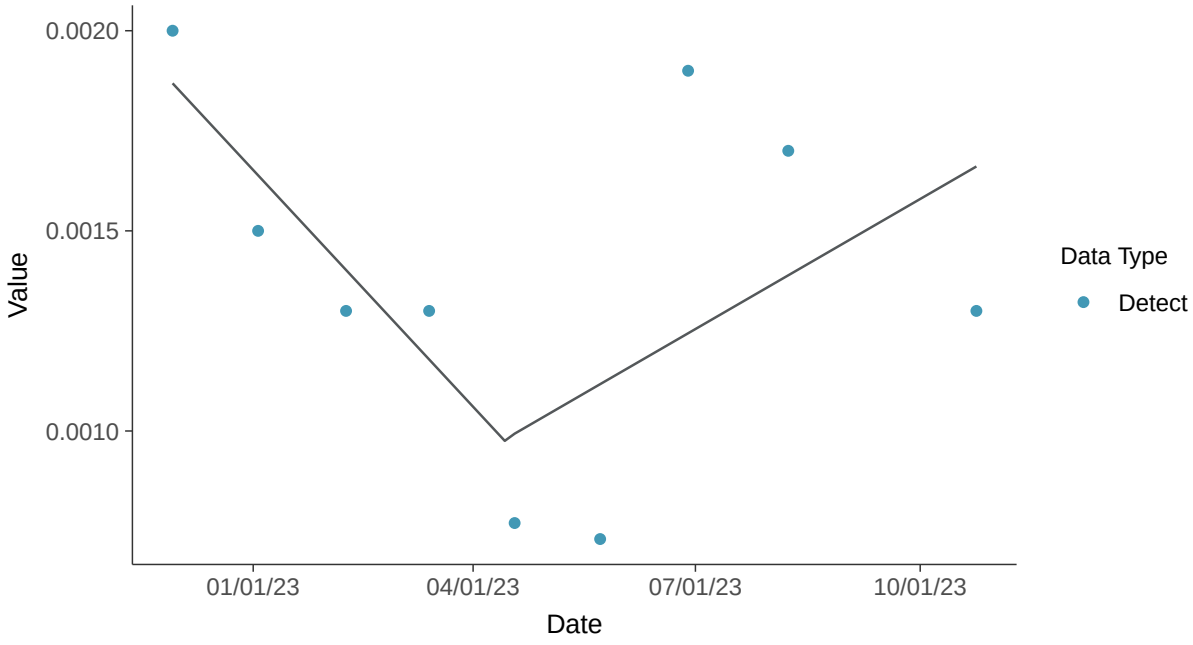
Trend Regression: Lognormal MLE

Arsenic, MW-01R (mg/L)



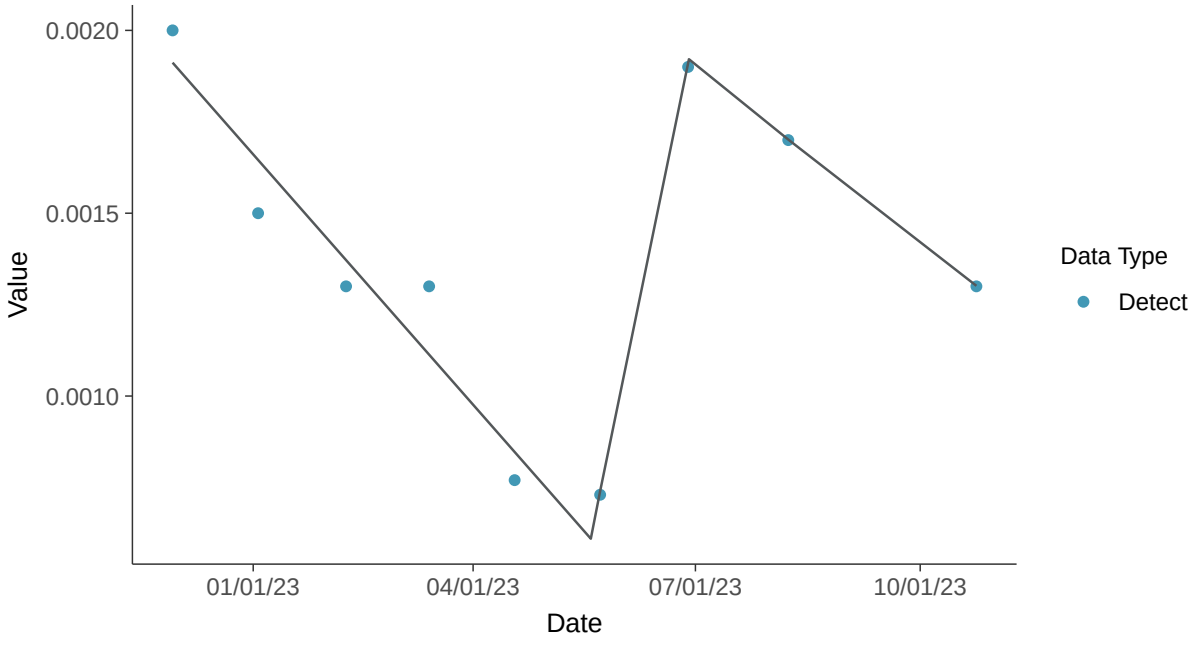
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-01R (mg/L)

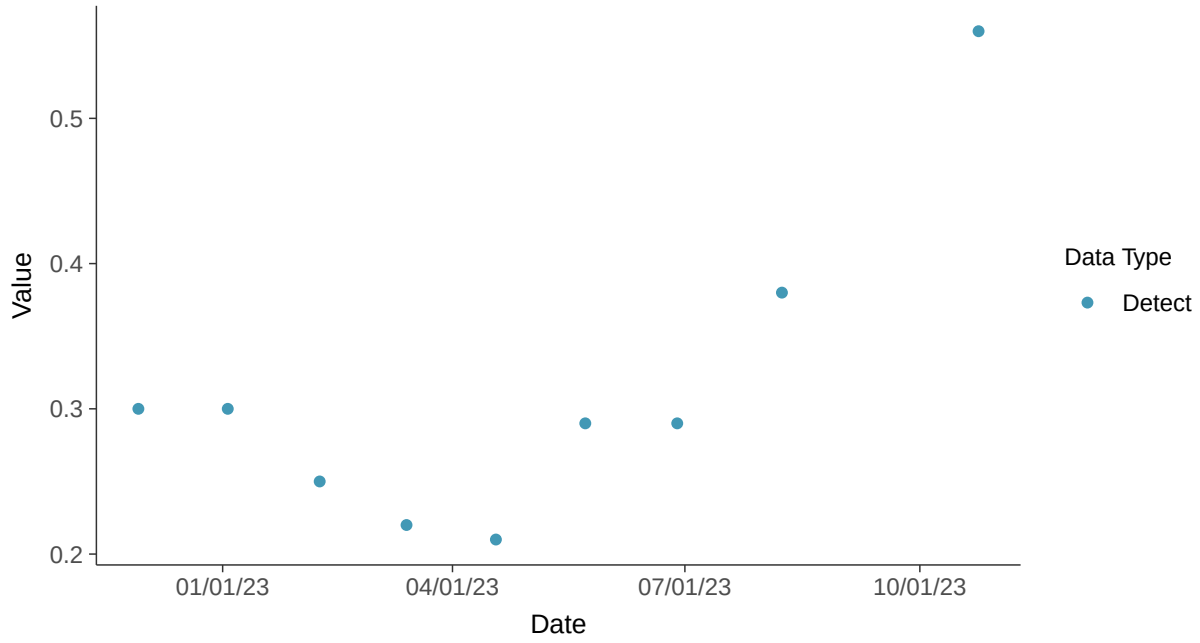


Appendix IV: Barium, MW-01R

ID: 1_11_5_103

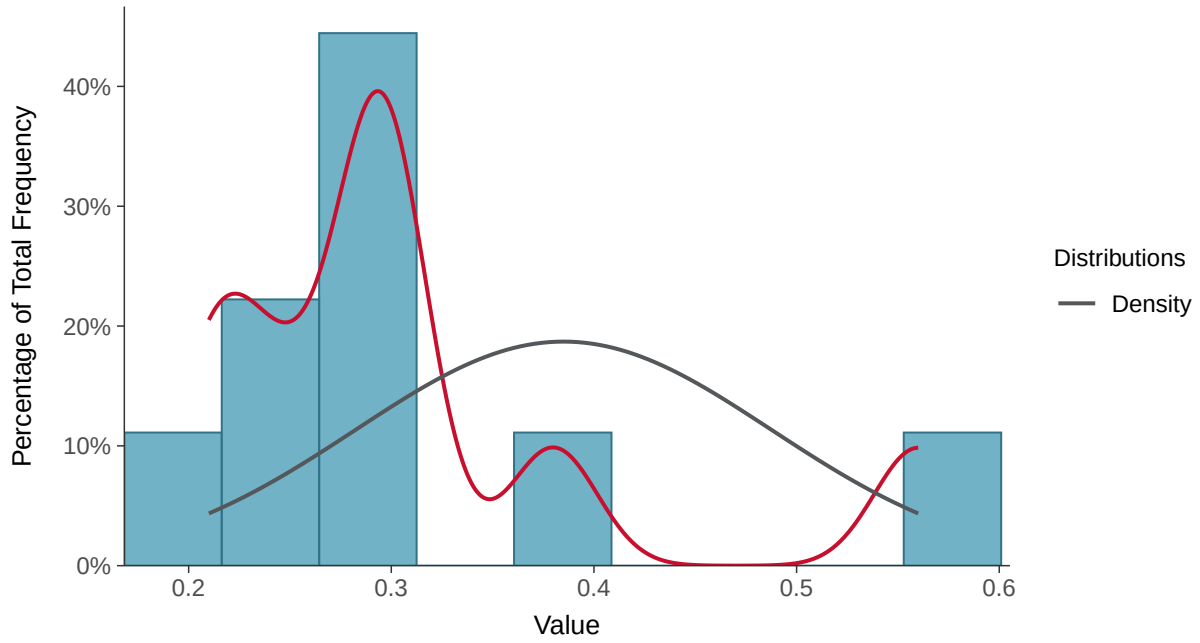
Scatter Plot

Barium, MW-01R (mg/L)



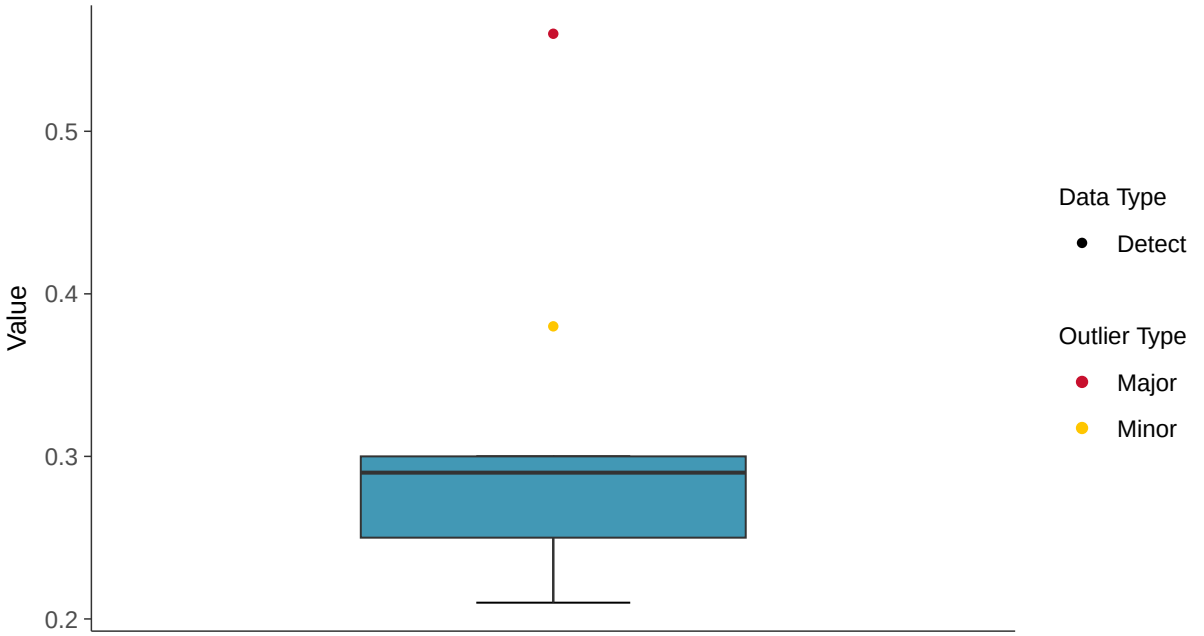
Histogram

Barium, MW-01R (mg/L)



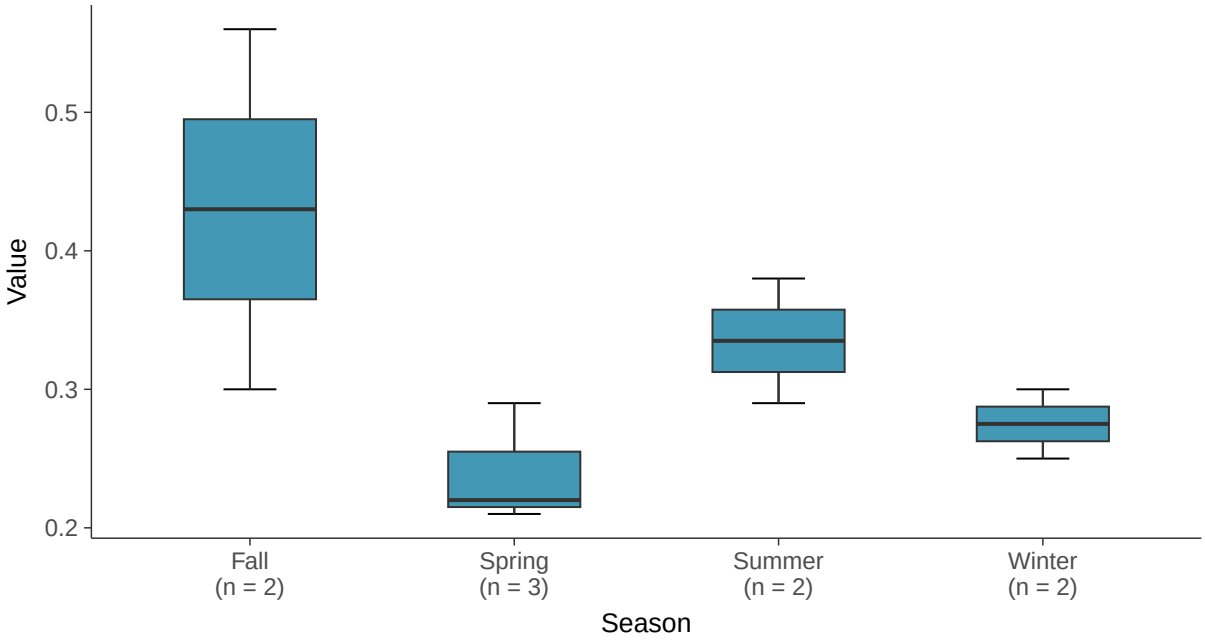
Boxplot

Barium, MW-01R (mg/L)



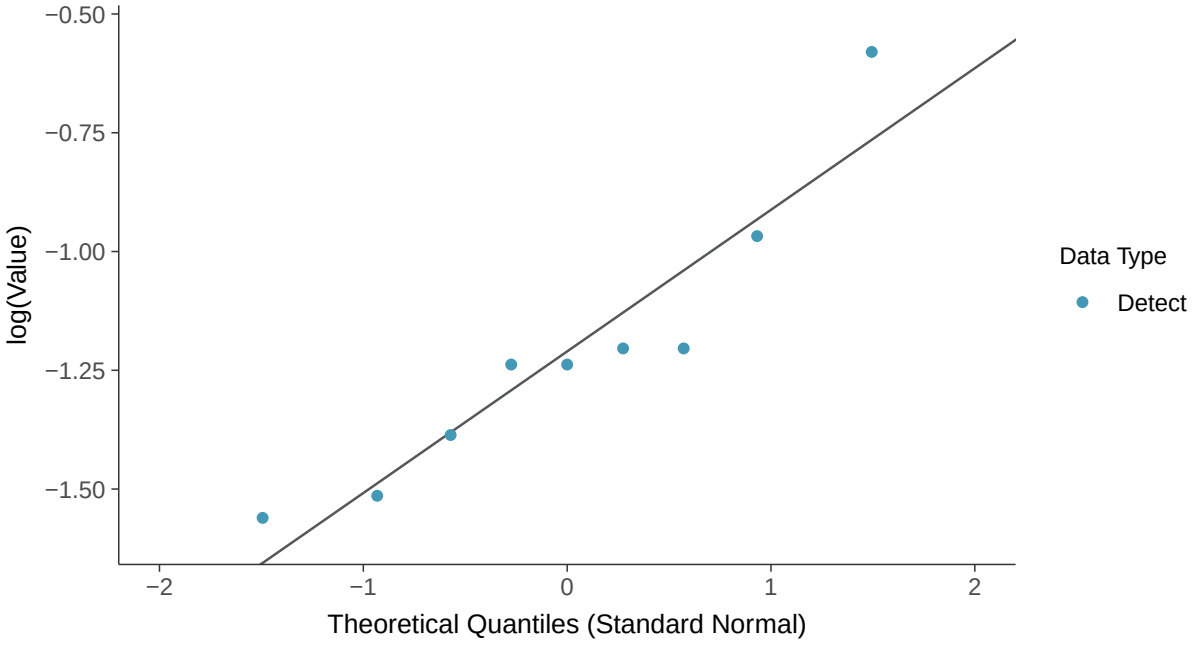
Boxplot by Season

Barium, MW-01R (mg/L)



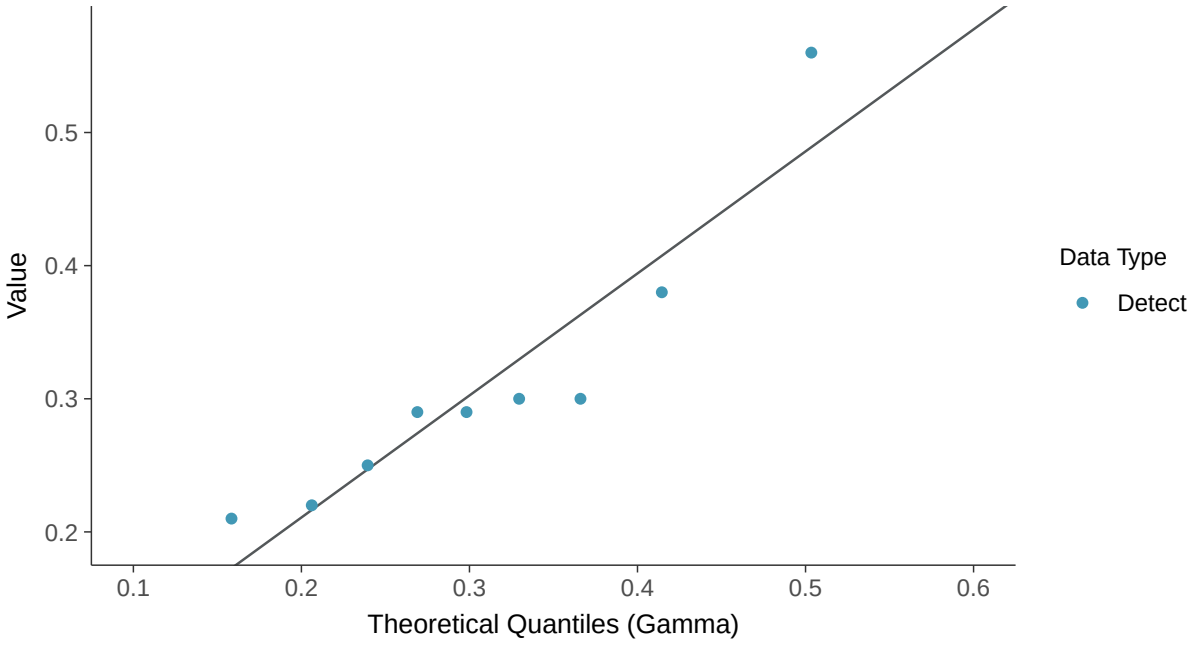
Lognormal Q-Q plot

Barium, MW-01R (mg/L)



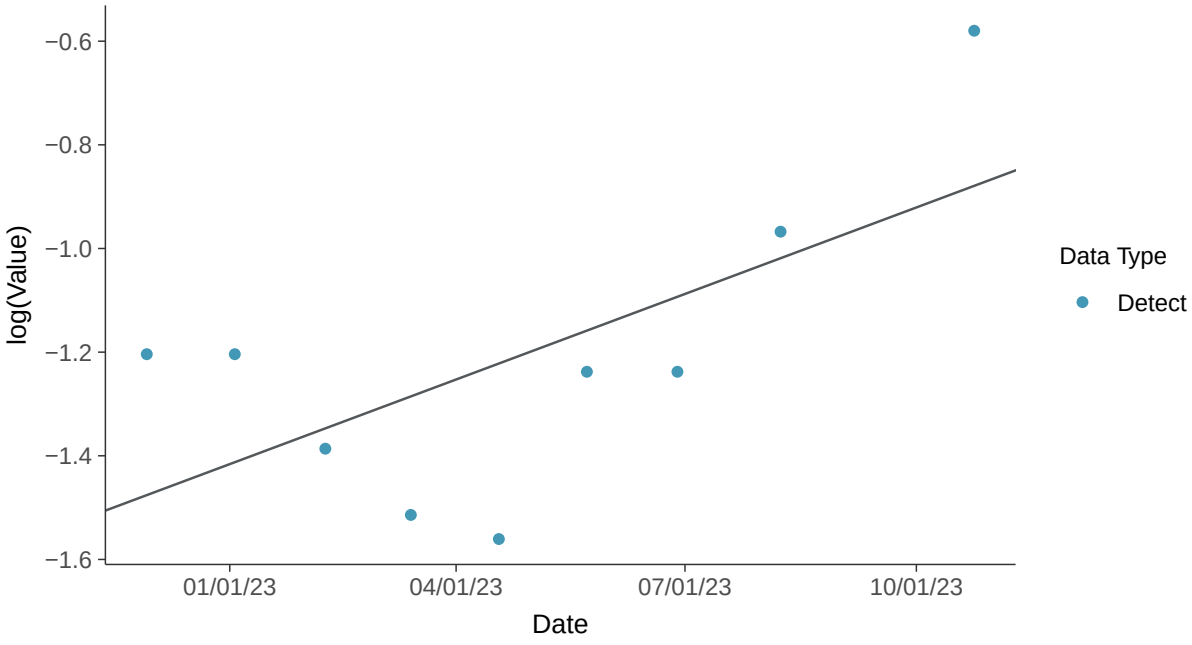
Gamma Q-Q plot

Barium, MW-01R (mg/L)



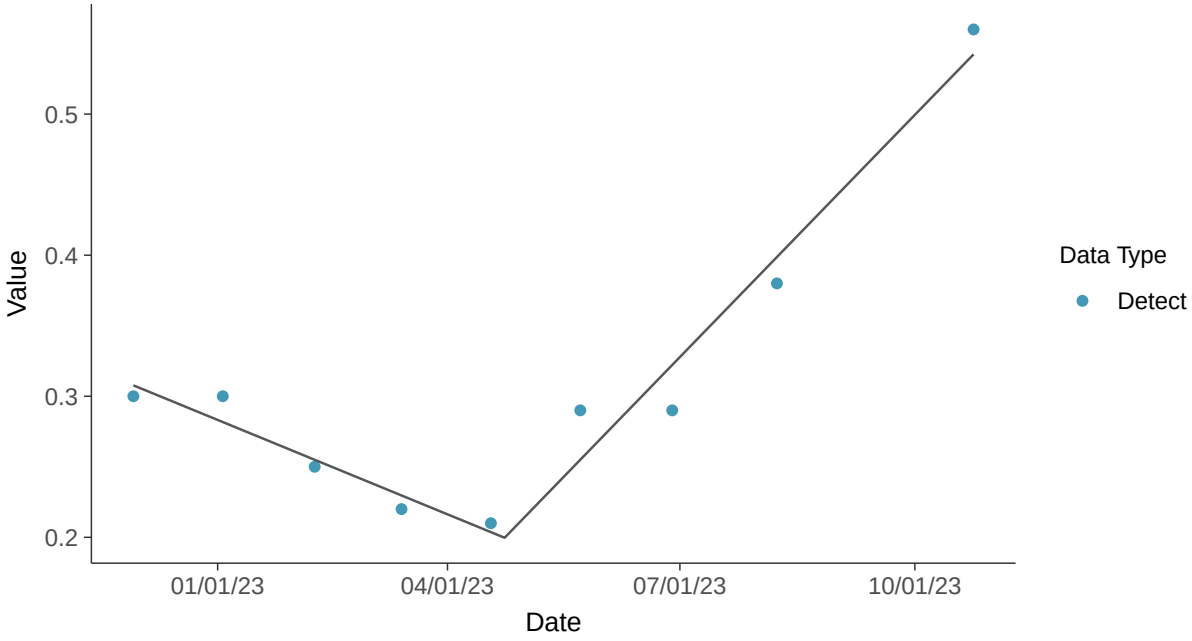
Trend Regression: Lognormal MLE

Barium, MW-01R (mg/L)



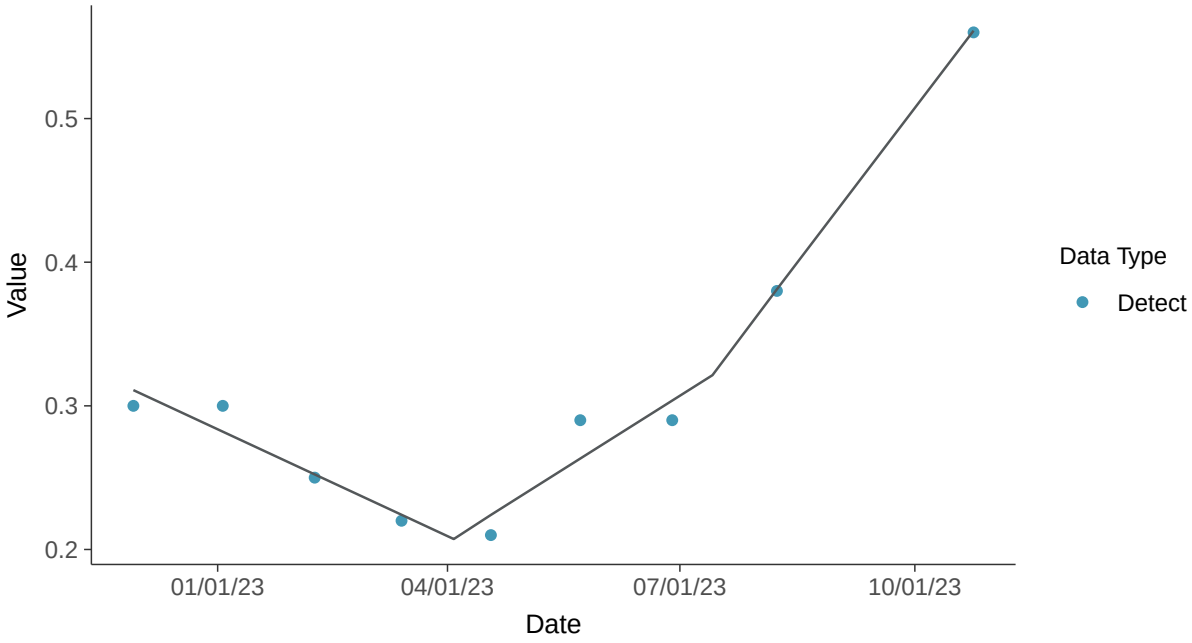
Trend Regression: Piecewise Linear-Linear

Barium, MW-01R (mg/L)



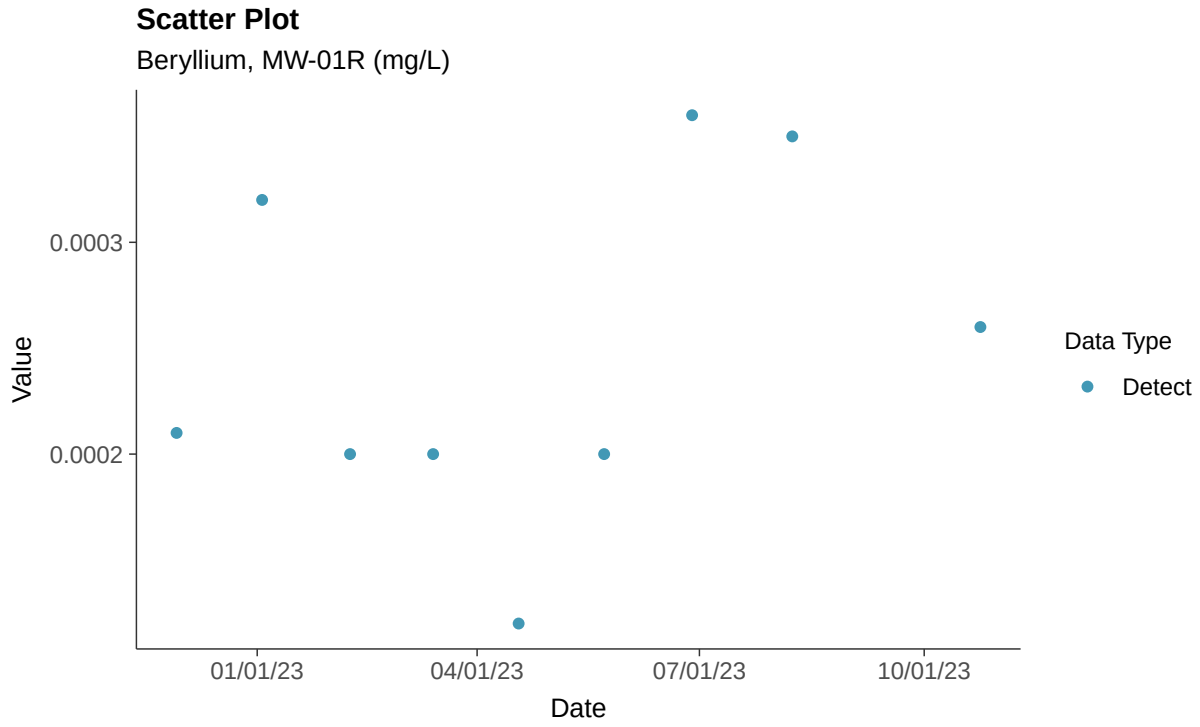
Trend Regression: Piecewise Linear-Linear-Linear

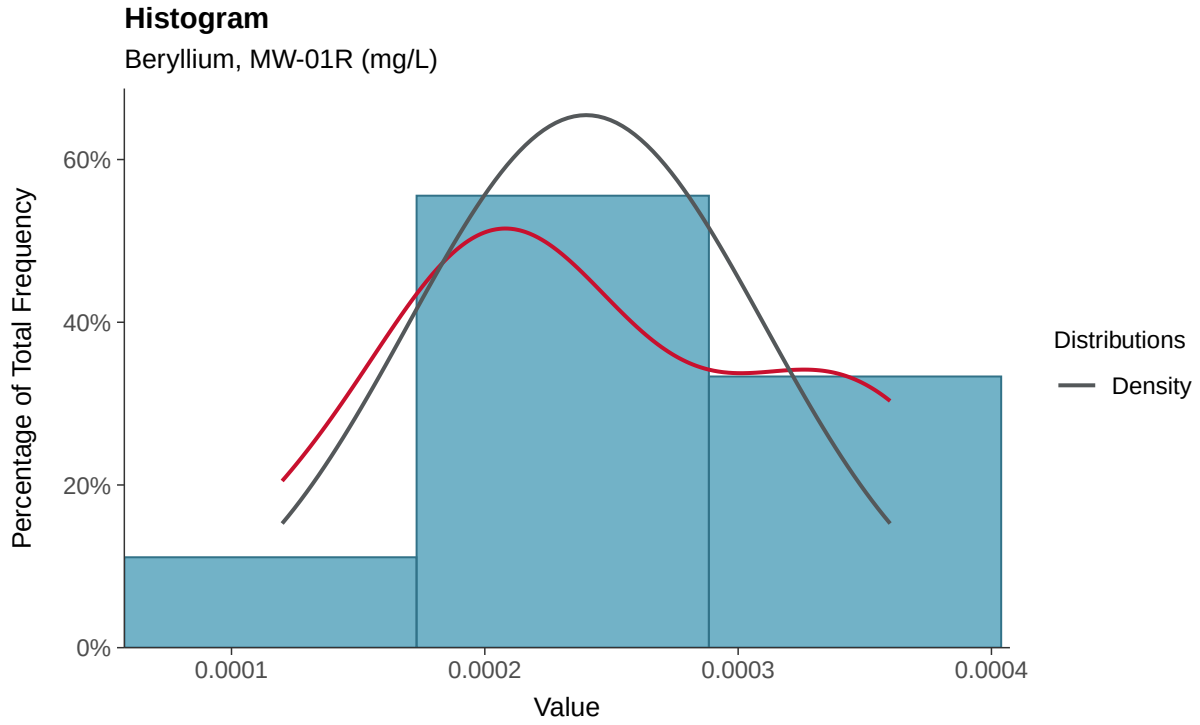
Barium, MW-01R (mg/L)



Appendix IV: Beryllium, MW-01R

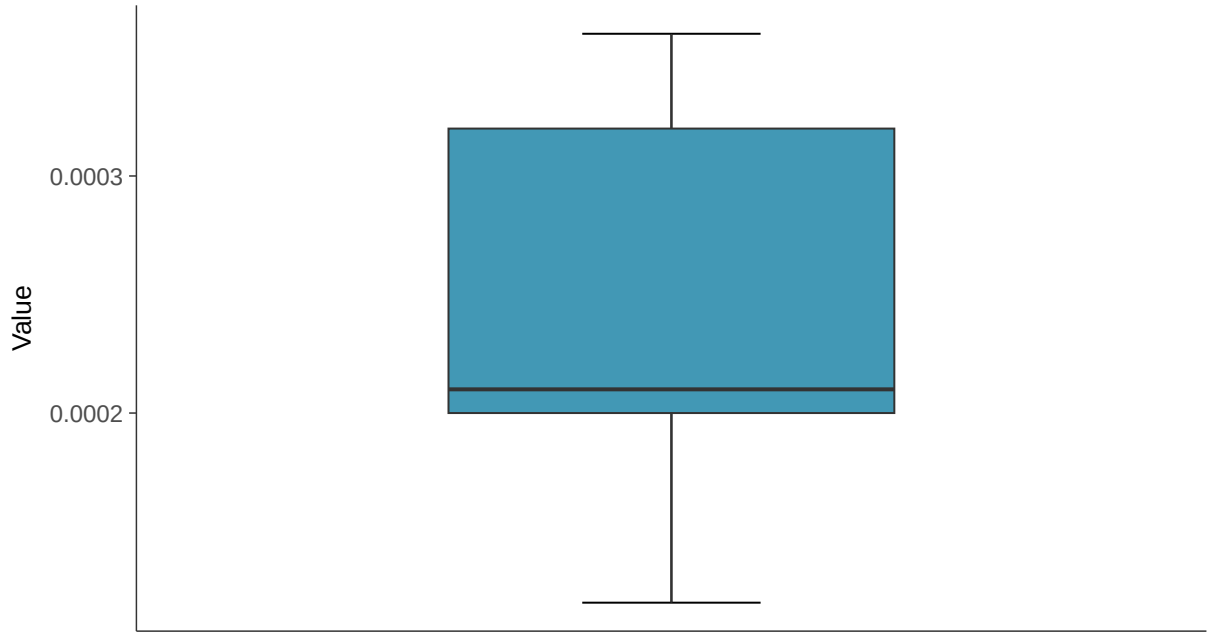
ID: 1_11_5_104





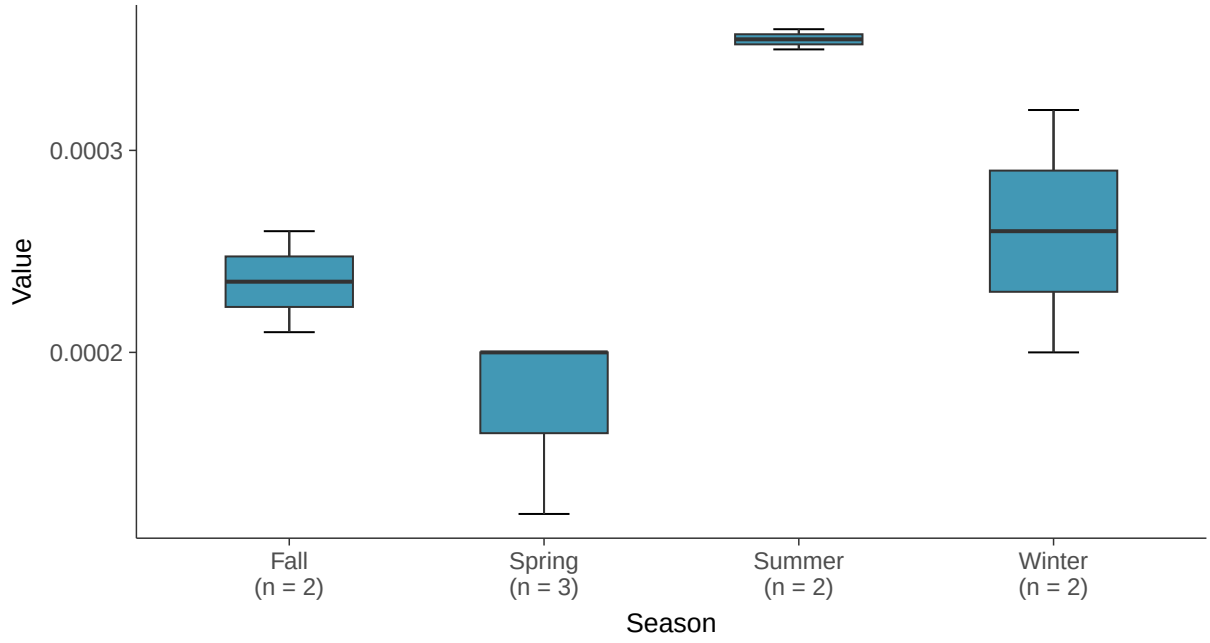
Boxplot

Beryllium, MW-01R (mg/L)



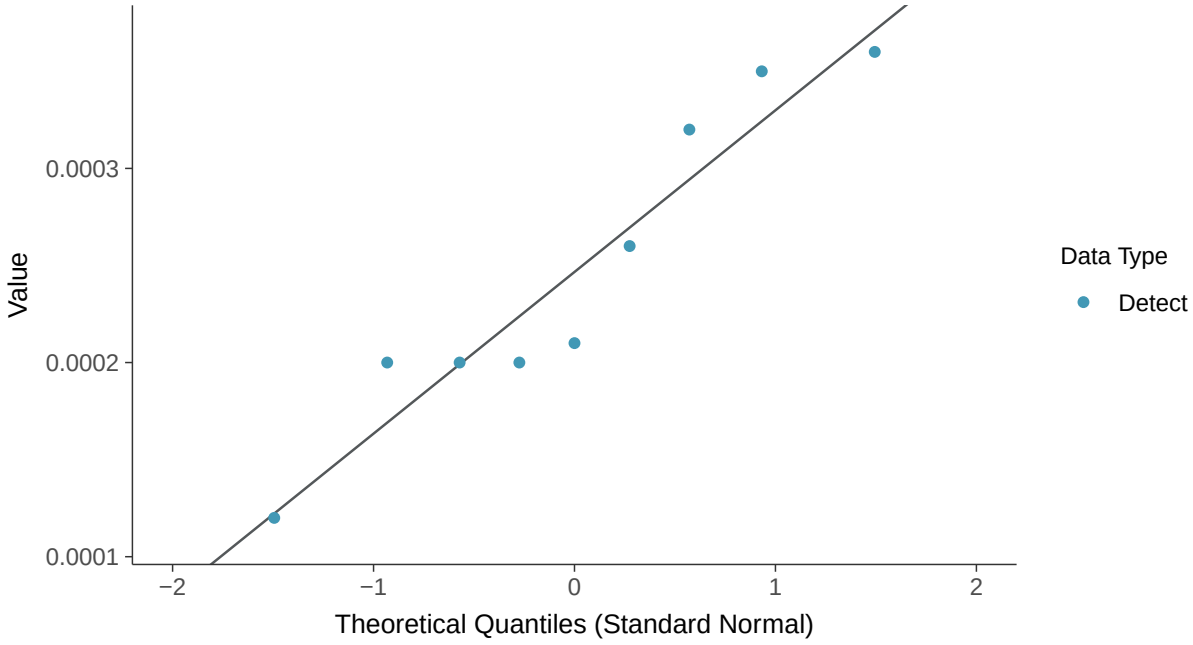
Boxplot by Season

Beryllium, MW-01R (mg/L)



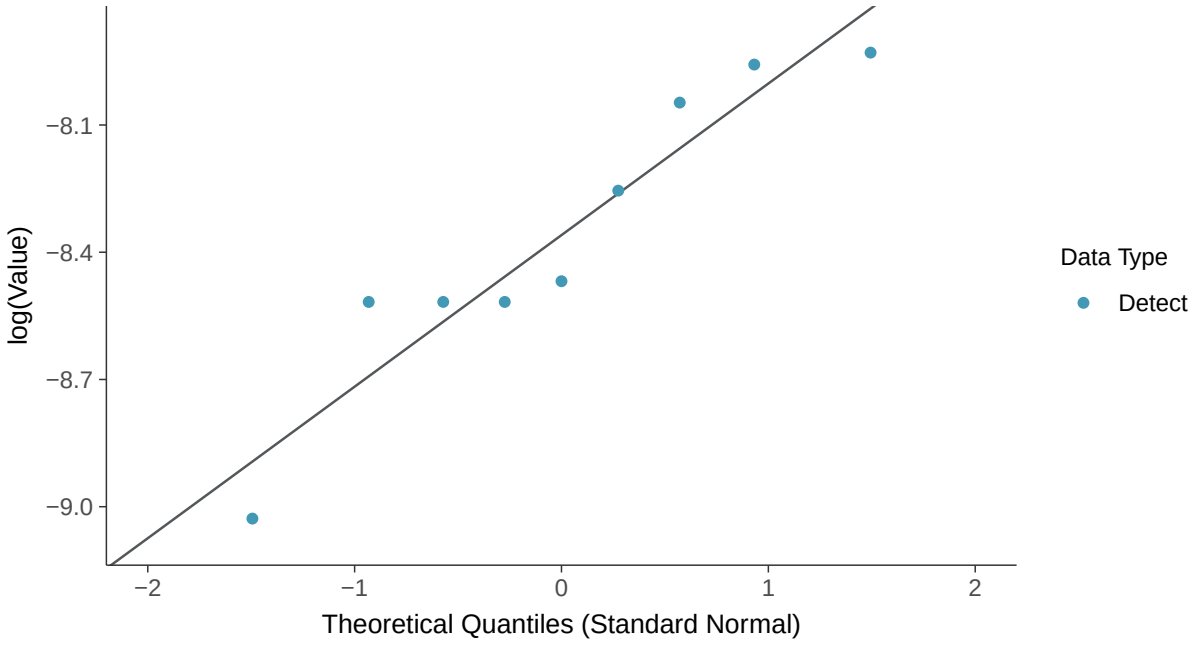
Normal Q-Q plot

Beryllium, MW-01R (mg/L)



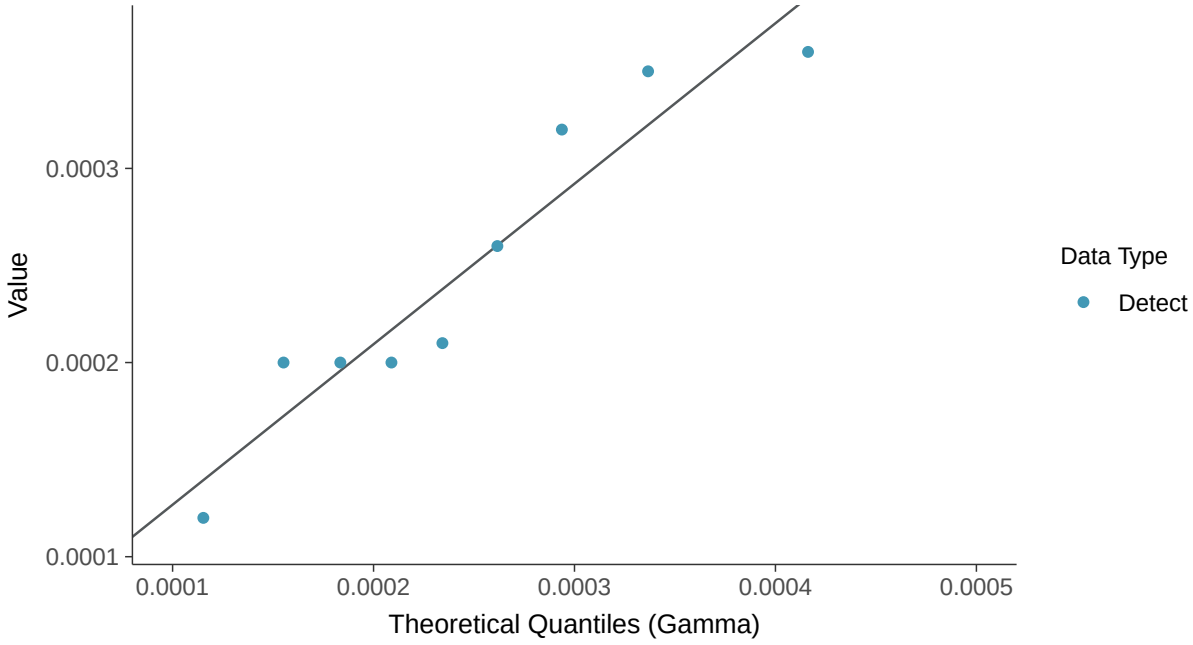
Lognormal Q-Q plot

Beryllium, MW-01R (mg/L)



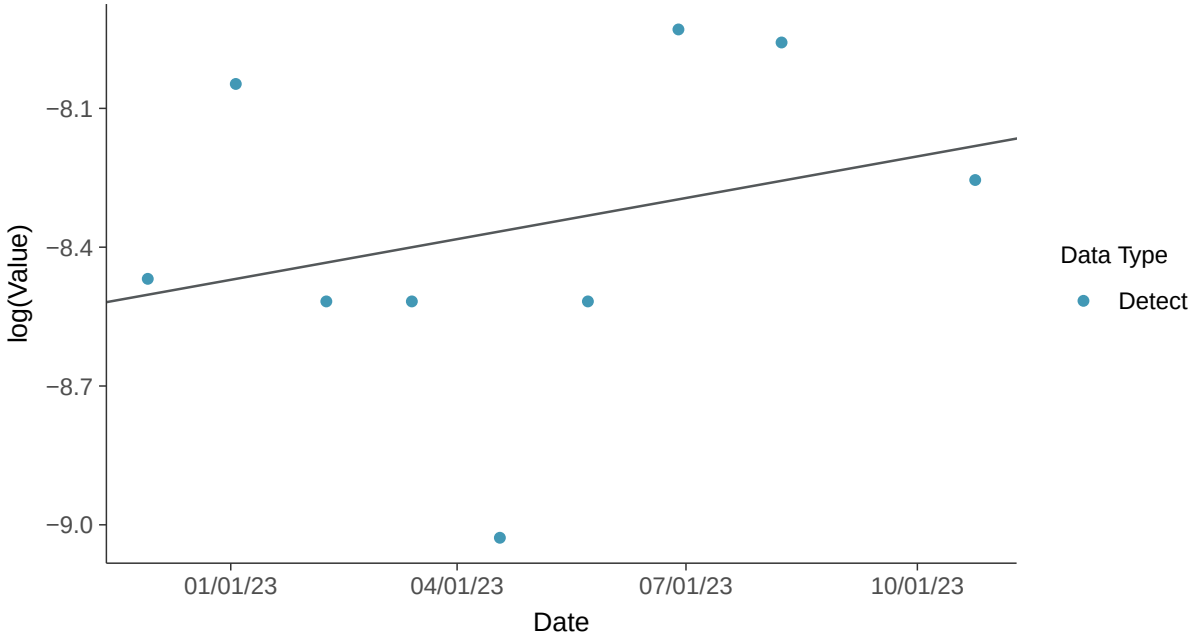
Gamma Q-Q plot

Beryllium, MW-01R (mg/L)



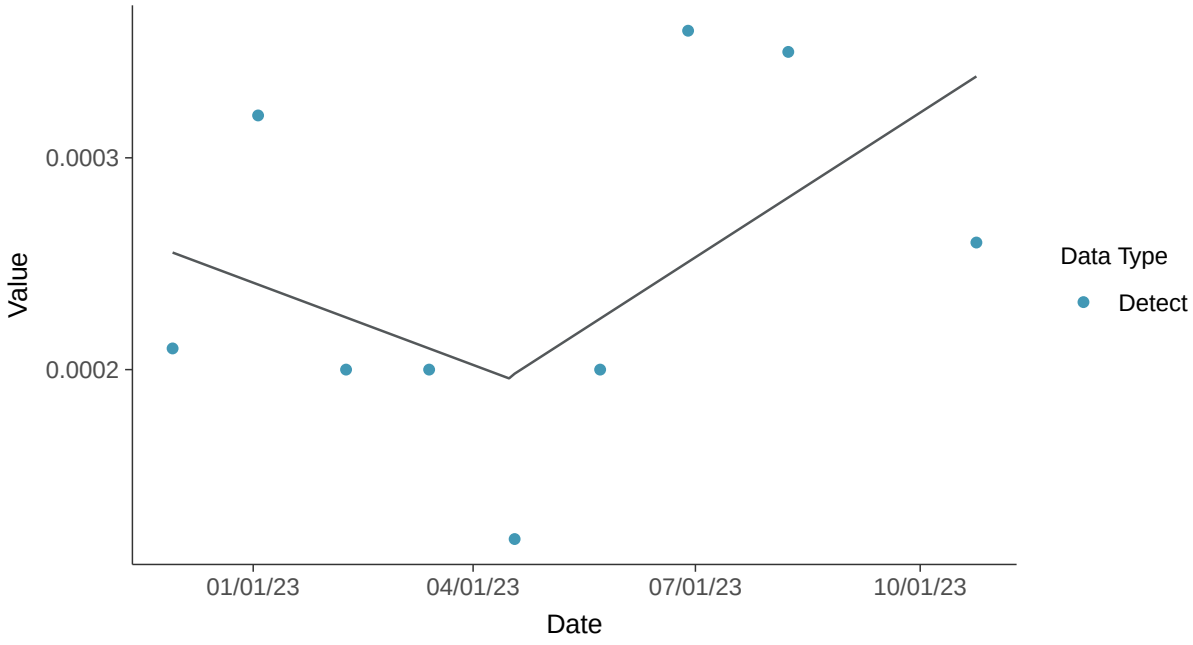
Trend Regression: Lognormal MLE

Beryllium, MW-01R (mg/L)



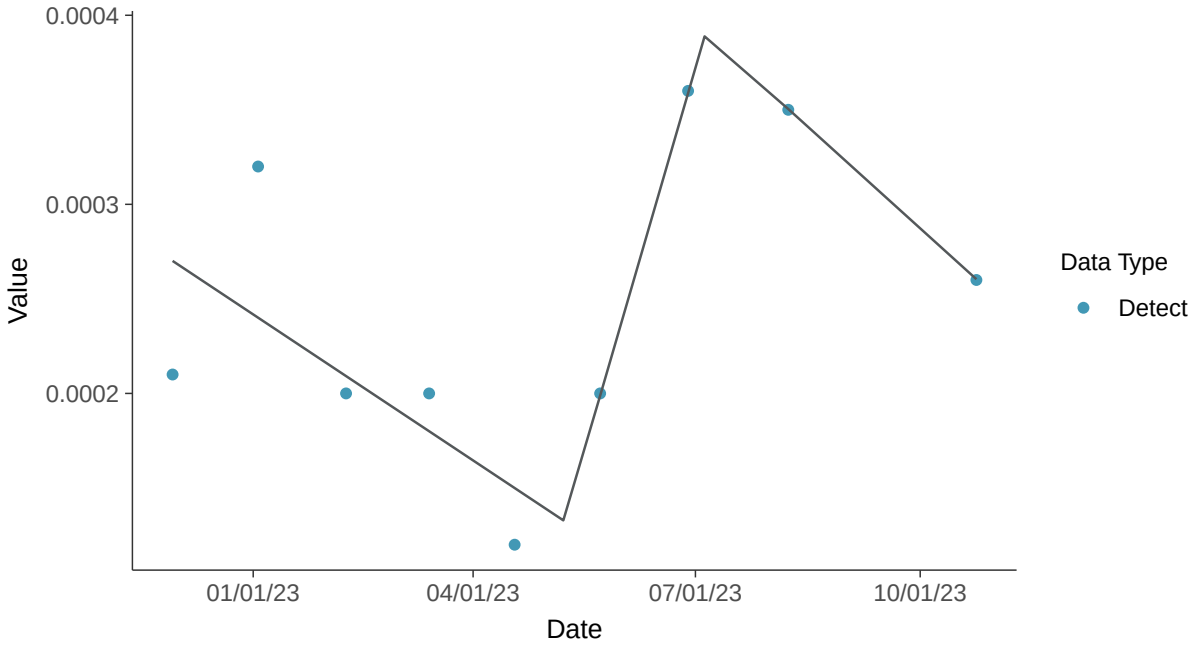
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-01R (mg/L)



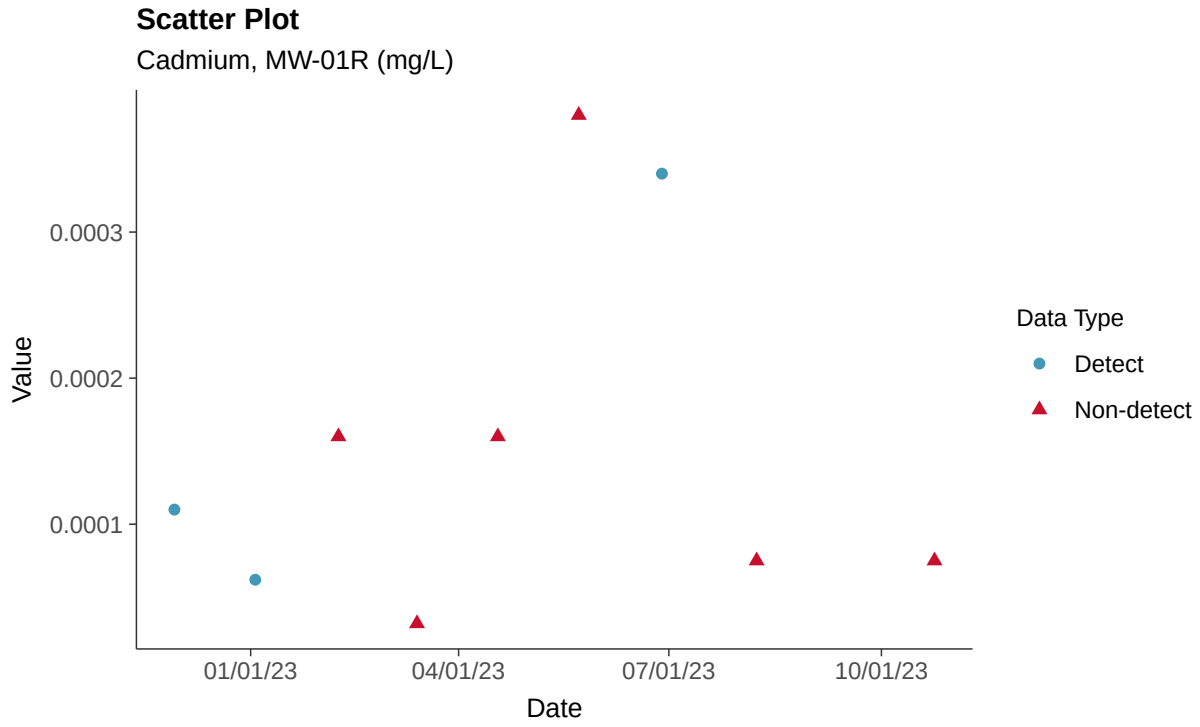
Trend Regression: Piecewise Linear-Linear-Linear

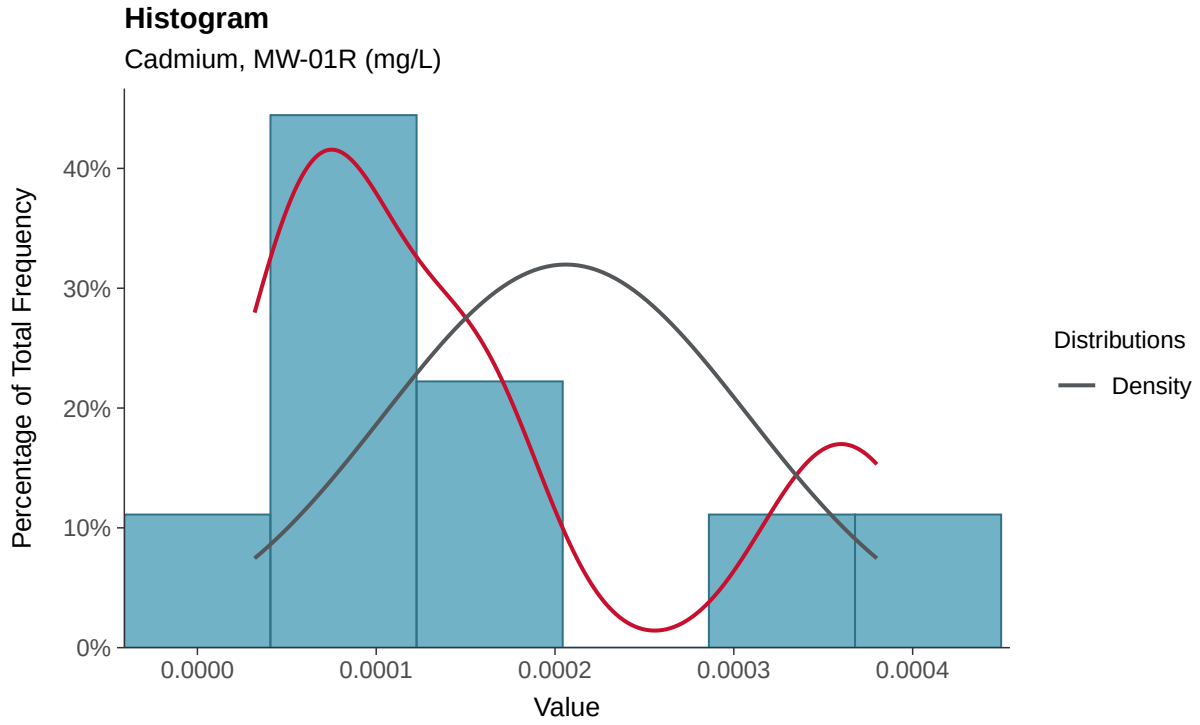
Beryllium, MW-01R (mg/L)



Appendix IV: Cadmium, MW-01R

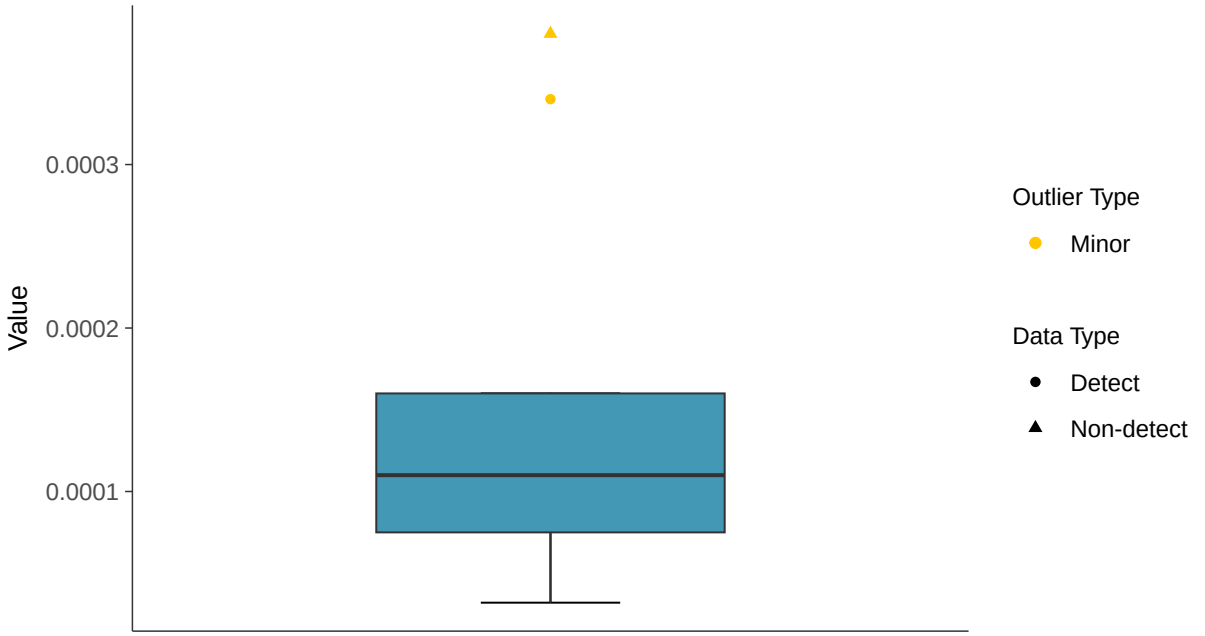
ID: 1_11_5_106





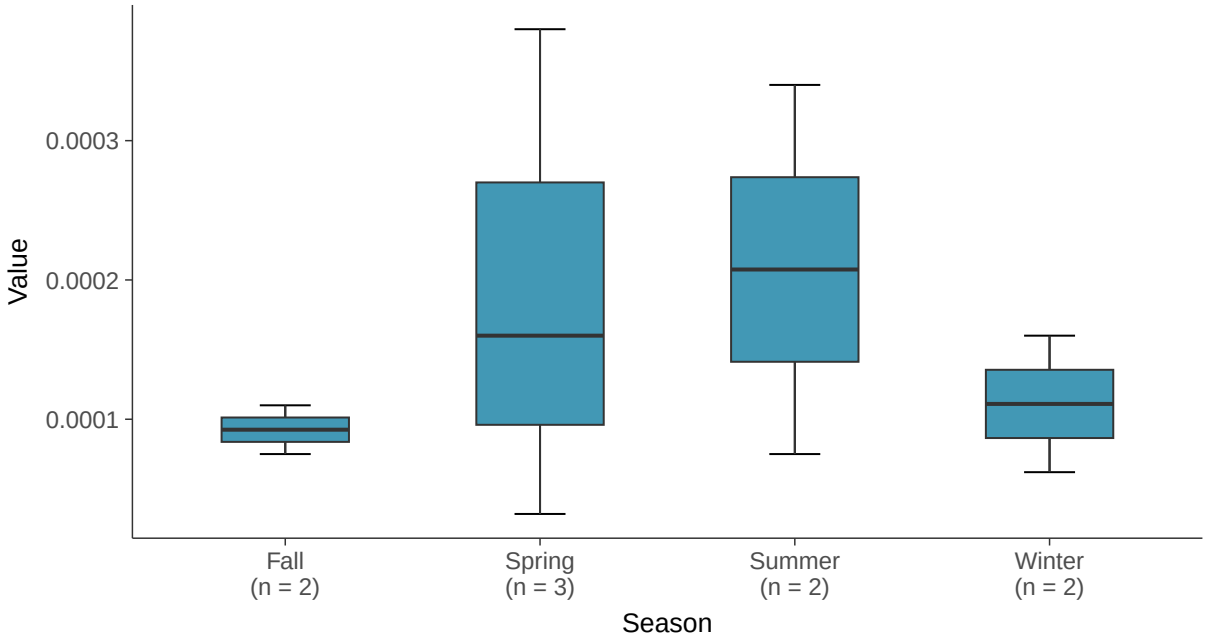
Boxplot

Cadmium, MW-01R (mg/L)



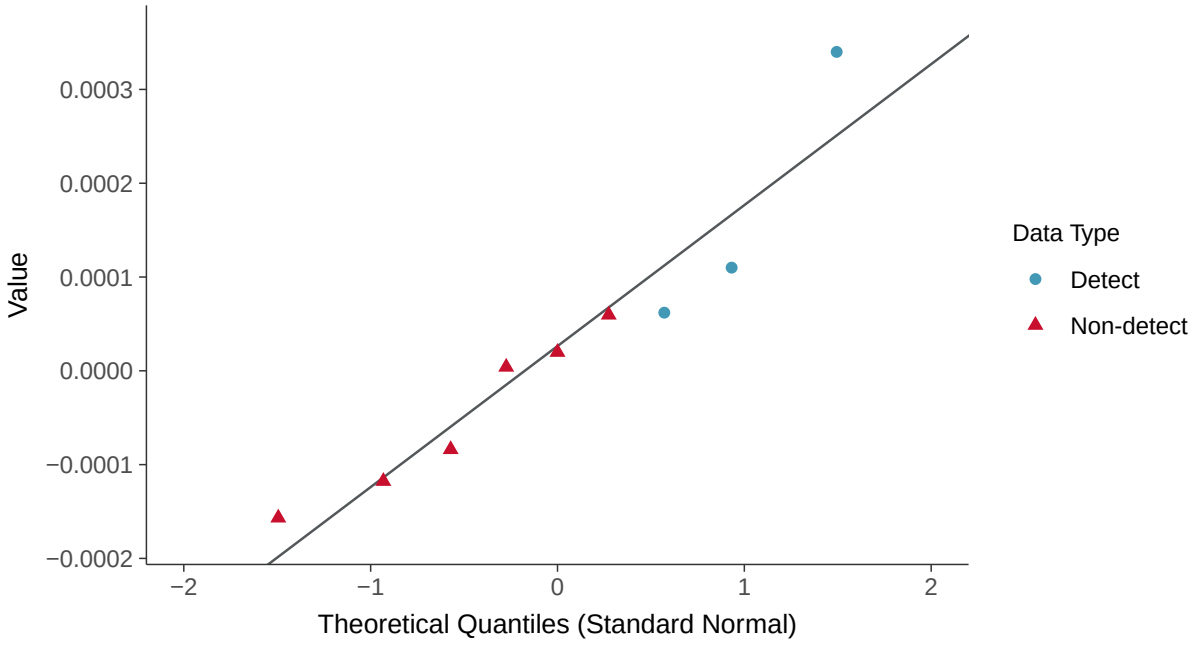
Boxplot by Season

Cadmium, MW-01R (mg/L)



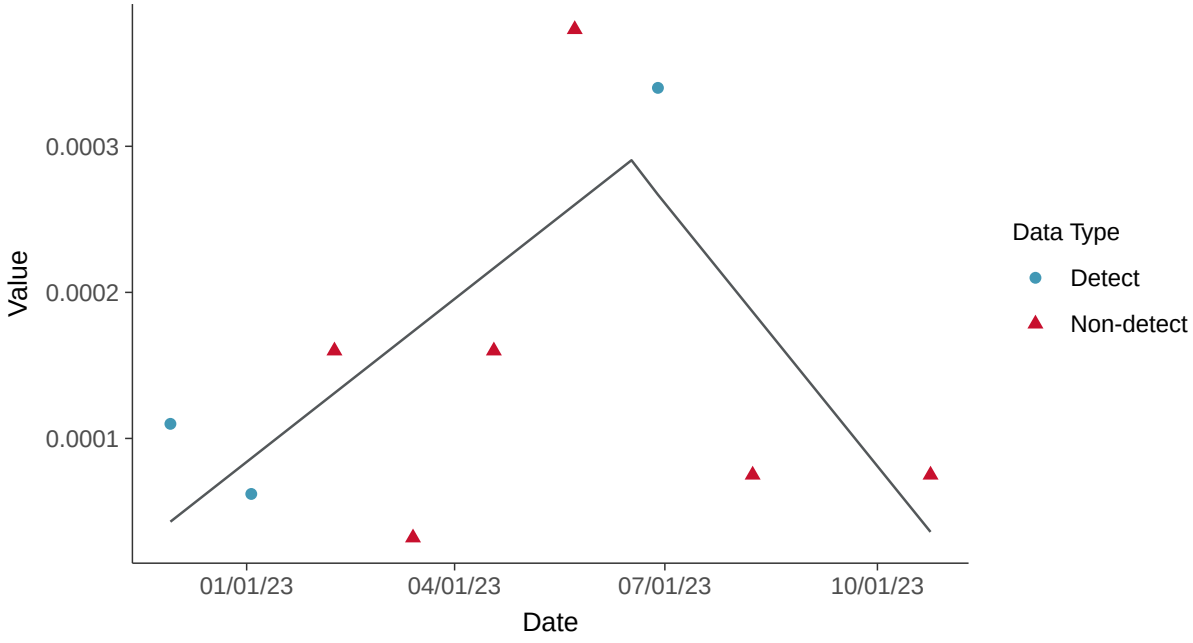
Normal Q-Q plot using ROS Imputed Estimates

Cadmium, MW-01R (mg/L)



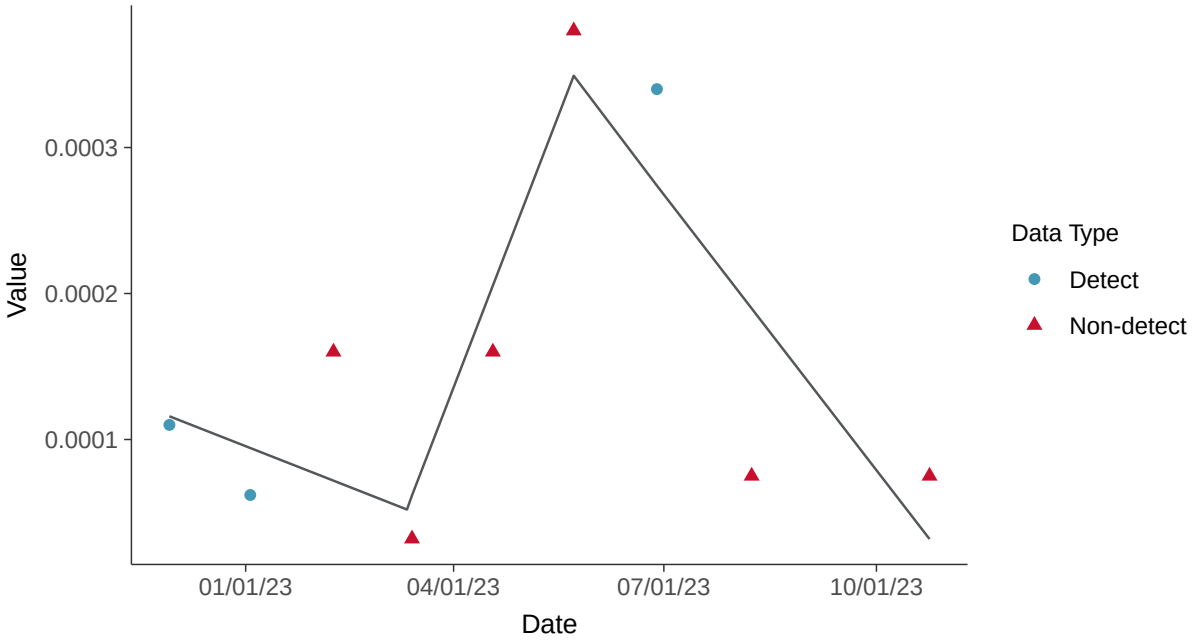
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-01R (mg/L)

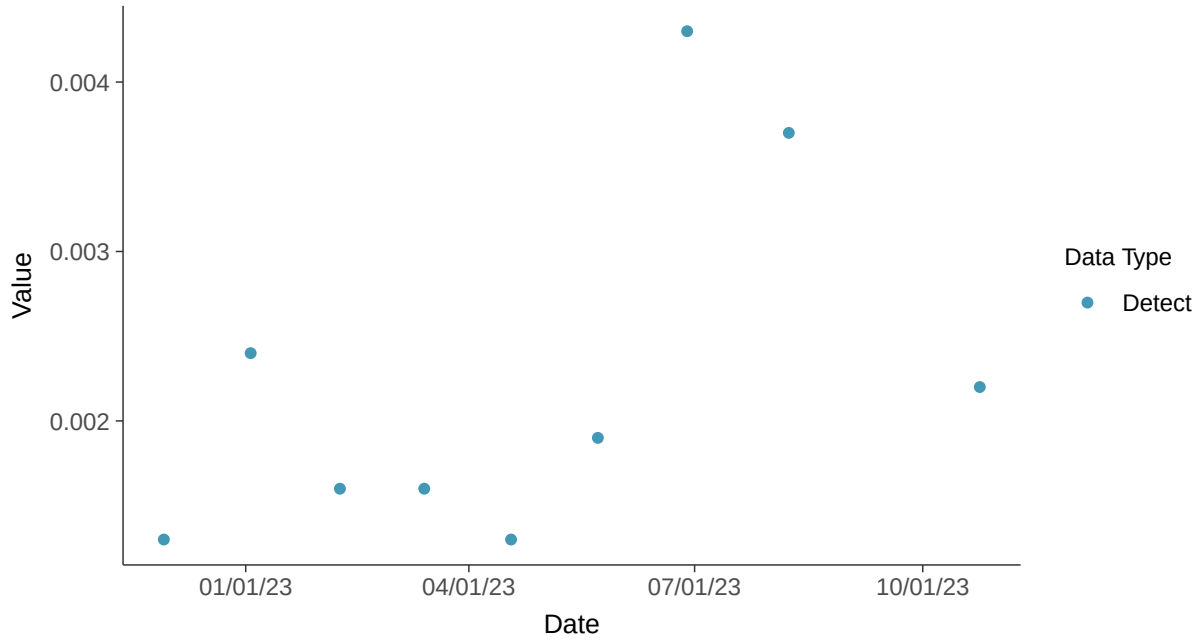


Appendix IV: Chromium, Total, MW-01R

ID: 1_11_5_109

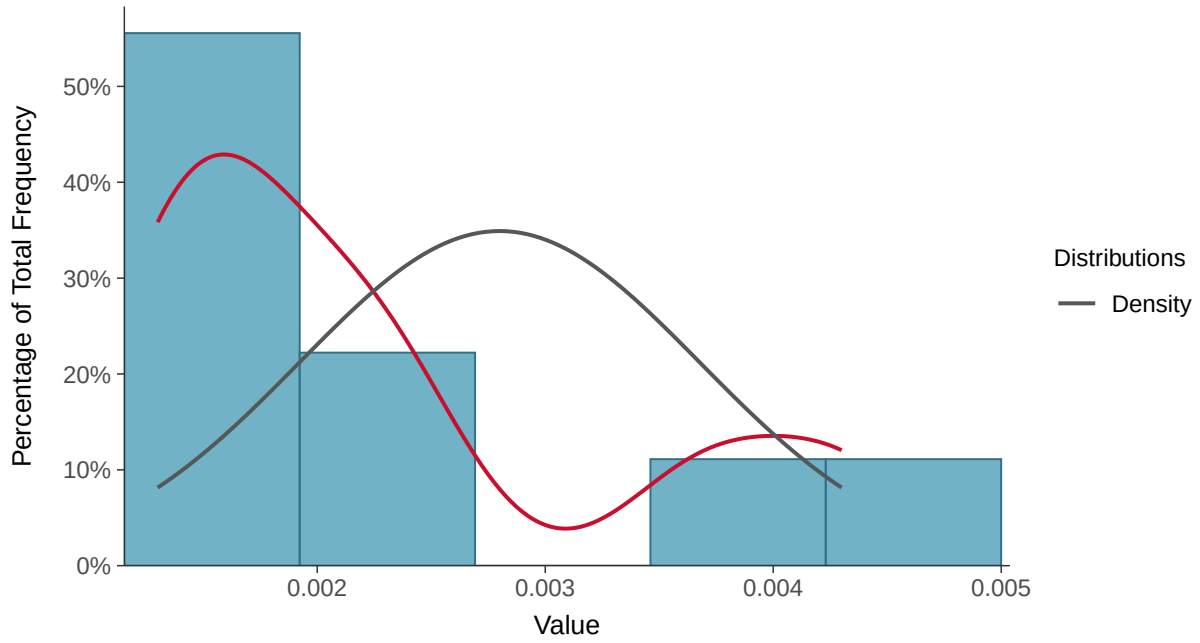
Scatter Plot

Chromium, Total, MW-01R (mg/L)



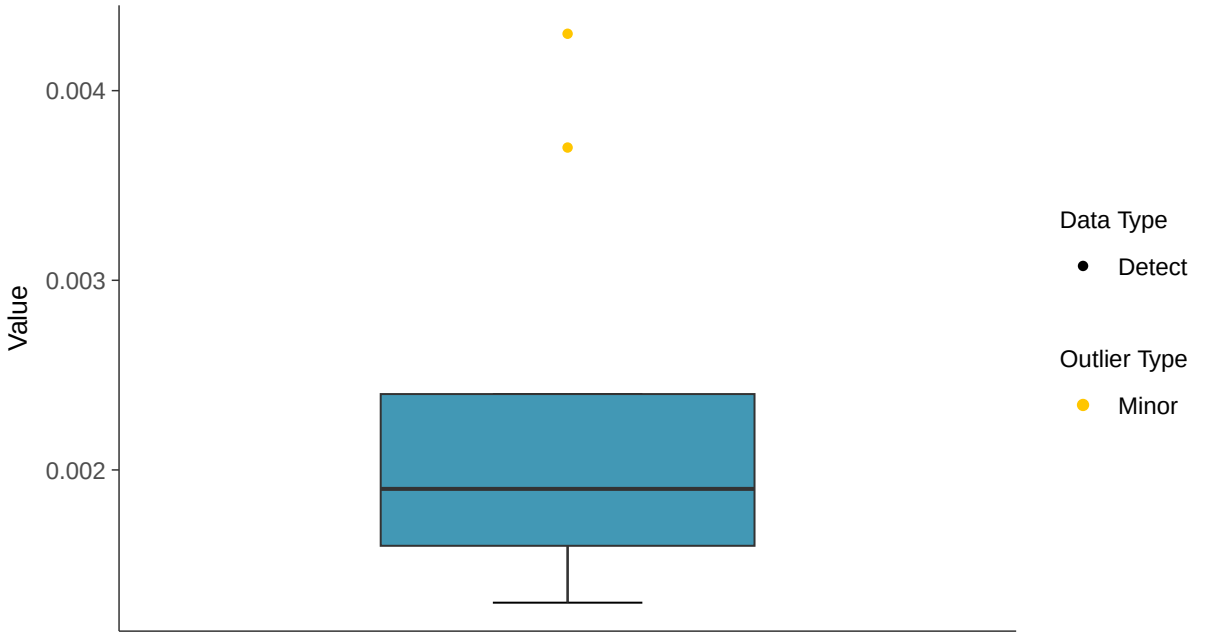
Histogram

Chromium, Total, MW-01R (mg/L)



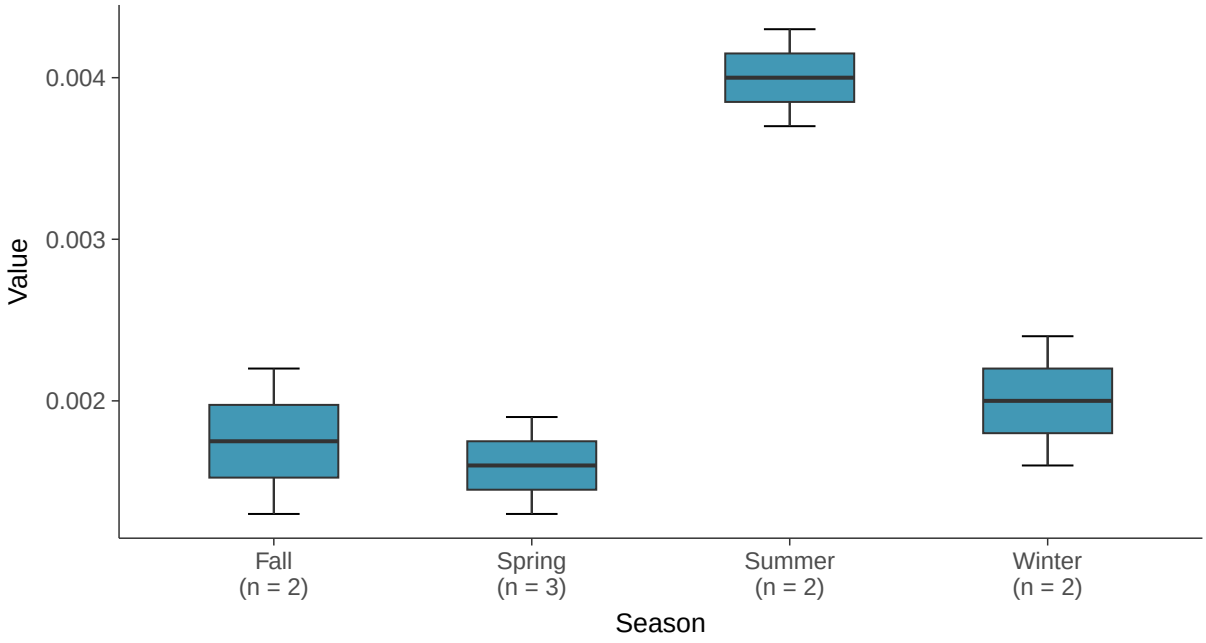
Boxplot

Chromium, Total, MW-01R (mg/L)



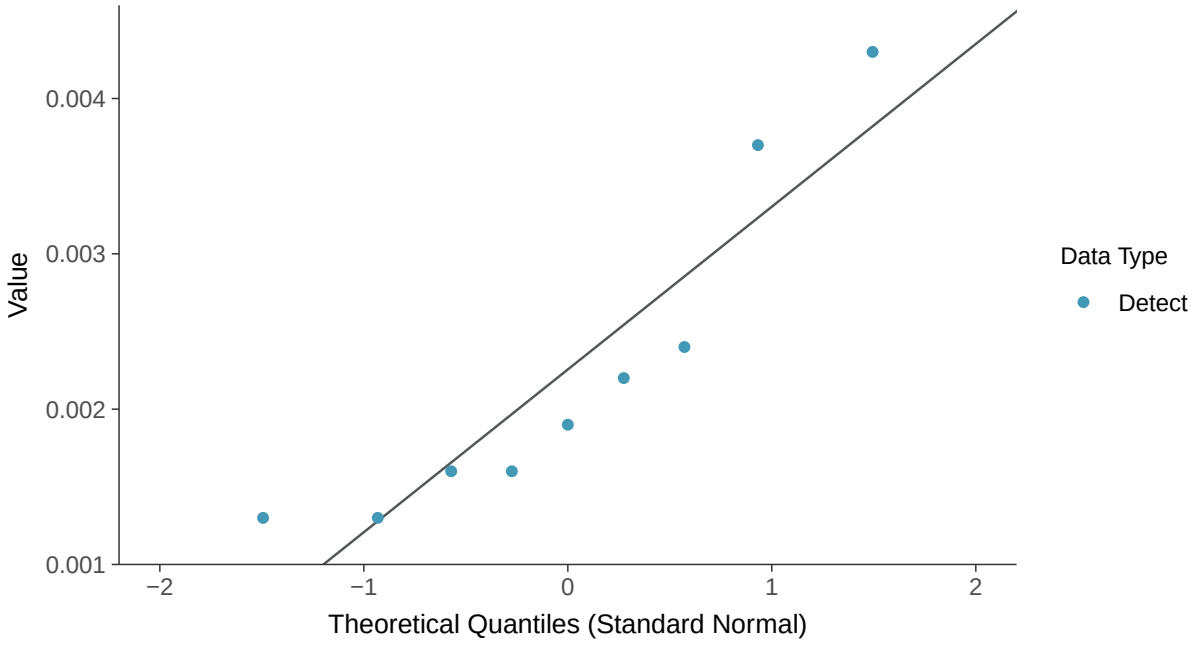
Boxplot by Season

Chromium, Total, MW-01R (mg/L)



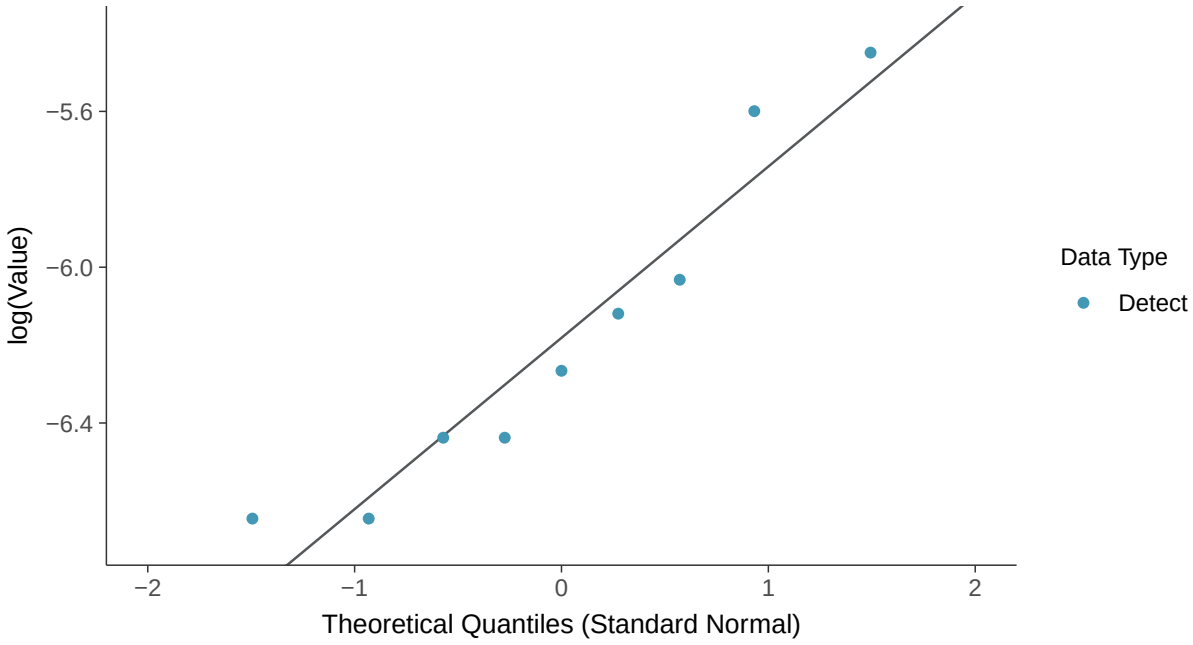
Normal Q-Q plot

Chromium, Total, MW-01R (mg/L)



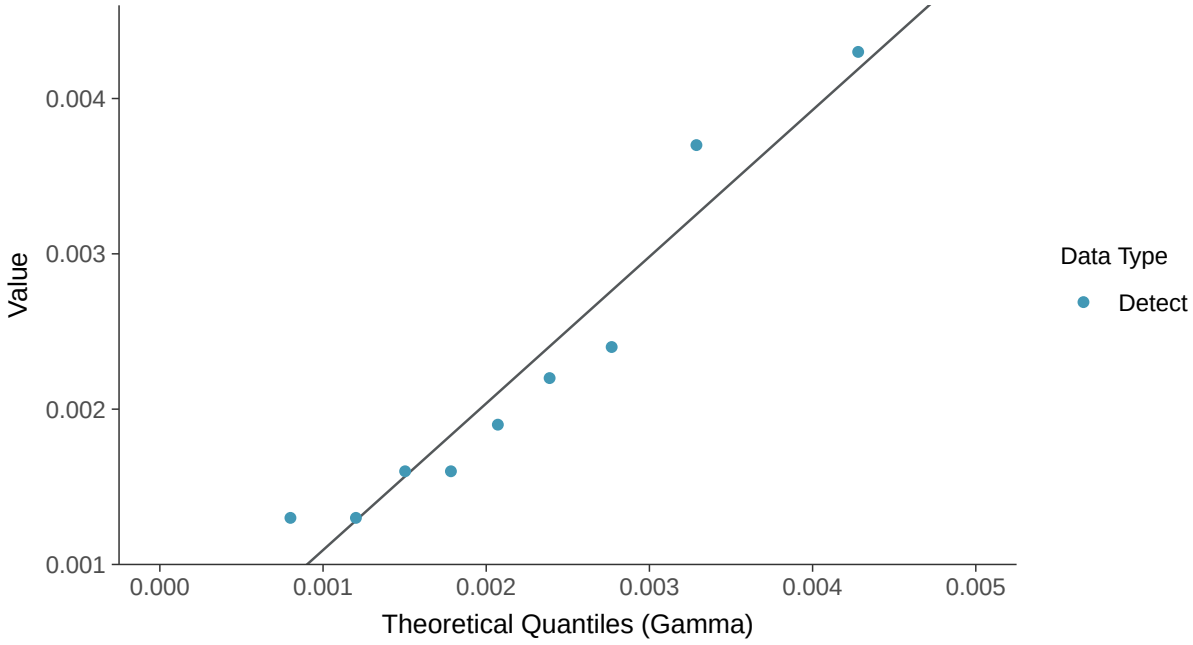
Lognormal Q-Q plot

Chromium, Total, MW-01R (mg/L)



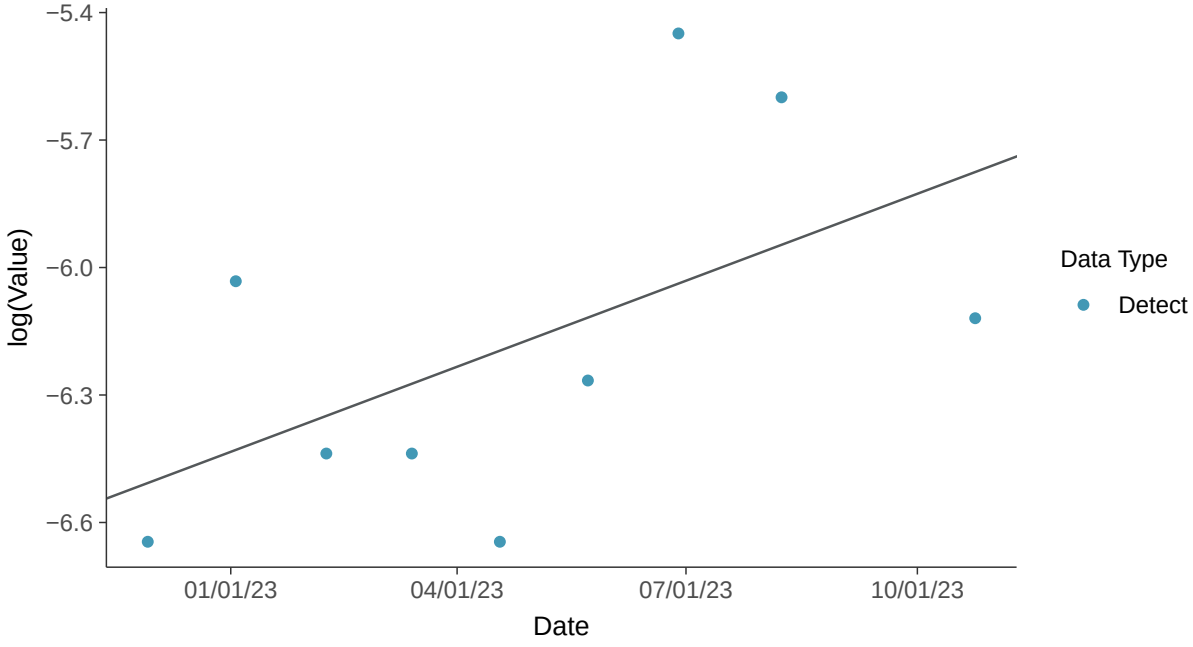
Gamma Q-Q plot

Chromium, Total, MW-01R (mg/L)



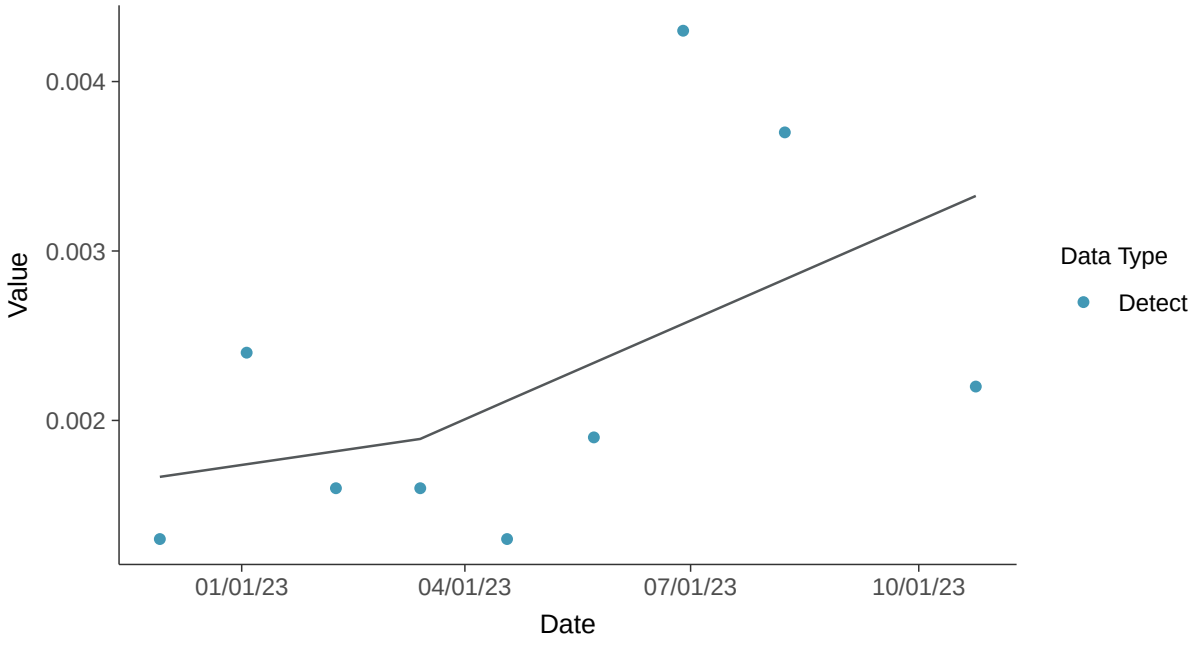
Trend Regression: Lognormal MLE

Chromium, Total, MW-01R (mg/L)



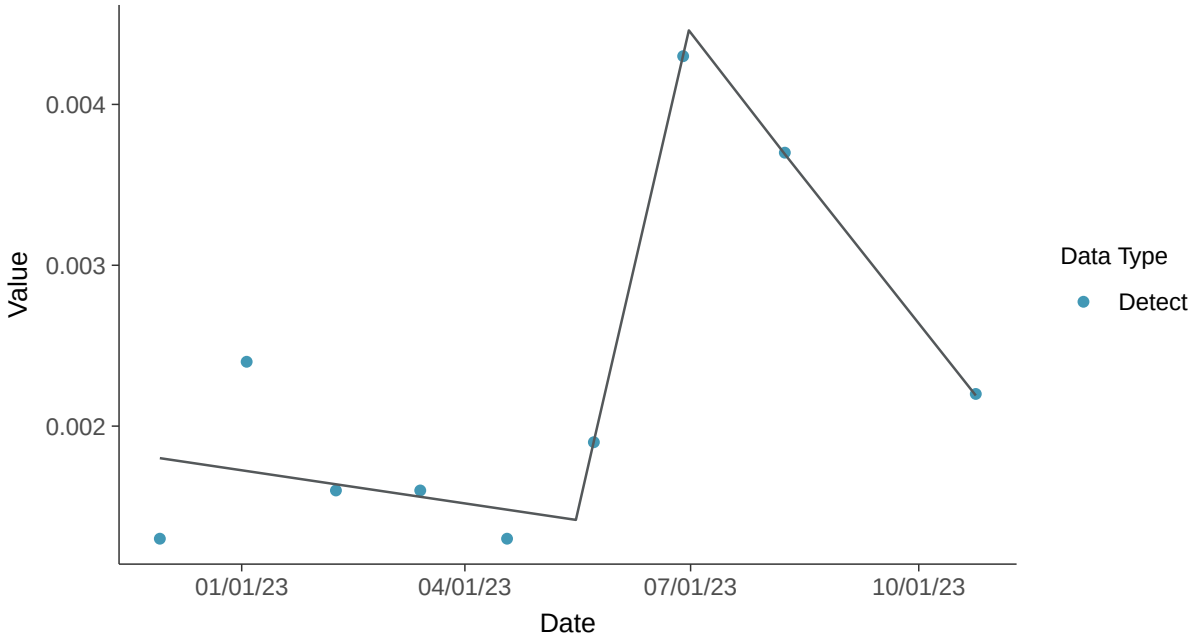
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-01R (mg/L)

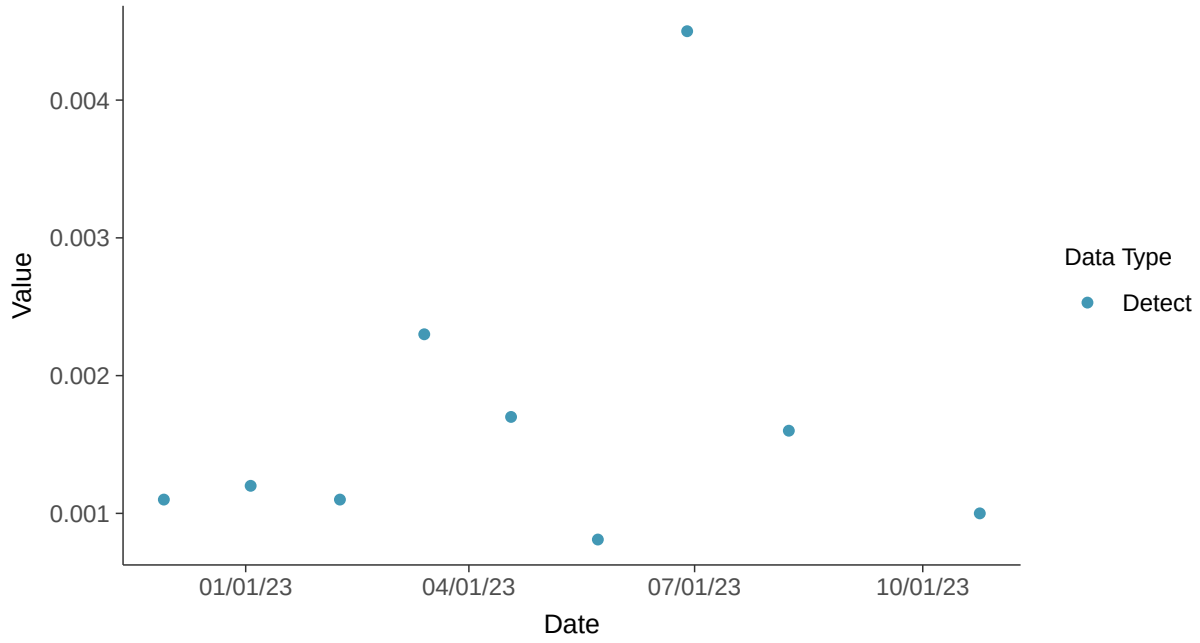


Appendix IV: Cobalt, MW-01R

ID: 1_11_5_110

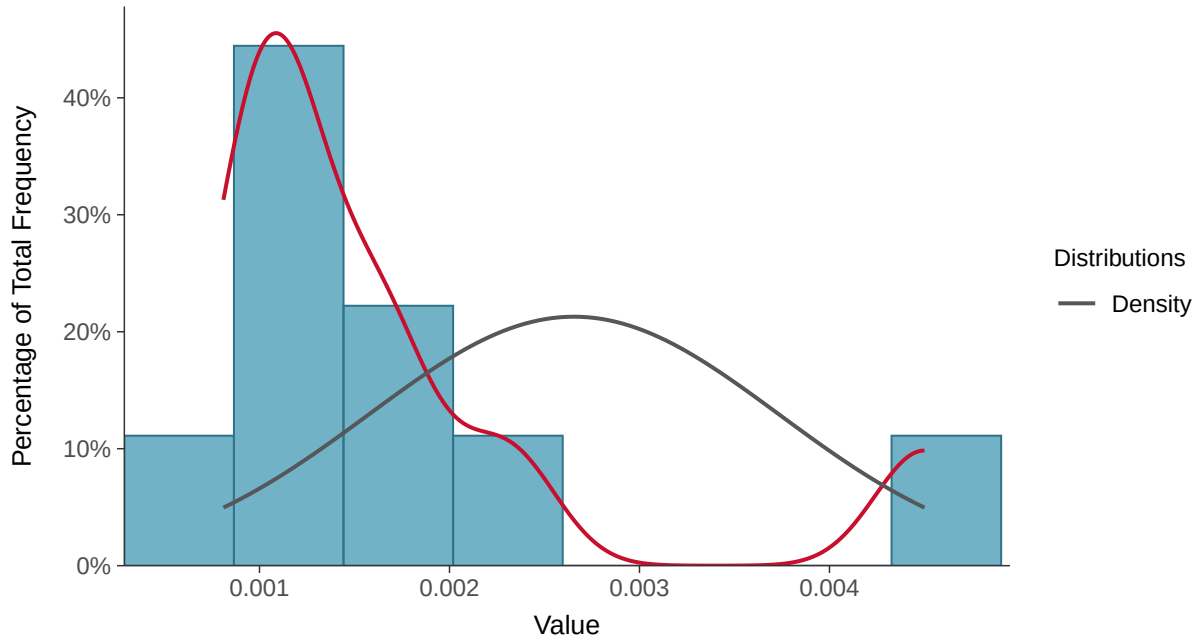
Scatter Plot

Cobalt, MW-01R (mg/L)



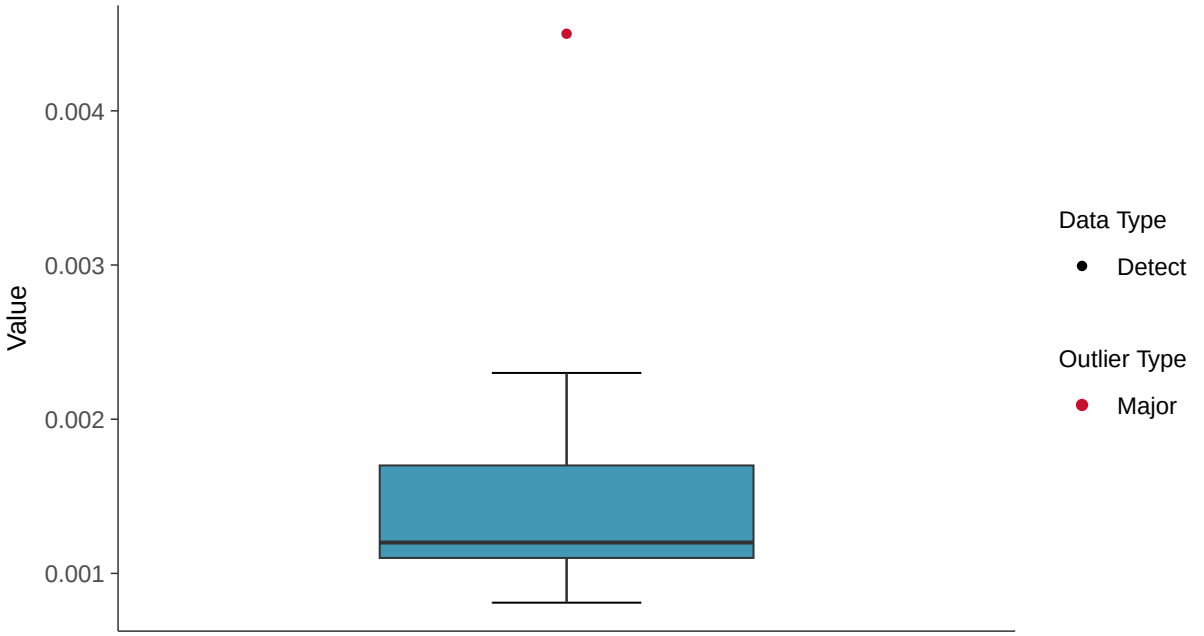
Histogram

Cobalt, MW-01R (mg/L)



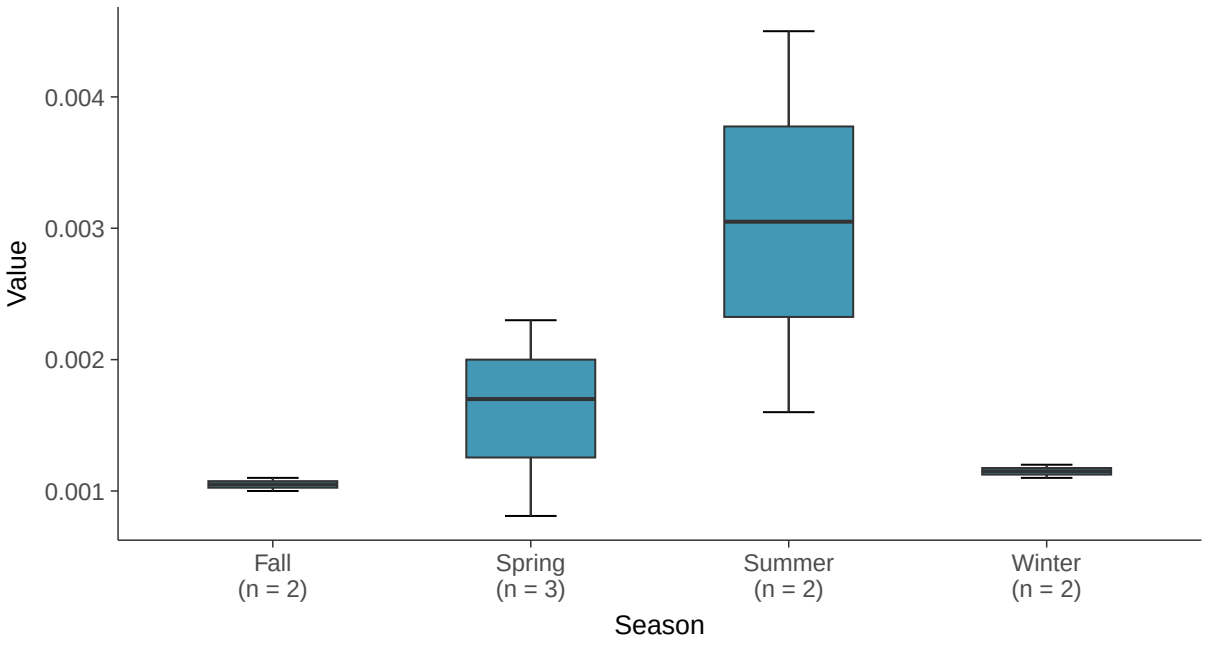
Boxplot

Cobalt, MW-01R (mg/L)



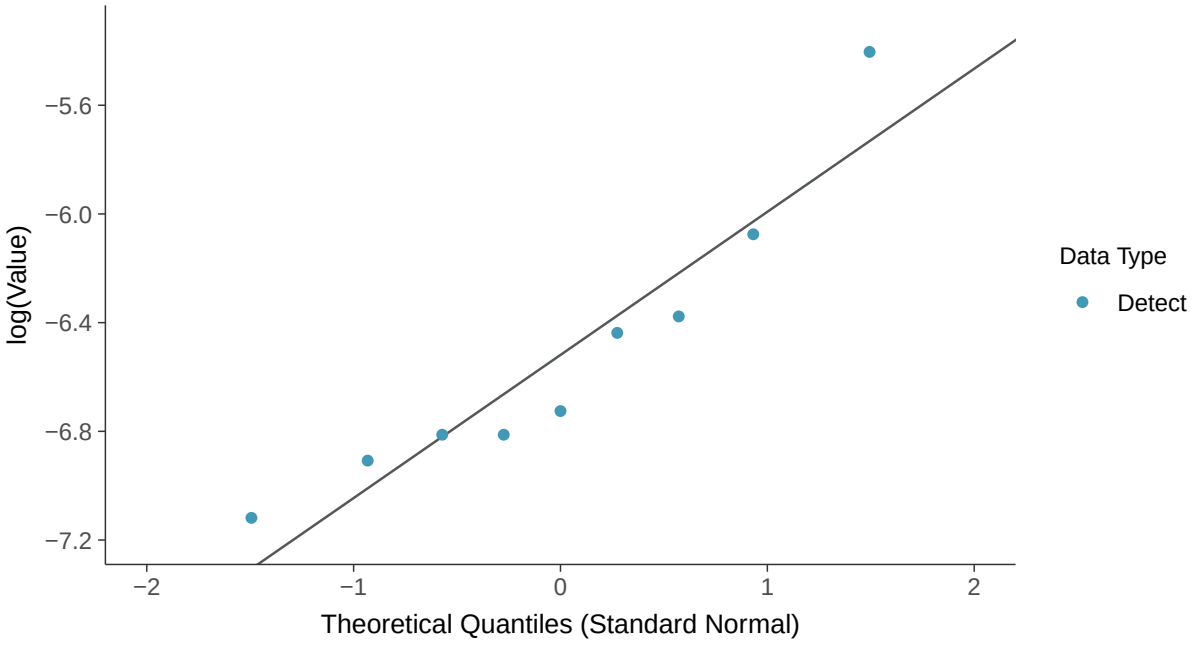
Boxplot by Season

Cobalt, MW-01R (mg/L)



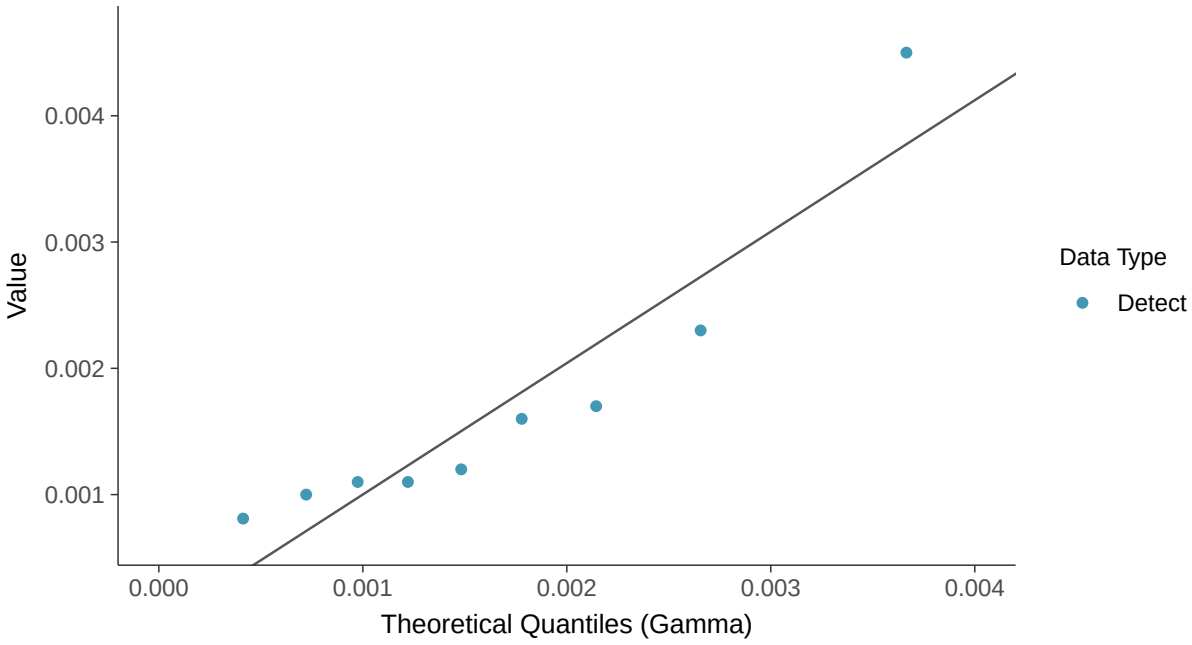
Lognormal Q-Q plot

Cobalt, MW-01R (mg/L)



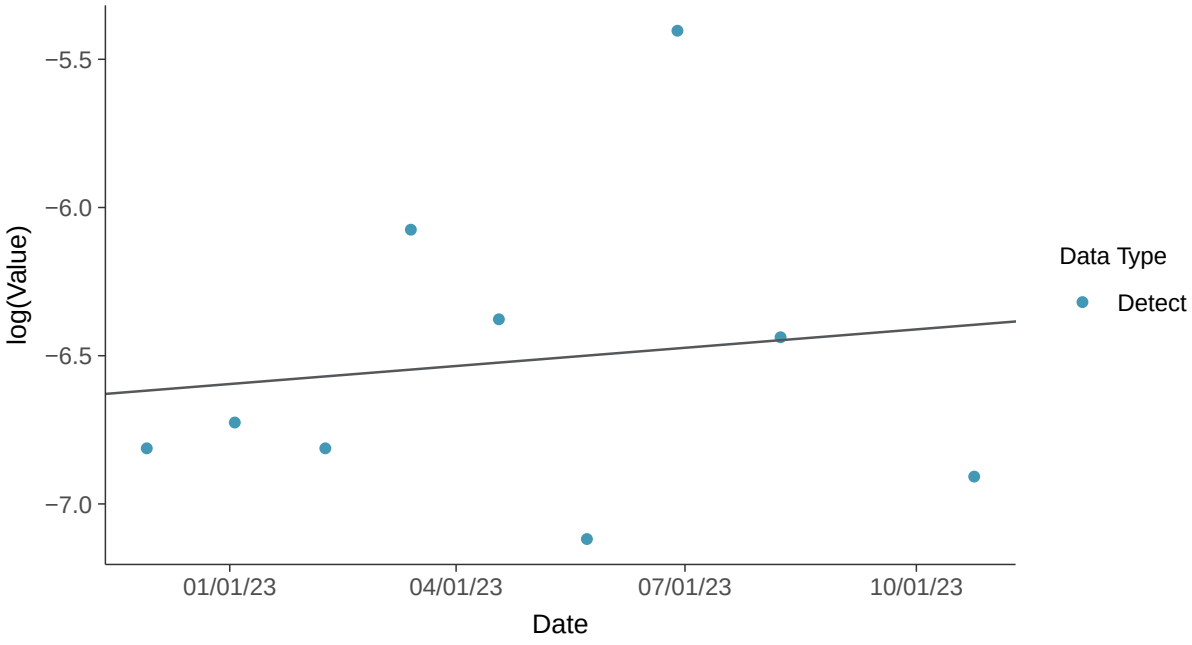
Gamma Q-Q plot

Cobalt, MW-01R (mg/L)



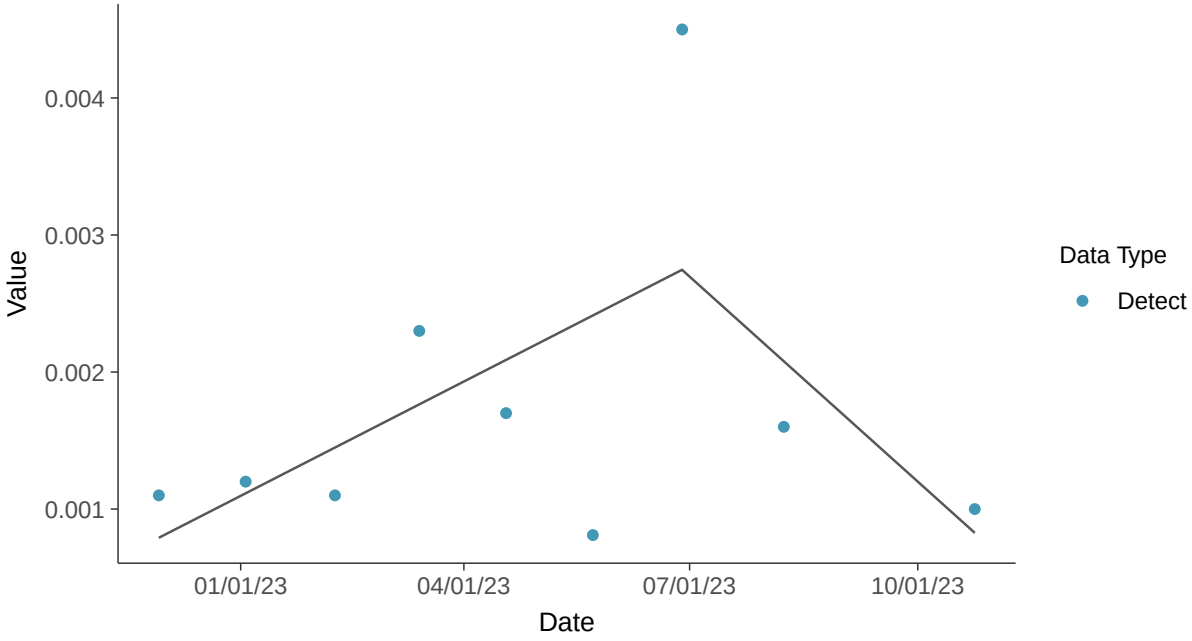
Trend Regression: Lognormal MLE

Cobalt, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear

Cobalt, MW-01R (mg/L)

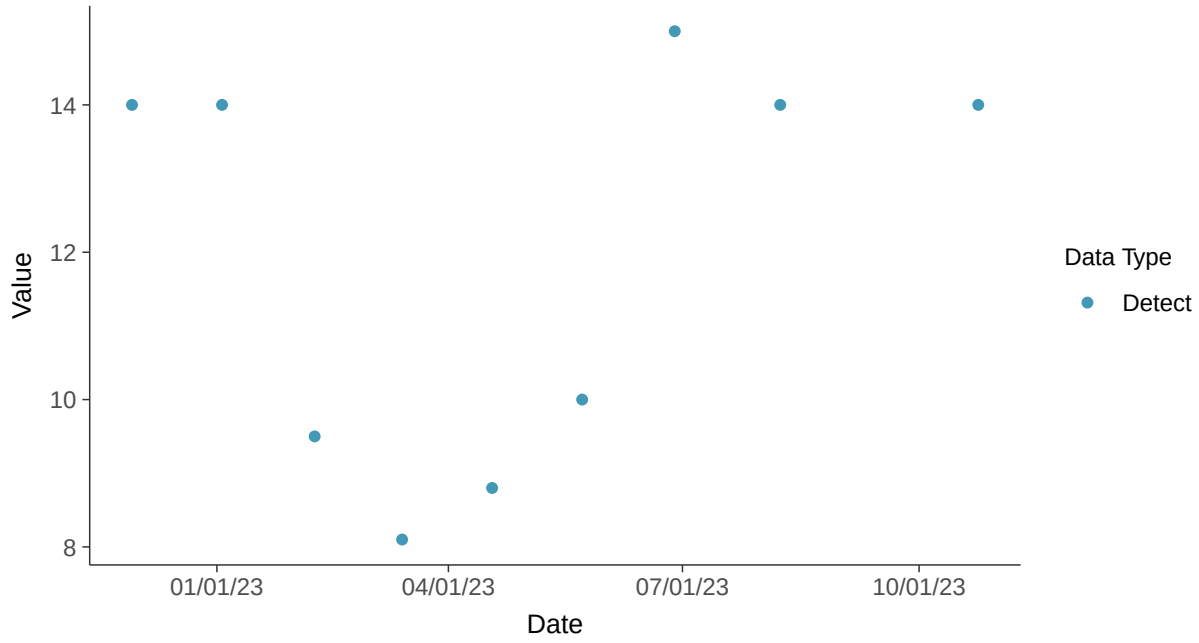


Appendix IV: Fluoride (App IV), MW-01R

ID: 1_11_5_113

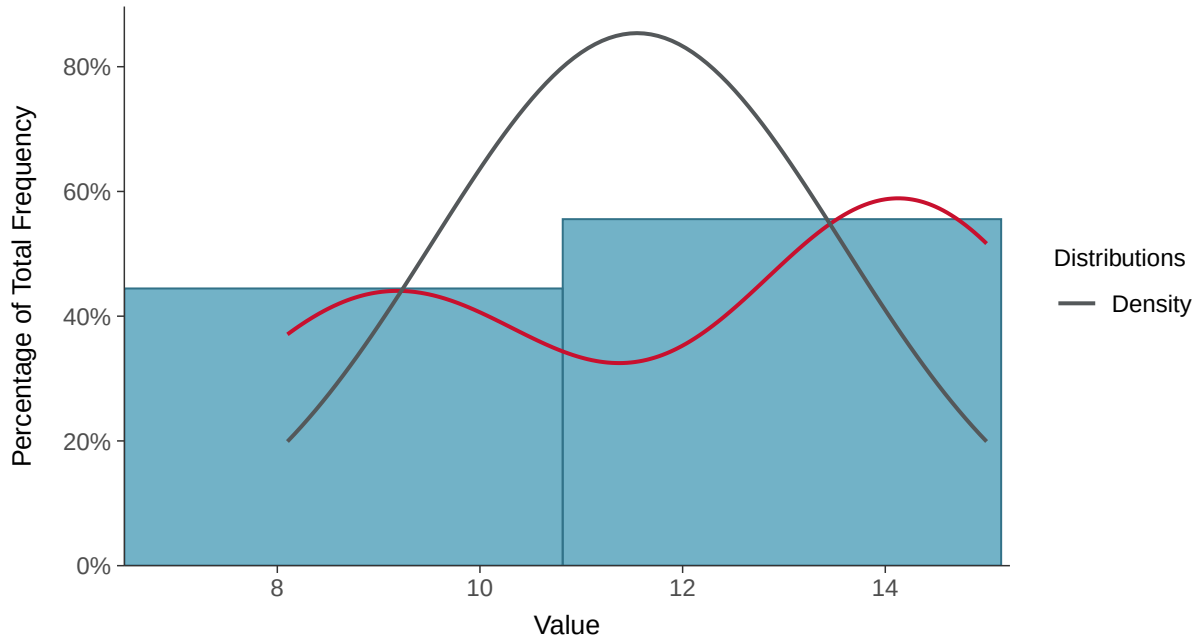
Scatter Plot

Fluoride (App IV), MW-01R (mg/L)



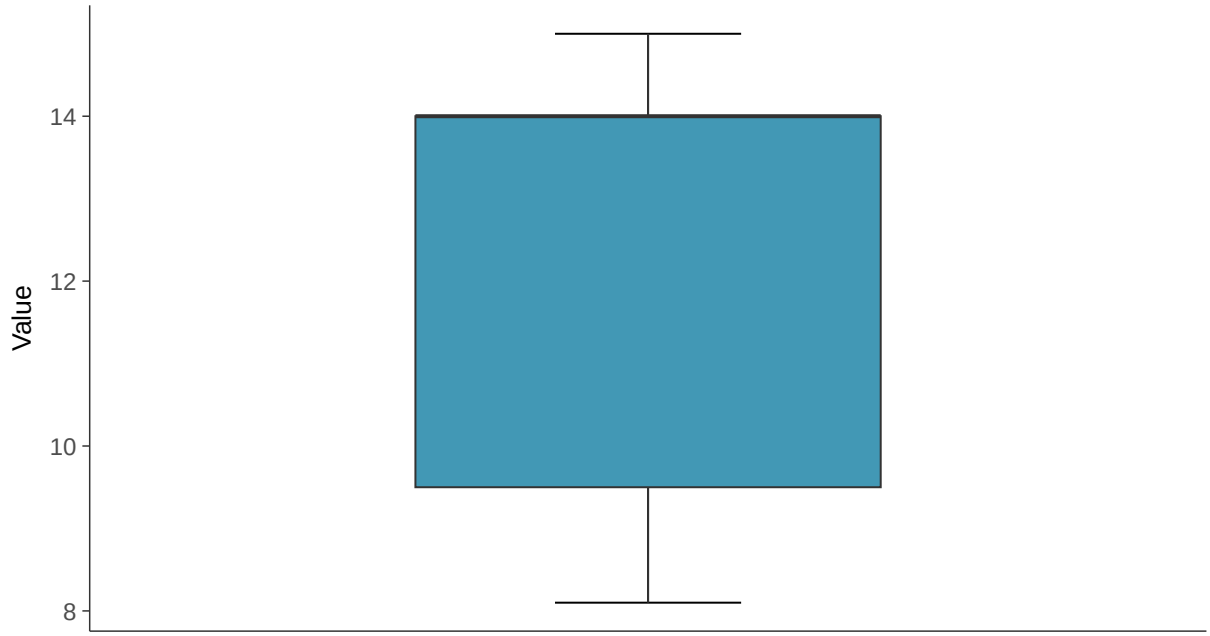
Histogram

Fluoride (App IV), MW-01R (mg/L)



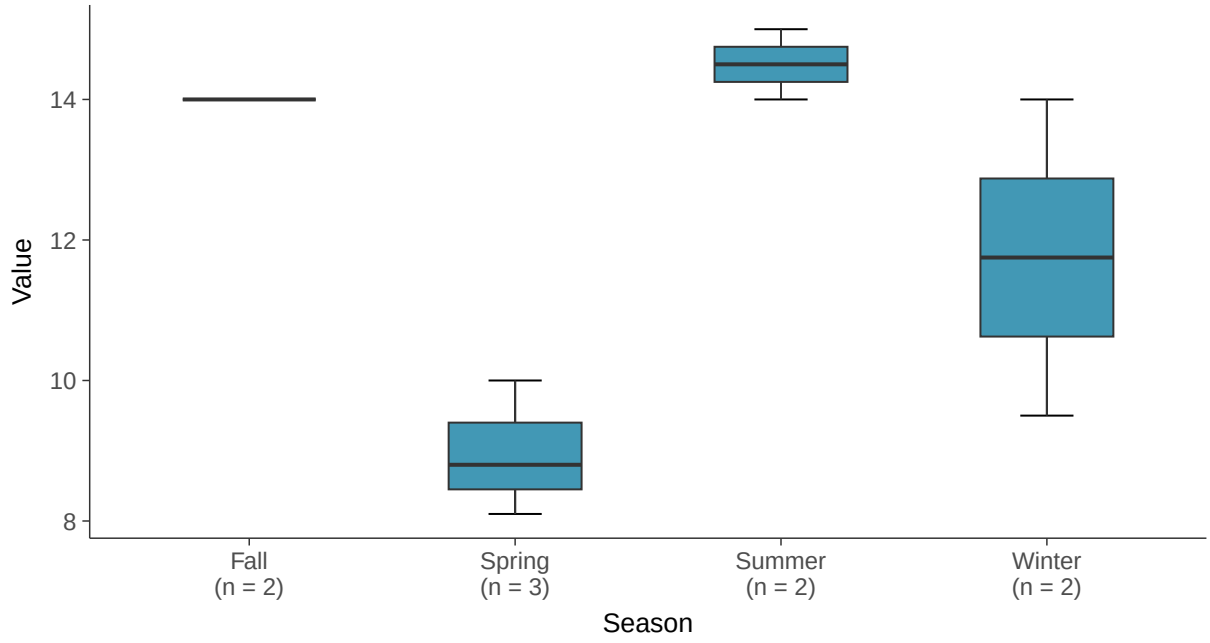
Boxplot

Fluoride (App IV), MW-01R (mg/L)



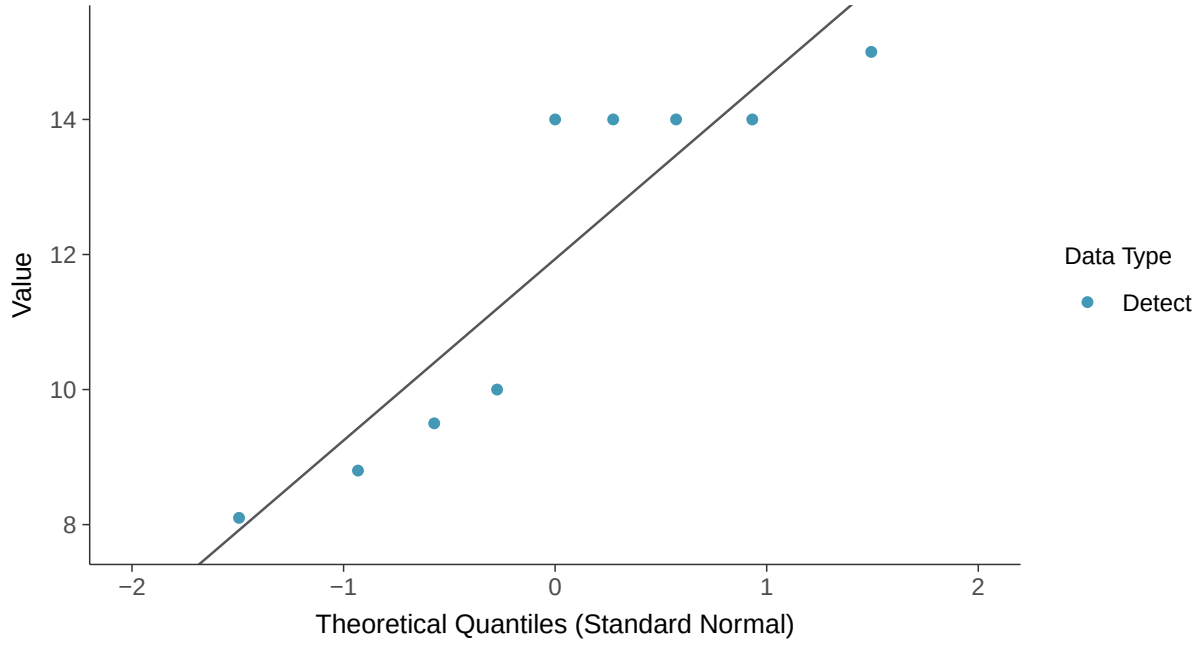
Boxplot by Season

Fluoride (App IV), MW-01R (mg/L)



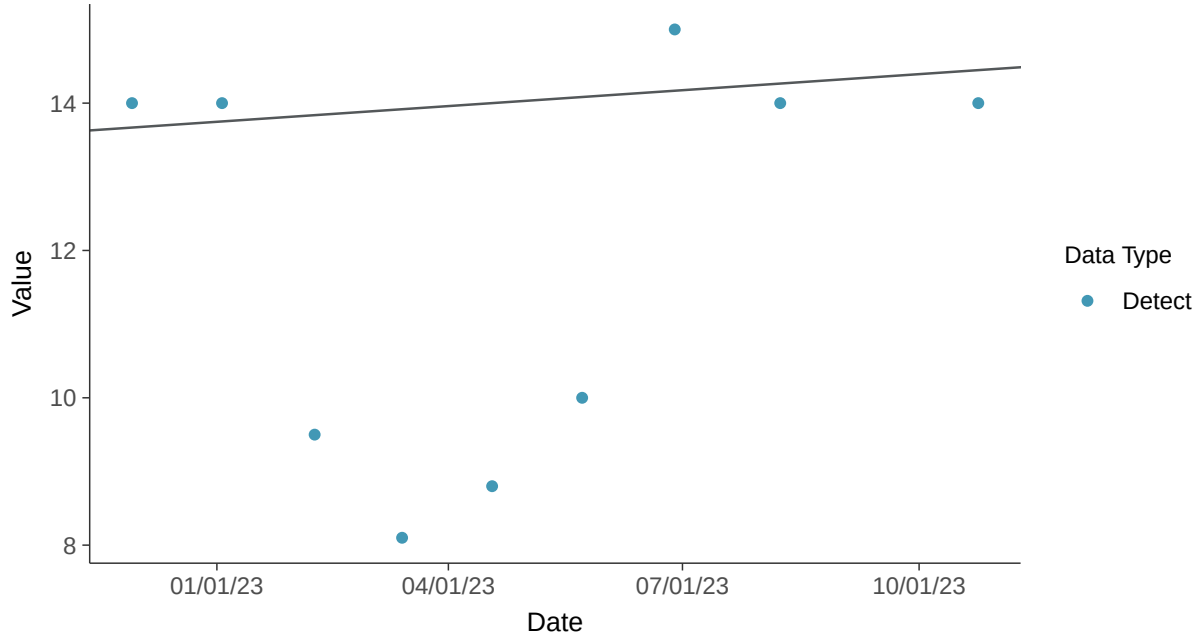
Normal Q-Q plot

Fluoride (App IV), MW-01R (mg/L)



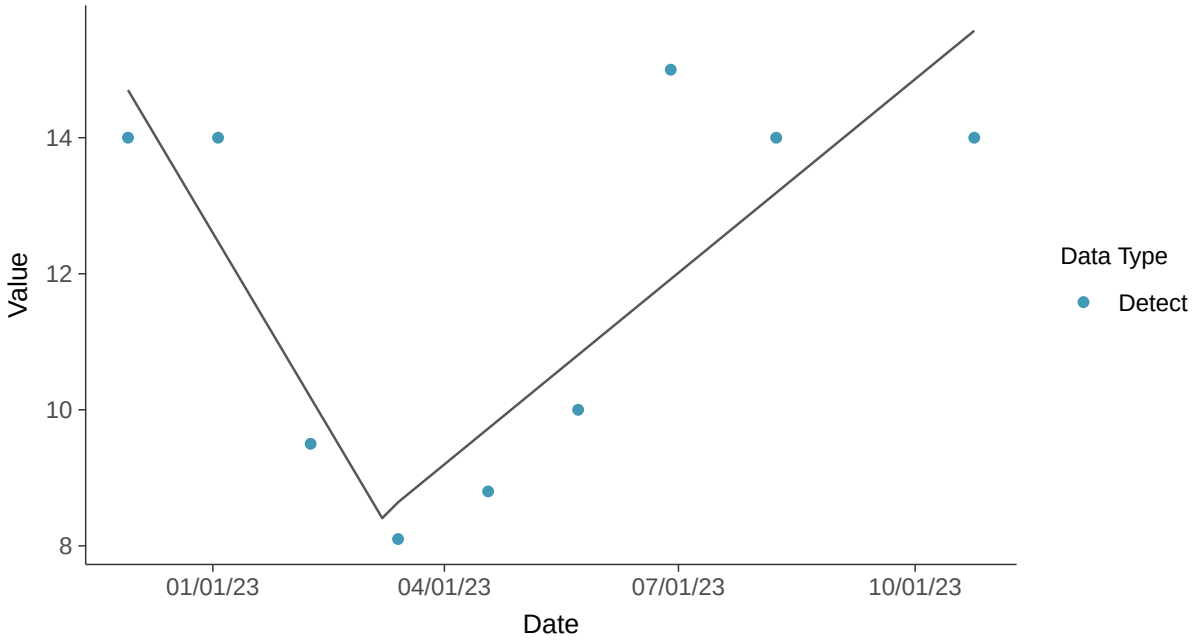
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride (App IV), MW-01R (mg/L)



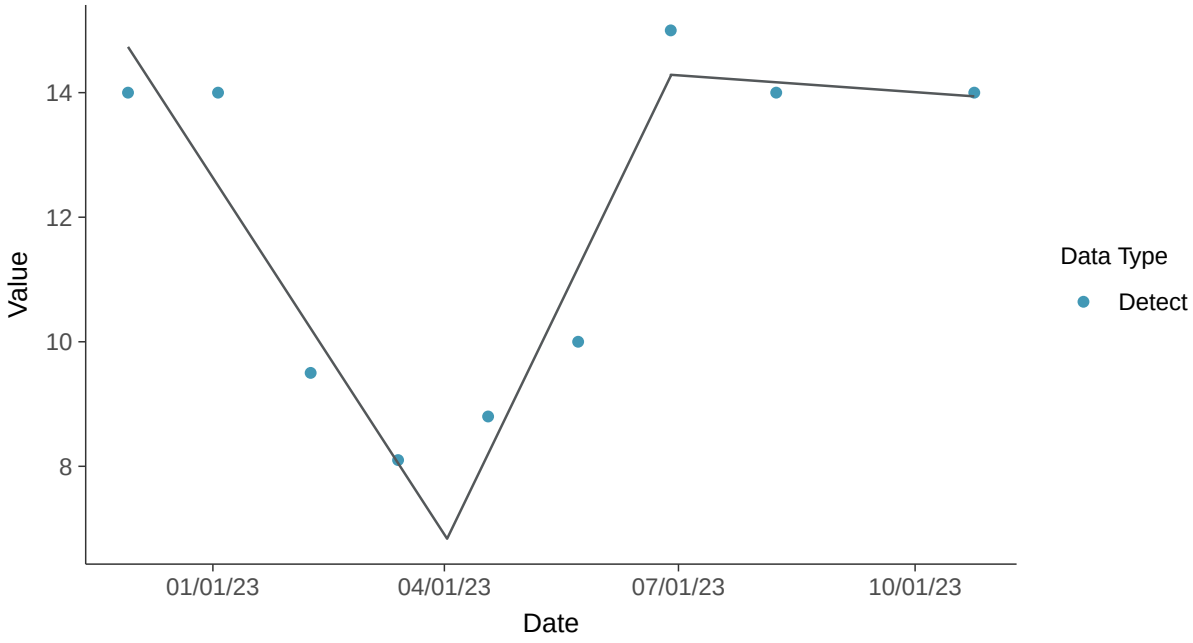
Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride (App IV), MW-01R (mg/L)

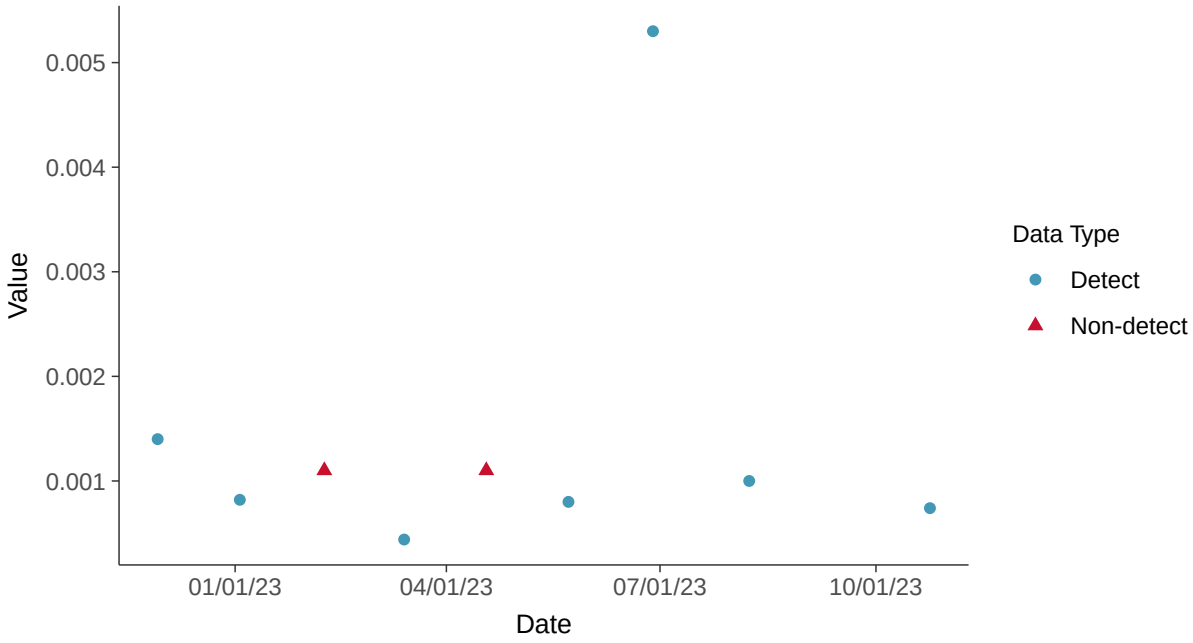


Appendix IV: Lead, MW-01R

ID: 1_11_5_115

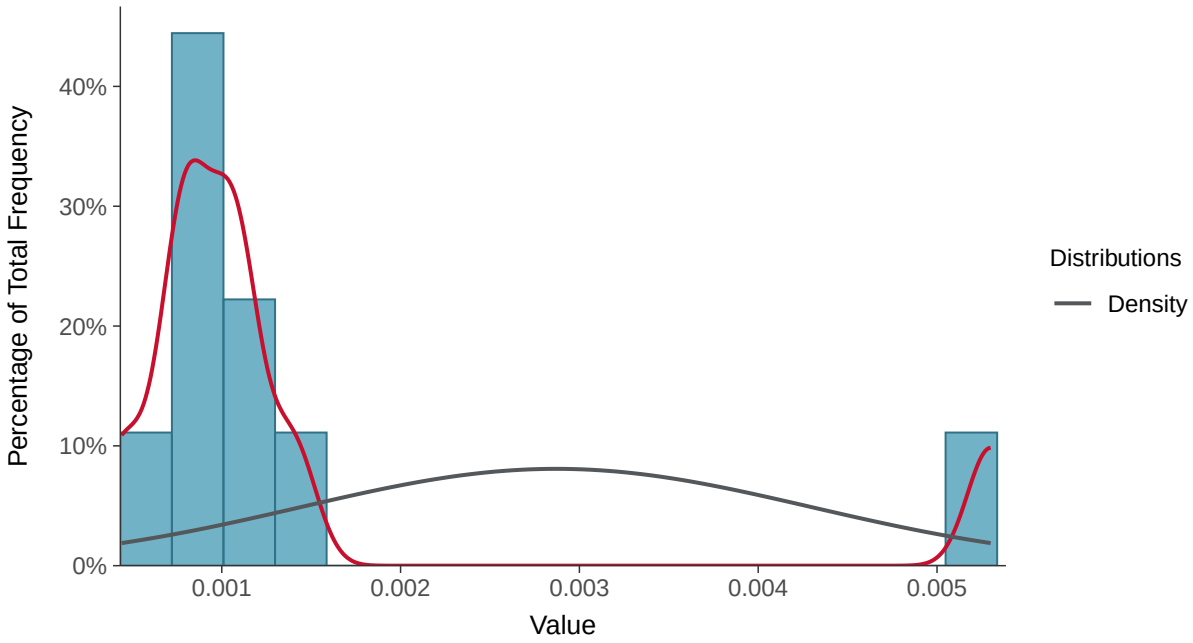
Scatter Plot

Lead, MW-01R (mg/L)



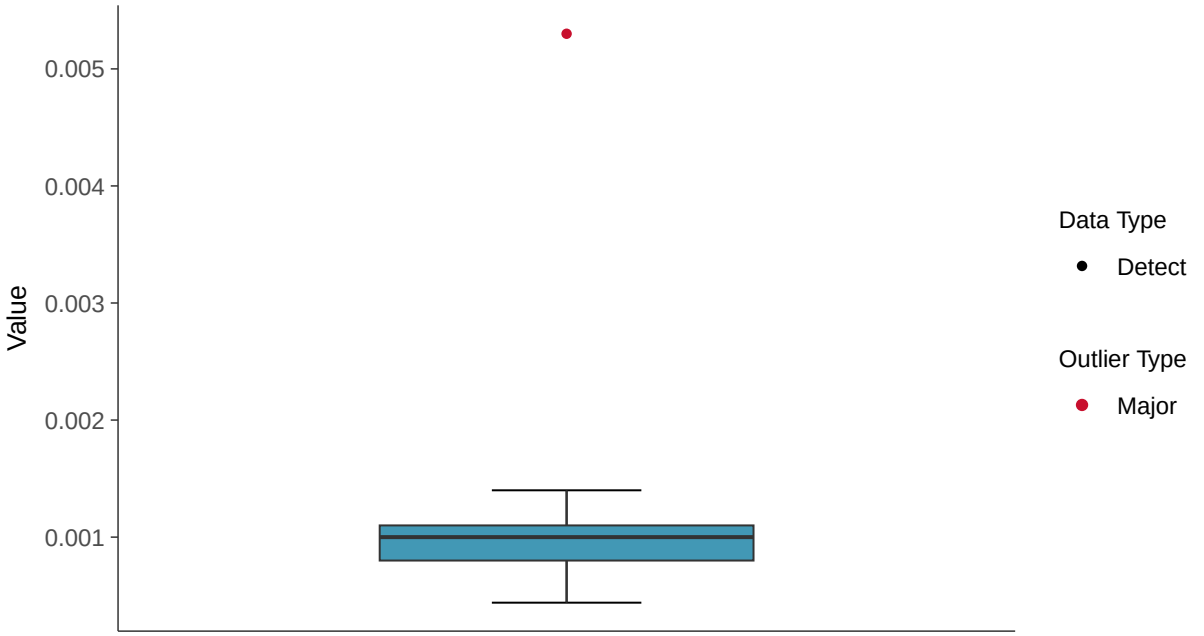
Histogram

Lead, MW-01R (mg/L)



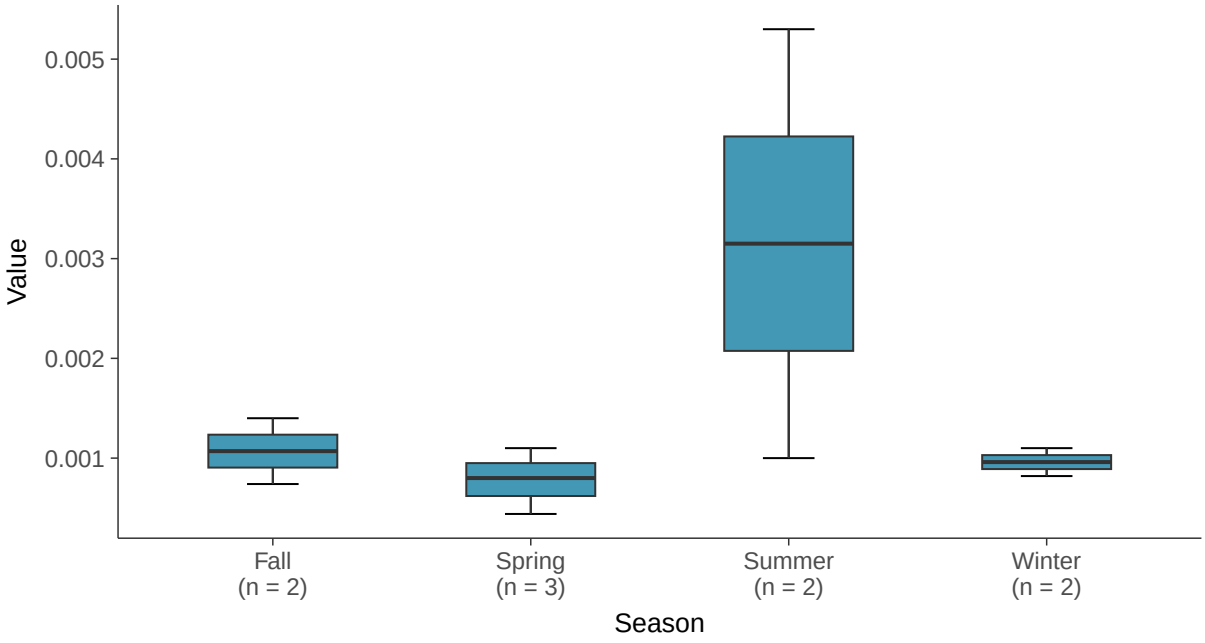
Boxplot

Lead, MW-01R (mg/L)



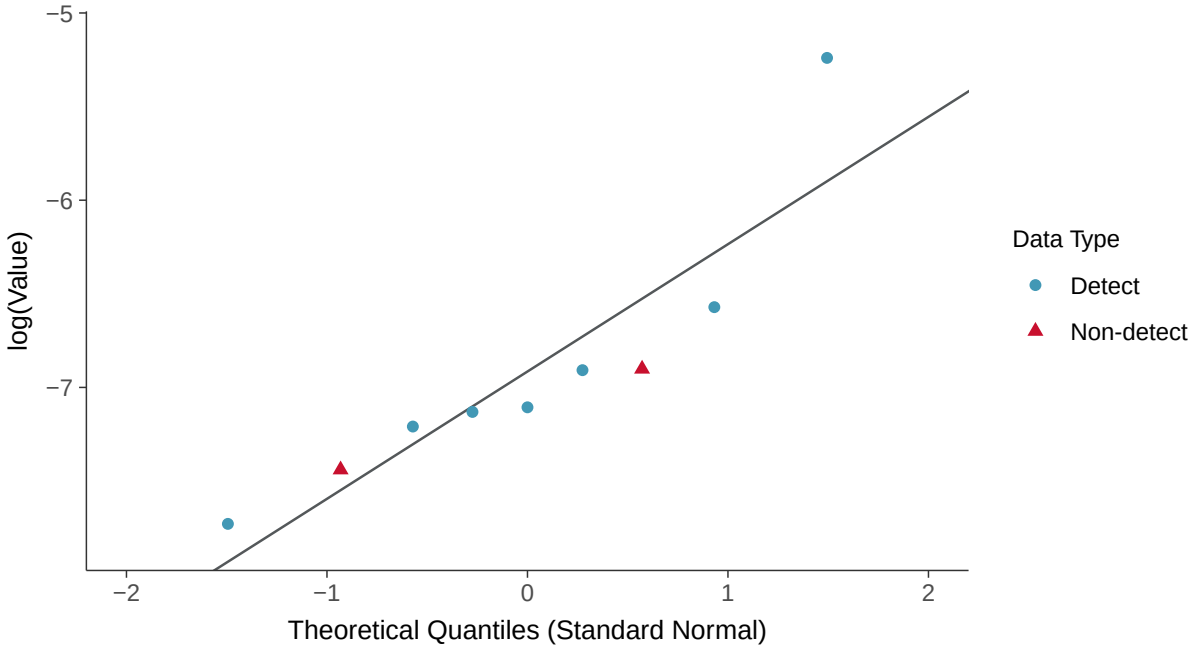
Boxplot by Season

Lead, MW-01R (mg/L)



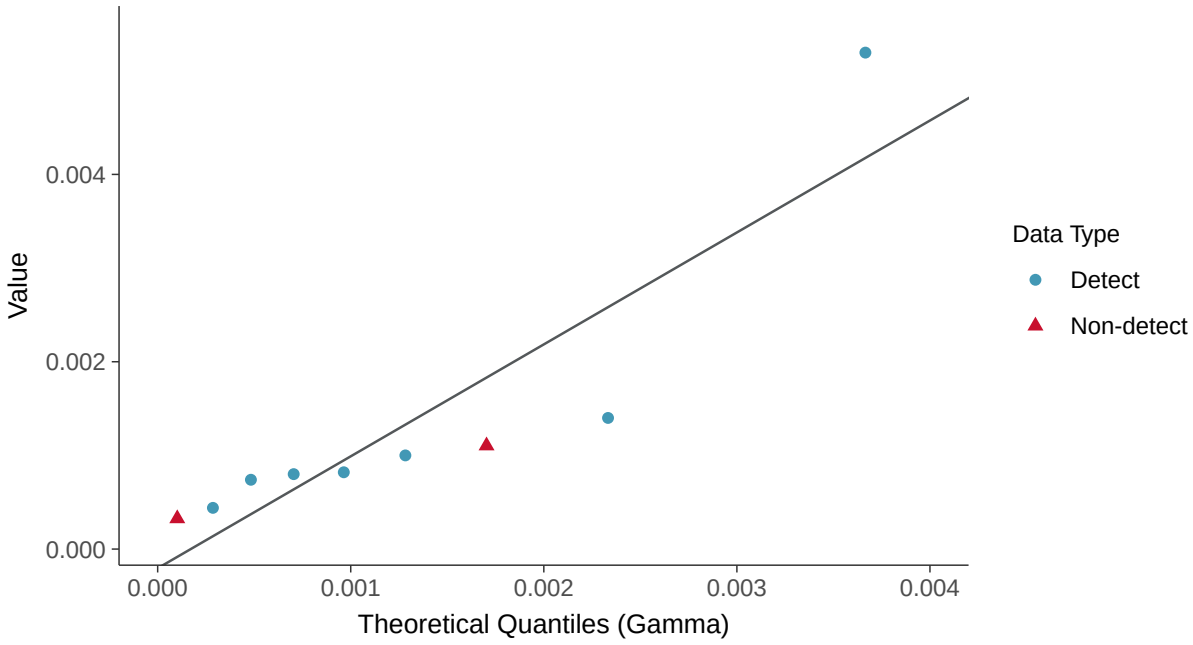
Lognormal Q-Q plot using ROS Imputed Estimates

Lead, MW-01R (mg/L)



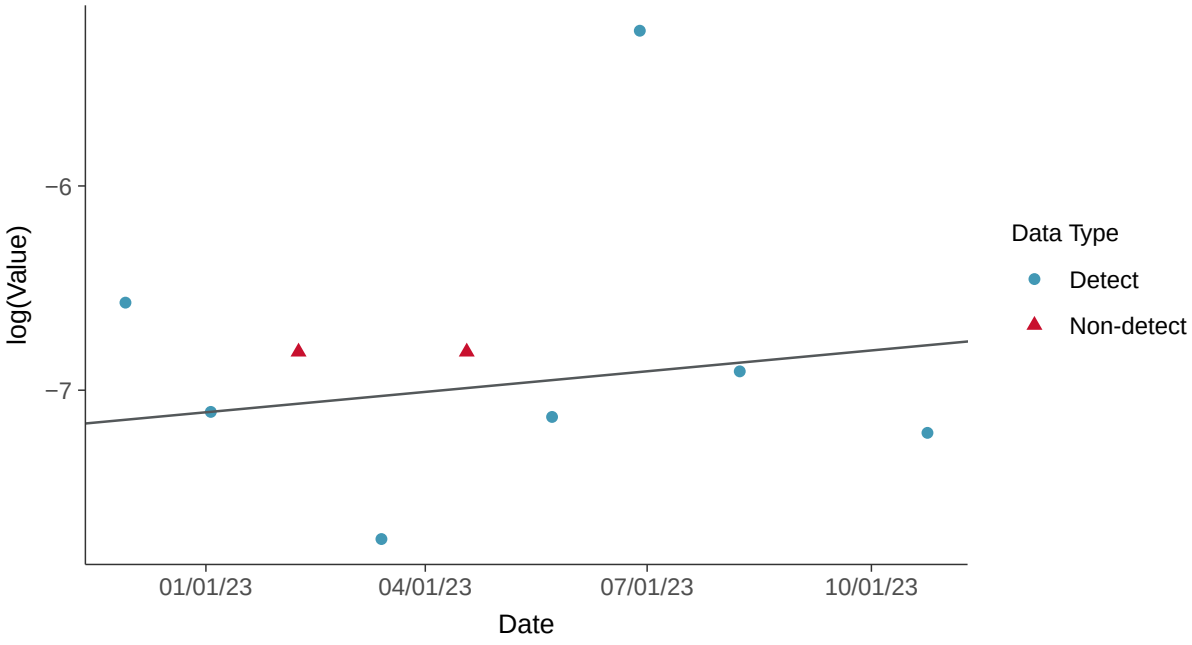
Gamma Q-Q plot using ROS Imputed Estimates

Lead, MW-01R (mg/L)



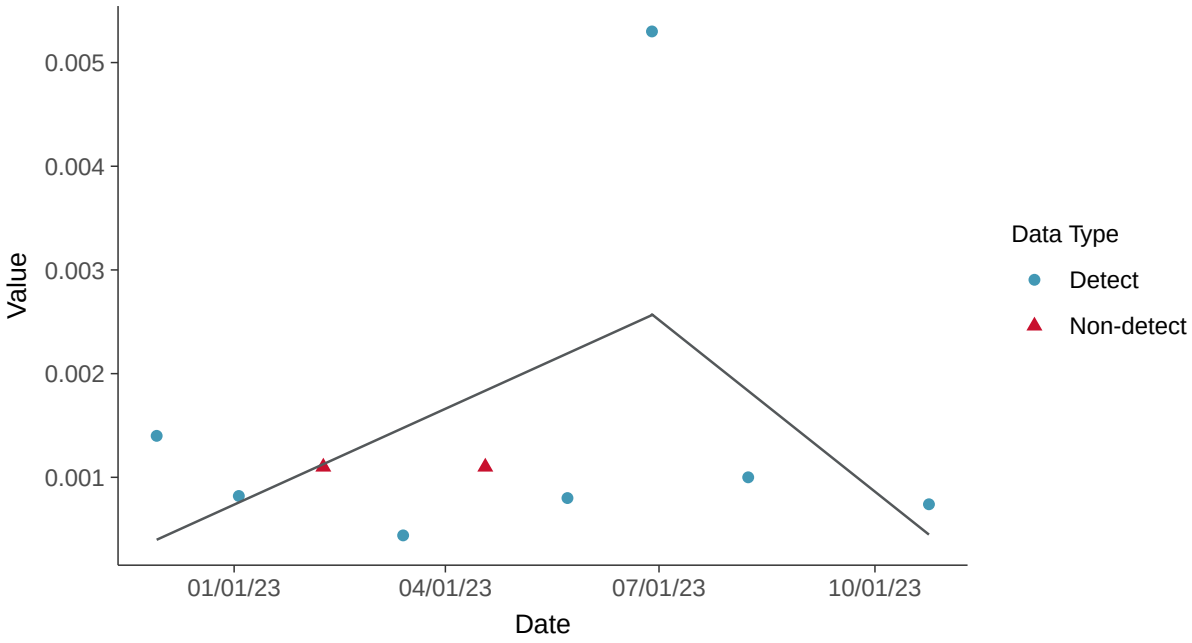
Trend Regression: Lognormal MLE

Lead, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear

Lead, MW-01R (mg/L)

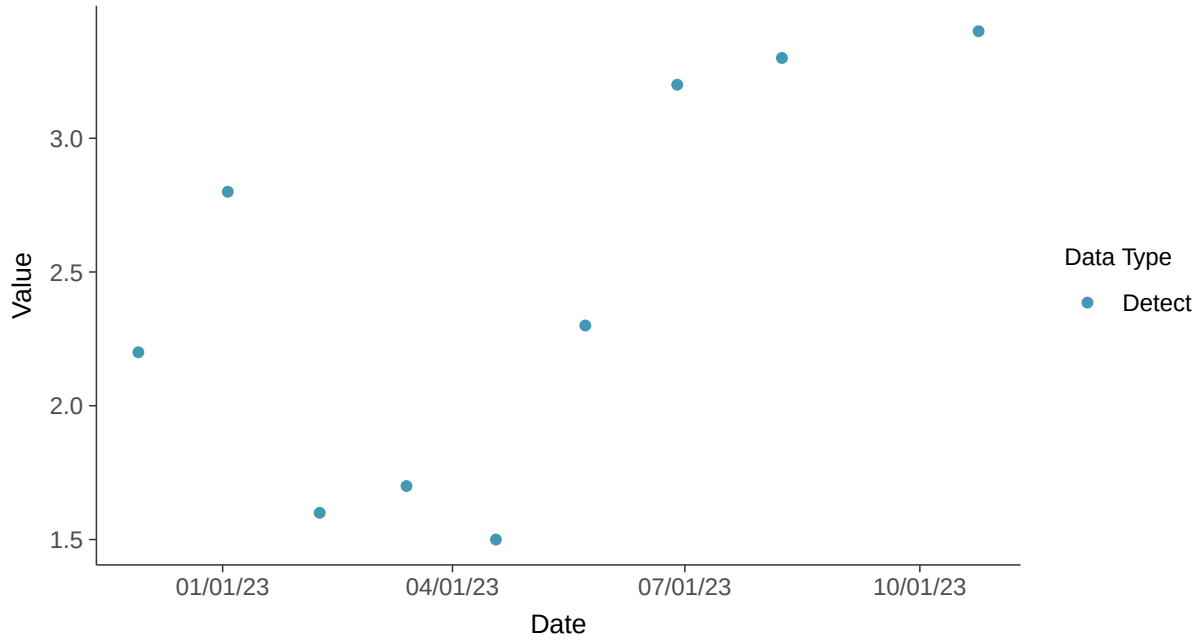


Appendix IV: Lithium, MW-01R

ID: 1_11_5_116

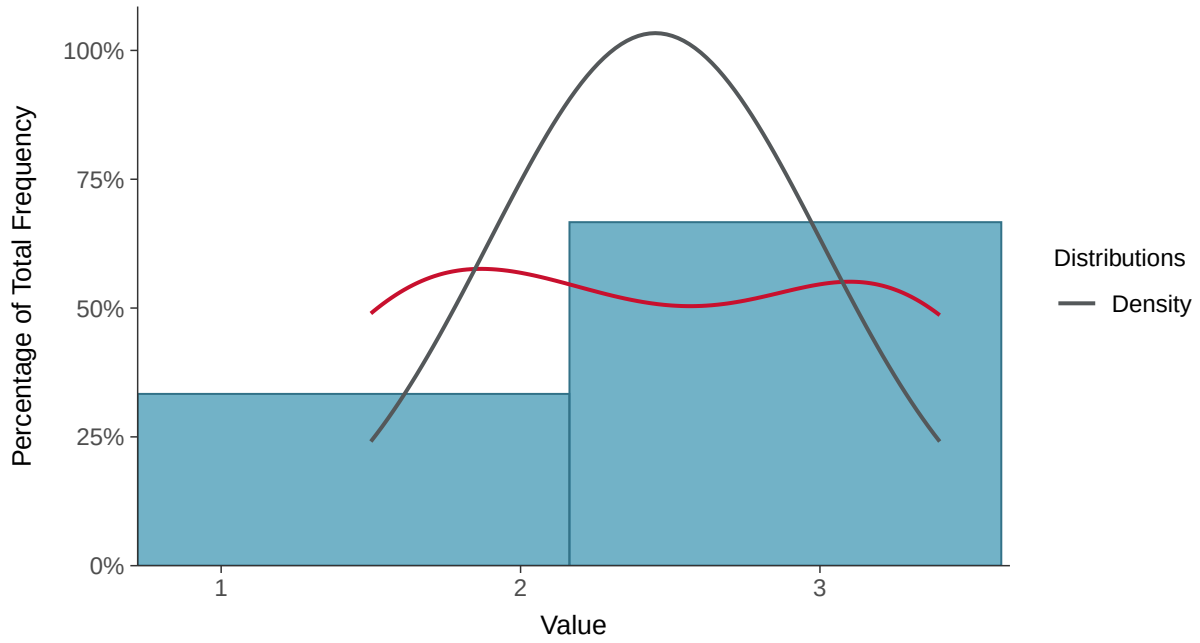
Scatter Plot

Lithium, MW-01R (mg/L)



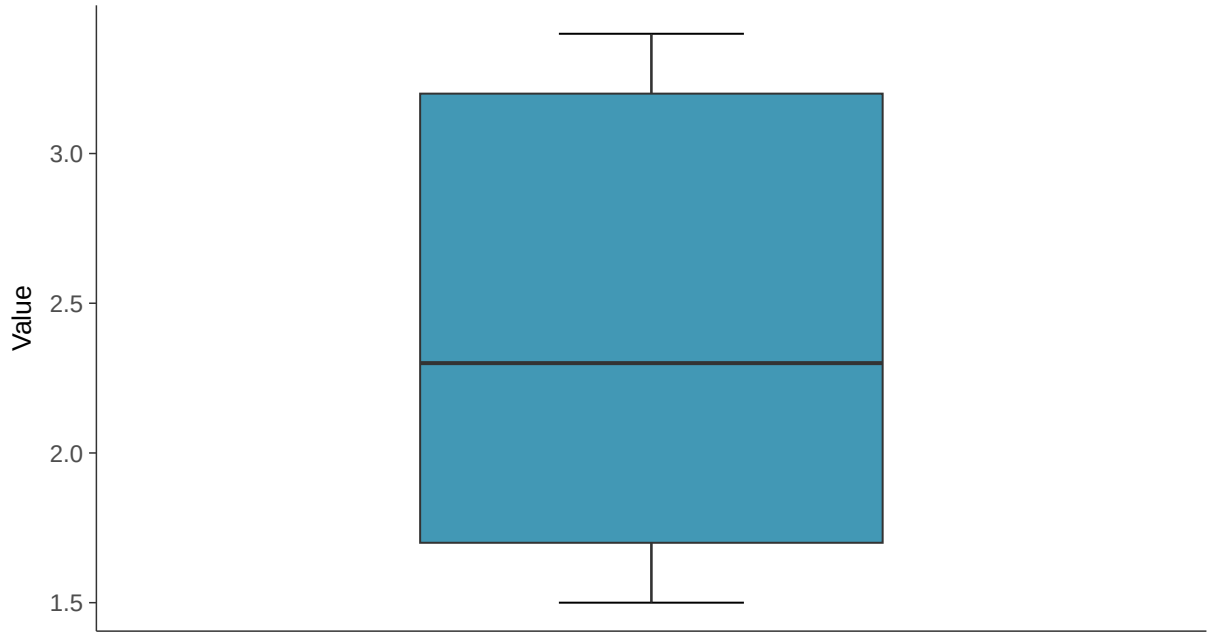
Histogram

Lithium, MW-01R (mg/L)



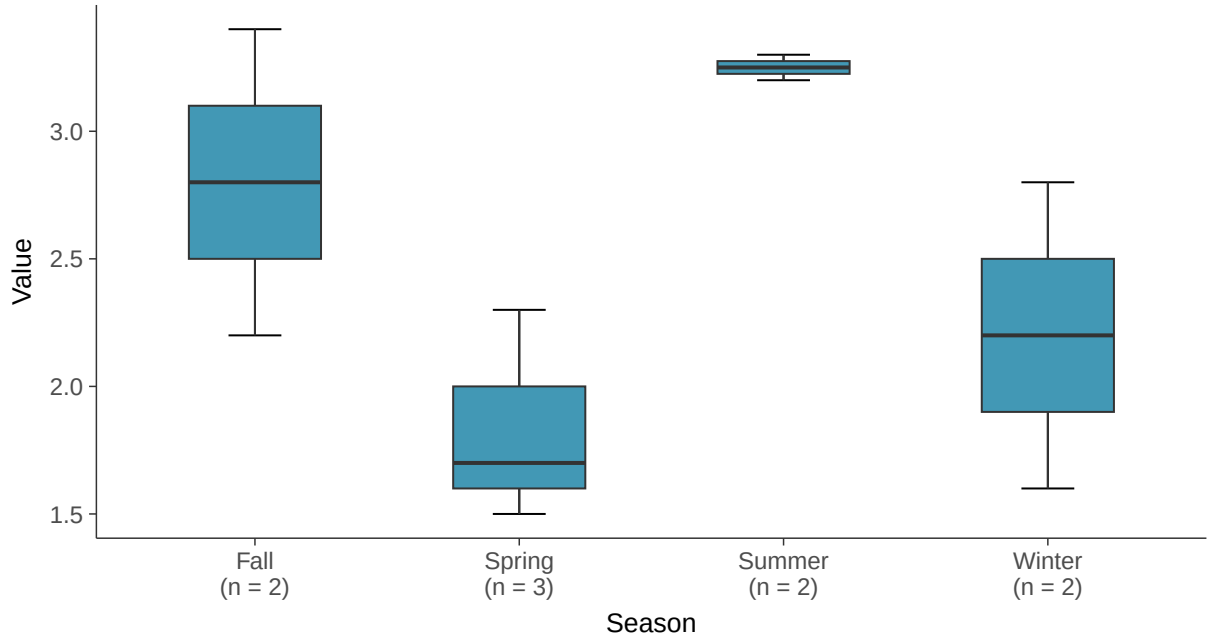
Boxplot

Lithium, MW-01R (mg/L)



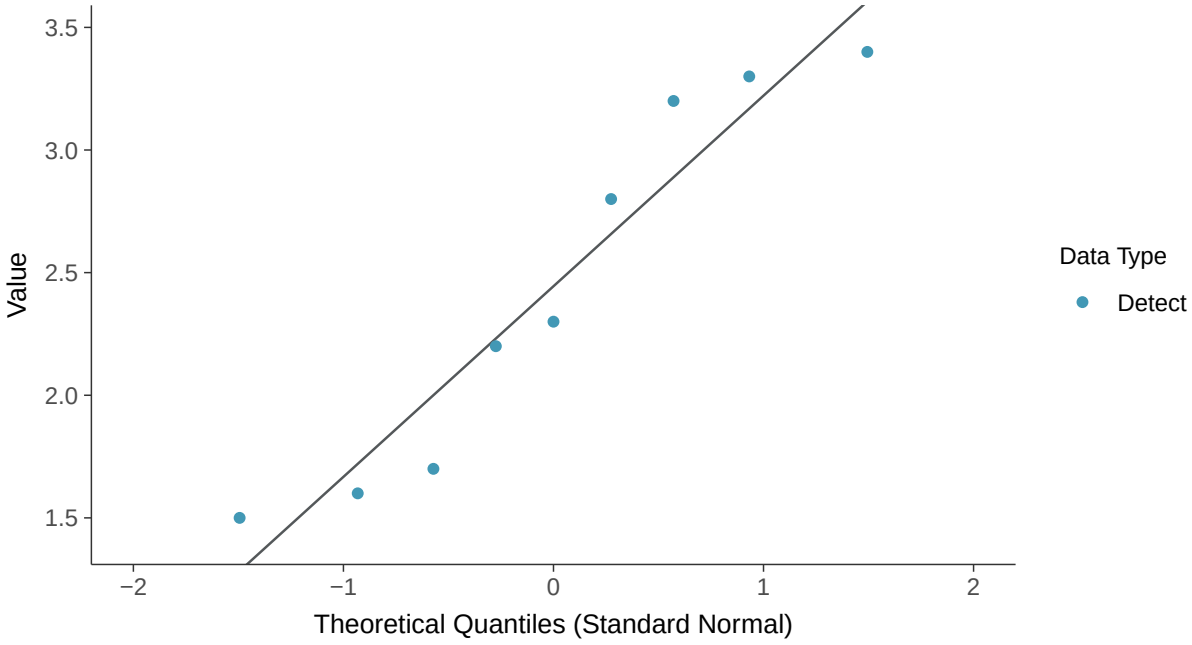
Boxplot by Season

Lithium, MW-01R (mg/L)



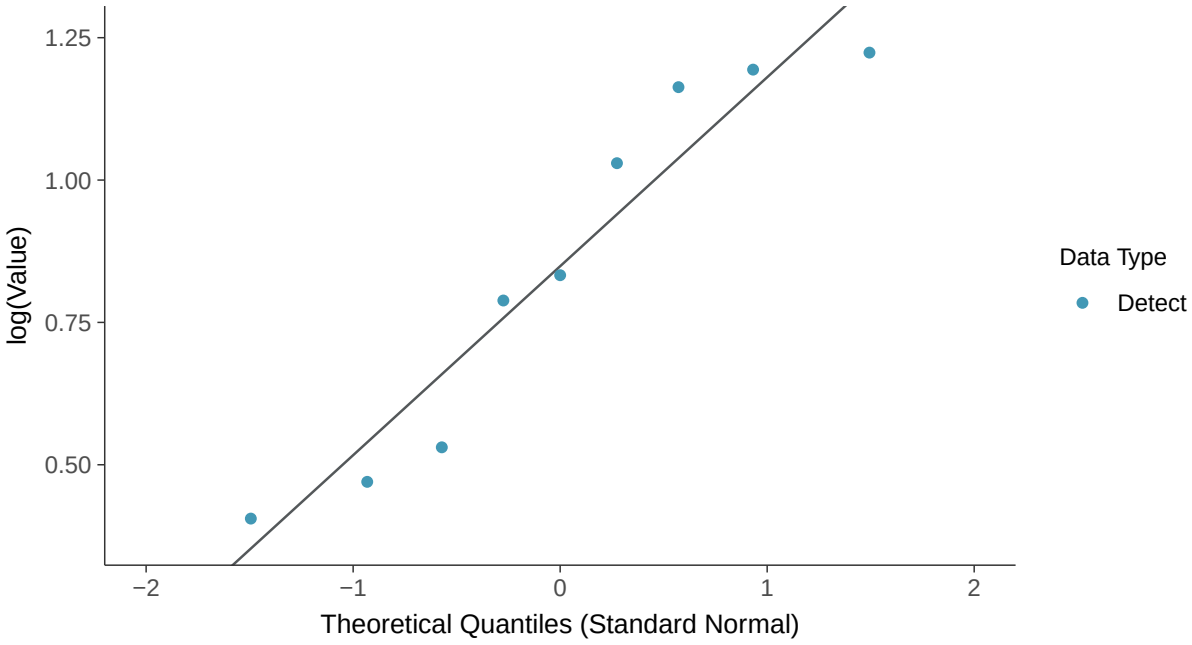
Normal Q-Q plot

Lithium, MW-01R (mg/L)



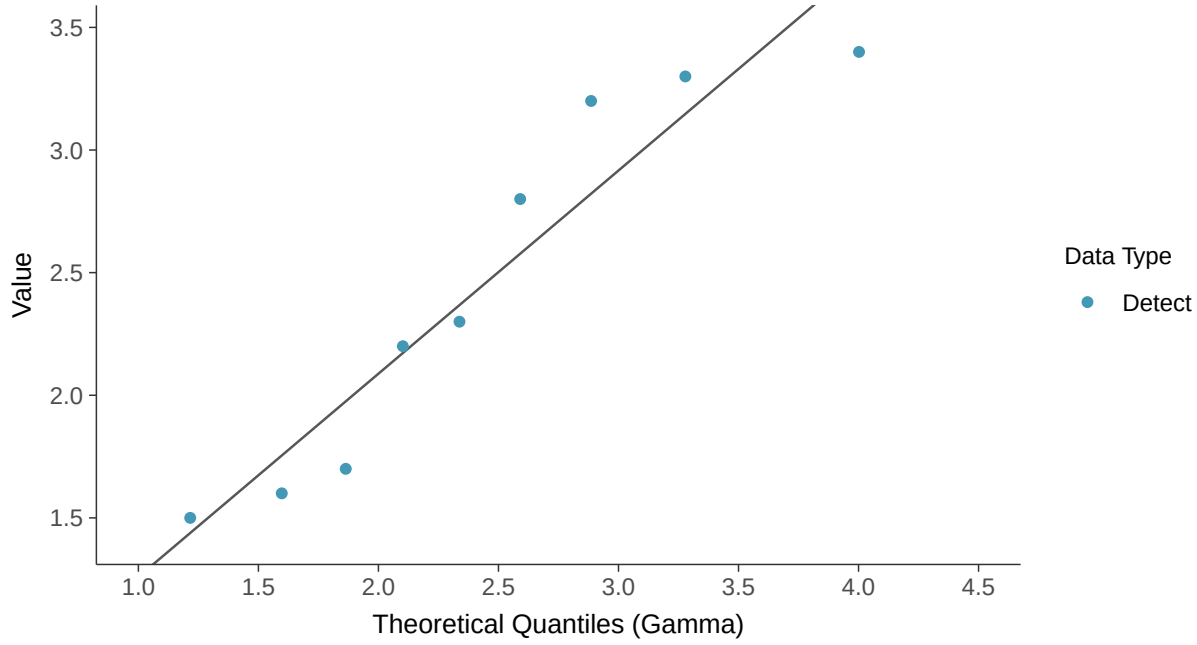
Lognormal Q-Q plot

Lithium, MW-01R (mg/L)



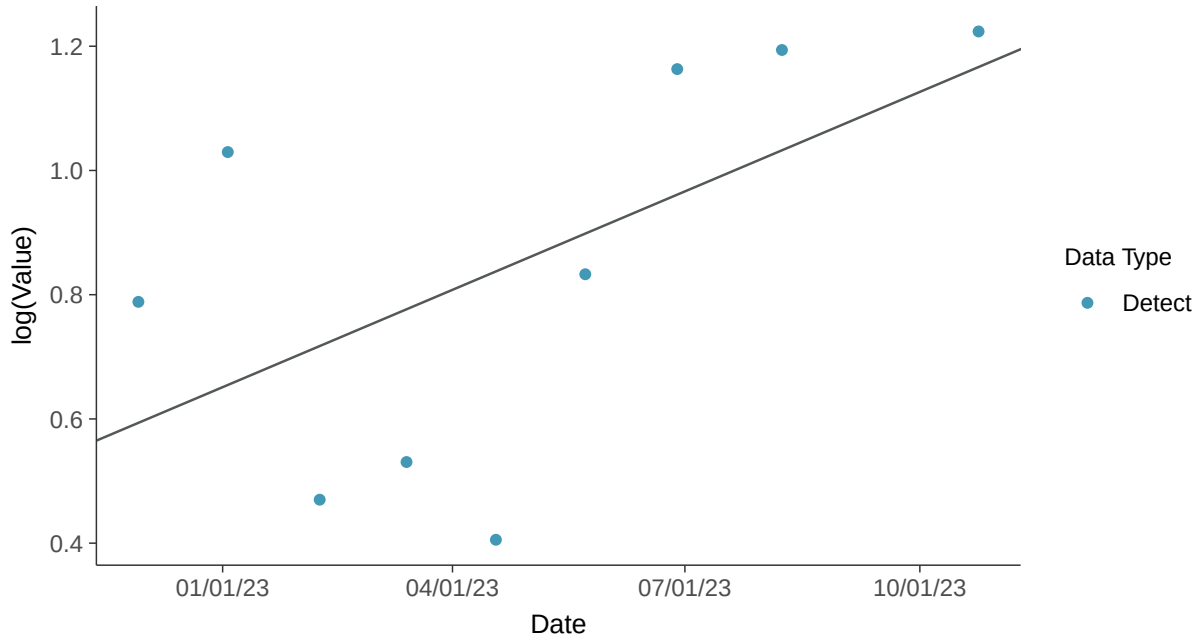
Gamma Q-Q plot

Lithium, MW-01R (mg/L)



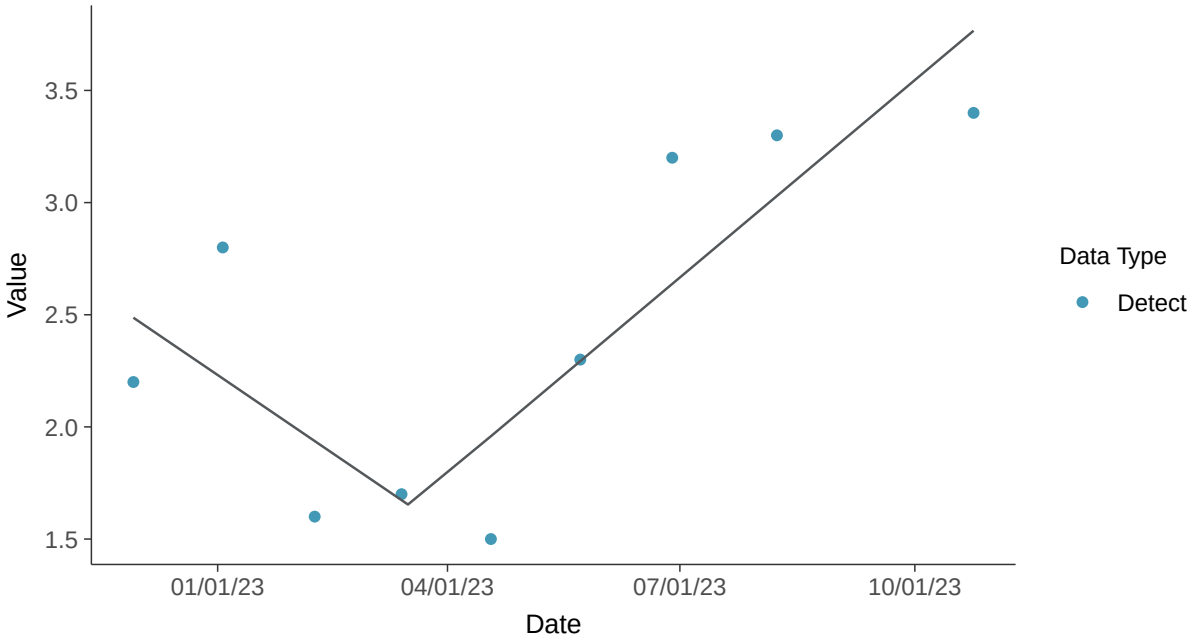
Trend Regression: Lognormal MLE

Lithium, MW-01R (mg/L)



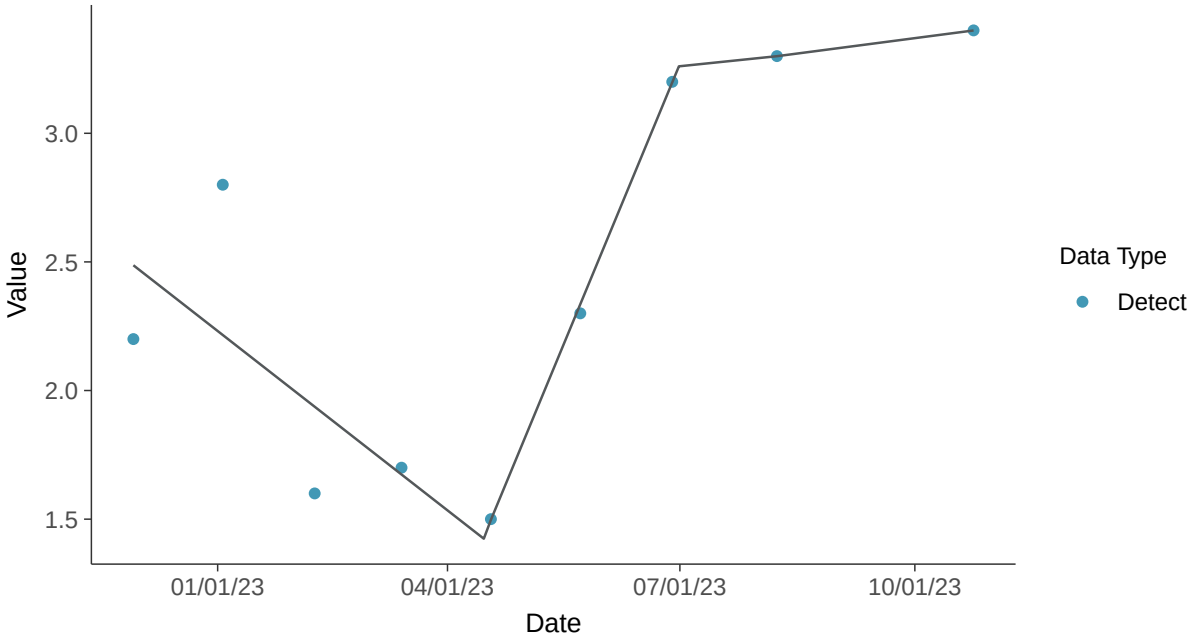
Trend Regression: Piecewise Linear-Linear

Lithium, MW-01R (mg/L)



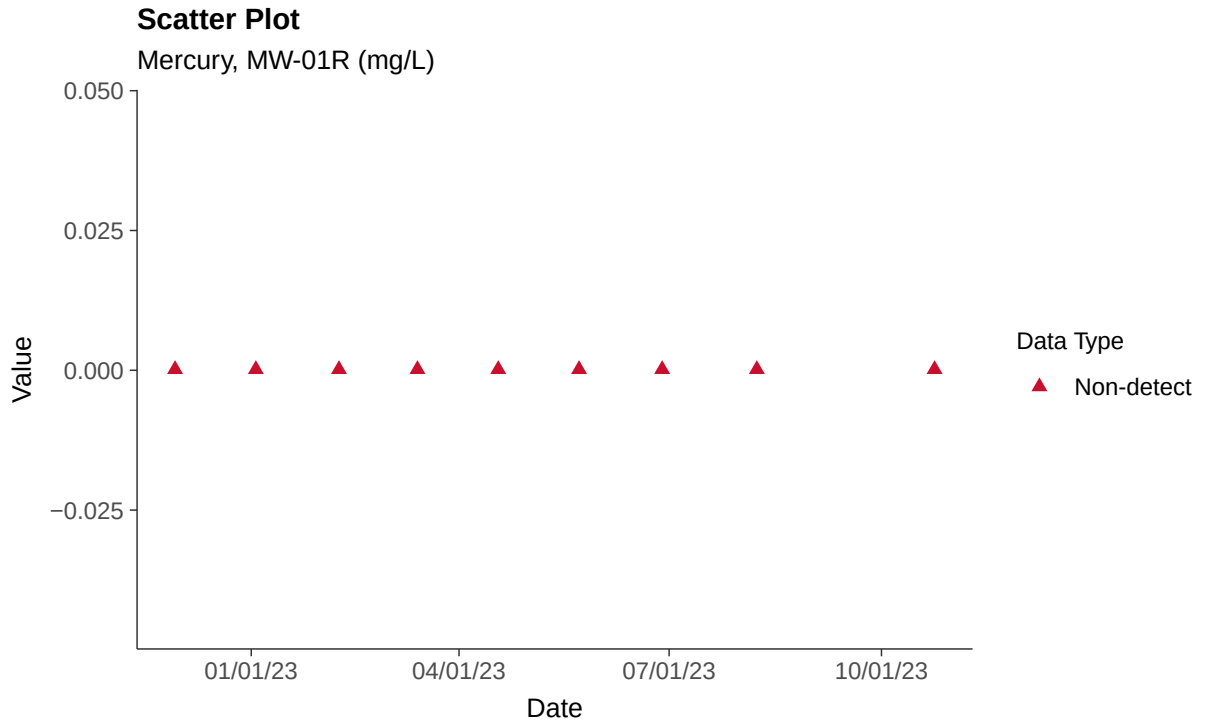
Trend Regression: Piecewise Linear-Linear-Linear

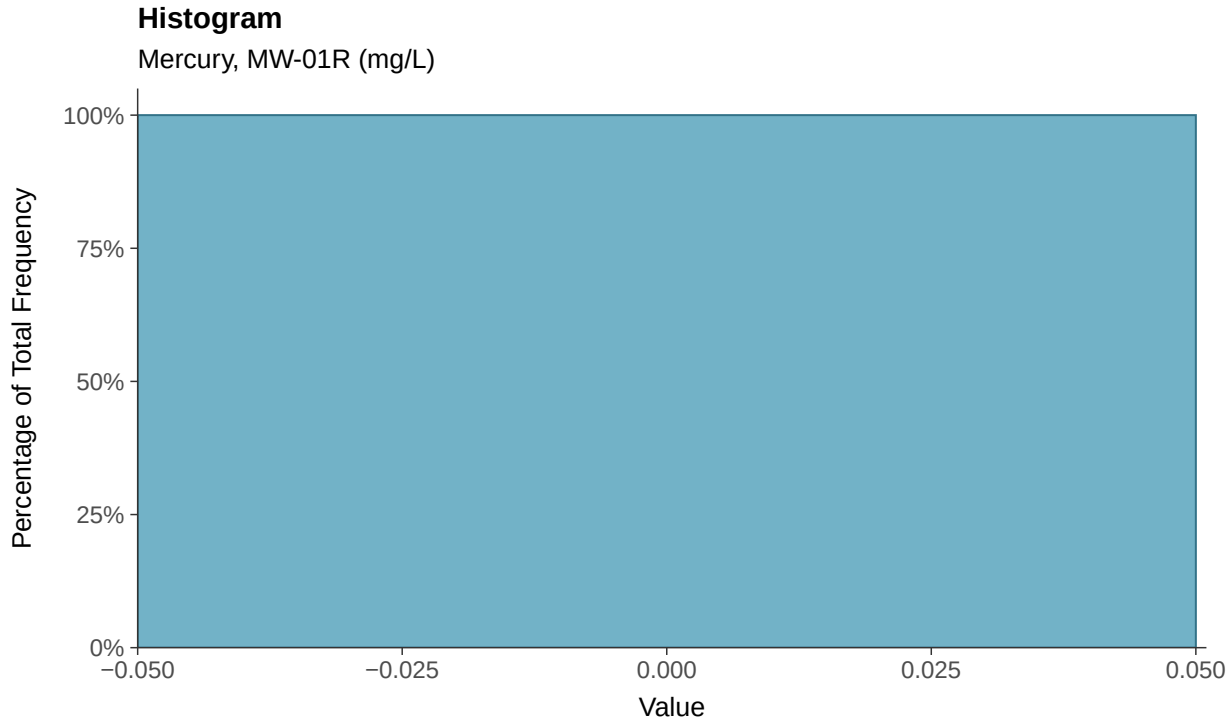
Lithium, MW-01R (mg/L)



Appendix IV: Mercury, MW-01R

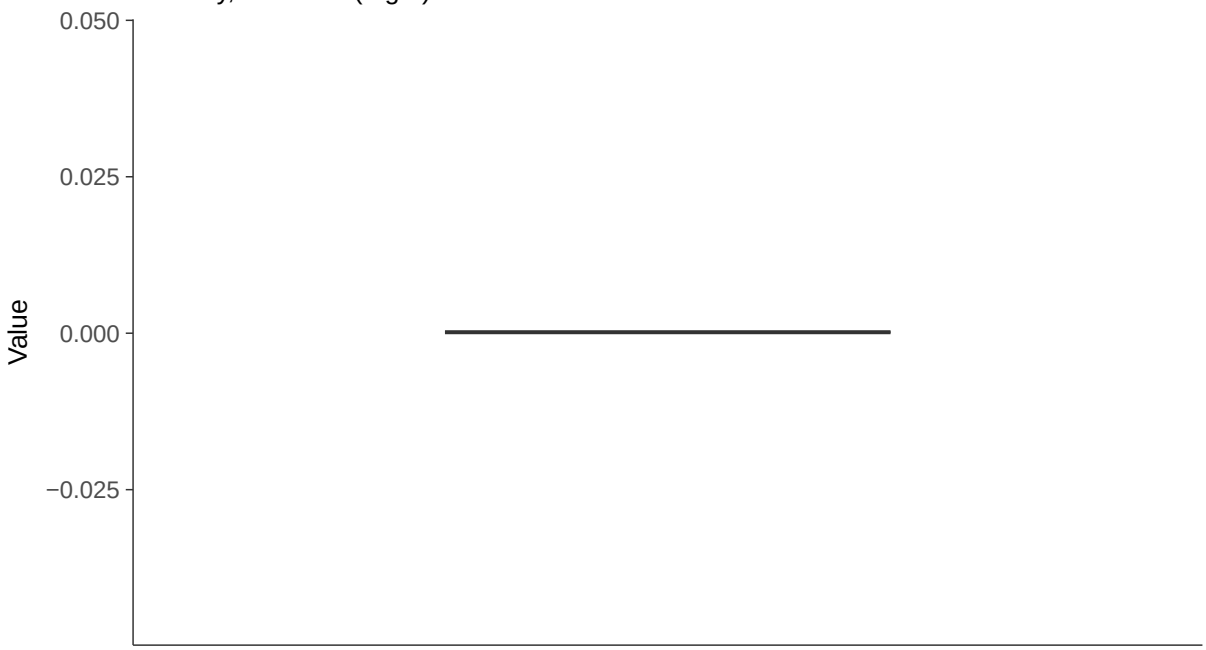
ID: 1_11_5_117





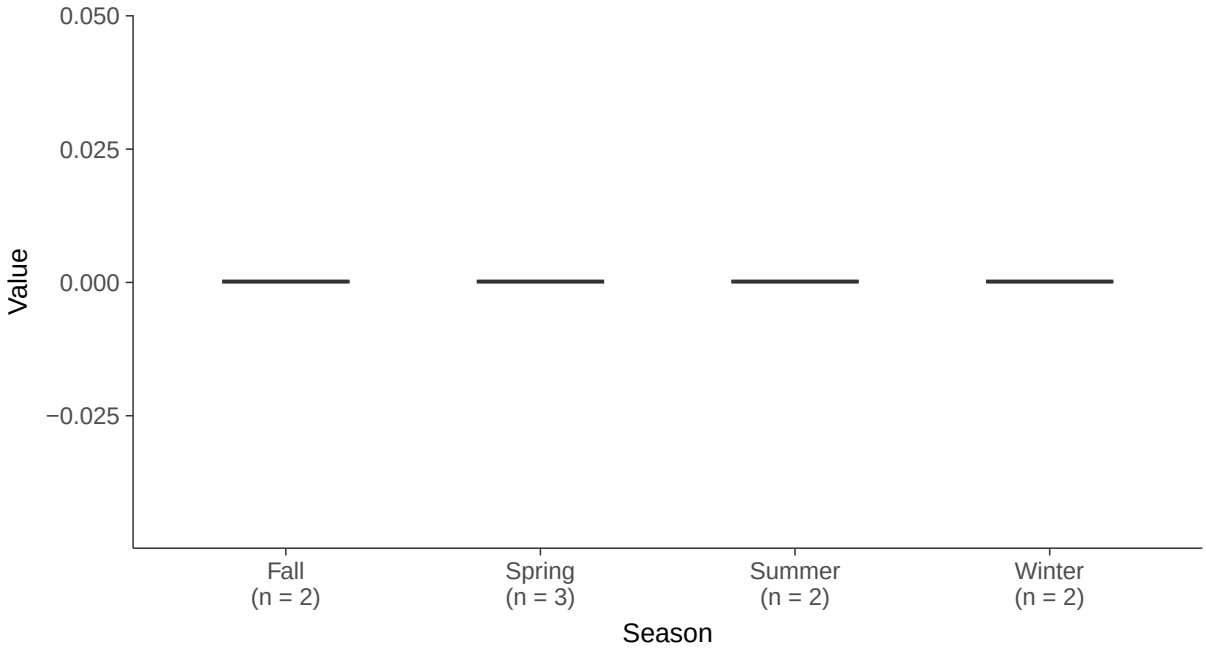
Boxplot

Mercury, MW-01R (mg/L)



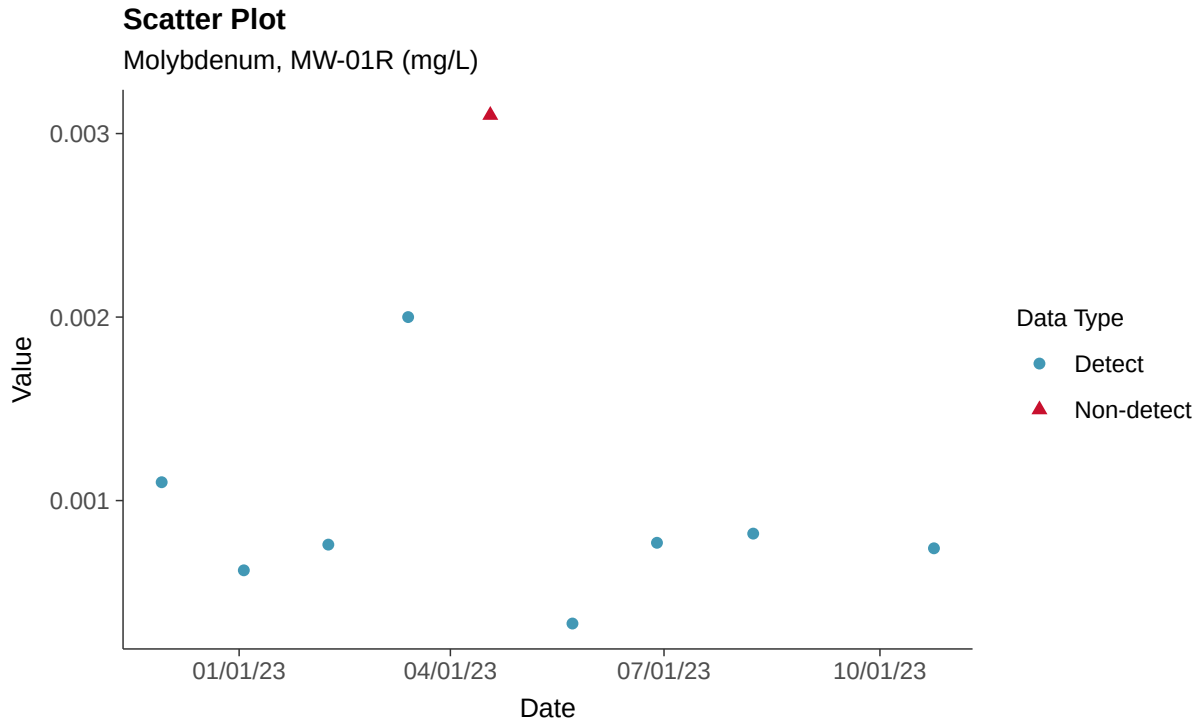
Boxplot by Season

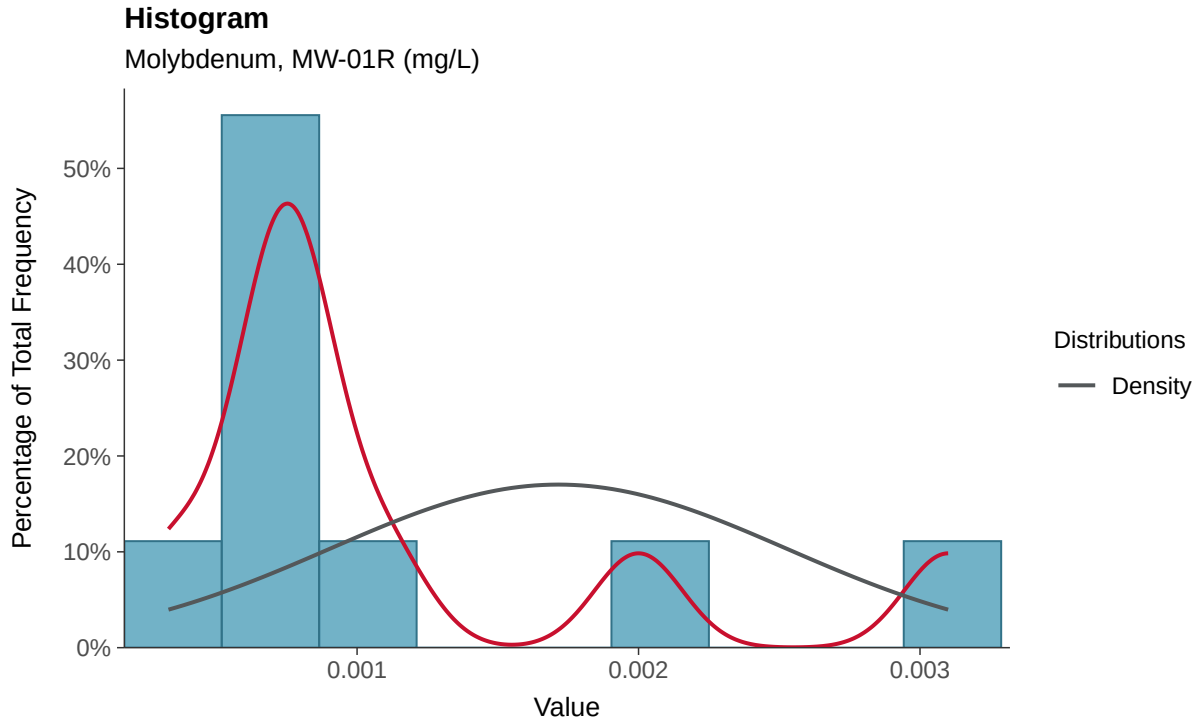
Mercury, MW-01R (mg/L)



Appendix IV: Molybdenum, MW-01R

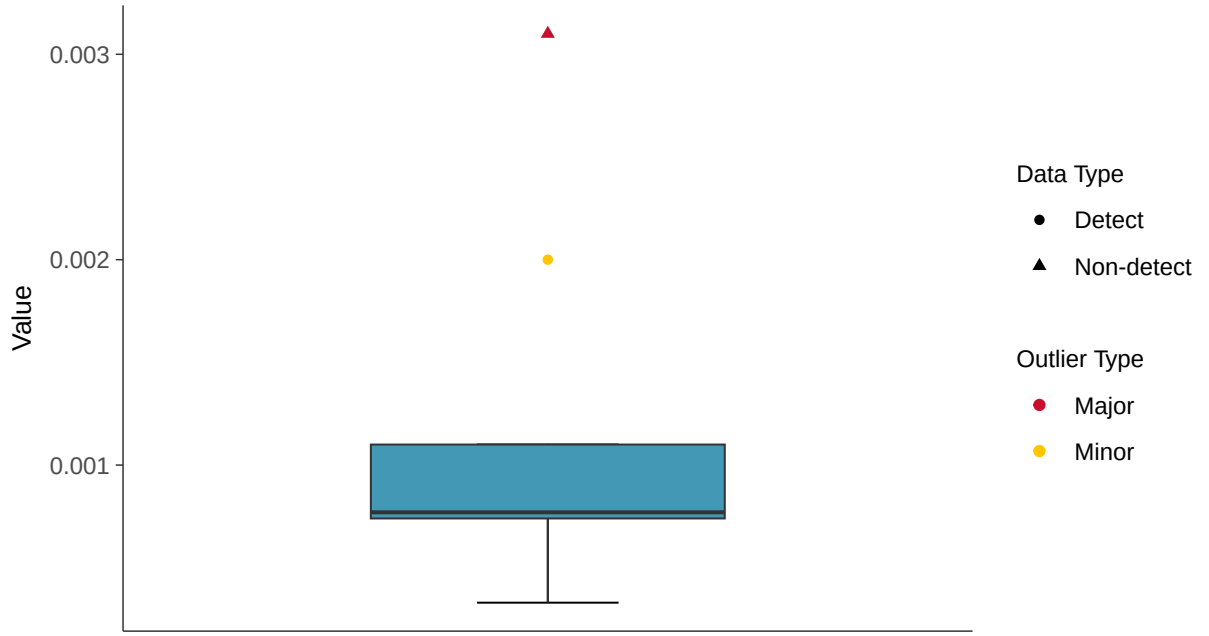
ID: 1_11_5_118





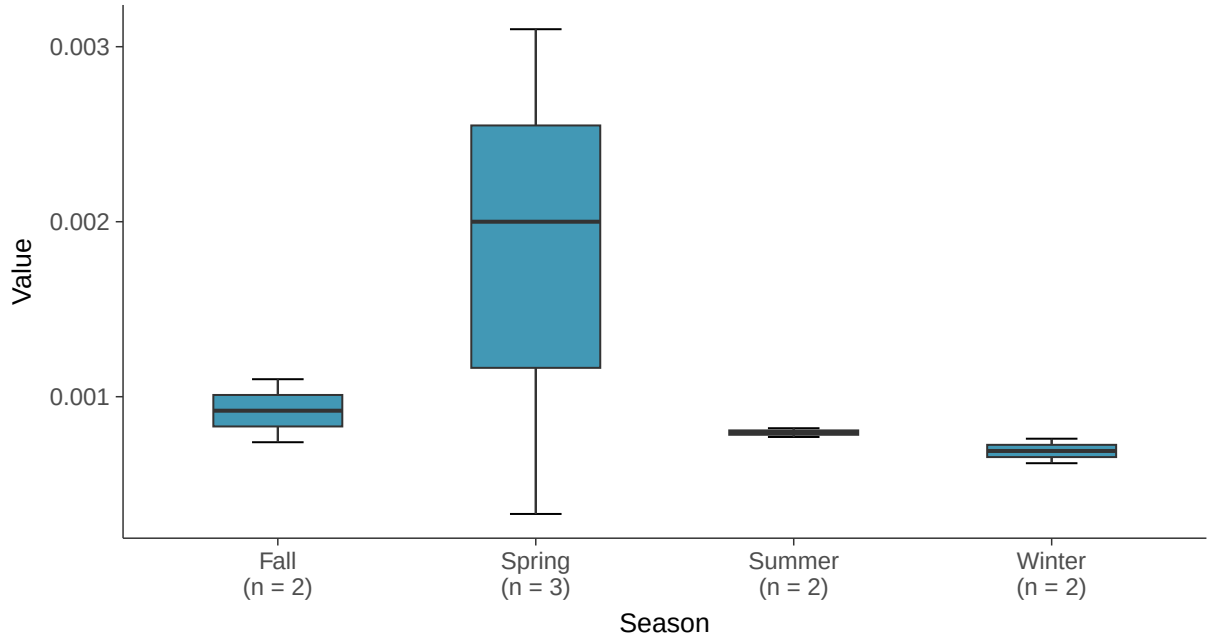
Boxplot

Molybdenum, MW-01R (mg/L)



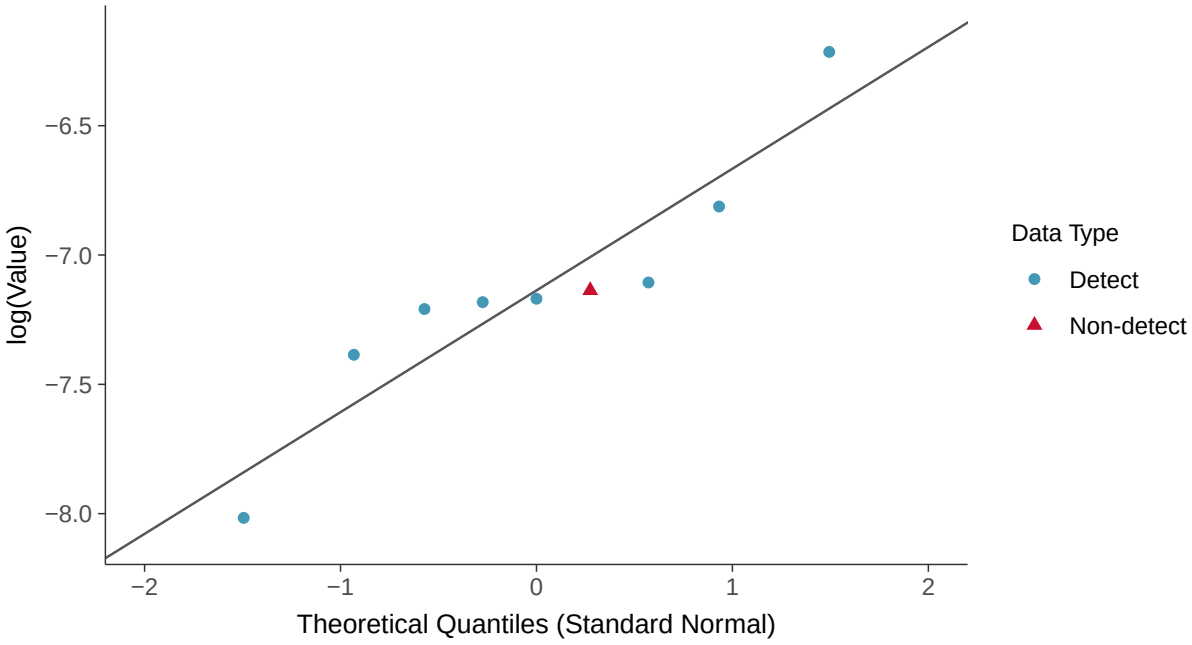
Boxplot by Season

Molybdenum, MW-01R (mg/L)



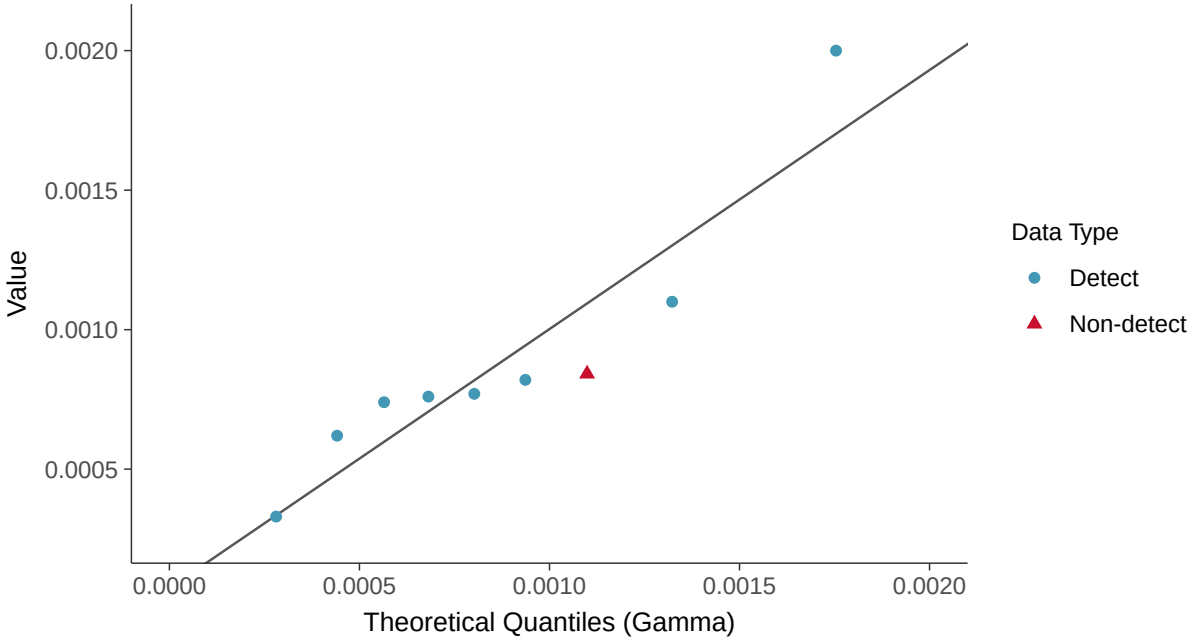
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-01R (mg/L)



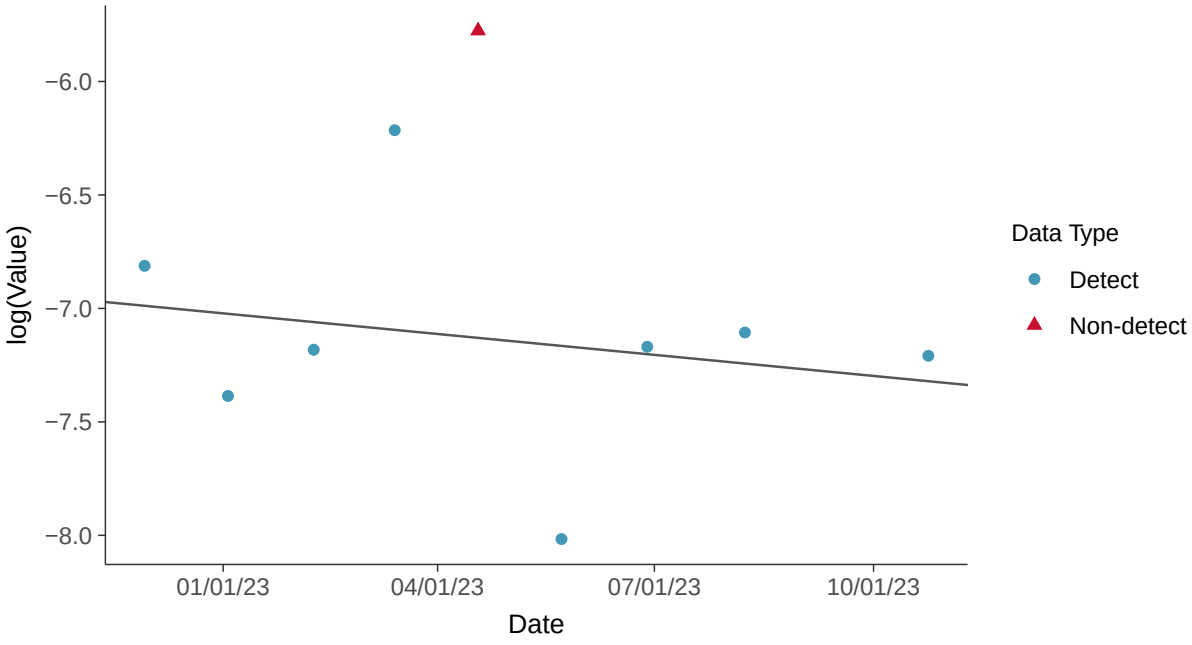
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-01R (mg/L)



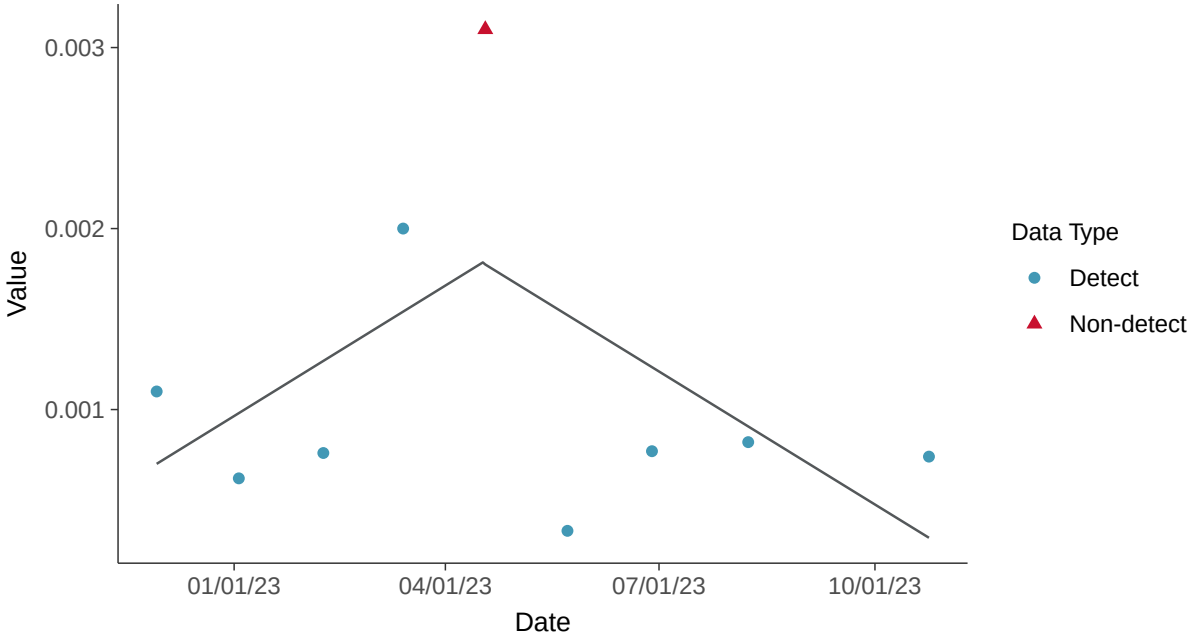
Trend Regression: Lognormal MLE

Molybdenum, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-01R (mg/L)

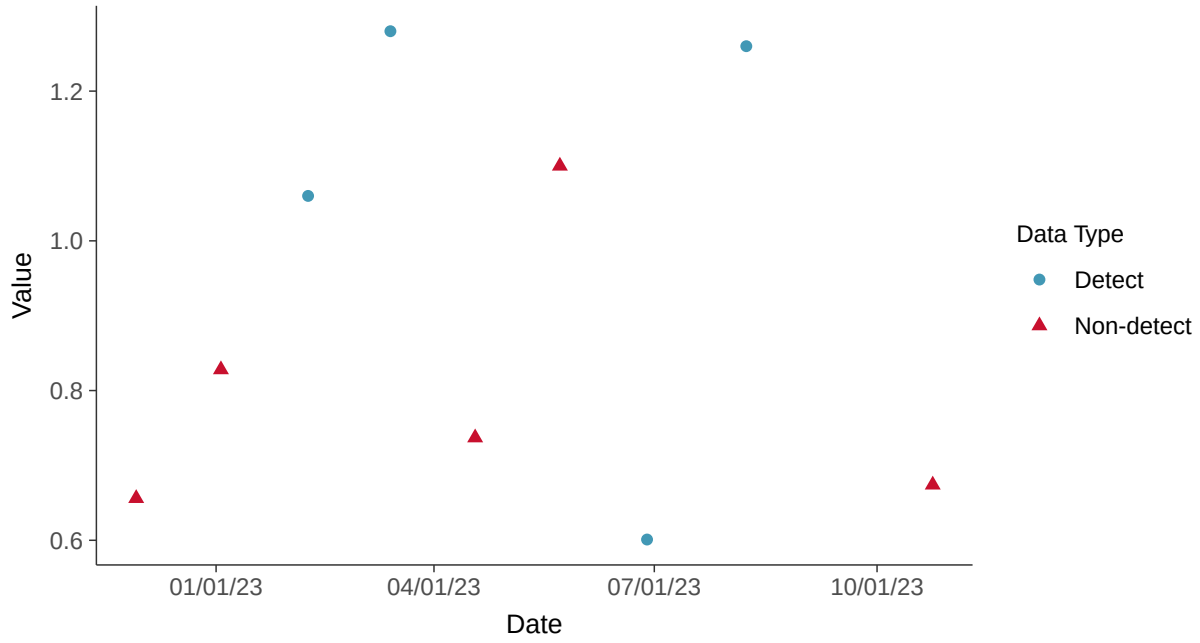


Appendix IV: Radium 226 and 228, MW-01R

ID: 1_11_5_121

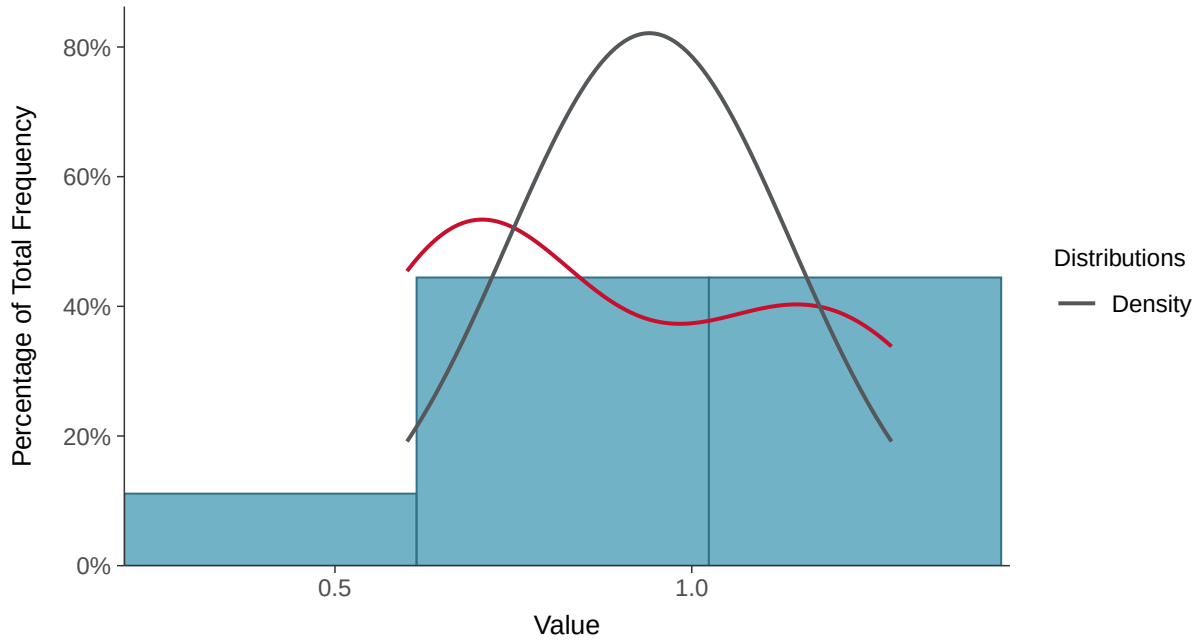
Scatter Plot

Radium 226 and 228, MW-01R (pCi/L)



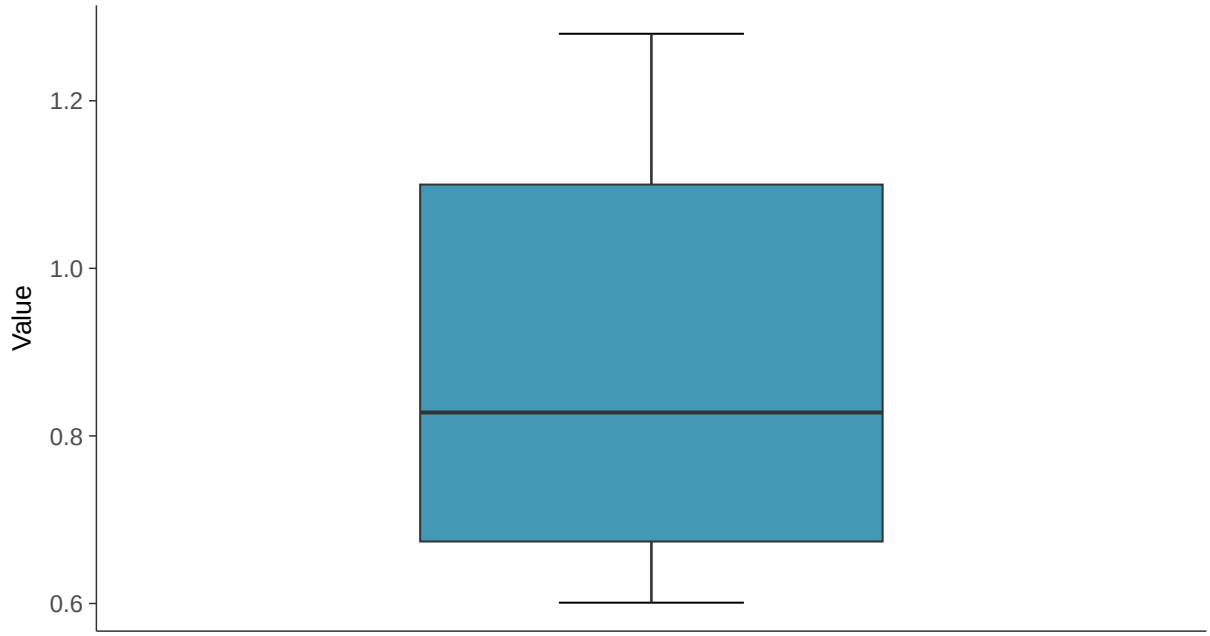
Histogram

Radium 226 and 228, MW-01R (pCi/L)



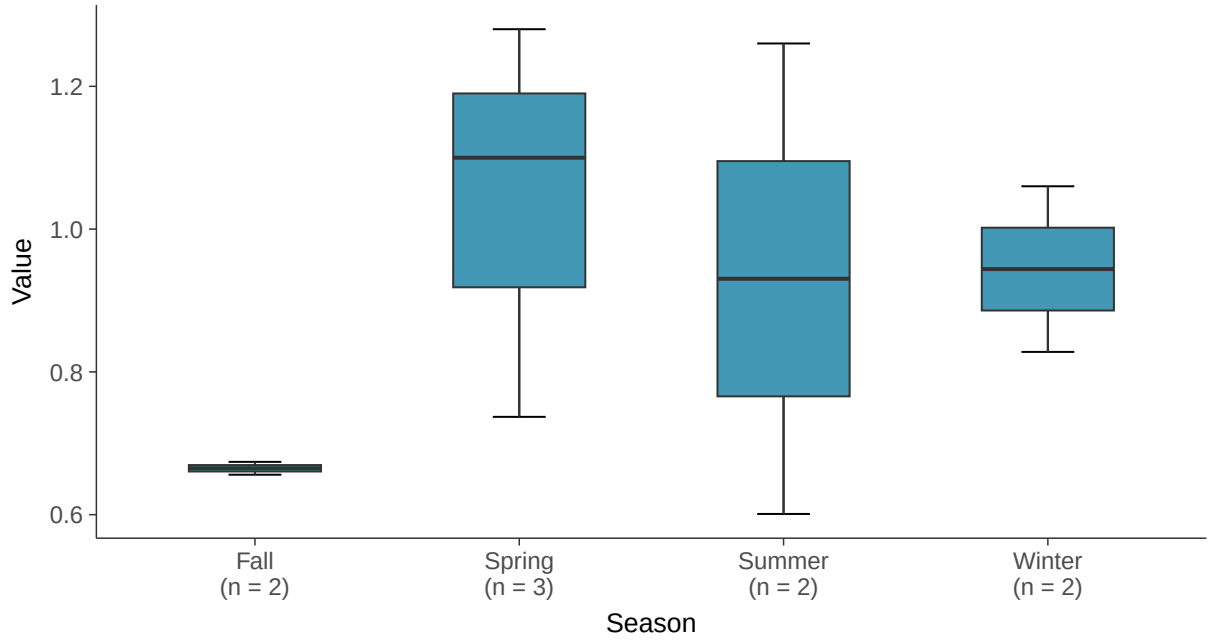
Boxplot

Radium 226 and 228, MW-01R (pCi/L)



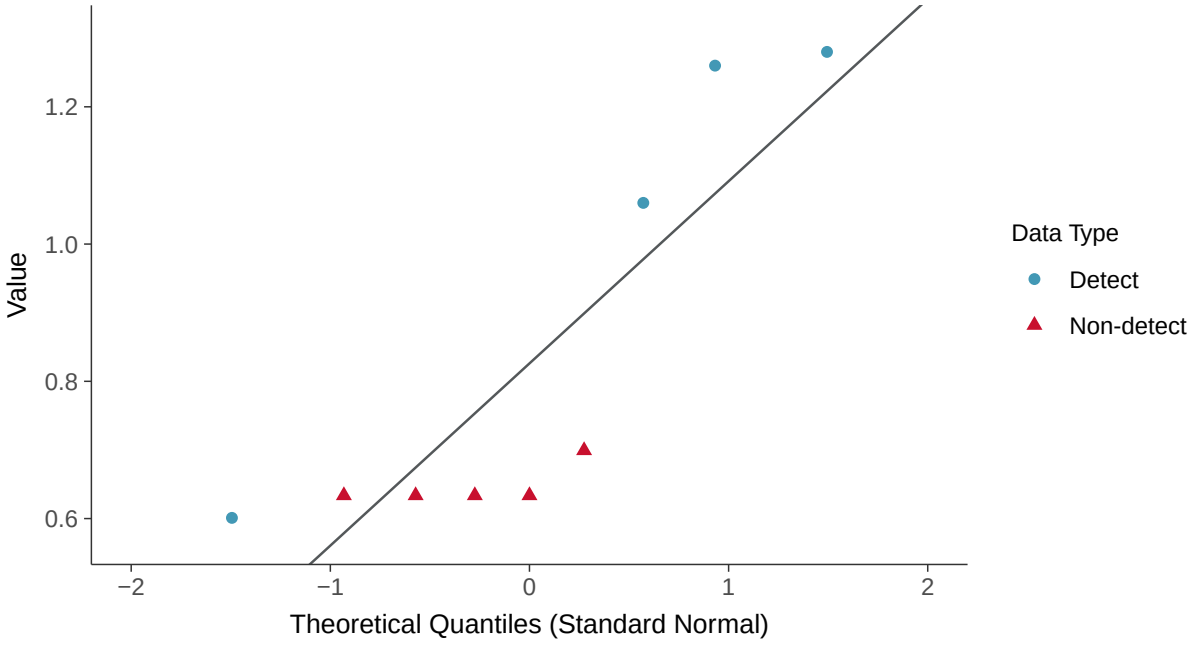
Boxplot by Season

Radium 226 and 228, MW-01R (pCi/L)



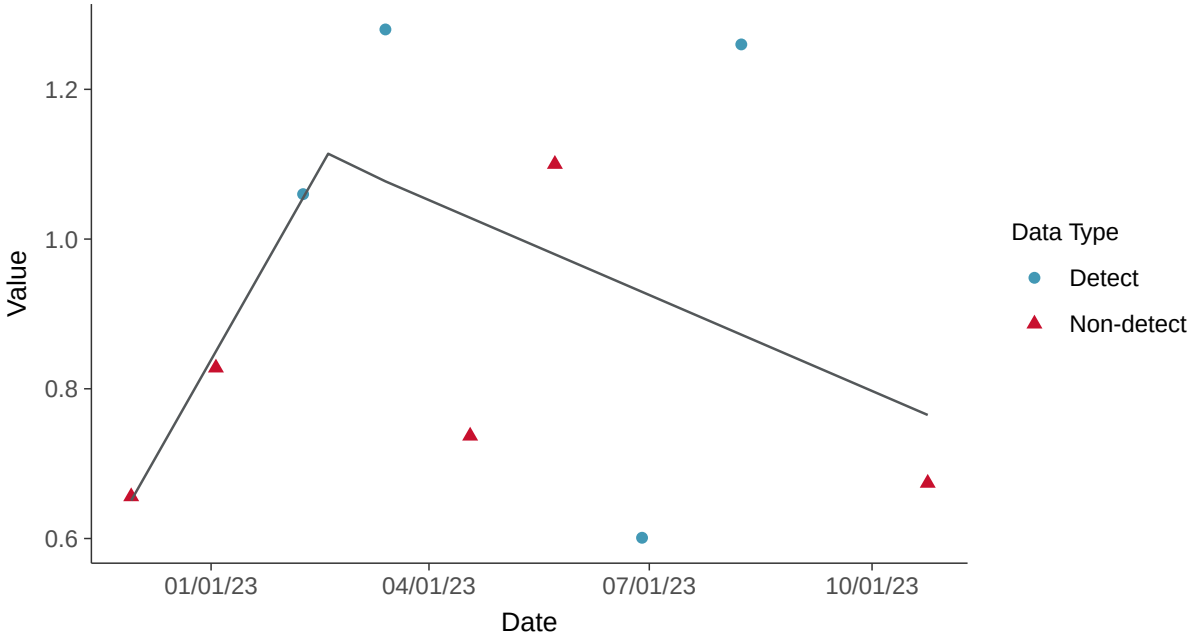
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-01R (pCi/L)



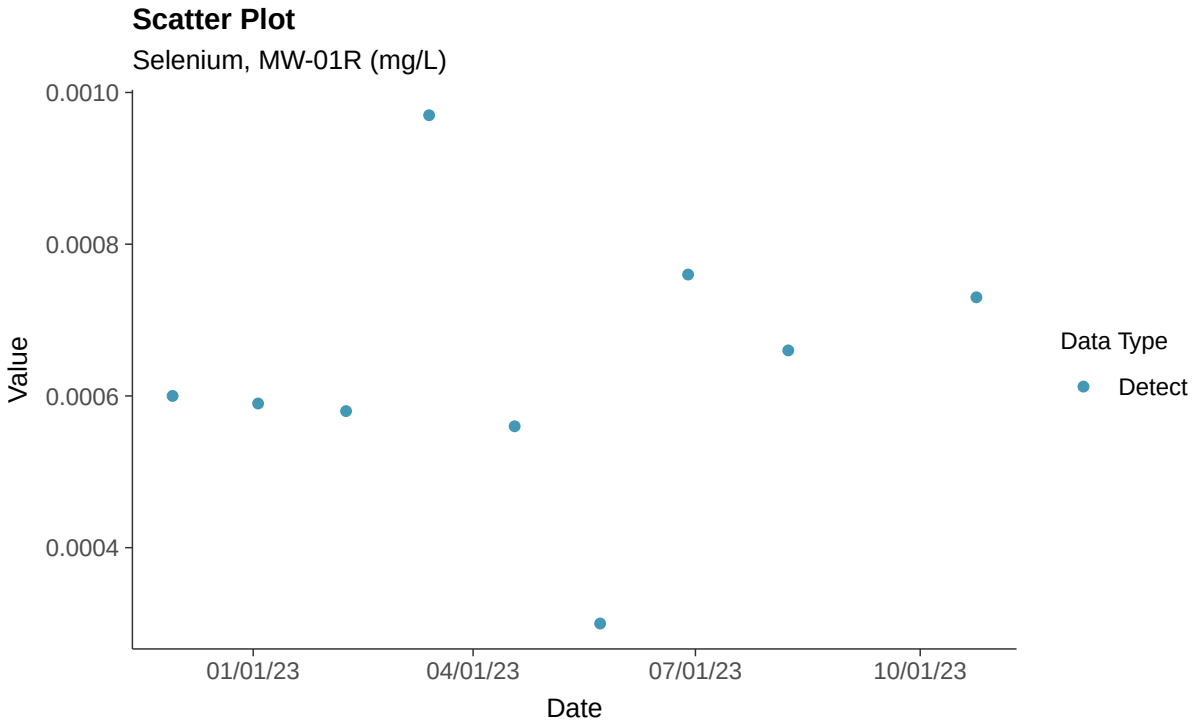
Trend Regression: Piecewise Linear-Linear

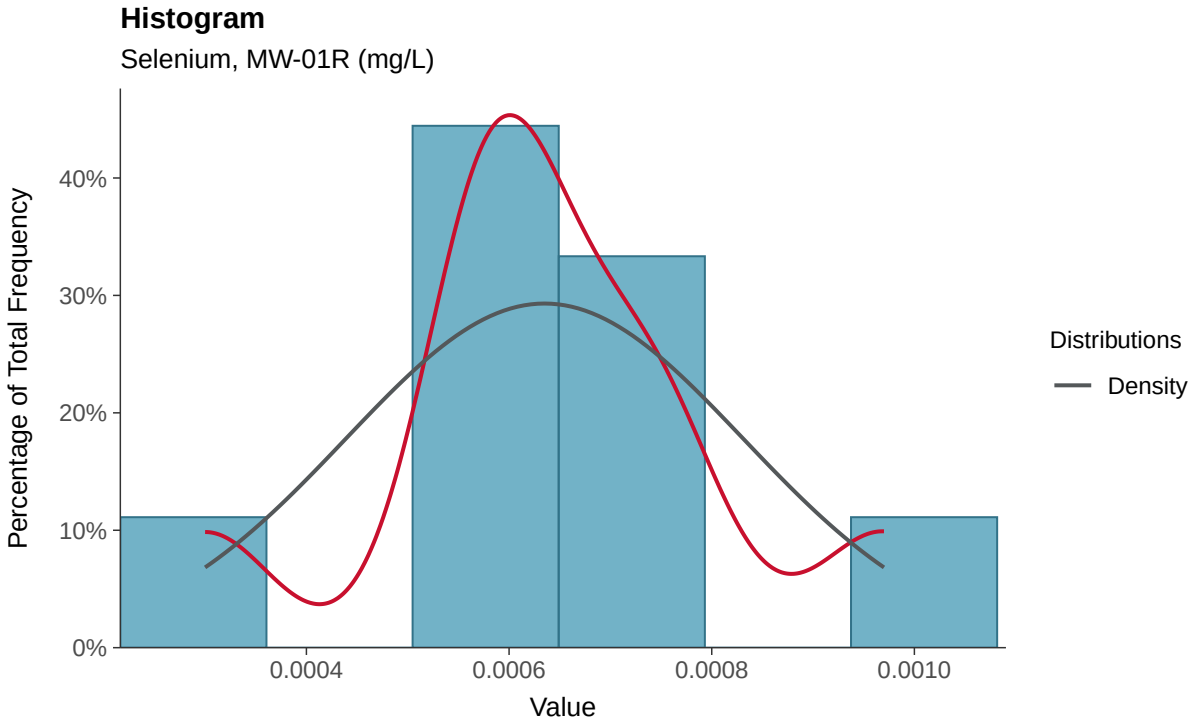
Radium 226 and 228, MW-01R (pCi/L)



Appendix IV: Selenium, MW-01R

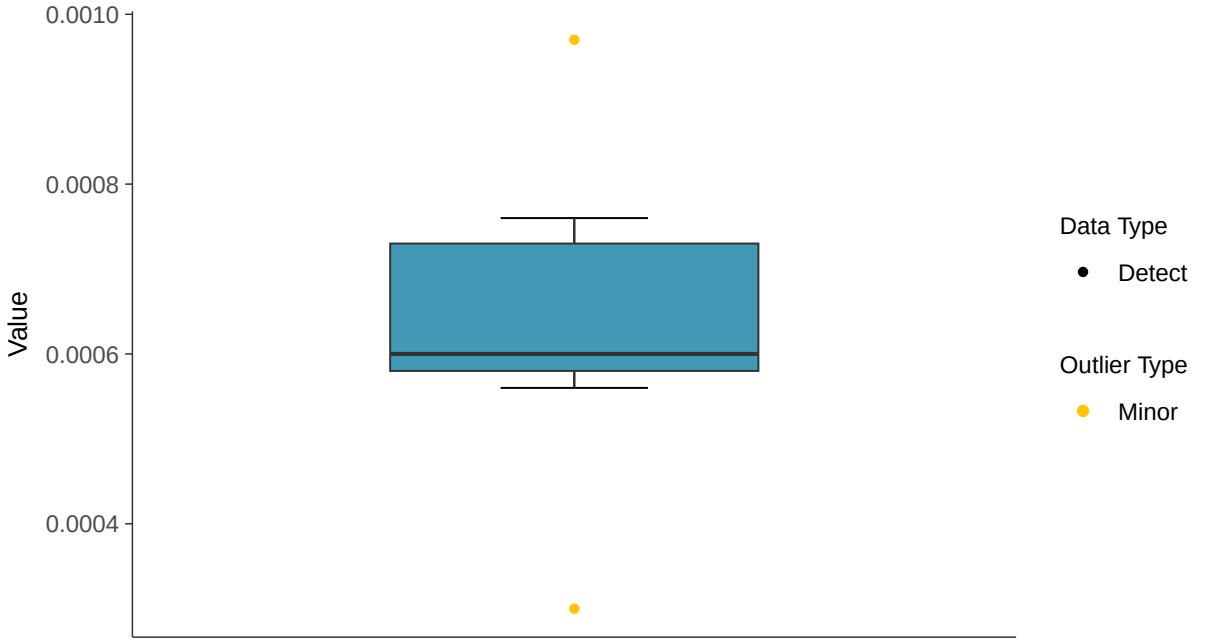
ID: 1_11_5_122





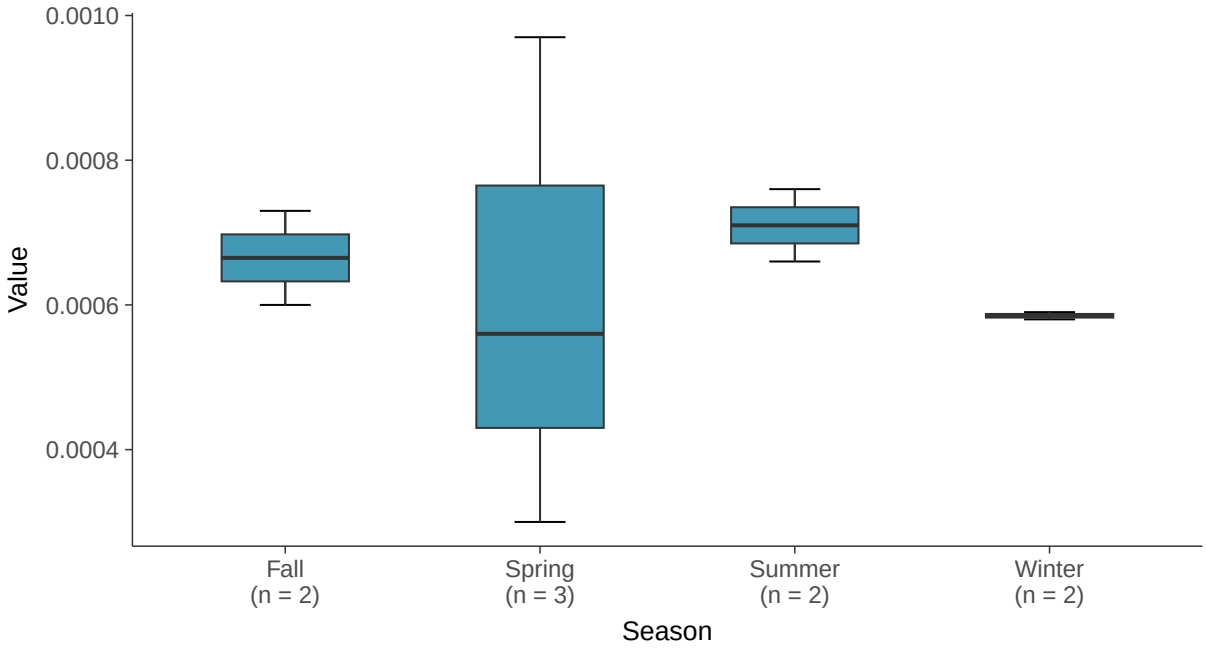
Boxplot

Selenium, MW-01R (mg/L)



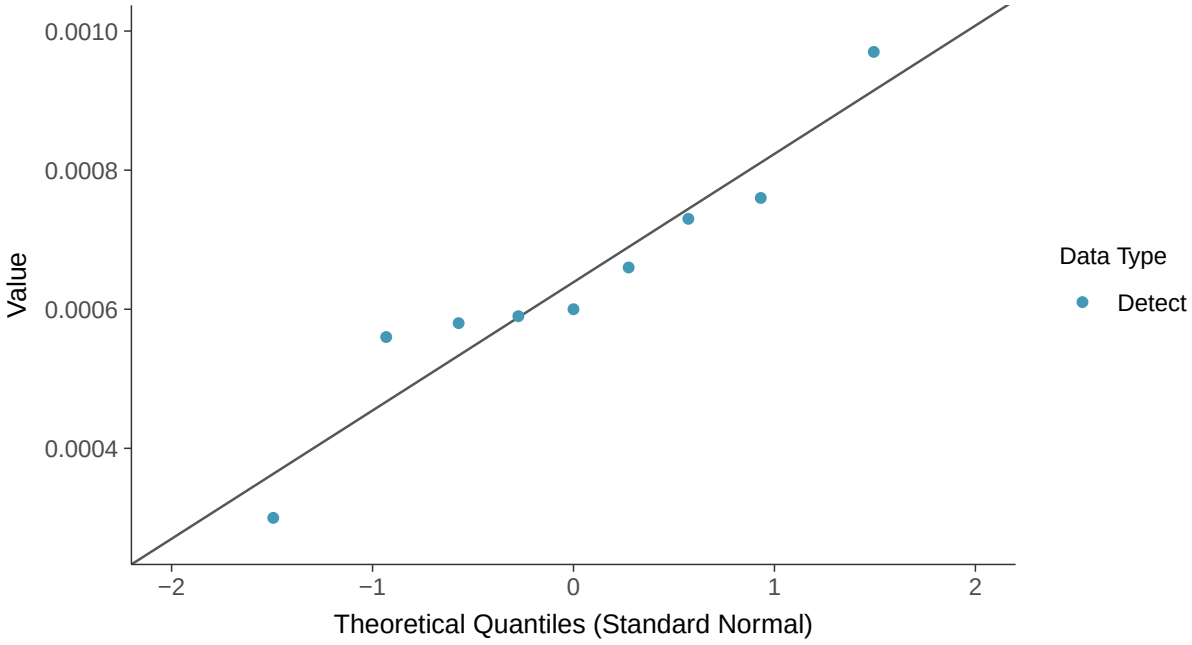
Boxplot by Season

Selenium, MW-01R (mg/L)



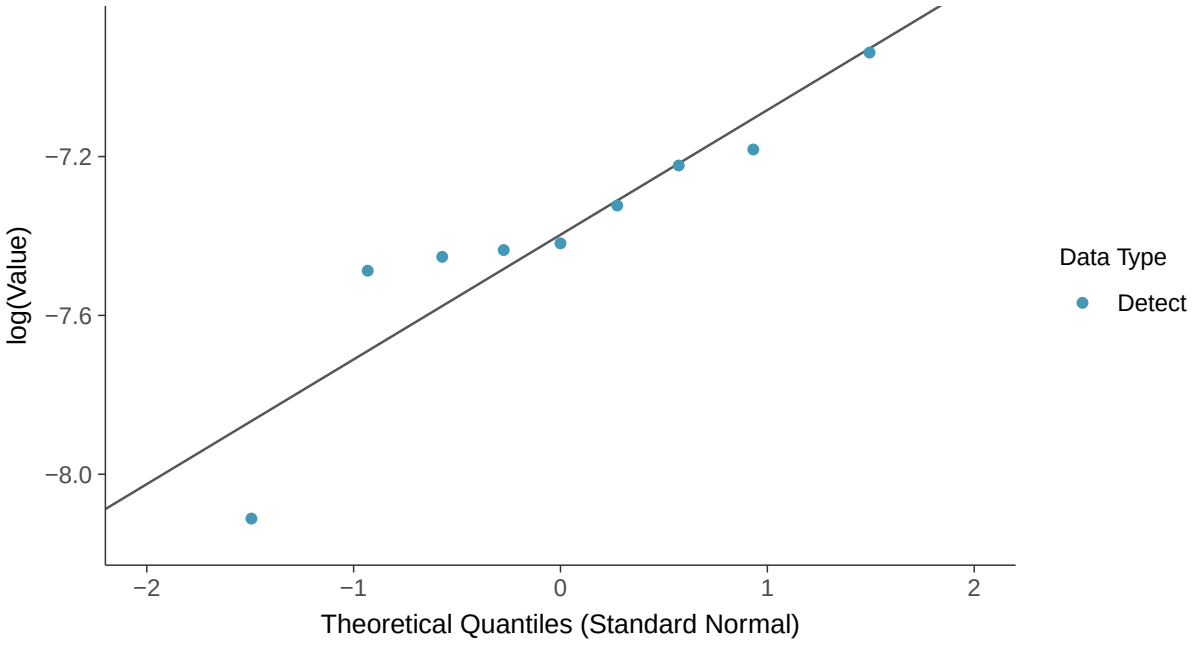
Normal Q-Q plot

Selenium, MW-01R (mg/L)



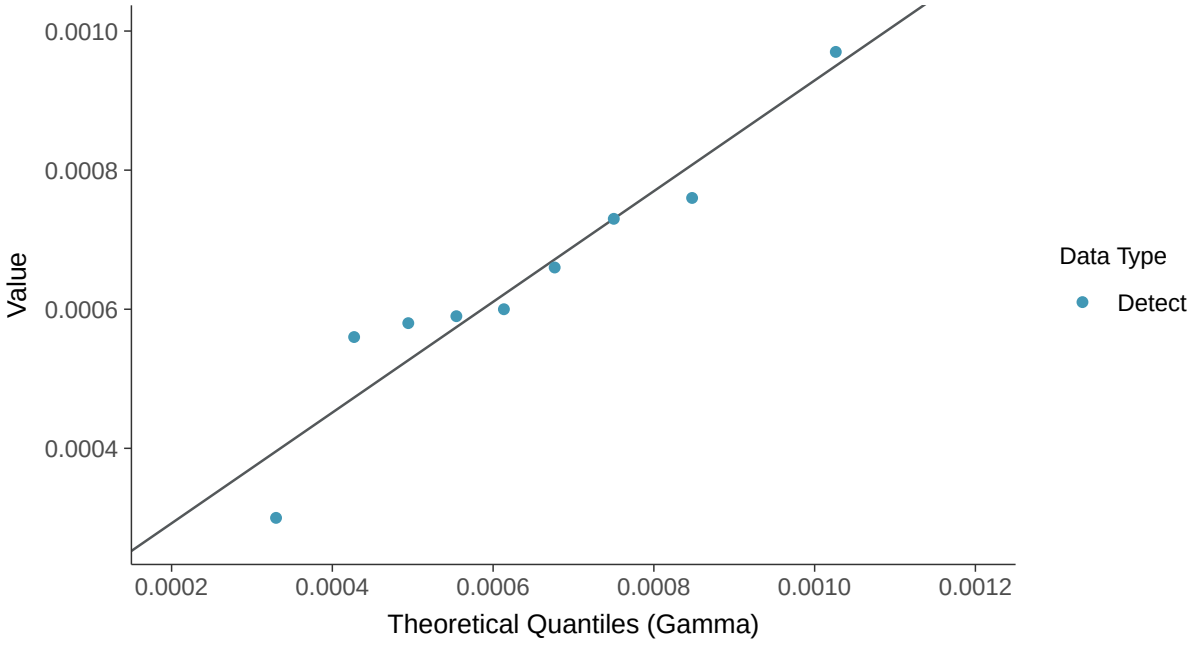
Lognormal Q-Q plot

Selenium, MW-01R (mg/L)



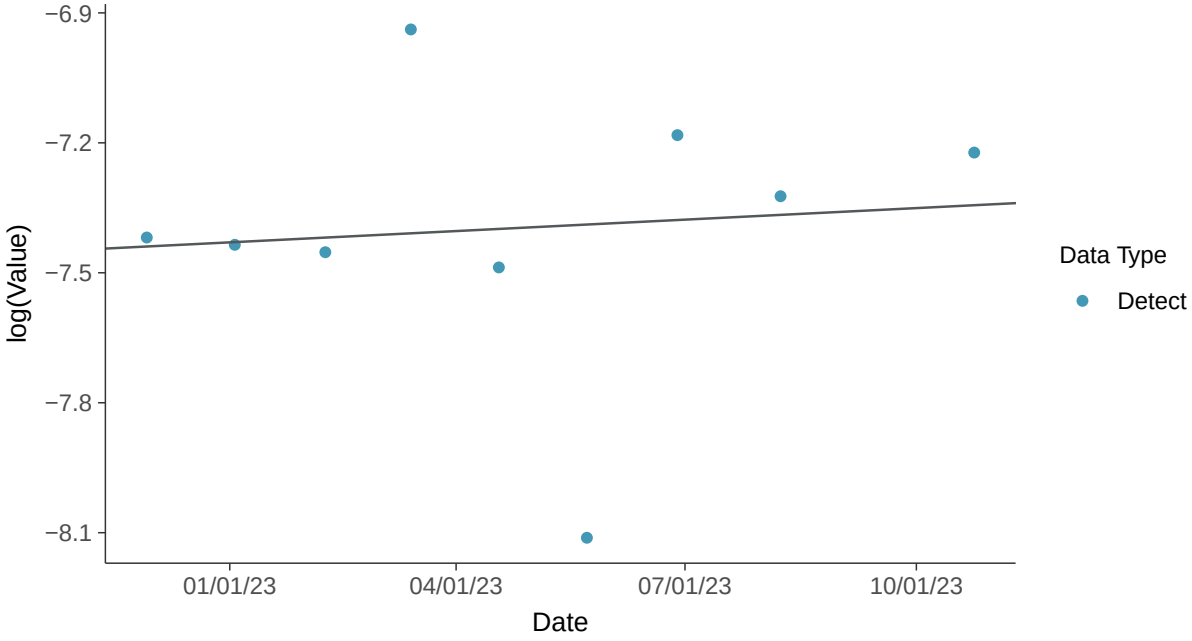
Gamma Q-Q plot

Selenium, MW-01R (mg/L)



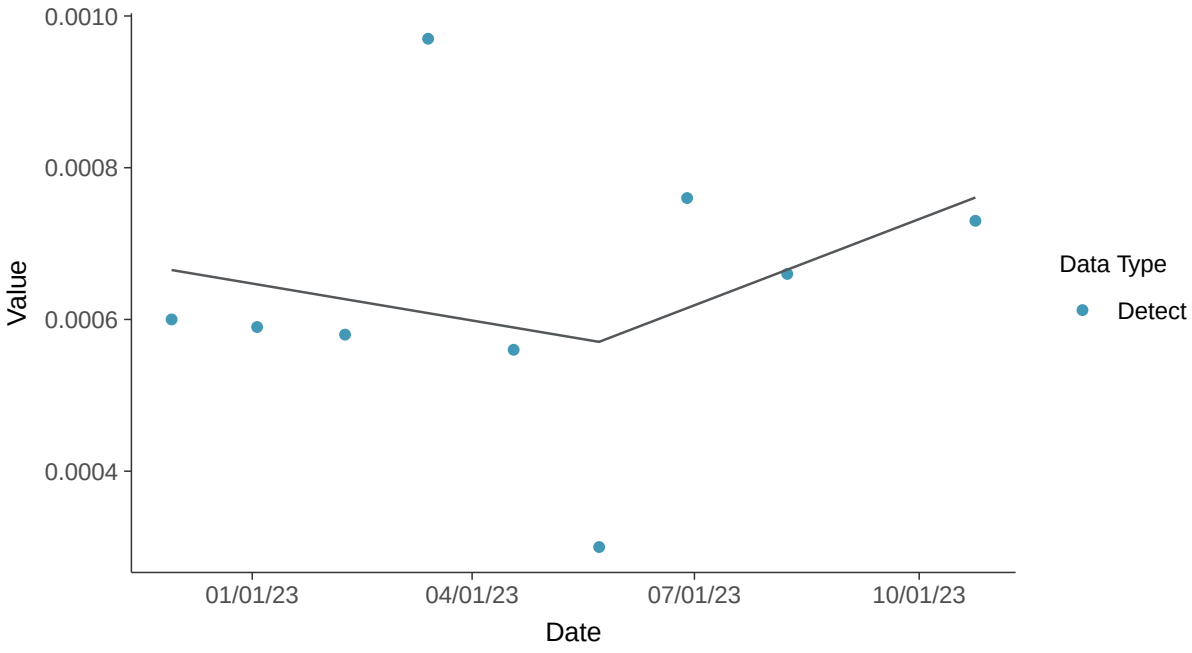
Trend Regression: Lognormal MLE

Selenium, MW-01R (mg/L)



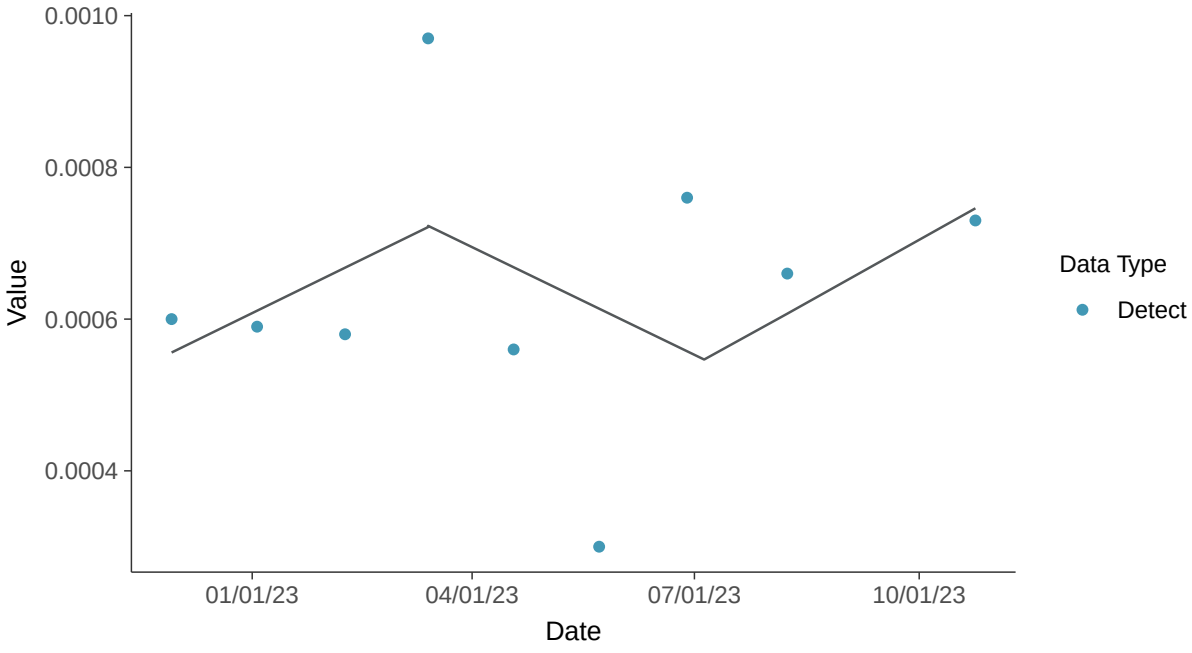
Trend Regression: Piecewise Linear-Linear

Selenium, MW-01R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-01R (mg/L)

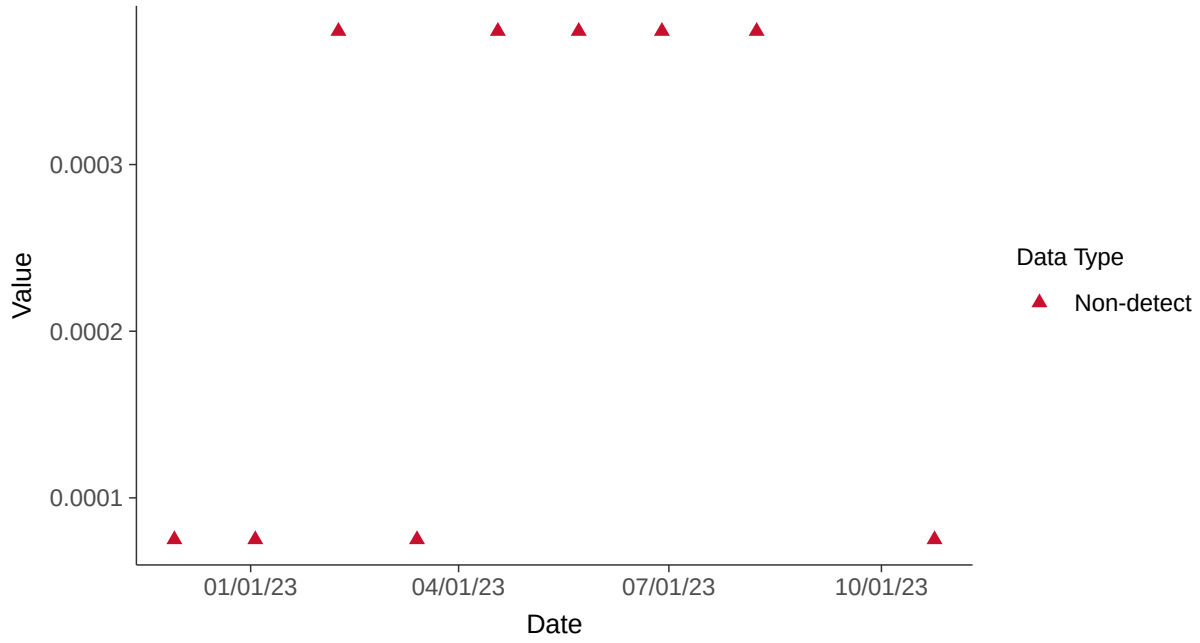


Appendix IV: Thallium, MW-01R

ID: 1_11_5_125

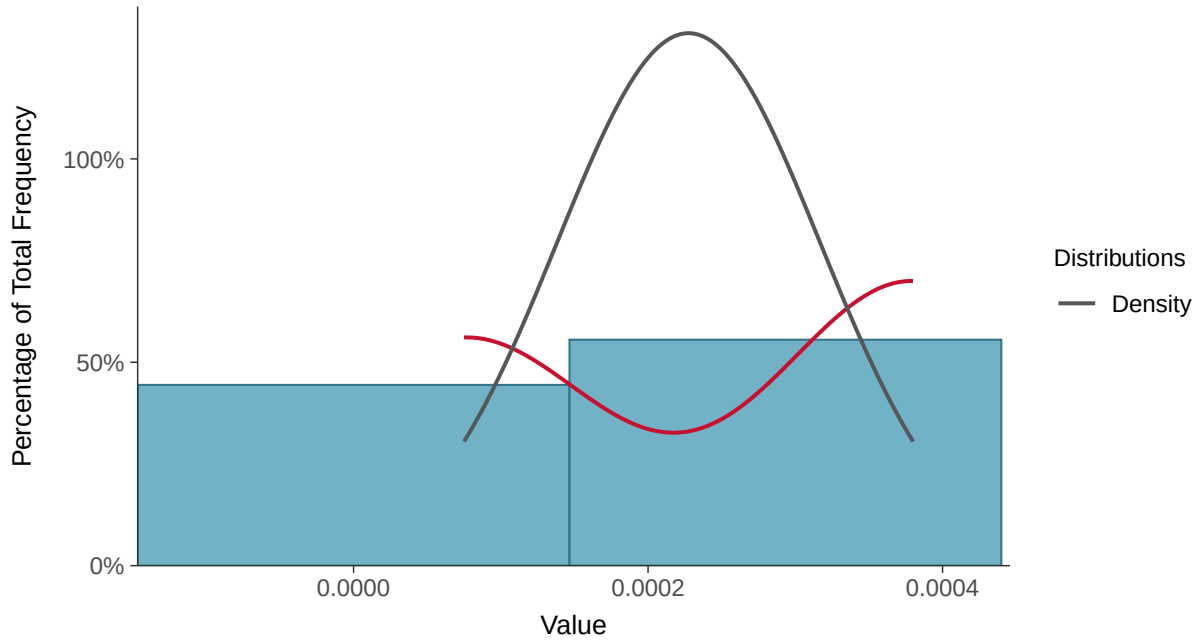
Scatter Plot

Thallium, MW-01R (mg/L)



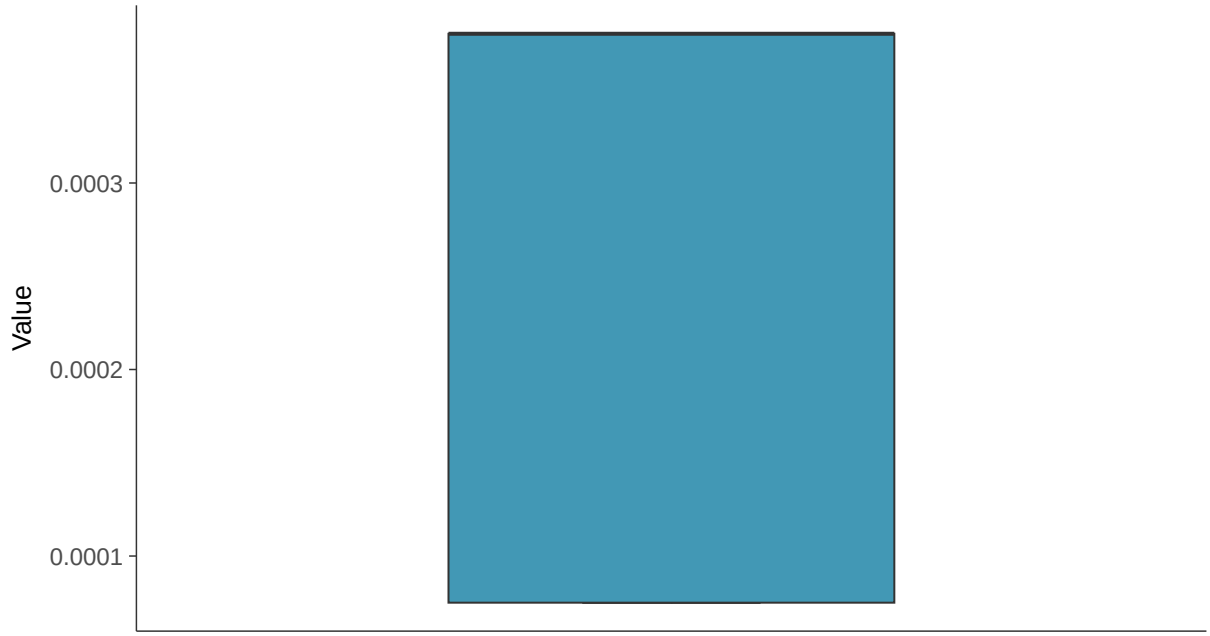
Histogram

Thallium, MW-01R (mg/L)



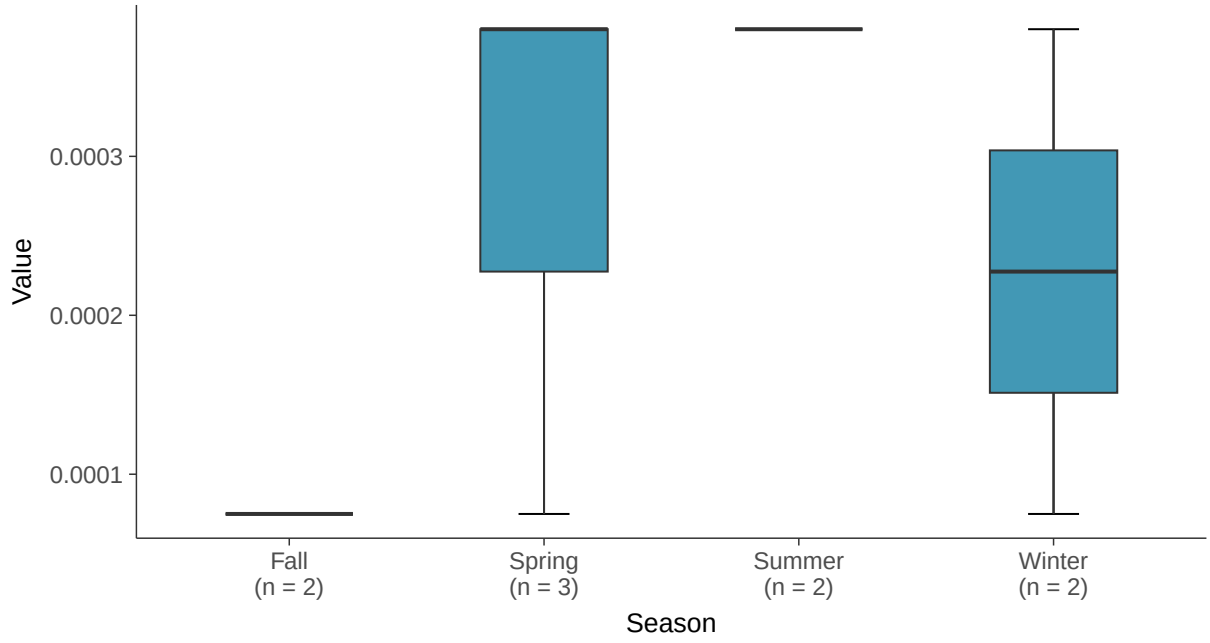
Boxplot

Thallium, MW-01R (mg/L)



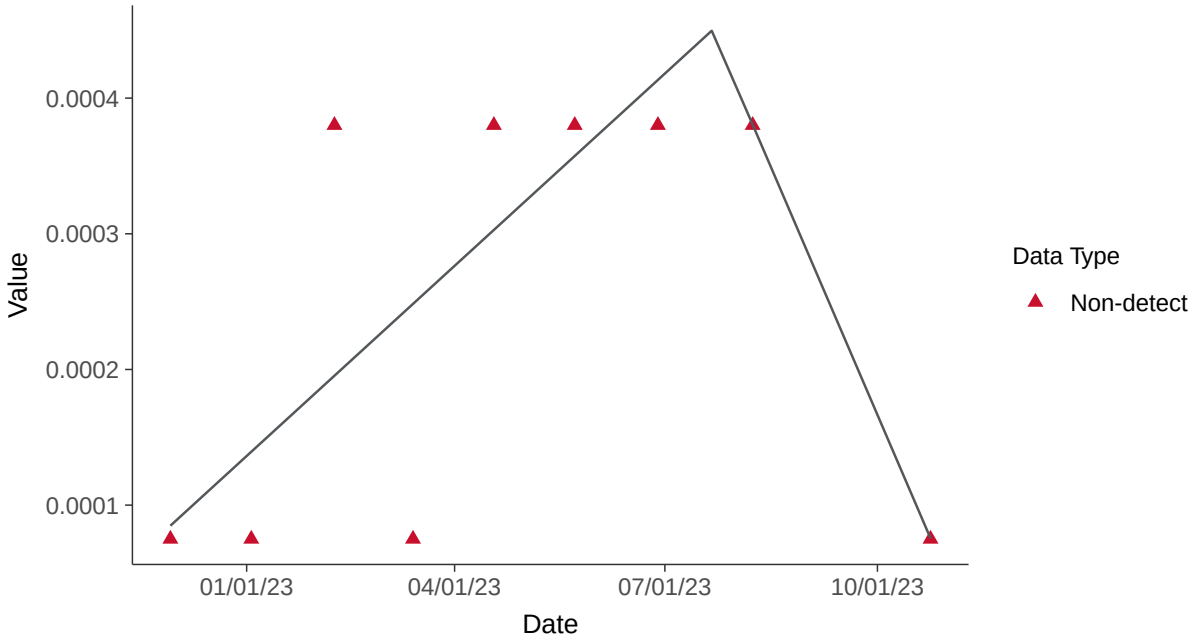
Boxplot by Season

Thallium, MW-01R (mg/L)



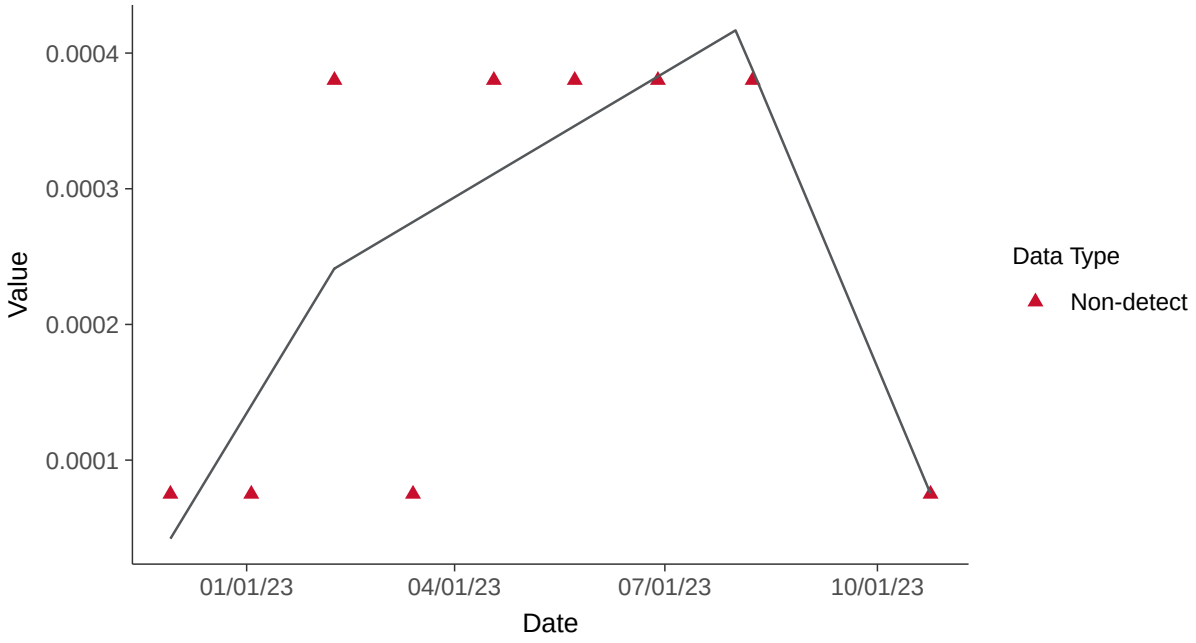
Trend Regression: Piecewise Linear-Linear

Thallium, MW-01R (mg/L)



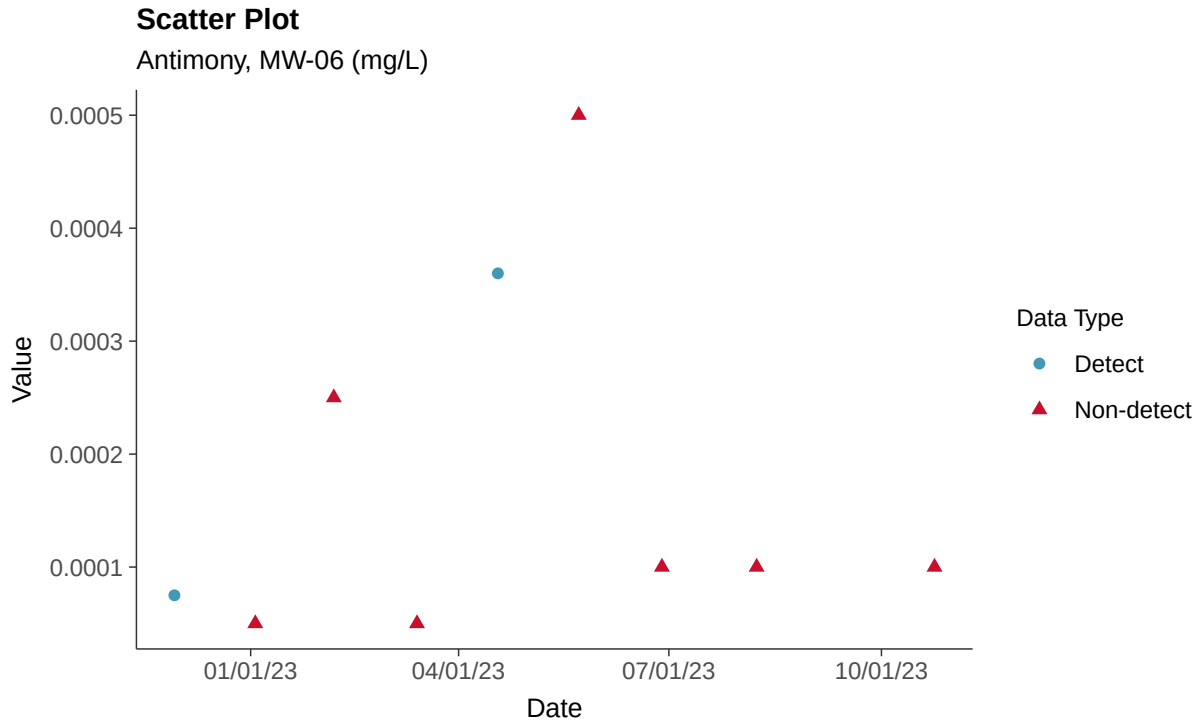
Trend Regression: Piecewise Linear-Linear-Linear

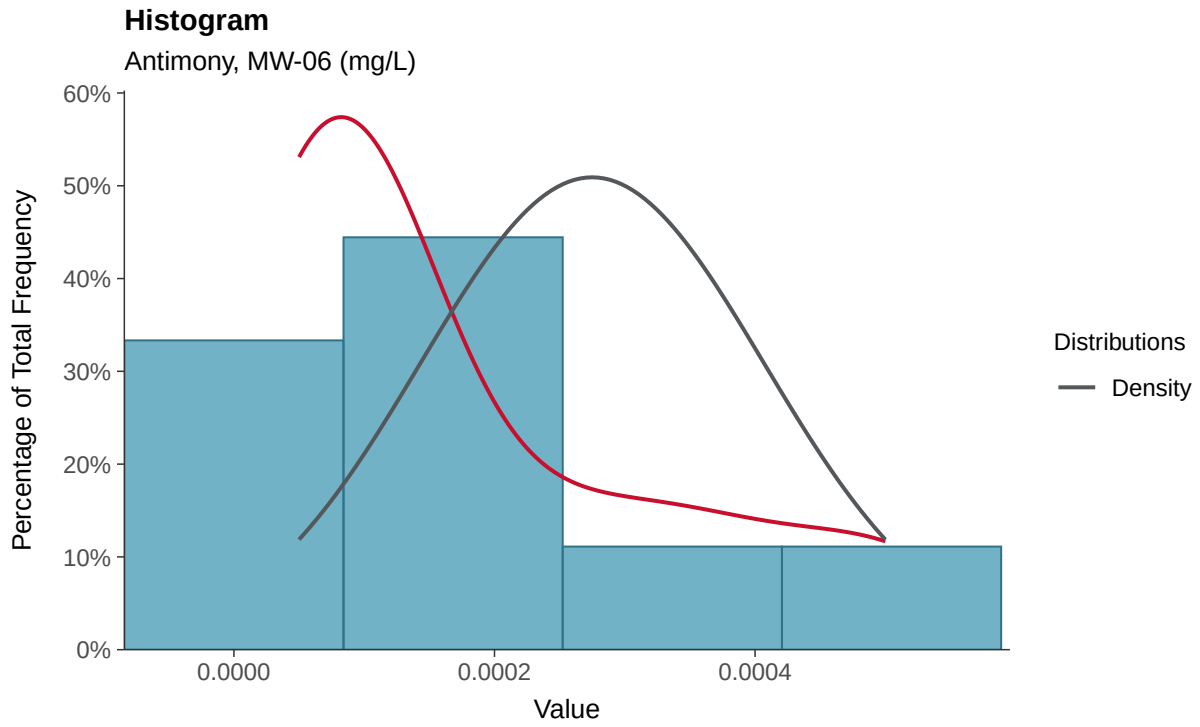
Thallium, MW-01R (mg/L)



Appendix IV: Antimony, MW-06

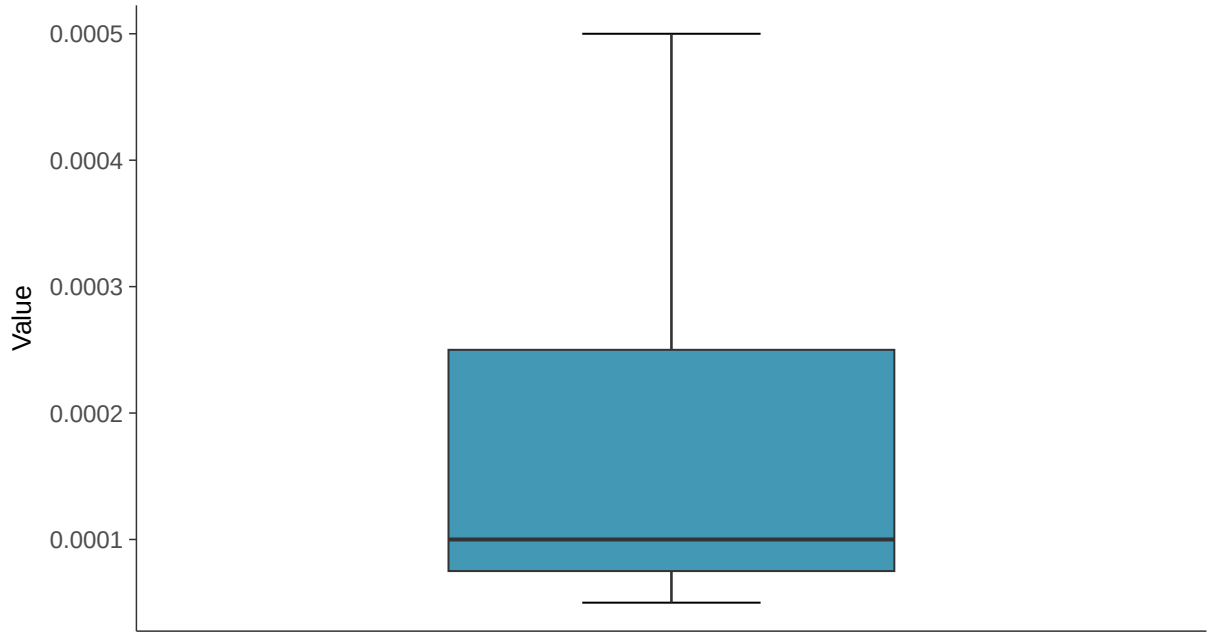
ID: 1_15_5_101





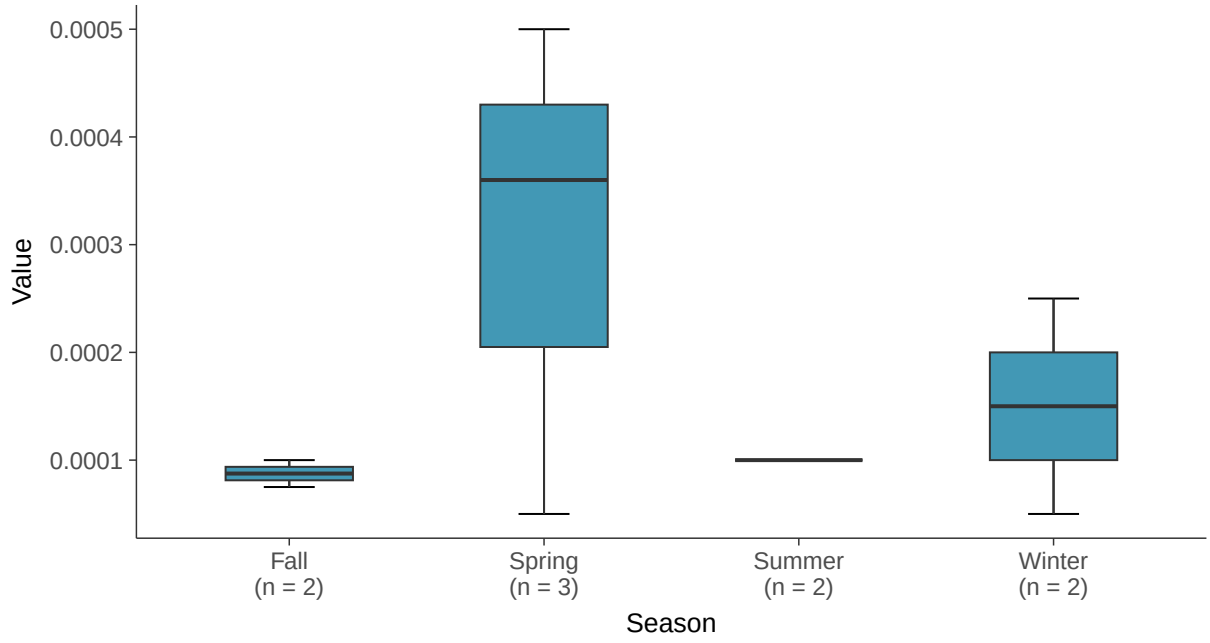
Boxplot

Antimony, MW-06 (mg/L)



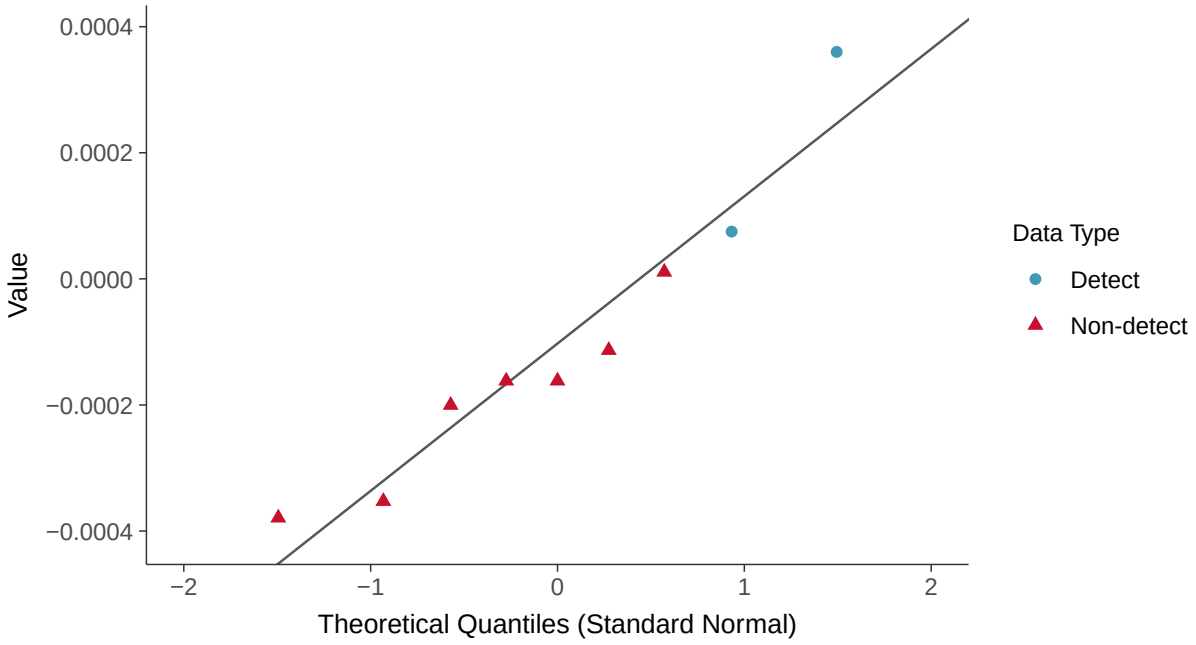
Boxplot by Season

Antimony, MW-06 (mg/L)



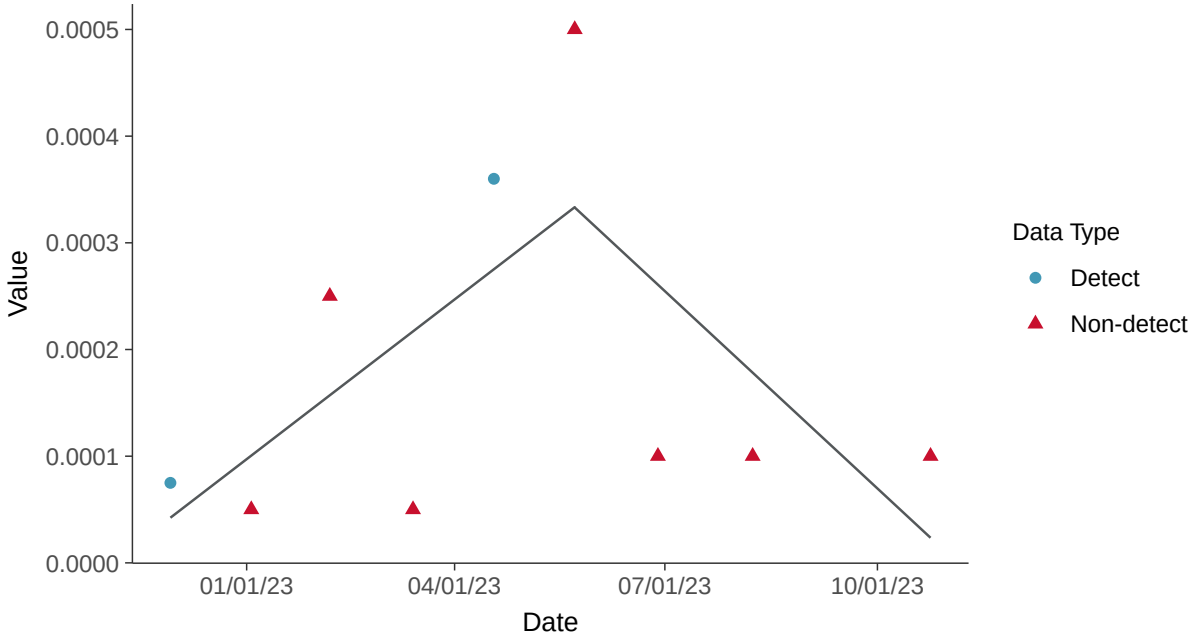
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-06 (mg/L)



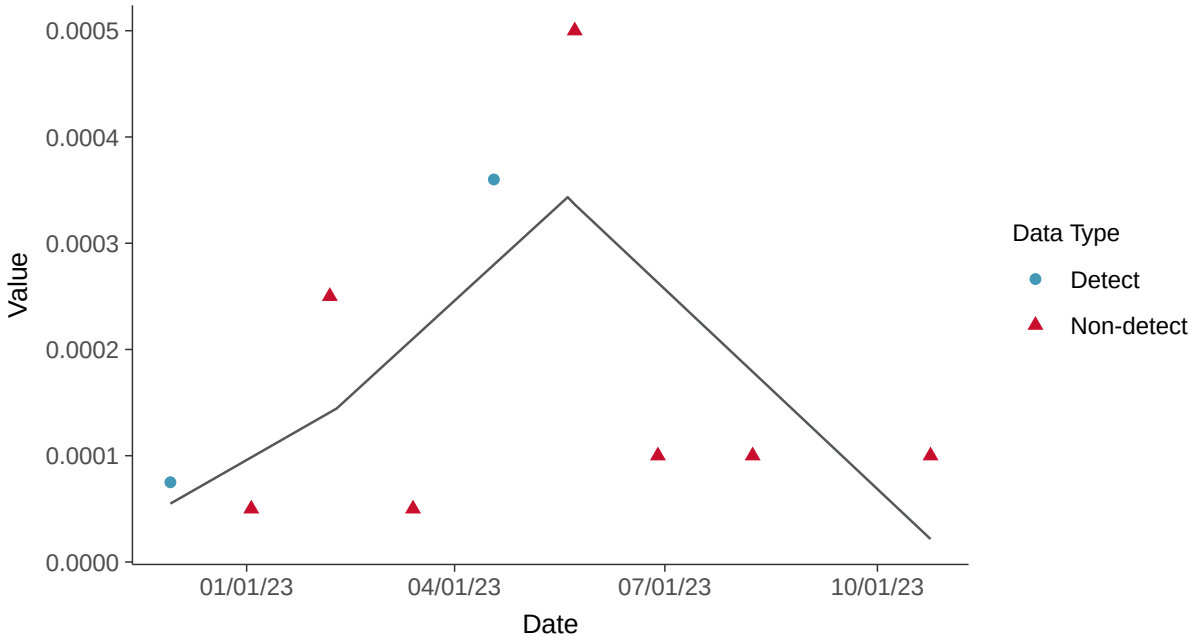
Trend Regression: Piecewise Linear-Linear

Antimony, MW-06 (mg/L)



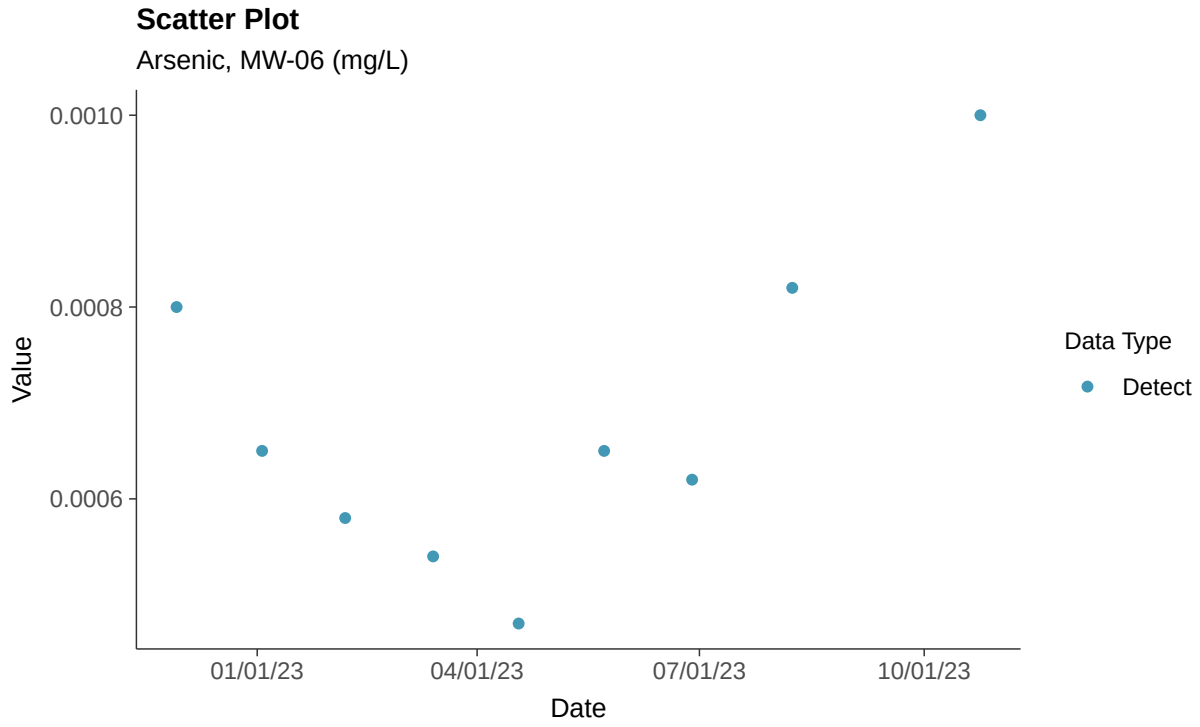
Trend Regression: Piecewise Linear-Linear-Linear

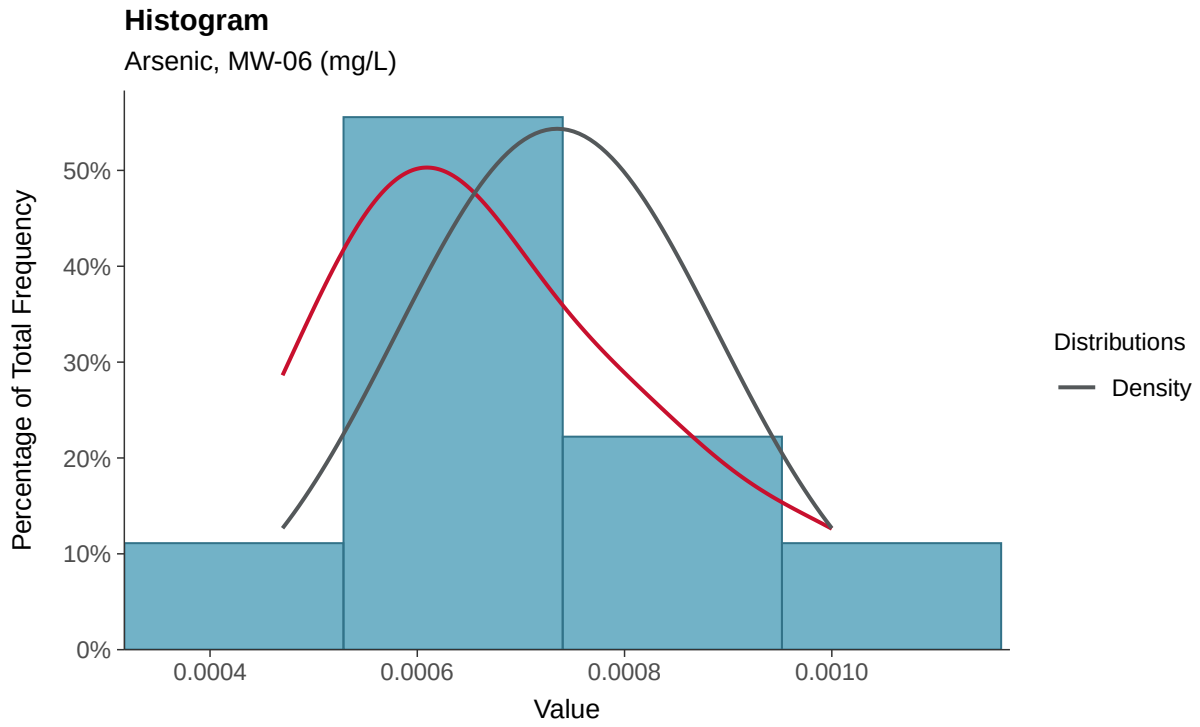
Antimony, MW-06 (mg/L)



Appendix IV: Arsenic, MW-06

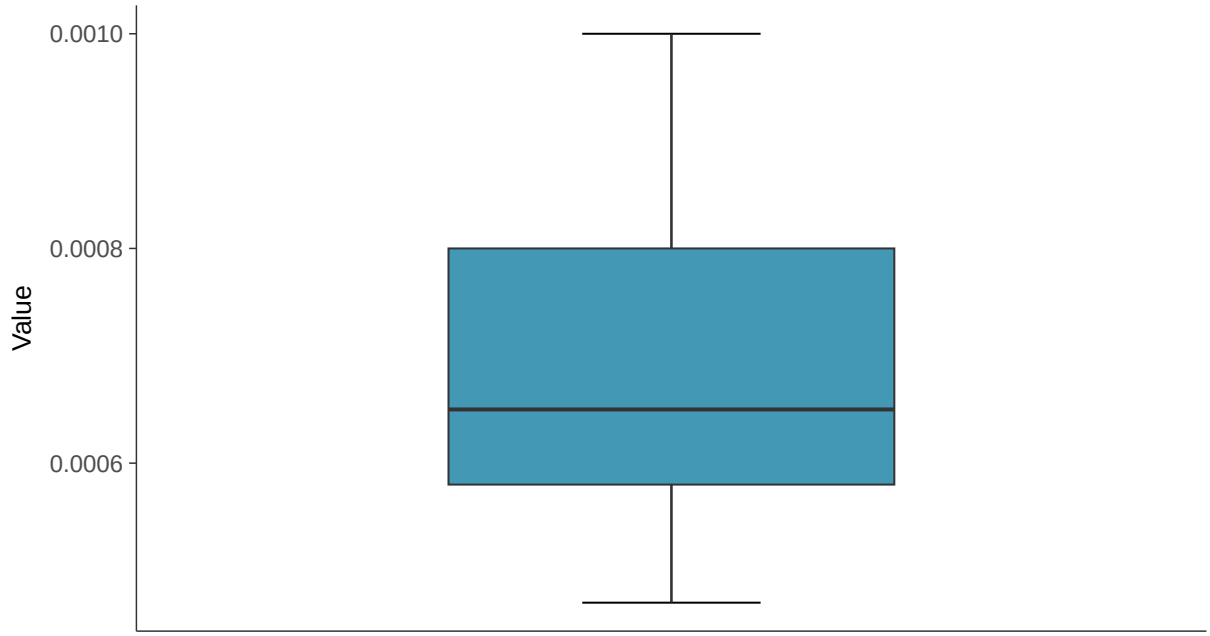
ID: 1_15_5_102





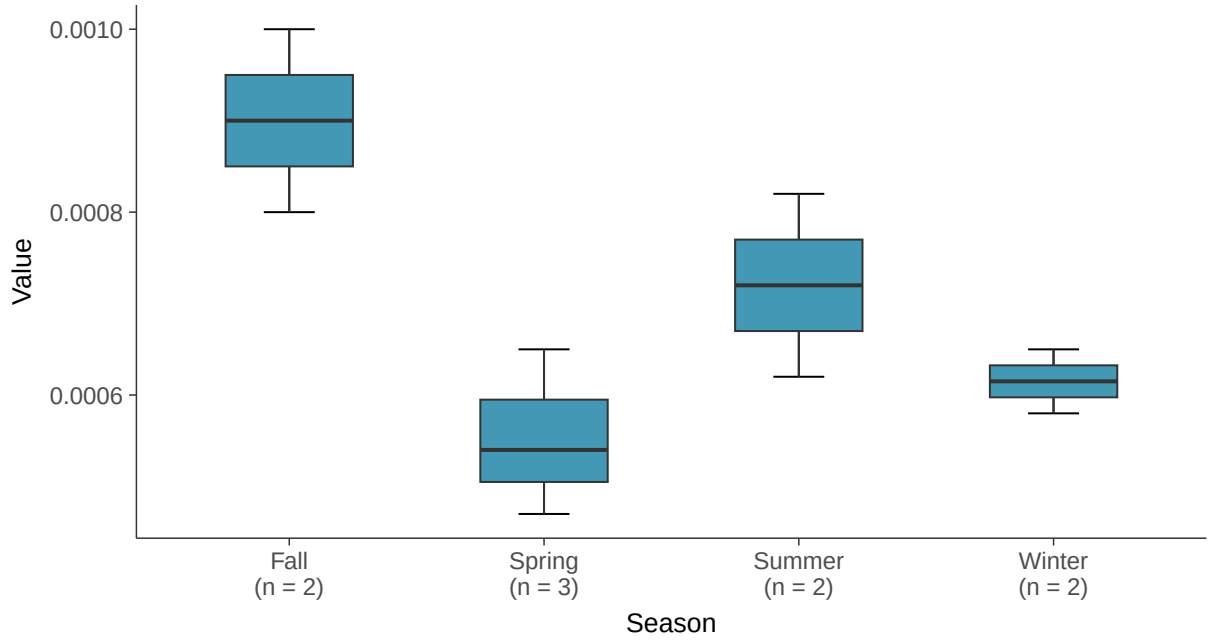
Boxplot

Arsenic, MW-06 (mg/L)



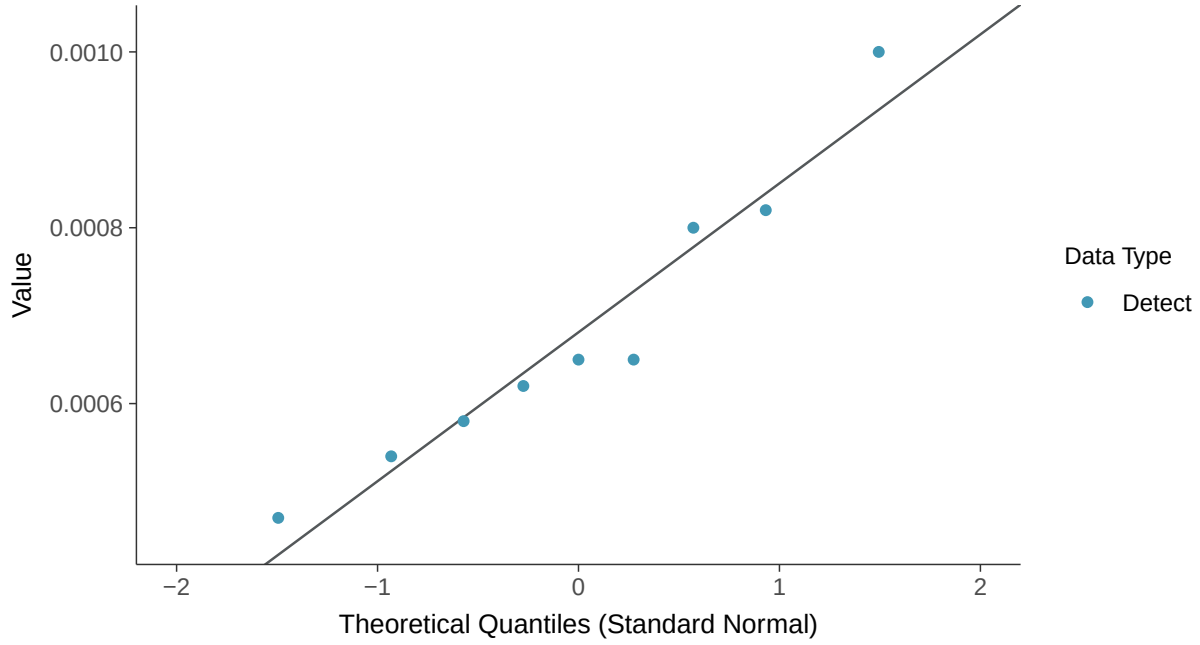
Boxplot by Season

Arsenic, MW-06 (mg/L)



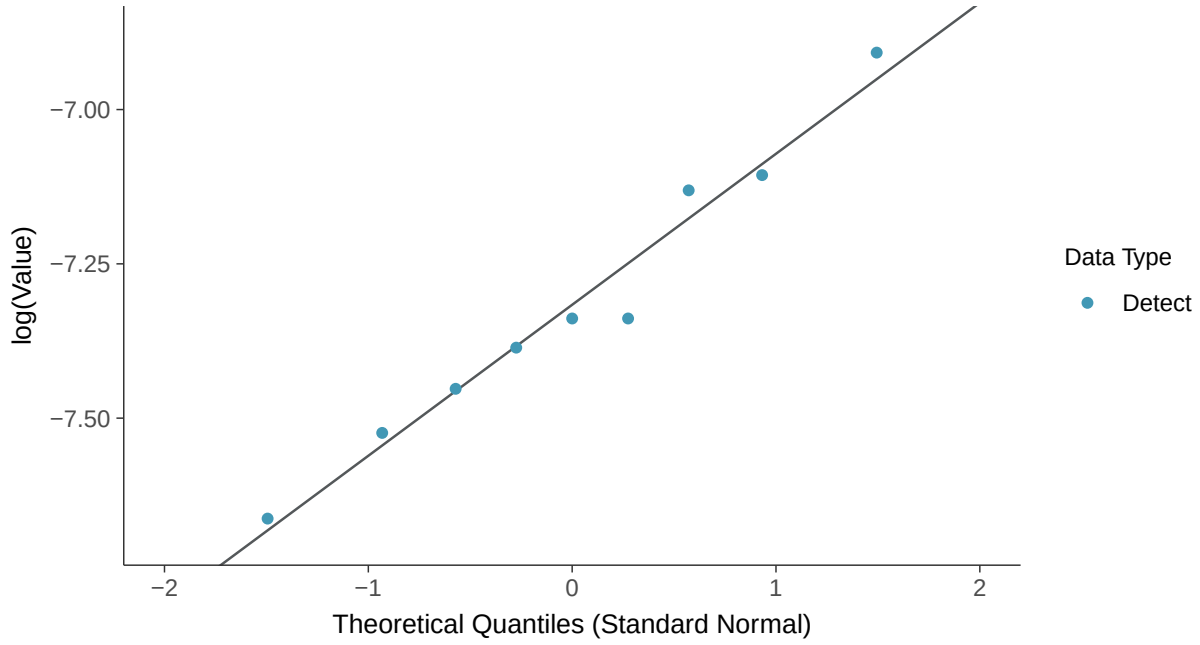
Normal Q-Q plot

Arsenic, MW-06 (mg/L)



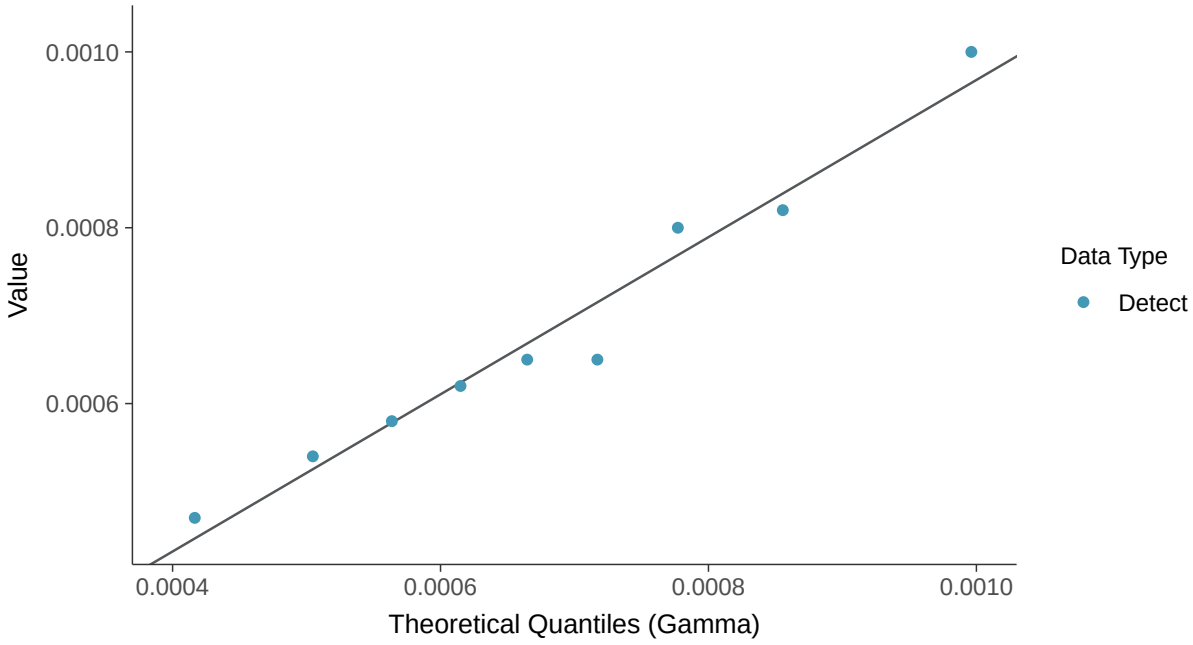
Lognormal Q-Q plot

Arsenic, MW-06 (mg/L)



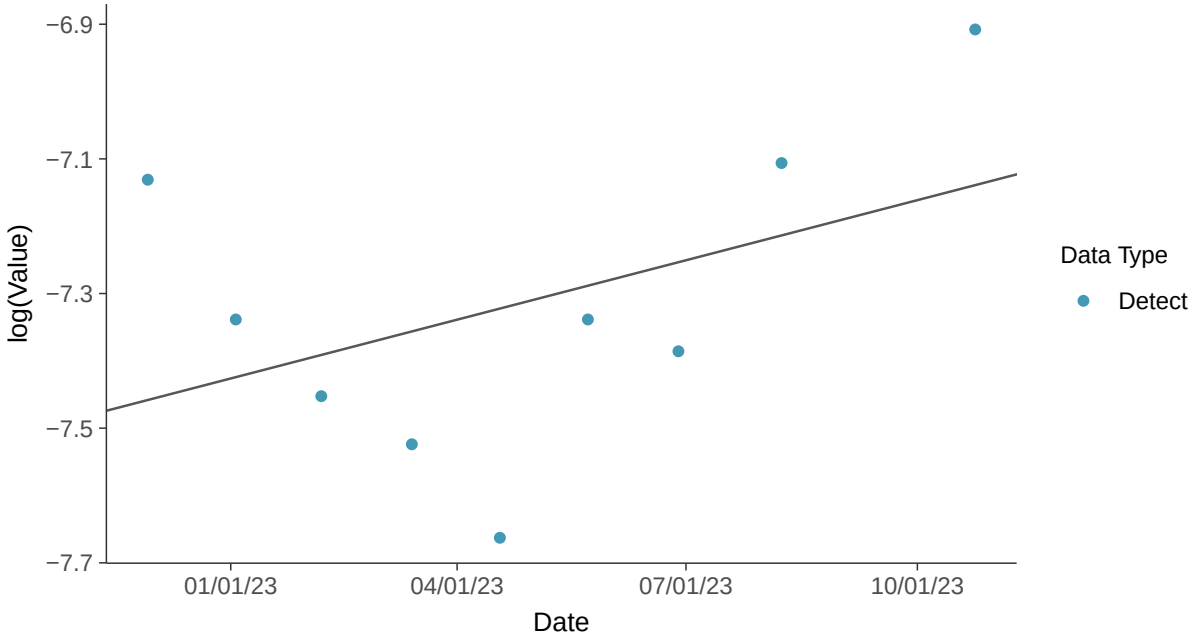
Gamma Q-Q plot

Arsenic, MW-06 (mg/L)



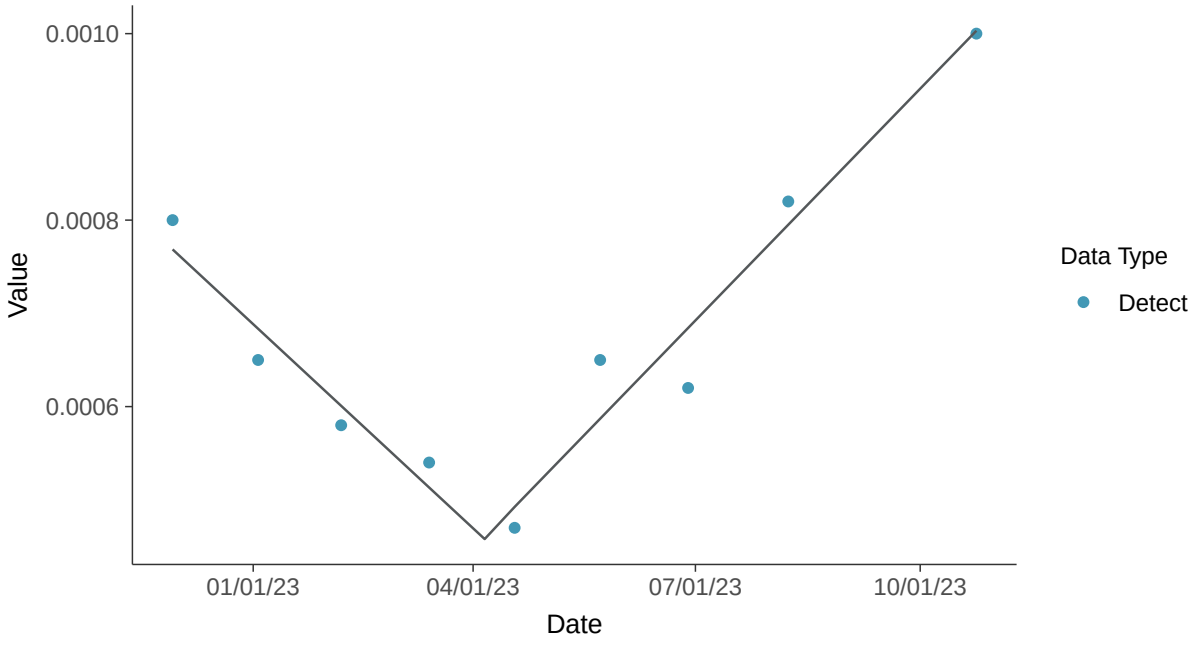
Trend Regression: Lognormal MLE

Arsenic, MW-06 (mg/L)



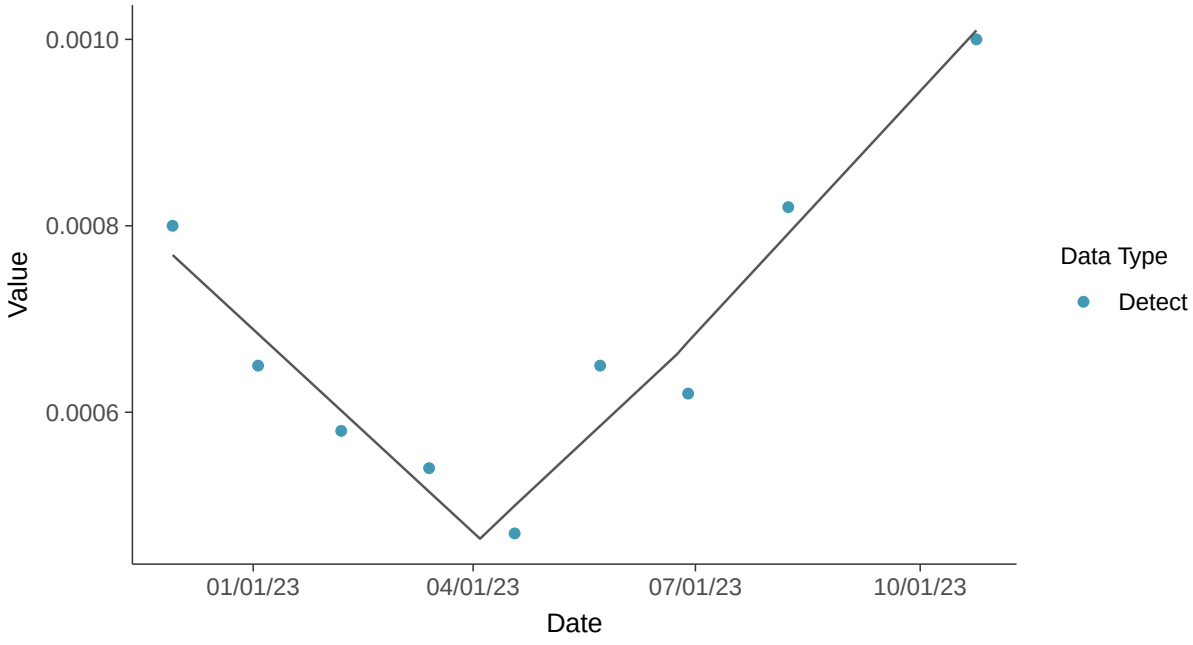
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-06 (mg/L)

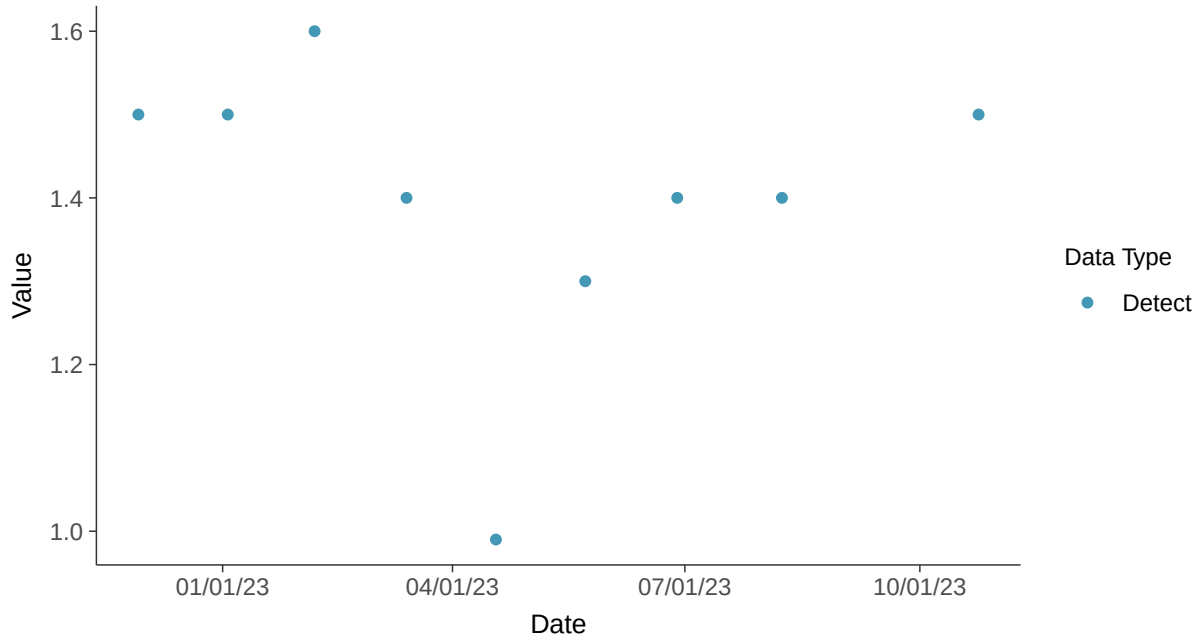


Appendix IV: Barium, MW-06

ID: 1_15_5_103

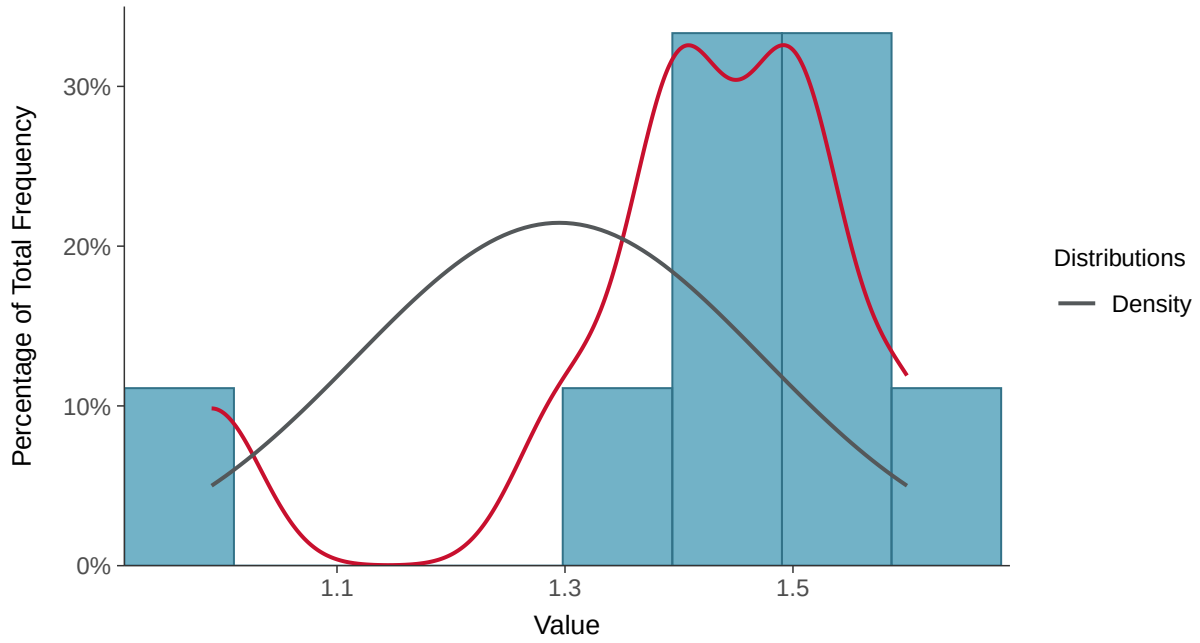
Scatter Plot

Barium, MW-06 (mg/L)



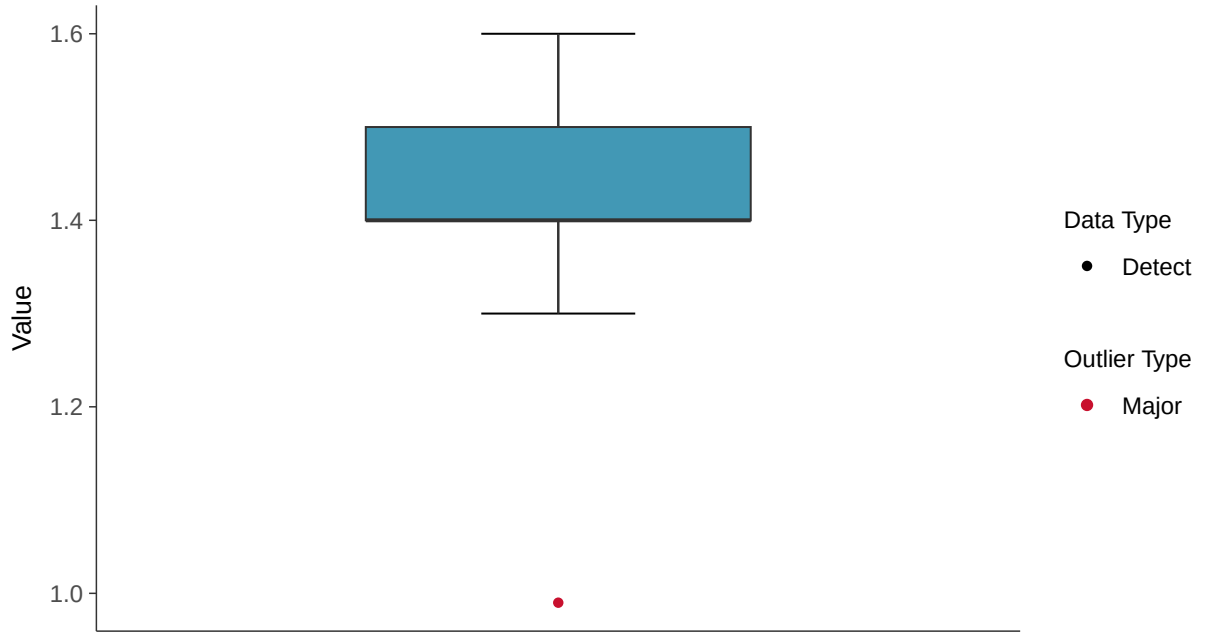
Histogram

Barium, MW-06 (mg/L)



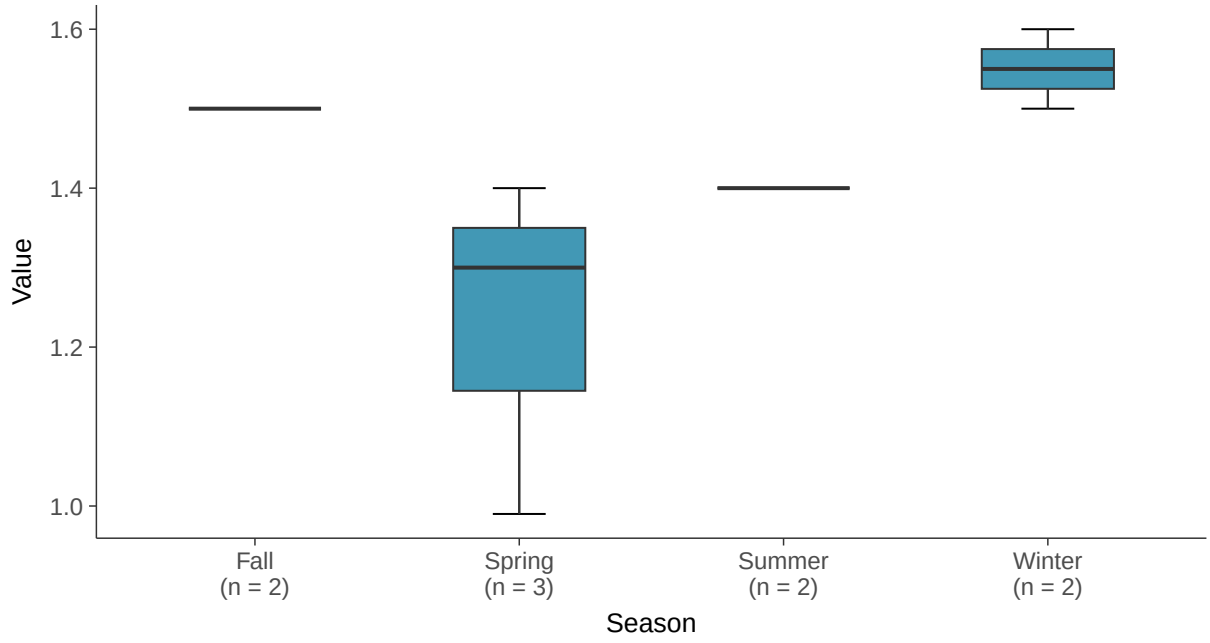
Boxplot

Barium, MW-06 (mg/L)



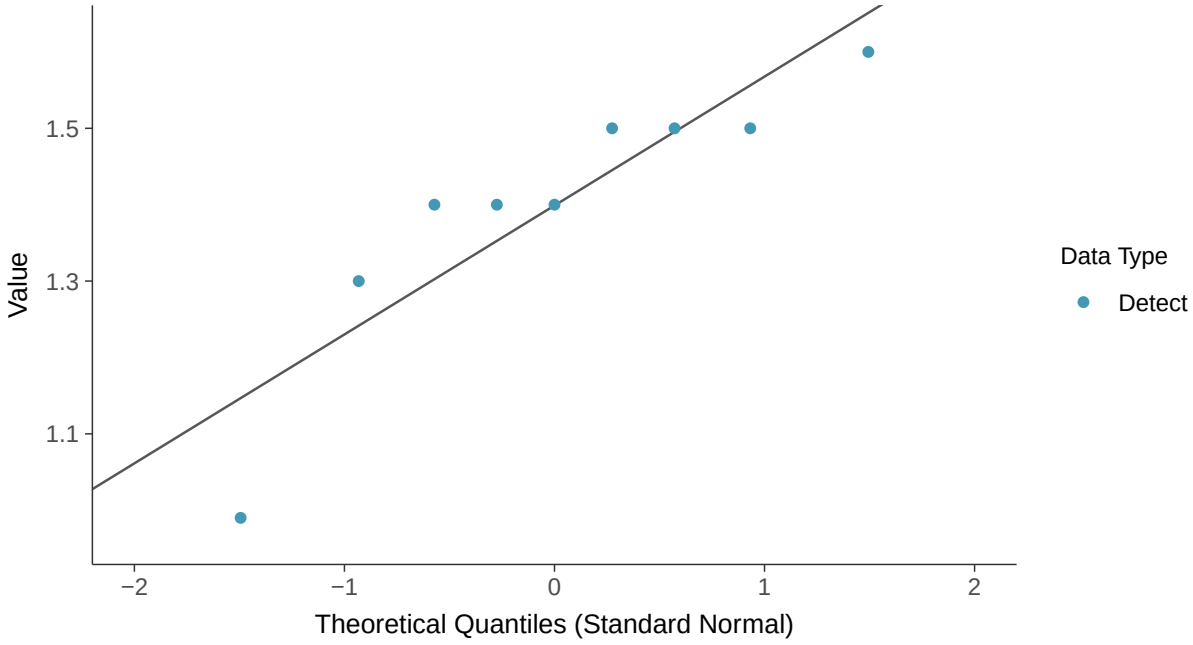
Boxplot by Season

Barium, MW-06 (mg/L)



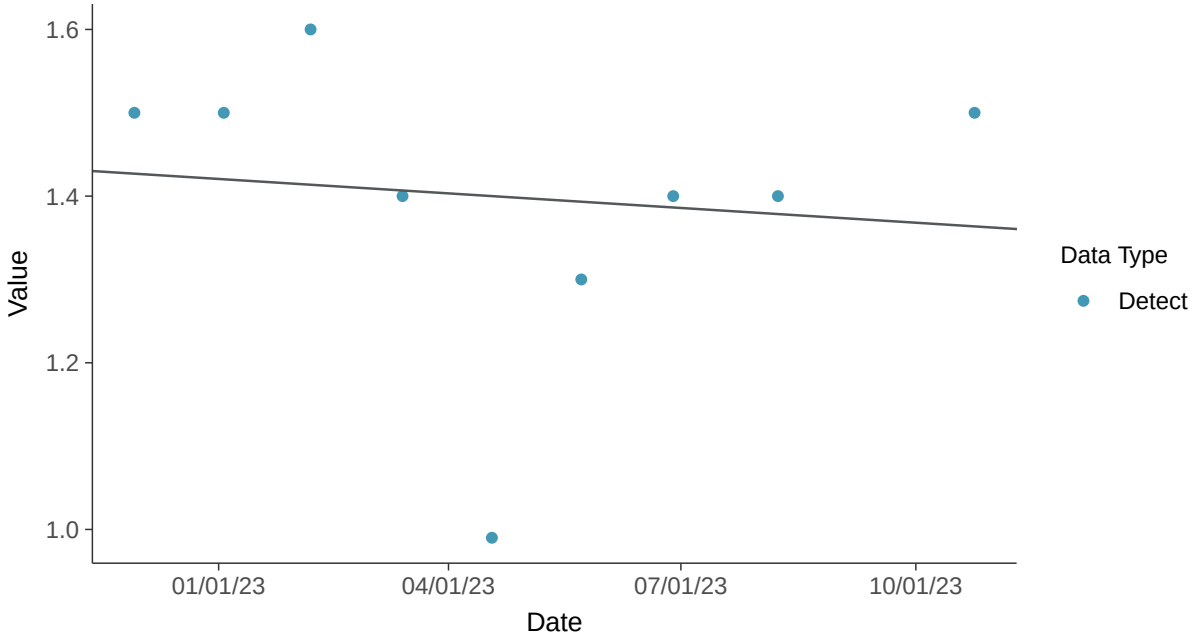
Normal Q-Q plot

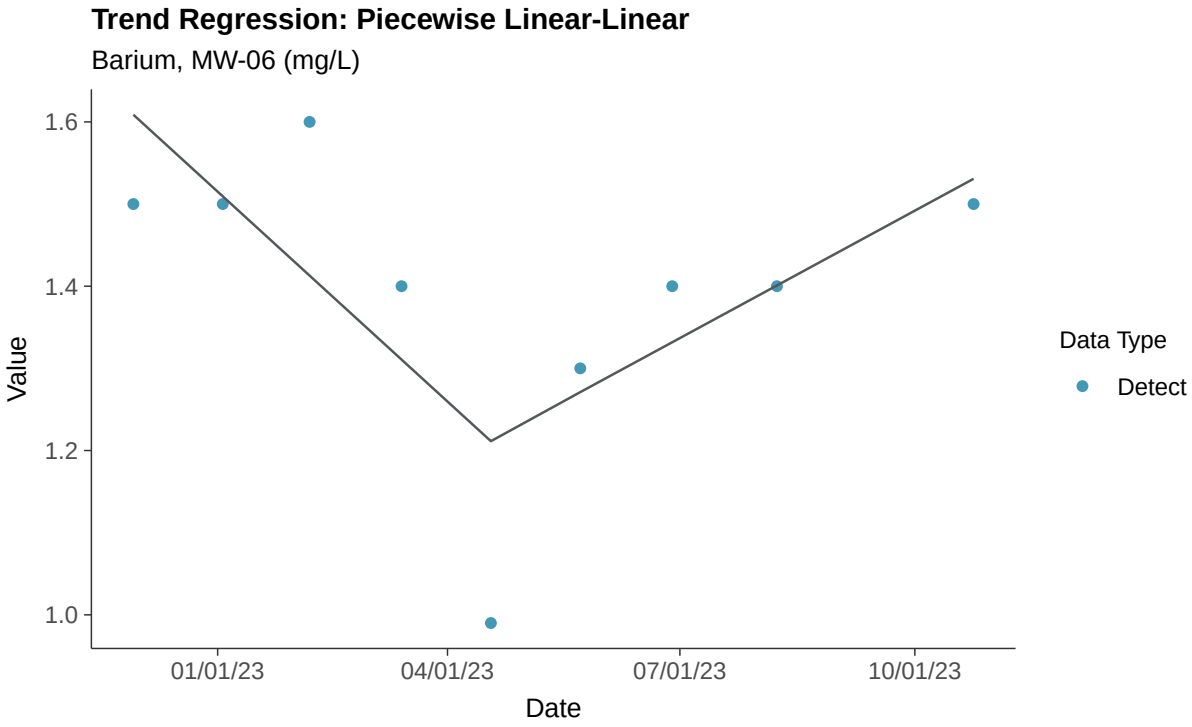
Barium, MW-06 (mg/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

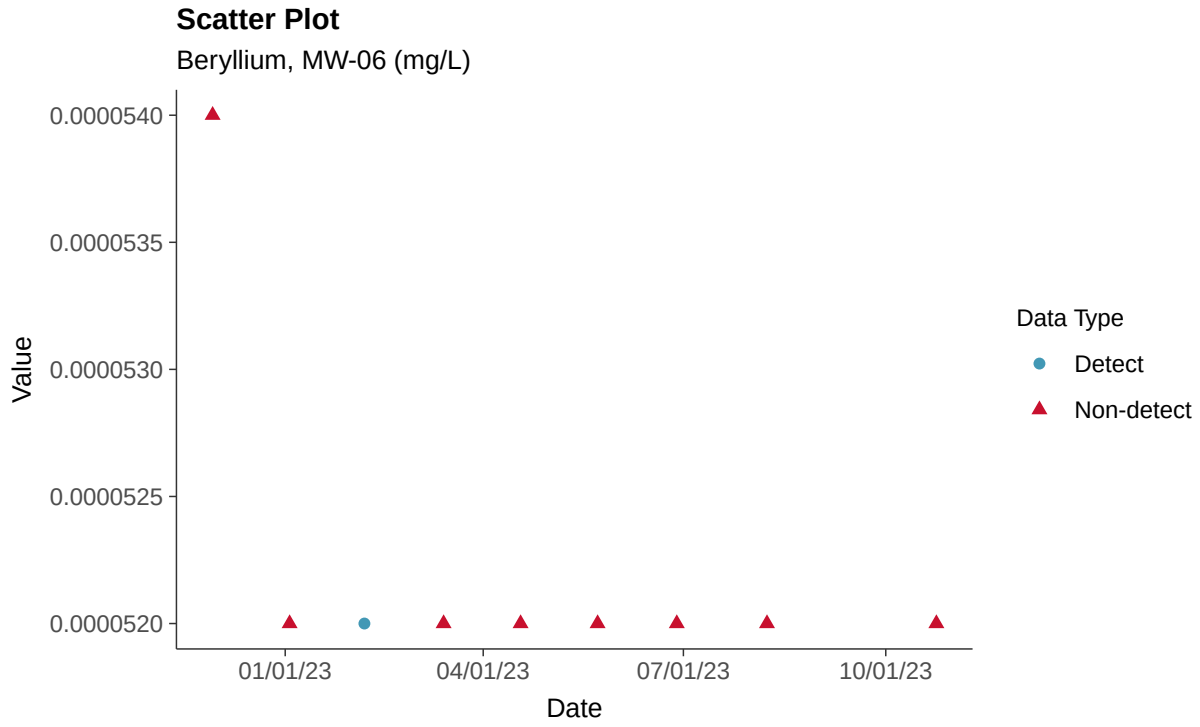
Barium, MW-06 (mg/L)

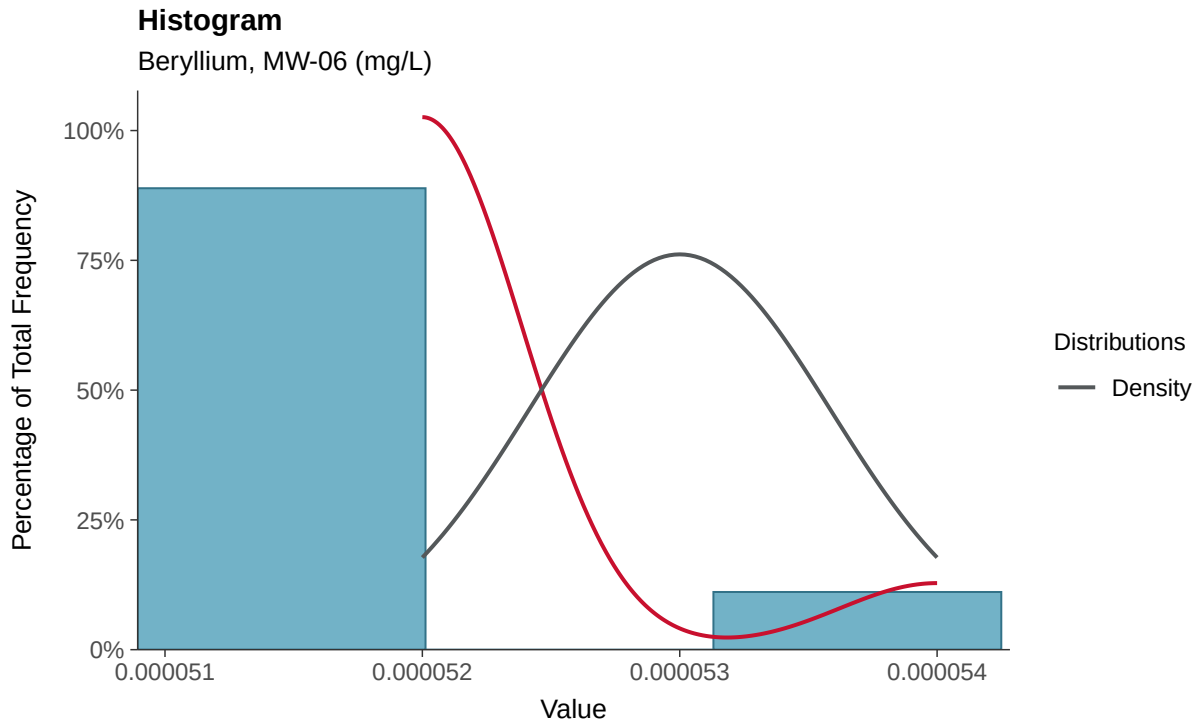



Trend Regression: Piecewise Linear-Linear
Barium, MW-06 (mg/L)
Value
1.6
1.4
1.2
1.0
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect

Appendix IV: Beryllium, MW-06

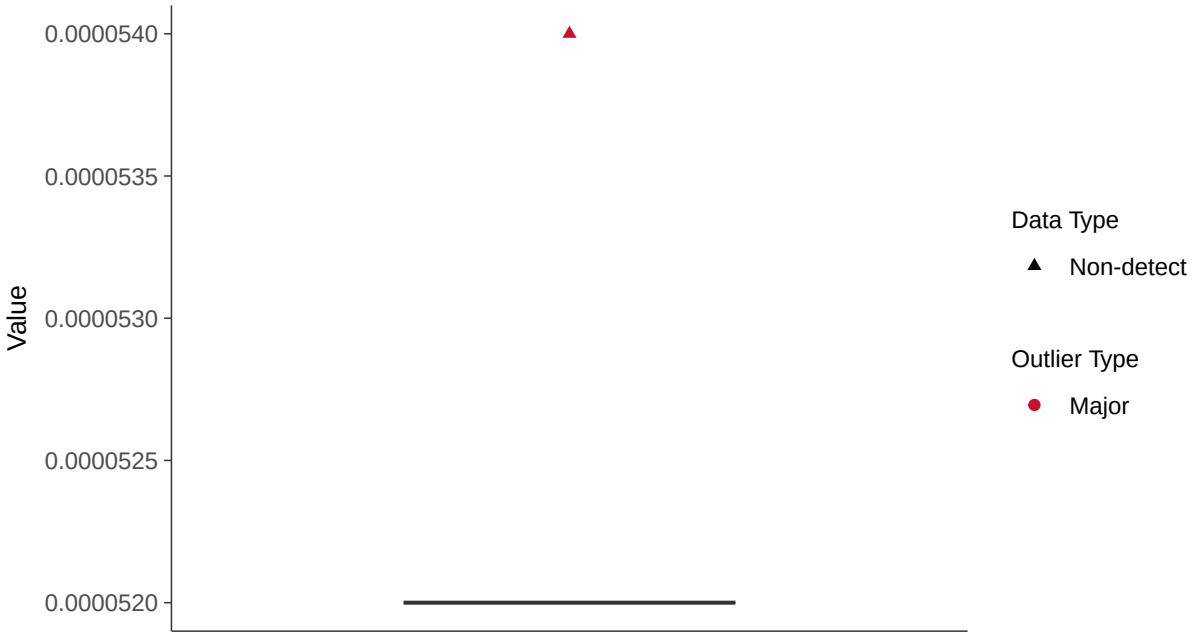
ID: 1_15_5_104





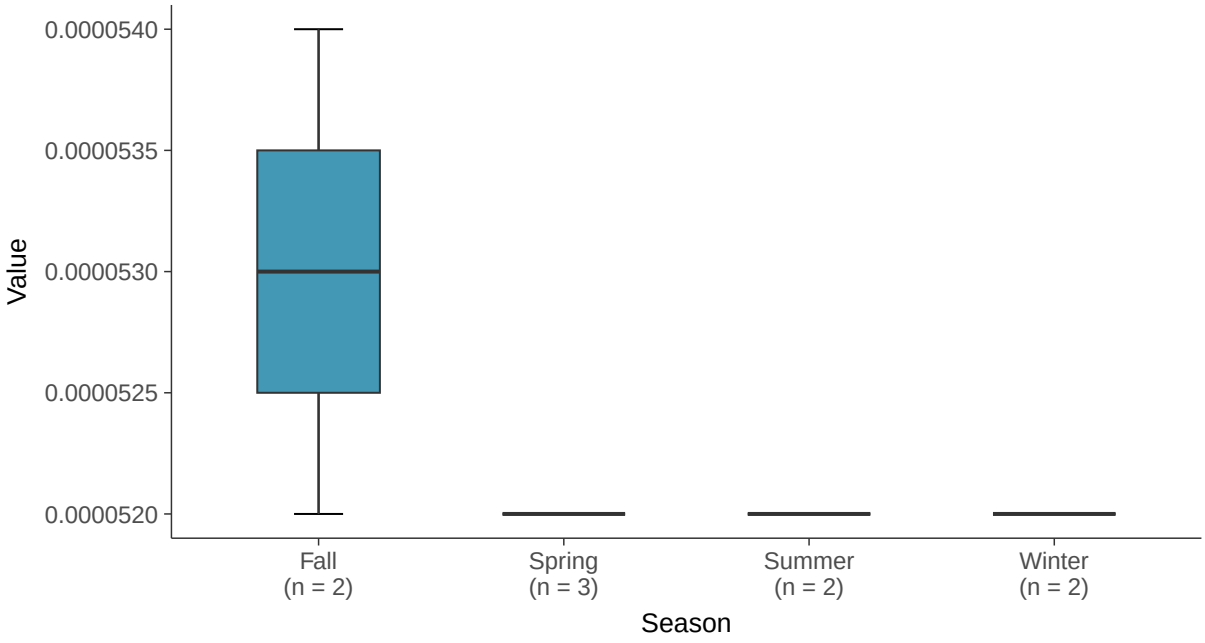
Boxplot

Beryllium, MW-06 (mg/L)



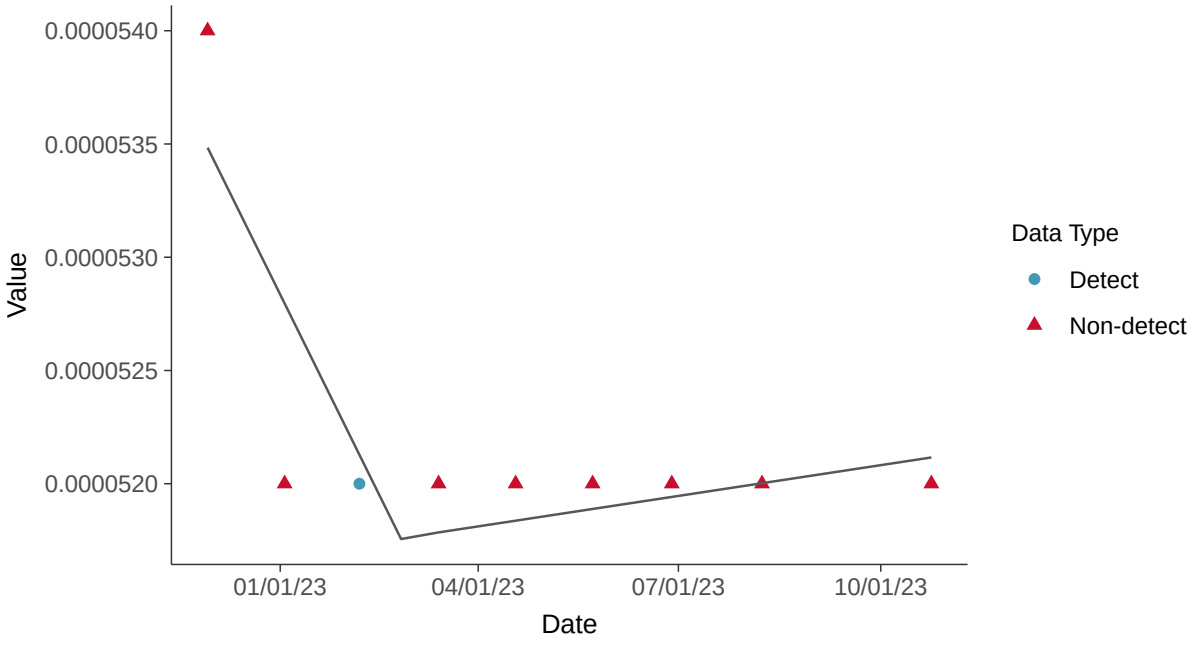
Boxplot by Season

Beryllium, MW-06 (mg/L)



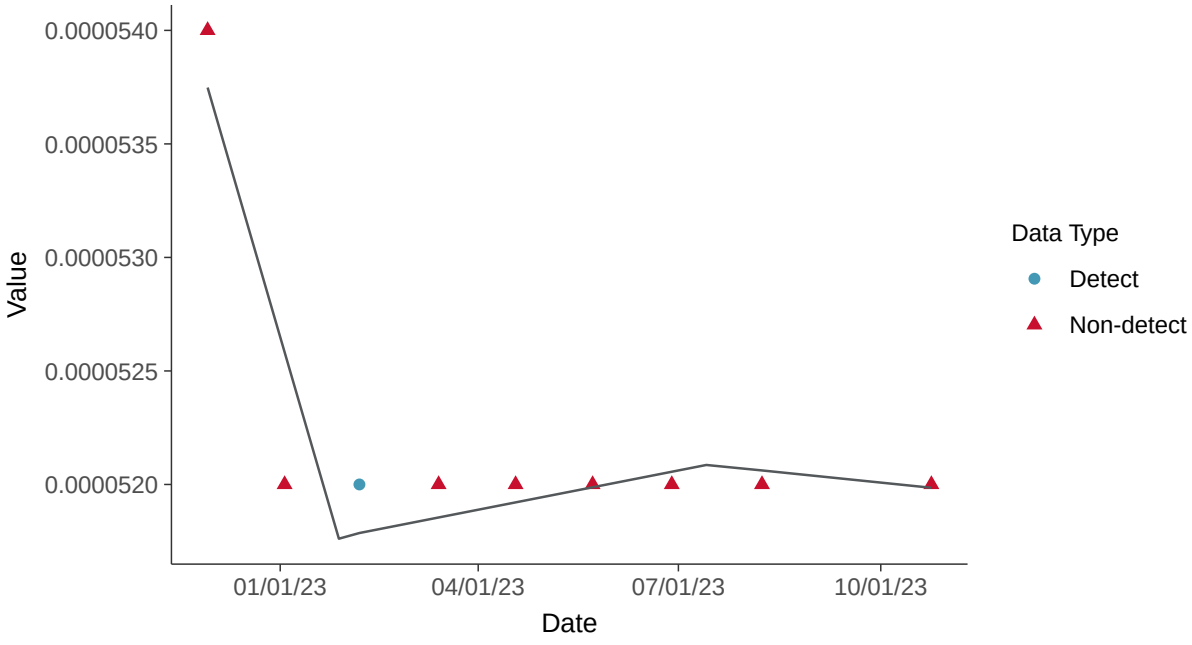
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-06 (mg/L)



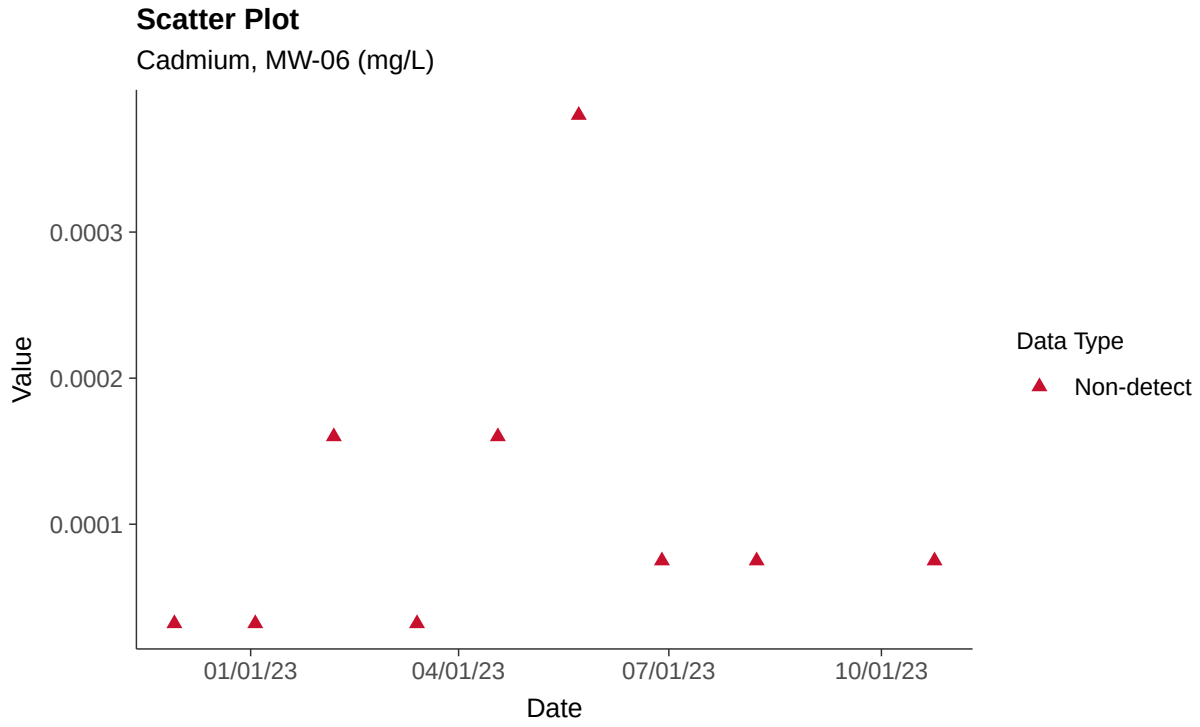
Trend Regression: Piecewise Linear-Linear-Linear

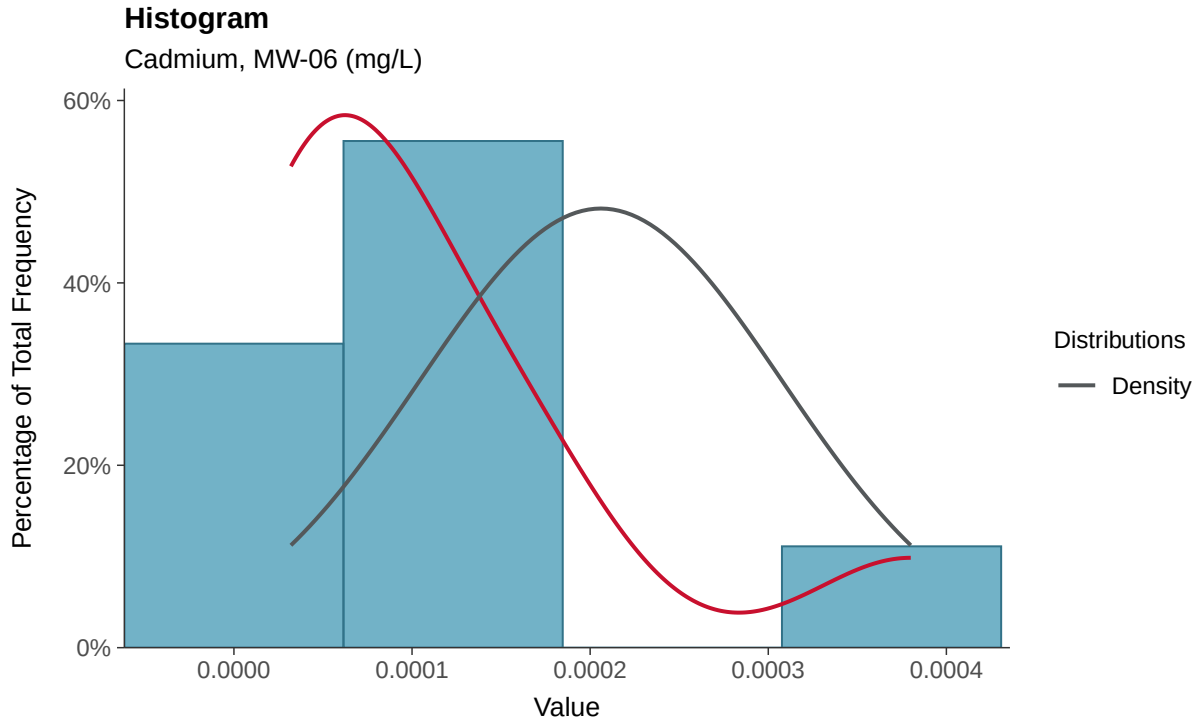
Beryllium, MW-06 (mg/L)



Appendix IV: Cadmium, MW-06

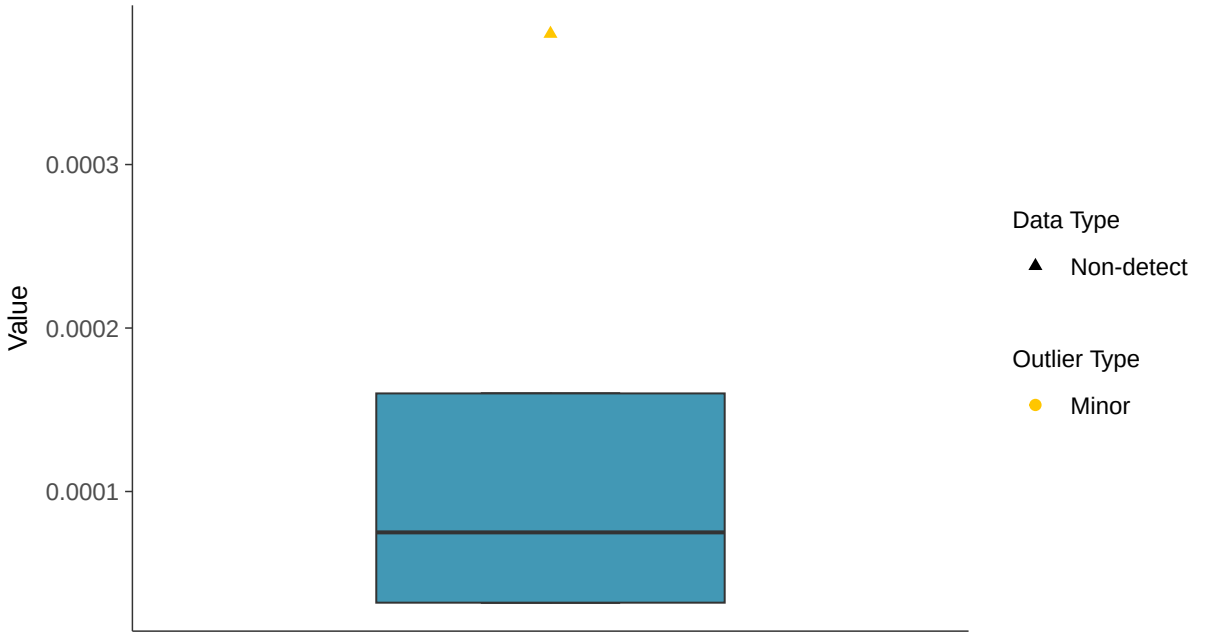
ID: 1_15_5_106





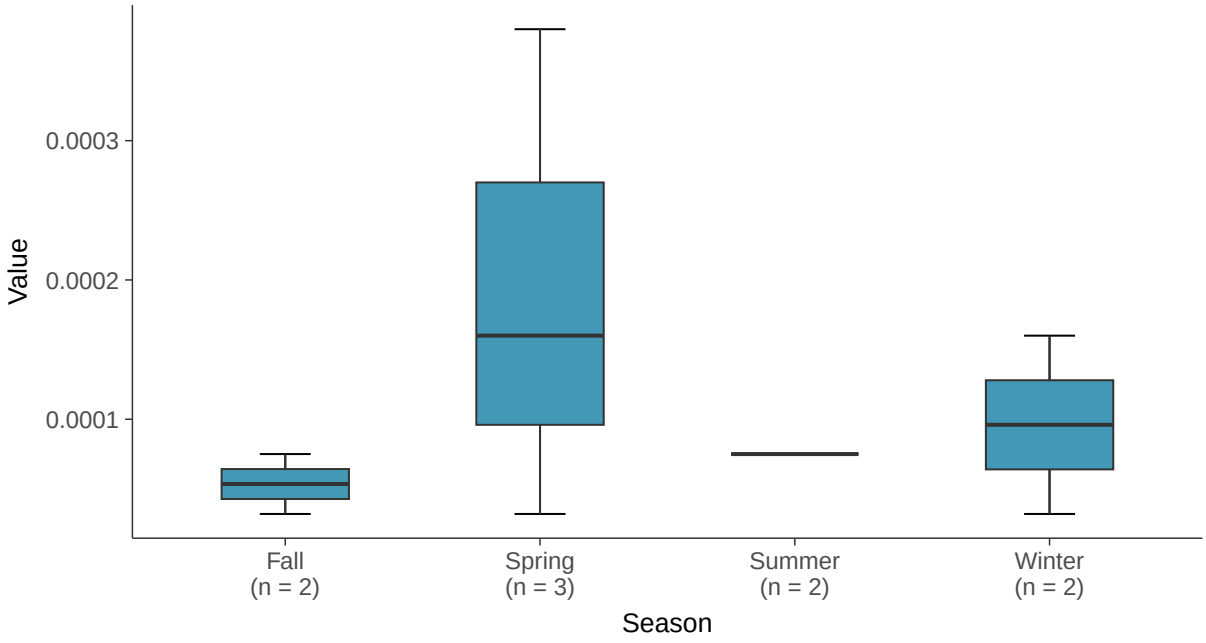
Boxplot

Cadmium, MW-06 (mg/L)



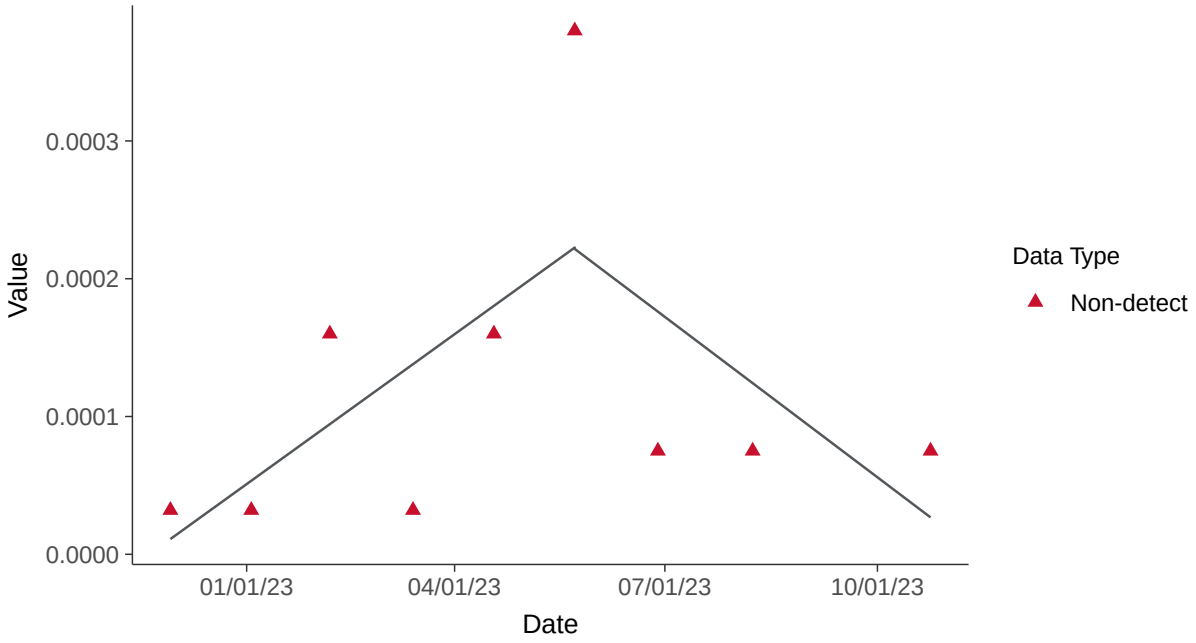
Boxplot by Season

Cadmium, MW-06 (mg/L)



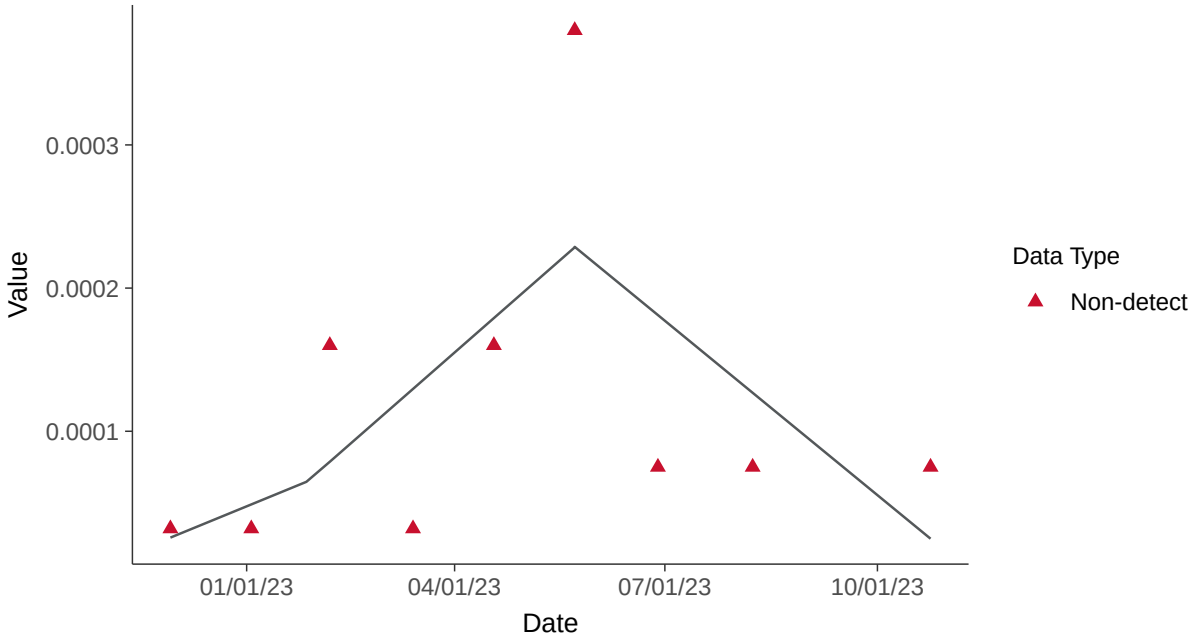
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-06 (mg/L)



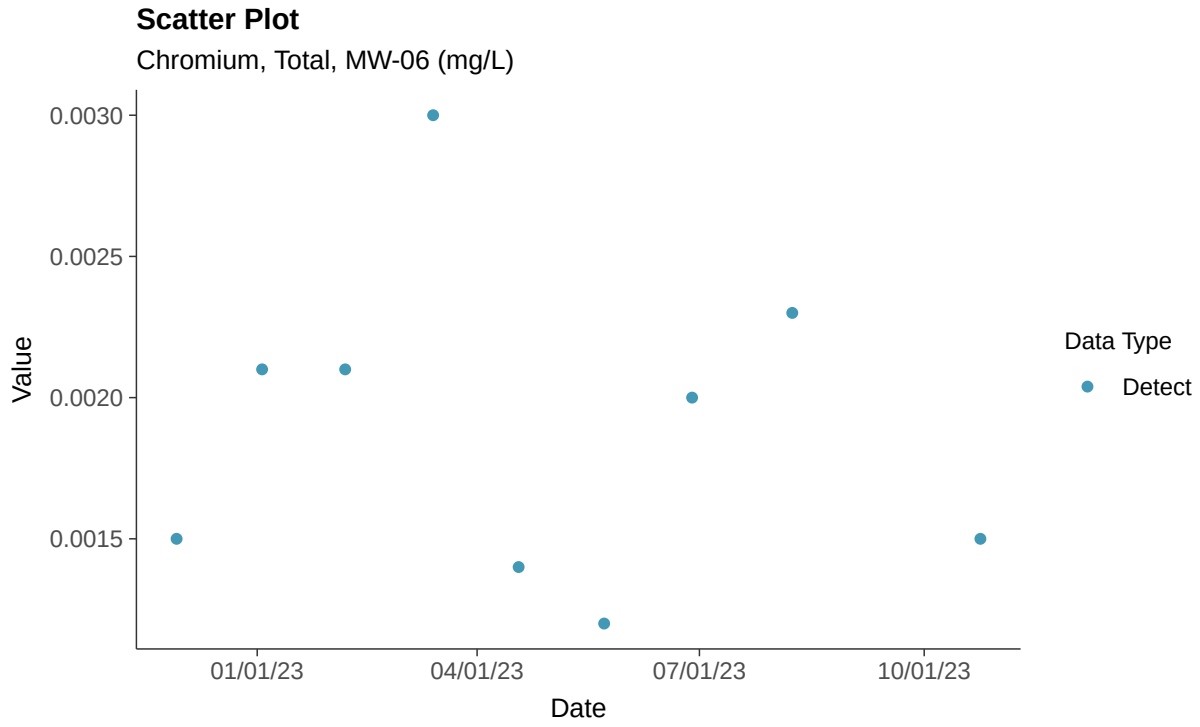
Trend Regression: Piecewise Linear-Linear-Linear

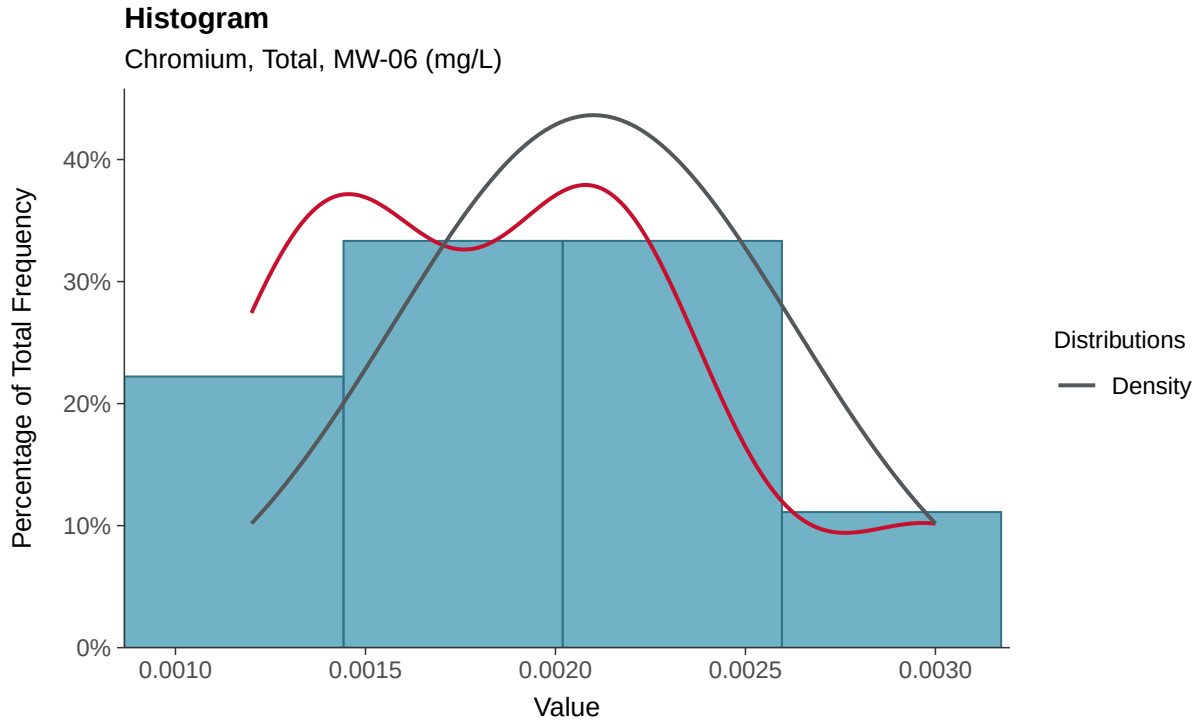
Cadmium, MW-06 (mg/L)



Appendix IV: Chromium, Total, MW-06

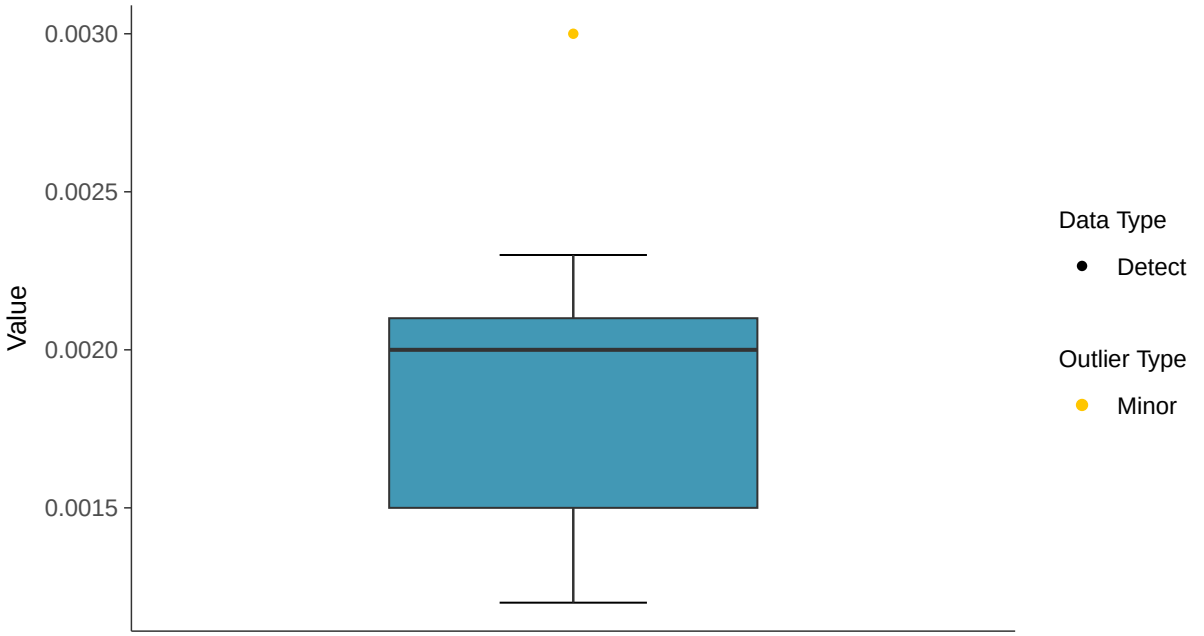
ID: 1_15_5_109





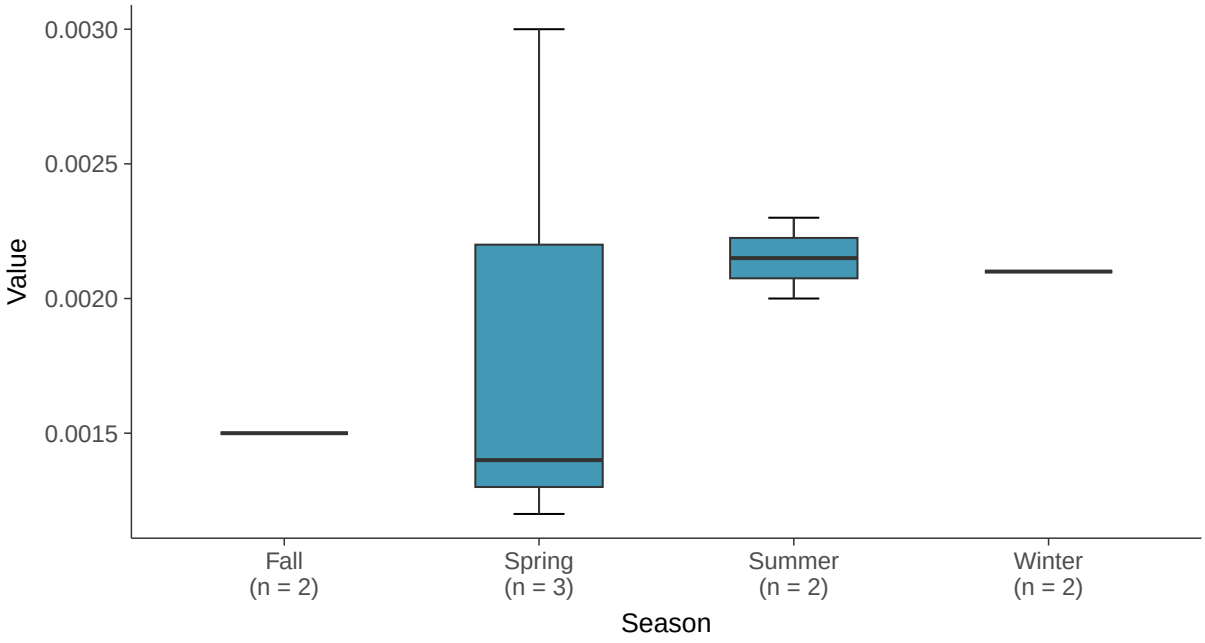
Boxplot

Chromium, Total, MW-06 (mg/L)



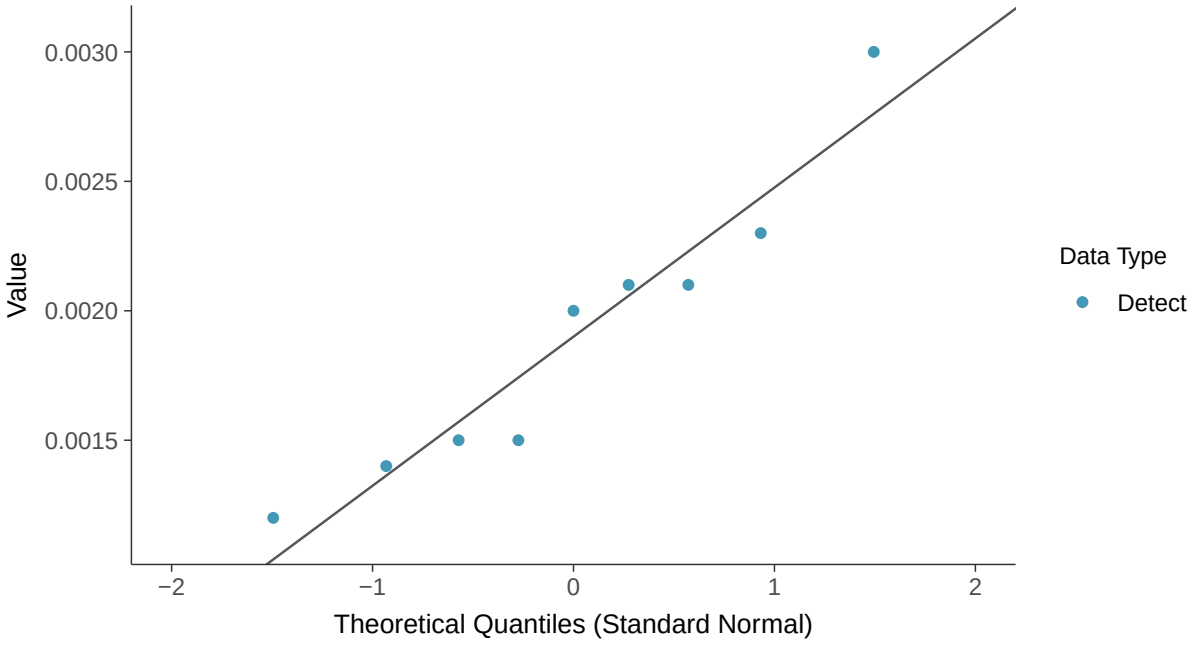
Boxplot by Season

Chromium, Total, MW-06 (mg/L)



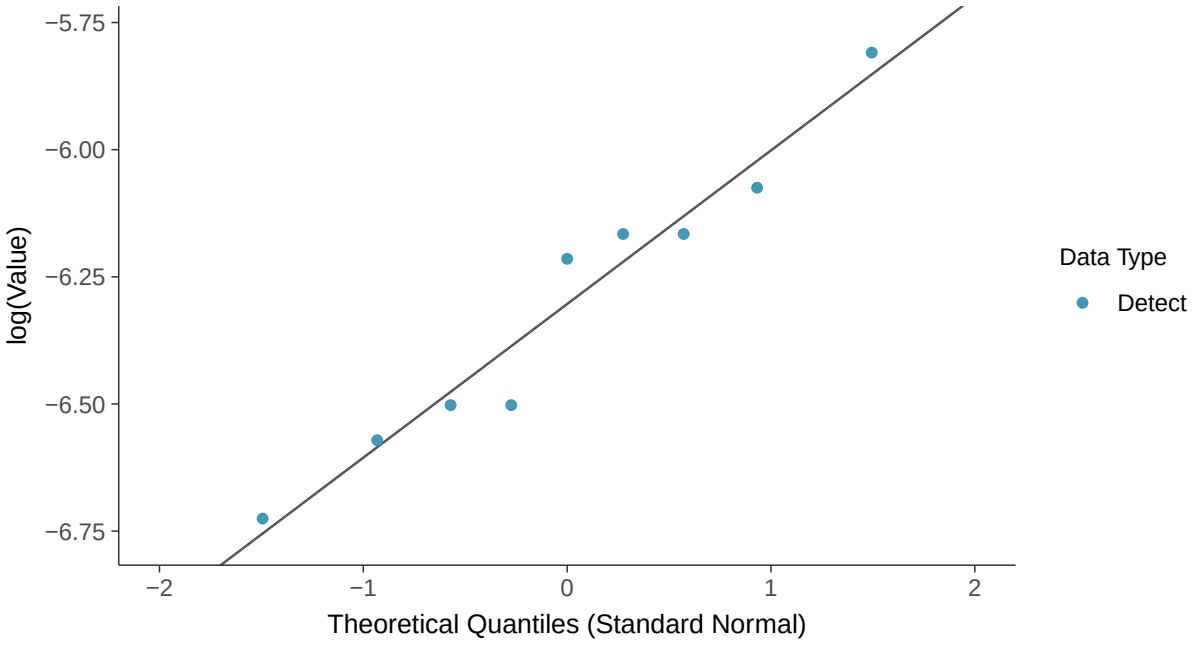
Normal Q-Q plot

Chromium, Total, MW-06 (mg/L)



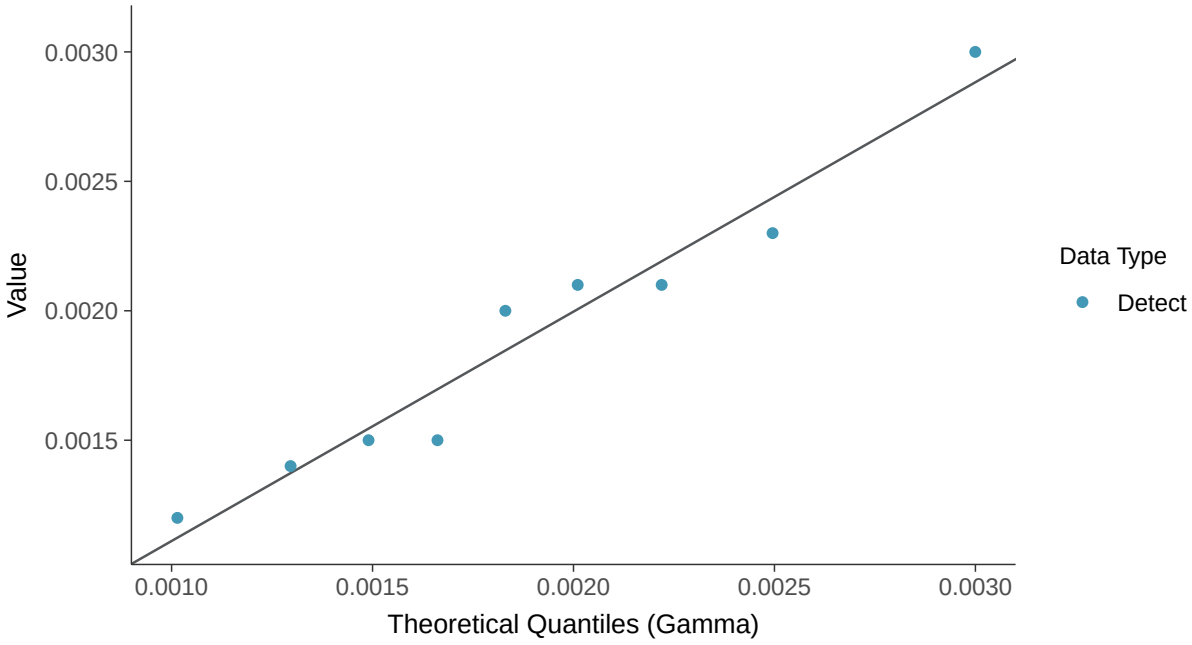
Lognormal Q-Q plot

Chromium, Total, MW-06 (mg/L)



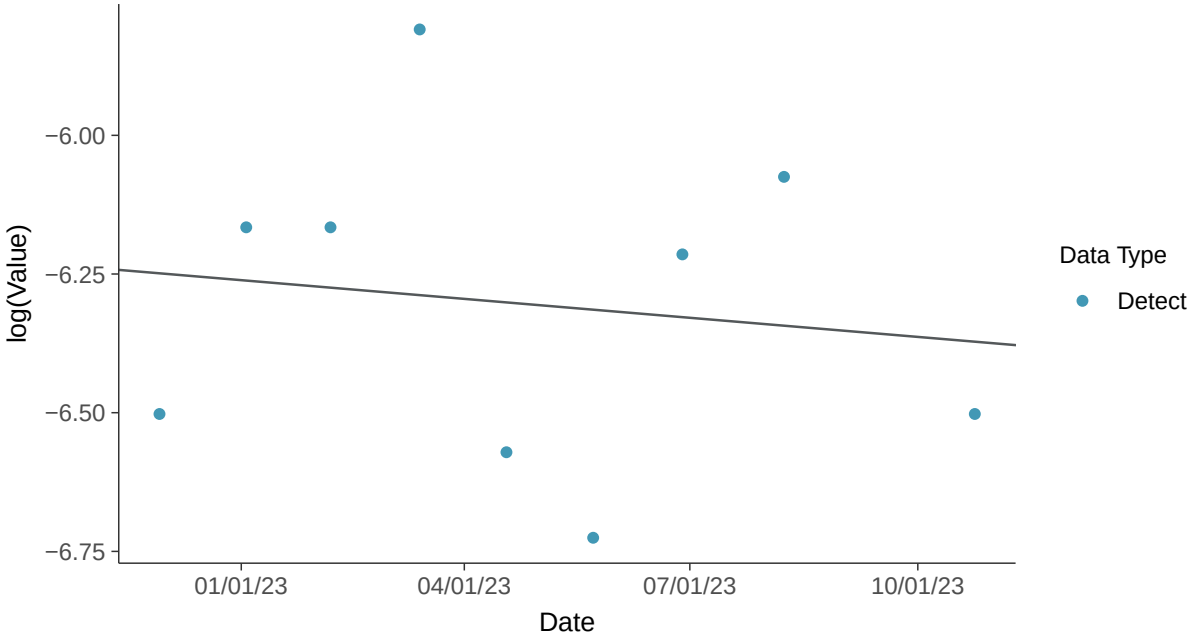
Gamma Q-Q plot

Chromium, Total, MW-06 (mg/L)



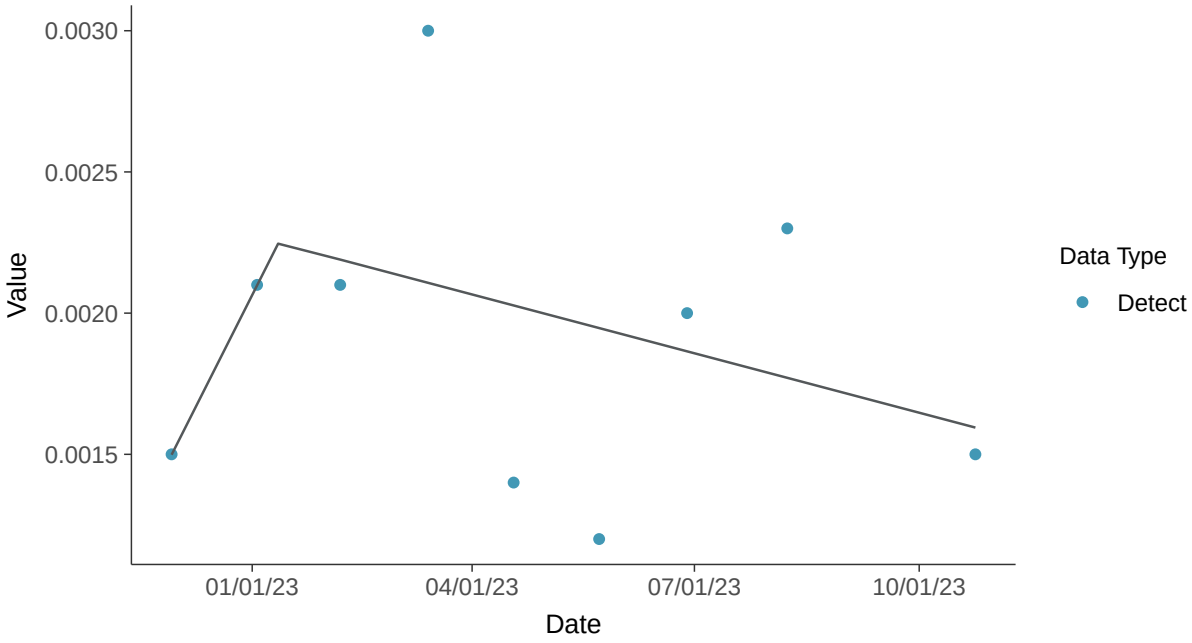
Trend Regression: Lognormal MLE

Chromium, Total, MW-06 (mg/L)



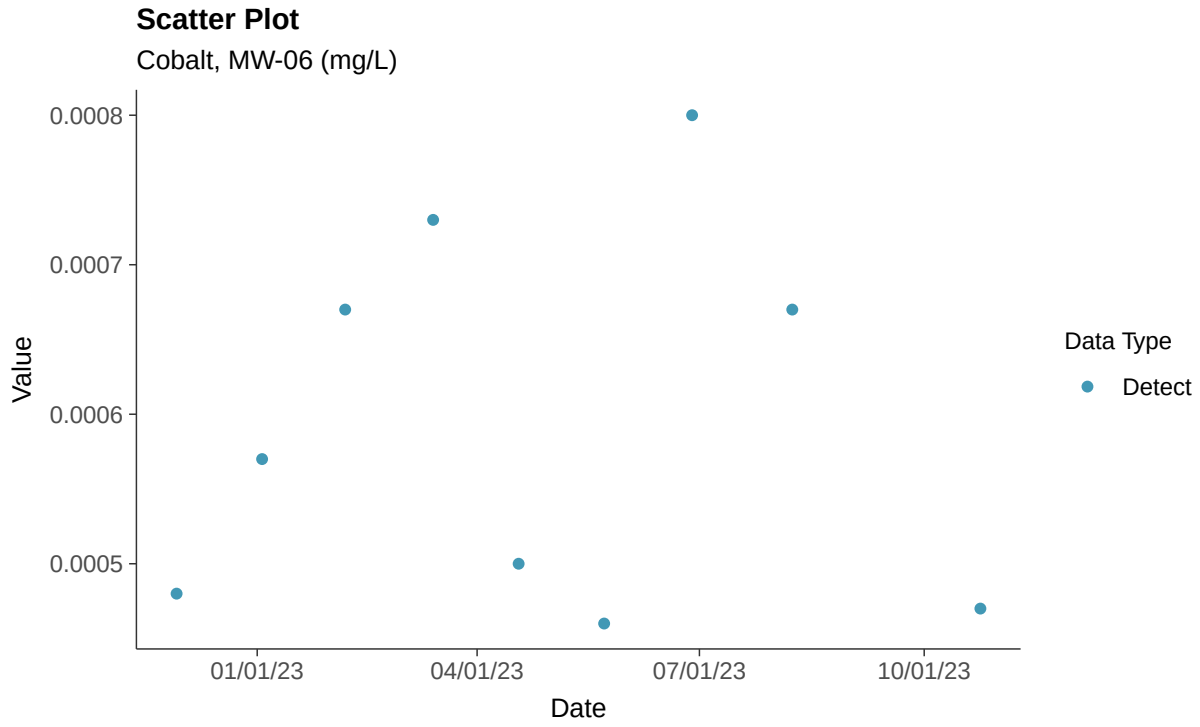
Trend Regression: Piecewise Linear-Linear

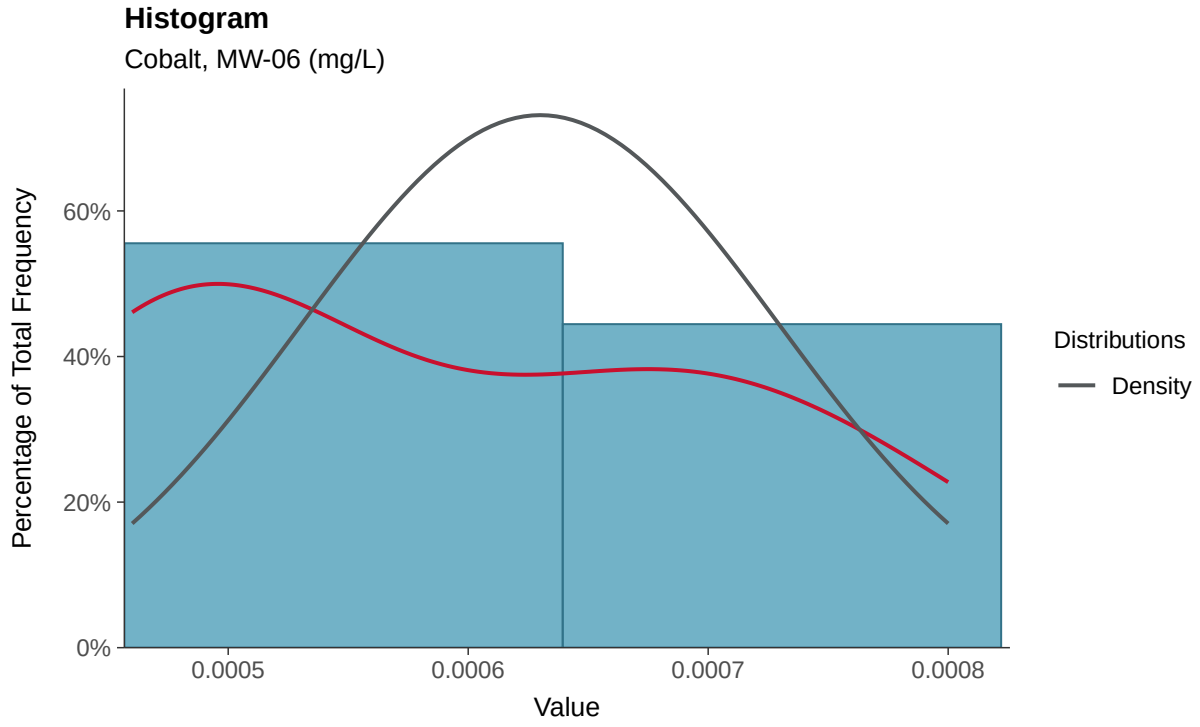
Chromium, Total, MW-06 (mg/L)



Appendix IV: Cobalt, MW-06

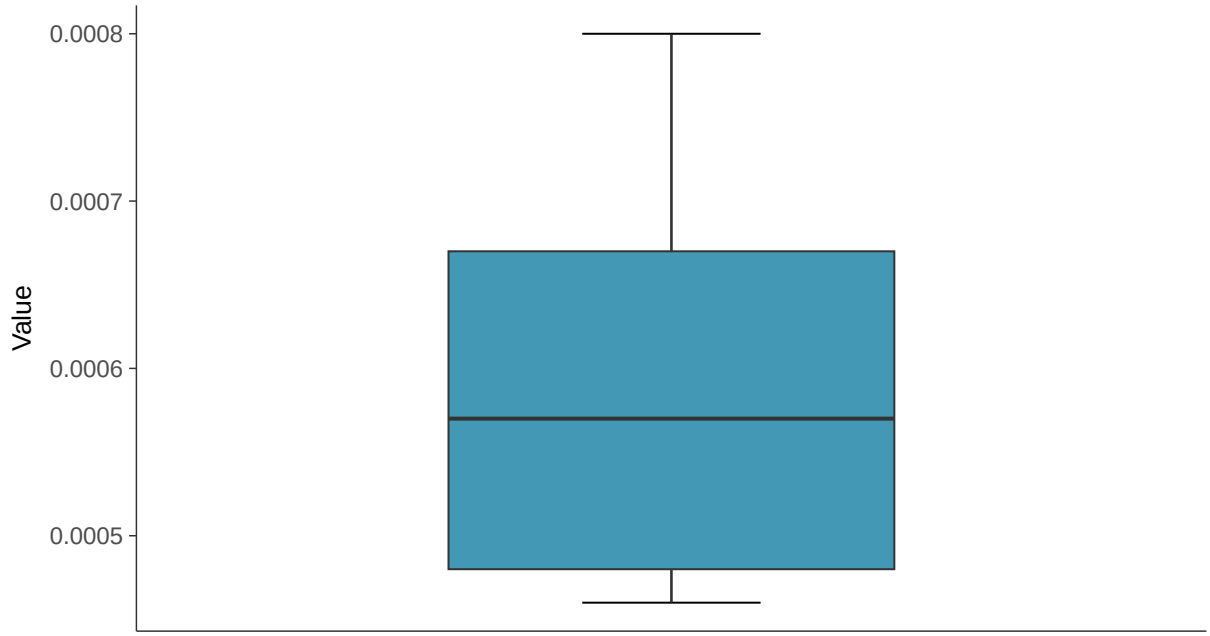
ID: 1_15_5_110





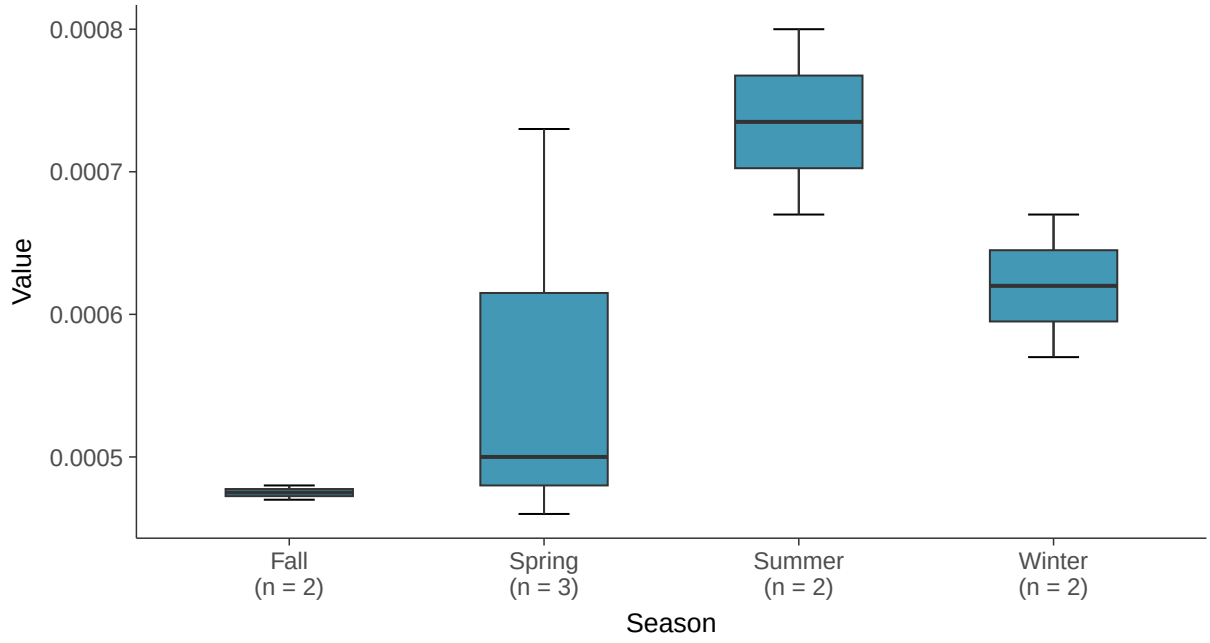
Boxplot

Cobalt, MW-06 (mg/L)



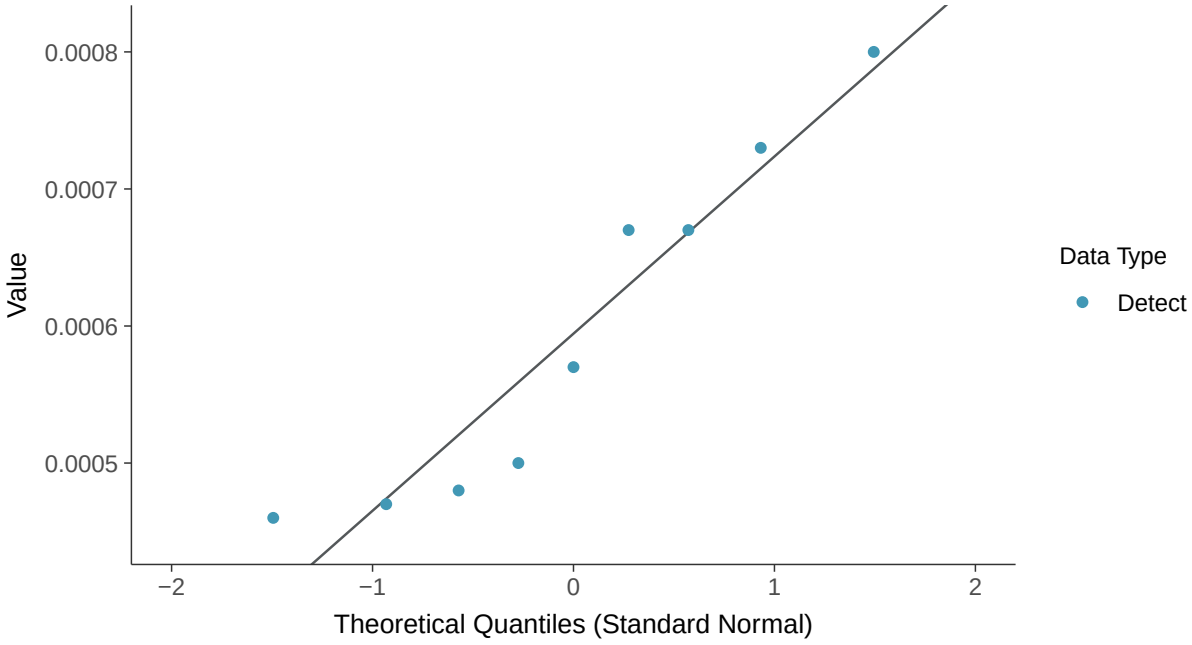
Boxplot by Season

Cobalt, MW-06 (mg/L)



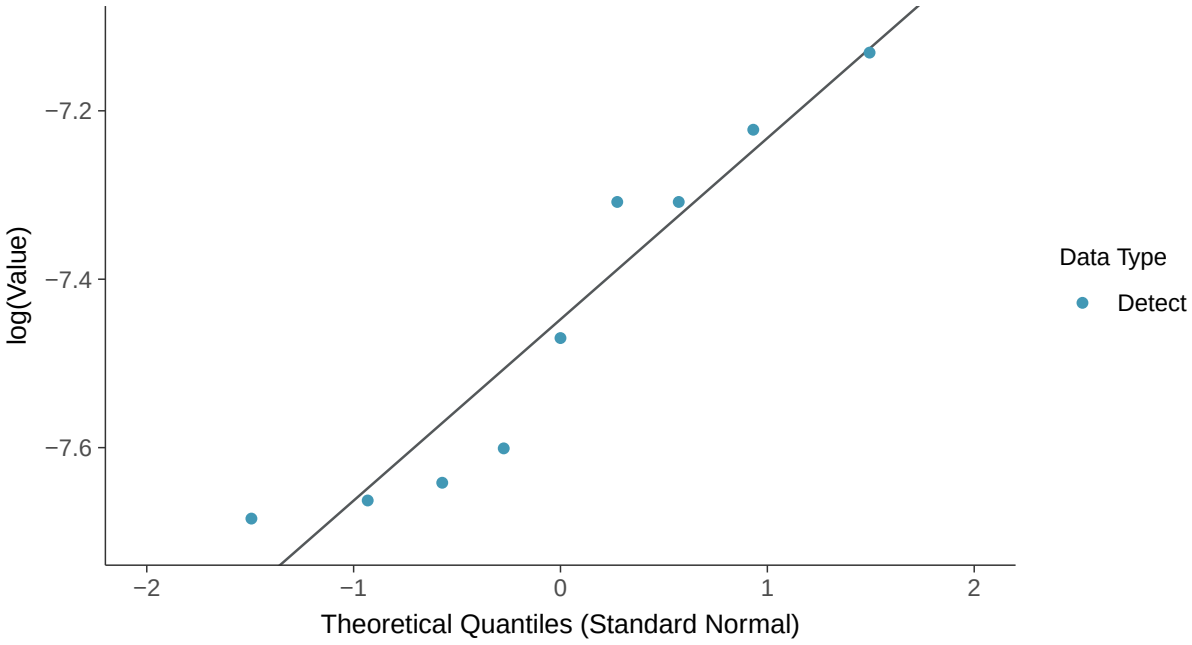
Normal Q-Q plot

Cobalt, MW-06 (mg/L)



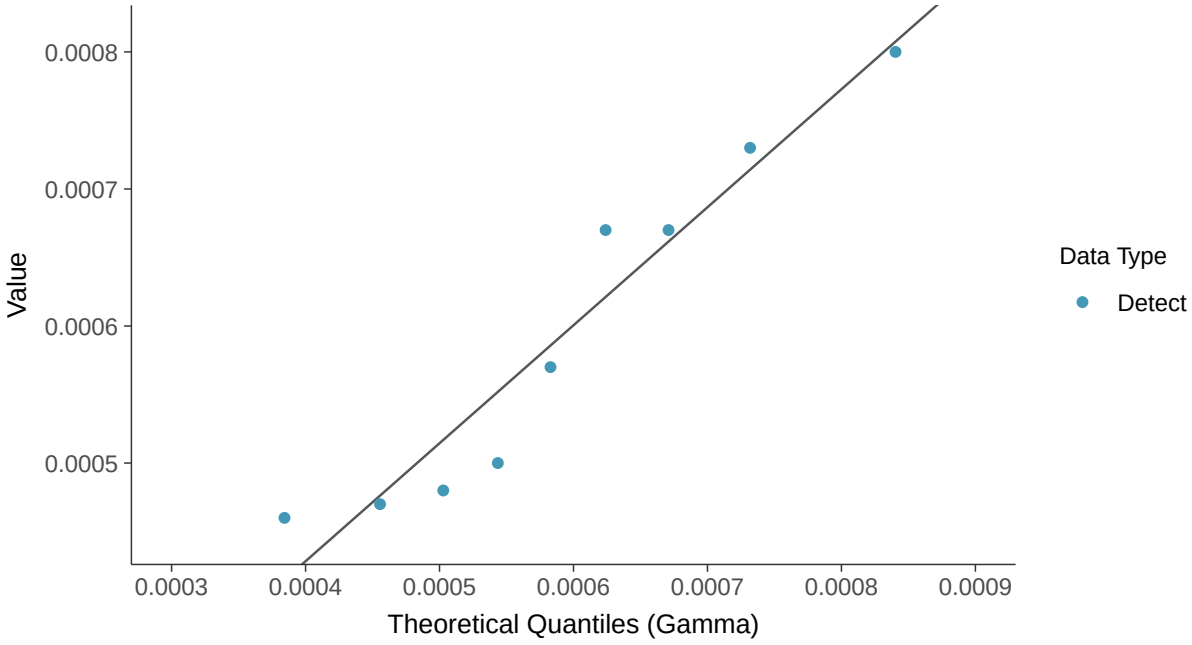
Lognormal Q-Q plot

Cobalt, MW-06 (mg/L)



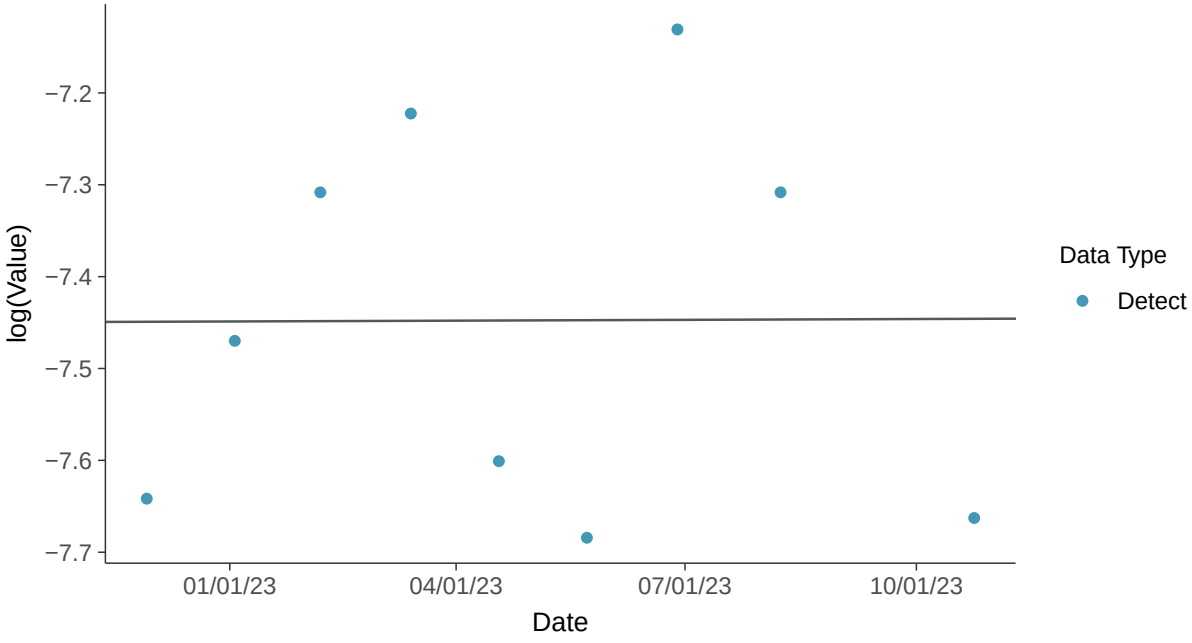
Gamma Q-Q plot

Cobalt, MW-06 (mg/L)



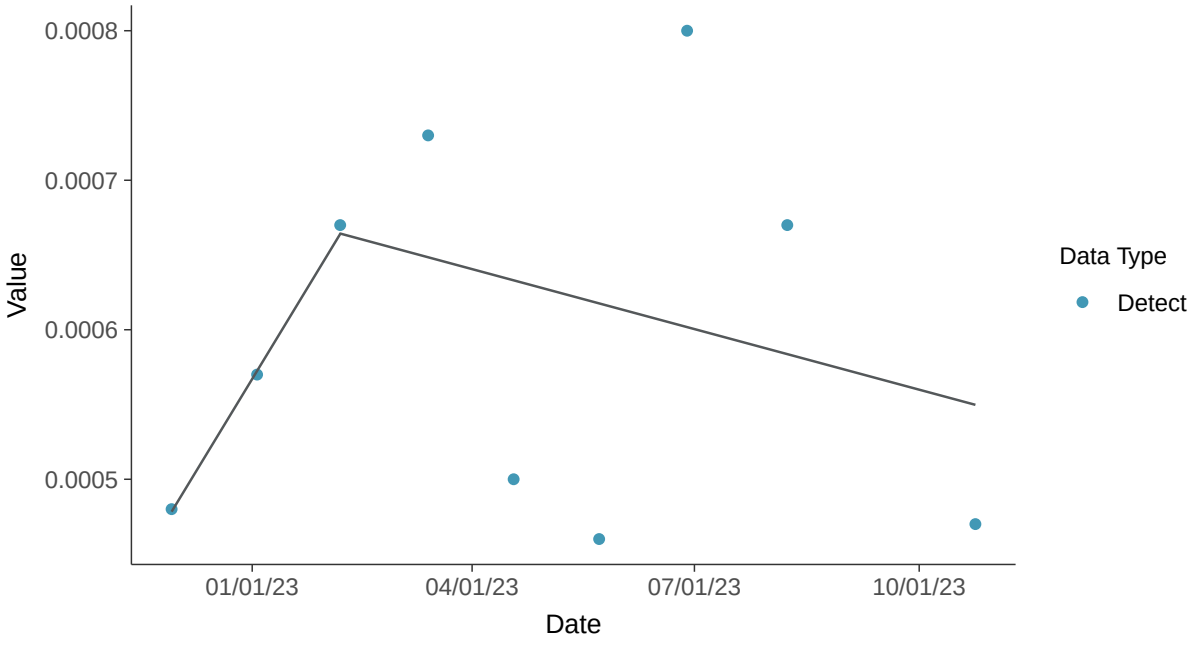
Trend Regression: Lognormal MLE

Cobalt, MW-06 (mg/L)



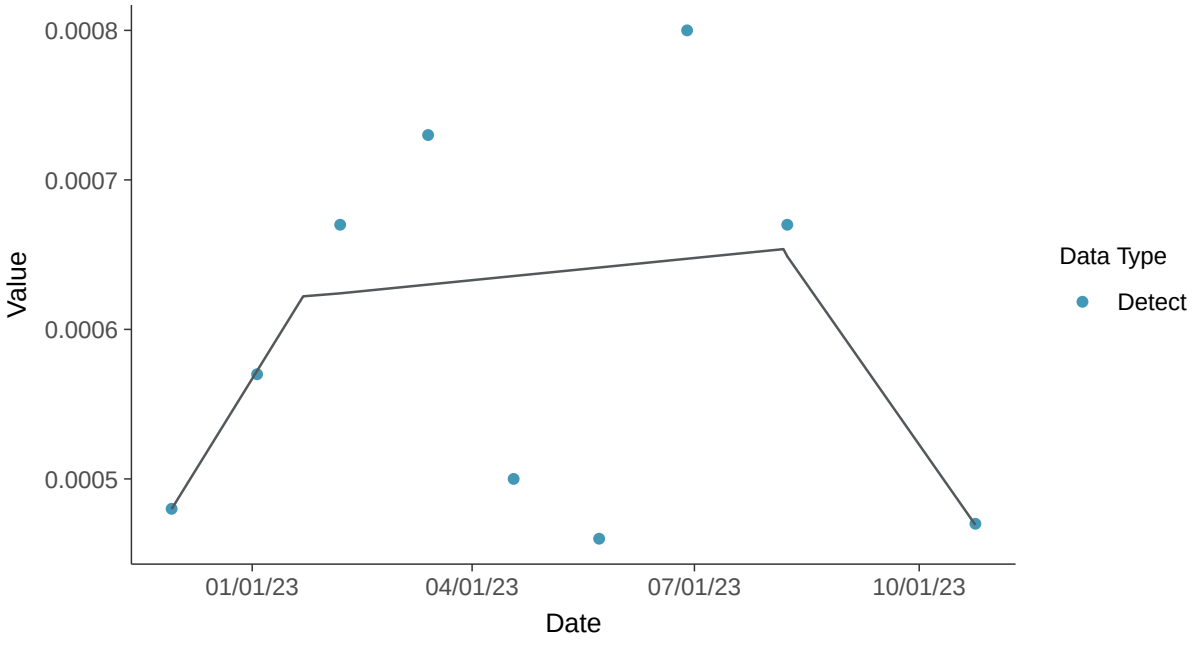
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-06 (mg/L)

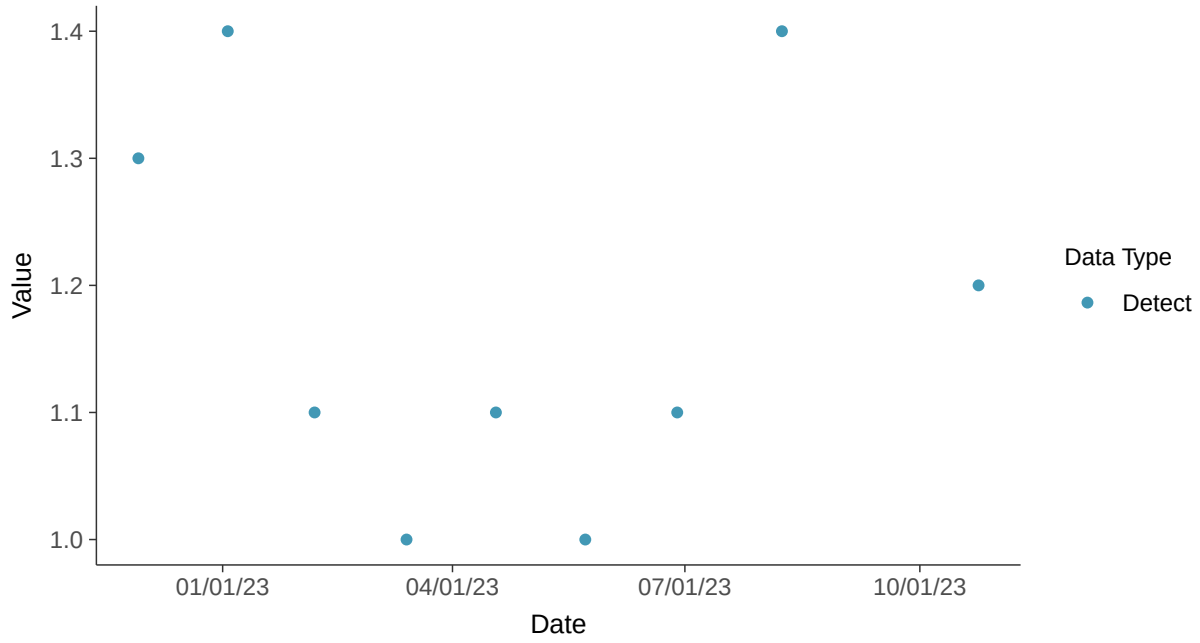


Appendix IV: Fluoride (App IV), MW-06

ID: 1_15_5_113

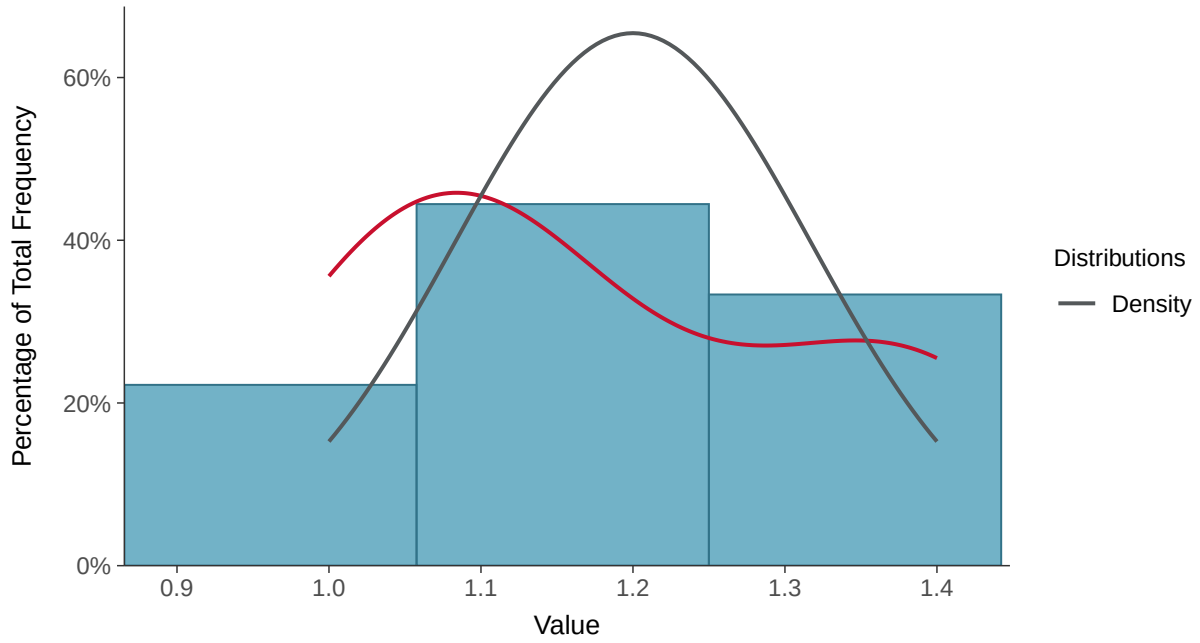
Scatter Plot

Fluoride (App IV), MW-06 (mg/L)



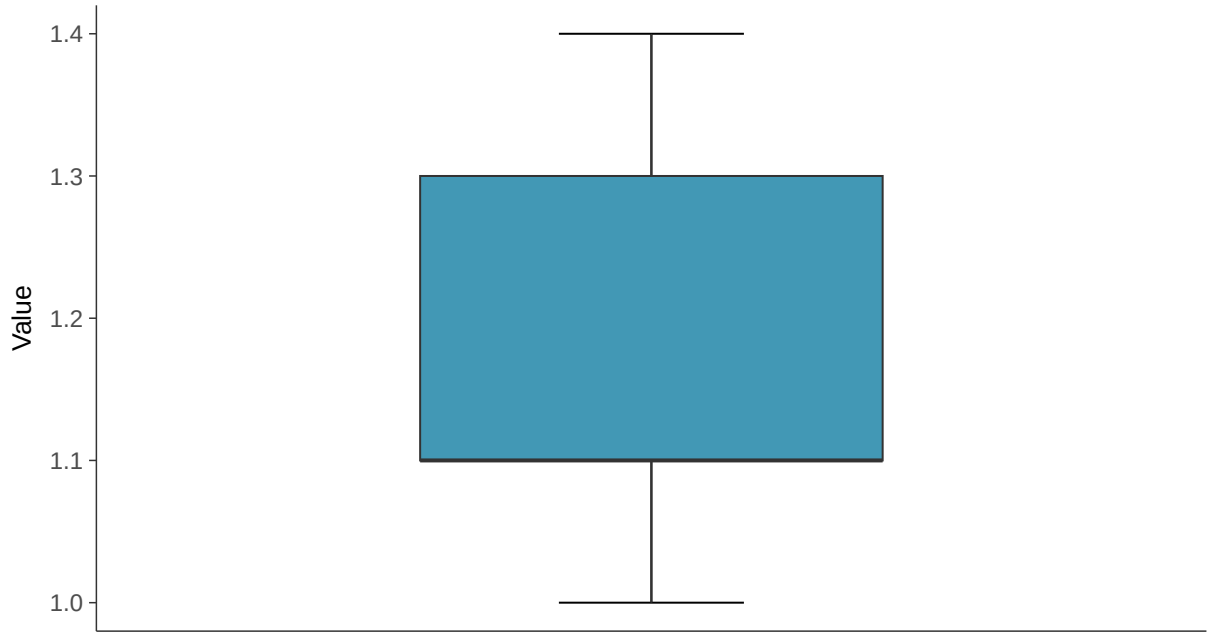
Histogram

Fluoride (App IV), MW-06 (mg/L)



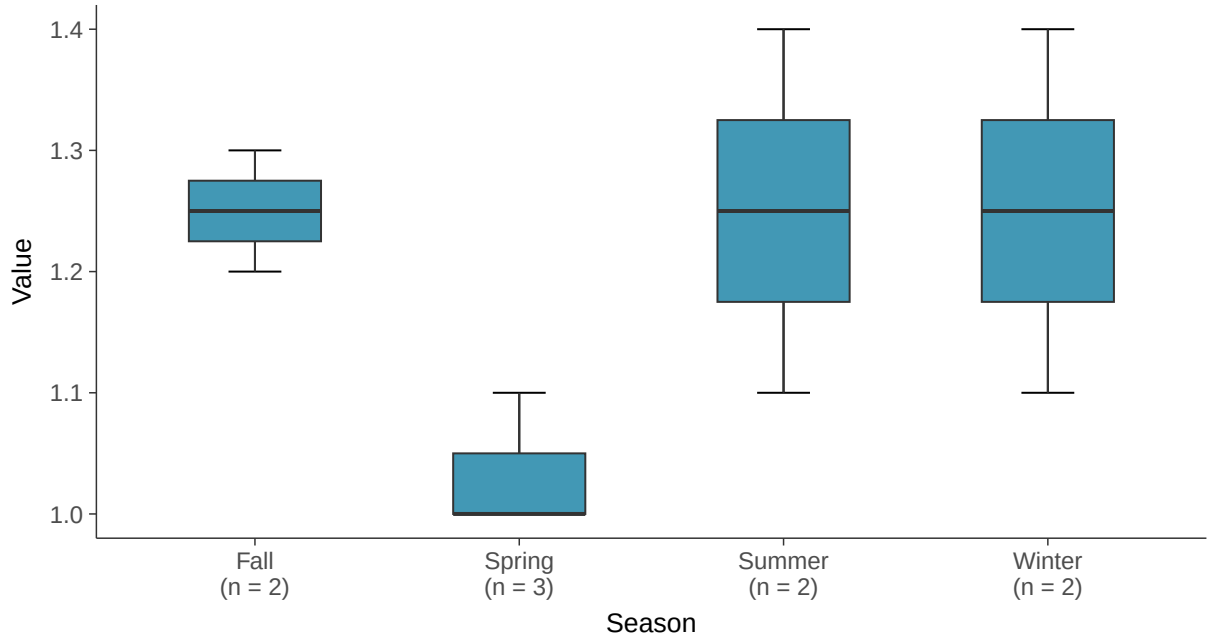
Boxplot

Fluoride (App IV), MW-06 (mg/L)



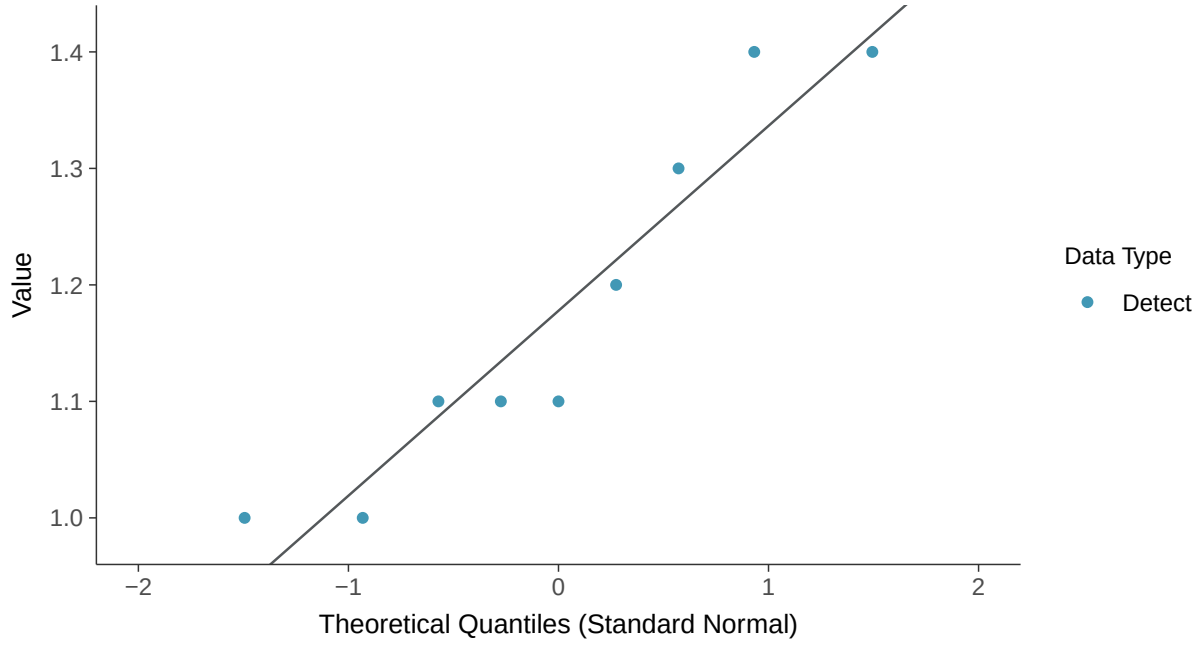
Boxplot by Season

Fluoride (App IV), MW-06 (mg/L)



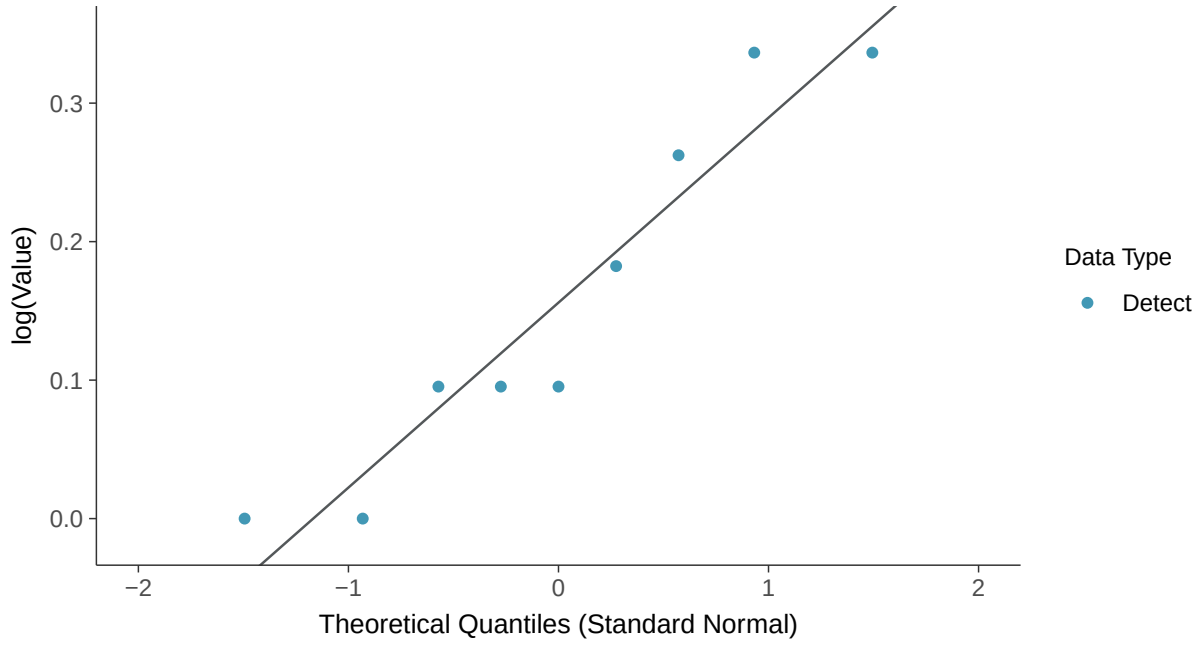
Normal Q-Q plot

Fluoride (App IV), MW-06 (mg/L)



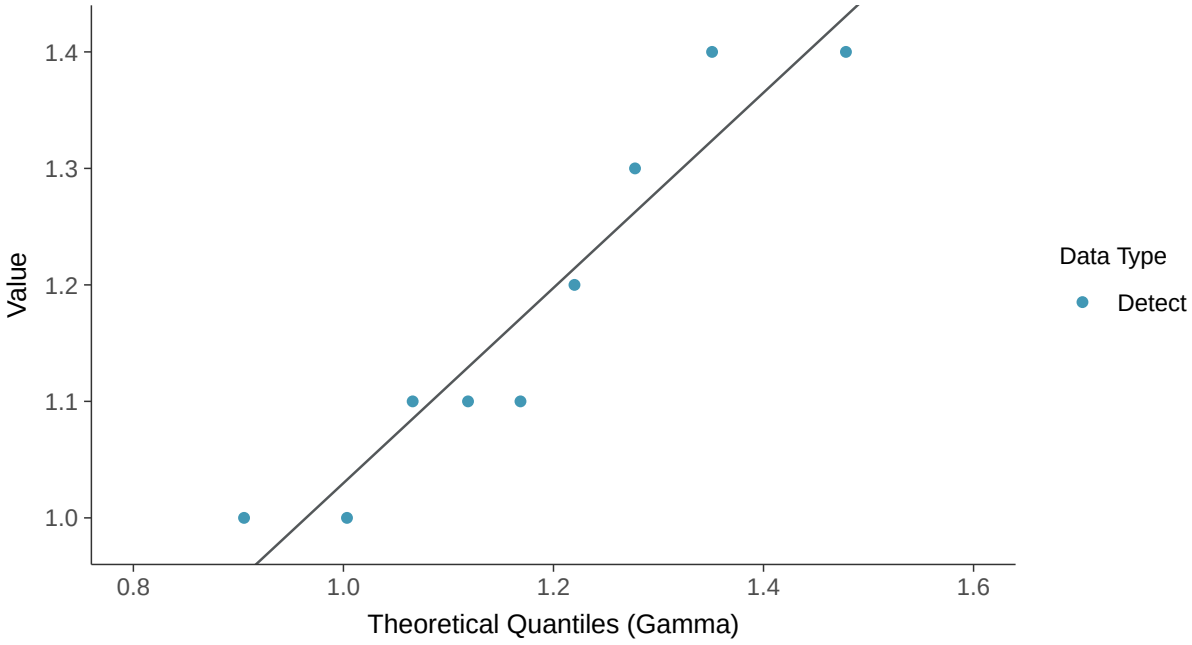
Lognormal Q-Q plot

Fluoride (App IV), MW-06 (mg/L)



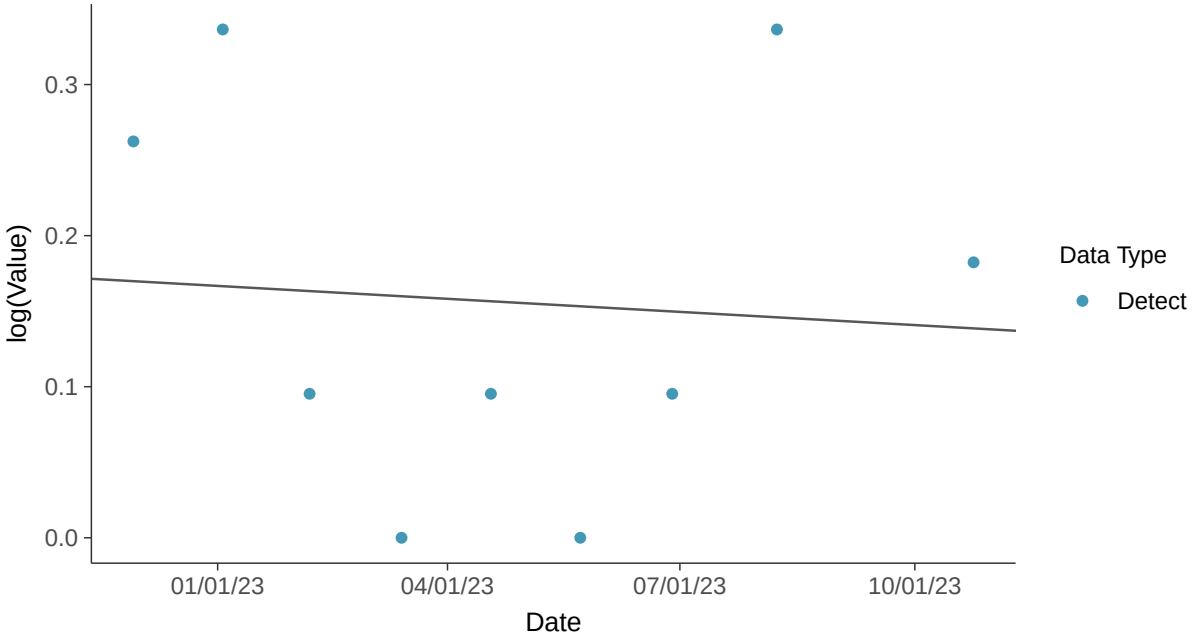
Gamma Q-Q plot

Fluoride (App IV), MW-06 (mg/L)



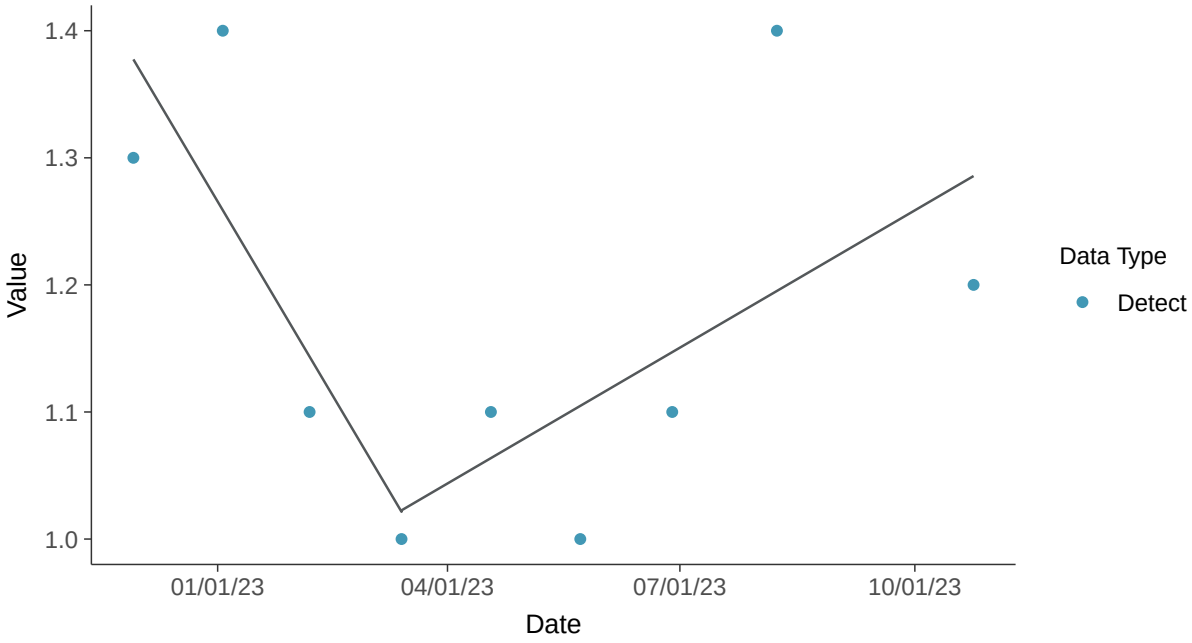
Trend Regression: Lognormal MLE

Fluoride (App IV), MW-06 (mg/L)



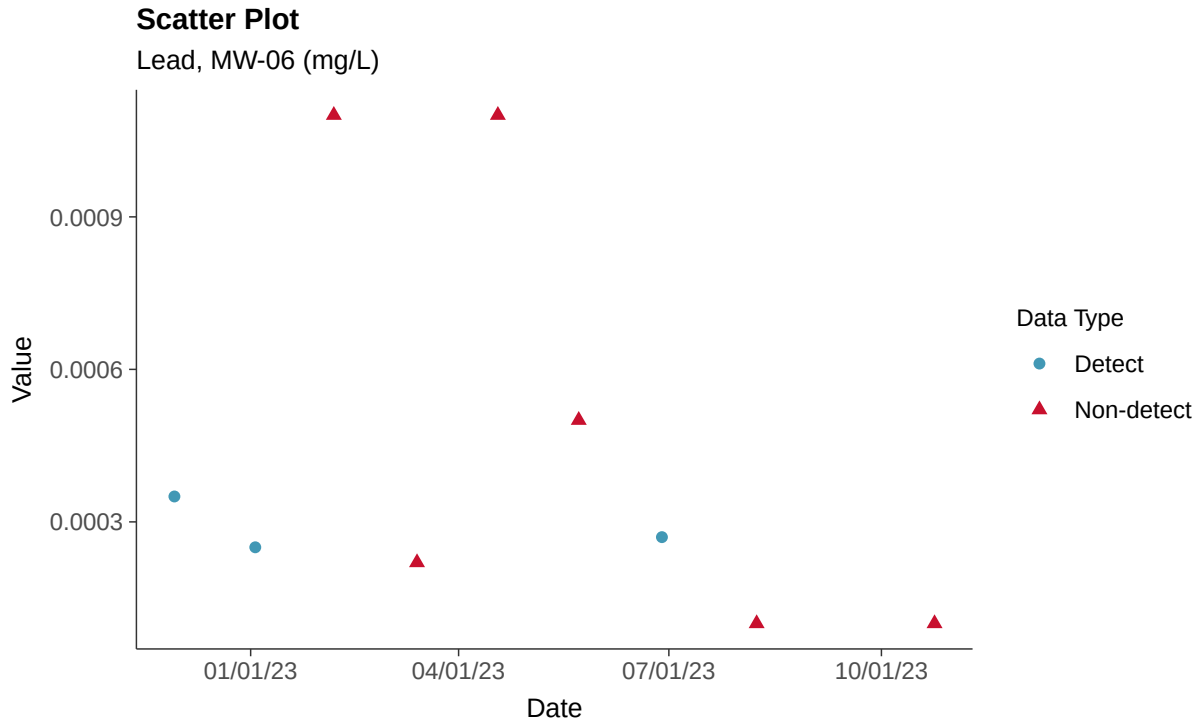
Trend Regression: Piecewise Linear-Linear

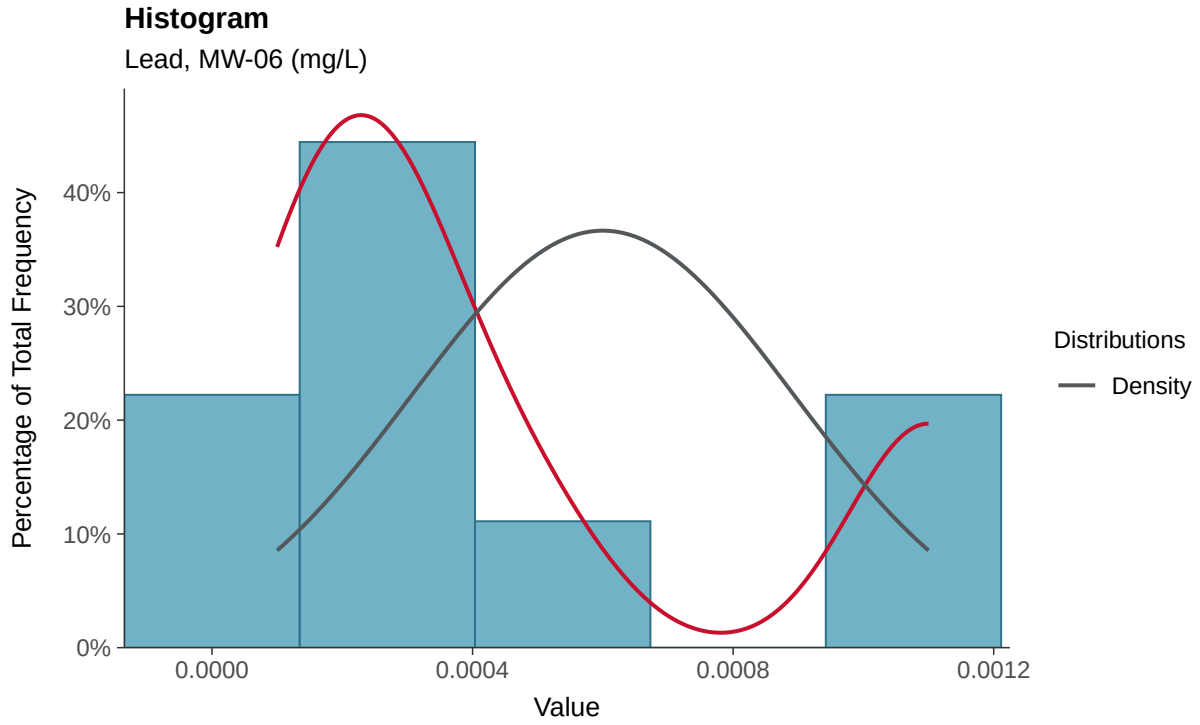
Fluoride (App IV), MW-06 (mg/L)



Appendix IV: Lead, MW-06

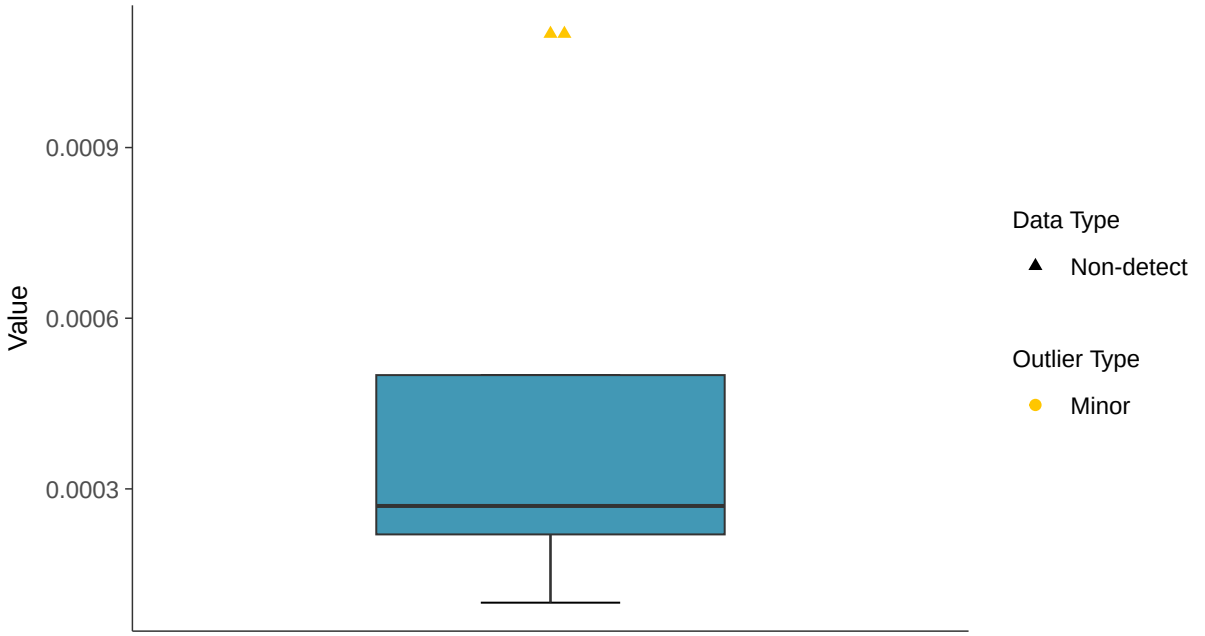
ID: 1_15_5_115





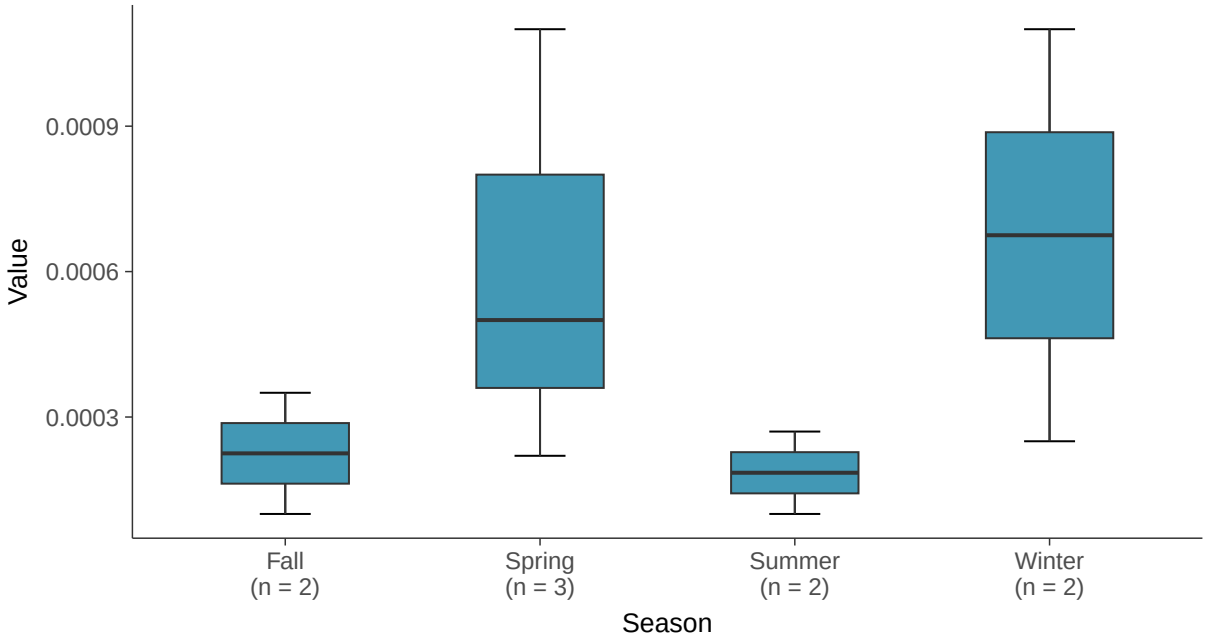
Boxplot

Lead, MW-06 (mg/L)



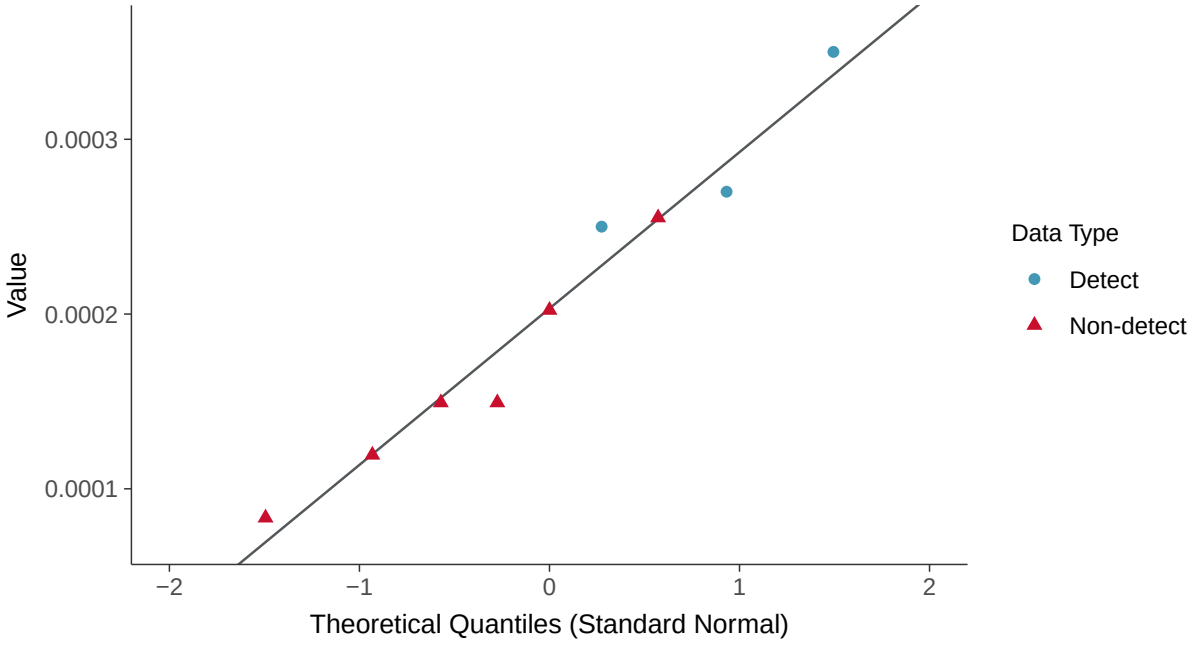
Boxplot by Season

Lead, MW-06 (mg/L)



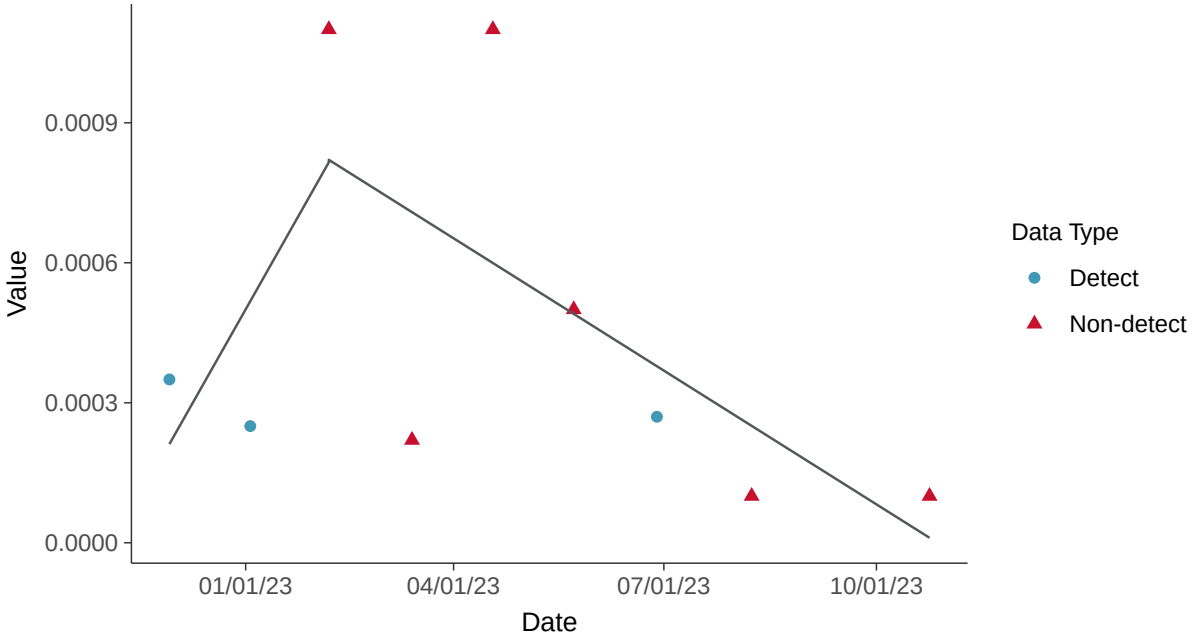
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-06 (mg/L)



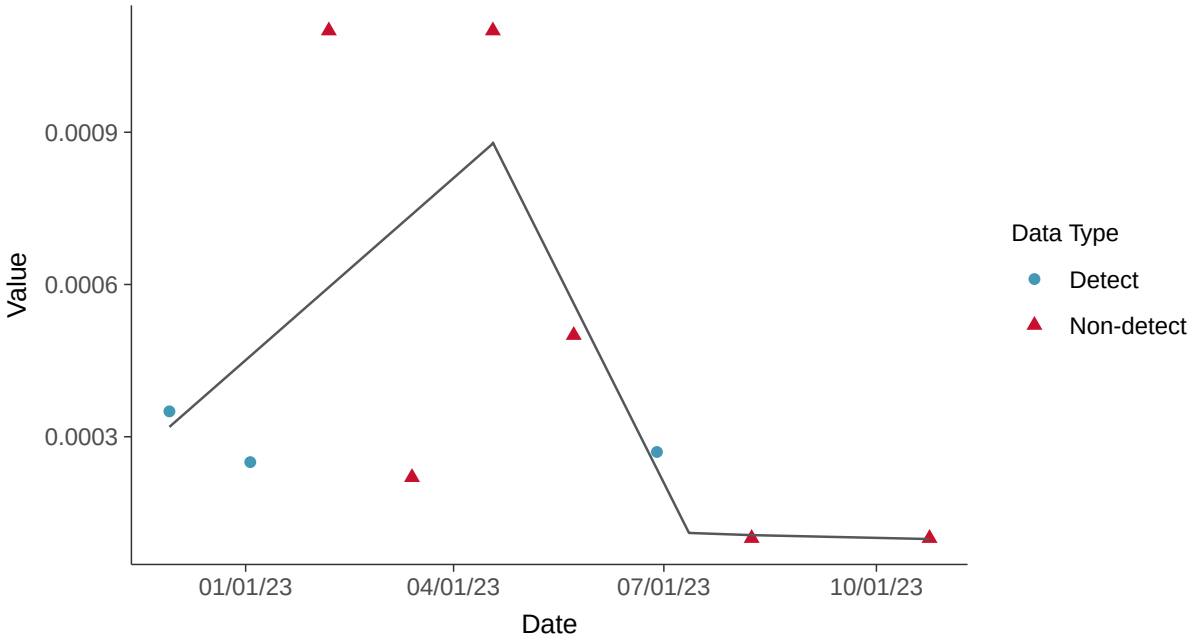
Trend Regression: Piecewise Linear-Linear

Lead, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-06 (mg/L)

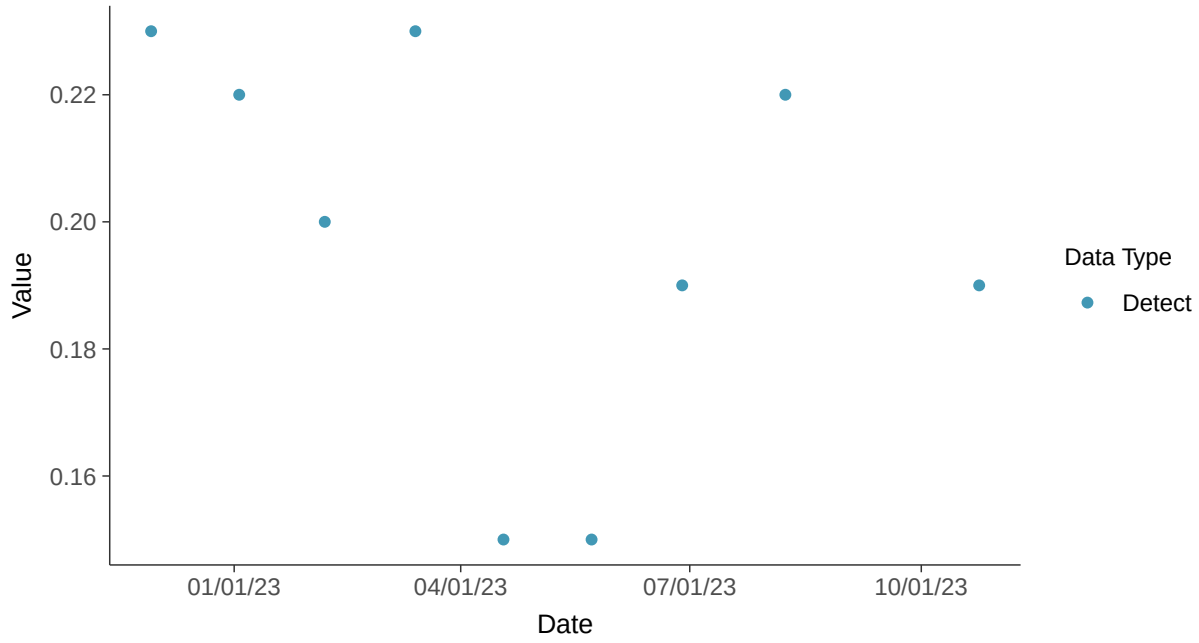


Appendix IV: Lithium, MW-06

ID: 1_15_5_116

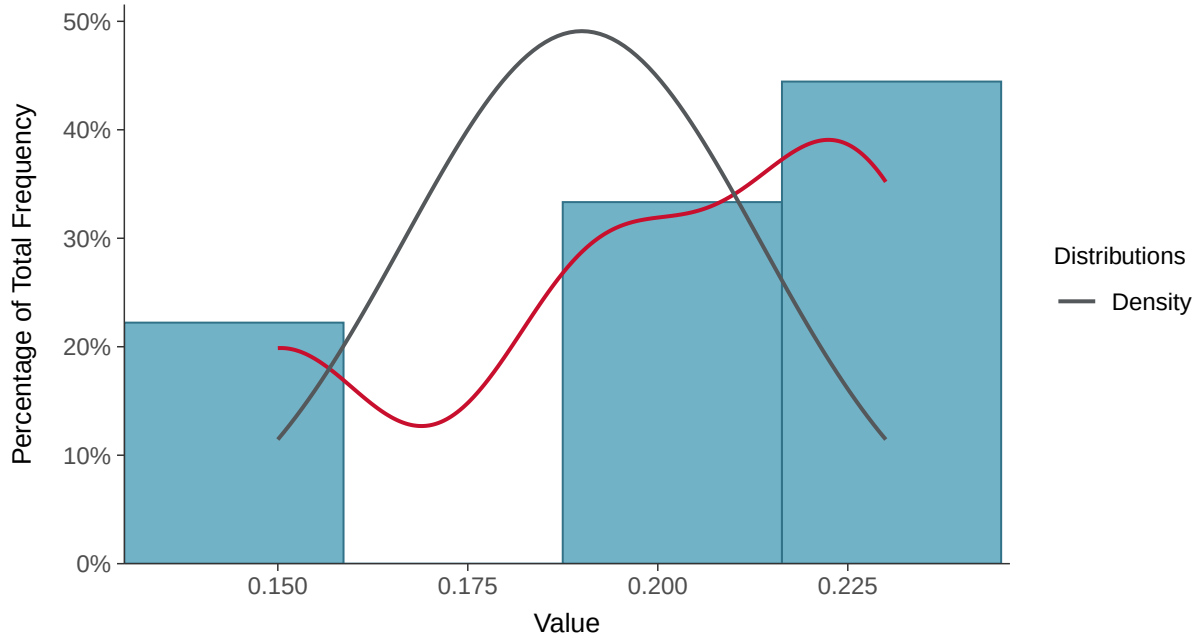
Scatter Plot

Lithium, MW-06 (mg/L)



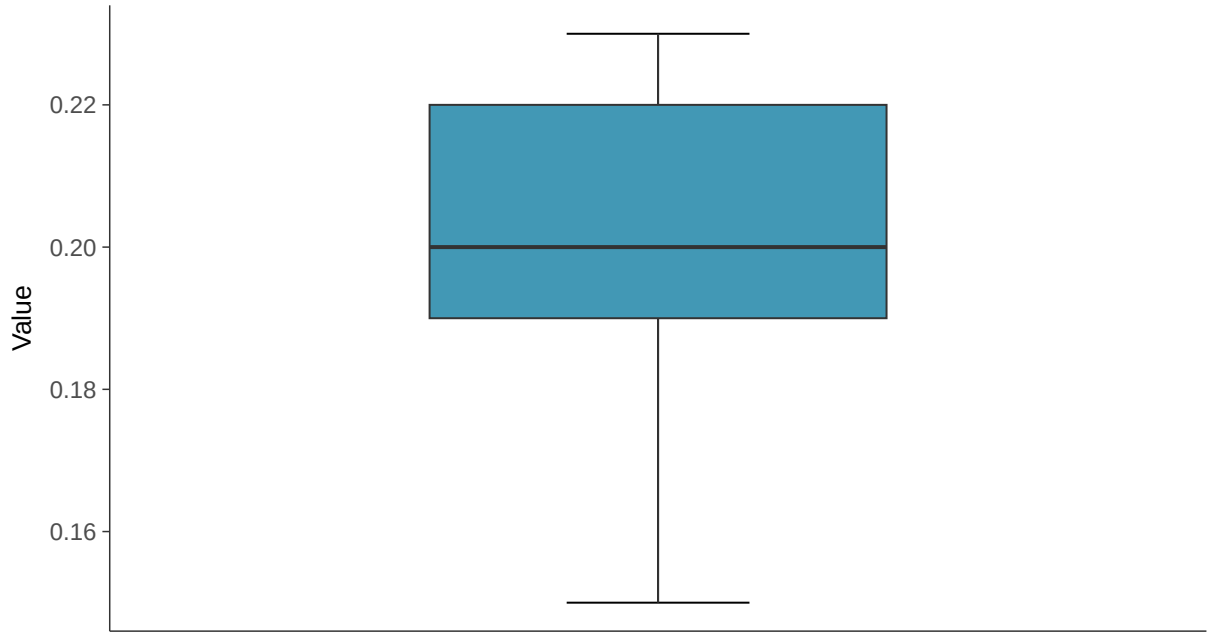
Histogram

Lithium, MW-06 (mg/L)



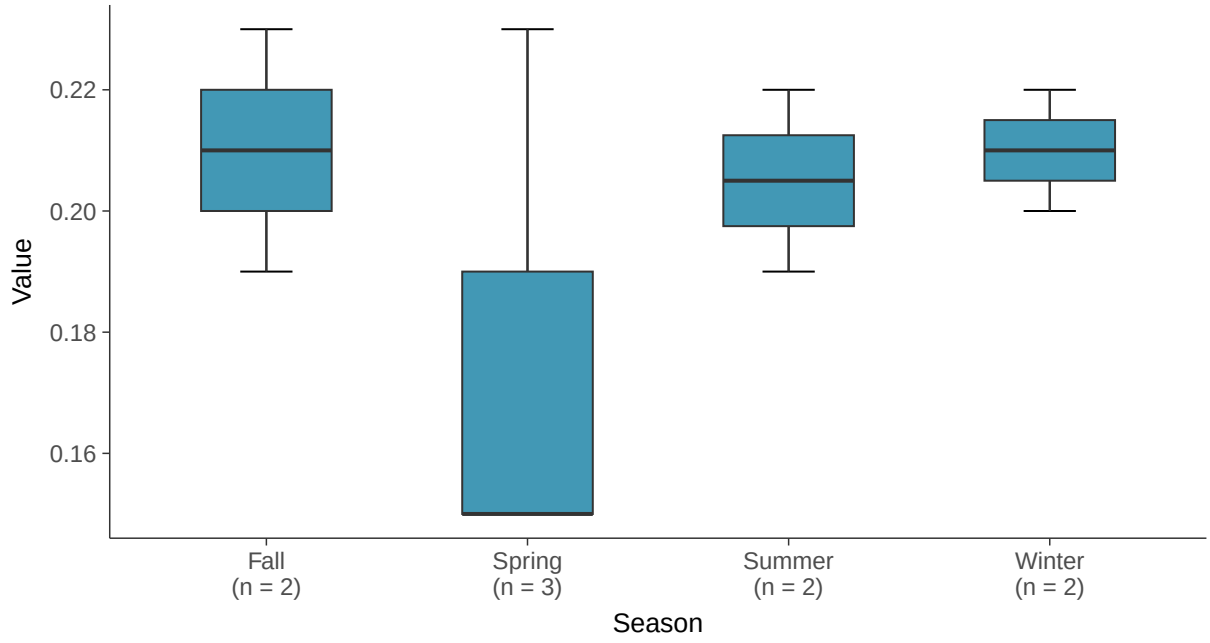
Boxplot

Lithium, MW-06 (mg/L)



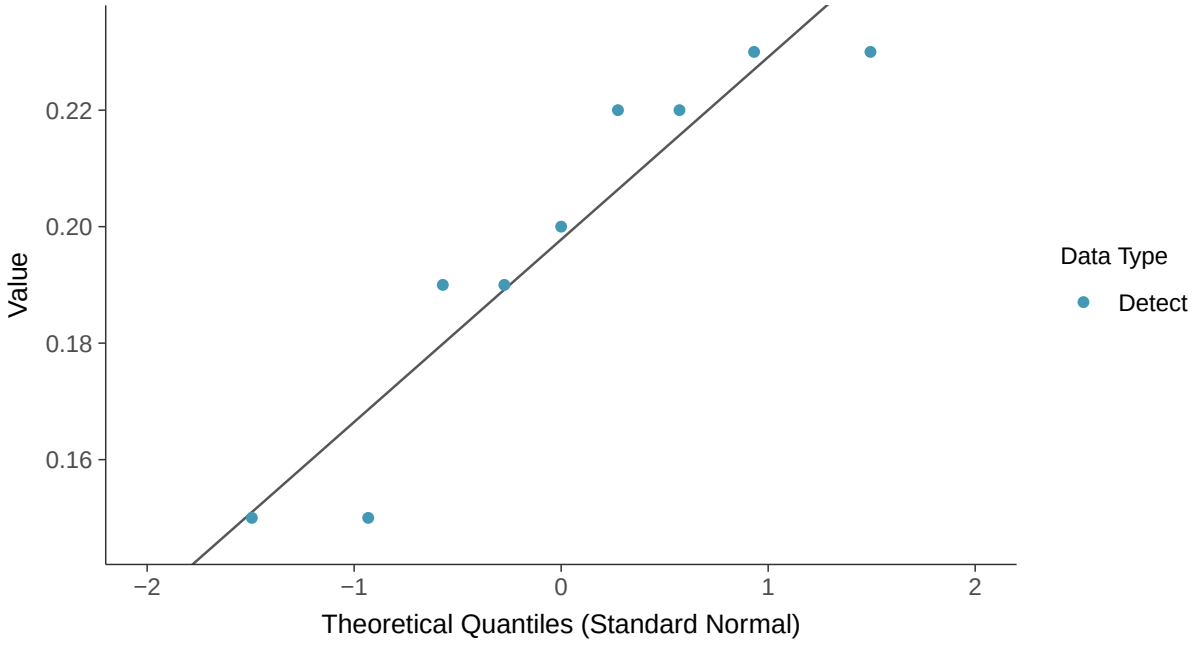
Boxplot by Season

Lithium, MW-06 (mg/L)



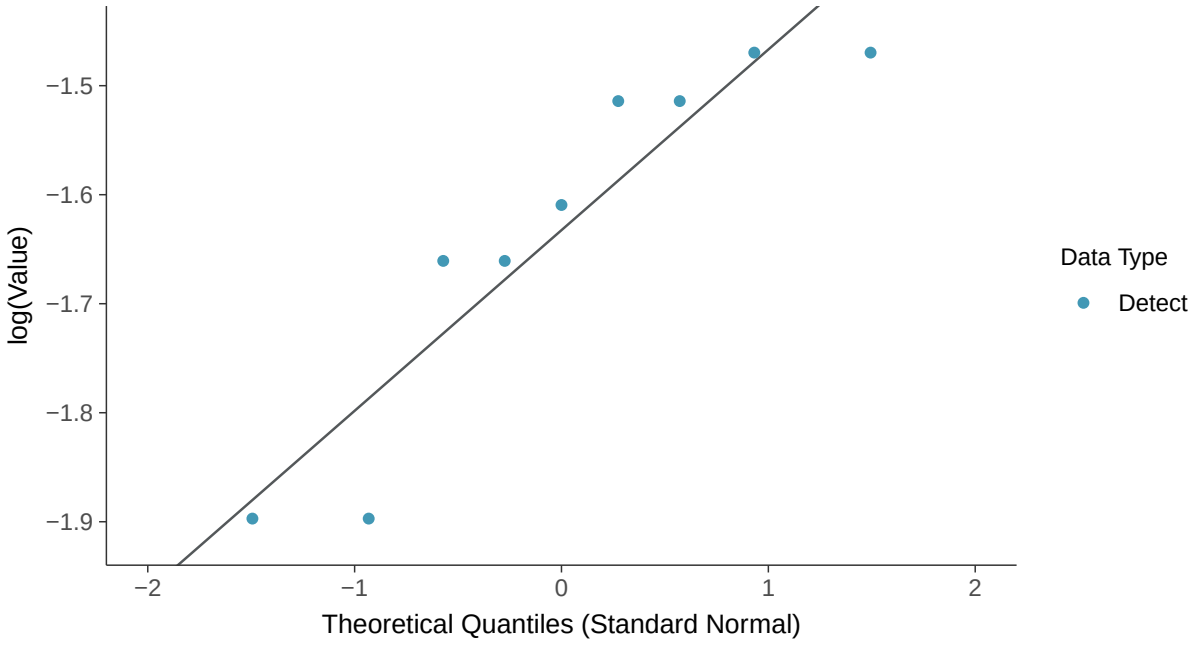
Normal Q-Q plot

Lithium, MW-06 (mg/L)



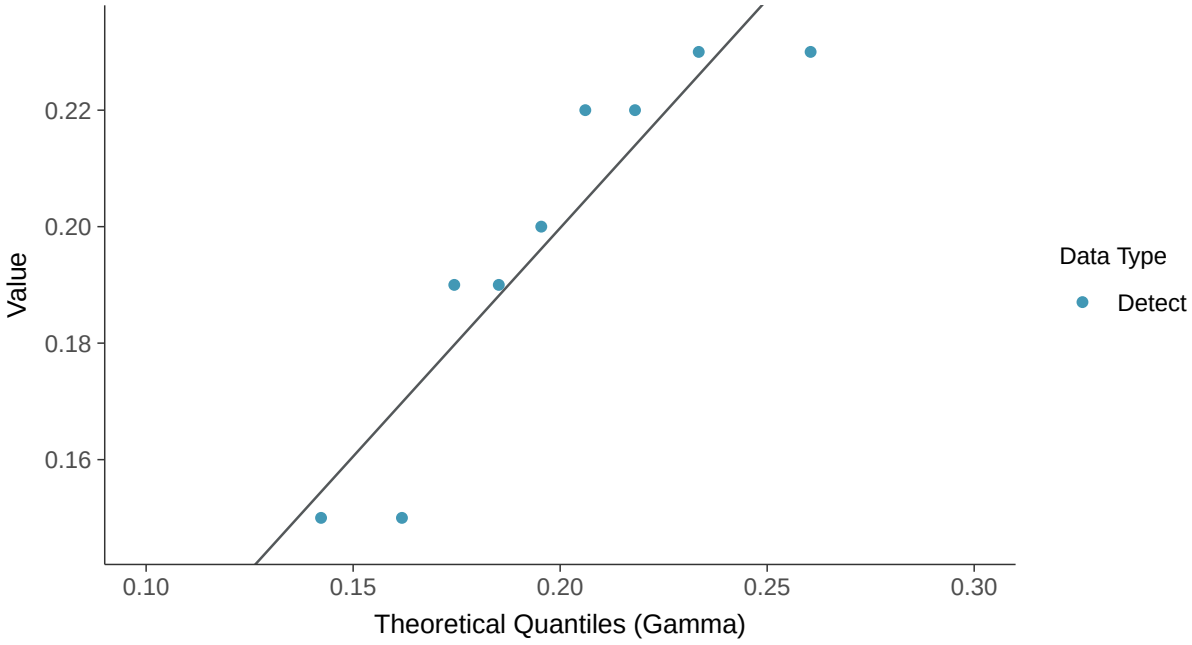
Lognormal Q-Q plot

Lithium, MW-06 (mg/L)



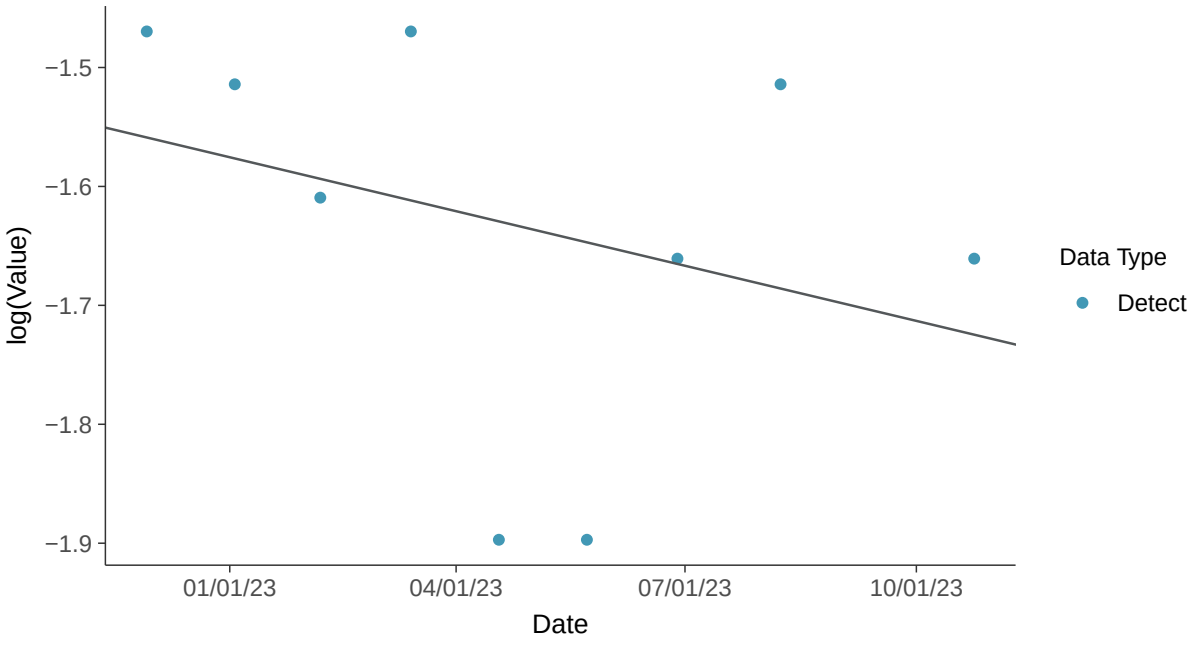
Gamma Q-Q plot

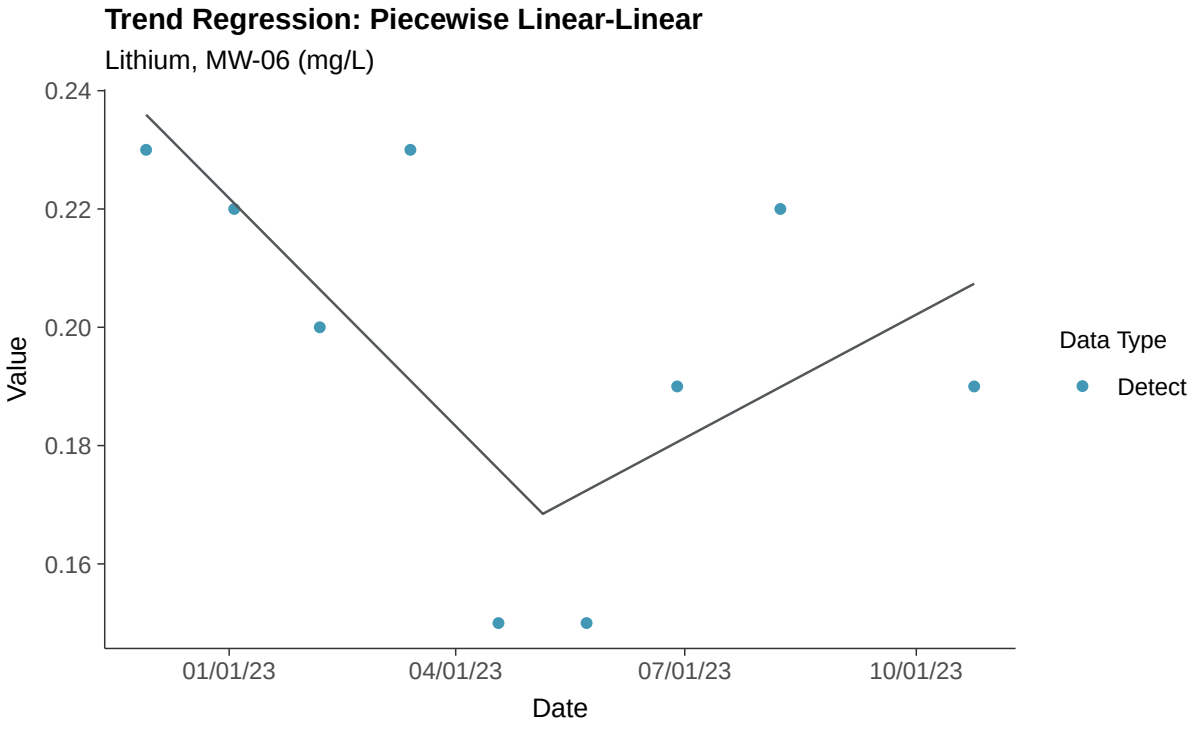
Lithium, MW-06 (mg/L)



Trend Regression: Lognormal MLE

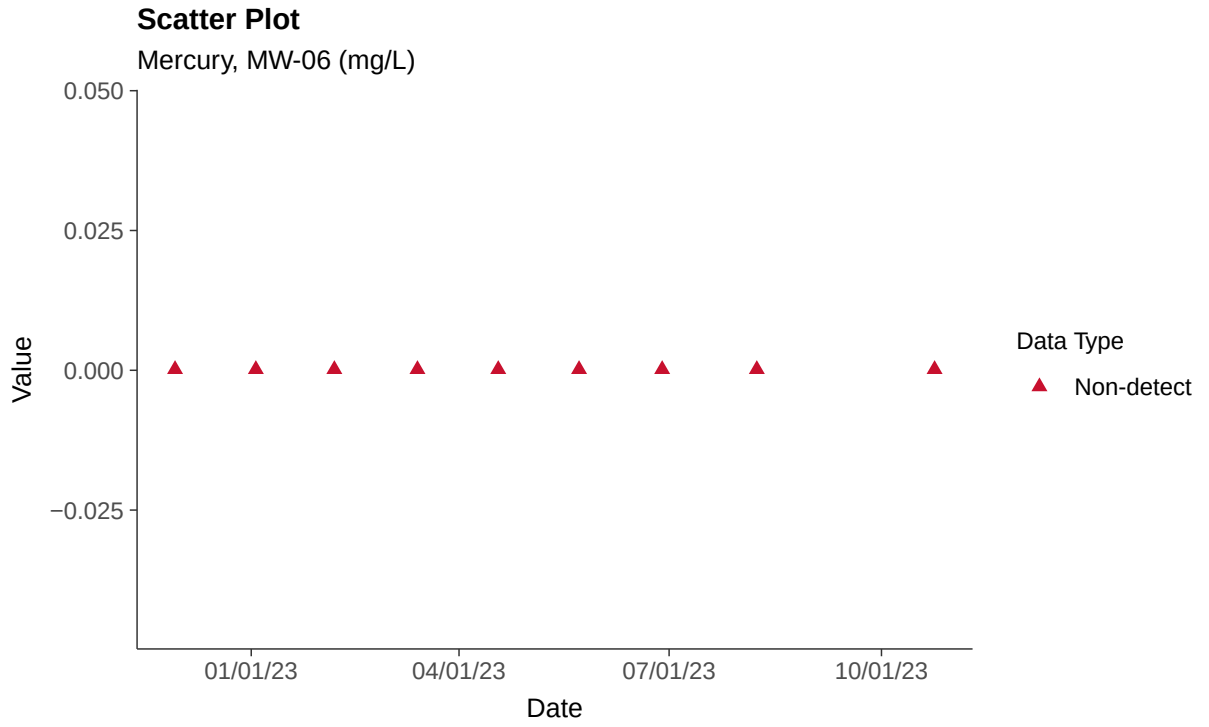
Lithium, MW-06 (mg/L)

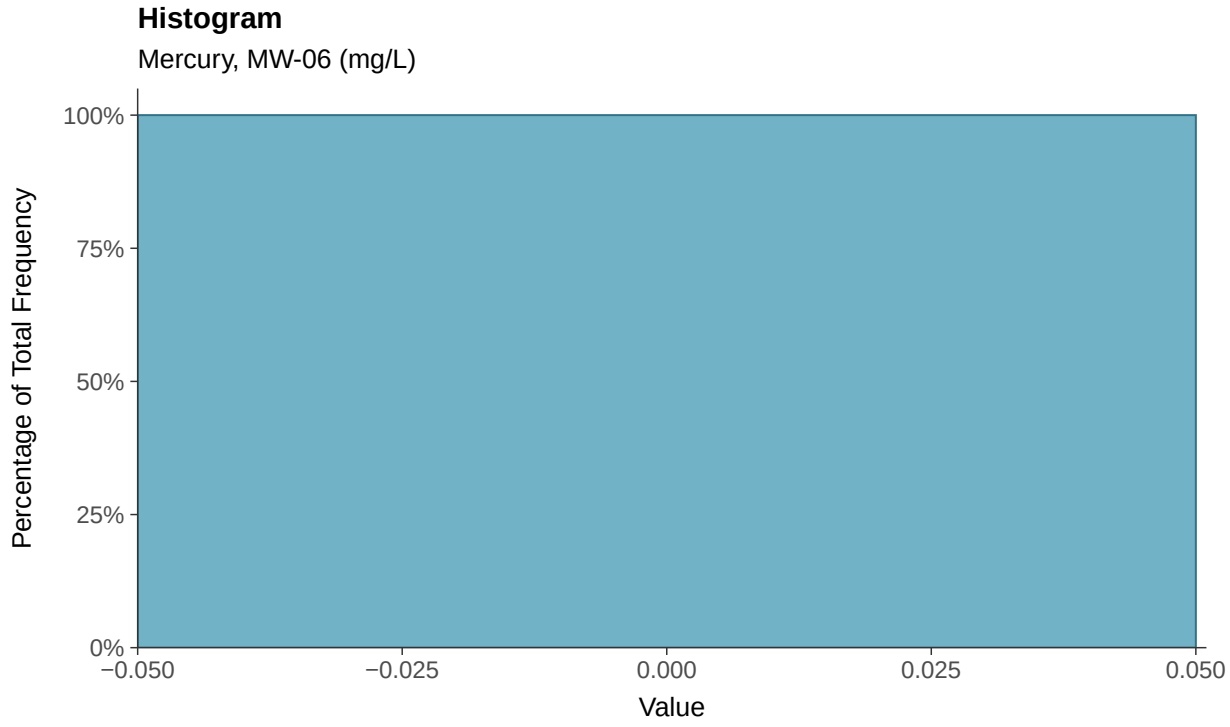



Trend Regression: Piecewise Linear-Linear
Lithium, MW-06 (mg/L)
0.24
0.22
0.20
0.18
0.16
Value
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect

Appendix IV: Mercury, MW-06

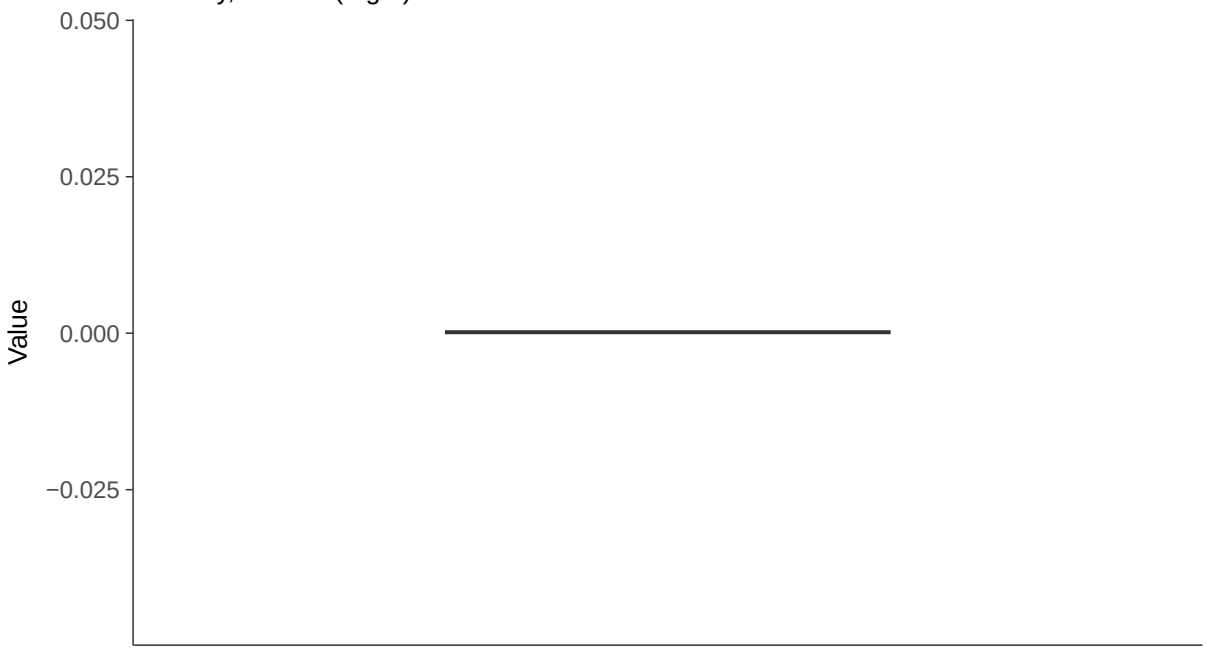
ID: 1_15_5_117





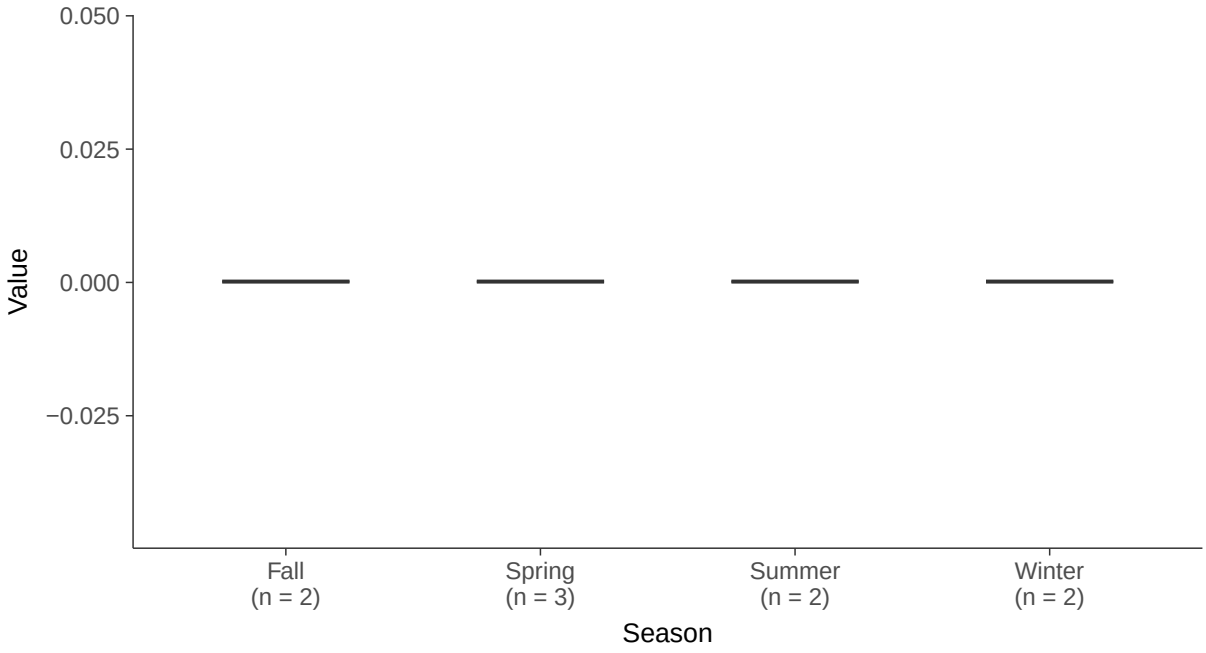
Boxplot

Mercury, MW-06 (mg/L)



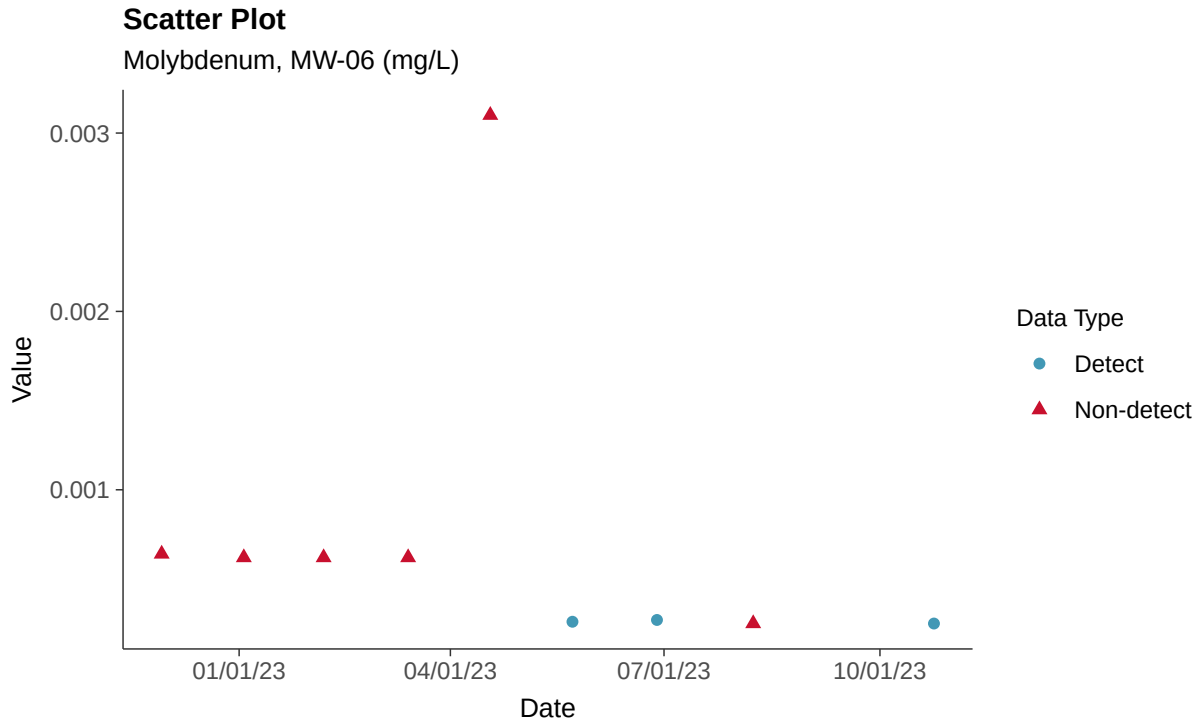
Boxplot by Season

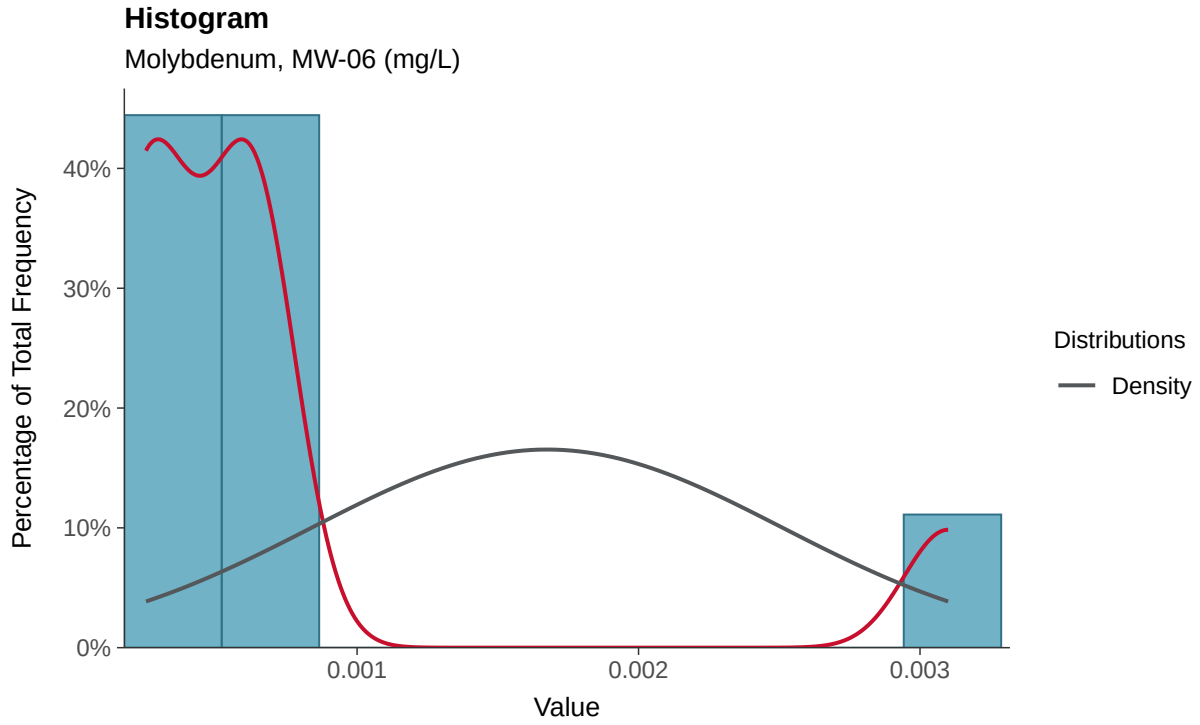
Mercury, MW-06 (mg/L)



Appendix IV: Molybdenum, MW-06

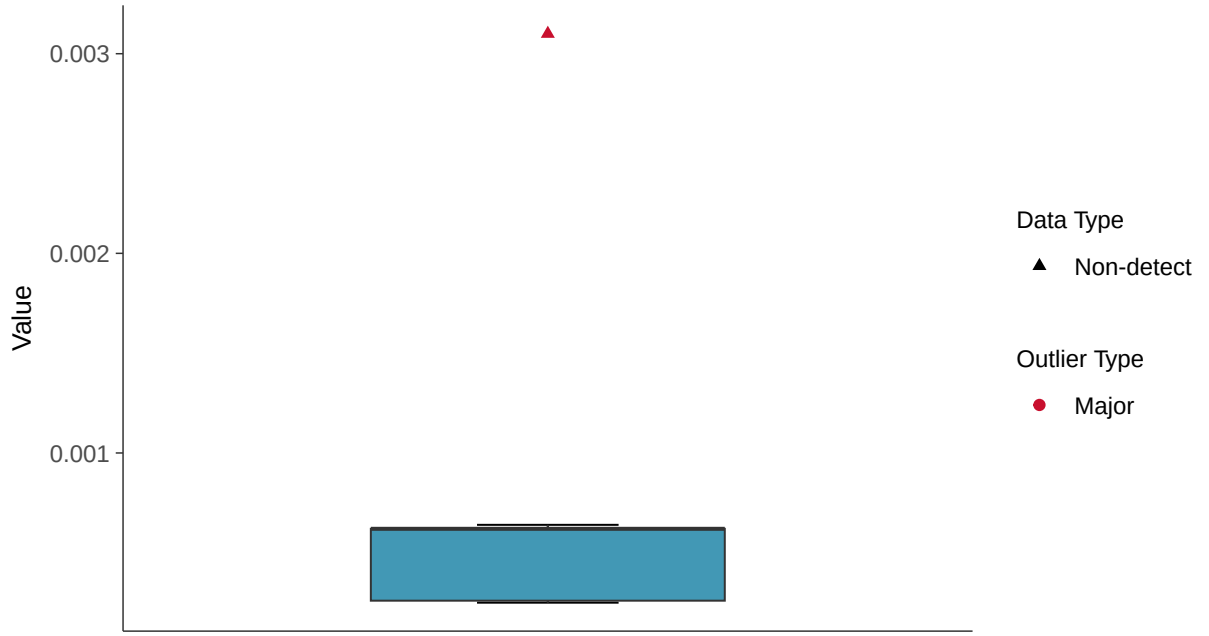
ID: 1_15_5_118





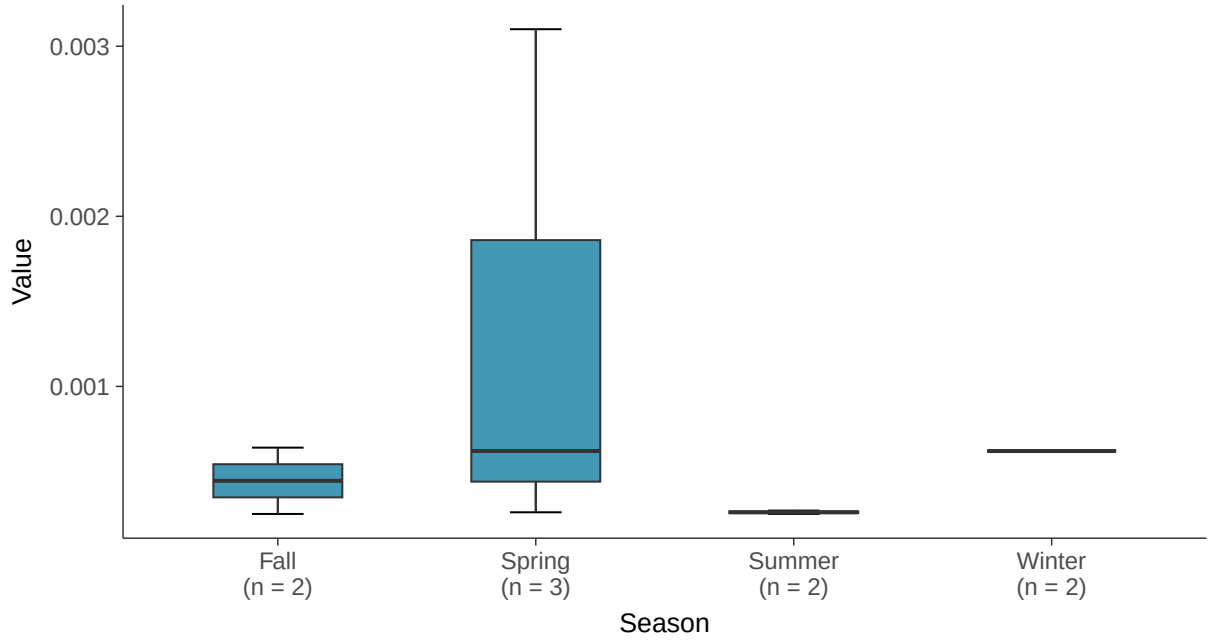
Boxplot

Molybdenum, MW-06 (mg/L)



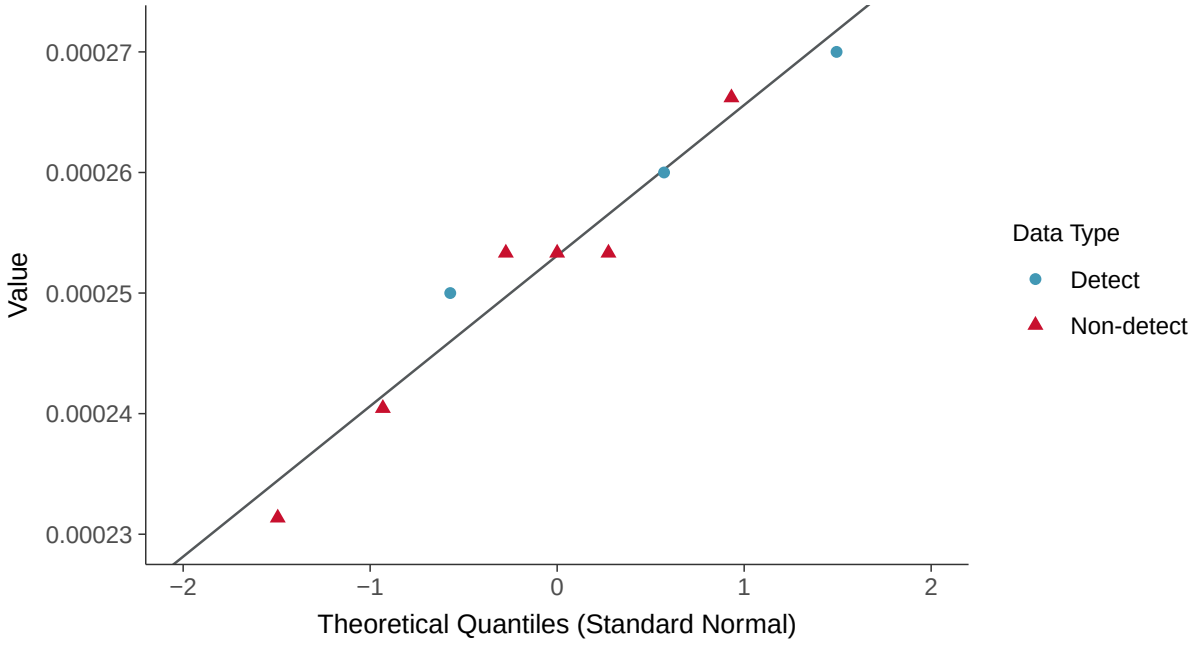
Boxplot by Season

Molybdenum, MW-06 (mg/L)



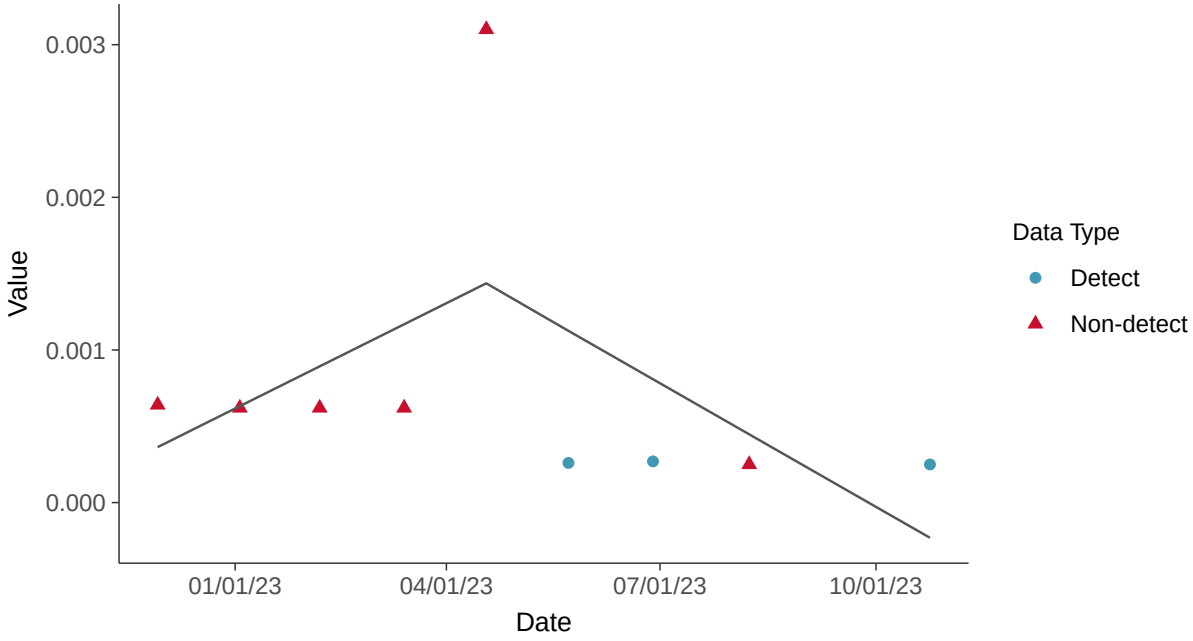
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-06 (mg/L)



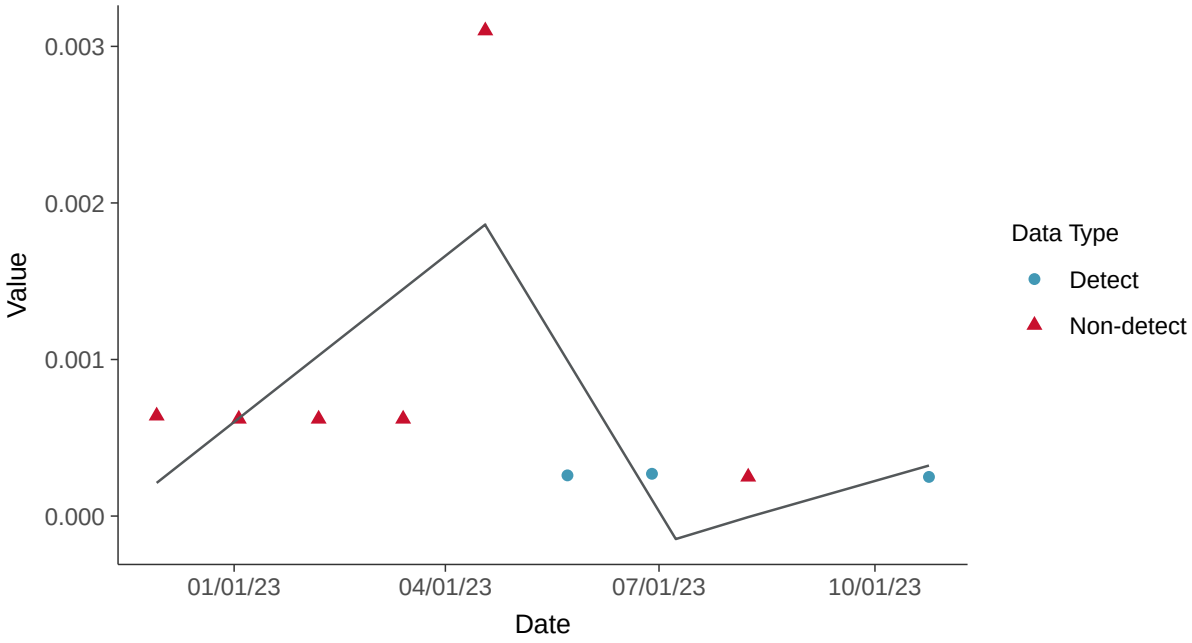
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-06 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-06 (mg/L)

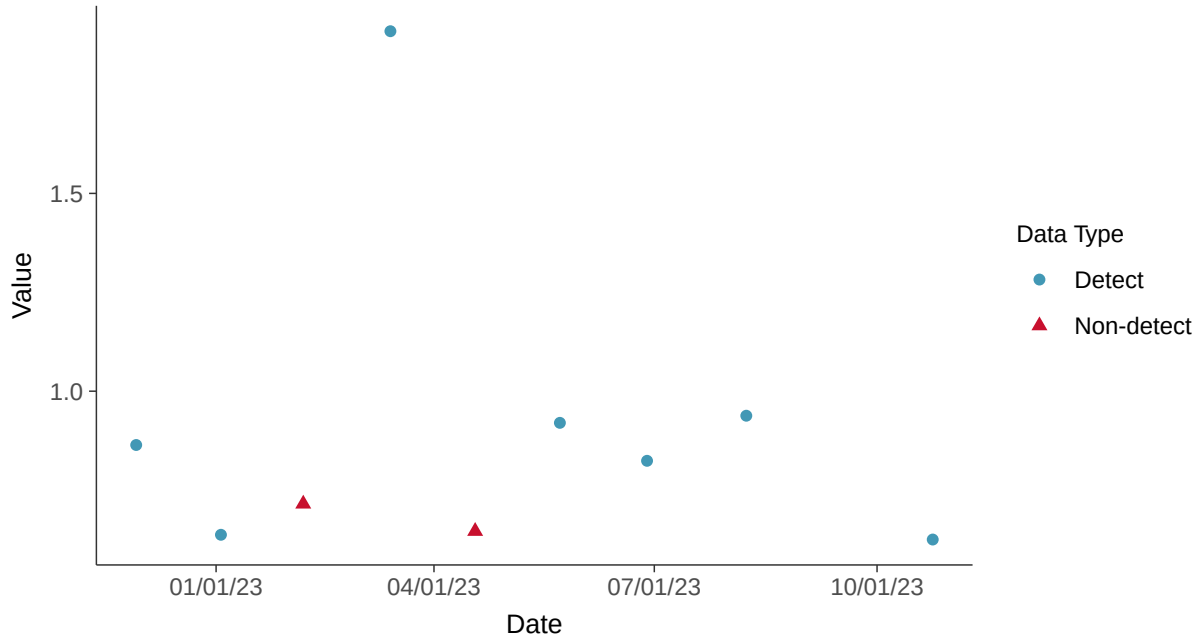


Appendix IV: Radium 226 and 228, MW-06

ID: 1_15_5_121

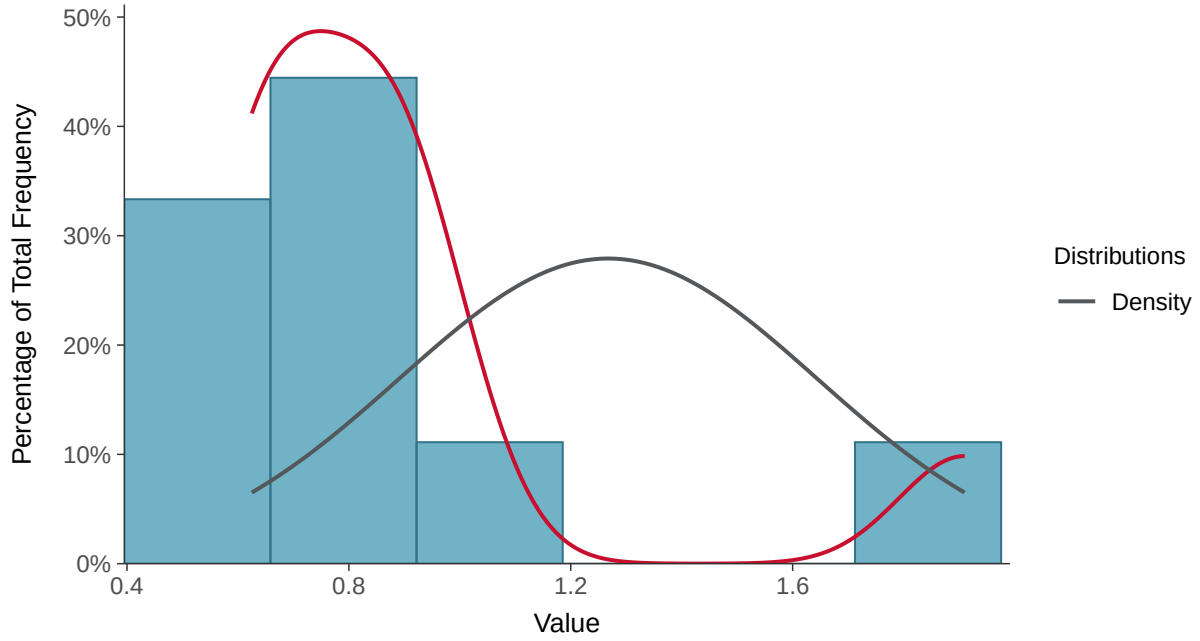
Scatter Plot

Radium 226 and 228, MW-06 (pCi/L)



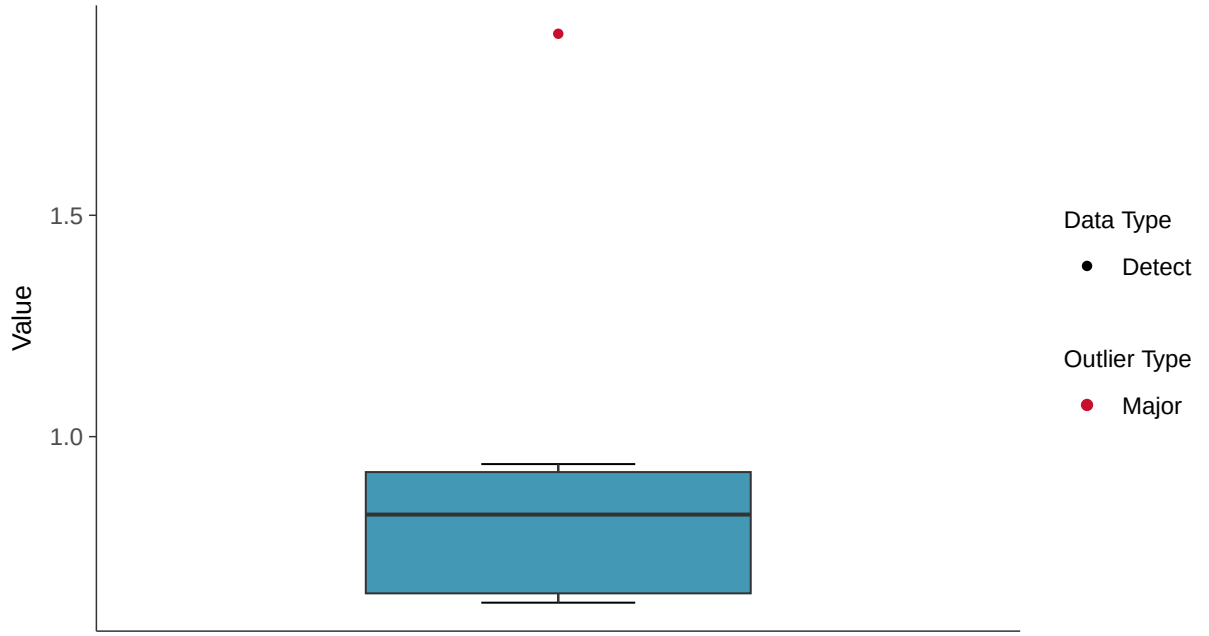
Histogram

Radium 226 and 228, MW-06 (pCi/L)



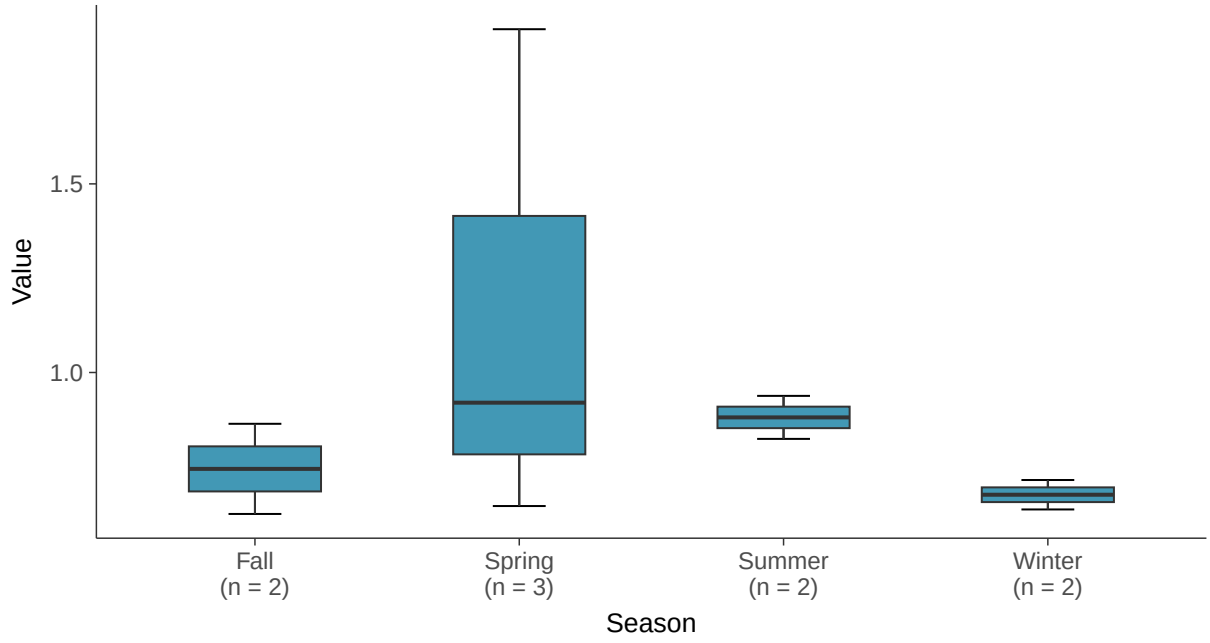
Boxplot

Radium 226 and 228, MW-06 (pCi/L)



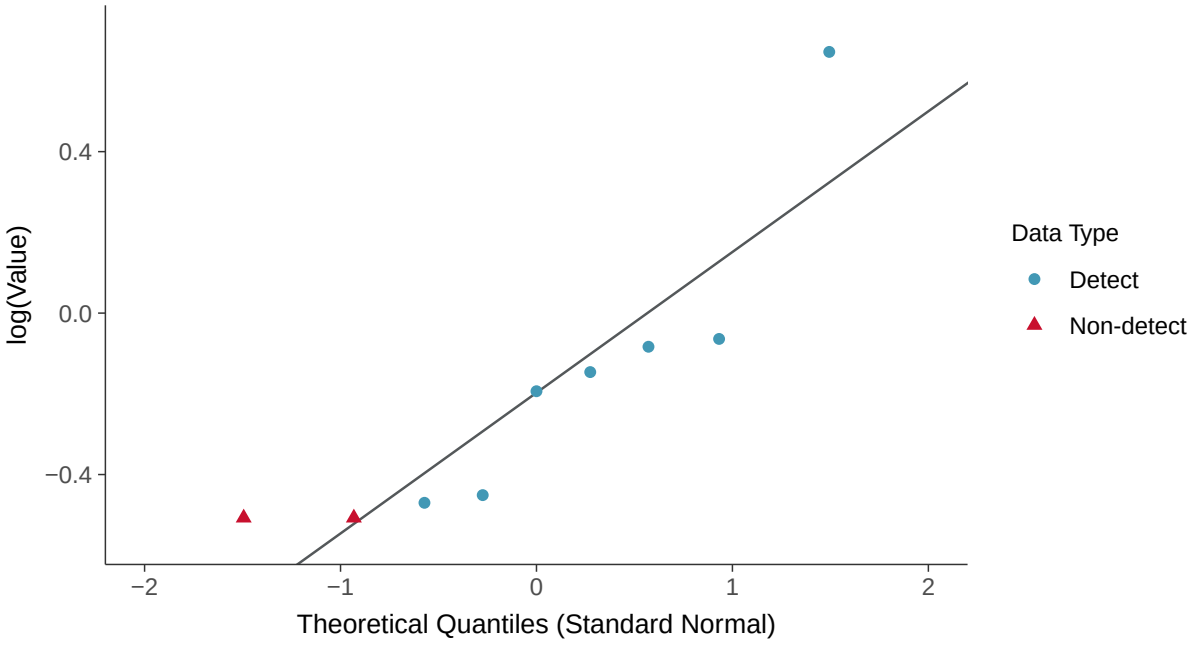
Boxplot by Season

Radium 226 and 228, MW-06 (pCi/L)



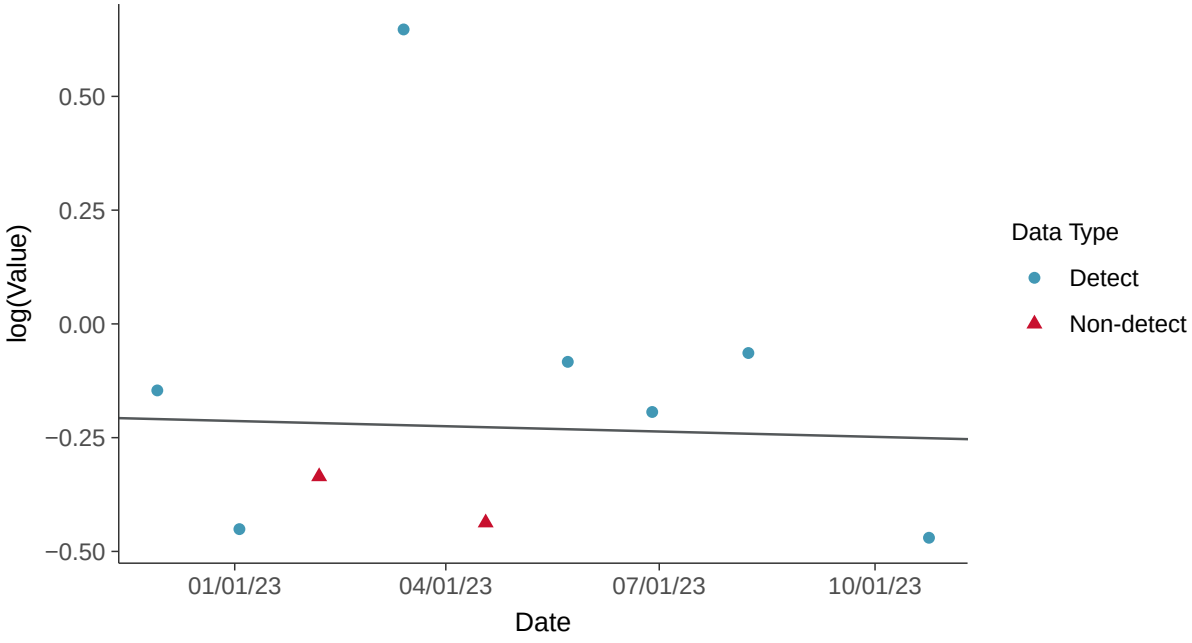
Lognormal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-06 (pCi/L)



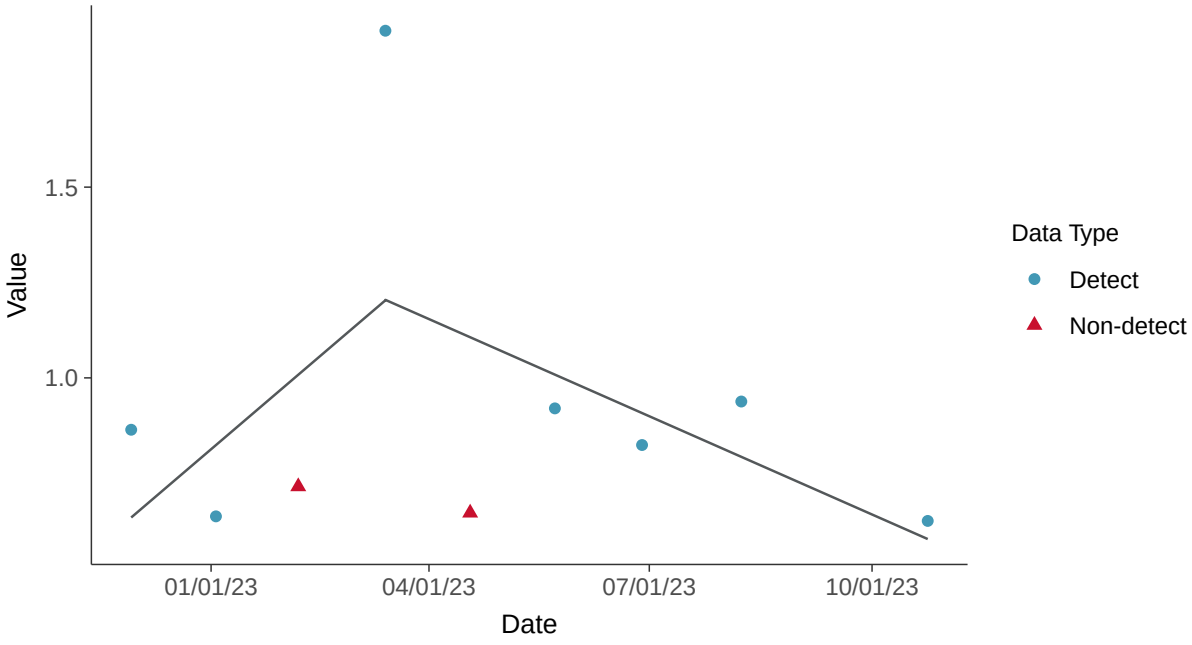
Trend Regression: Lognormal MLE

Radium 226 and 228, MW-06 (pCi/L)



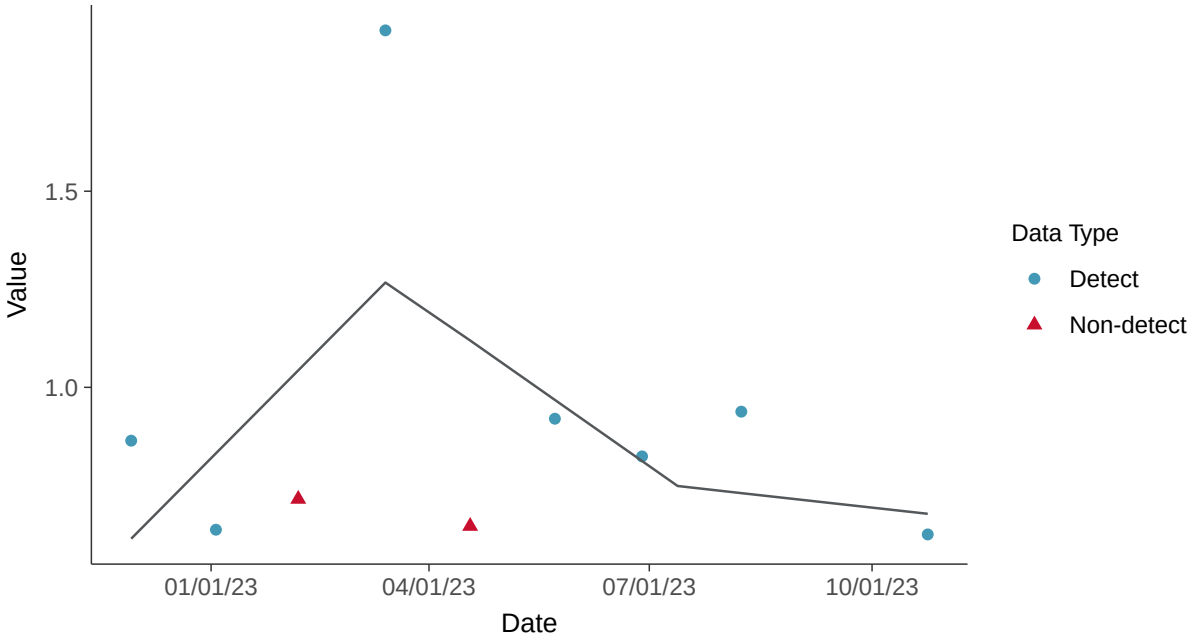
Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-06 (pCi/L)



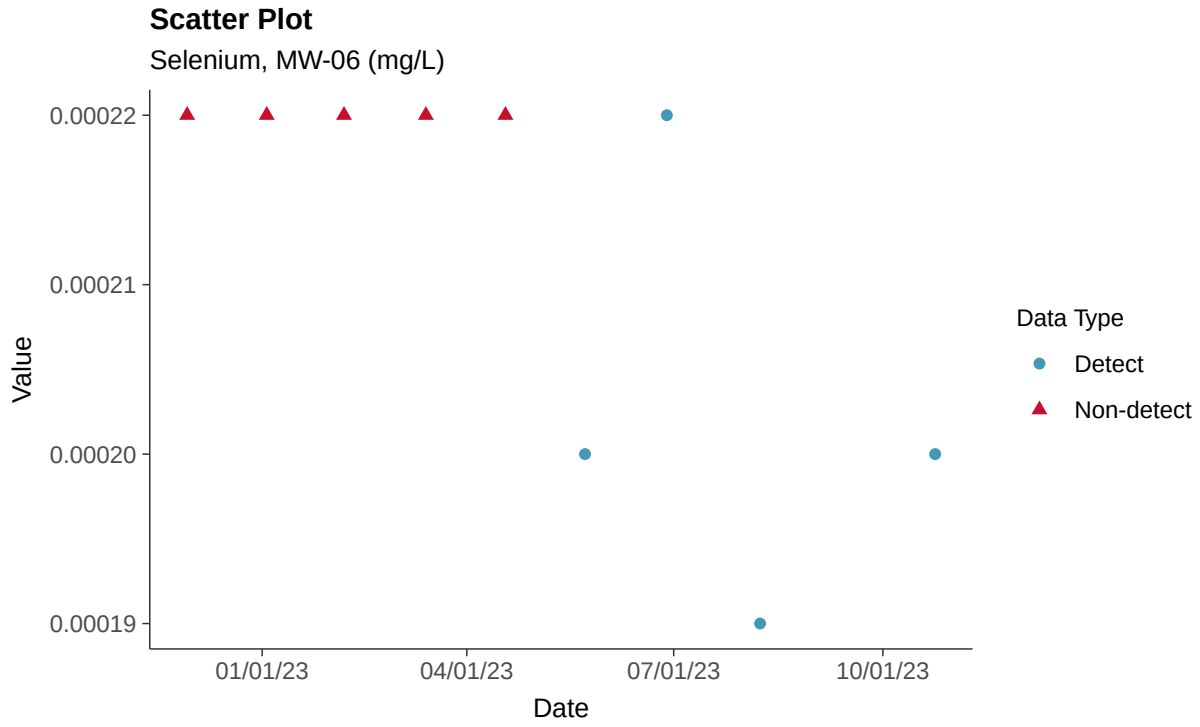
Trend Regression: Piecewise Linear-Linear-Linear

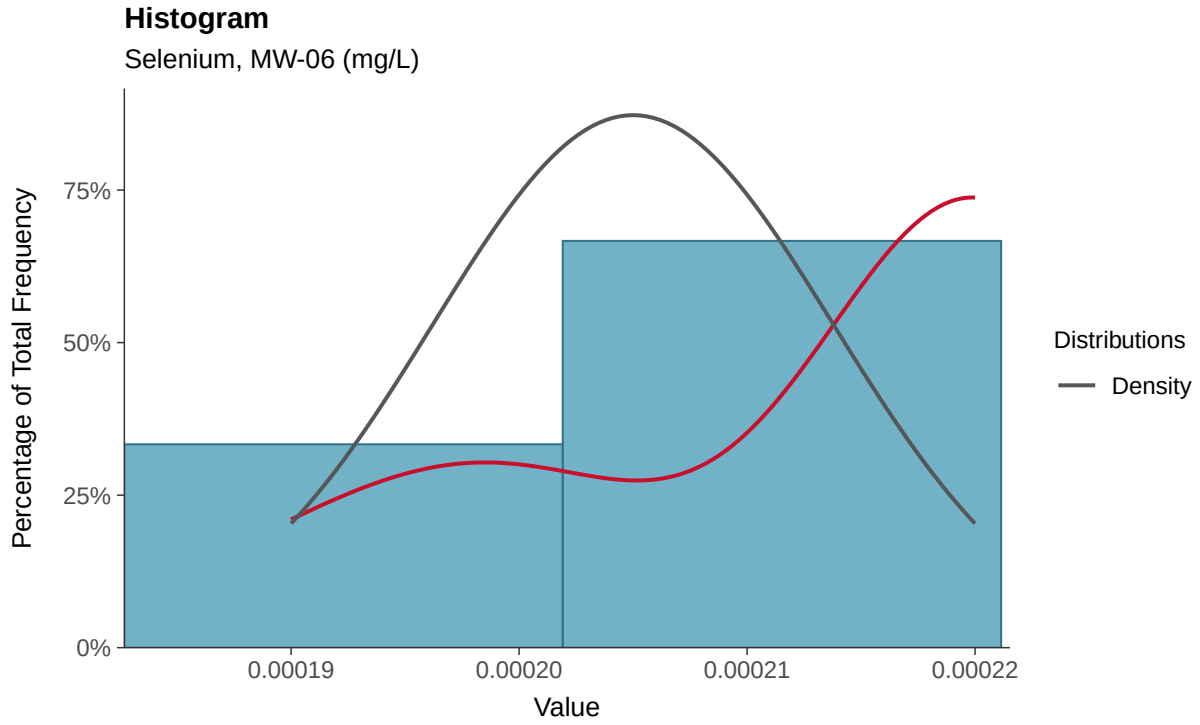
Radium 226 and 228, MW-06 (pCi/L)



Appendix IV: Selenium, MW-06

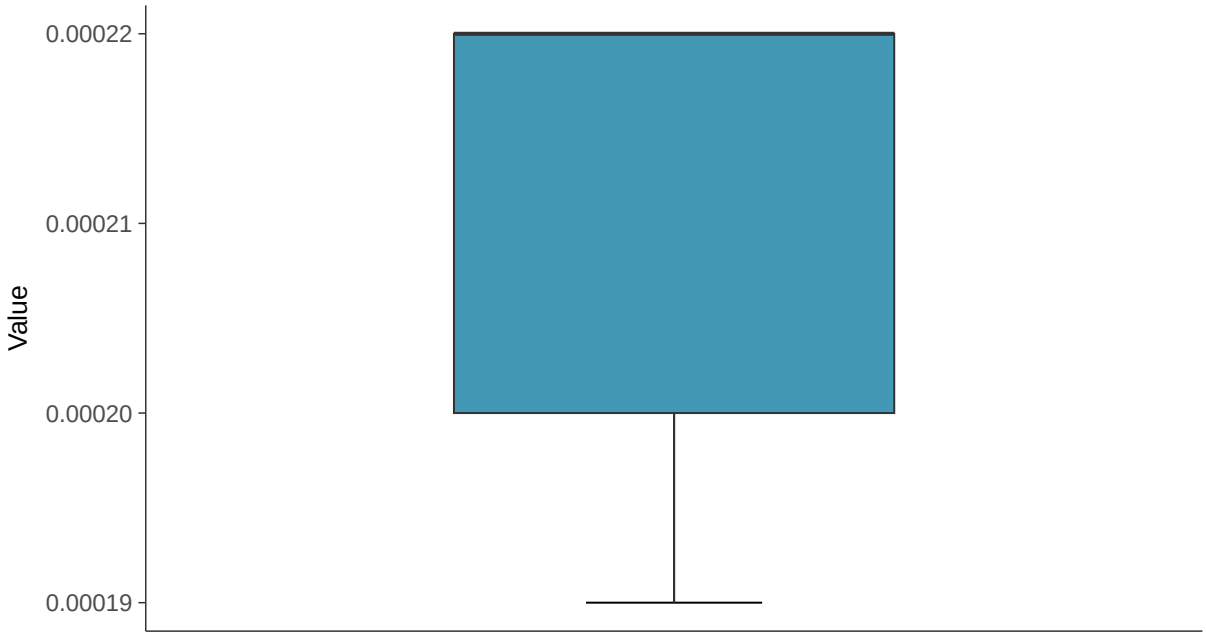
ID: 1_15_5_122





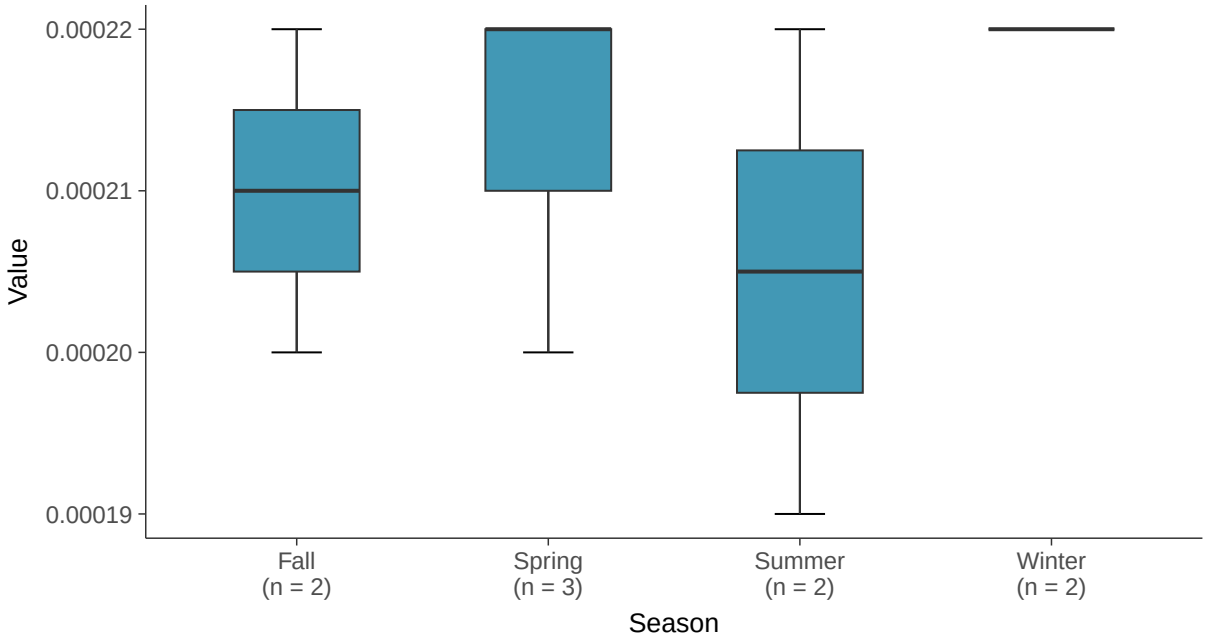
Boxplot

Selenium, MW-06 (mg/L)



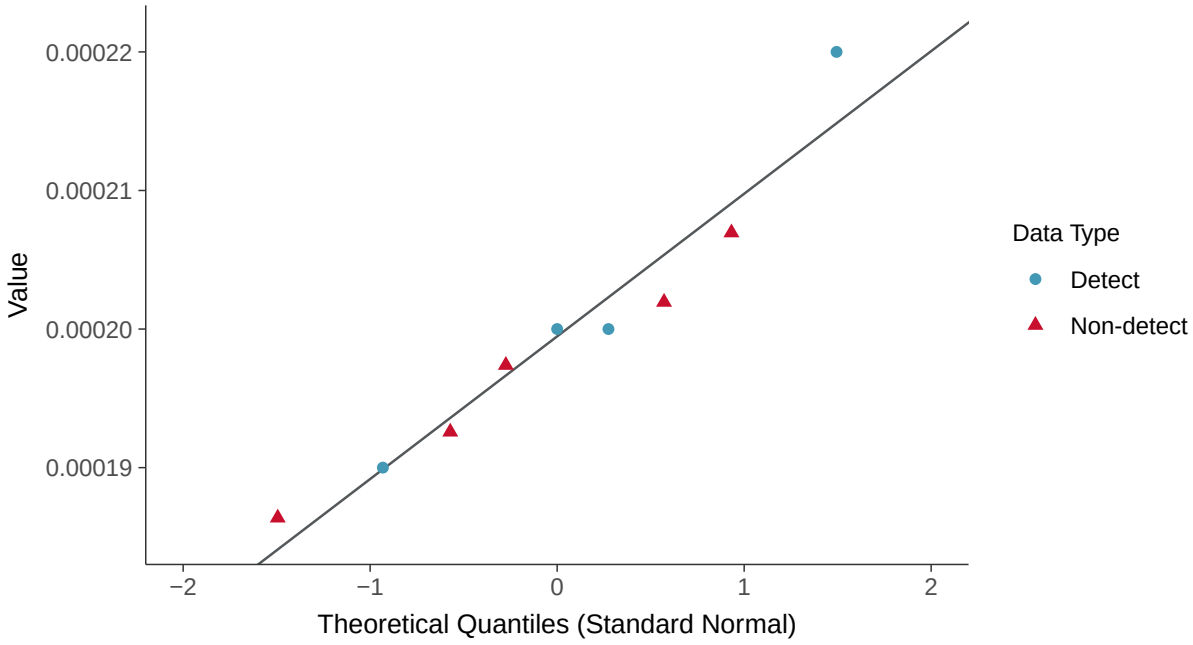
Boxplot by Season

Selenium, MW-06 (mg/L)



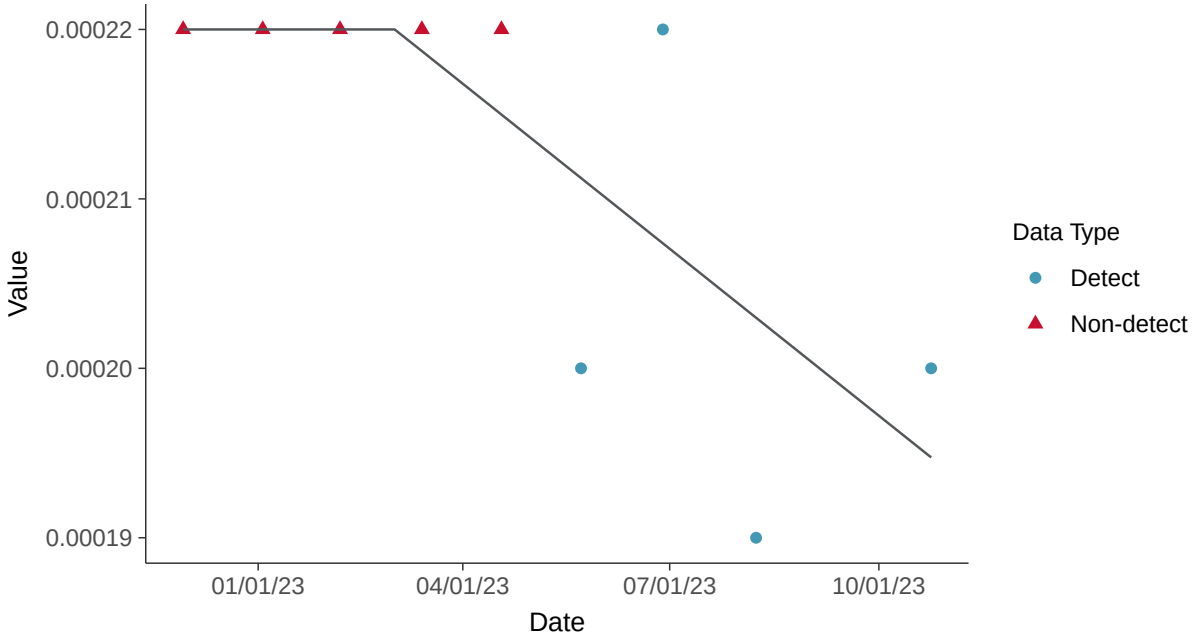
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-06 (mg/L)



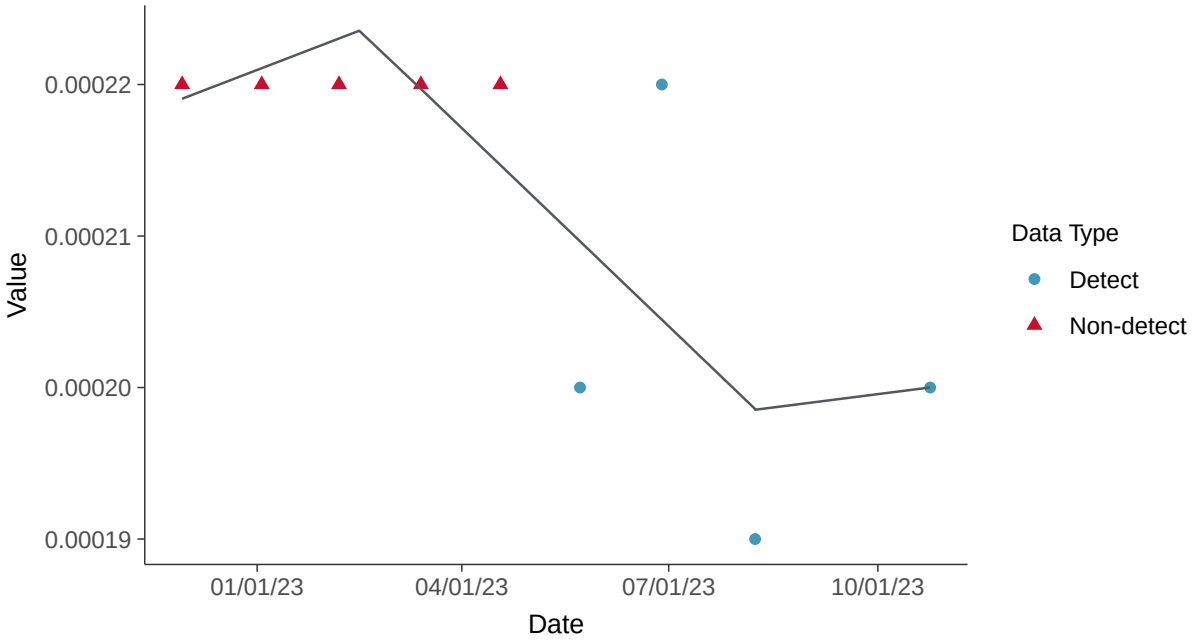
Trend Regression: Piecewise Linear-Linear

Selenium, MW-06 (mg/L)



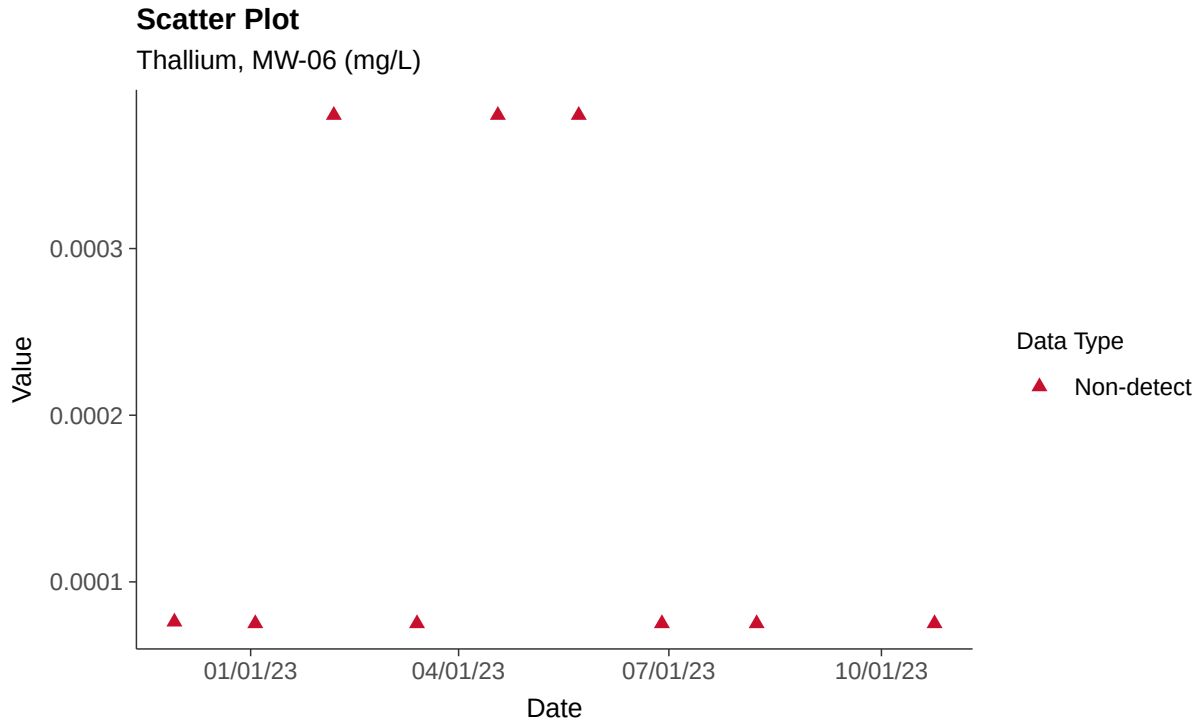
Trend Regression: Piecewise Linear-Linear-Linear

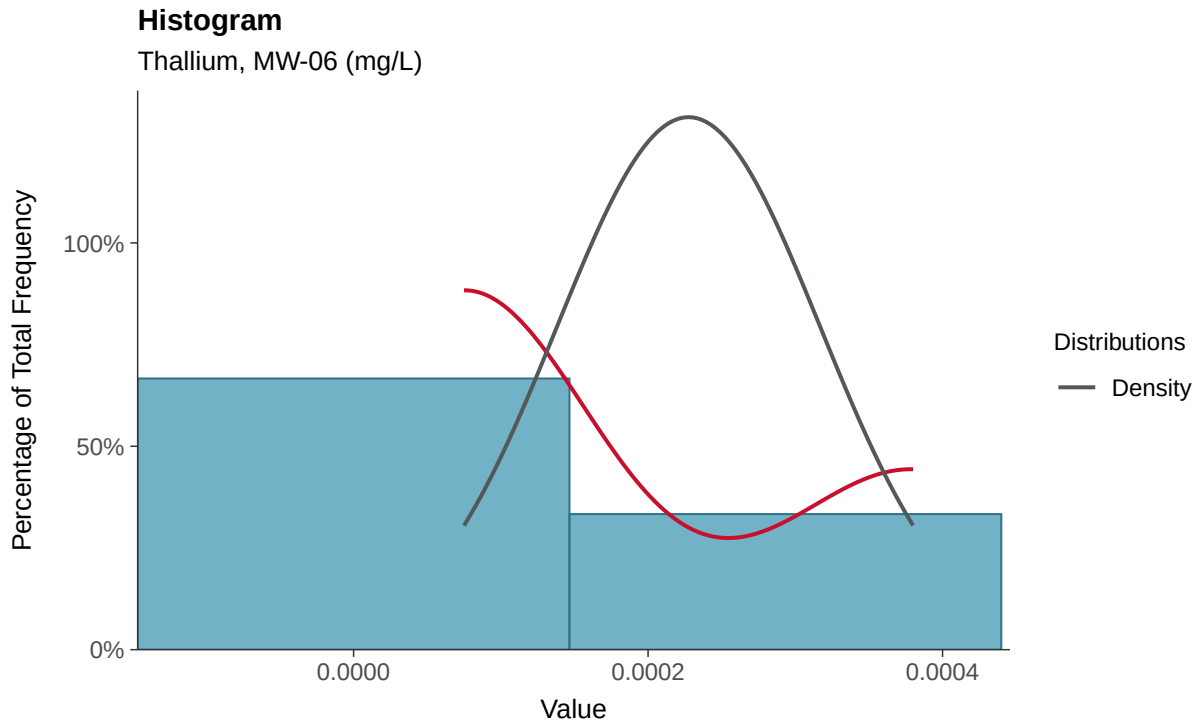
Selenium, MW-06 (mg/L)



Appendix IV: Thallium, MW-06

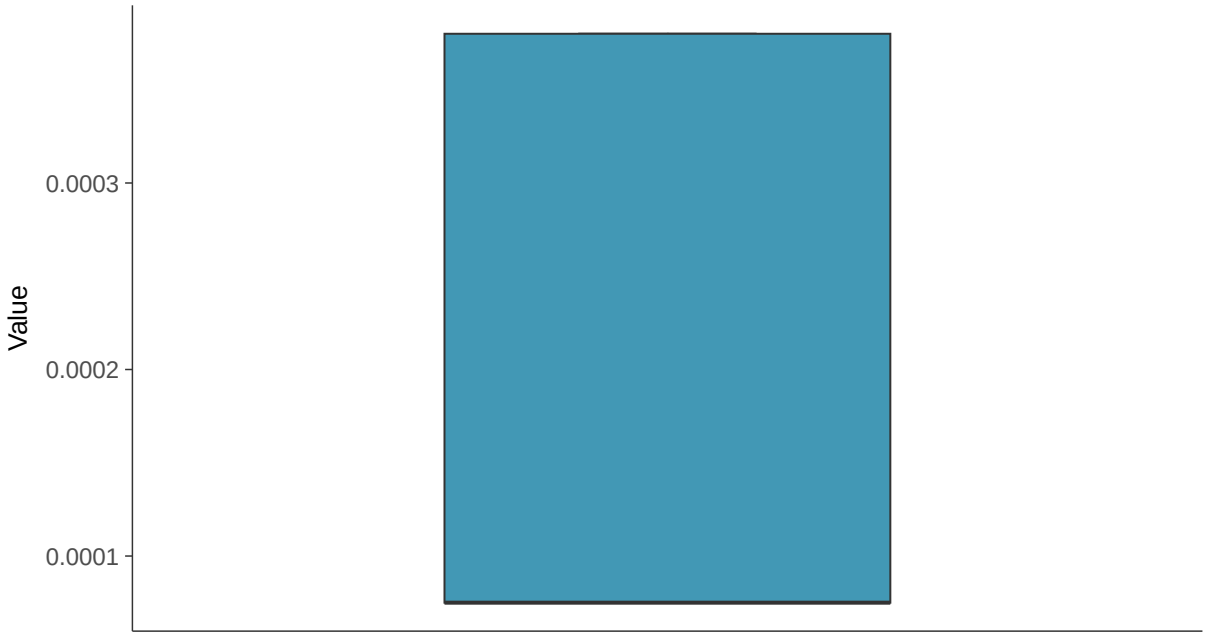
ID: 1_15_5_125





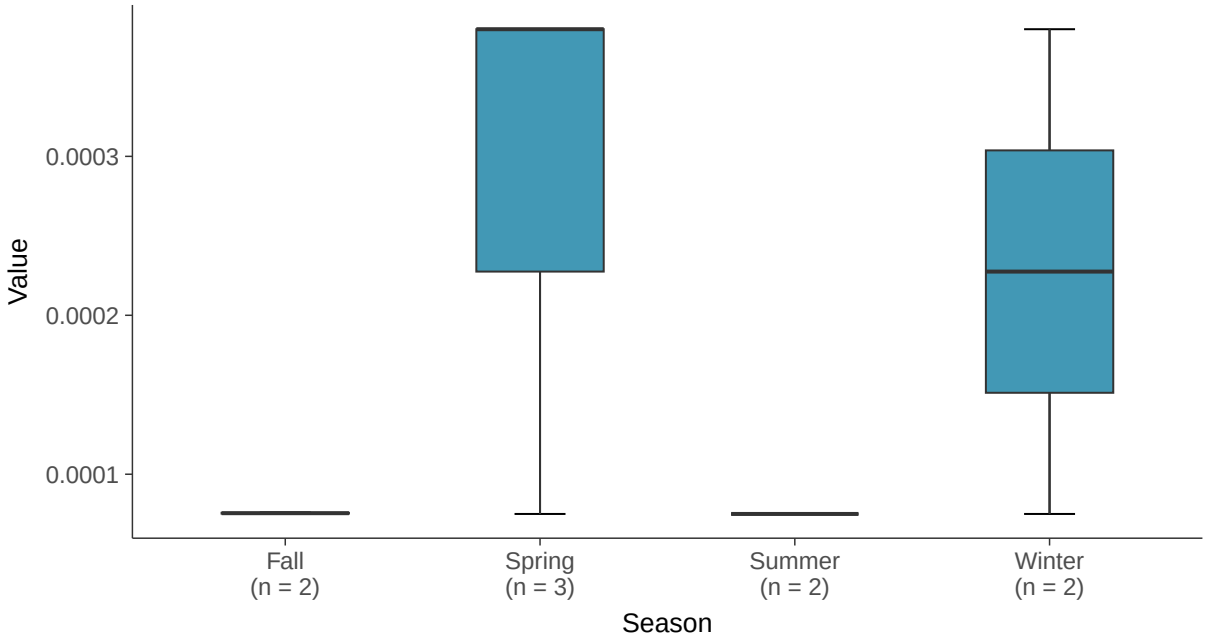
Boxplot

Thallium, MW-06 (mg/L)



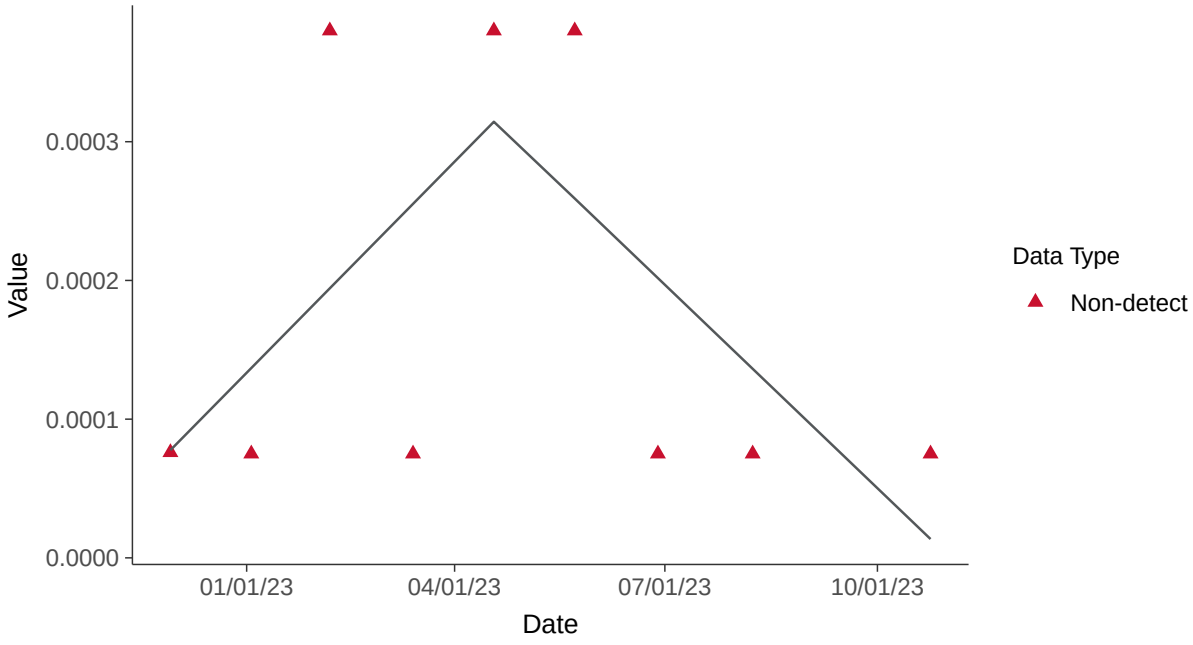
Boxplot by Season

Thallium, MW-06 (mg/L)



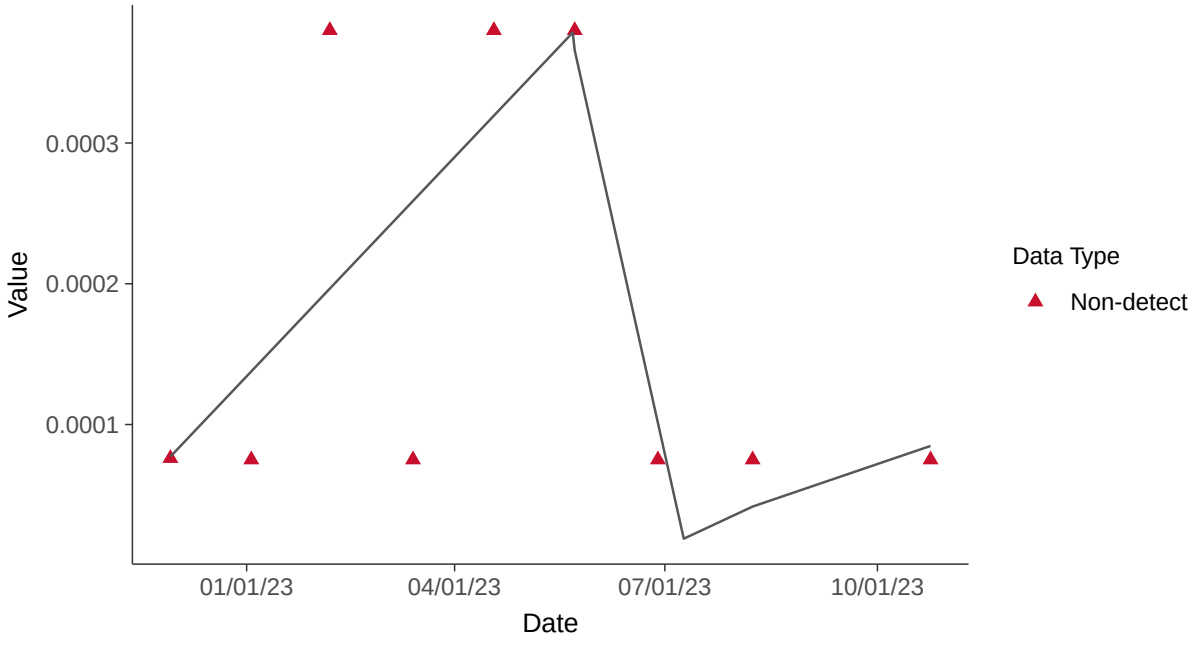
Trend Regression: Piecewise Linear-Linear

Thallium, MW-06 (mg/L)



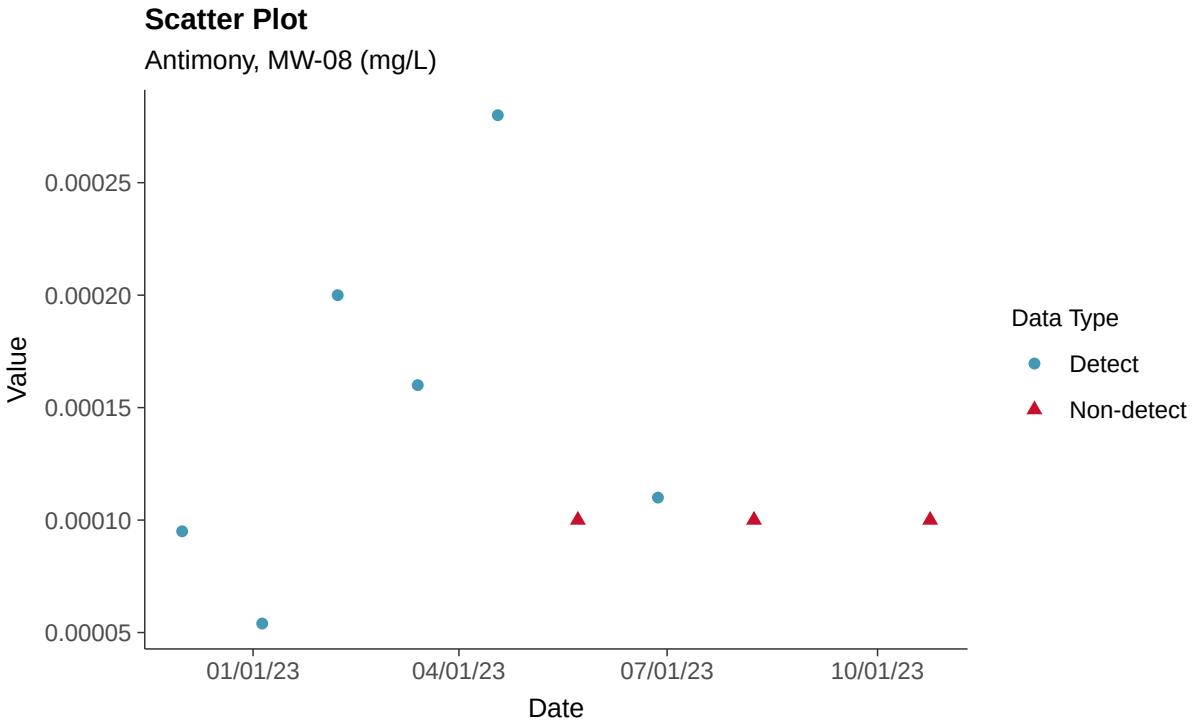
Trend Regression: Piecewise Linear-Linear-Linear

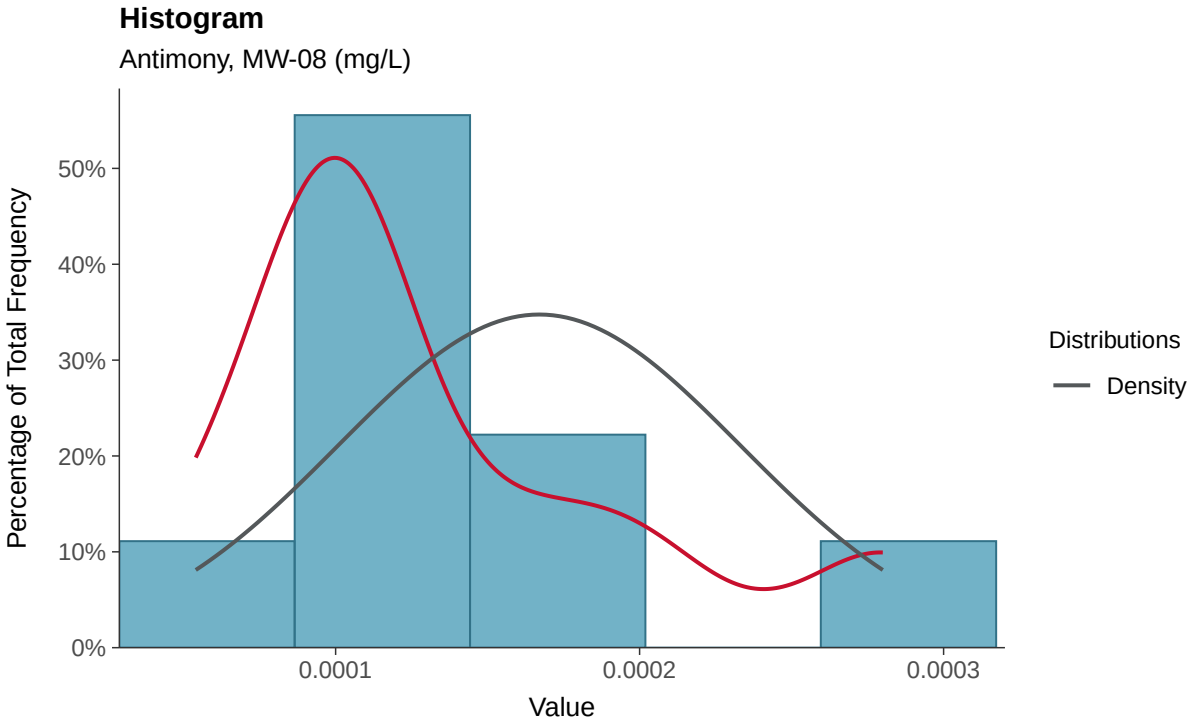
Thallium, MW-06 (mg/L)



Appendix IV: Antimony, MW-08

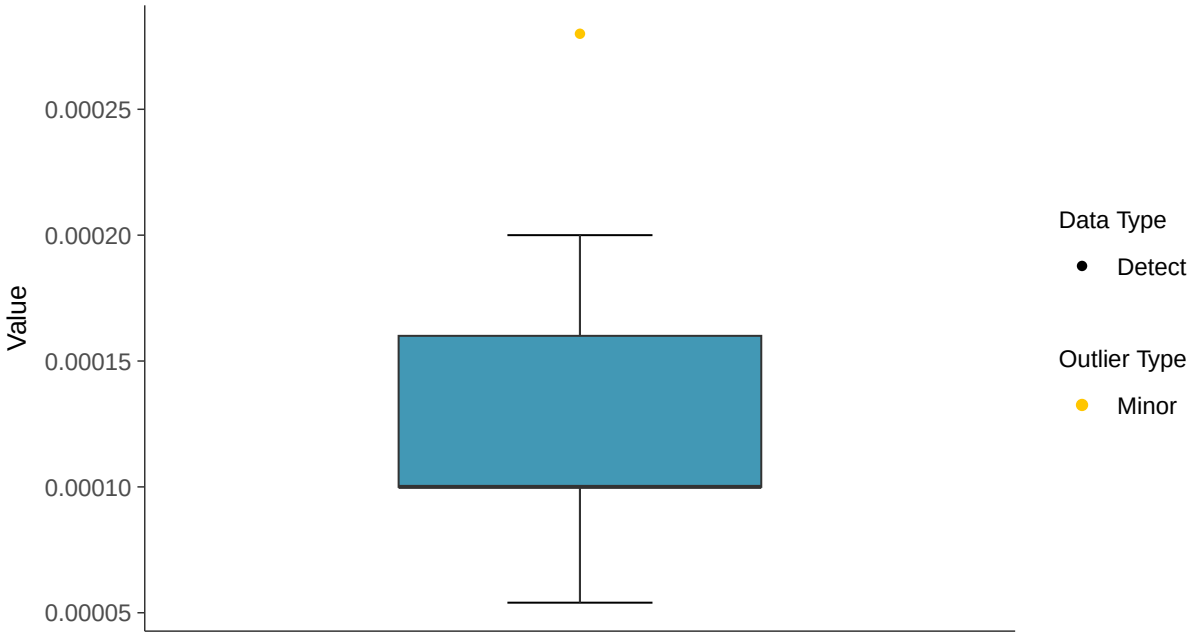
ID: 1_17_5_101





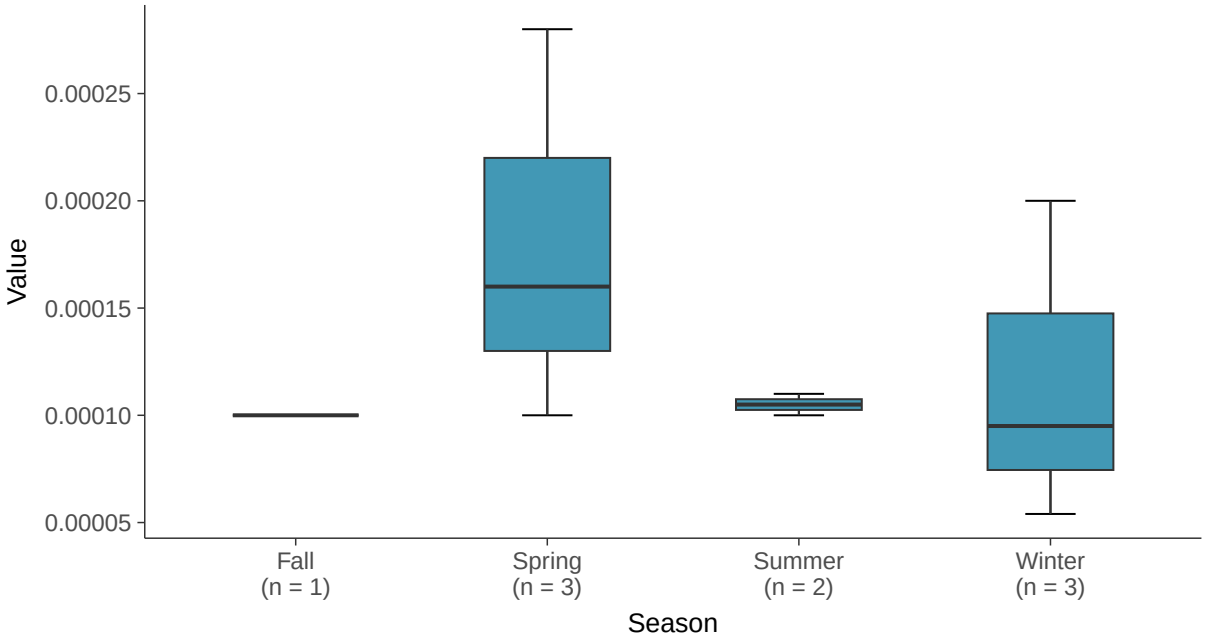
Boxplot

Antimony, MW-08 (mg/L)



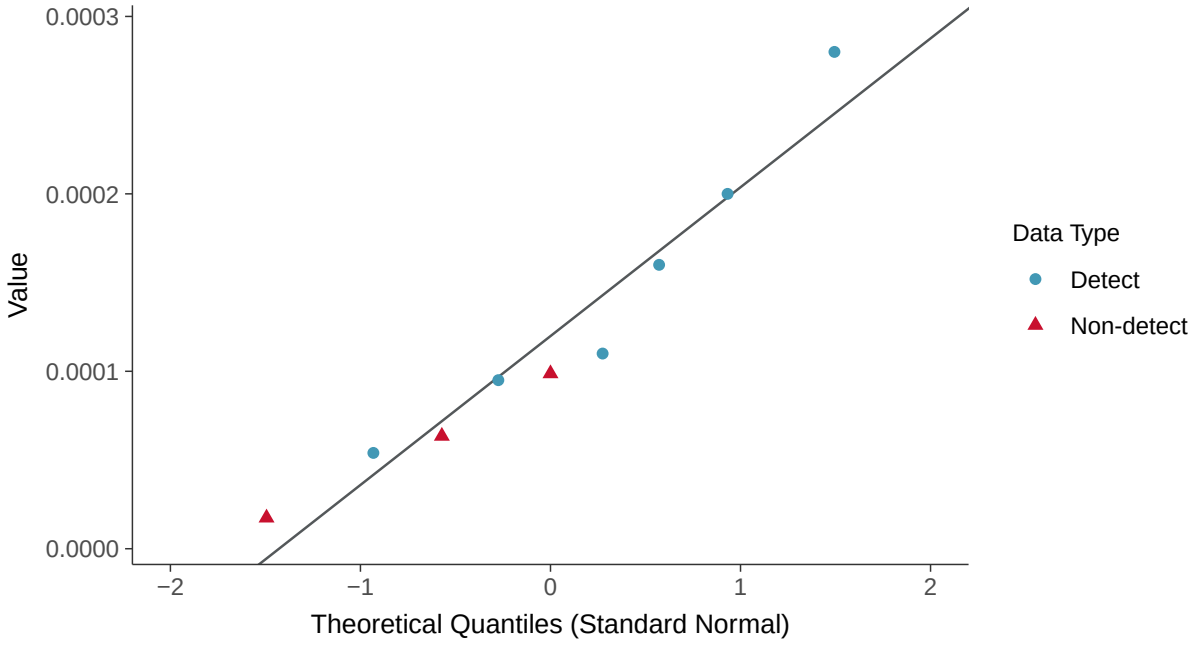
Boxplot by Season

Antimony, MW-08 (mg/L)



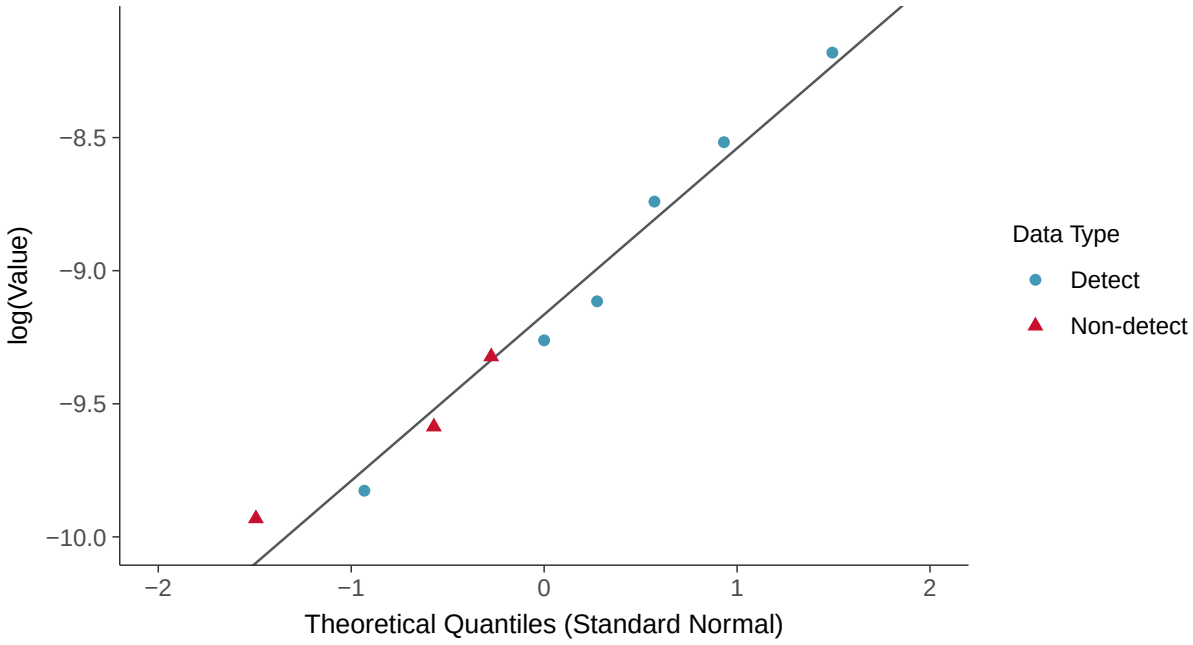
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-08 (mg/L)



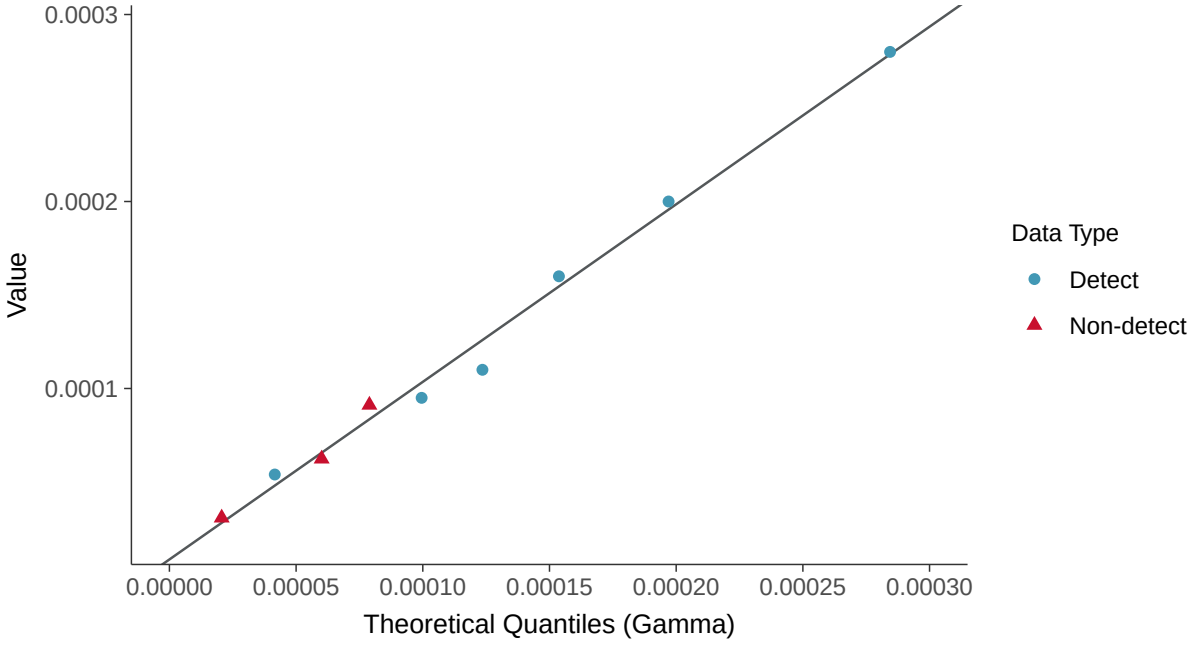
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-08 (mg/L)



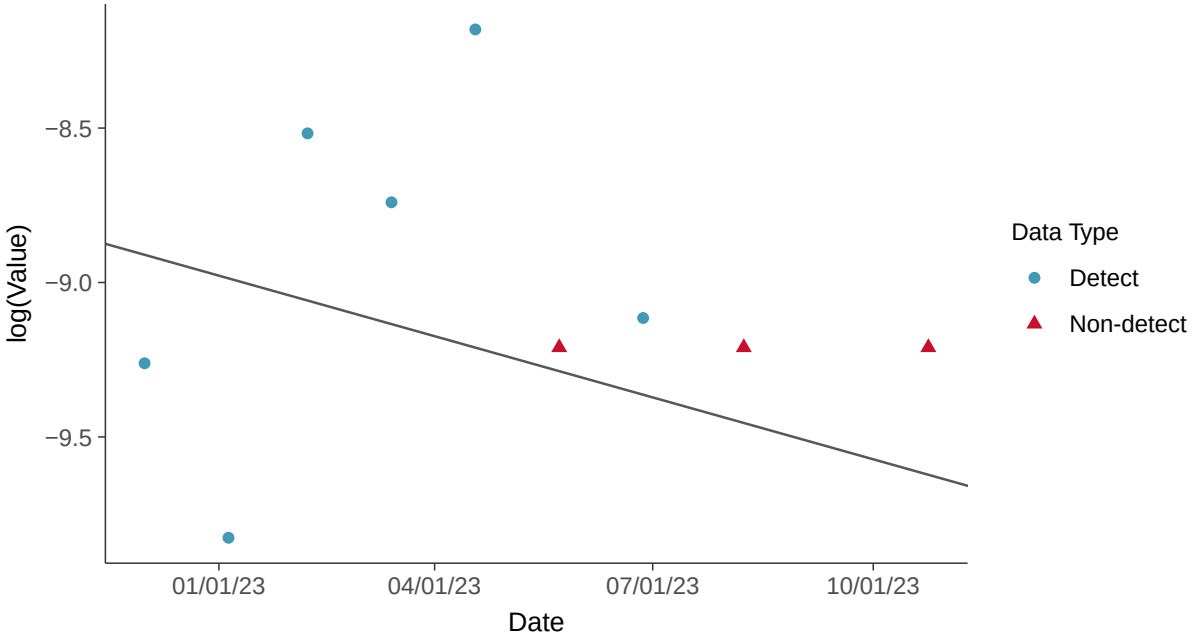
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-08 (mg/L)



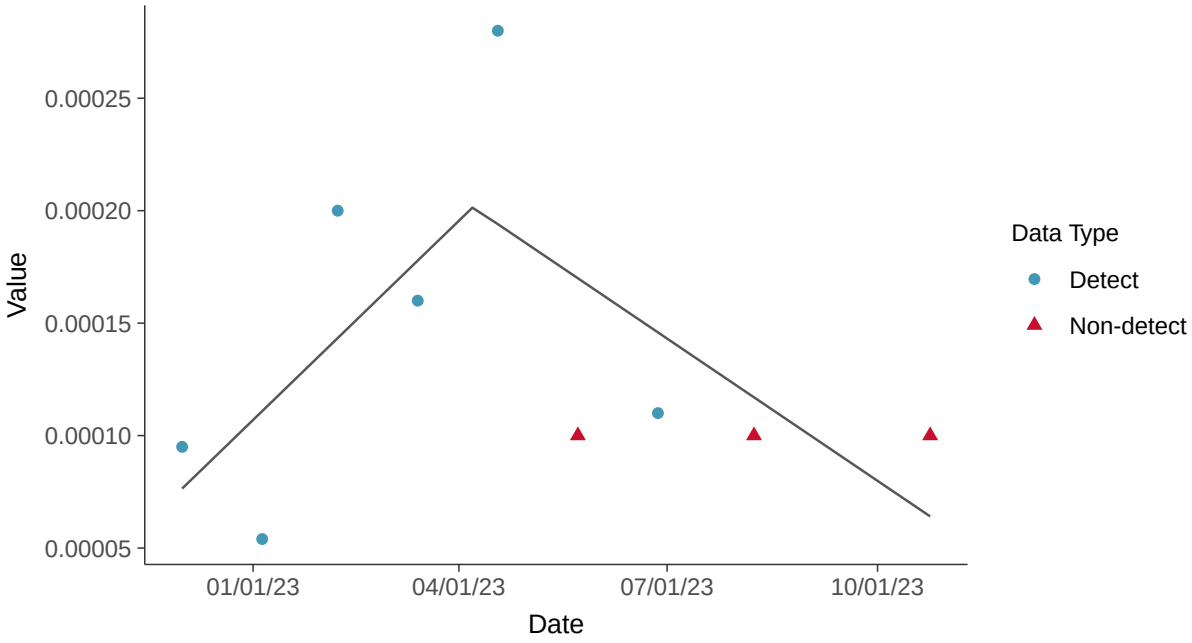
Trend Regression: Lognormal MLE

Antimony, MW-08 (mg/L)



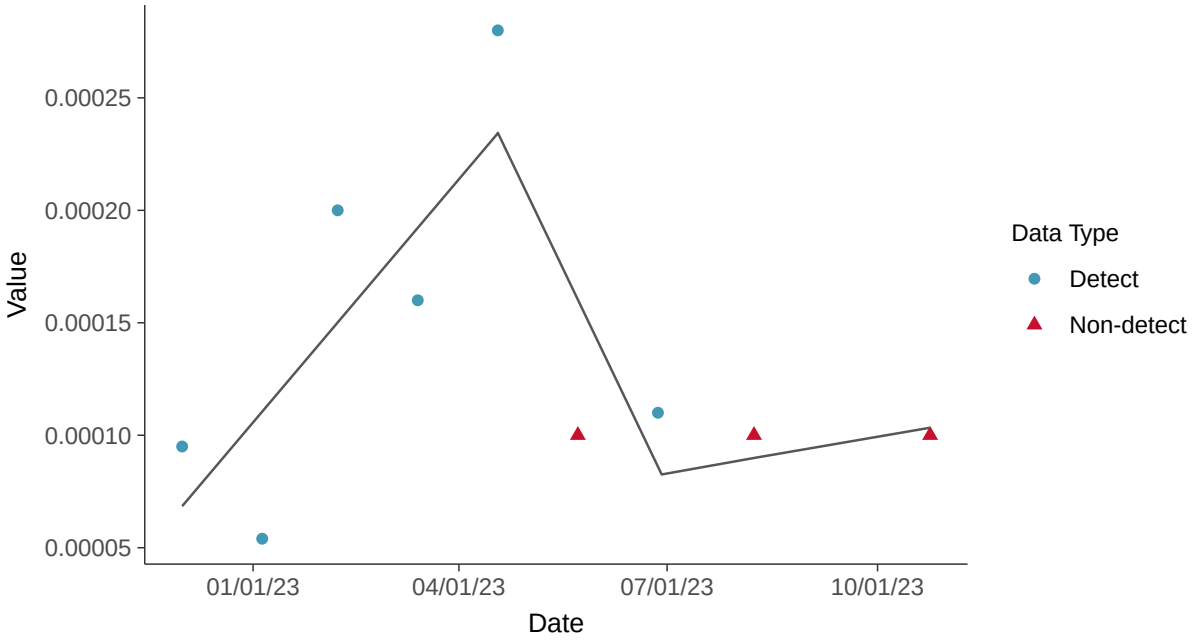
Trend Regression: Piecewise Linear-Linear

Antimony, MW-08 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-08 (mg/L)

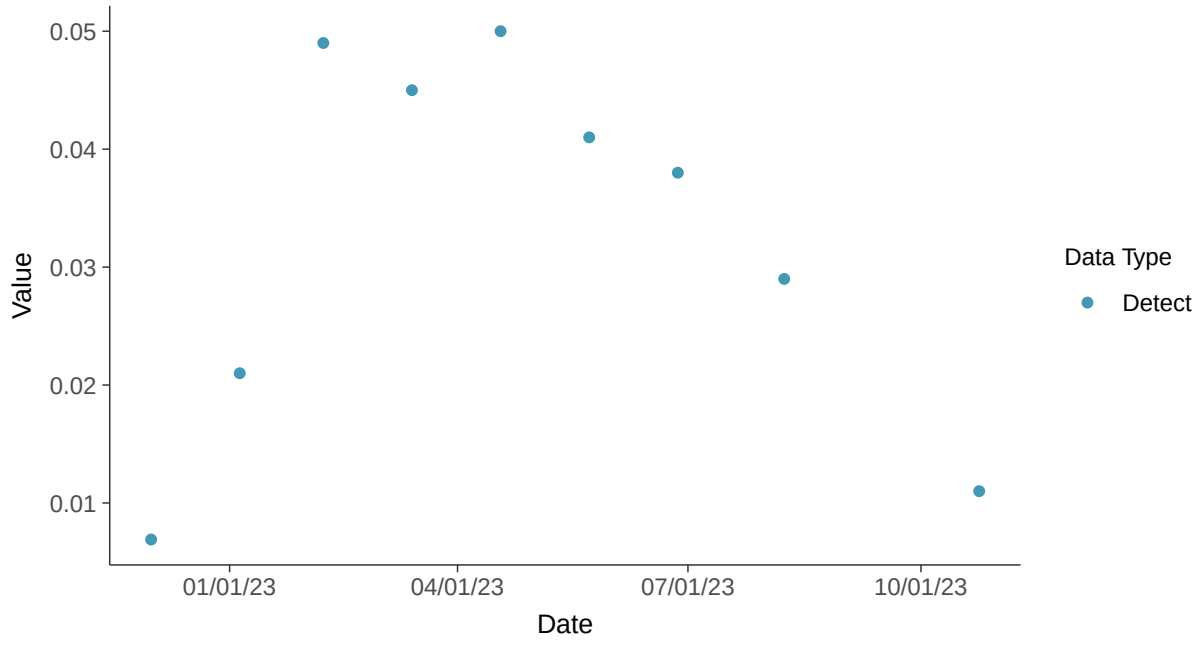


Appendix IV: Arsenic, MW-08

ID: 1_17_5_102

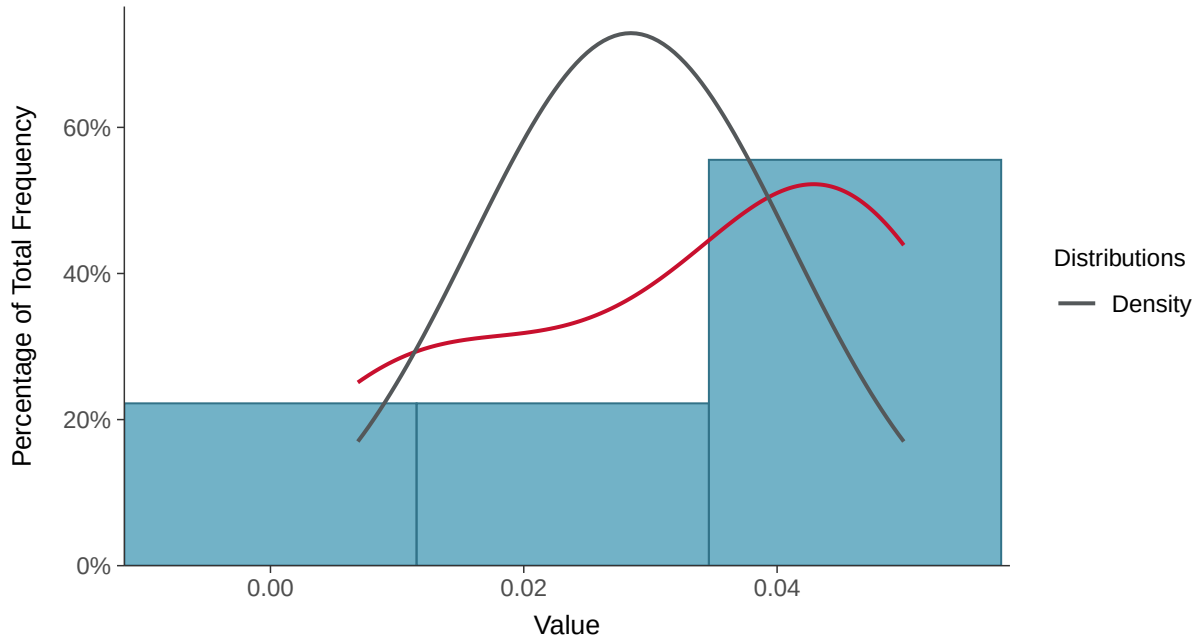
Scatter Plot

Arsenic, MW-08 (mg/L)



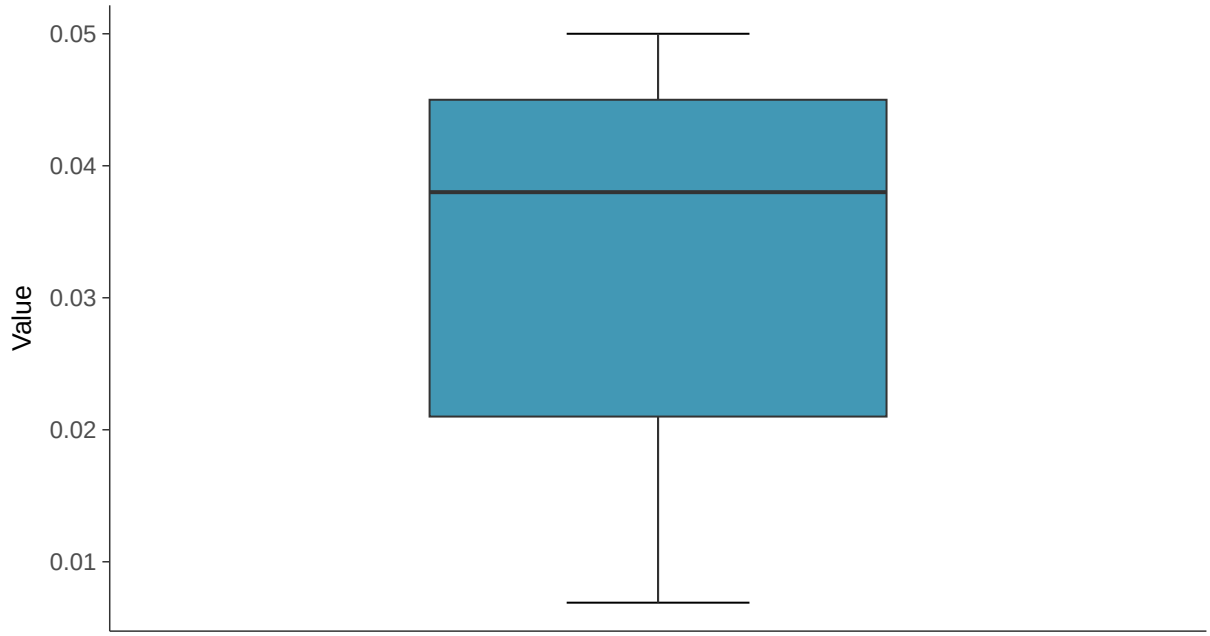
Histogram

Arsenic, MW-08 (mg/L)



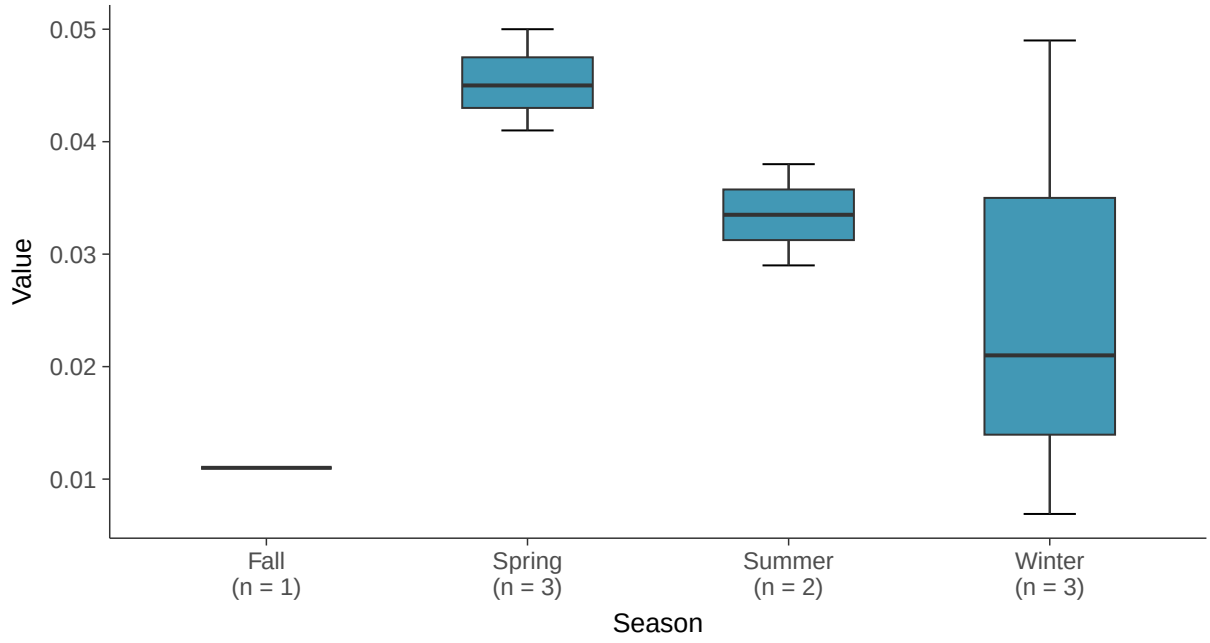
Boxplot

Arsenic, MW-08 (mg/L)



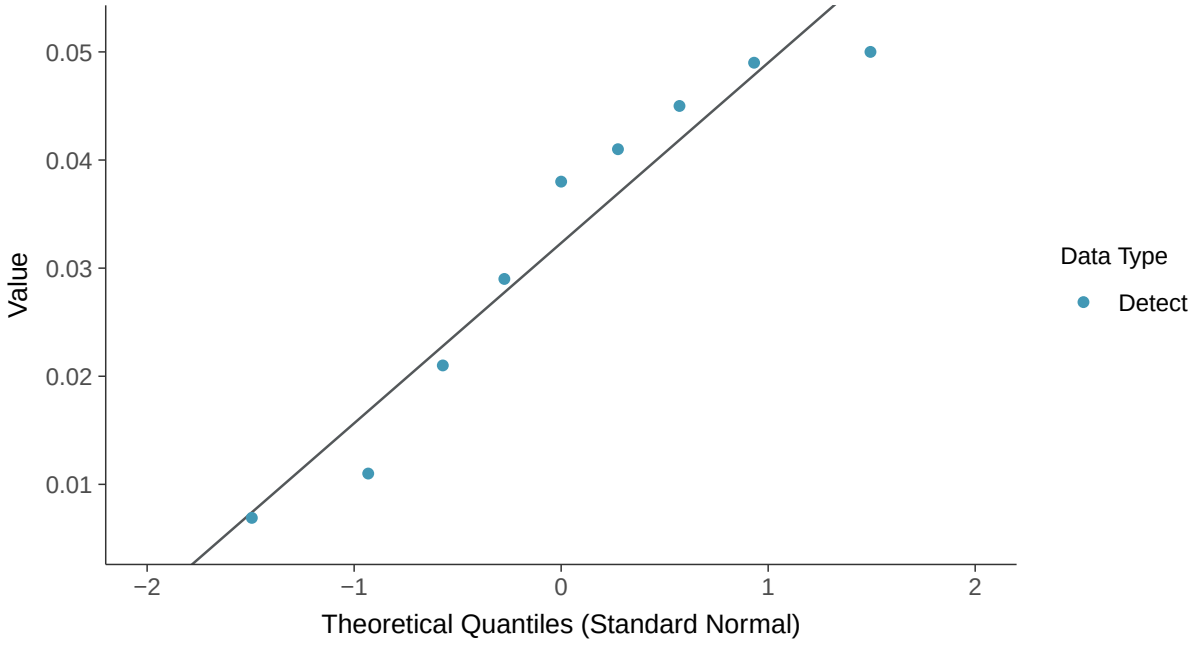
Boxplot by Season

Arsenic, MW-08 (mg/L)



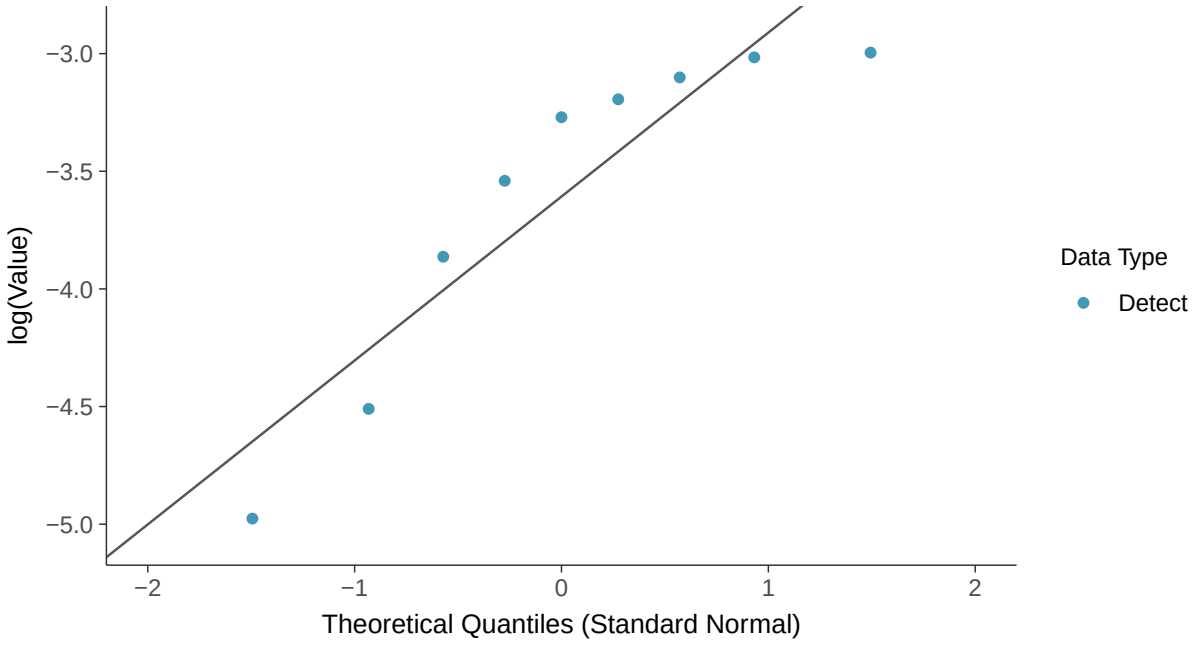
Normal Q-Q plot

Arsenic, MW-08 (mg/L)



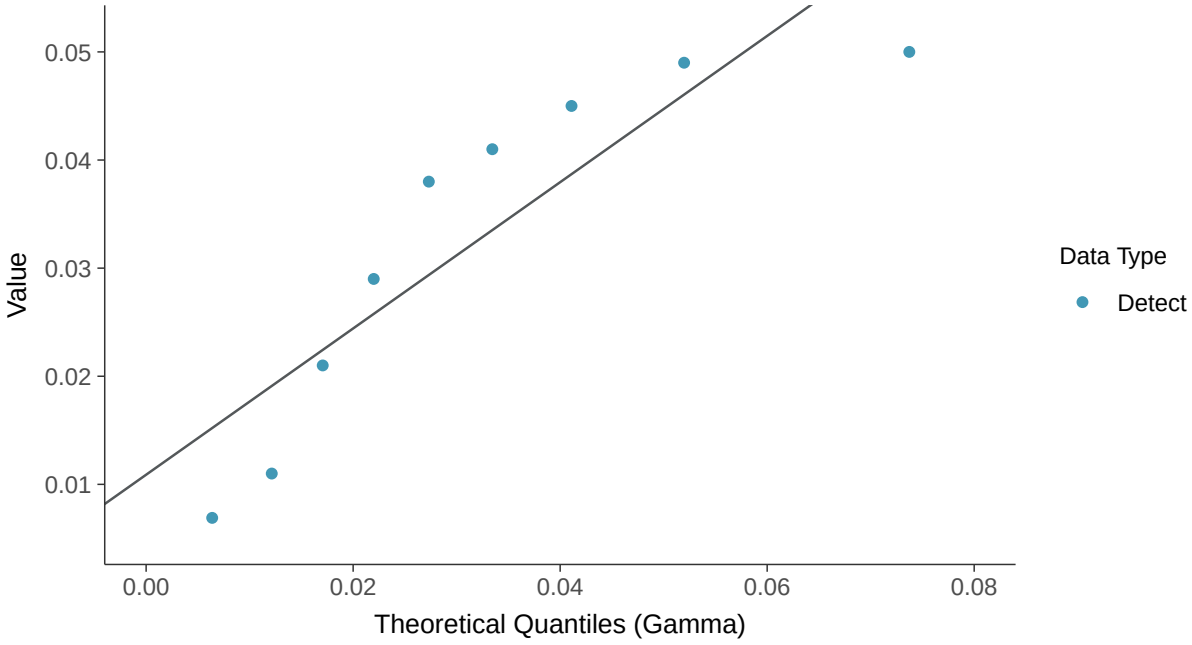
Lognormal Q-Q plot

Arsenic, MW-08 (mg/L)



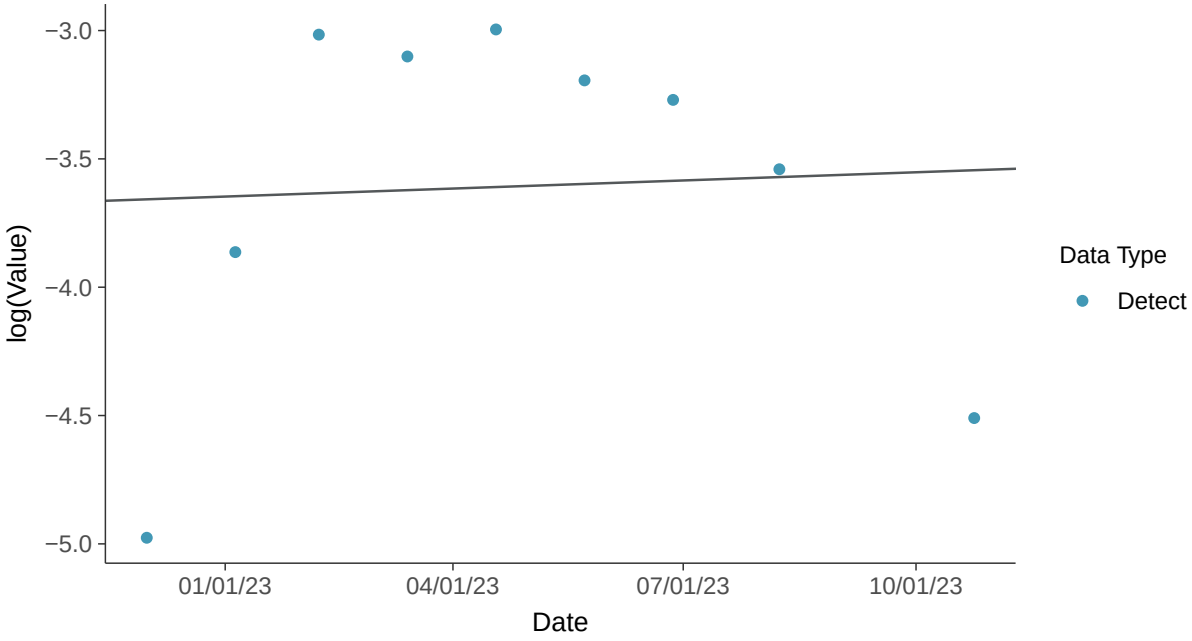
Gamma Q-Q plot

Arsenic, MW-08 (mg/L)



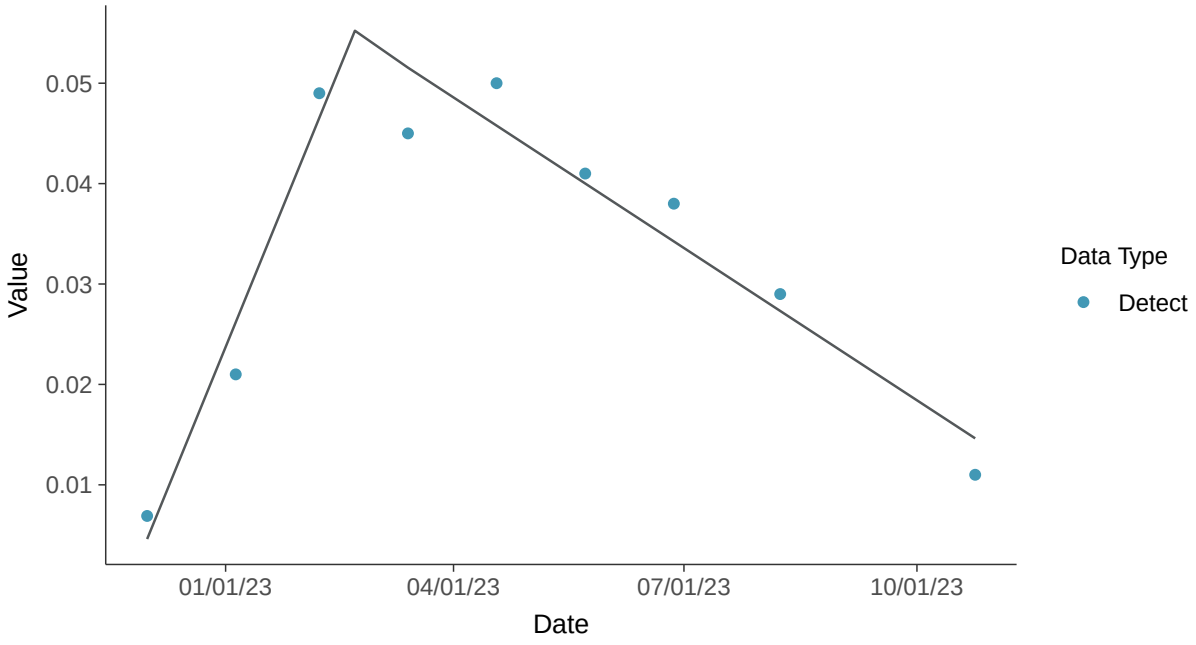
Trend Regression: Lognormal MLE

Arsenic, MW-08 (mg/L)



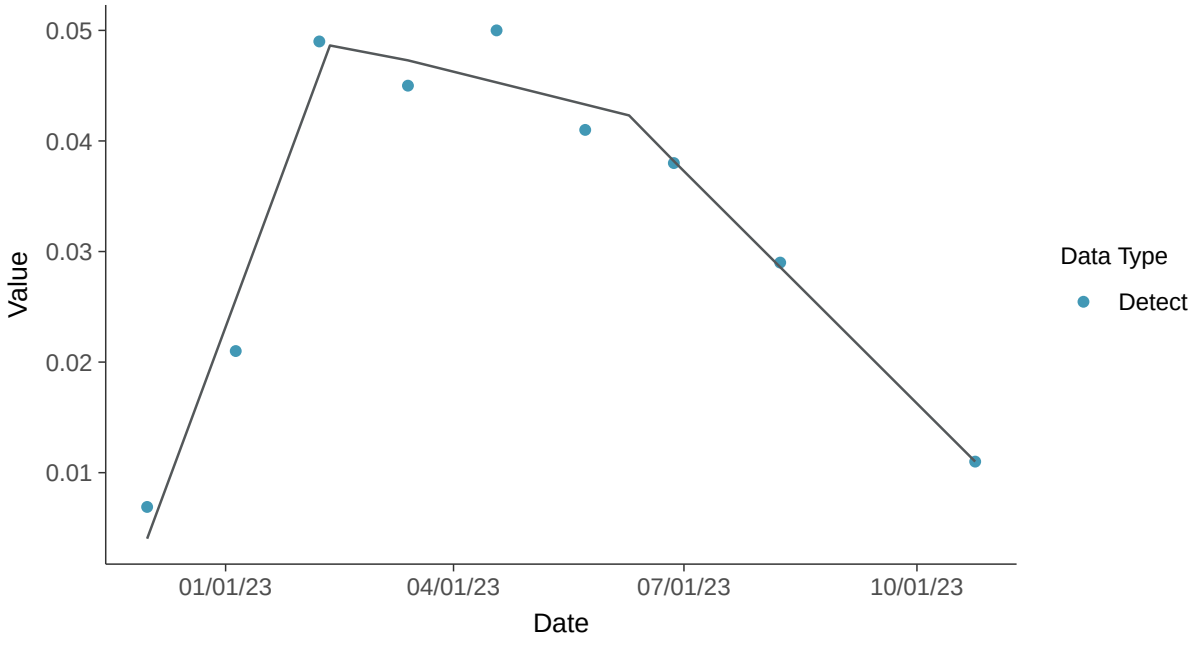
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-08 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-08 (mg/L)

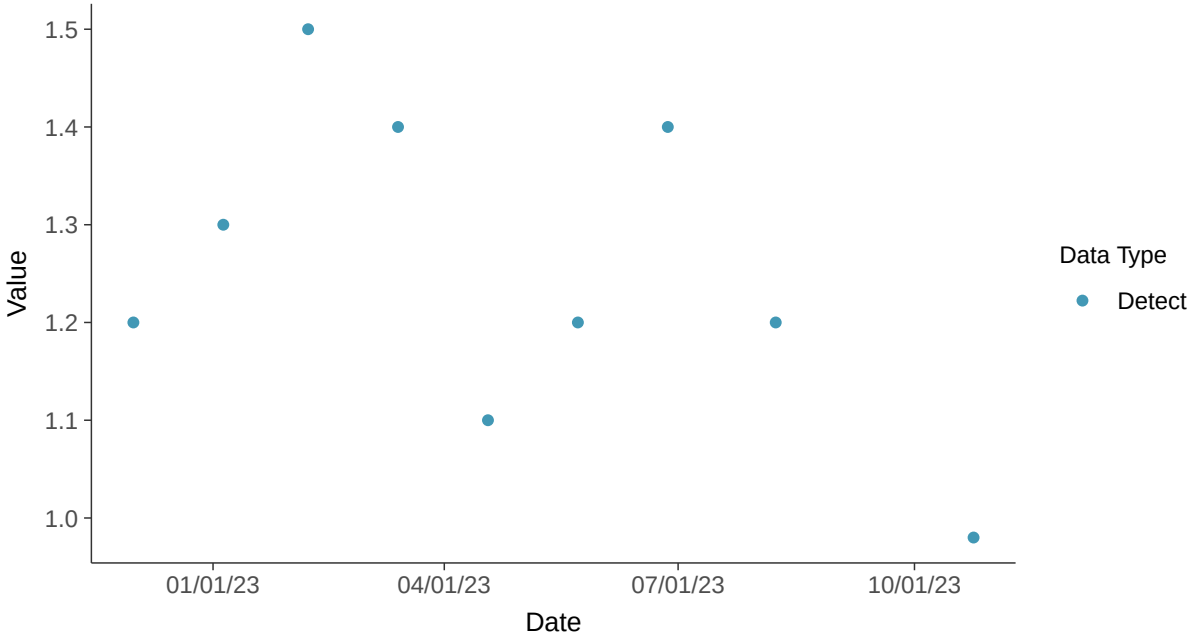


Appendix IV: Barium, MW-08

ID: 1_17_5_103

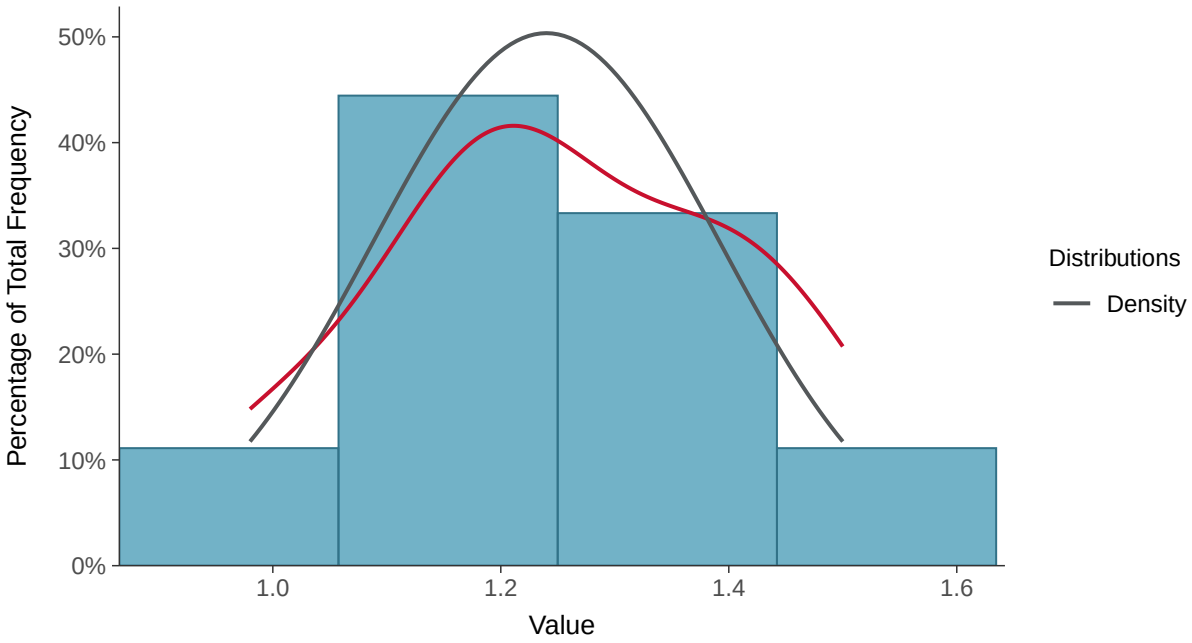
Scatter Plot

Barium, MW-08 (mg/L)



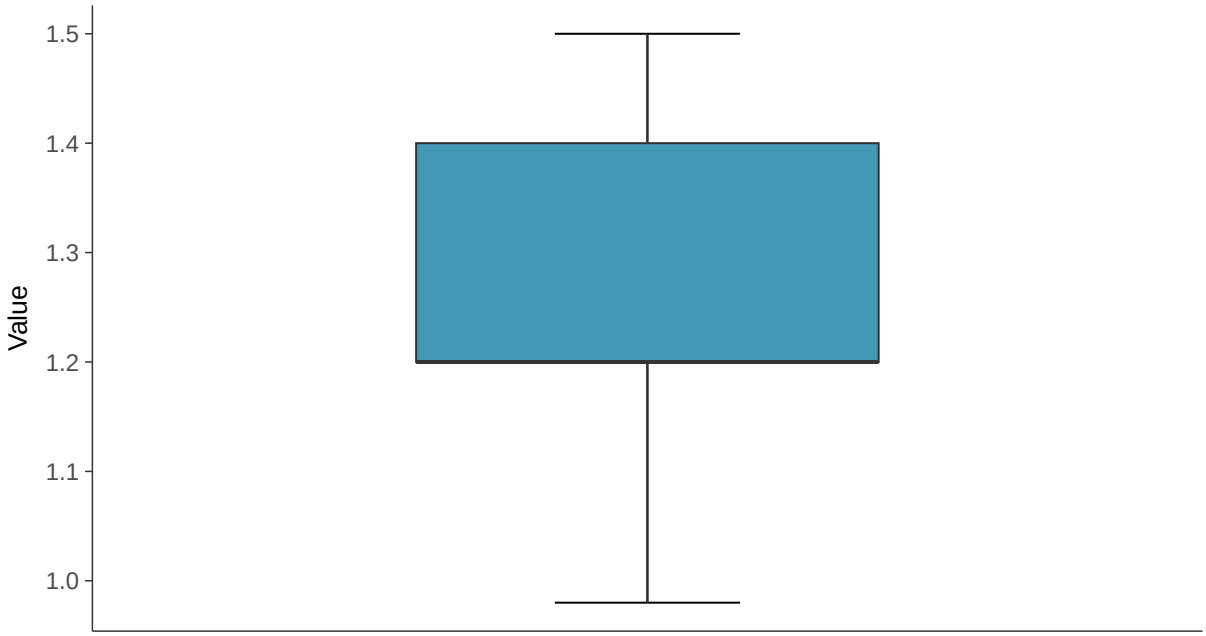
Histogram

Barium, MW-08 (mg/L)



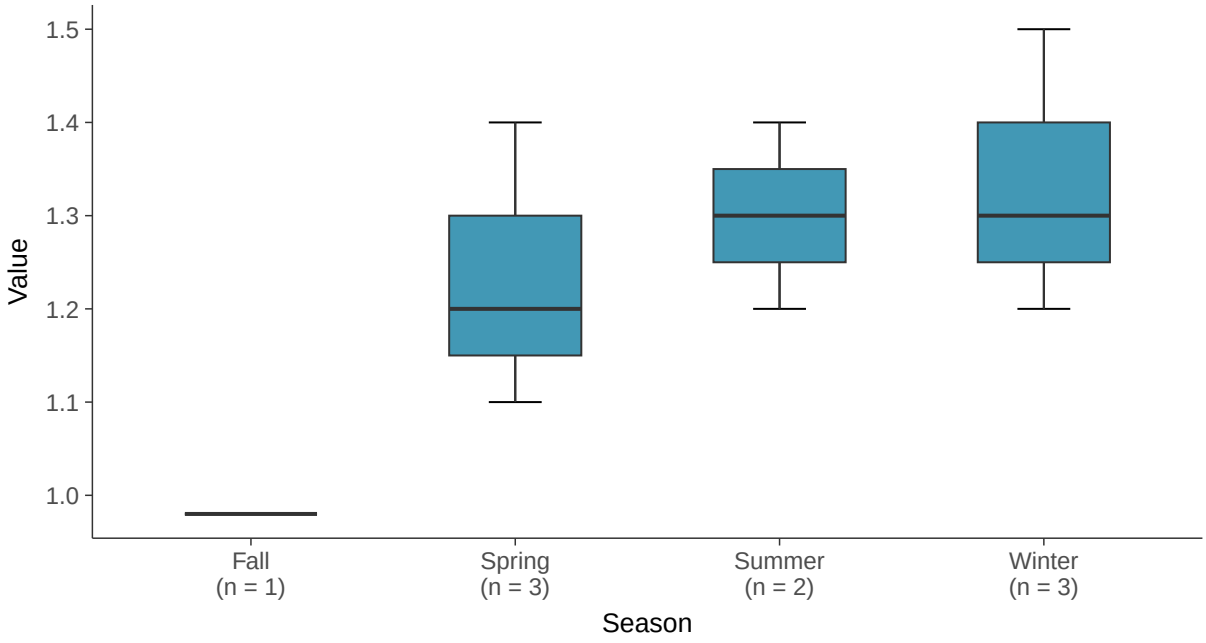
Boxplot

Barium, MW-08 (mg/L)



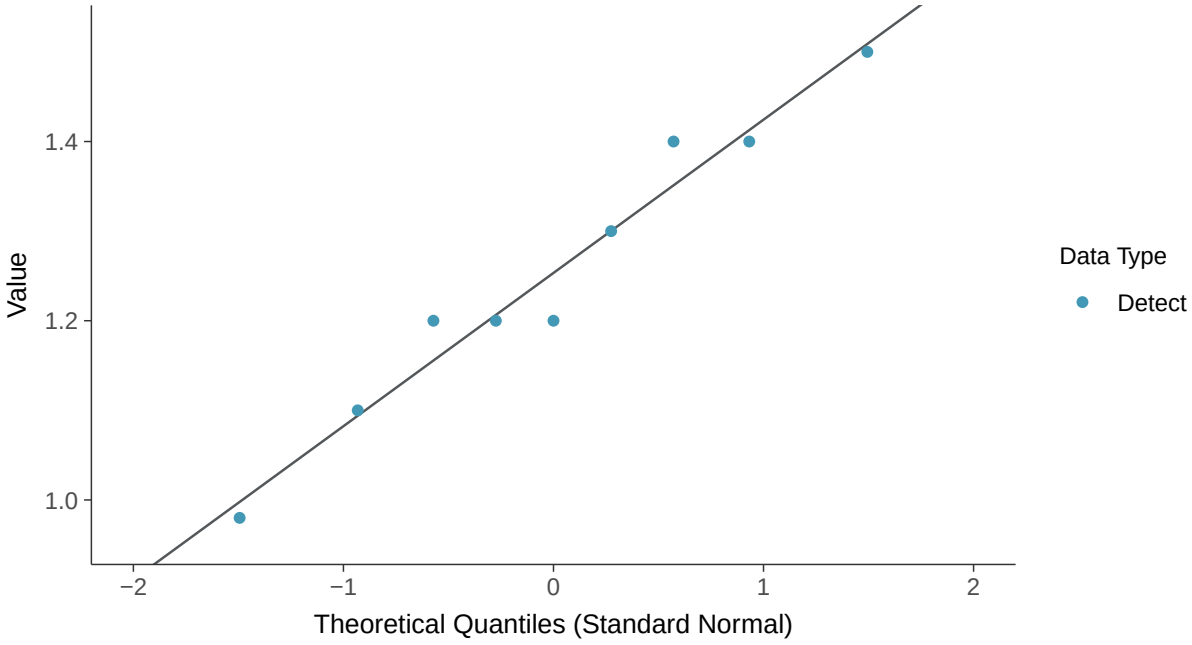
Boxplot by Season

Barium, MW-08 (mg/L)



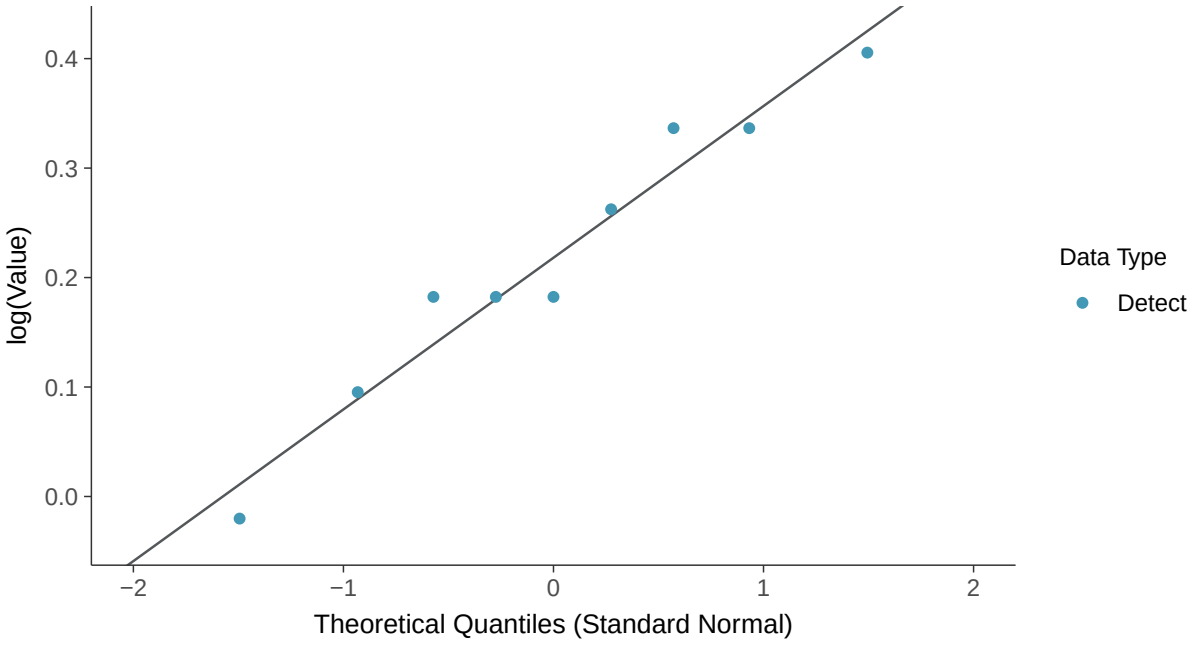
Normal Q-Q plot

Barium, MW-08 (mg/L)



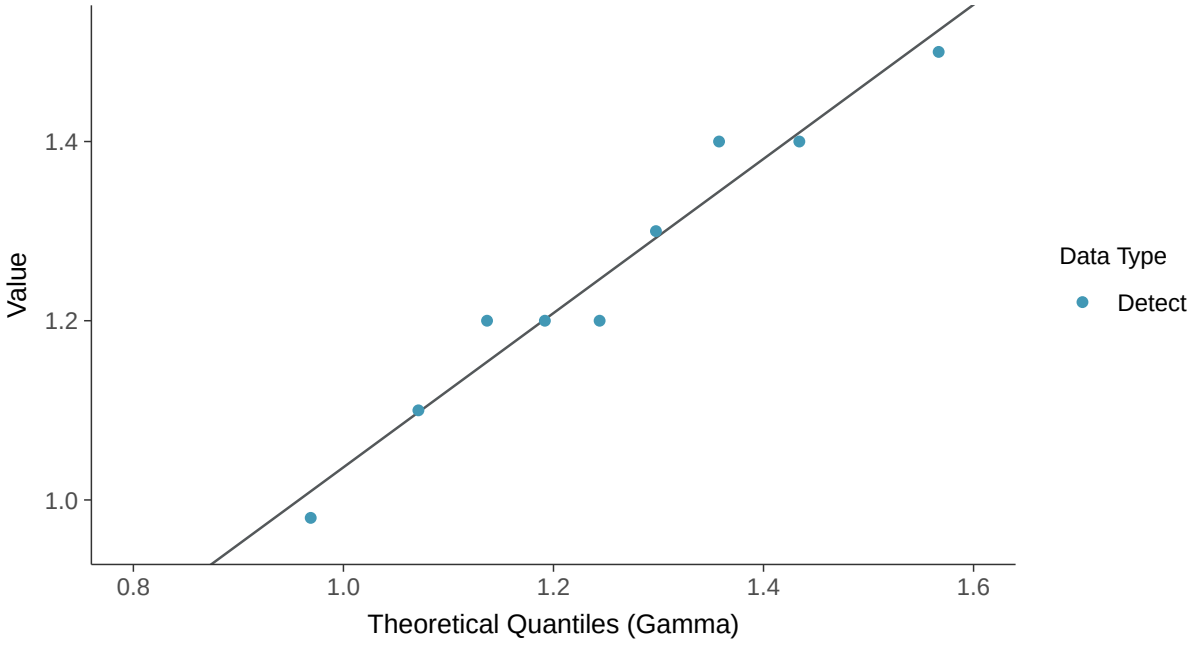
Lognormal Q-Q plot

Barium, MW-08 (mg/L)



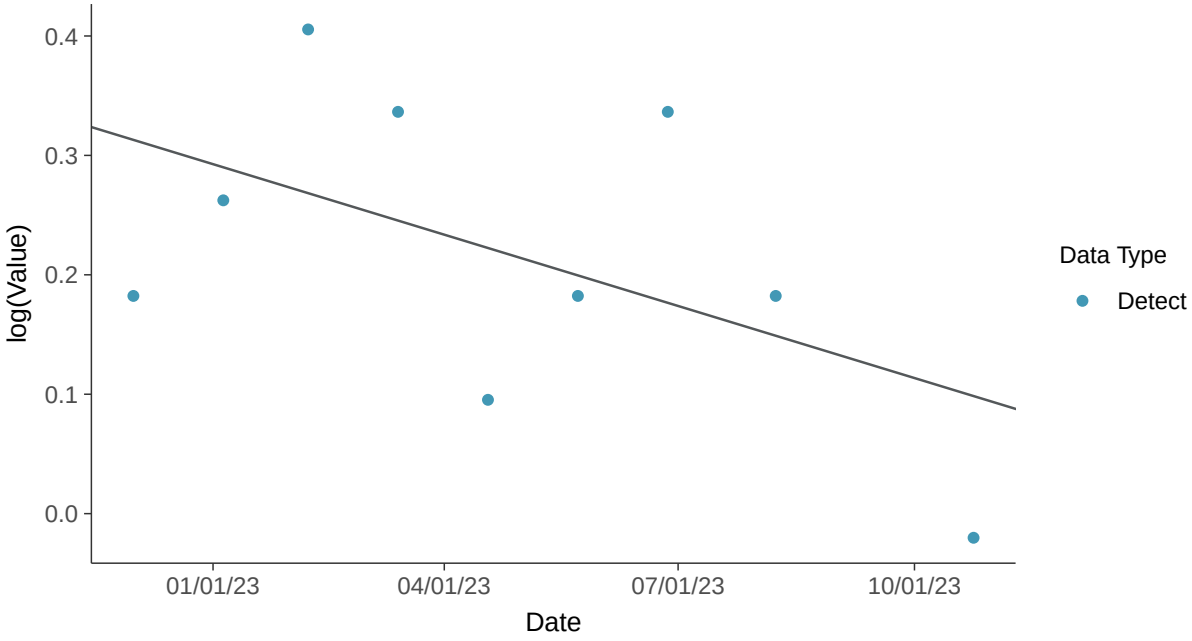
Gamma Q-Q plot

Barium, MW-08 (mg/L)



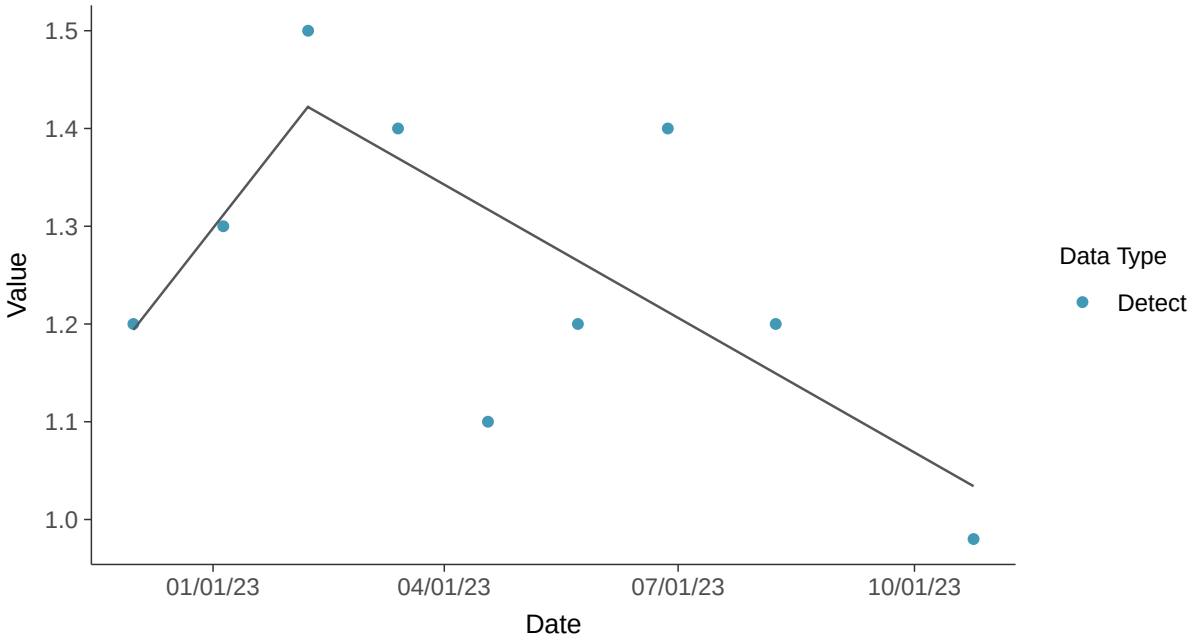
Trend Regression: Lognormal MLE

Barium, MW-08 (mg/L)



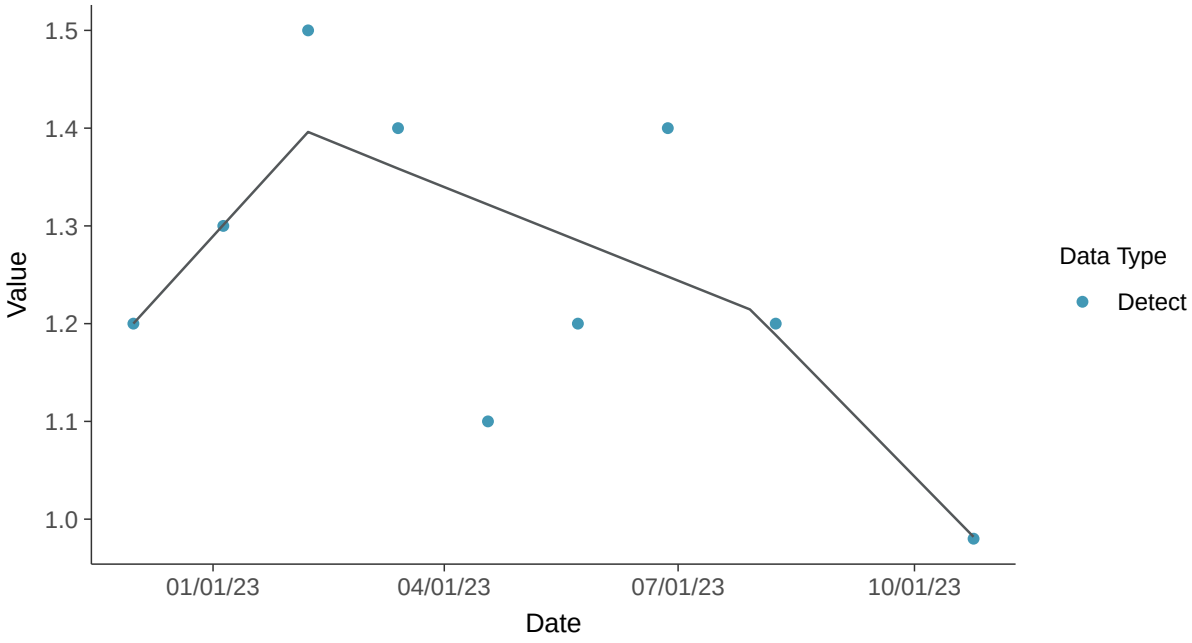
Trend Regression: Piecewise Linear-Linear

Barium, MW-08 (mg/L)



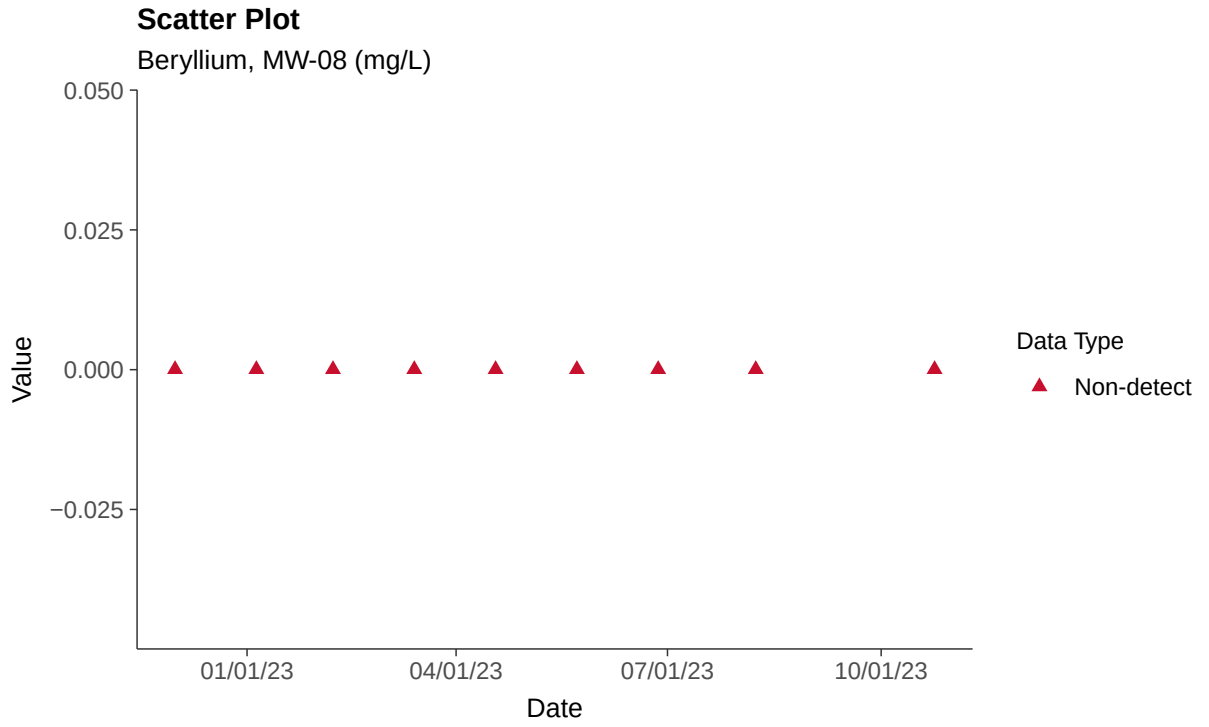
Trend Regression: Piecewise Linear-Linear-Linear

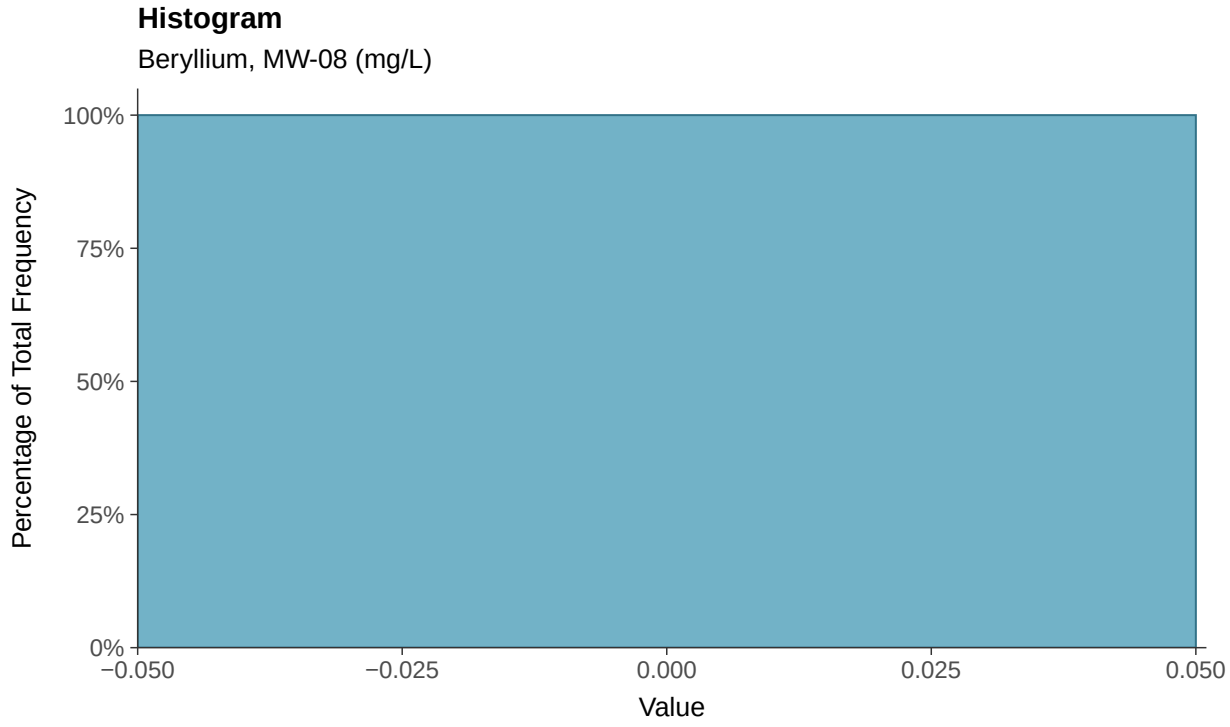
Barium, MW-08 (mg/L)



Appendix IV: Beryllium, MW-08

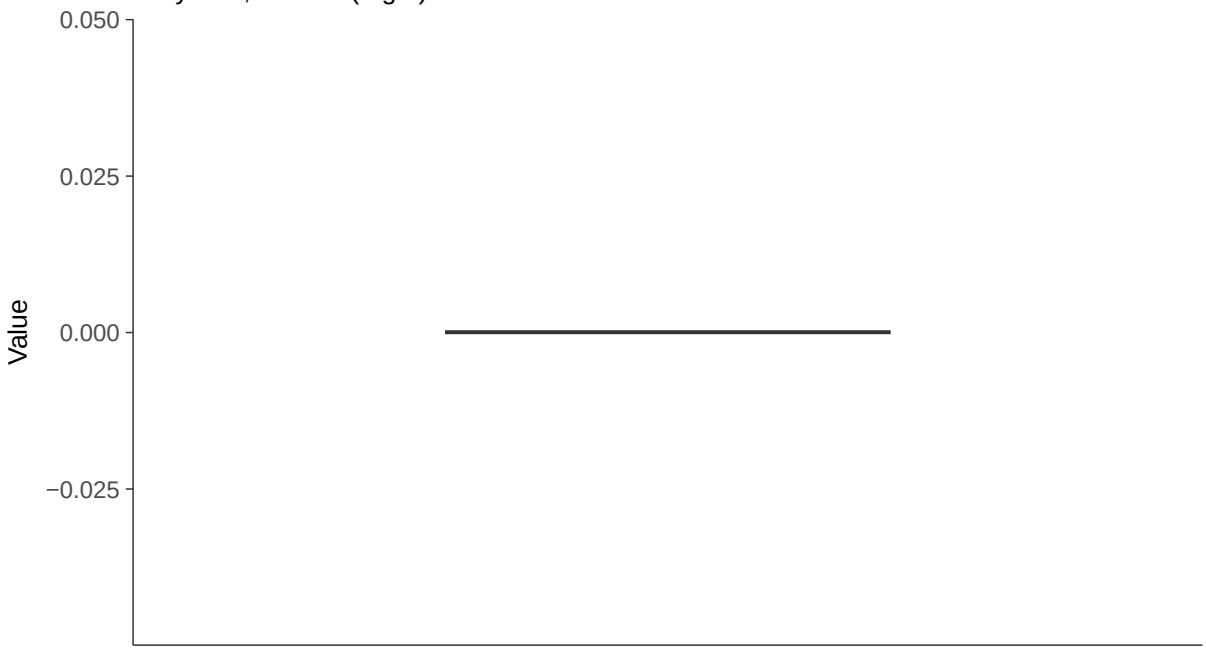
ID: 1_17_5_104





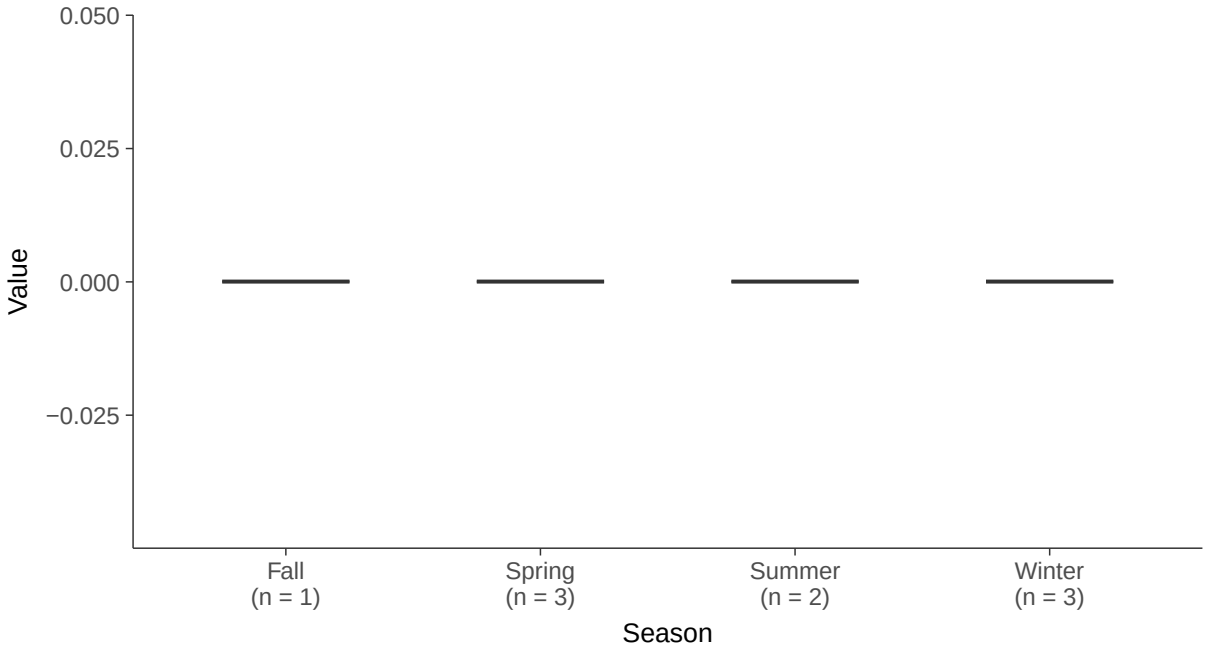
Boxplot

Beryllium, MW-08 (mg/L)



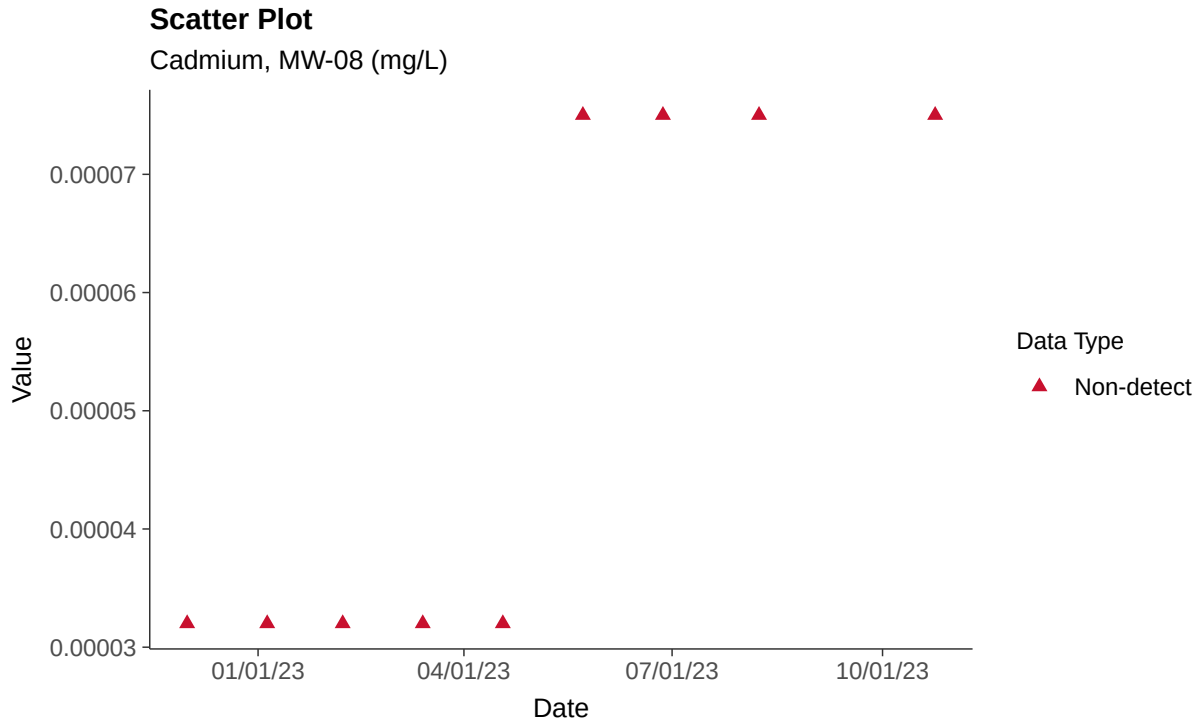
Boxplot by Season

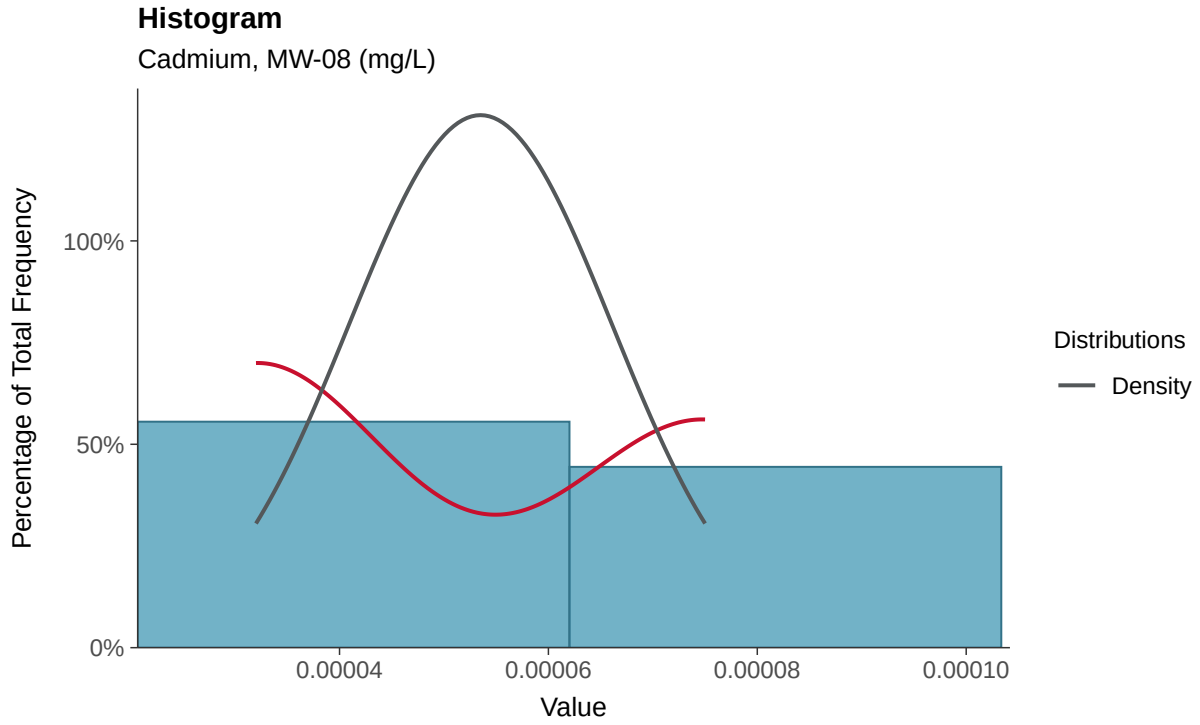
Beryllium, MW-08 (mg/L)



Appendix IV: Cadmium, MW-08

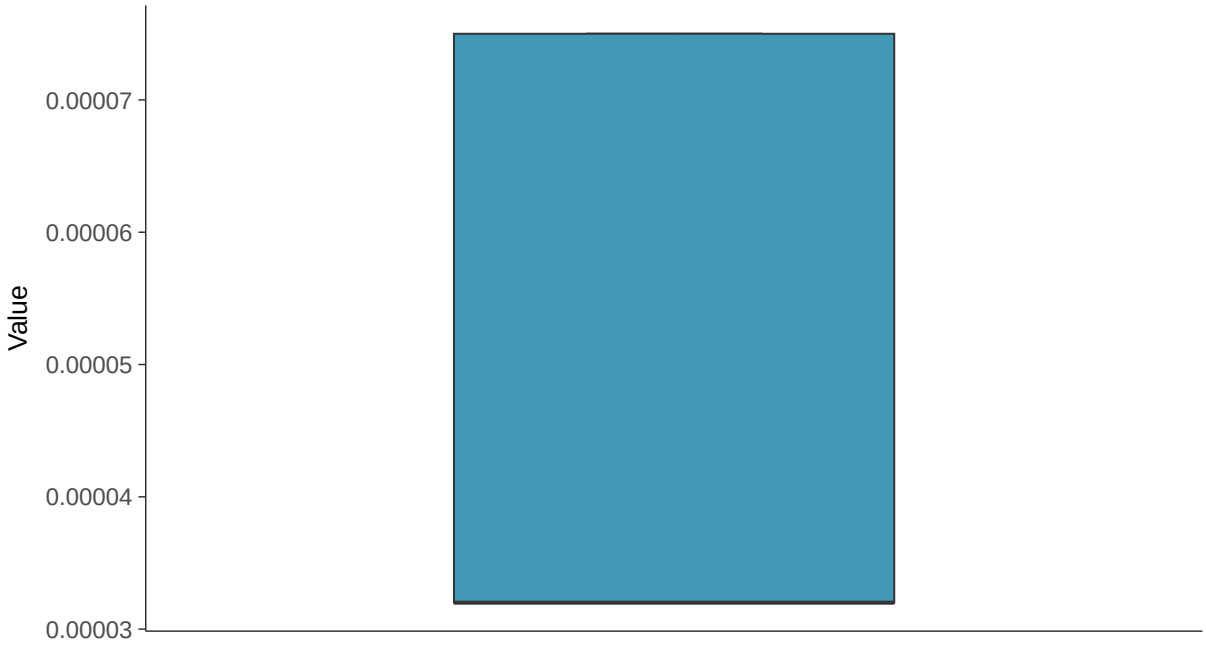
ID: 1_17_5_106





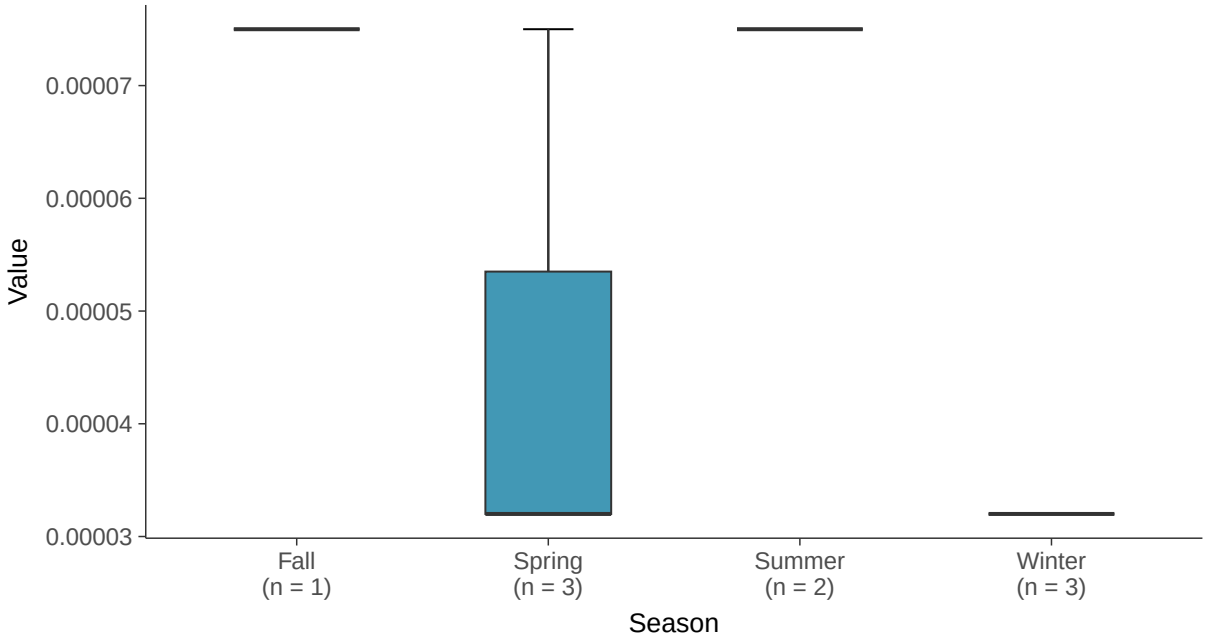
Boxplot

Cadmium, MW-08 (mg/L)



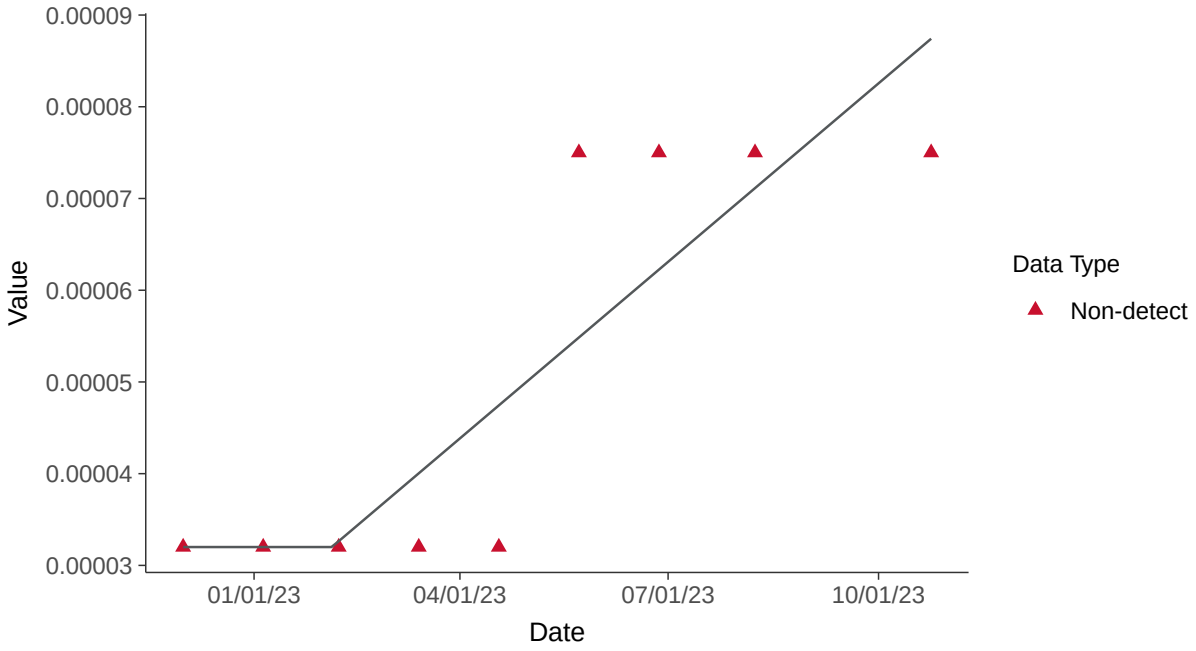
Boxplot by Season

Cadmium, MW-08 (mg/L)



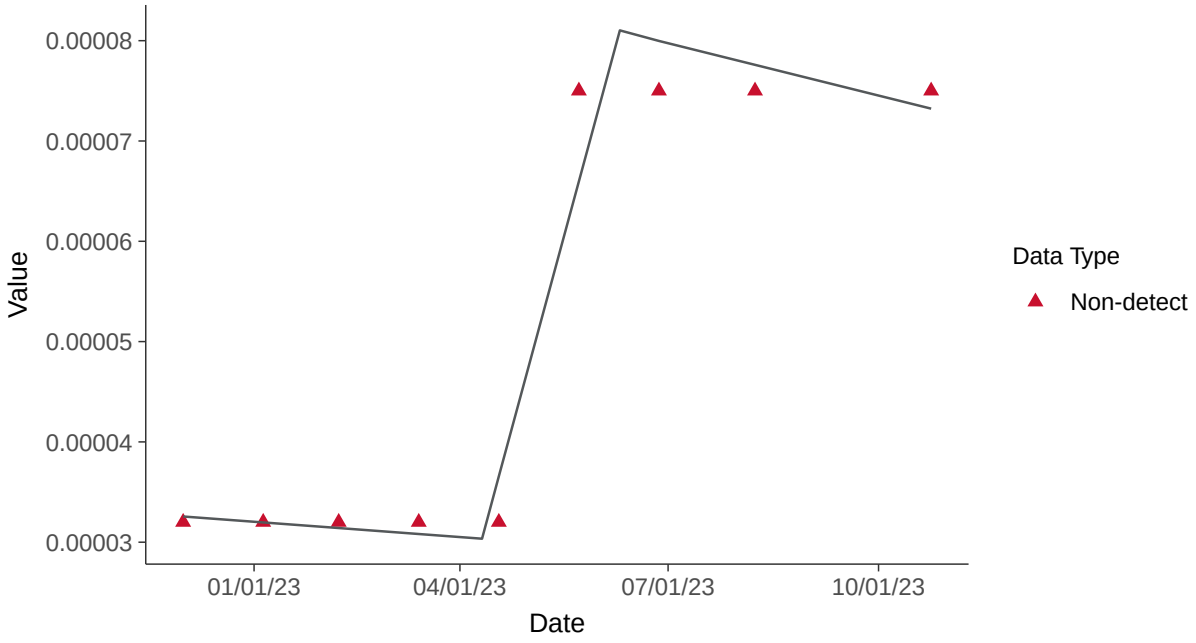
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-08 (mg/L)



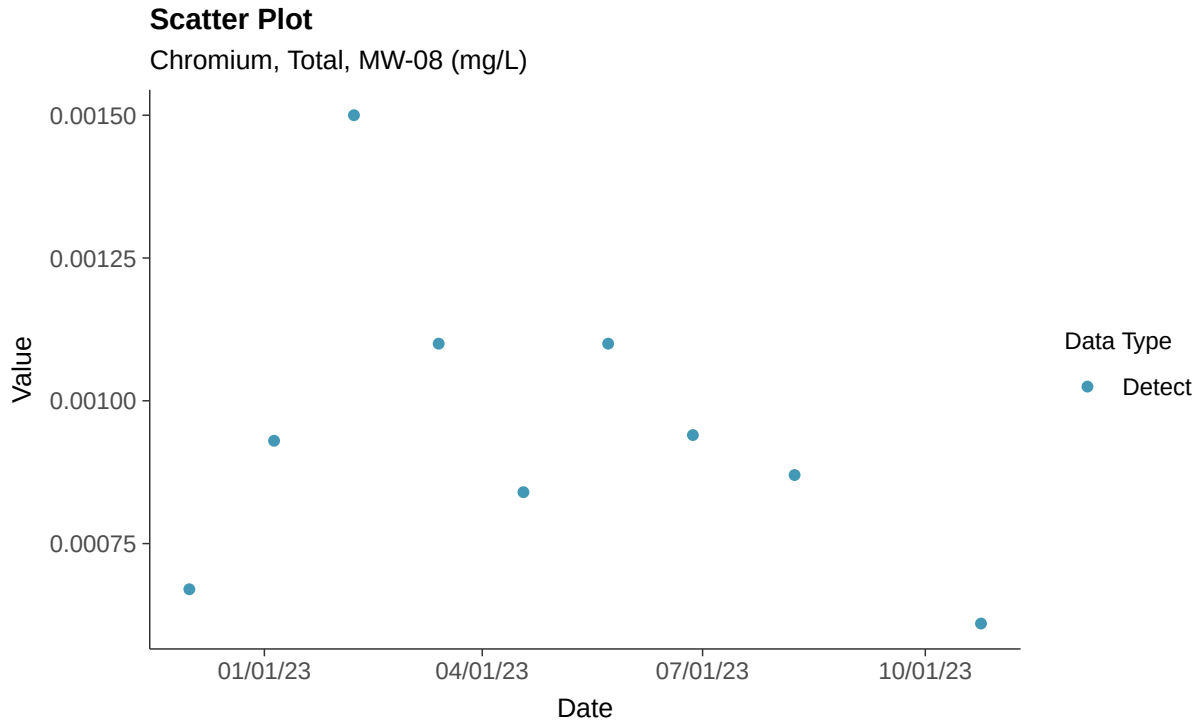
Trend Regression: Piecewise Linear-Linear-Linear

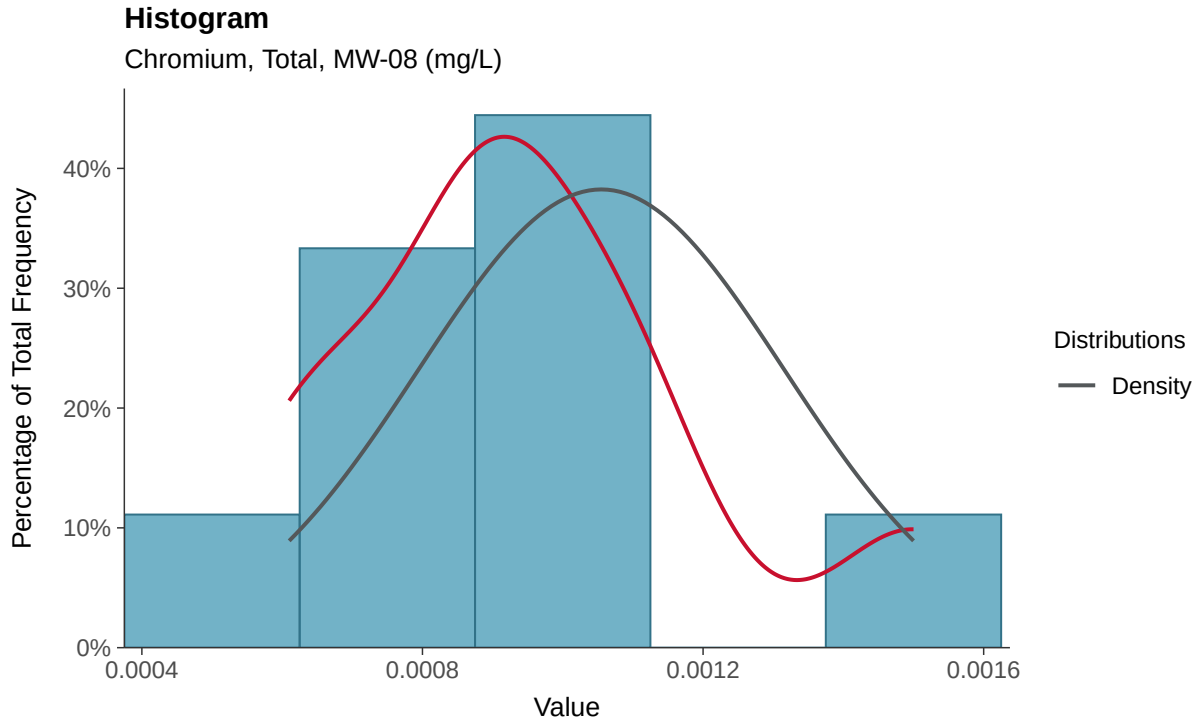
Cadmium, MW-08 (mg/L)



Appendix IV: Chromium, Total, MW-08

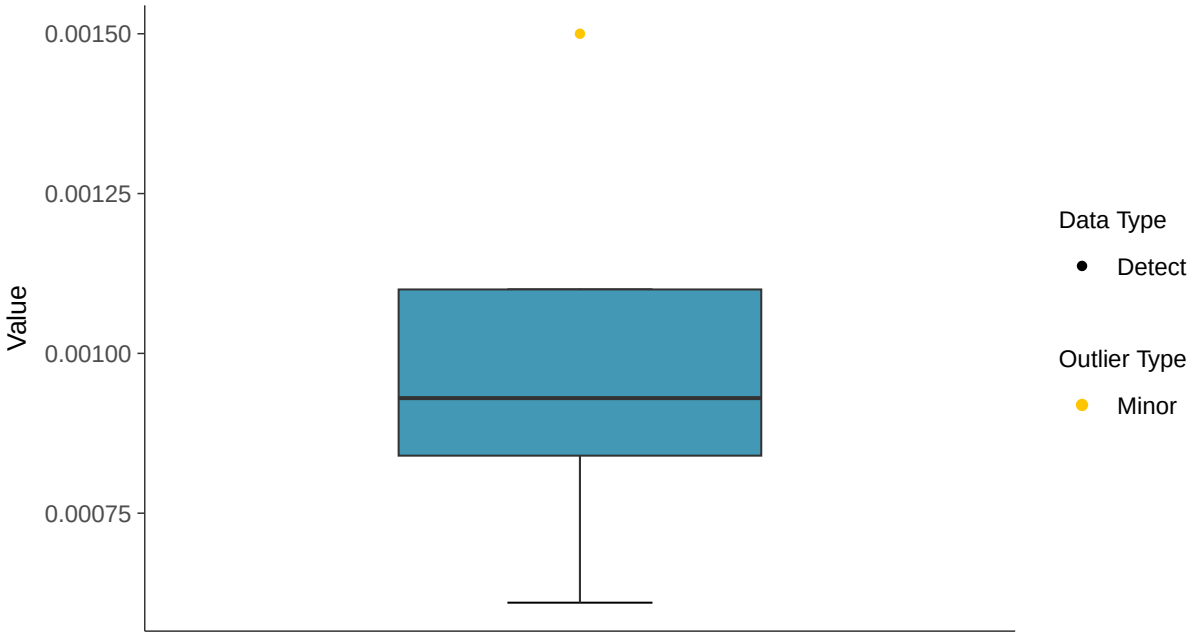
ID: 1_17_5_109





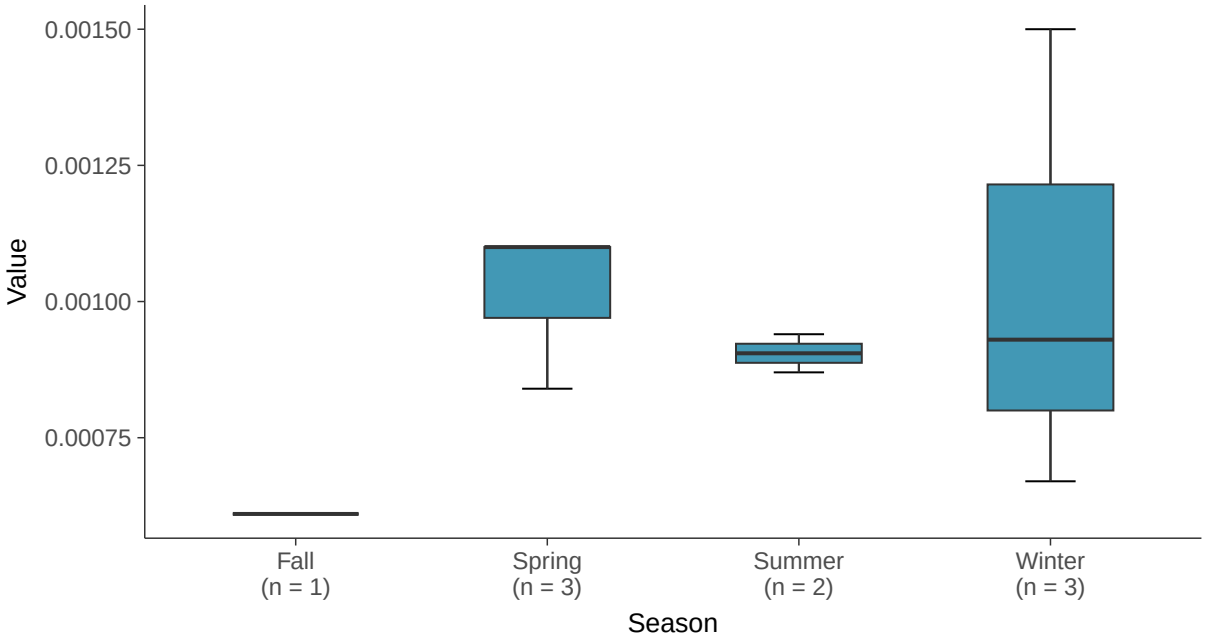
Boxplot

Chromium, Total, MW-08 (mg/L)



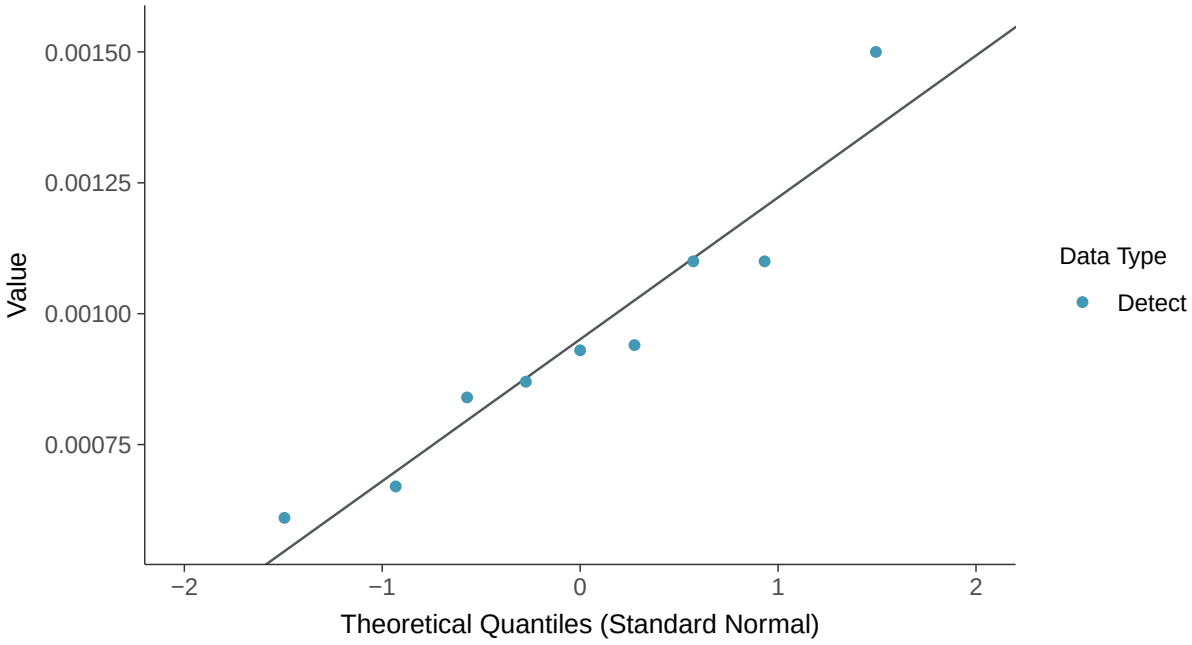
Boxplot by Season

Chromium, Total, MW-08 (mg/L)



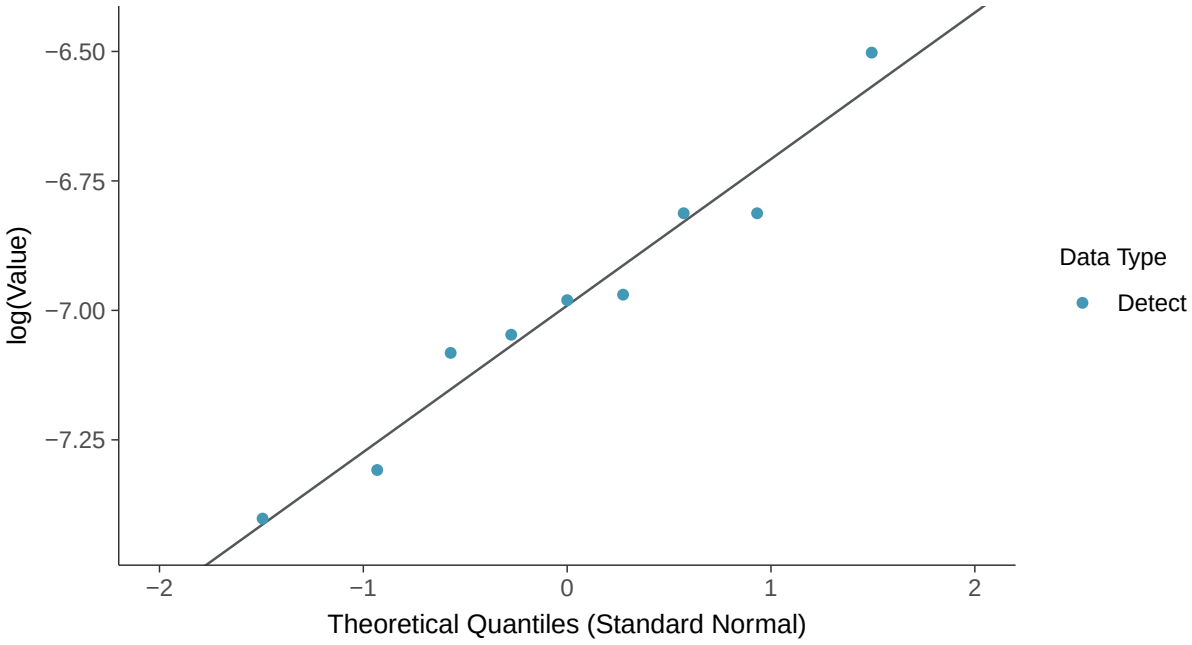
Normal Q-Q plot

Chromium, Total, MW-08 (mg/L)



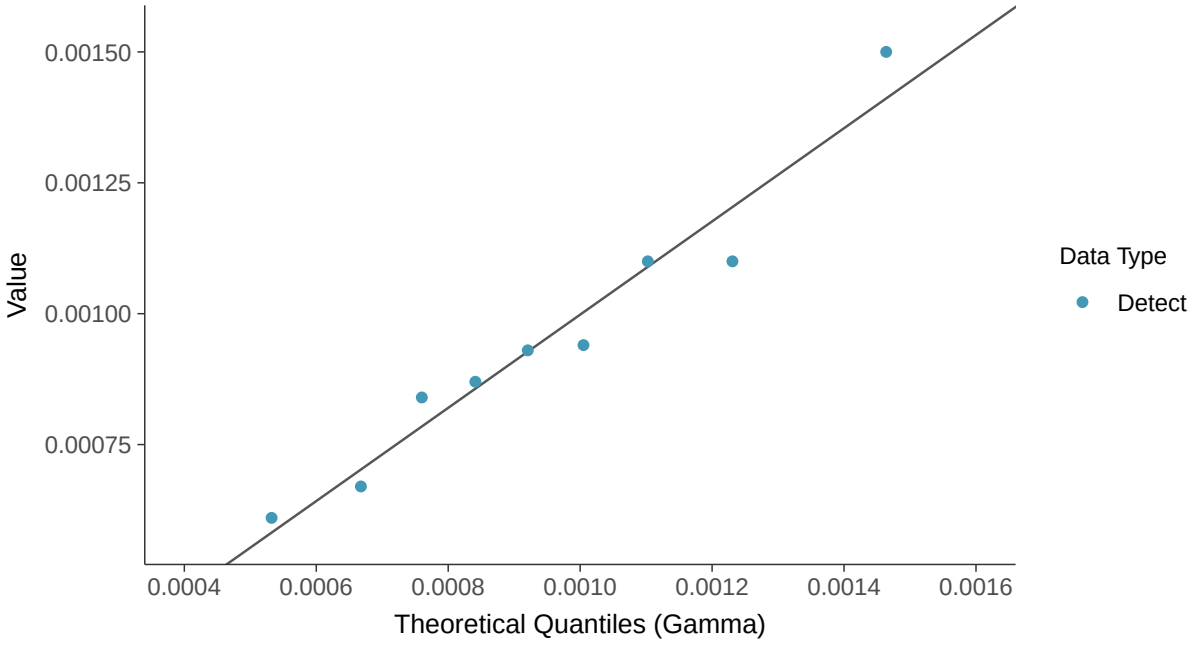
Lognormal Q-Q plot

Chromium, Total, MW-08 (mg/L)



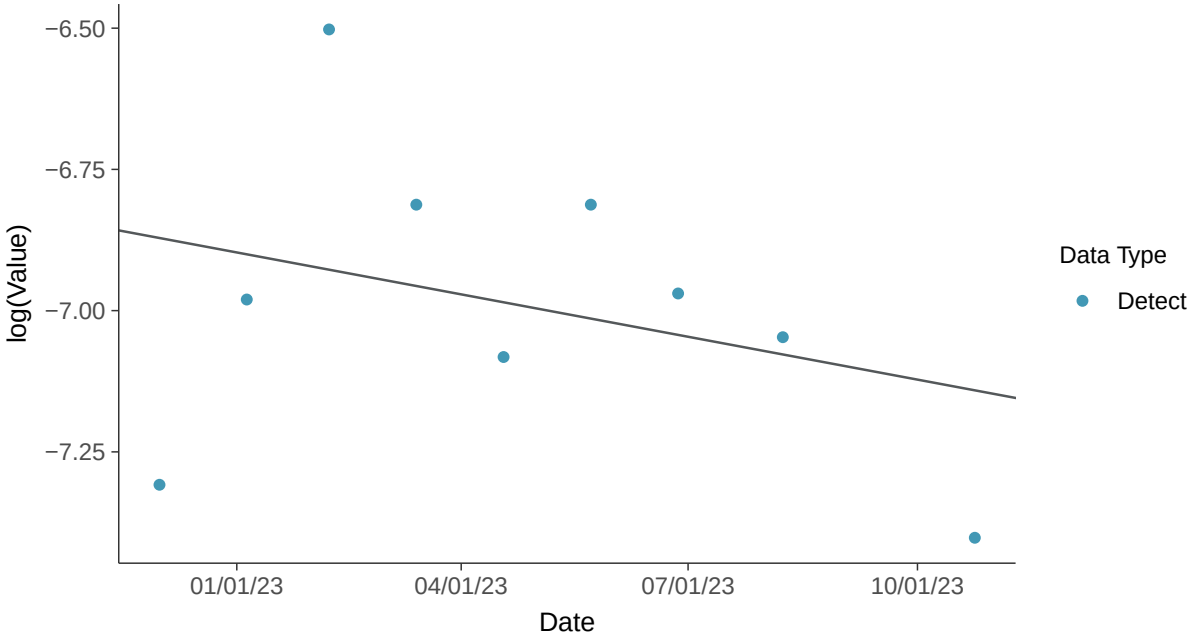
Gamma Q-Q plot

Chromium, Total, MW-08 (mg/L)



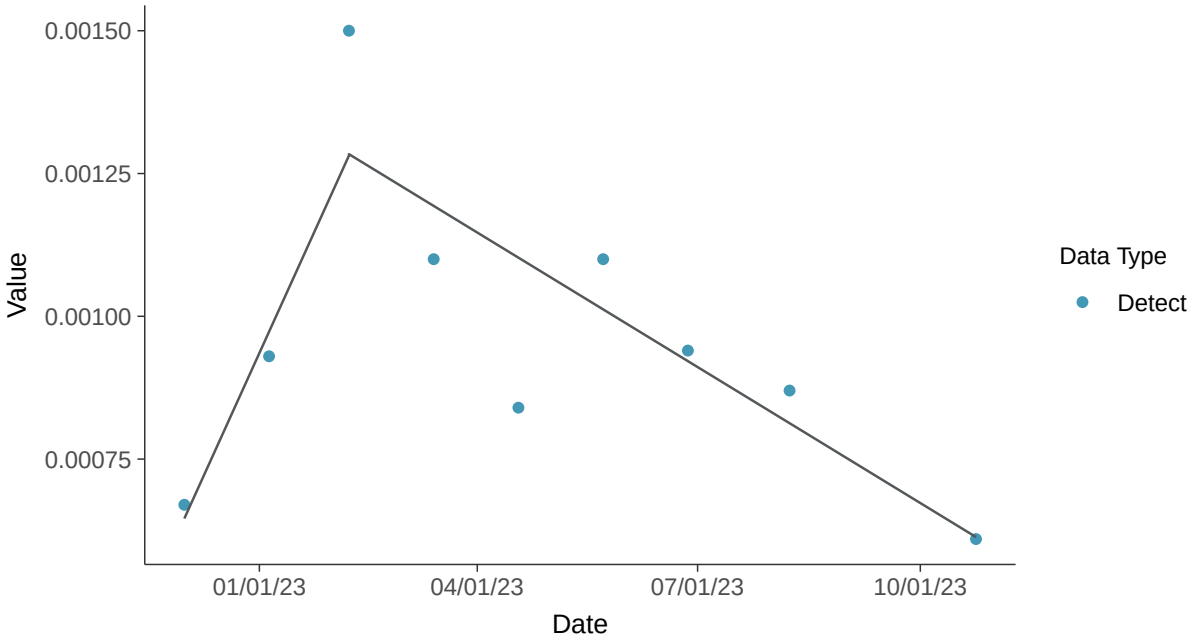
Trend Regression: Lognormal MLE

Chromium, Total, MW-08 (mg/L)



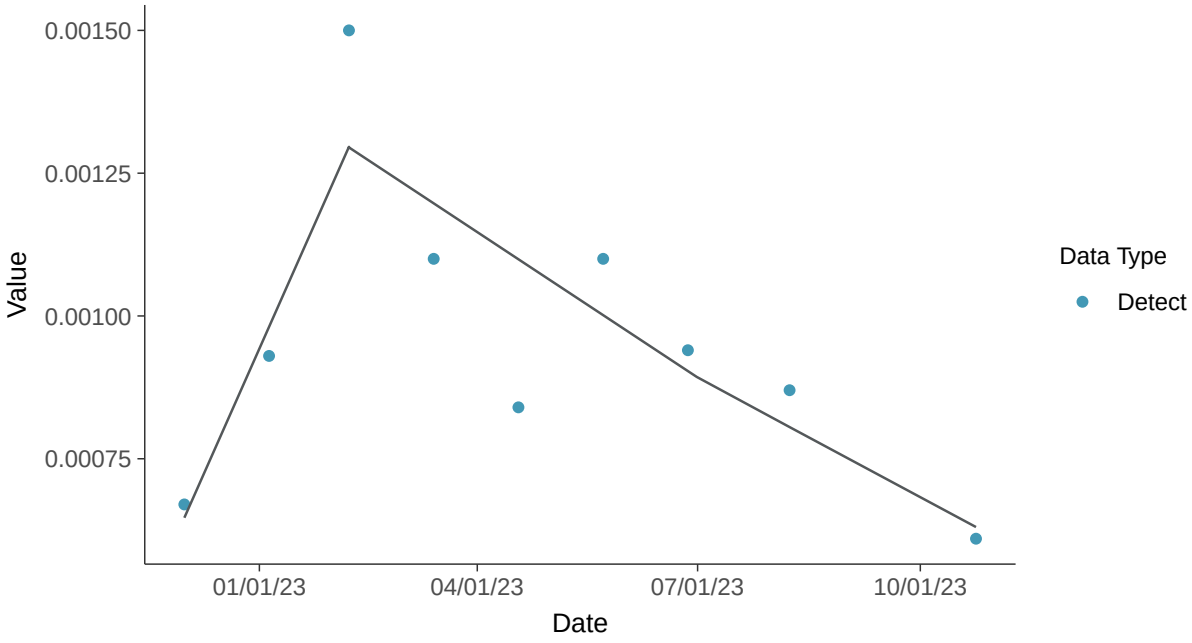
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-08 (mg/L)



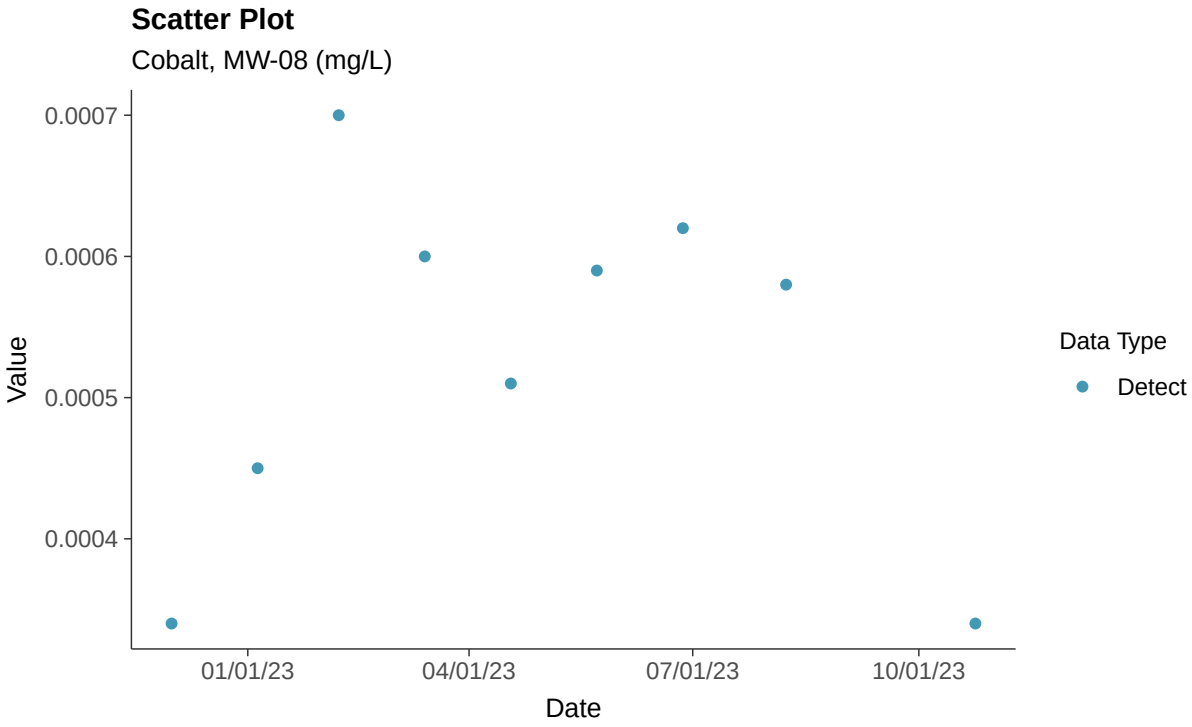
Trend Regression: Piecewise Linear-Linear-Linear

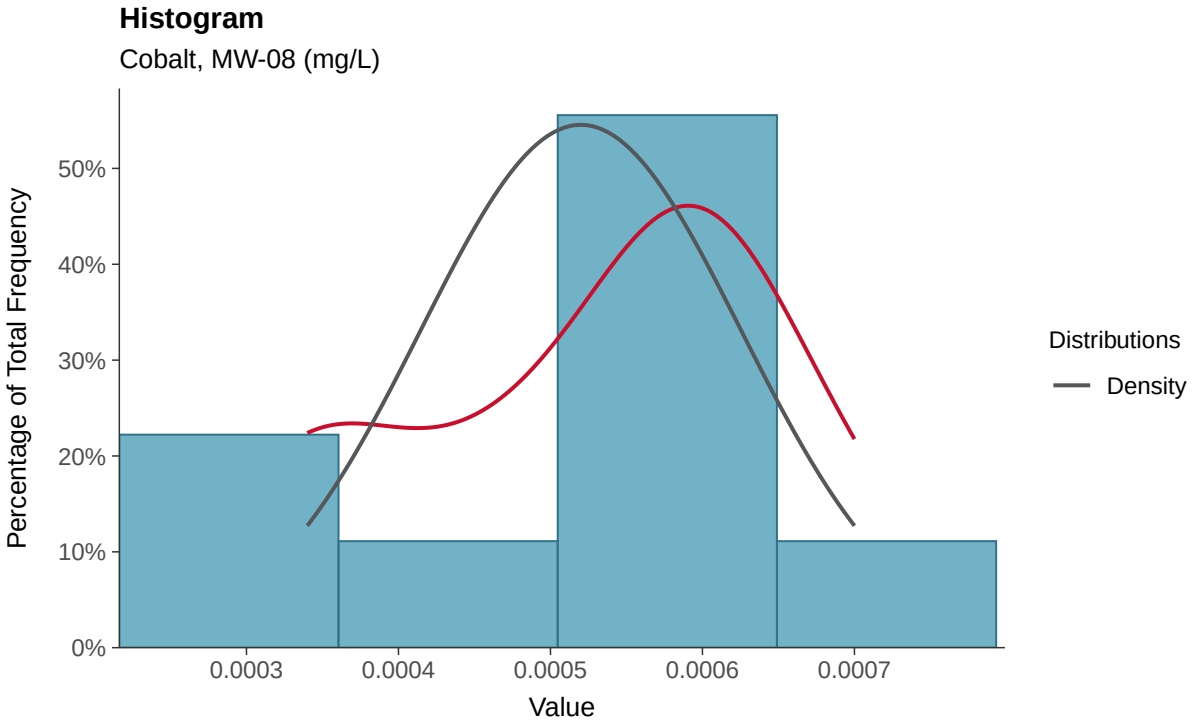
Chromium, Total, MW-08 (mg/L)



Appendix IV: Cobalt, MW-08

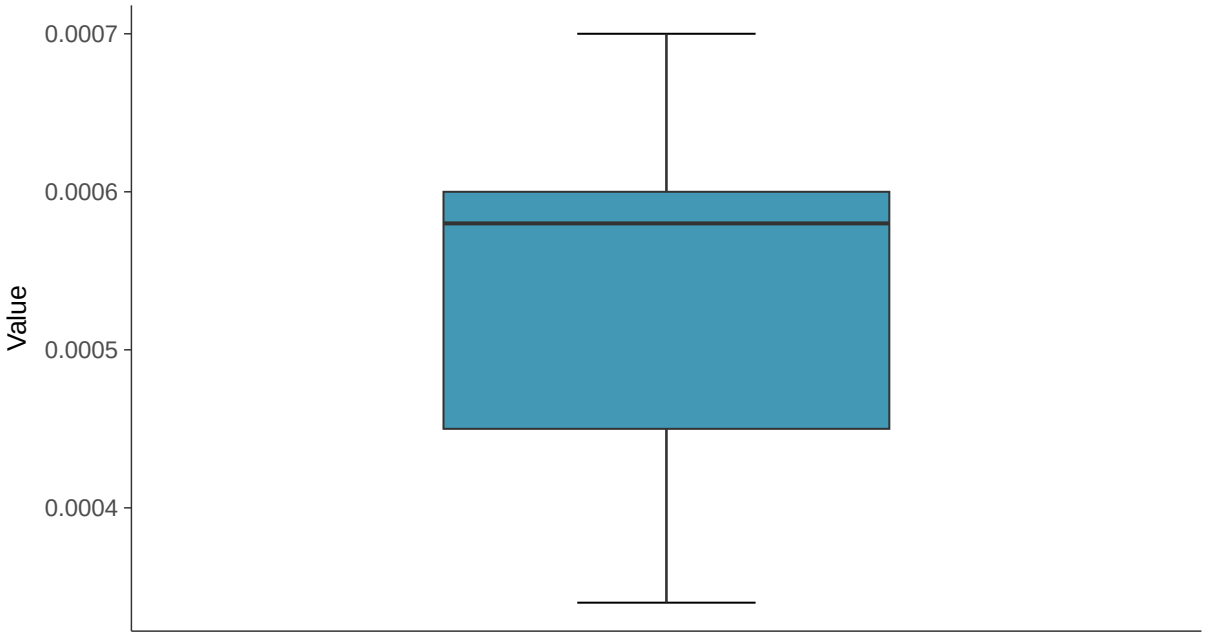
ID: 1_17_5_110





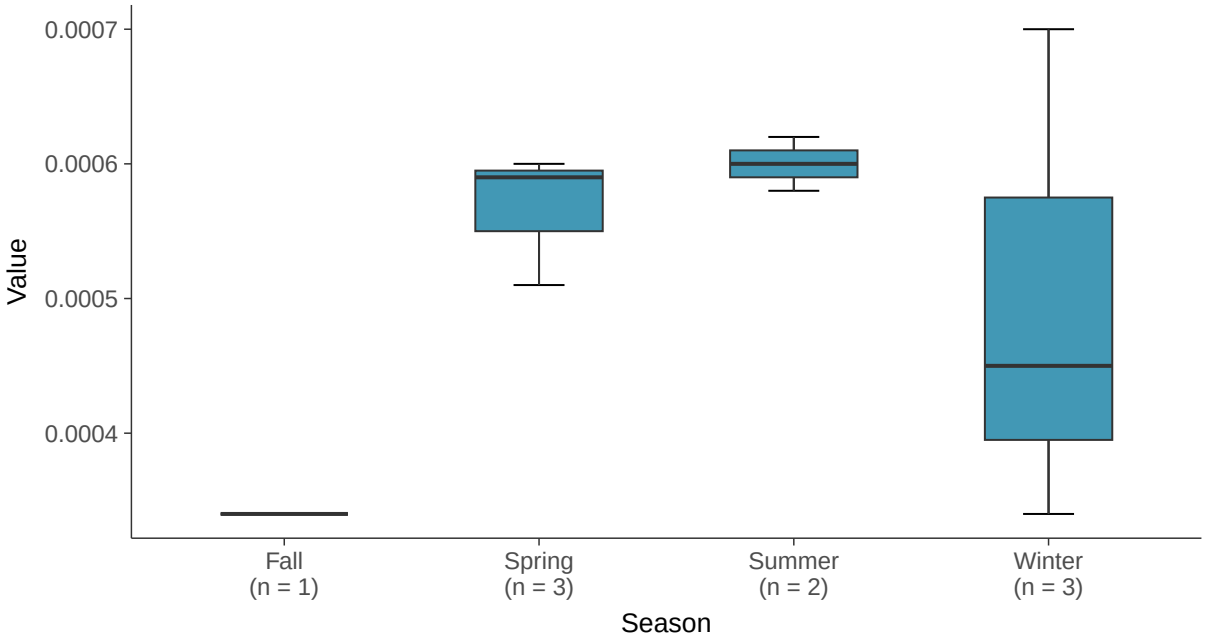
Boxplot

Cobalt, MW-08 (mg/L)



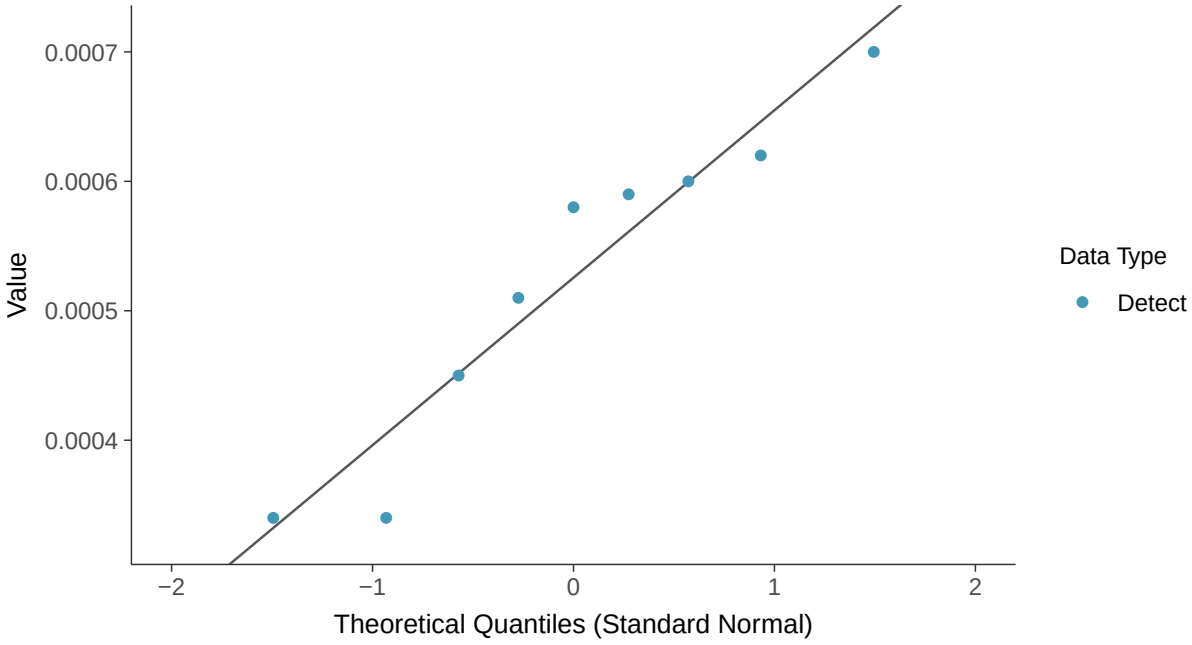
Boxplot by Season

Cobalt, MW-08 (mg/L)



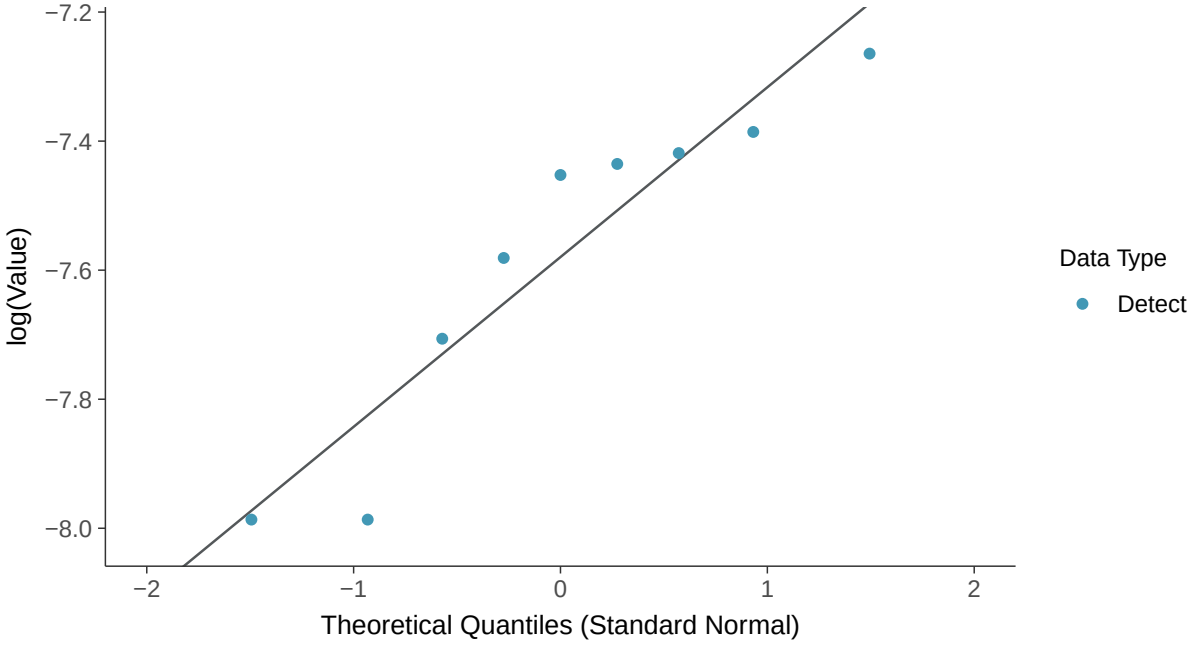
Normal Q-Q plot

Cobalt, MW-08 (mg/L)



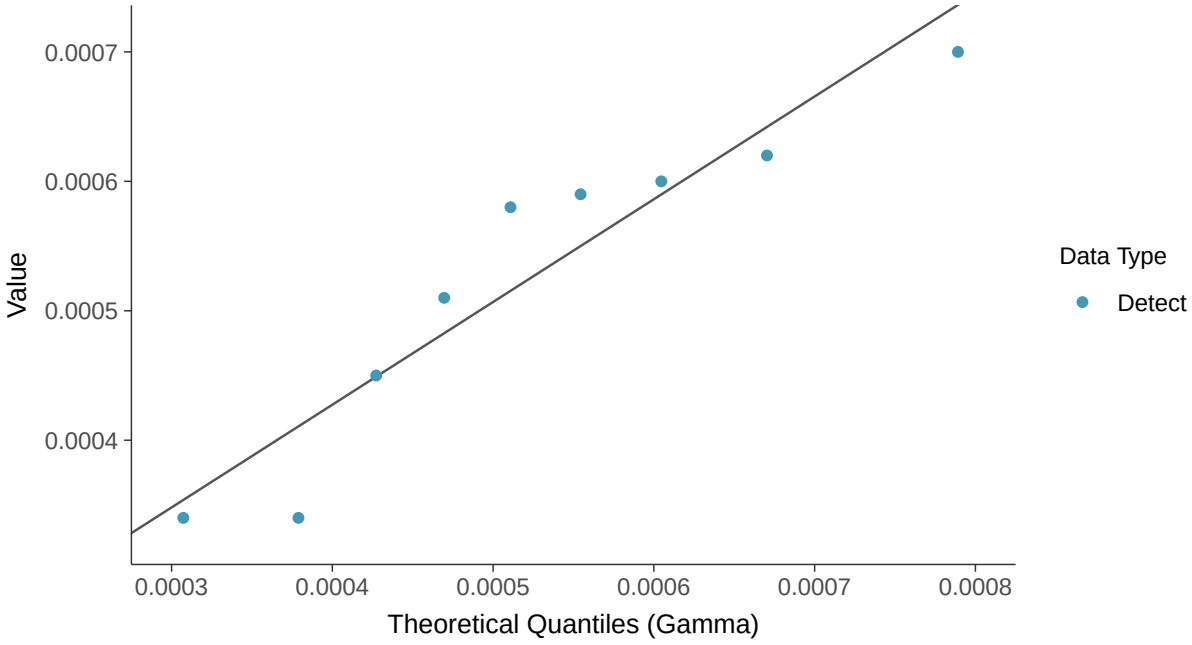
Lognormal Q-Q plot

Cobalt, MW-08 (mg/L)



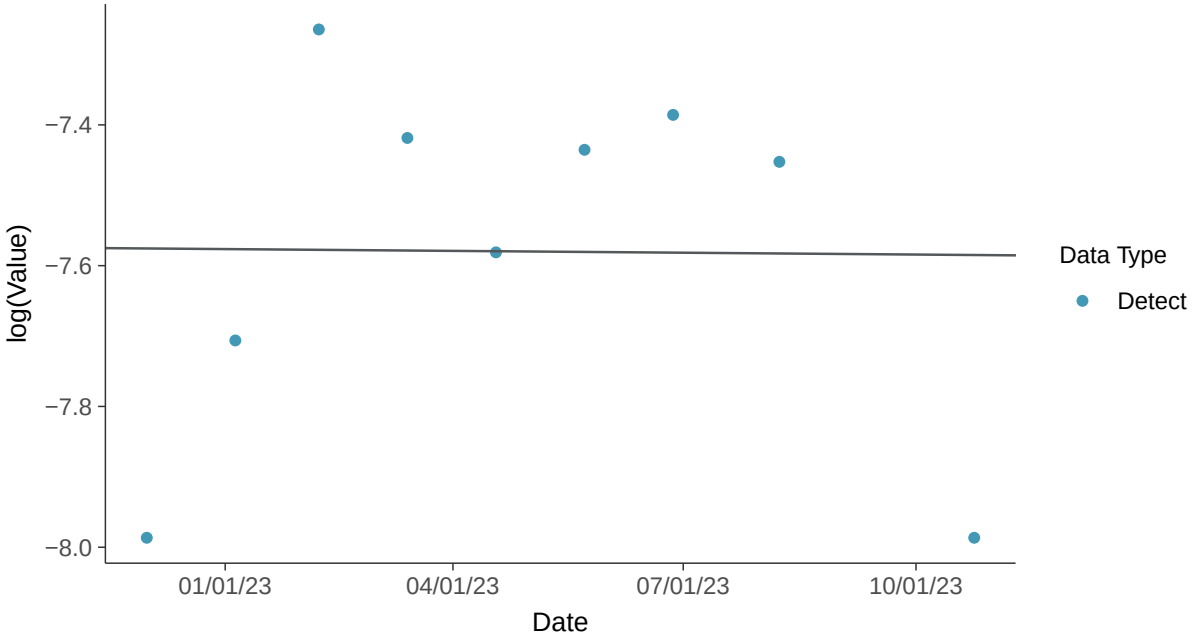
Gamma Q-Q plot

Cobalt, MW-08 (mg/L)



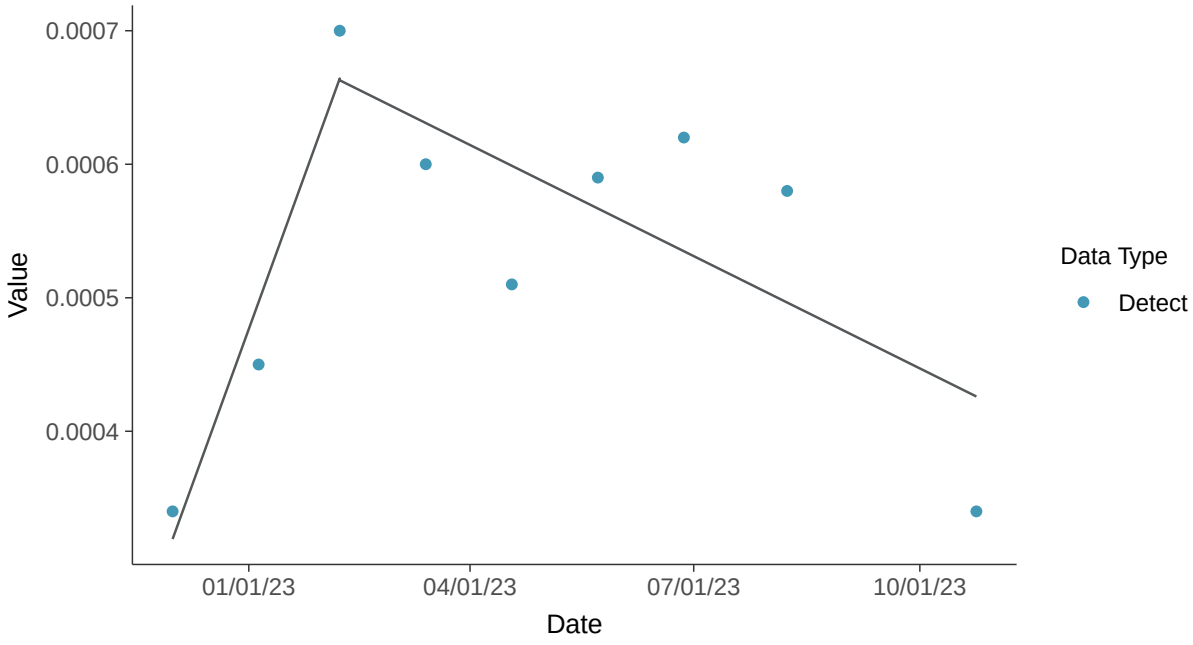
Trend Regression: Lognormal MLE

Cobalt, MW-08 (mg/L)



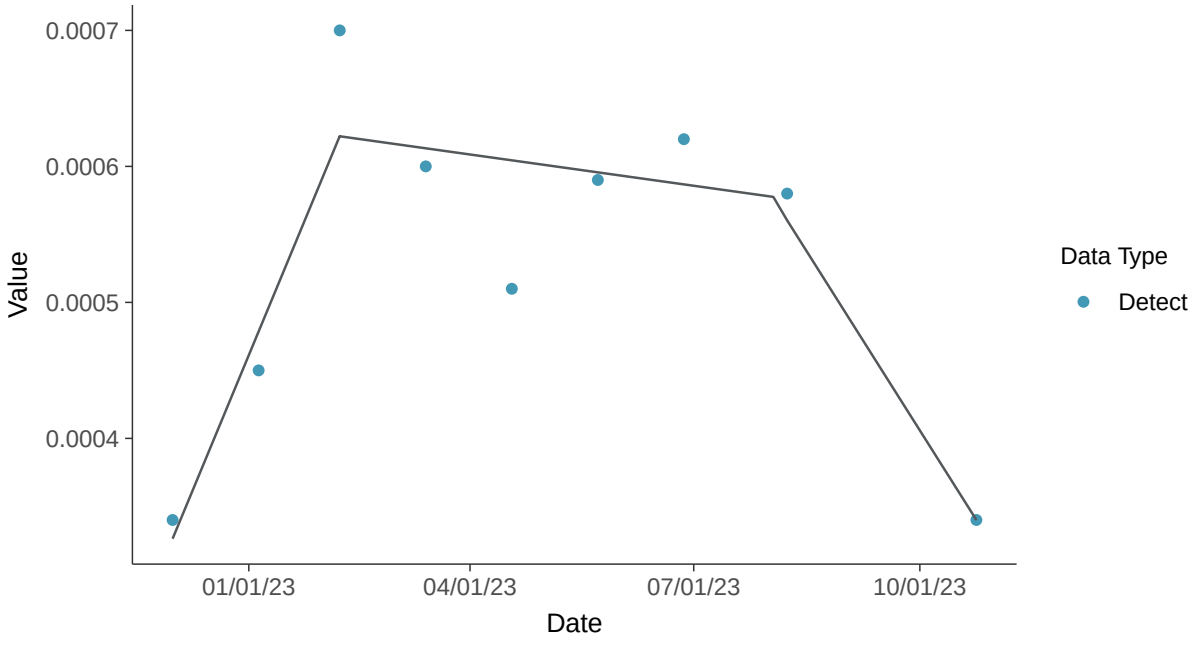
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-08 (mg/L)



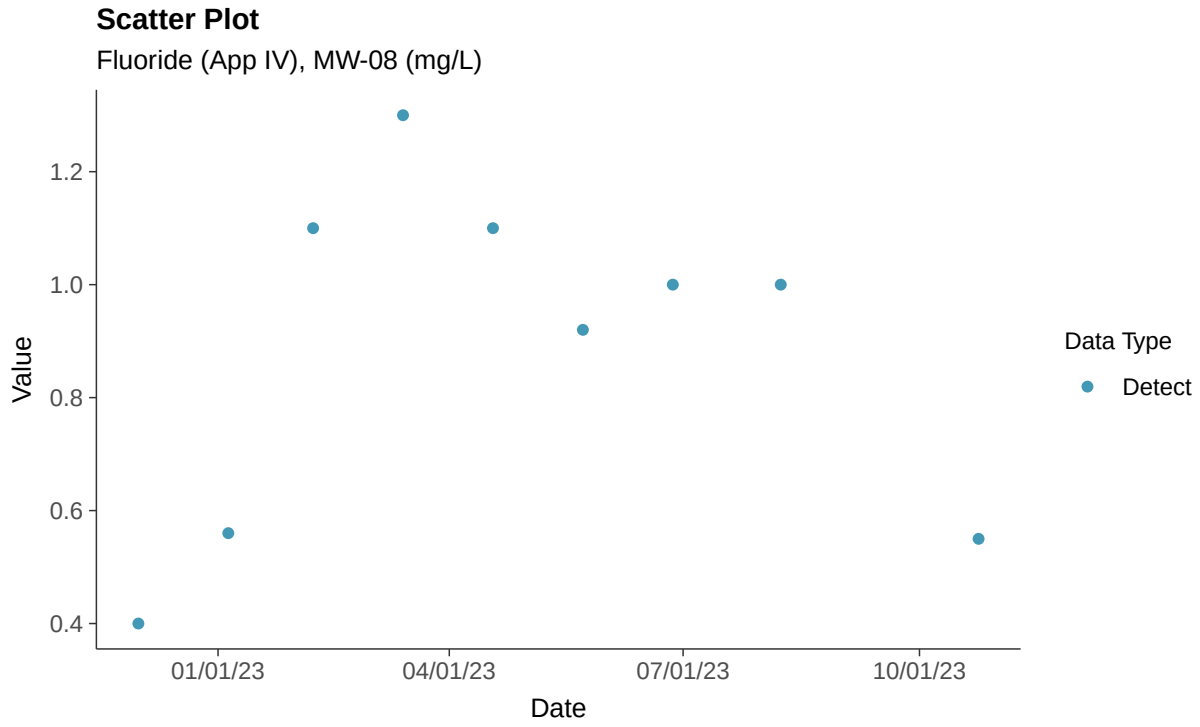
Trend Regression: Piecewise Linear-Linear-Linear

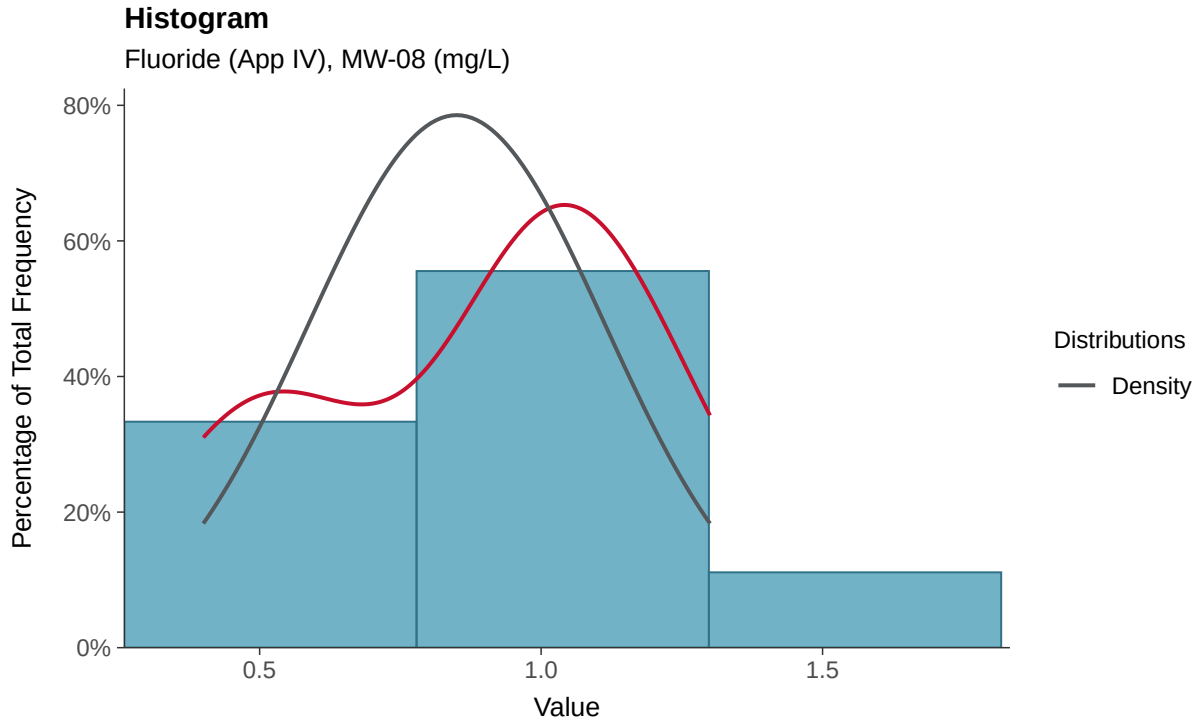
Cobalt, MW-08 (mg/L)



Appendix IV: Fluoride (App IV), MW-08

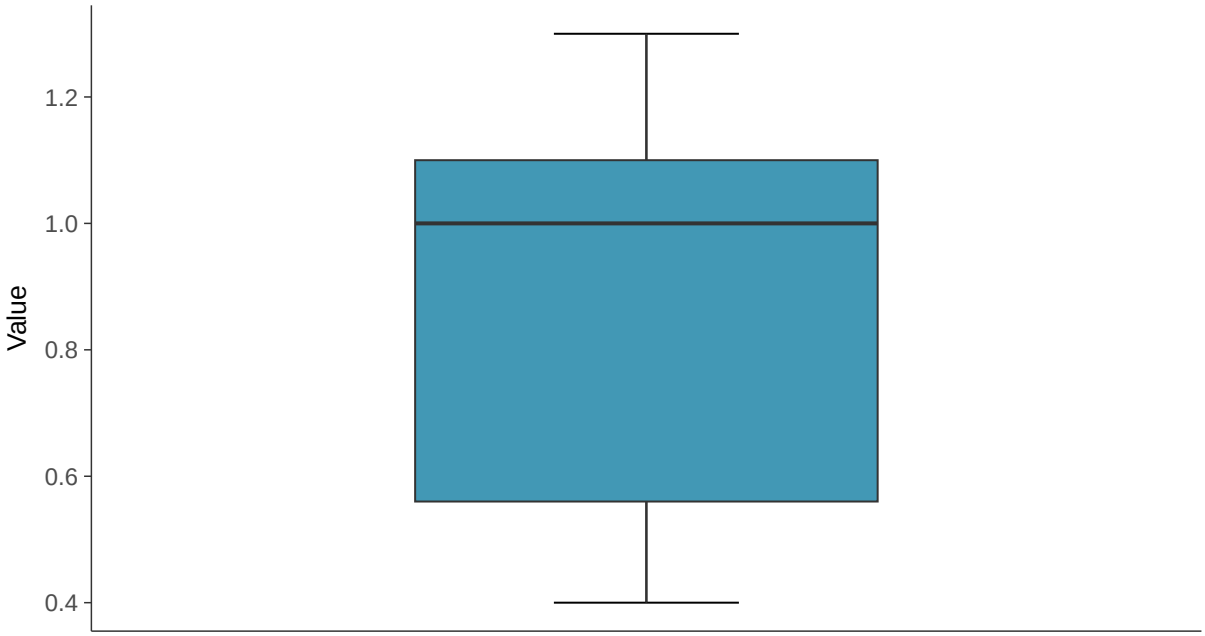
ID: 1_17_5_113





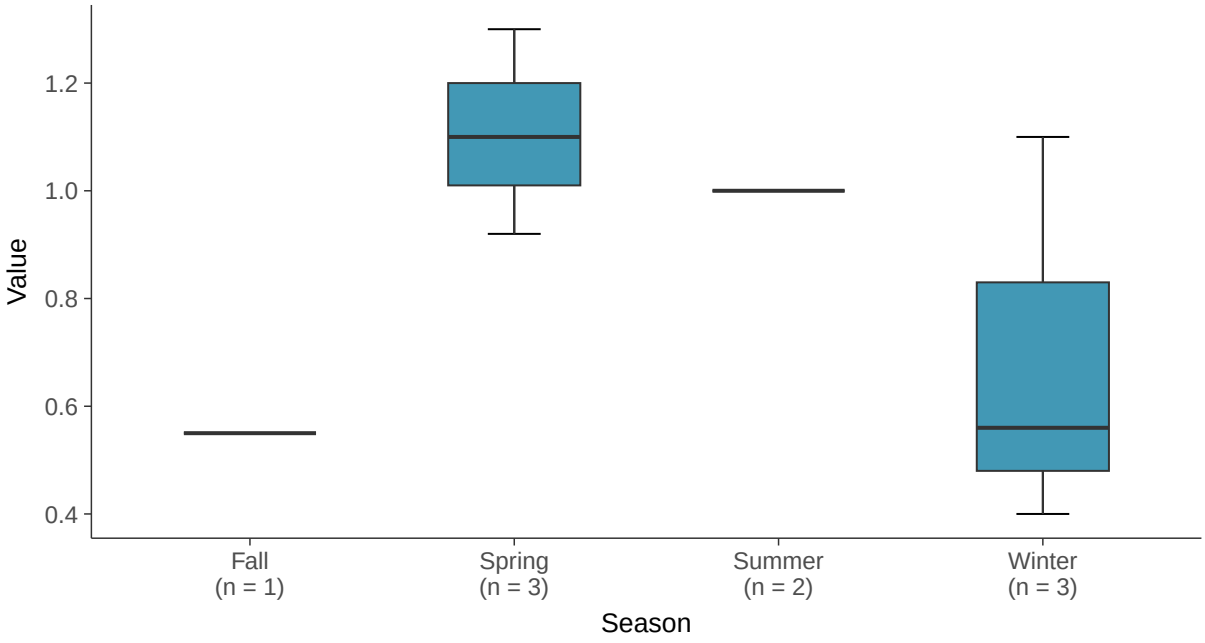
Boxplot

Fluoride (App IV), MW-08 (mg/L)



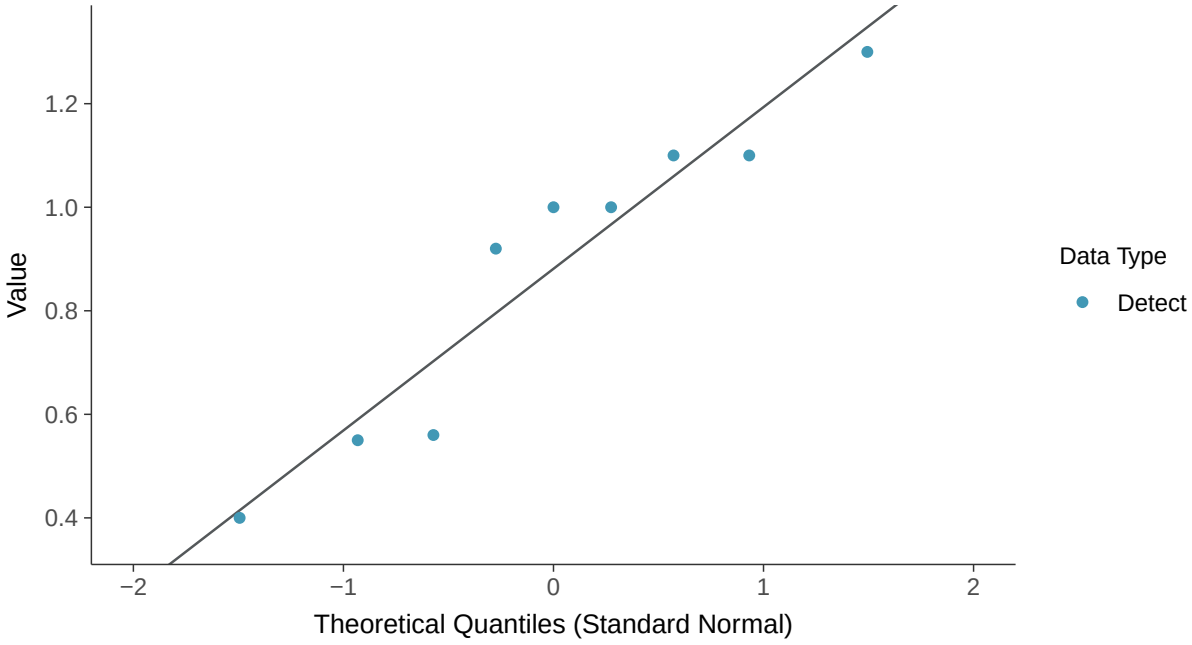
Boxplot by Season

Fluoride (App IV), MW-08 (mg/L)



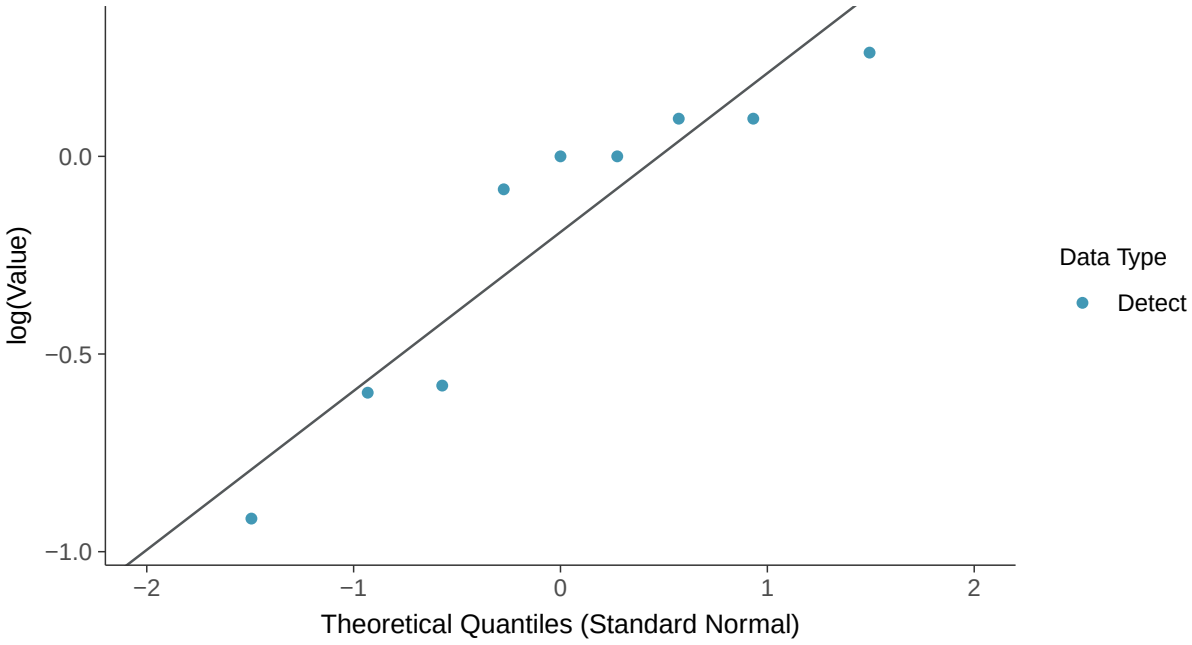
Normal Q-Q plot

Fluoride (App IV), MW-08 (mg/L)



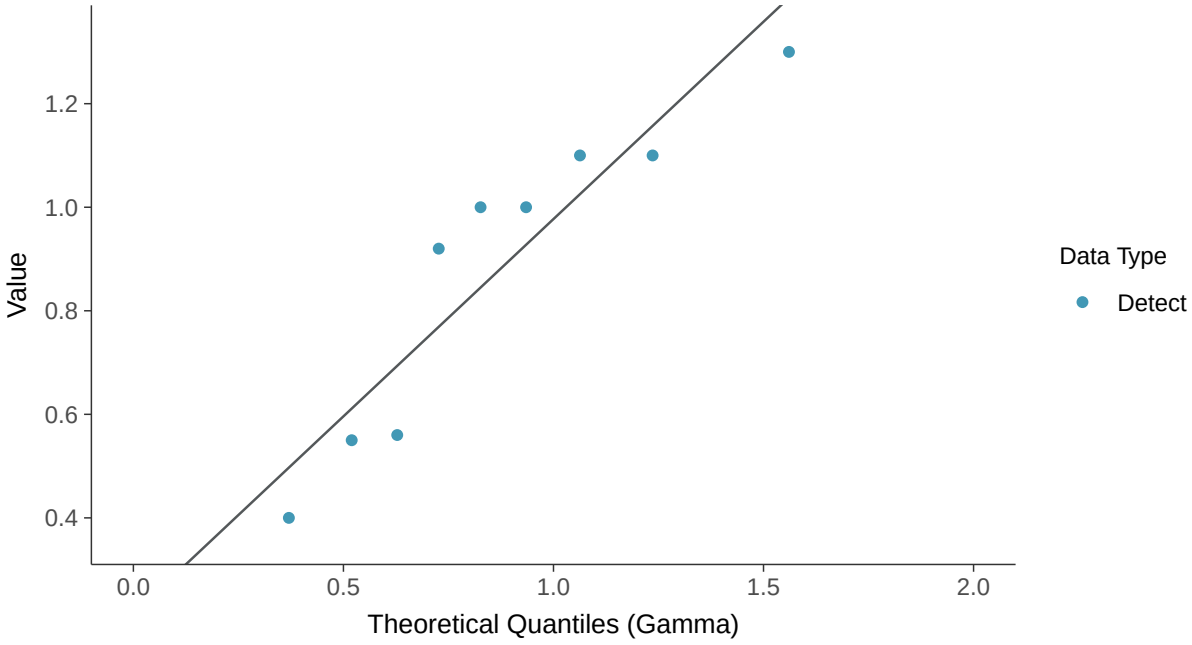
Lognormal Q-Q plot

Fluoride (App IV), MW-08 (mg/L)



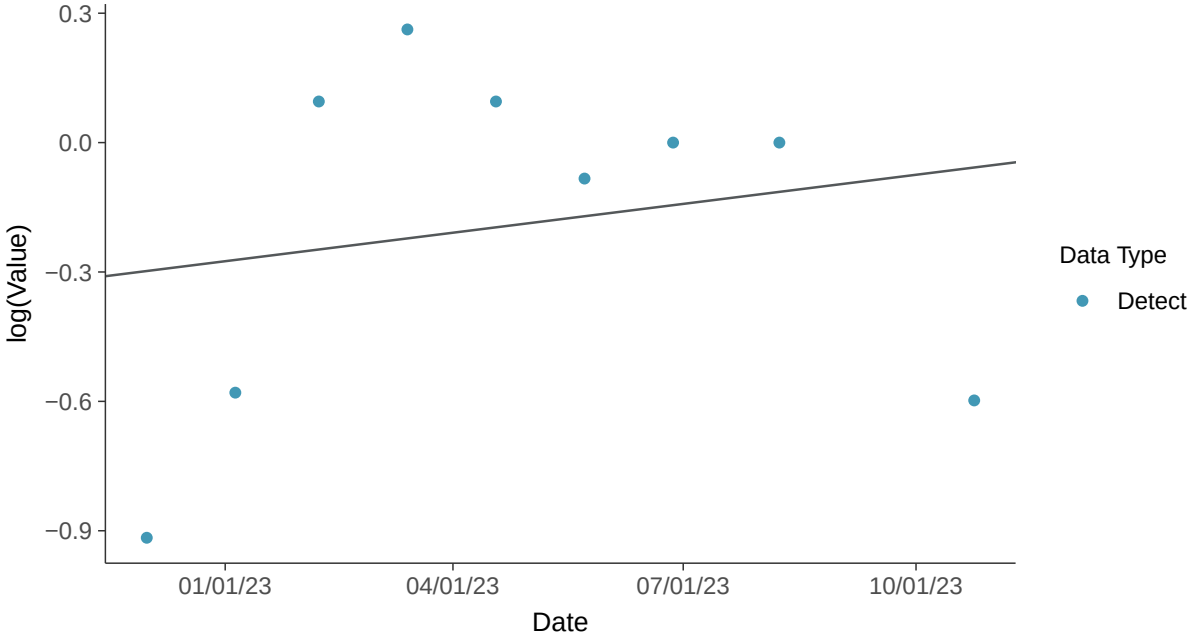
Gamma Q-Q plot

Fluoride (App IV), MW-08 (mg/L)



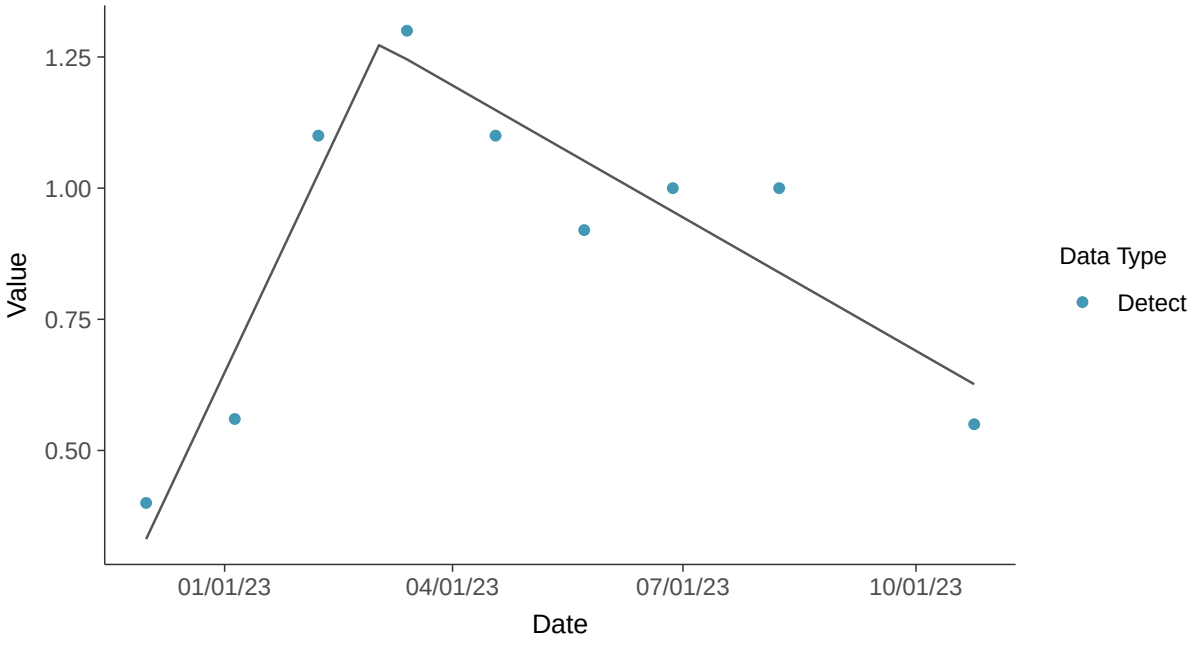
Trend Regression: Lognormal MLE

Fluoride (App IV), MW-08 (mg/L)



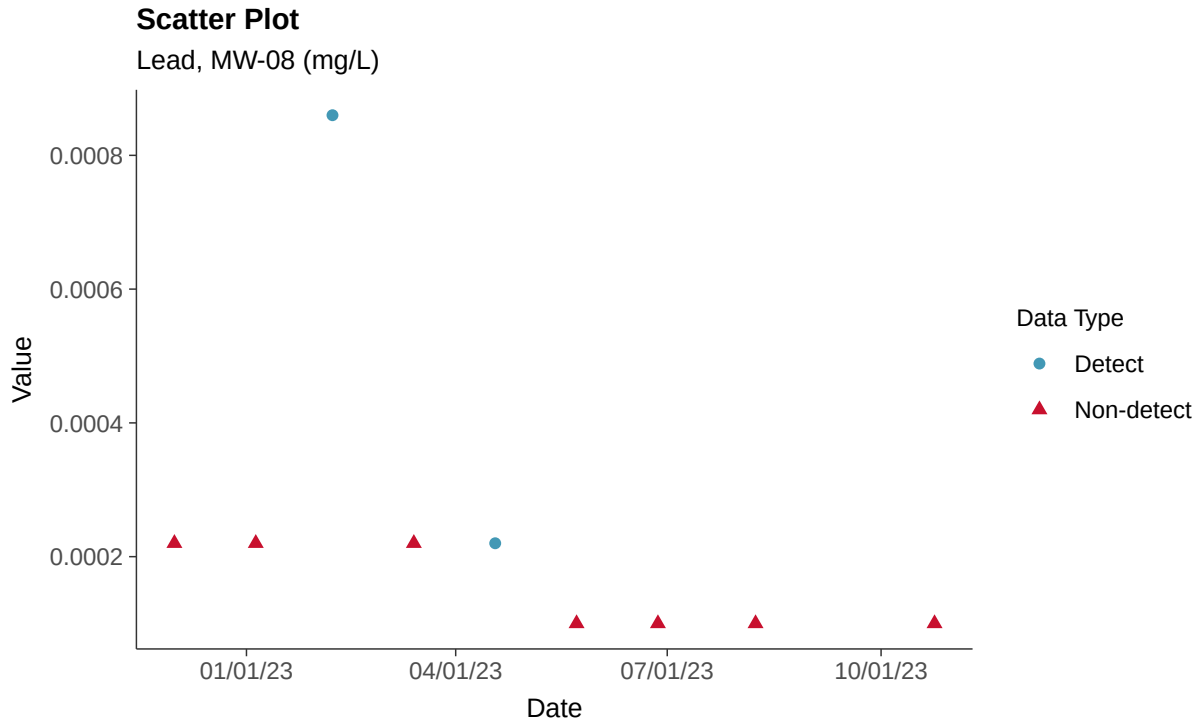
Trend Regression: Piecewise Linear-Linear

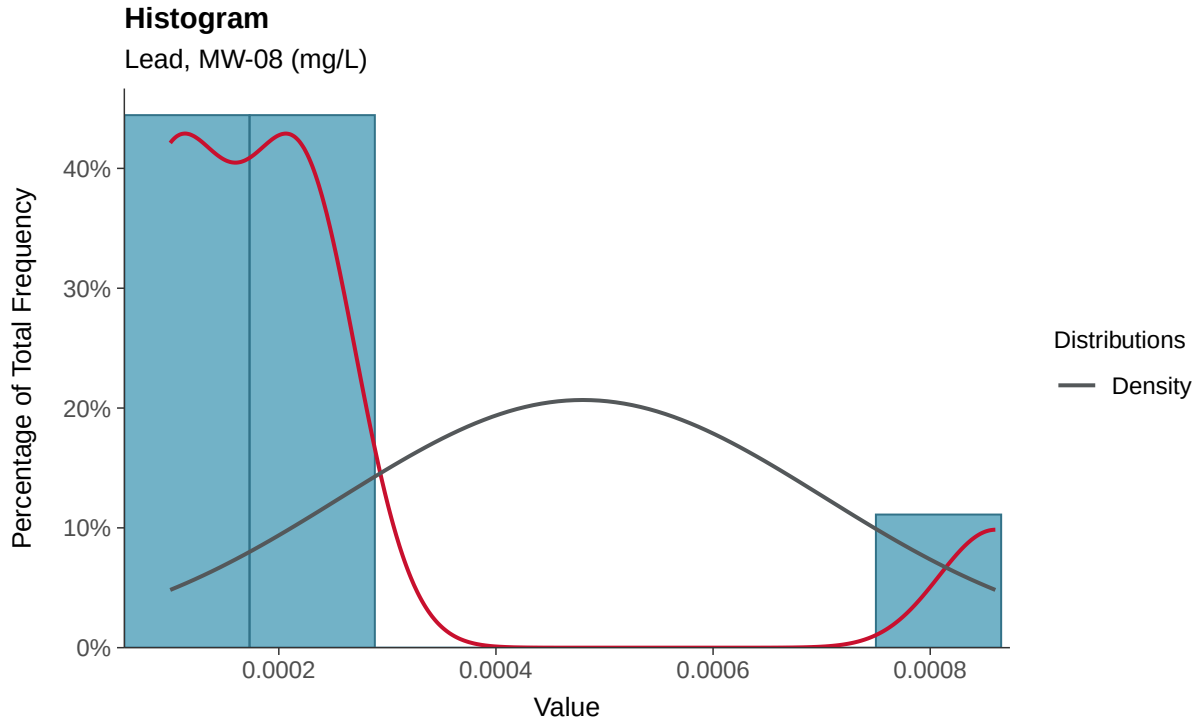
Fluoride (App IV), MW-08 (mg/L)



Appendix IV: Lead, MW-08

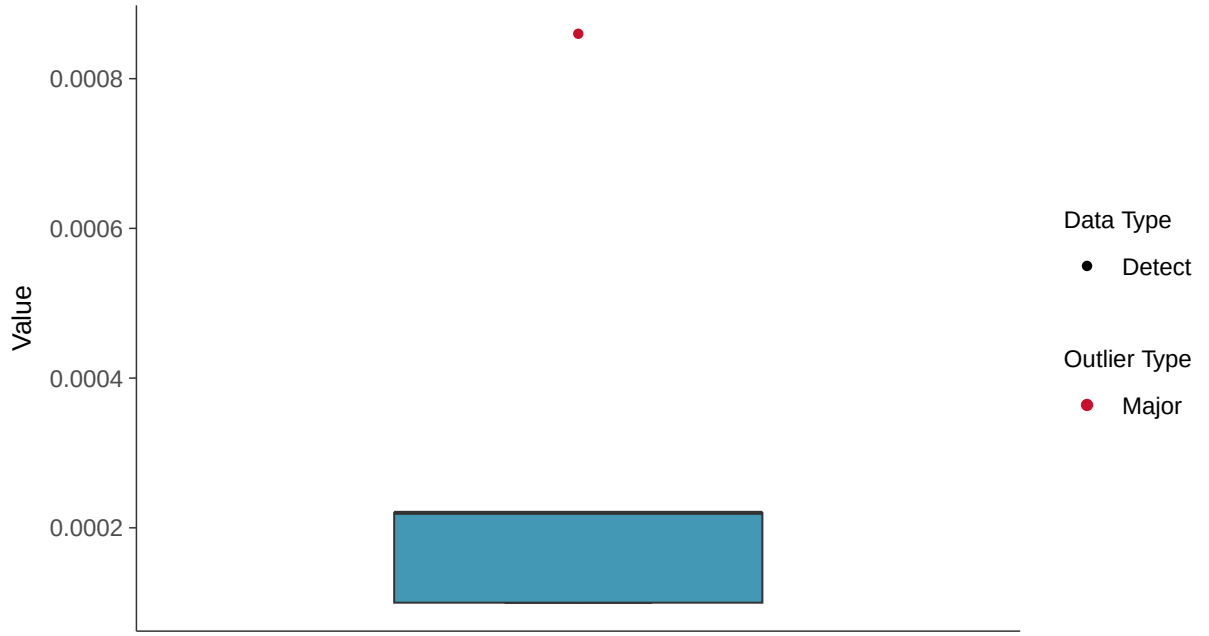
ID: 1_17_5_115





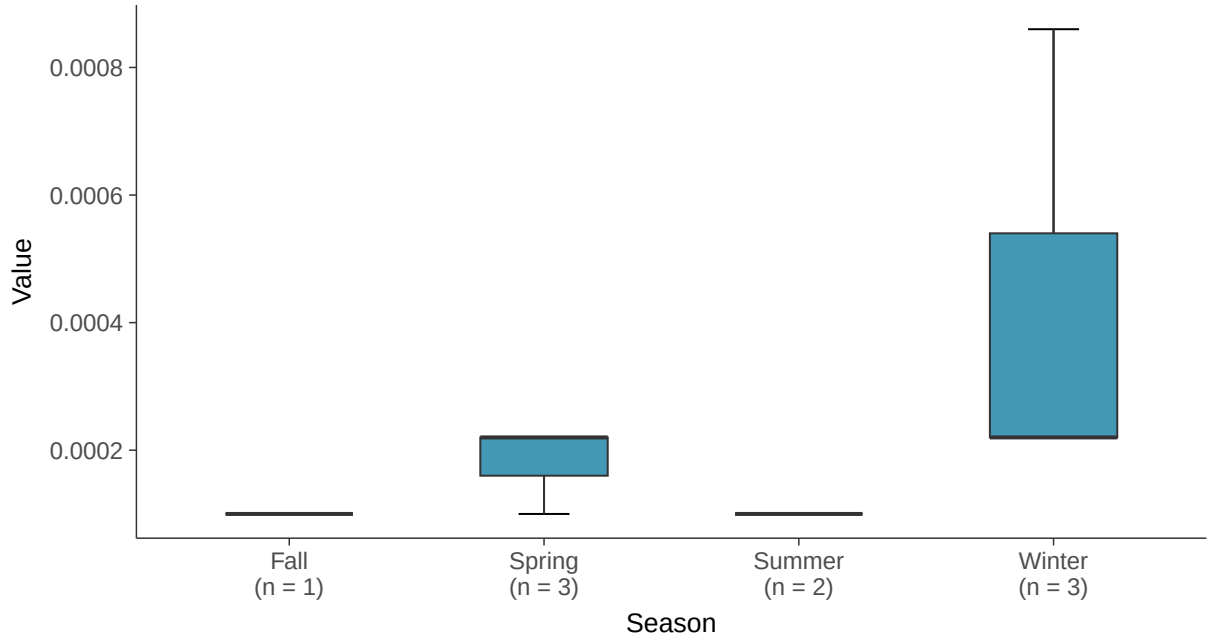
Boxplot

Lead, MW-08 (mg/L)



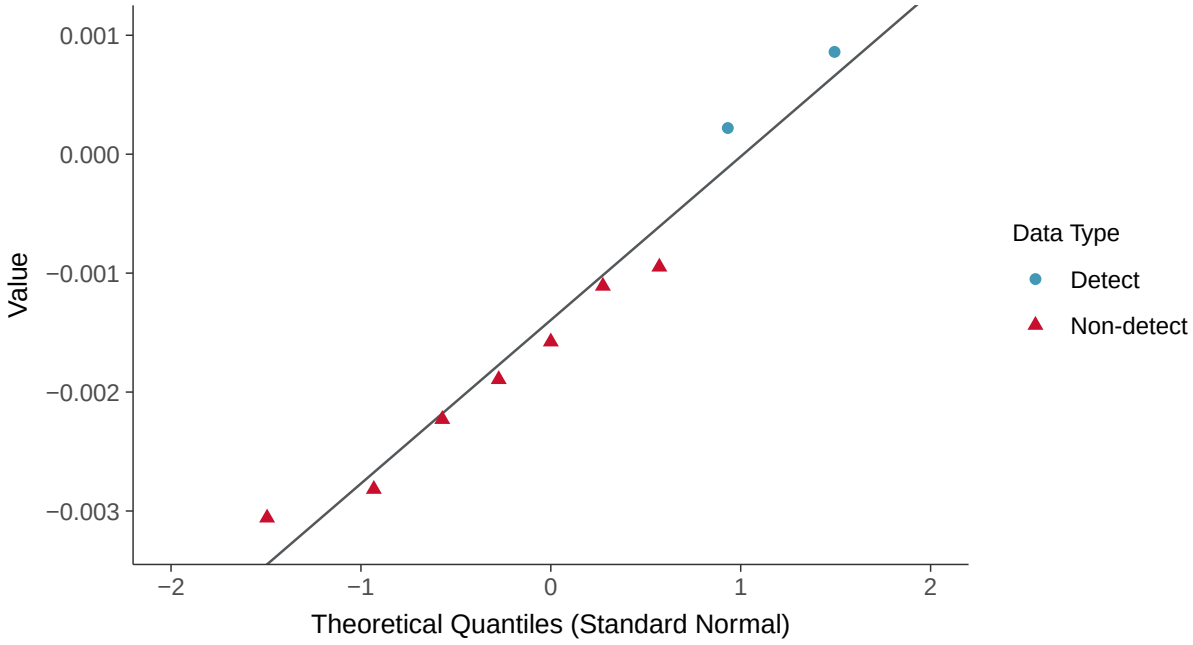
Boxplot by Season

Lead, MW-08 (mg/L)



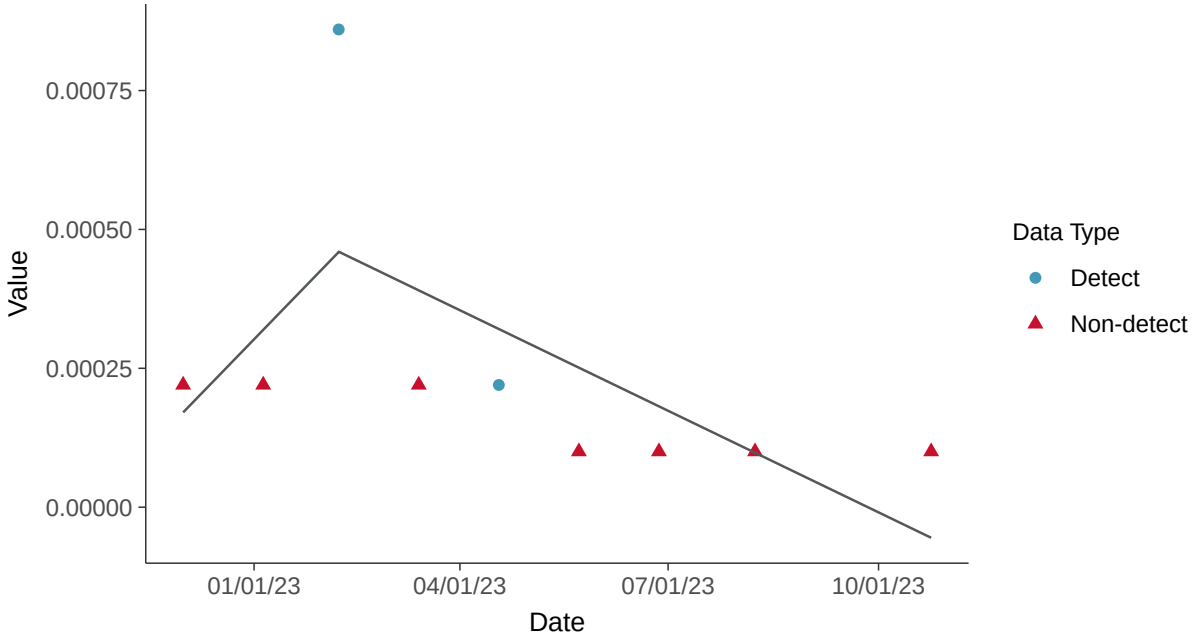
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-08 (mg/L)



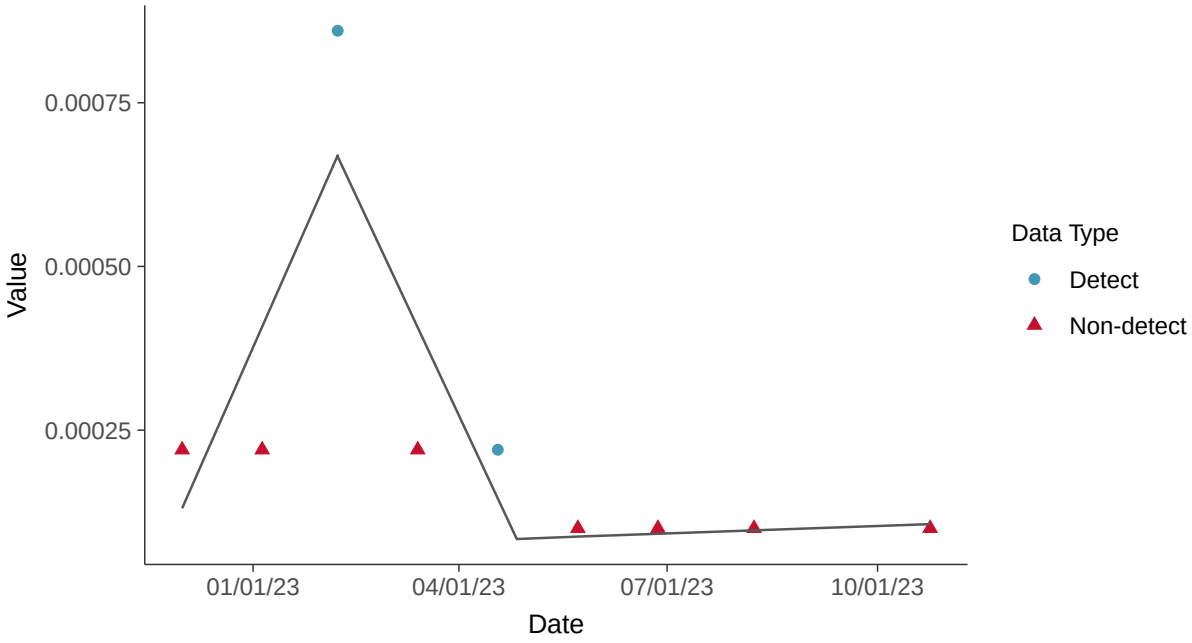
Trend Regression: Piecewise Linear-Linear

Lead, MW-08 (mg/L)



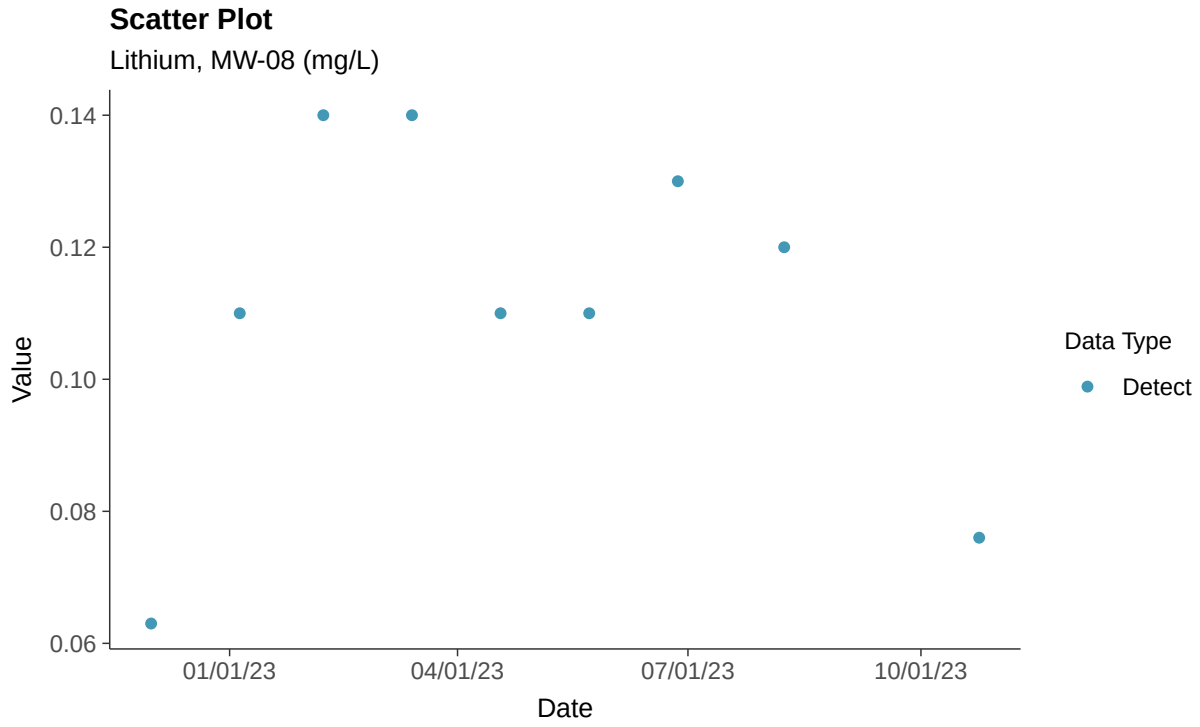
Trend Regression: Piecewise Linear-Linear-Linear

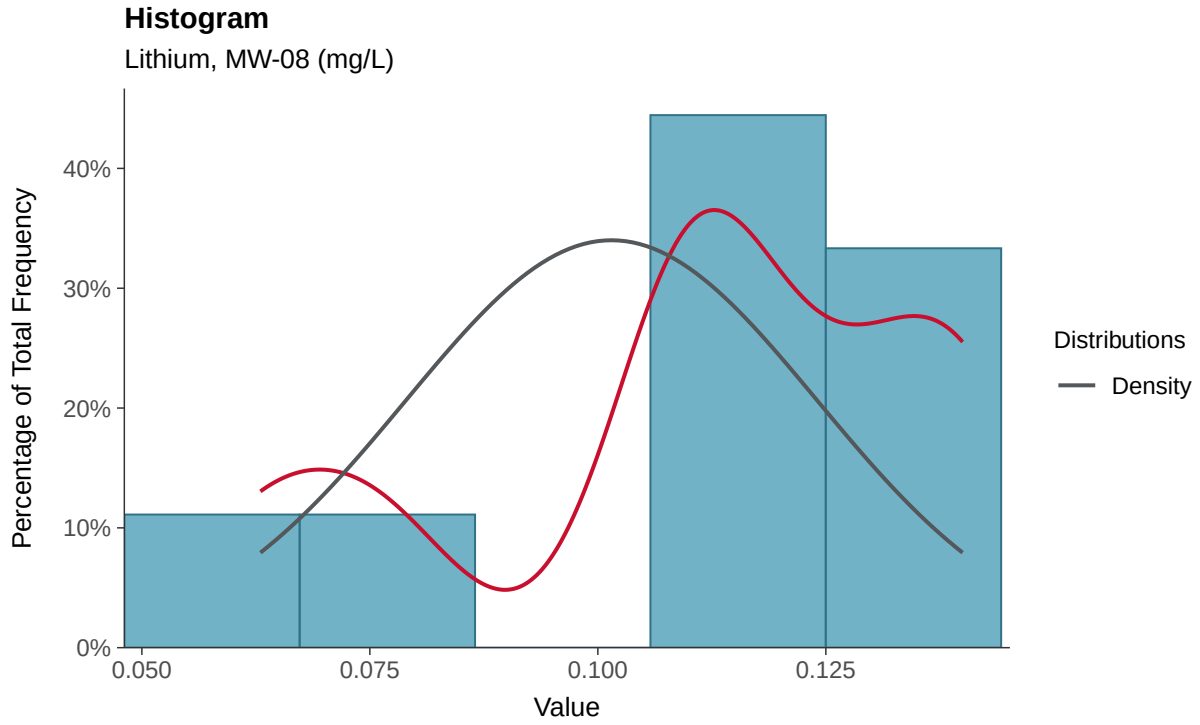
Lead, MW-08 (mg/L)



Appendix IV: Lithium, MW-08

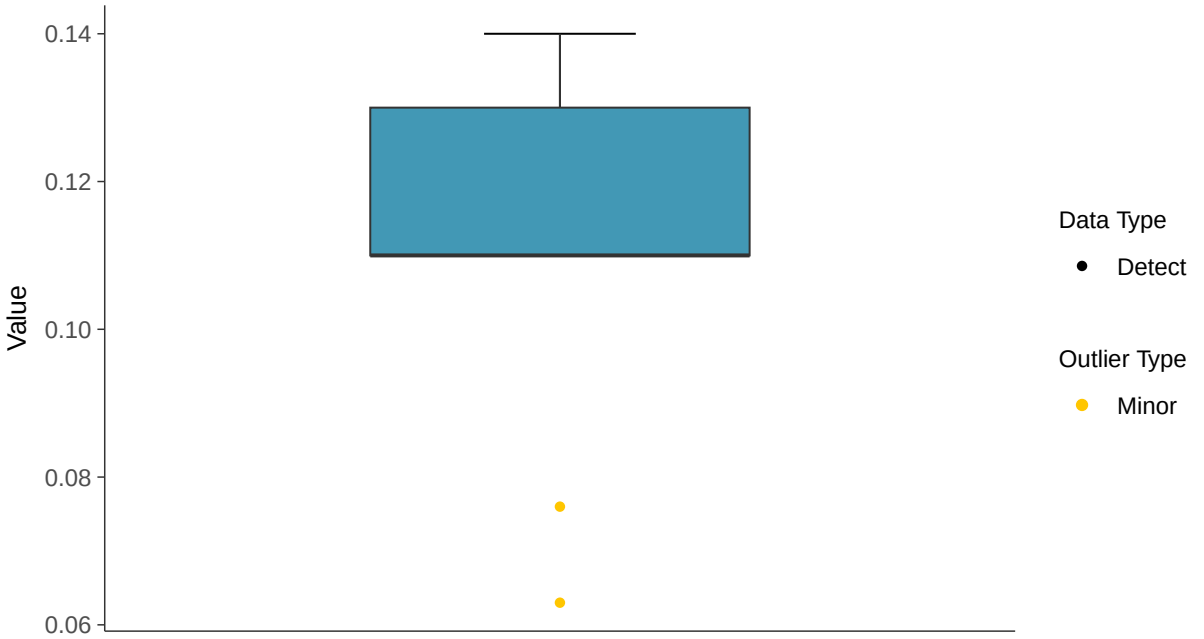
ID: 1_17_5_116





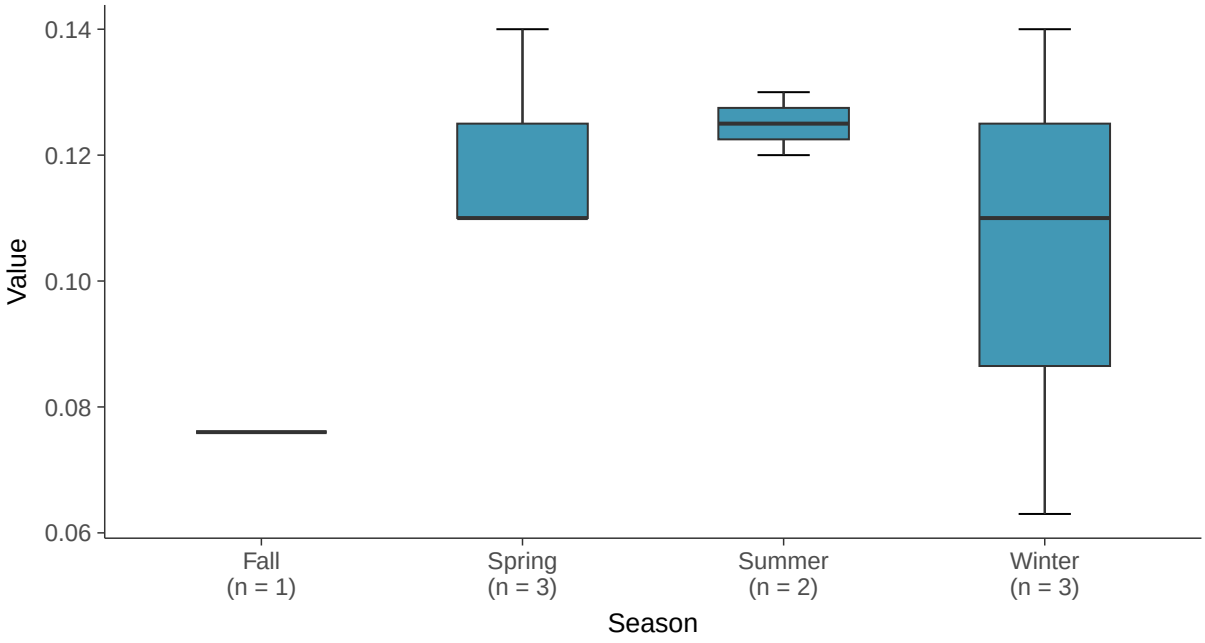
Boxplot

Lithium, MW-08 (mg/L)



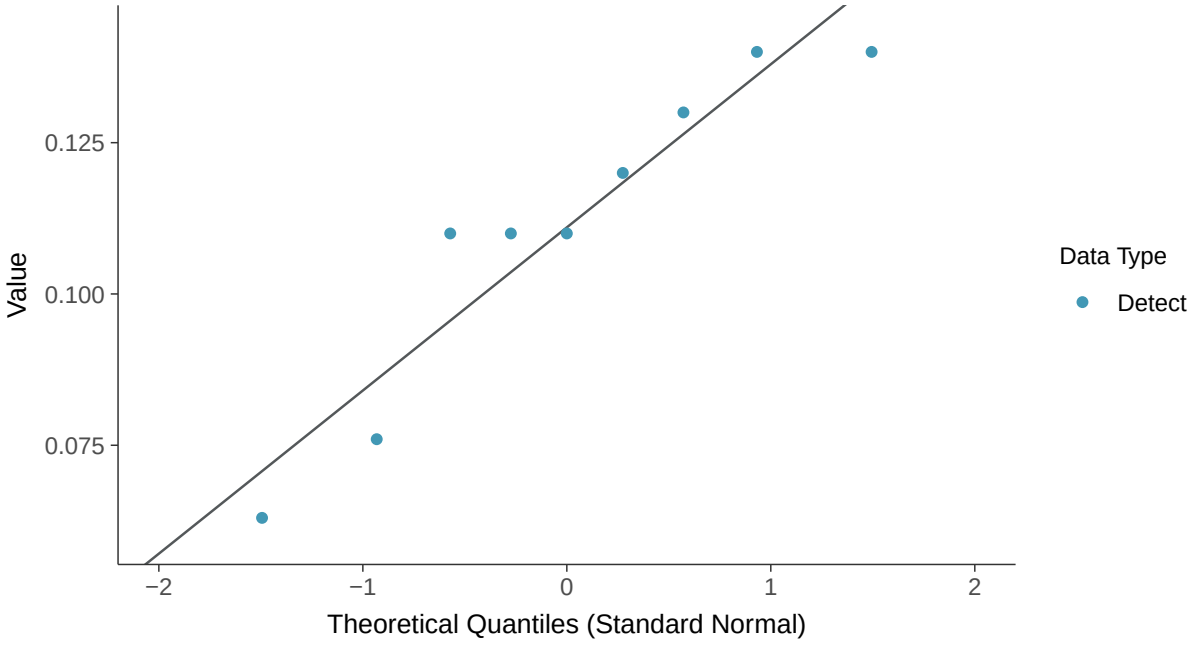
Boxplot by Season

Lithium, MW-08 (mg/L)



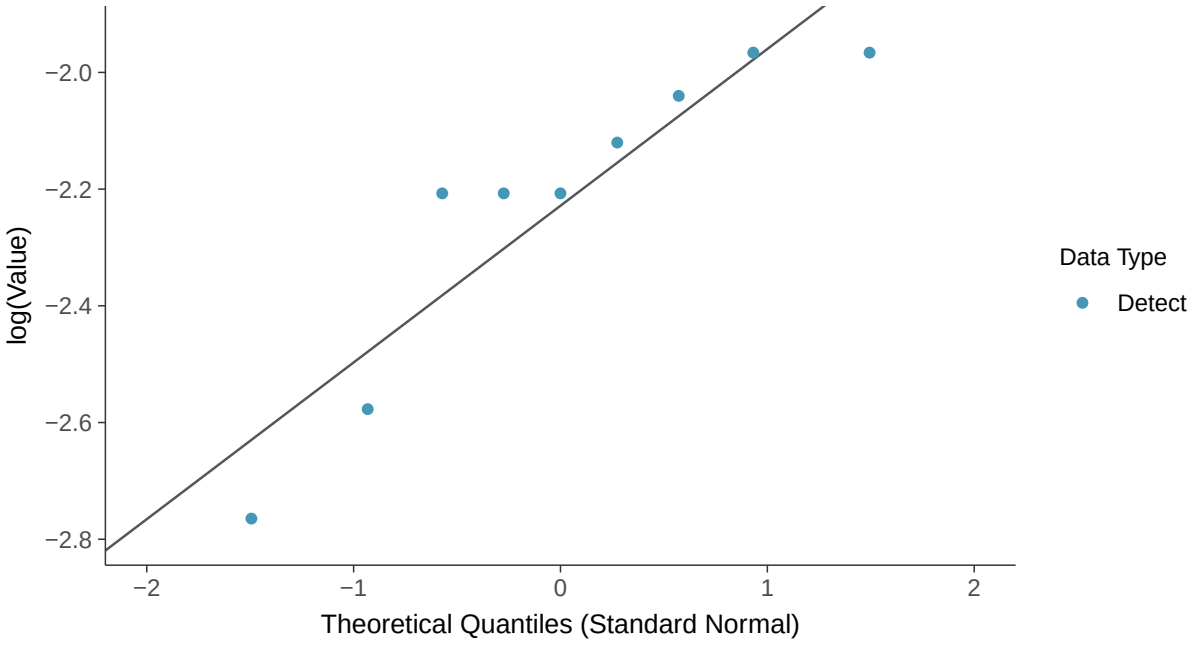
Normal Q-Q plot

Lithium, MW-08 (mg/L)



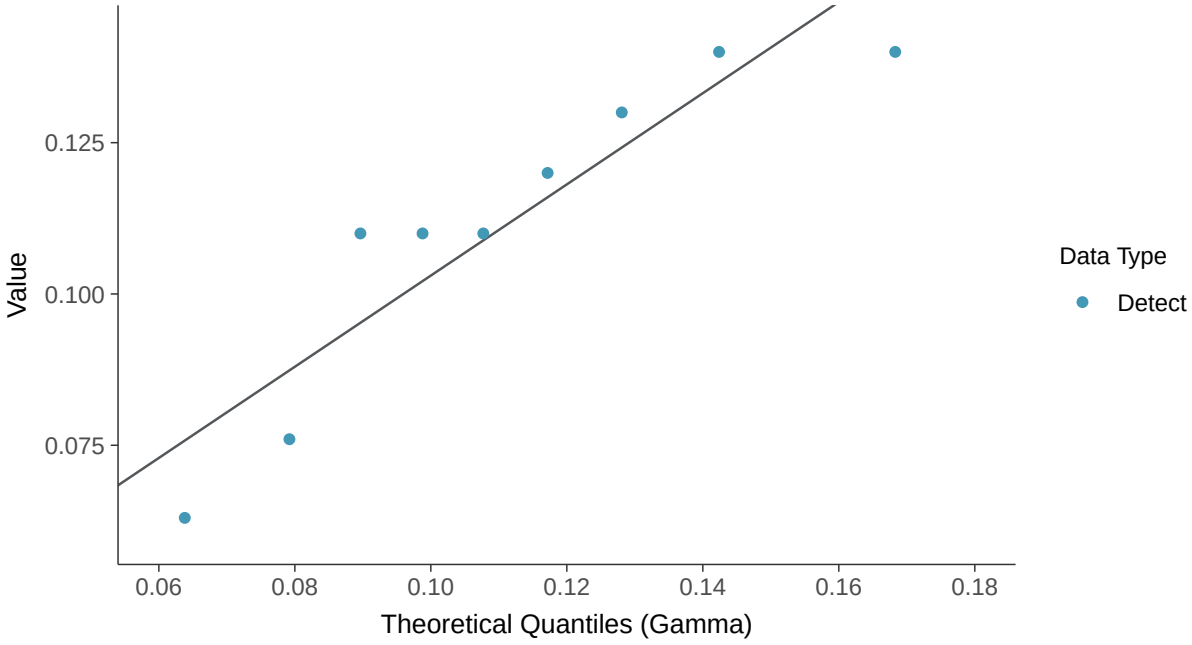
Lognormal Q-Q plot

Lithium, MW-08 (mg/L)



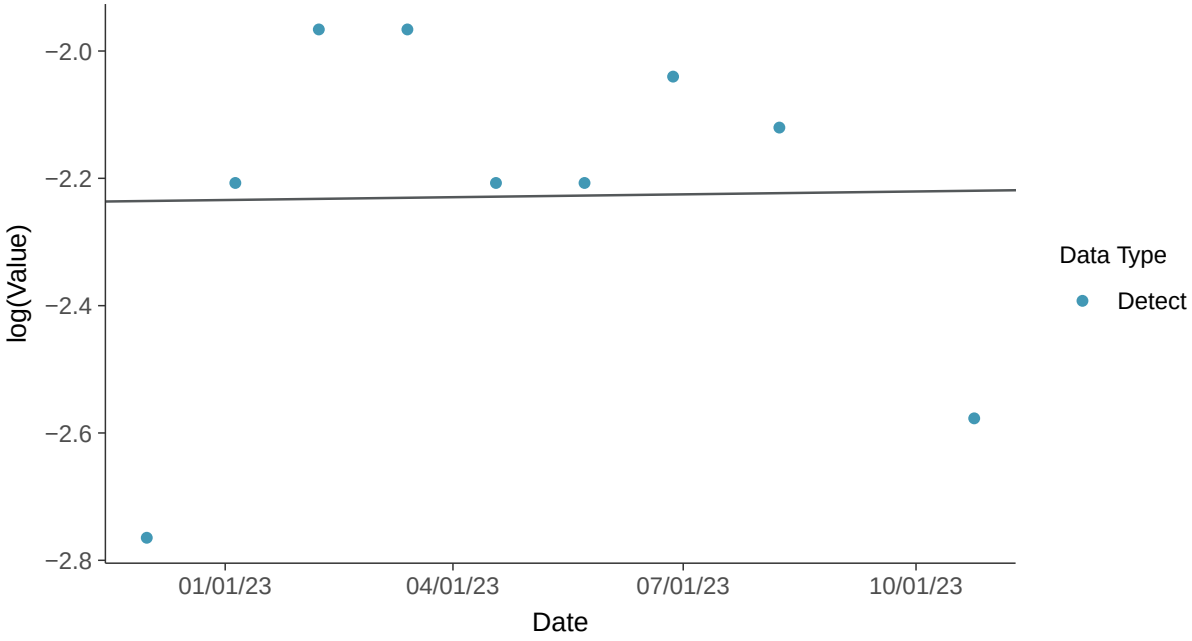
Gamma Q-Q plot

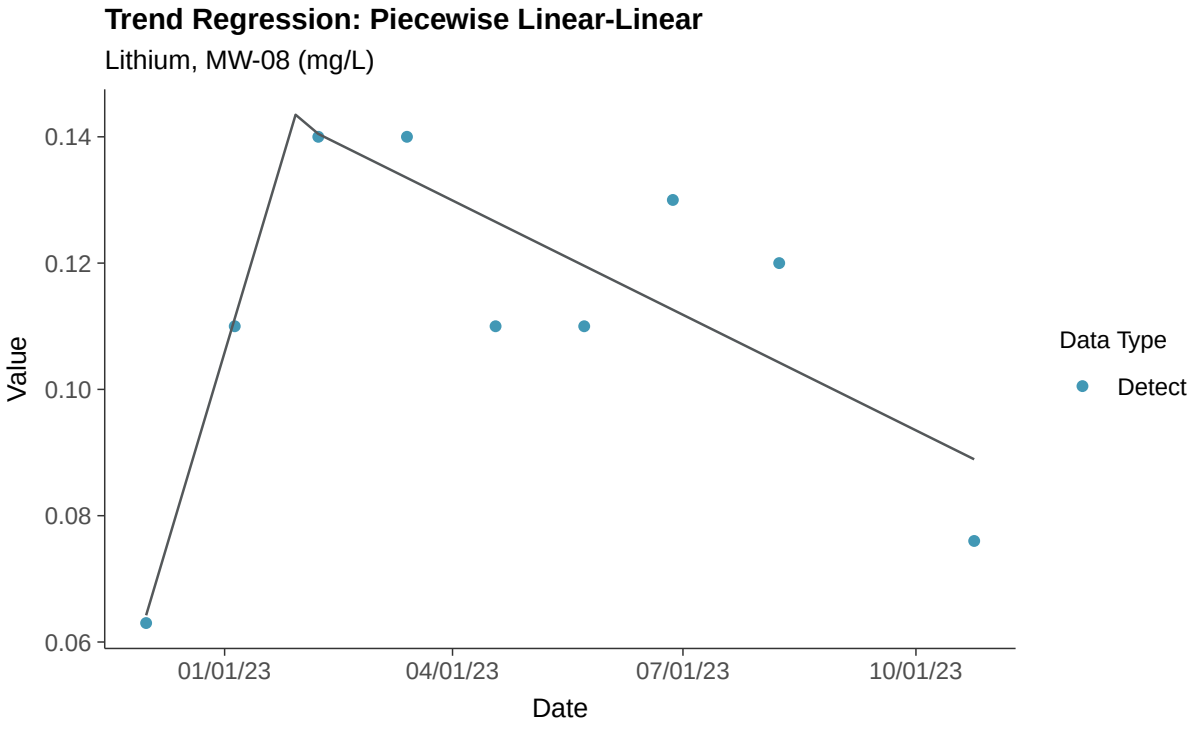
Lithium, MW-08 (mg/L)



Trend Regression: Lognormal MLE

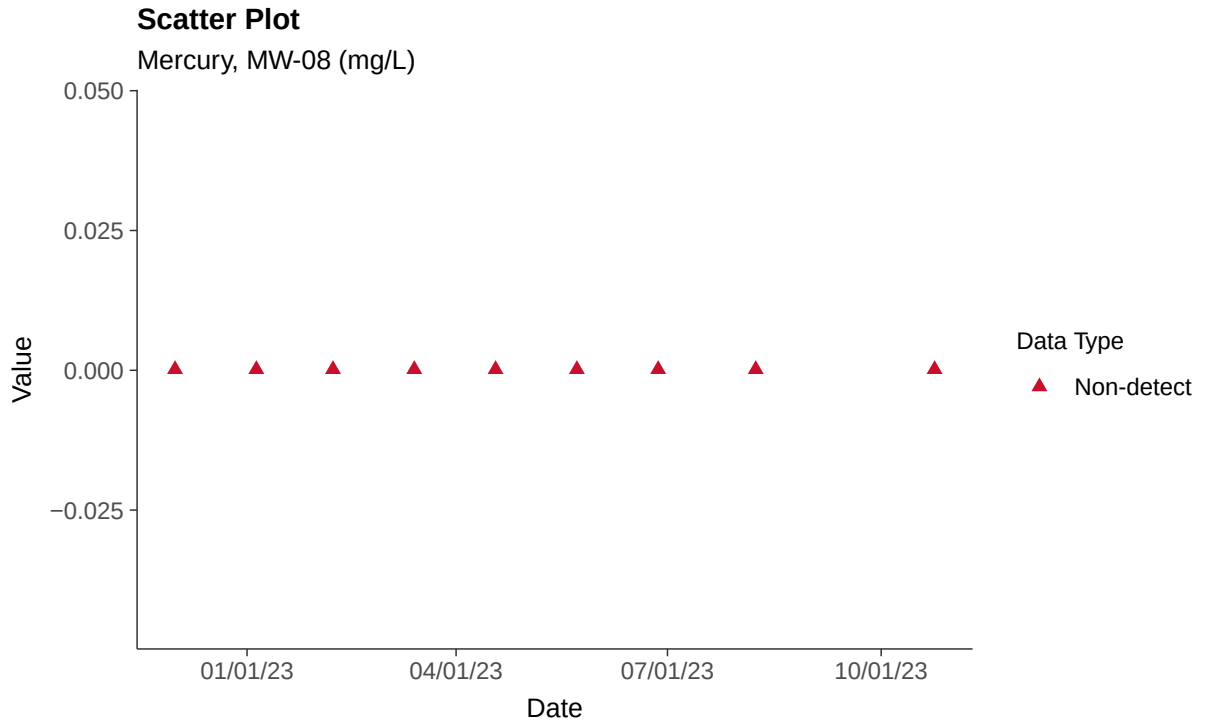
Lithium, MW-08 (mg/L)

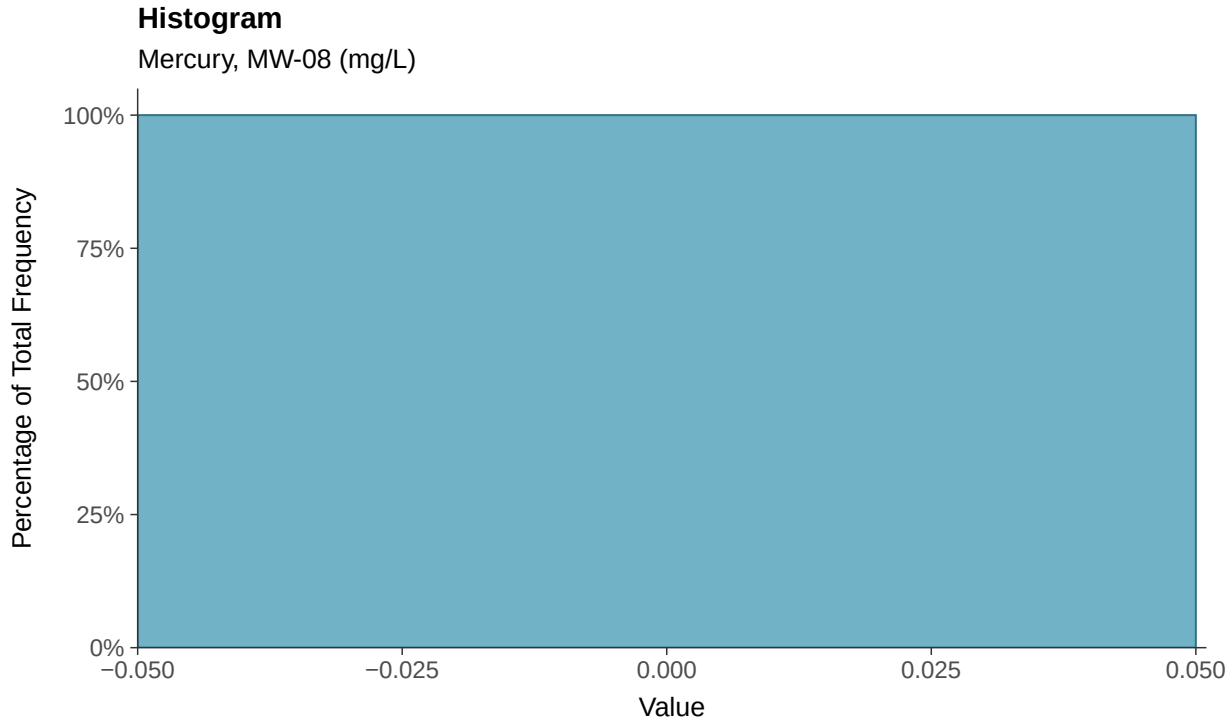



Trend Regression: Piecewise Linear-Linear
Lithium, MW-08 (mg/L)
Value
0.14
0.12
0.10
0.08
0.06
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect

Appendix IV: Mercury, MW-08

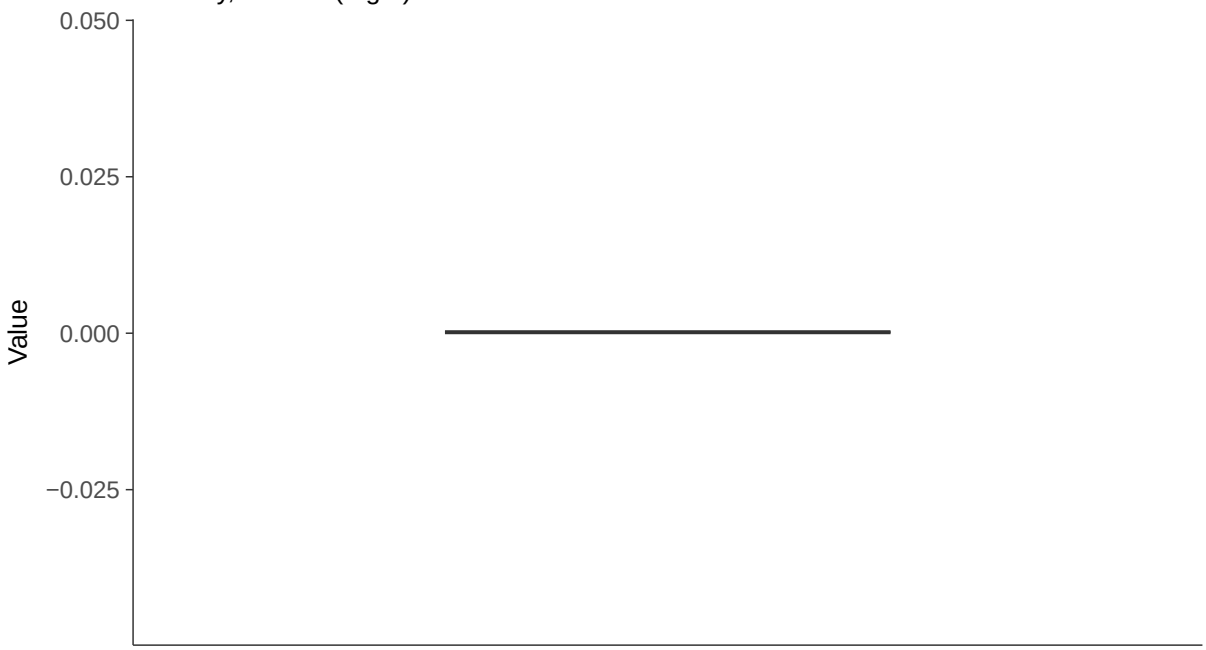
ID: 1_17_5_117





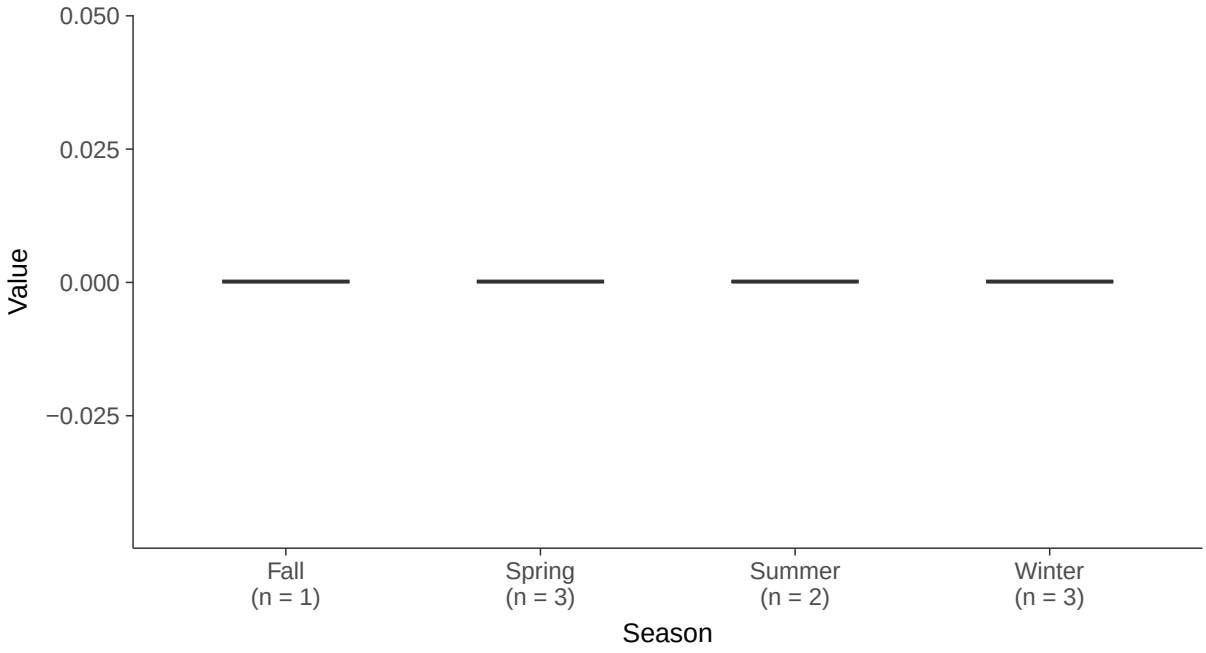
Boxplot

Mercury, MW-08 (mg/L)



Boxplot by Season

Mercury, MW-08 (mg/L)

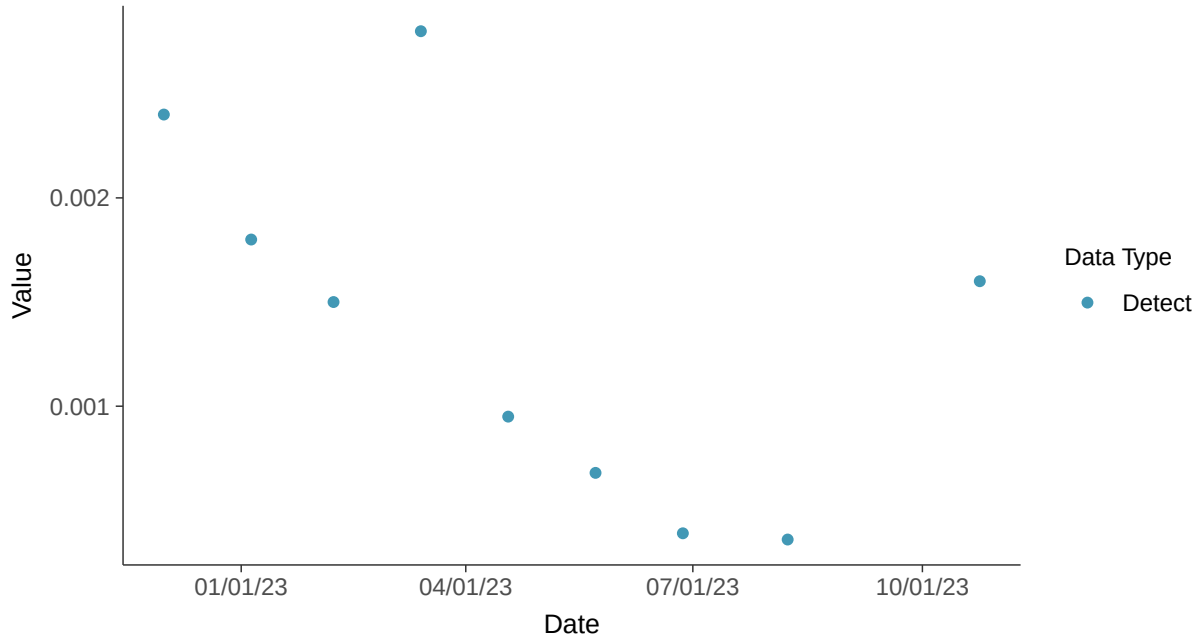


Appendix IV: Molybdenum, MW-08

ID: 1_17_5_118

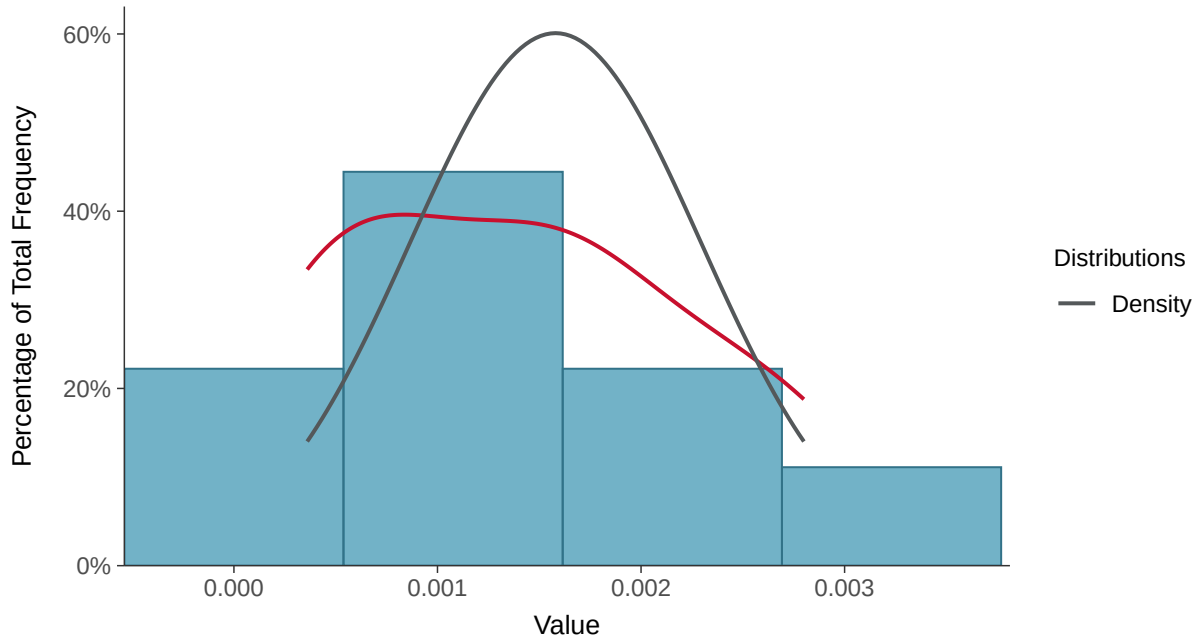
Scatter Plot

Molybdenum, MW-08 (mg/L)



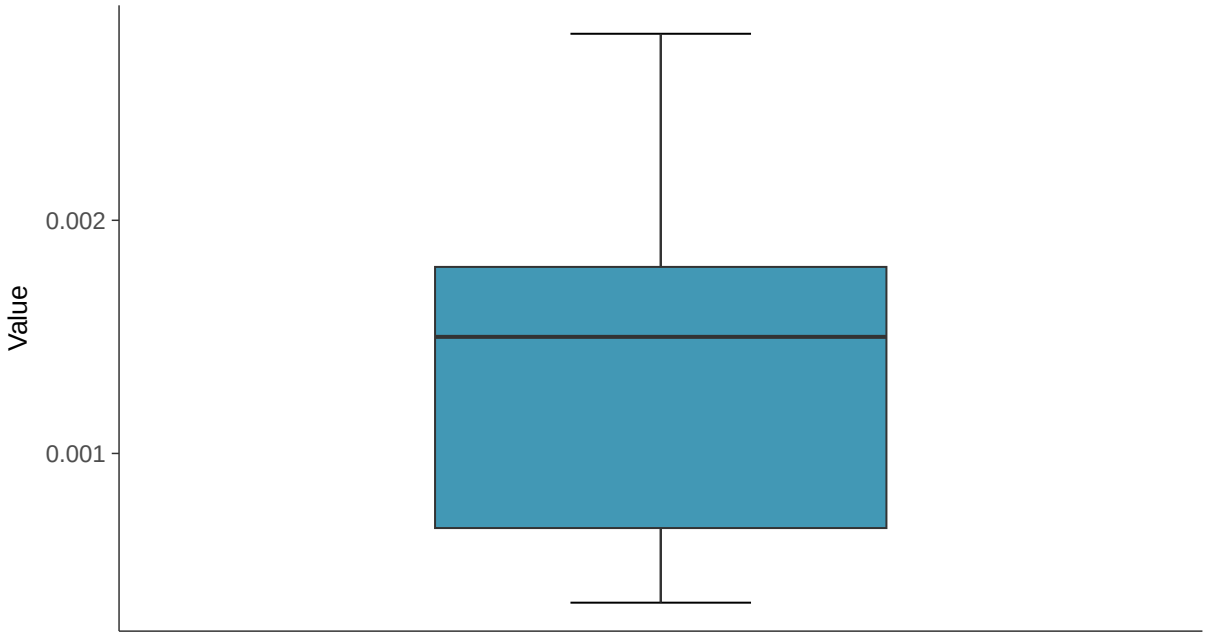
Histogram

Molybdenum, MW-08 (mg/L)



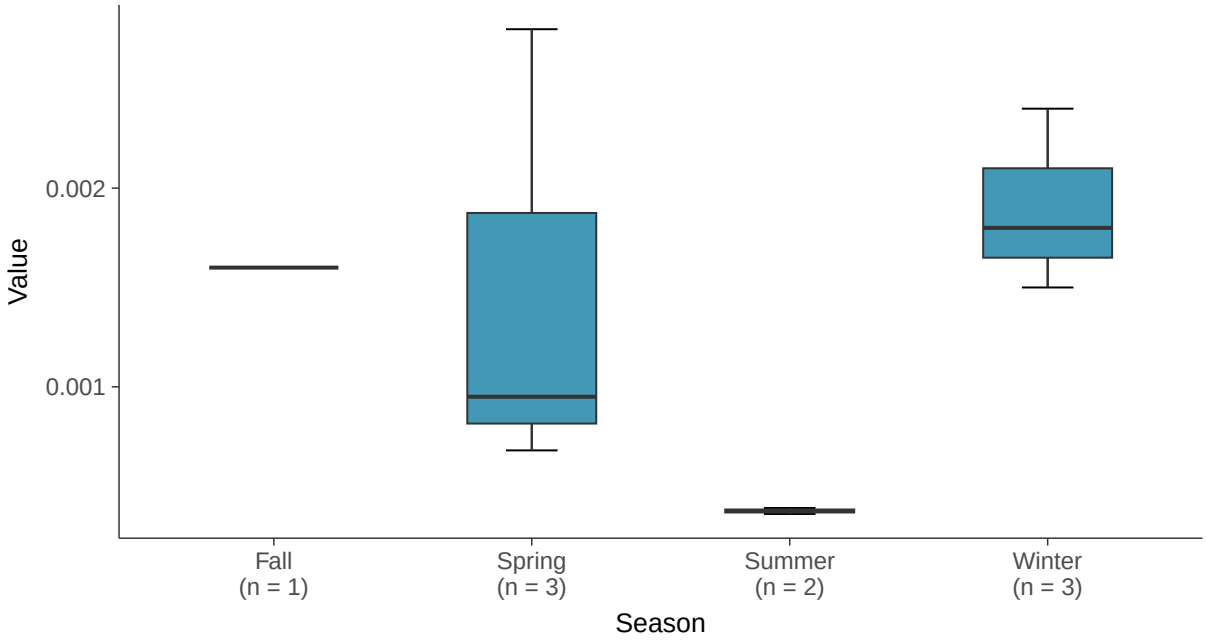
Boxplot

Molybdenum, MW-08 (mg/L)



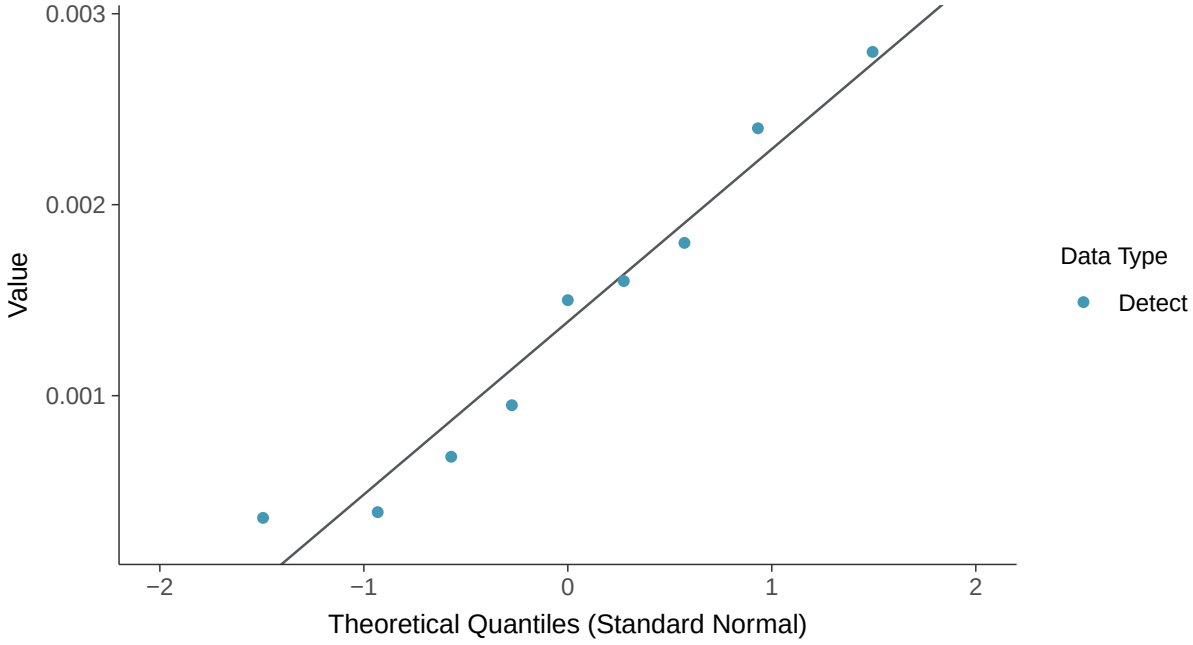
Boxplot by Season

Molybdenum, MW-08 (mg/L)



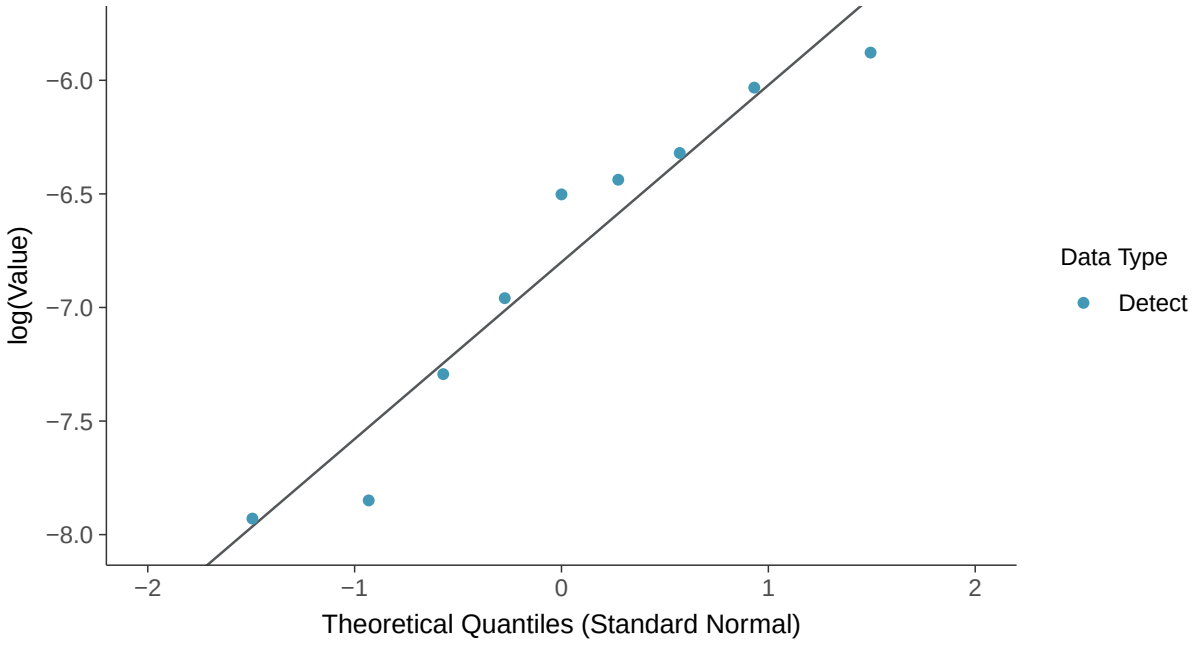
Normal Q-Q plot

Molybdenum, MW-08 (mg/L)



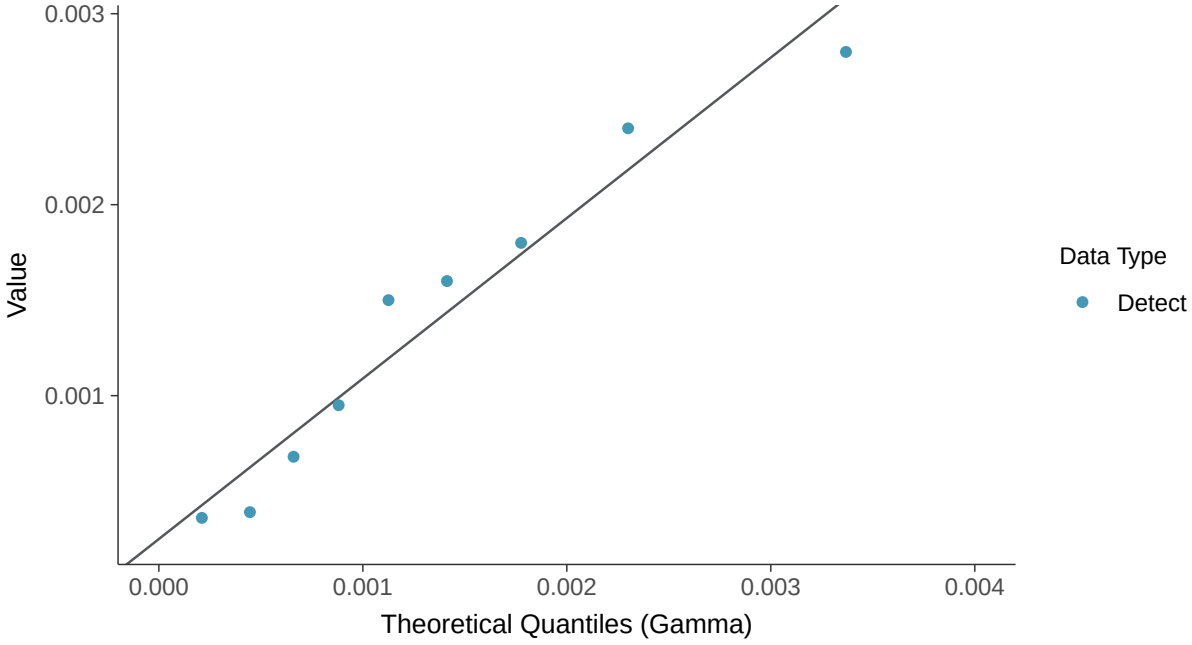
Lognormal Q-Q plot

Molybdenum, MW-08 (mg/L)



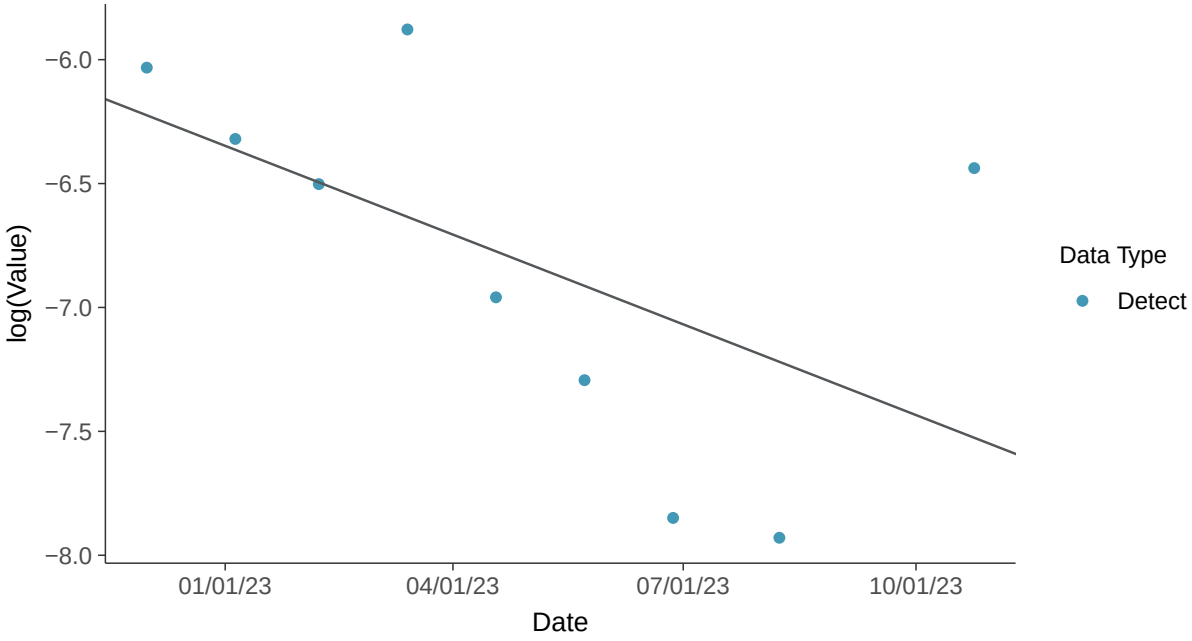
Gamma Q-Q plot

Molybdenum, MW-08 (mg/L)



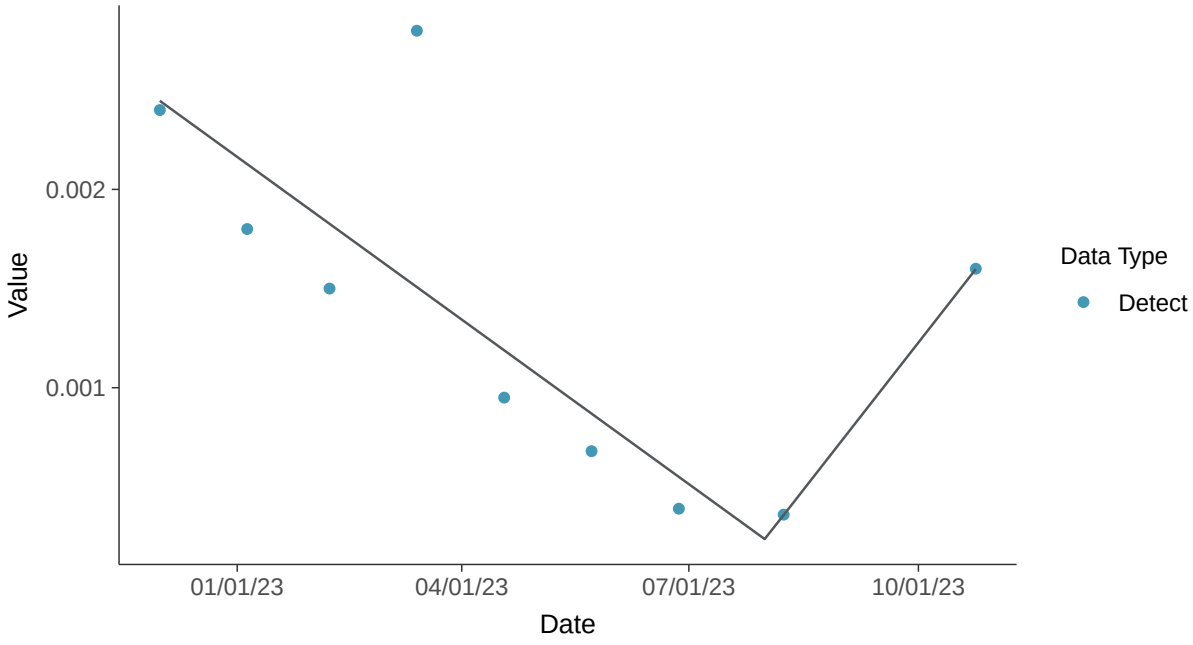
Trend Regression: Lognormal MLE

Molybdenum, MW-08 (mg/L)



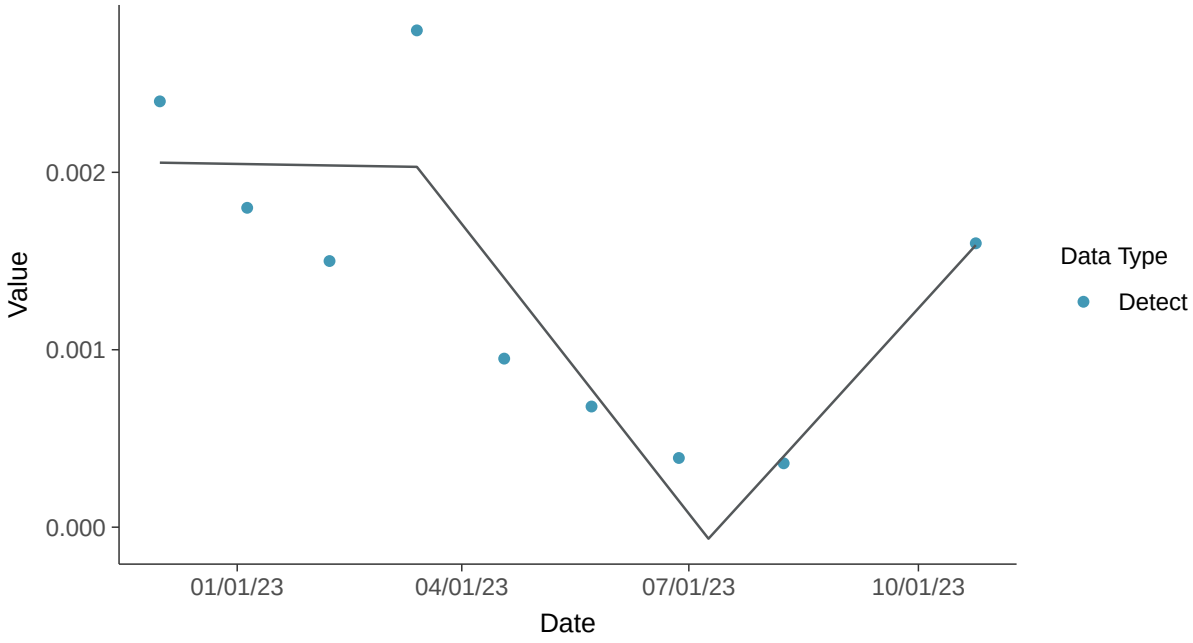
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-08 (mg/L)



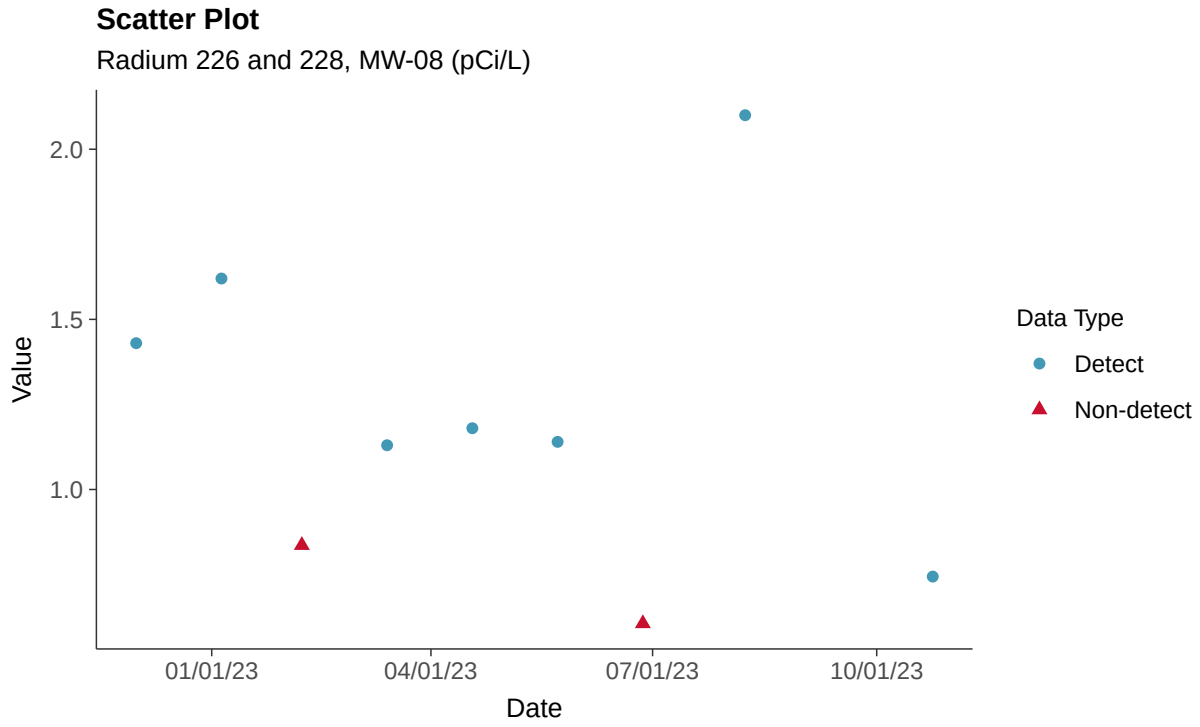
Trend Regression: Piecewise Linear-Linear-Linear

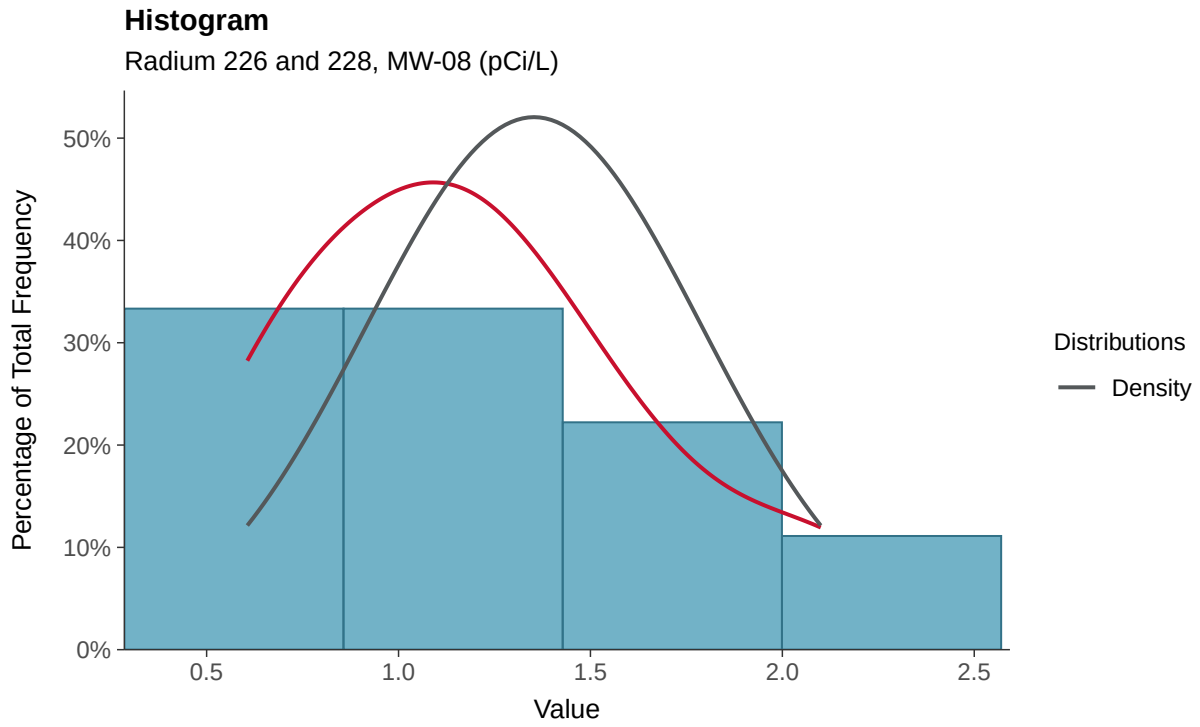
Molybdenum, MW-08 (mg/L)



Appendix IV: Radium 226 and 228, MW-08

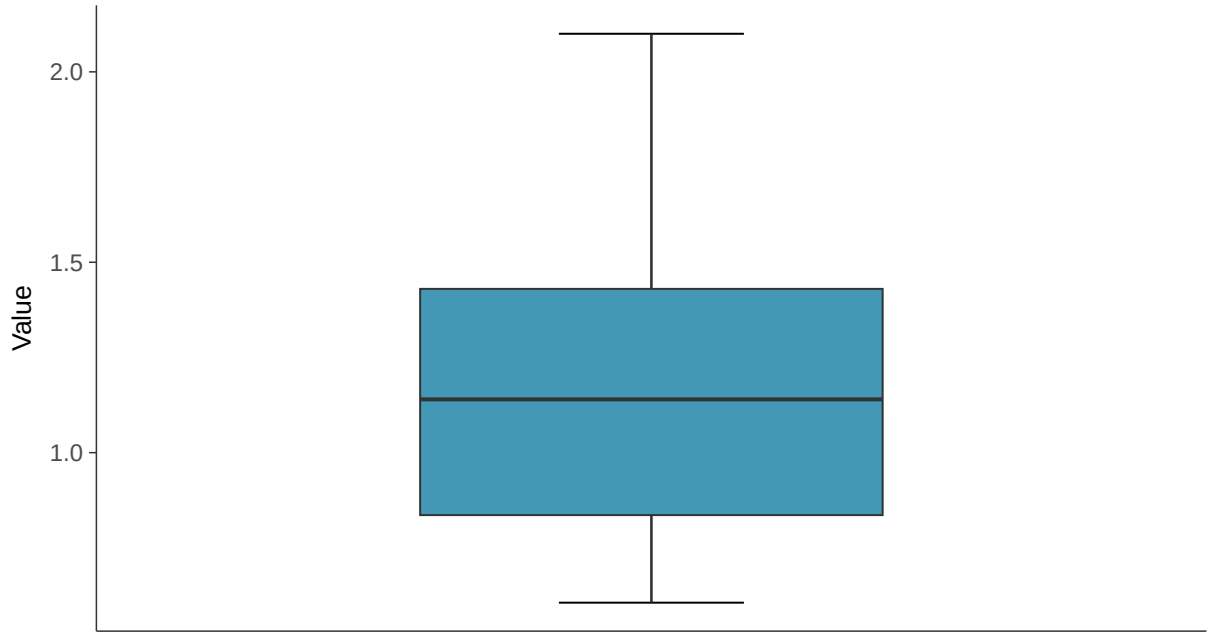
ID: 1_17_5_121





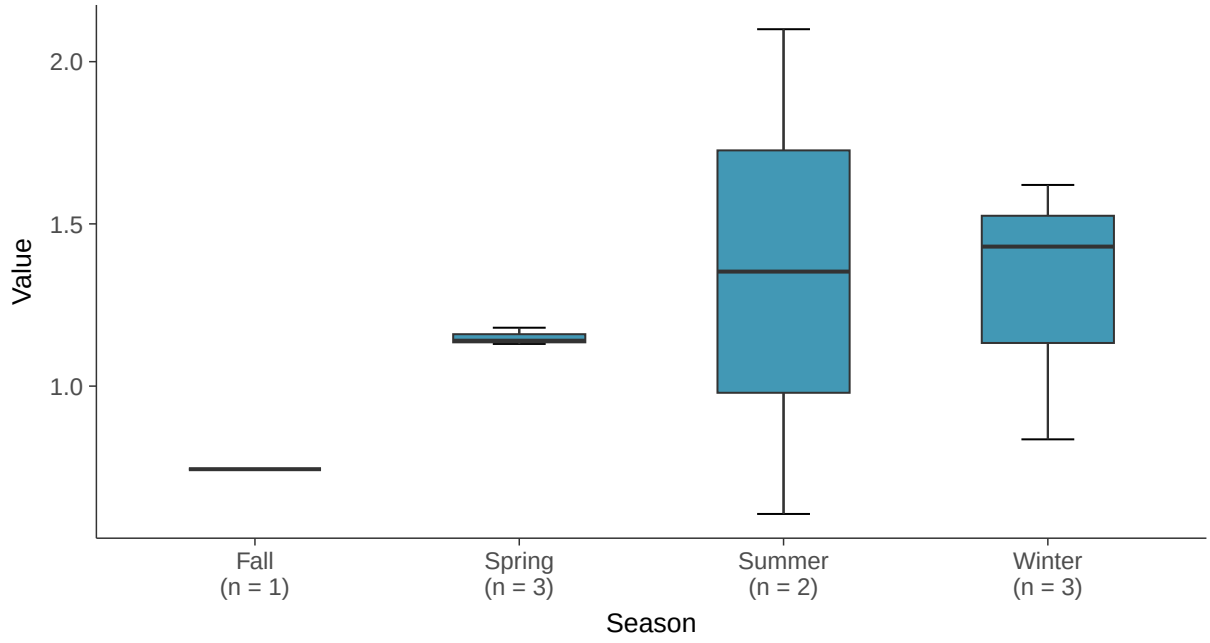
Boxplot

Radium 226 and 228, MW-08 (pCi/L)



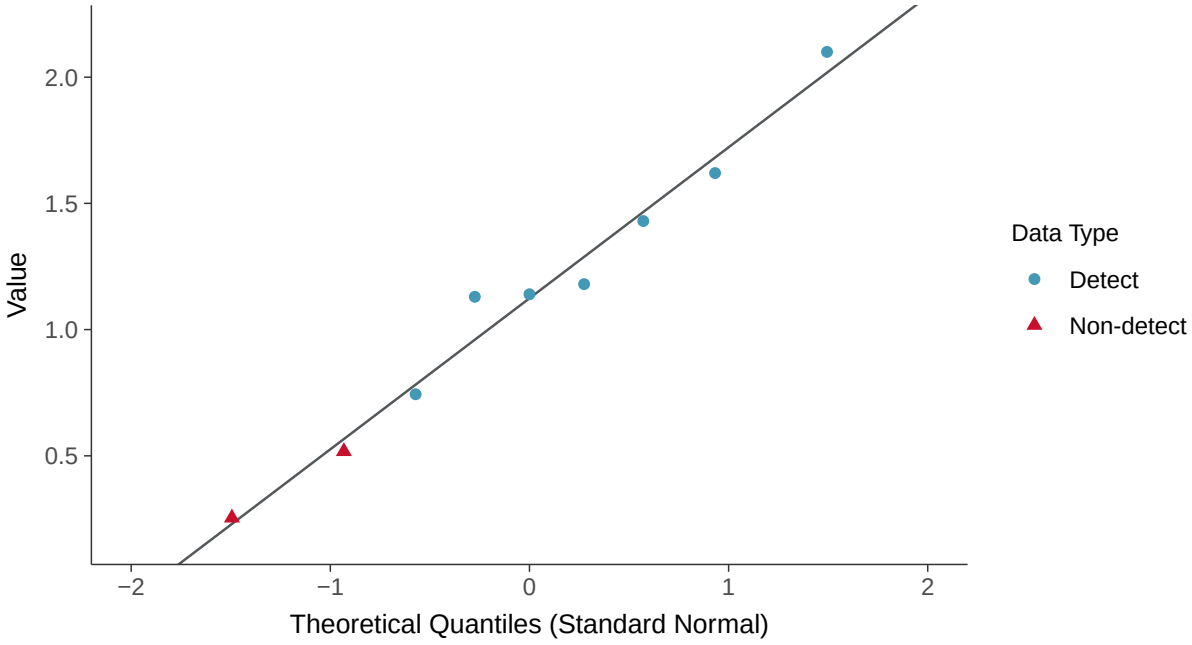
Boxplot by Season

Radium 226 and 228, MW-08 (pCi/L)



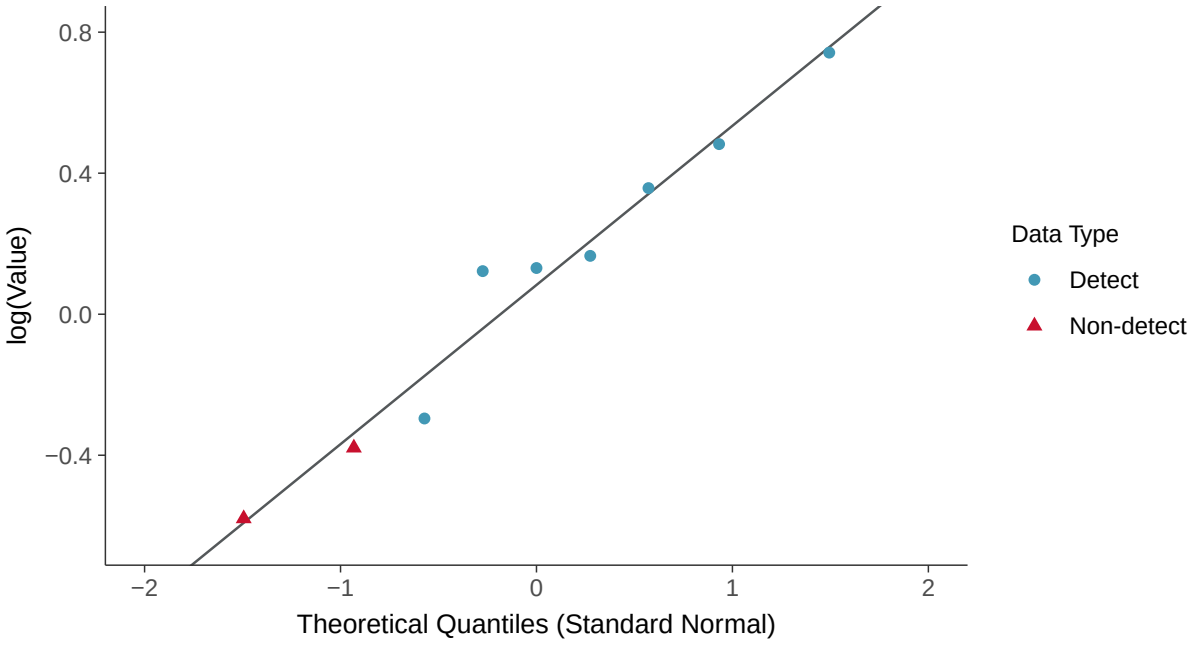
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-08 (pCi/L)



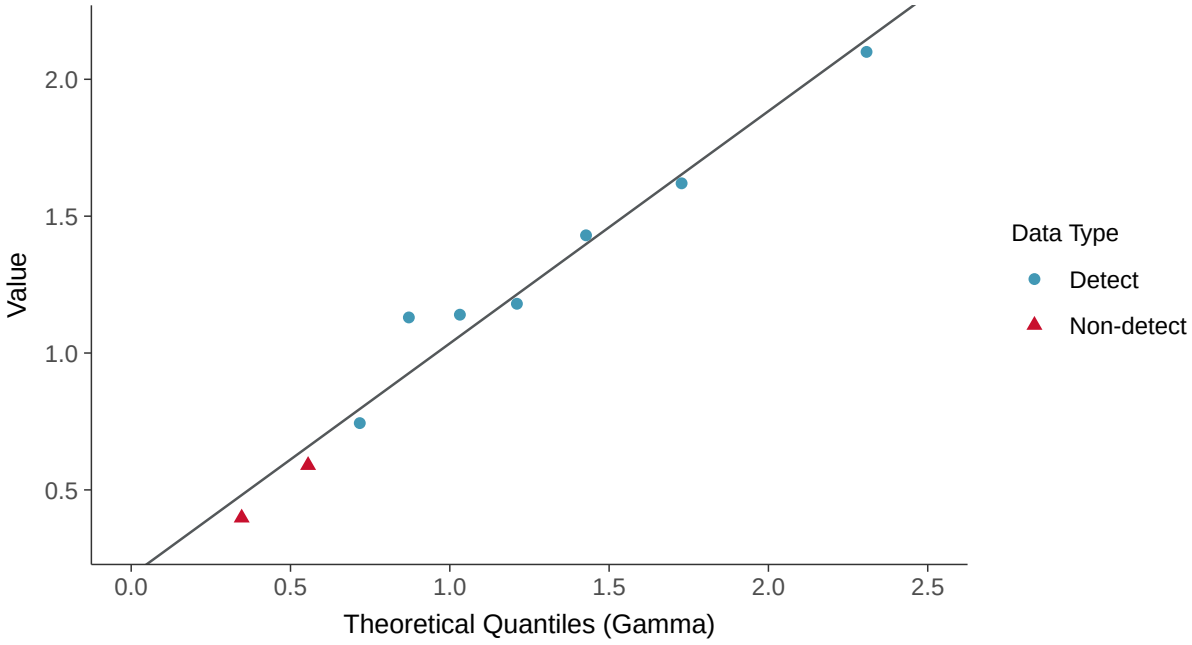
Lognormal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-08 (pCi/L)



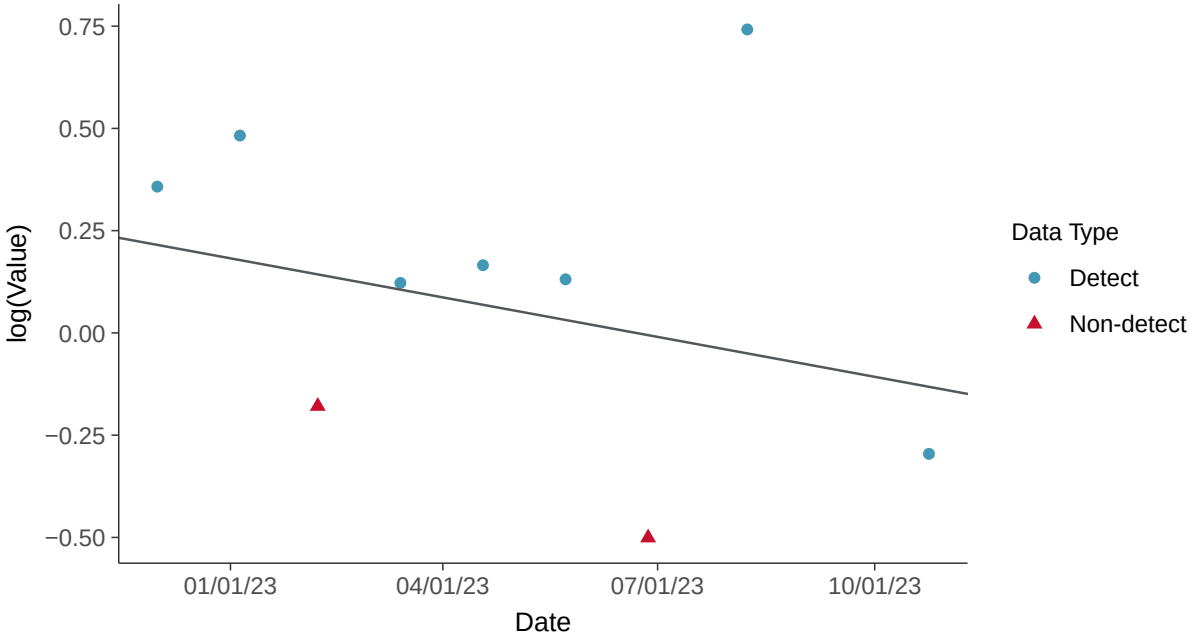
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-08 (pCi/L)



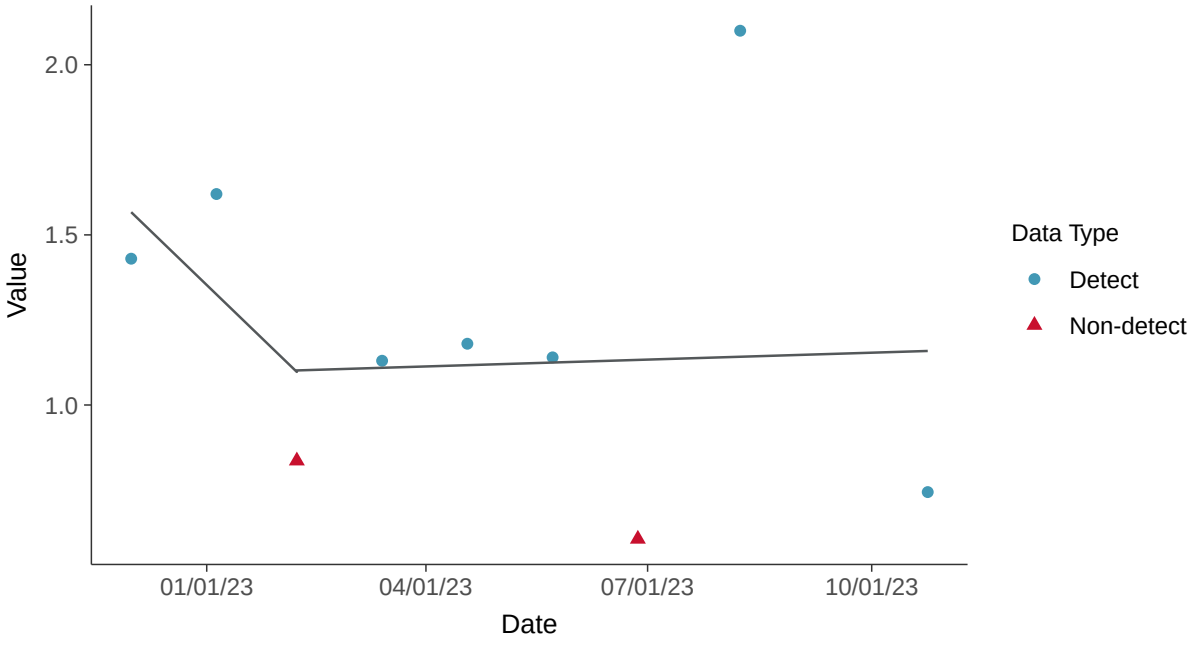
Trend Regression: Lognormal MLE

Radium 226 and 228, MW-08 (pCi/L)



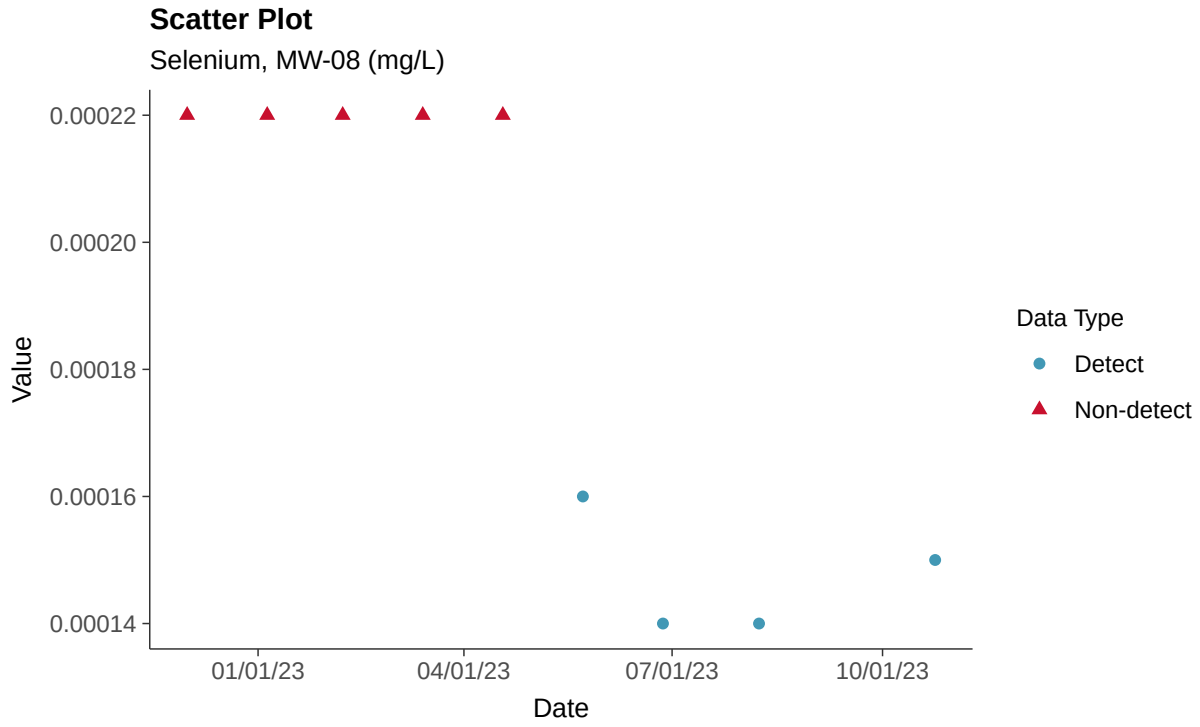
Trend Regression: Piecewise Linear-Linear

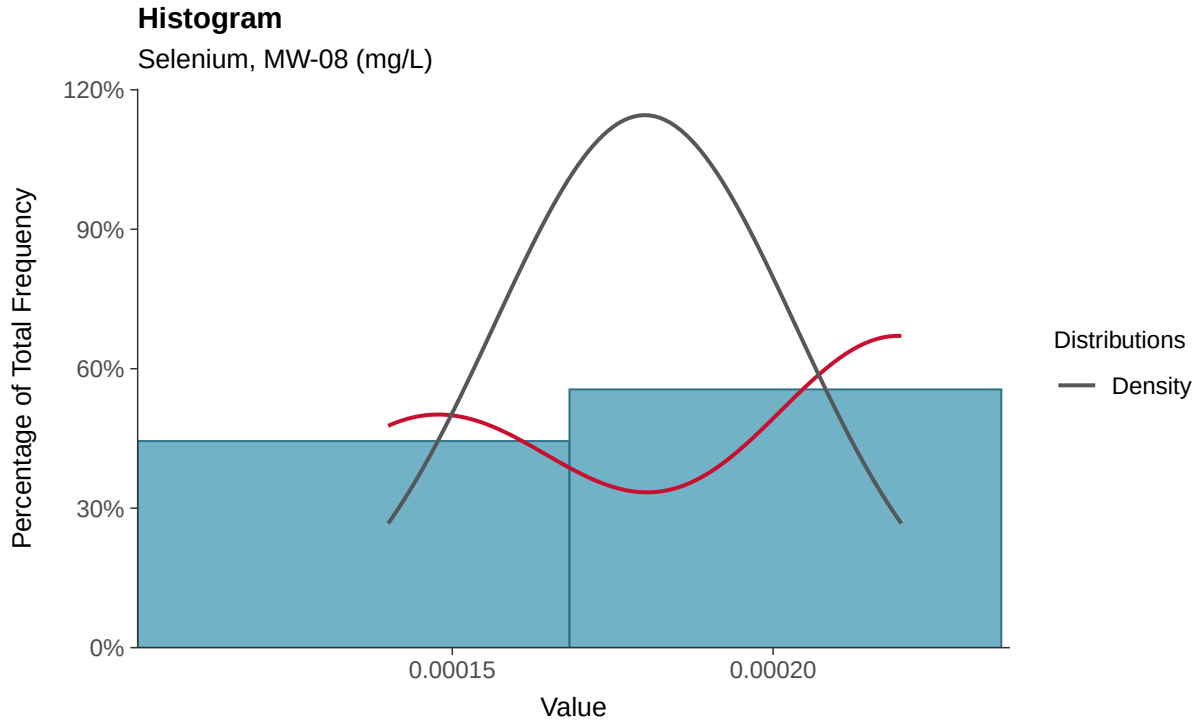
Radium 226 and 228, MW-08 (pCi/L)



Appendix IV: Selenium, MW-08

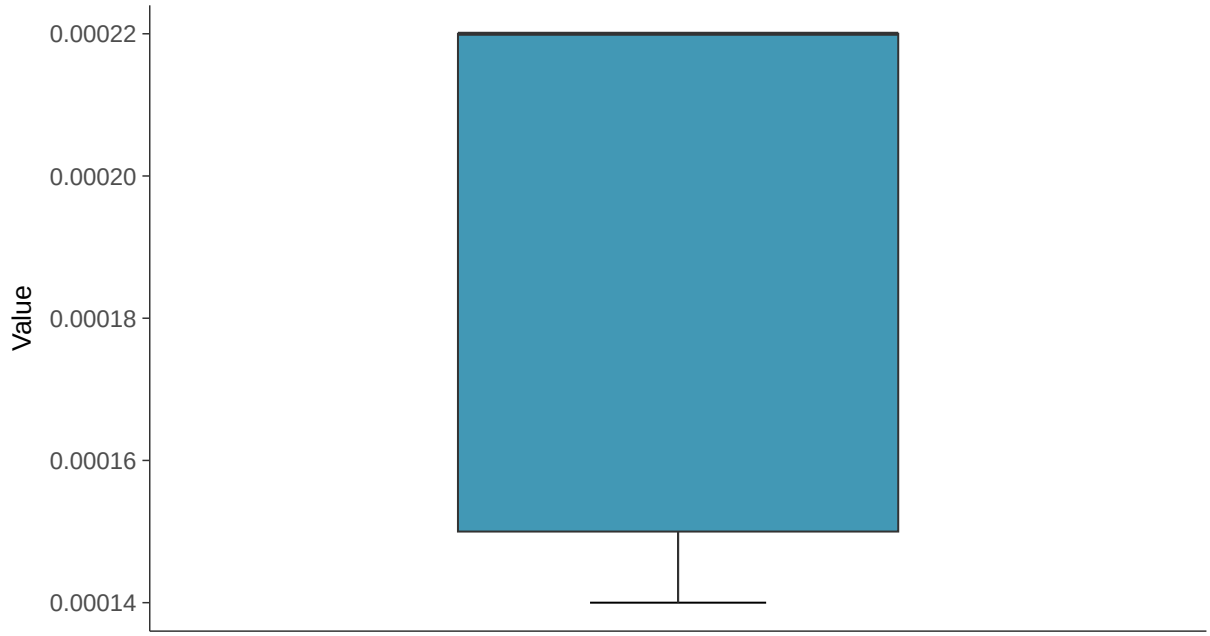
ID: 1_17_5_122





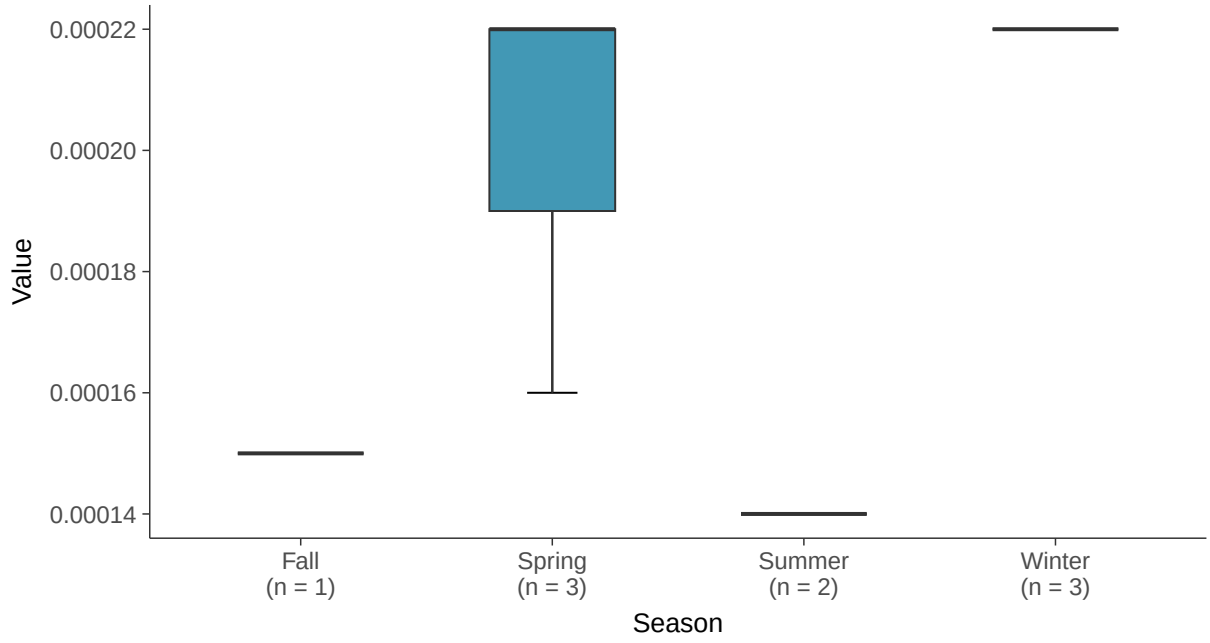
Boxplot

Selenium, MW-08 (mg/L)



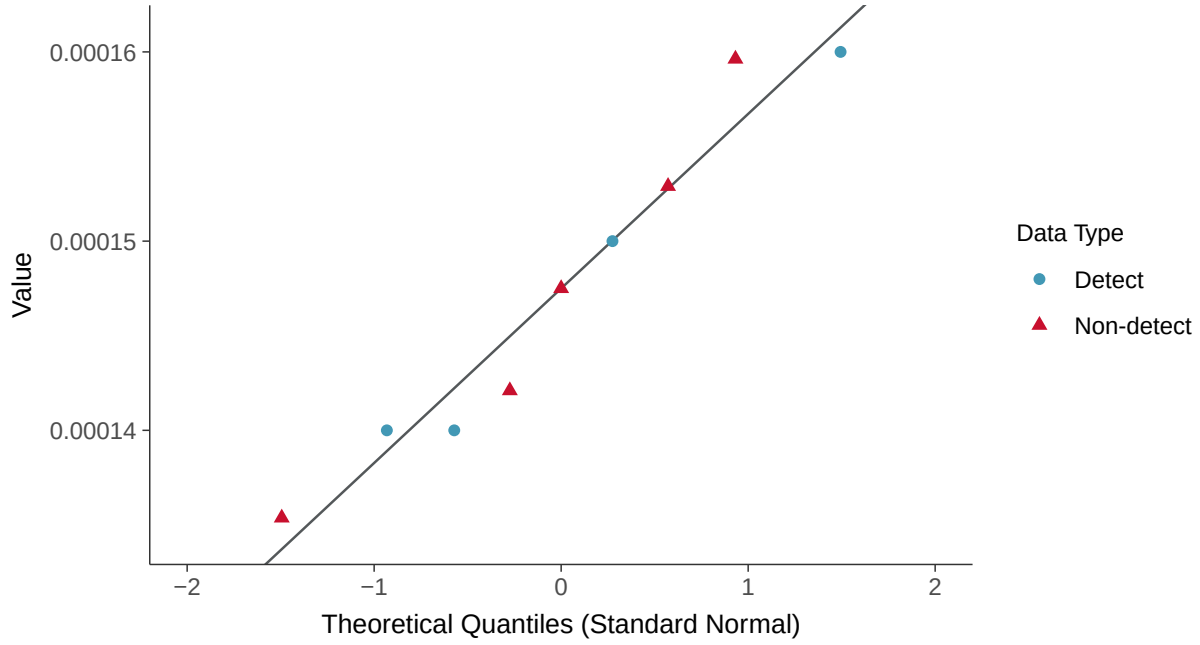
Boxplot by Season

Selenium, MW-08 (mg/L)



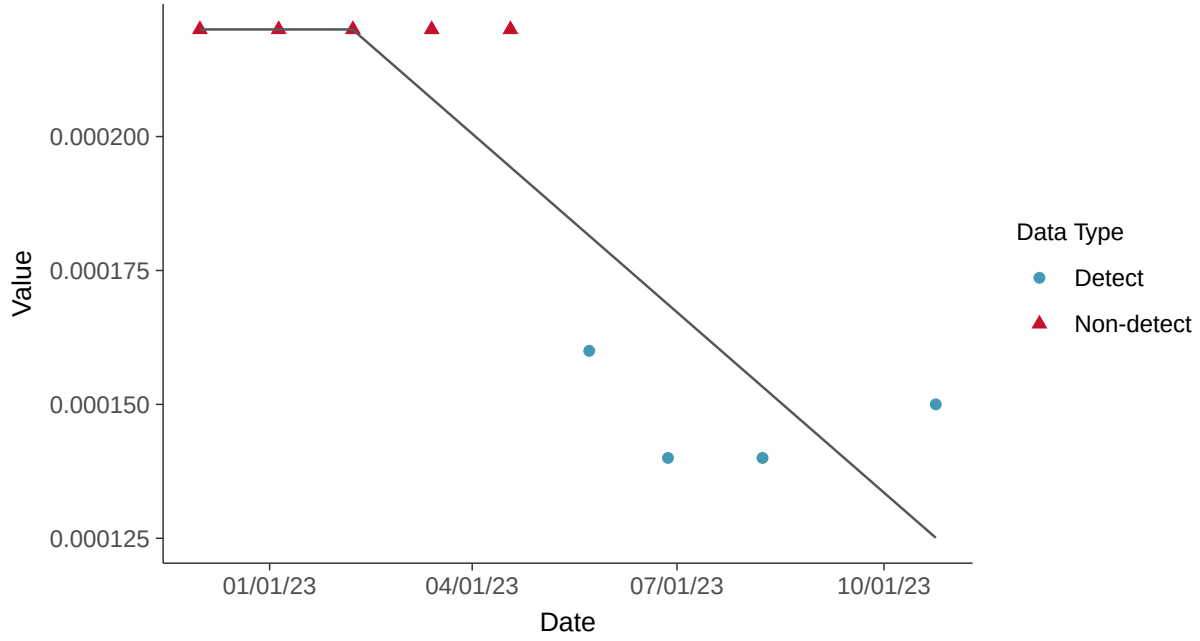
Normal Q-Q plot using ROS Imputed Estimates

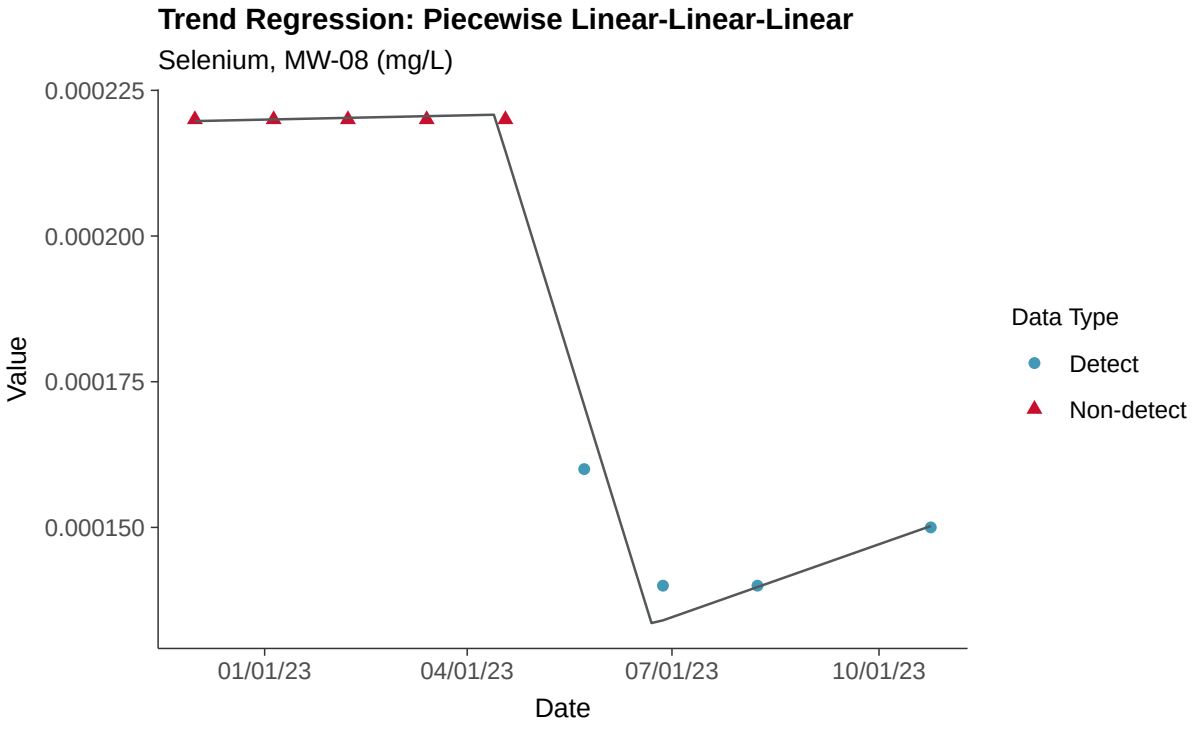
Selenium, MW-08 (mg/L)



Trend Regression: Piecewise Linear-Linear

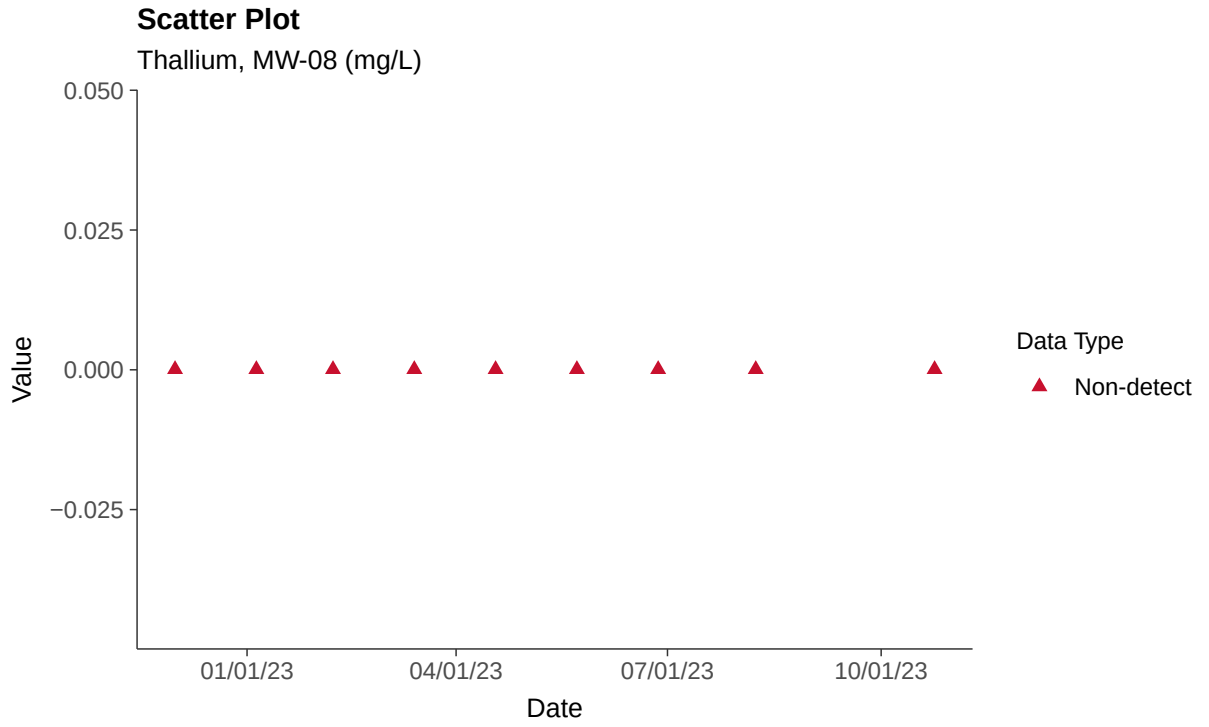
Selenium, MW-08 (mg/L)

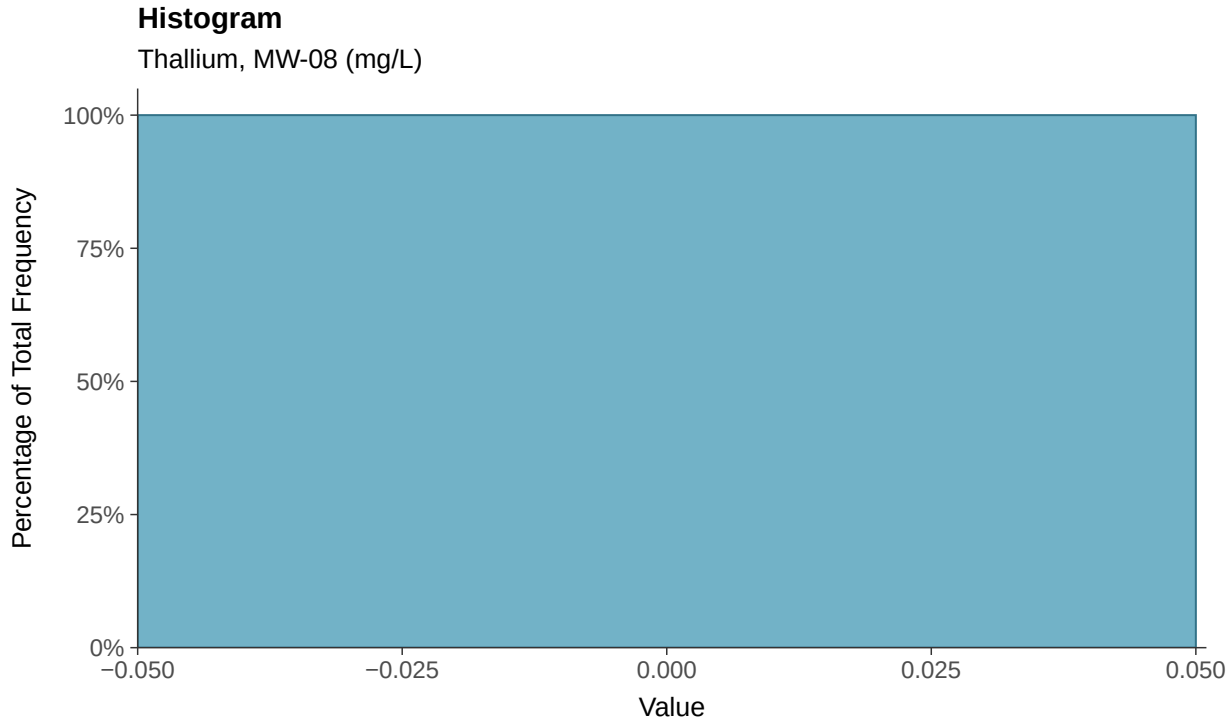



Trend Regression: Piecewise Linear-Linear-Linear
Selenium, MW-08 (mg/L)
0.000225
0.000200
0.000175
0.000150
Value
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect
Non-detect

Appendix IV: Thallium, MW-08

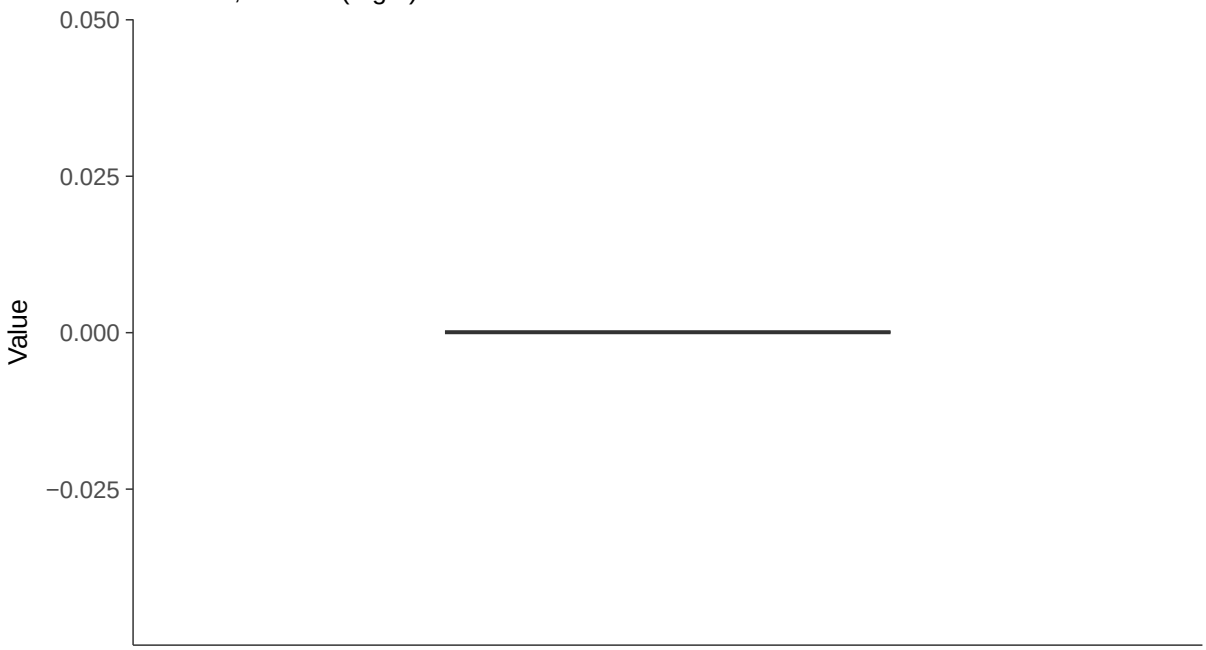
ID: 1_17_5_125





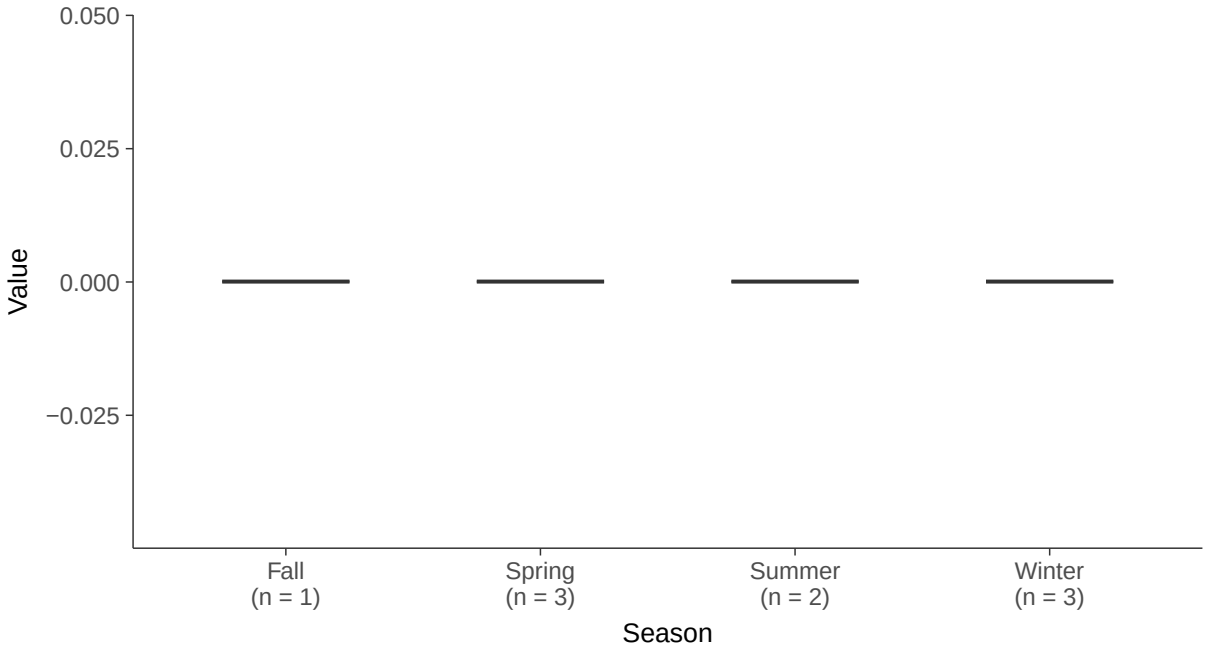
Boxplot

Thallium, MW-08 (mg/L)



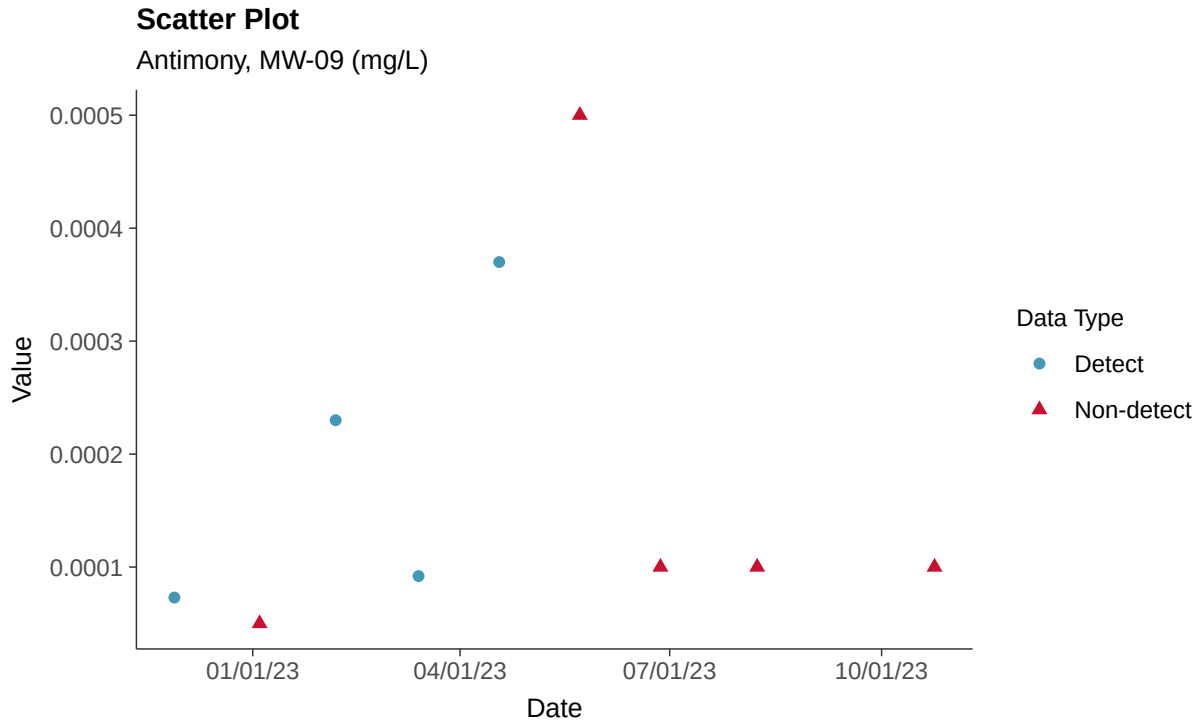
Boxplot by Season

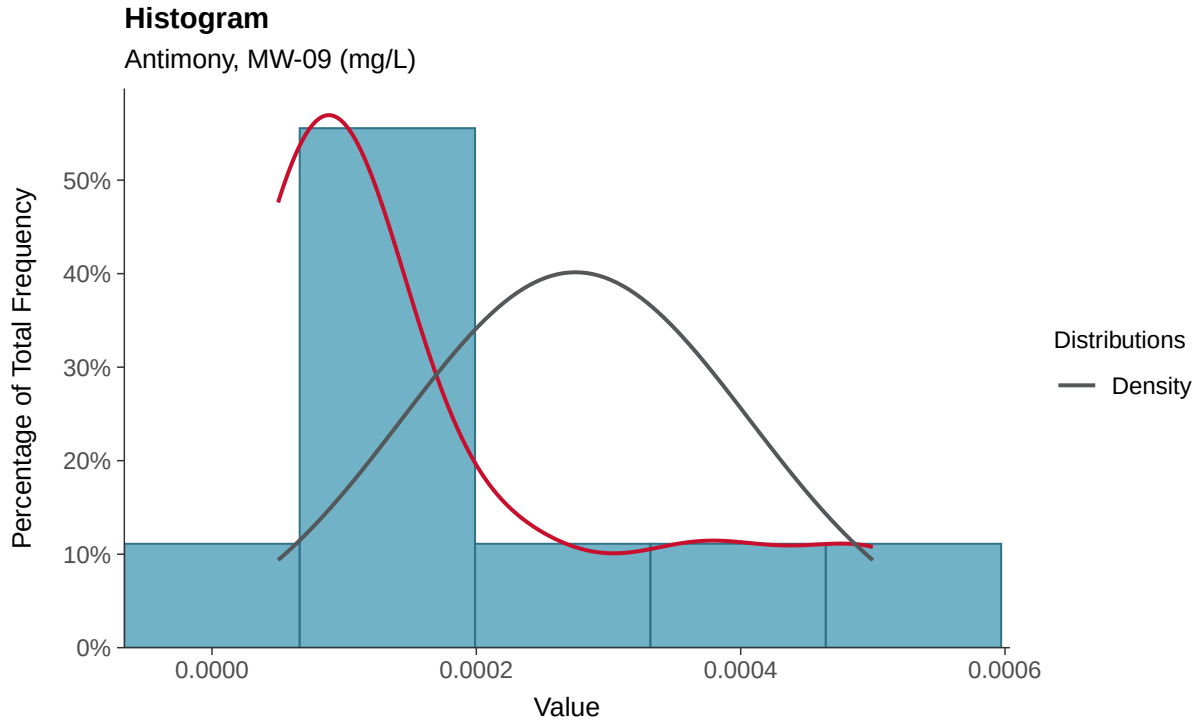
Thallium, MW-08 (mg/L)



Appendix IV: Antimony, MW-09

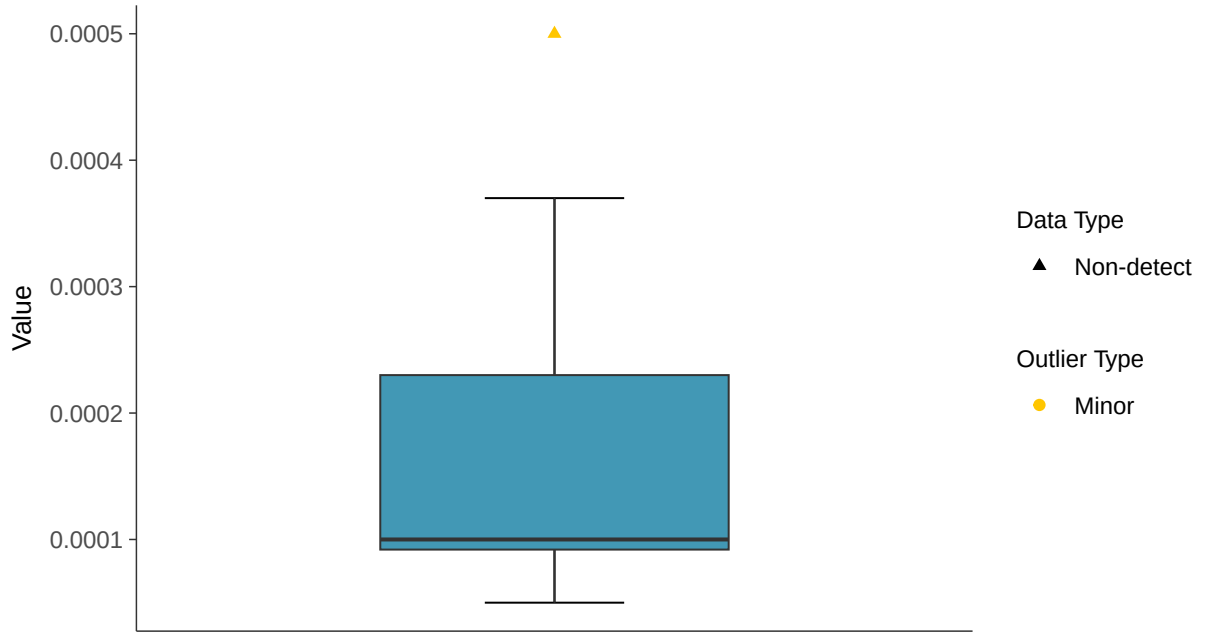
ID: 1_18_5_101





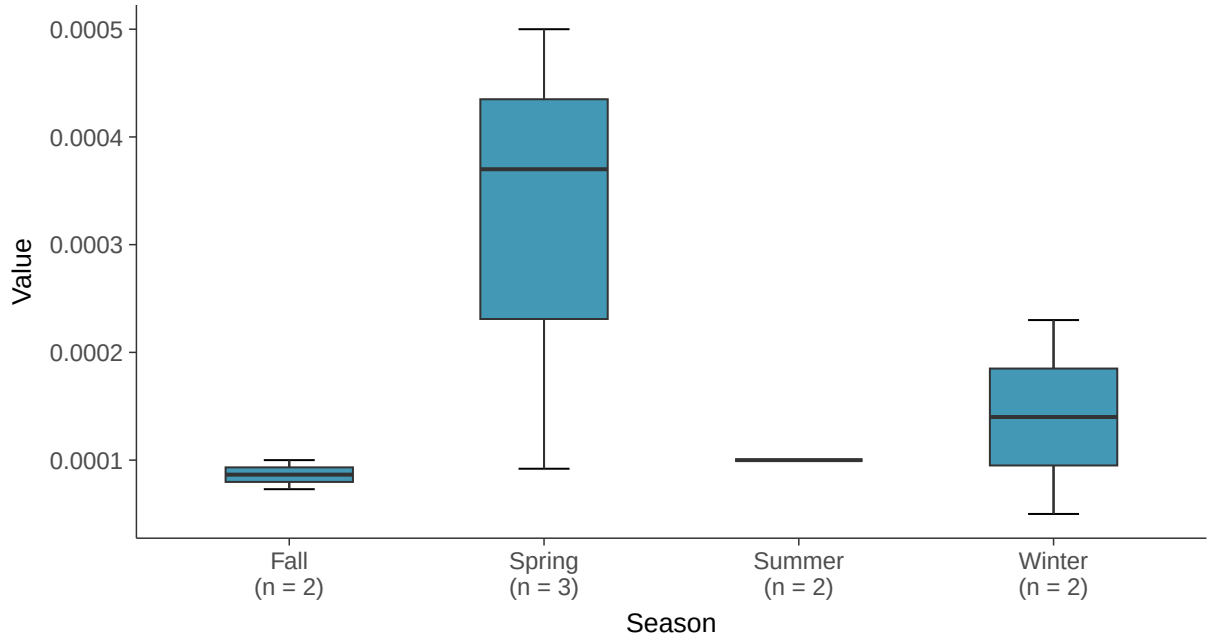
Boxplot

Antimony, MW-09 (mg/L)



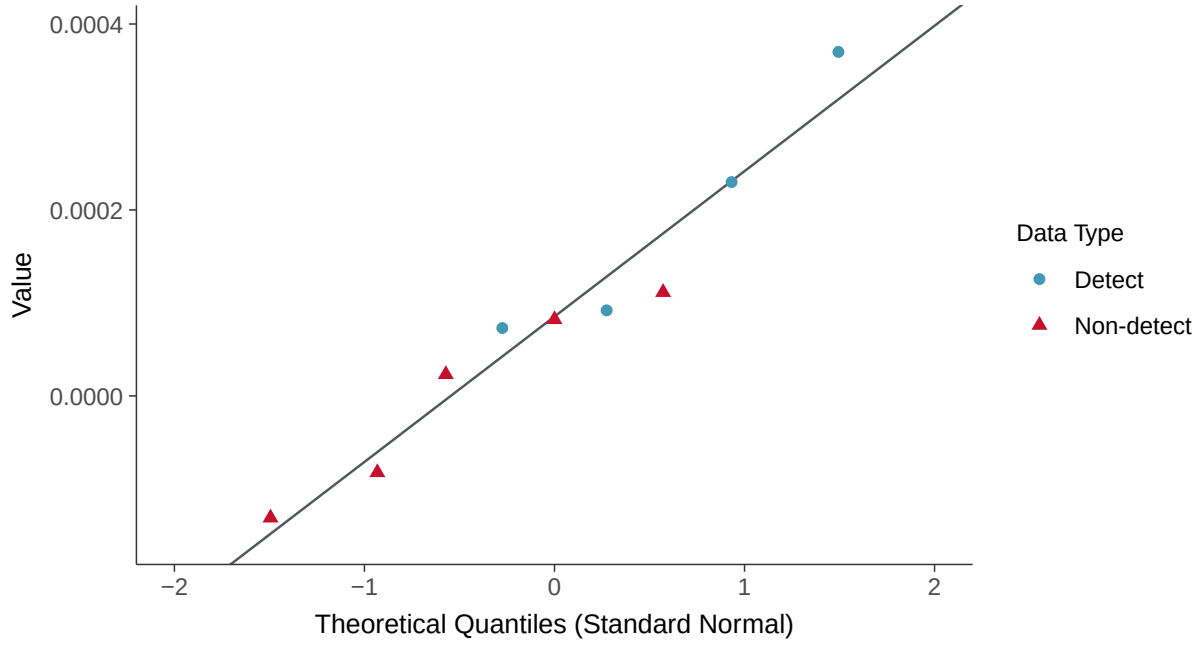
Boxplot by Season

Antimony, MW-09 (mg/L)



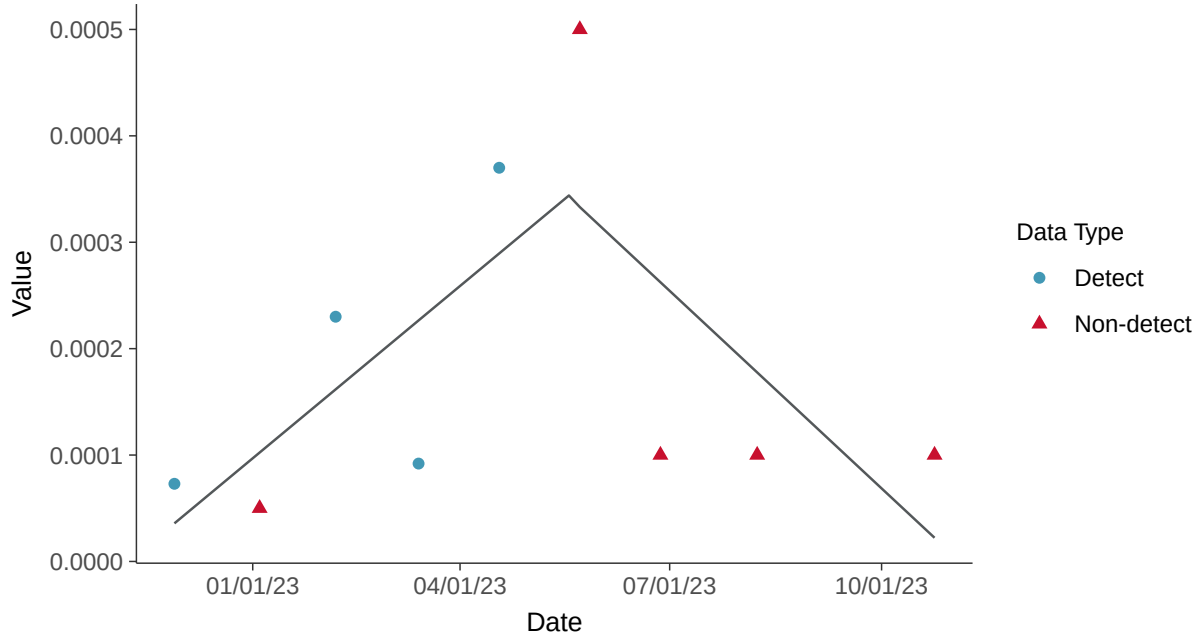
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-09 (mg/L)



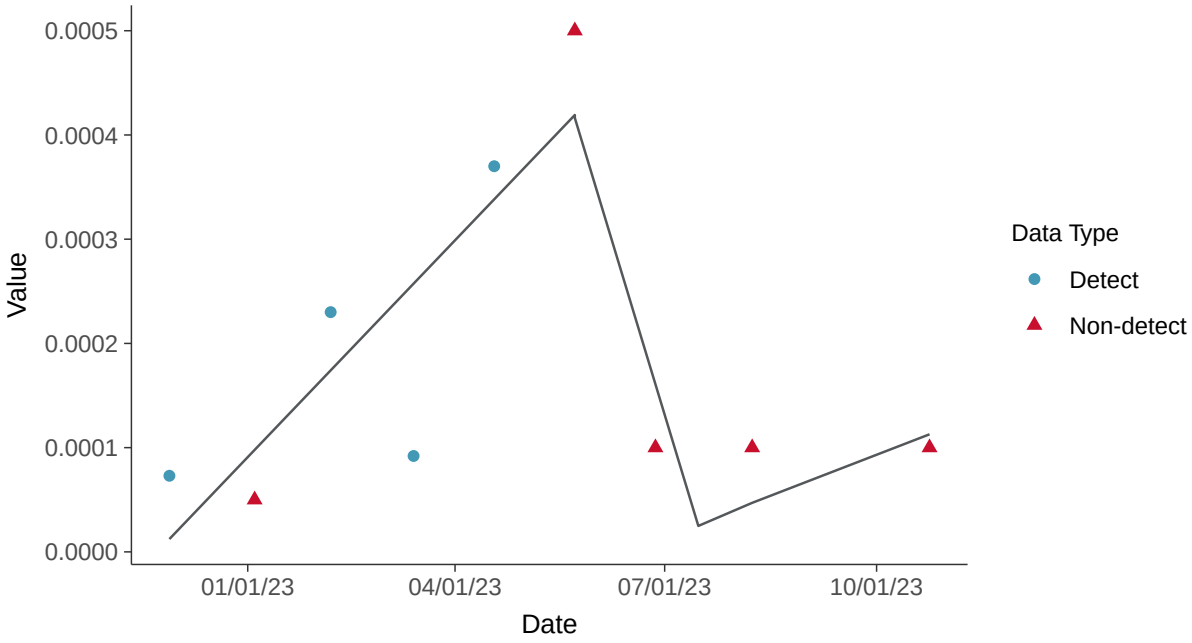
Trend Regression: Piecewise Linear-Linear

Antimony, MW-09 (mg/L)



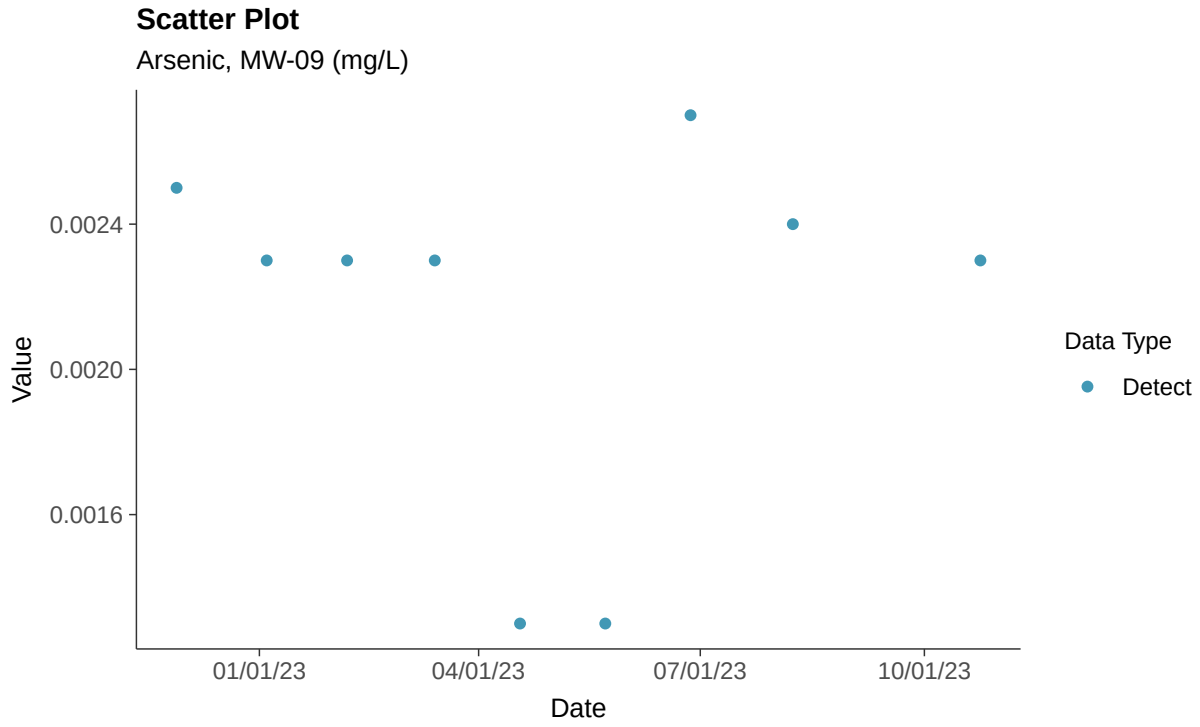
Trend Regression: Piecewise Linear-Linear-Linear

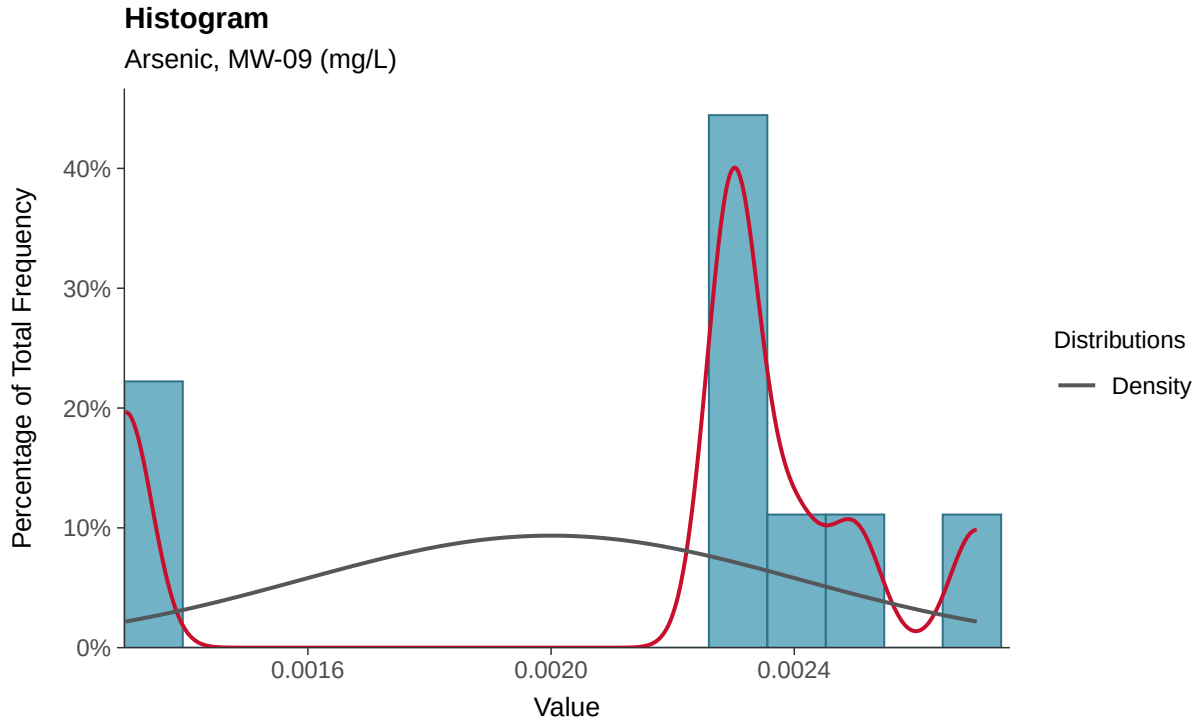
Antimony, MW-09 (mg/L)



Appendix IV: Arsenic, MW-09

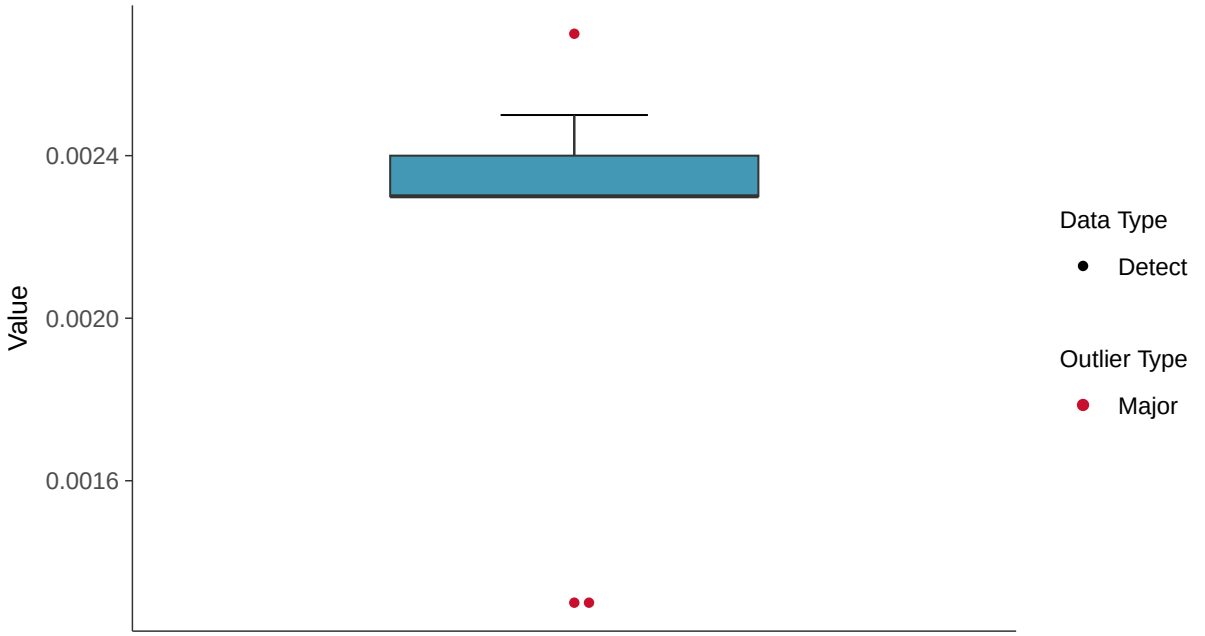
ID: 1_18_5_102





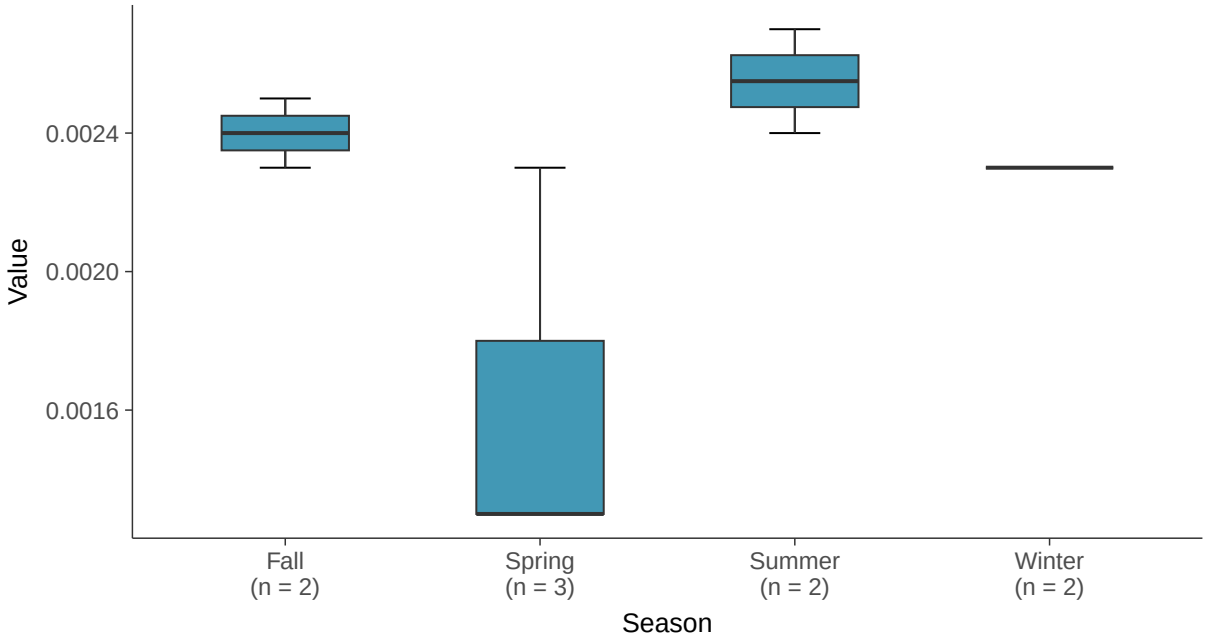
Boxplot

Arsenic, MW-09 (mg/L)



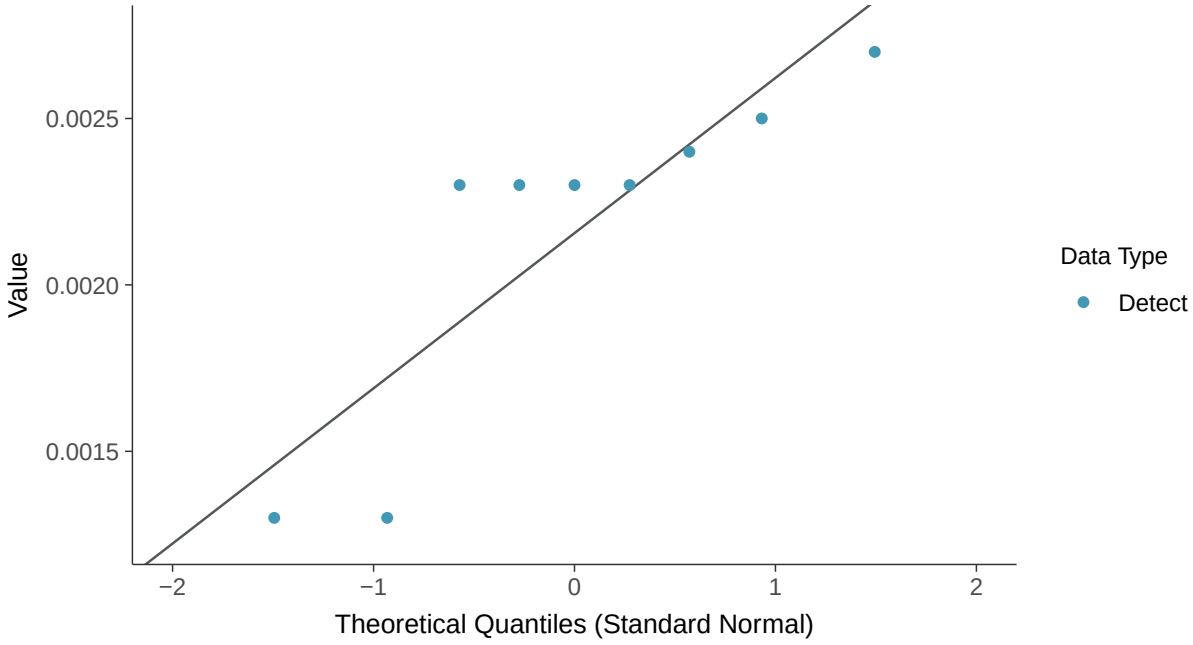
Boxplot by Season

Arsenic, MW-09 (mg/L)



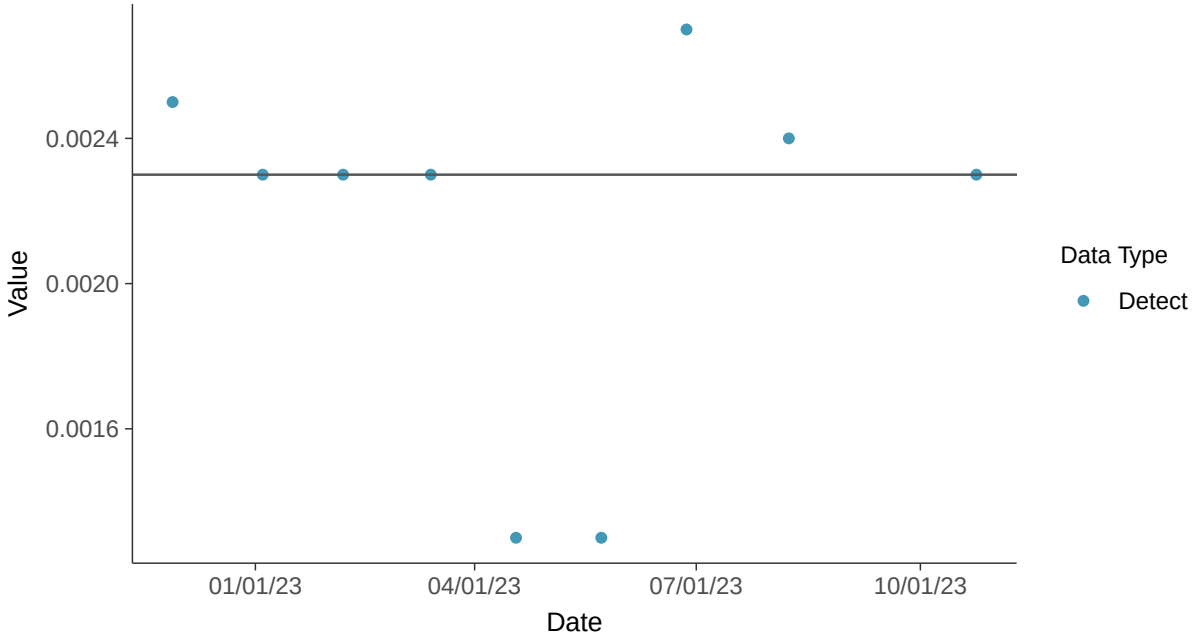
Normal Q-Q plot

Arsenic, MW-09 (mg/L)



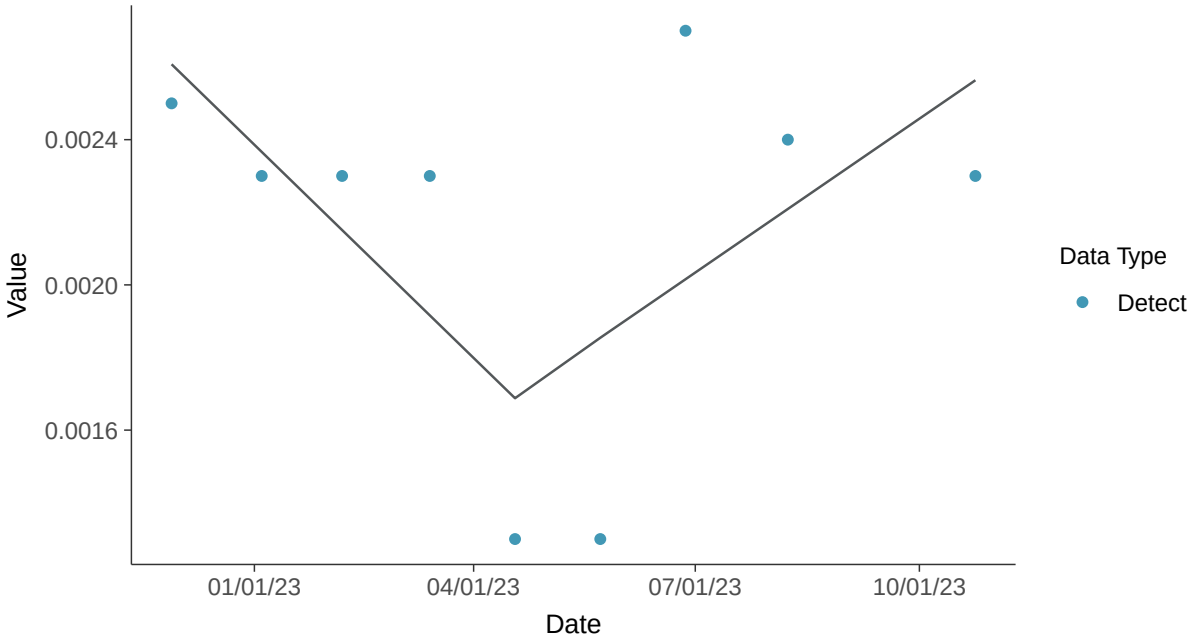
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Arsenic, MW-09 (mg/L)



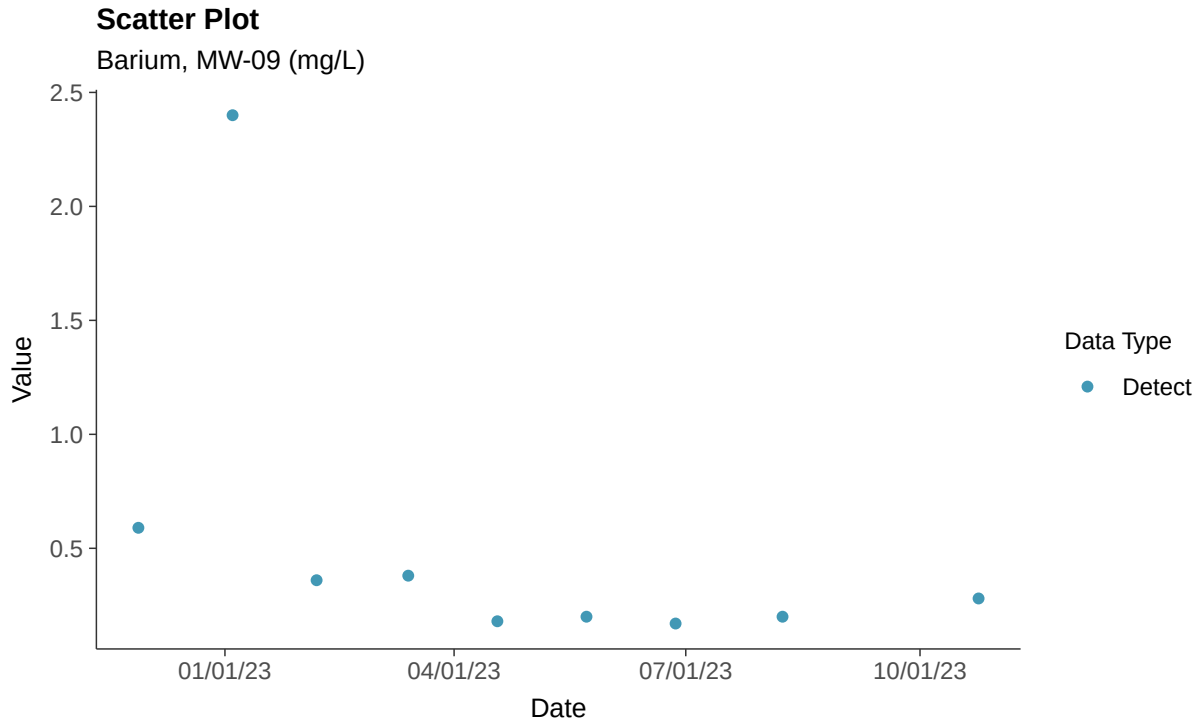
Trend Regression: Piecewise Linear-Linear

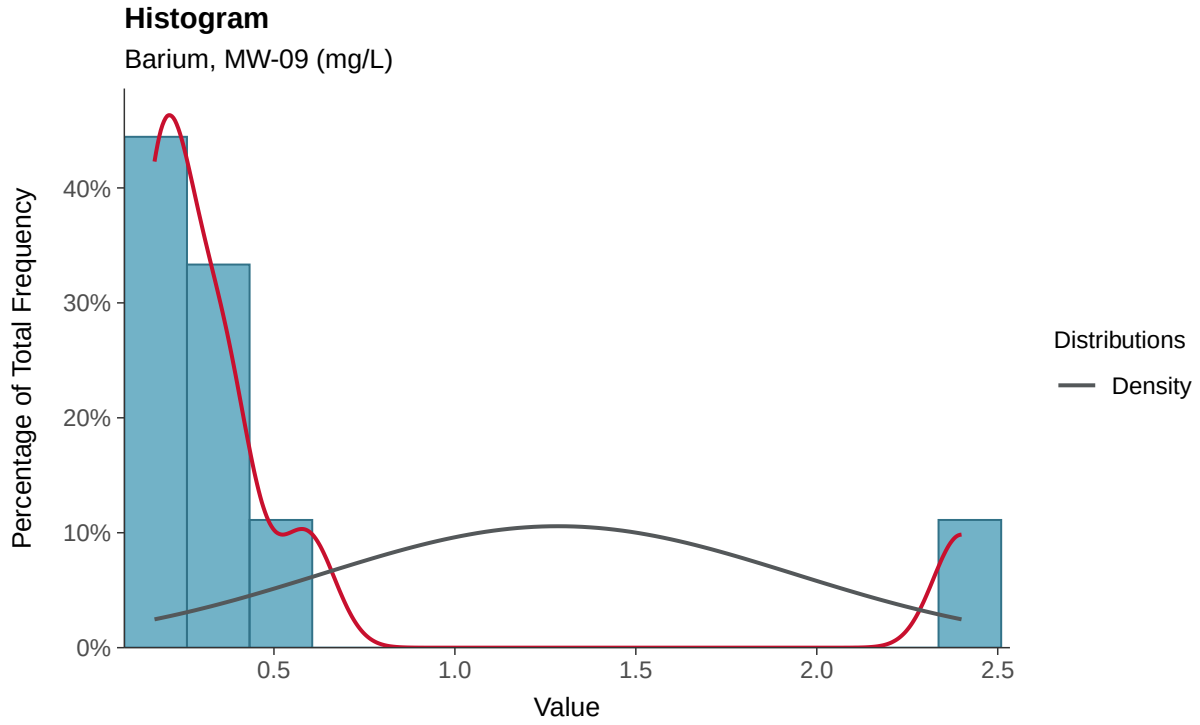
Arsenic, MW-09 (mg/L)



Appendix IV: Barium, MW-09

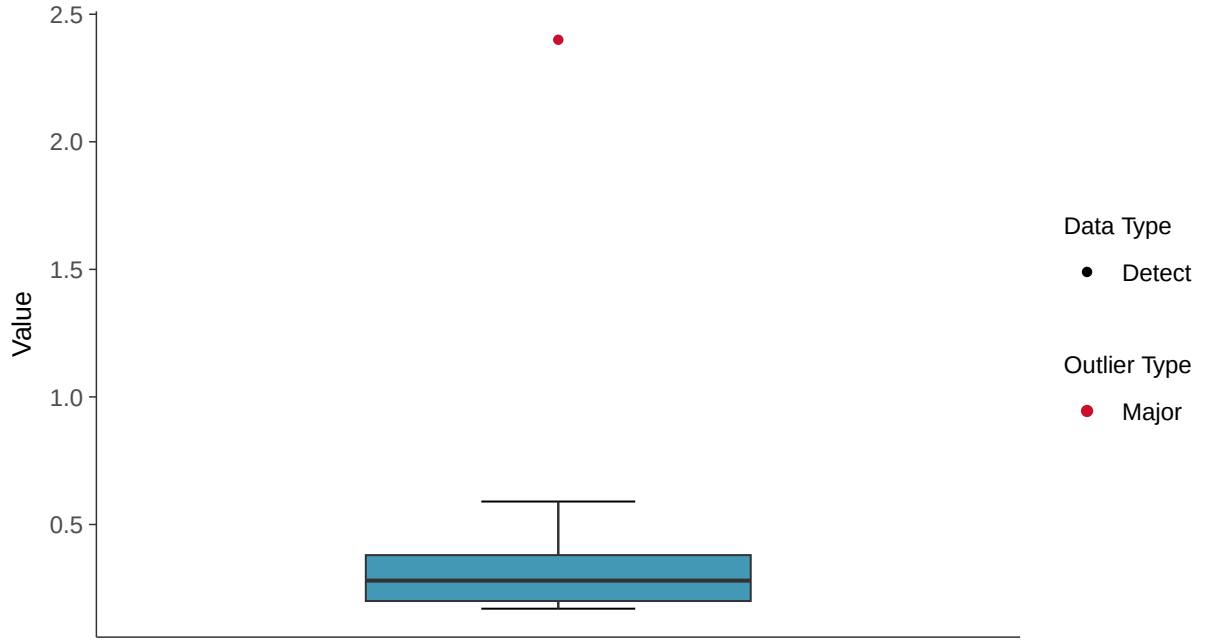
ID: 1_18_5_103





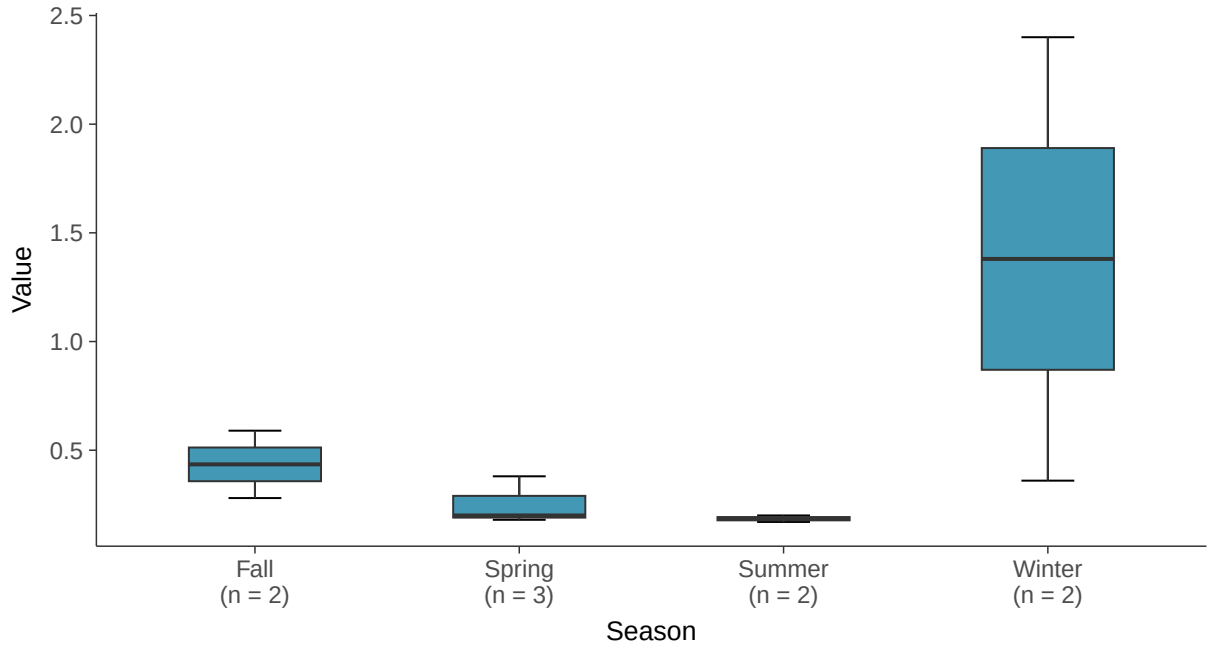
Boxplot

Barium, MW-09 (mg/L)



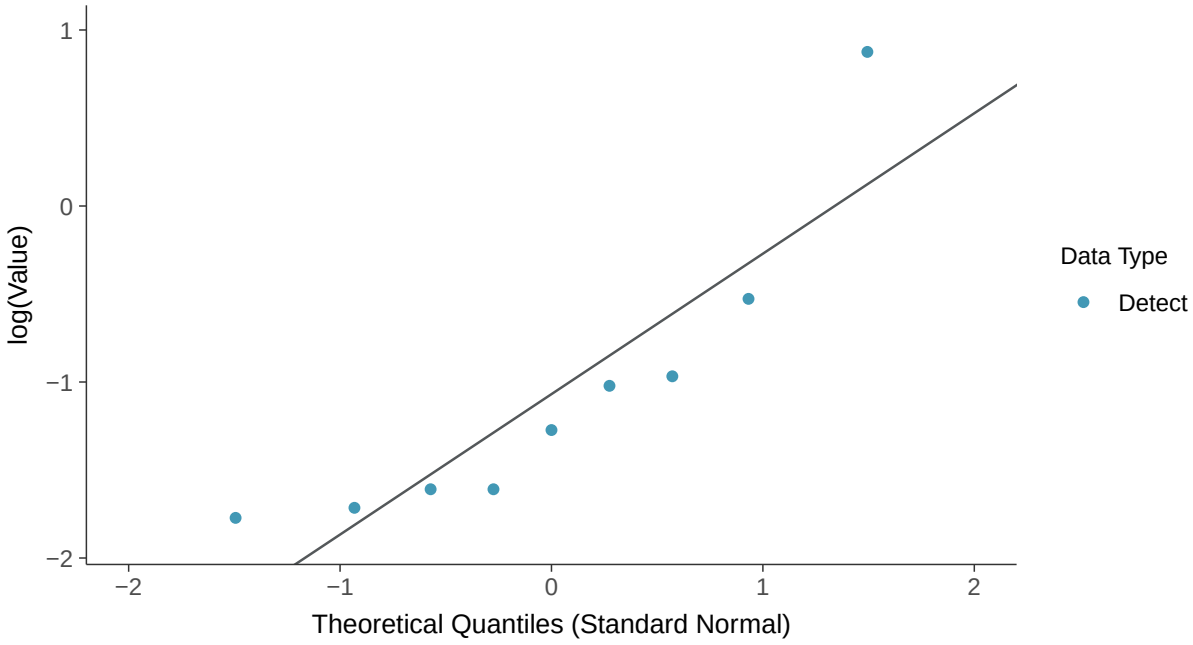
Boxplot by Season

Barium, MW-09 (mg/L)



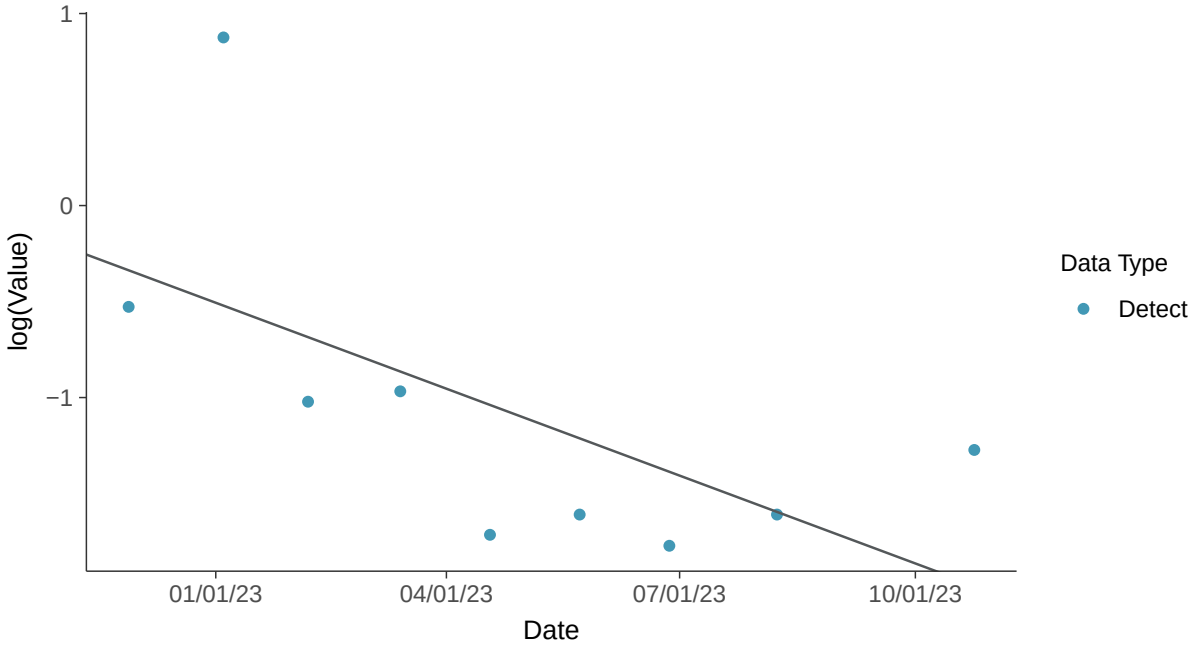
Lognormal Q-Q plot

Barium, MW-09 (mg/L)



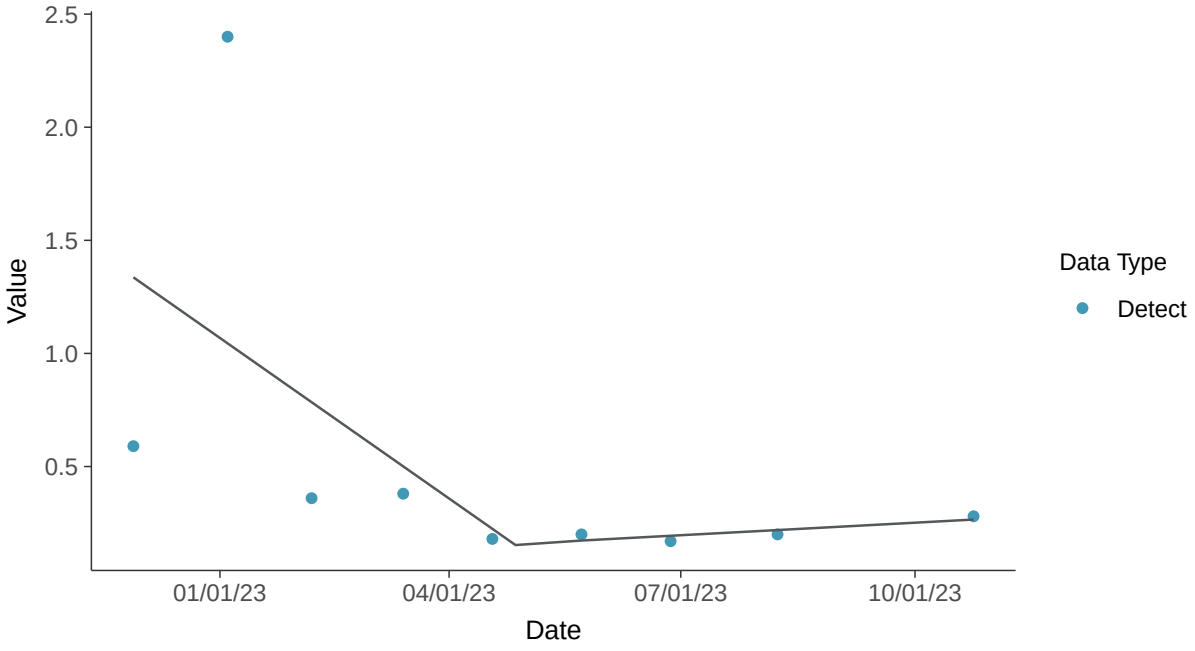
Trend Regression: Lognormal MLE

Barium, MW-09 (mg/L)



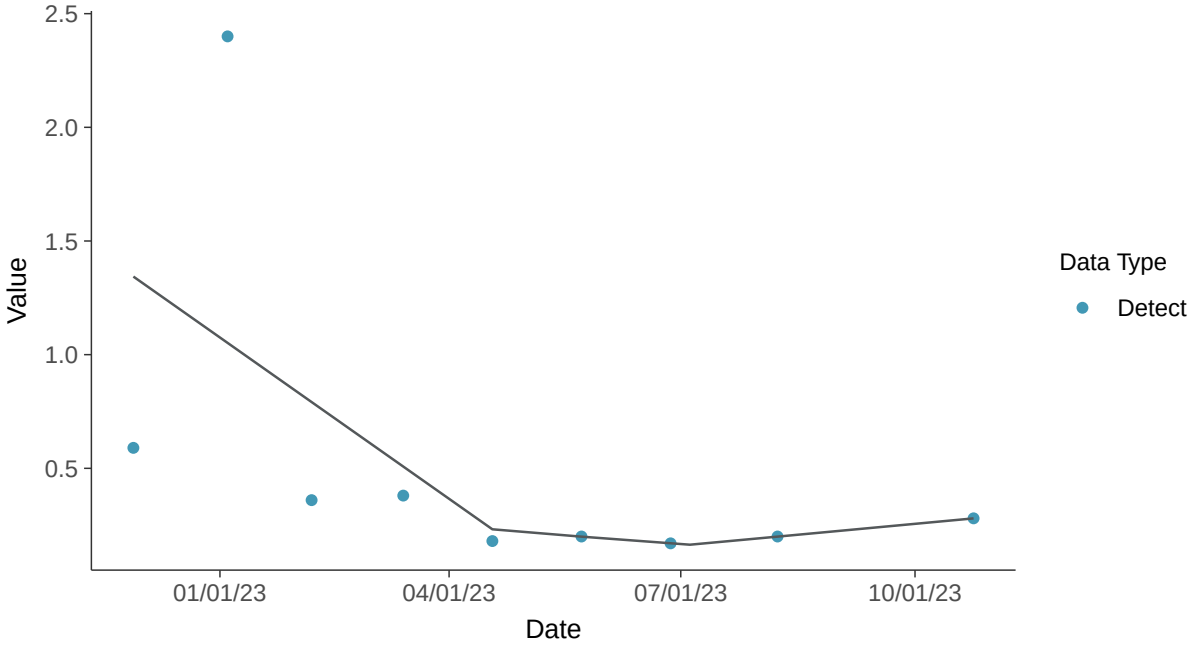
Trend Regression: Piecewise Linear-Linear

Barium, MW-09 (mg/L)



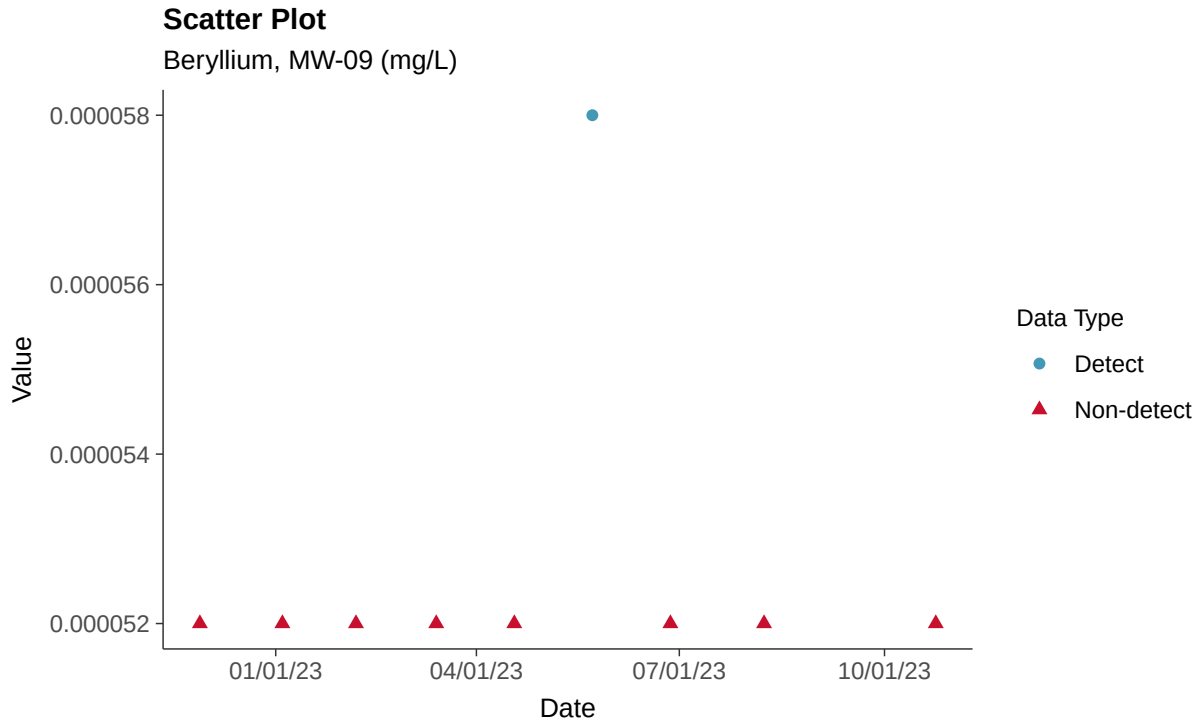
Trend Regression: Piecewise Linear-Linear-Linear

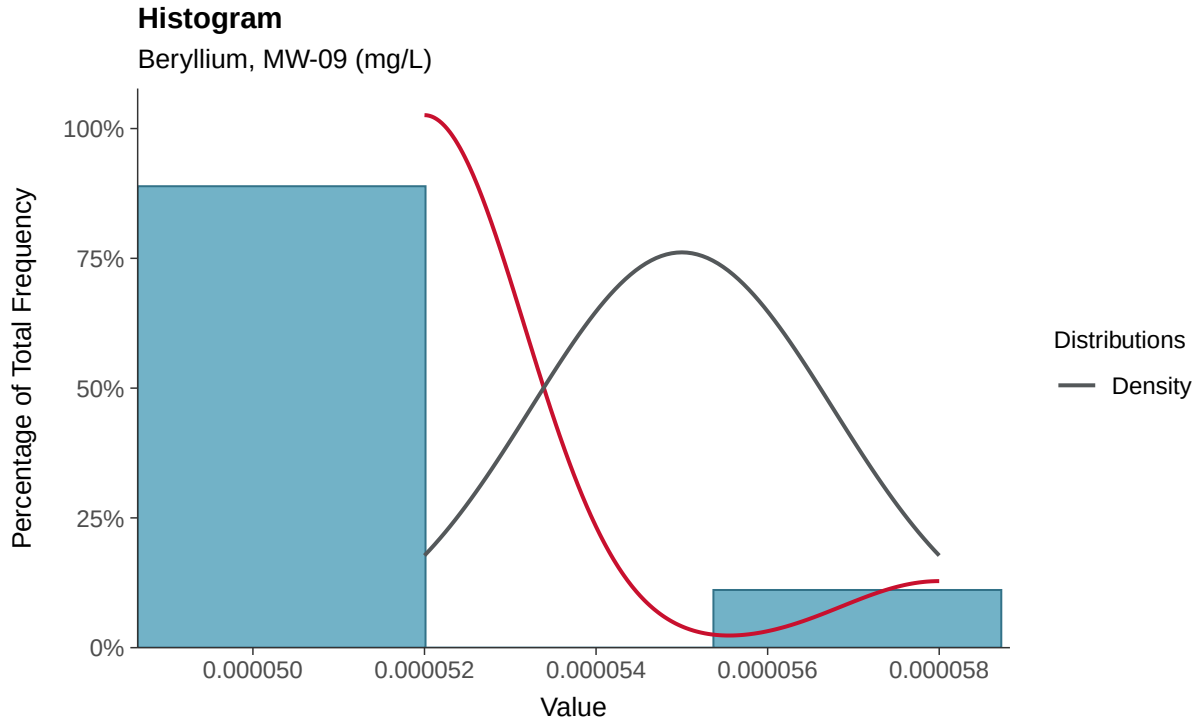
Barium, MW-09 (mg/L)



Appendix IV: Beryllium, MW-09

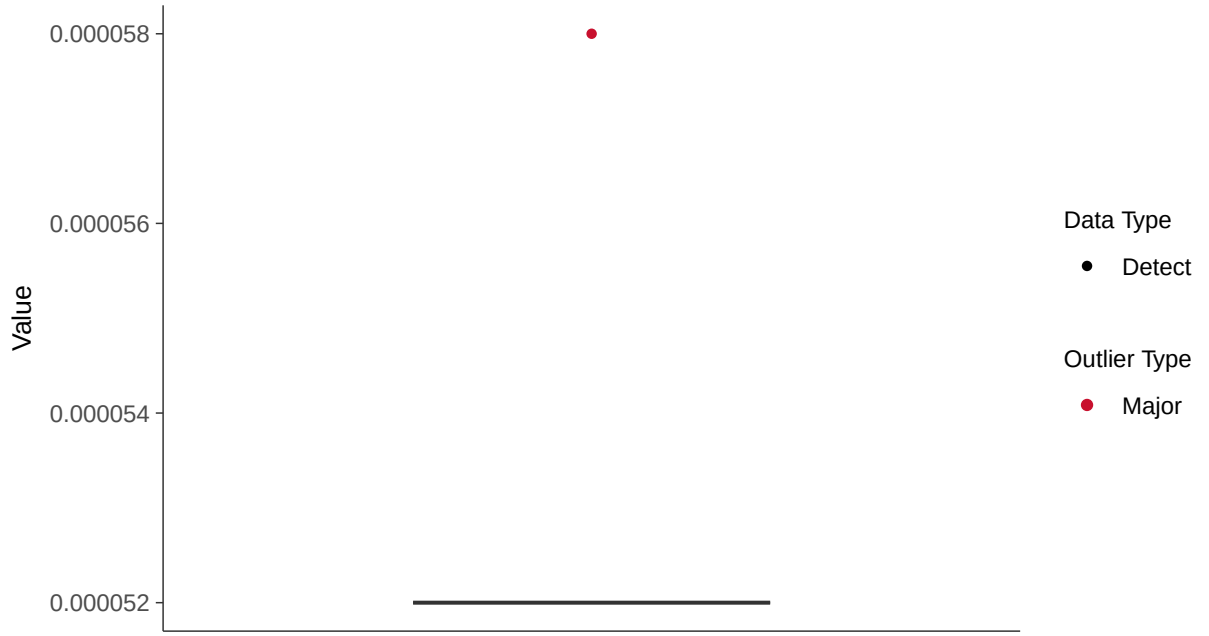
ID: 1_18_5_104





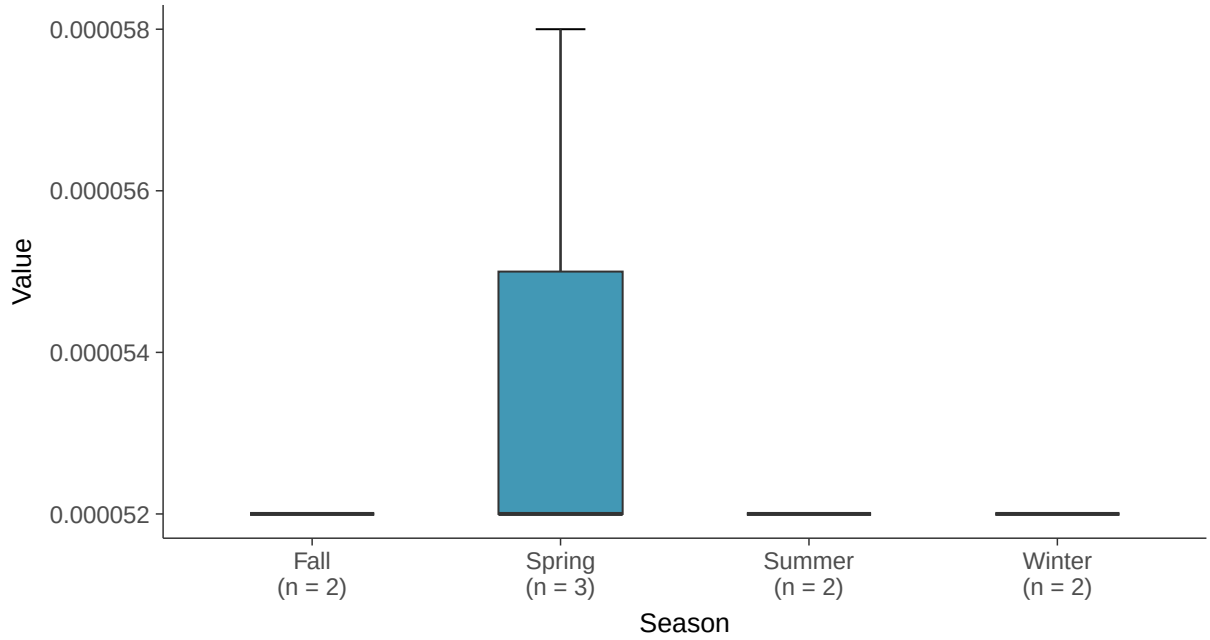
Boxplot

Beryllium, MW-09 (mg/L)



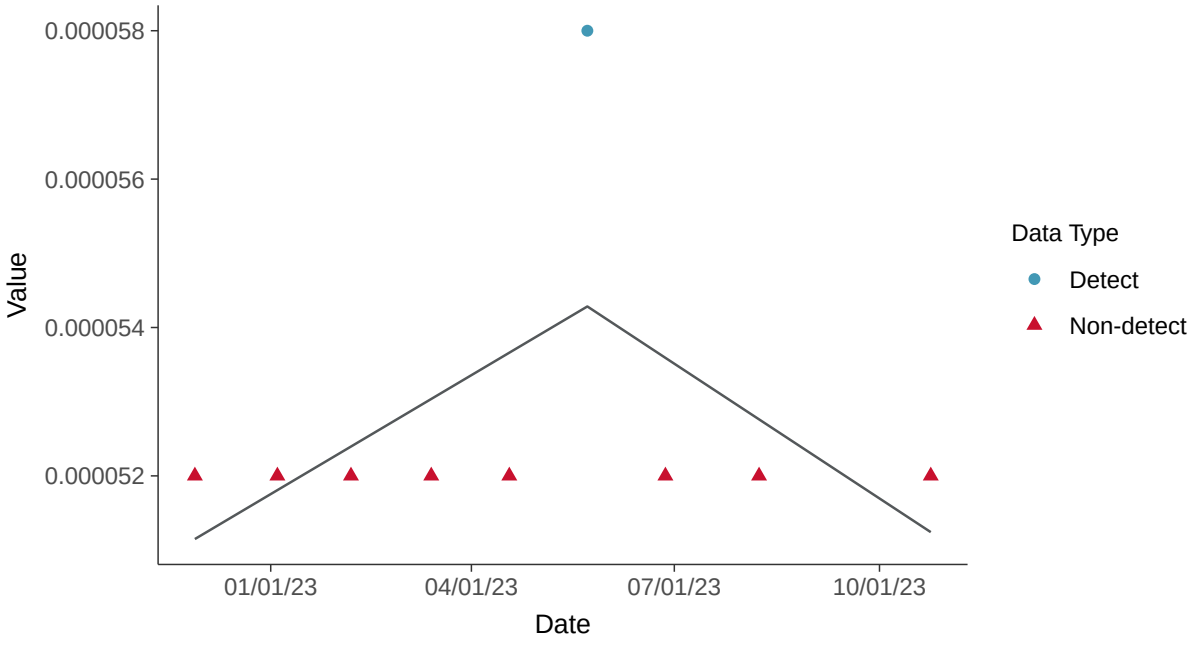
Boxplot by Season

Beryllium, MW-09 (mg/L)



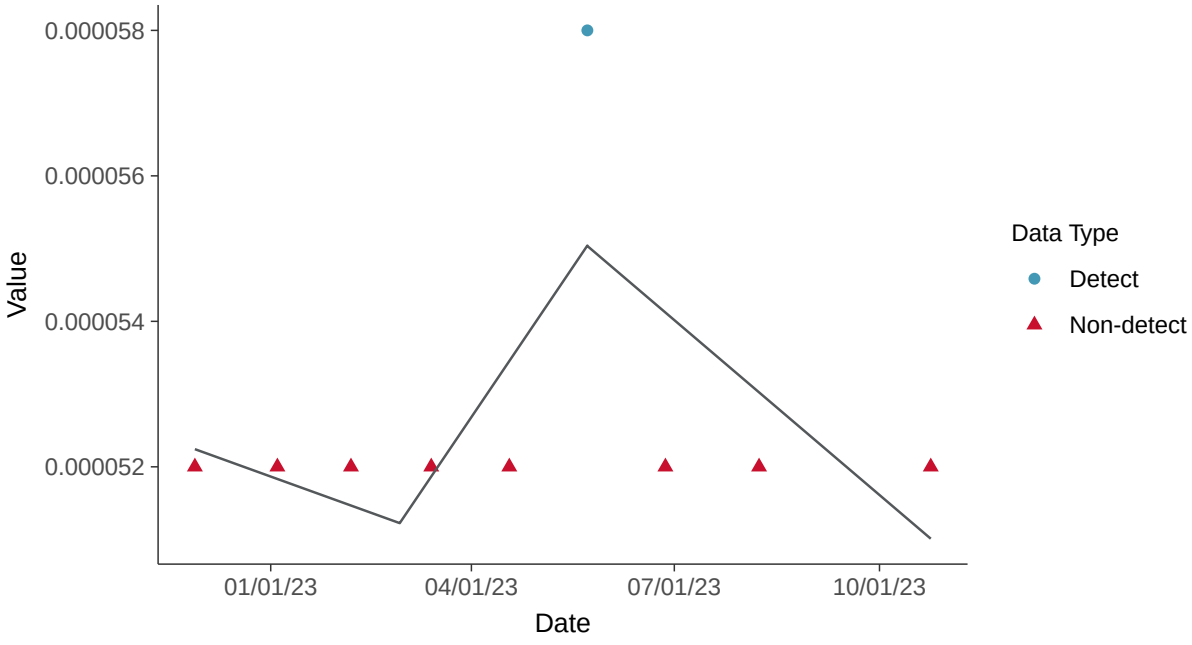
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-09 (mg/L)



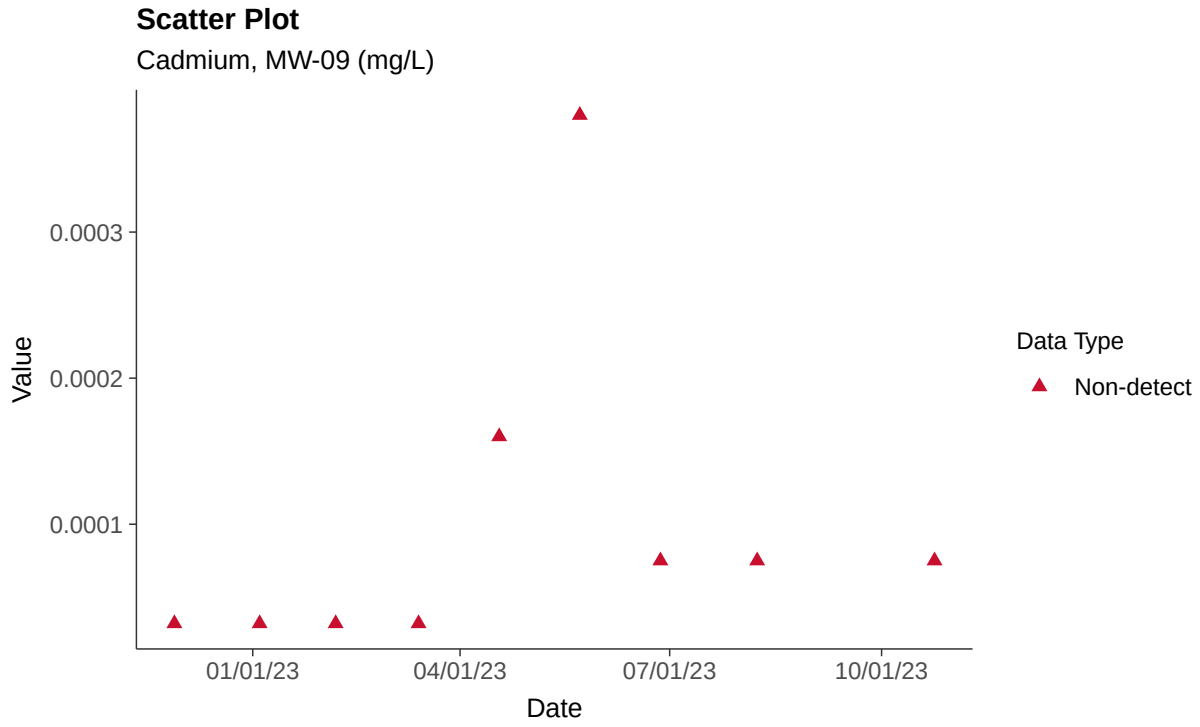
Trend Regression: Piecewise Linear-Linear-Linear

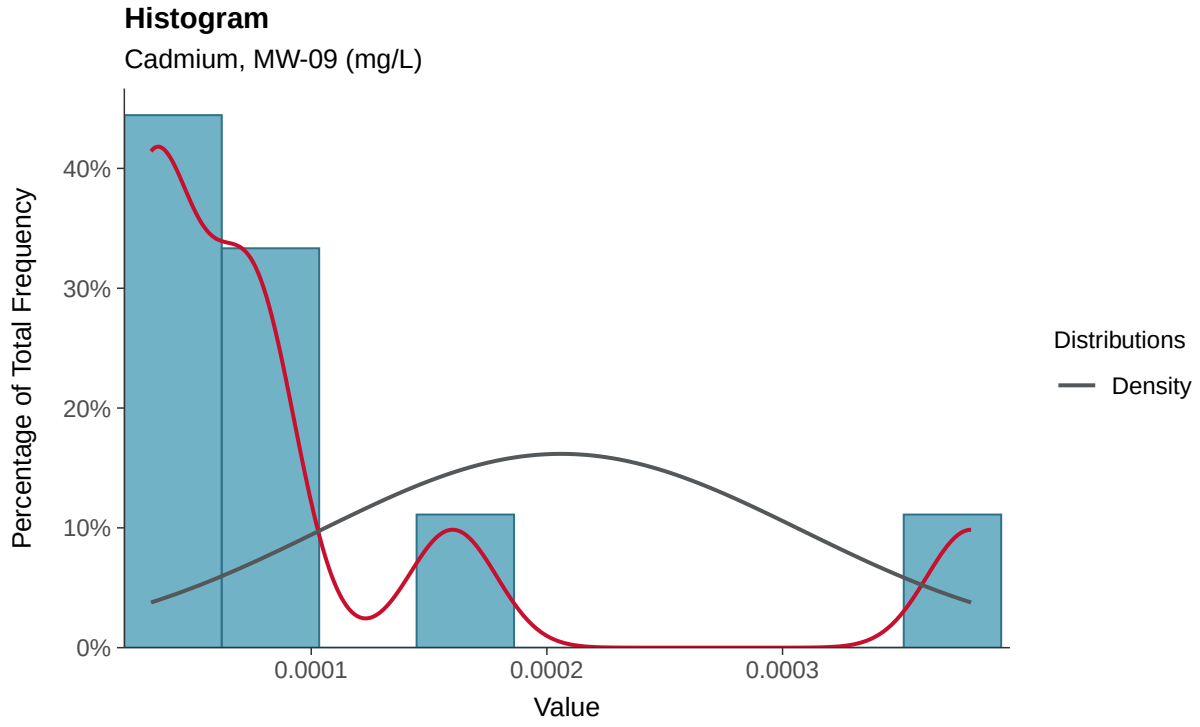
Beryllium, MW-09 (mg/L)



Appendix IV: Cadmium, MW-09

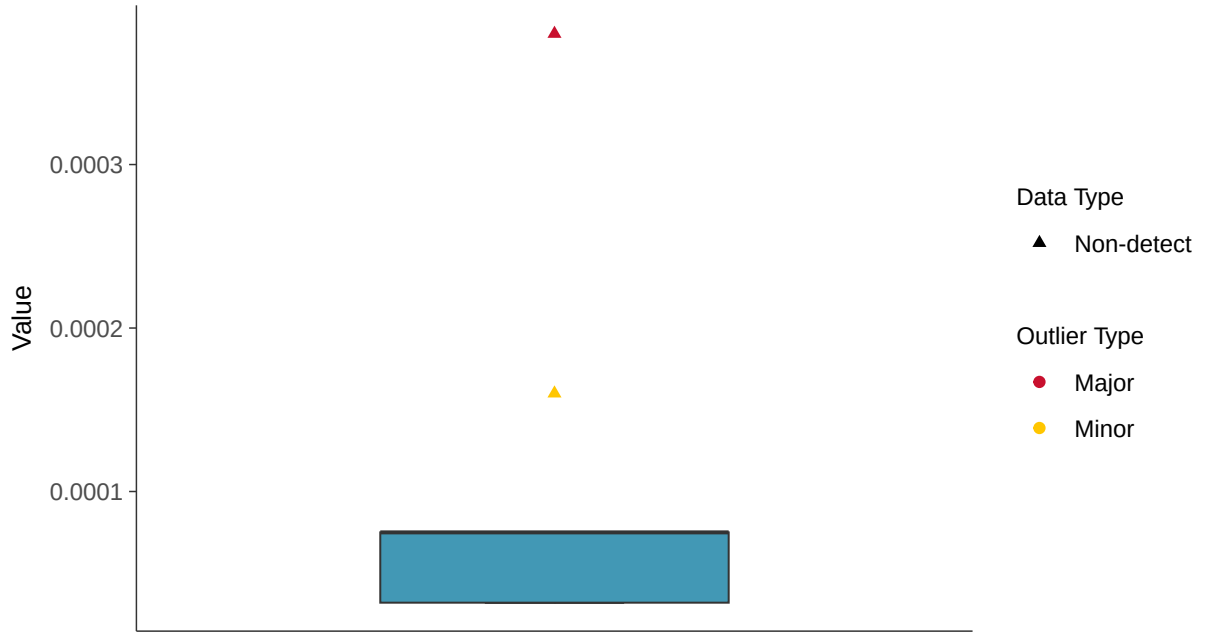
ID: 1_18_5_106





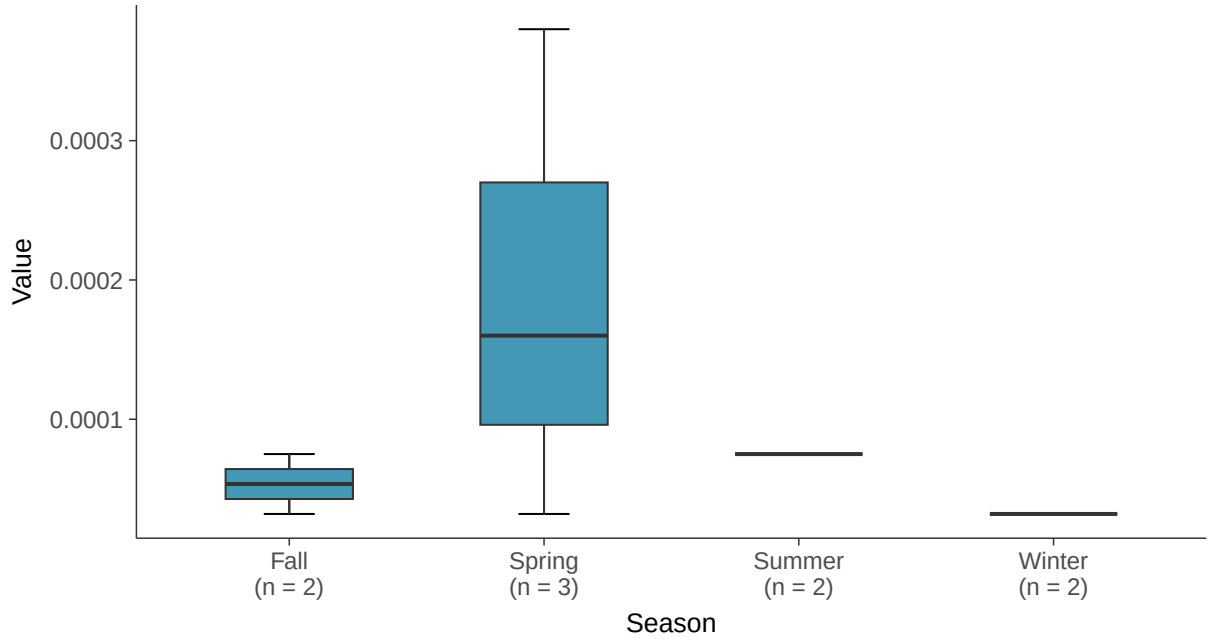
Boxplot

Cadmium, MW-09 (mg/L)



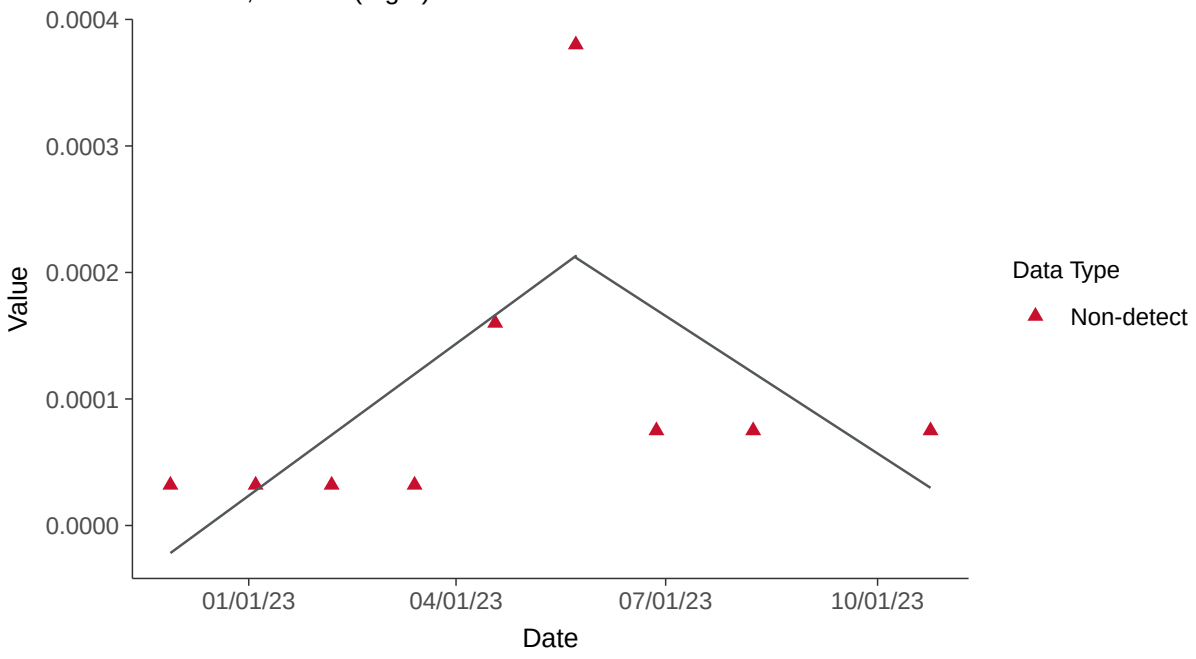
Boxplot by Season

Cadmium, MW-09 (mg/L)



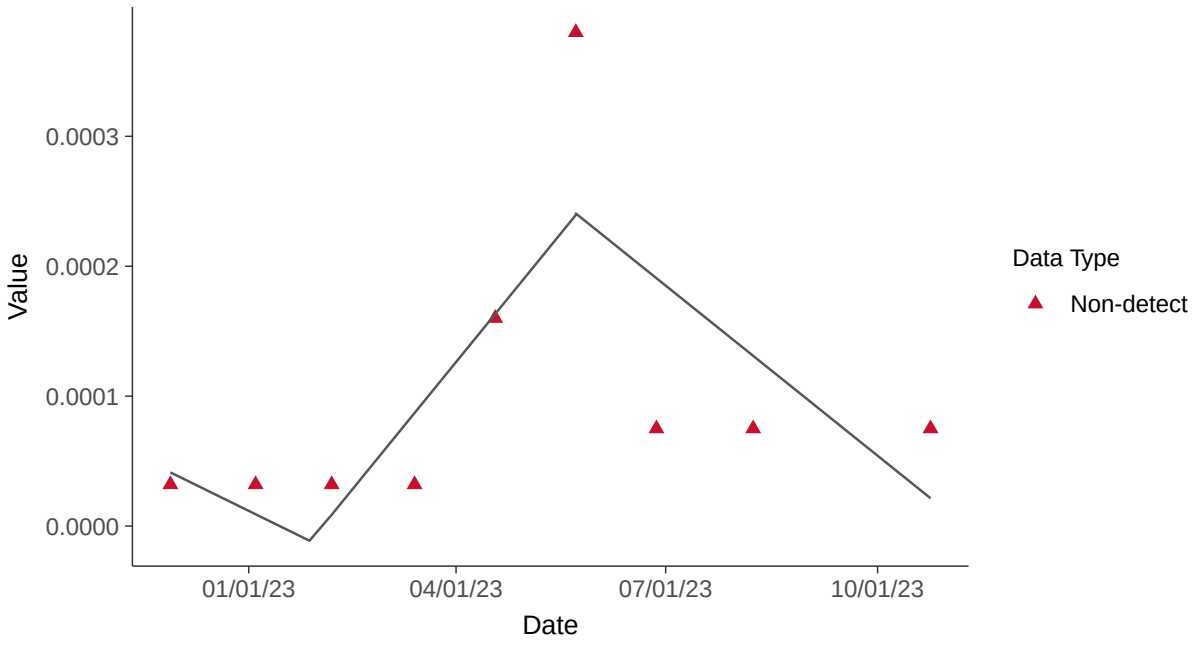
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-09 (mg/L)

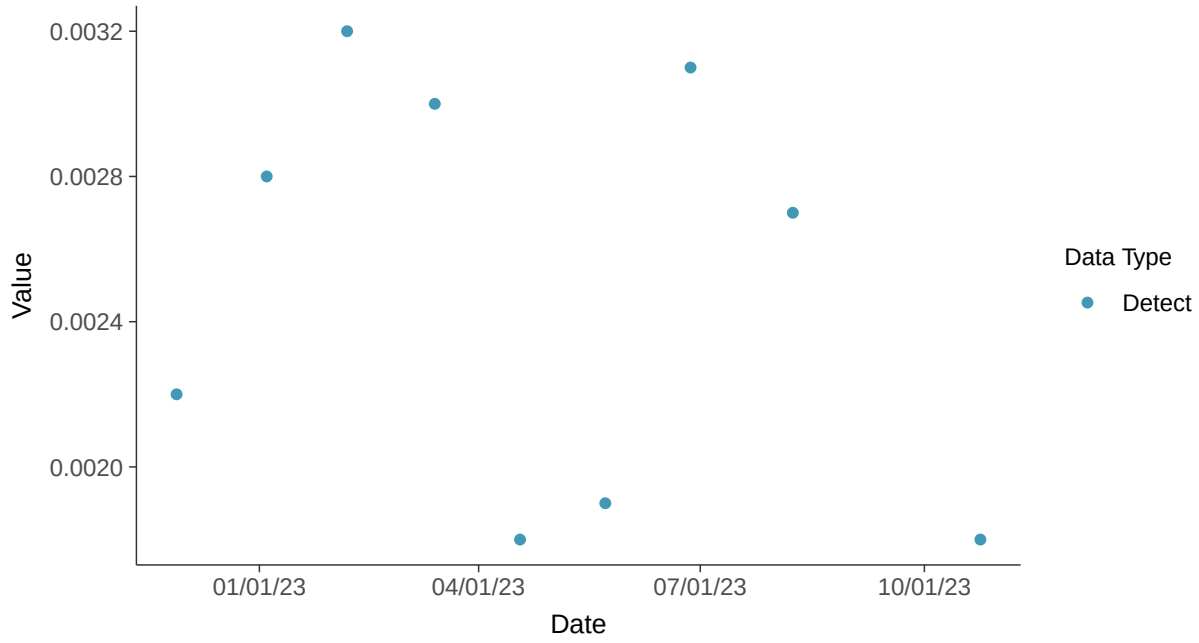


Appendix IV: Chromium, Total, MW-09

ID: 1_18_5_109

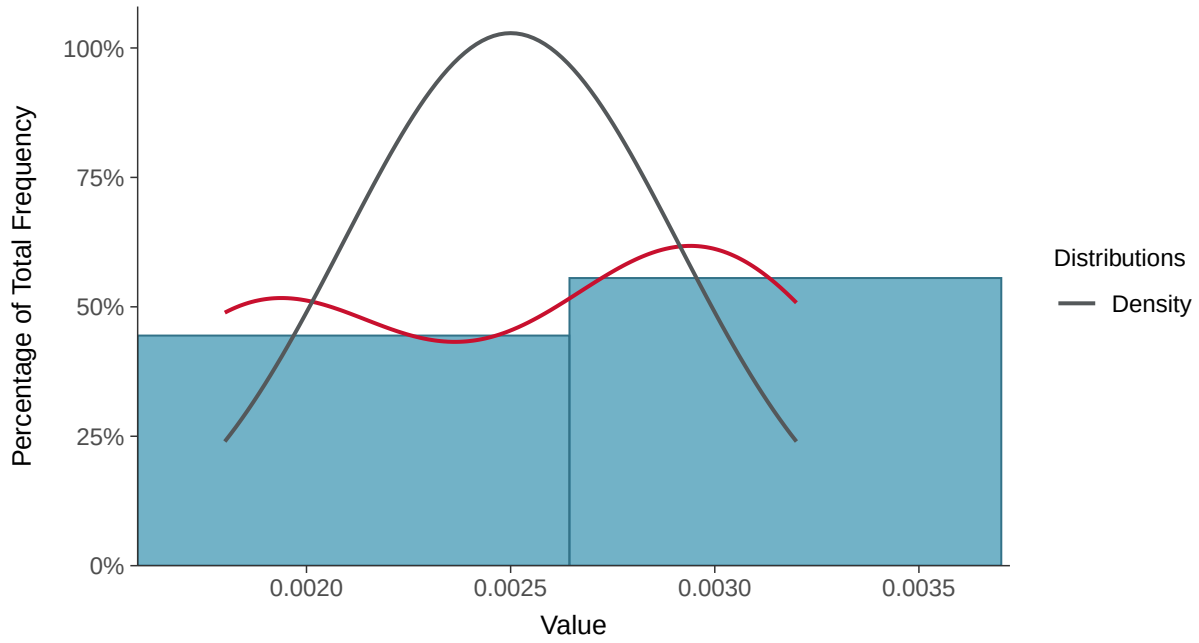
Scatter Plot

Chromium, Total, MW-09 (mg/L)



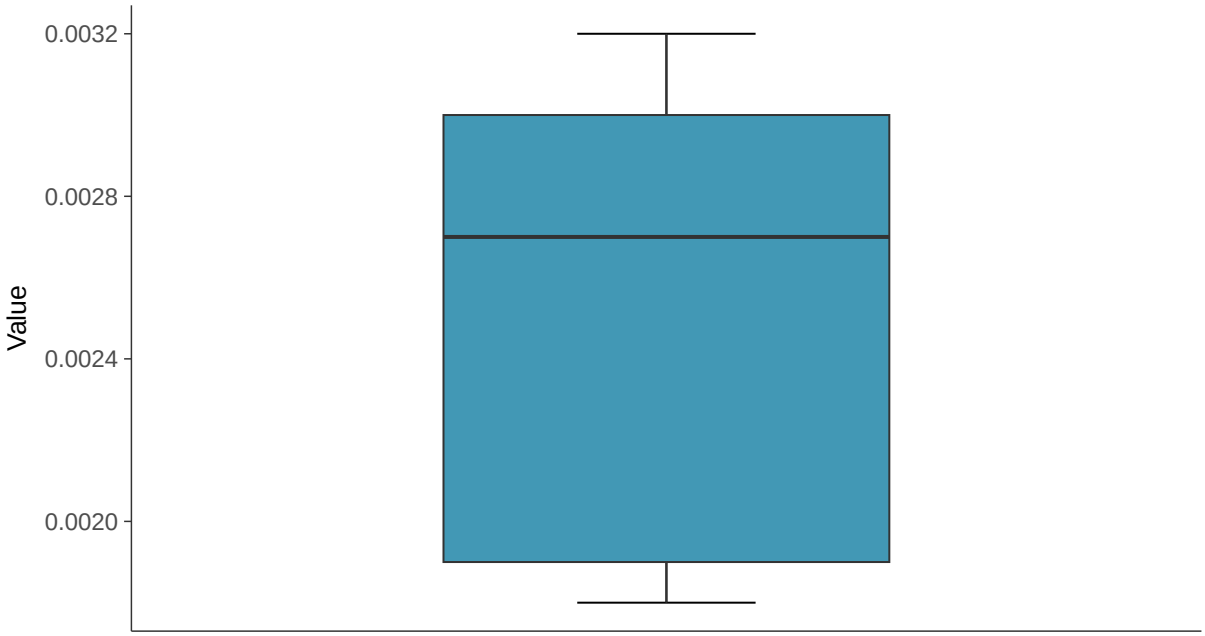
Histogram

Chromium, Total, MW-09 (mg/L)



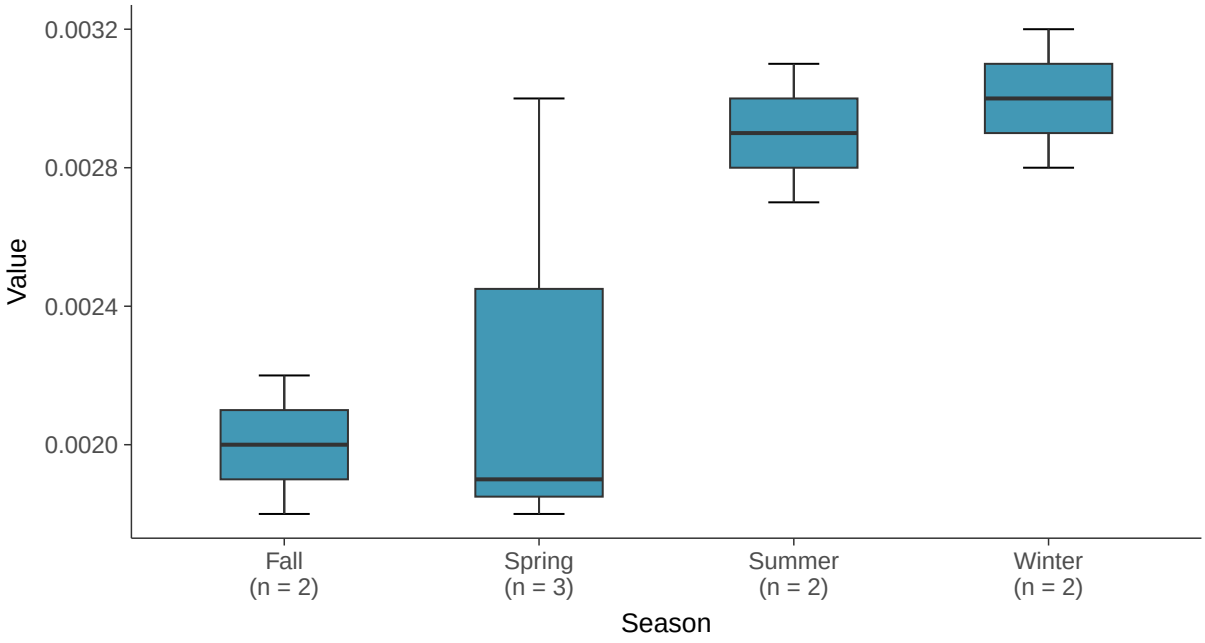
Boxplot

Chromium, Total, MW-09 (mg/L)



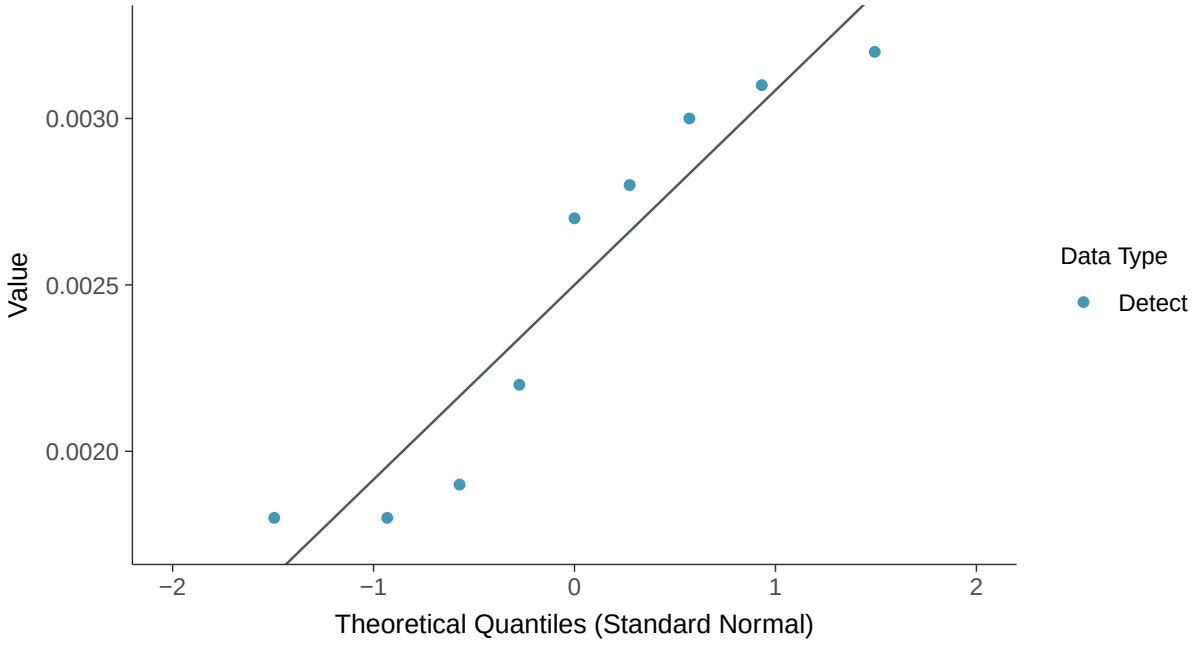
Boxplot by Season

Chromium, Total, MW-09 (mg/L)



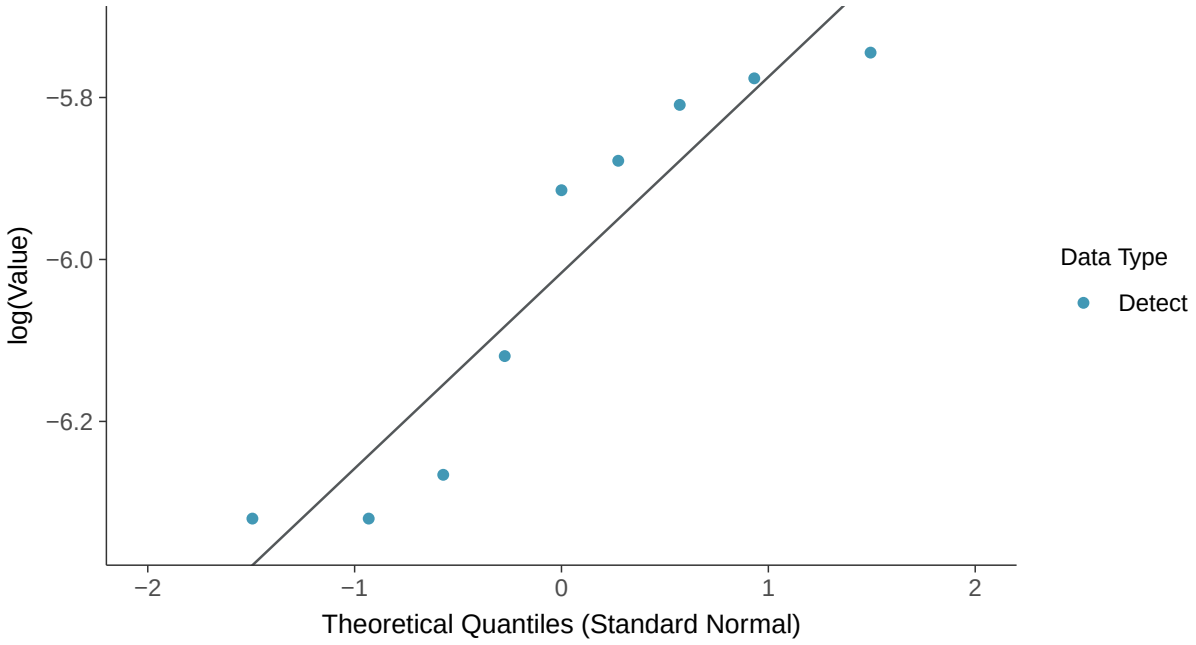
Normal Q-Q plot

Chromium, Total, MW-09 (mg/L)



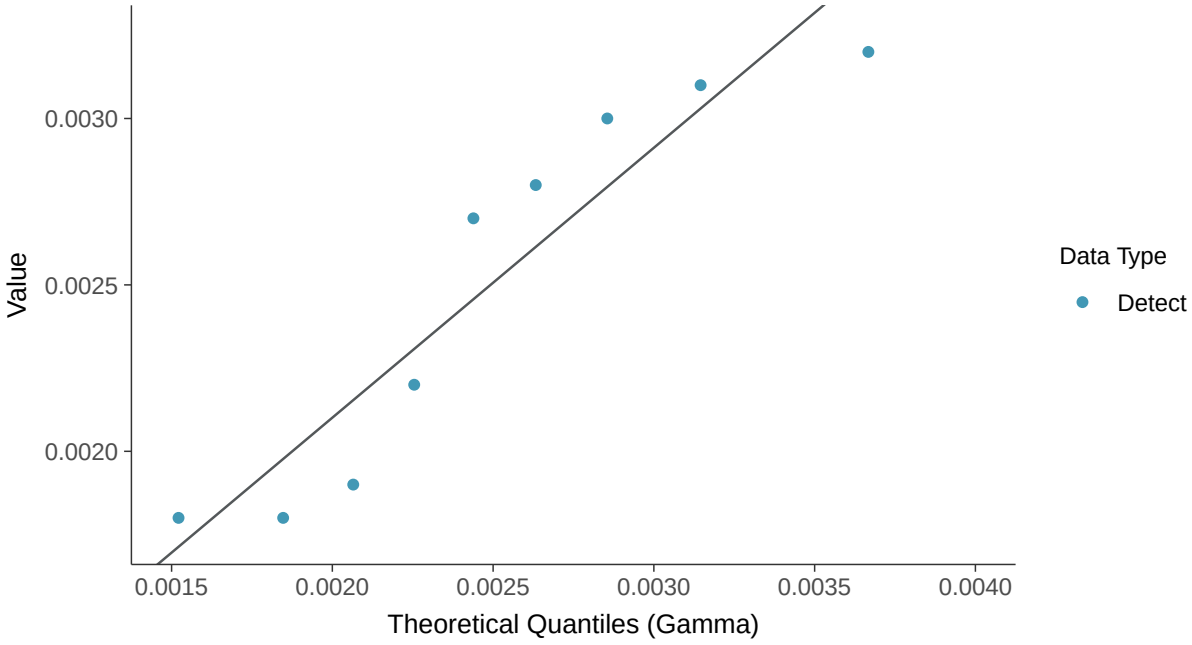
Lognormal Q-Q plot

Chromium, Total, MW-09 (mg/L)



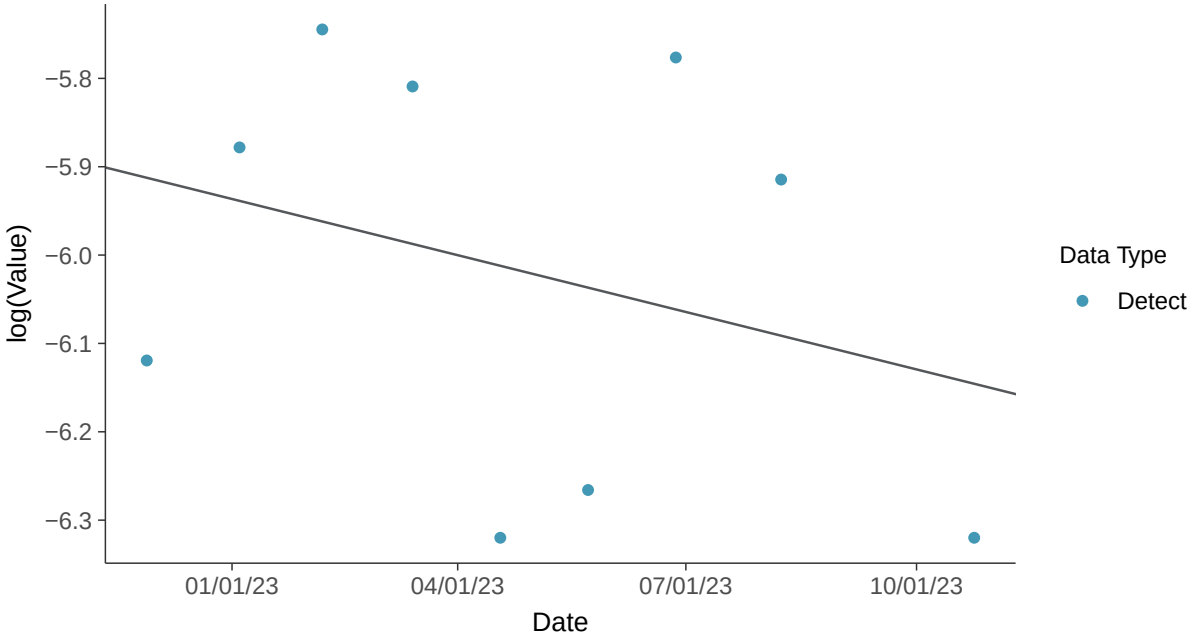
Gamma Q-Q plot

Chromium, Total, MW-09 (mg/L)



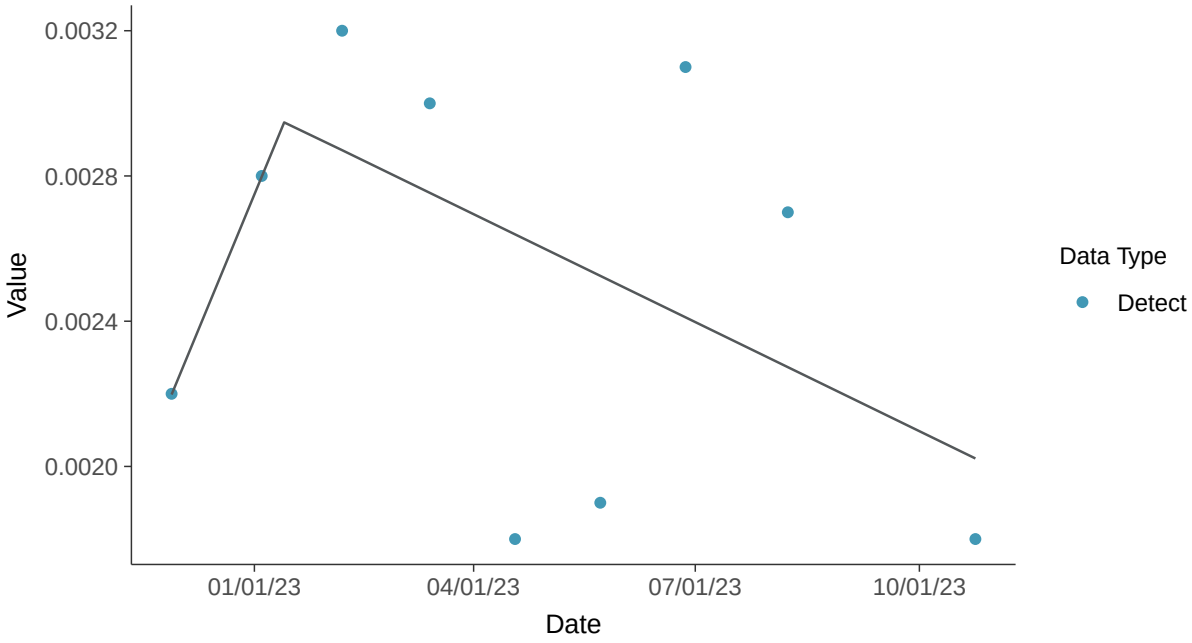
Trend Regression: Lognormal MLE

Chromium, Total, MW-09 (mg/L)



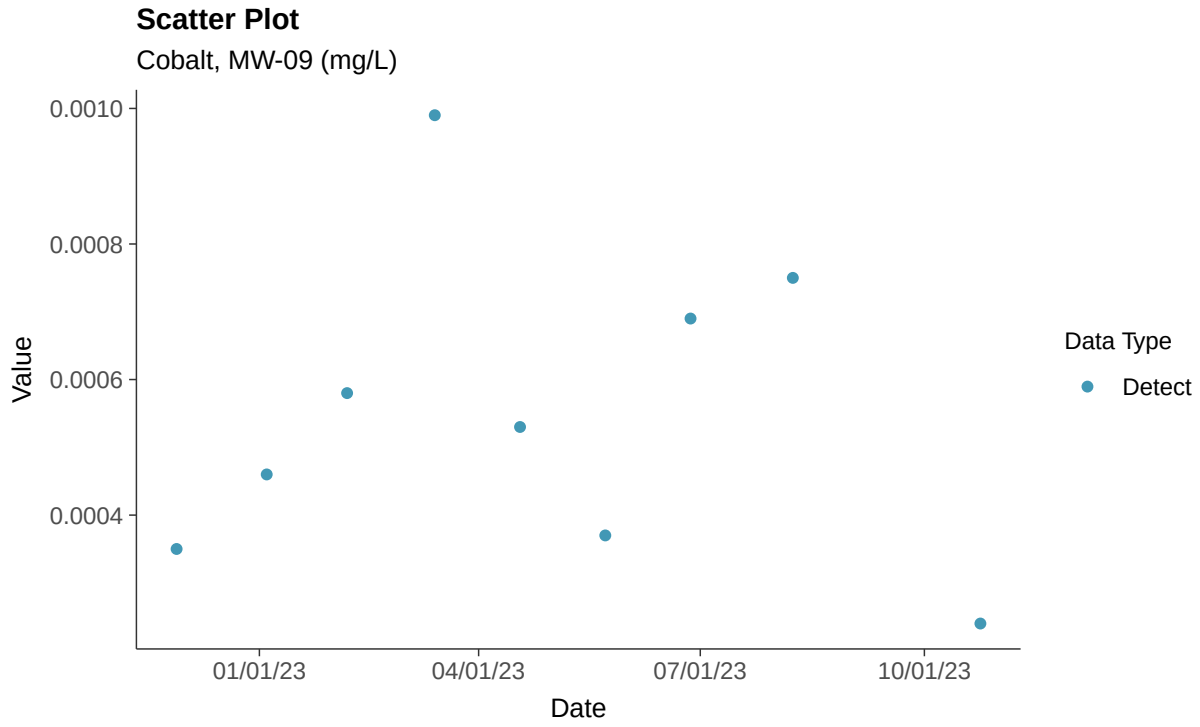
Trend Regression: Piecewise Linear-Linear

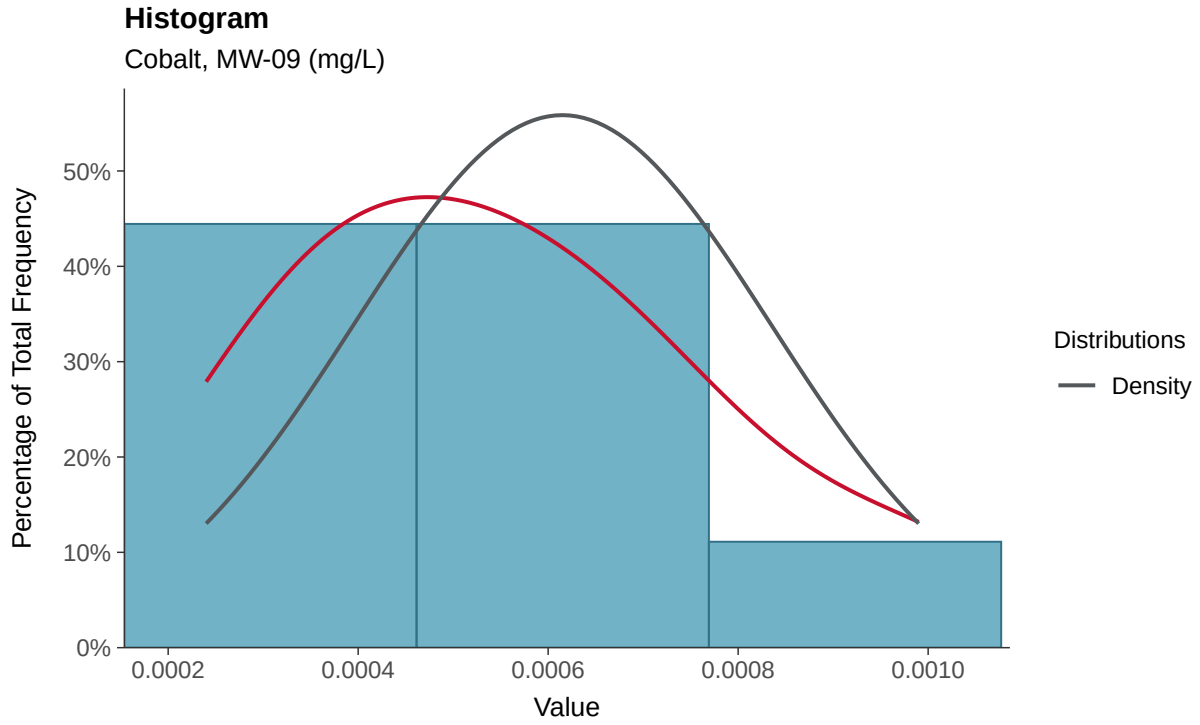
Chromium, Total, MW-09 (mg/L)



Appendix IV: Cobalt, MW-09

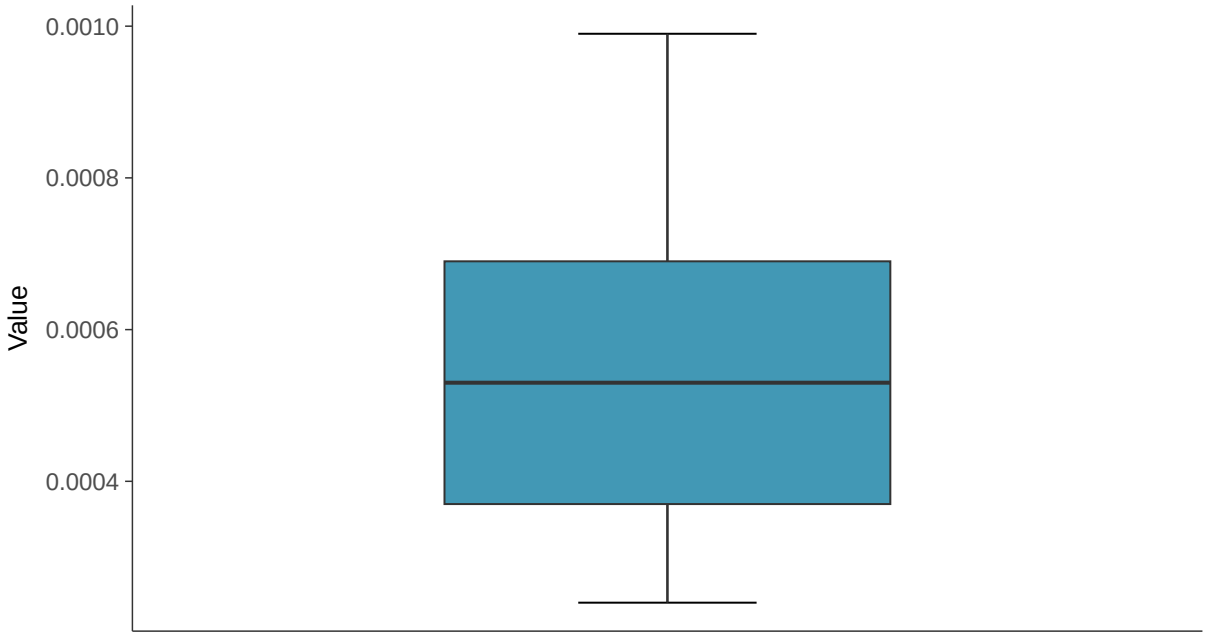
ID: 1_18_5_110





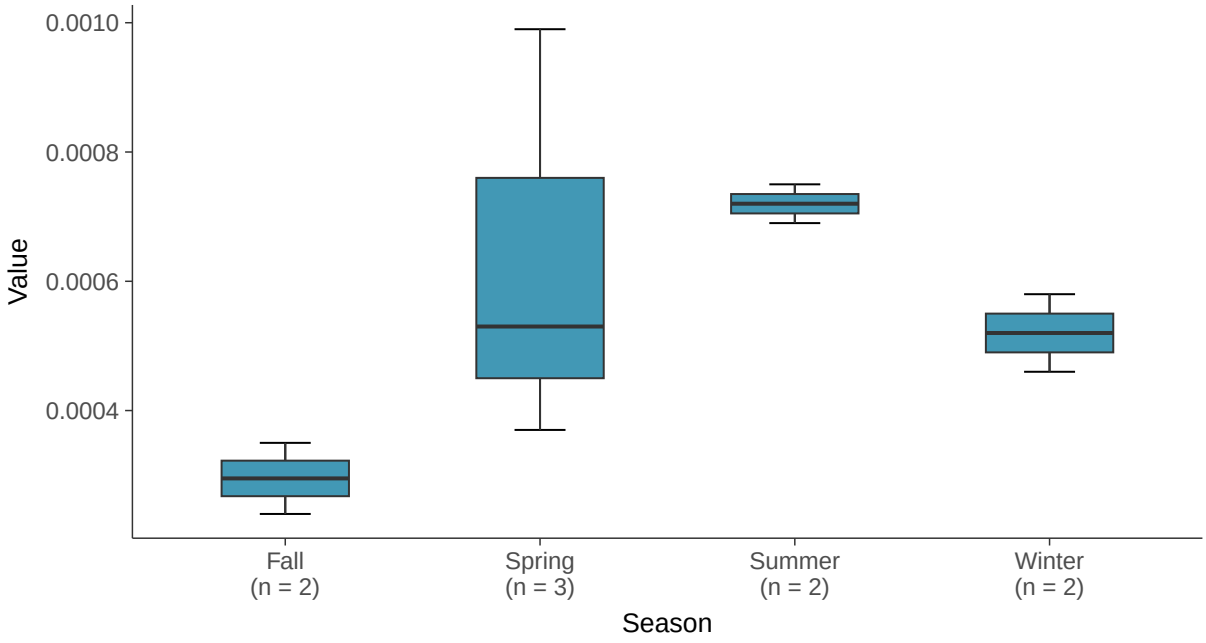
Boxplot

Cobalt, MW-09 (mg/L)



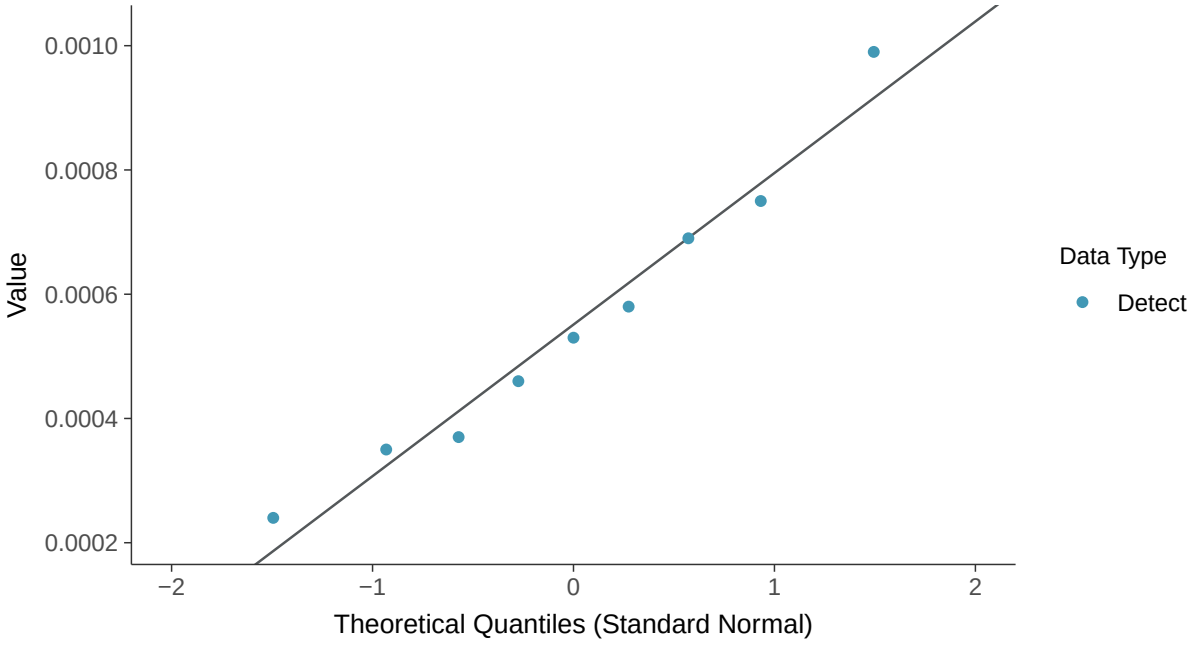
Boxplot by Season

Cobalt, MW-09 (mg/L)



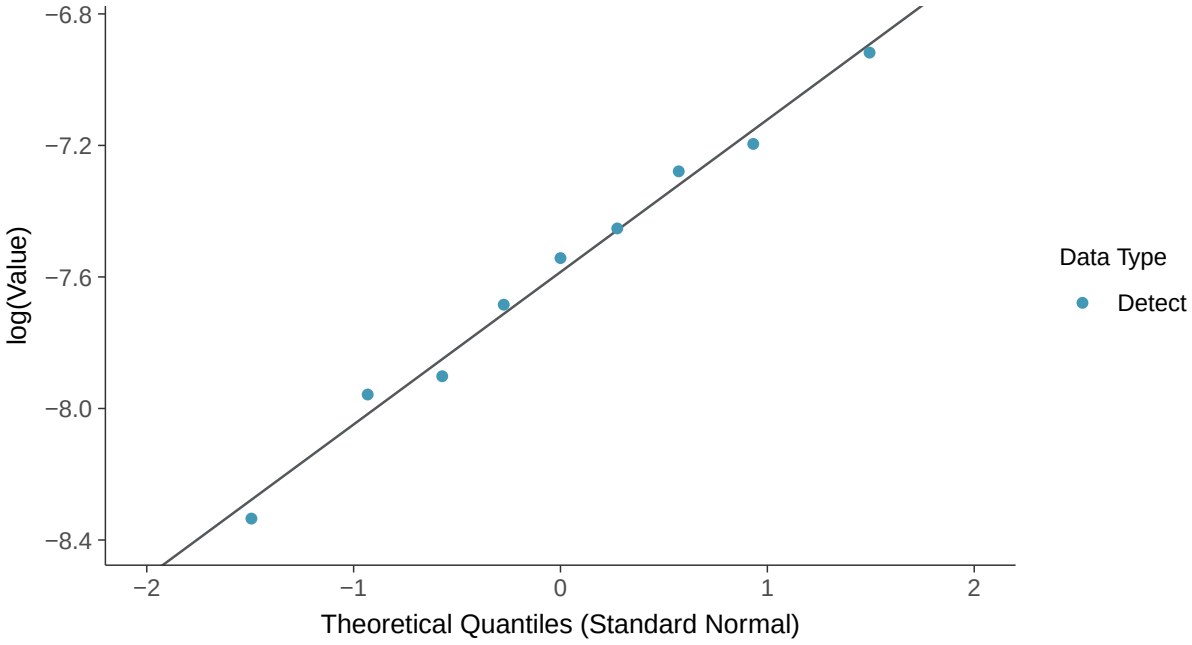
Normal Q-Q plot

Cobalt, MW-09 (mg/L)



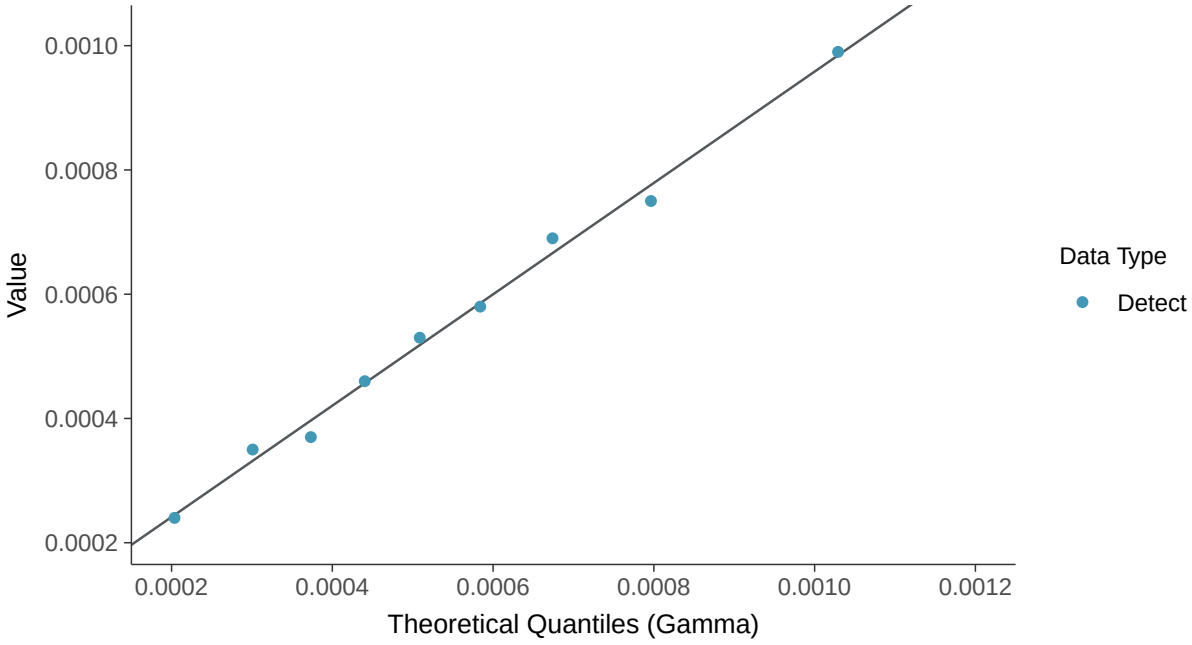
Lognormal Q-Q plot

Cobalt, MW-09 (mg/L)



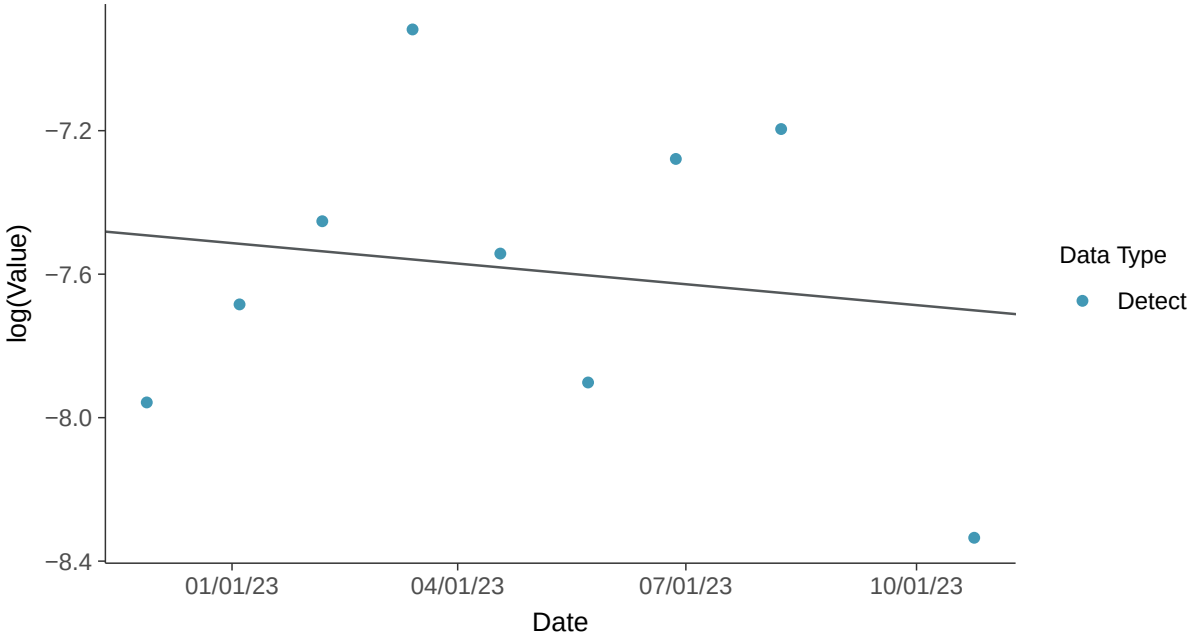
Gamma Q-Q plot

Cobalt, MW-09 (mg/L)



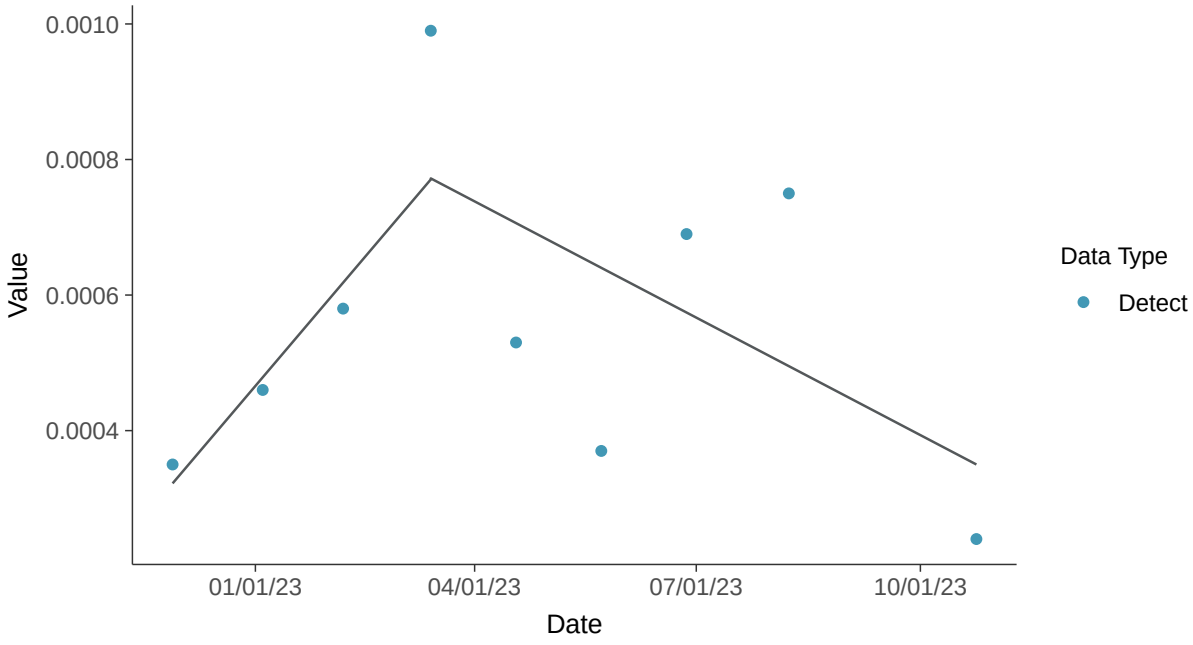
Trend Regression: Lognormal MLE

Cobalt, MW-09 (mg/L)



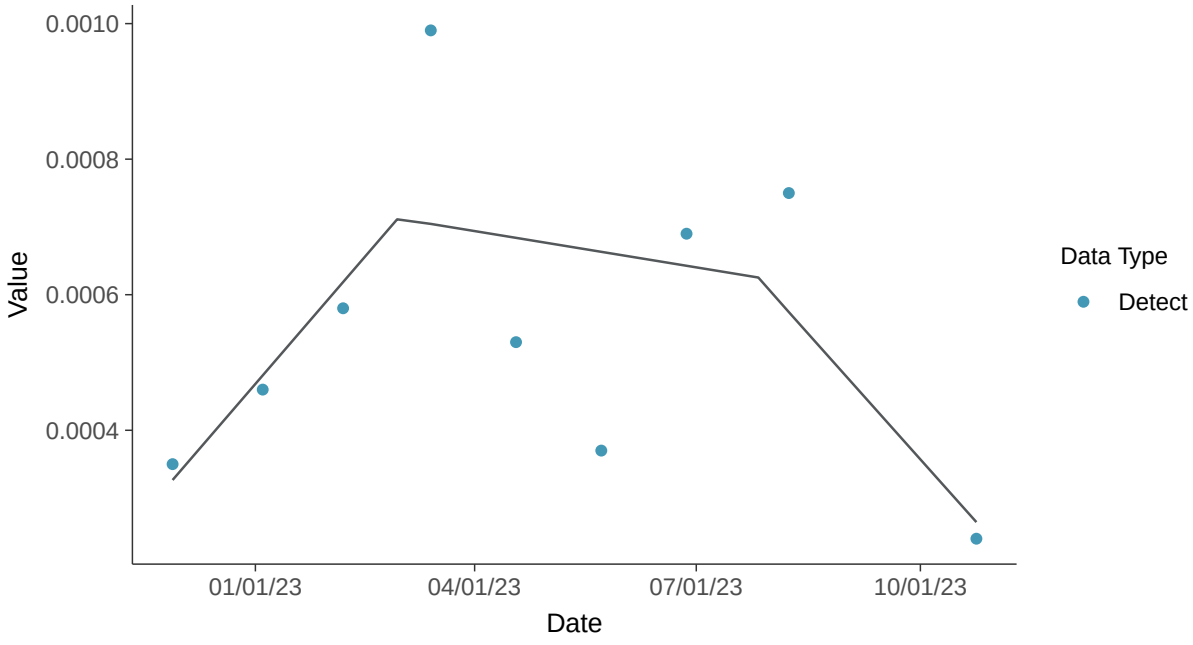
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-09 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-09 (mg/L)

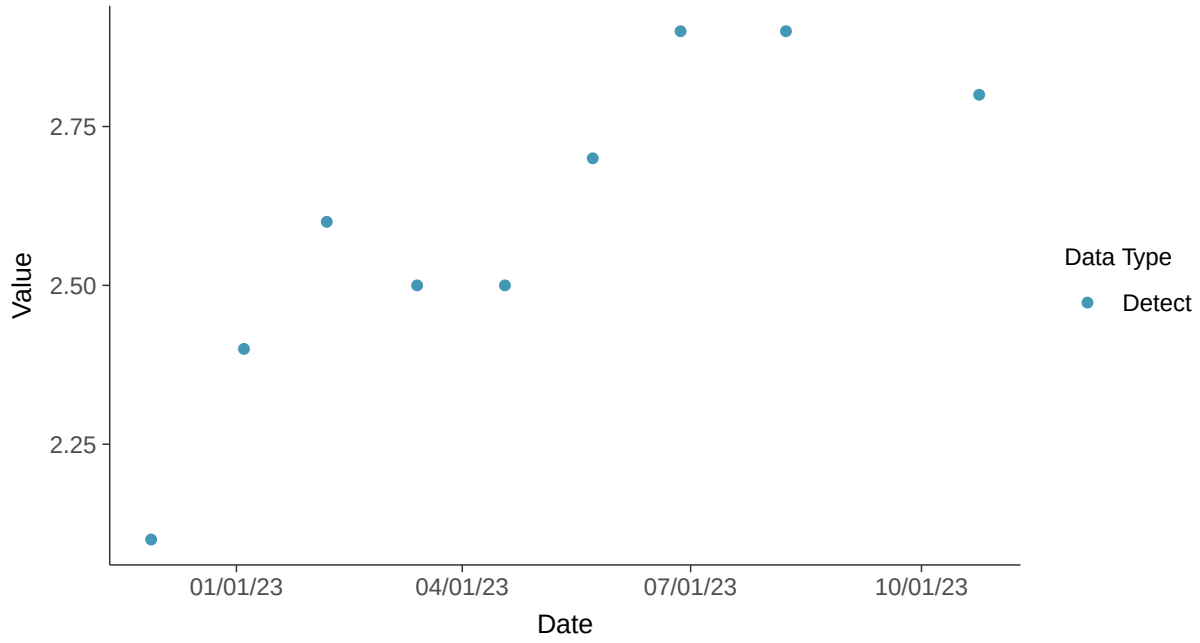


Appendix IV: Fluoride (App IV), MW-09

ID: 1_18_5_113

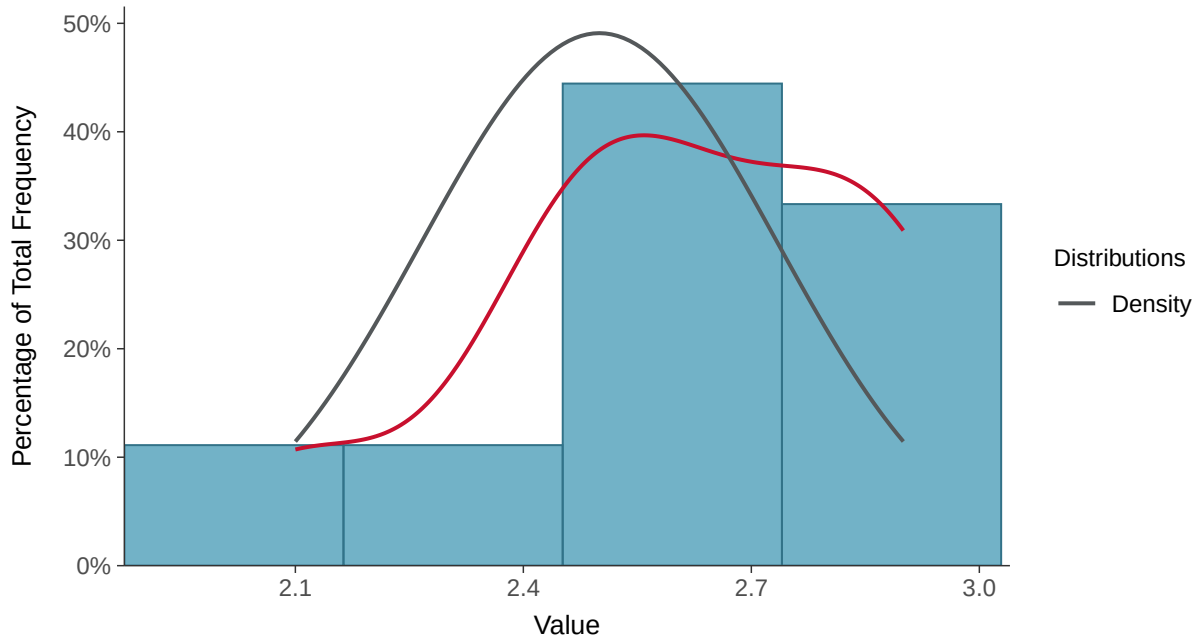
Scatter Plot

Fluoride (App IV), MW-09 (mg/L)



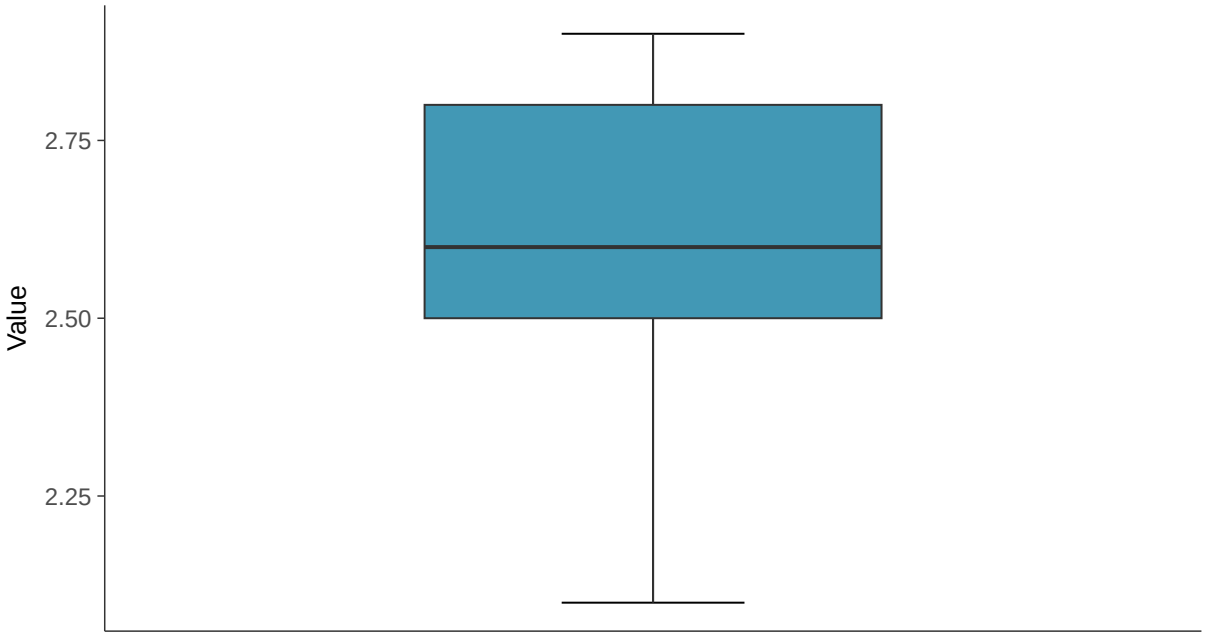
Histogram

Fluoride (App IV), MW-09 (mg/L)



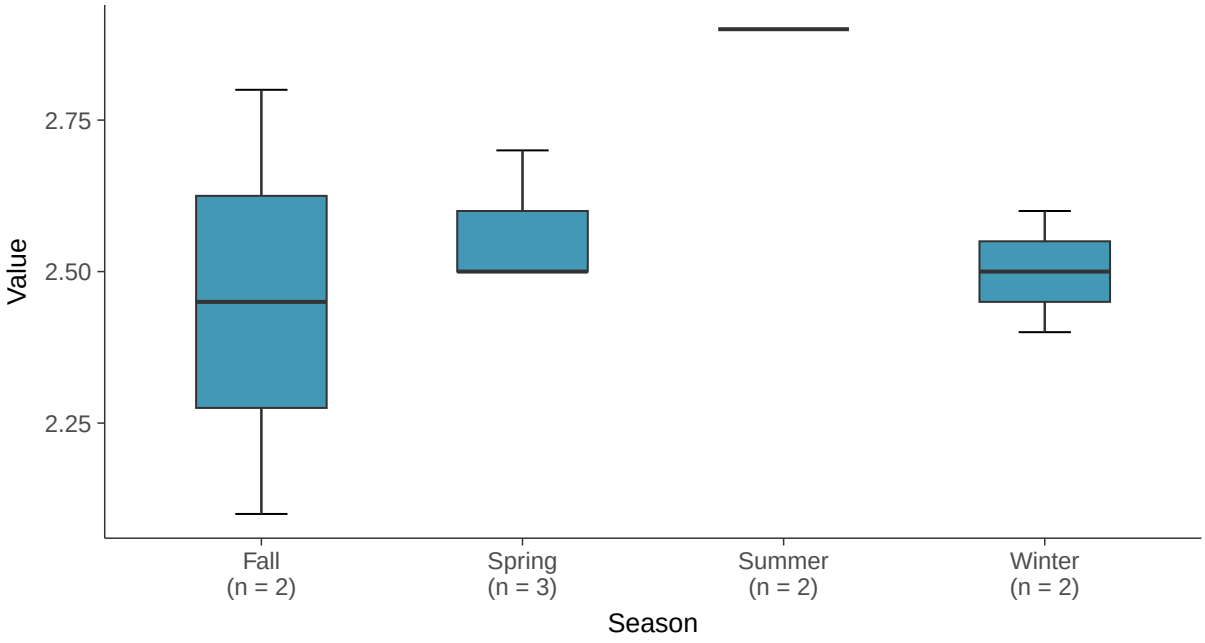
Boxplot

Fluoride (App IV), MW-09 (mg/L)



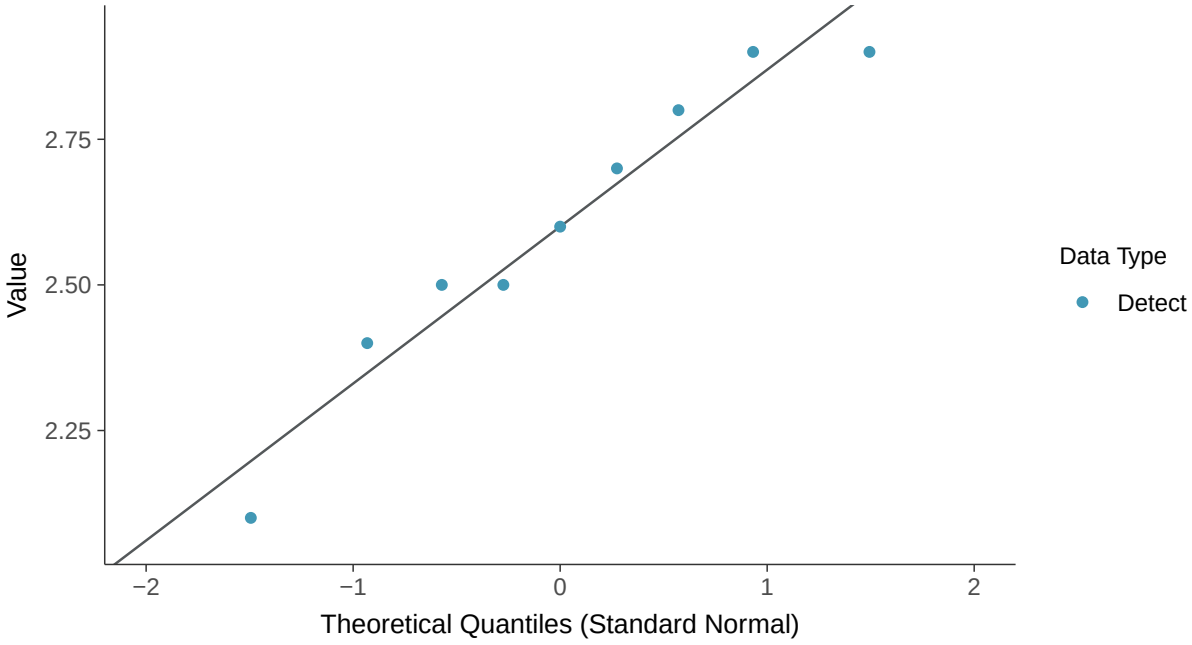
Boxplot by Season

Fluoride (App IV), MW-09 (mg/L)



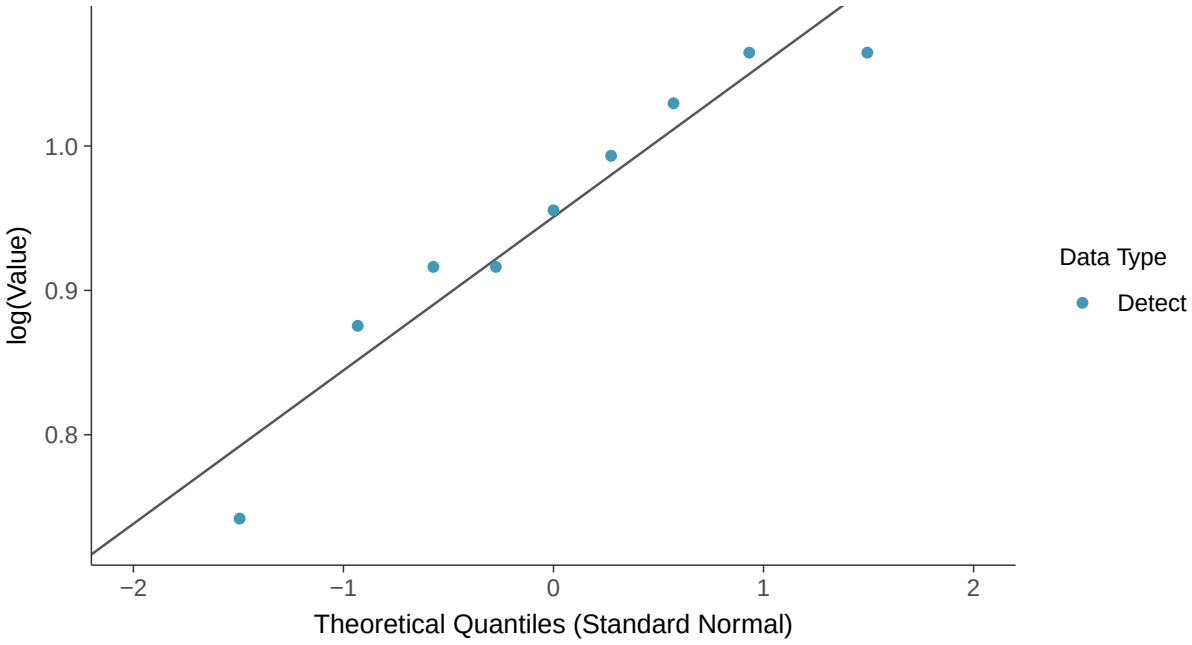
Normal Q-Q plot

Fluoride (App IV), MW-09 (mg/L)



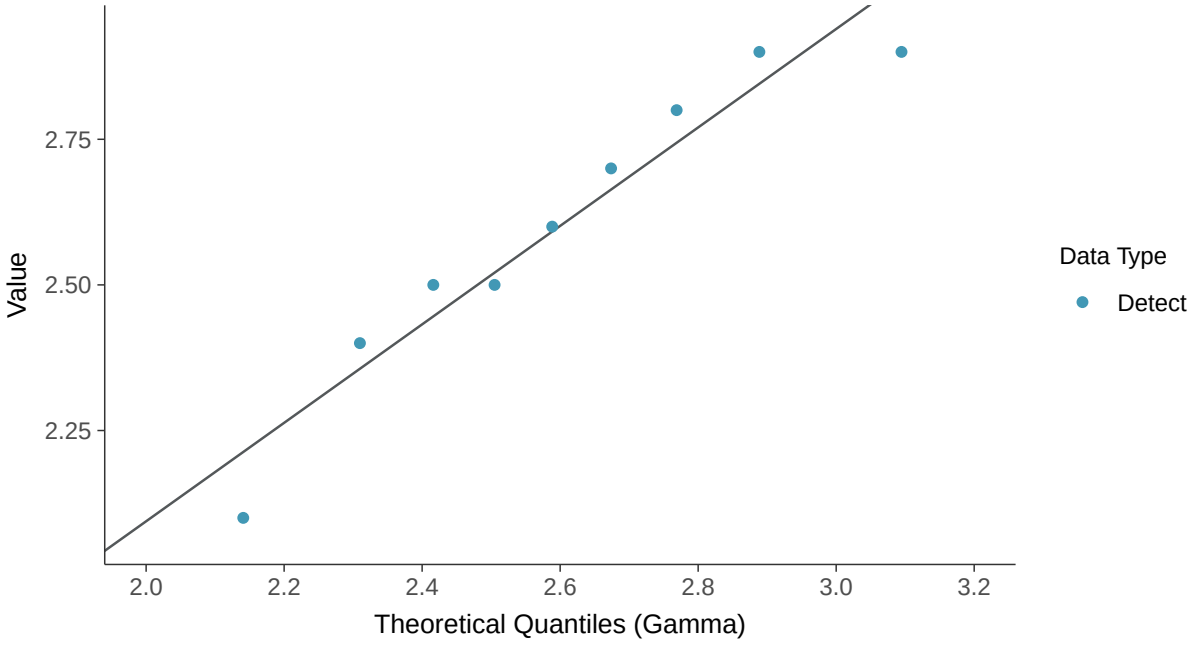
Lognormal Q-Q plot

Fluoride (App IV), MW-09 (mg/L)



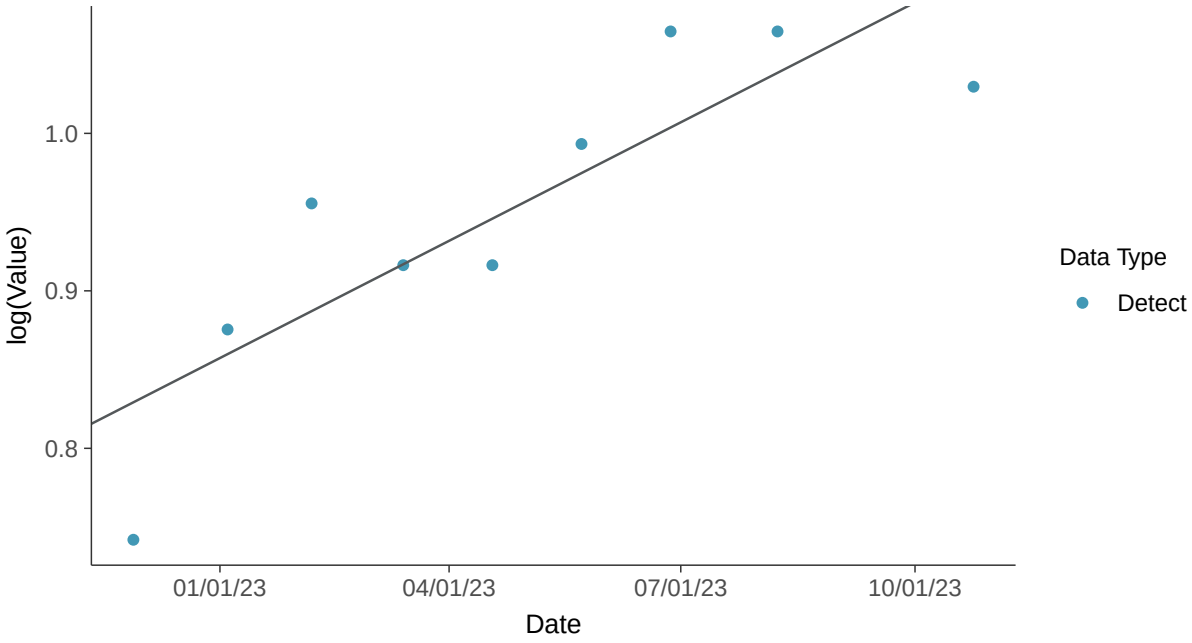
Gamma Q-Q plot

Fluoride (App IV), MW-09 (mg/L)



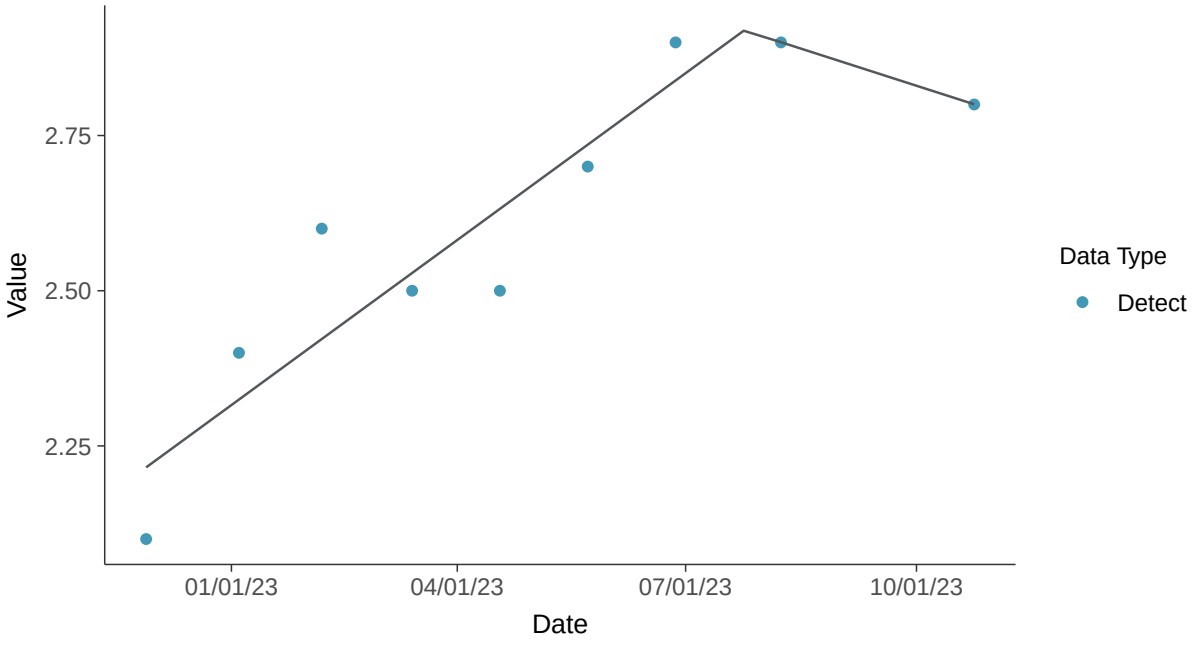
Trend Regression: Lognormal MLE

Fluoride (App IV), MW-09 (mg/L)



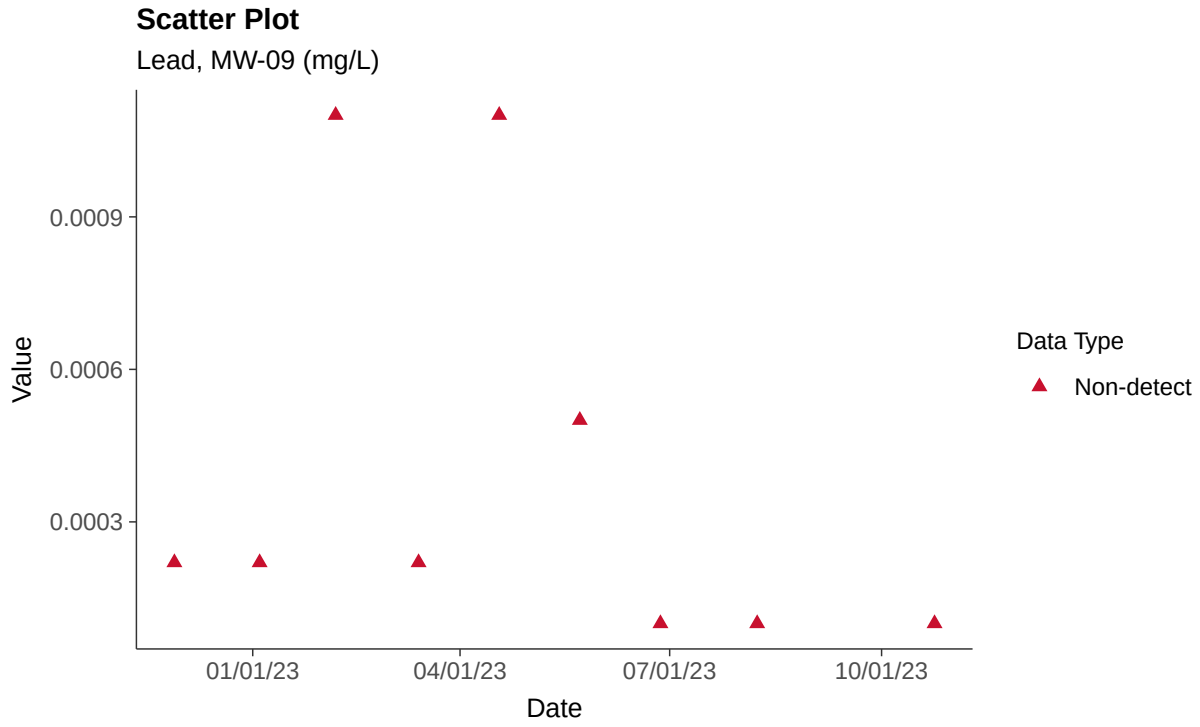
Trend Regression: Piecewise Linear-Linear

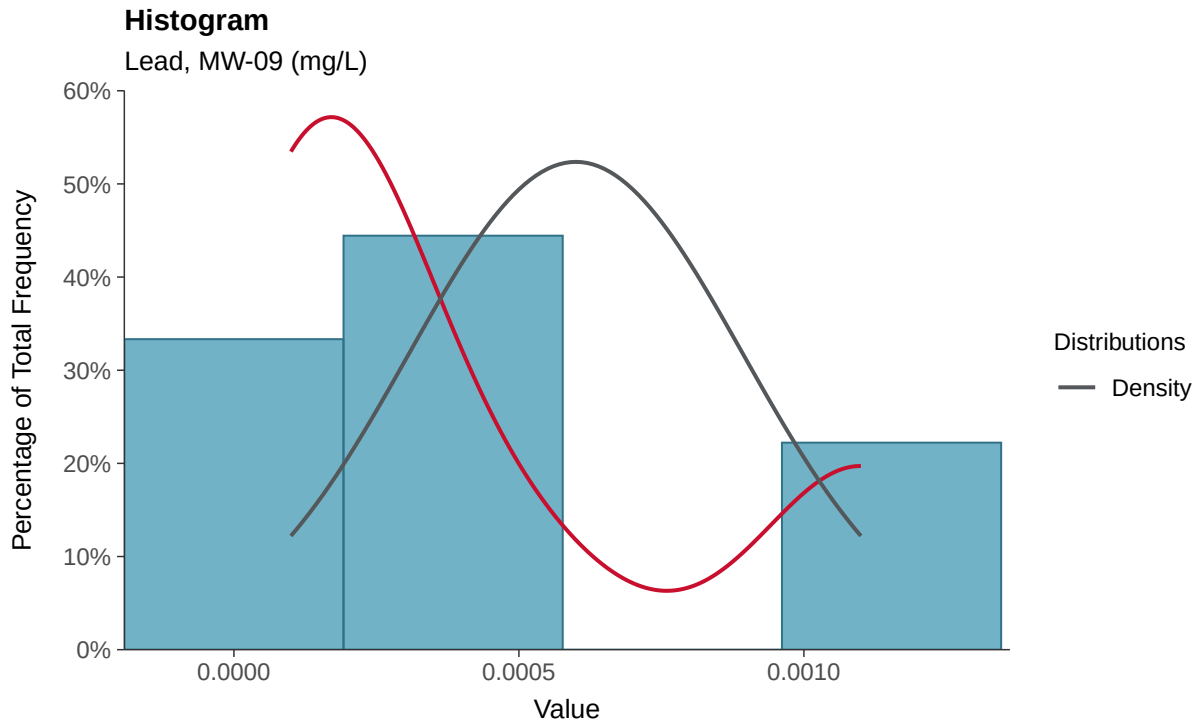
Fluoride (App IV), MW-09 (mg/L)



Appendix IV: Lead, MW-09

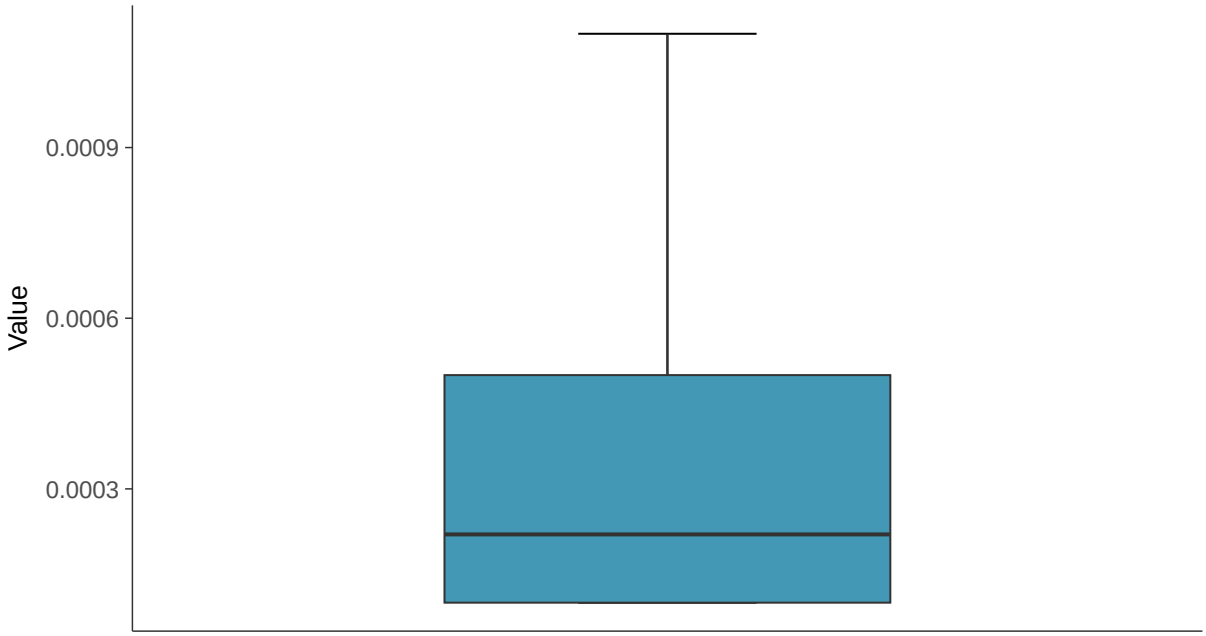
ID: 1_18_5_115





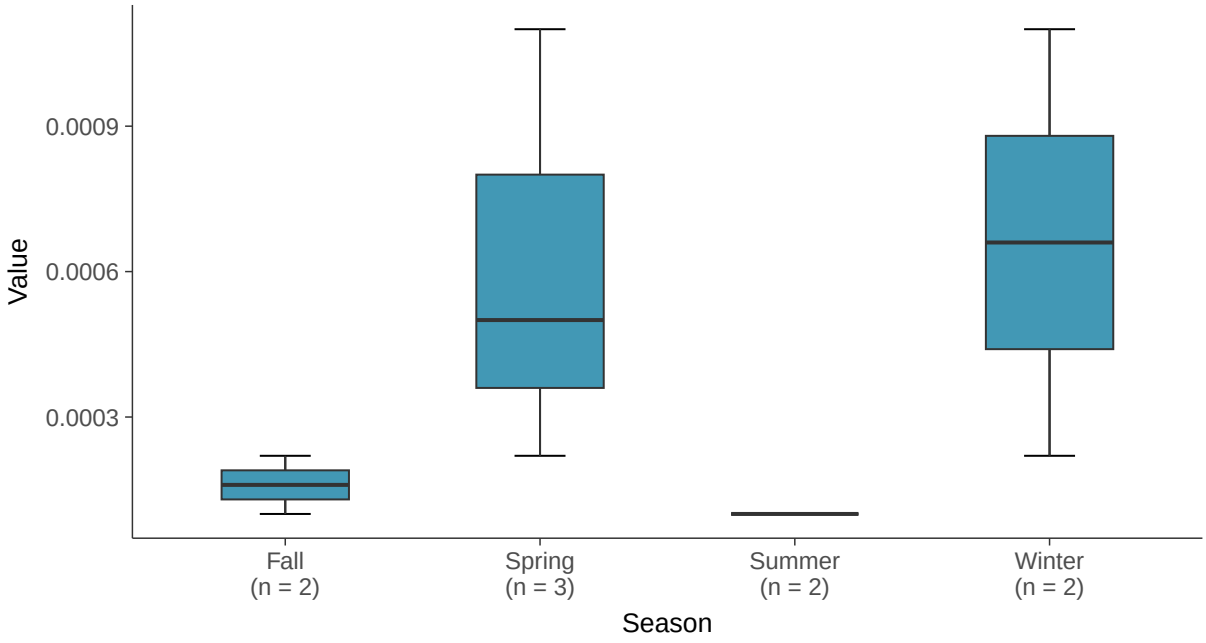
Boxplot

Lead, MW-09 (mg/L)



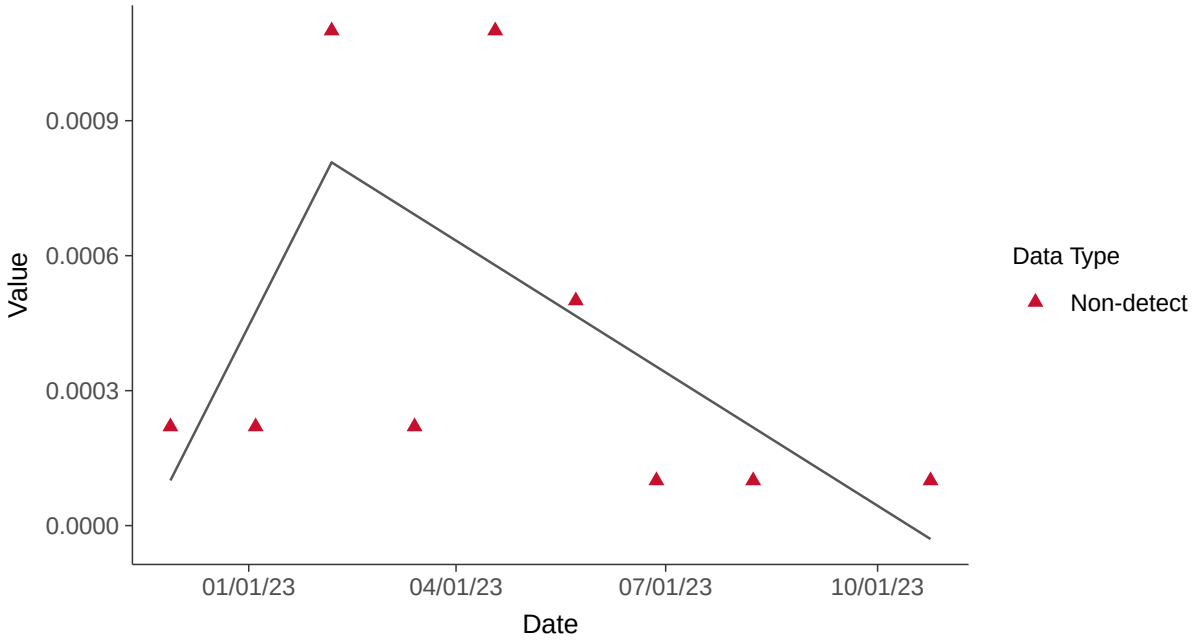
Boxplot by Season

Lead, MW-09 (mg/L)



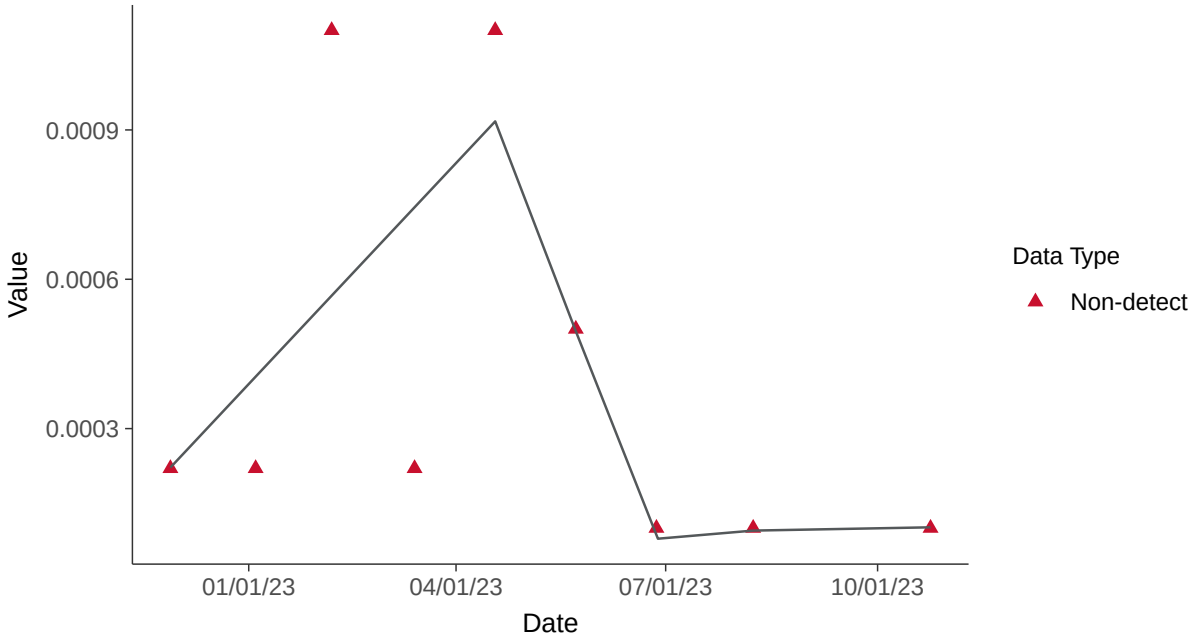
Trend Regression: Piecewise Linear-Linear

Lead, MW-09 (mg/L)



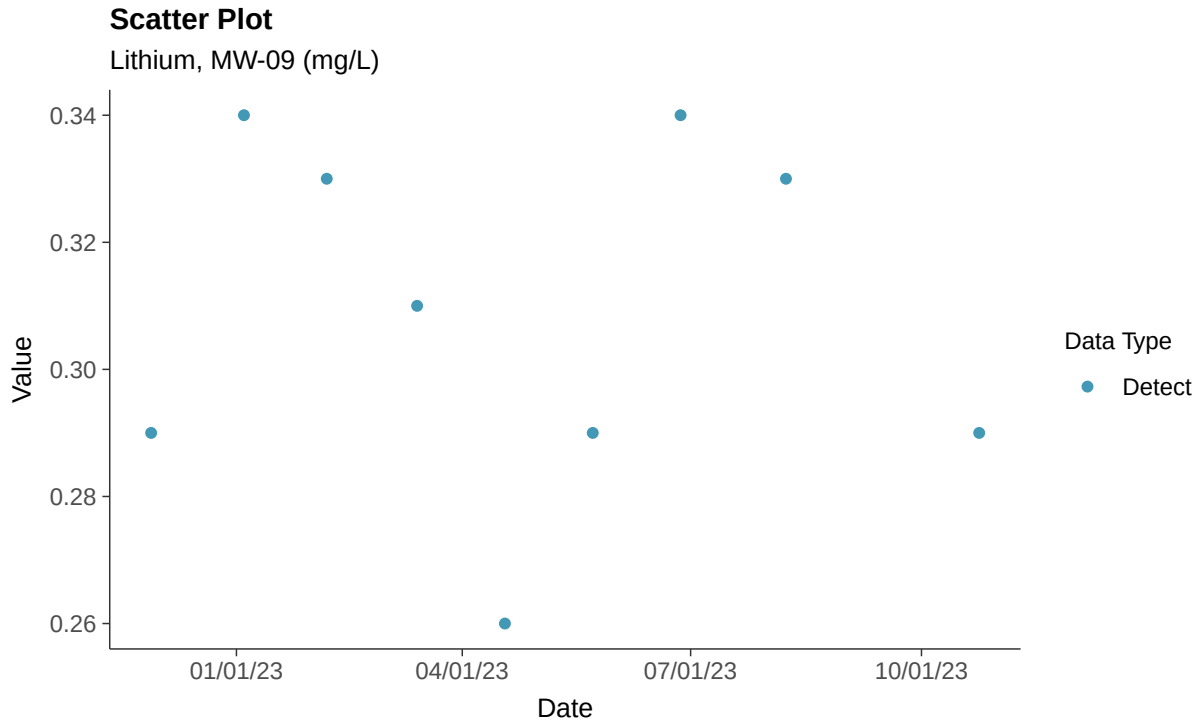
Trend Regression: Piecewise Linear-Linear-Linear

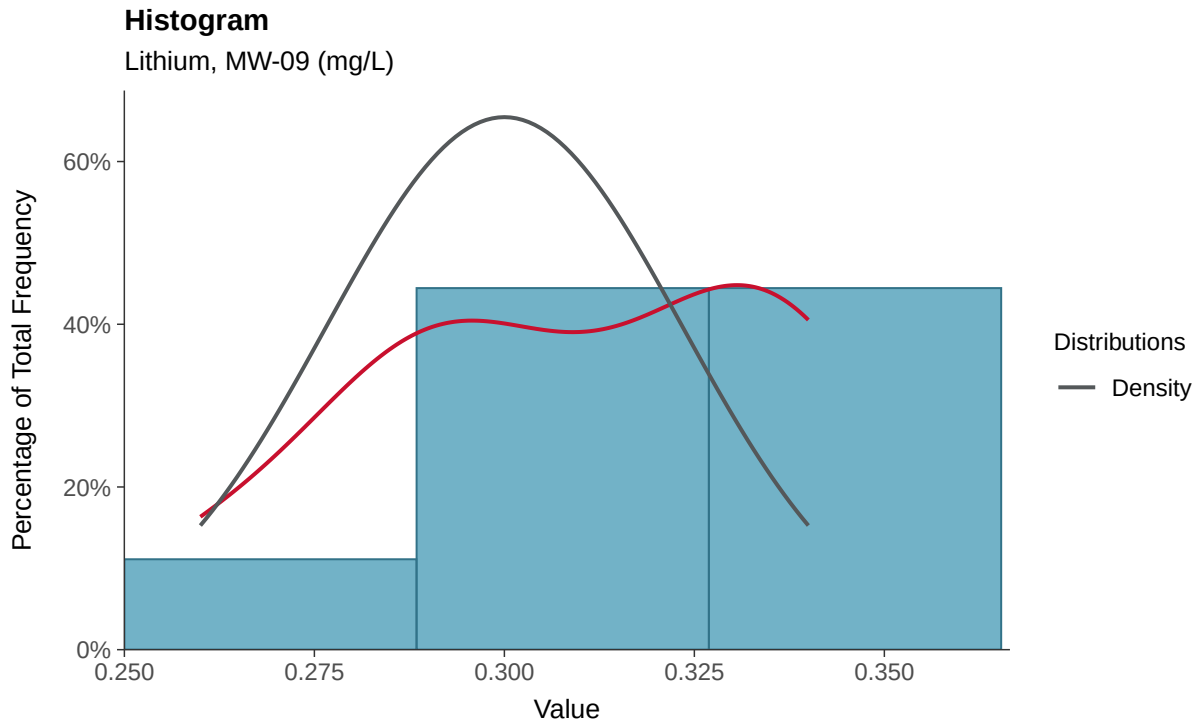
Lead, MW-09 (mg/L)



Appendix IV: Lithium, MW-09

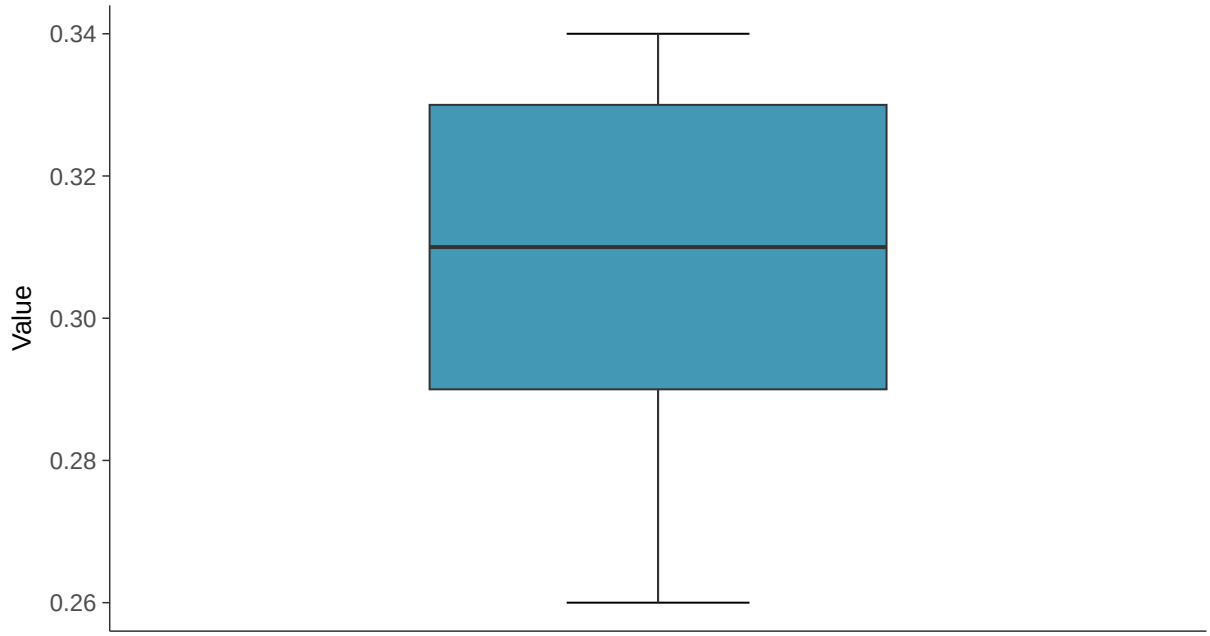
ID: 1_18_5_116





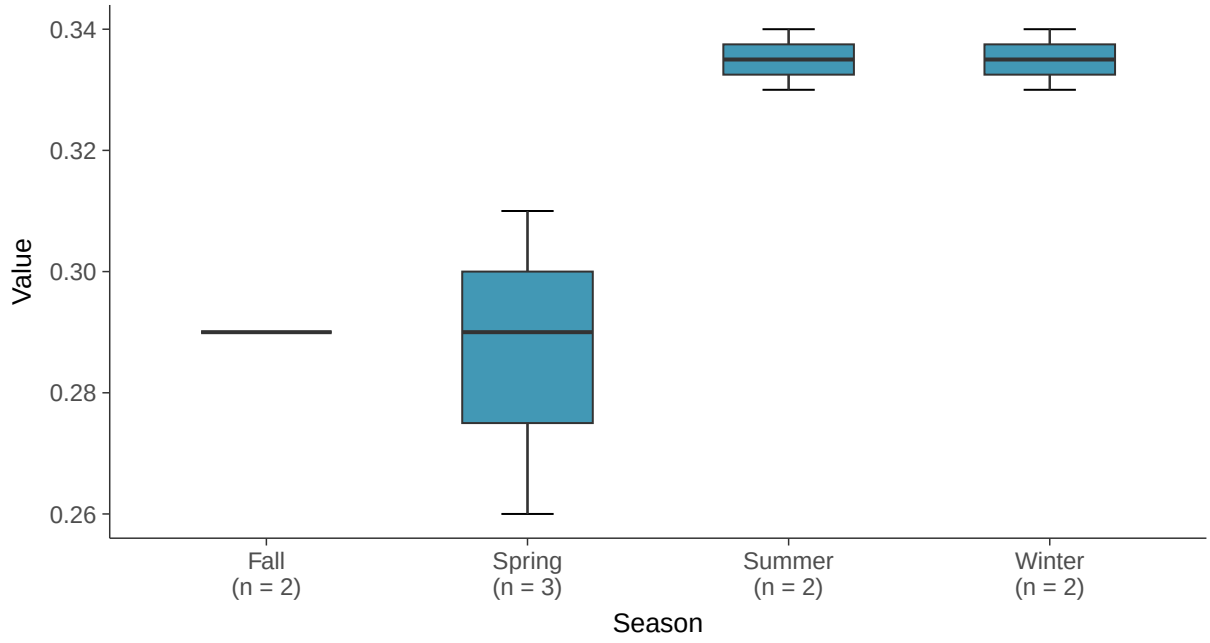
Boxplot

Lithium, MW-09 (mg/L)



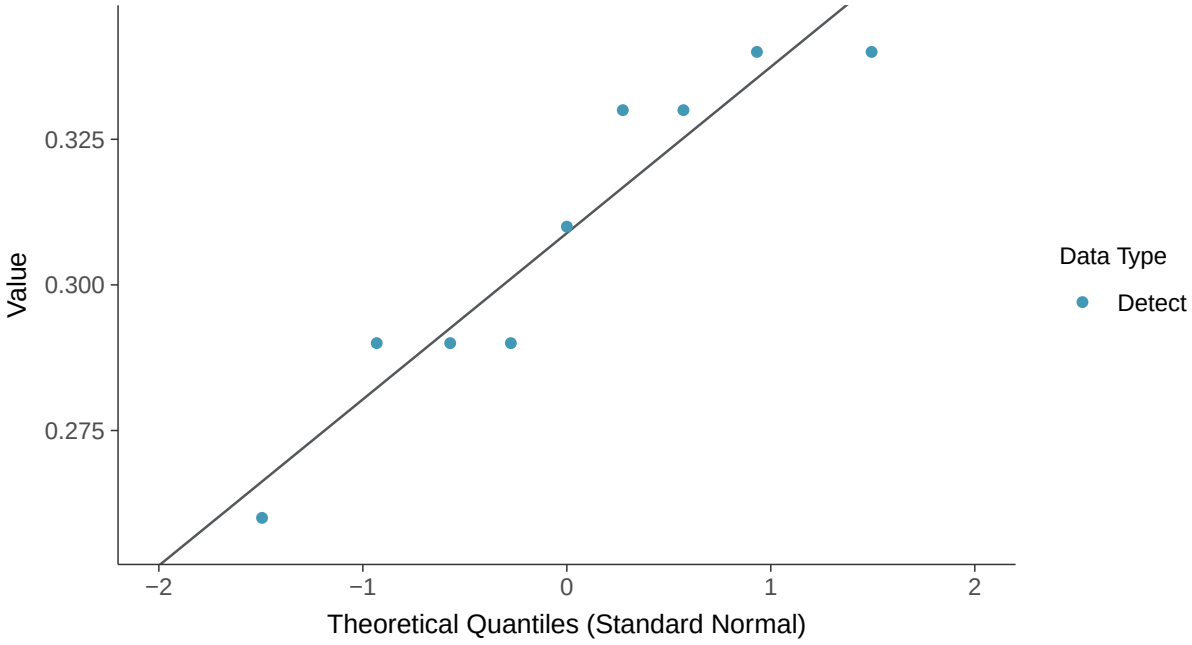
Boxplot by Season

Lithium, MW-09 (mg/L)



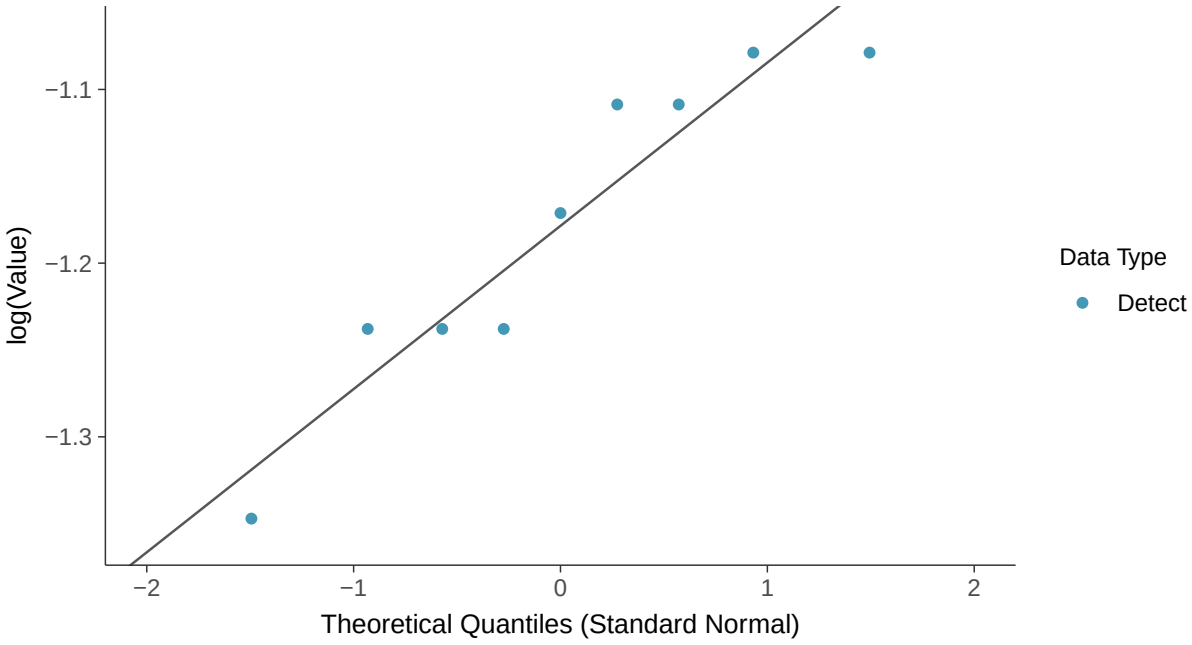
Normal Q-Q plot

Lithium, MW-09 (mg/L)



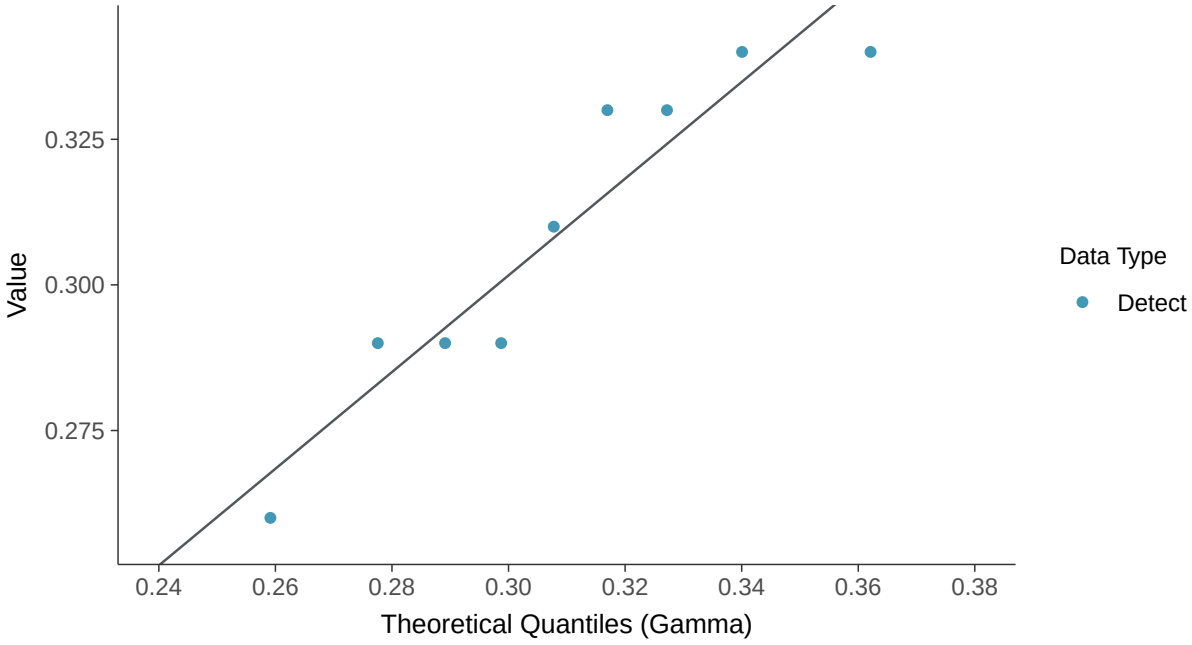
Lognormal Q-Q plot

Lithium, MW-09 (mg/L)



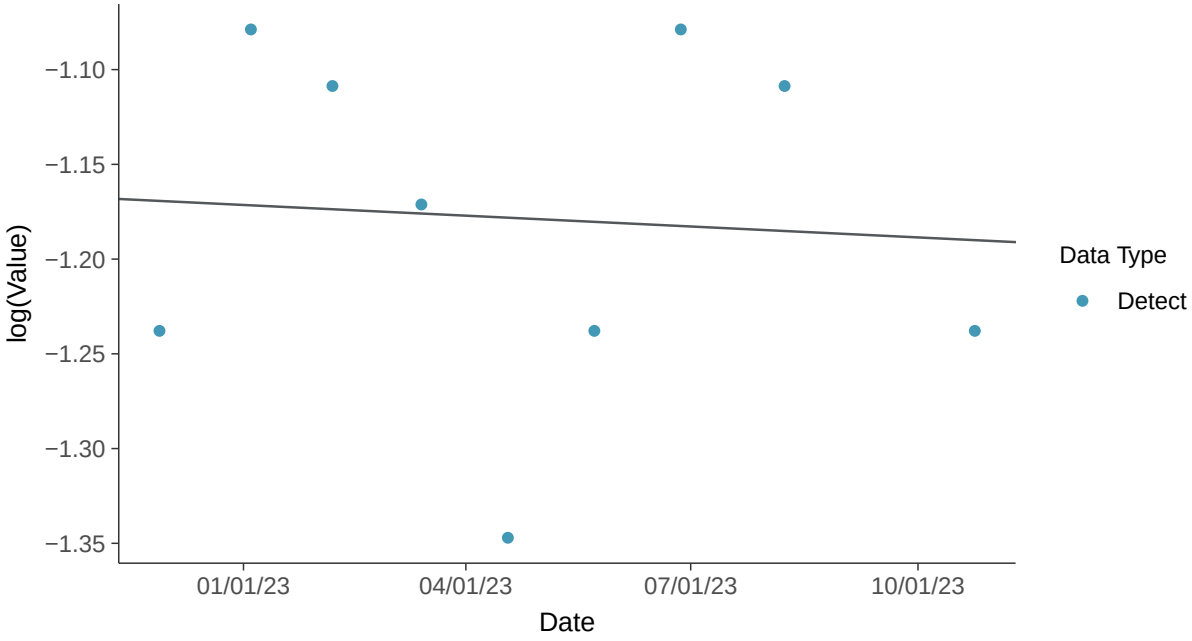
Gamma Q-Q plot

Lithium, MW-09 (mg/L)



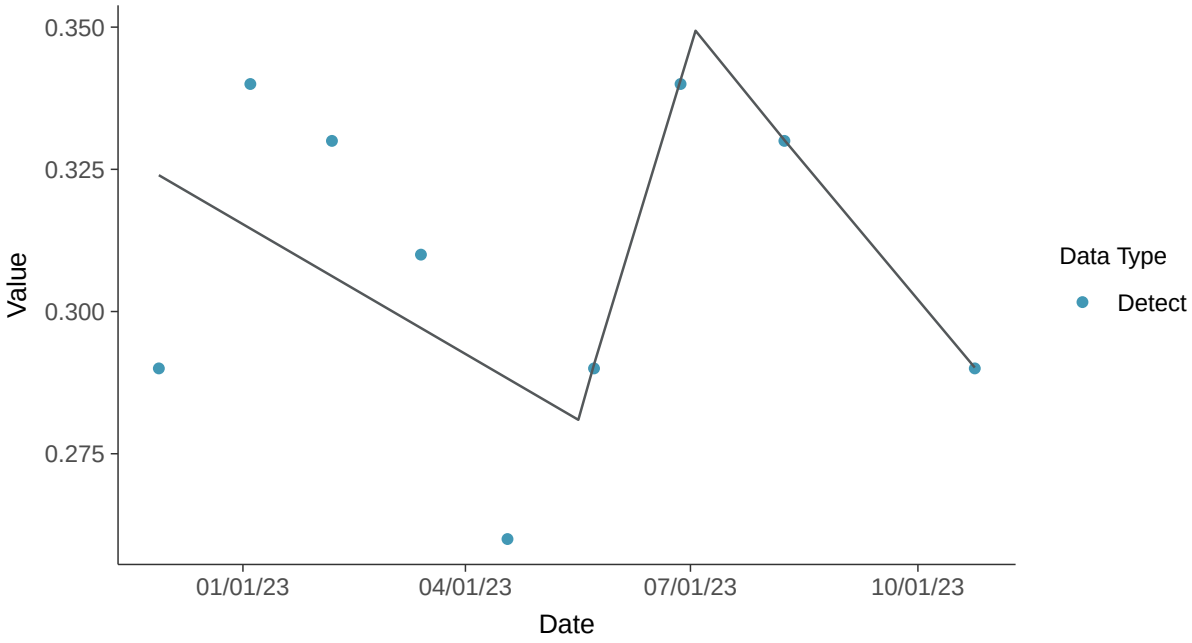
Trend Regression: Lognormal MLE

Lithium, MW-09 (mg/L)



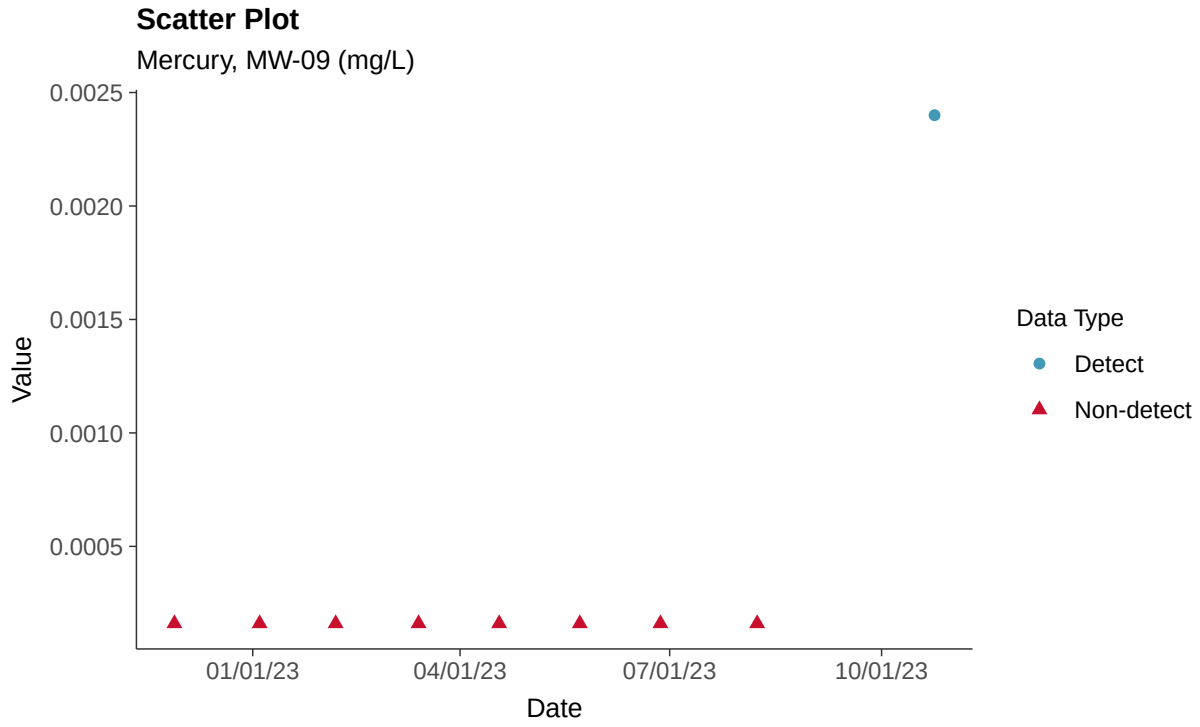
Trend Regression: Piecewise Linear-Linear-Linear

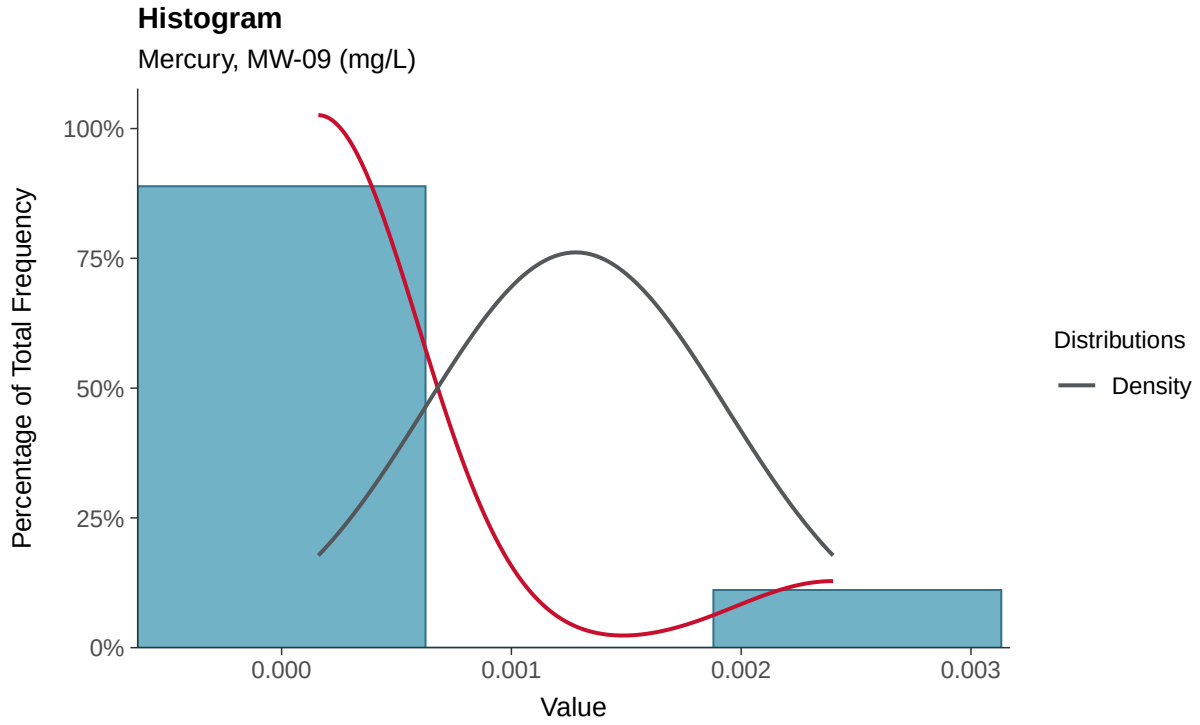
Lithium, MW-09 (mg/L)



Appendix IV: Mercury, MW-09

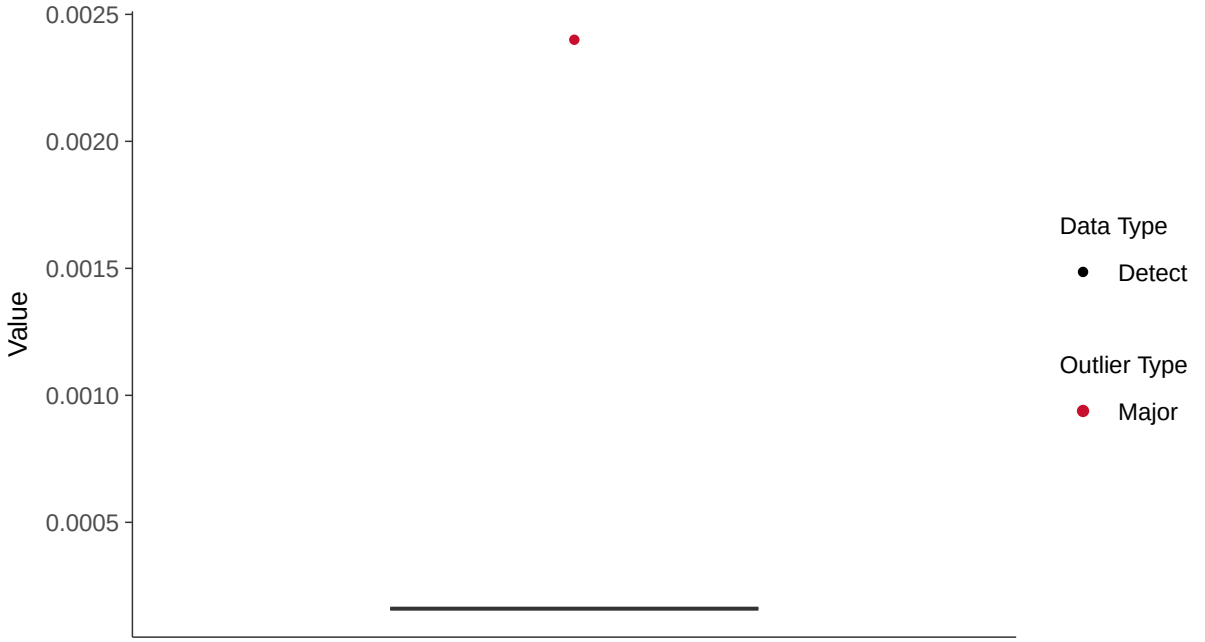
ID: 1_18_5_117





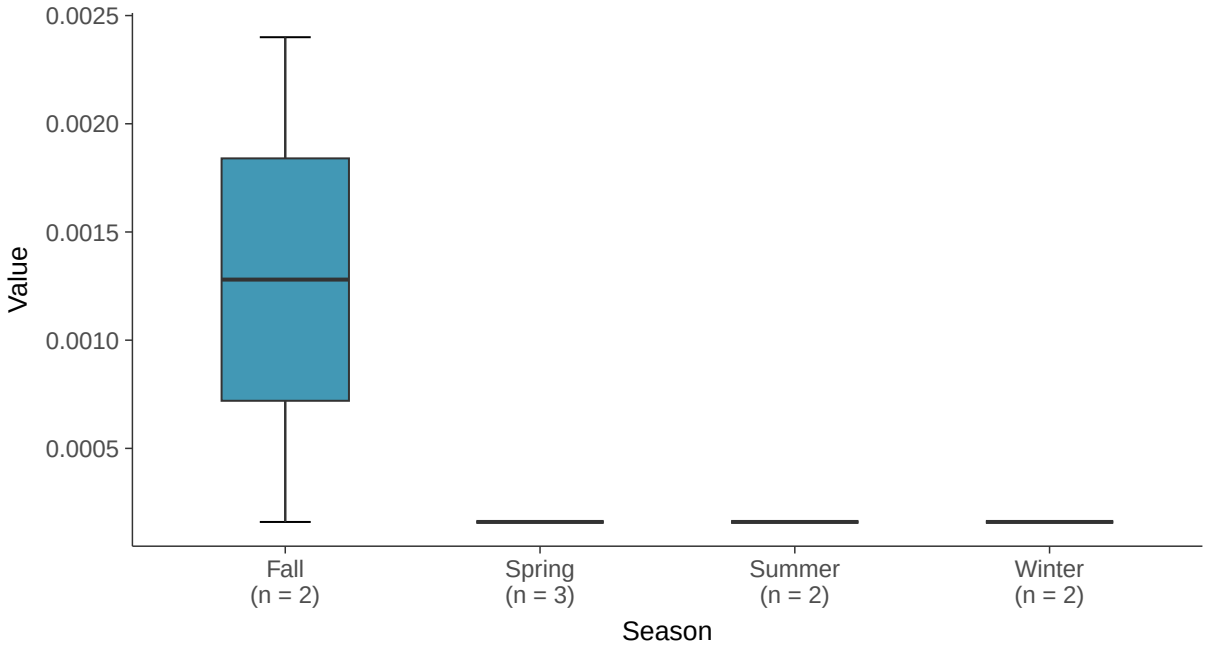
Boxplot

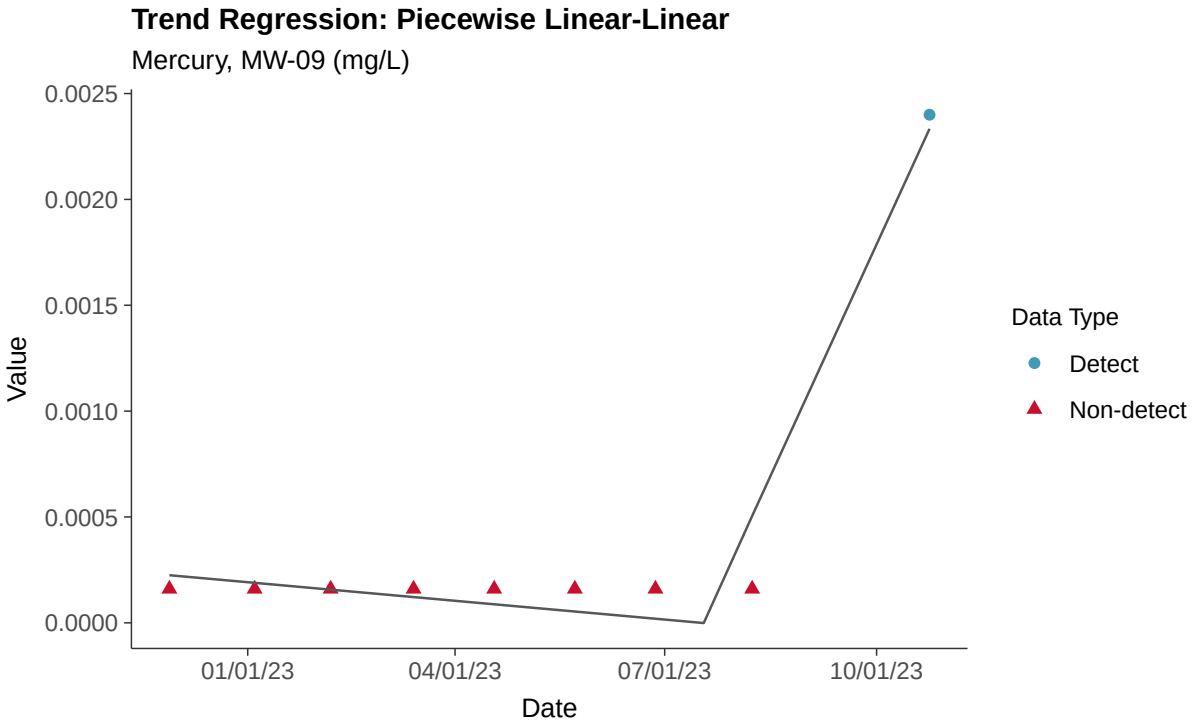
Mercury, MW-09 (mg/L)



Boxplot by Season

Mercury, MW-09 (mg/L)



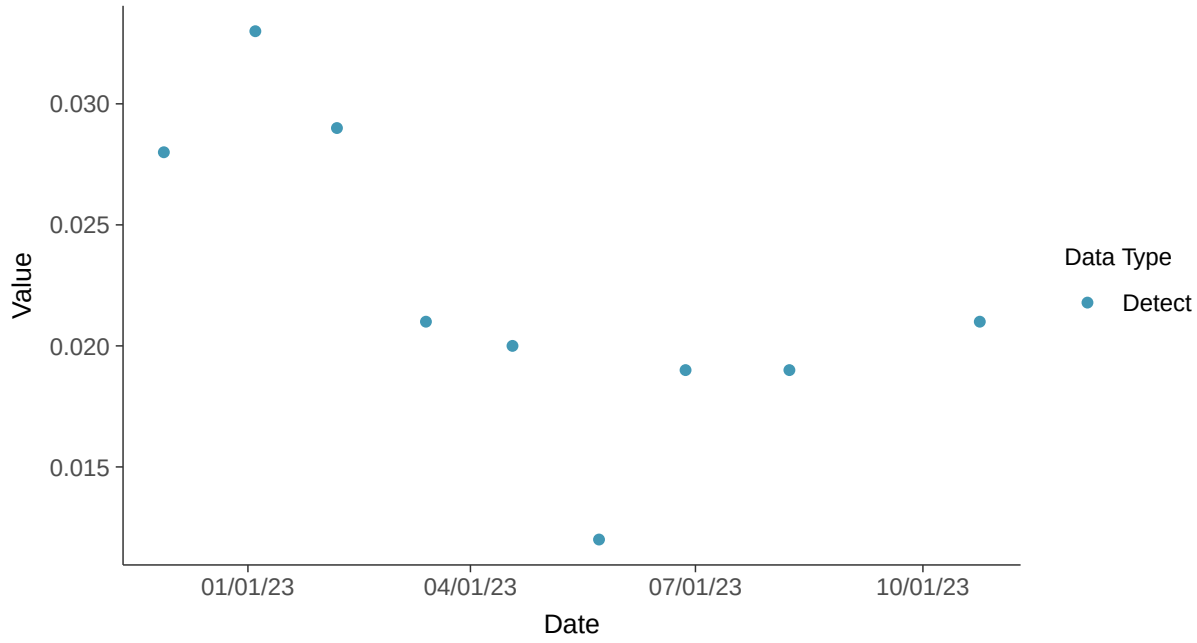

Trend Regression: Piecewise Linear-Linear
Mercury, MW-09 (mg/L)
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
Value
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect
Non-detect

Appendix IV: Molybdenum, MW-09

ID: 1_18_5_118

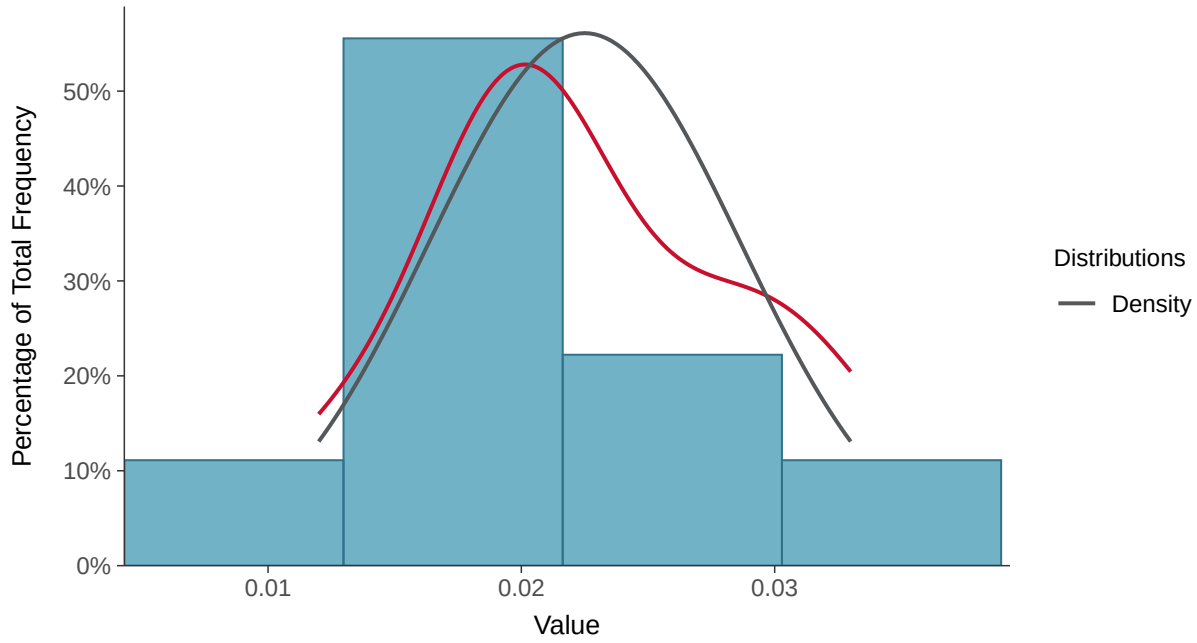
Scatter Plot

Molybdenum, MW-09 (mg/L)



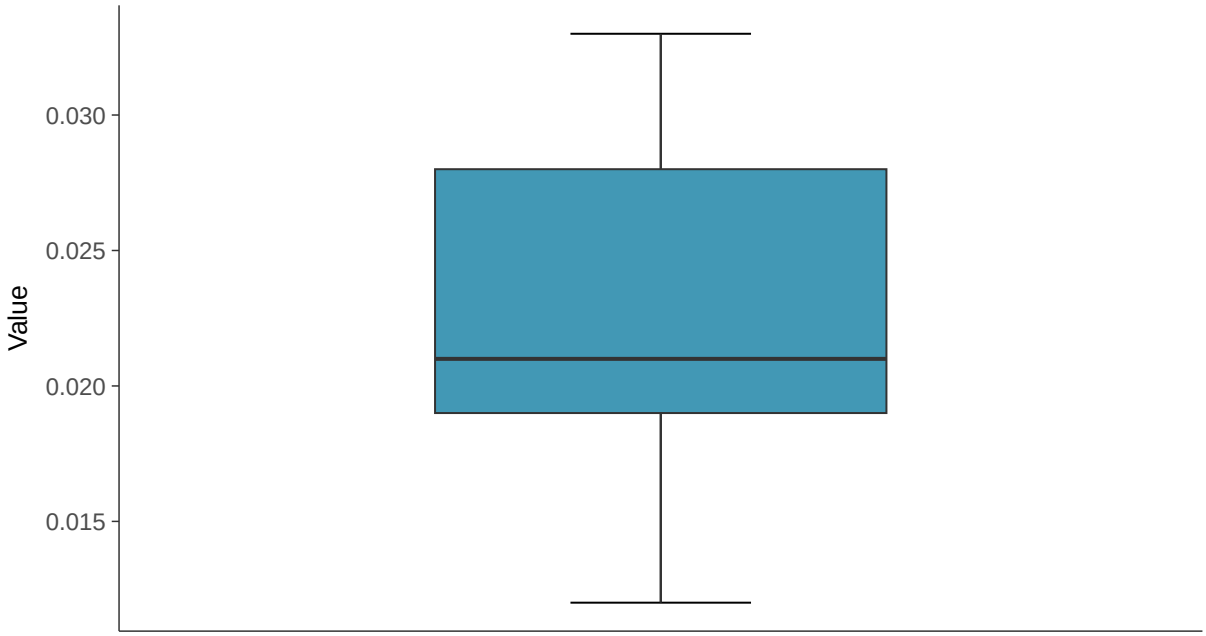
Histogram

Molybdenum, MW-09 (mg/L)



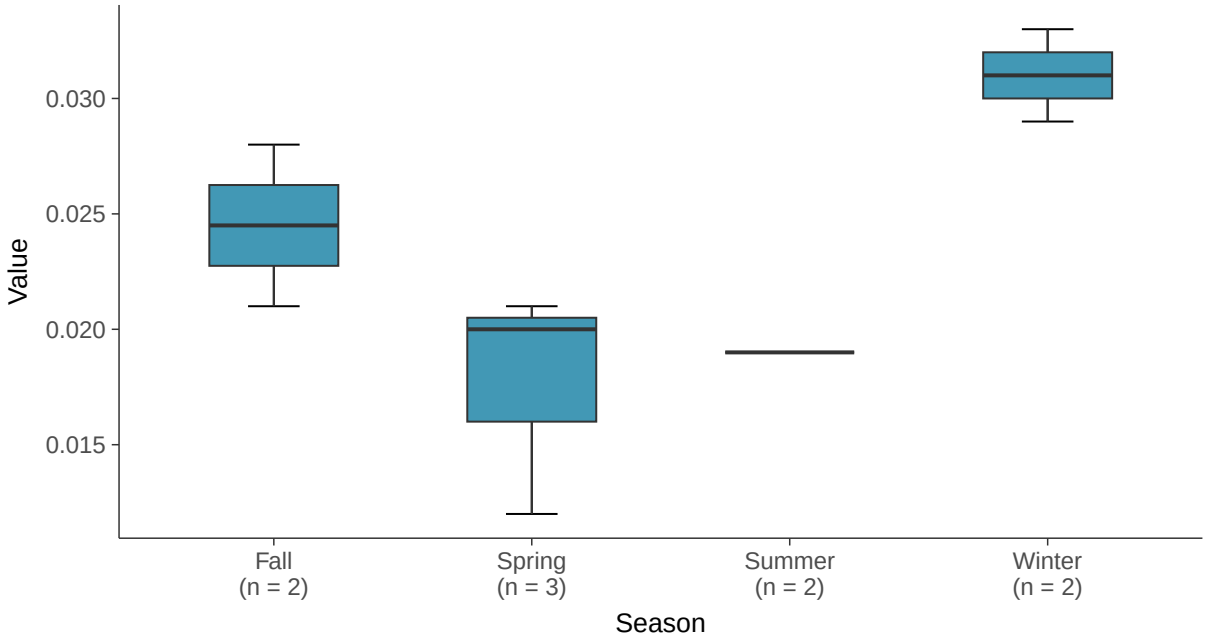
Boxplot

Molybdenum, MW-09 (mg/L)



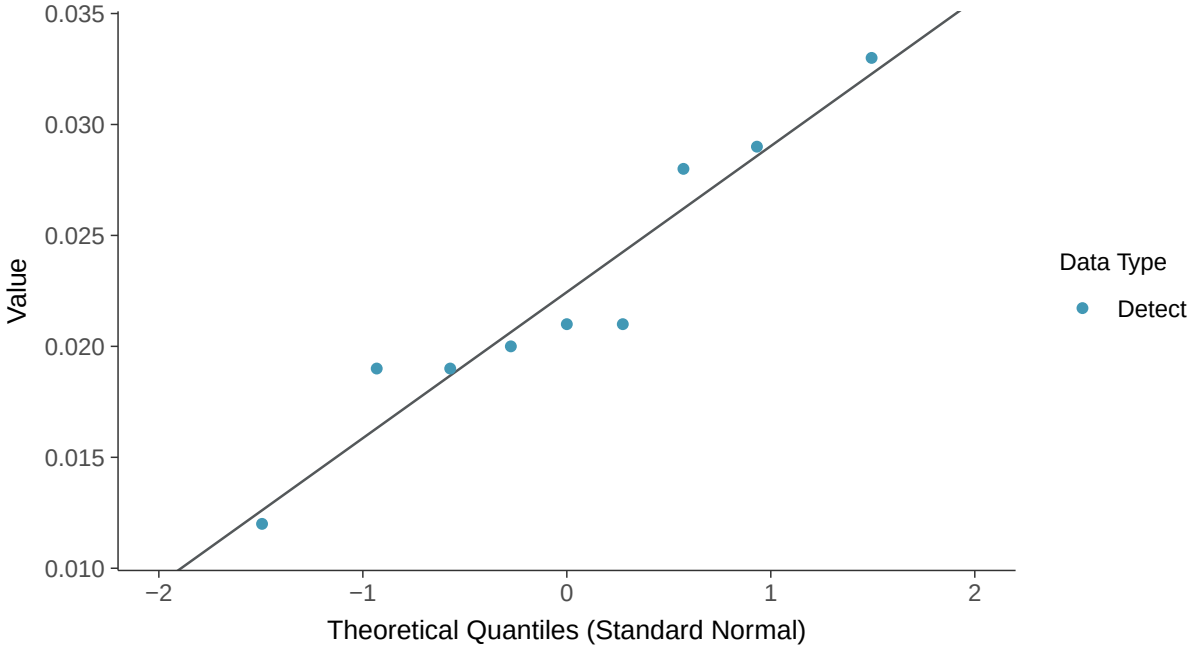
Boxplot by Season

Molybdenum, MW-09 (mg/L)



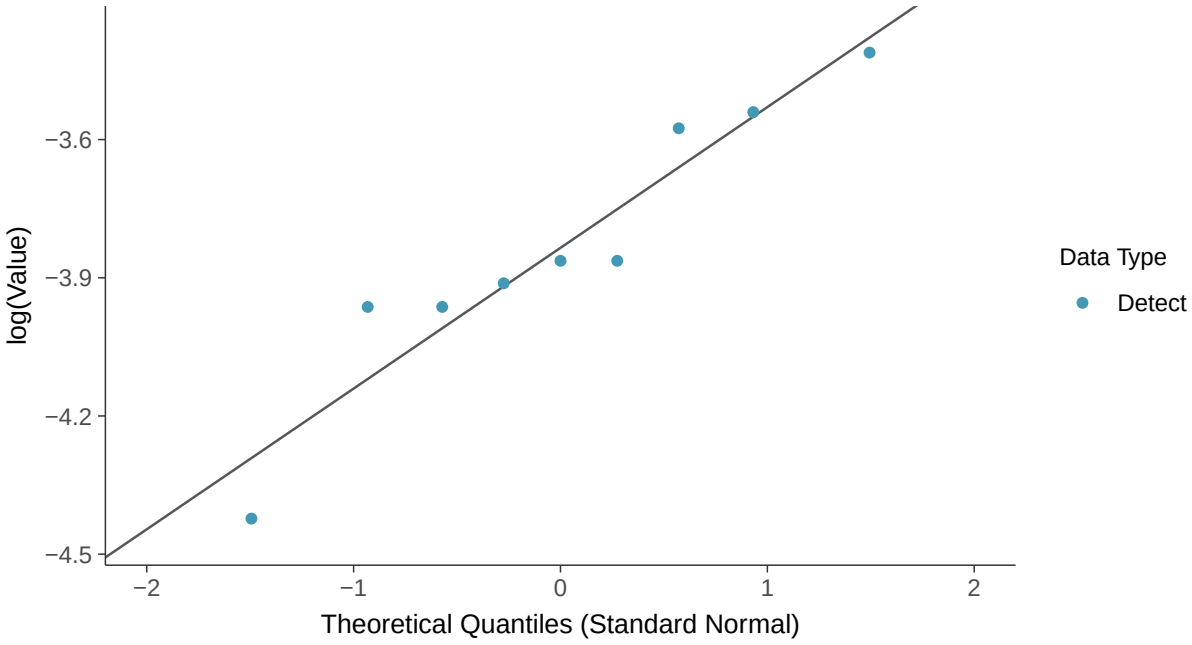
Normal Q-Q plot

Molybdenum, MW-09 (mg/L)



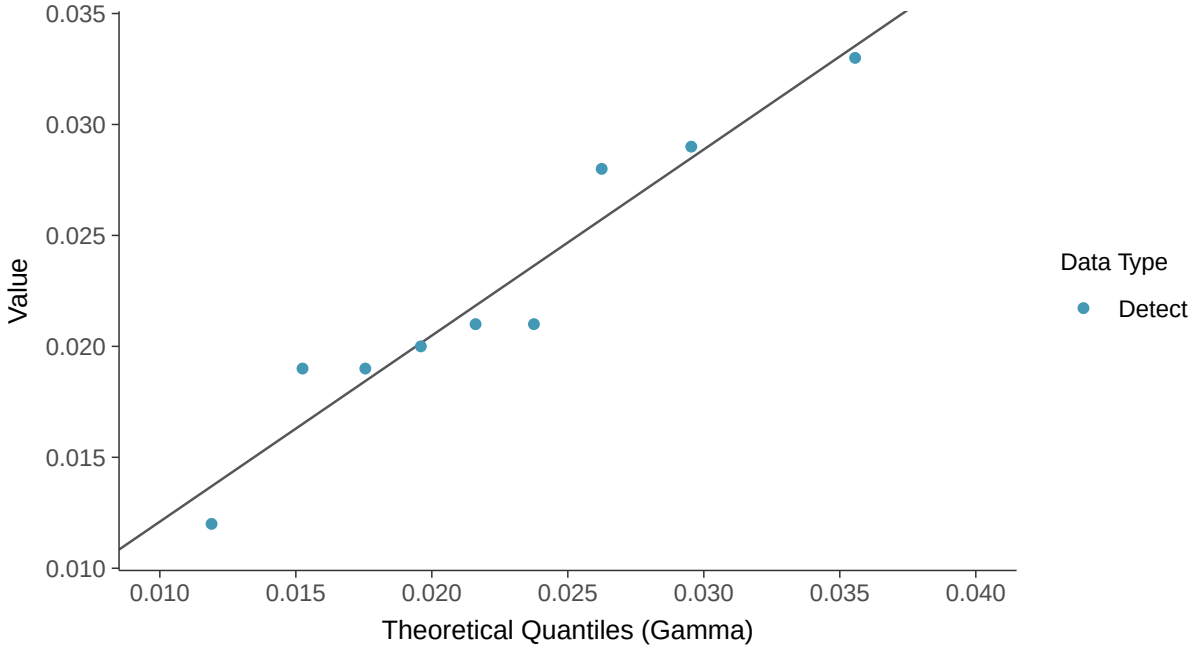
Lognormal Q-Q plot

Molybdenum, MW-09 (mg/L)



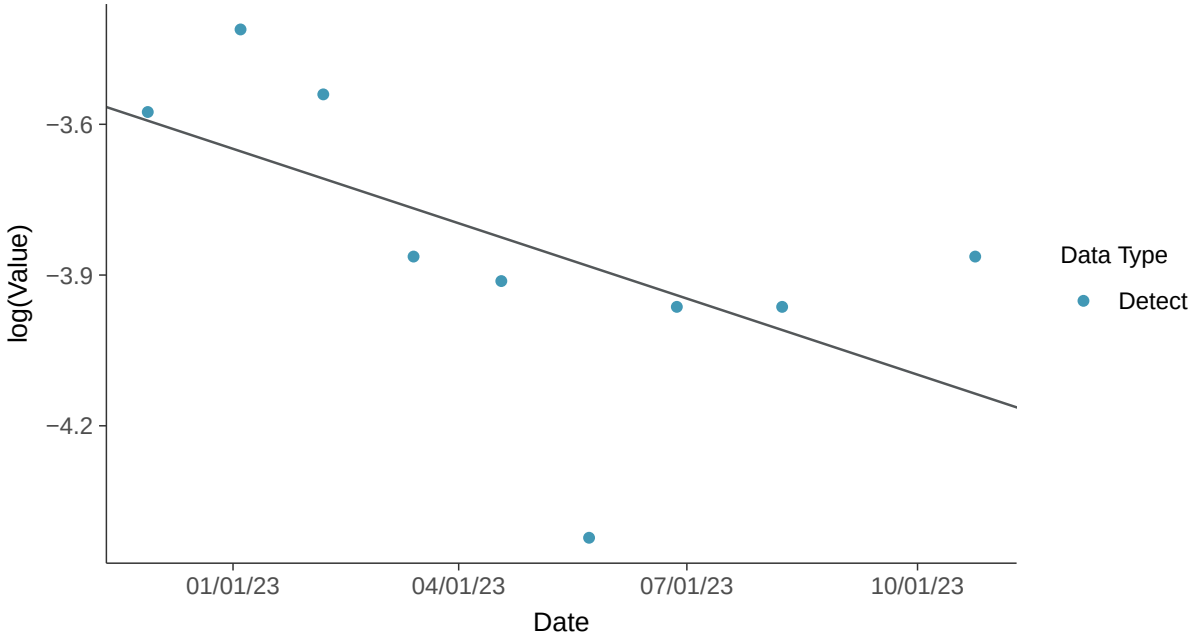
Gamma Q-Q plot

Molybdenum, MW-09 (mg/L)



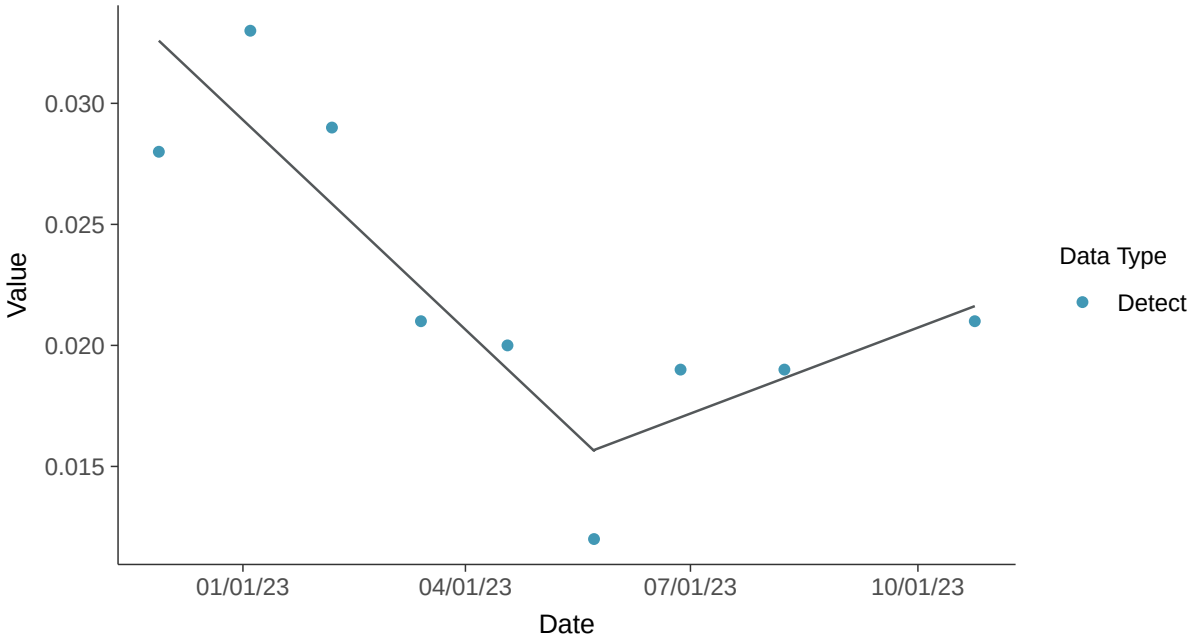
Trend Regression: Lognormal MLE

Molybdenum, MW-09 (mg/L)



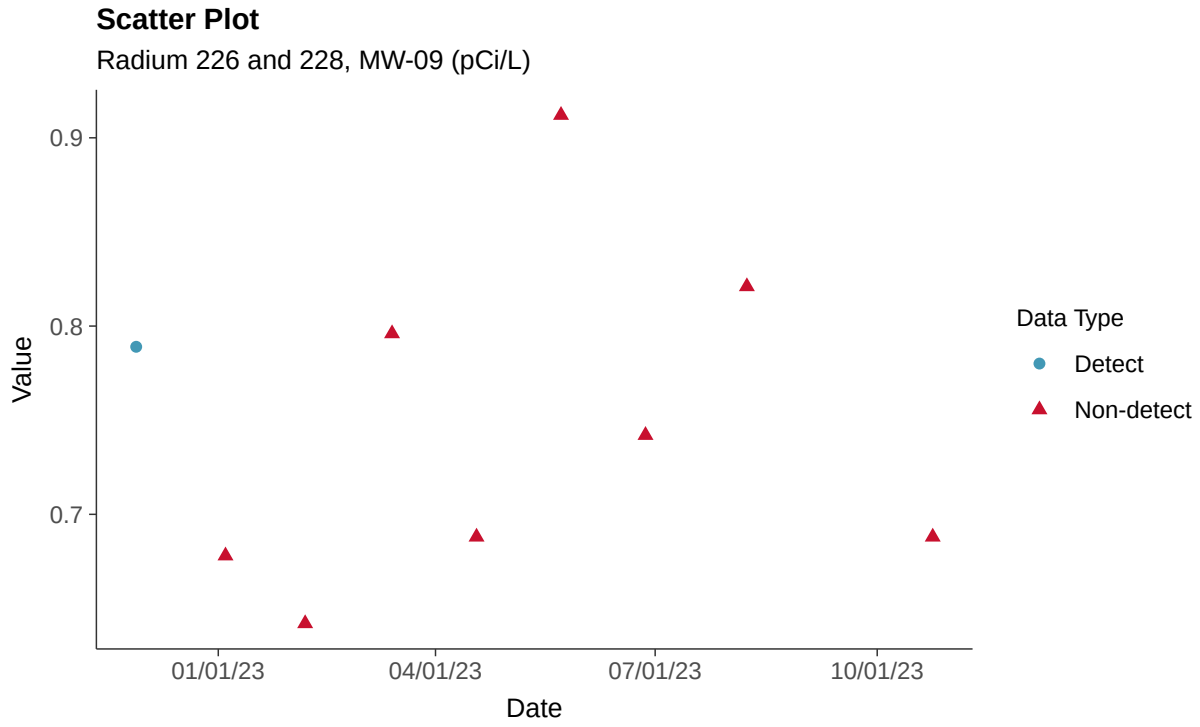
Trend Regression: Piecewise Linear-Linear

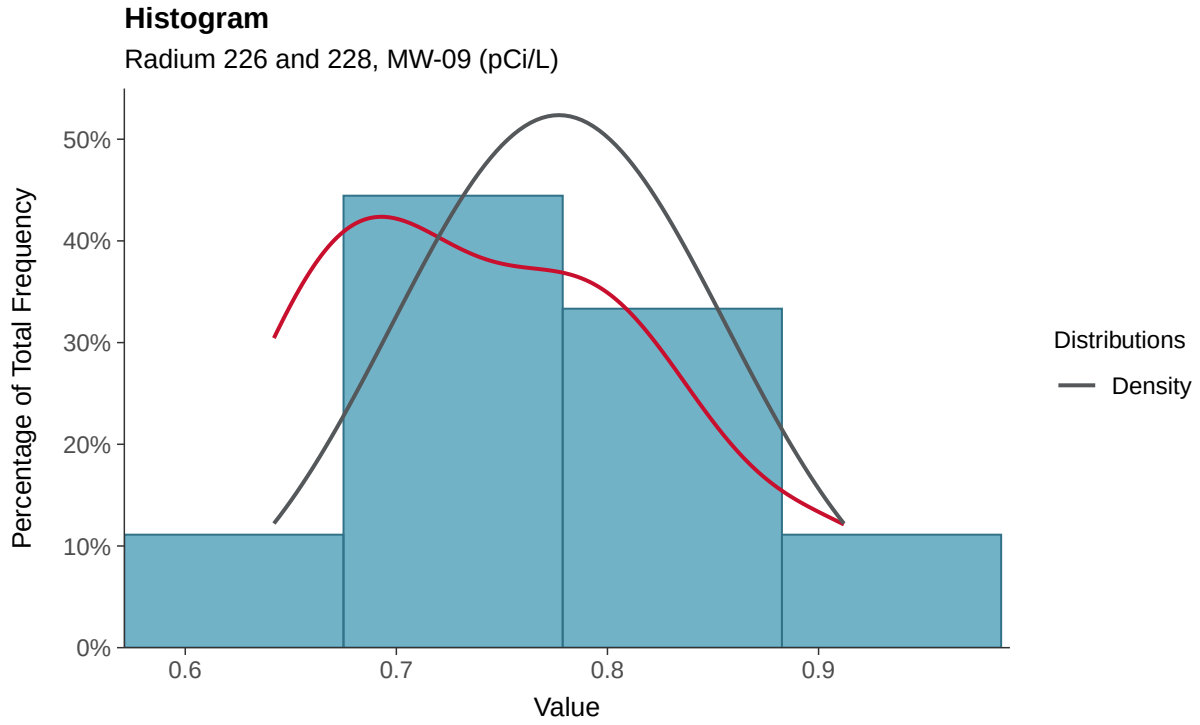
Molybdenum, MW-09 (mg/L)



Appendix IV: Radium 226 and 228, MW-09

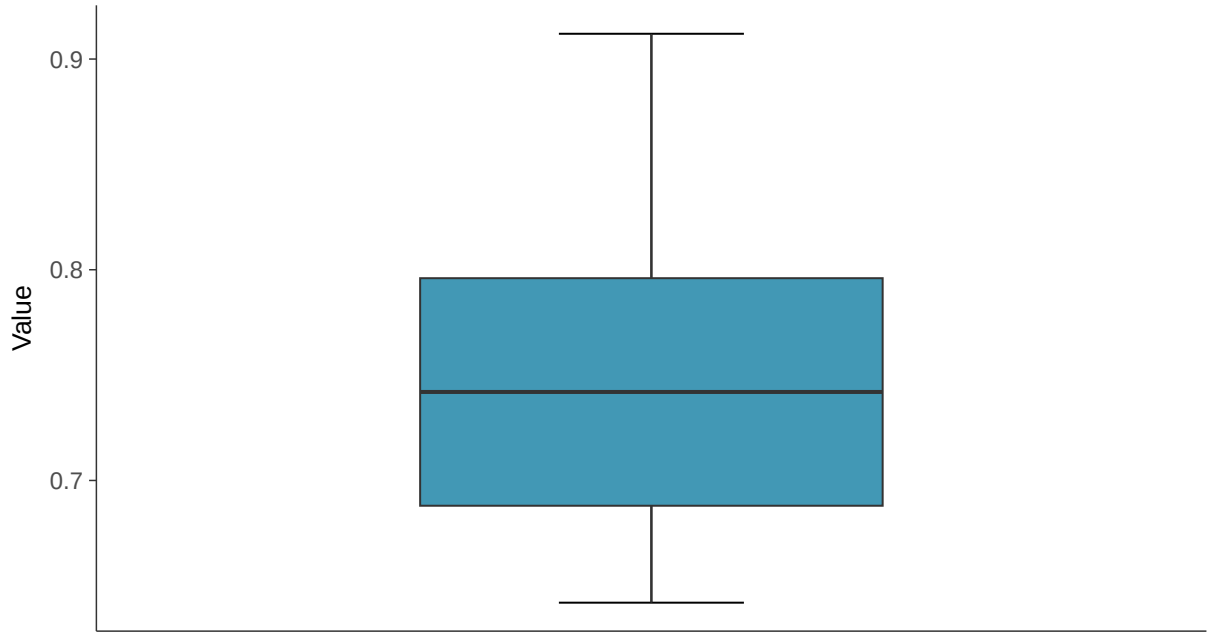
ID: 1_18_5_121





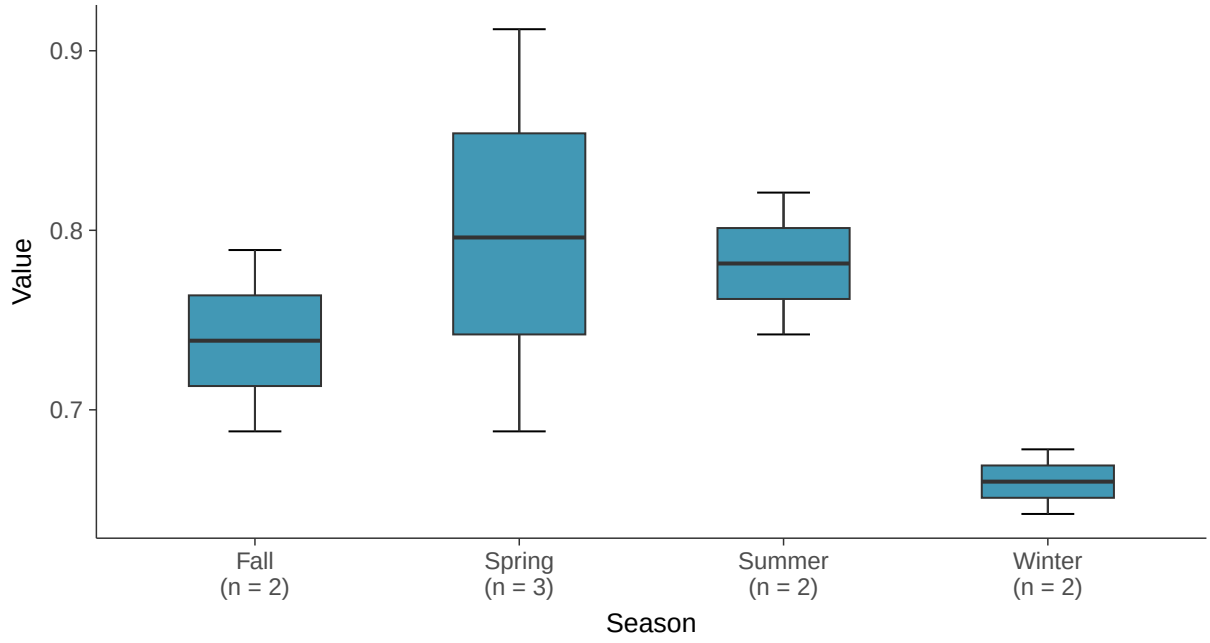
Boxplot

Radium 226 and 228, MW-09 (pCi/L)



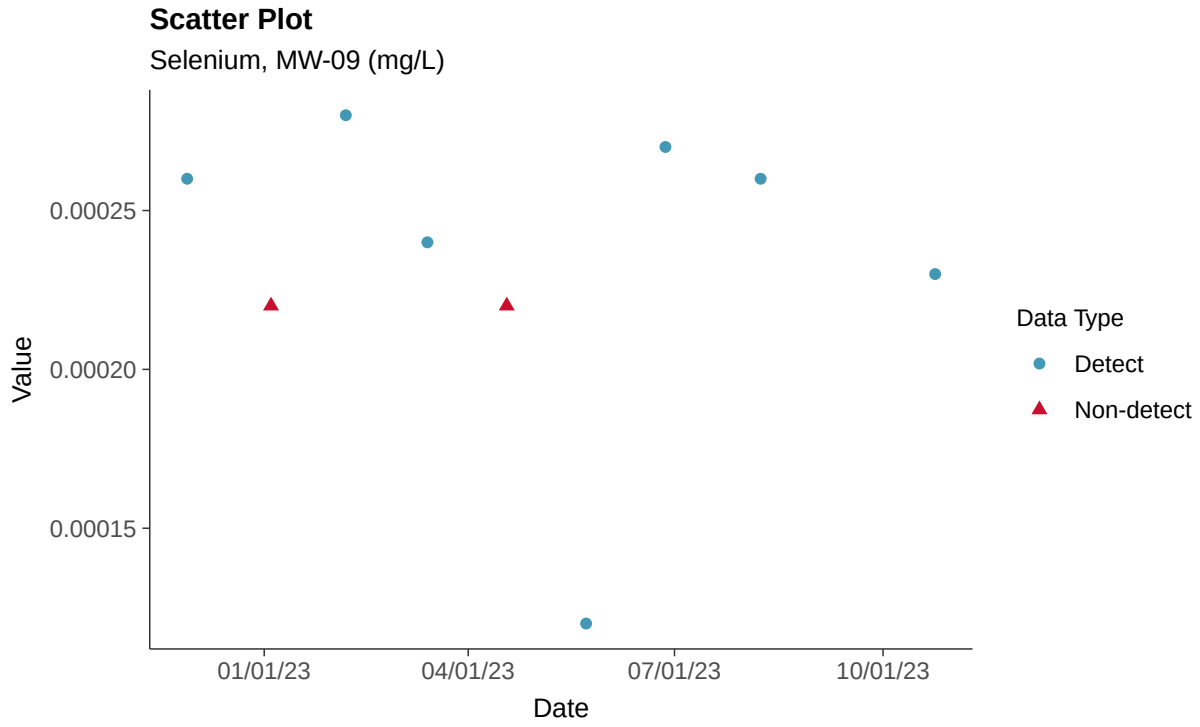
Boxplot by Season

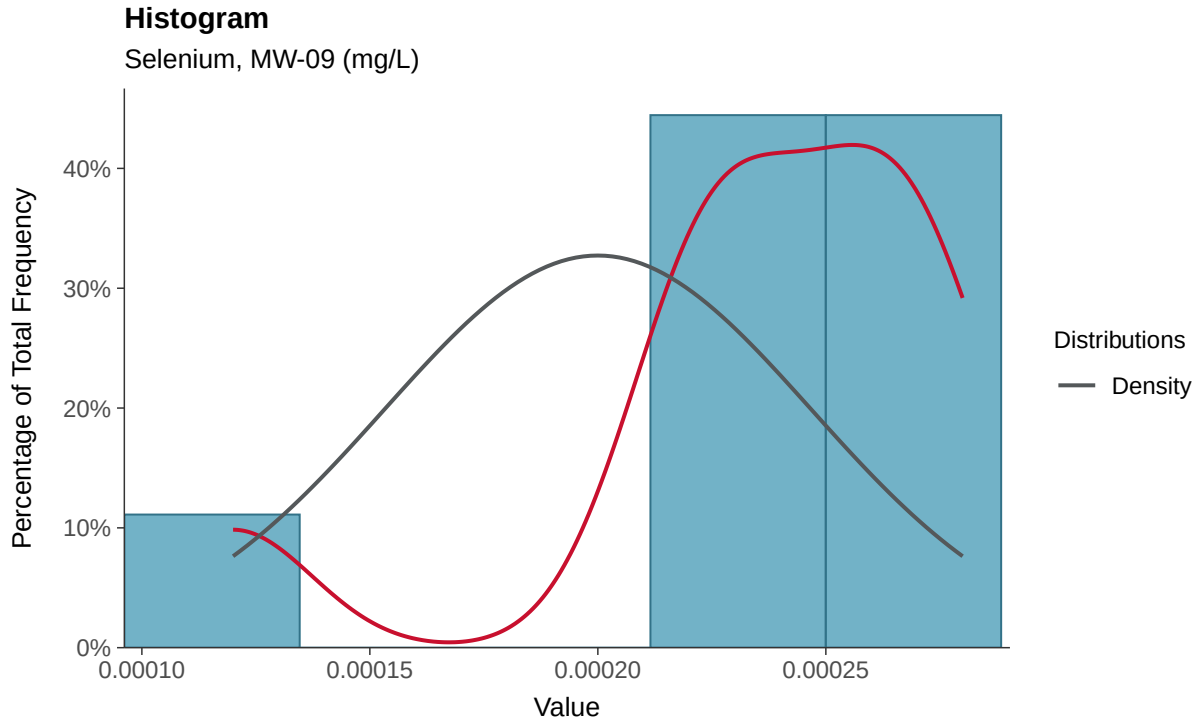
Radium 226 and 228, MW-09 (pCi/L)



Appendix IV: Selenium, MW-09

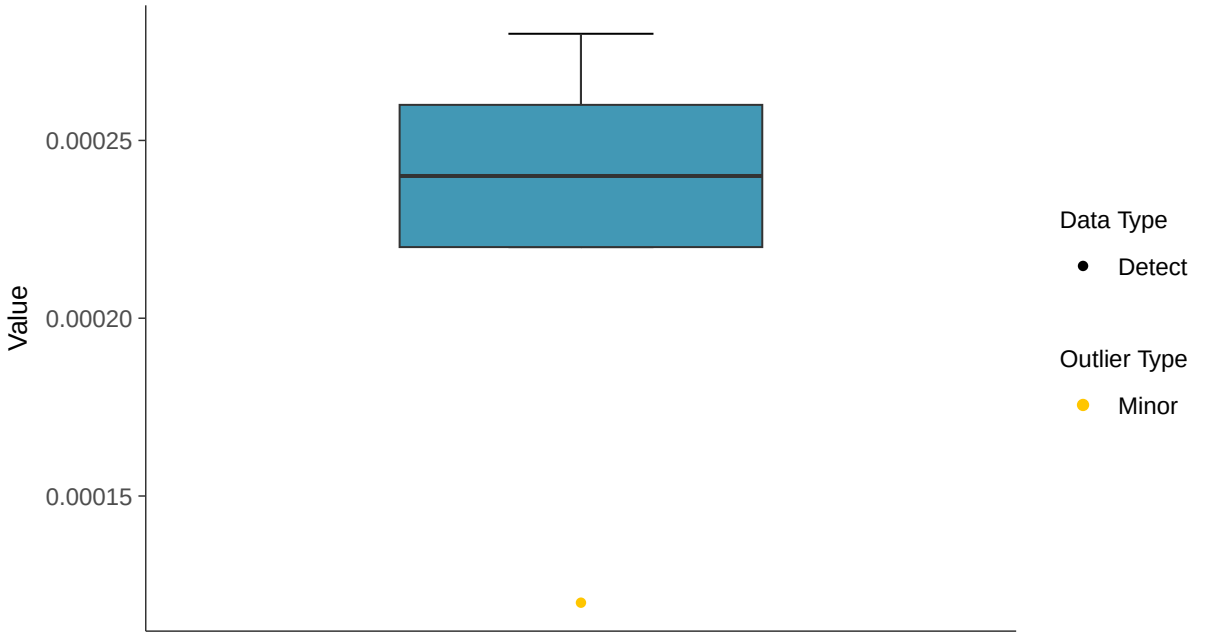
ID: 1_18_5_122





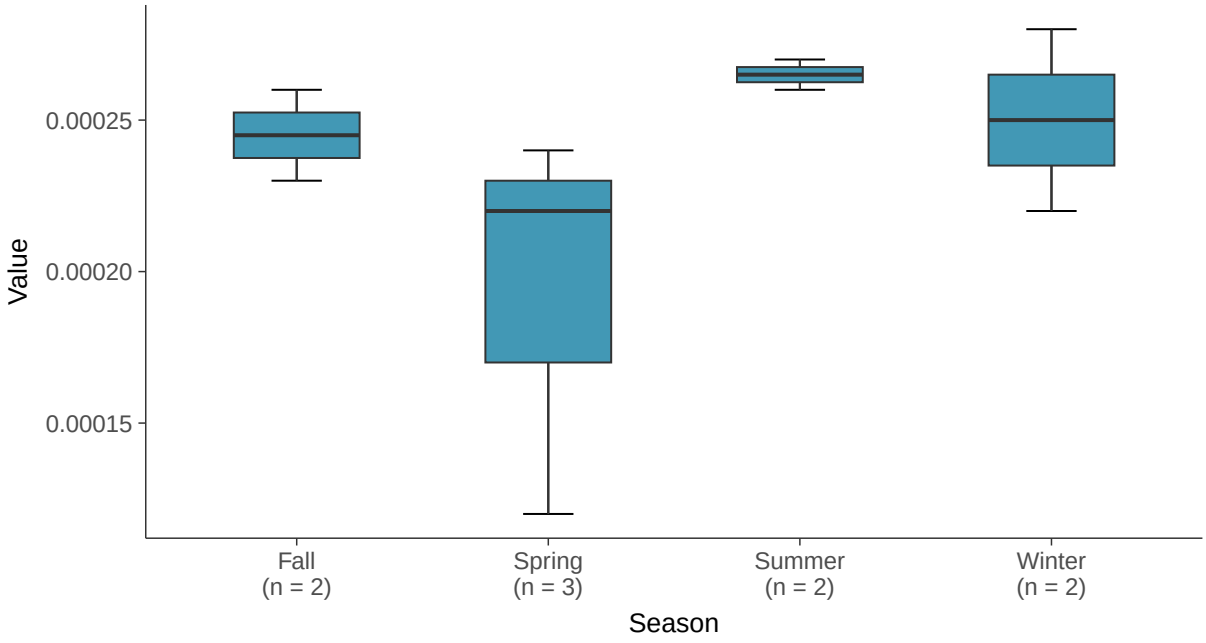
Boxplot

Selenium, MW-09 (mg/L)



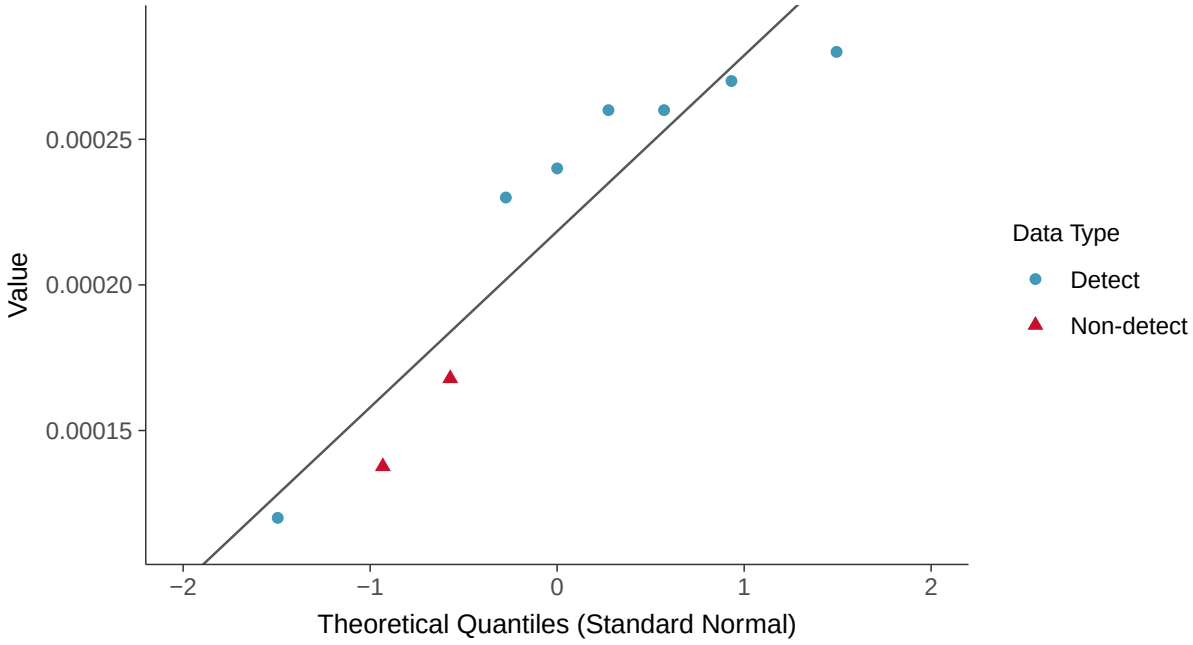
Boxplot by Season

Selenium, MW-09 (mg/L)



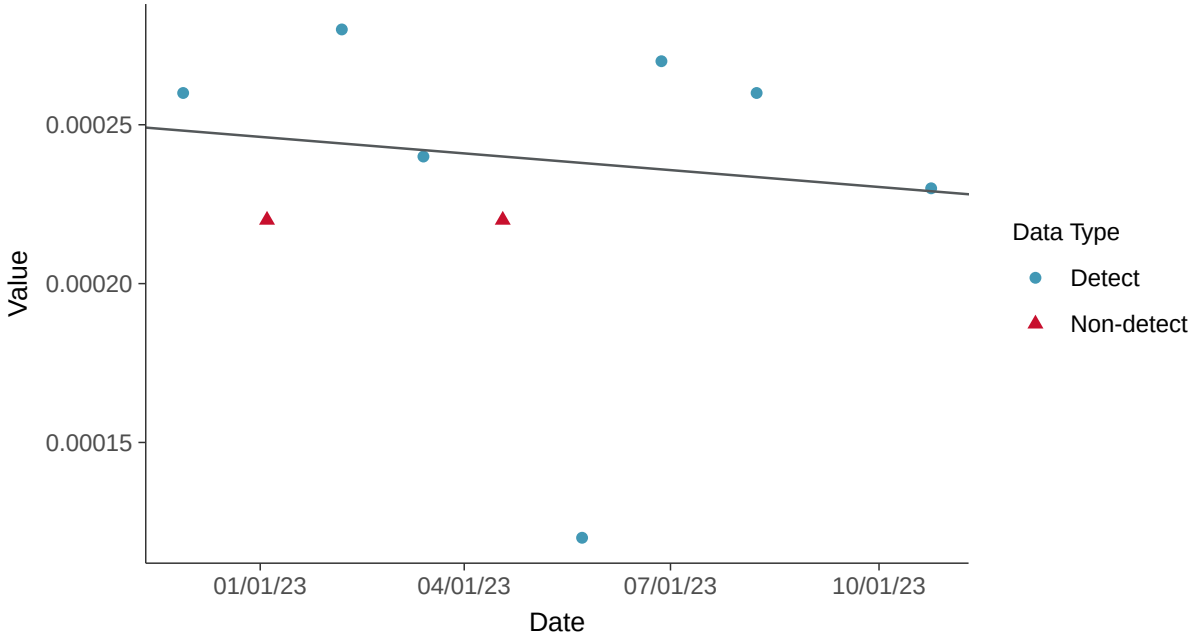
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-09 (mg/L)



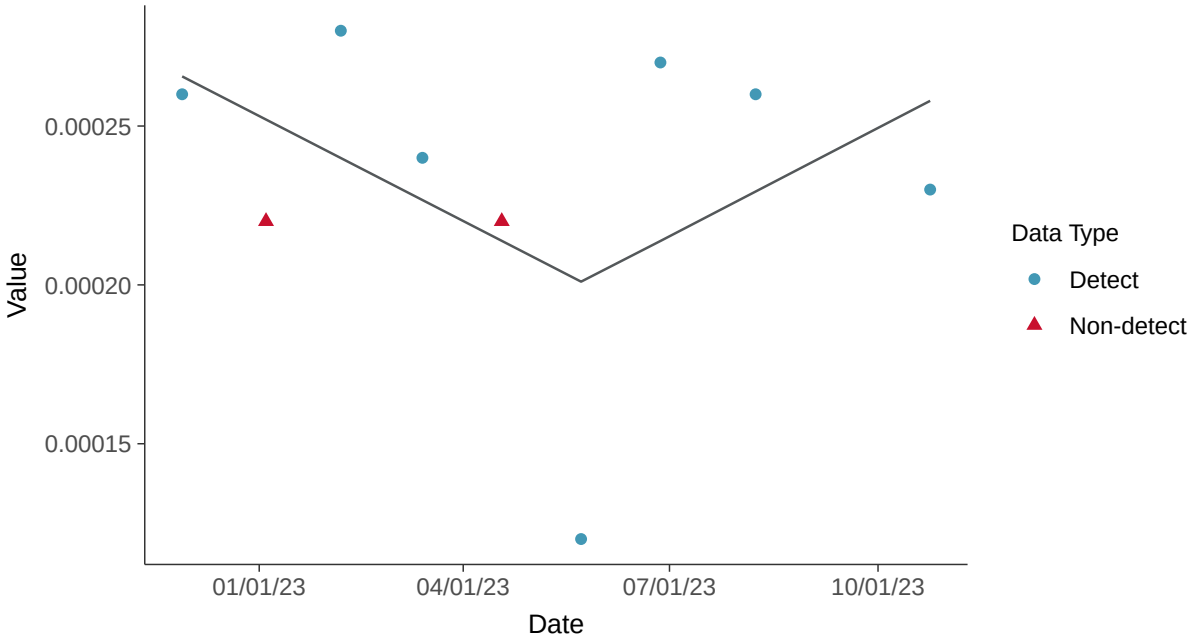
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Selenium, MW-09 (mg/L)



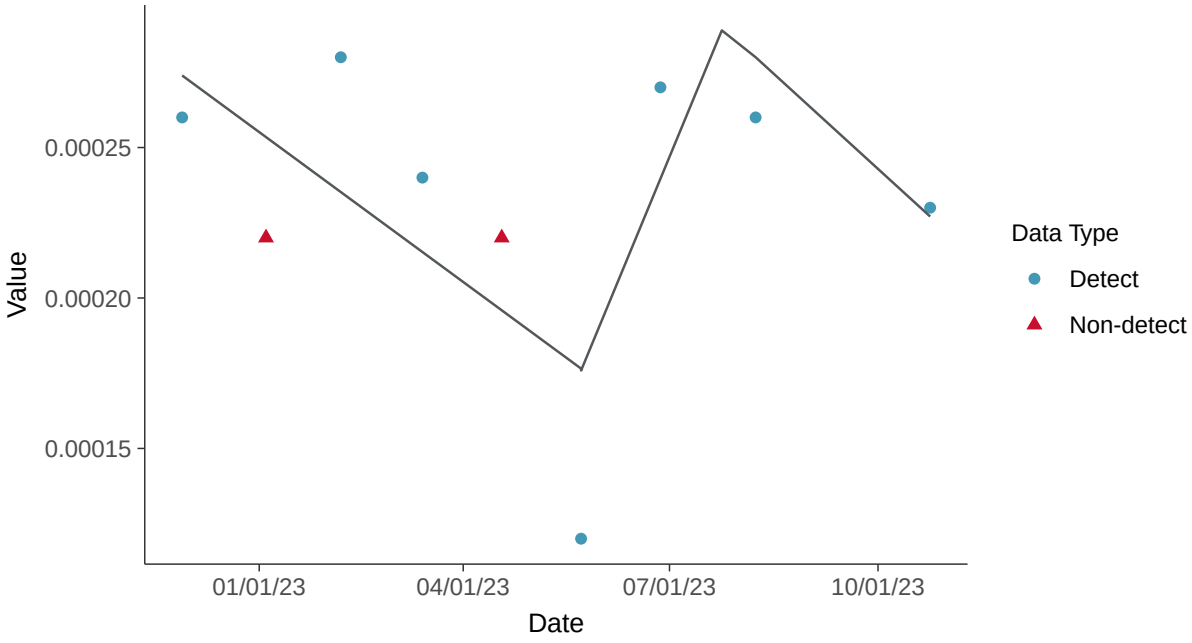
Trend Regression: Piecewise Linear-Linear

Selenium, MW-09 (mg/L)



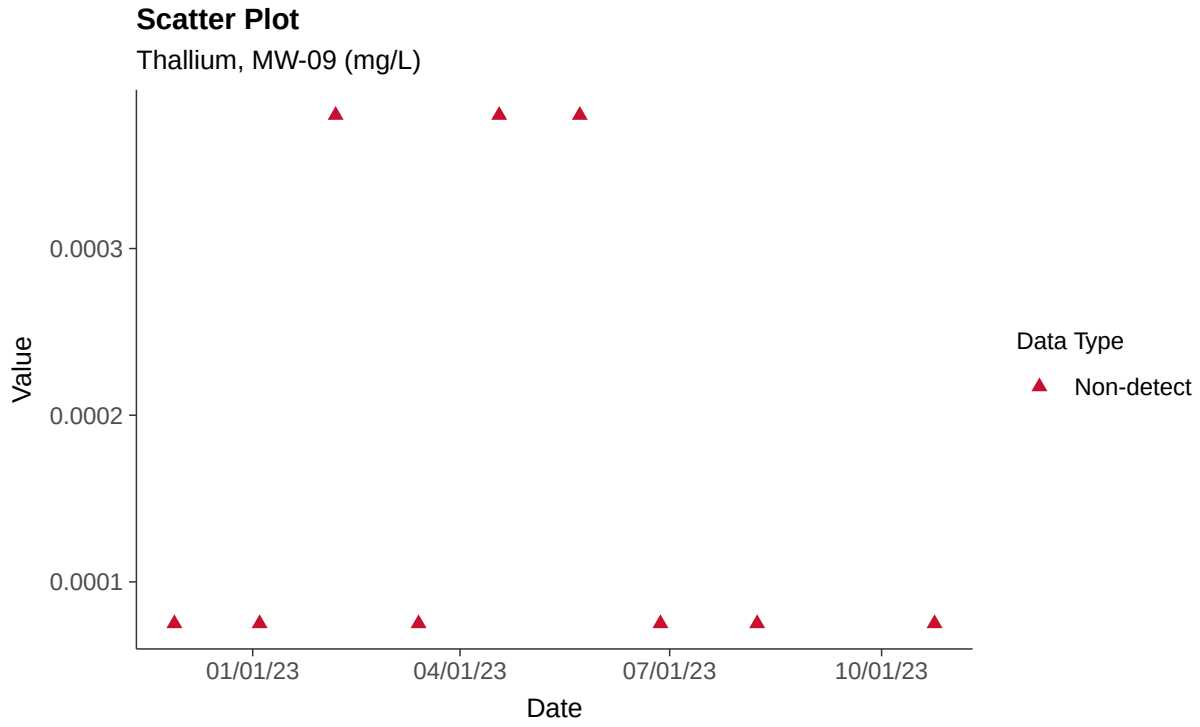
Trend Regression: Piecewise Linear-Linear-Linear

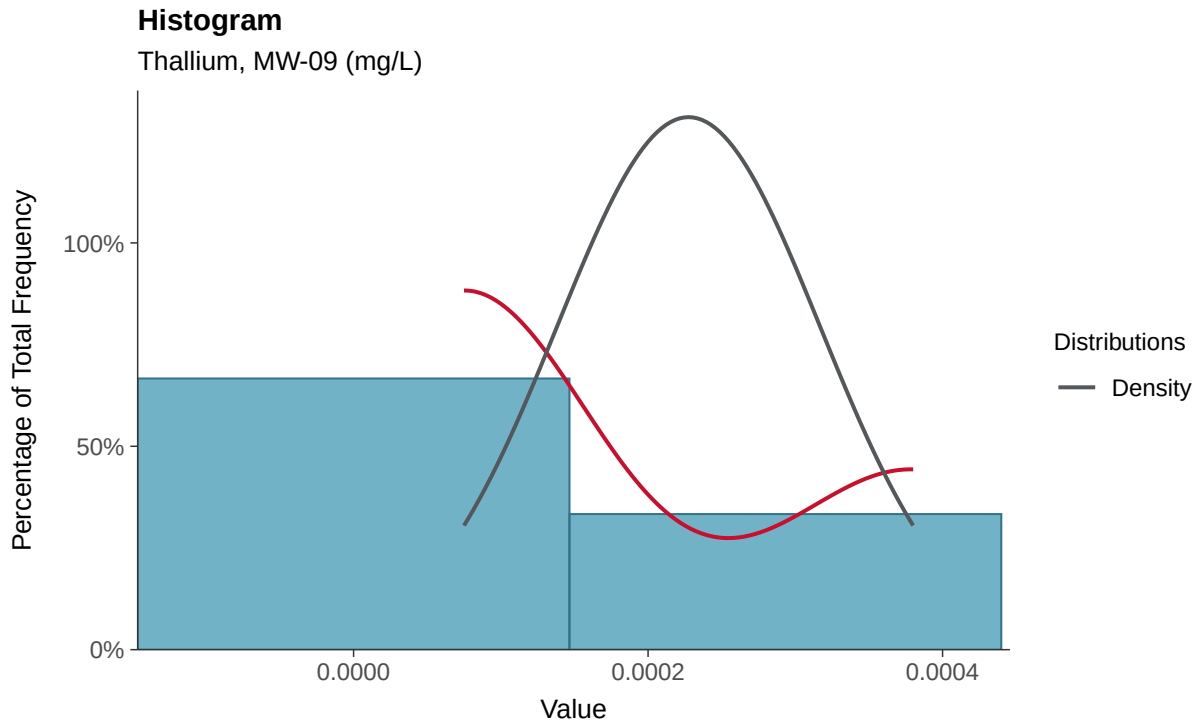
Selenium, MW-09 (mg/L)



Appendix IV: Thallium, MW-09

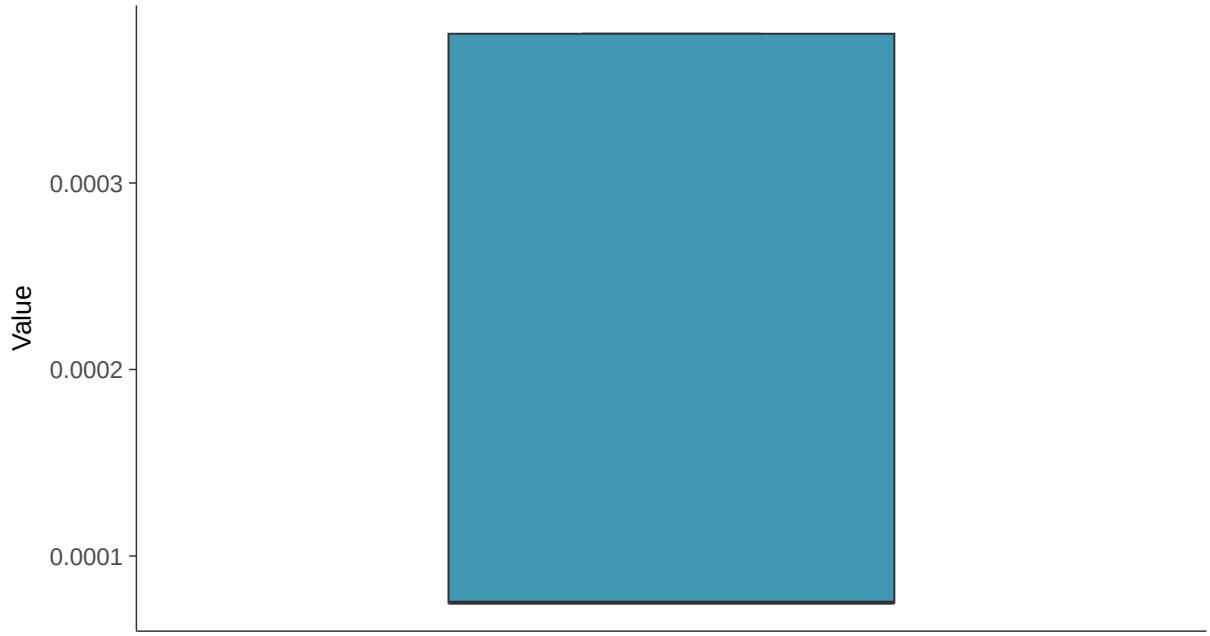
ID: 1_18_5_125





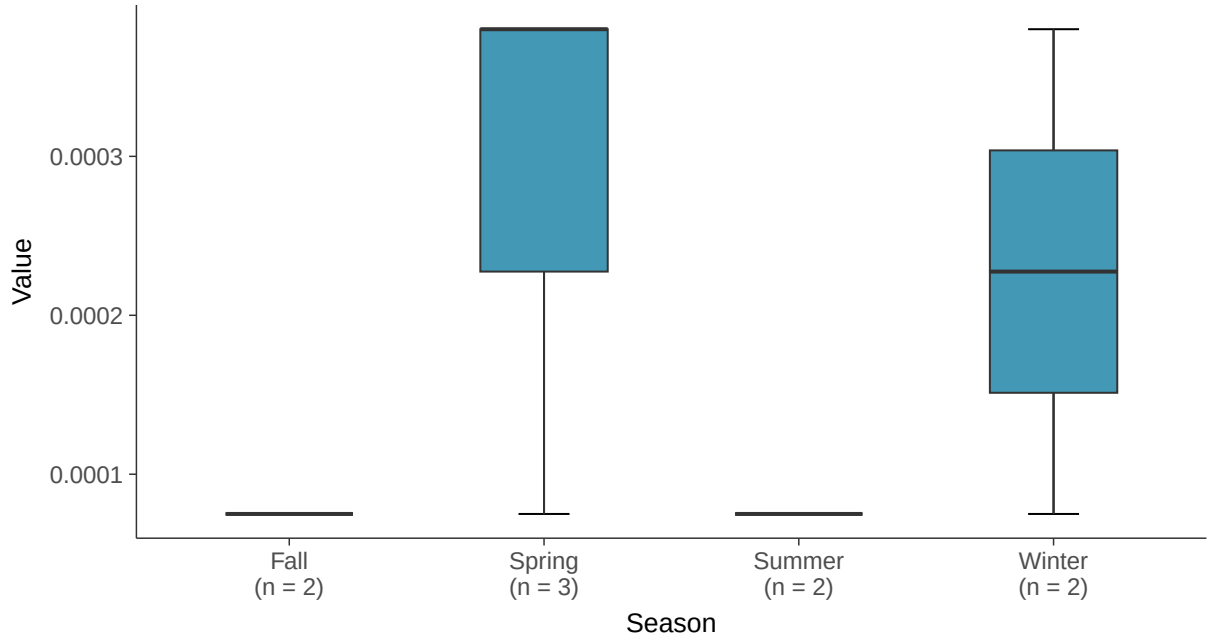
Boxplot

Thallium, MW-09 (mg/L)



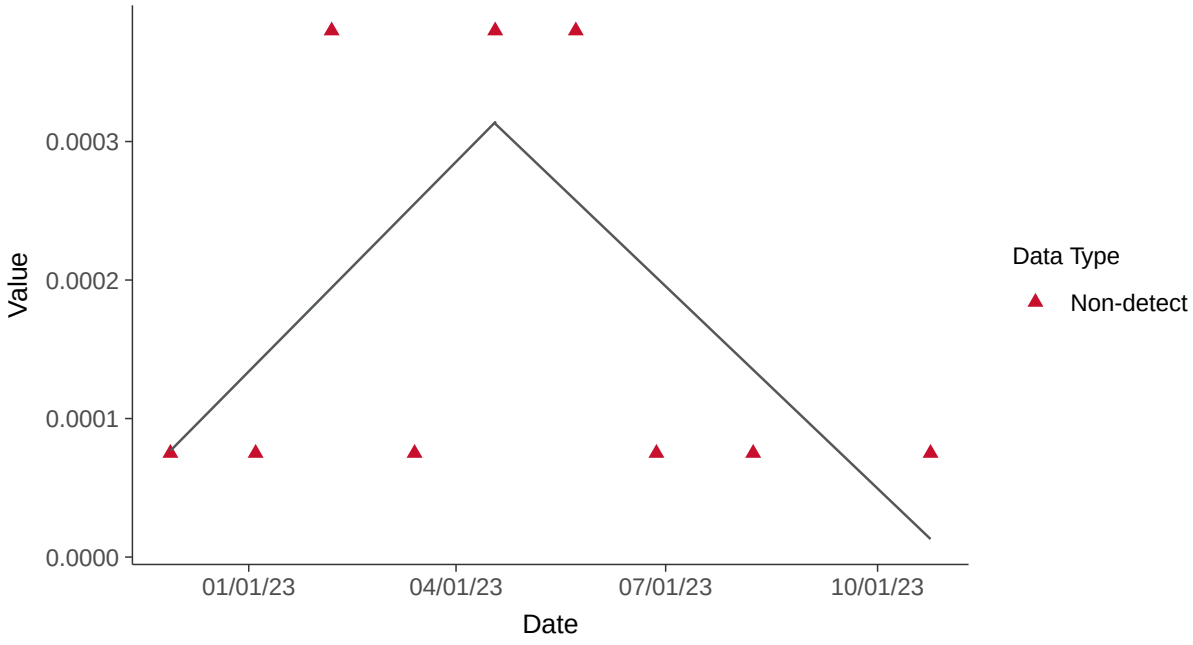
Boxplot by Season

Thallium, MW-09 (mg/L)



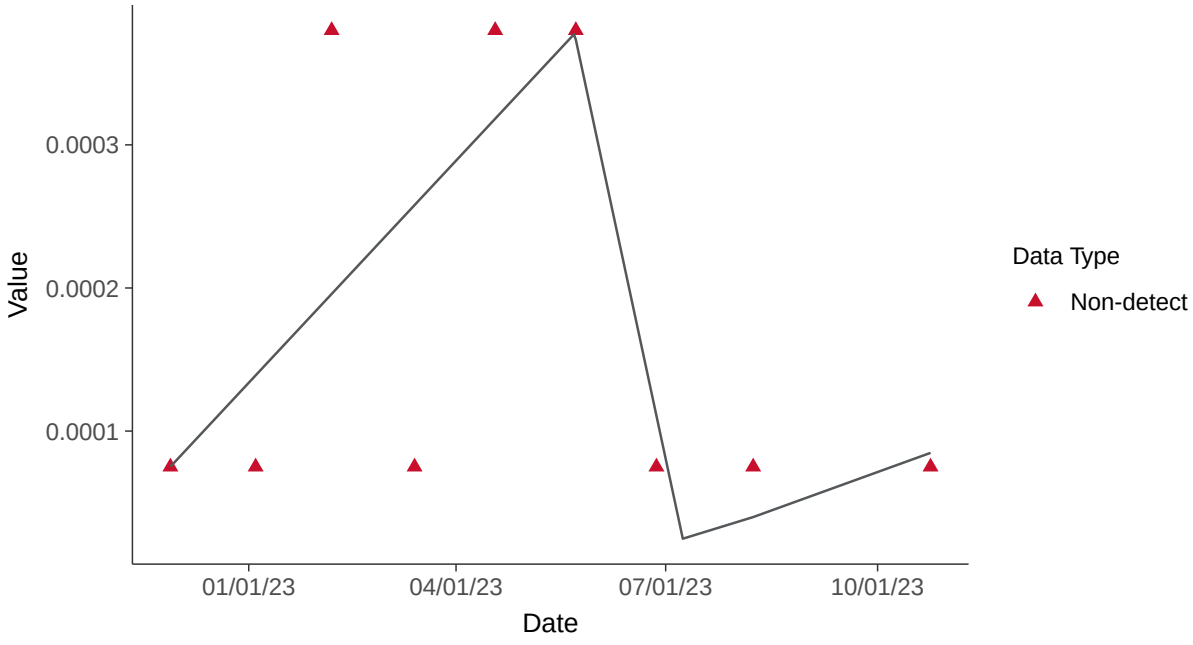
Trend Regression: Piecewise Linear-Linear

Thallium, MW-09 (mg/L)



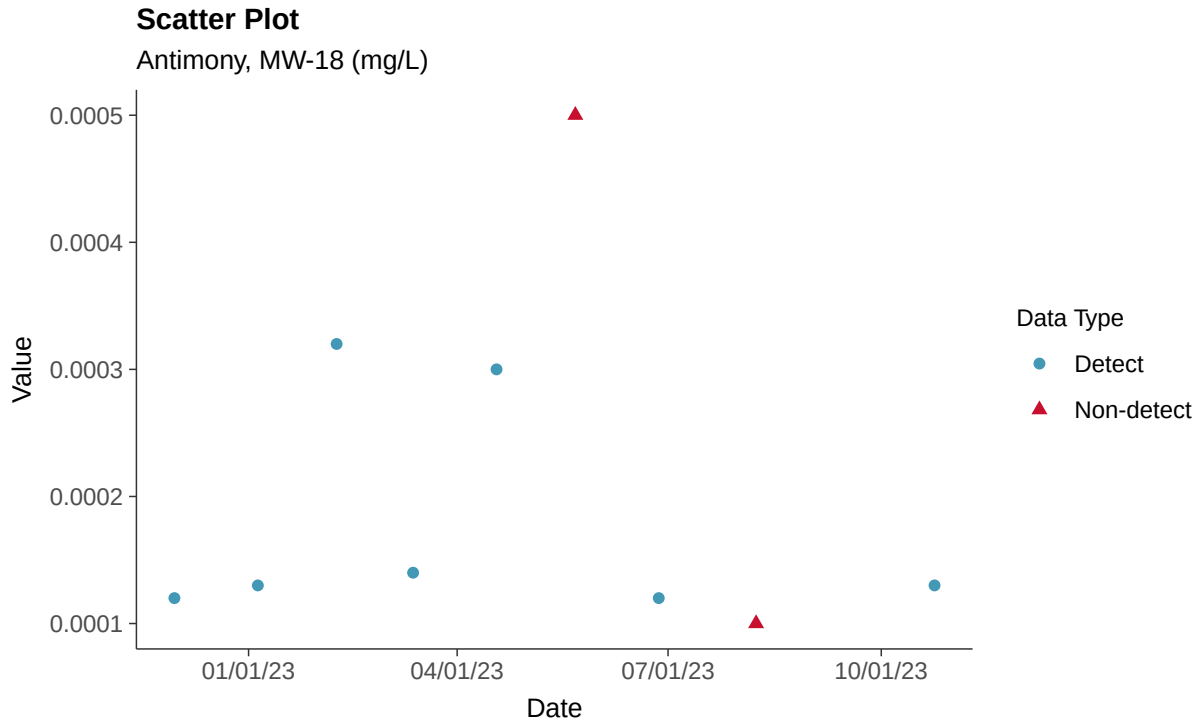
Trend Regression: Piecewise Linear-Linear-Linear

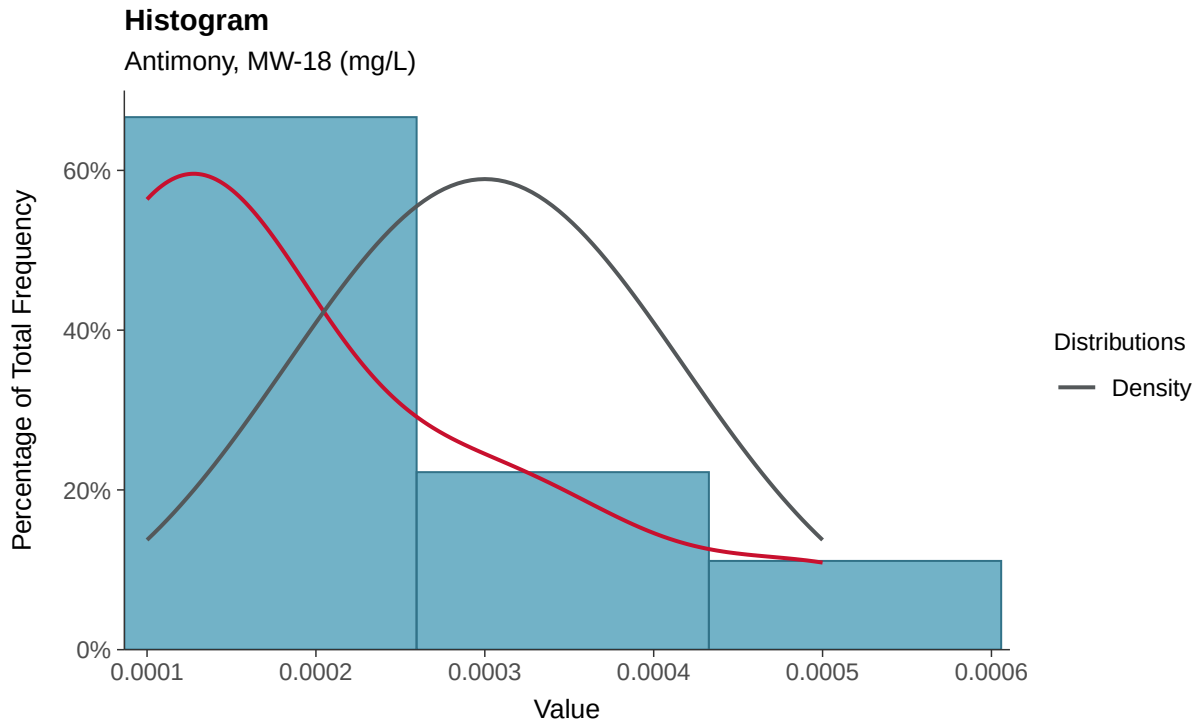
Thallium, MW-09 (mg/L)



Appendix IV: Antimony, MW-18

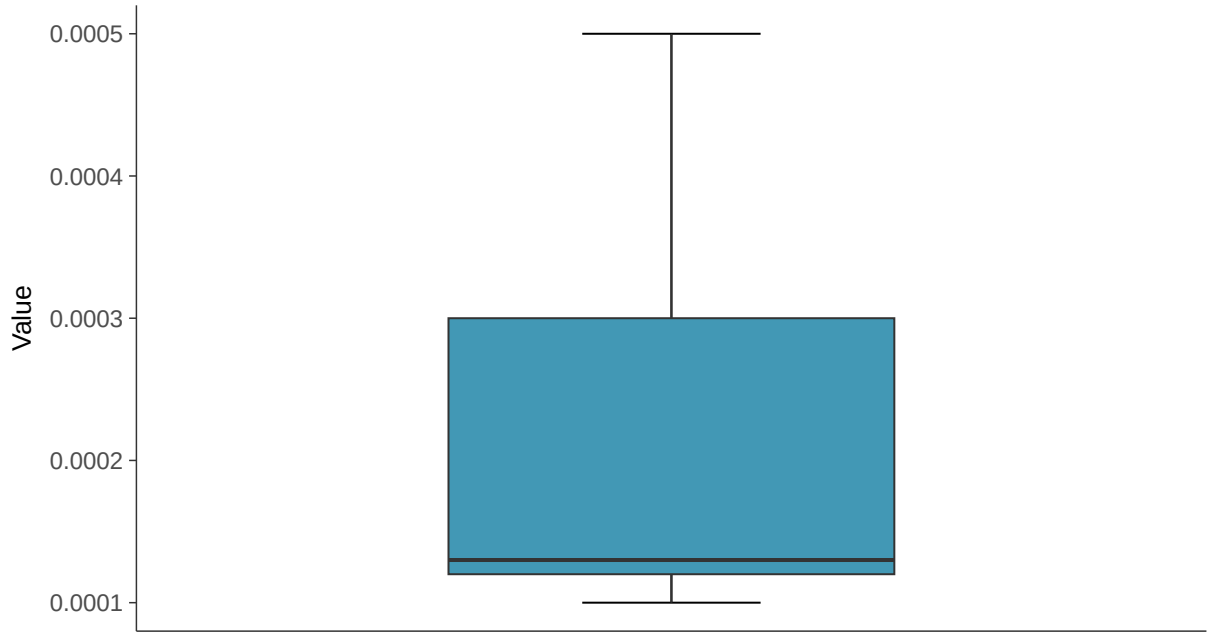
ID: 1_22_5_101





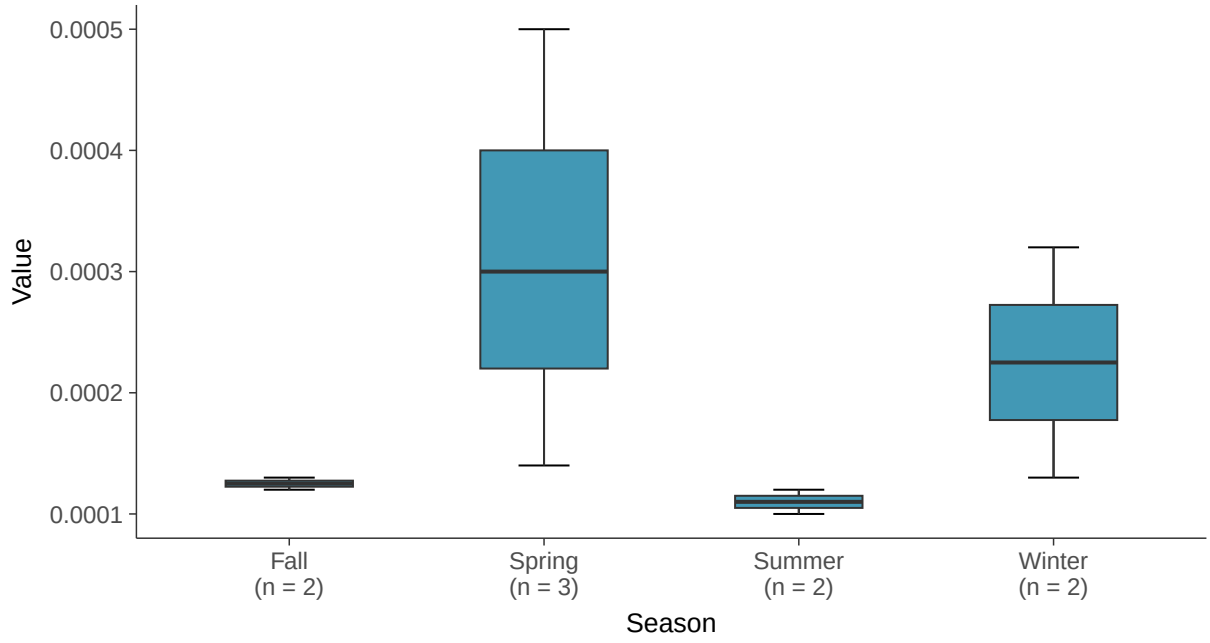
Boxplot

Antimony, MW-18 (mg/L)



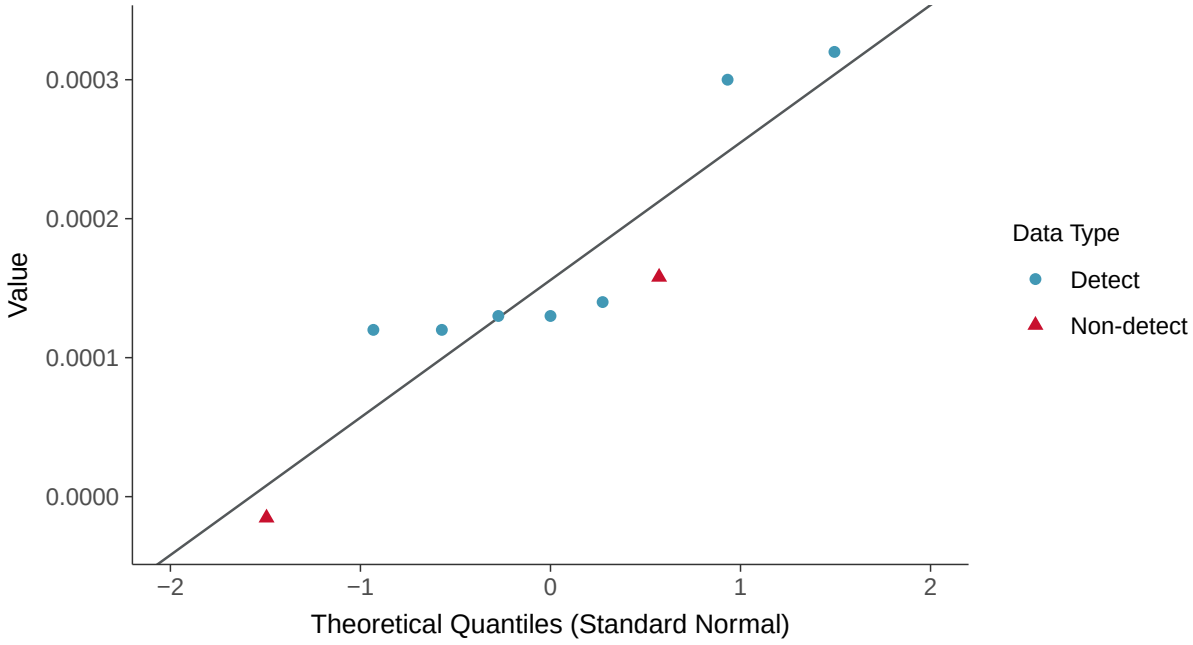
Boxplot by Season

Antimony, MW-18 (mg/L)



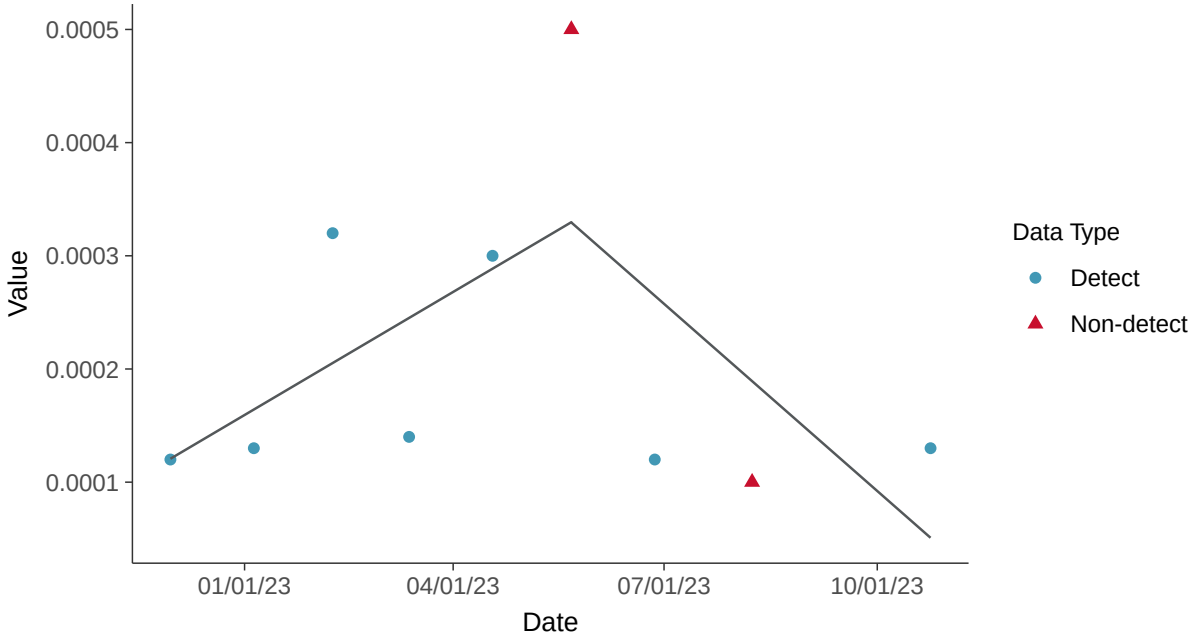
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-18 (mg/L)



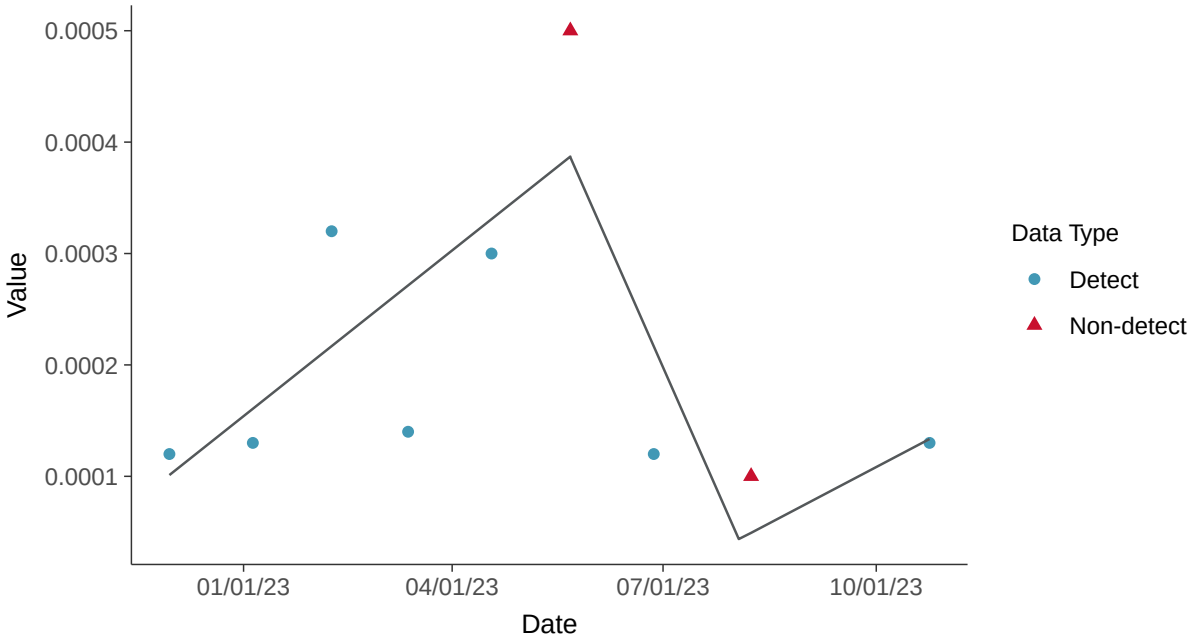
Trend Regression: Piecewise Linear-Linear

Antimony, MW-18 (mg/L)



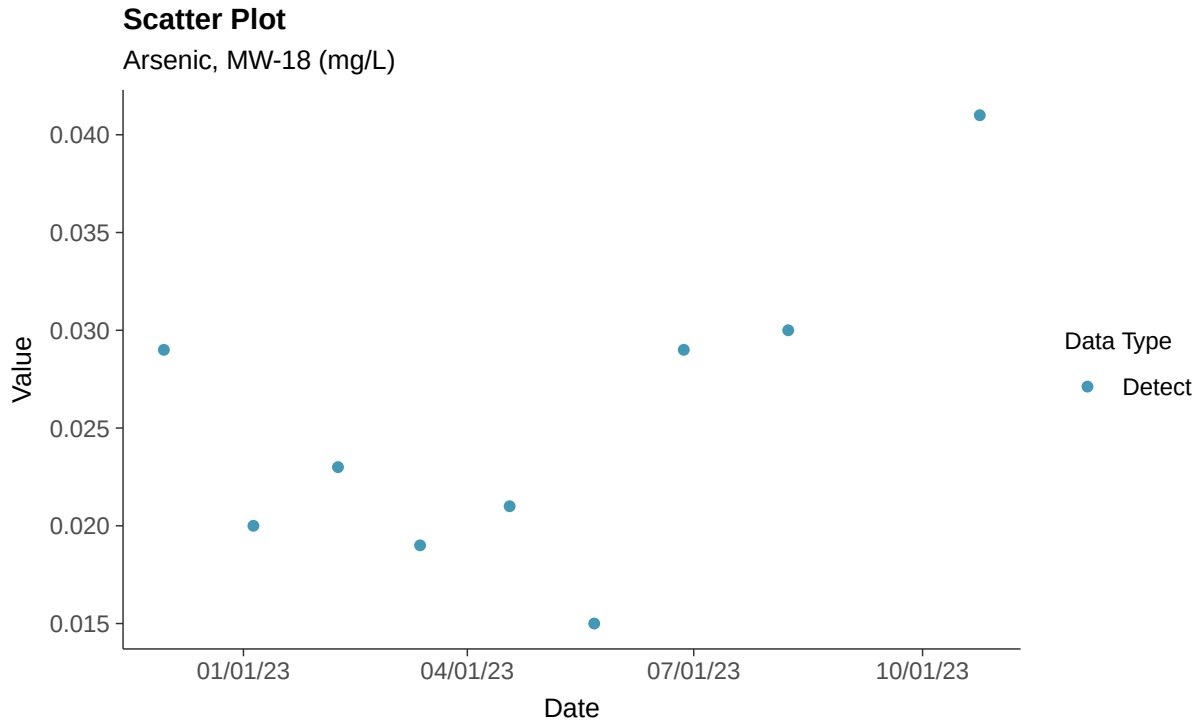
Trend Regression: Piecewise Linear-Linear-Linear

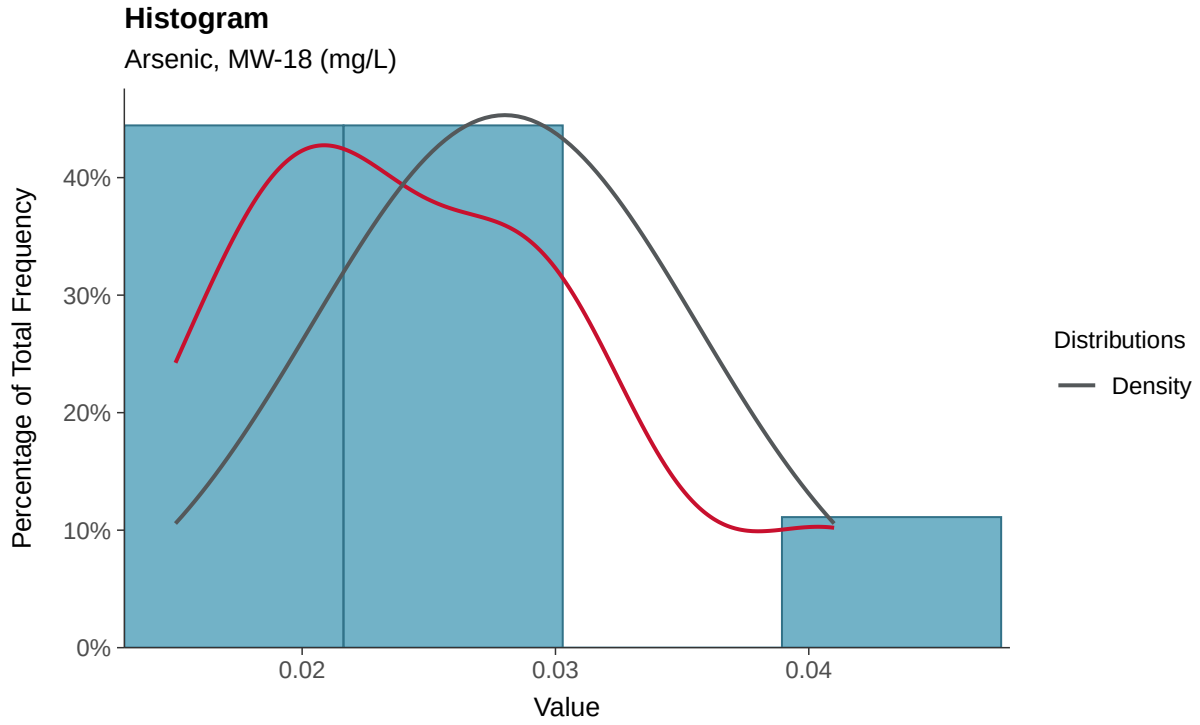
Antimony, MW-18 (mg/L)



Appendix IV: Arsenic, MW-18

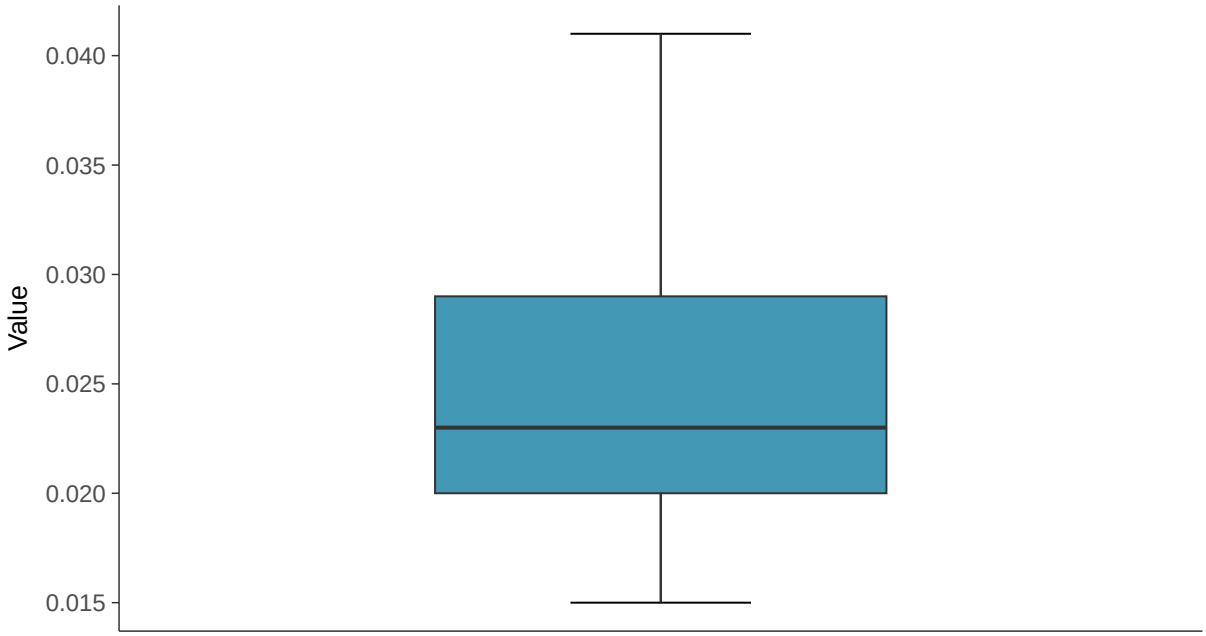
ID: 1_22_5_102





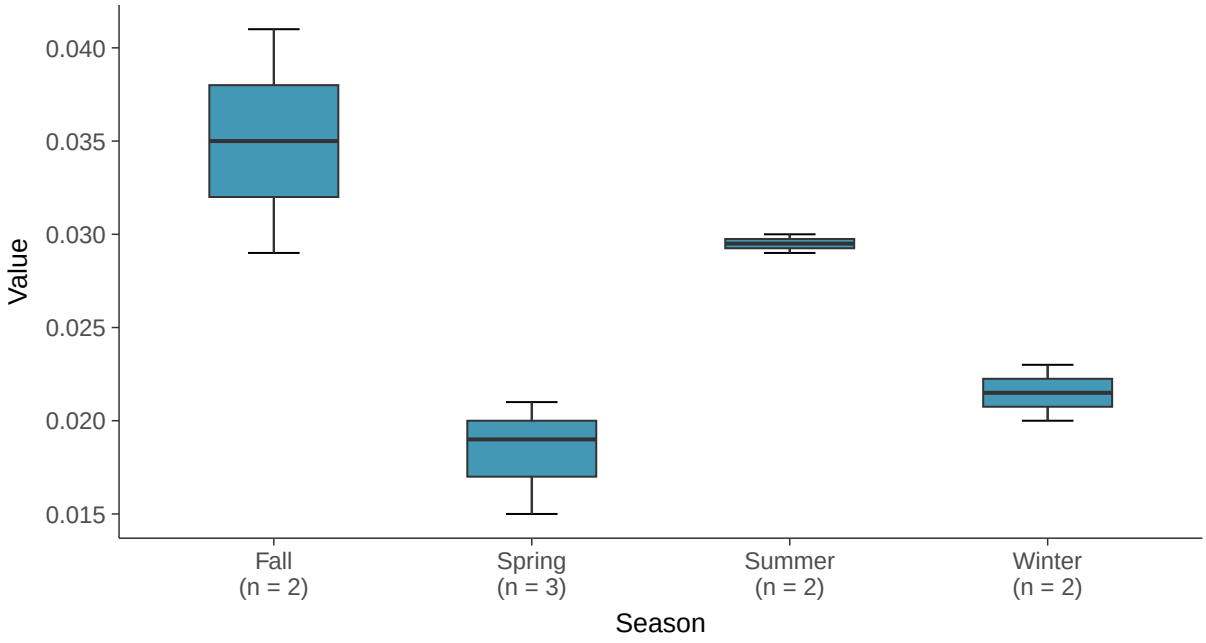
Boxplot

Arsenic, MW-18 (mg/L)



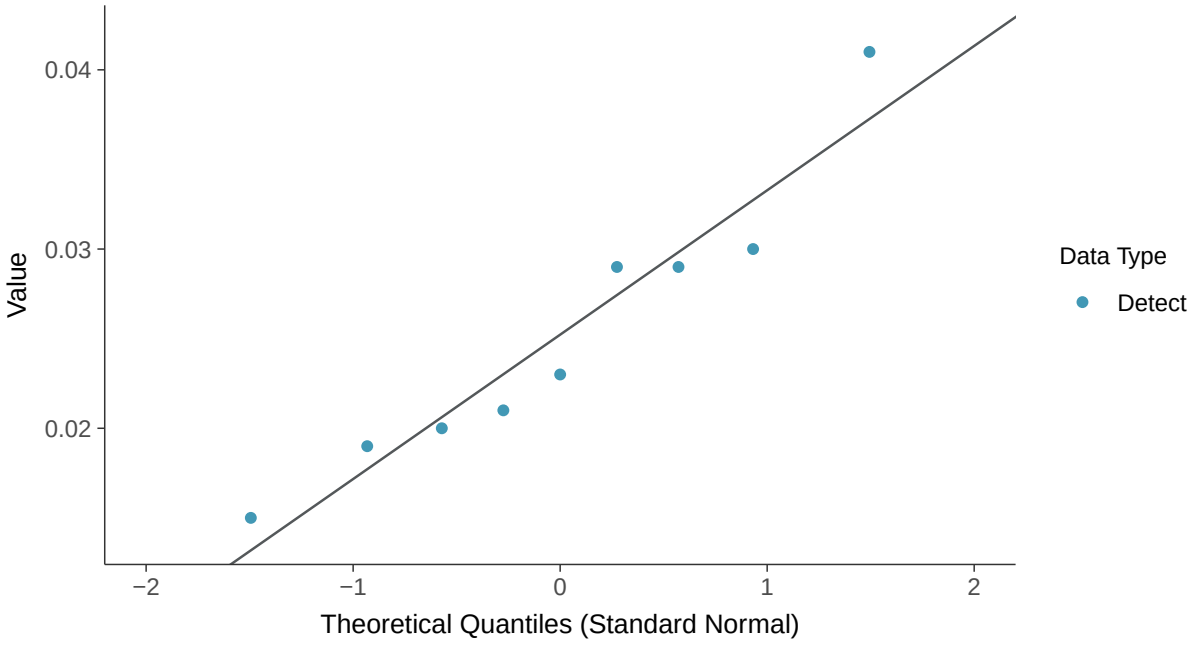
Boxplot by Season

Arsenic, MW-18 (mg/L)



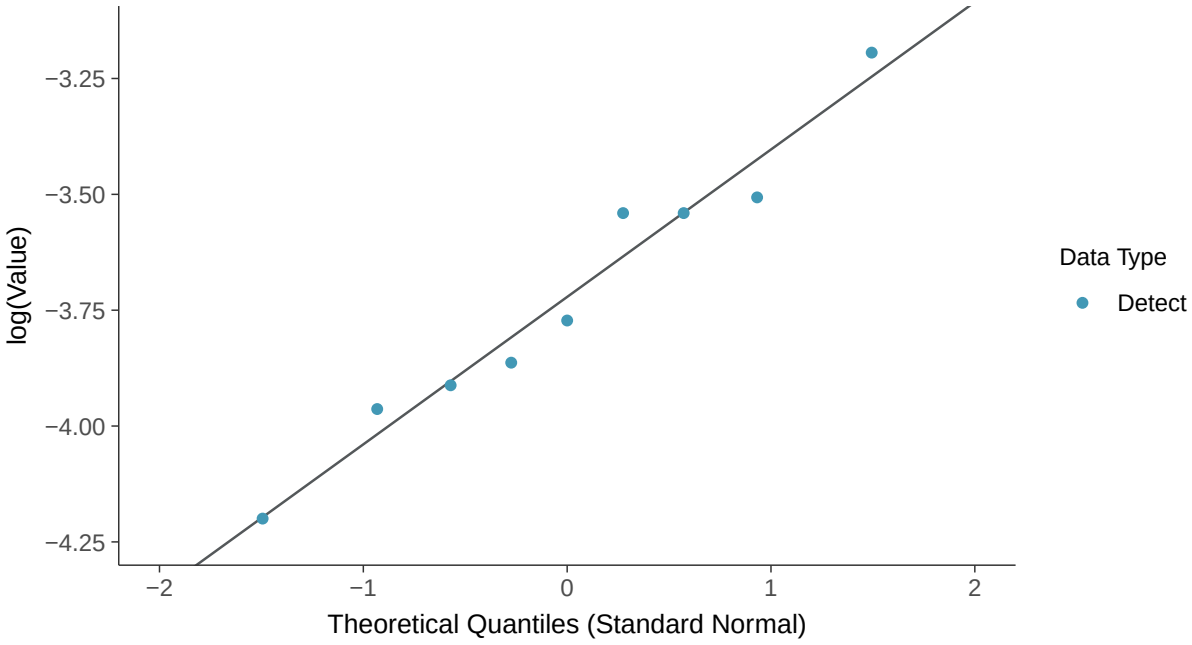
Normal Q-Q plot

Arsenic, MW-18 (mg/L)



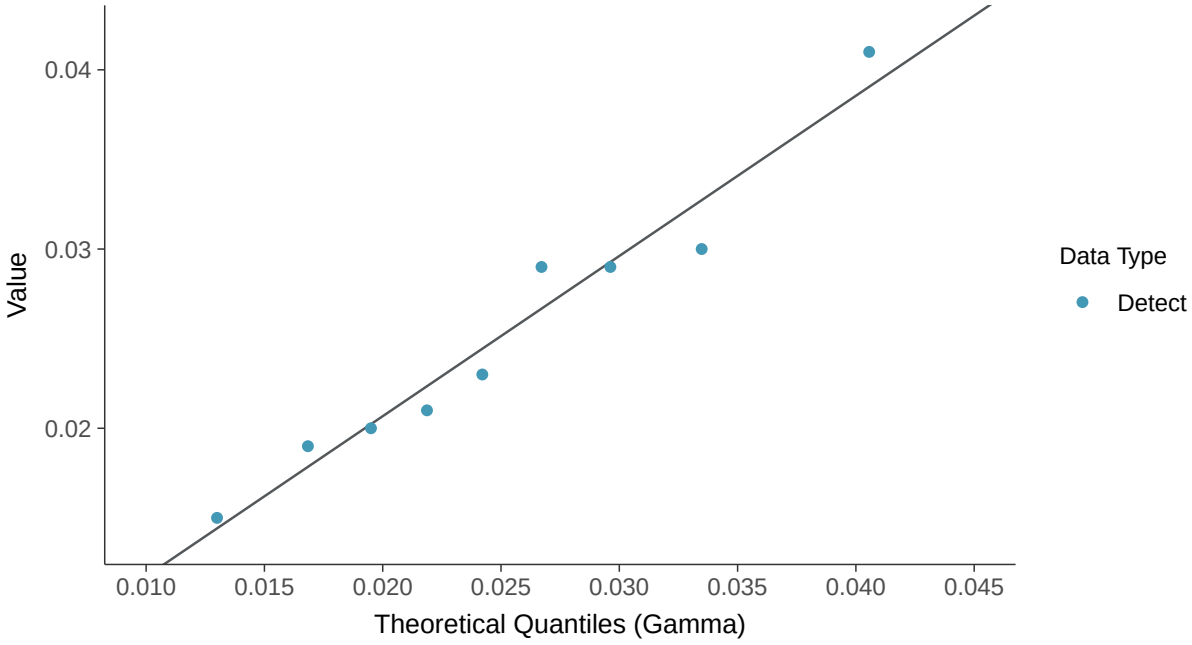
Lognormal Q-Q plot

Arsenic, MW-18 (mg/L)



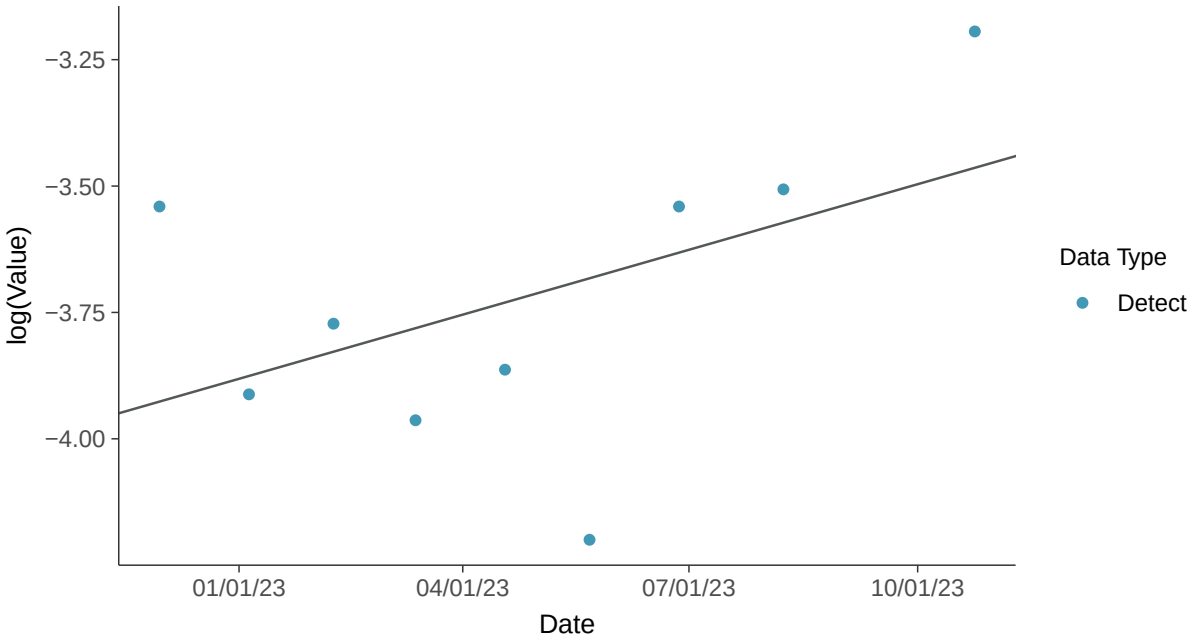
Gamma Q-Q plot

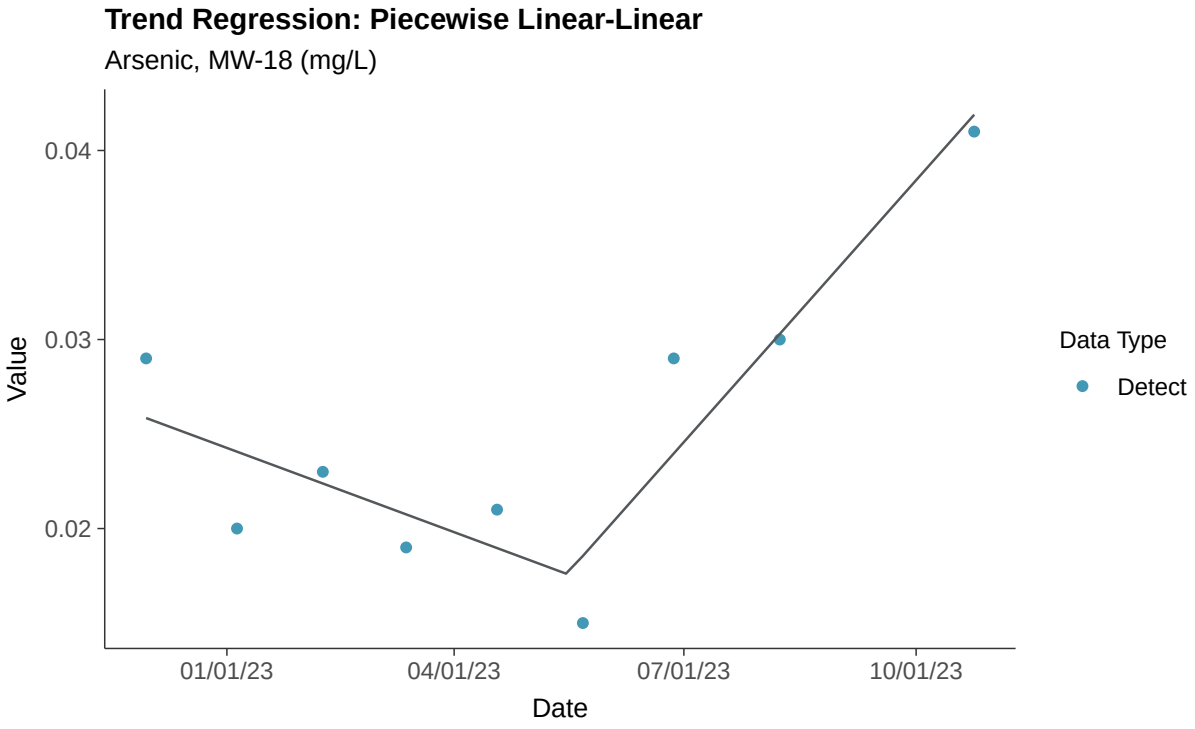
Arsenic, MW-18 (mg/L)



Trend Regression: Lognormal MLE

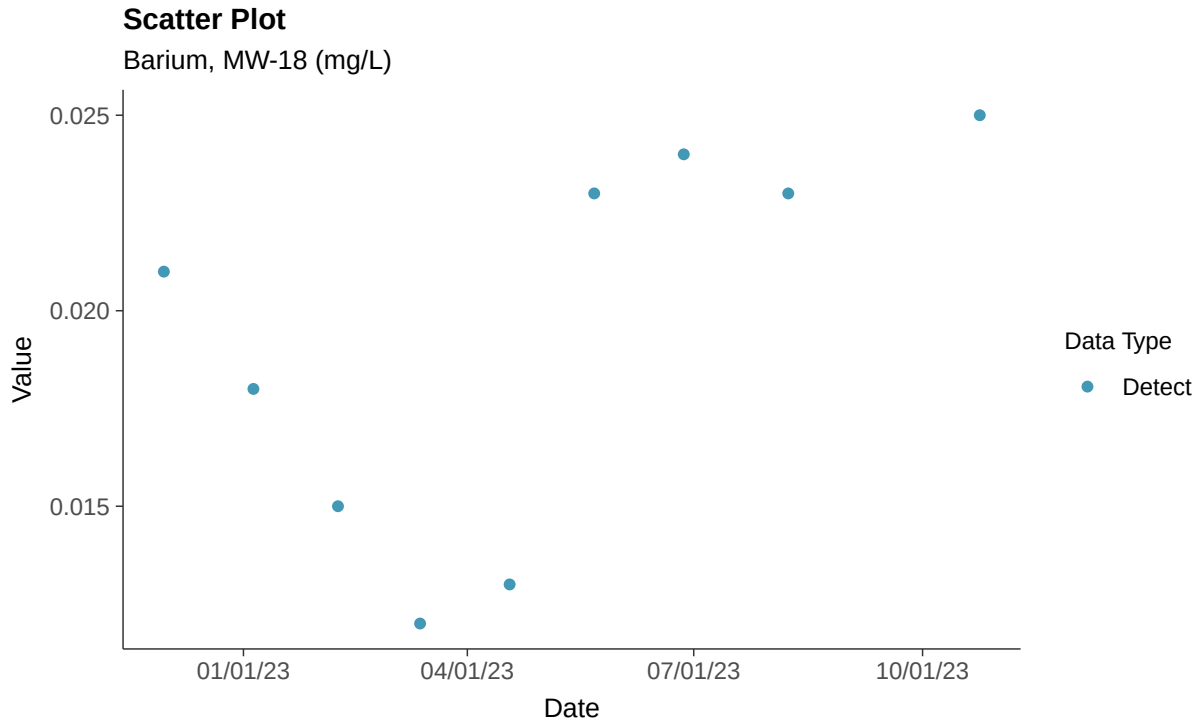
Arsenic, MW-18 (mg/L)

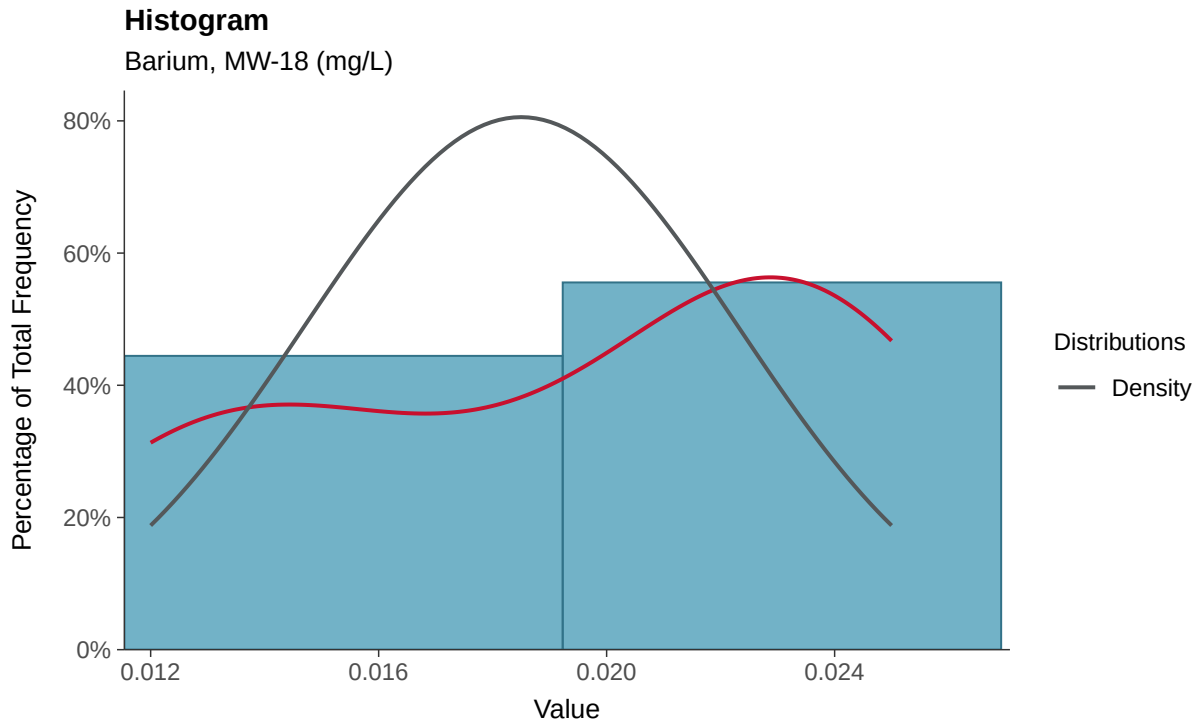



Trend Regression: Piecewise Linear-Linear
Arsenic, MW-18 (mg/L)
0.04
0.03
0.02
Value
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect

Appendix IV: Barium, MW-18

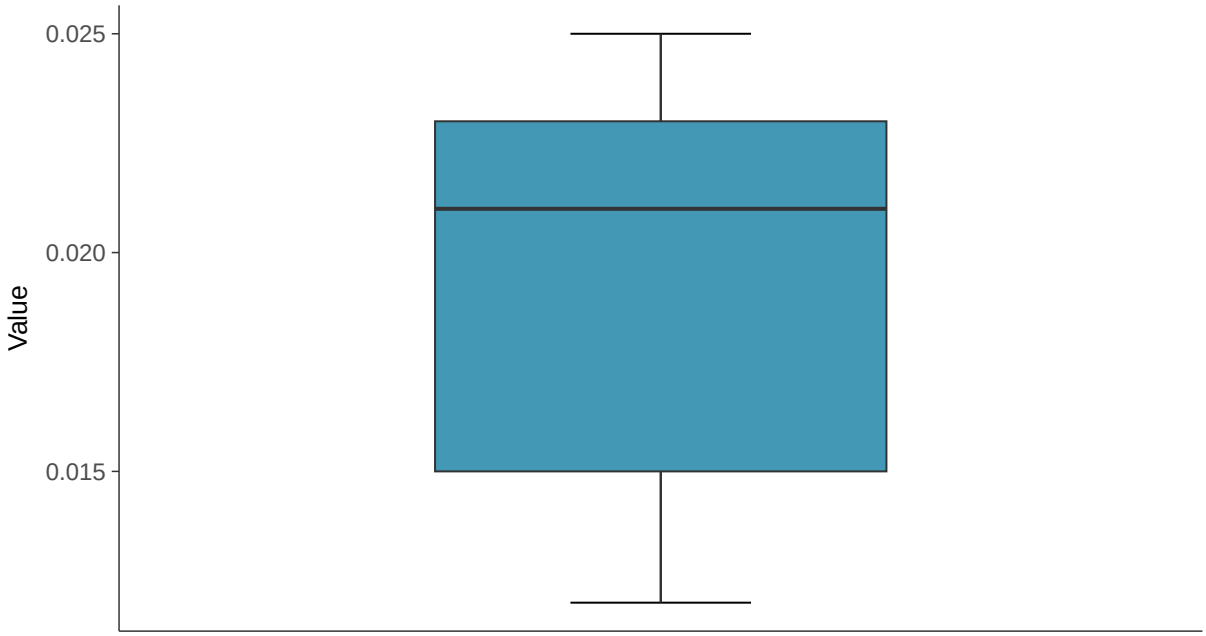
ID: 1_22_5_103





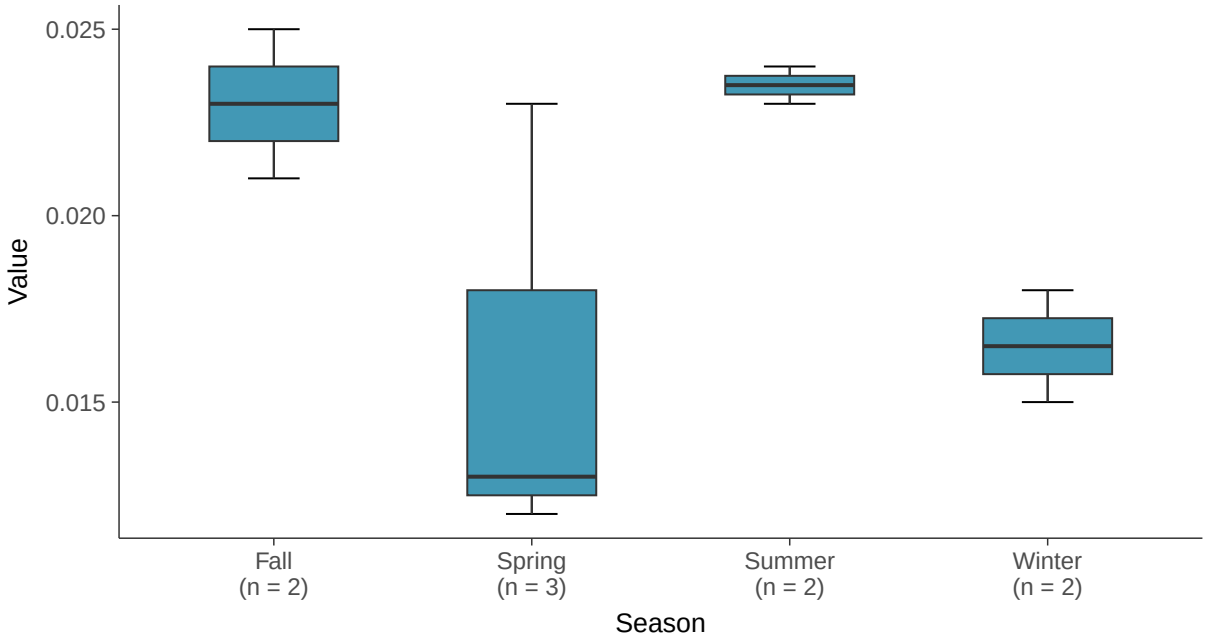
Boxplot

Barium, MW-18 (mg/L)



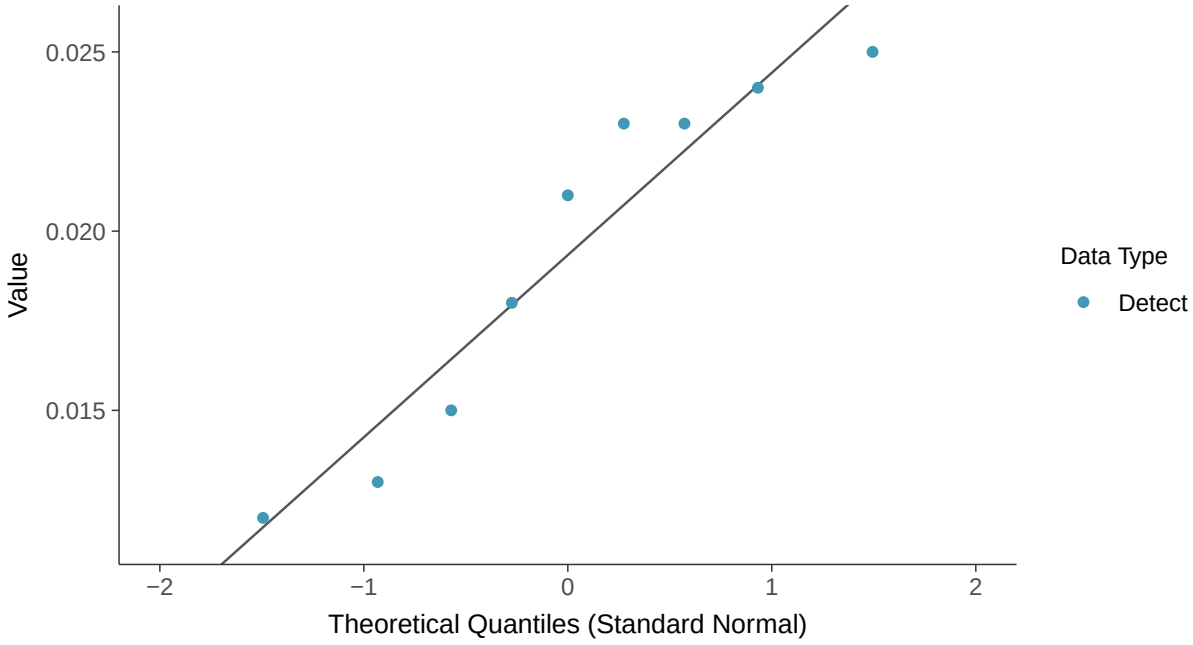
Boxplot by Season

Barium, MW-18 (mg/L)



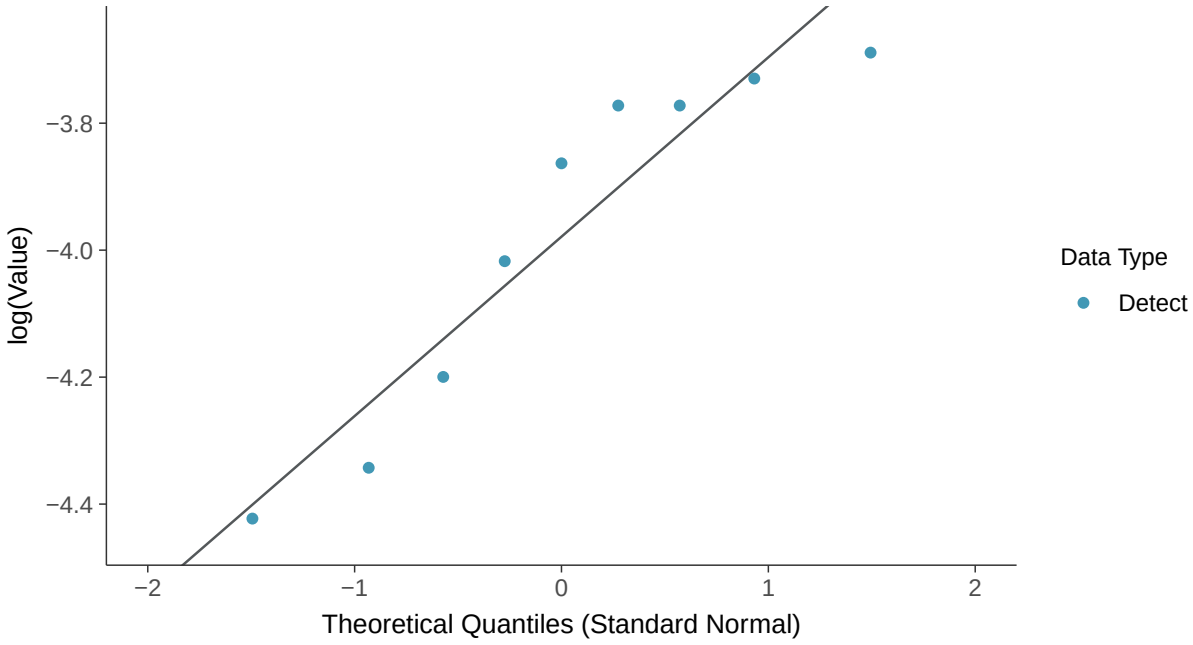
Normal Q-Q plot

Barium, MW-18 (mg/L)



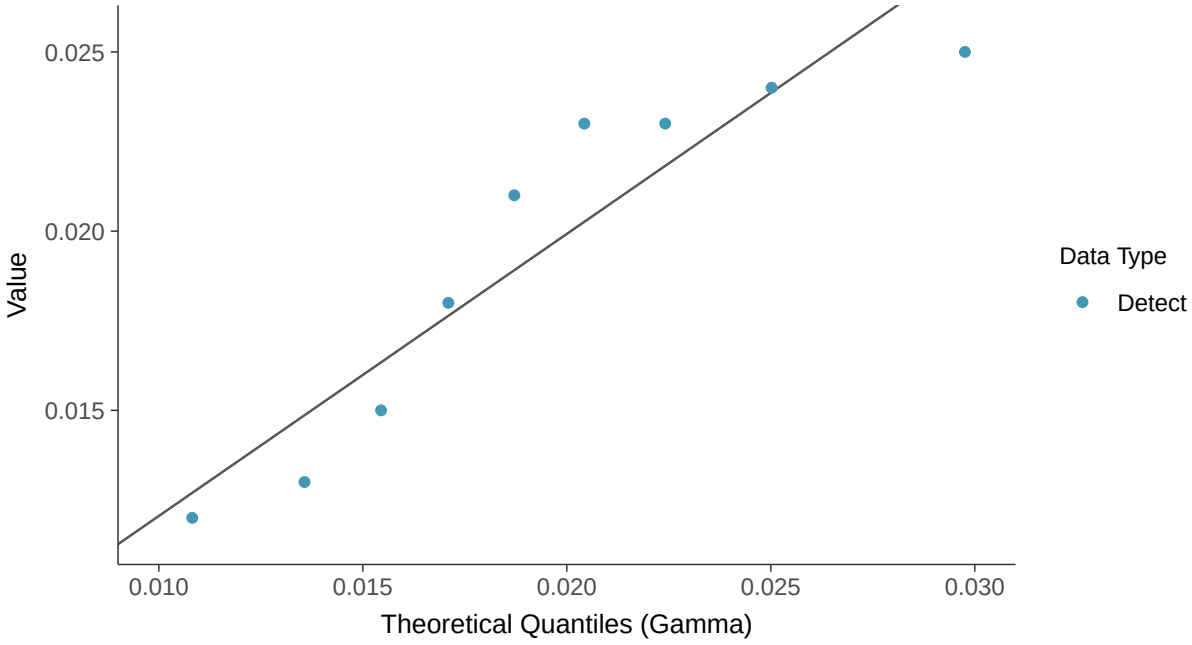
Lognormal Q-Q plot

Barium, MW-18 (mg/L)



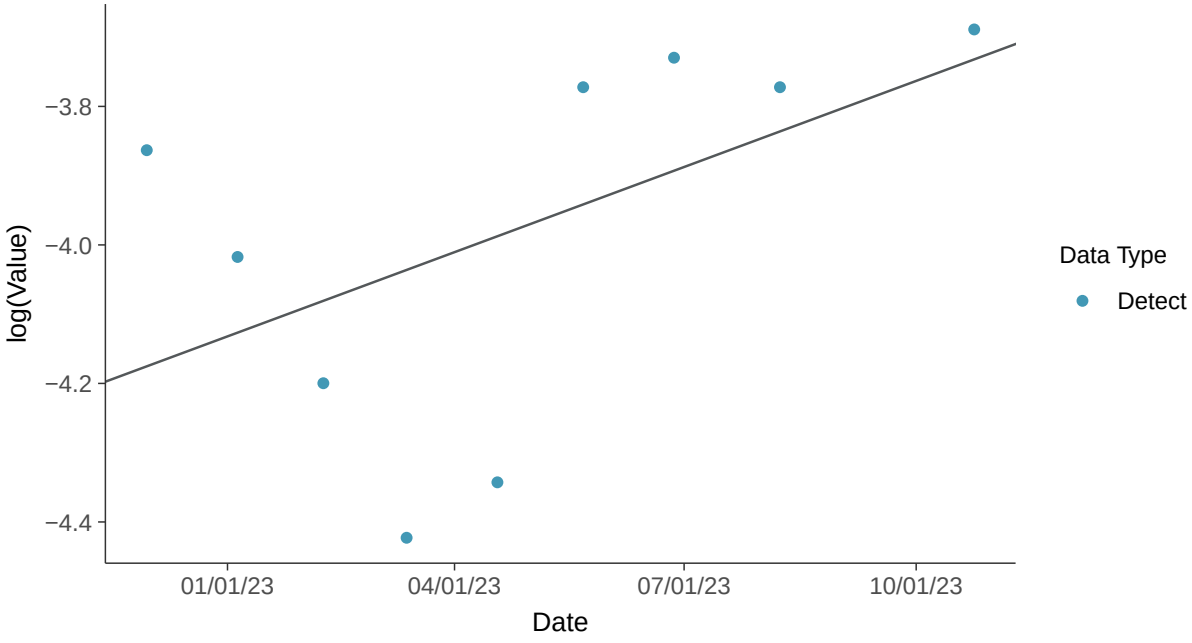
Gamma Q-Q plot

Barium, MW-18 (mg/L)



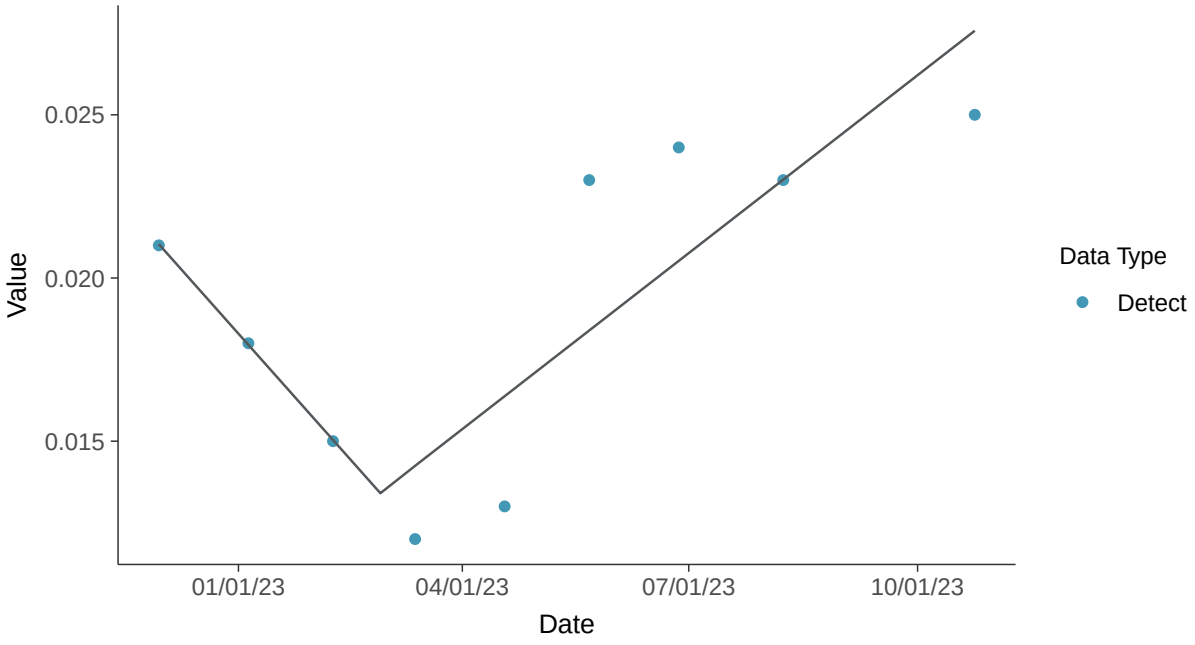
Trend Regression: Lognormal MLE

Barium, MW-18 (mg/L)



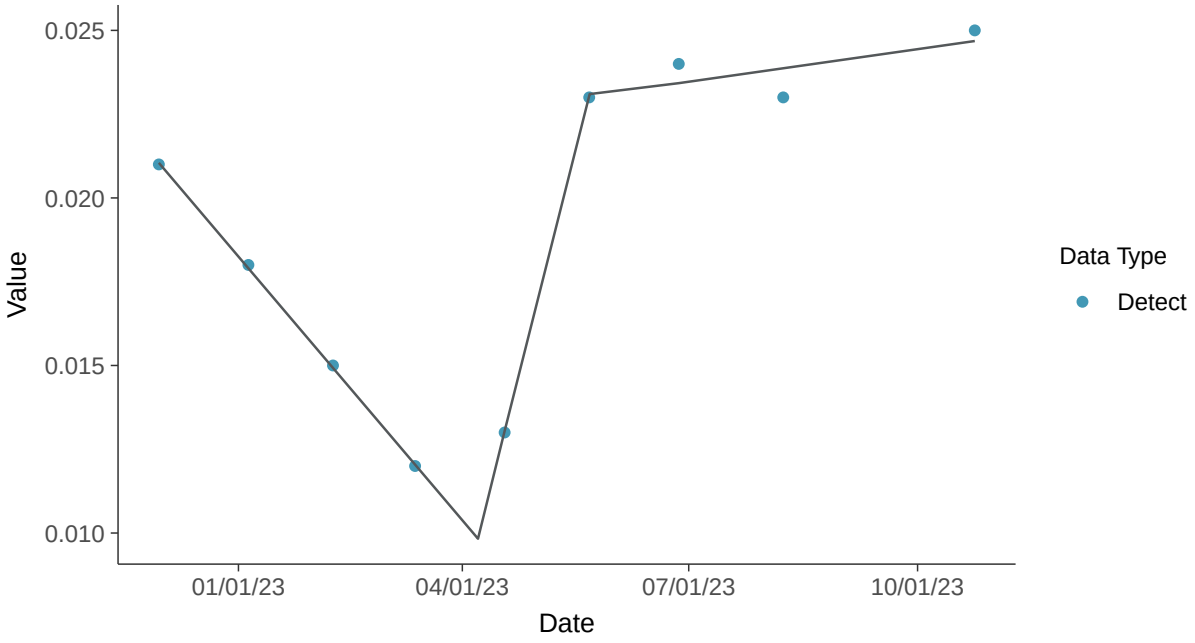
Trend Regression: Piecewise Linear-Linear

Barium, MW-18 (mg/L)



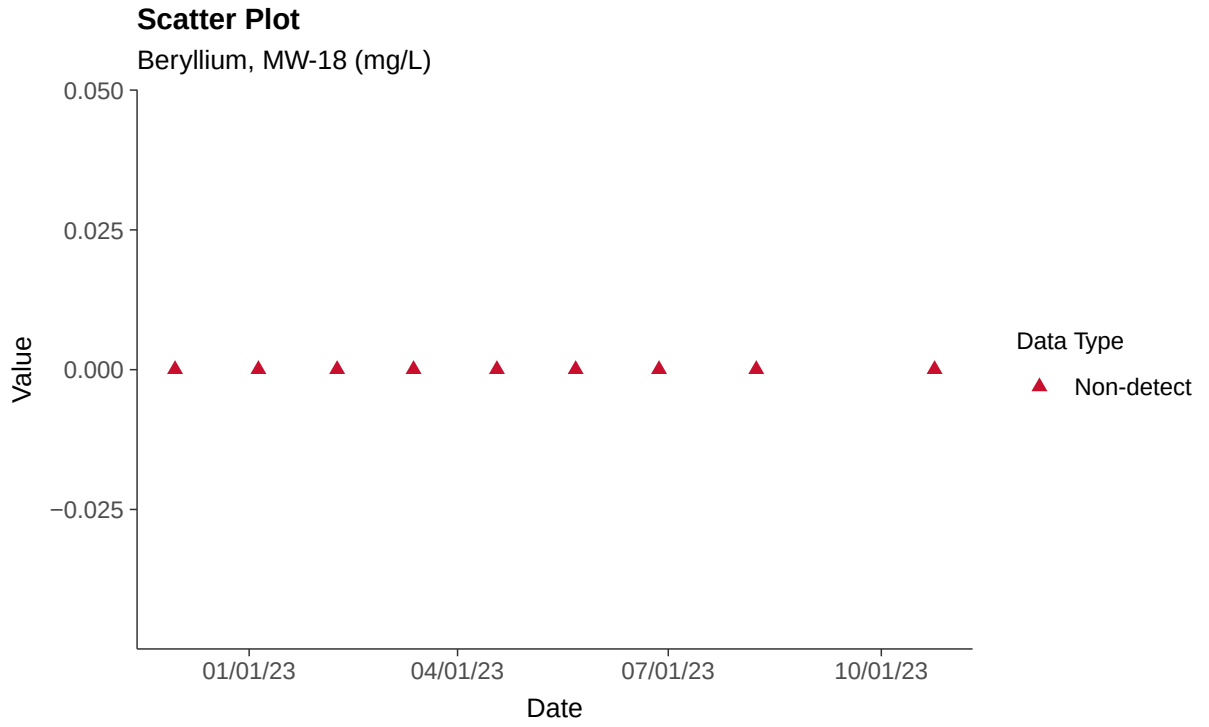
Trend Regression: Piecewise Linear-Linear-Linear

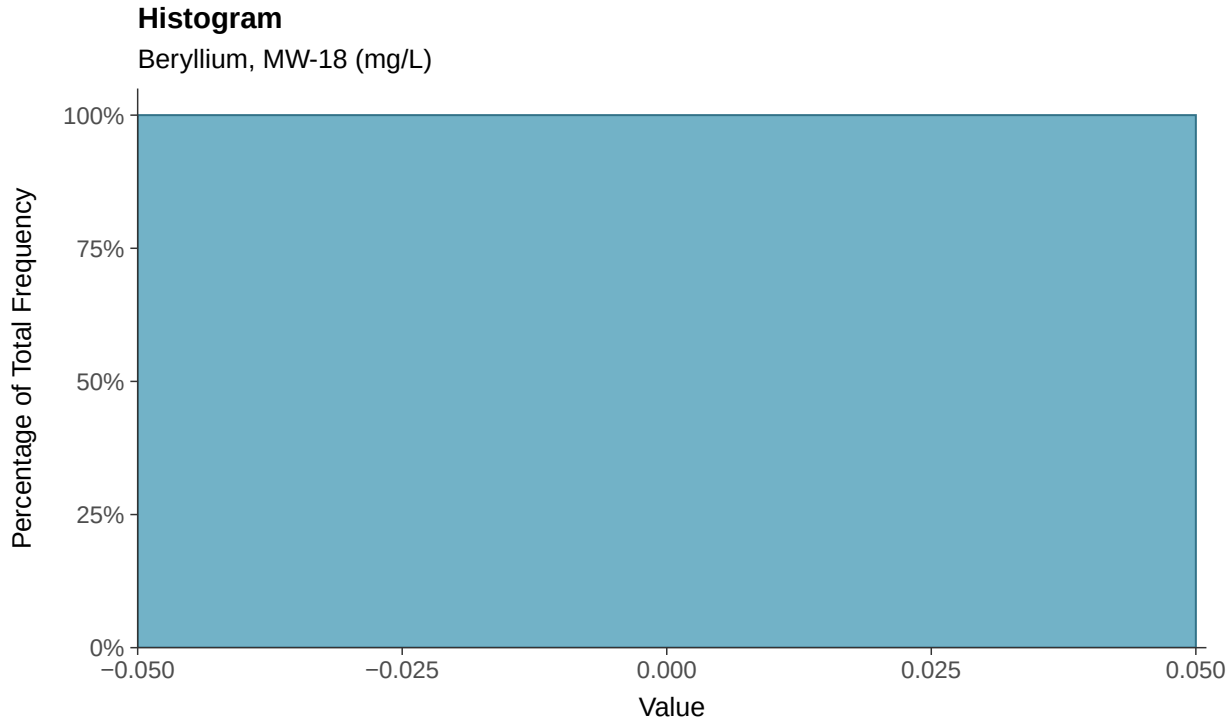
Barium, MW-18 (mg/L)



Appendix IV: Beryllium, MW-18

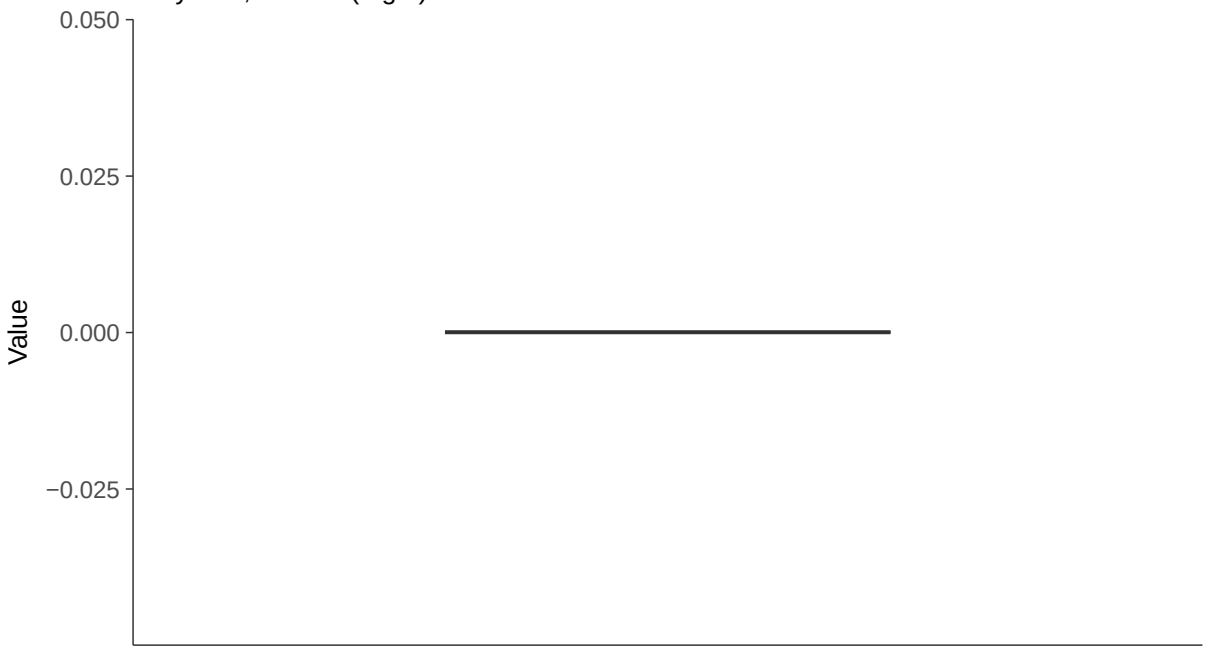
ID: 1_22_5_104





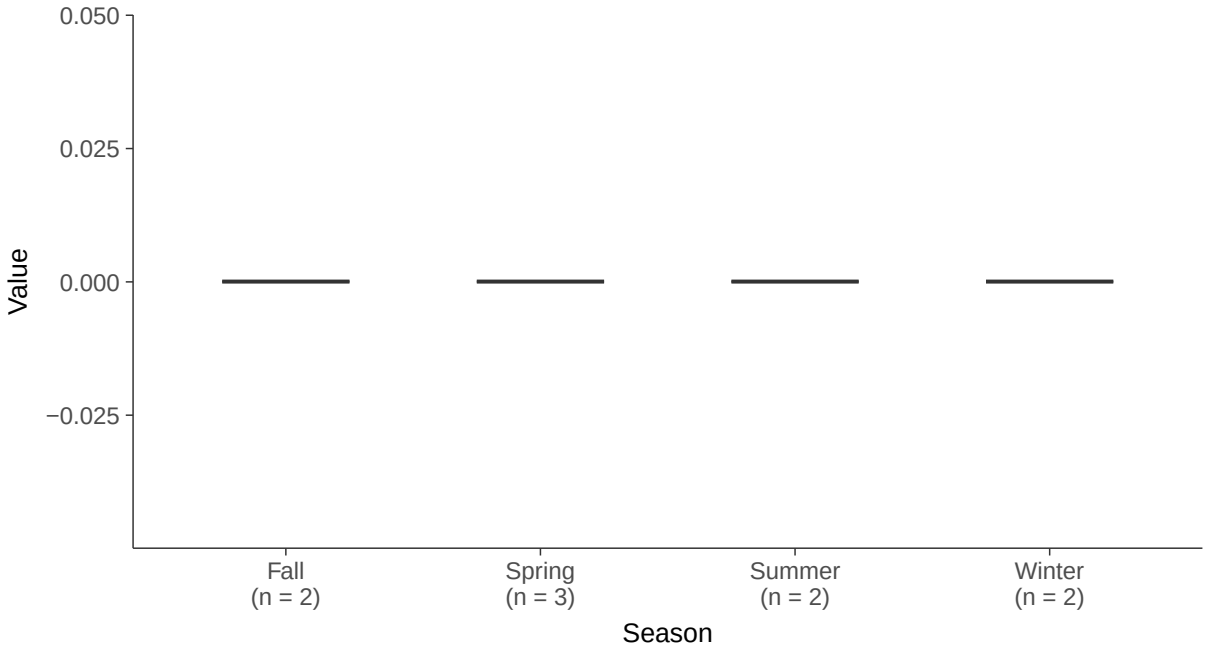
Boxplot

Beryllium, MW-18 (mg/L)



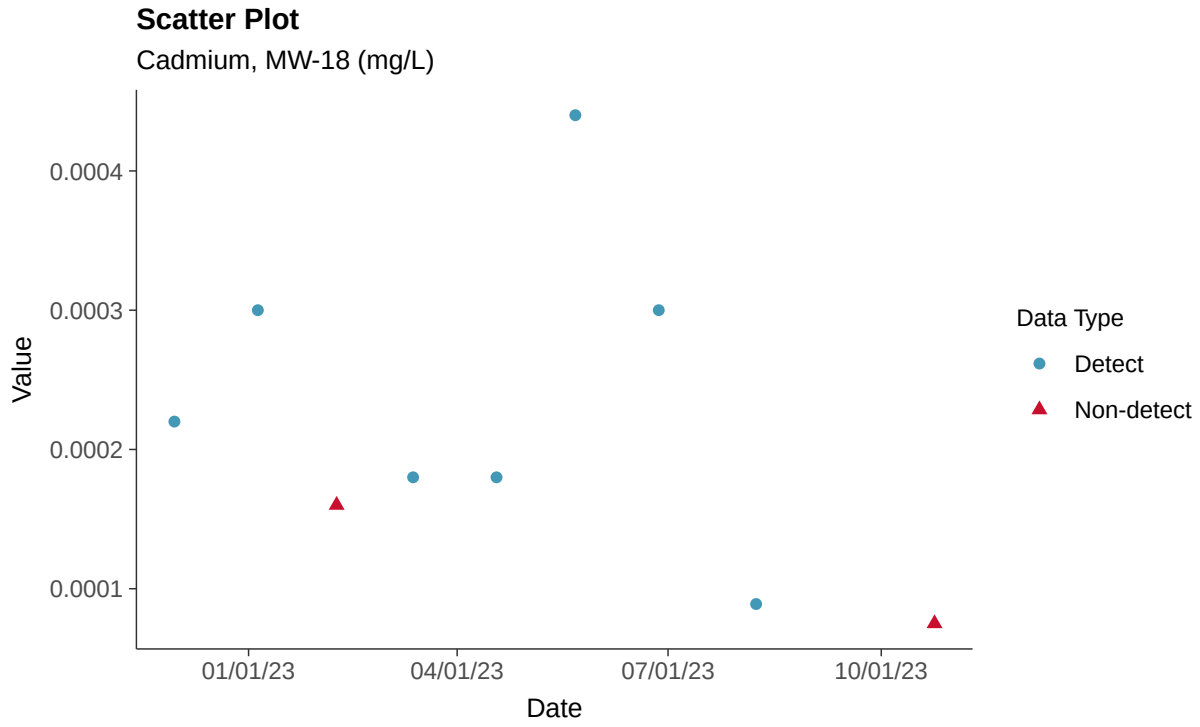
Boxplot by Season

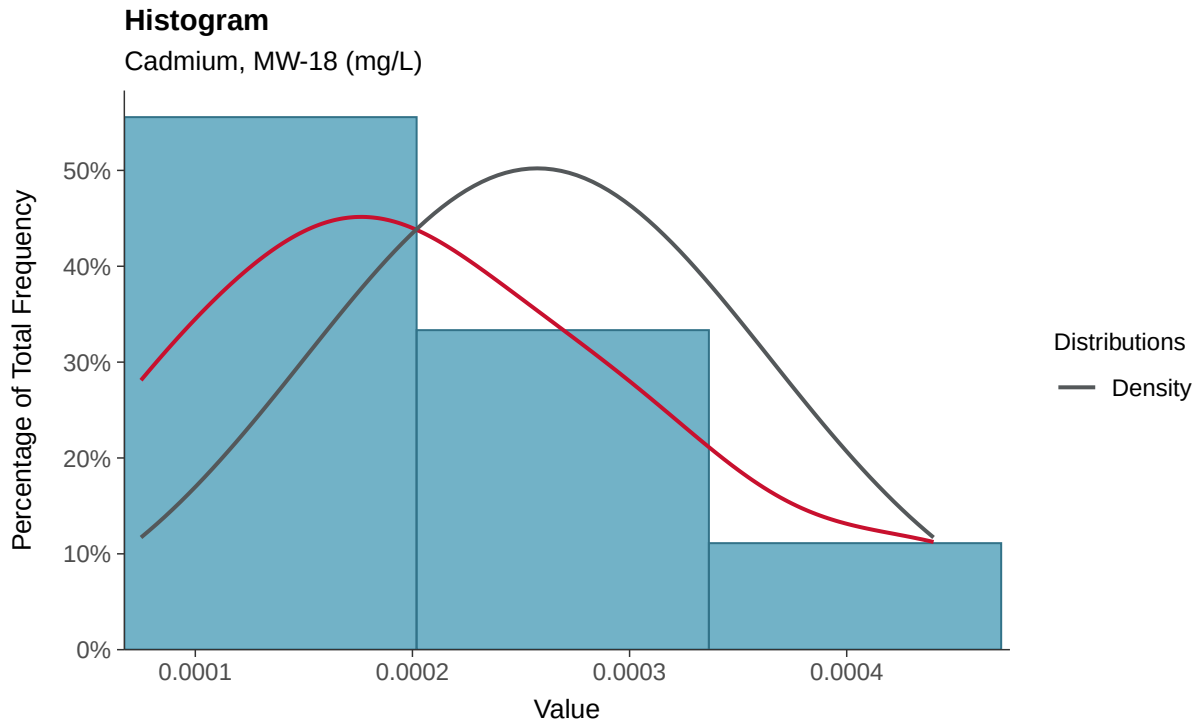
Beryllium, MW-18 (mg/L)



Appendix IV: Cadmium, MW-18

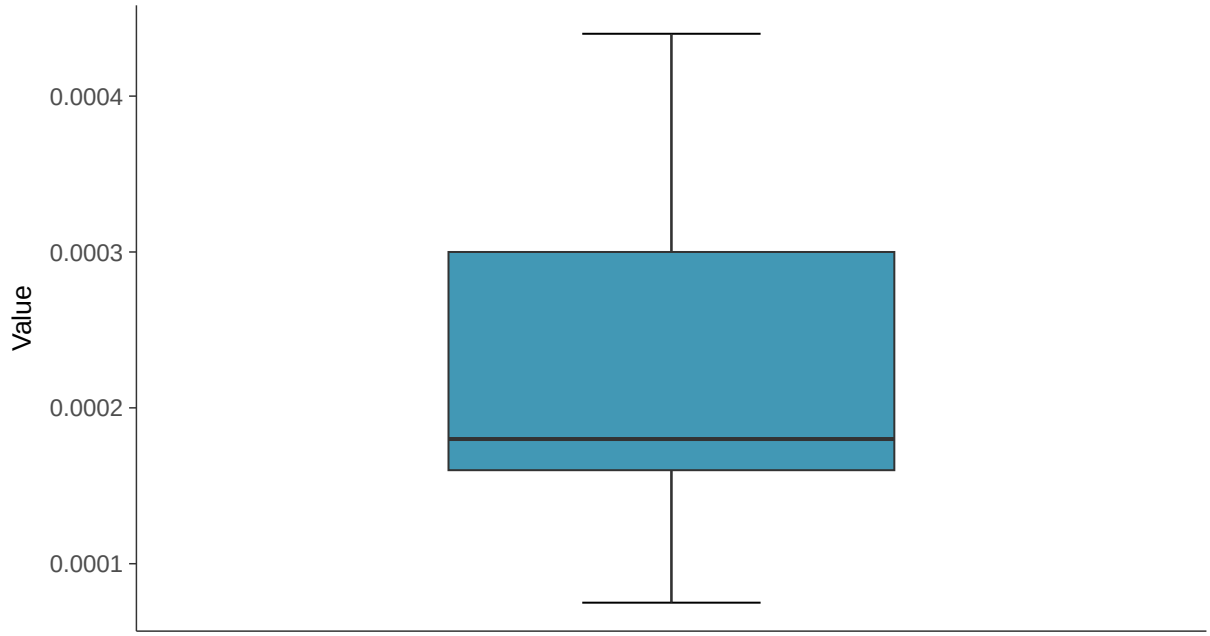
ID: 1_22_5_106





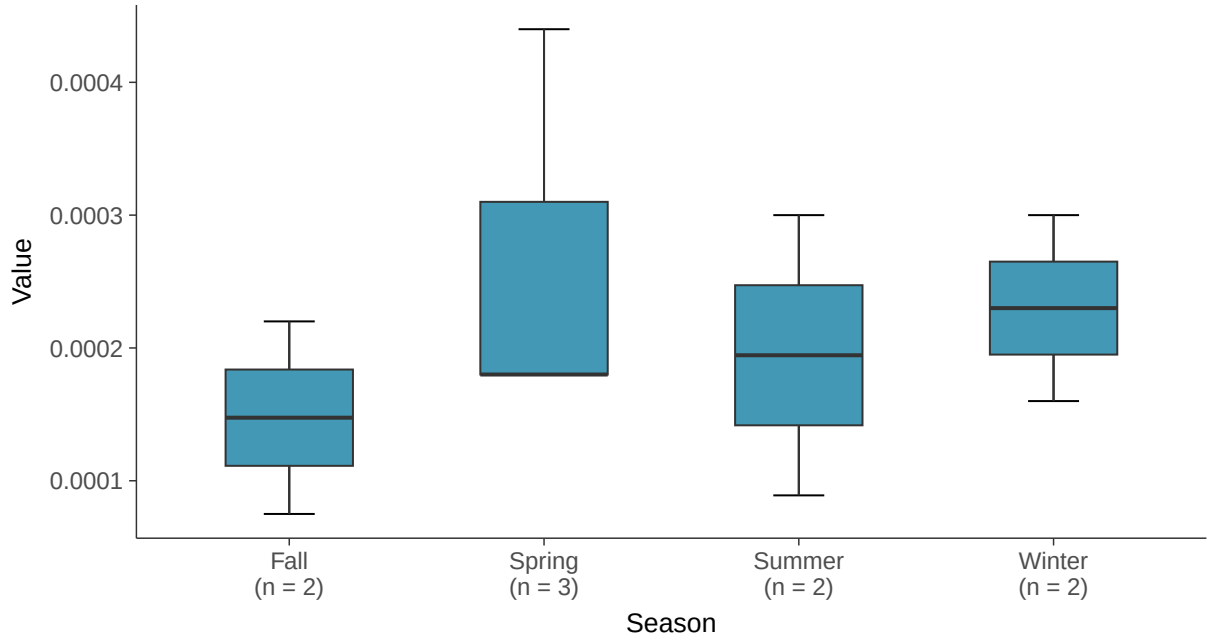
Boxplot

Cadmium, MW-18 (mg/L)



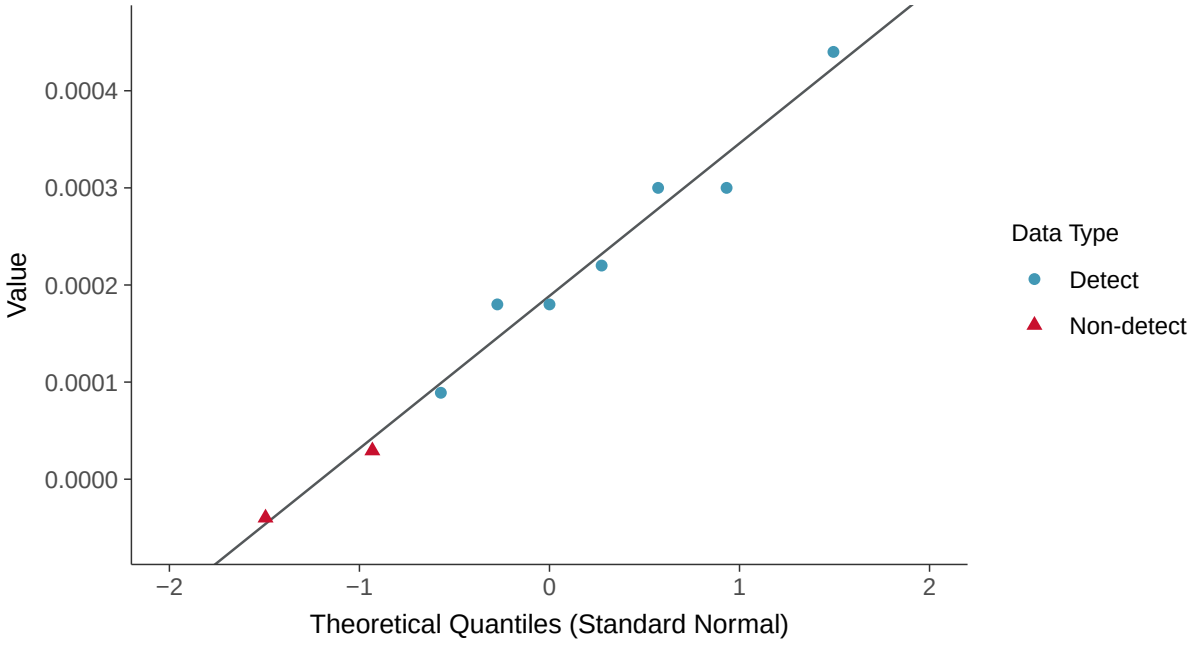
Boxplot by Season

Cadmium, MW-18 (mg/L)



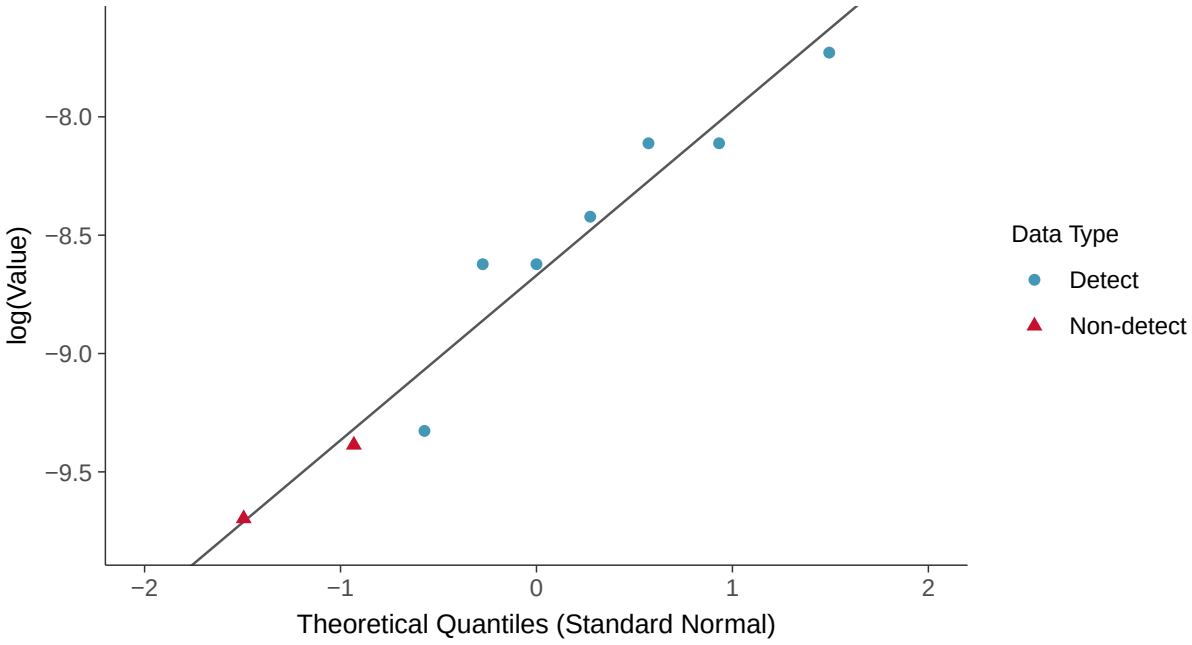
Normal Q-Q plot using ROS Imputed Estimates

Cadmium, MW-18 (mg/L)



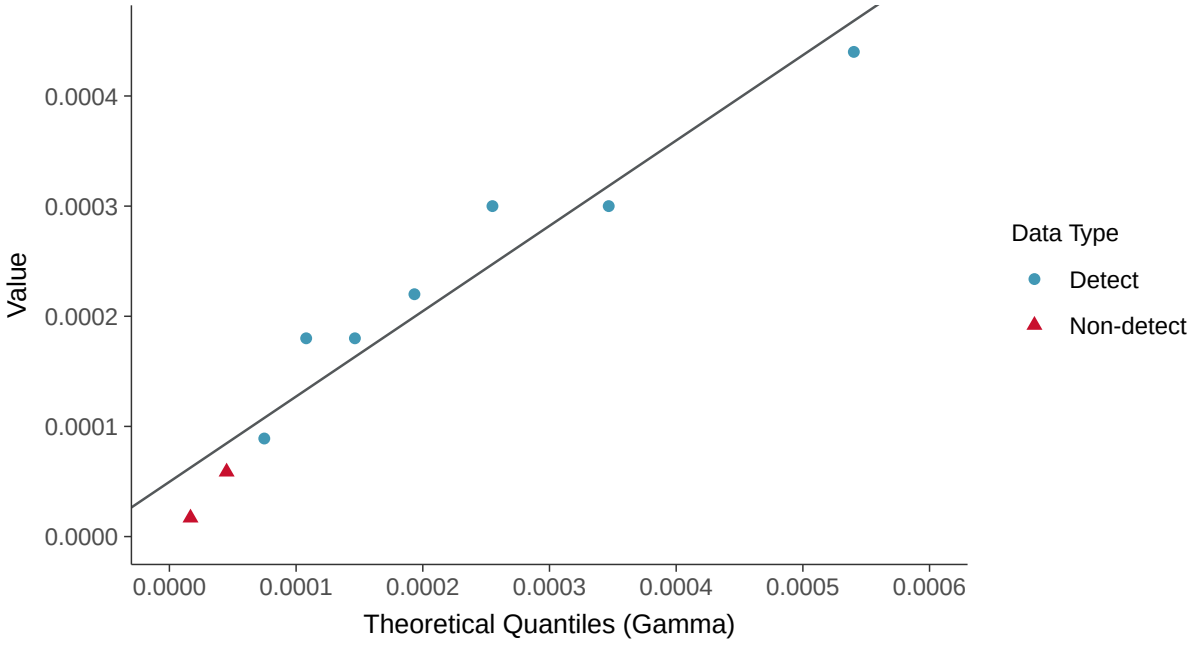
Lognormal Q-Q plot using ROS Imputed Estimates

Cadmium, MW-18 (mg/L)



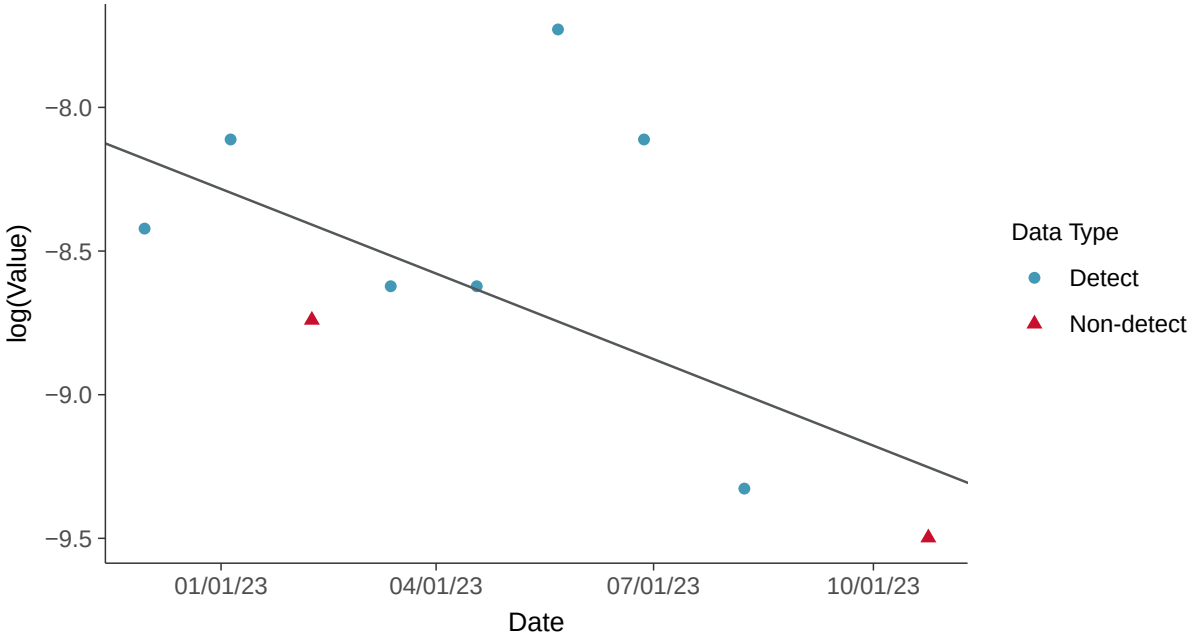
Gamma Q-Q plot using ROS Imputed Estimates

Cadmium, MW-18 (mg/L)



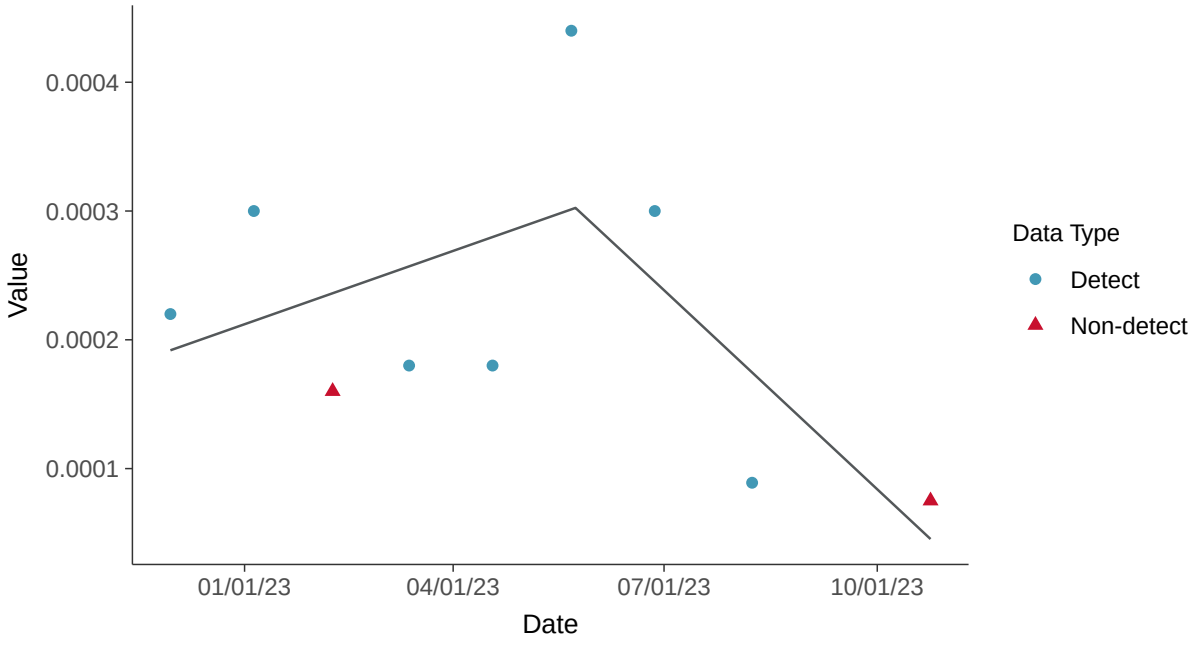
Trend Regression: Lognormal MLE

Cadmium, MW-18 (mg/L)



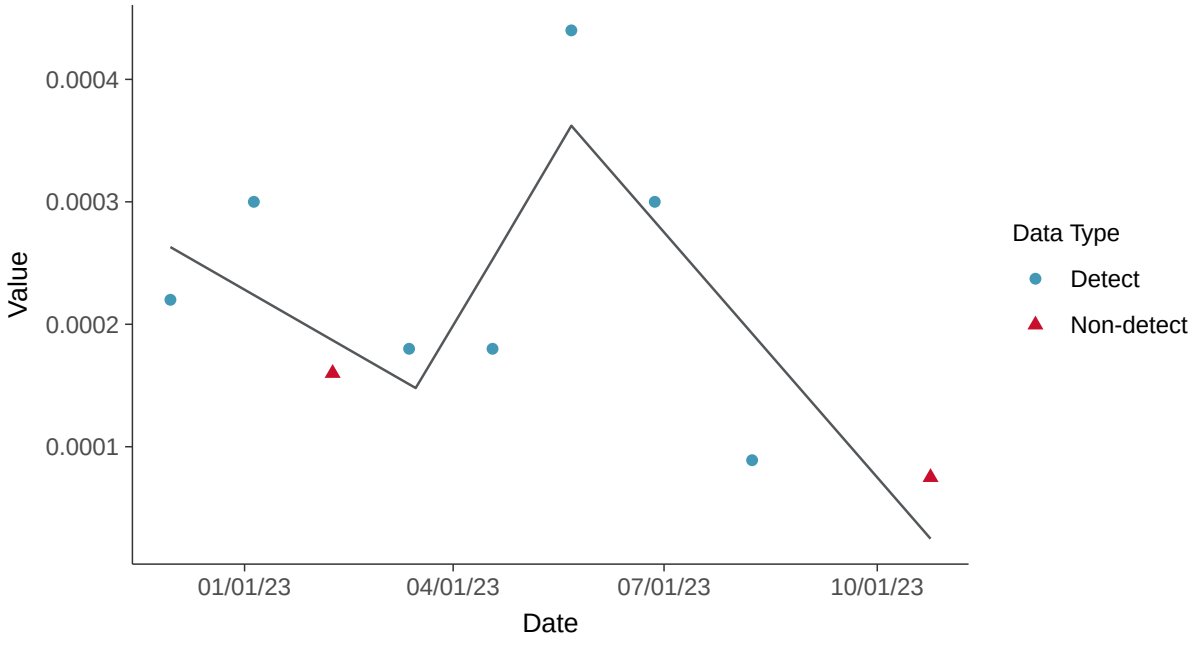
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-18 (mg/L)



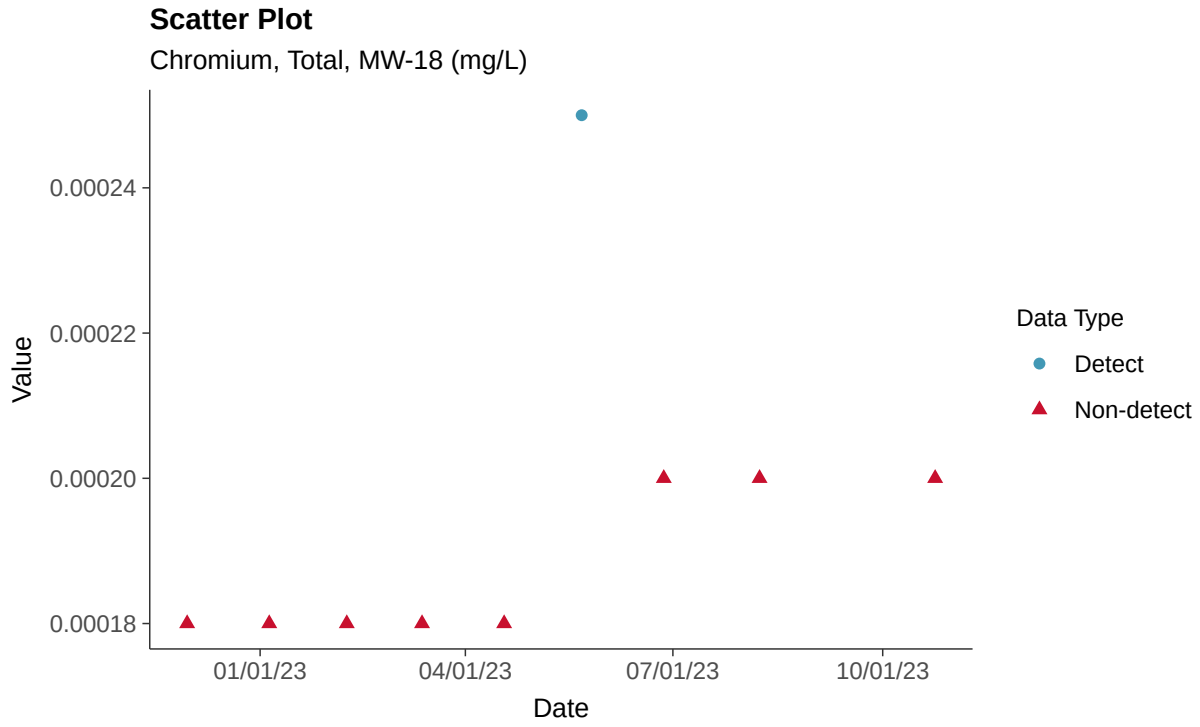
Trend Regression: Piecewise Linear-Linear-Linear

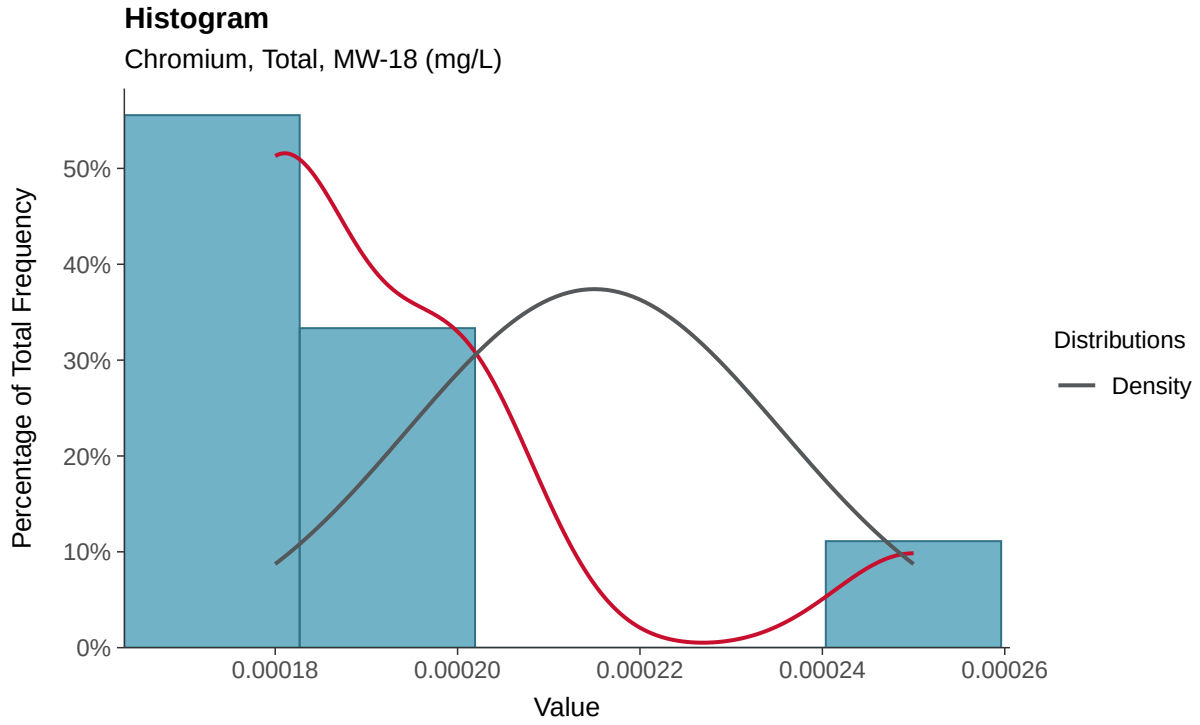
Cadmium, MW-18 (mg/L)



Appendix IV: Chromium, Total, MW-18

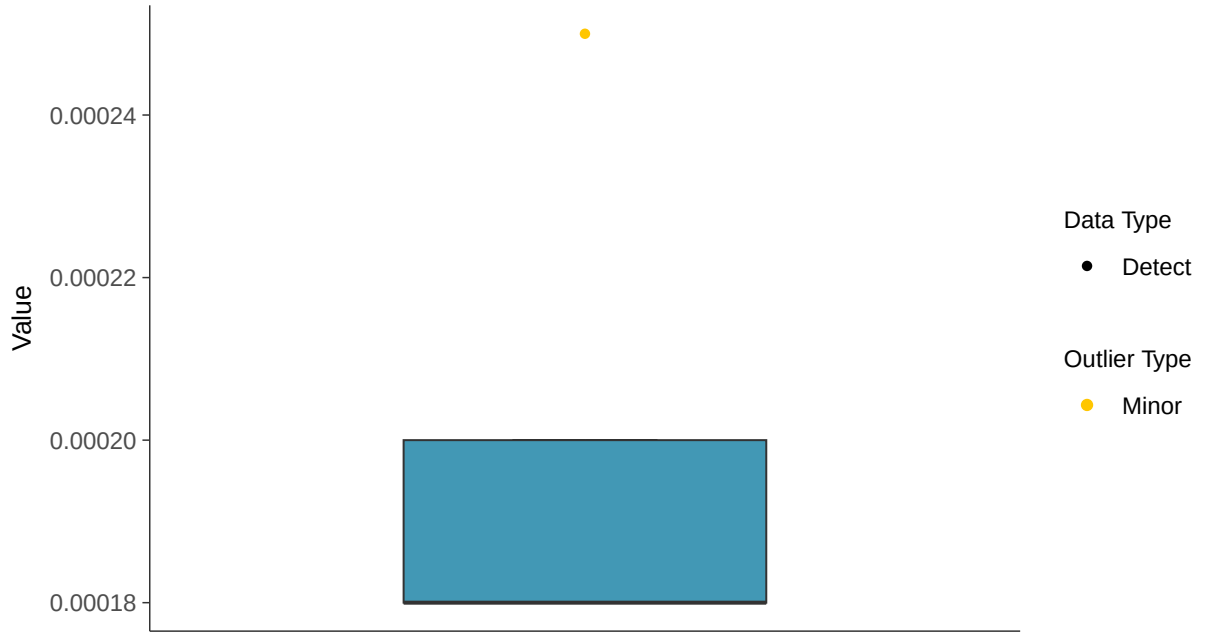
ID: 1_22_5_109





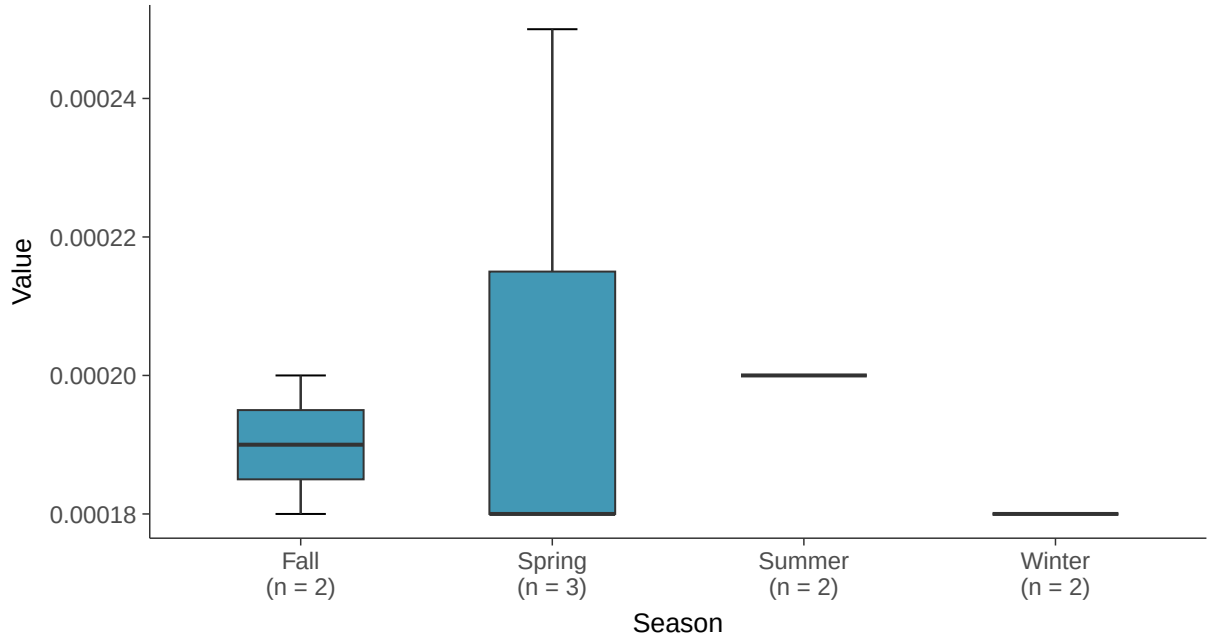
Boxplot

Chromium, Total, MW-18 (mg/L)



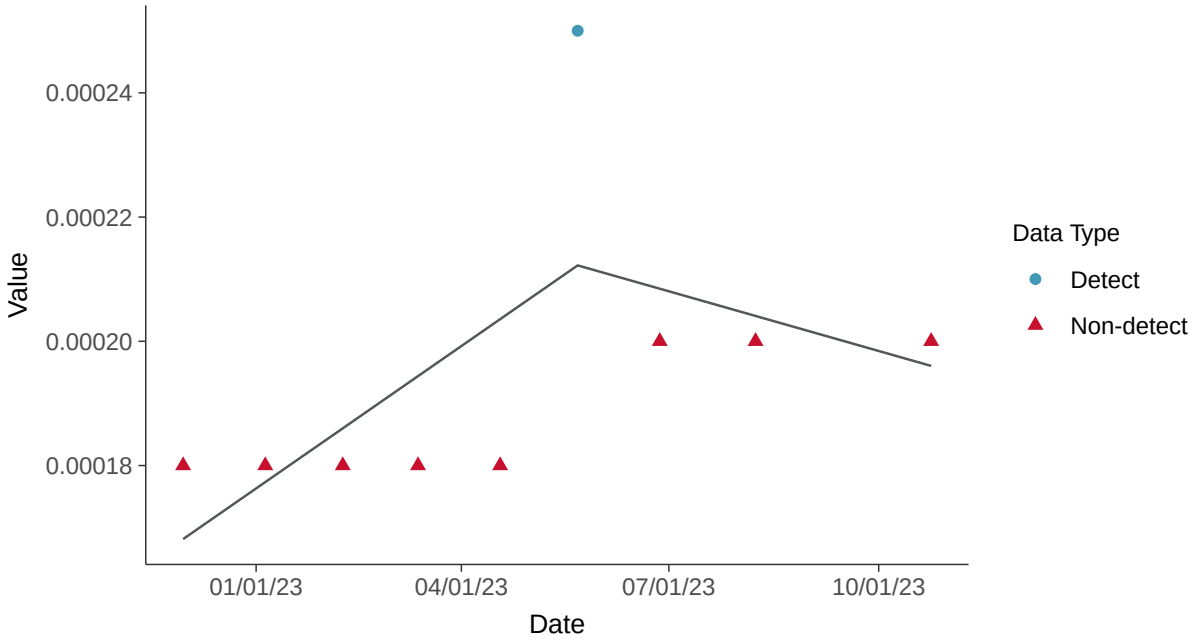
Boxplot by Season

Chromium, Total, MW-18 (mg/L)



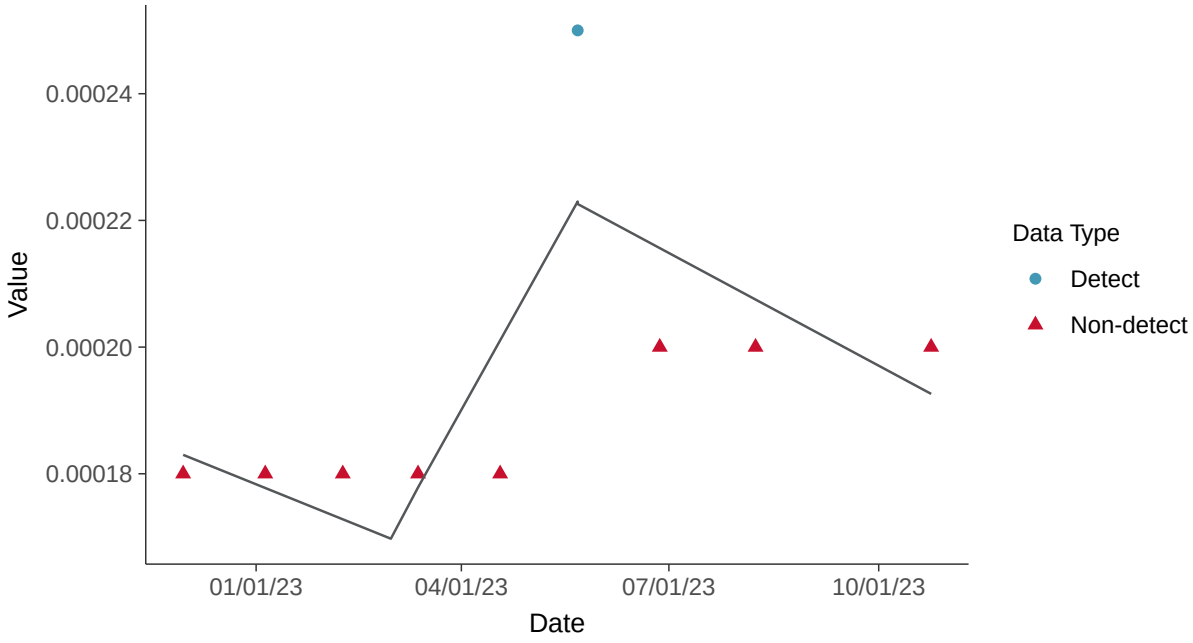
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-18 (mg/L)

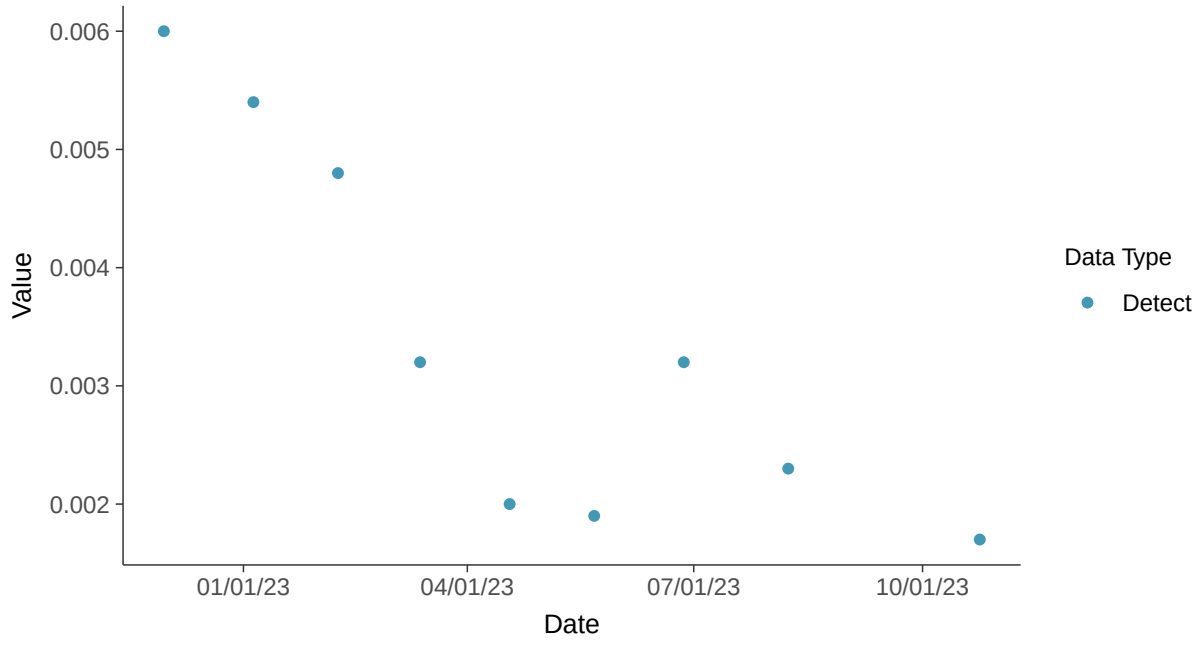


Appendix IV: Cobalt, MW-18

ID: 1_22_5_110

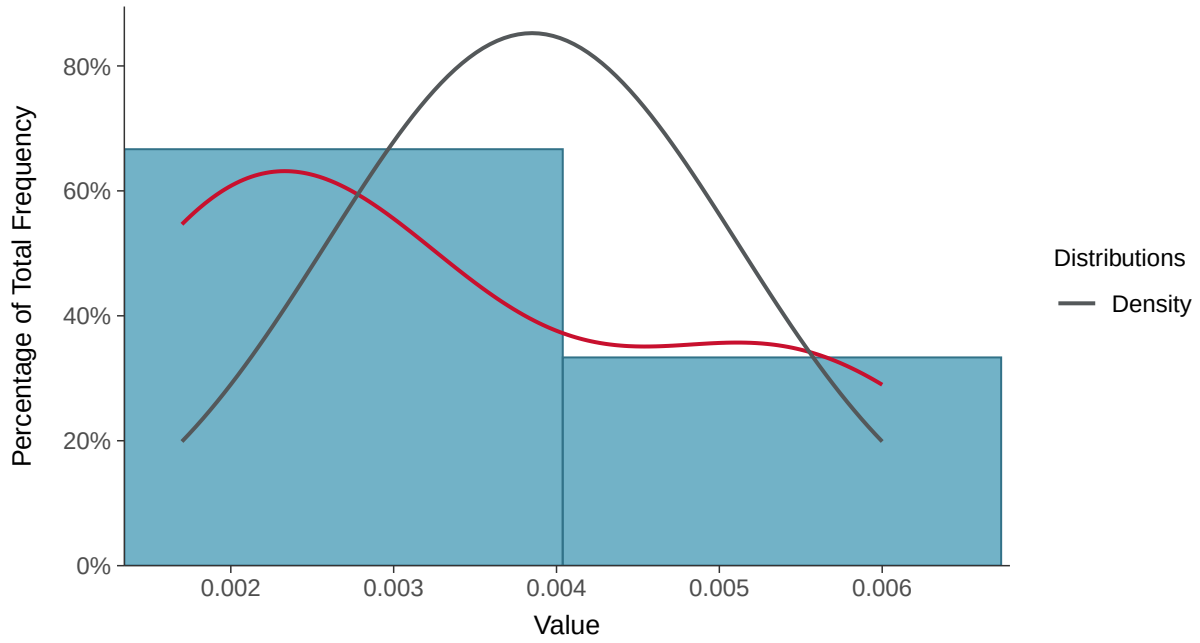
Scatter Plot

Cobalt, MW-18 (mg/L)



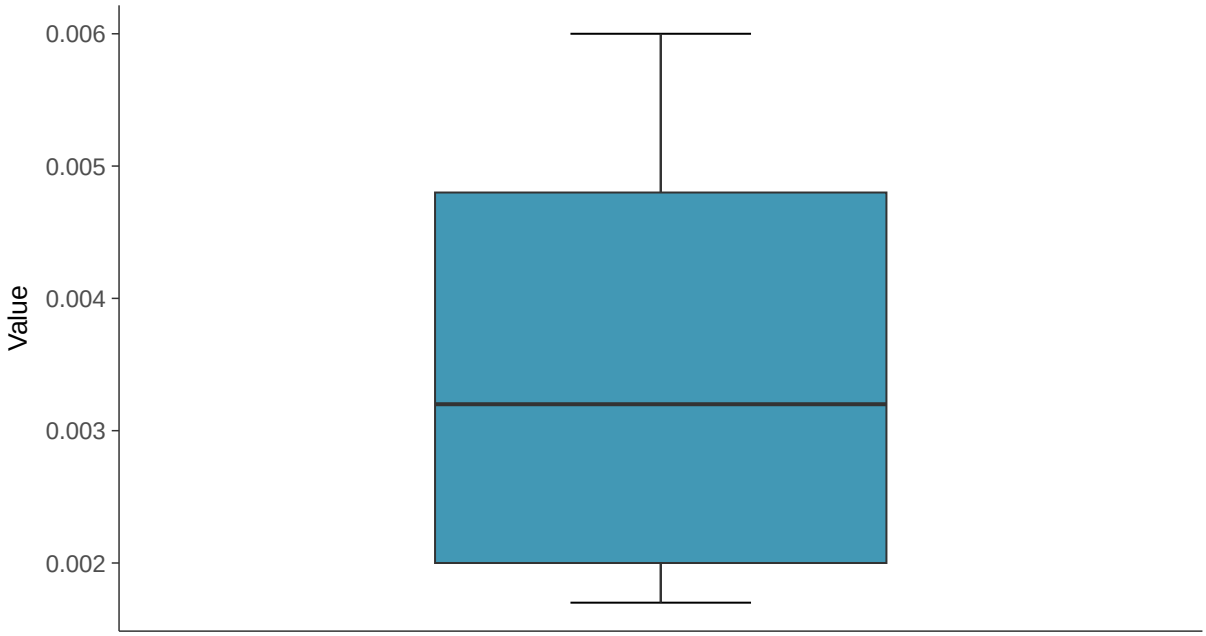
Histogram

Cobalt, MW-18 (mg/L)



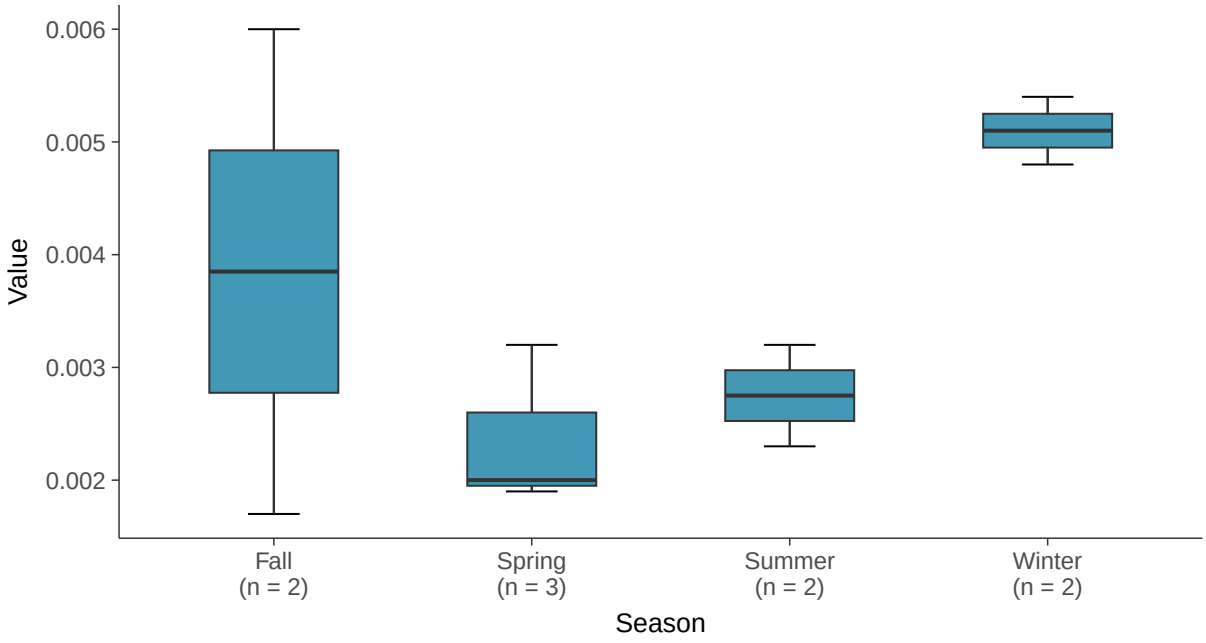
Boxplot

Cobalt, MW-18 (mg/L)



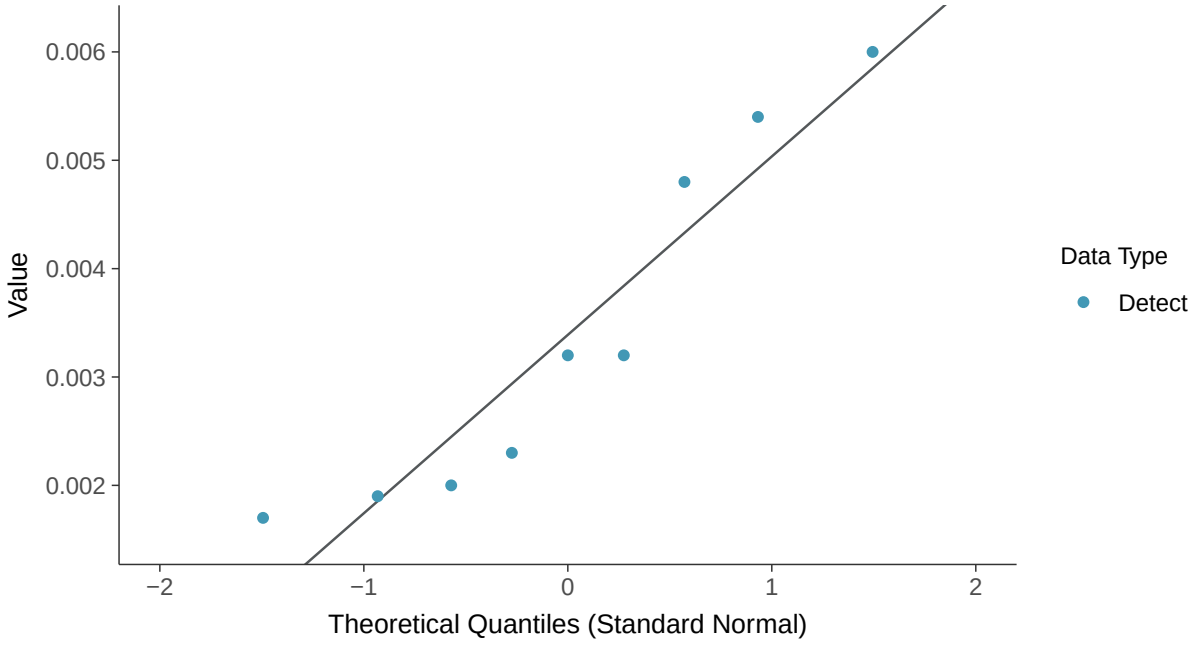
Boxplot by Season

Cobalt, MW-18 (mg/L)



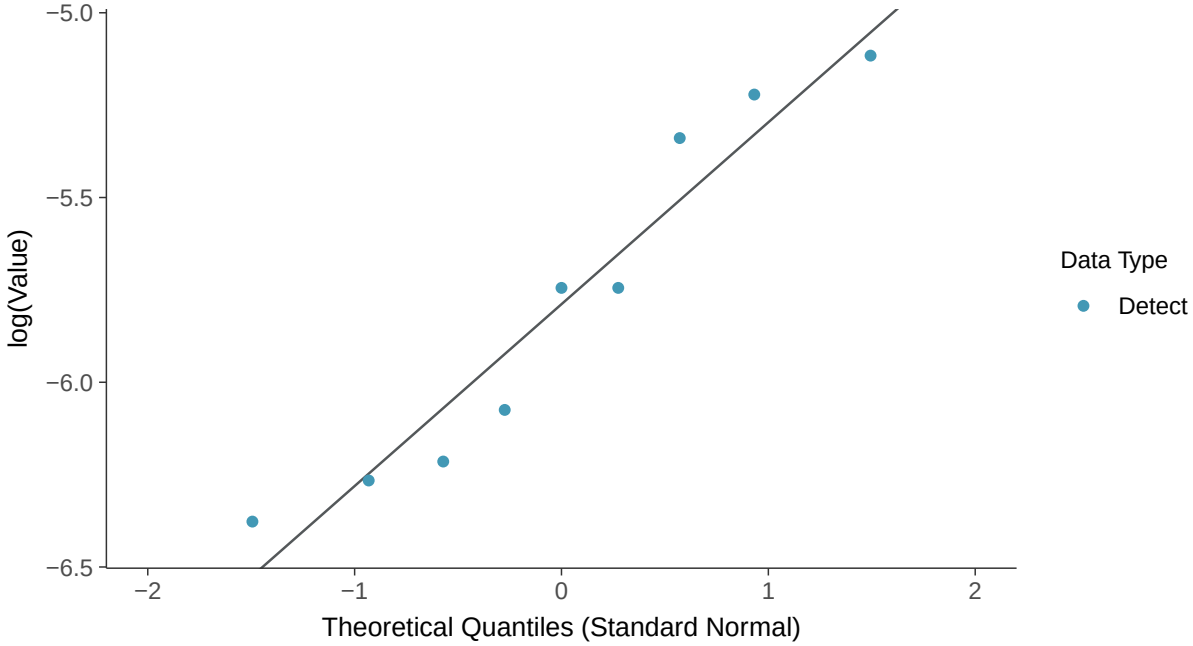
Normal Q-Q plot

Cobalt, MW-18 (mg/L)



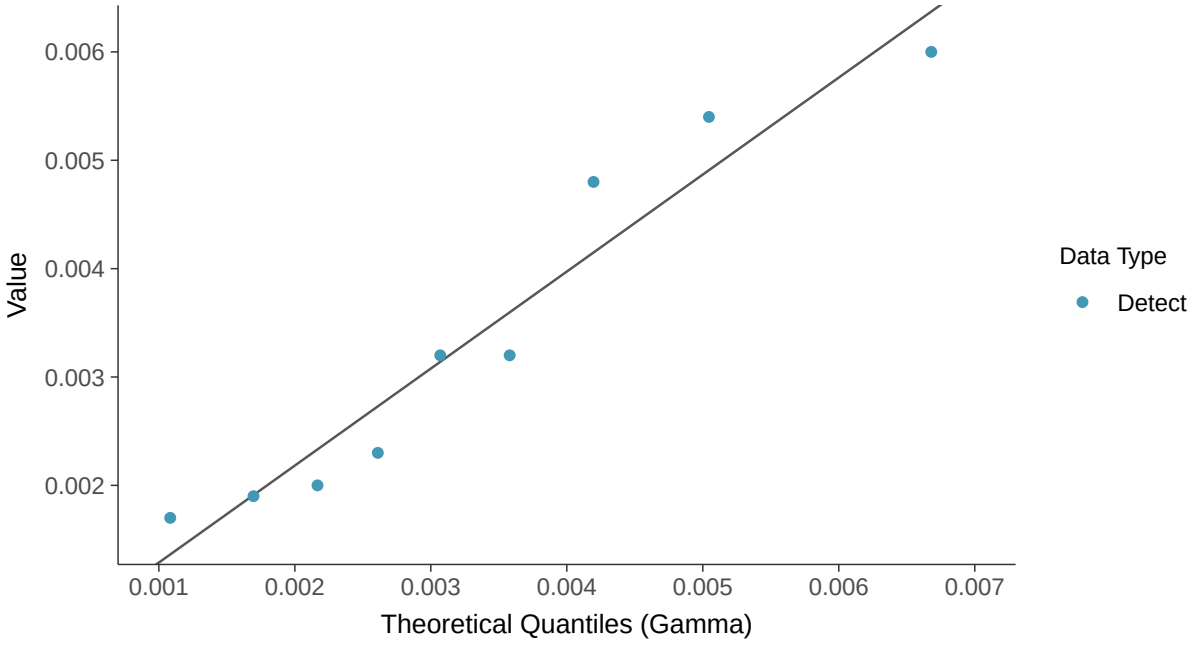
Lognormal Q-Q plot

Cobalt, MW-18 (mg/L)



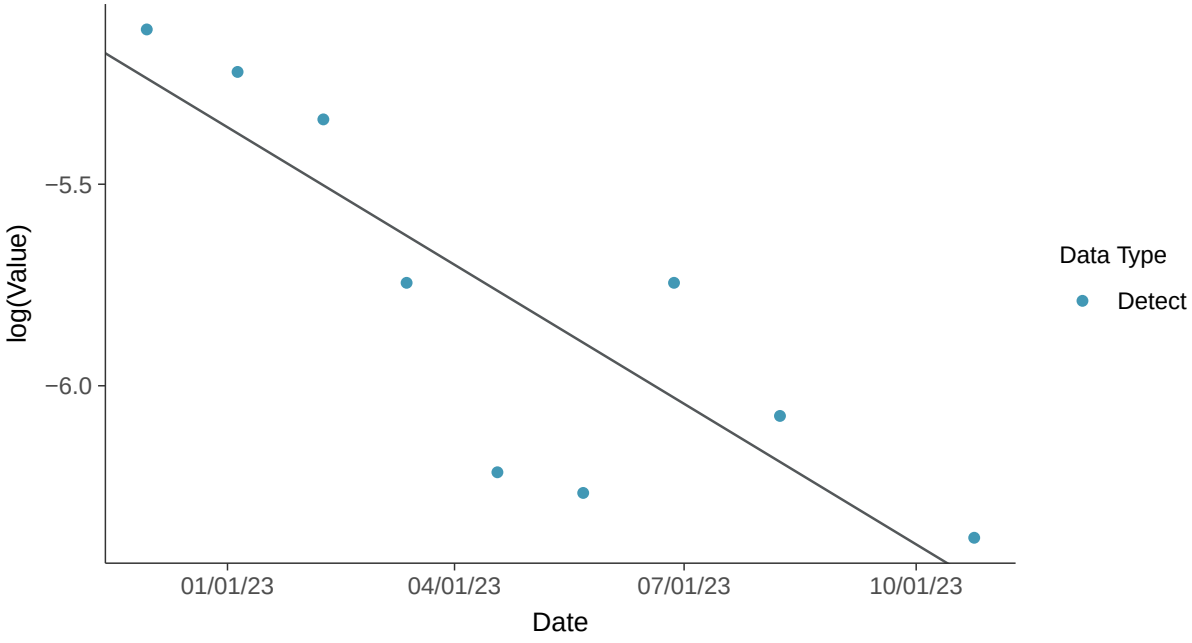
Gamma Q-Q plot

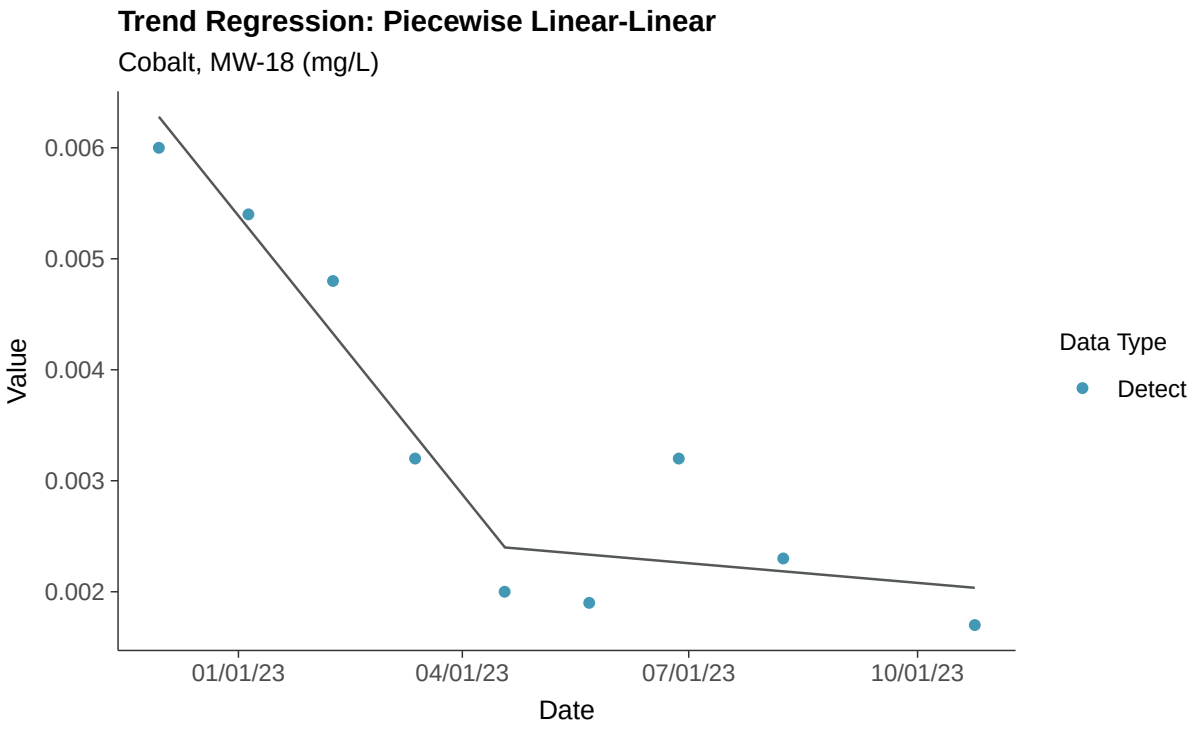
Cobalt, MW-18 (mg/L)



Trend Regression: Lognormal MLE

Cobalt, MW-18 (mg/L)



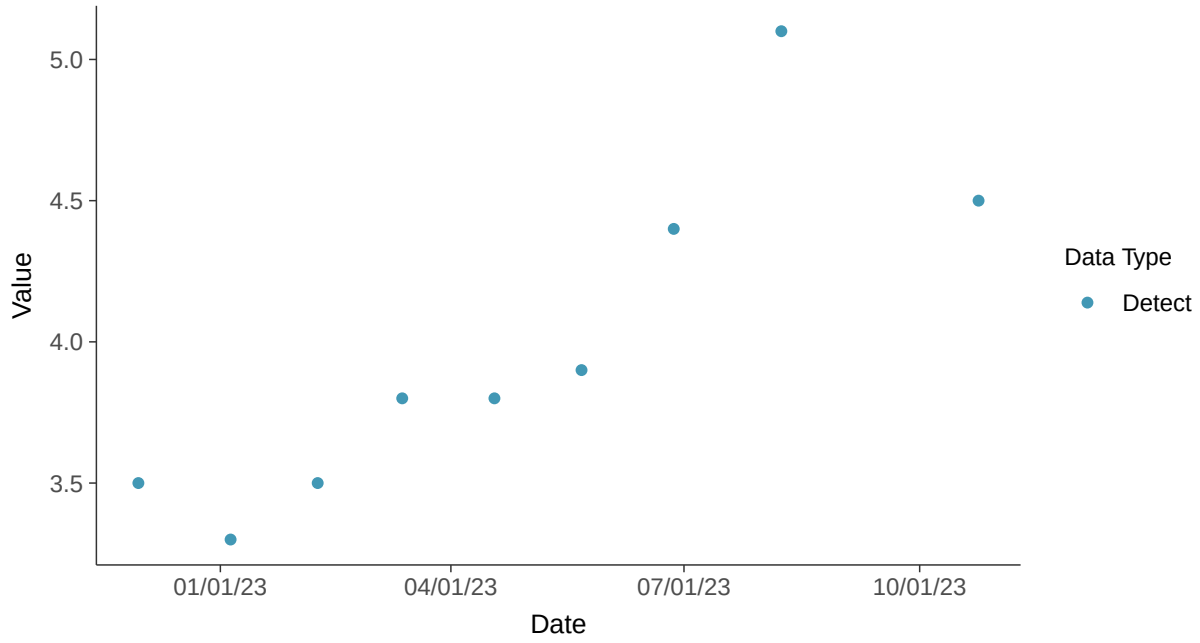

Trend Regression: Piecewise Linear-Linear
Cobalt, MW-18 (mg/L)
0.006
0.005
0.004
0.003
0.002
Value
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect

Appendix IV: Fluoride (App IV), MW-18

ID: 1_22_5_113

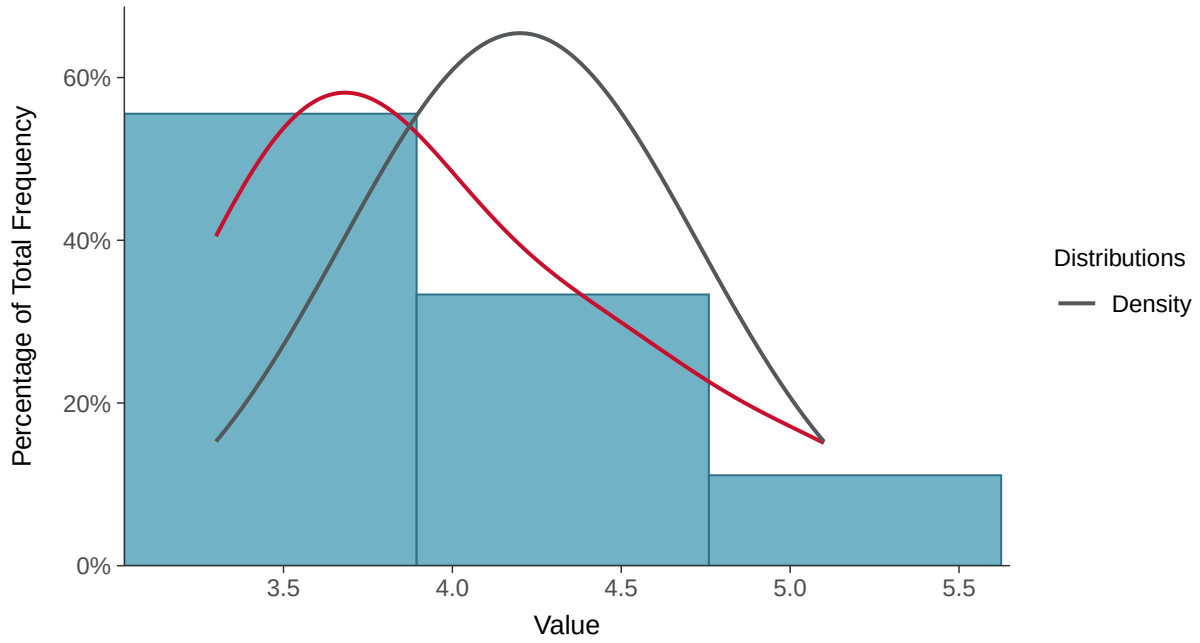
Scatter Plot

Fluoride (App IV), MW-18 (mg/L)



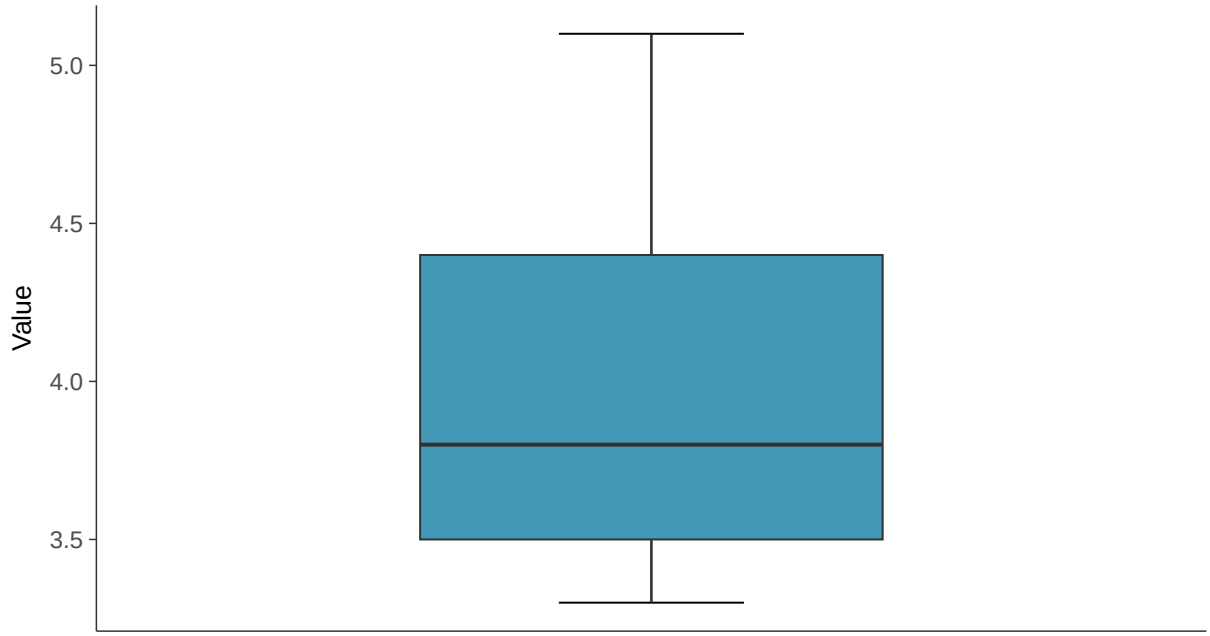
Histogram

Fluoride (App IV), MW-18 (mg/L)



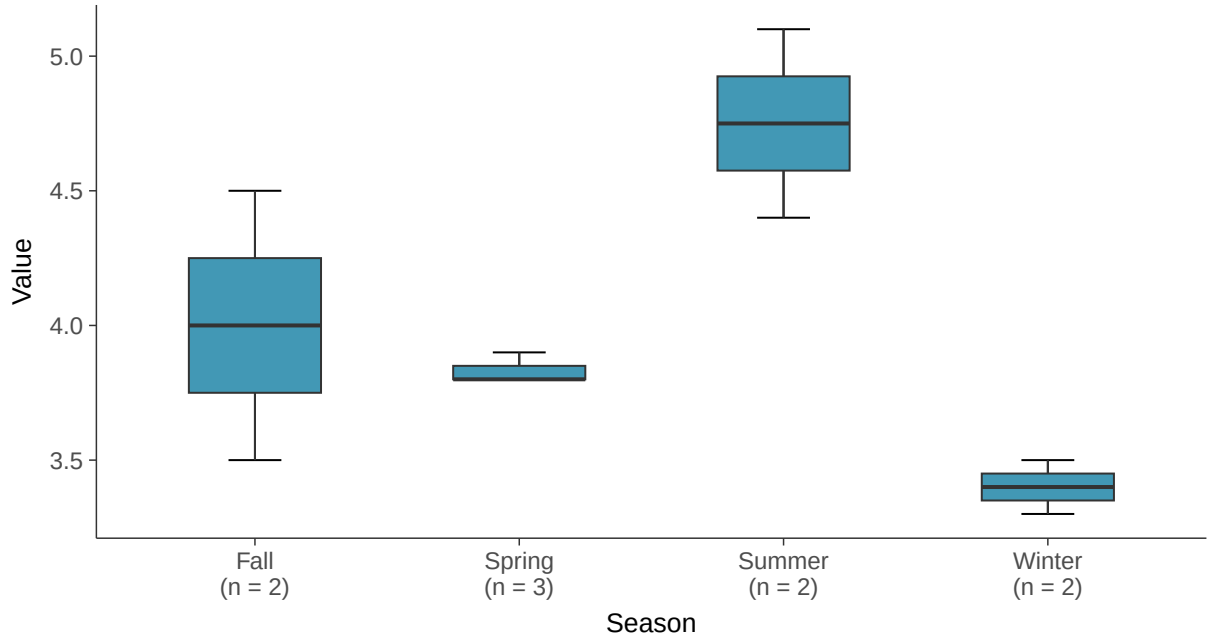
Boxplot

Fluoride (App IV), MW-18 (mg/L)



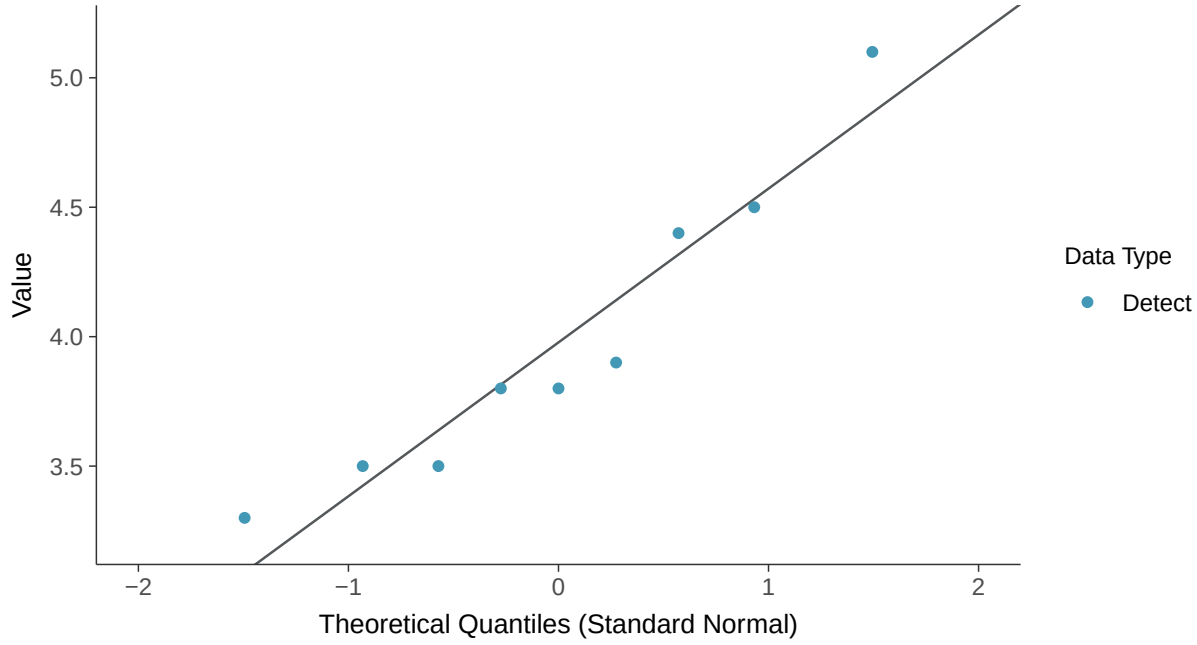
Boxplot by Season

Fluoride (App IV), MW-18 (mg/L)



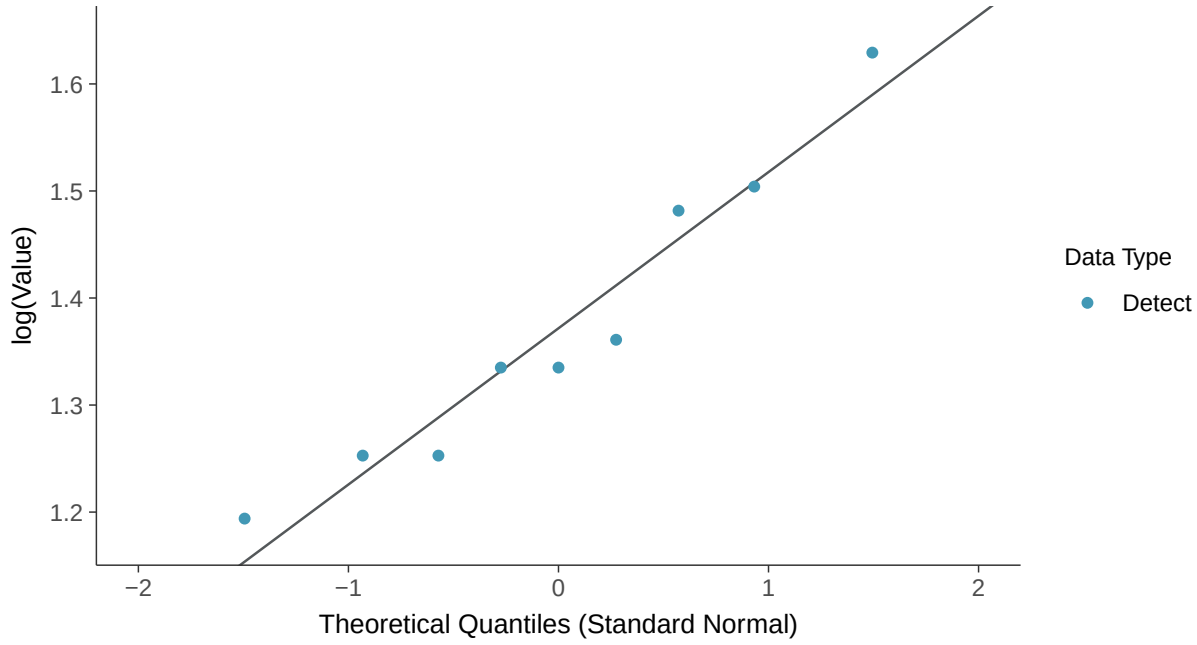
Normal Q-Q plot

Fluoride (App IV), MW-18 (mg/L)



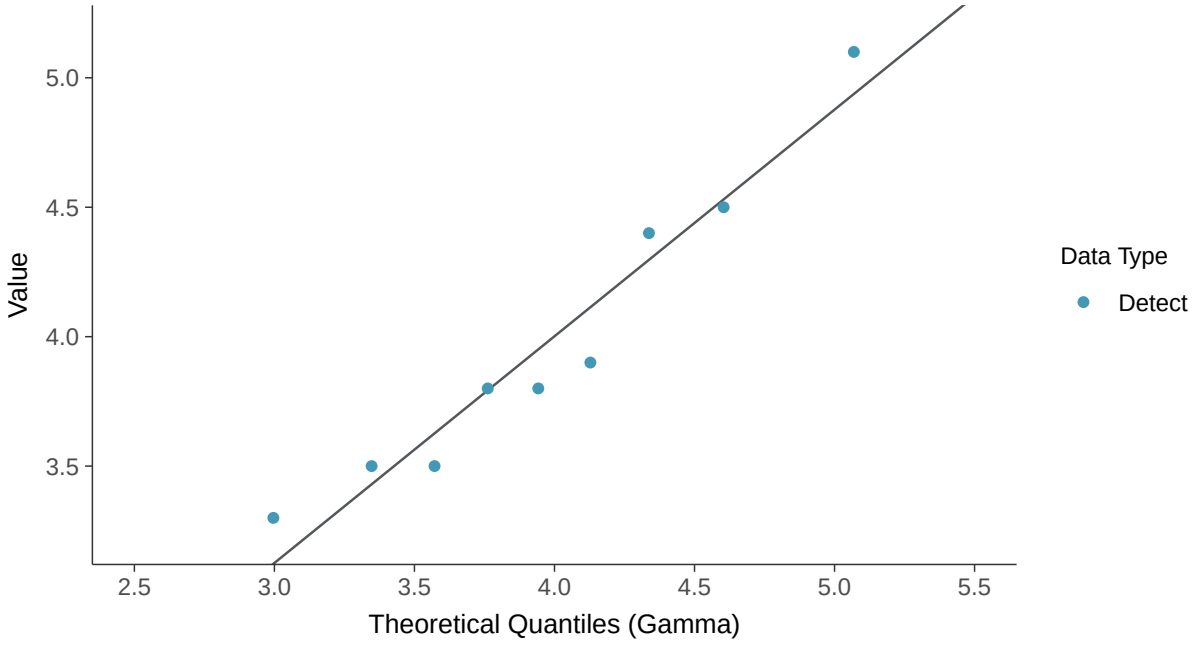
Lognormal Q-Q plot

Fluoride (App IV), MW-18 (mg/L)



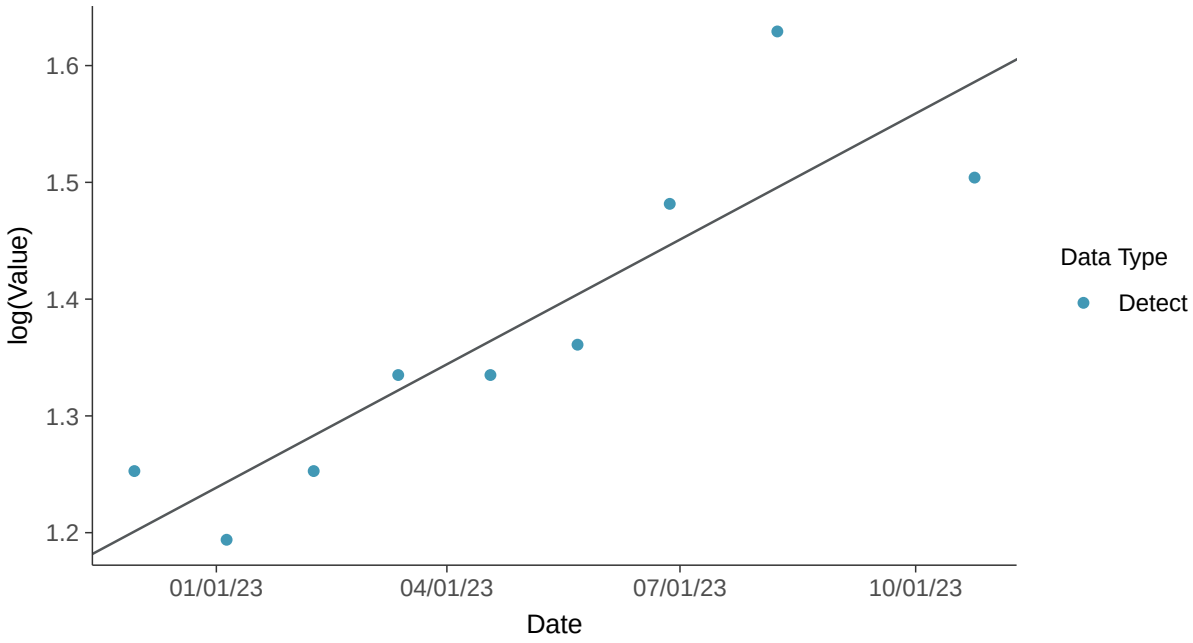
Gamma Q-Q plot

Fluoride (App IV), MW-18 (mg/L)



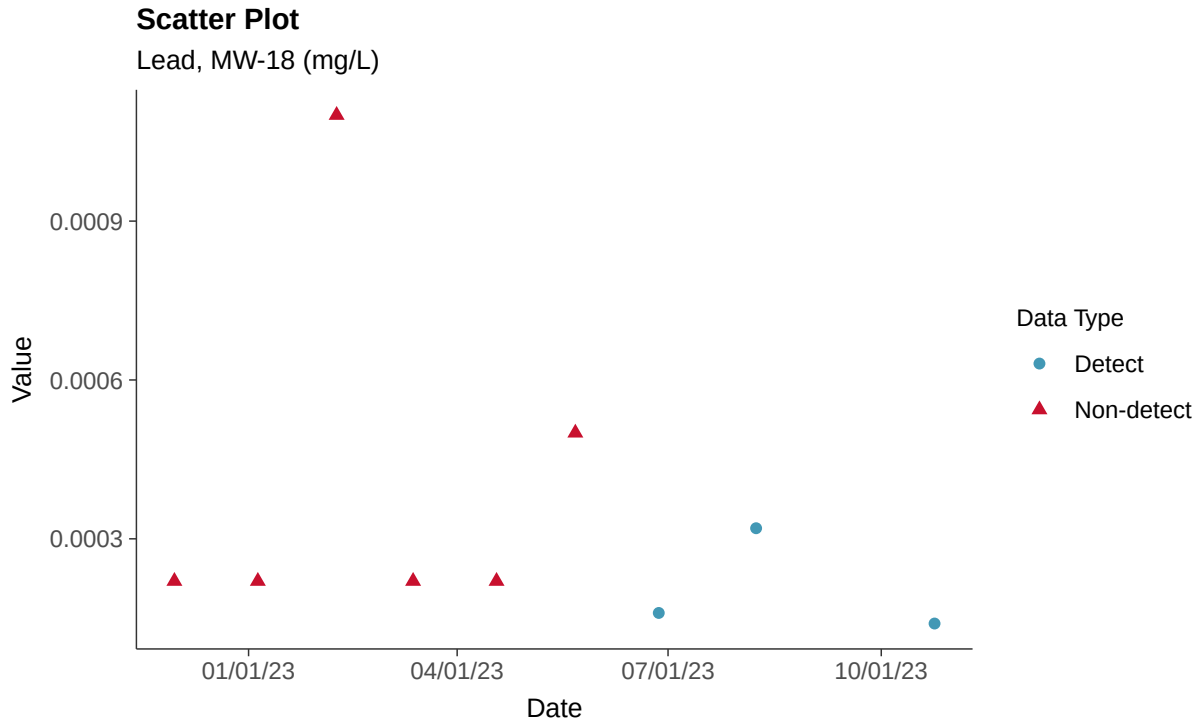
Trend Regression: Lognormal MLE

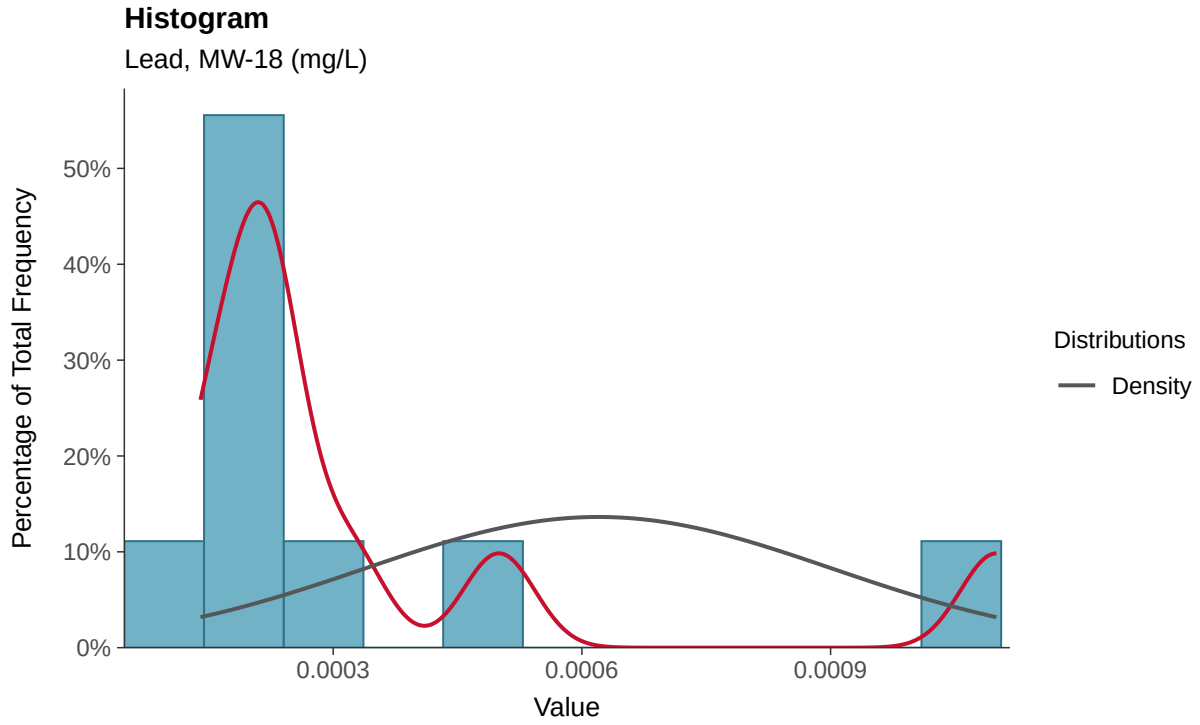
Fluoride (App IV), MW-18 (mg/L)



Appendix IV: Lead, MW-18

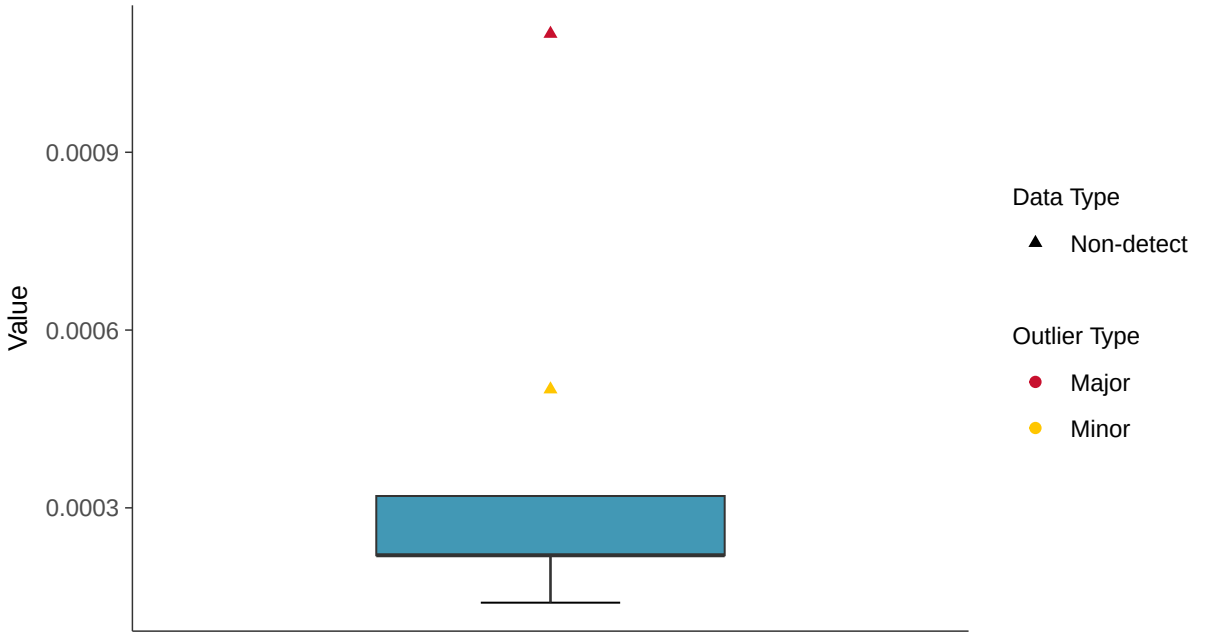
ID: 1_22_5_115





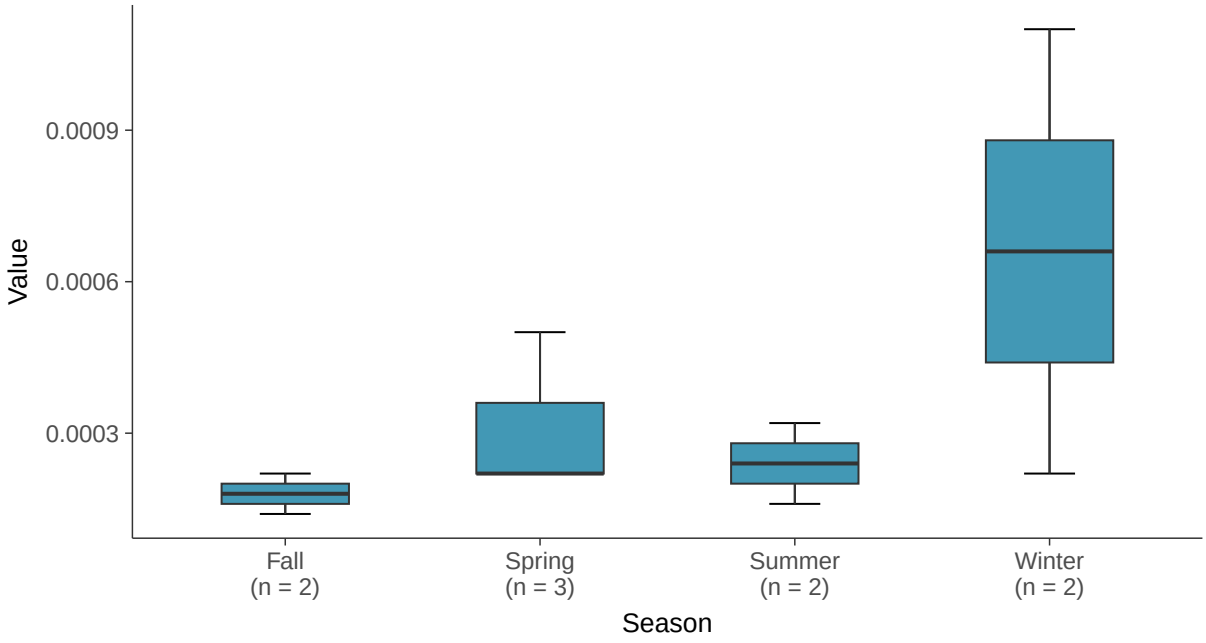
Boxplot

Lead, MW-18 (mg/L)



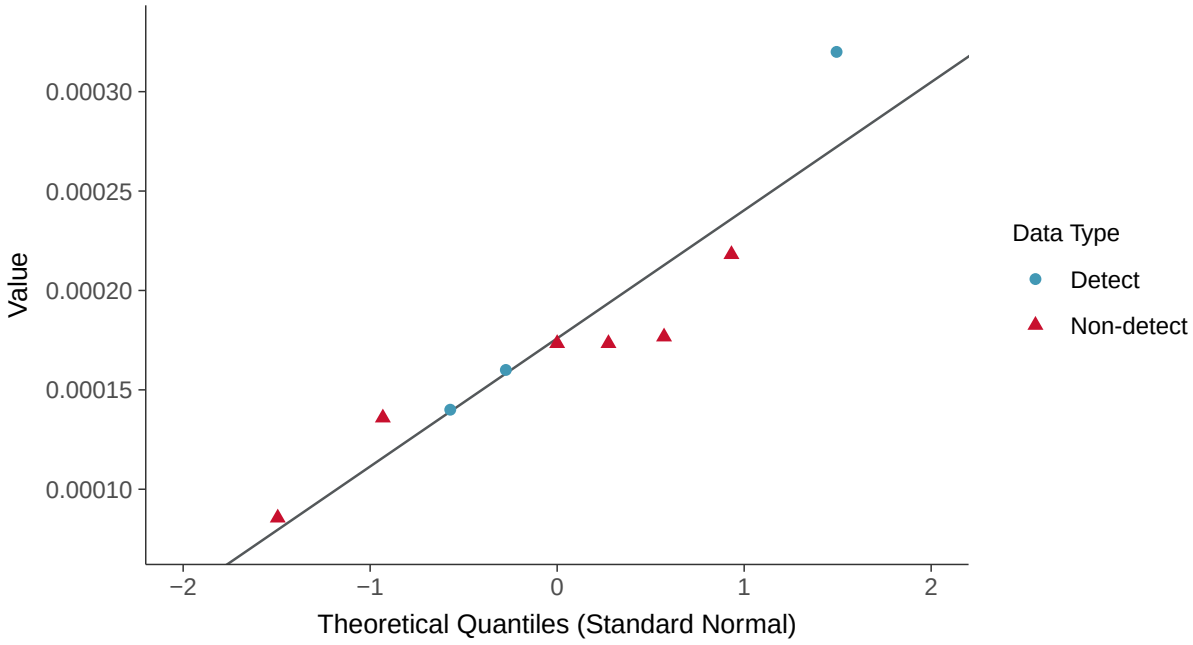
Boxplot by Season

Lead, MW-18 (mg/L)



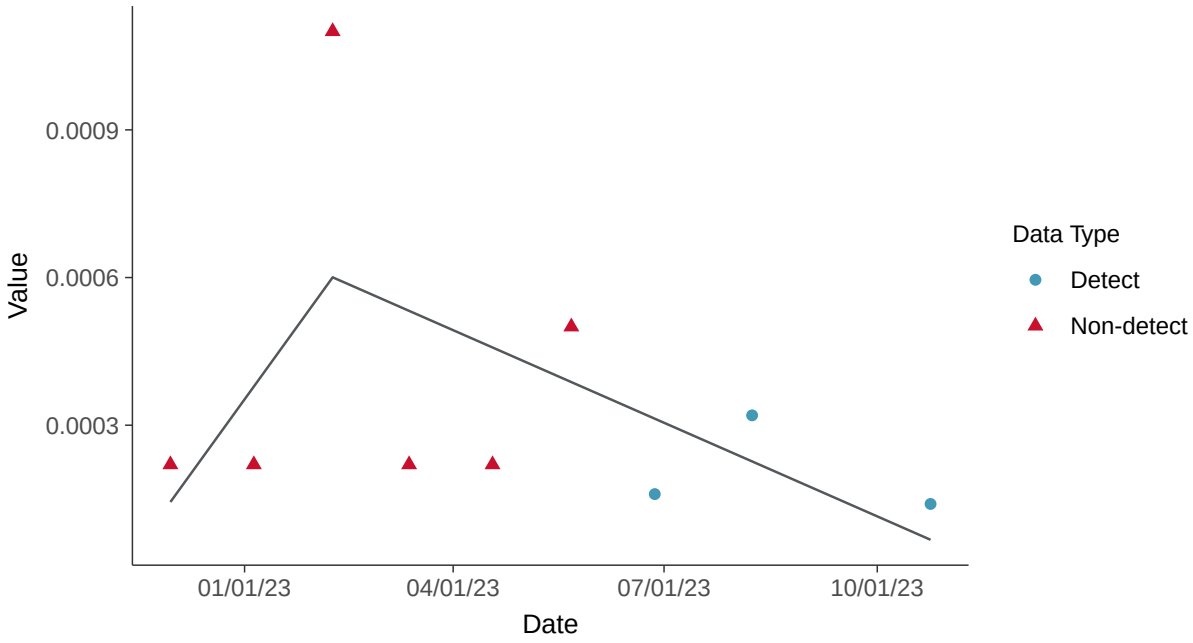
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-18 (mg/L)



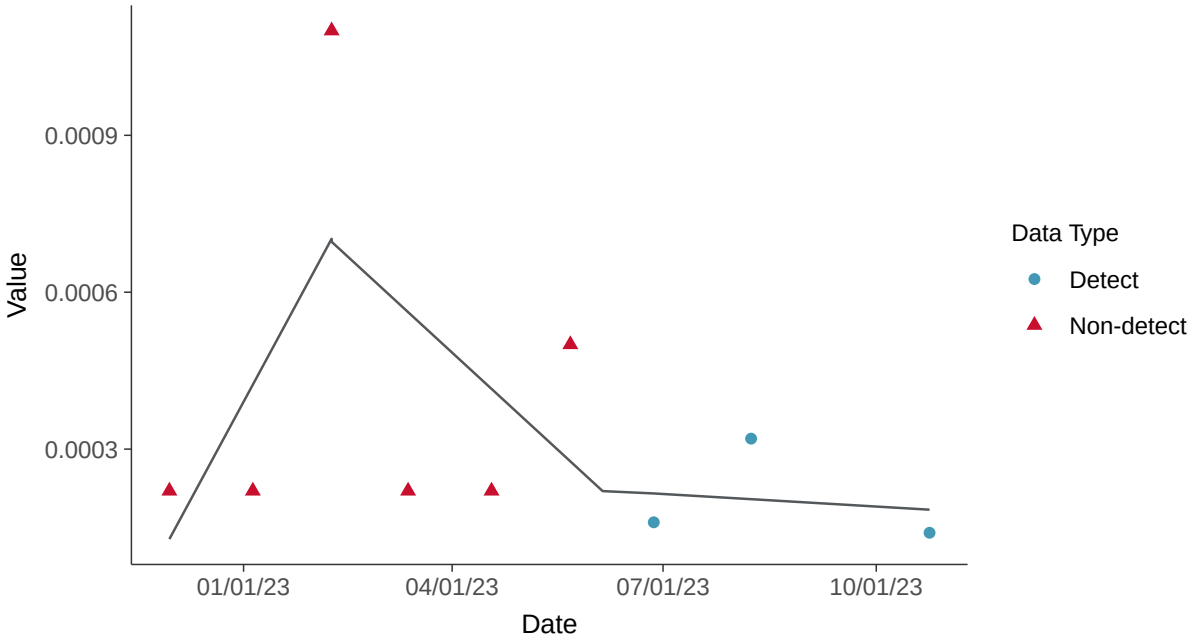
Trend Regression: Piecewise Linear-Linear

Lead, MW-18 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-18 (mg/L)

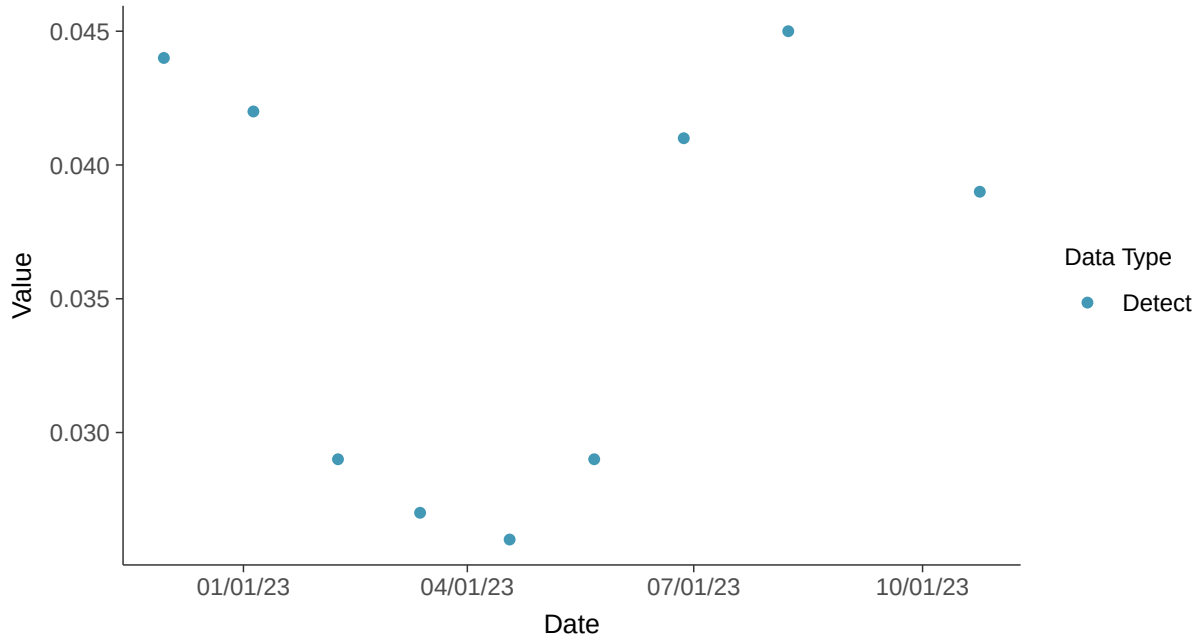


Appendix IV: Lithium, MW-18

ID: 1_22_5_116

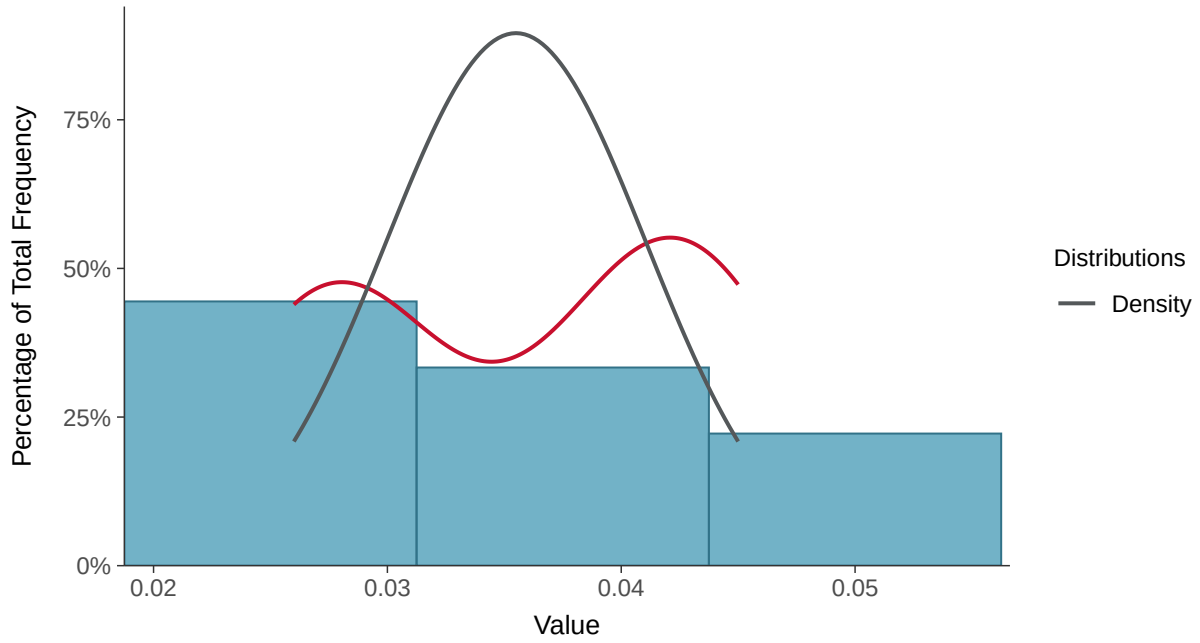
Scatter Plot

Lithium, MW-18 (mg/L)



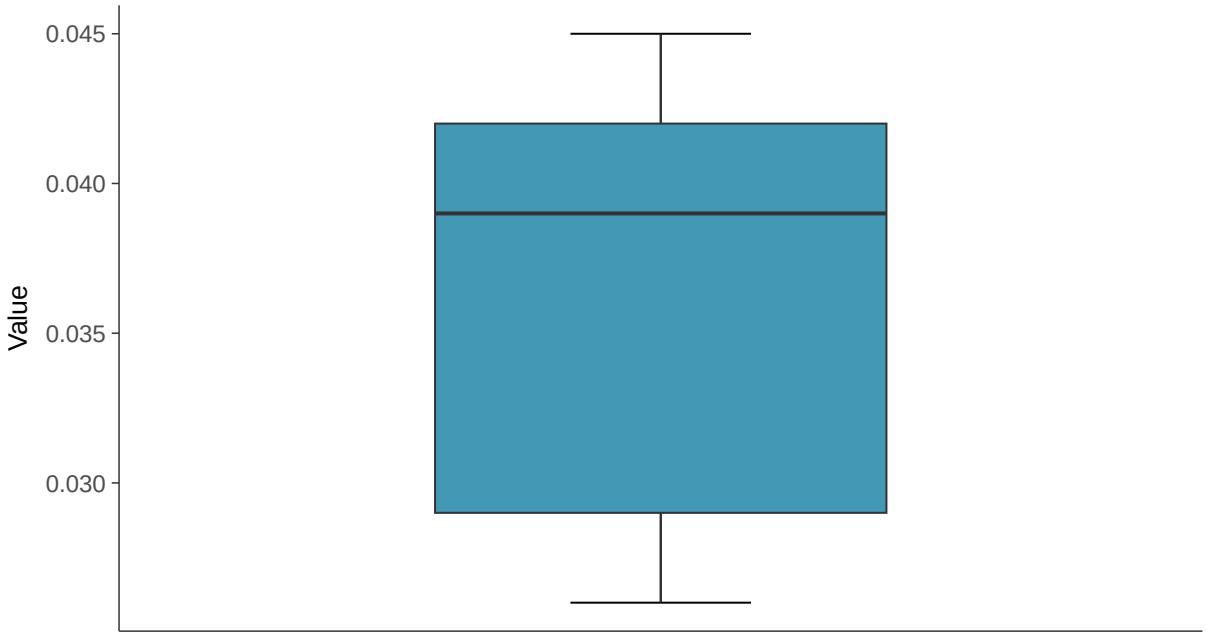
Histogram

Lithium, MW-18 (mg/L)



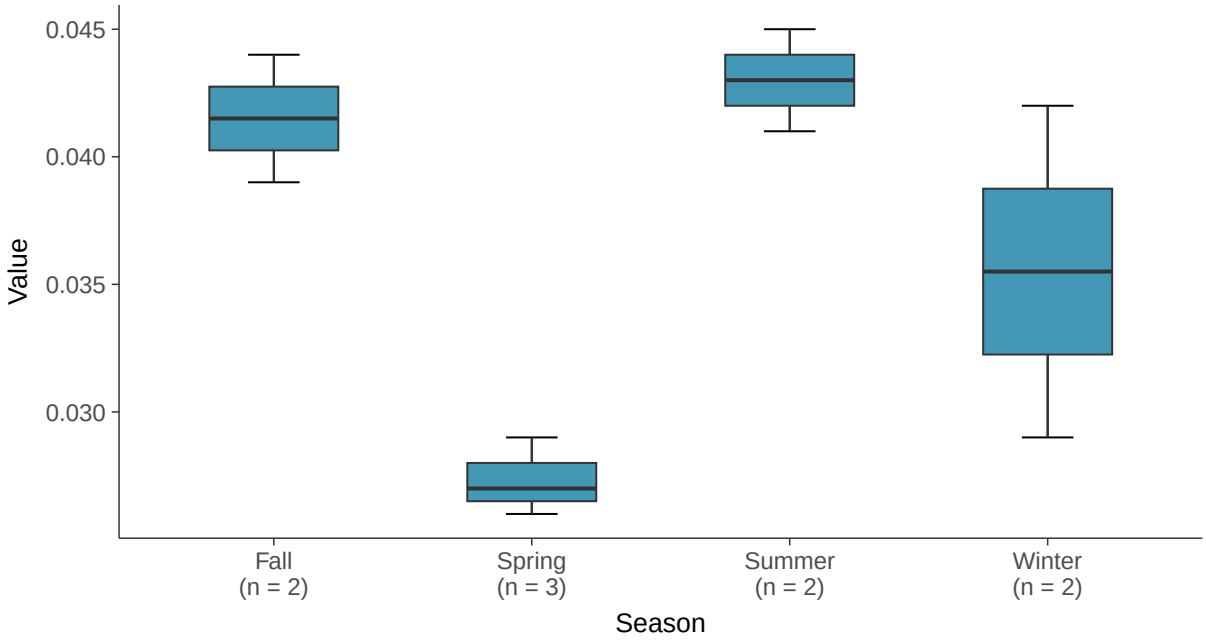
Boxplot

Lithium, MW-18 (mg/L)



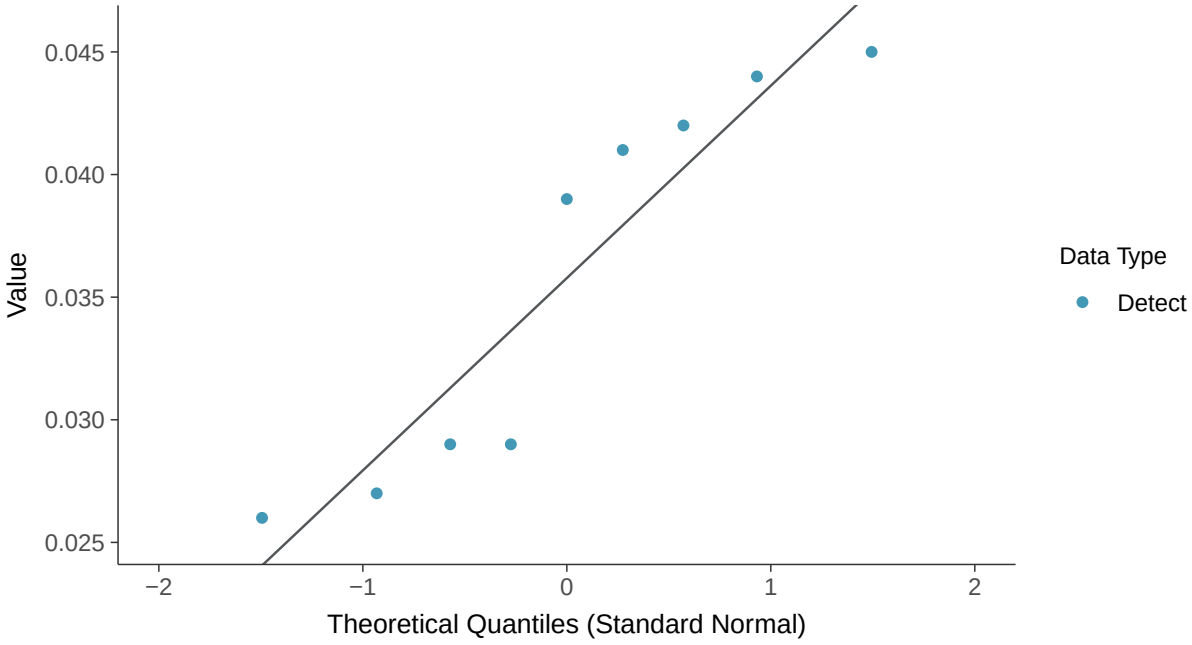
Boxplot by Season

Lithium, MW-18 (mg/L)



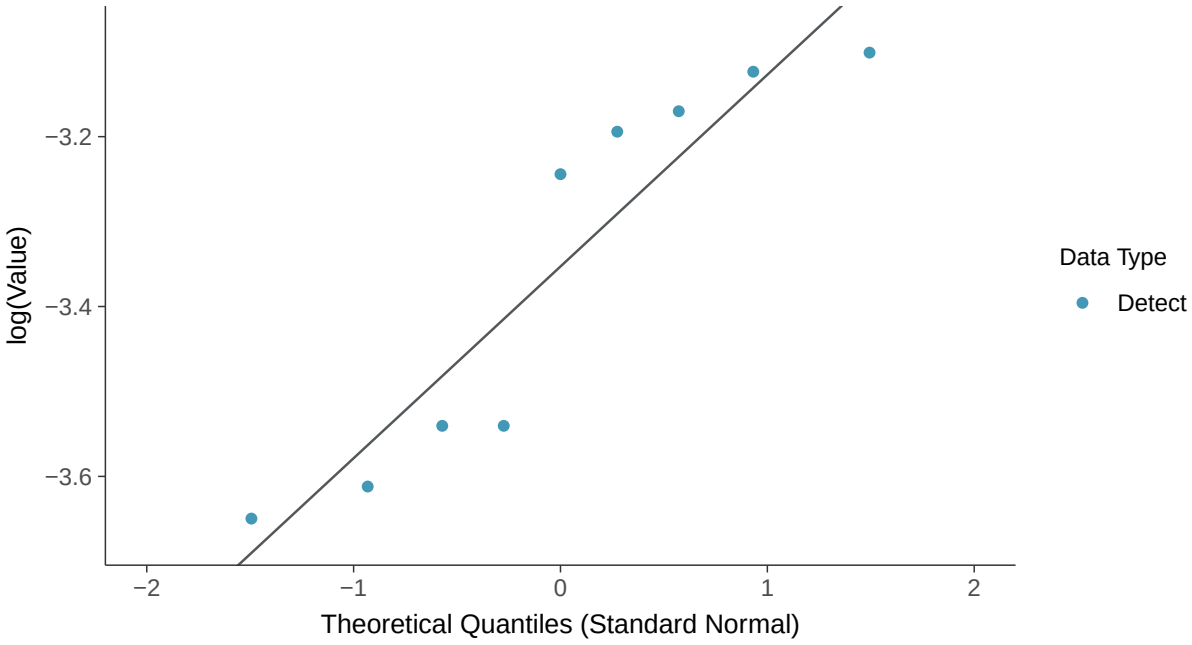
Normal Q-Q plot

Lithium, MW-18 (mg/L)



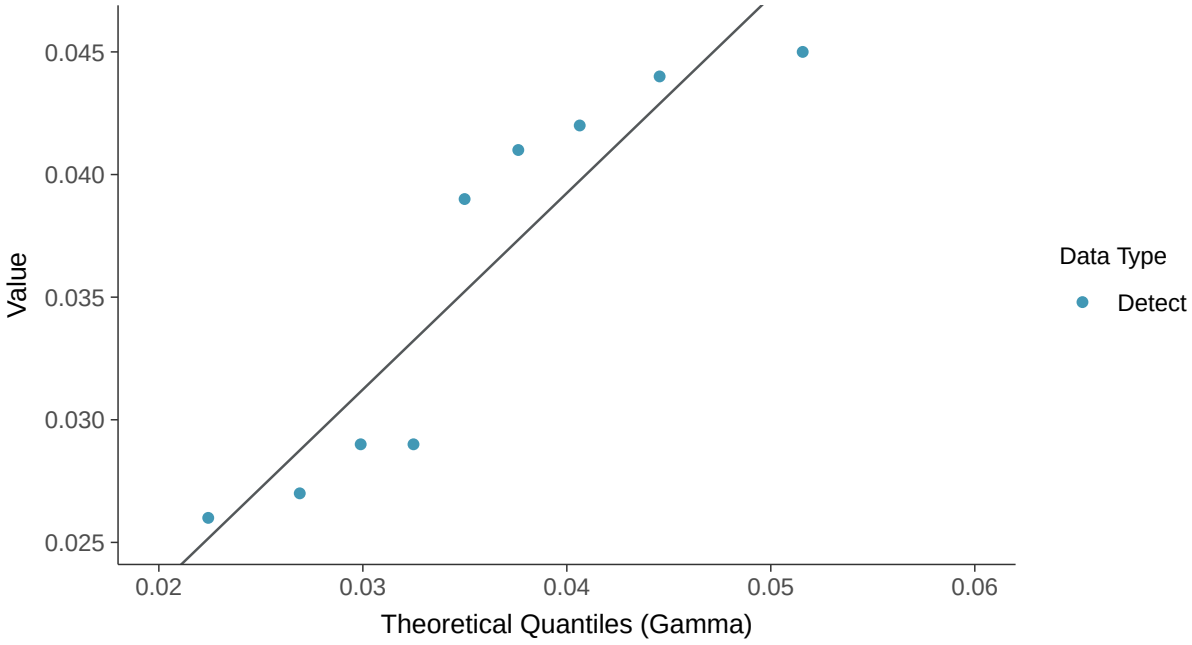
Lognormal Q-Q plot

Lithium, MW-18 (mg/L)



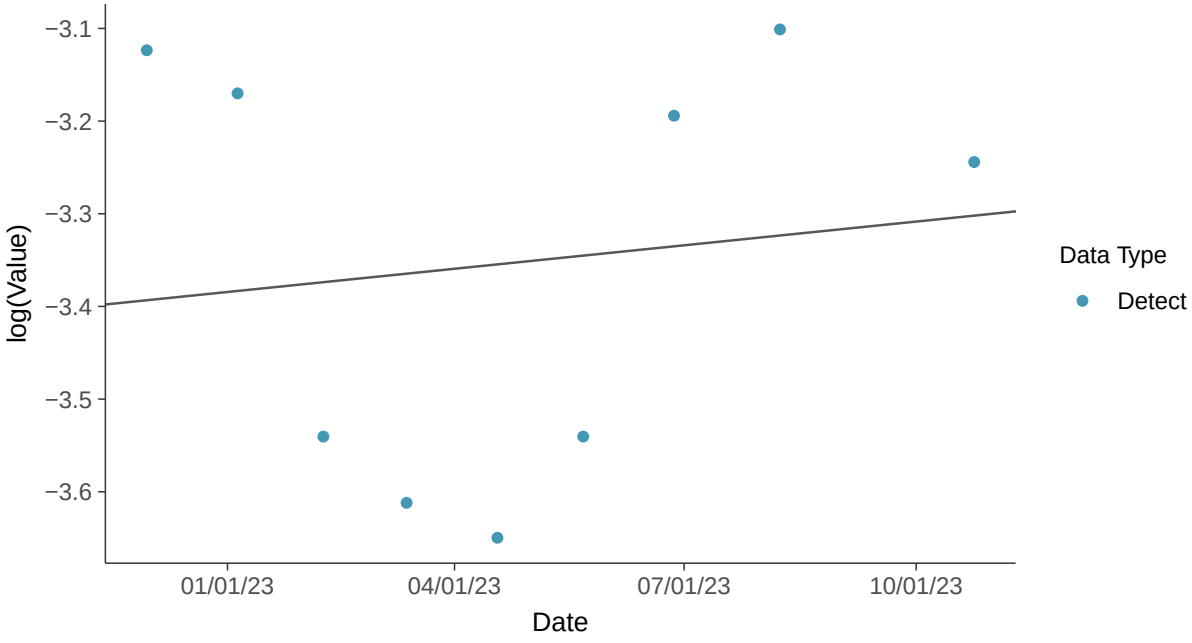
Gamma Q-Q plot

Lithium, MW-18 (mg/L)



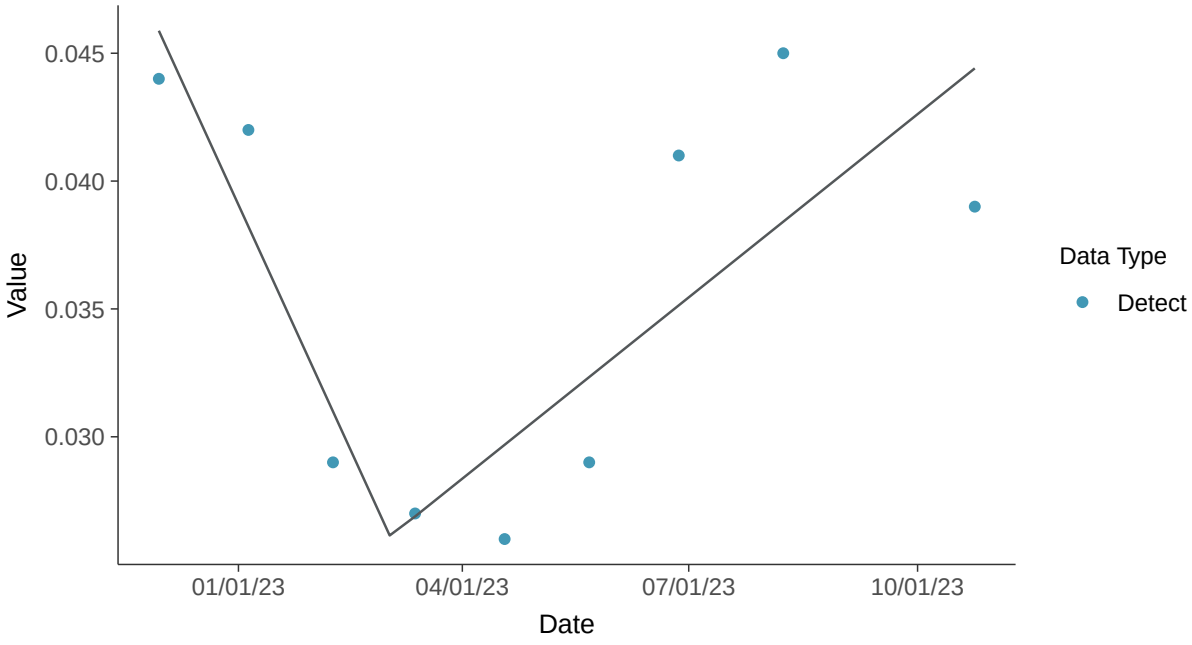
Trend Regression: Lognormal MLE

Lithium, MW-18 (mg/L)



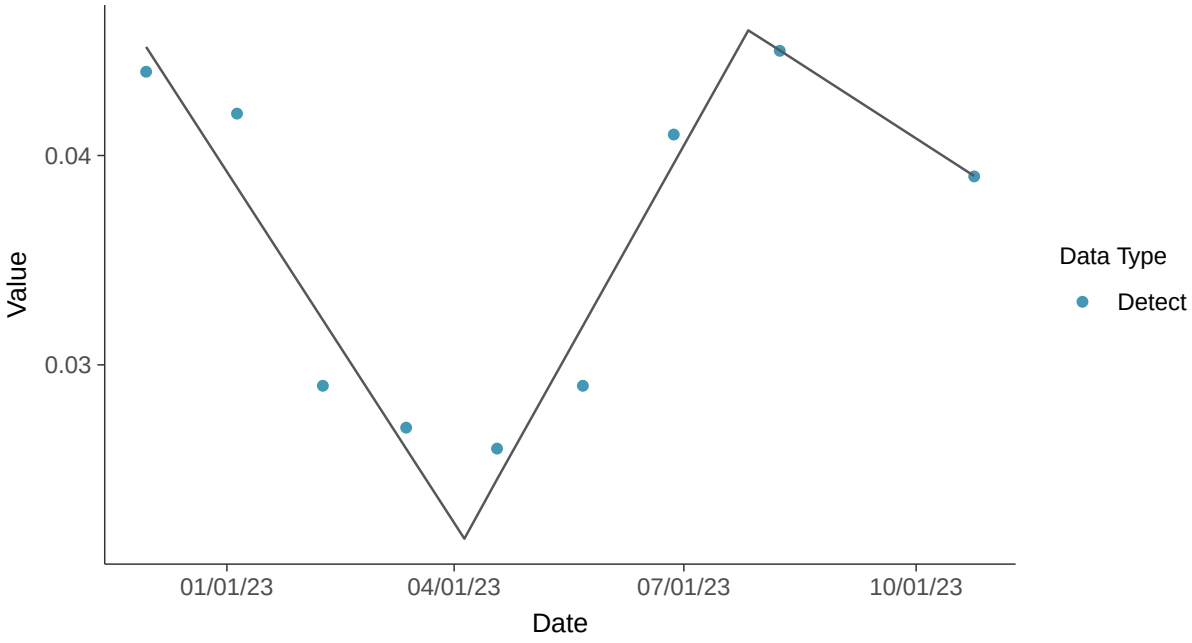
Trend Regression: Piecewise Linear-Linear

Lithium, MW-18 (mg/L)



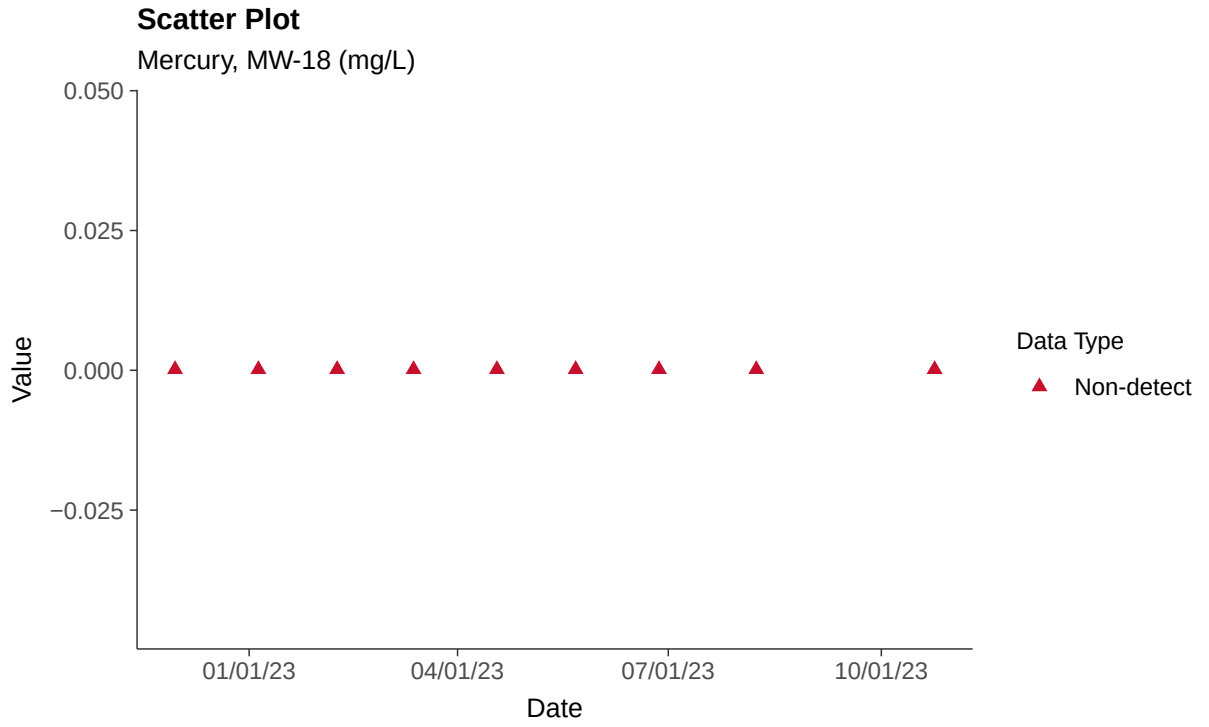
Trend Regression: Piecewise Linear-Linear-Linear

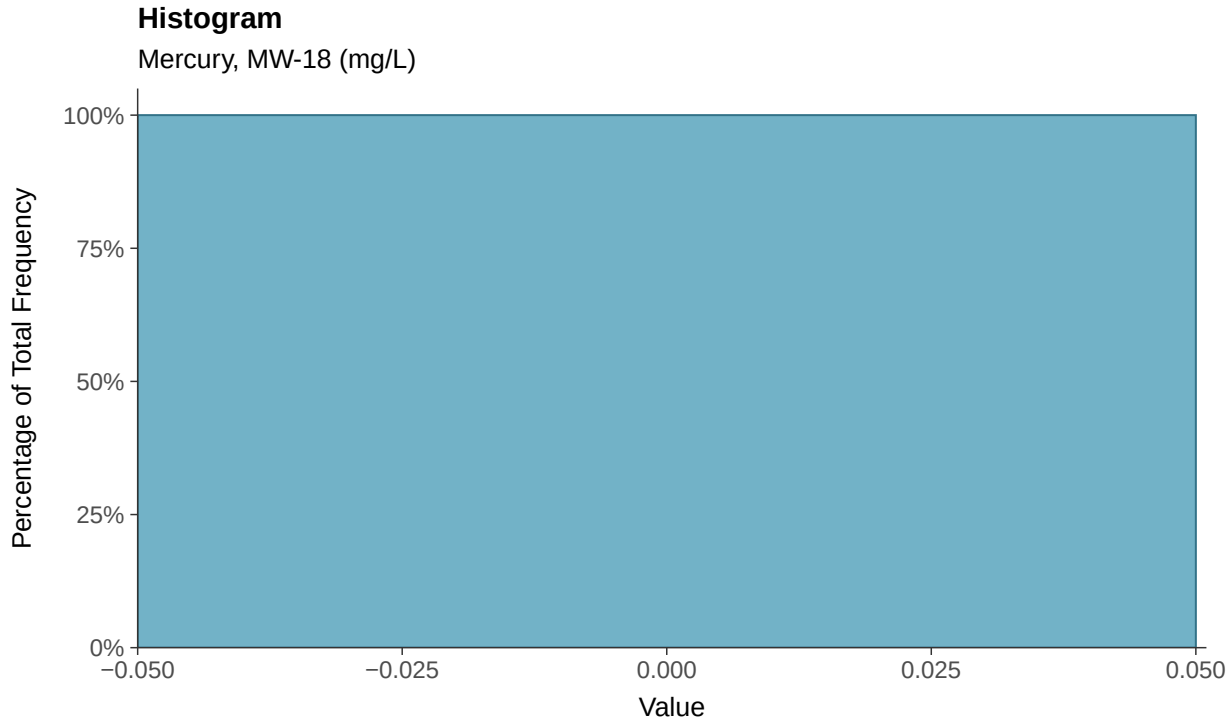
Lithium, MW-18 (mg/L)



Appendix IV: Mercury, MW-18

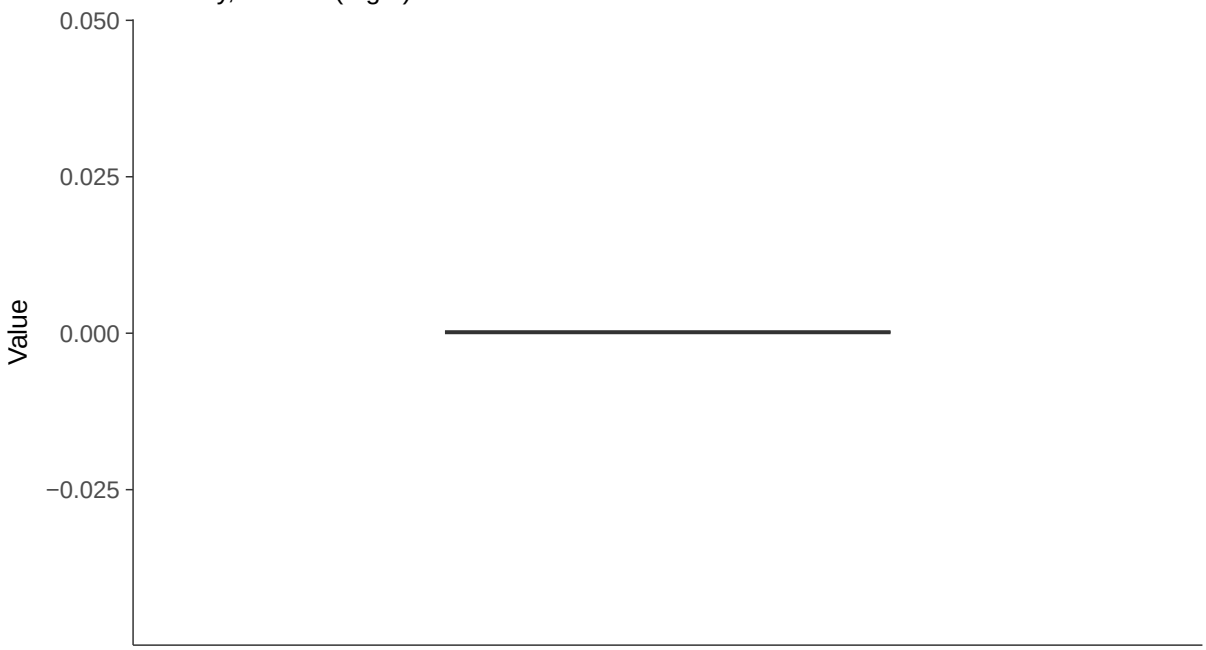
ID: 1_22_5_117





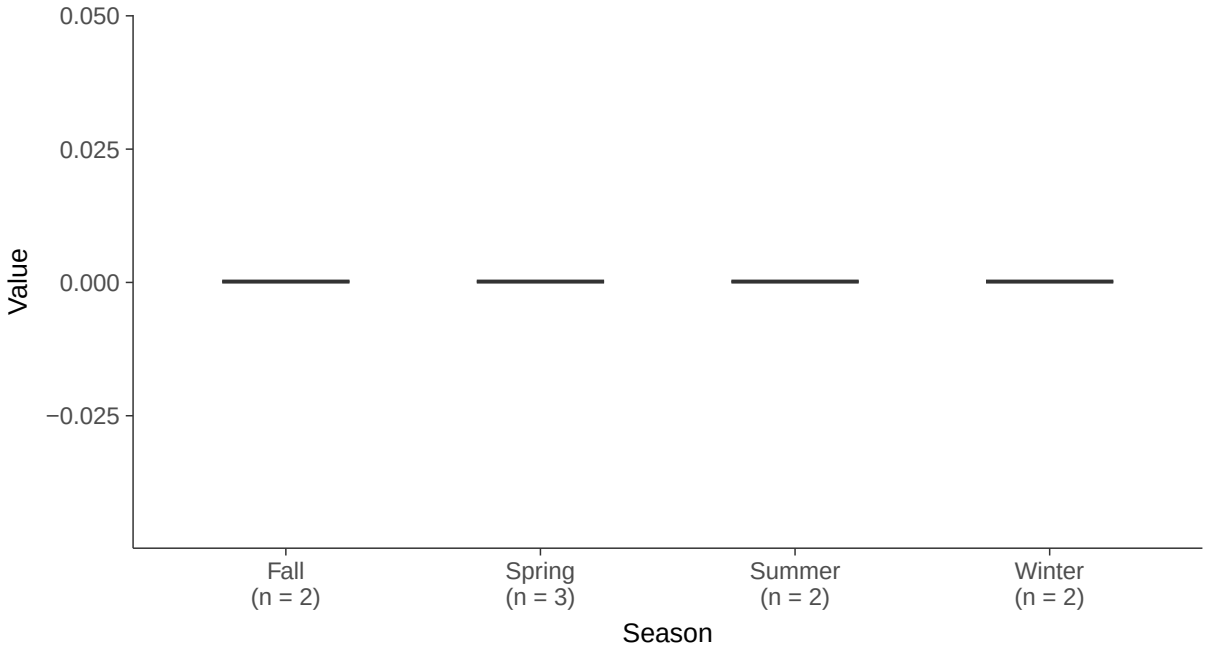
Boxplot

Mercury, MW-18 (mg/L)



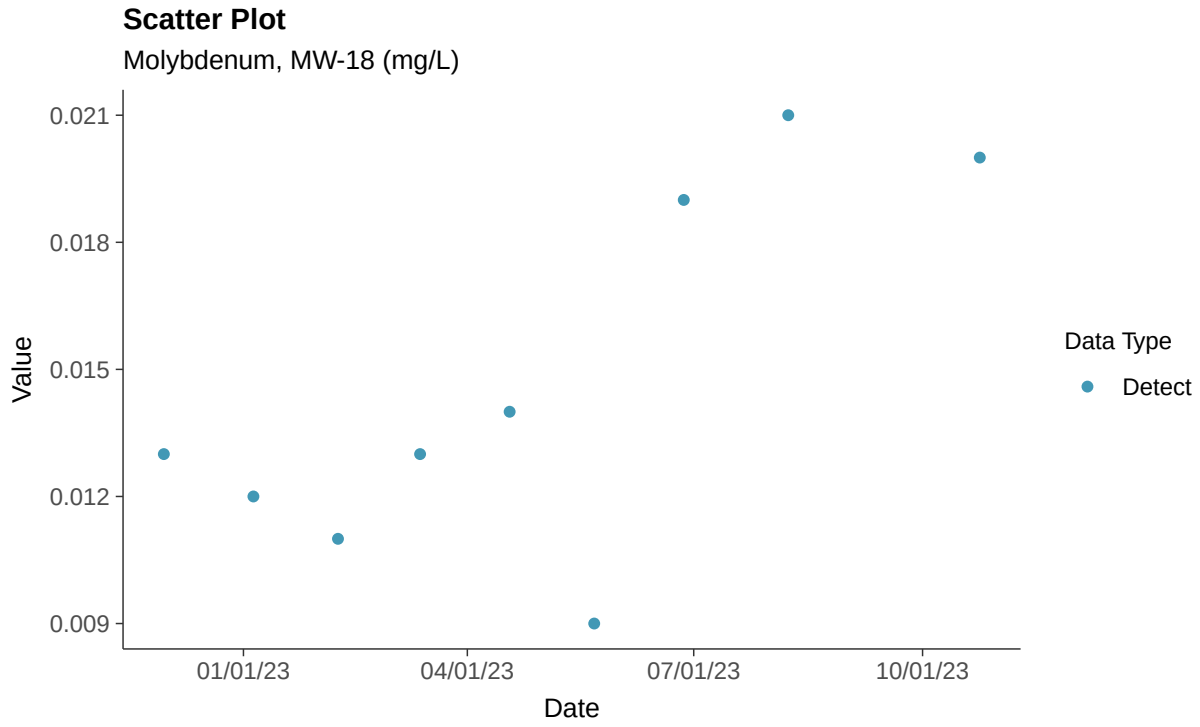
Boxplot by Season

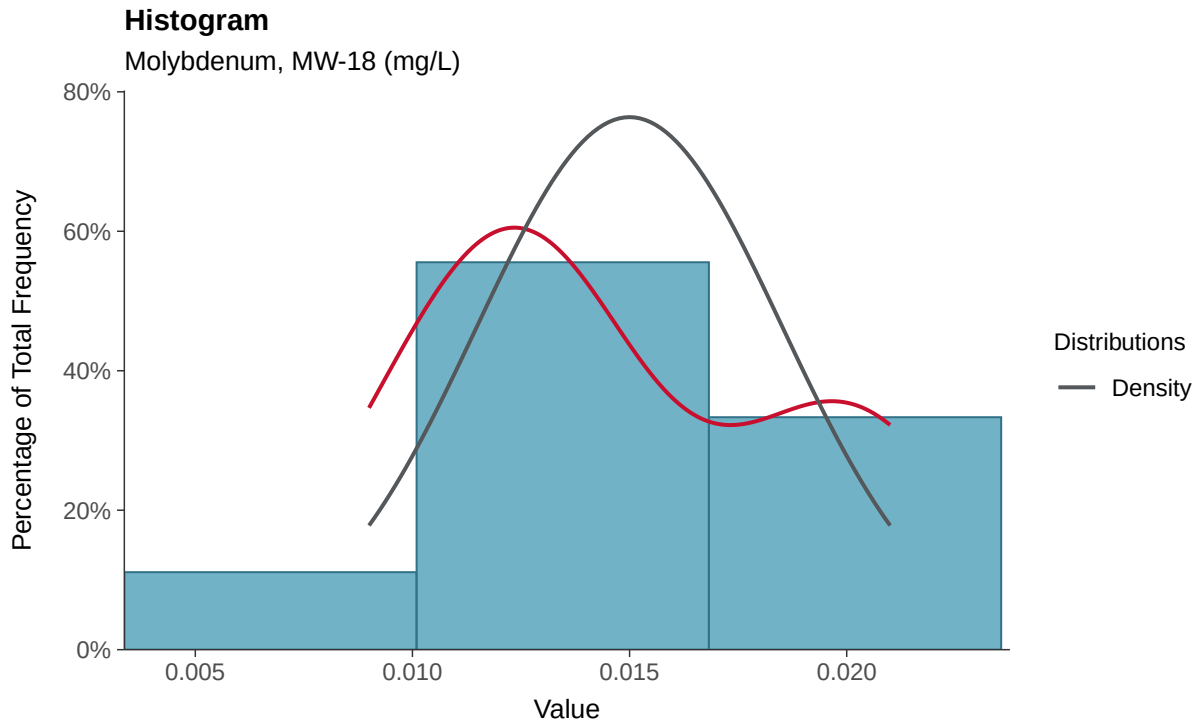
Mercury, MW-18 (mg/L)



Appendix IV: Molybdenum, MW-18

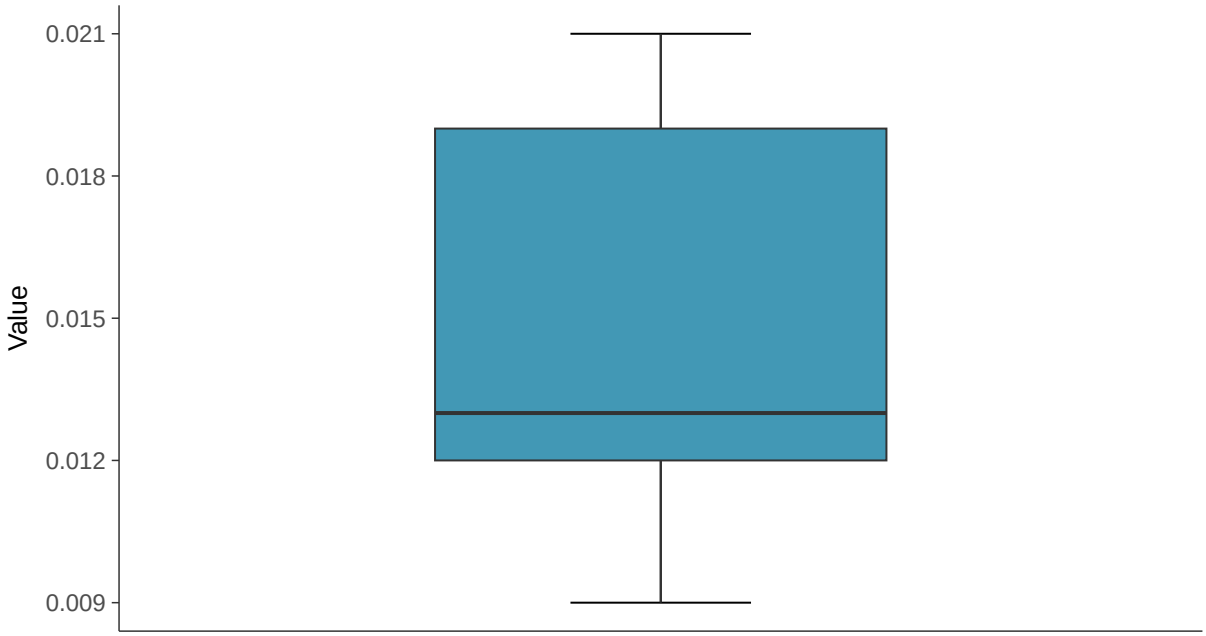
ID: 1_22_5_118





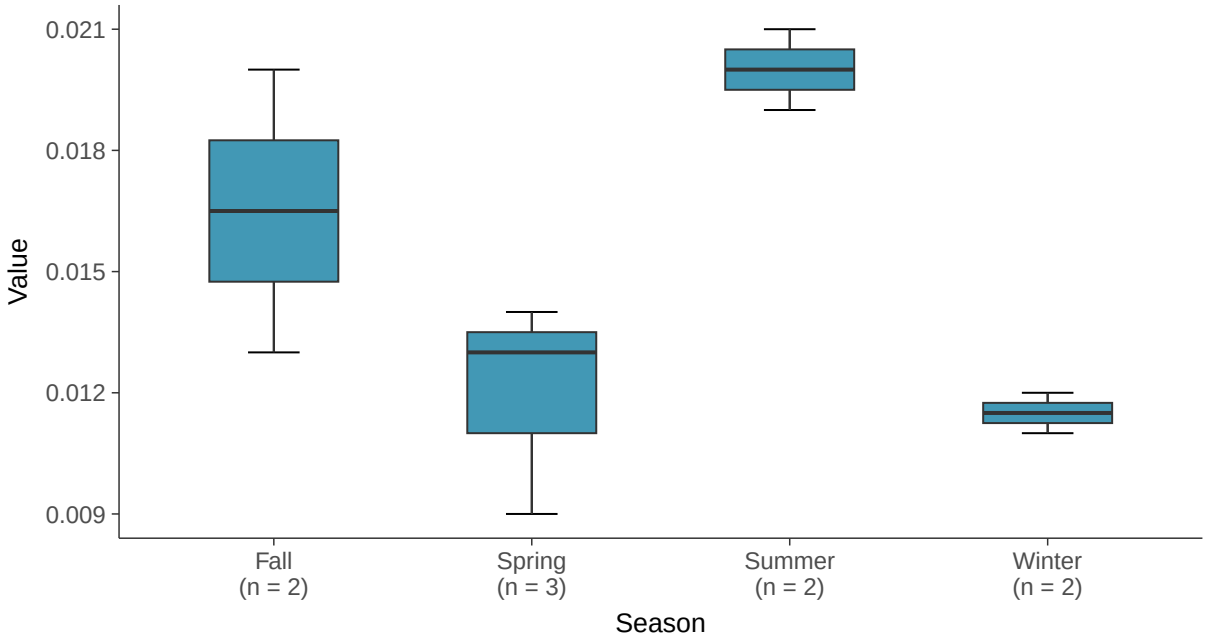
Boxplot

Molybdenum, MW-18 (mg/L)



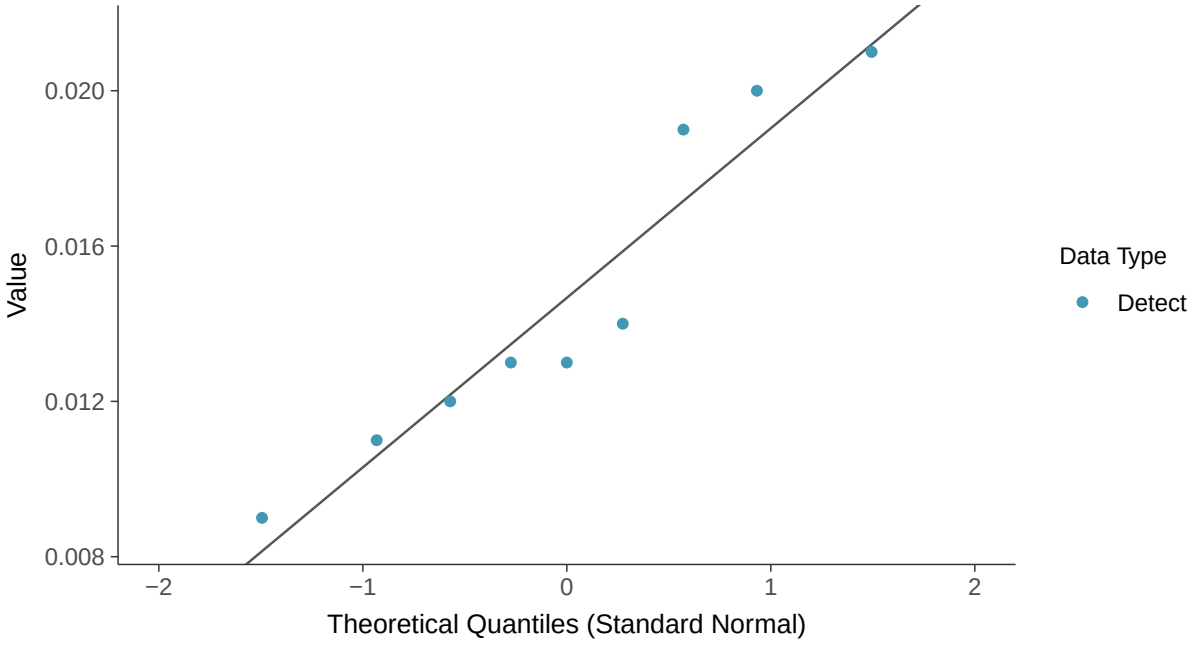
Boxplot by Season

Molybdenum, MW-18 (mg/L)



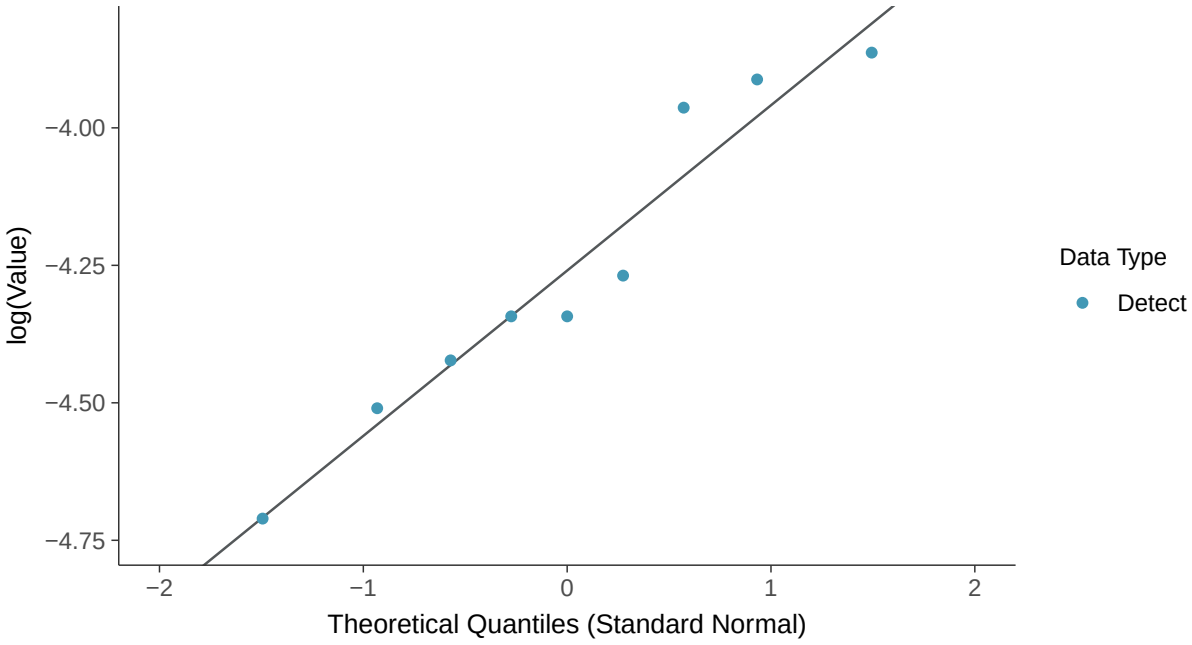
Normal Q-Q plot

Molybdenum, MW-18 (mg/L)



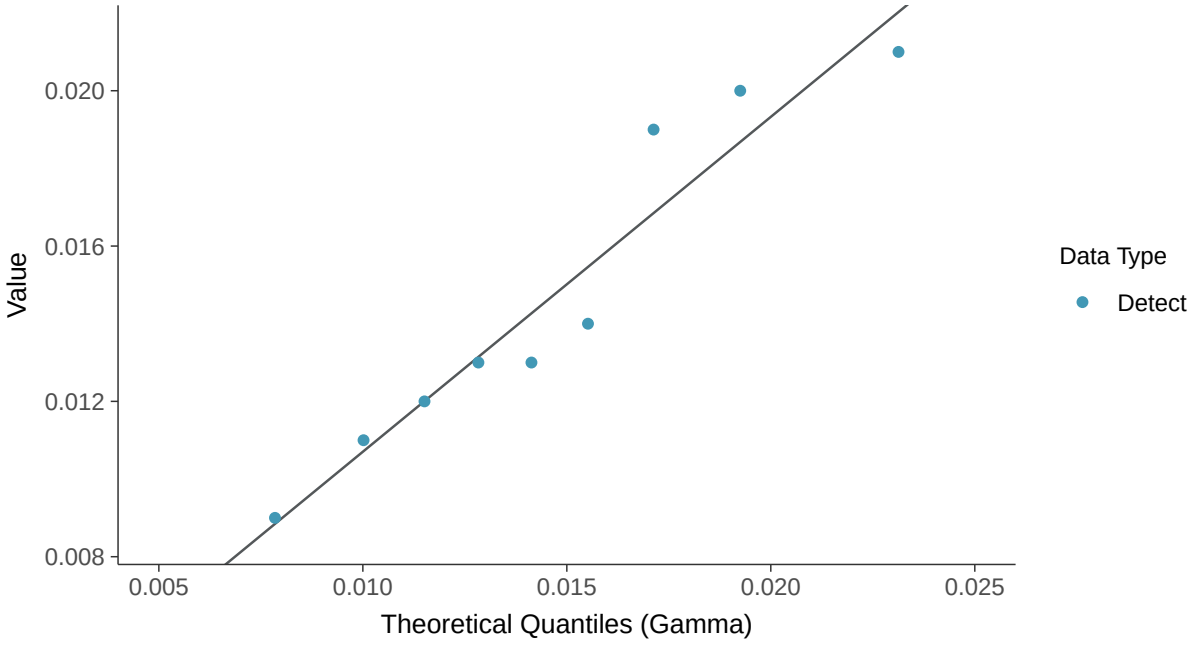
Lognormal Q-Q plot

Molybdenum, MW-18 (mg/L)



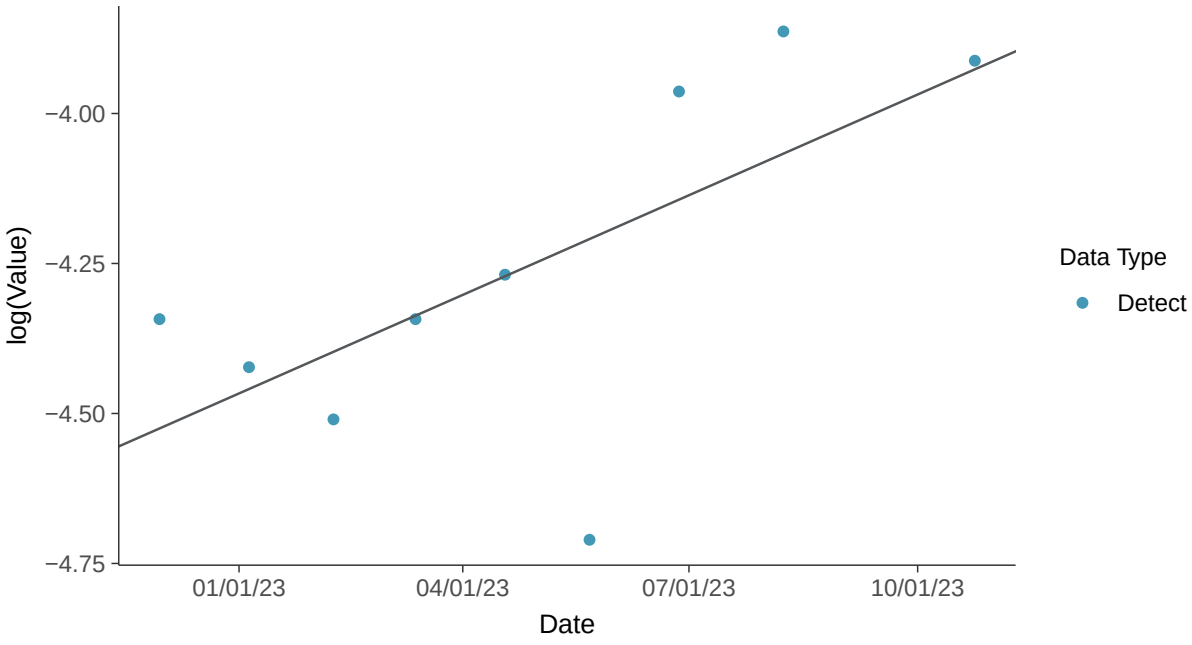
Gamma Q-Q plot

Molybdenum, MW-18 (mg/L)



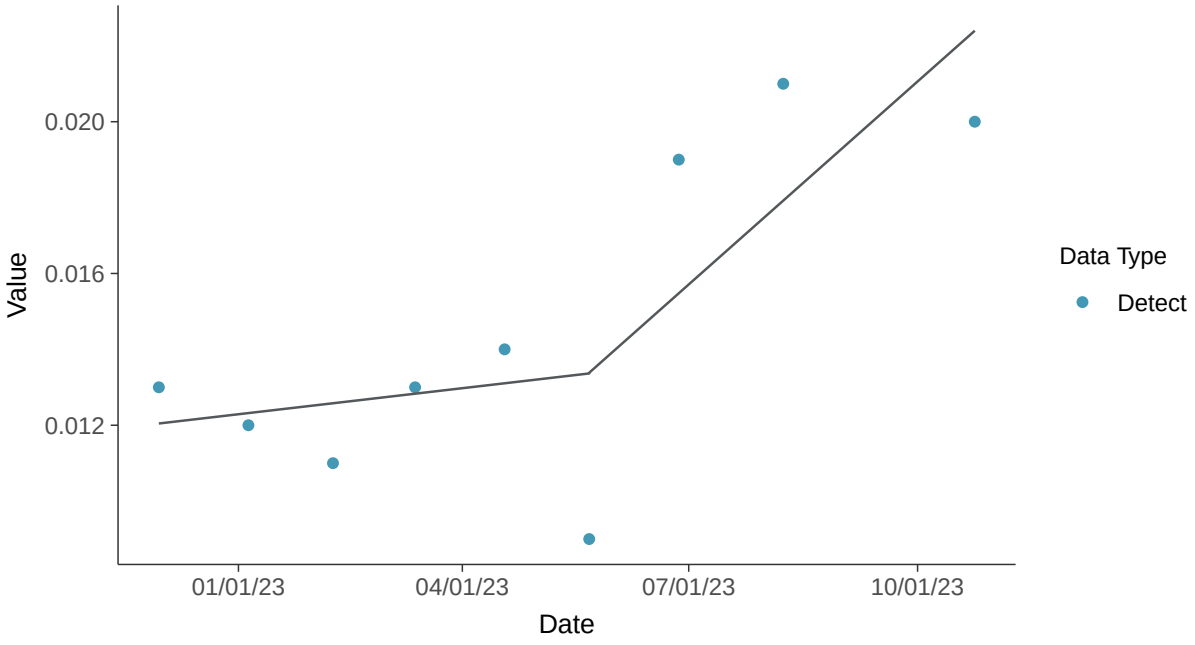
Trend Regression: Lognormal MLE

Molybdenum, MW-18 (mg/L)



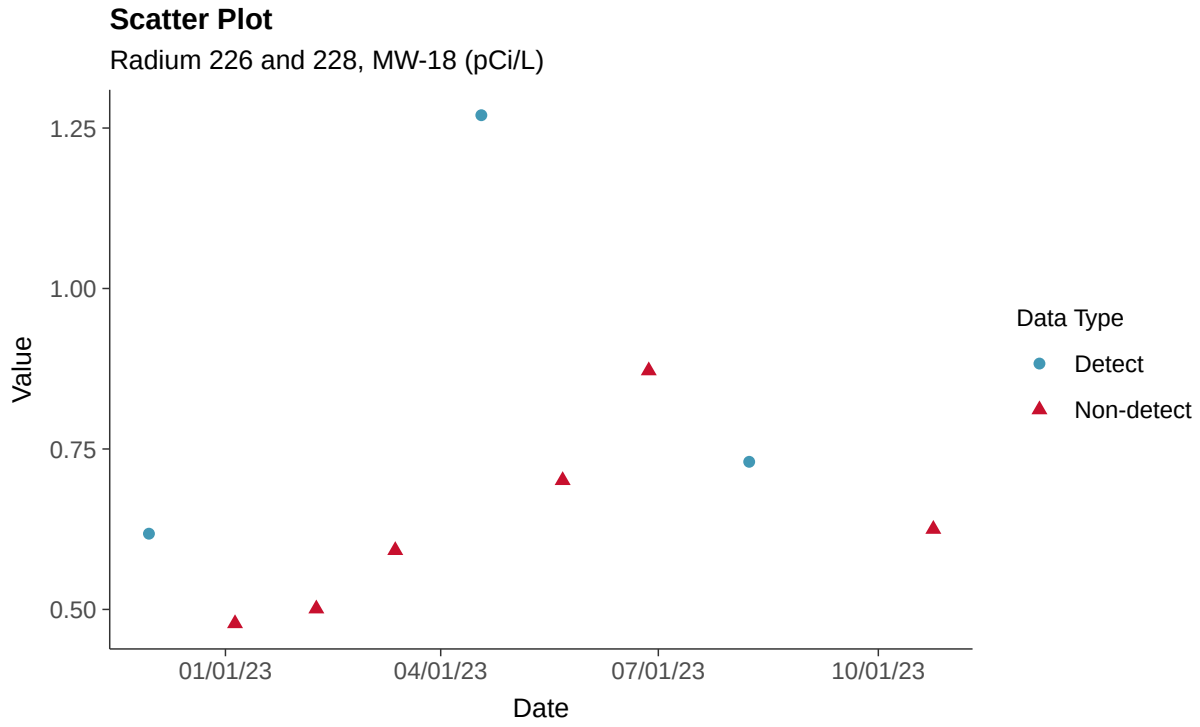
Trend Regression: Piecewise Linear-Linear

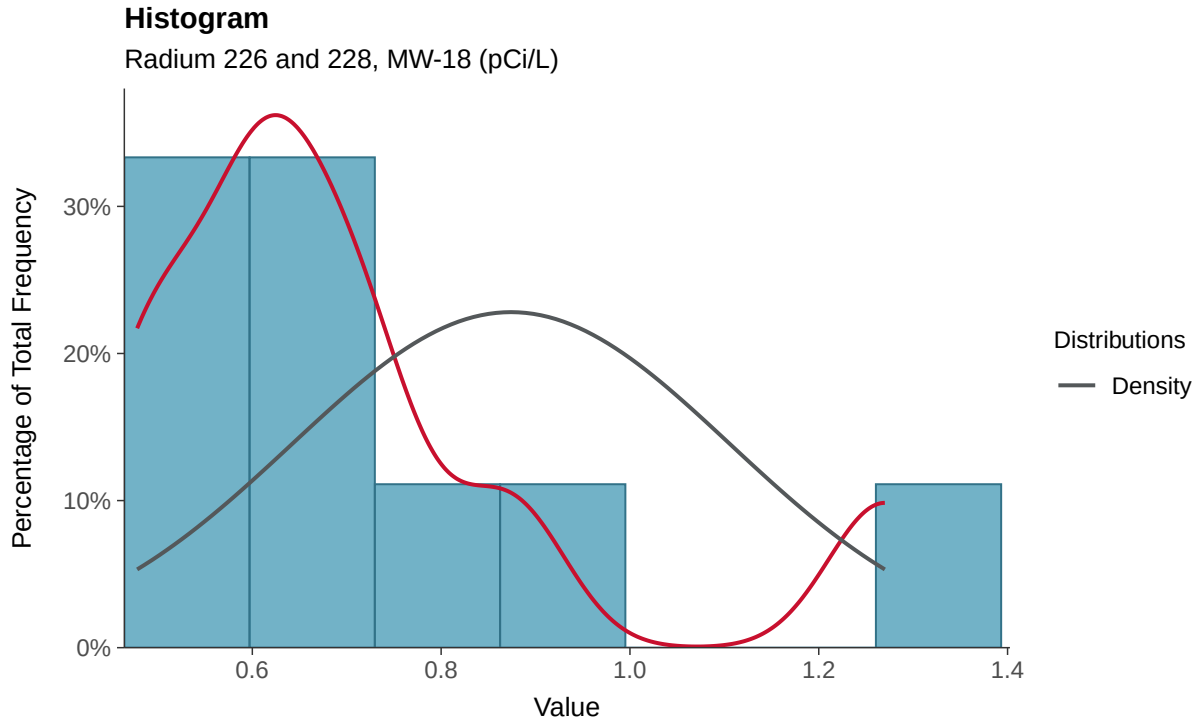
Molybdenum, MW-18 (mg/L)



Appendix IV: Radium 226 and 228, MW-18

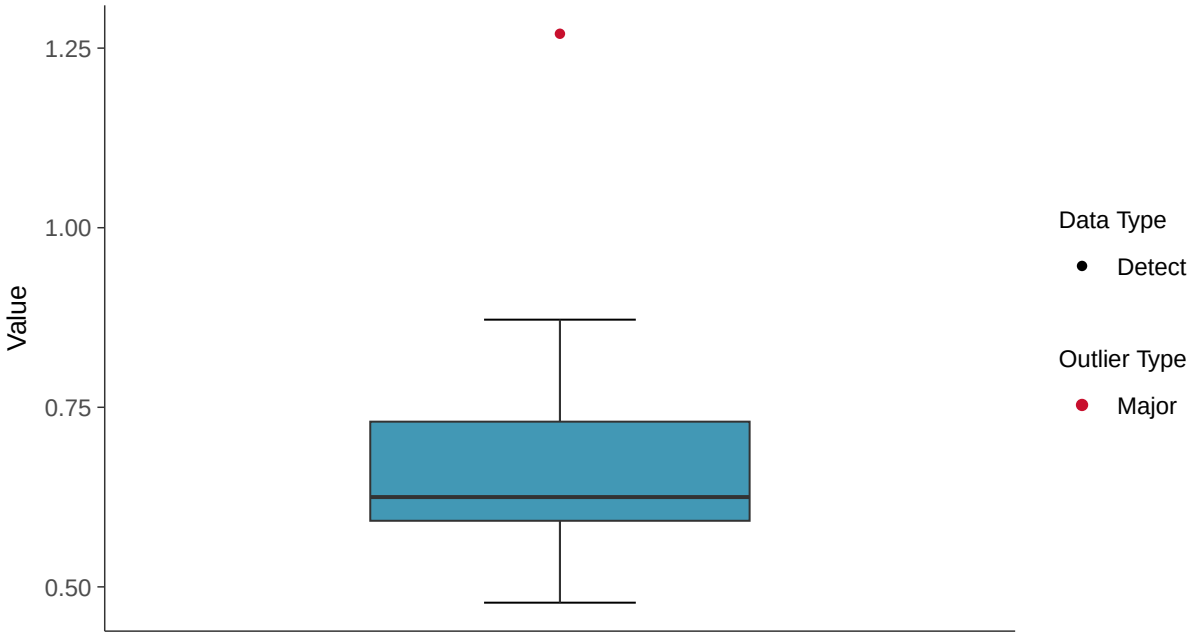
ID: 1_22_5_121





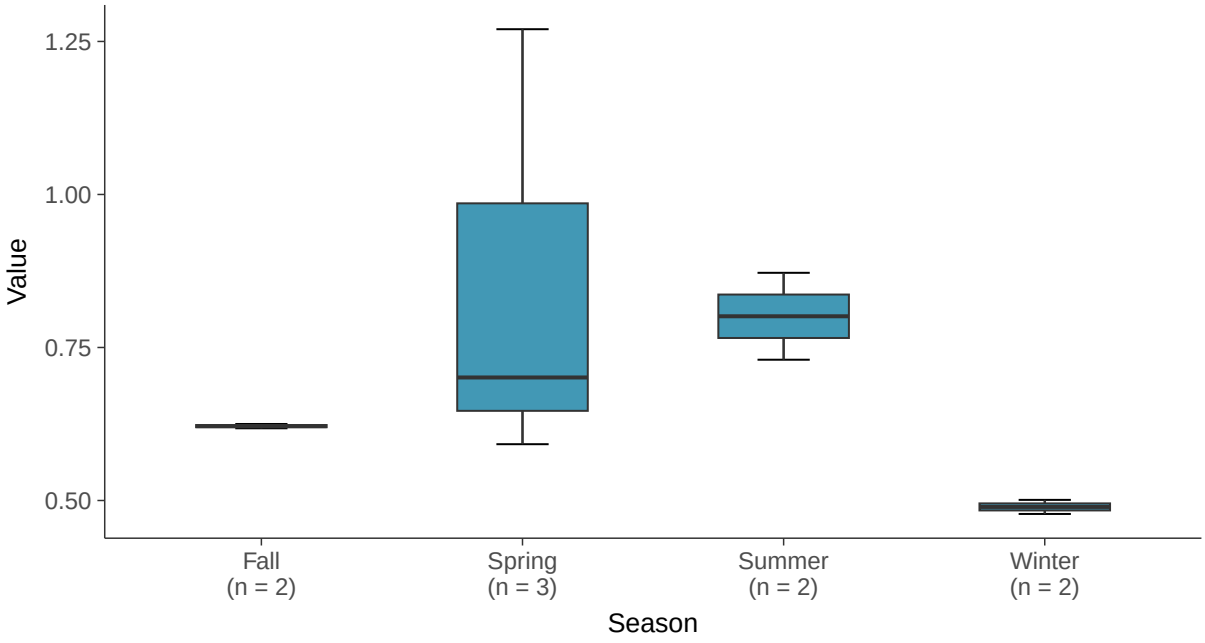
Boxplot

Radium 226 and 228, MW-18 (pCi/L)



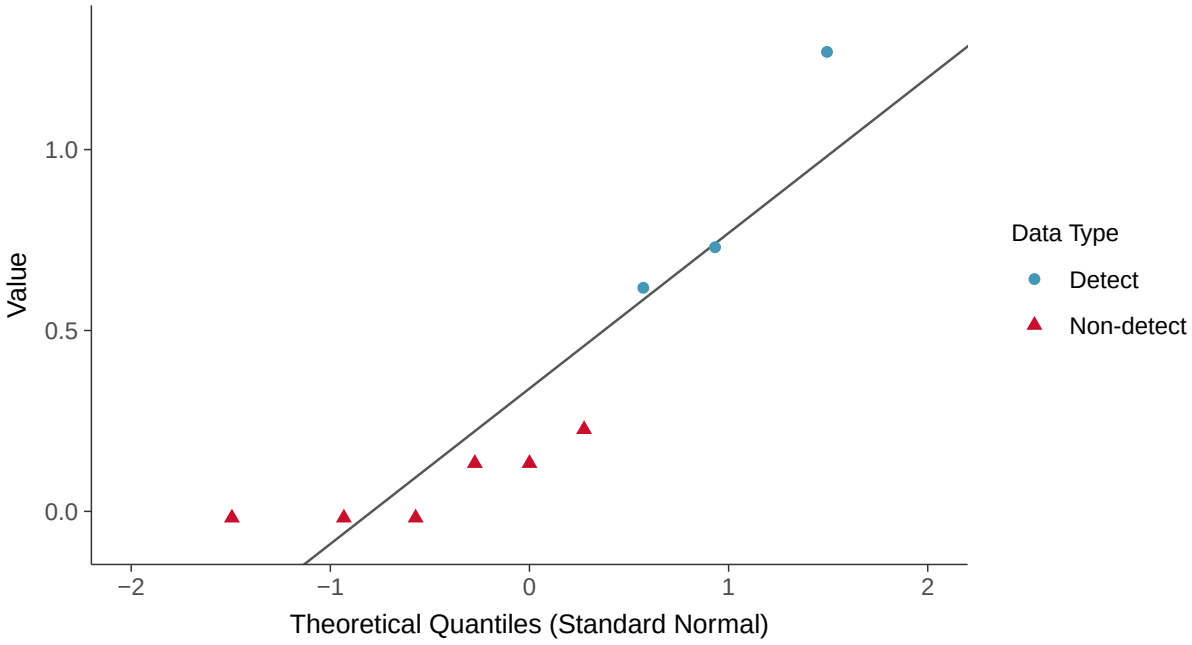
Boxplot by Season

Radium 226 and 228, MW-18 (pCi/L)



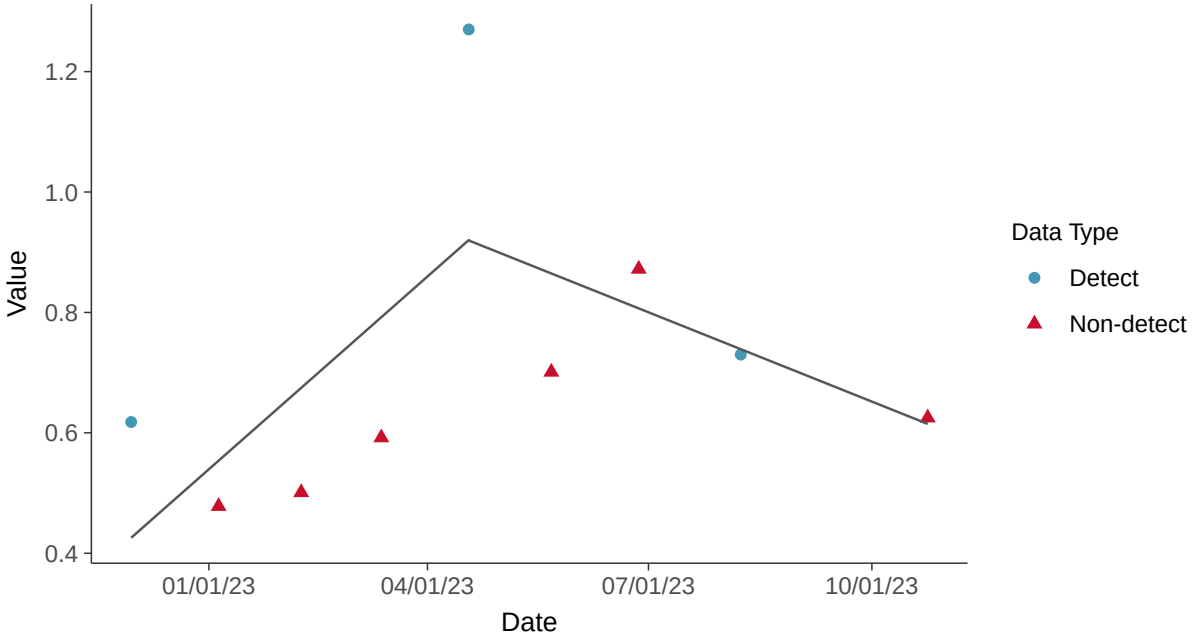
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-18 (pCi/L)



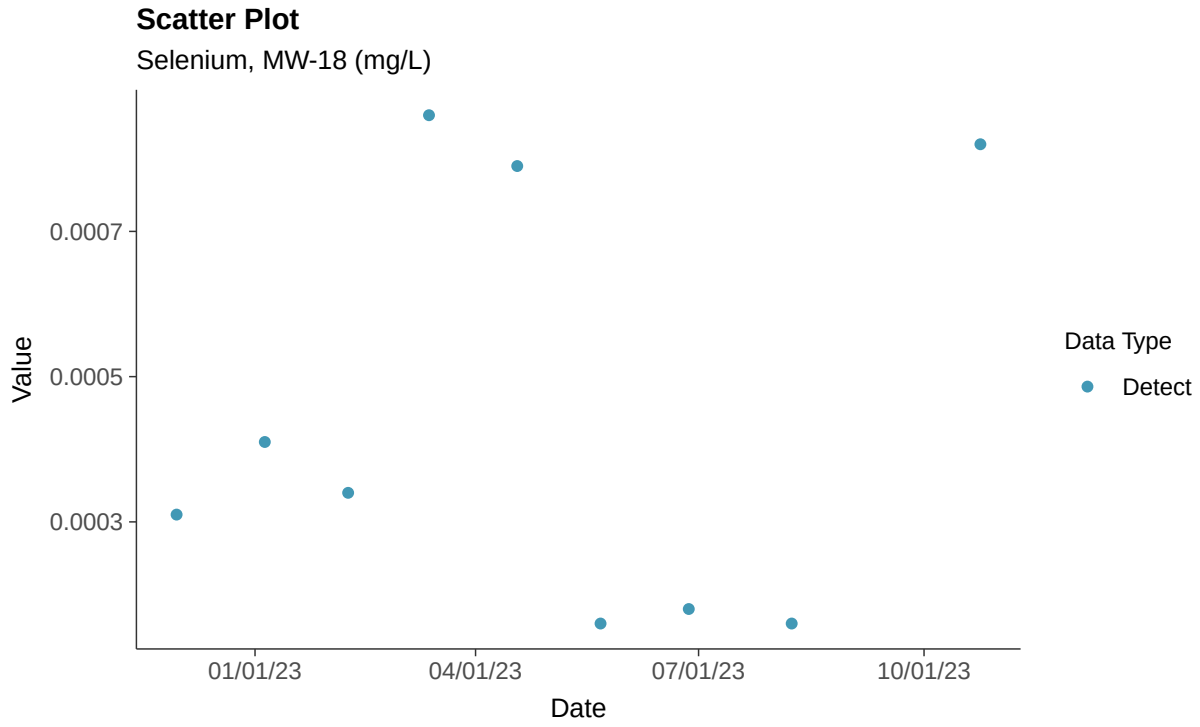
Trend Regression: Piecewise Linear-Linear

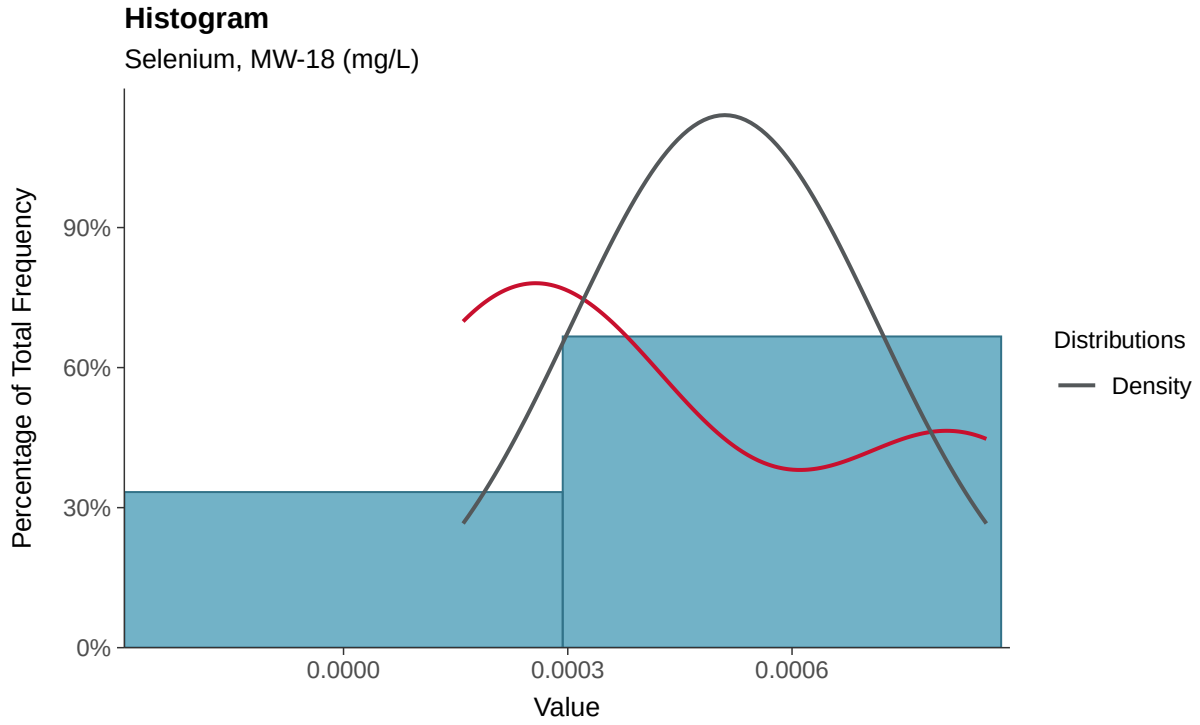
Radium 226 and 228, MW-18 (pCi/L)



Appendix IV: Selenium, MW-18

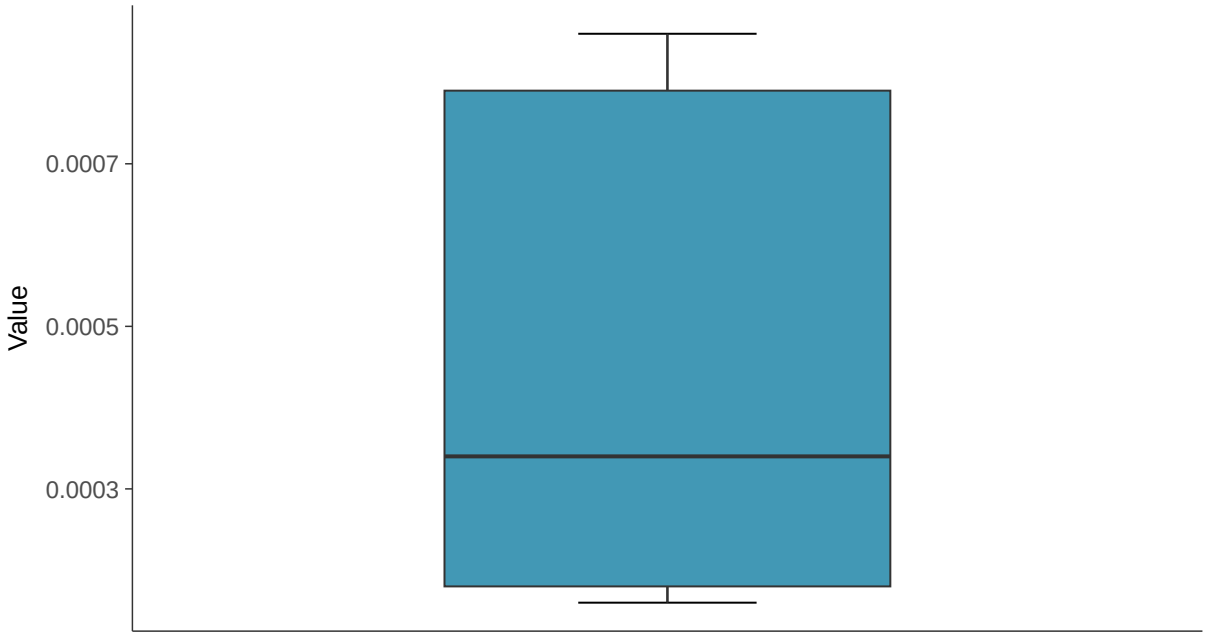
ID: 1_22_5_122





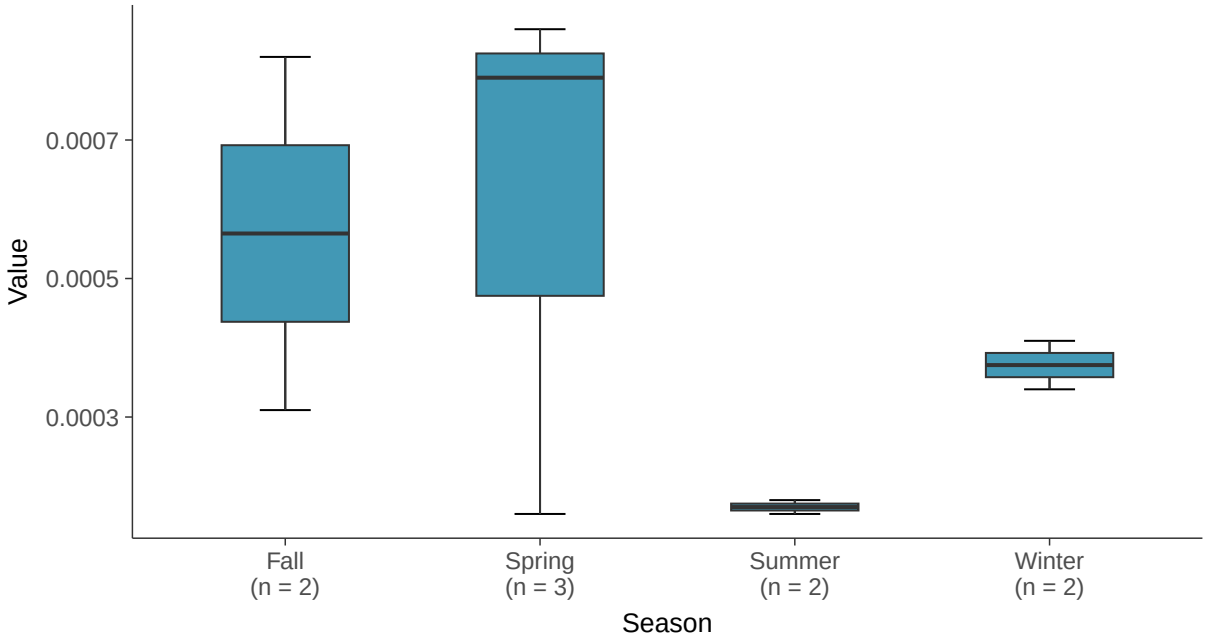
Boxplot

Selenium, MW-18 (mg/L)



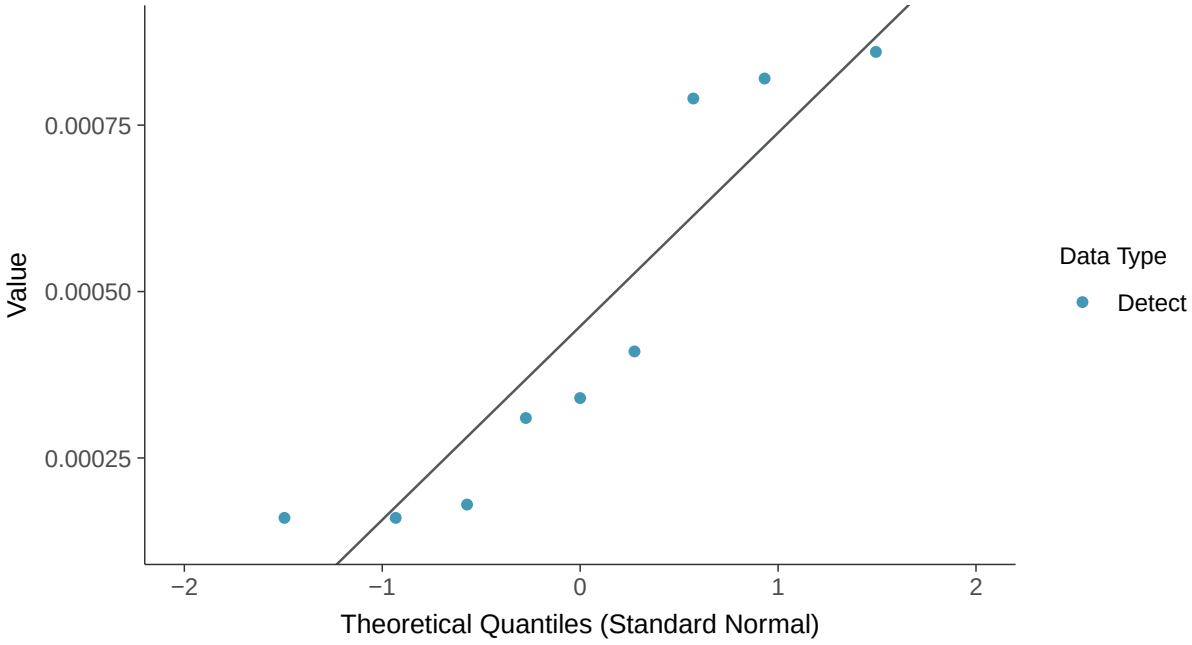
Boxplot by Season

Selenium, MW-18 (mg/L)



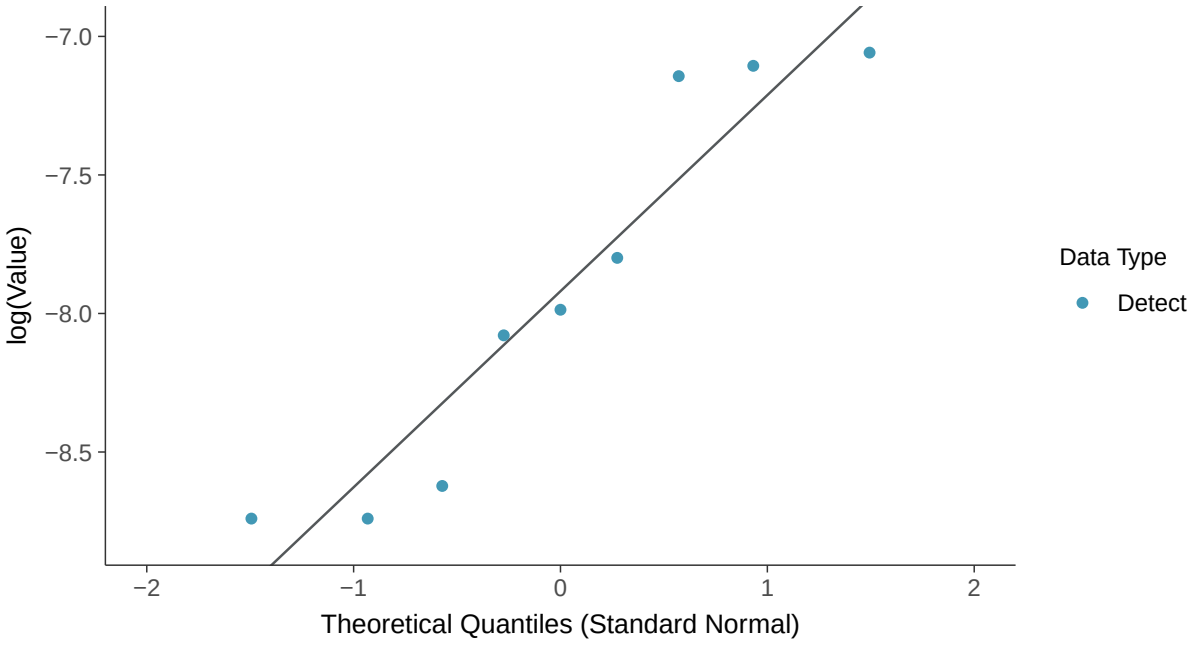
Normal Q-Q plot

Selenium, MW-18 (mg/L)



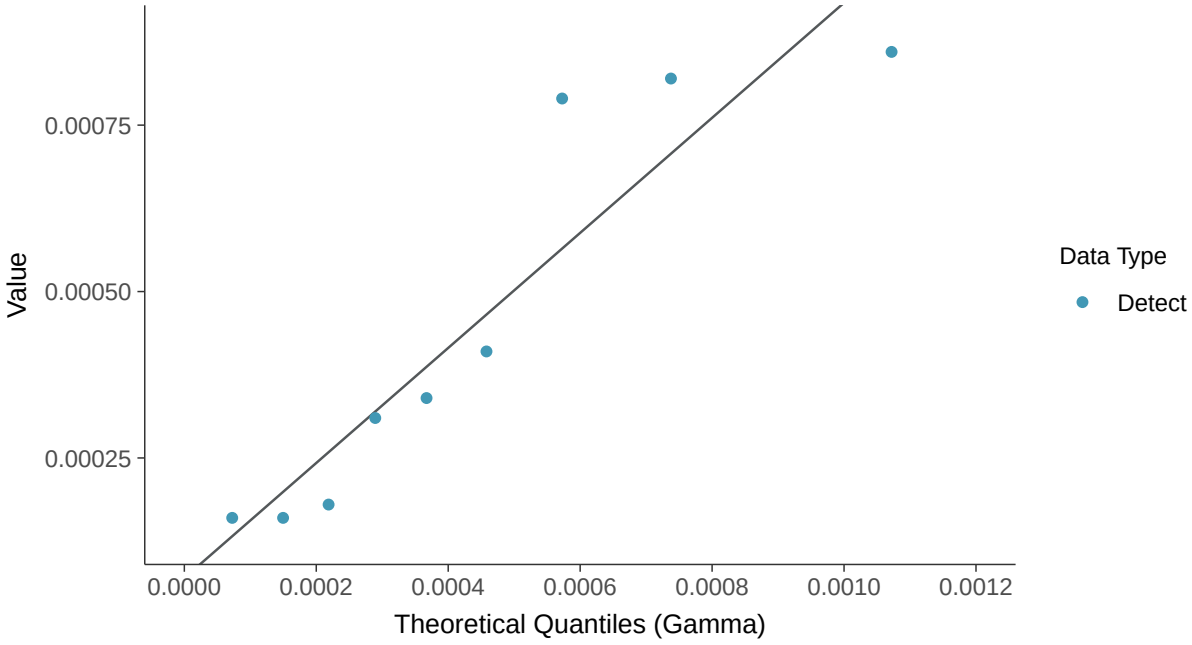
Lognormal Q-Q plot

Selenium, MW-18 (mg/L)



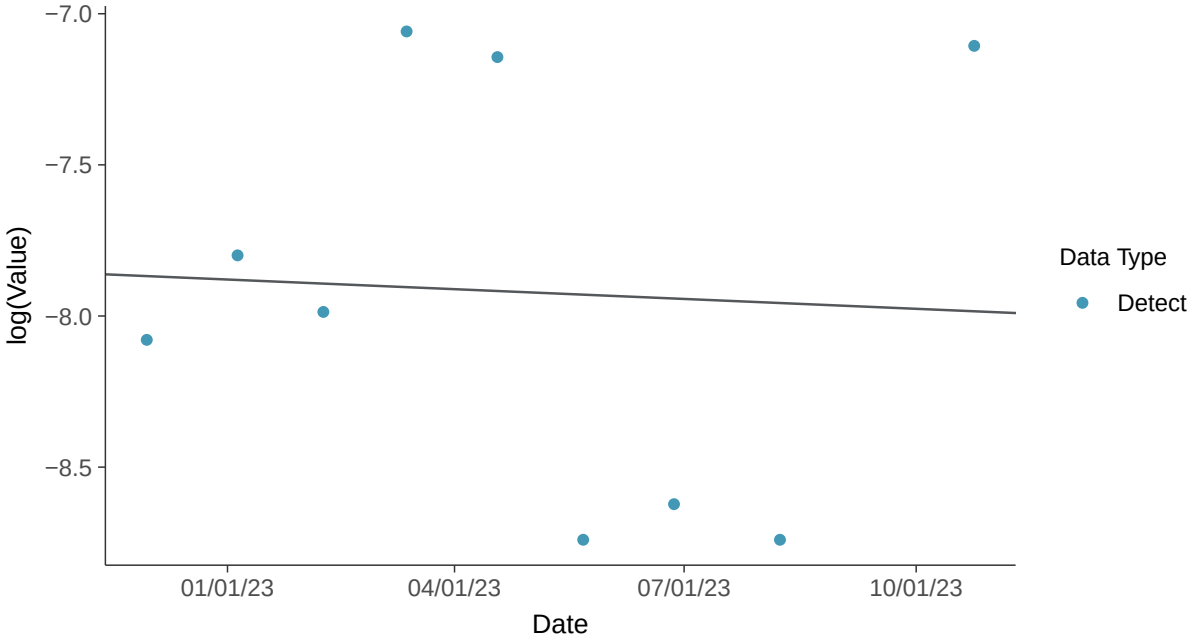
Gamma Q-Q plot

Selenium, MW-18 (mg/L)



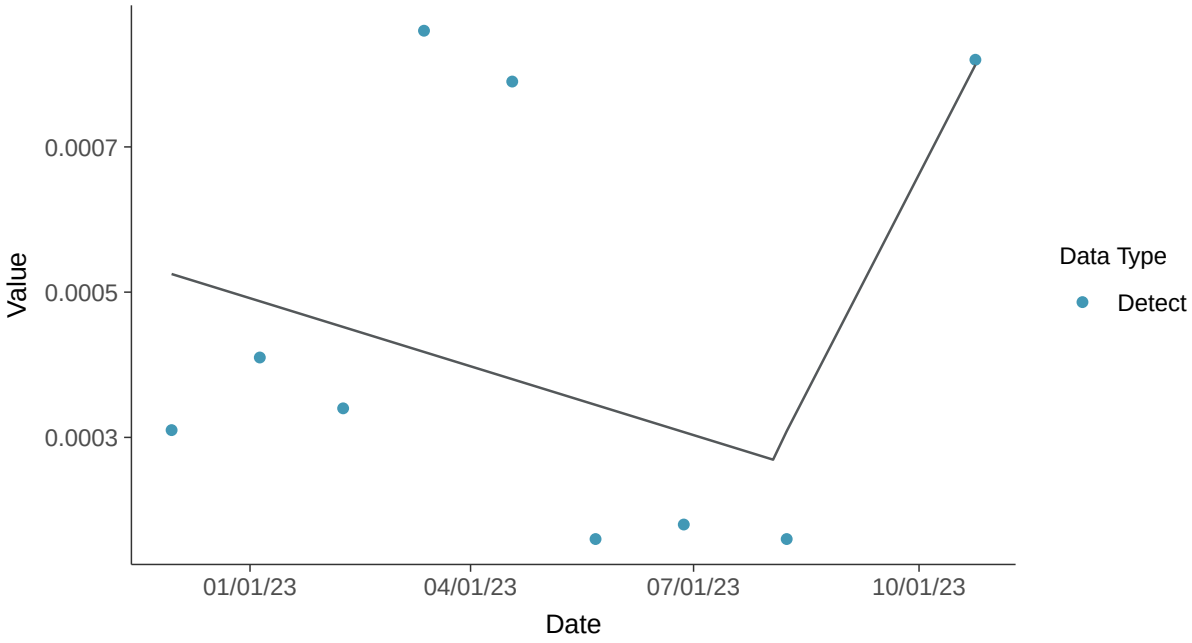
Trend Regression: Lognormal MLE

Selenium, MW-18 (mg/L)



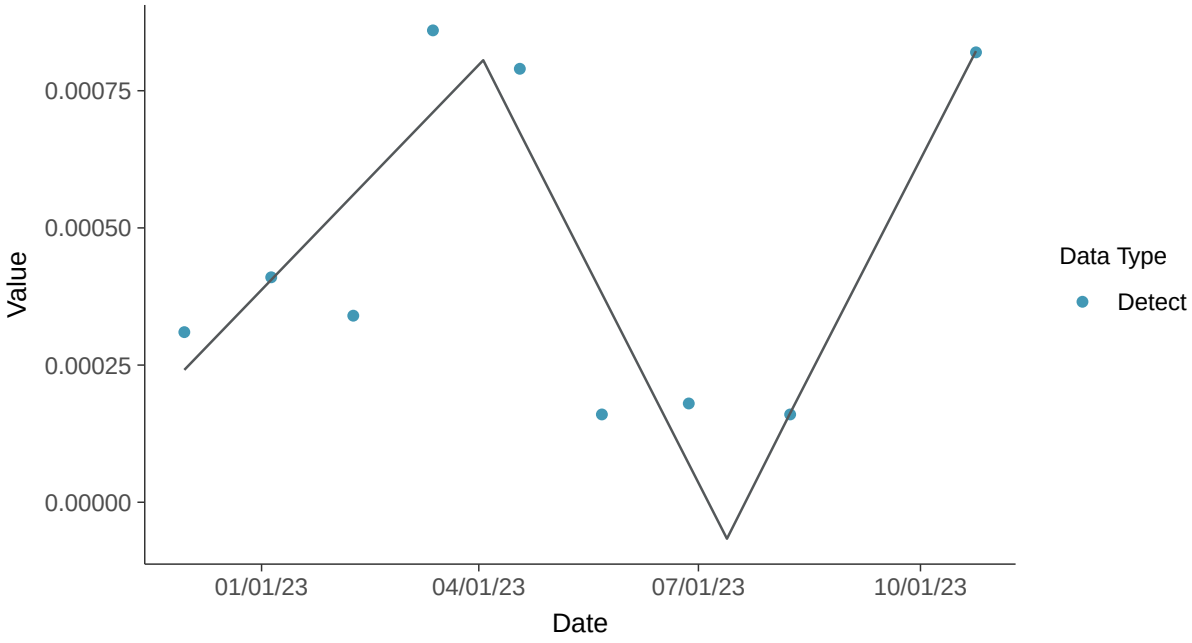
Trend Regression: Piecewise Linear-Linear

Selenium, MW-18 (mg/L)



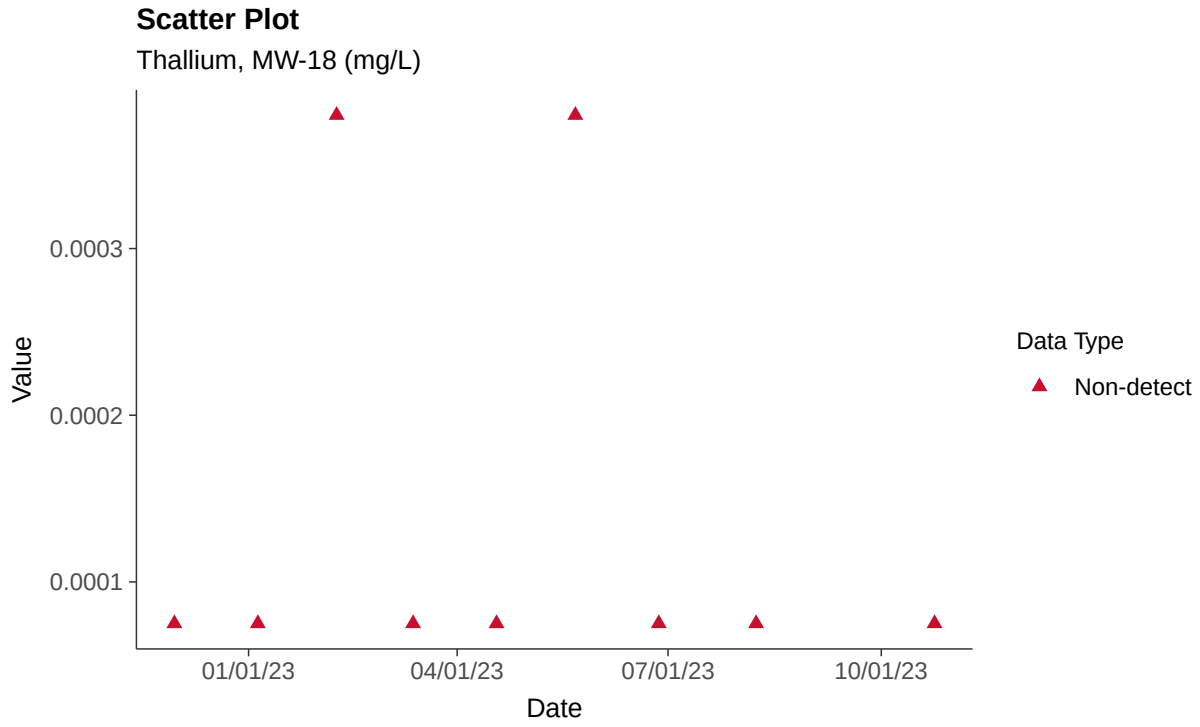
Trend Regression: Piecewise Linear-Linear-Linear

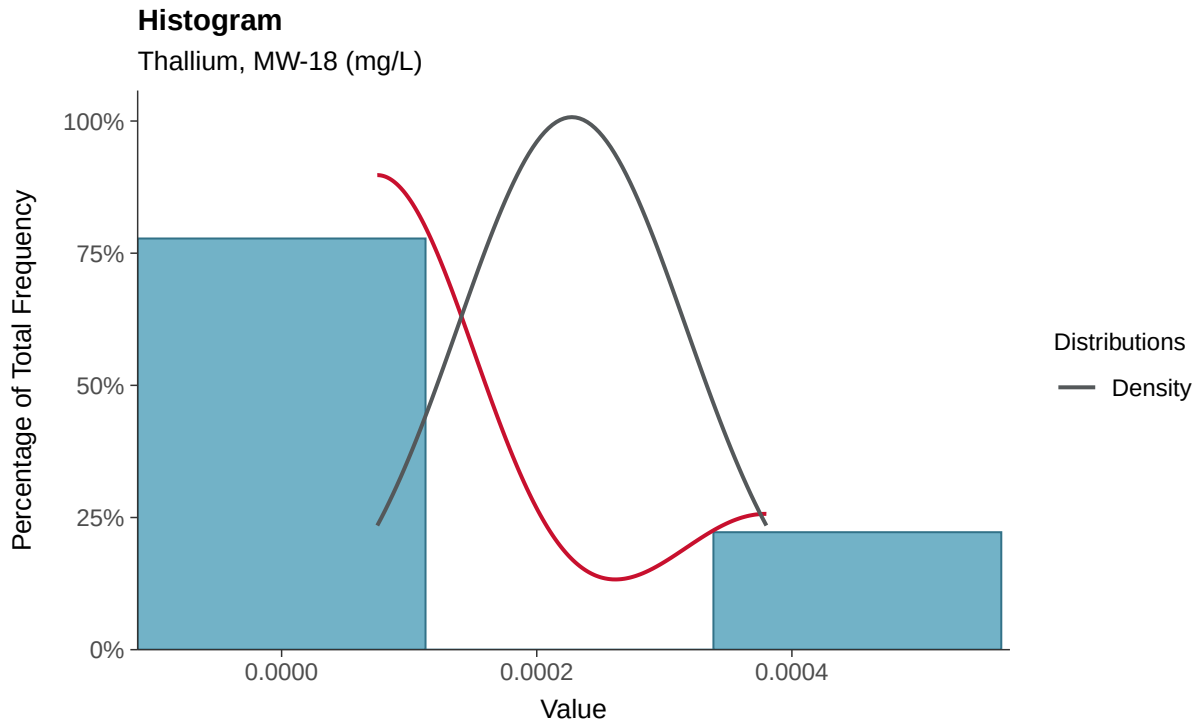
Selenium, MW-18 (mg/L)



Appendix IV: Thallium, MW-18

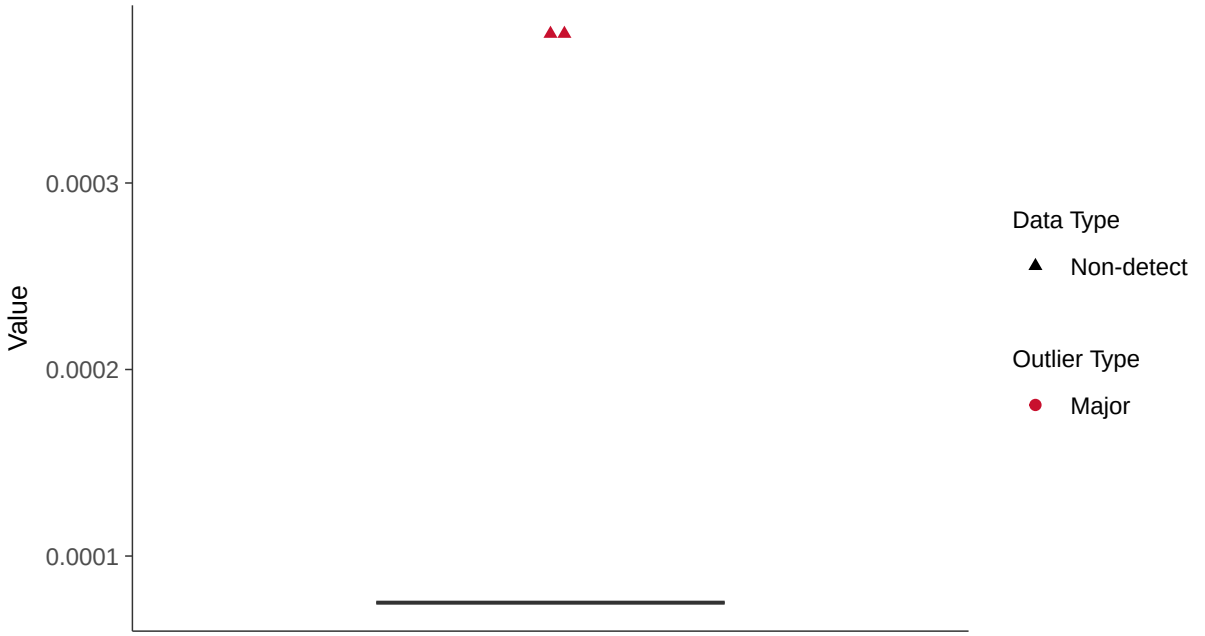
ID: 1_22_5_125





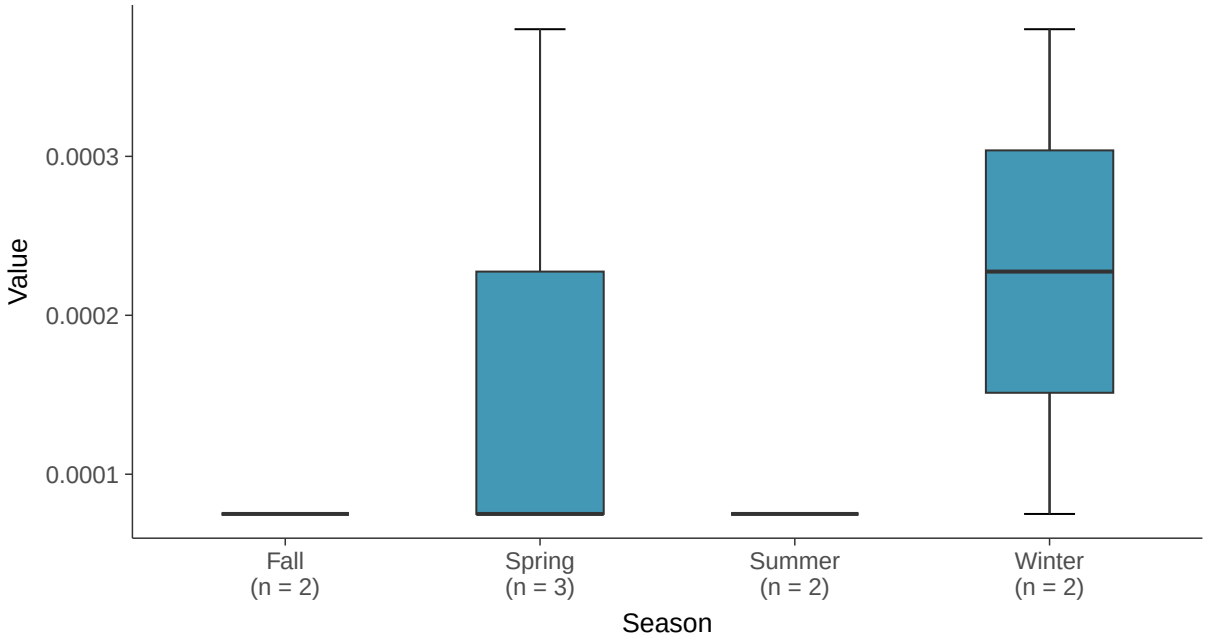
Boxplot

Thallium, MW-18 (mg/L)



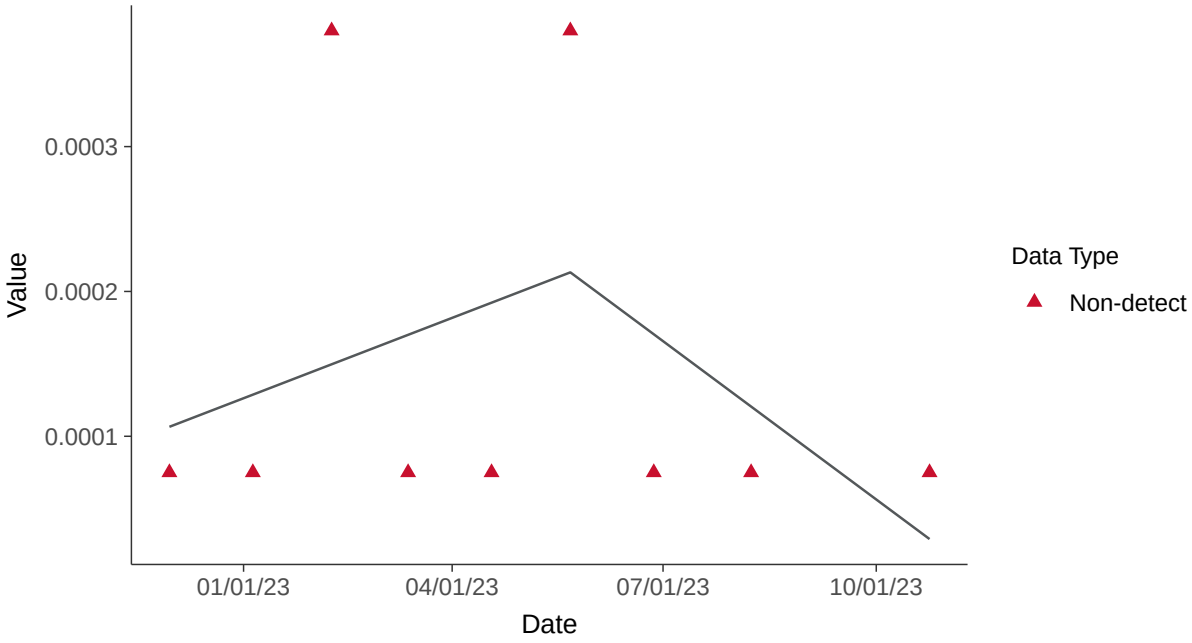
Boxplot by Season

Thallium, MW-18 (mg/L)



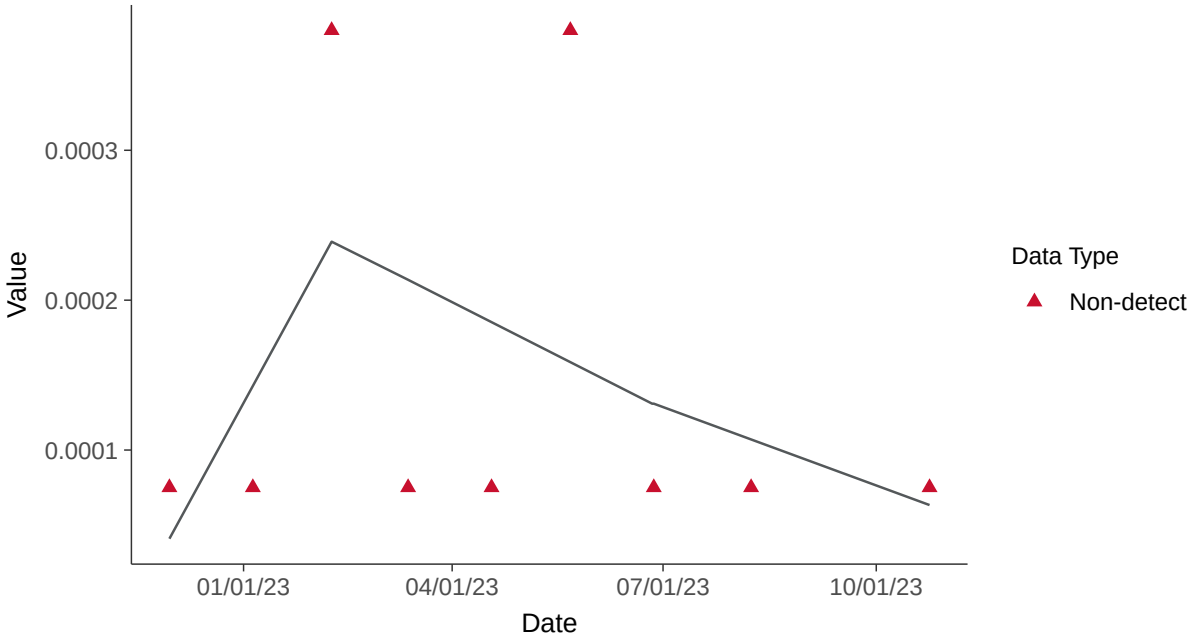
Trend Regression: Piecewise Linear-Linear

Thallium, MW-18 (mg/L)



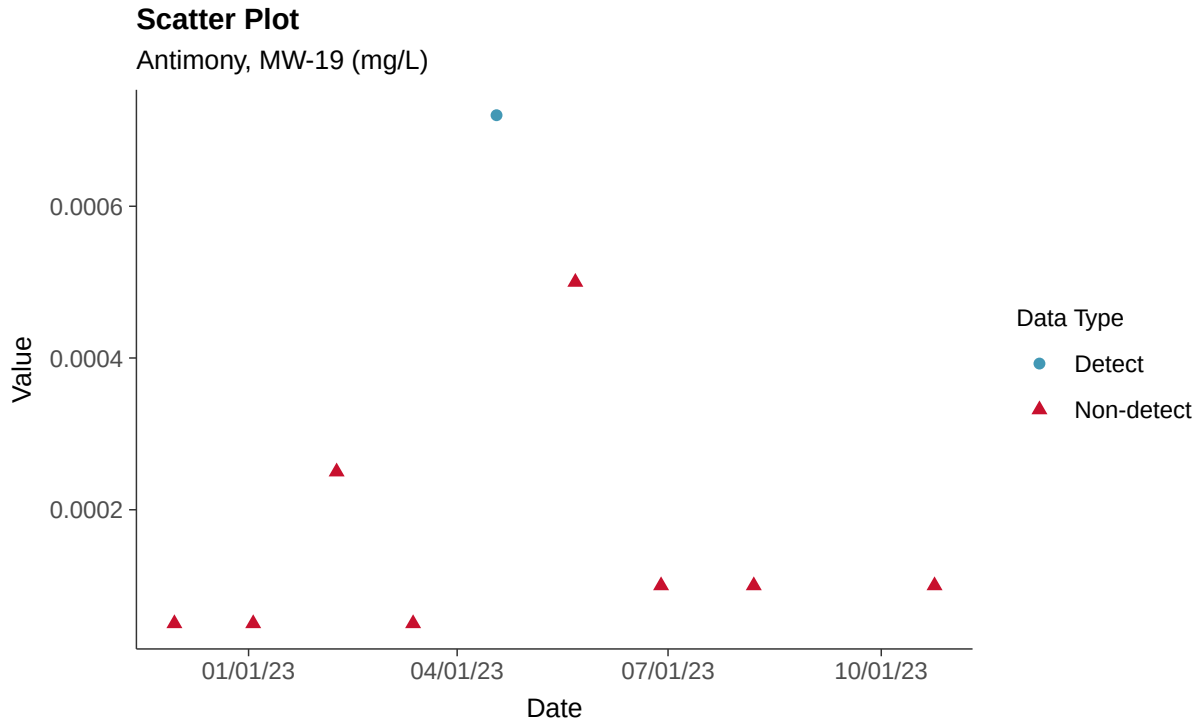
Trend Regression: Piecewise Linear-Linear-Linear

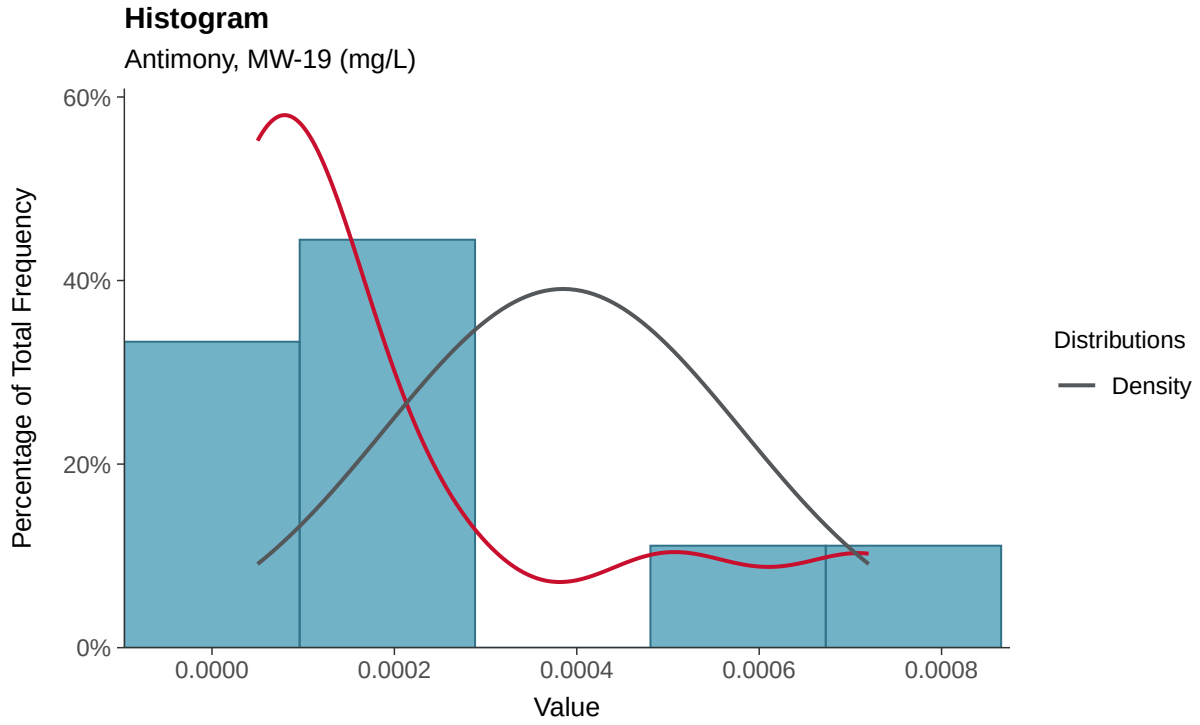
Thallium, MW-18 (mg/L)



Appendix IV: Antimony, MW-19

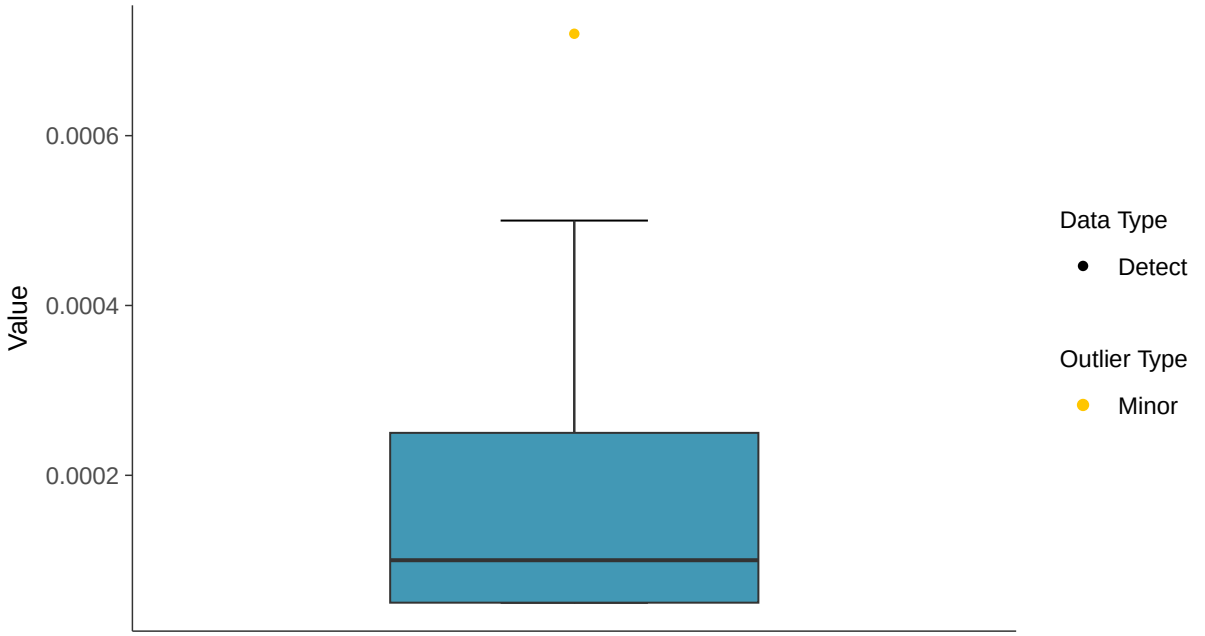
ID: 1_23_5_101





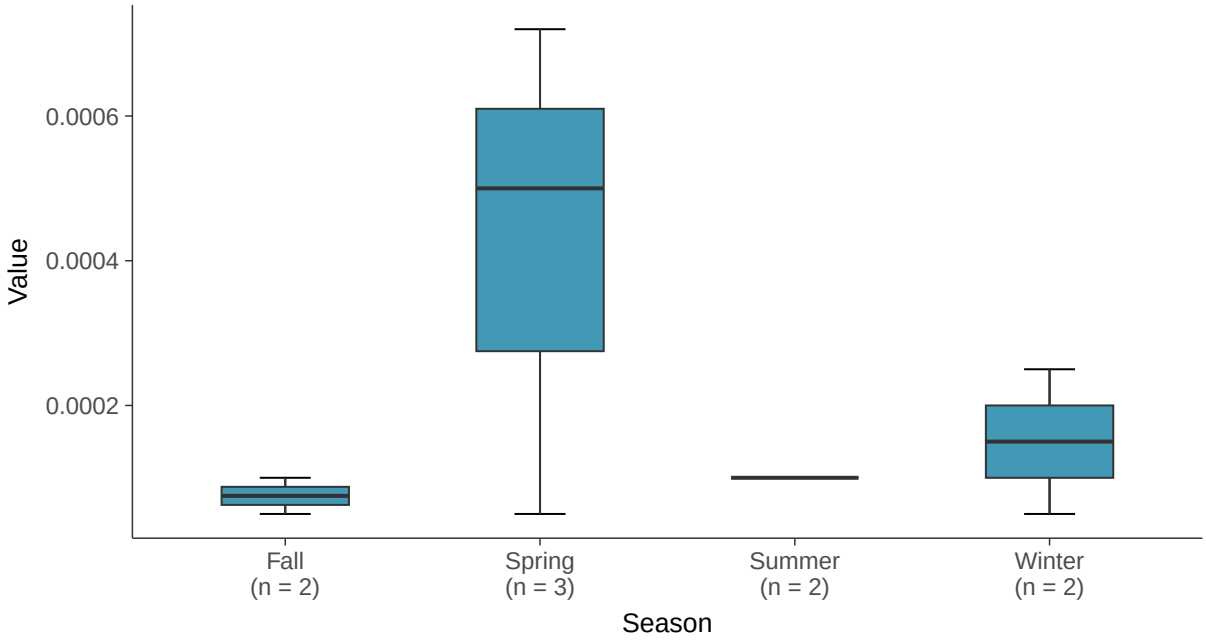
Boxplot

Antimony, MW-19 (mg/L)



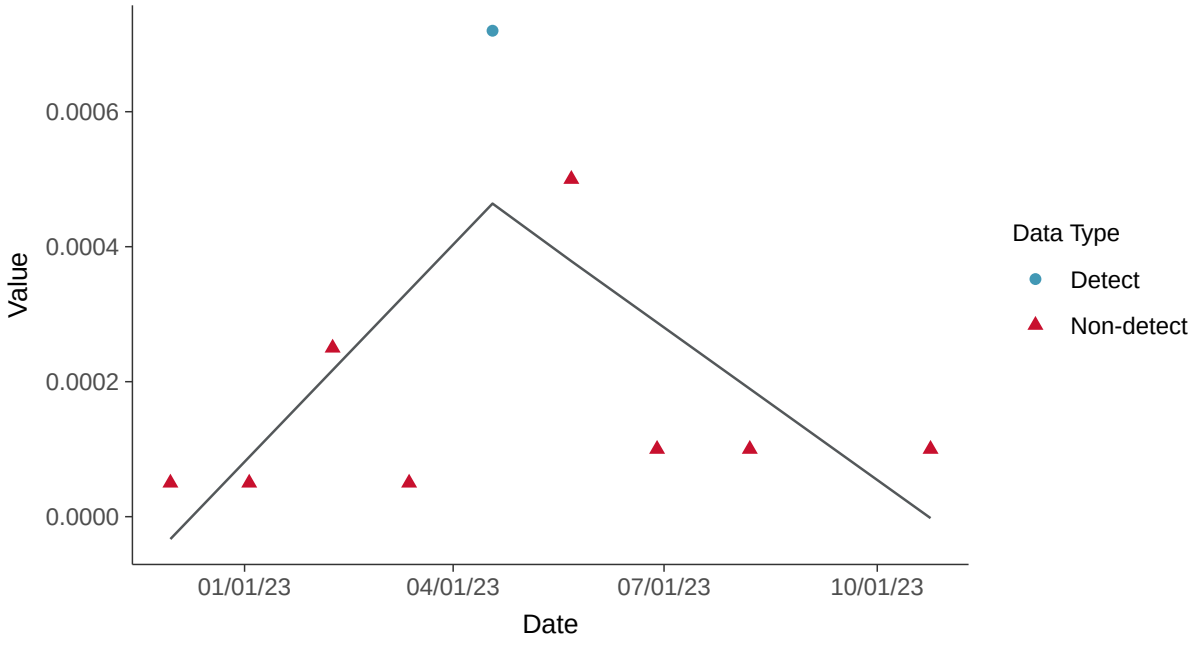
Boxplot by Season

Antimony, MW-19 (mg/L)



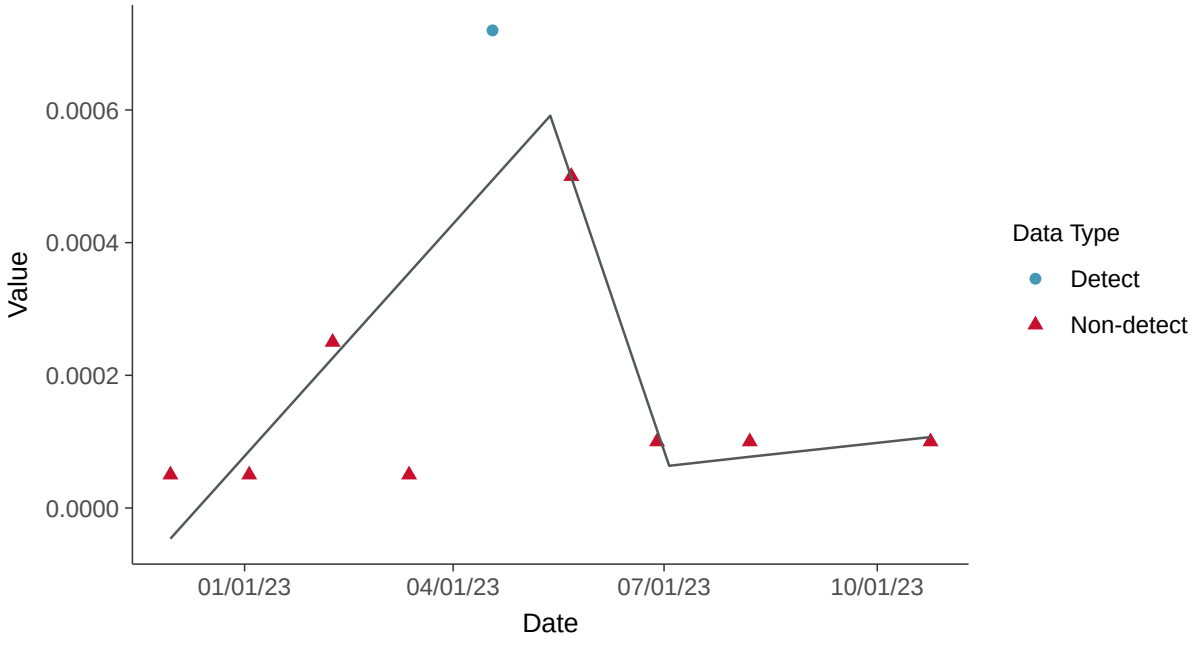
Trend Regression: Piecewise Linear-Linear

Antimony, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-19 (mg/L)

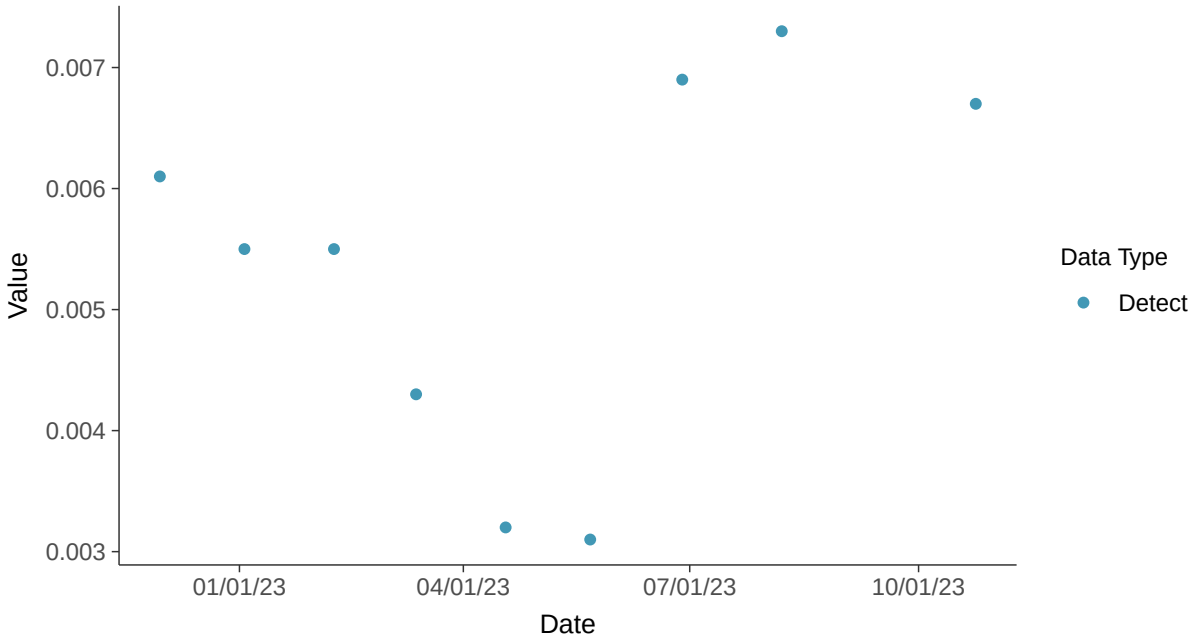


Appendix IV: Arsenic, MW-19

ID: 1_23_5_102

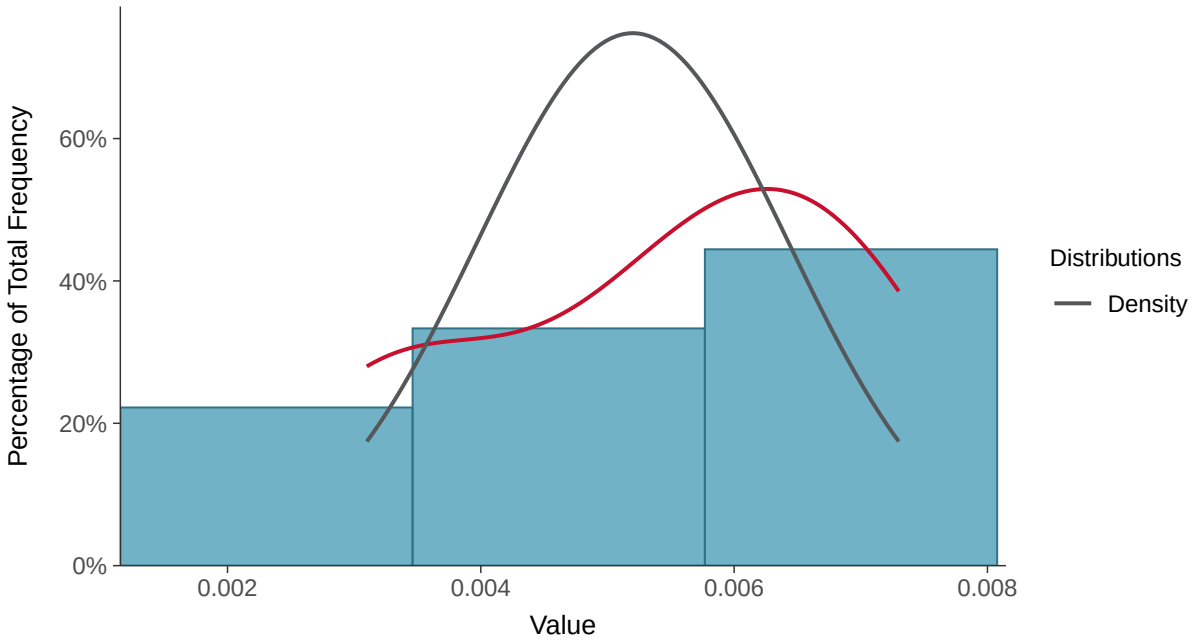
Scatter Plot

Arsenic, MW-19 (mg/L)



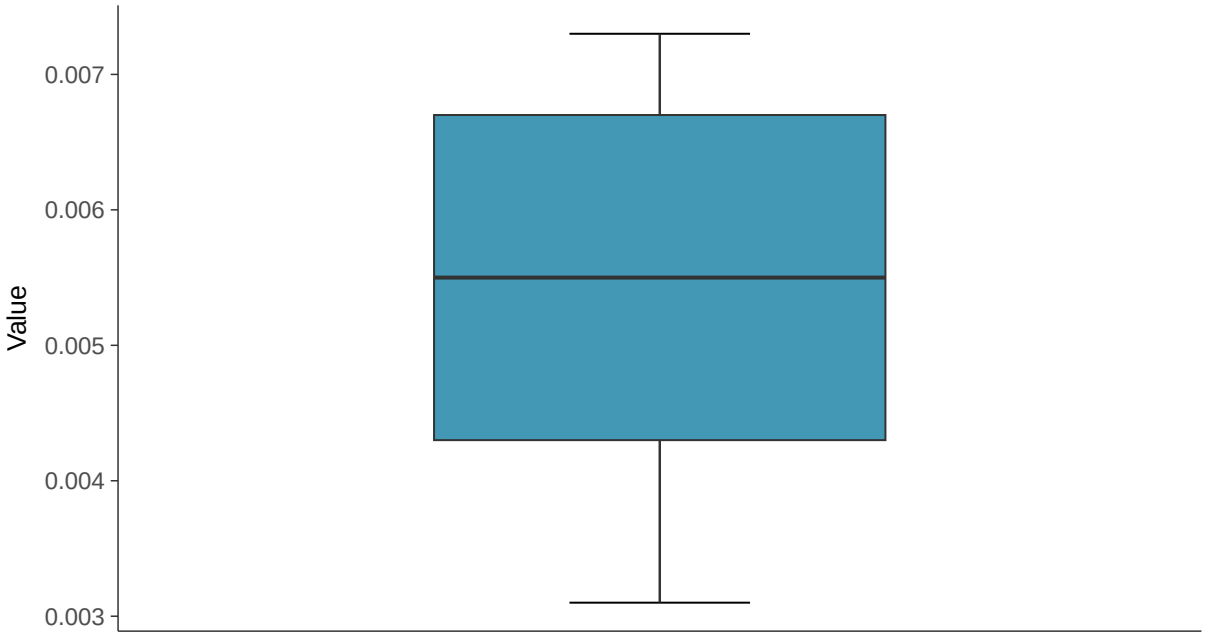
Histogram

Arsenic, MW-19 (mg/L)



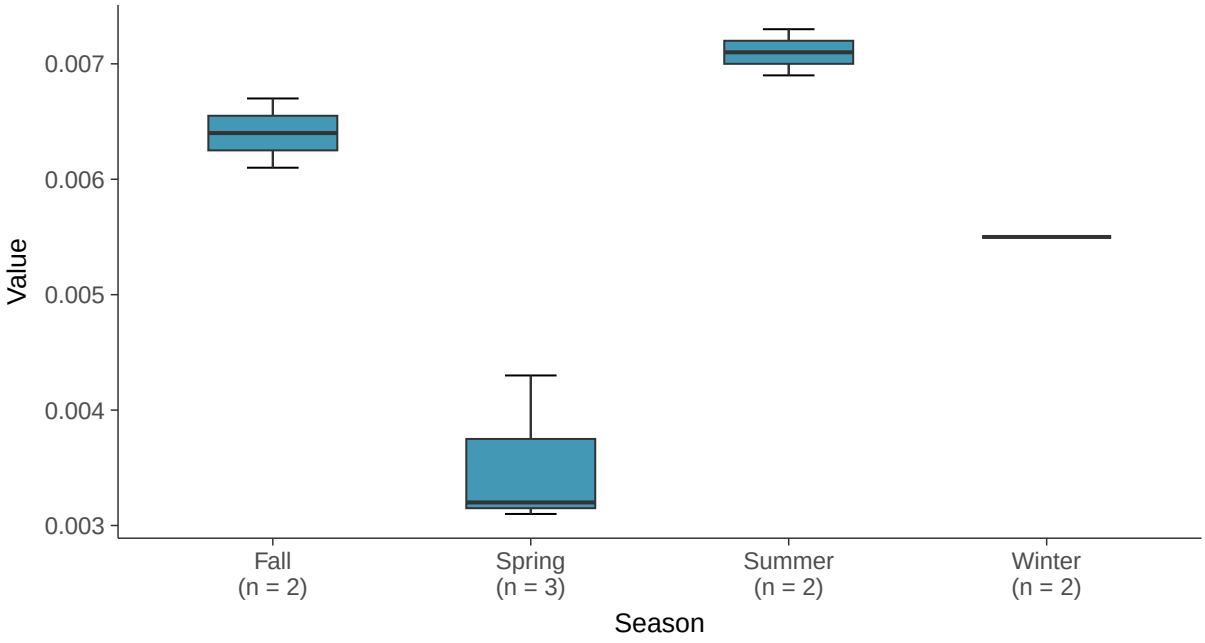
Boxplot

Arsenic, MW-19 (mg/L)



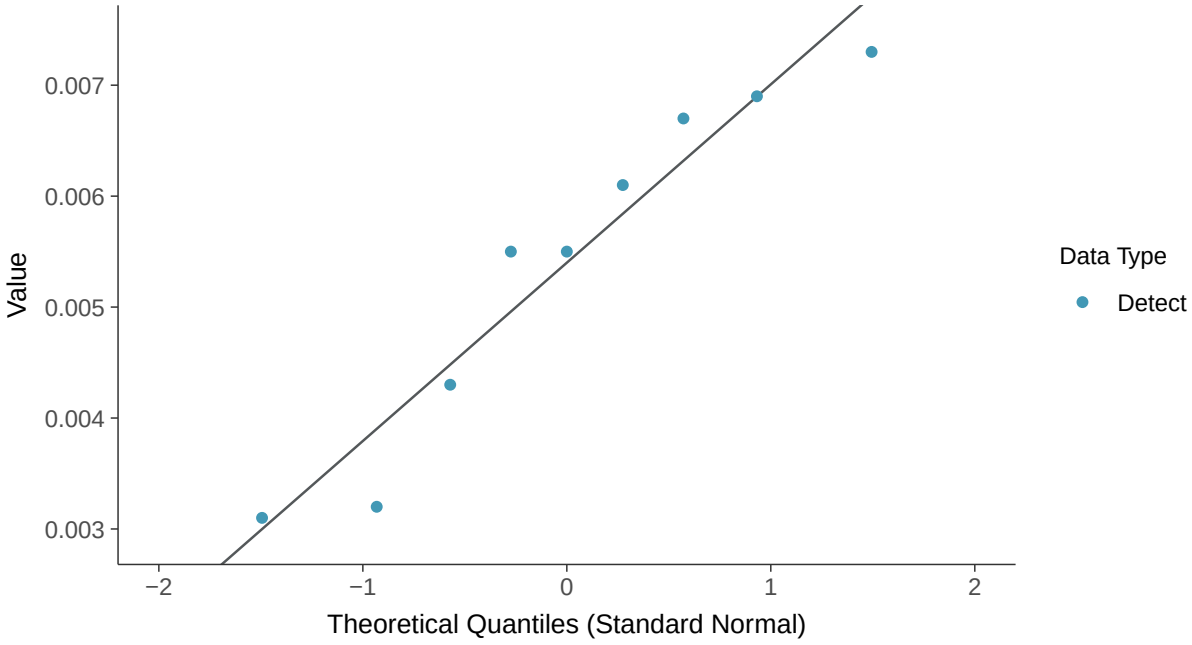
Boxplot by Season

Arsenic, MW-19 (mg/L)



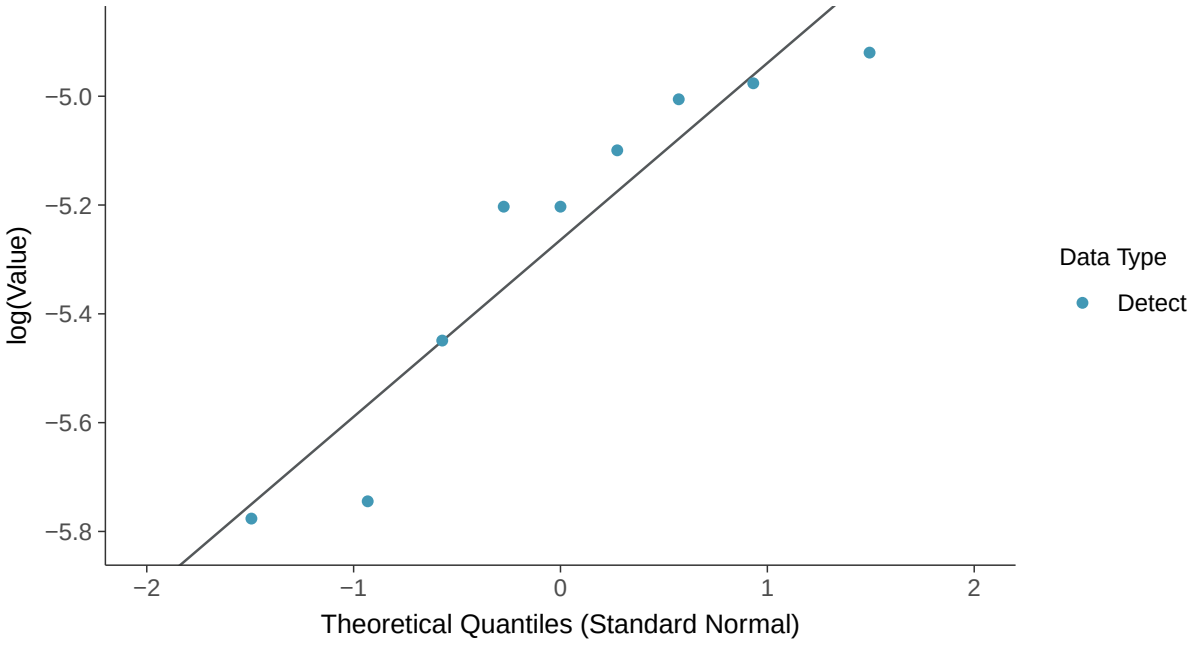
Normal Q-Q plot

Arsenic, MW-19 (mg/L)



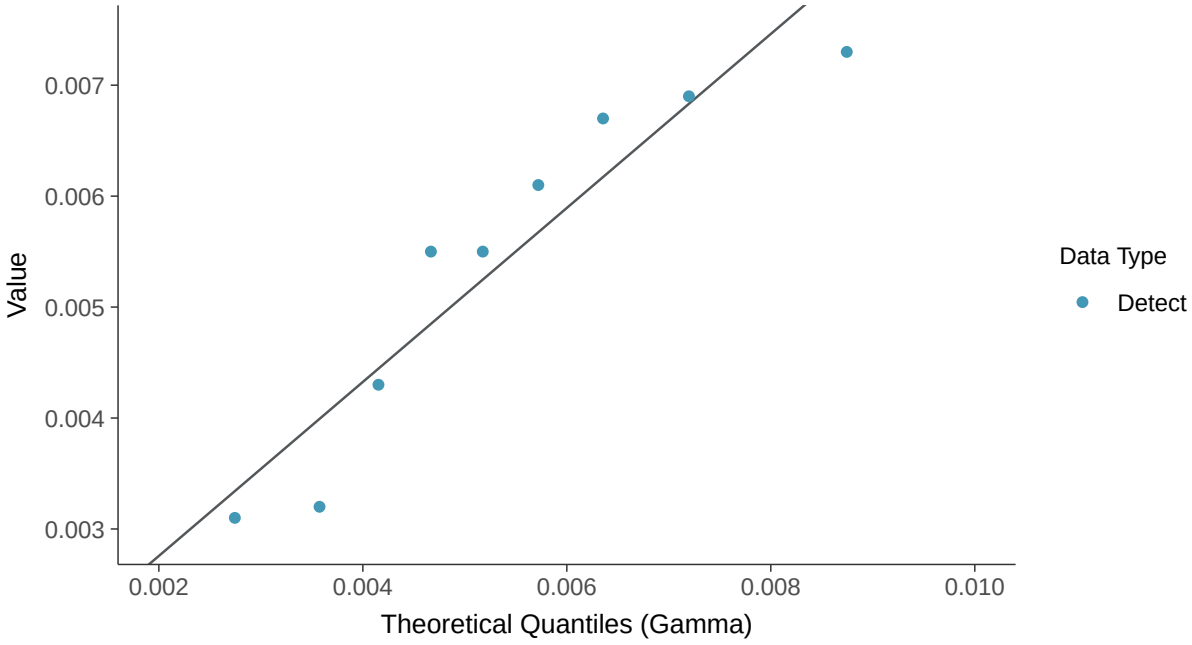
Lognormal Q-Q plot

Arsenic, MW-19 (mg/L)



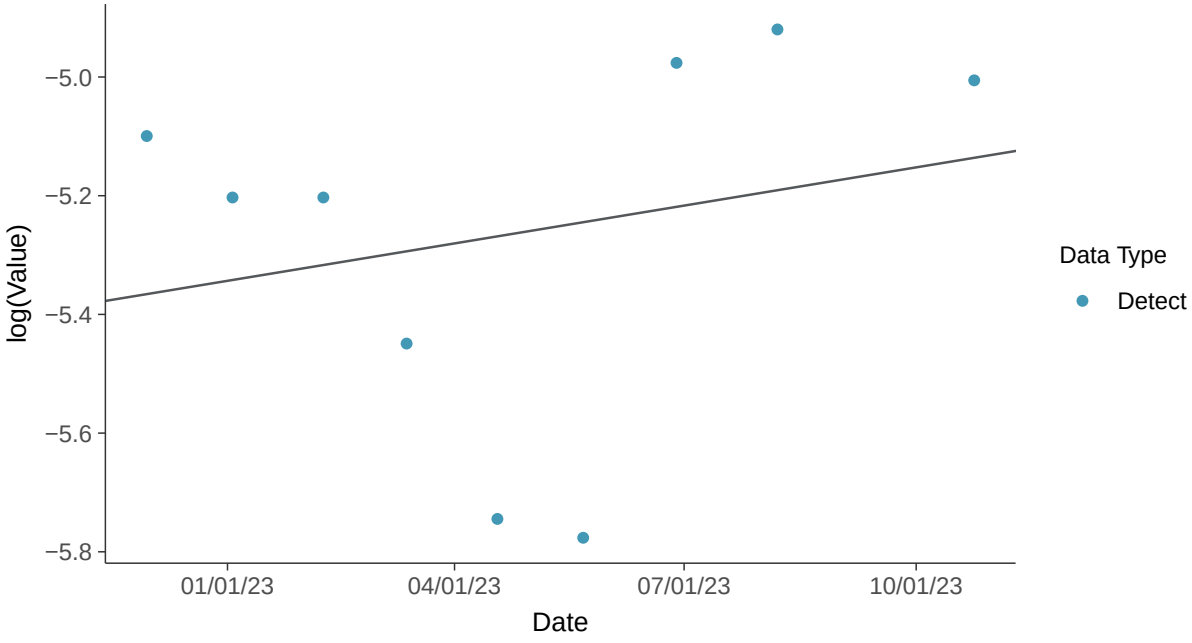
Gamma Q-Q plot

Arsenic, MW-19 (mg/L)



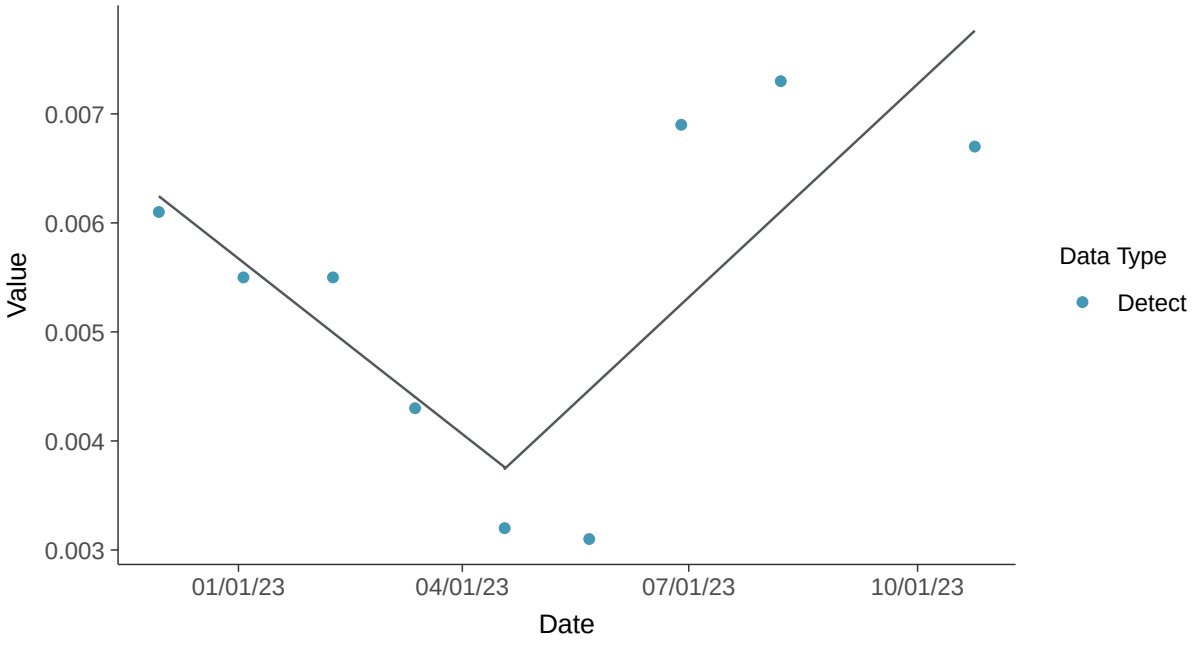
Trend Regression: Lognormal MLE

Arsenic, MW-19 (mg/L)



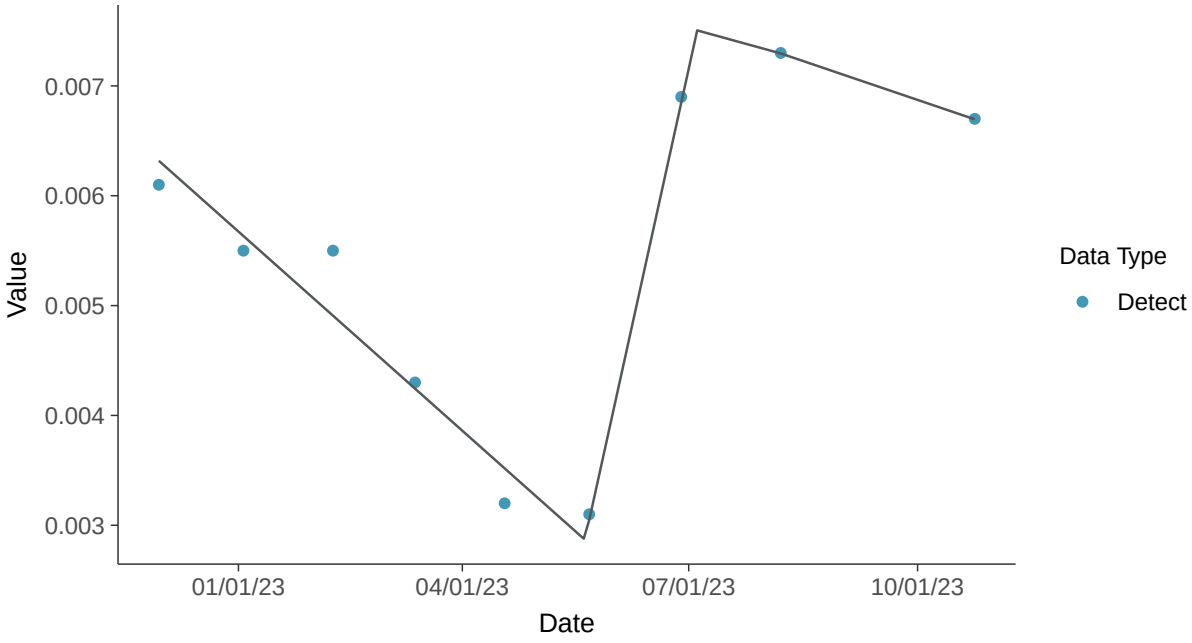
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-19 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-19 (mg/L)

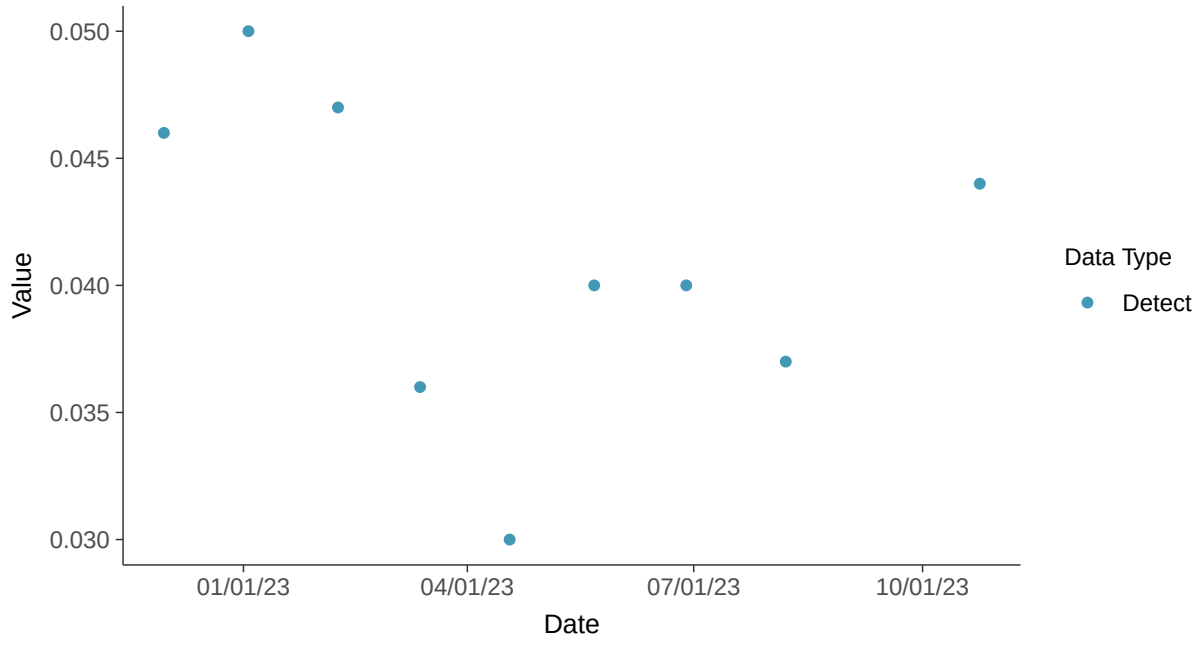


Appendix IV: Barium, MW-19

ID: 1_23_5_103

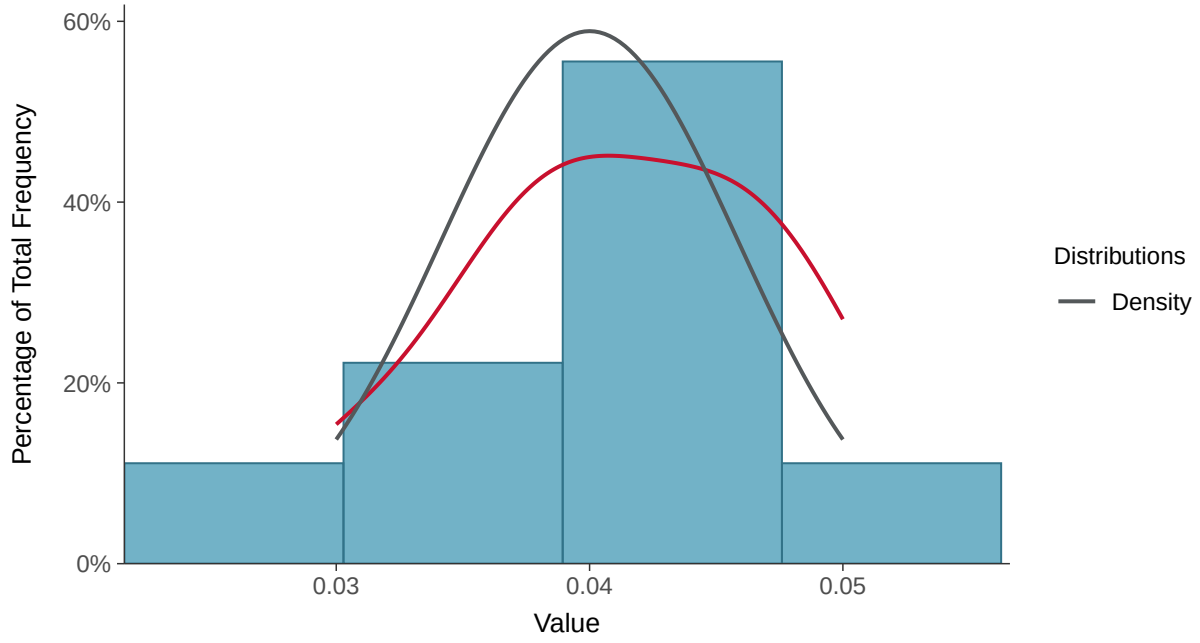
Scatter Plot

Barium, MW-19 (mg/L)



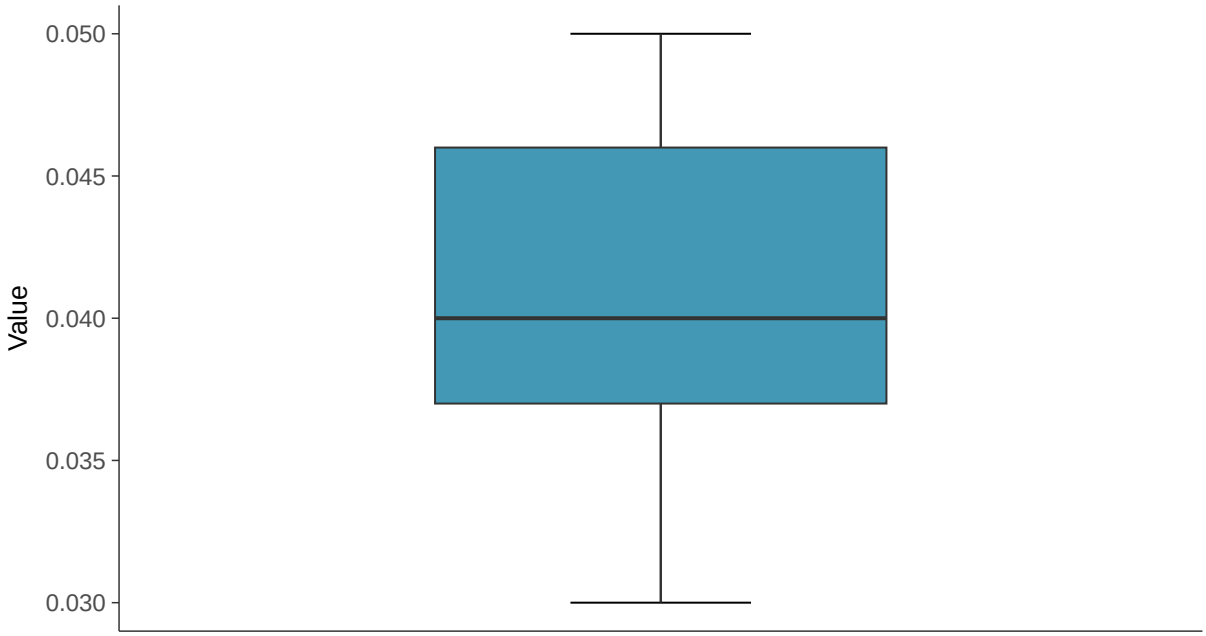
Histogram

Barium, MW-19 (mg/L)



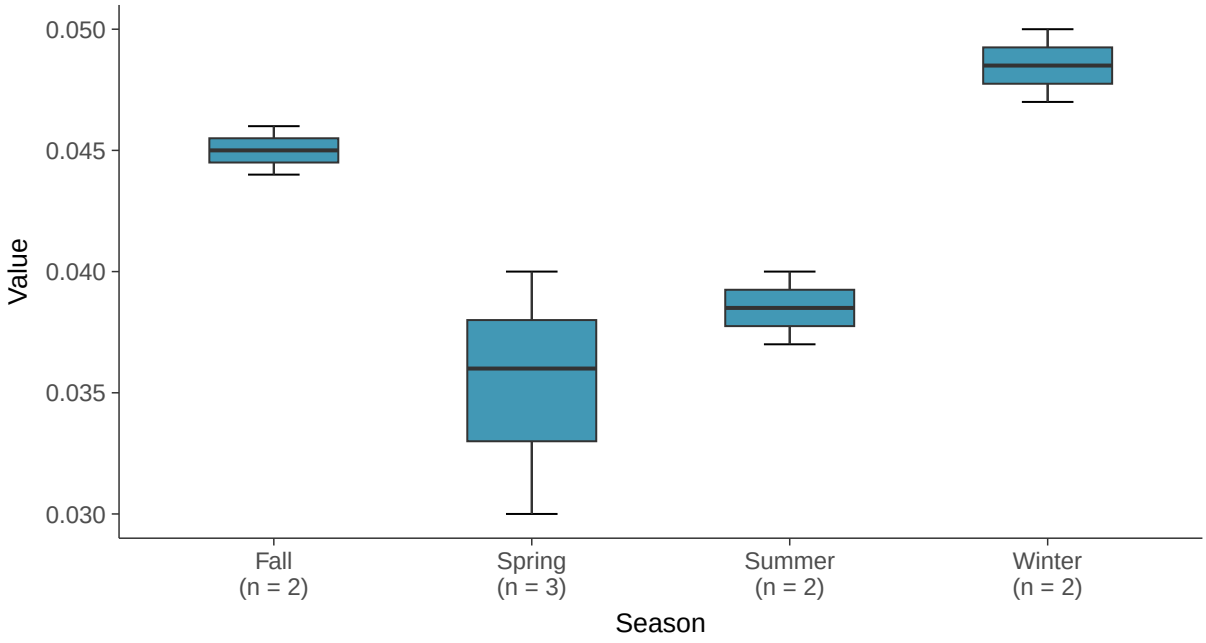
Boxplot

Barium, MW-19 (mg/L)



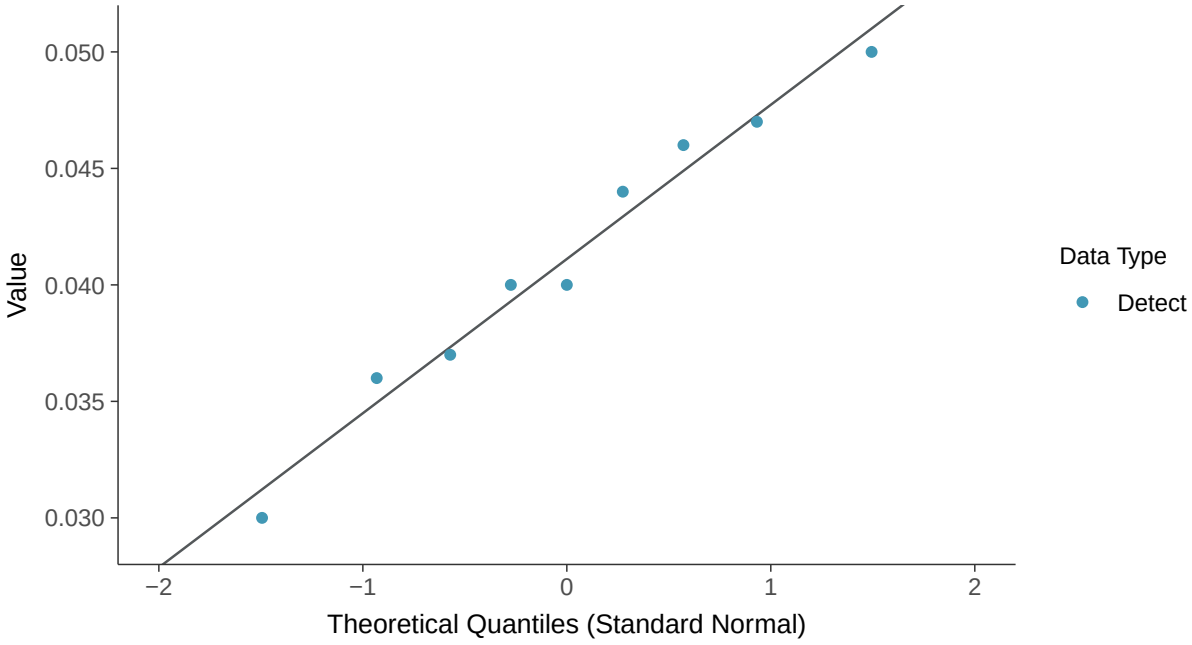
Boxplot by Season

Barium, MW-19 (mg/L)



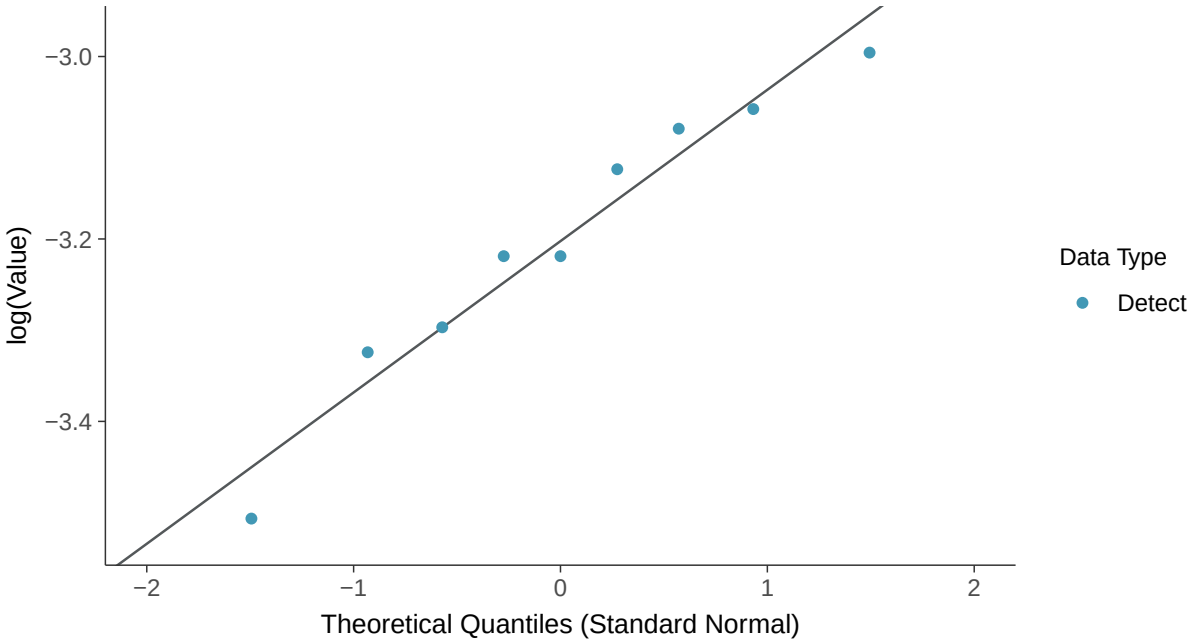
Normal Q-Q plot

Barium, MW-19 (mg/L)



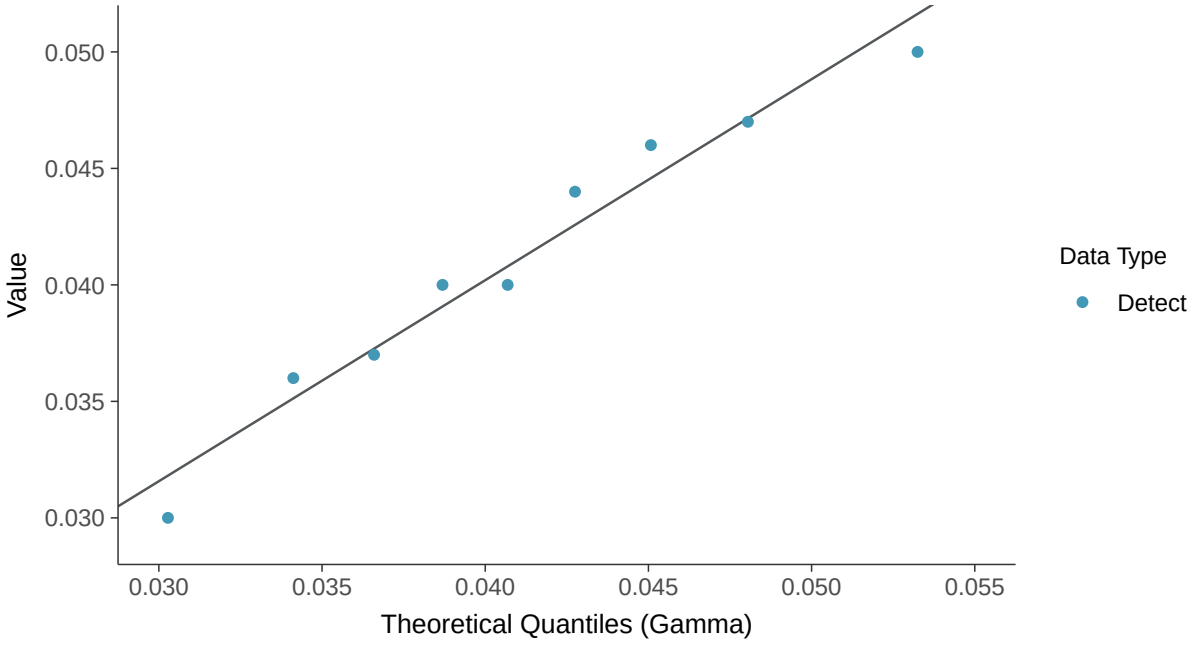
Lognormal Q-Q plot

Barium, MW-19 (mg/L)



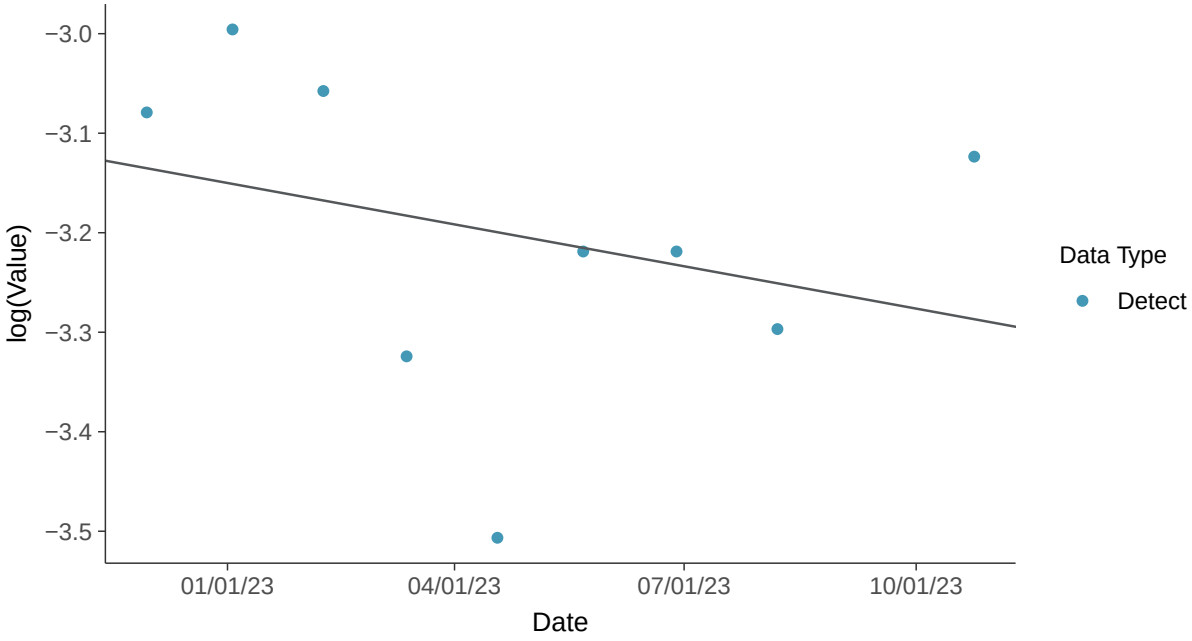
Gamma Q-Q plot

Barium, MW-19 (mg/L)



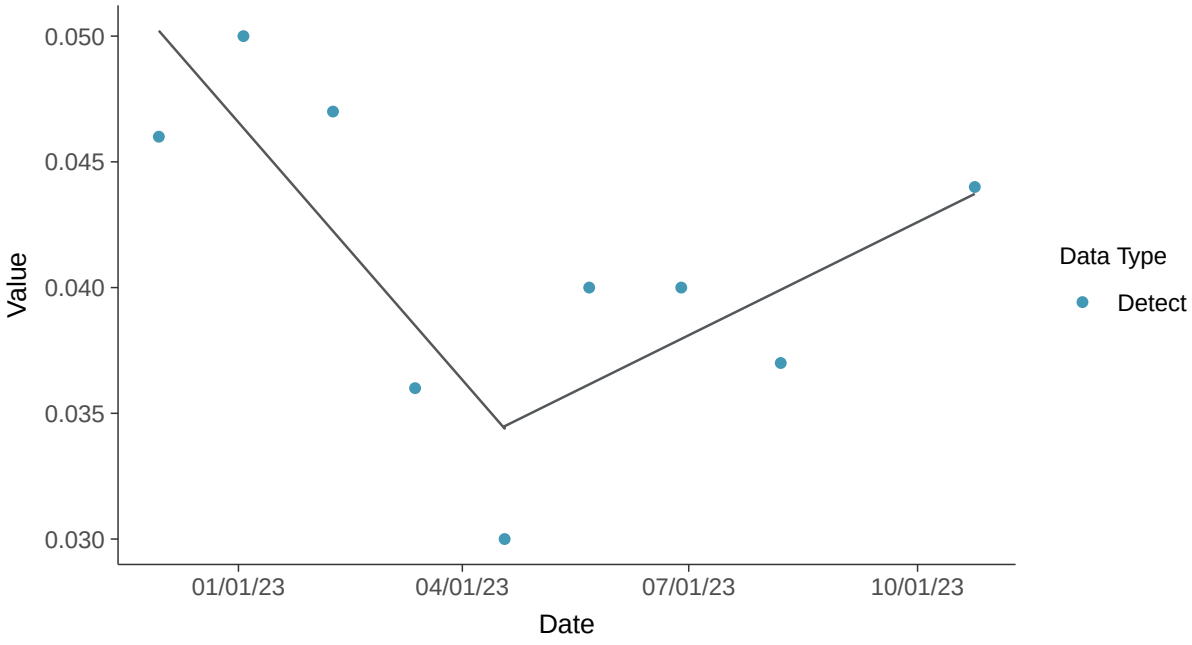
Trend Regression: Lognormal MLE

Barium, MW-19 (mg/L)



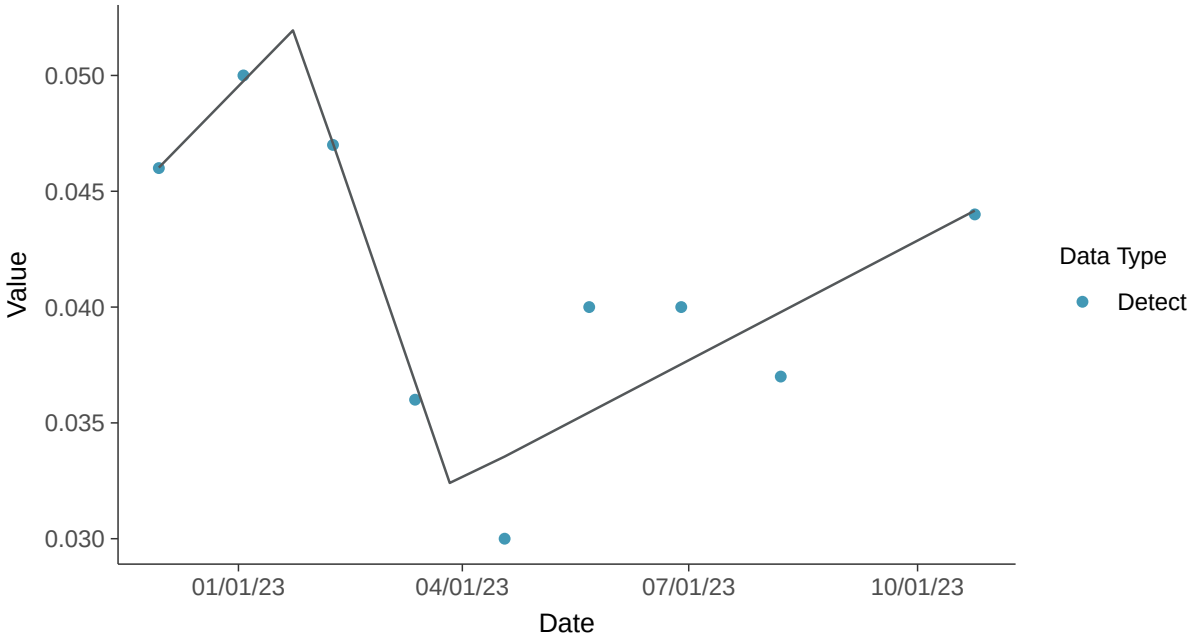
Trend Regression: Piecewise Linear-Linear

Barium, MW-19 (mg/L)



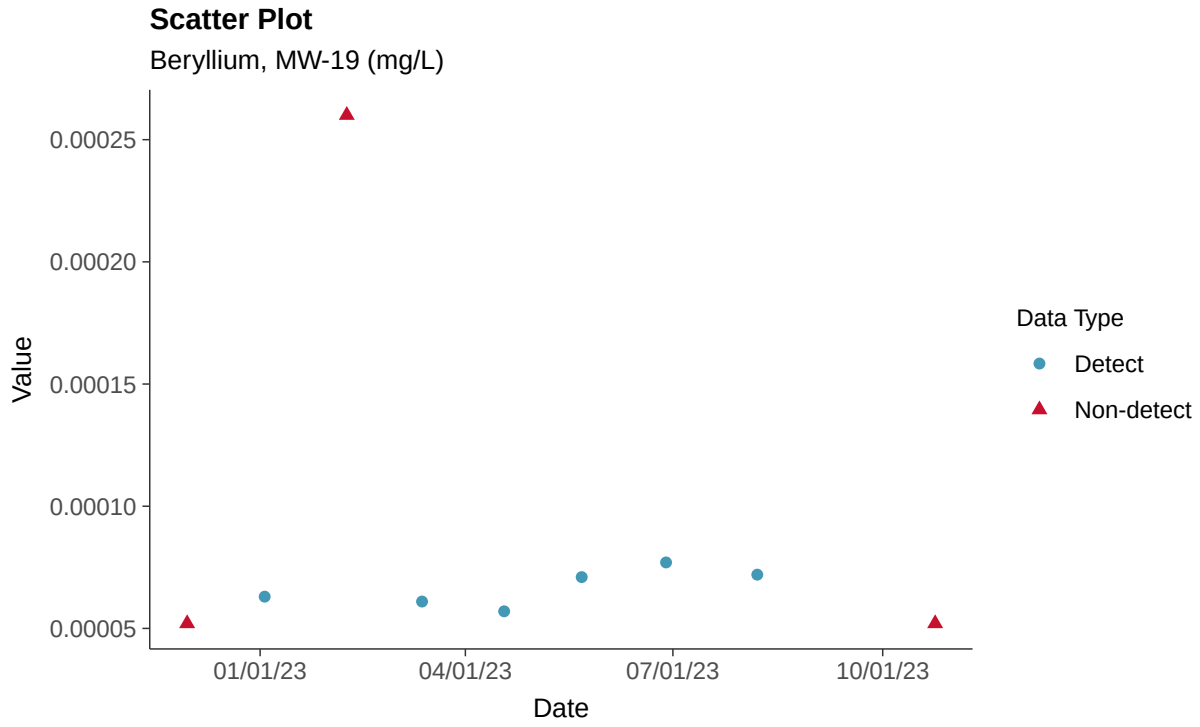
Trend Regression: Piecewise Linear-Linear-Linear

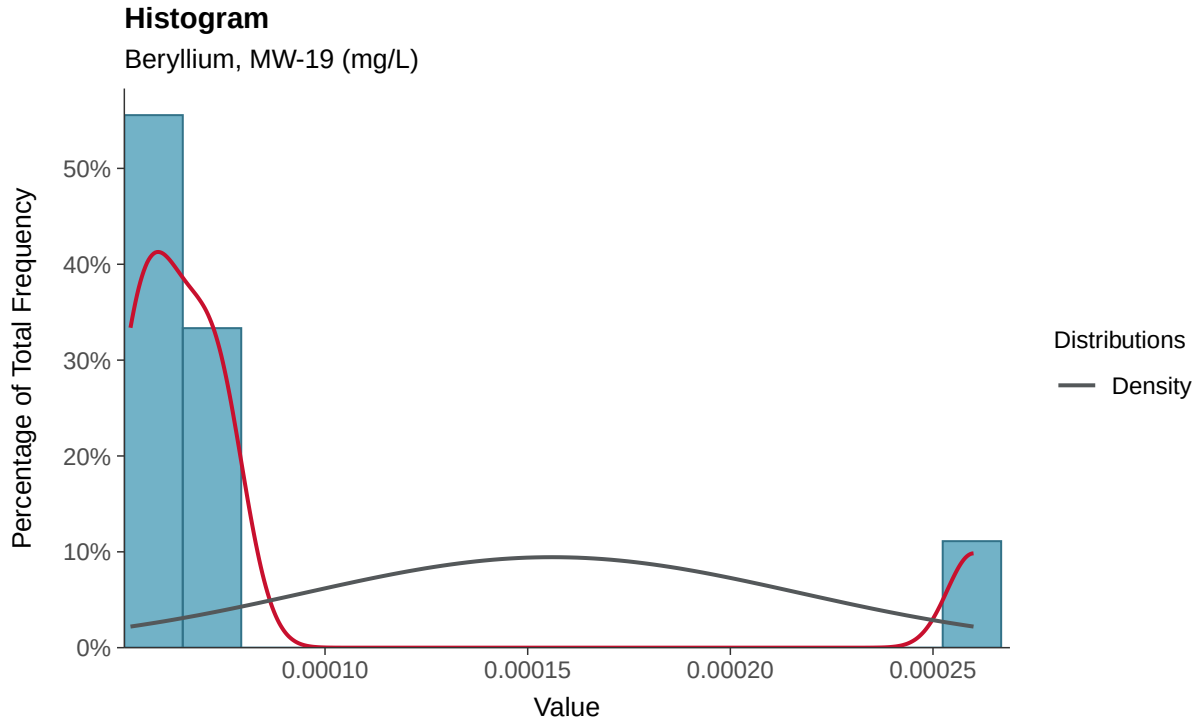
Barium, MW-19 (mg/L)



Appendix IV: Beryllium, MW-19

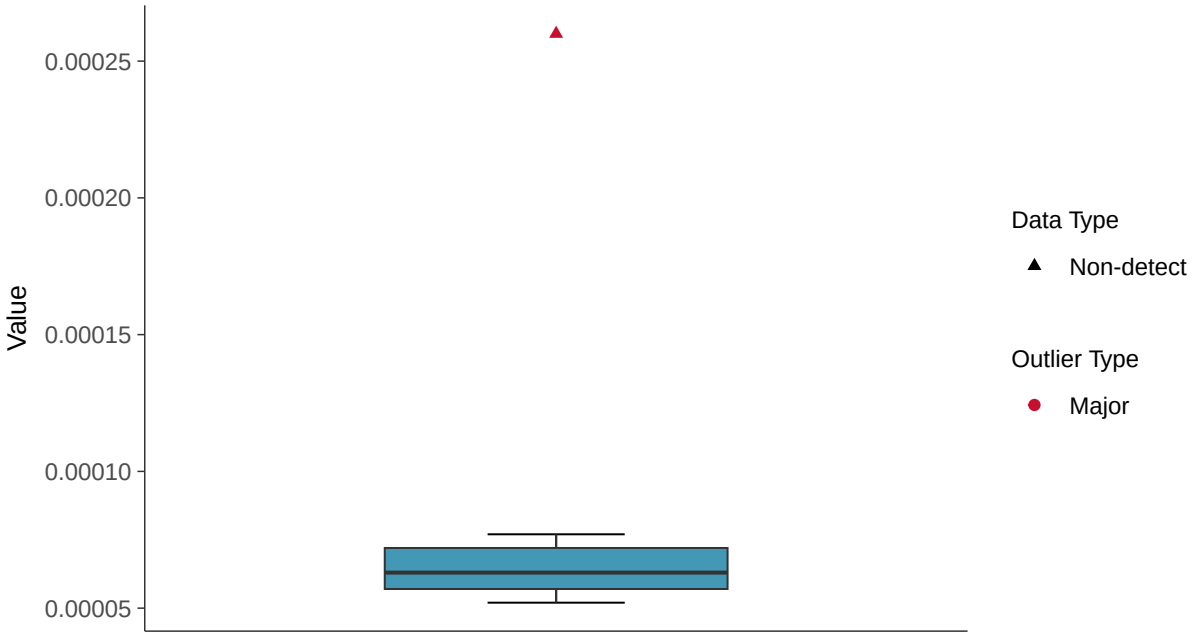
ID: 1_23_5_104





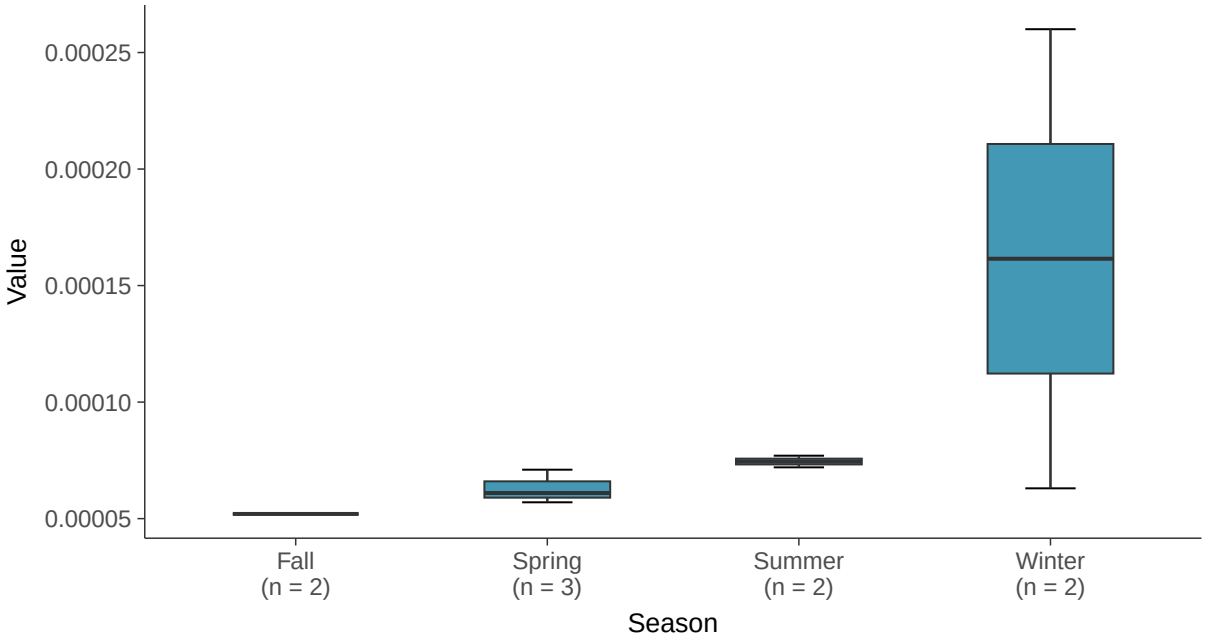
Boxplot

Beryllium, MW-19 (mg/L)



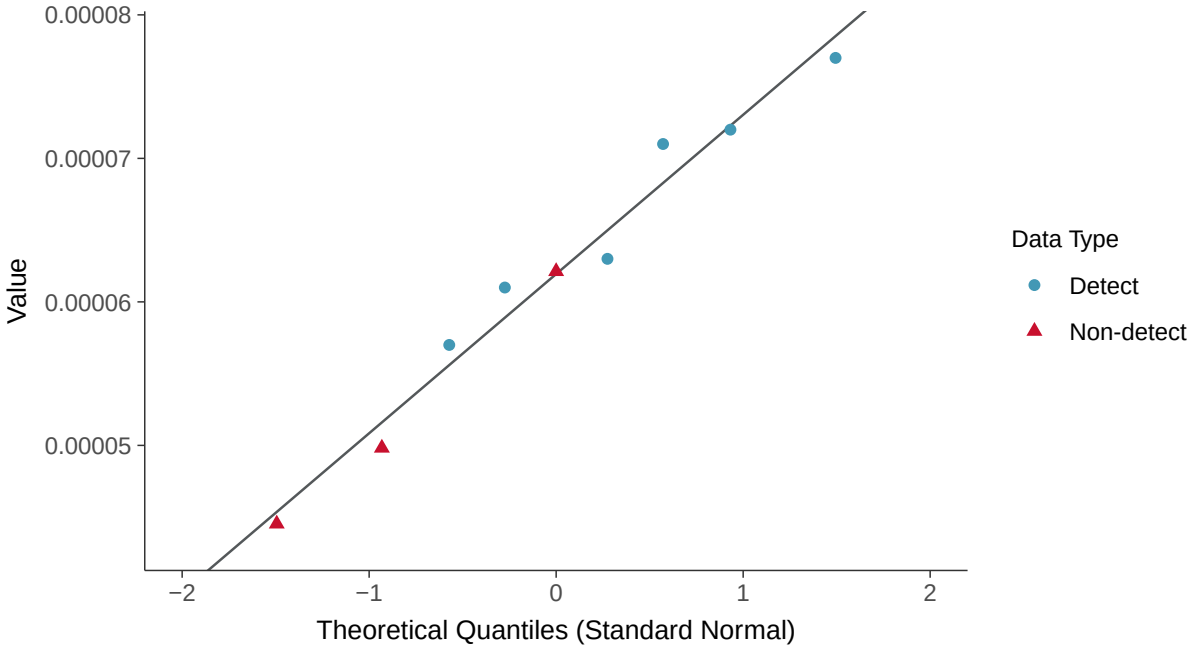
Boxplot by Season

Beryllium, MW-19 (mg/L)



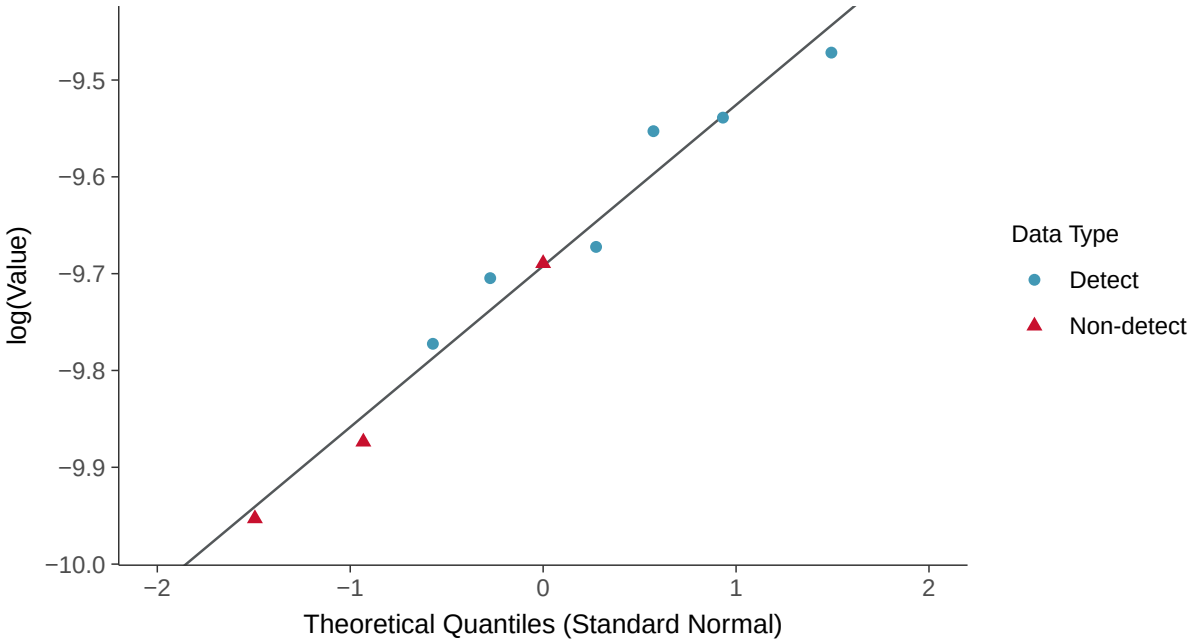
Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-19 (mg/L)



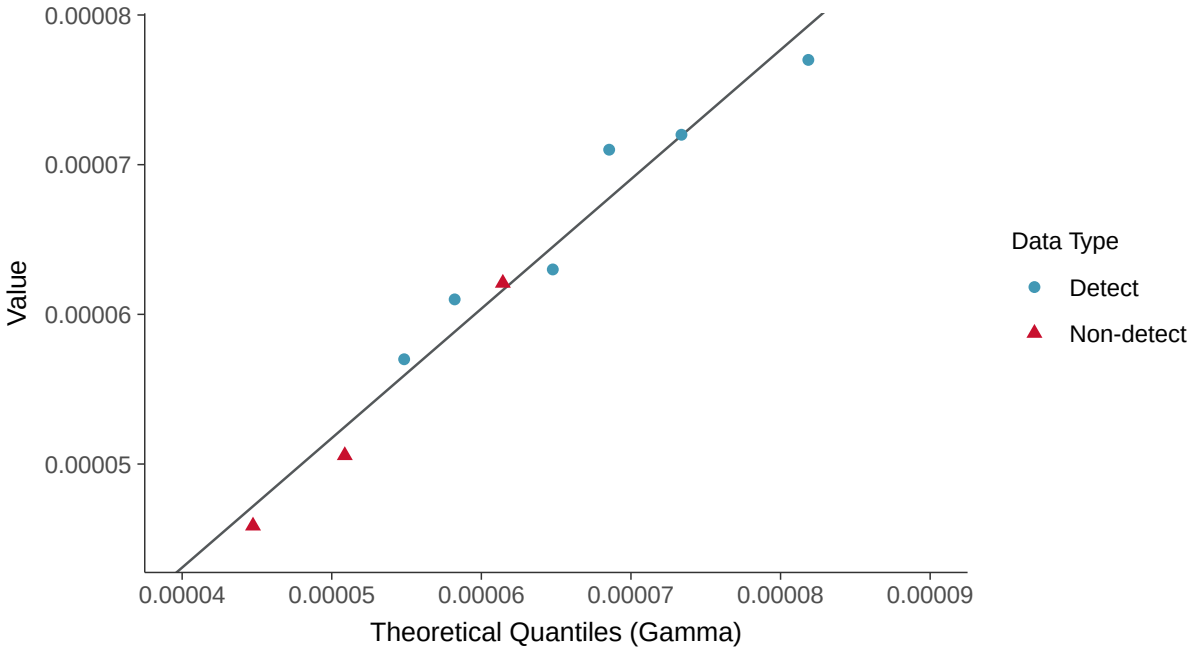
Lognormal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-19 (mg/L)



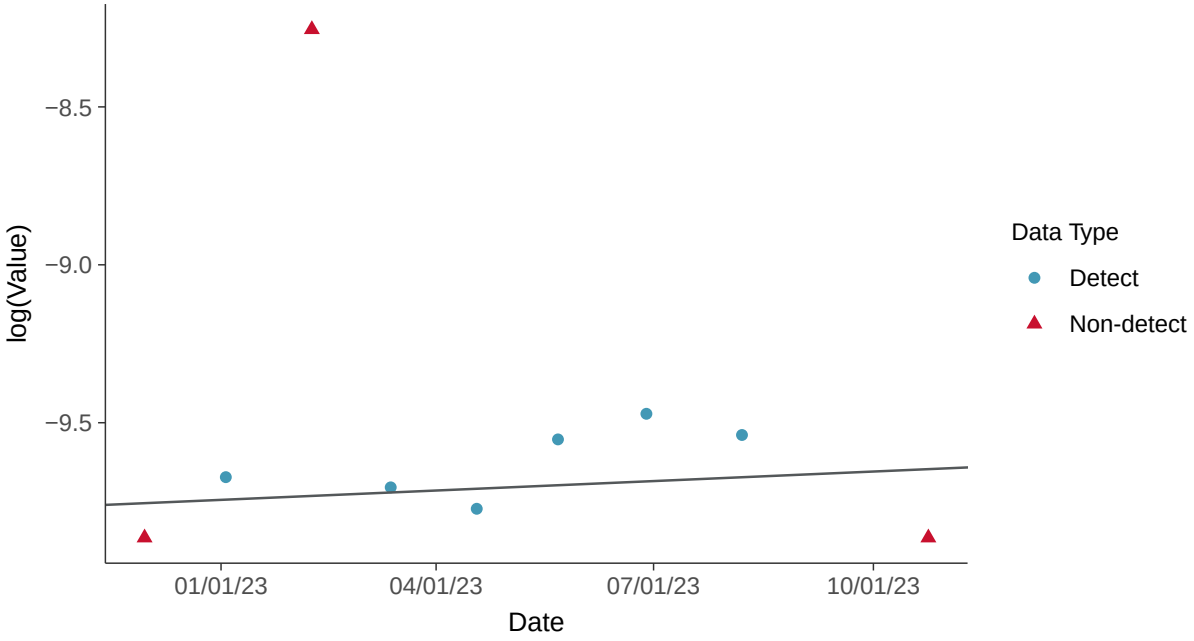
Gamma Q-Q plot using ROS Imputed Estimates

Beryllium, MW-19 (mg/L)



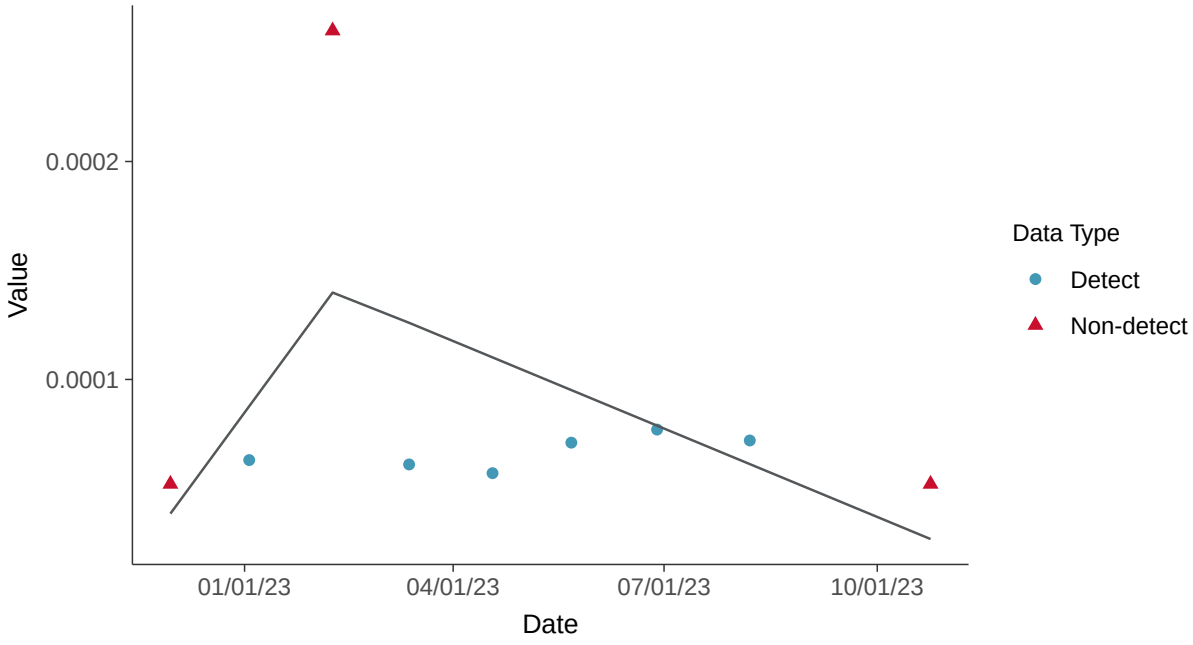
Trend Regression: Lognormal MLE

Beryllium, MW-19 (mg/L)



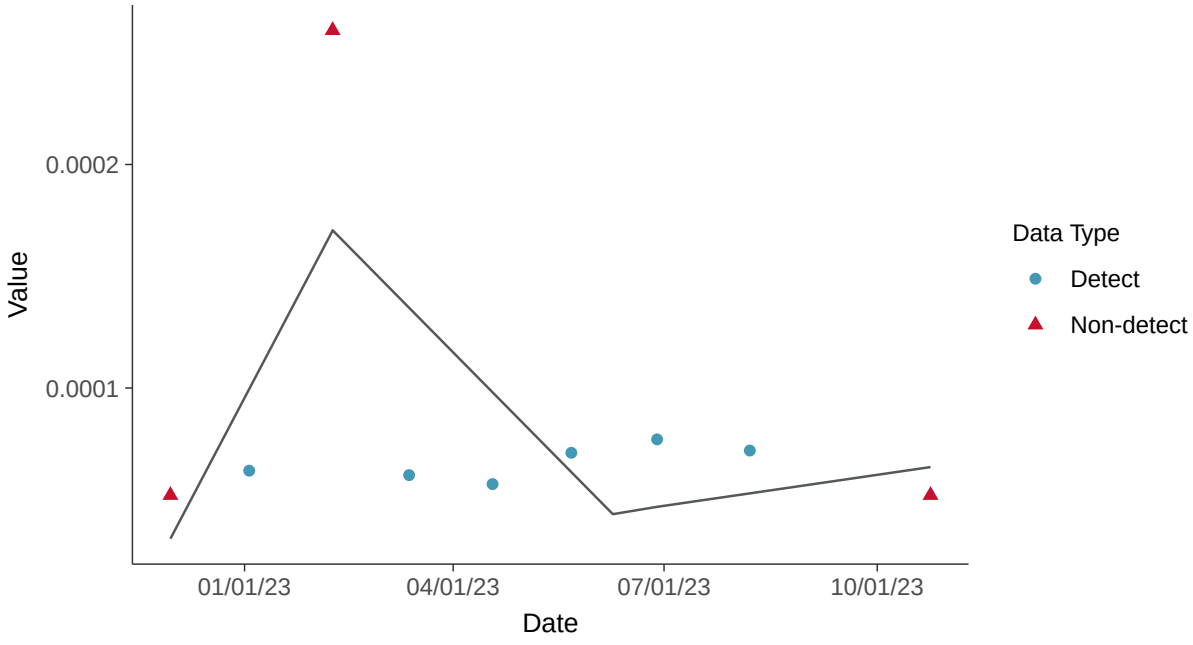
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-19 (mg/L)



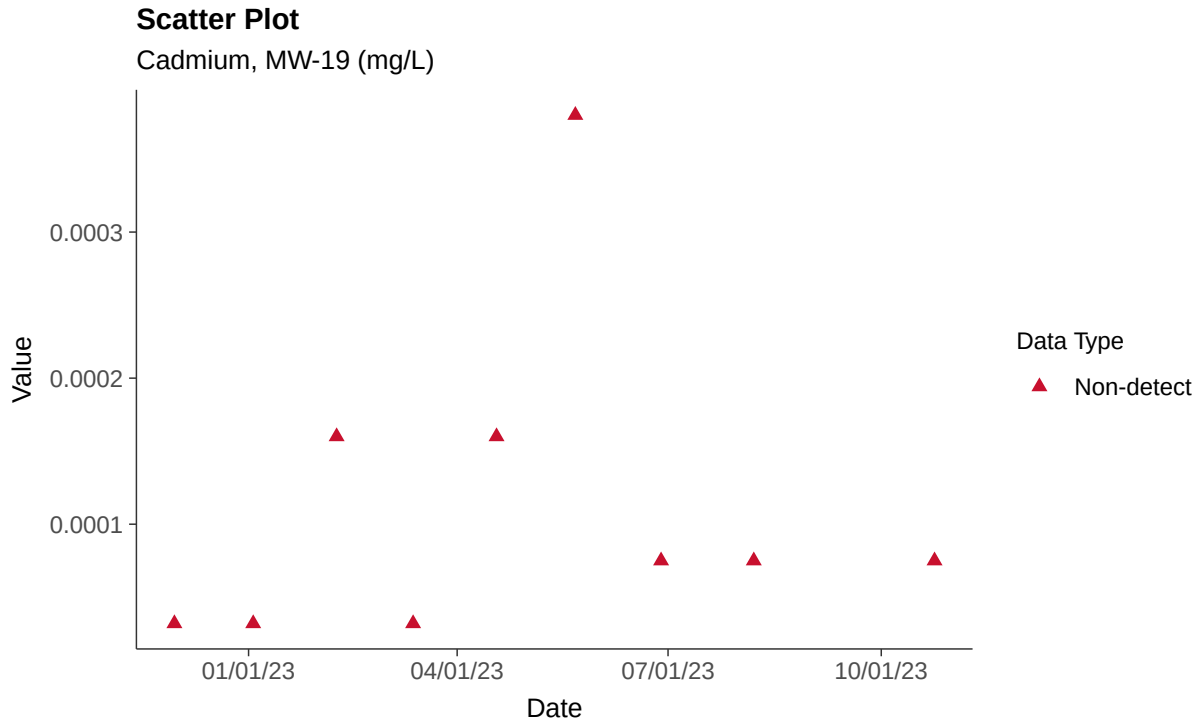
Trend Regression: Piecewise Linear-Linear-Linear

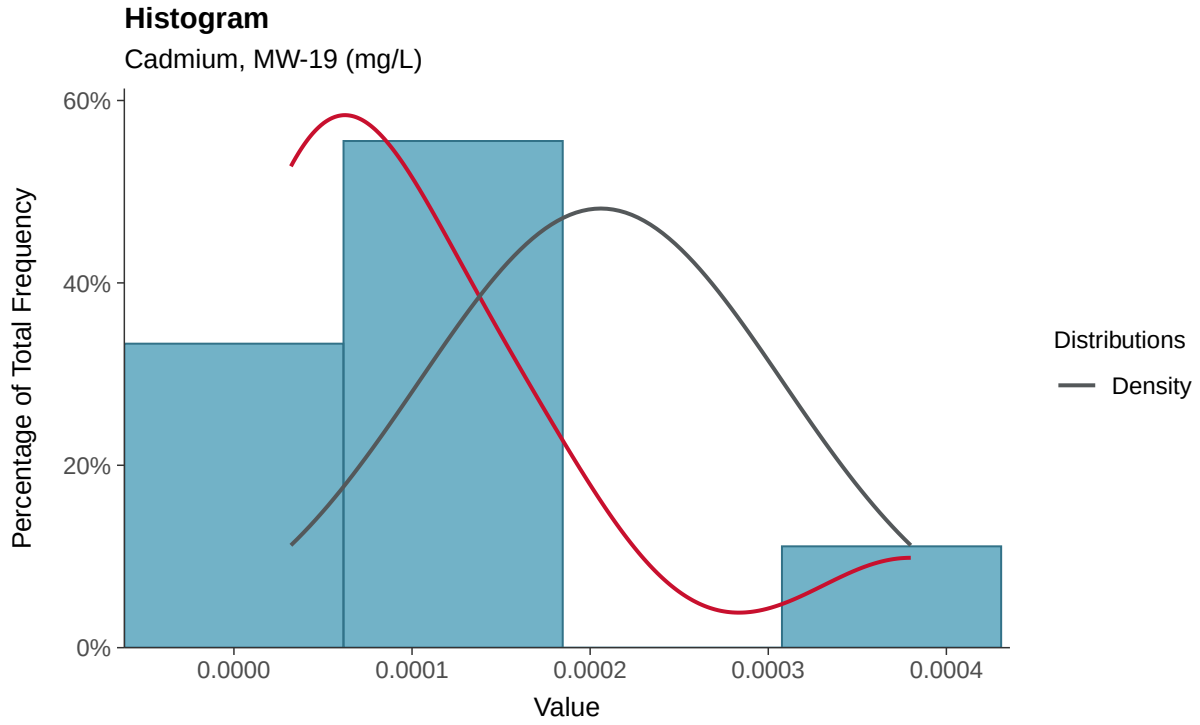
Beryllium, MW-19 (mg/L)



Appendix IV: Cadmium, MW-19

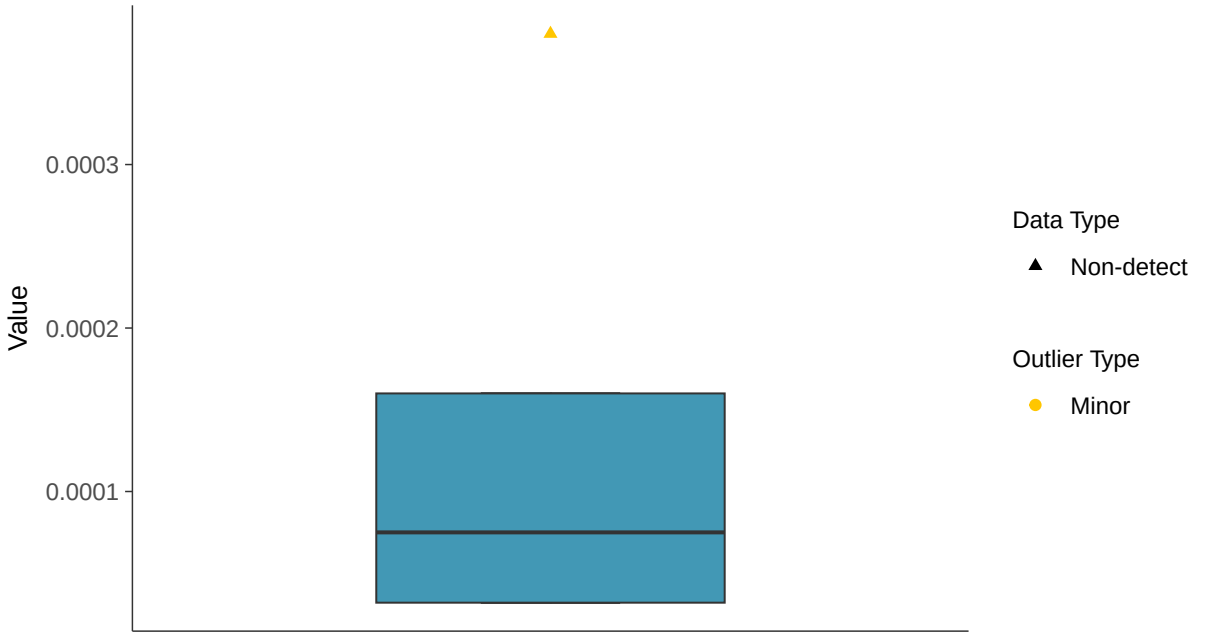
ID: 1_23_5_106





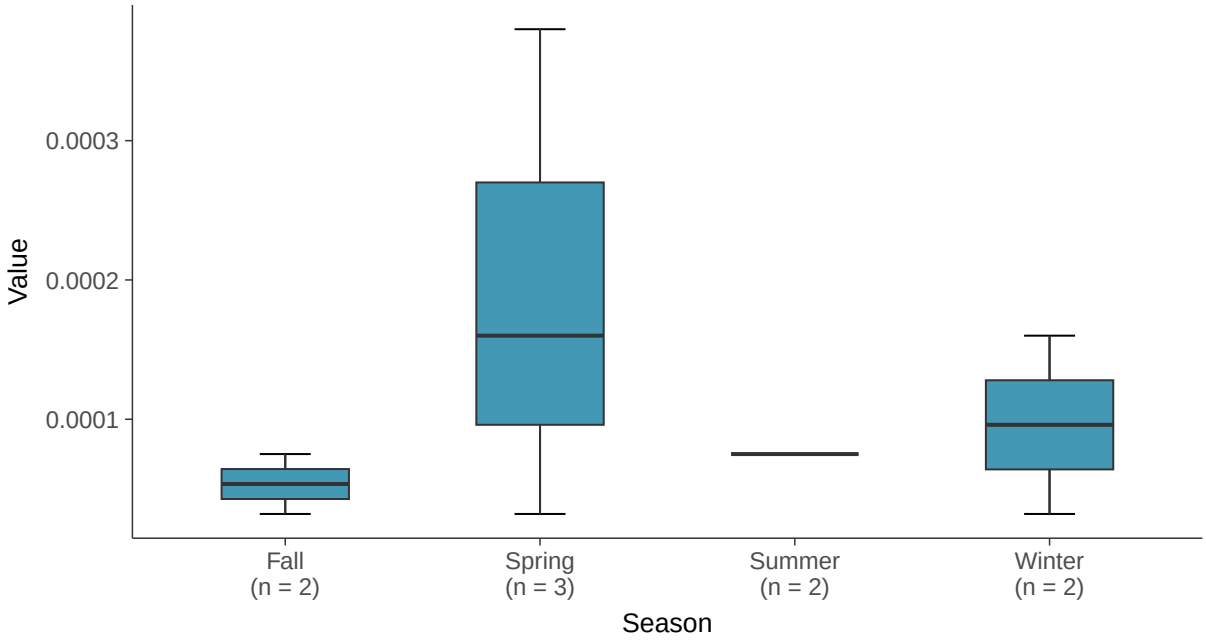
Boxplot

Cadmium, MW-19 (mg/L)



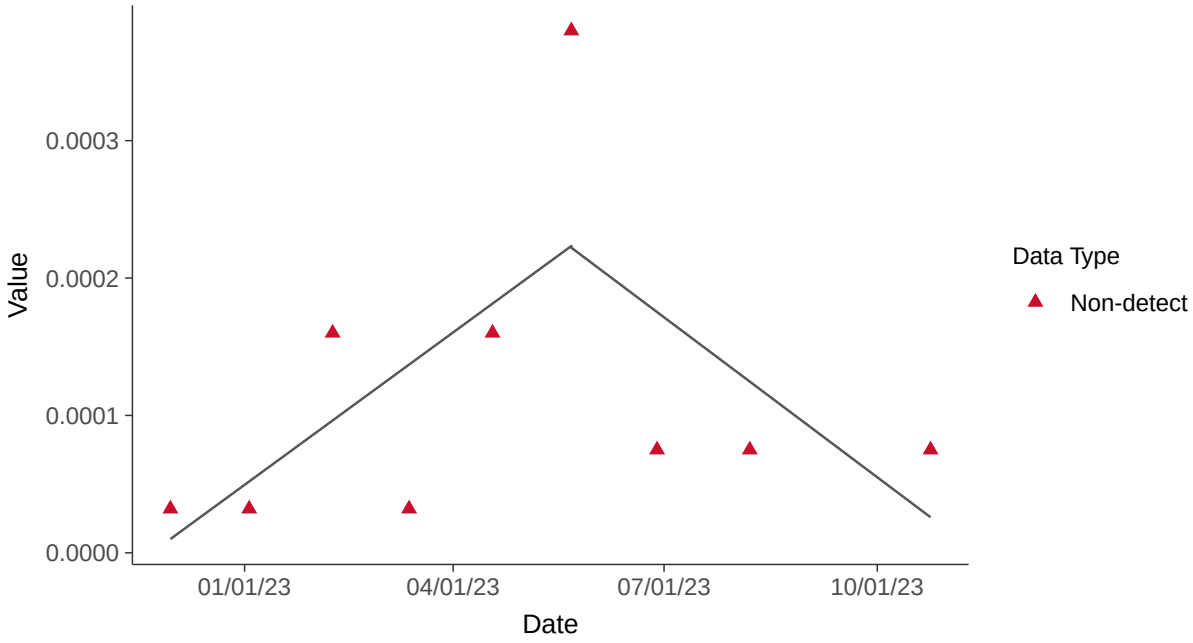
Boxplot by Season

Cadmium, MW-19 (mg/L)



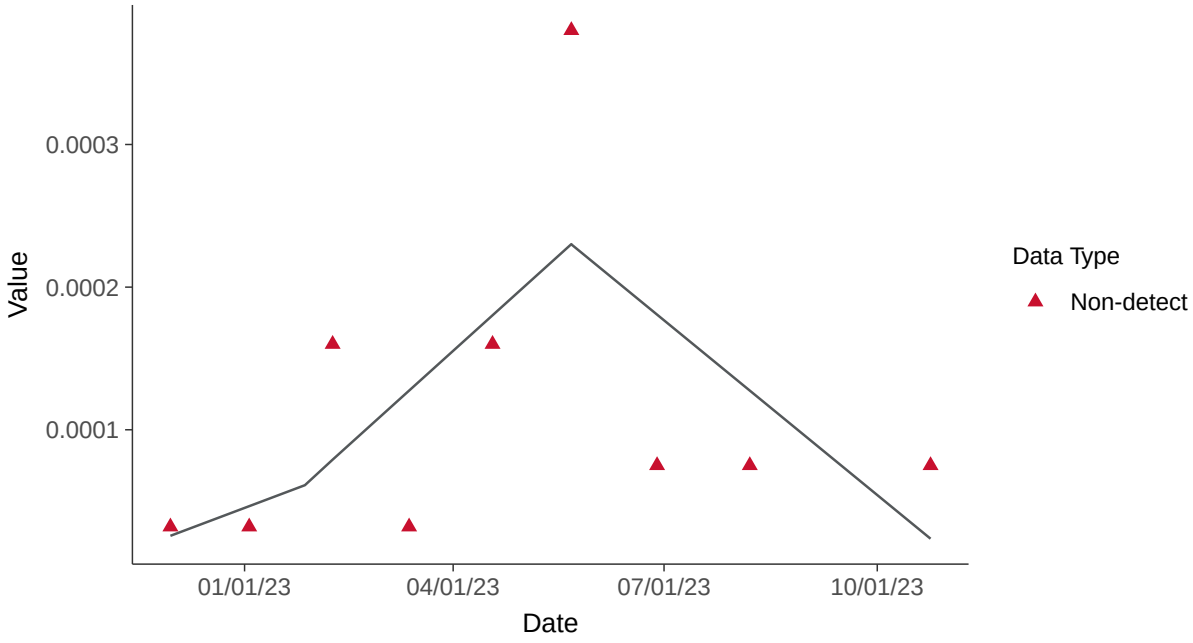
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-19 (mg/L)



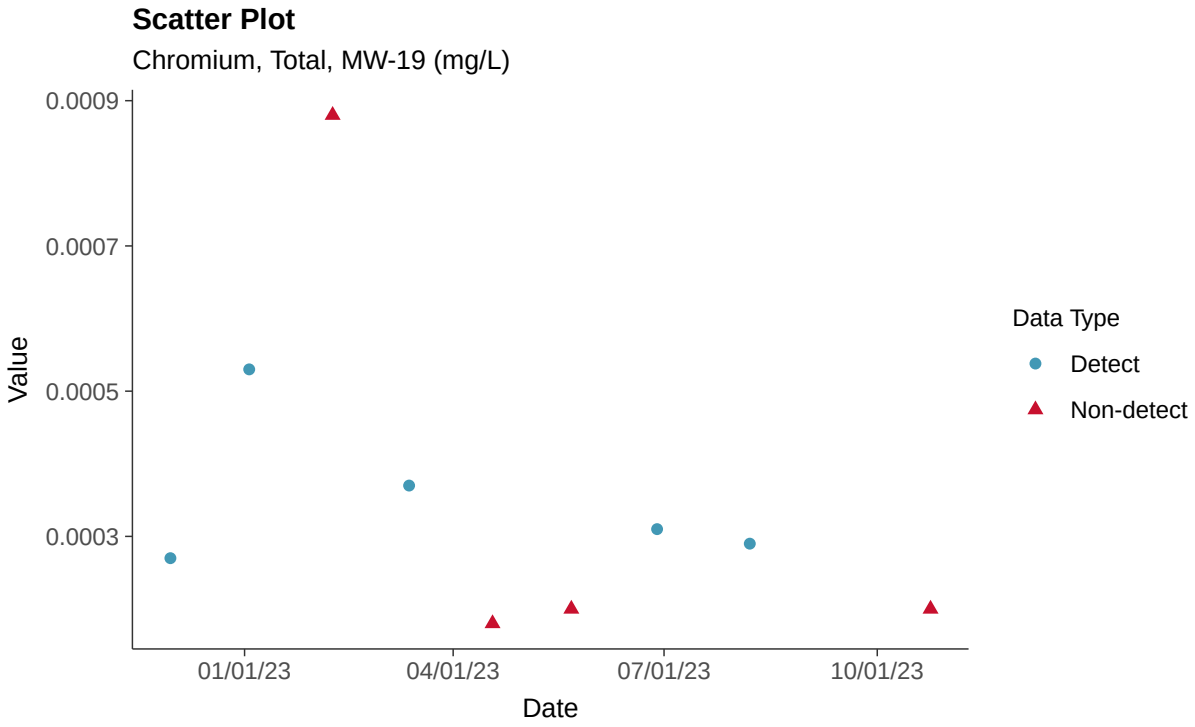
Trend Regression: Piecewise Linear-Linear-Linear

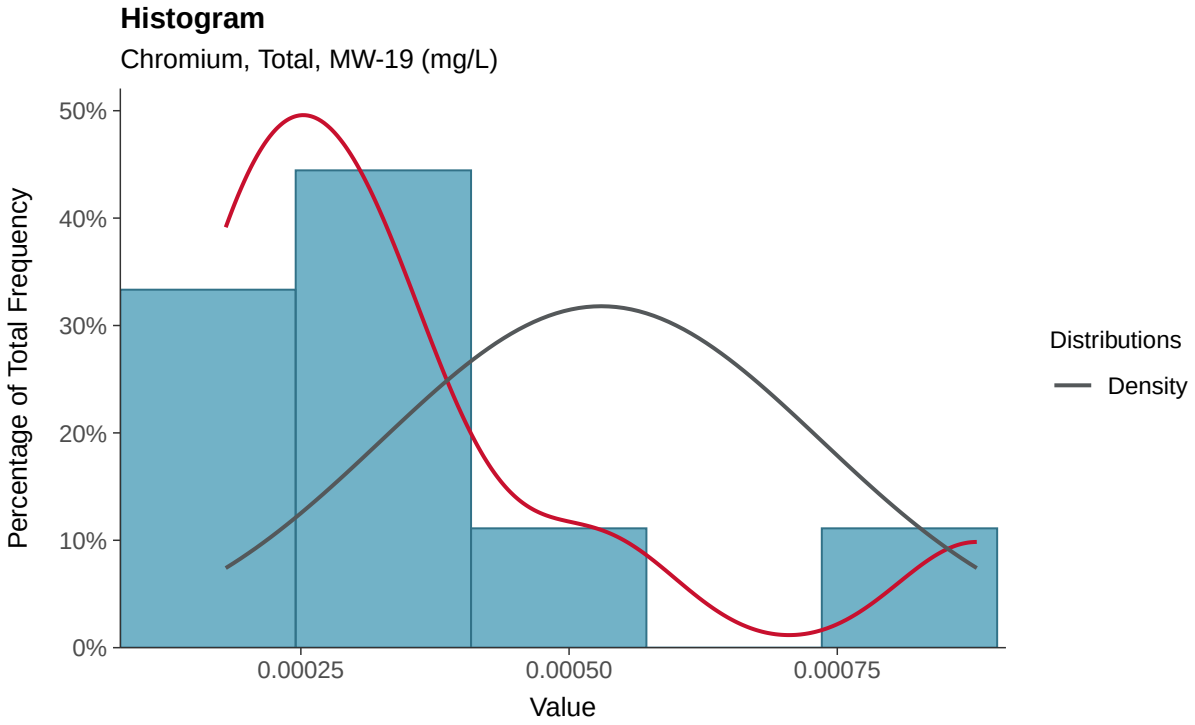
Cadmium, MW-19 (mg/L)



Appendix IV: Chromium, Total, MW-19

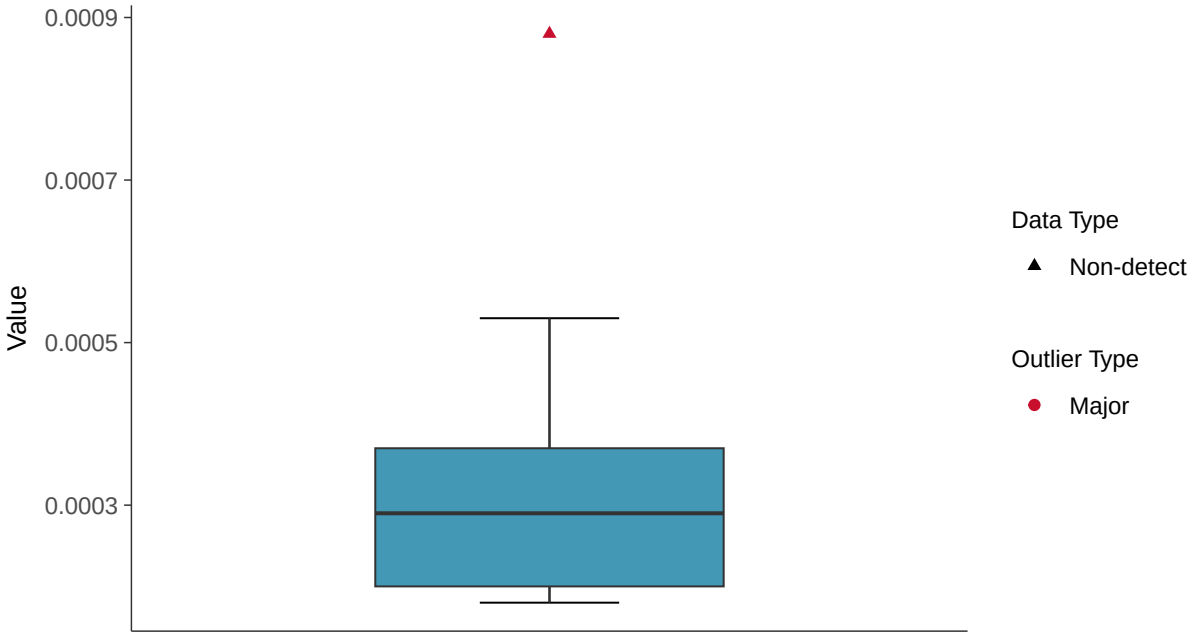
ID: 1_23_5_109





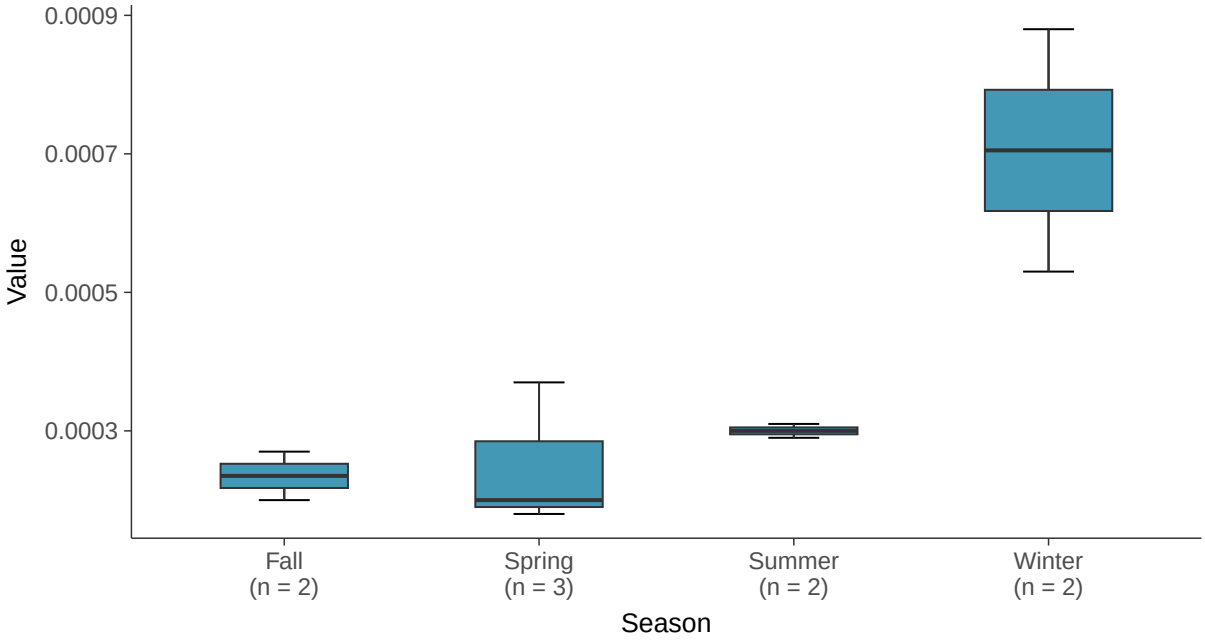
Boxplot

Chromium, Total, MW-19 (mg/L)



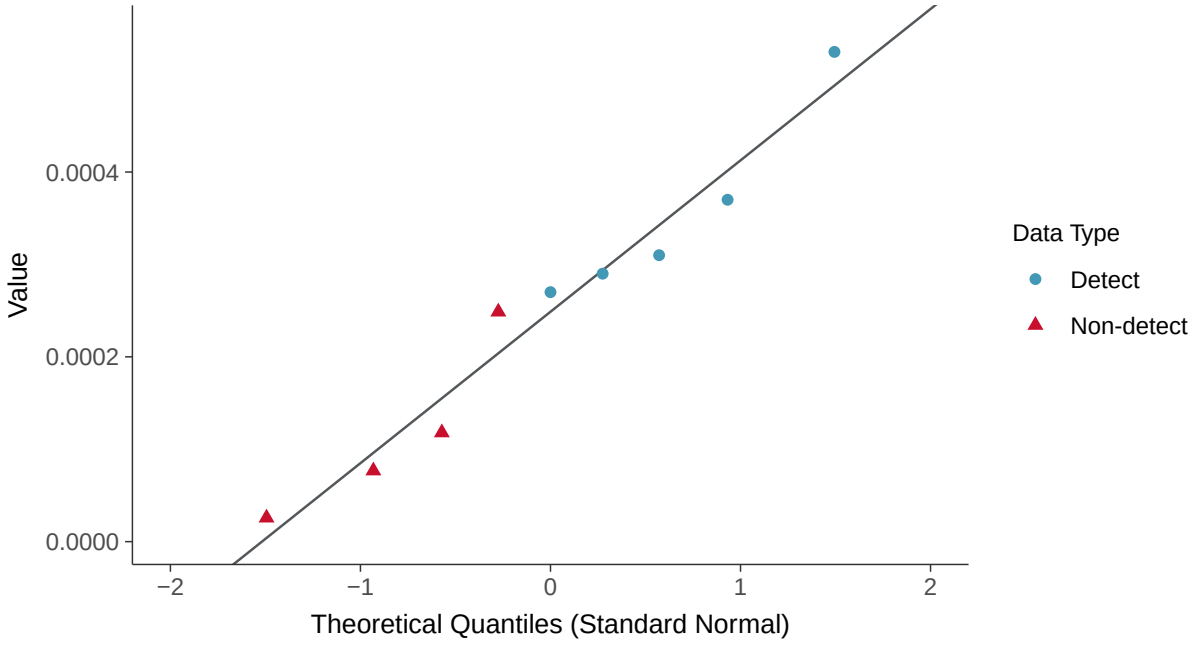
Boxplot by Season

Chromium, Total, MW-19 (mg/L)



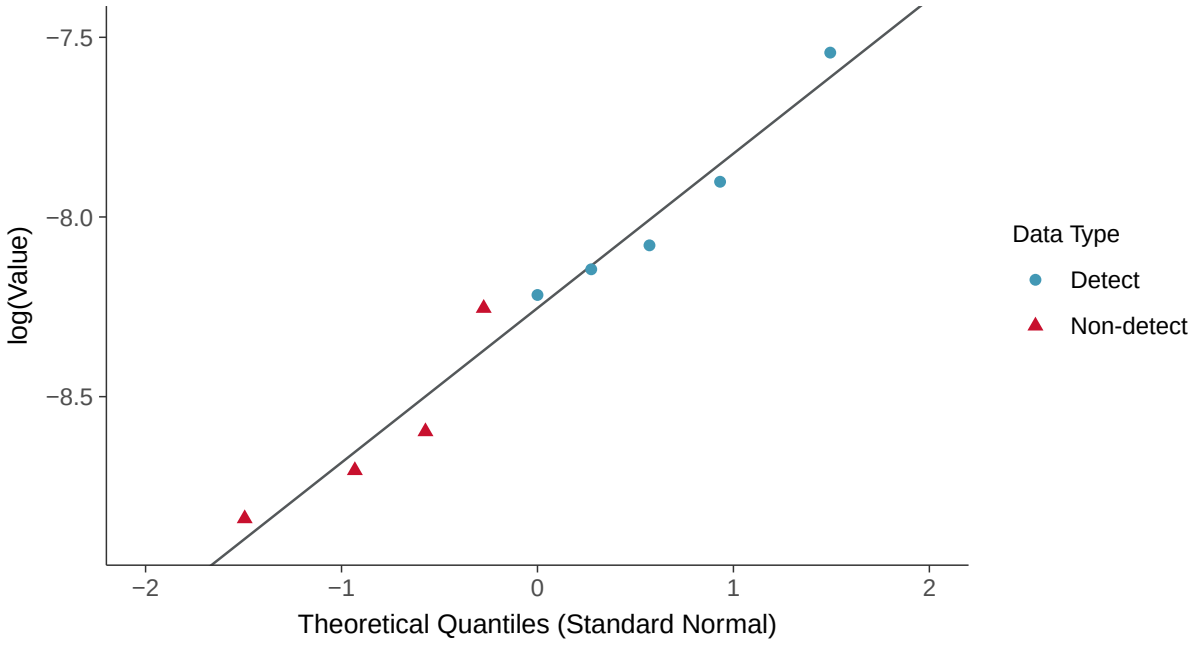
Normal Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-19 (mg/L)



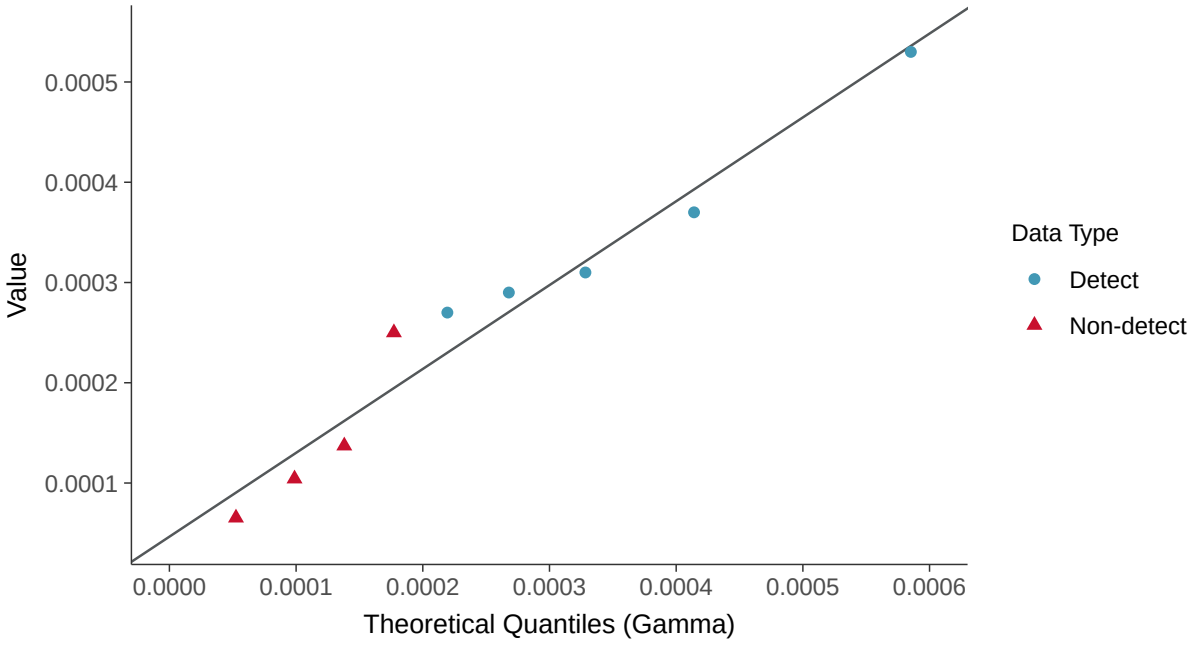
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-19 (mg/L)



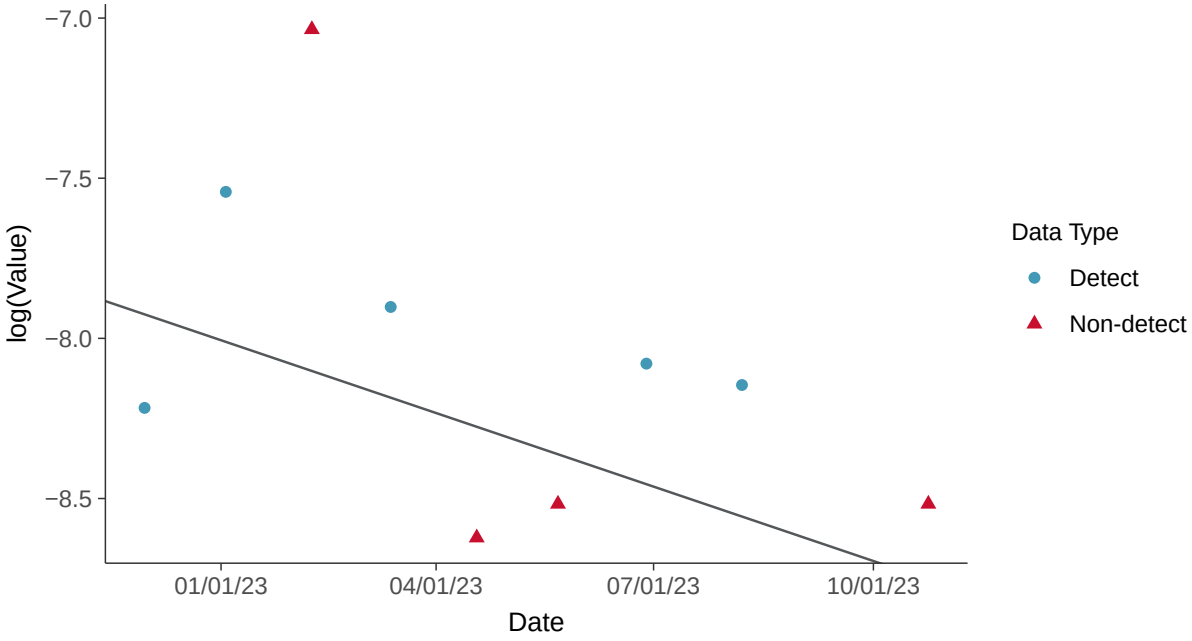
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-19 (mg/L)



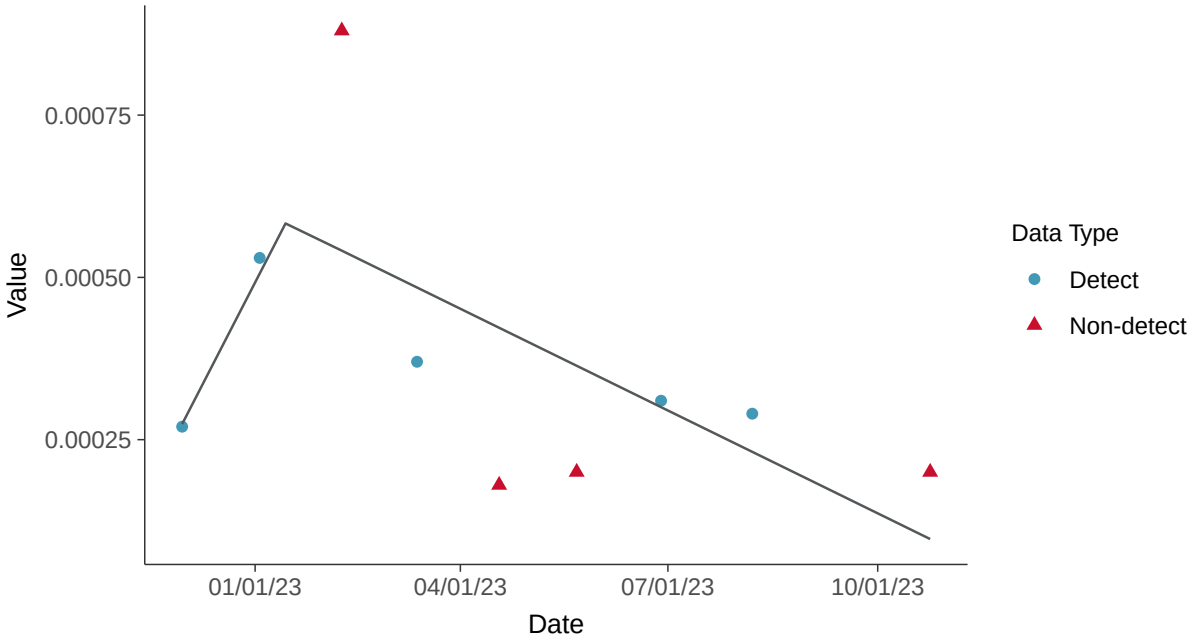
Trend Regression: Lognormal MLE

Chromium, Total, MW-19 (mg/L)



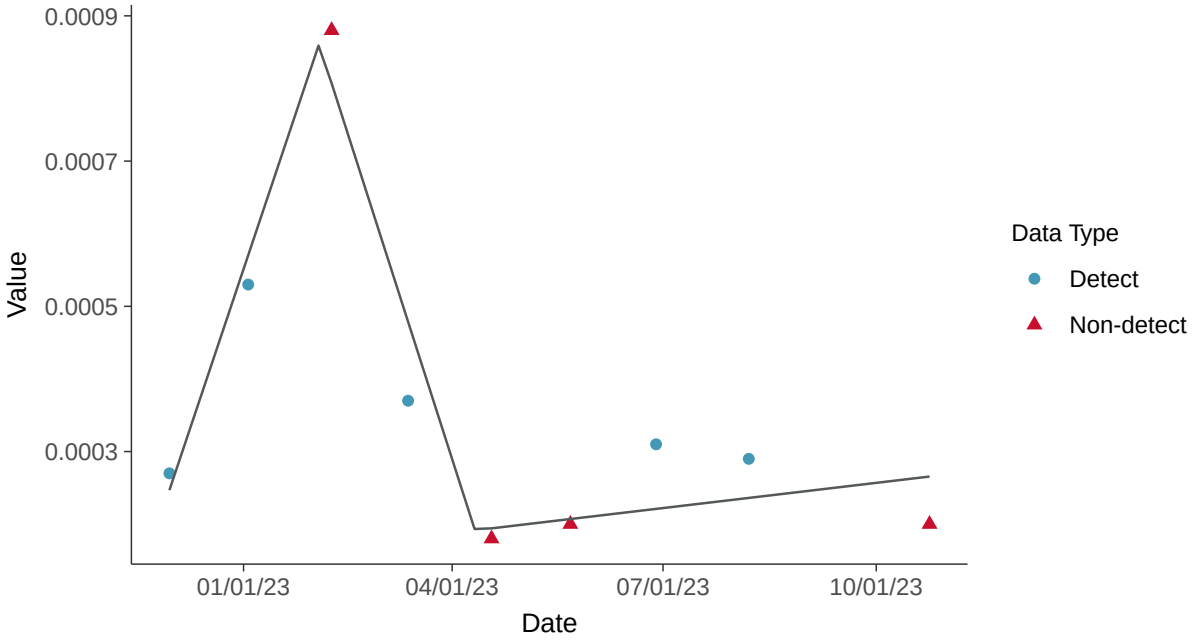
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-19 (mg/L)



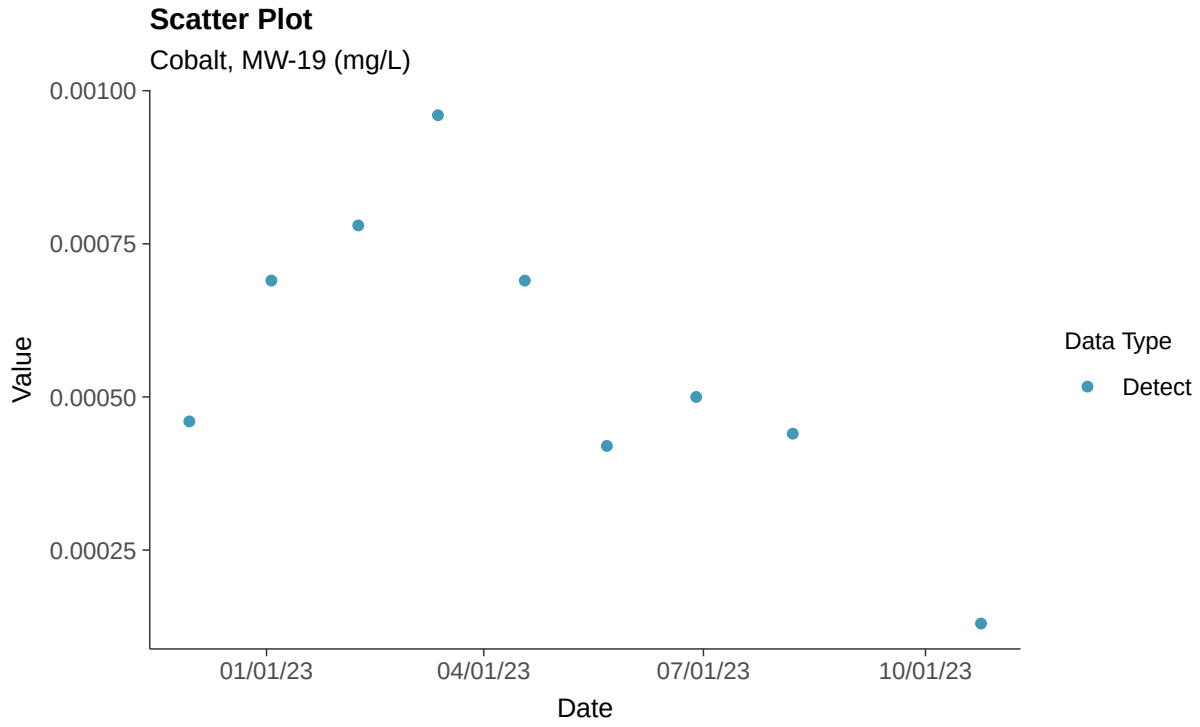
Trend Regression: Piecewise Linear-Linear-Linear

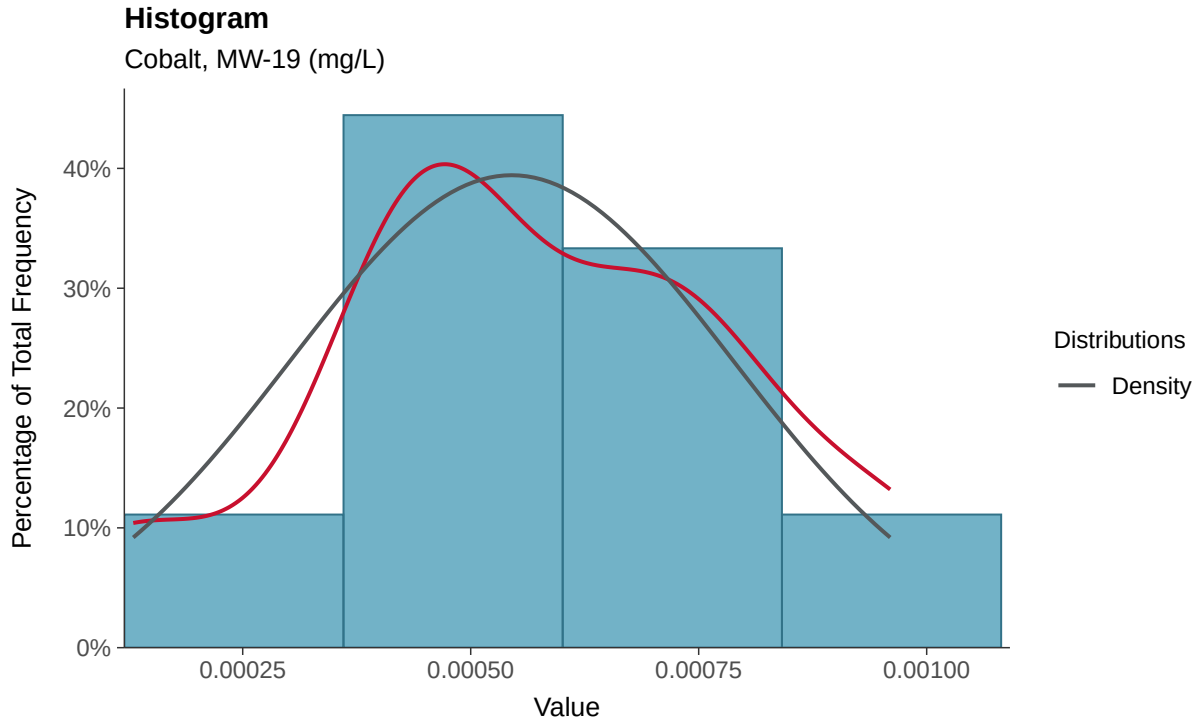
Chromium, Total, MW-19 (mg/L)



Appendix IV: Cobalt, MW-19

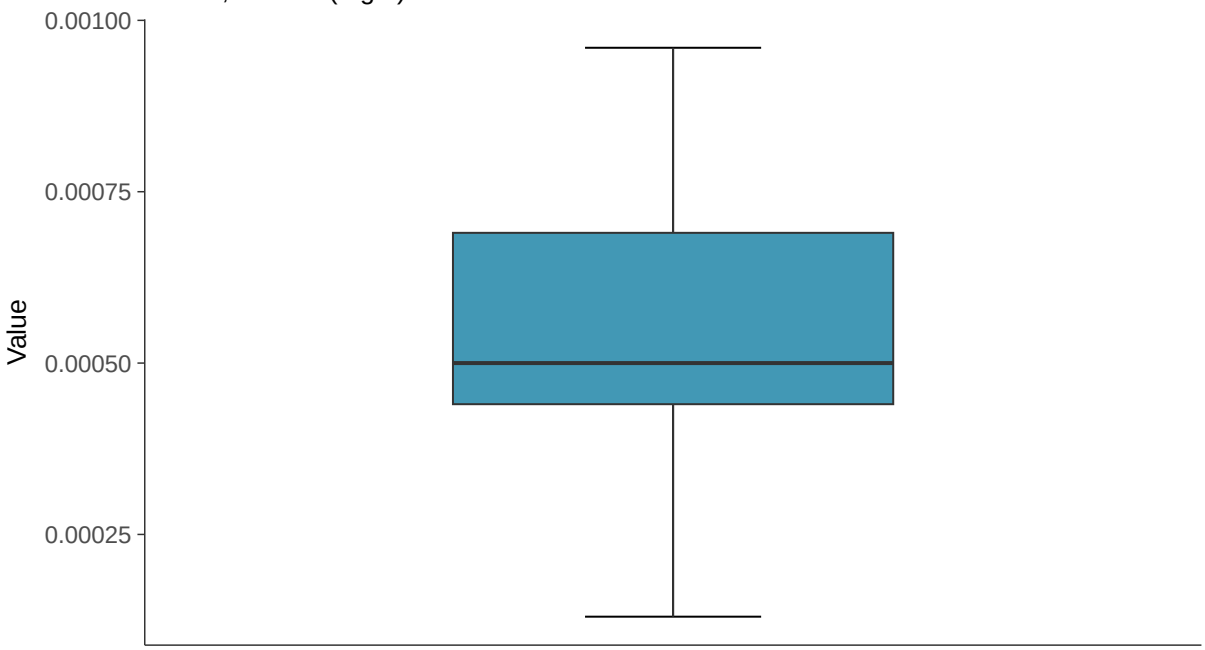
ID: 1_23_5_110





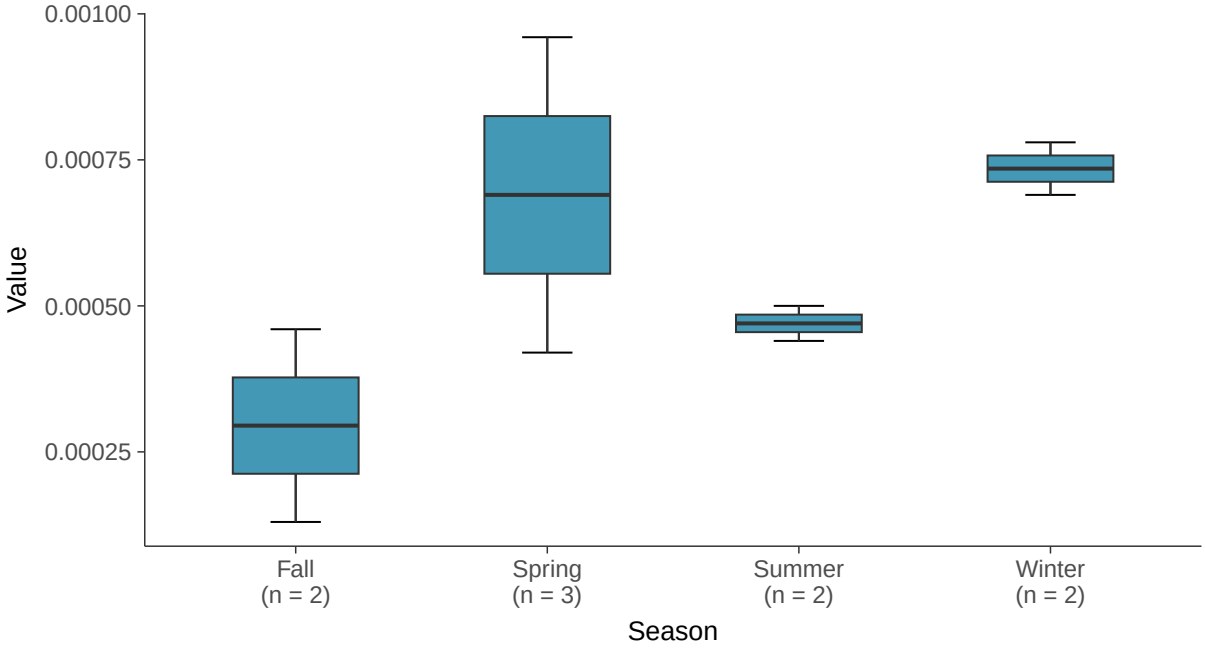
Boxplot

Cobalt, MW-19 (mg/L)



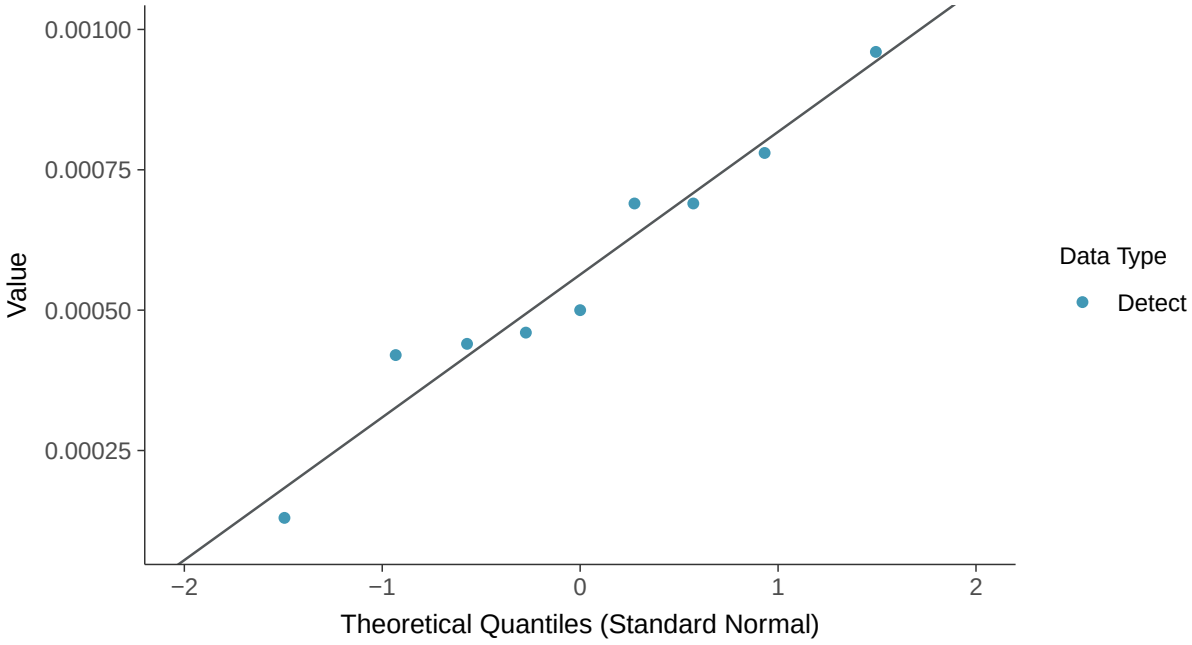
Boxplot by Season

Cobalt, MW-19 (mg/L)



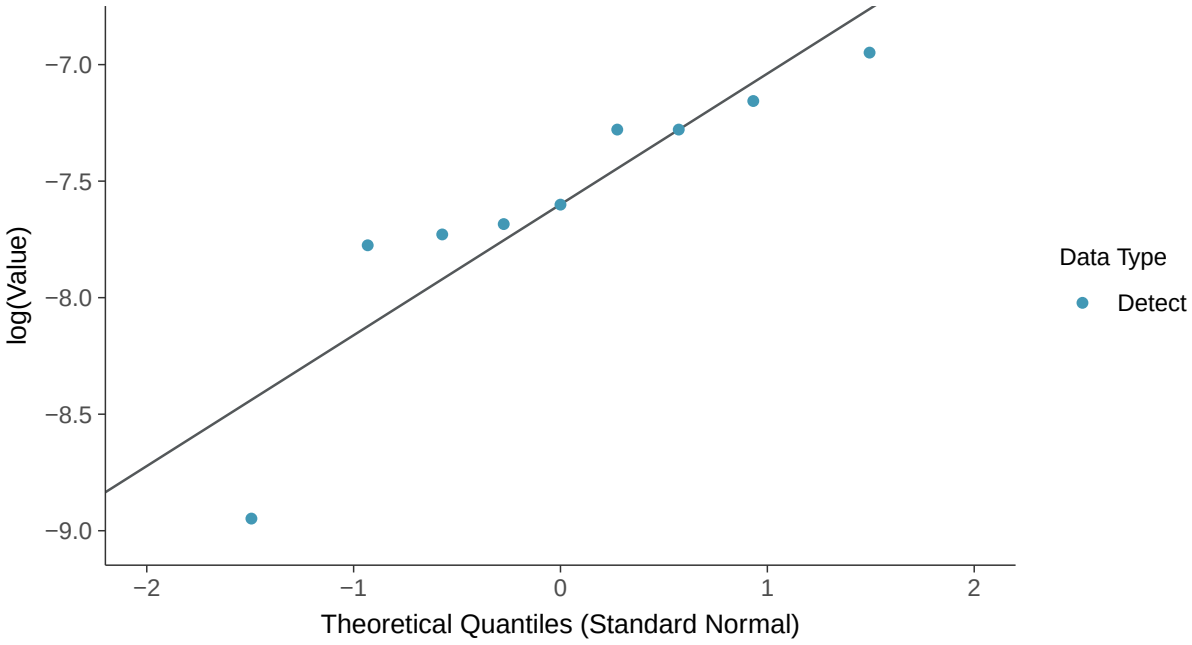
Normal Q-Q plot

Cobalt, MW-19 (mg/L)



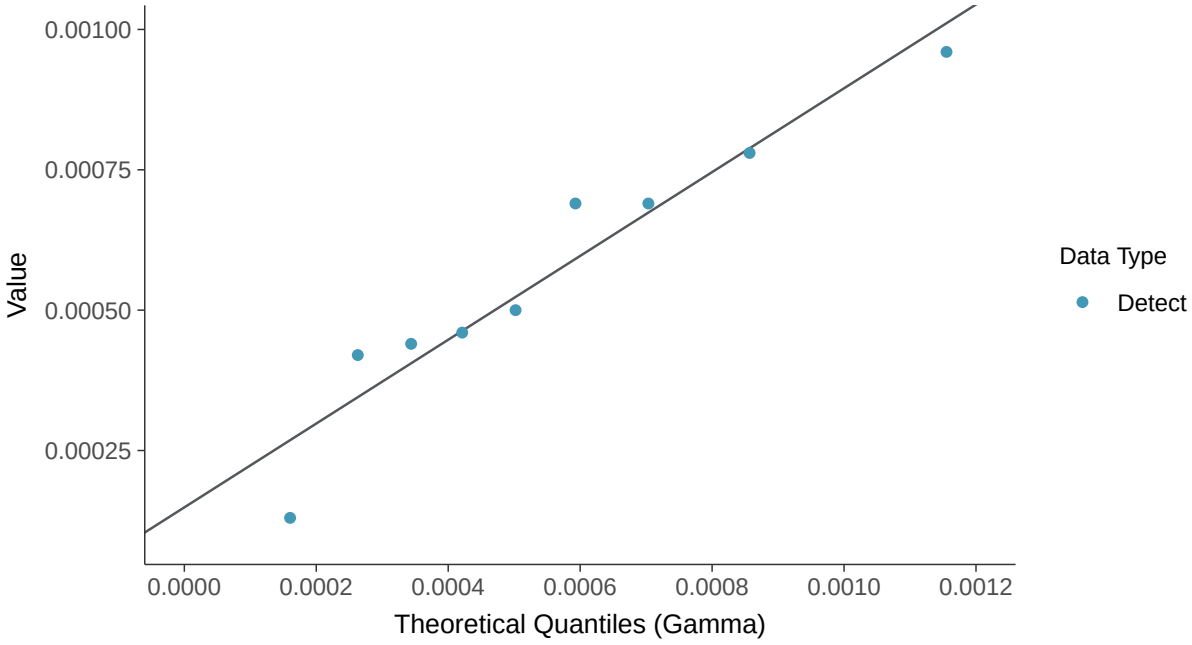
Lognormal Q-Q plot

Cobalt, MW-19 (mg/L)



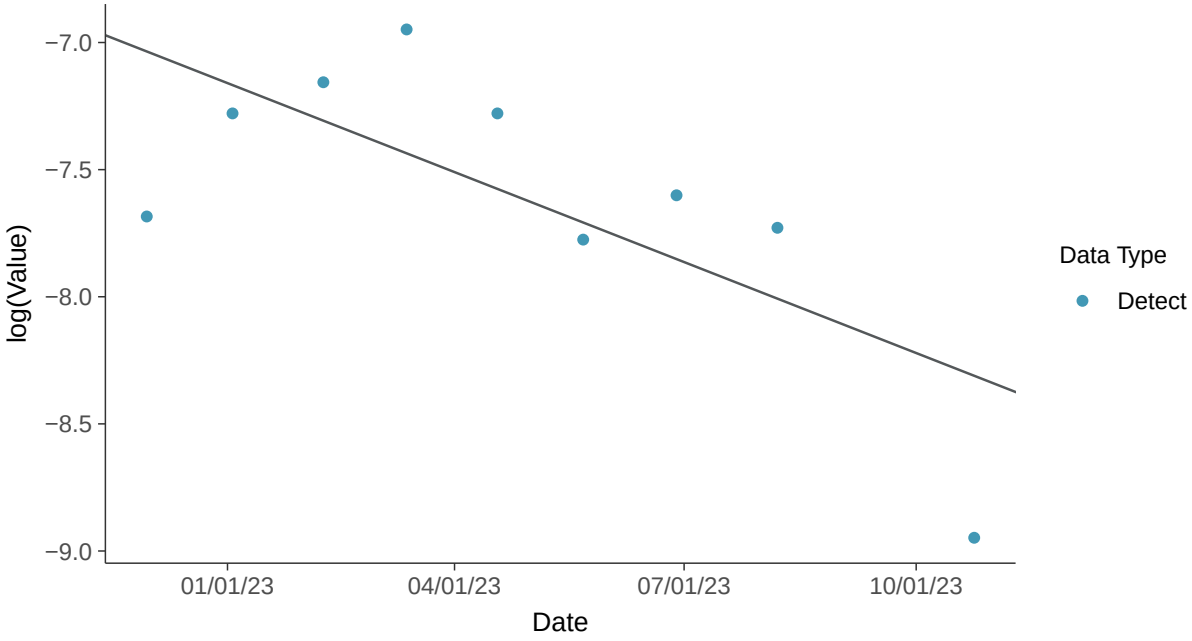
Gamma Q-Q plot

Cobalt, MW-19 (mg/L)



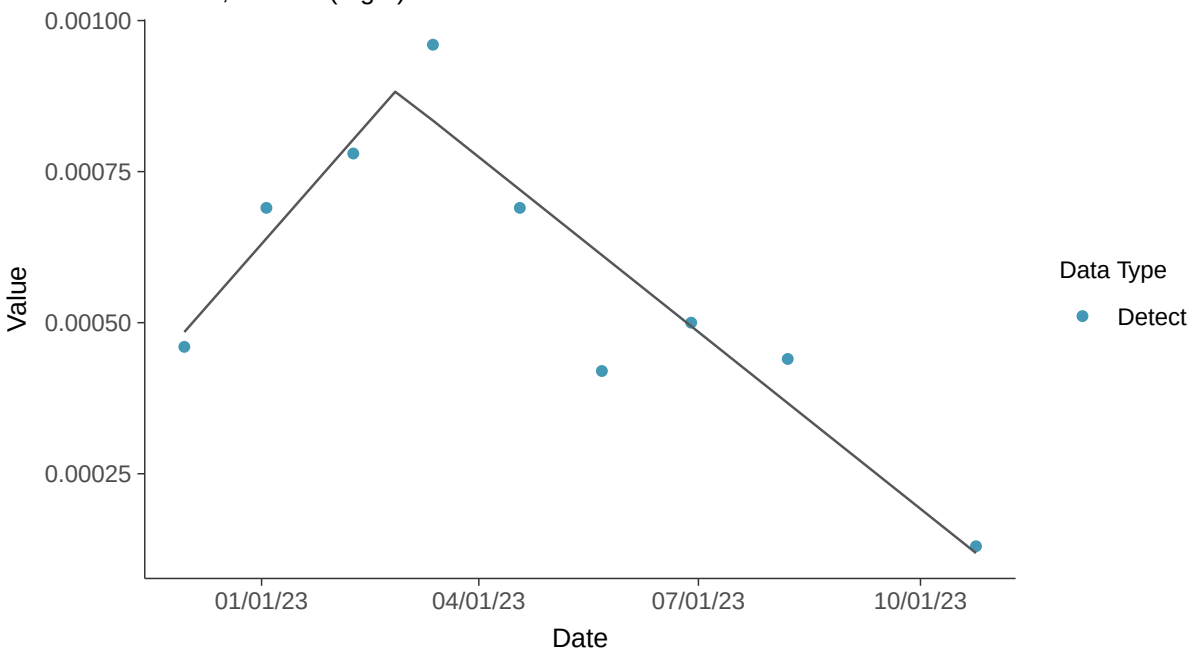
Trend Regression: Lognormal MLE

Cobalt, MW-19 (mg/L)



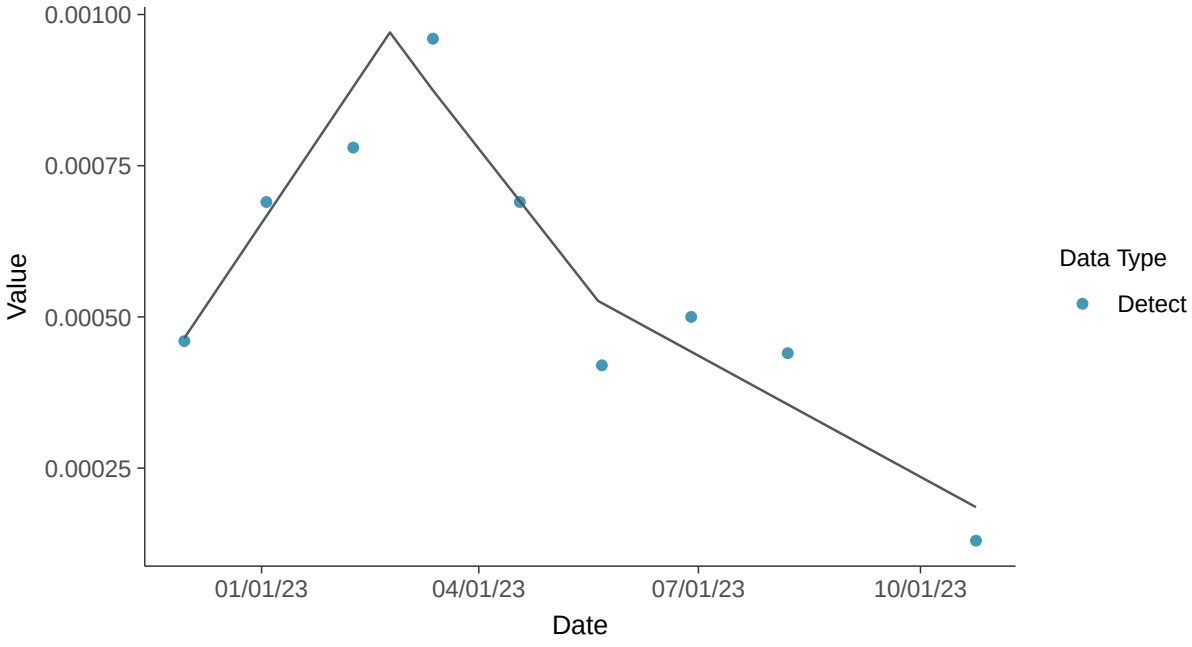
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-19 (mg/L)



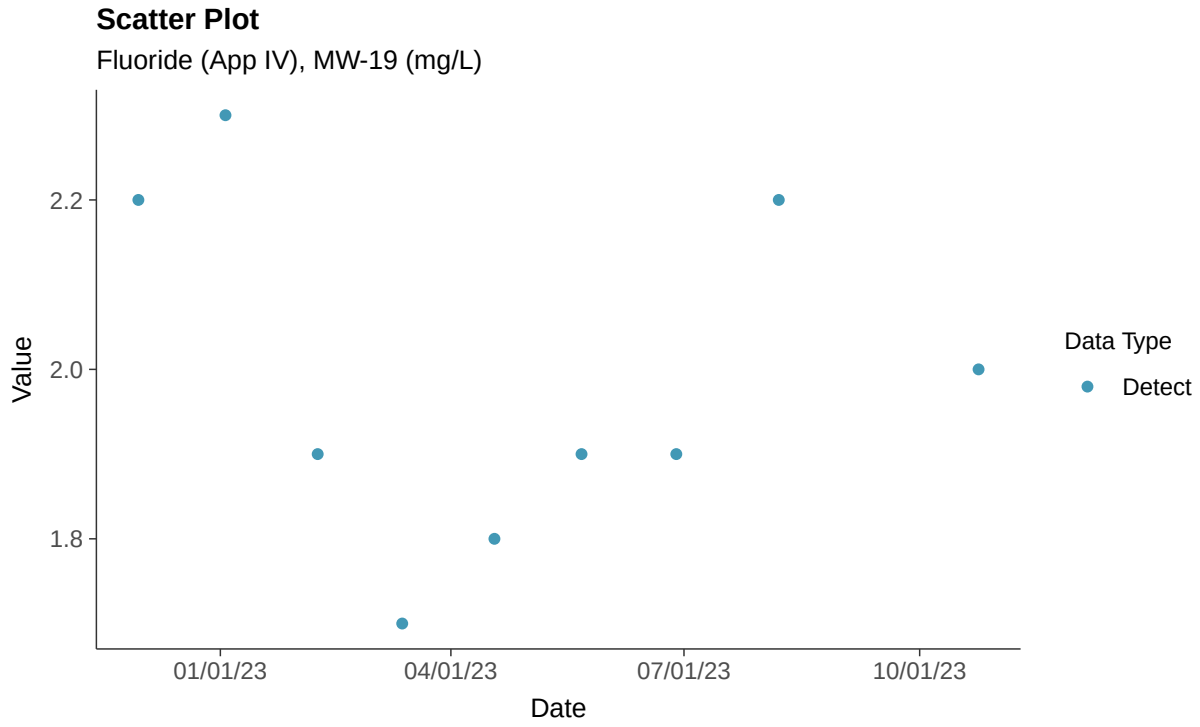
Trend Regression: Piecewise Linear-Linear-Linear

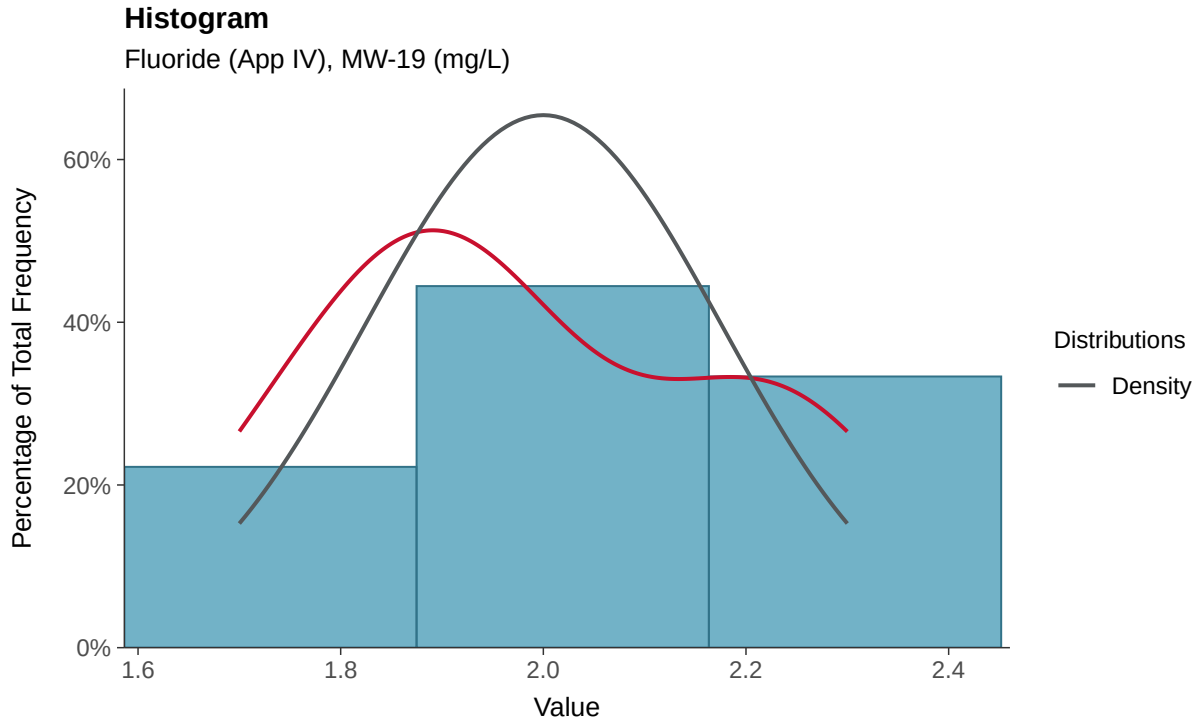
Cobalt, MW-19 (mg/L)



Appendix IV: Fluoride (App IV), MW-19

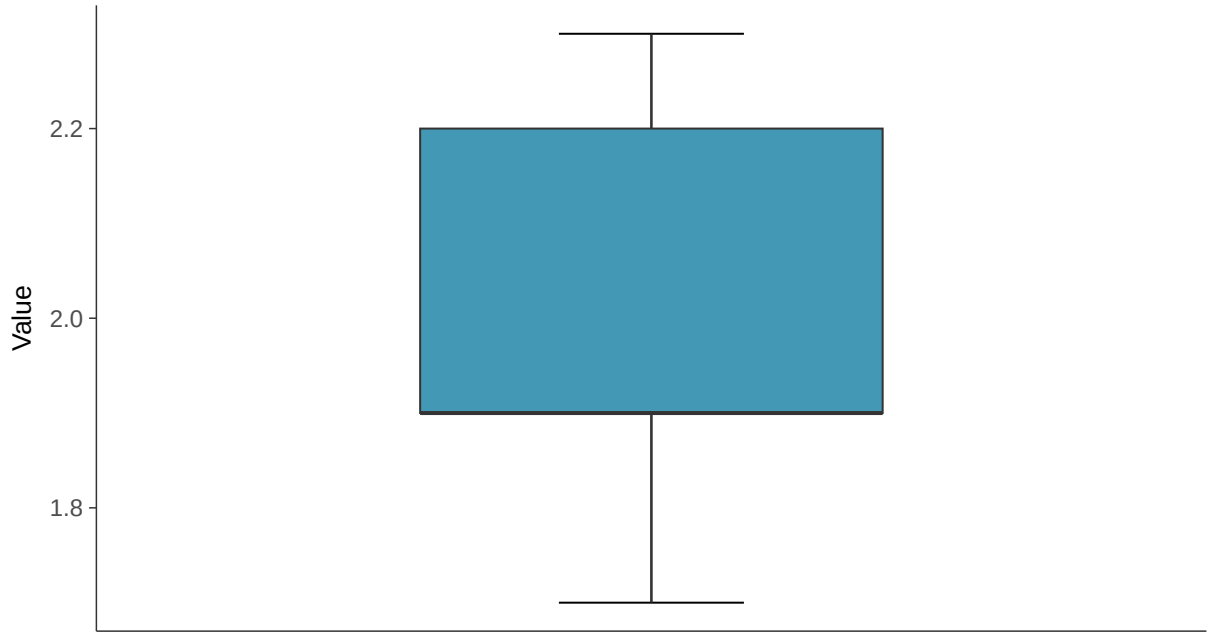
ID: 1_23_5_113





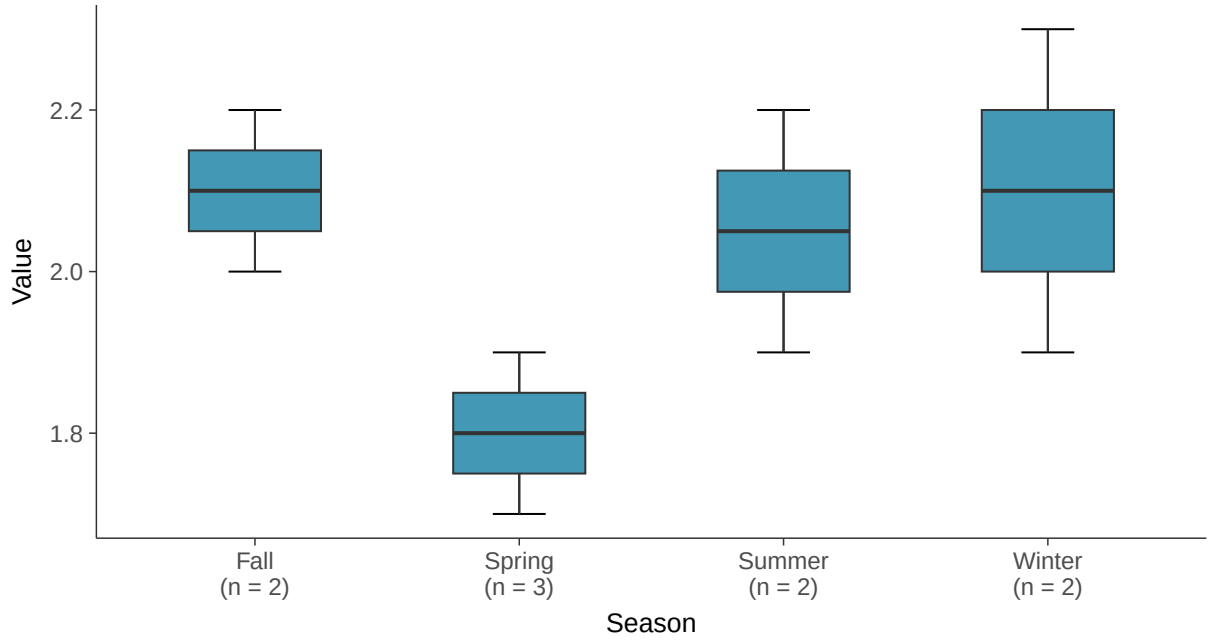
Boxplot

Fluoride (App IV), MW-19 (mg/L)



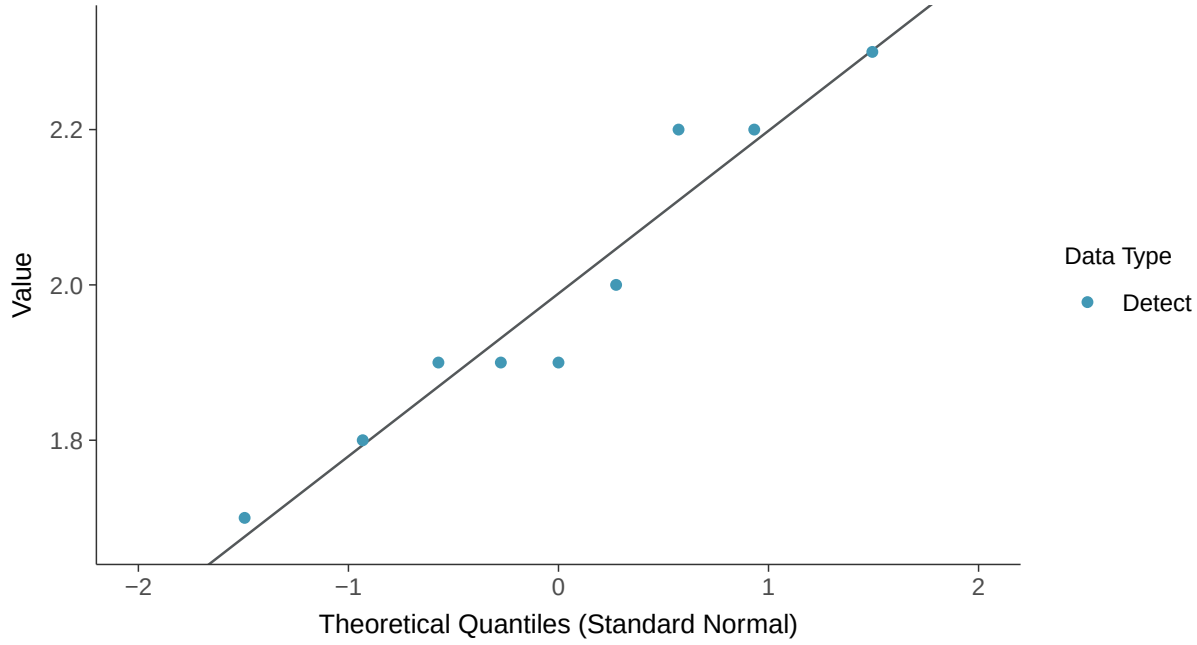
Boxplot by Season

Fluoride (App IV), MW-19 (mg/L)



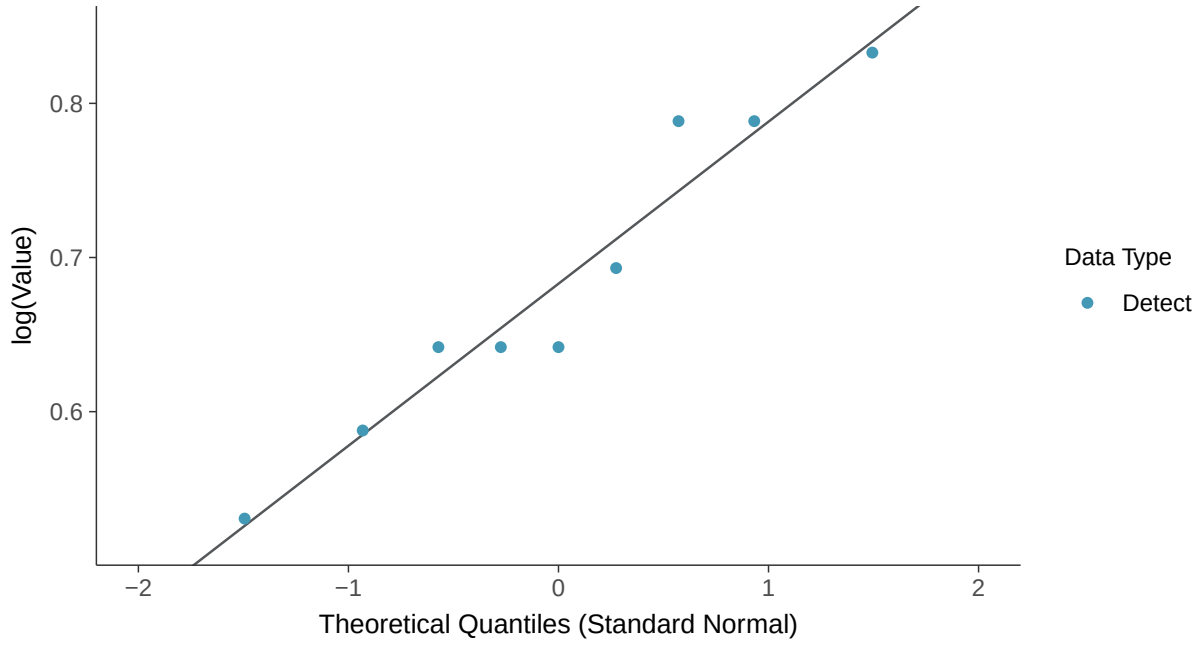
Normal Q-Q plot

Fluoride (App IV), MW-19 (mg/L)



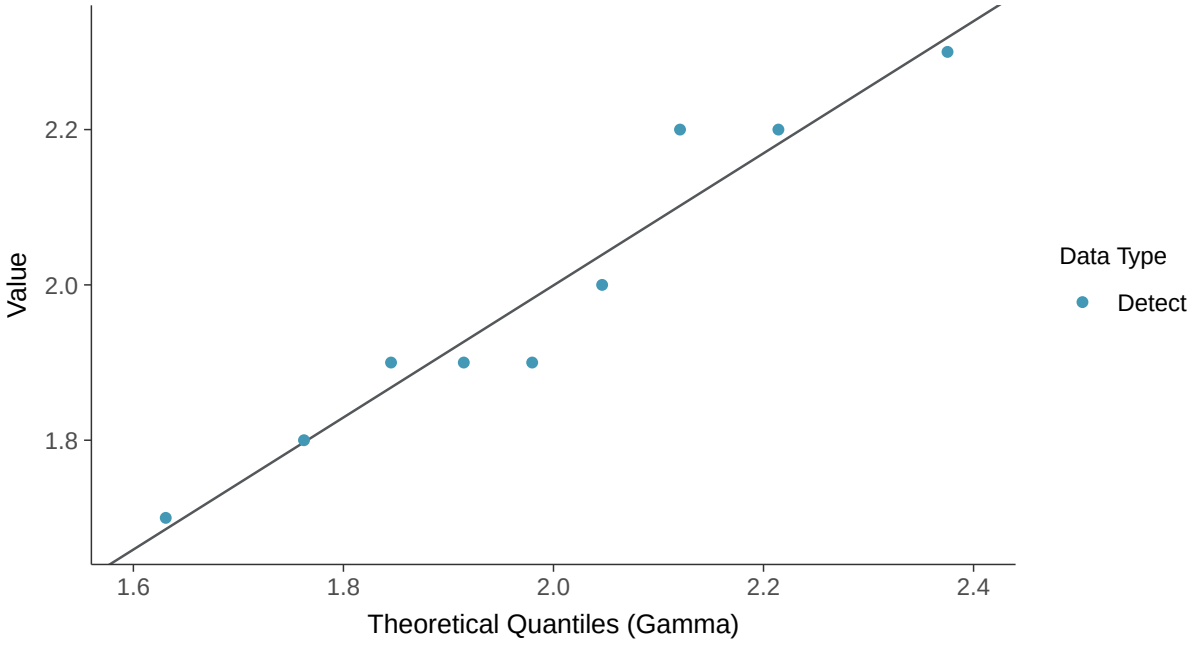
Lognormal Q-Q plot

Fluoride (App IV), MW-19 (mg/L)



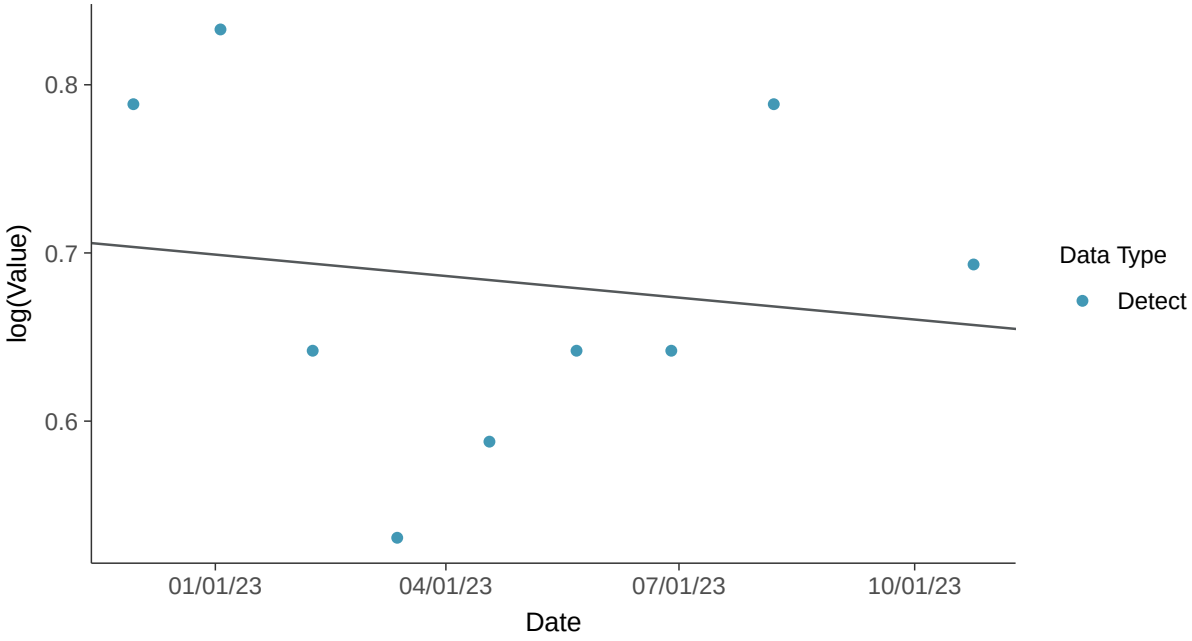
Gamma Q-Q plot

Fluoride (App IV), MW-19 (mg/L)



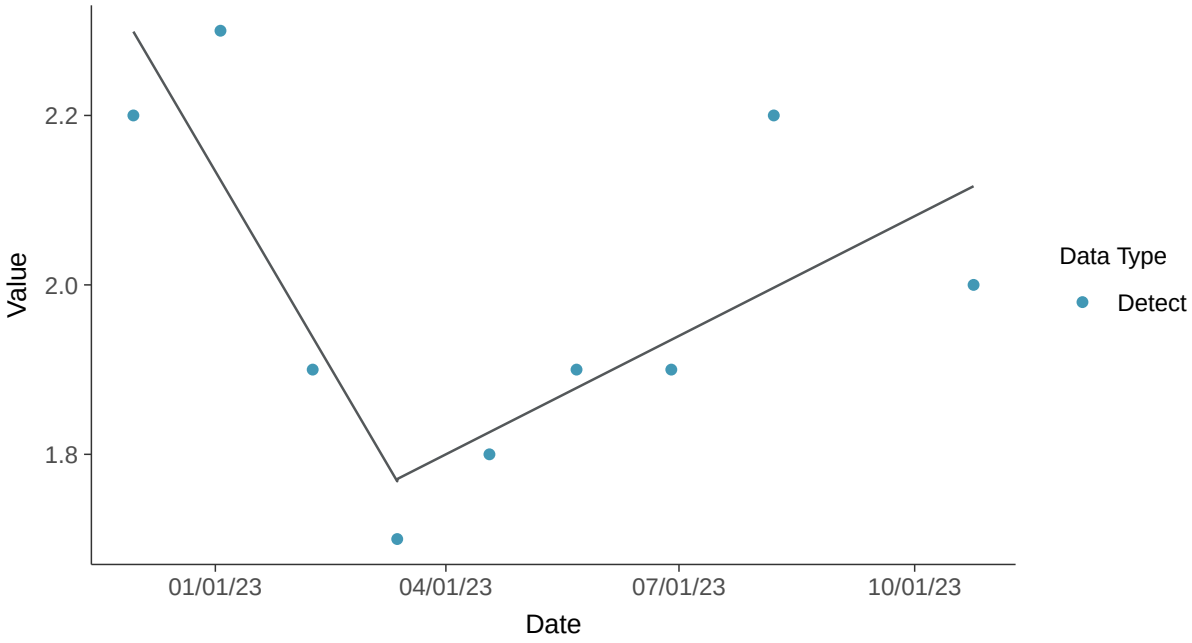
Trend Regression: Lognormal MLE

Fluoride (App IV), MW-19 (mg/L)



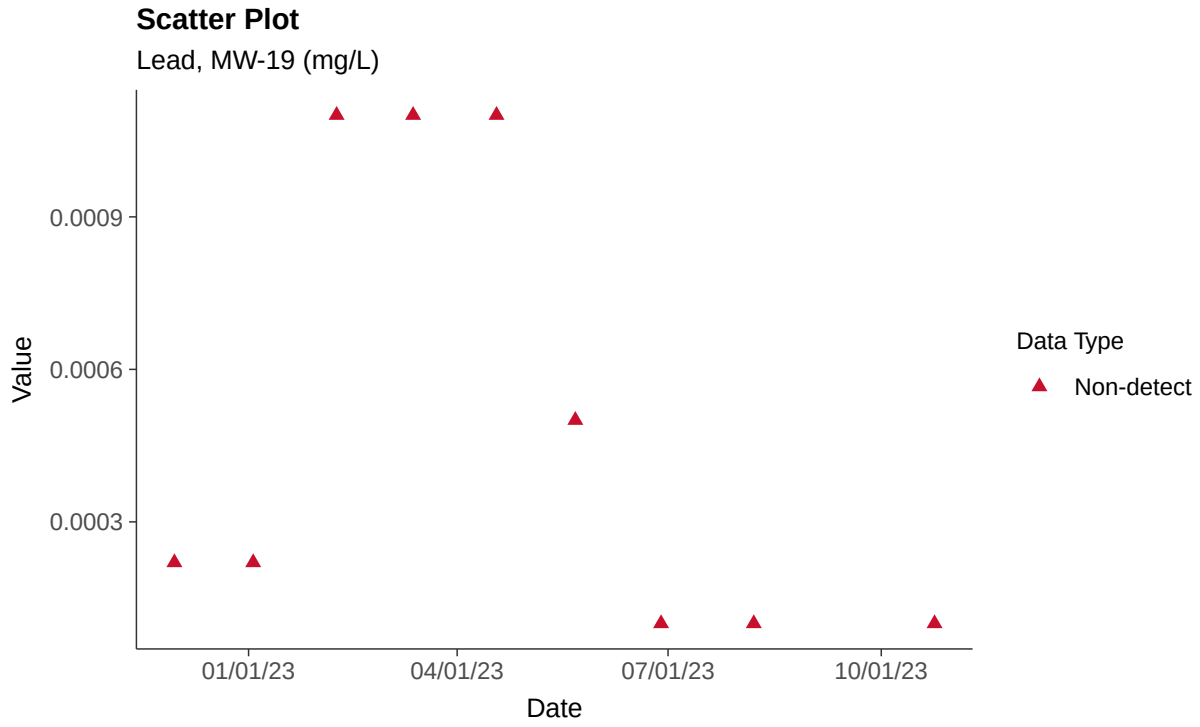
Trend Regression: Piecewise Linear-Linear

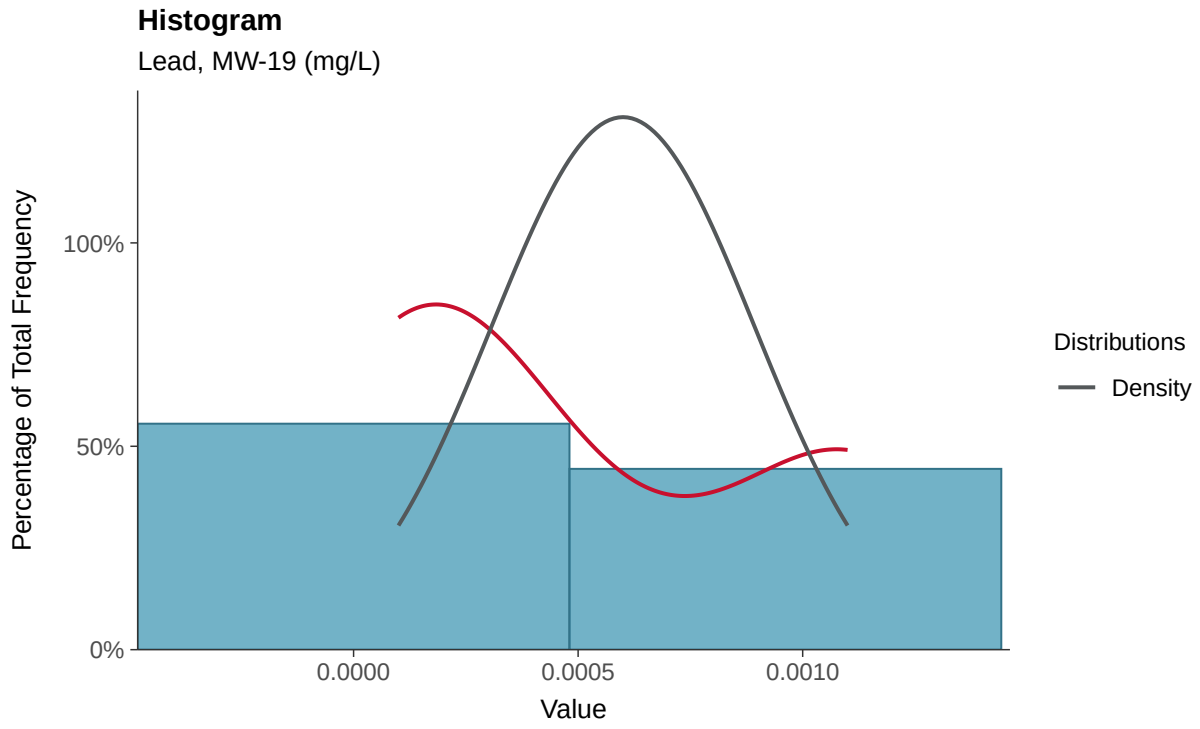
Fluoride (App IV), MW-19 (mg/L)



Appendix IV: Lead, MW-19

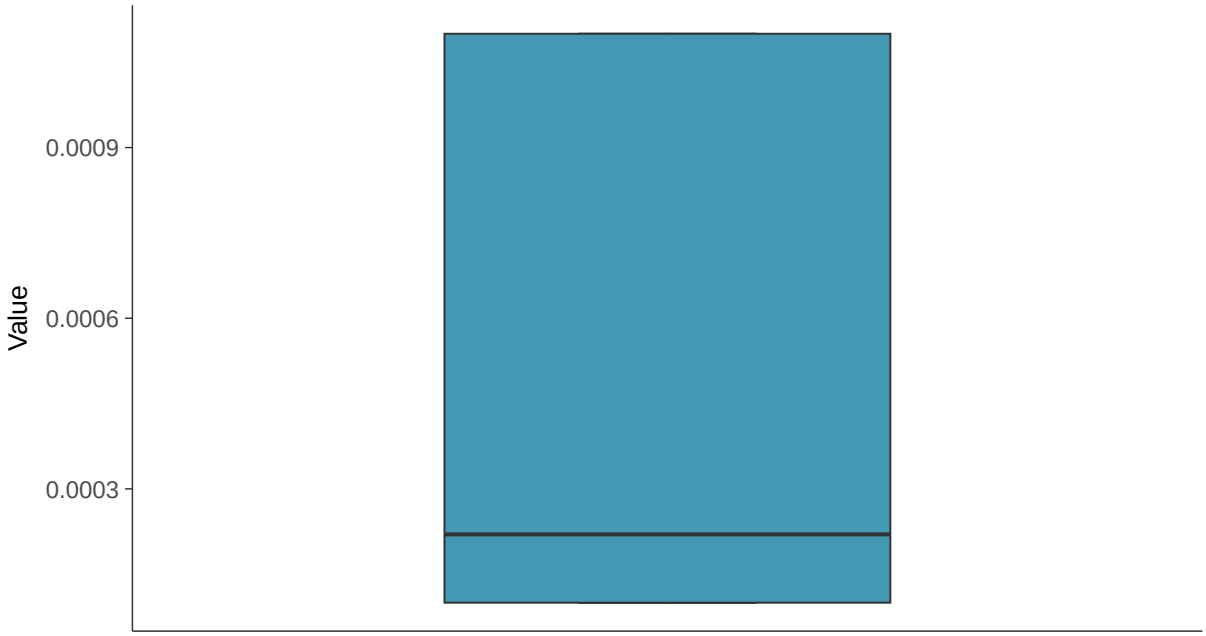
ID: 1_23_5_115





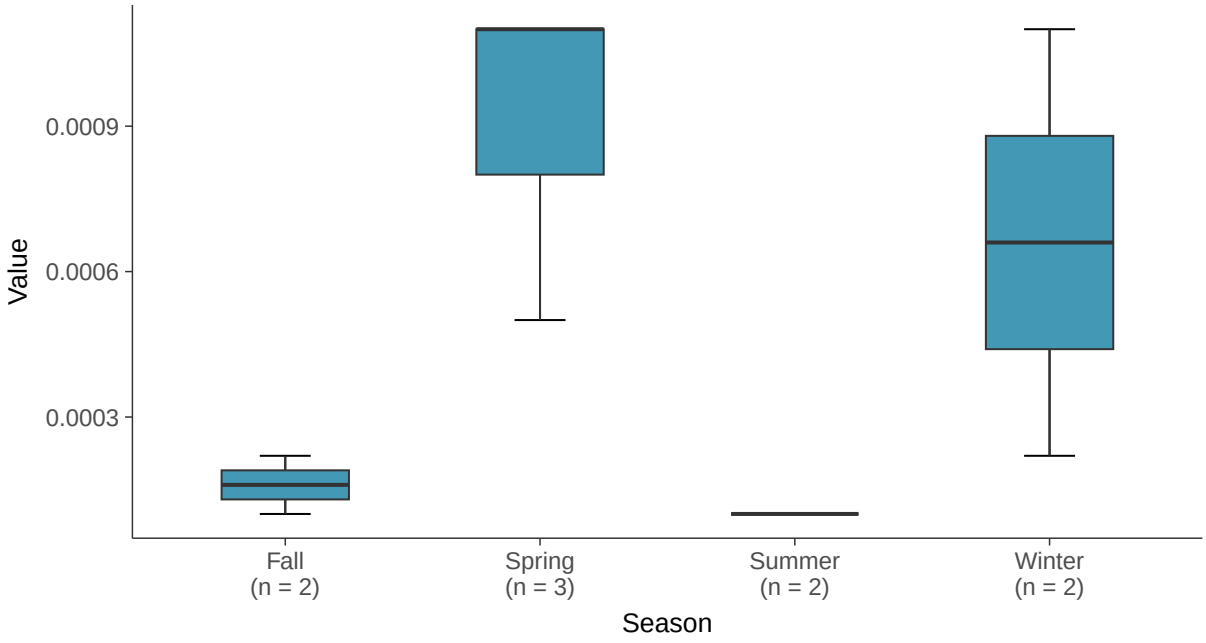
Boxplot

Lead, MW-19 (mg/L)



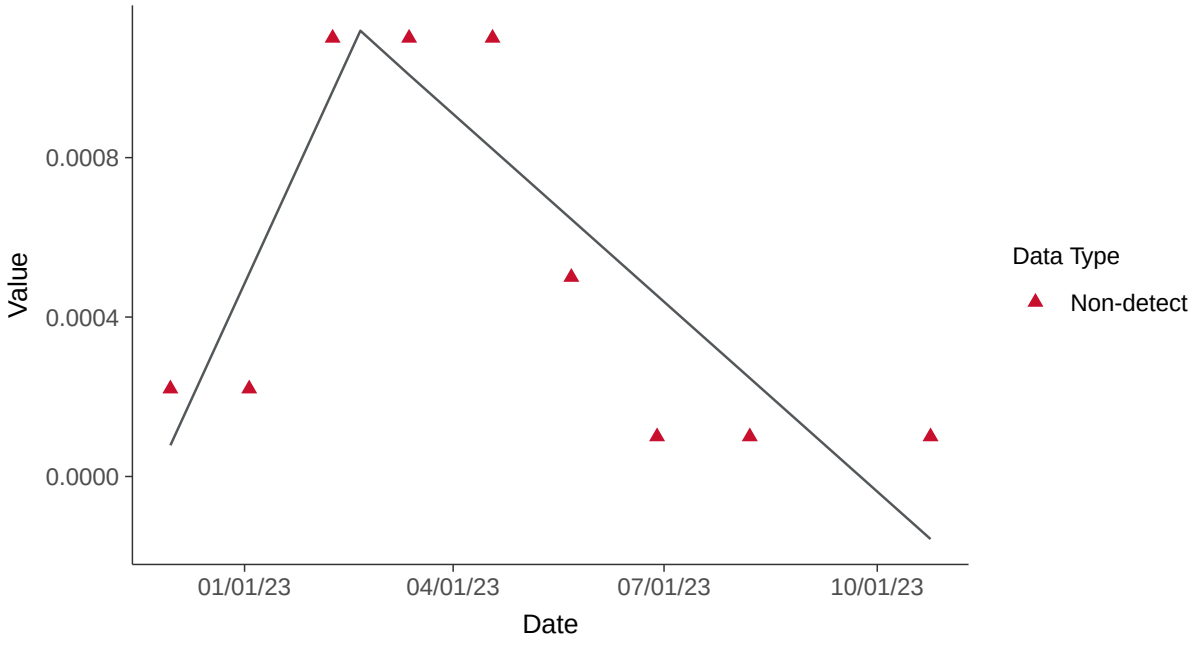
Boxplot by Season

Lead, MW-19 (mg/L)



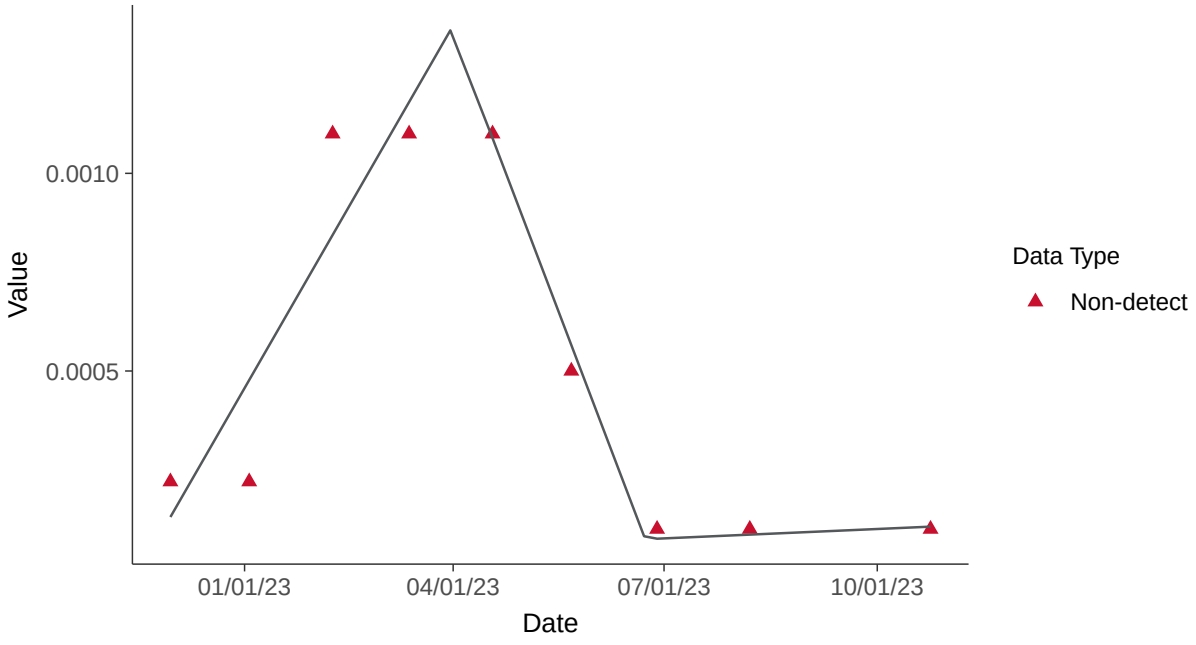
Trend Regression: Piecewise Linear-Linear

Lead, MW-19 (mg/L)



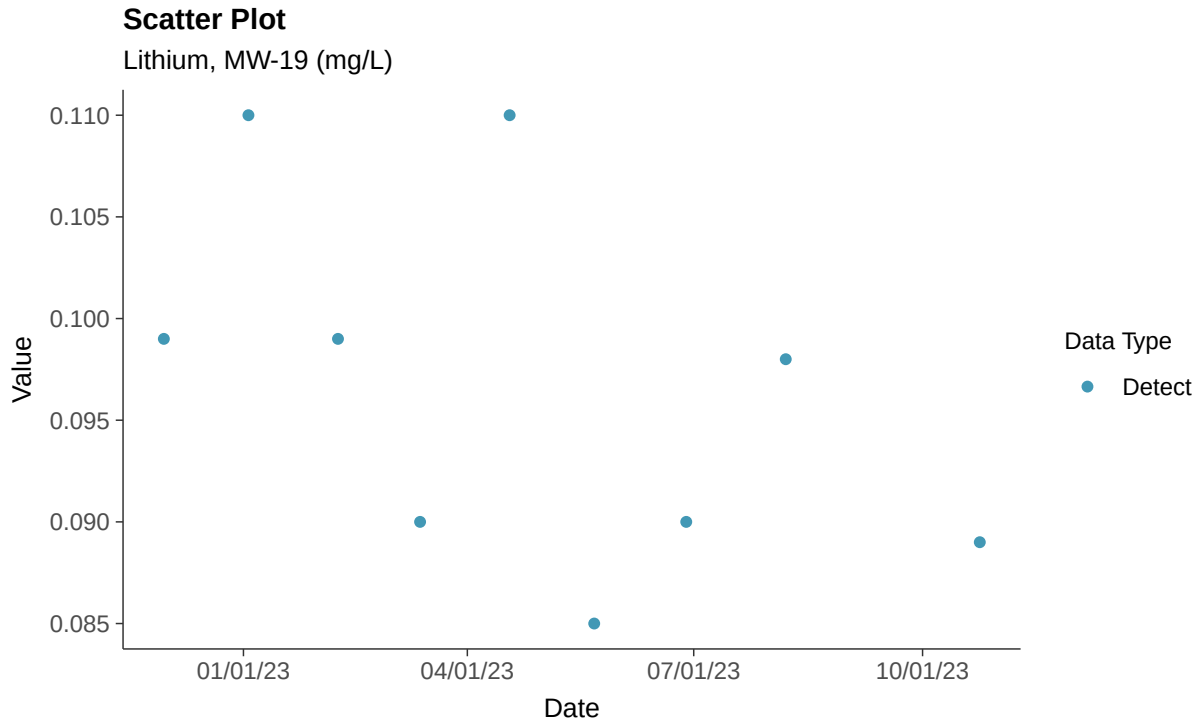
Trend Regression: Piecewise Linear-Linear-Linear

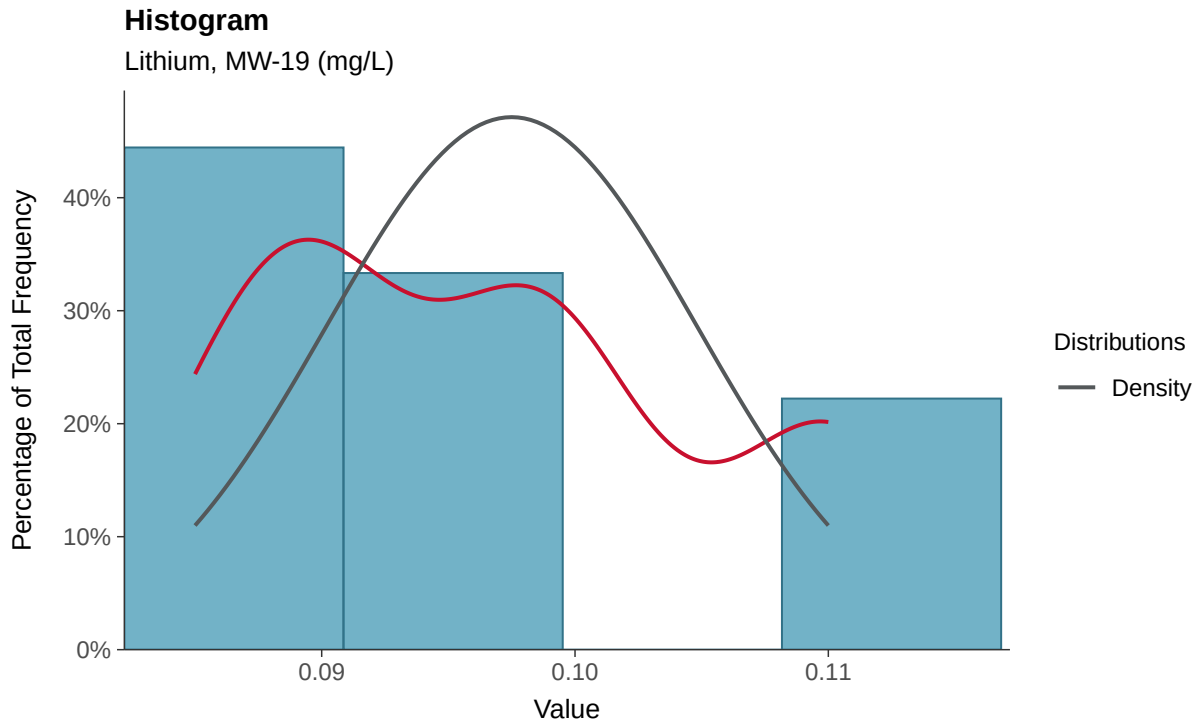
Lead, MW-19 (mg/L)



Appendix IV: Lithium, MW-19

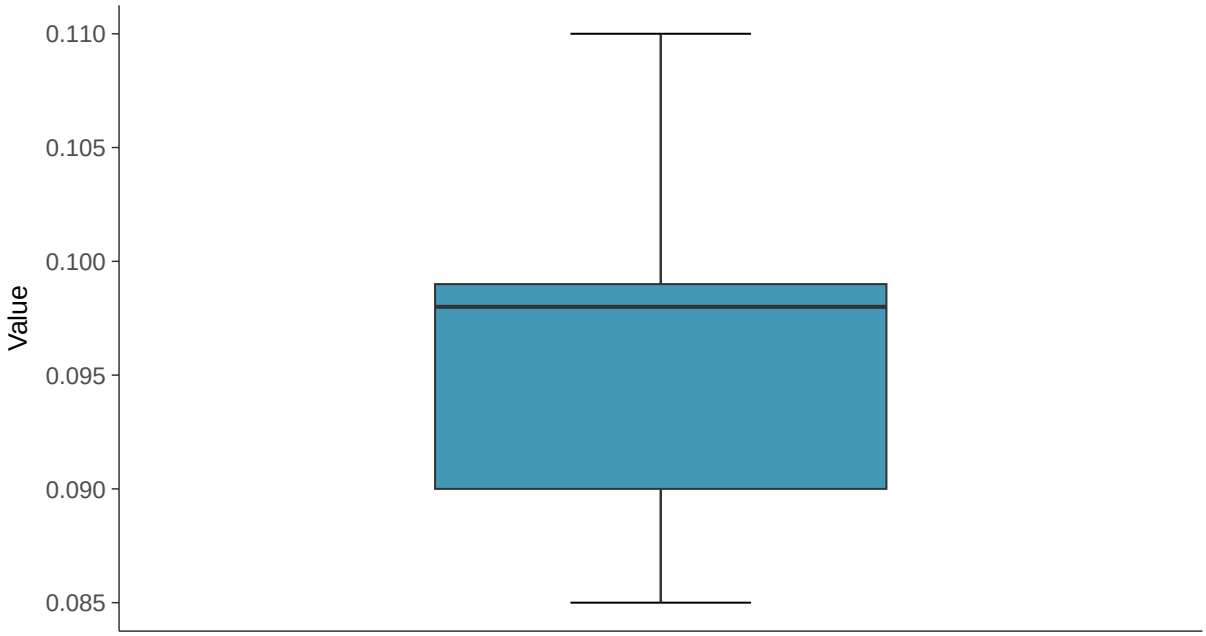
ID: 1_23_5_116





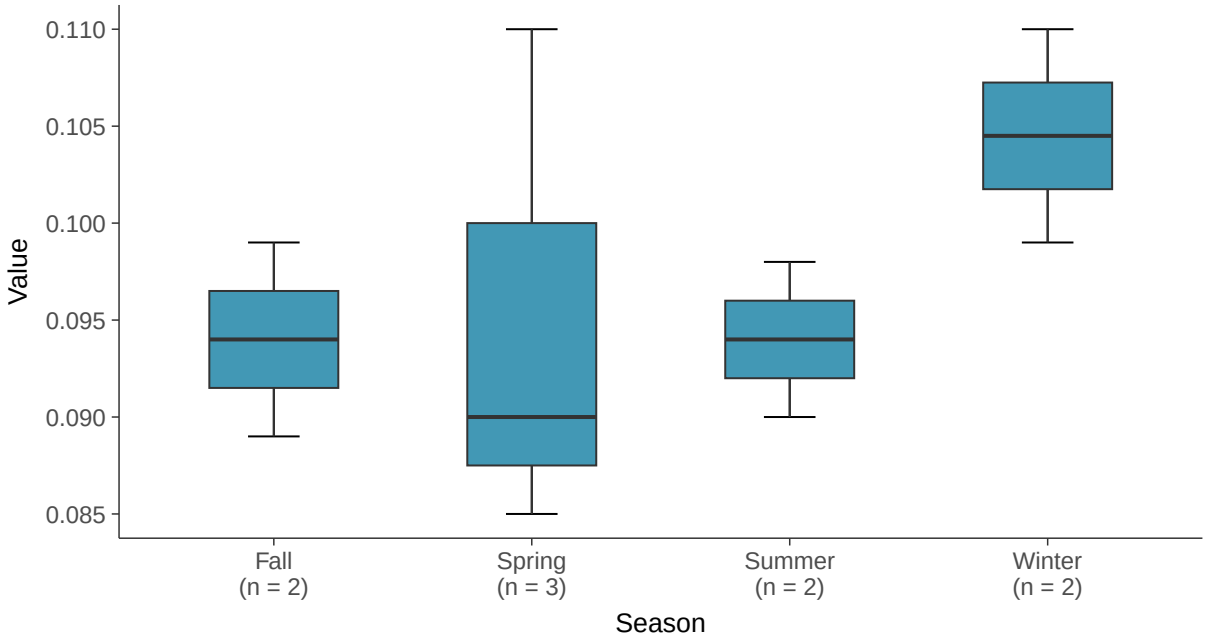
Boxplot

Lithium, MW-19 (mg/L)



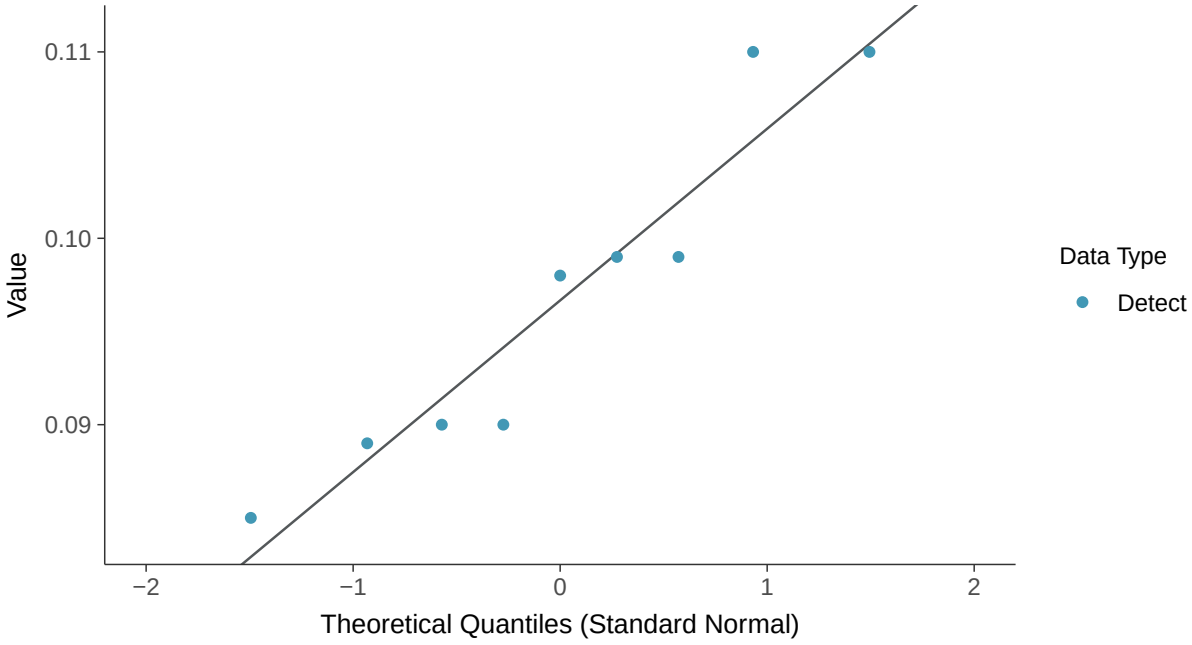
Boxplot by Season

Lithium, MW-19 (mg/L)



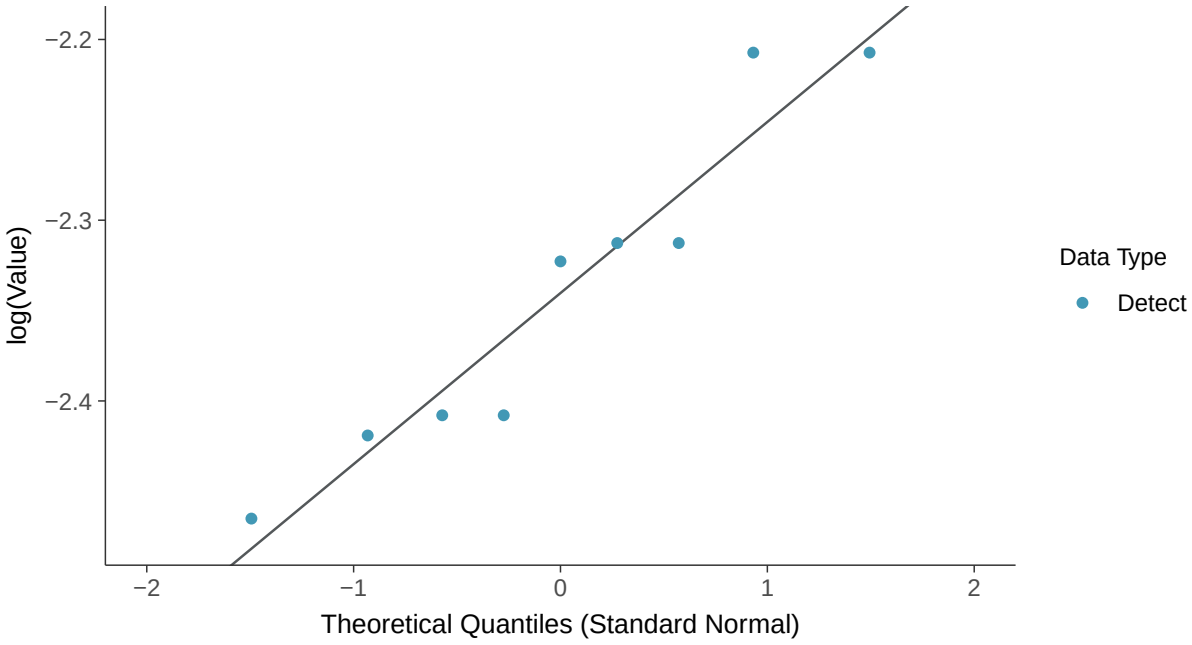
Normal Q-Q plot

Lithium, MW-19 (mg/L)



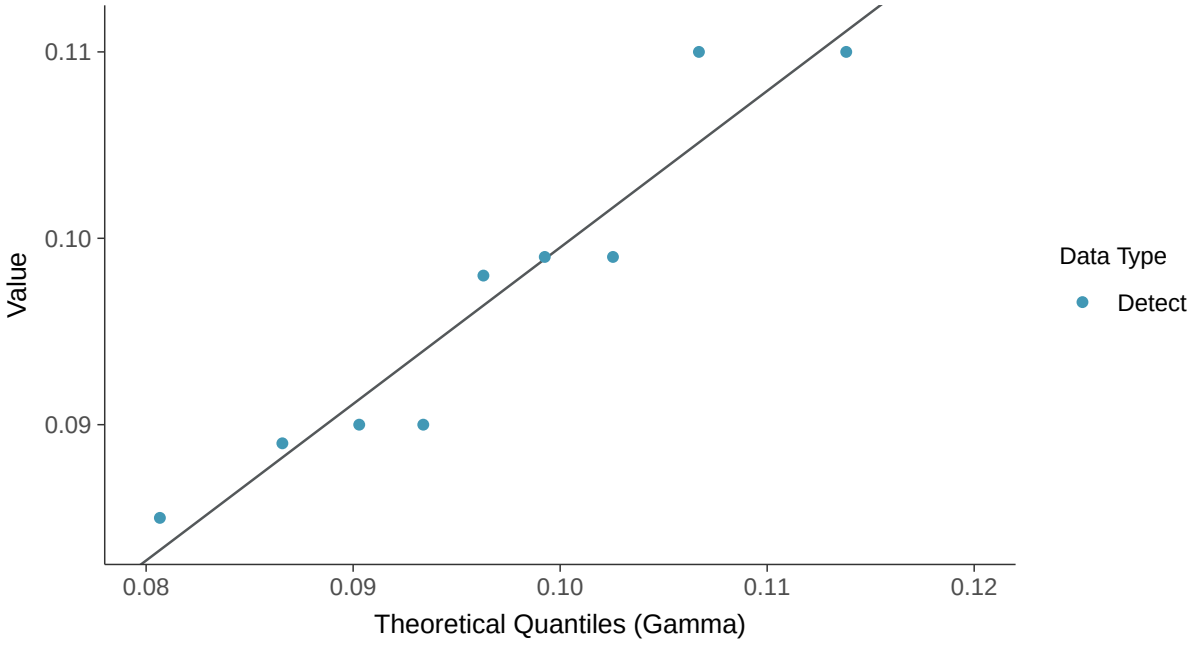
Lognormal Q-Q plot

Lithium, MW-19 (mg/L)



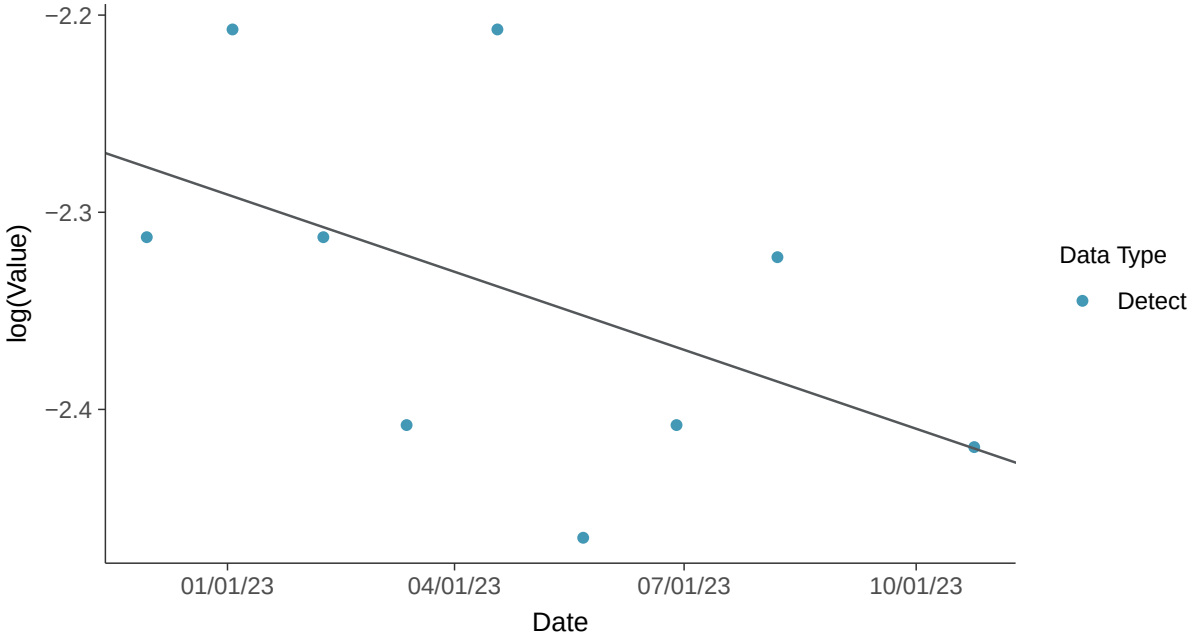
Gamma Q-Q plot

Lithium, MW-19 (mg/L)



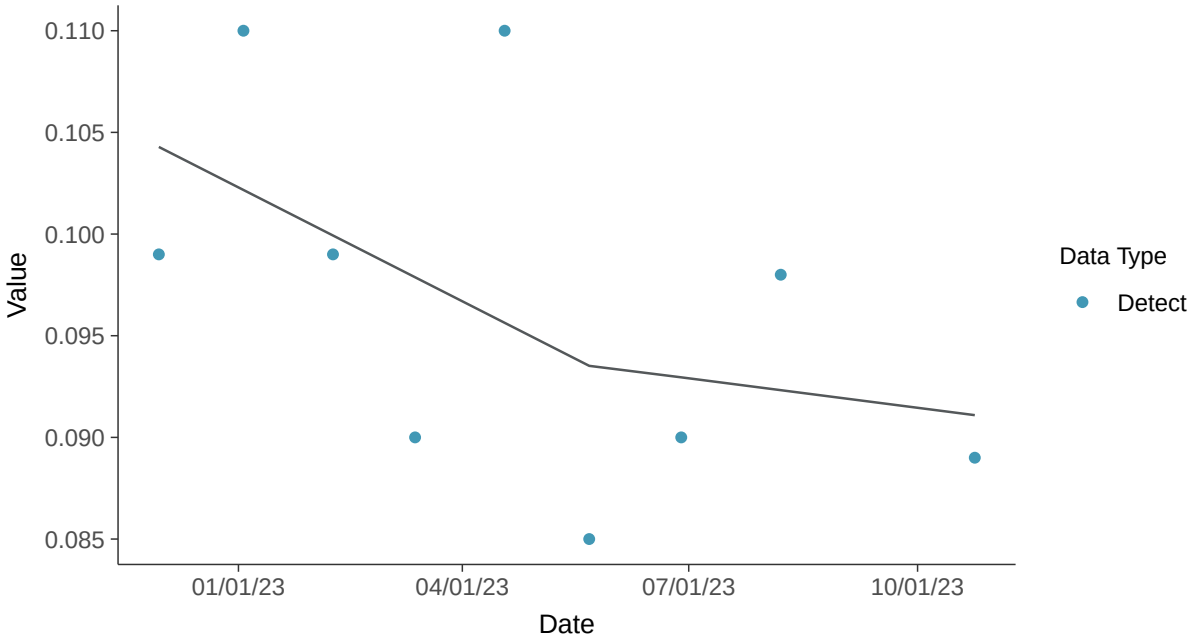
Trend Regression: Lognormal MLE

Lithium, MW-19 (mg/L)



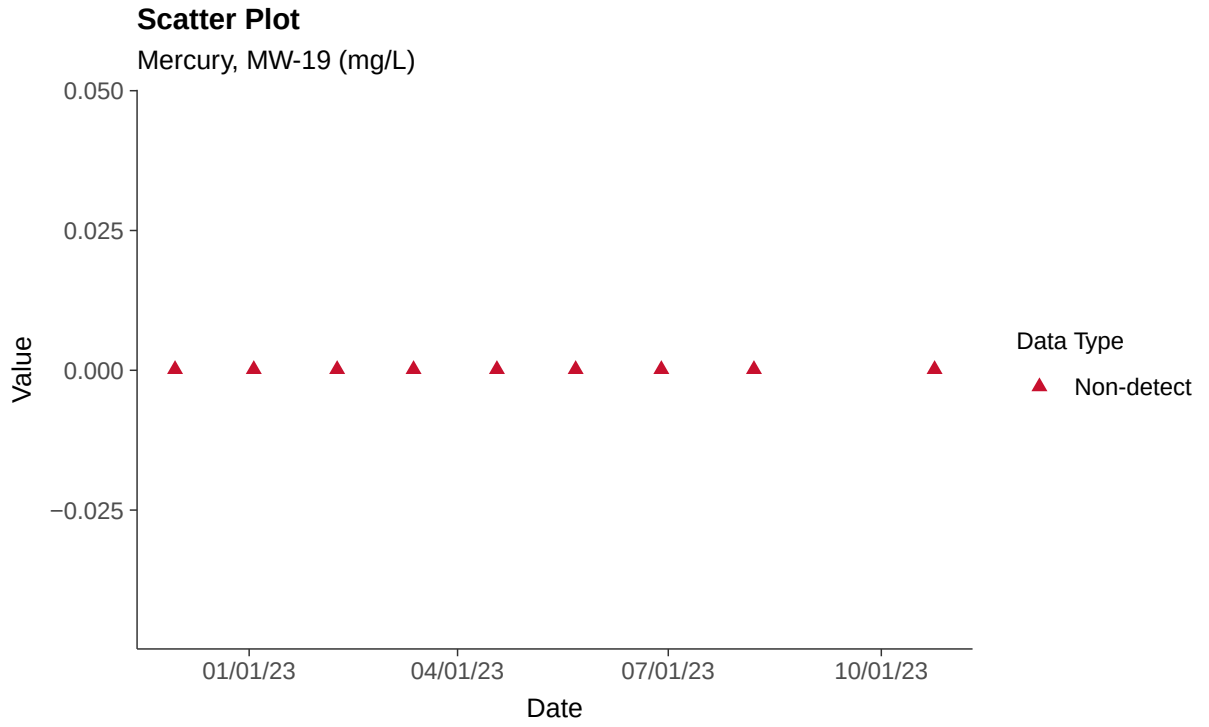
Trend Regression: Piecewise Linear-Linear

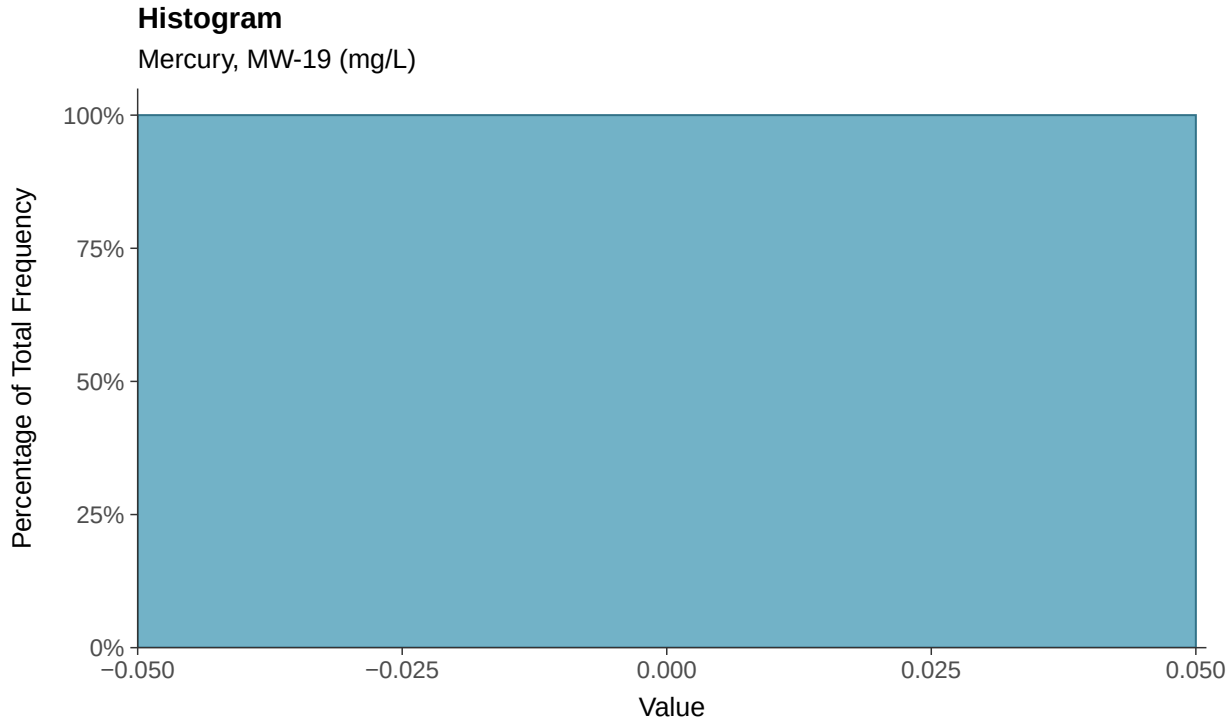
Lithium, MW-19 (mg/L)



Appendix IV: Mercury, MW-19

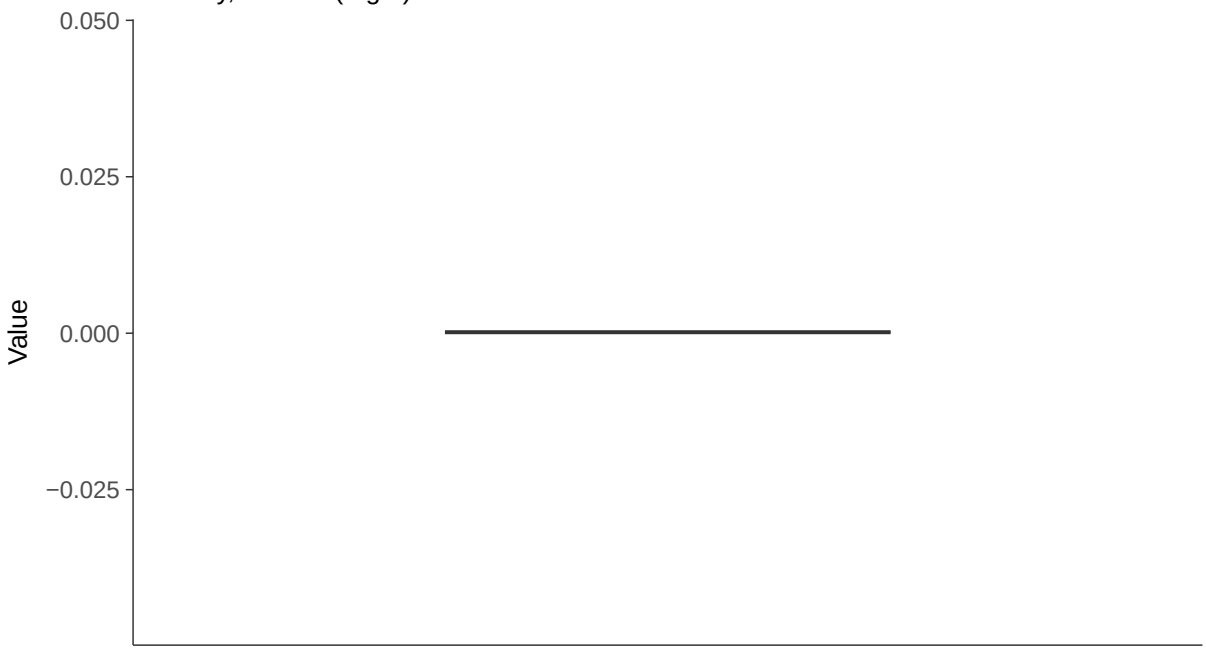
ID: 1_23_5_117





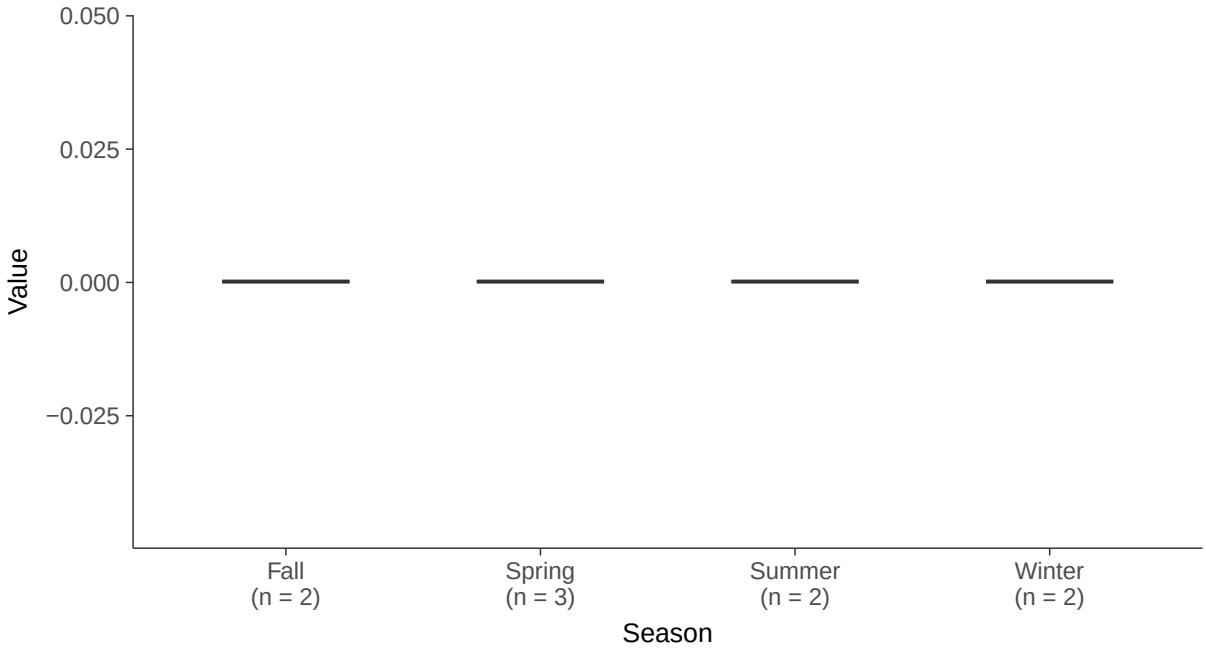
Boxplot

Mercury, MW-19 (mg/L)



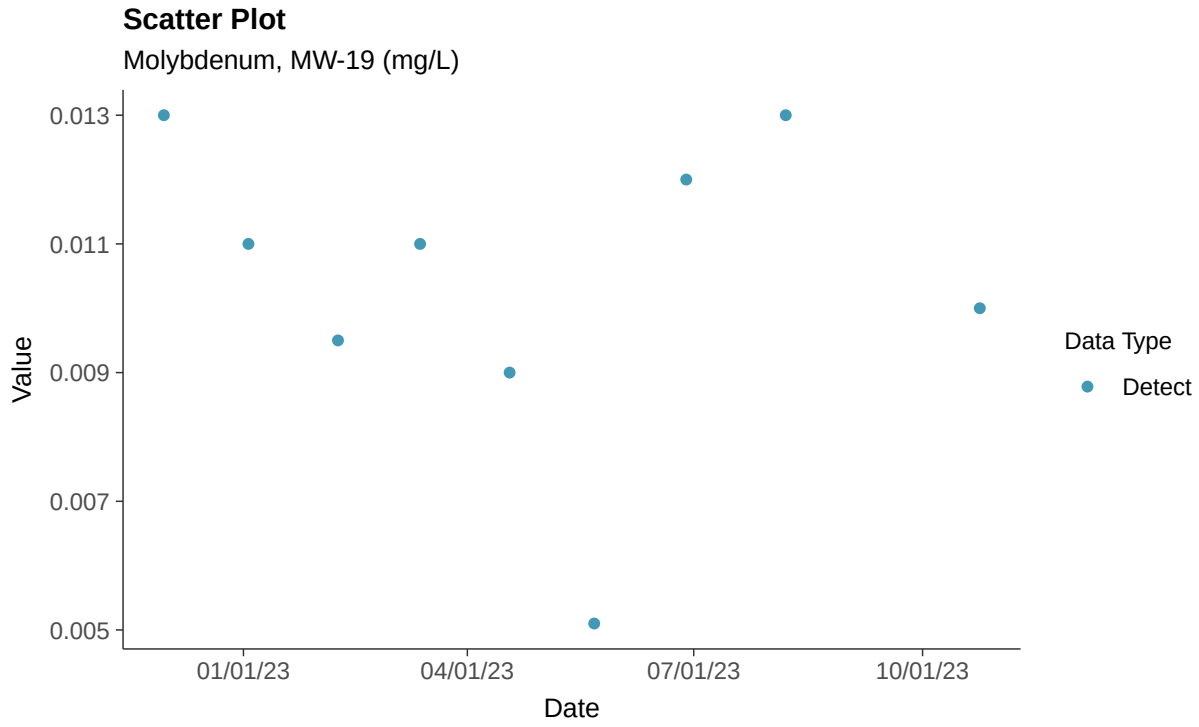
Boxplot by Season

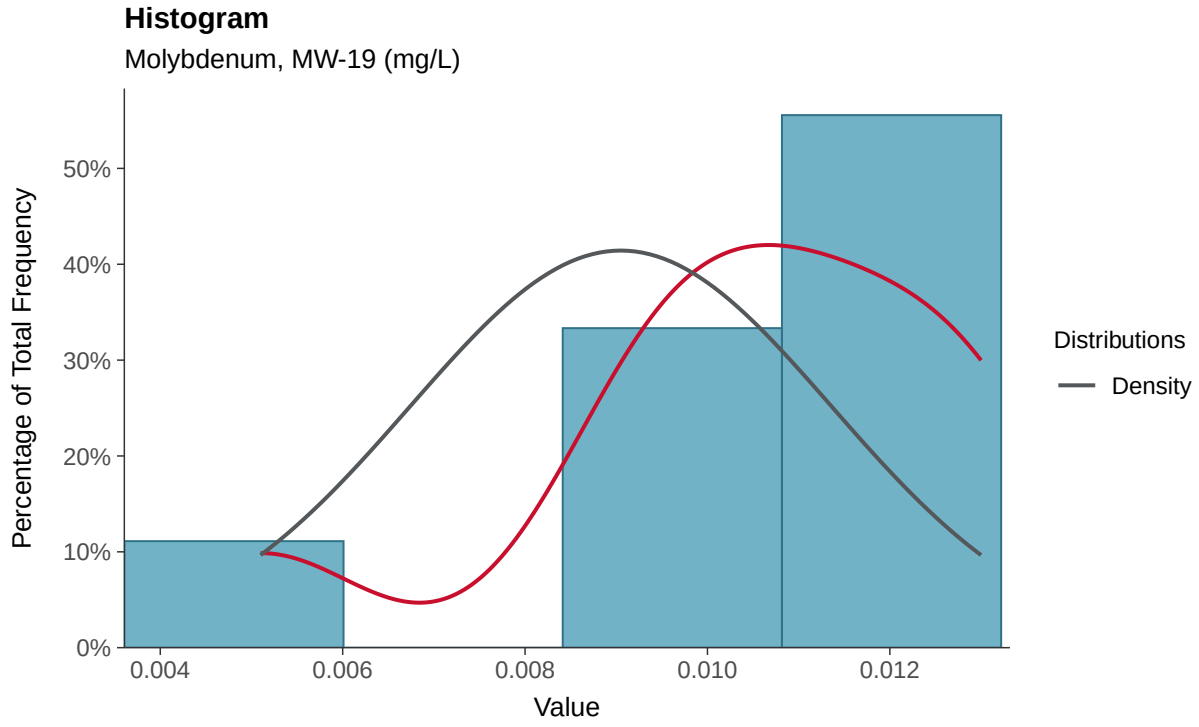
Mercury, MW-19 (mg/L)



Appendix IV: Molybdenum, MW-19

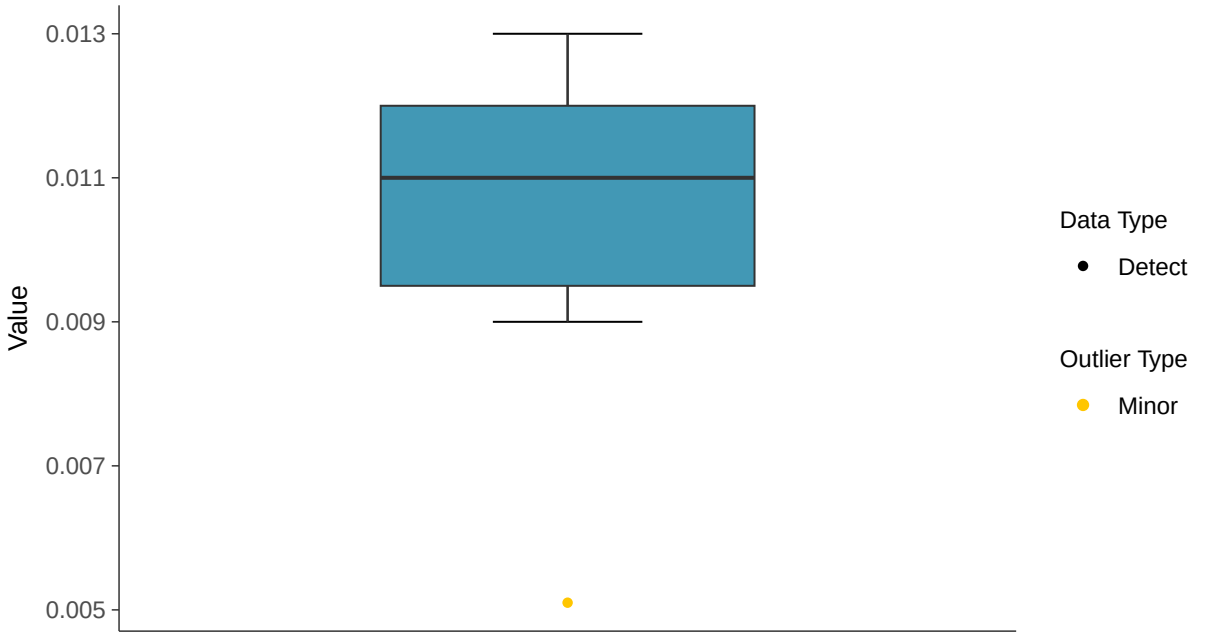
ID: 1_23_5_118





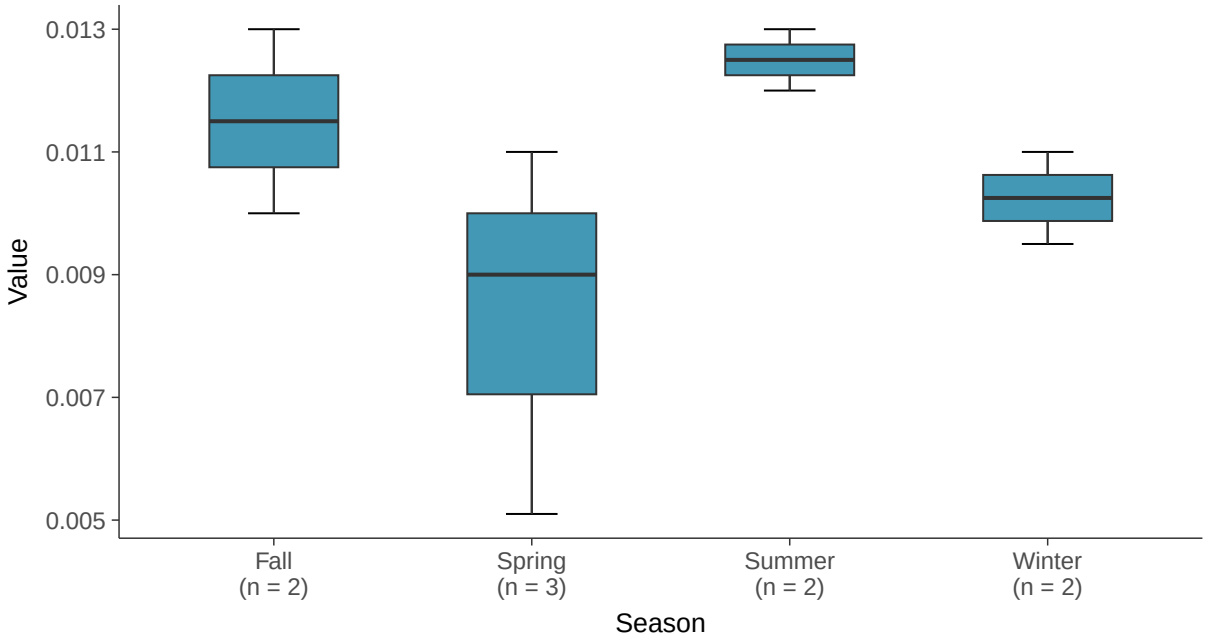
Boxplot

Molybdenum, MW-19 (mg/L)



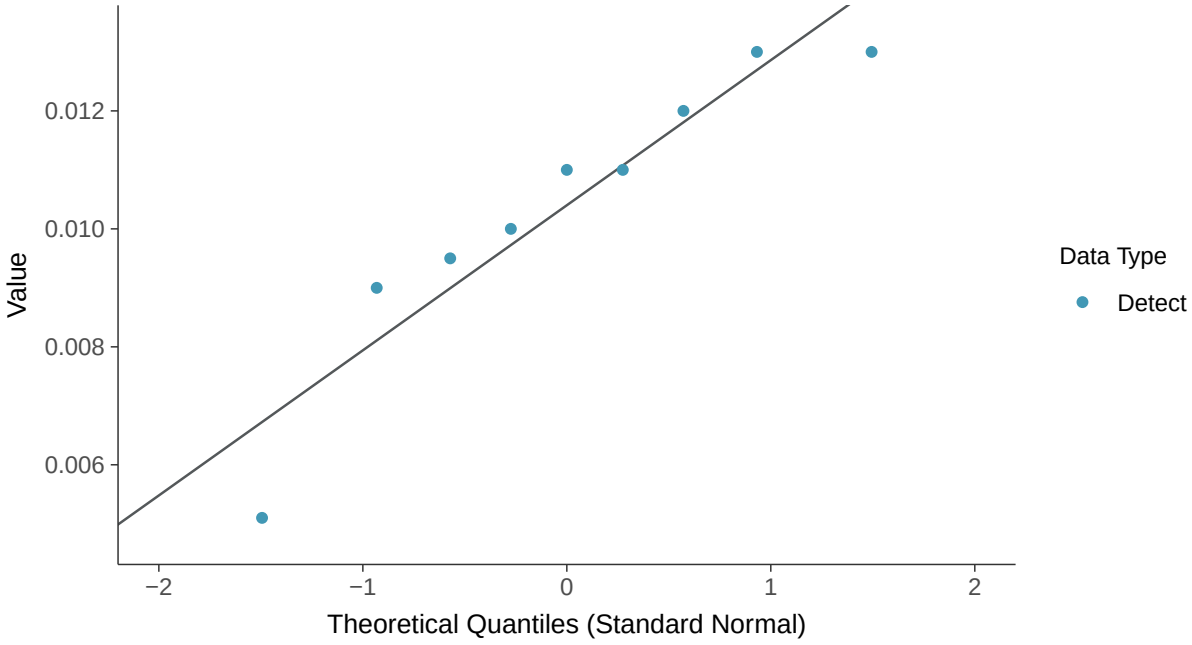
Boxplot by Season

Molybdenum, MW-19 (mg/L)



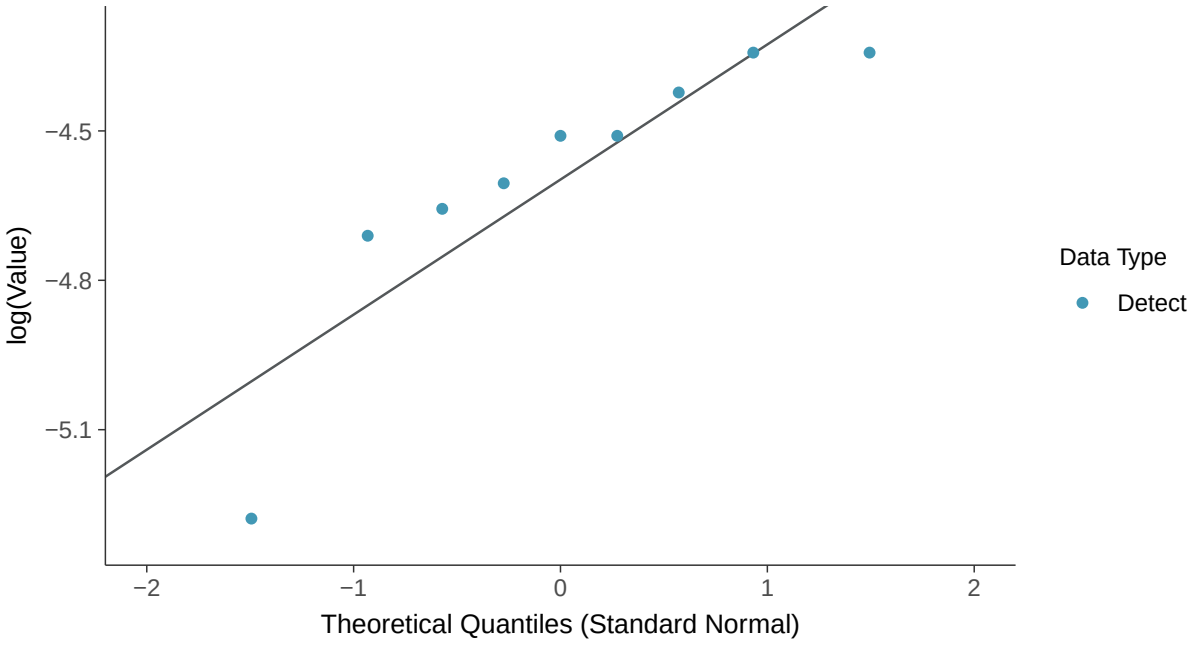
Normal Q-Q plot

Molybdenum, MW-19 (mg/L)



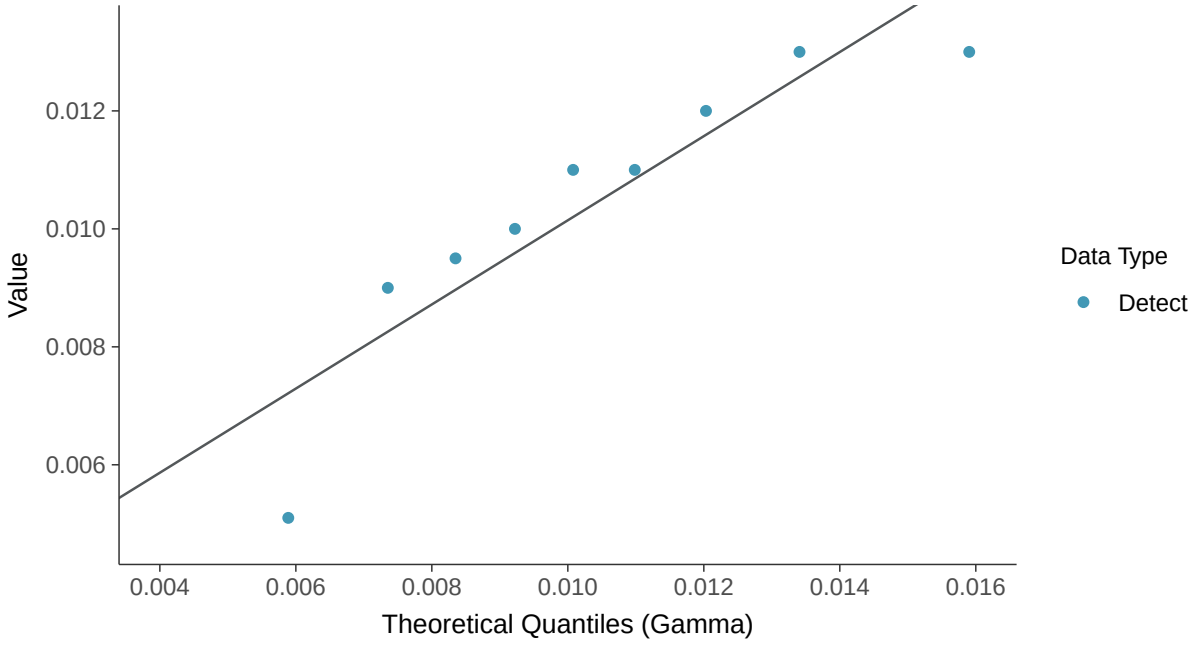
Lognormal Q-Q plot

Molybdenum, MW-19 (mg/L)



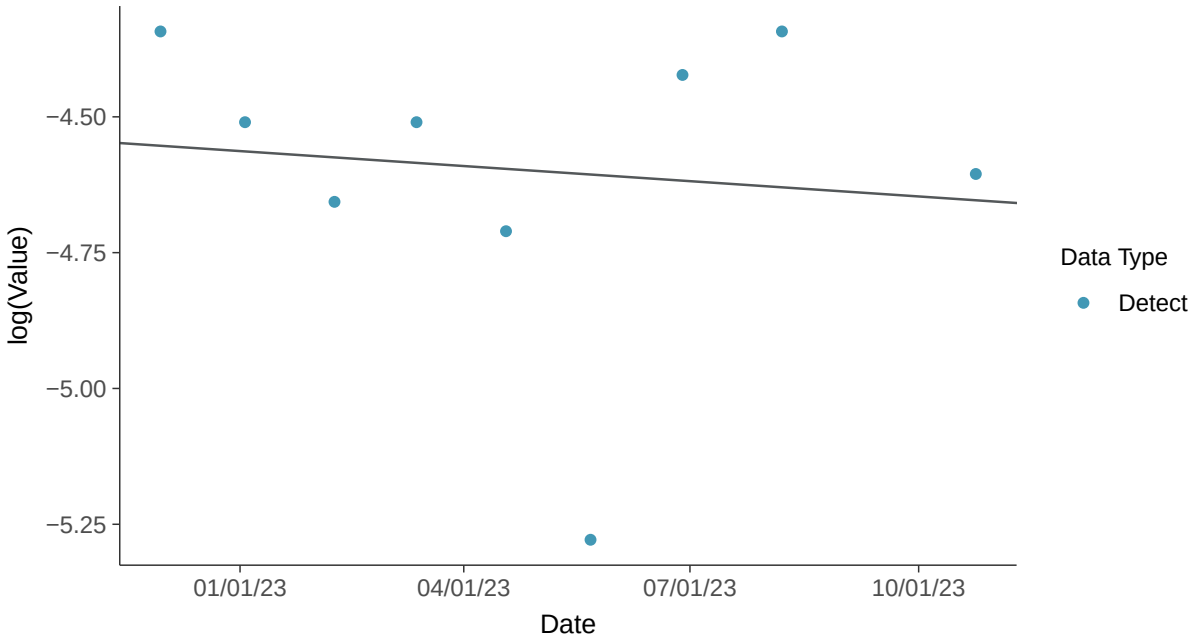
Gamma Q-Q plot

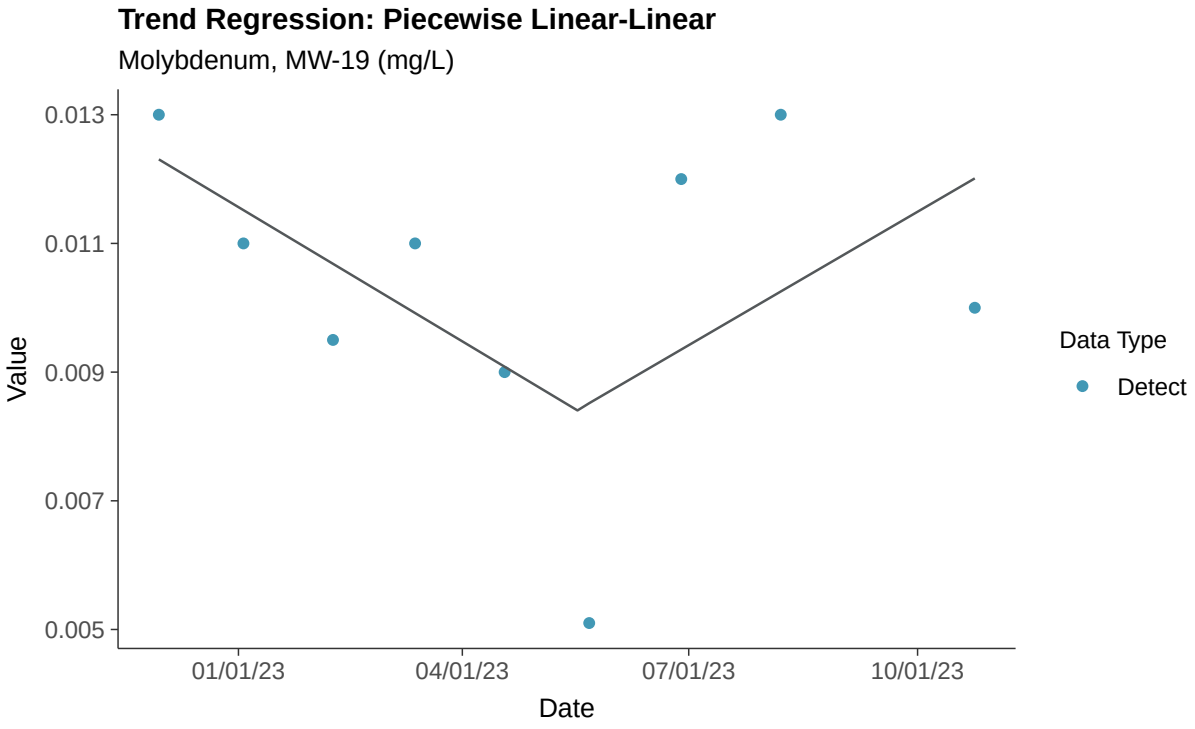
Molybdenum, MW-19 (mg/L)



Trend Regression: Lognormal MLE

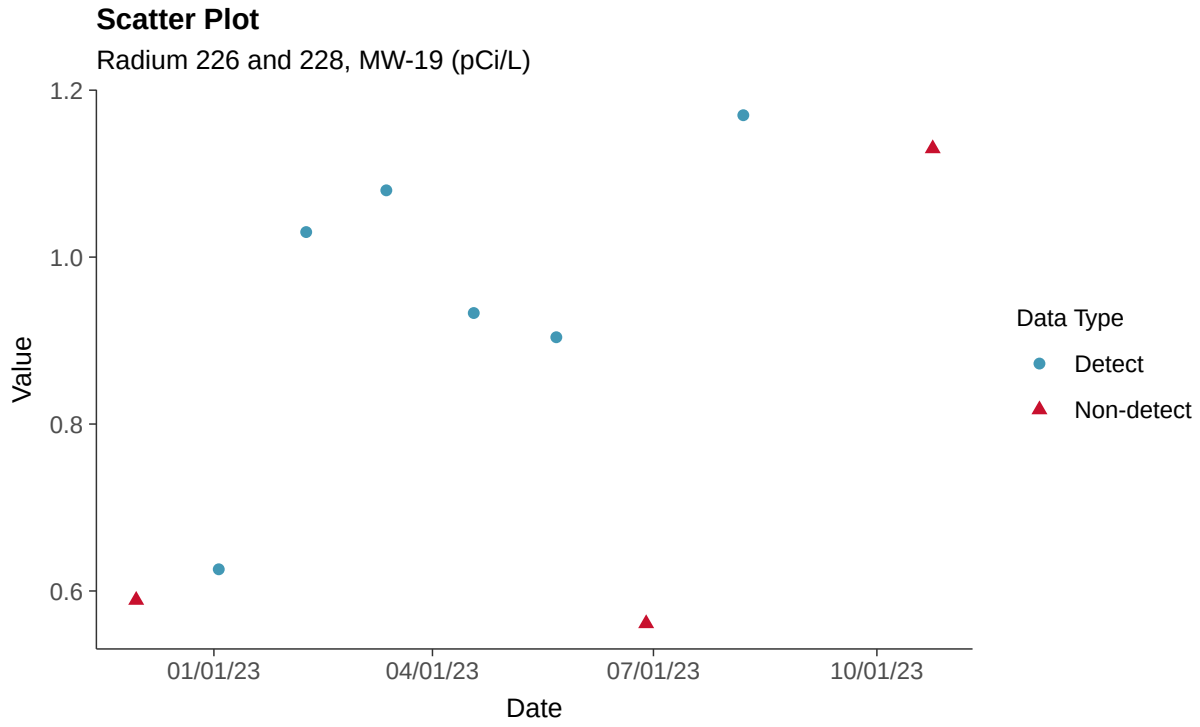
Molybdenum, MW-19 (mg/L)

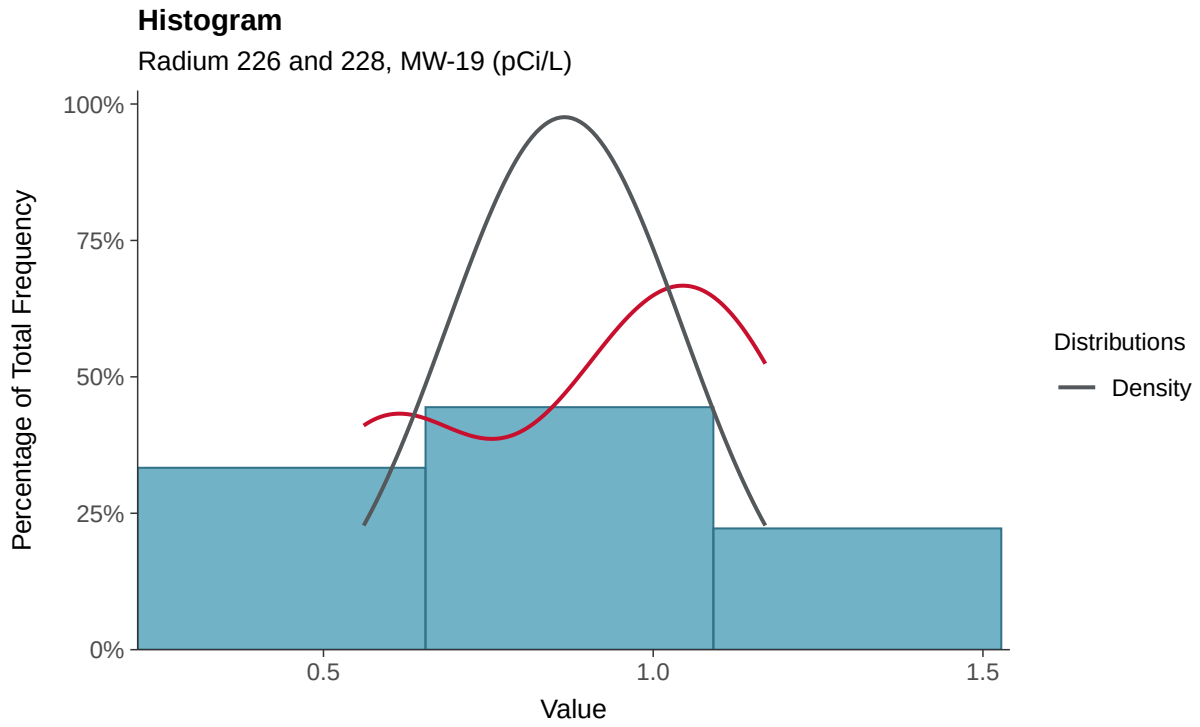



Trend Regression: Piecewise Linear-Linear
Molybdenum, MW-19 (mg/L)
0.013
0.011
0.009
0.007
0.005
Value
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect

Appendix IV: Radium 226 and 228, MW-19

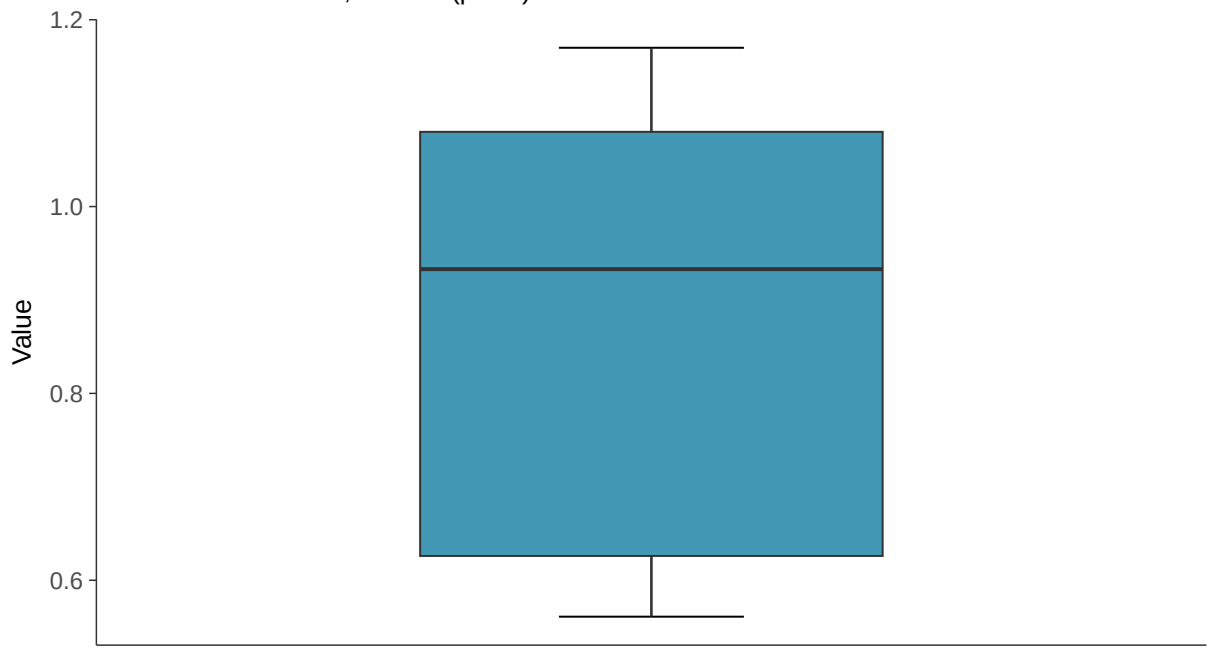
ID: 1_23_5_121





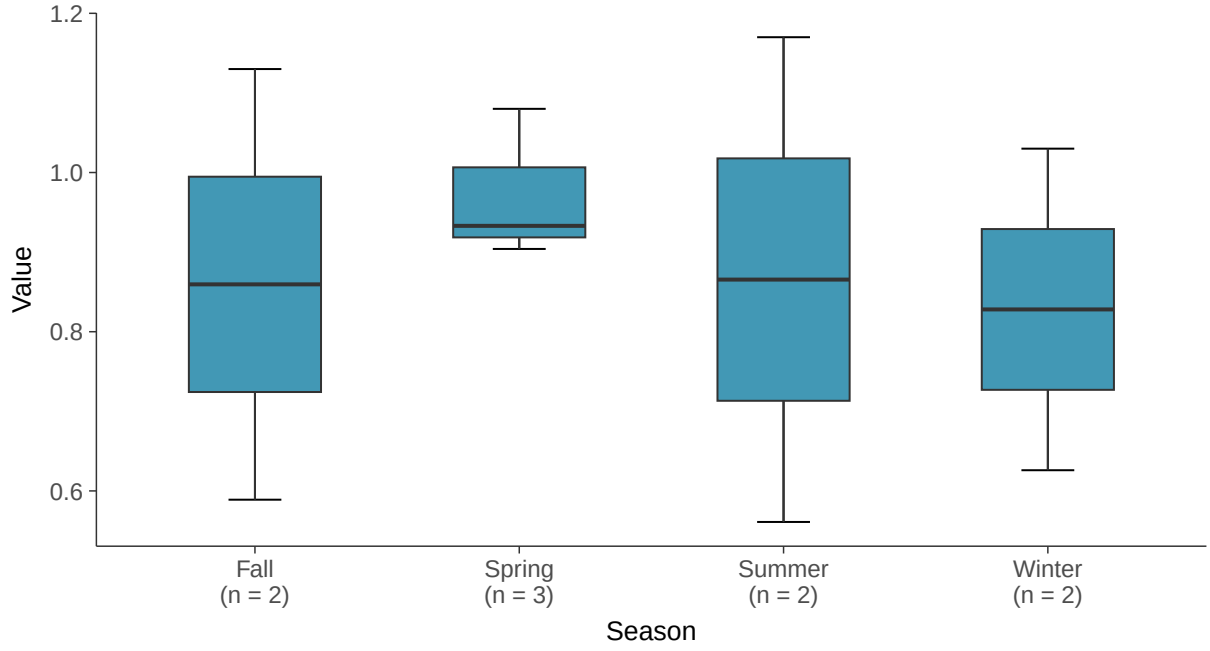
Boxplot

Radium 226 and 228, MW-19 (pCi/L)



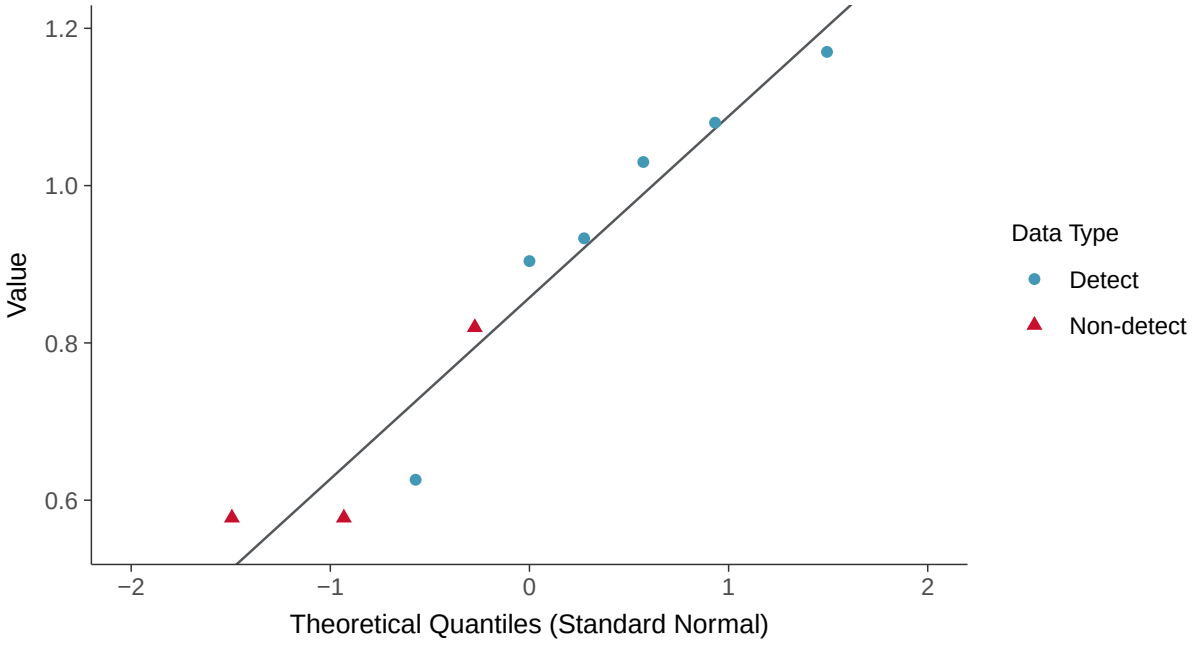
Boxplot by Season

Radium 226 and 228, MW-19 (pCi/L)



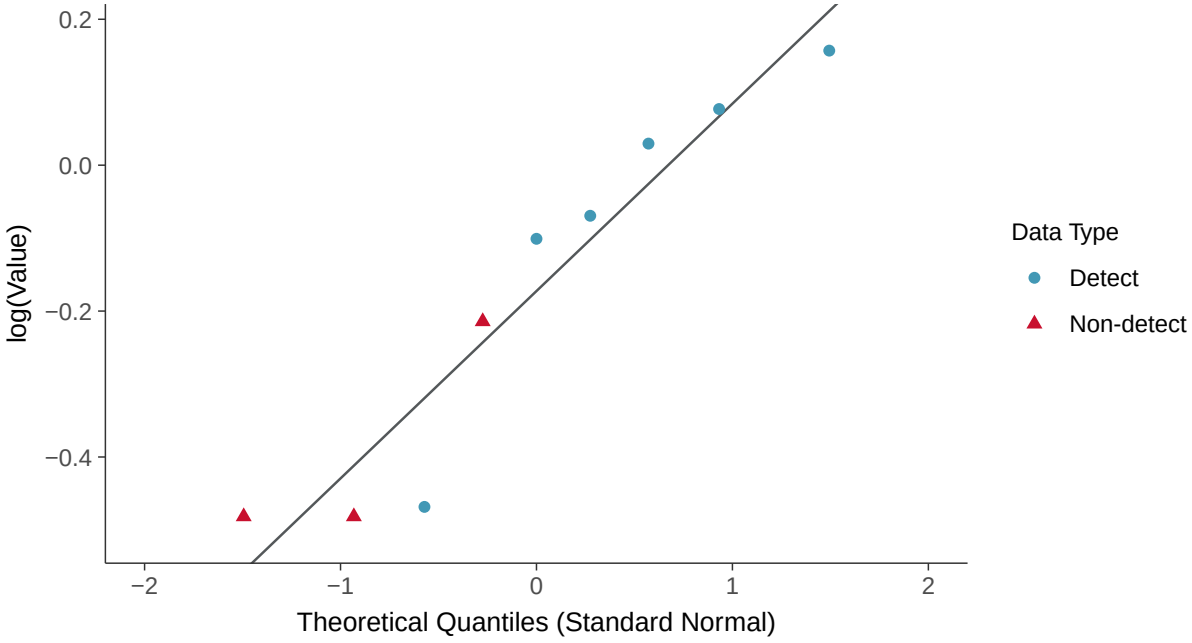
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-19 (pCi/L)



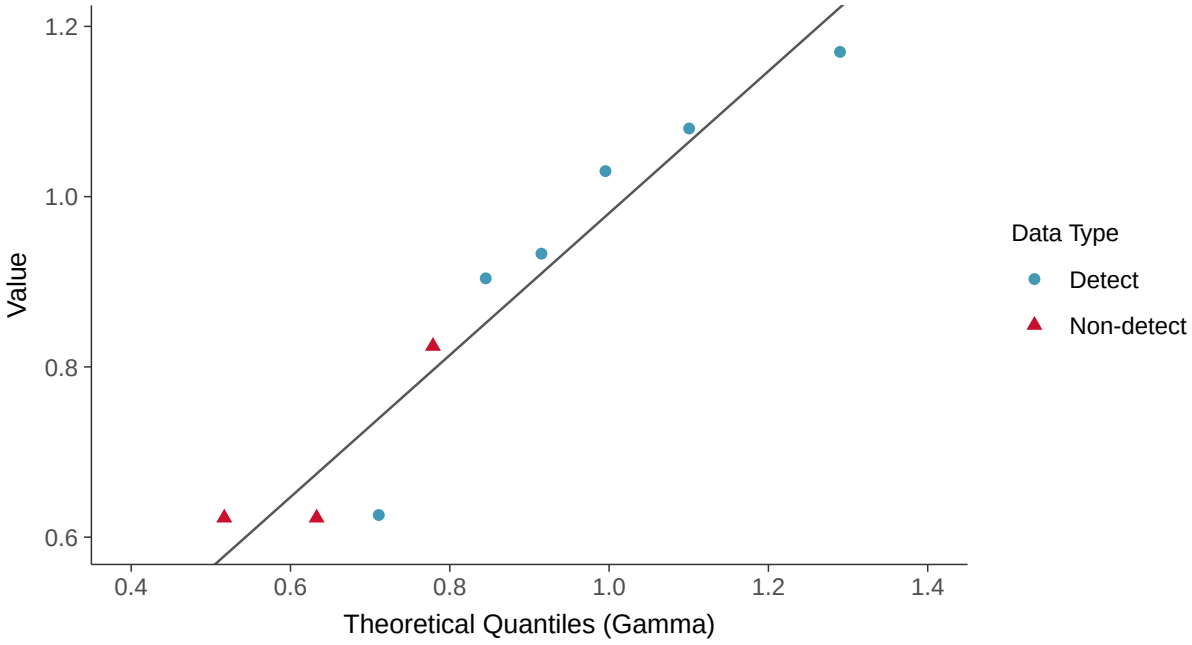
Lognormal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-19 (pCi/L)



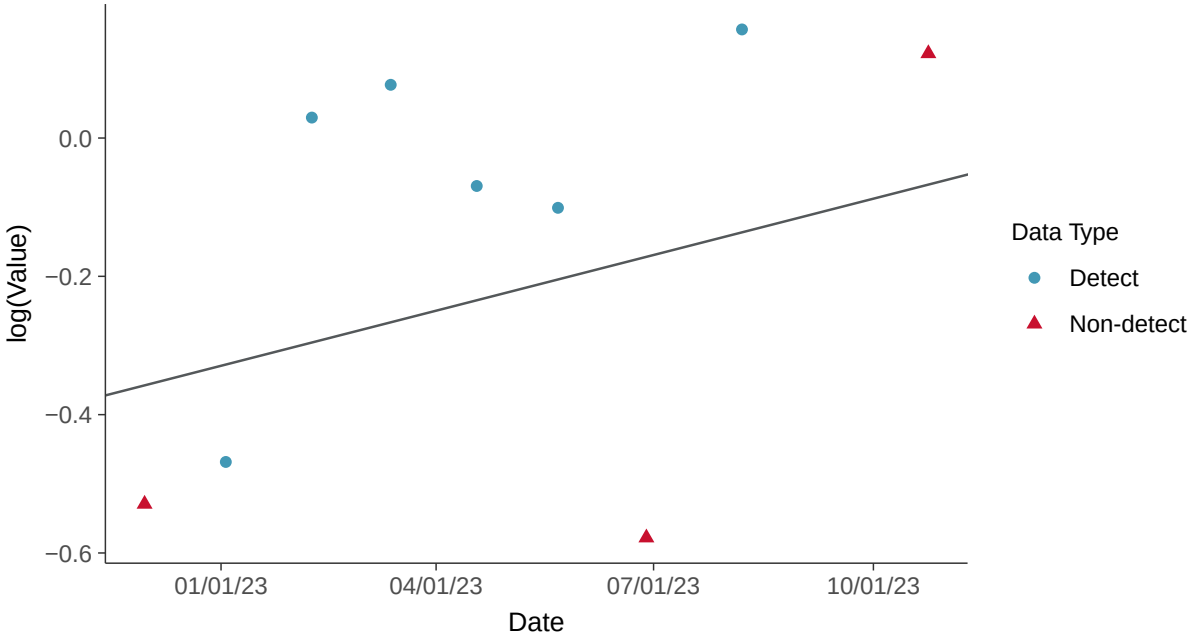
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-19 (pCi/L)



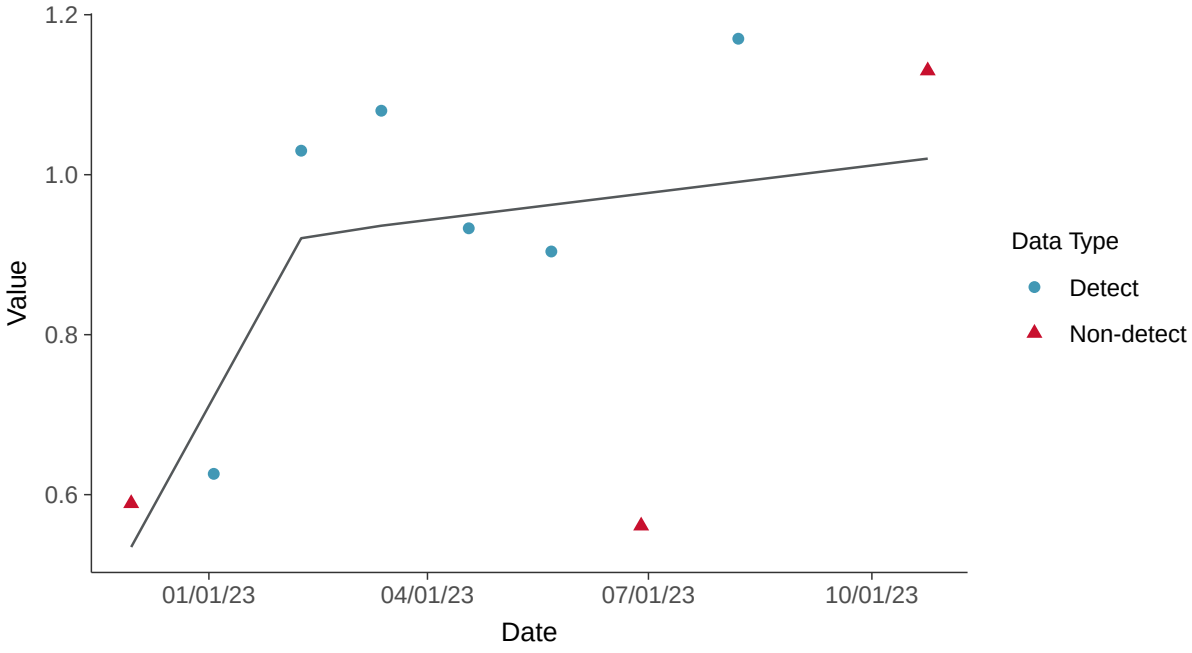
Trend Regression: Lognormal MLE

Radium 226 and 228, MW-19 (pCi/L)



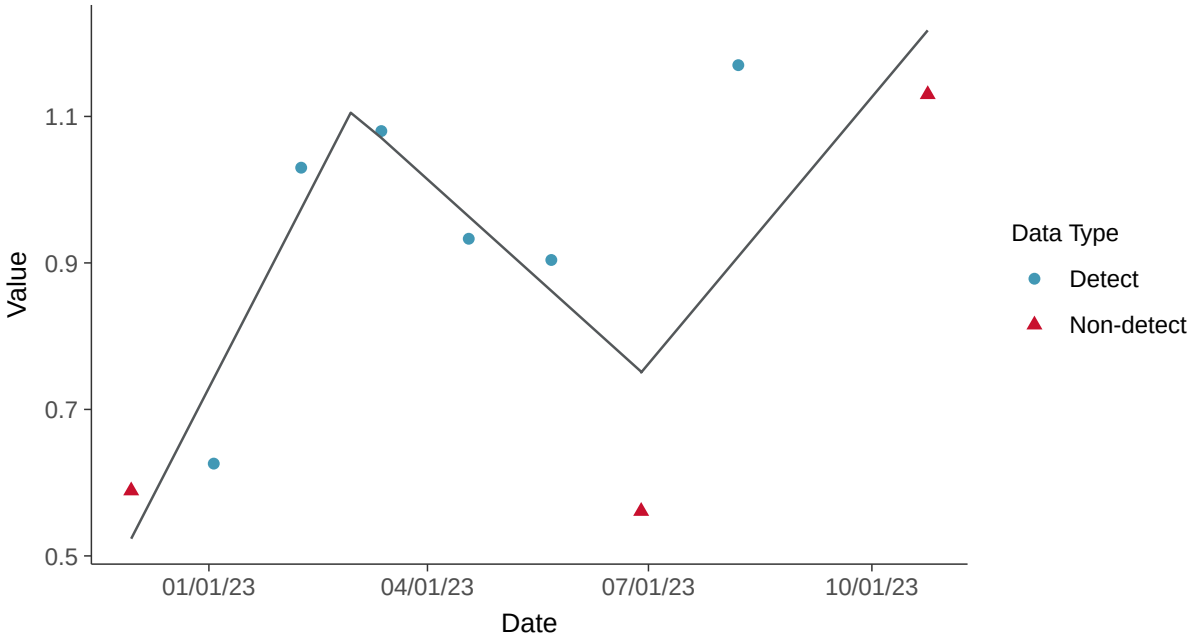
Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-19 (pCi/L)



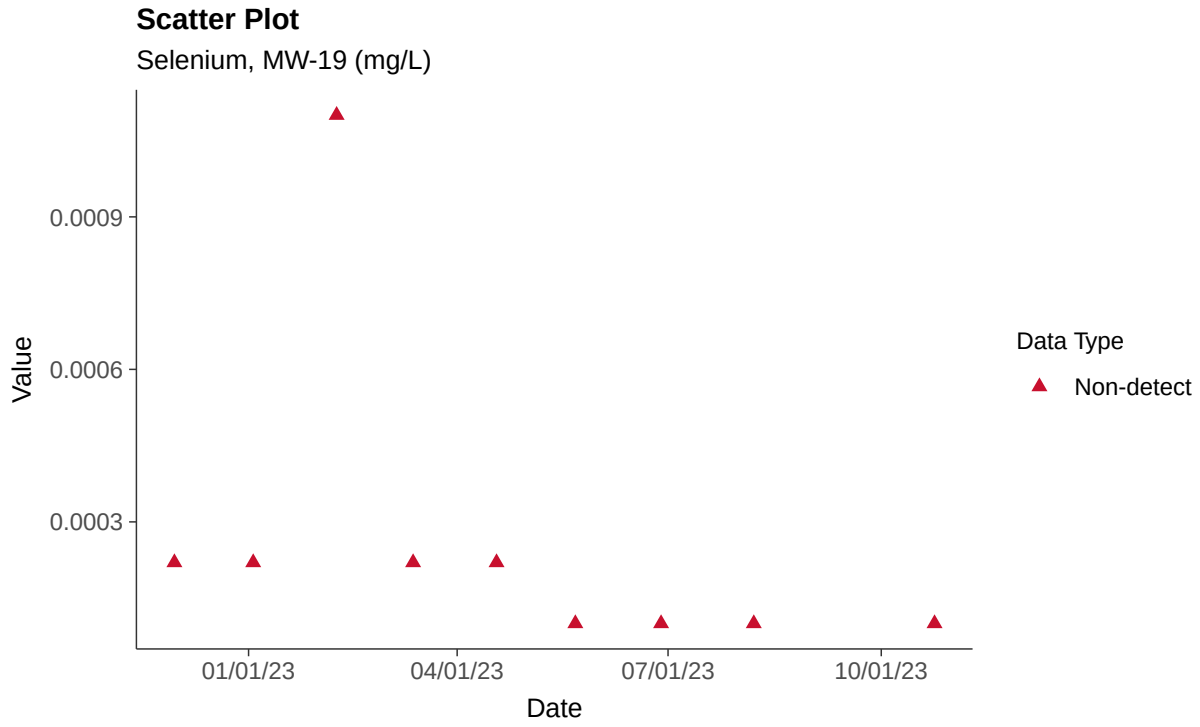
Trend Regression: Piecewise Linear-Linear-Linear

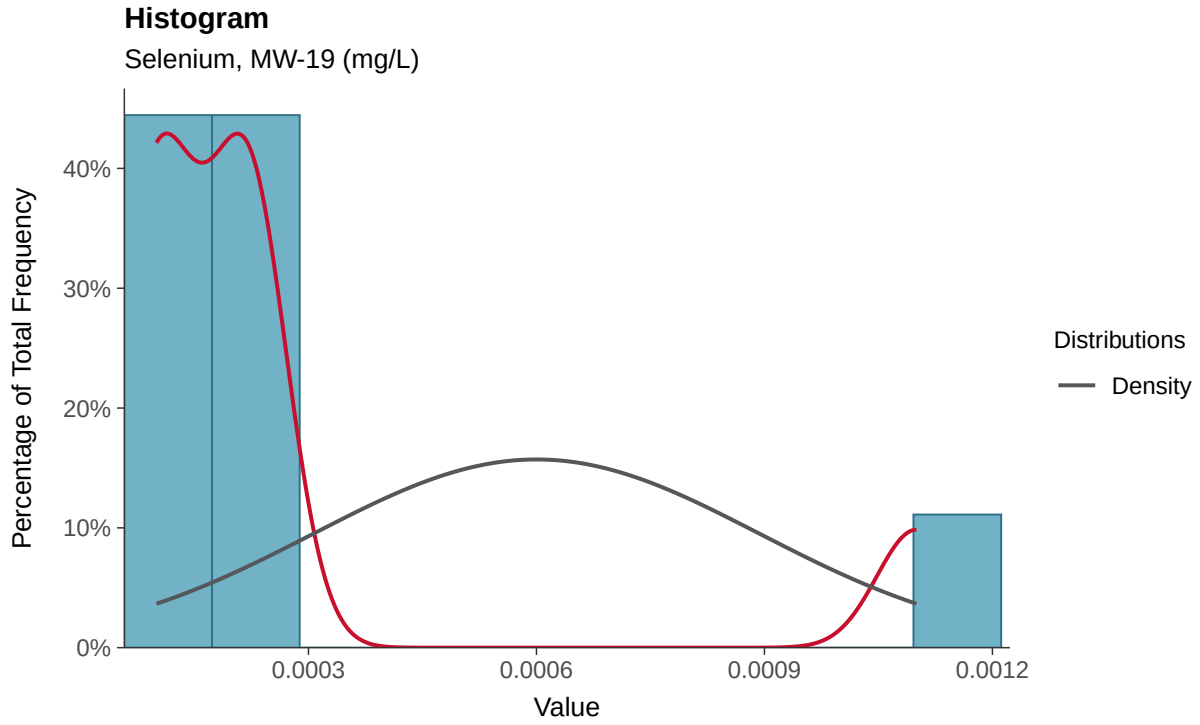
Radium 226 and 228, MW-19 (pCi/L)



Appendix IV: Selenium, MW-19

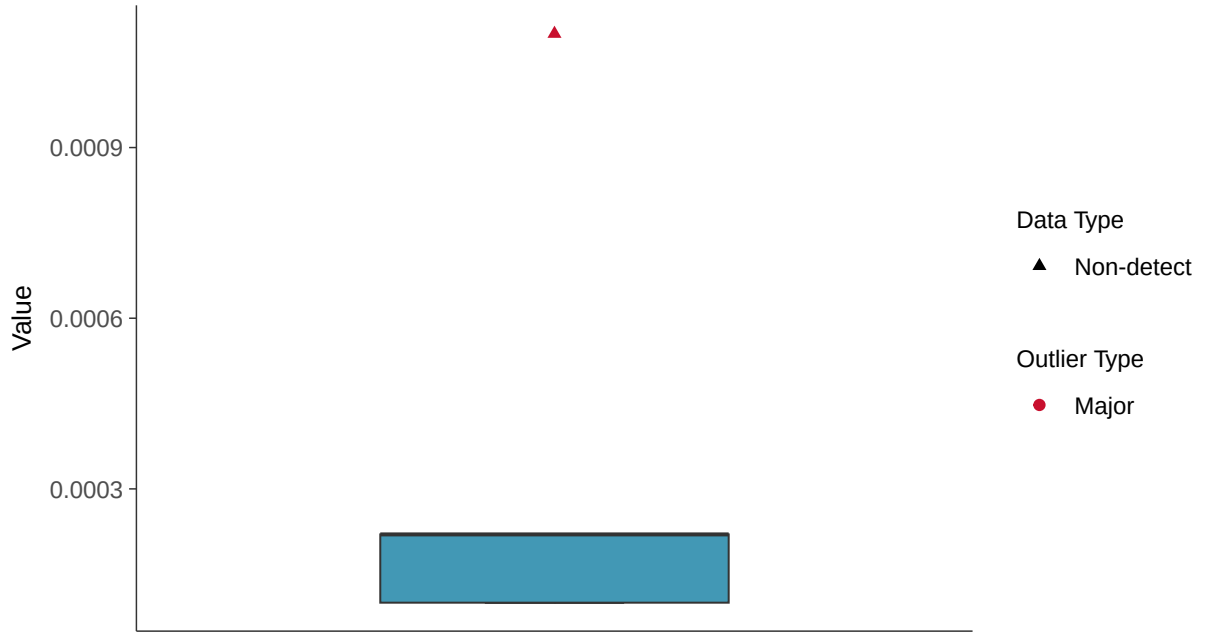
ID: 1_23_5_122





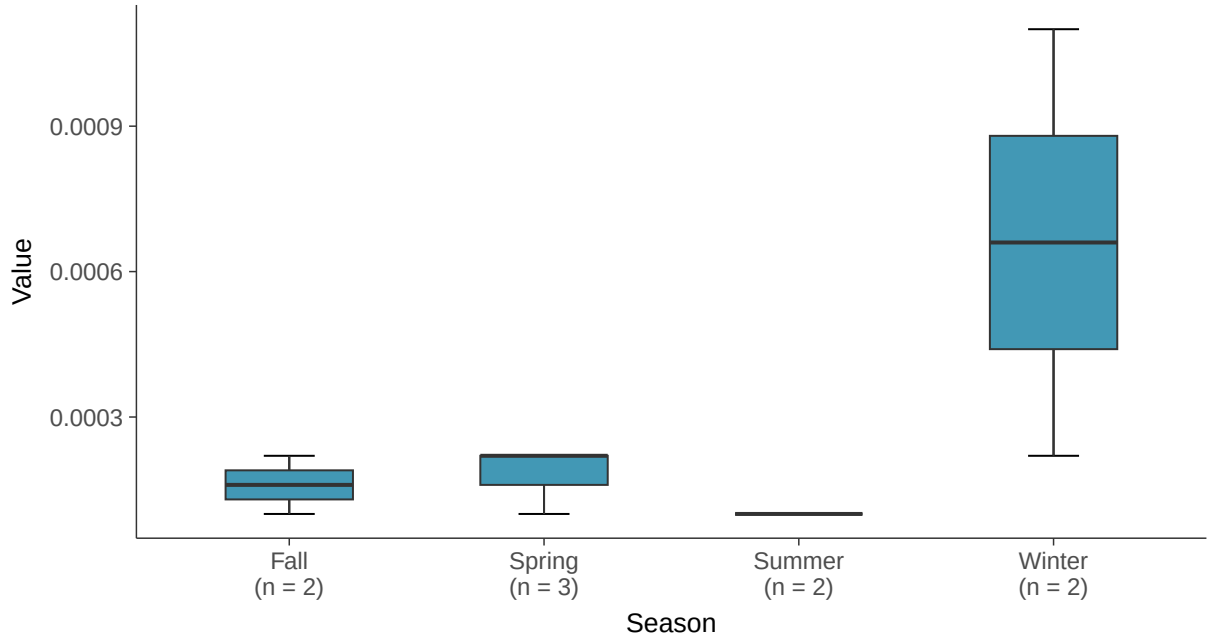
Boxplot

Selenium, MW-19 (mg/L)



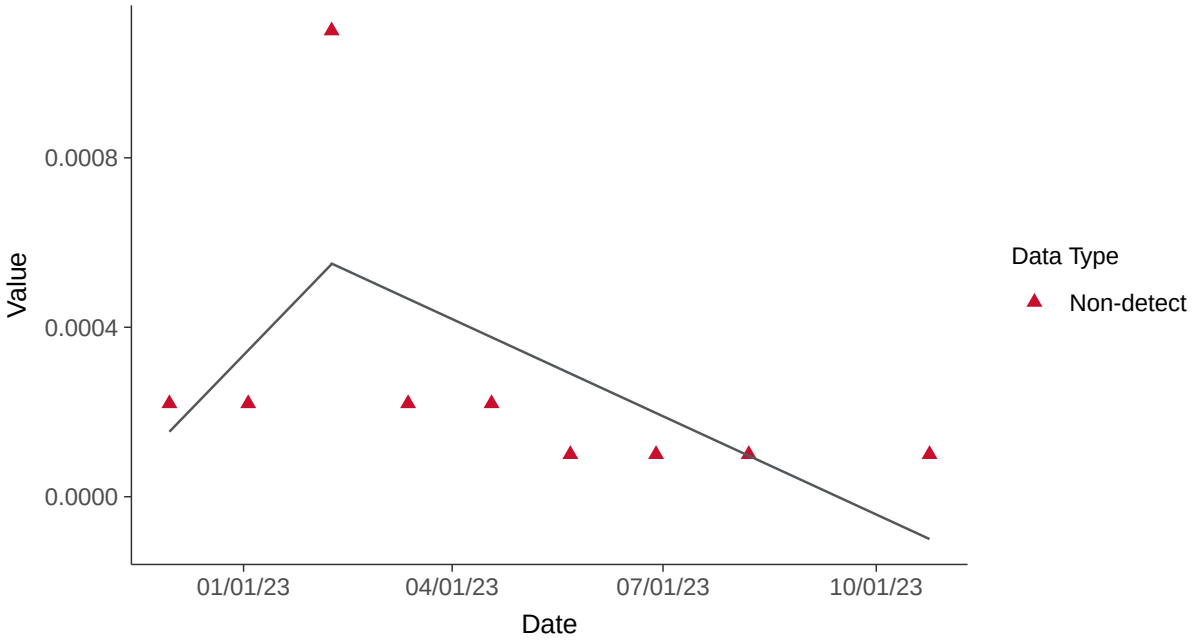
Boxplot by Season

Selenium, MW-19 (mg/L)



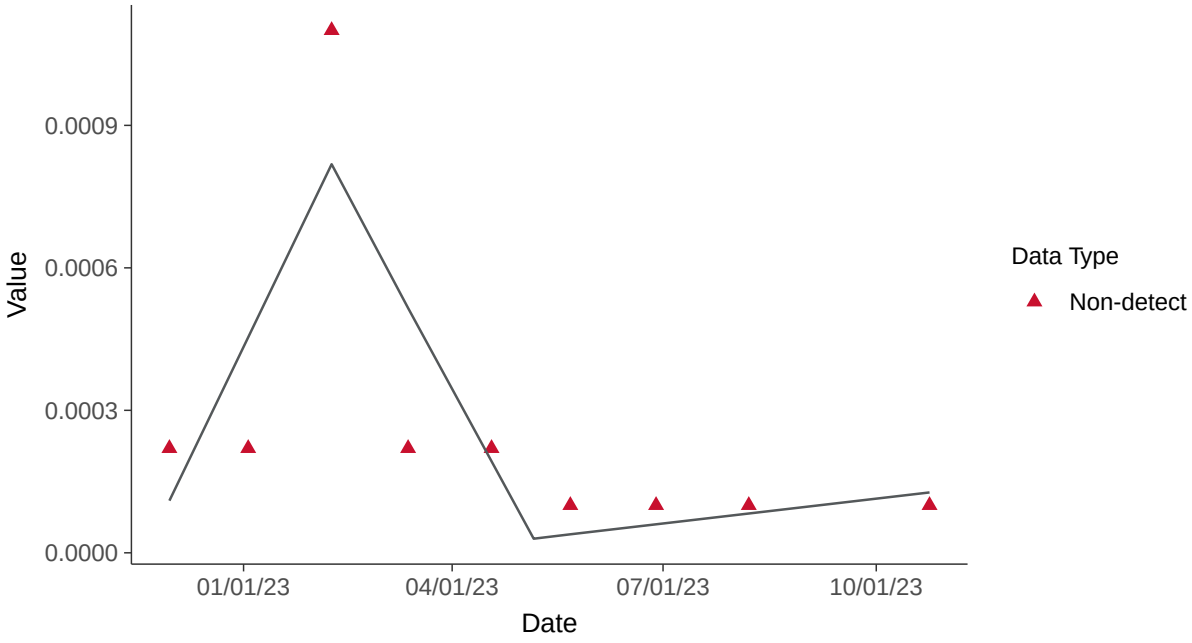
Trend Regression: Piecewise Linear-Linear

Selenium, MW-19 (mg/L)



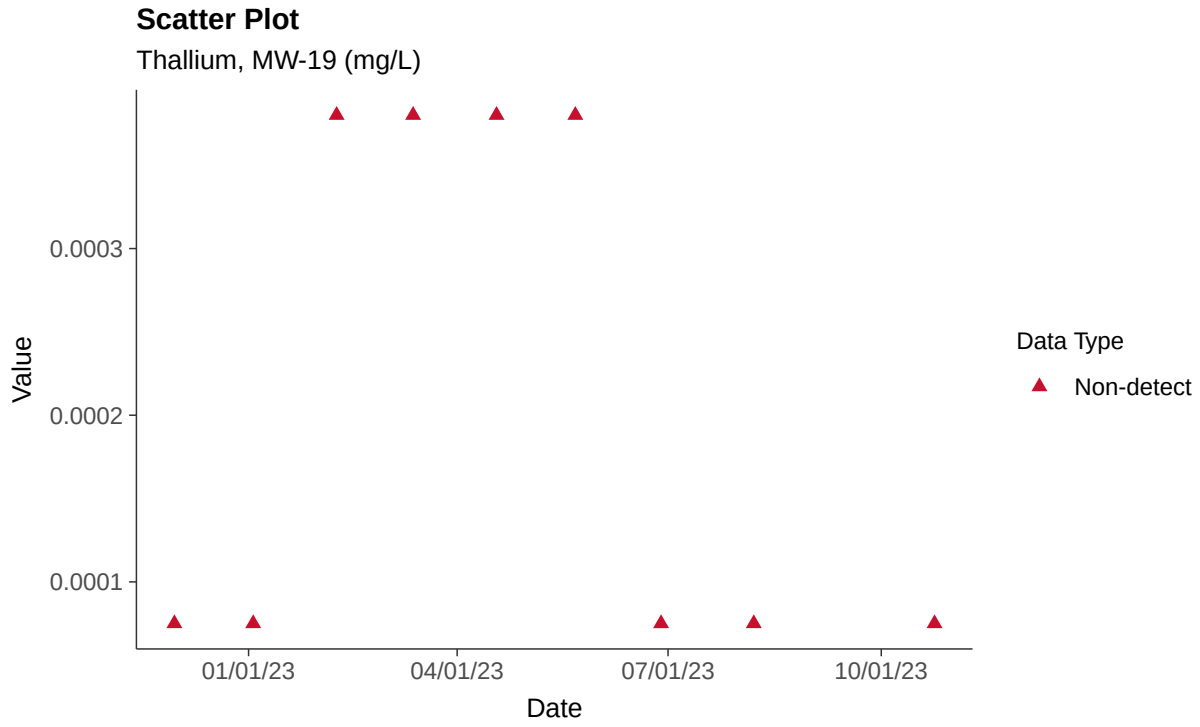
Trend Regression: Piecewise Linear-Linear-Linear

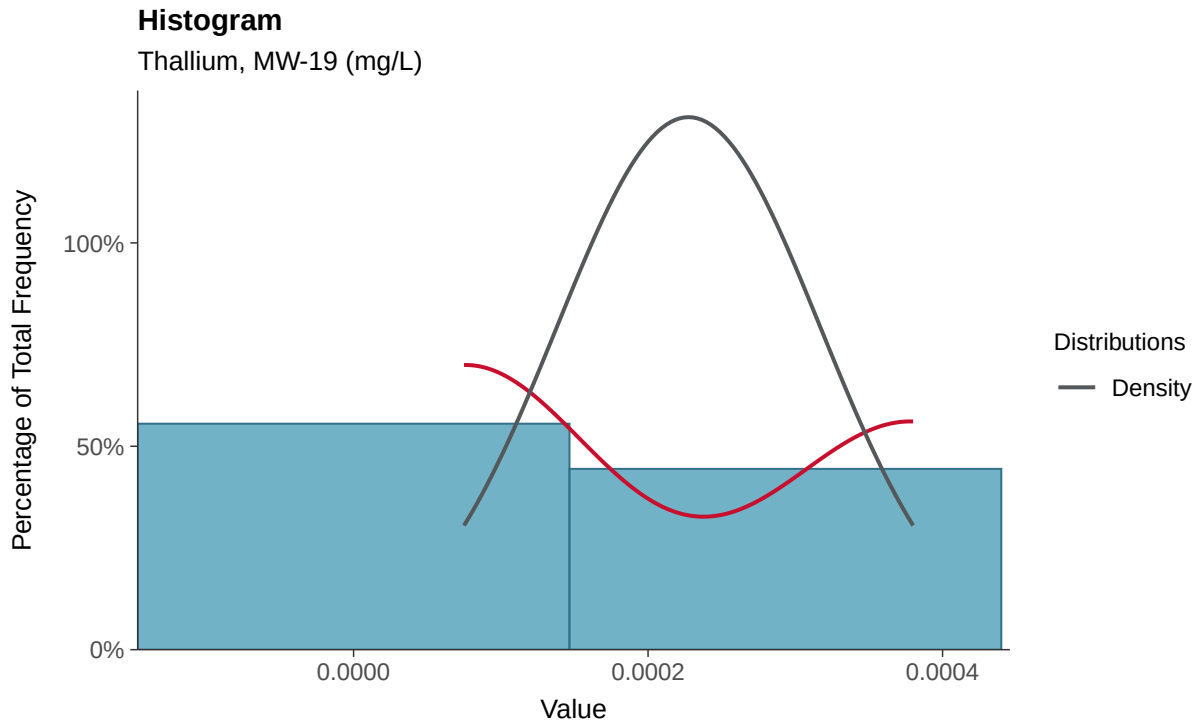
Selenium, MW-19 (mg/L)



Appendix IV: Thallium, MW-19

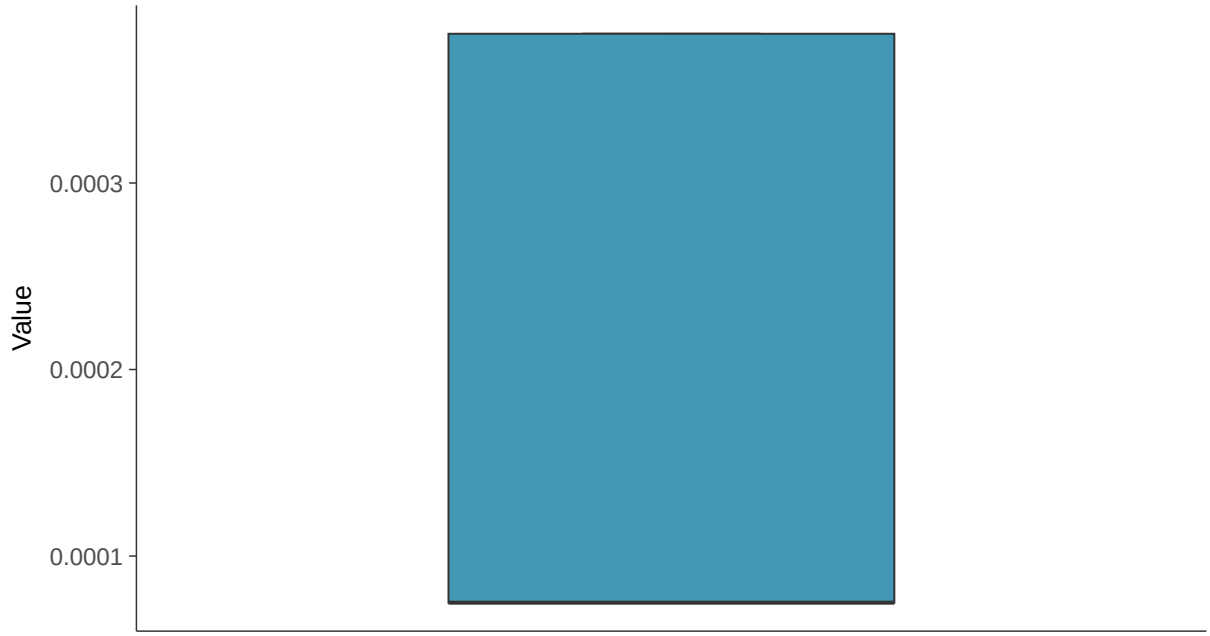
ID: 1_23_5_125





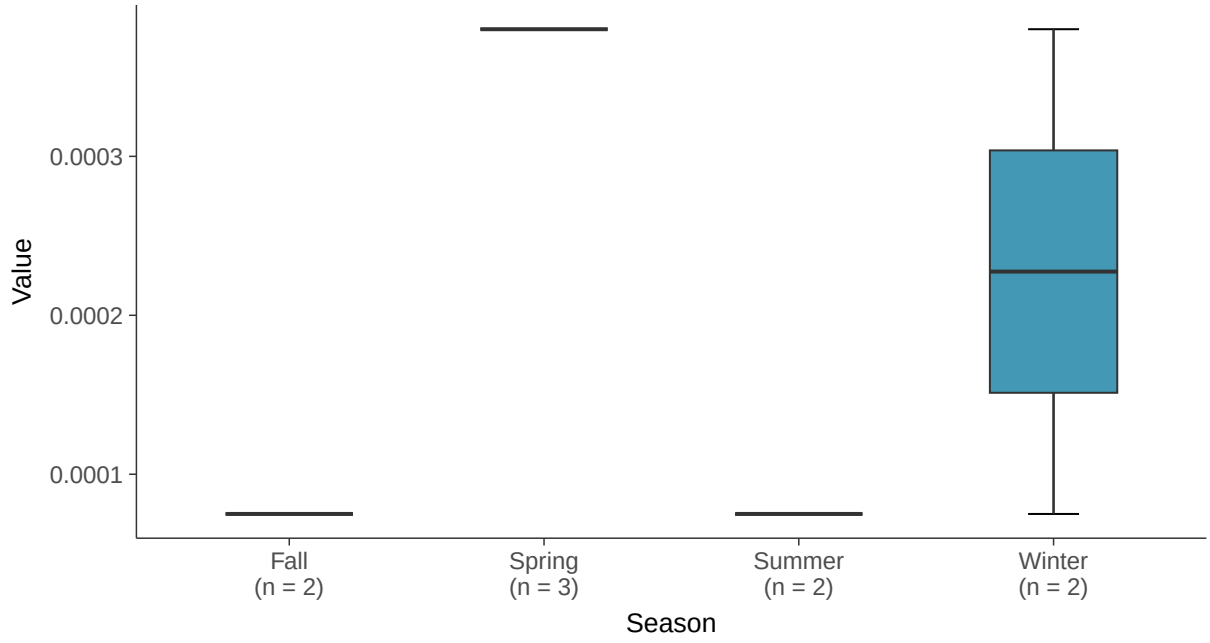
Boxplot

Thallium, MW-19 (mg/L)



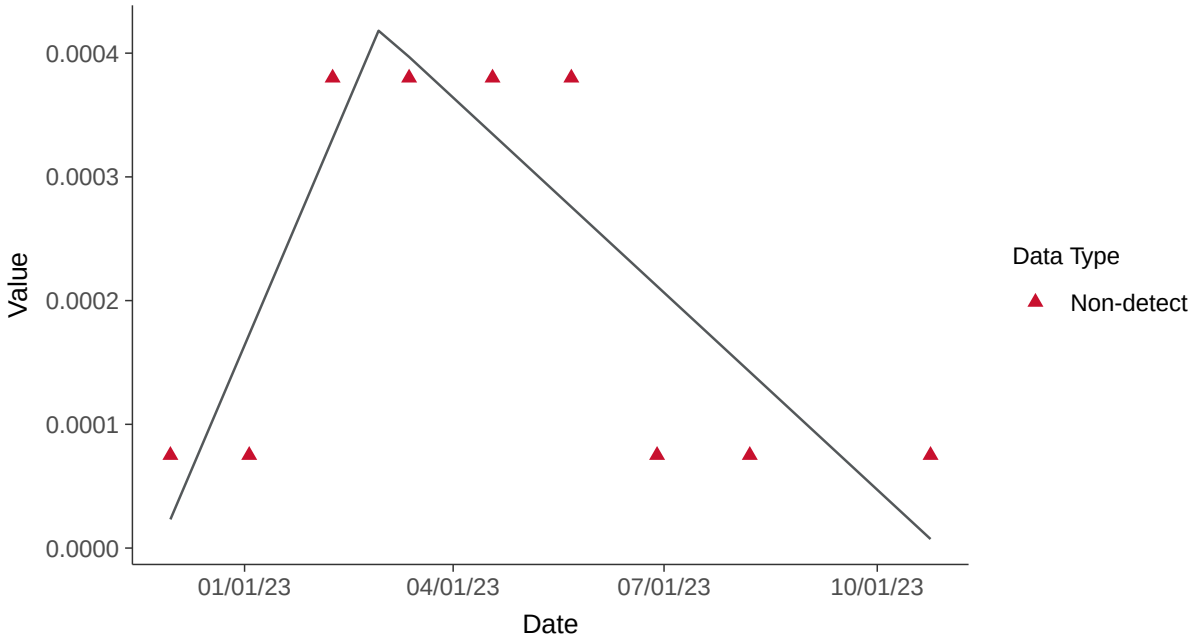
Boxplot by Season

Thallium, MW-19 (mg/L)



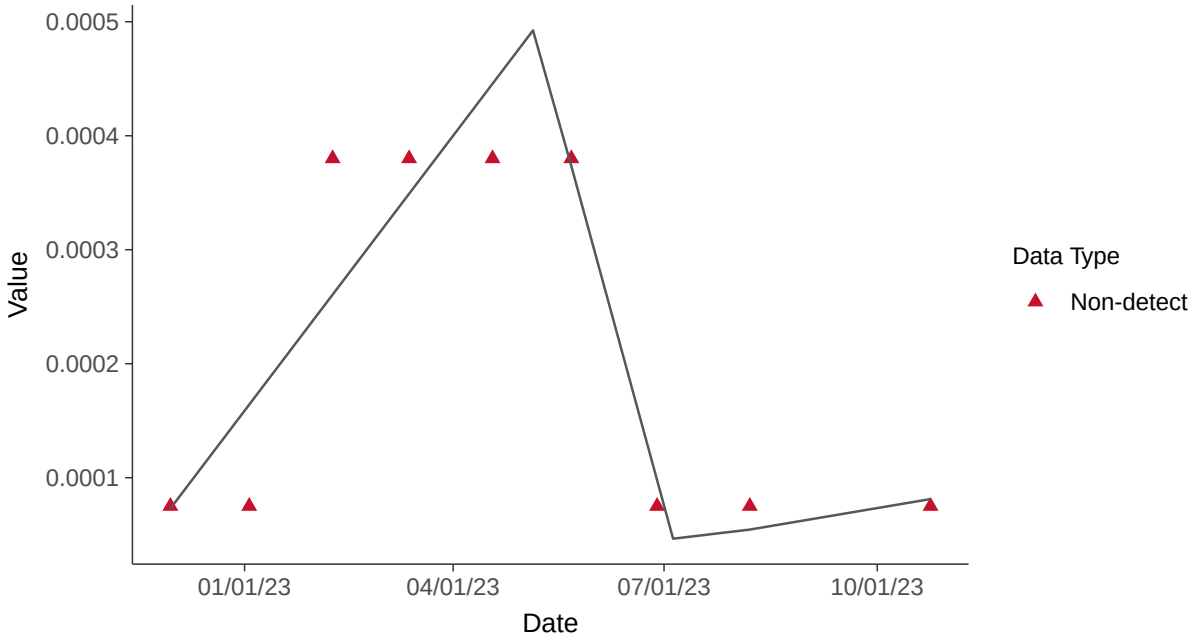
Trend Regression: Piecewise Linear-Linear

Thallium, MW-19 (mg/L)



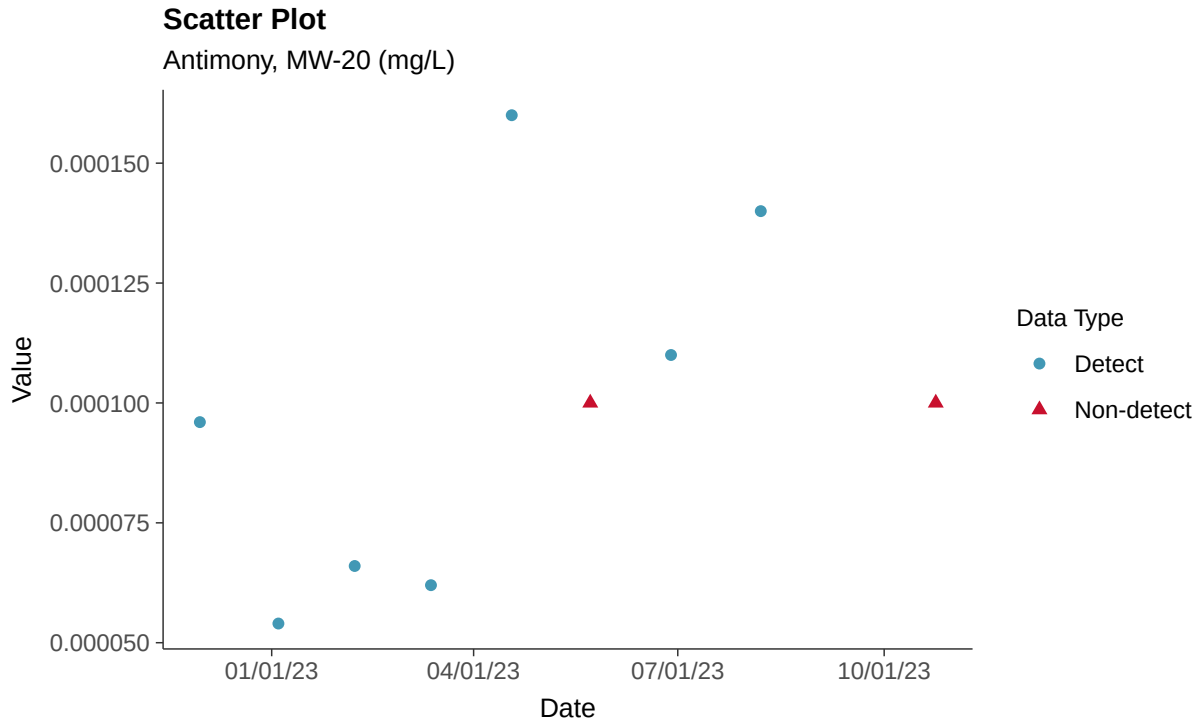
Trend Regression: Piecewise Linear-Linear-Linear

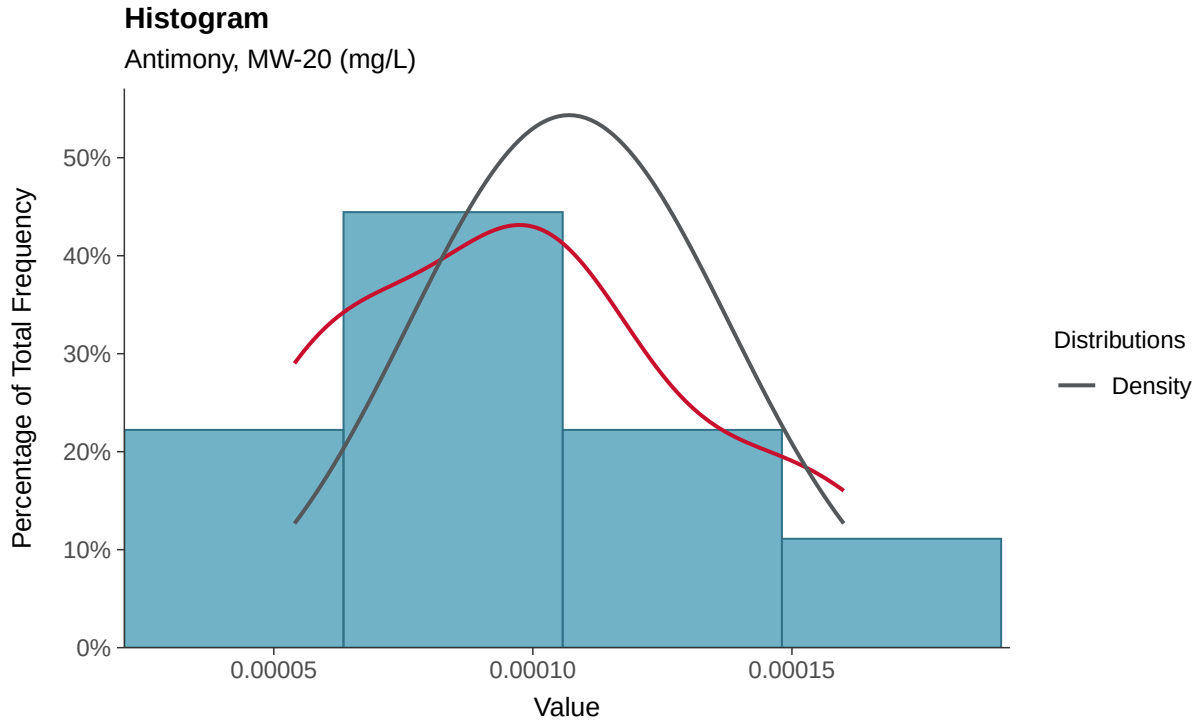
Thallium, MW-19 (mg/L)



Appendix IV: Antimony, MW-20

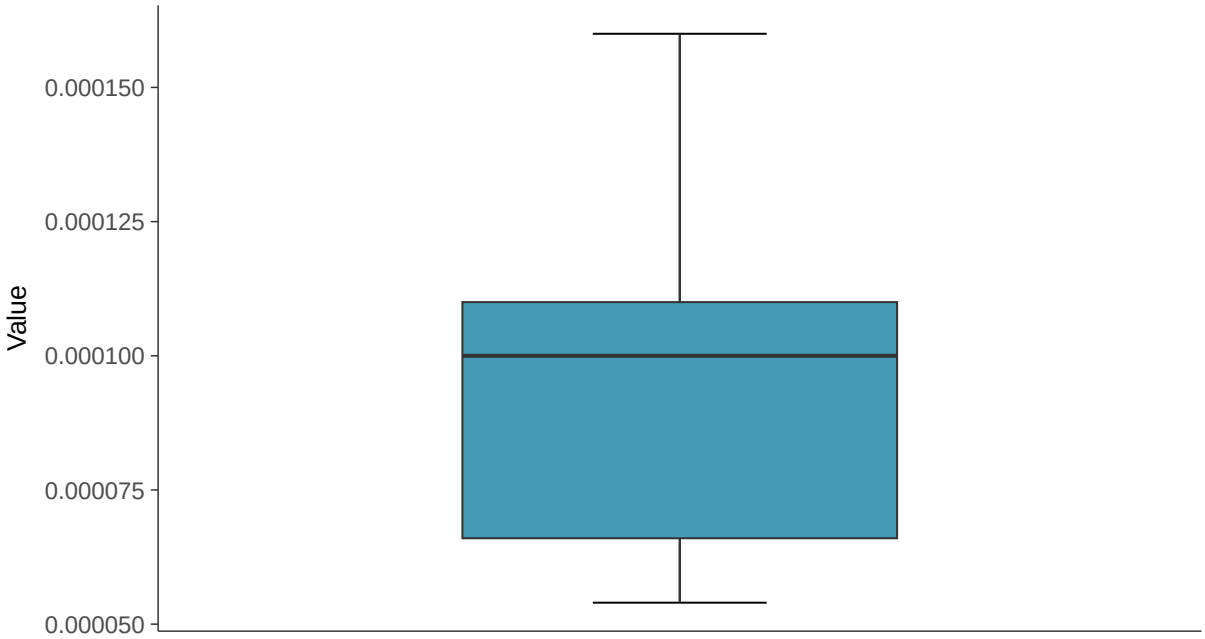
ID: 1_24_5_101





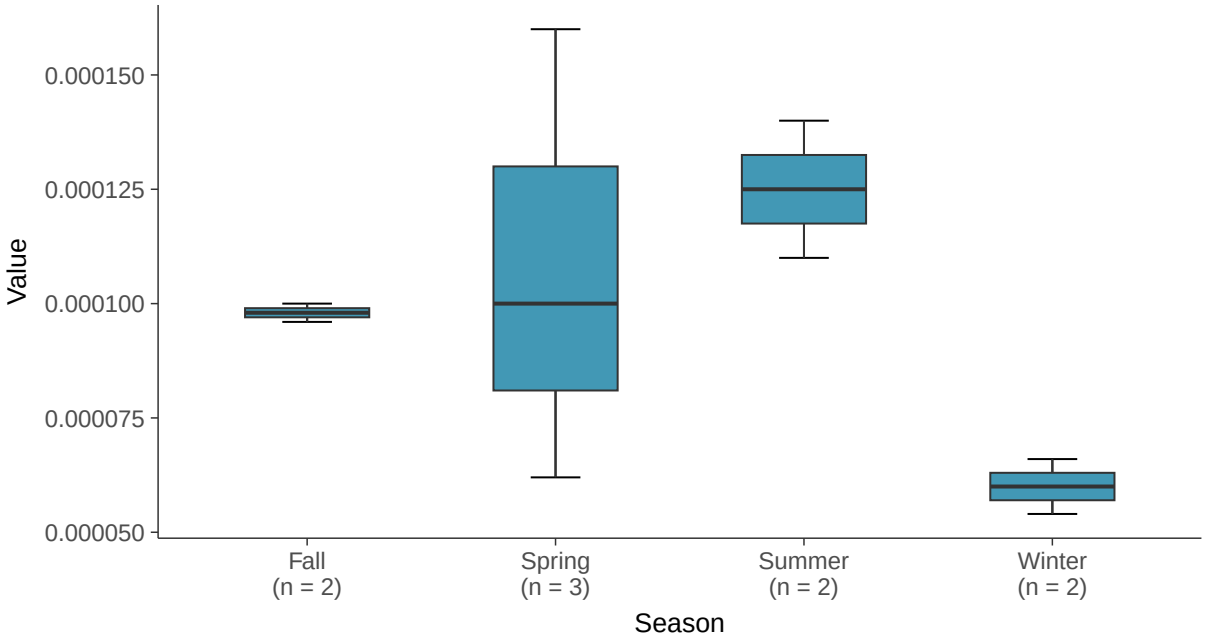
Boxplot

Antimony, MW-20 (mg/L)



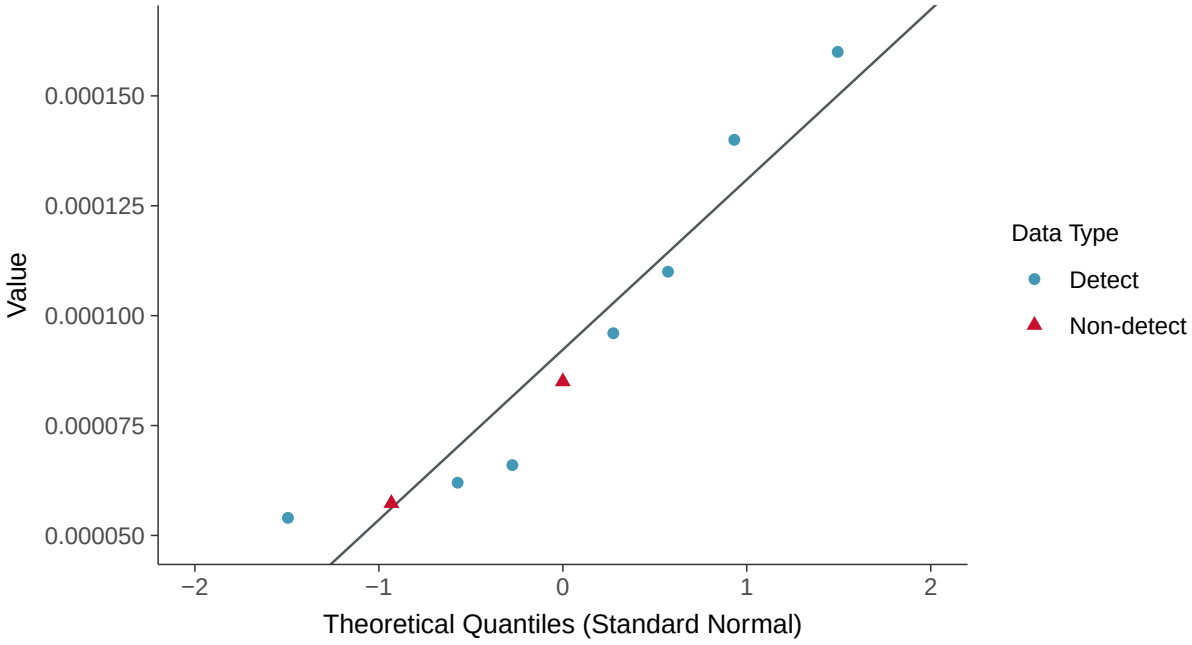
Boxplot by Season

Antimony, MW-20 (mg/L)



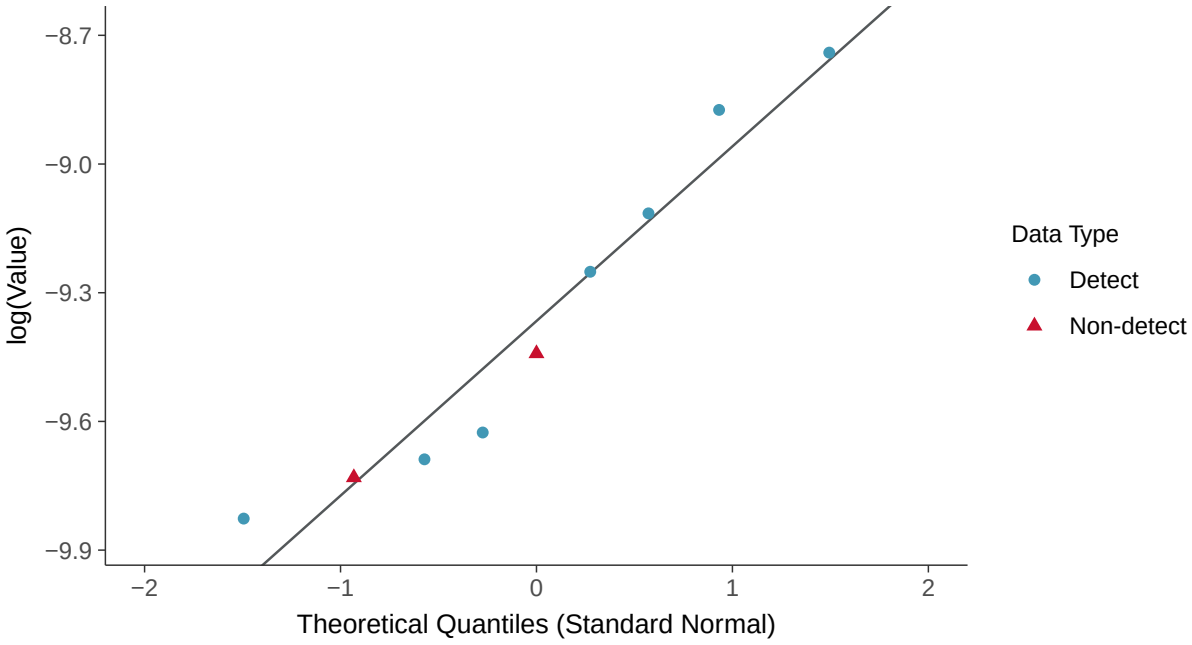
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-20 (mg/L)



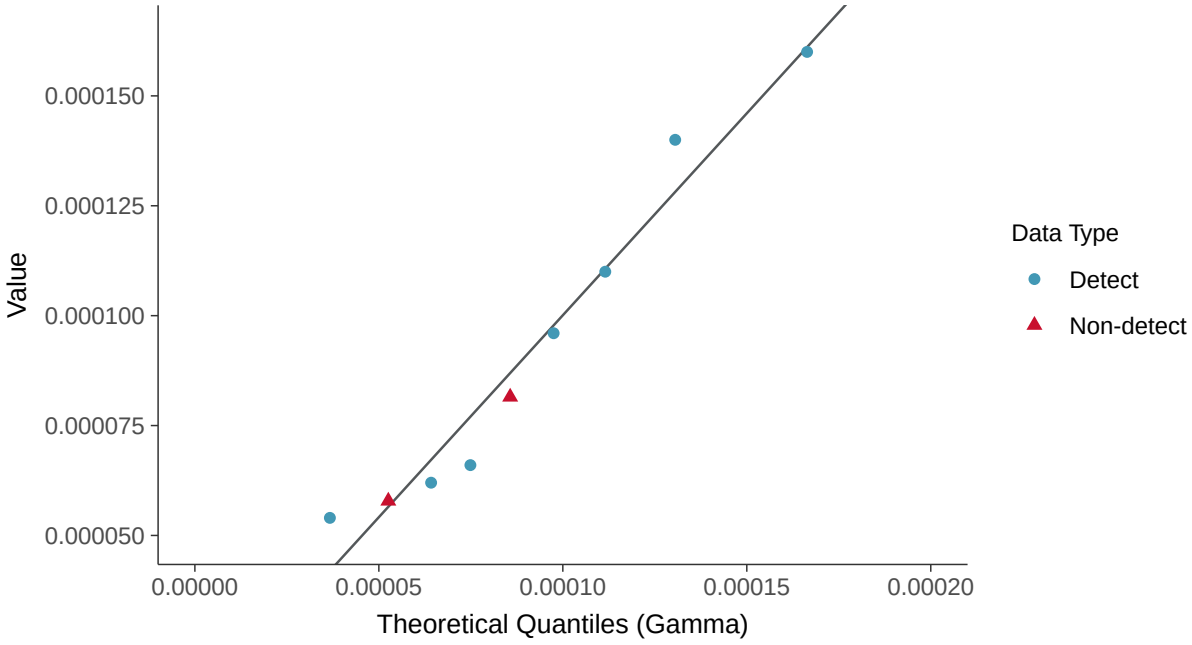
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-20 (mg/L)



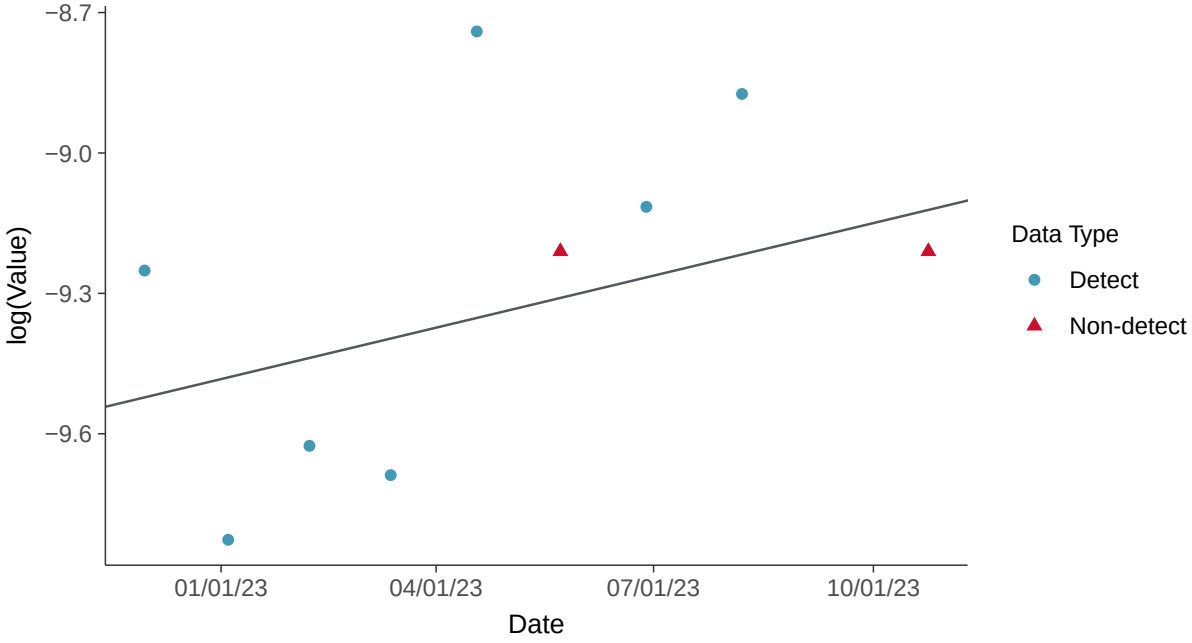
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-20 (mg/L)



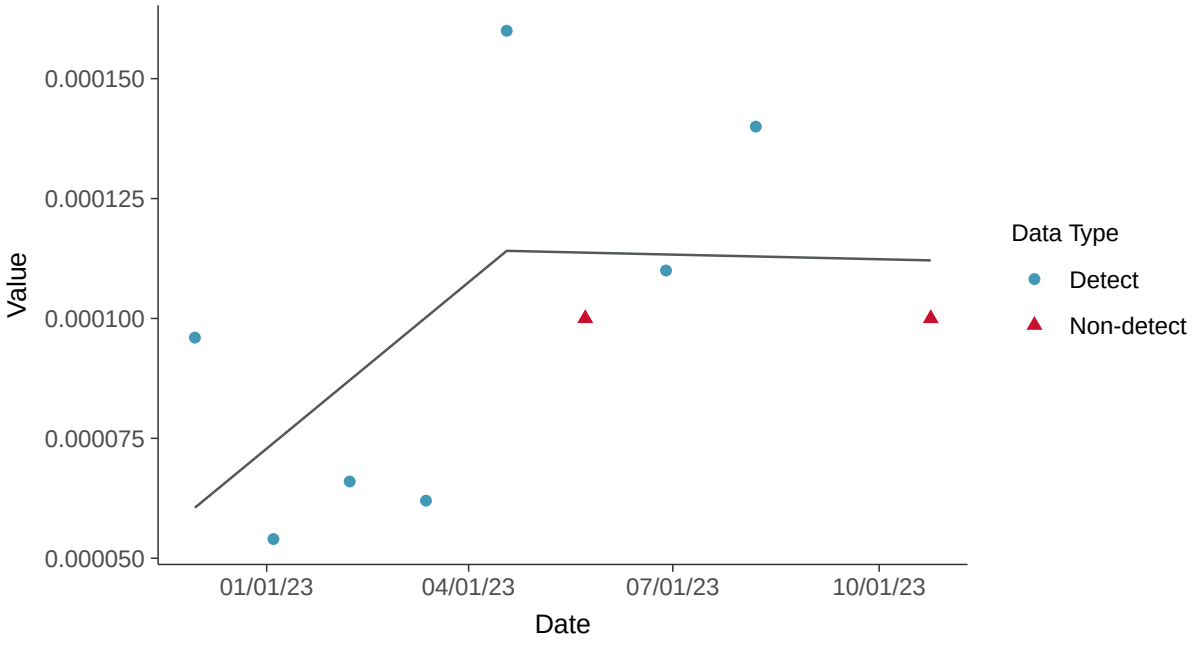
Trend Regression: Lognormal MLE

Antimony, MW-20 (mg/L)



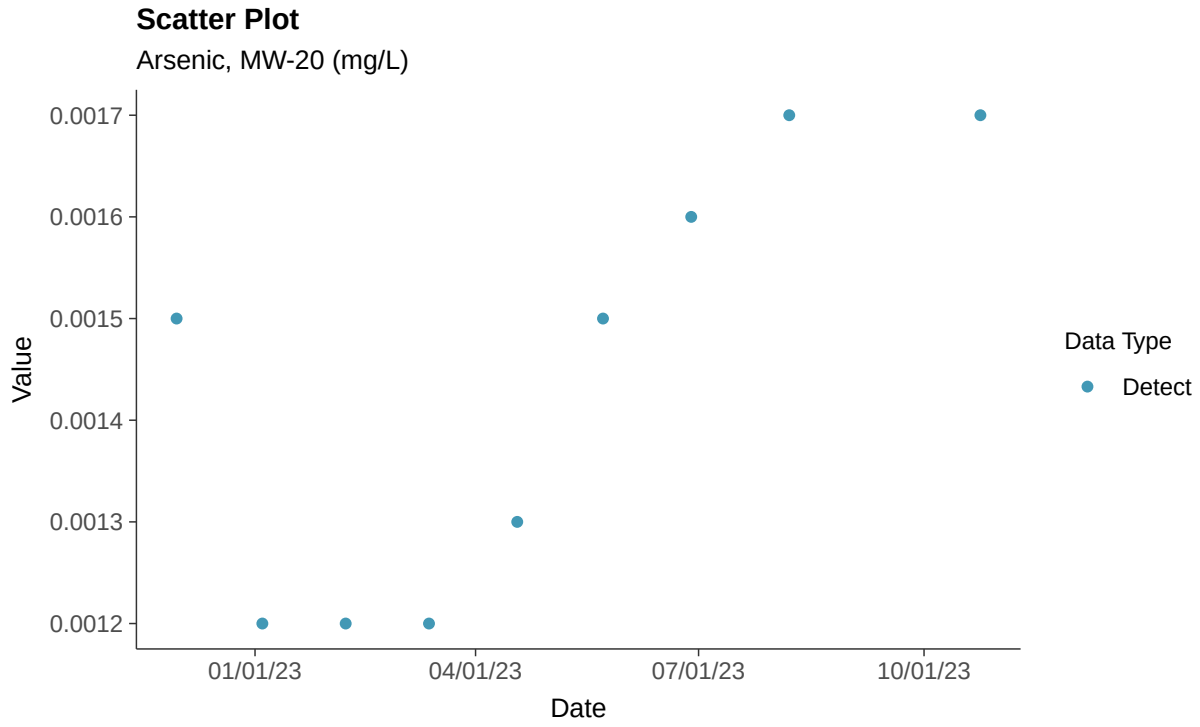
Trend Regression: Piecewise Linear-Linear

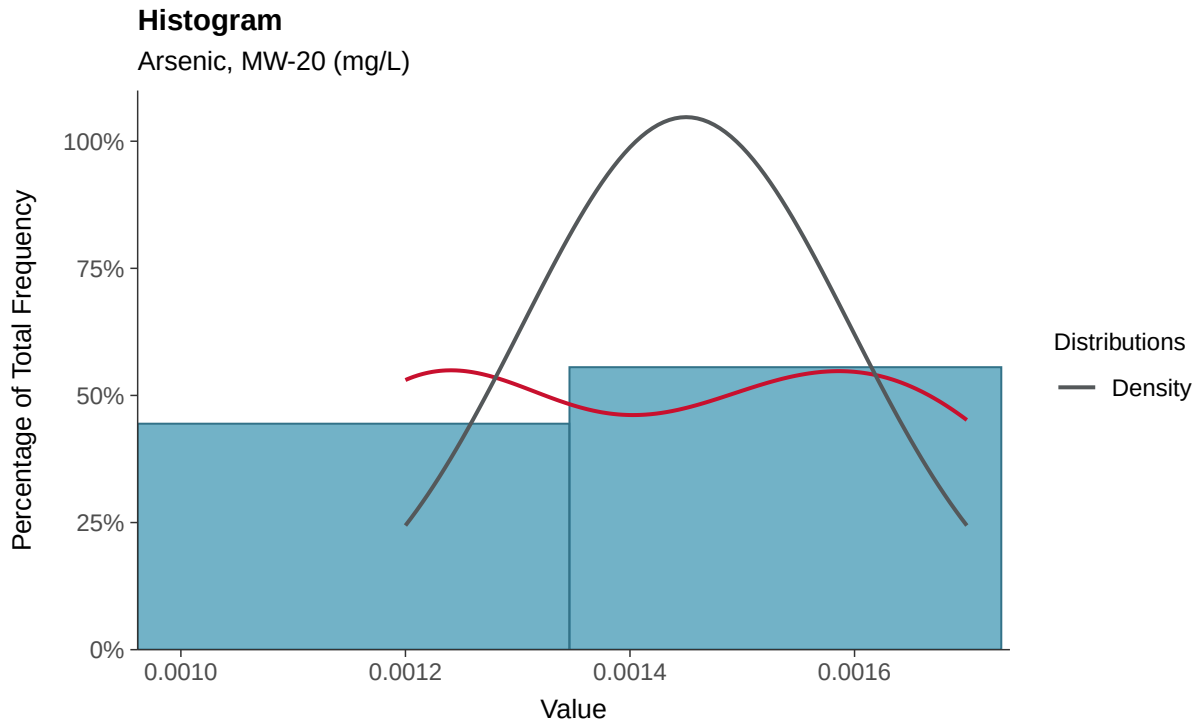
Antimony, MW-20 (mg/L)



Appendix IV: Arsenic, MW-20

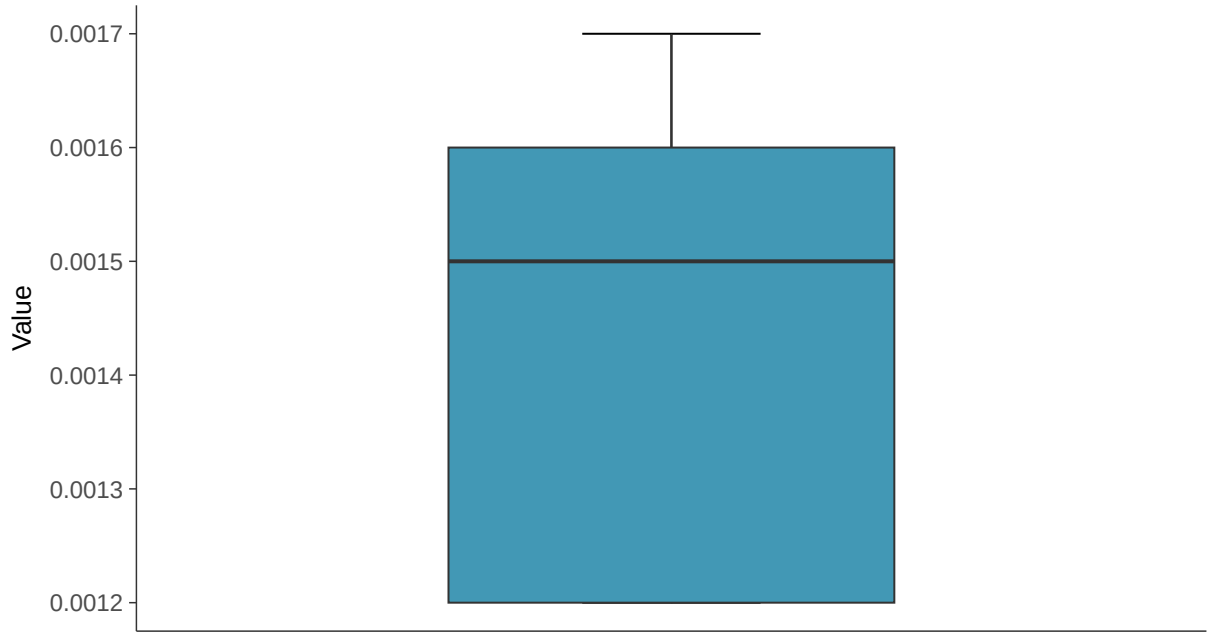
ID: 1_24_5_102





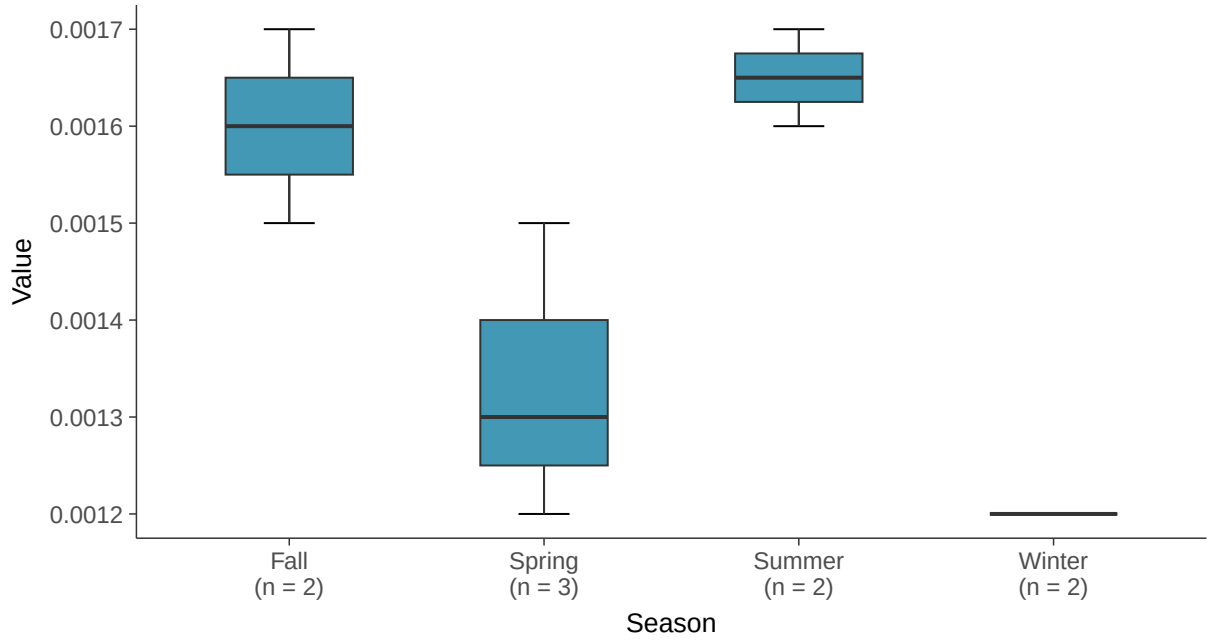
Boxplot

Arsenic, MW-20 (mg/L)



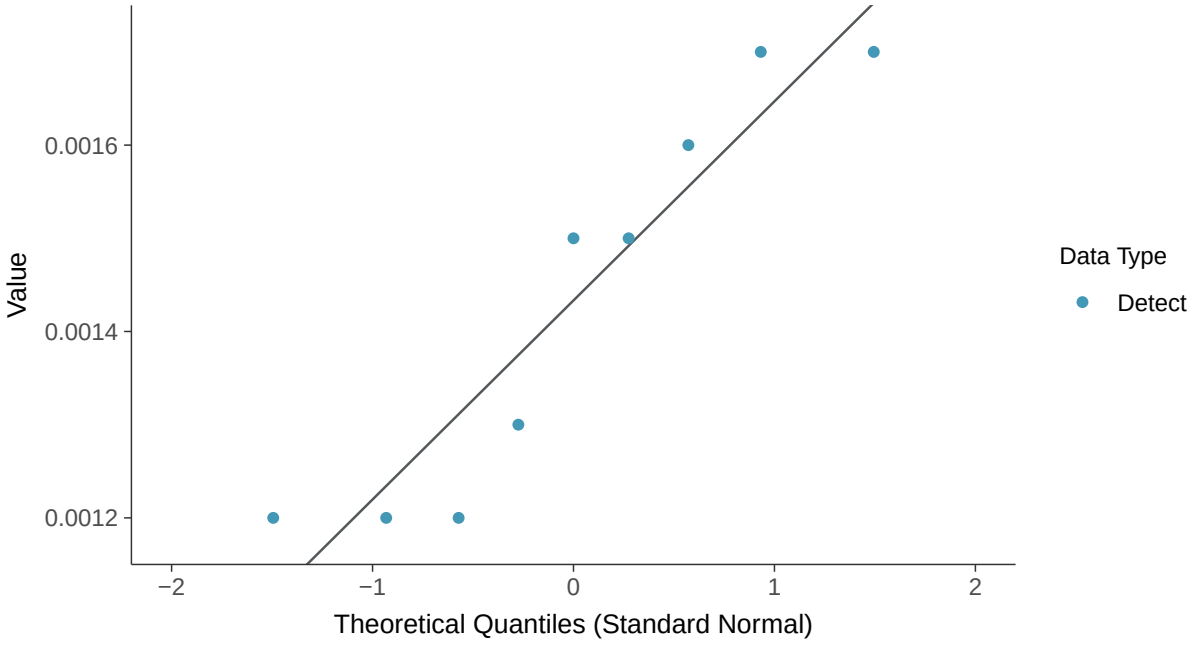
Boxplot by Season

Arsenic, MW-20 (mg/L)



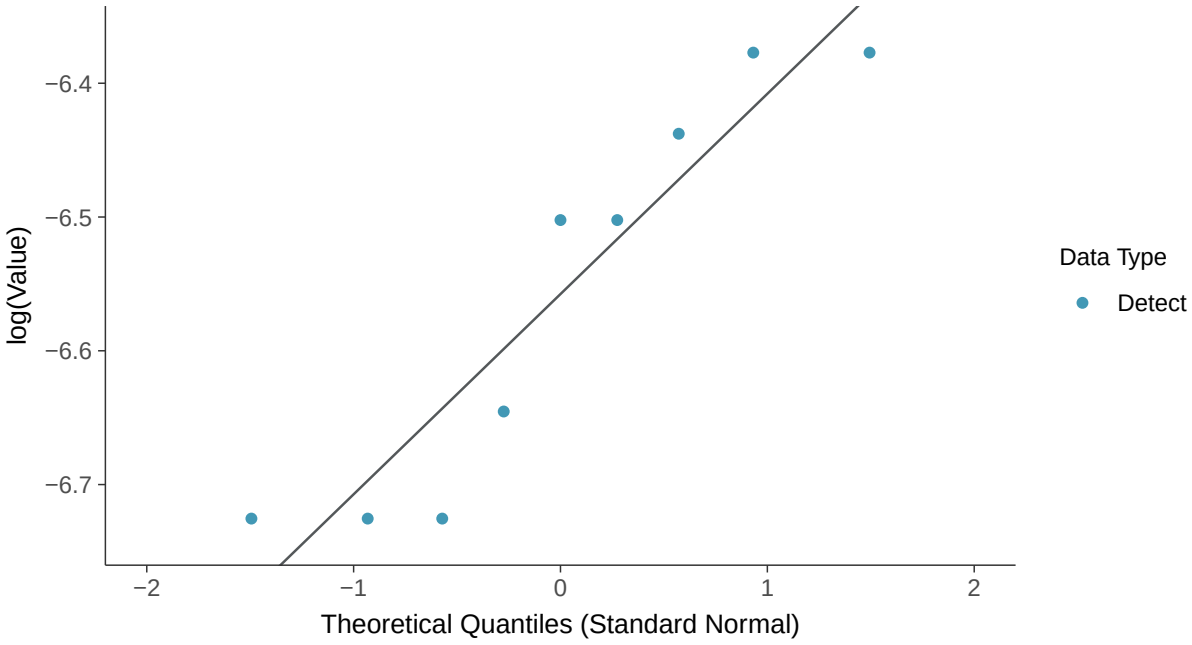
Normal Q-Q plot

Arsenic, MW-20 (mg/L)



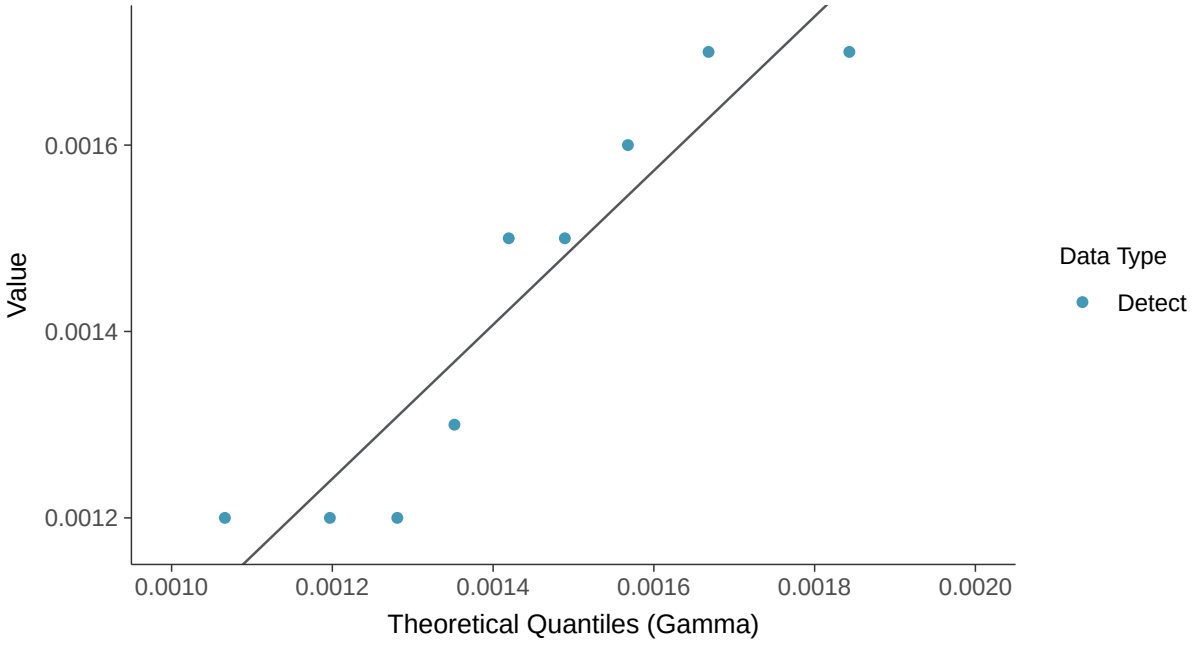
Lognormal Q-Q plot

Arsenic, MW-20 (mg/L)



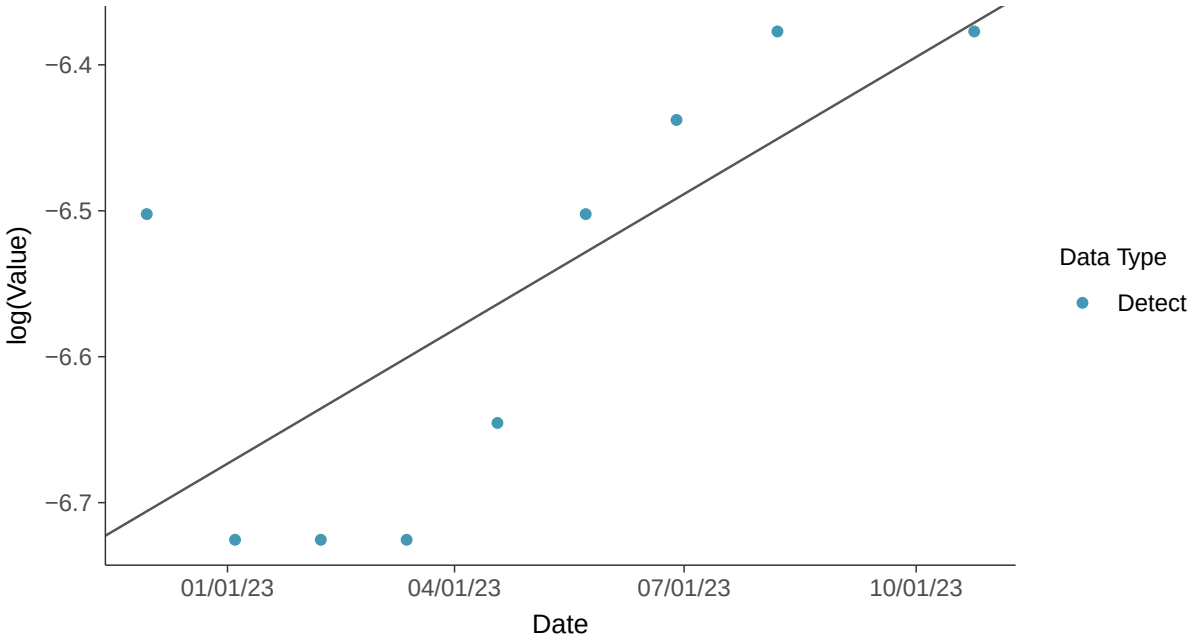
Gamma Q-Q plot

Arsenic, MW-20 (mg/L)



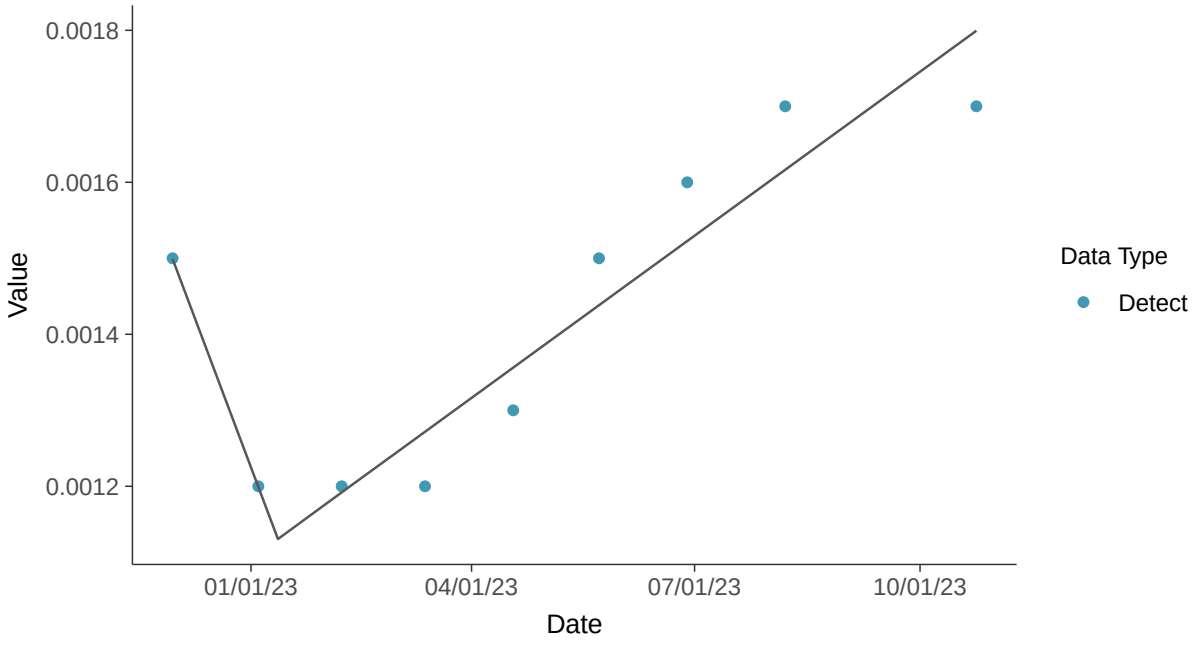
Trend Regression: Lognormal MLE

Arsenic, MW-20 (mg/L)



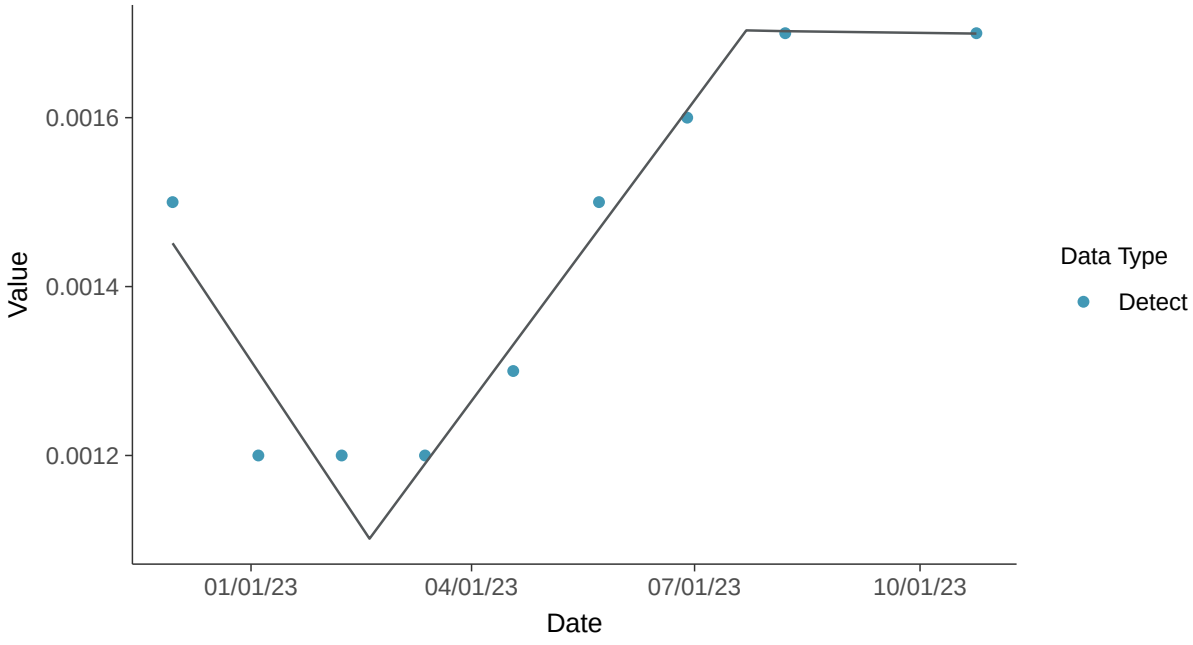
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-20 (mg/L)



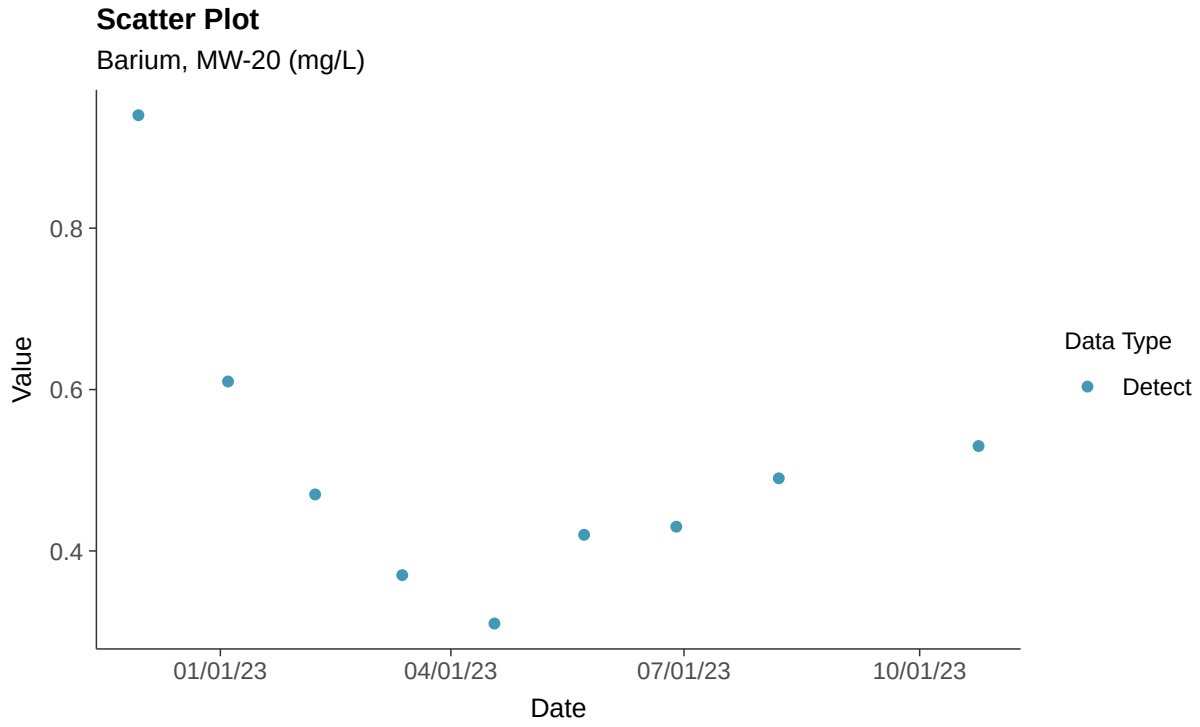
Trend Regression: Piecewise Linear-Linear-Linear

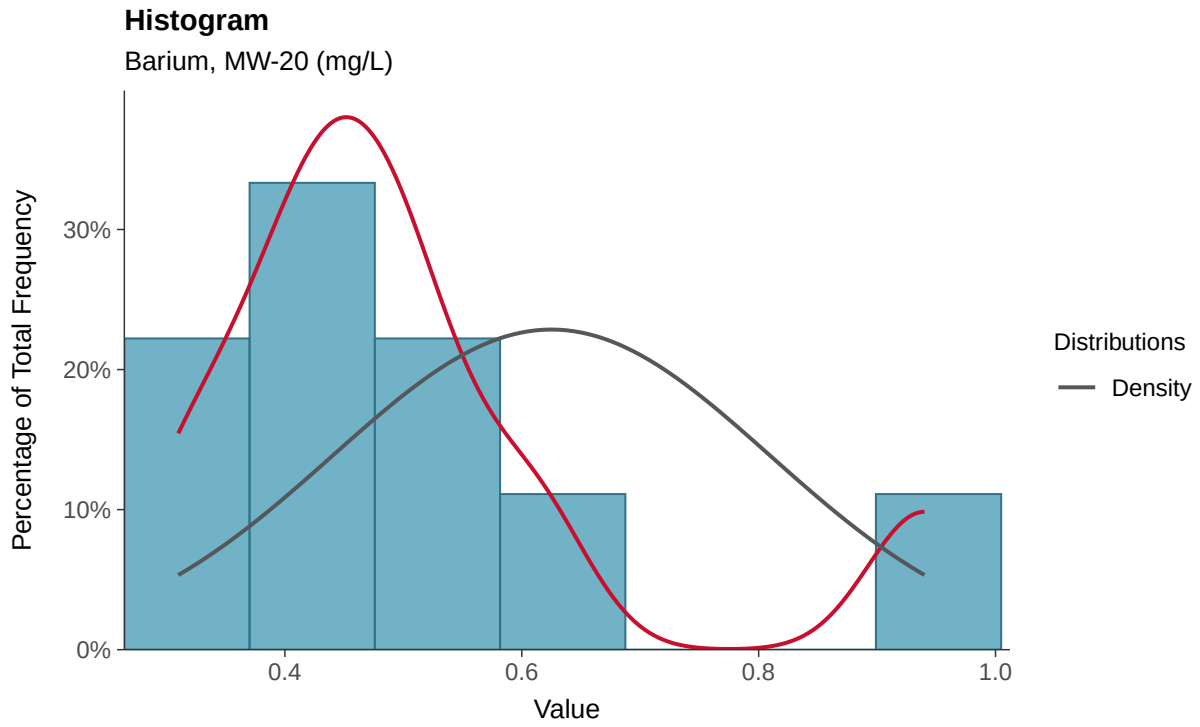
Arsenic, MW-20 (mg/L)



Appendix IV: Barium, MW-20

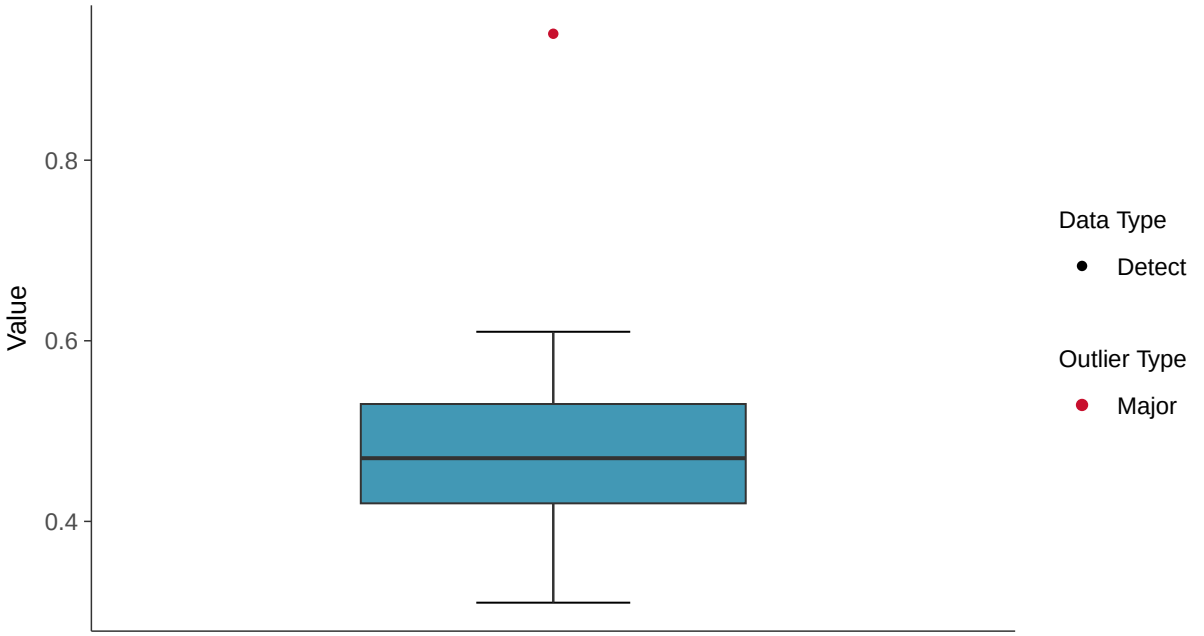
ID: 1_24_5_103





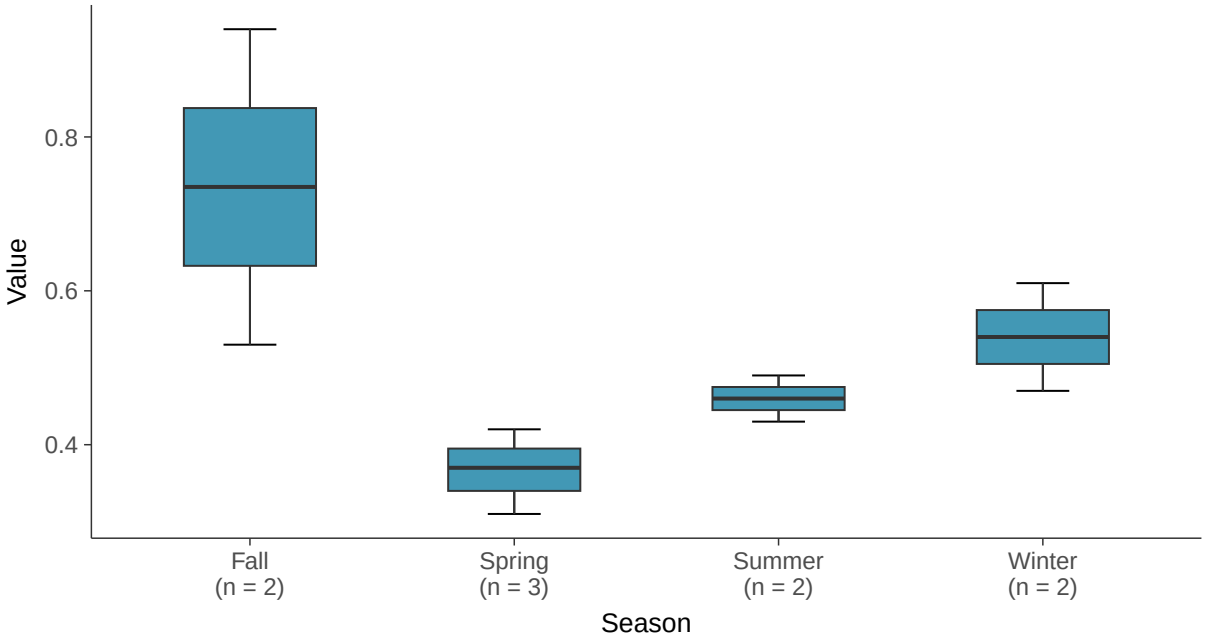
Boxplot

Barium, MW-20 (mg/L)



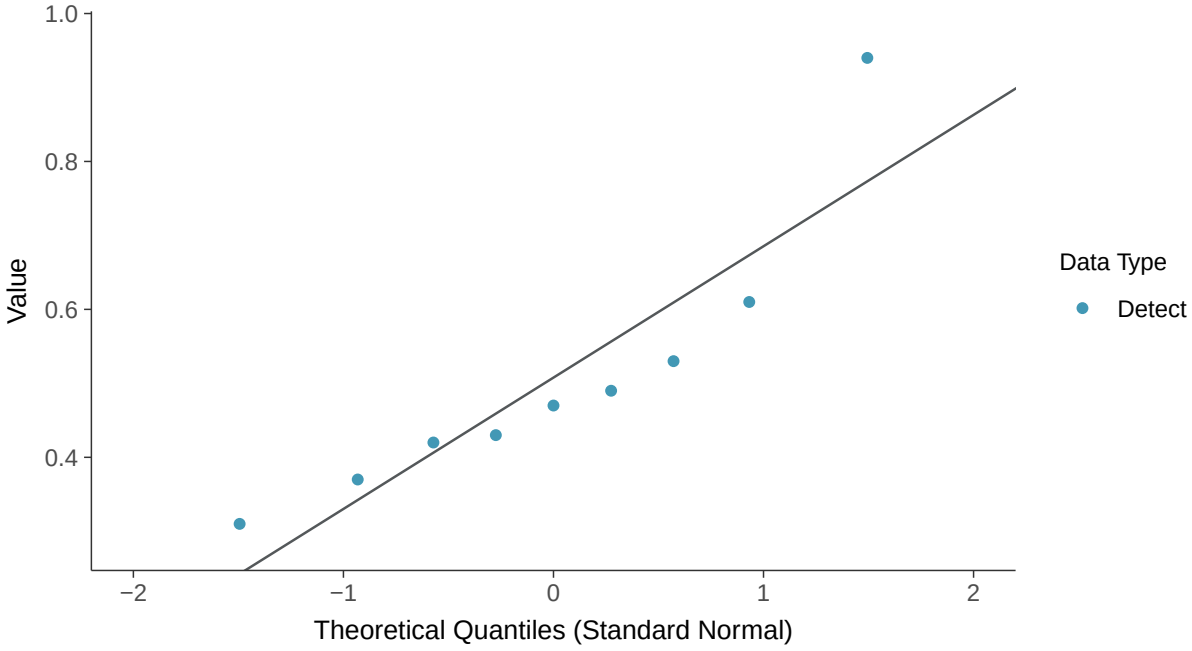
Boxplot by Season

Barium, MW-20 (mg/L)



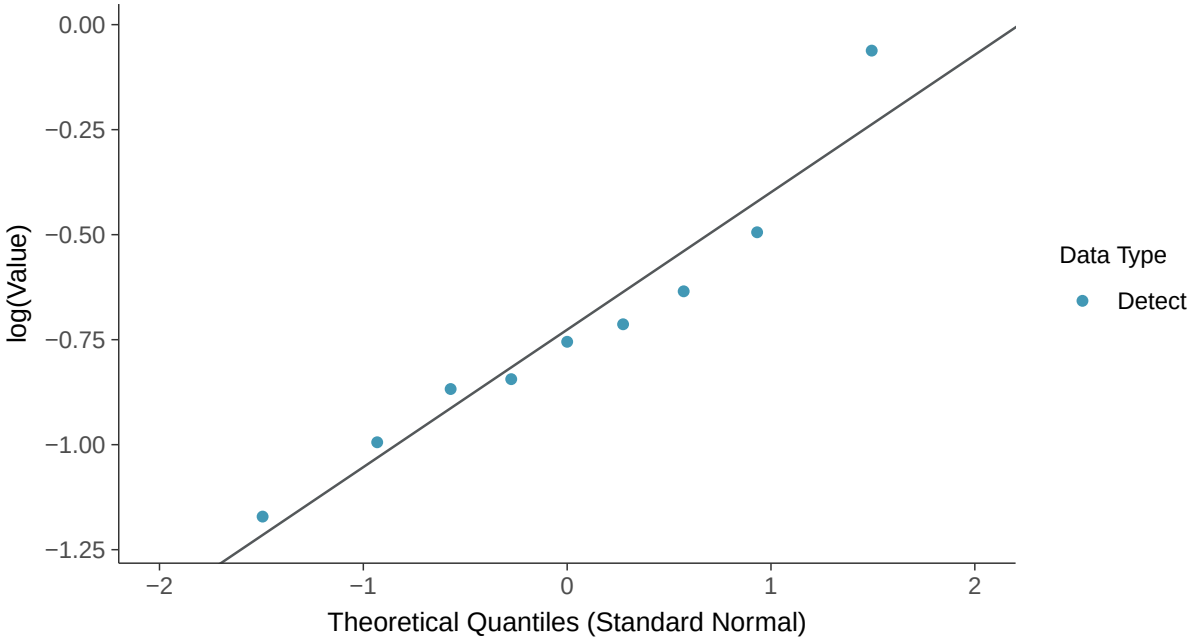
Normal Q-Q plot

Barium, MW-20 (mg/L)



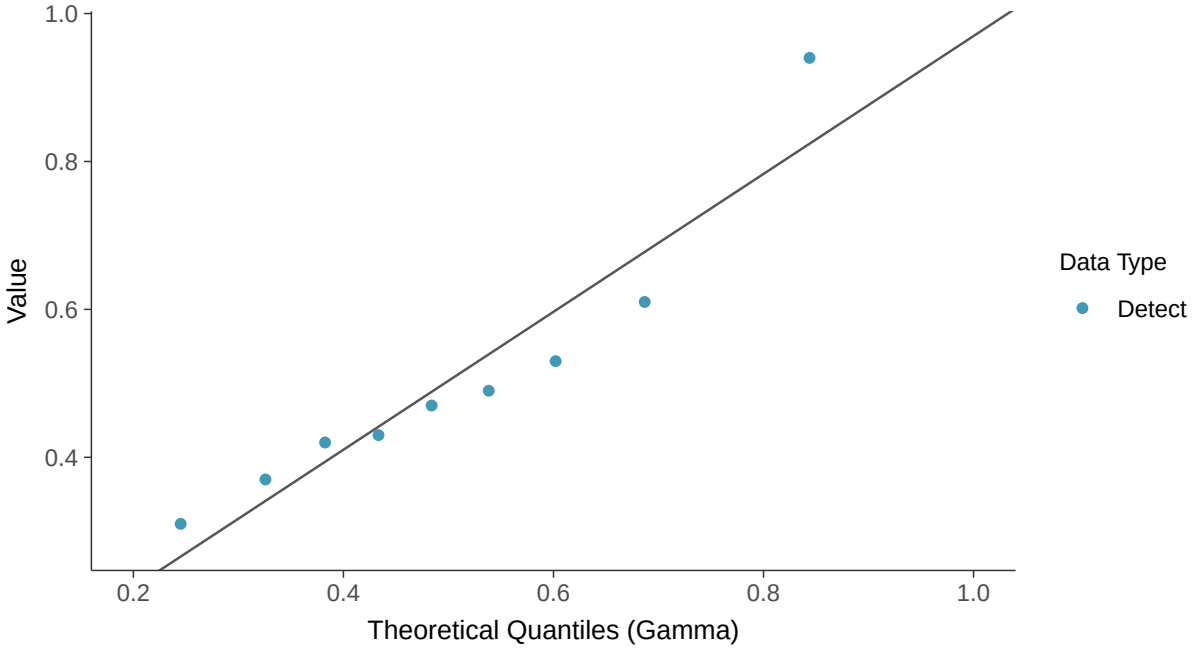
Lognormal Q-Q plot

Barium, MW-20 (mg/L)



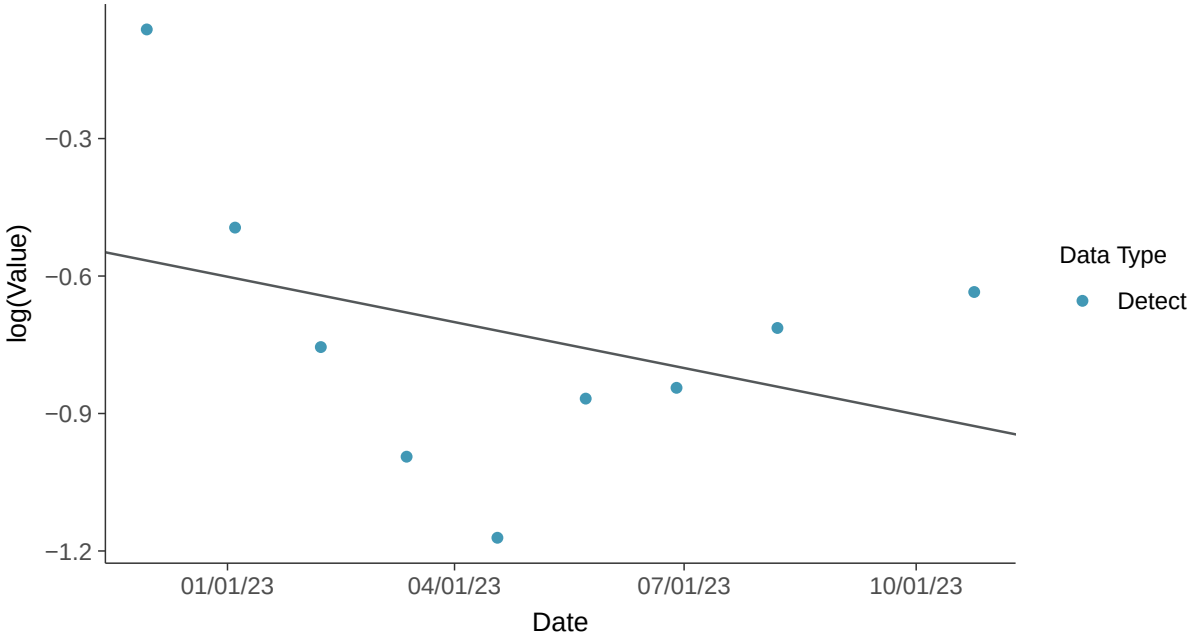
Gamma Q-Q plot

Barium, MW-20 (mg/L)



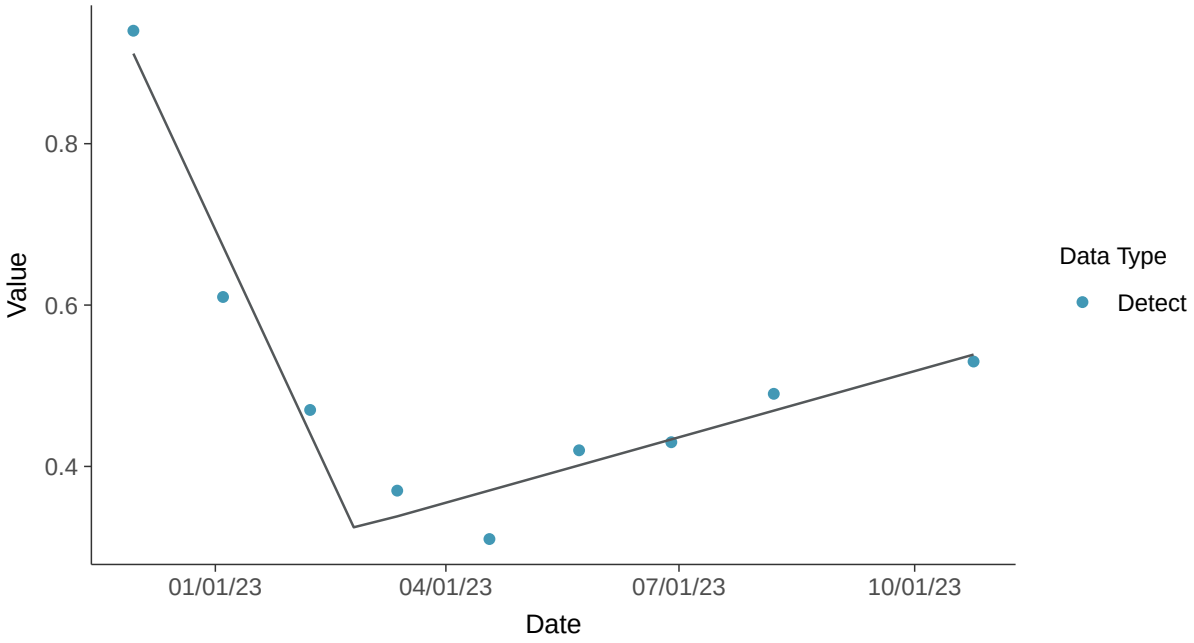
Trend Regression: Lognormal MLE

Barium, MW-20 (mg/L)



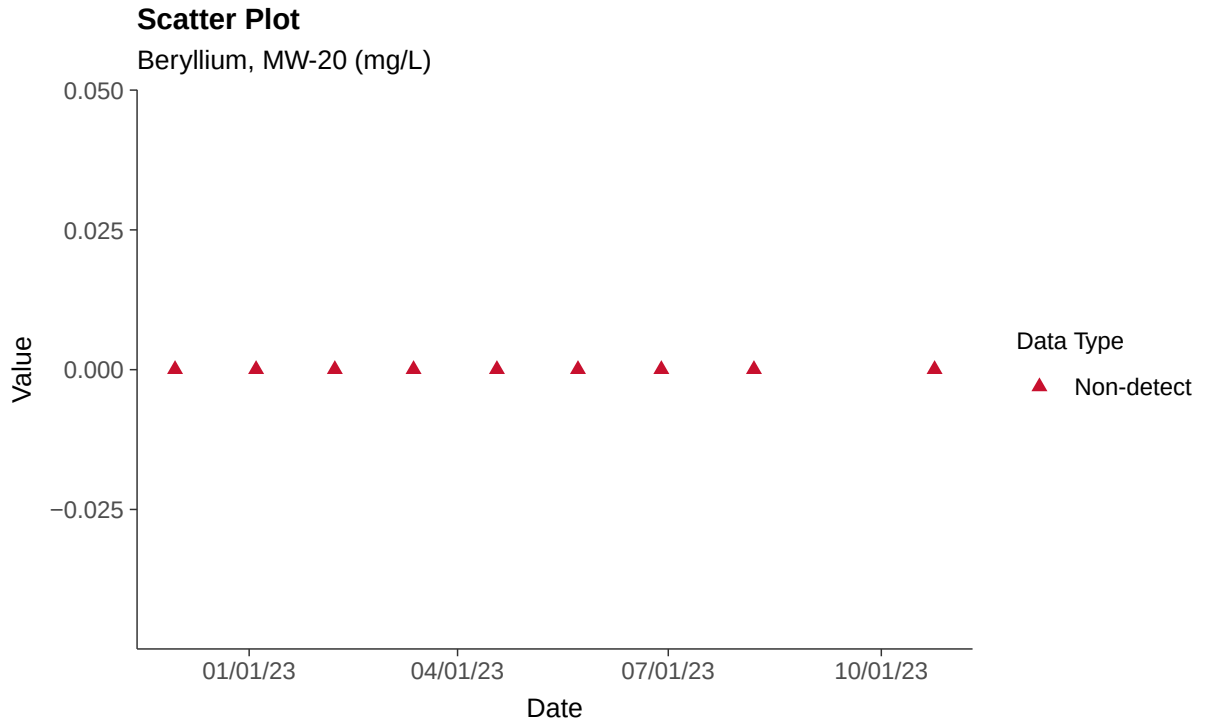
Trend Regression: Piecewise Linear-Linear

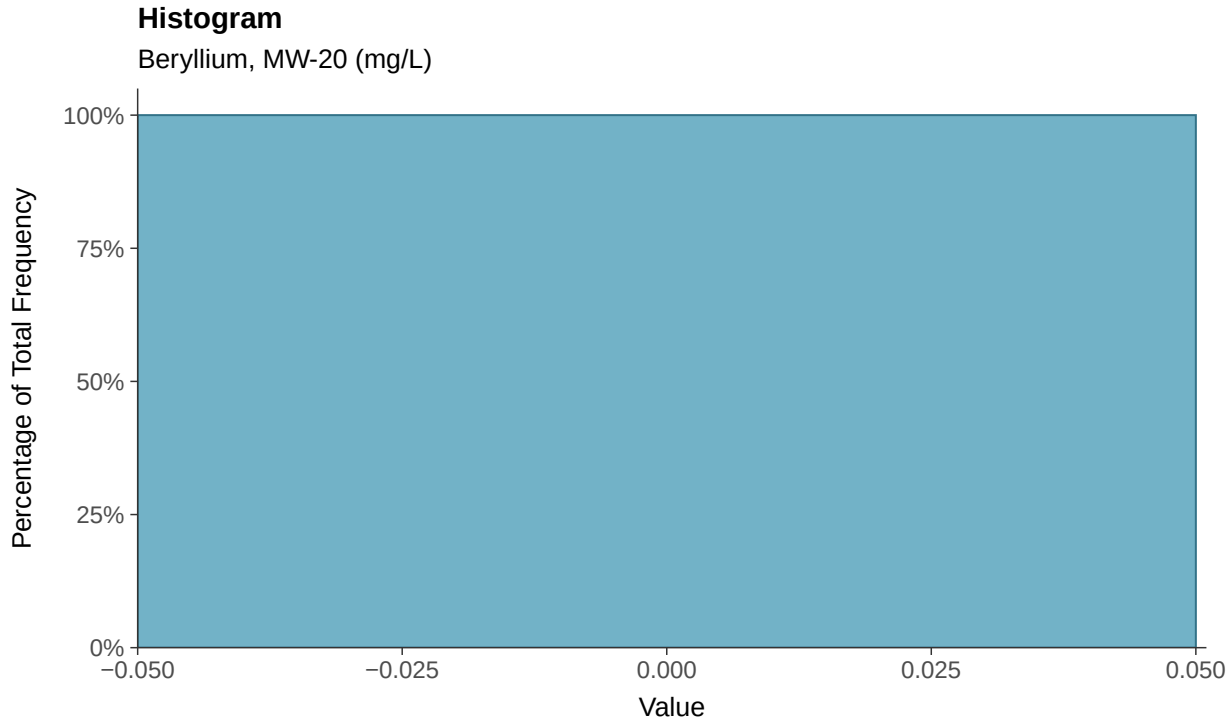
Barium, MW-20 (mg/L)



Appendix IV: Beryllium, MW-20

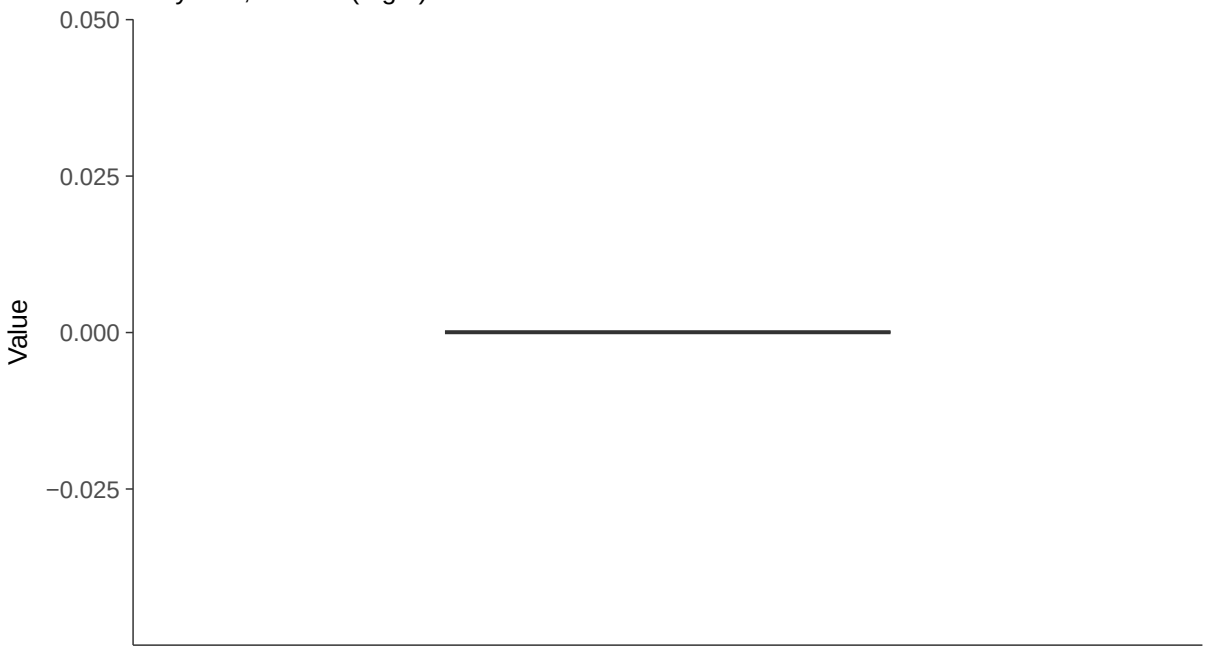
ID: 1_24_5_104





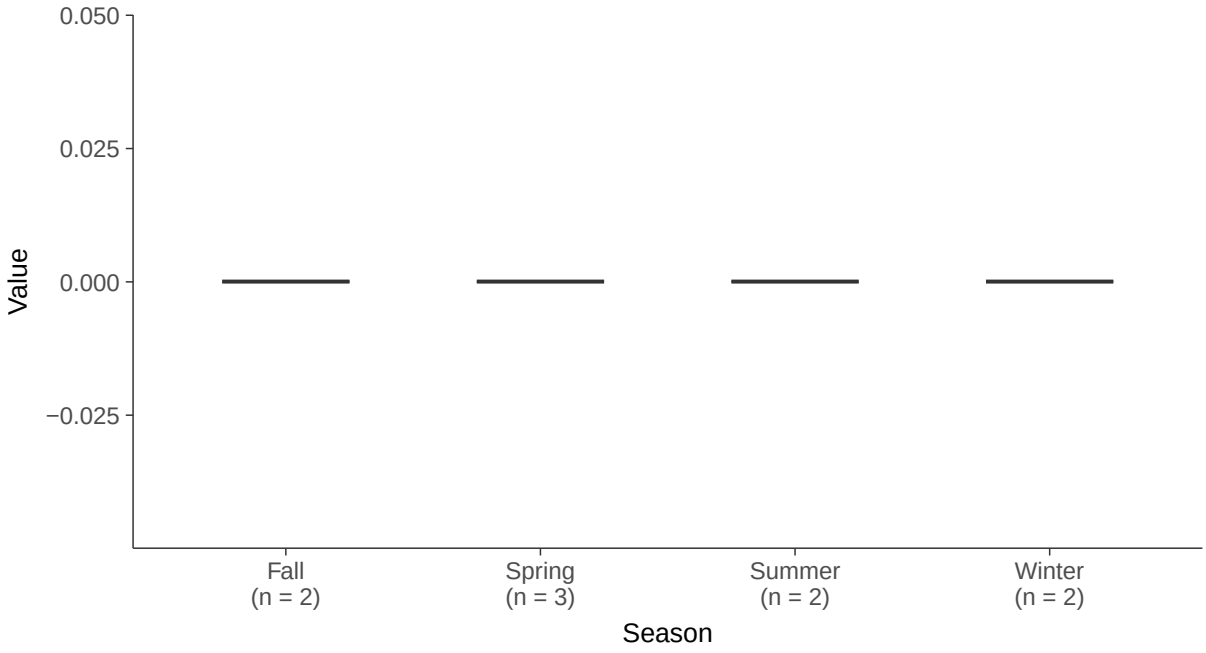
Boxplot

Beryllium, MW-20 (mg/L)



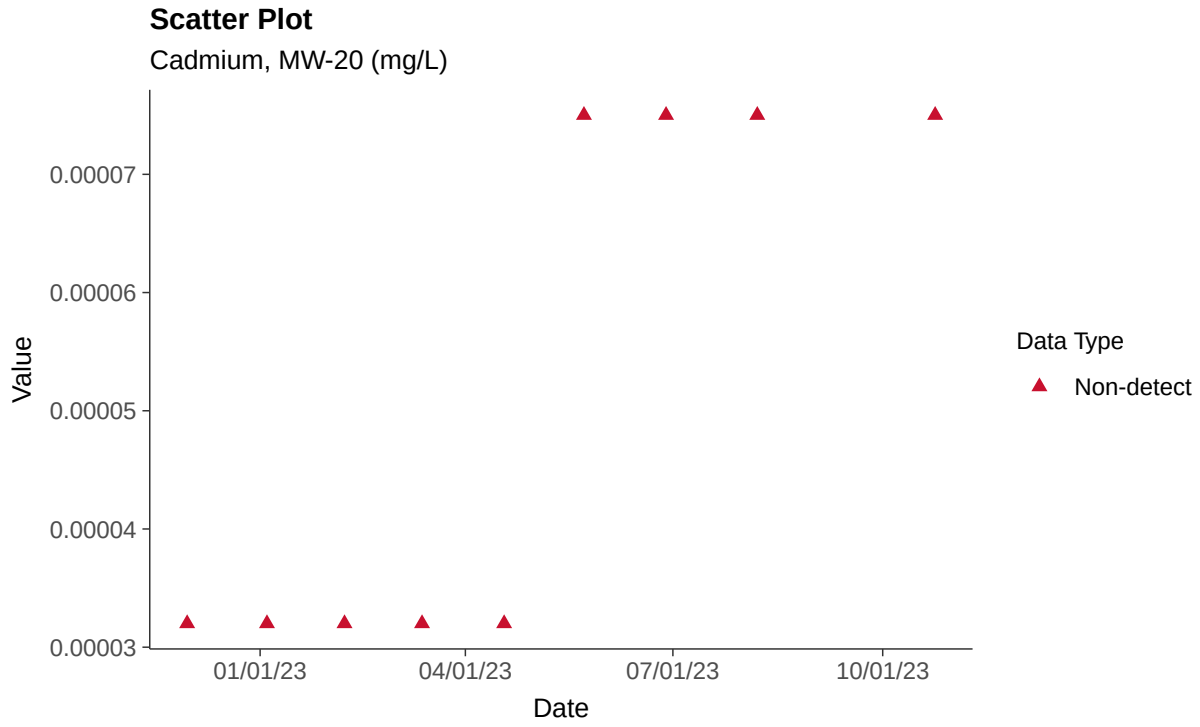
Boxplot by Season

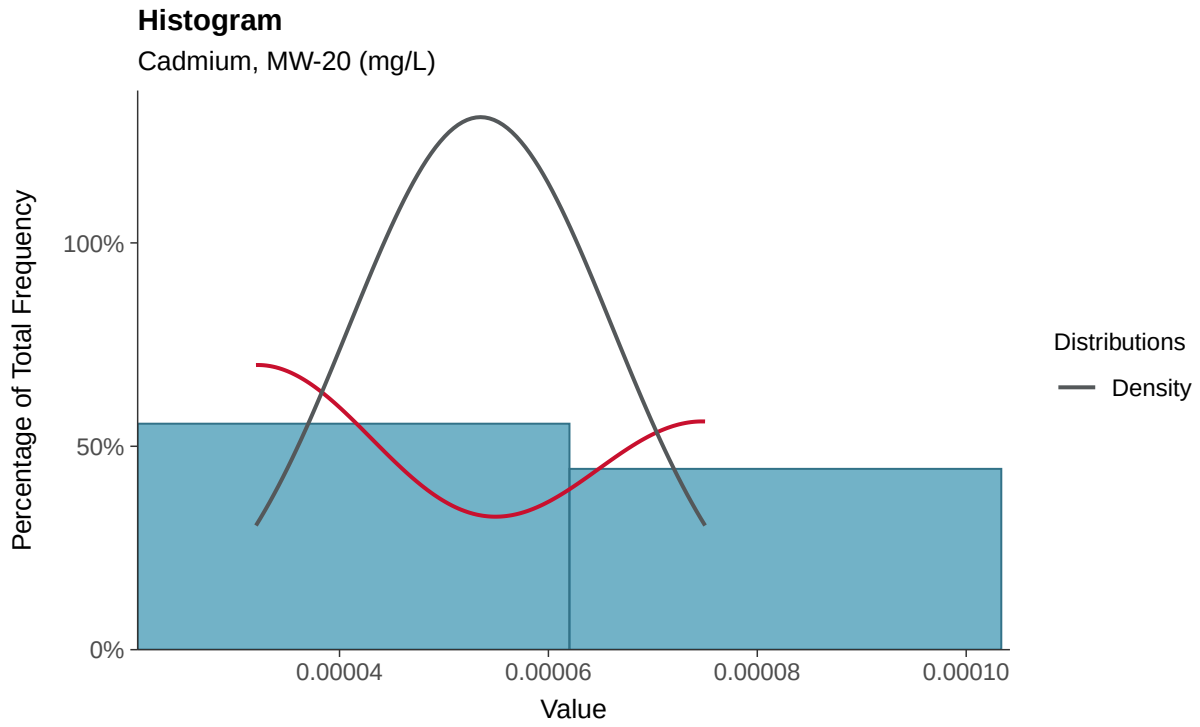
Beryllium, MW-20 (mg/L)



Appendix IV: Cadmium, MW-20

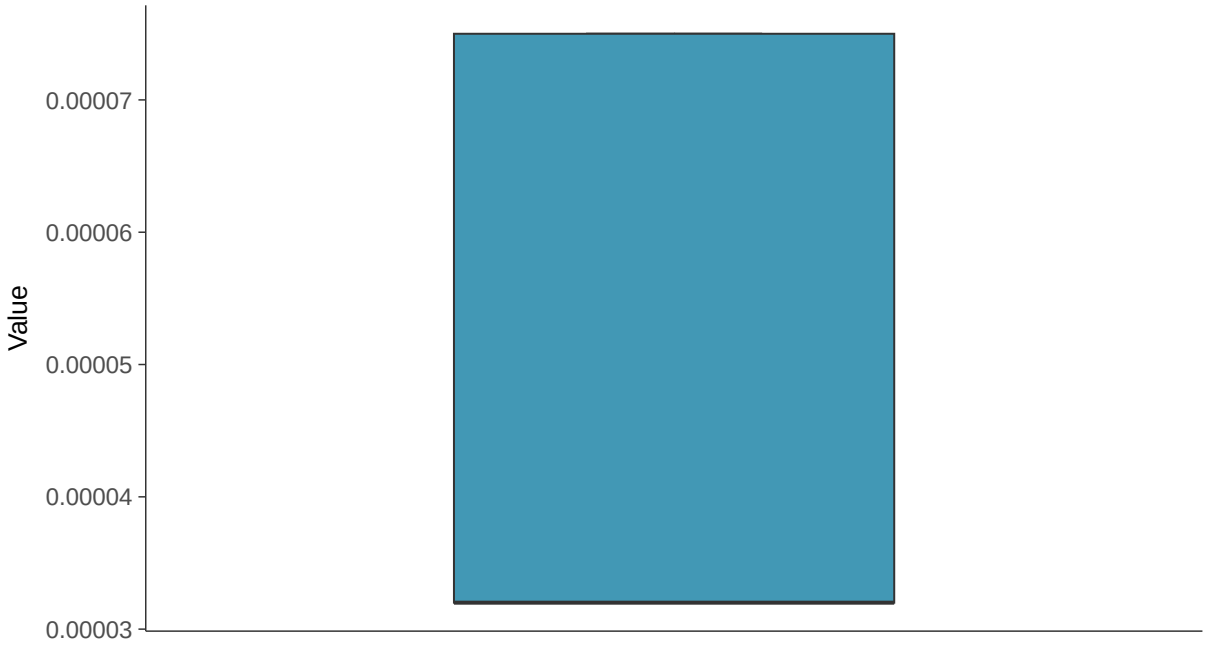
ID: 1_24_5_106





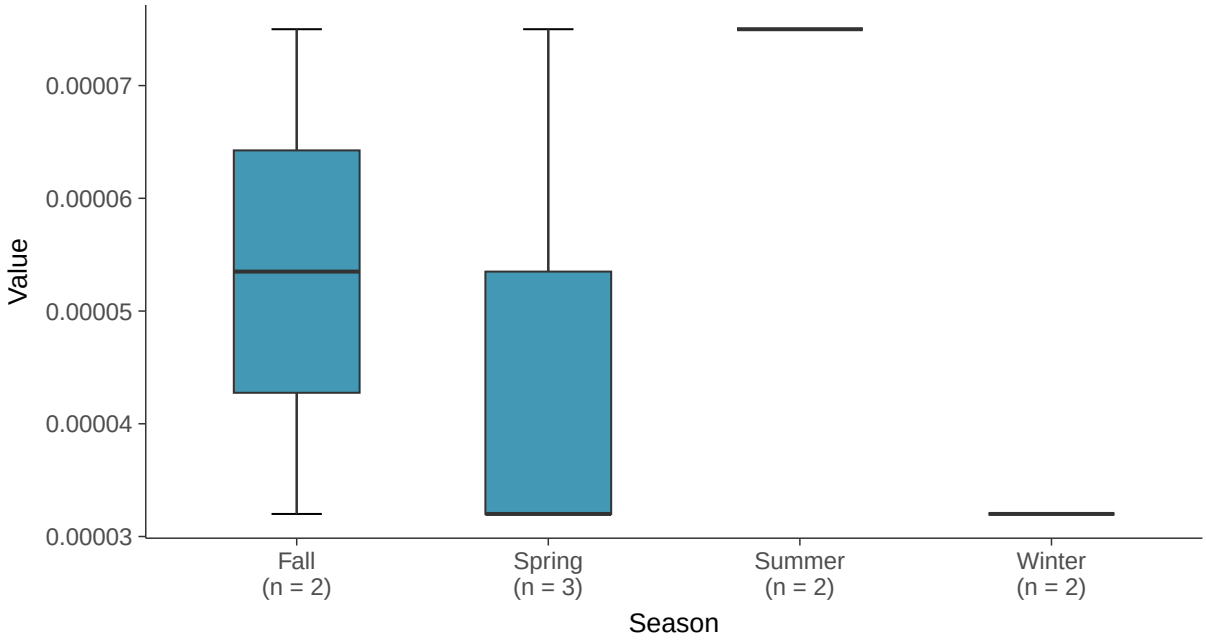
Boxplot

Cadmium, MW-20 (mg/L)



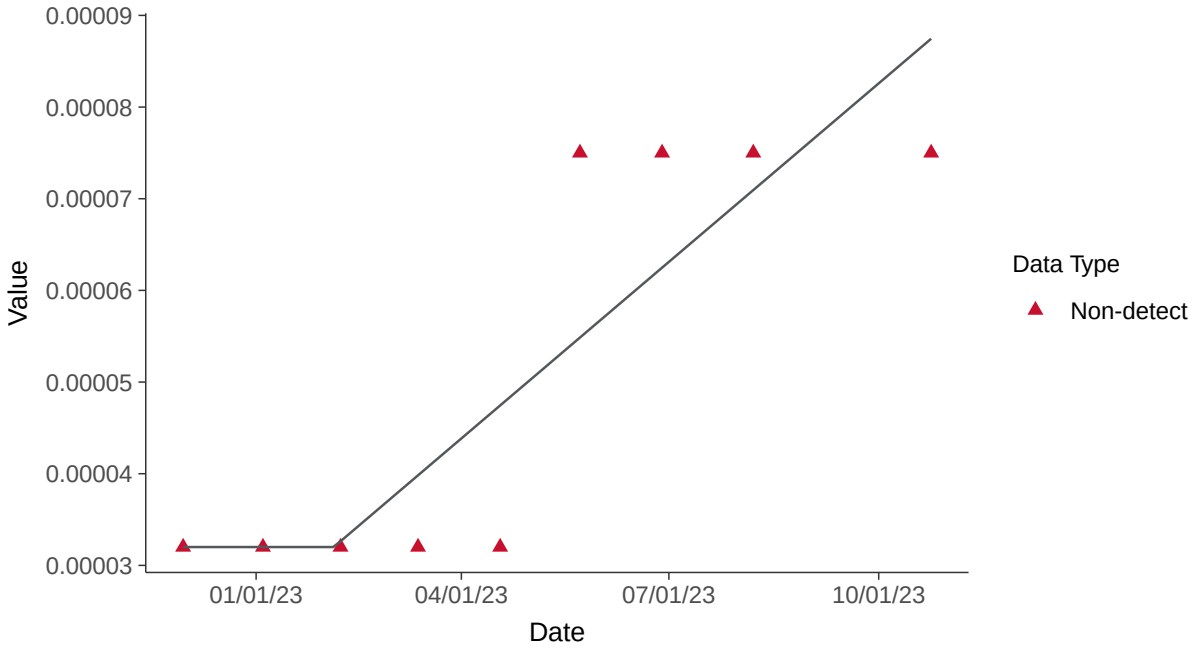
Boxplot by Season

Cadmium, MW-20 (mg/L)



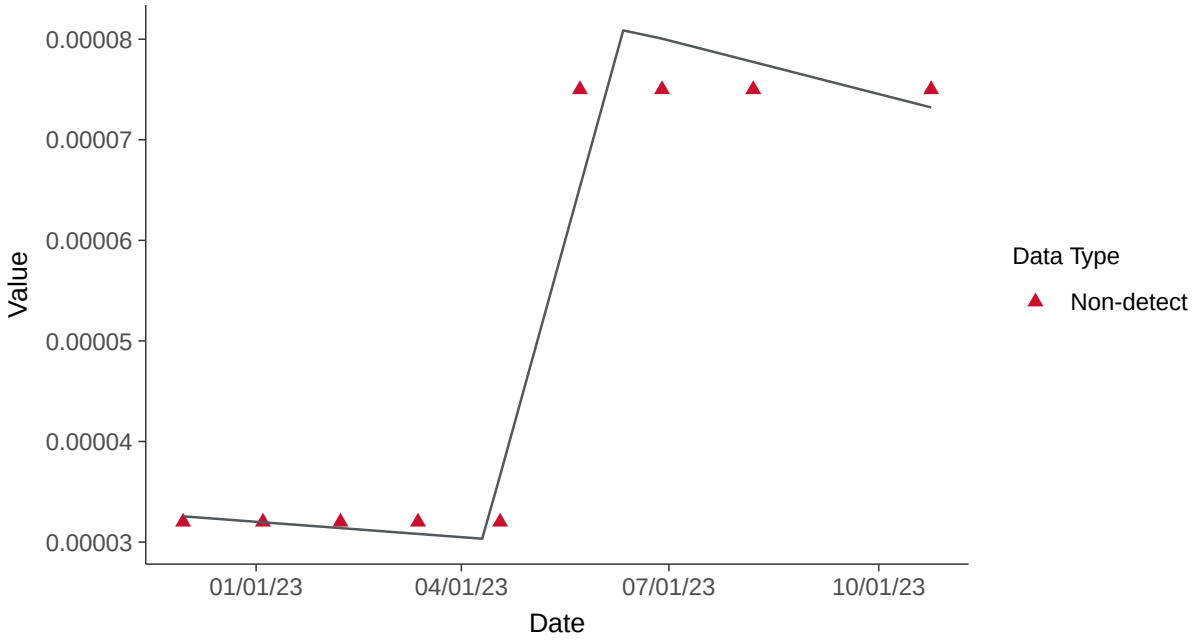
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-20 (mg/L)



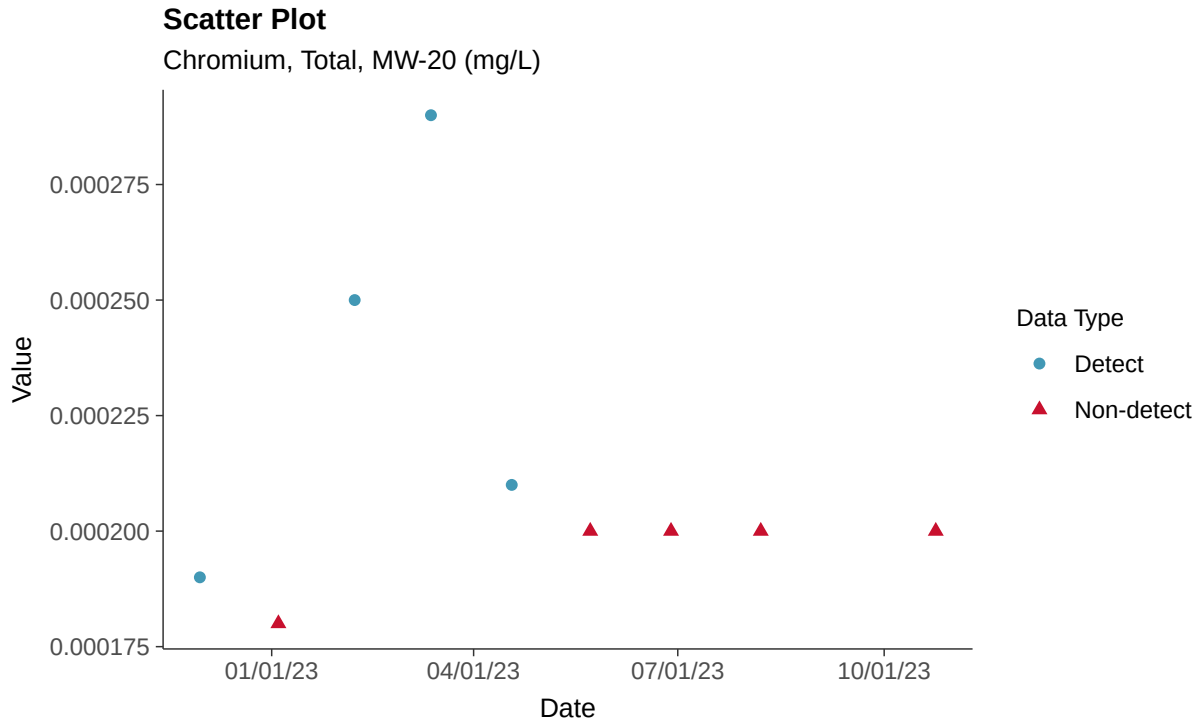
Trend Regression: Piecewise Linear-Linear-Linear

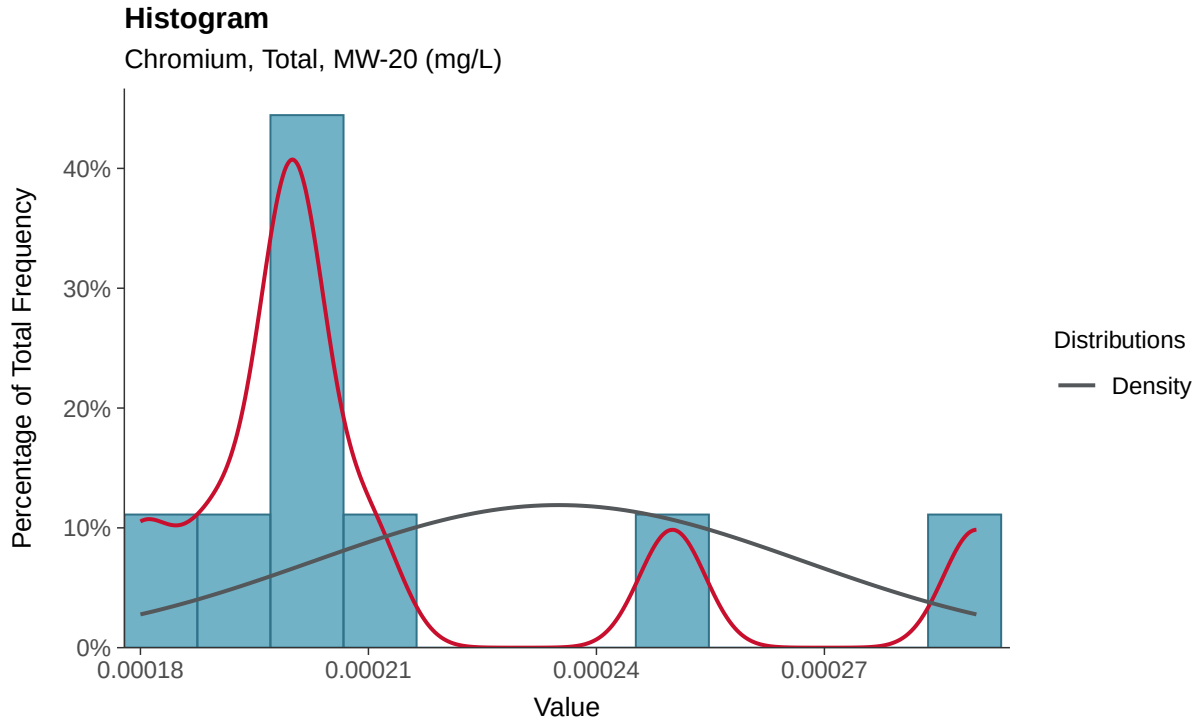
Cadmium, MW-20 (mg/L)



Appendix IV: Chromium, Total, MW-20

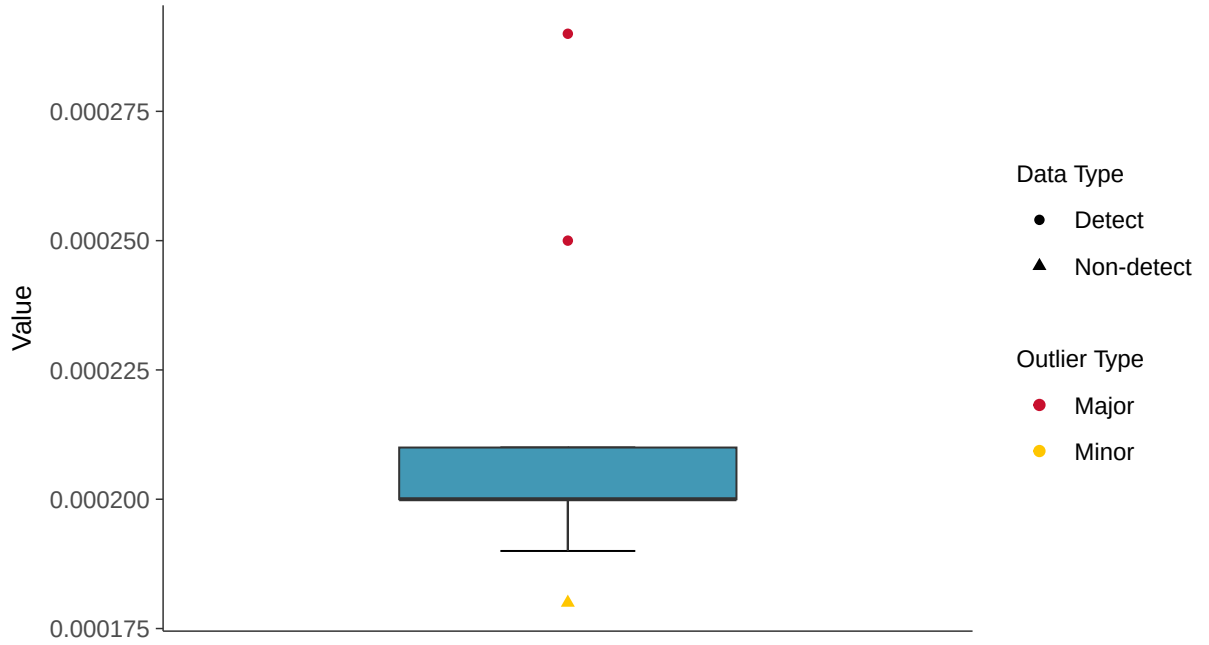
ID: 1_24_5_109





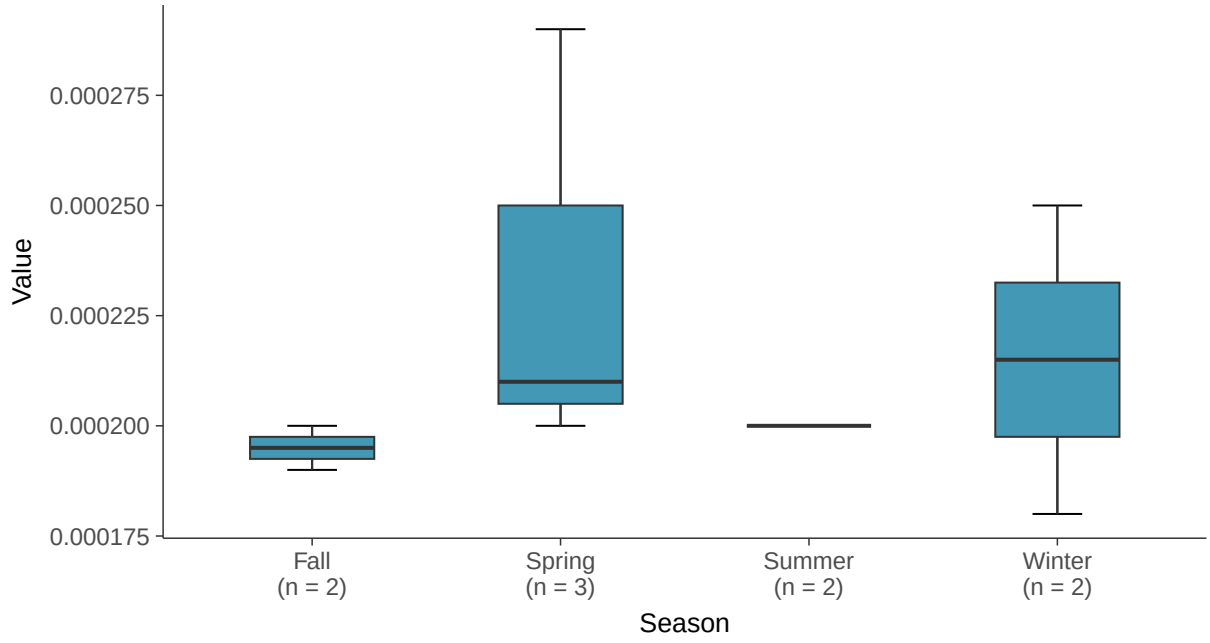
Boxplot

Chromium, Total, MW-20 (mg/L)



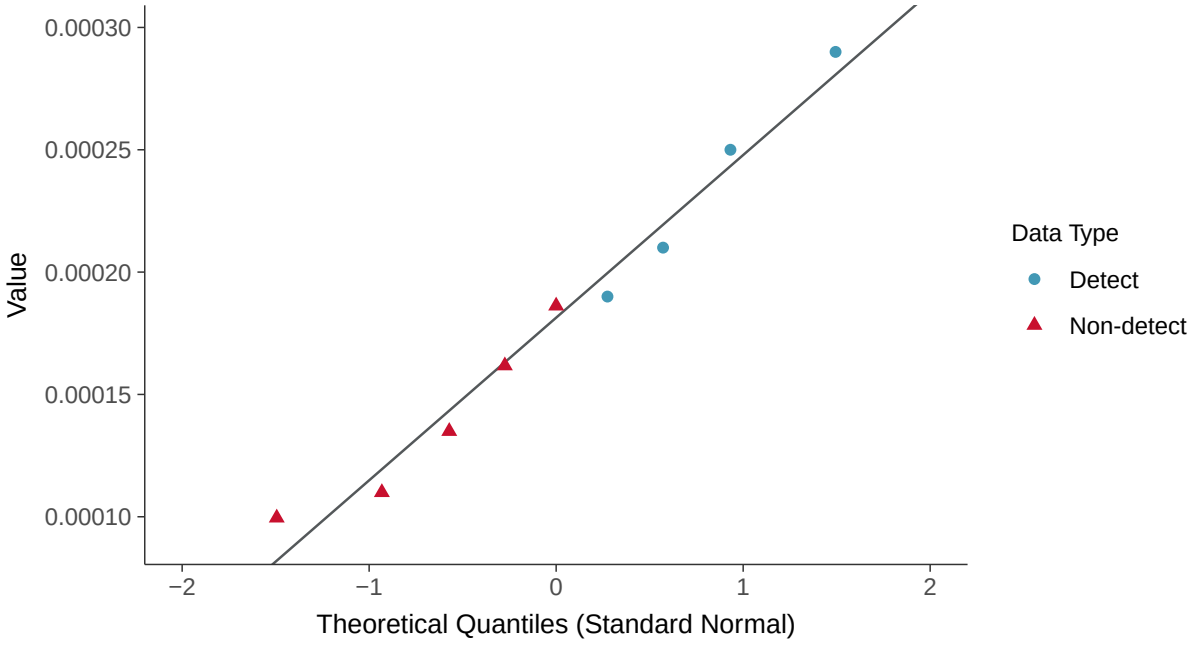
Boxplot by Season

Chromium, Total, MW-20 (mg/L)



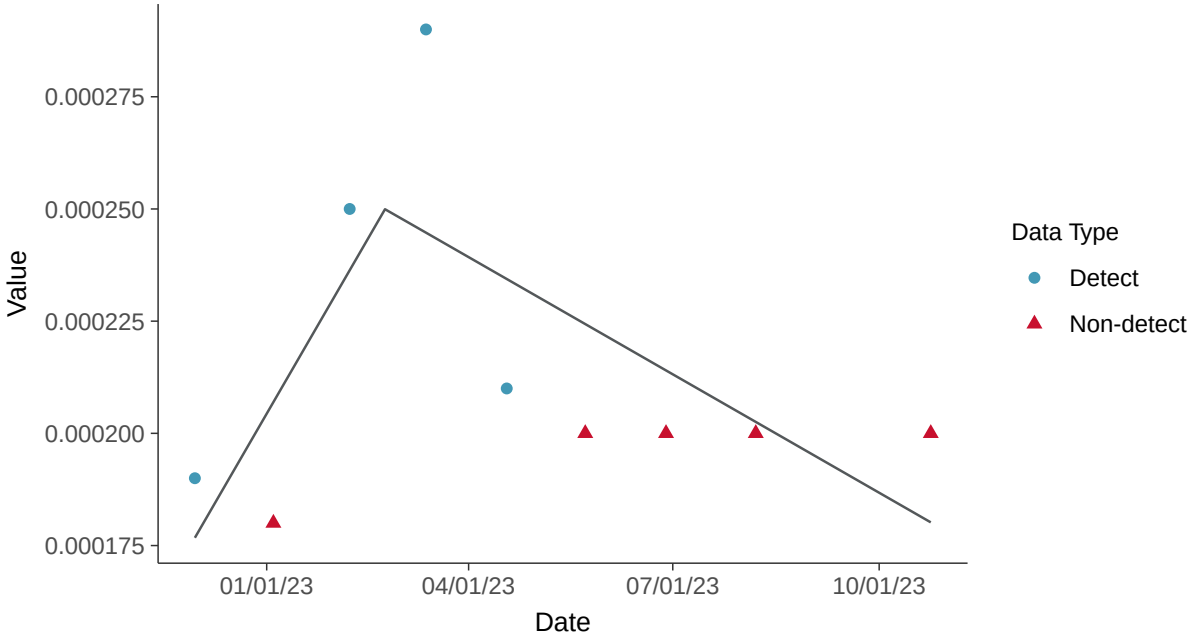
Normal Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-20 (mg/L)



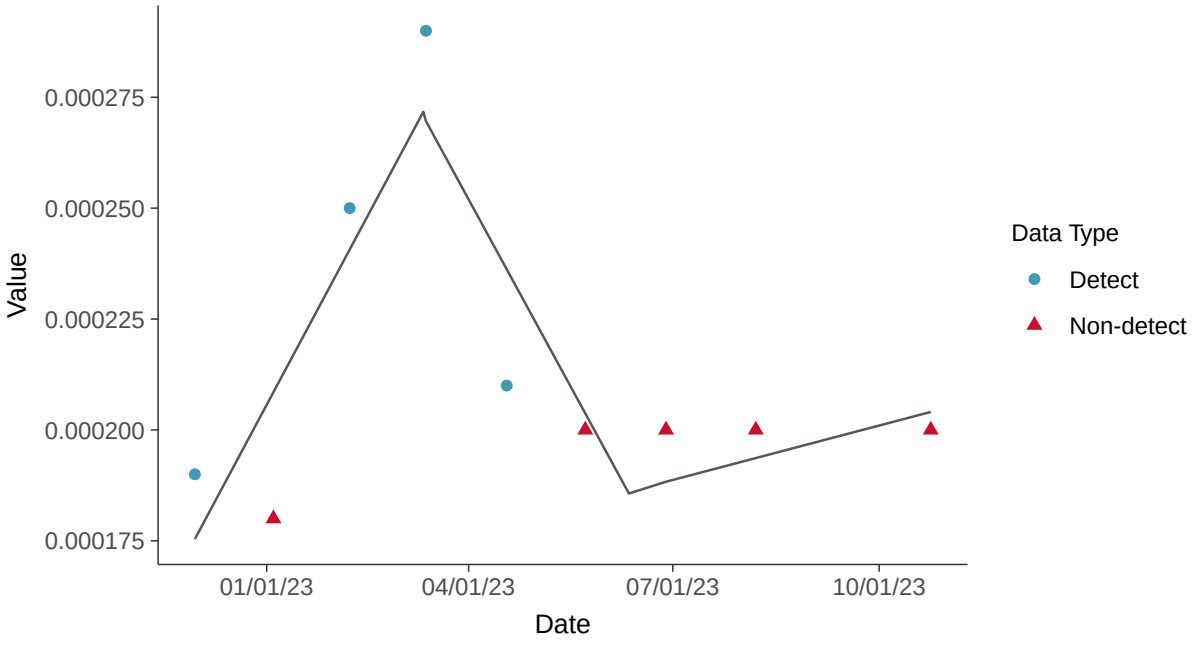
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-20 (mg/L)



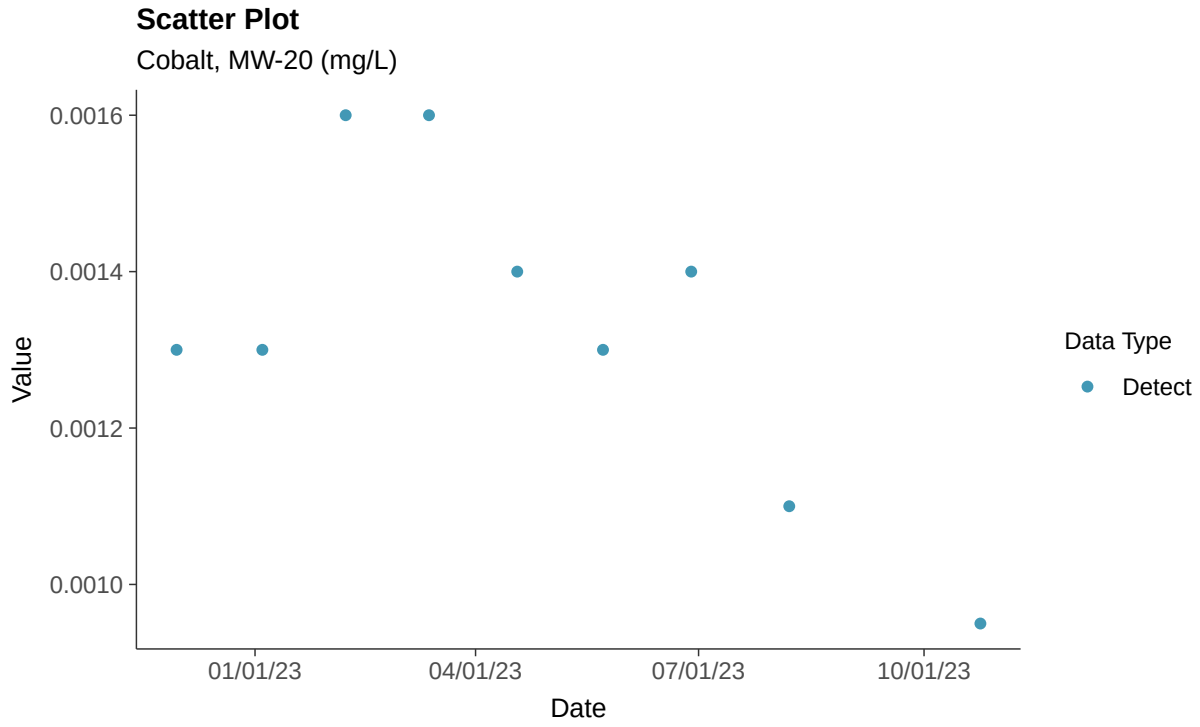
Trend Regression: Piecewise Linear-Linear-Linear

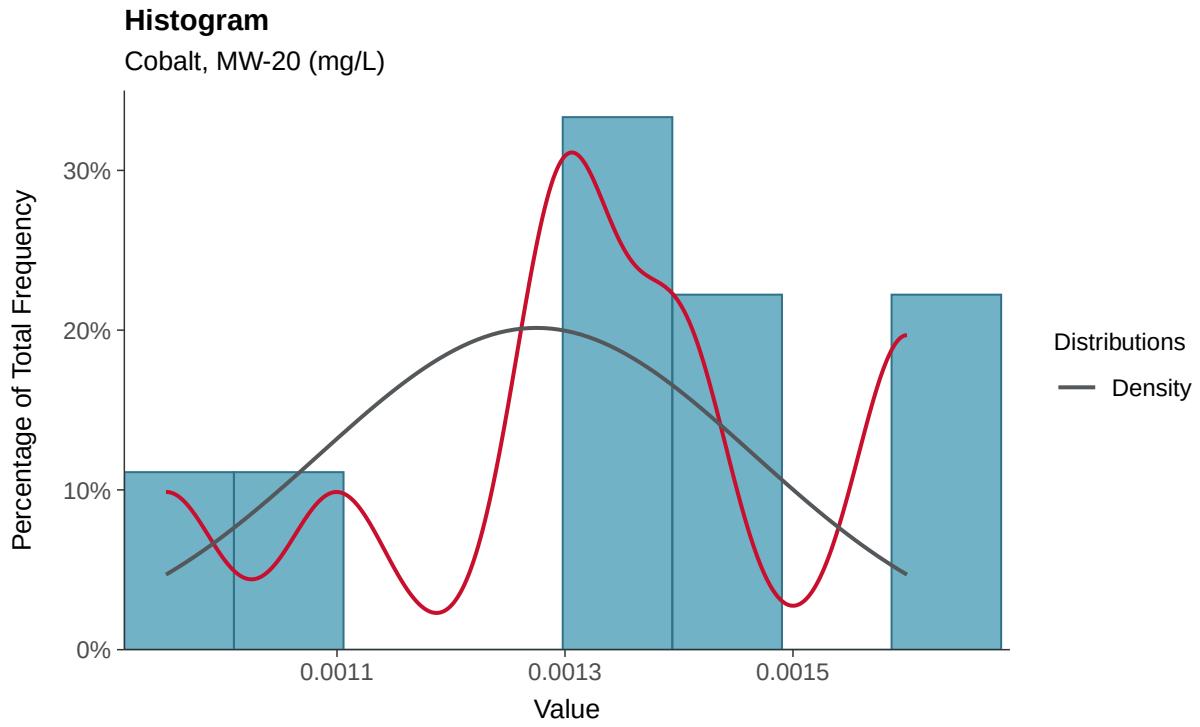
Chromium, Total, MW-20 (mg/L)



Appendix IV: Cobalt, MW-20

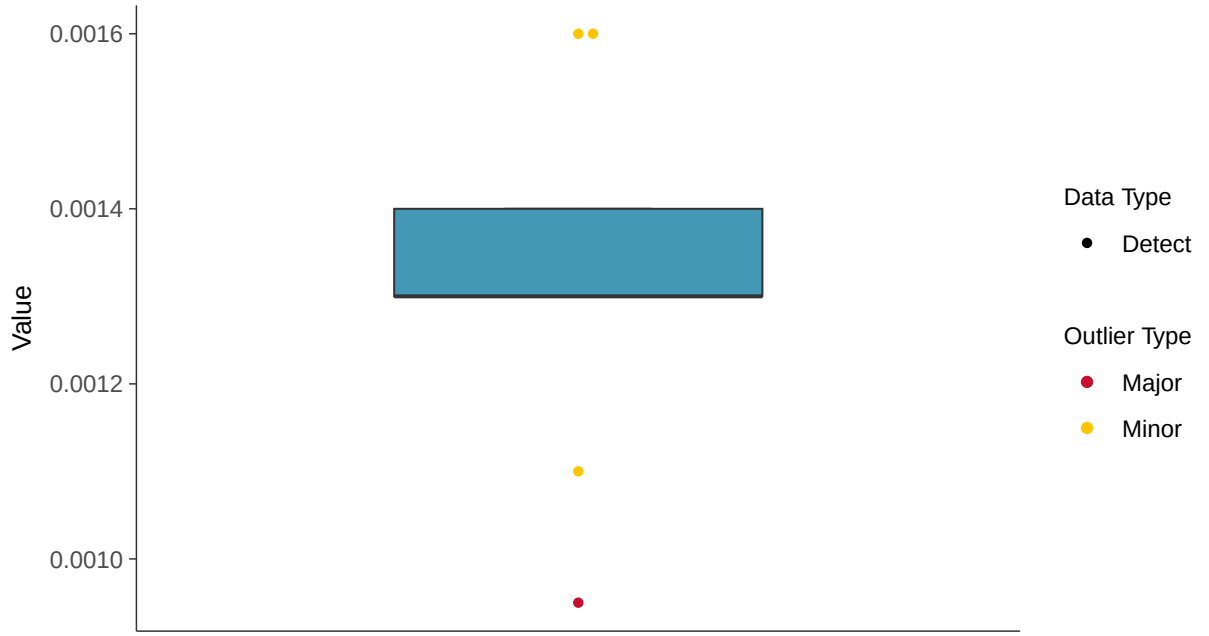
ID: 1_24_5_110





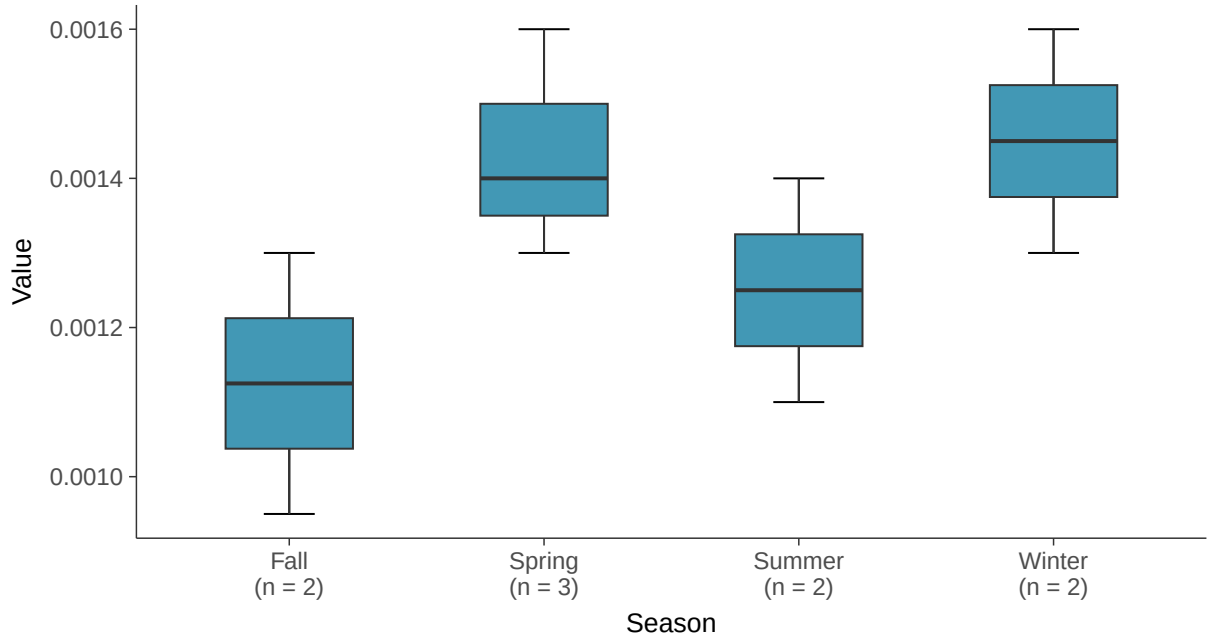
Boxplot

Cobalt, MW-20 (mg/L)



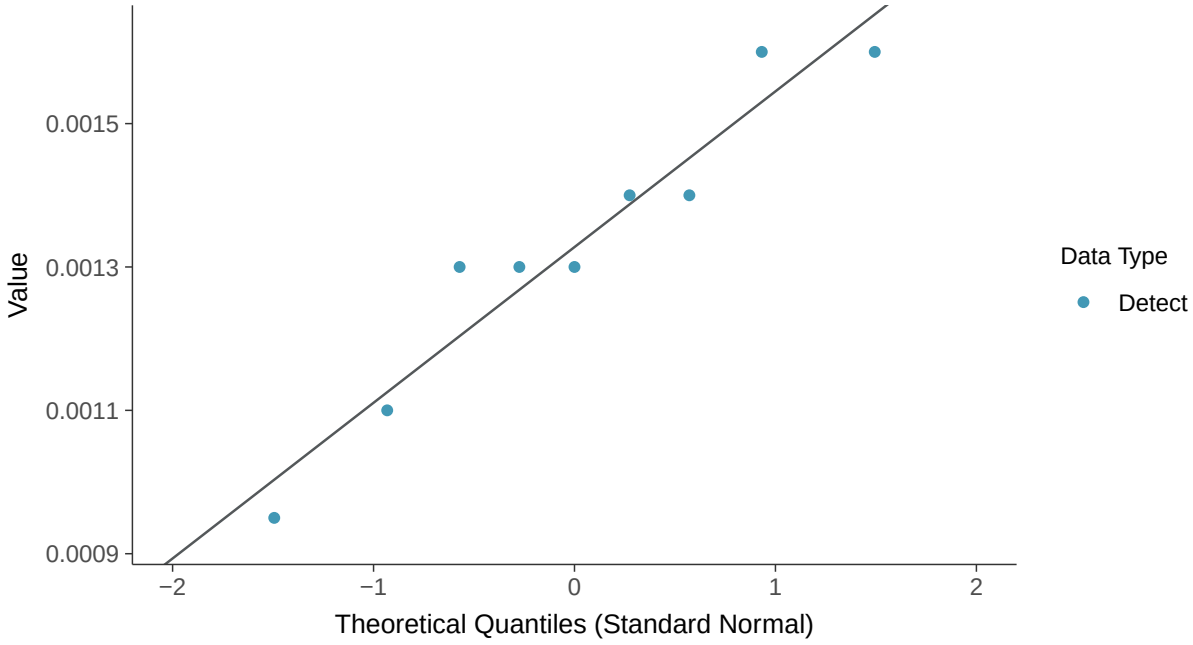
Boxplot by Season

Cobalt, MW-20 (mg/L)



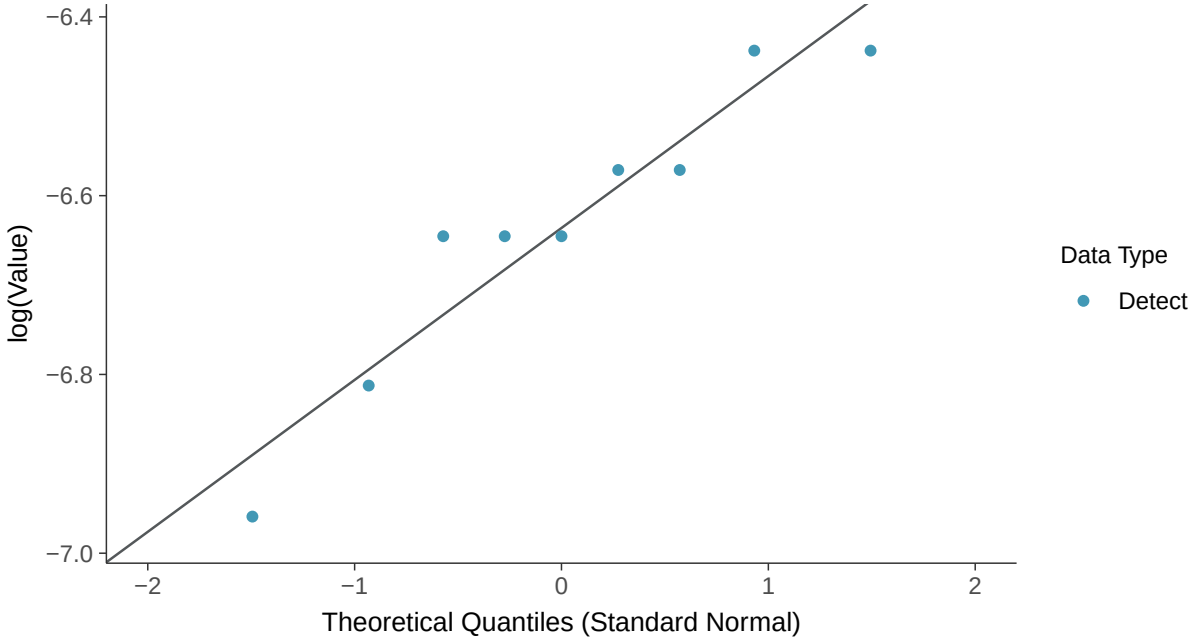
Normal Q-Q plot

Cobalt, MW-20 (mg/L)



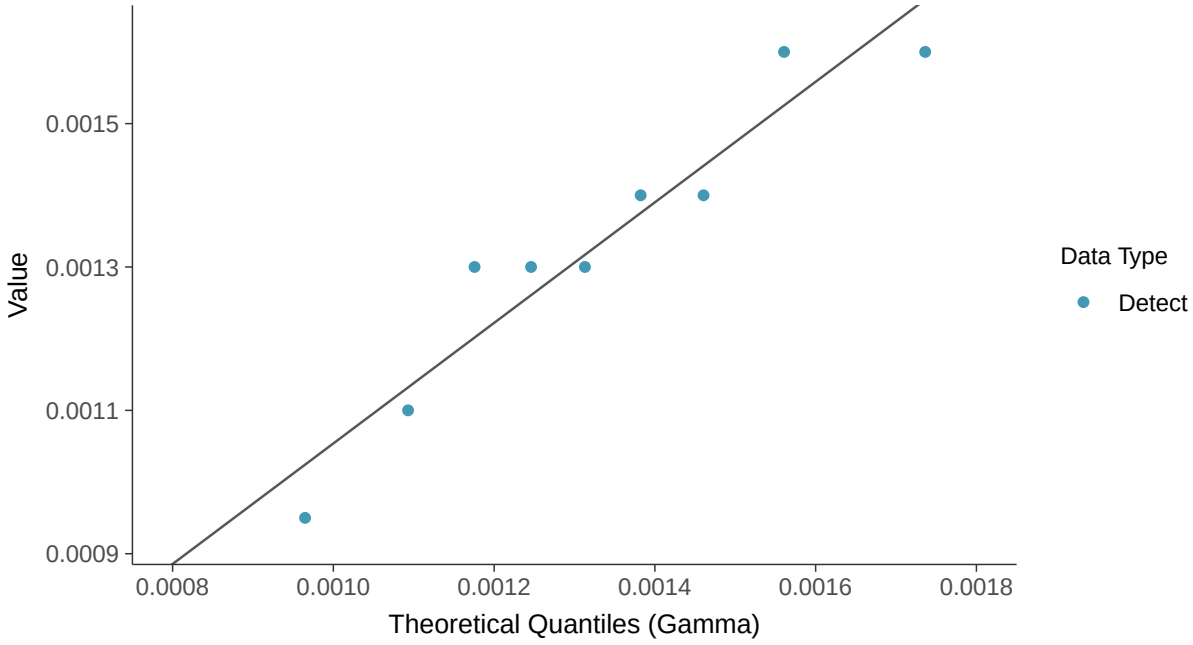
Lognormal Q-Q plot

Cobalt, MW-20 (mg/L)



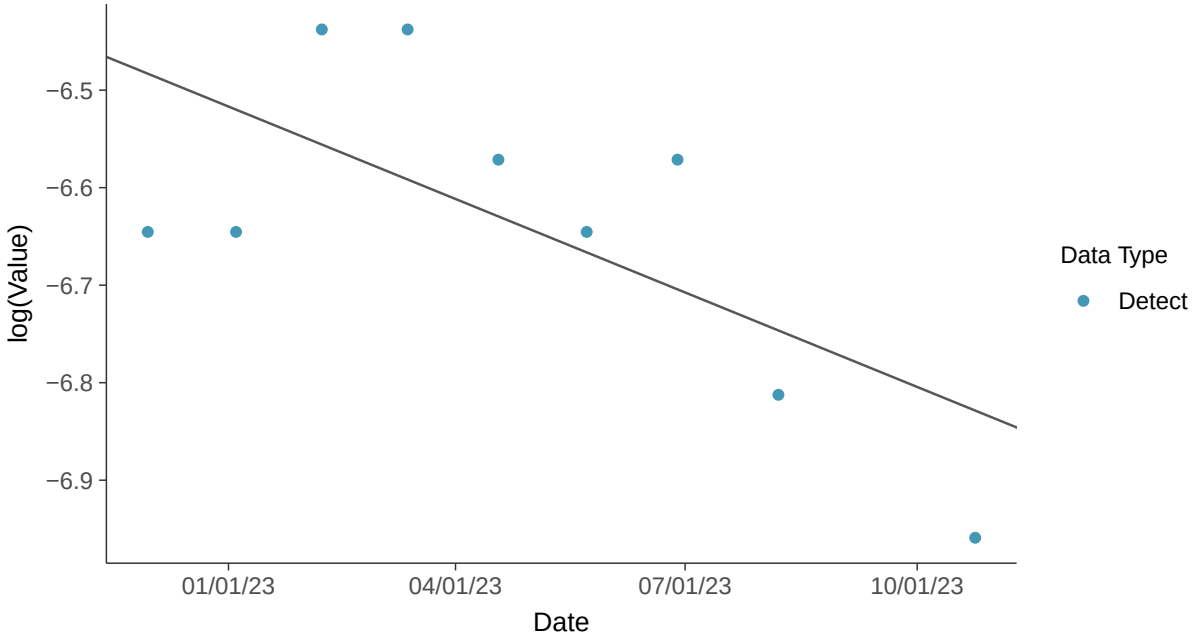
Gamma Q-Q plot

Cobalt, MW-20 (mg/L)



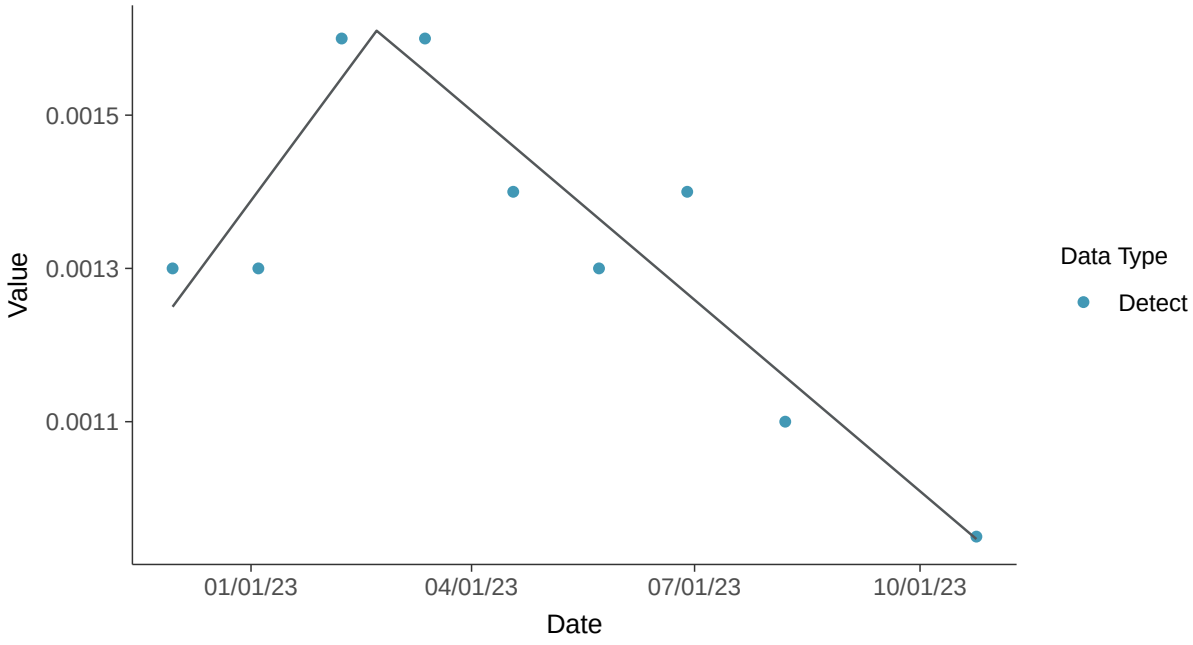
Trend Regression: Lognormal MLE

Cobalt, MW-20 (mg/L)



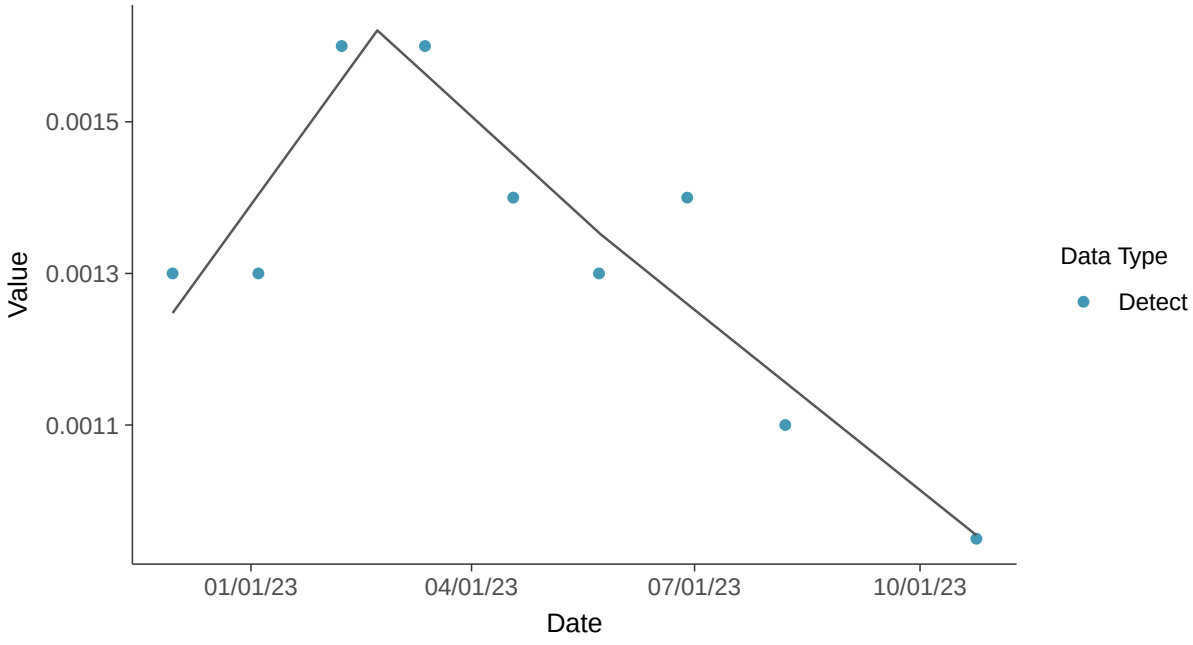
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-20 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-20 (mg/L)

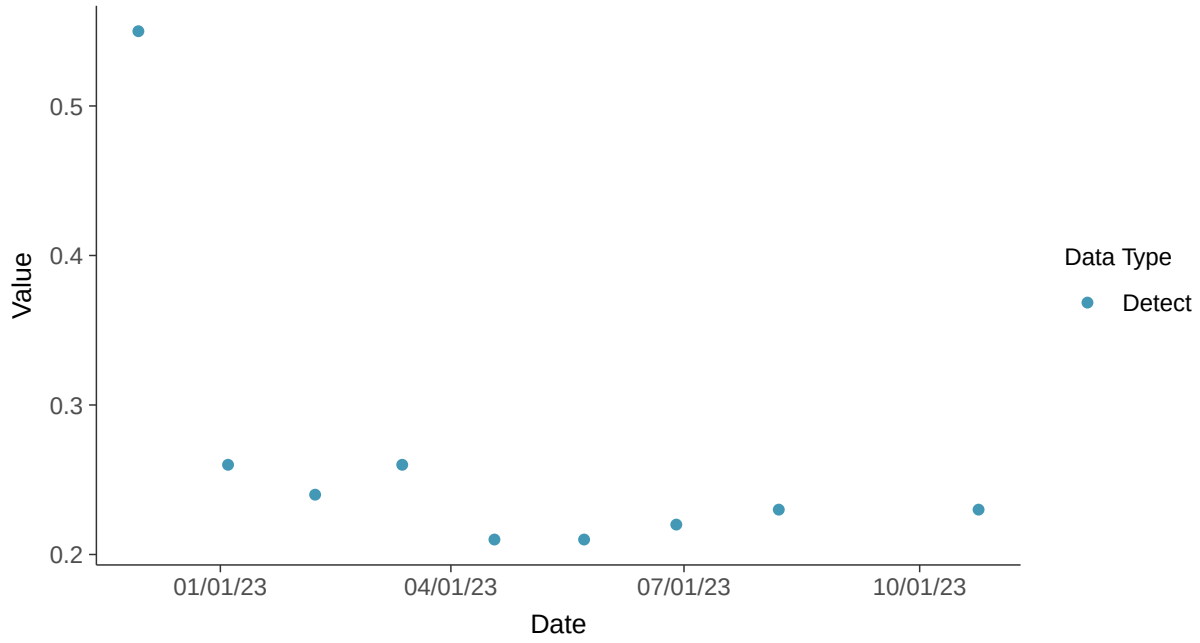


Appendix IV: Fluoride (App IV), MW-20

ID: 1_24_5_113

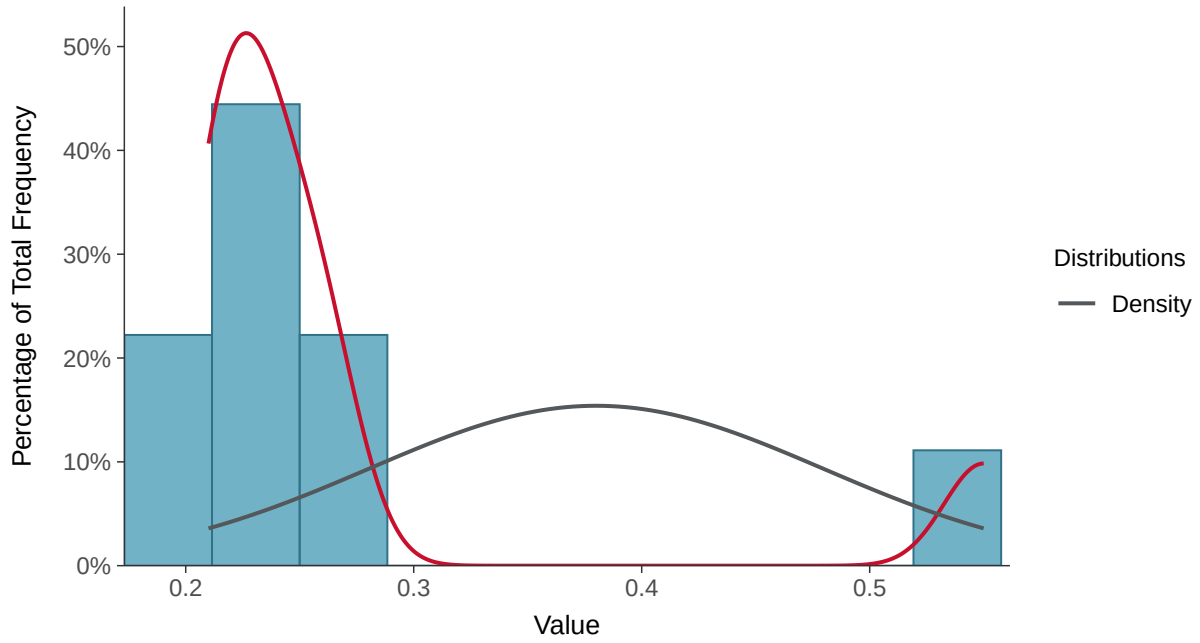
Scatter Plot

Fluoride (App IV), MW-20 (mg/L)



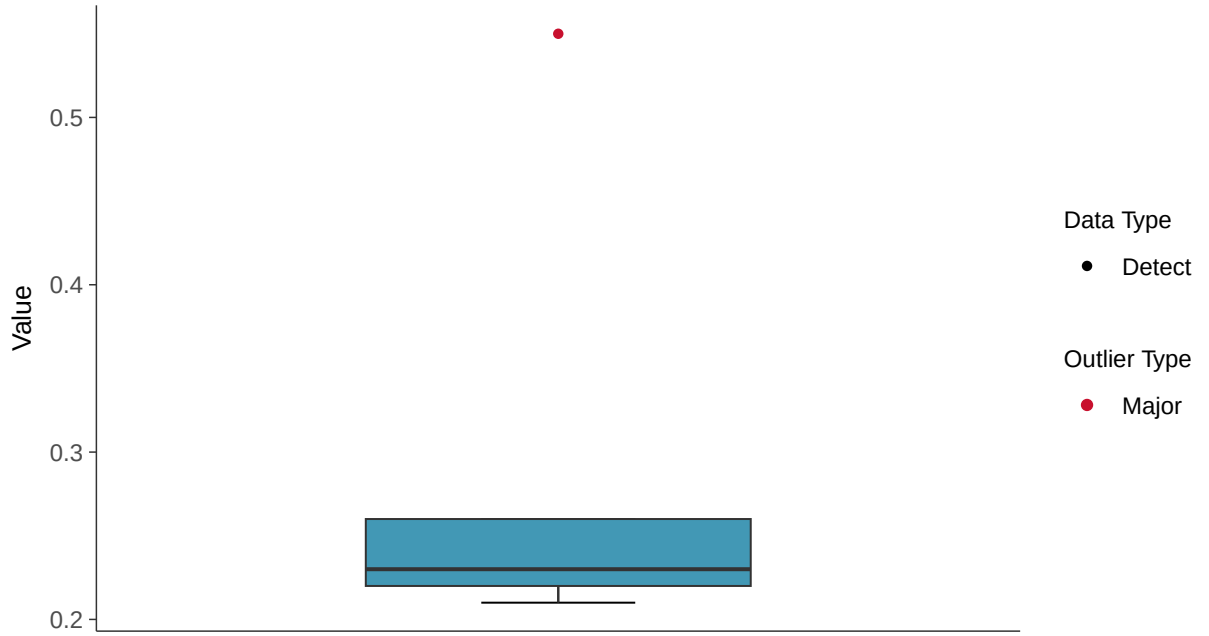
Histogram

Fluoride (App IV), MW-20 (mg/L)



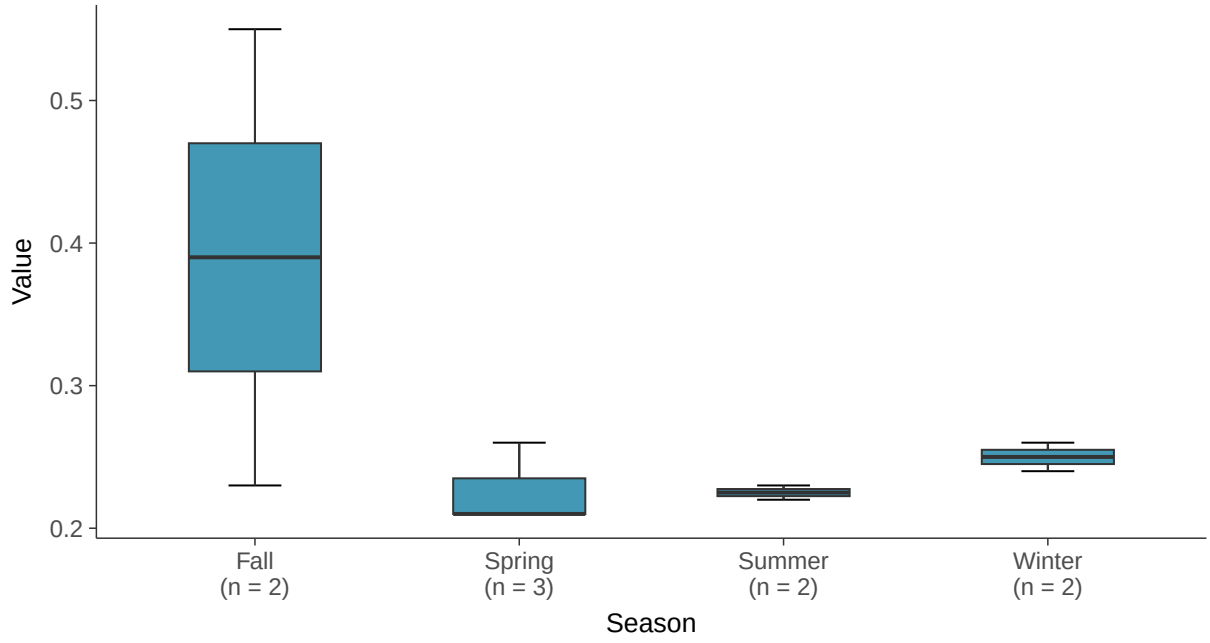
Boxplot

Fluoride (App IV), MW-20 (mg/L)



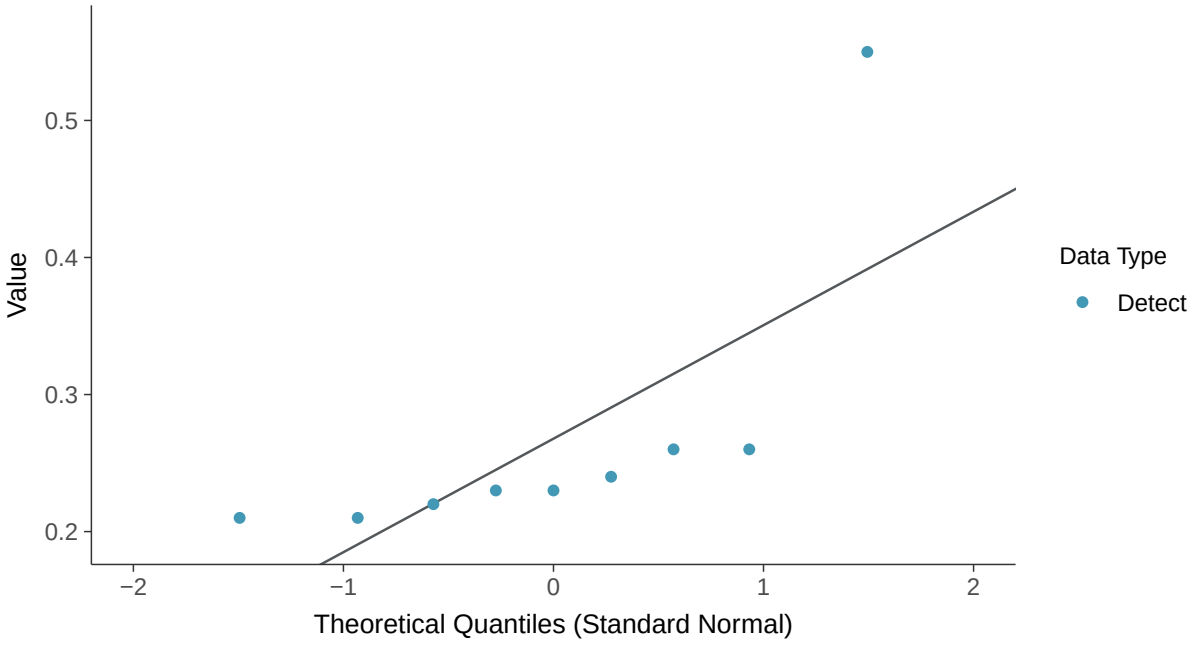
Boxplot by Season

Fluoride (App IV), MW-20 (mg/L)



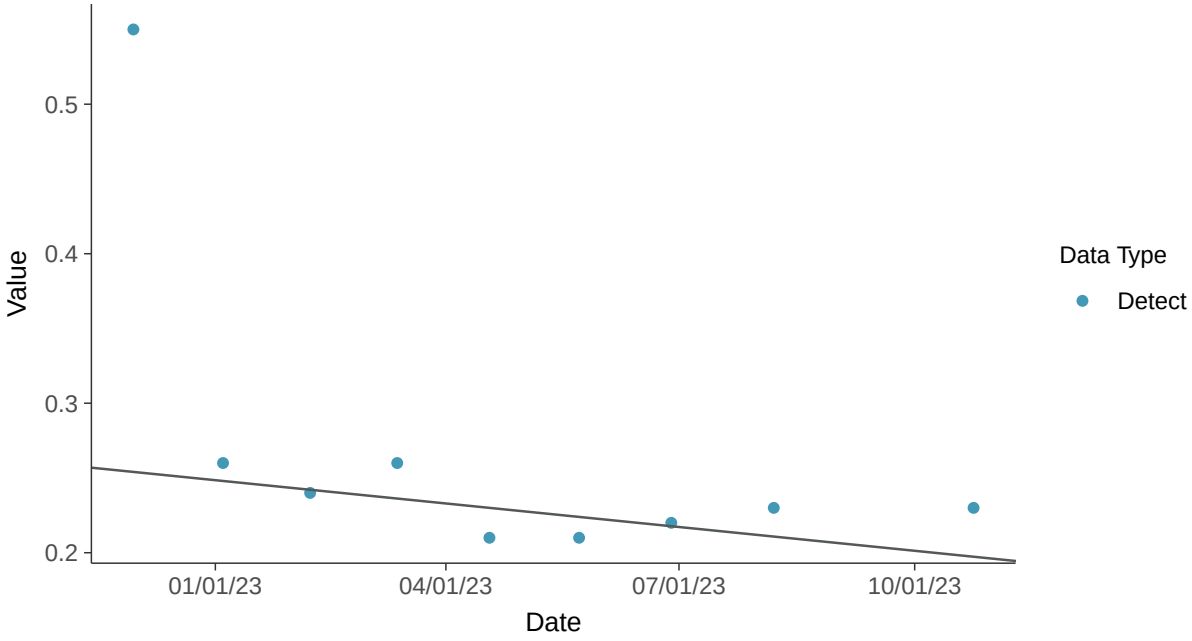
Normal Q-Q plot

Fluoride (App IV), MW-20 (mg/L)



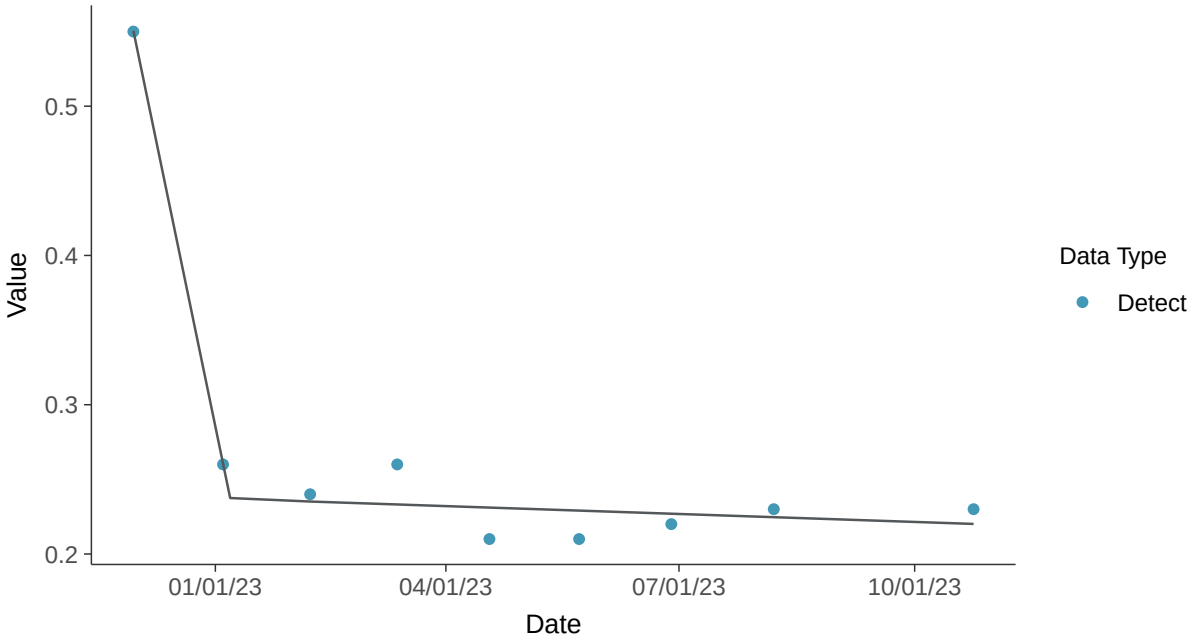
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride (App IV), MW-20 (mg/L)



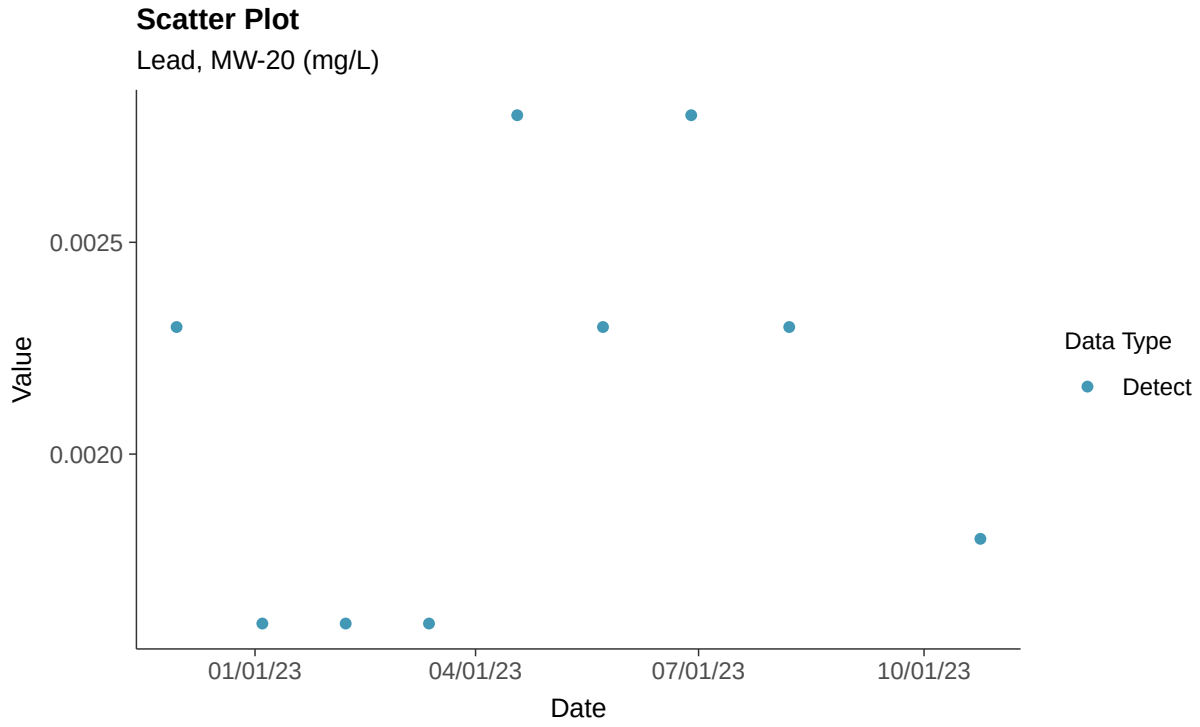
Trend Regression: Piecewise Linear-Linear

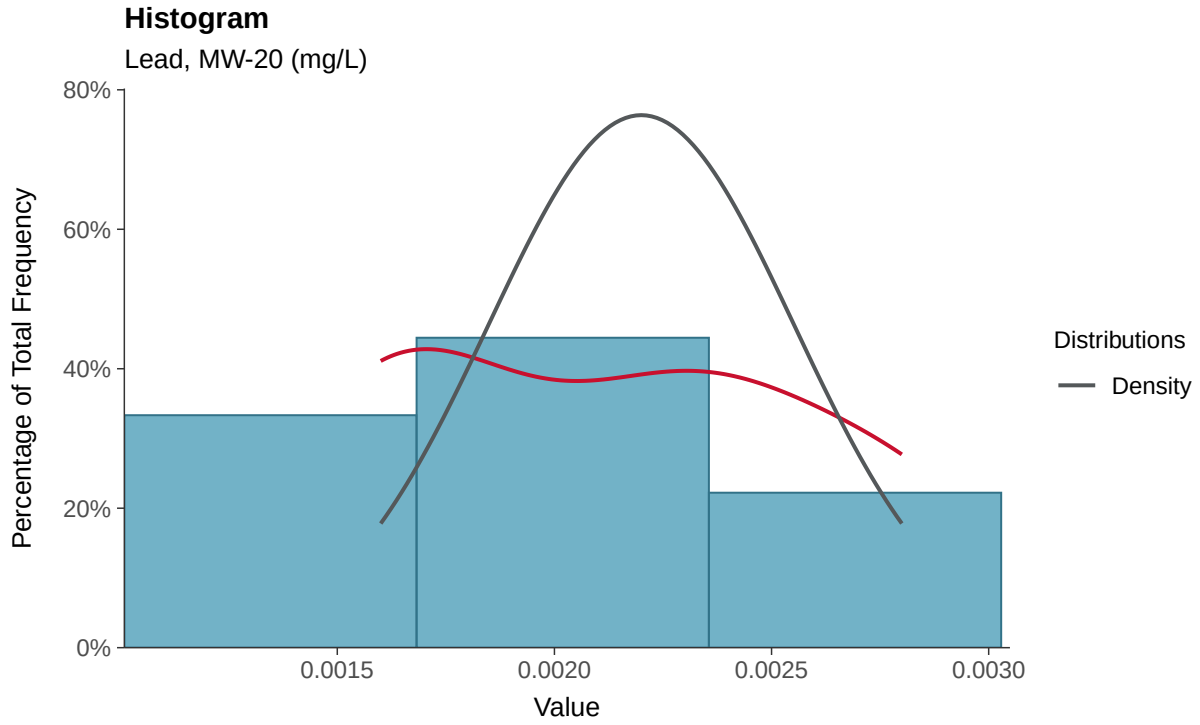
Fluoride (App IV), MW-20 (mg/L)



Appendix IV: Lead, MW-20

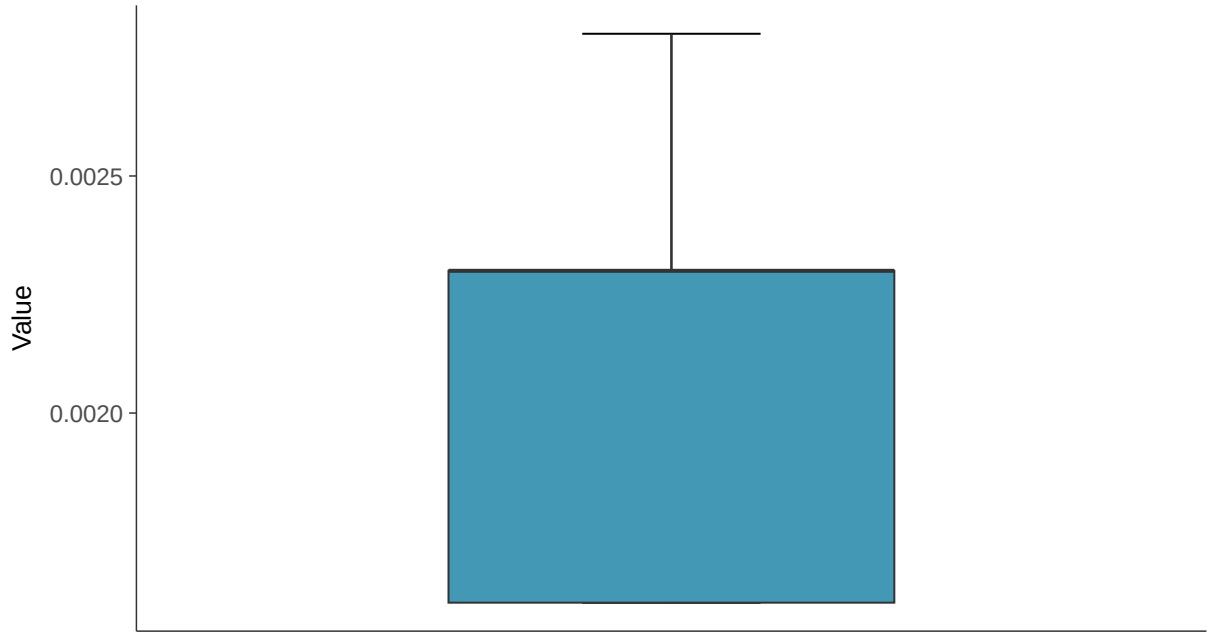
ID: 1_24_5_115





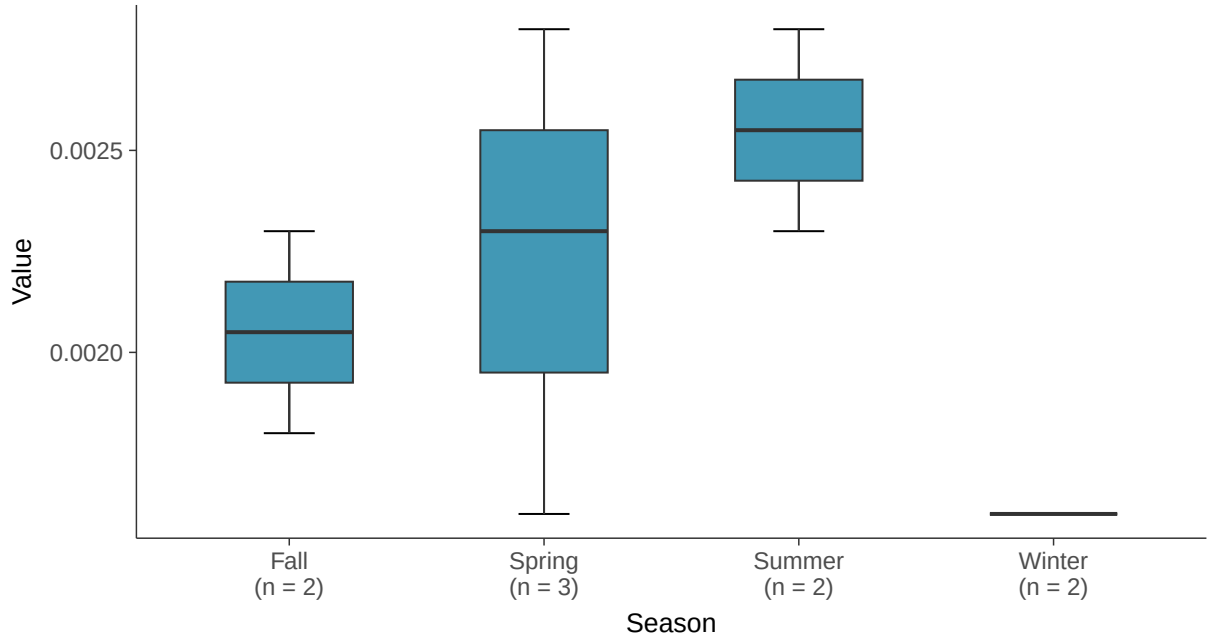
Boxplot

Lead, MW-20 (mg/L)



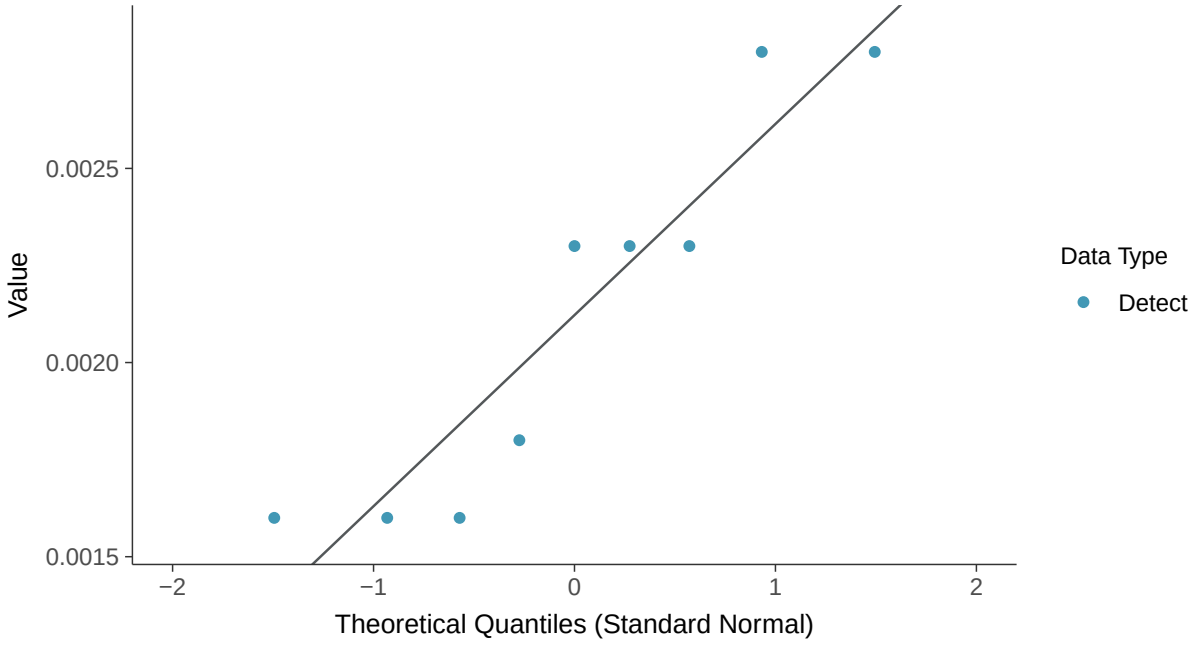
Boxplot by Season

Lead, MW-20 (mg/L)



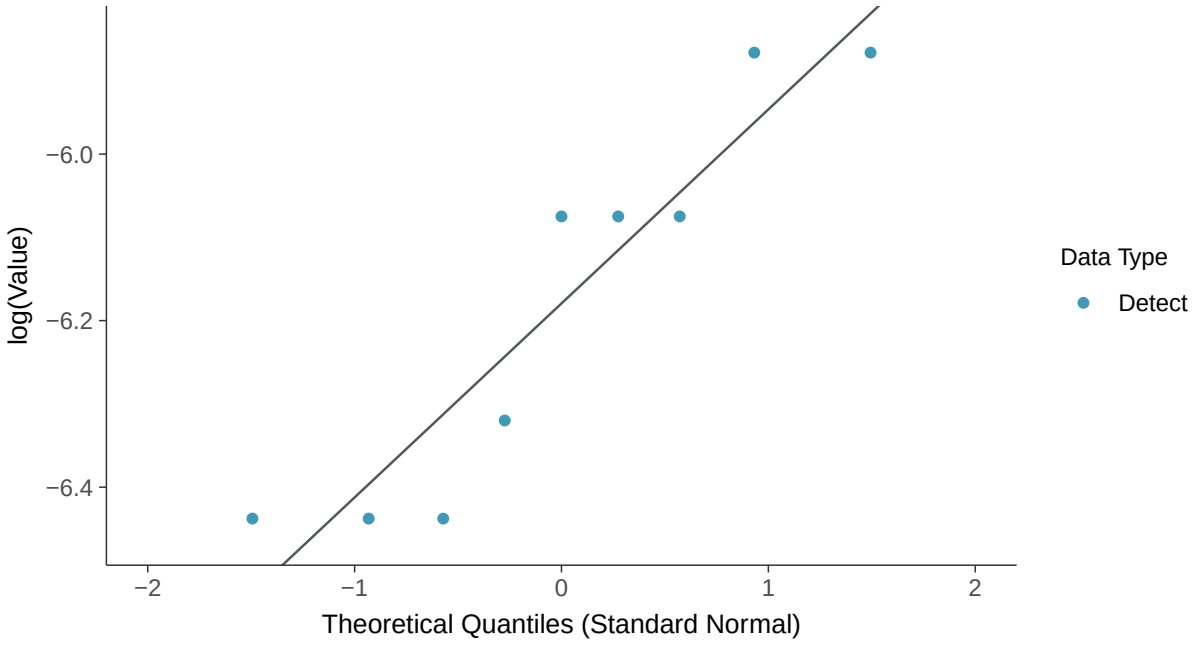
Normal Q-Q plot

Lead, MW-20 (mg/L)



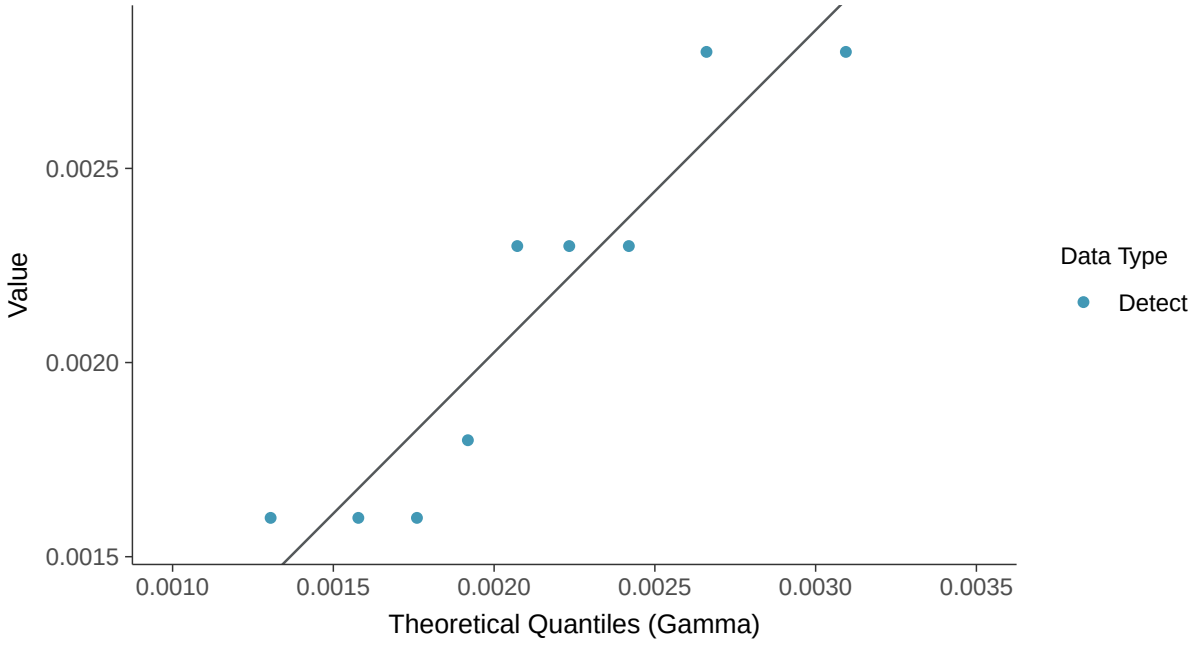
Lognormal Q-Q plot

Lead, MW-20 (mg/L)



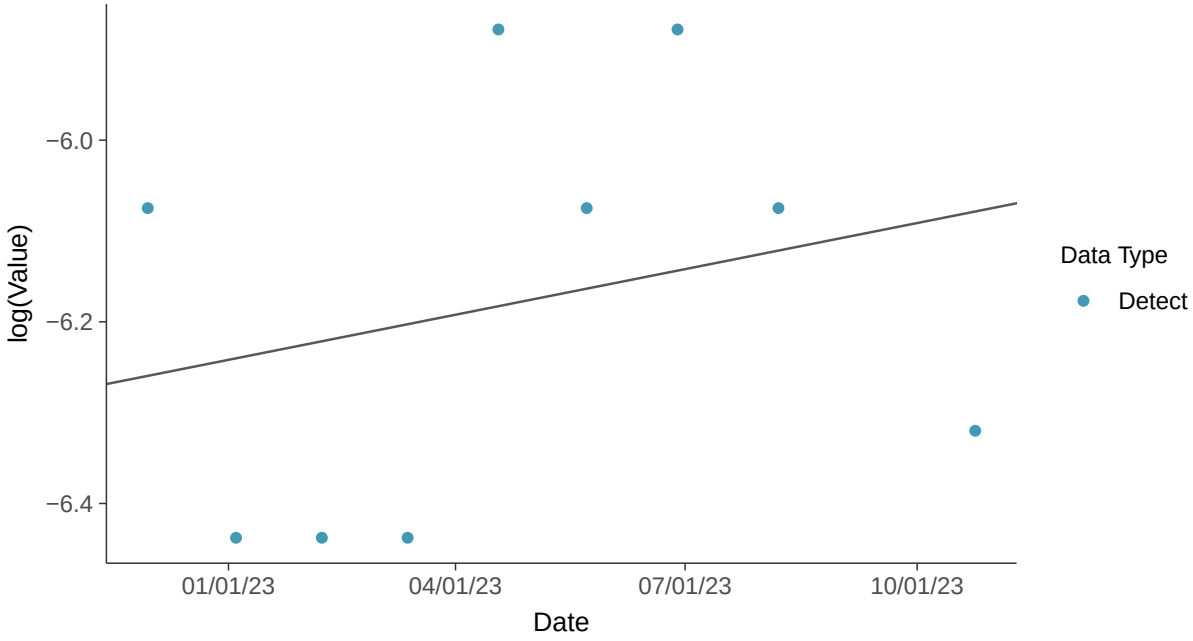
Gamma Q-Q plot

Lead, MW-20 (mg/L)



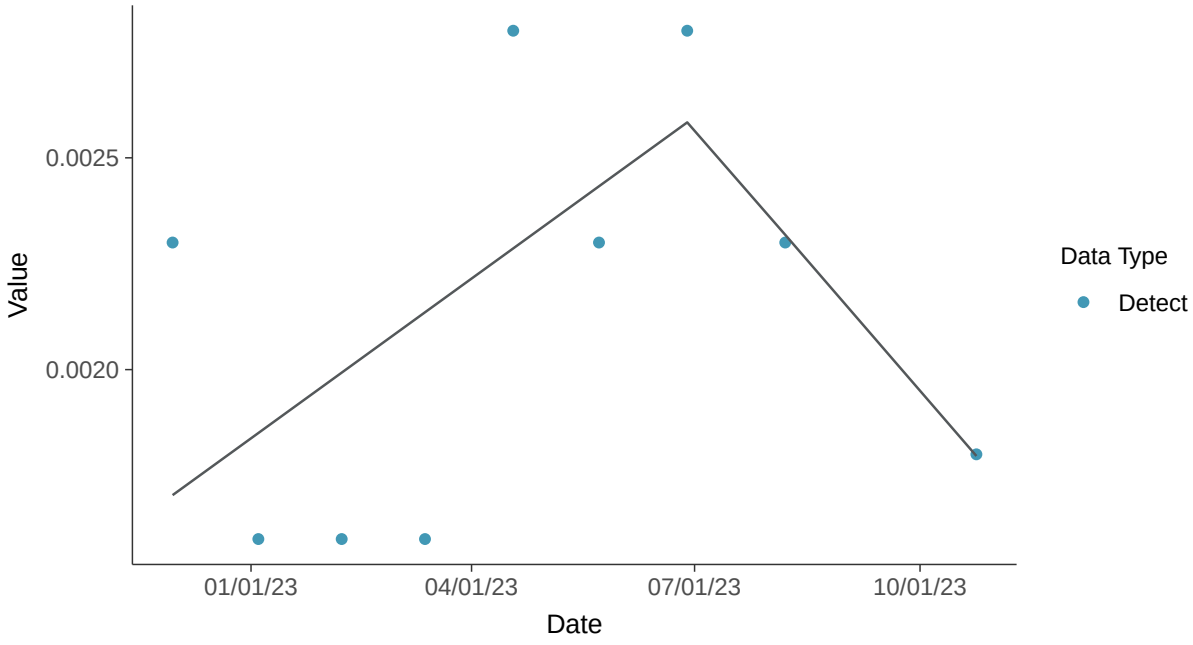
Trend Regression: Lognormal MLE

Lead, MW-20 (mg/L)



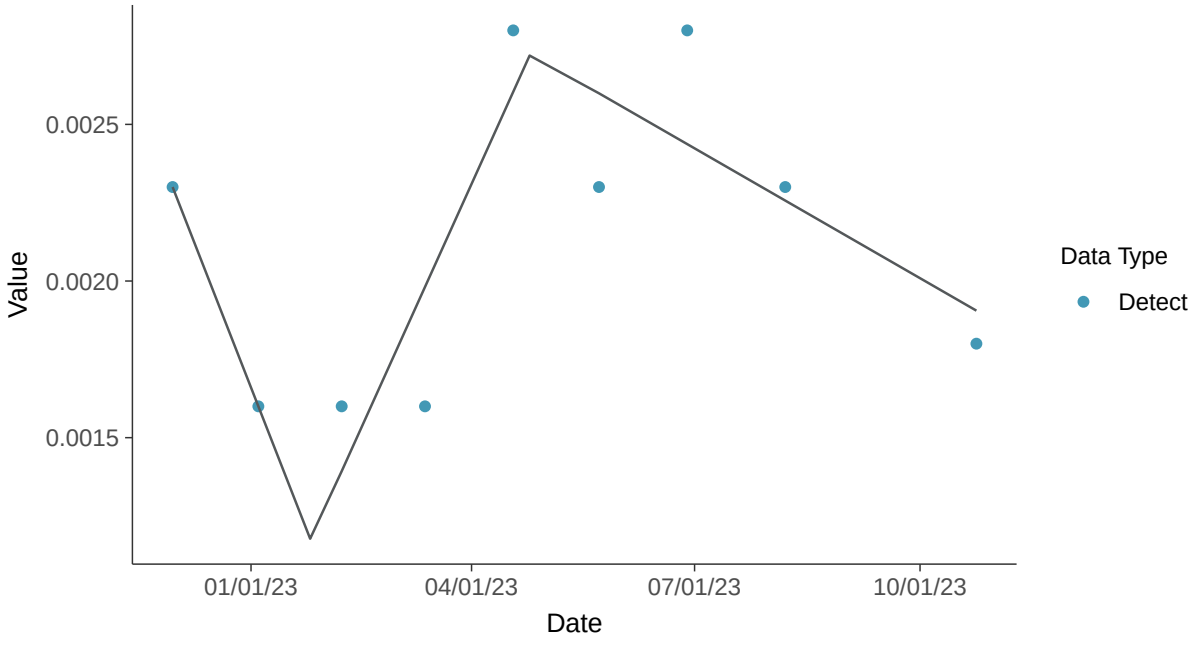
Trend Regression: Piecewise Linear-Linear

Lead, MW-20 (mg/L)



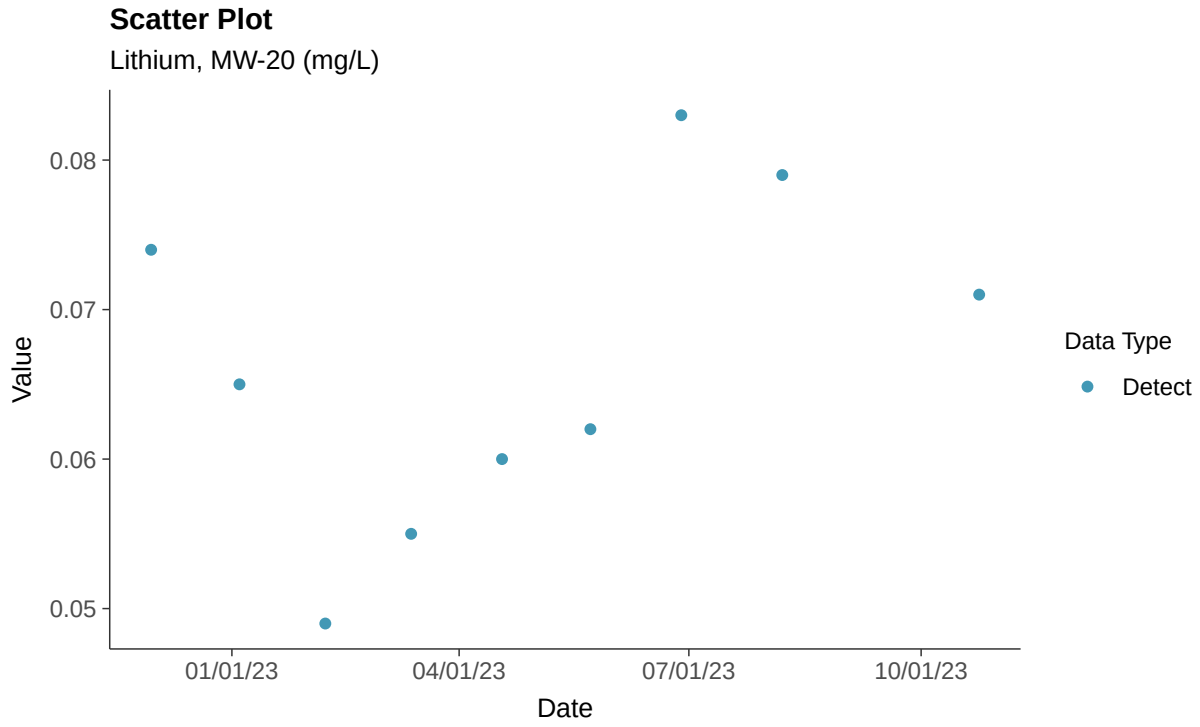
Trend Regression: Piecewise Linear-Linear-Linear

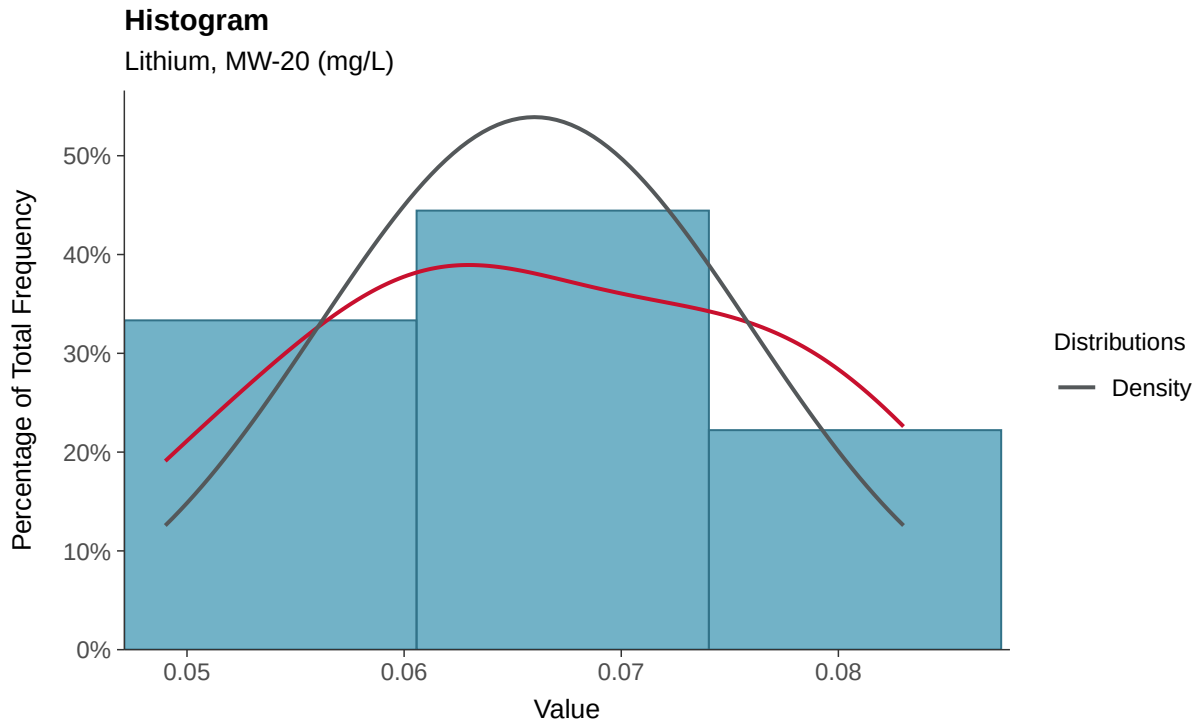
Lead, MW-20 (mg/L)



Appendix IV: Lithium, MW-20

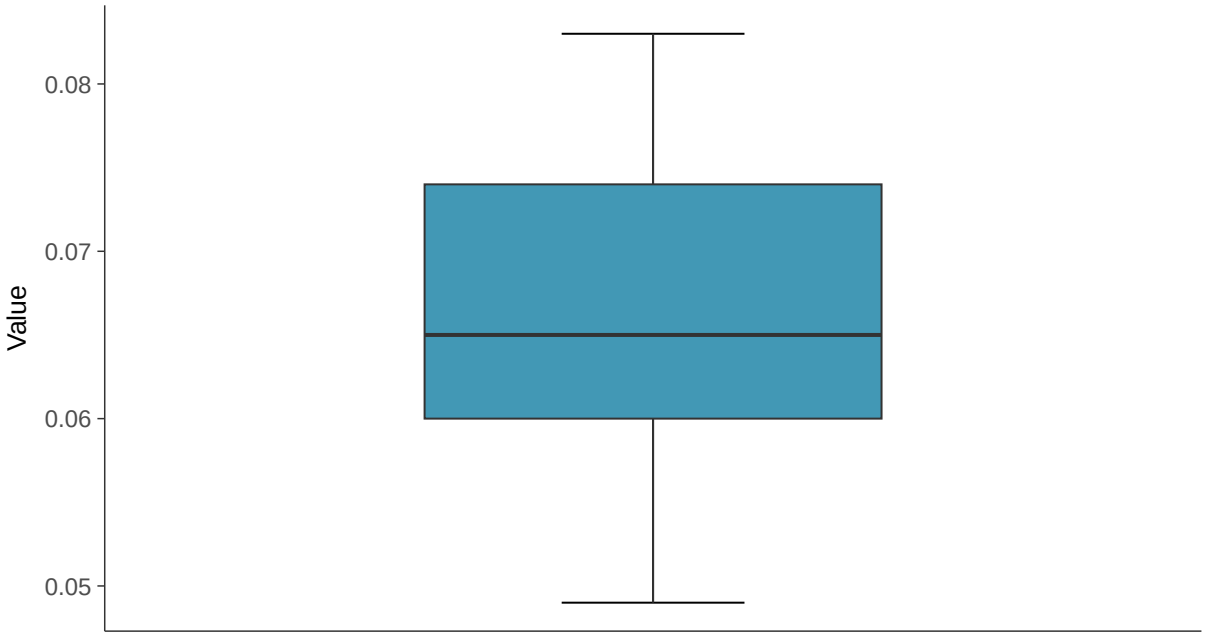
ID: 1_24_5_116





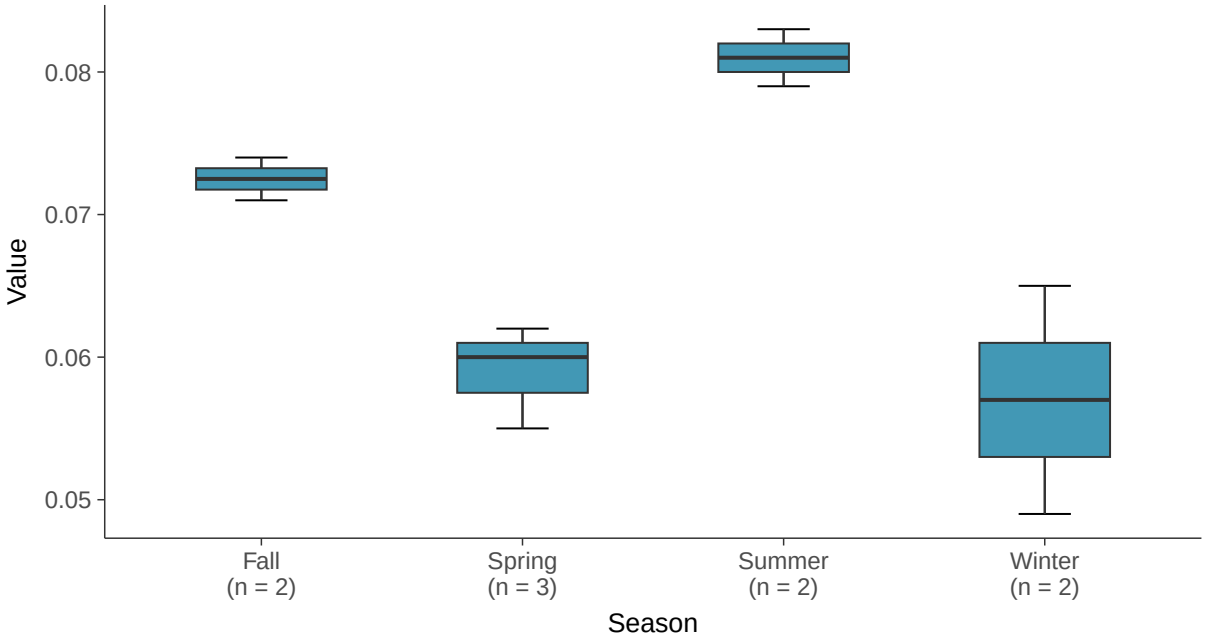
Boxplot

Lithium, MW-20 (mg/L)



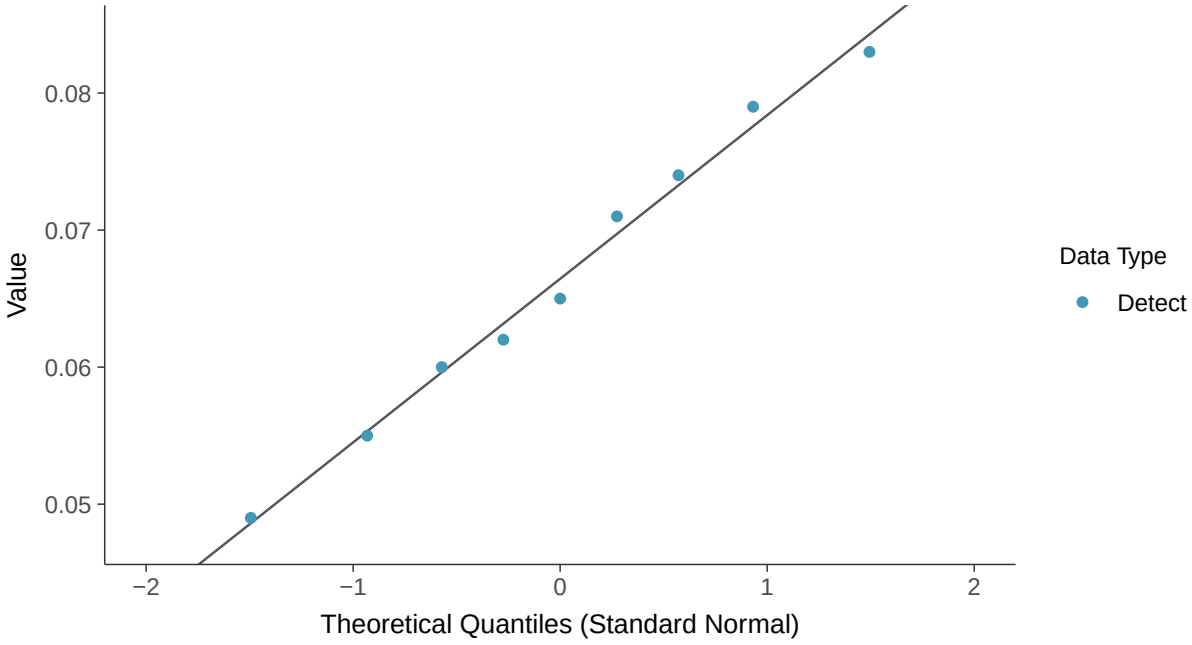
Boxplot by Season

Lithium, MW-20 (mg/L)



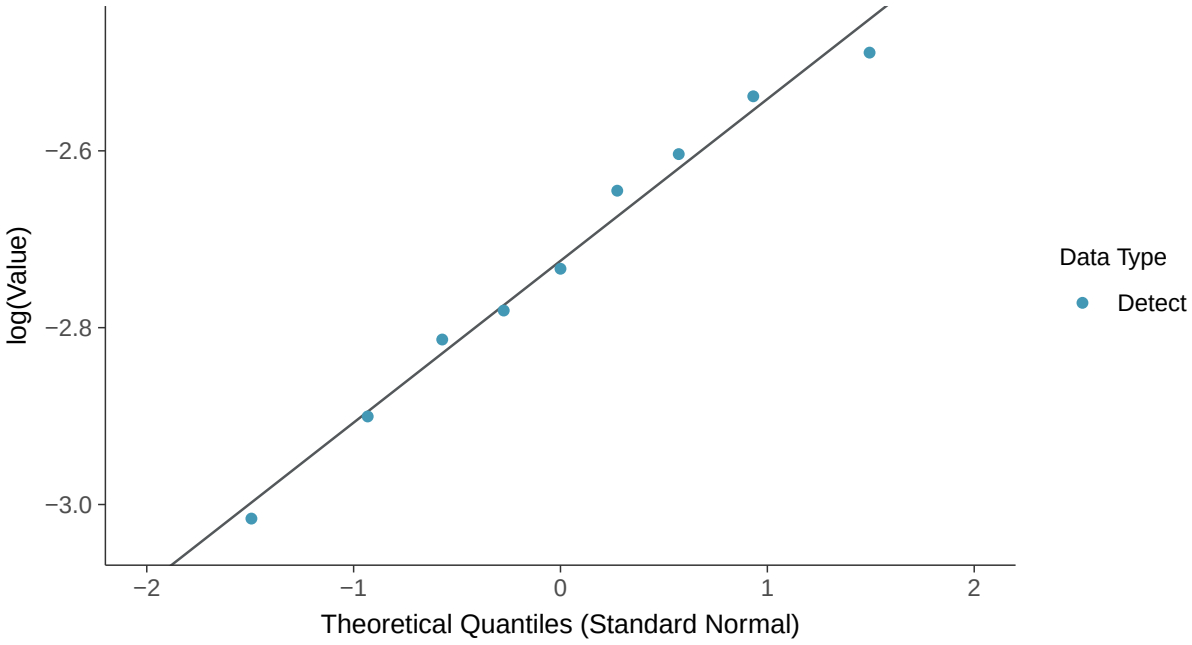
Normal Q-Q plot

Lithium, MW-20 (mg/L)



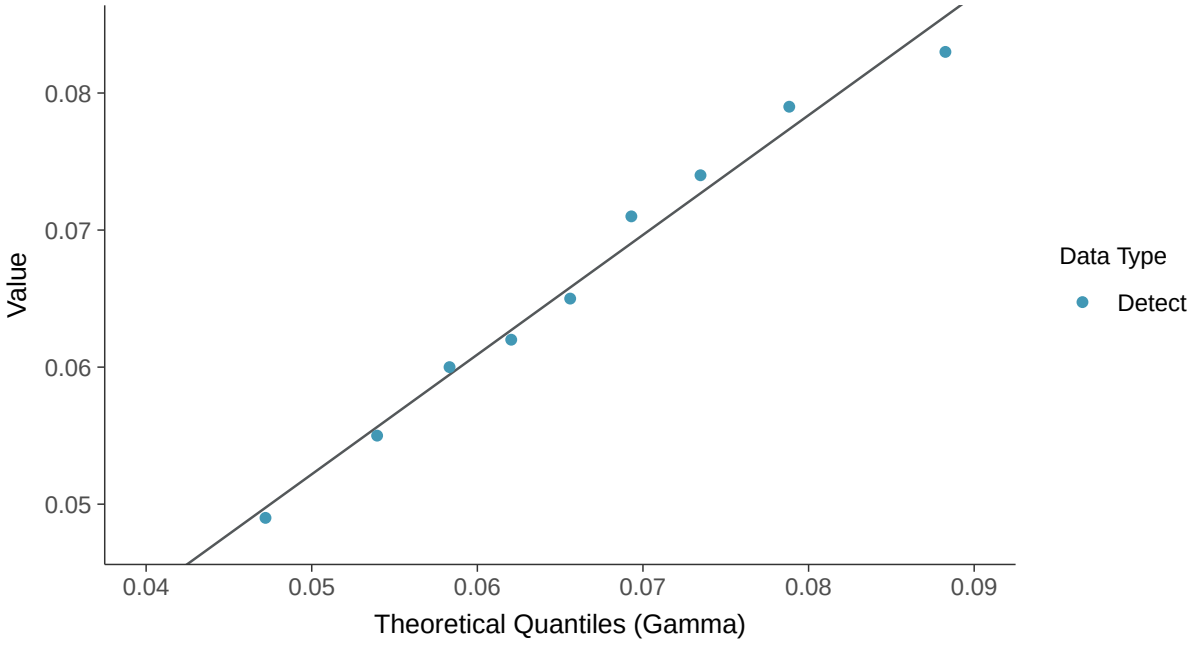
Lognormal Q-Q plot

Lithium, MW-20 (mg/L)



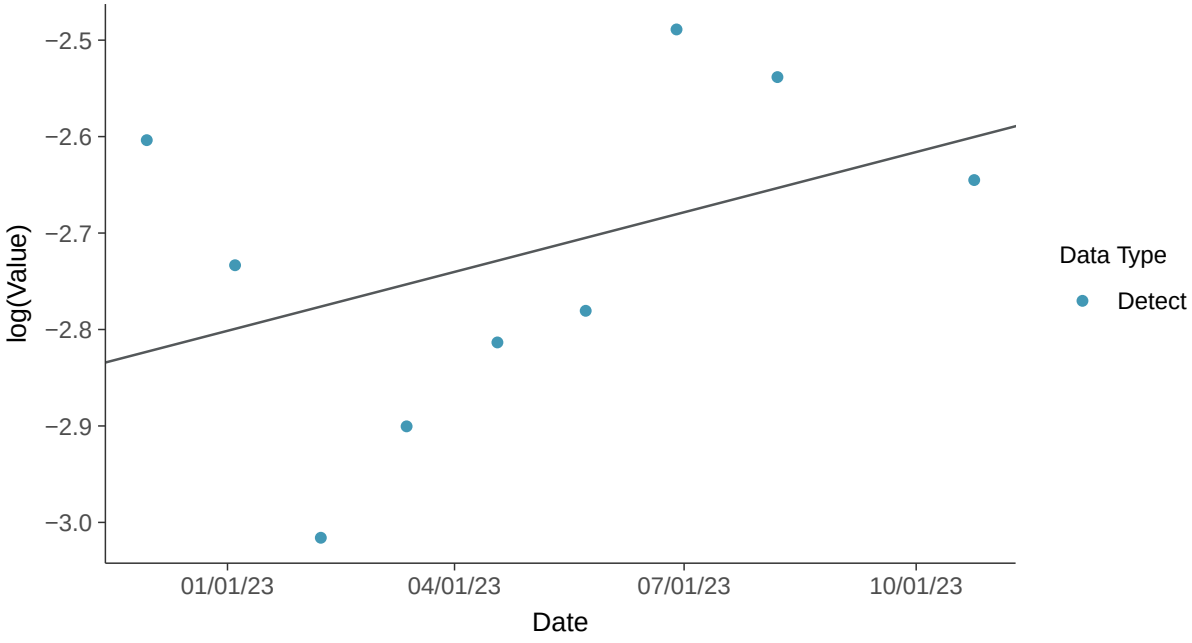
Gamma Q-Q plot

Lithium, MW-20 (mg/L)



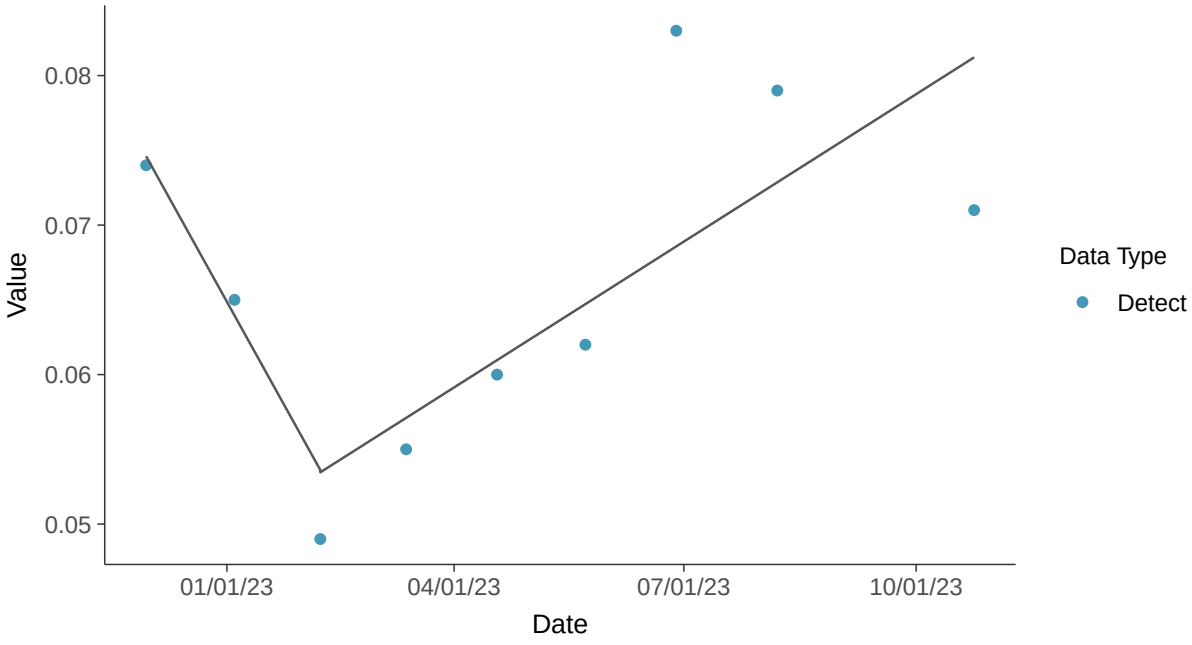
Trend Regression: Lognormal MLE

Lithium, MW-20 (mg/L)



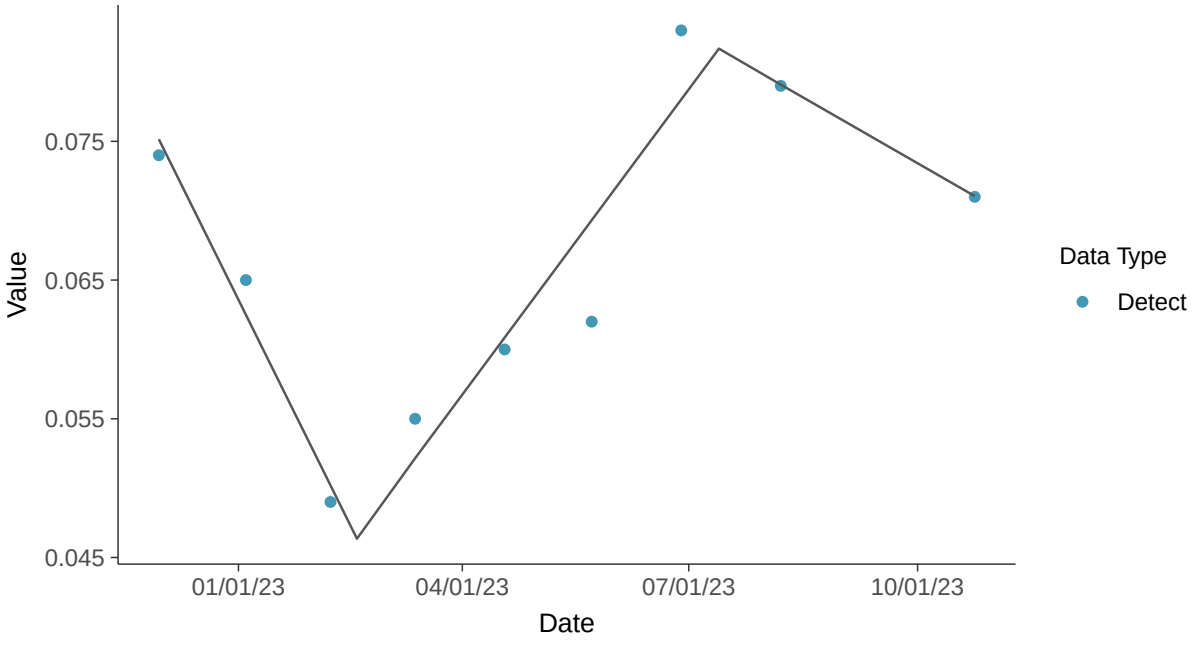
Trend Regression: Piecewise Linear-Linear

Lithium, MW-20 (mg/L)



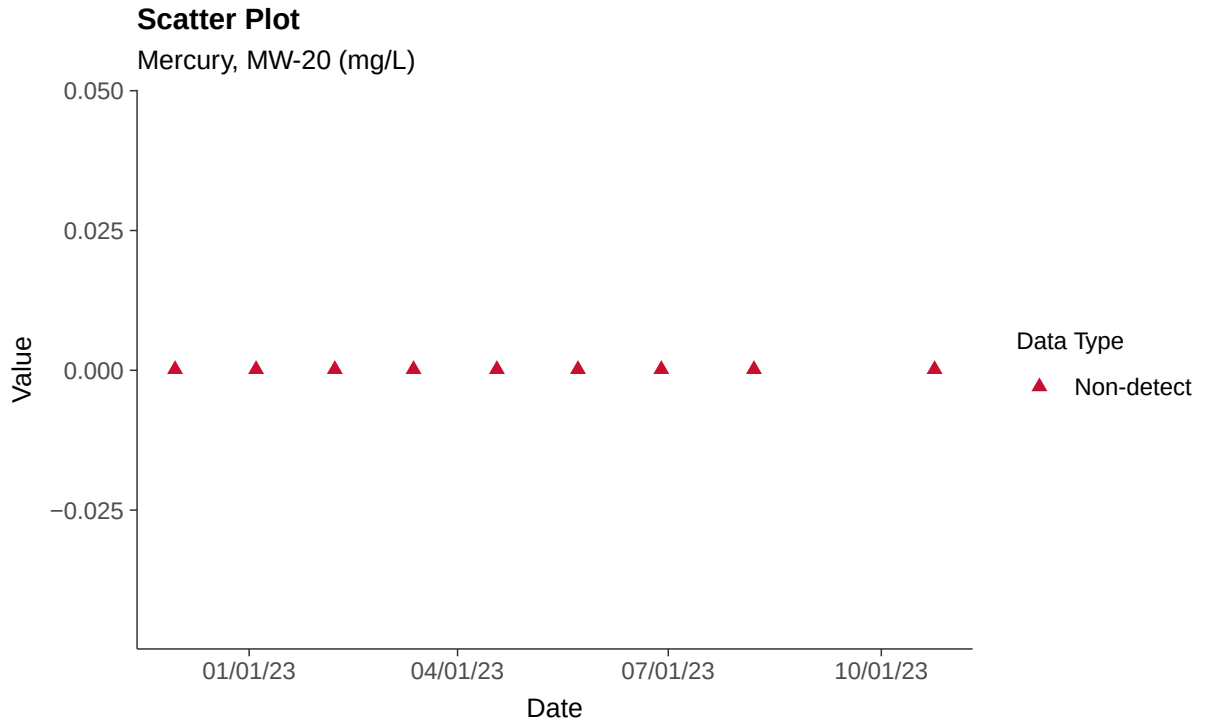
Trend Regression: Piecewise Linear-Linear-Linear

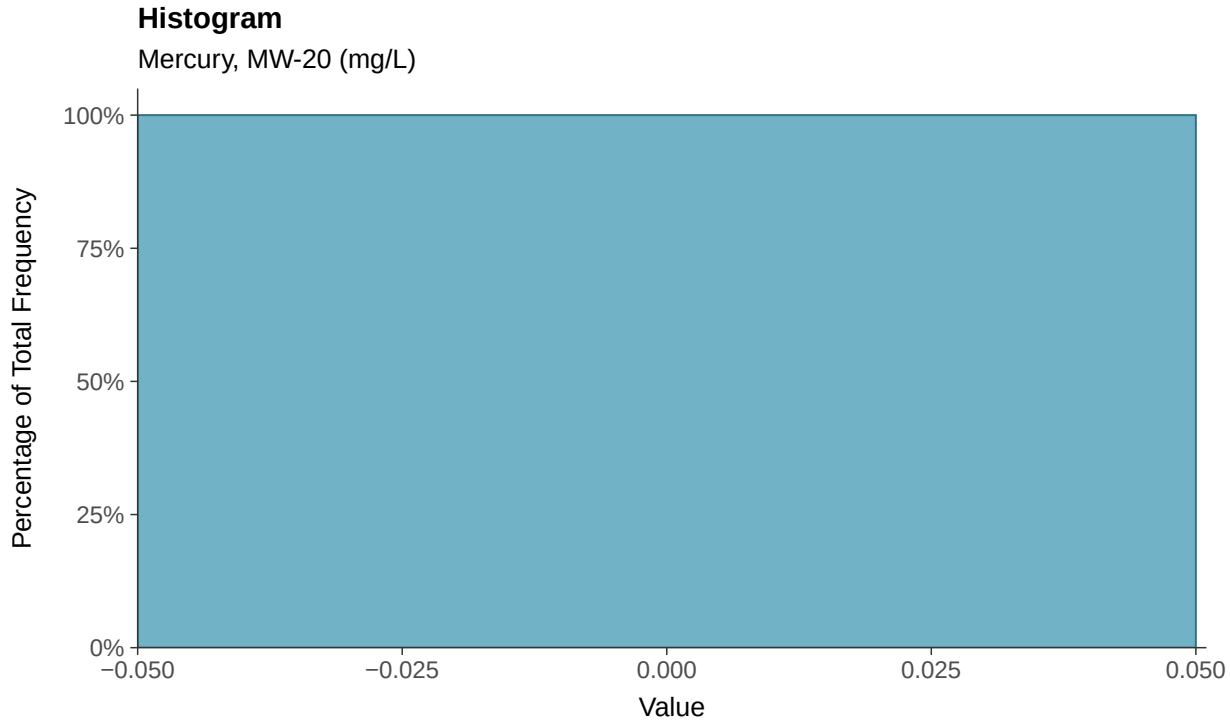
Lithium, MW-20 (mg/L)



Appendix IV: Mercury, MW-20

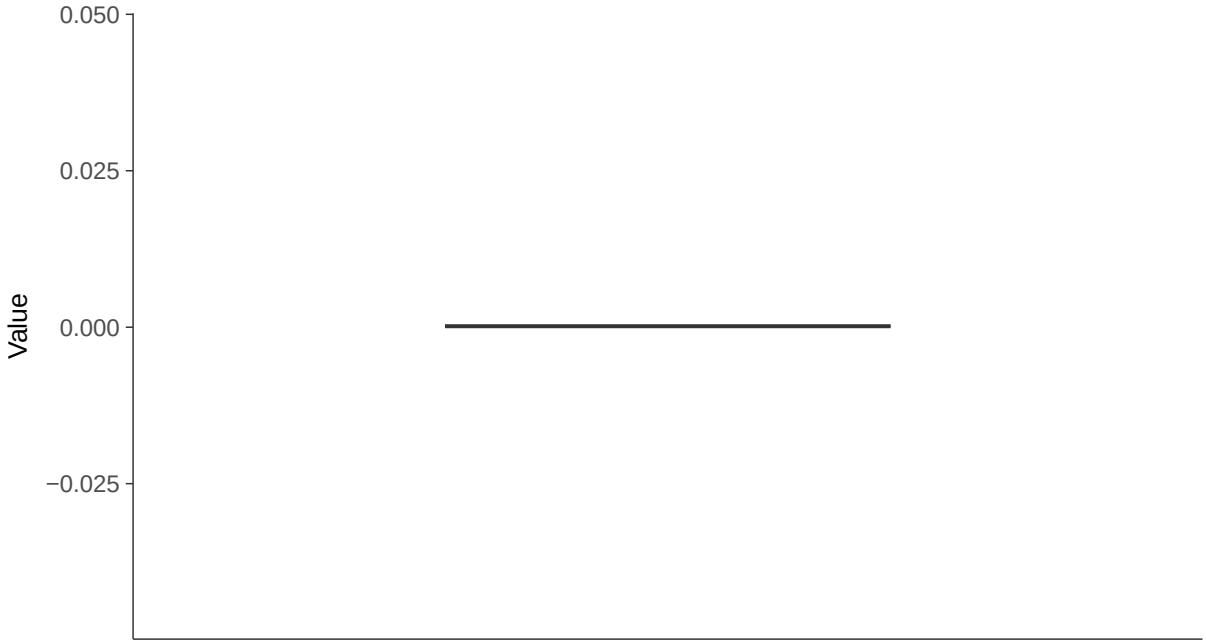
ID: 1_24_5_117





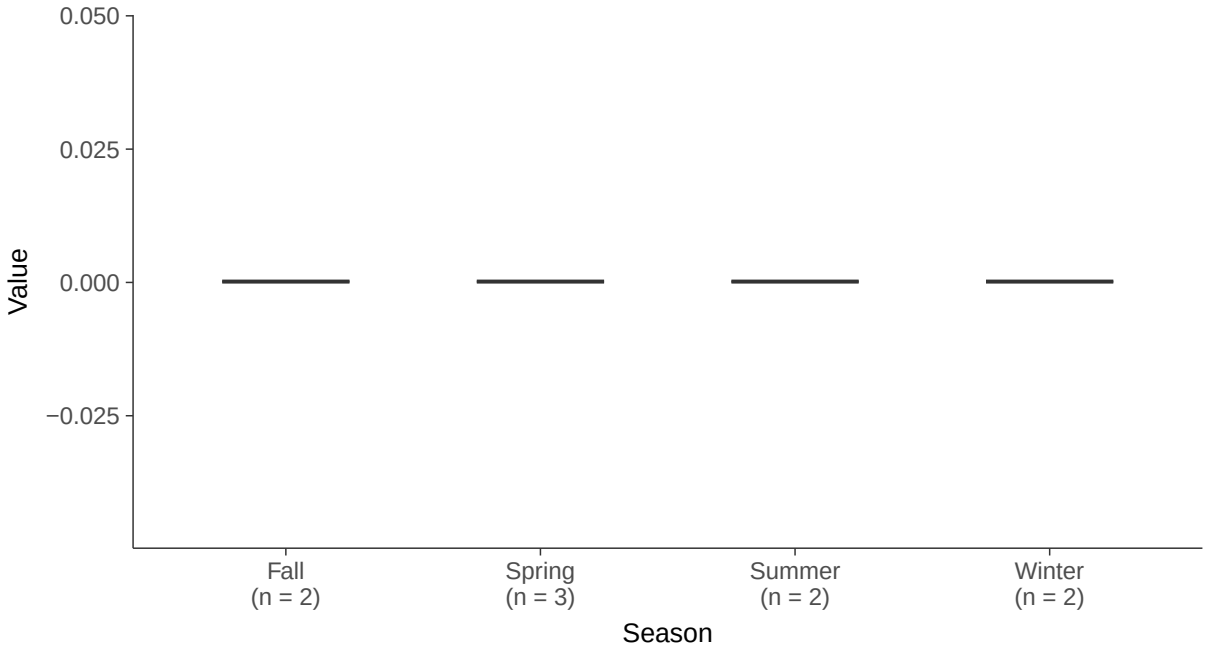
Boxplot

Mercury, MW-20 (mg/L)



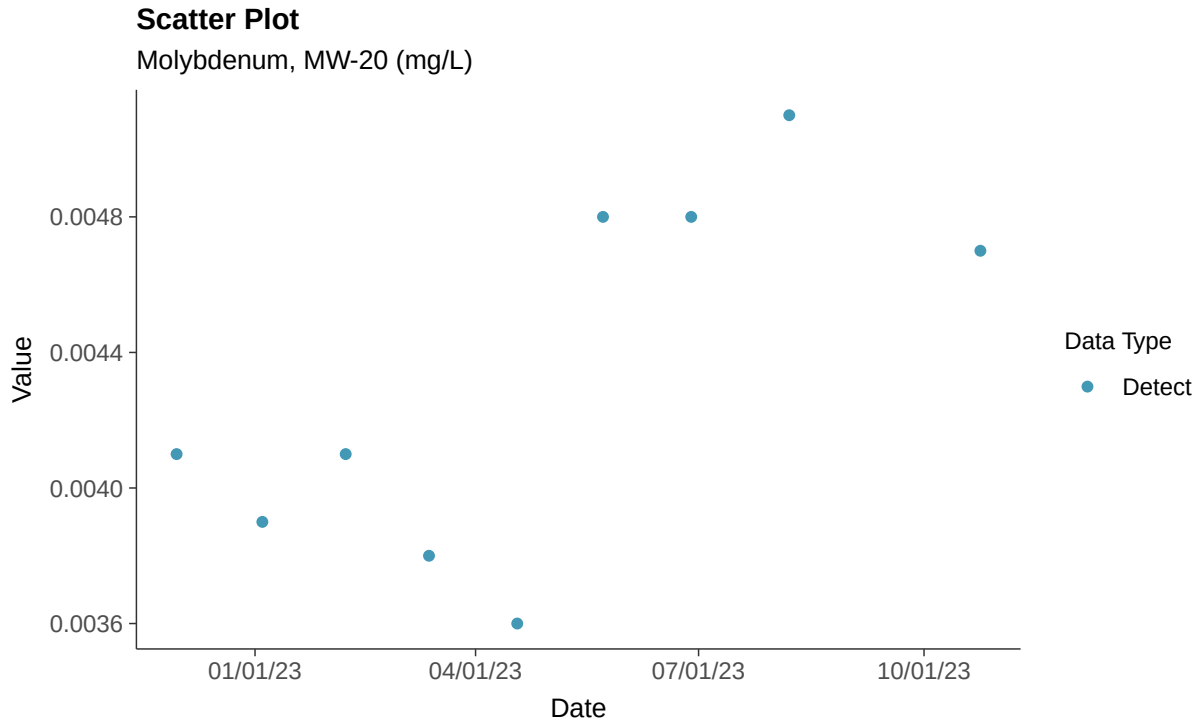
Boxplot by Season

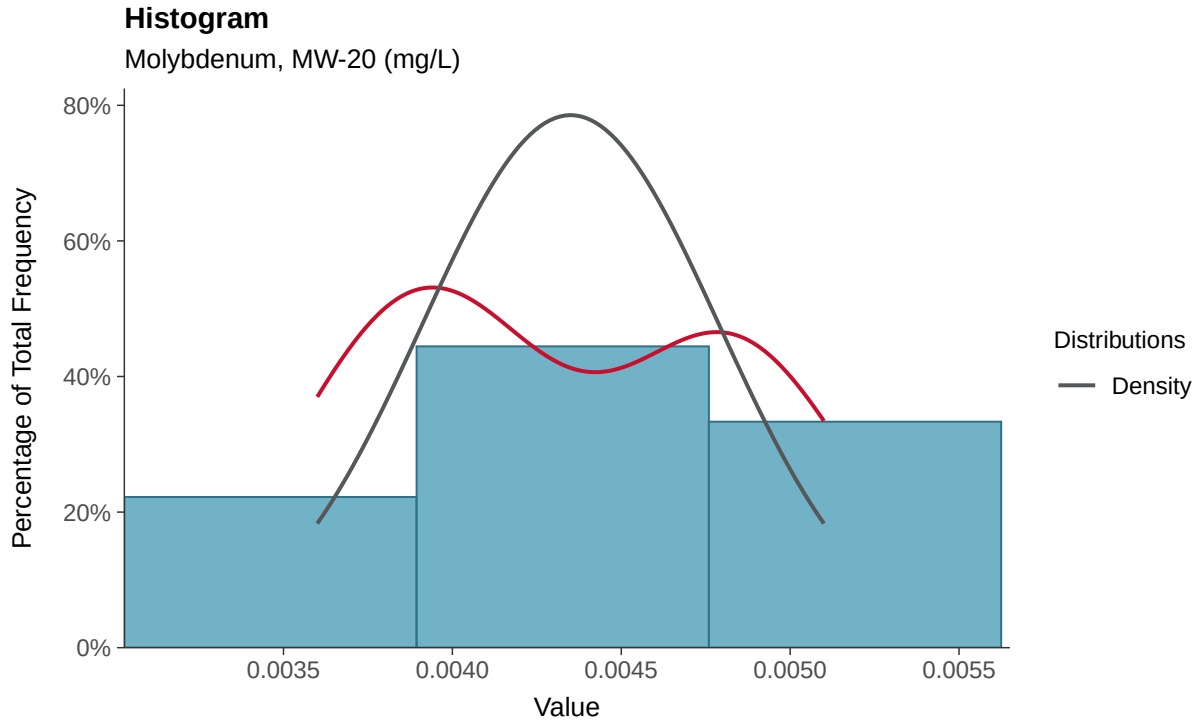
Mercury, MW-20 (mg/L)



Appendix IV: Molybdenum, MW-20

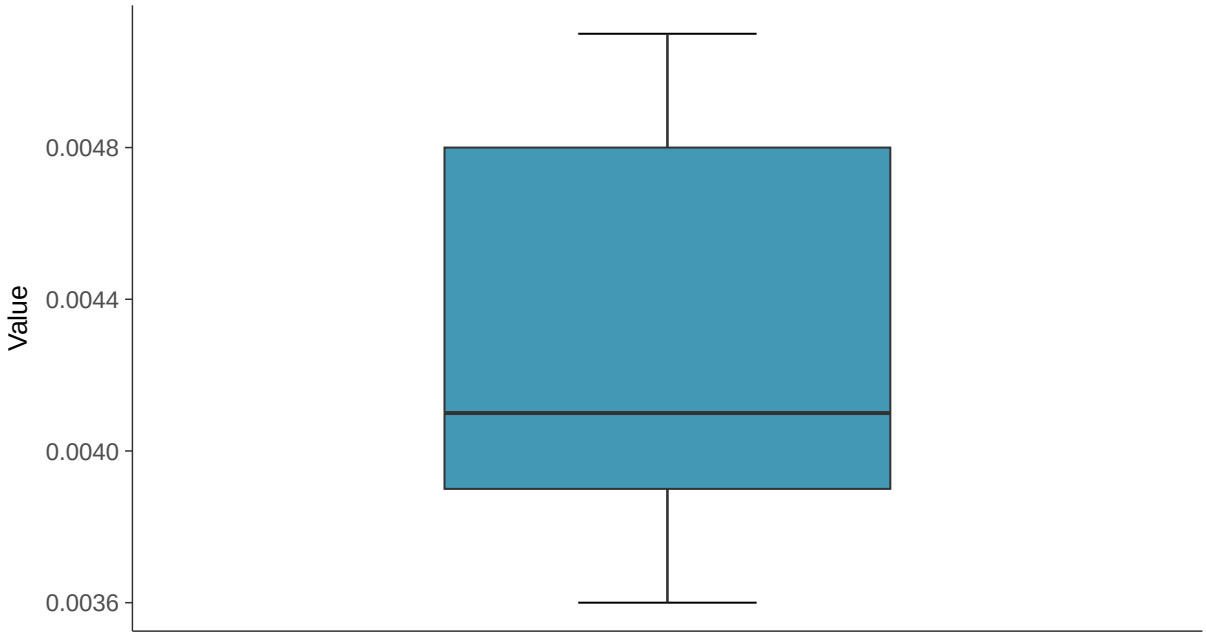
ID: 1_24_5_118





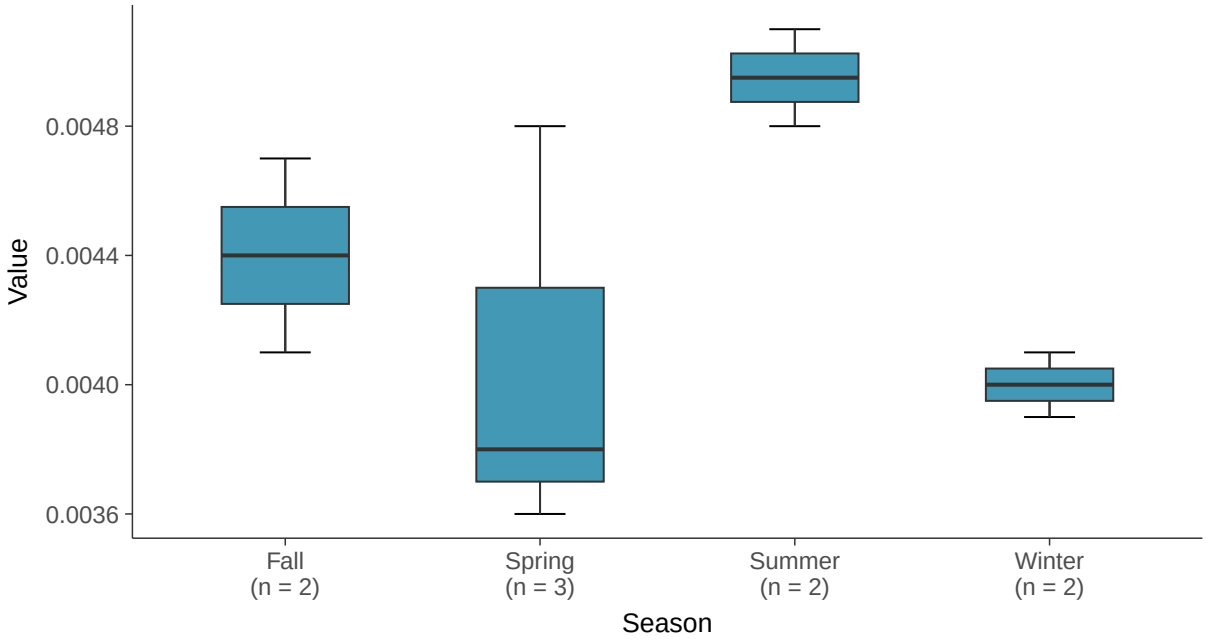
Boxplot

Molybdenum, MW-20 (mg/L)



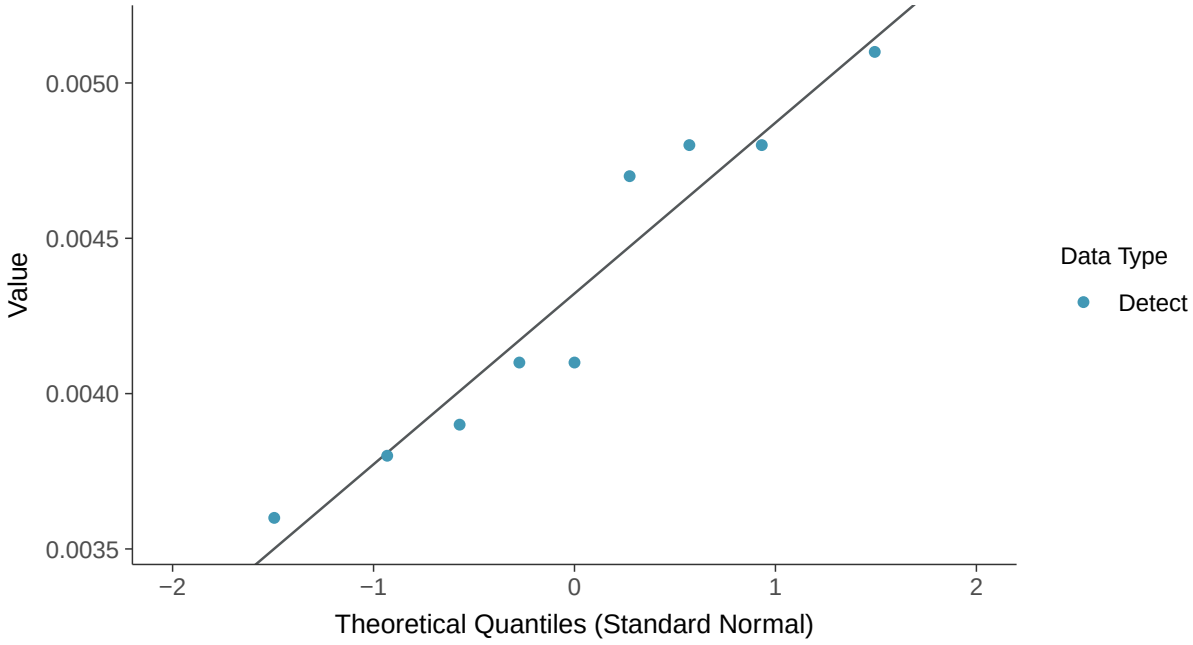
Boxplot by Season

Molybdenum, MW-20 (mg/L)



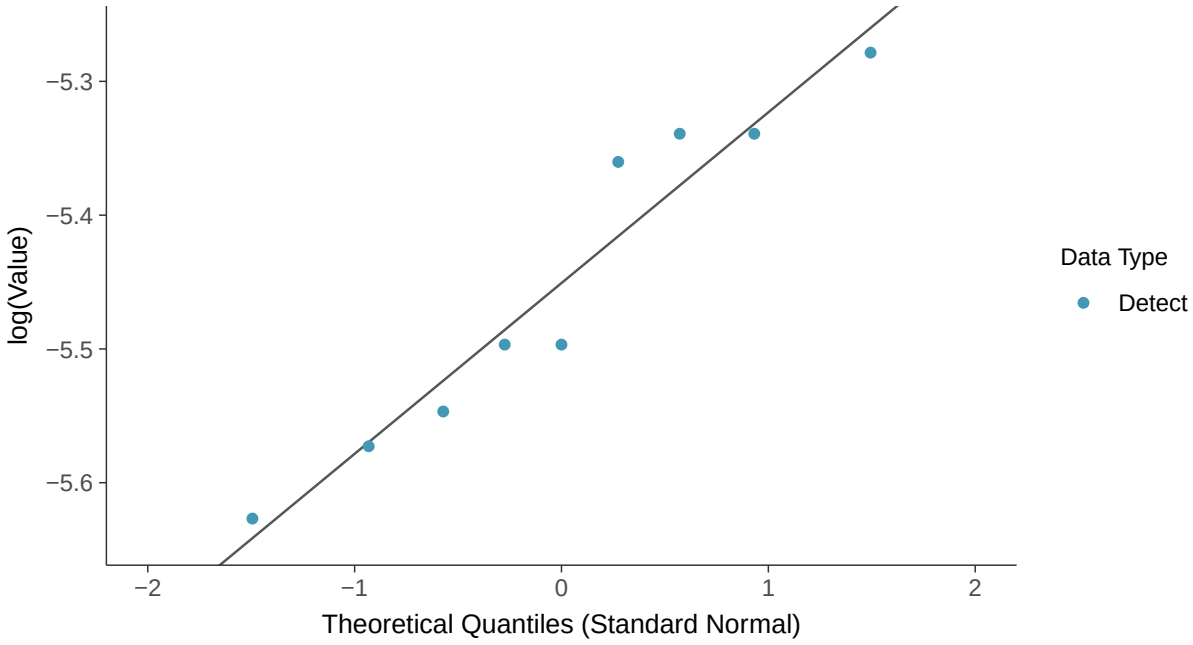
Normal Q-Q plot

Molybdenum, MW-20 (mg/L)



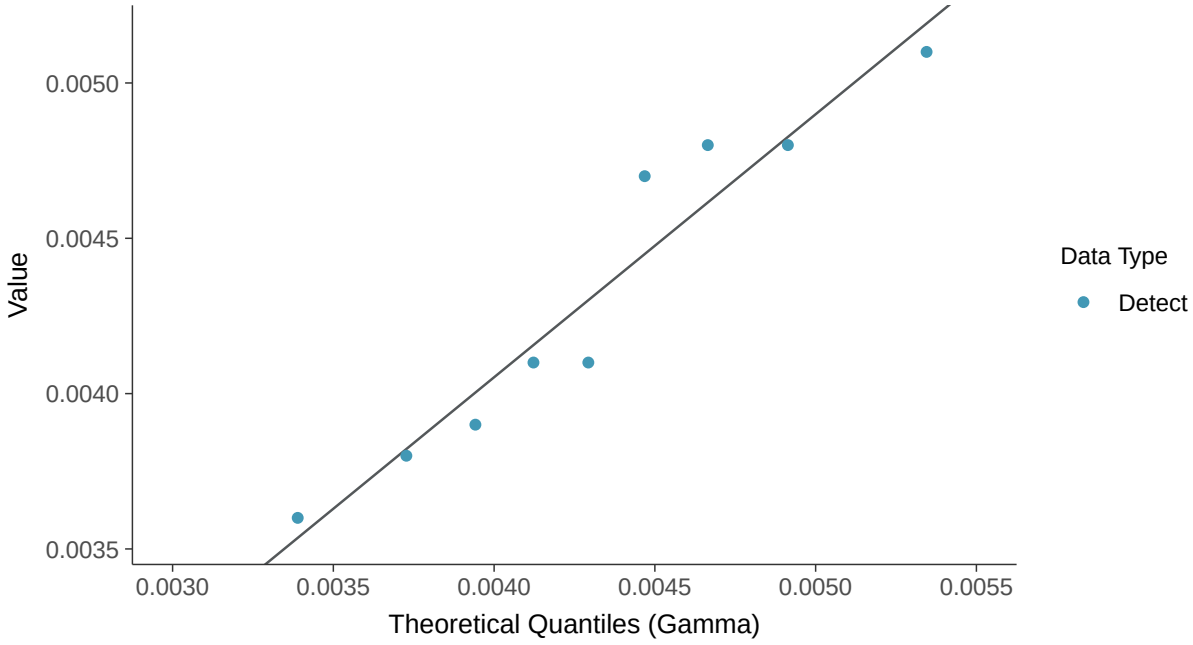
Lognormal Q-Q plot

Molybdenum, MW-20 (mg/L)



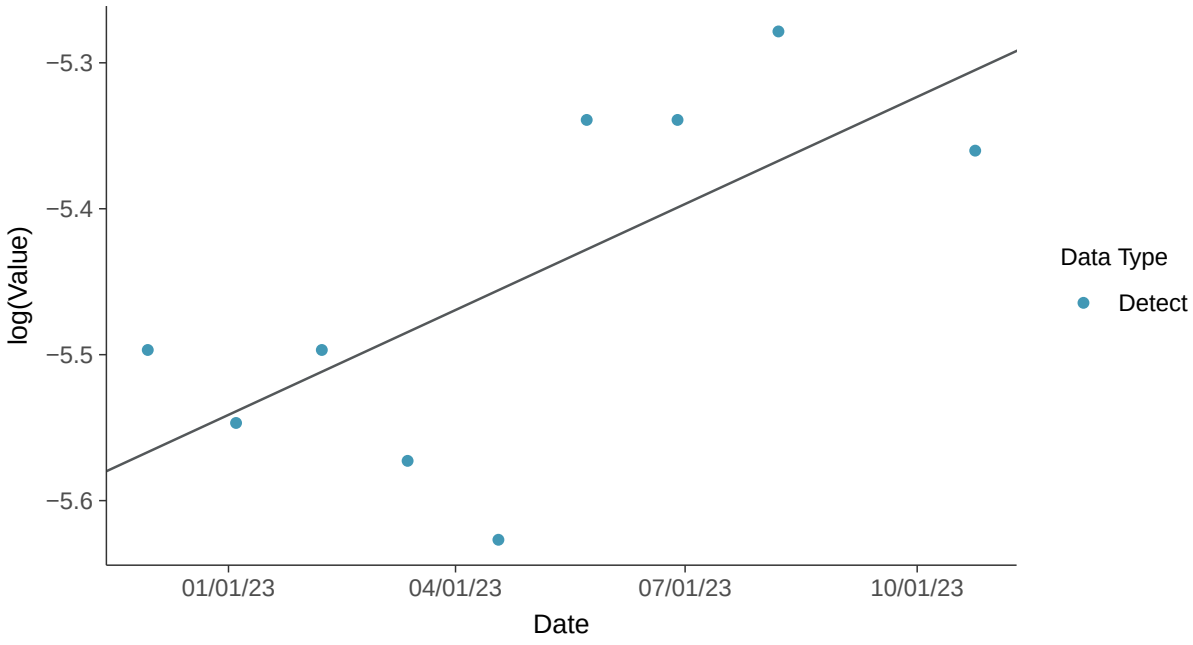
Gamma Q-Q plot

Molybdenum, MW-20 (mg/L)



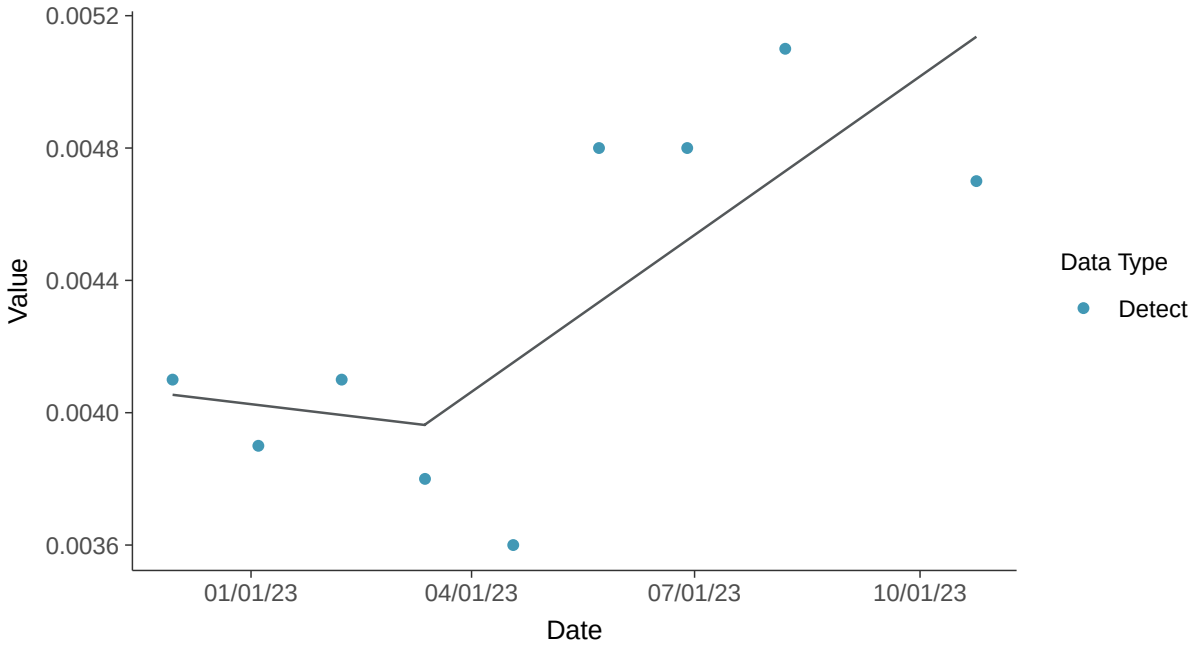
Trend Regression: Lognormal MLE

Molybdenum, MW-20 (mg/L)



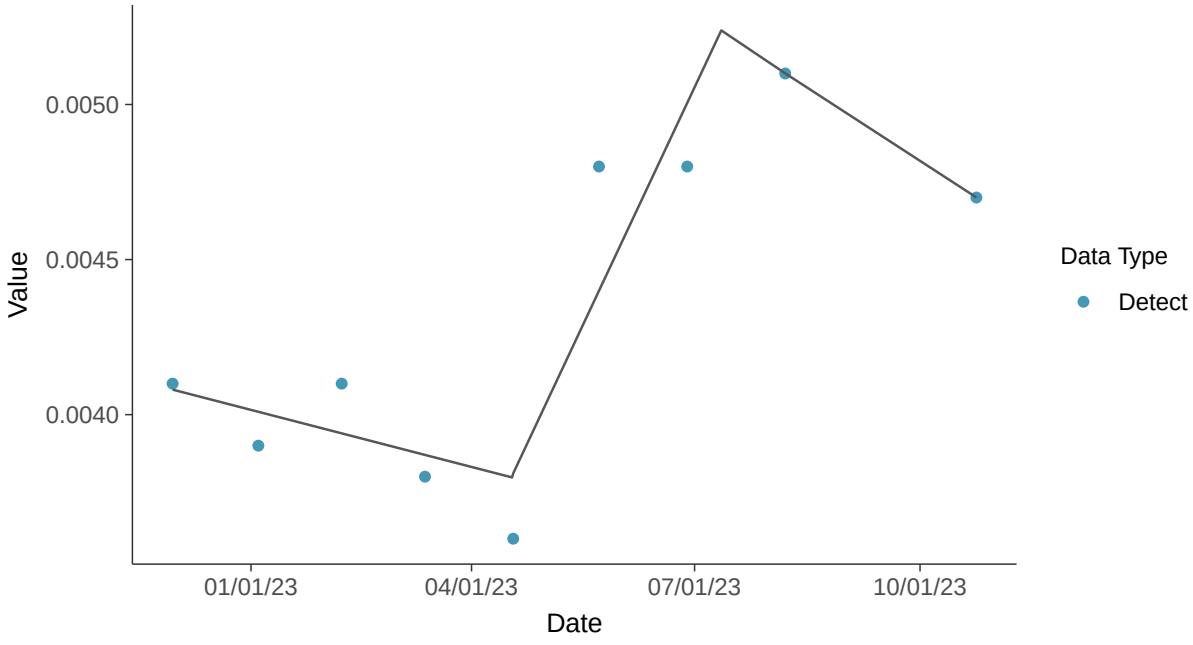
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-20 (mg/L)



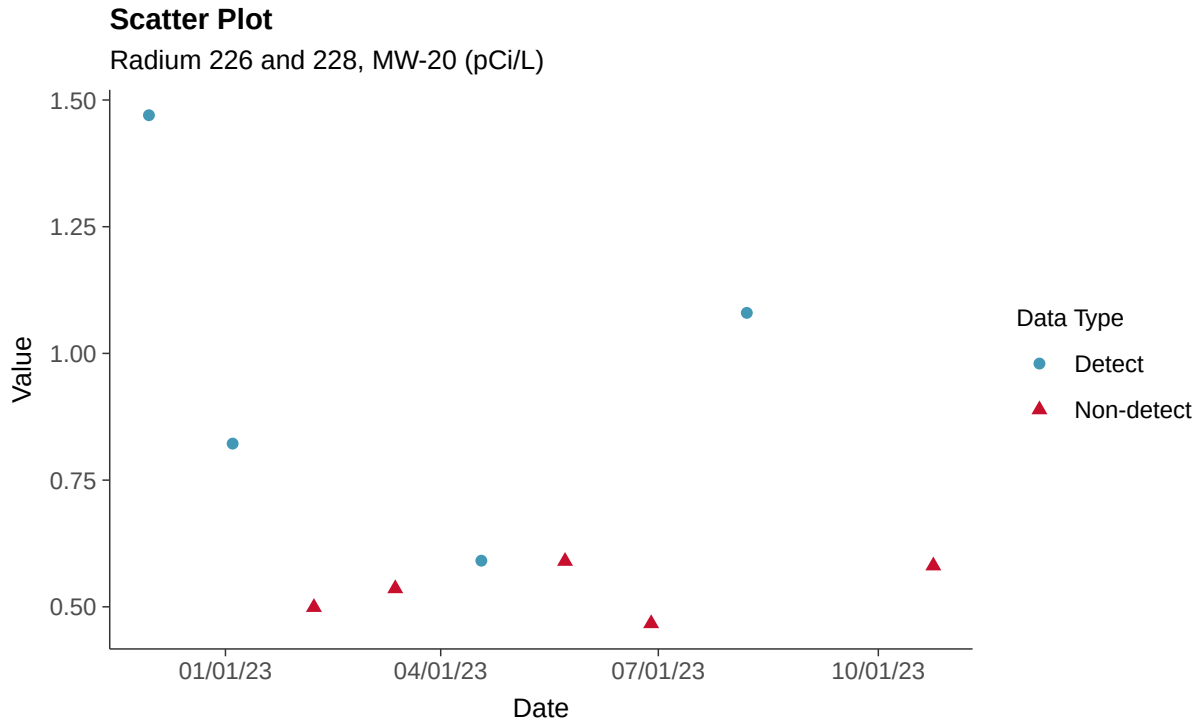
Trend Regression: Piecewise Linear-Linear-Linear

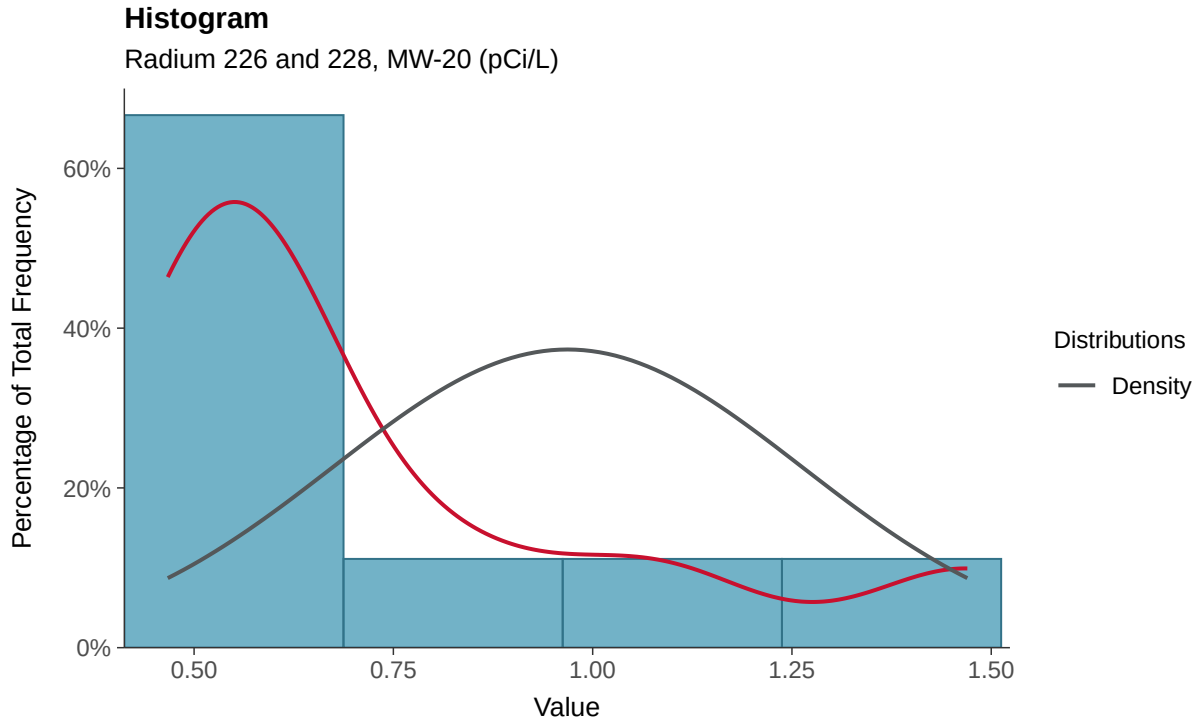
Molybdenum, MW-20 (mg/L)



Appendix IV: Radium 226 and 228, MW-20

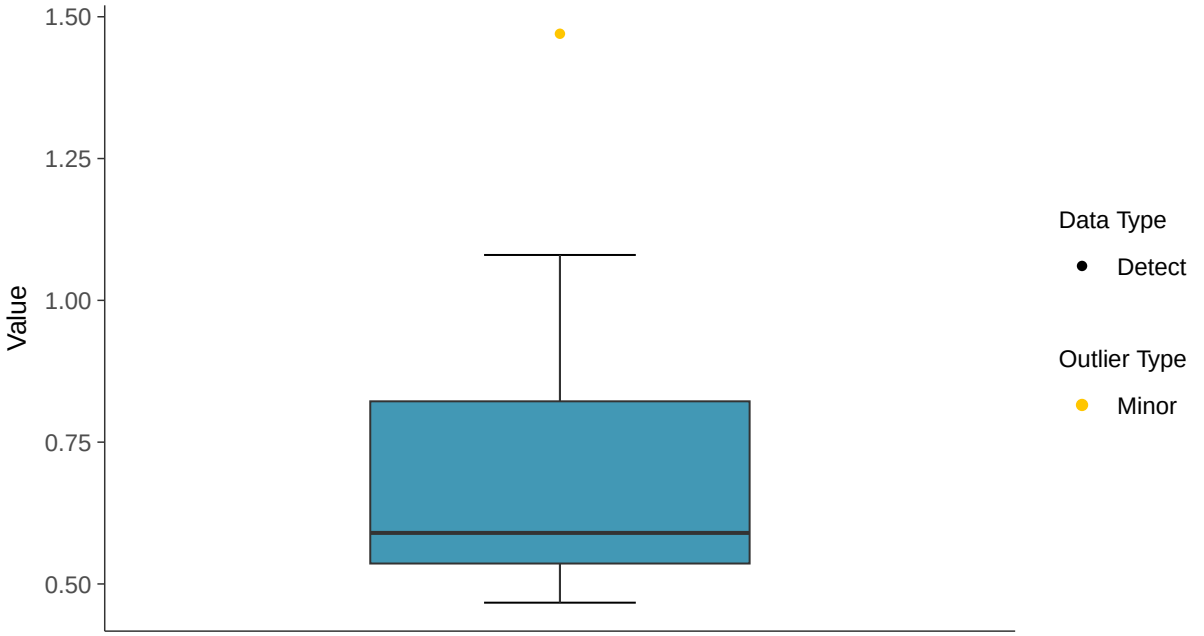
ID: 1_24_5_121





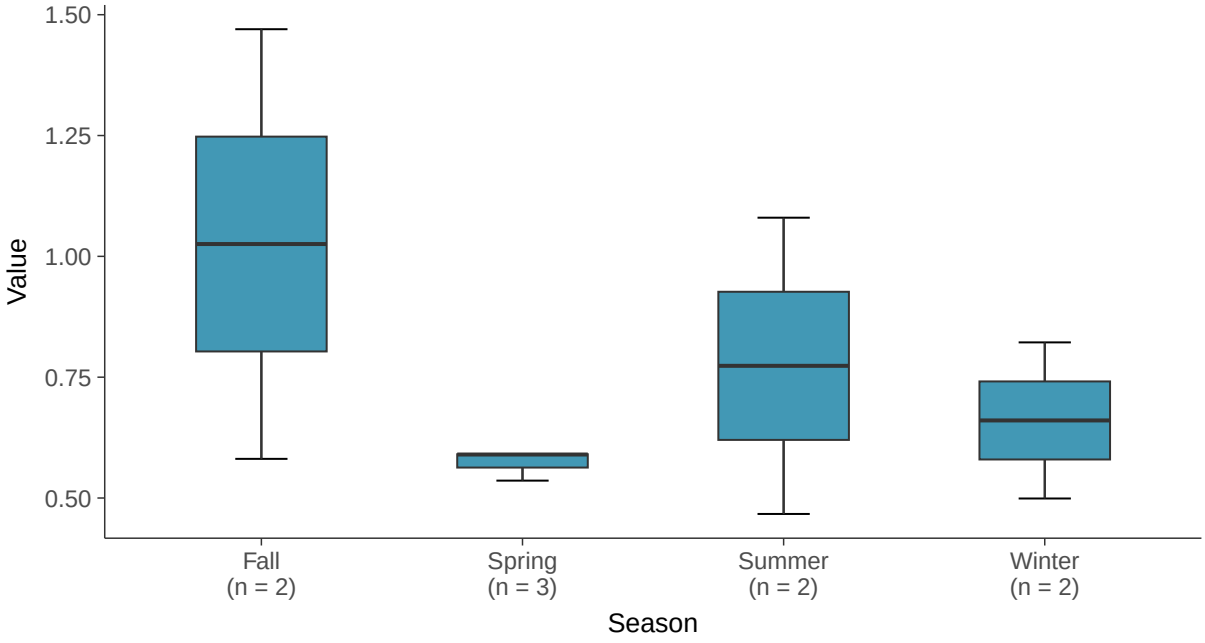
Boxplot

Radium 226 and 228, MW-20 (pCi/L)



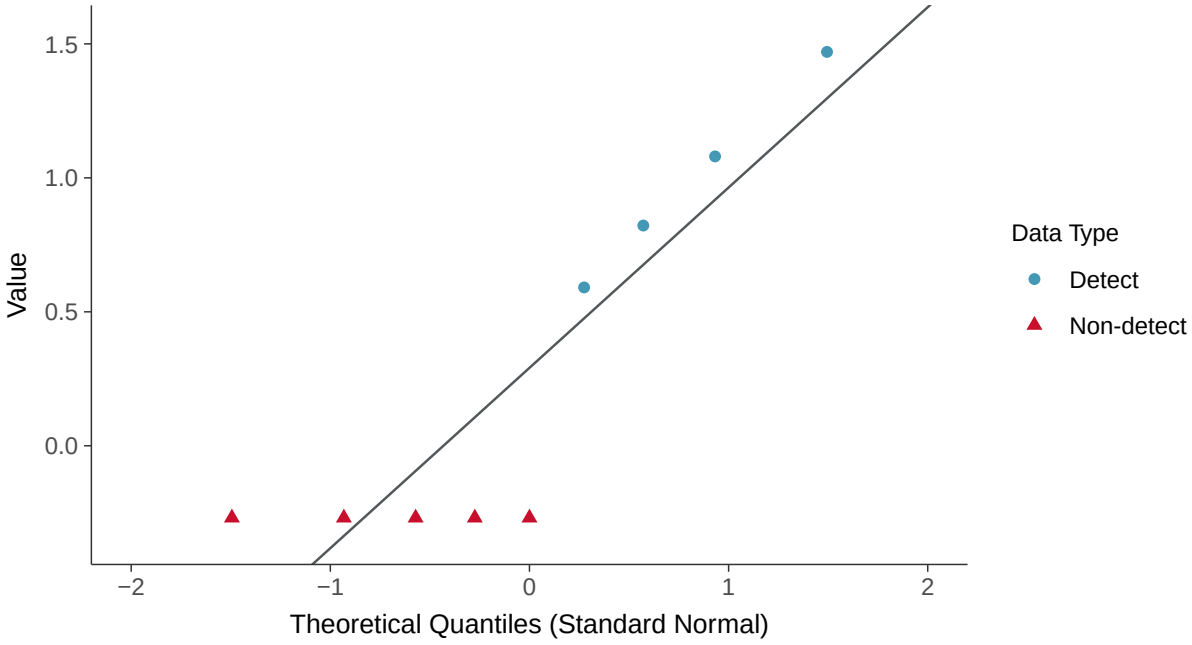
Boxplot by Season

Radium 226 and 228, MW-20 (pCi/L)



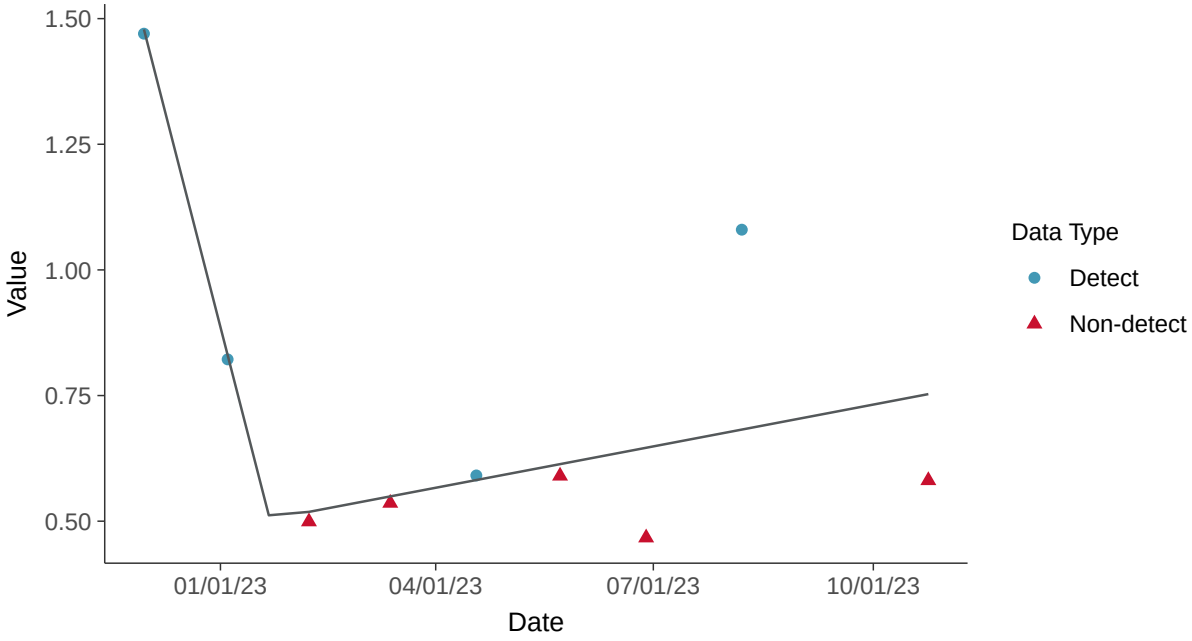
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-20 (pCi/L)



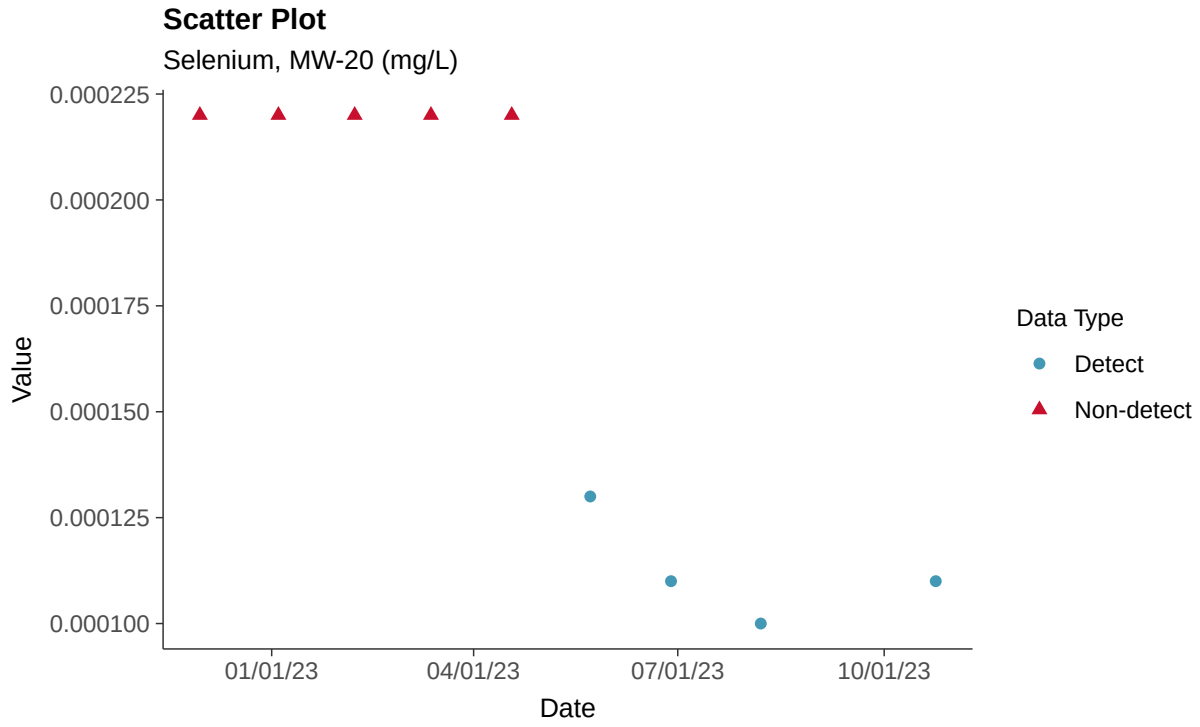
Trend Regression: Piecewise Linear-Linear

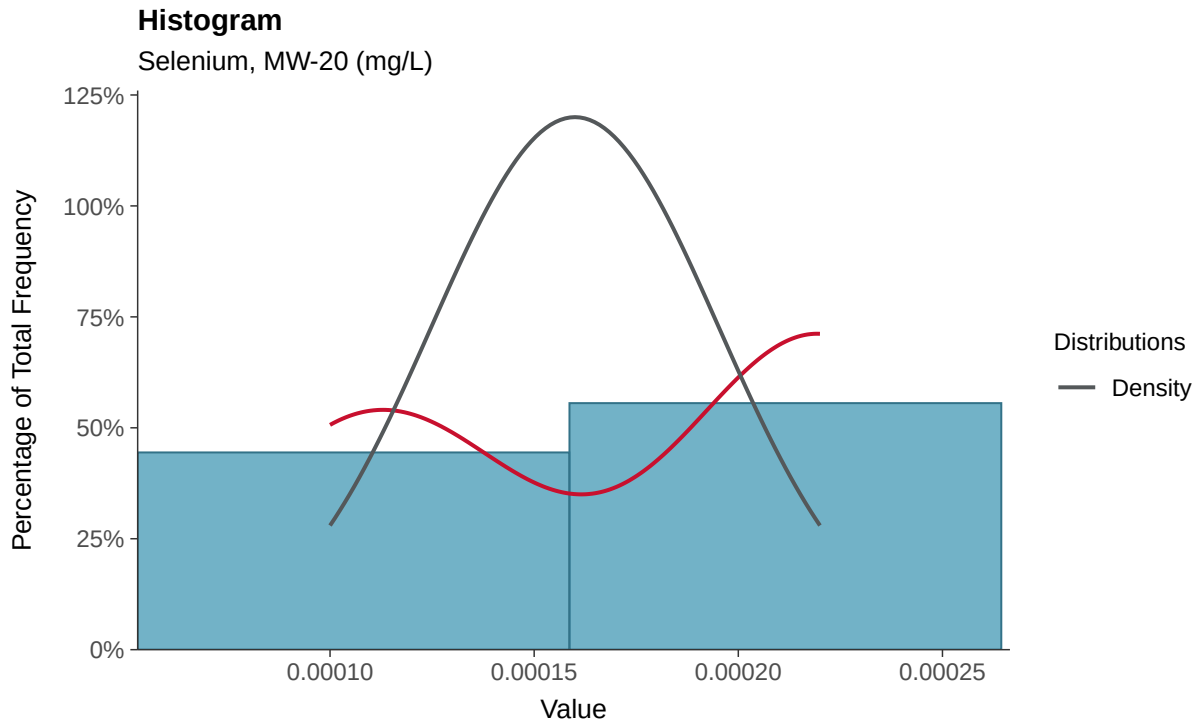
Radium 226 and 228, MW-20 (pCi/L)



Appendix IV: Selenium, MW-20

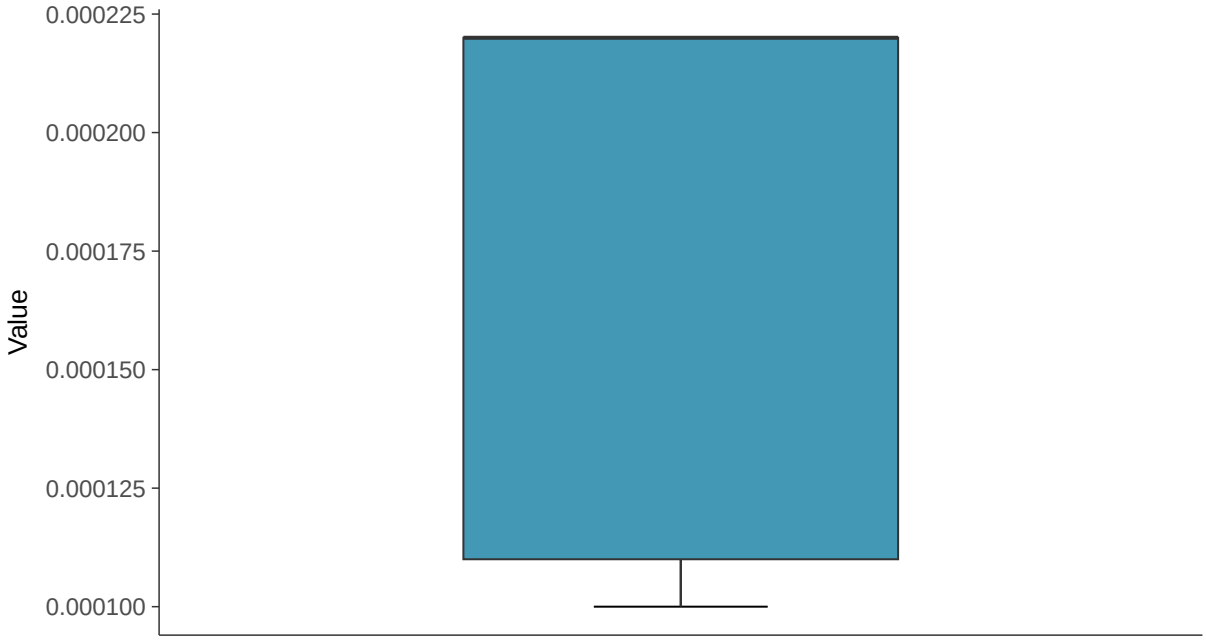
ID: 1_24_5_122





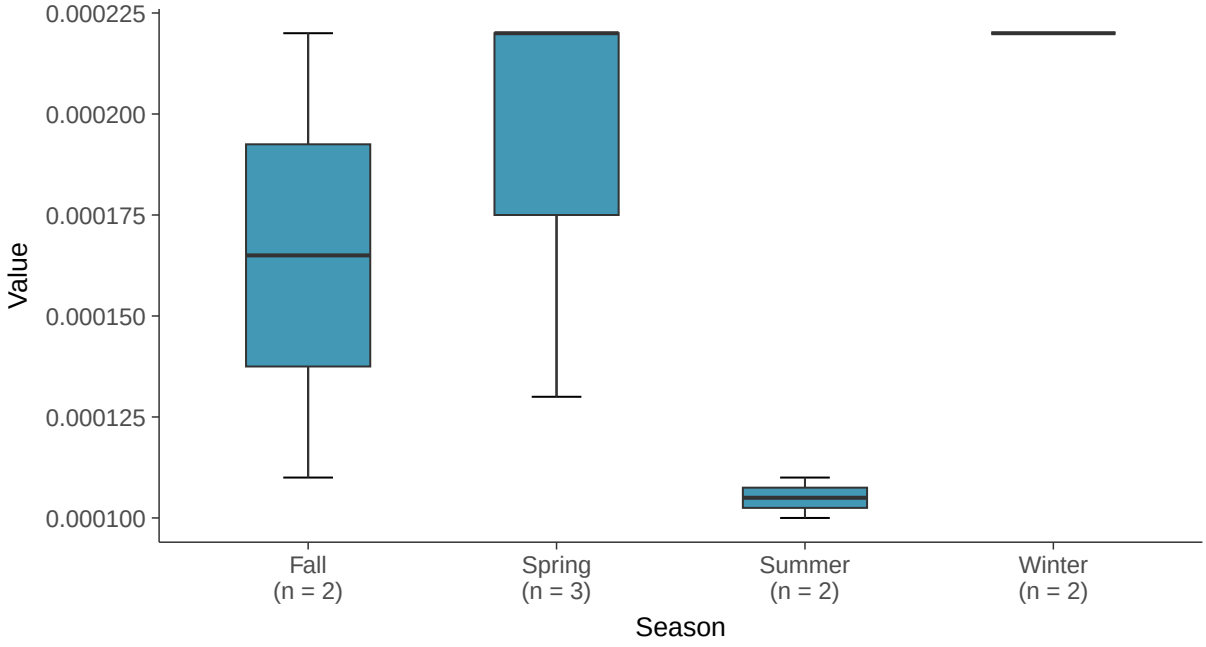
Boxplot

Selenium, MW-20 (mg/L)



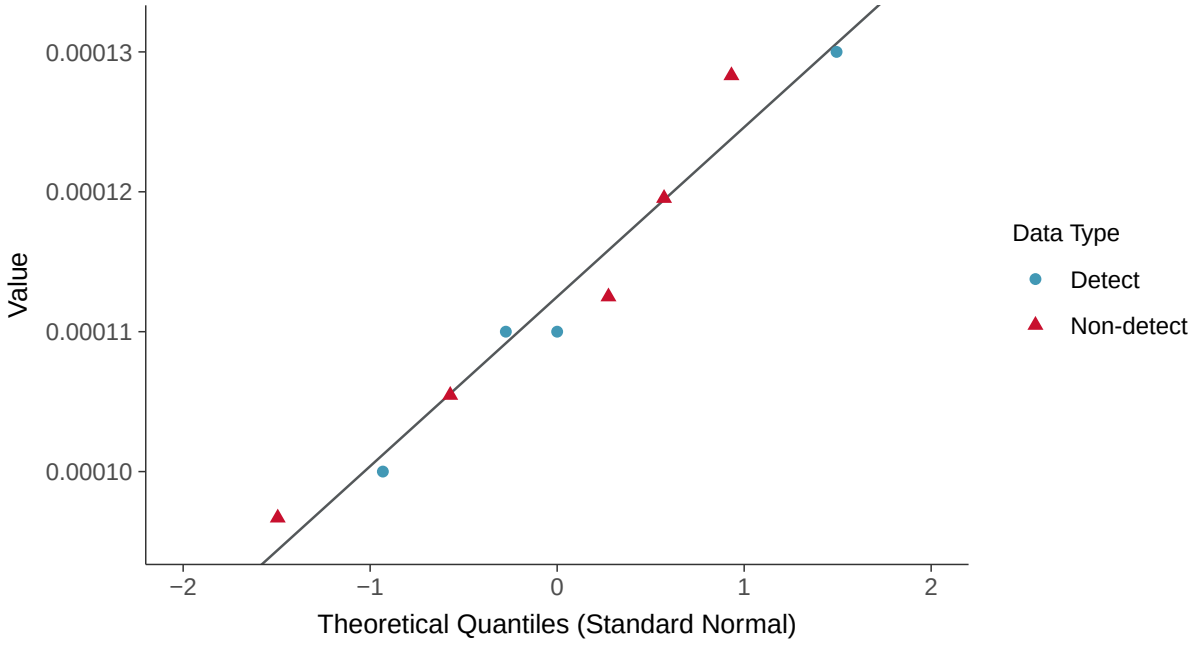
Boxplot by Season

Selenium, MW-20 (mg/L)



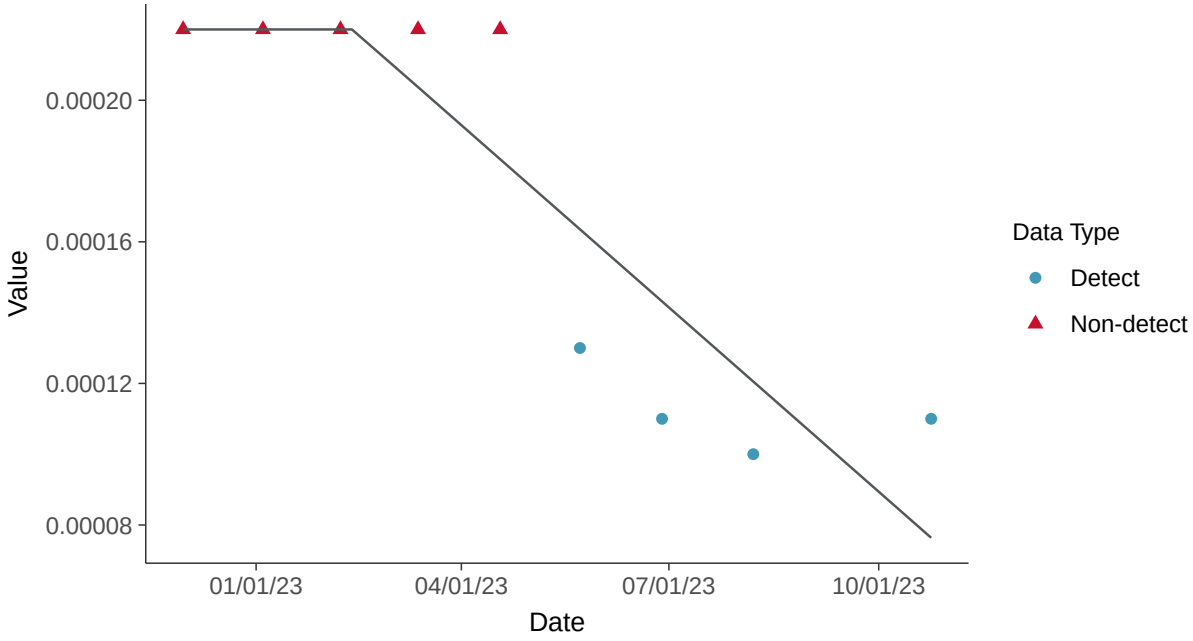
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-20 (mg/L)



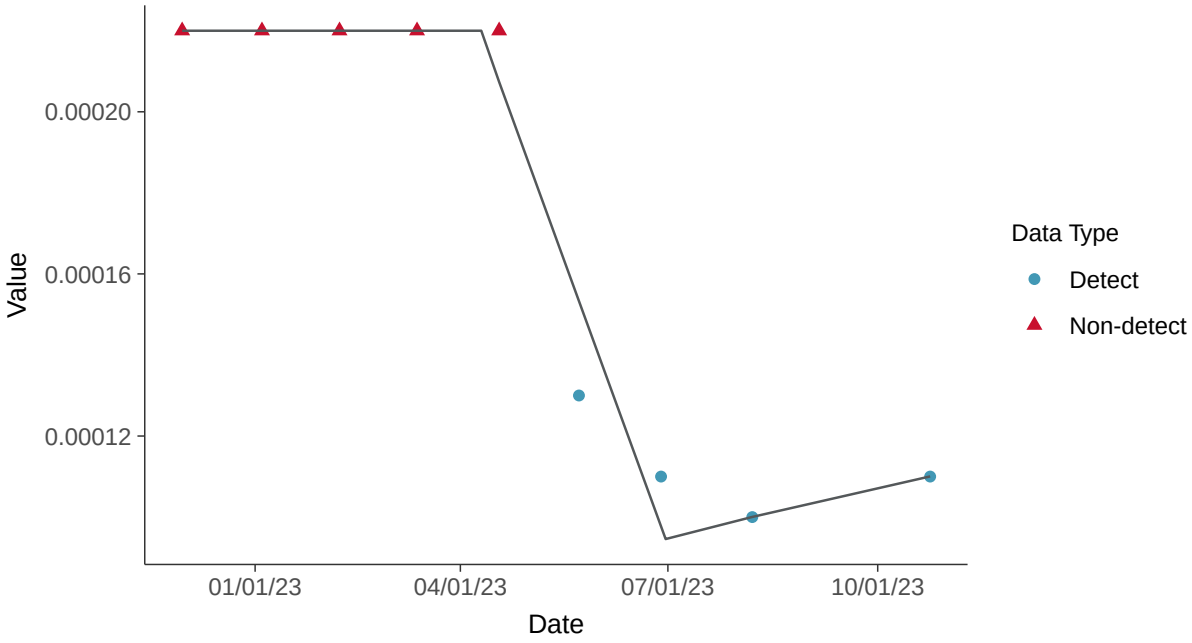
Trend Regression: Piecewise Linear-Linear

Selenium, MW-20 (mg/L)



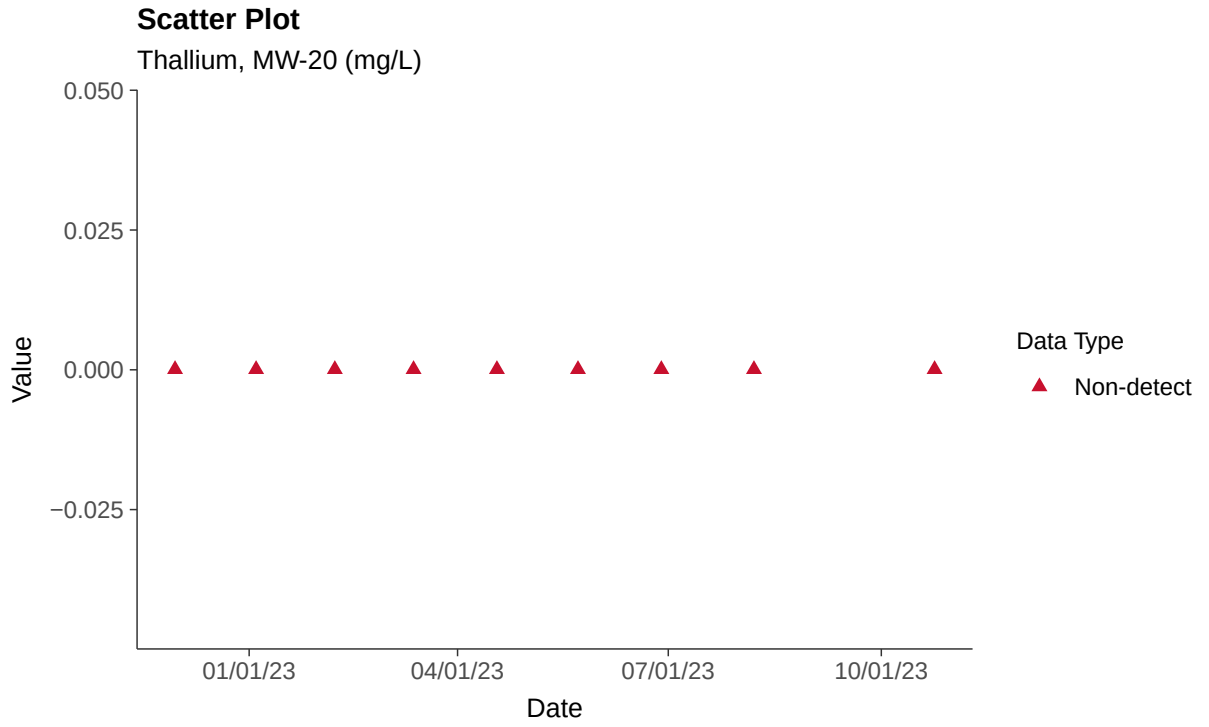
Trend Regression: Piecewise Linear-Linear-Linear

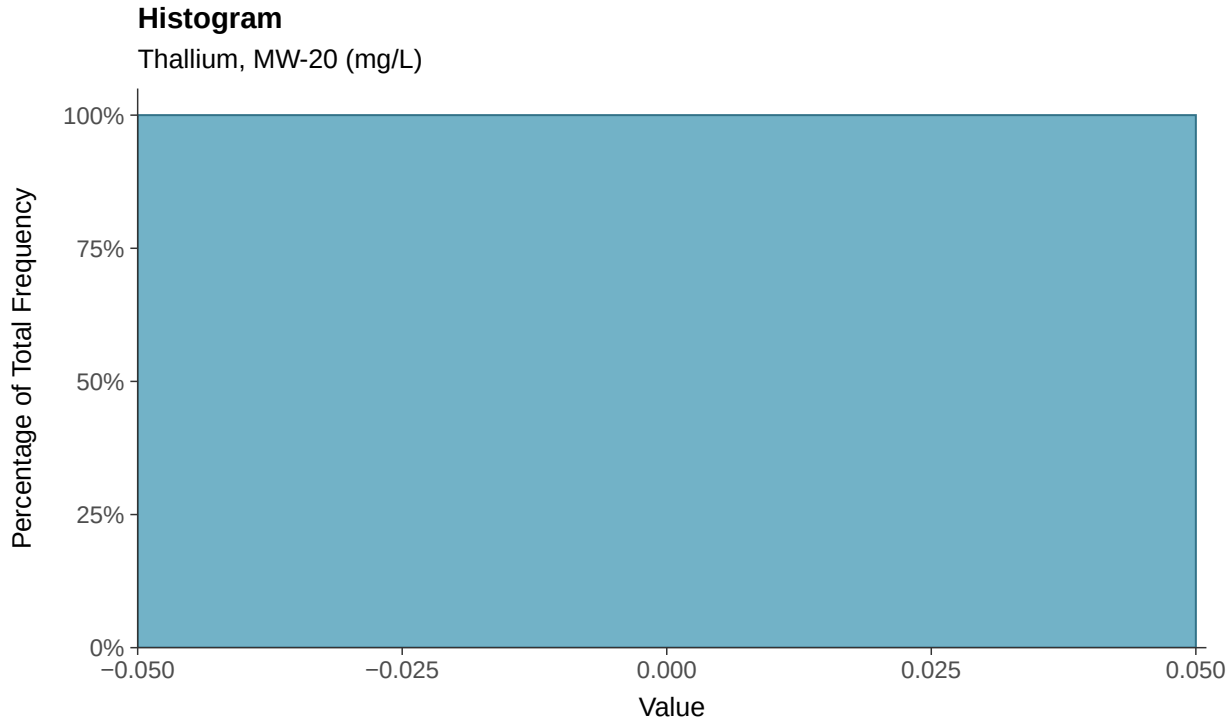
Selenium, MW-20 (mg/L)



Appendix IV: Thallium, MW-20

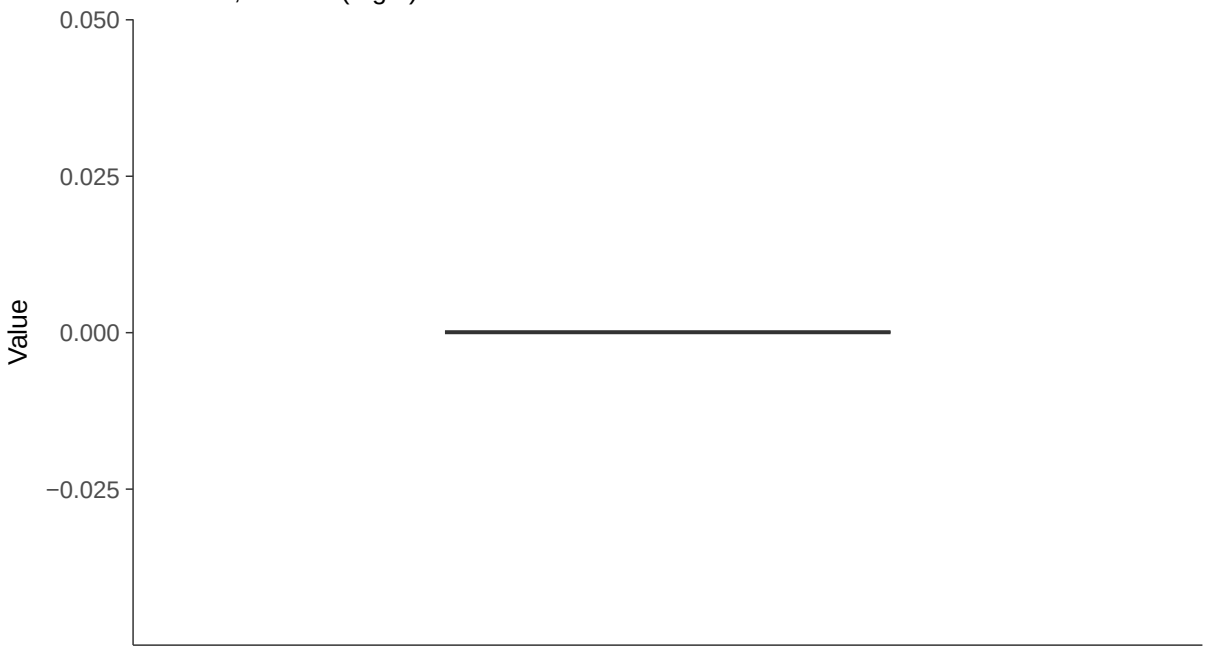
ID: 1_24_5_125





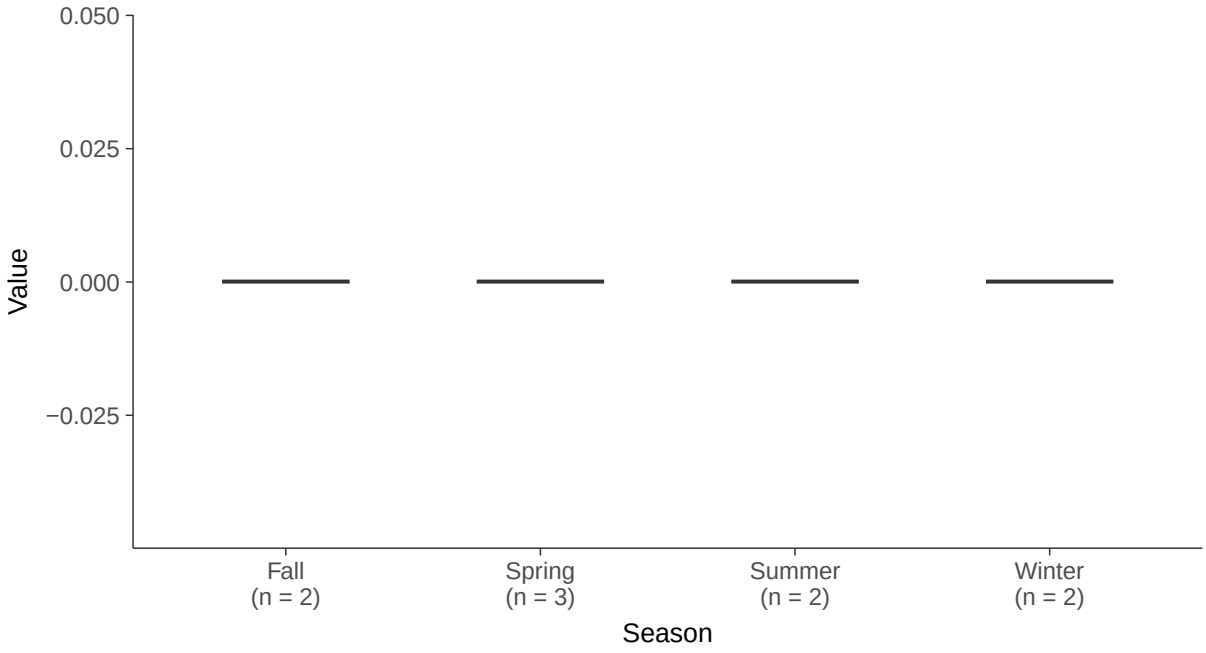
Boxplot

Thallium, MW-20 (mg/L)



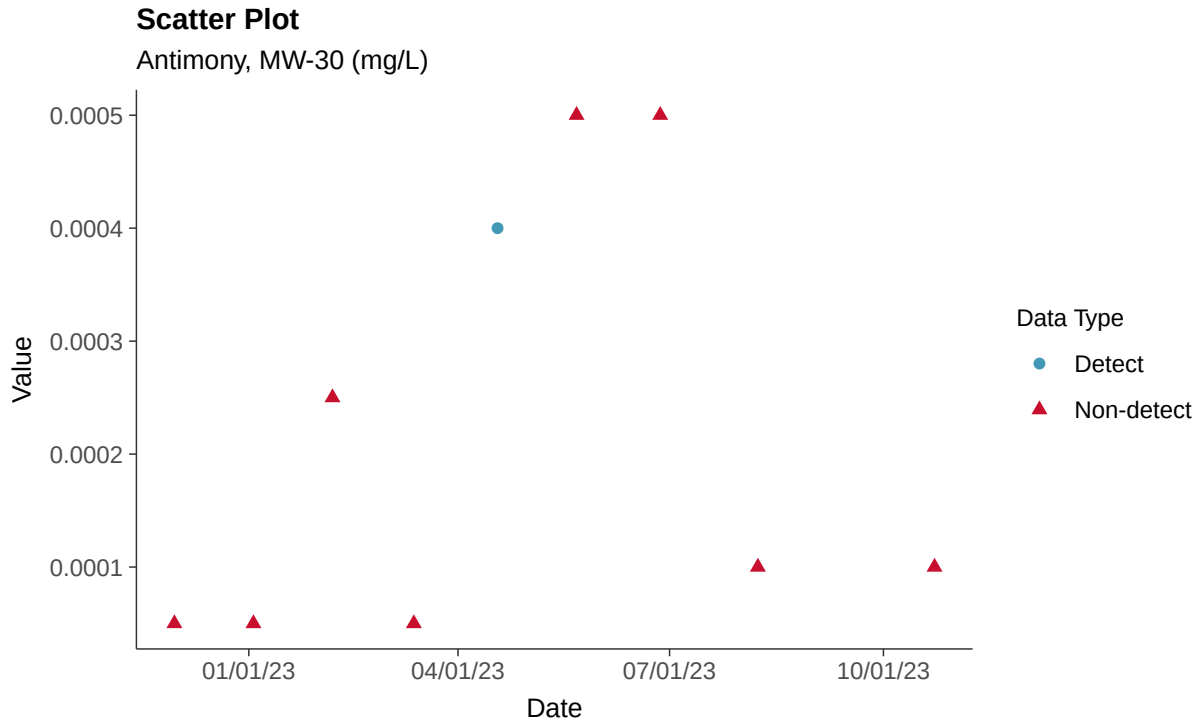
Boxplot by Season

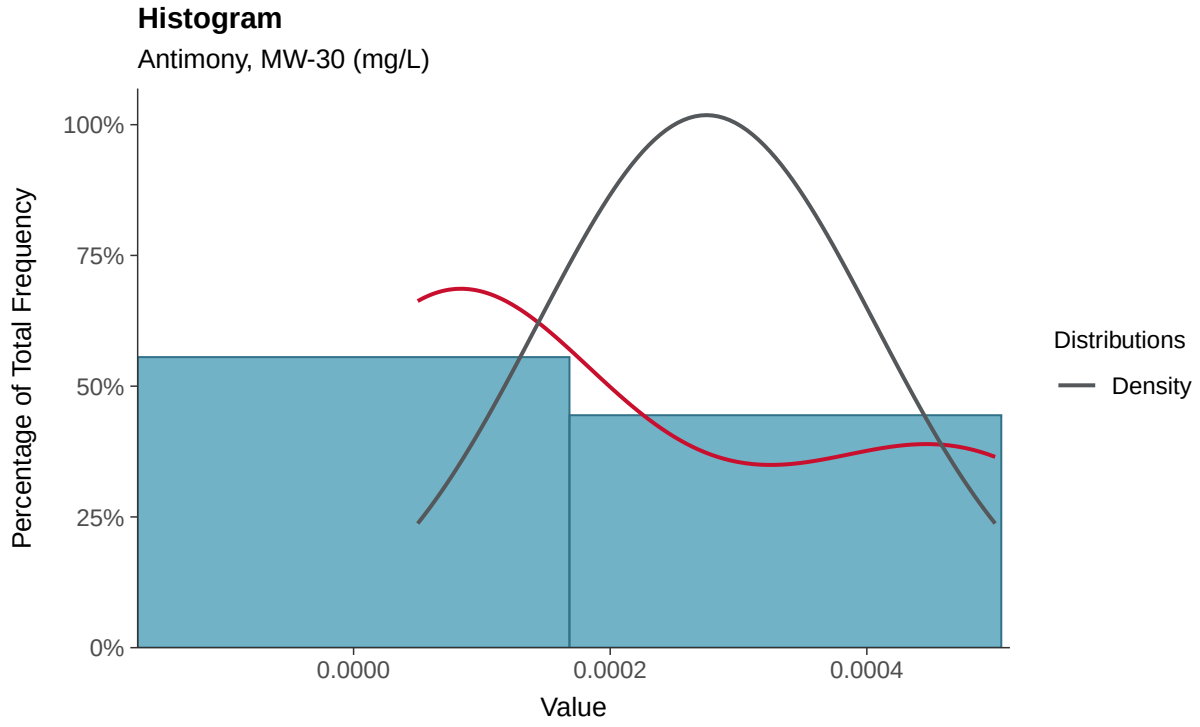
Thallium, MW-20 (mg/L)



Appendix IV: Antimony, MW-30

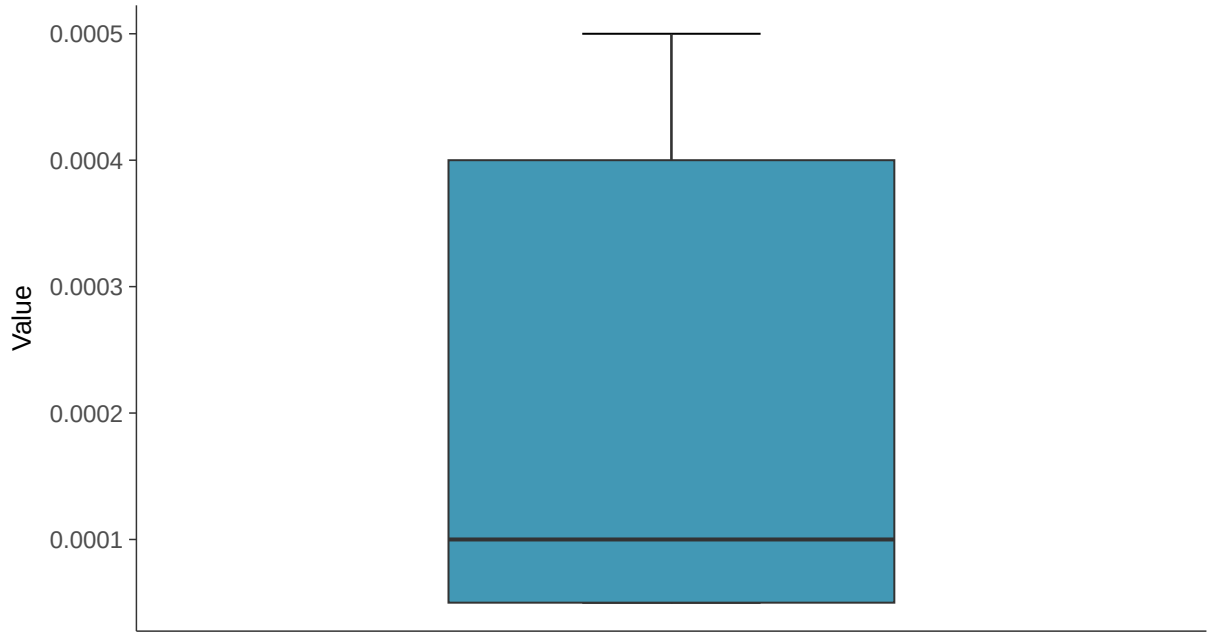
ID: 1_25_5_101





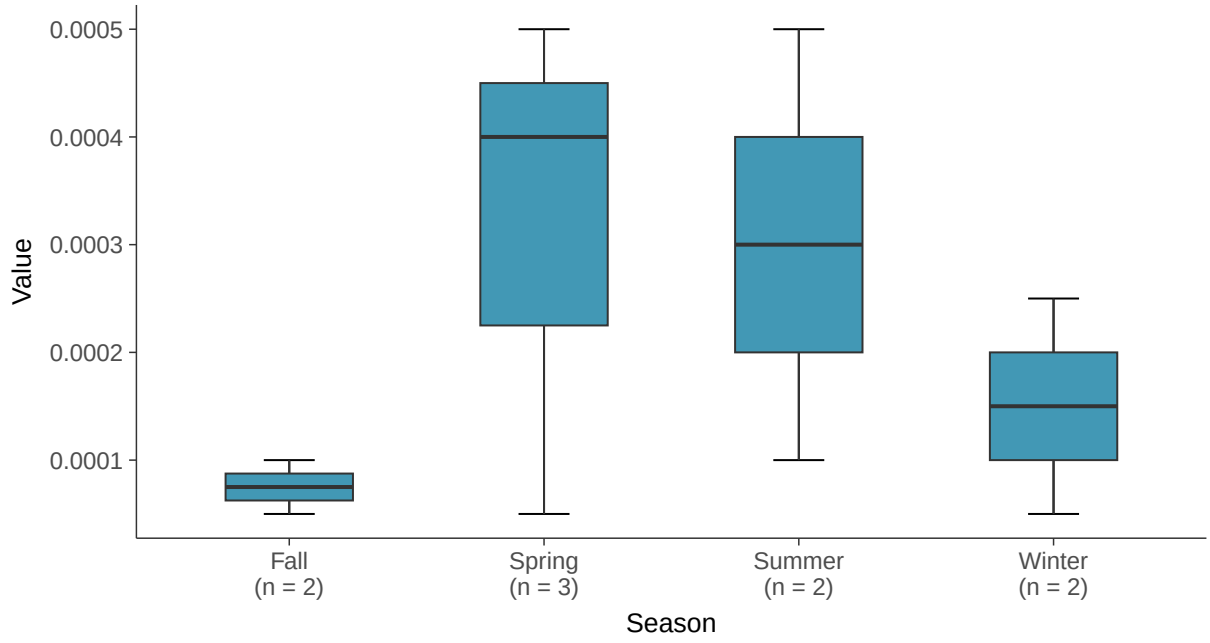
Boxplot

Antimony, MW-30 (mg/L)



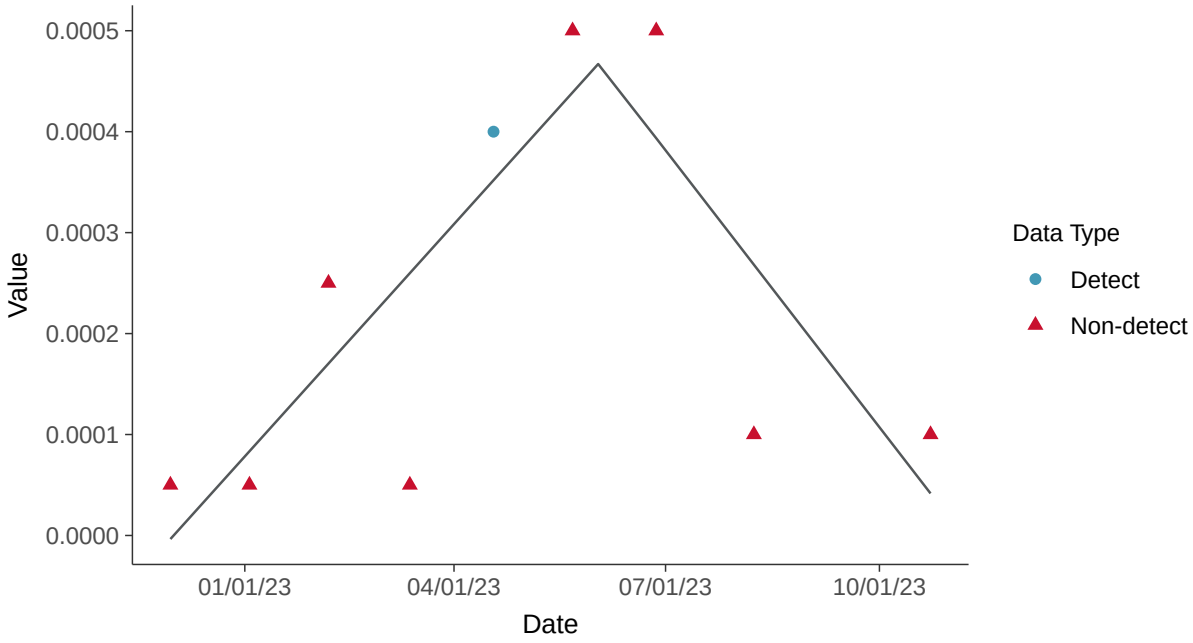
Boxplot by Season

Antimony, MW-30 (mg/L)



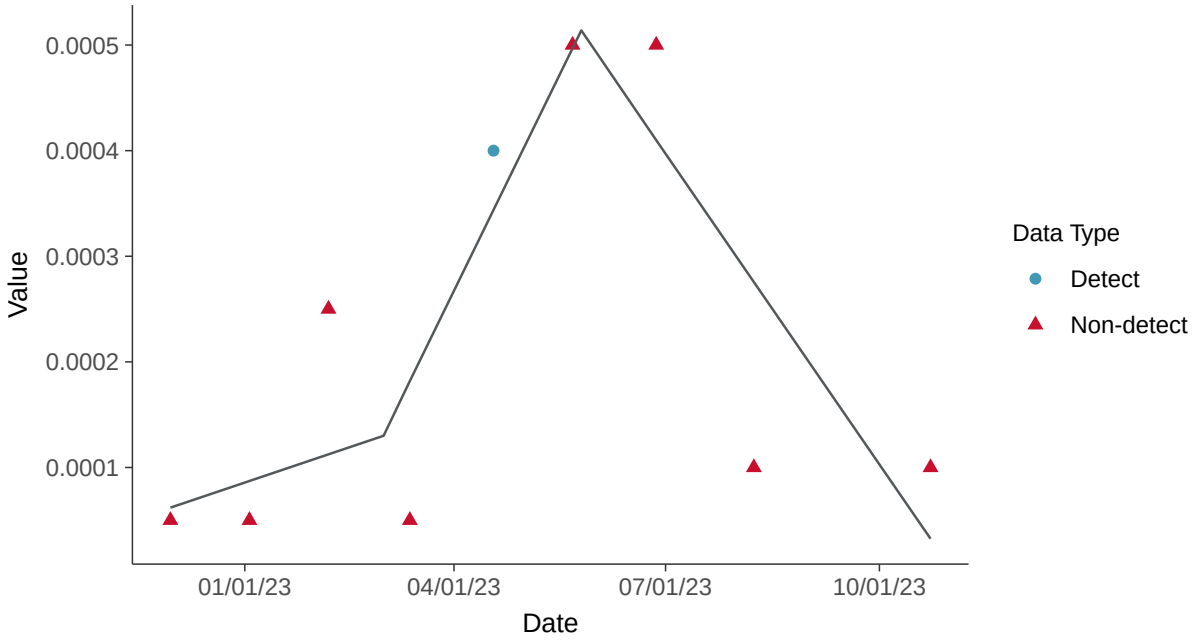
Trend Regression: Piecewise Linear-Linear

Antimony, MW-30 (mg/L)



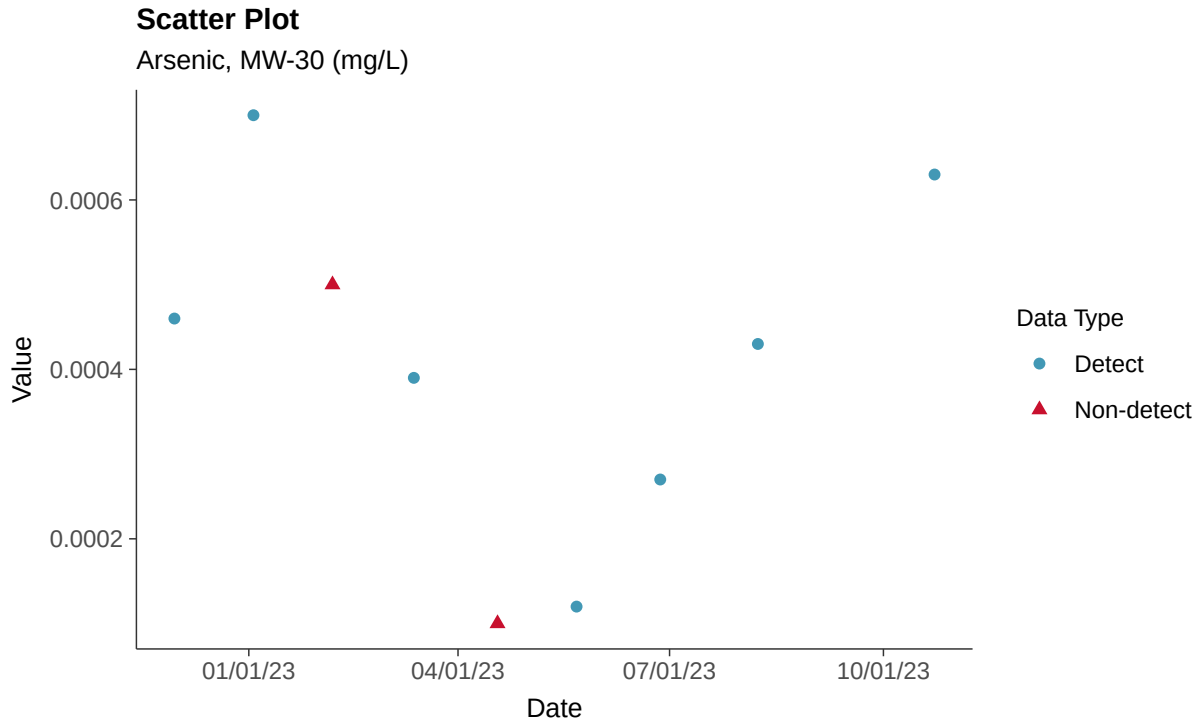
Trend Regression: Piecewise Linear-Linear-Linear

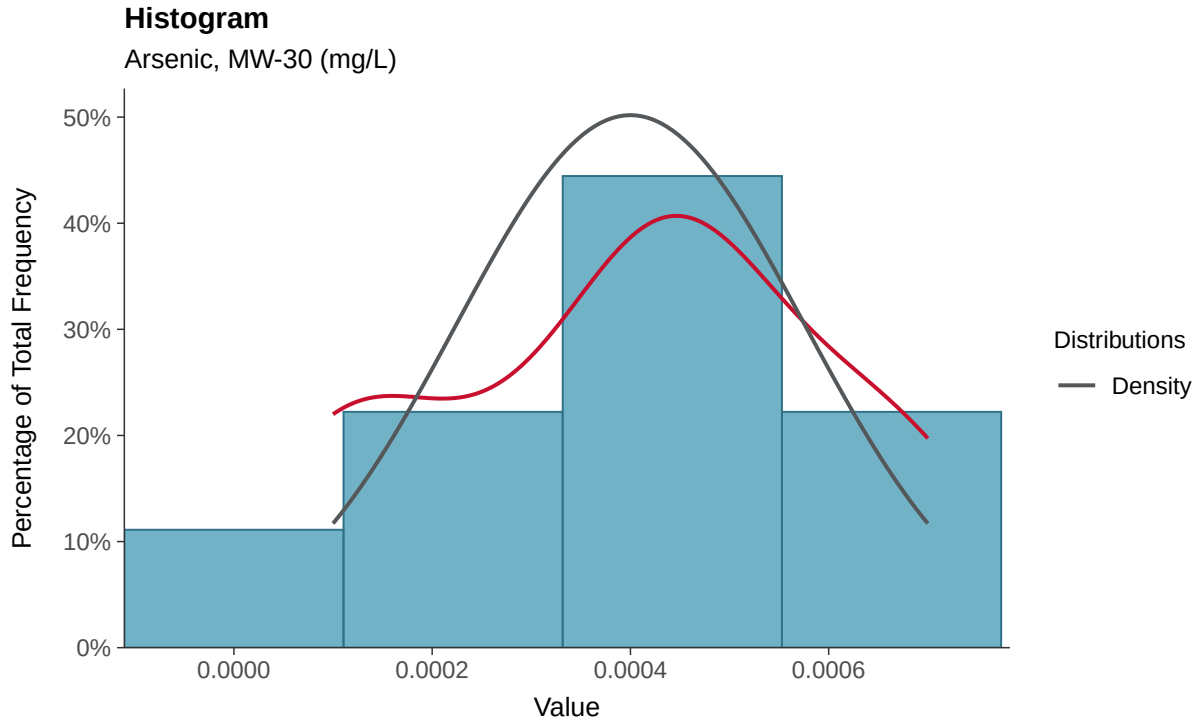
Antimony, MW-30 (mg/L)



Appendix IV: Arsenic, MW-30

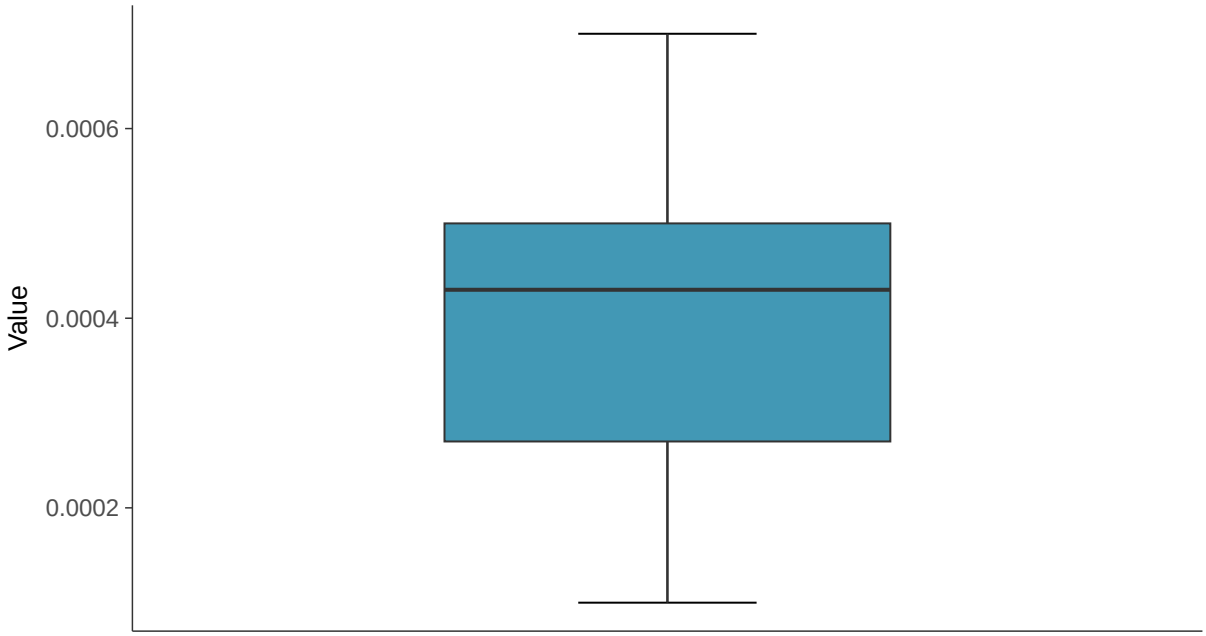
ID: 1_25_5_102





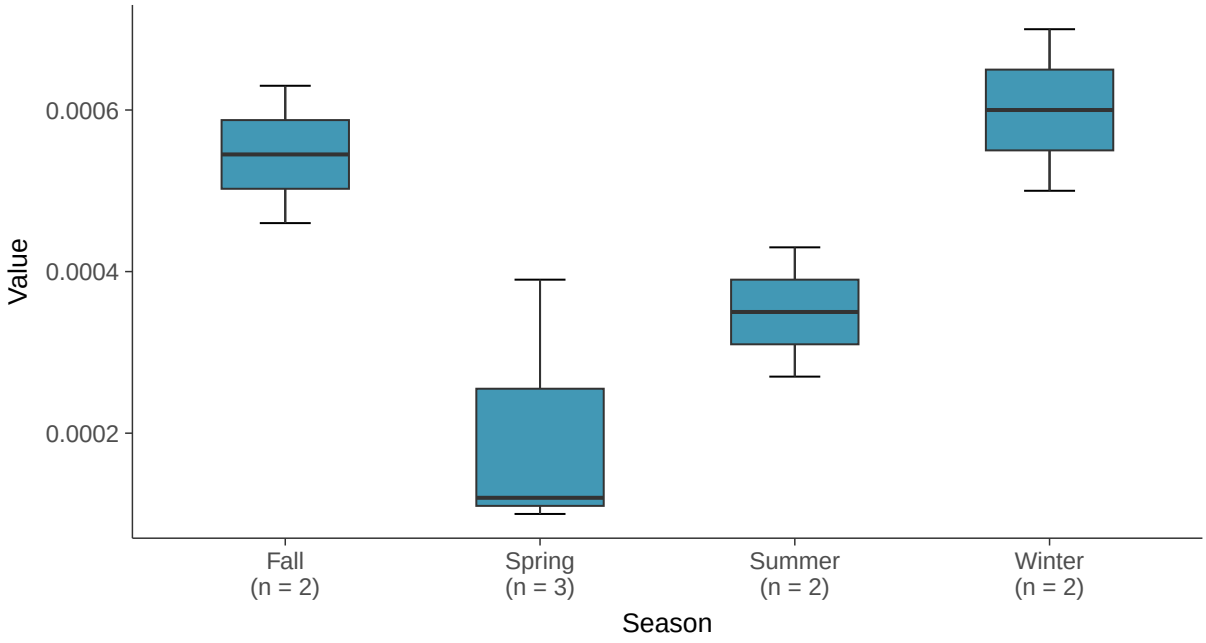
Boxplot

Arsenic, MW-30 (mg/L)



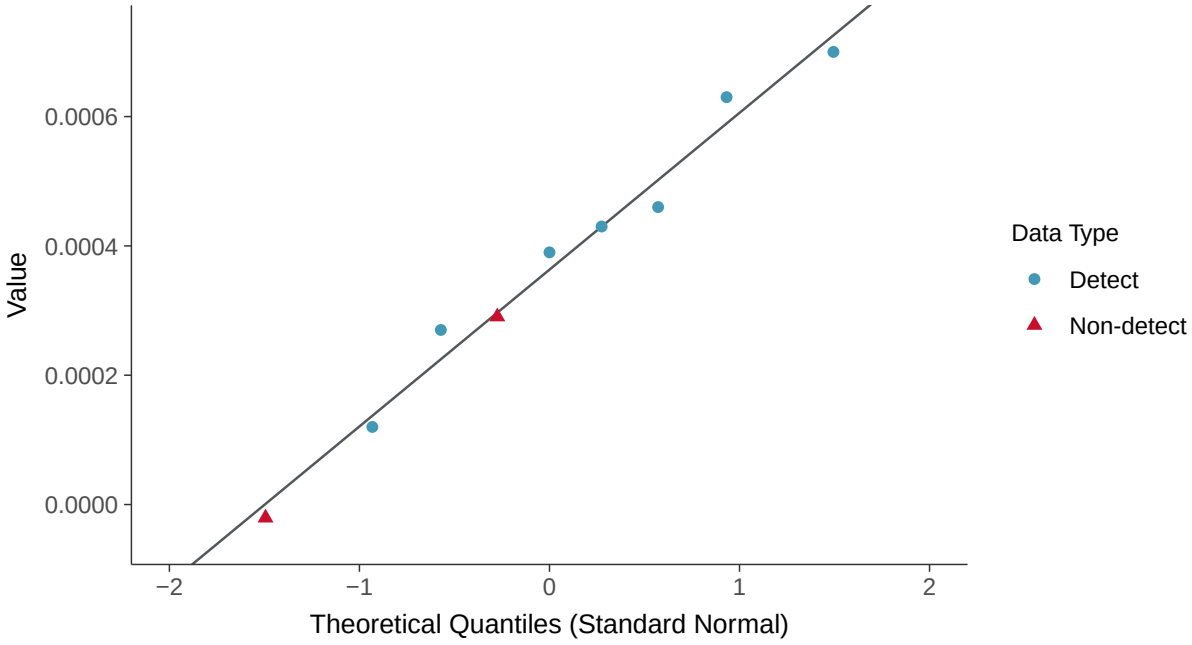
Boxplot by Season

Arsenic, MW-30 (mg/L)



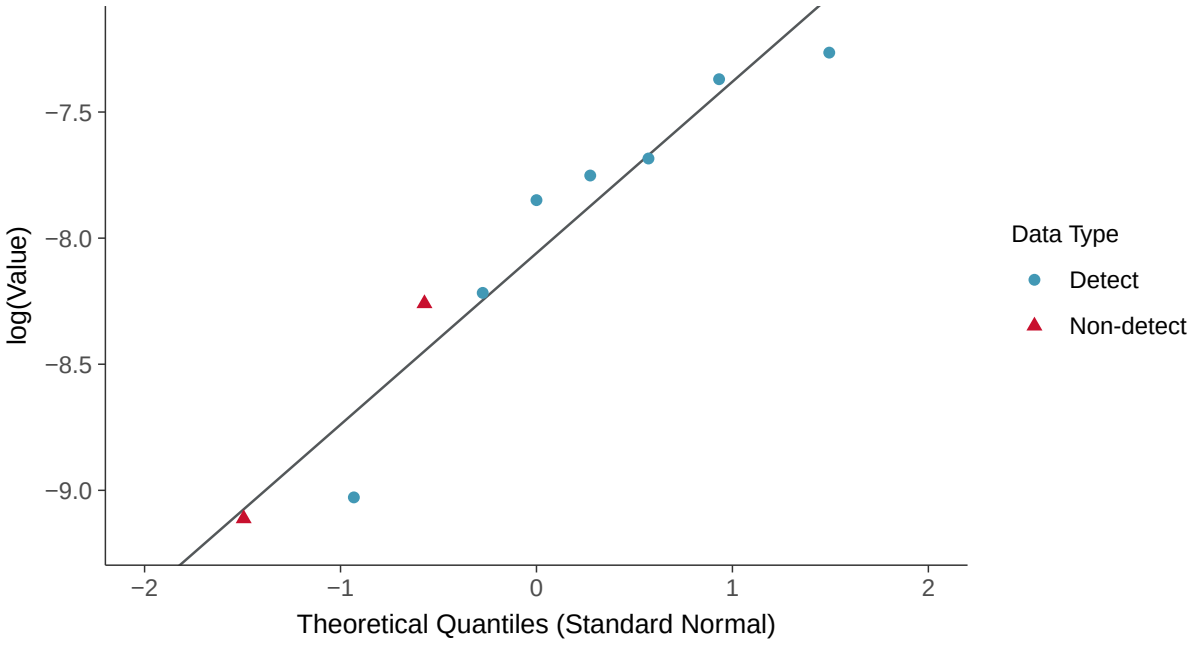
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-30 (mg/L)



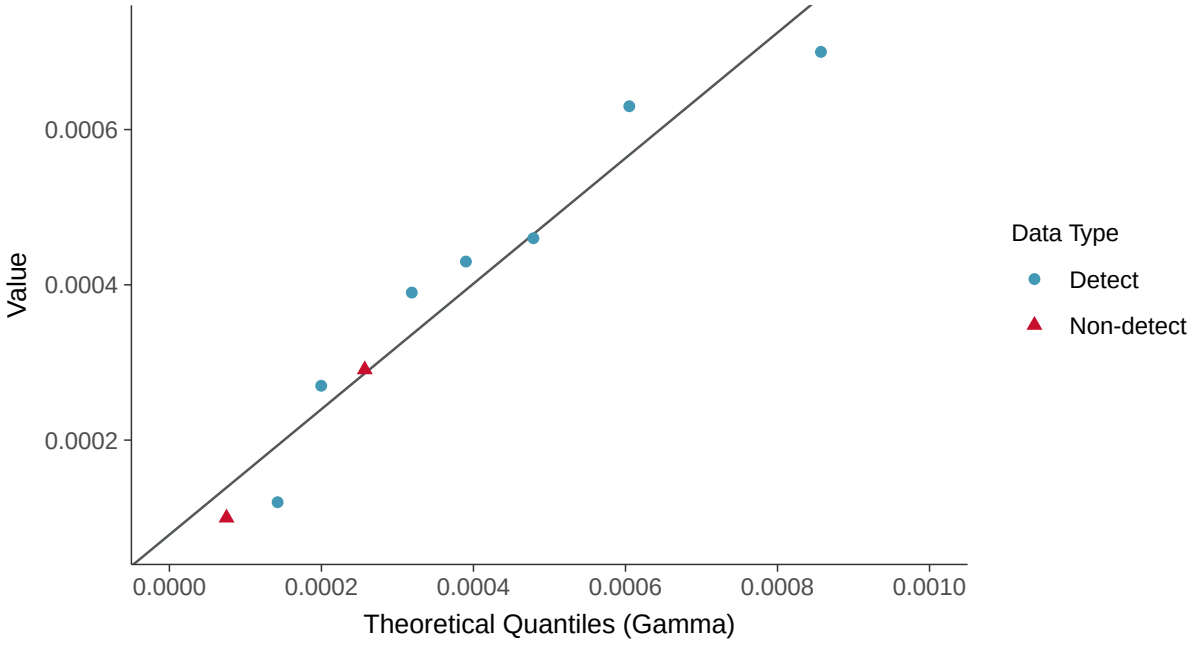
Lognormal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-30 (mg/L)



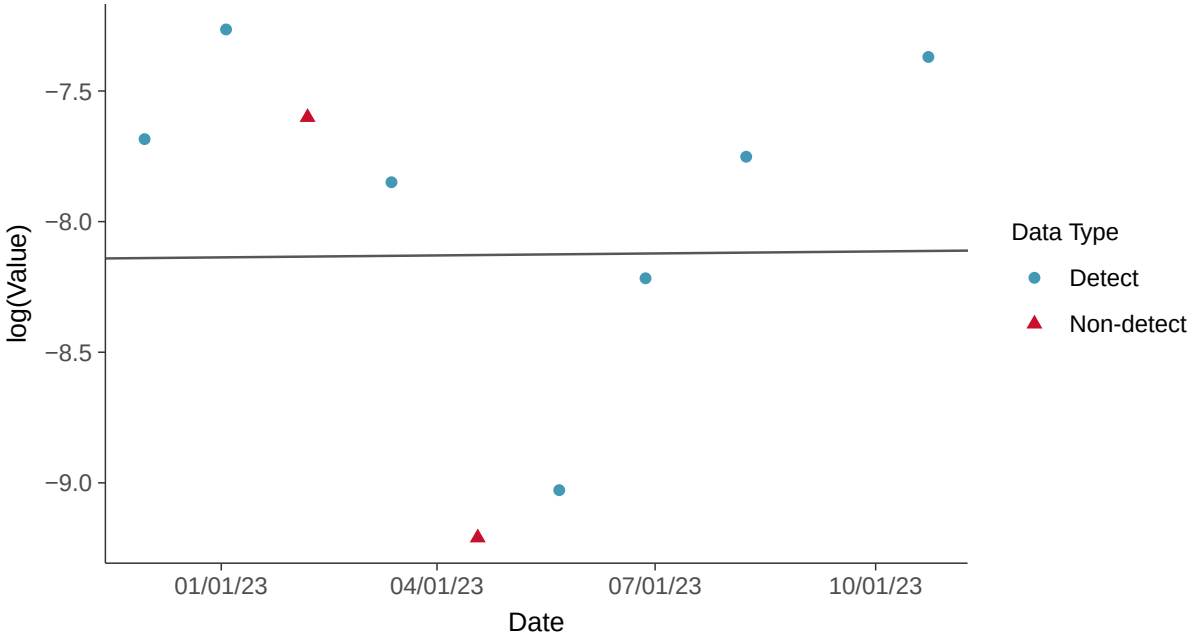
Gamma Q-Q plot using ROS Imputed Estimates

Arsenic, MW-30 (mg/L)



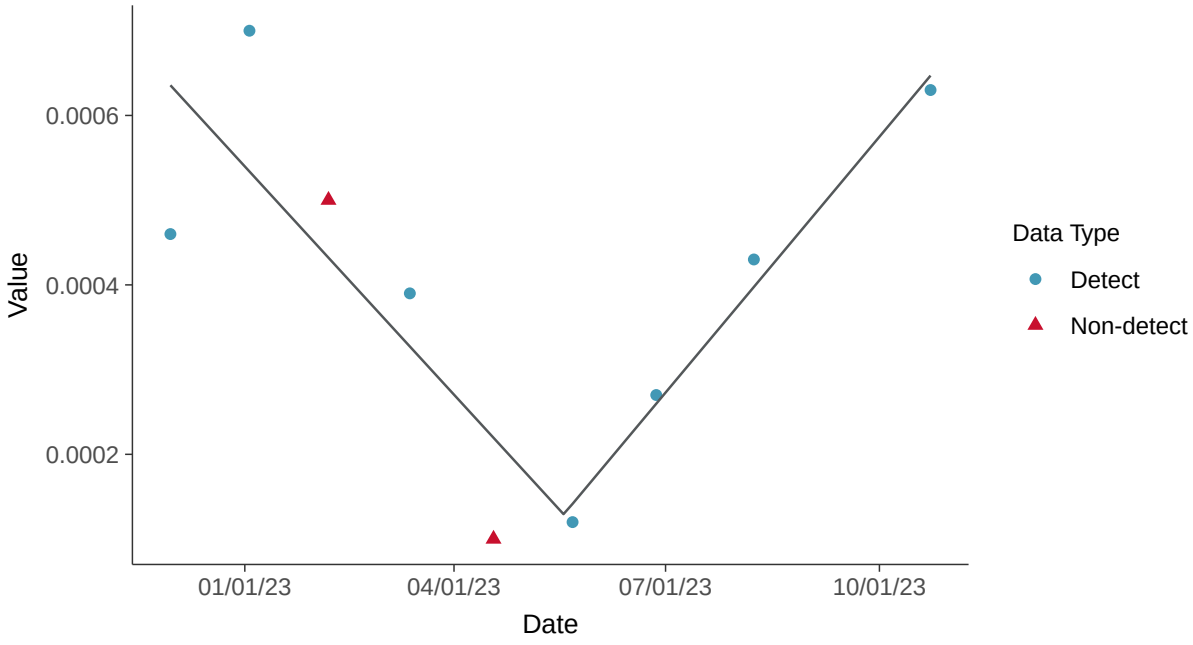
Trend Regression: Lognormal MLE

Arsenic, MW-30 (mg/L)



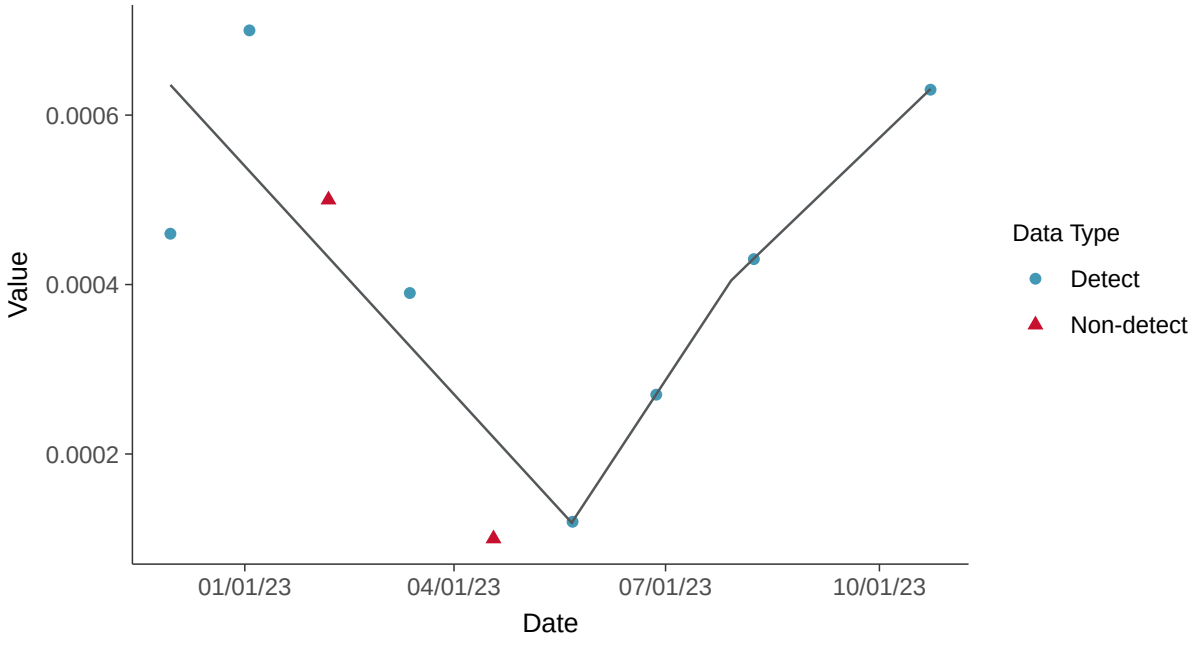
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-30 (mg/L)



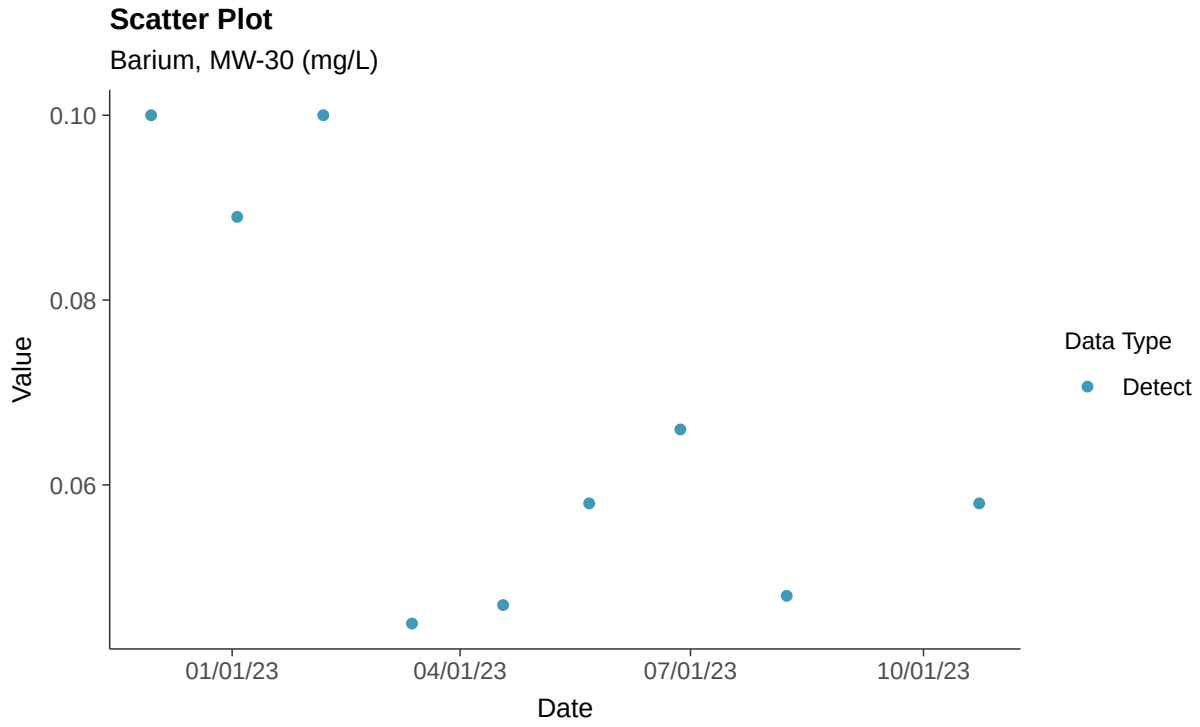
Trend Regression: Piecewise Linear-Linear-Linear

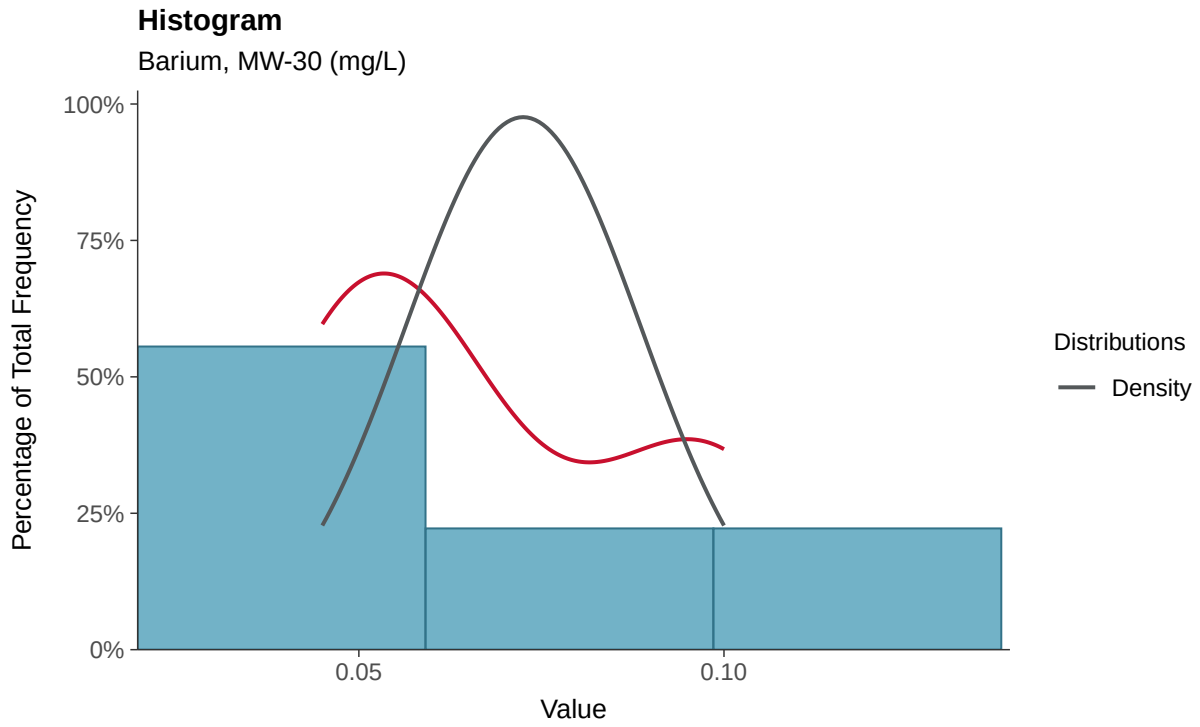
Arsenic, MW-30 (mg/L)



Appendix IV: Barium, MW-30

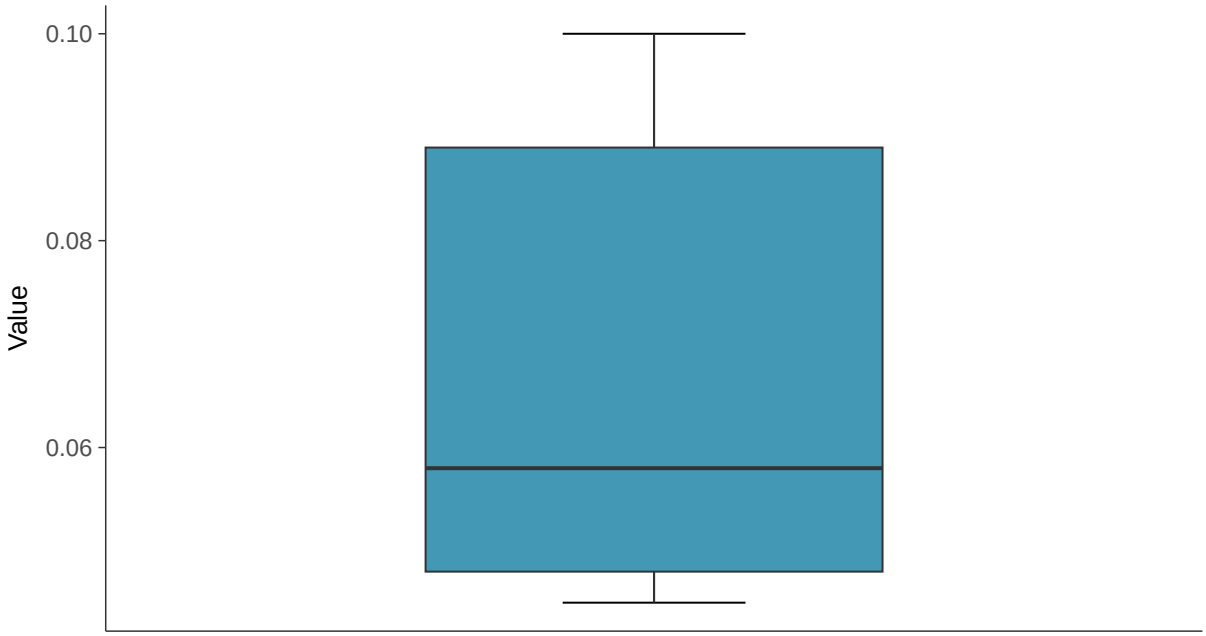
ID: 1_25_5_103





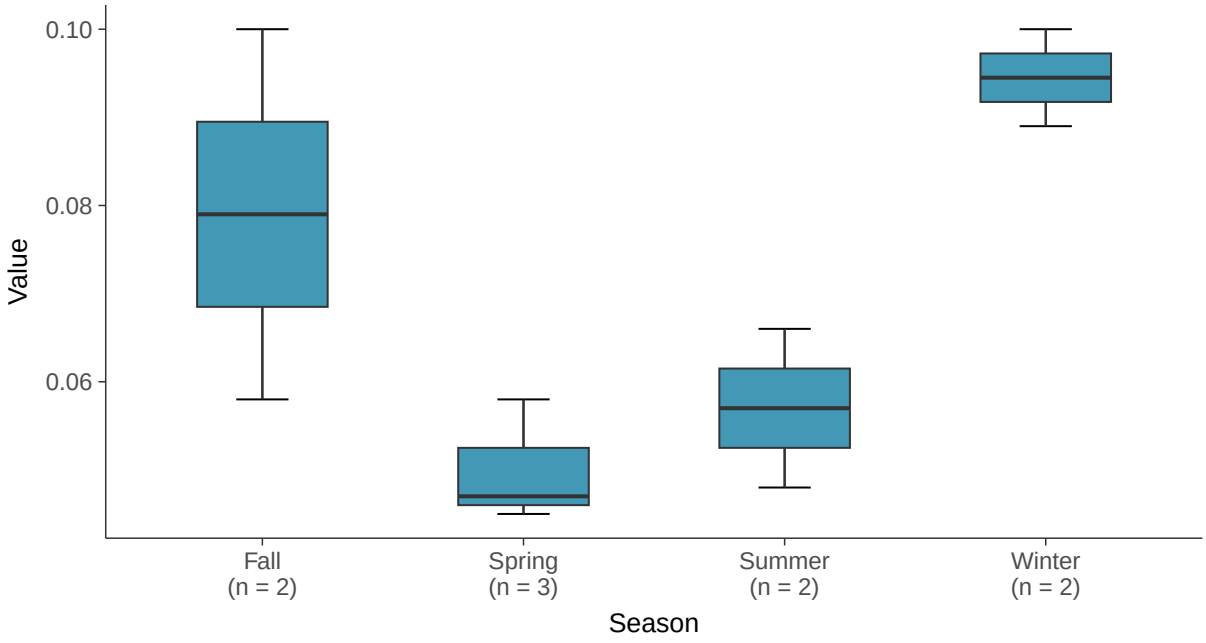
Boxplot

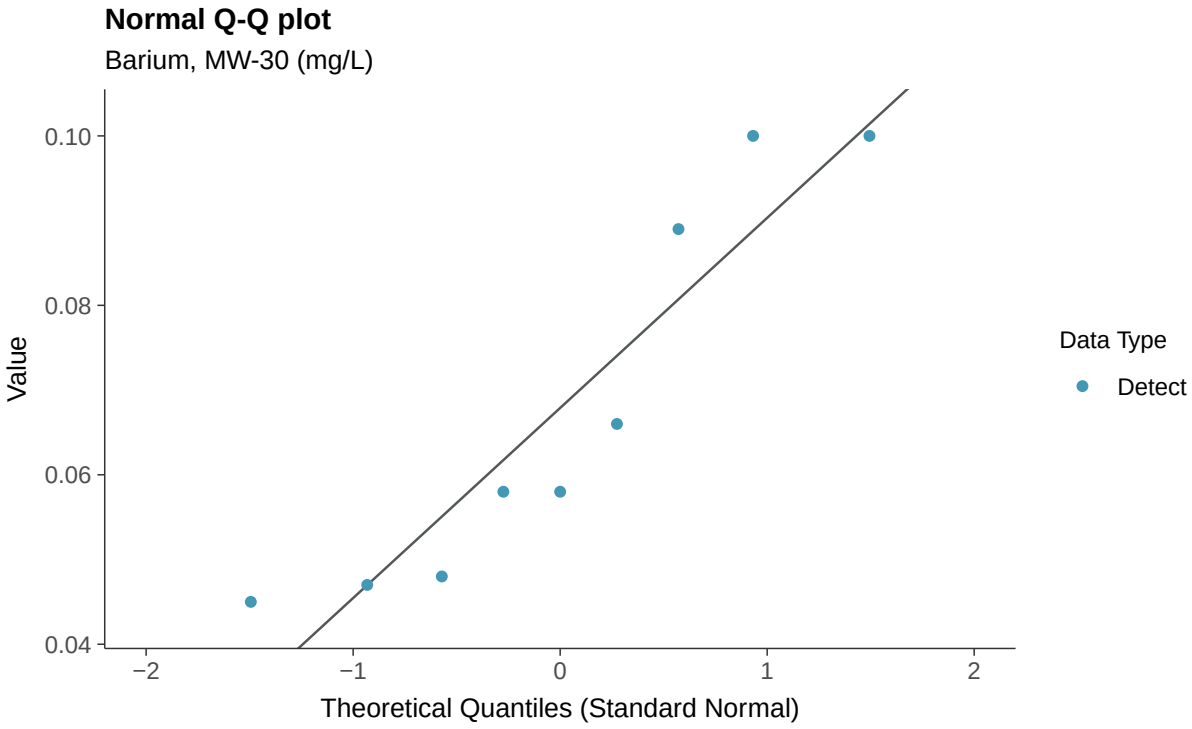
Barium, MW-30 (mg/L)

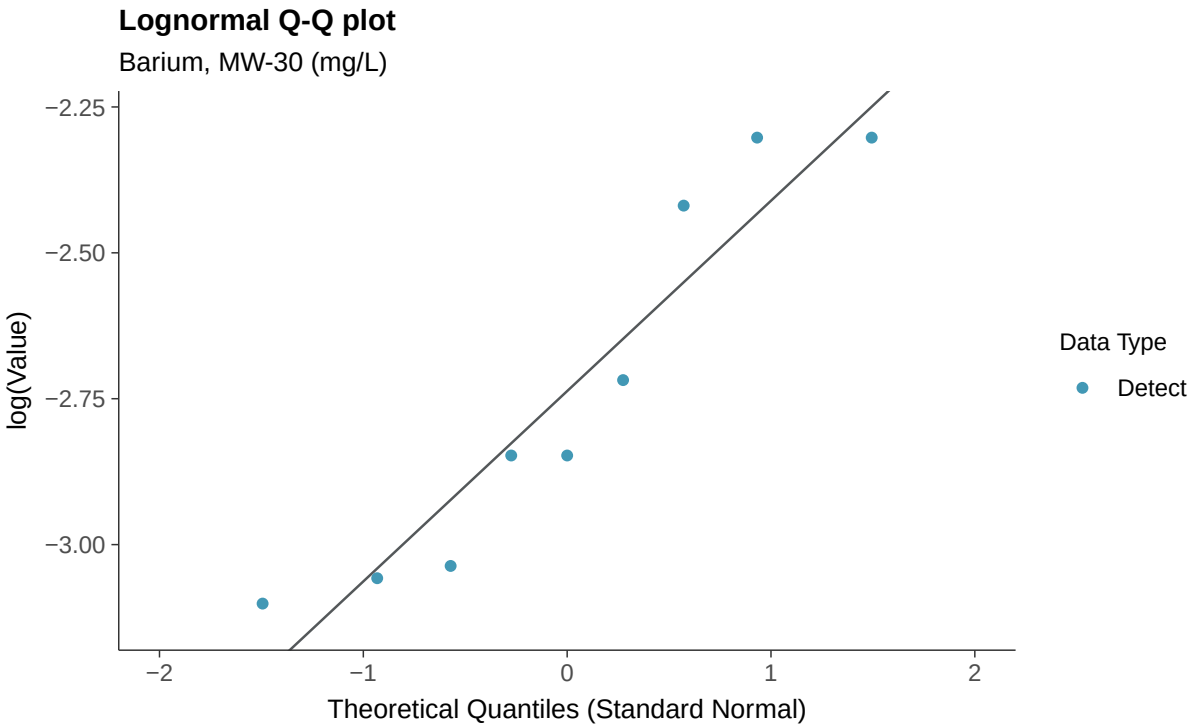


Boxplot by Season

Barium, MW-30 (mg/L)

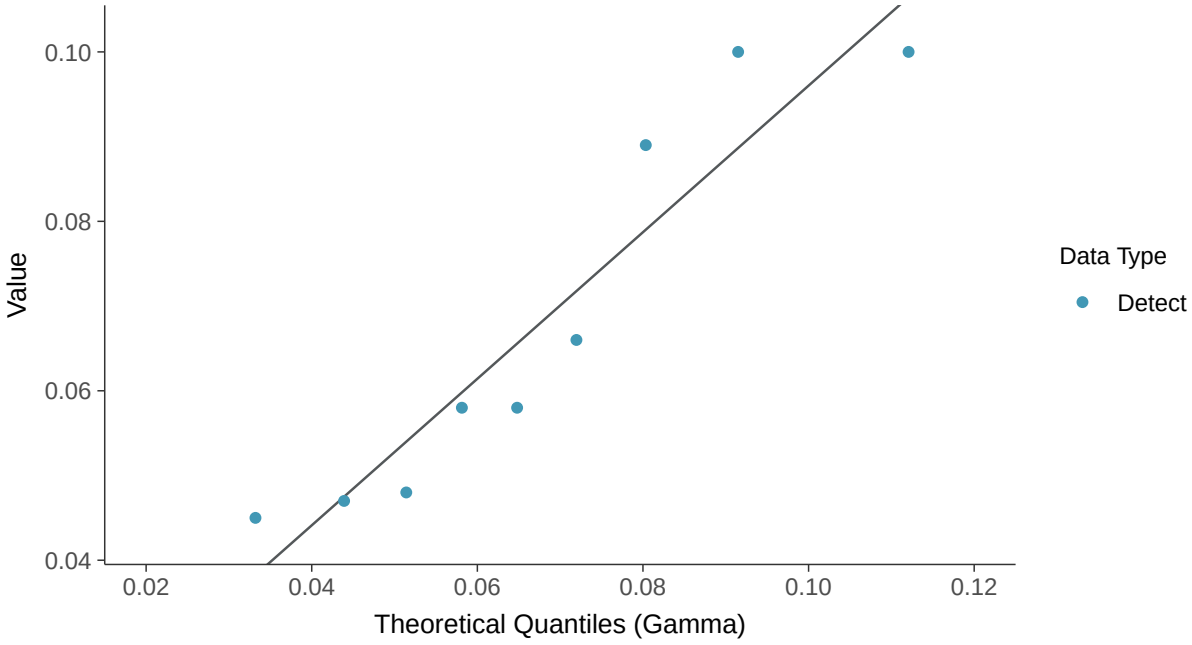



Normal Q-Q plot
Barium, MW-30 (mg/L)
Value
0.10
0.08
0.06
0.04
−2
−1
0
1
2
Theoretical Quantiles (Standard Normal)
Data Type
Detect


Lognormal Q-Q plot
Barium, MW-30 (mg/L)
log(Value)
−2.25
−2.50
−2.75
−3.00
−2
−1
0
1
2
Theoretical Quantiles (Standard Normal)
Data Type
Detect

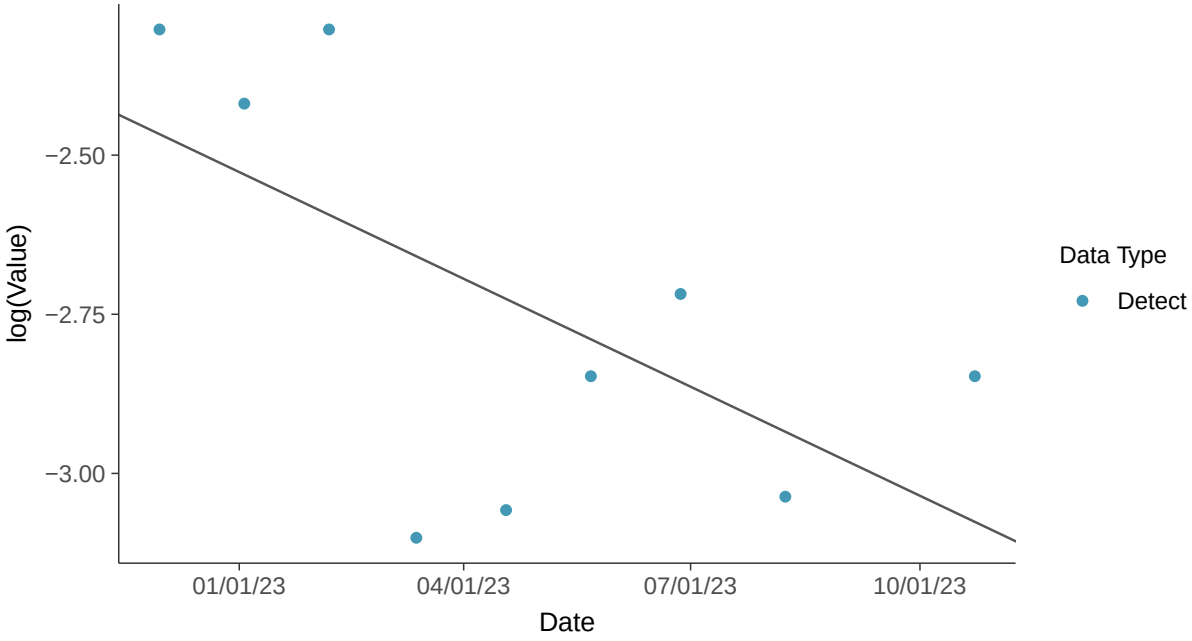
Gamma Q-Q plot

Barium, MW-30 (mg/L)



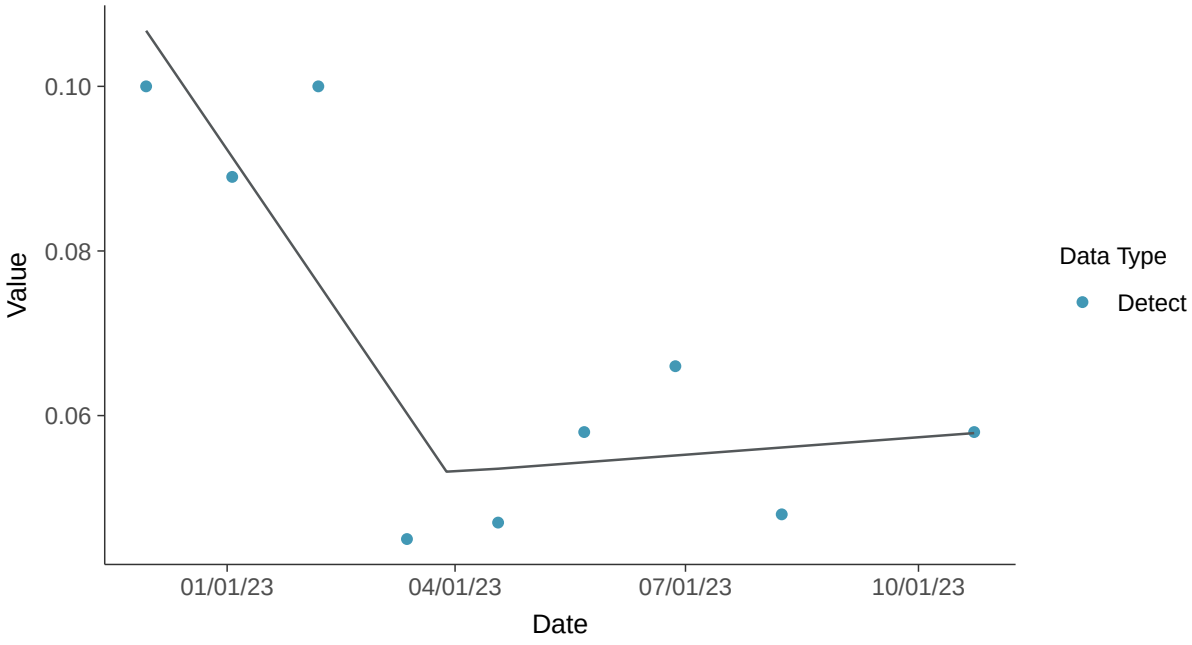
Trend Regression: Lognormal MLE

Barium, MW-30 (mg/L)



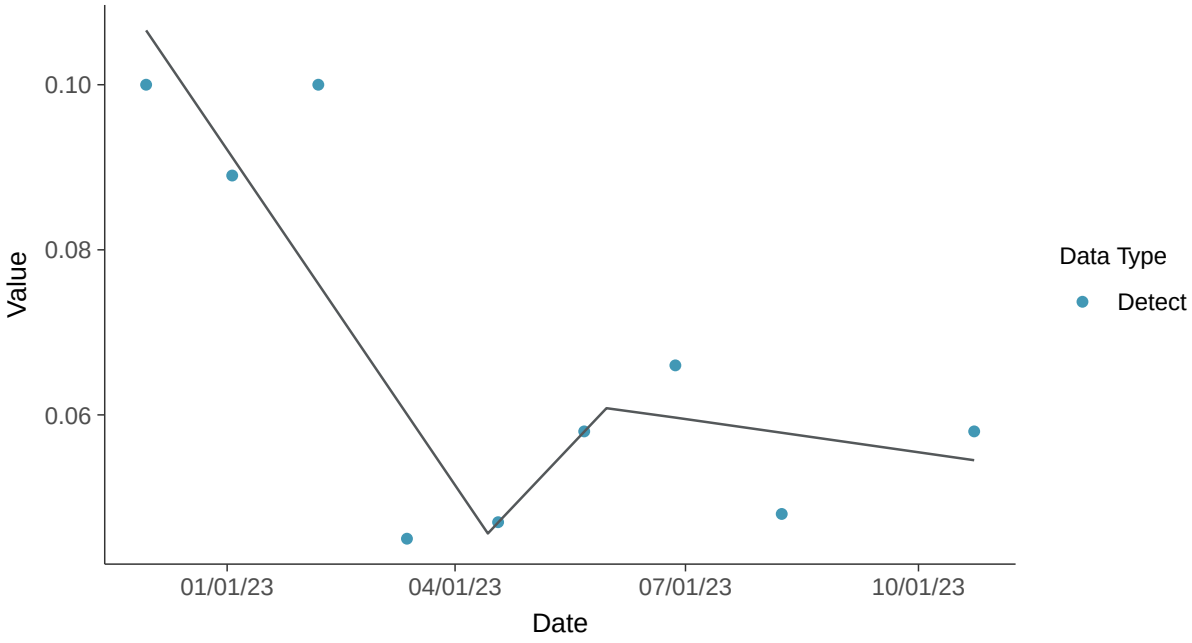
Trend Regression: Piecewise Linear-Linear

Barium, MW-30 (mg/L)



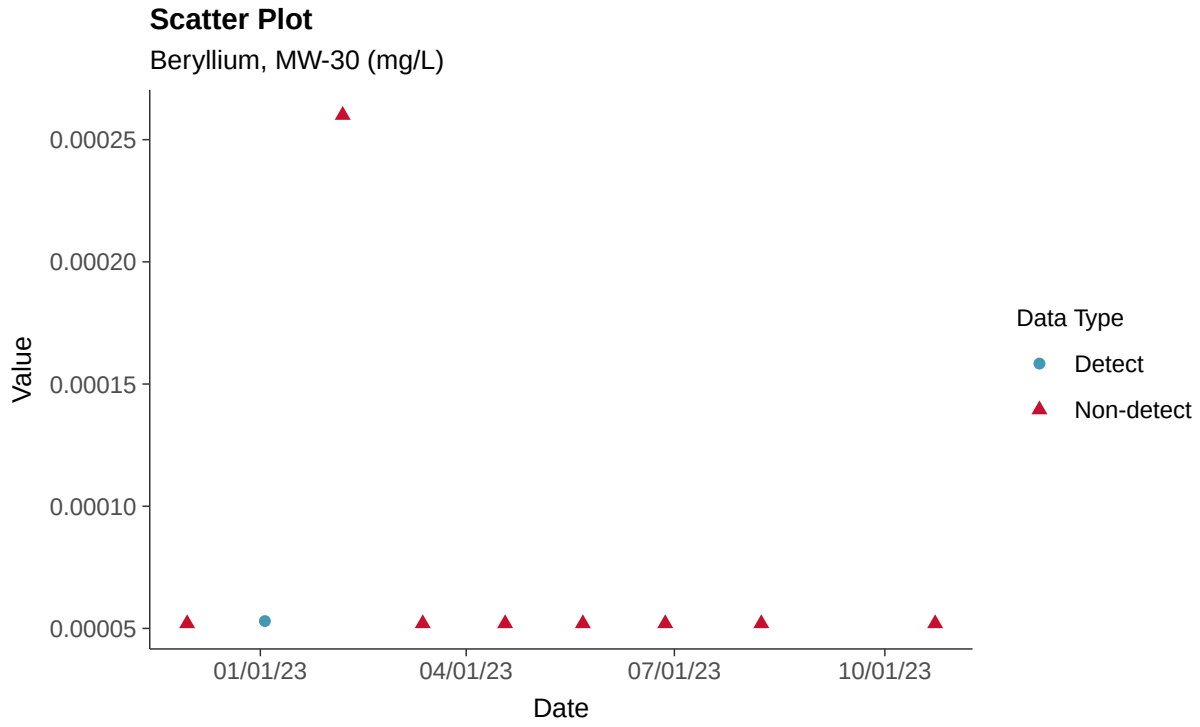
Trend Regression: Piecewise Linear-Linear-Linear

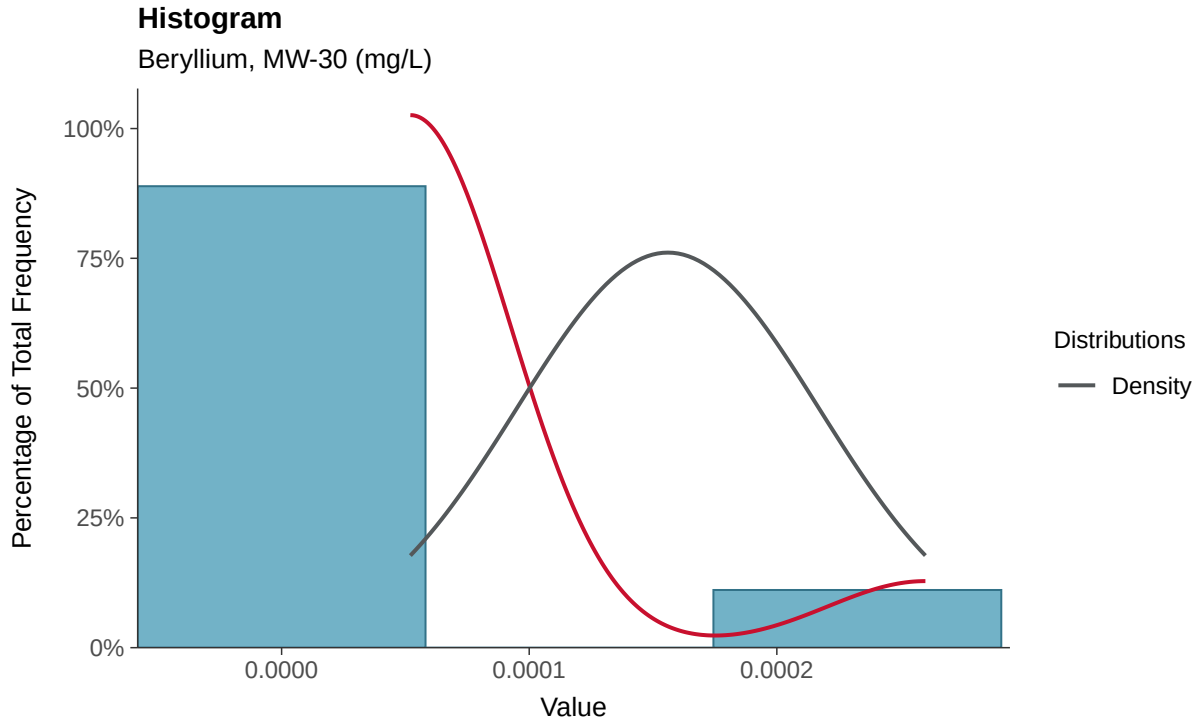
Barium, MW-30 (mg/L)



Appendix IV: Beryllium, MW-30

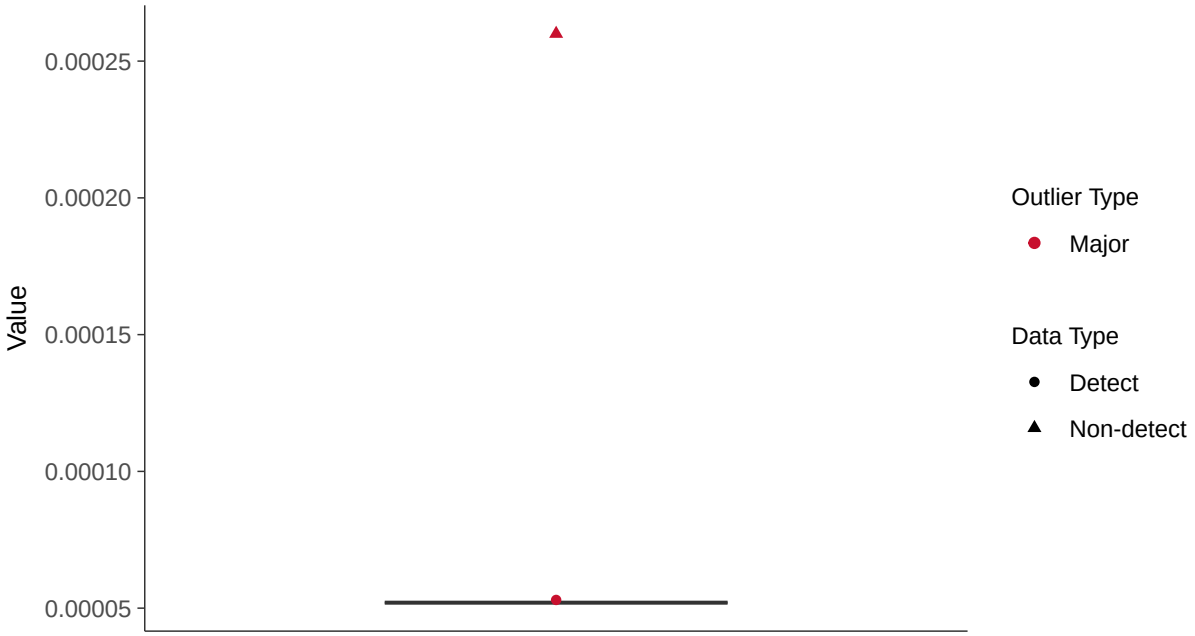
ID: 1_25_5_104





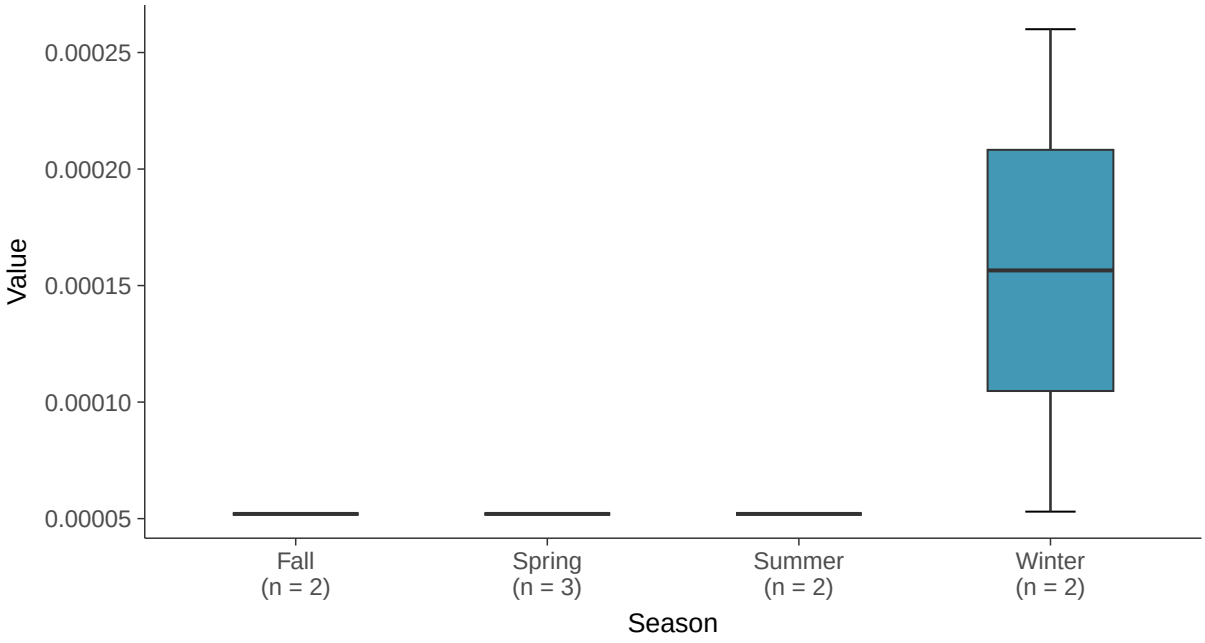
Boxplot

Beryllium, MW-30 (mg/L)



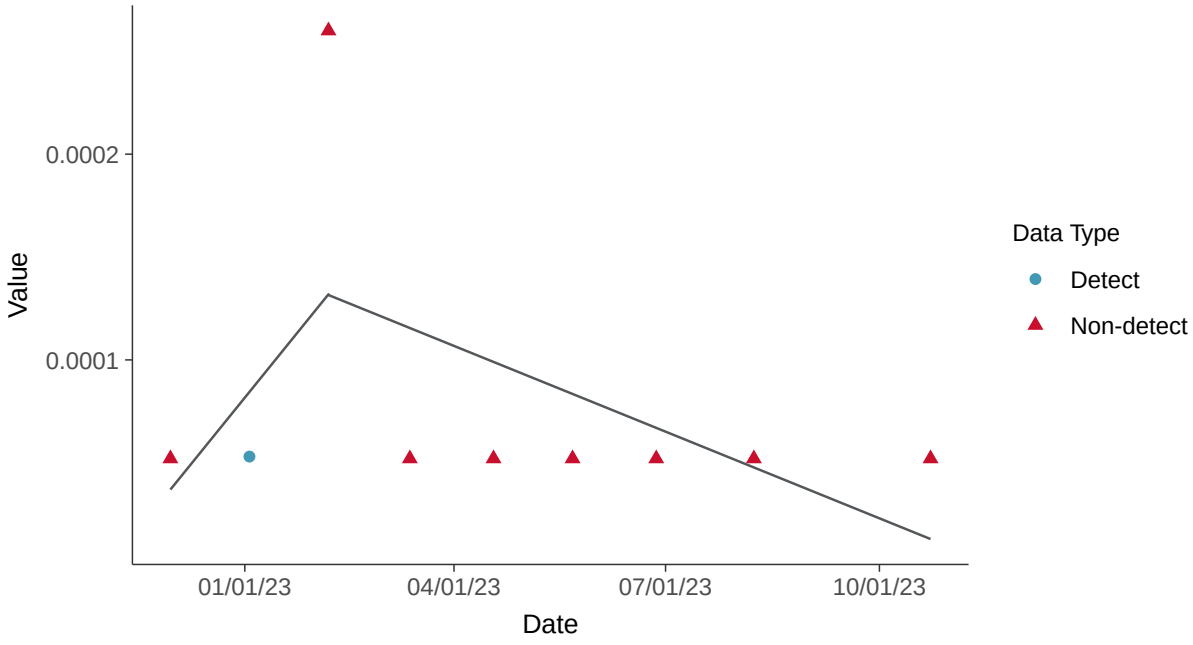
Boxplot by Season

Beryllium, MW-30 (mg/L)



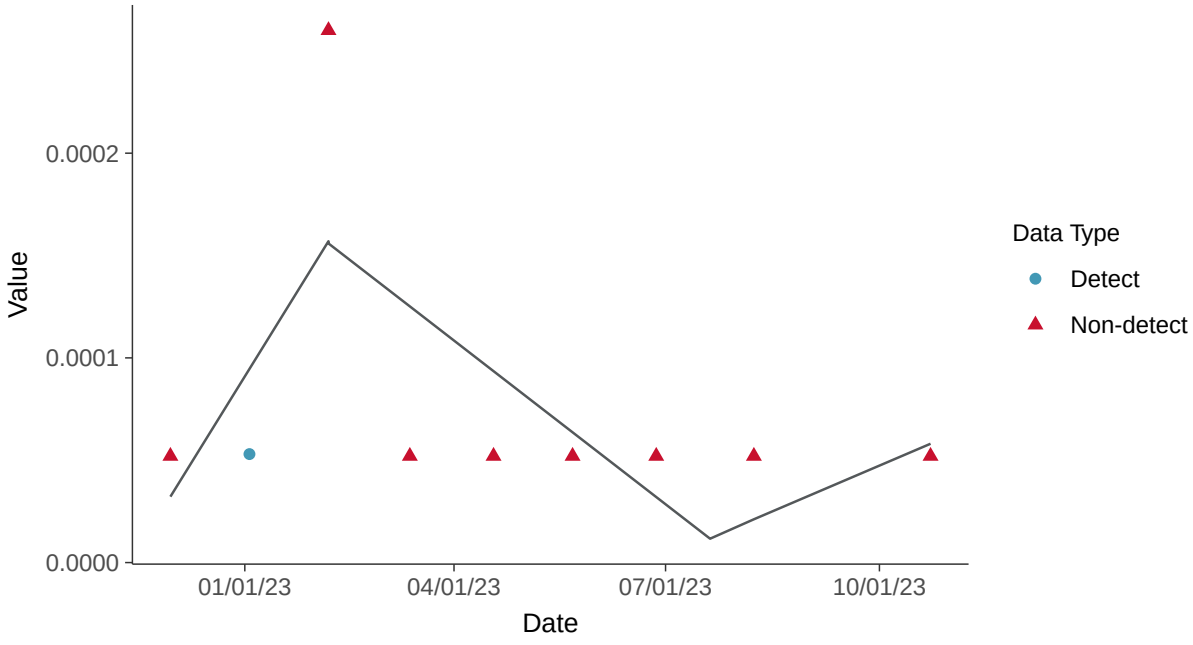
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-30 (mg/L)



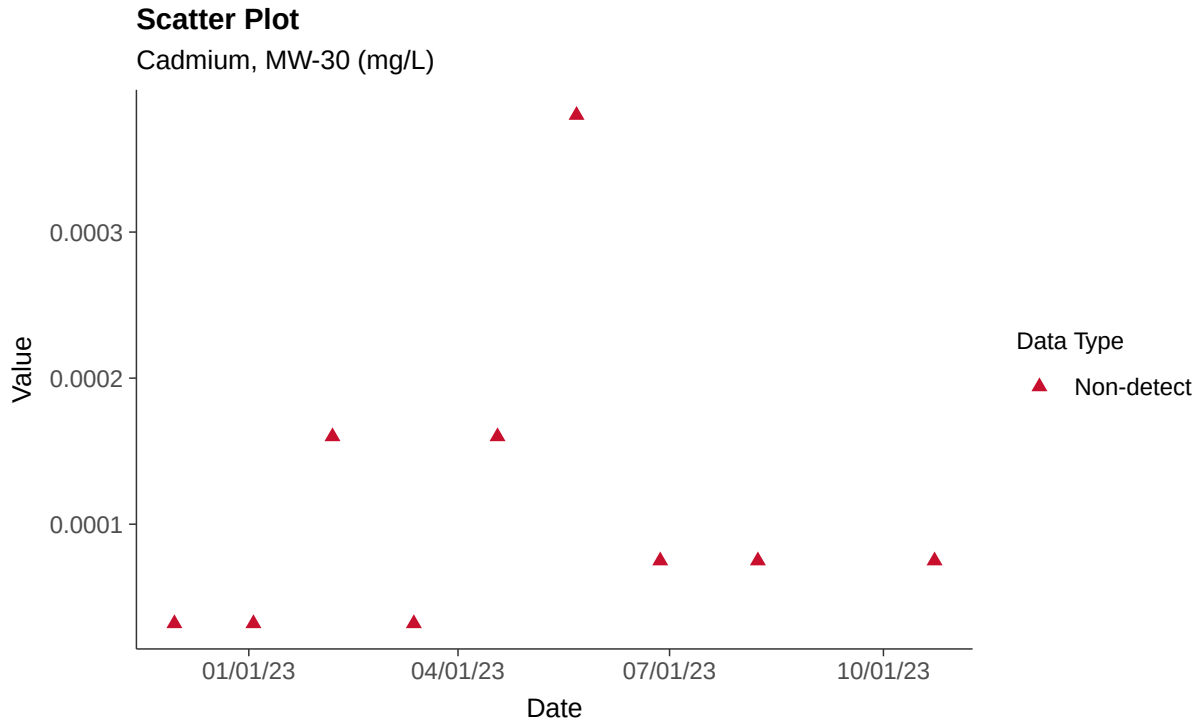
Trend Regression: Piecewise Linear-Linear-Linear

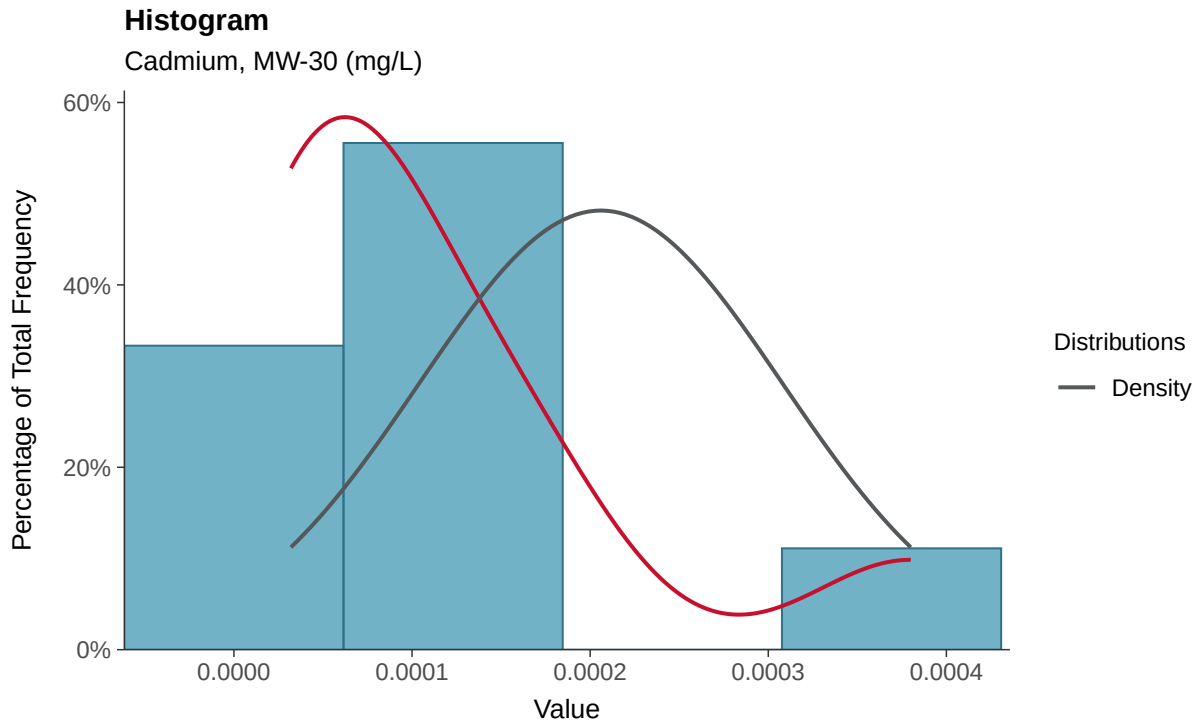
Beryllium, MW-30 (mg/L)



Appendix IV: Cadmium, MW-30

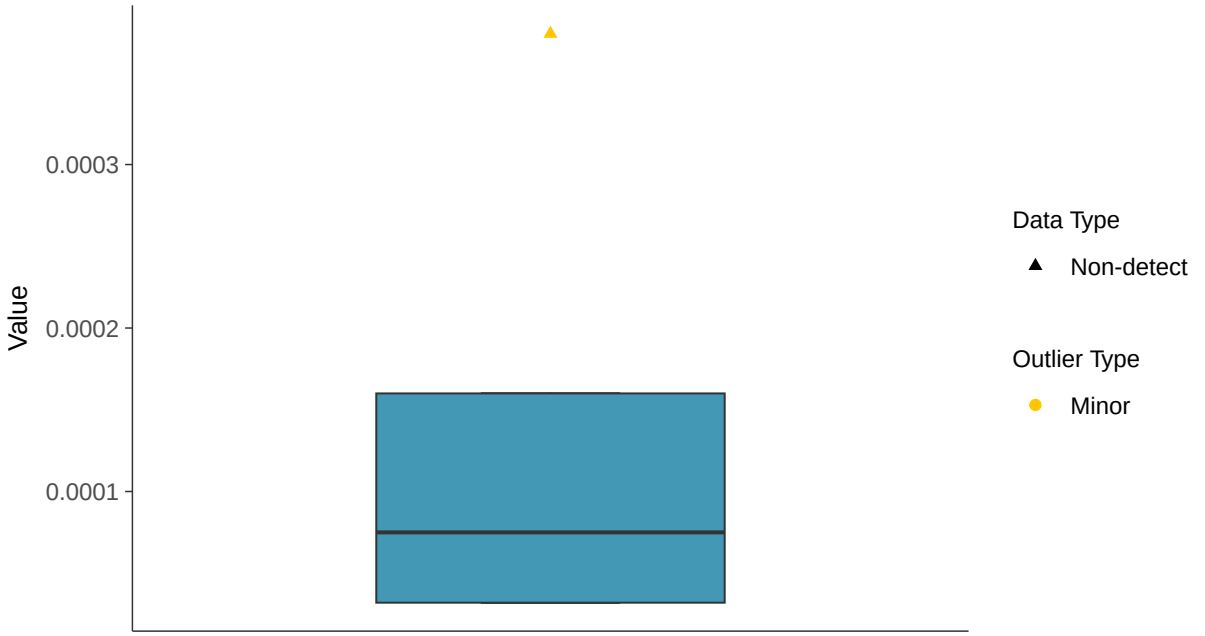
ID: 1_25_5_106





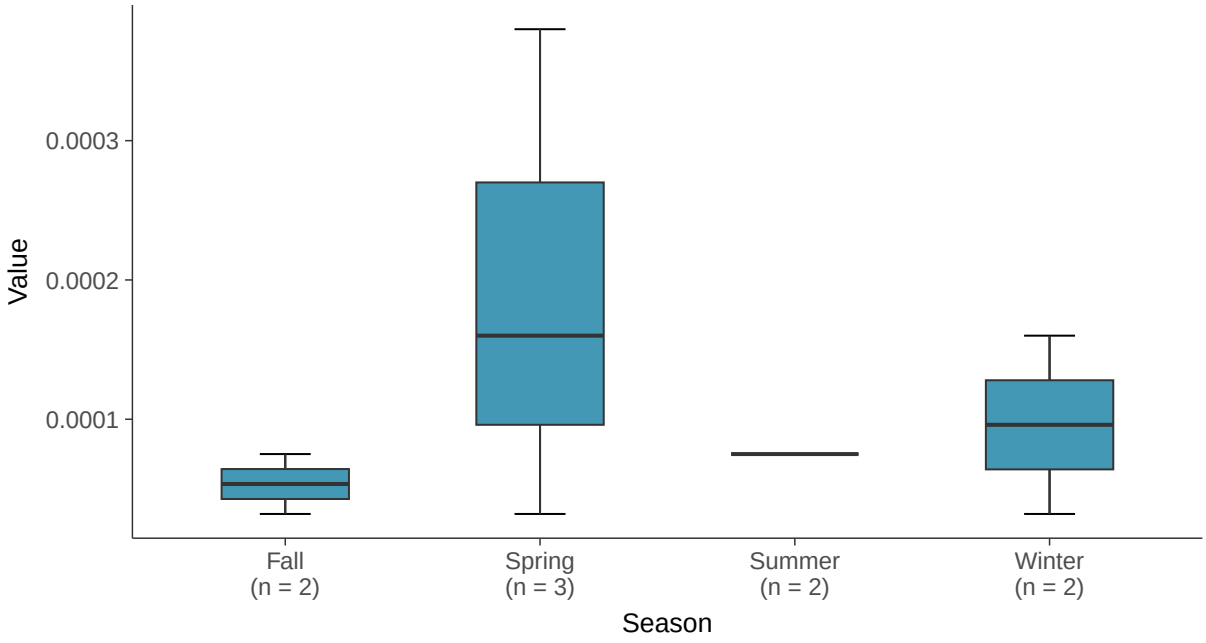
Boxplot

Cadmium, MW-30 (mg/L)



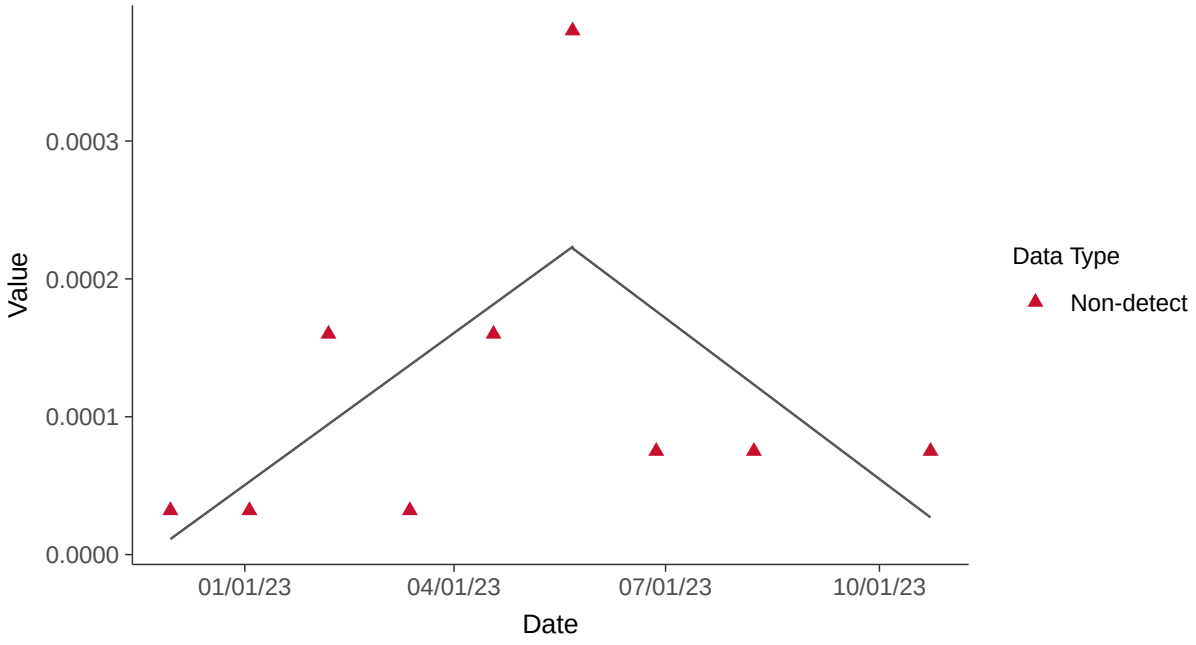
Boxplot by Season

Cadmium, MW-30 (mg/L)



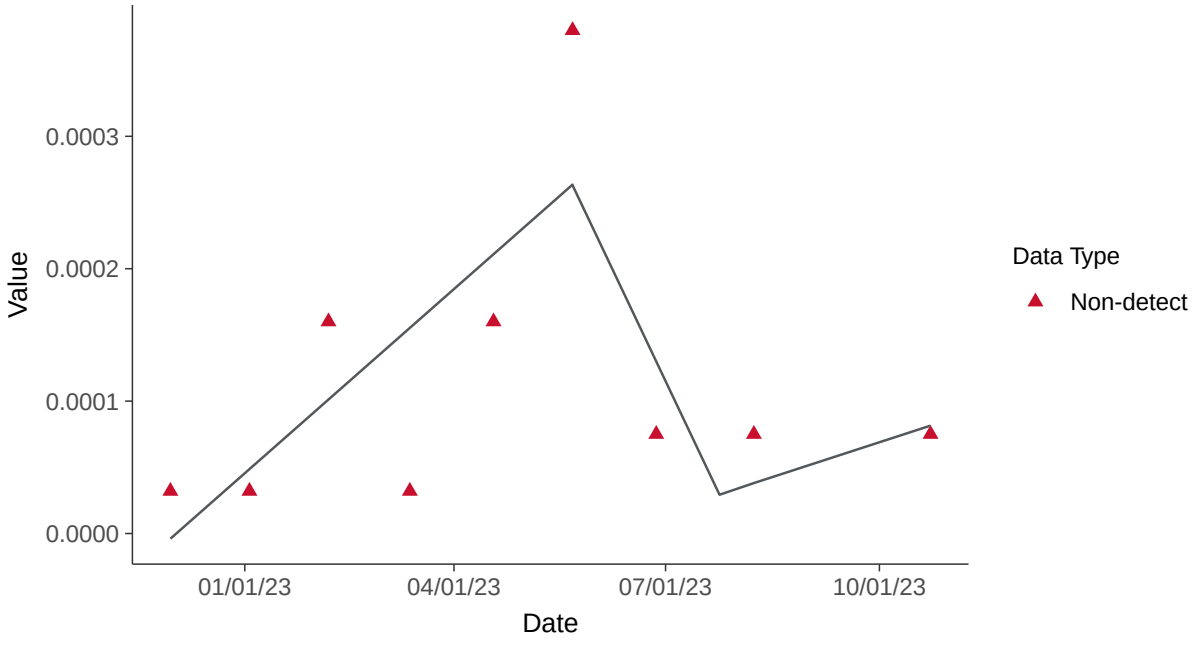
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-30 (mg/L)



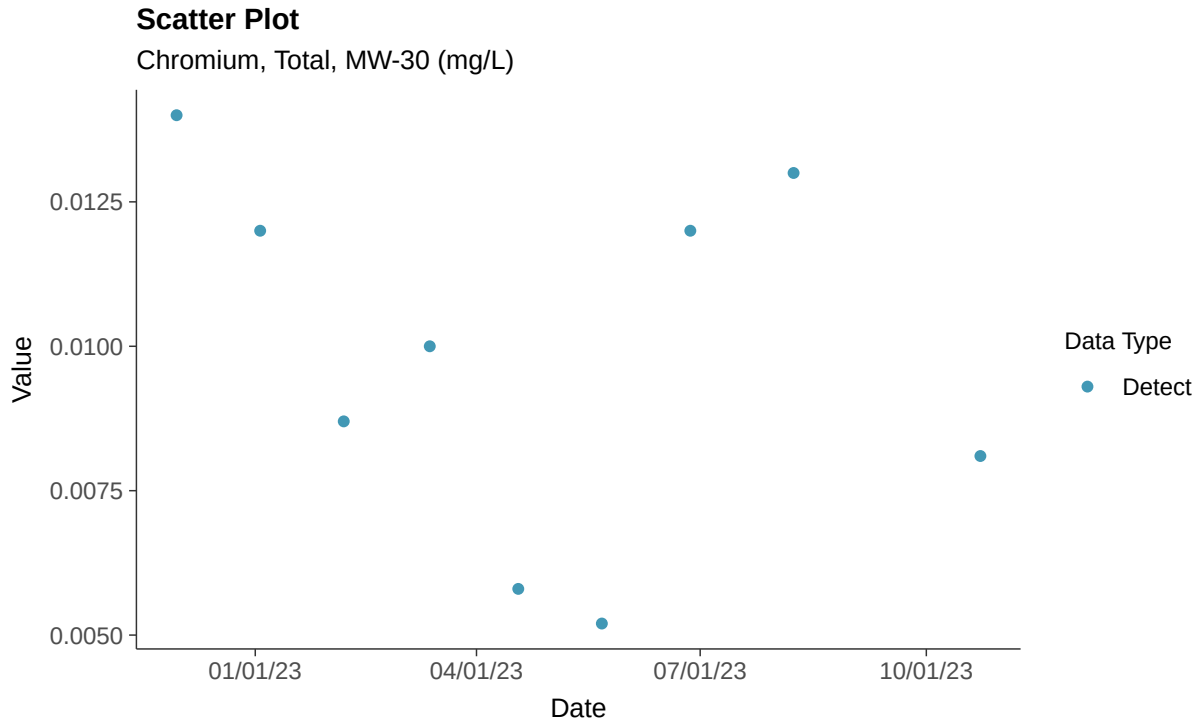
Trend Regression: Piecewise Linear-Linear-Linear

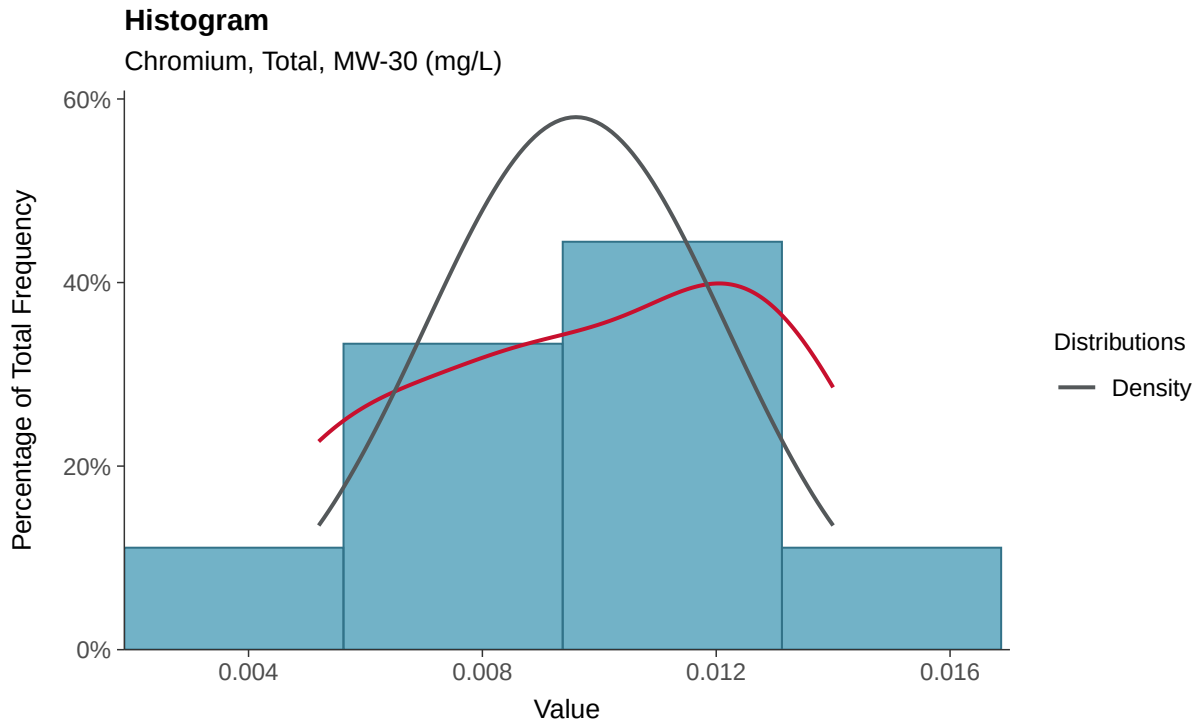
Cadmium, MW-30 (mg/L)



Appendix IV: Chromium, Total, MW-30

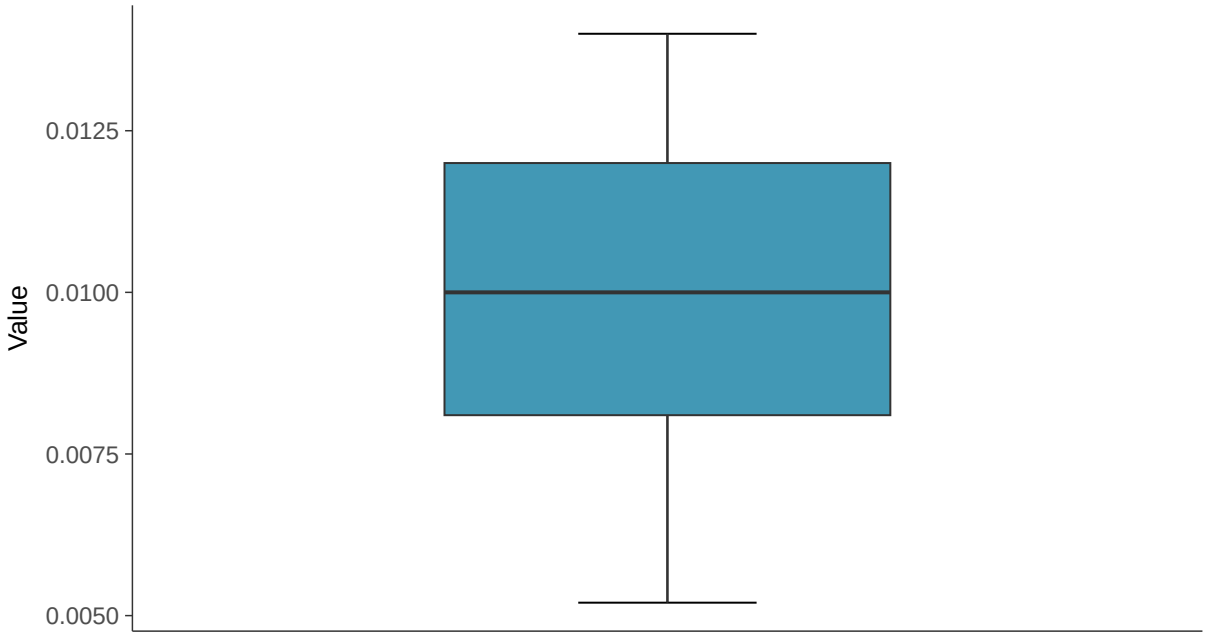
ID: 1_25_5_109





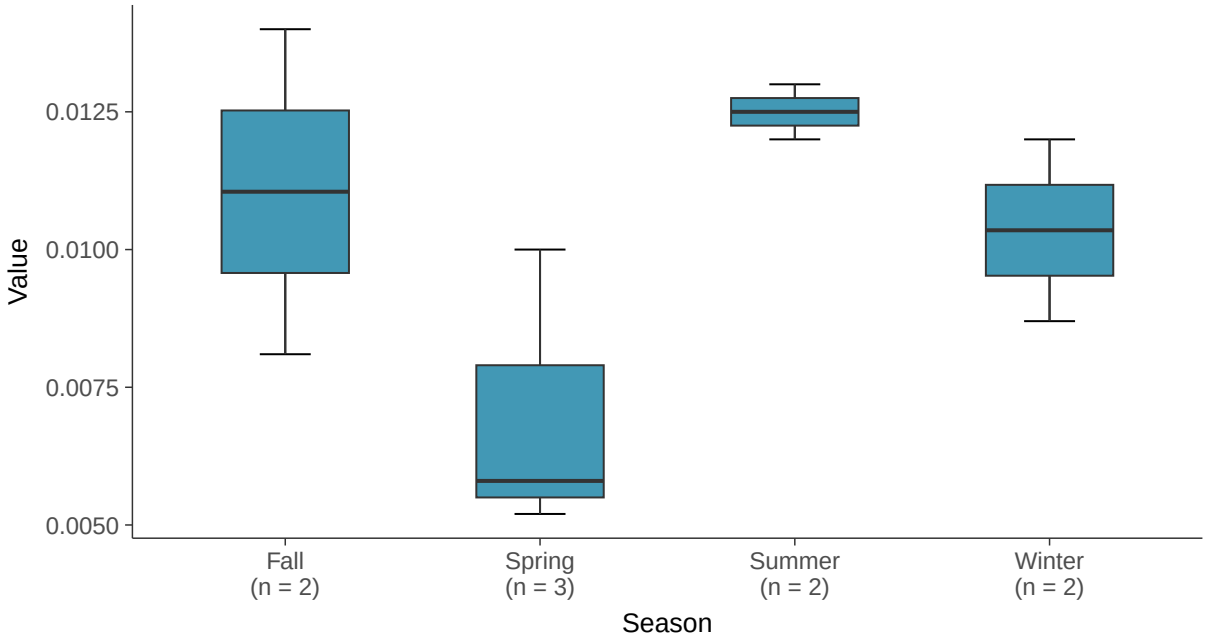
Boxplot

Chromium, Total, MW-30 (mg/L)



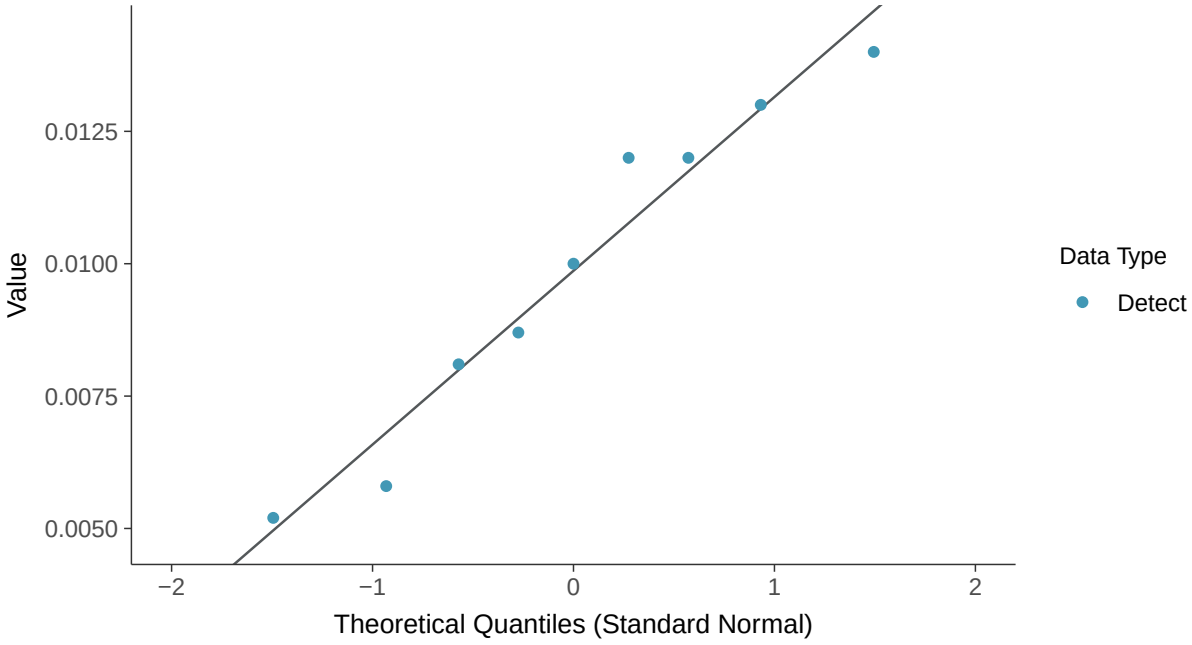
Boxplot by Season

Chromium, Total, MW-30 (mg/L)



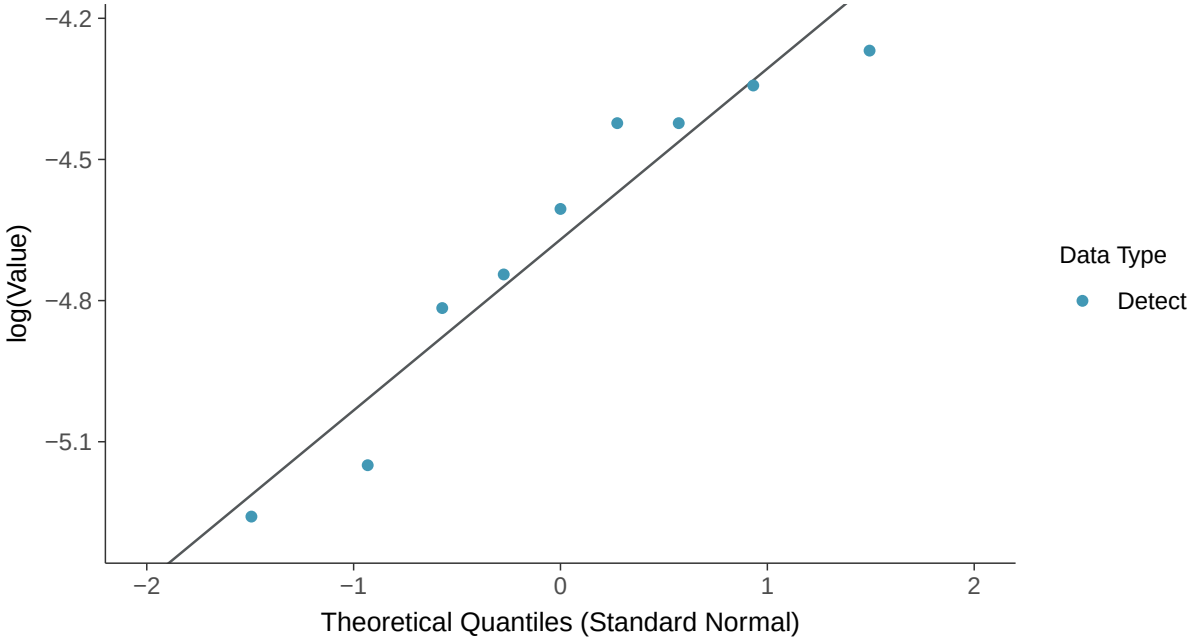
Normal Q-Q plot

Chromium, Total, MW-30 (mg/L)



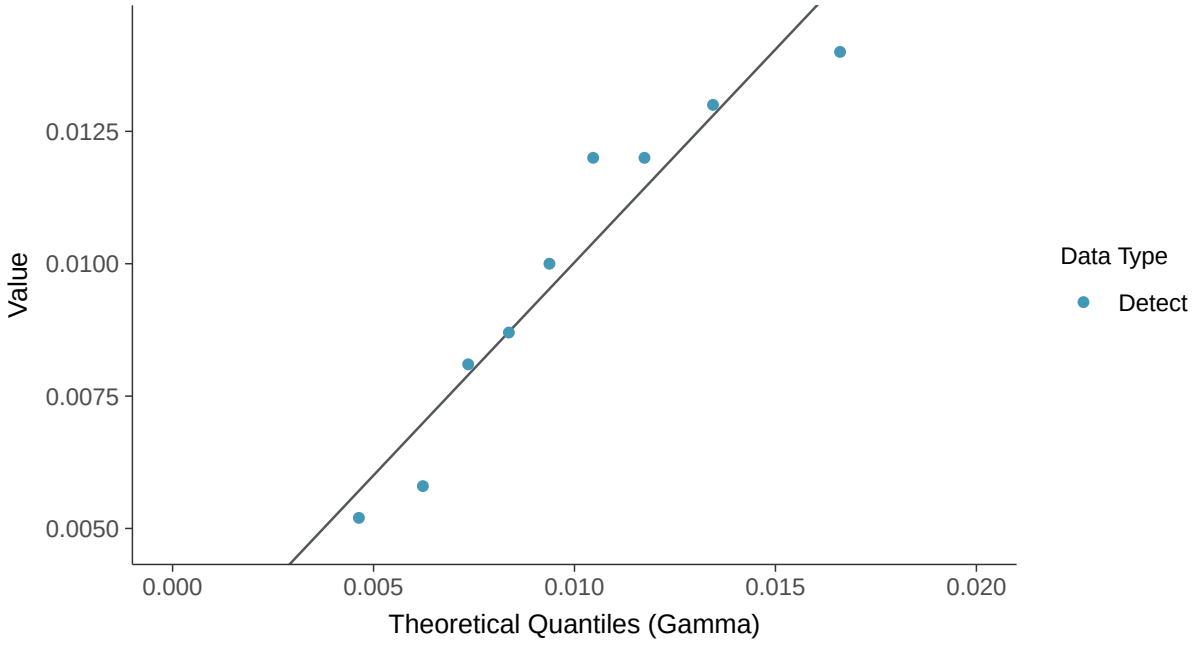
Lognormal Q-Q plot

Chromium, Total, MW-30 (mg/L)



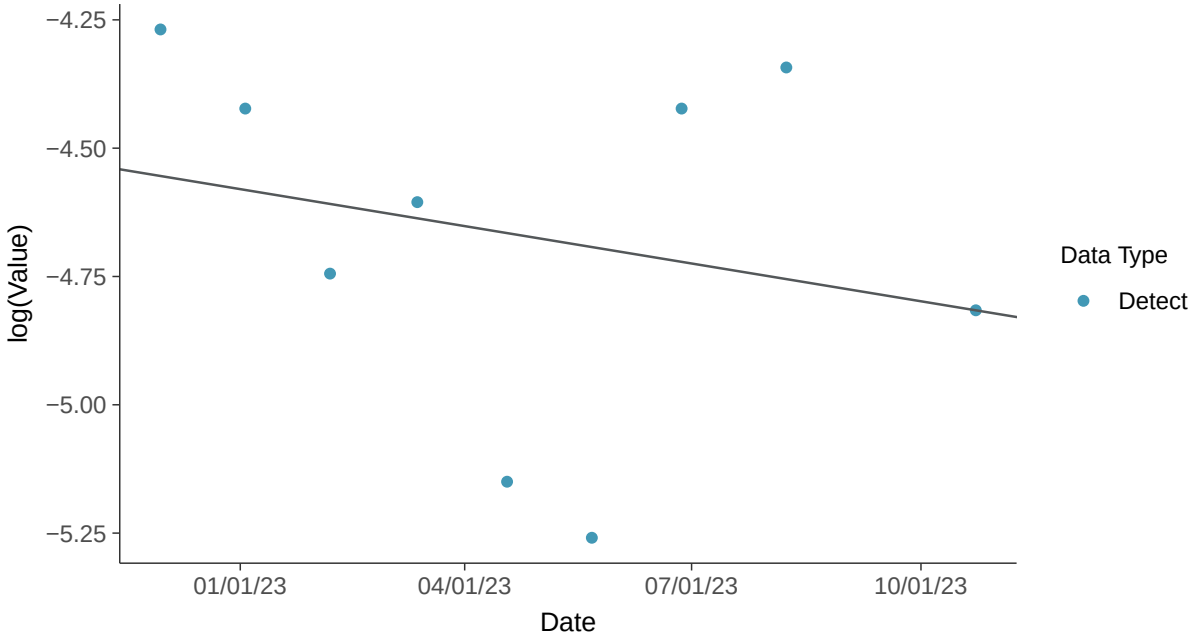
Gamma Q-Q plot

Chromium, Total, MW-30 (mg/L)



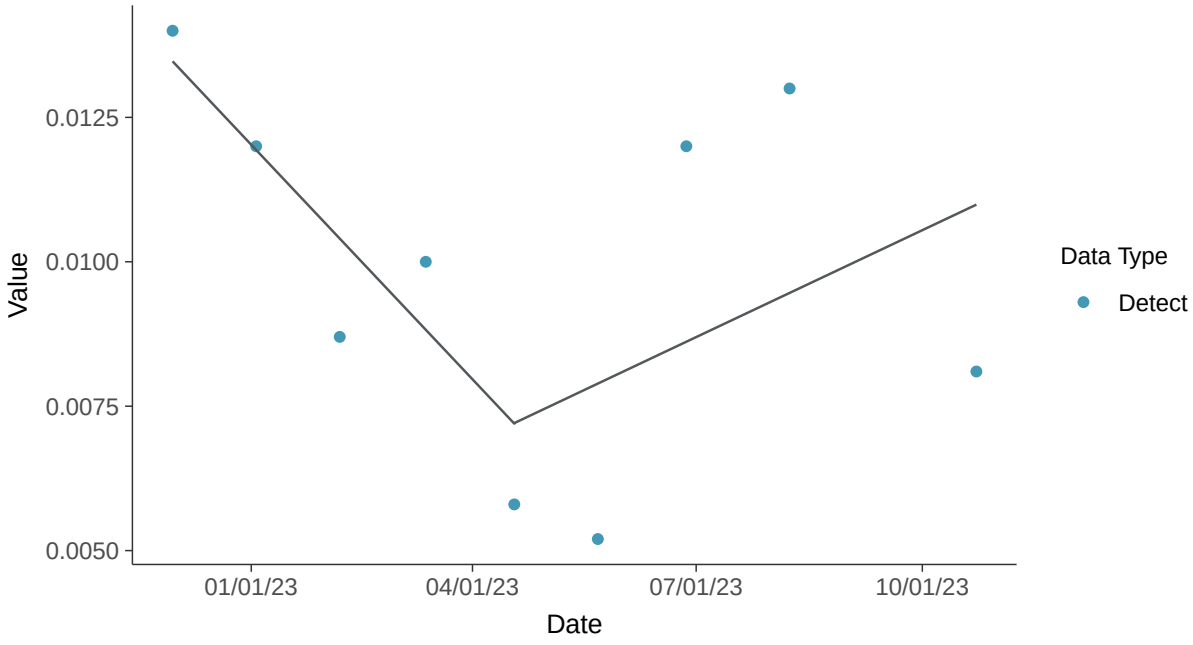
Trend Regression: Lognormal MLE

Chromium, Total, MW-30 (mg/L)



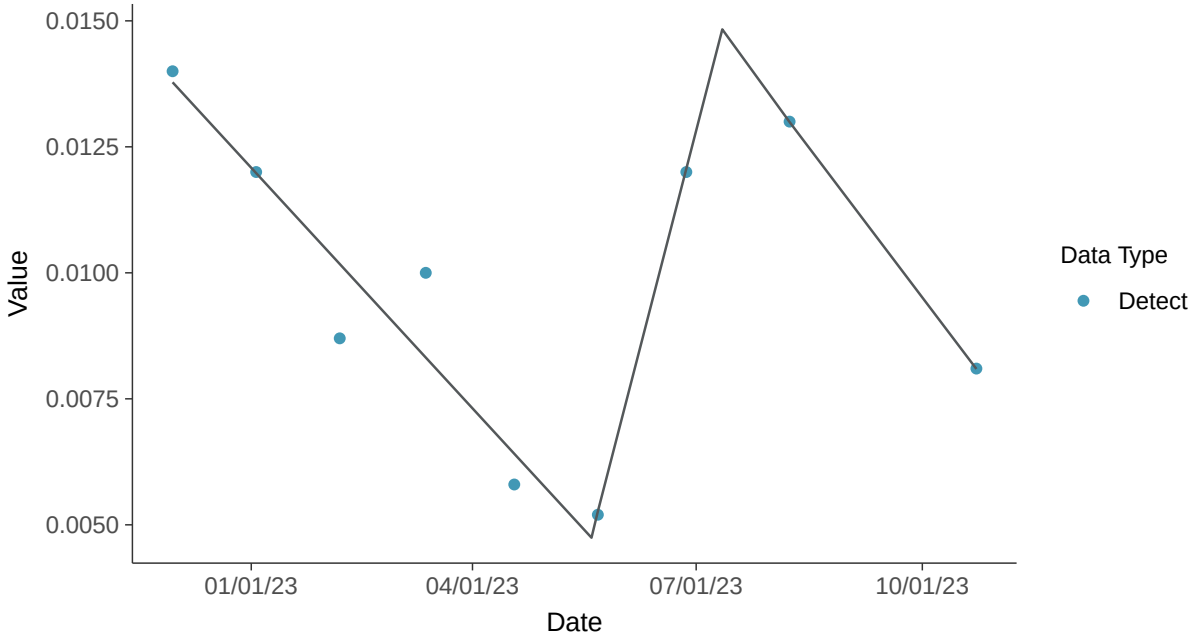
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-30 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-30 (mg/L)

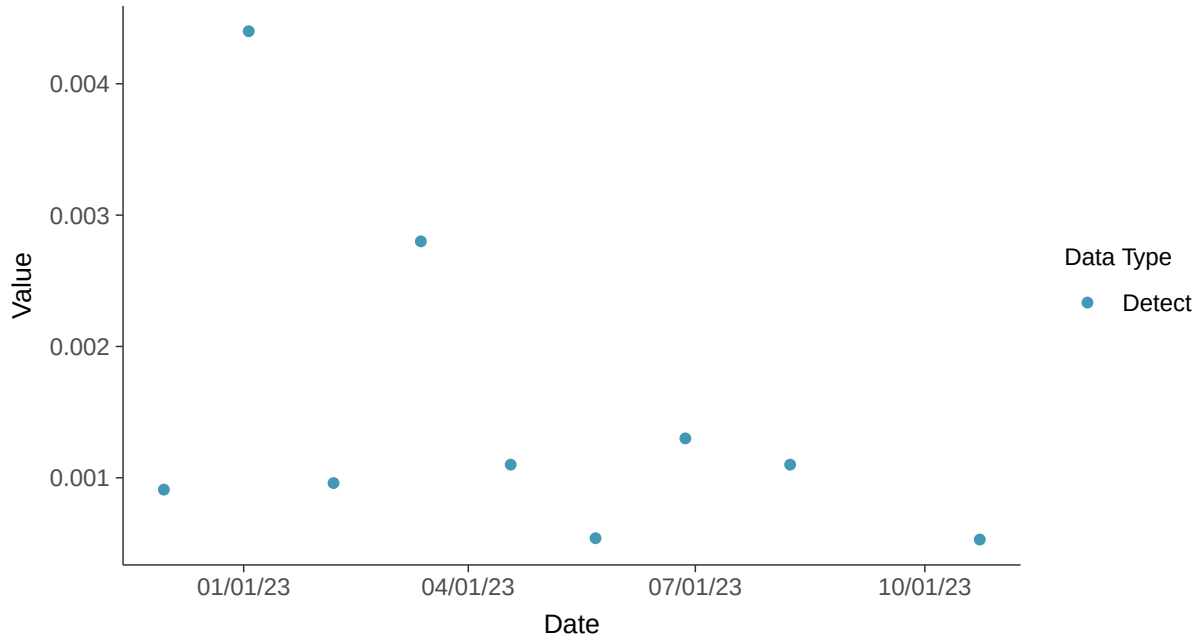


Appendix IV: Cobalt, MW-30

ID: 1_25_5_110

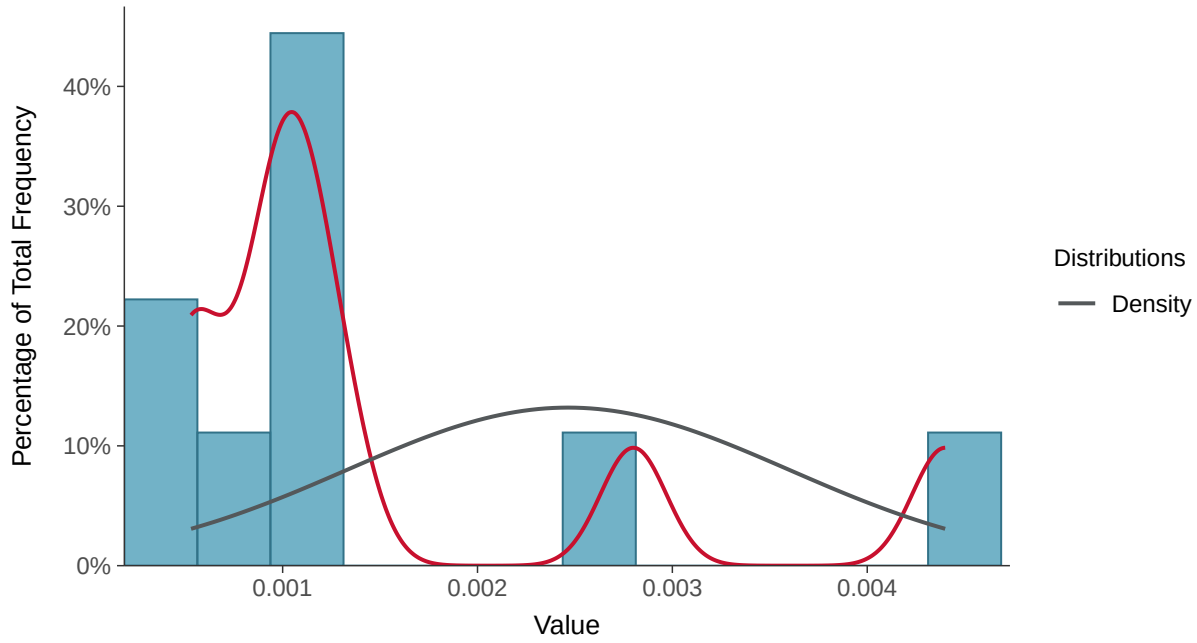
Scatter Plot

Cobalt, MW-30 (mg/L)



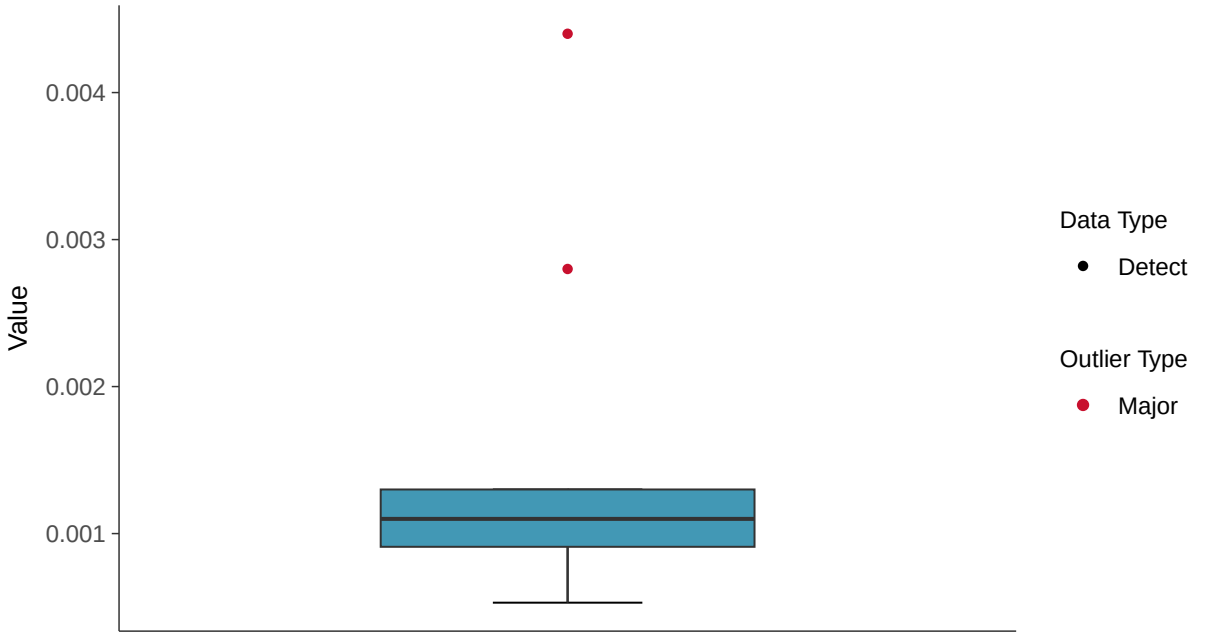
Histogram

Cobalt, MW-30 (mg/L)



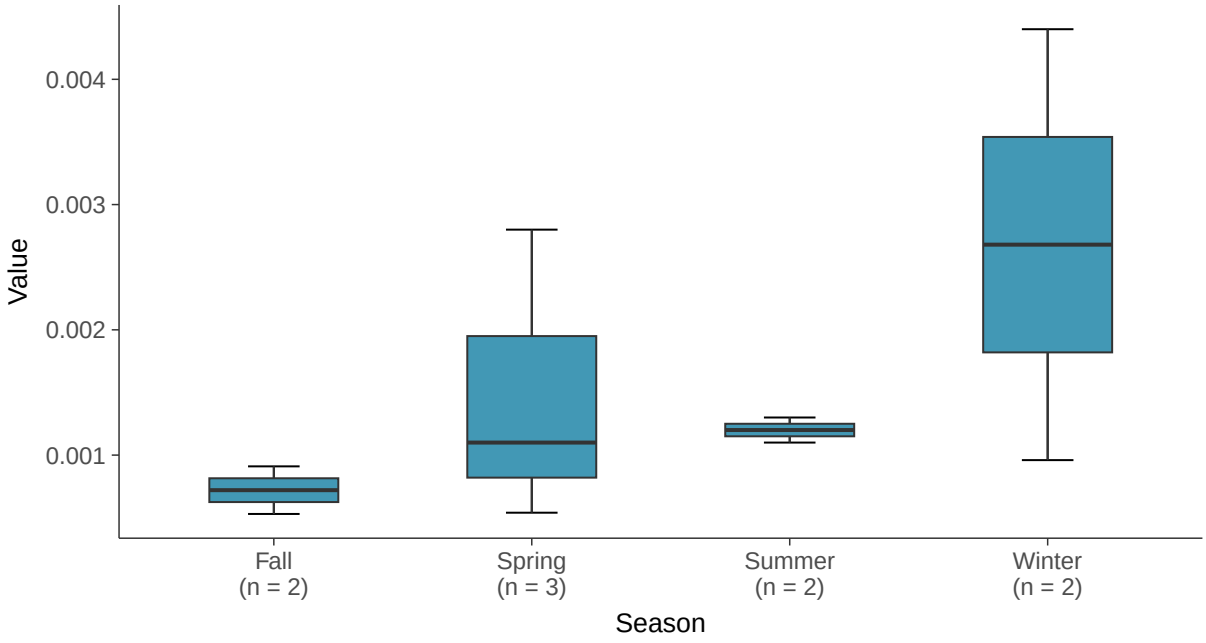
Boxplot

Cobalt, MW-30 (mg/L)



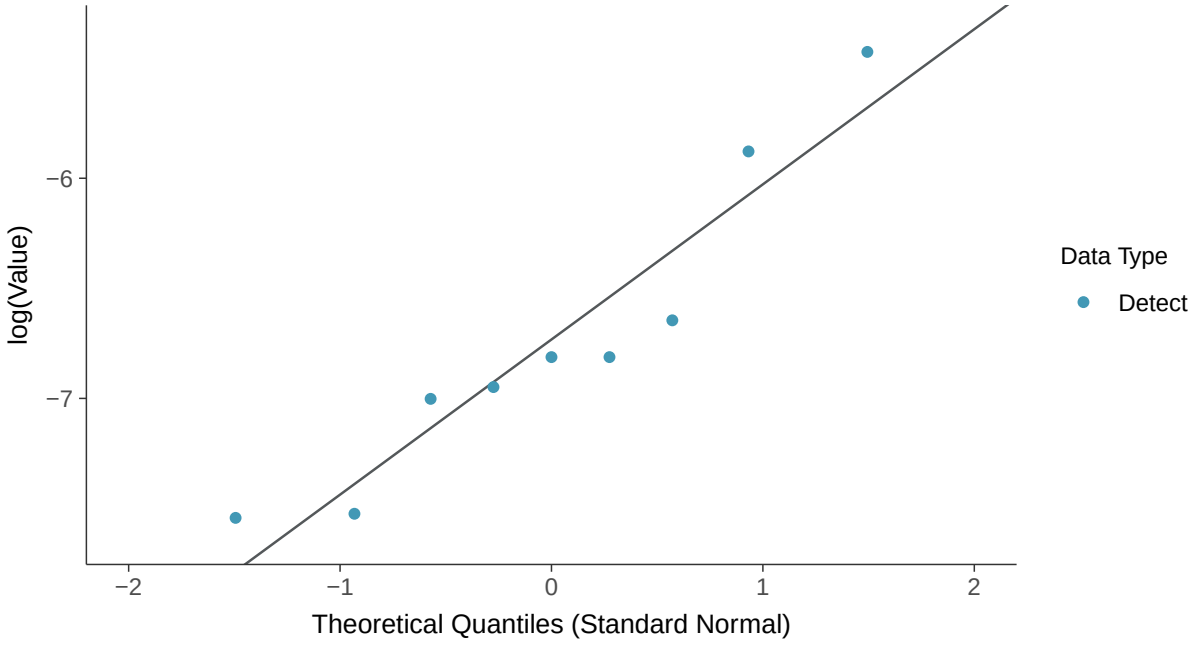
Boxplot by Season

Cobalt, MW-30 (mg/L)



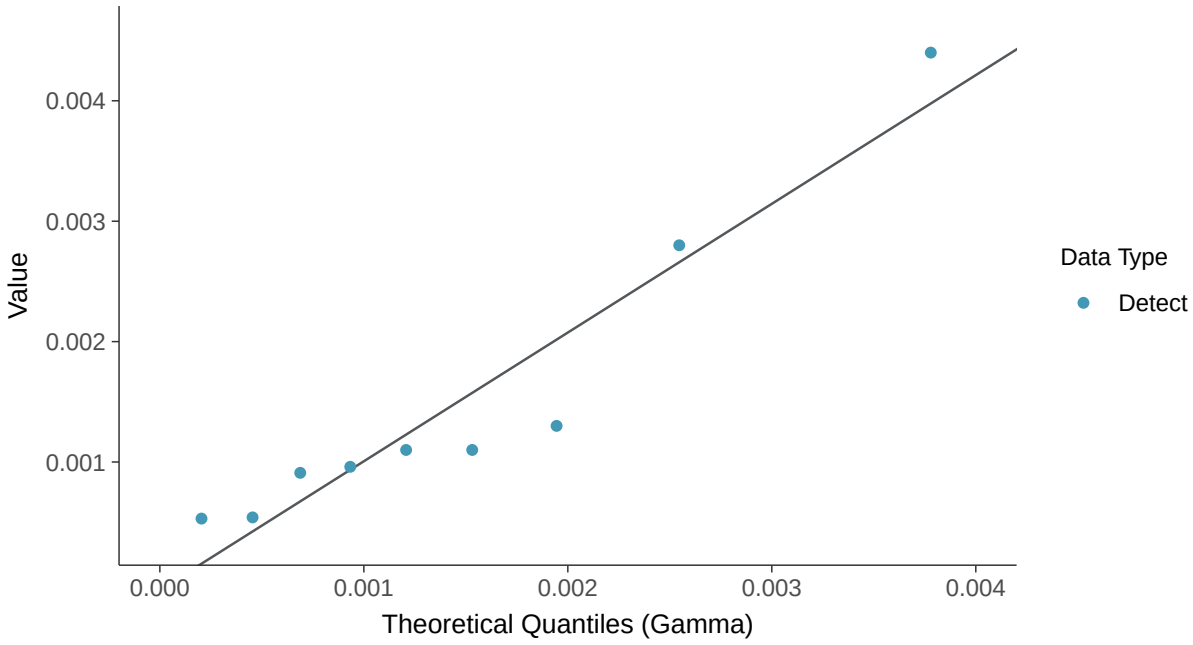
Lognormal Q-Q plot

Cobalt, MW-30 (mg/L)



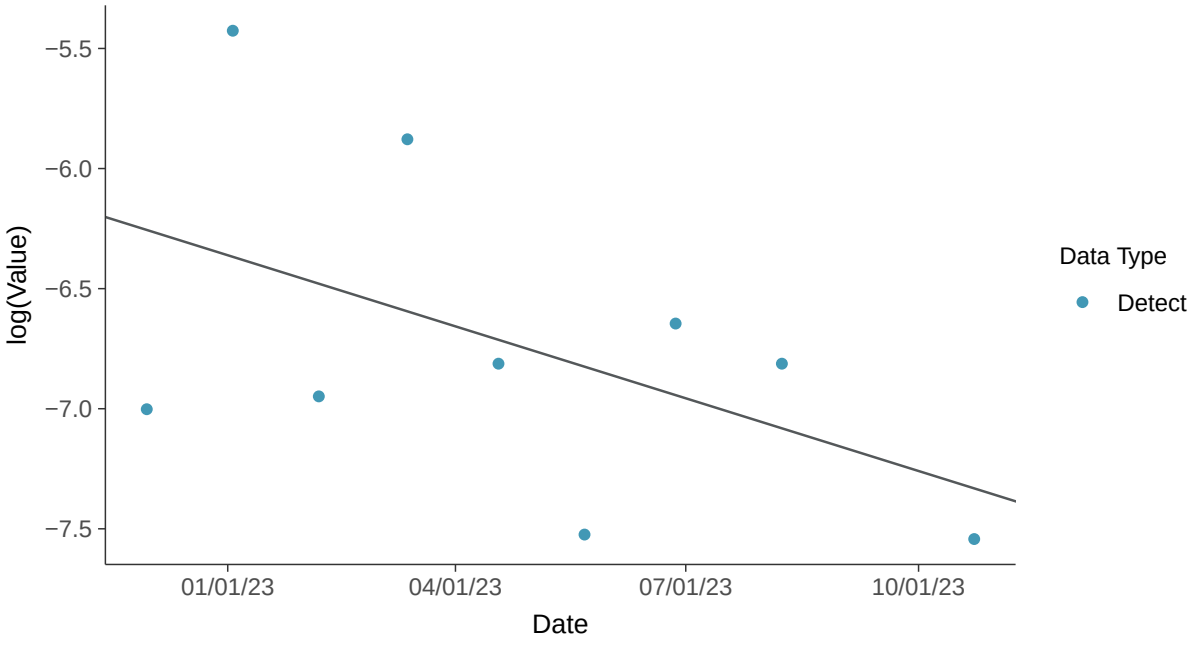
Gamma Q-Q plot

Cobalt, MW-30 (mg/L)



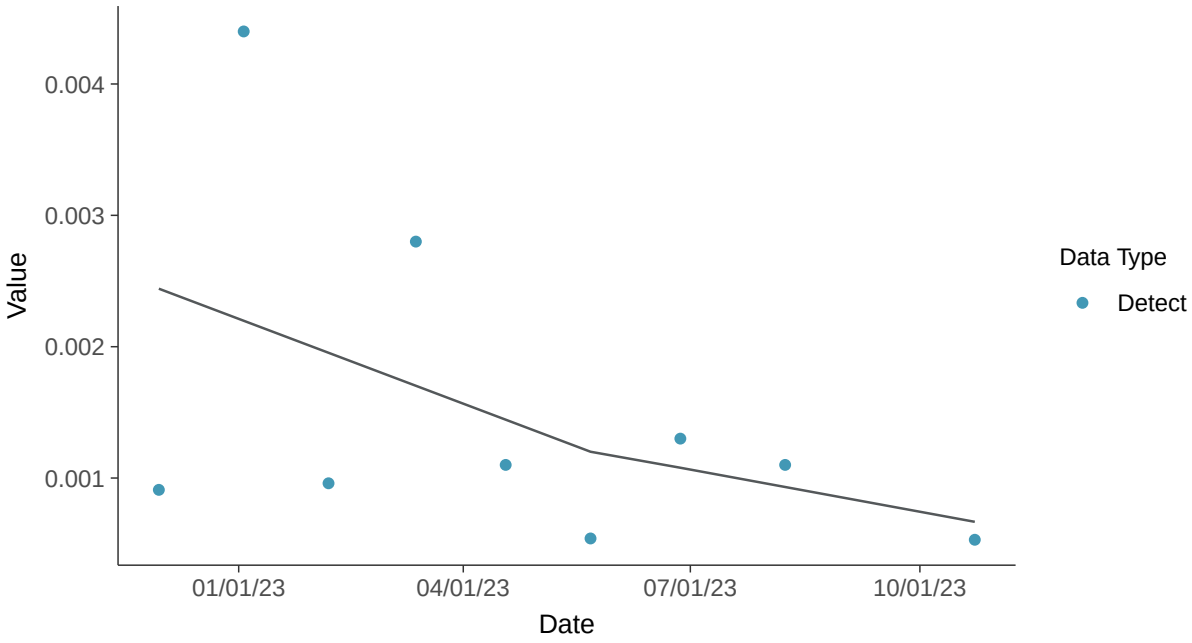
Trend Regression: Lognormal MLE

Cobalt, MW-30 (mg/L)



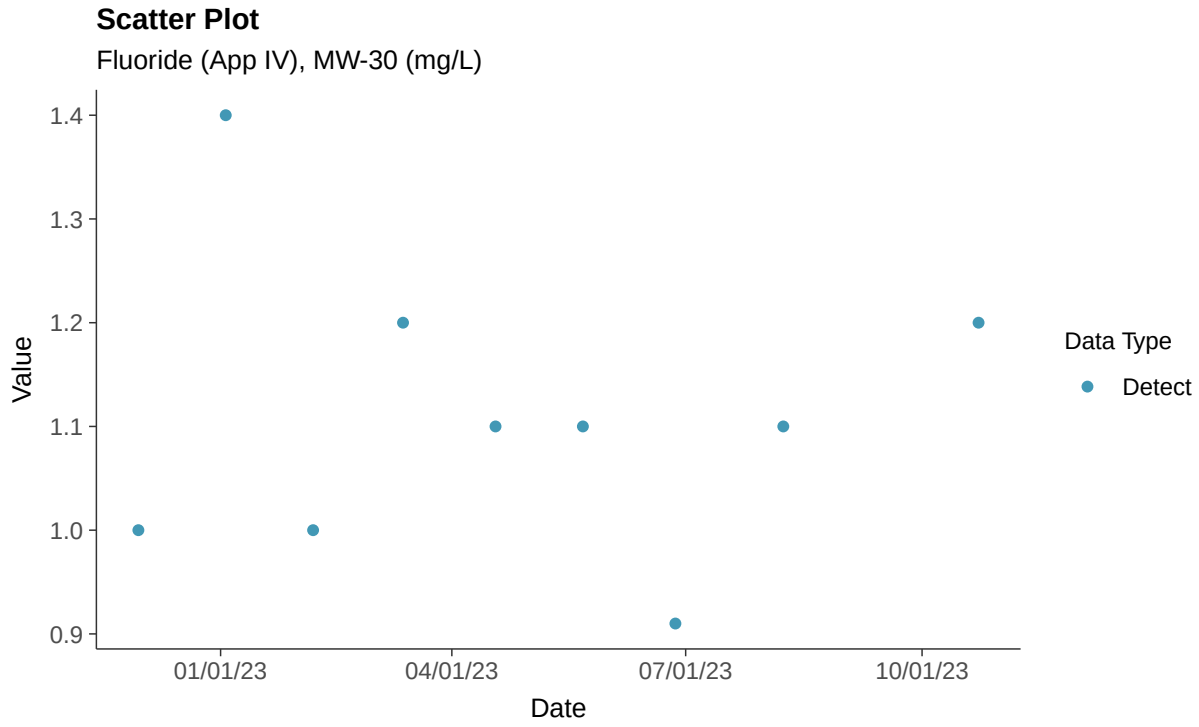
Trend Regression: Piecewise Linear-Linear

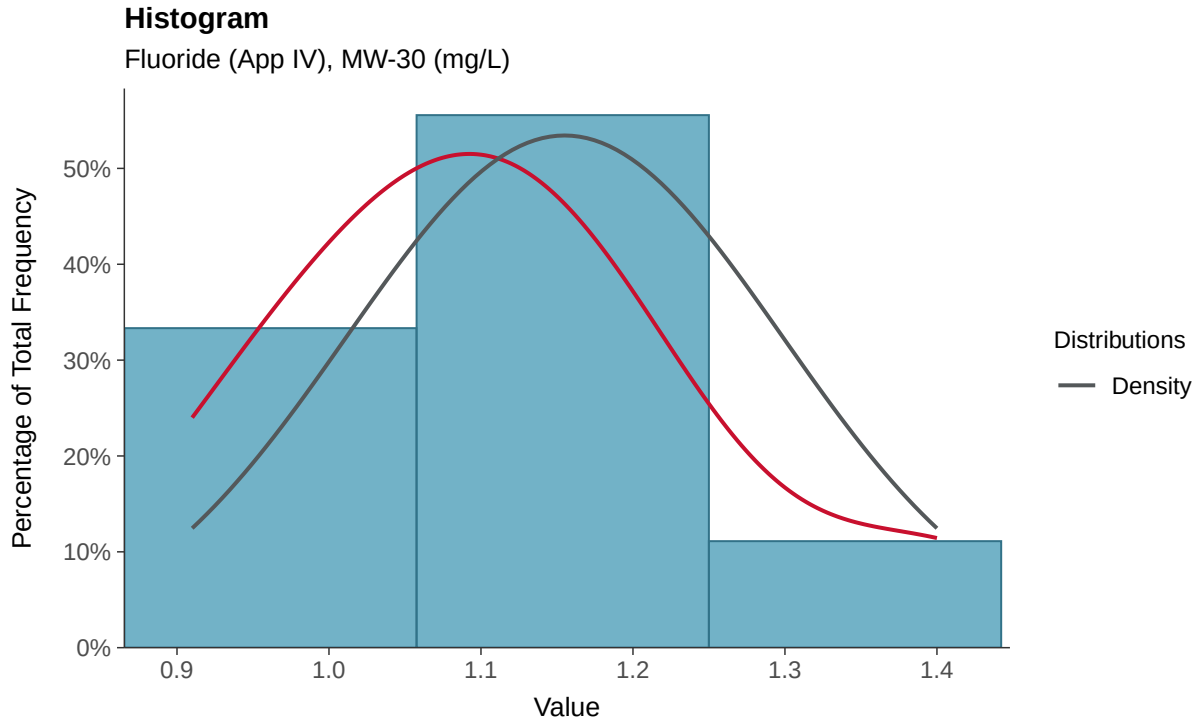
Cobalt, MW-30 (mg/L)



Appendix IV: Fluoride (App IV), MW-30

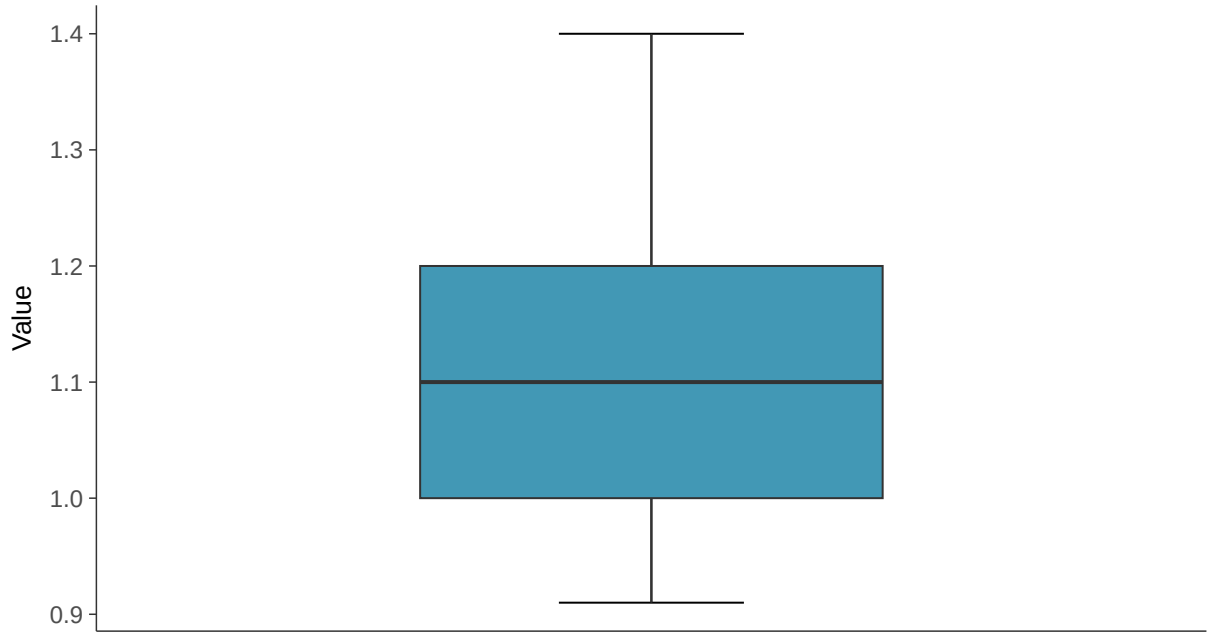
ID: 1_25_5_113





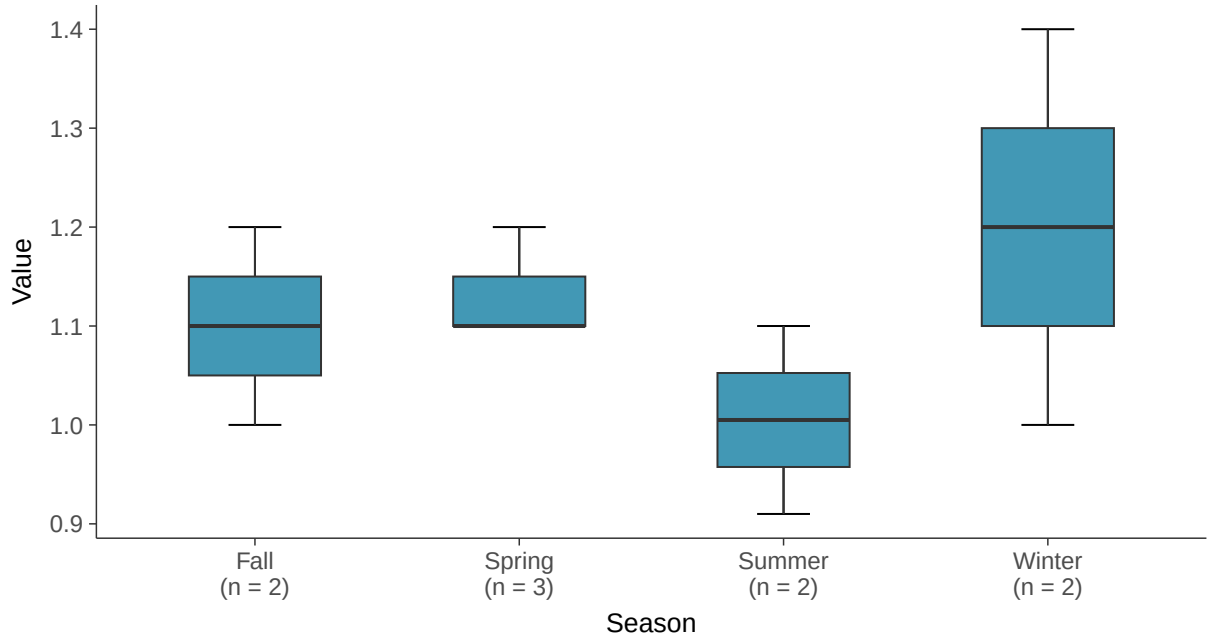
Boxplot

Fluoride (App IV), MW-30 (mg/L)



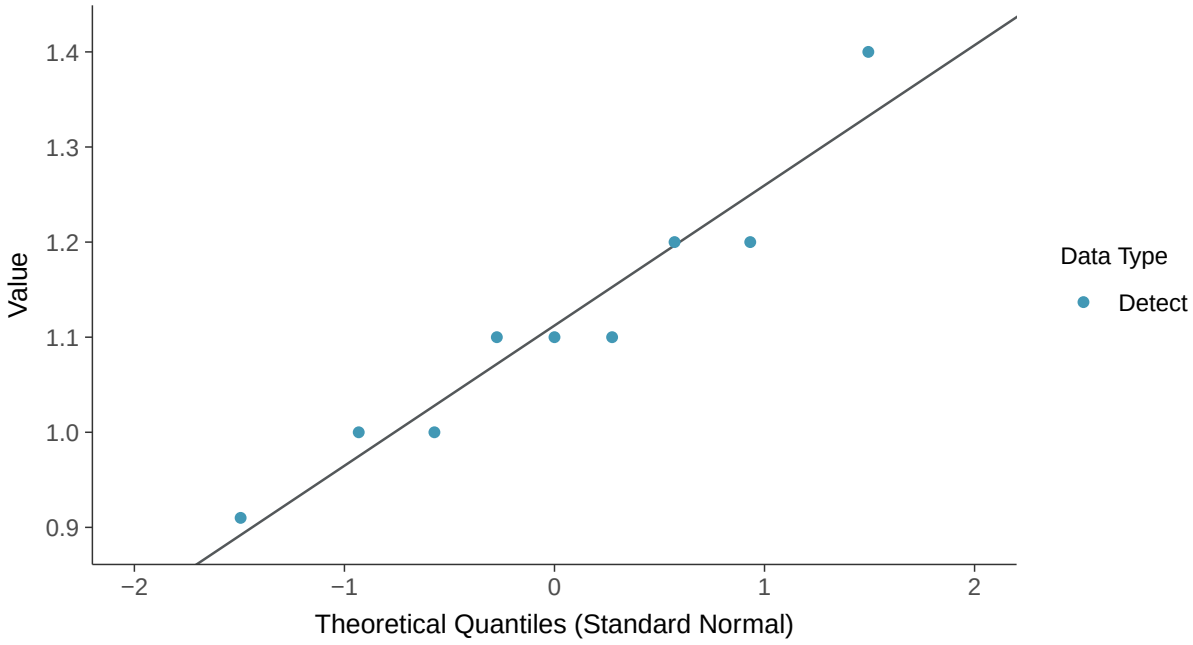
Boxplot by Season

Fluoride (App IV), MW-30 (mg/L)



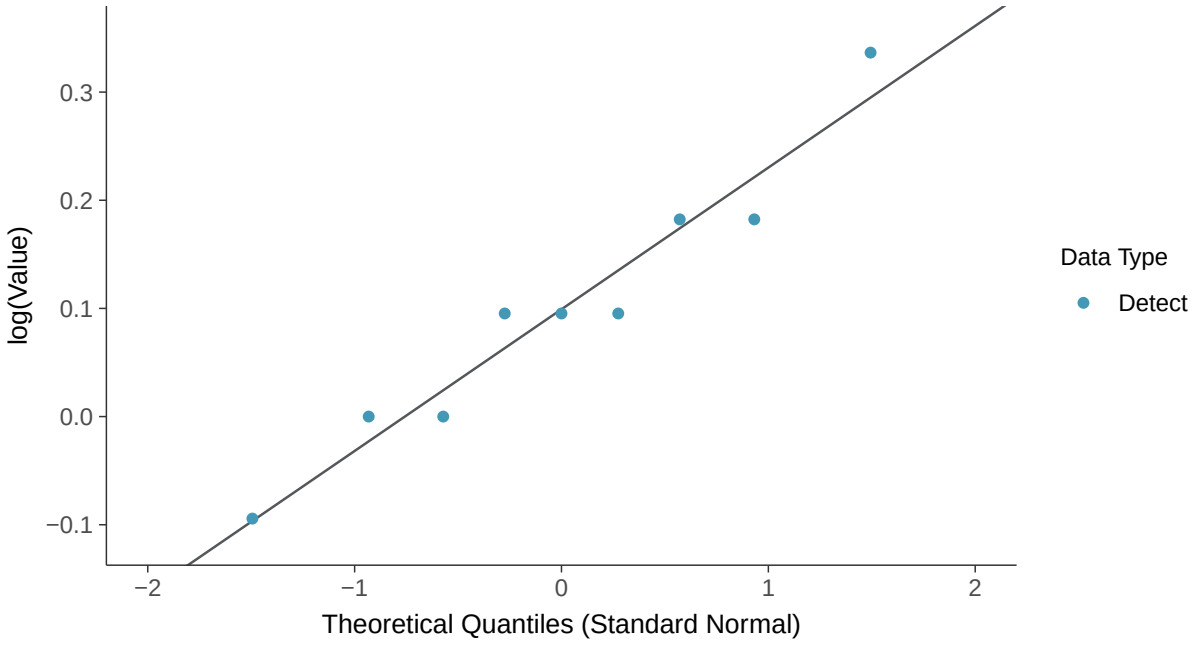
Normal Q-Q plot

Fluoride (App IV), MW-30 (mg/L)



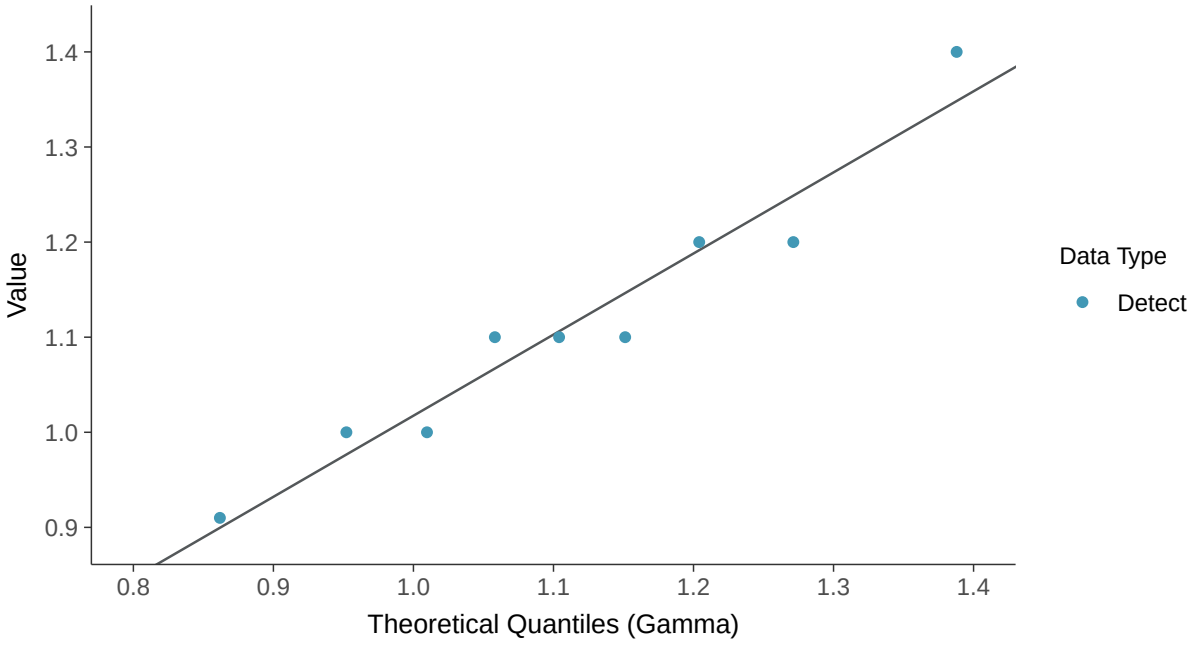
Lognormal Q-Q plot

Fluoride (App IV), MW-30 (mg/L)



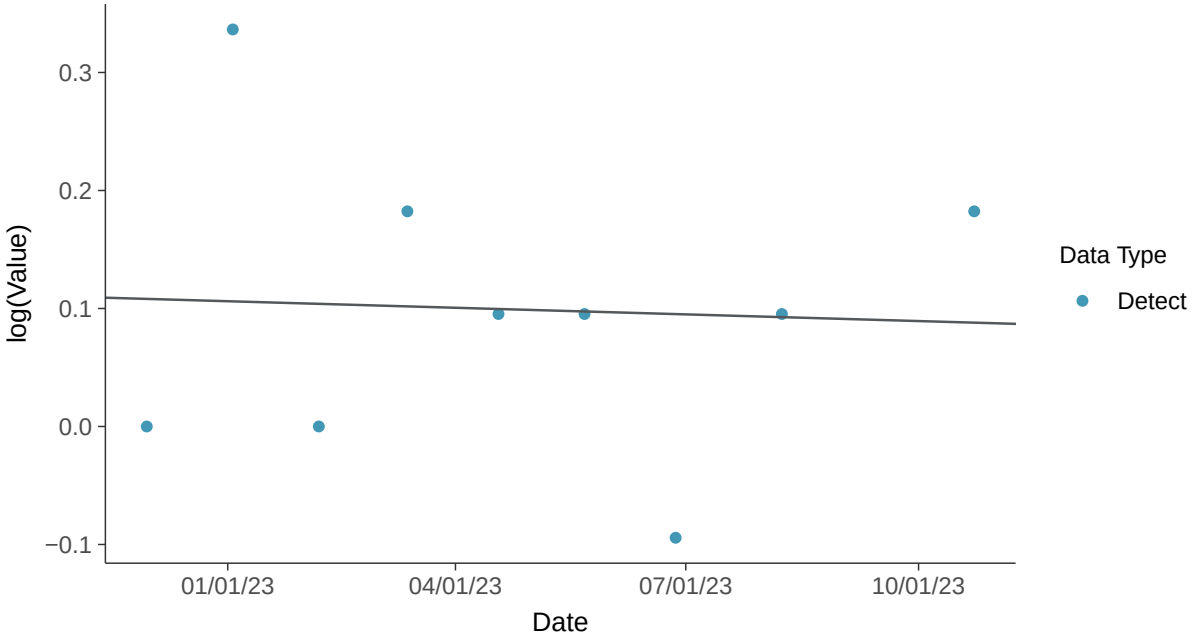
Gamma Q-Q plot

Fluoride (App IV), MW-30 (mg/L)



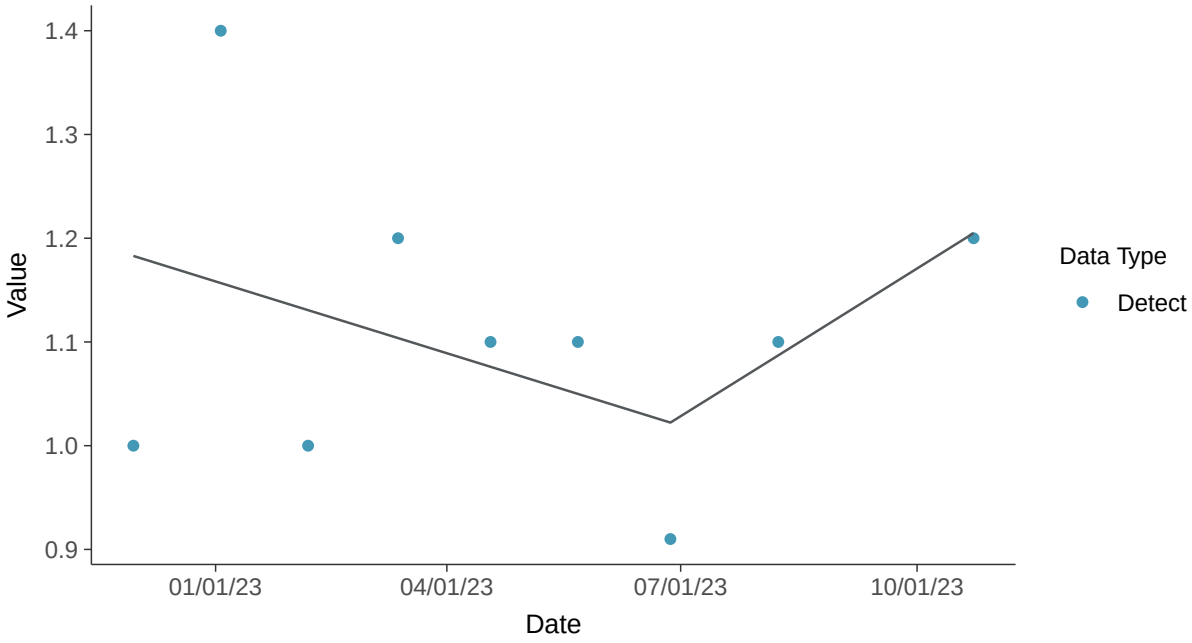
Trend Regression: Lognormal MLE

Fluoride (App IV), MW-30 (mg/L)



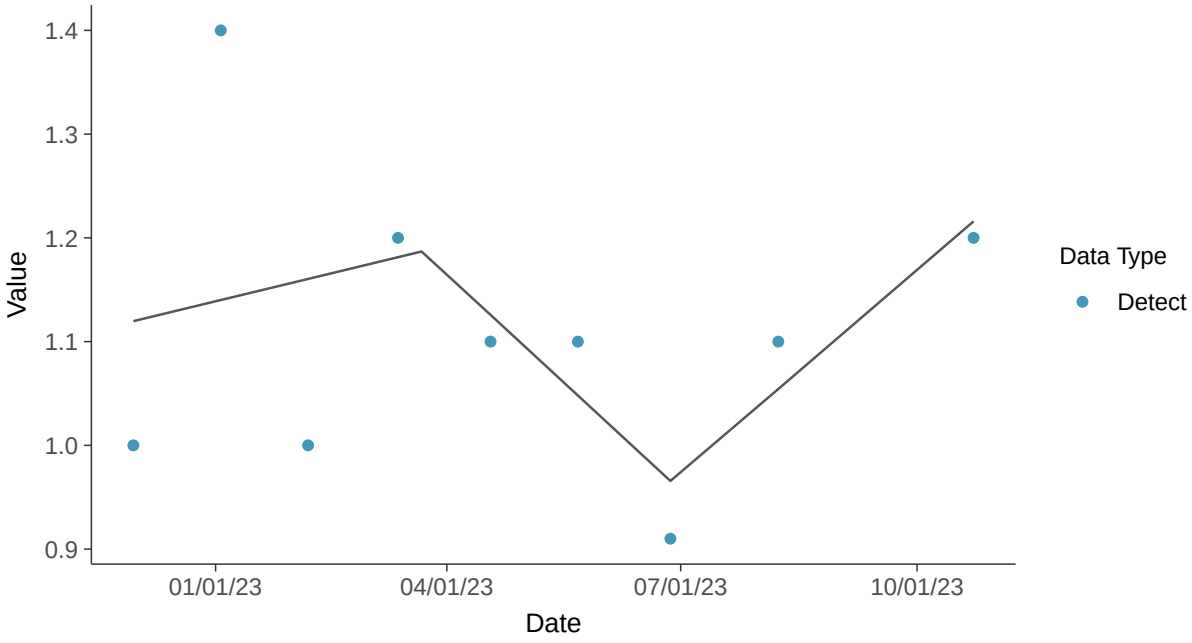
Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-30 (mg/L)



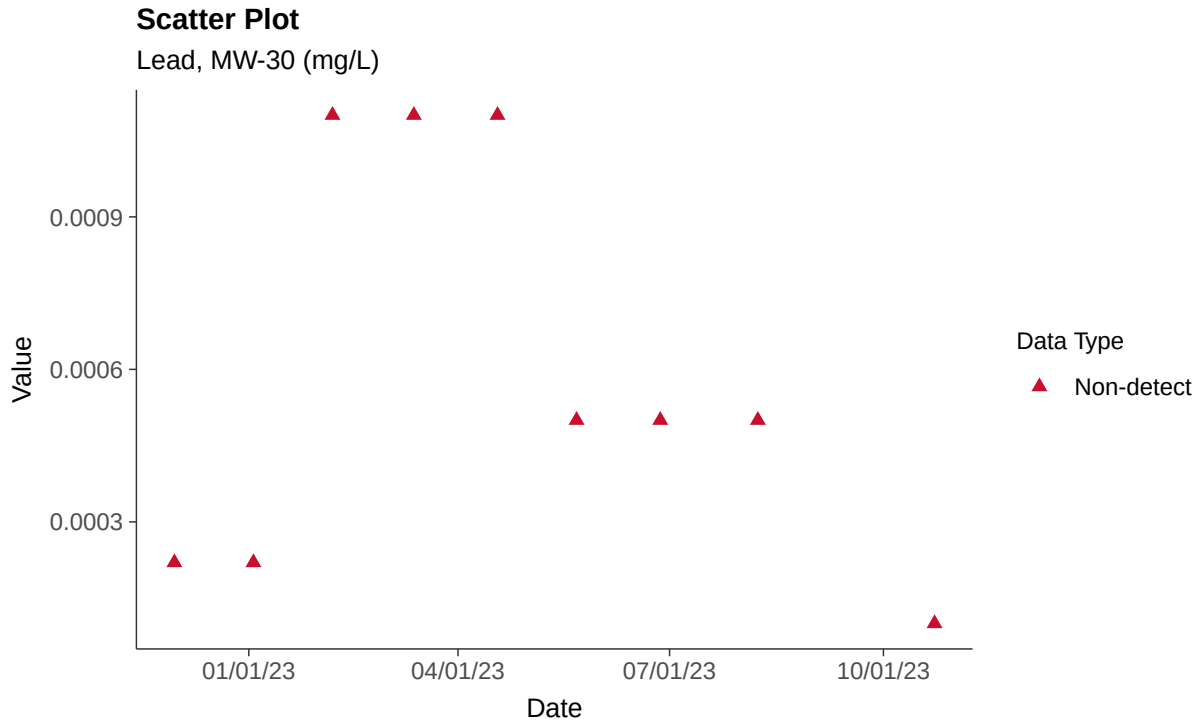
Trend Regression: Piecewise Linear-Linear-Linear

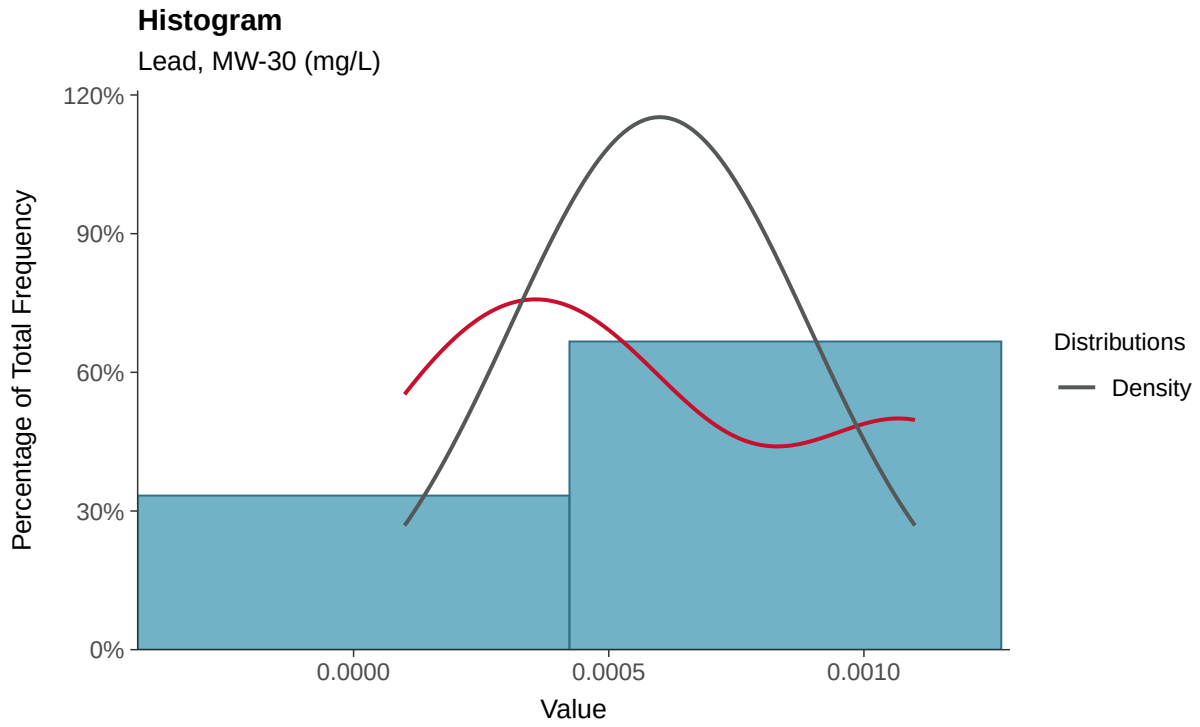
Fluoride (App IV), MW-30 (mg/L)



Appendix IV: Lead, MW-30

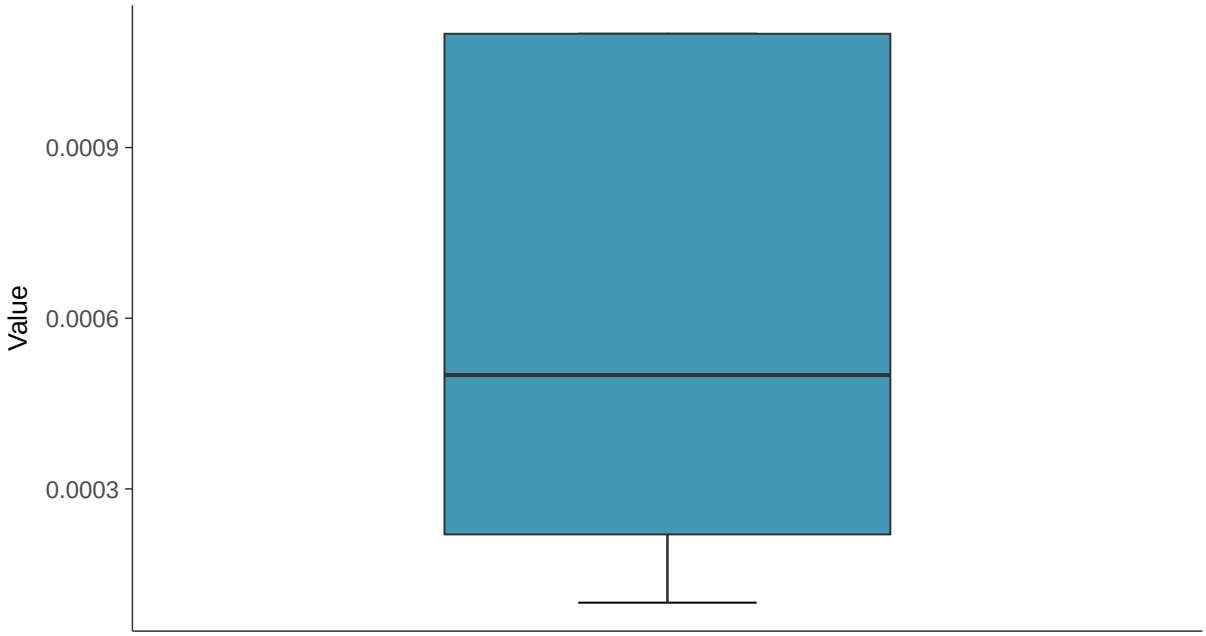
ID: 1_25_5_115





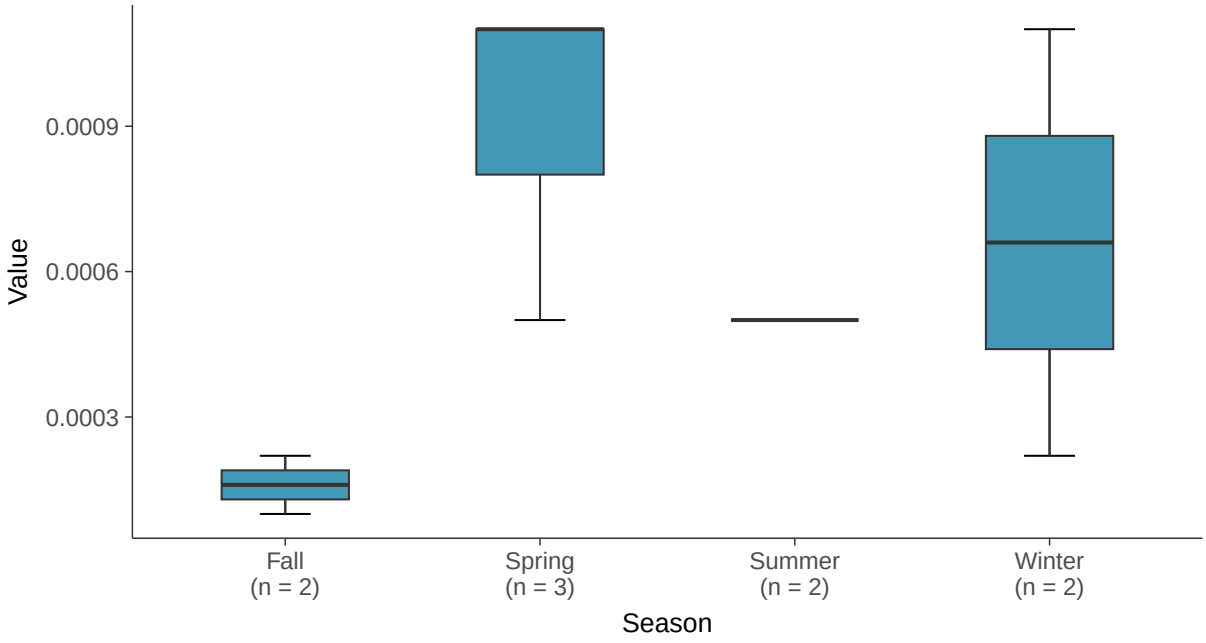
Boxplot

Lead, MW-30 (mg/L)



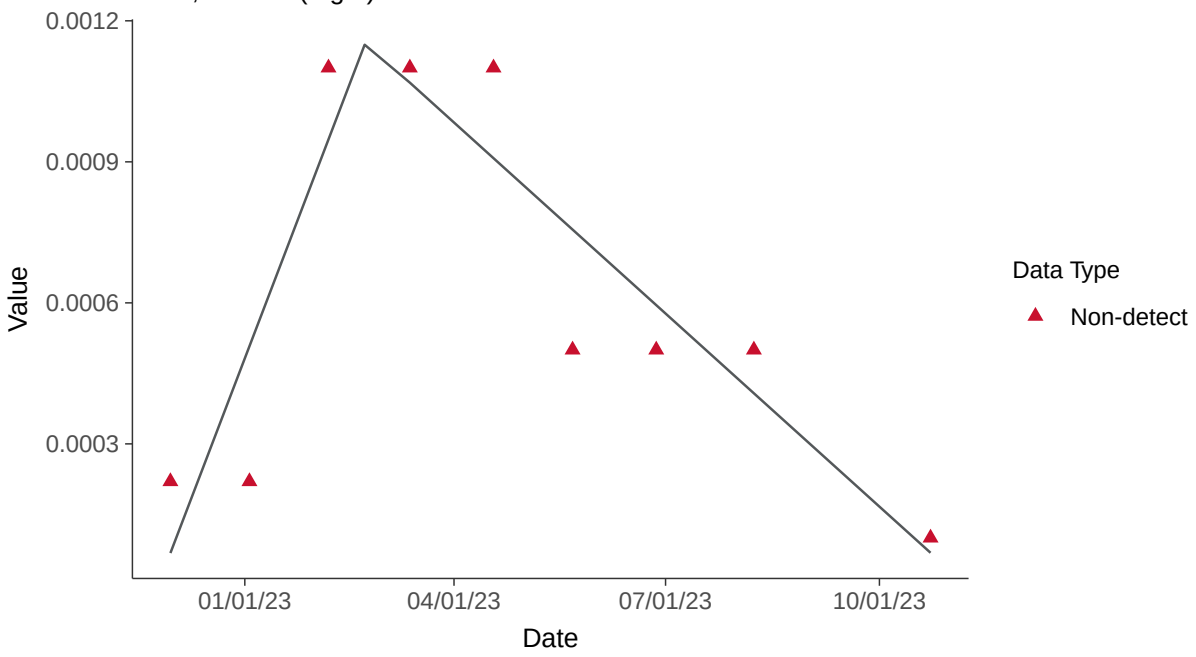
Boxplot by Season

Lead, MW-30 (mg/L)



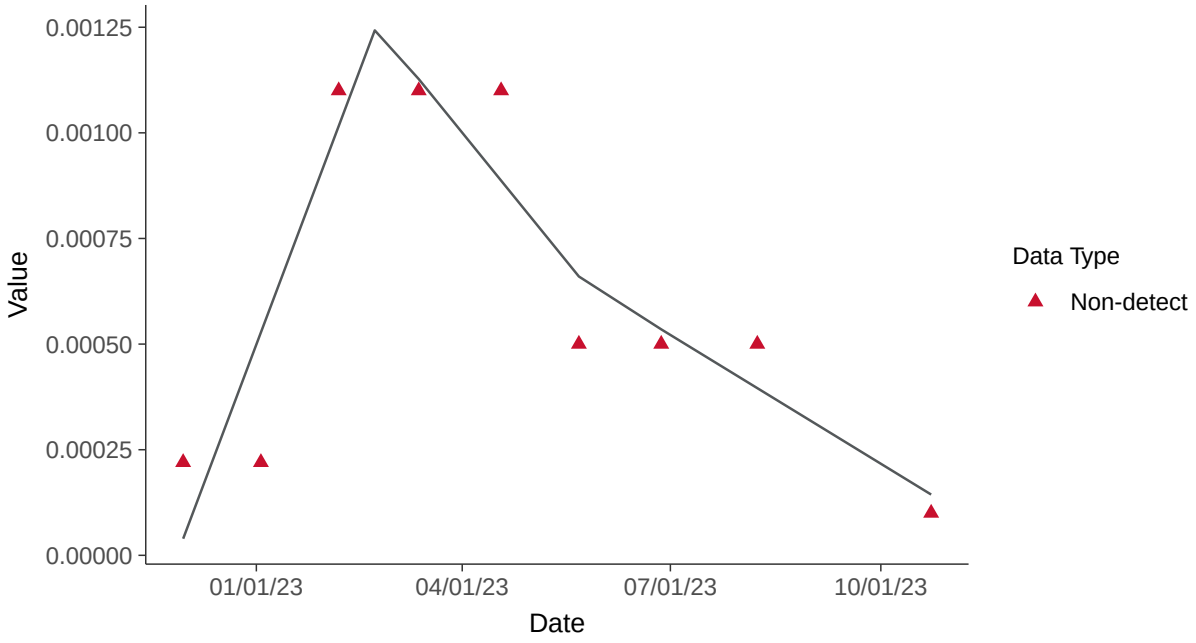
Trend Regression: Piecewise Linear-Linear

Lead, MW-30 (mg/L)



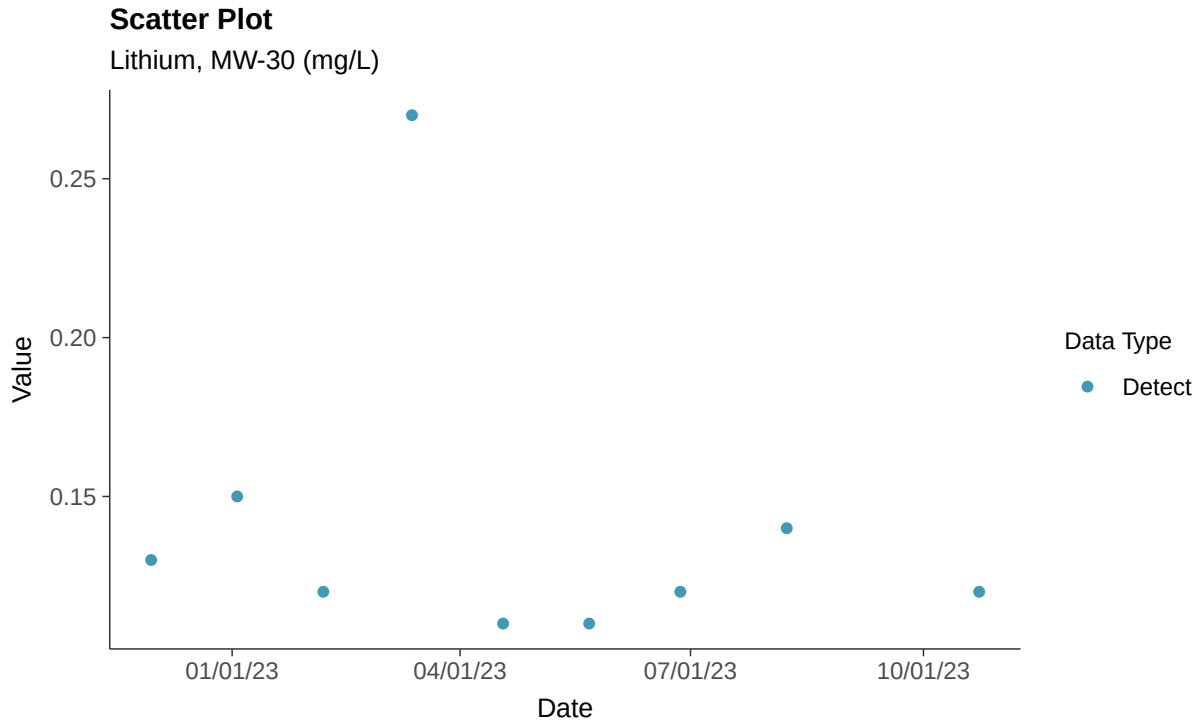
Trend Regression: Piecewise Linear-Linear-Linear

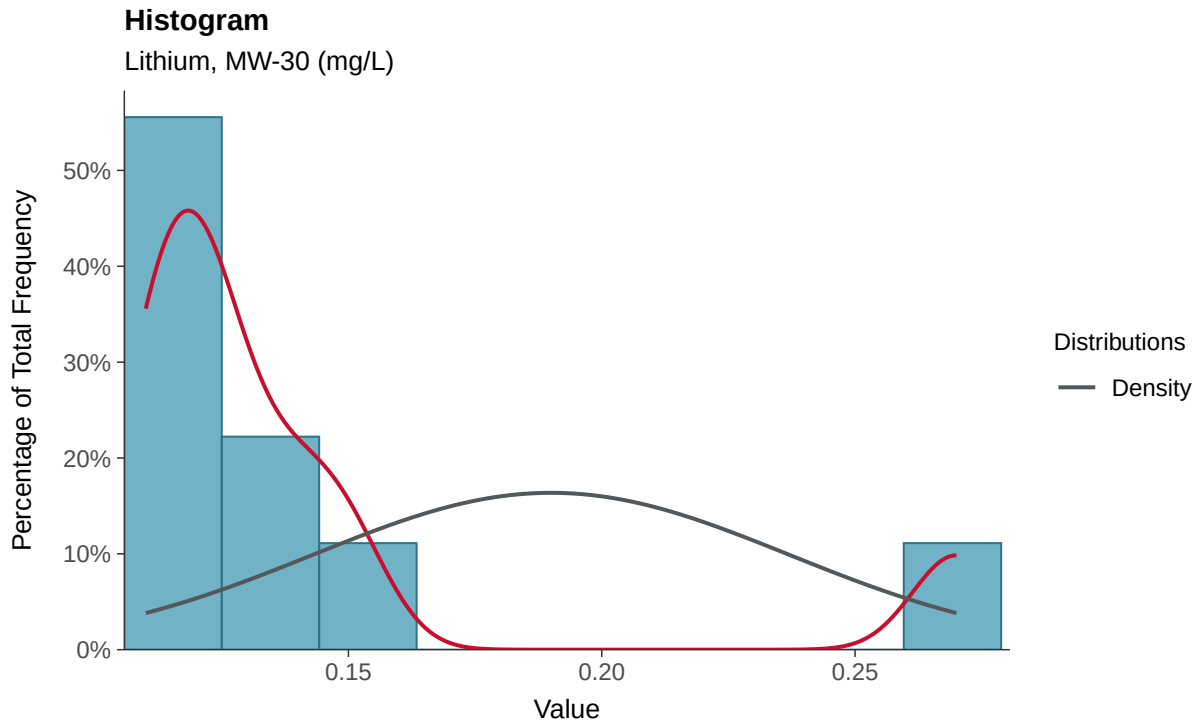
Lead, MW-30 (mg/L)



Appendix IV: Lithium, MW-30

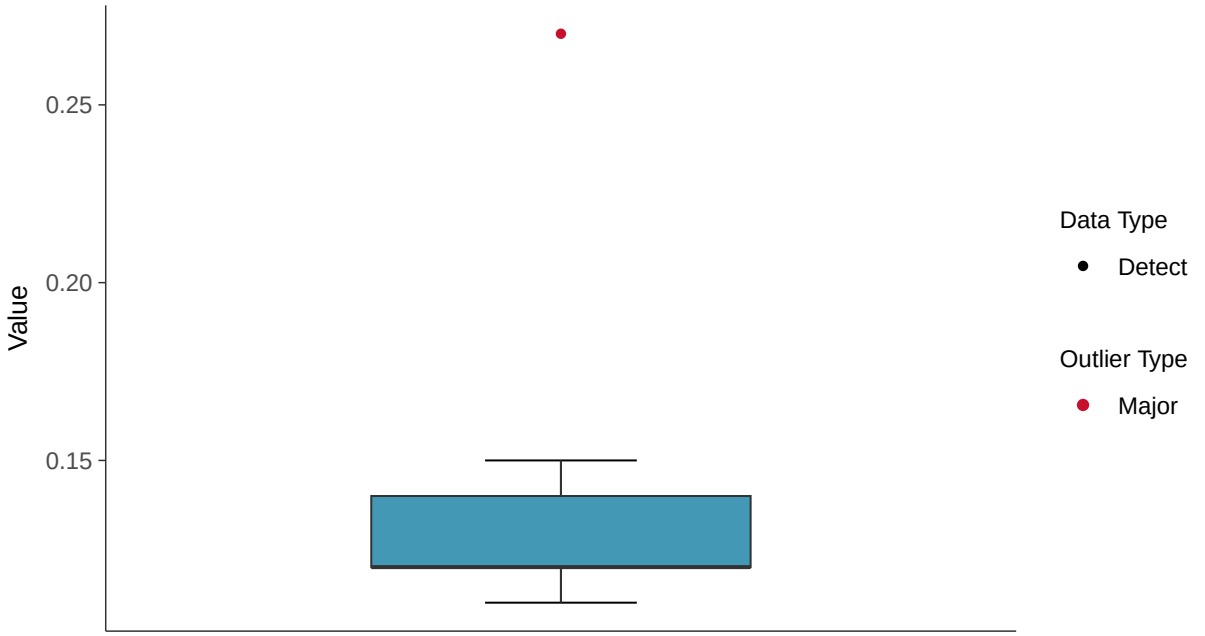
ID: 1_25_5_116





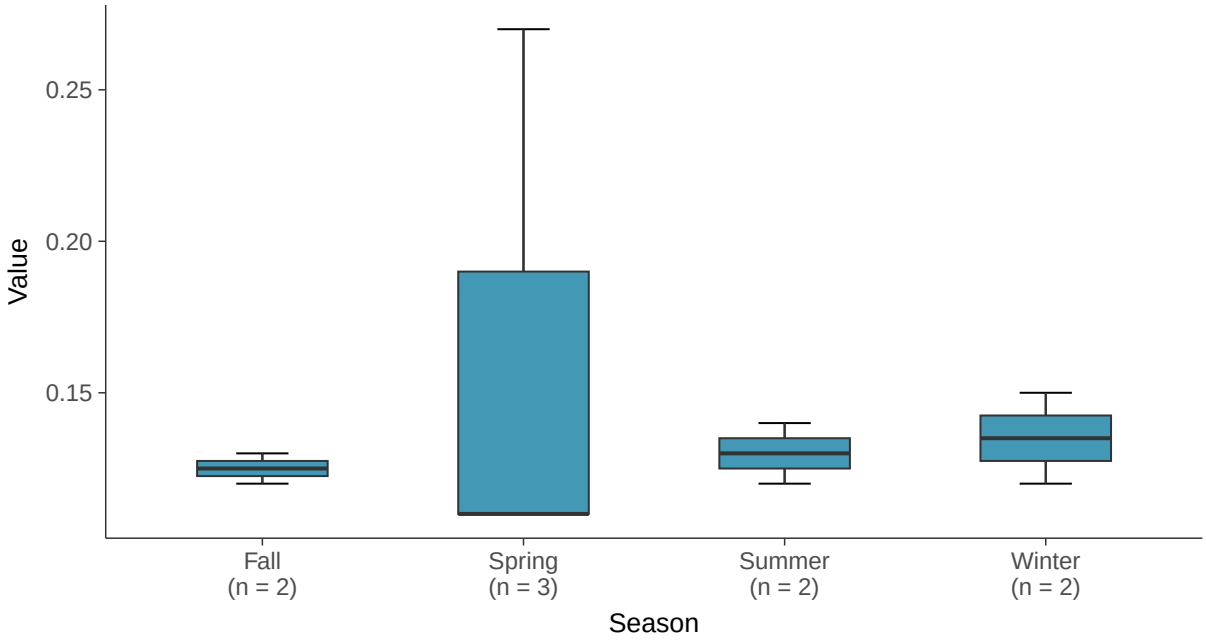
Boxplot

Lithium, MW-30 (mg/L)



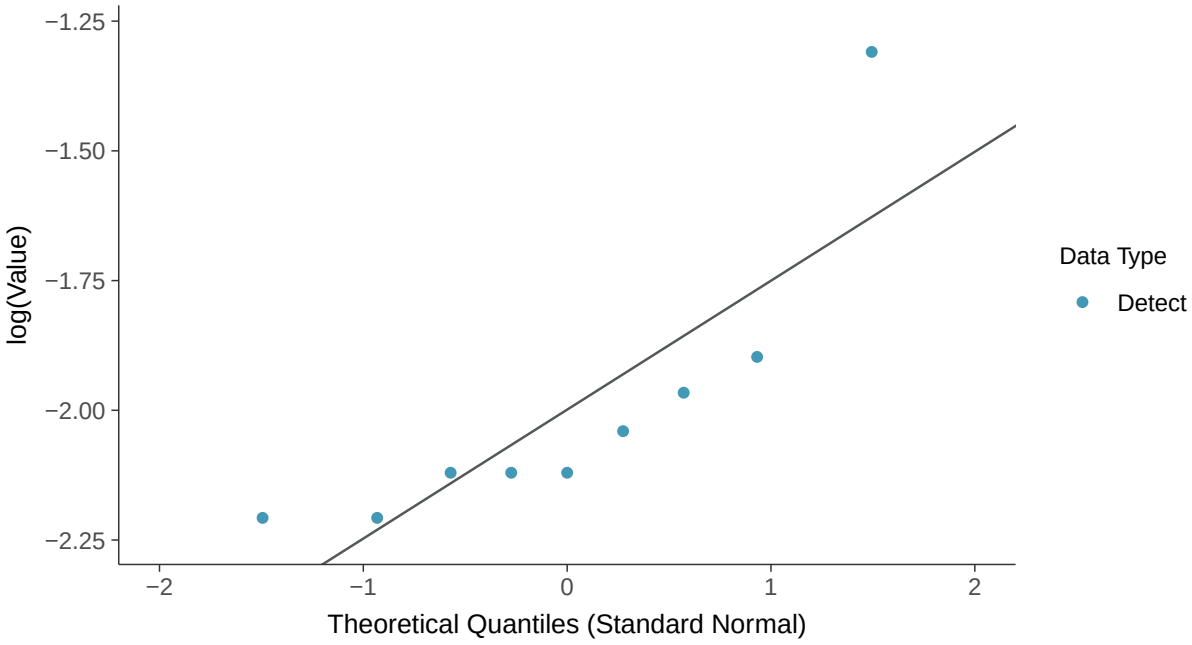
Boxplot by Season

Lithium, MW-30 (mg/L)



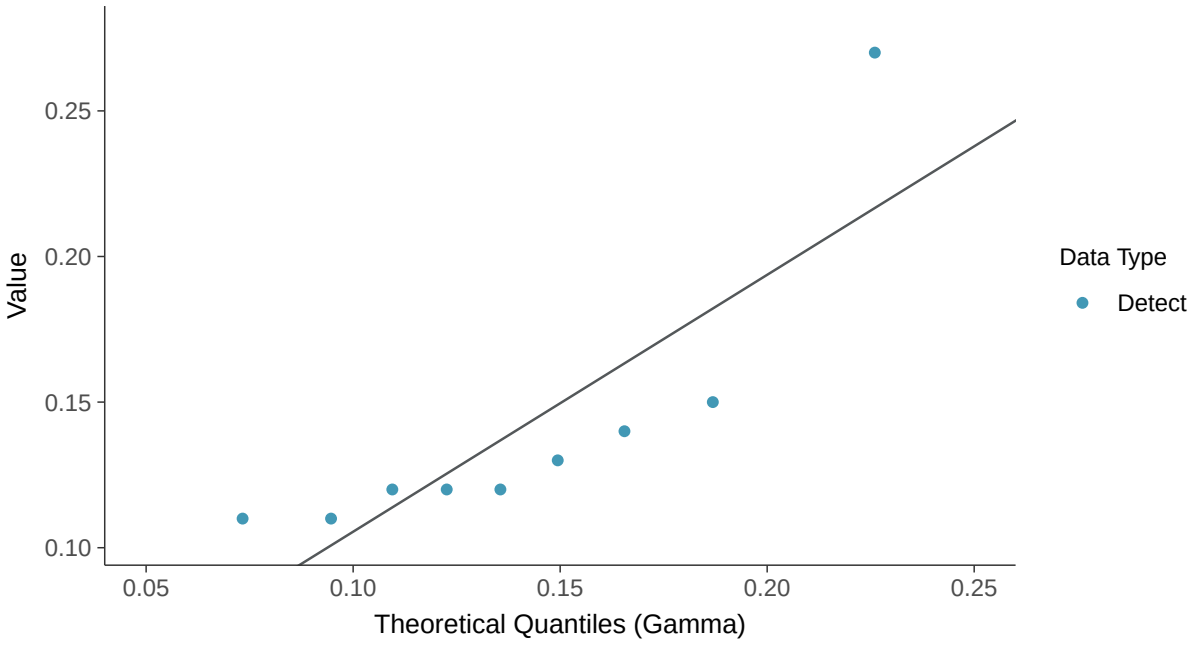
Lognormal Q-Q plot

Lithium, MW-30 (mg/L)



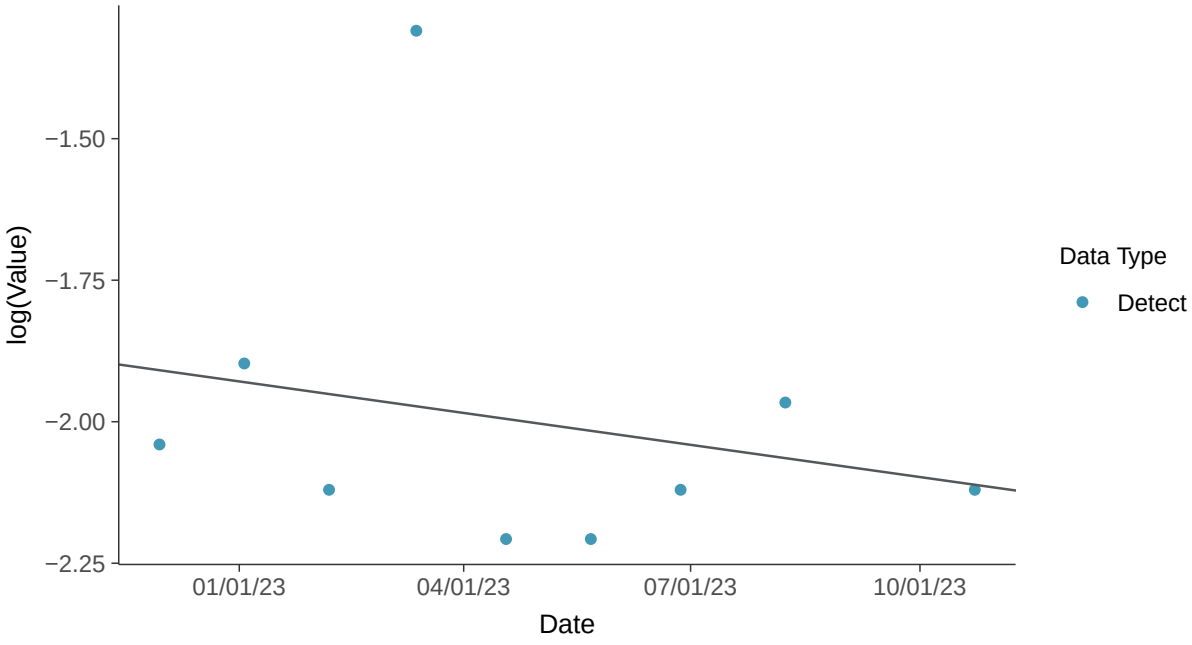
Gamma Q-Q plot

Lithium, MW-30 (mg/L)



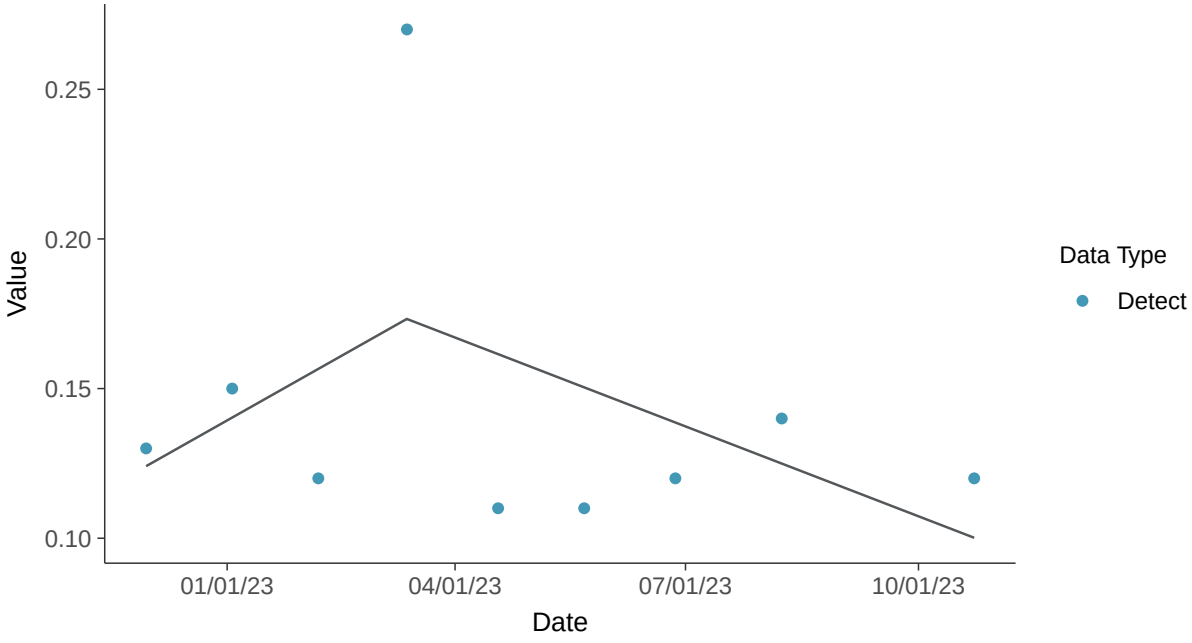
Trend Regression: Lognormal MLE

Lithium, MW-30 (mg/L)



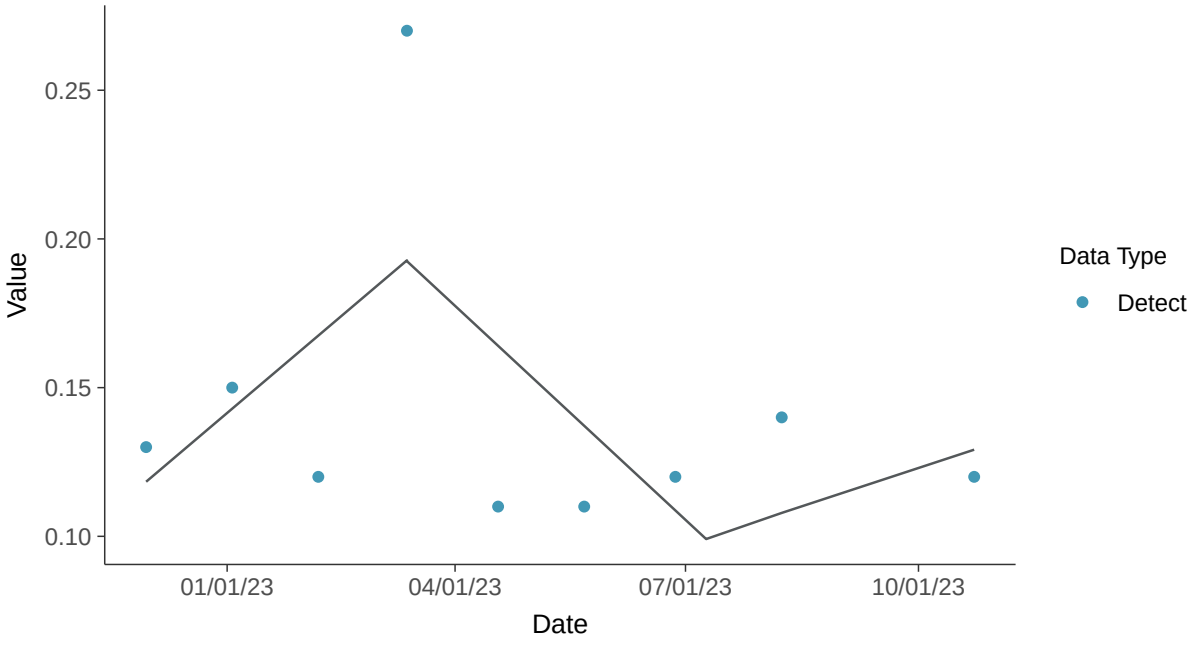
Trend Regression: Piecewise Linear-Linear

Lithium, MW-30 (mg/L)



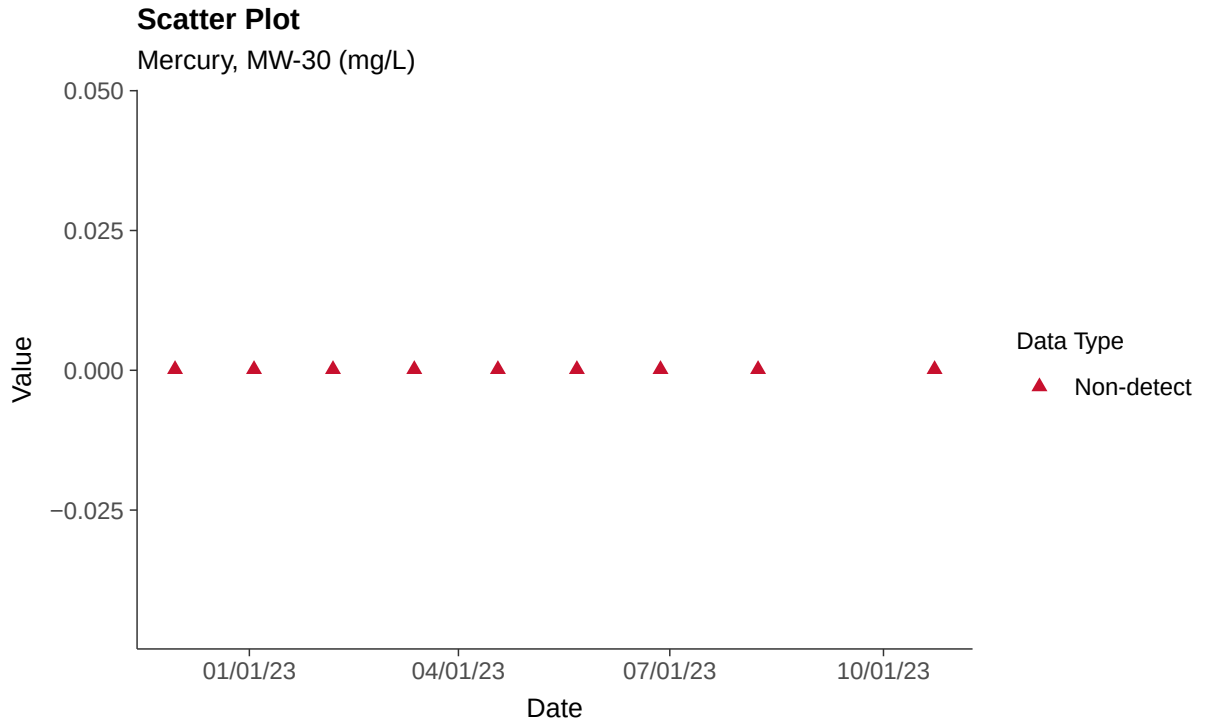
Trend Regression: Piecewise Linear-Linear-Linear

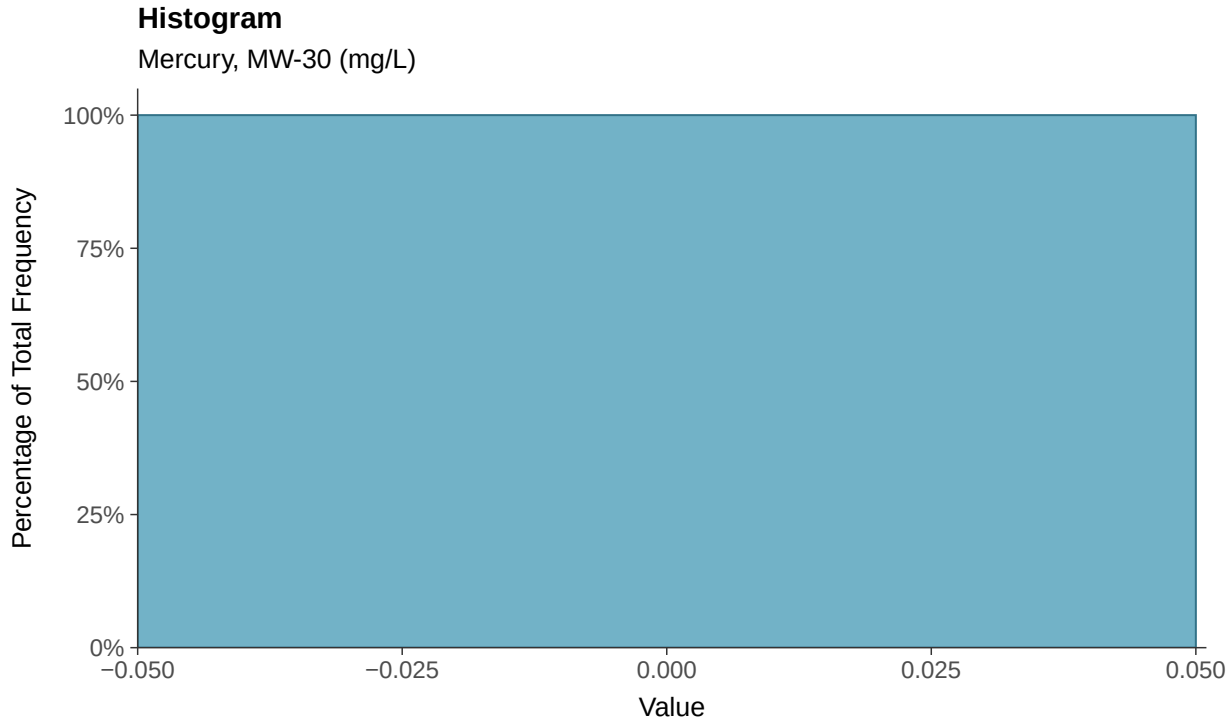
Lithium, MW-30 (mg/L)



Appendix IV: Mercury, MW-30

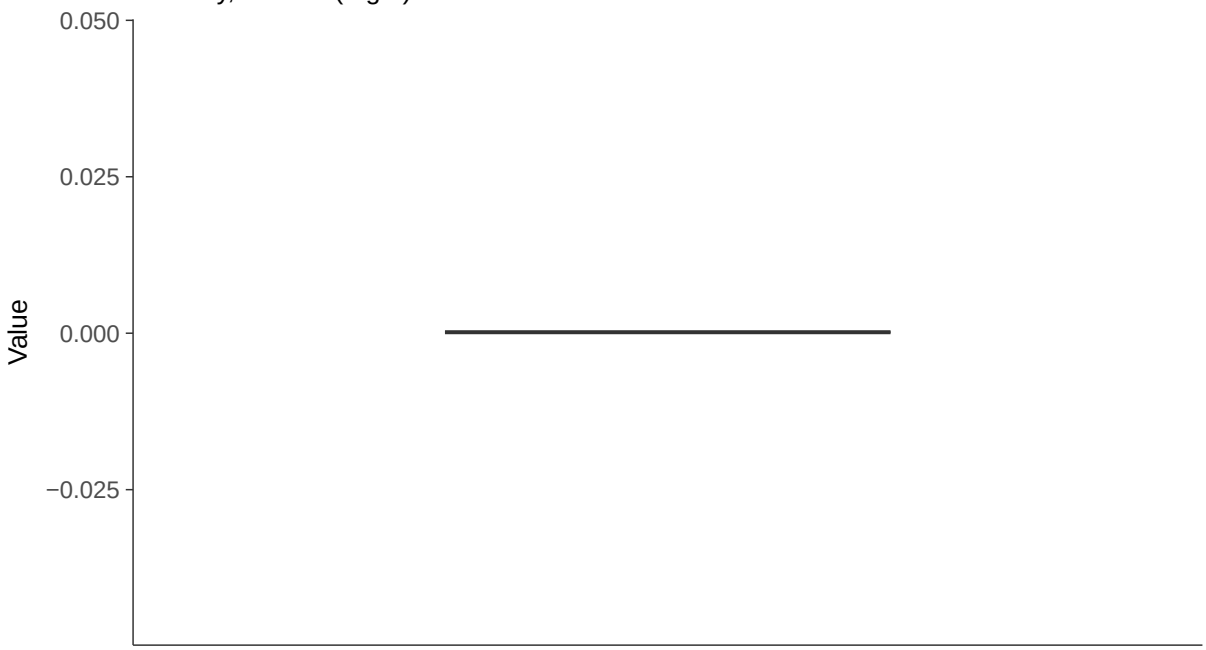
ID: 1_25_5_117





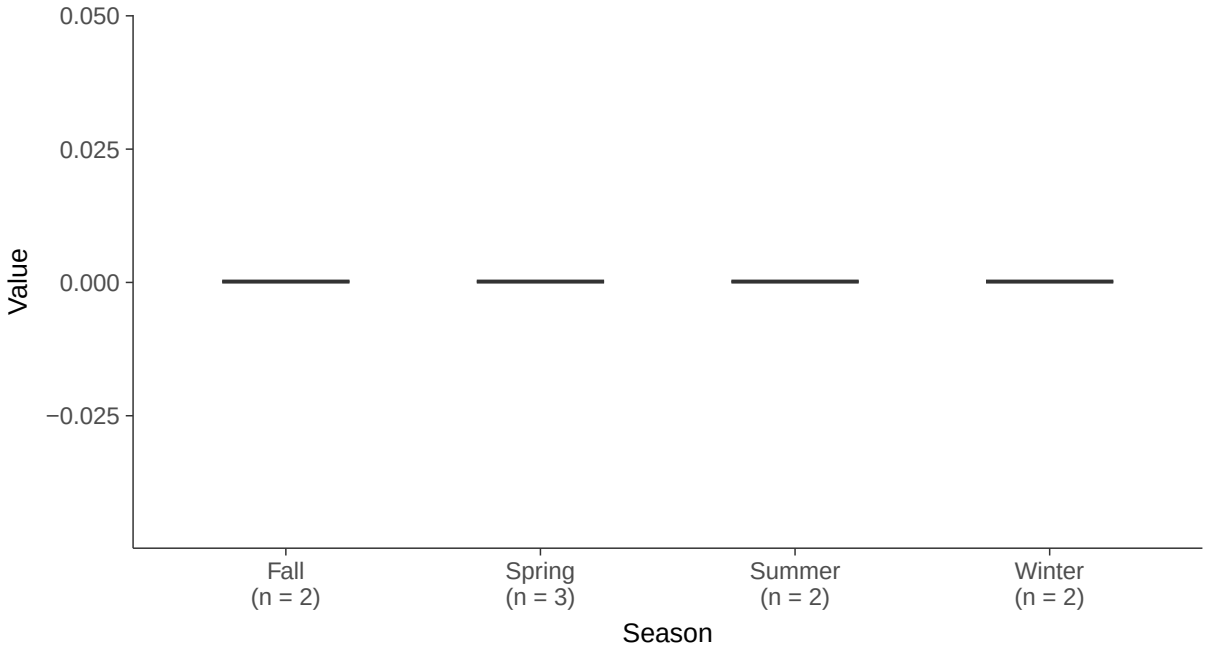
Boxplot

Mercury, MW-30 (mg/L)



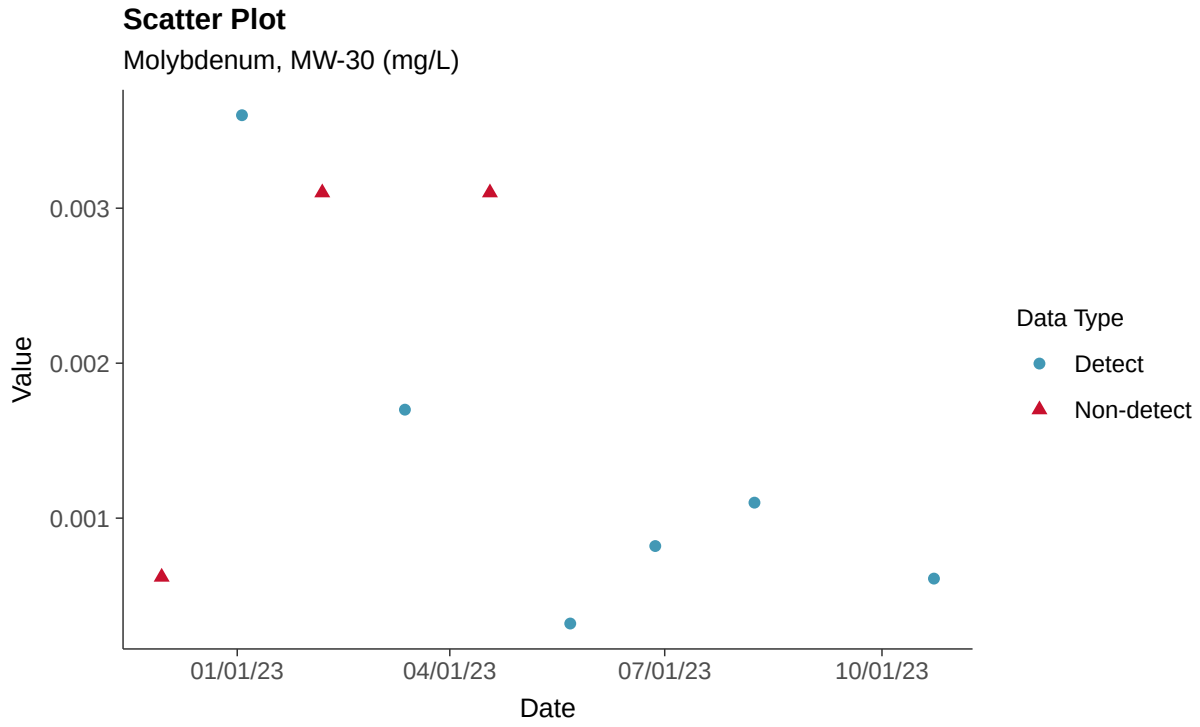
Boxplot by Season

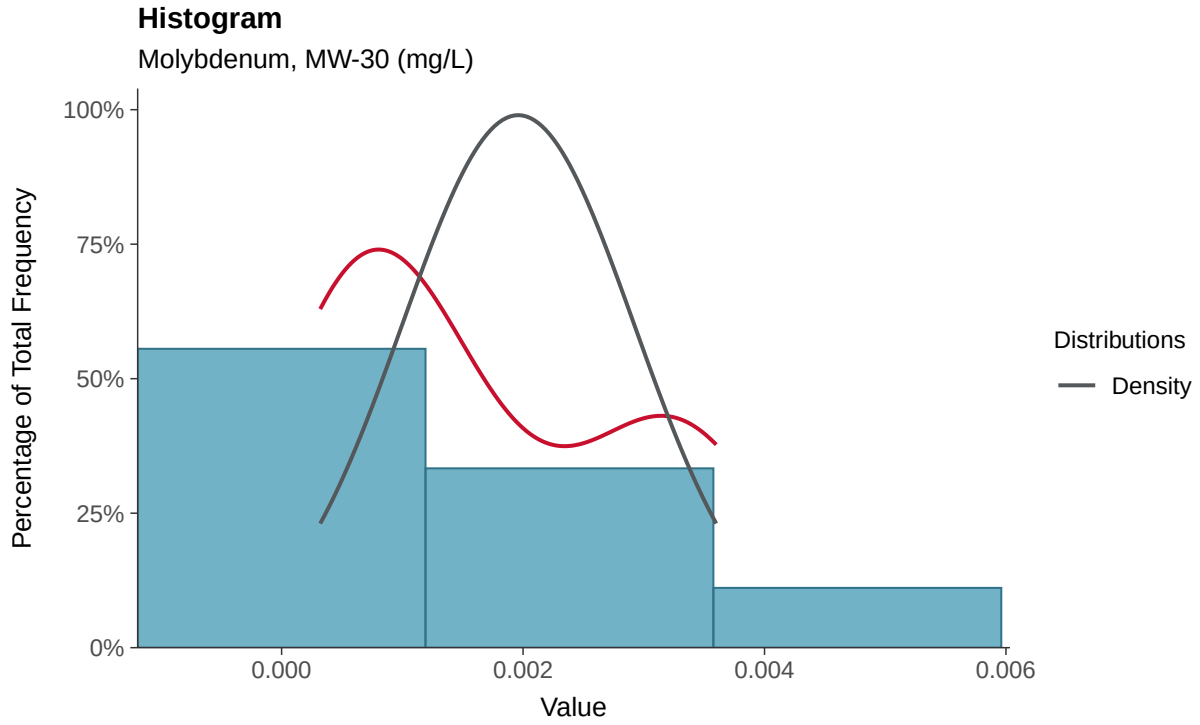
Mercury, MW-30 (mg/L)



Appendix IV: Molybdenum, MW-30

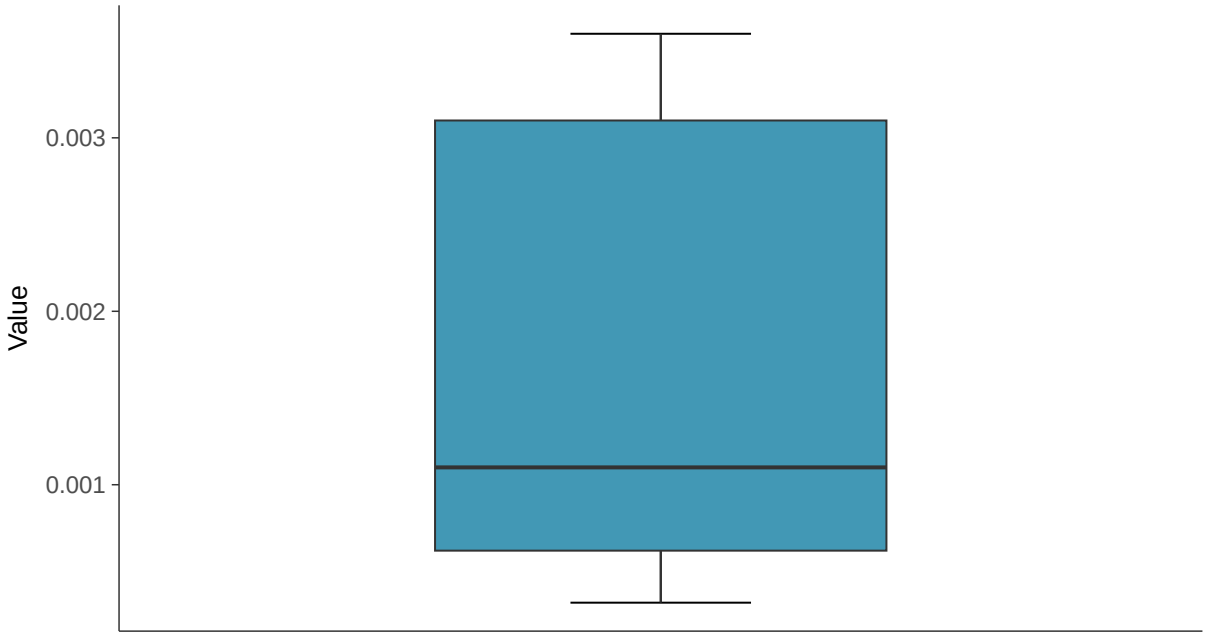
ID: 1_25_5_118





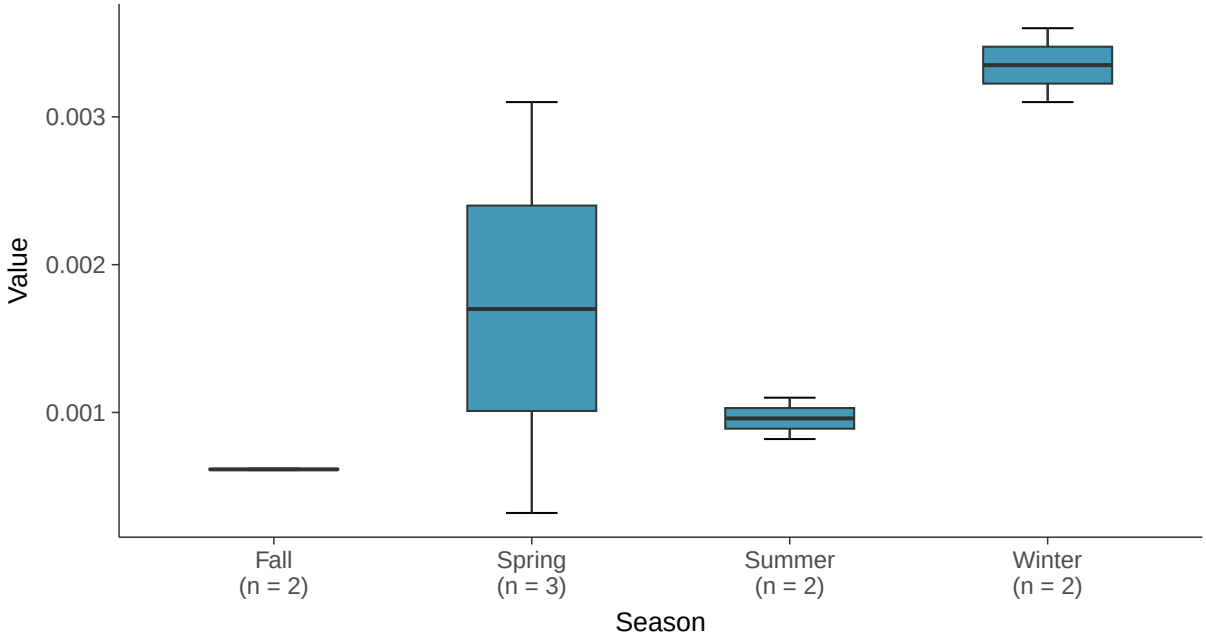
Boxplot

Molybdenum, MW-30 (mg/L)



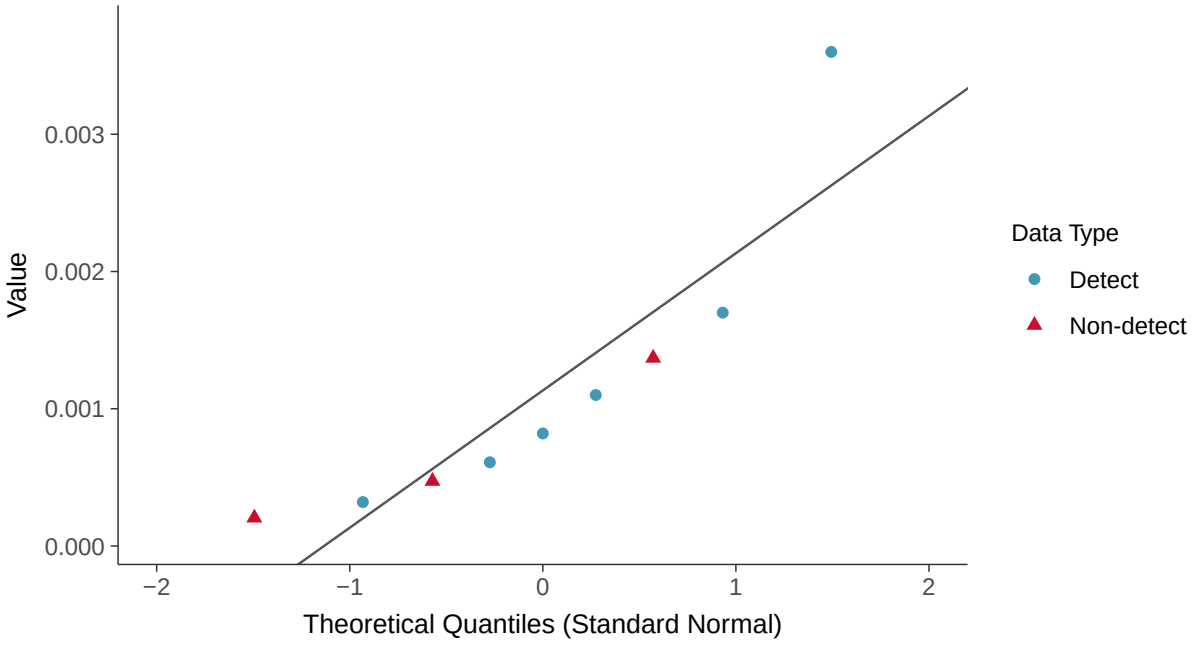
Boxplot by Season

Molybdenum, MW-30 (mg/L)



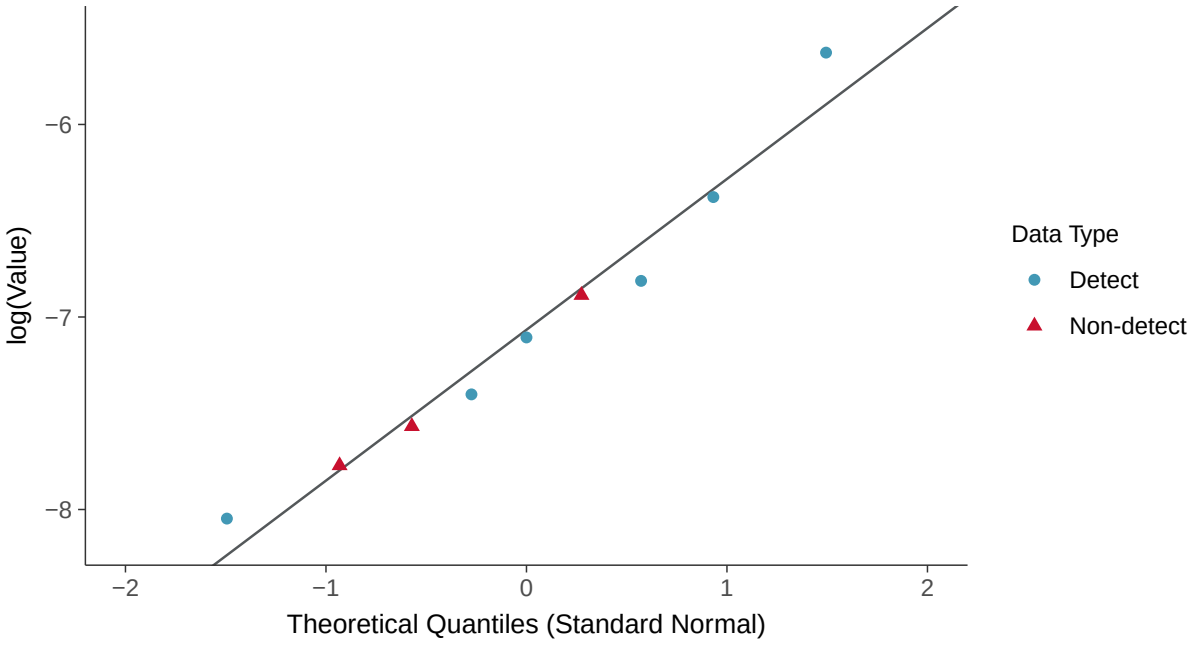
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-30 (mg/L)



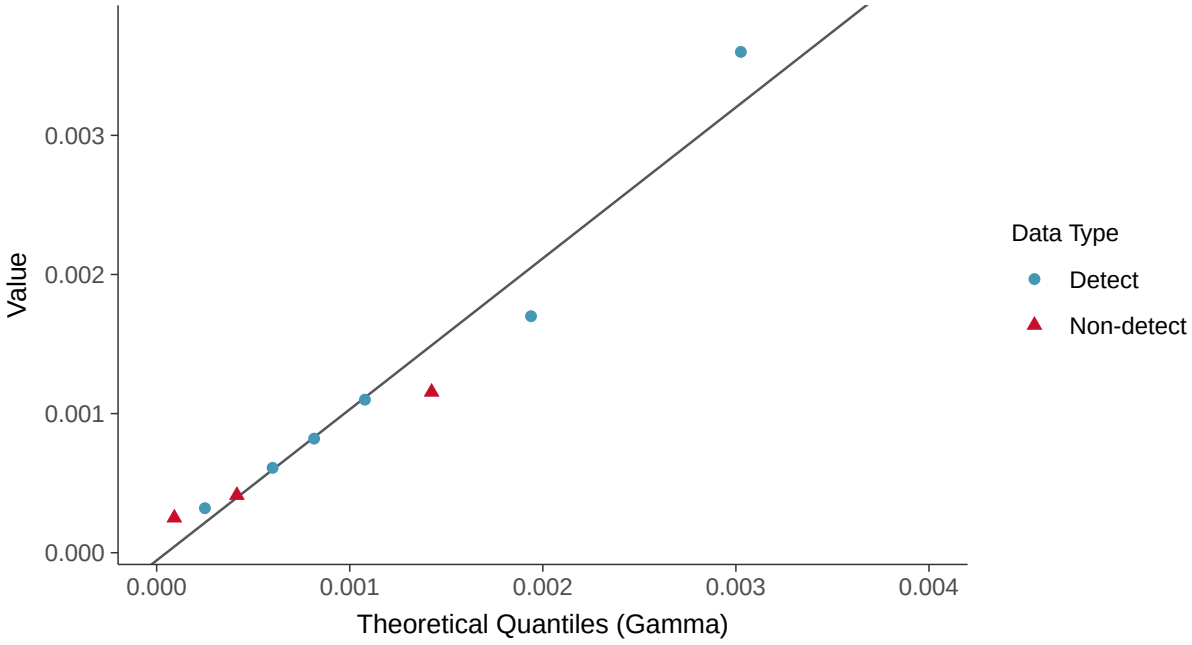
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-30 (mg/L)



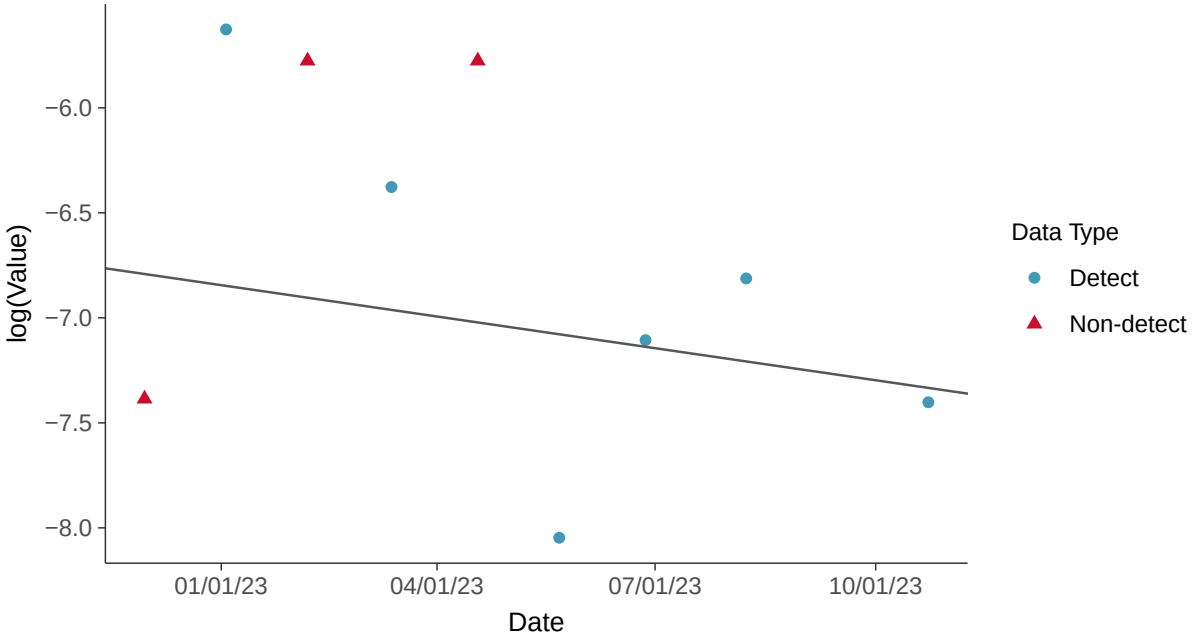
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-30 (mg/L)



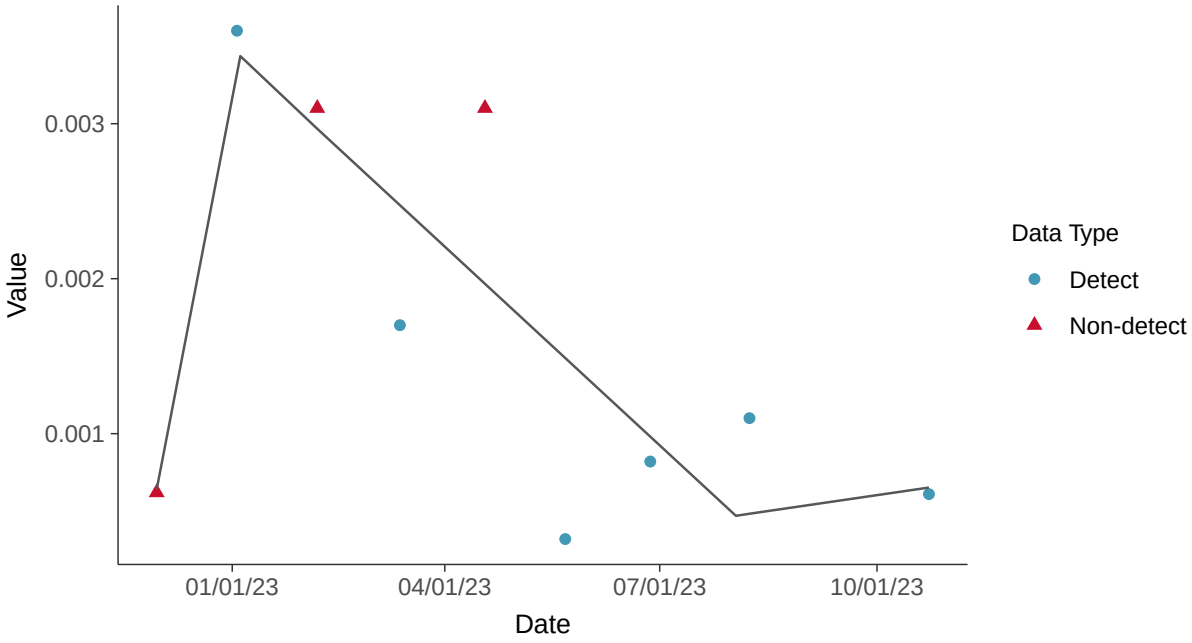
Trend Regression: Lognormal MLE

Molybdenum, MW-30 (mg/L)



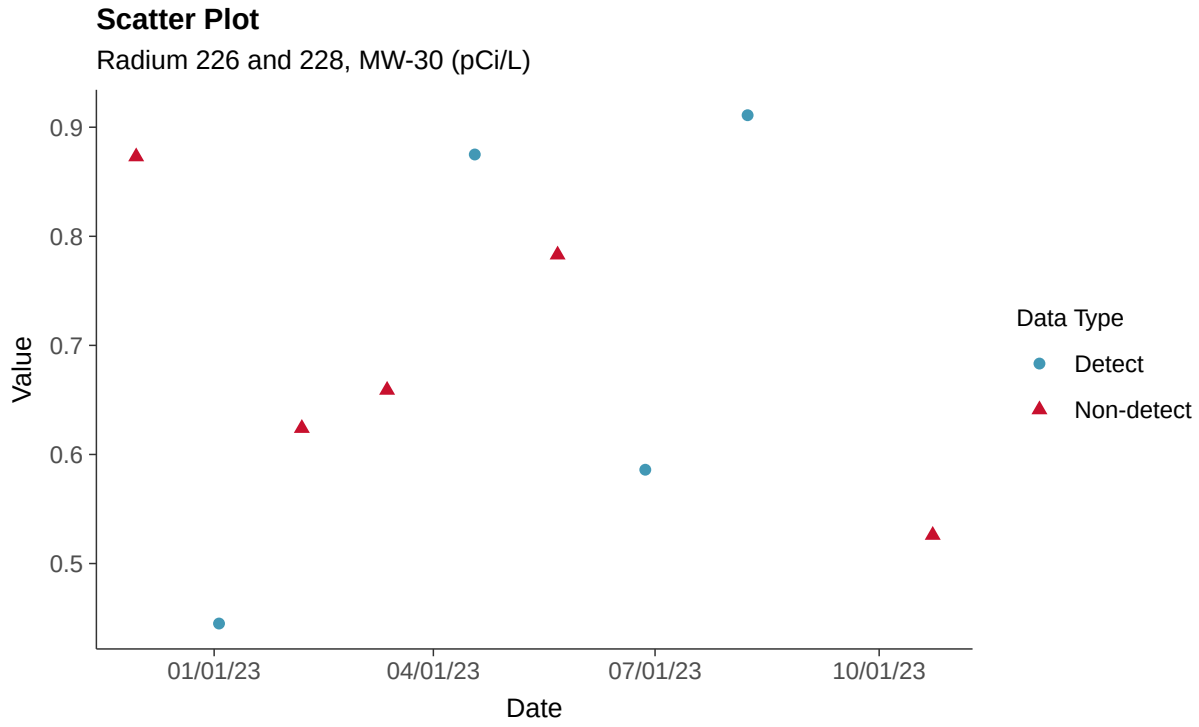
Trend Regression: Piecewise Linear-Linear-Linear

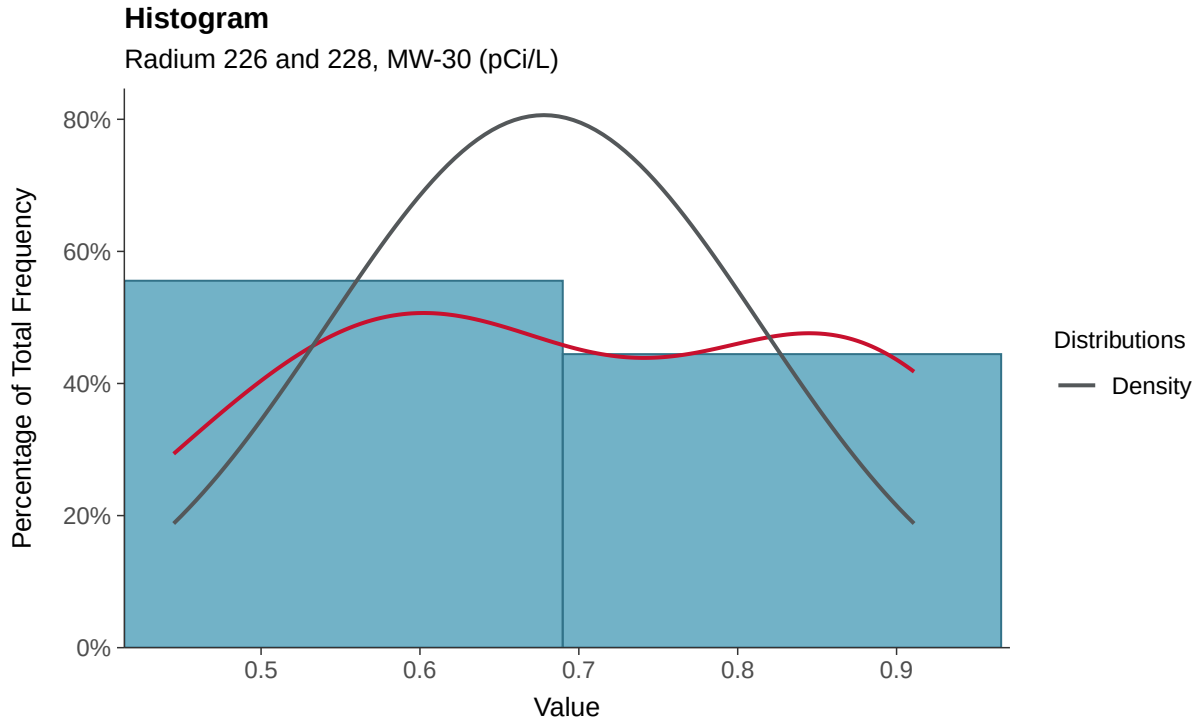
Molybdenum, MW-30 (mg/L)



Appendix IV: Radium 226 and 228, MW-30

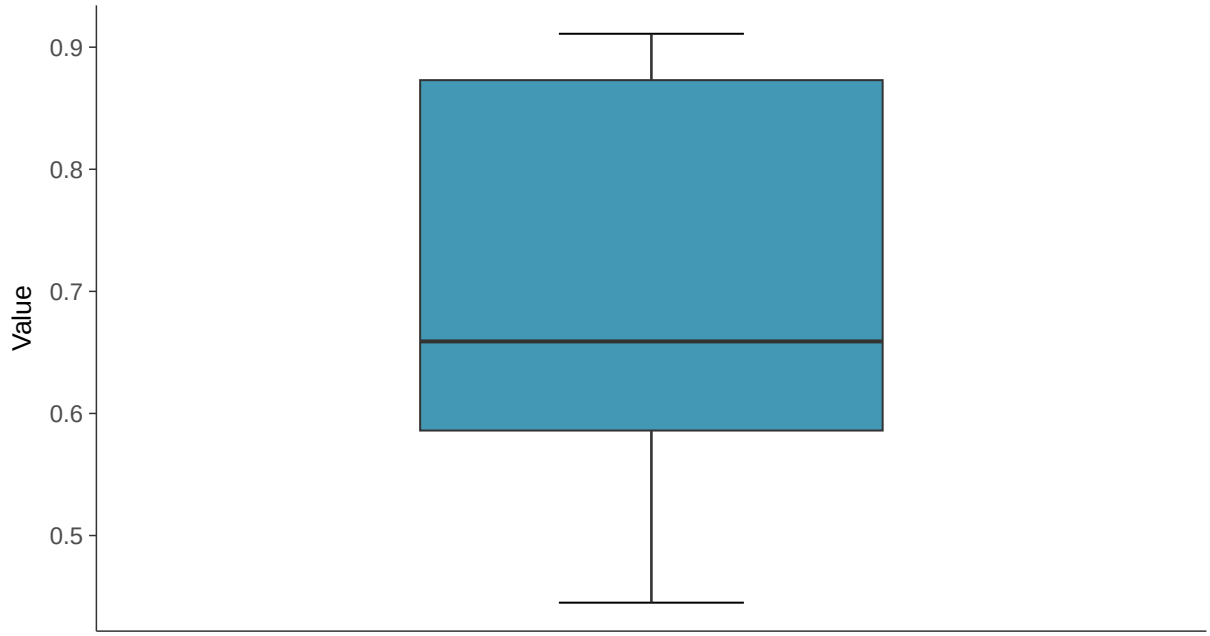
ID: 1_25_5_121





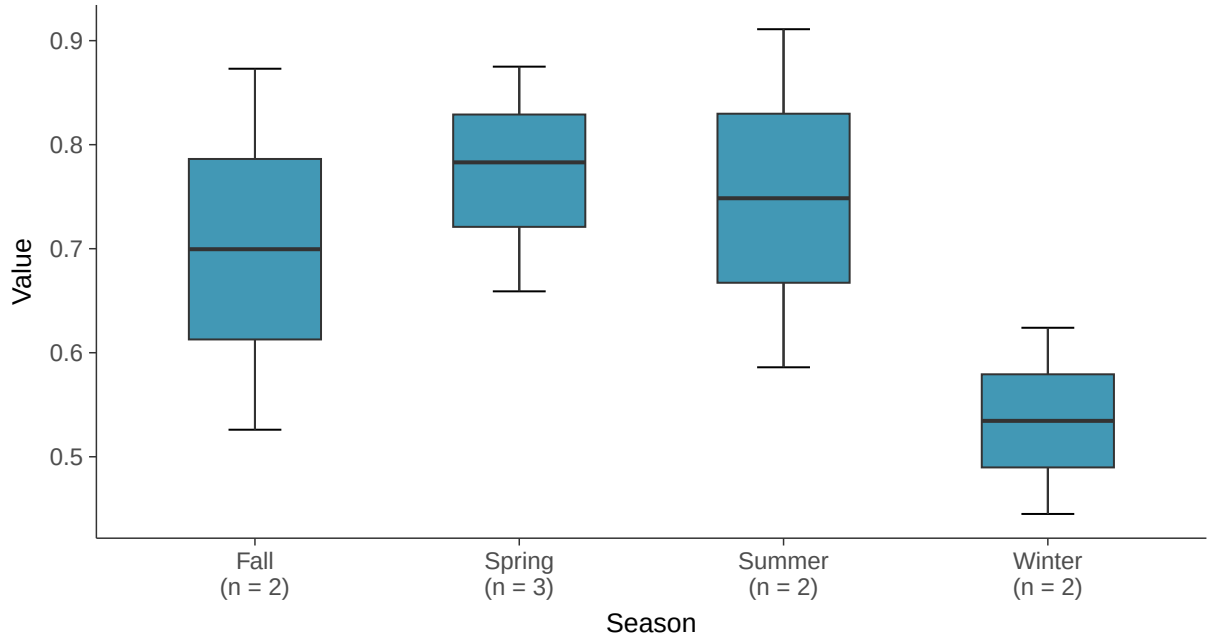
Boxplot

Radium 226 and 228, MW-30 (pCi/L)



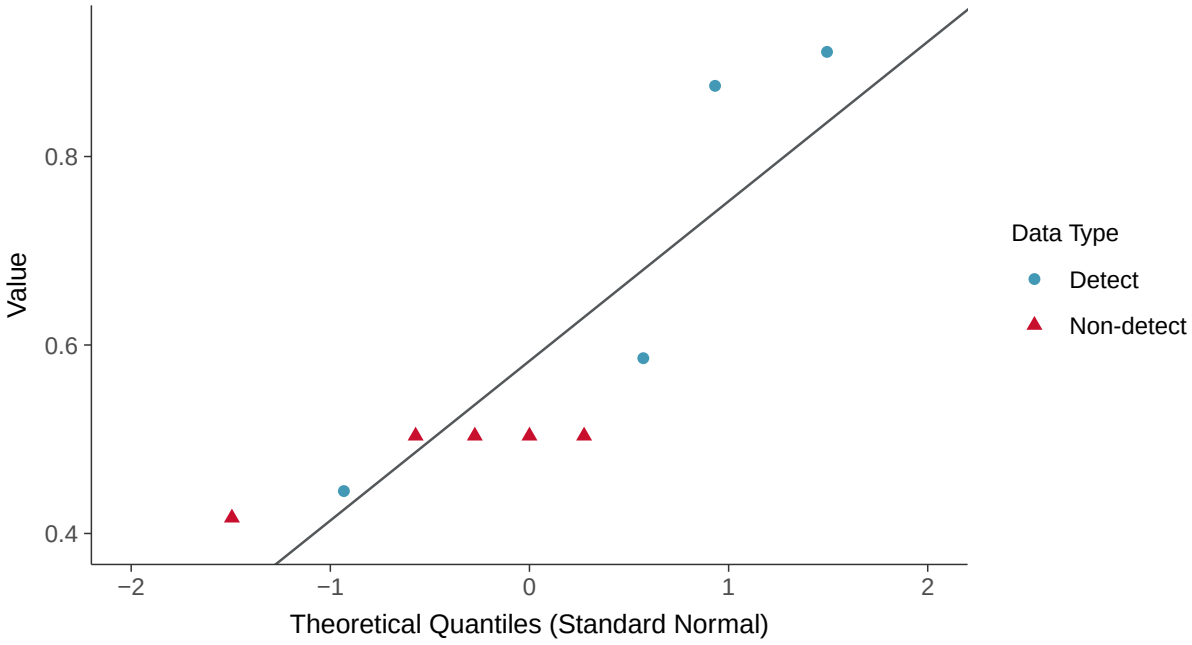
Boxplot by Season

Radium 226 and 228, MW-30 (pCi/L)



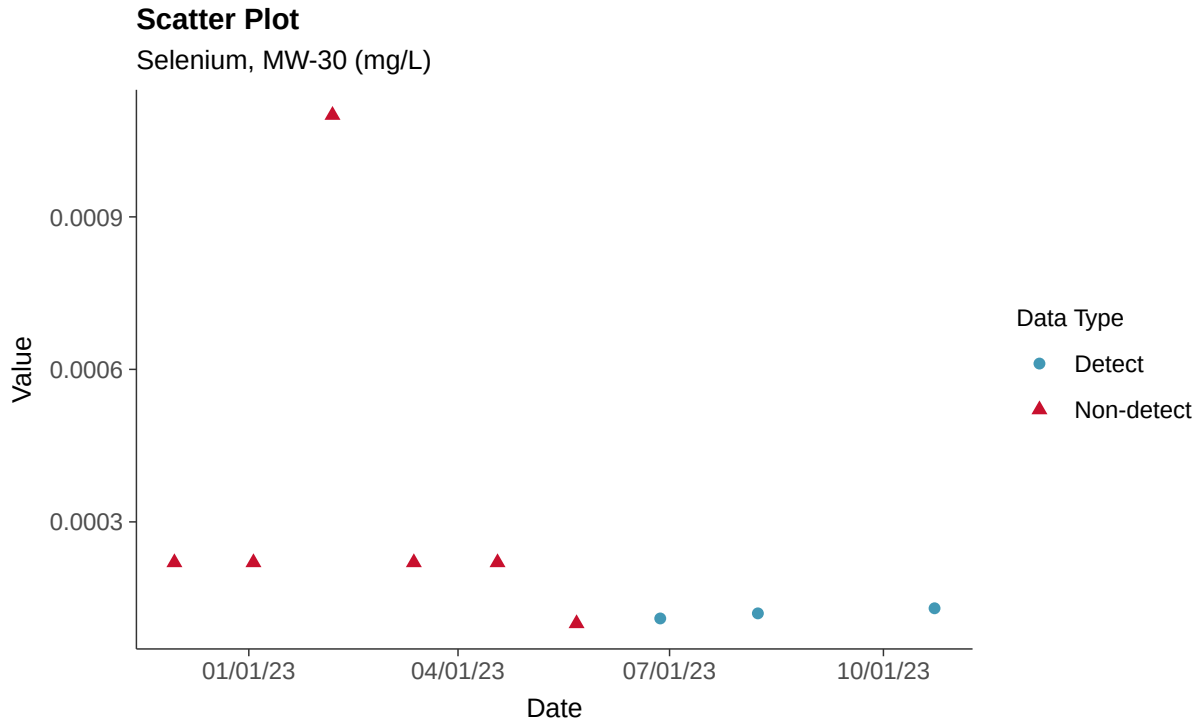
Normal Q-Q plot using ROS Imputed Estimates

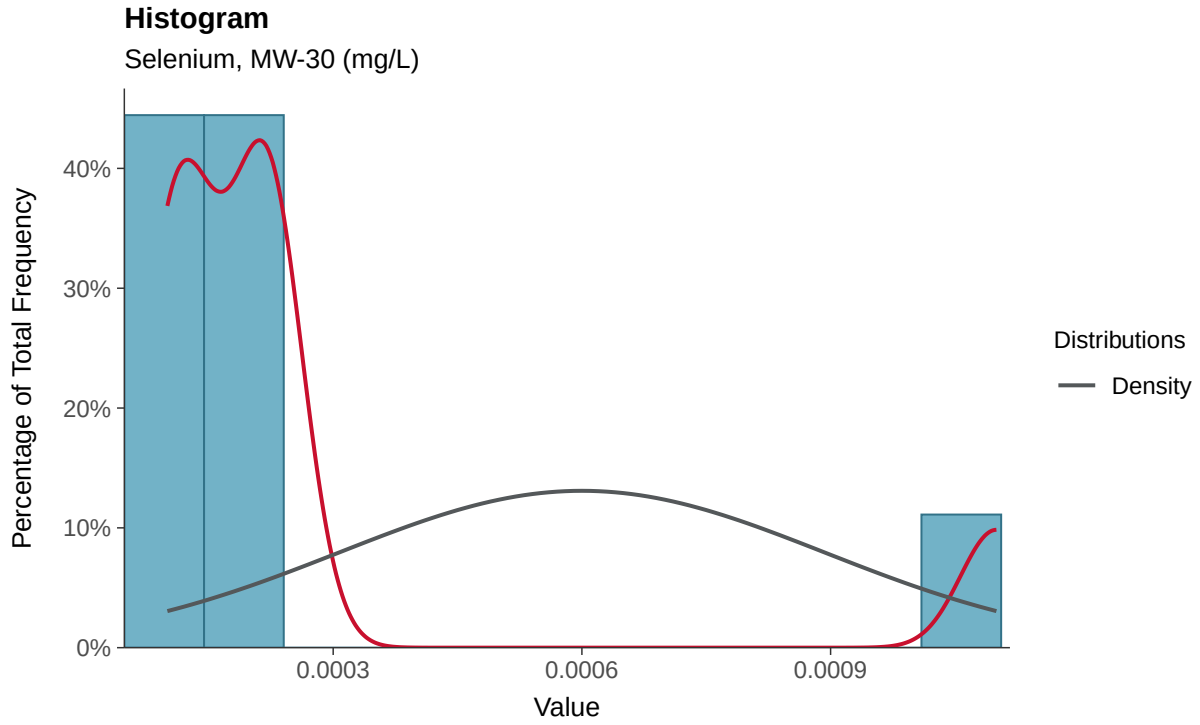
Radium 226 and 228, MW-30 (pCi/L)



Appendix IV: Selenium, MW-30

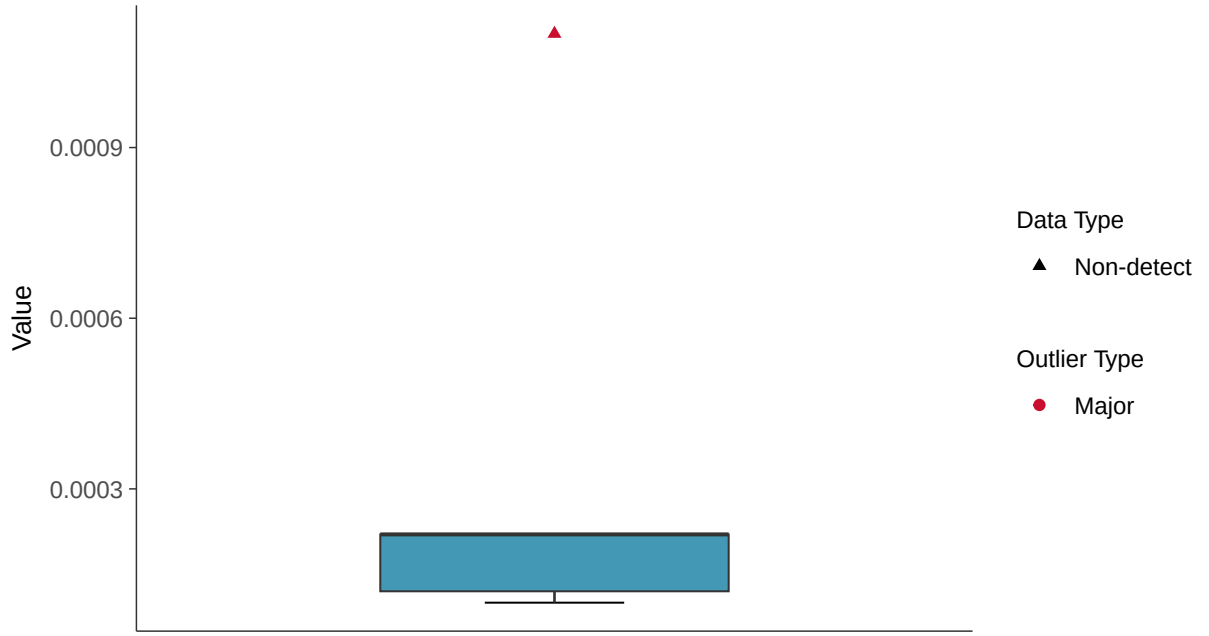
ID: 1_25_5_122





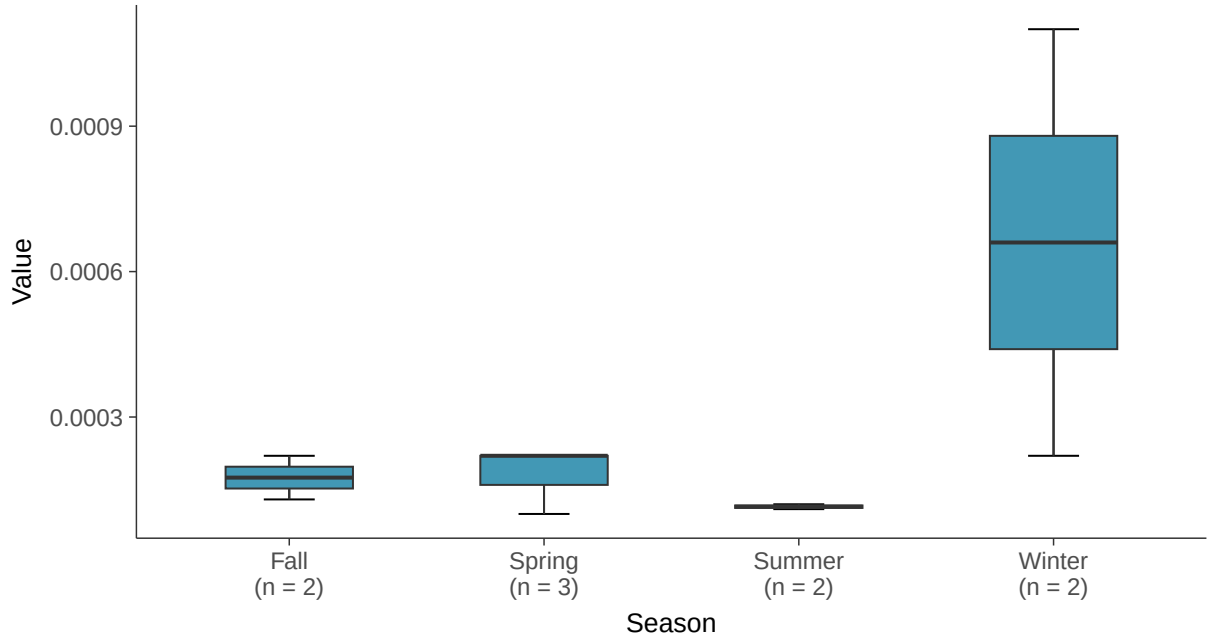
Boxplot

Selenium, MW-30 (mg/L)



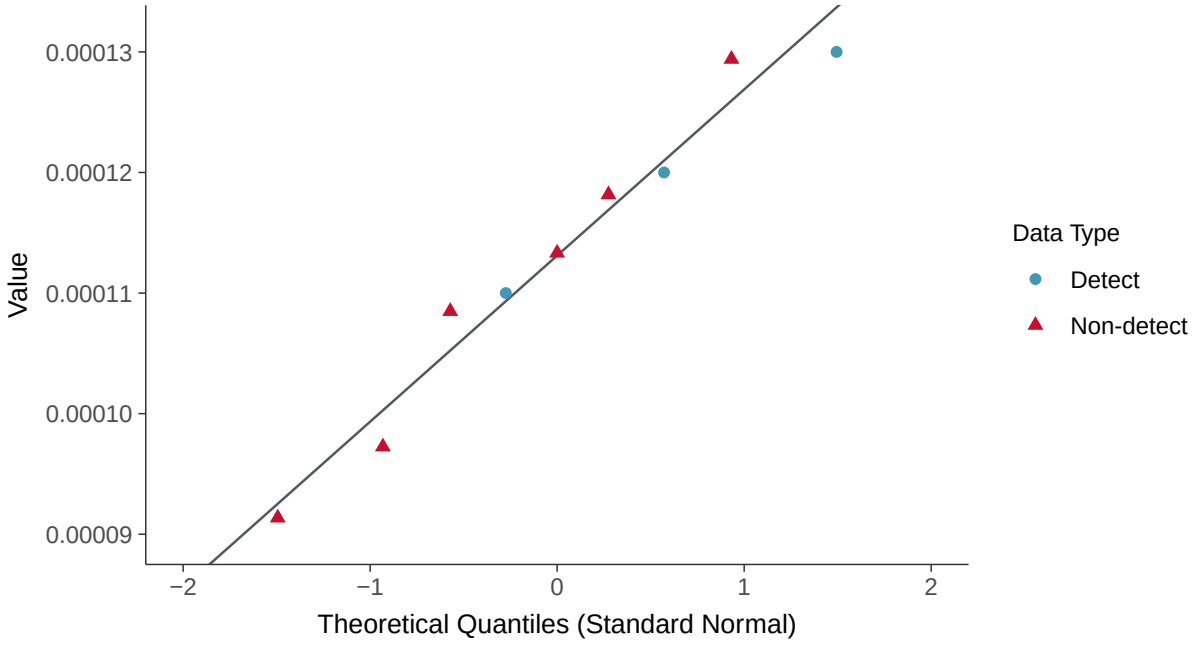
Boxplot by Season

Selenium, MW-30 (mg/L)



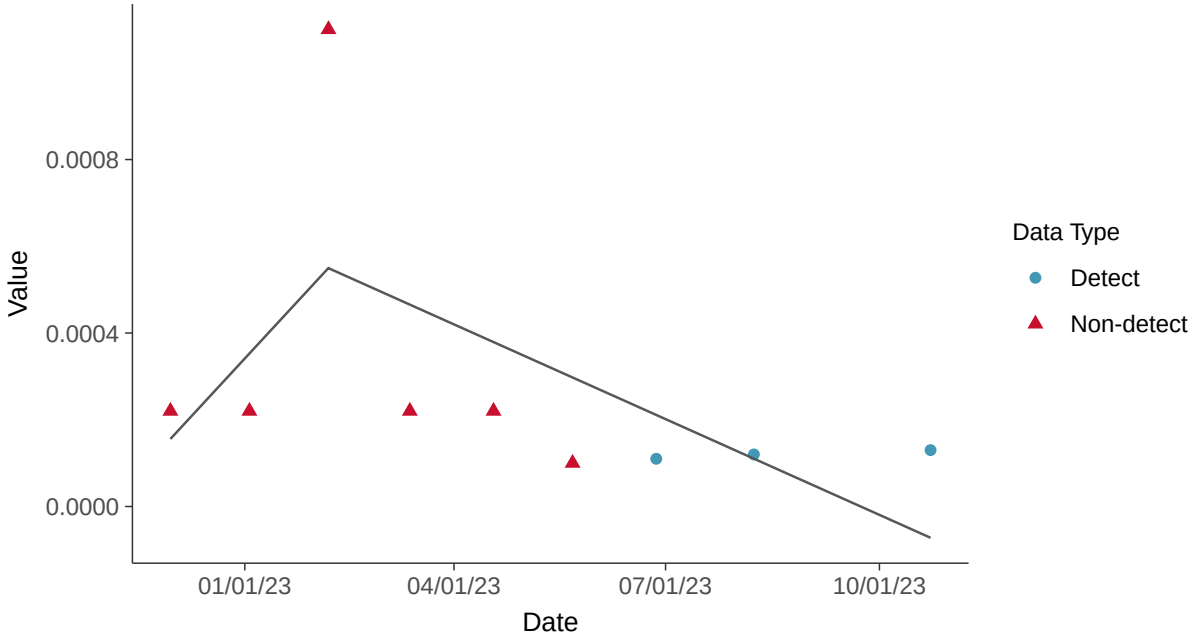
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-30 (mg/L)



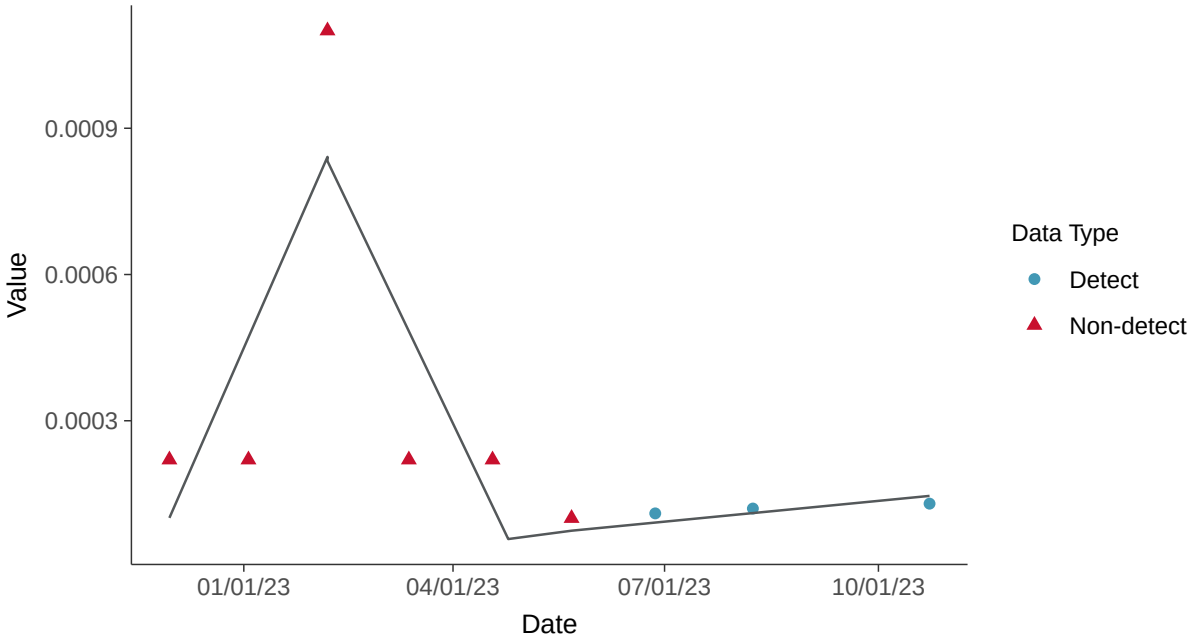
Trend Regression: Piecewise Linear-Linear

Selenium, MW-30 (mg/L)



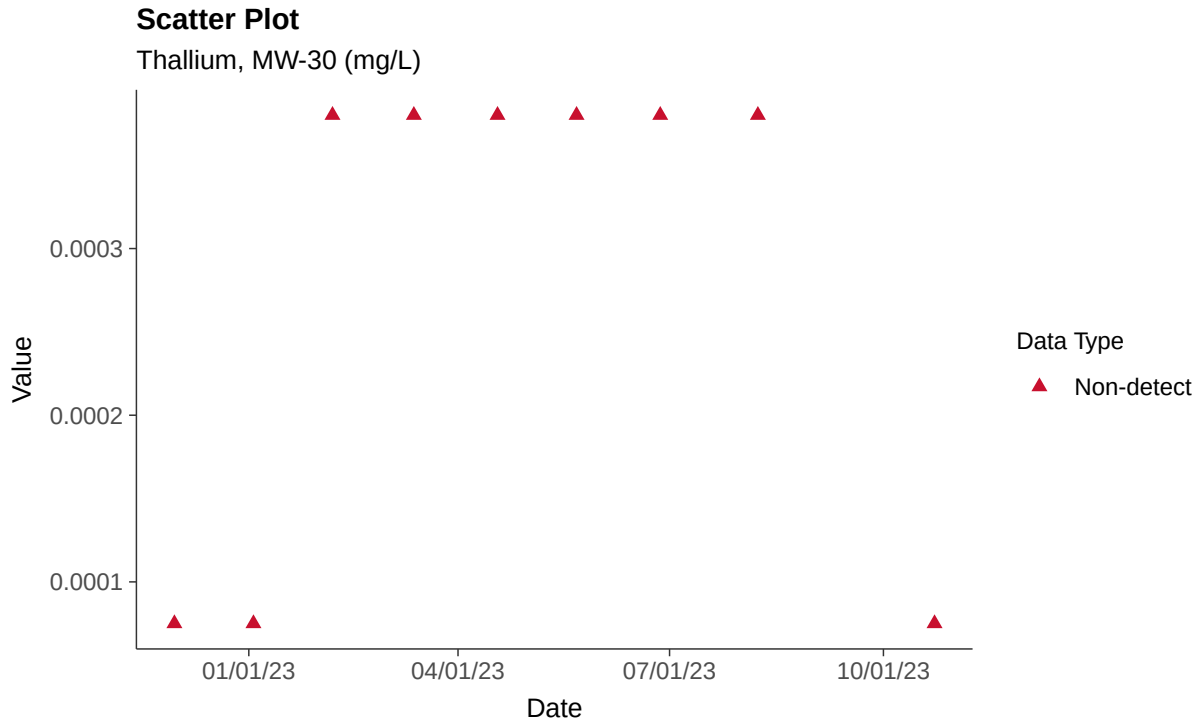
Trend Regression: Piecewise Linear-Linear-Linear

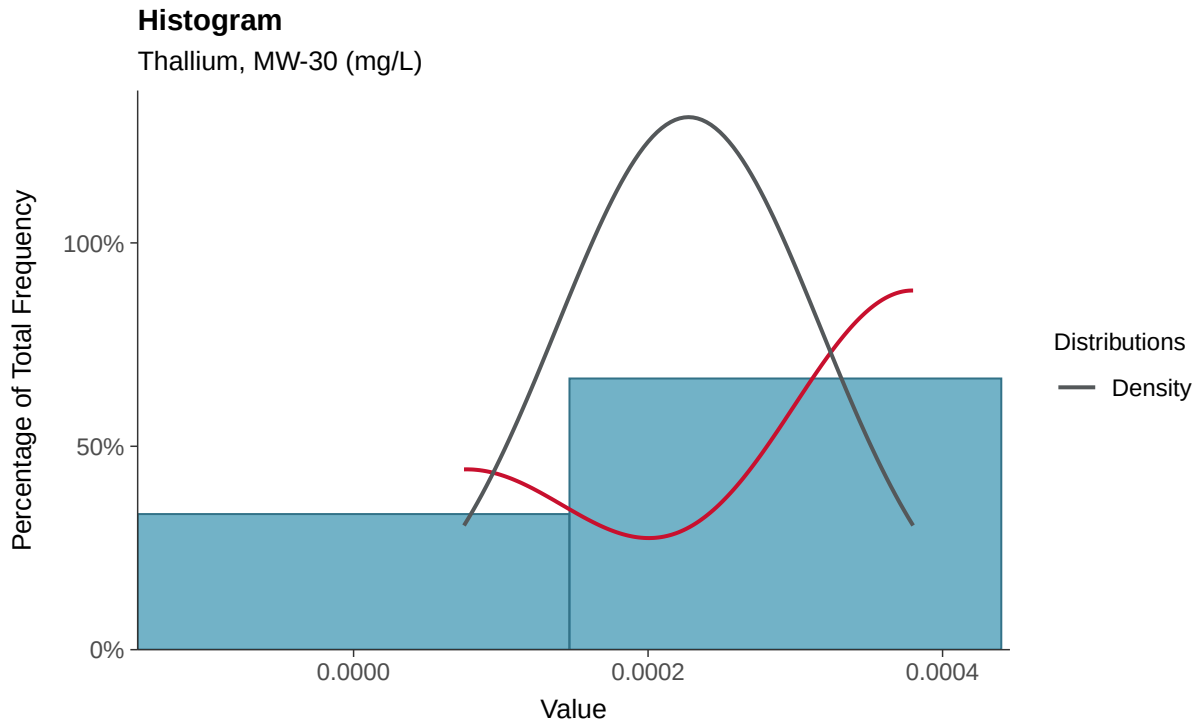
Selenium, MW-30 (mg/L)



Appendix IV: Thallium, MW-30

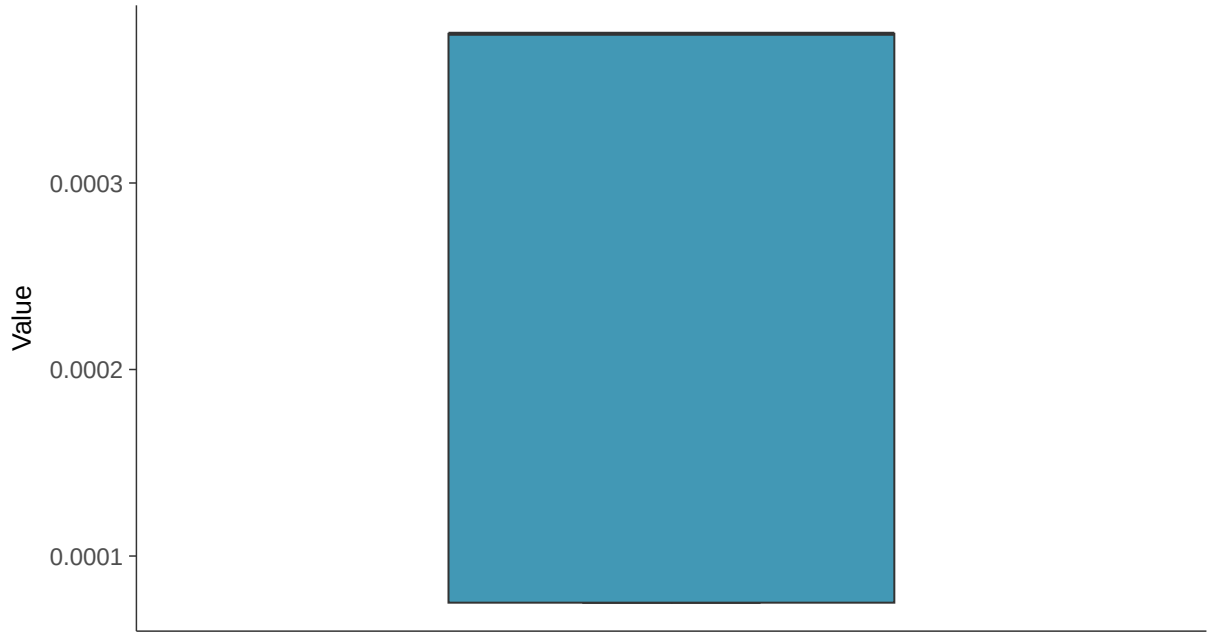
ID: 1_25_5_125





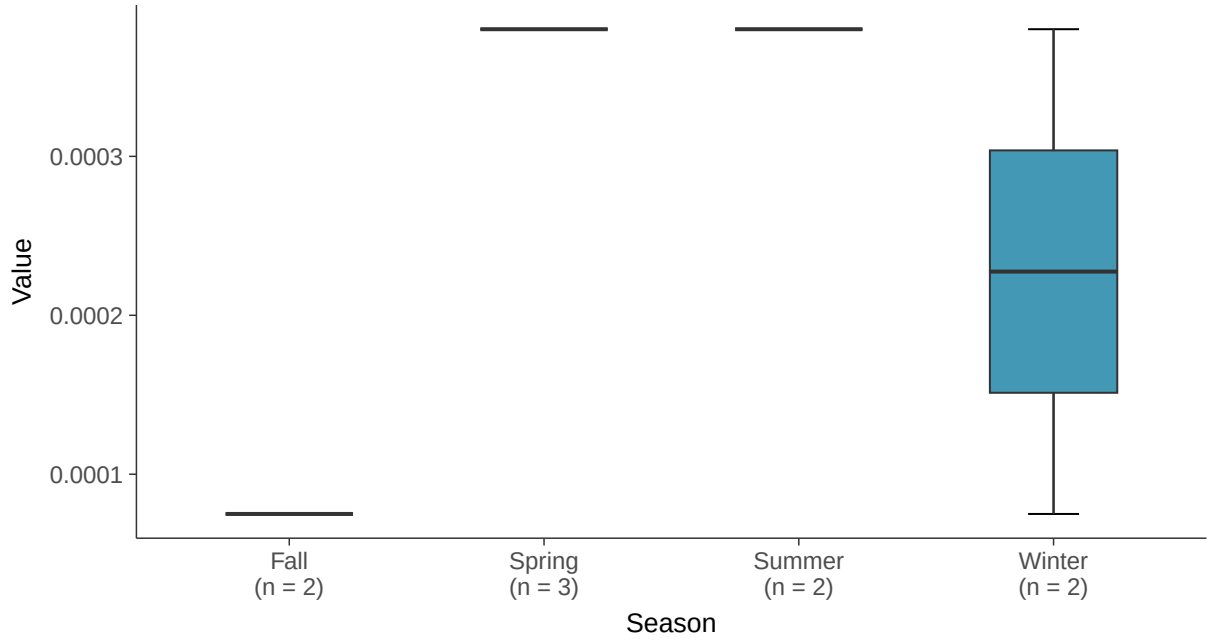
Boxplot

Thallium, MW-30 (mg/L)



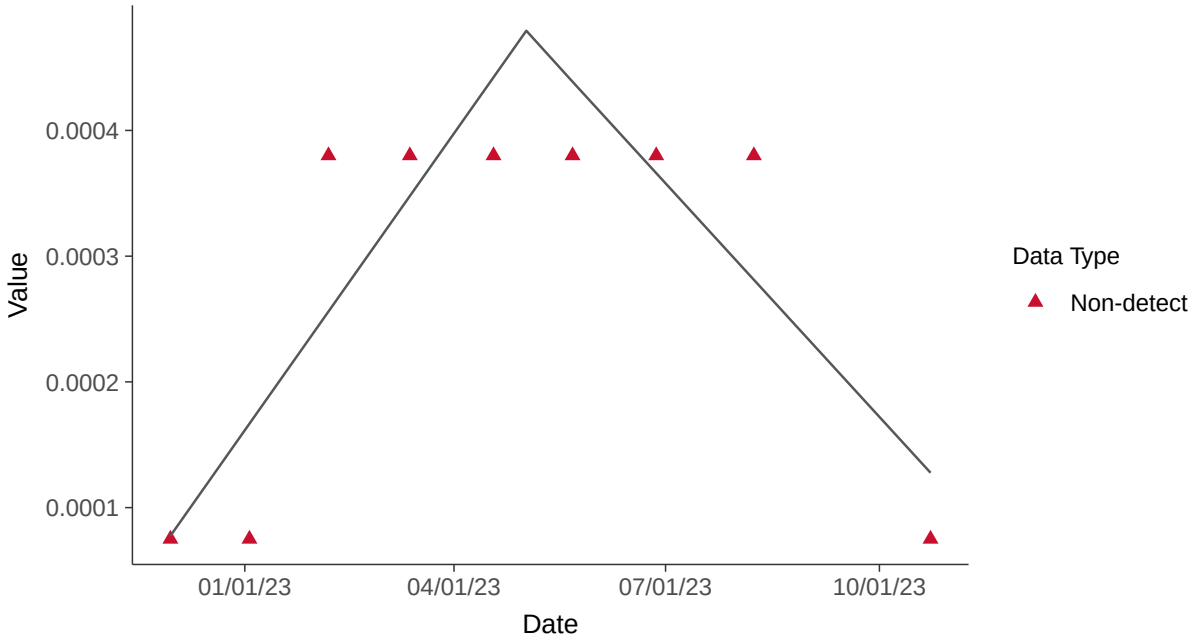
Boxplot by Season

Thallium, MW-30 (mg/L)



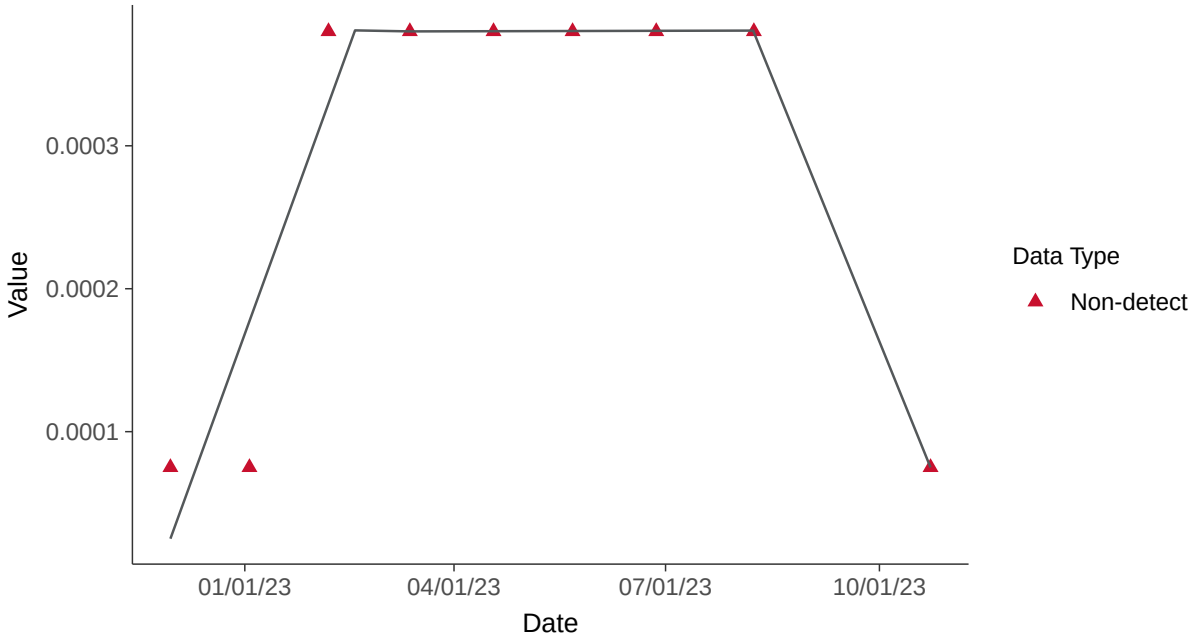
Trend Regression: Piecewise Linear-Linear

Thallium, MW-30 (mg/L)



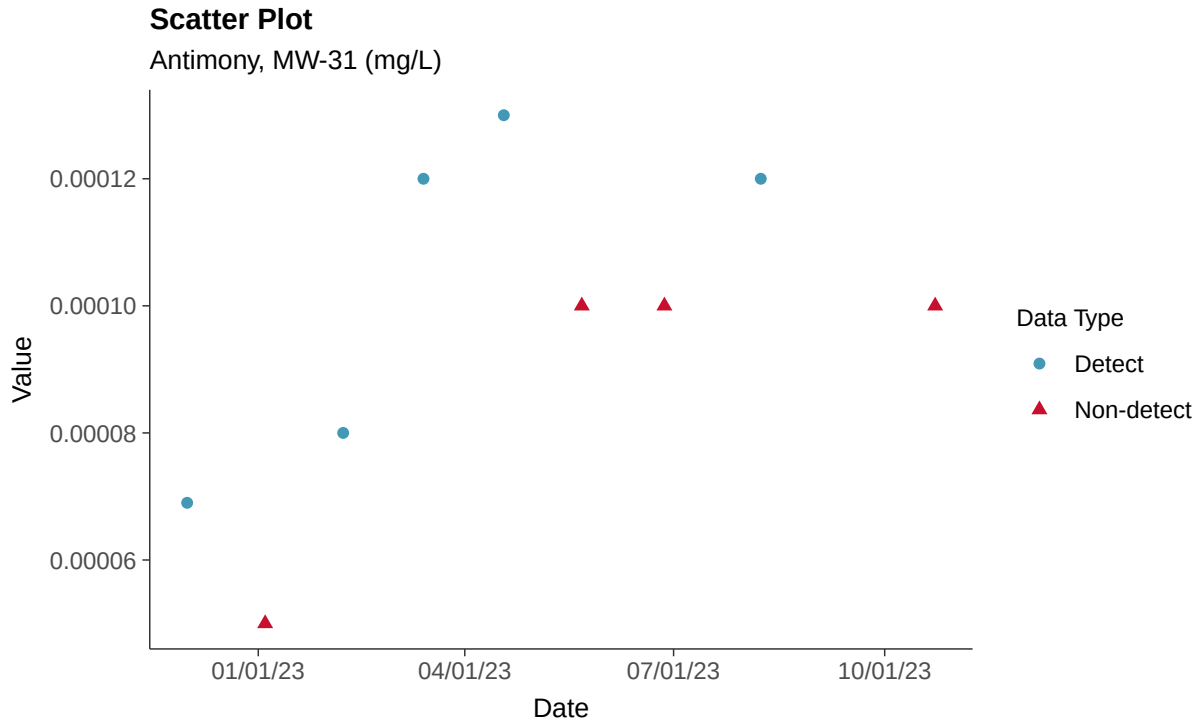
Trend Regression: Piecewise Linear-Linear-Linear

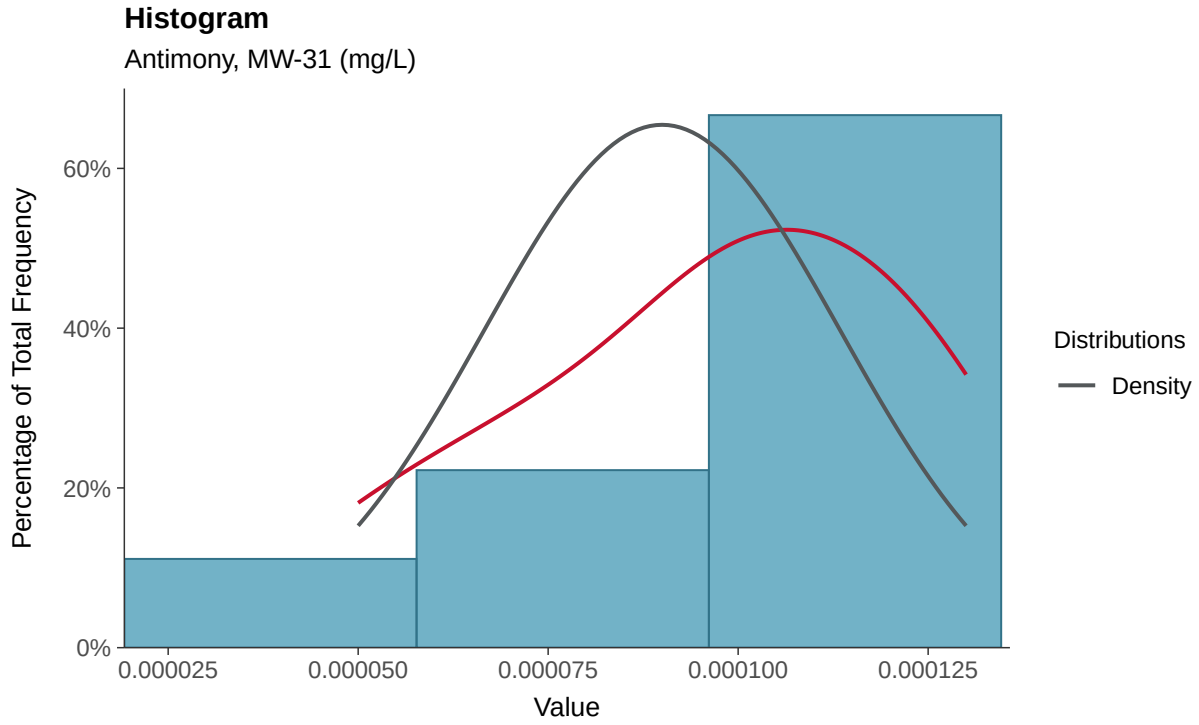
Thallium, MW-30 (mg/L)



Appendix IV: Antimony, MW-31

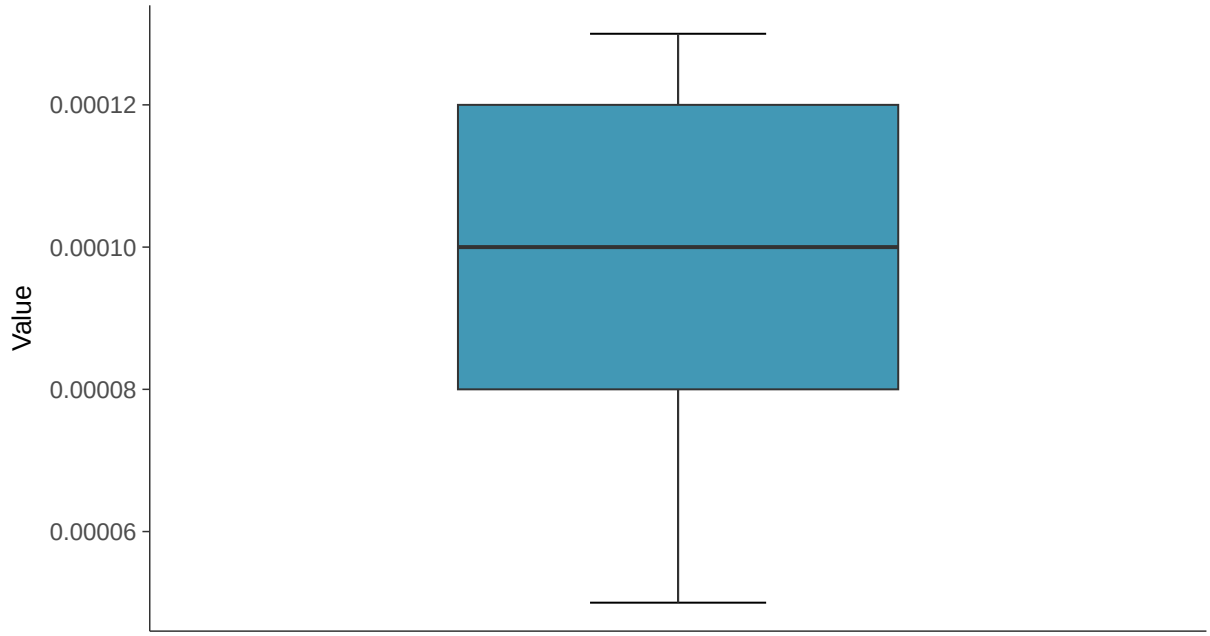
ID: 1_26_5_101





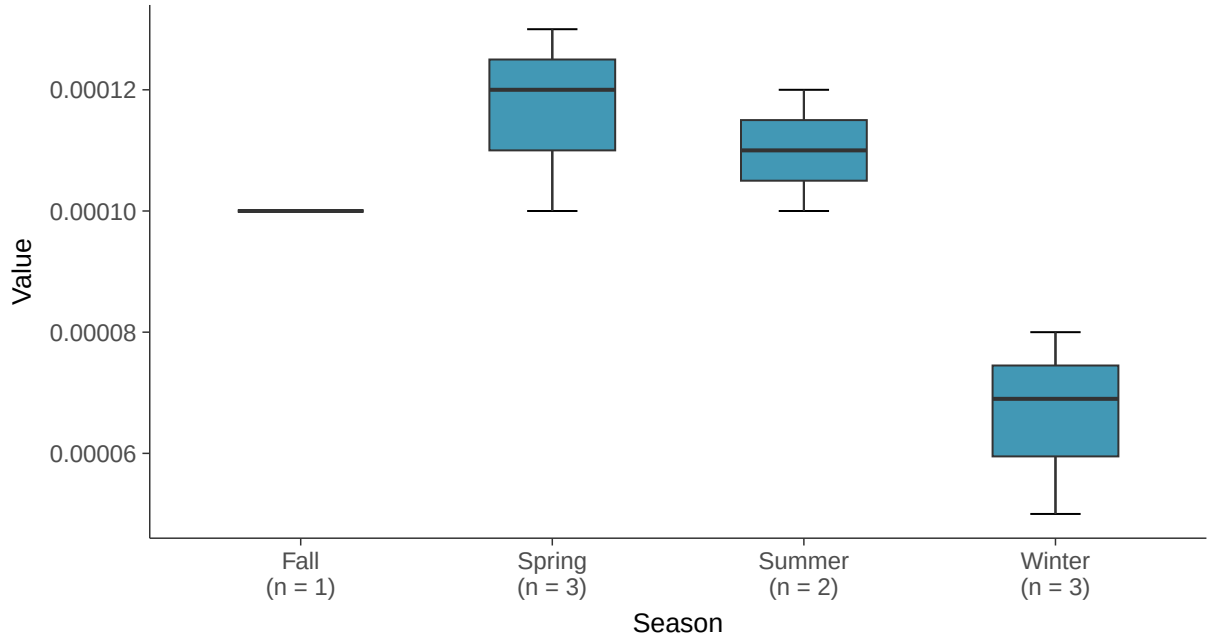
Boxplot

Antimony, MW-31 (mg/L)



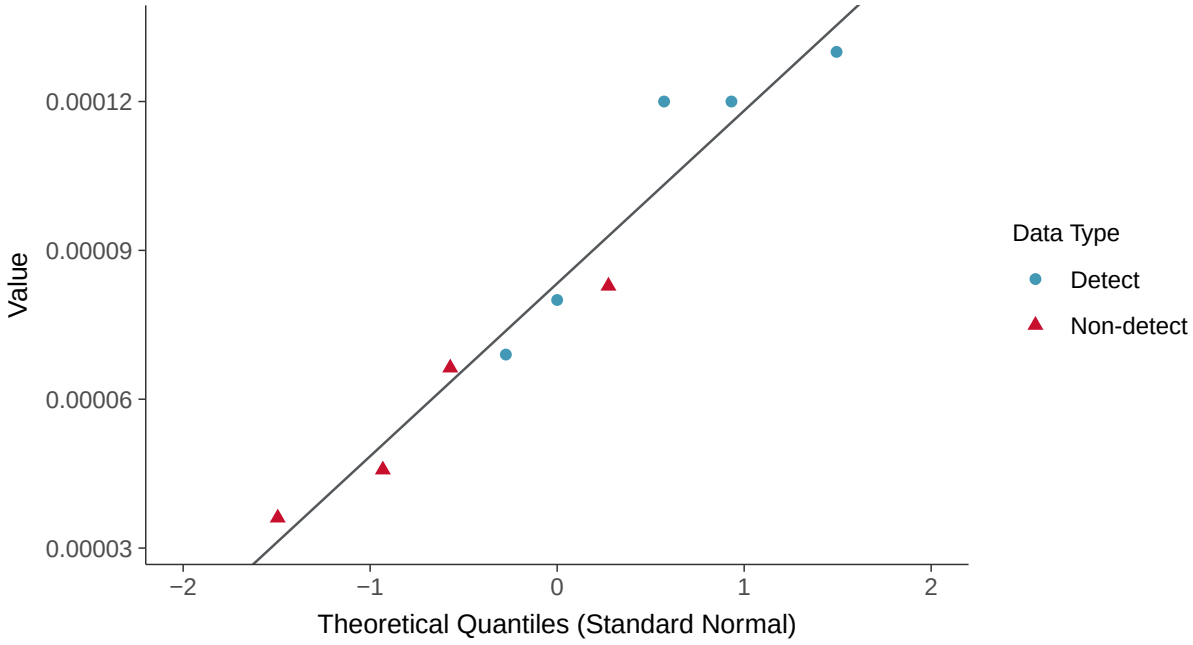
Boxplot by Season

Antimony, MW-31 (mg/L)



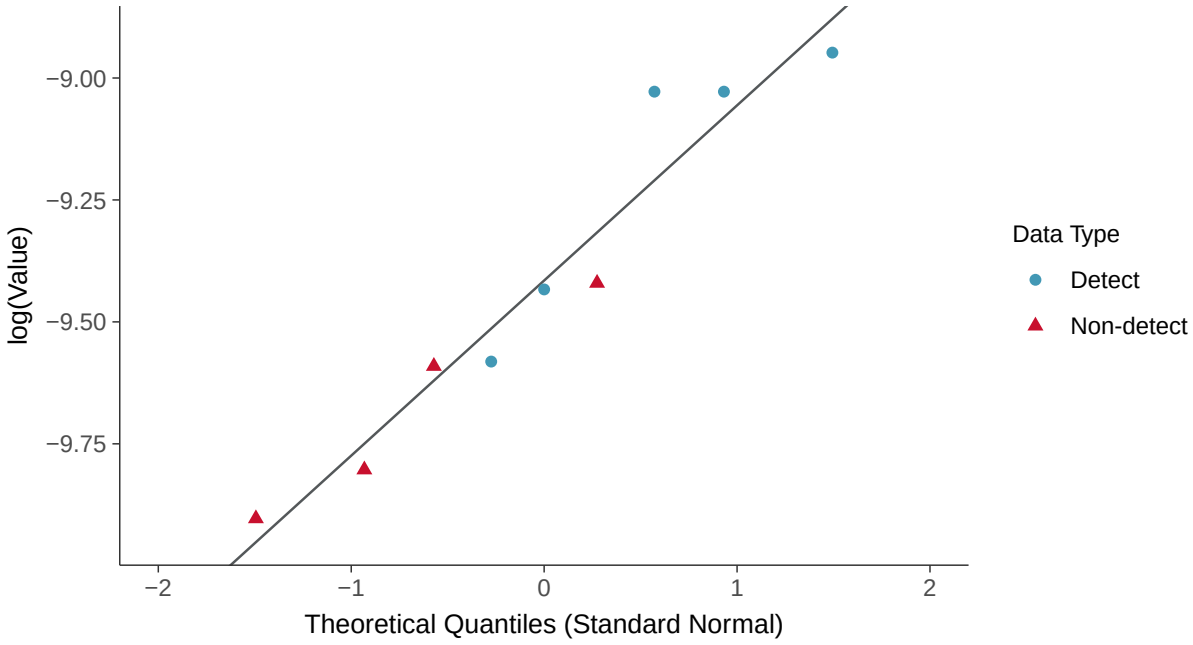
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-31 (mg/L)



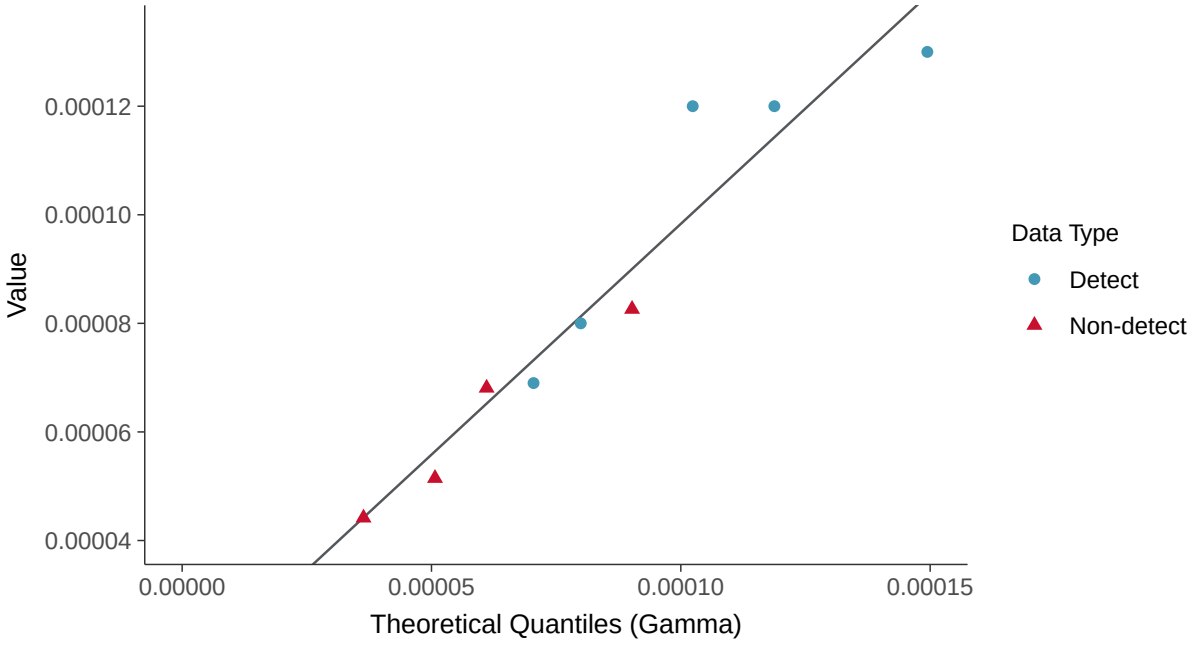
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-31 (mg/L)



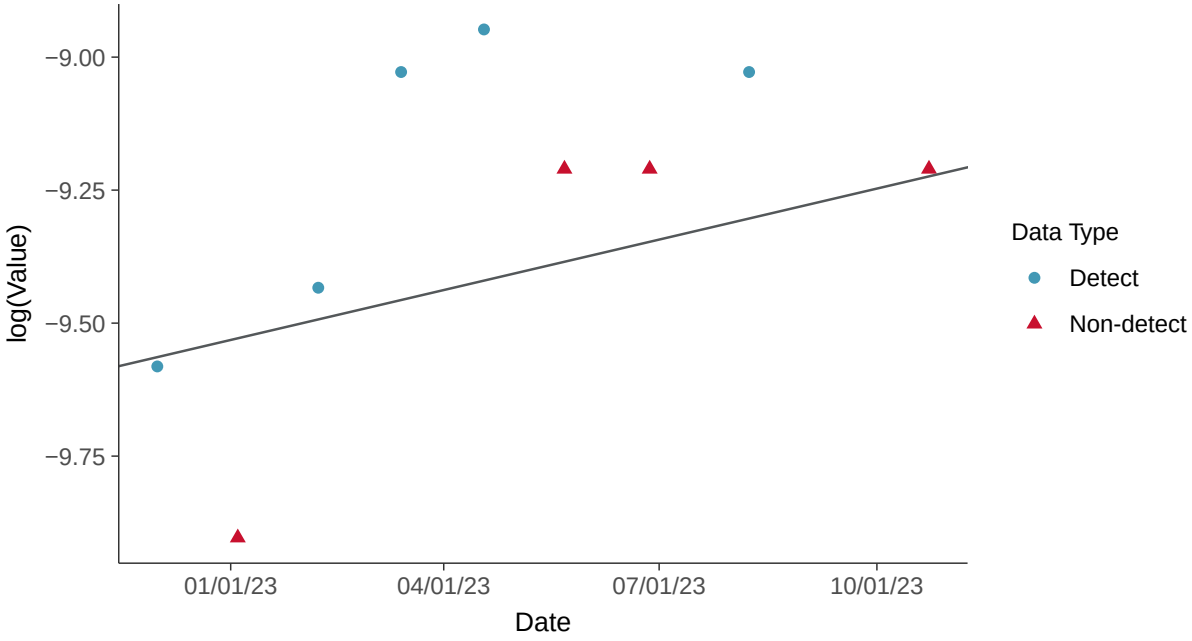
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-31 (mg/L)



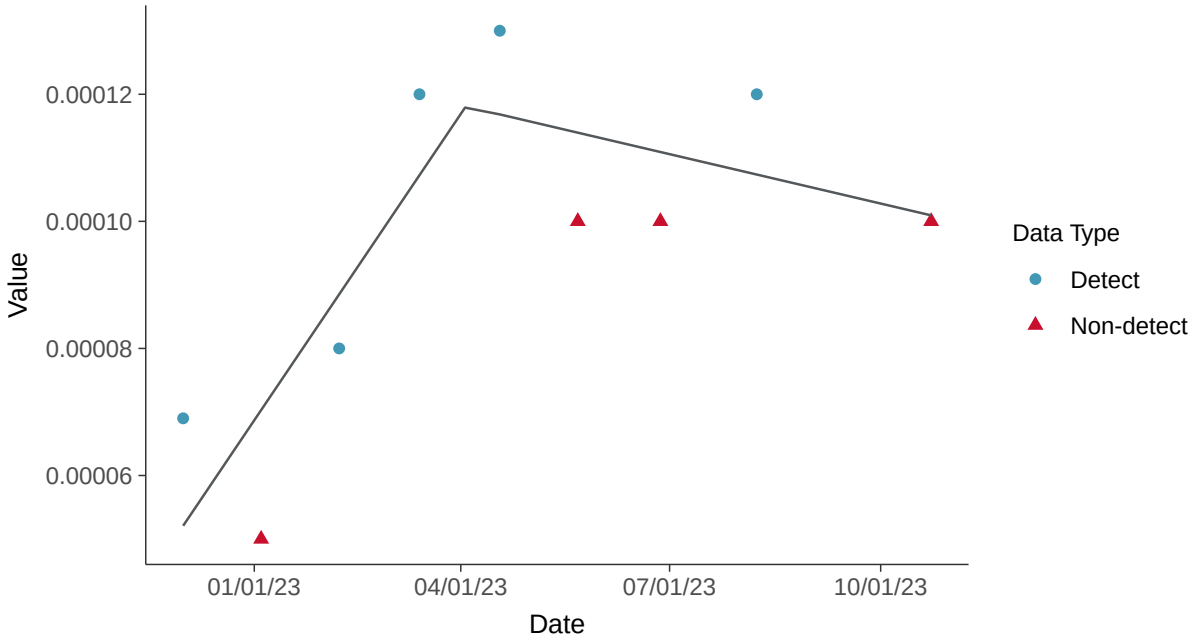
Trend Regression: Lognormal MLE

Antimony, MW-31 (mg/L)



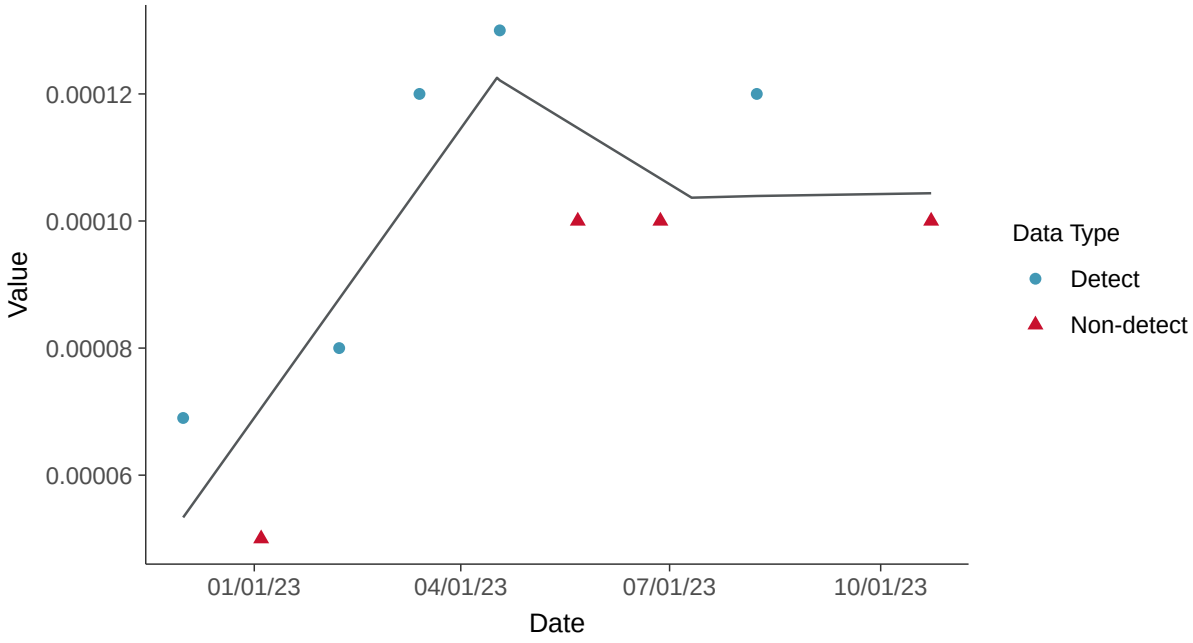
Trend Regression: Piecewise Linear-Linear

Antimony, MW-31 (mg/L)



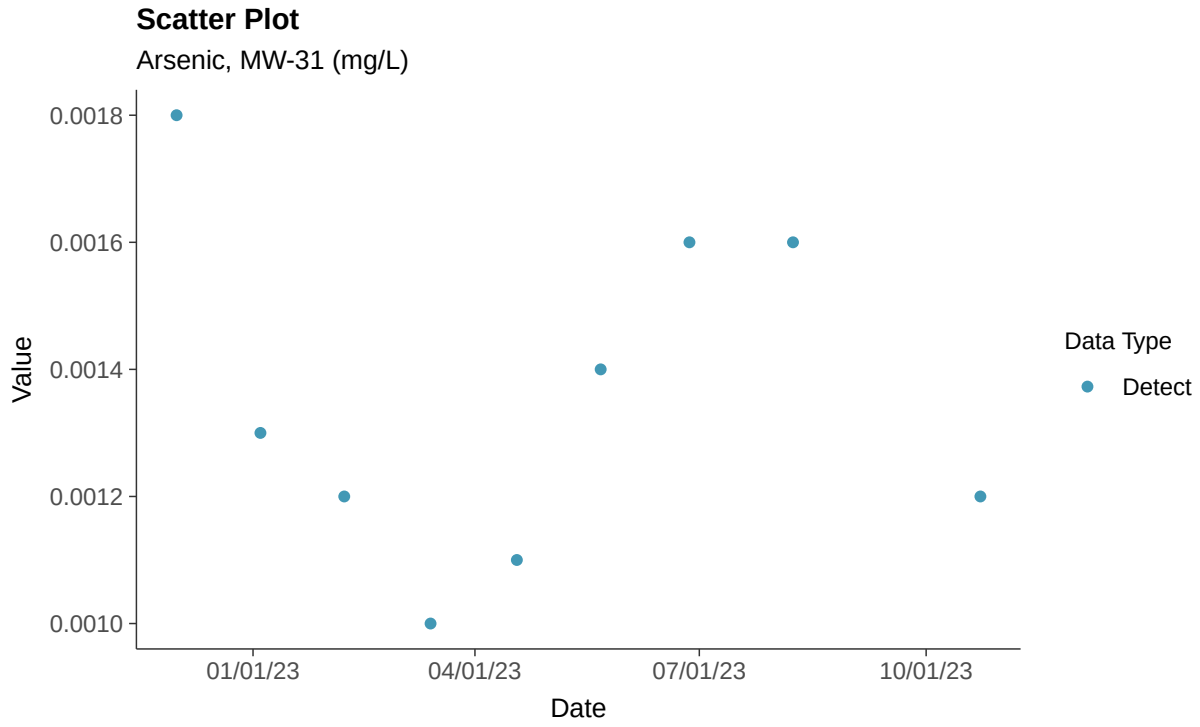
Trend Regression: Piecewise Linear-Linear-Linear

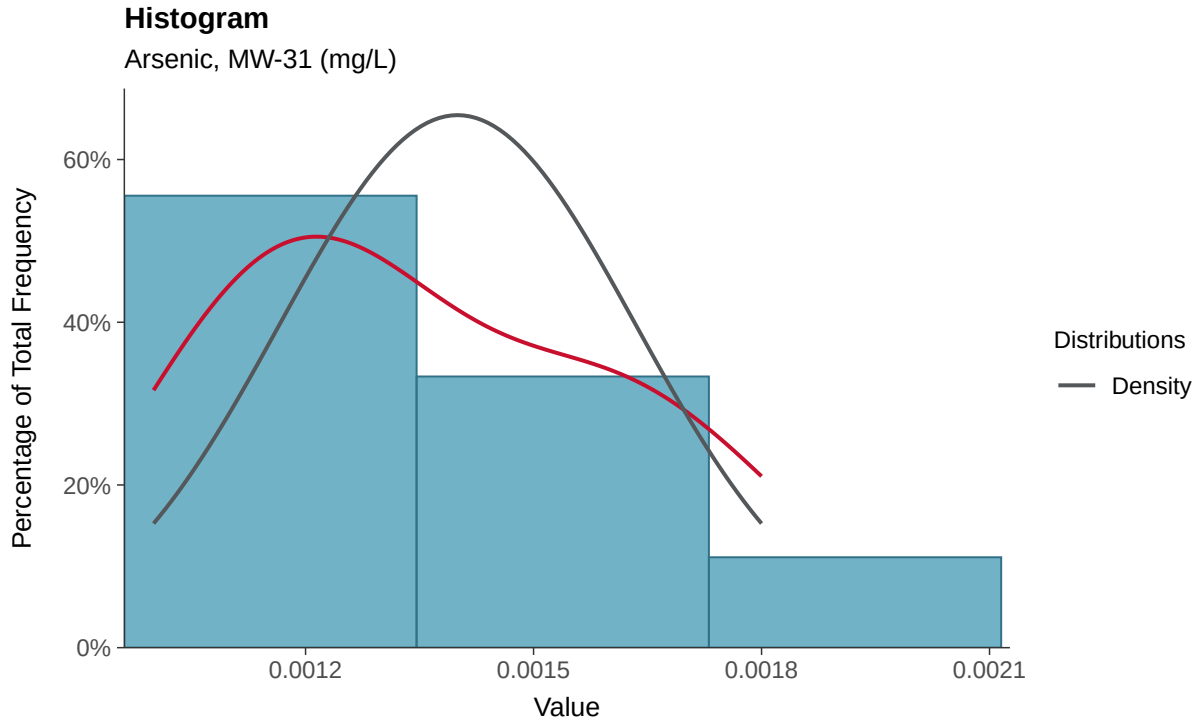
Antimony, MW-31 (mg/L)



Appendix IV: Arsenic, MW-31

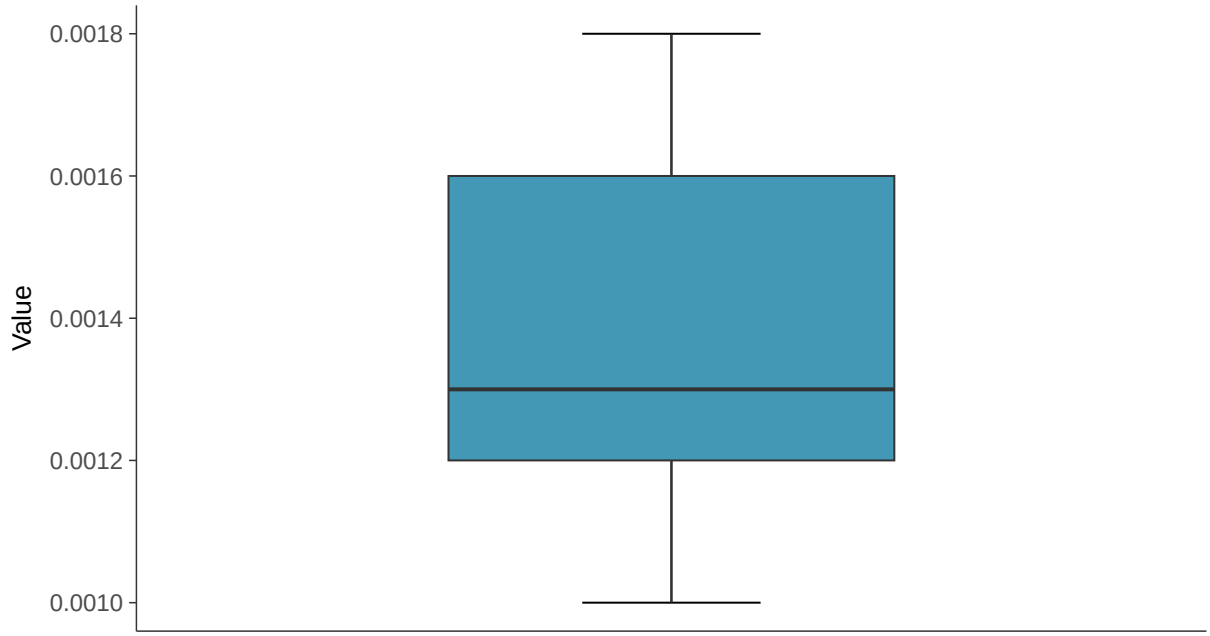
ID: 1_26_5_102





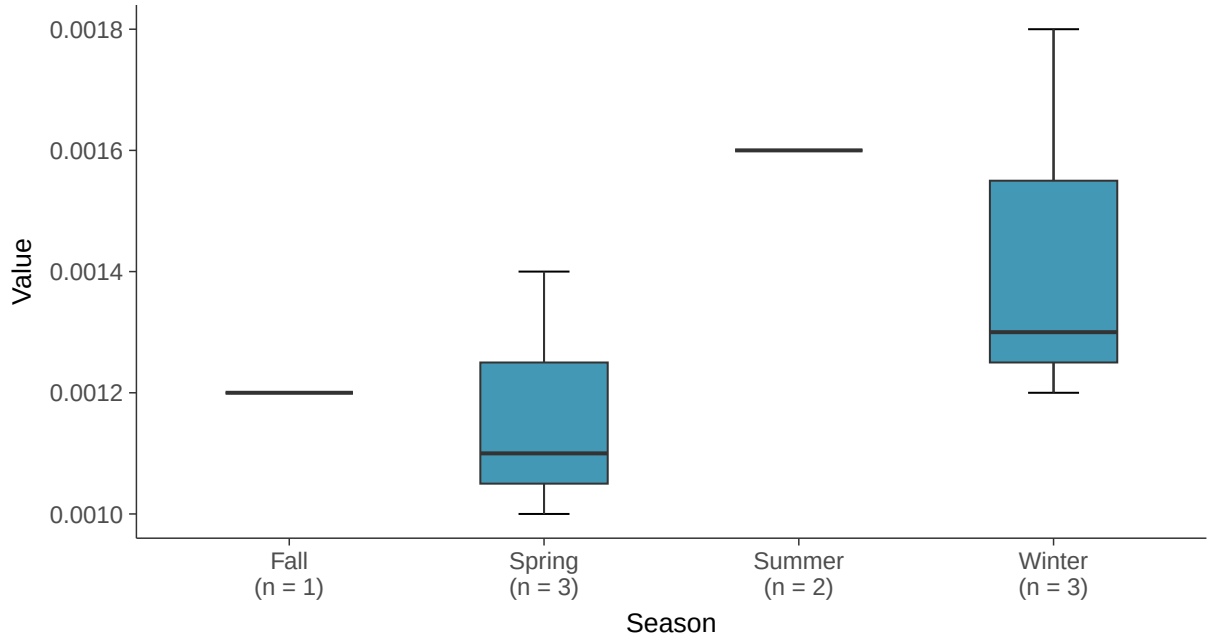
Boxplot

Arsenic, MW-31 (mg/L)



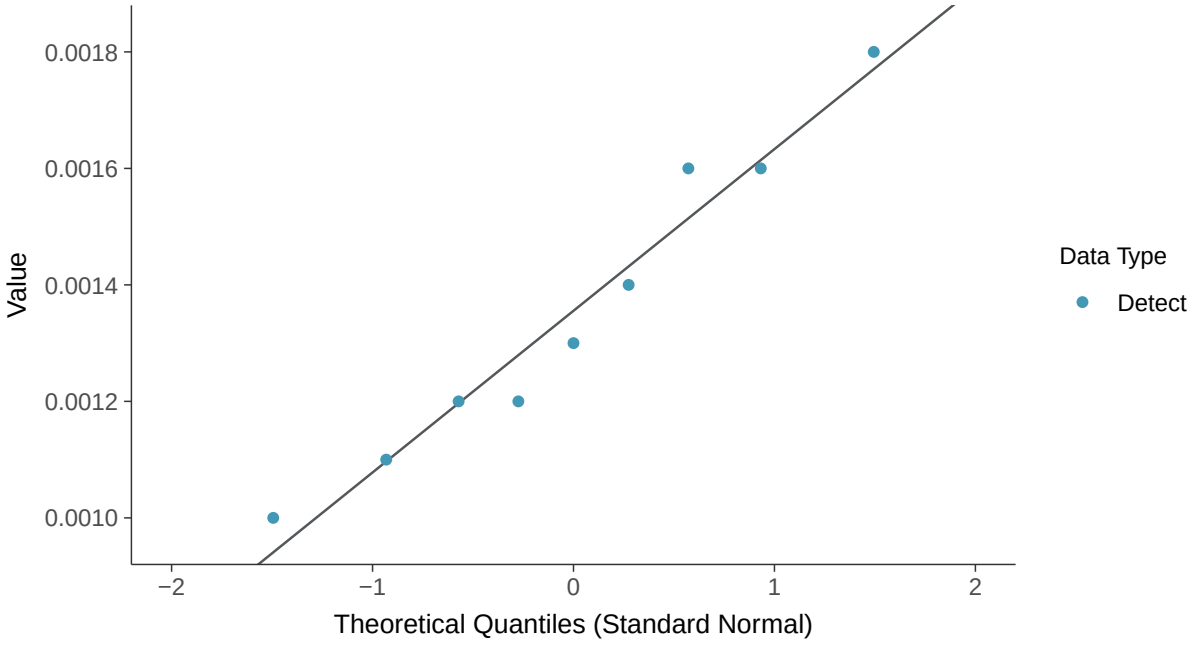
Boxplot by Season

Arsenic, MW-31 (mg/L)



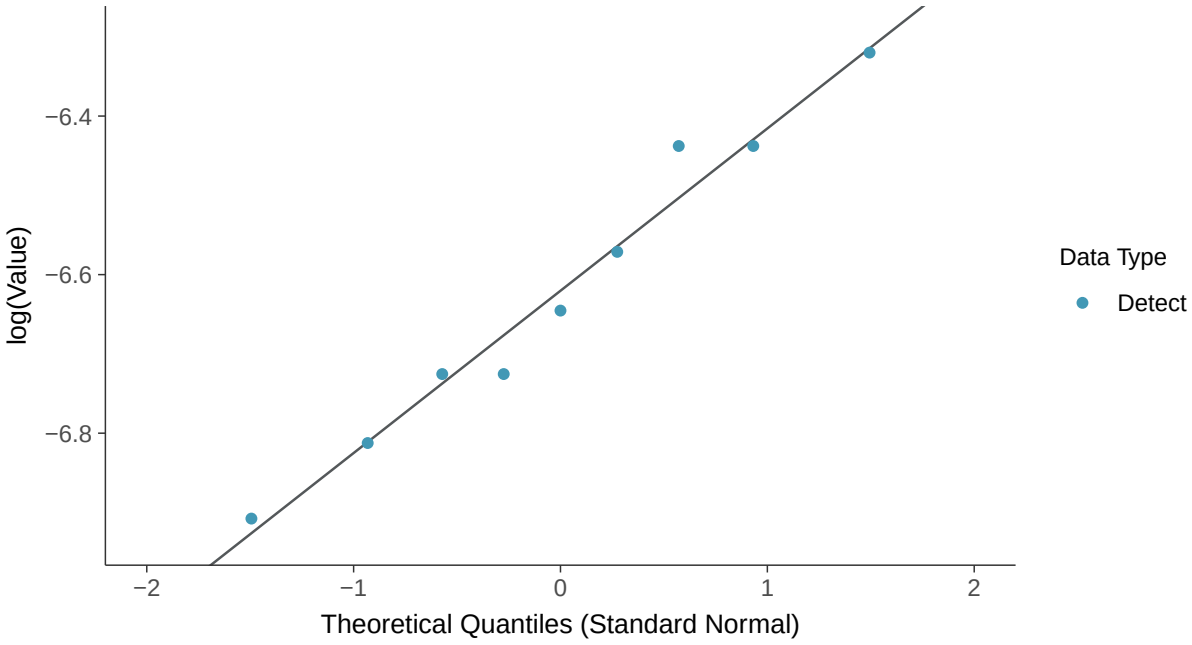
Normal Q-Q plot

Arsenic, MW-31 (mg/L)



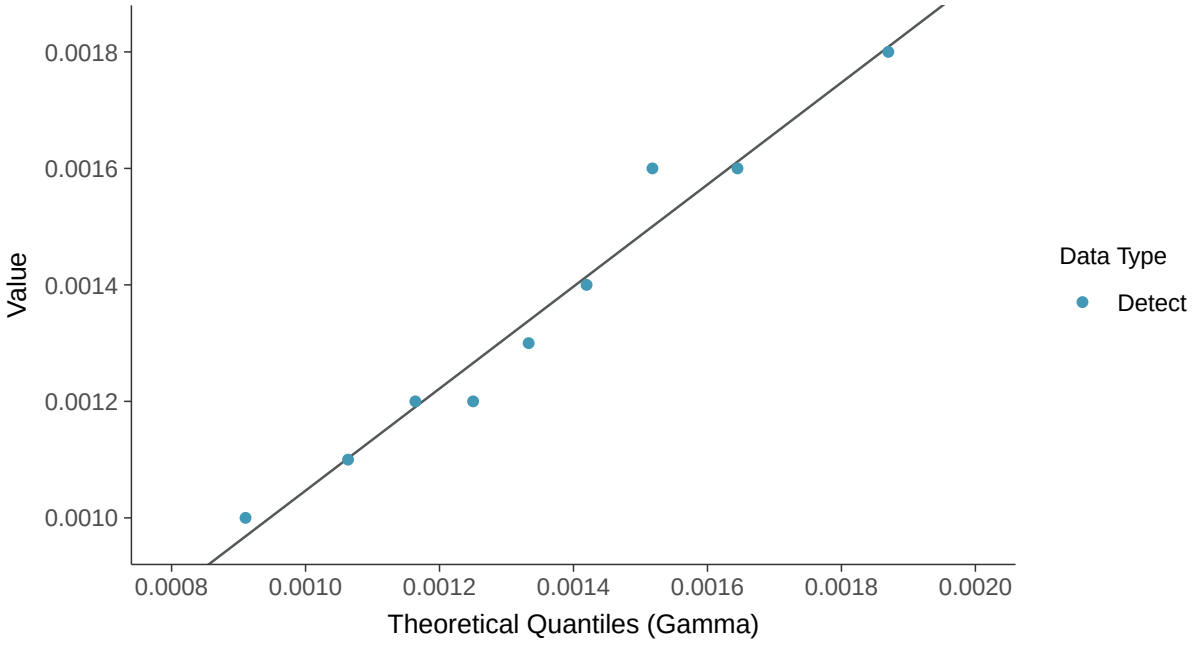
Lognormal Q-Q plot

Arsenic, MW-31 (mg/L)



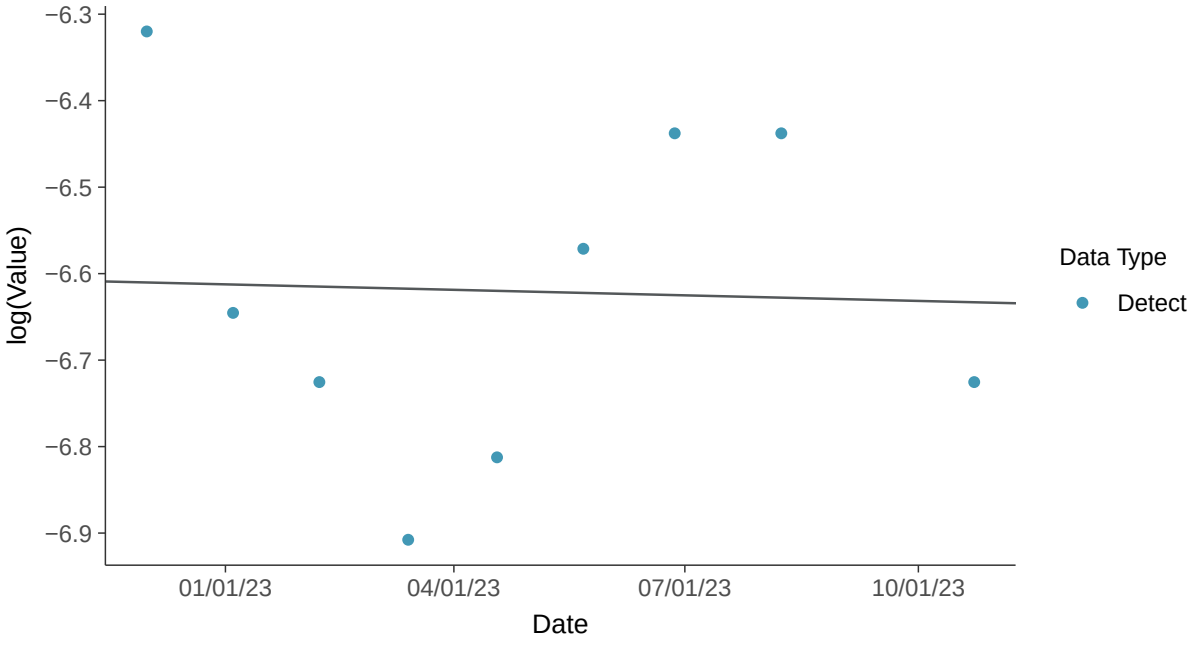
Gamma Q-Q plot

Arsenic, MW-31 (mg/L)



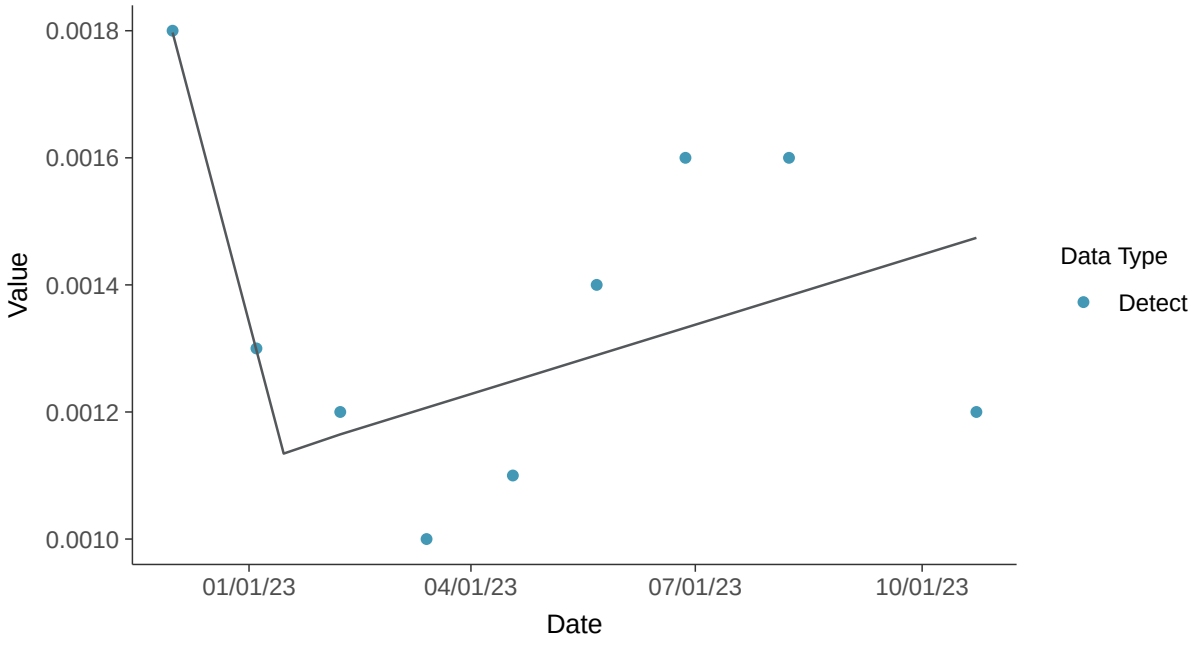
Trend Regression: Lognormal MLE

Arsenic, MW-31 (mg/L)



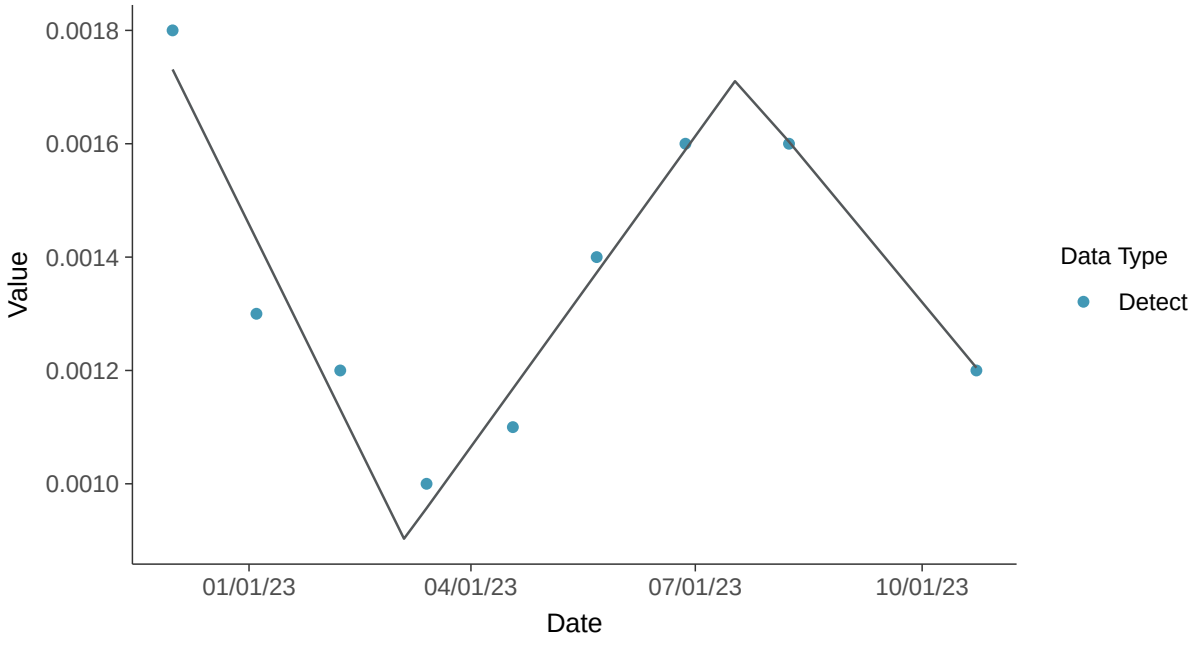
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-31 (mg/L)



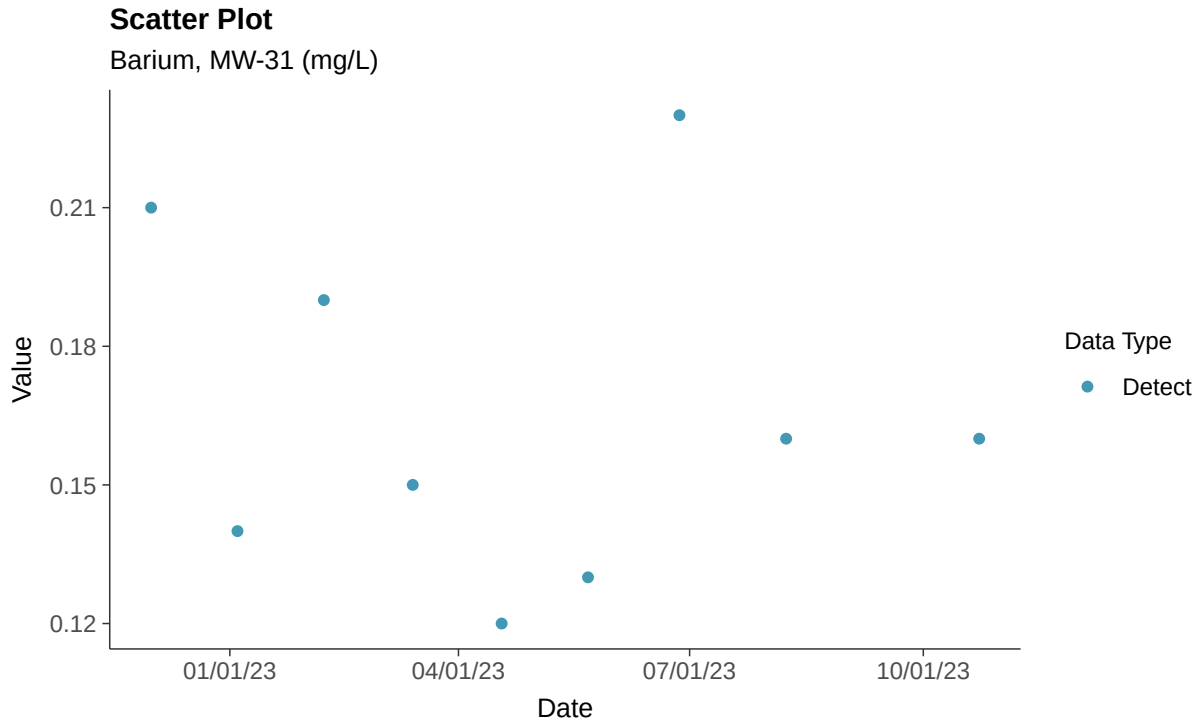
Trend Regression: Piecewise Linear-Linear-Linear

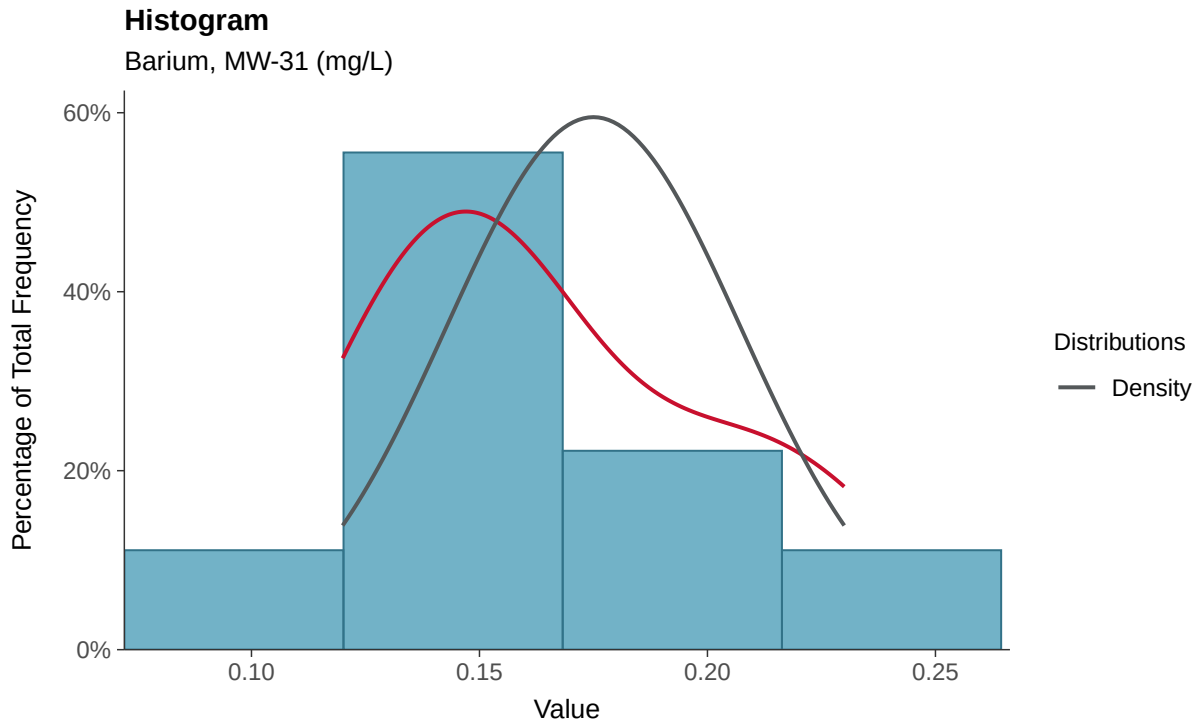
Arsenic, MW-31 (mg/L)



Appendix IV: Barium, MW-31

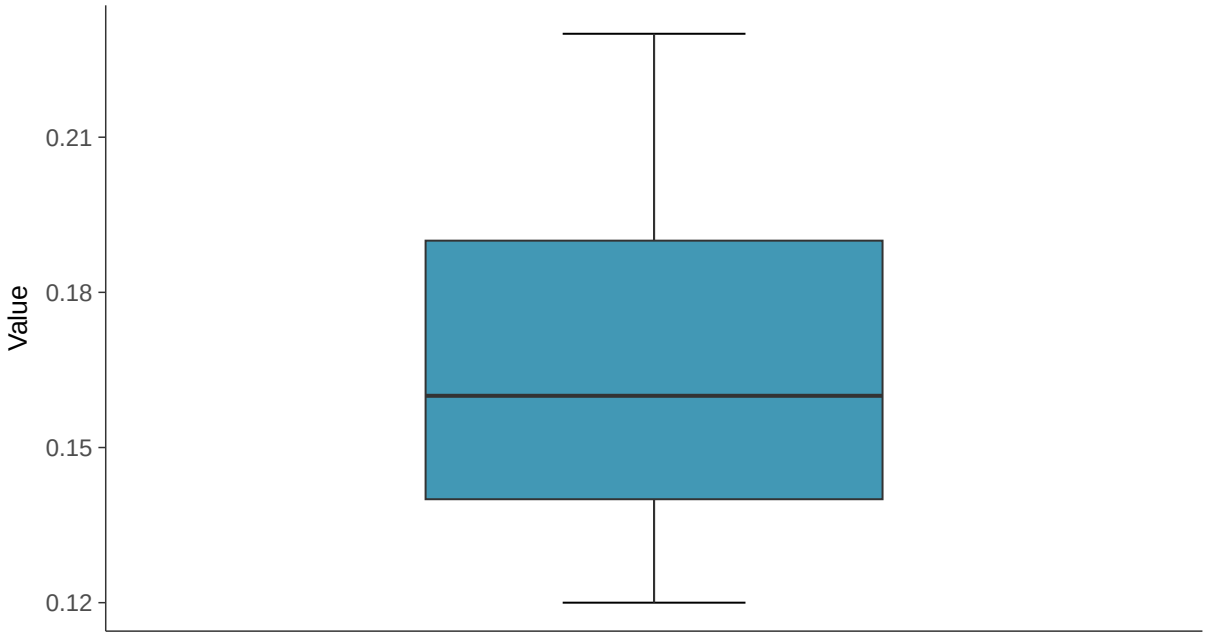
ID: 1_26_5_103





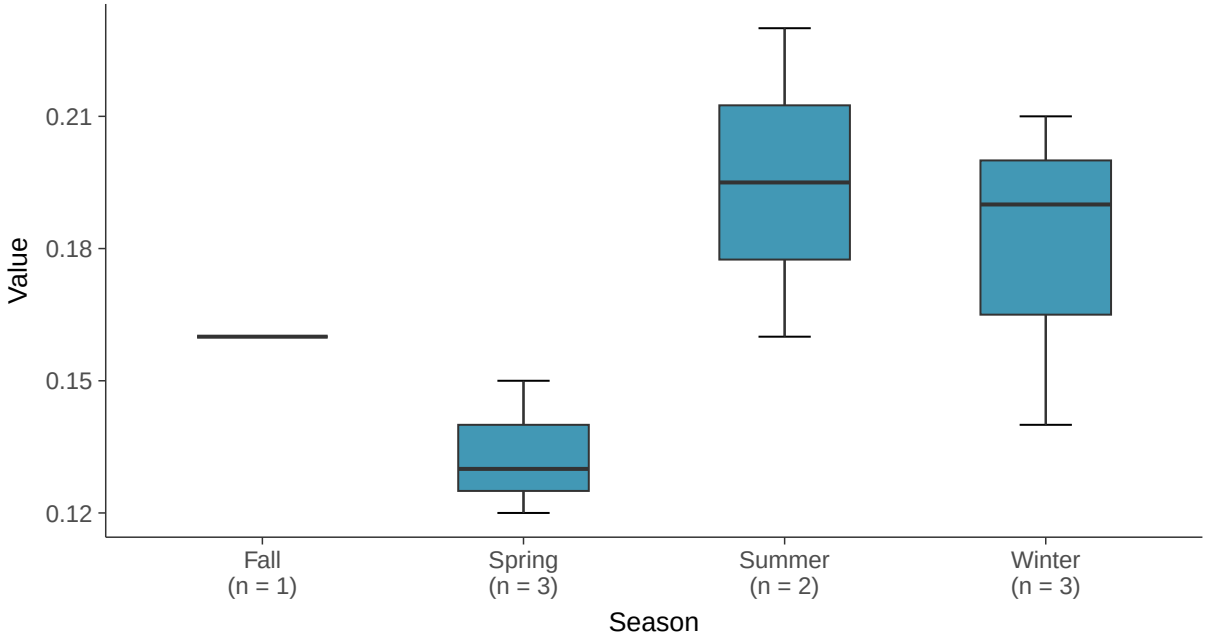
Boxplot

Barium, MW-31 (mg/L)



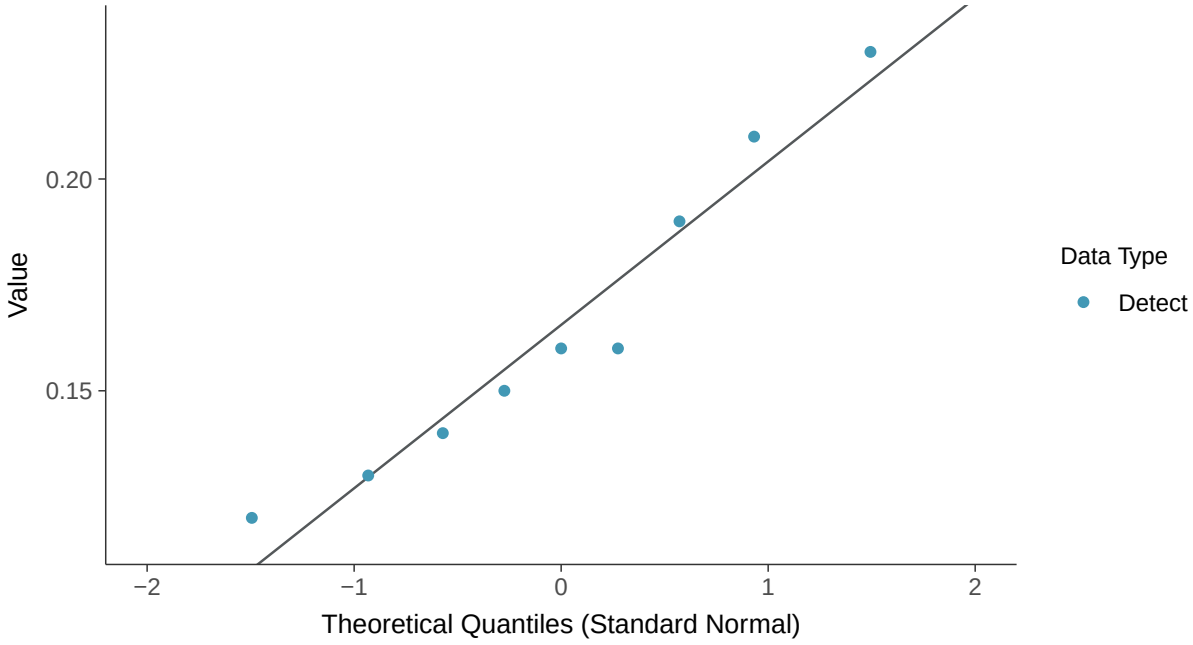
Boxplot by Season

Barium, MW-31 (mg/L)



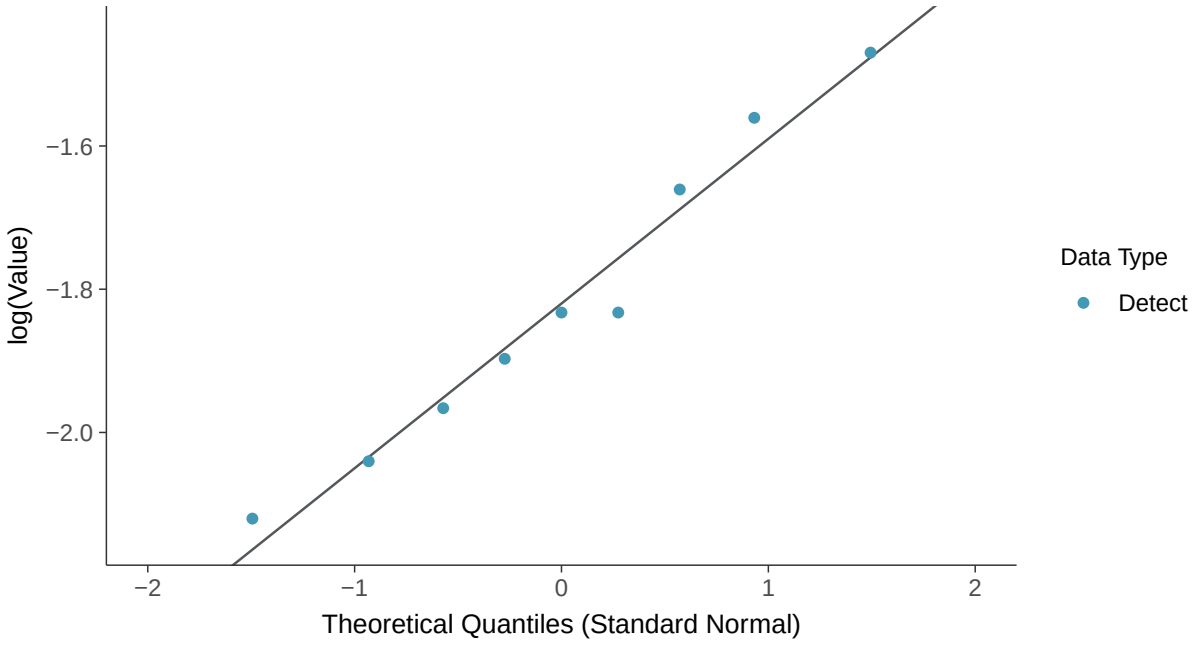
Normal Q-Q plot

Barium, MW-31 (mg/L)



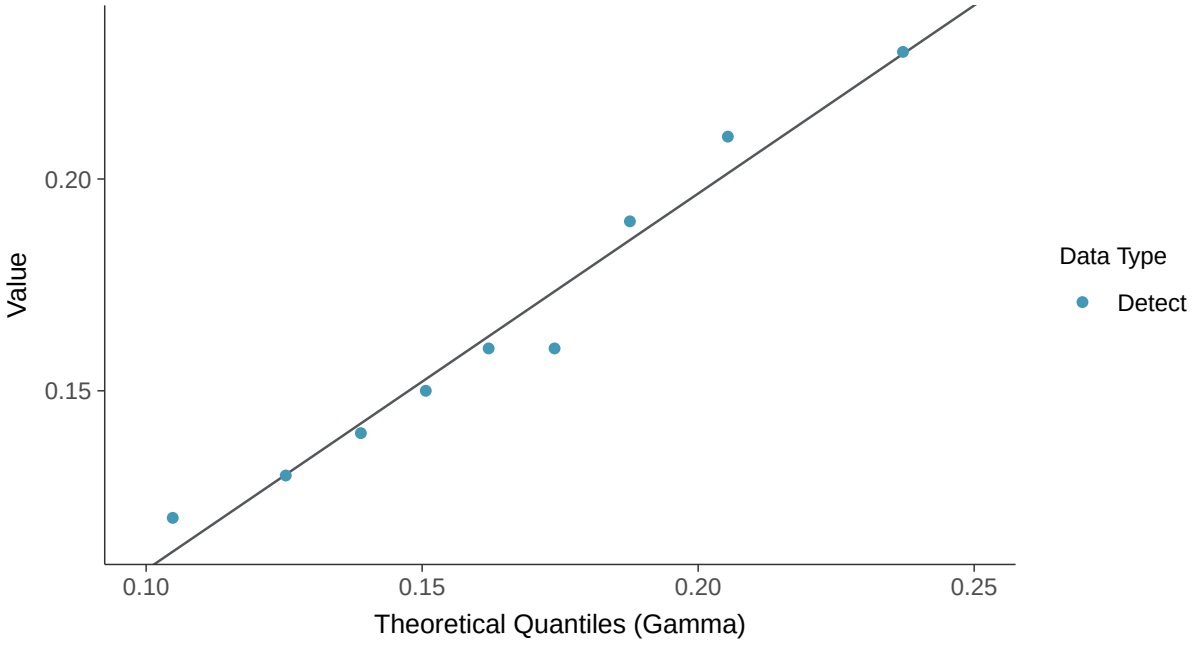
Lognormal Q-Q plot

Barium, MW-31 (mg/L)



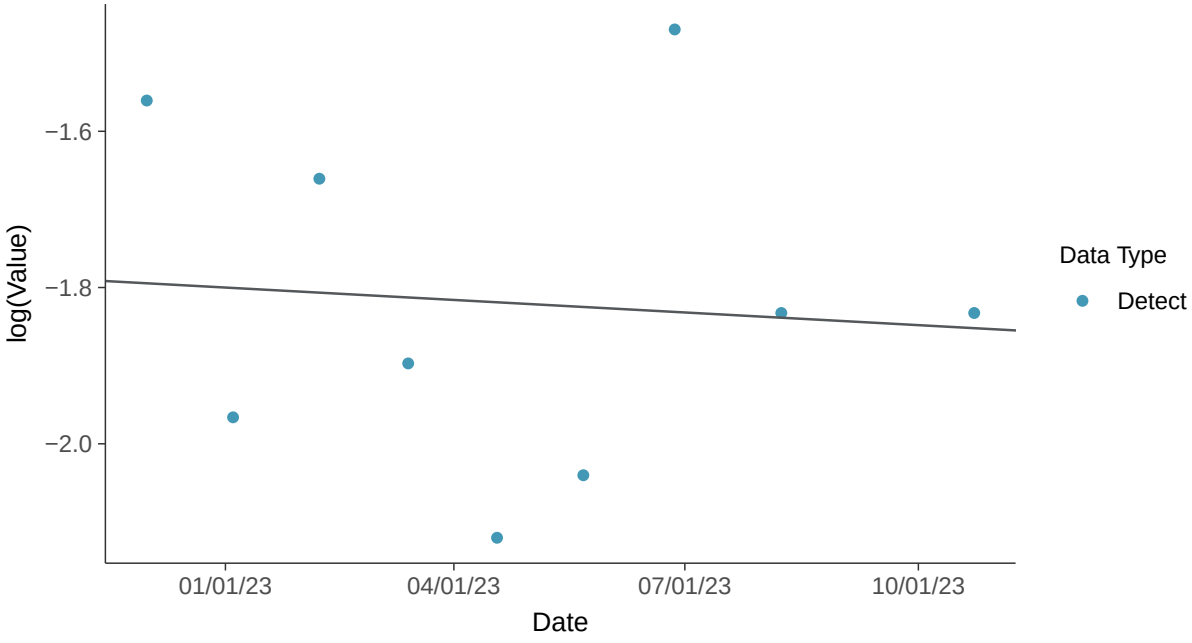
Gamma Q-Q plot

Barium, MW-31 (mg/L)



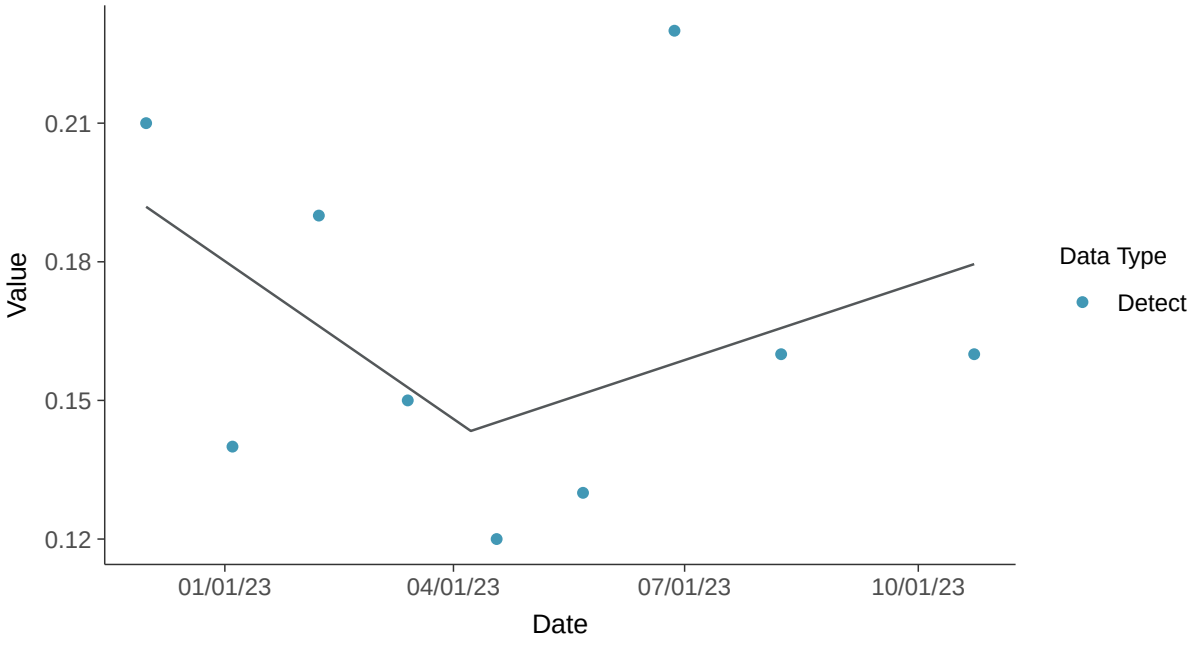
Trend Regression: Lognormal MLE

Barium, MW-31 (mg/L)



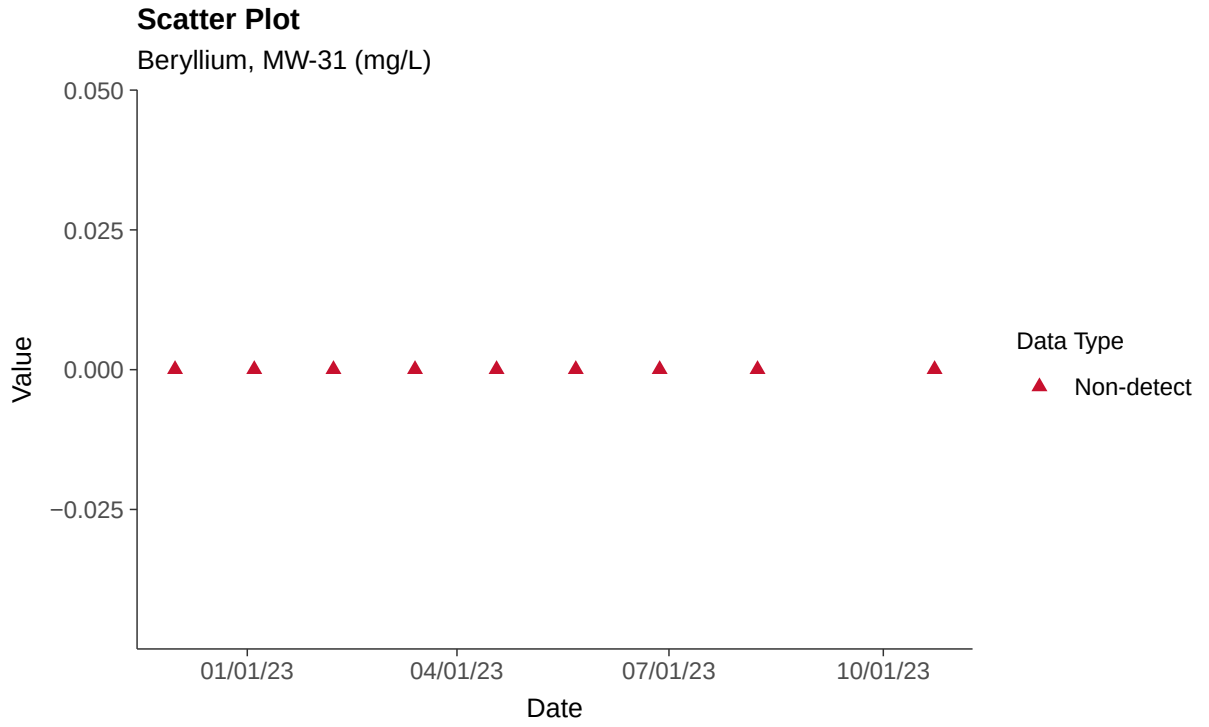
Trend Regression: Piecewise Linear-Linear

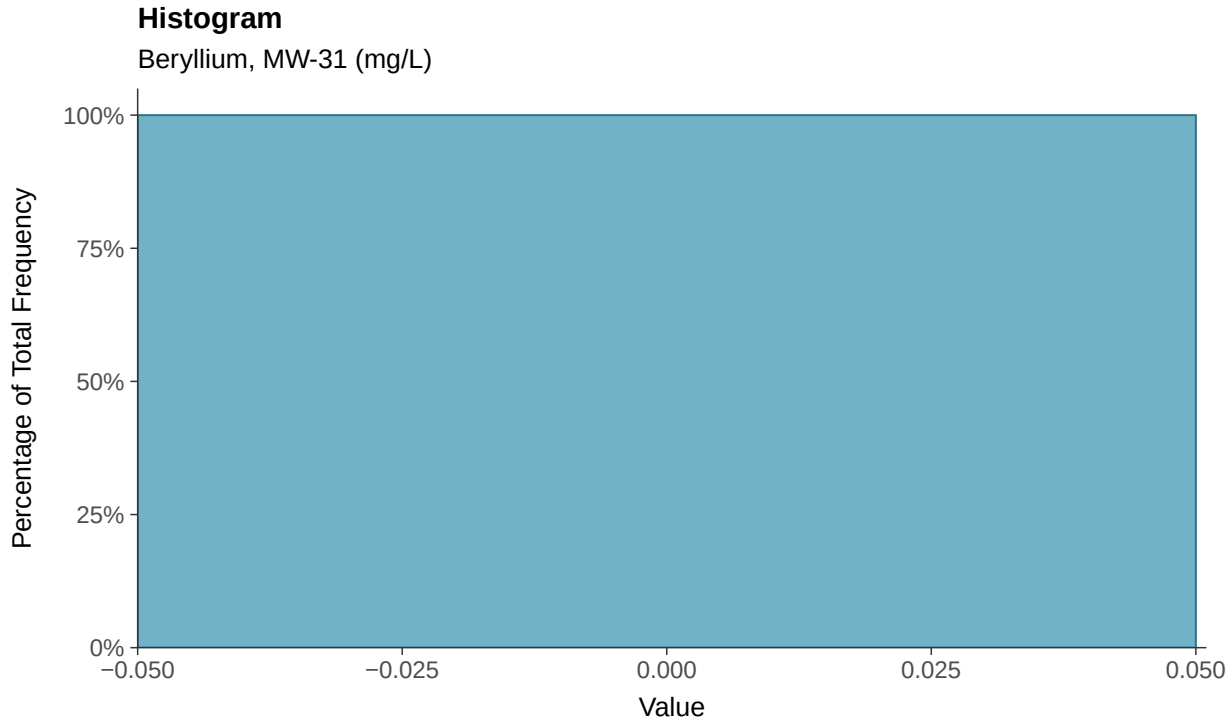
Barium, MW-31 (mg/L)



Appendix IV: Beryllium, MW-31

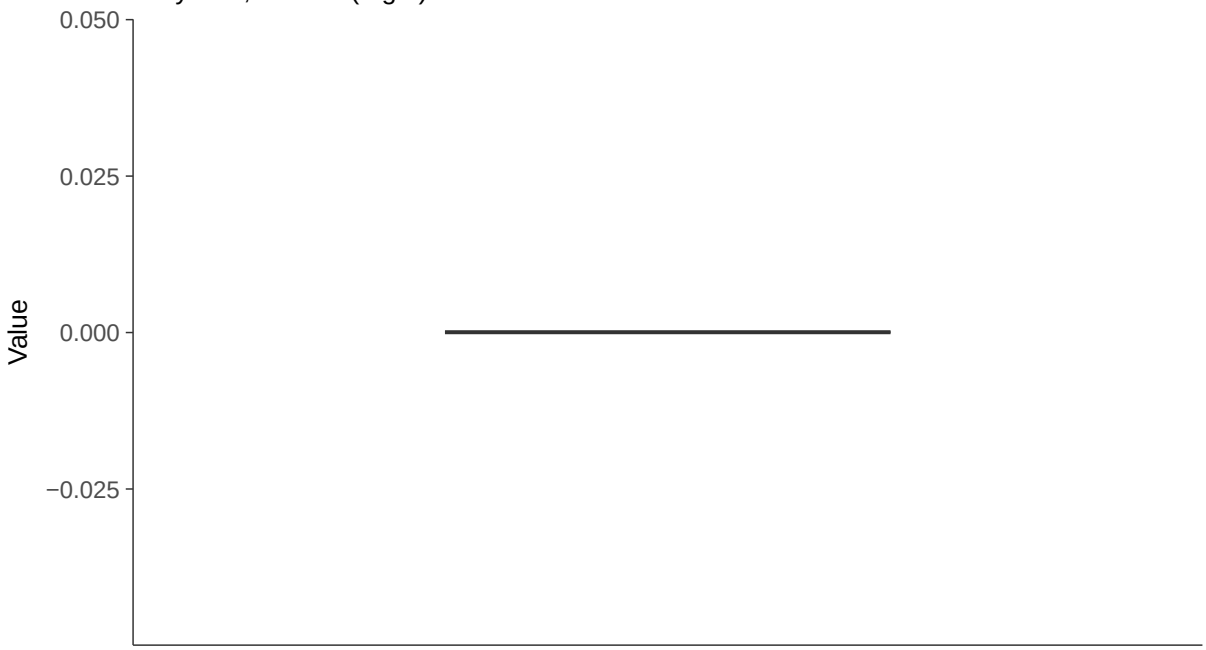
ID: 1_26_5_104





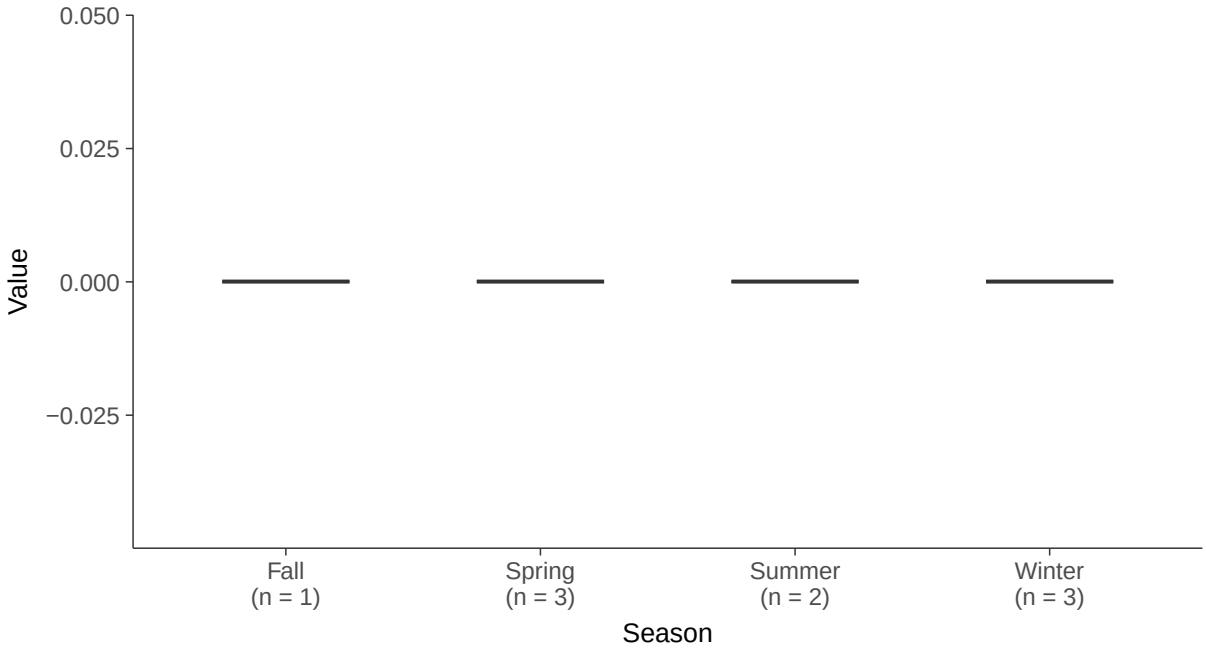
Boxplot

Beryllium, MW-31 (mg/L)



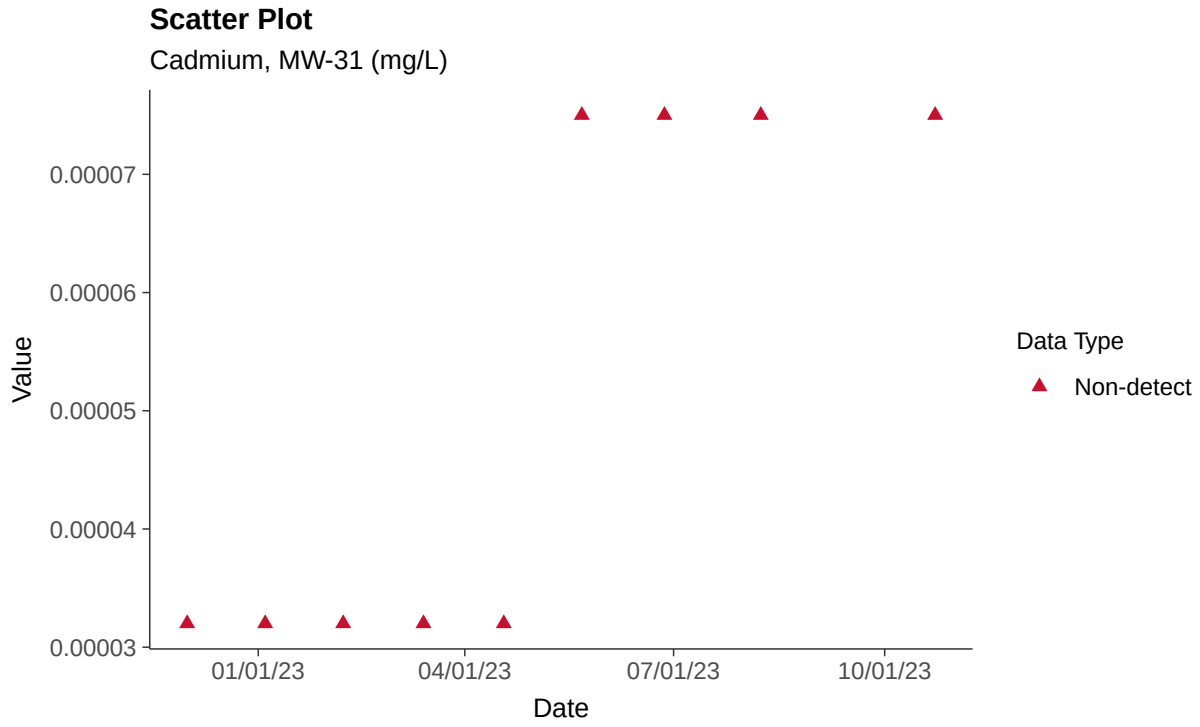
Boxplot by Season

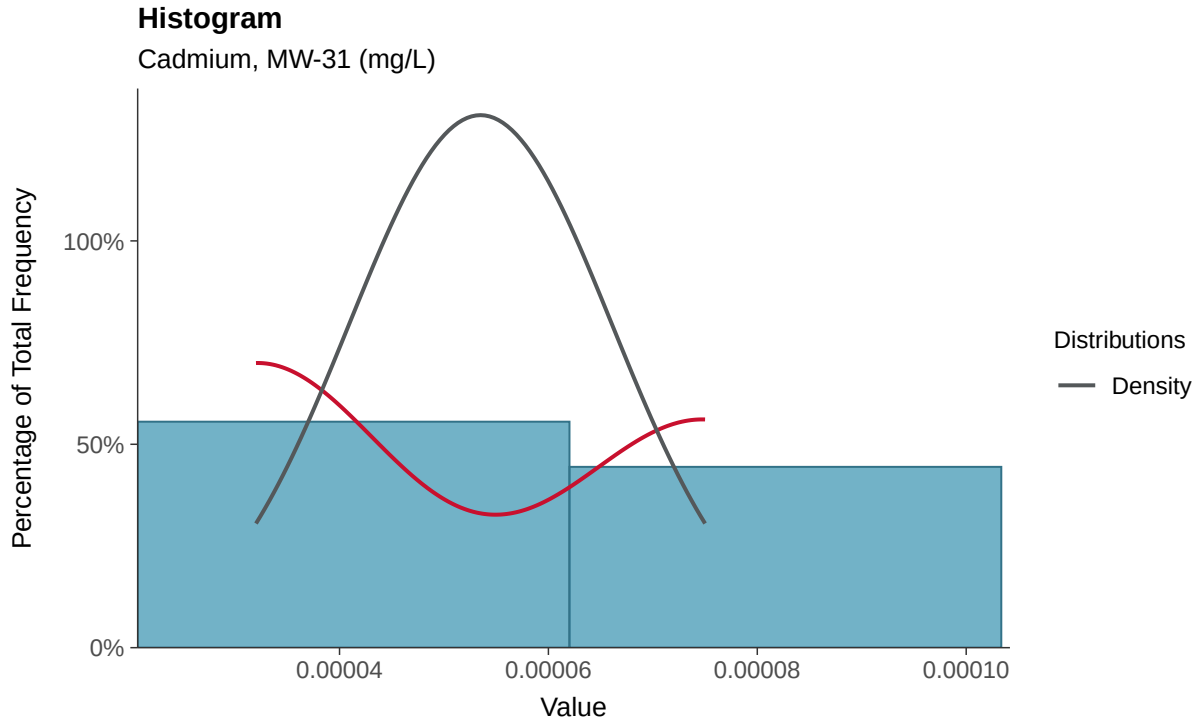
Beryllium, MW-31 (mg/L)



Appendix IV: Cadmium, MW-31

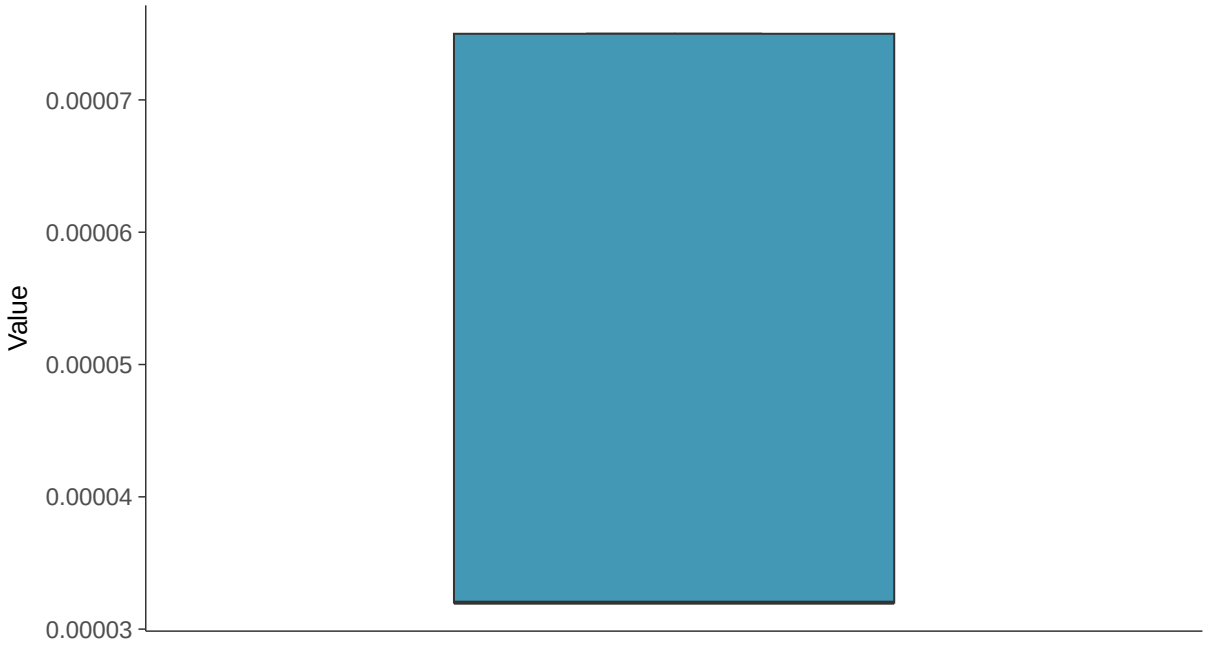
ID: 1_26_5_106





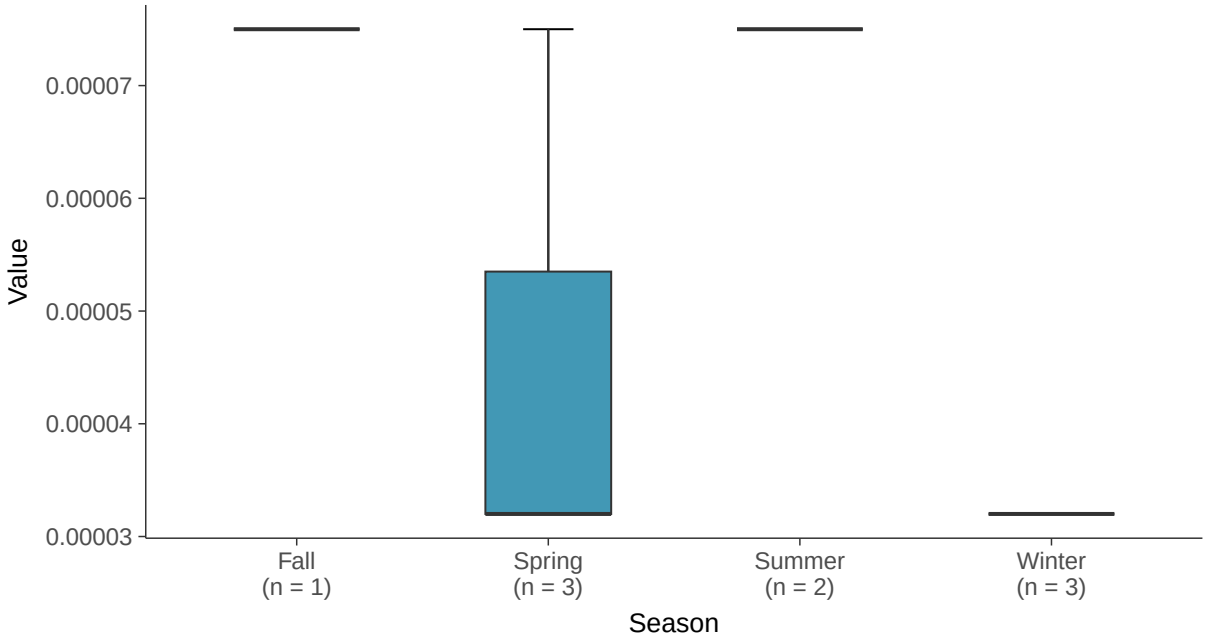
Boxplot

Cadmium, MW-31 (mg/L)



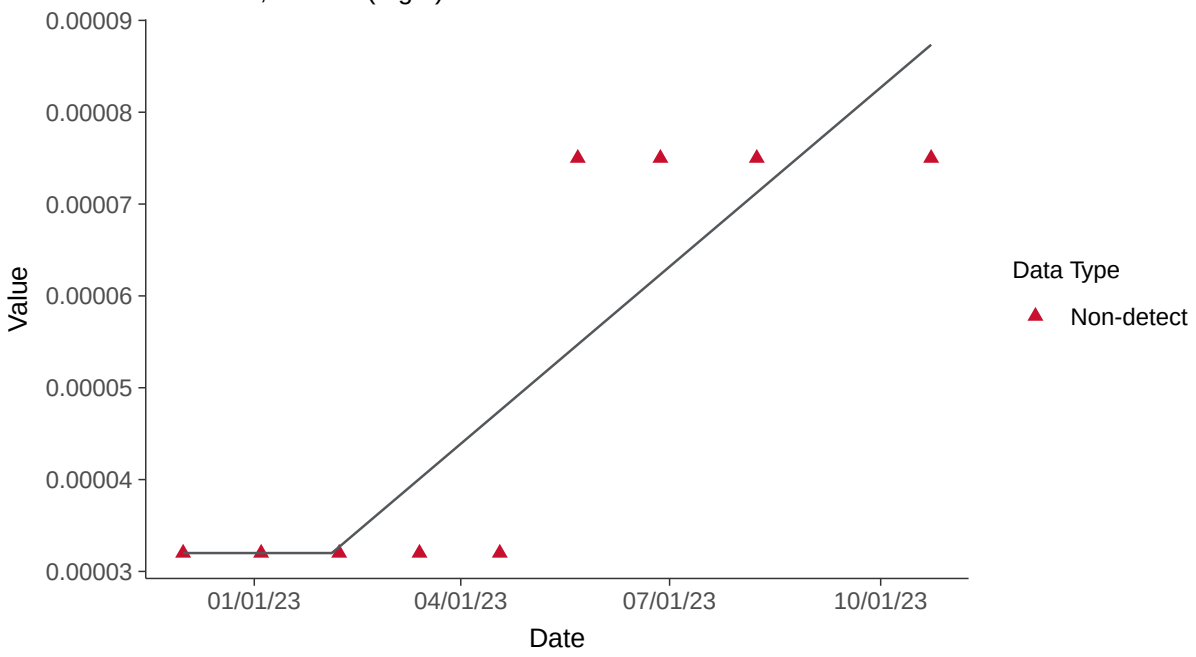
Boxplot by Season

Cadmium, MW-31 (mg/L)



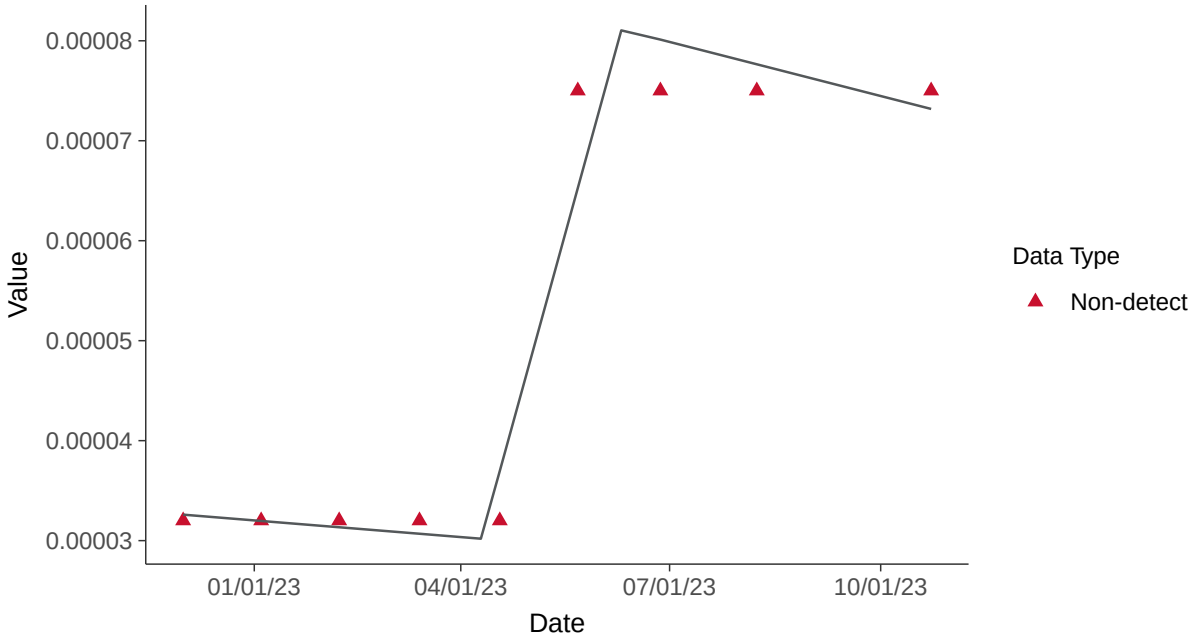
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-31 (mg/L)



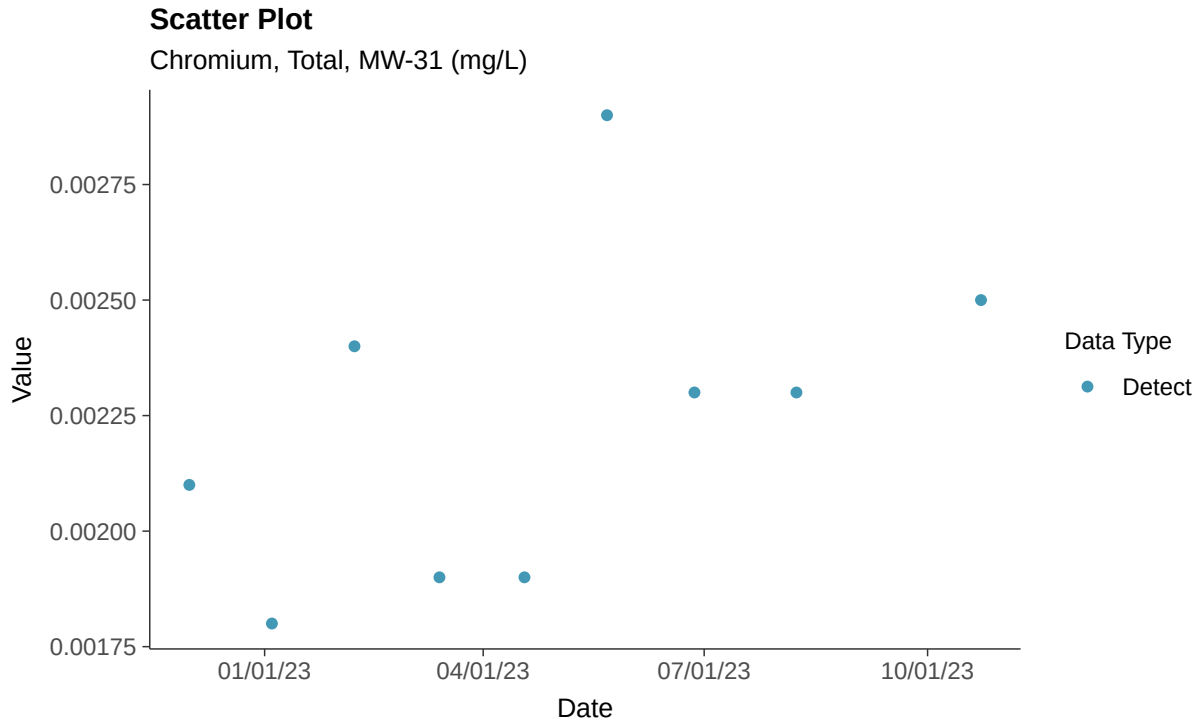
Trend Regression: Piecewise Linear-Linear-Linear

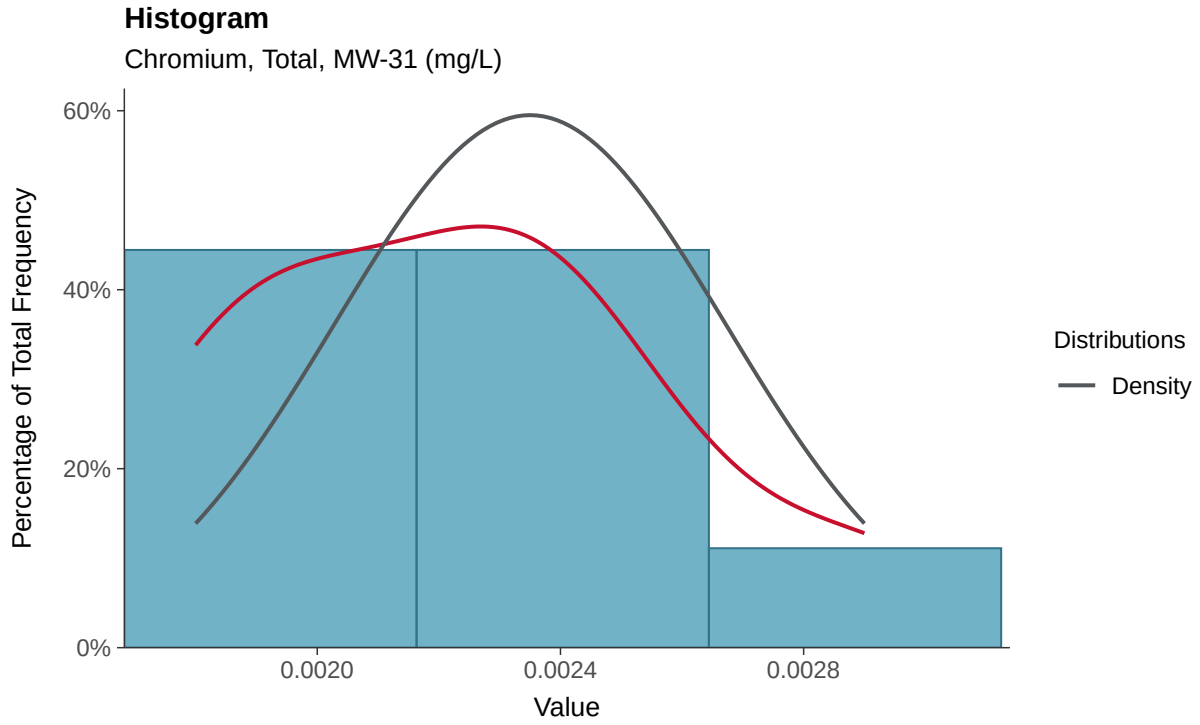
Cadmium, MW-31 (mg/L)



Appendix IV: Chromium, Total, MW-31

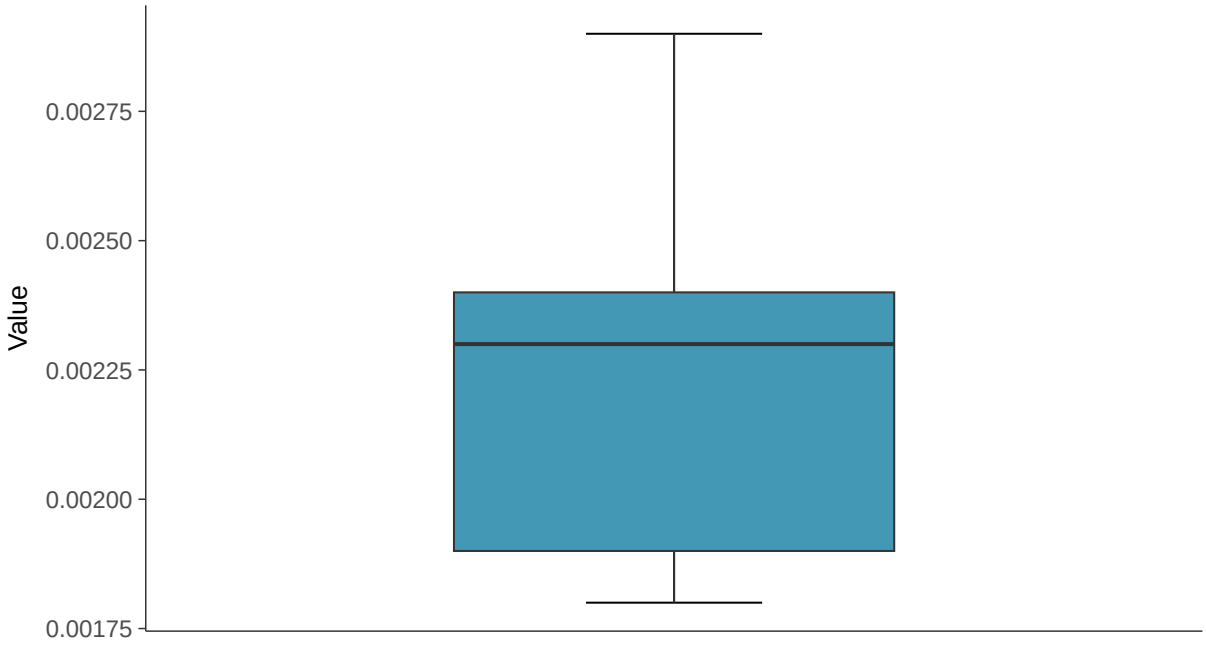
ID: 1_26_5_109





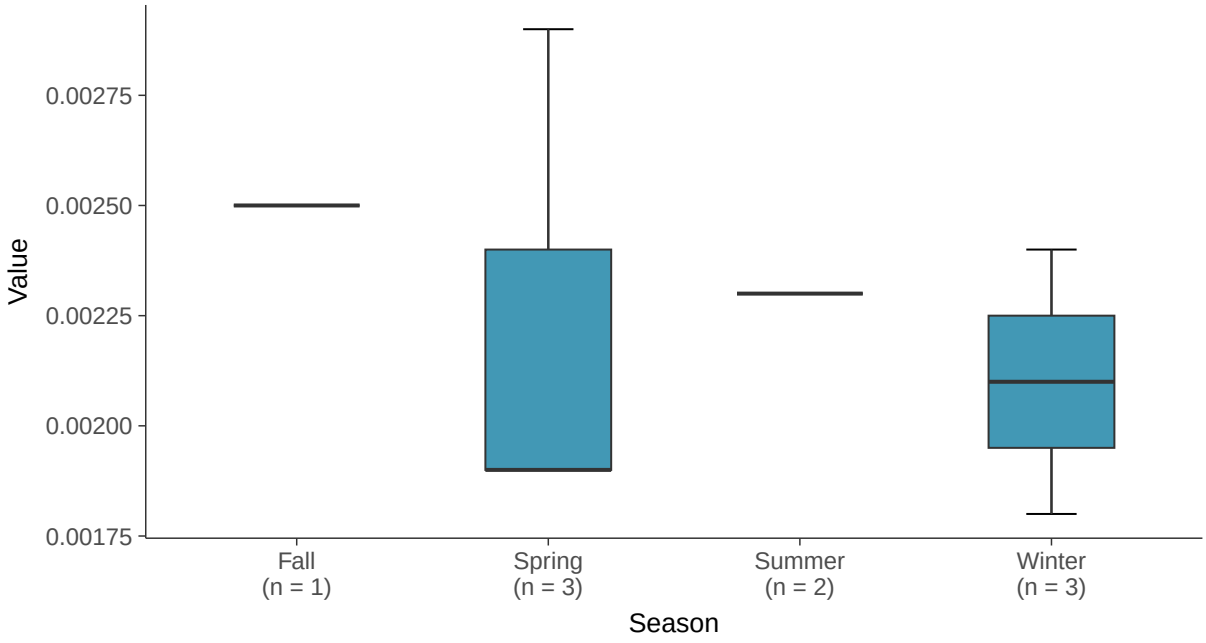
Boxplot

Chromium, Total, MW-31 (mg/L)



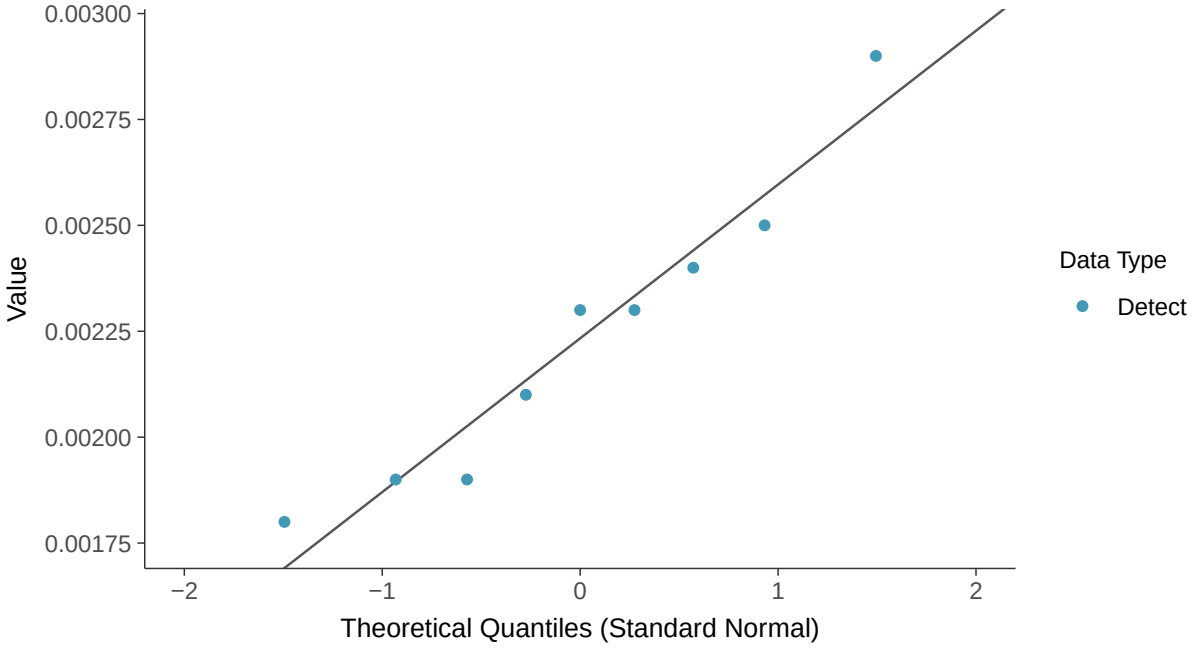
Boxplot by Season

Chromium, Total, MW-31 (mg/L)



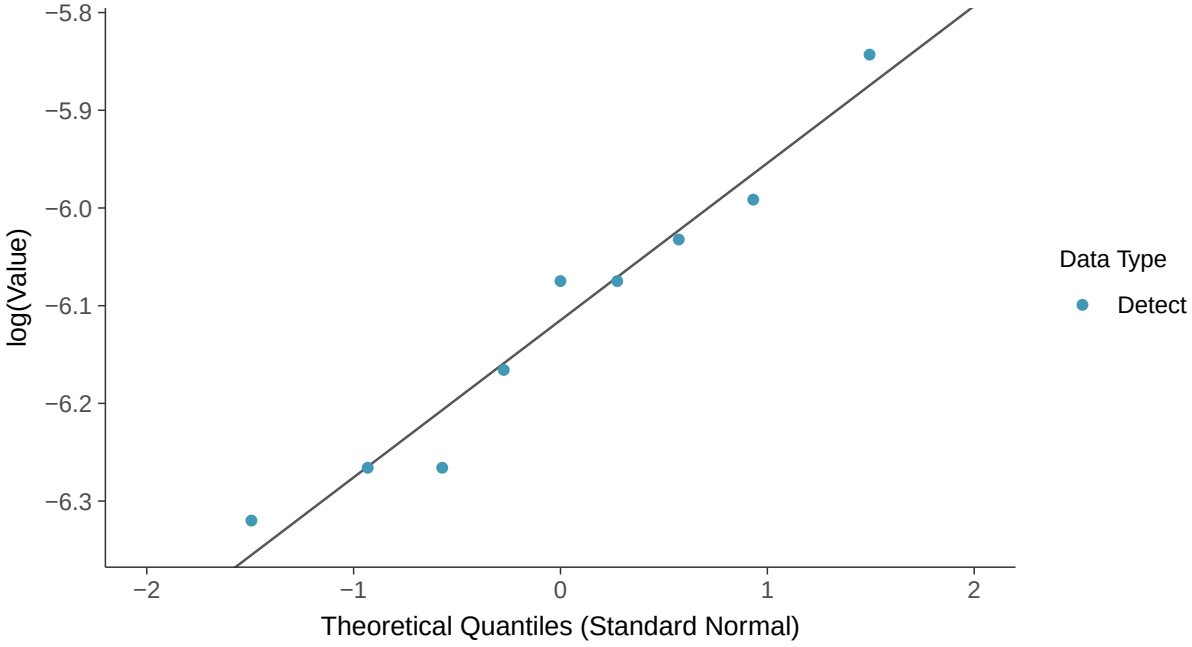
Normal Q-Q plot

Chromium, Total, MW-31 (mg/L)



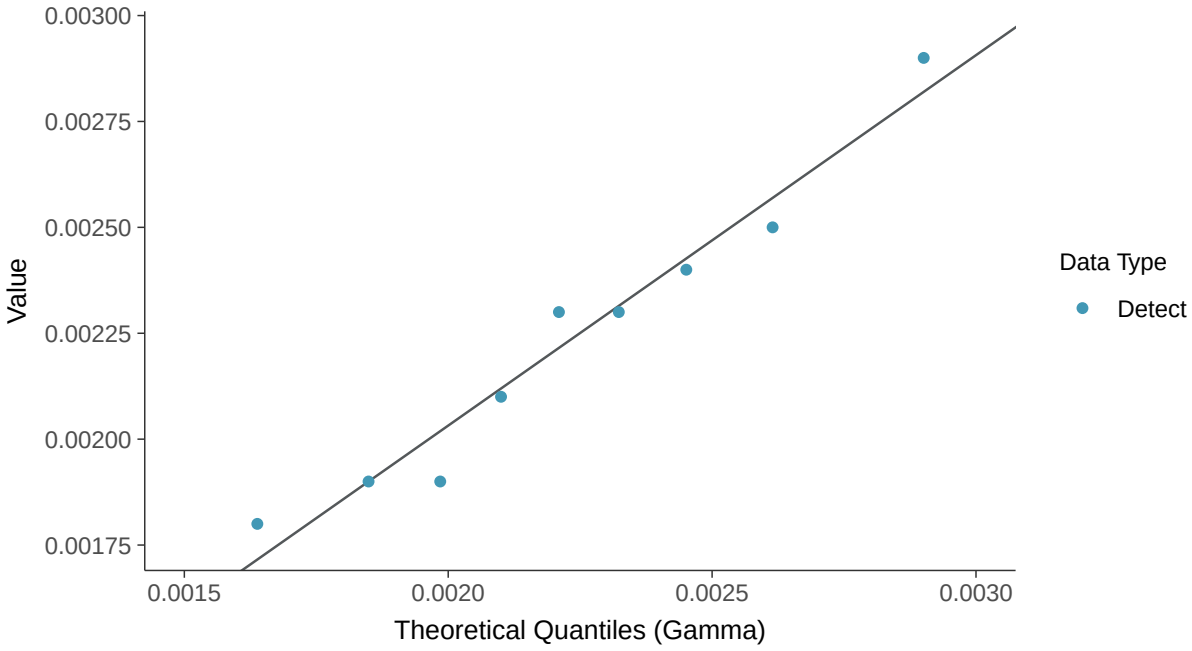
Lognormal Q-Q plot

Chromium, Total, MW-31 (mg/L)



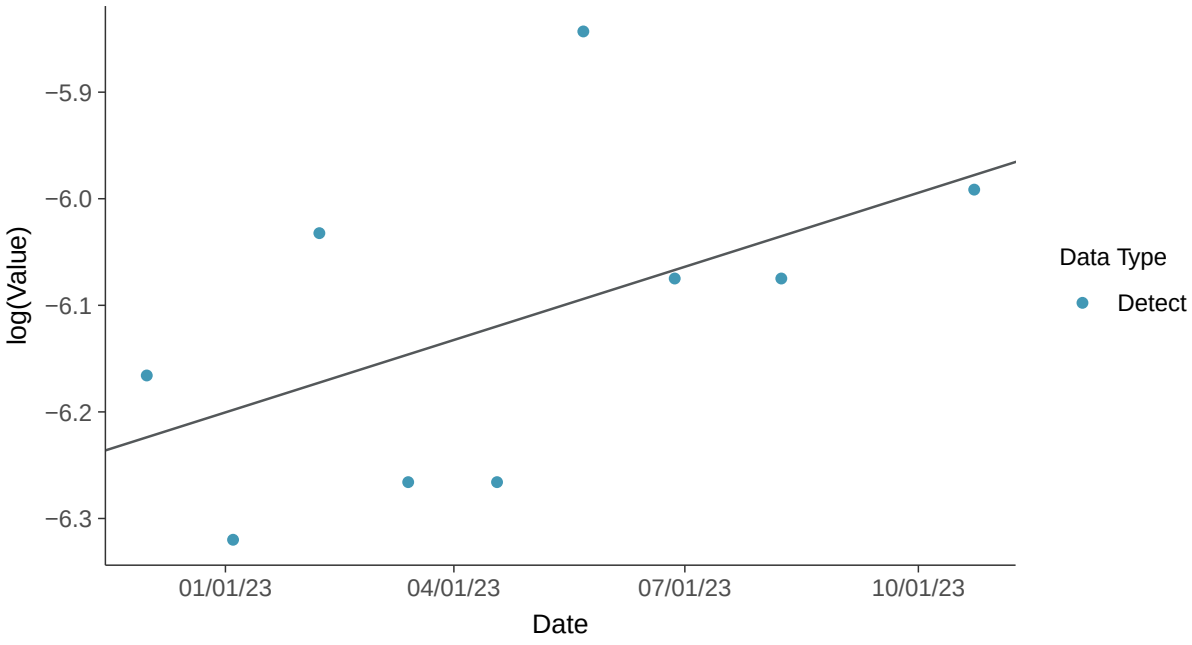
Gamma Q-Q plot

Chromium, Total, MW-31 (mg/L)



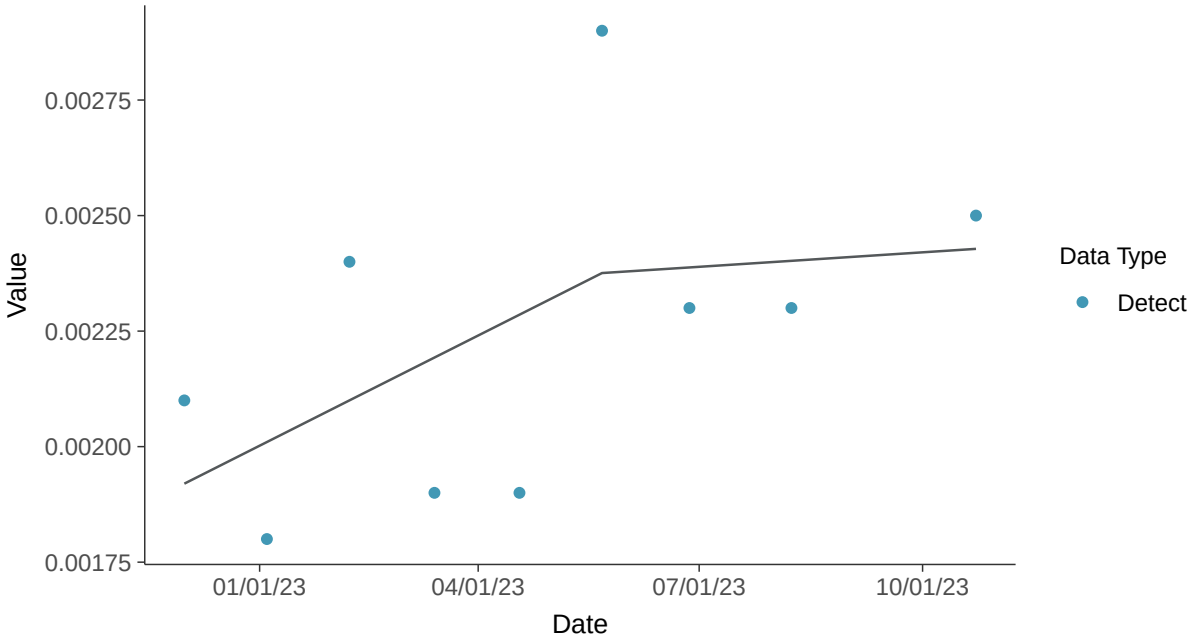
Trend Regression: Lognormal MLE

Chromium, Total, MW-31 (mg/L)



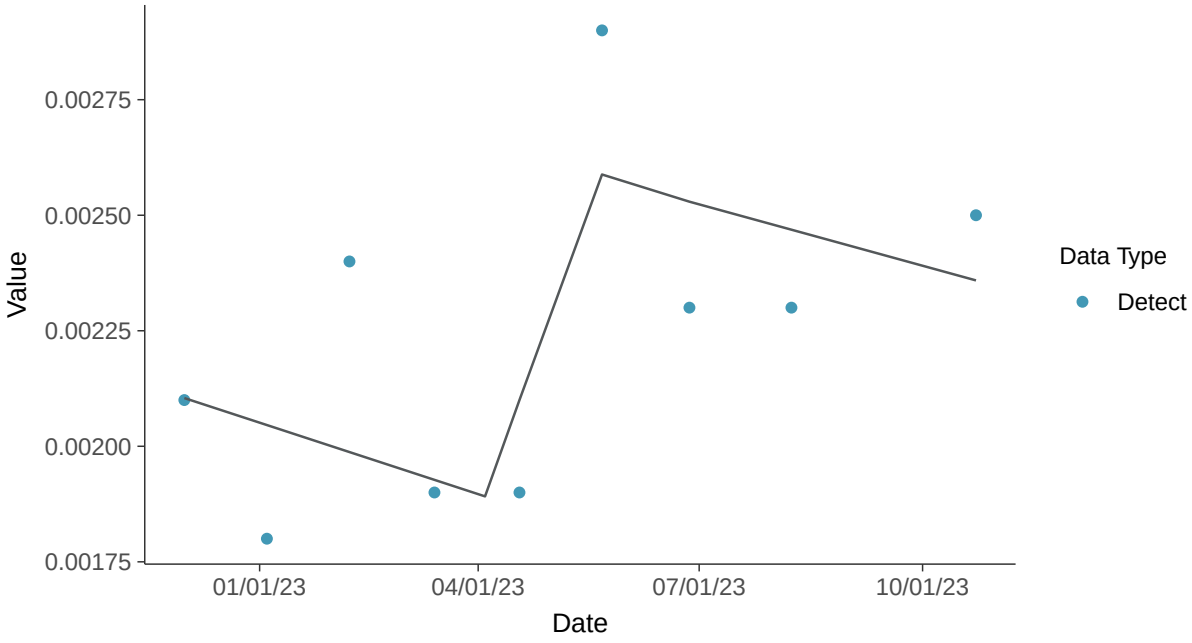
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-31 (mg/L)



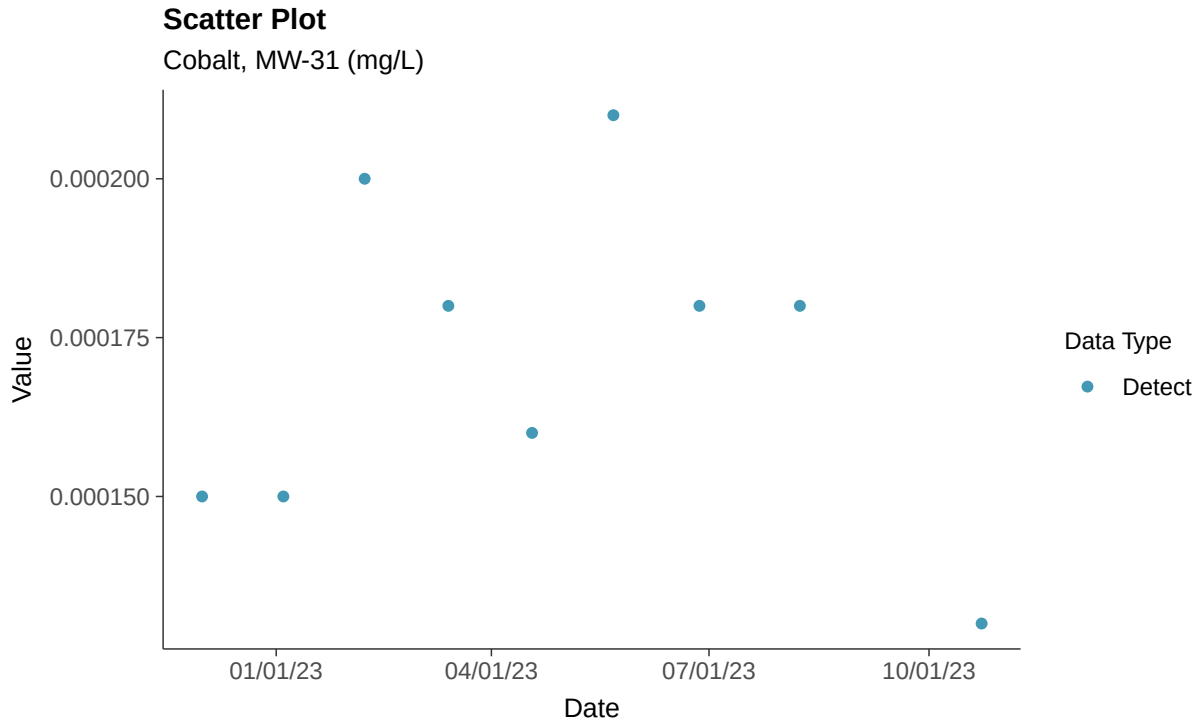
Trend Regression: Piecewise Linear-Linear-Linear

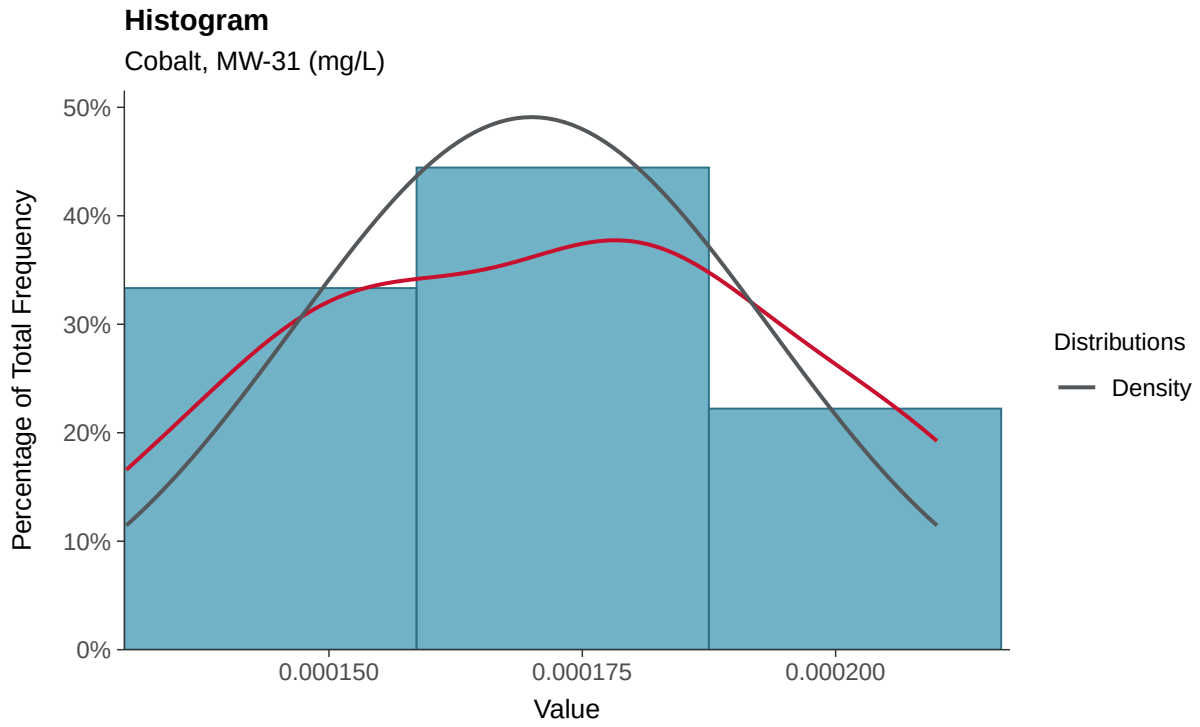
Chromium, Total, MW-31 (mg/L)



Appendix IV: Cobalt, MW-31

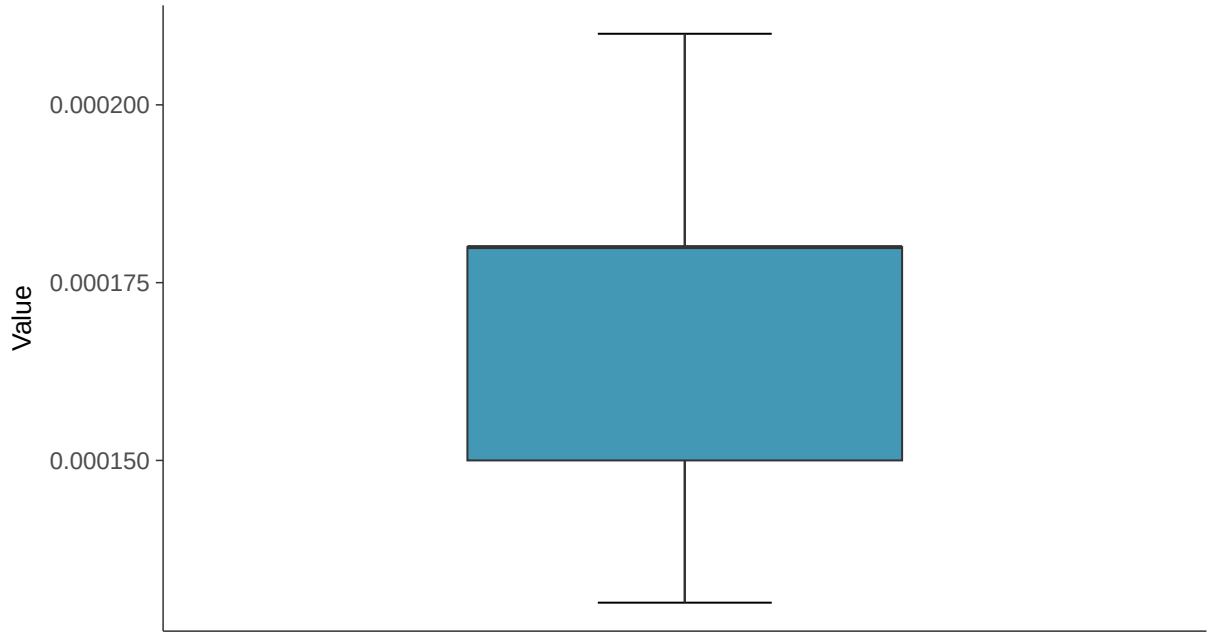
ID: 1_26_5_110





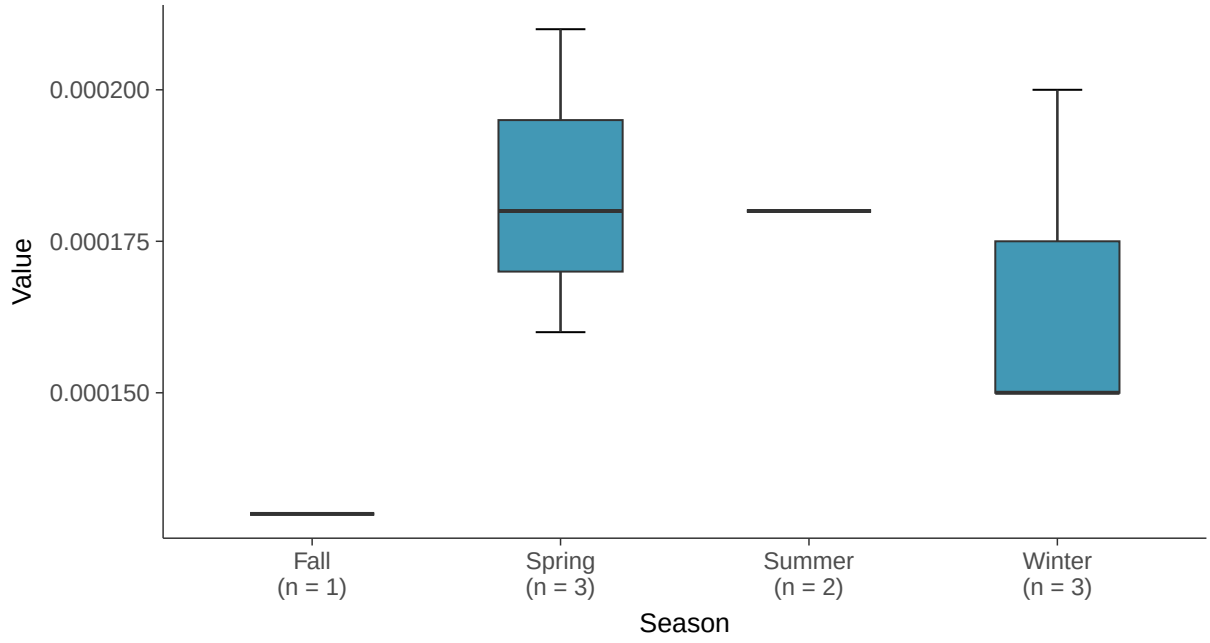
Boxplot

Cobalt, MW-31 (mg/L)



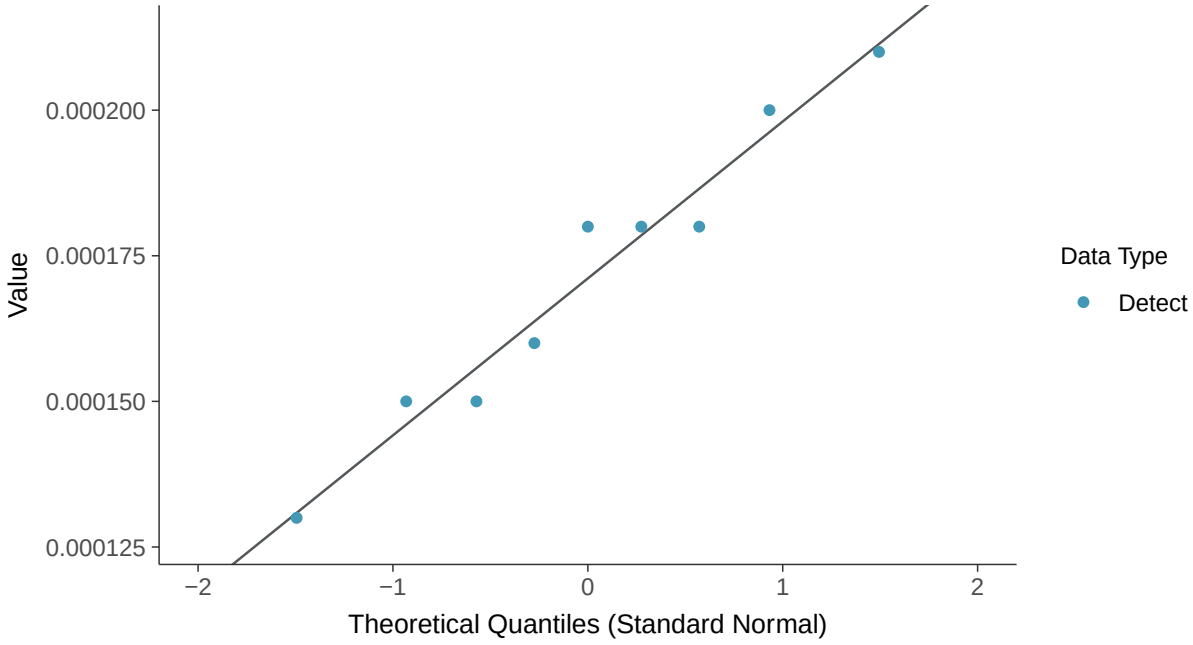
Boxplot by Season

Cobalt, MW-31 (mg/L)



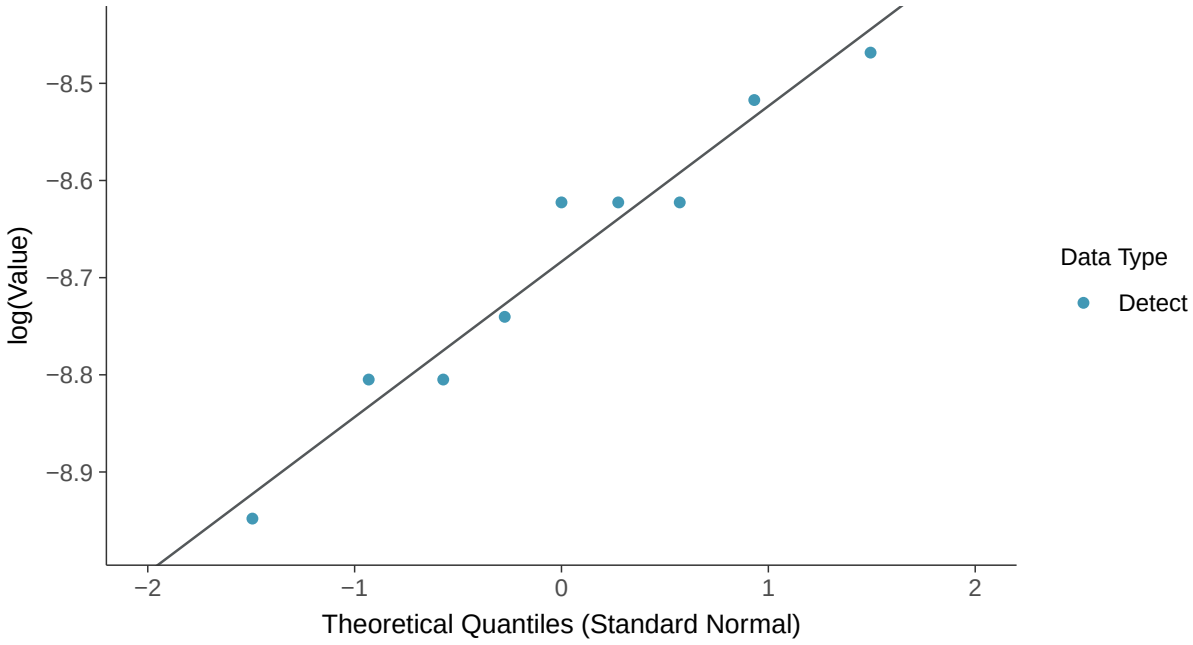
Normal Q-Q plot

Cobalt, MW-31 (mg/L)



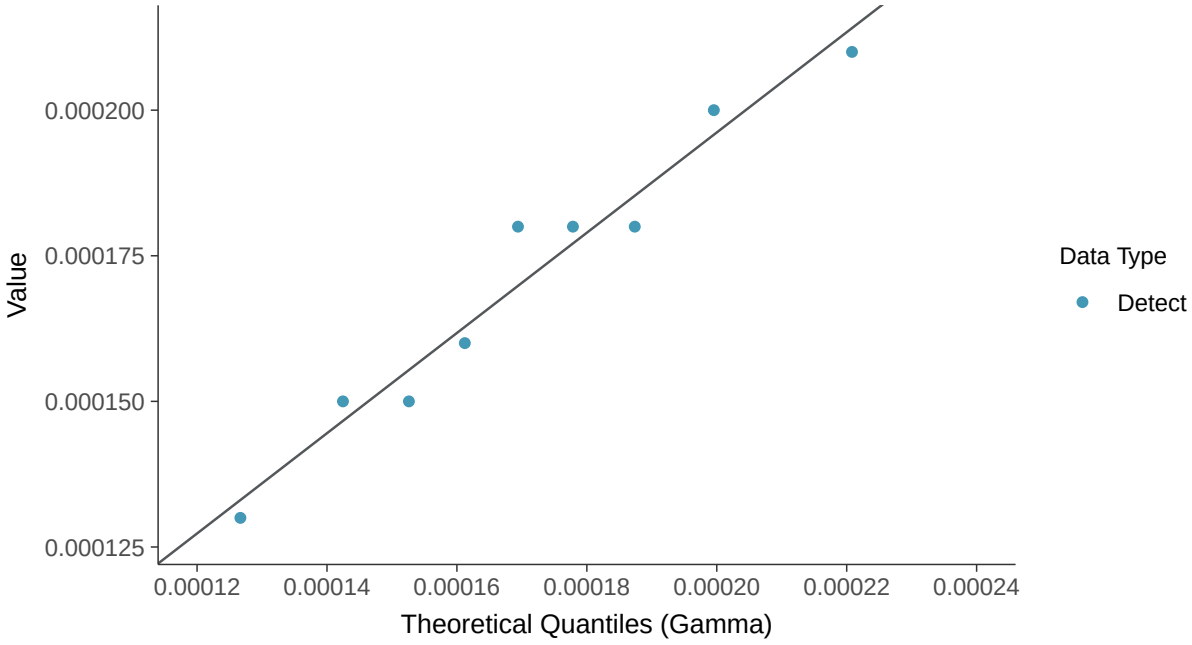
Lognormal Q-Q plot

Cobalt, MW-31 (mg/L)



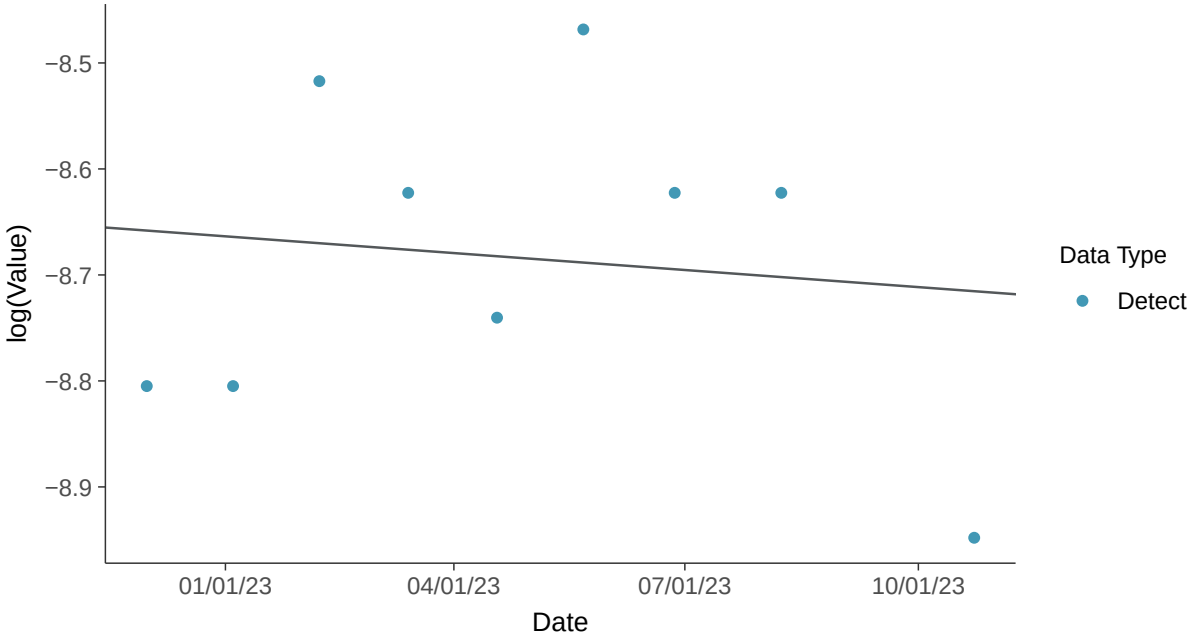
Gamma Q-Q plot

Cobalt, MW-31 (mg/L)



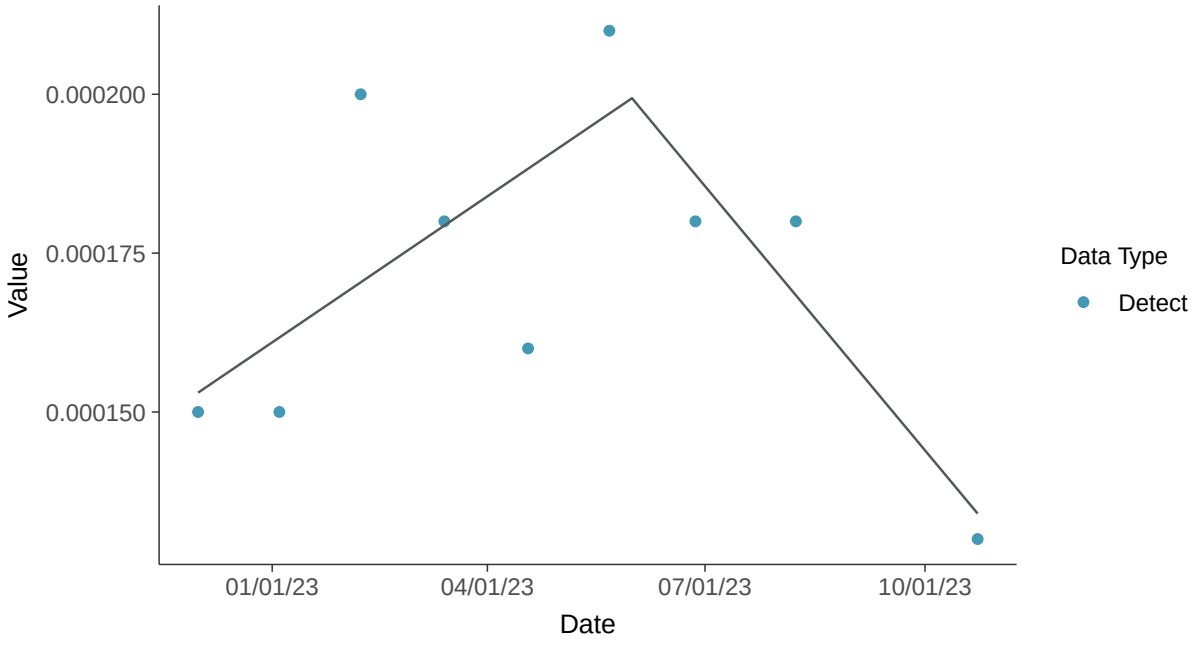
Trend Regression: Lognormal MLE

Cobalt, MW-31 (mg/L)



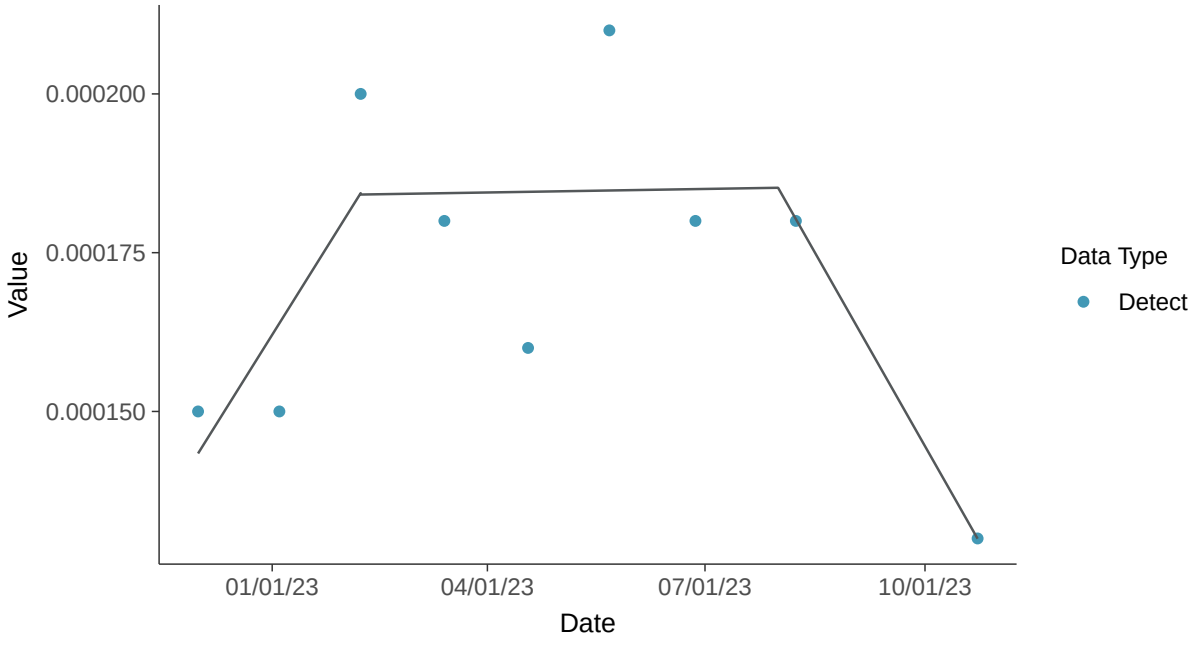
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-31 (mg/L)



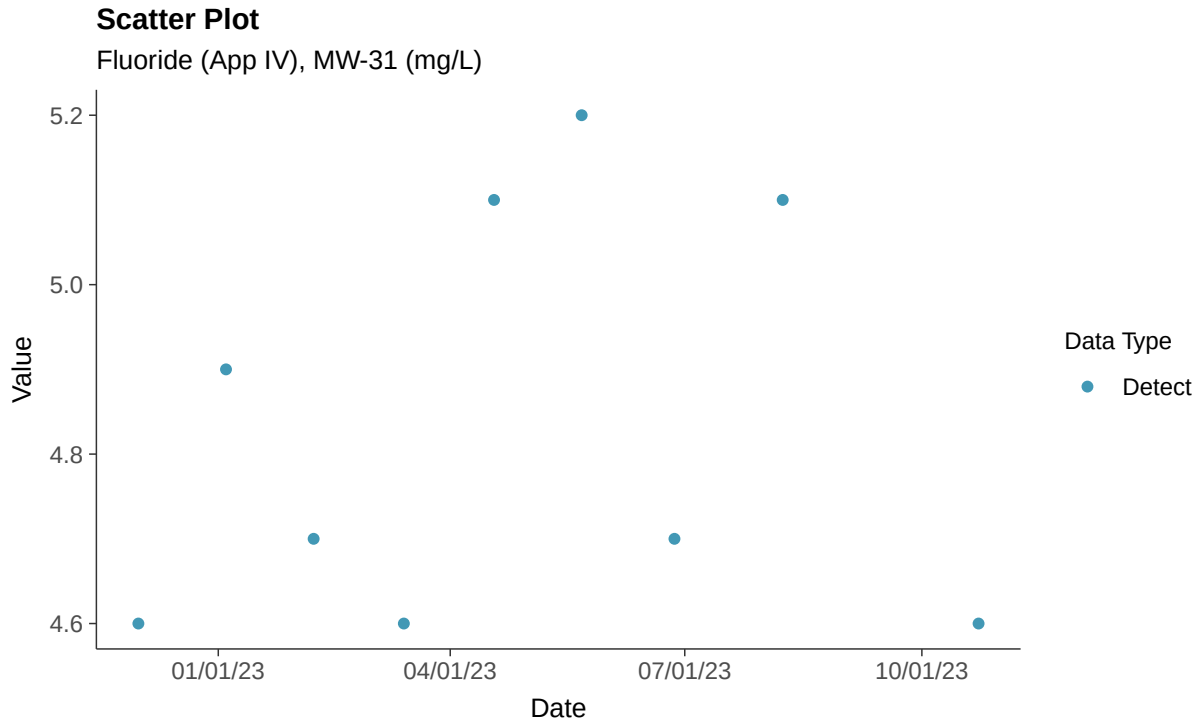
Trend Regression: Piecewise Linear-Linear-Linear

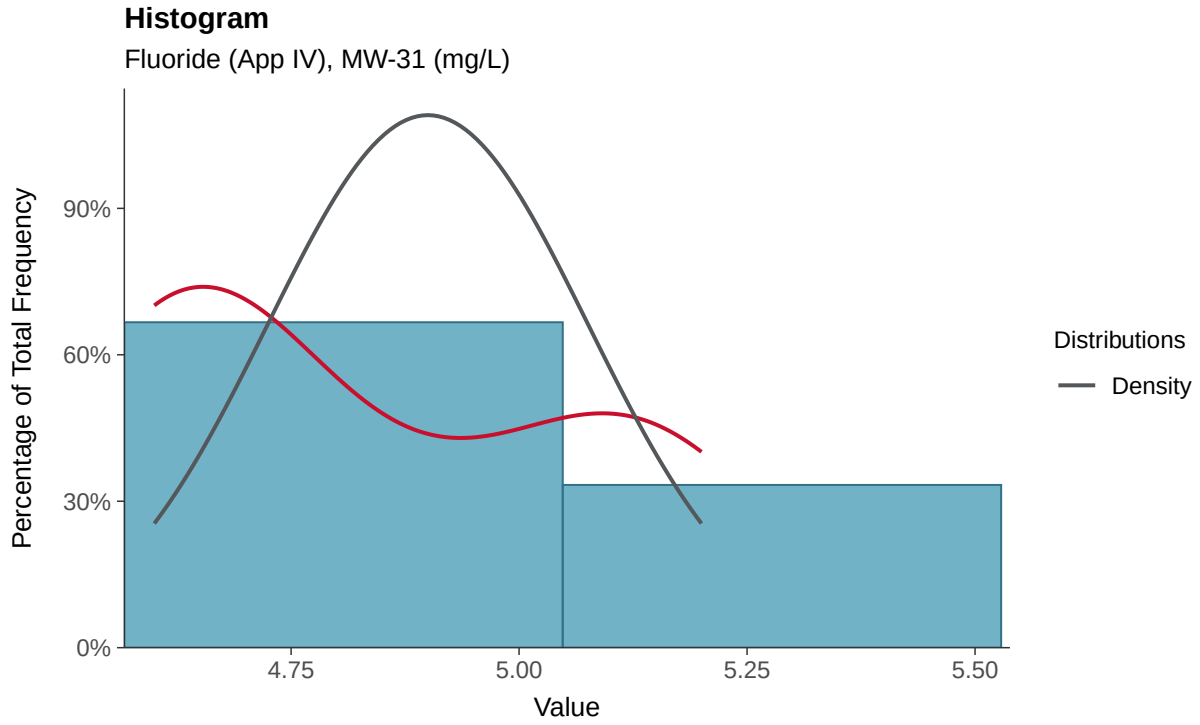
Cobalt, MW-31 (mg/L)



Appendix IV: Fluoride (App IV), MW-31

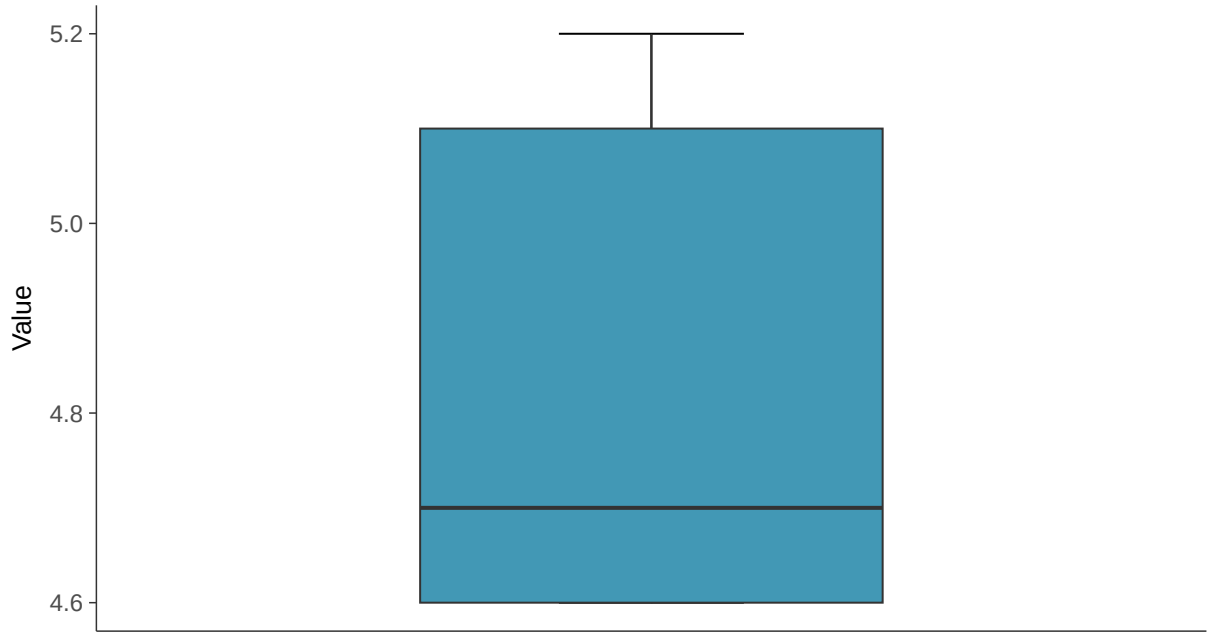
ID: 1_26_5_113





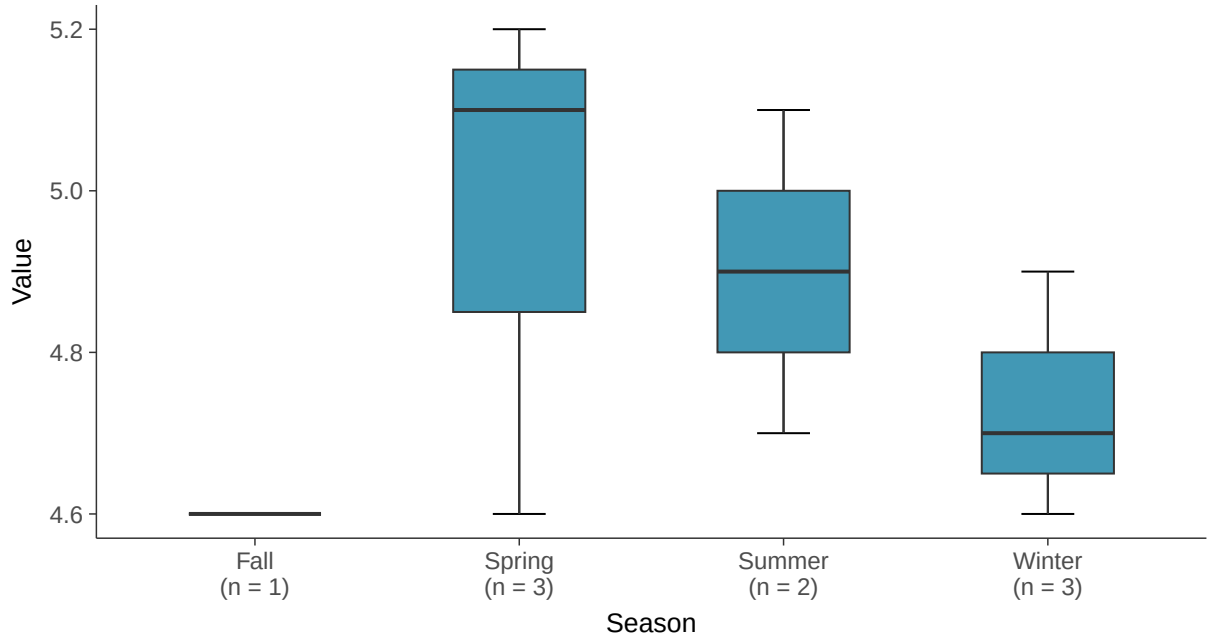
Boxplot

Fluoride (App IV), MW-31 (mg/L)



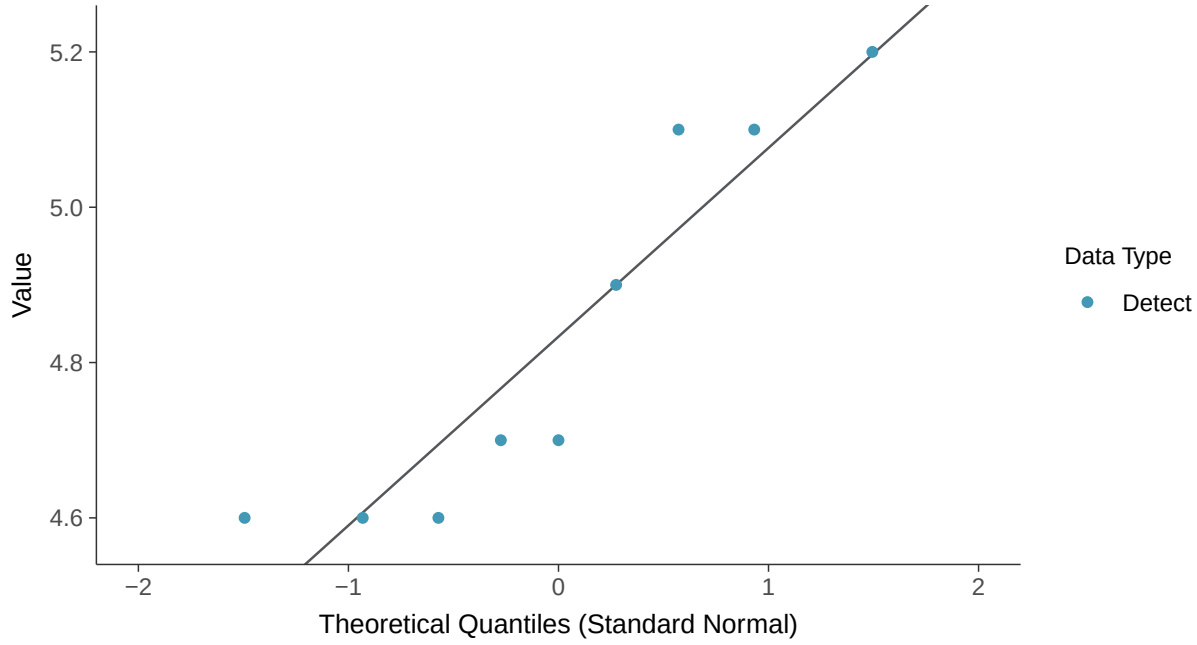
Boxplot by Season

Fluoride (App IV), MW-31 (mg/L)



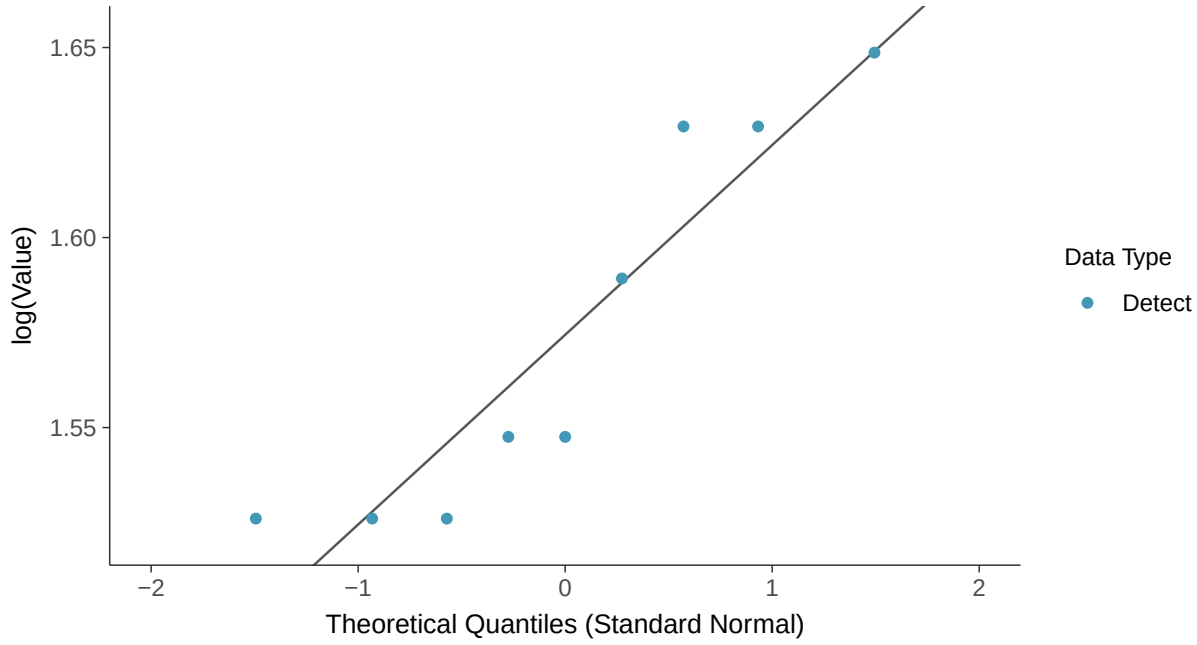
Normal Q-Q plot

Fluoride (App IV), MW-31 (mg/L)



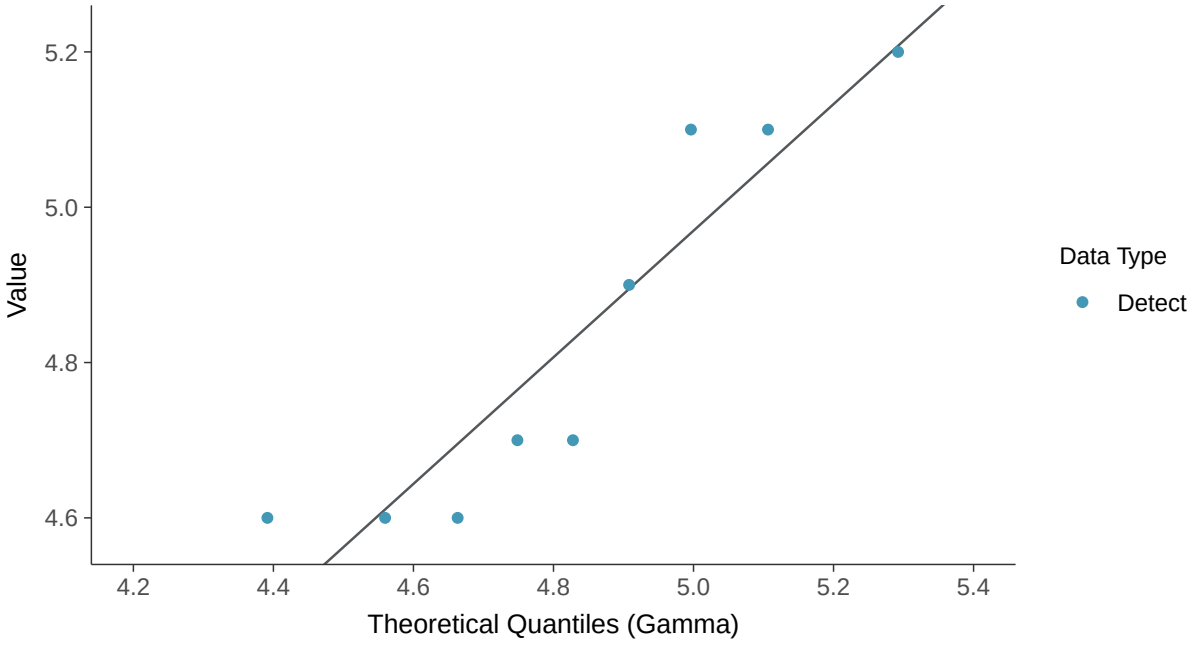
Lognormal Q-Q plot

Fluoride (App IV), MW-31 (mg/L)



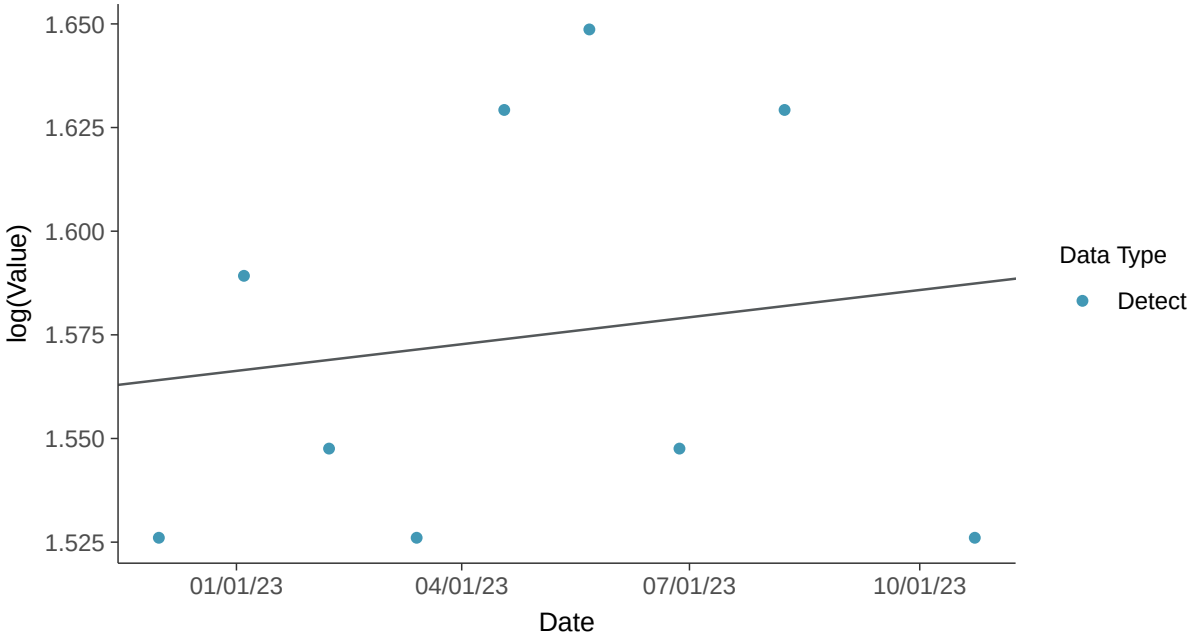
Gamma Q-Q plot

Fluoride (App IV), MW-31 (mg/L)



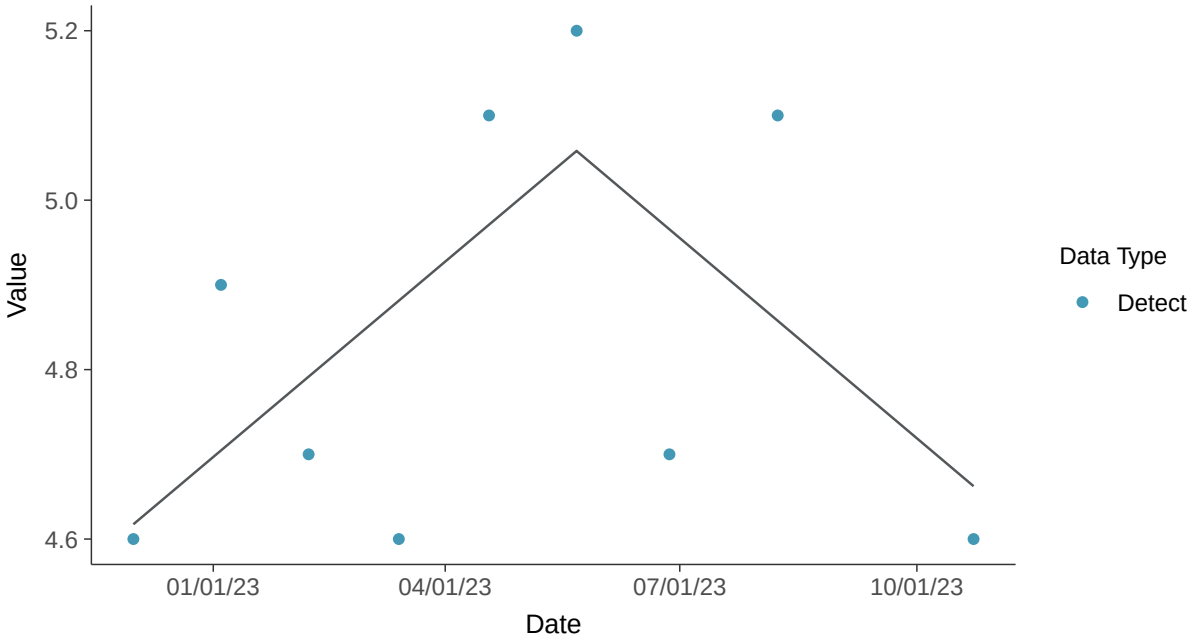
Trend Regression: Lognormal MLE

Fluoride (App IV), MW-31 (mg/L)



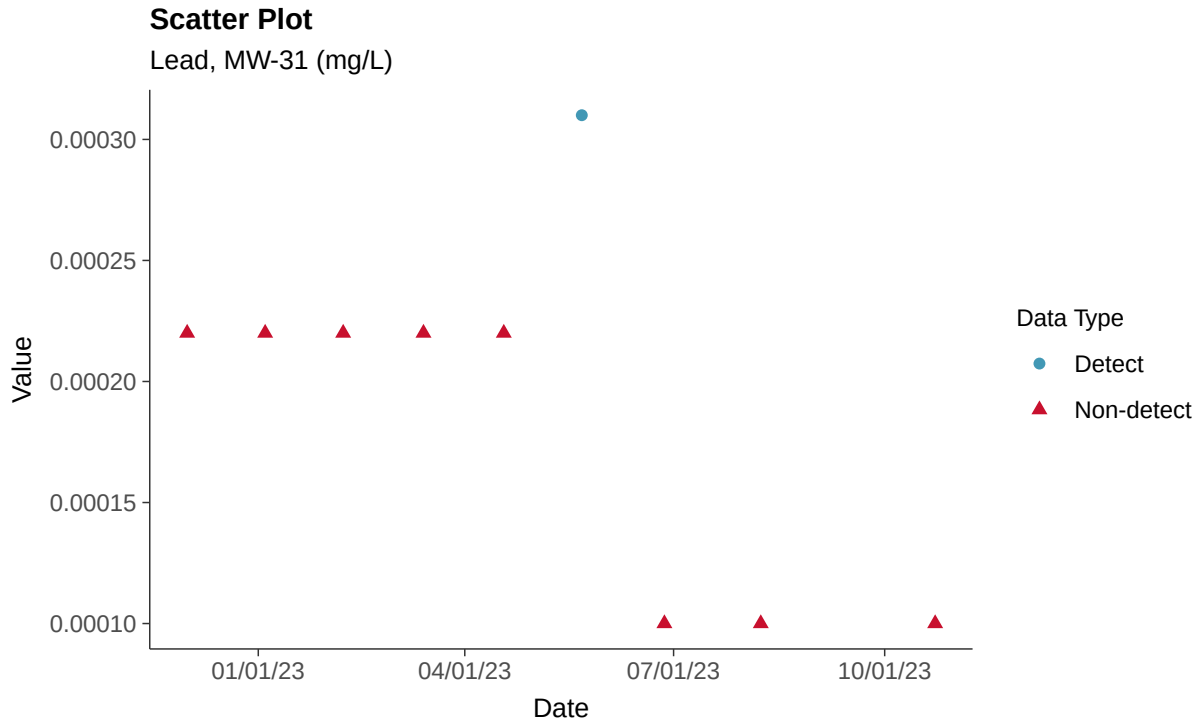
Trend Regression: Piecewise Linear-Linear

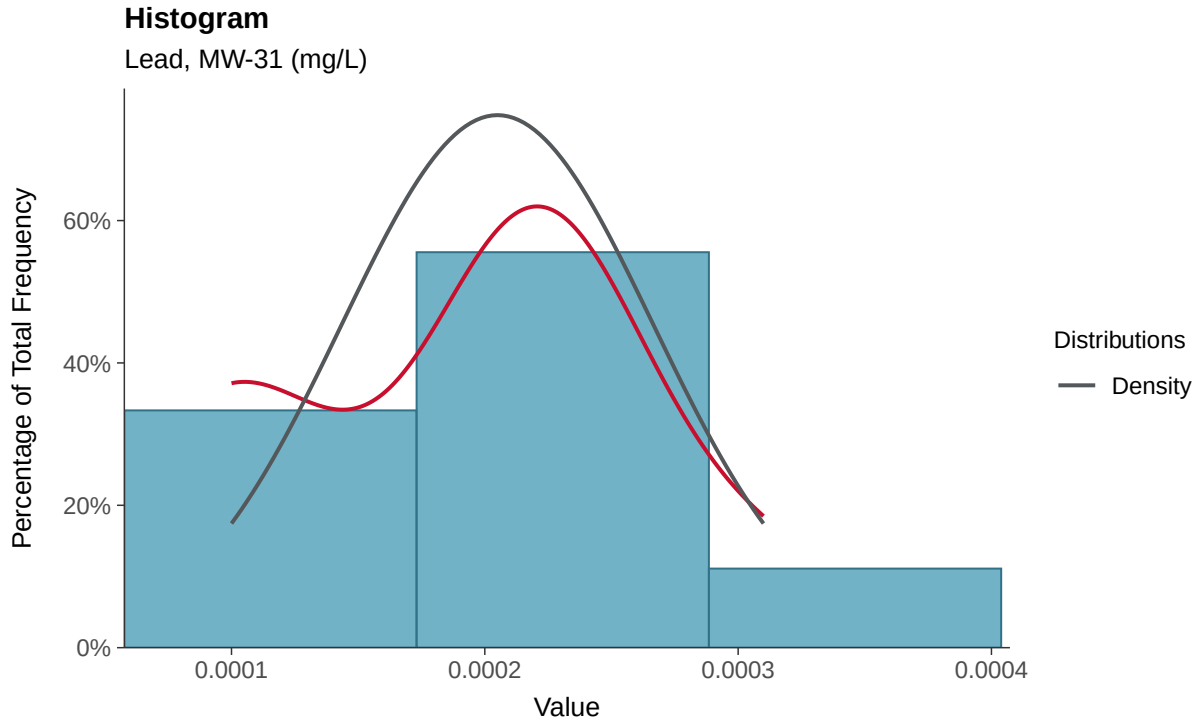
Fluoride (App IV), MW-31 (mg/L)



Appendix IV: Lead, MW-31

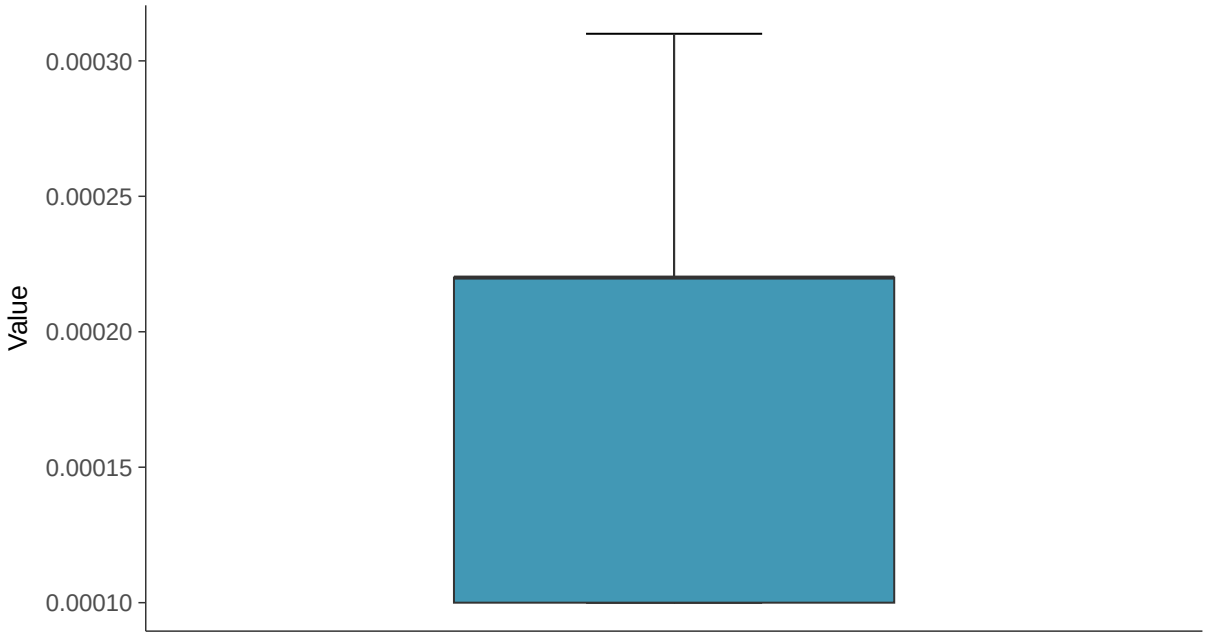
ID: 1_26_5_115





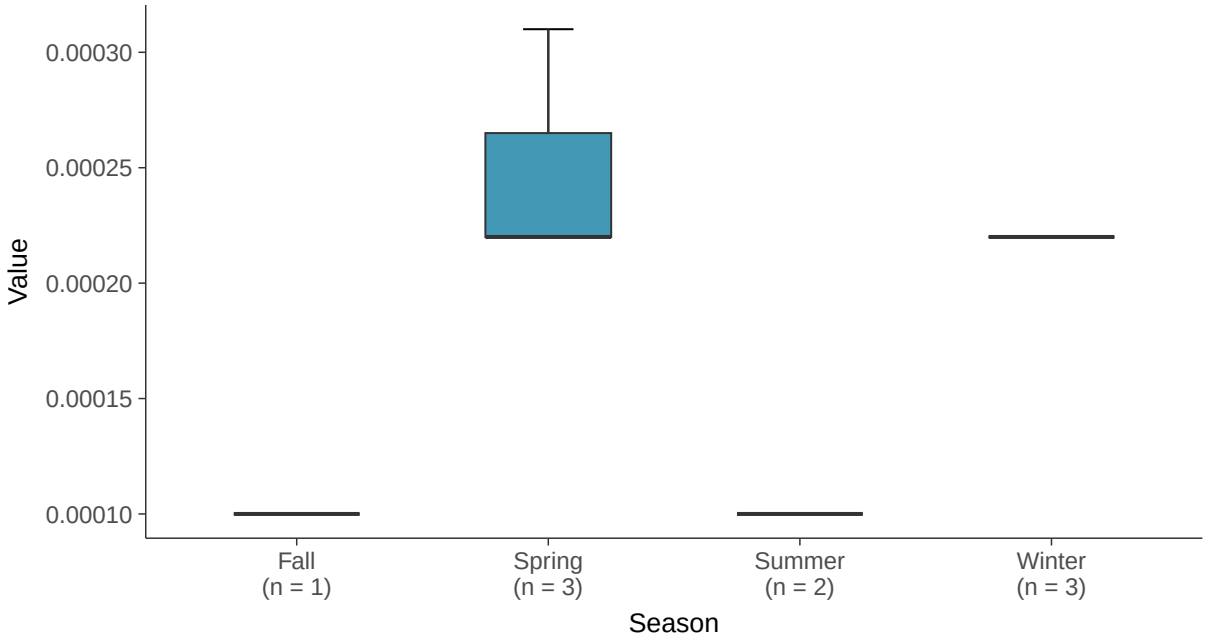
Boxplot

Lead, MW-31 (mg/L)



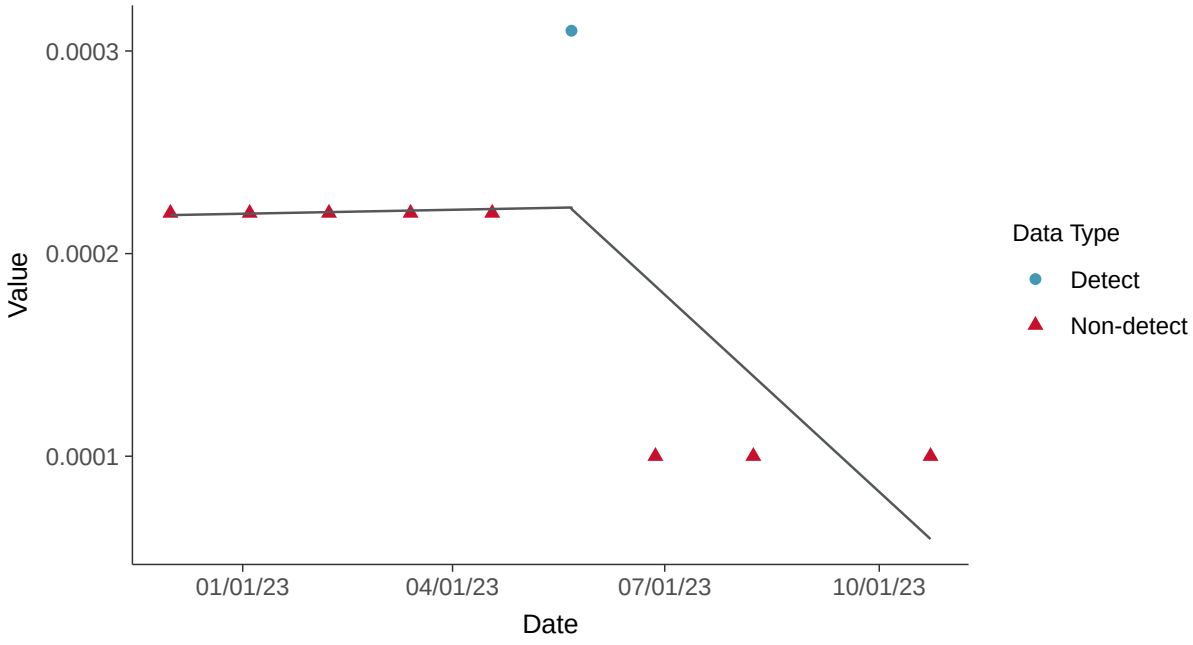
Boxplot by Season

Lead, MW-31 (mg/L)



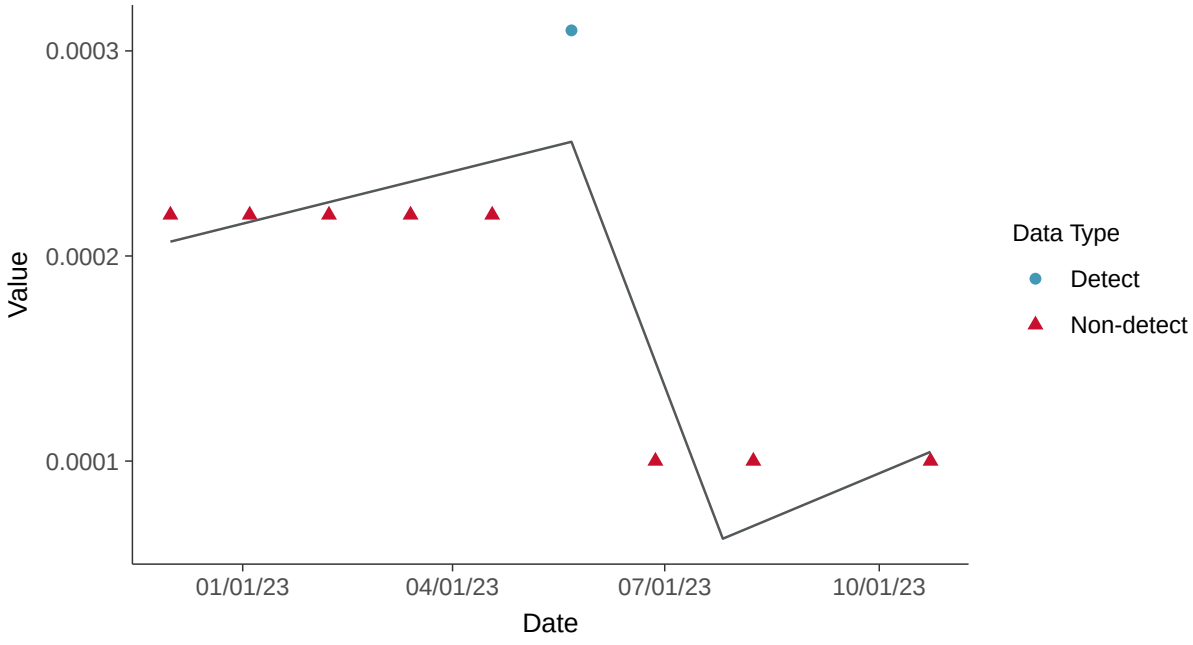
Trend Regression: Piecewise Linear-Linear

Lead, MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-31 (mg/L)

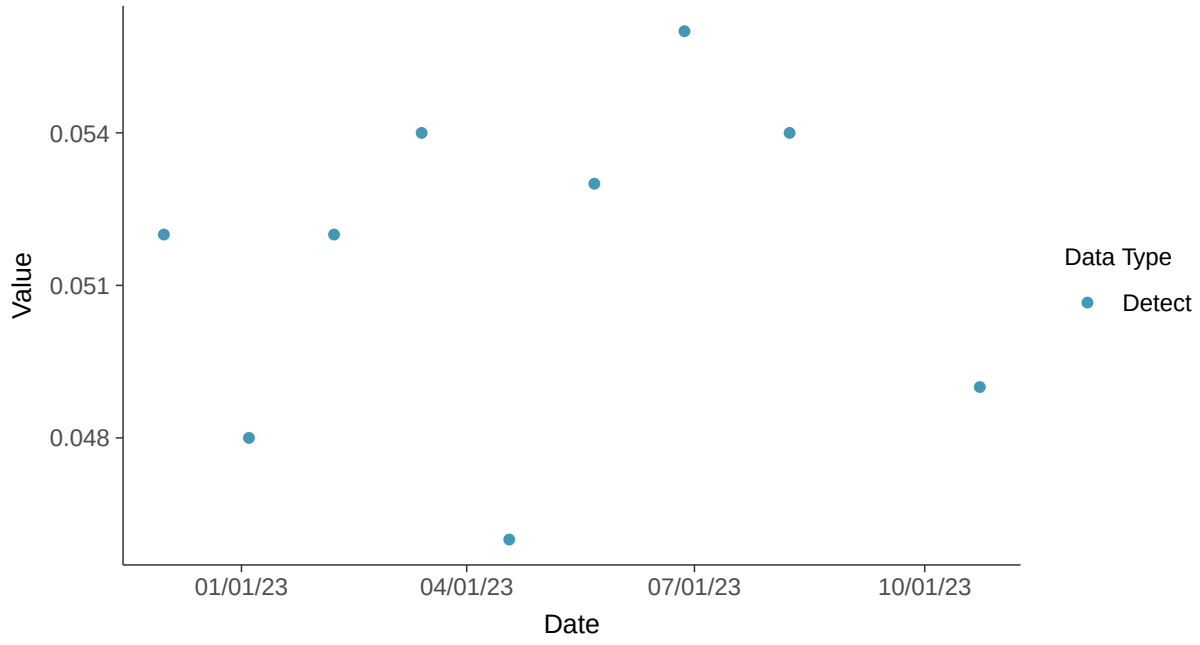


Appendix IV: Lithium, MW-31

ID: 1_26_5_116

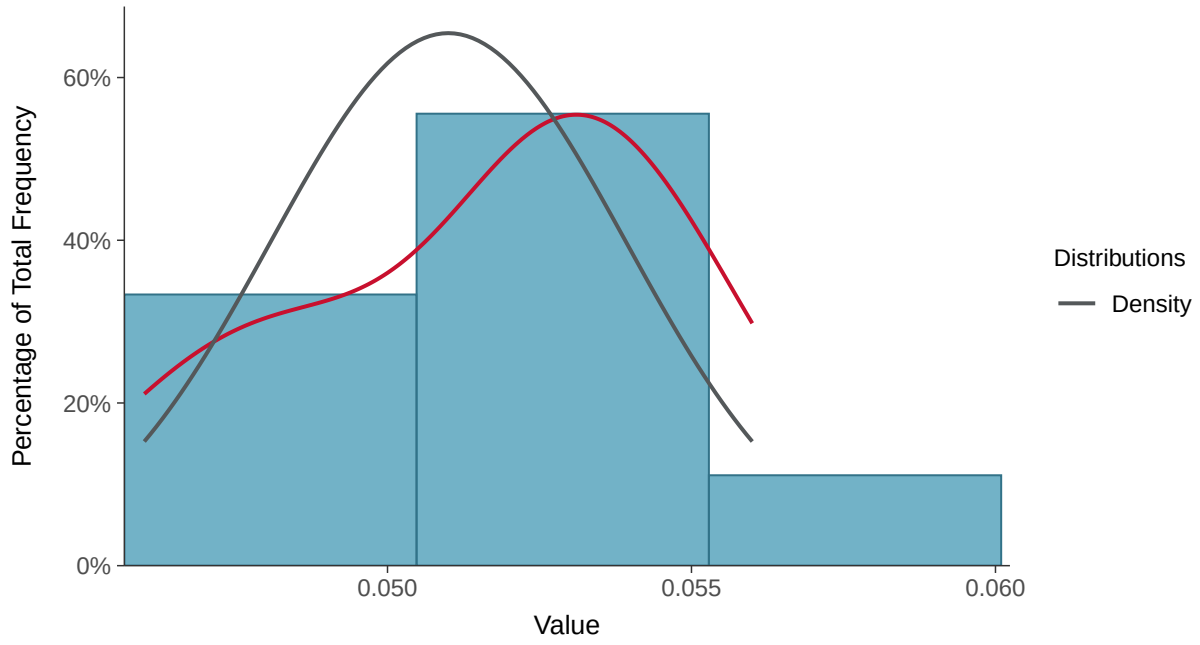
Scatter Plot

Lithium, MW-31 (mg/L)



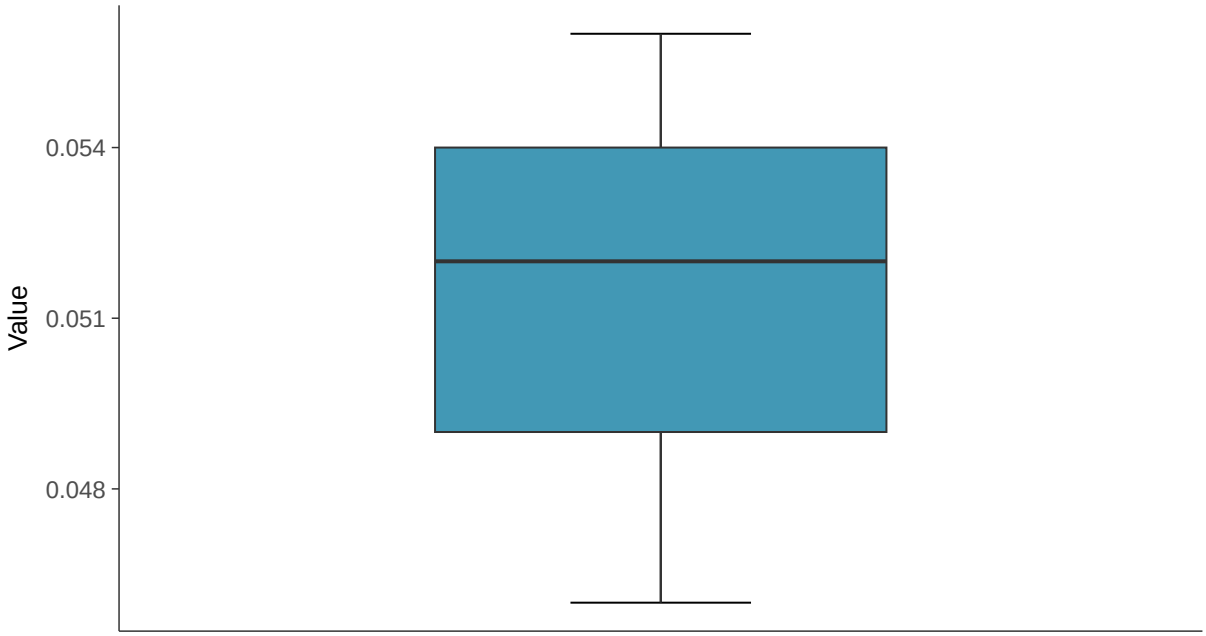
Histogram

Lithium, MW-31 (mg/L)



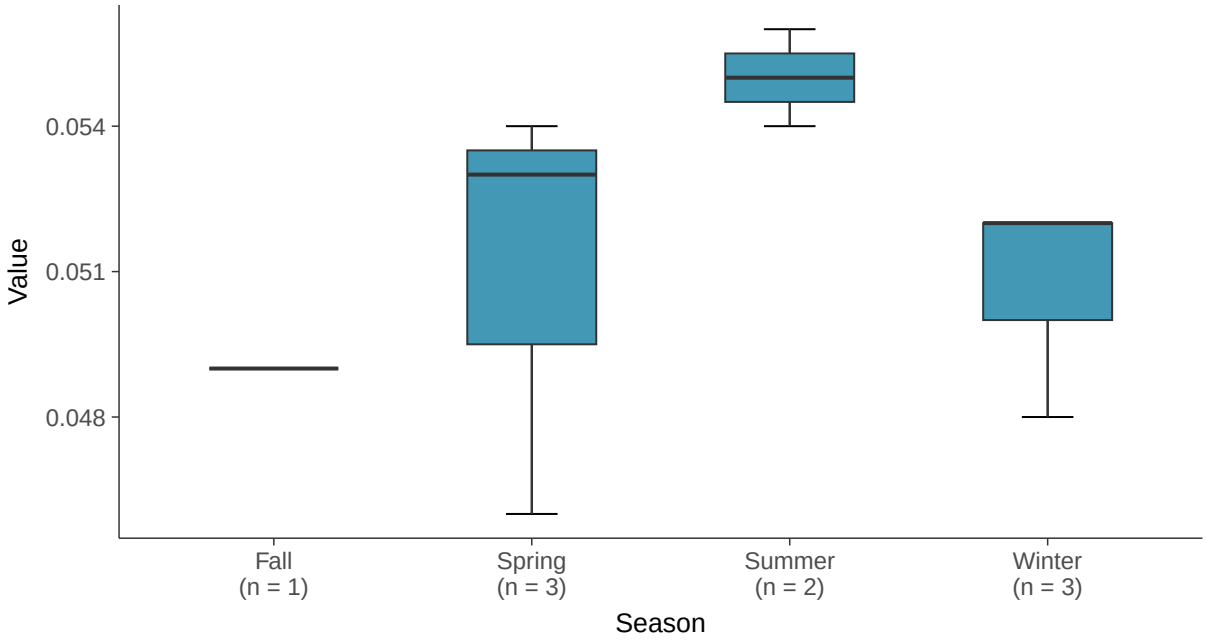
Boxplot

Lithium, MW-31 (mg/L)



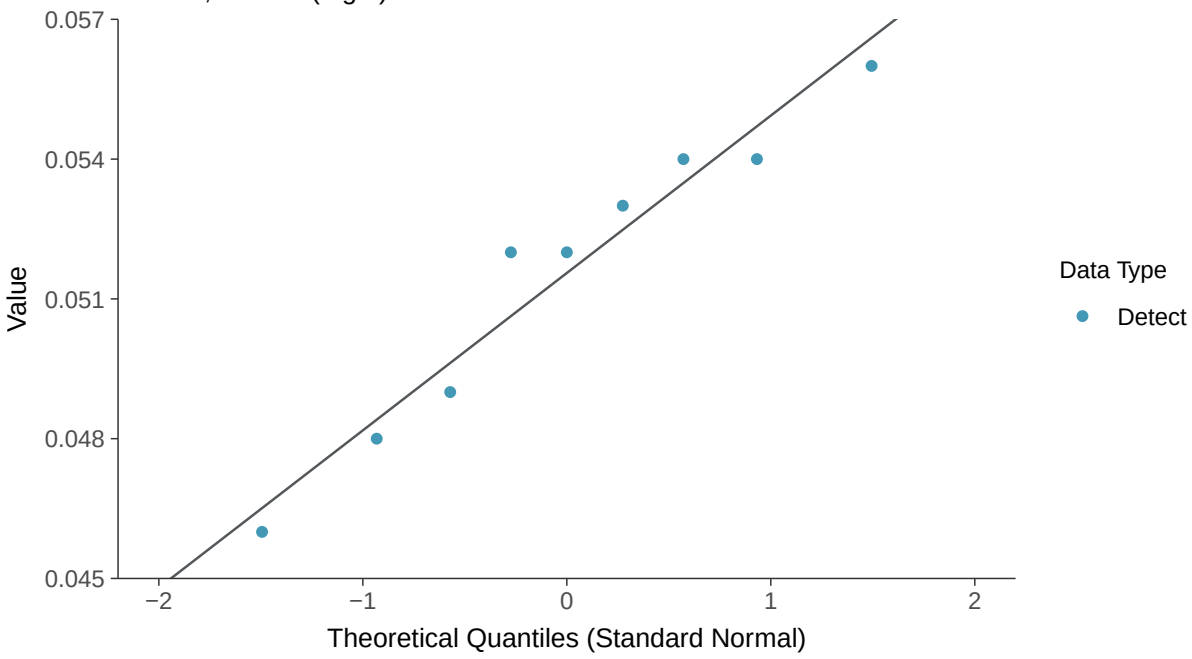
Boxplot by Season

Lithium, MW-31 (mg/L)



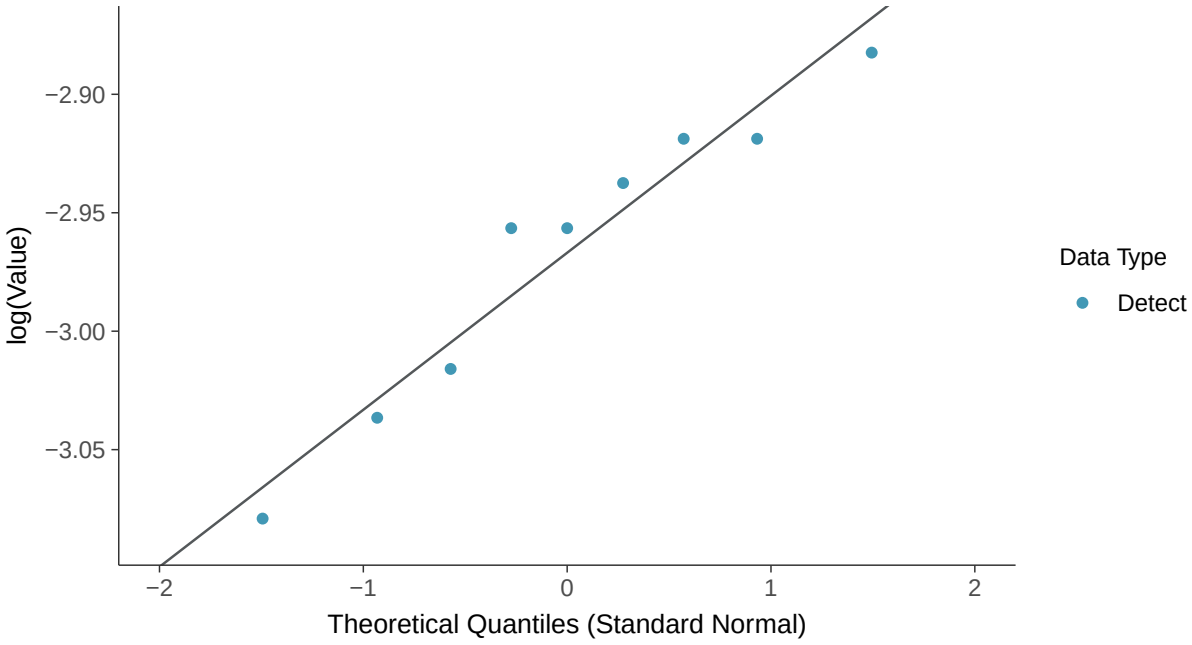
Normal Q-Q plot

Lithium, MW-31 (mg/L)



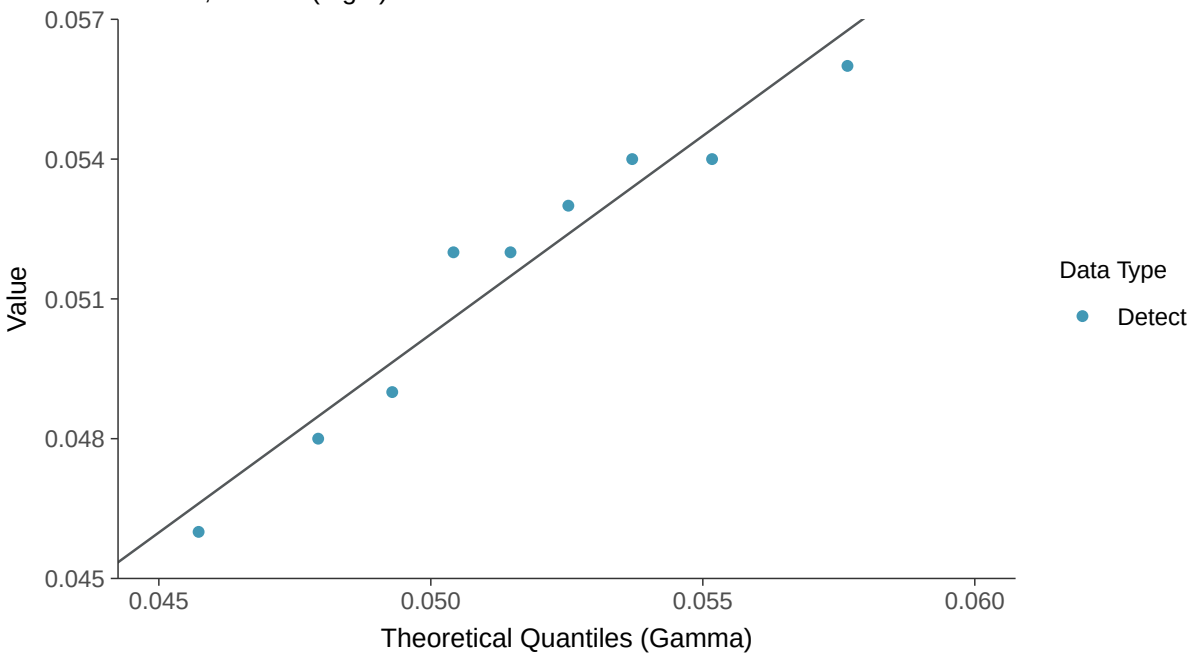
Lognormal Q-Q plot

Lithium, MW-31 (mg/L)



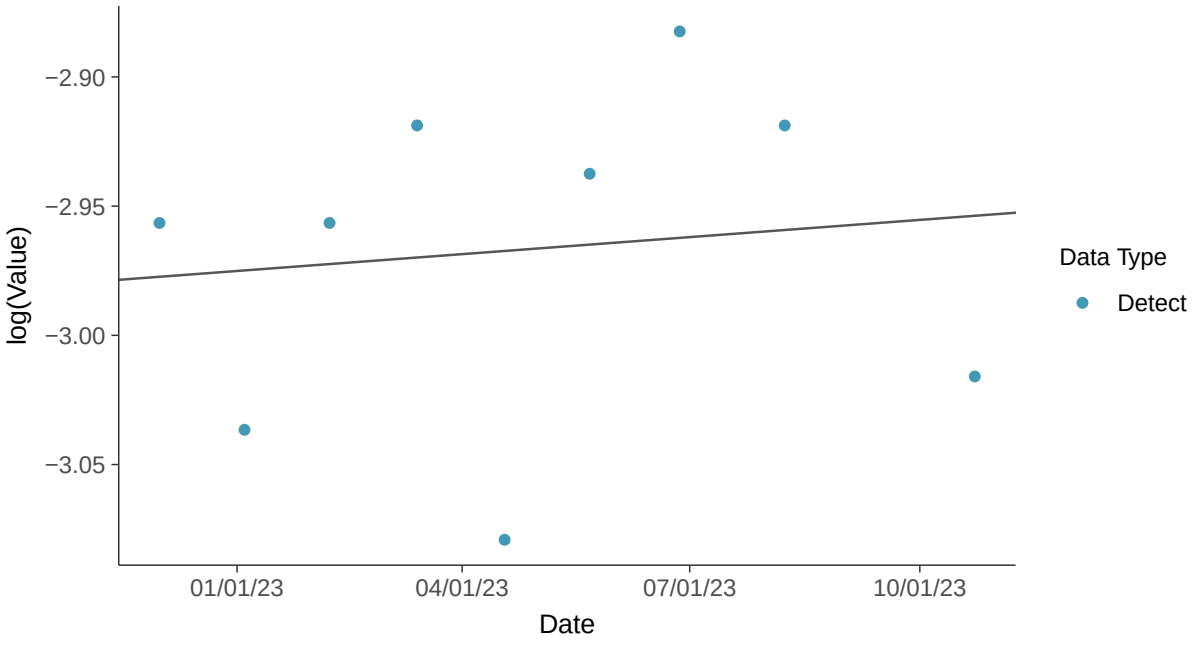
Gamma Q-Q plot

Lithium, MW-31 (mg/L)



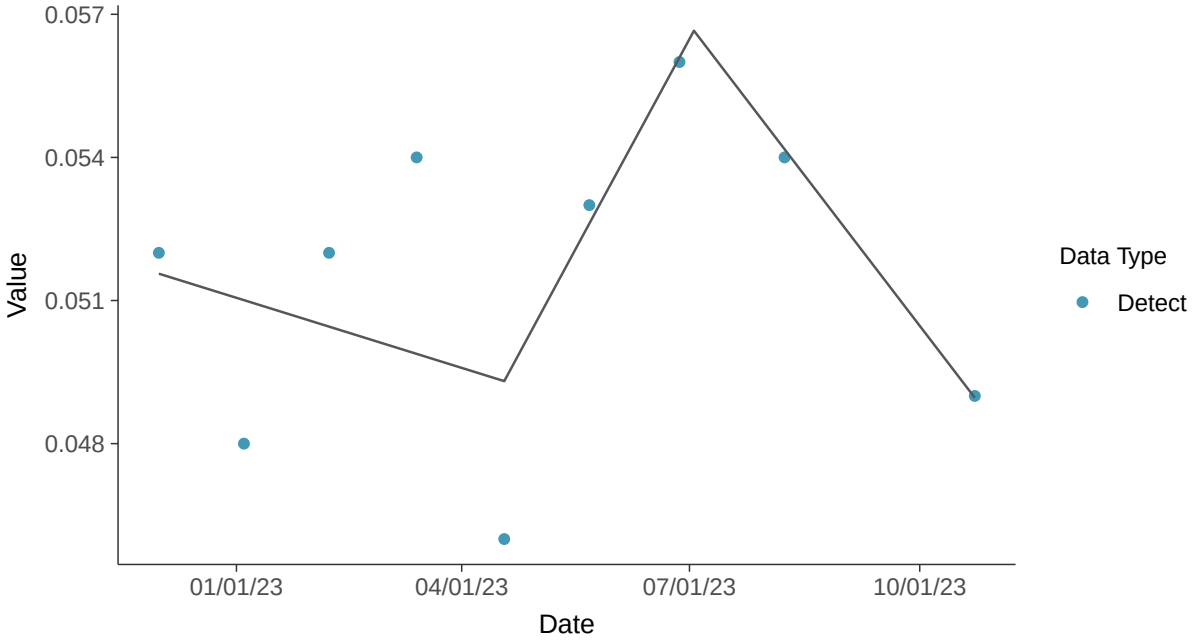
Trend Regression: Lognormal MLE

Lithium, MW-31 (mg/L)



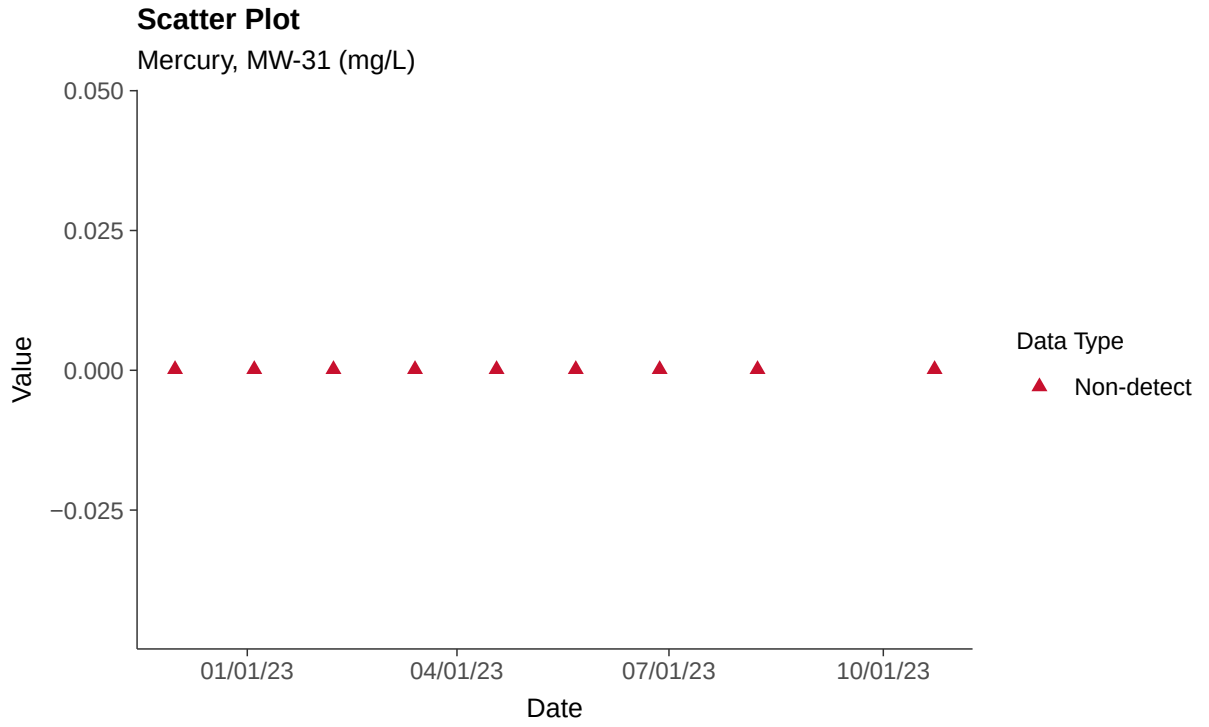
Trend Regression: Piecewise Linear-Linear-Linear

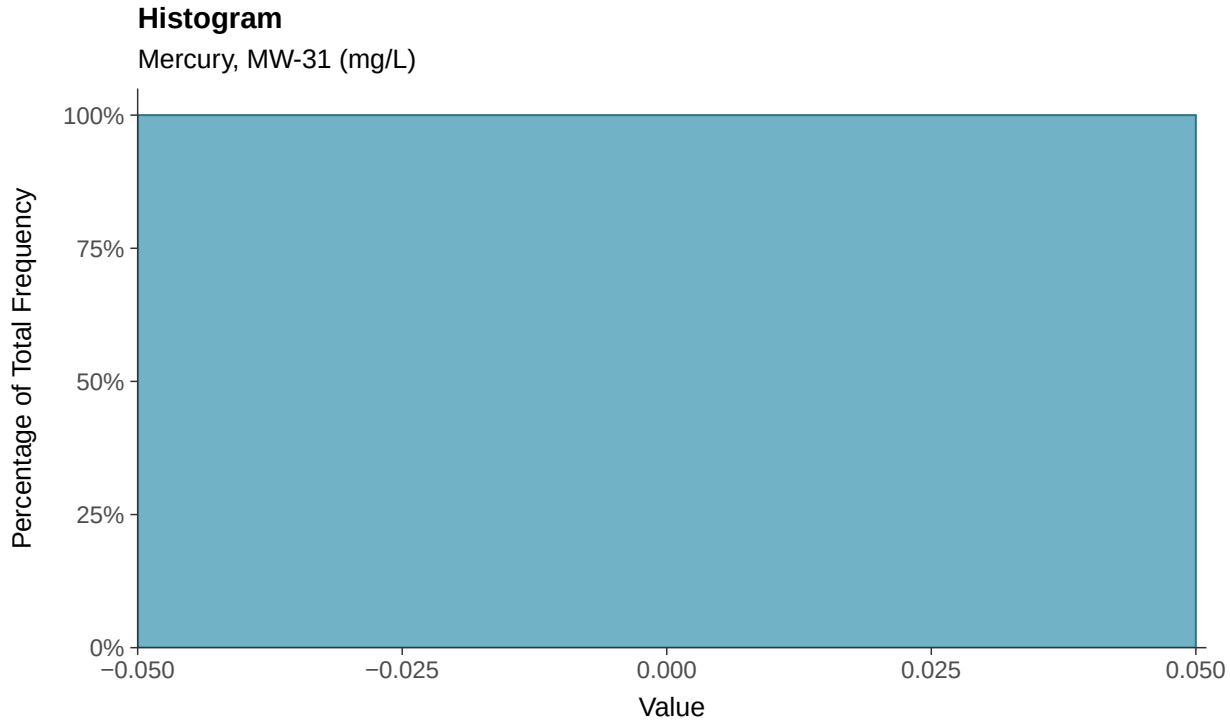
Lithium, MW-31 (mg/L)



Appendix IV: Mercury, MW-31

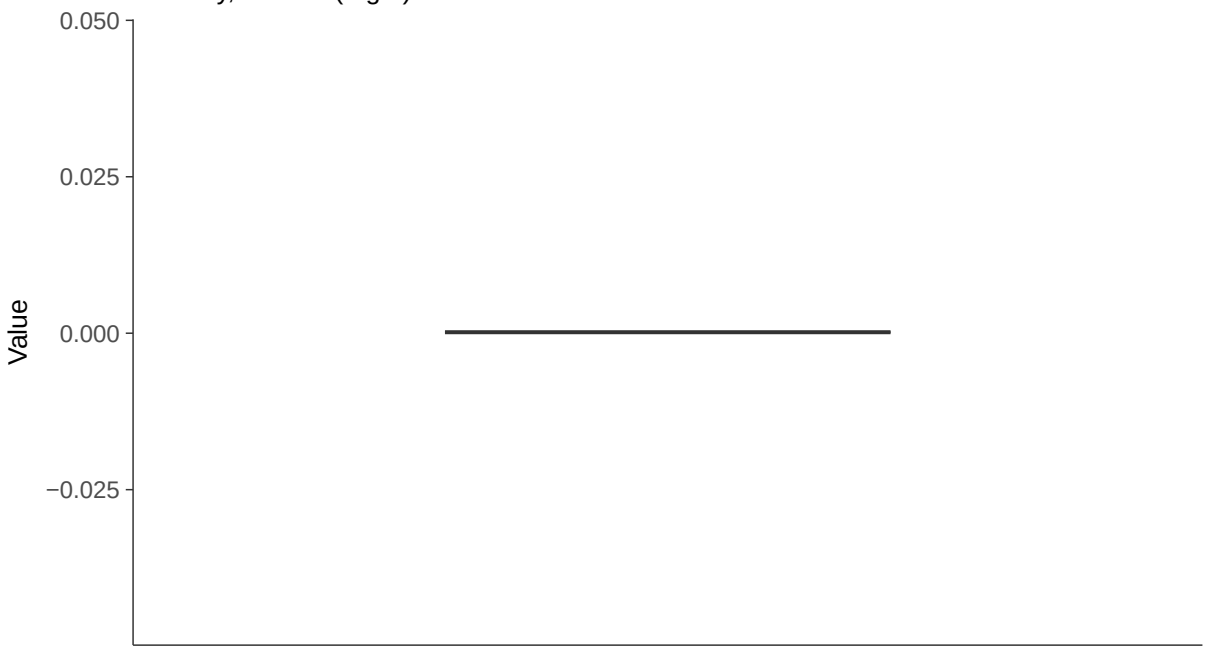
ID: 1_26_5_117





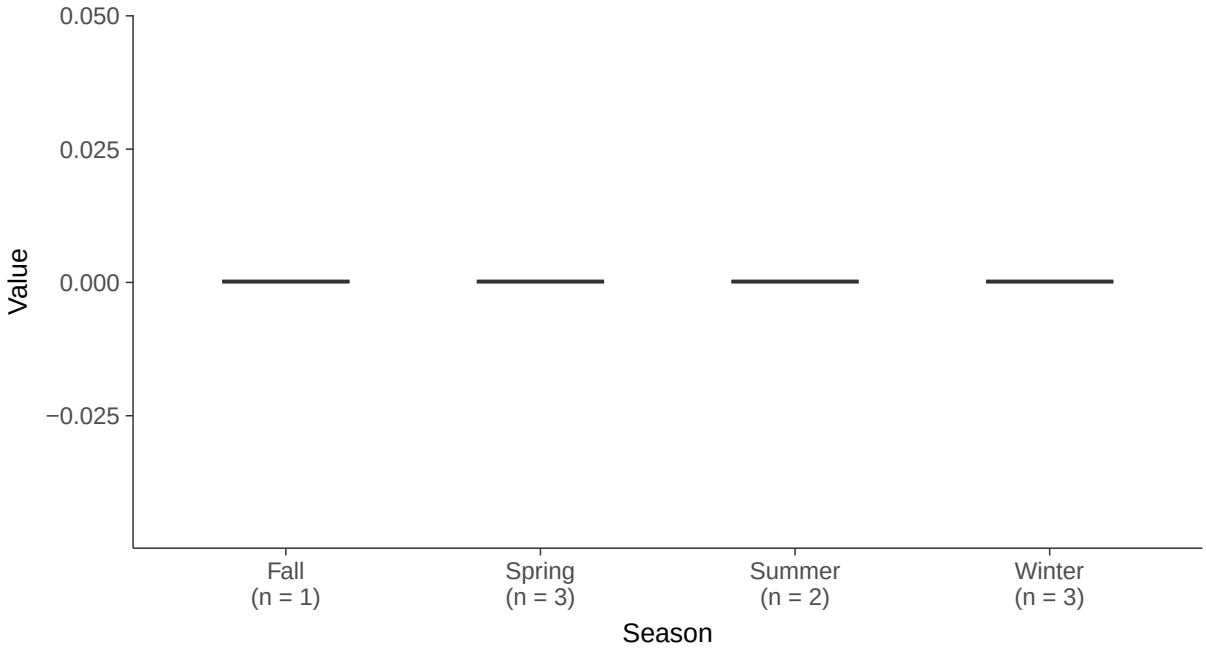
Boxplot

Mercury, MW-31 (mg/L)



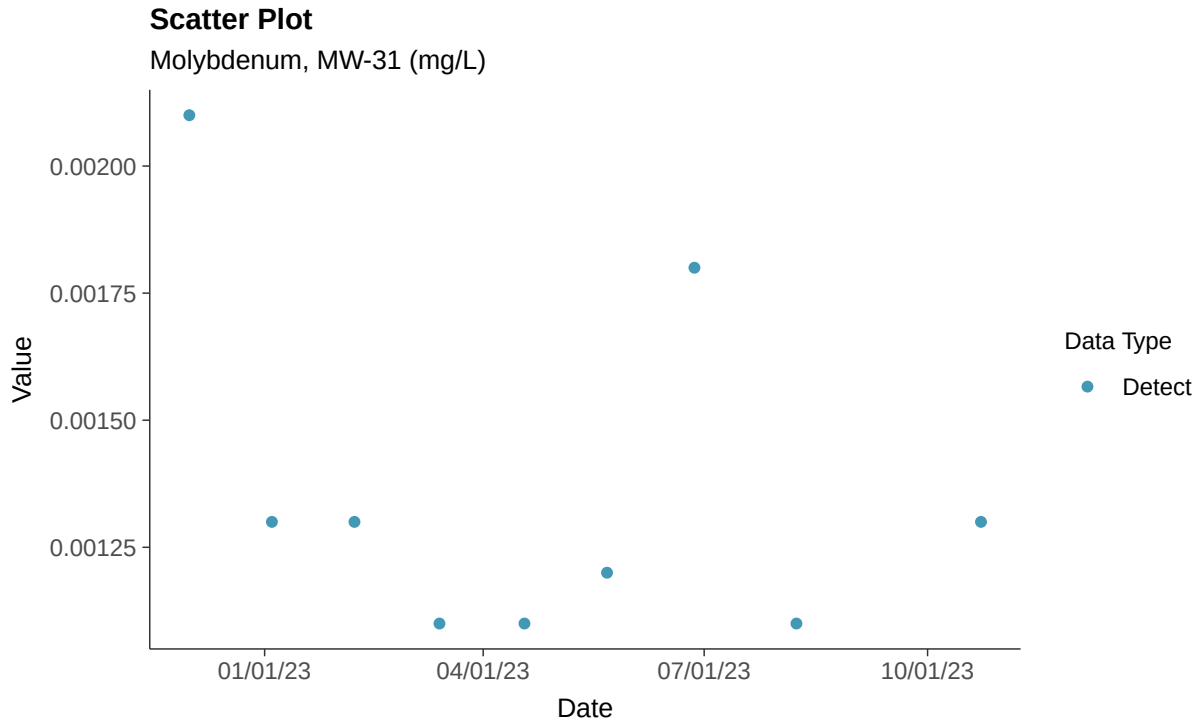
Boxplot by Season

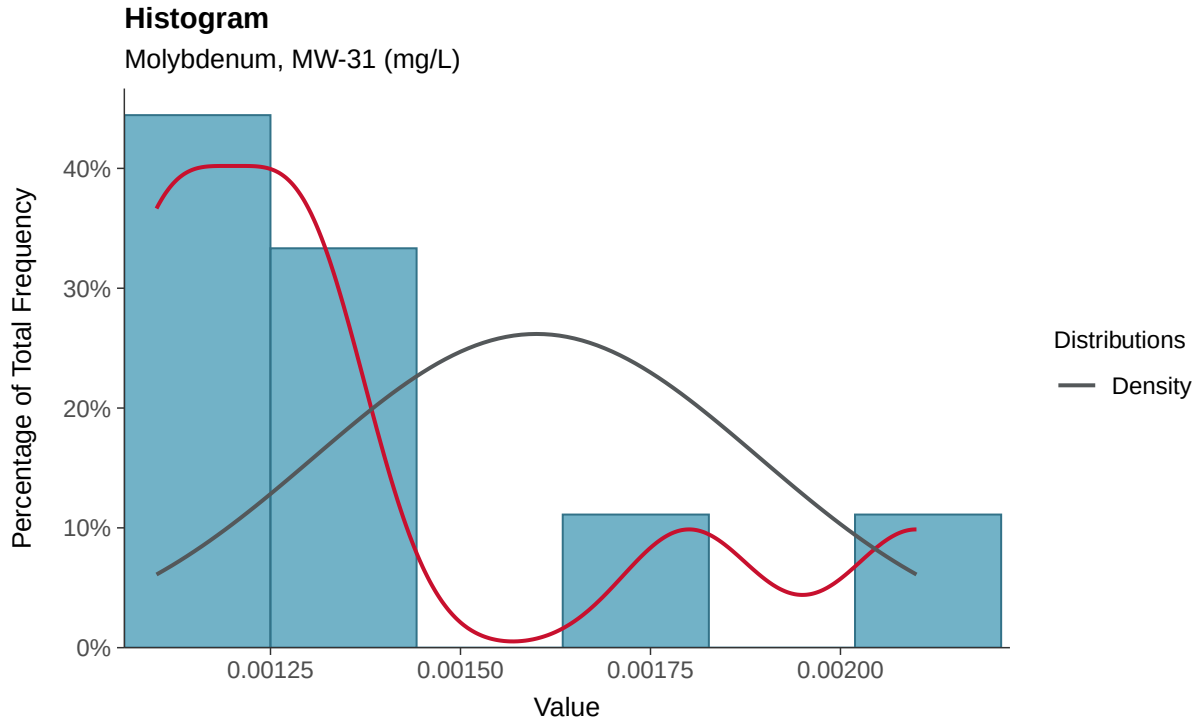
Mercury, MW-31 (mg/L)



Appendix IV: Molybdenum, MW-31

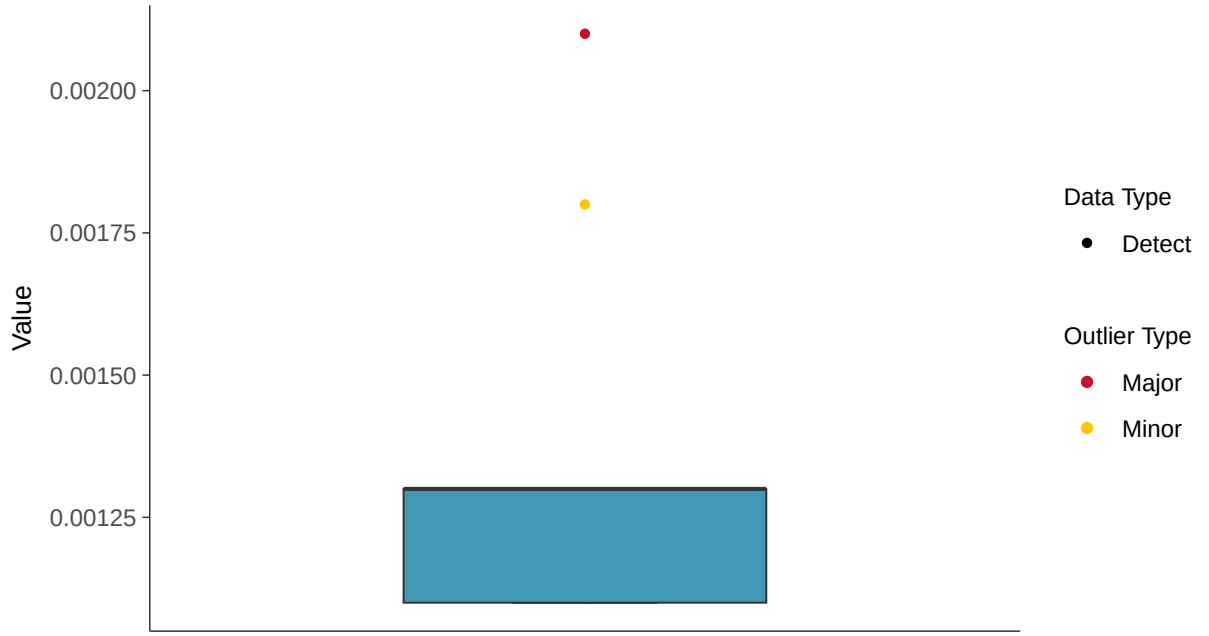
ID: 1_26_5_118





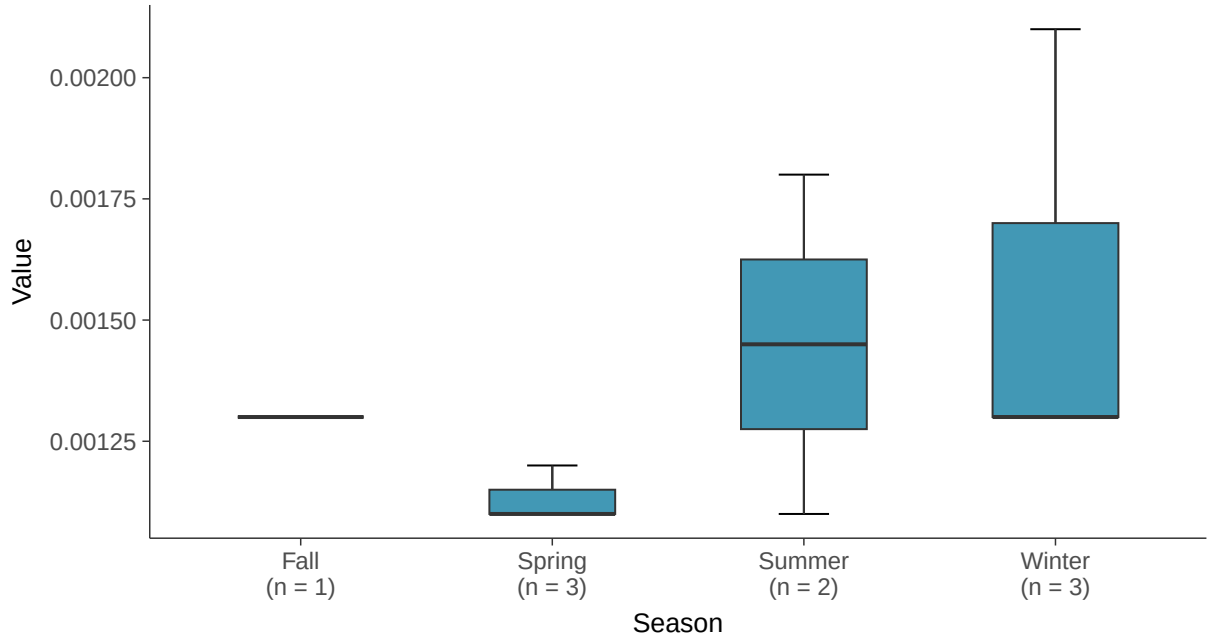
Boxplot

Molybdenum, MW-31 (mg/L)



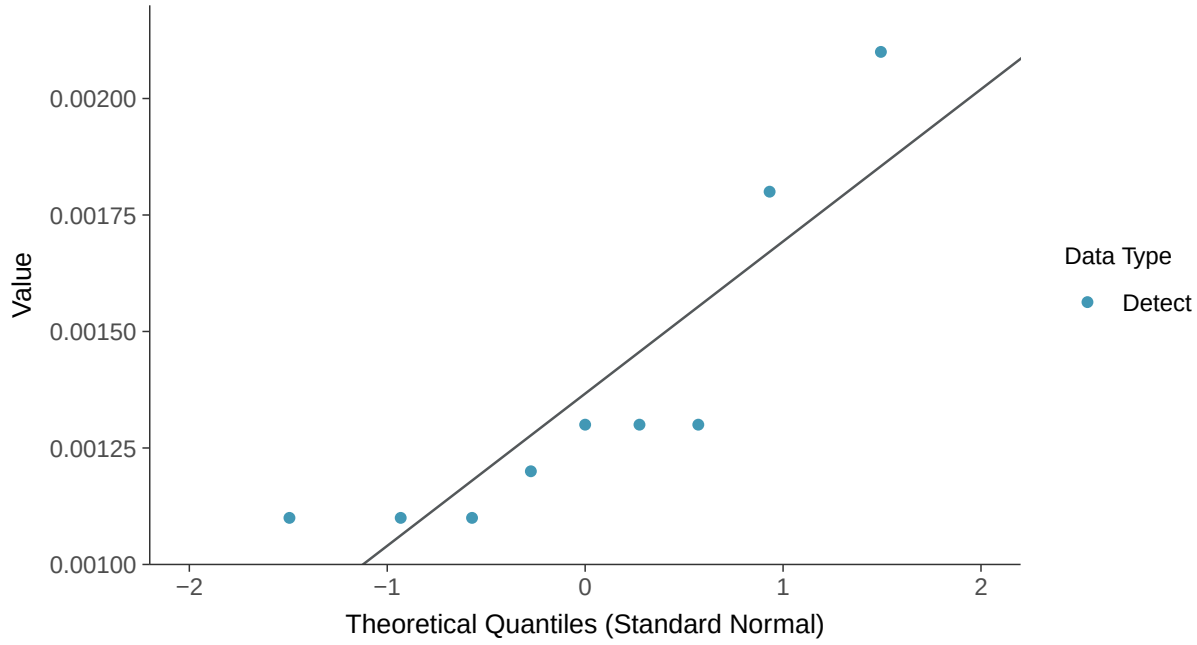
Boxplot by Season

Molybdenum, MW-31 (mg/L)



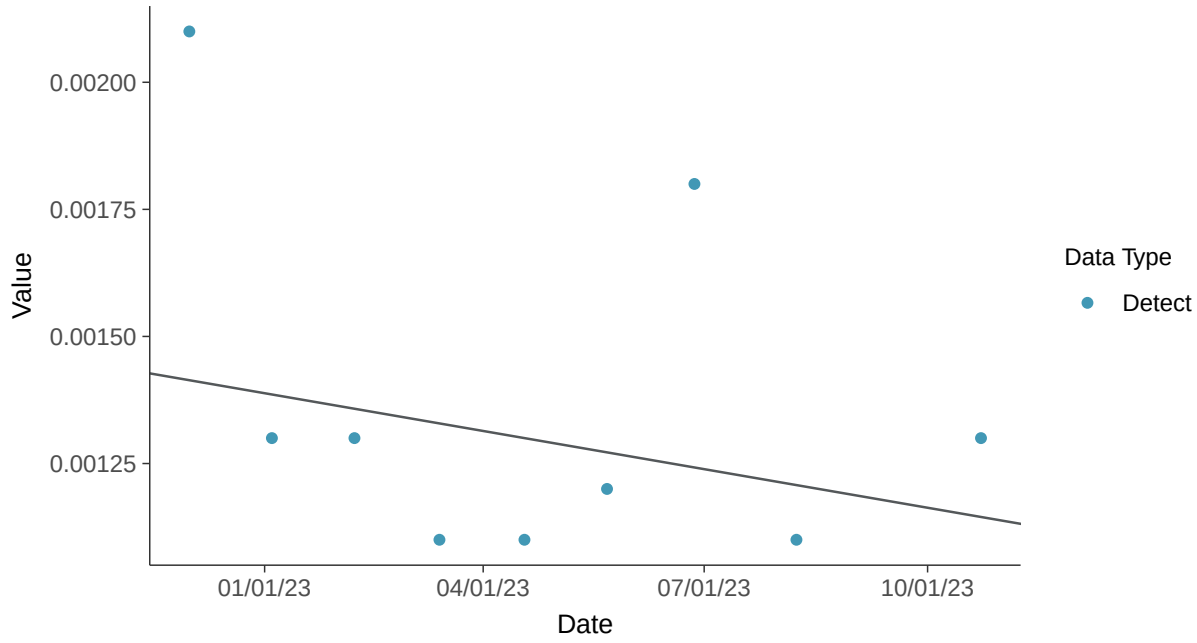
Normal Q-Q plot

Molybdenum, MW-31 (mg/L)



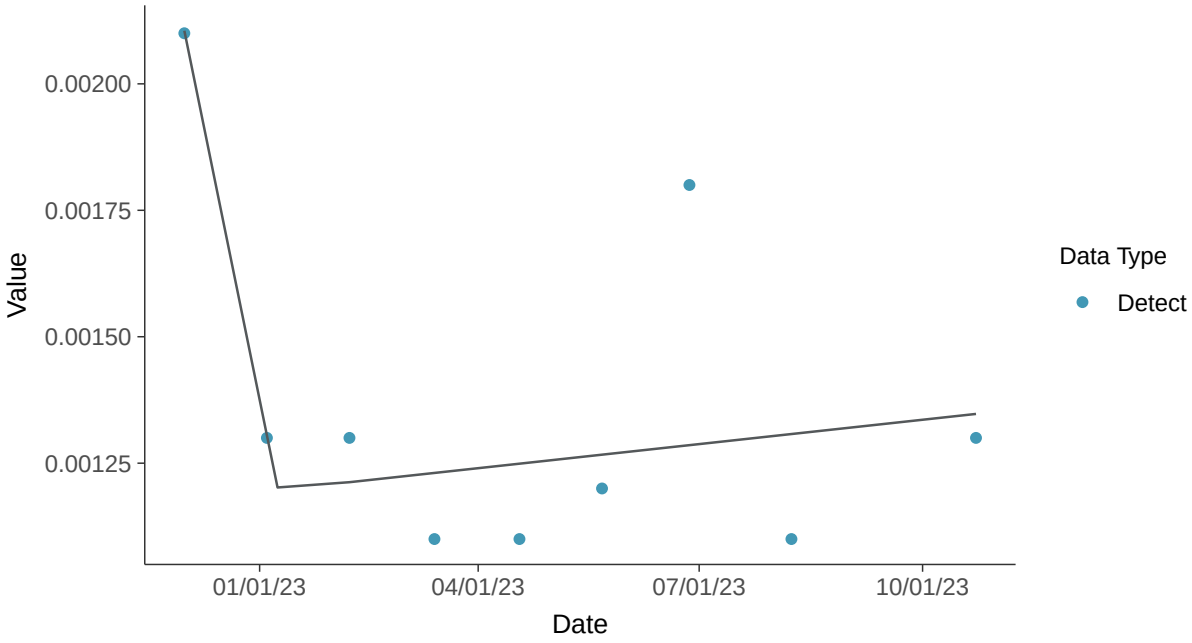
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Molybdenum, MW-31 (mg/L)



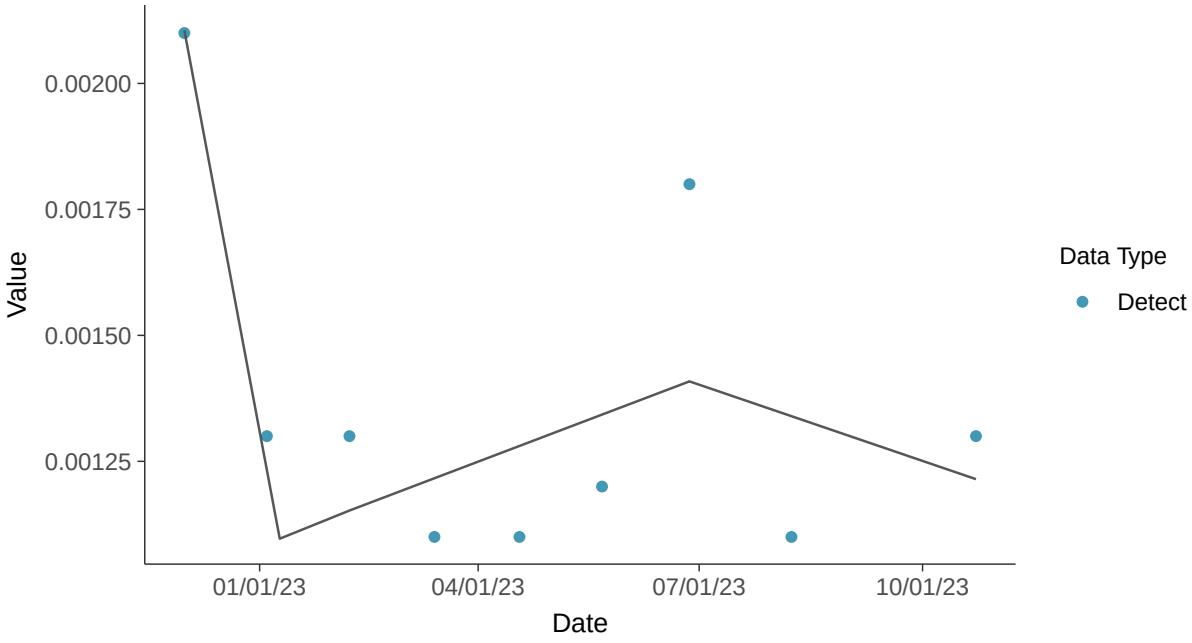
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-31 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-31 (mg/L)

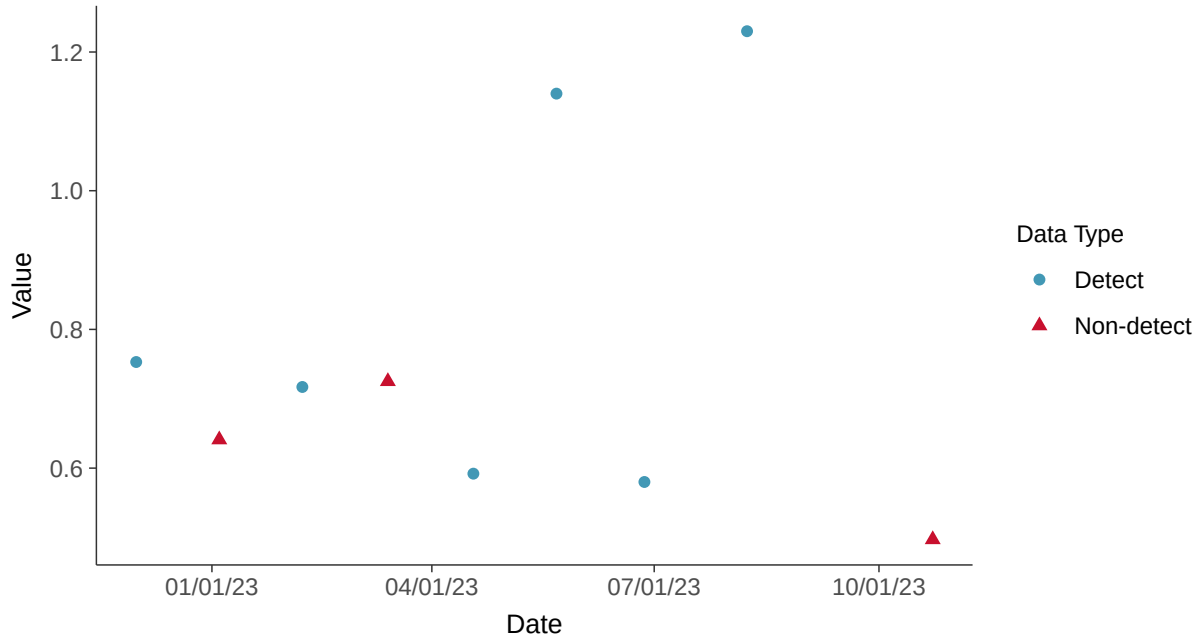


Appendix IV: Radium 226 and 228, MW-31

ID: 1_26_5_121

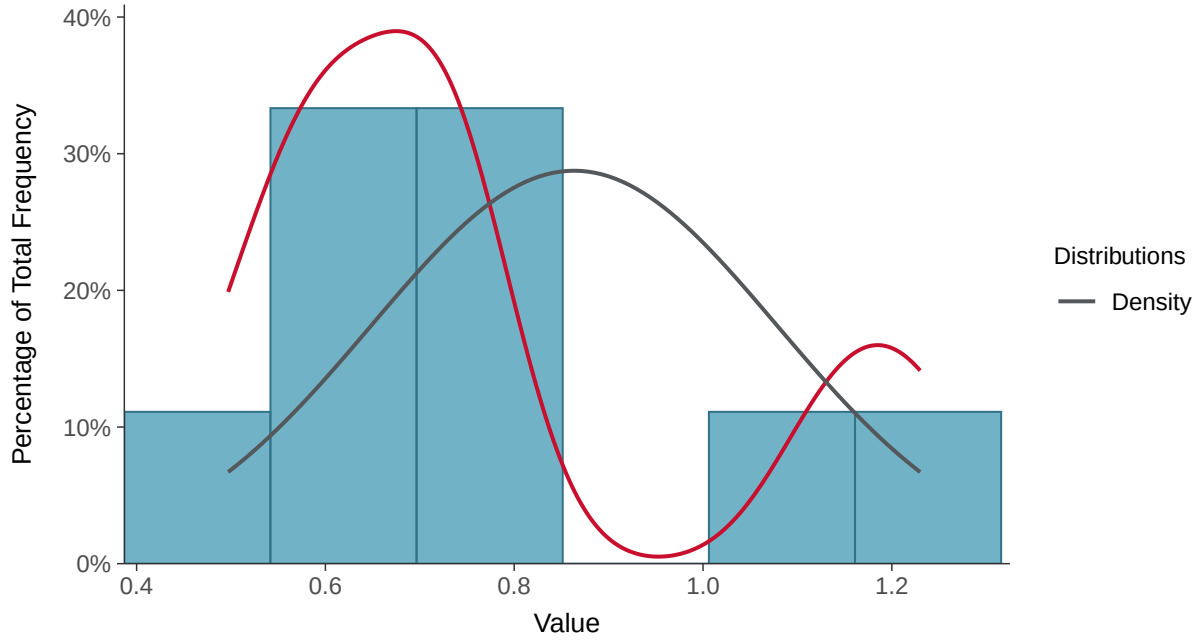
Scatter Plot

Radium 226 and 228, MW-31 (pCi/L)



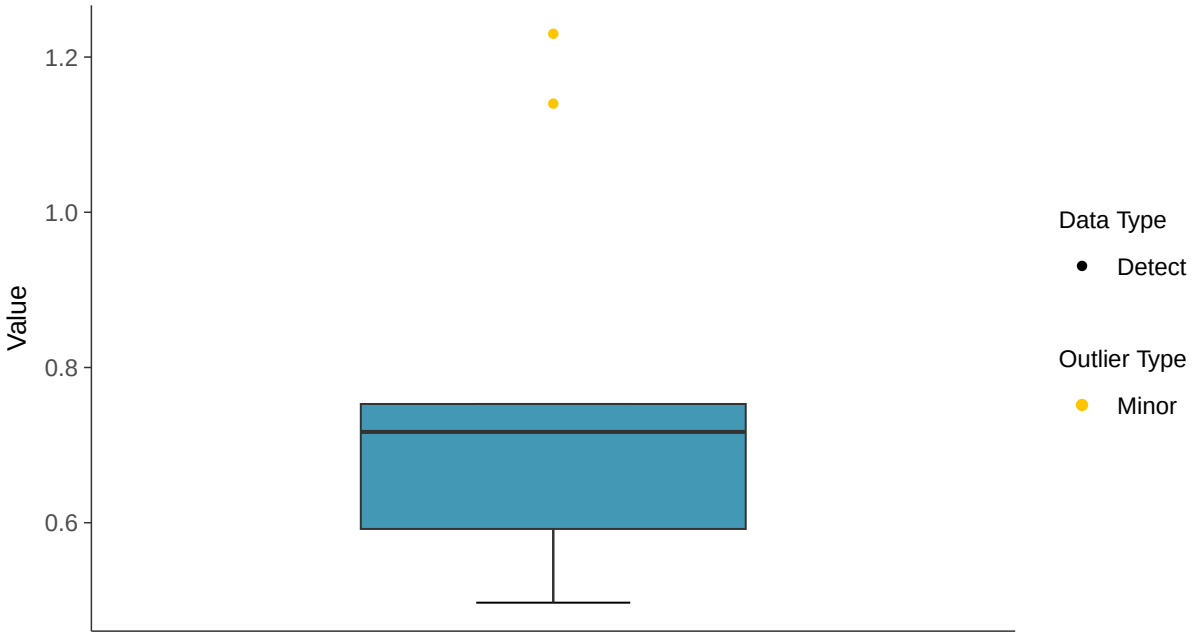
Histogram

Radium 226 and 228, MW-31 (pCi/L)



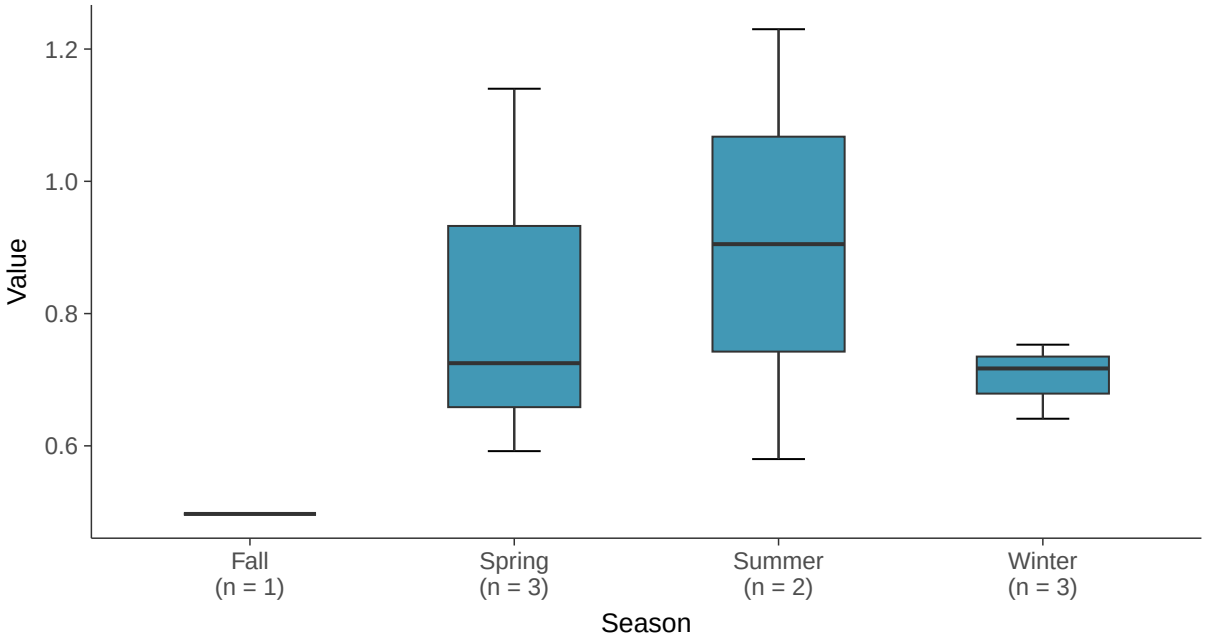
Boxplot

Radium 226 and 228, MW-31 (pCi/L)



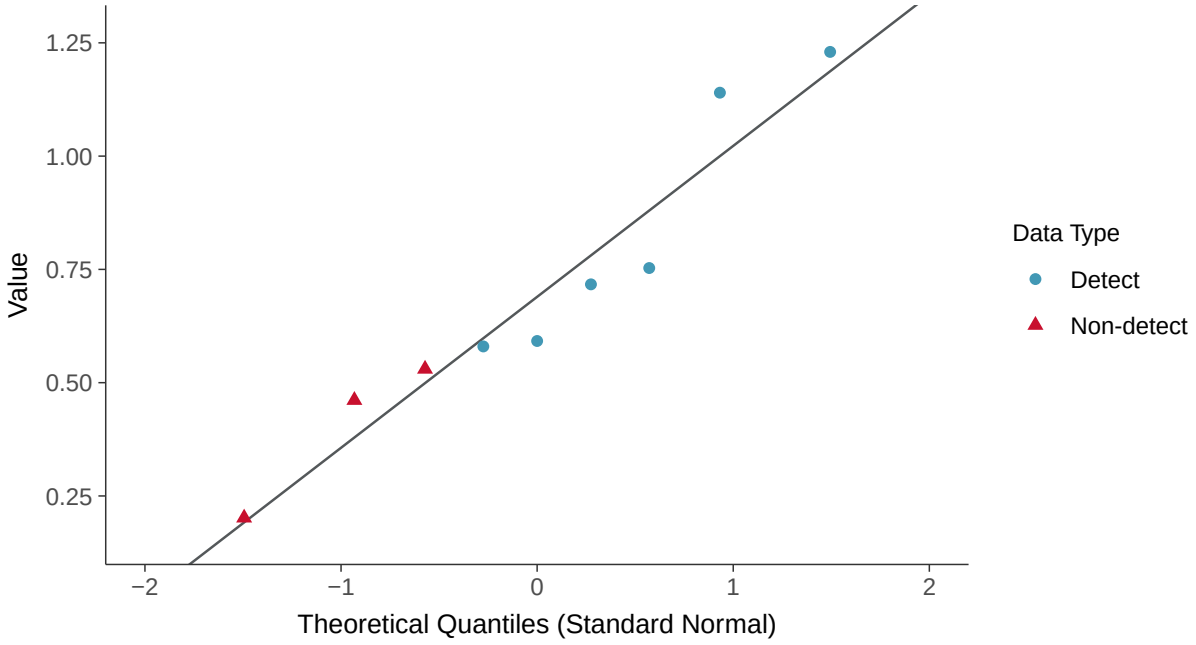
Boxplot by Season

Radium 226 and 228, MW-31 (pCi/L)



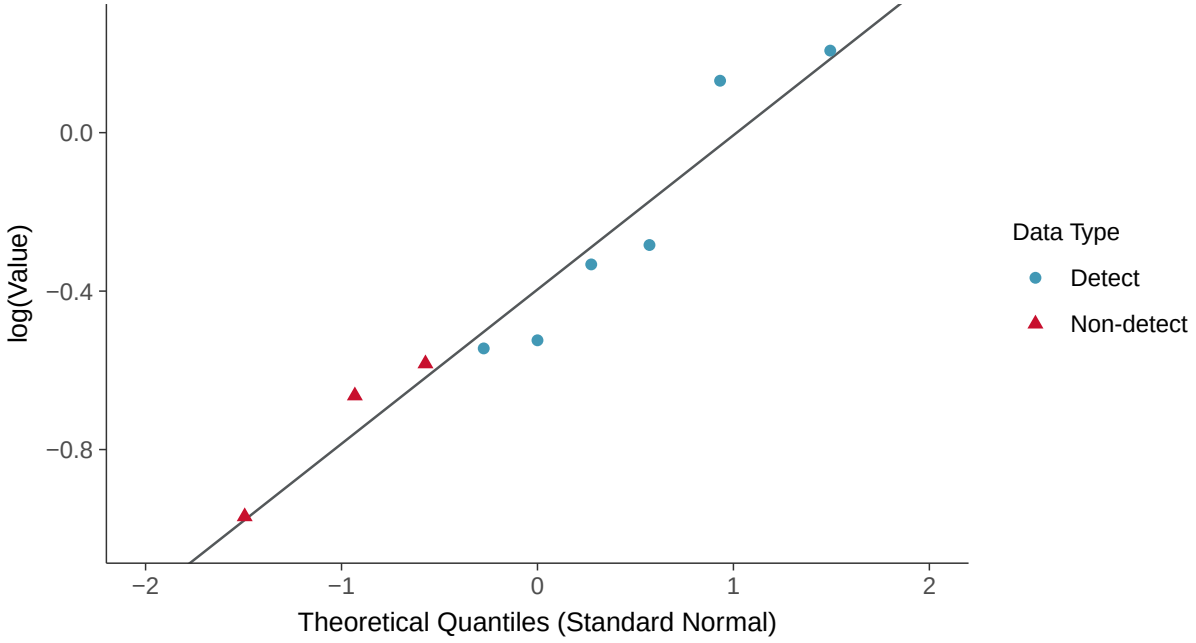
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-31 (pCi/L)



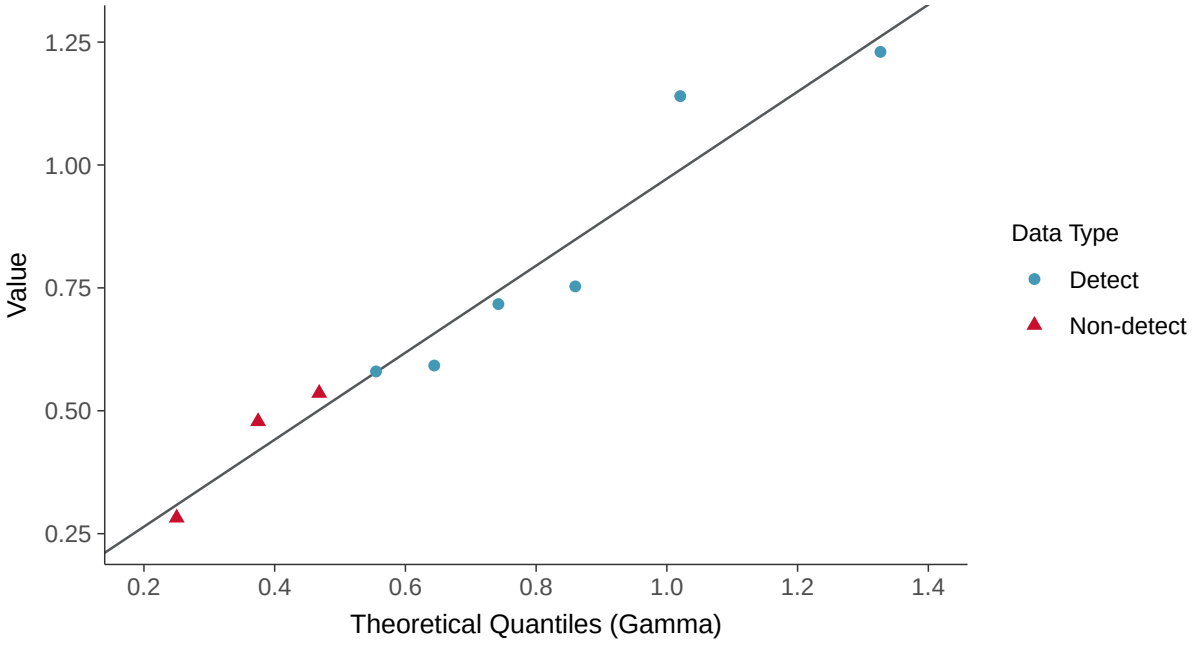
Lognormal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-31 (pCi/L)



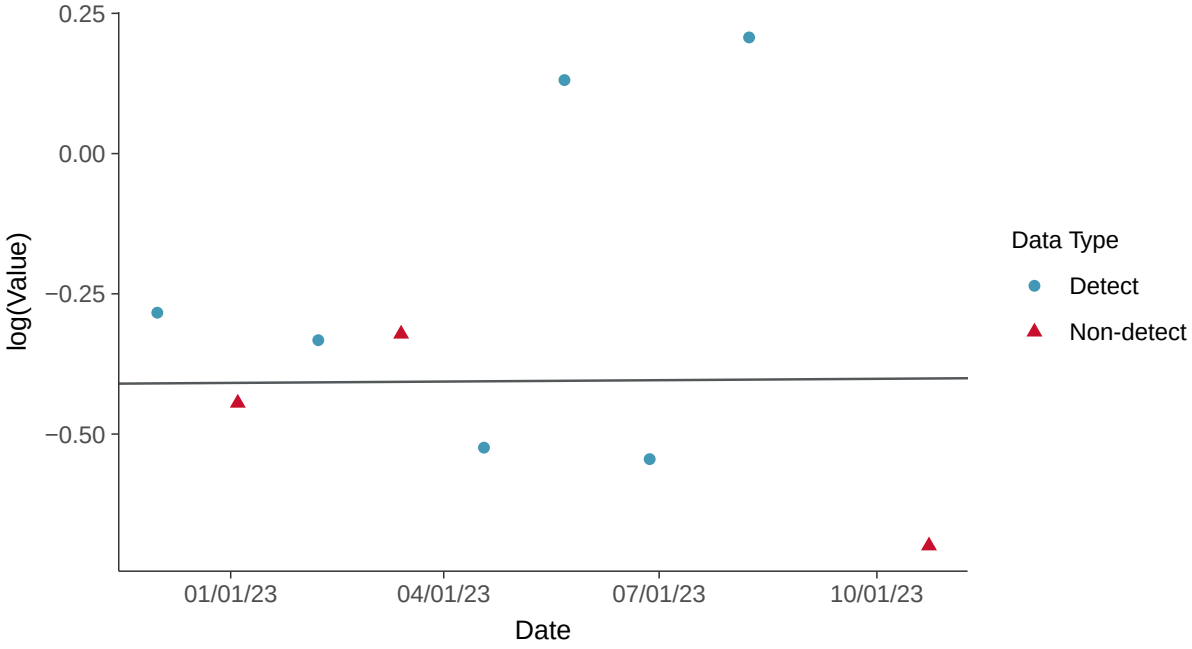
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-31 (pCi/L)



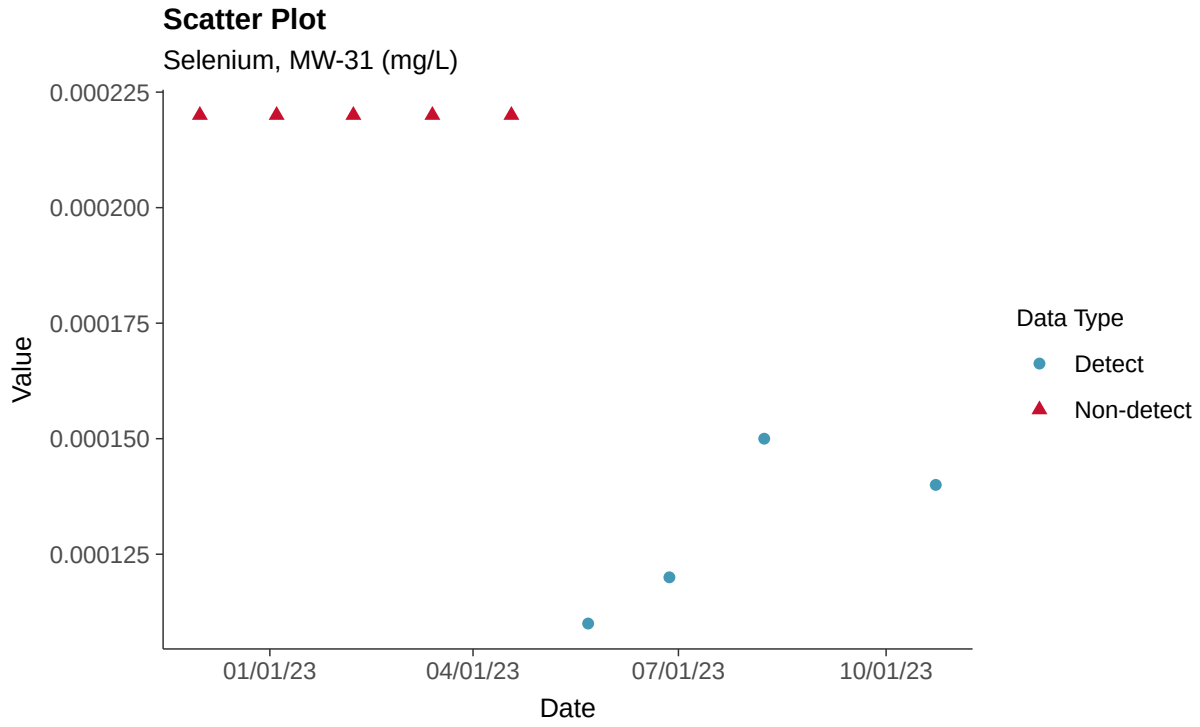
Trend Regression: Lognormal MLE

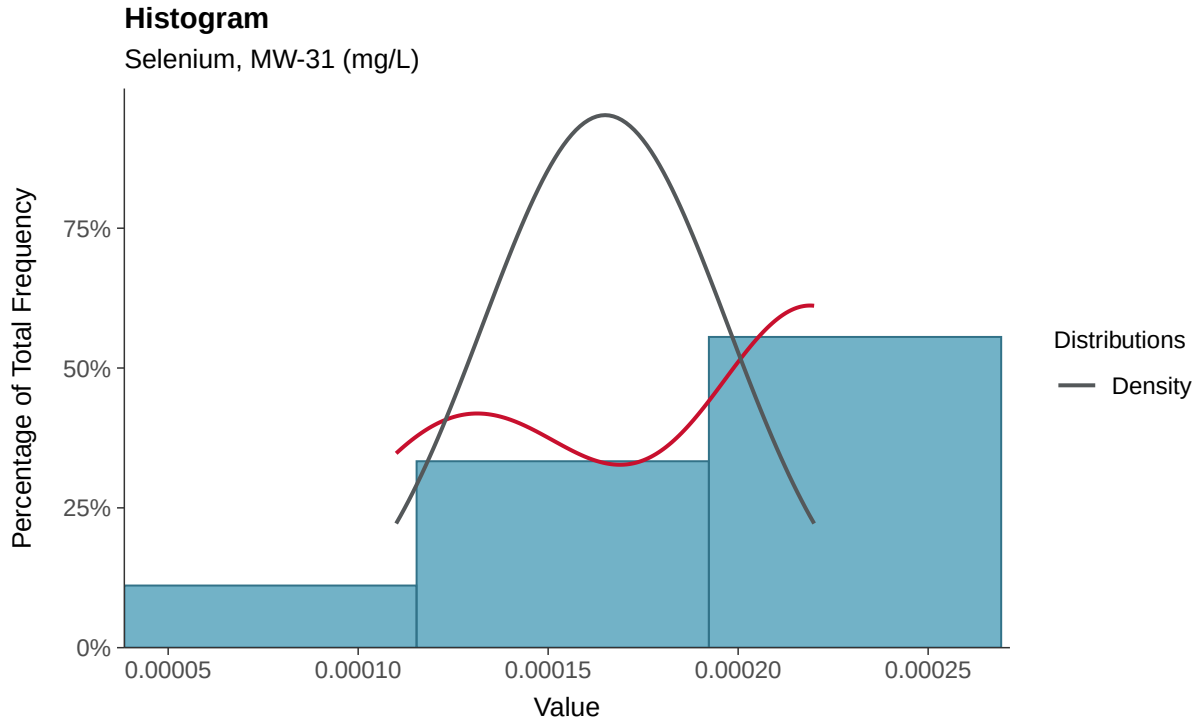
Radium 226 and 228, MW-31 (pCi/L)



Appendix IV: Selenium, MW-31

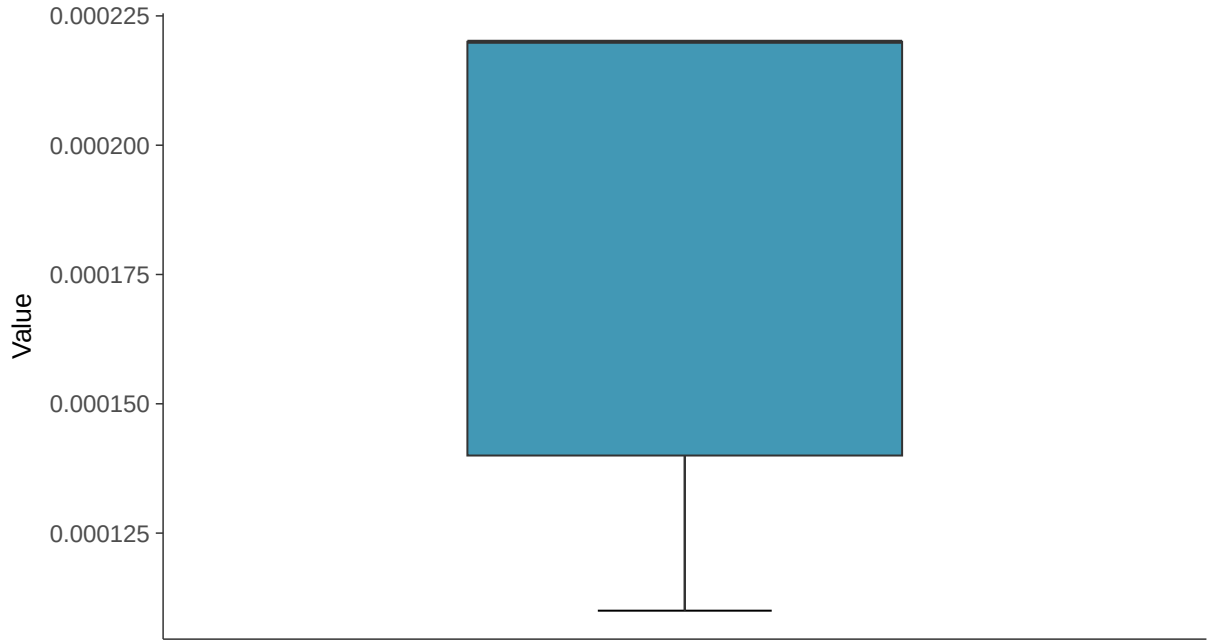
ID: 1_26_5_122





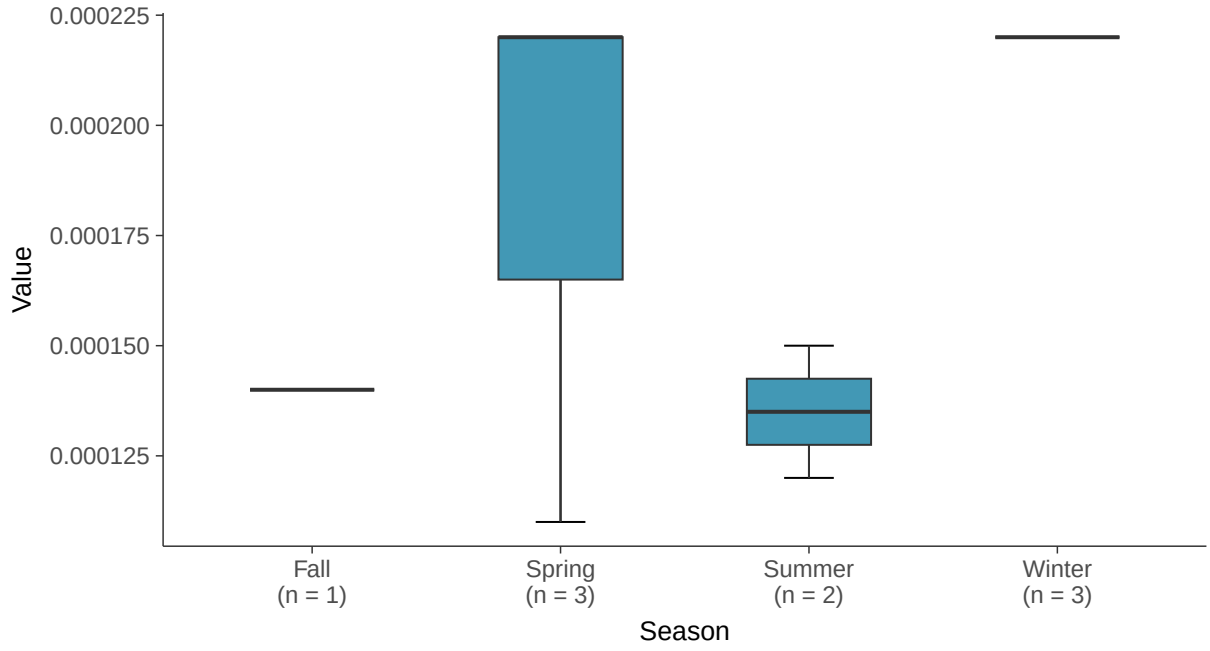
Boxplot

Selenium, MW-31 (mg/L)



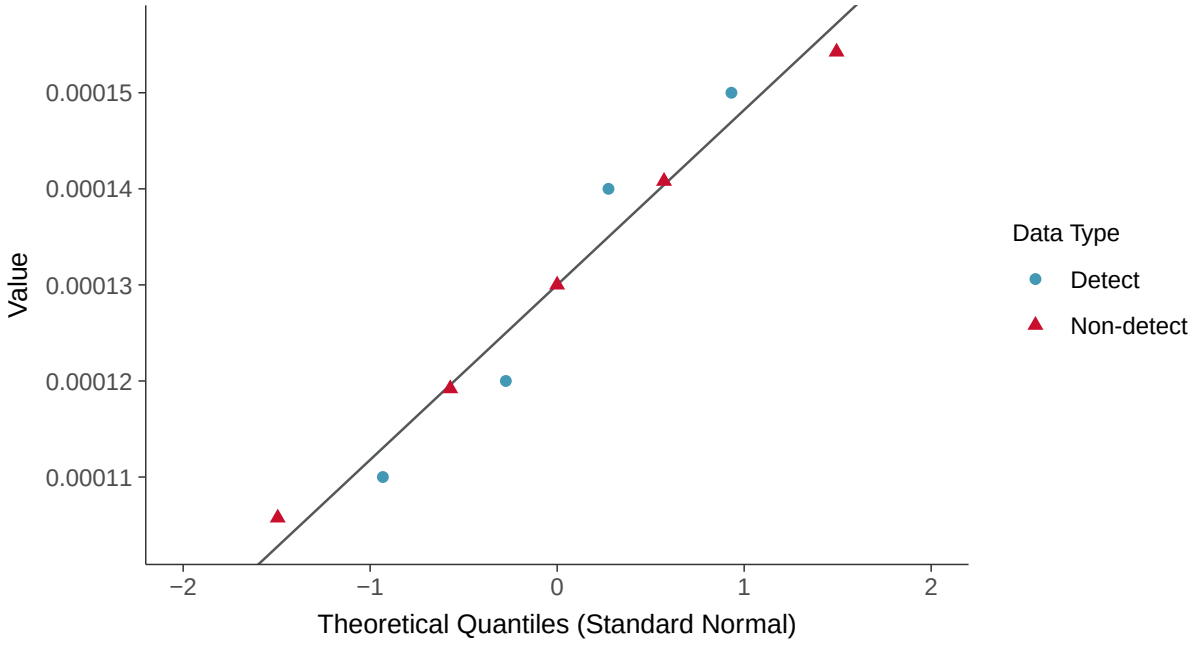
Boxplot by Season

Selenium, MW-31 (mg/L)



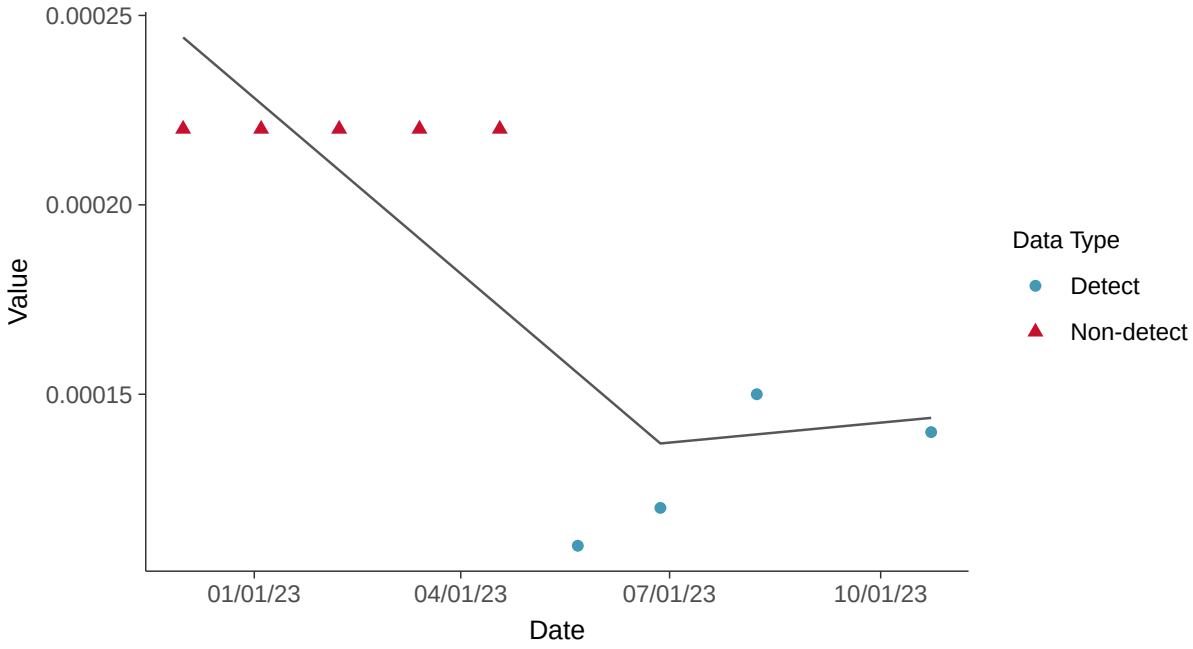
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-31 (mg/L)



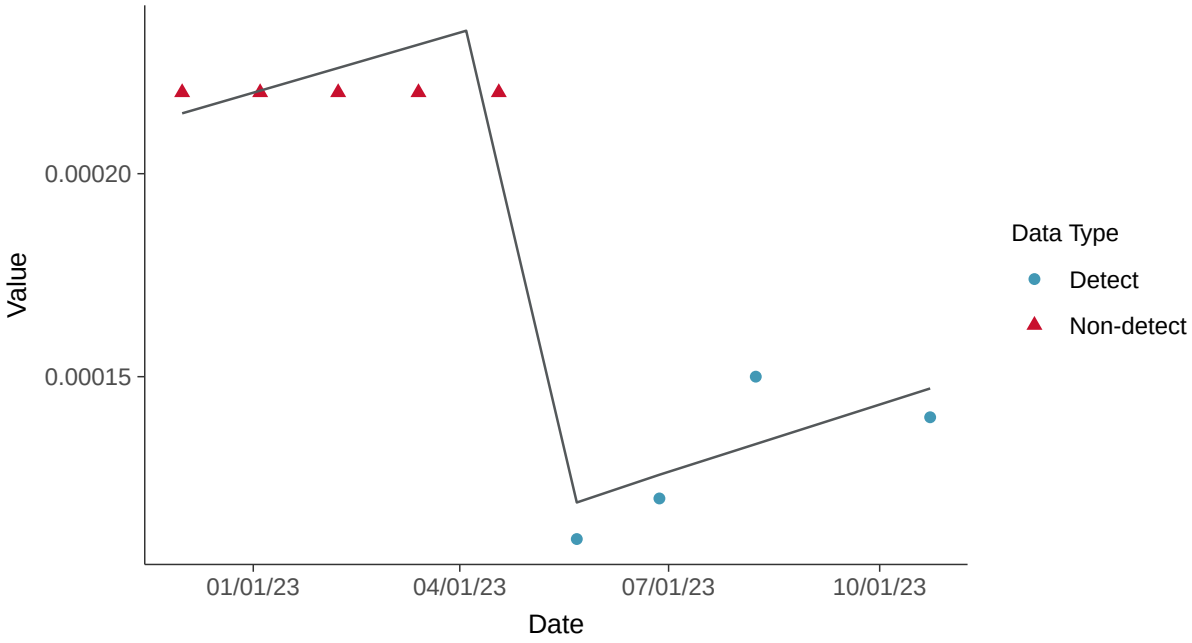
Trend Regression: Piecewise Linear-Linear

Selenium, MW-31 (mg/L)



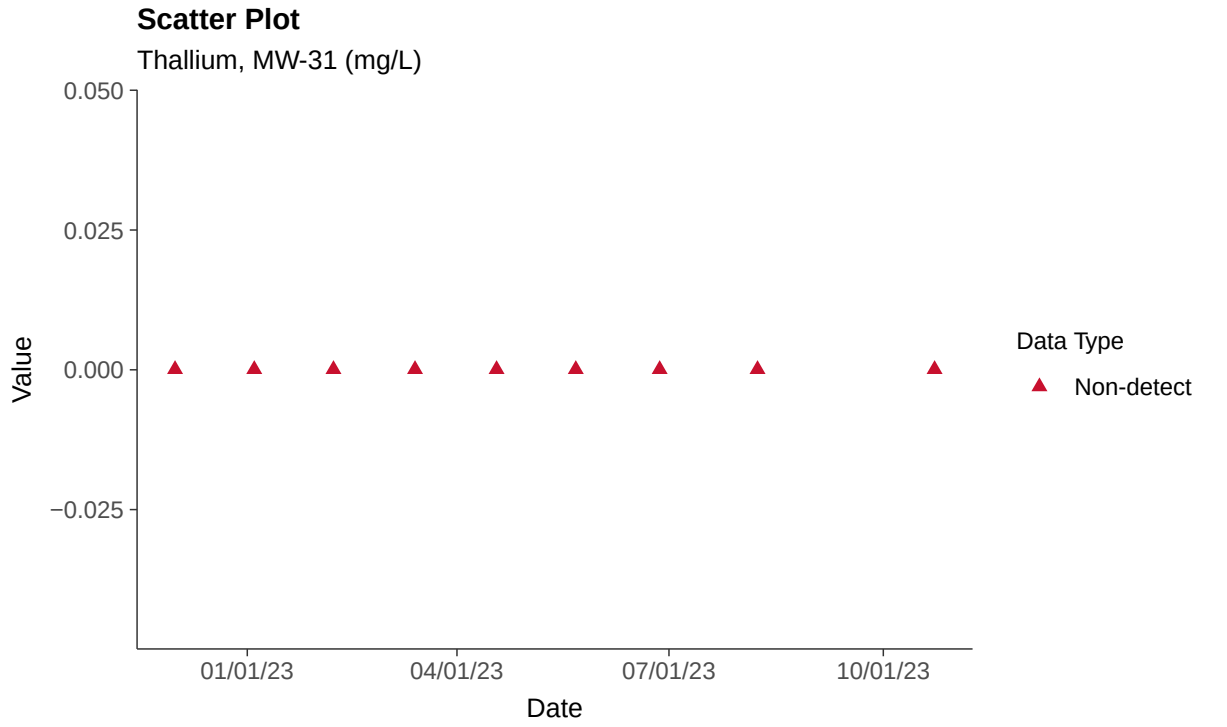
Trend Regression: Piecewise Linear-Linear-Linear

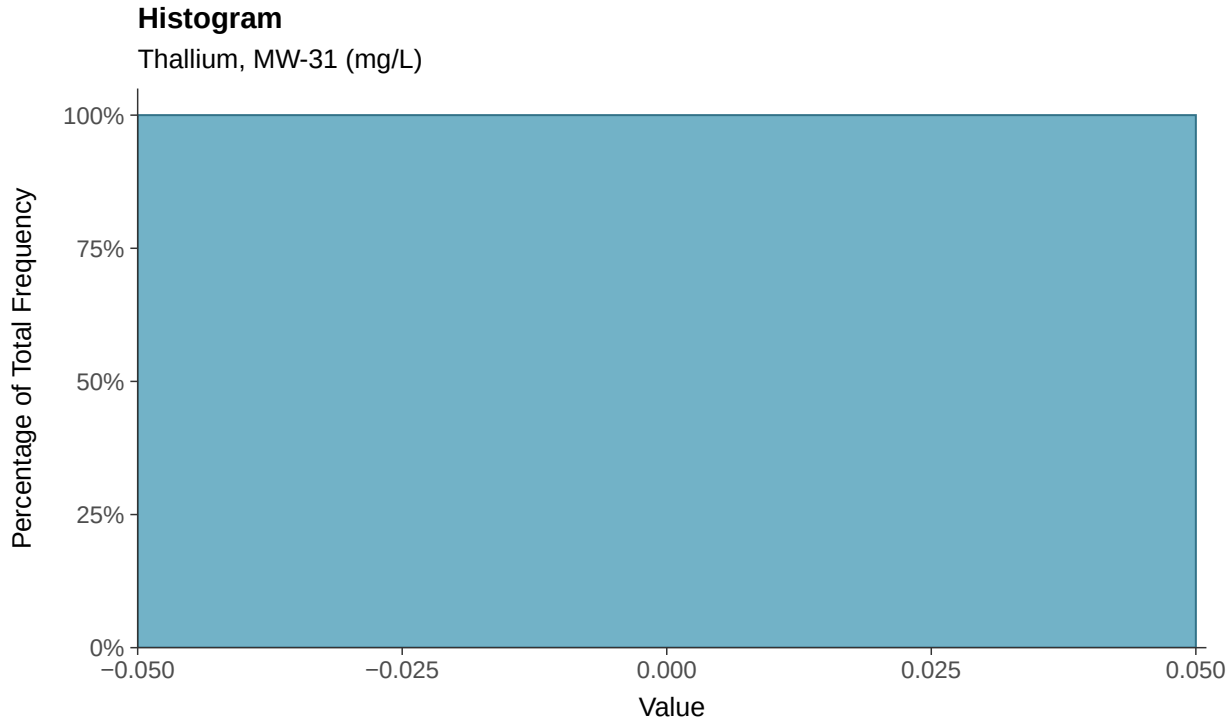
Selenium, MW-31 (mg/L)



Appendix IV: Thallium, MW-31

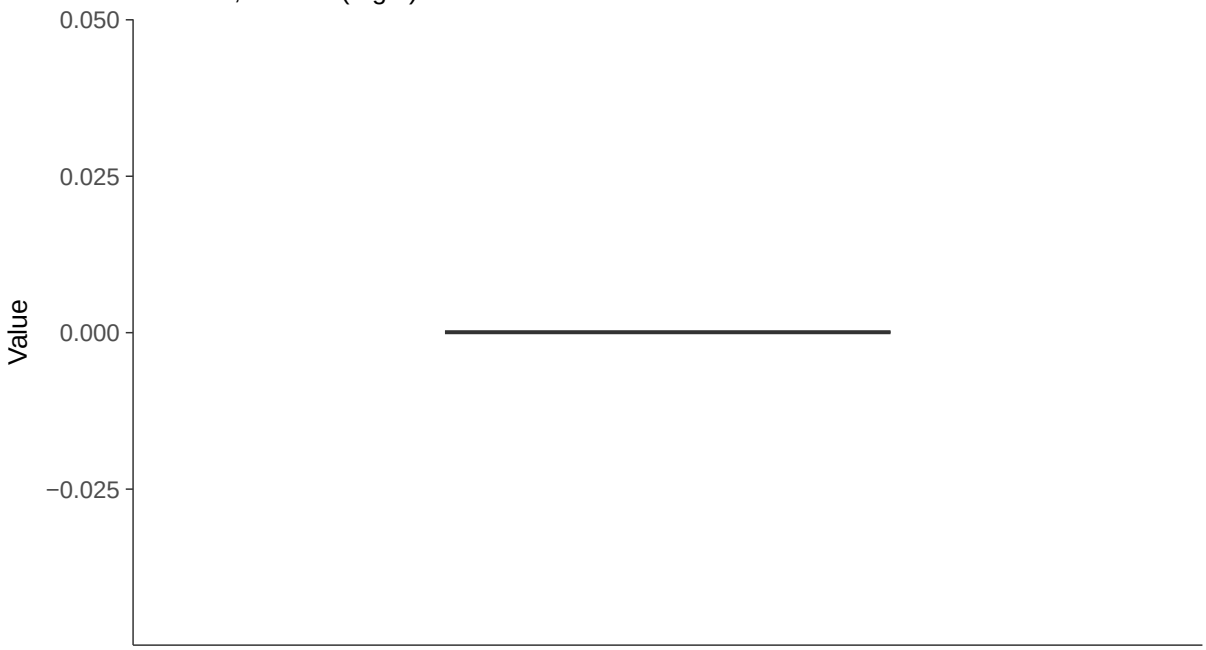
ID: 1_26_5_125





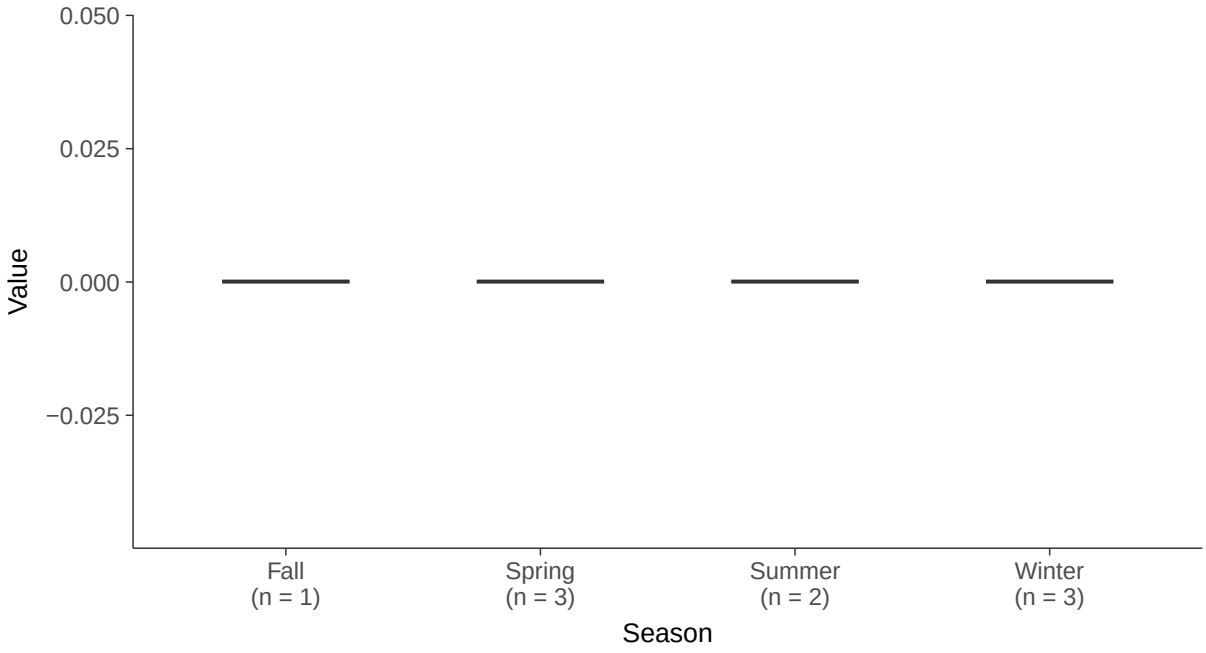
Boxplot

Thallium, MW-31 (mg/L)



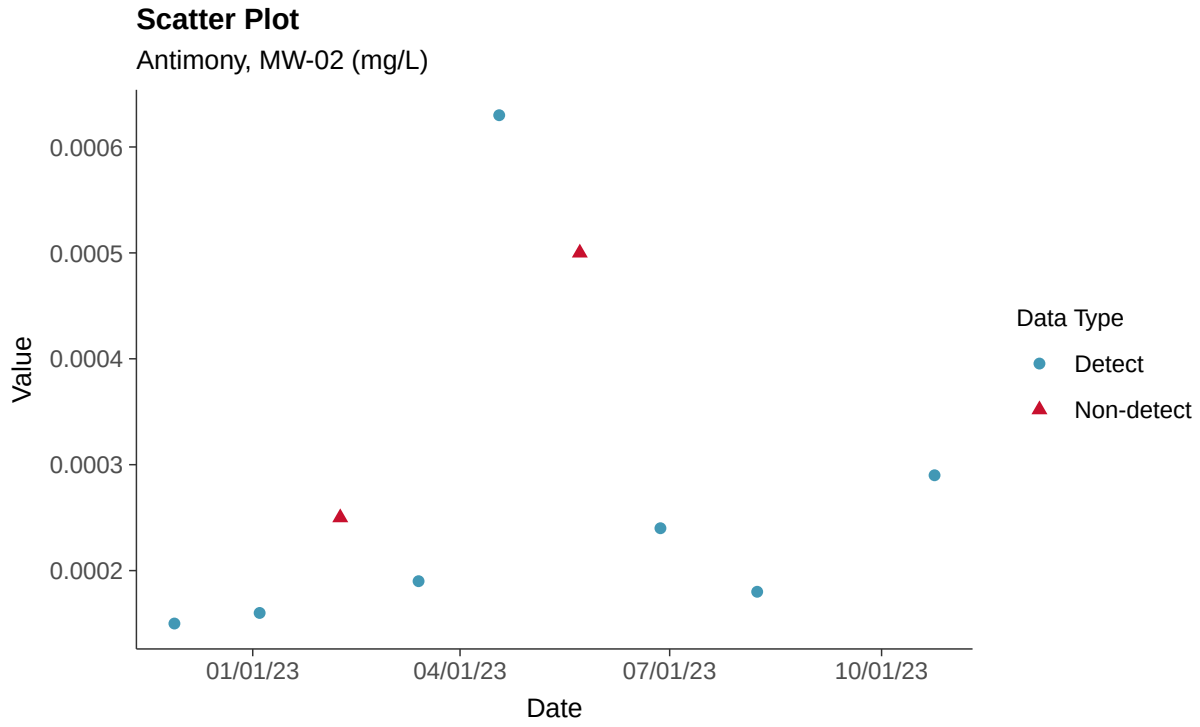
Boxplot by Season

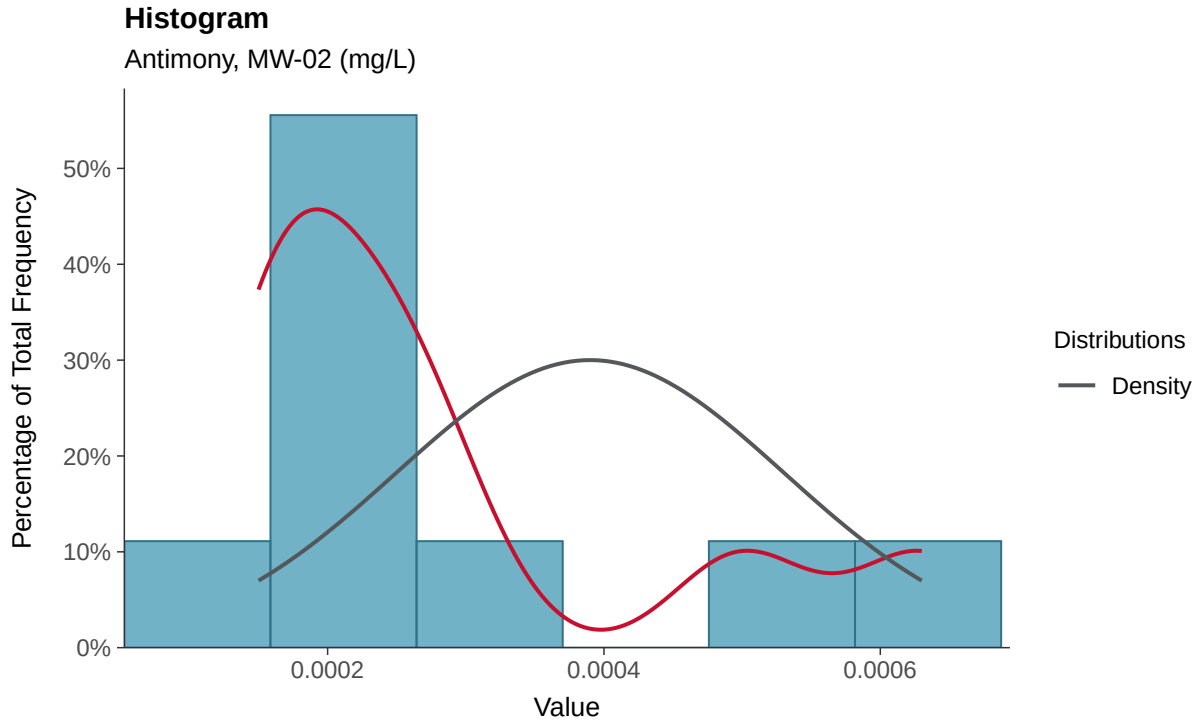
Thallium, MW-31 (mg/L)



Appendix IV: Antimony, MW-02

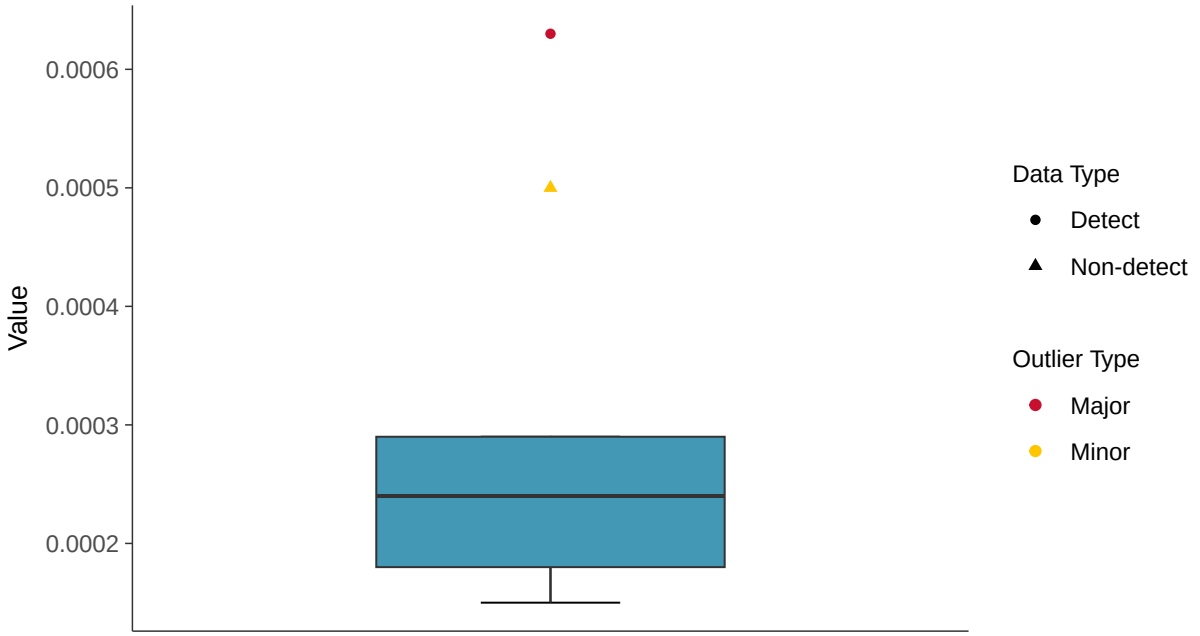
ID: 2_12_5_101





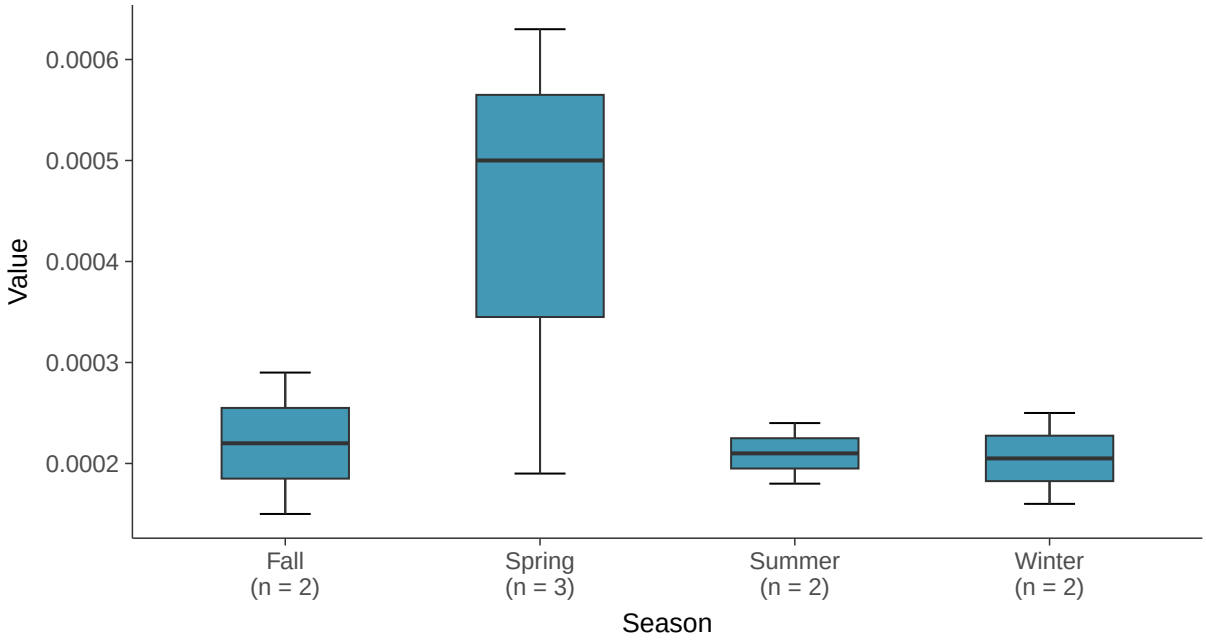
Boxplot

Antimony, MW-02 (mg/L)



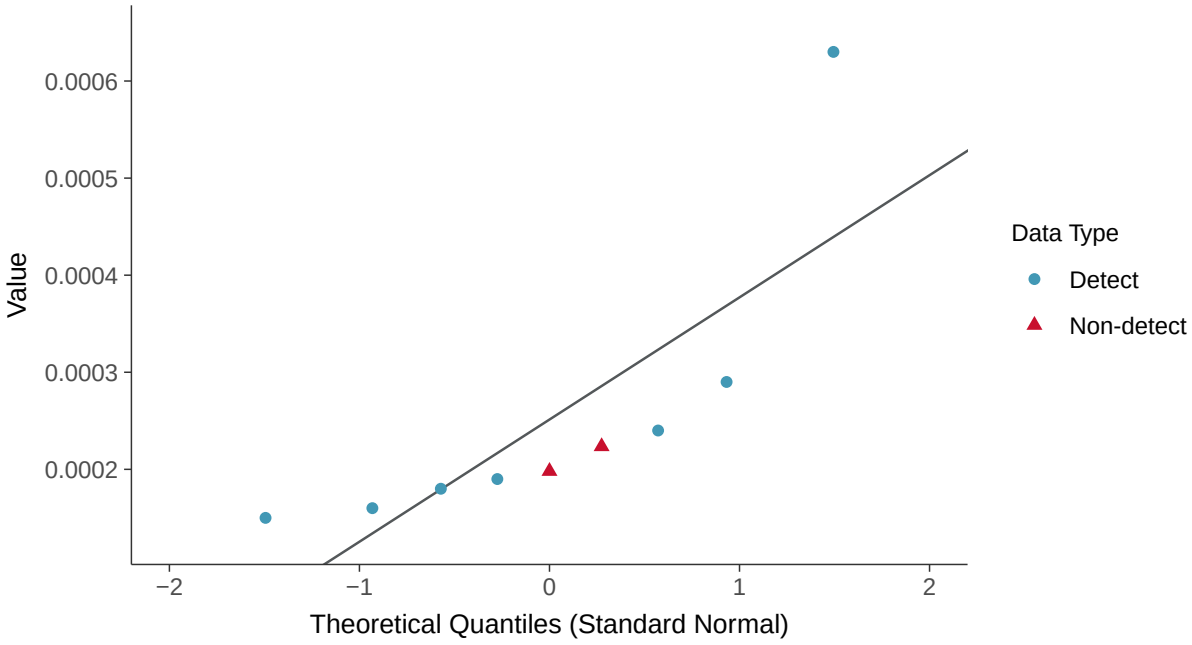
Boxplot by Season

Antimony, MW-02 (mg/L)



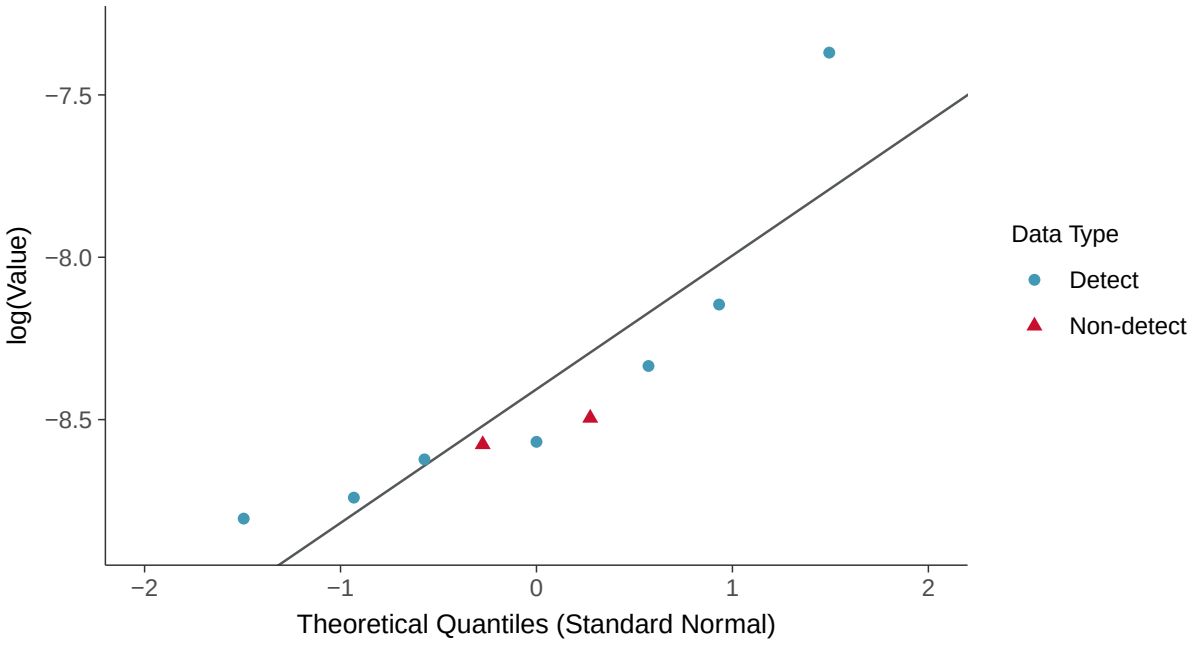
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-02 (mg/L)



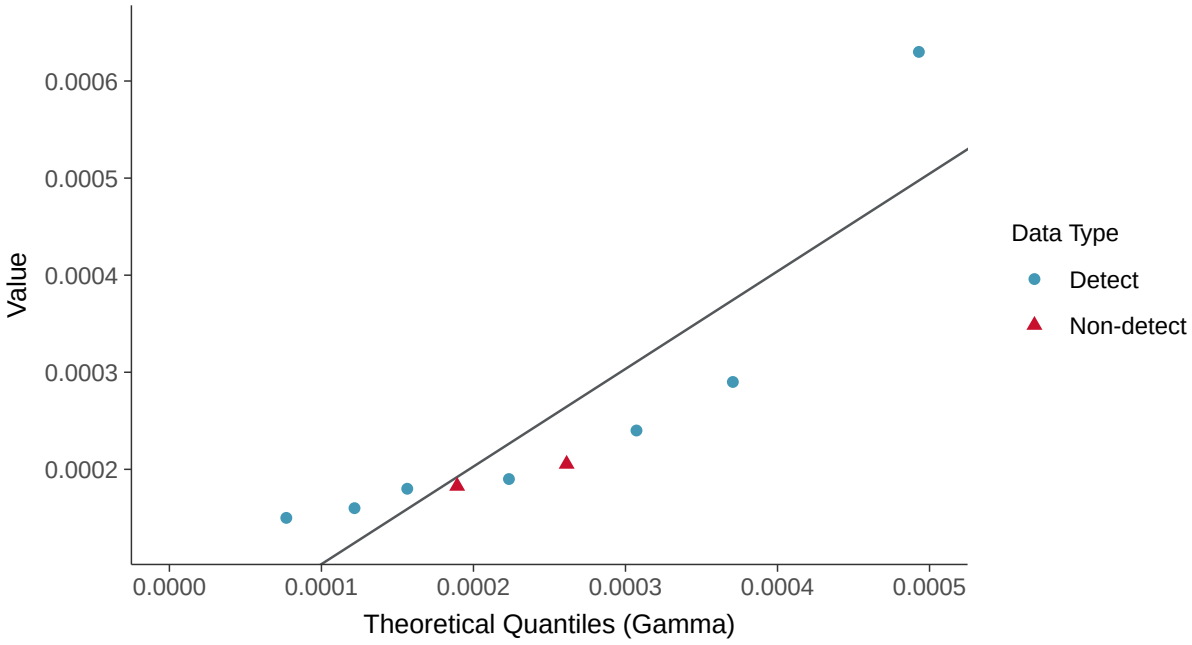
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-02 (mg/L)



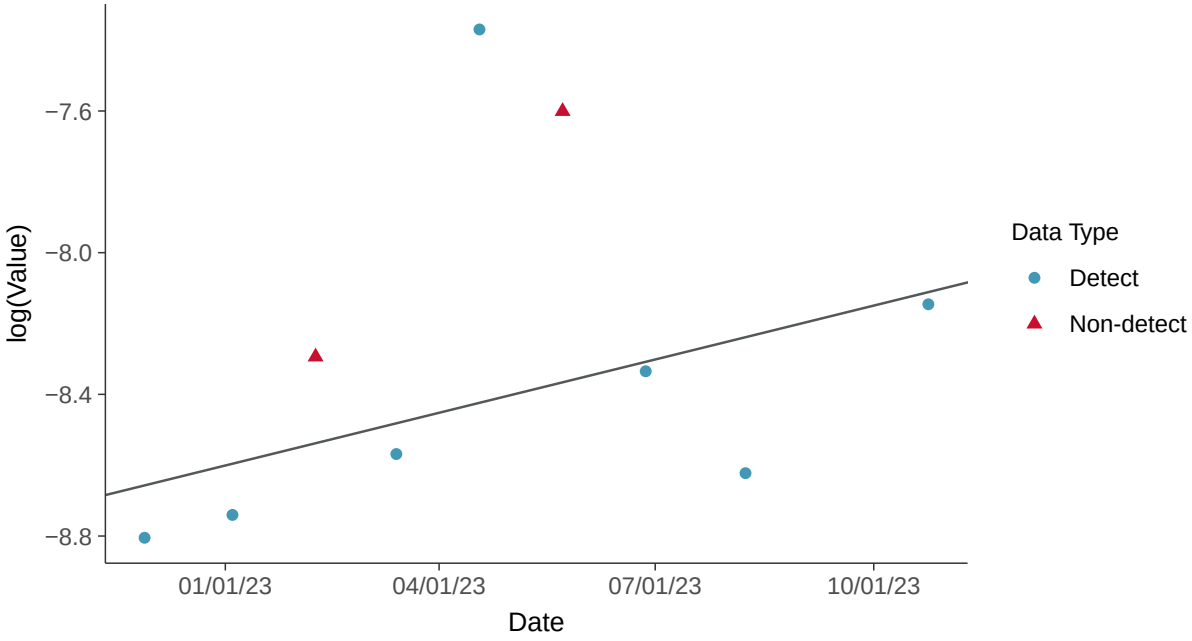
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-02 (mg/L)



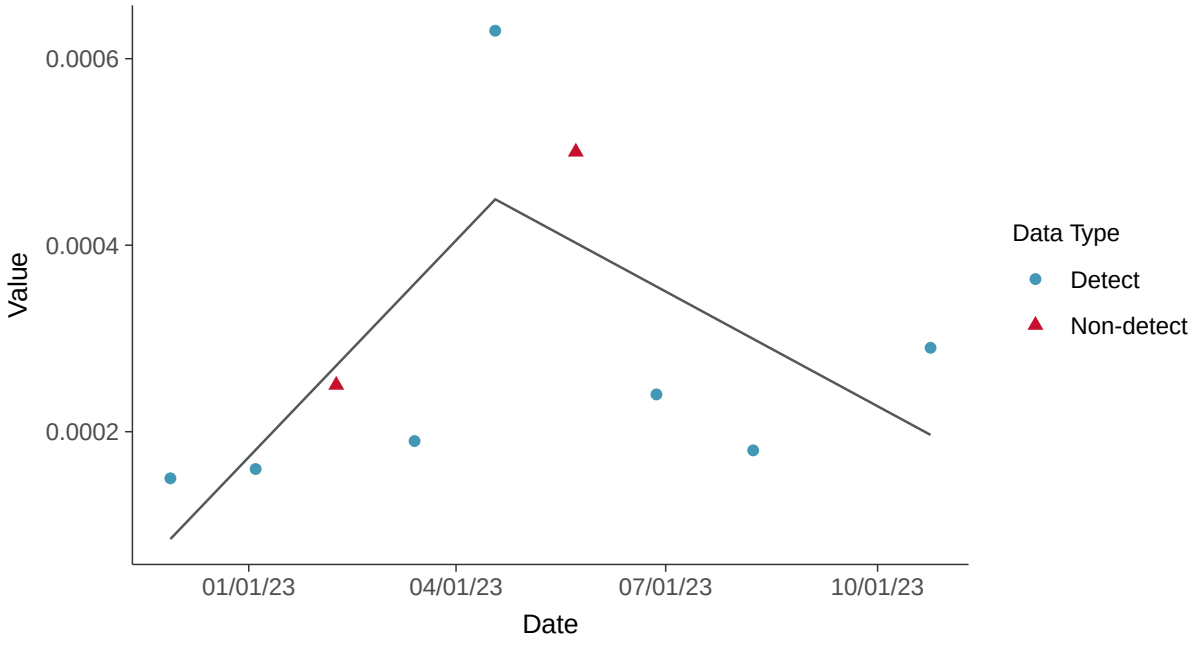
Trend Regression: Lognormal MLE

Antimony, MW-02 (mg/L)



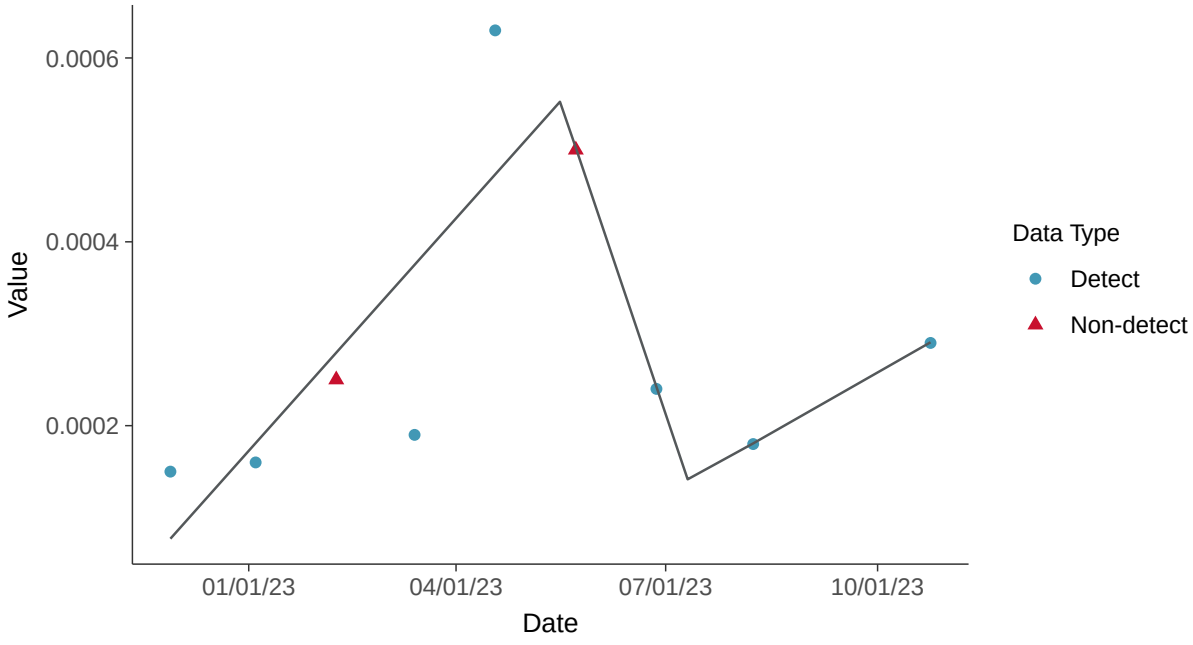
Trend Regression: Piecewise Linear-Linear

Antimony, MW-02 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-02 (mg/L)

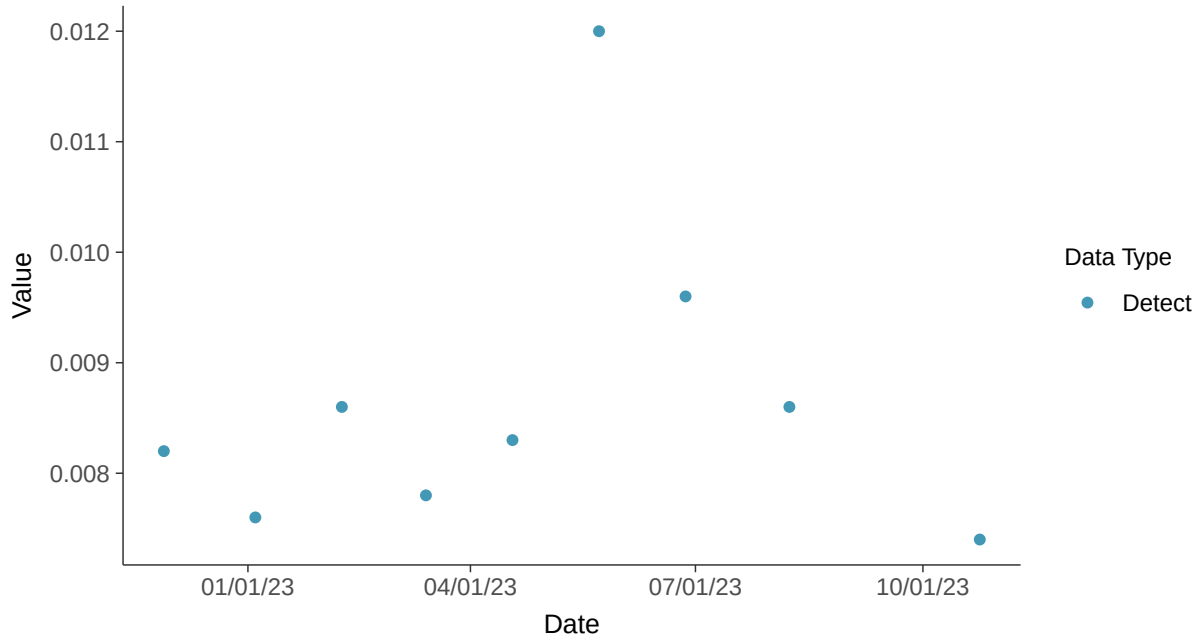


Appendix IV: Arsenic, MW-02

ID: 2_12_5_102

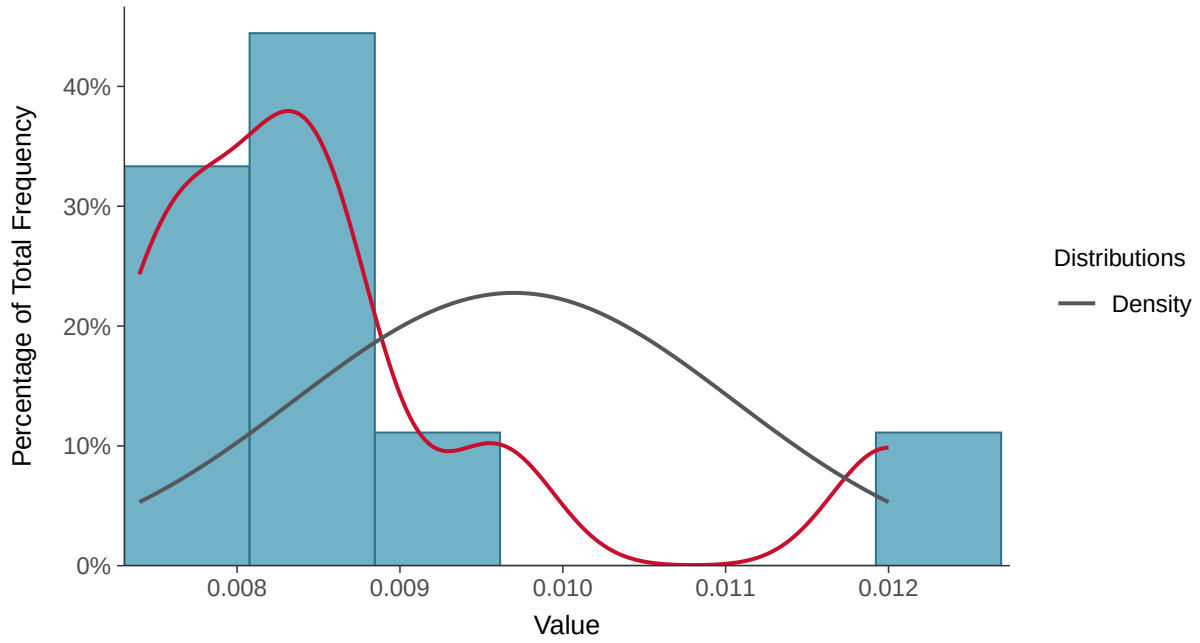
Scatter Plot

Arsenic, MW-02 (mg/L)



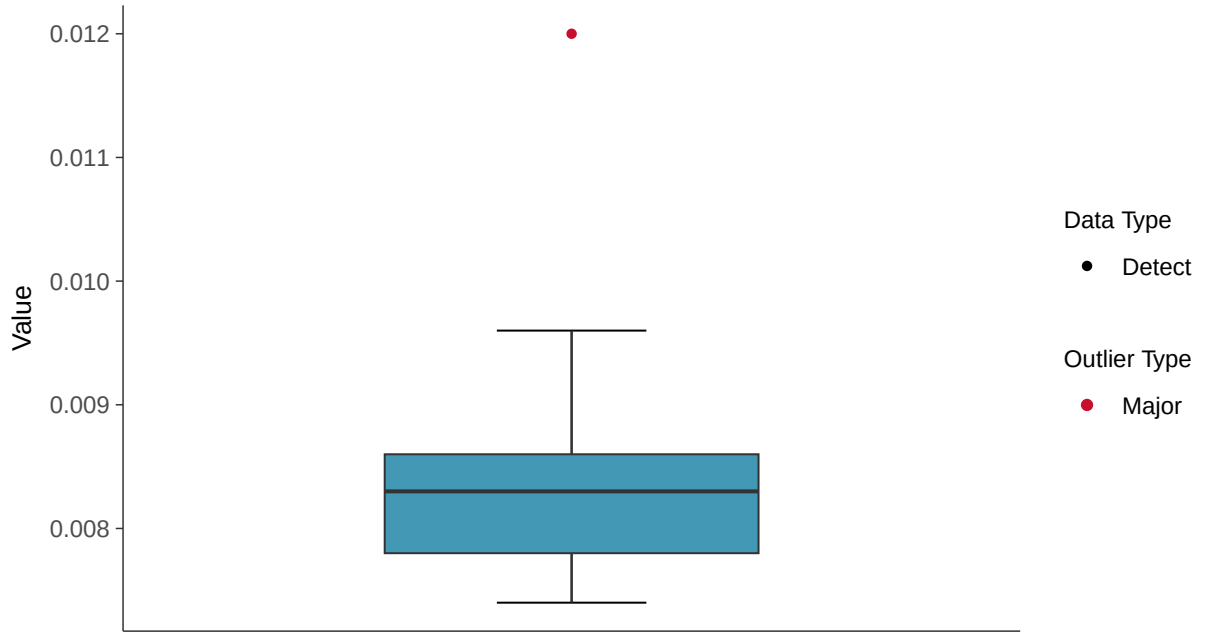
Histogram

Arsenic, MW-02 (mg/L)



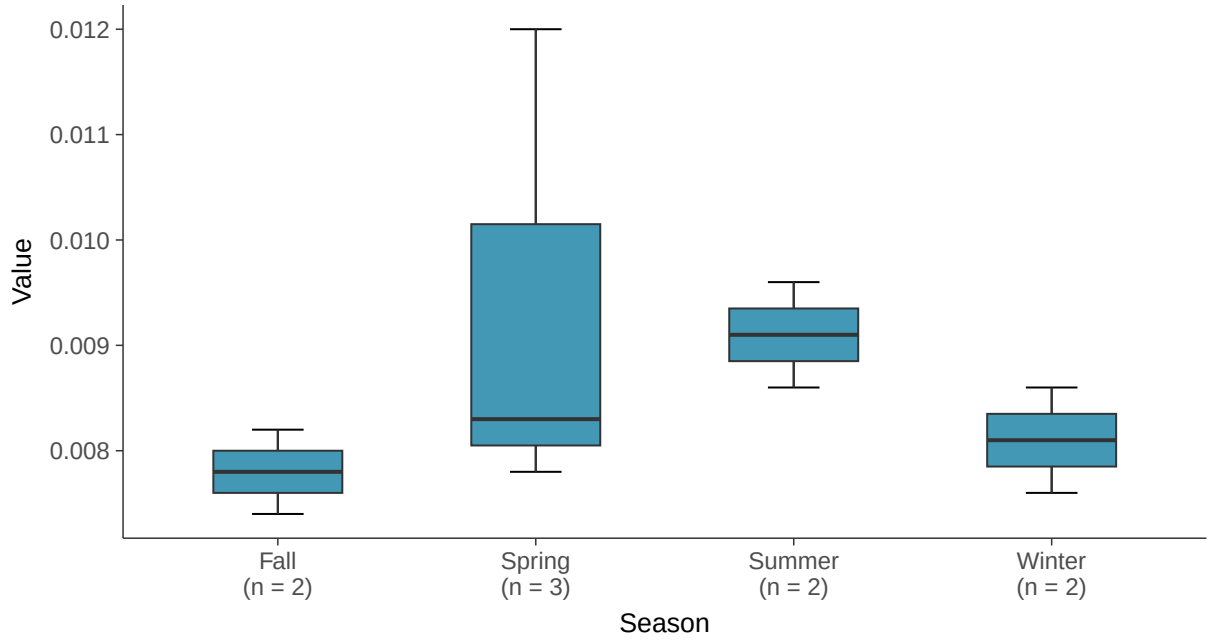
Boxplot

Arsenic, MW-02 (mg/L)



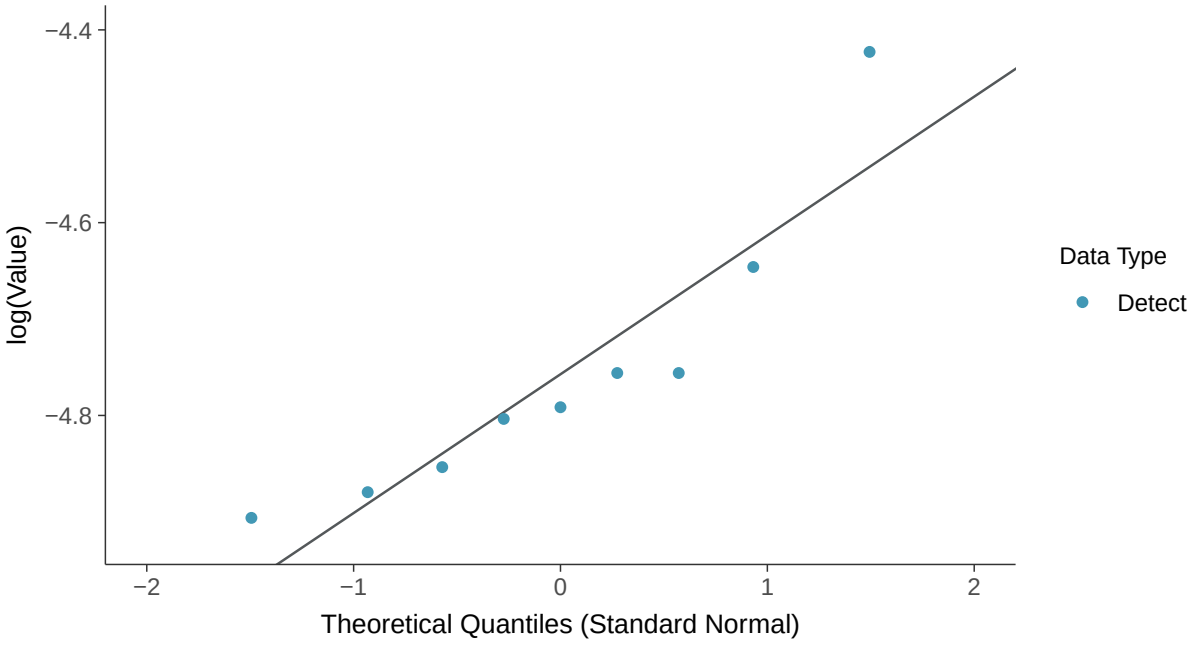
Boxplot by Season

Arsenic, MW-02 (mg/L)



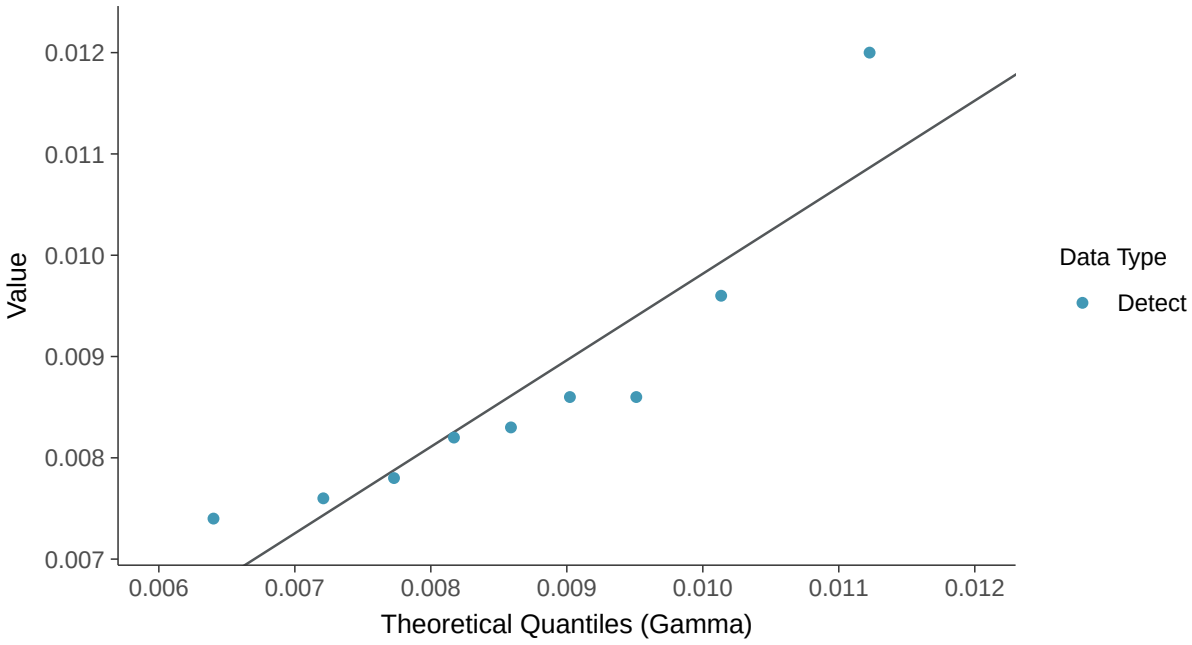
Lognormal Q-Q plot

Arsenic, MW-02 (mg/L)



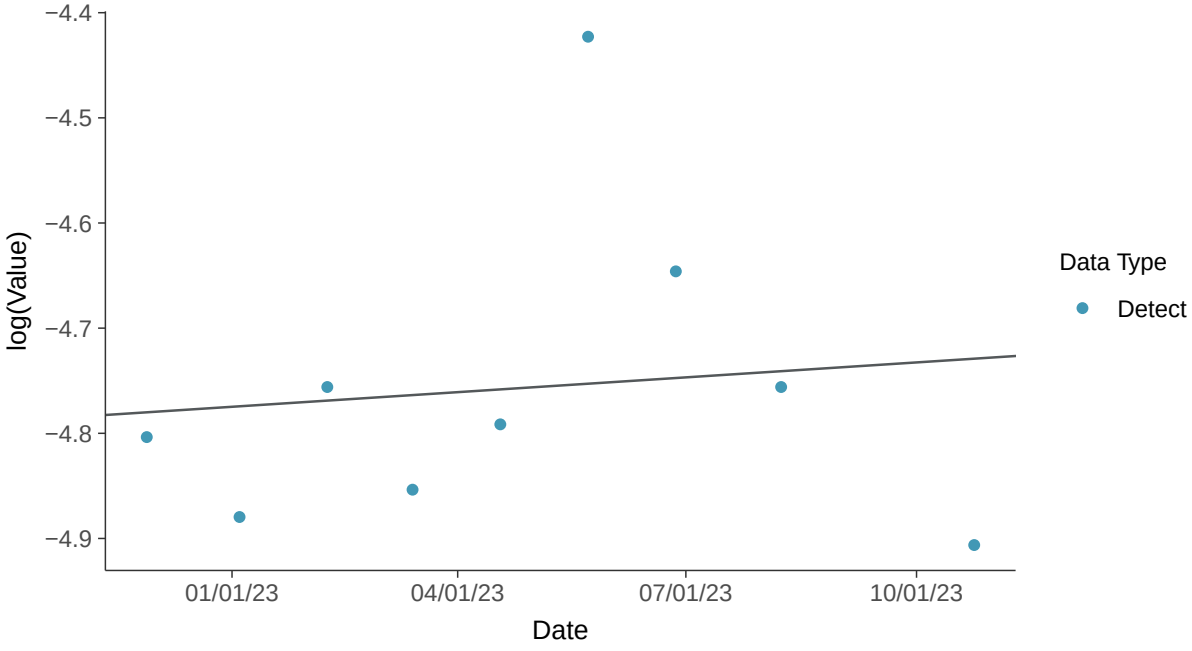
Gamma Q-Q plot

Arsenic, MW-02 (mg/L)



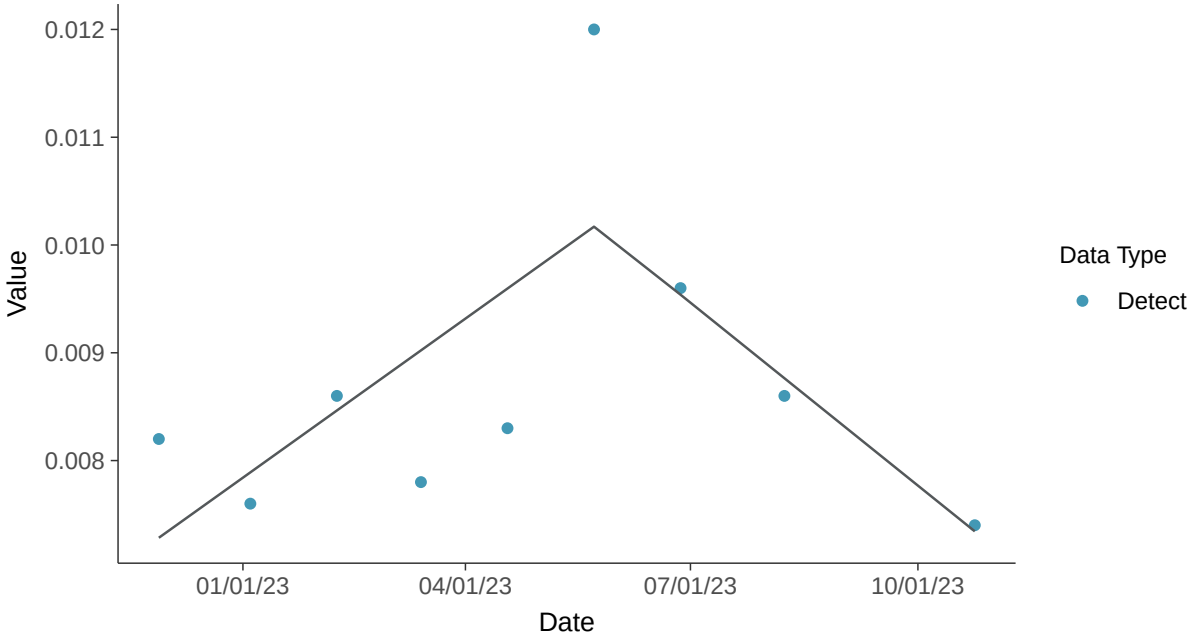
Trend Regression: Lognormal MLE

Arsenic, MW-02 (mg/L)



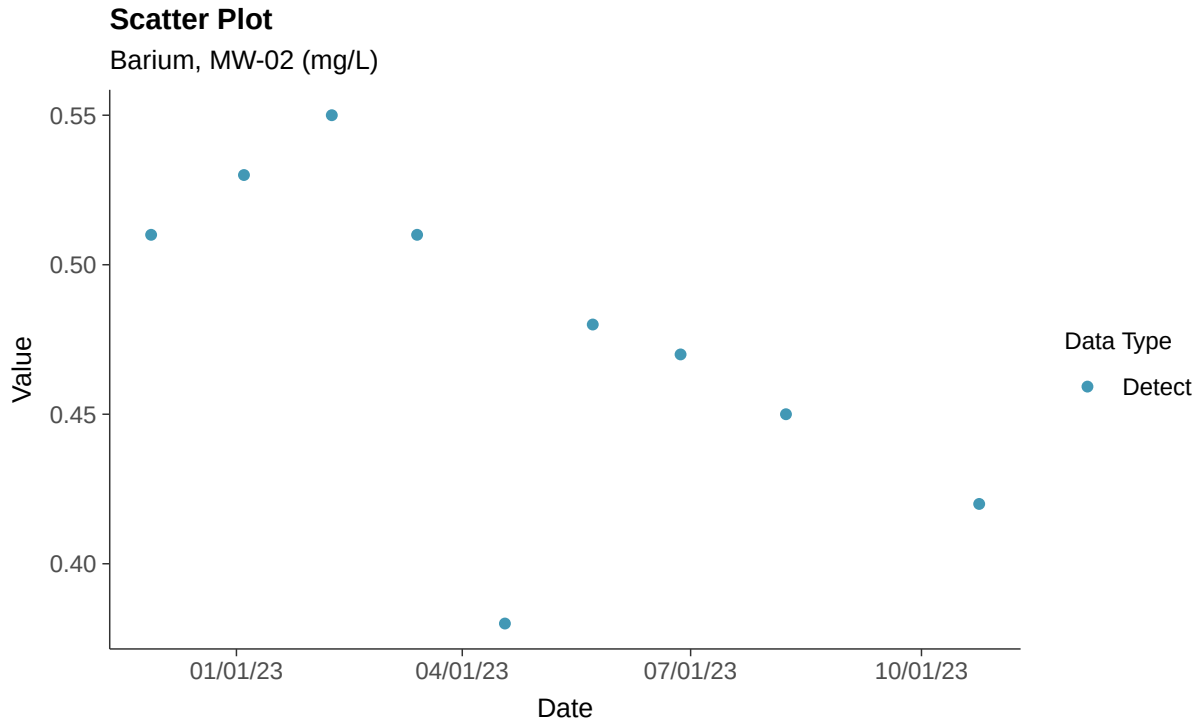
Trend Regression: Piecewise Linear-Linear

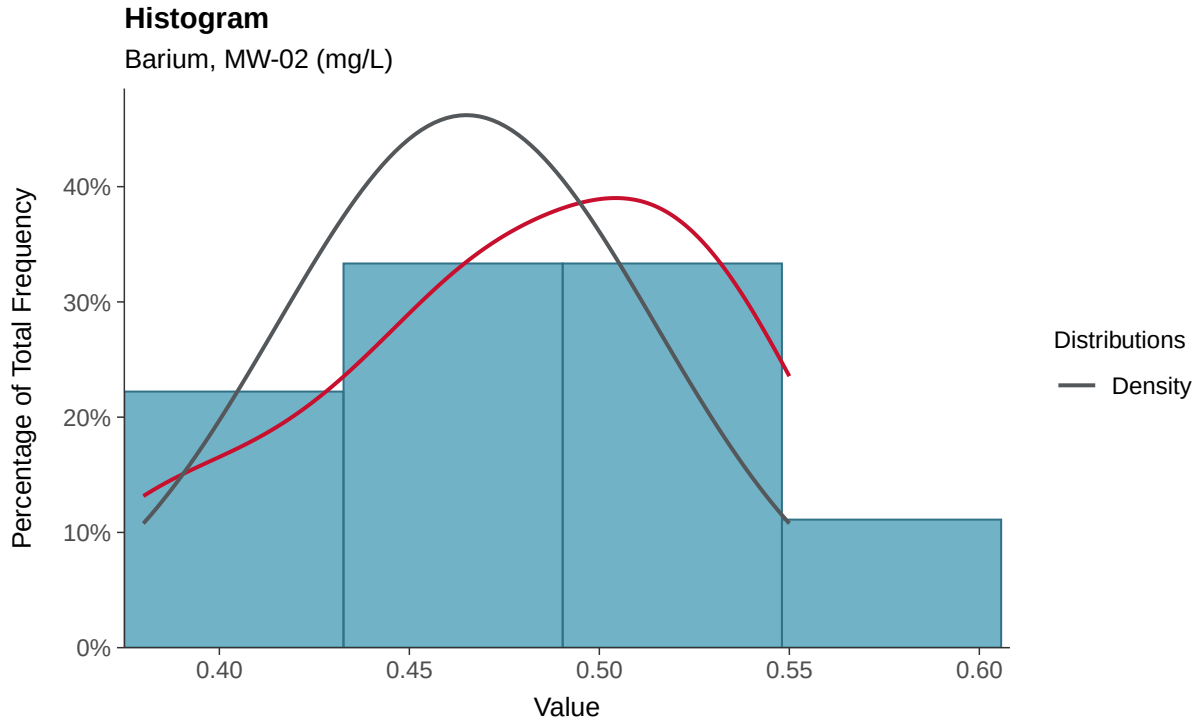
Arsenic, MW-02 (mg/L)



Appendix IV: Barium, MW-02

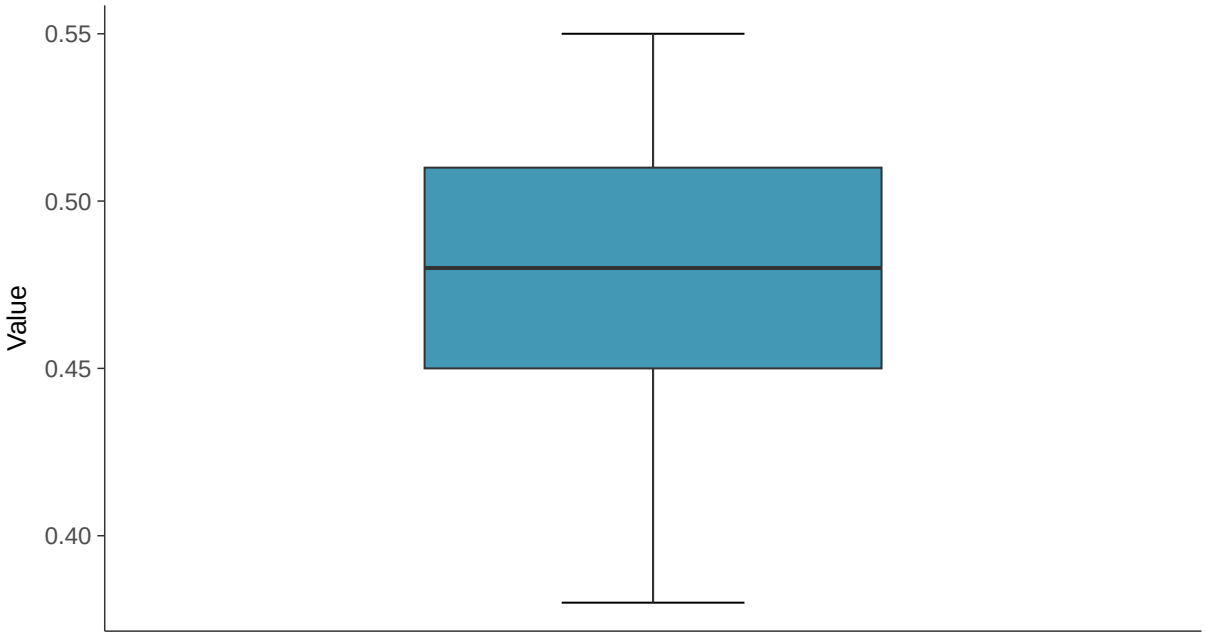
ID: 2_12_5_103





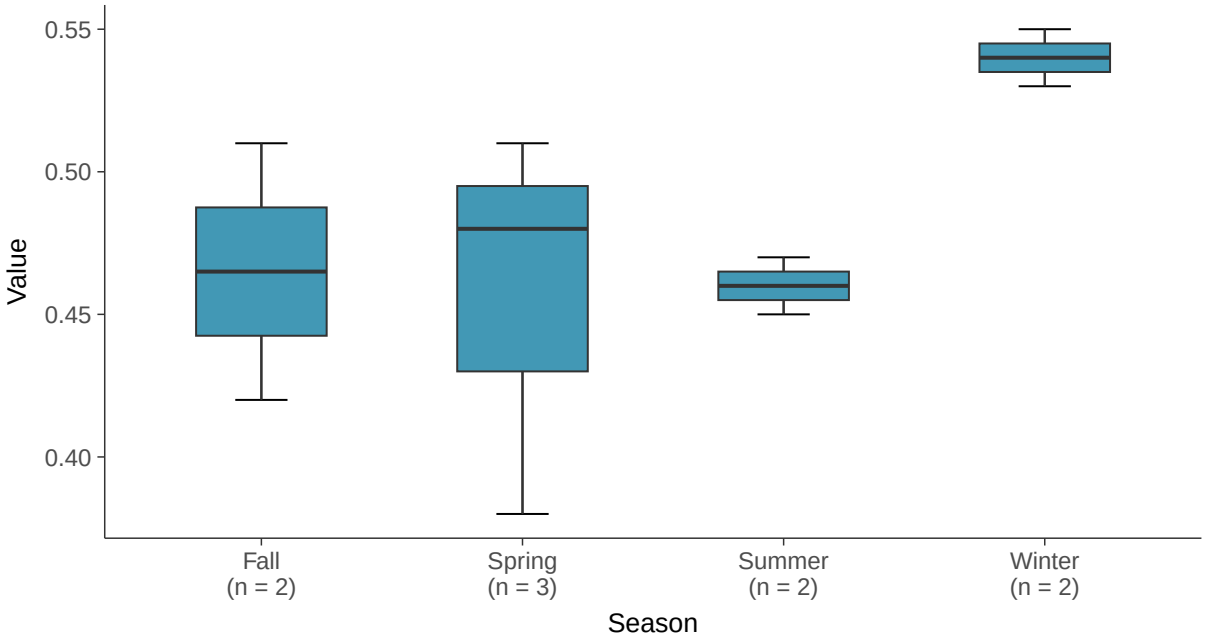
Boxplot

Barium, MW-02 (mg/L)



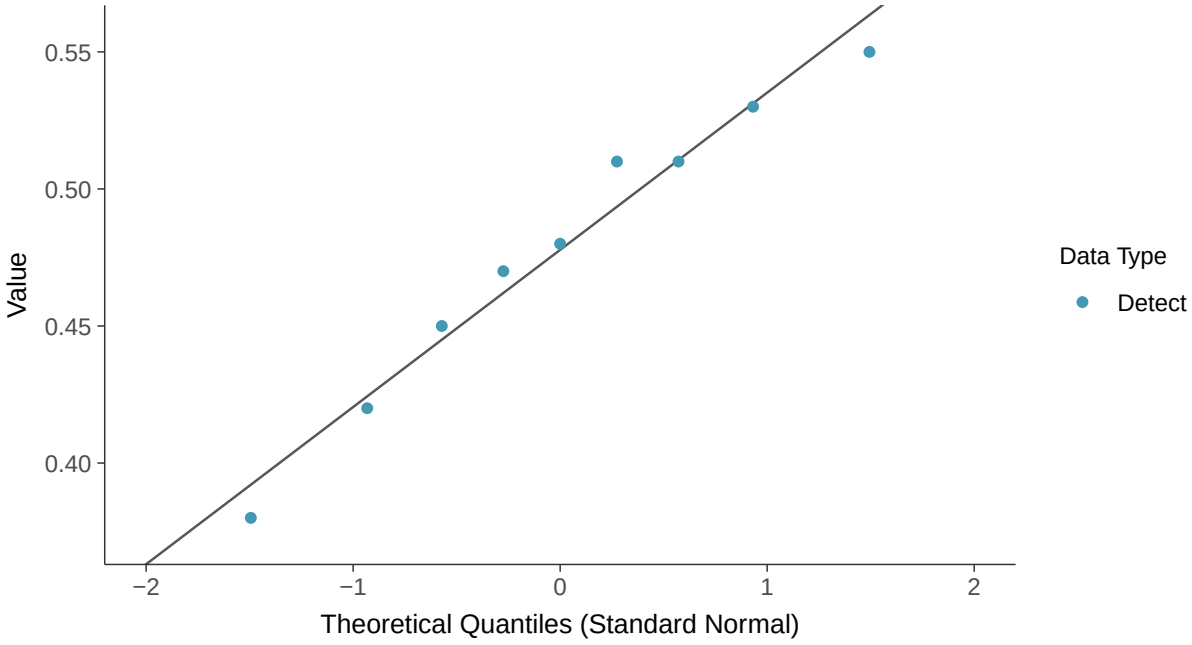
Boxplot by Season

Barium, MW-02 (mg/L)



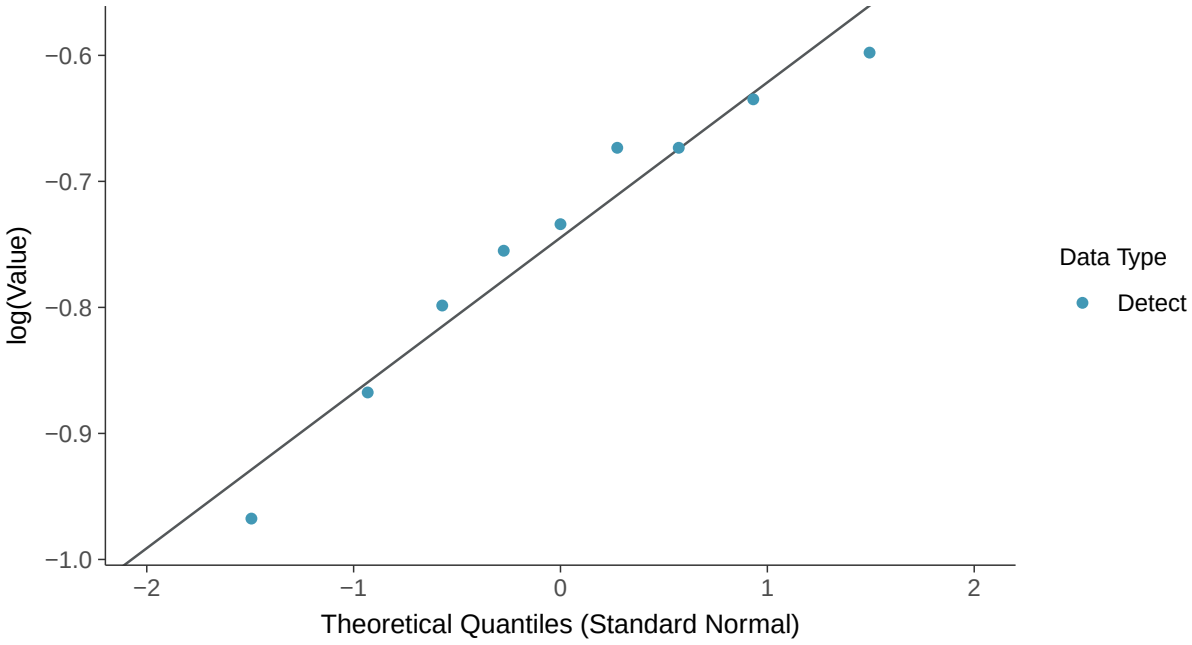
Normal Q-Q plot

Barium, MW-02 (mg/L)



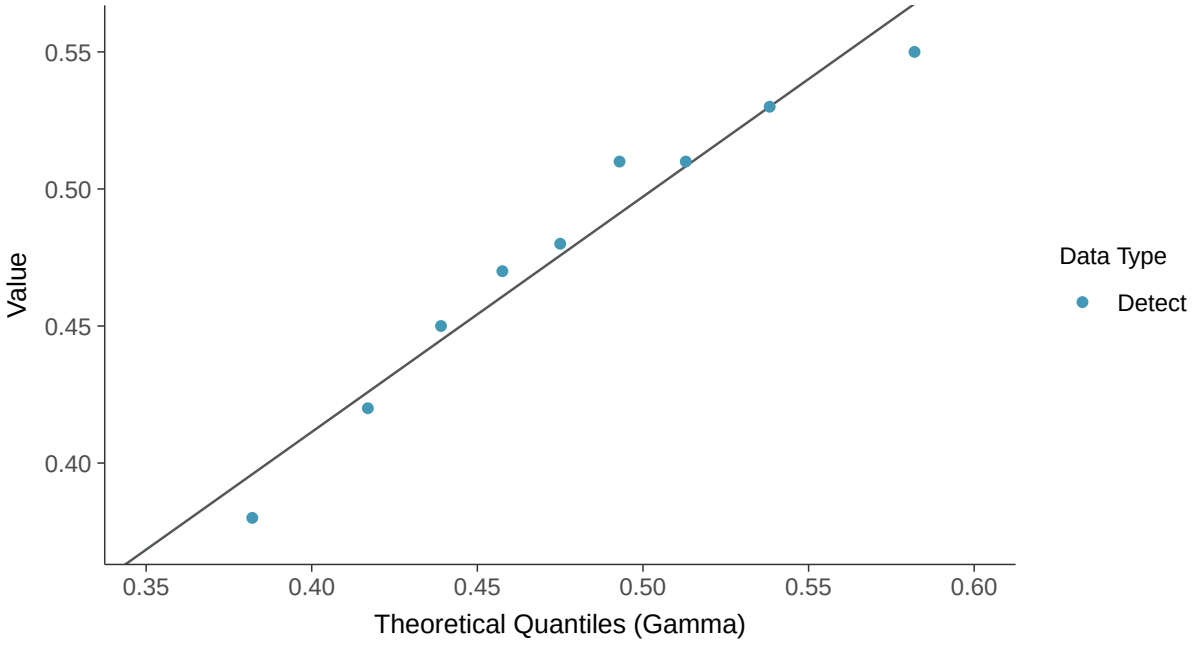
Lognormal Q-Q plot

Barium, MW-02 (mg/L)



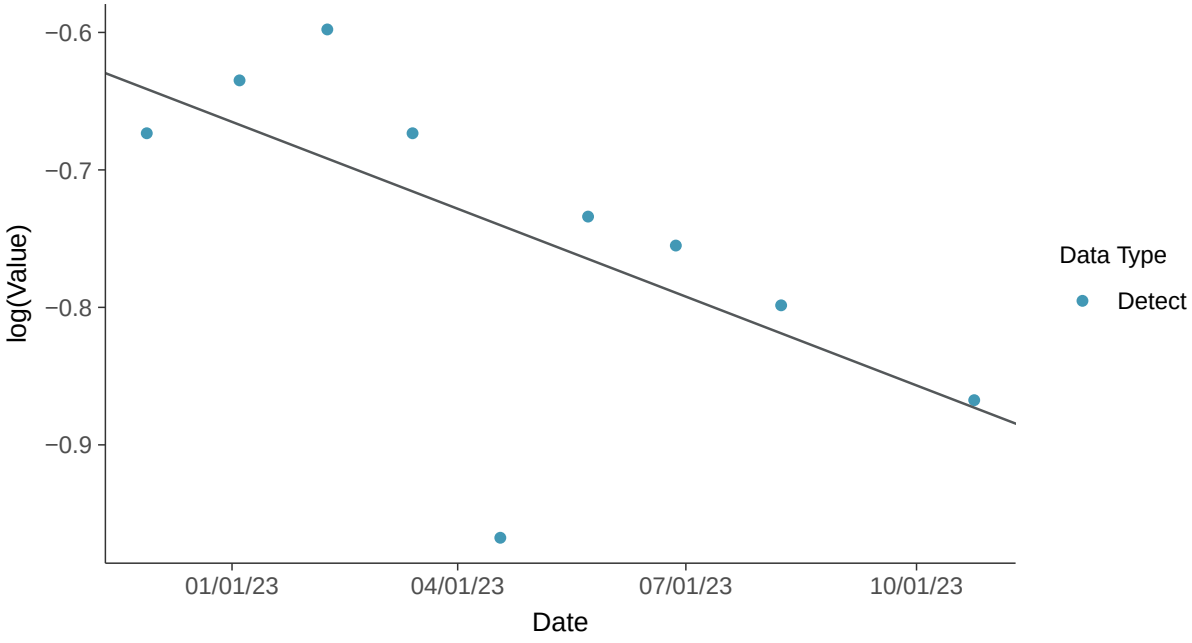
Gamma Q-Q plot

Barium, MW-02 (mg/L)



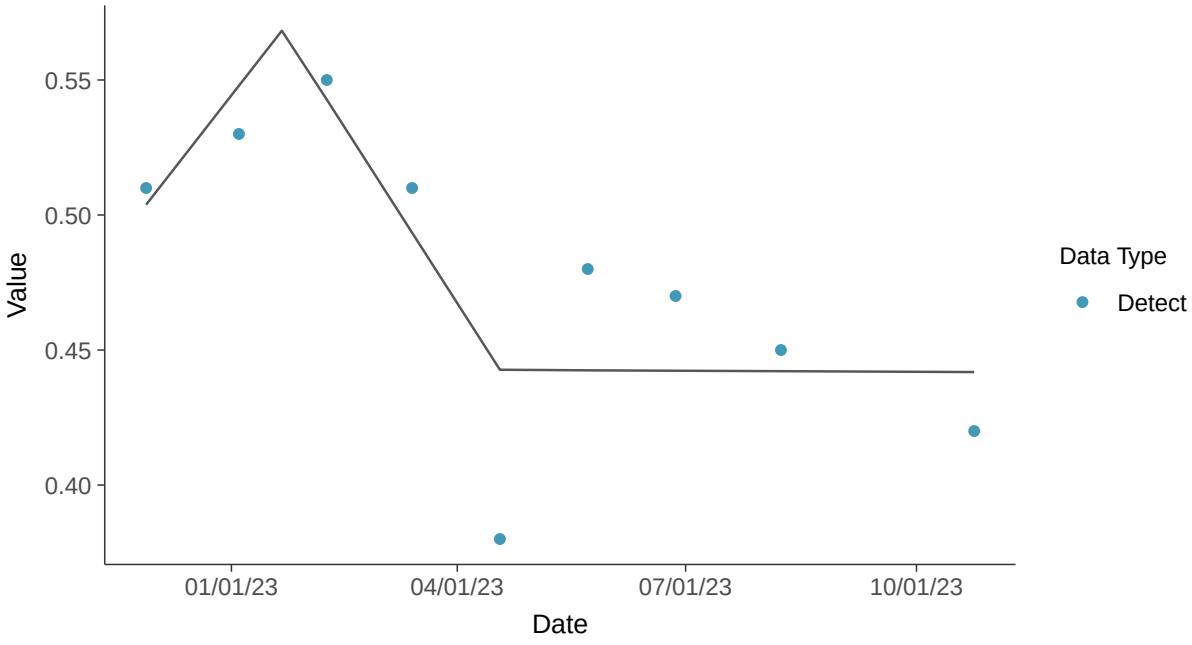
Trend Regression: Lognormal MLE

Barium, MW-02 (mg/L)



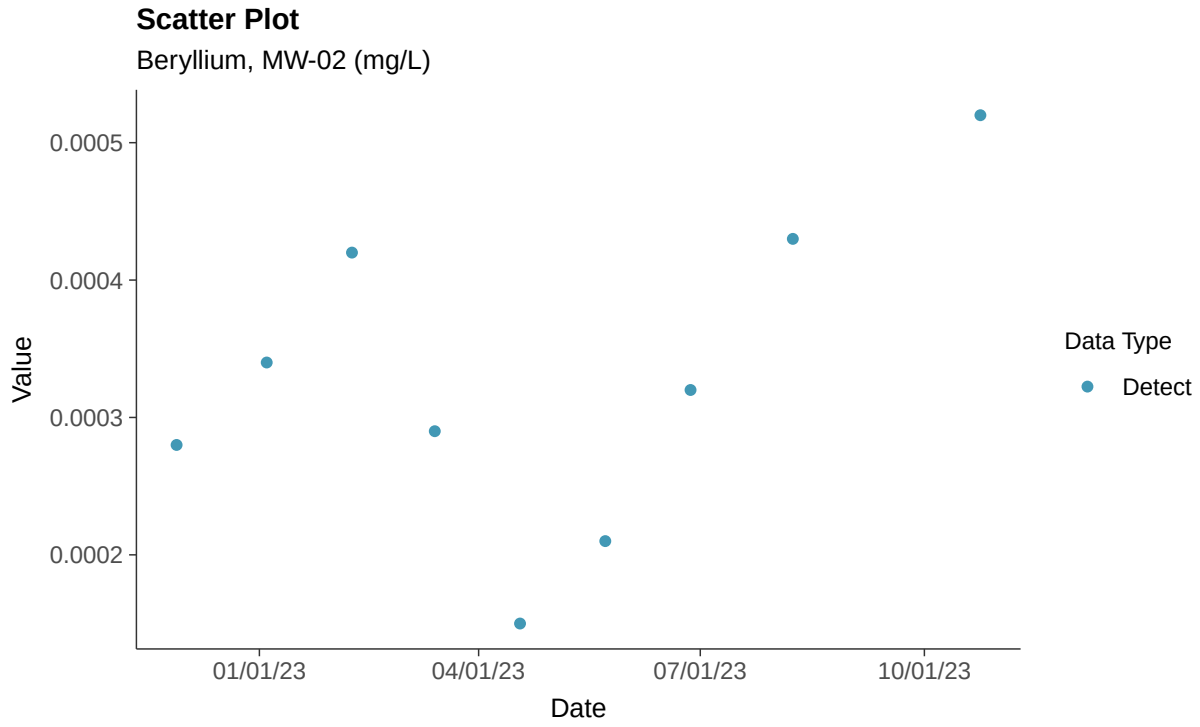
Trend Regression: Piecewise Linear-Linear-Linear

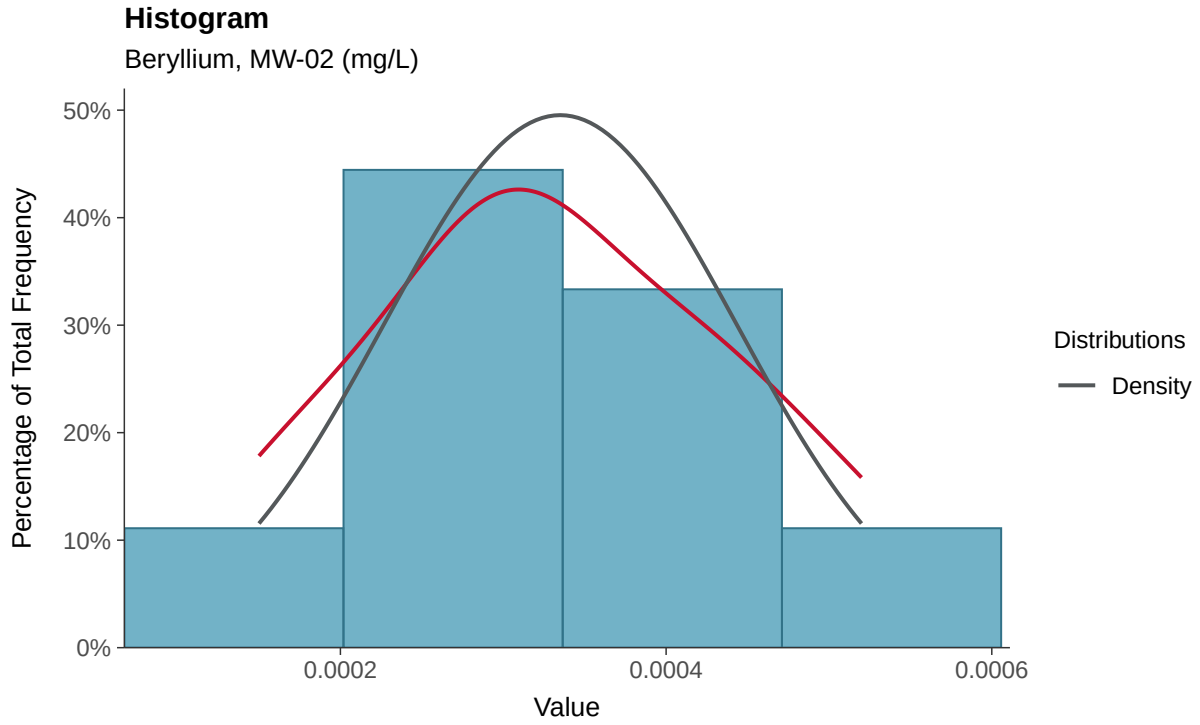
Barium, MW-02 (mg/L)



Appendix IV: Beryllium, MW-02

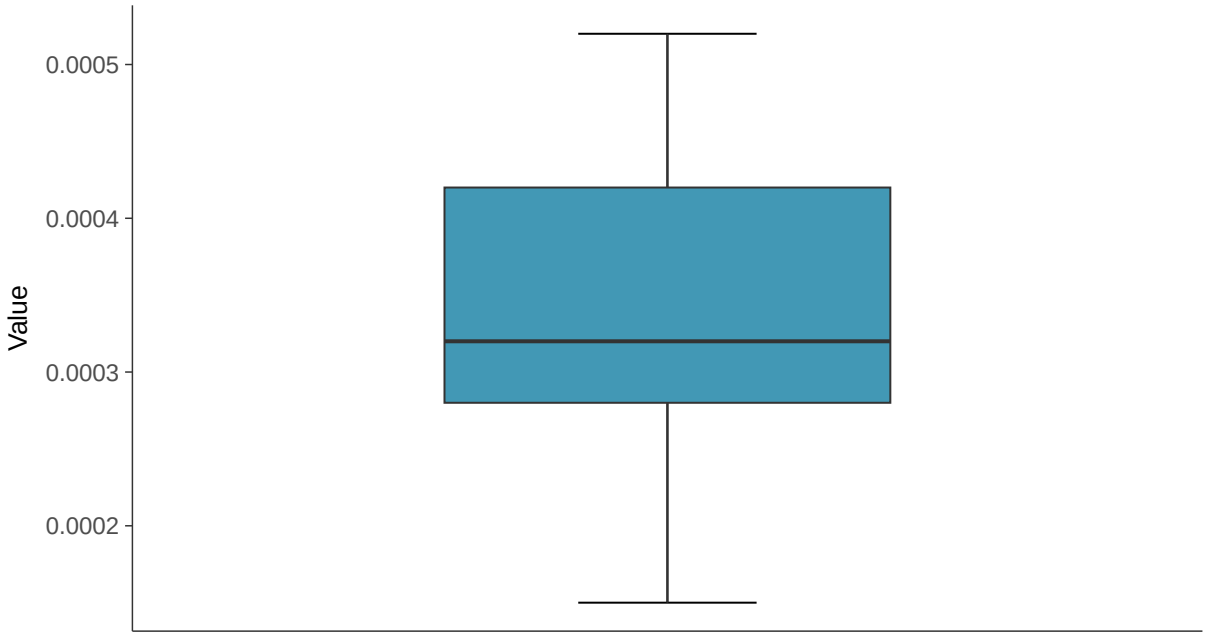
ID: 2_12_5_104





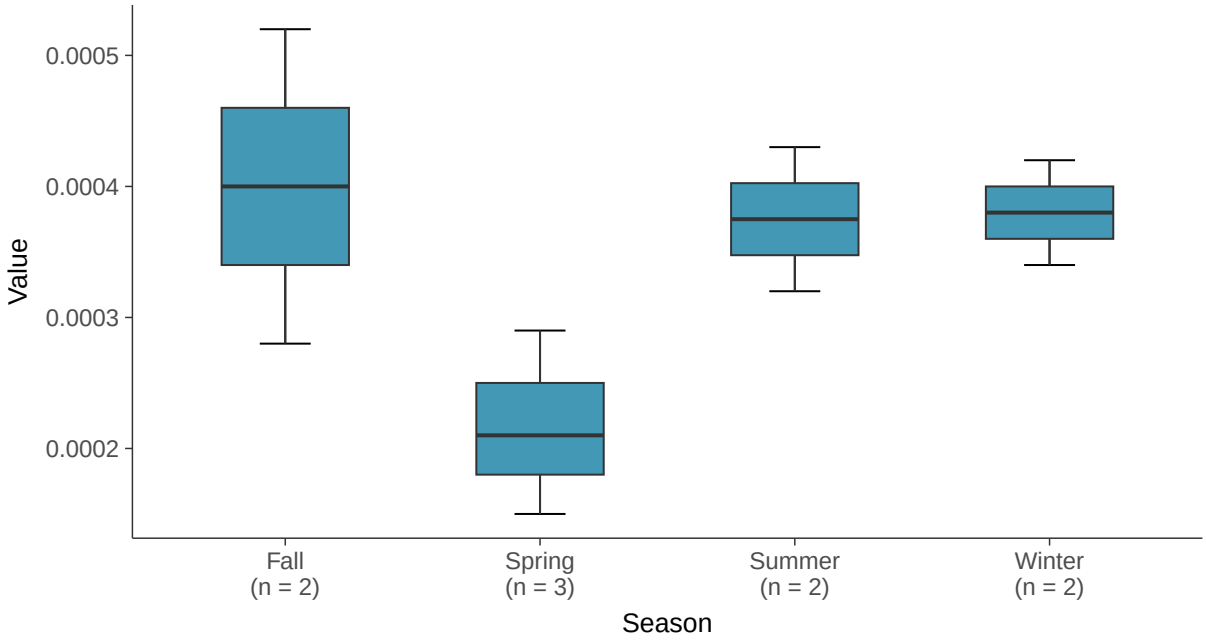
Boxplot

Beryllium, MW-02 (mg/L)



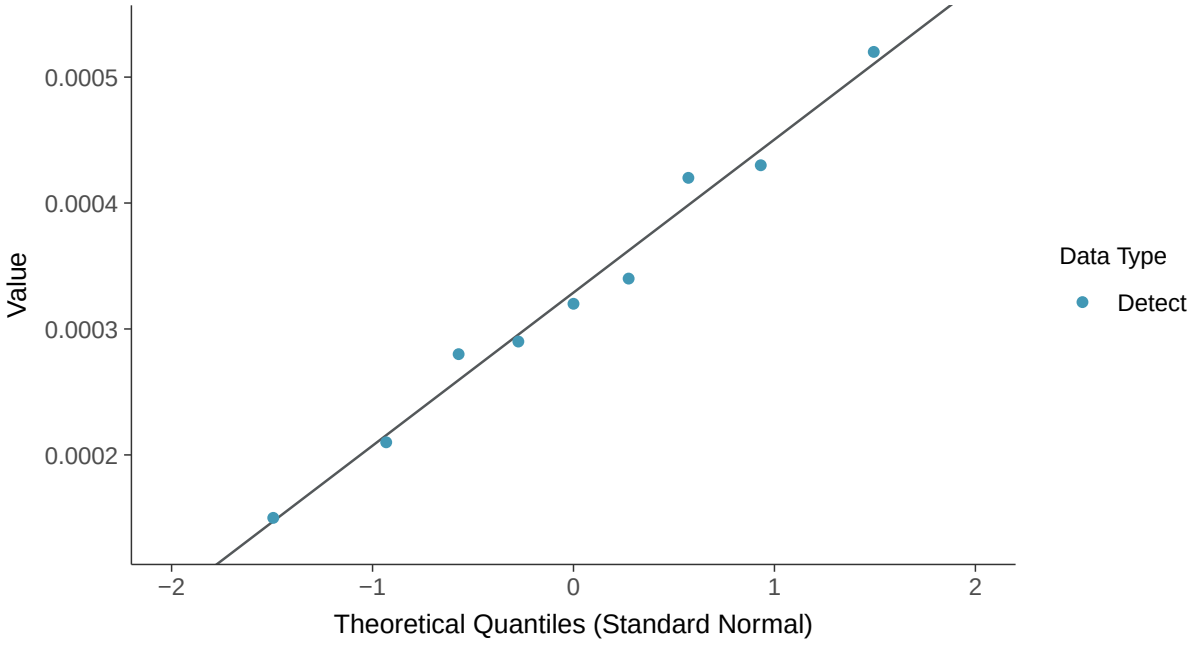
Boxplot by Season

Beryllium, MW-02 (mg/L)



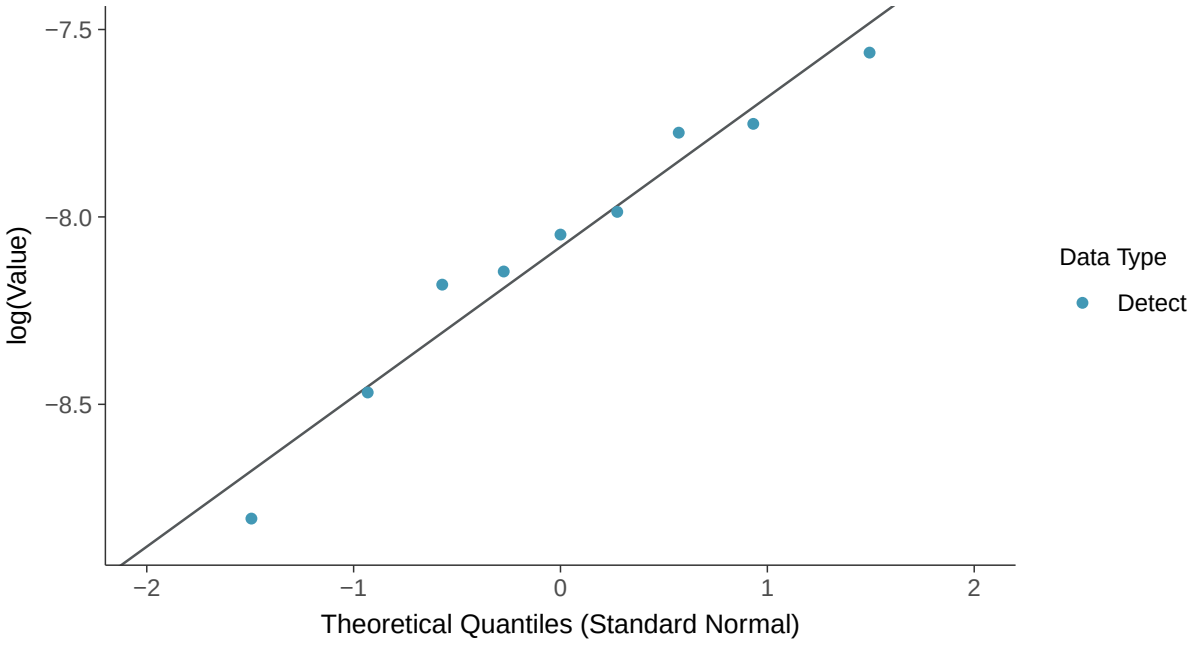
Normal Q-Q plot

Beryllium, MW-02 (mg/L)



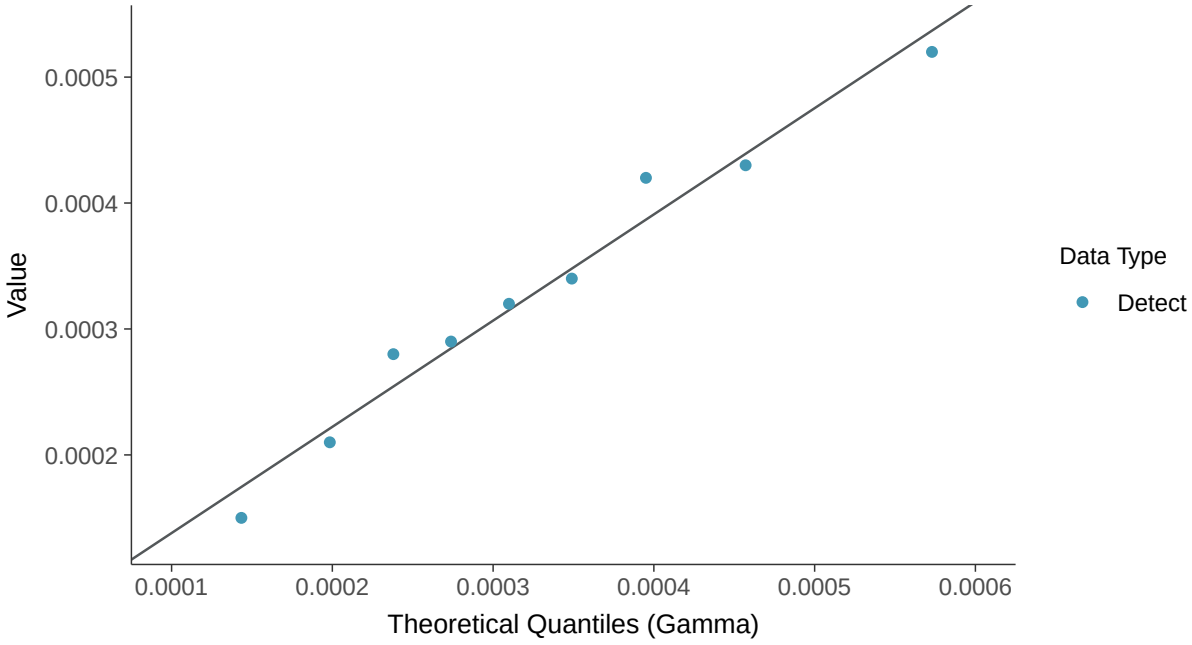
Lognormal Q-Q plot

Beryllium, MW-02 (mg/L)



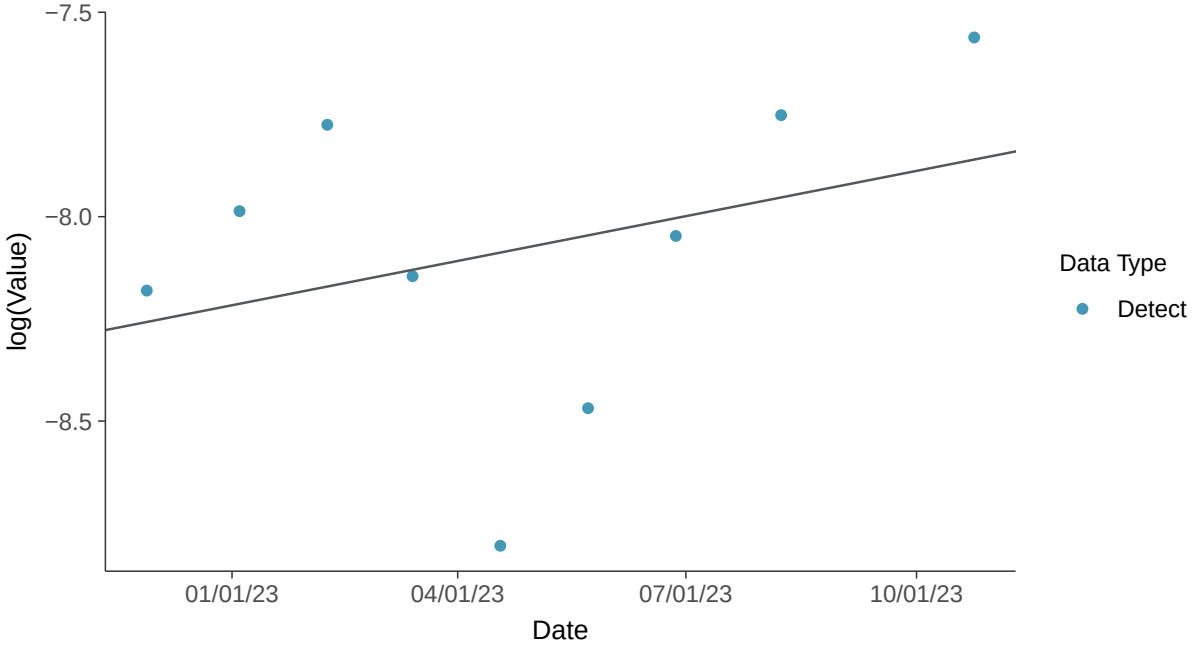
Gamma Q-Q plot

Beryllium, MW-02 (mg/L)



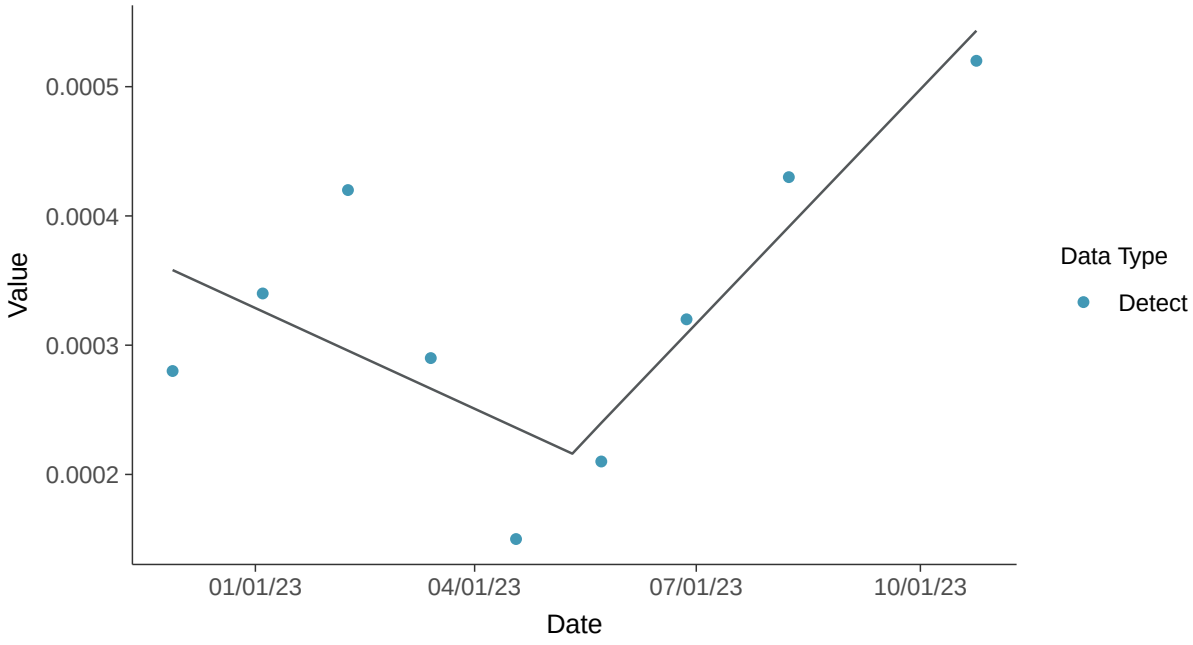
Trend Regression: Lognormal MLE

Beryllium, MW-02 (mg/L)



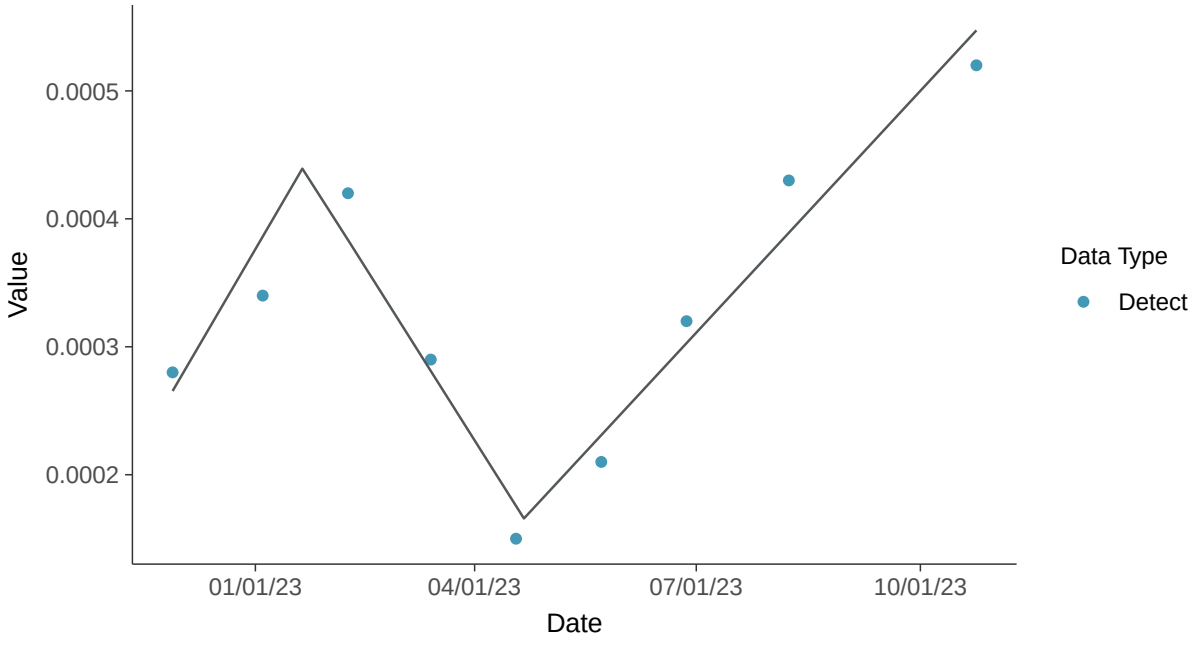
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-02 (mg/L)



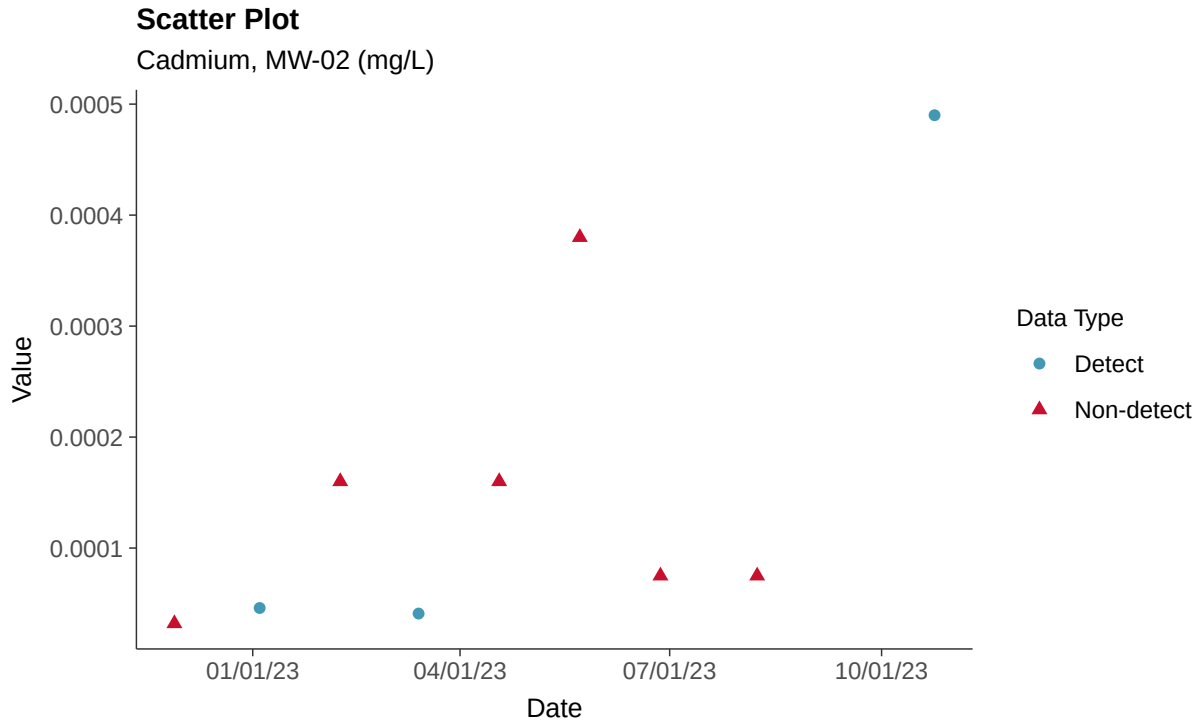
Trend Regression: Piecewise Linear-Linear-Linear

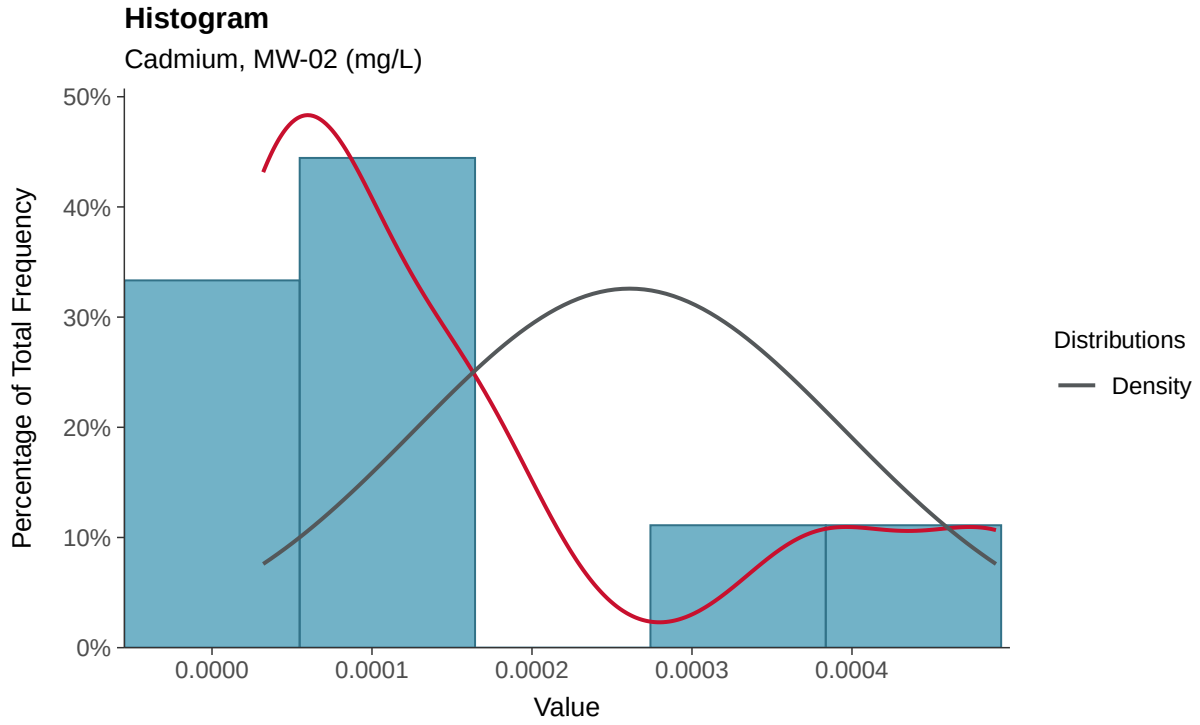
Beryllium, MW-02 (mg/L)



Appendix IV: Cadmium, MW-02

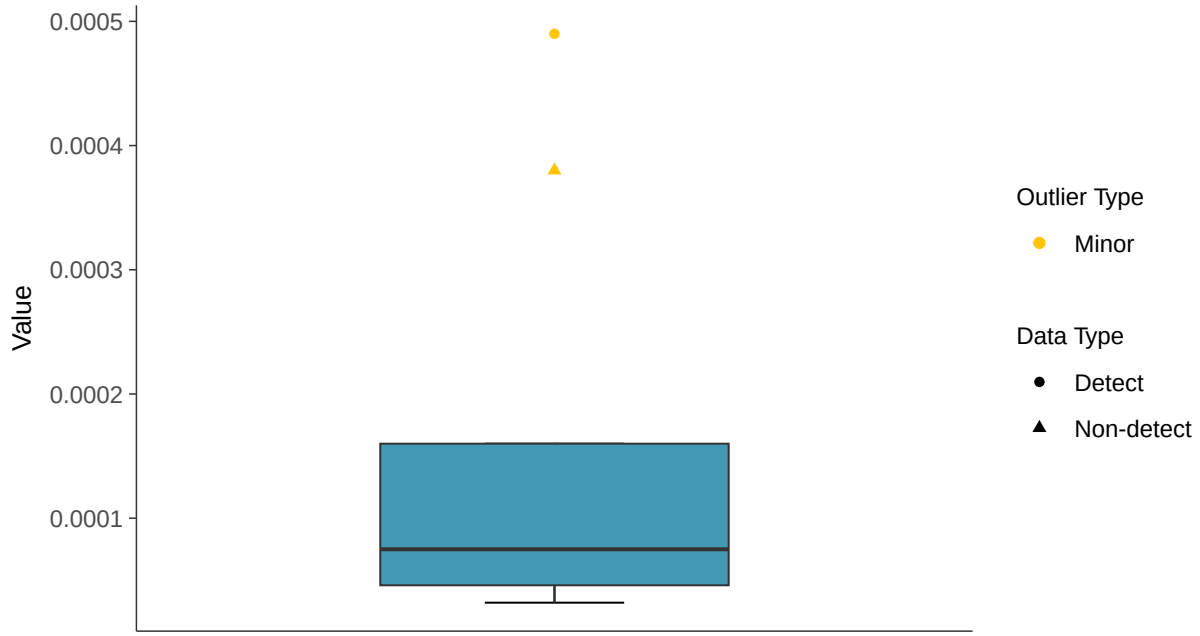
ID: 2_12_5_106





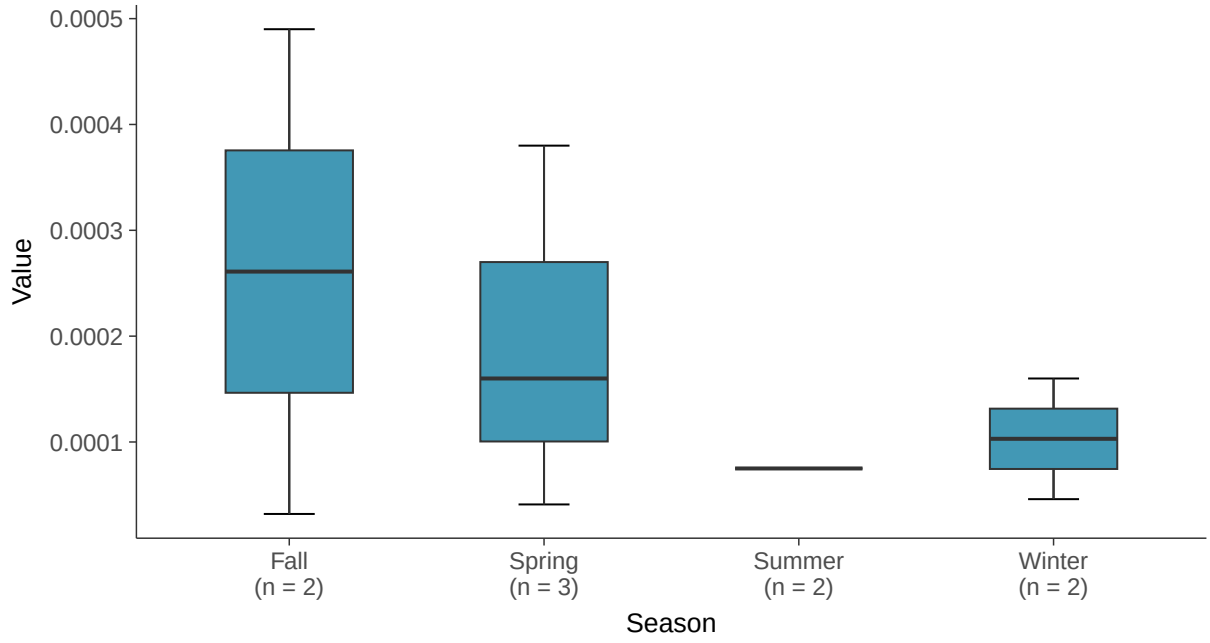
Boxplot

Cadmium, MW-02 (mg/L)



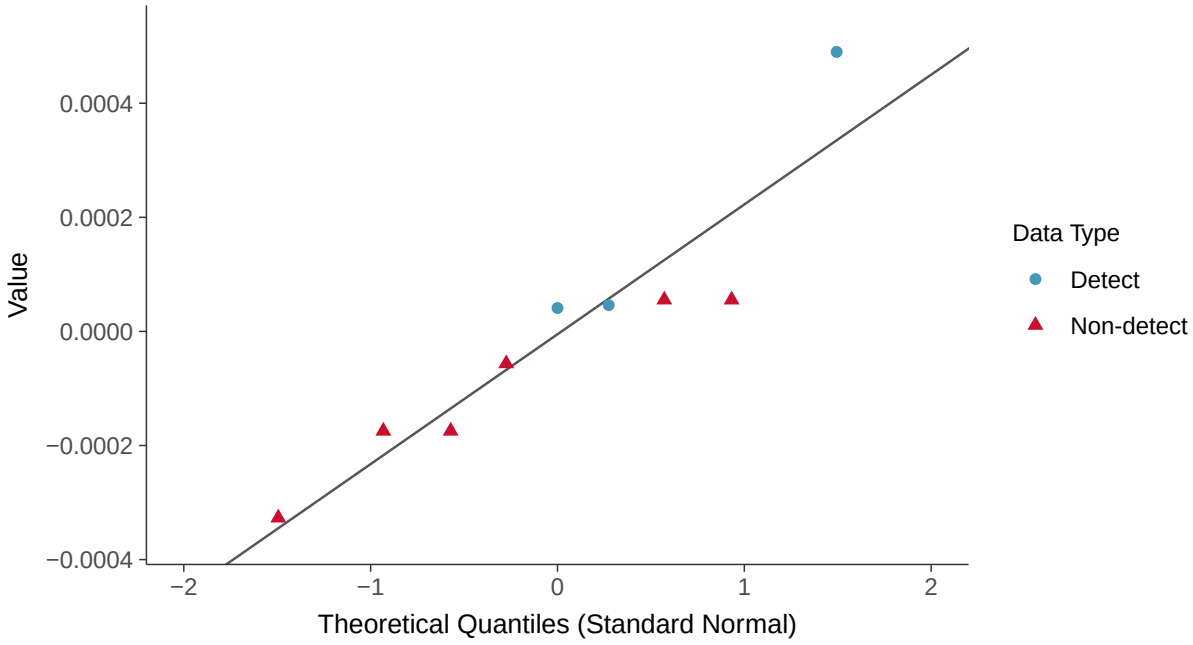
Boxplot by Season

Cadmium, MW-02 (mg/L)



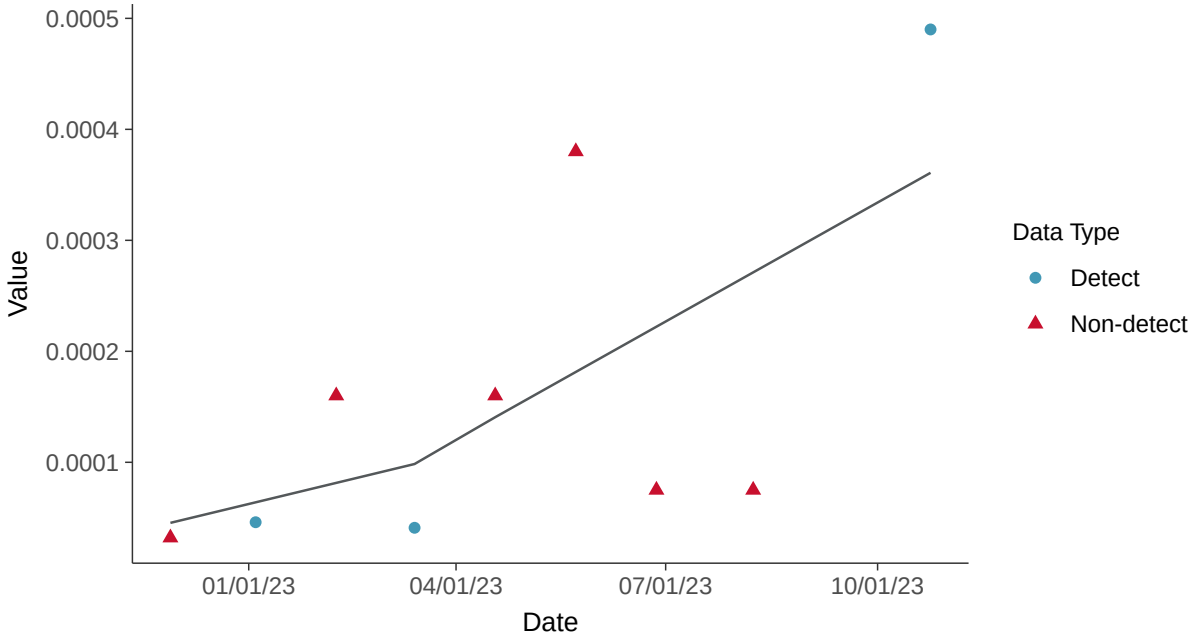
Normal Q-Q plot using ROS Imputed Estimates

Cadmium, MW-02 (mg/L)



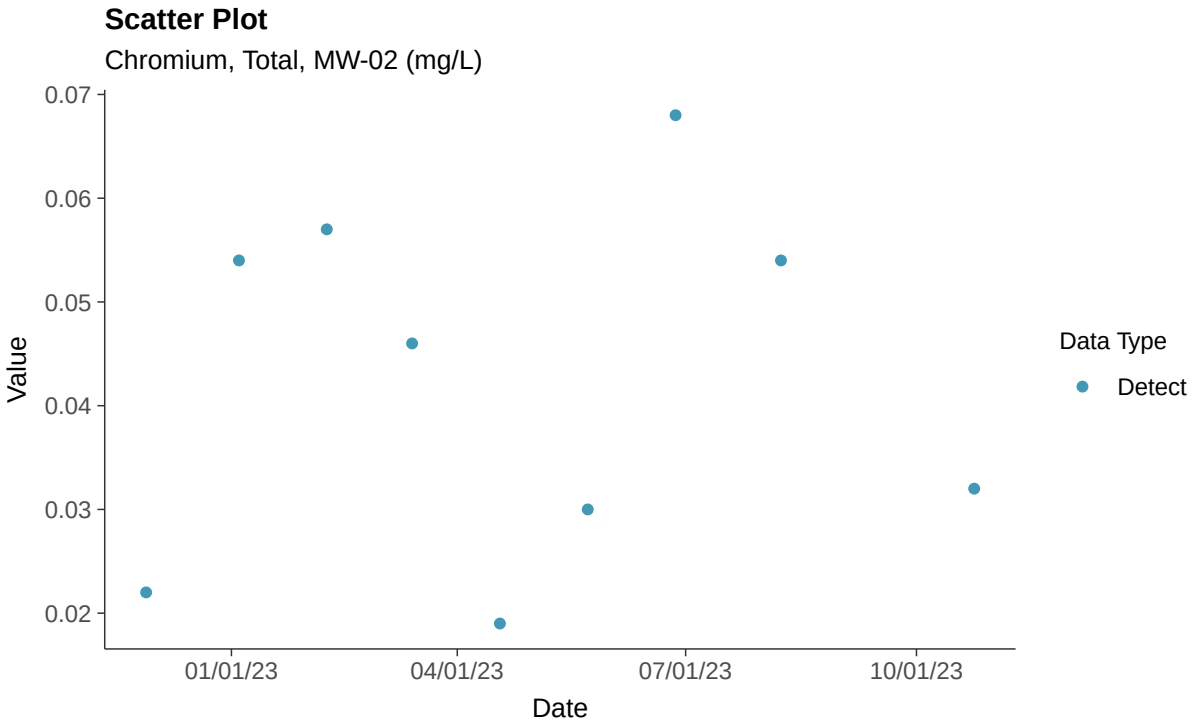
Trend Regression: Piecewise Linear-Linear

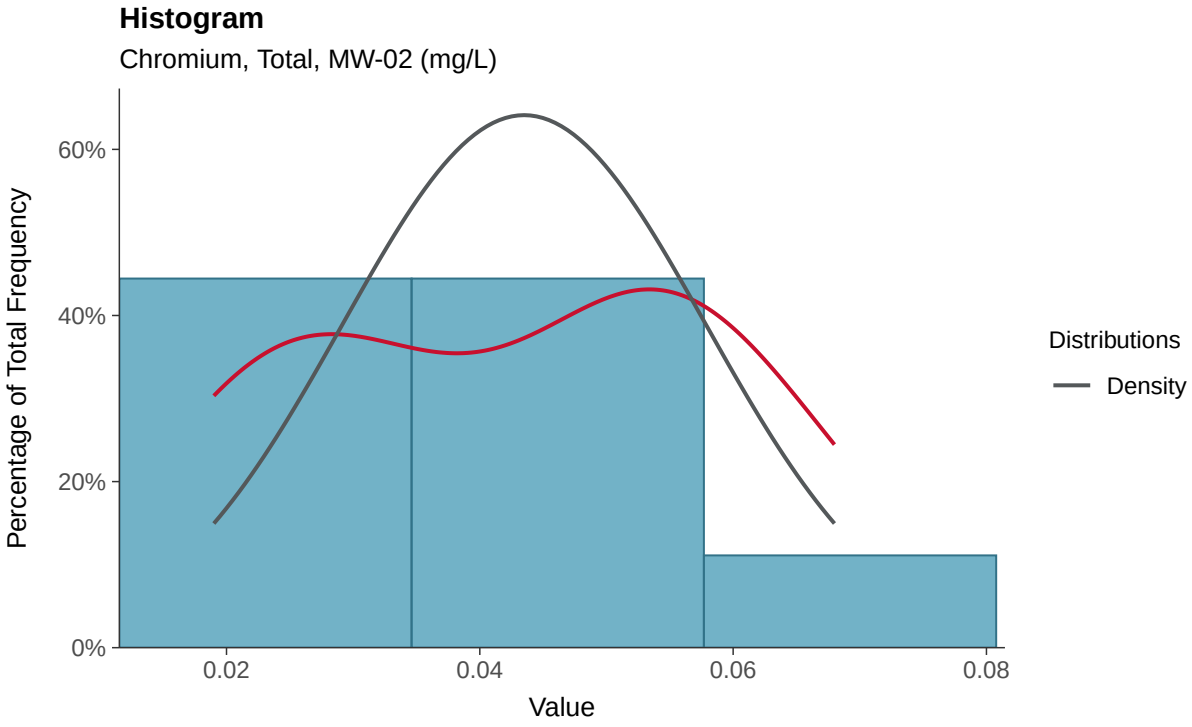
Cadmium, MW-02 (mg/L)



Appendix IV: Chromium, Total, MW-02

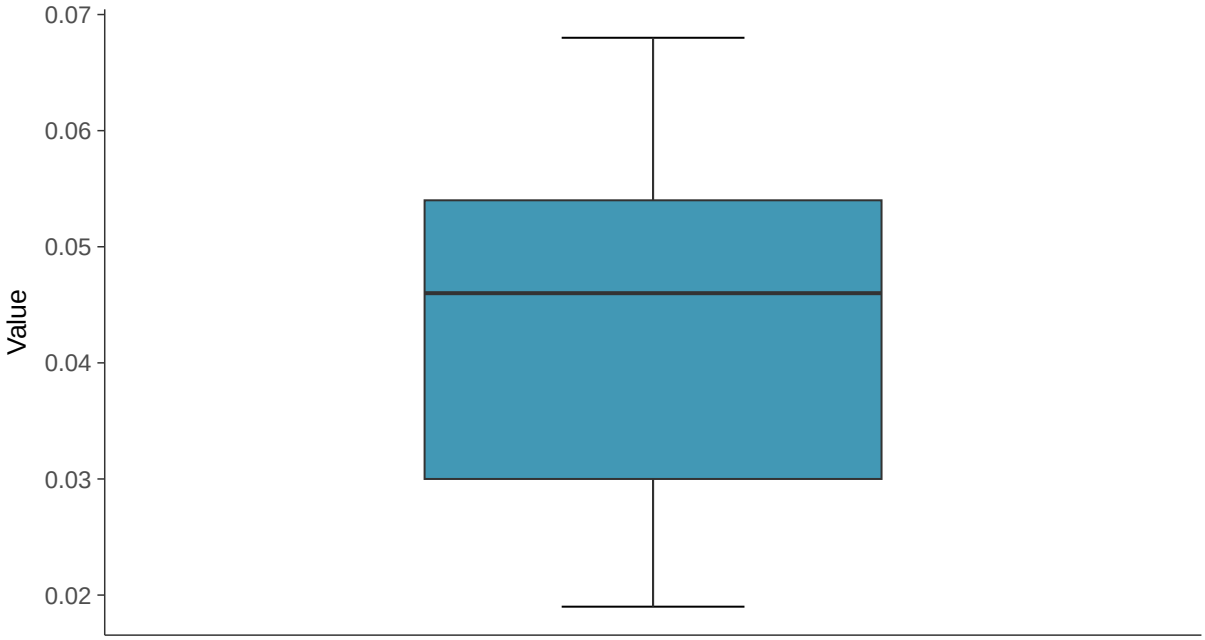
ID: 2_12_5_109





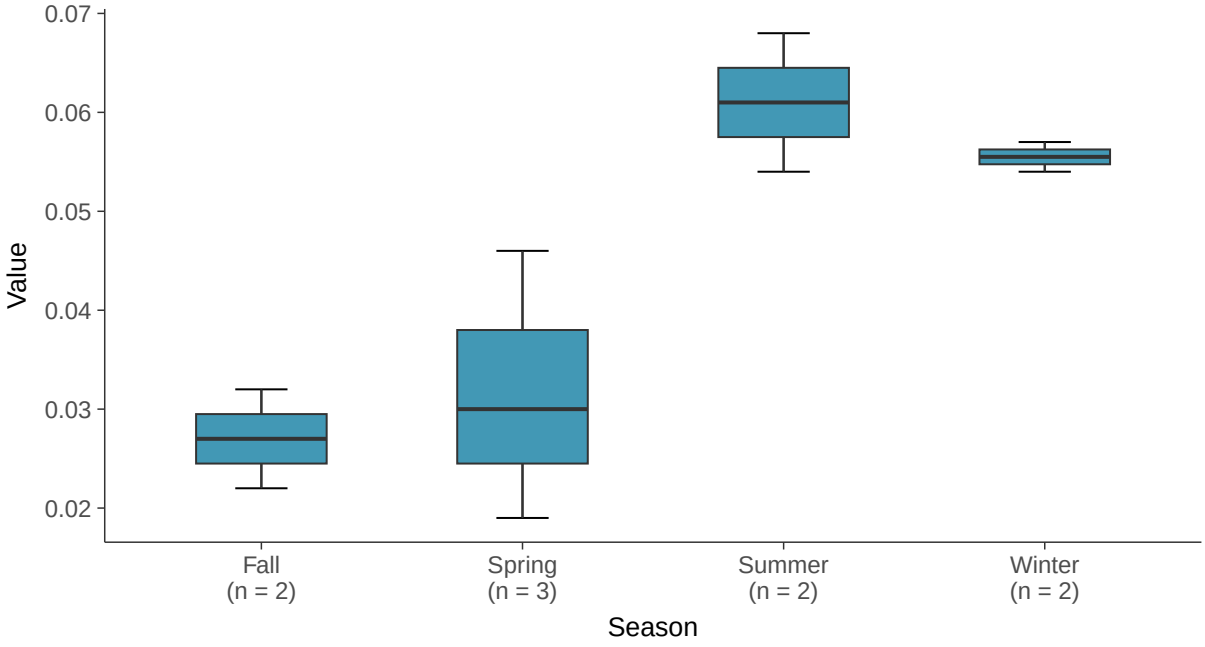
Boxplot

Chromium, Total, MW-02 (mg/L)



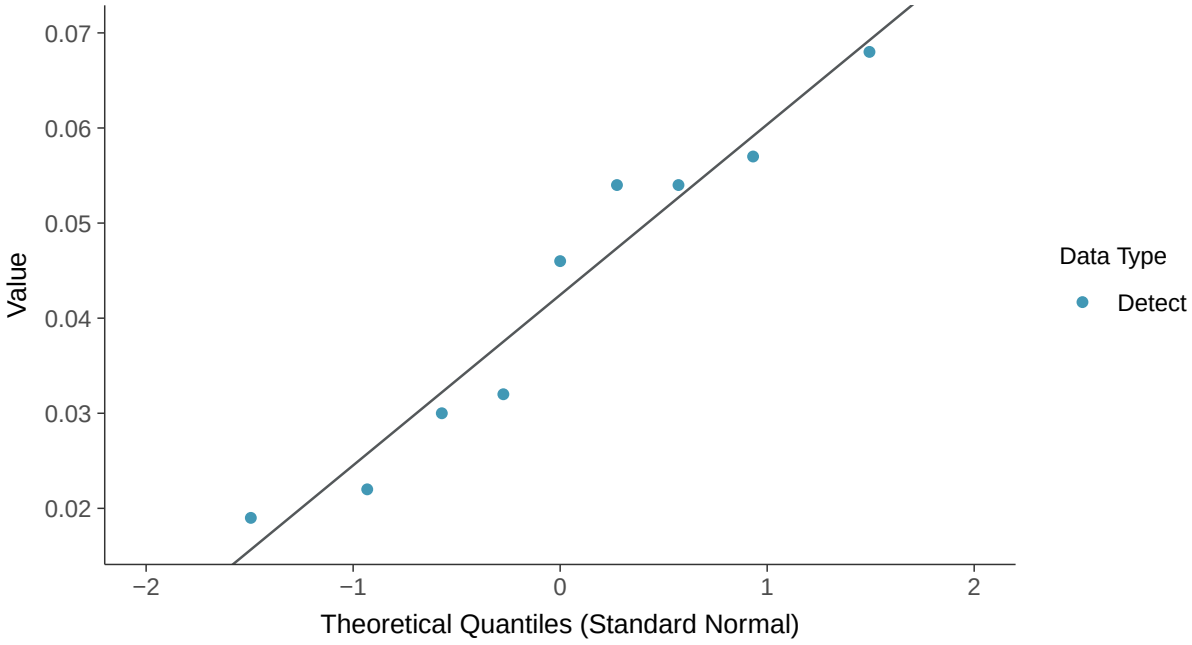
Boxplot by Season

Chromium, Total, MW-02 (mg/L)



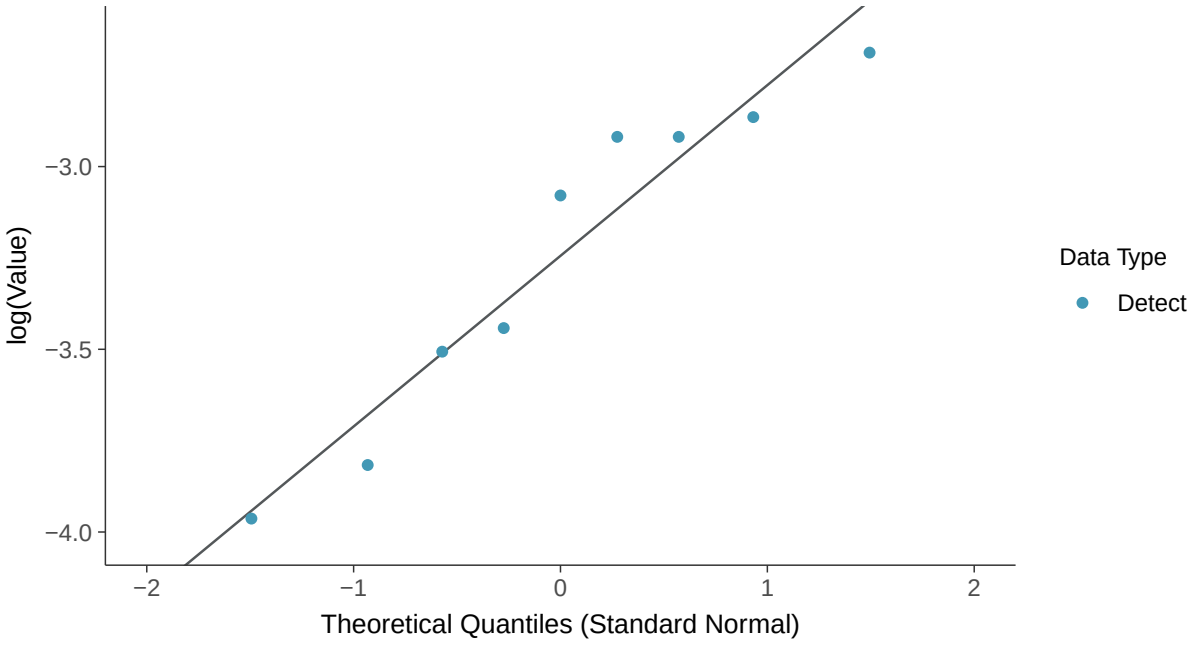
Normal Q-Q plot

Chromium, Total, MW-02 (mg/L)



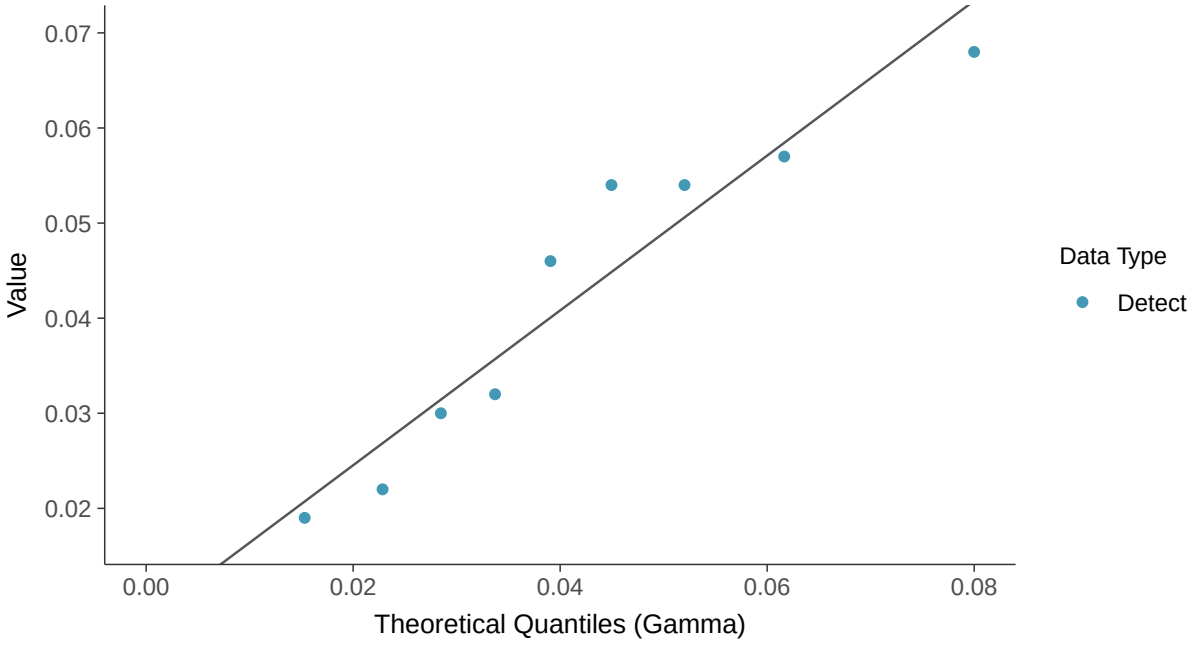
Lognormal Q-Q plot

Chromium, Total, MW-02 (mg/L)



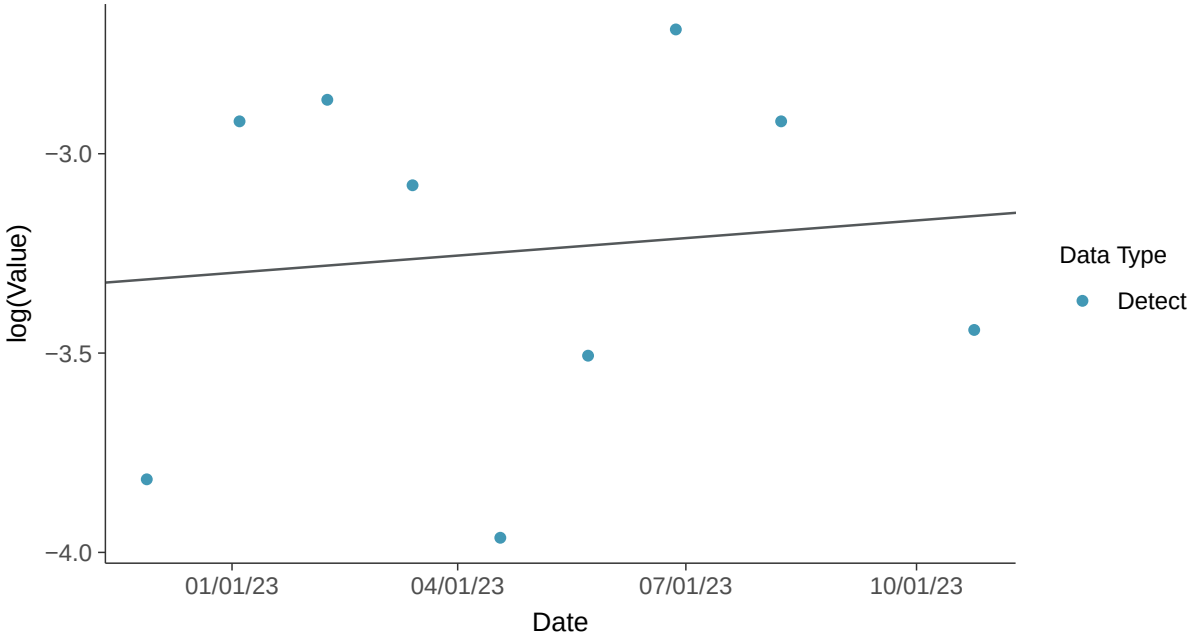
Gamma Q-Q plot

Chromium, Total, MW-02 (mg/L)



Trend Regression: Lognormal MLE

Chromium, Total, MW-02 (mg/L)

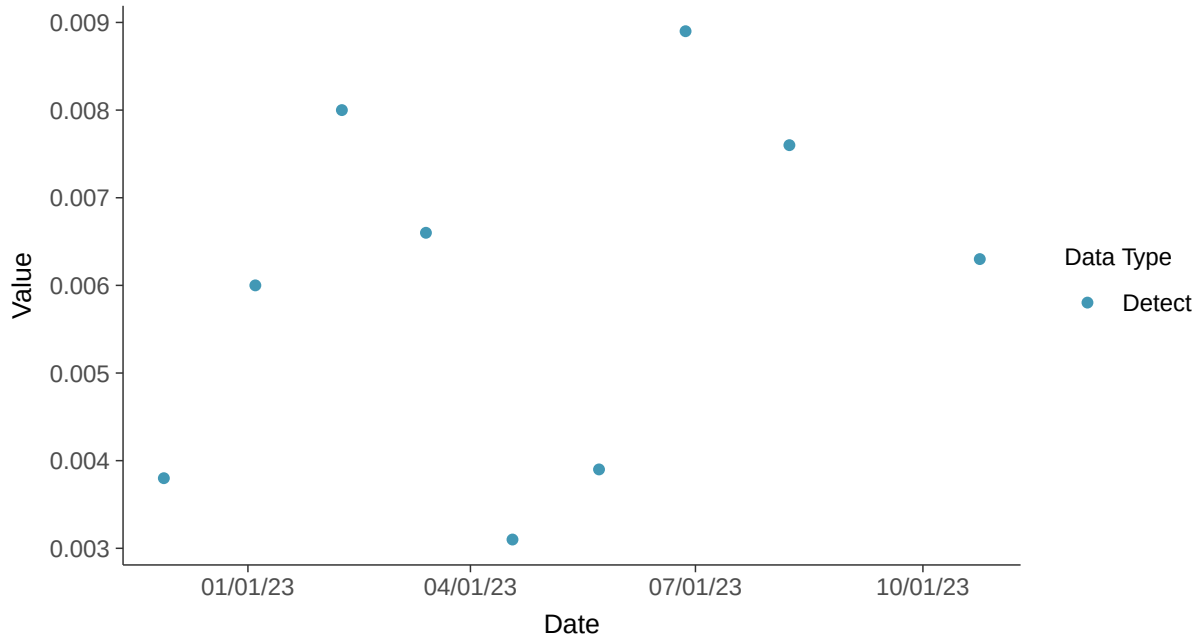


Appendix IV: Cobalt, MW-02

ID: 2_12_5_110

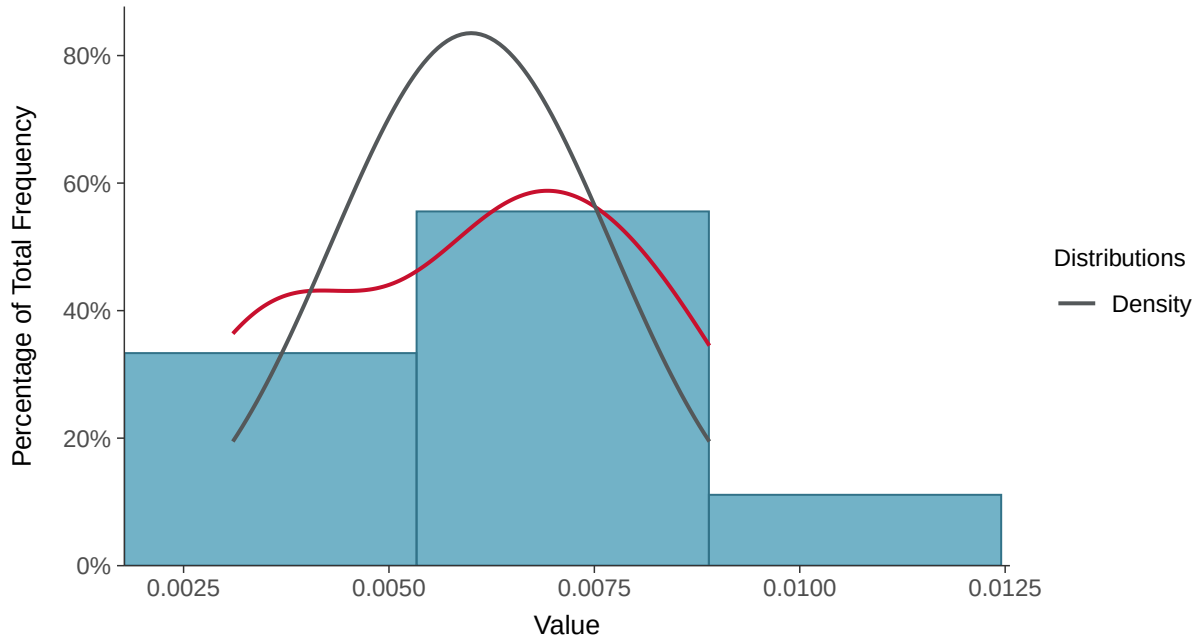
Scatter Plot

Cobalt, MW-02 (mg/L)



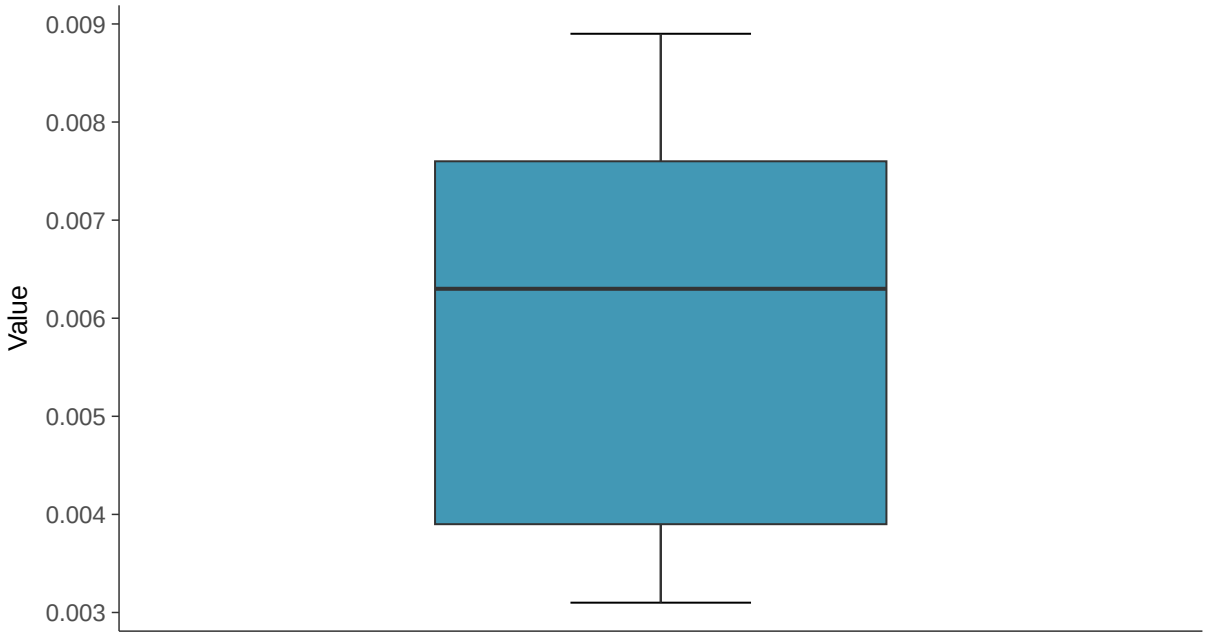
Histogram

Cobalt, MW-02 (mg/L)



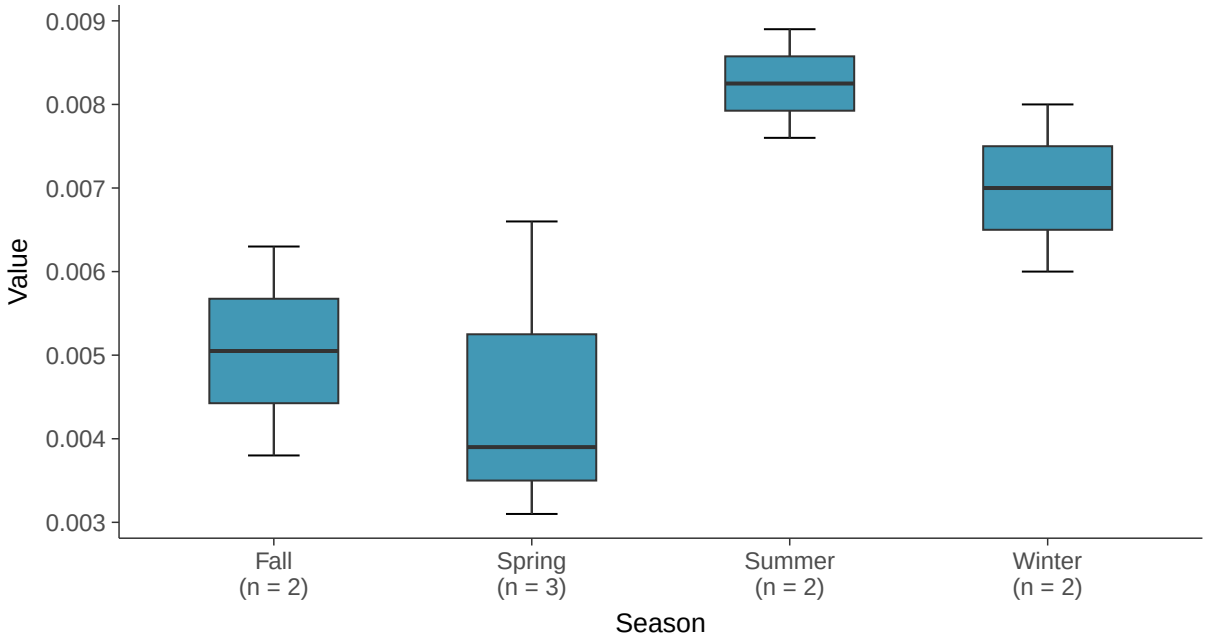
Boxplot

Cobalt, MW-02 (mg/L)



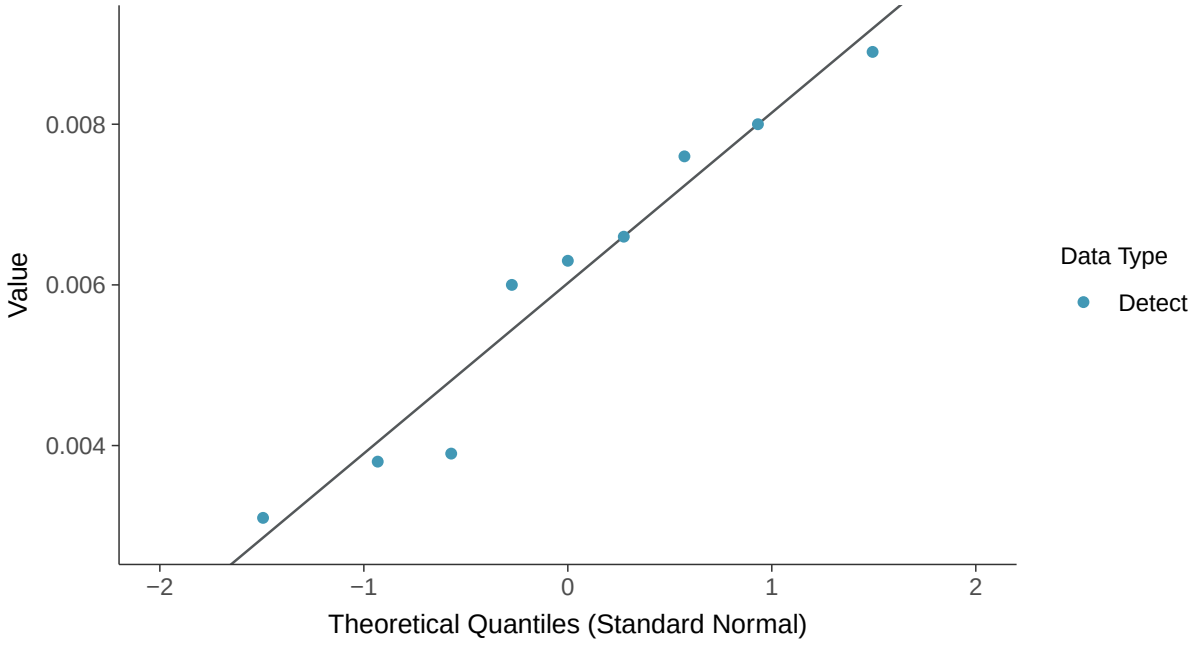
Boxplot by Season

Cobalt, MW-02 (mg/L)



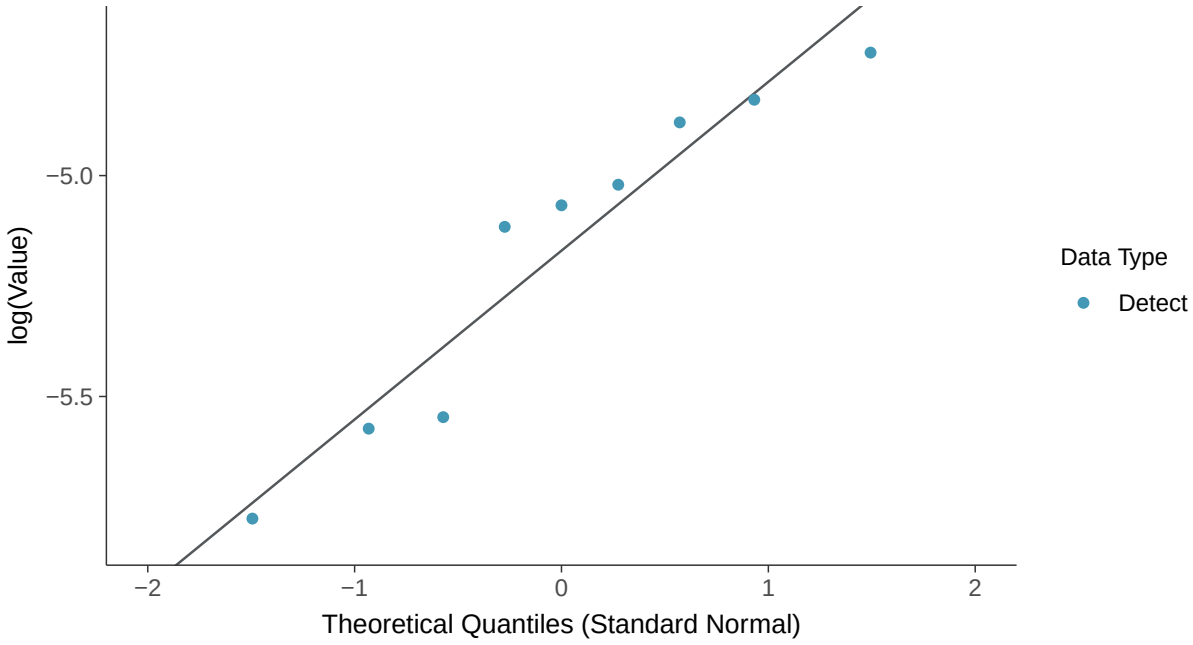
Normal Q-Q plot

Cobalt, MW-02 (mg/L)



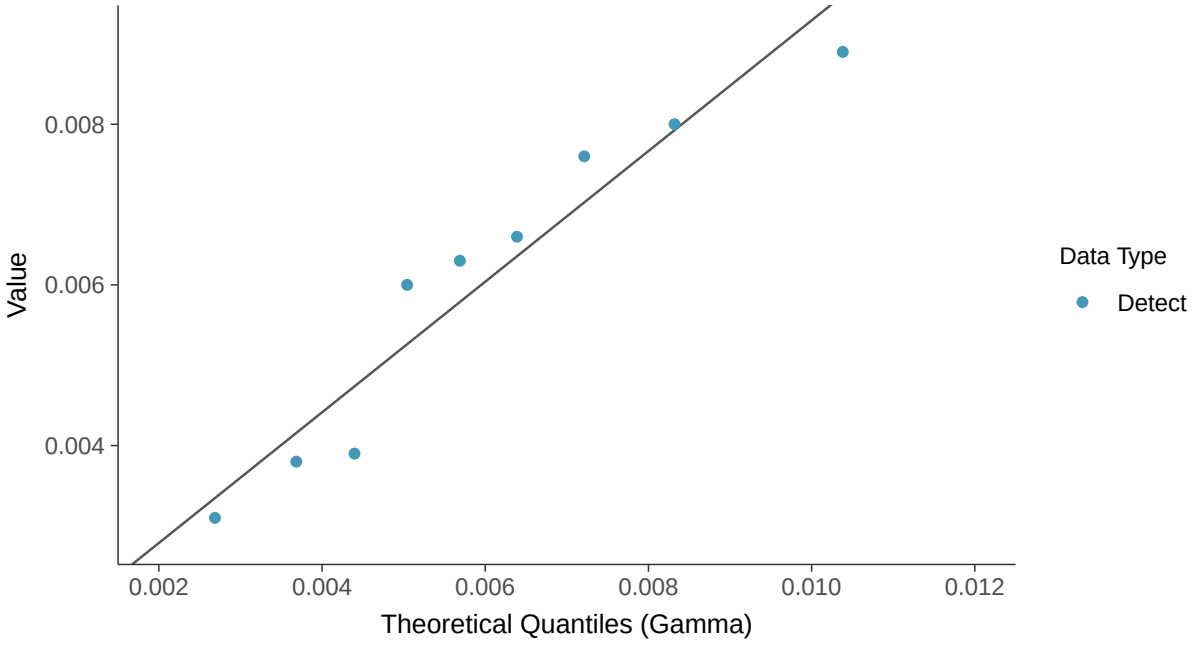
Lognormal Q-Q plot

Cobalt, MW-02 (mg/L)



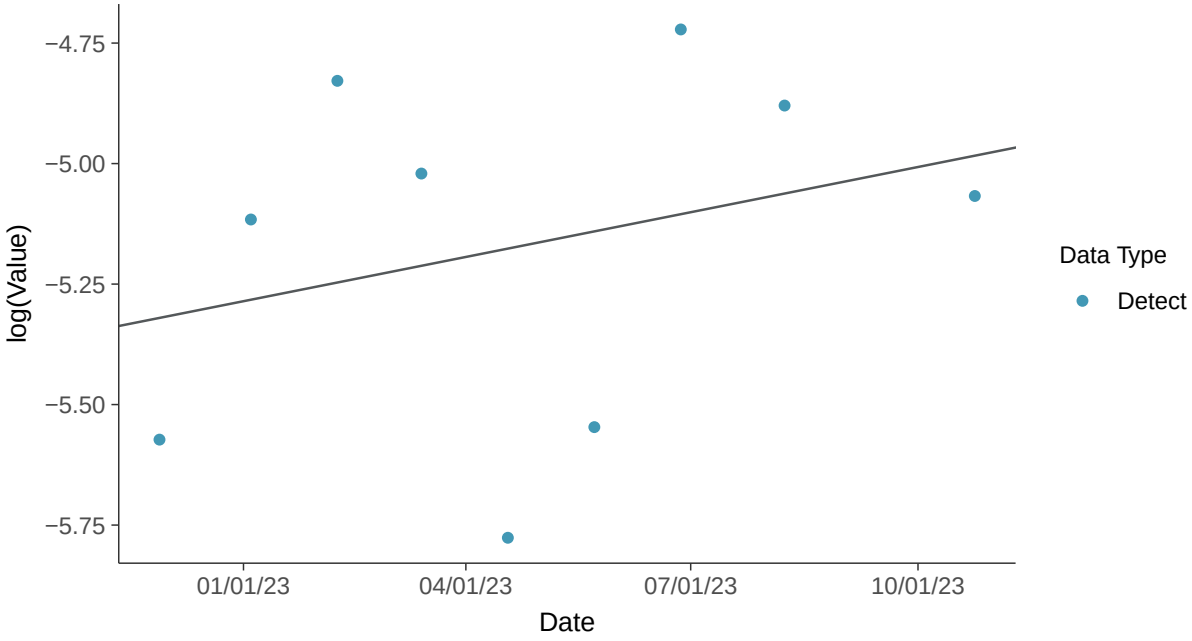
Gamma Q-Q plot

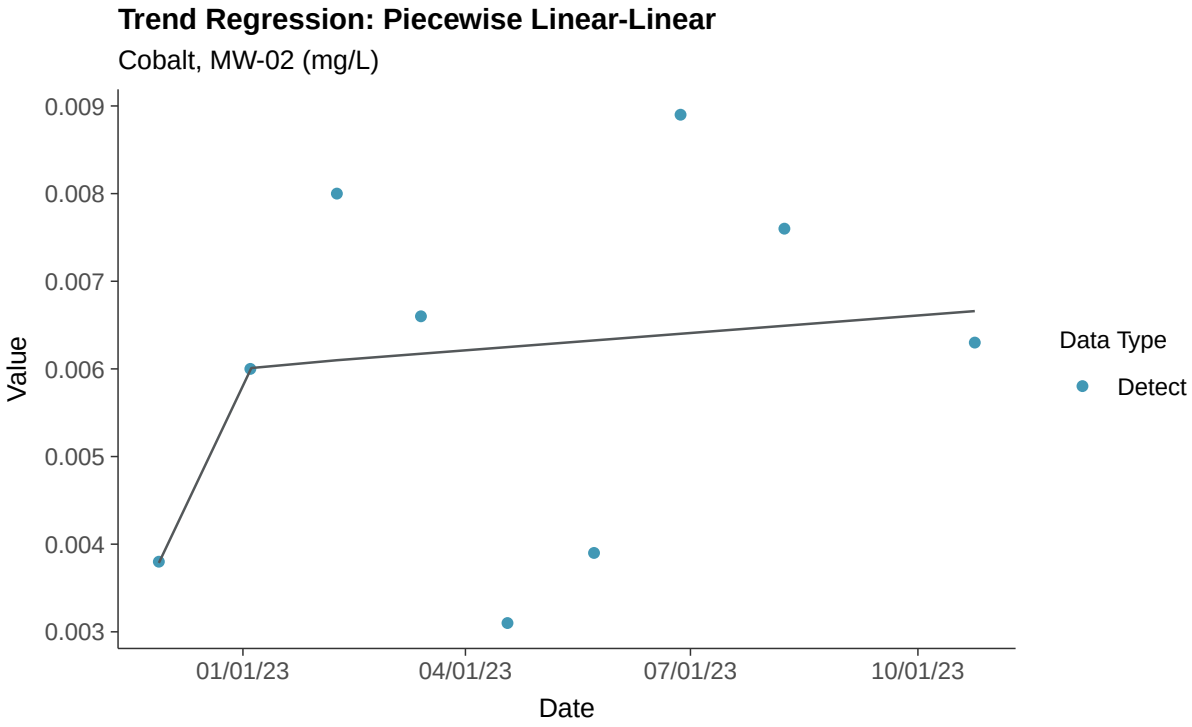
Cobalt, MW-02 (mg/L)



Trend Regression: Lognormal MLE

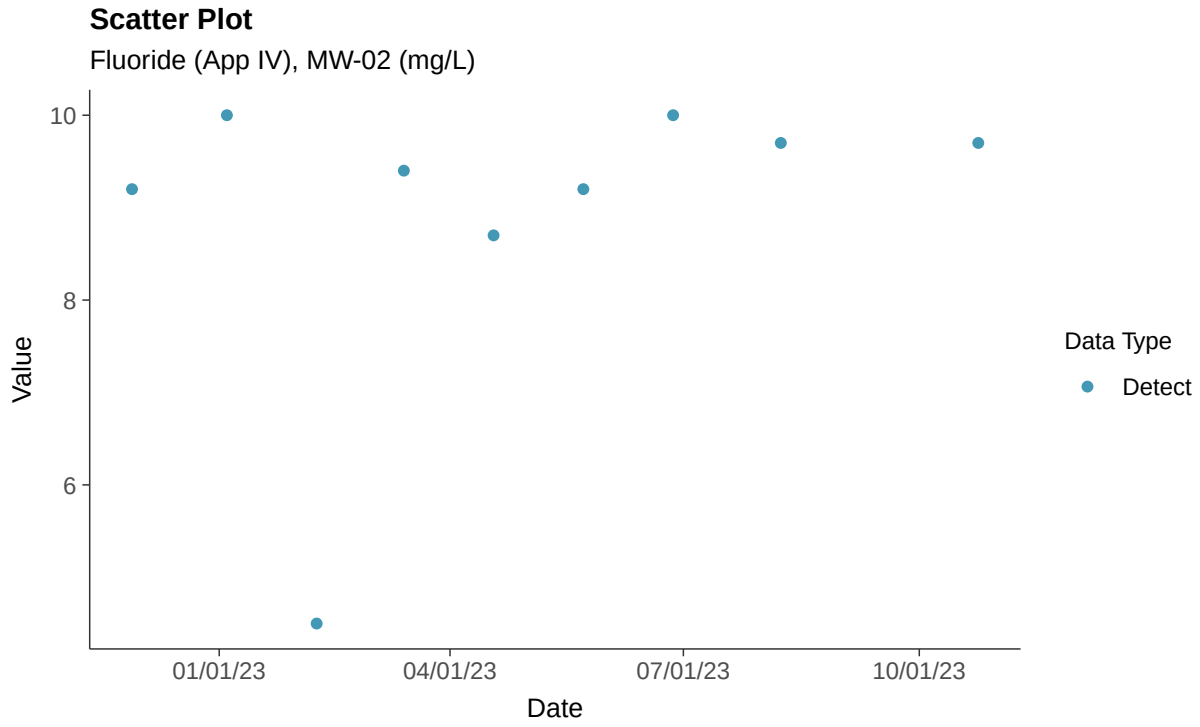
Cobalt, MW-02 (mg/L)

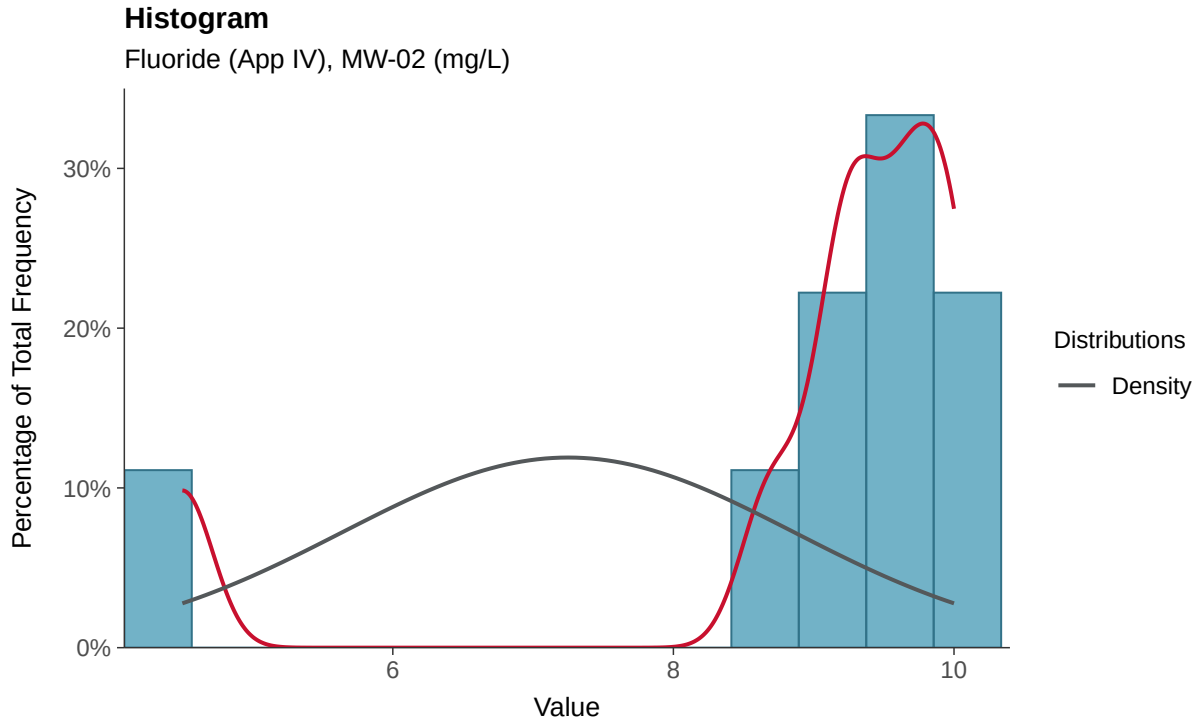



Trend Regression: Piecewise Linear-Linear
Cobalt, MW-02 (mg/L)
Value
0.009
0.008
0.007
0.006
0.005
0.004
0.003
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect

Appendix IV: Fluoride (App IV), MW-02

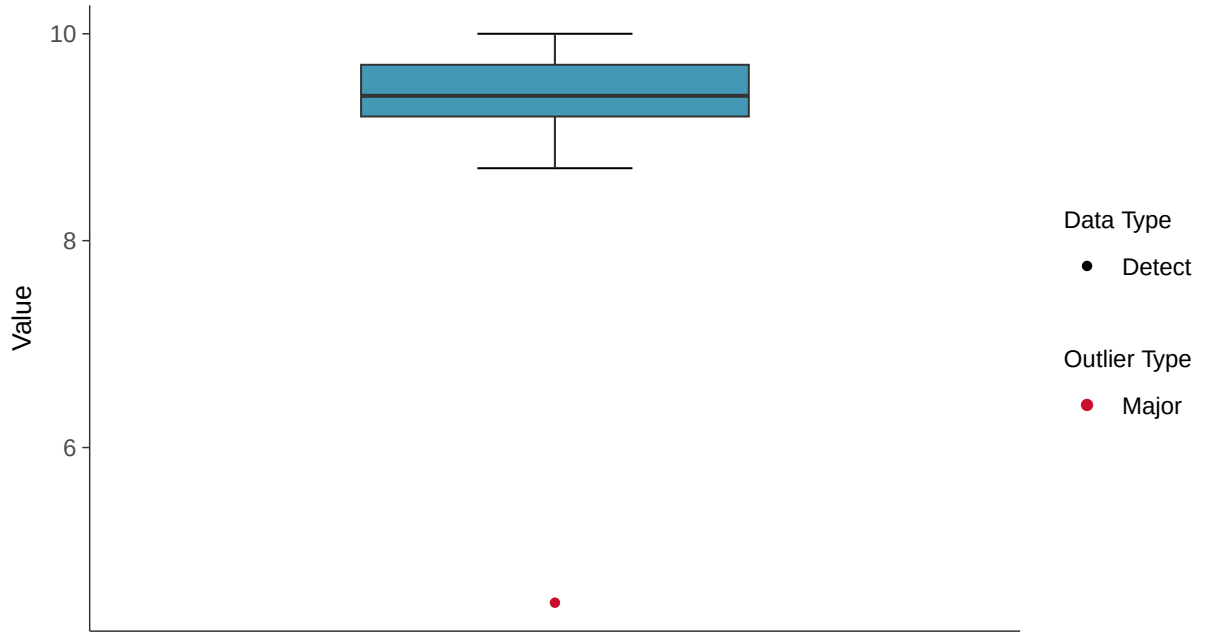
ID: 2_12_5_113





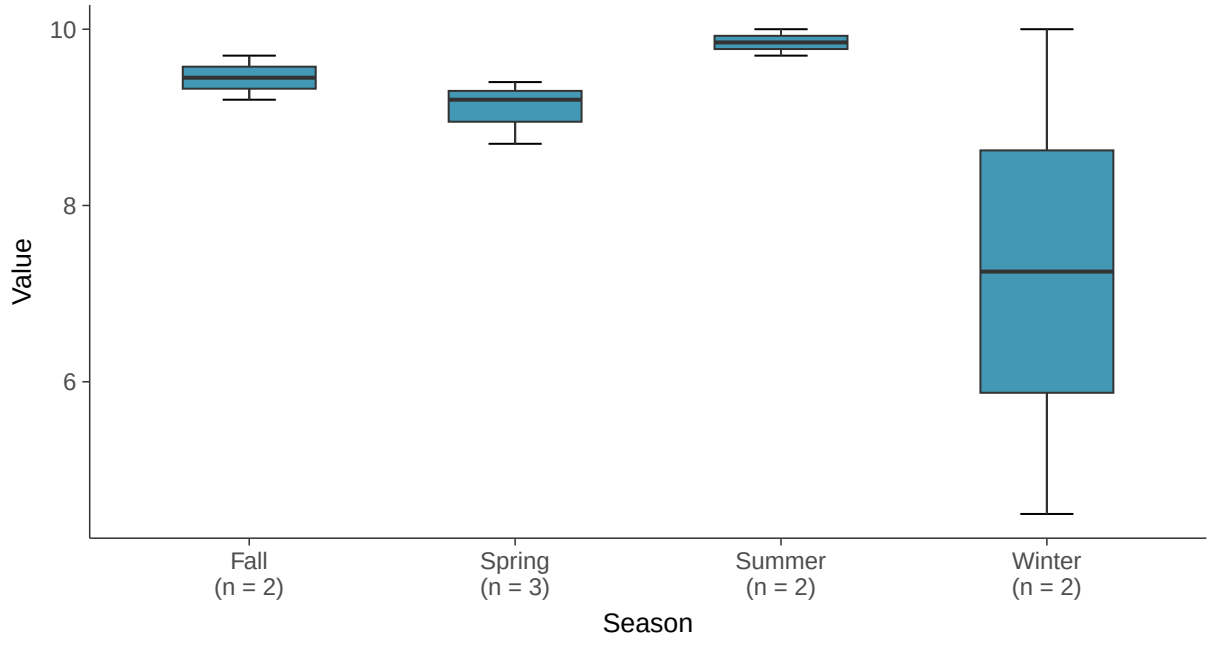
Boxplot

Fluoride (App IV), MW-02 (mg/L)



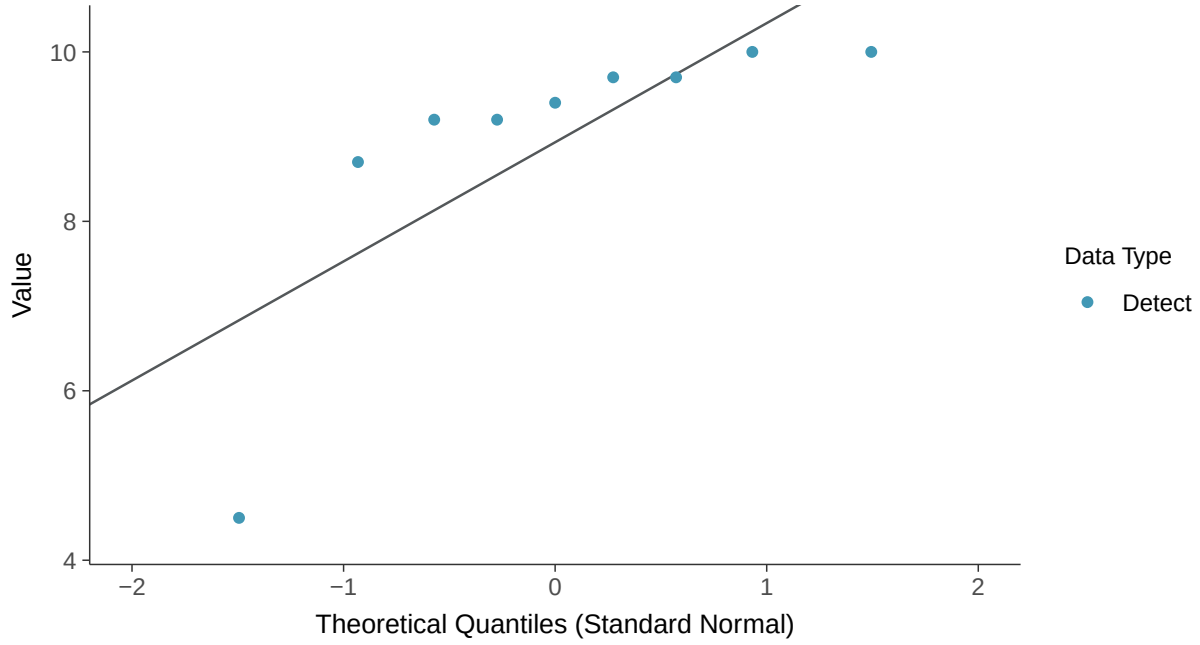
Boxplot by Season

Fluoride (App IV), MW-02 (mg/L)



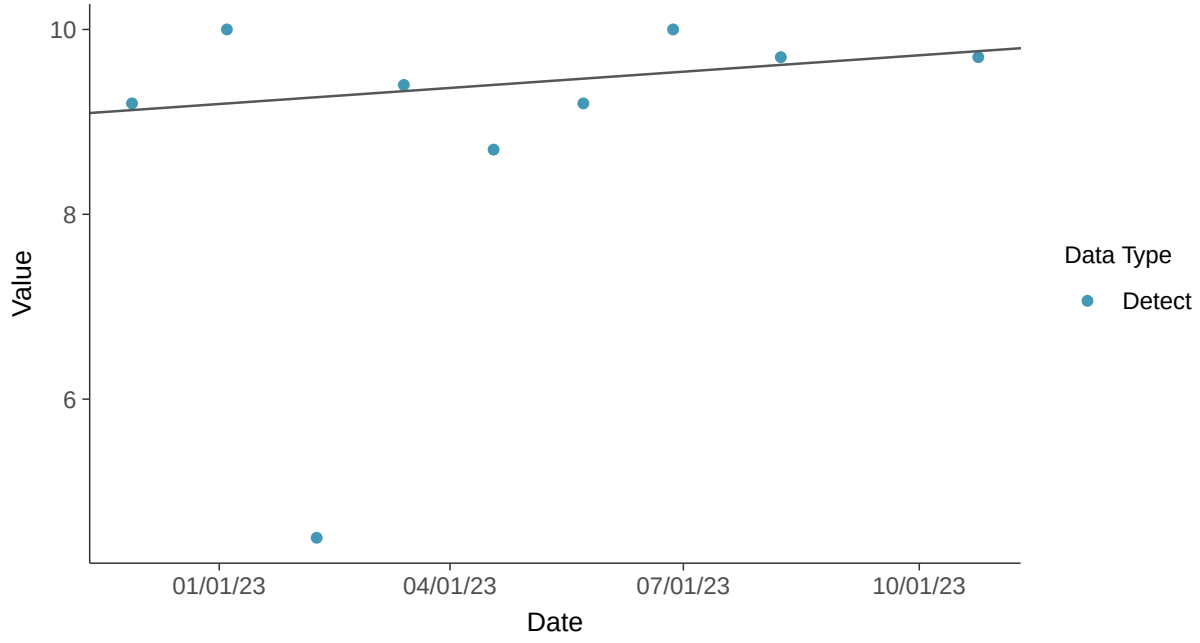
Normal Q-Q plot

Fluoride (App IV), MW-02 (mg/L)



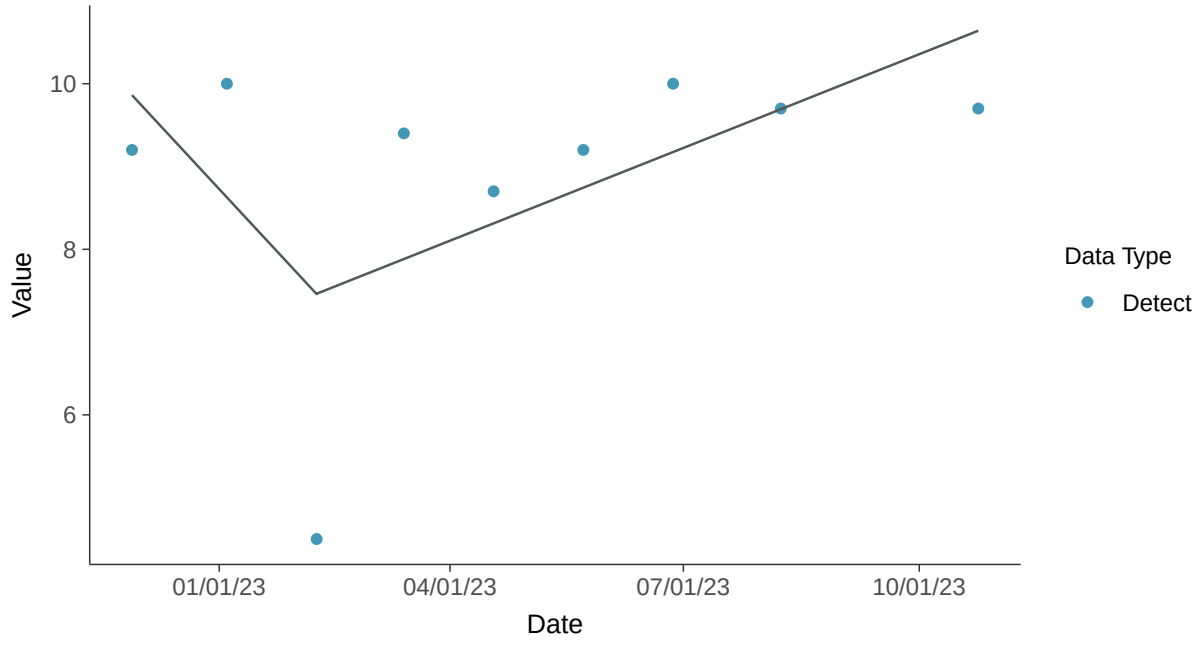
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride (App IV), MW-02 (mg/L)



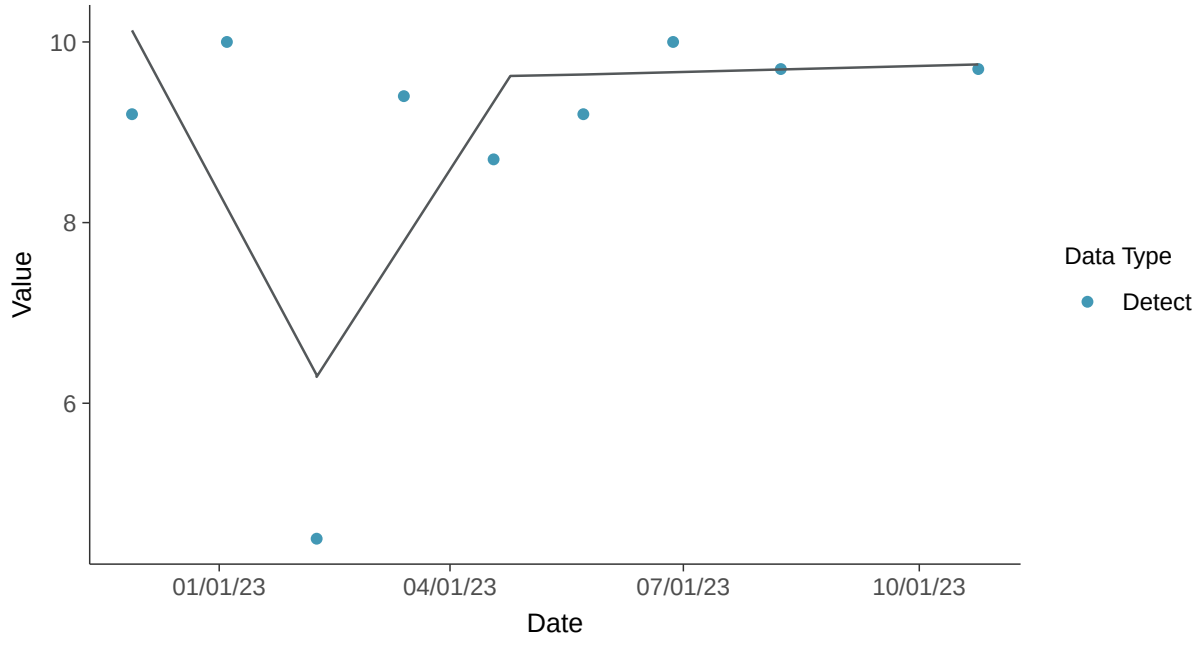
Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-02 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride (App IV), MW-02 (mg/L)

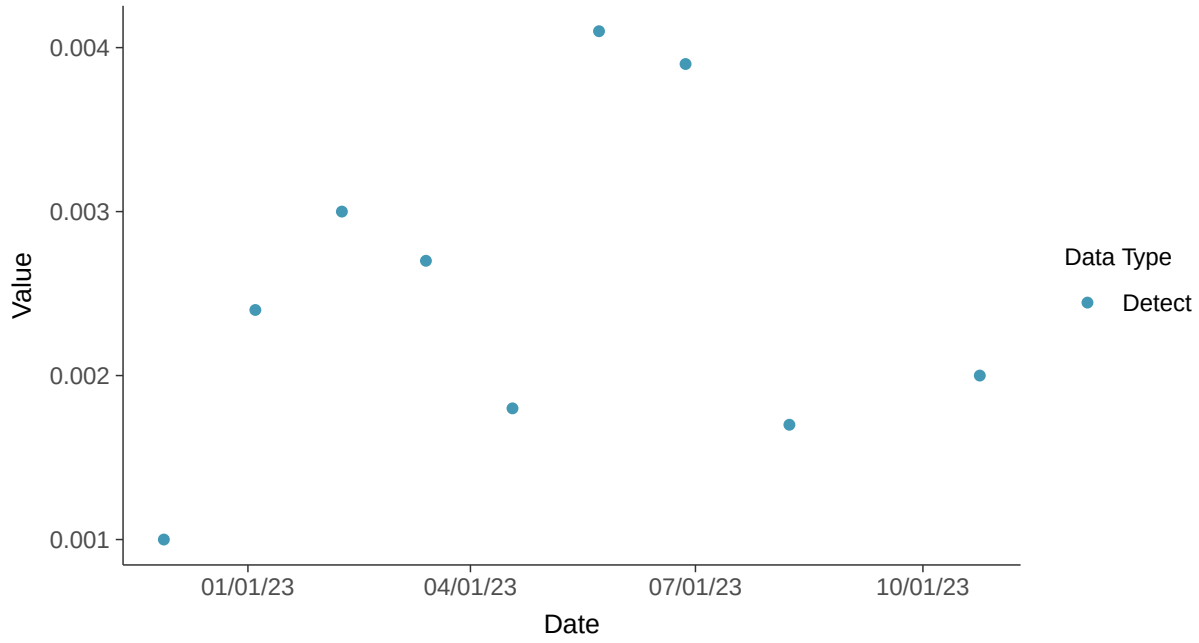


Appendix IV: Lead, MW-02

ID: 2_12_5_115

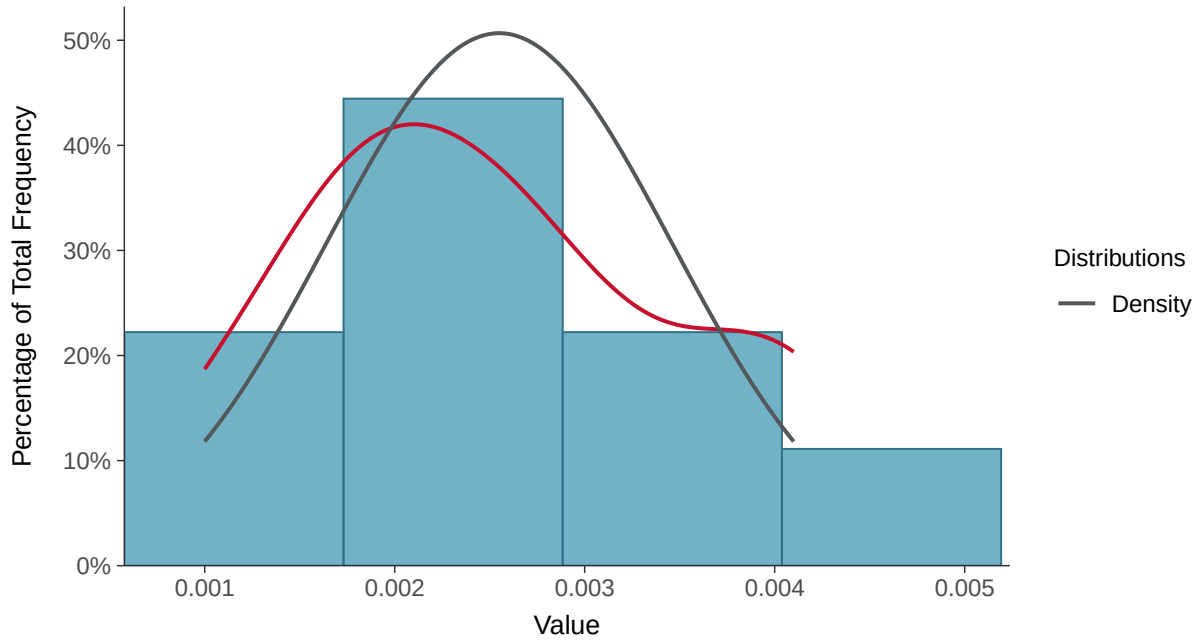
Scatter Plot

Lead, MW-02 (mg/L)



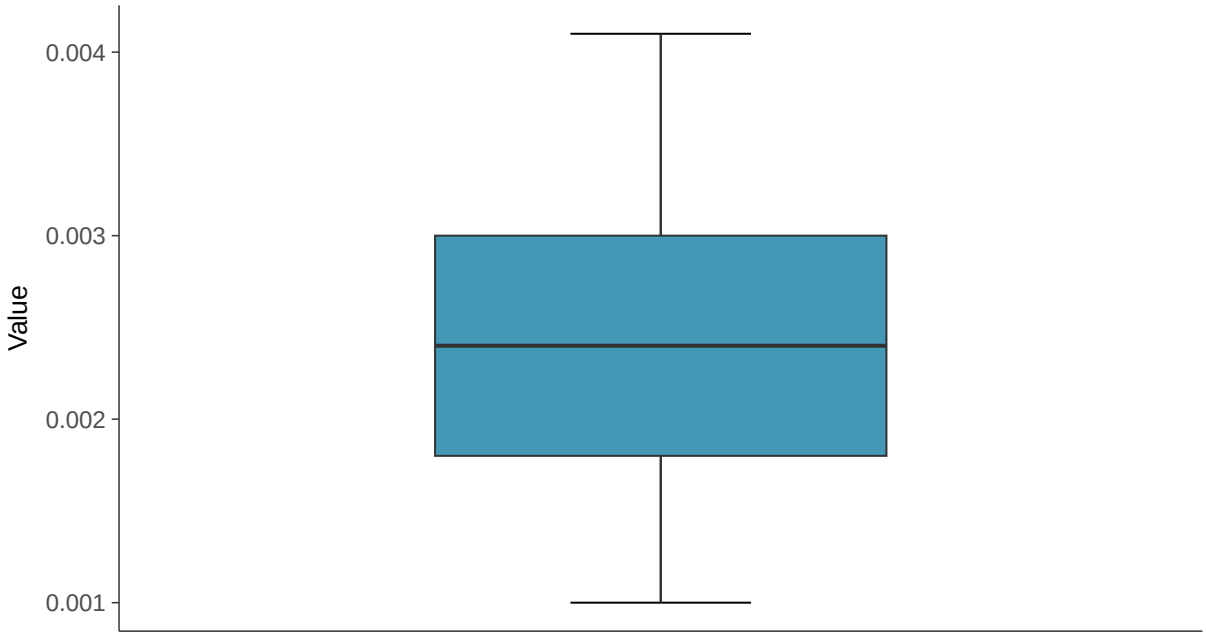
Histogram

Lead, MW-02 (mg/L)



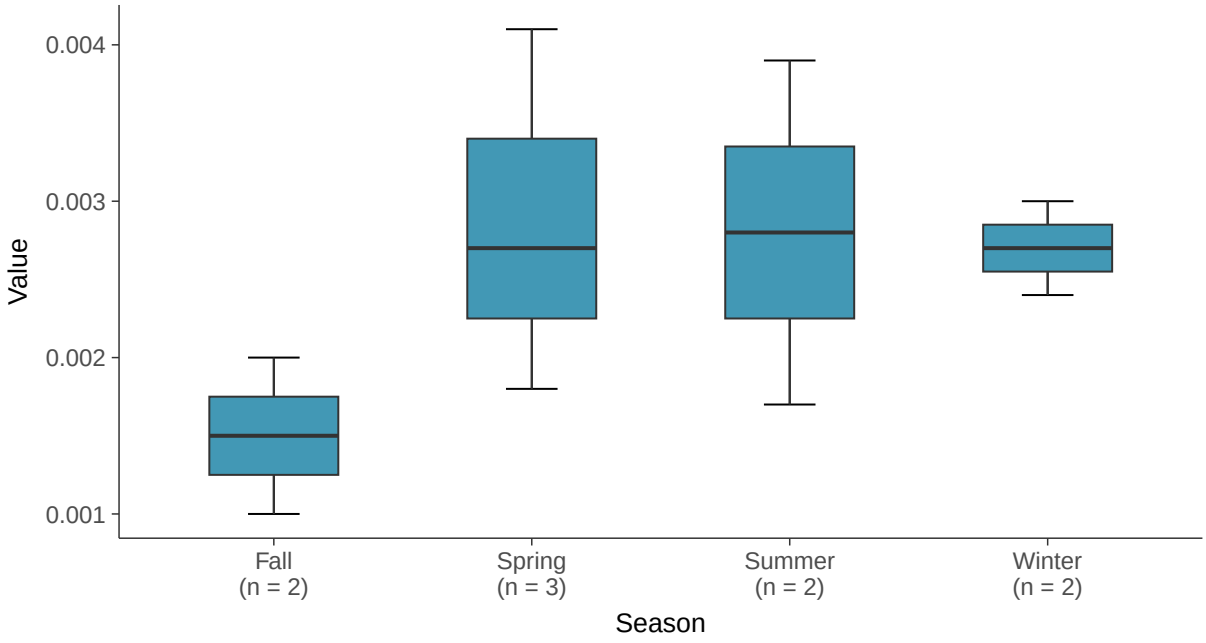
Boxplot

Lead, MW-02 (mg/L)



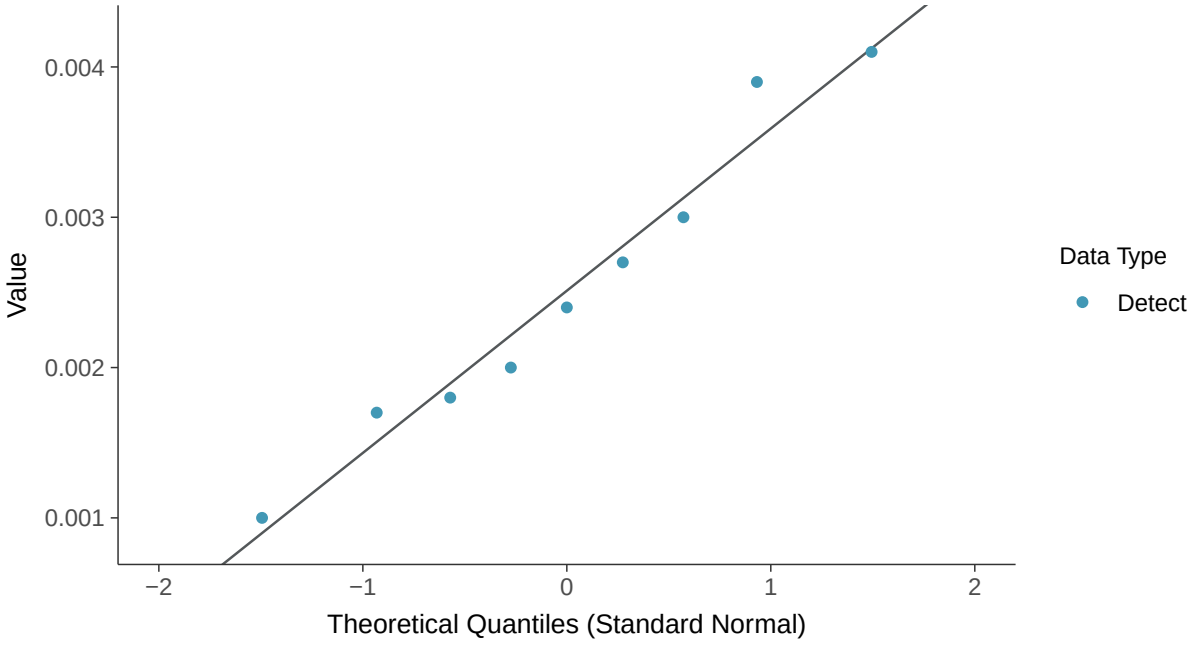
Boxplot by Season

Lead, MW-02 (mg/L)



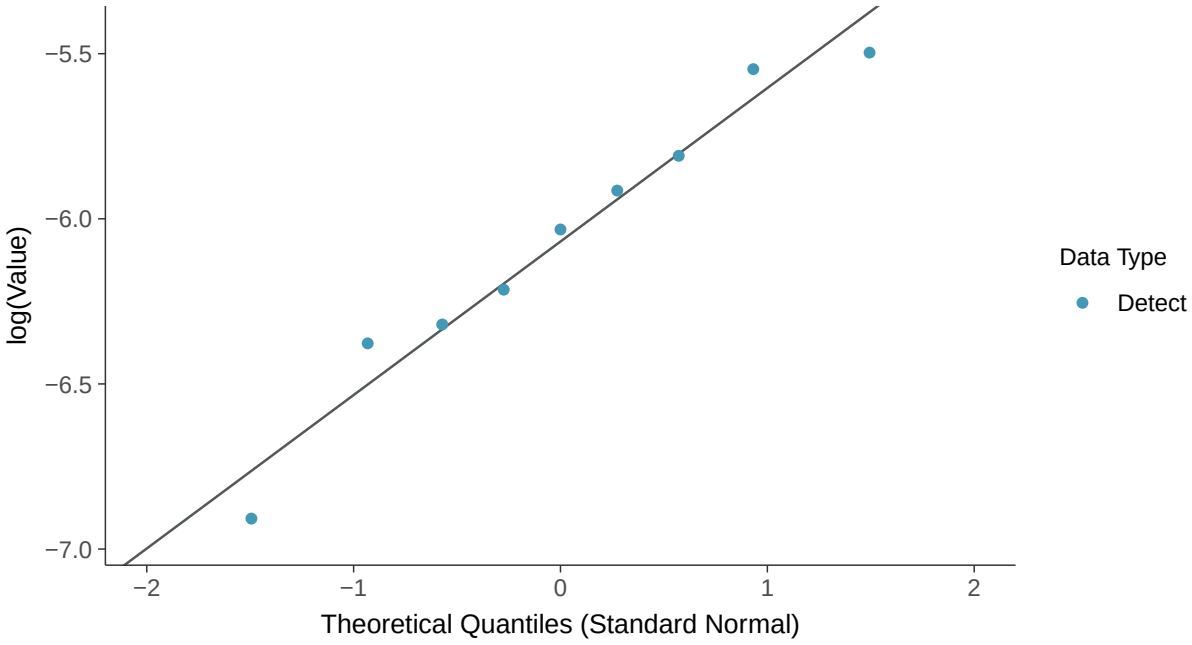
Normal Q-Q plot

Lead, MW-02 (mg/L)



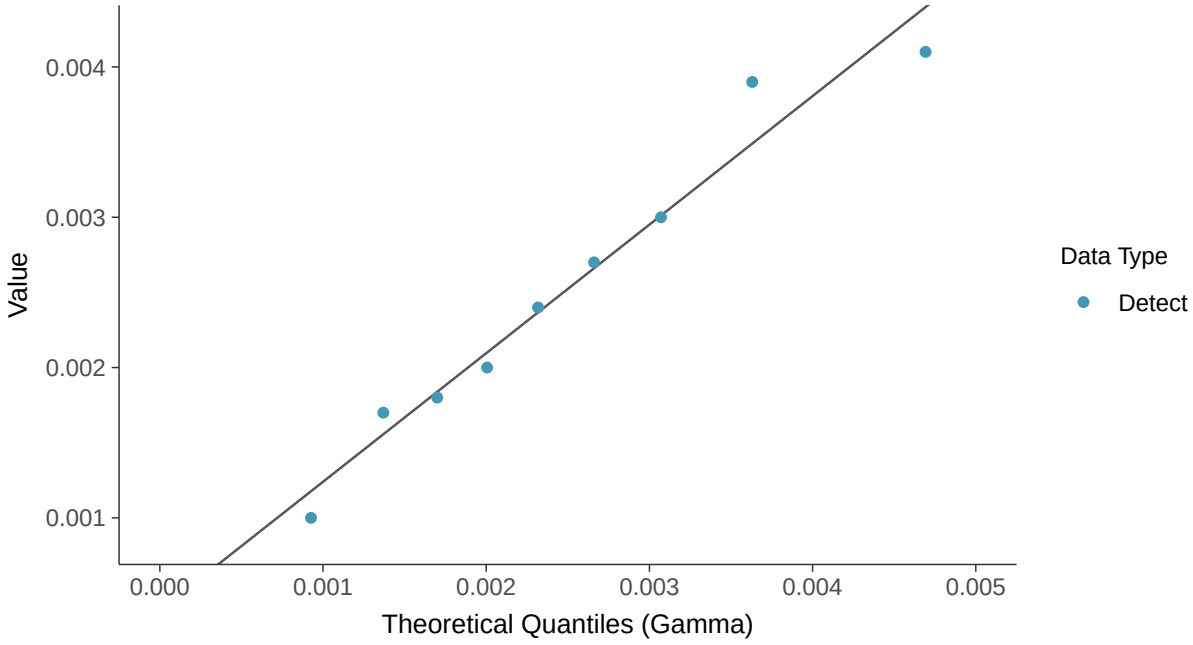
Lognormal Q-Q plot

Lead, MW-02 (mg/L)



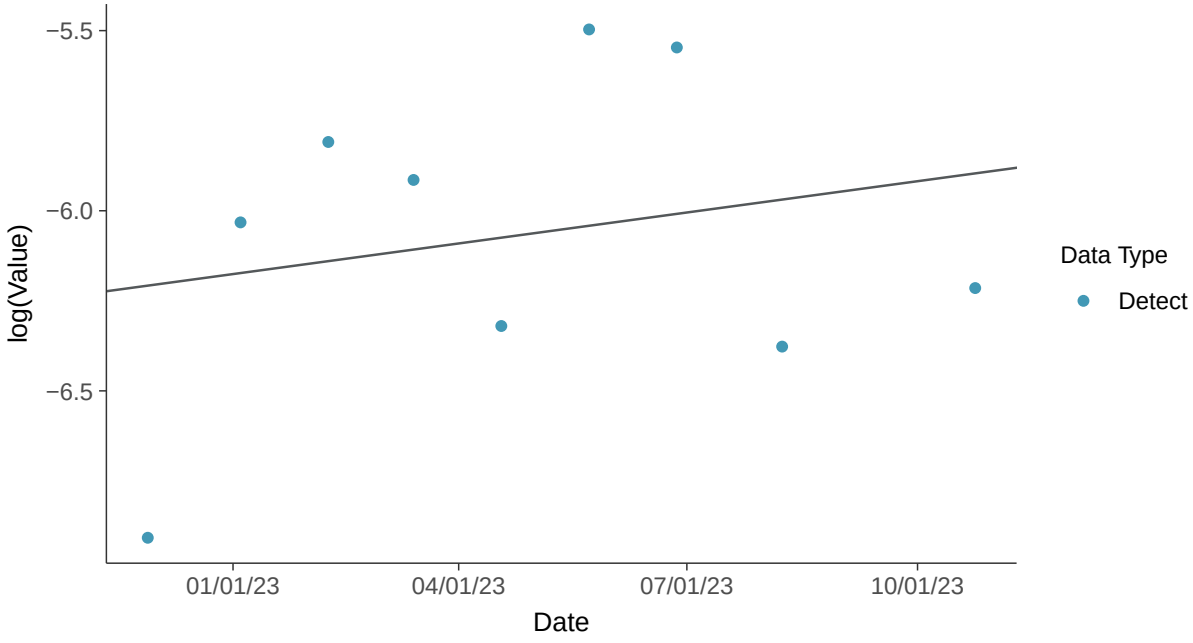
Gamma Q-Q plot

Lead, MW-02 (mg/L)



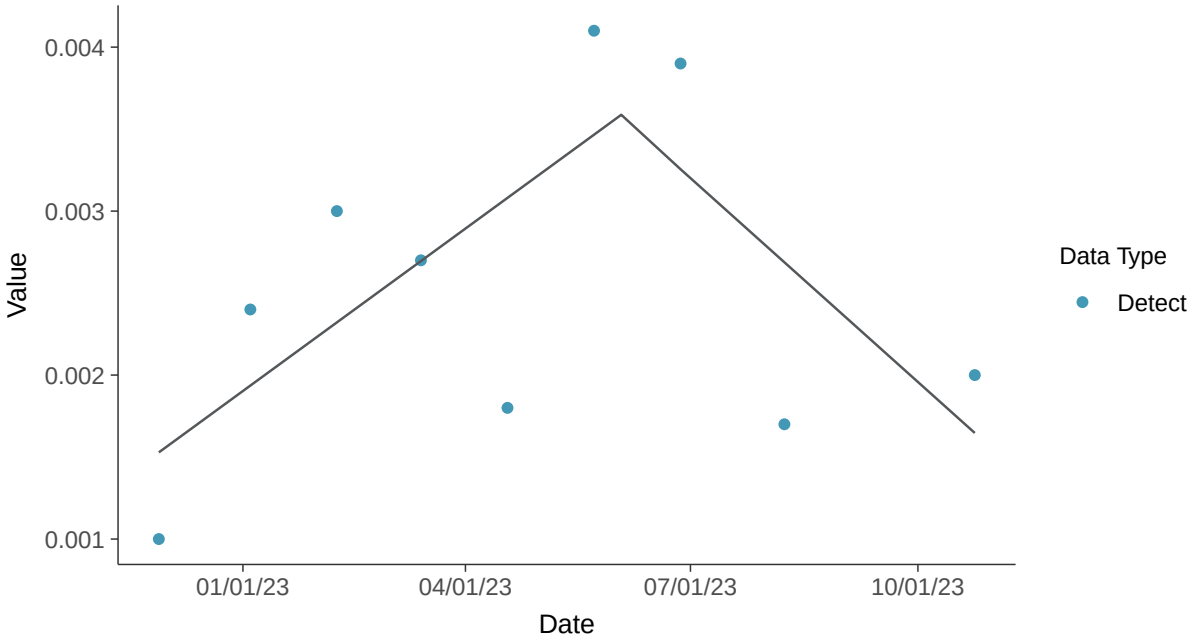
Trend Regression: Lognormal MLE

Lead, MW-02 (mg/L)



Trend Regression: Piecewise Linear-Linear

Lead, MW-02 (mg/L)

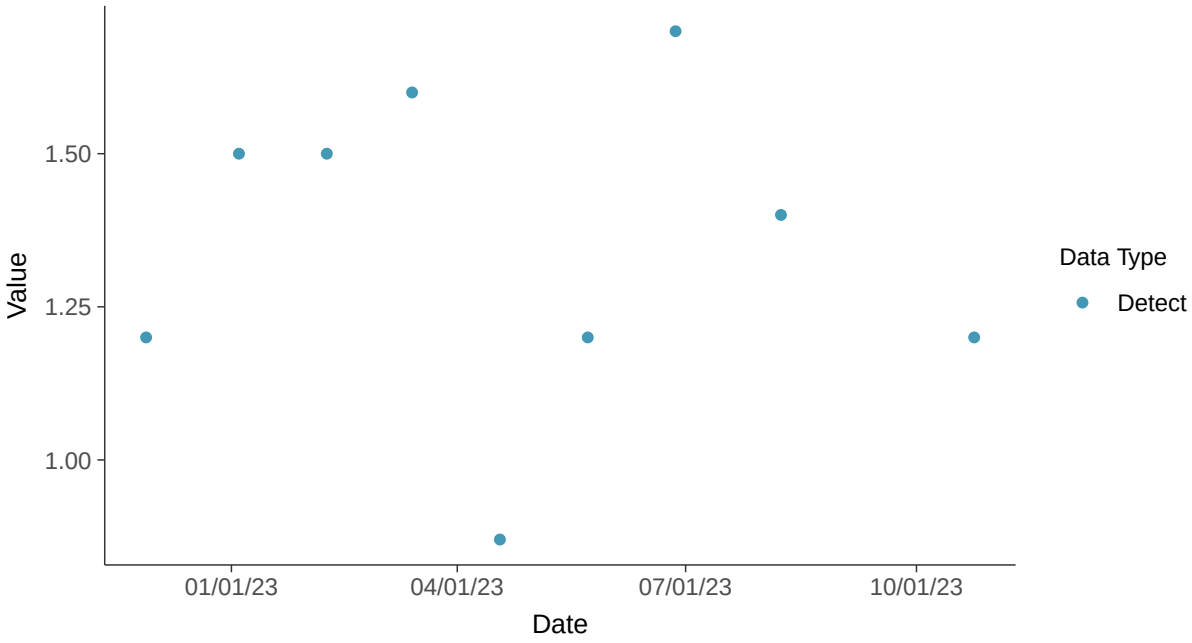


Appendix IV: Lithium, MW-02

ID: 2_12_5_116

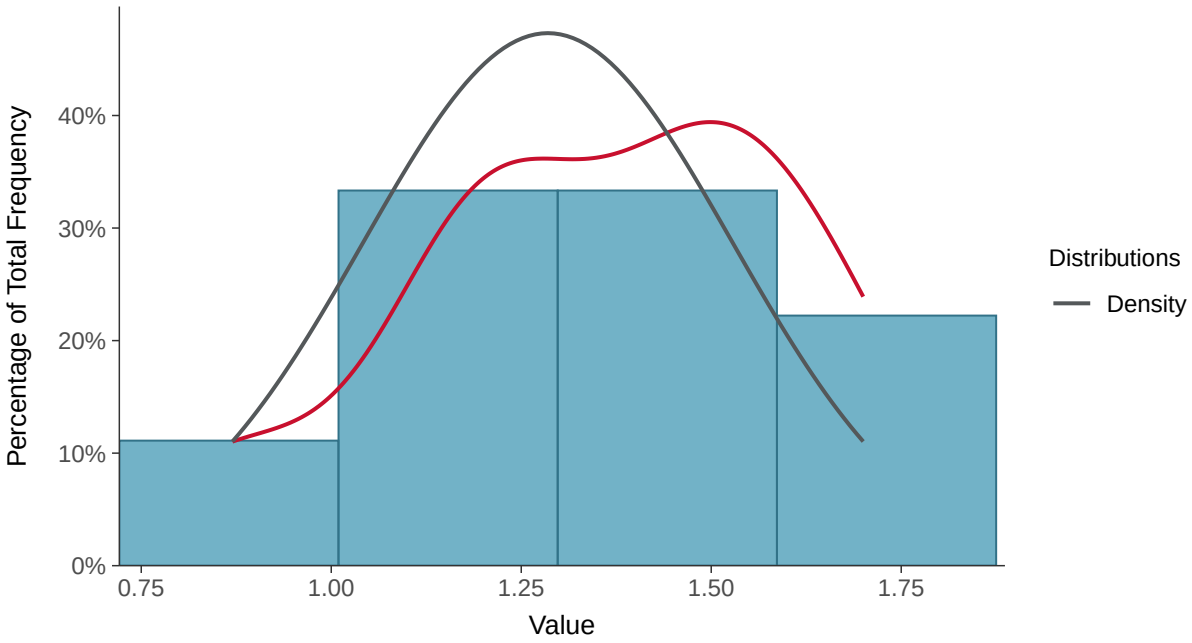
Scatter Plot

Lithium, MW-02 (mg/L)



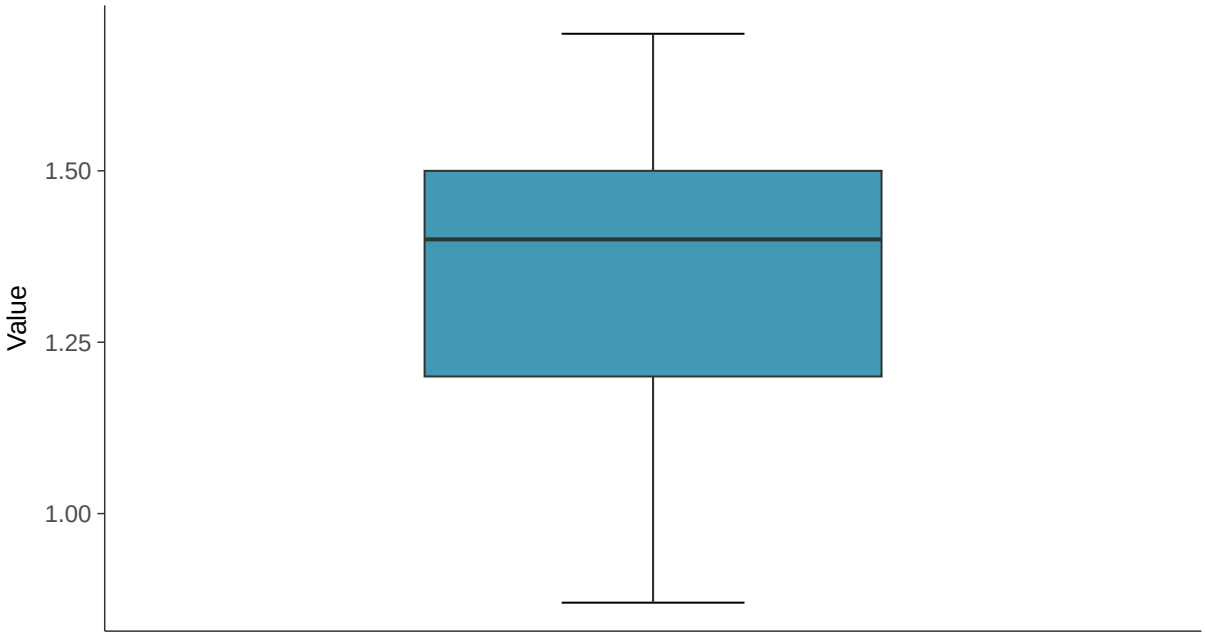
Histogram

Lithium, MW-02 (mg/L)



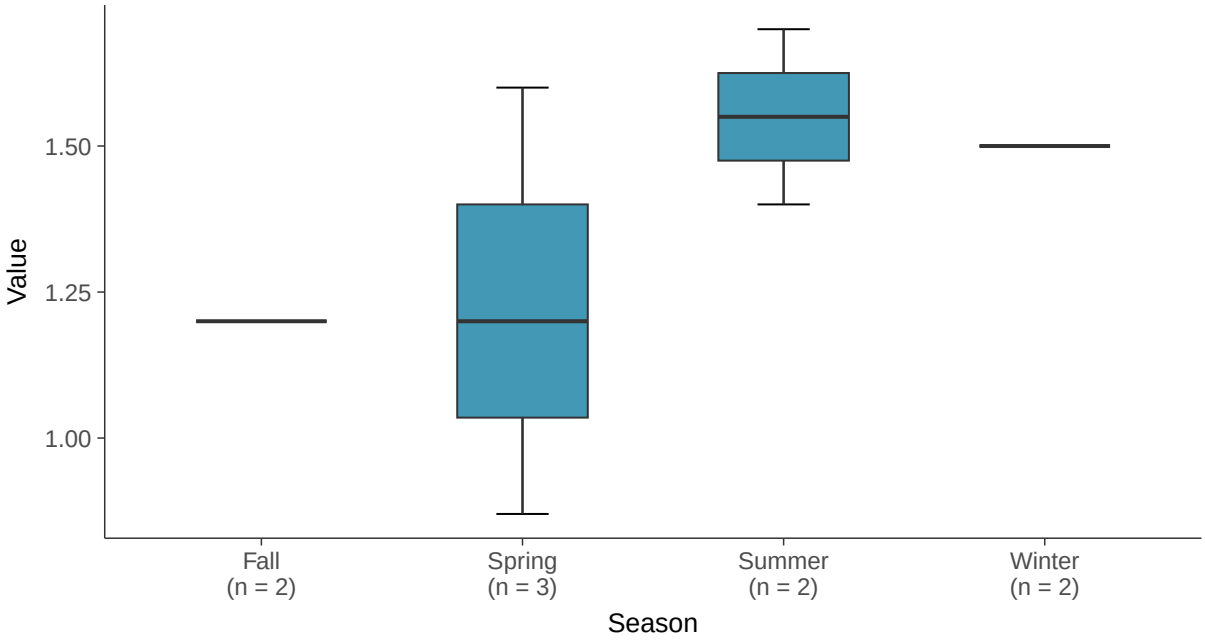
Boxplot

Lithium, MW-02 (mg/L)



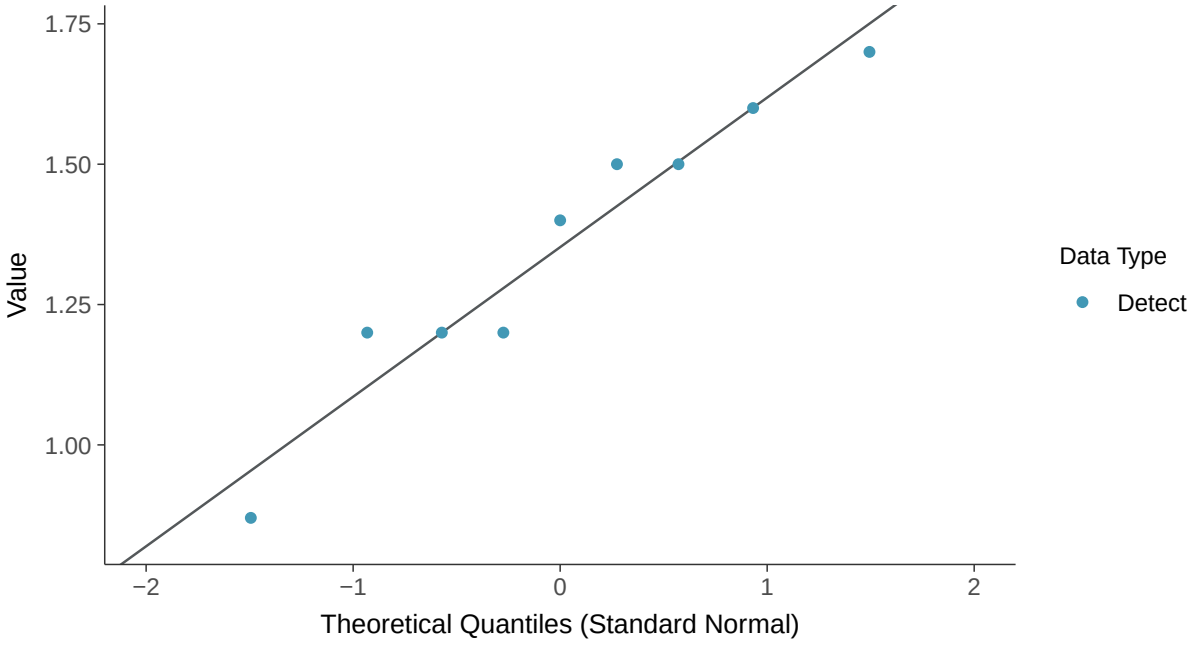
Boxplot by Season

Lithium, MW-02 (mg/L)



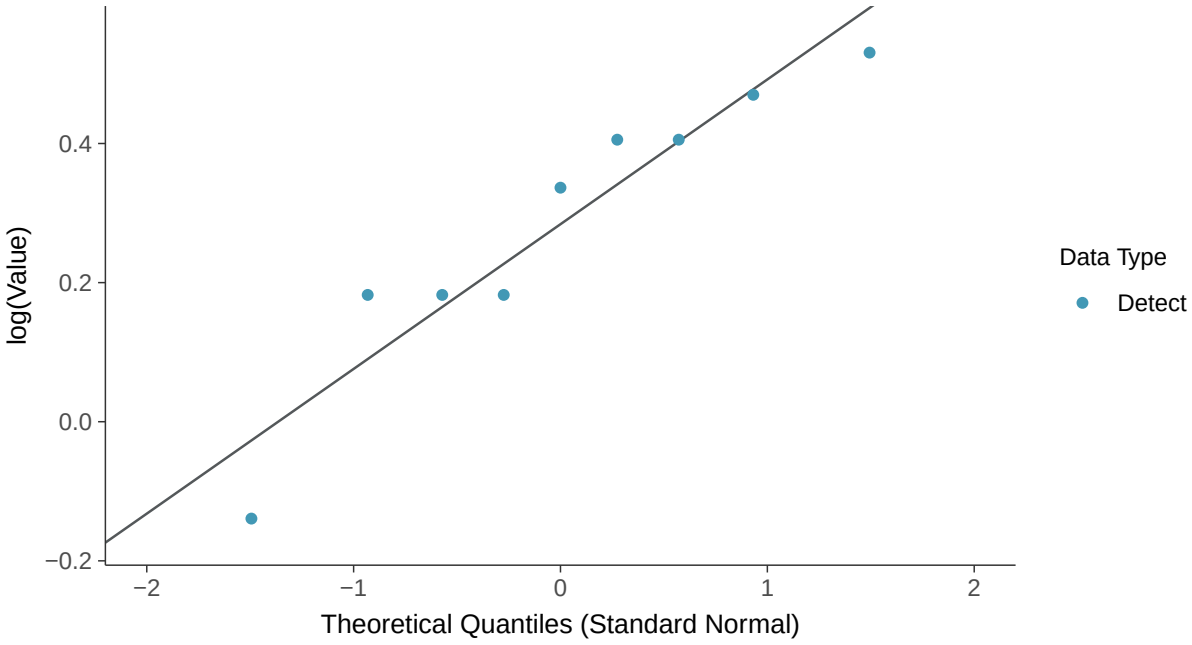
Normal Q-Q plot

Lithium, MW-02 (mg/L)



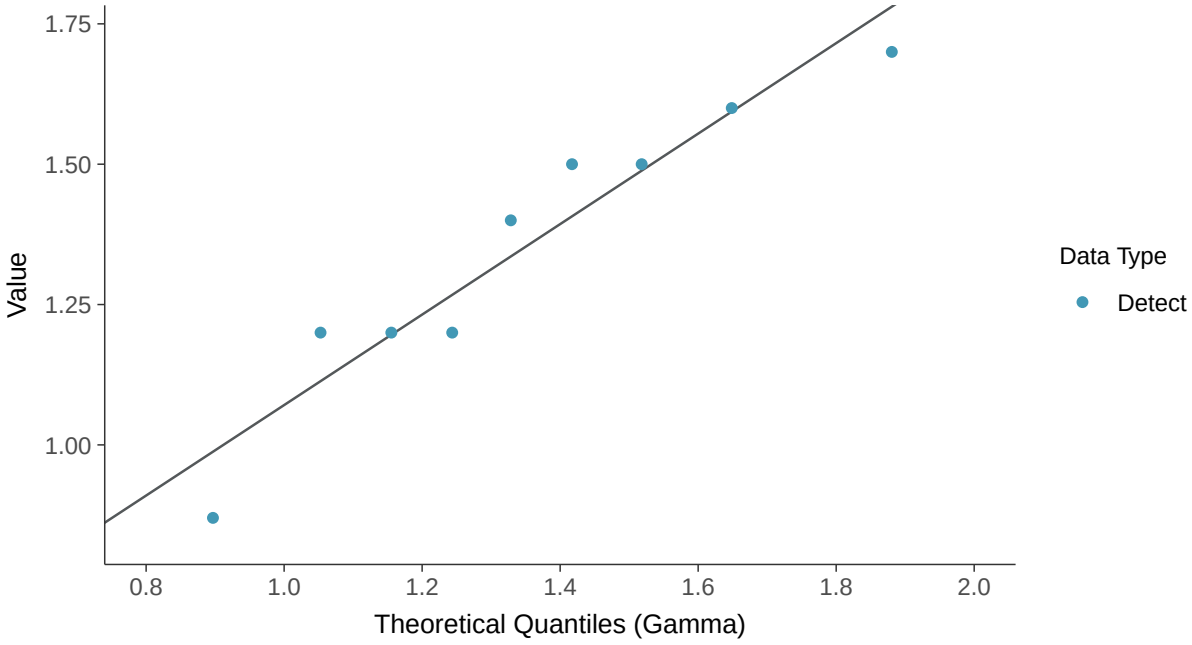
Lognormal Q-Q plot

Lithium, MW-02 (mg/L)



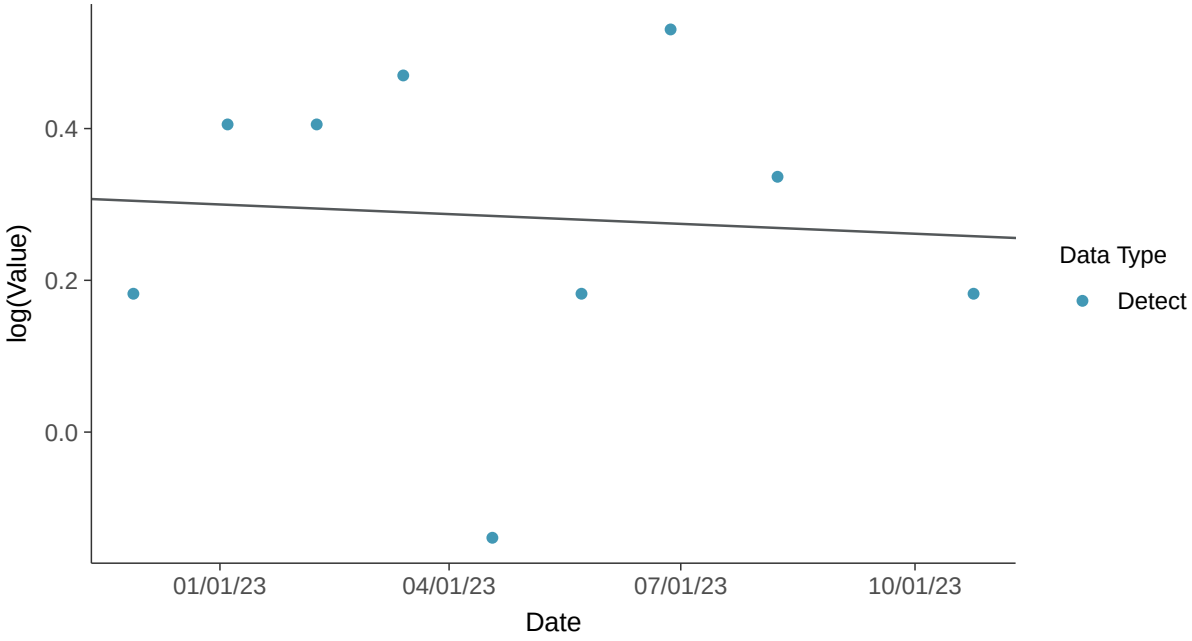
Gamma Q-Q plot

Lithium, MW-02 (mg/L)



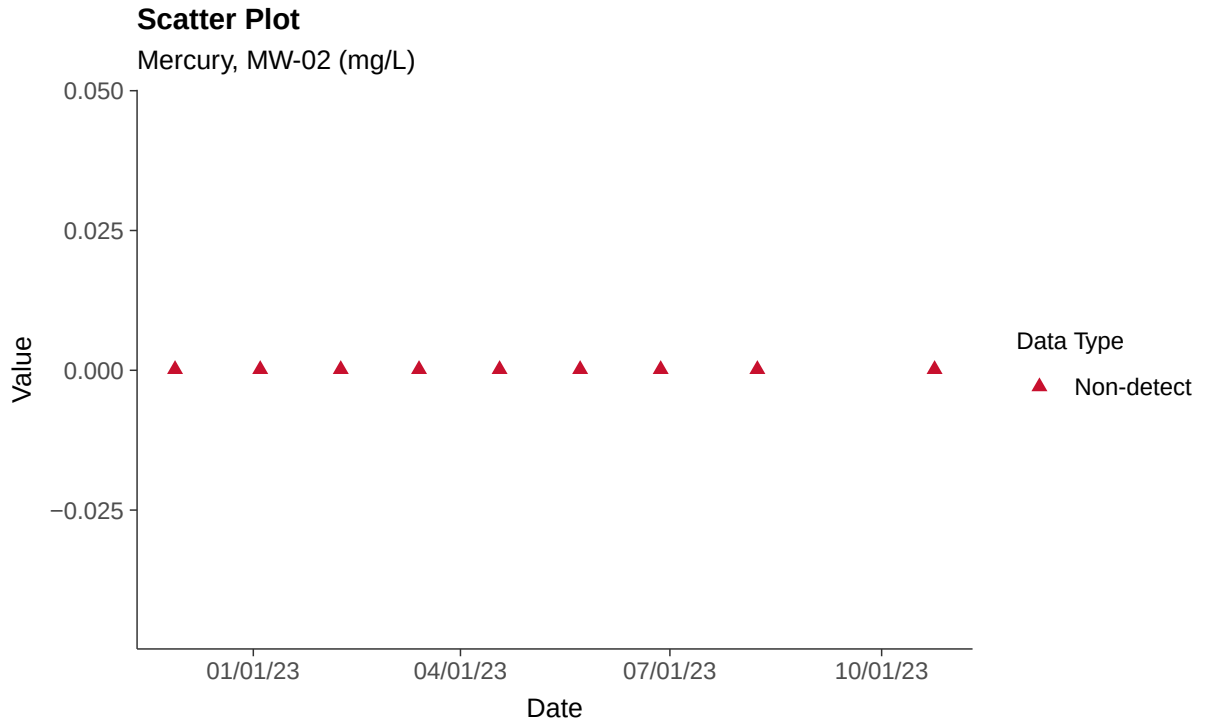
Trend Regression: Lognormal MLE

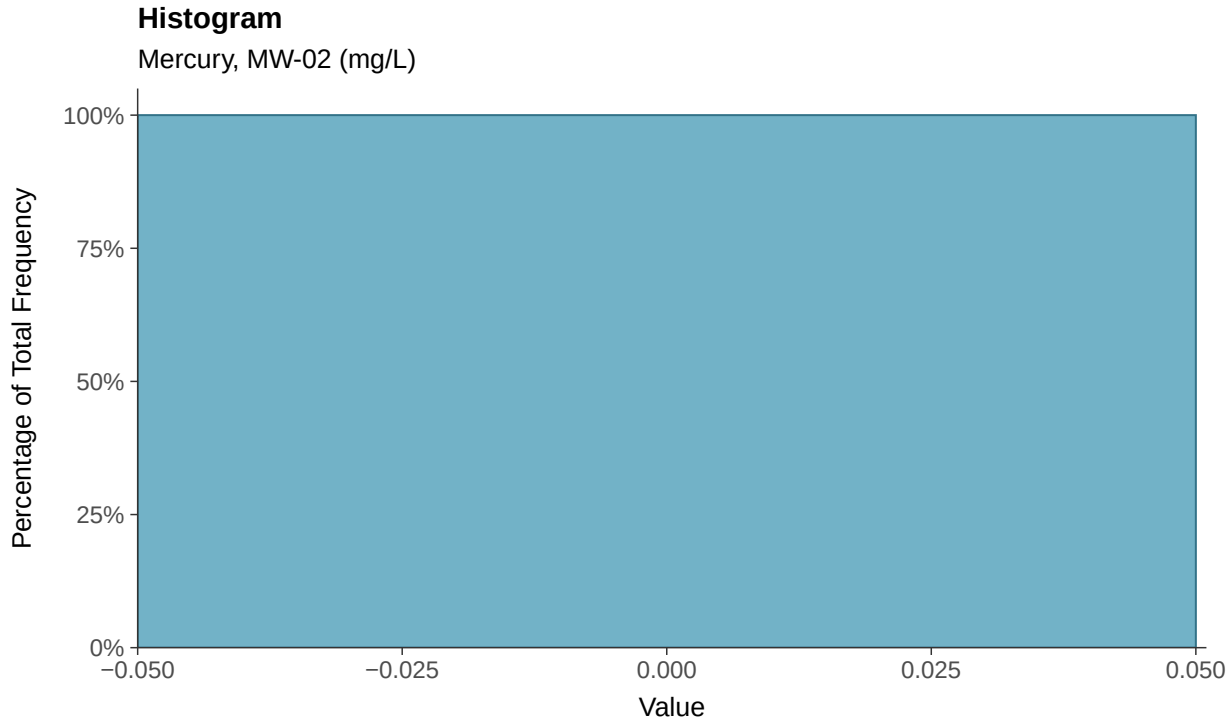
Lithium, MW-02 (mg/L)



Appendix IV: Mercury, MW-02

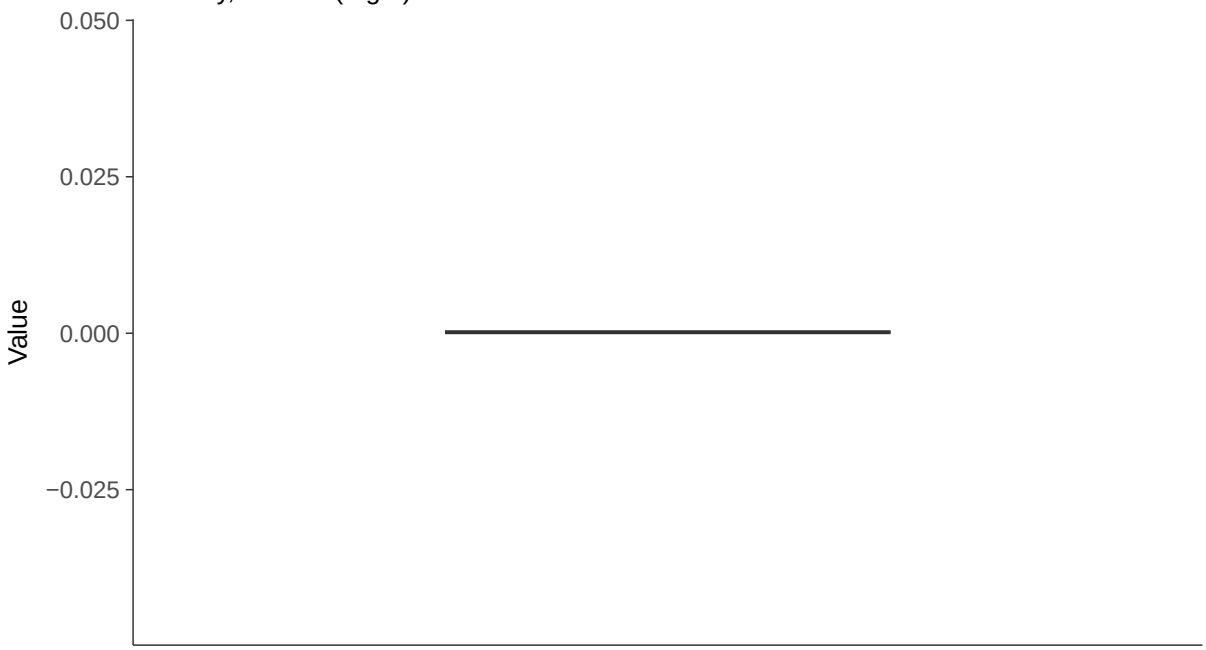
ID: 2_12_5_117





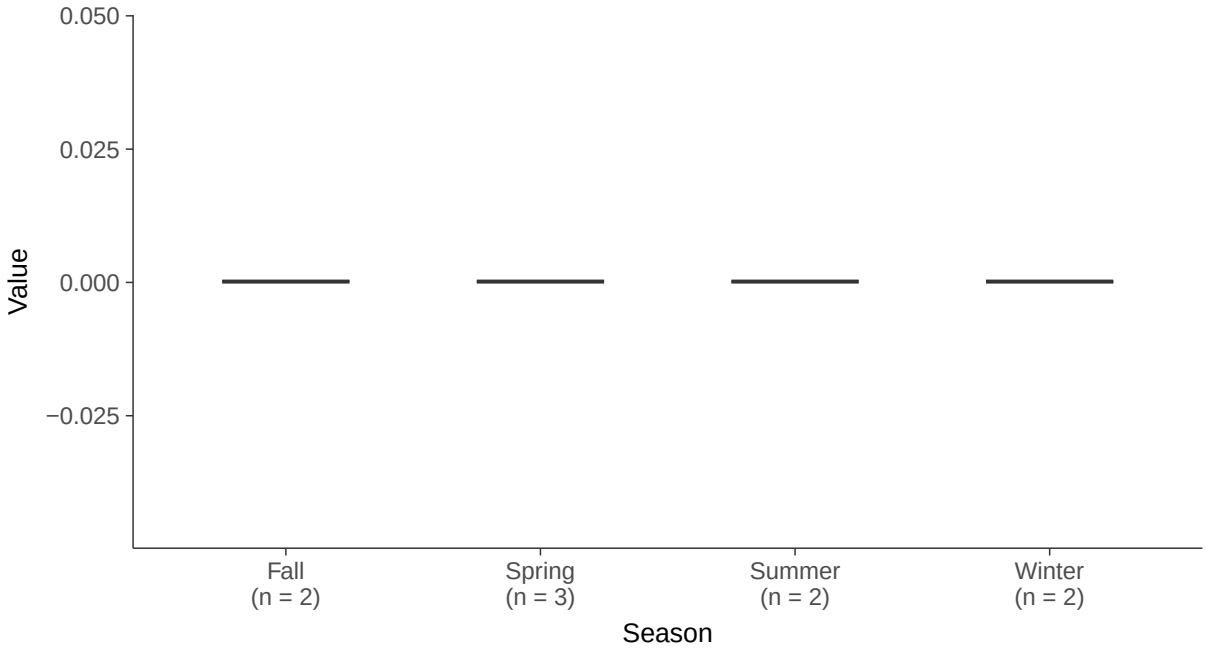
Boxplot

Mercury, MW-02 (mg/L)



Boxplot by Season

Mercury, MW-02 (mg/L)

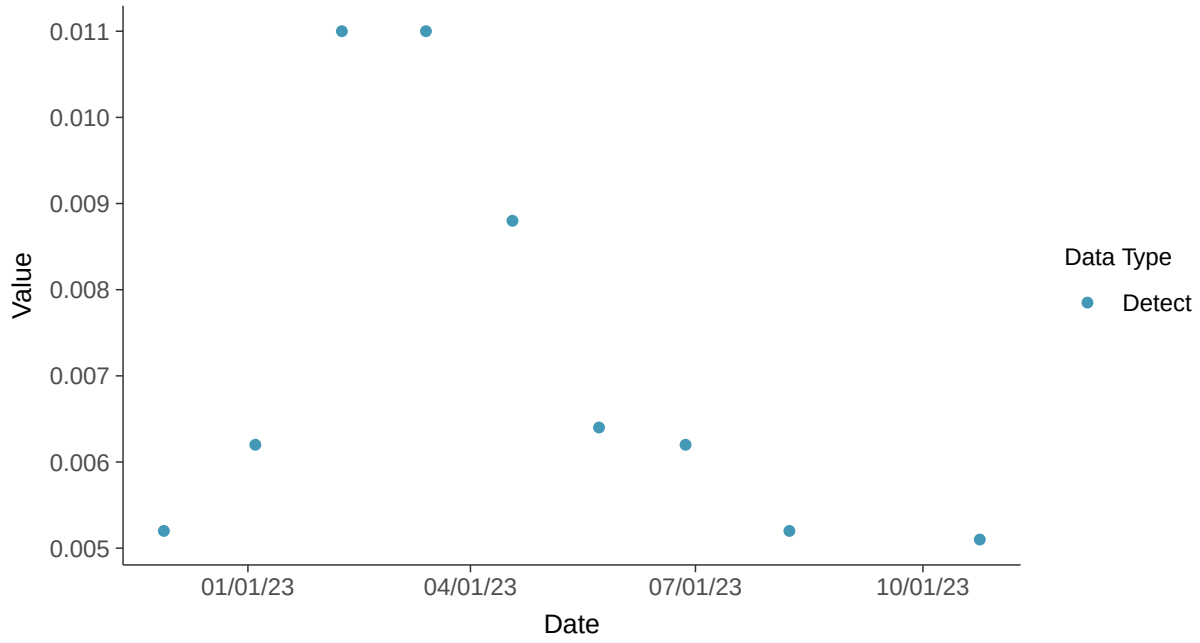


Appendix IV: Molybdenum, MW-02

ID: 2_12_5_118

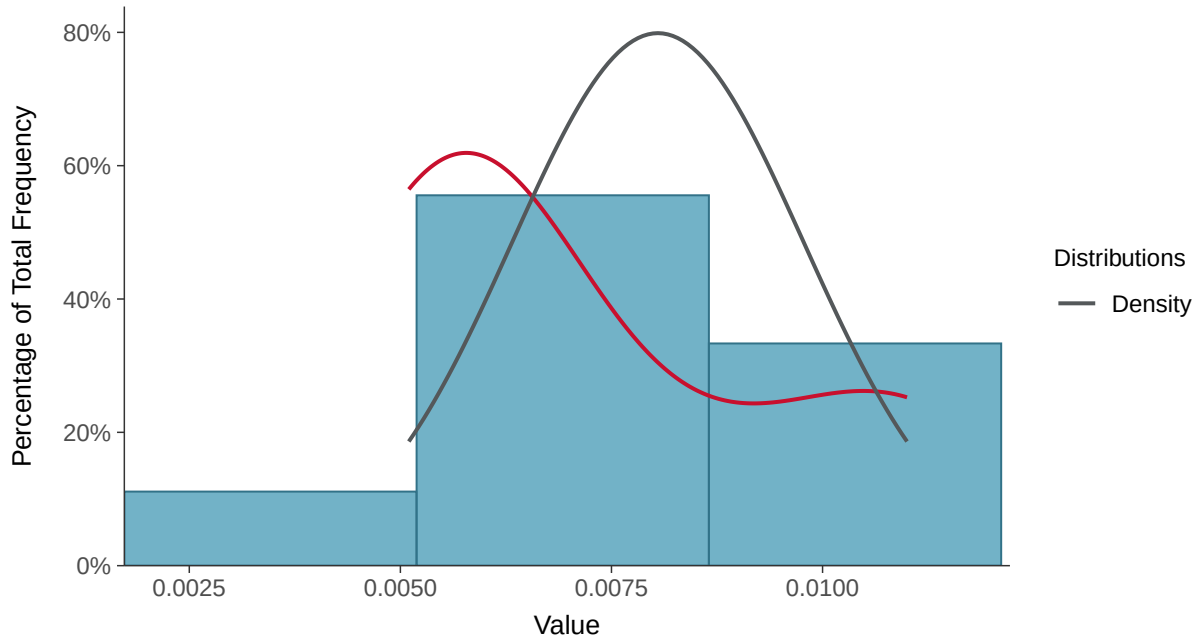
Scatter Plot

Molybdenum, MW-02 (mg/L)



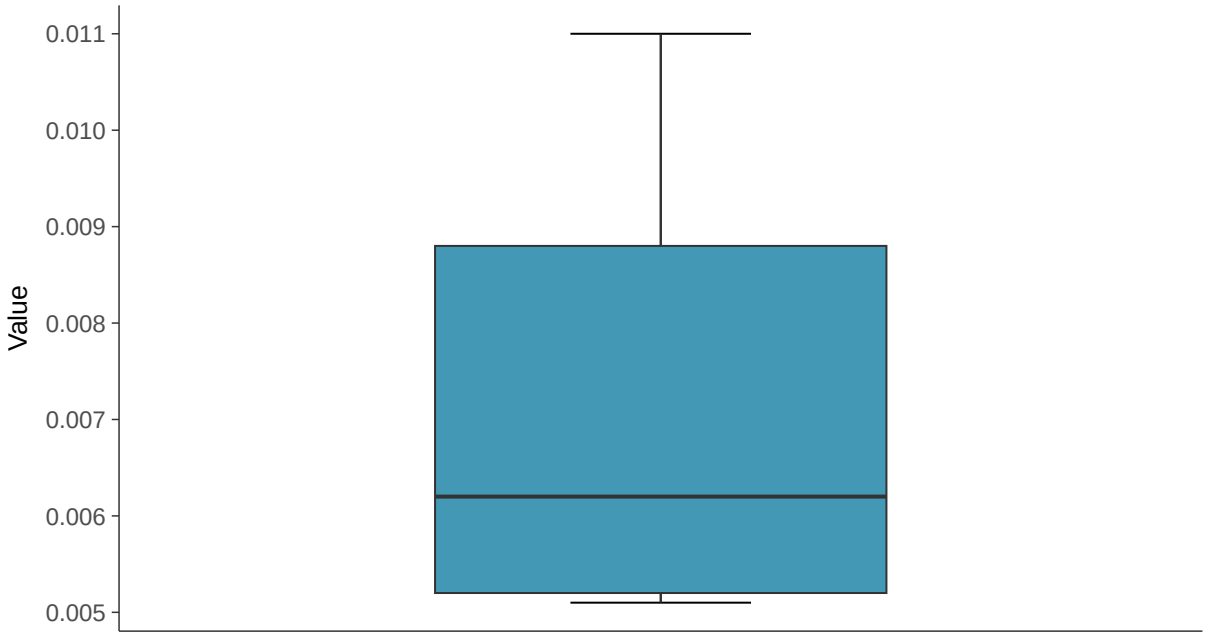
Histogram

Molybdenum, MW-02 (mg/L)



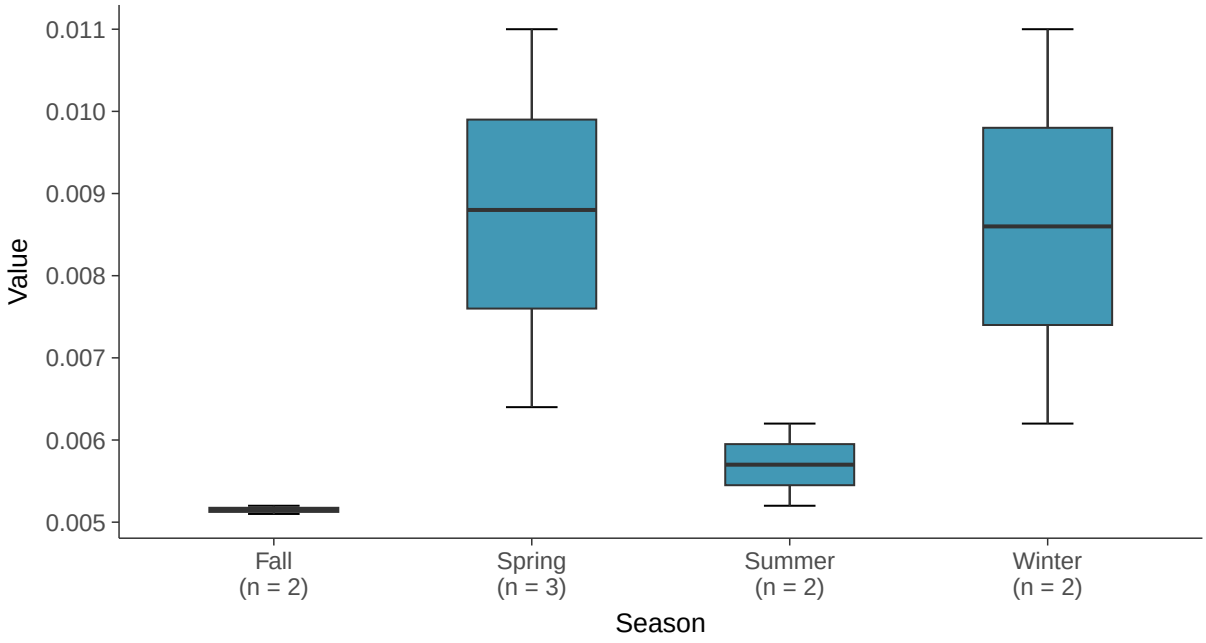
Boxplot

Molybdenum, MW-02 (mg/L)



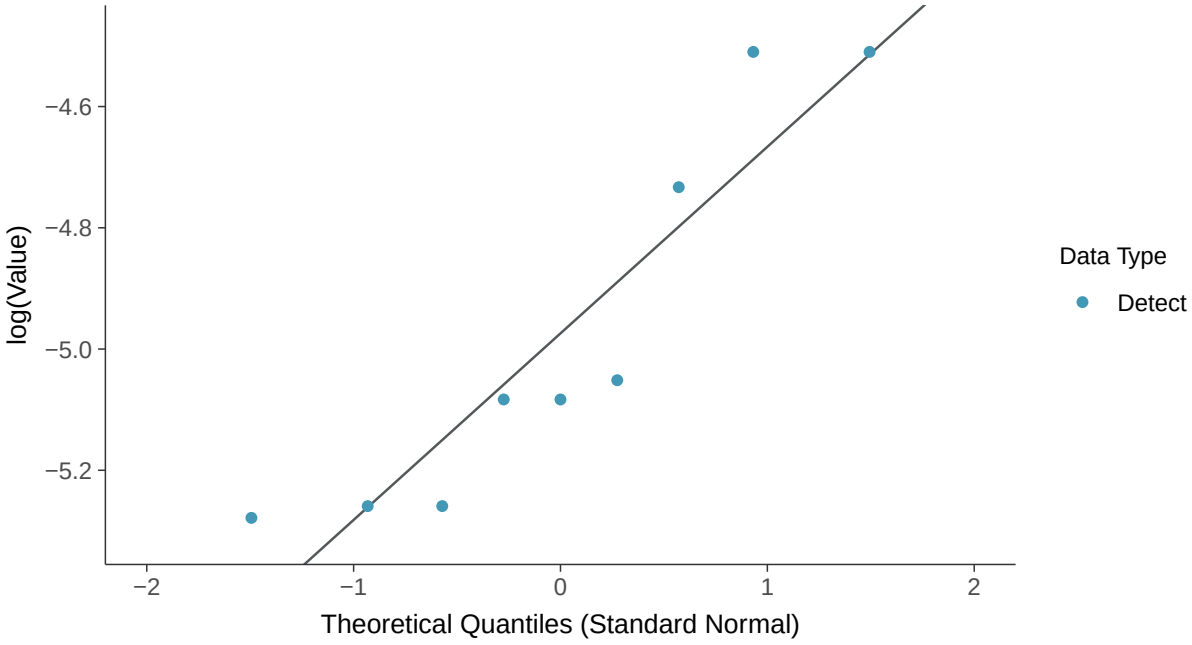
Boxplot by Season

Molybdenum, MW-02 (mg/L)



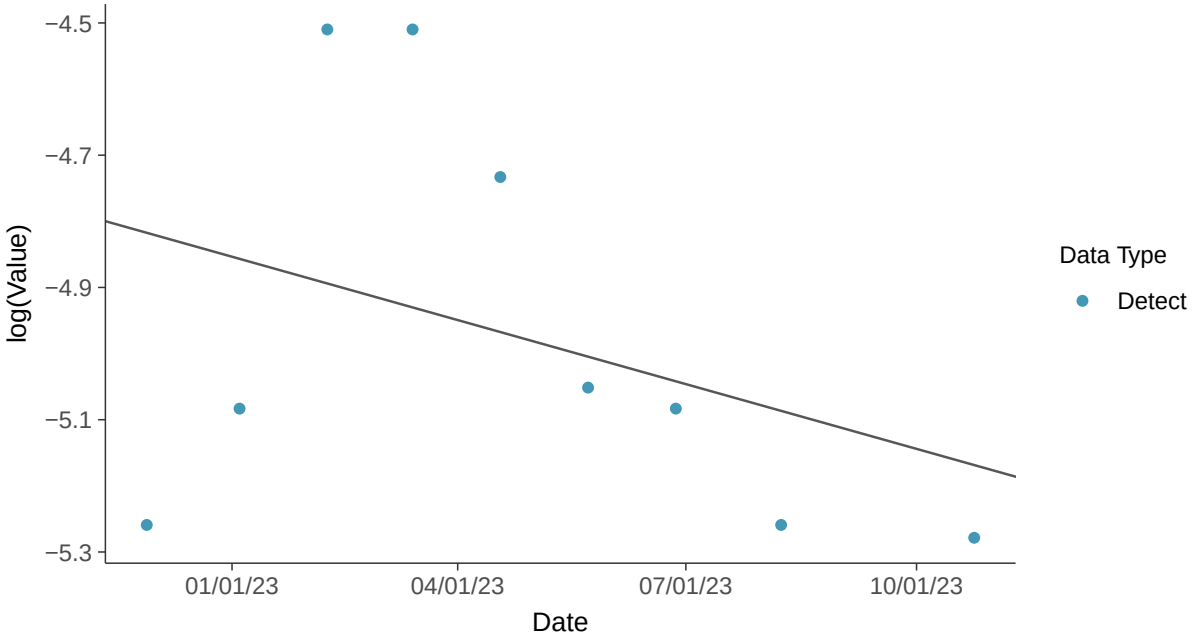
Lognormal Q-Q plot

Molybdenum, MW-02 (mg/L)



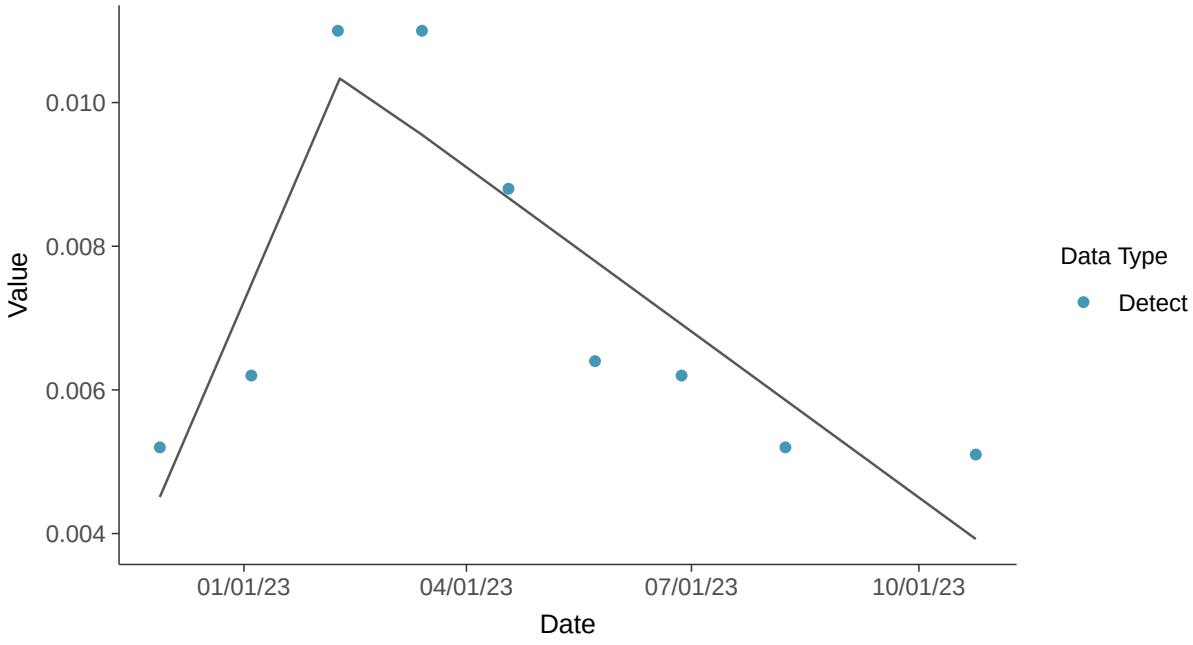
Trend Regression: Lognormal MLE

Molybdenum, MW-02 (mg/L)



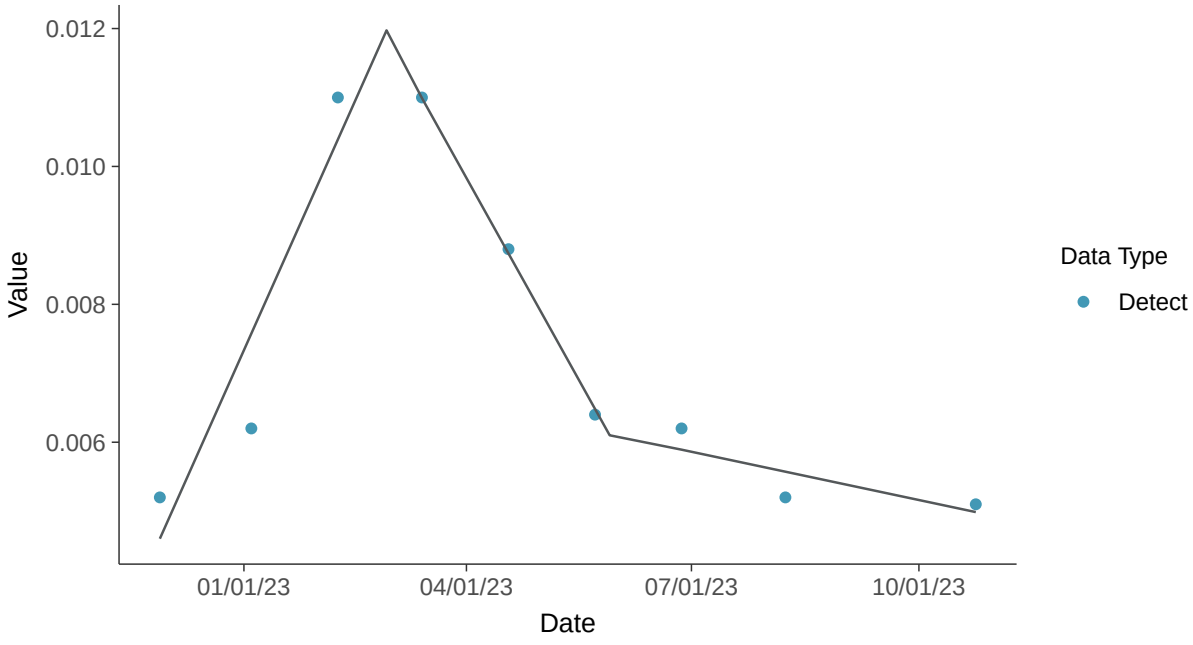
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-02 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-02 (mg/L)

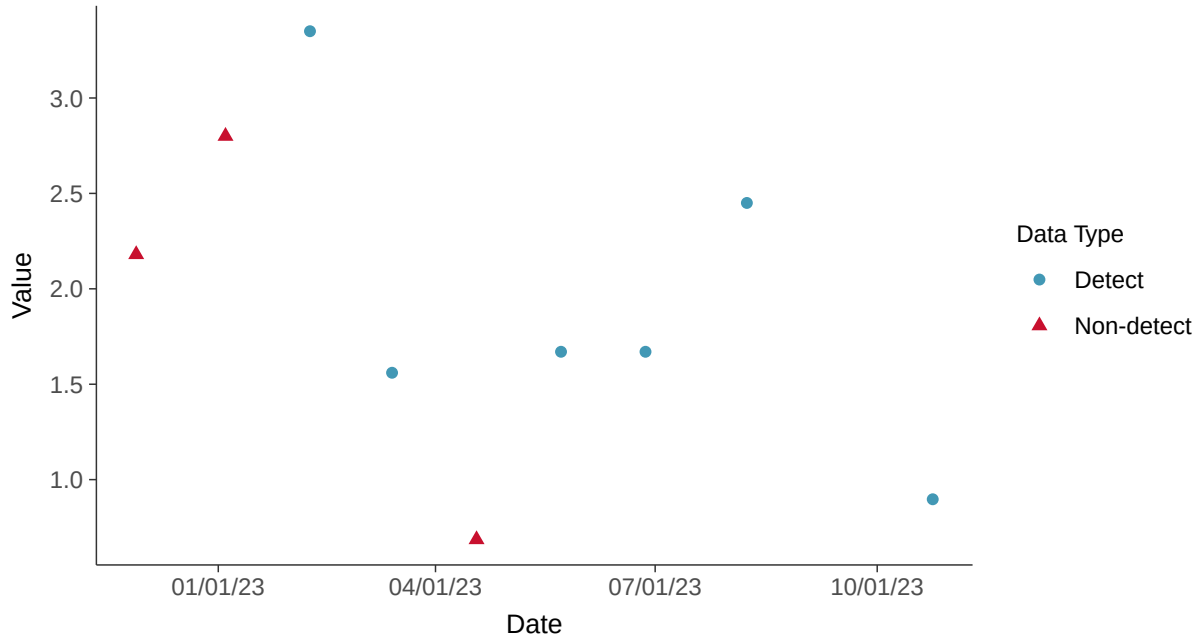


Appendix IV: Radium 226 and 228, MW-02

ID: 2_12_5_121

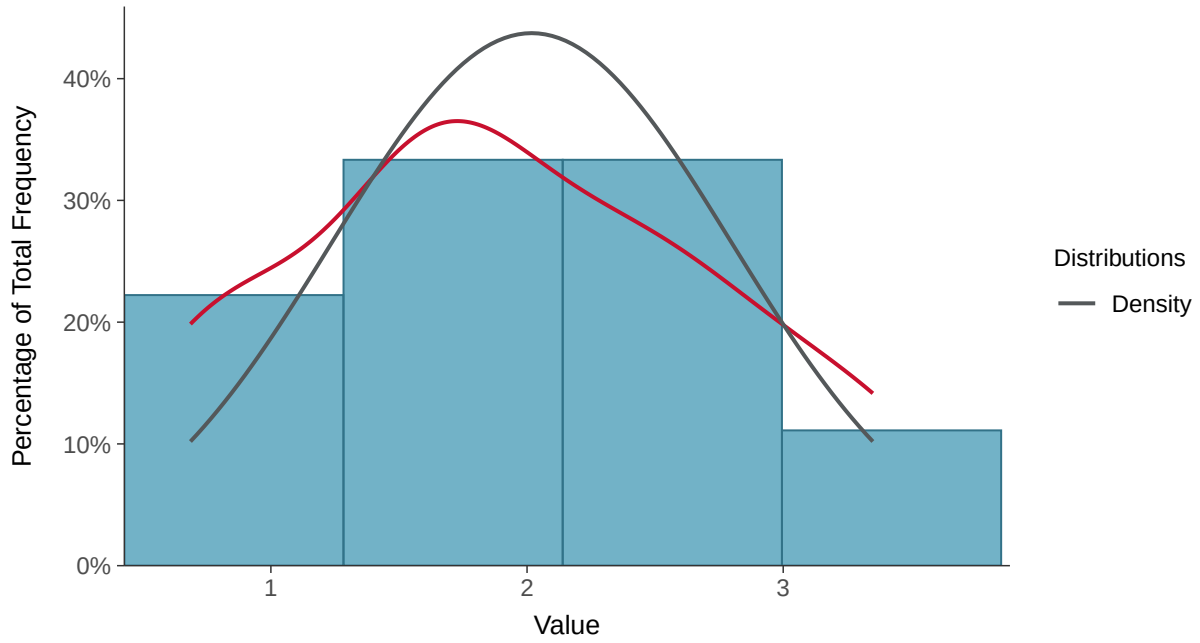
Scatter Plot

Radium 226 and 228, MW-02 (pCi/L)



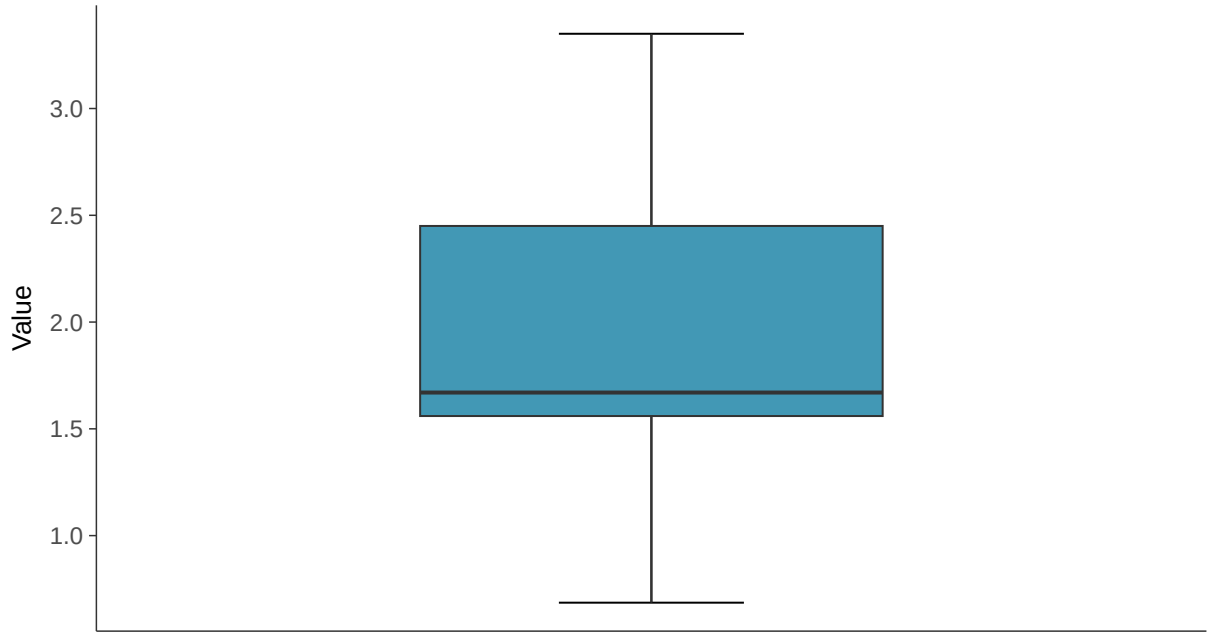
Histogram

Radium 226 and 228, MW-02 (pCi/L)



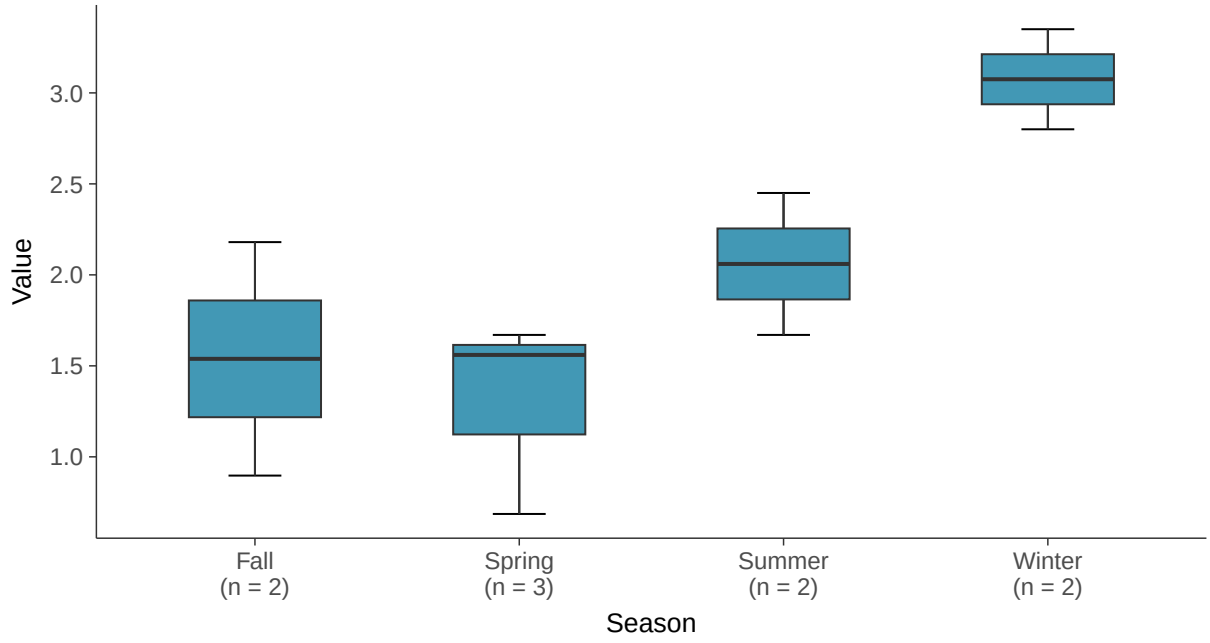
Boxplot

Radium 226 and 228, MW-02 (pCi/L)



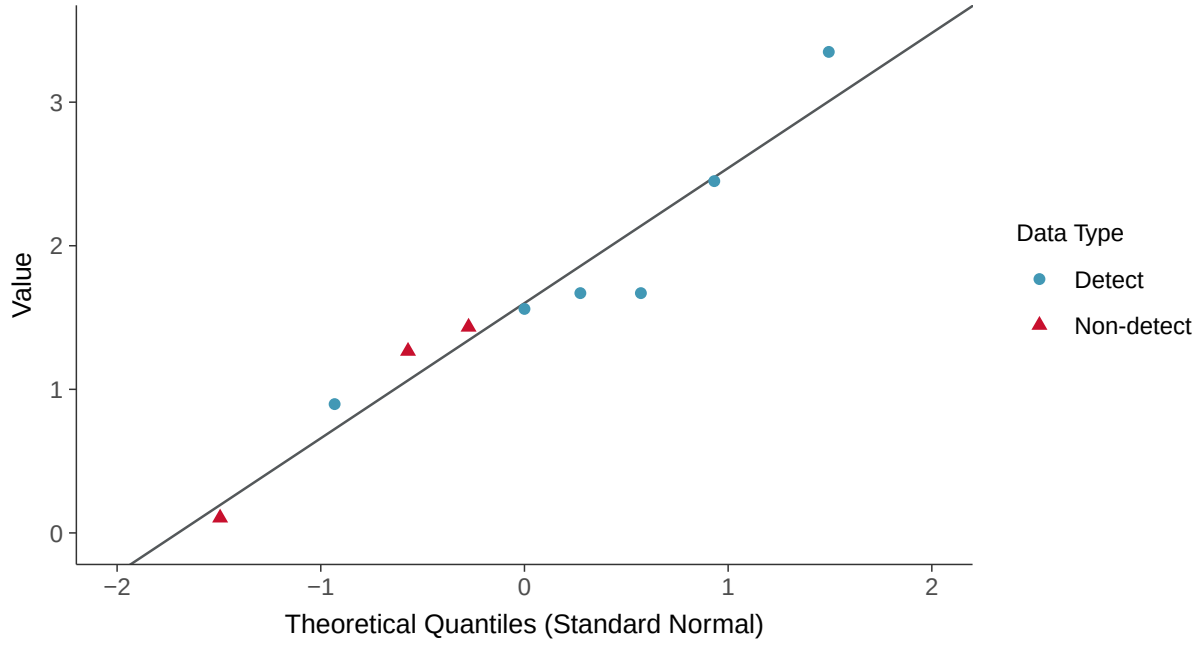
Boxplot by Season

Radium 226 and 228, MW-02 (pCi/L)



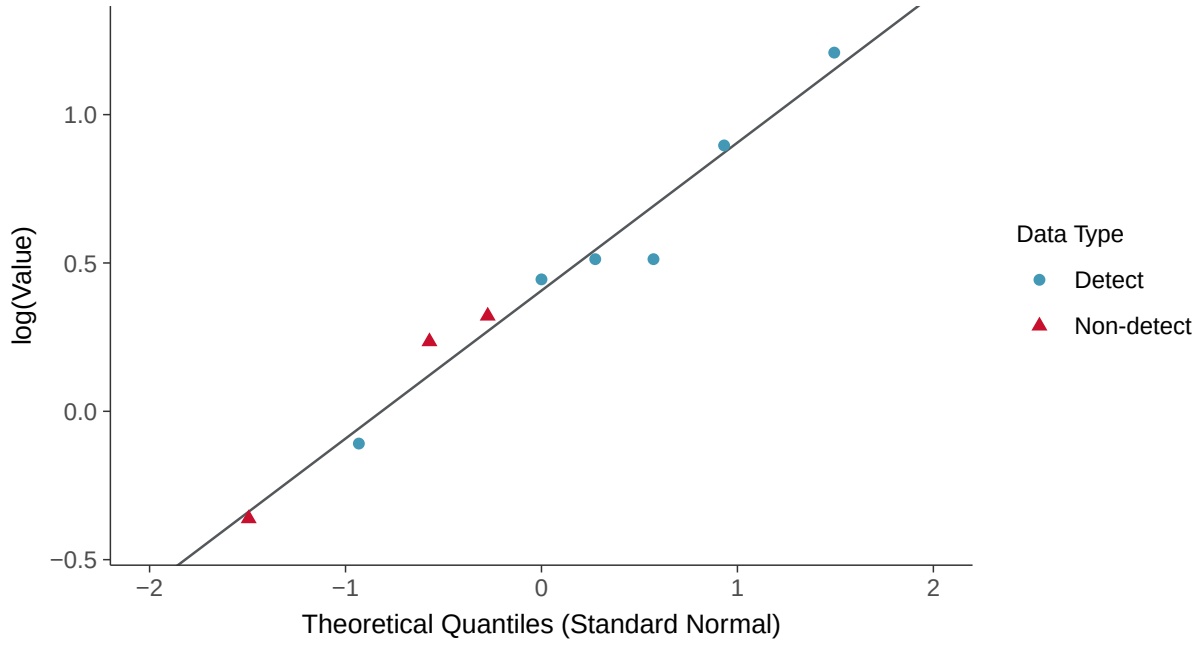
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-02 (pCi/L)



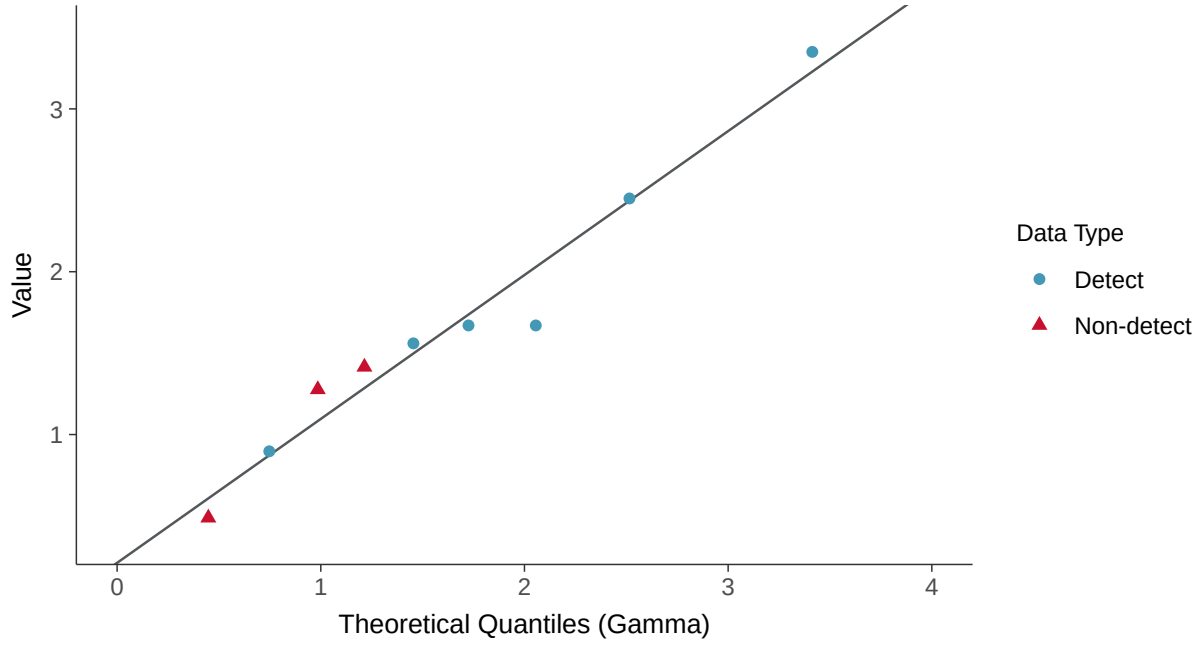
Lognormal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-02 (pCi/L)



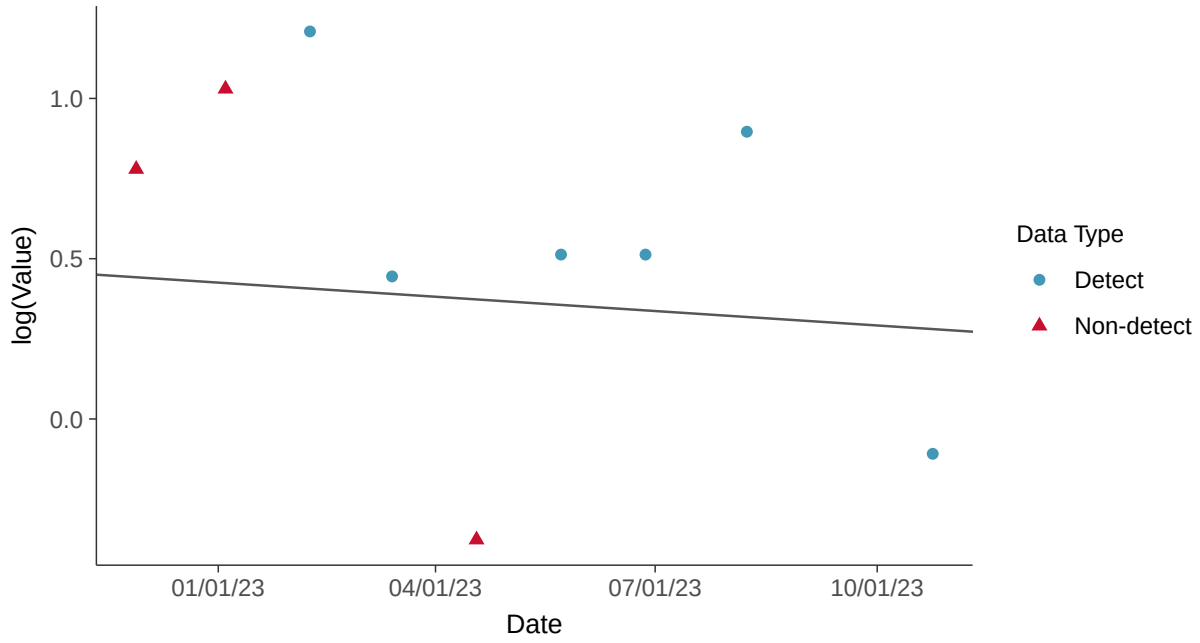
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-02 (pCi/L)



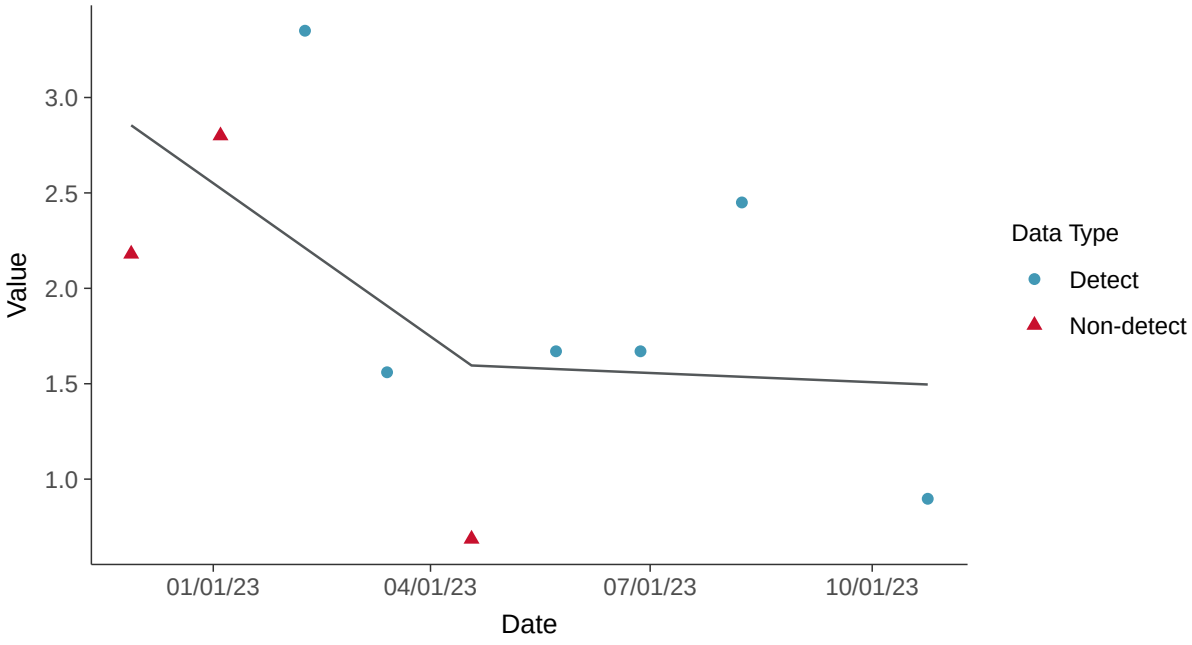
Trend Regression: Lognormal MLE

Radium 226 and 228, MW-02 (pCi/L)



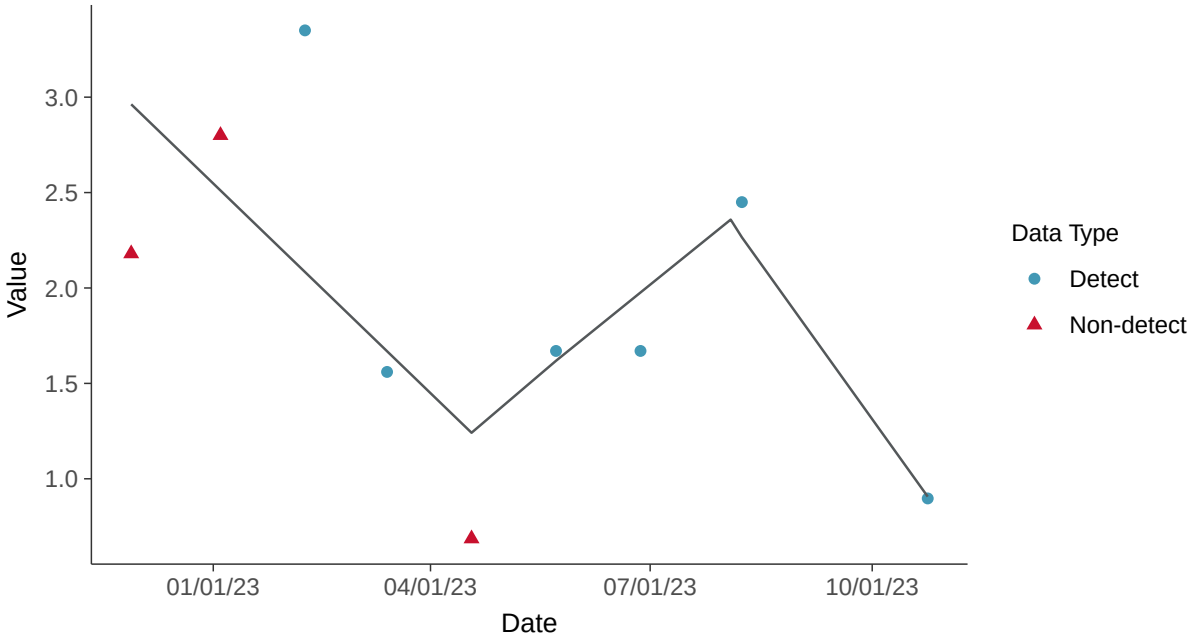
Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-02 (pCi/L)



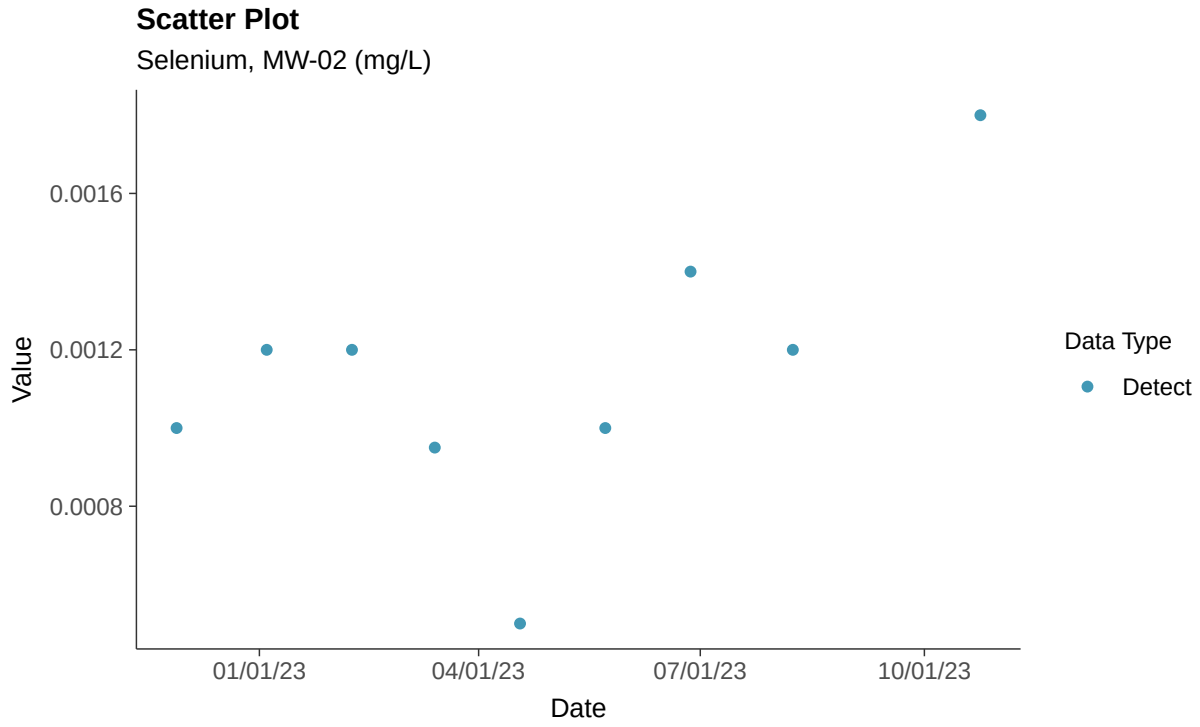
Trend Regression: Piecewise Linear-Linear-Linear

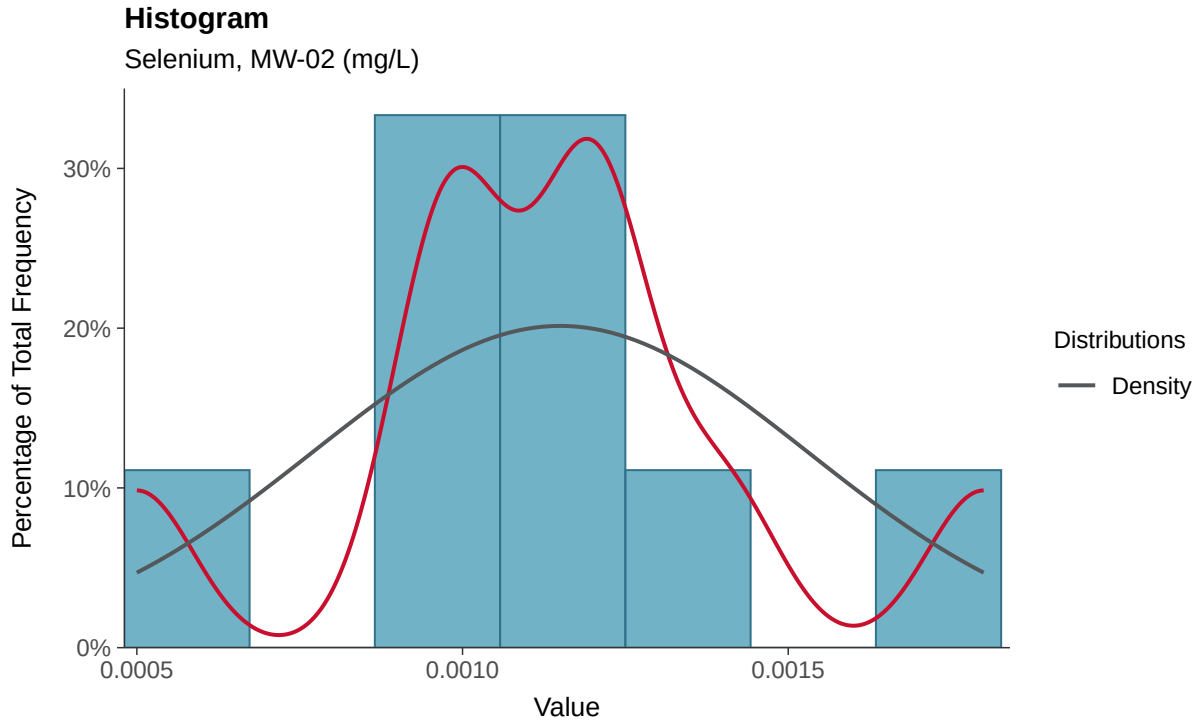
Radium 226 and 228, MW-02 (pCi/L)



Appendix IV: Selenium, MW-02

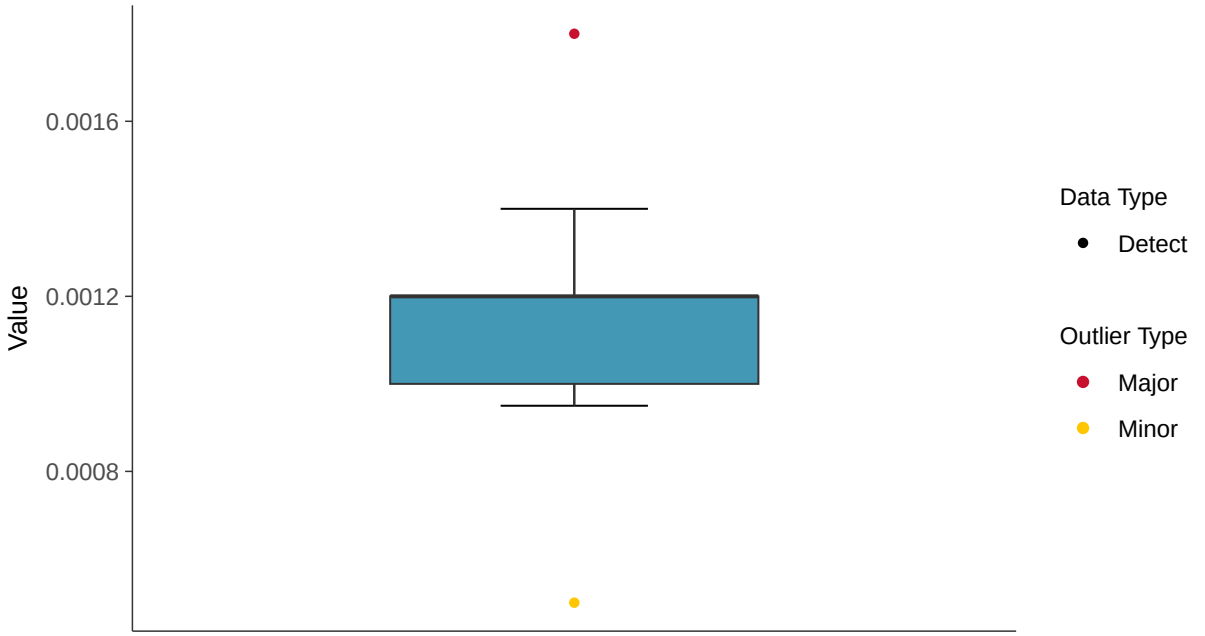
ID: 2_12_5_122





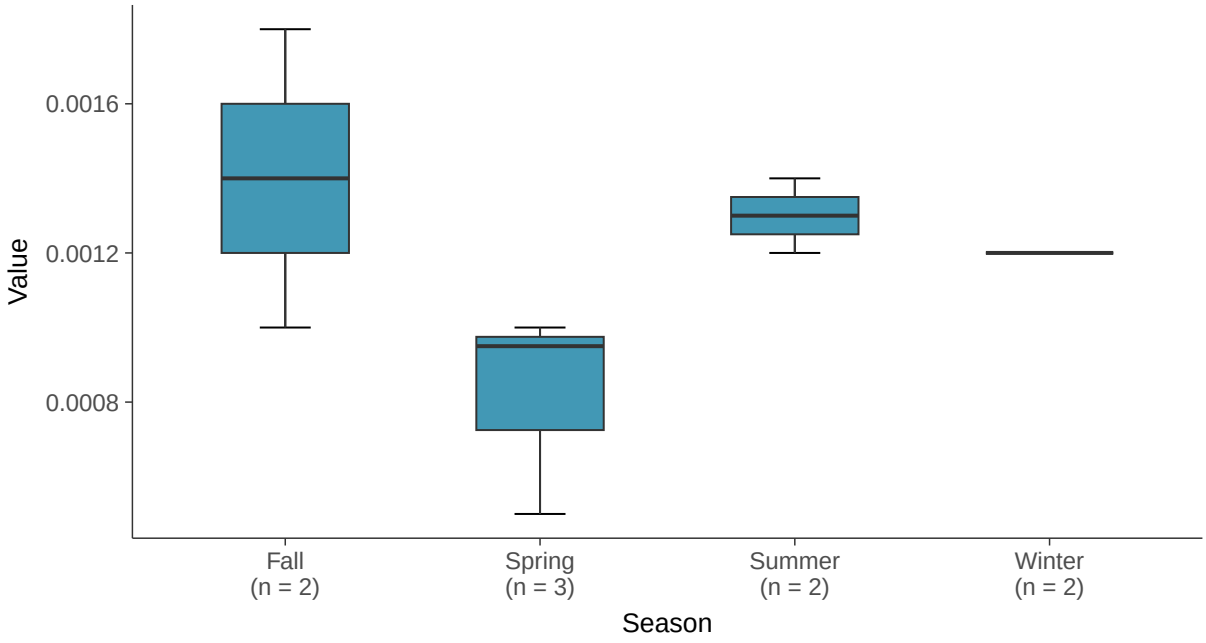
Boxplot

Selenium, MW-02 (mg/L)



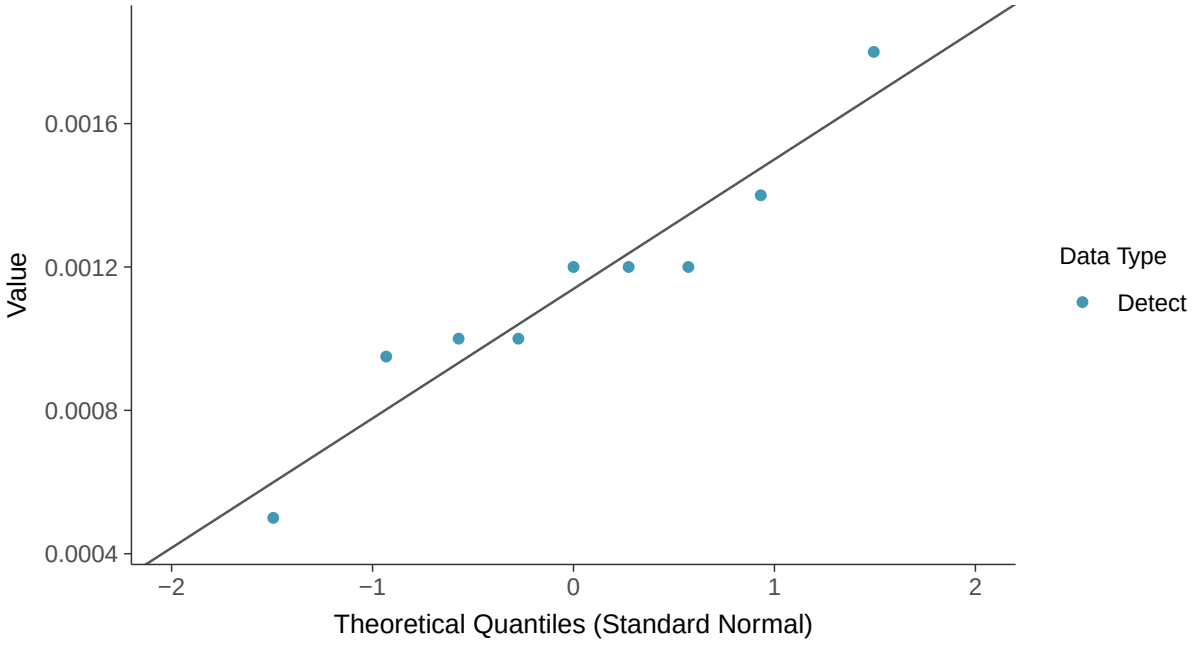
Boxplot by Season

Selenium, MW-02 (mg/L)



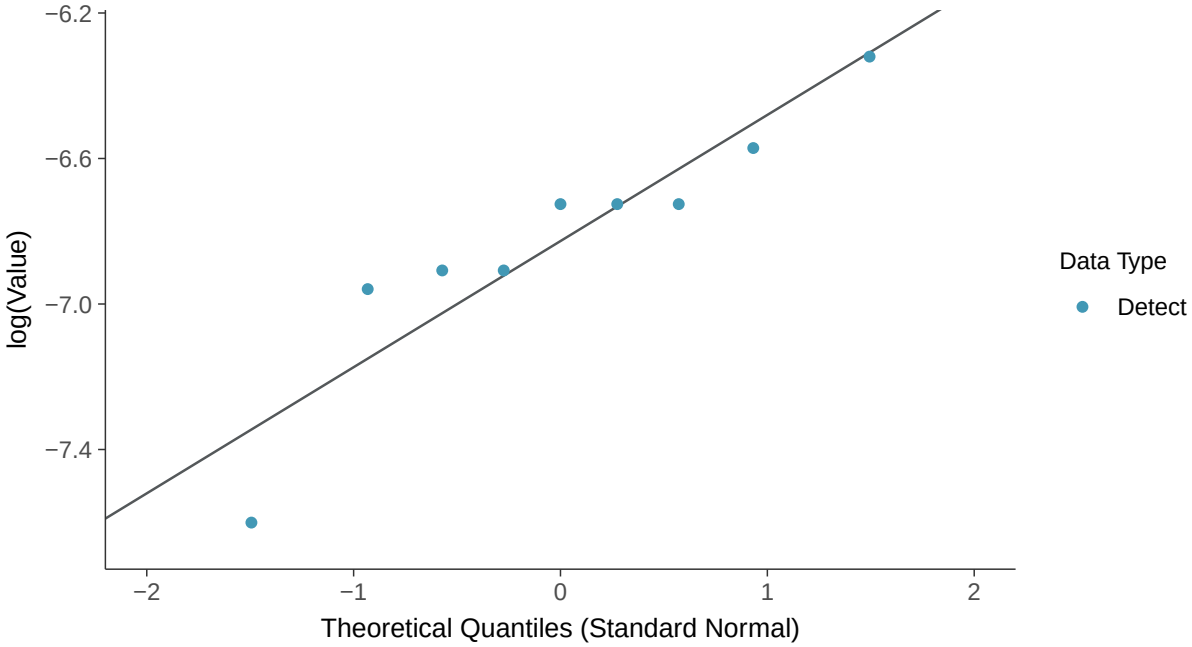
Normal Q-Q plot

Selenium, MW-02 (mg/L)



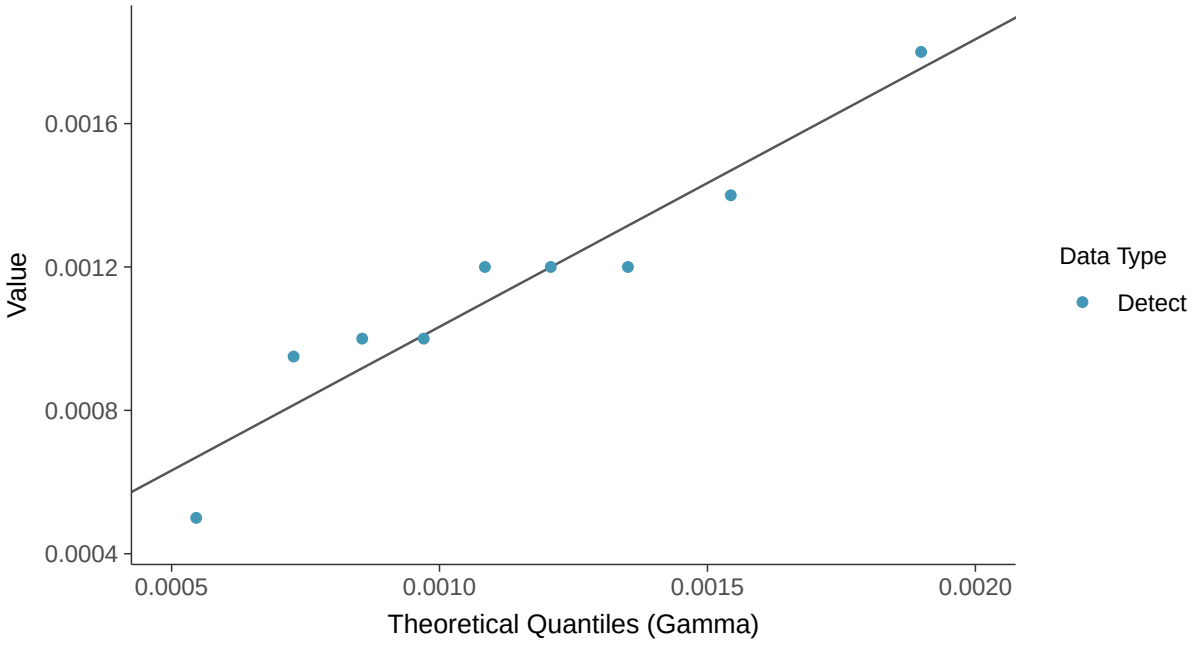
Lognormal Q-Q plot

Selenium, MW-02 (mg/L)



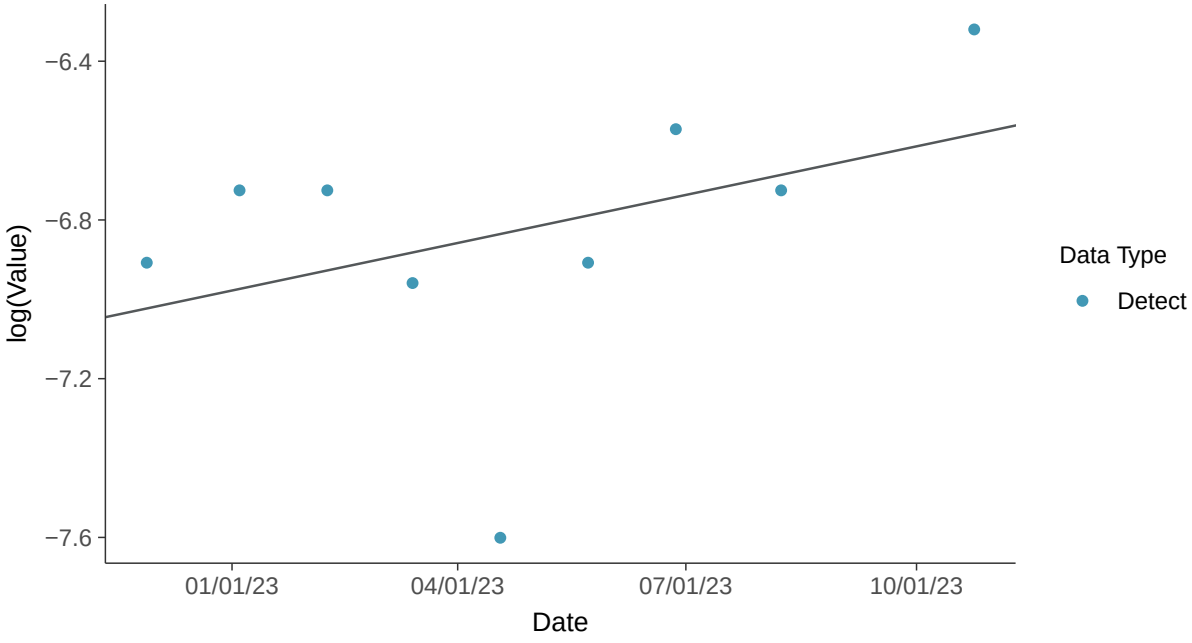
Gamma Q-Q plot

Selenium, MW-02 (mg/L)



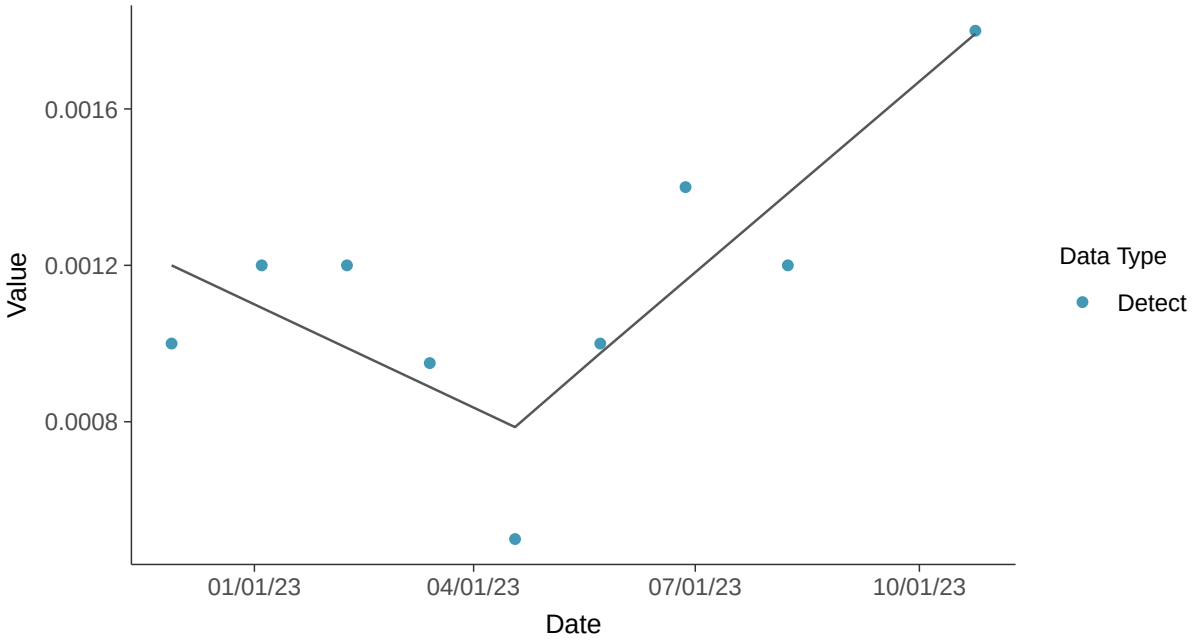
Trend Regression: Lognormal MLE

Selenium, MW-02 (mg/L)



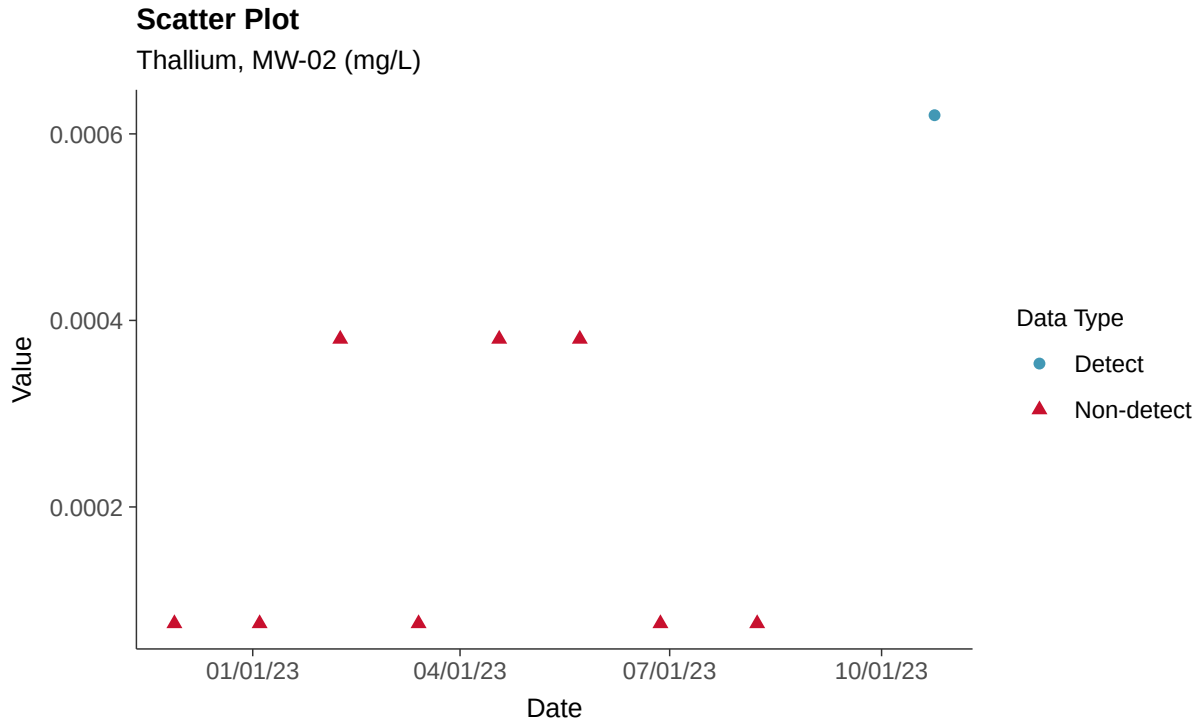
Trend Regression: Piecewise Linear-Linear

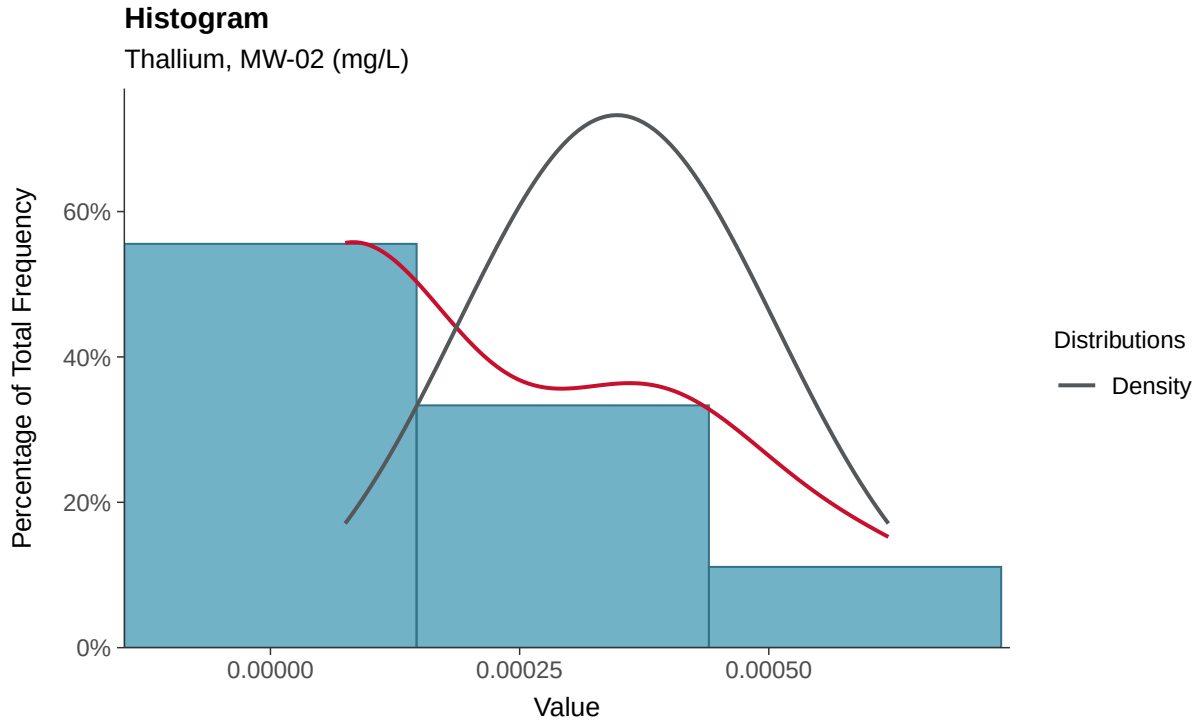
Selenium, MW-02 (mg/L)



Appendix IV: Thallium, MW-02

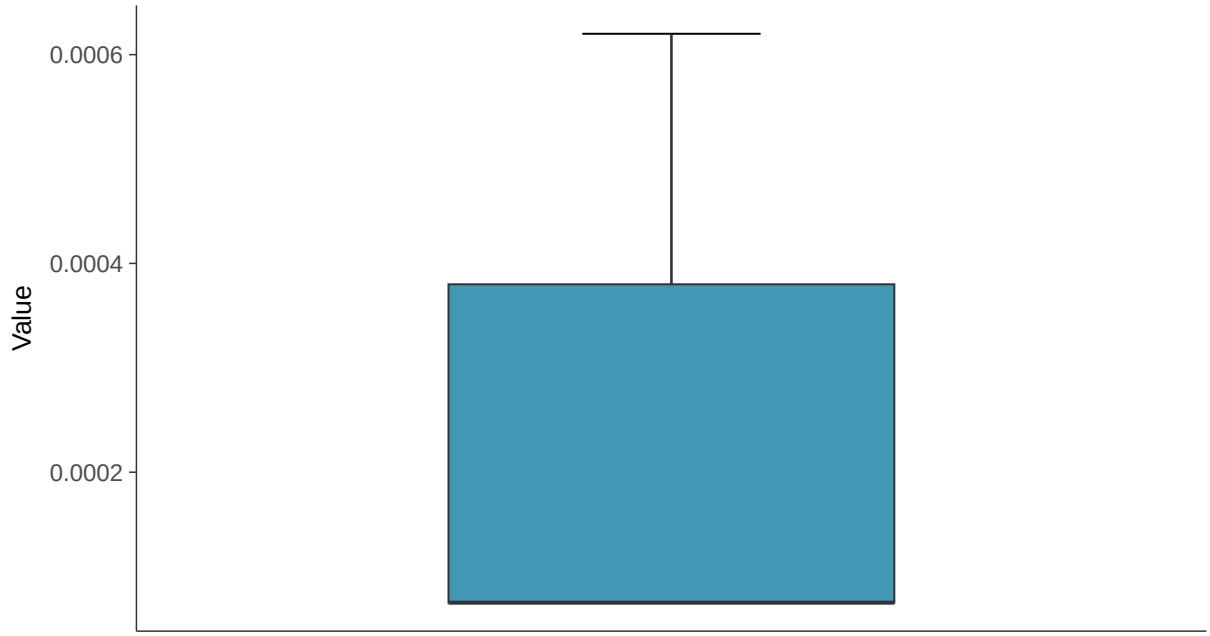
ID: 2_12_5_125





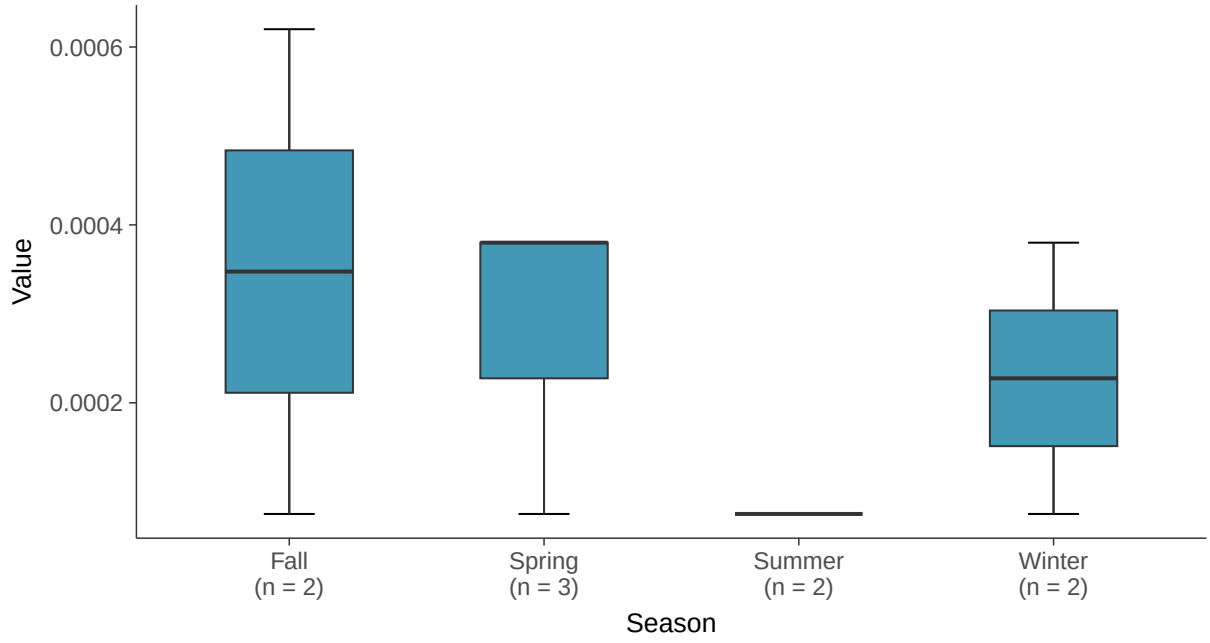
Boxplot

Thallium, MW-02 (mg/L)



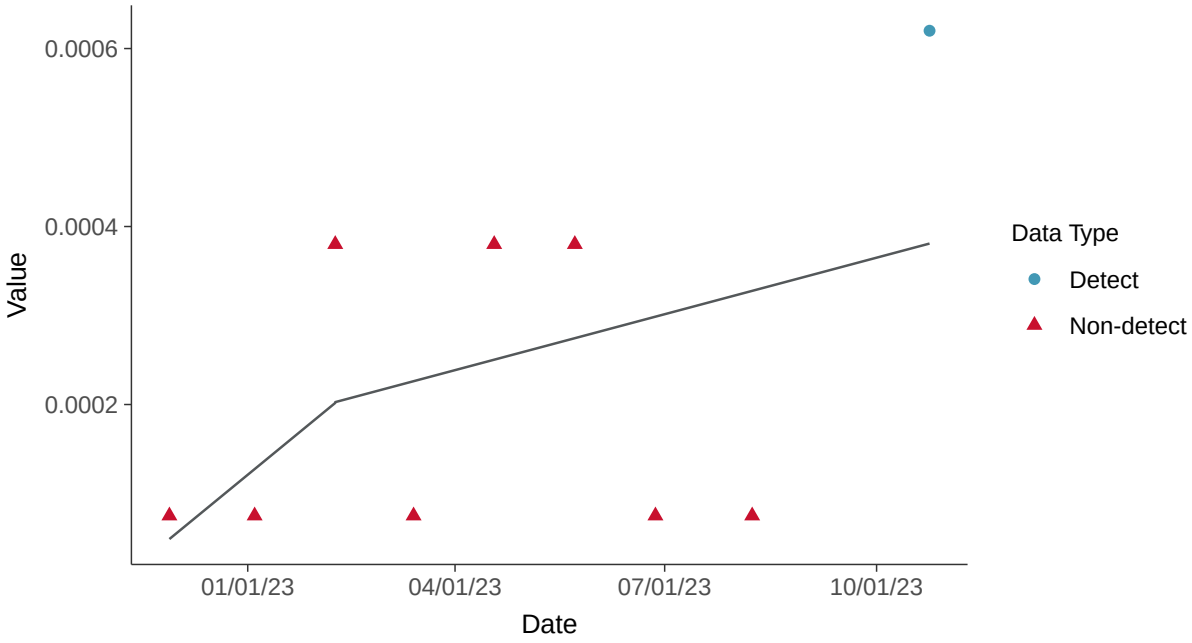
Boxplot by Season

Thallium, MW-02 (mg/L)



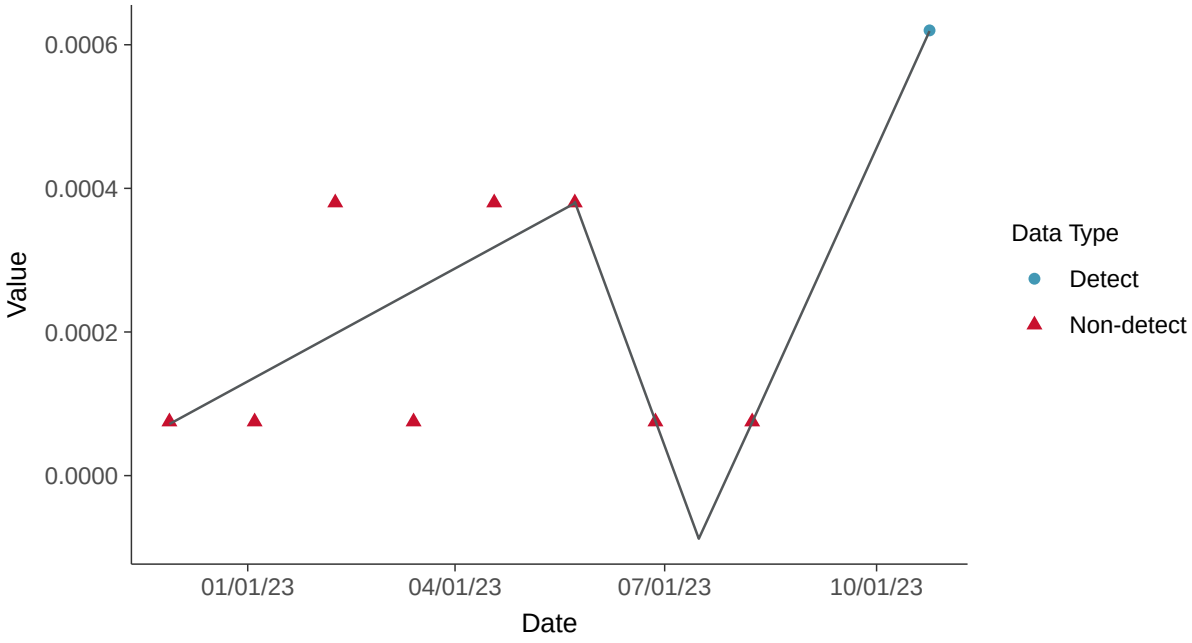
Trend Regression: Piecewise Linear-Linear

Thallium, MW-02 (mg/L)



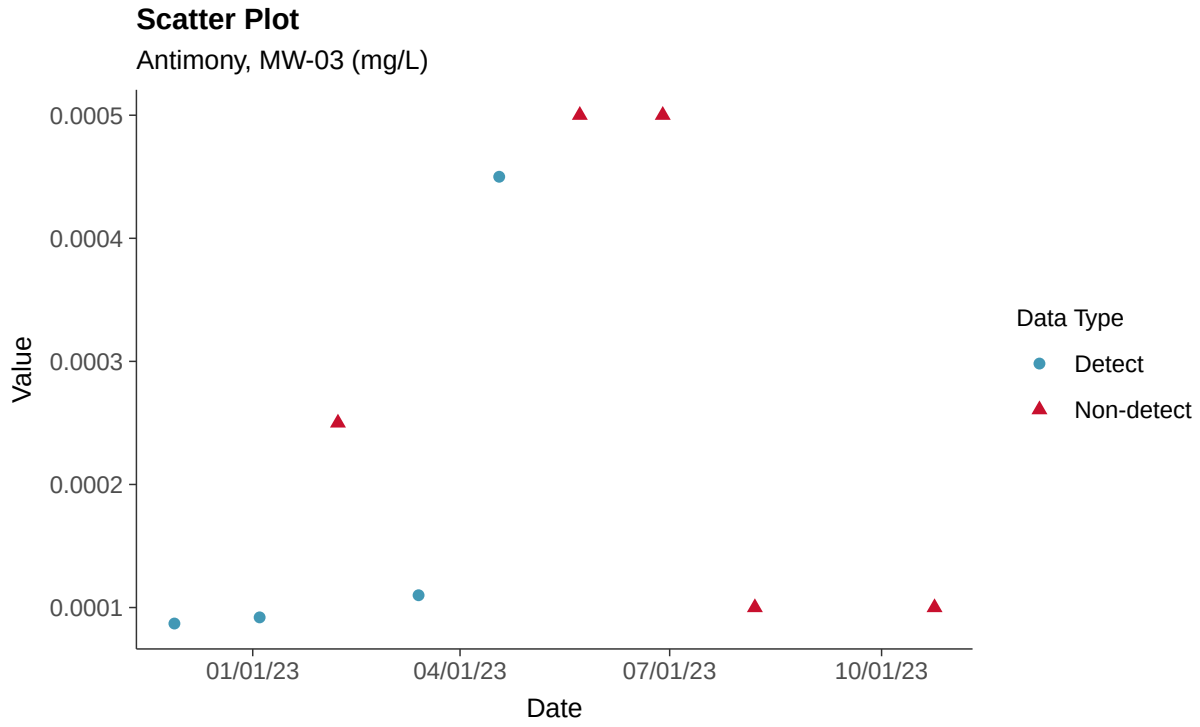
Trend Regression: Piecewise Linear-Linear-Linear

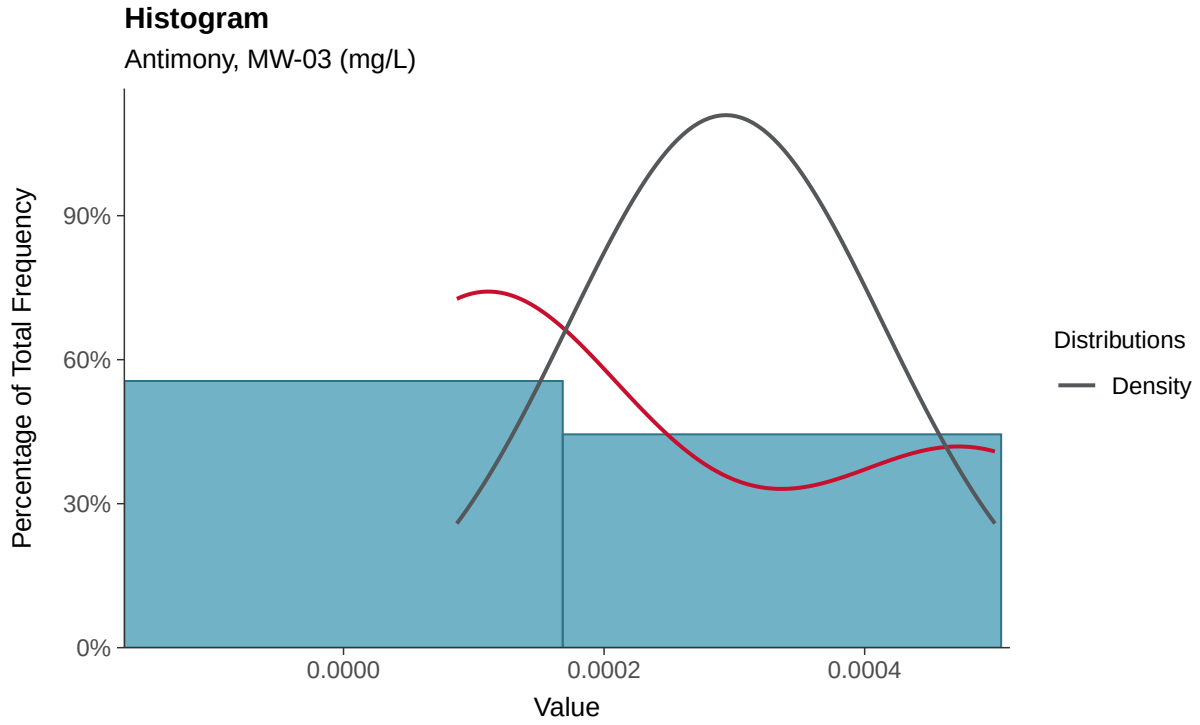
Thallium, MW-02 (mg/L)



Appendix IV: Antimony, MW-03

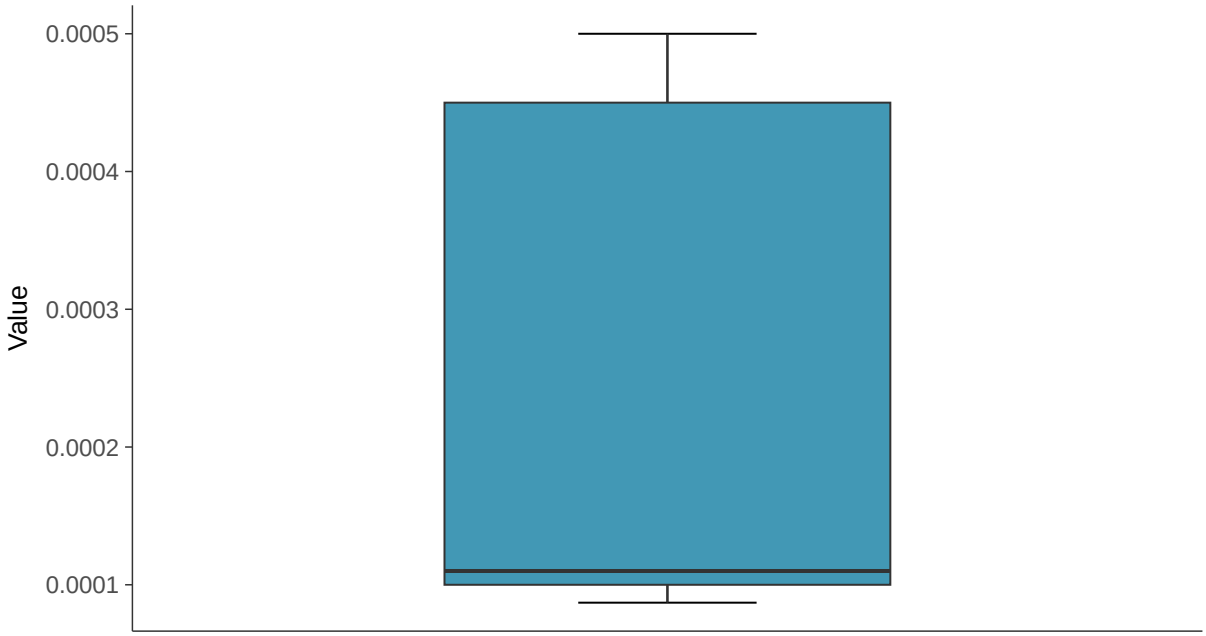
ID: 2_13_5_101





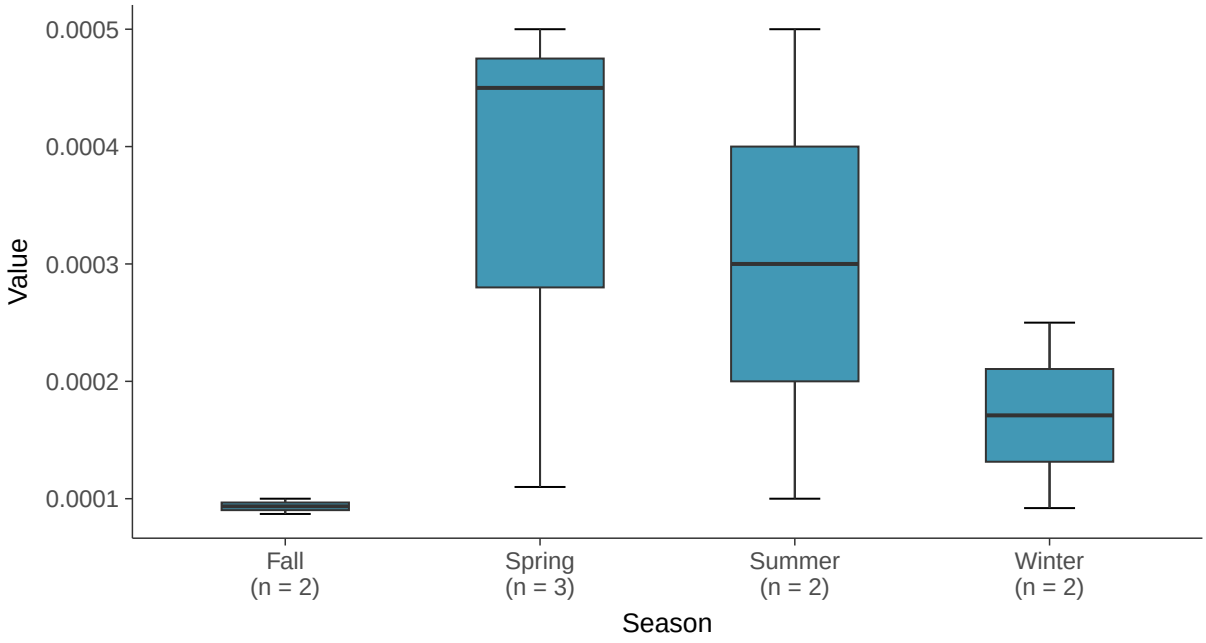
Boxplot

Antimony, MW-03 (mg/L)



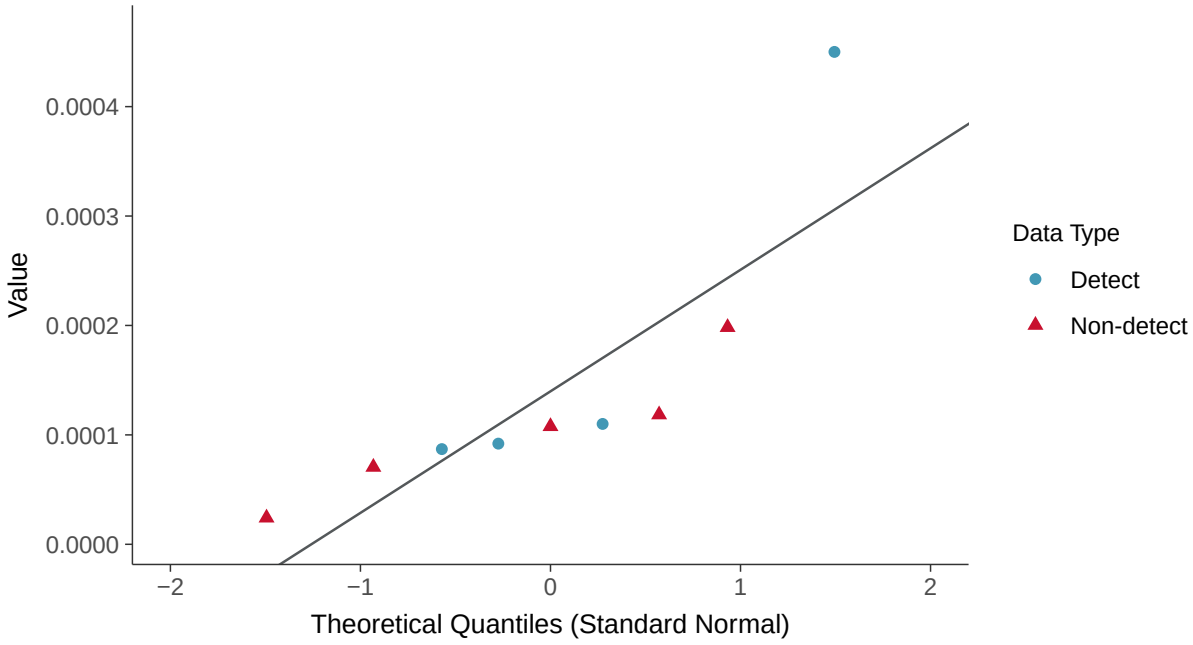
Boxplot by Season

Antimony, MW-03 (mg/L)



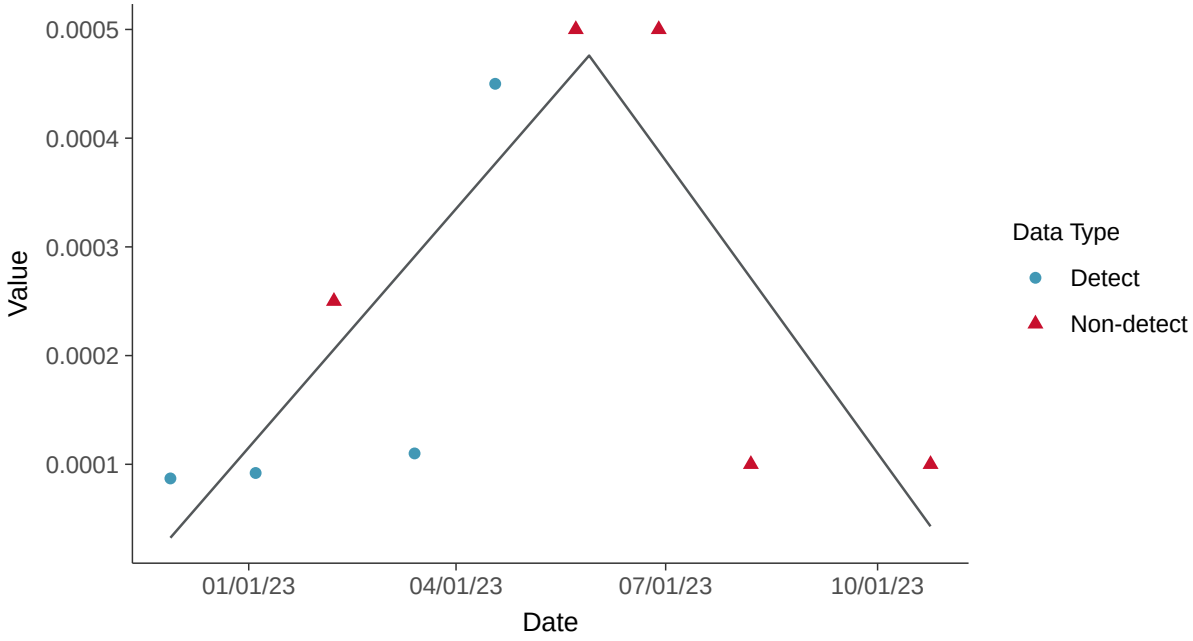
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-03 (mg/L)



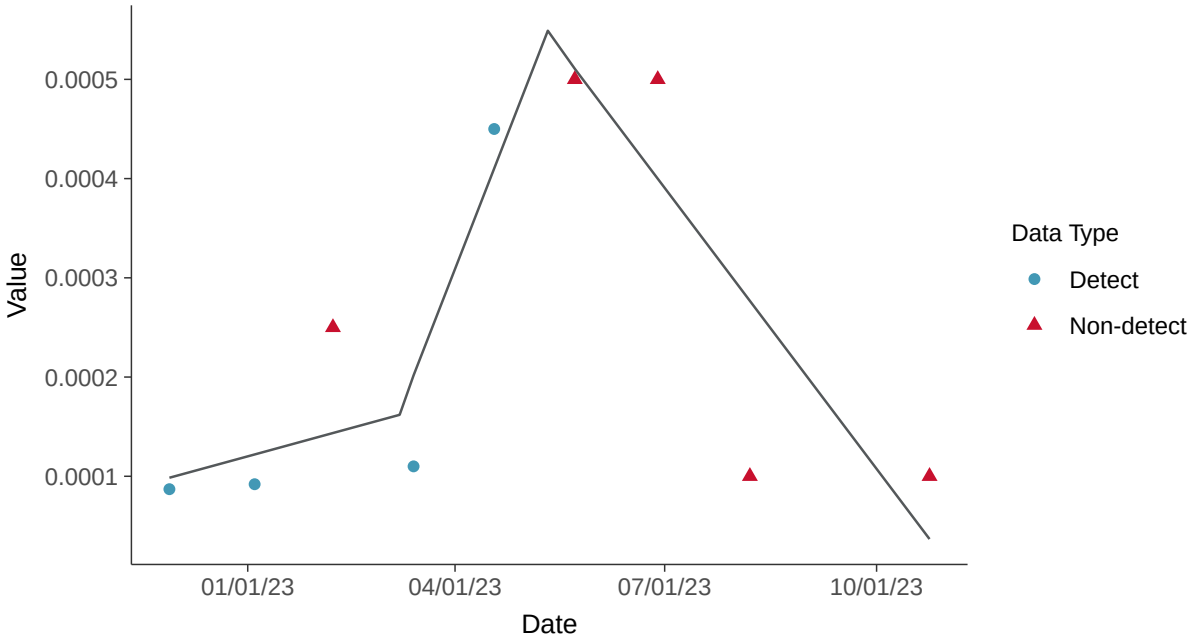
Trend Regression: Piecewise Linear-Linear

Antimony, MW-03 (mg/L)



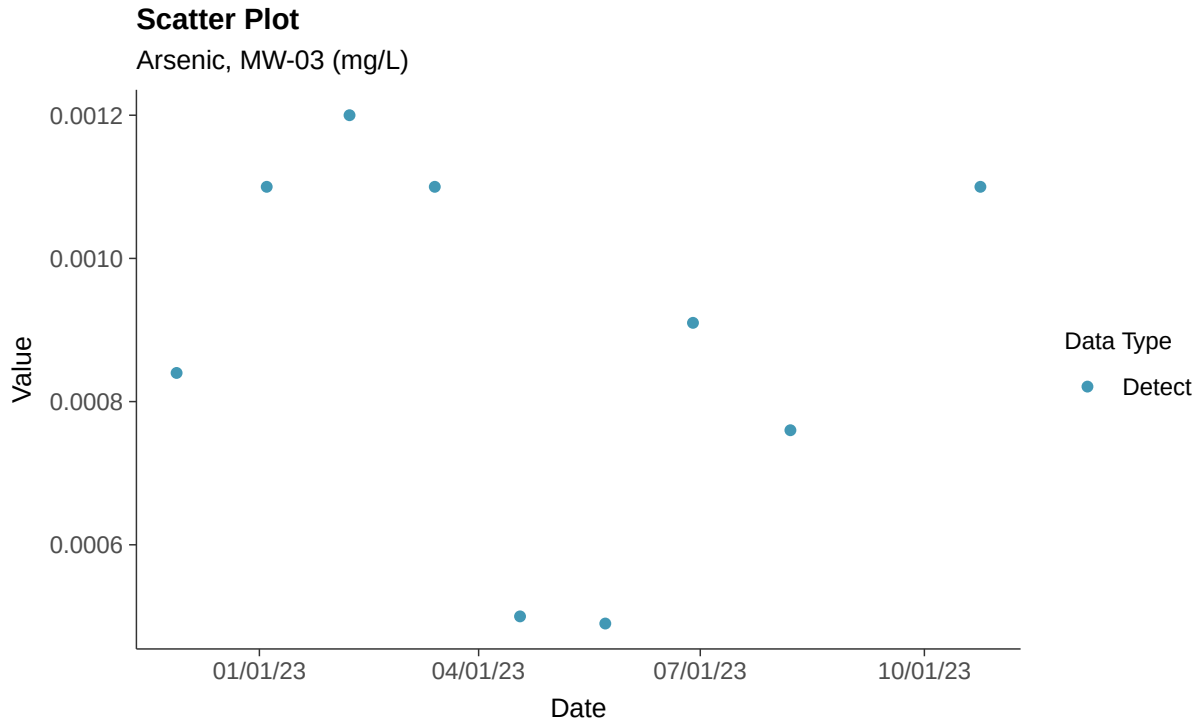
Trend Regression: Piecewise Linear-Linear-Linear

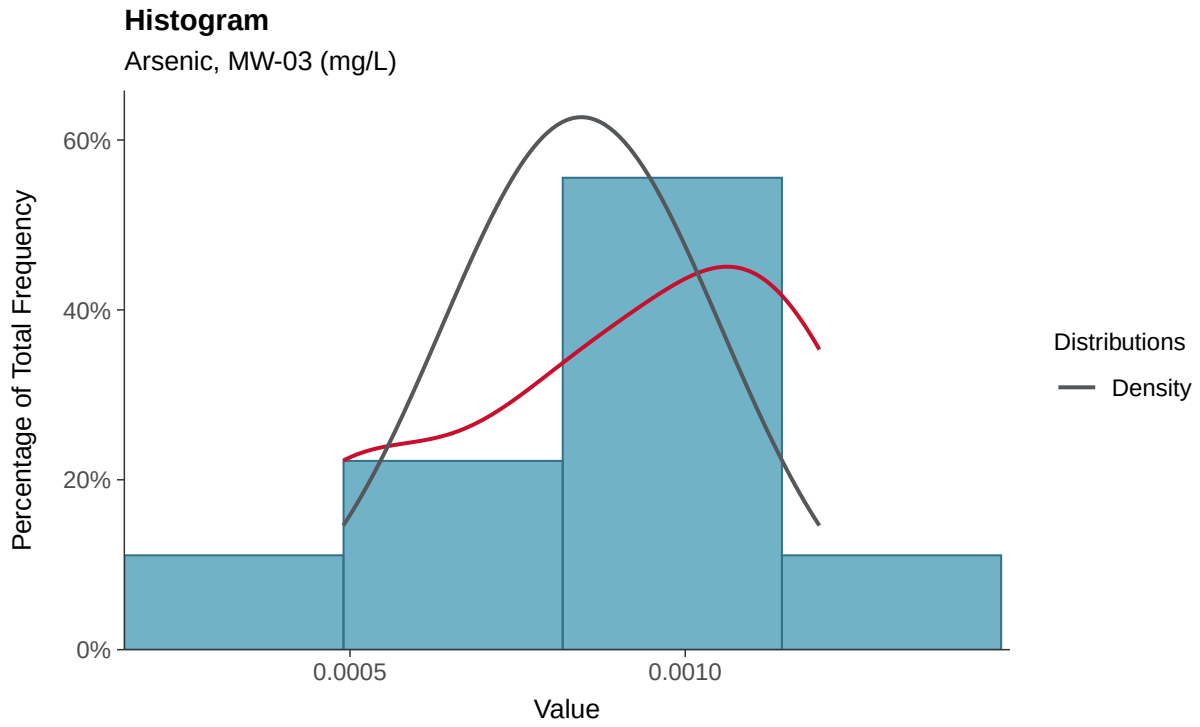
Antimony, MW-03 (mg/L)



Appendix IV: Arsenic, MW-03

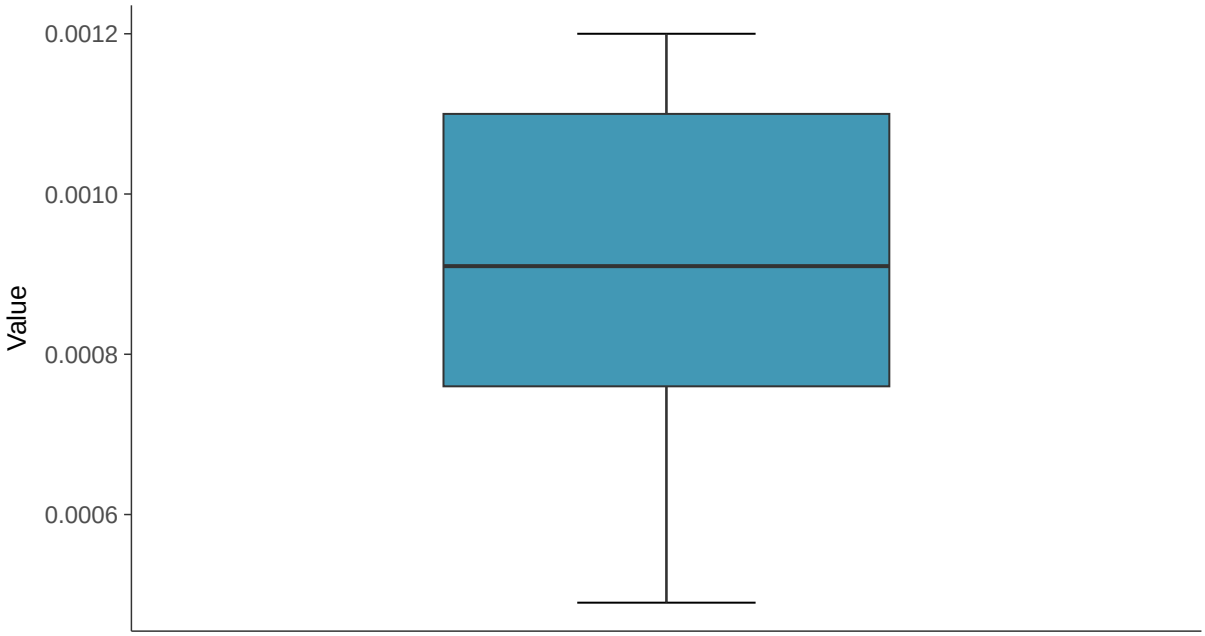
ID: 2_13_5_102





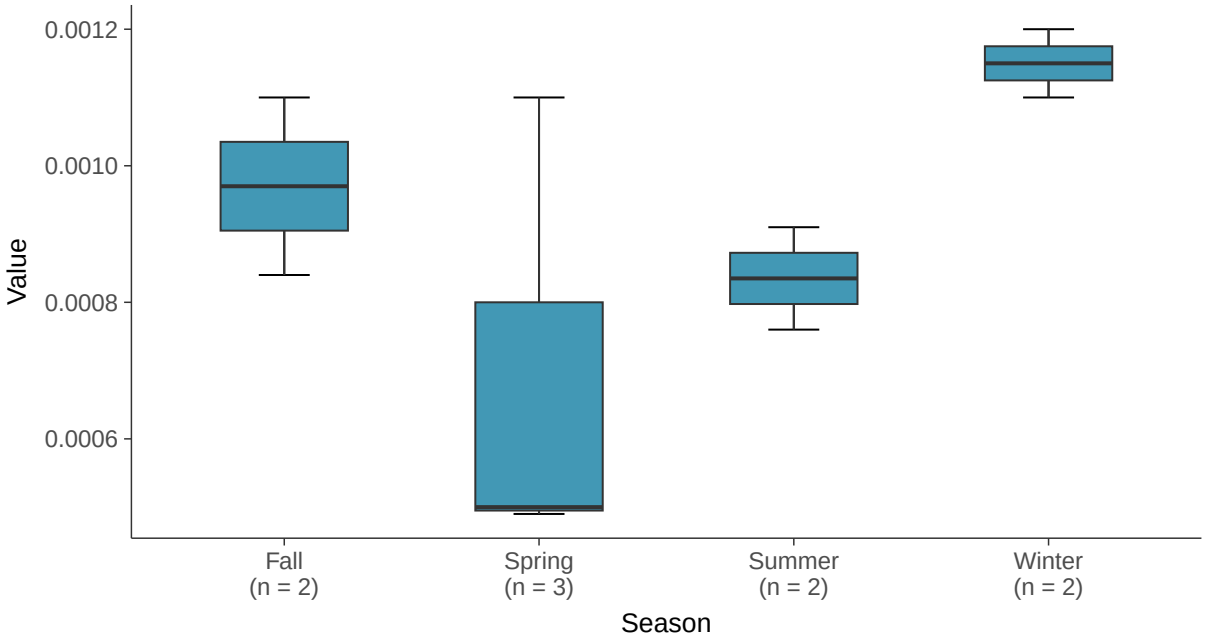
Boxplot

Arsenic, MW-03 (mg/L)



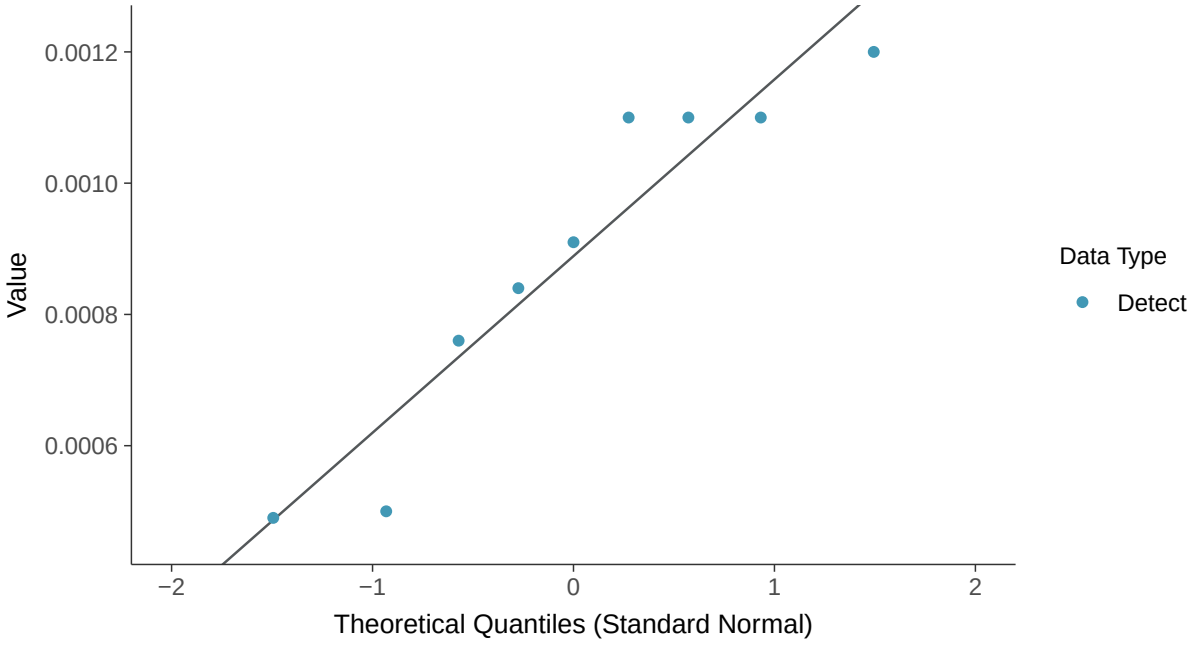
Boxplot by Season

Arsenic, MW-03 (mg/L)



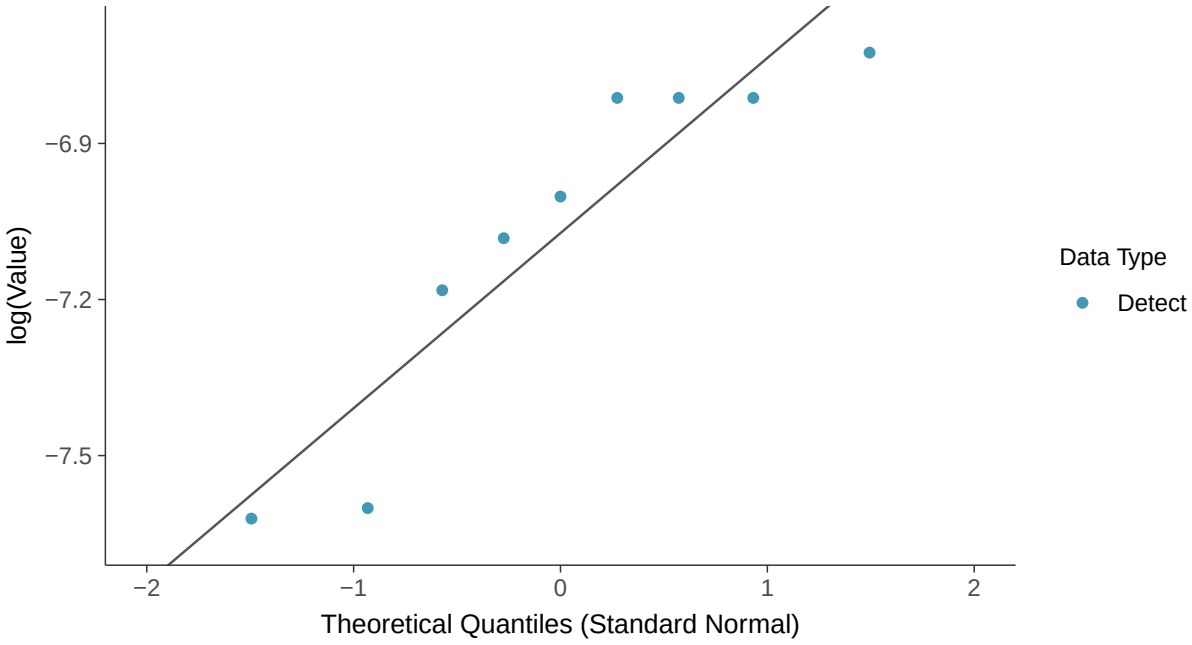
Normal Q-Q plot

Arsenic, MW-03 (mg/L)



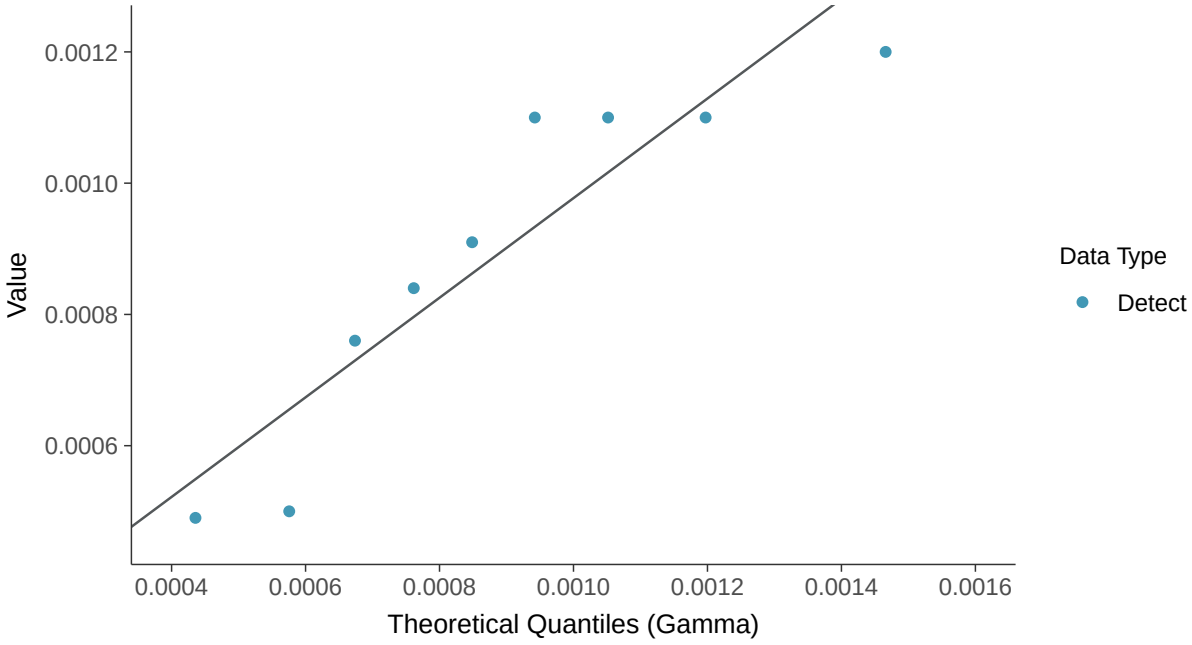
Lognormal Q-Q plot

Arsenic, MW-03 (mg/L)



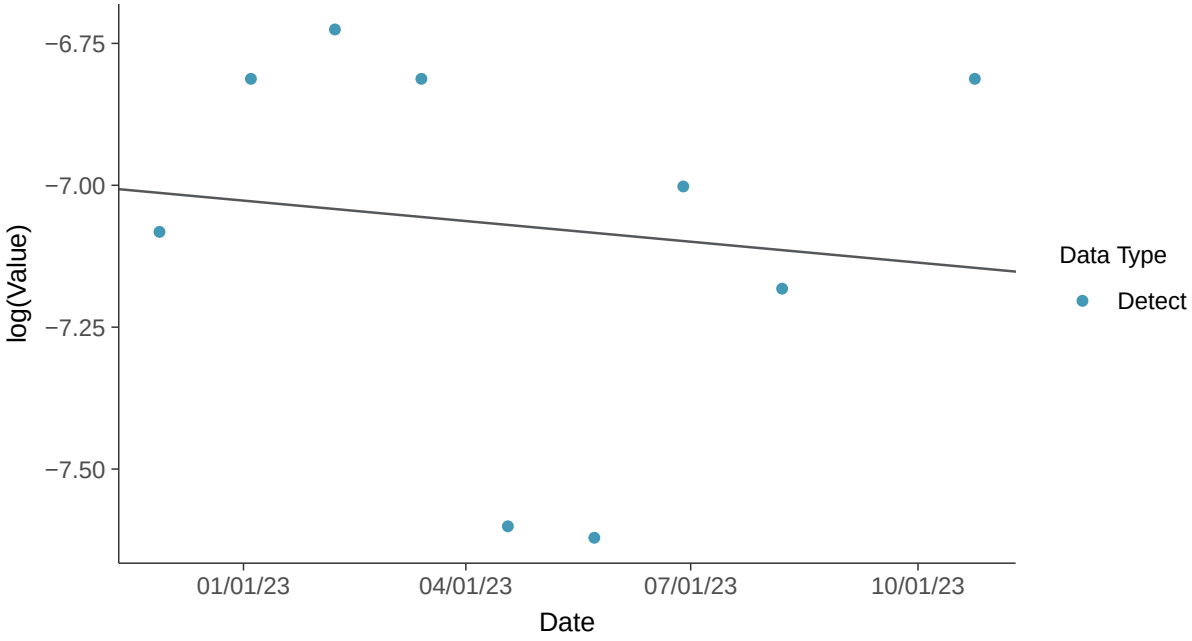
Gamma Q-Q plot

Arsenic, MW-03 (mg/L)



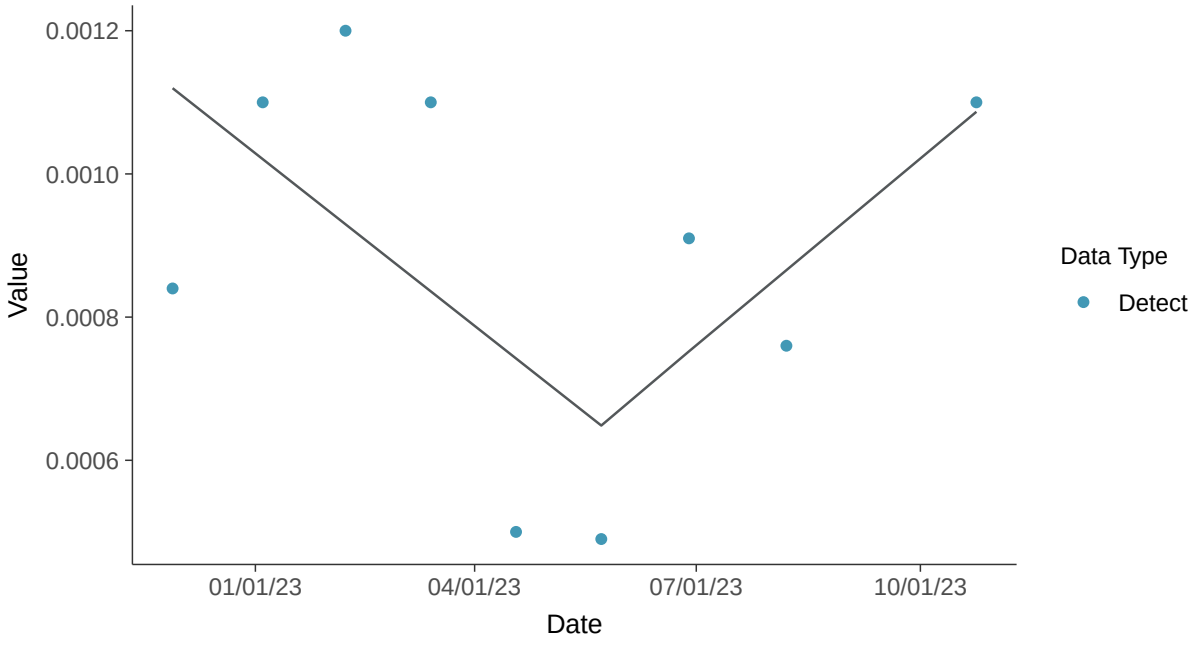
Trend Regression: Lognormal MLE

Arsenic, MW-03 (mg/L)



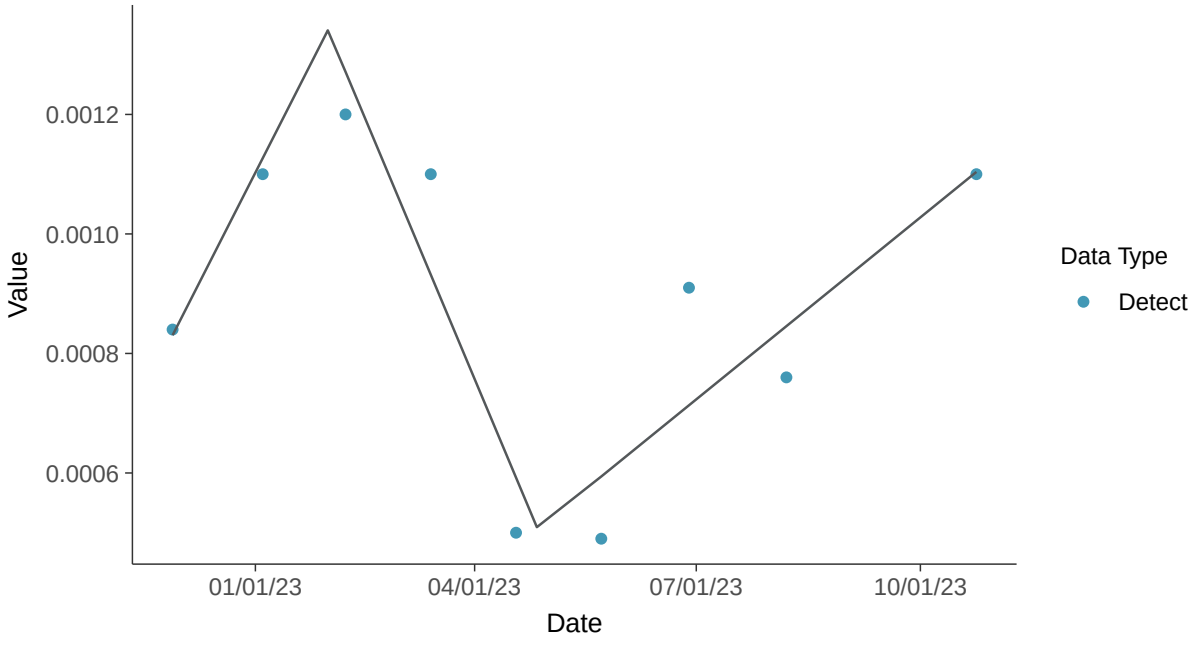
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-03 (mg/L)

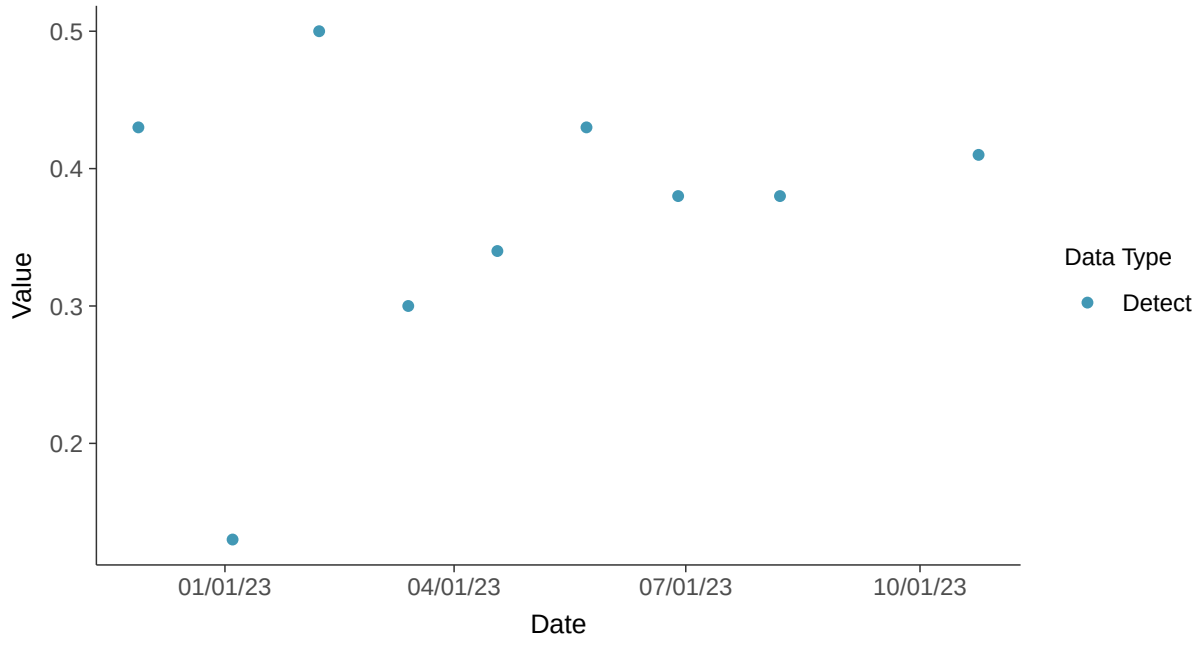


Appendix IV: Barium, MW-03

ID: 2_13_5_103

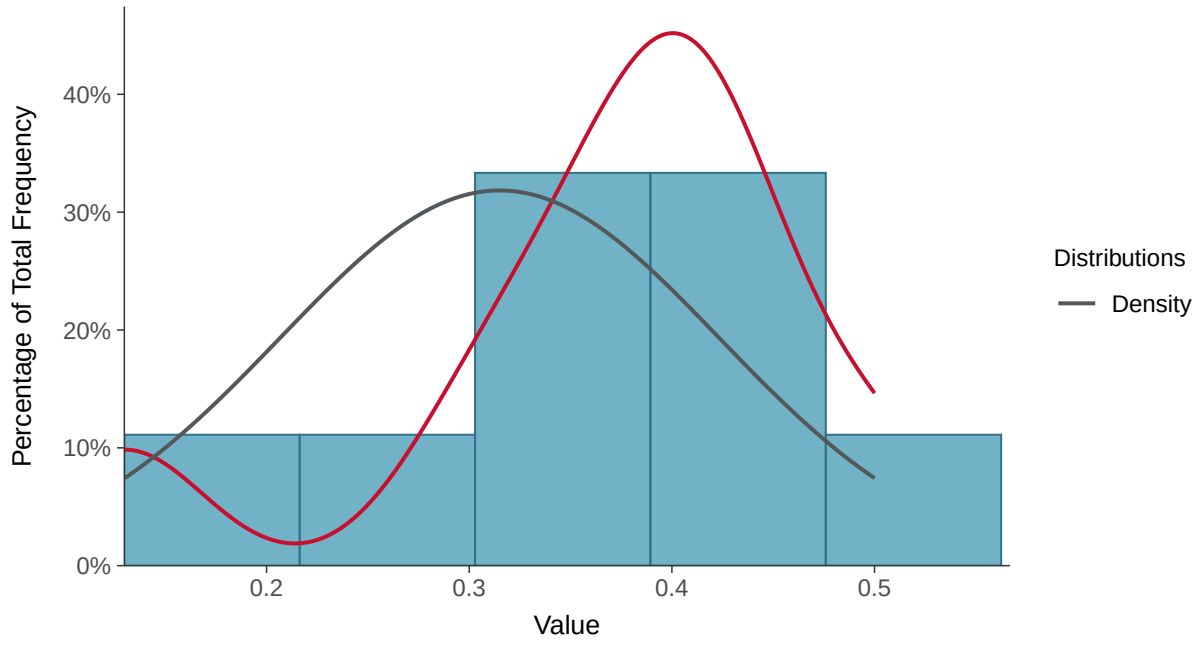
Scatter Plot

Barium, MW-03 (mg/L)



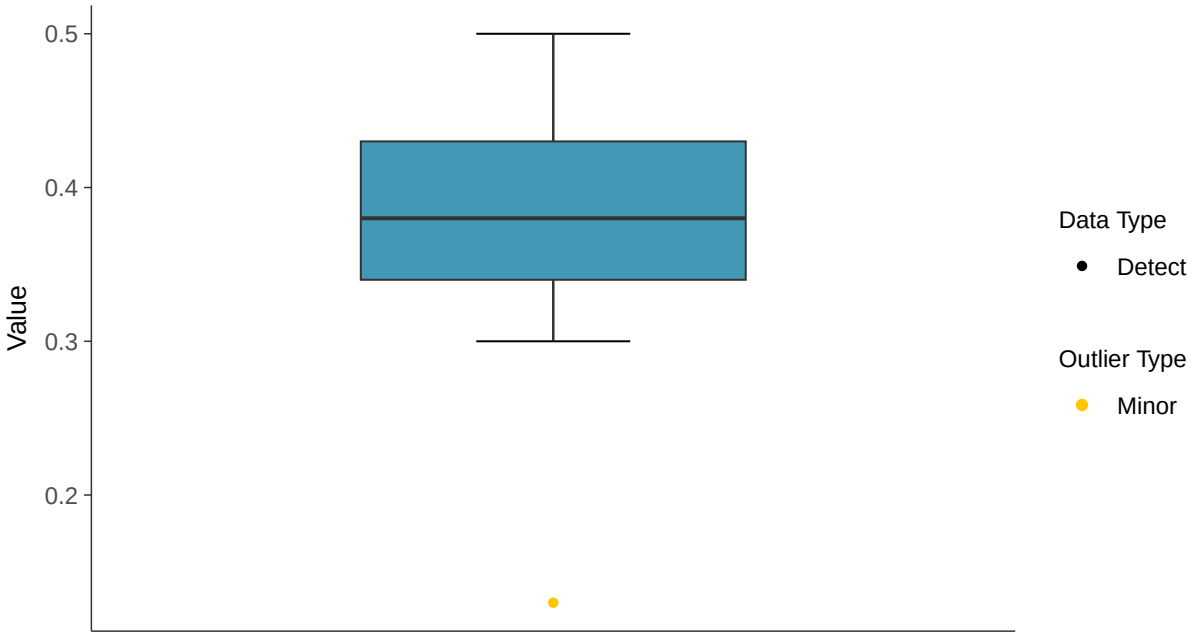
Histogram

Barium, MW-03 (mg/L)



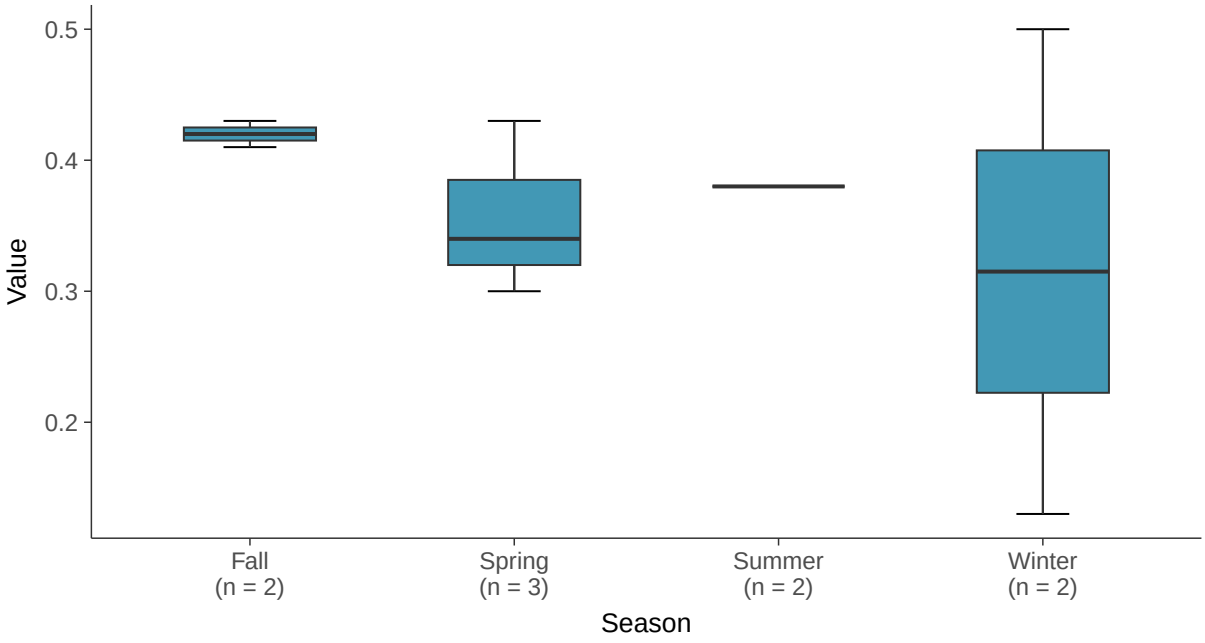
Boxplot

Barium, MW-03 (mg/L)



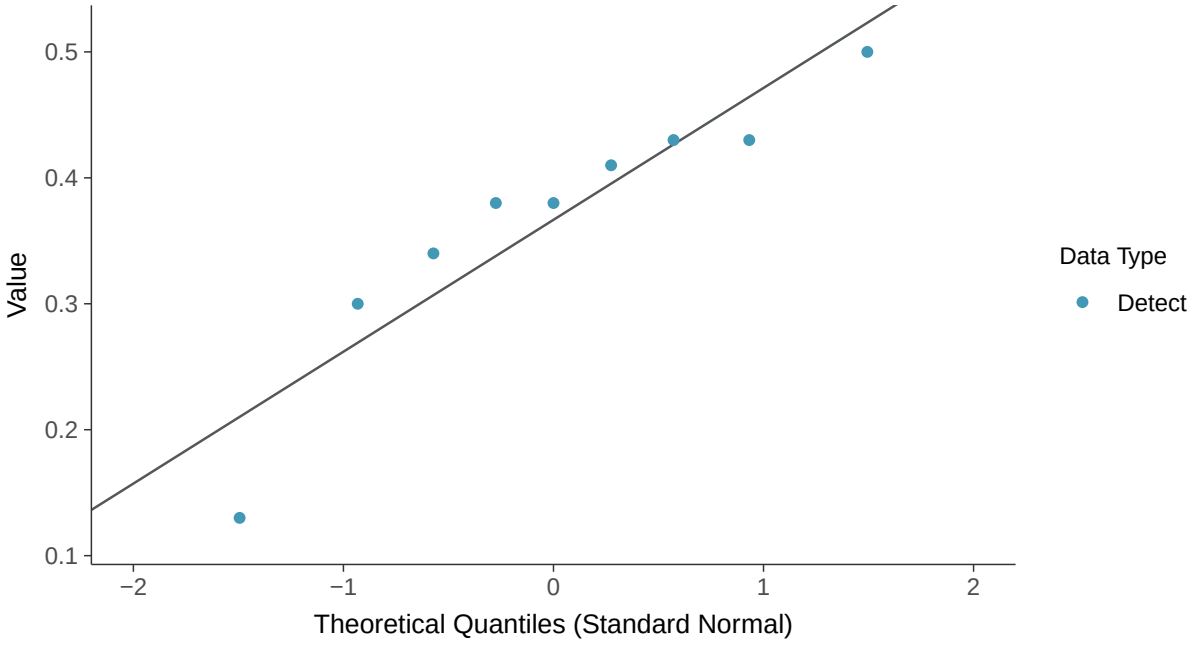
Boxplot by Season

Barium, MW-03 (mg/L)



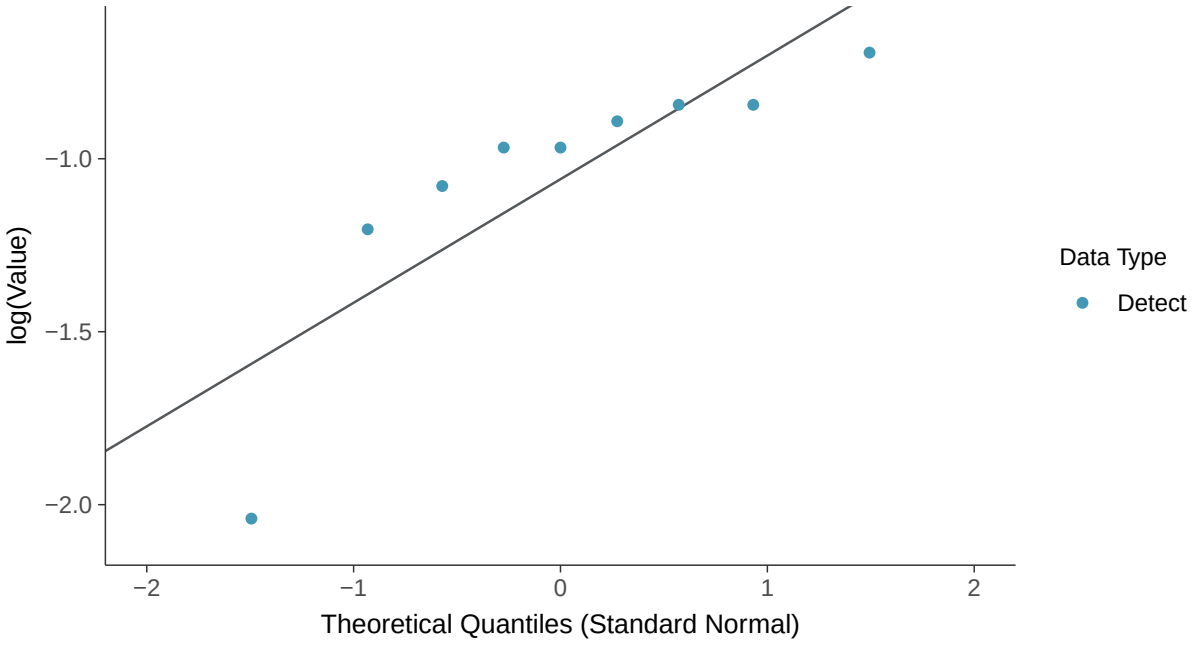
Normal Q-Q plot

Barium, MW-03 (mg/L)



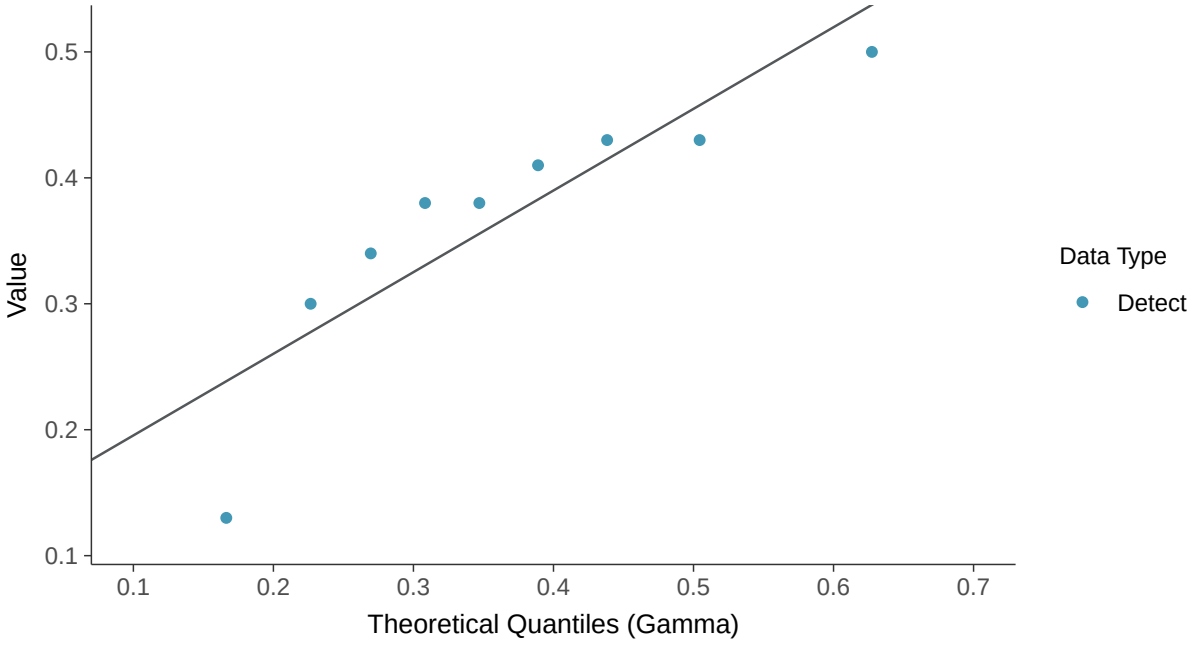
Lognormal Q-Q plot

Barium, MW-03 (mg/L)



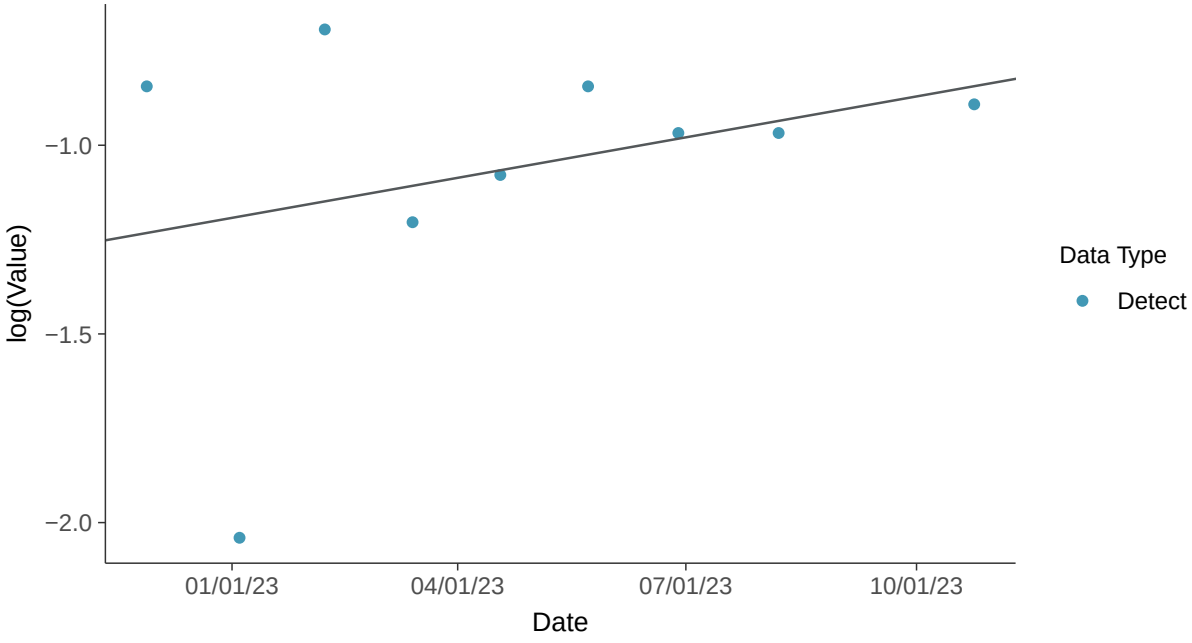
Gamma Q-Q plot

Barium, MW-03 (mg/L)



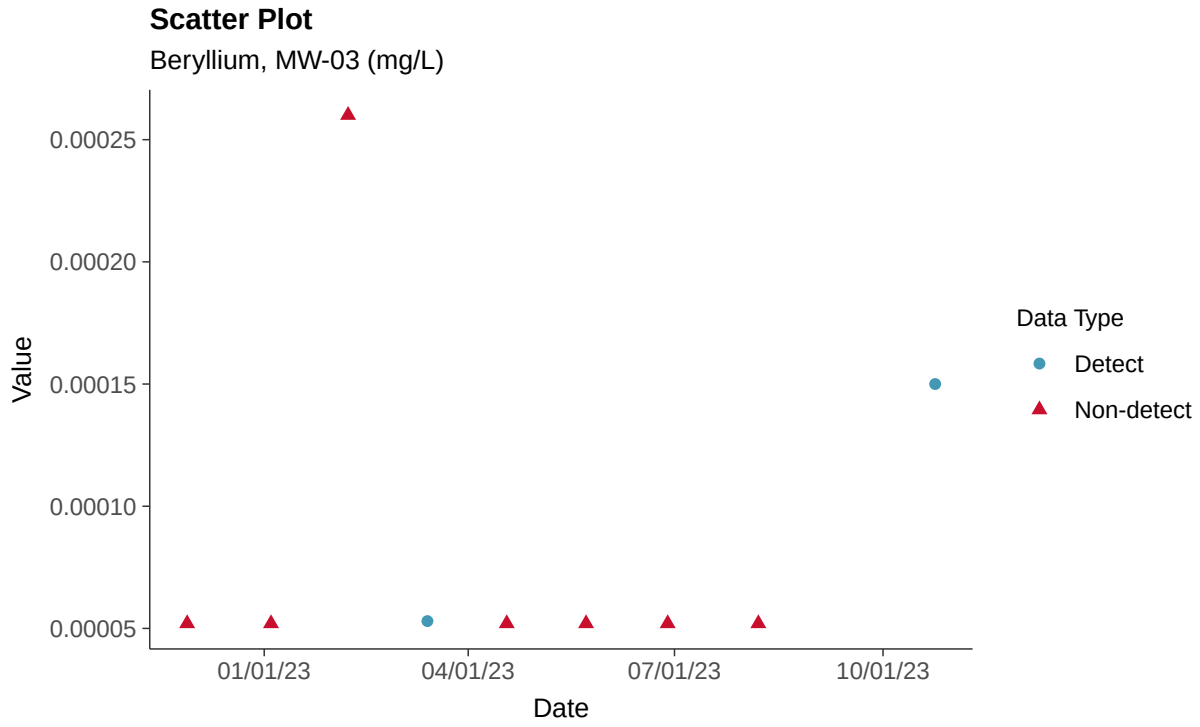
Trend Regression: Lognormal MLE

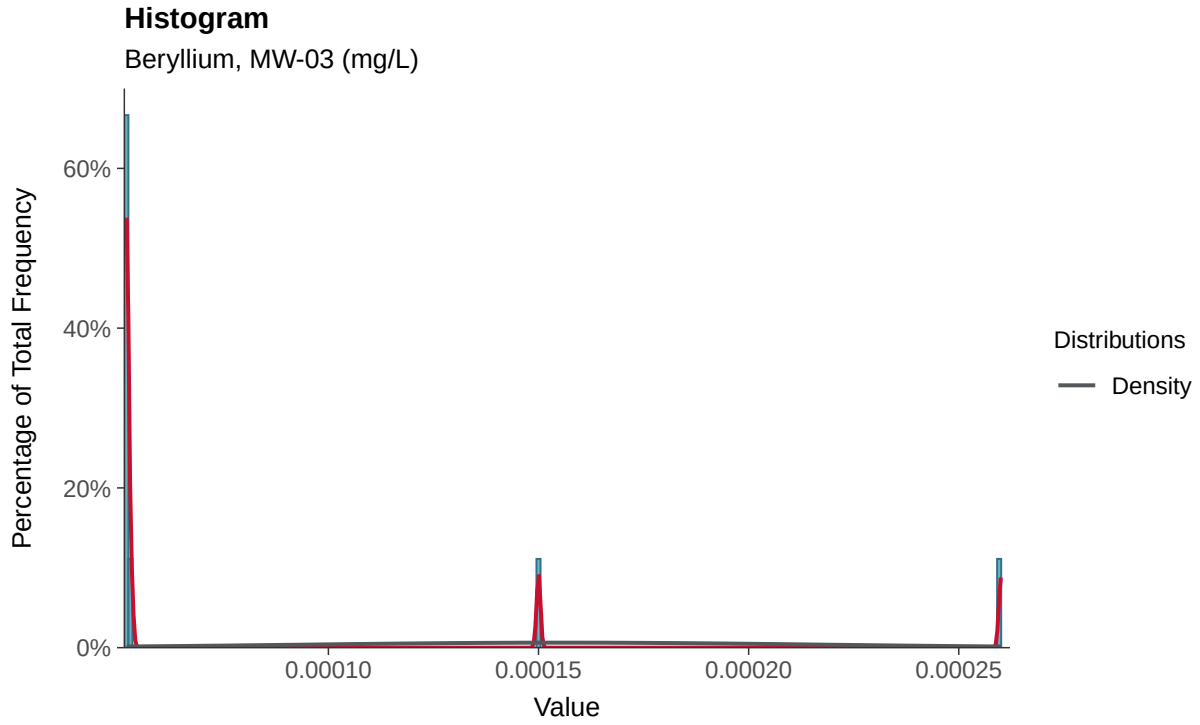
Barium, MW-03 (mg/L)



Appendix IV: Beryllium, MW-03

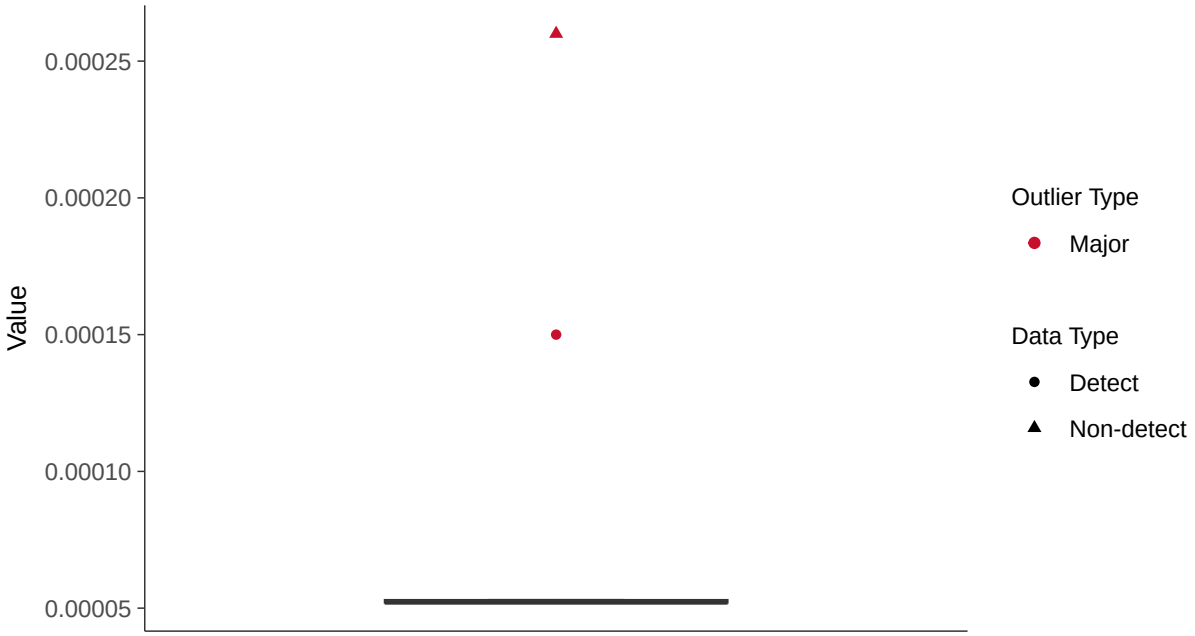
ID: 2_13_5_104





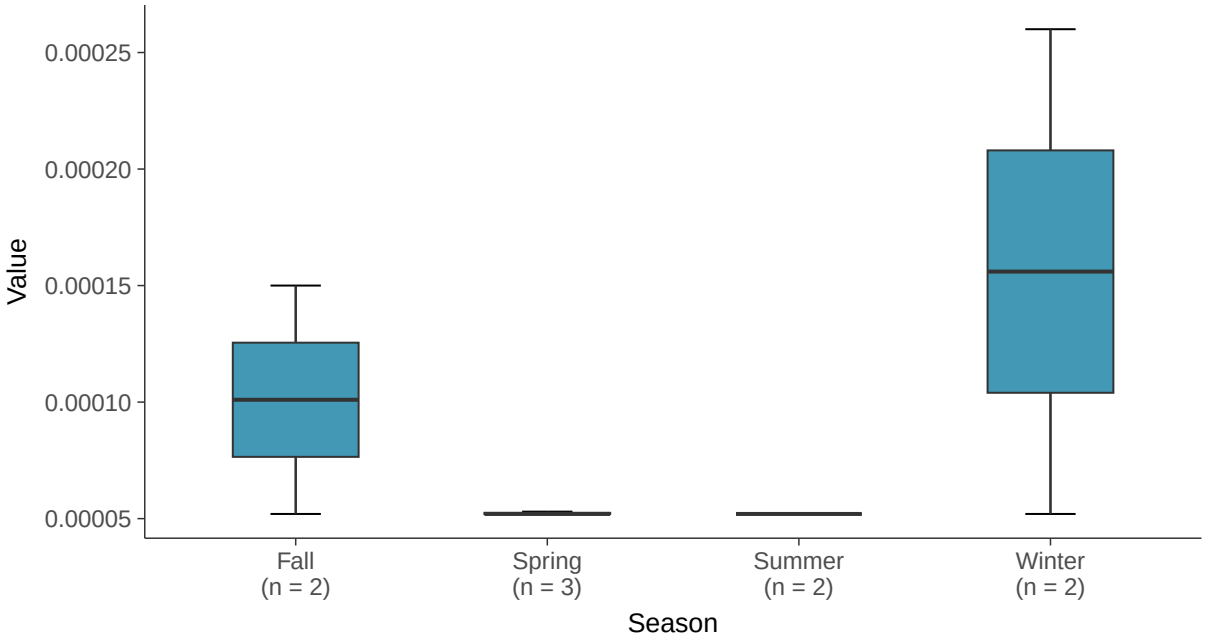
Boxplot

Beryllium, MW-03 (mg/L)



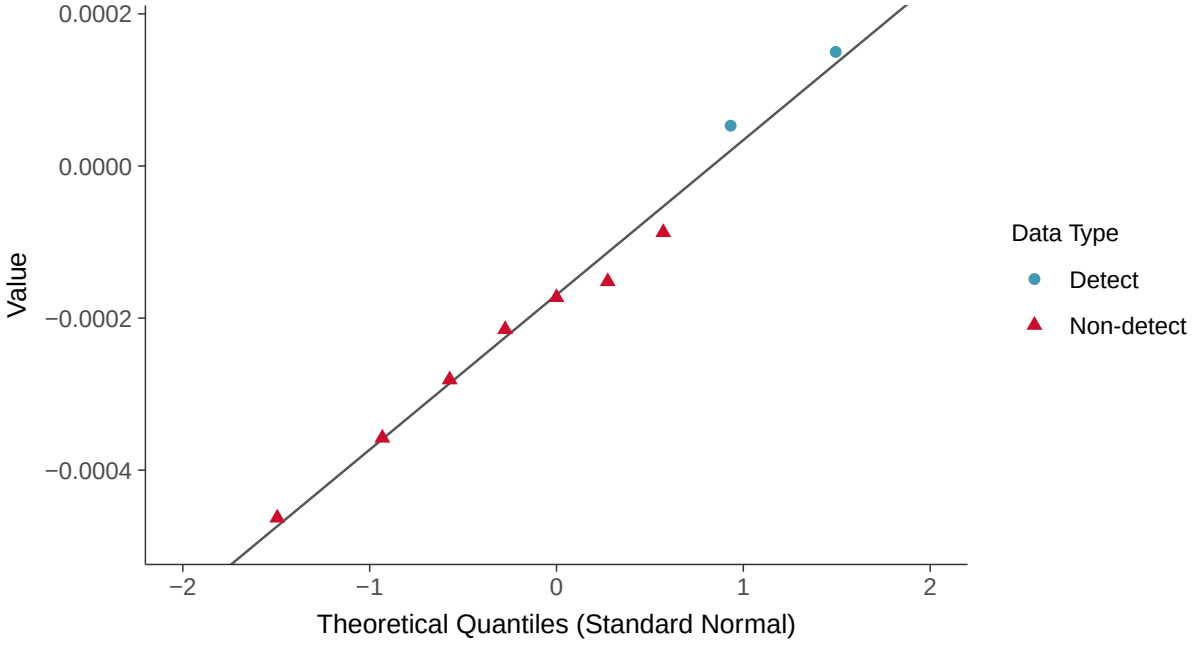
Boxplot by Season

Beryllium, MW-03 (mg/L)



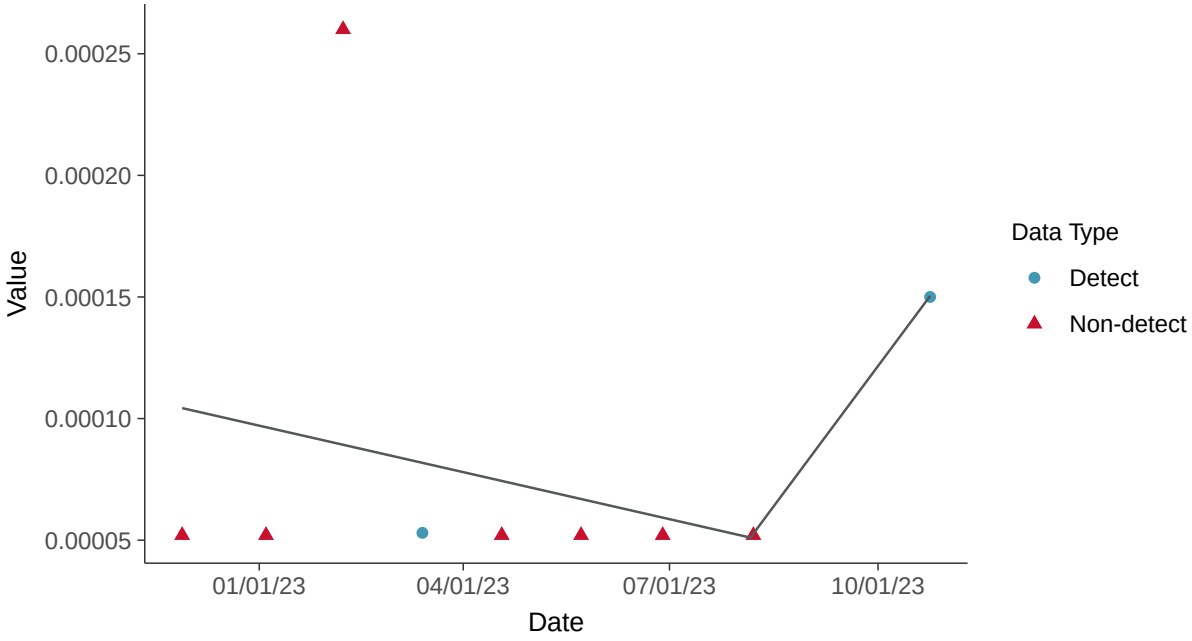
Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-03 (mg/L)



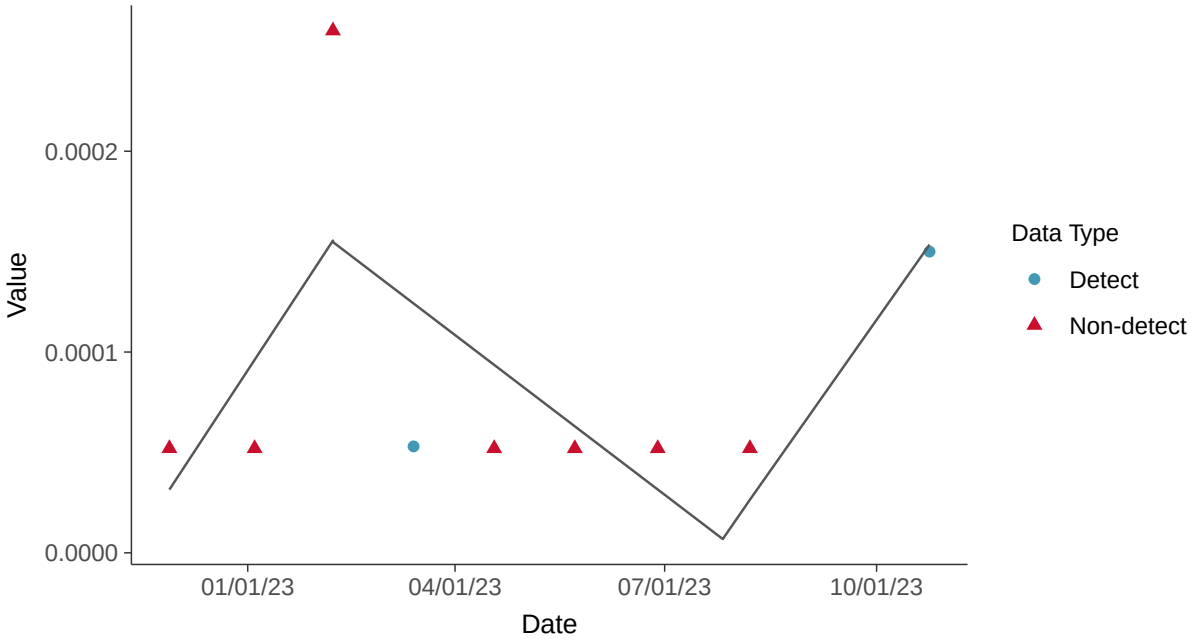
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-03 (mg/L)



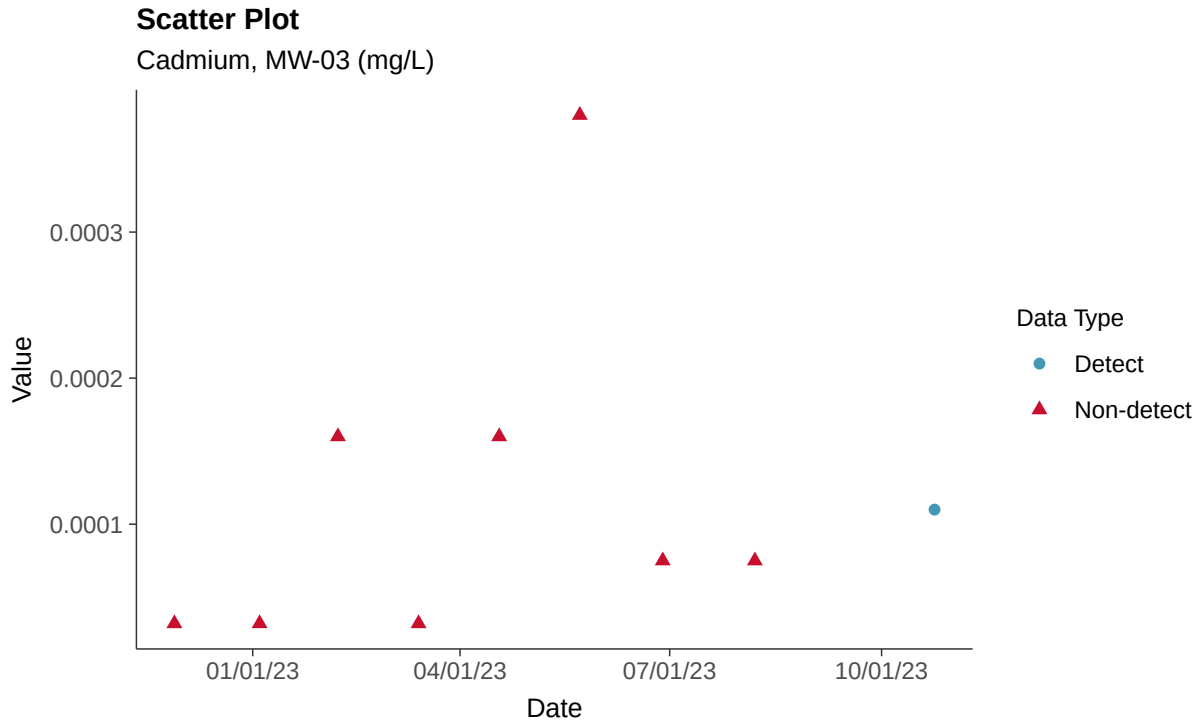
Trend Regression: Piecewise Linear-Linear-Linear

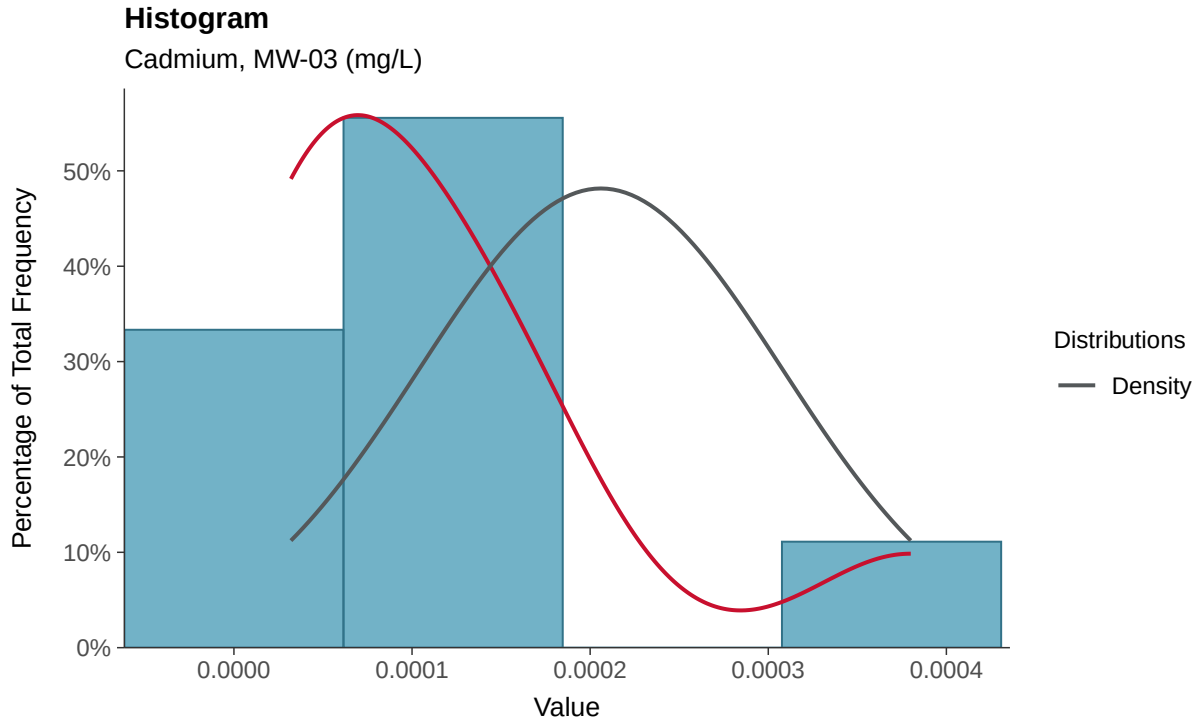
Beryllium, MW-03 (mg/L)



Appendix IV: Cadmium, MW-03

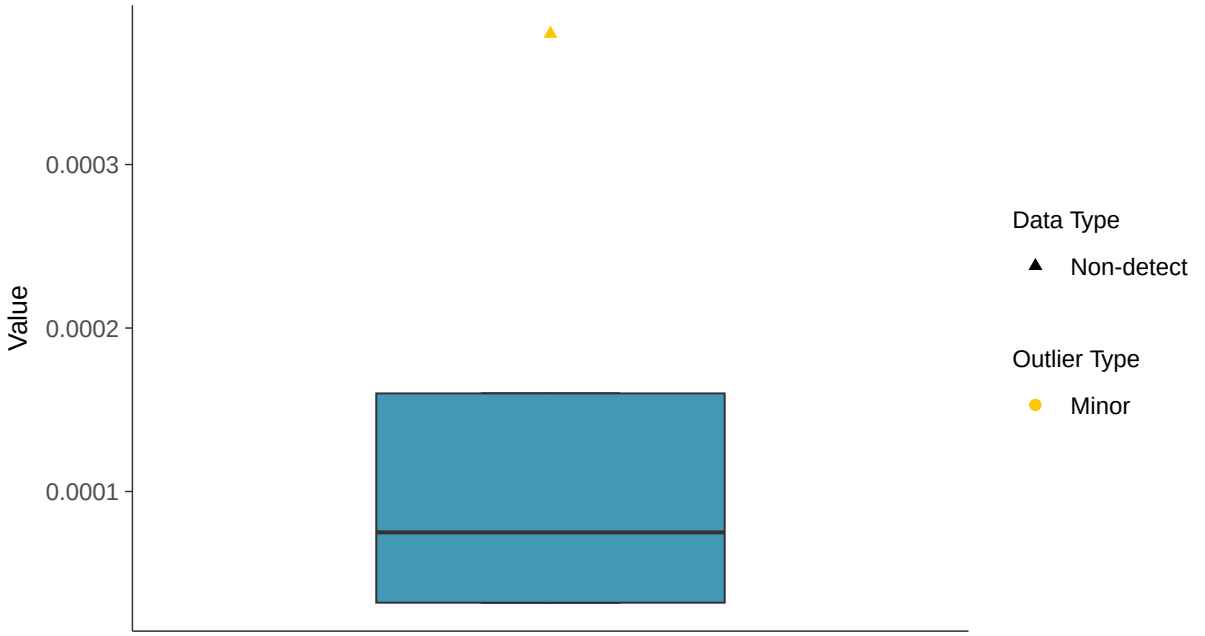
ID: 2_13_5_106





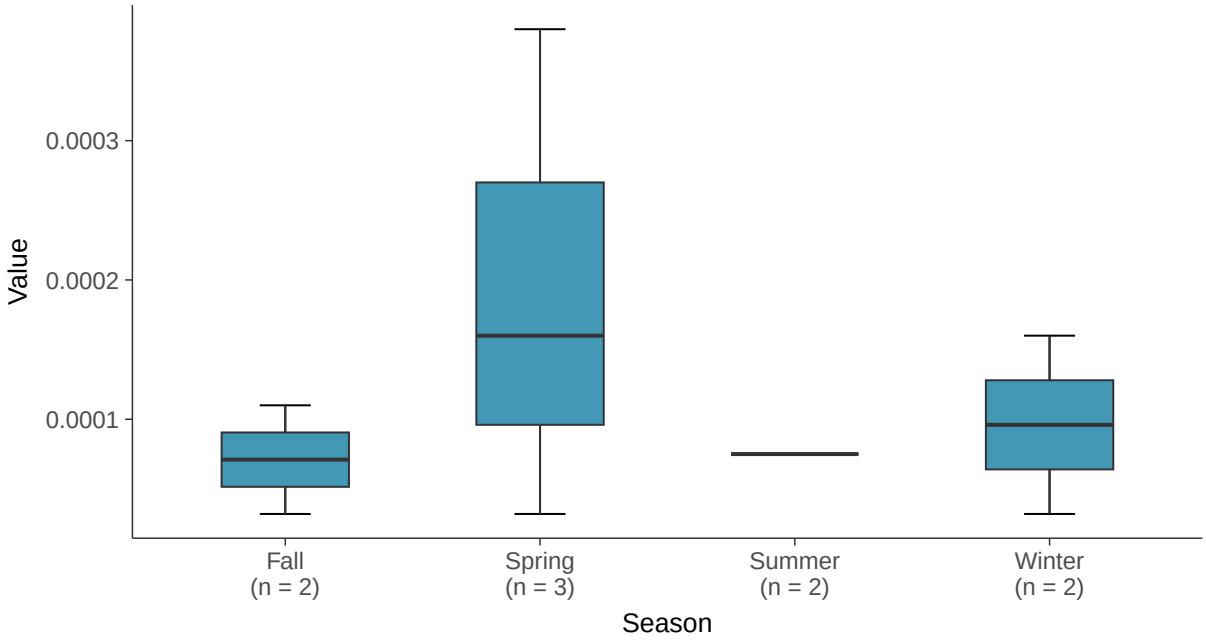
Boxplot

Cadmium, MW-03 (mg/L)



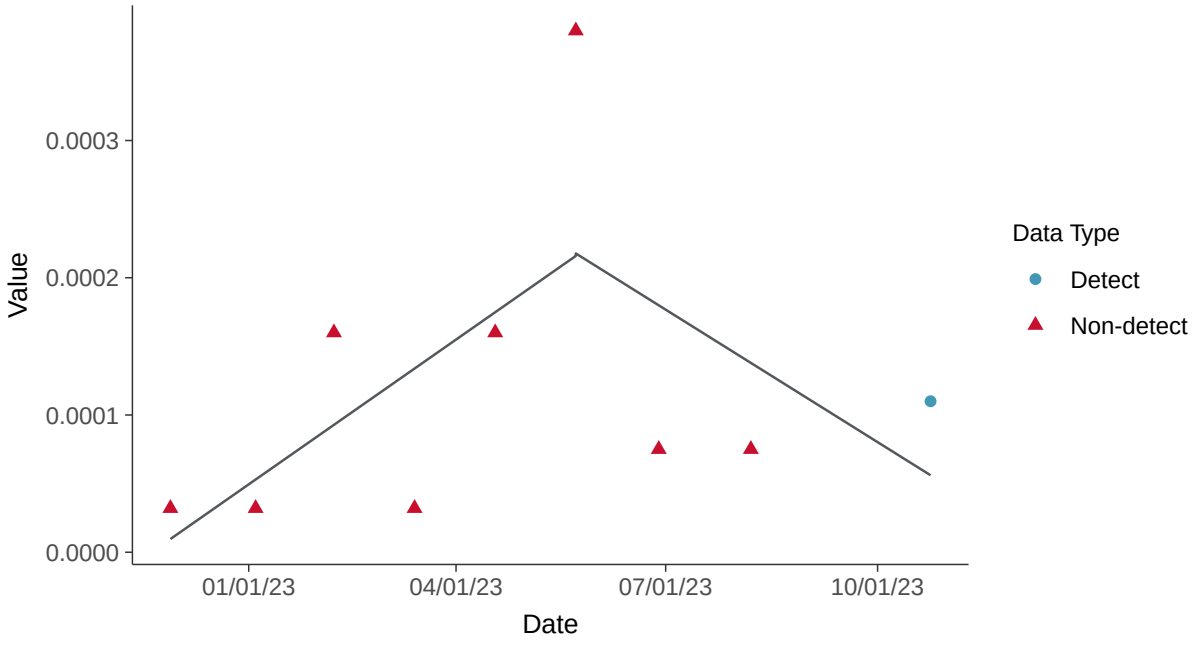
Boxplot by Season

Cadmium, MW-03 (mg/L)



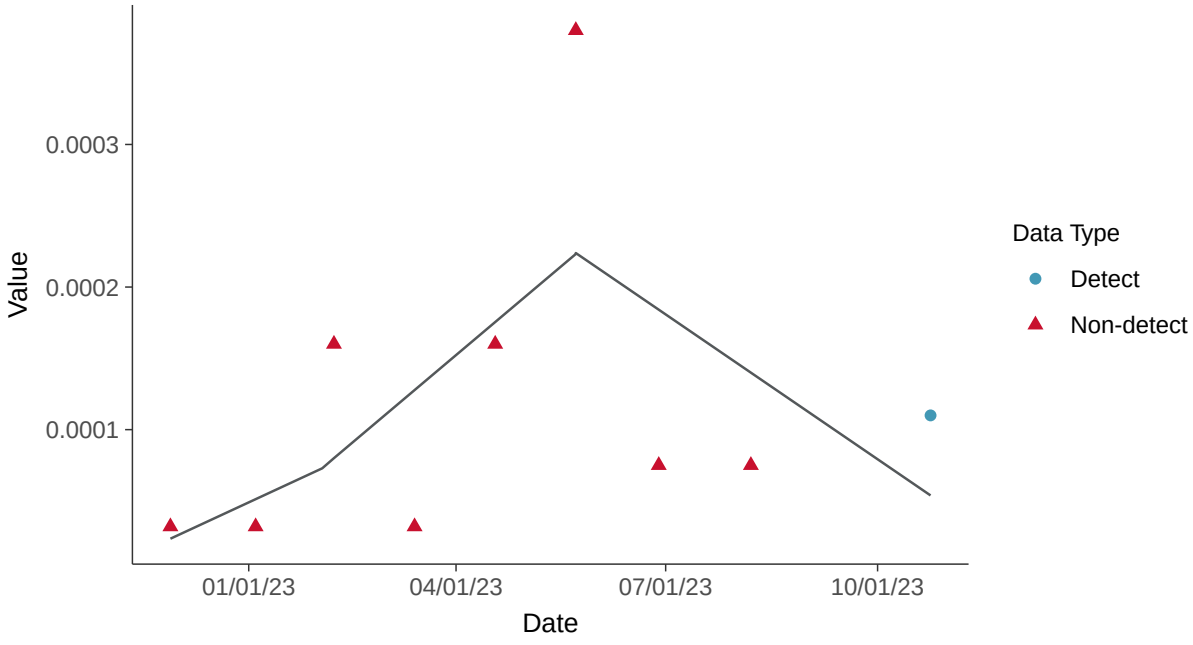
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-03 (mg/L)



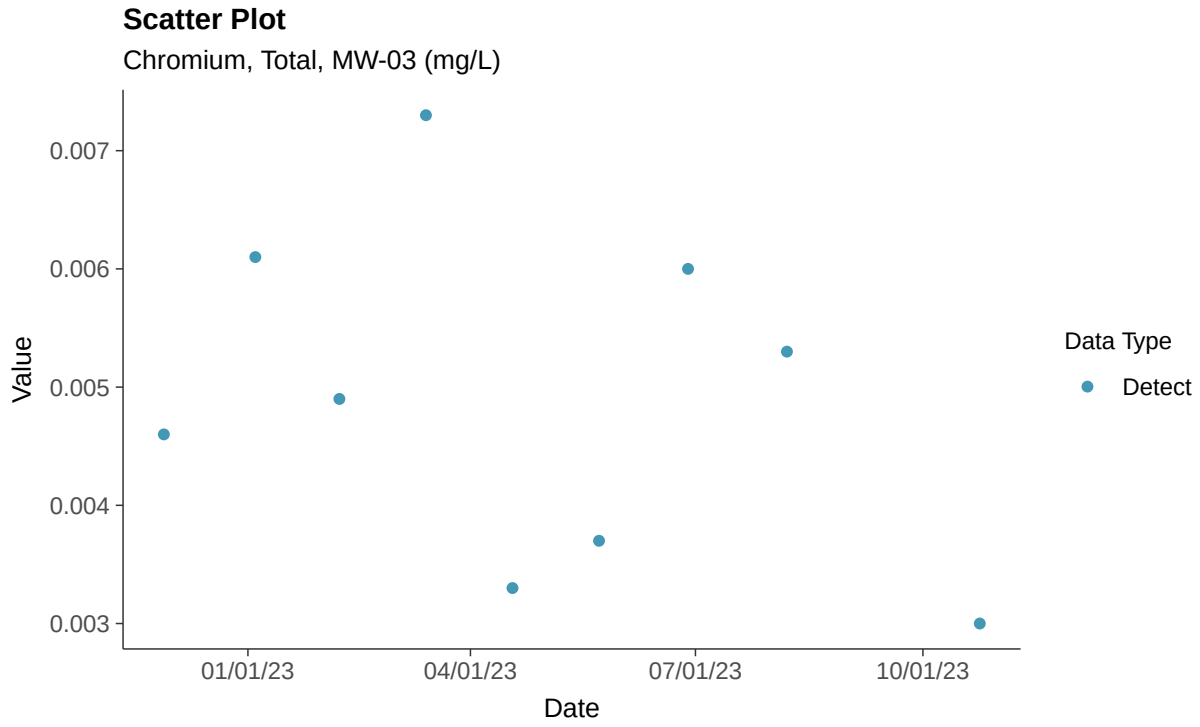
Trend Regression: Piecewise Linear-Linear-Linear

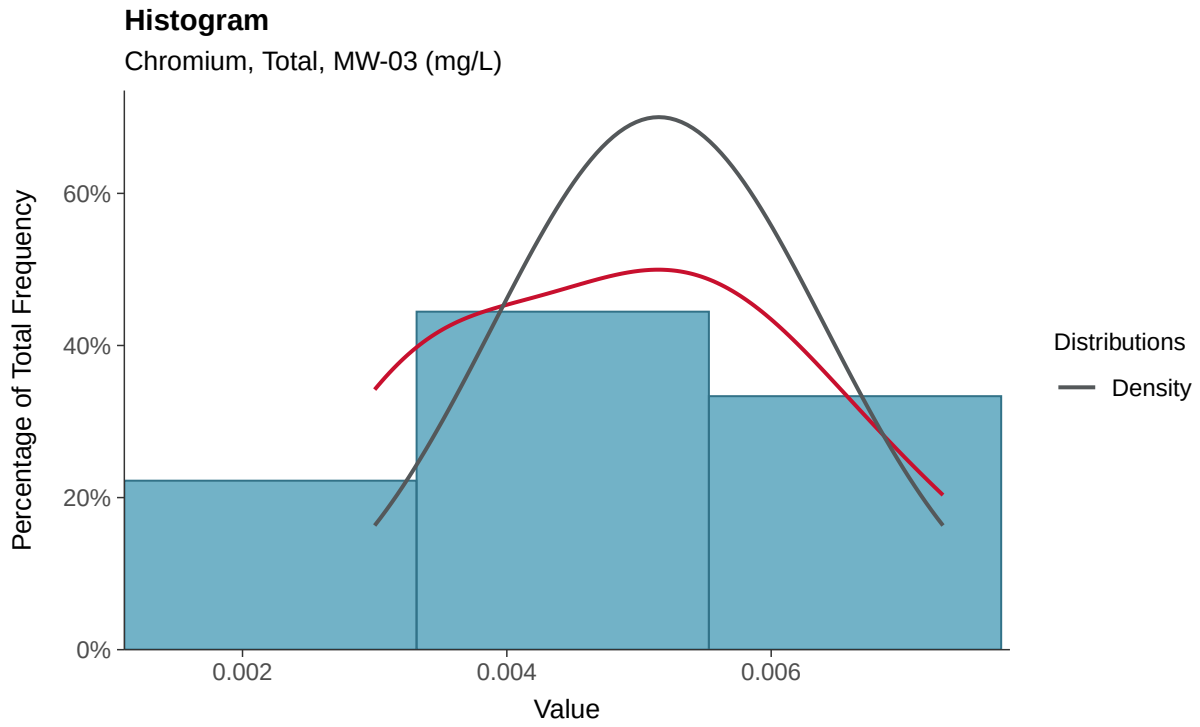
Cadmium, MW-03 (mg/L)



Appendix IV: Chromium, Total, MW-03

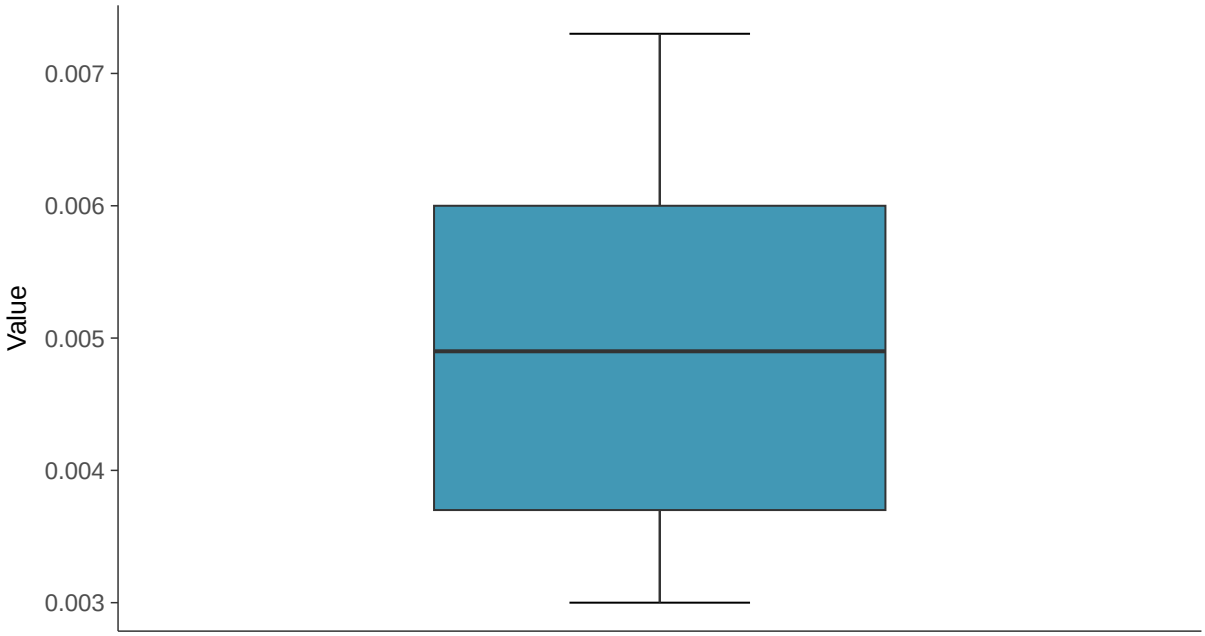
ID: 2_13_5_109





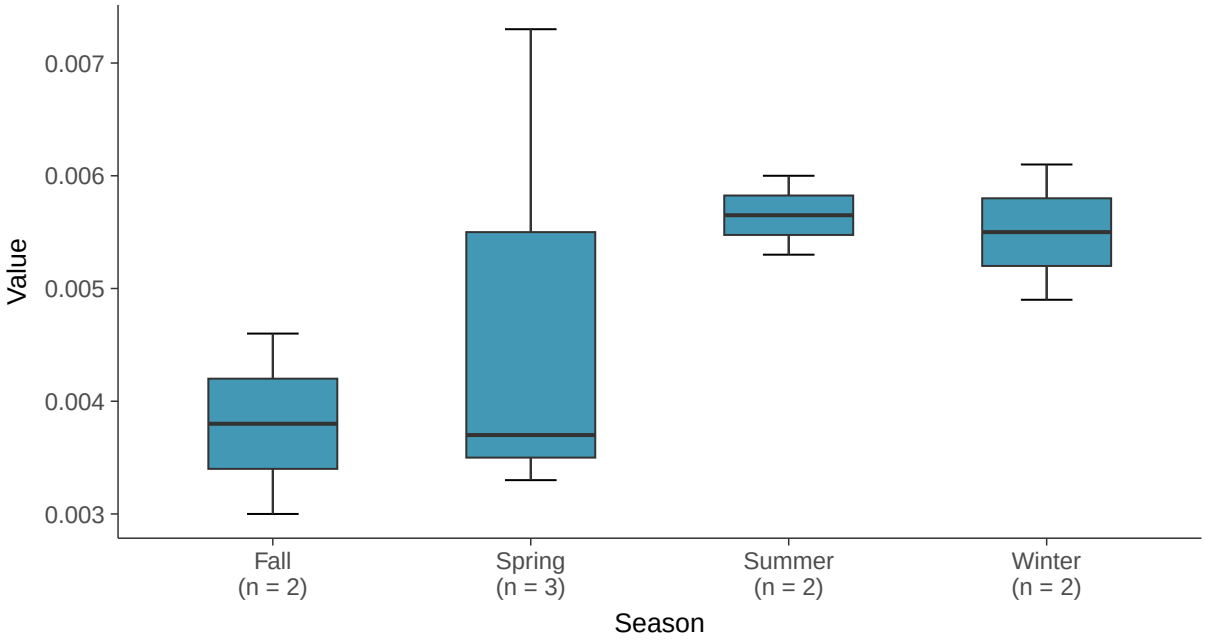
Boxplot

Chromium, Total, MW-03 (mg/L)



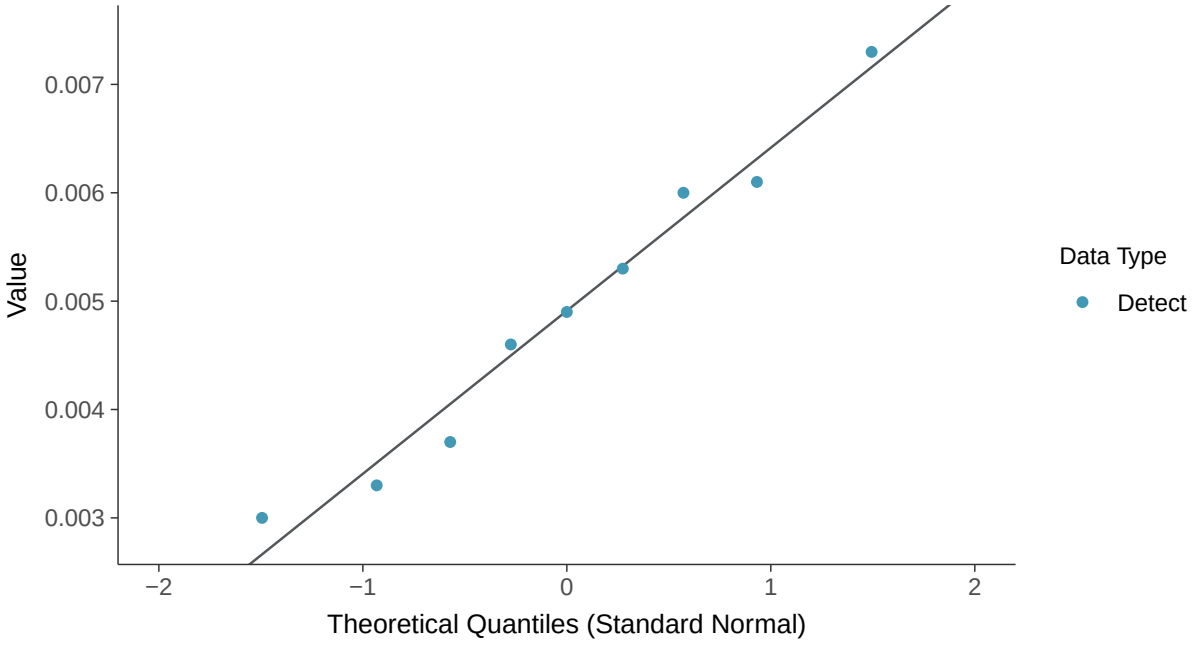
Boxplot by Season

Chromium, Total, MW-03 (mg/L)



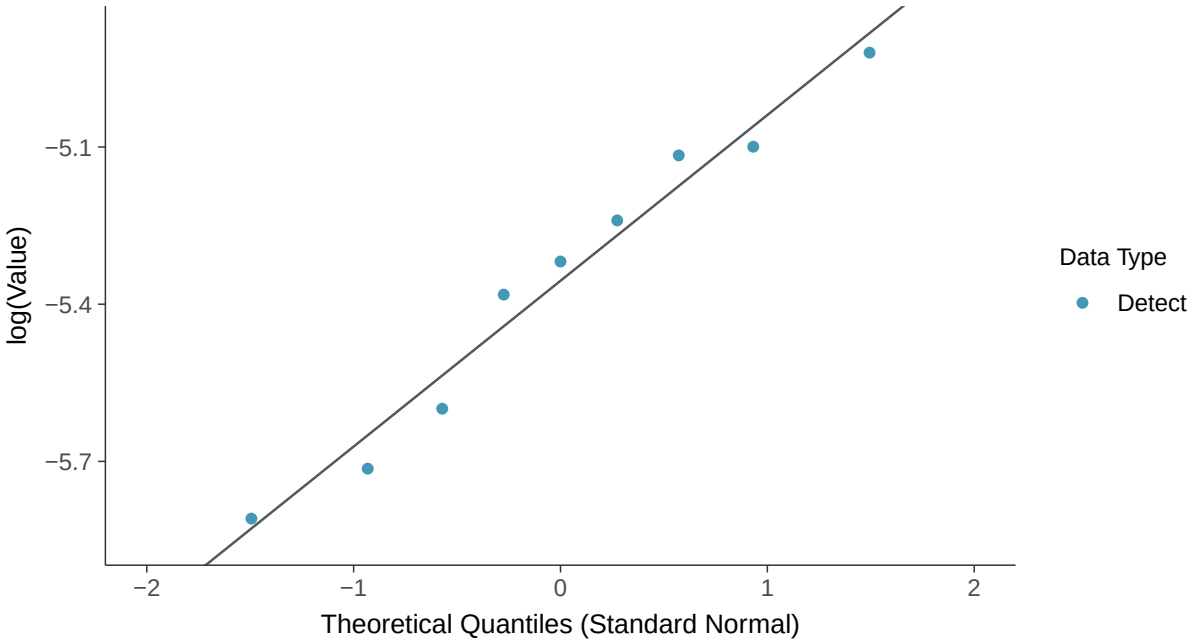
Normal Q-Q plot

Chromium, Total, MW-03 (mg/L)



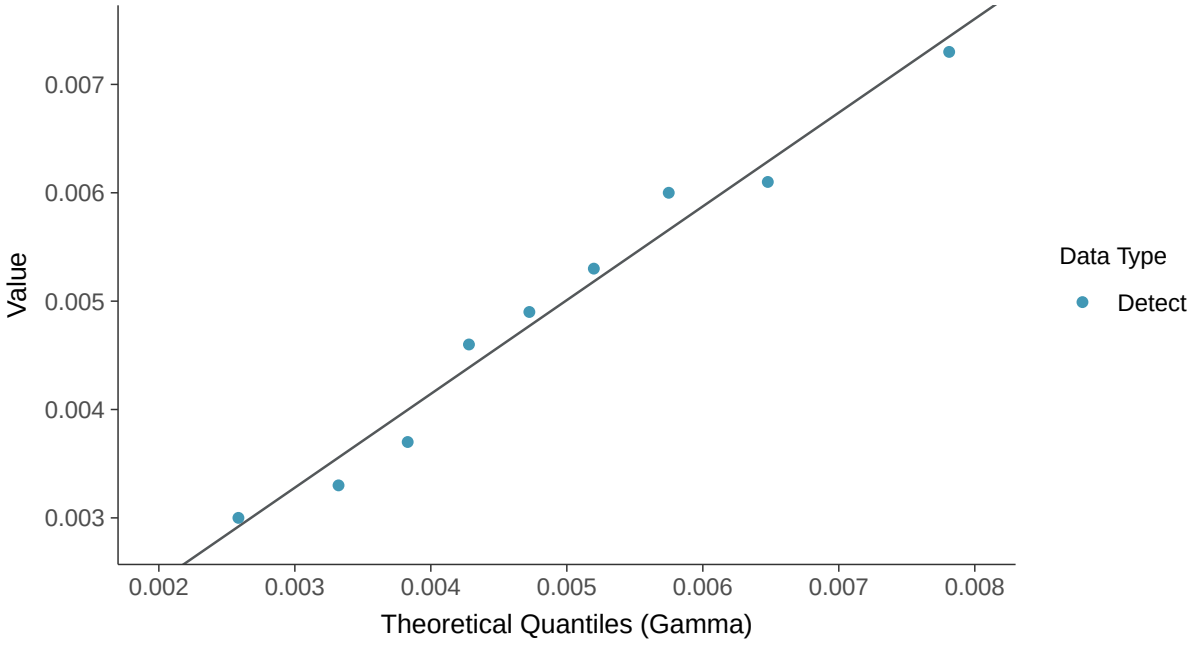
Lognormal Q-Q plot

Chromium, Total, MW-03 (mg/L)



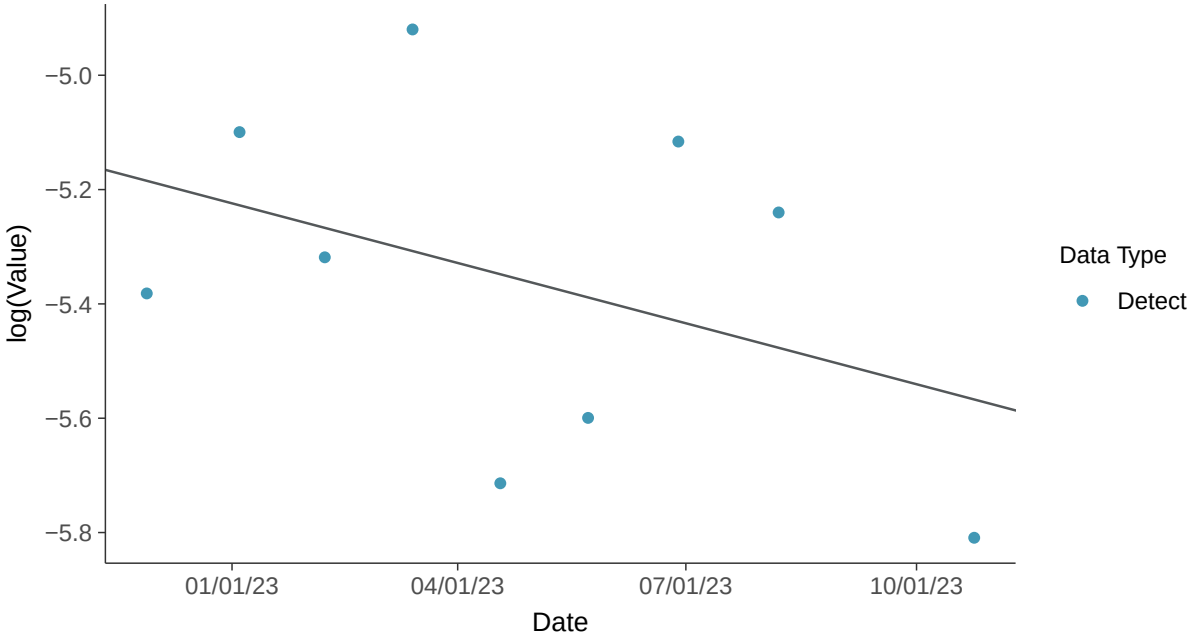
Gamma Q-Q plot

Chromium, Total, MW-03 (mg/L)



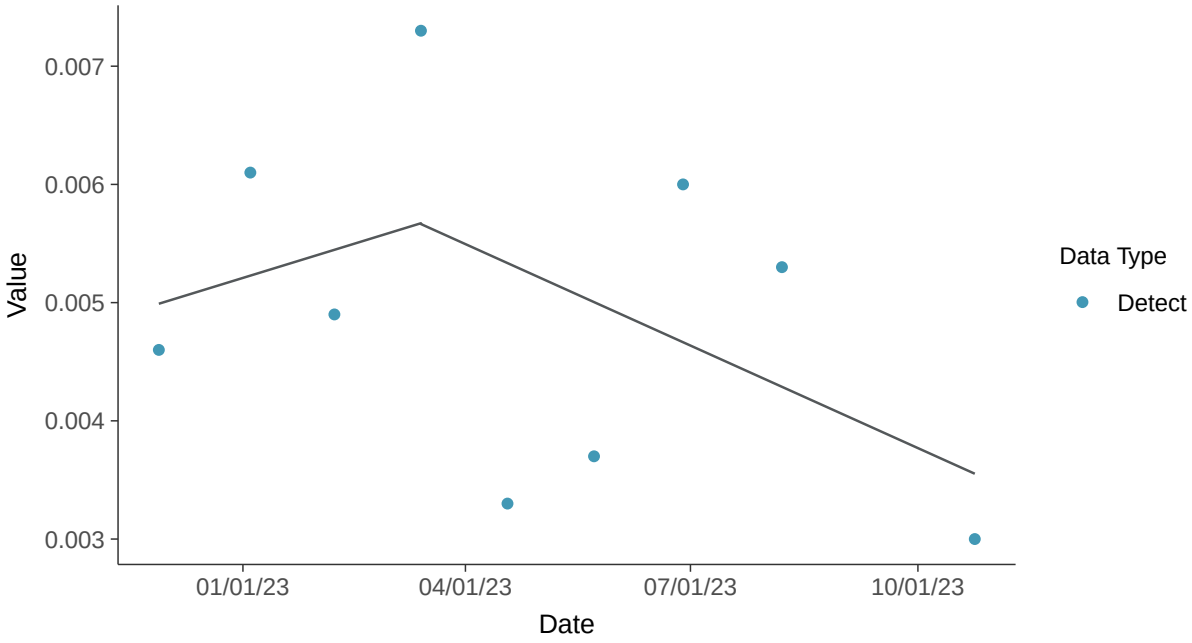
Trend Regression: Lognormal MLE

Chromium, Total, MW-03 (mg/L)



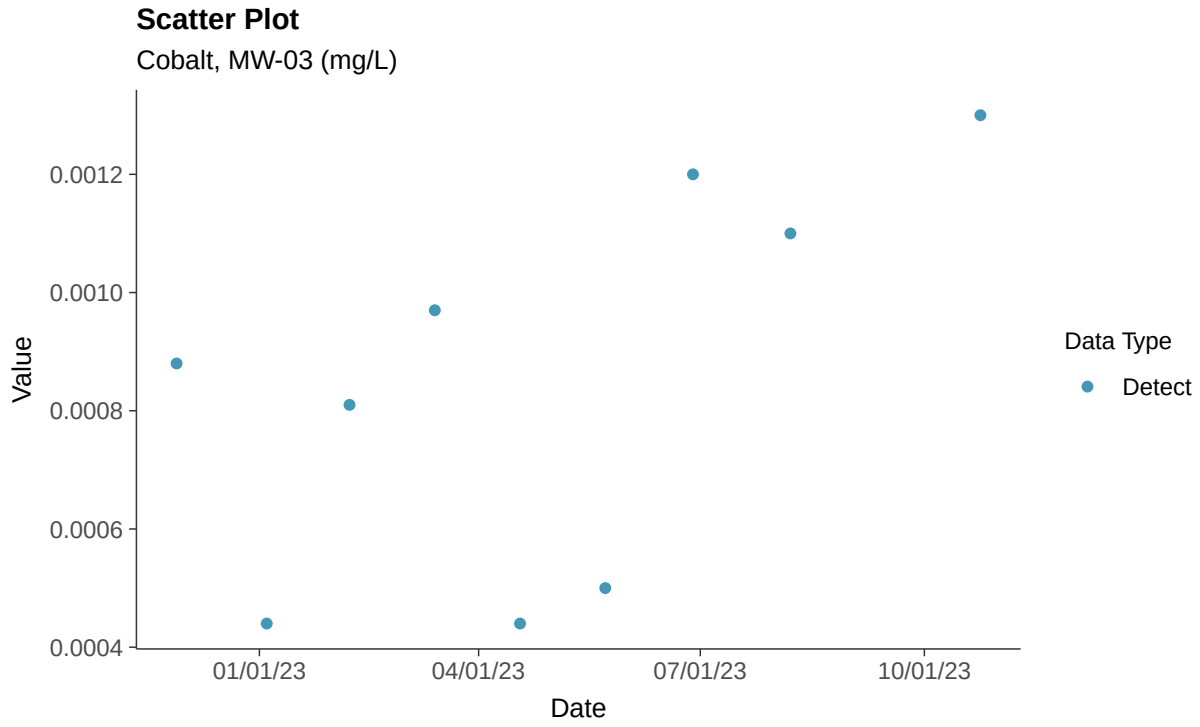
Trend Regression: Piecewise Linear-Linear

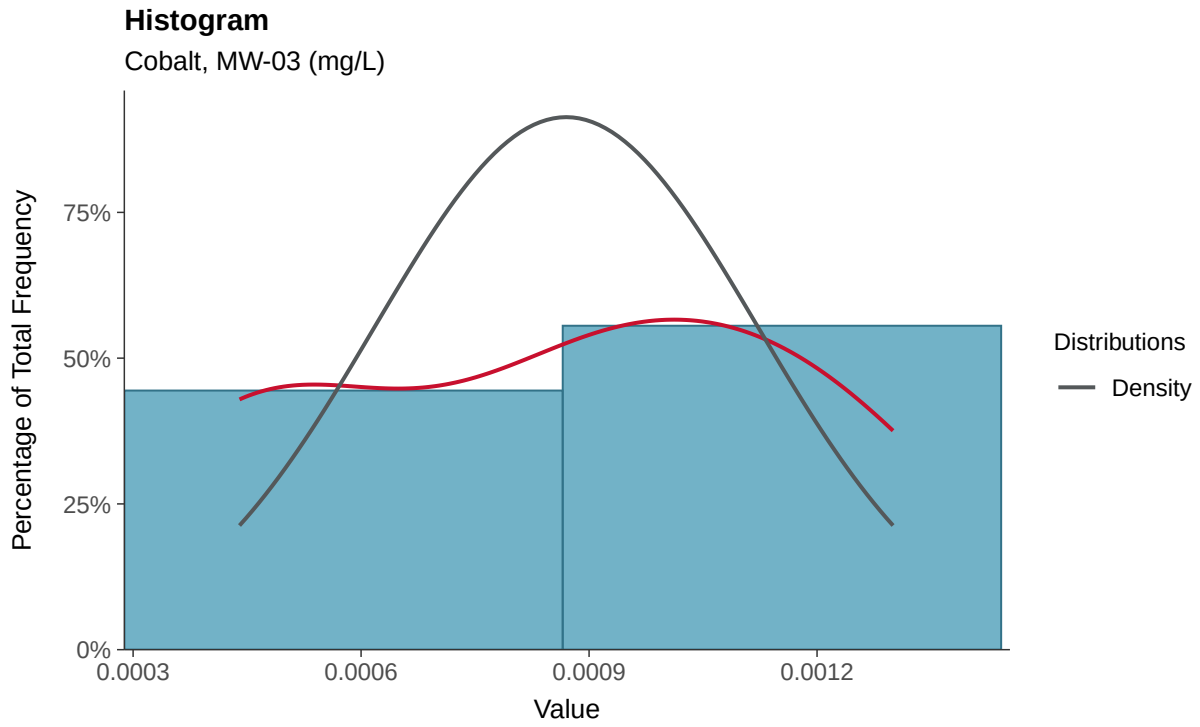
Chromium, Total, MW-03 (mg/L)



Appendix IV: Cobalt, MW-03

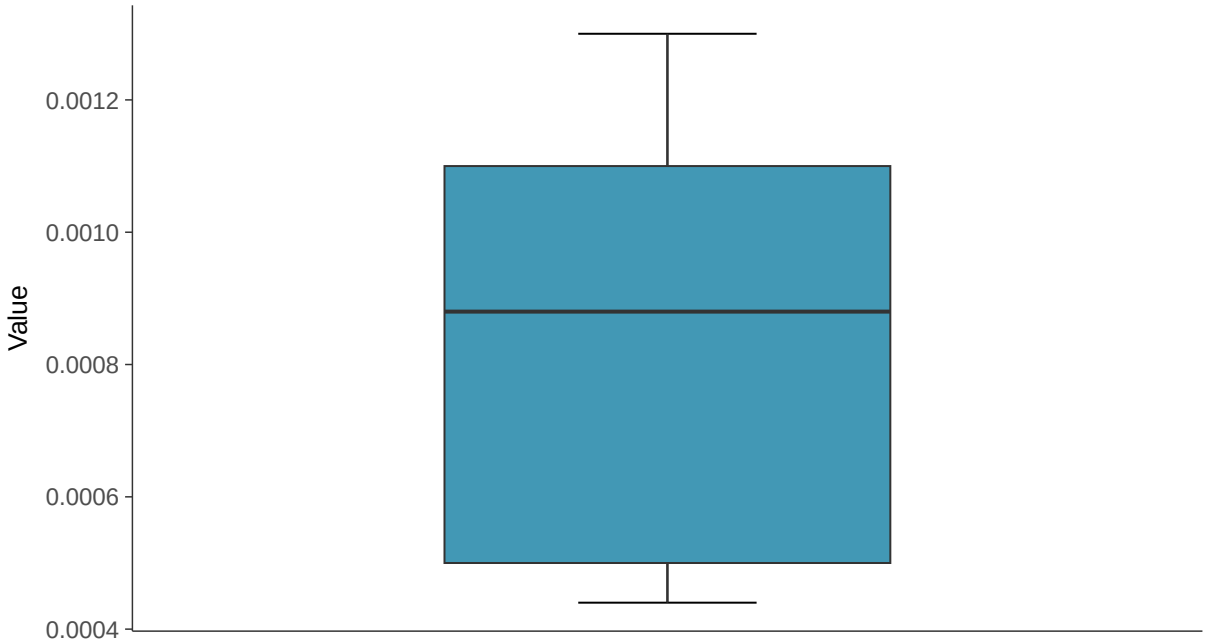
ID: 2_13_5_110





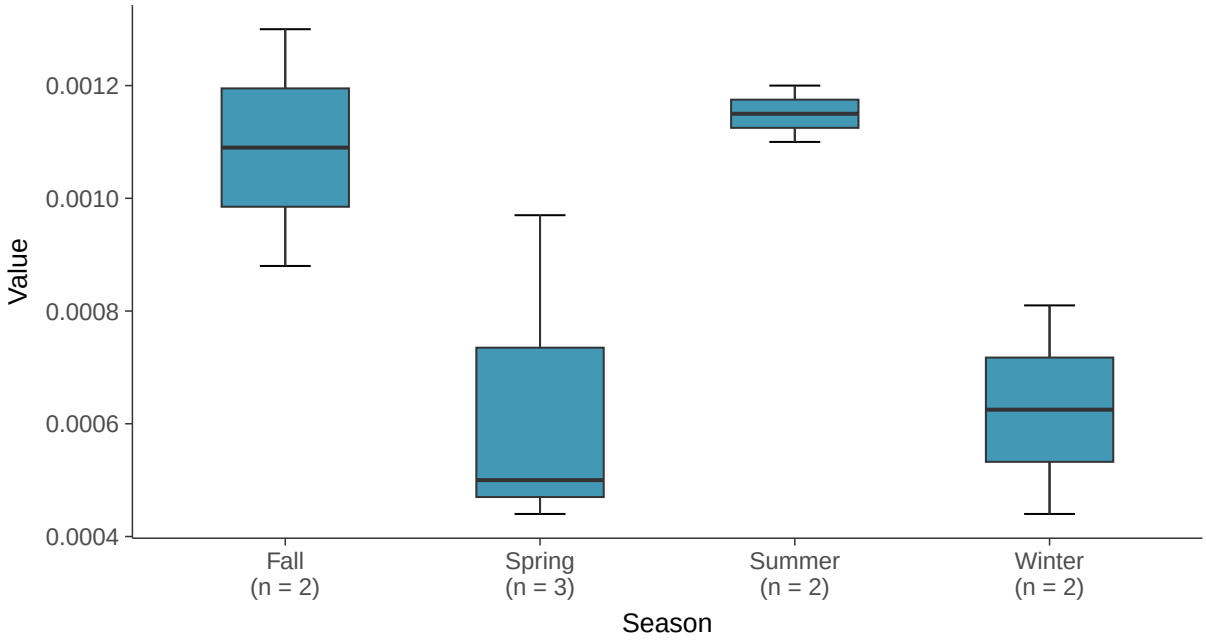
Boxplot

Cobalt, MW-03 (mg/L)



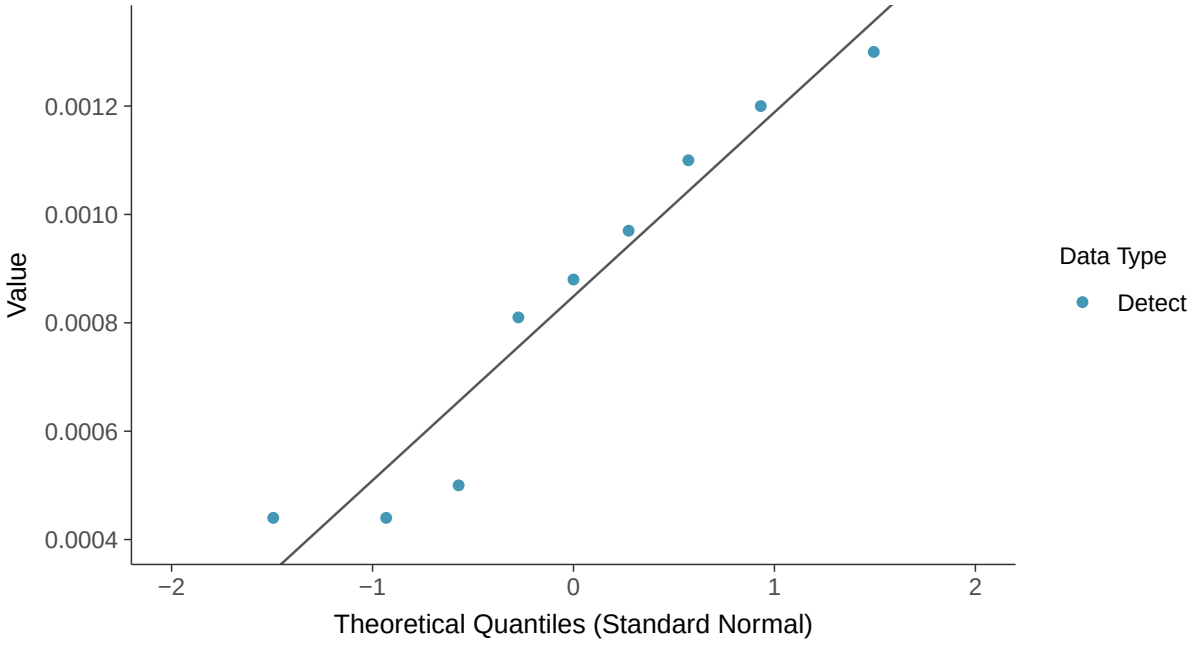
Boxplot by Season

Cobalt, MW-03 (mg/L)



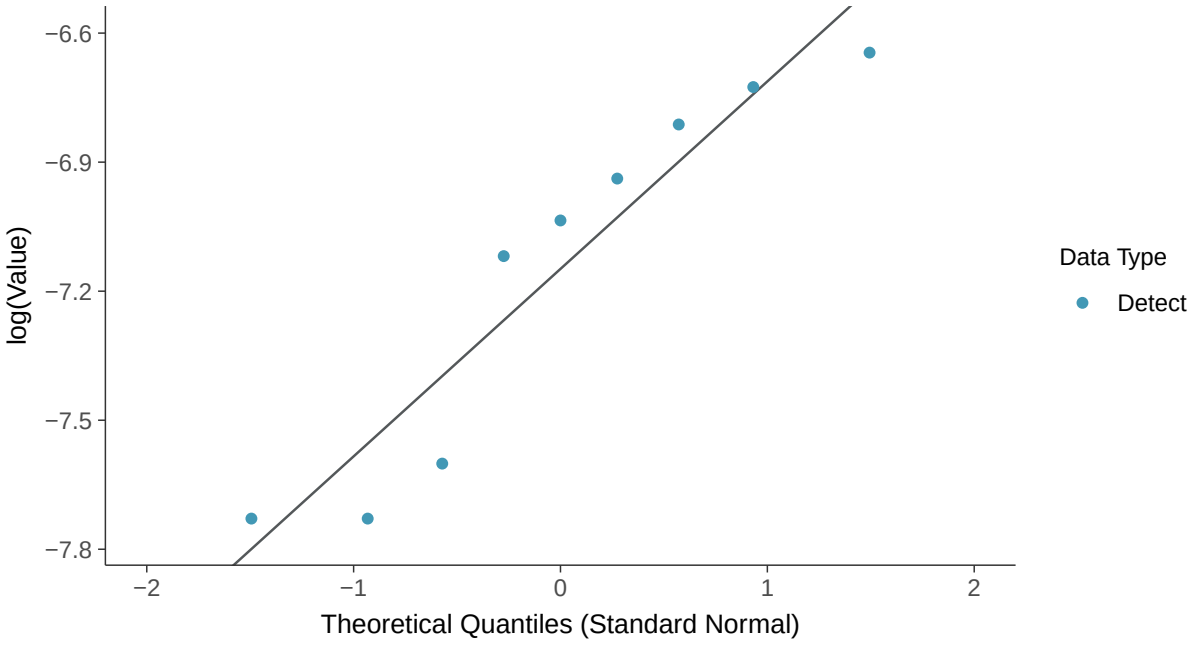
Normal Q-Q plot

Cobalt, MW-03 (mg/L)



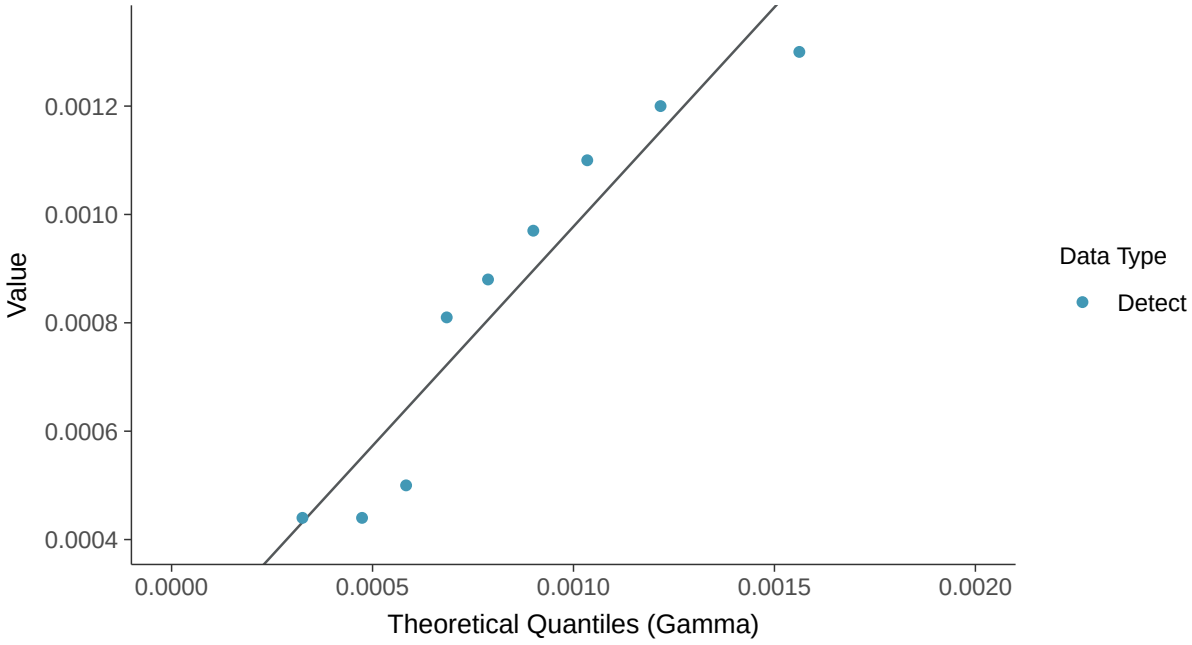
Lognormal Q-Q plot

Cobalt, MW-03 (mg/L)



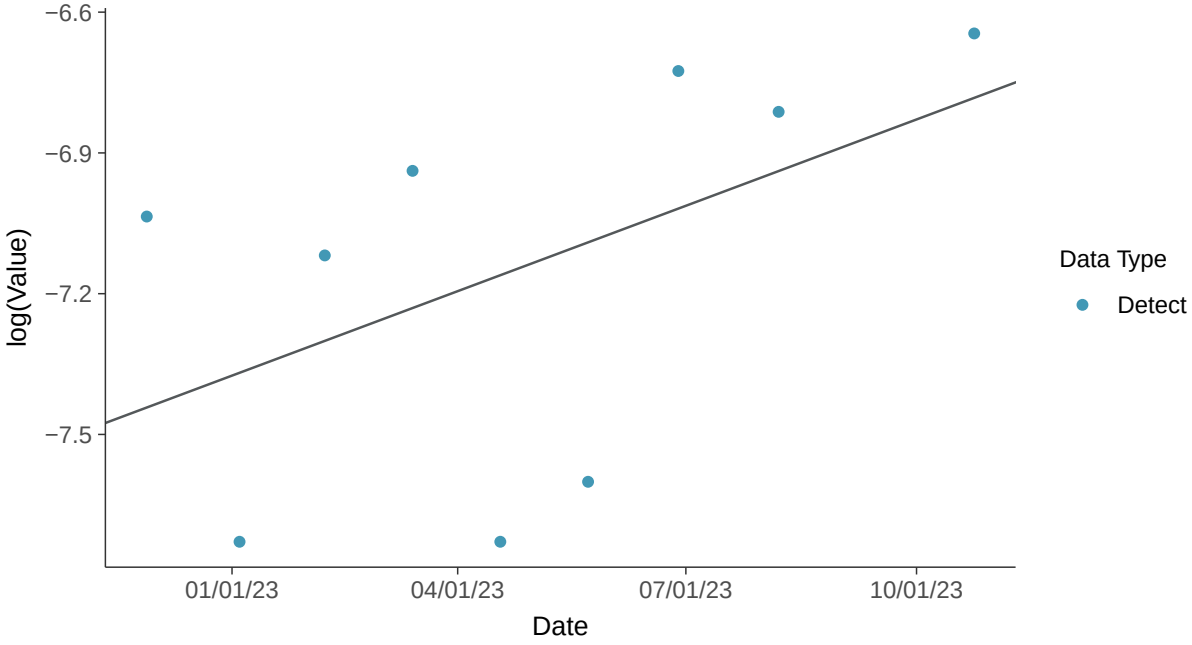
Gamma Q-Q plot

Cobalt, MW-03 (mg/L)



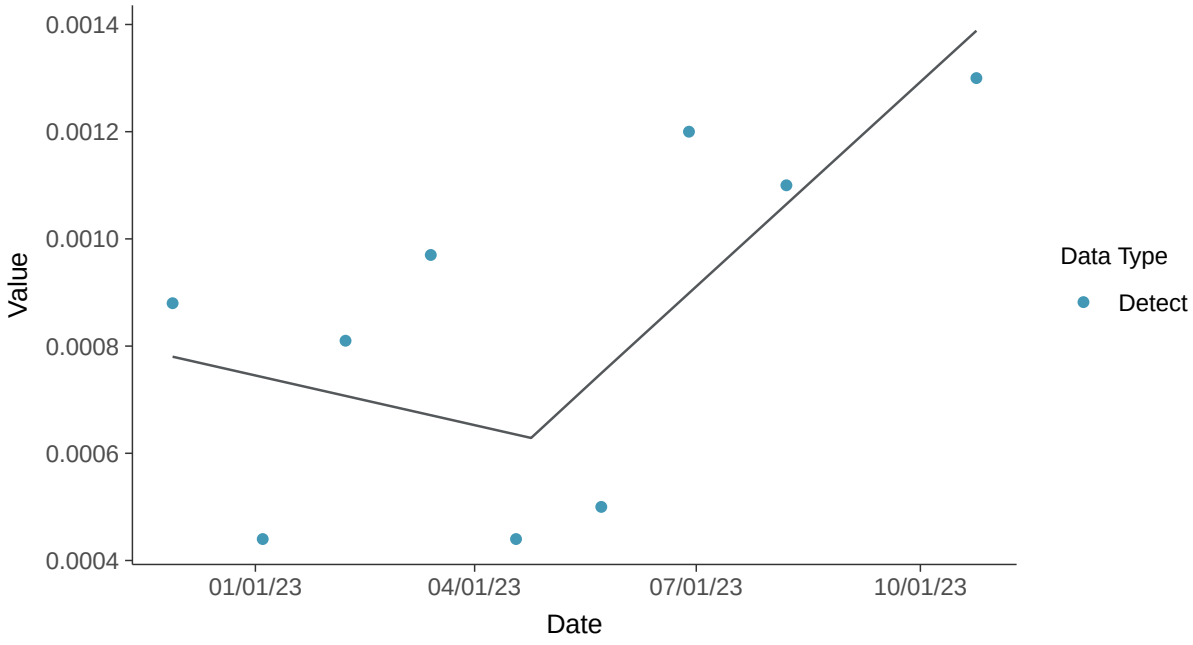
Trend Regression: Lognormal MLE

Cobalt, MW-03 (mg/L)



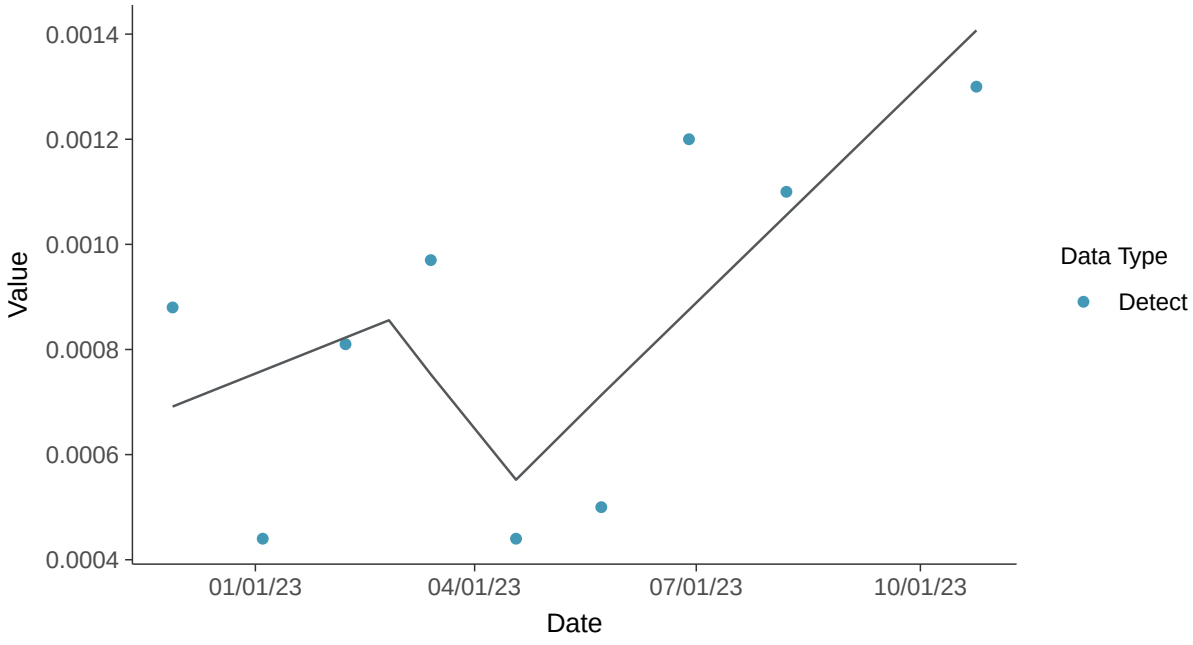
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-03 (mg/L)



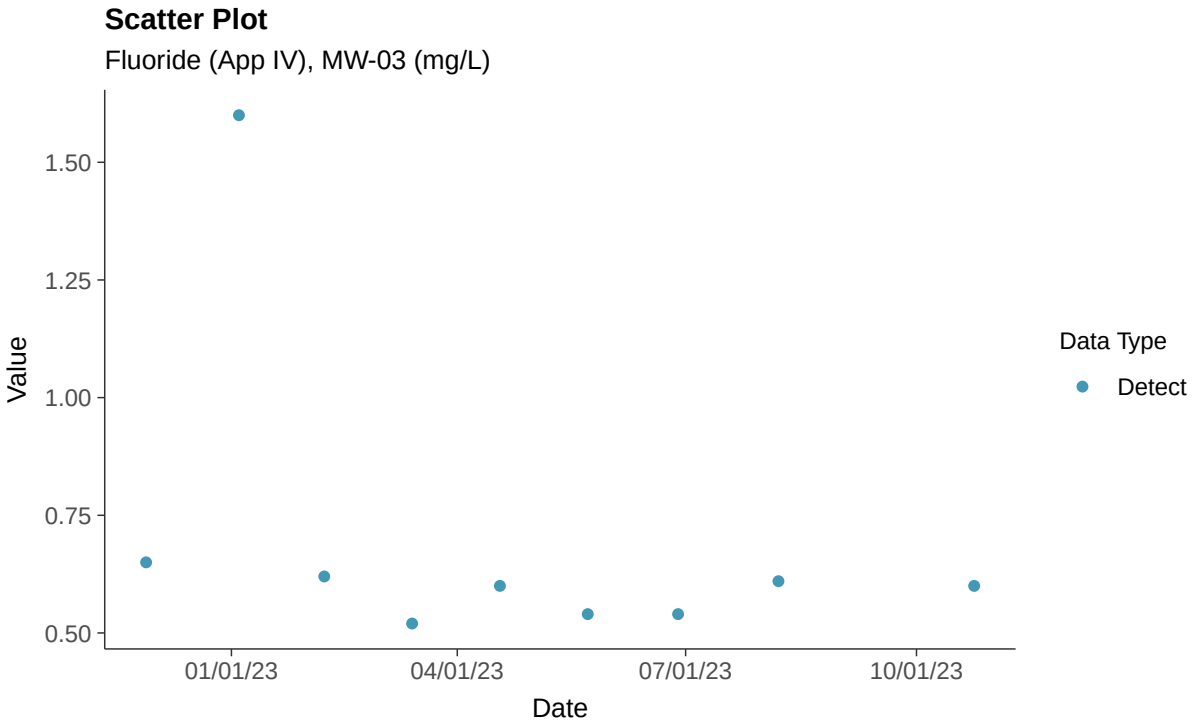
Trend Regression: Piecewise Linear-Linear-Linear

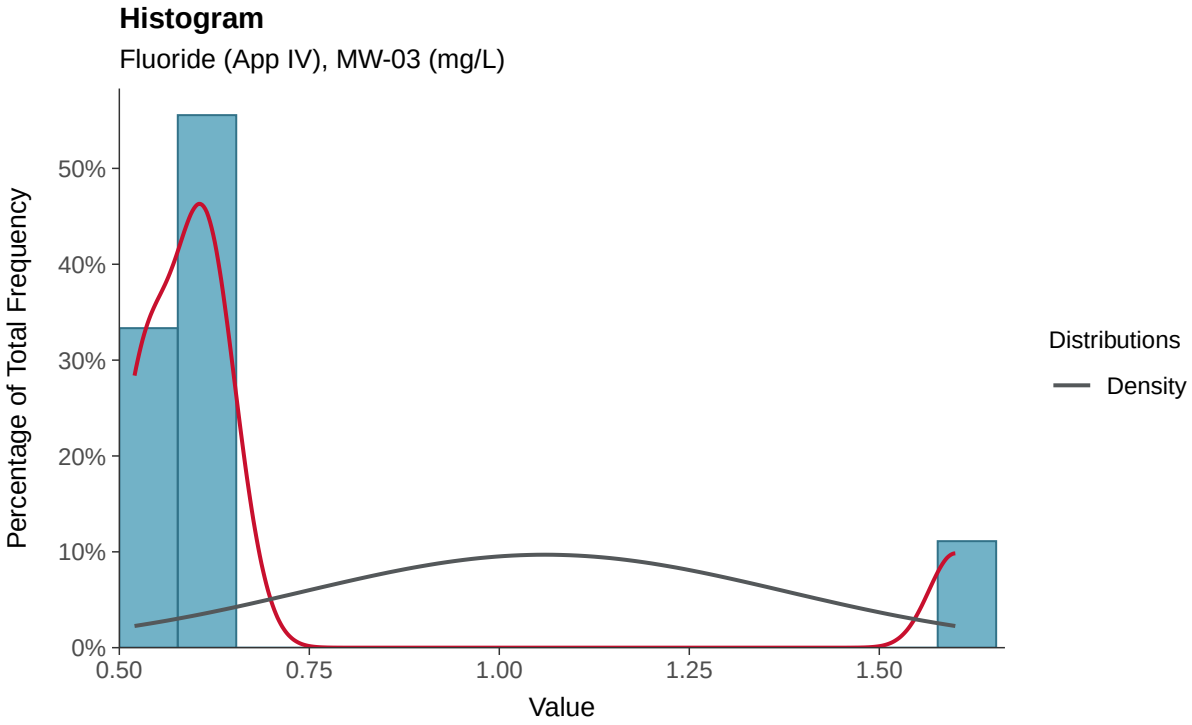
Cobalt, MW-03 (mg/L)



Appendix IV: Fluoride (App IV), MW-03

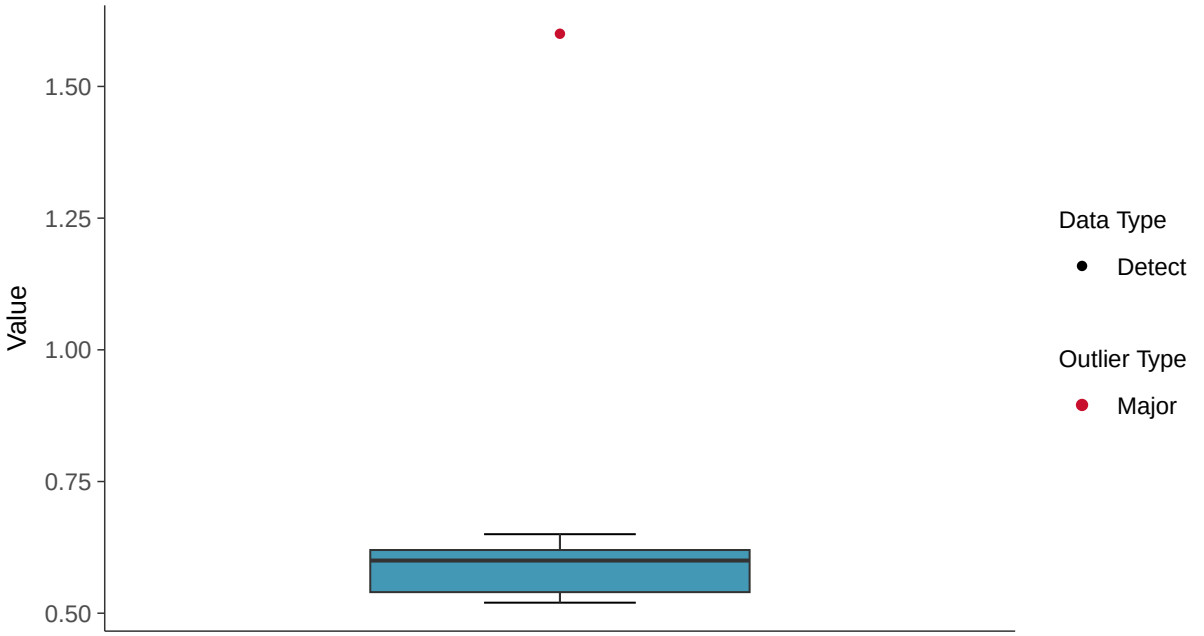
ID: 2_13_5_113





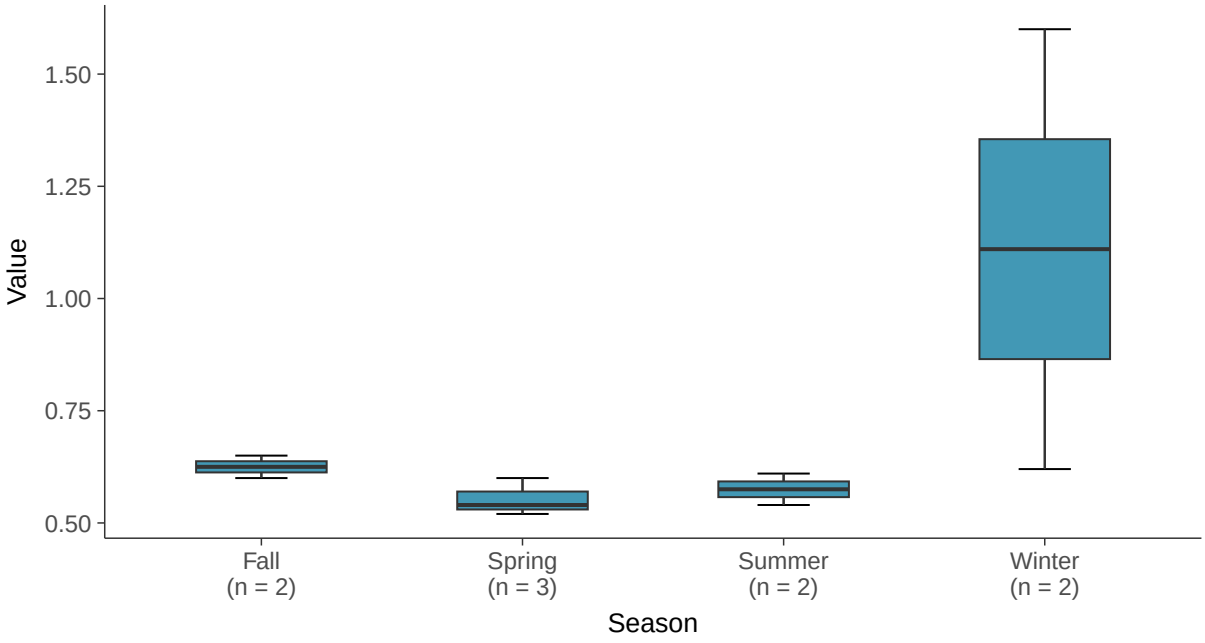
Boxplot

Fluoride (App IV), MW-03 (mg/L)



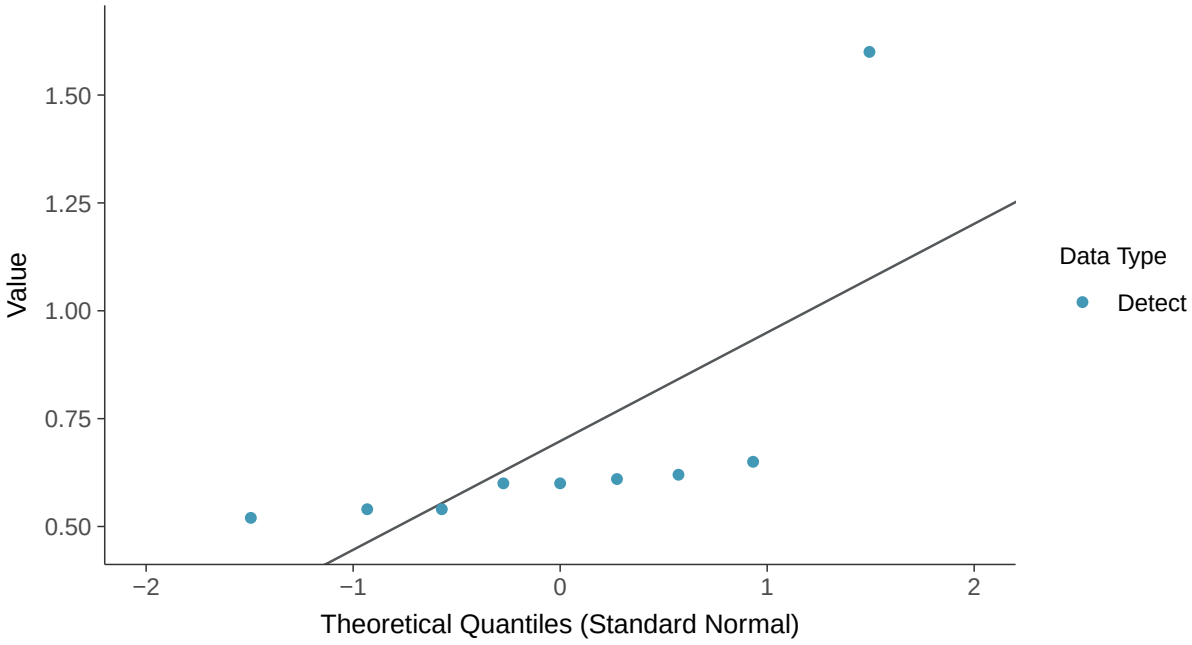
Boxplot by Season

Fluoride (App IV), MW-03 (mg/L)



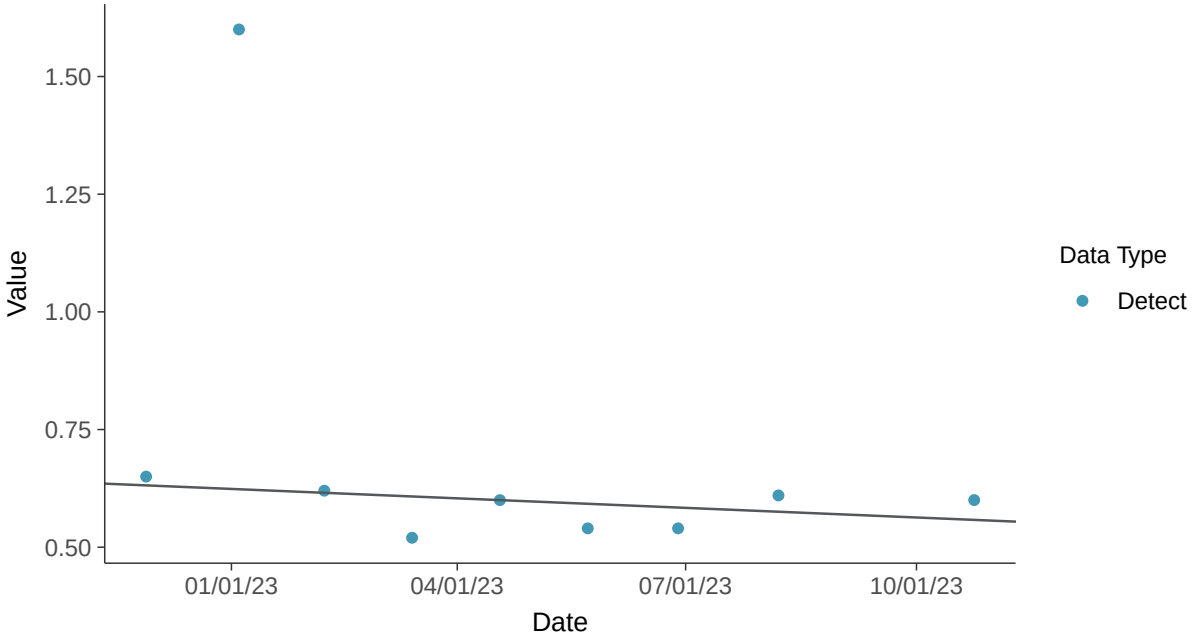
Normal Q-Q plot

Fluoride (App IV), MW-03 (mg/L)



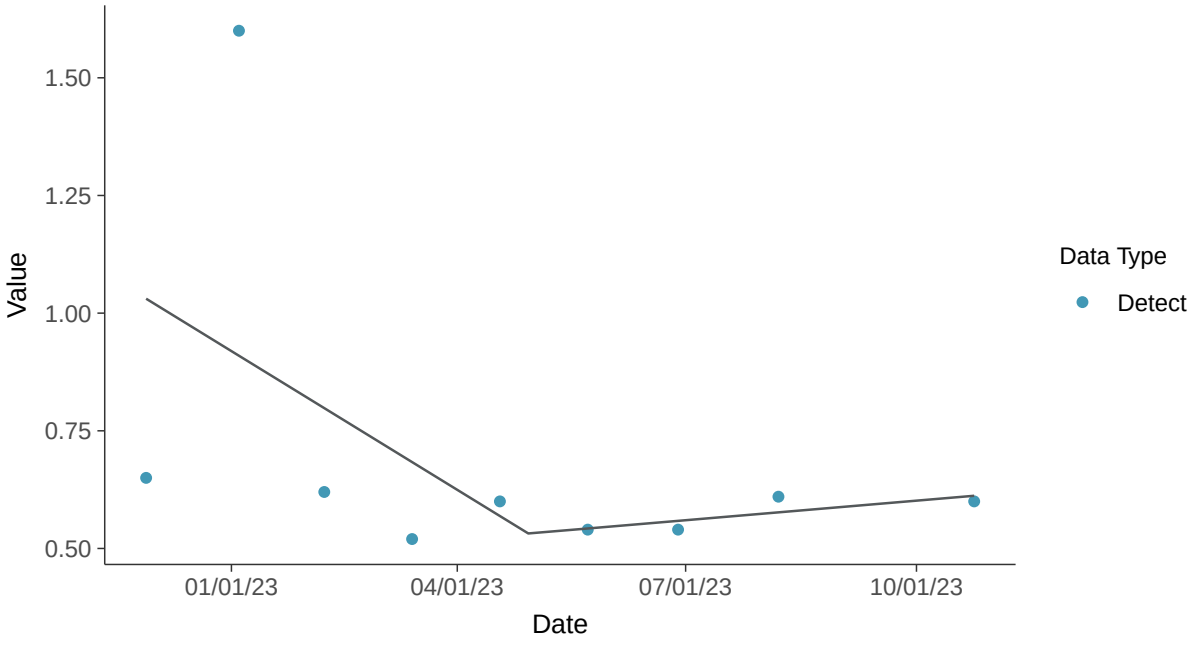
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride (App IV), MW-03 (mg/L)



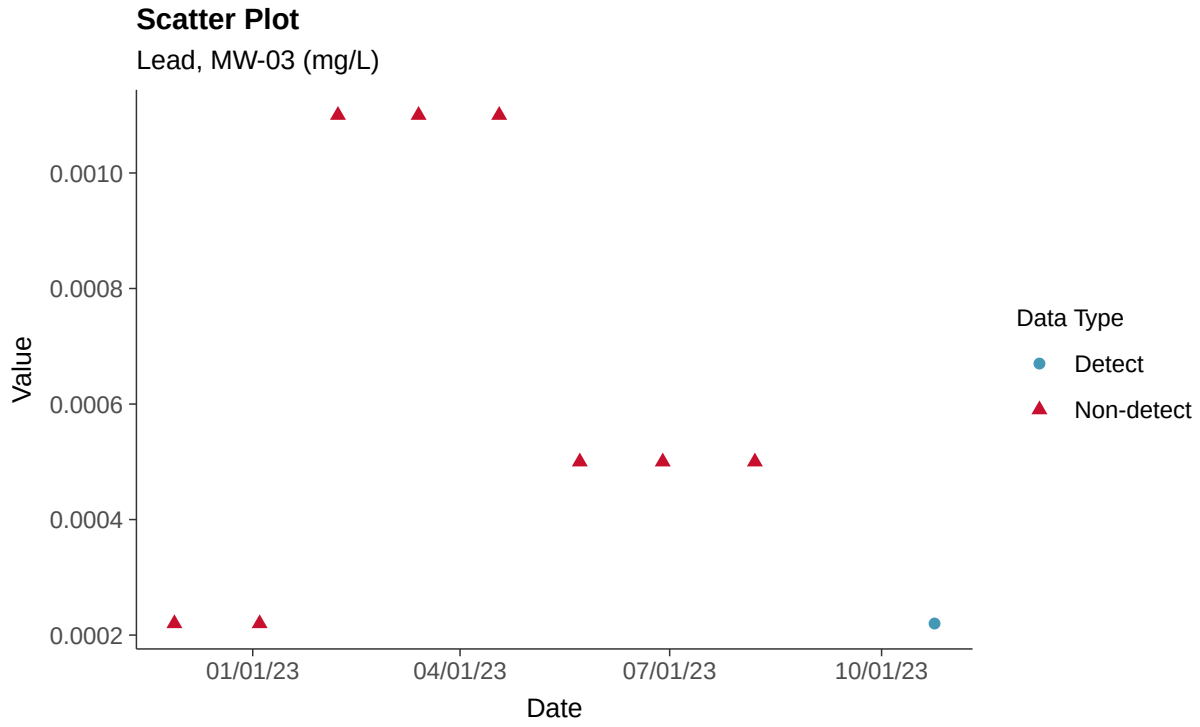
Trend Regression: Piecewise Linear-Linear

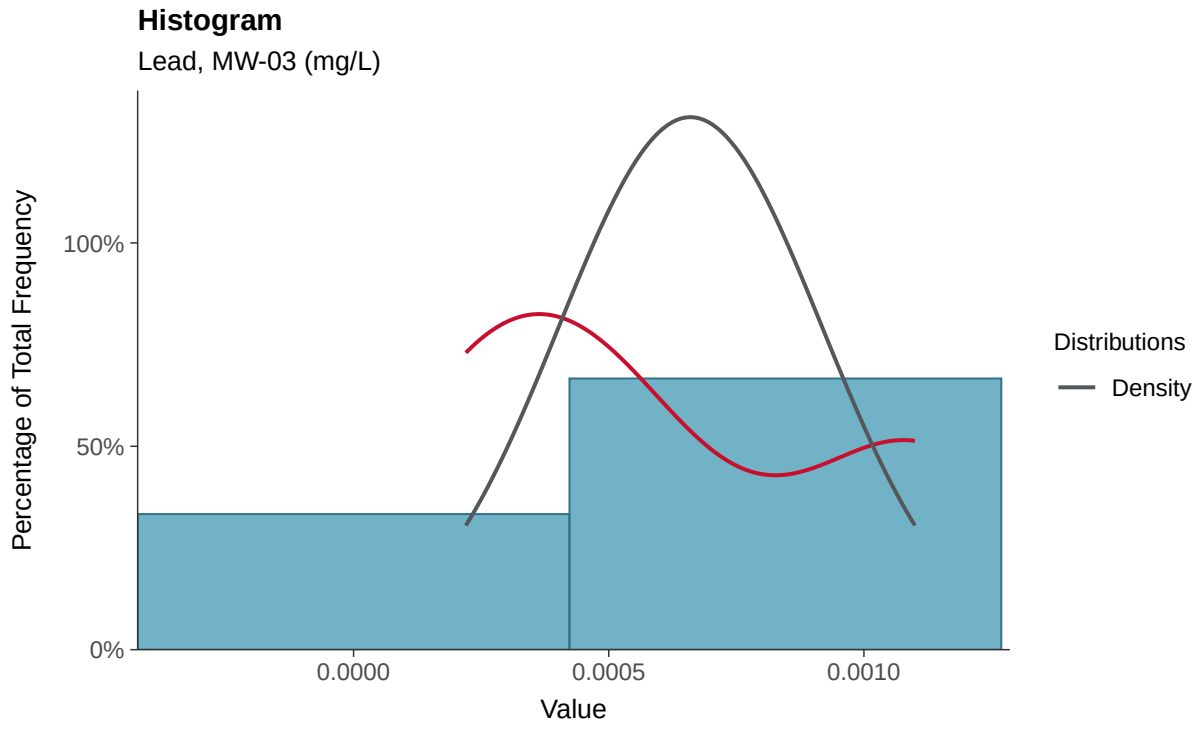
Fluoride (App IV), MW-03 (mg/L)



Appendix IV: Lead, MW-03

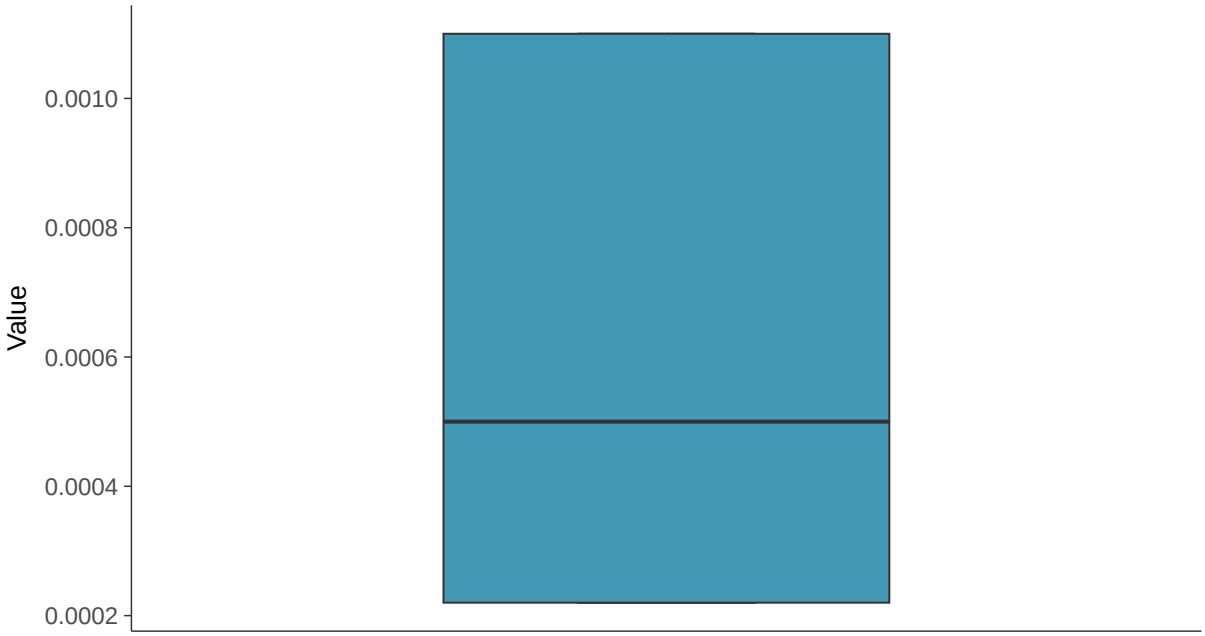
ID: 2_13_5_115





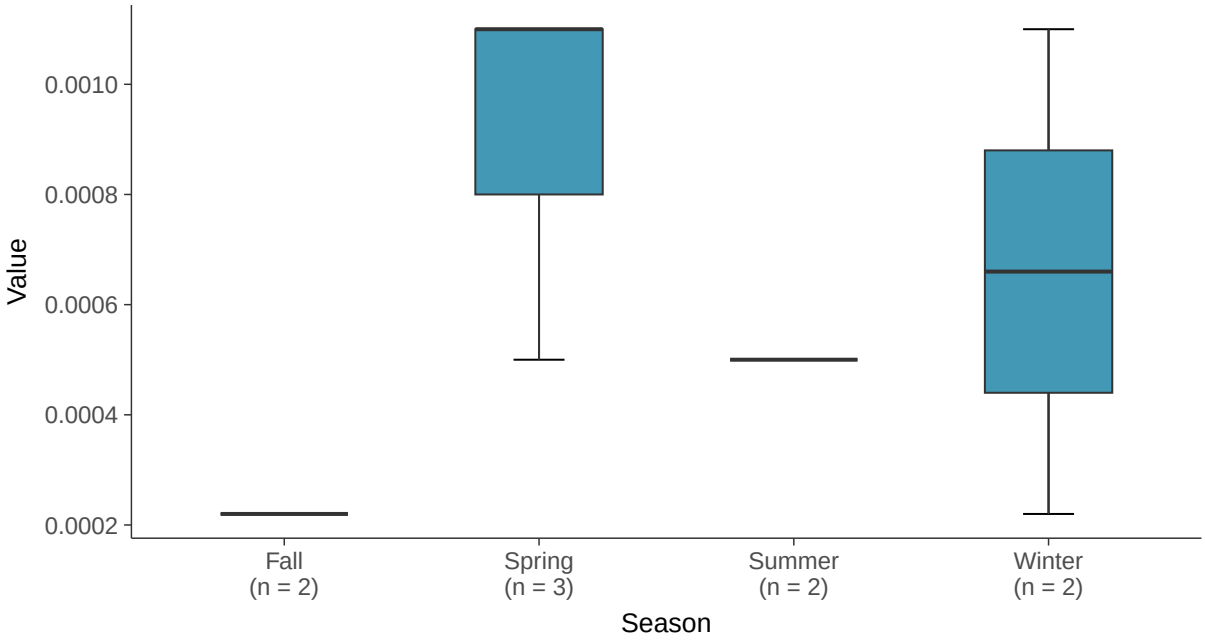
Boxplot

Lead, MW-03 (mg/L)



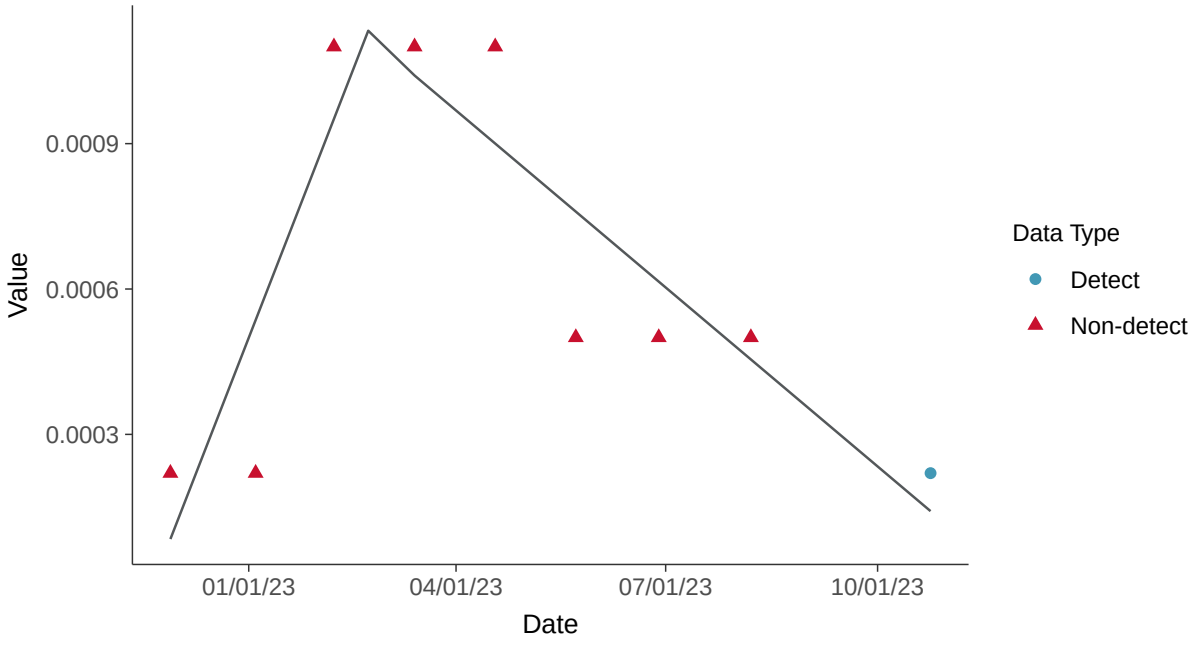
Boxplot by Season

Lead, MW-03 (mg/L)



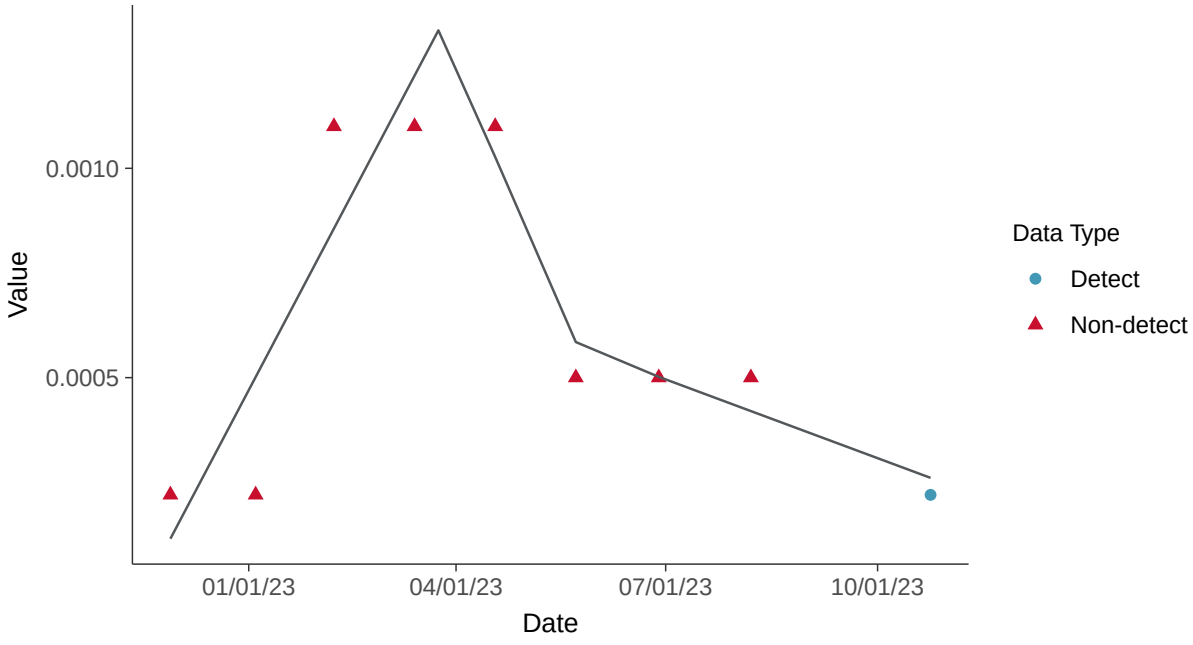
Trend Regression: Piecewise Linear-Linear

Lead, MW-03 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-03 (mg/L)

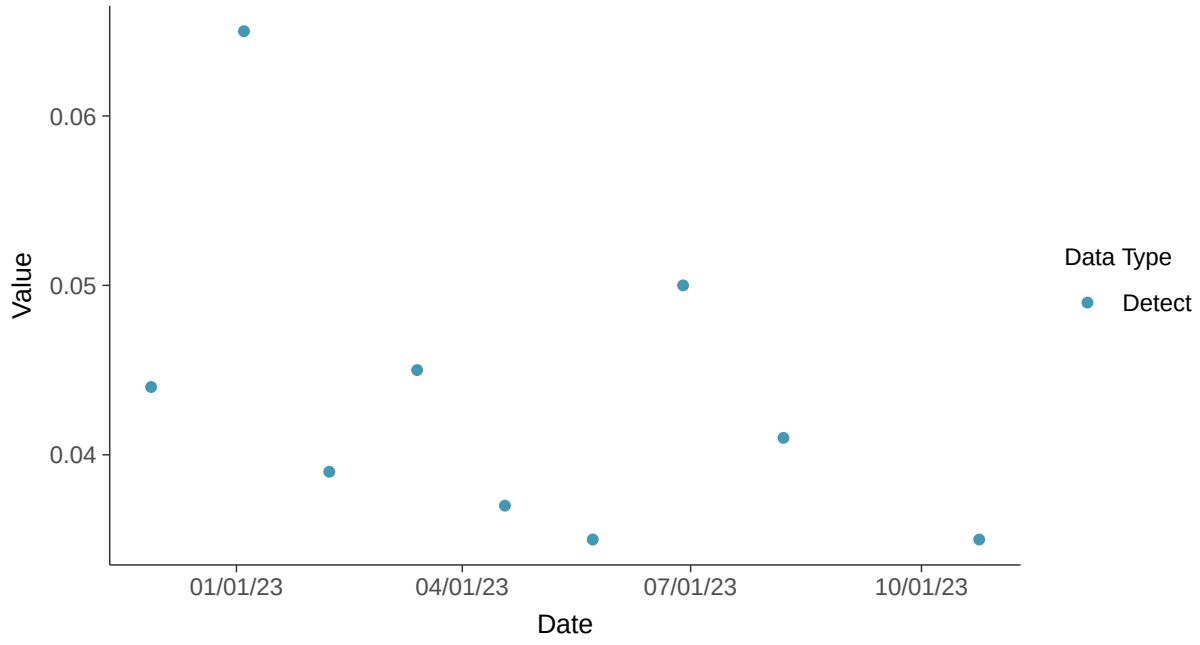


Appendix IV: Lithium, MW-03

ID: 2_13_5_116

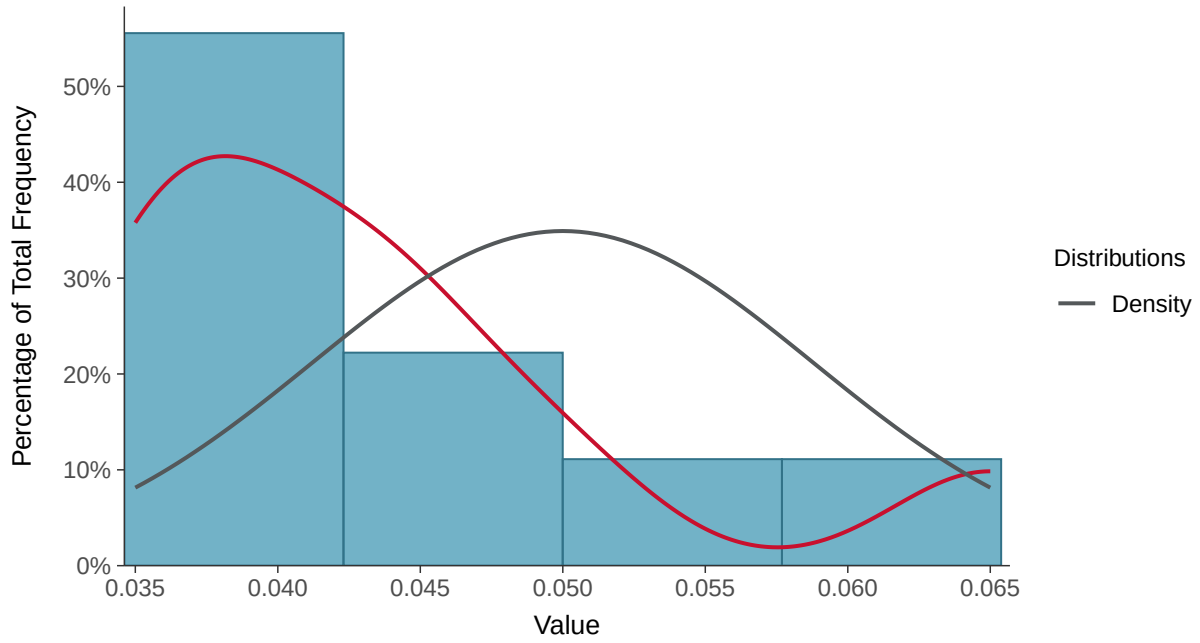
Scatter Plot

Lithium, MW-03 (mg/L)



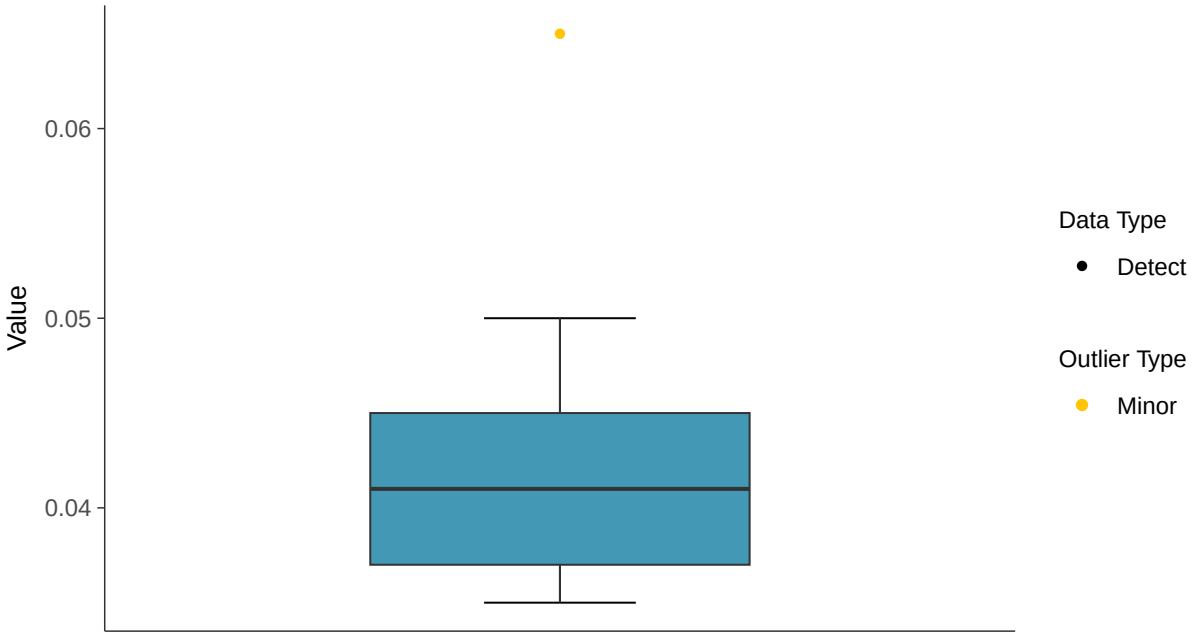
Histogram

Lithium, MW-03 (mg/L)



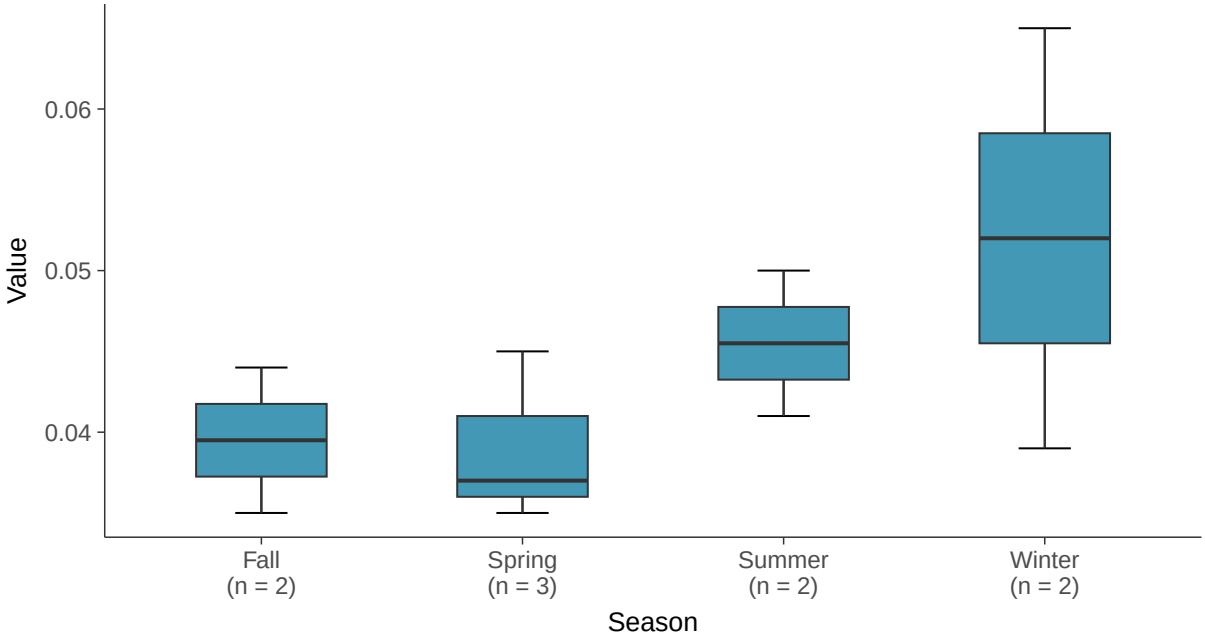
Boxplot

Lithium, MW-03 (mg/L)



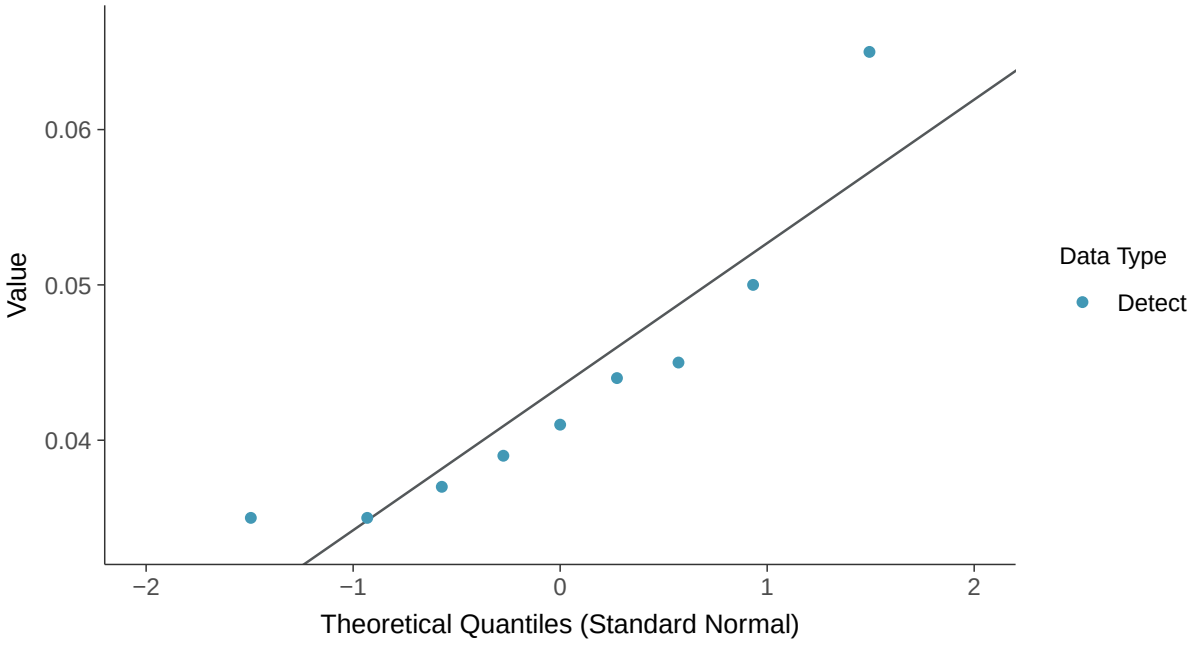
Boxplot by Season

Lithium, MW-03 (mg/L)



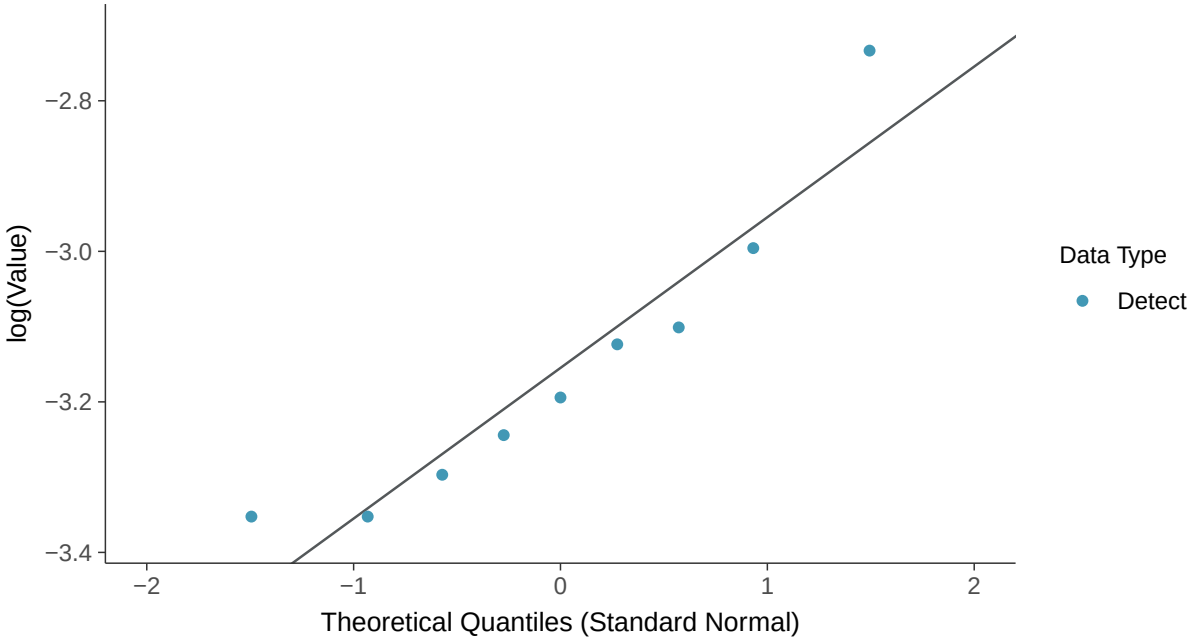
Normal Q-Q plot

Lithium, MW-03 (mg/L)



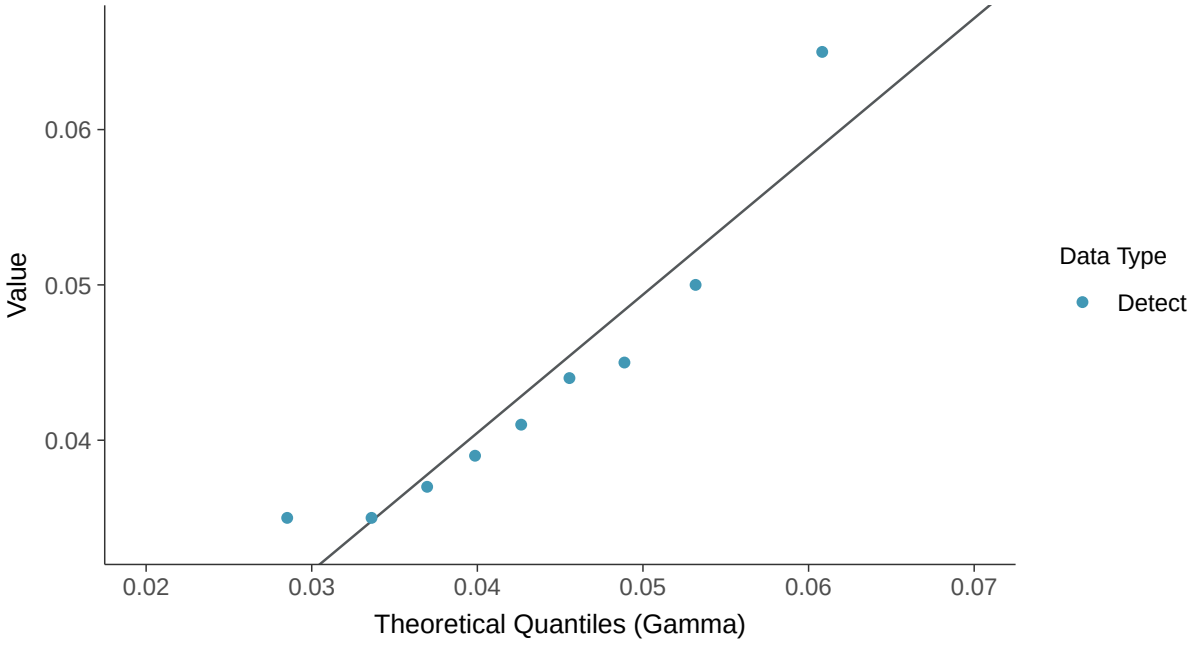
Lognormal Q-Q plot

Lithium, MW-03 (mg/L)



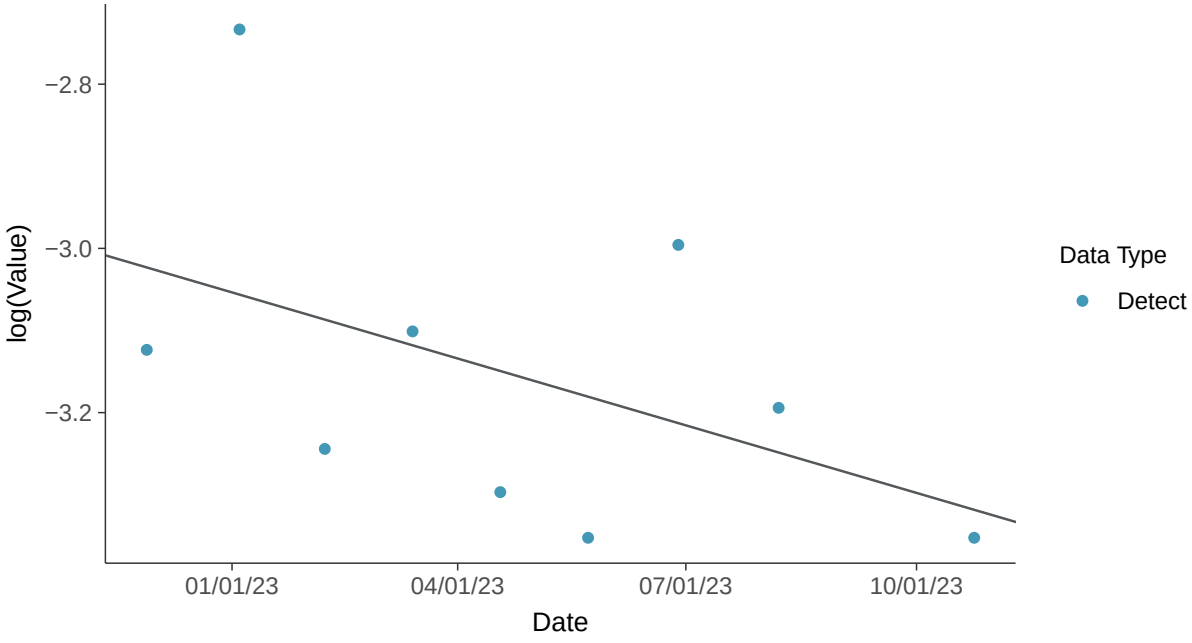
Gamma Q-Q plot

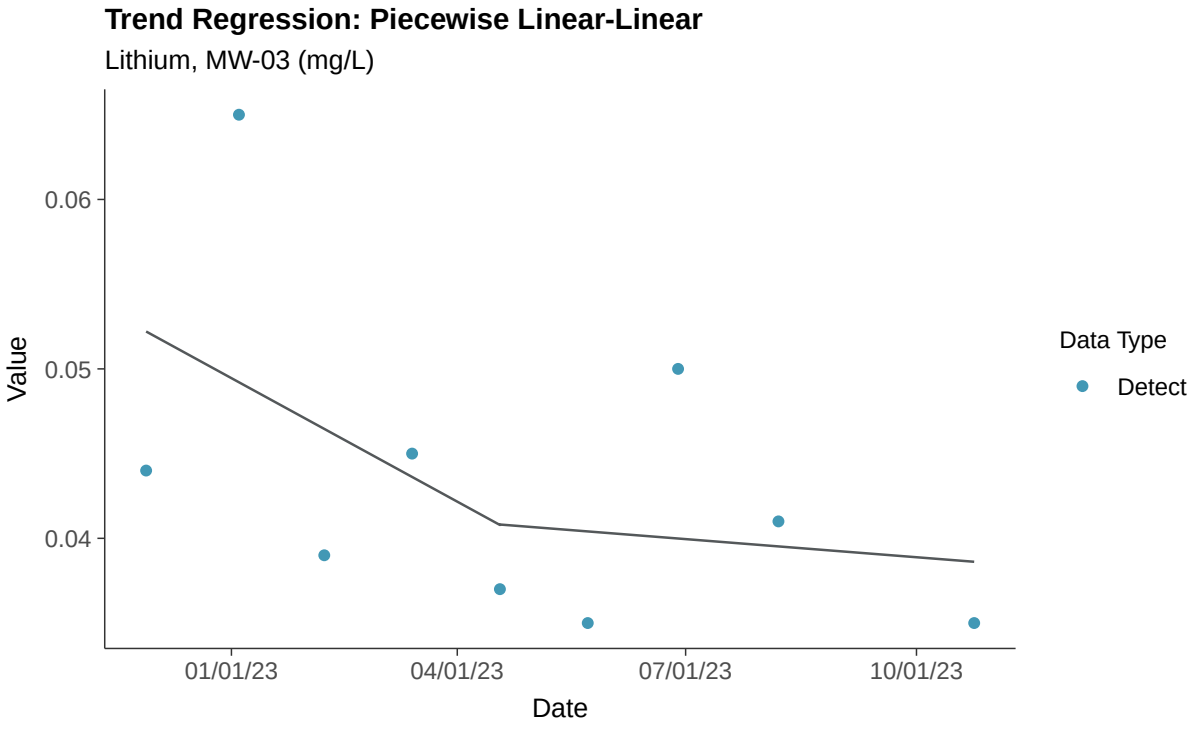
Lithium, MW-03 (mg/L)



Trend Regression: Lognormal MLE

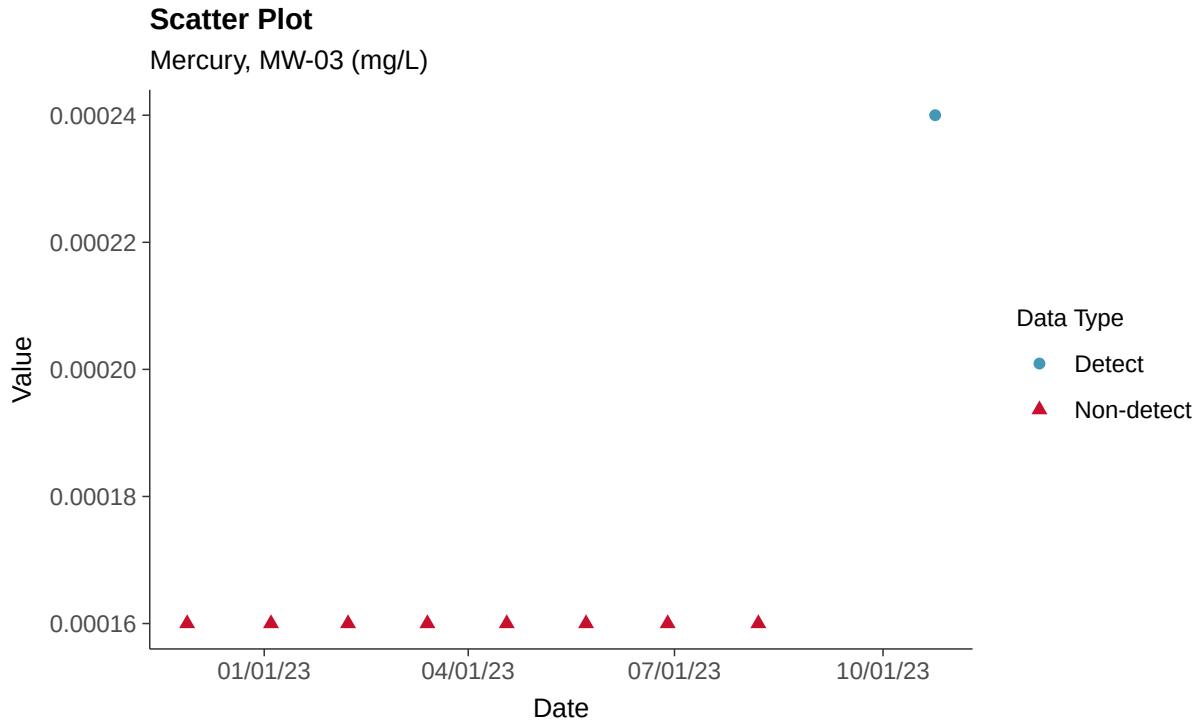
Lithium, MW-03 (mg/L)

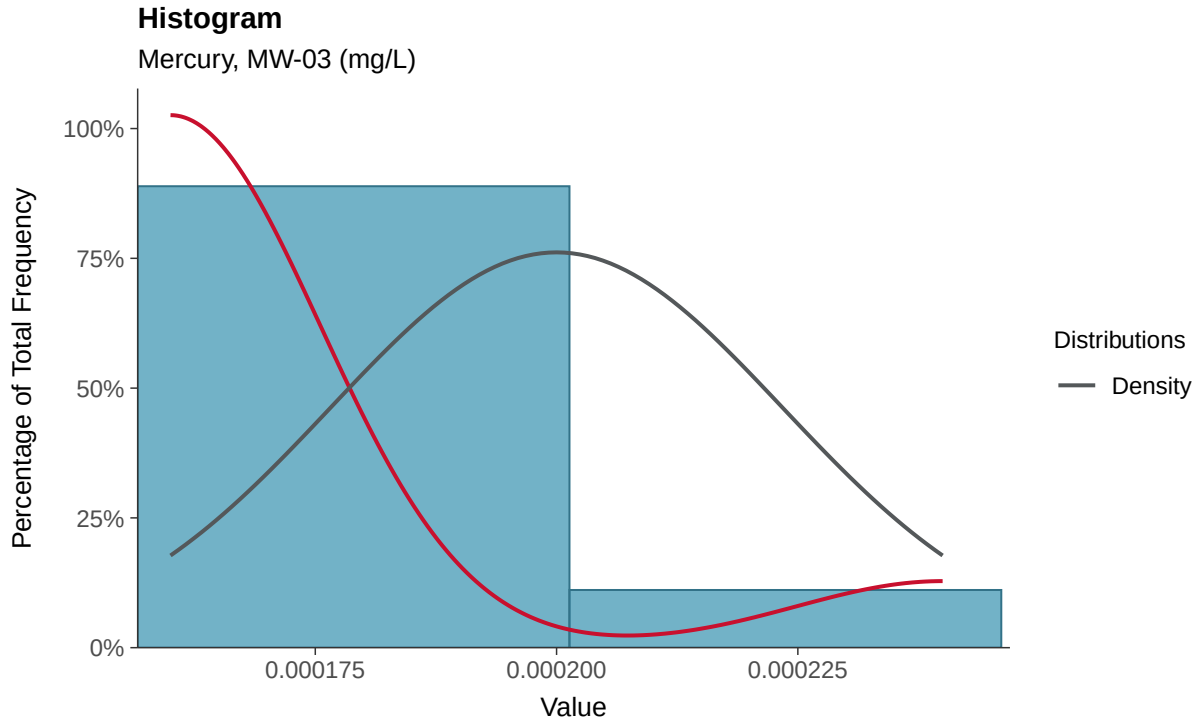


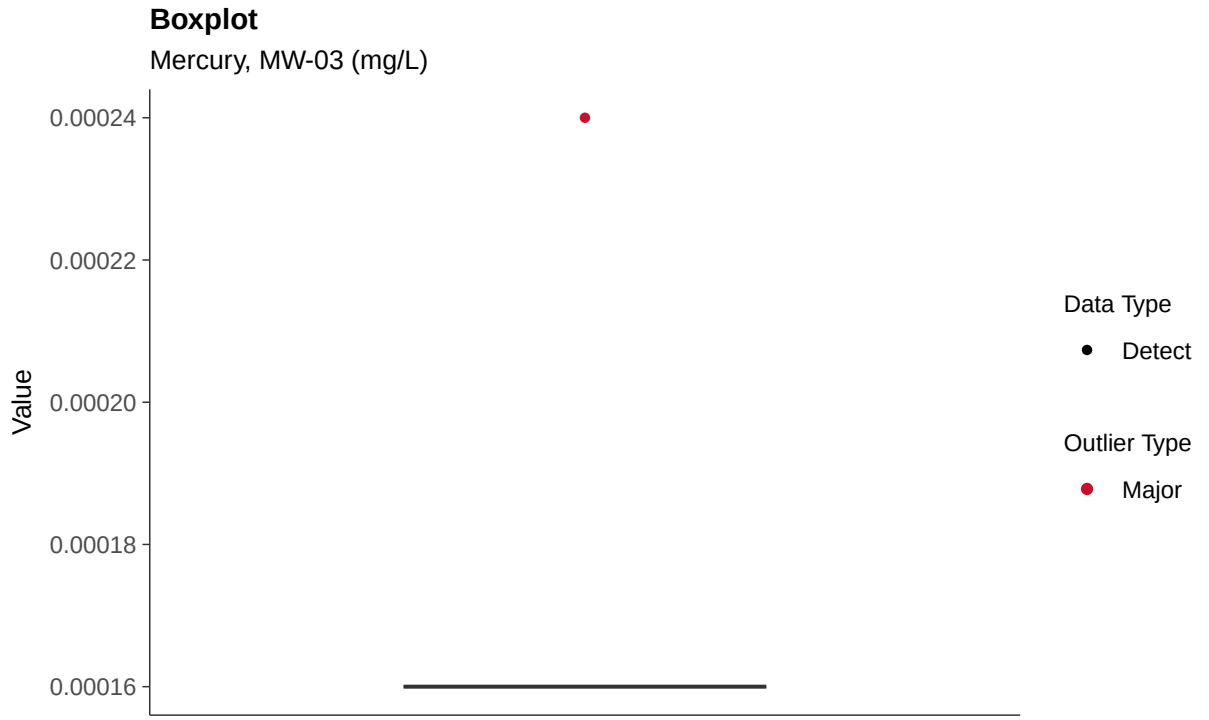

Trend Regression: Piecewise Linear-Linear
Lithium, MW-03 (mg/L)
Value
0.06
0.05
0.04
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect

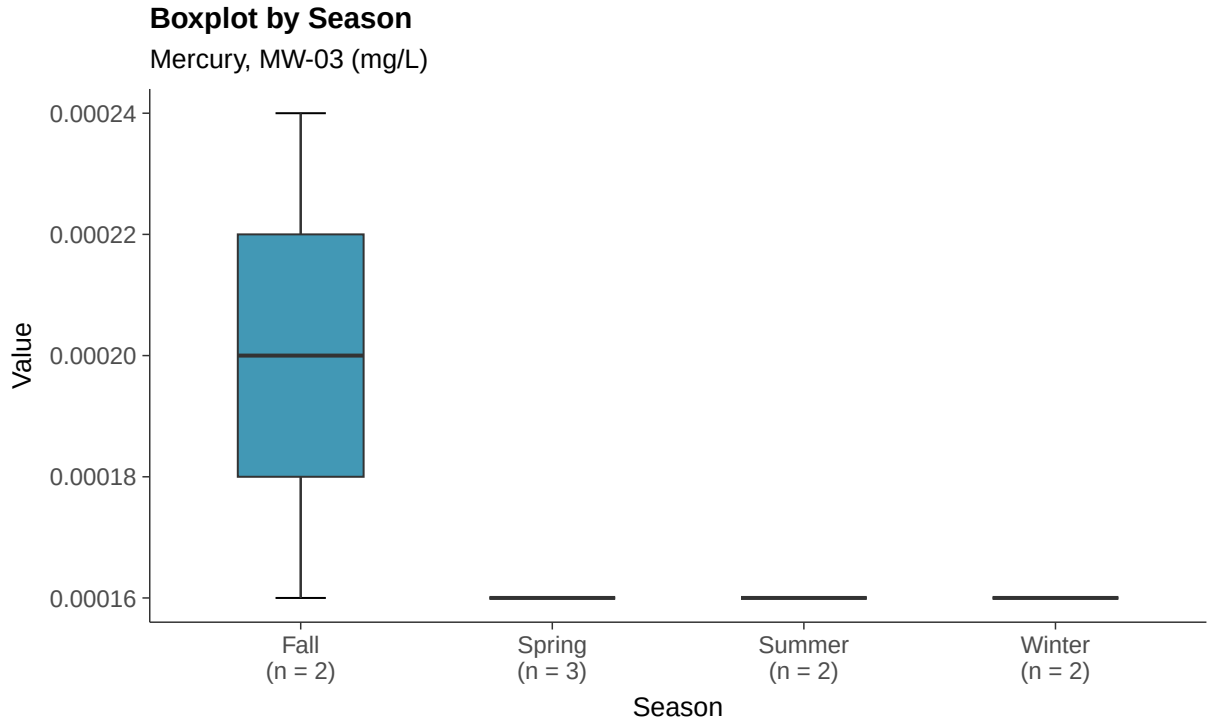
Appendix IV: Mercury, MW-03

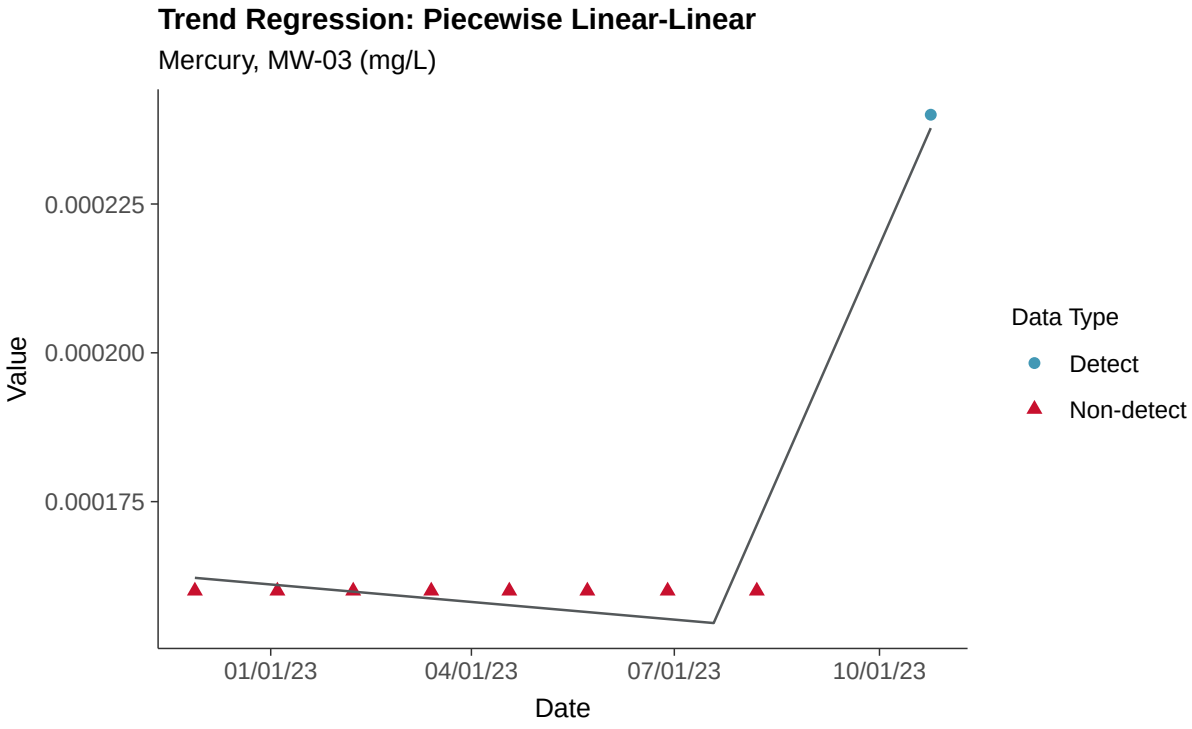
ID: 2_13_5_117





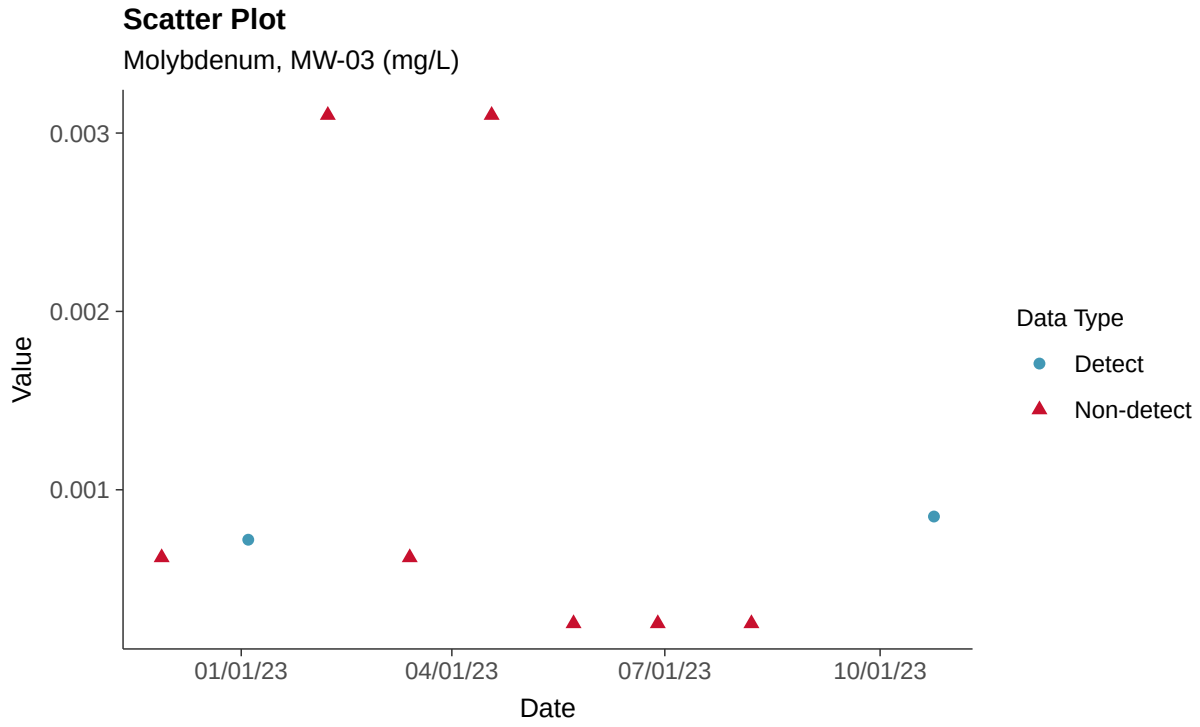

Boxplot
Mercury, MW-03 (mg/L)
0.00024
0.00022
0.00020
0.00018
0.00016
Value
Data Type
Detect
Outlier Type
Major

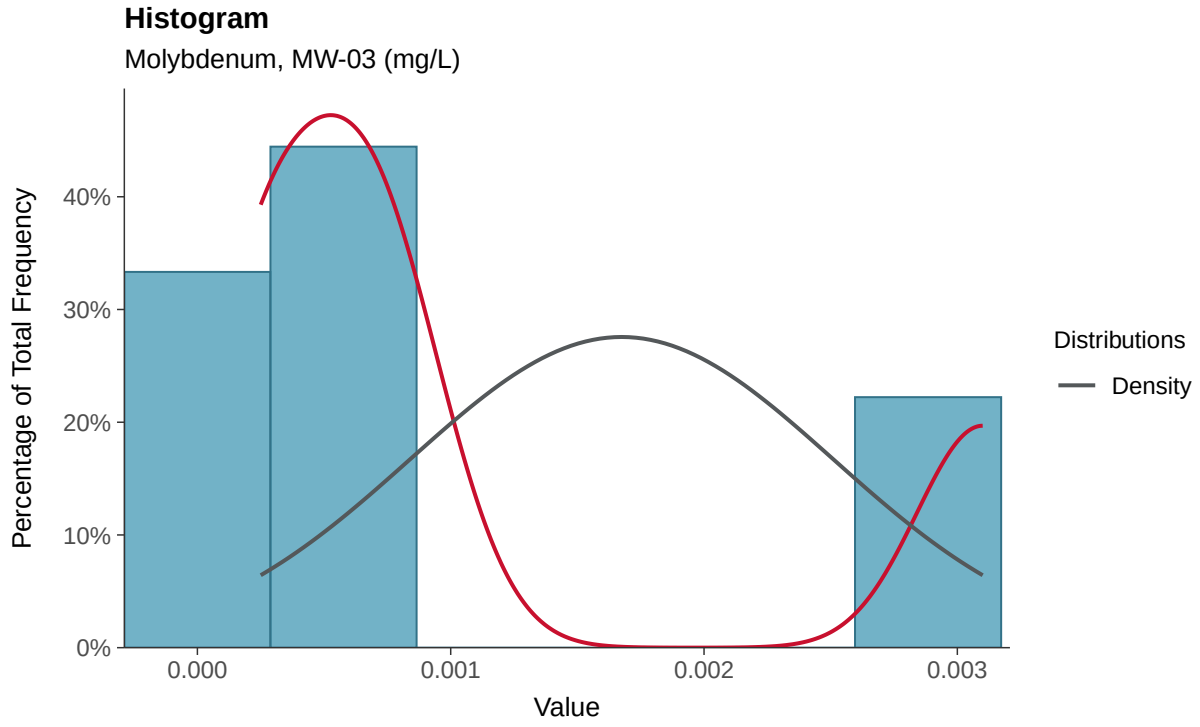

Boxplot by Season
Mercury, MW-03 (mg/L)
0.00024
0.00022
0.00020
0.00018
0.00016
Value
Fall
(n = 2)
Spring
(n = 3)
Summer
(n = 2)
Winter
(n = 2)
Season


Trend Regression: Piecewise Linear-Linear
Mercury, MW-03 (mg/L)
Value
0.000225
0.000200
0.000175
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect
Non-detect

Appendix IV: Molybdenum, MW-03

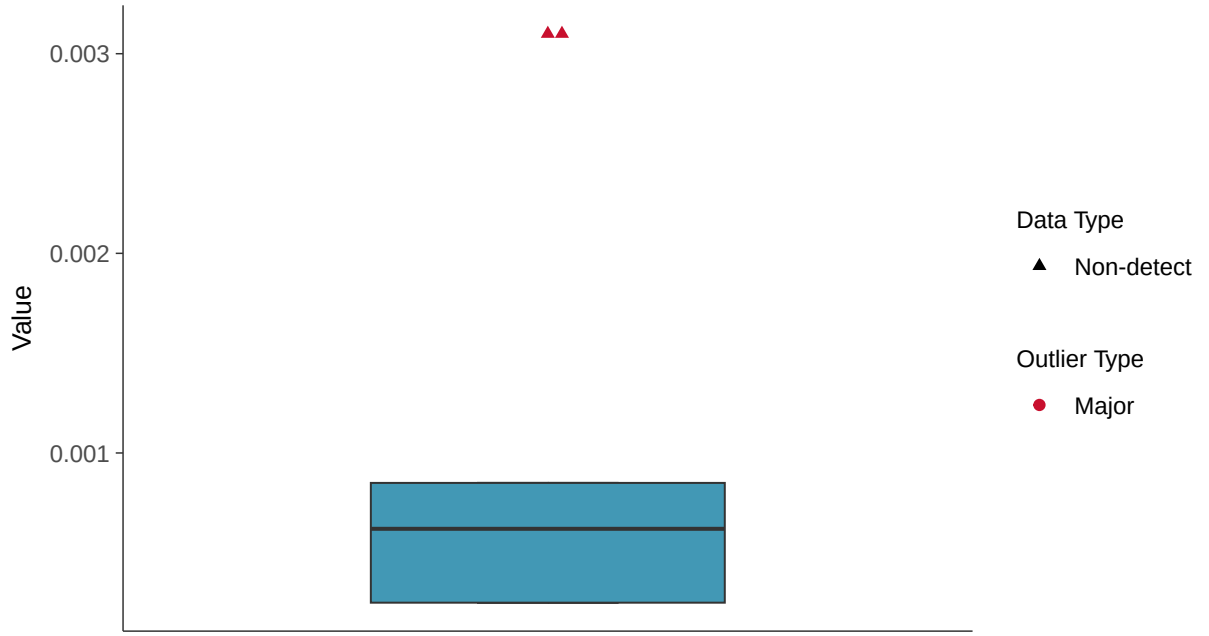
ID: 2_13_5_118





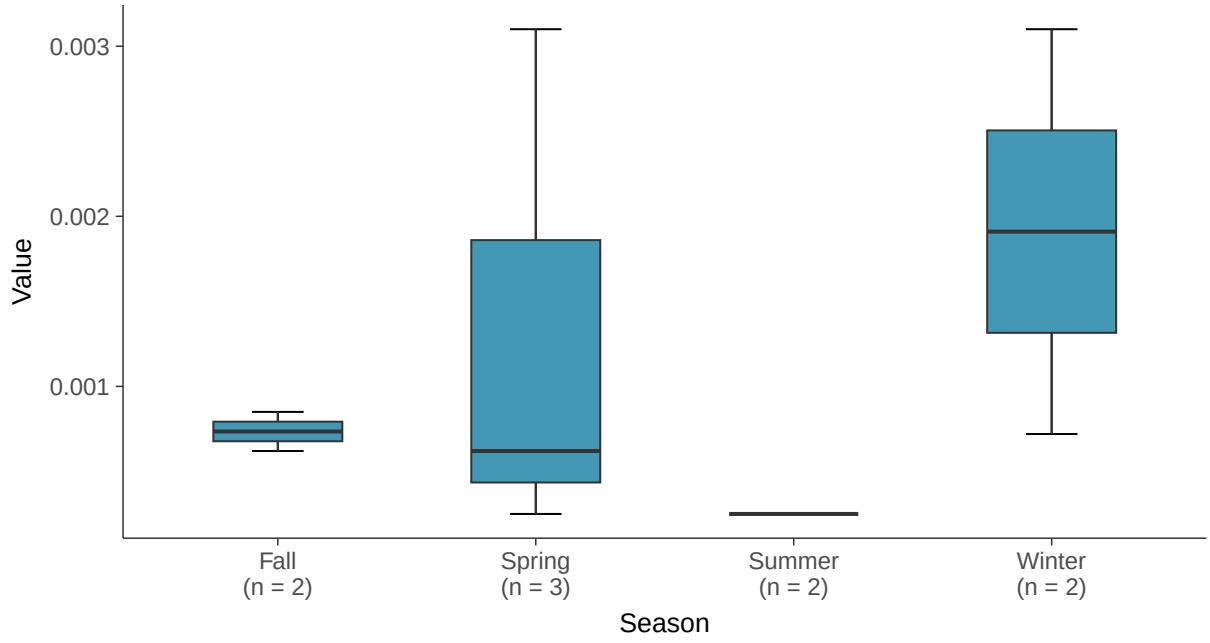
Boxplot

Molybdenum, MW-03 (mg/L)



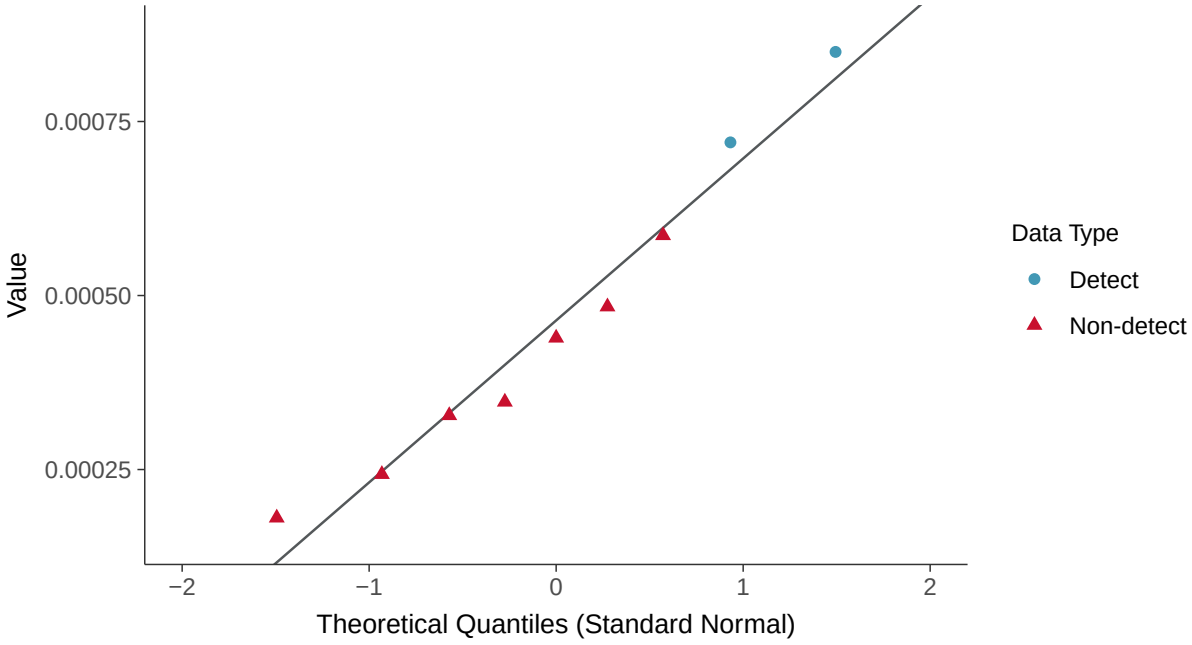
Boxplot by Season

Molybdenum, MW-03 (mg/L)



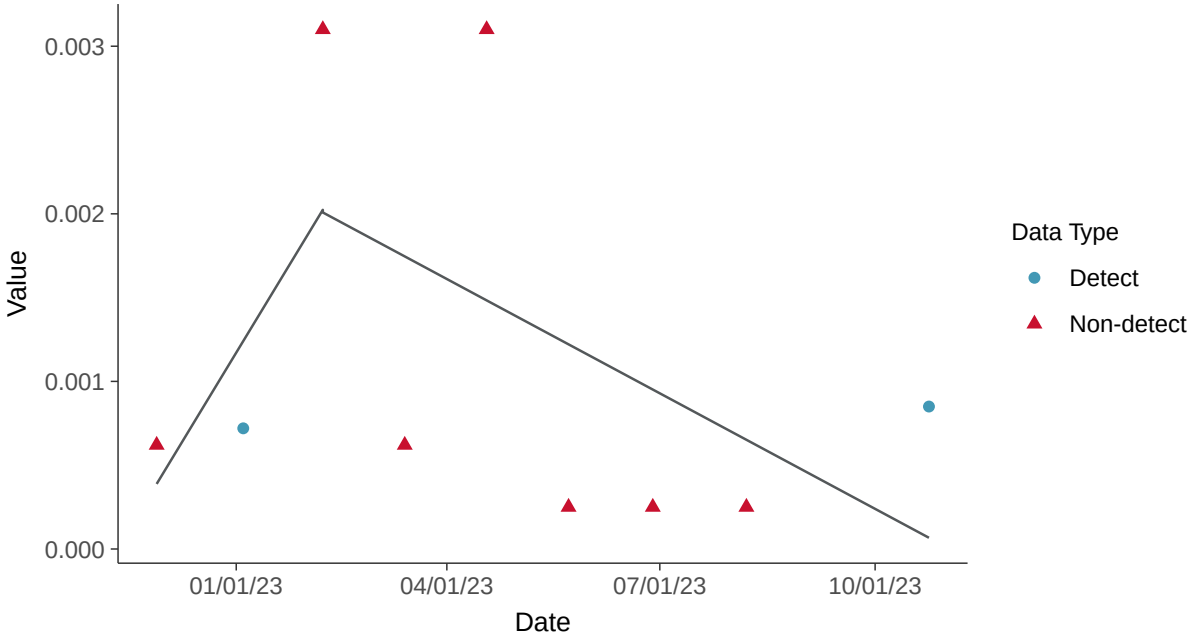
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-03 (mg/L)



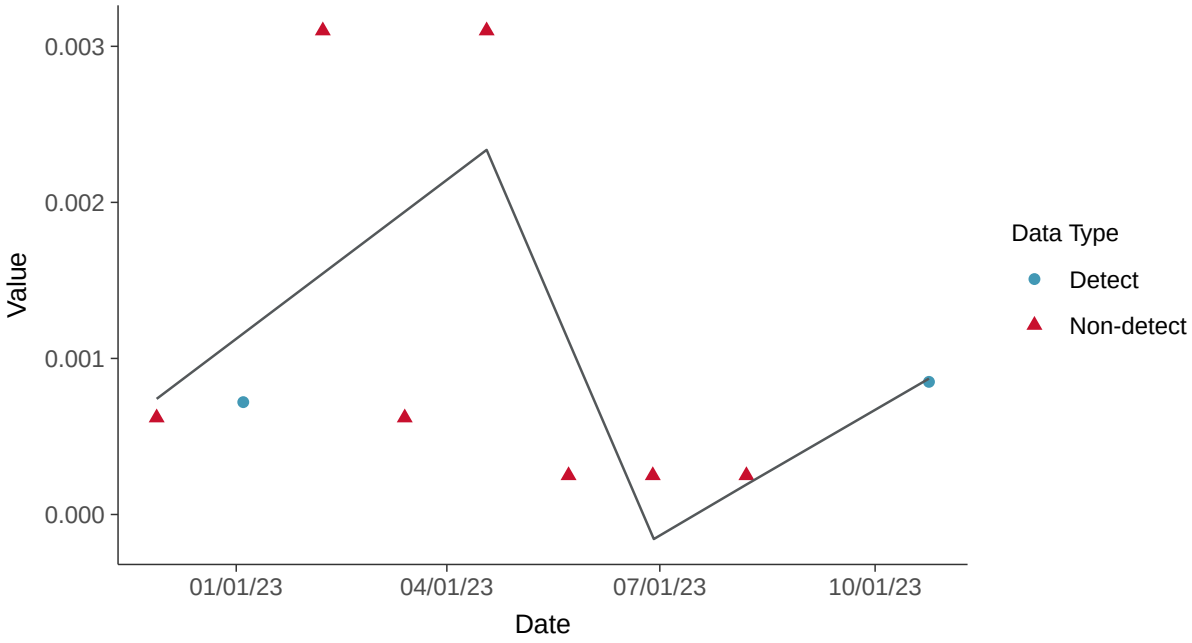
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-03 (mg/L)



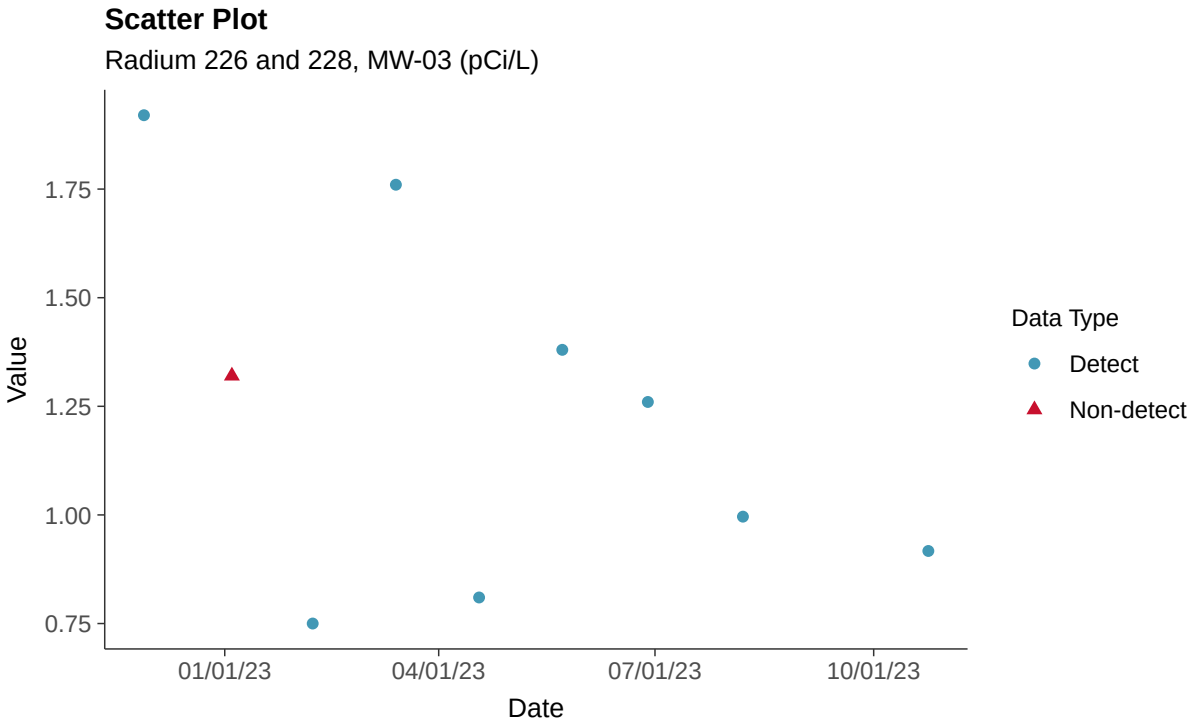
Trend Regression: Piecewise Linear-Linear-Linear

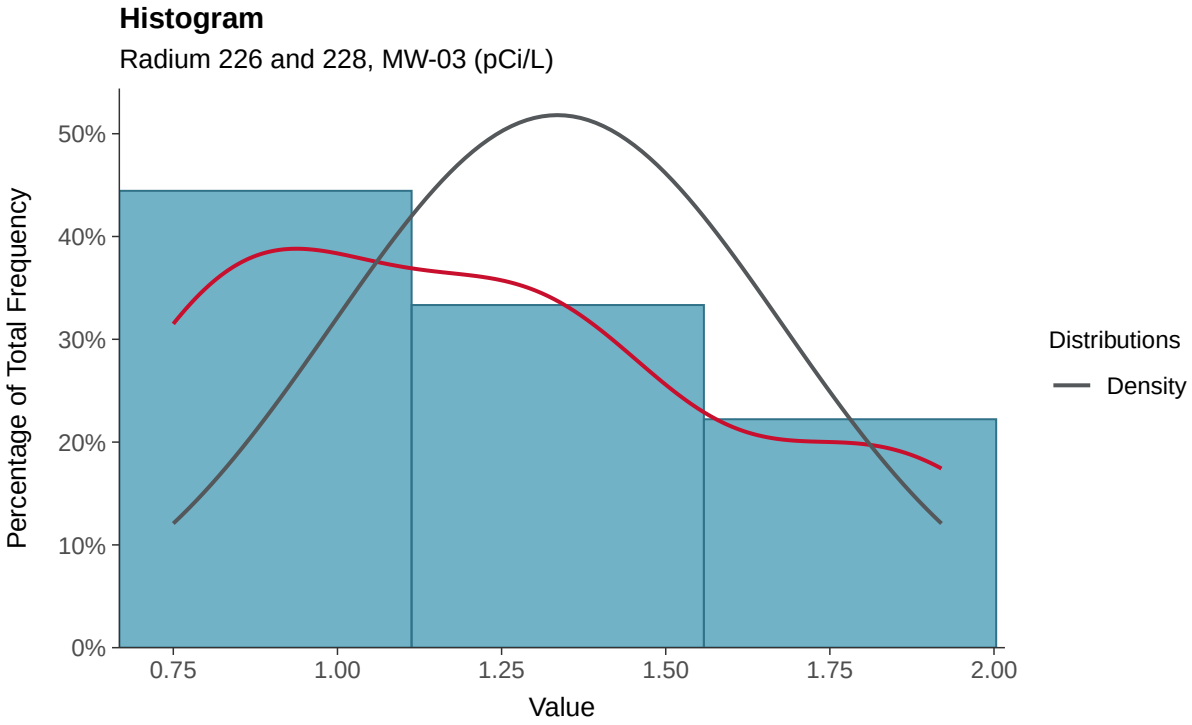
Molybdenum, MW-03 (mg/L)



Appendix IV: Radium 226 and 228, MW-03

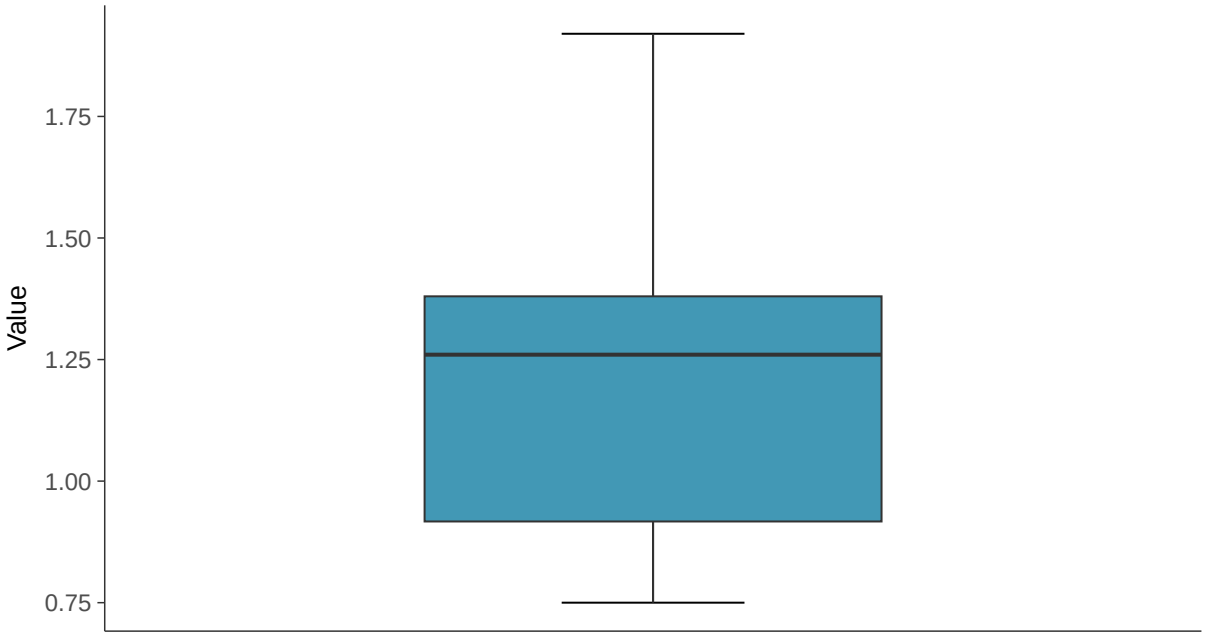
ID: 2_13_5_121





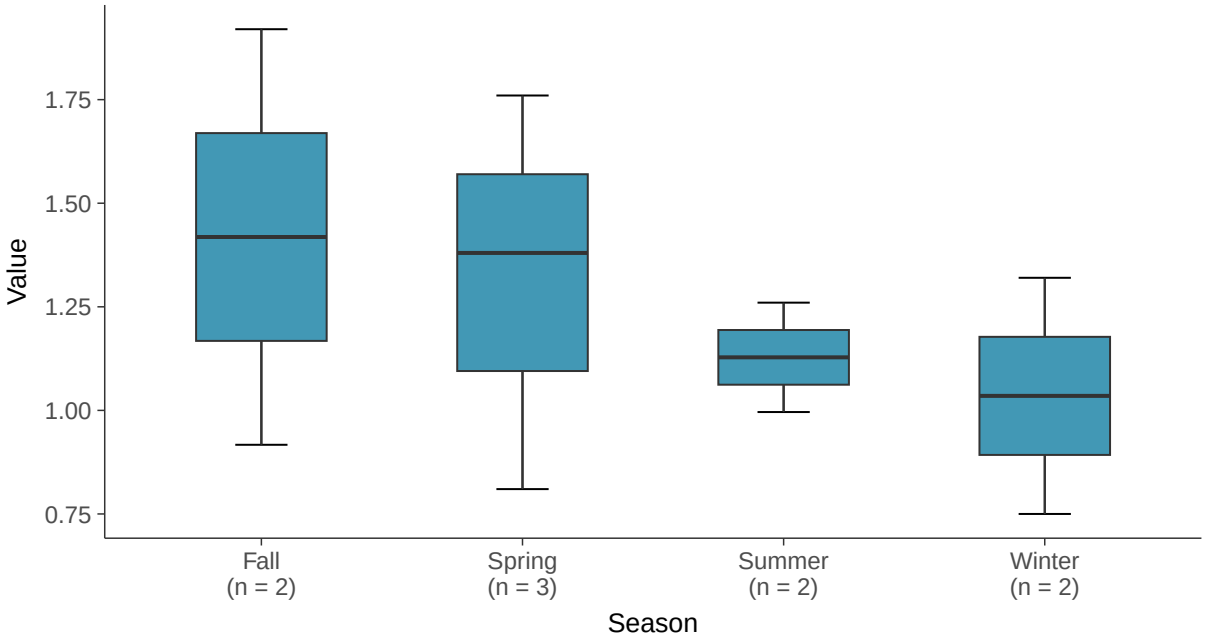
Boxplot

Radium 226 and 228, MW-03 (pCi/L)



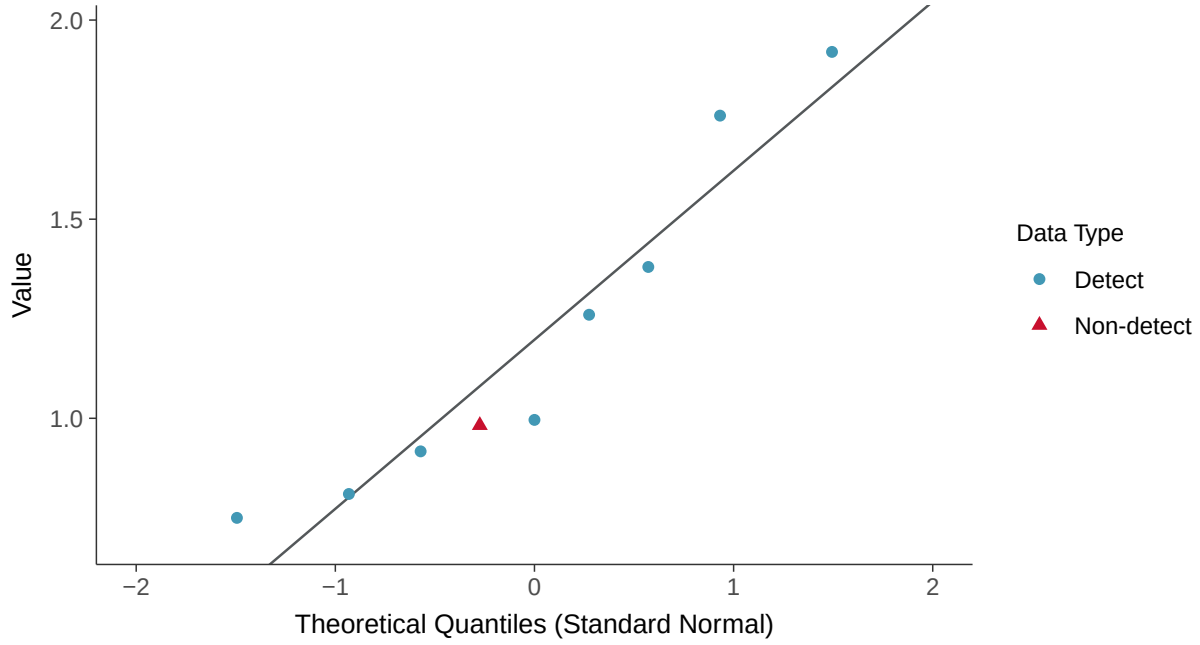
Boxplot by Season

Radium 226 and 228, MW-03 (pCi/L)



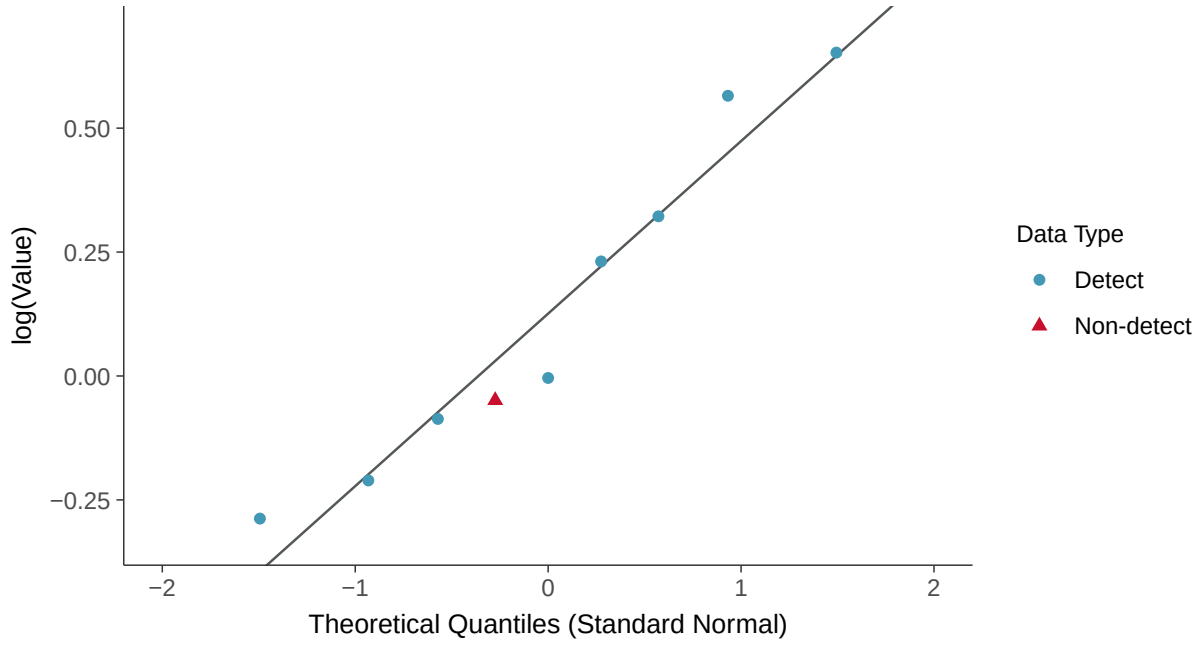
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-03 (pCi/L)



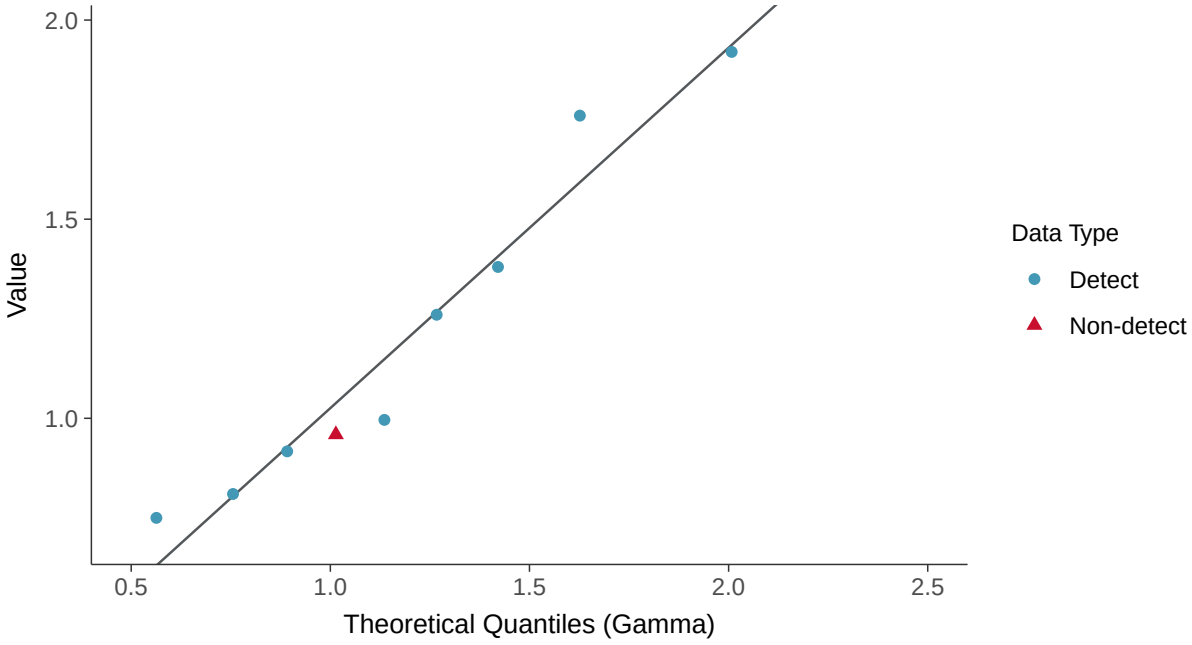
Lognormal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-03 (pCi/L)



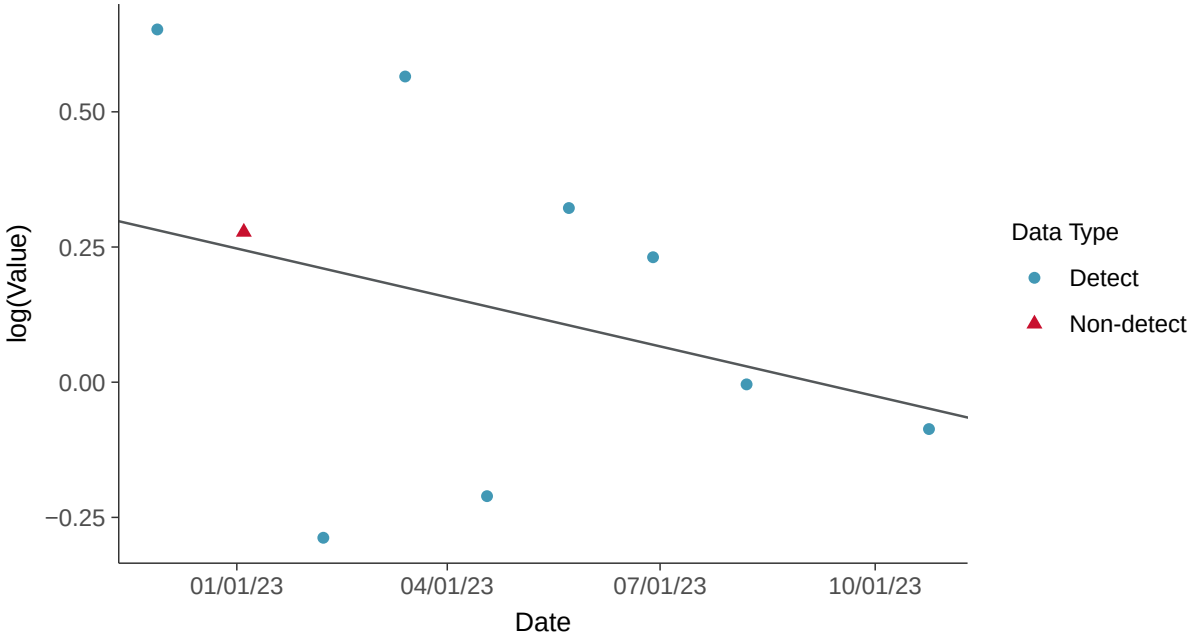
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-03 (pCi/L)



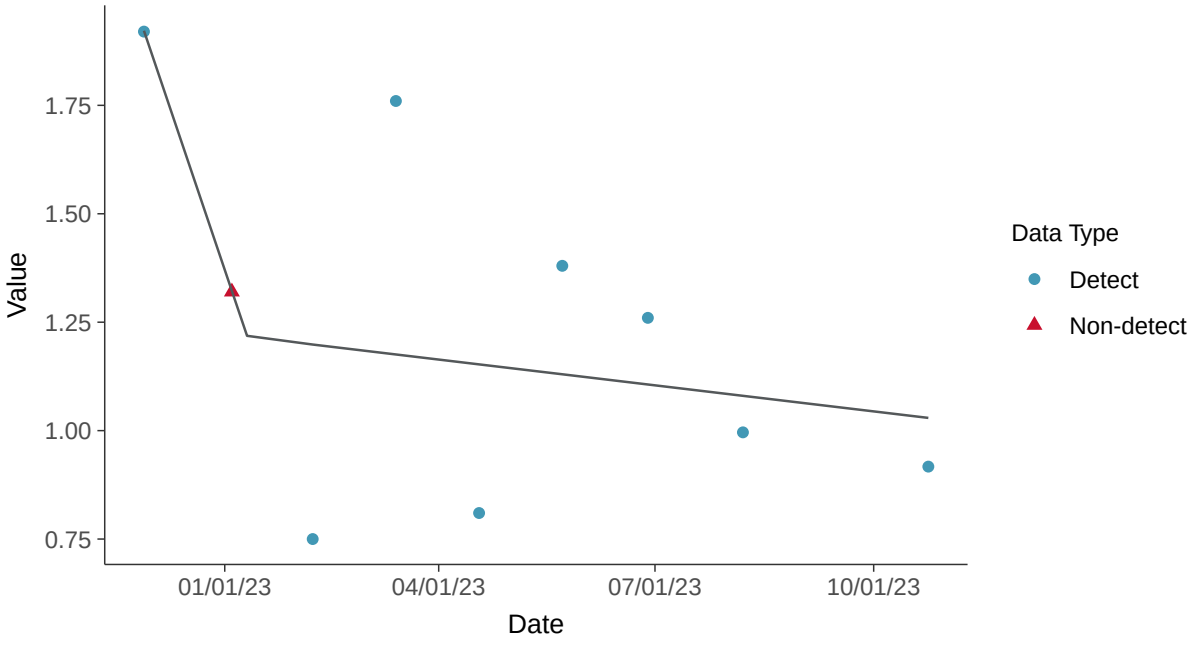
Trend Regression: Lognormal MLE

Radium 226 and 228, MW-03 (pCi/L)



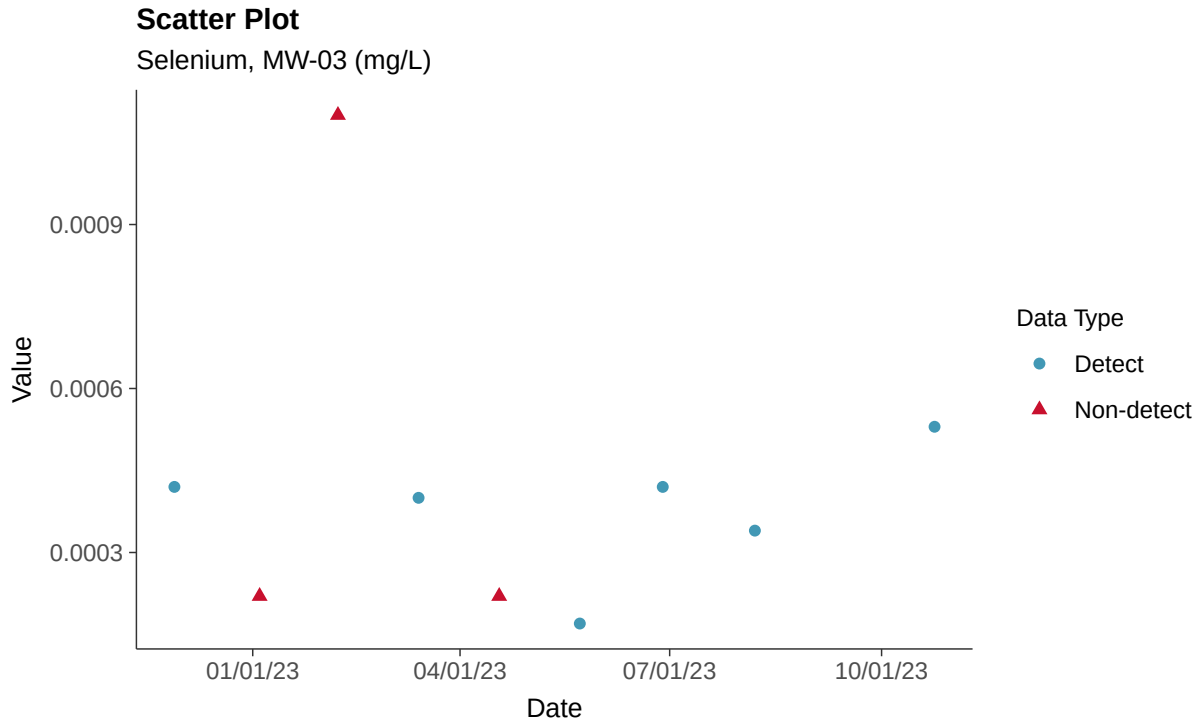
Trend Regression: Piecewise Linear-Linear

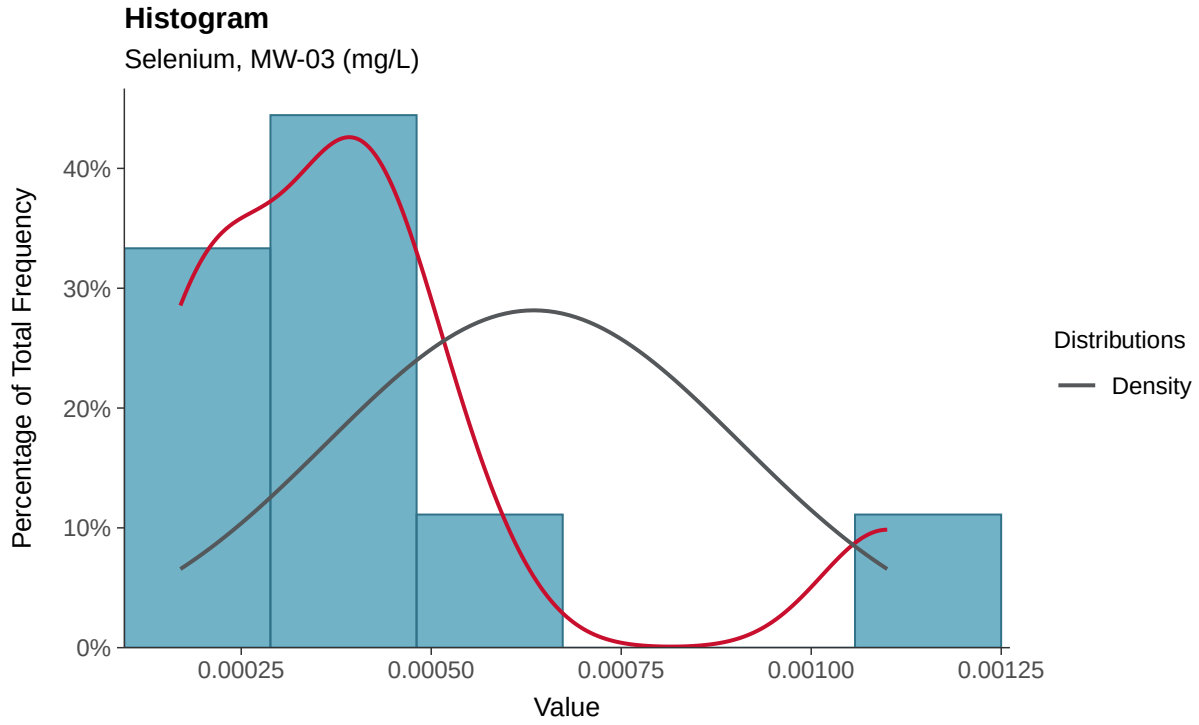
Radium 226 and 228, MW-03 (pCi/L)



Appendix IV: Selenium, MW-03

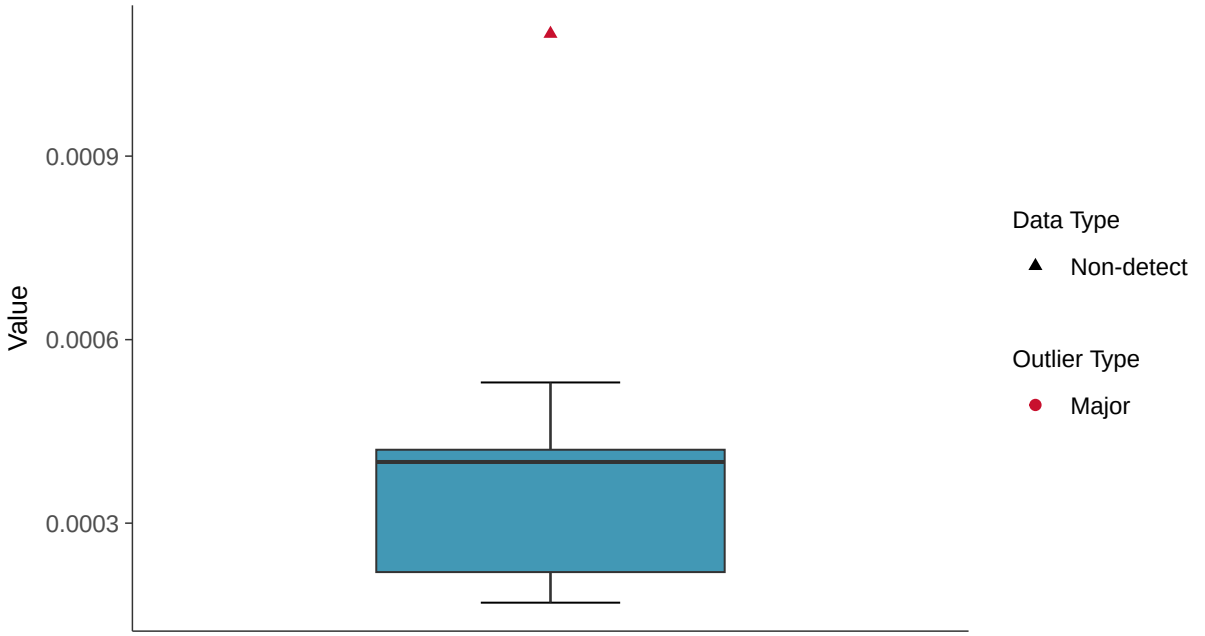
ID: 2_13_5_122





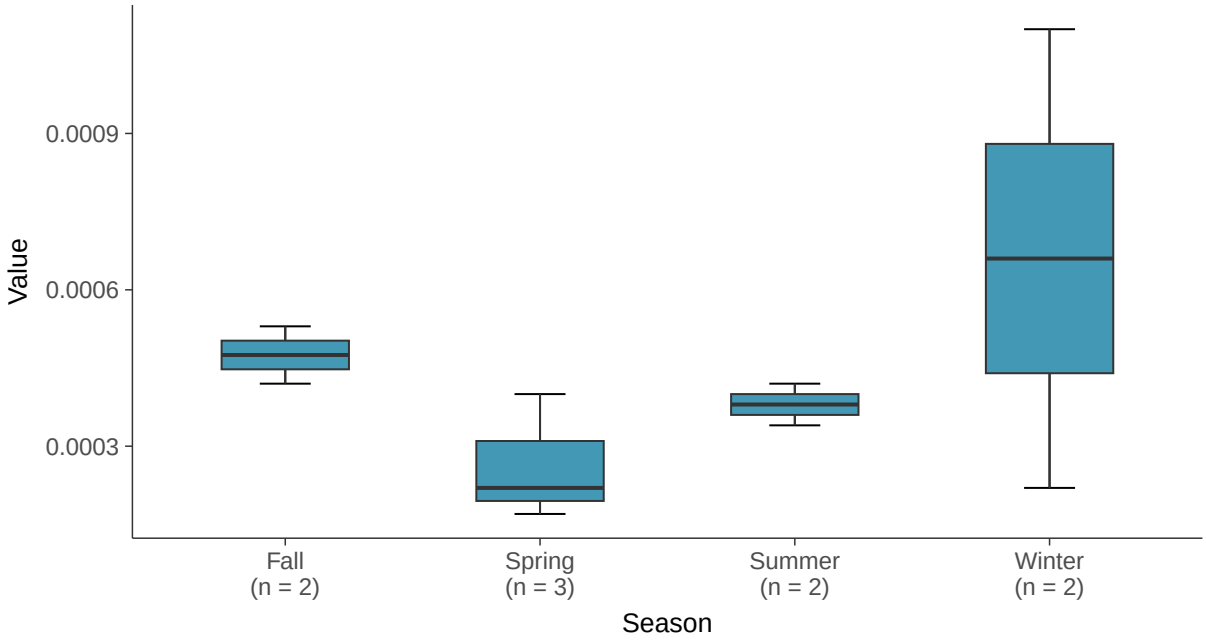
Boxplot

Selenium, MW-03 (mg/L)



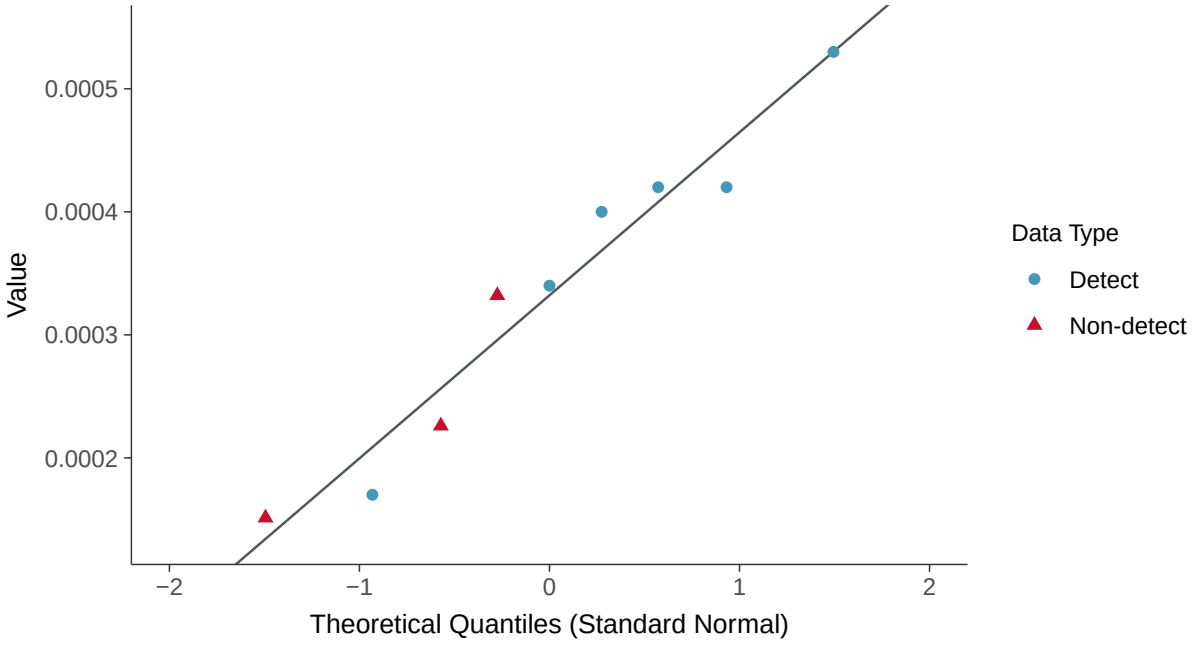
Boxplot by Season

Selenium, MW-03 (mg/L)



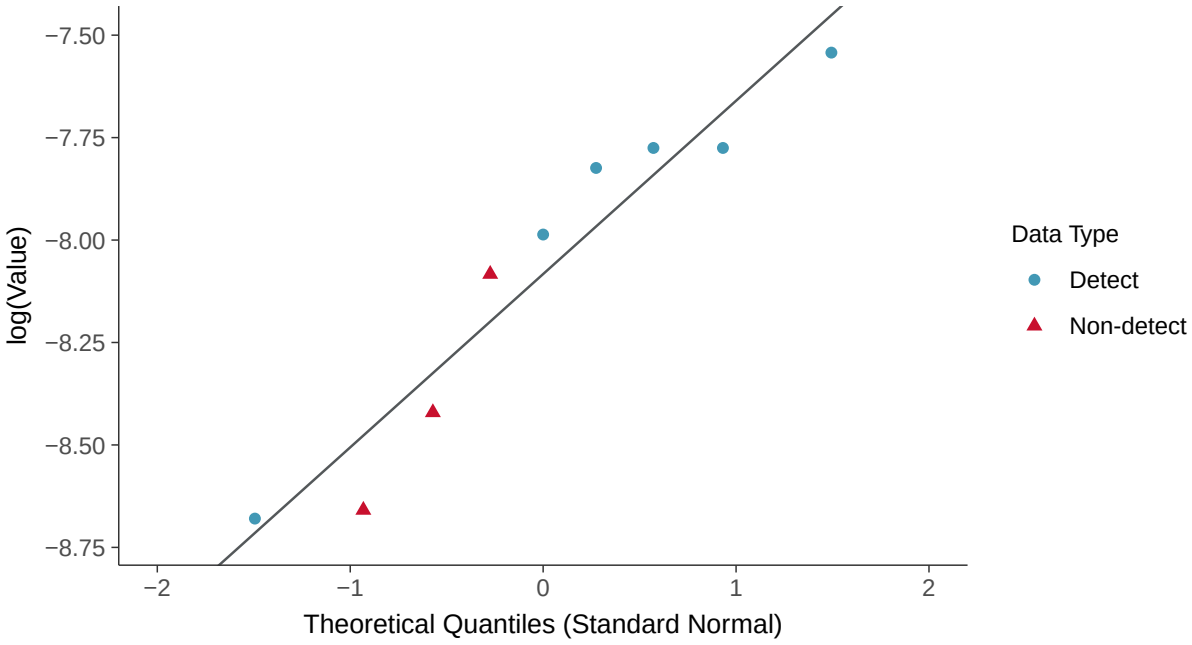
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-03 (mg/L)



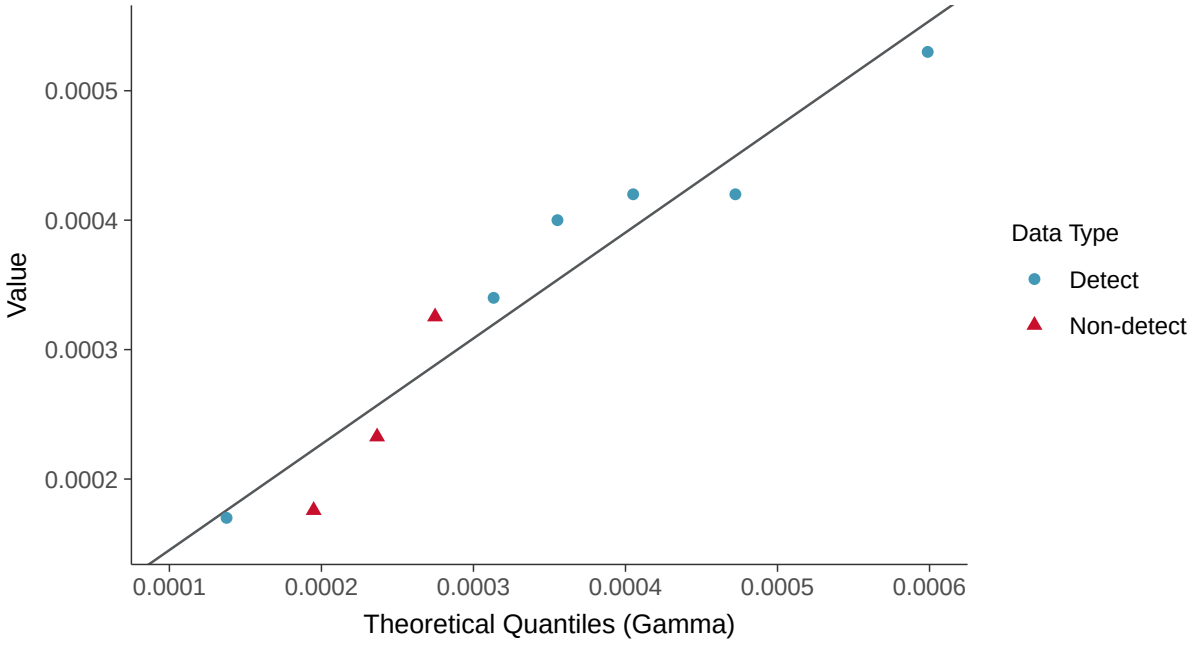
Lognormal Q-Q plot using ROS Imputed Estimates

Selenium, MW-03 (mg/L)



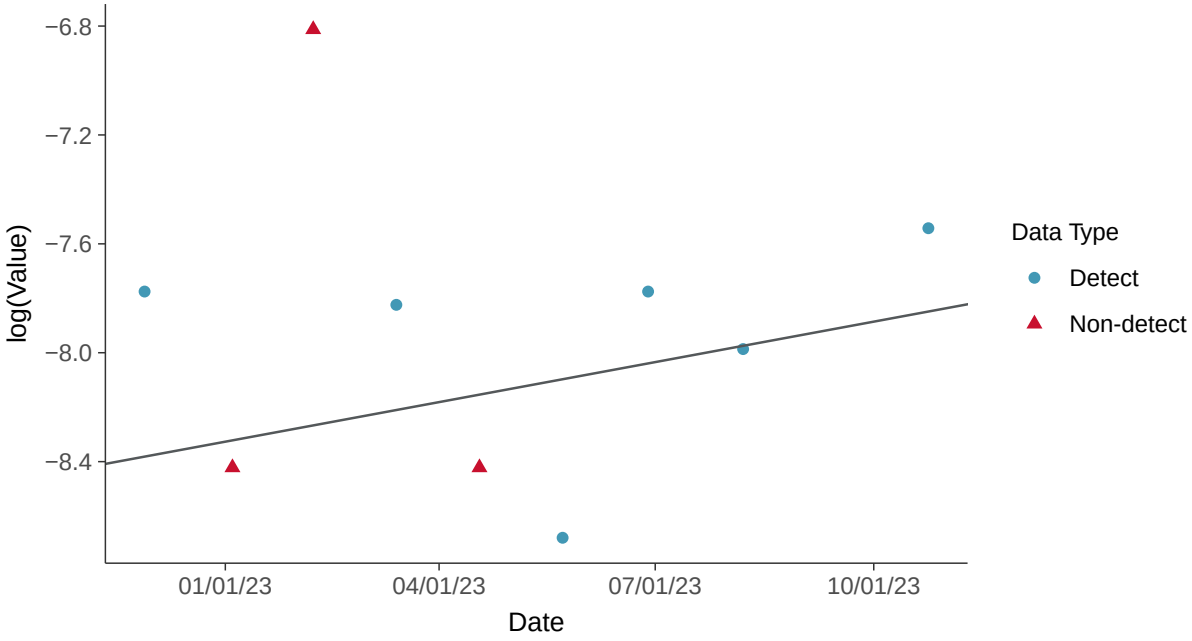
Gamma Q-Q plot using ROS Imputed Estimates

Selenium, MW-03 (mg/L)



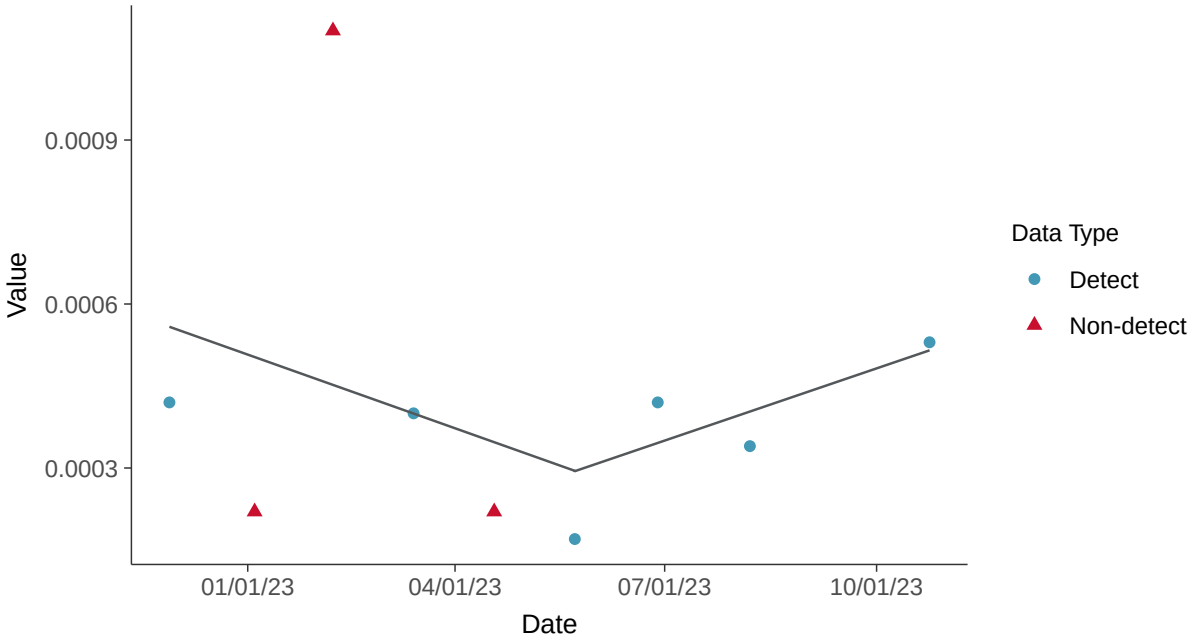
Trend Regression: Lognormal MLE

Selenium, MW-03 (mg/L)



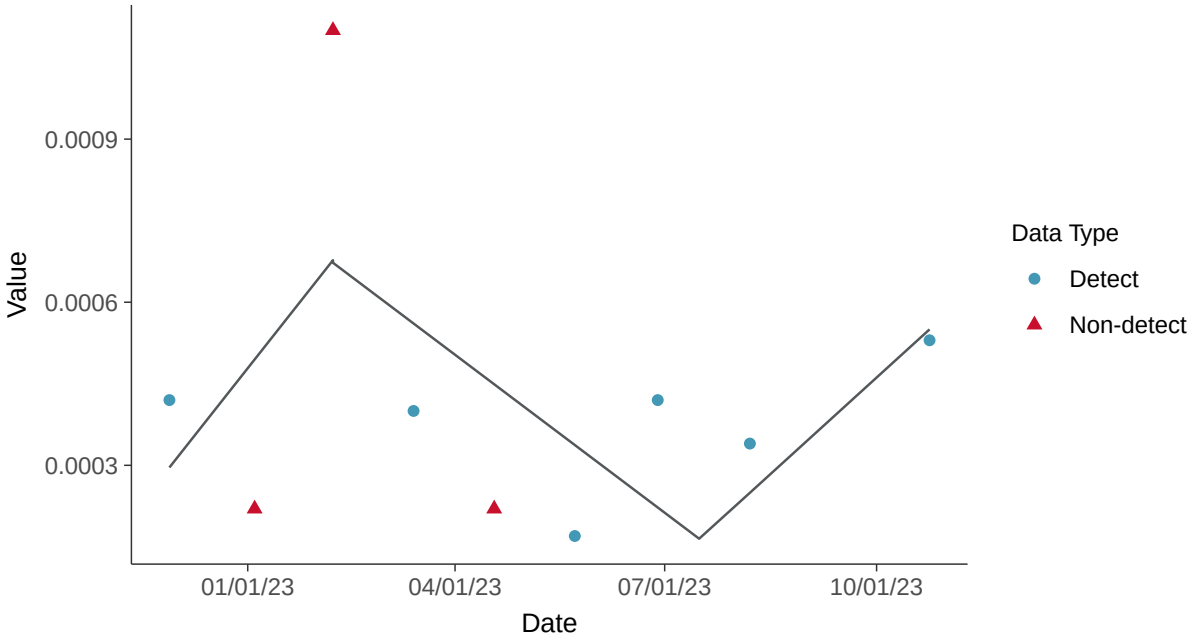
Trend Regression: Piecewise Linear-Linear

Selenium, MW-03 (mg/L)



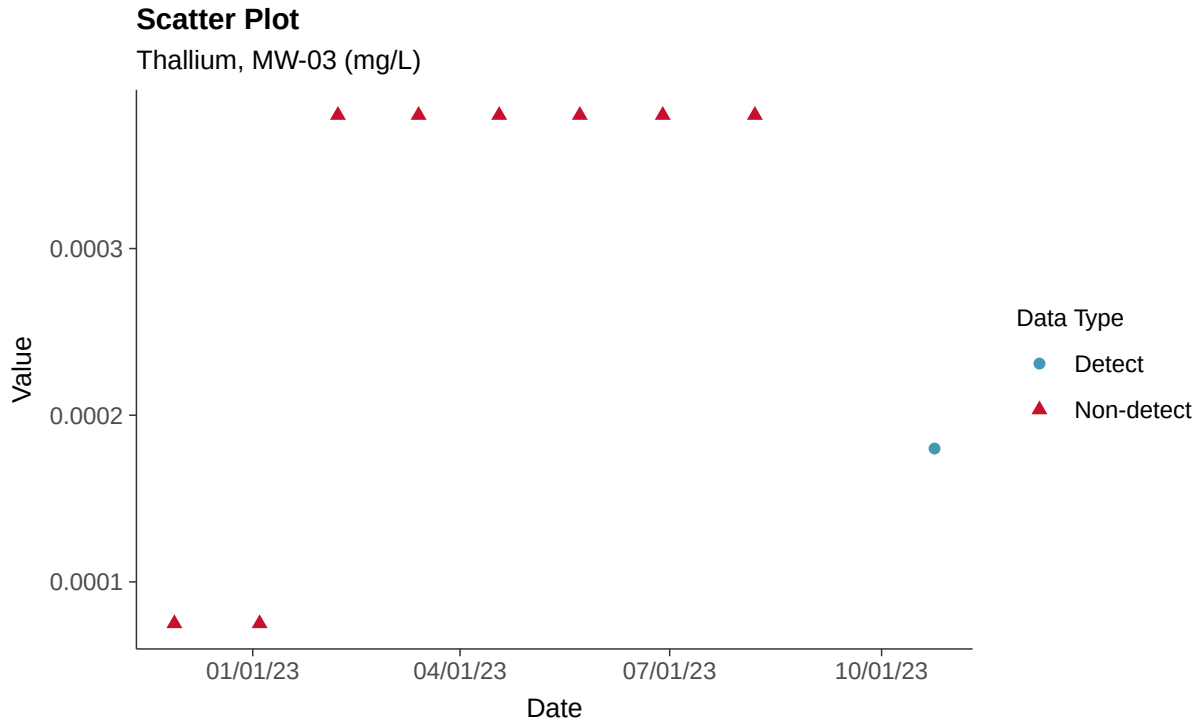
Trend Regression: Piecewise Linear-Linear-Linear

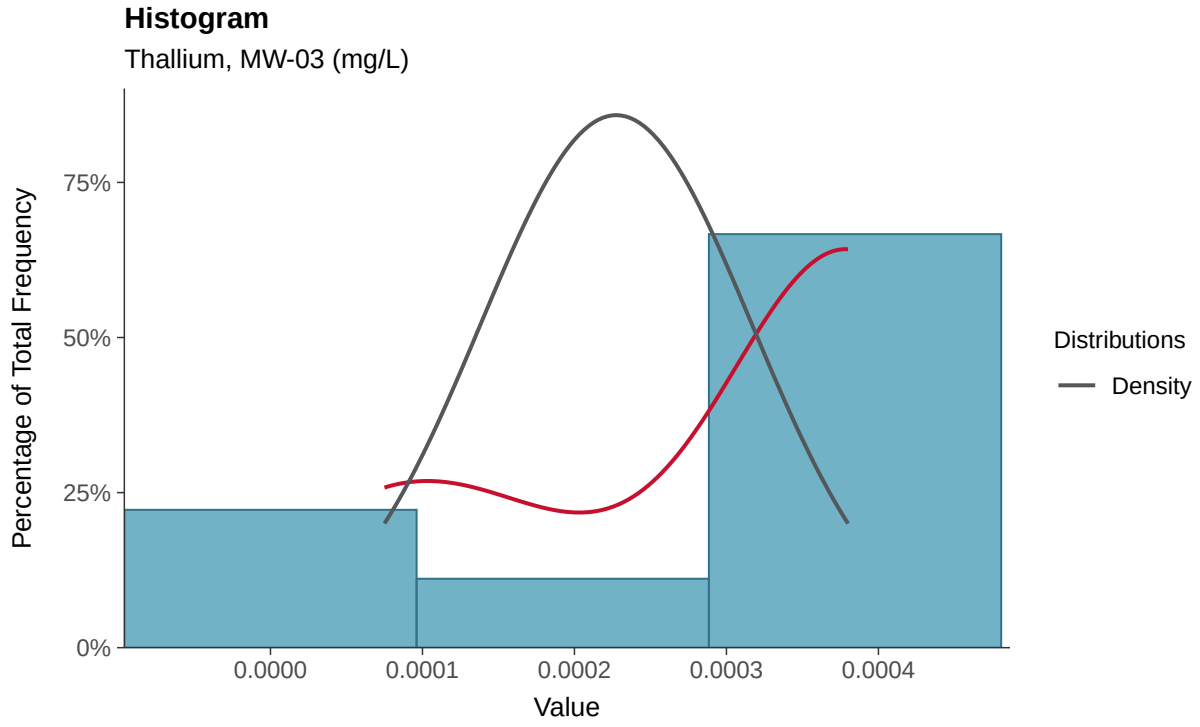
Selenium, MW-03 (mg/L)



Appendix IV: Thallium, MW-03

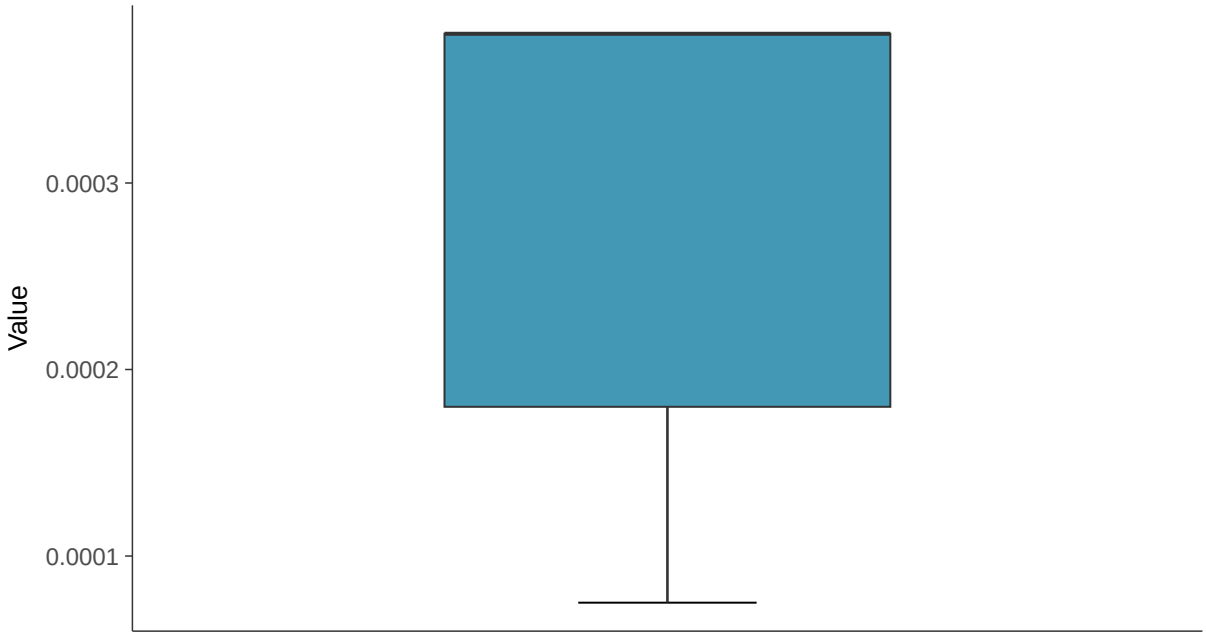
ID: 2_13_5_125





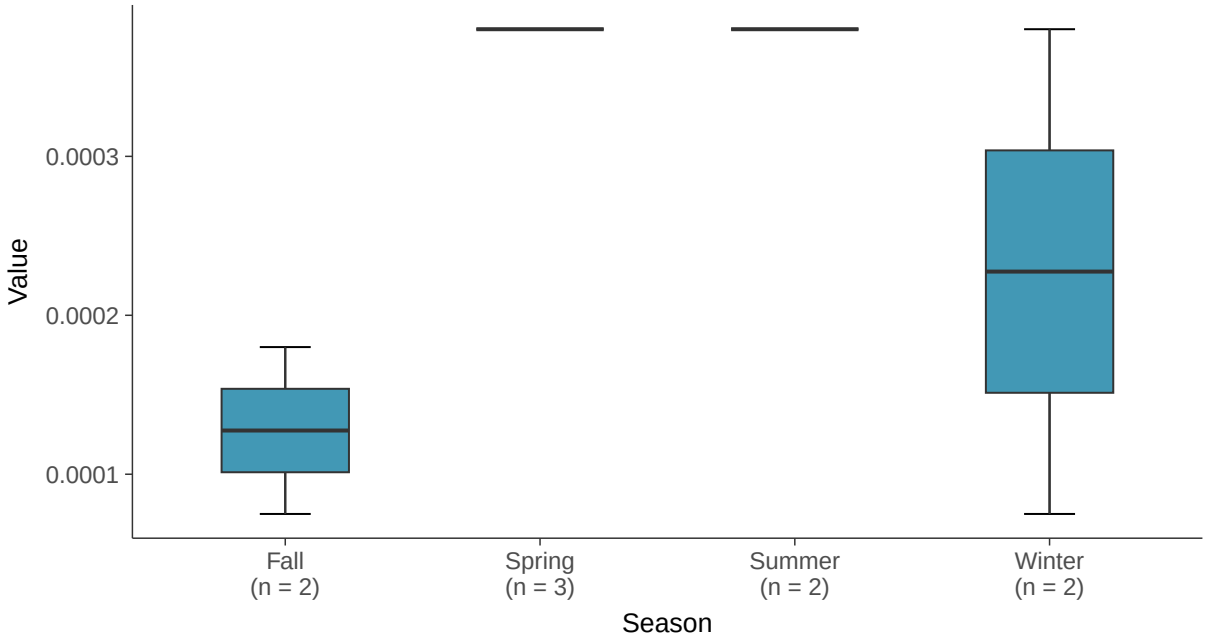
Boxplot

Thallium, MW-03 (mg/L)



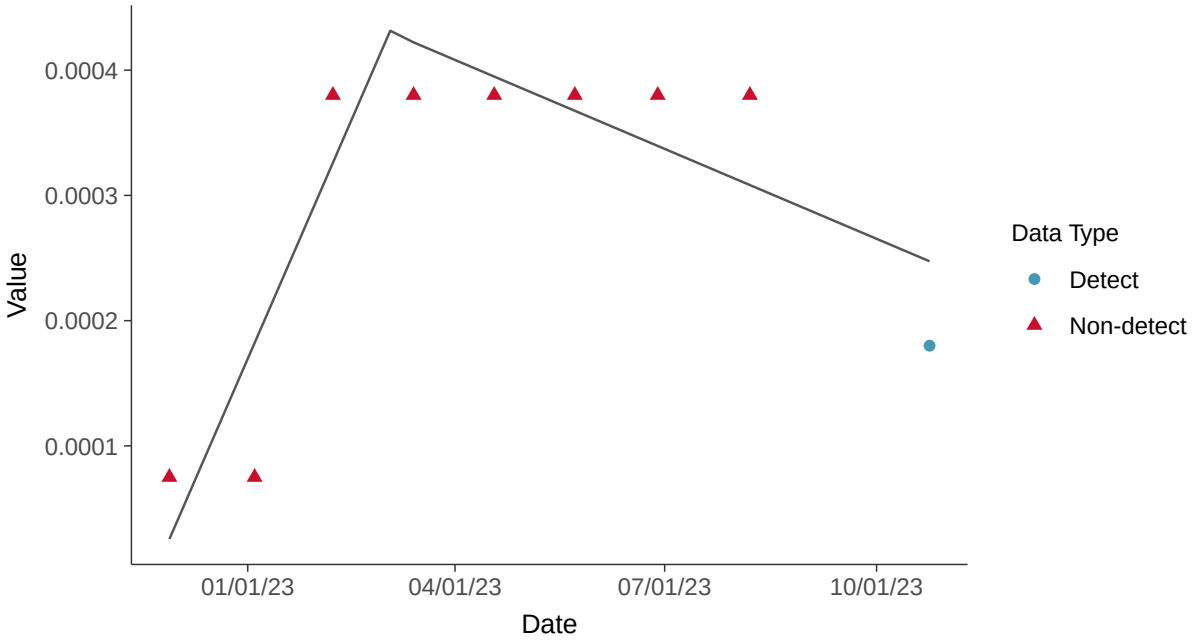
Boxplot by Season

Thallium, MW-03 (mg/L)



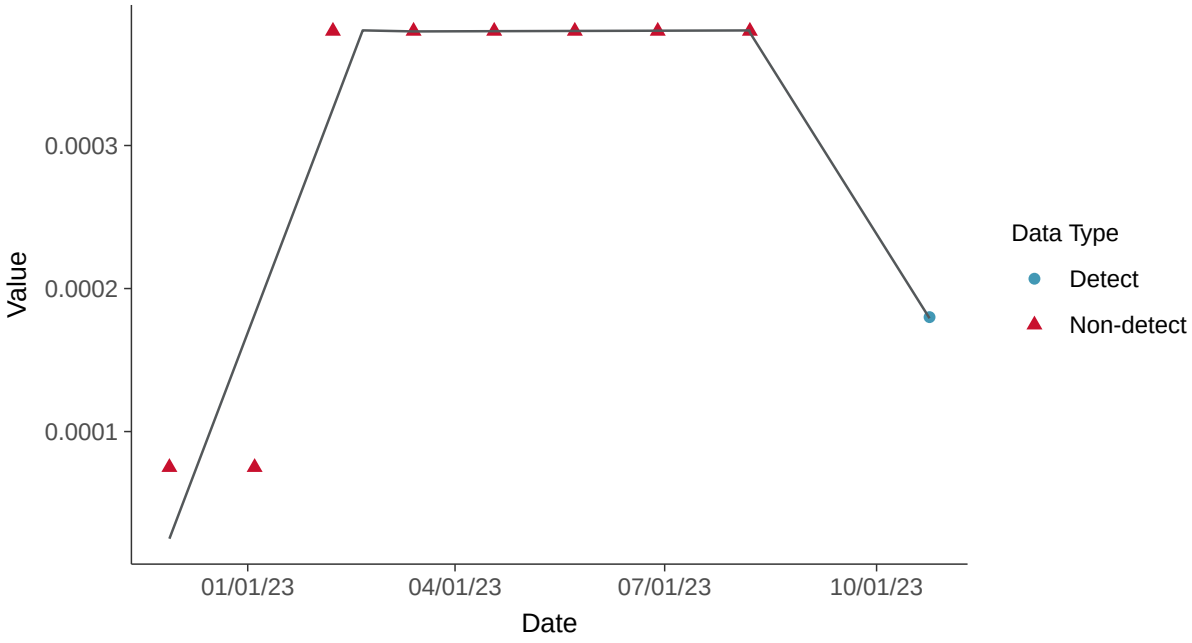
Trend Regression: Piecewise Linear-Linear

Thallium, MW-03 (mg/L)



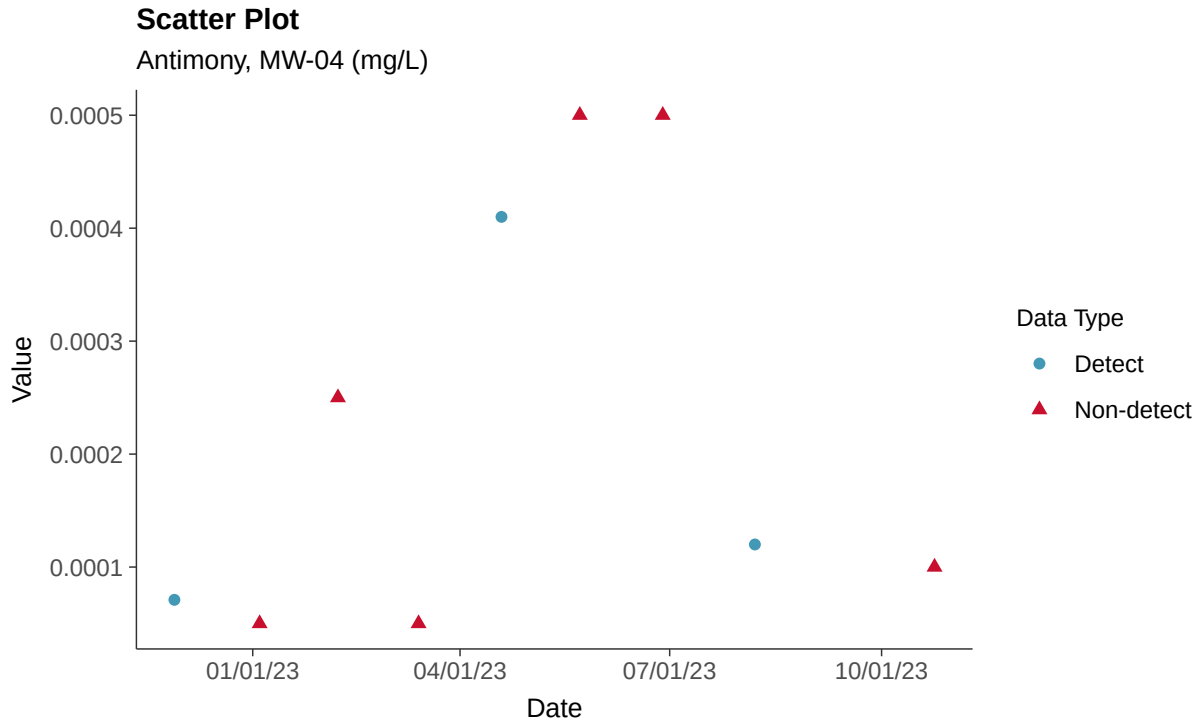
Trend Regression: Piecewise Linear-Linear-Linear

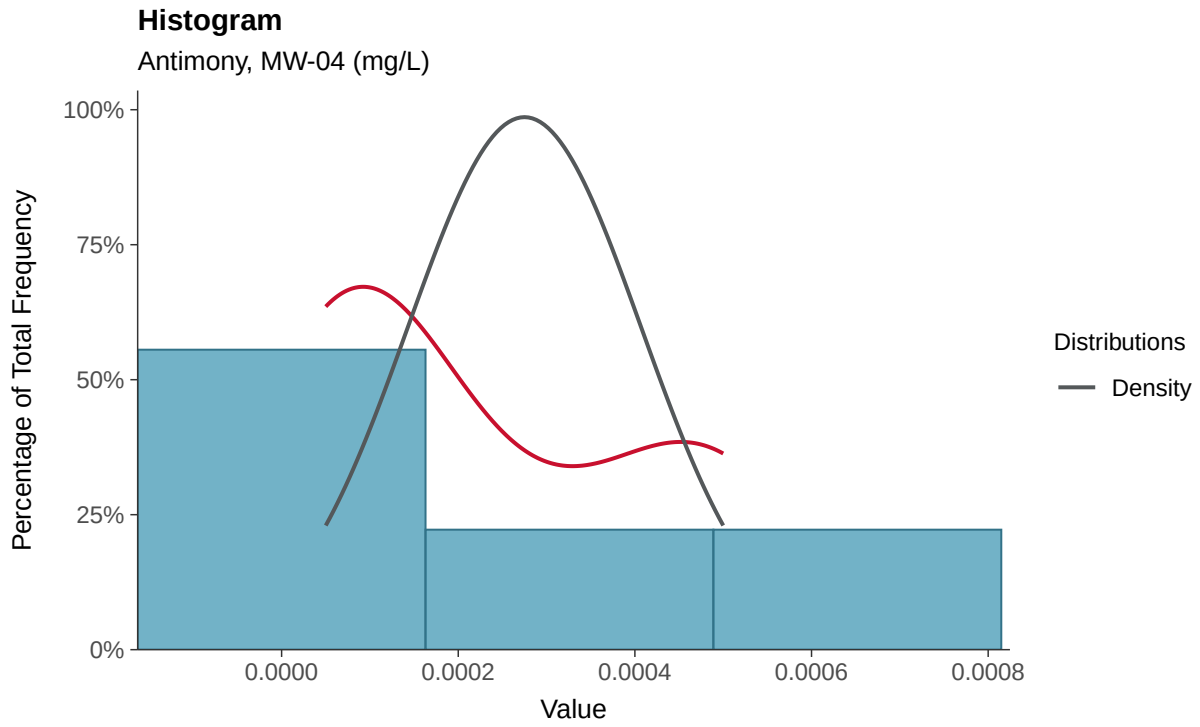
Thallium, MW-03 (mg/L)



Appendix IV: Antimony, MW-04

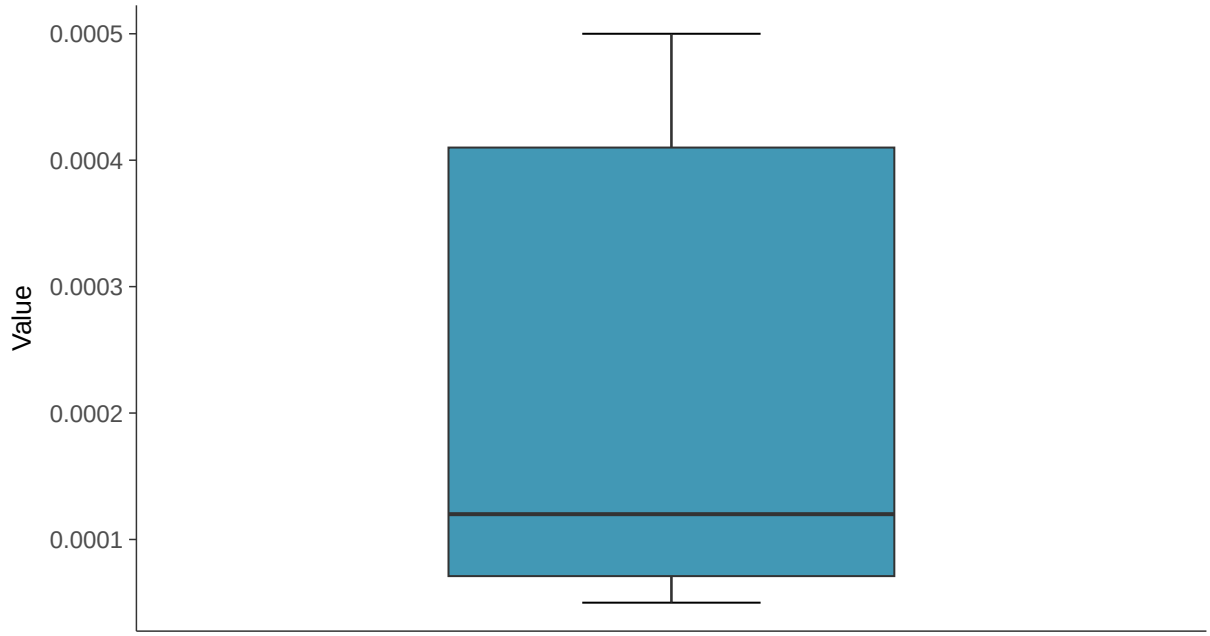
ID: 2_14_5_101





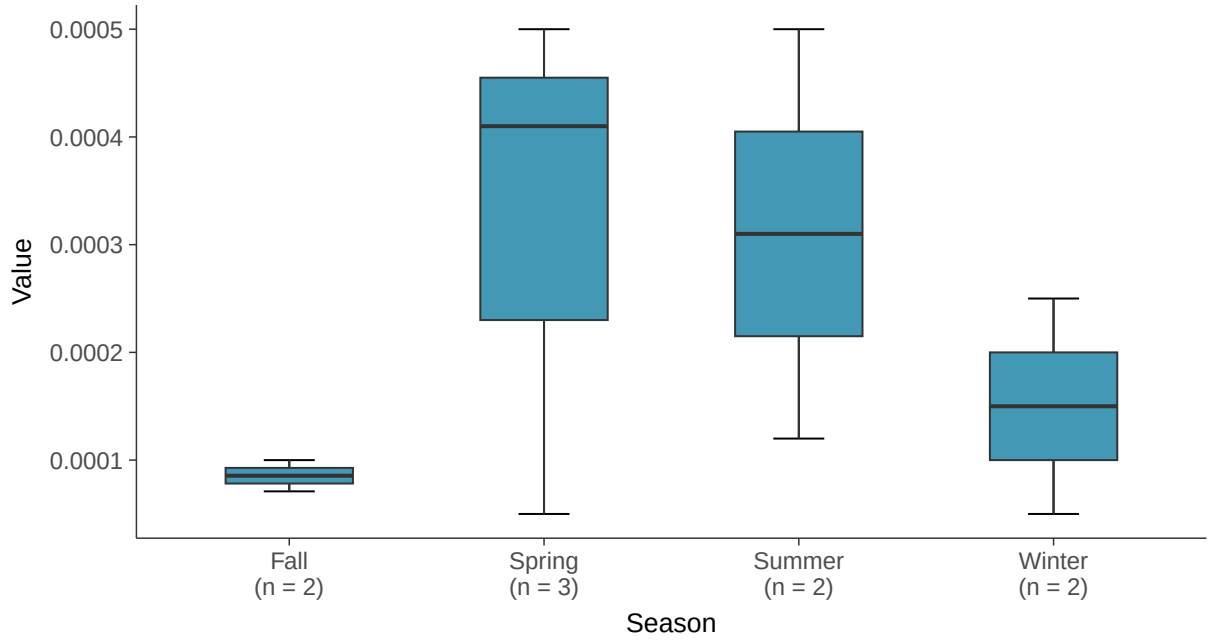
Boxplot

Antimony, MW-04 (mg/L)



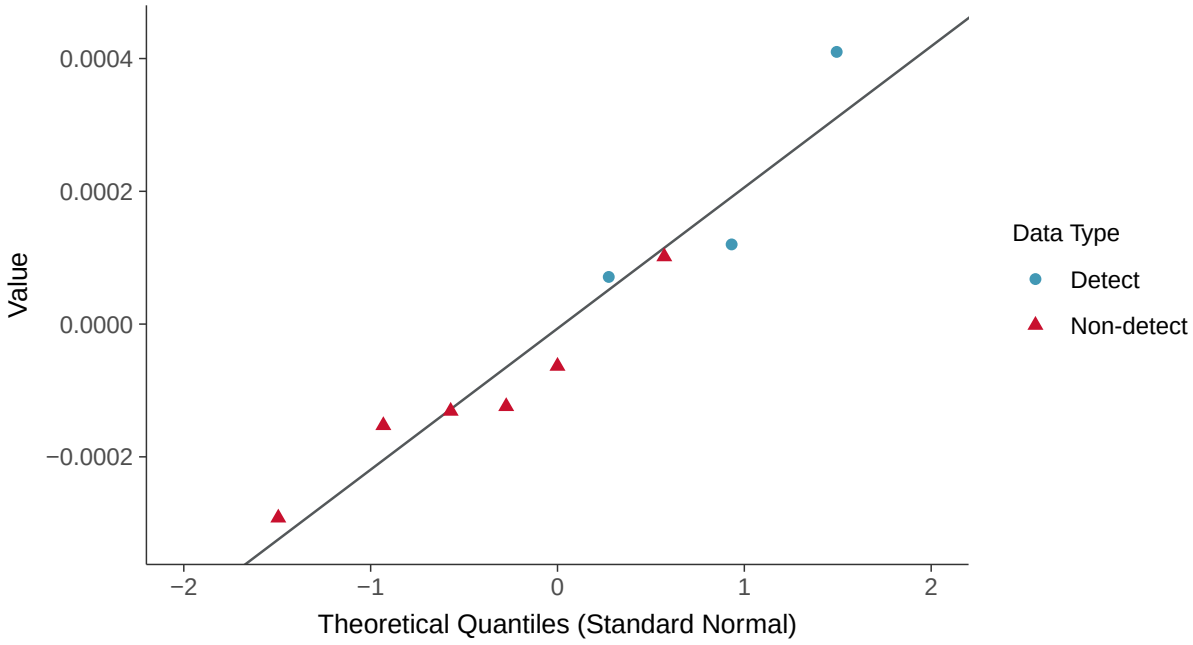
Boxplot by Season

Antimony, MW-04 (mg/L)



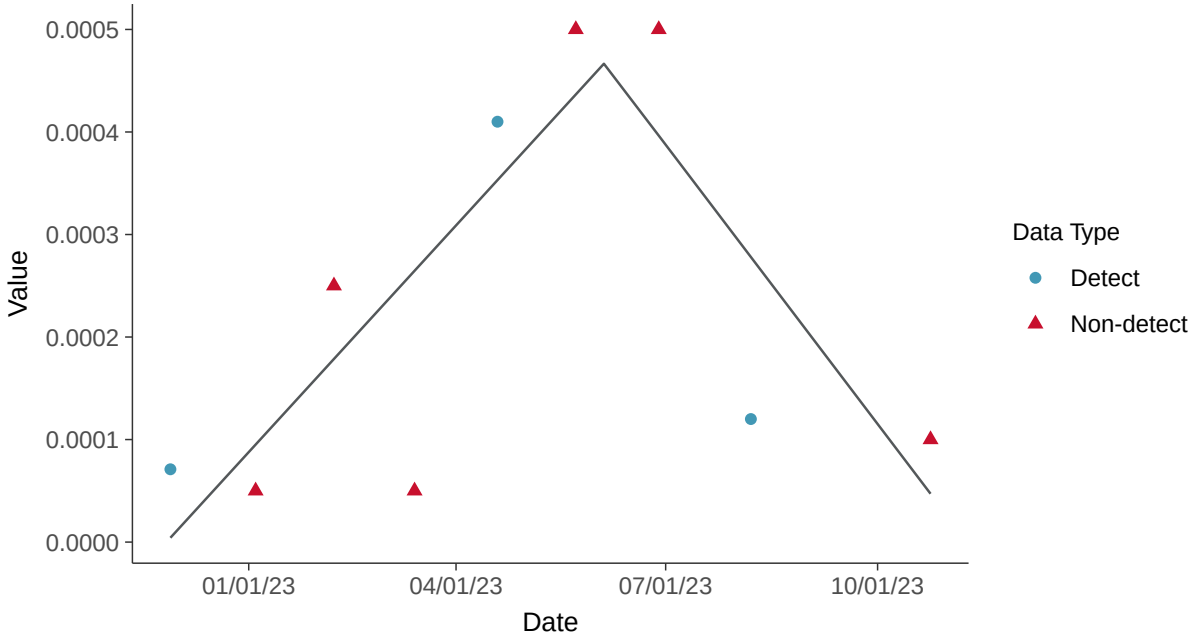
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-04 (mg/L)



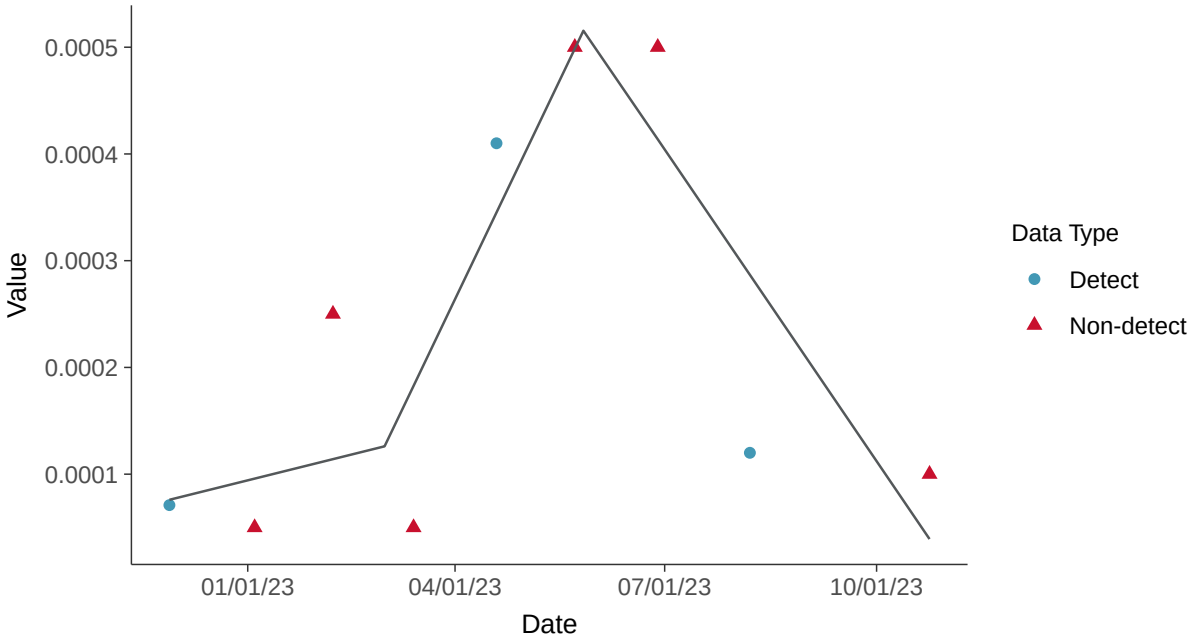
Trend Regression: Piecewise Linear-Linear

Antimony, MW-04 (mg/L)



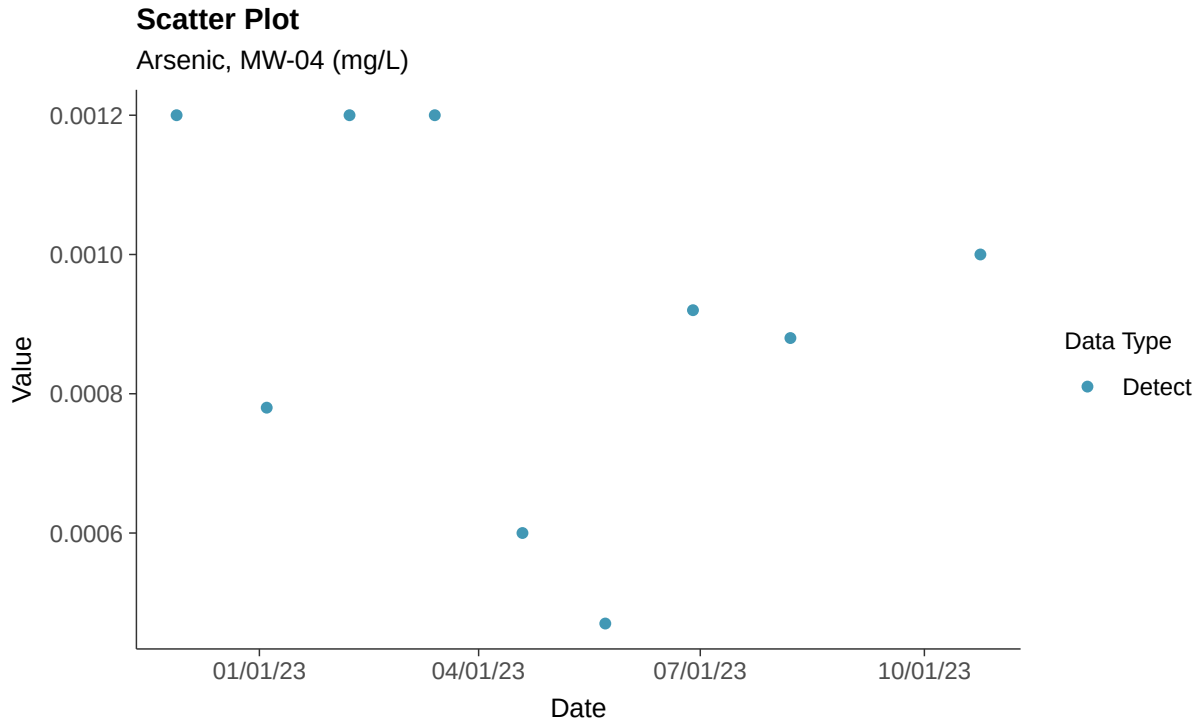
Trend Regression: Piecewise Linear-Linear-Linear

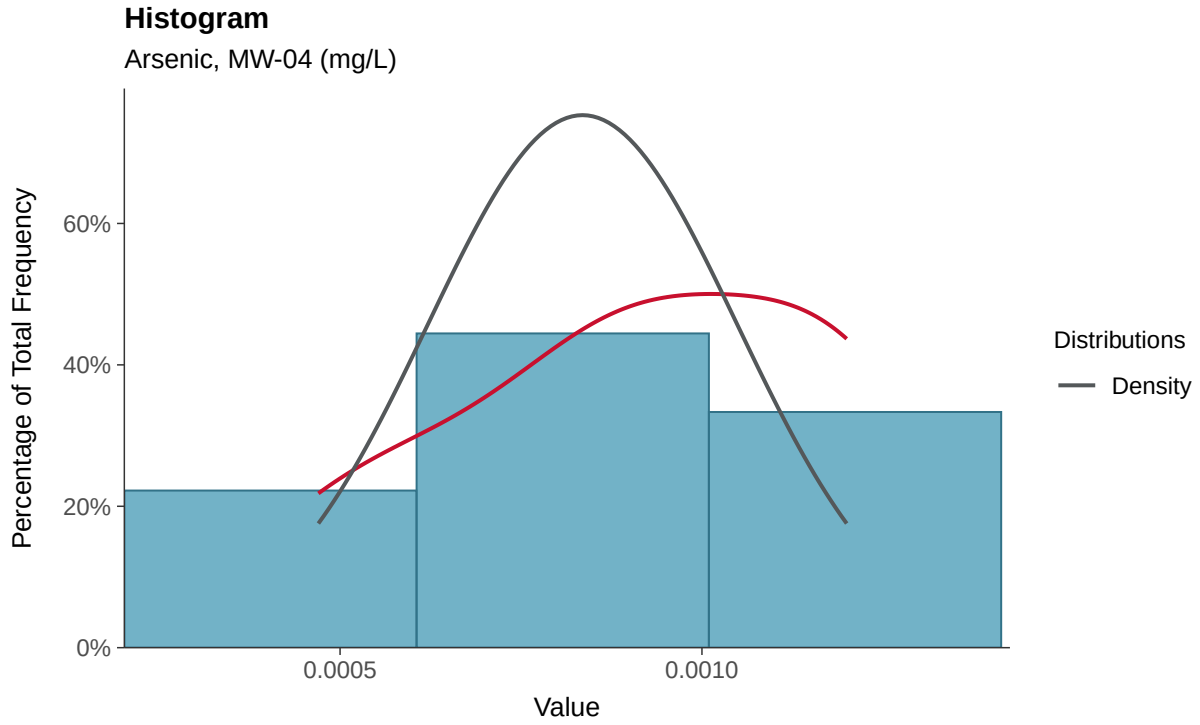
Antimony, MW-04 (mg/L)



Appendix IV: Arsenic, MW-04

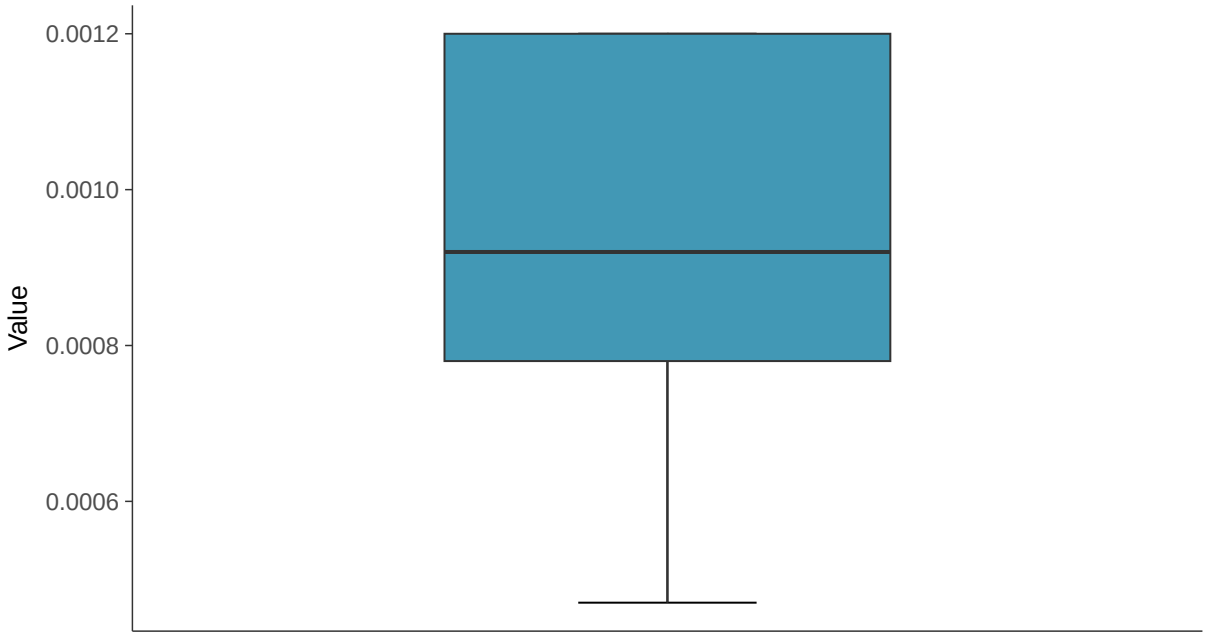
ID: 2_14_5_102





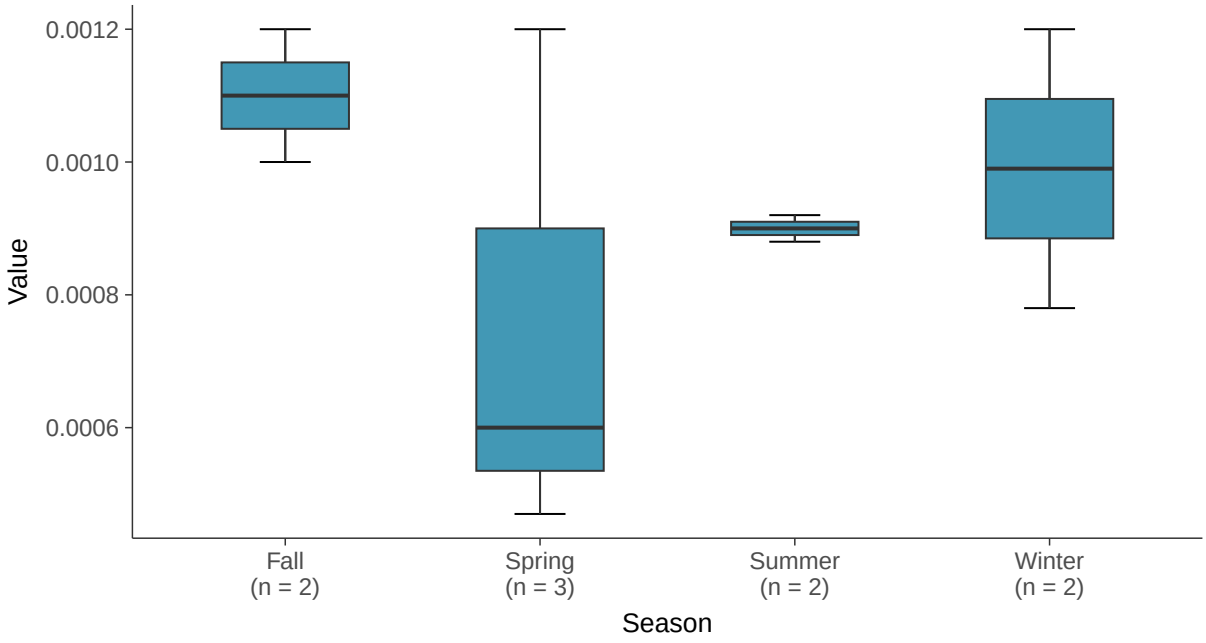
Boxplot

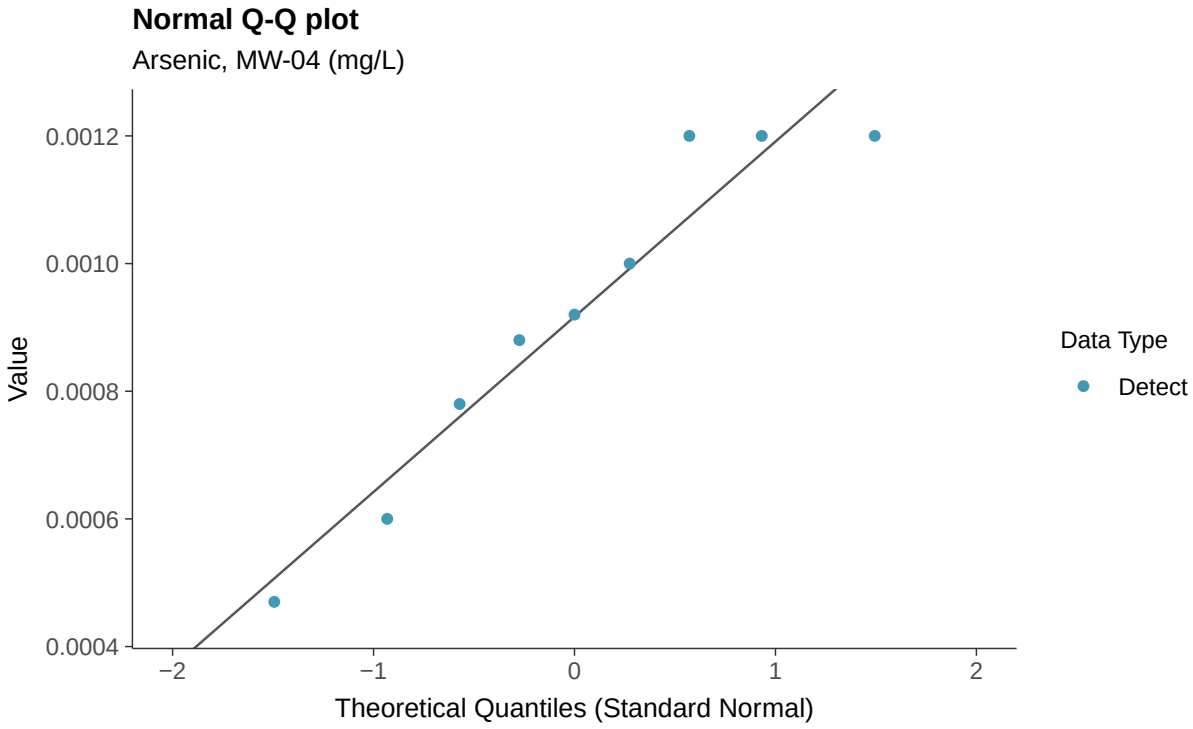
Arsenic, MW-04 (mg/L)

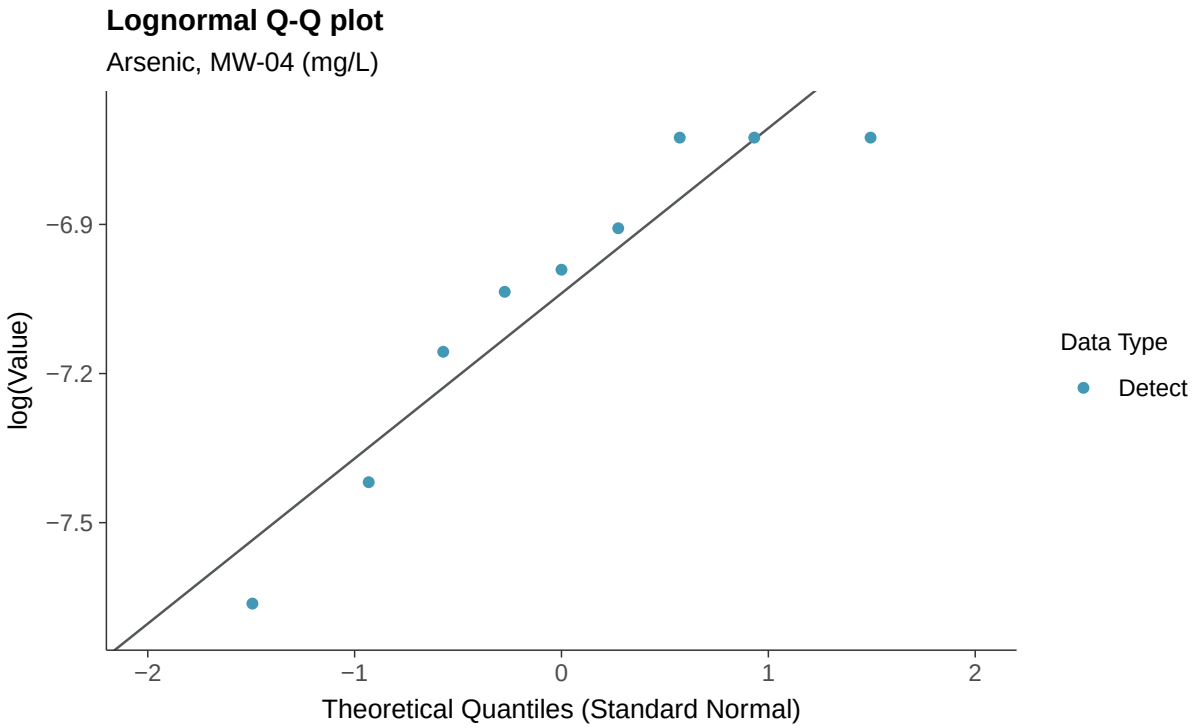


Boxplot by Season

Arsenic, MW-04 (mg/L)

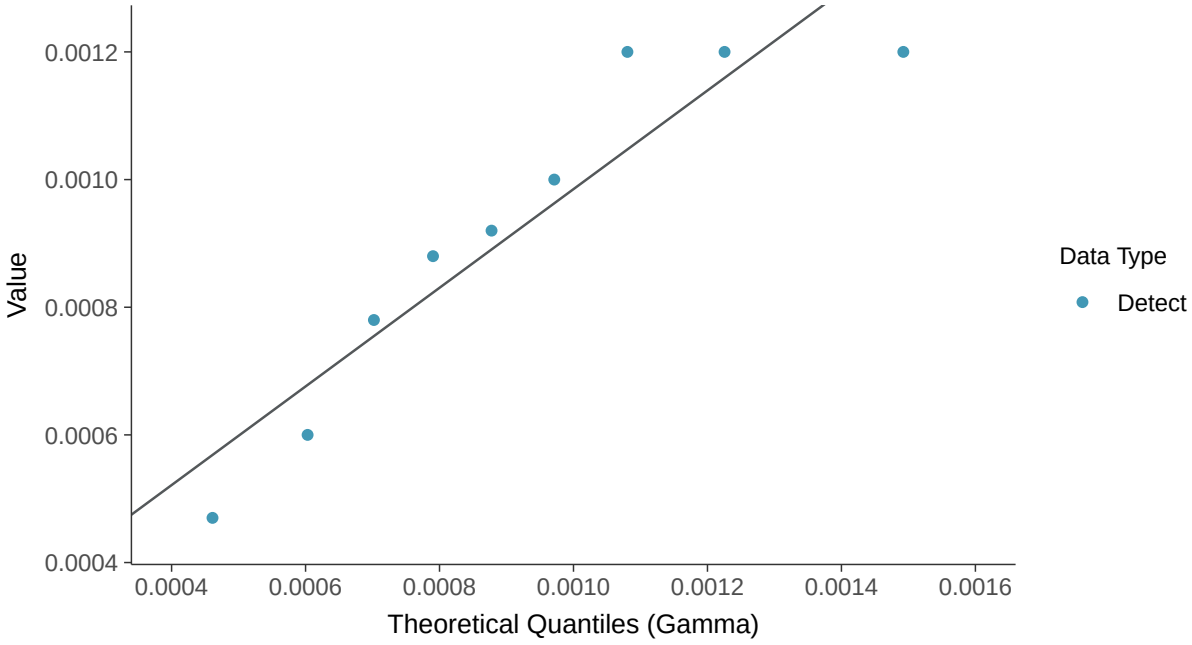



Normal Q-Q plot
Arsenic, MW-04 (mg/L)
Value
0.0012
0.0010
0.0008
0.0006
0.0004
−2
−1
0
1
2
Theoretical Quantiles (Standard Normal)
Data Type
Detect


Lognormal Q-Q plot
Arsenic, MW-04 (mg/L)
log(Value)
−6.9
−7.2
−7.5
−2
−1
0
1
2
Theoretical Quantiles (Standard Normal)
Data Type
Detect

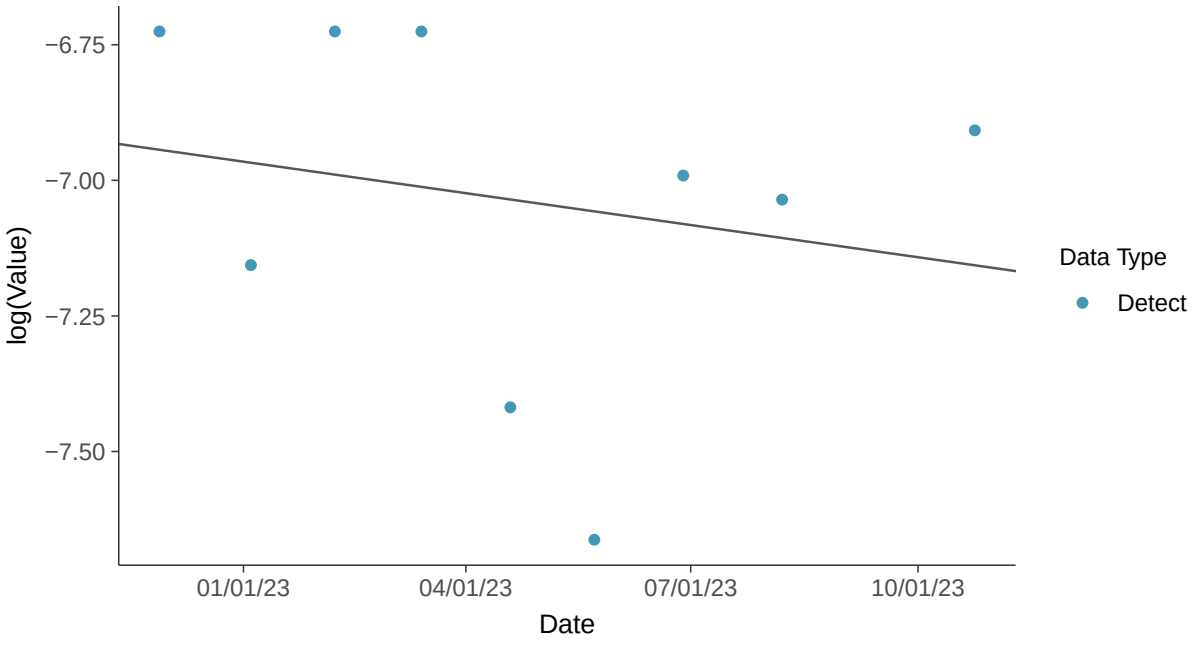
Gamma Q-Q plot

Arsenic, MW-04 (mg/L)



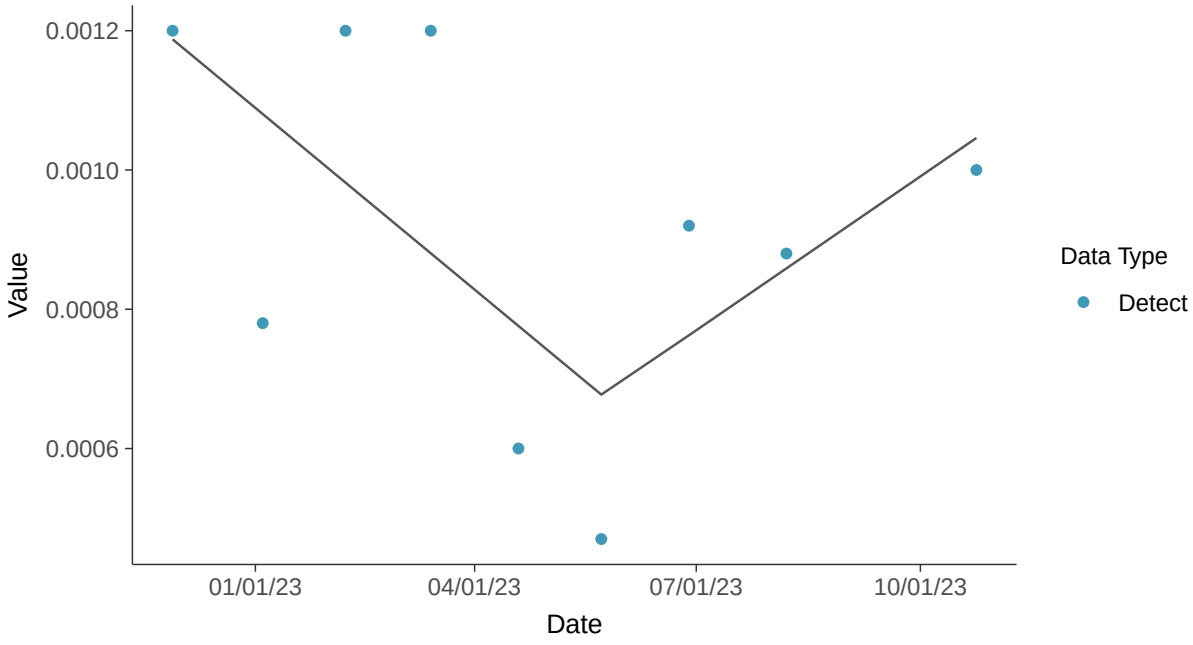
Trend Regression: Lognormal MLE

Arsenic, MW-04 (mg/L)



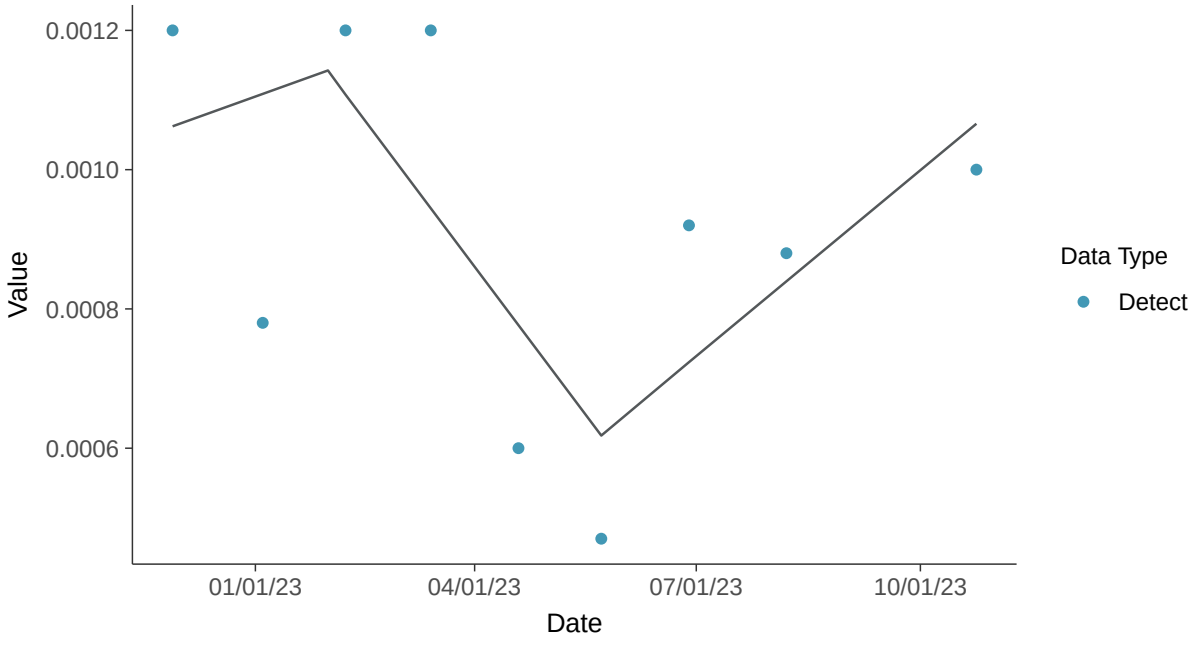
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-04 (mg/L)



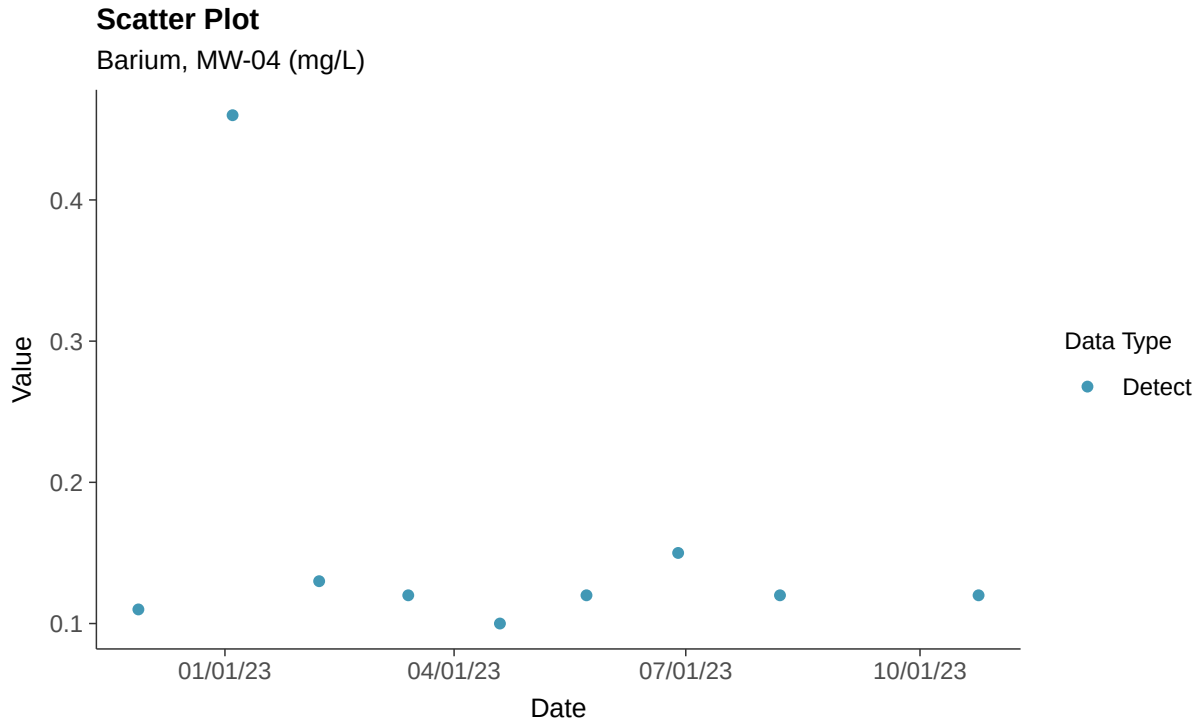
Trend Regression: Piecewise Linear-Linear-Linear

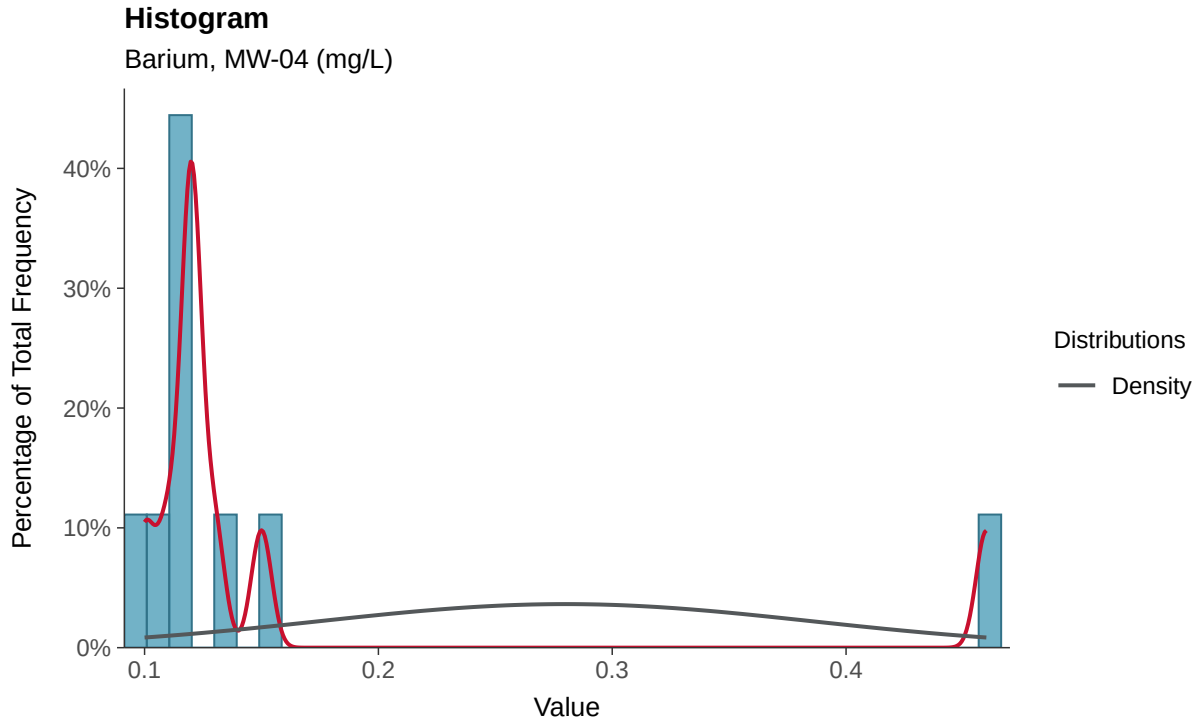
Arsenic, MW-04 (mg/L)



Appendix IV: Barium, MW-04

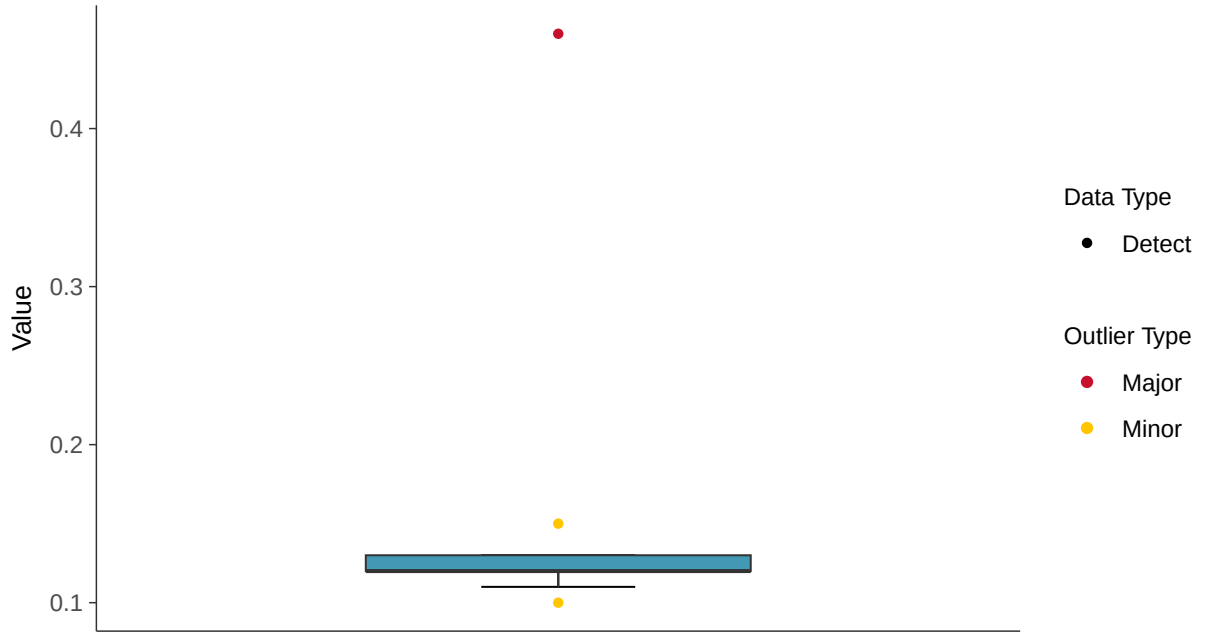
ID: 2_14_5_103





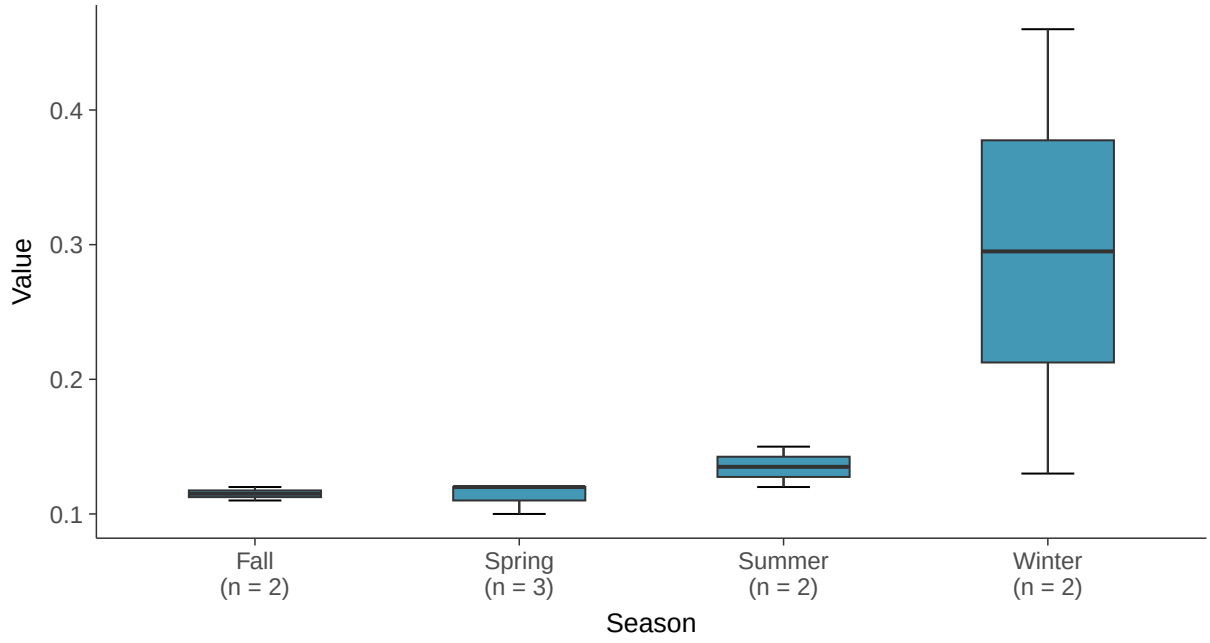
Boxplot

Barium, MW-04 (mg/L)



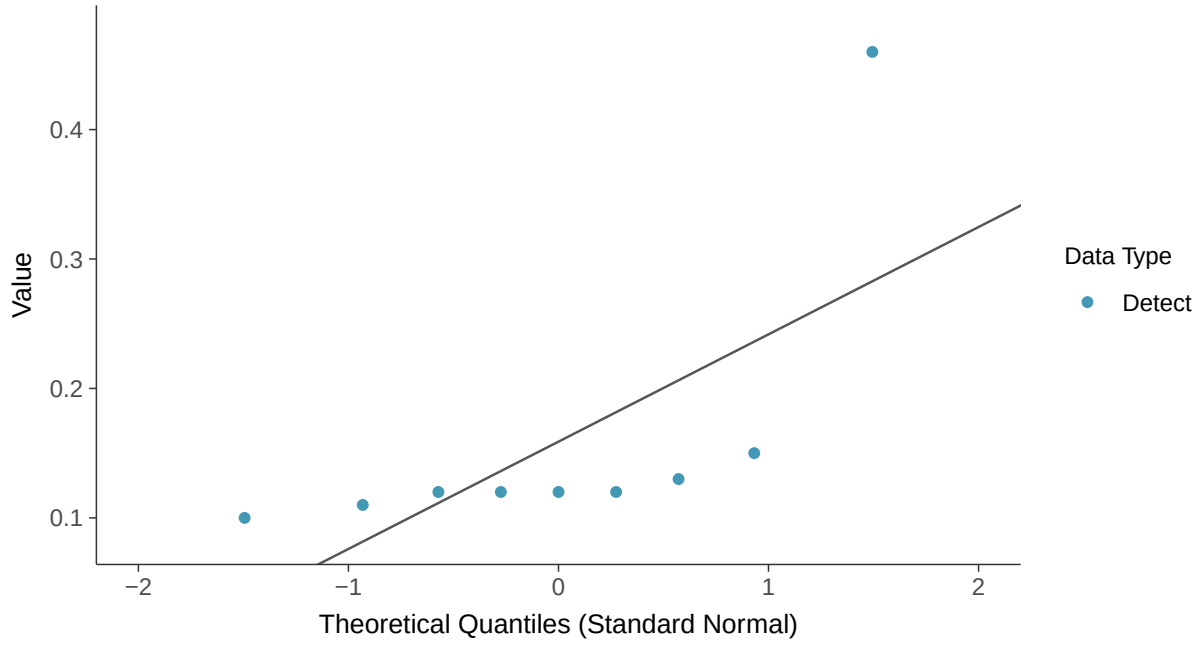
Boxplot by Season

Barium, MW-04 (mg/L)



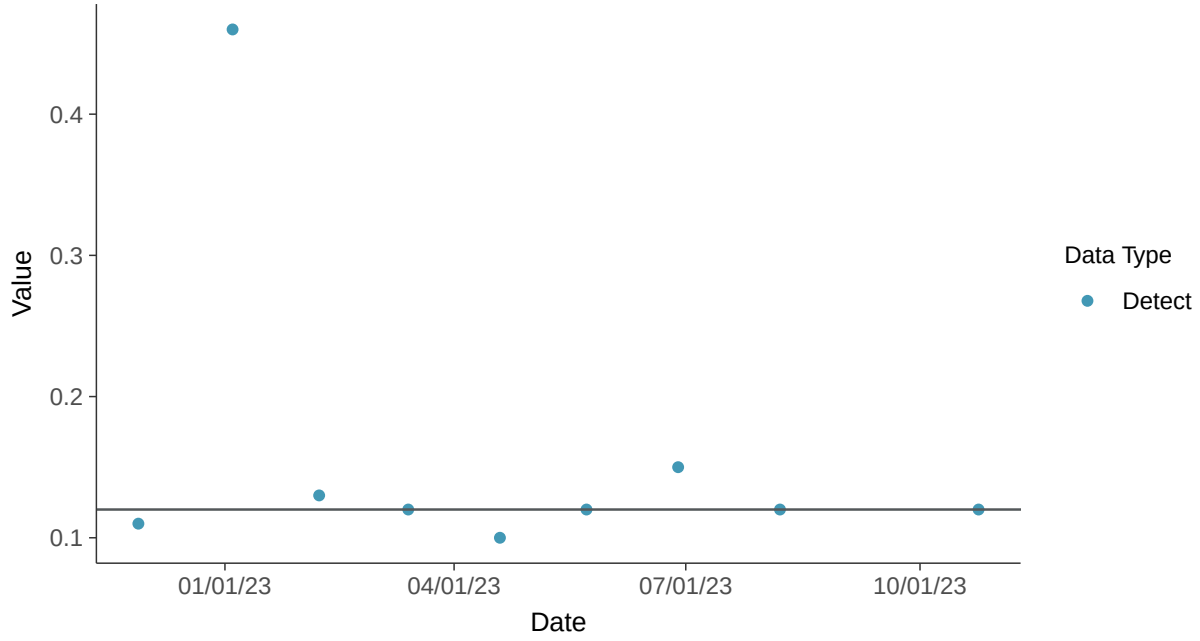
Normal Q-Q plot

Barium, MW-04 (mg/L)



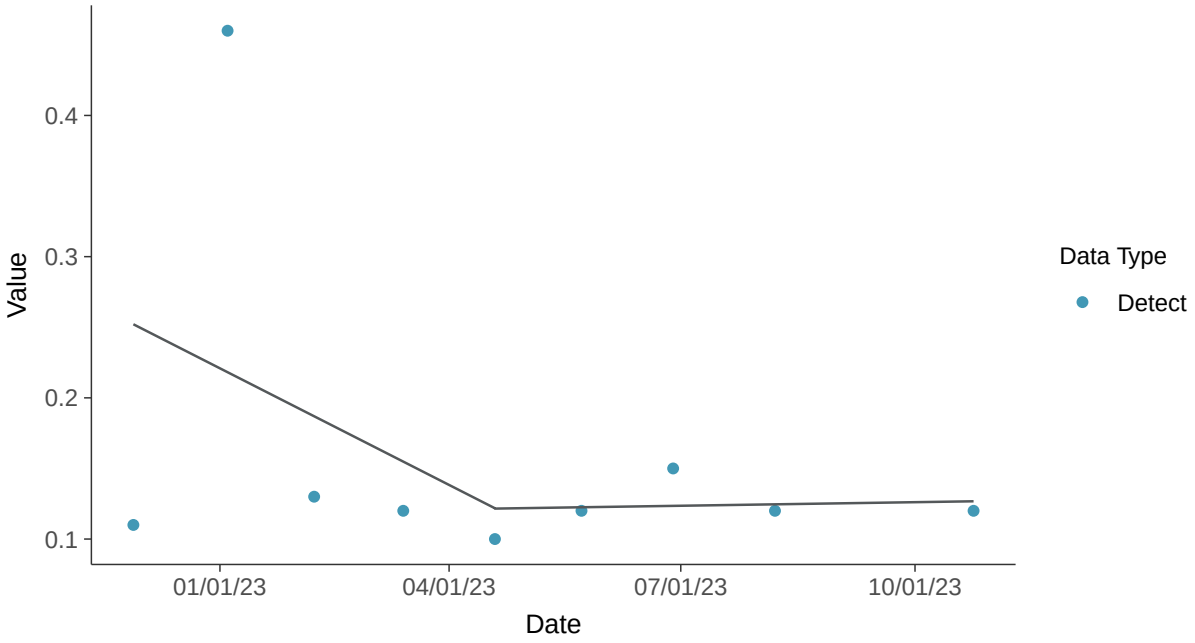
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-04 (mg/L)



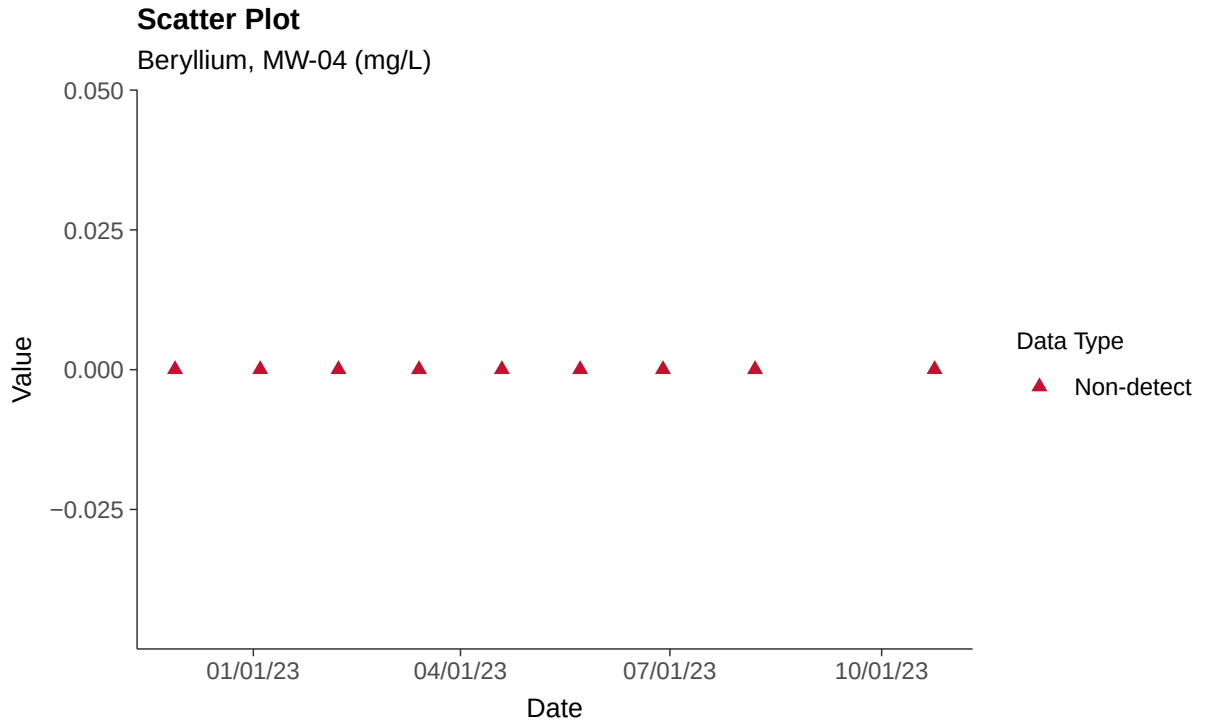
Trend Regression: Piecewise Linear-Linear

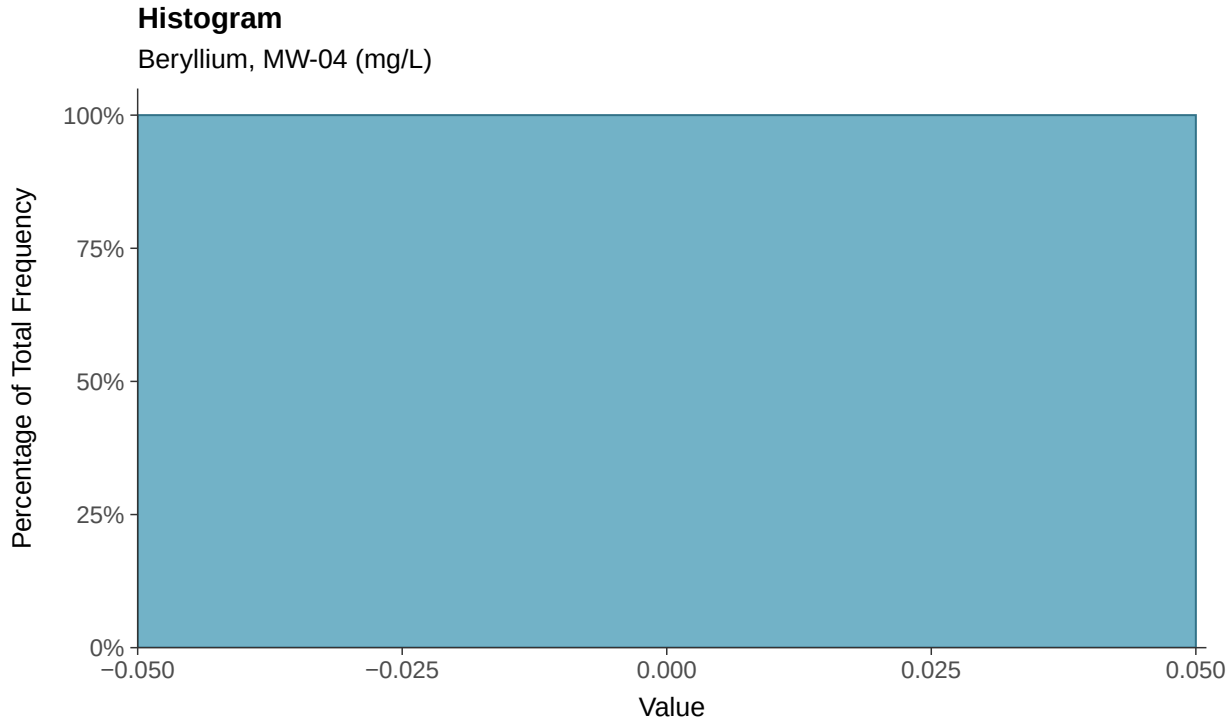
Barium, MW-04 (mg/L)



Appendix IV: Beryllium, MW-04

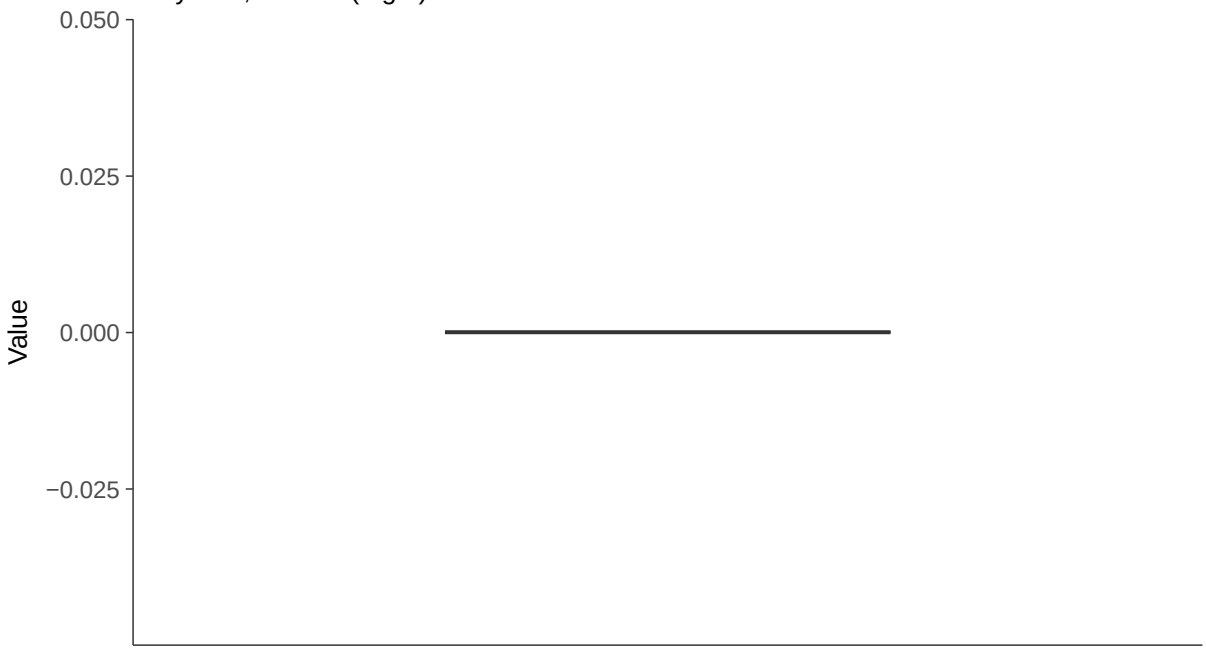
ID: 2_14_5_104





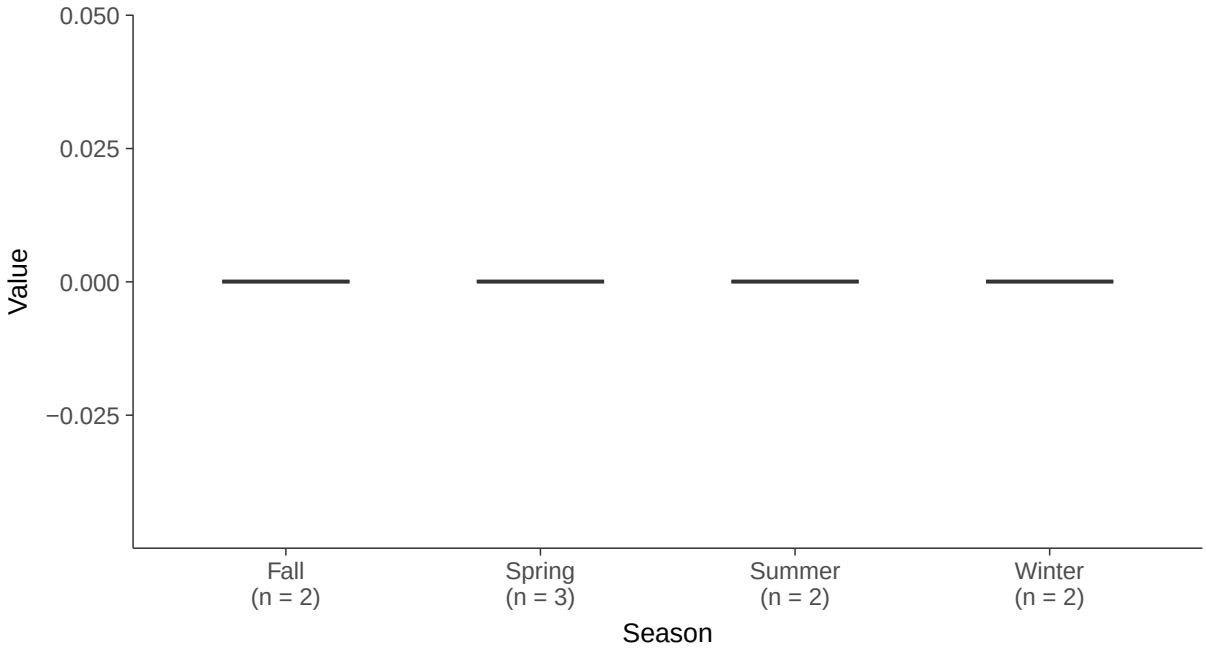
Boxplot

Beryllium, MW-04 (mg/L)



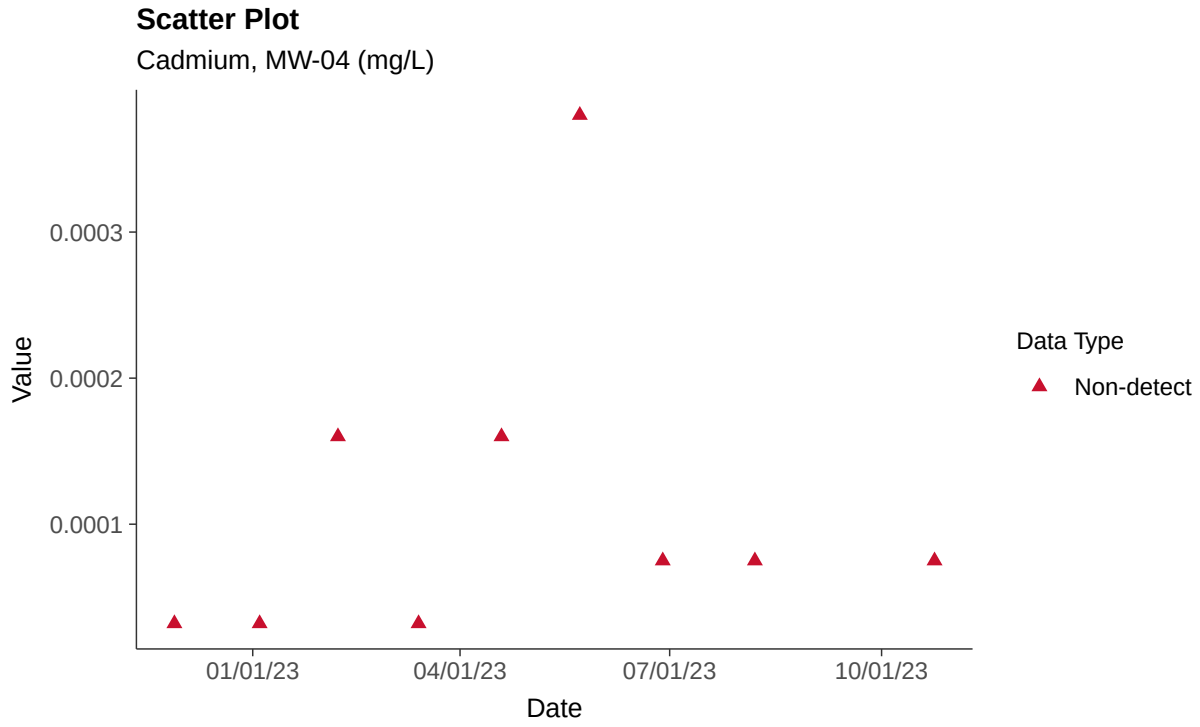
Boxplot by Season

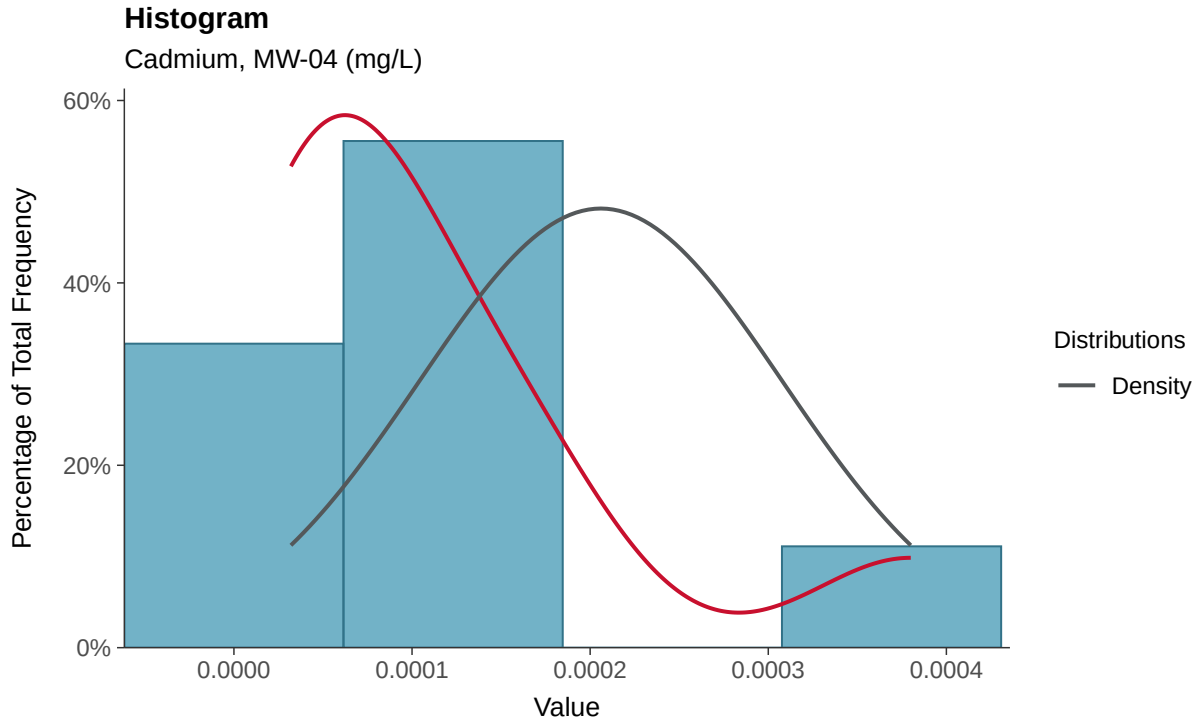
Beryllium, MW-04 (mg/L)



Appendix IV: Cadmium, MW-04

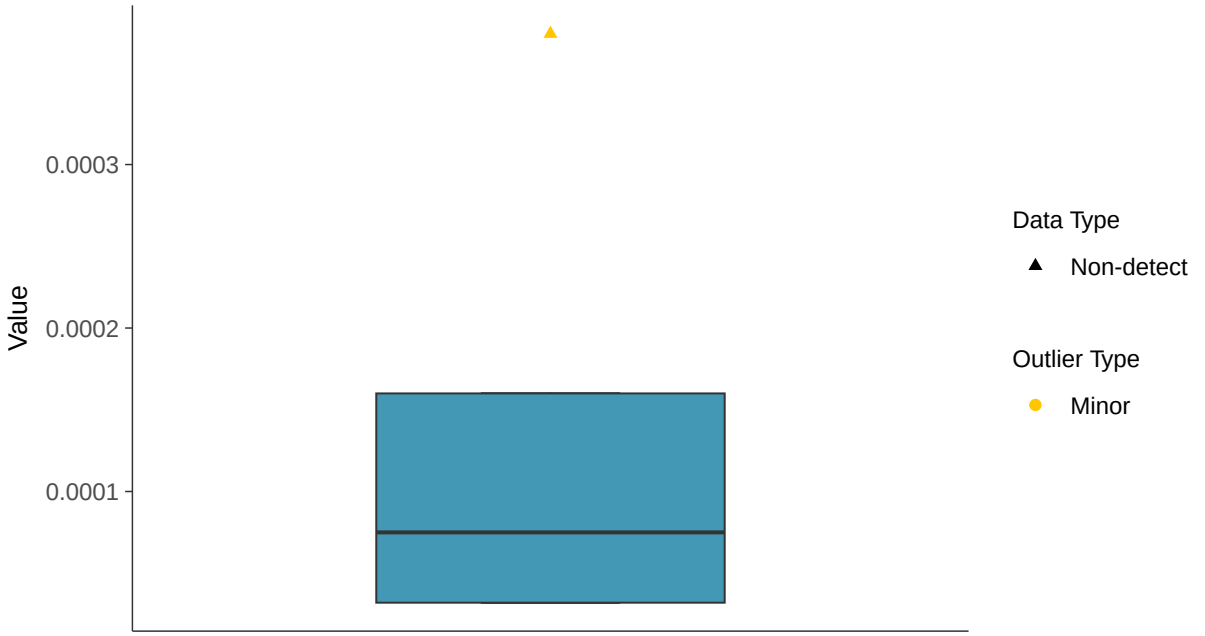
ID: 2_14_5_106





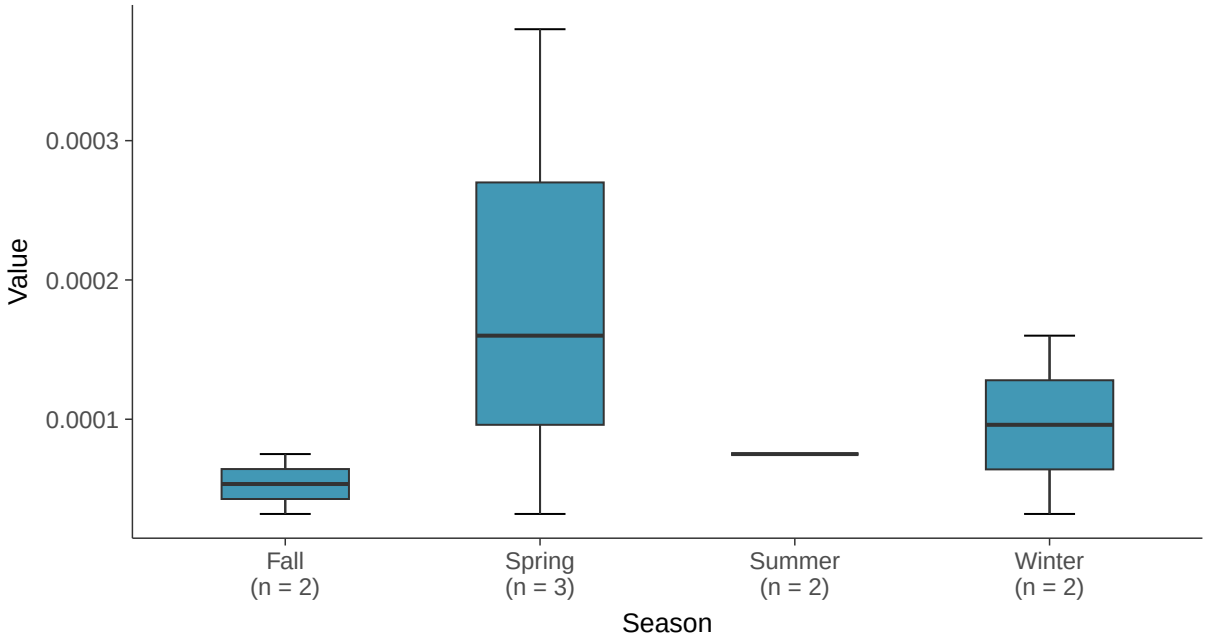
Boxplot

Cadmium, MW-04 (mg/L)



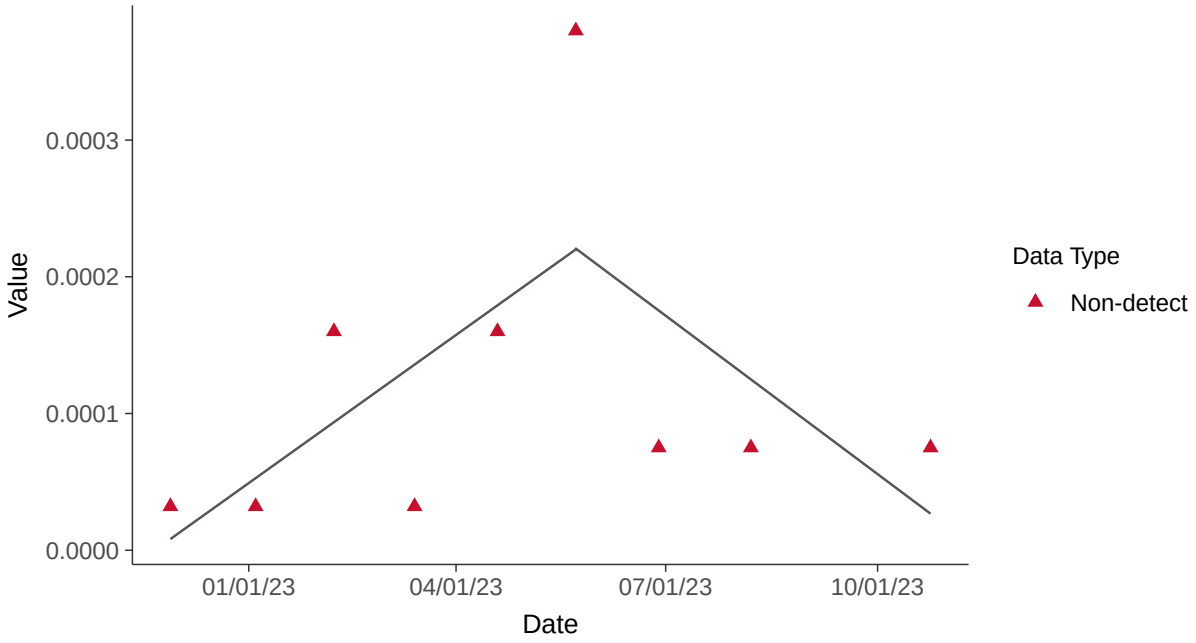
Boxplot by Season

Cadmium, MW-04 (mg/L)



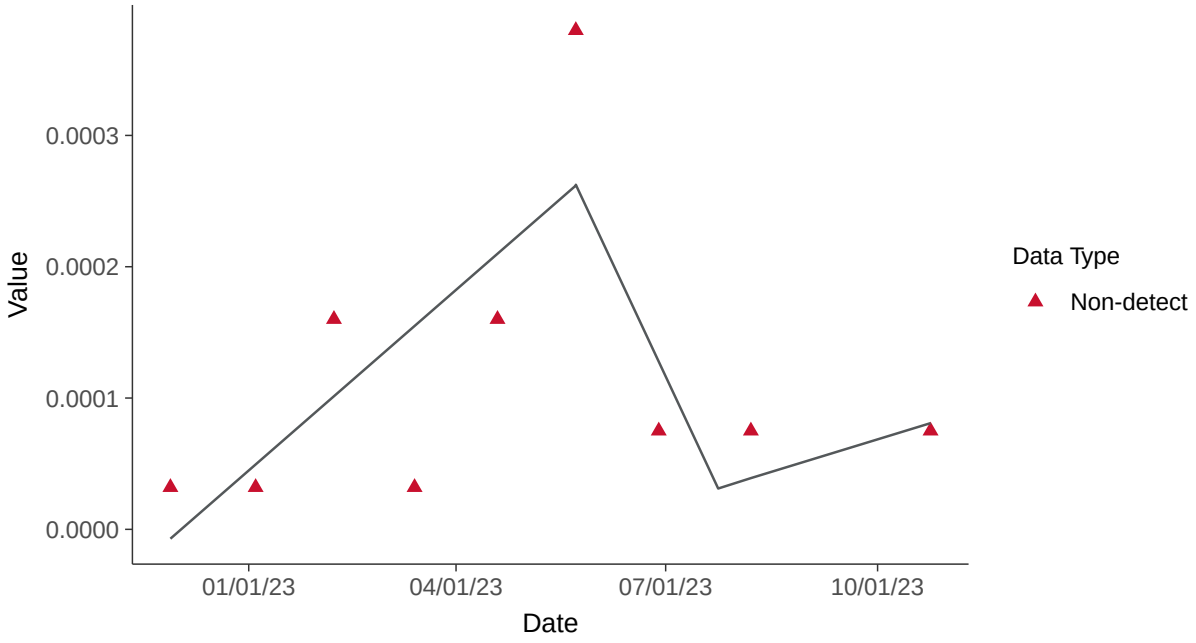
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-04 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-04 (mg/L)

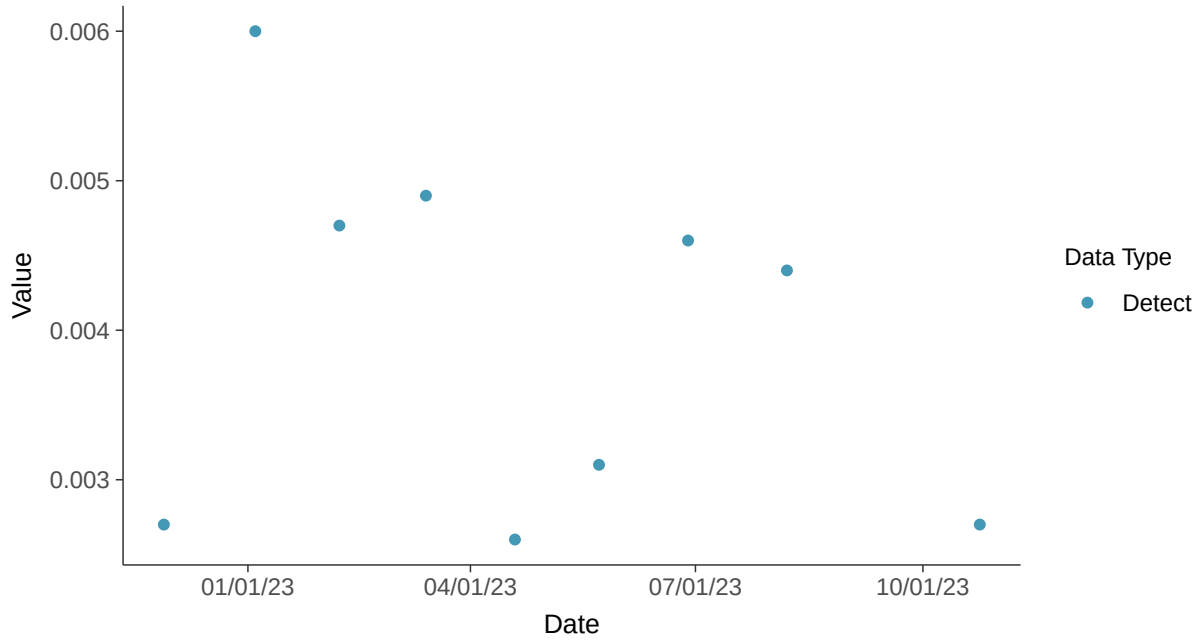


Appendix IV: Chromium, Total, MW-04

ID: 2_14_5_109

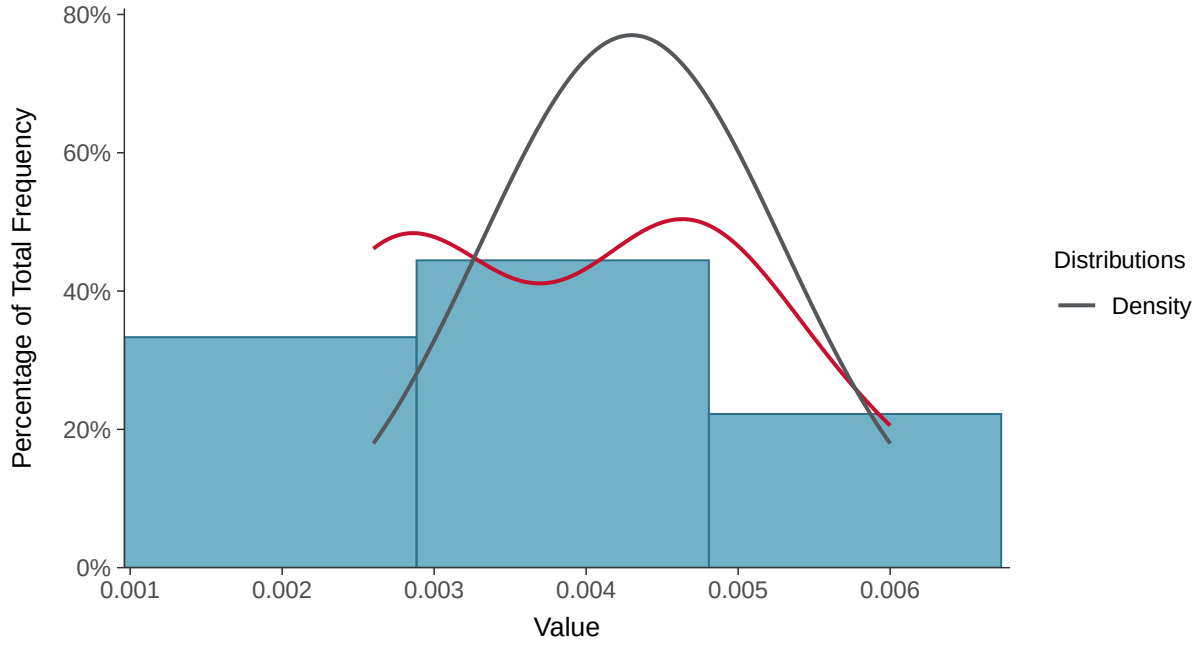
Scatter Plot

Chromium, Total, MW-04 (mg/L)



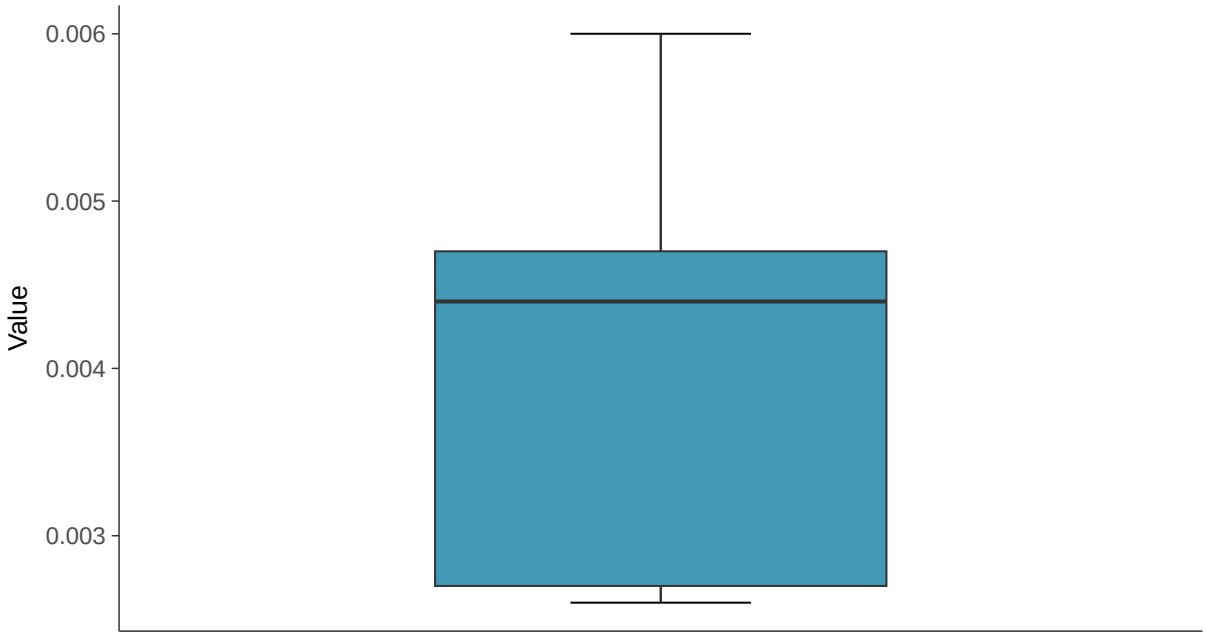
Histogram

Chromium, Total, MW-04 (mg/L)



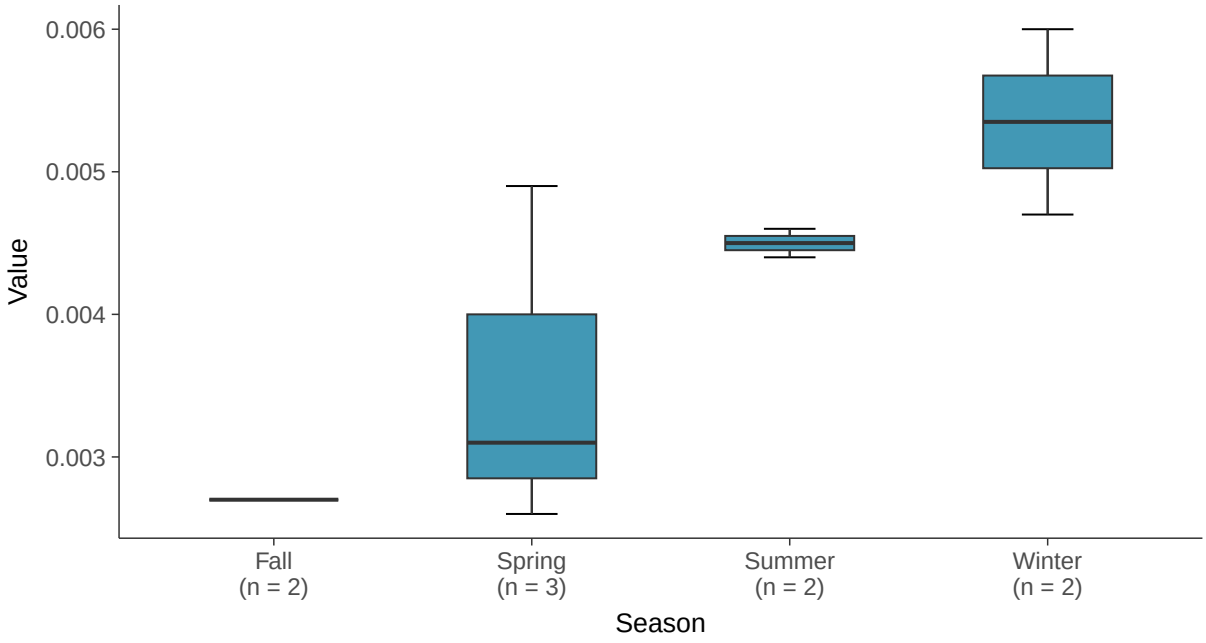
Boxplot

Chromium, Total, MW-04 (mg/L)



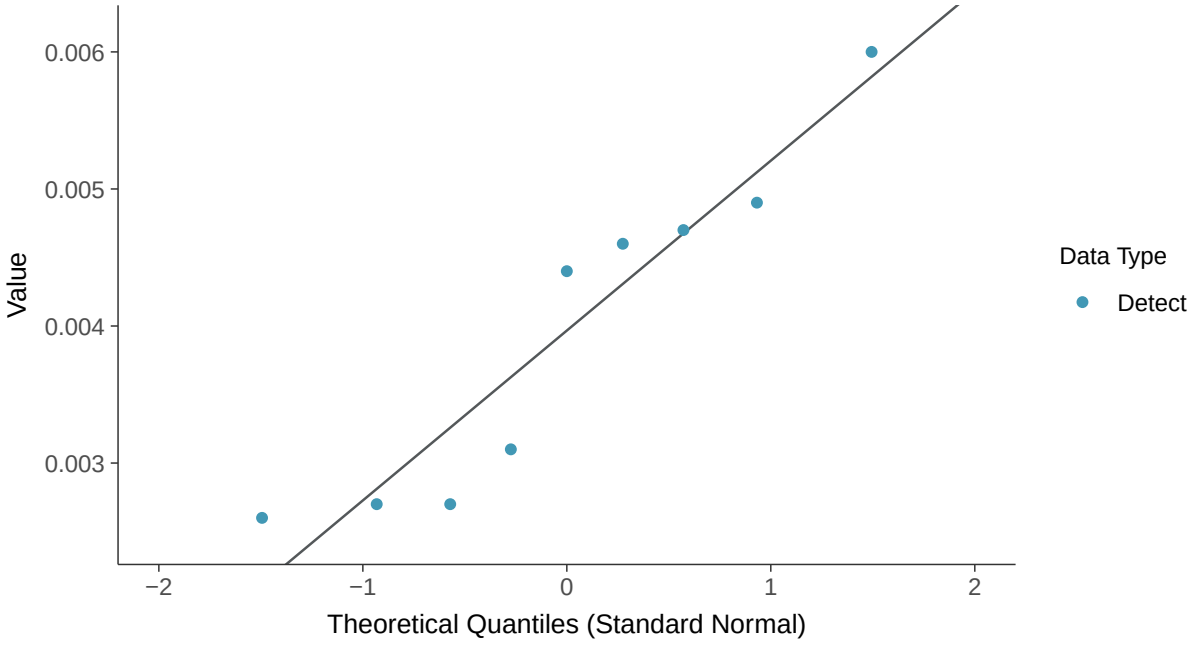
Boxplot by Season

Chromium, Total, MW-04 (mg/L)



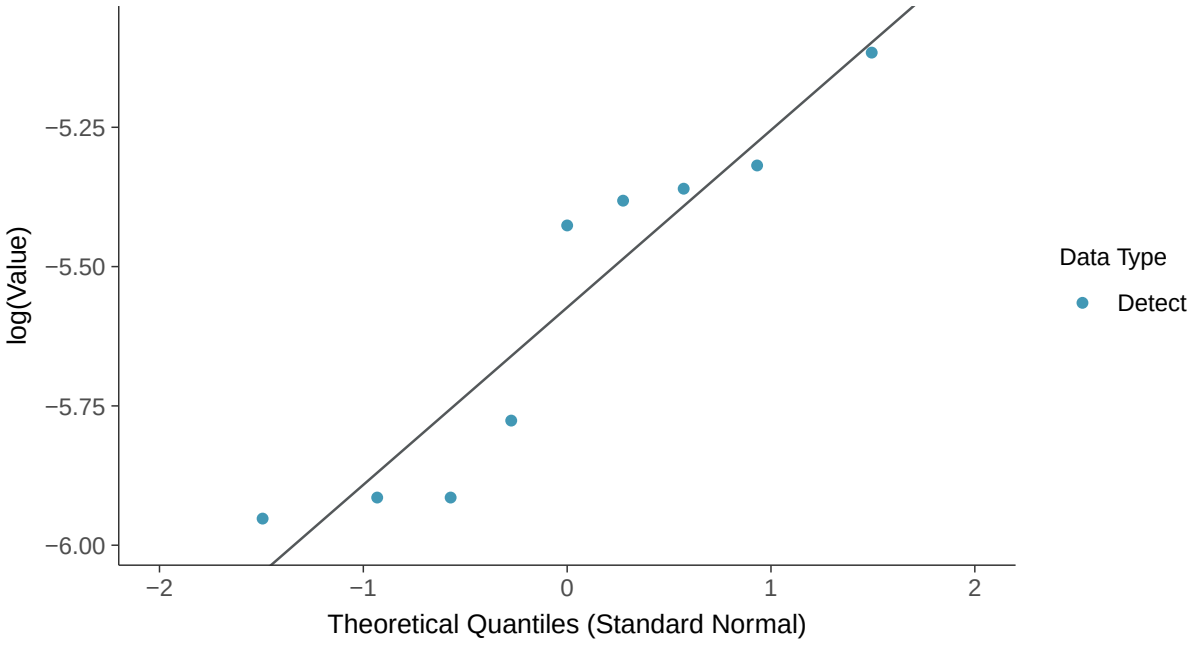
Normal Q-Q plot

Chromium, Total, MW-04 (mg/L)



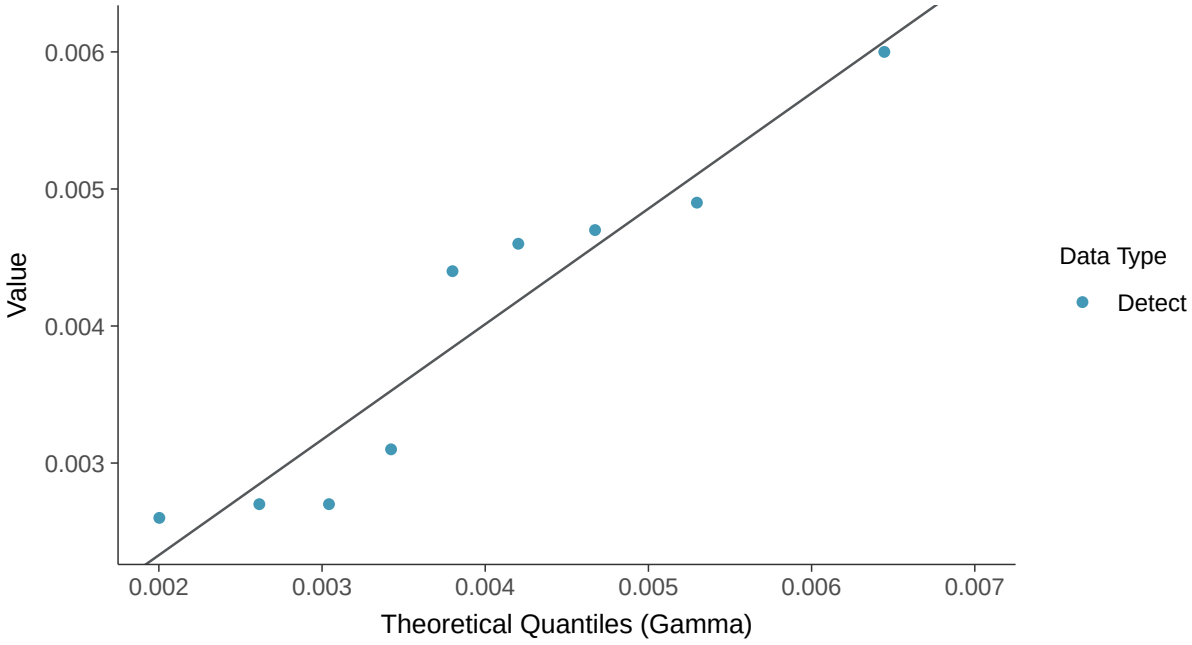
Lognormal Q-Q plot

Chromium, Total, MW-04 (mg/L)



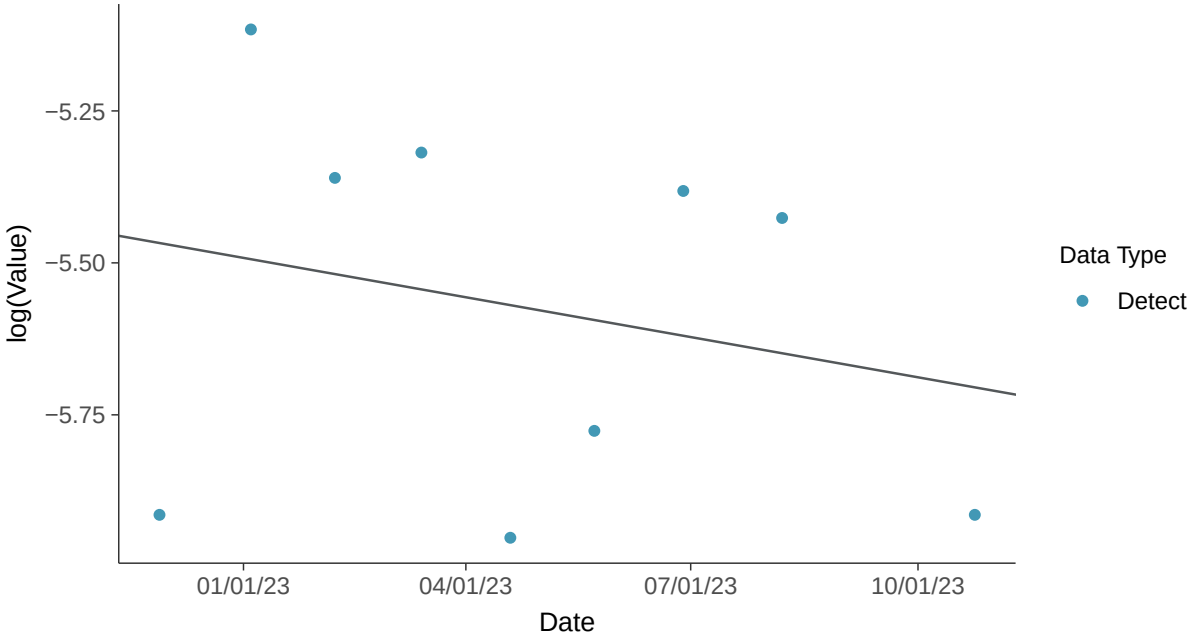
Gamma Q-Q plot

Chromium, Total, MW-04 (mg/L)



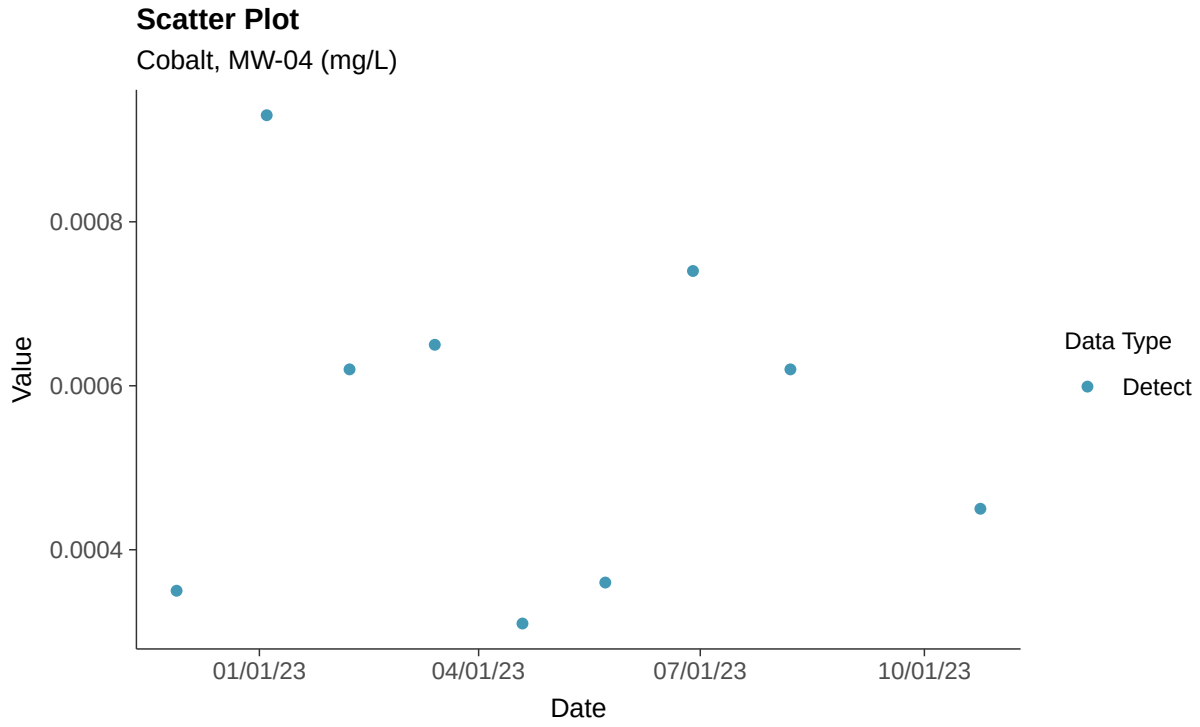
Trend Regression: Lognormal MLE

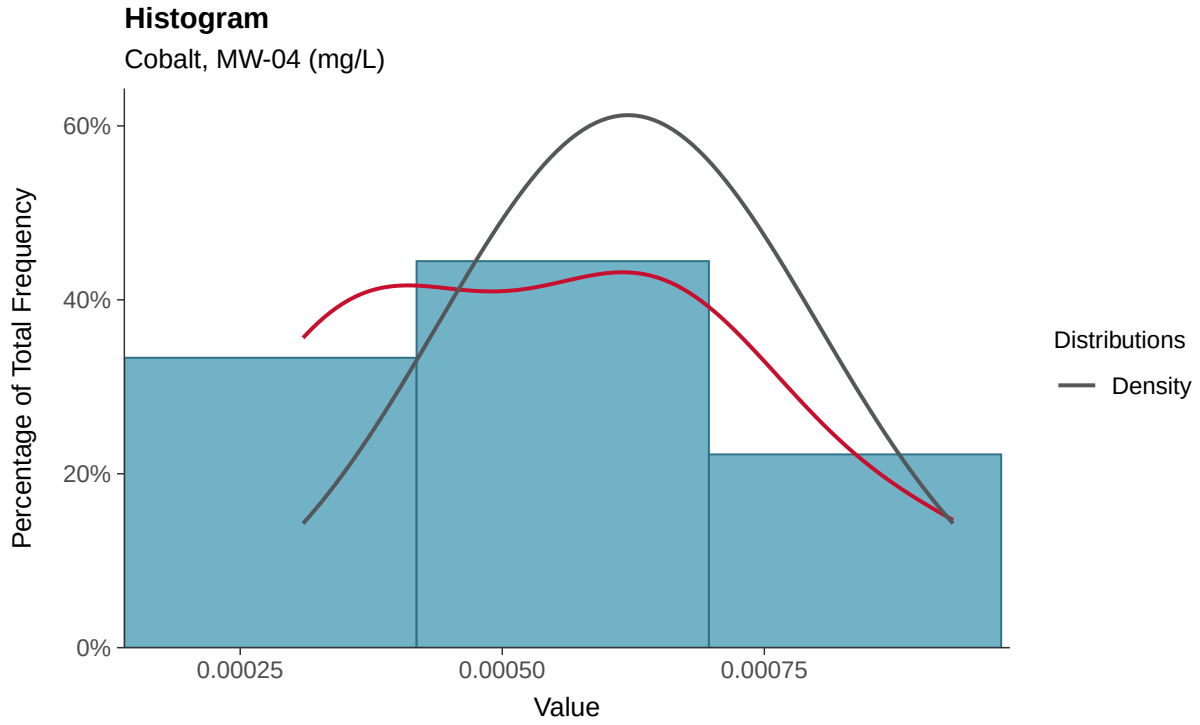
Chromium, Total, MW-04 (mg/L)



Appendix IV: Cobalt, MW-04

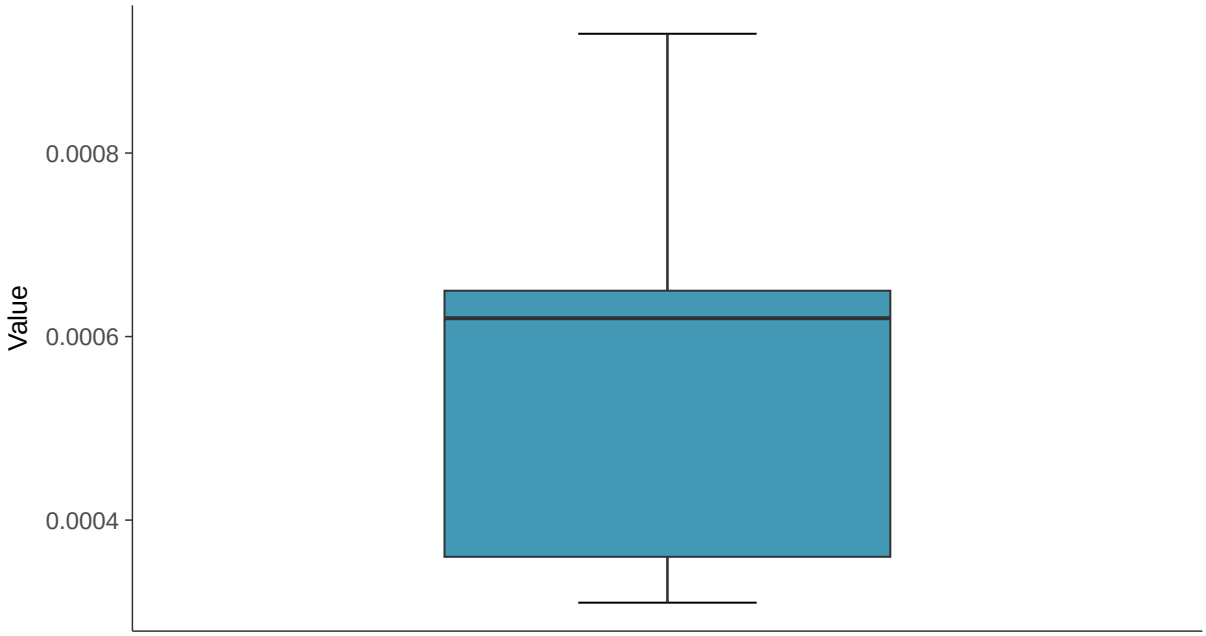
ID: 2_14_5_110





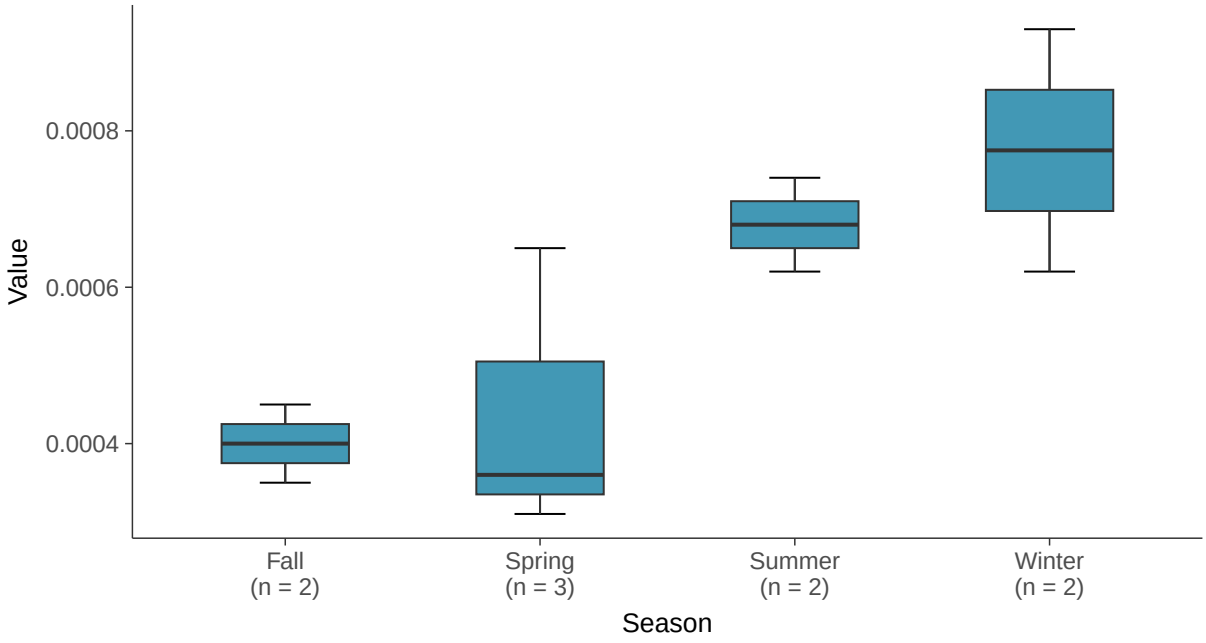
Boxplot

Cobalt, MW-04 (mg/L)



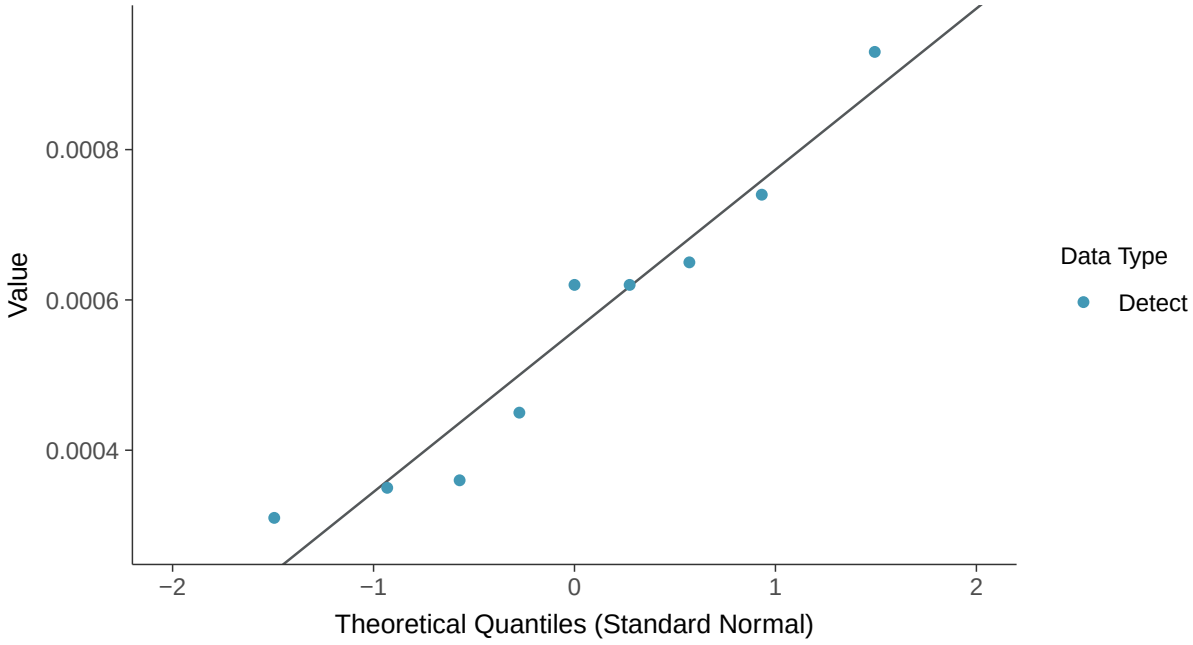
Boxplot by Season

Cobalt, MW-04 (mg/L)



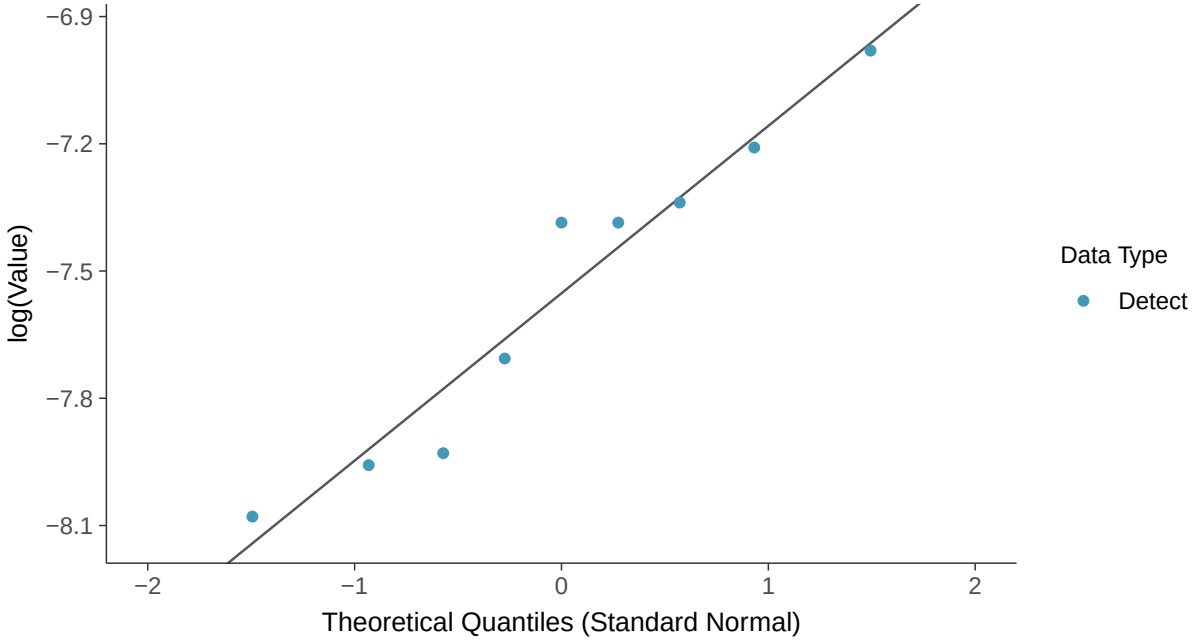
Normal Q-Q plot

Cobalt, MW-04 (mg/L)



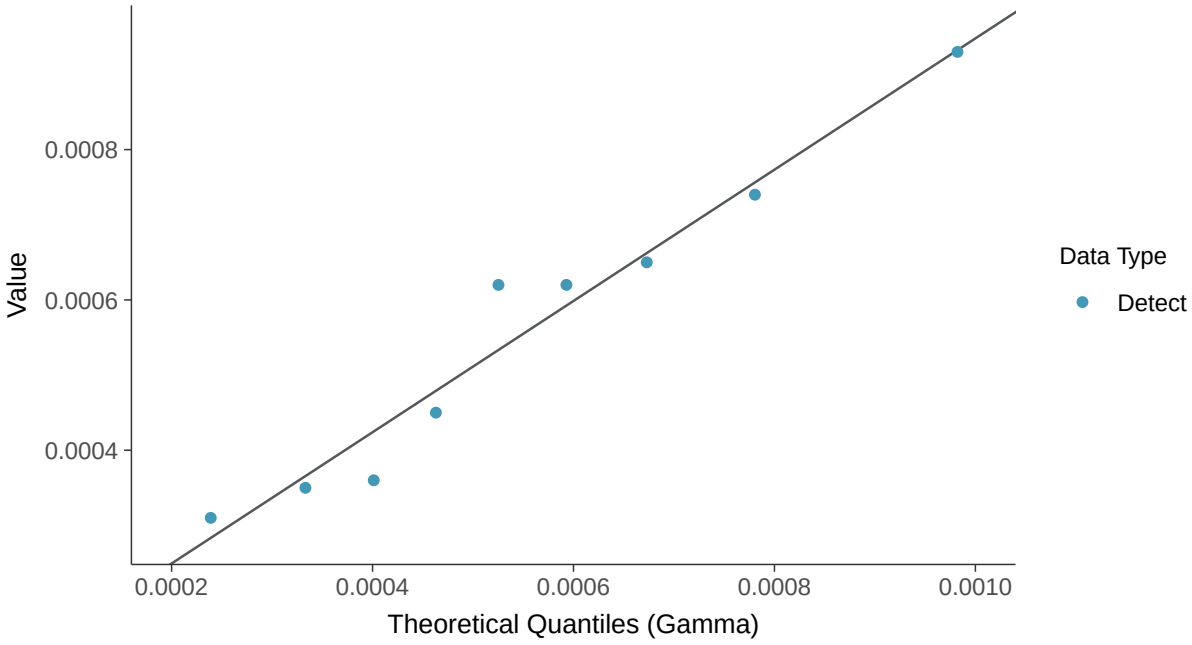
Lognormal Q-Q plot

Cobalt, MW-04 (mg/L)



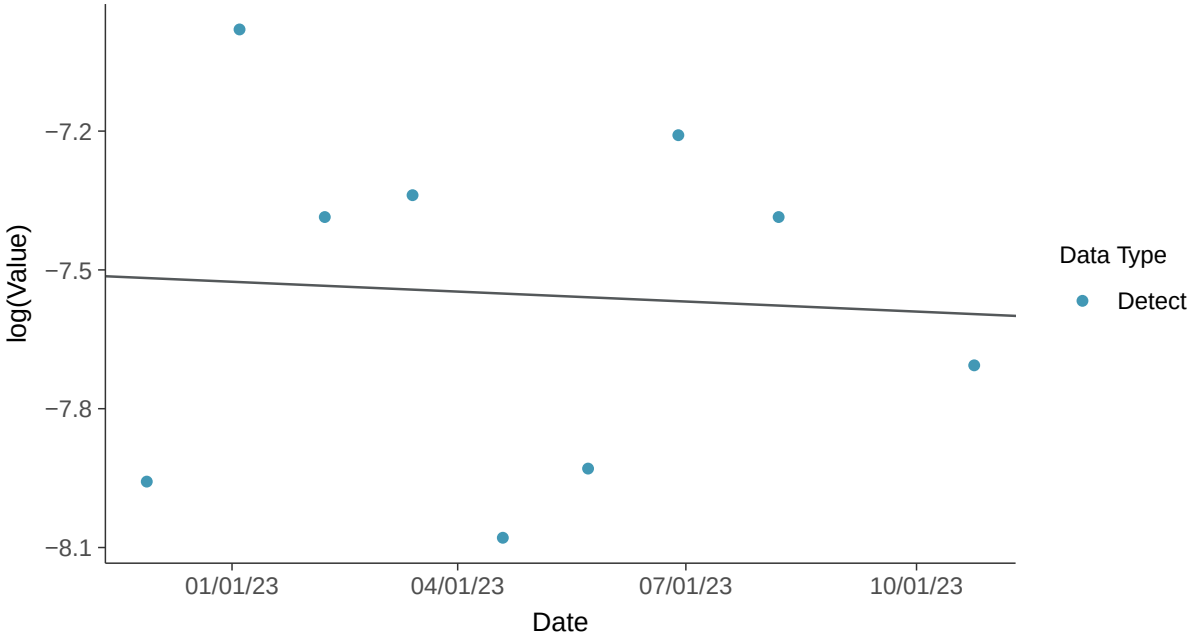
Gamma Q-Q plot

Cobalt, MW-04 (mg/L)



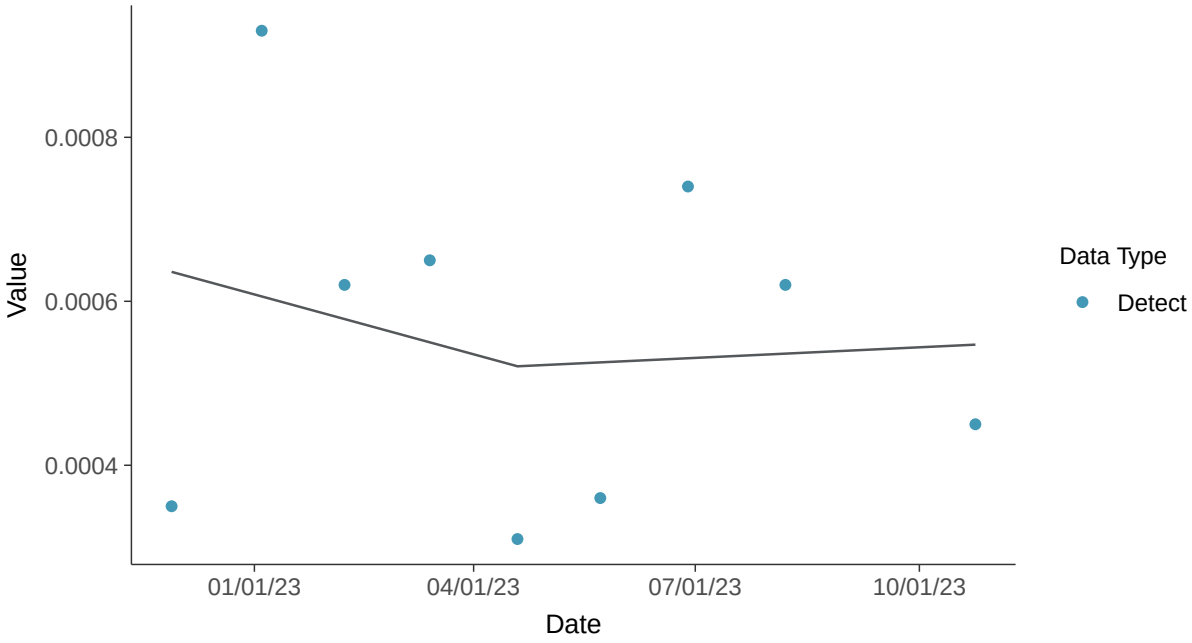
Trend Regression: Lognormal MLE

Cobalt, MW-04 (mg/L)



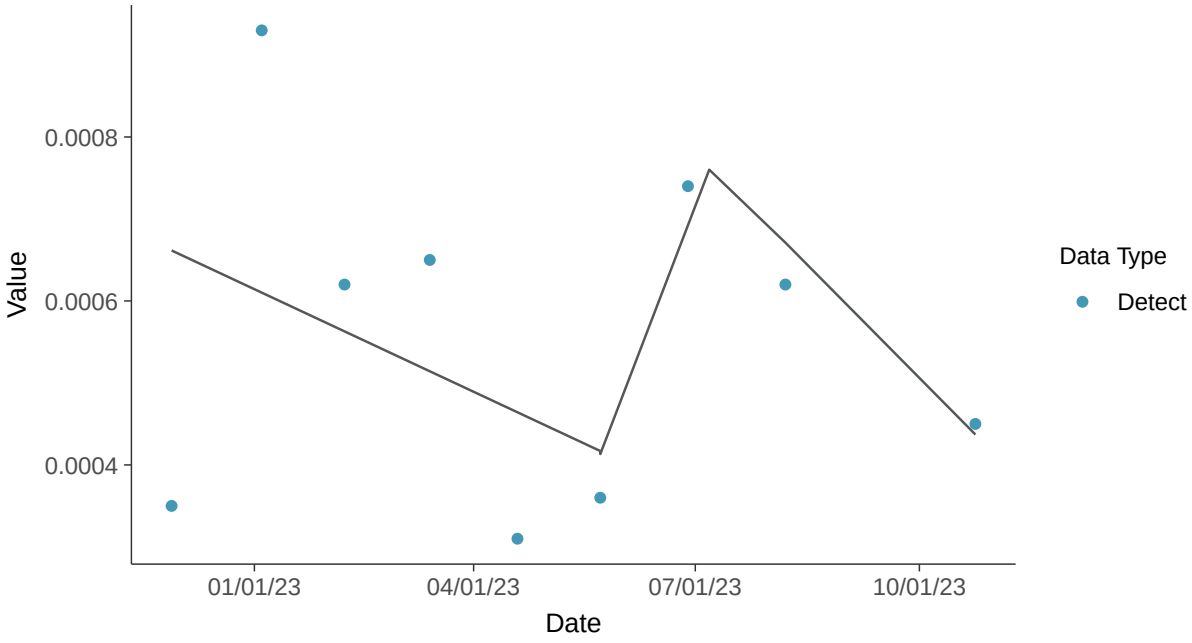
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-04 (mg/L)



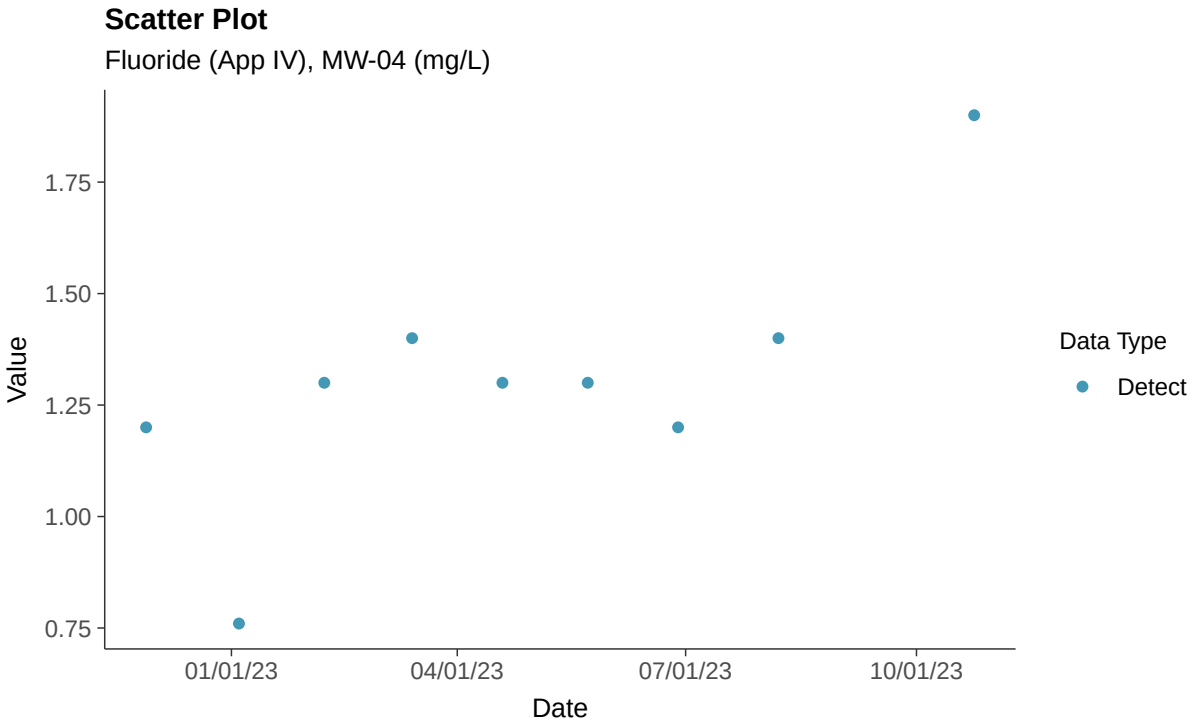
Trend Regression: Piecewise Linear-Linear-Linear

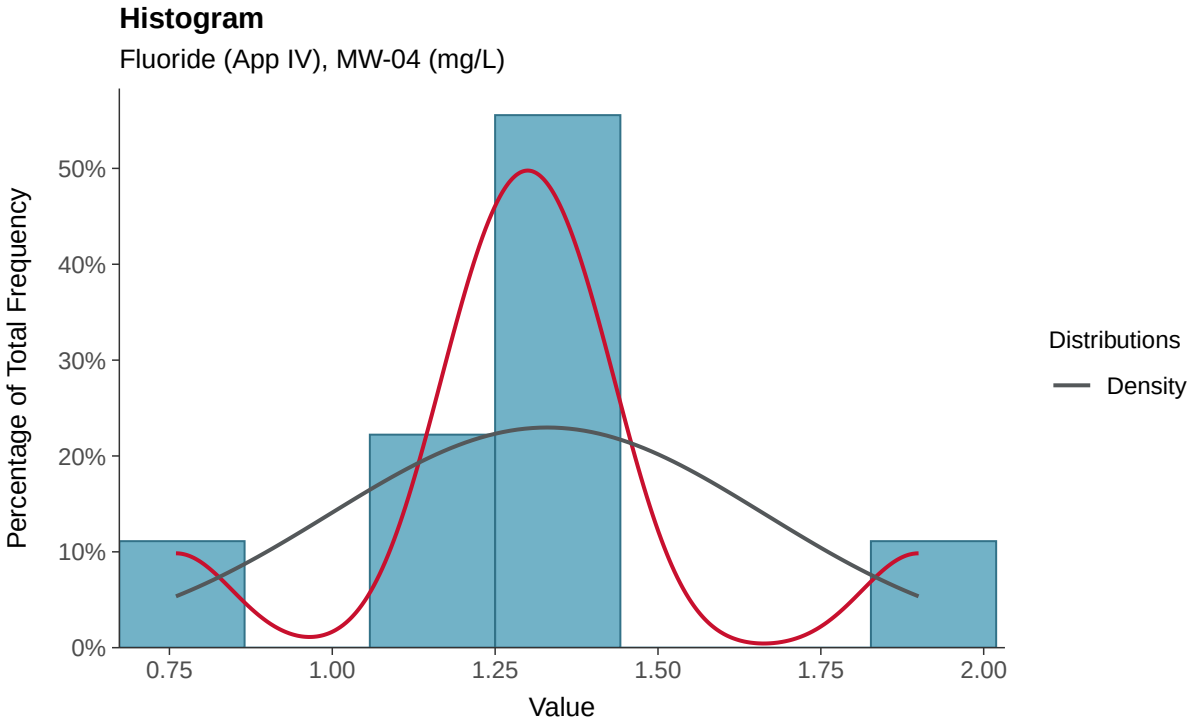
Cobalt, MW-04 (mg/L)



Appendix IV: Fluoride (App IV), MW-04

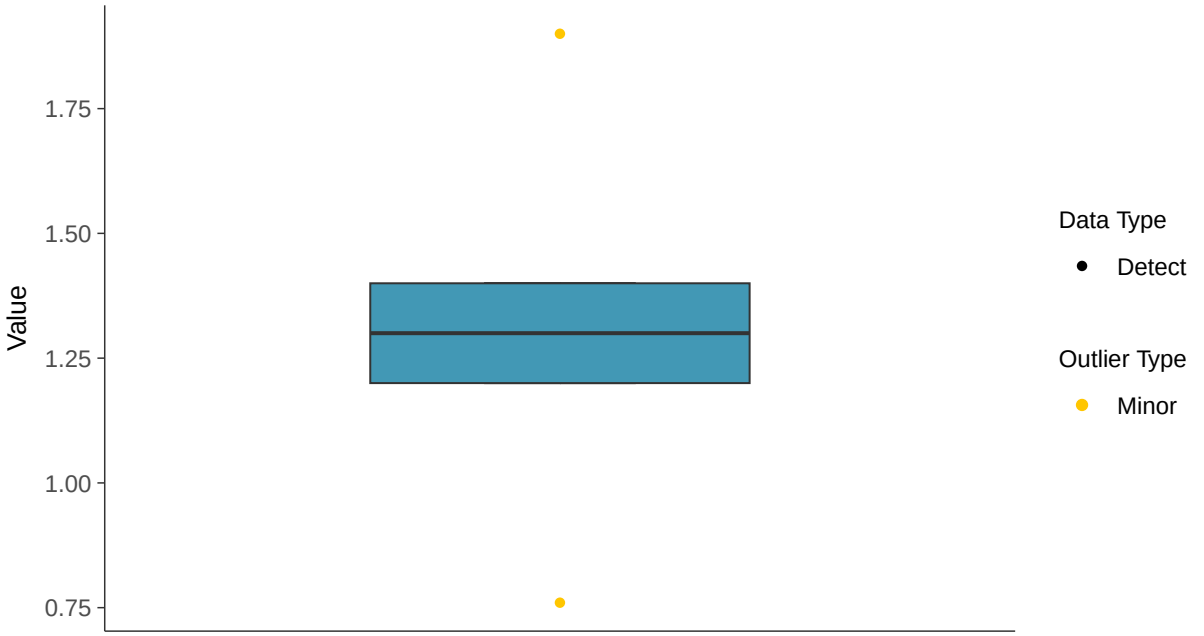
ID: 2_14_5_113





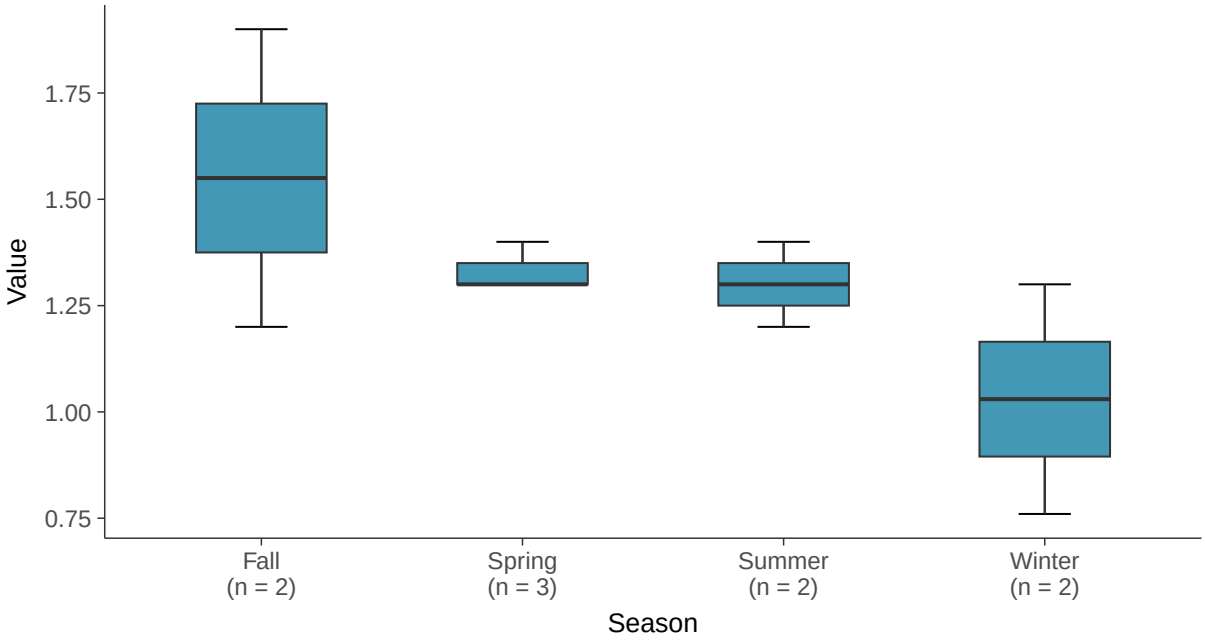
Boxplot

Fluoride (App IV), MW-04 (mg/L)



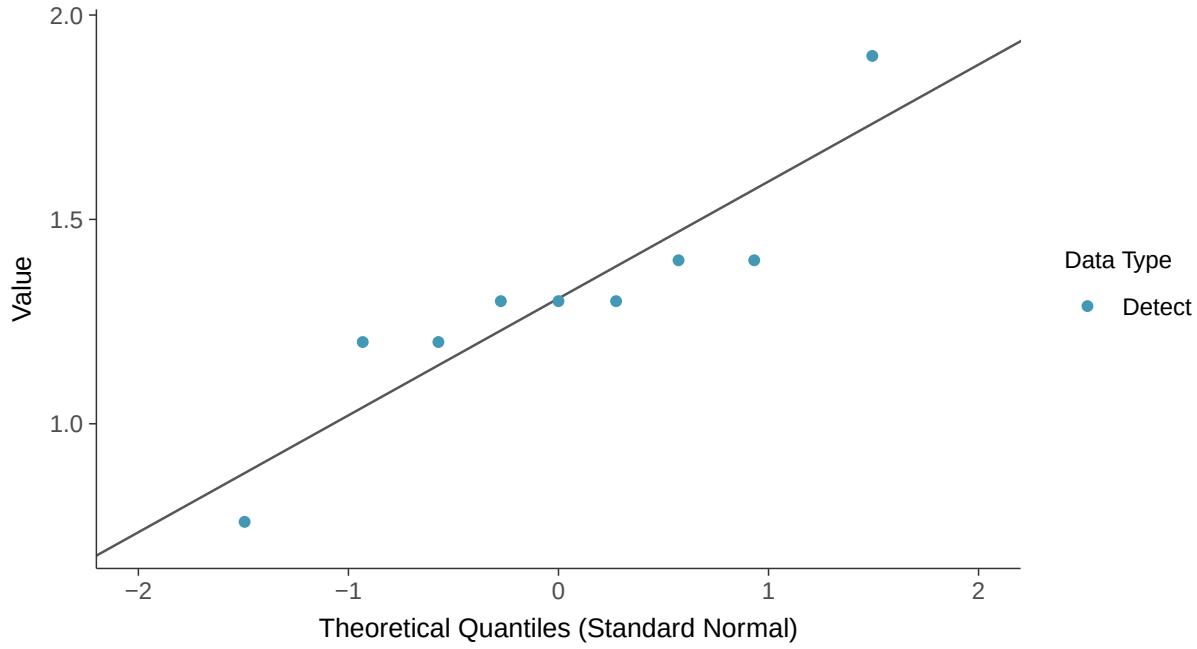
Boxplot by Season

Fluoride (App IV), MW-04 (mg/L)



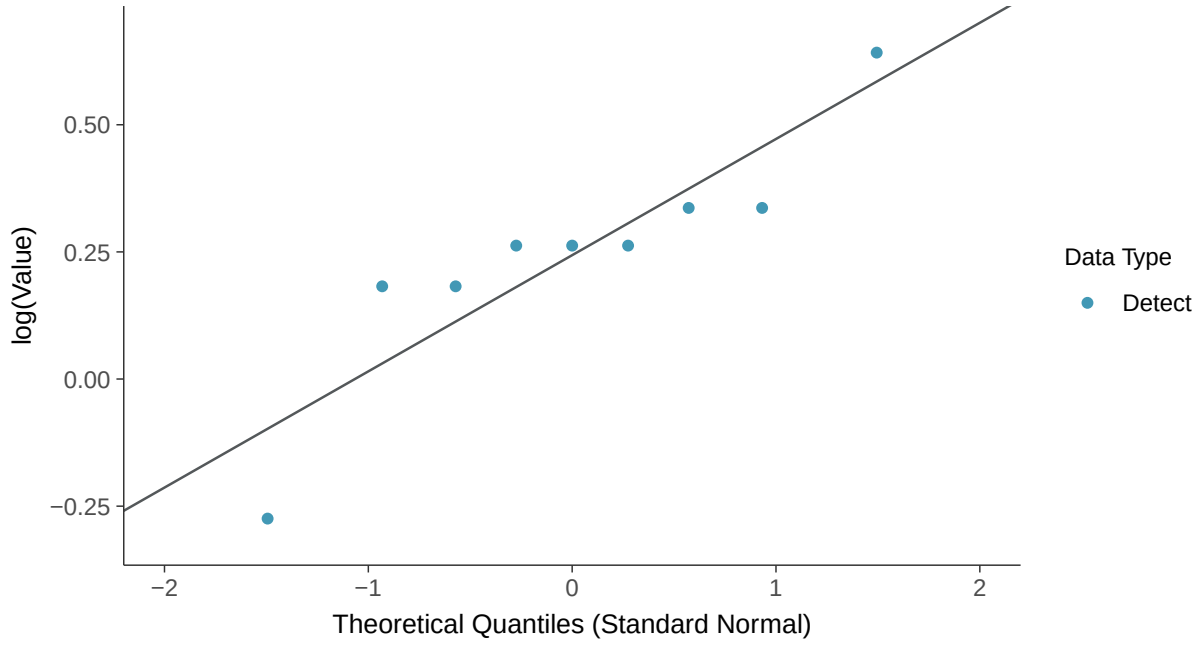
Normal Q-Q plot

Fluoride (App IV), MW-04 (mg/L)



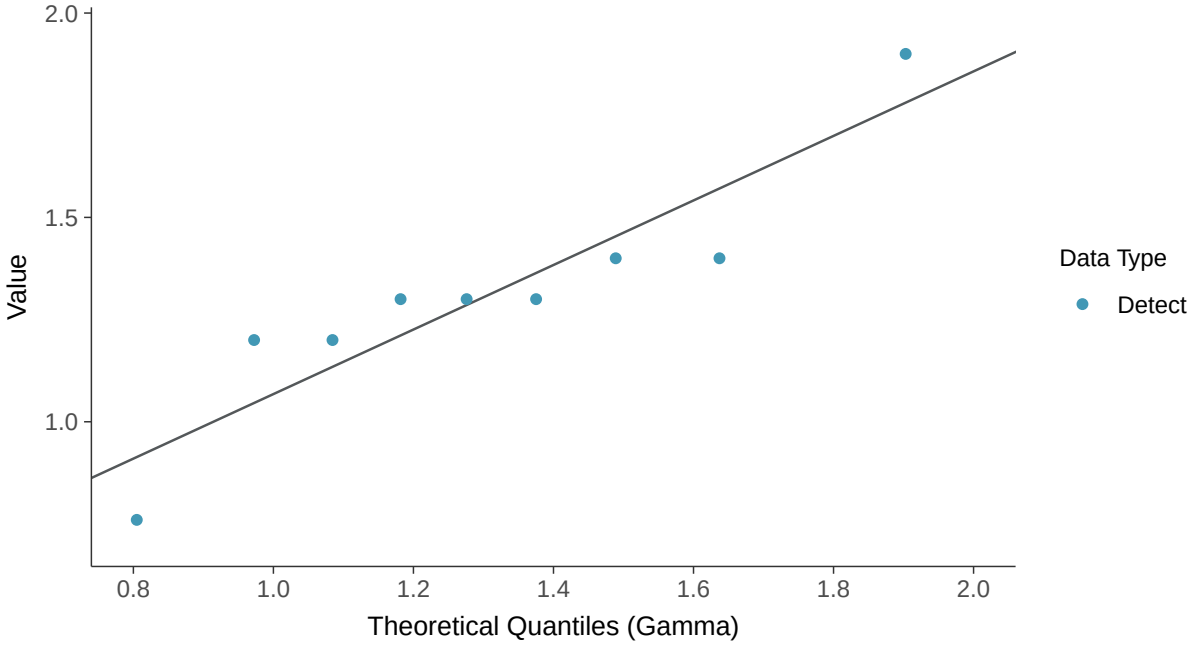
Lognormal Q-Q plot

Fluoride (App IV), MW-04 (mg/L)



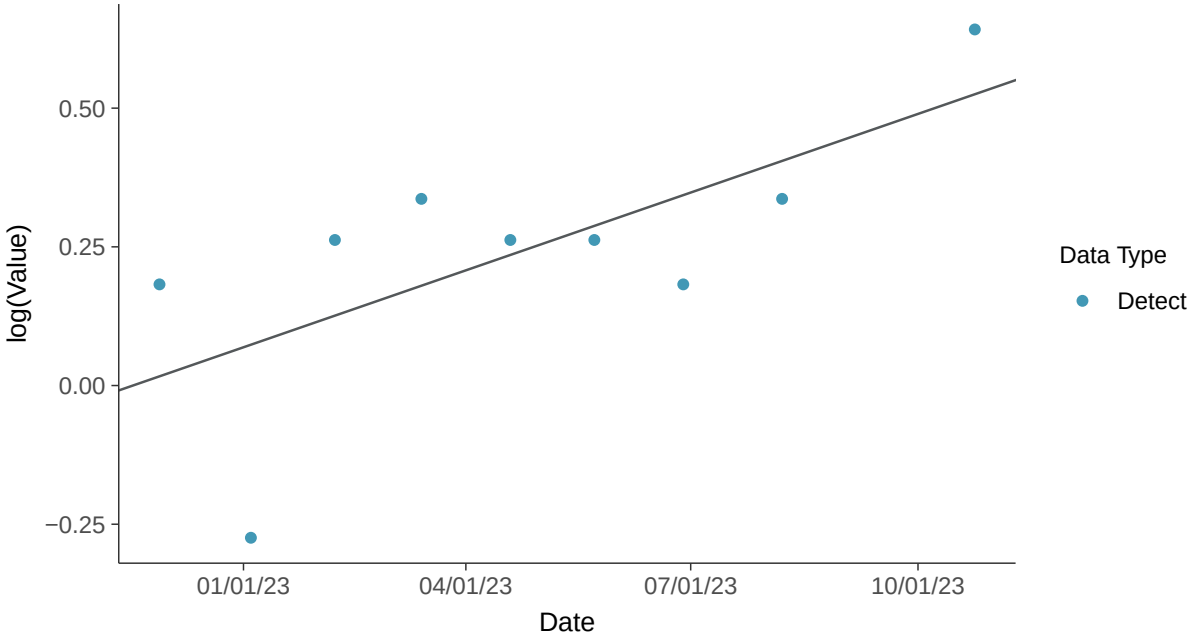
Gamma Q-Q plot

Fluoride (App IV), MW-04 (mg/L)



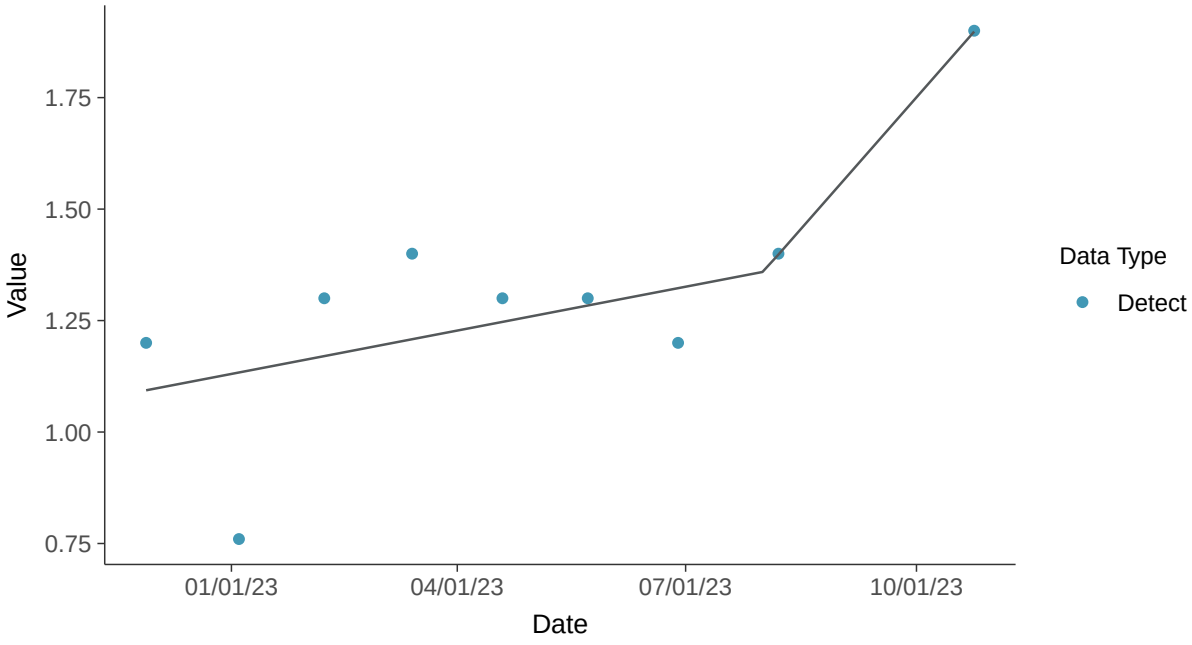
Trend Regression: Lognormal MLE

Fluoride (App IV), MW-04 (mg/L)



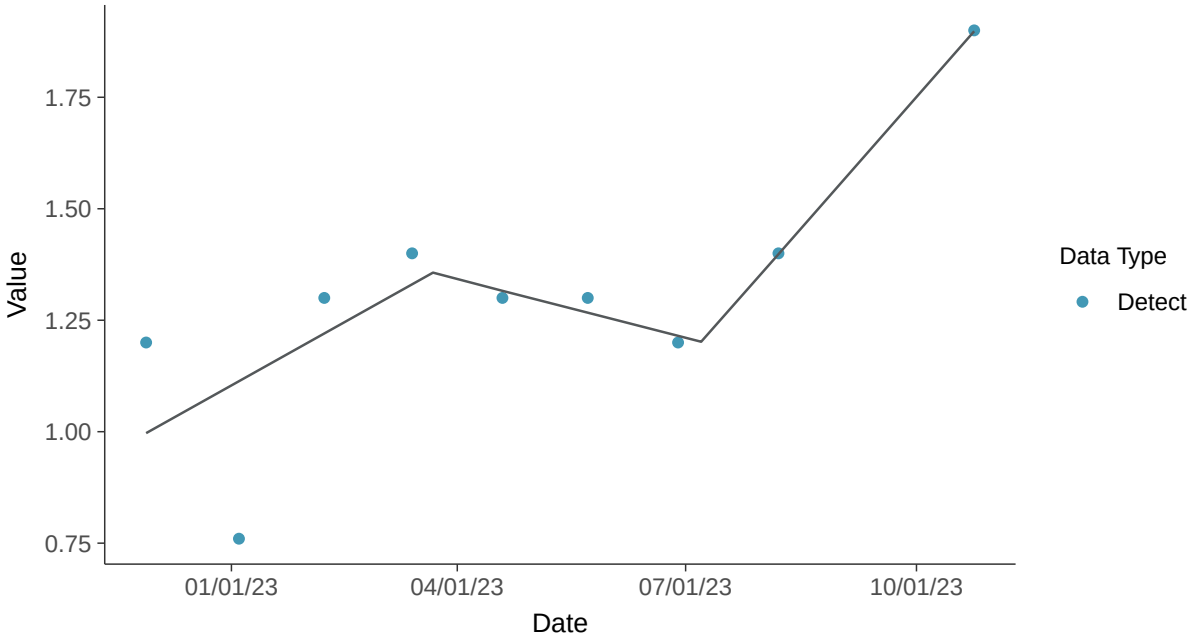
Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-04 (mg/L)



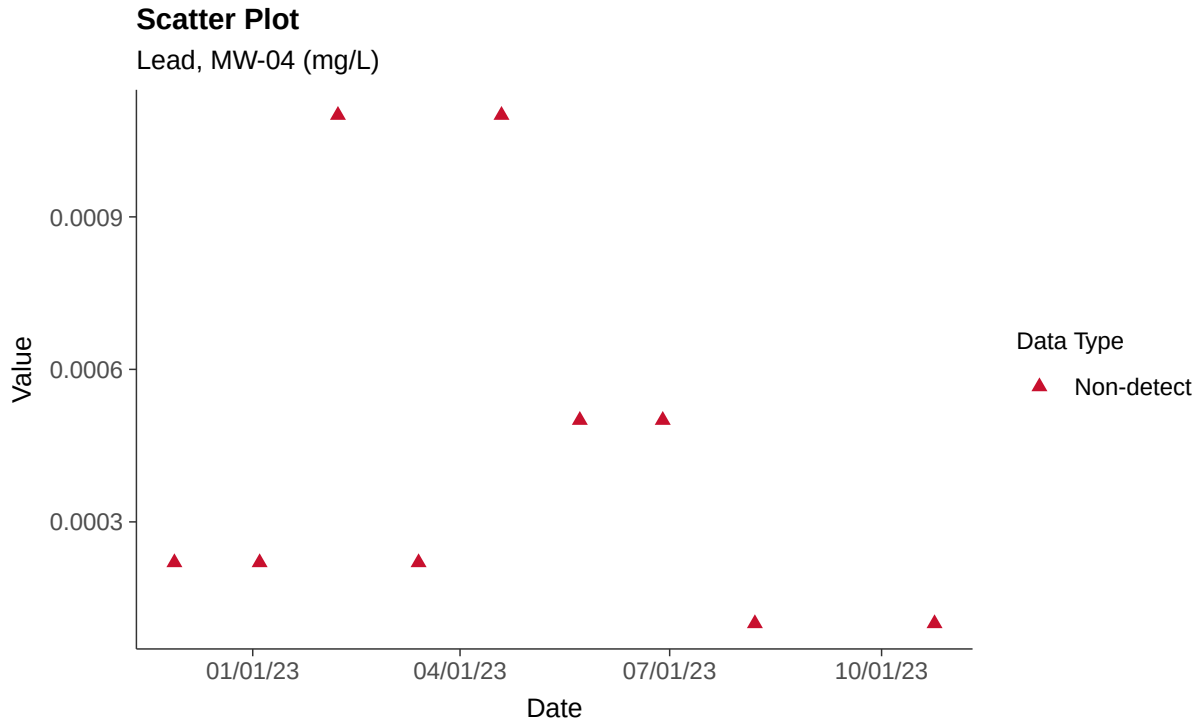
Trend Regression: Piecewise Linear-Linear-Linear

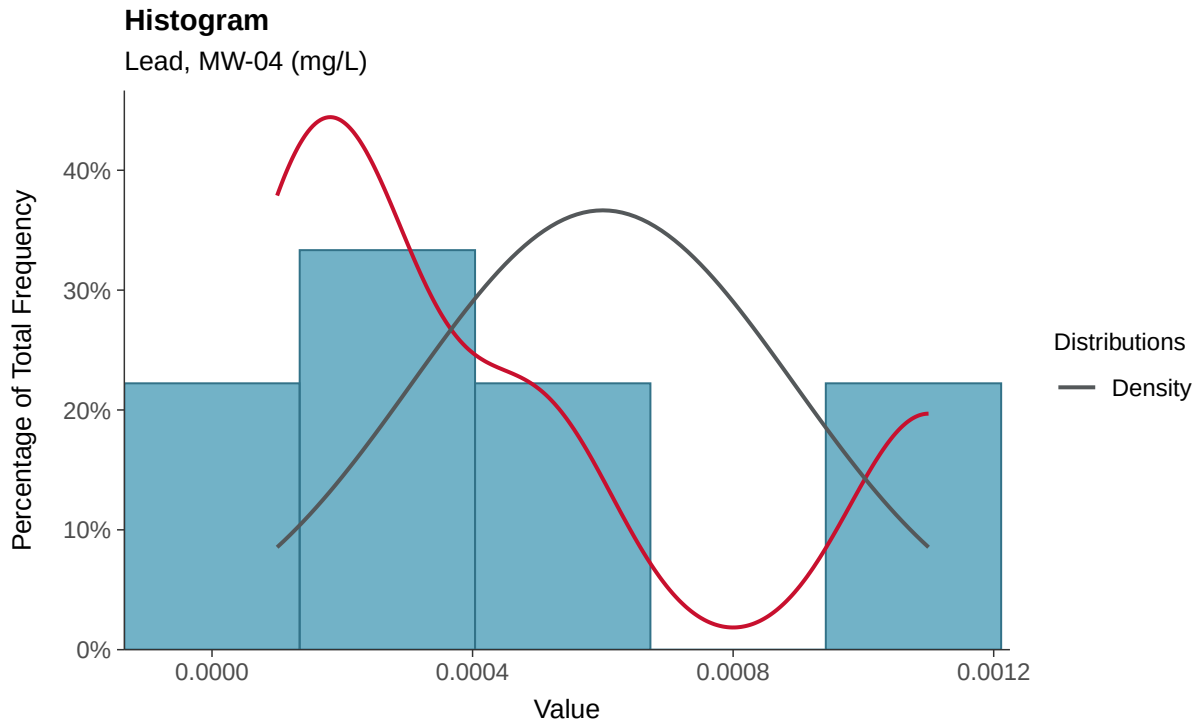
Fluoride (App IV), MW-04 (mg/L)



Appendix IV: Lead, MW-04

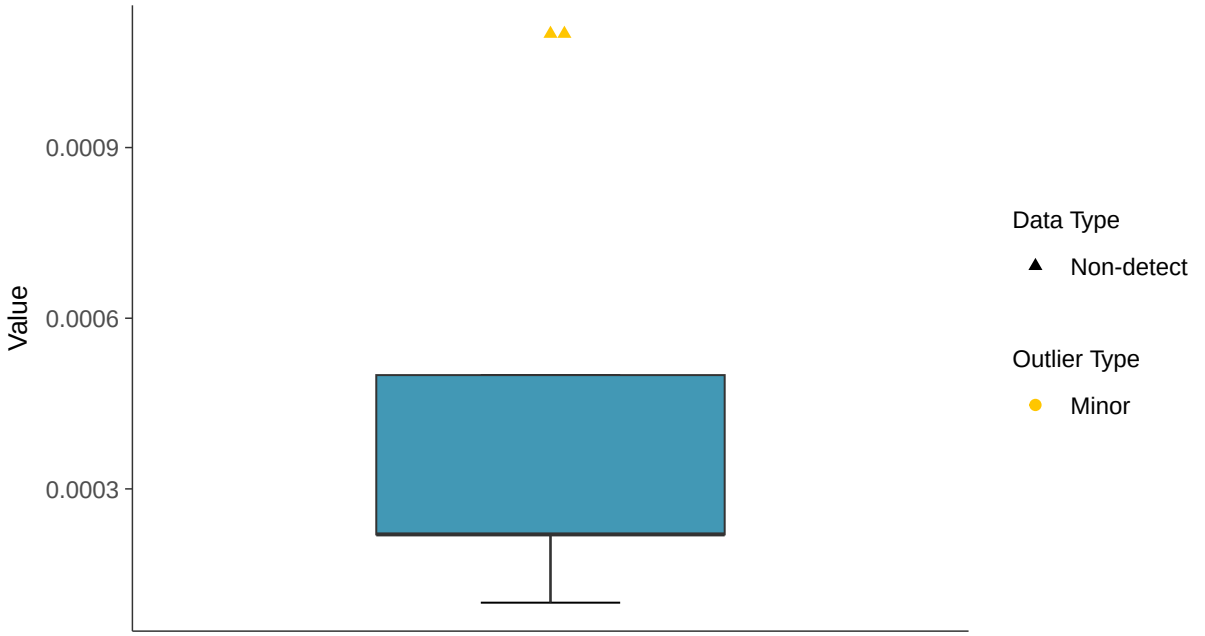
ID: 2_14_5_115





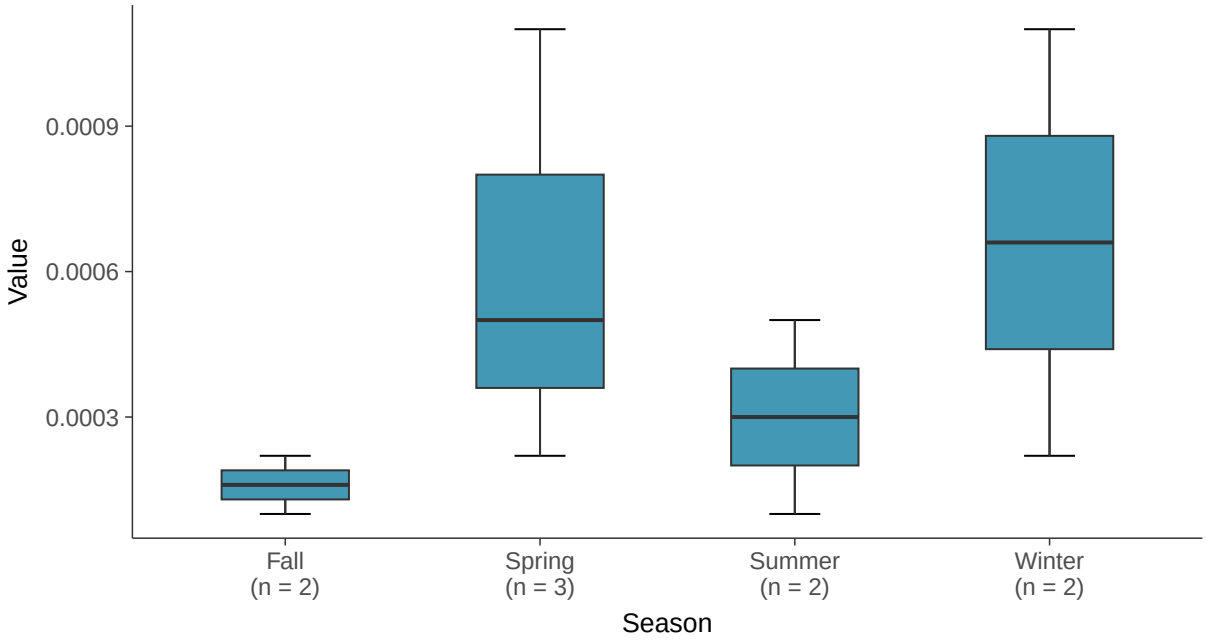
Boxplot

Lead, MW-04 (mg/L)



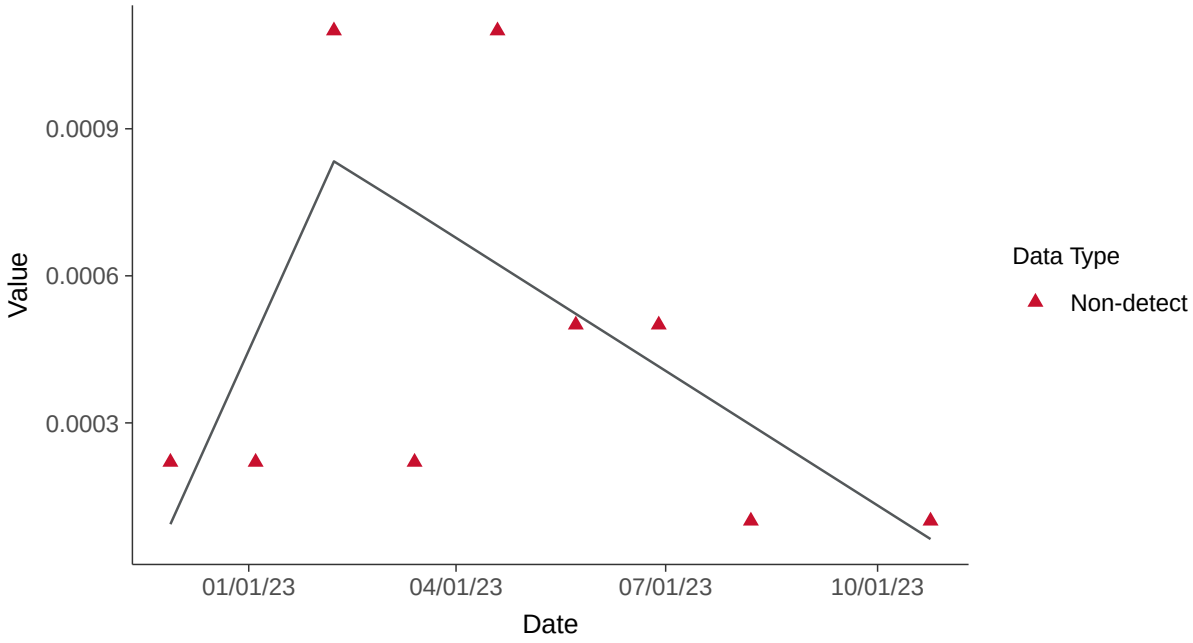
Boxplot by Season

Lead, MW-04 (mg/L)



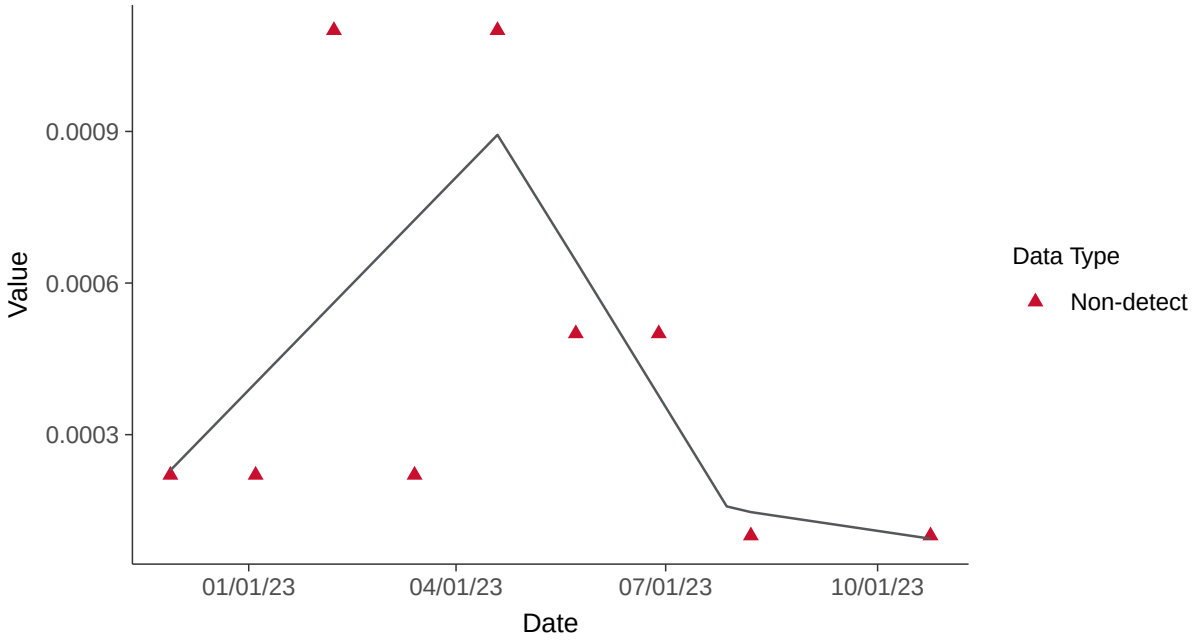
Trend Regression: Piecewise Linear-Linear

Lead, MW-04 (mg/L)



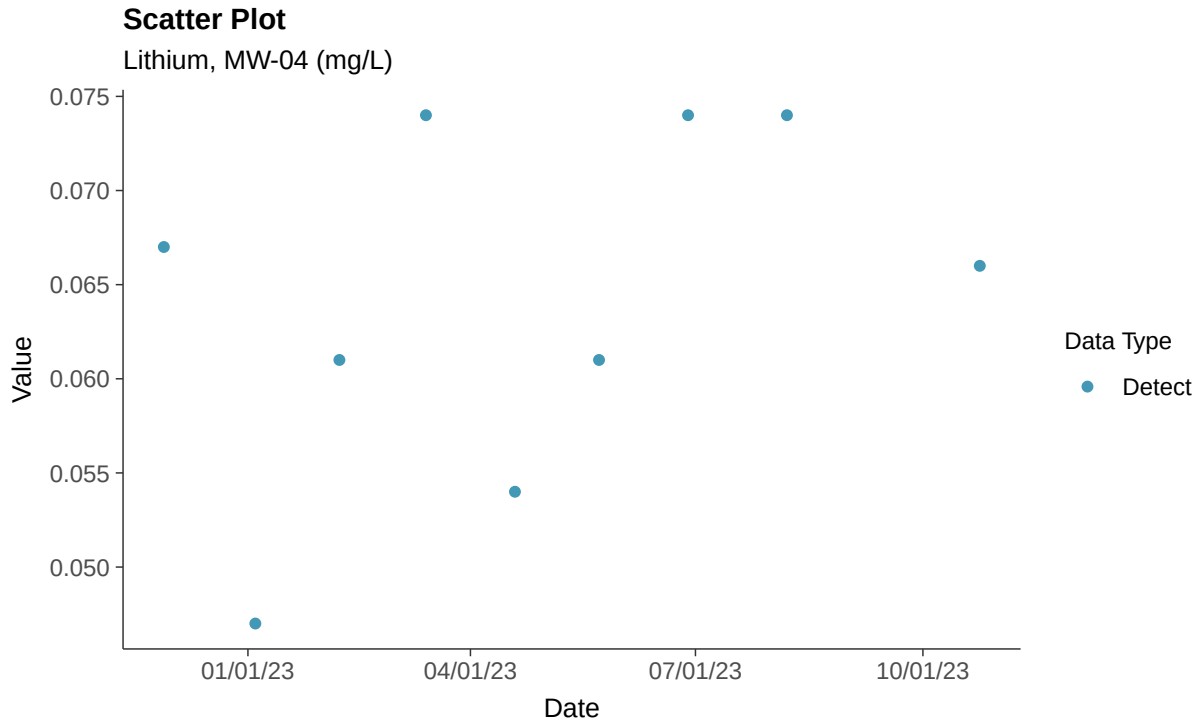
Trend Regression: Piecewise Linear-Linear-Linear

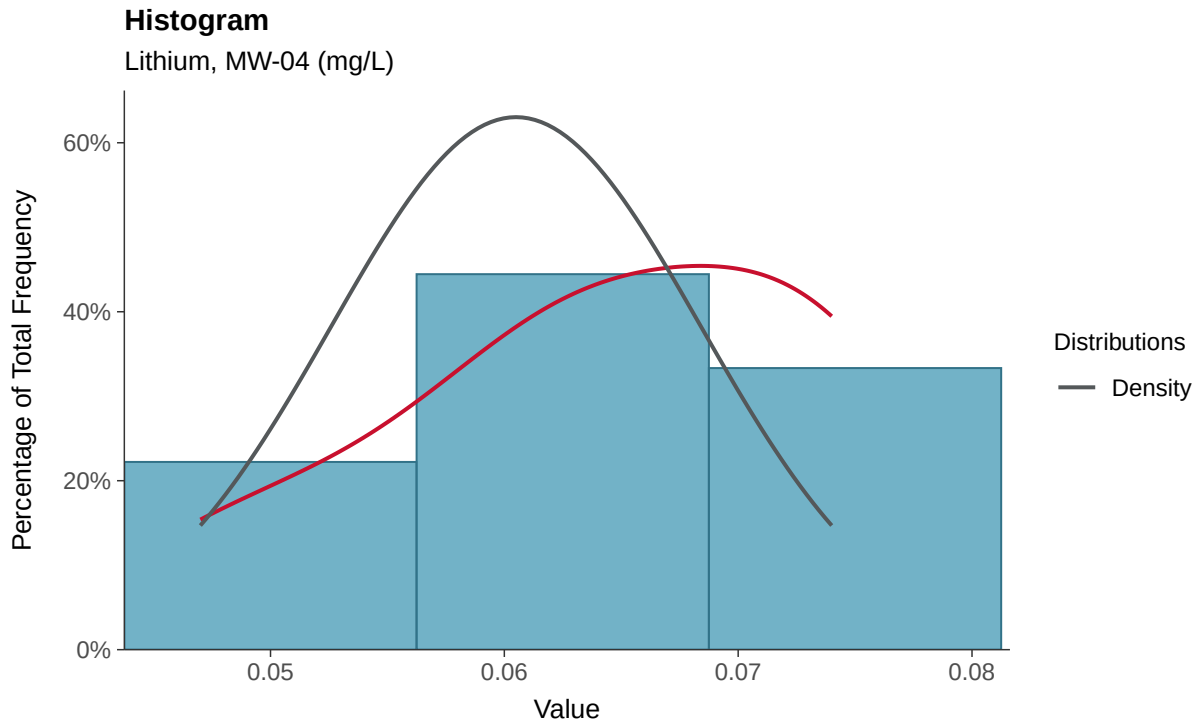
Lead, MW-04 (mg/L)



Appendix IV: Lithium, MW-04

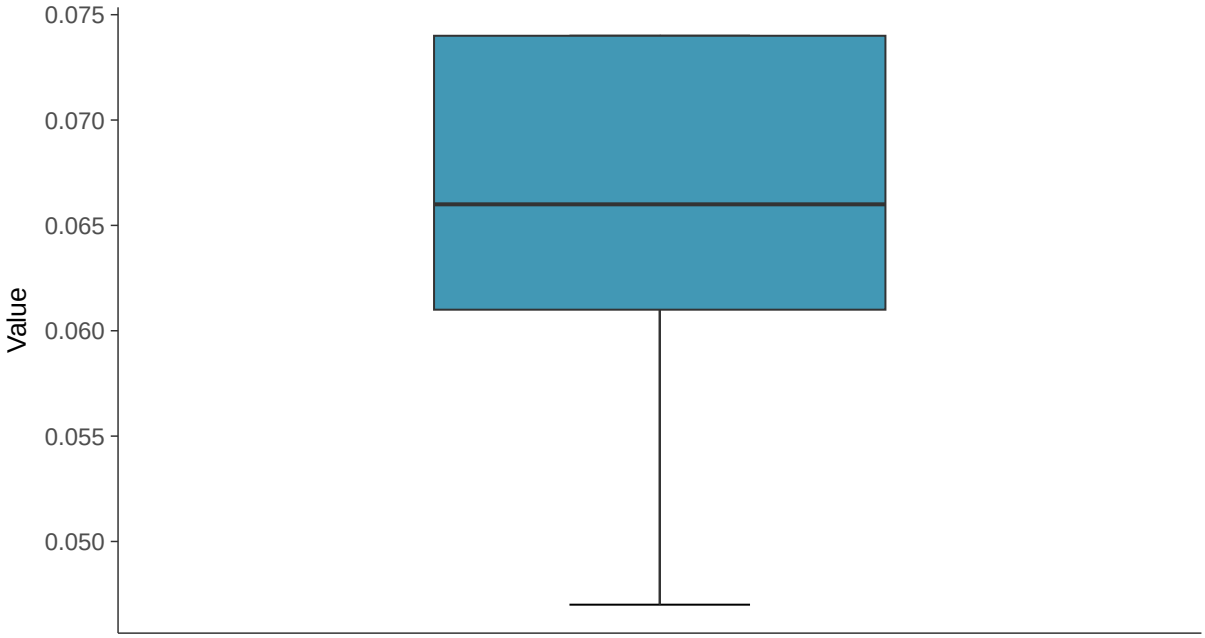
ID: 2_14_5_116





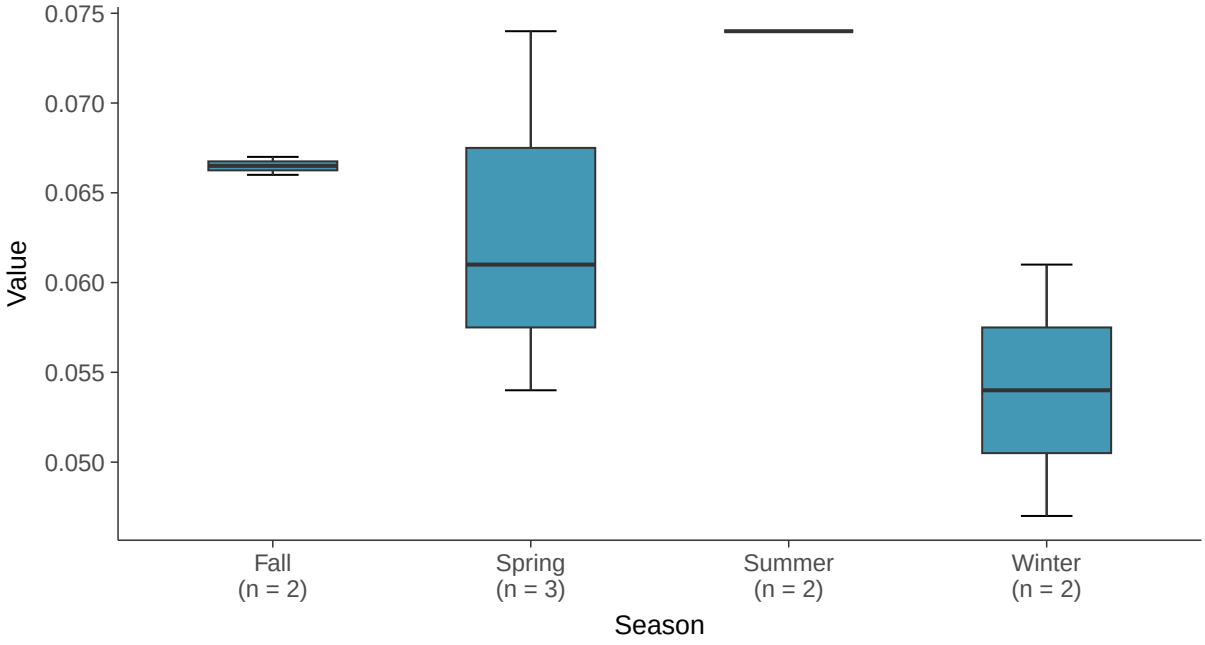
Boxplot

Lithium, MW-04 (mg/L)



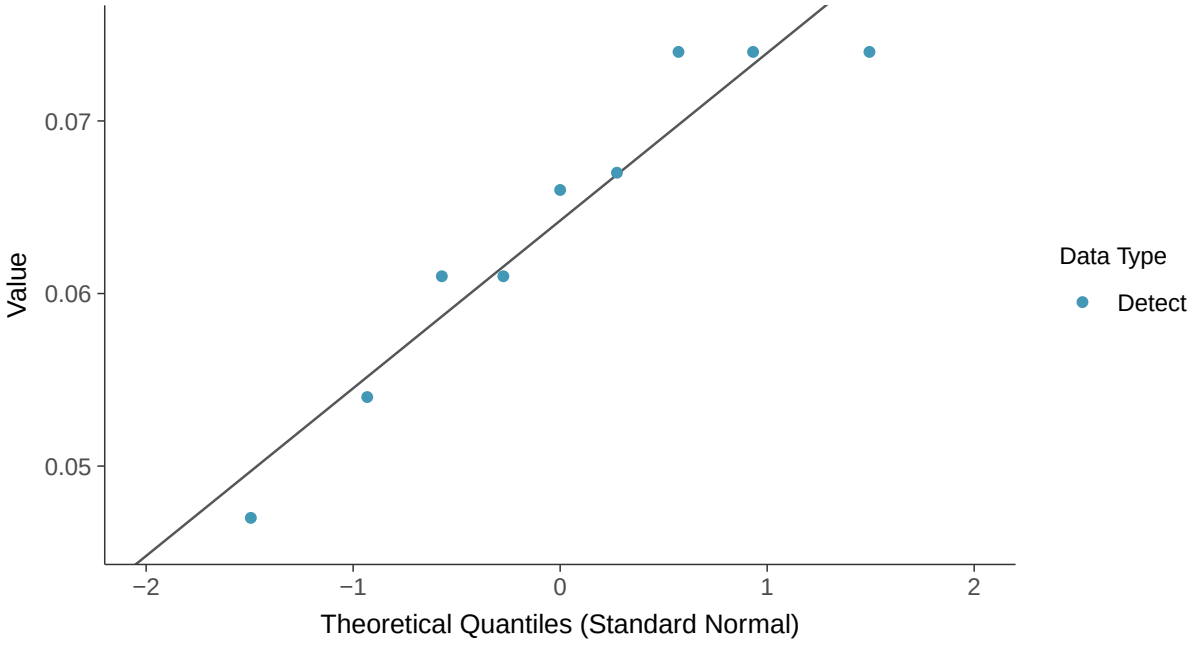
Boxplot by Season

Lithium, MW-04 (mg/L)



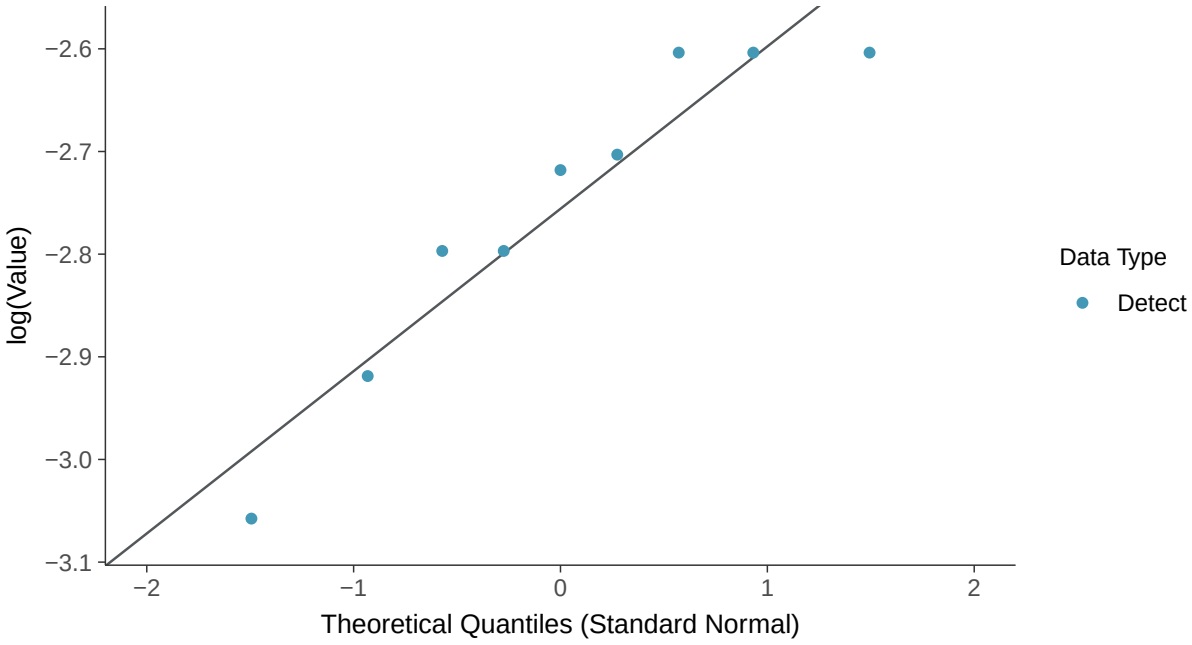
Normal Q-Q plot

Lithium, MW-04 (mg/L)



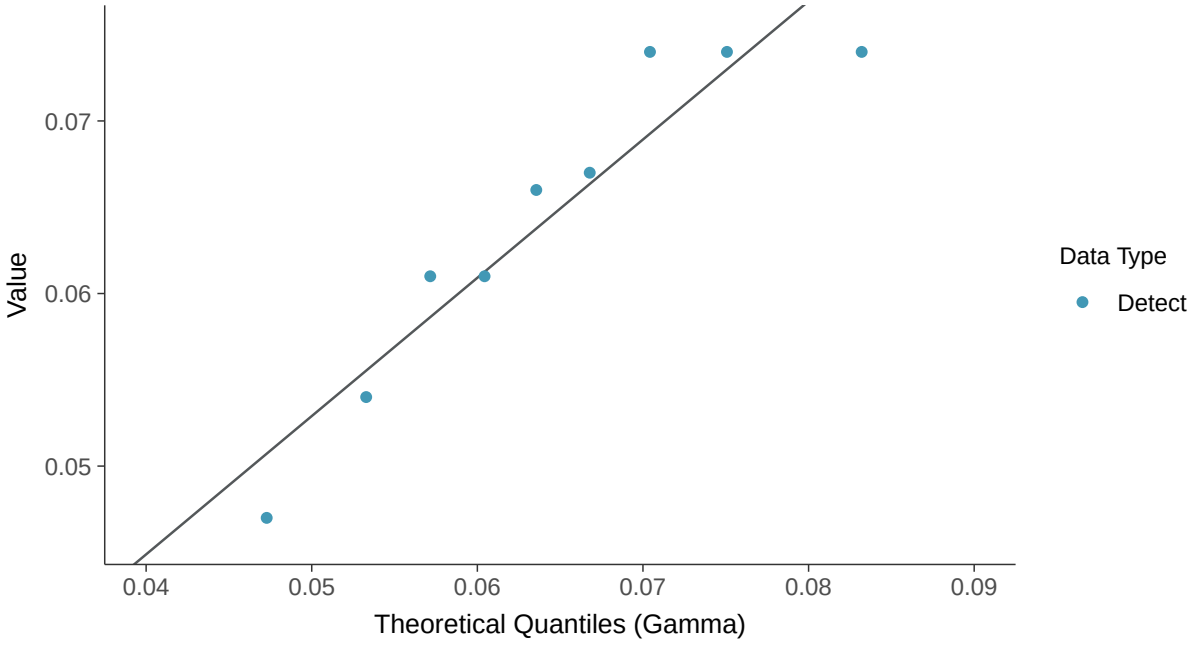
Lognormal Q-Q plot

Lithium, MW-04 (mg/L)



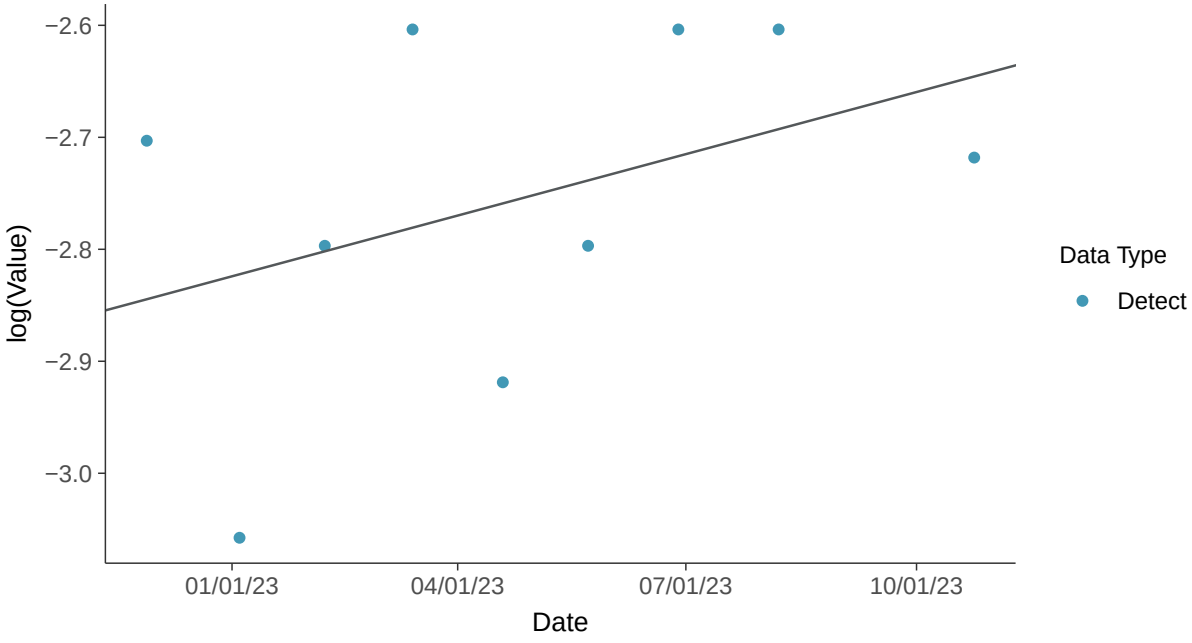
Gamma Q-Q plot

Lithium, MW-04 (mg/L)



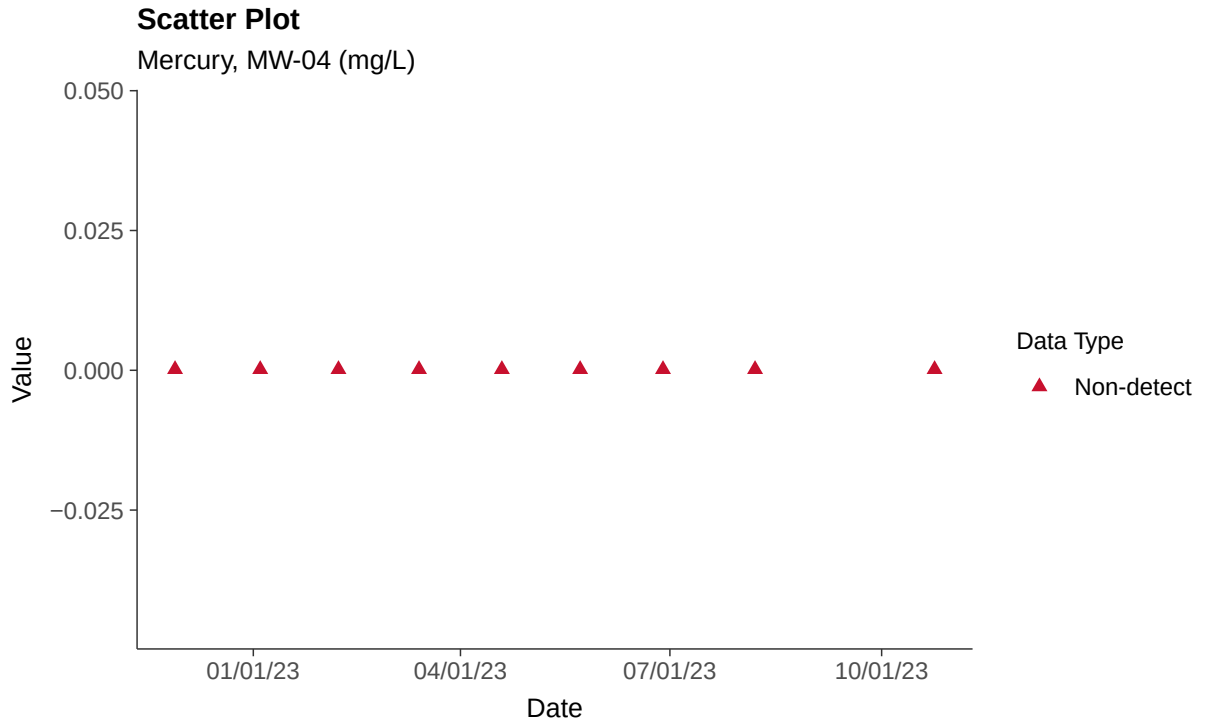
Trend Regression: Lognormal MLE

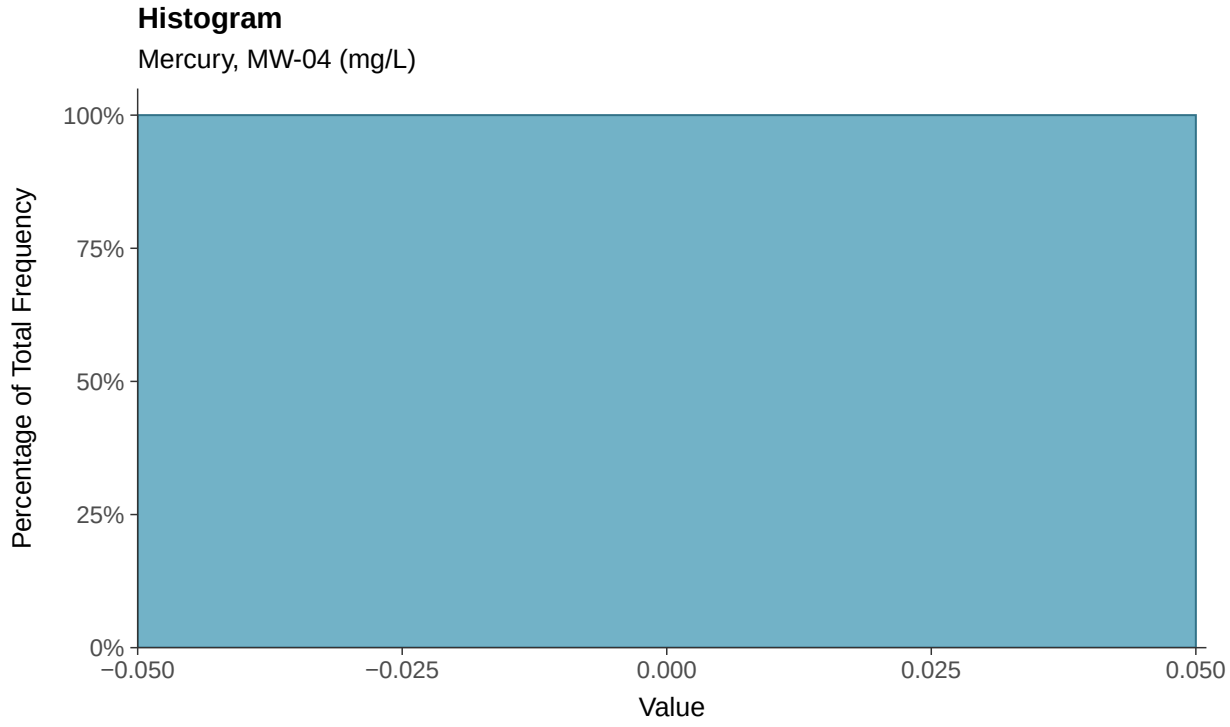
Lithium, MW-04 (mg/L)



Appendix IV: Mercury, MW-04

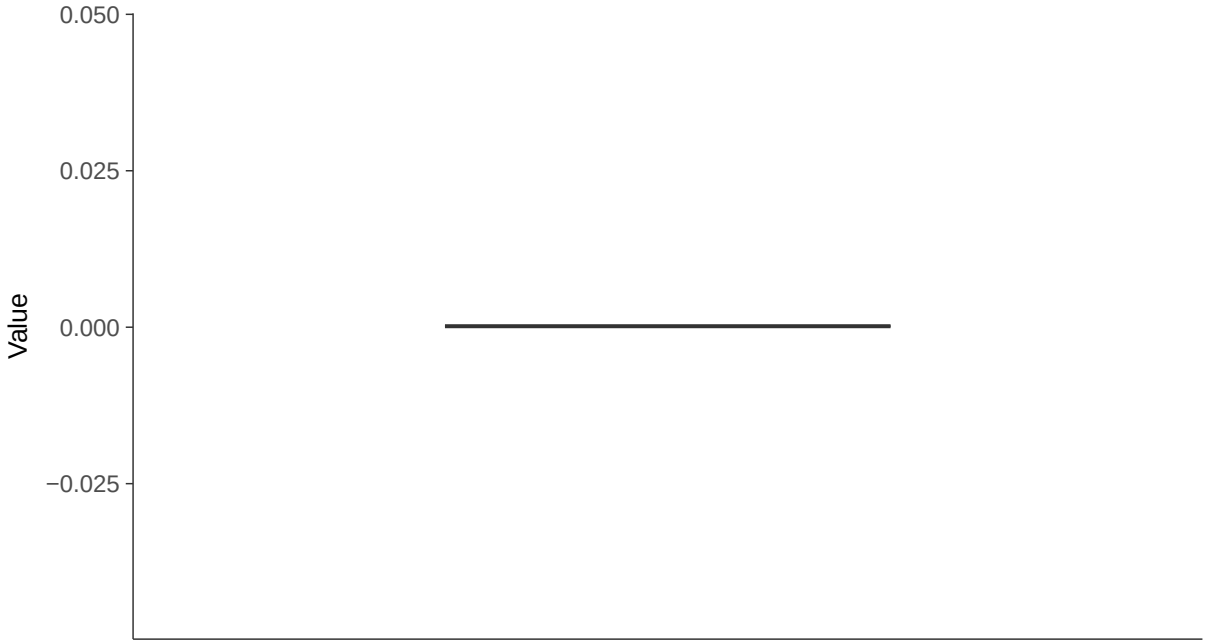
ID: 2_14_5_117





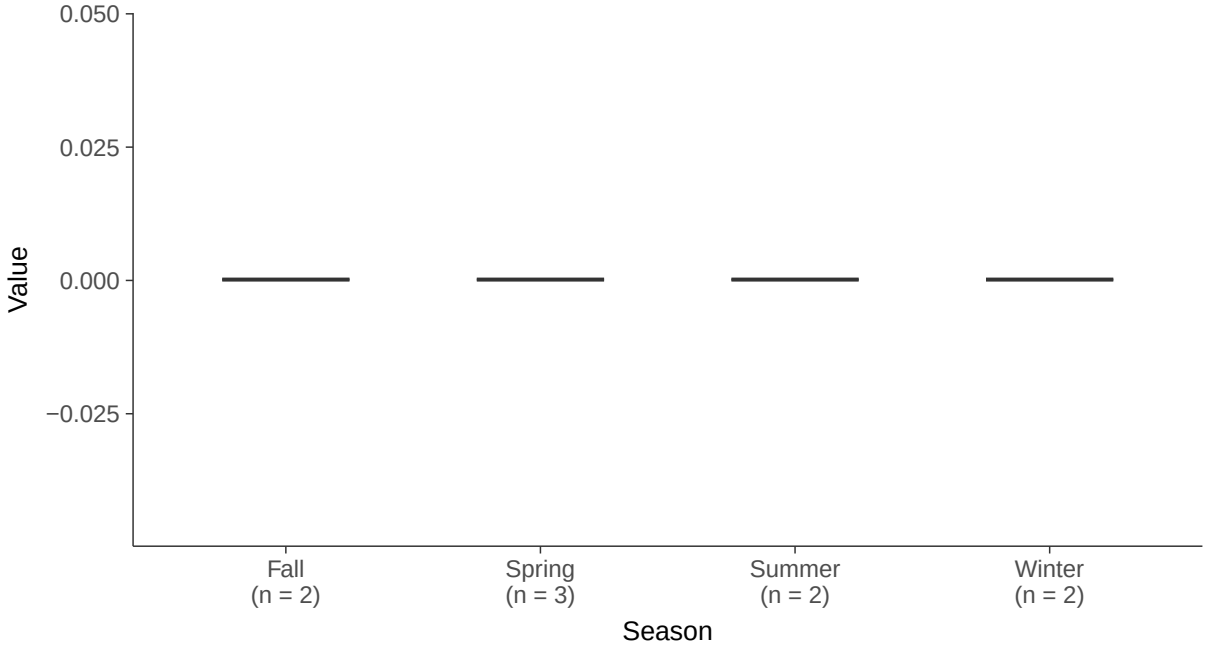
Boxplot

Mercury, MW-04 (mg/L)



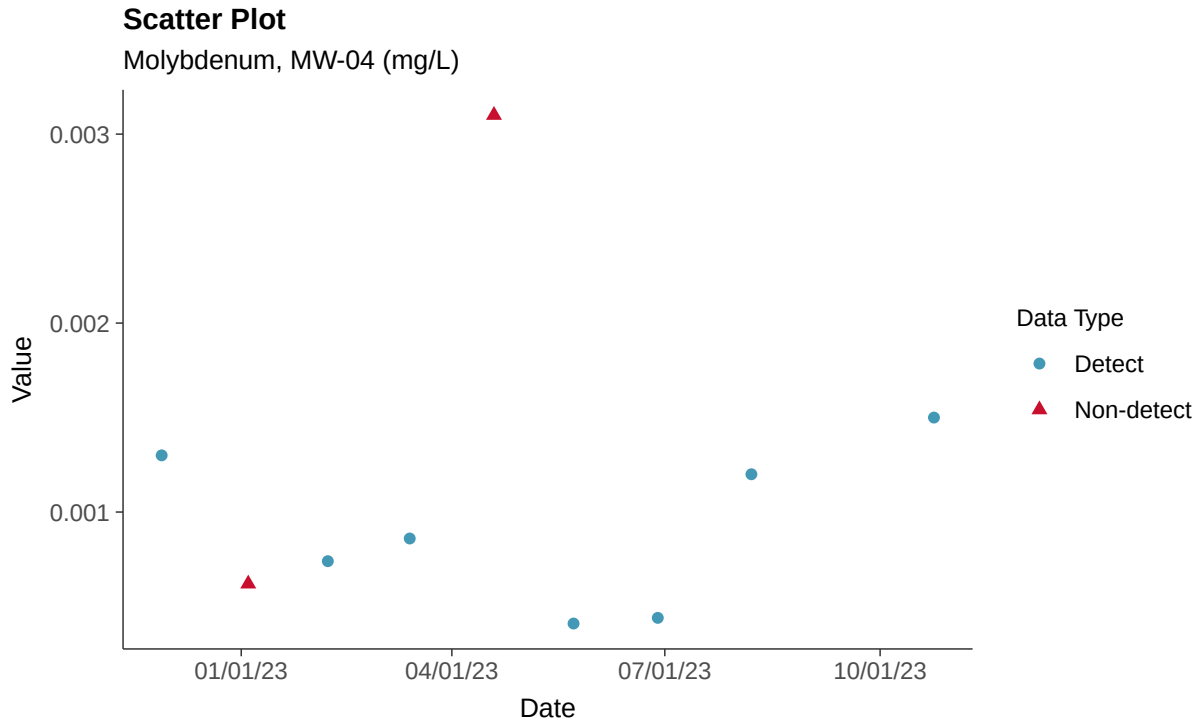
Boxplot by Season

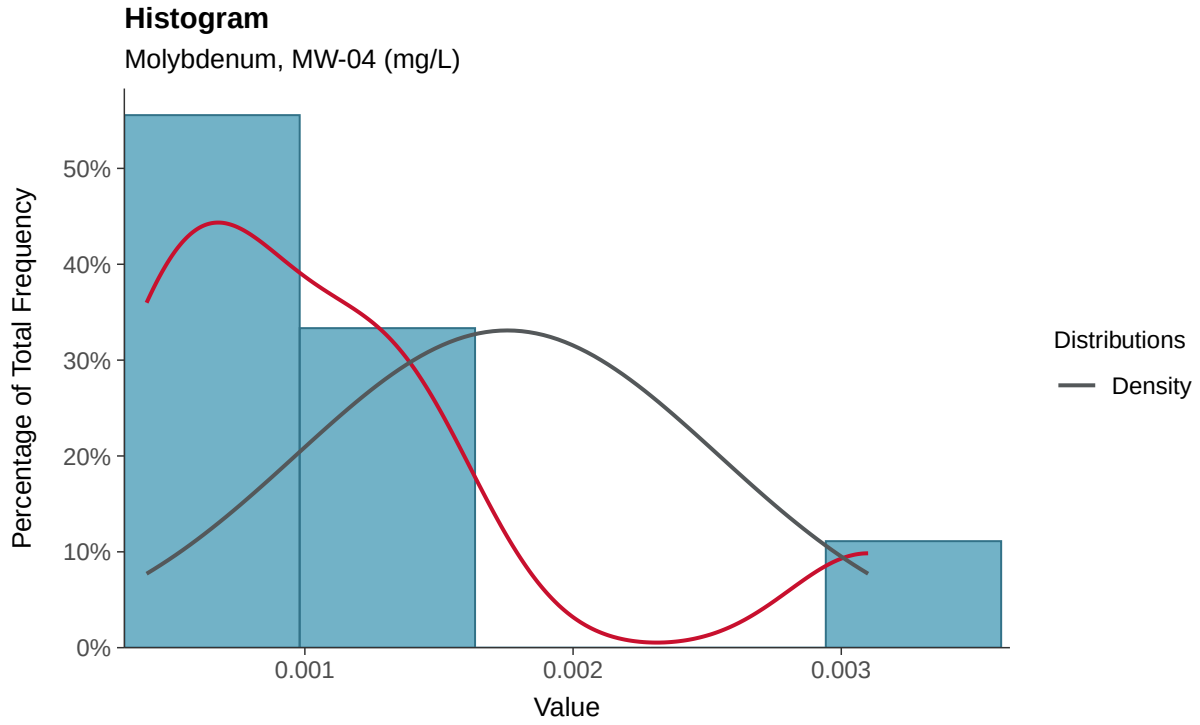
Mercury, MW-04 (mg/L)



Appendix IV: Molybdenum, MW-04

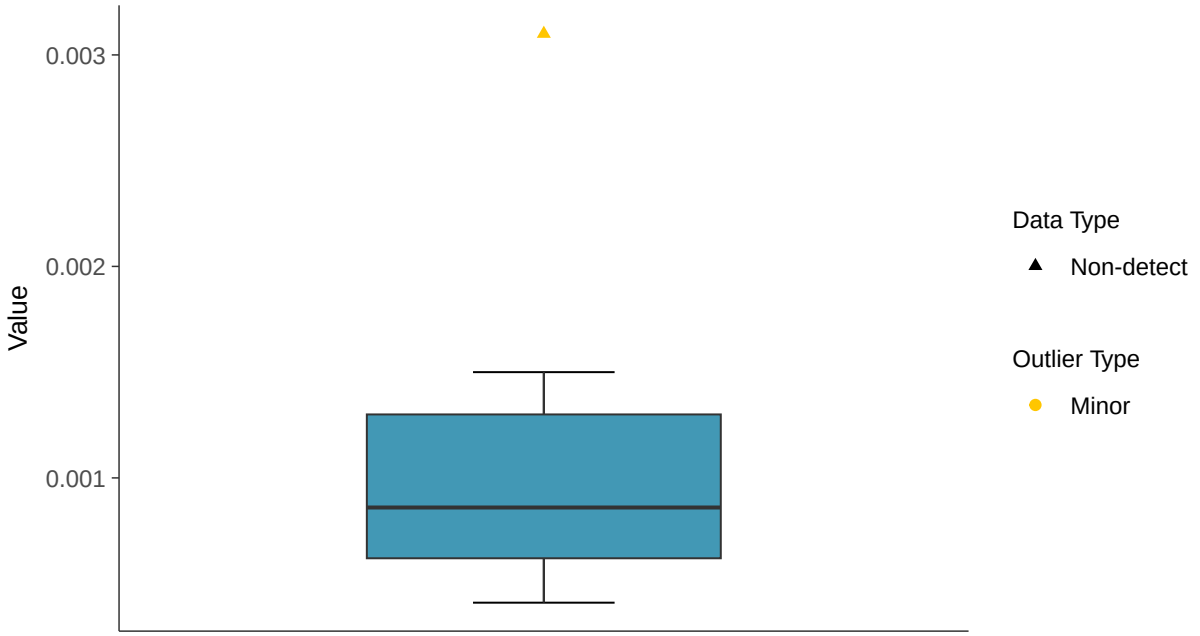
ID: 2_14_5_118





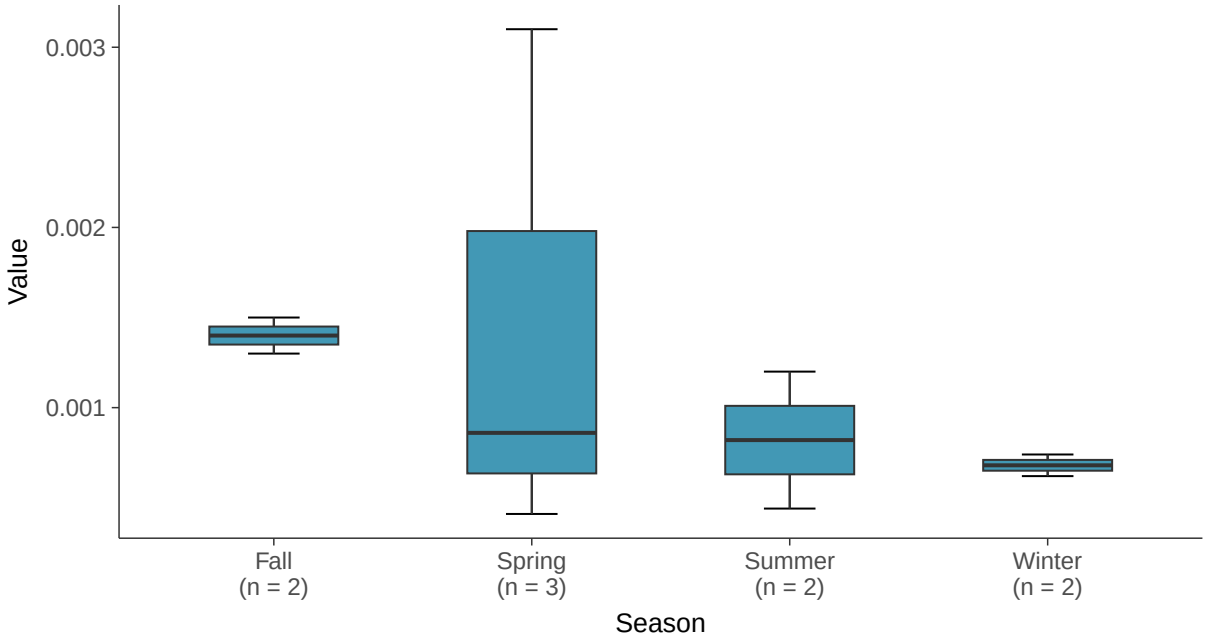
Boxplot

Molybdenum, MW-04 (mg/L)



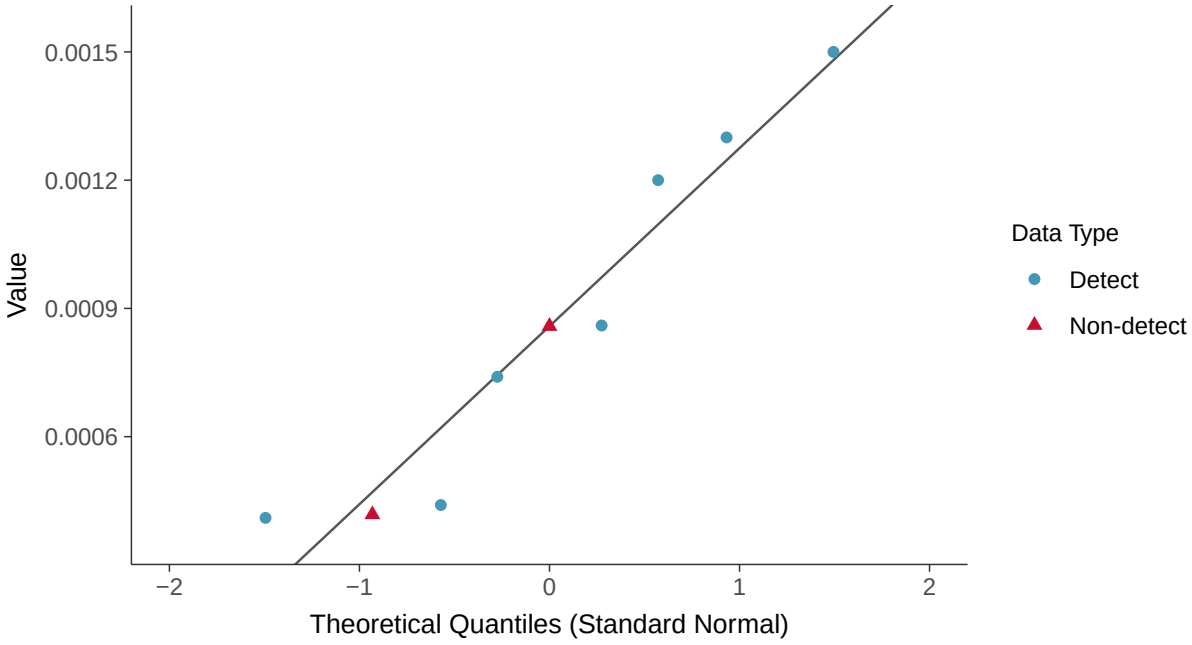
Boxplot by Season

Molybdenum, MW-04 (mg/L)



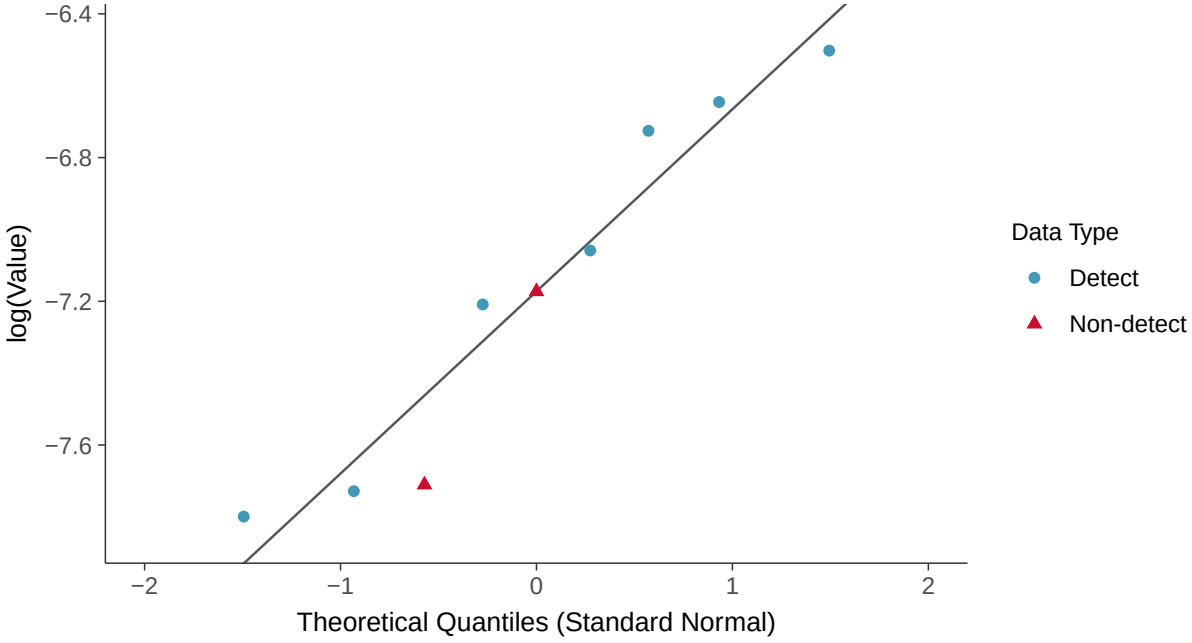
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-04 (mg/L)



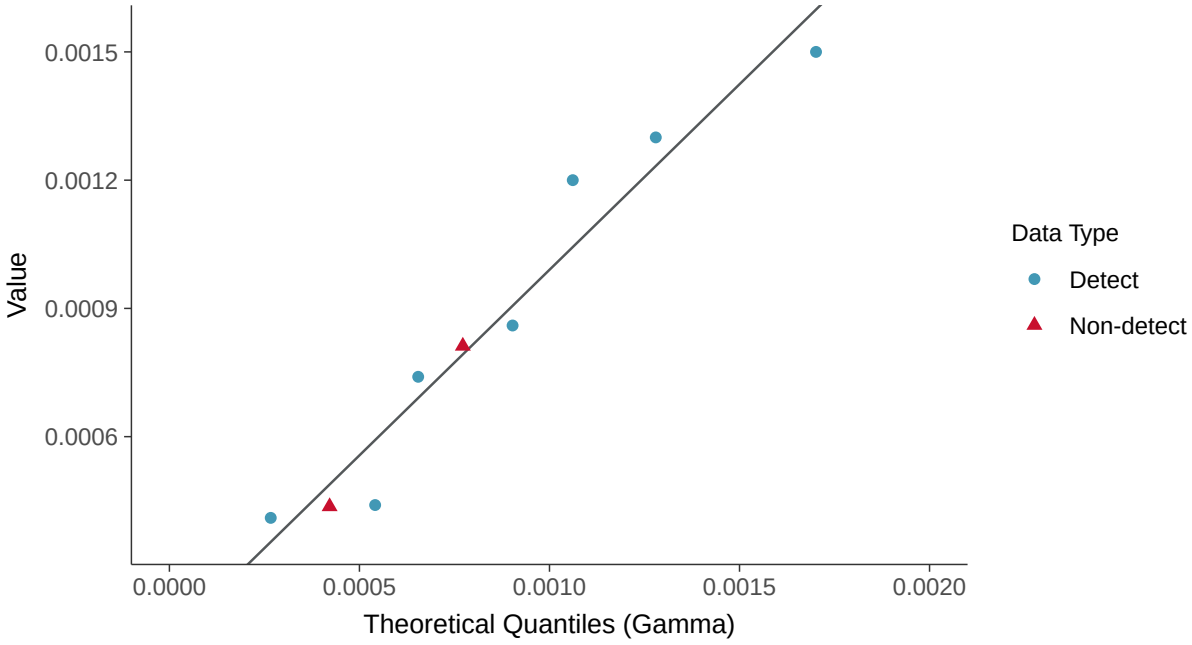
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-04 (mg/L)



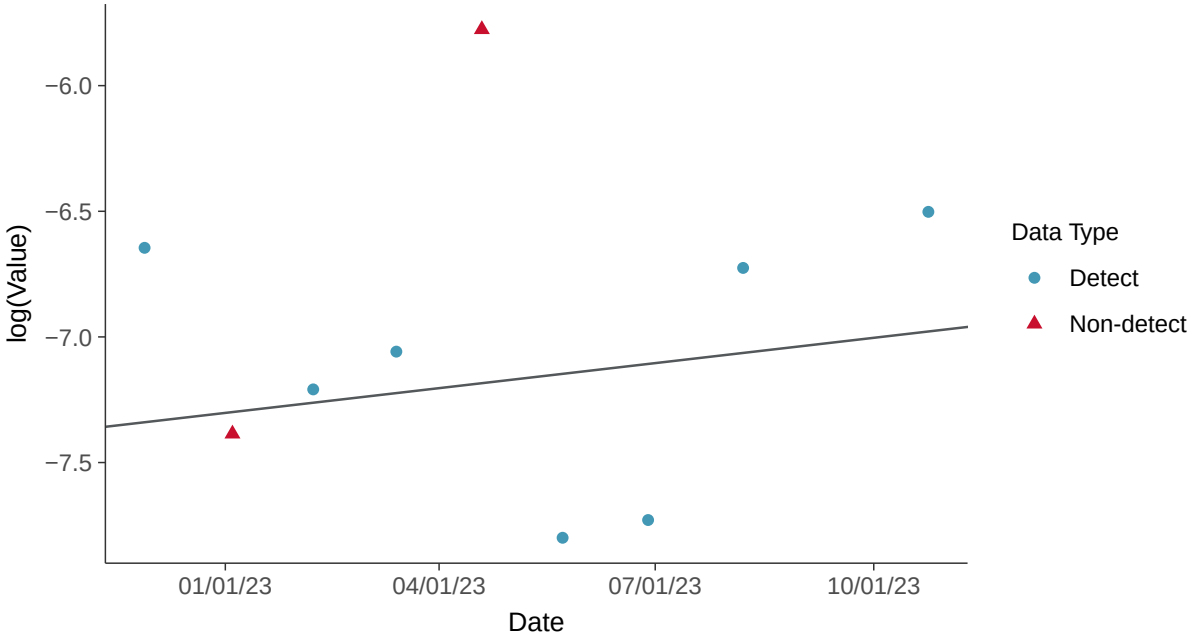
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-04 (mg/L)



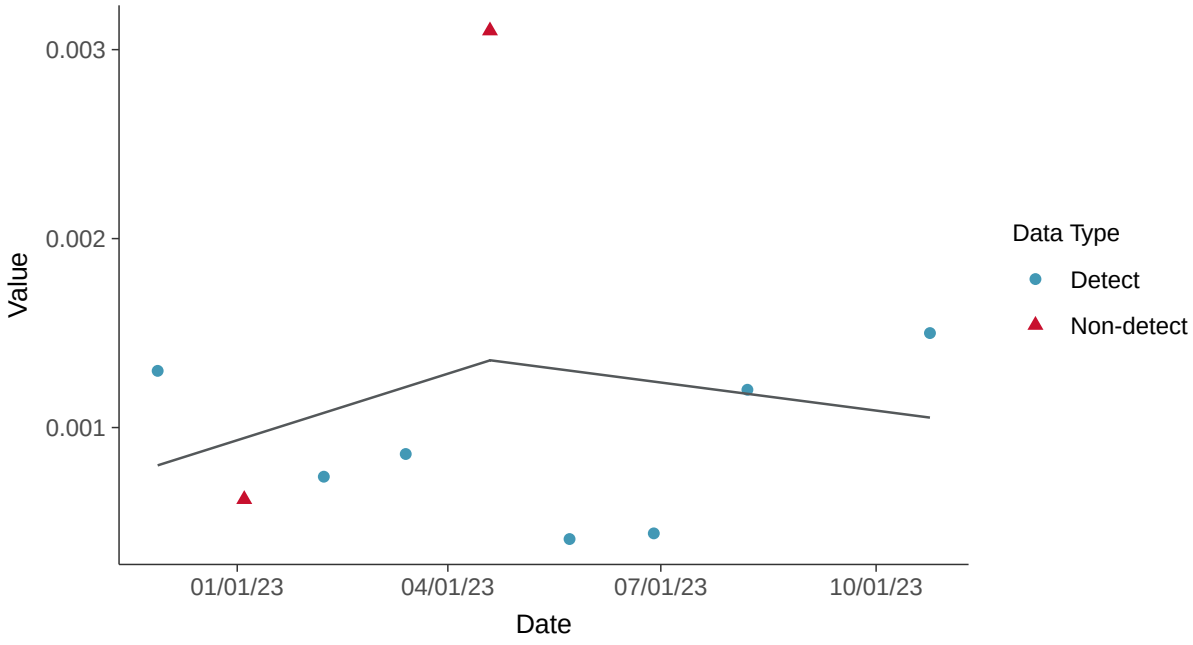
Trend Regression: Lognormal MLE

Molybdenum, MW-04 (mg/L)



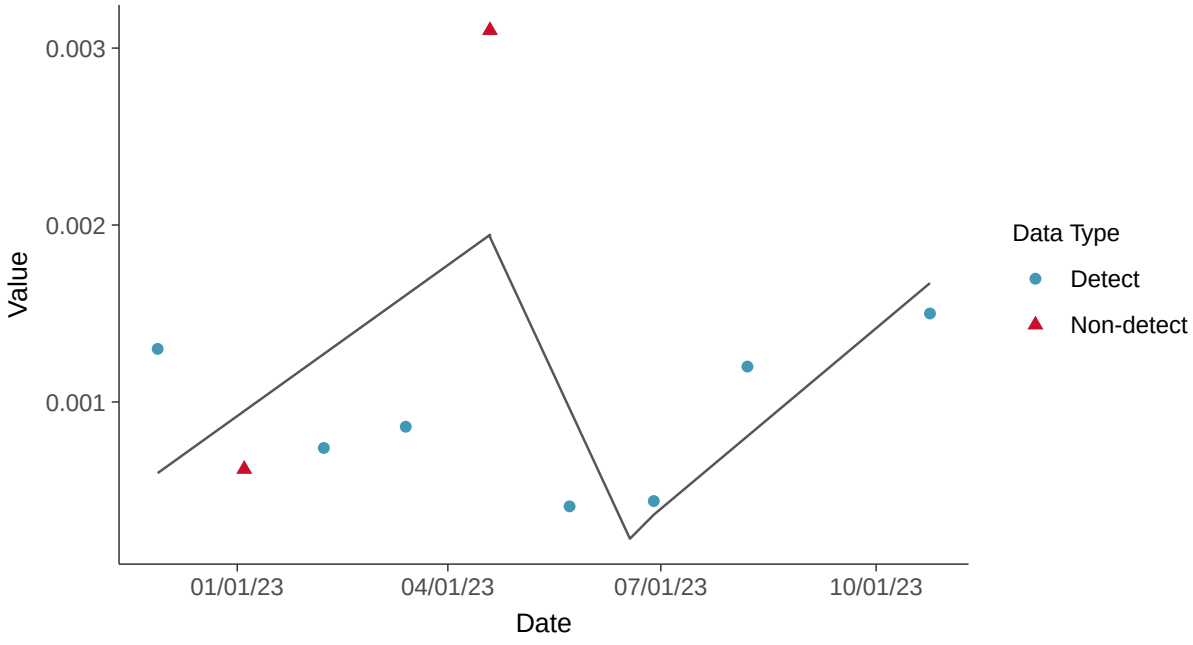
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-04 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-04 (mg/L)

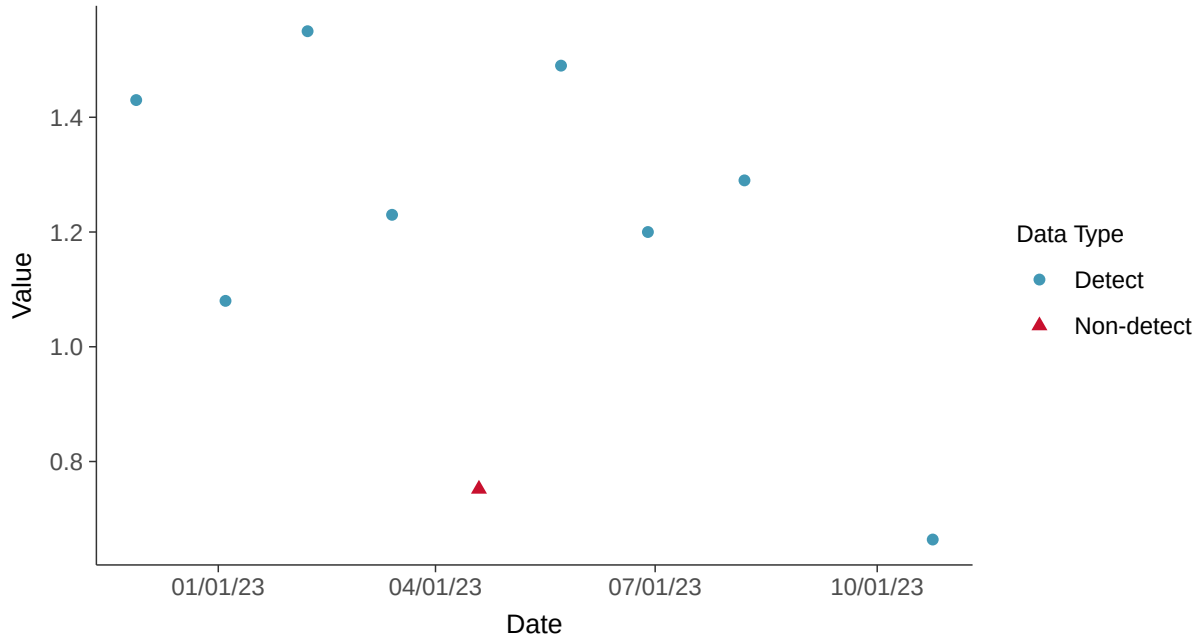


Appendix IV: Radium 226 and 228, MW-04

ID: 2_14_5_121

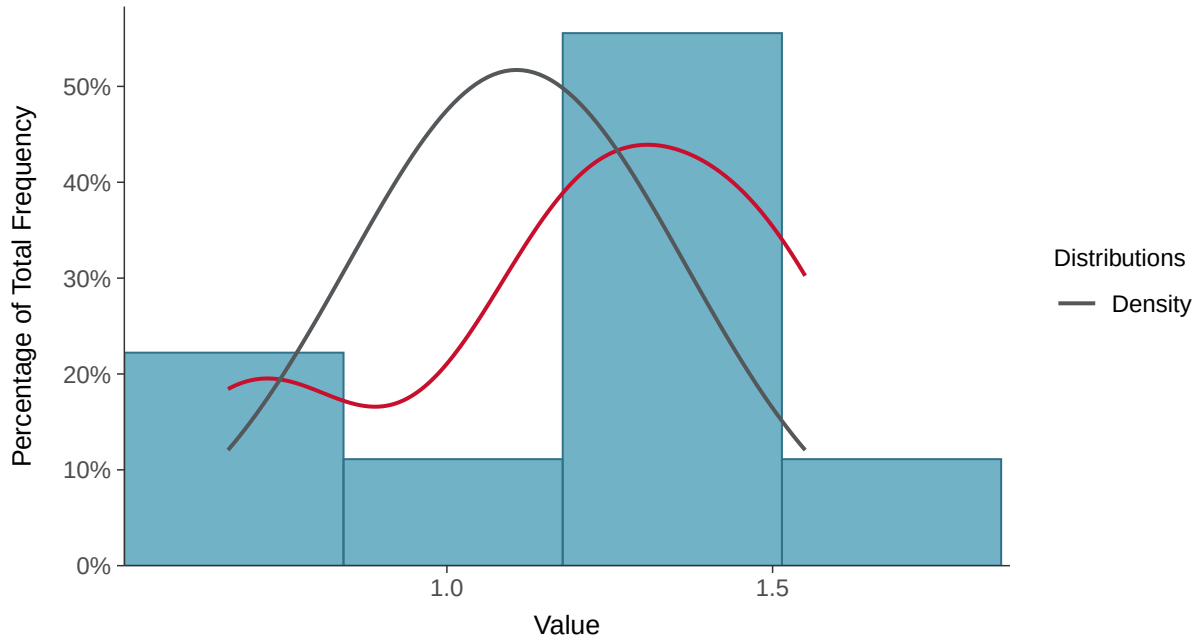
Scatter Plot

Radium 226 and 228, MW-04 (pCi/L)



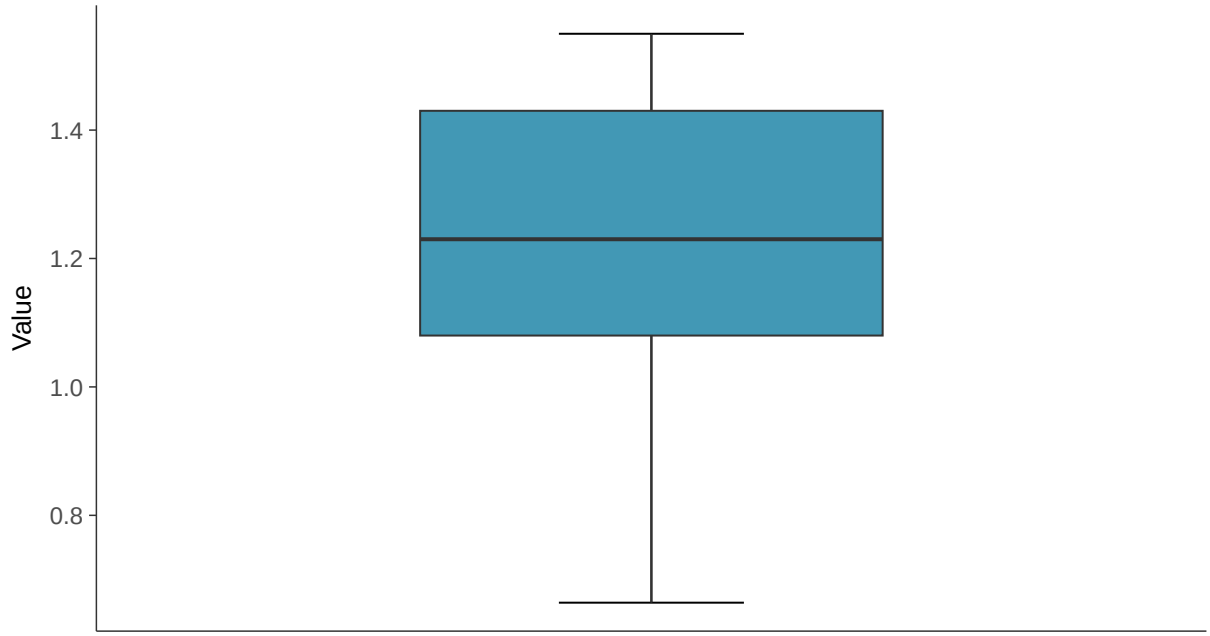
Histogram

Radium 226 and 228, MW-04 (pCi/L)



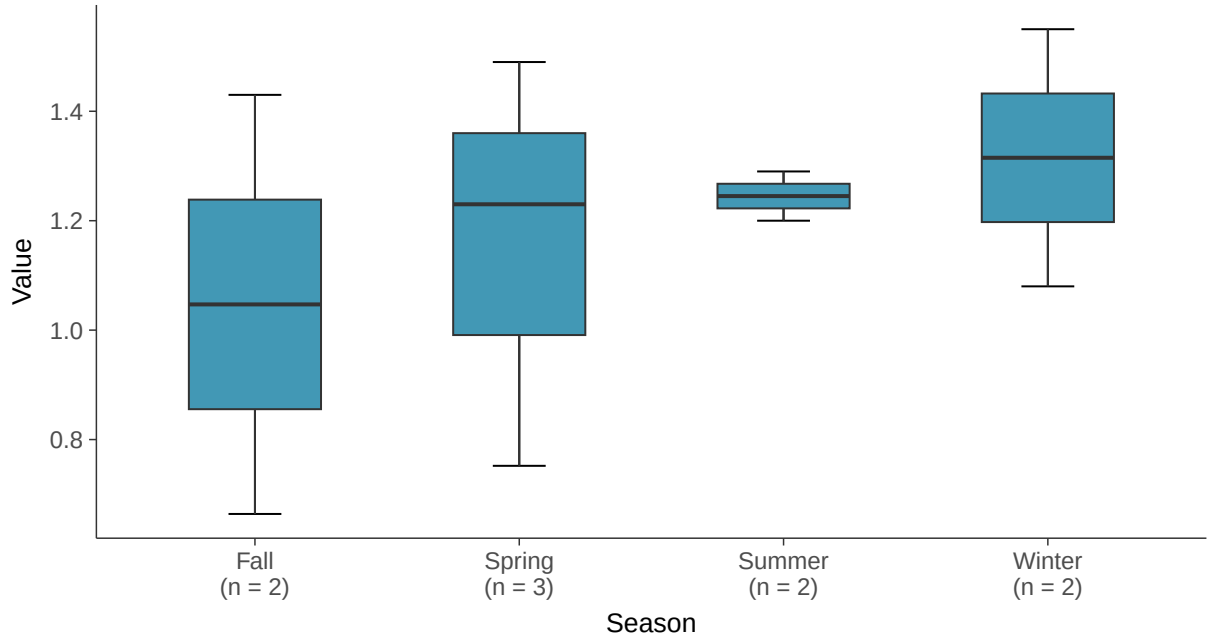
Boxplot

Radium 226 and 228, MW-04 (pCi/L)



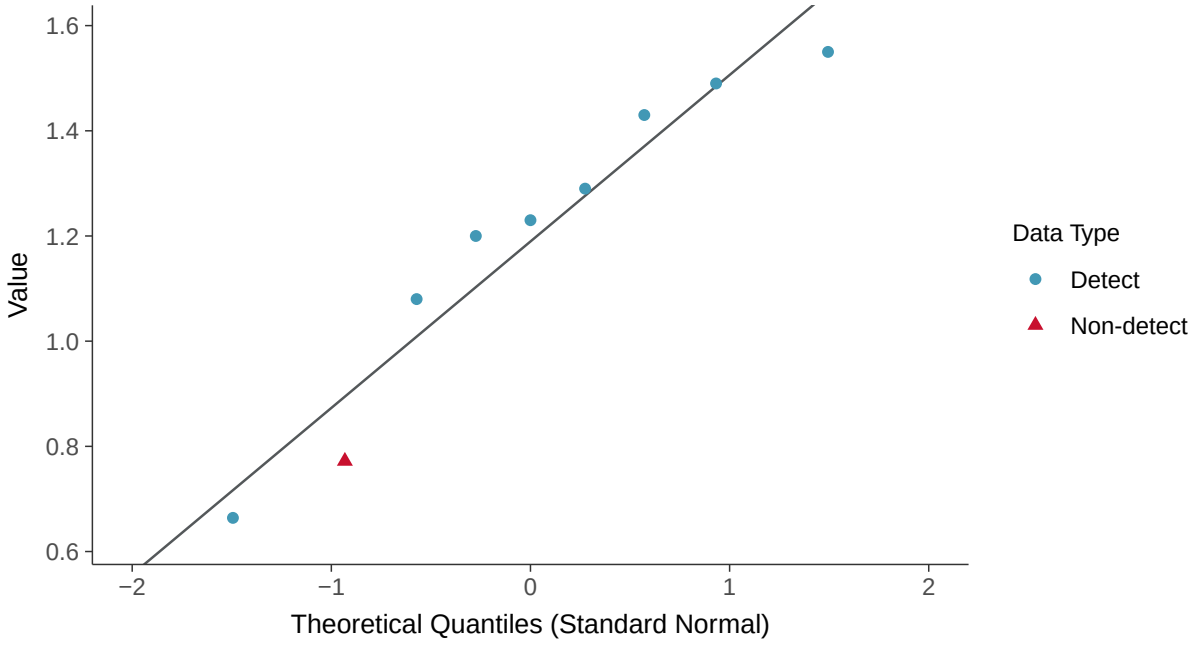
Boxplot by Season

Radium 226 and 228, MW-04 (pCi/L)



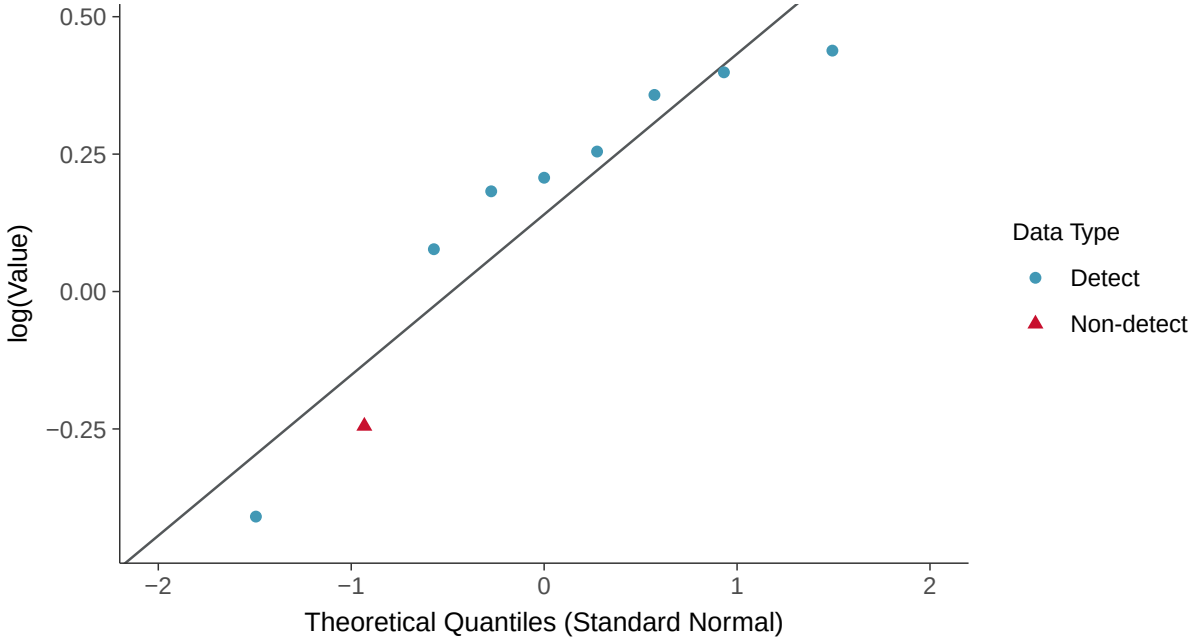
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-04 (pCi/L)



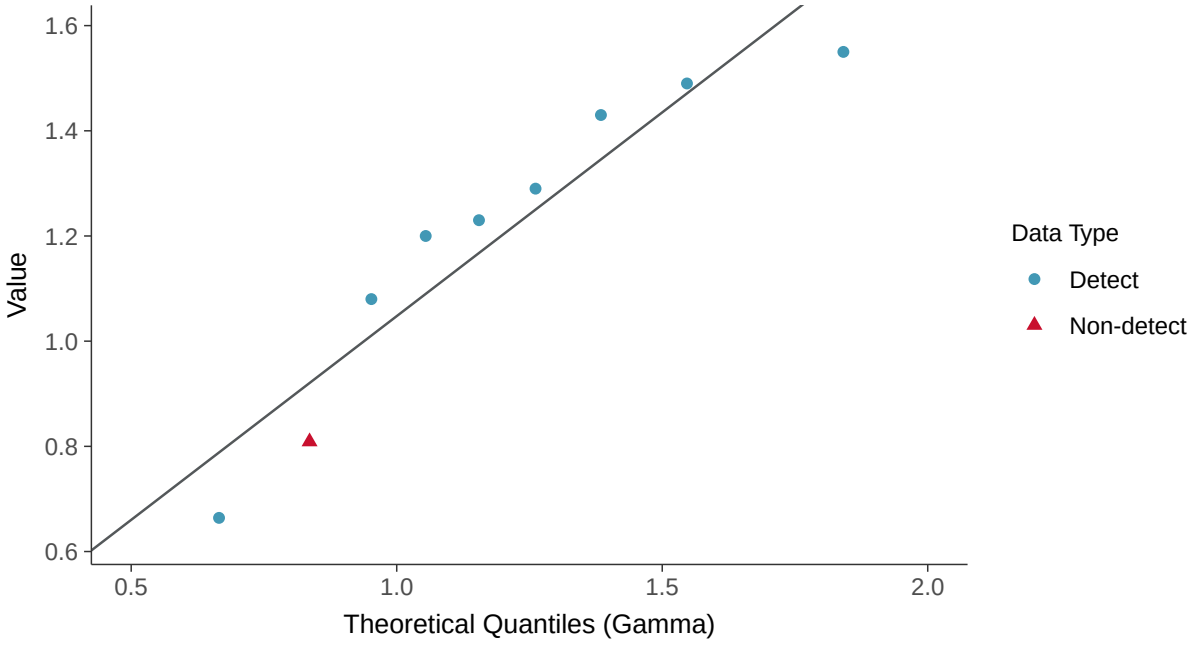
Lognormal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-04 (pCi/L)



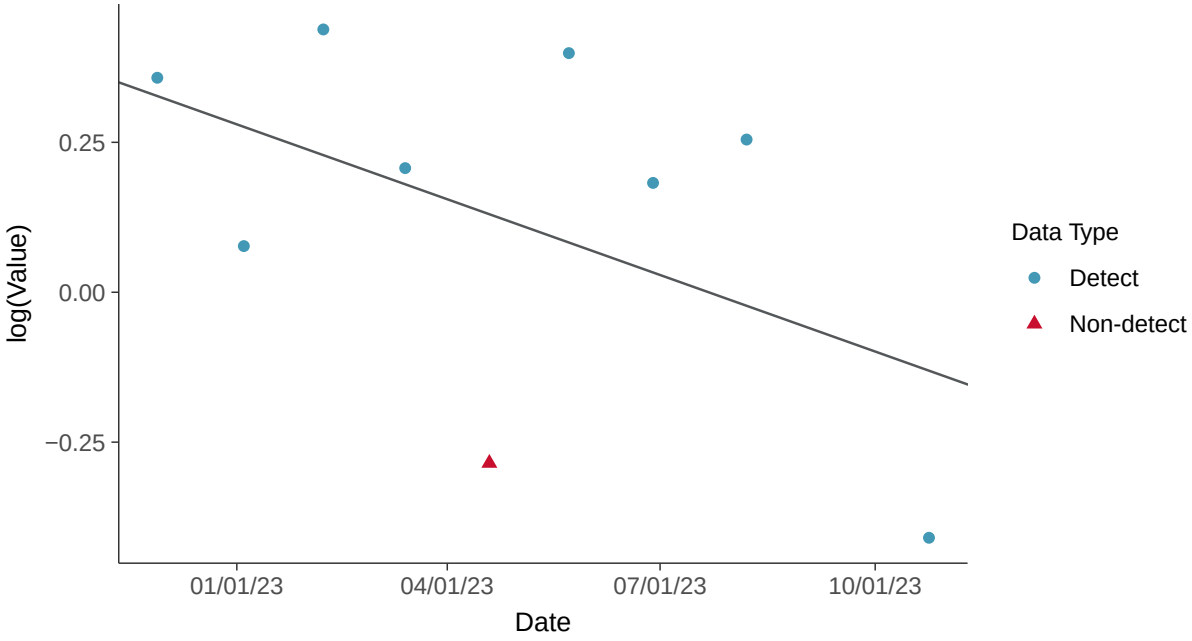
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-04 (pCi/L)



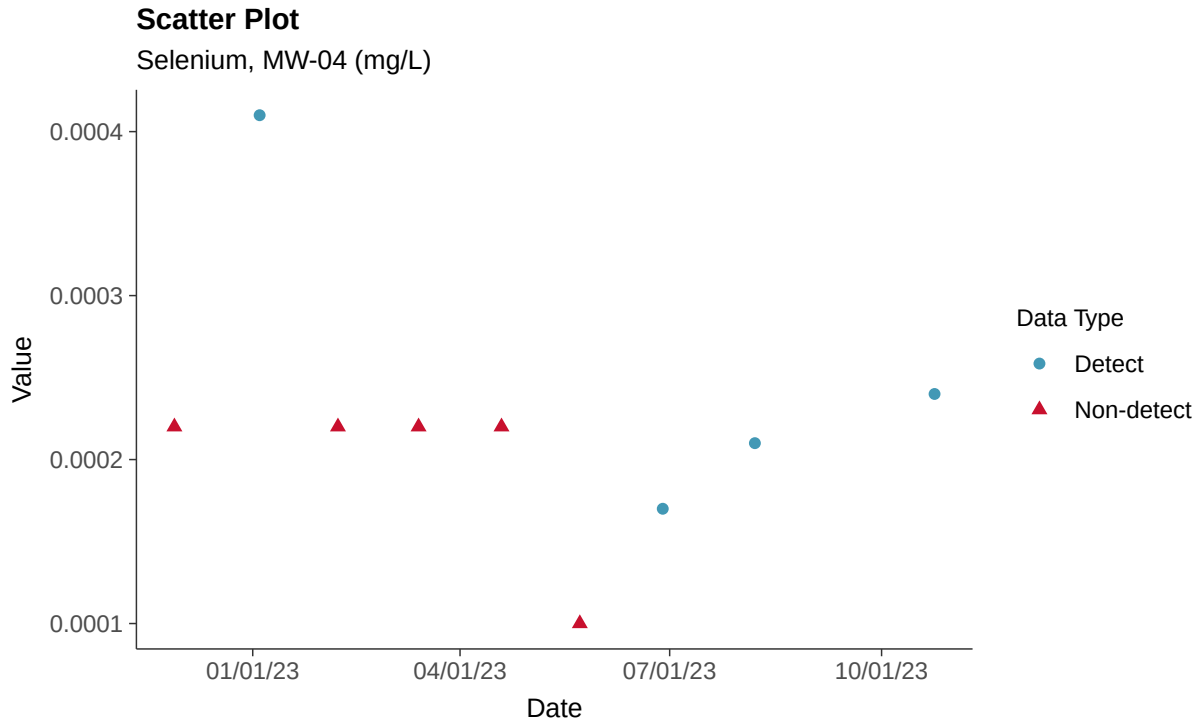
Trend Regression: Lognormal MLE

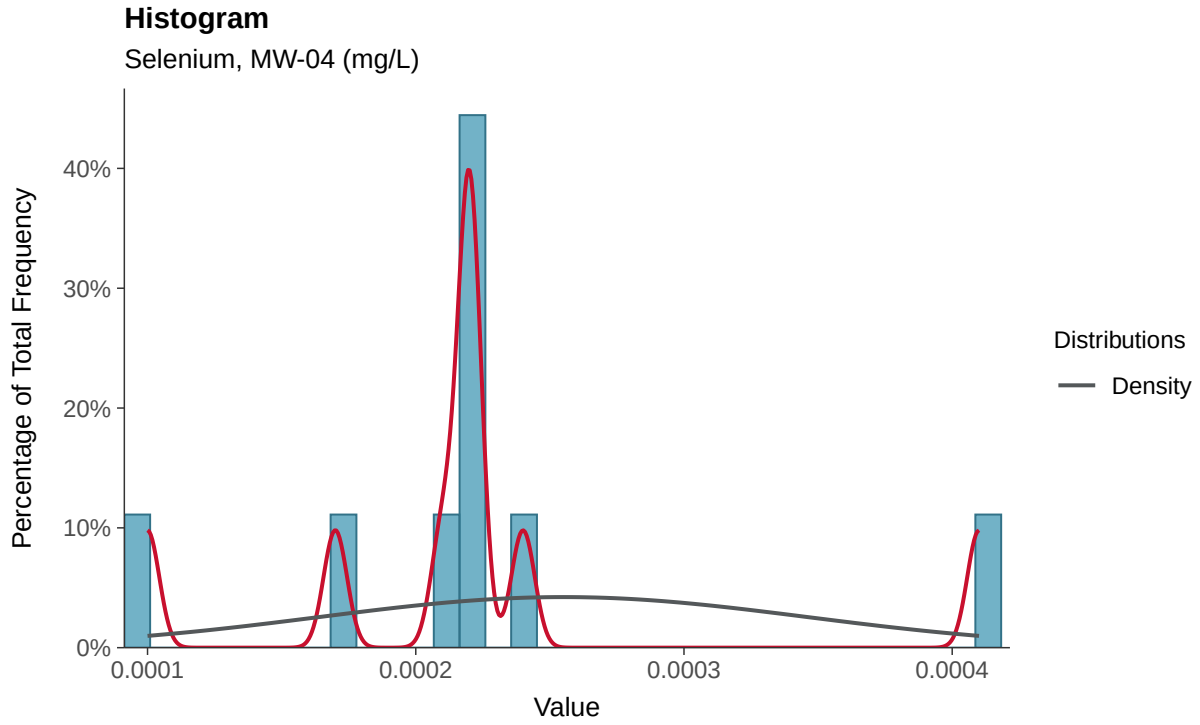
Radium 226 and 228, MW-04 (pCi/L)



Appendix IV: Selenium, MW-04

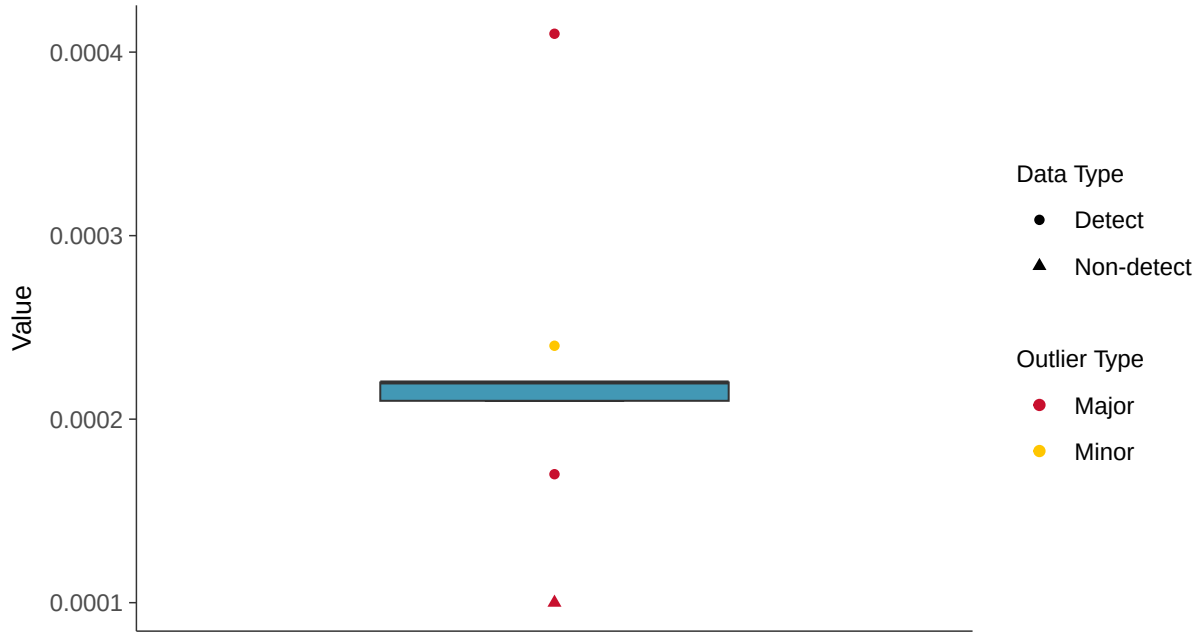
ID: 2_14_5_122





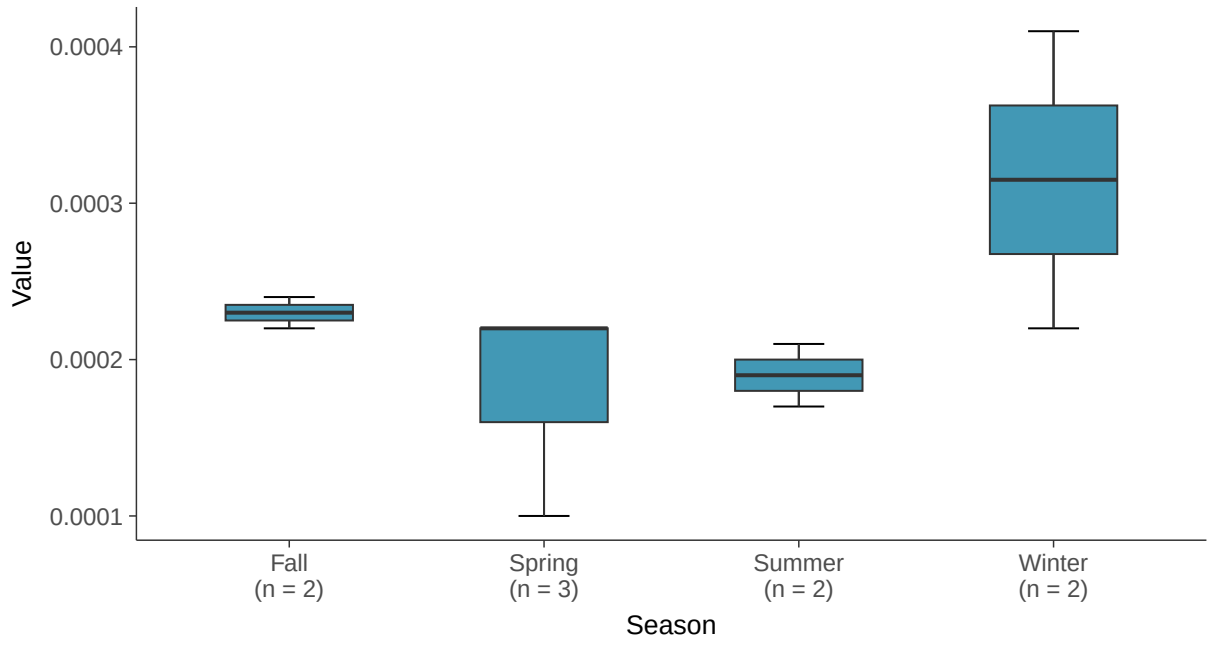
Boxplot

Selenium, MW-04 (mg/L)



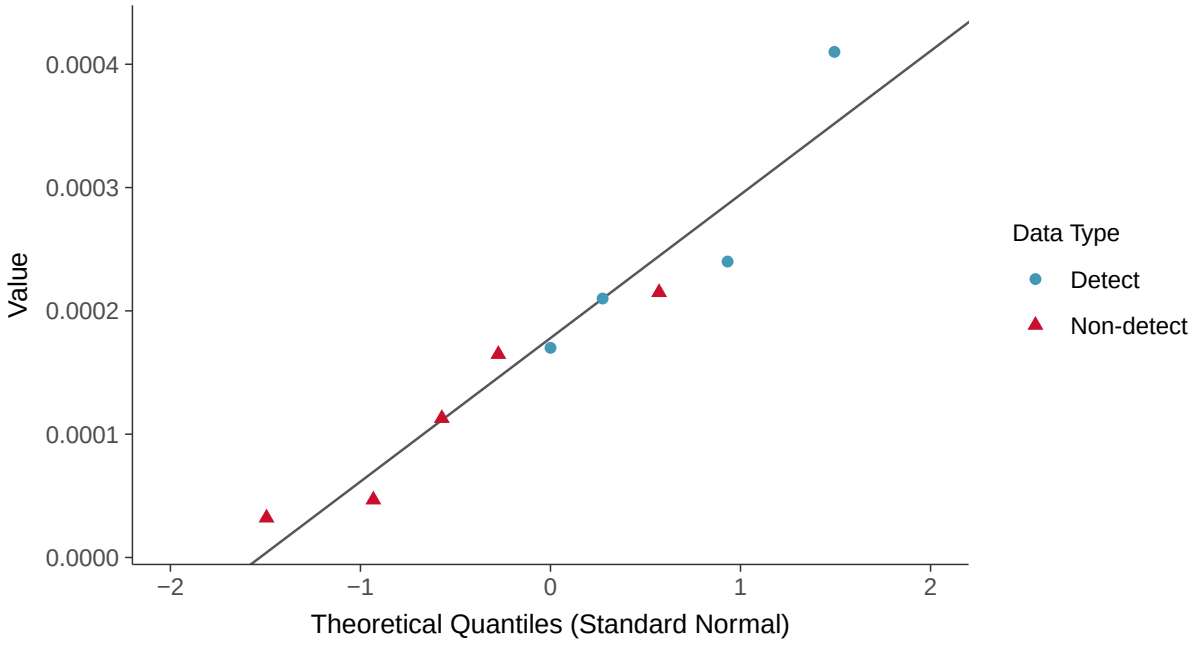
Boxplot by Season

Selenium, MW-04 (mg/L)



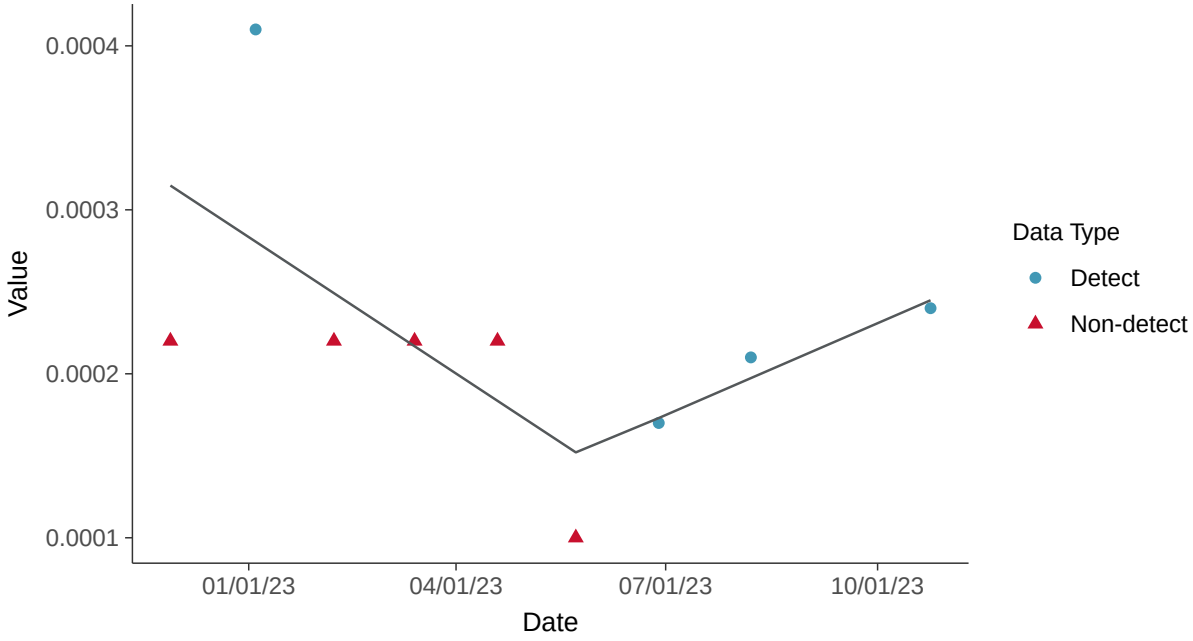
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-04 (mg/L)



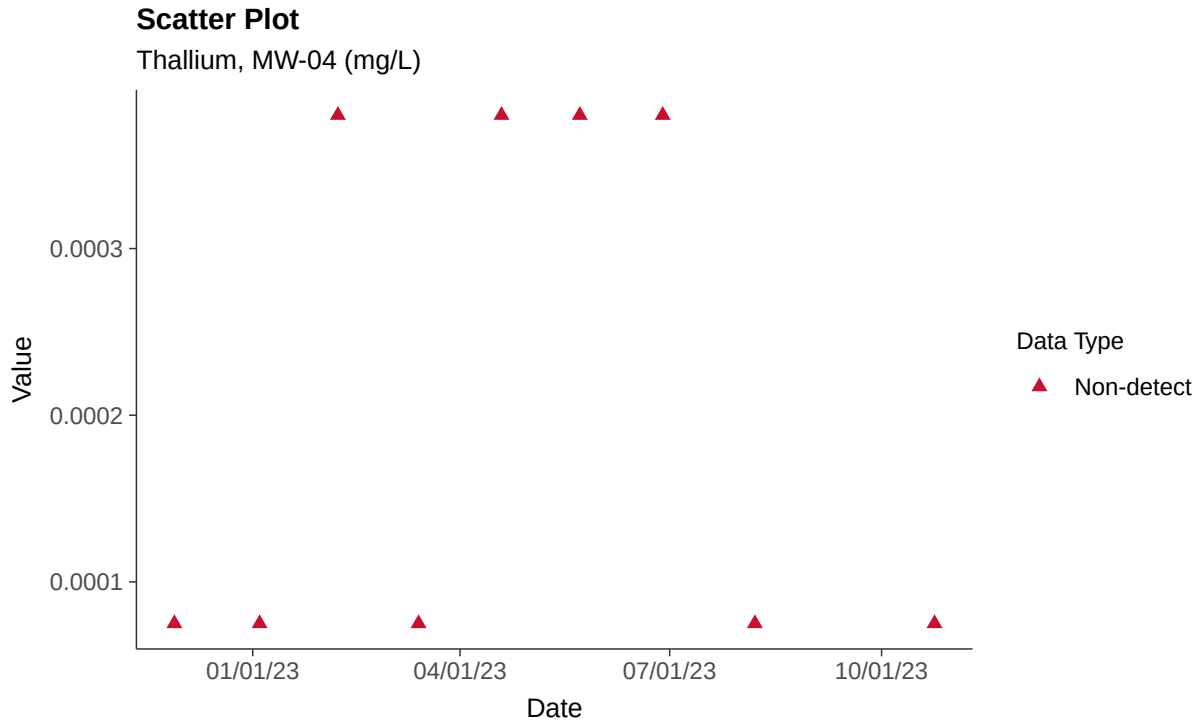
Trend Regression: Piecewise Linear-Linear

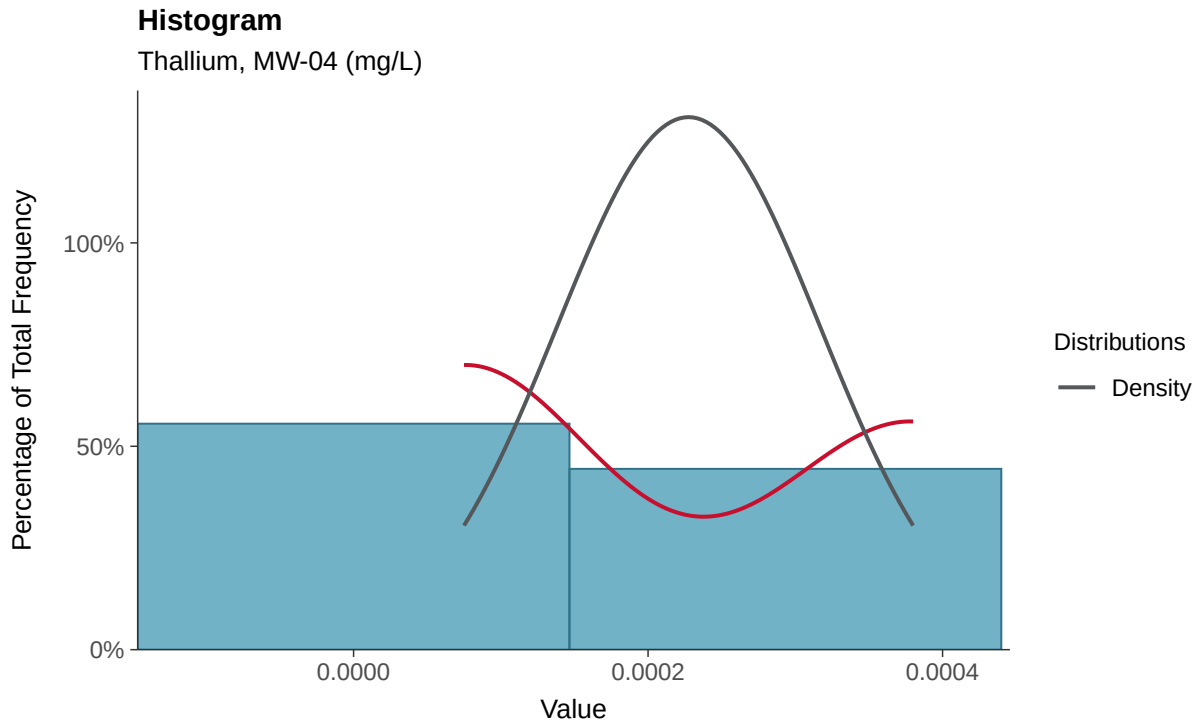
Selenium, MW-04 (mg/L)



Appendix IV: Thallium, MW-04

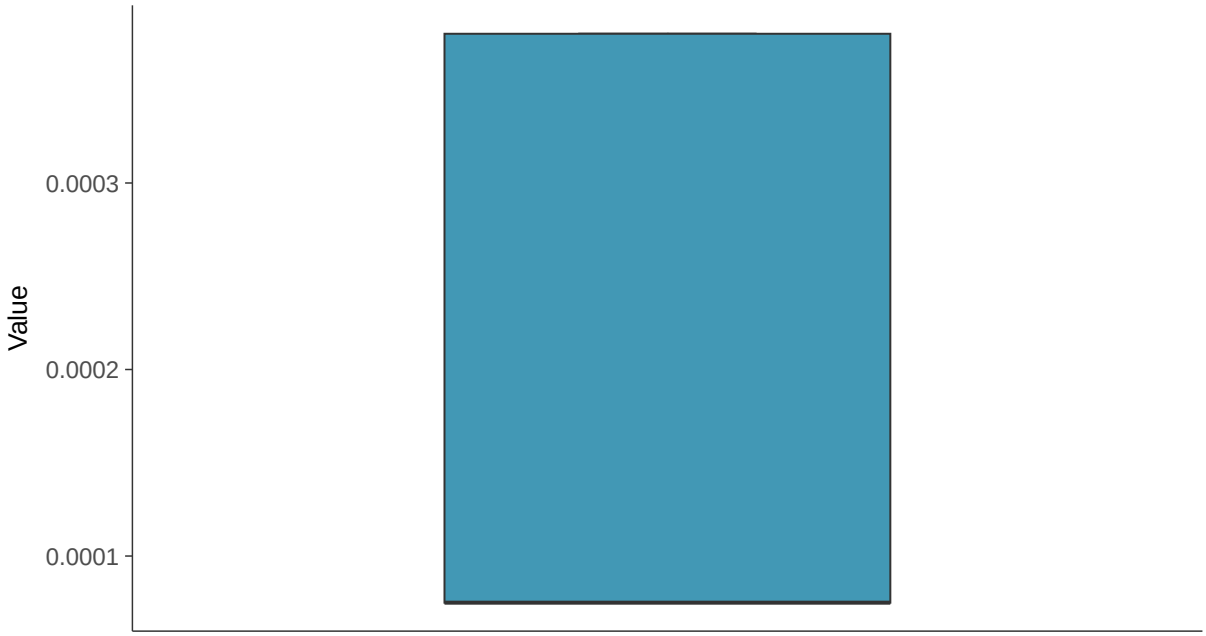
ID: 2_14_5_125





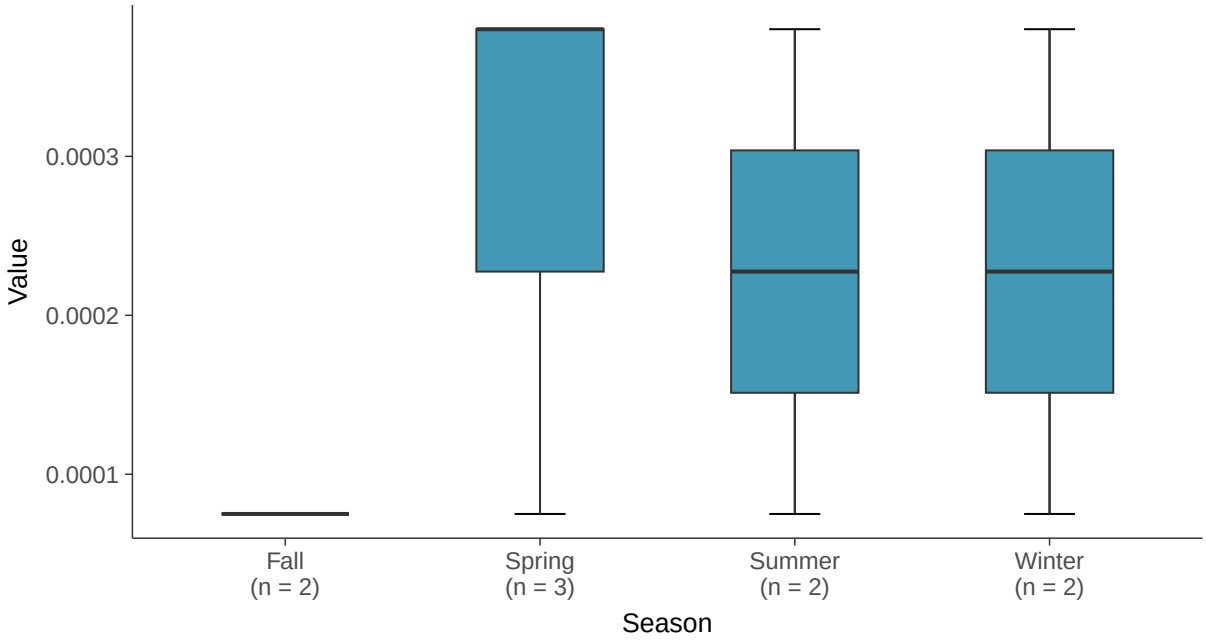
Boxplot

Thallium, MW-04 (mg/L)



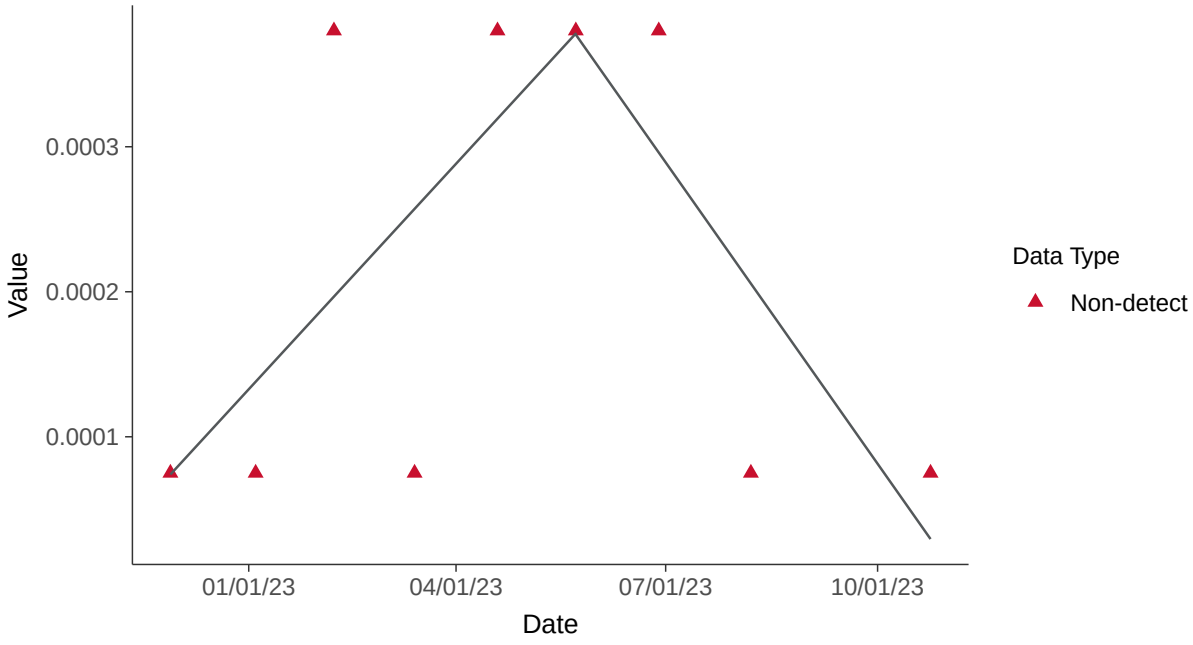
Boxplot by Season

Thallium, MW-04 (mg/L)



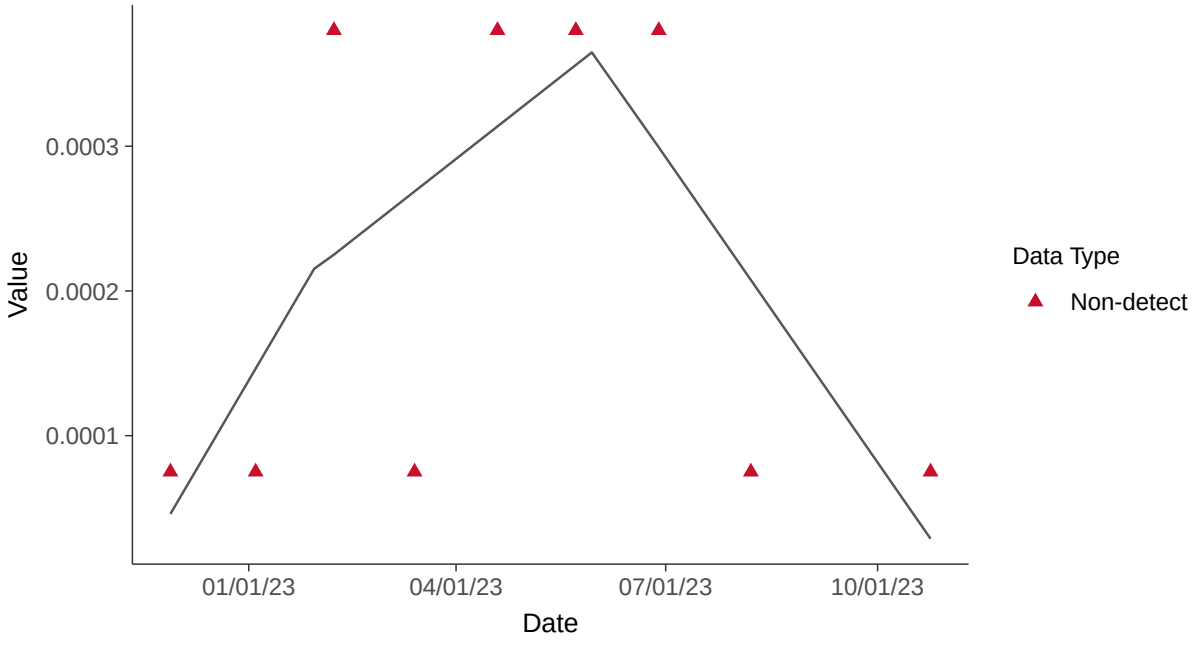
Trend Regression: Piecewise Linear-Linear

Thallium, MW-04 (mg/L)



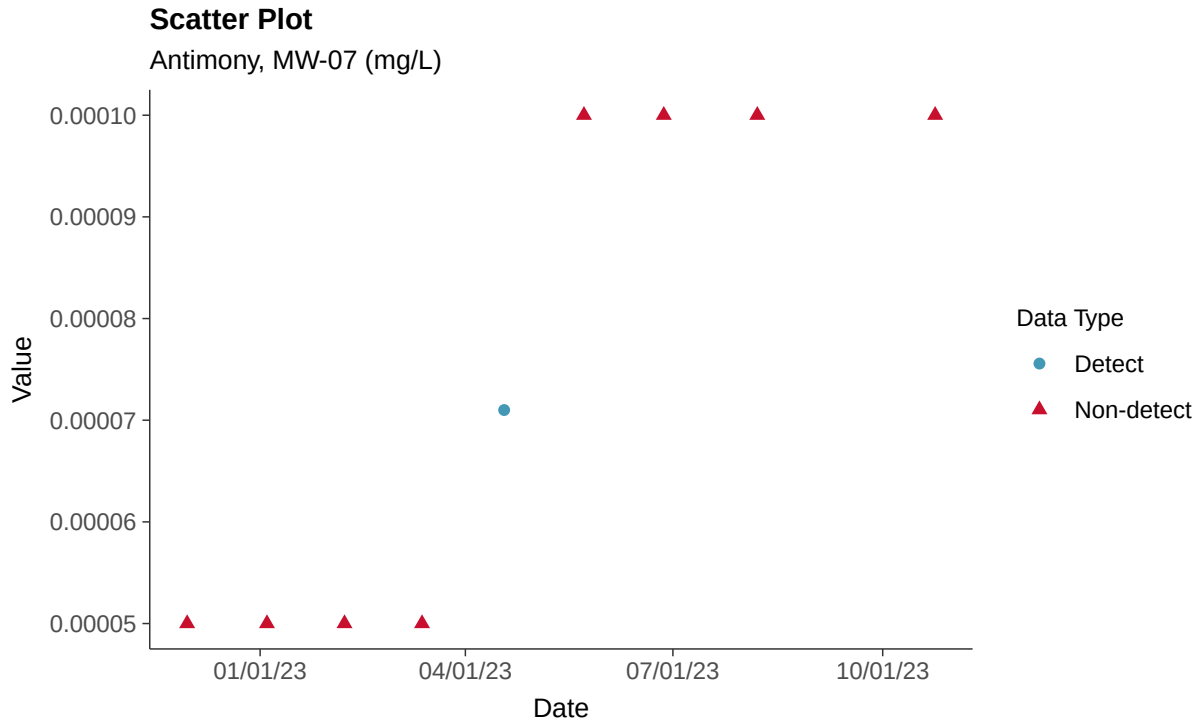
Trend Regression: Piecewise Linear-Linear-Linear

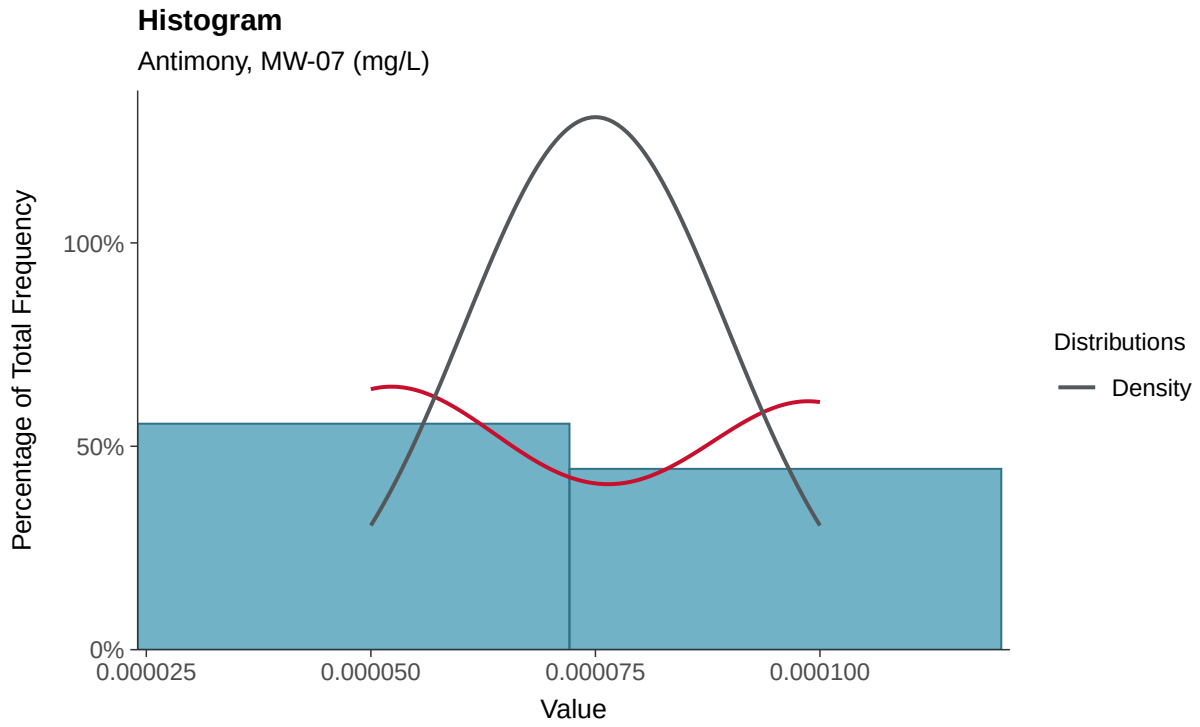
Thallium, MW-04 (mg/L)



Appendix IV: Antimony, MW-07

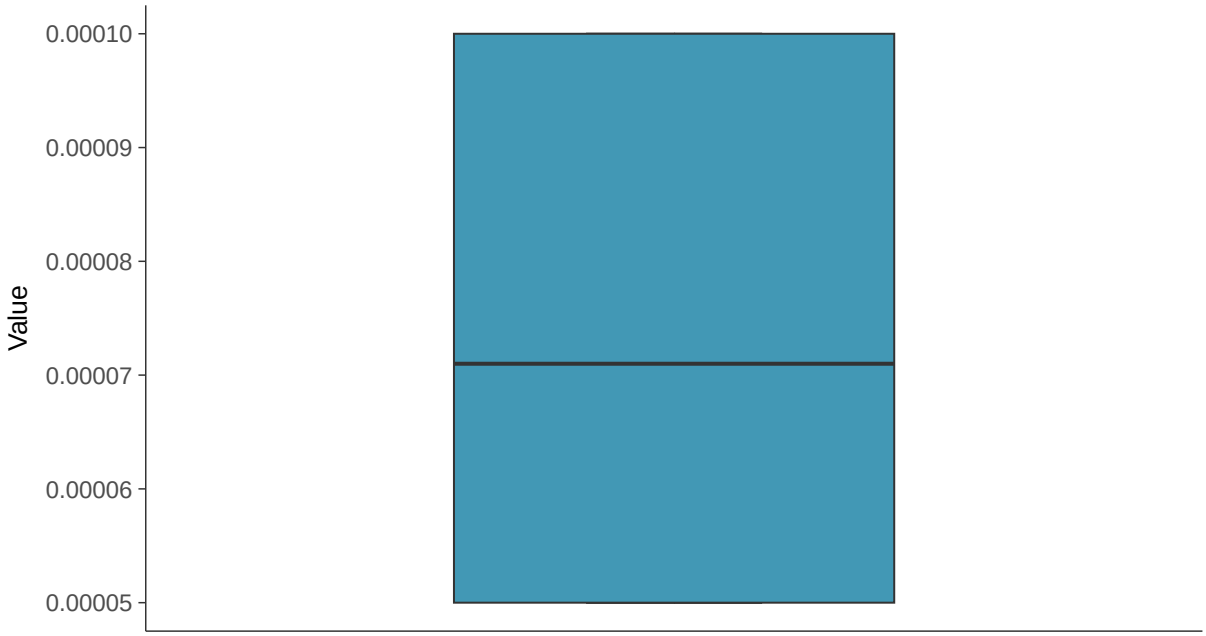
ID: 2_16_5_101





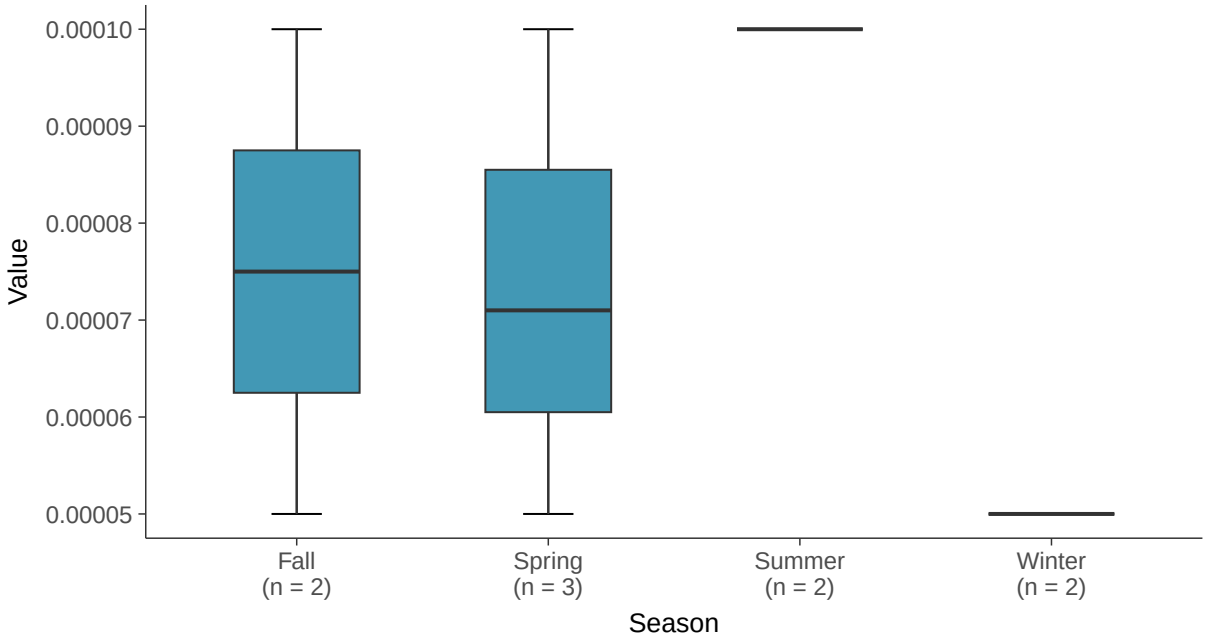
Boxplot

Antimony, MW-07 (mg/L)



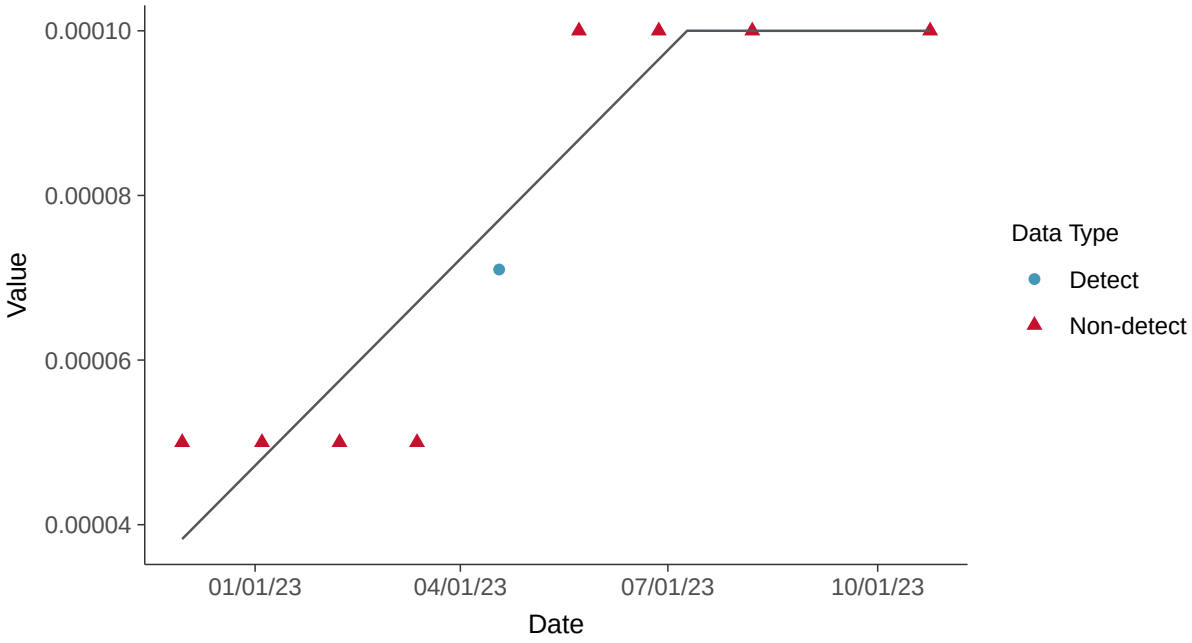
Boxplot by Season

Antimony, MW-07 (mg/L)



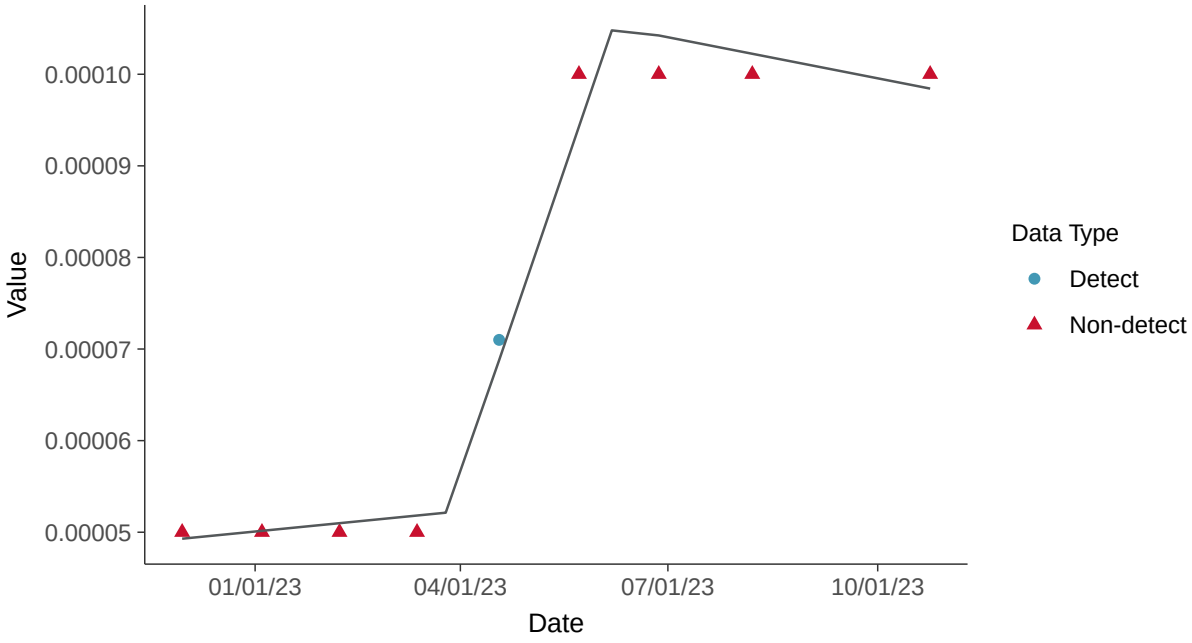
Trend Regression: Piecewise Linear-Linear

Antimony, MW-07 (mg/L)



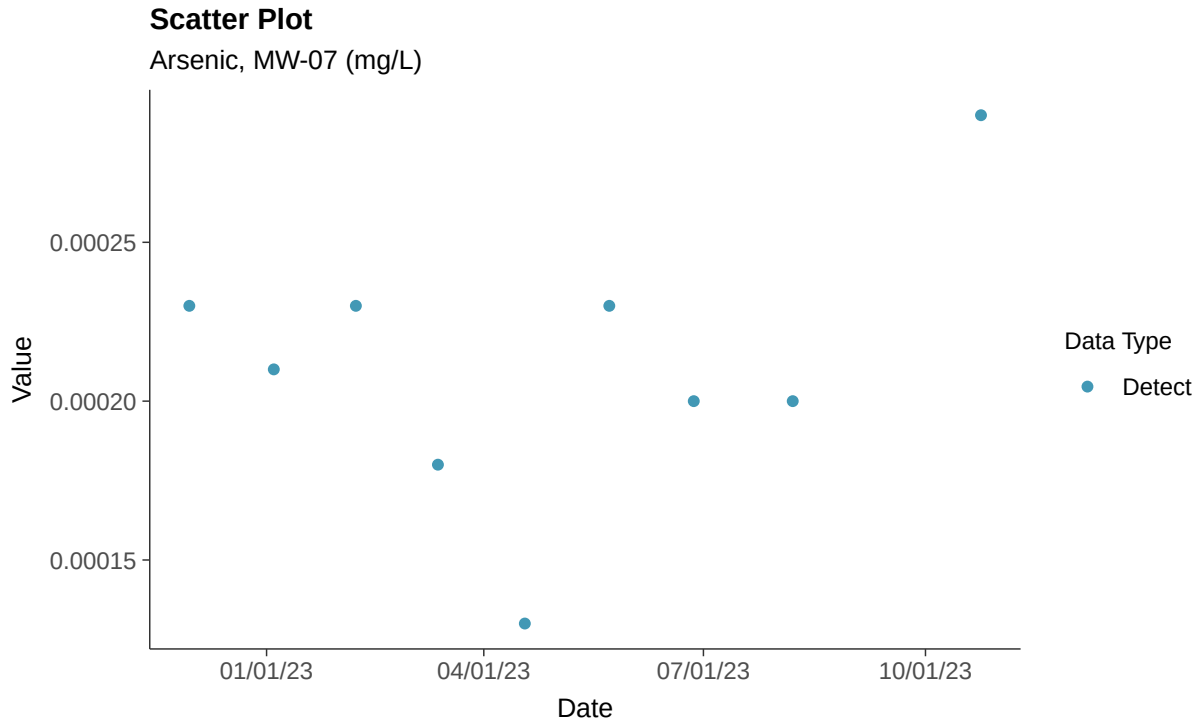
Trend Regression: Piecewise Linear-Linear-Linear

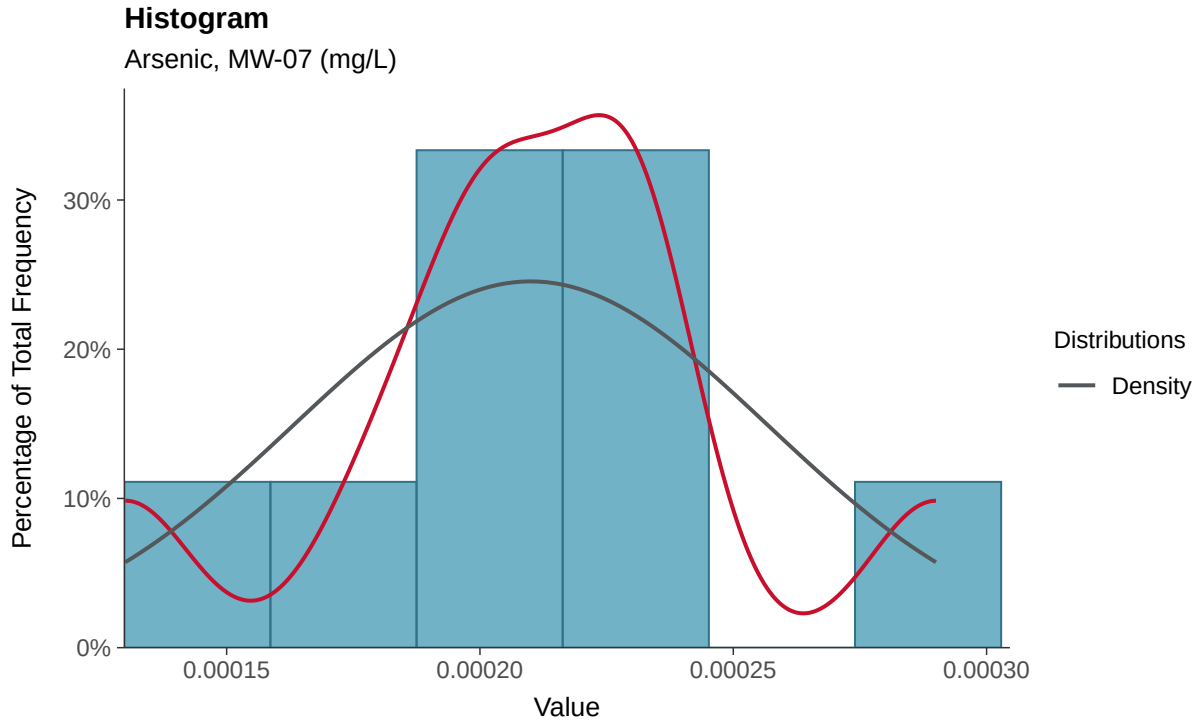
Antimony, MW-07 (mg/L)



Appendix IV: Arsenic, MW-07

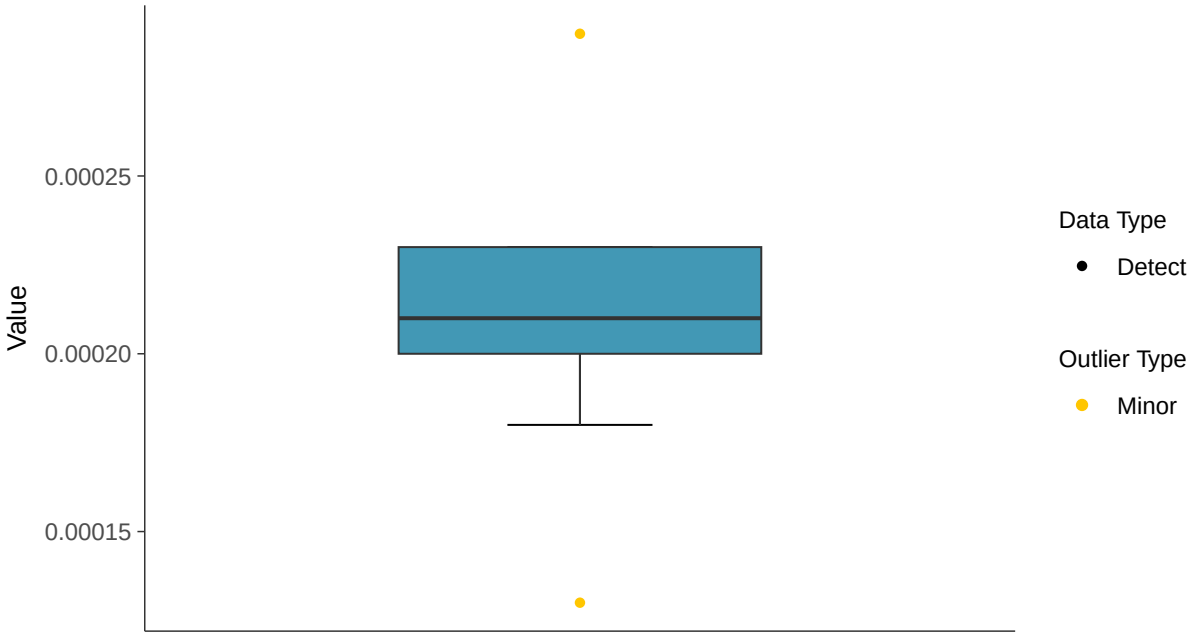
ID: 2_16_5_102





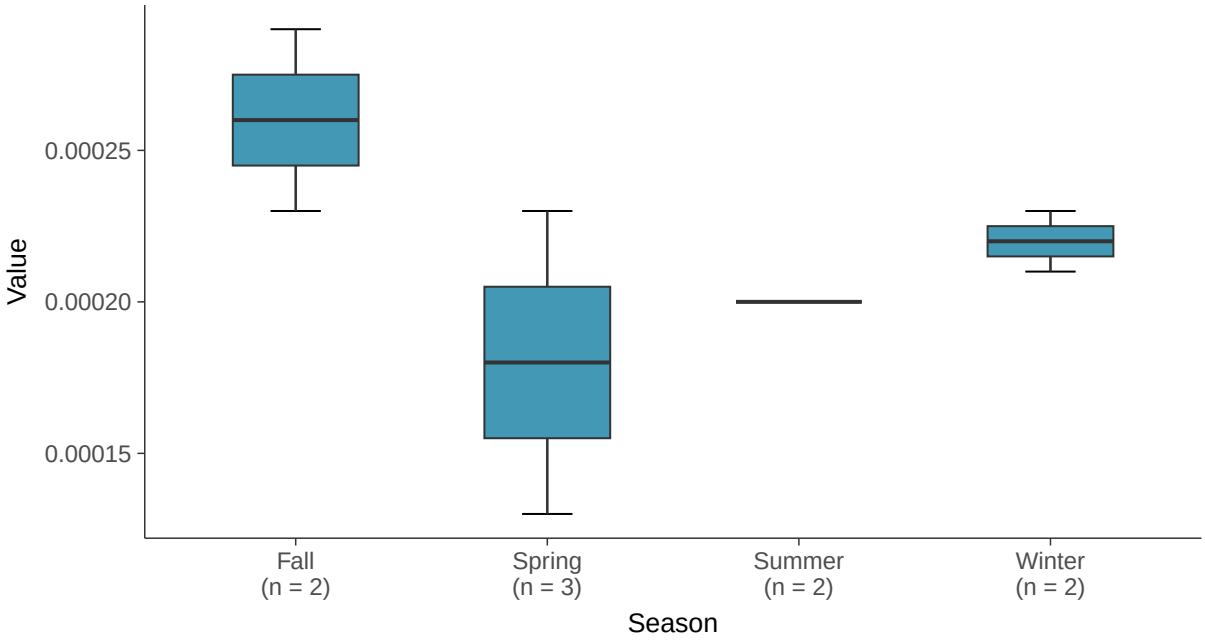
Boxplot

Arsenic, MW-07 (mg/L)



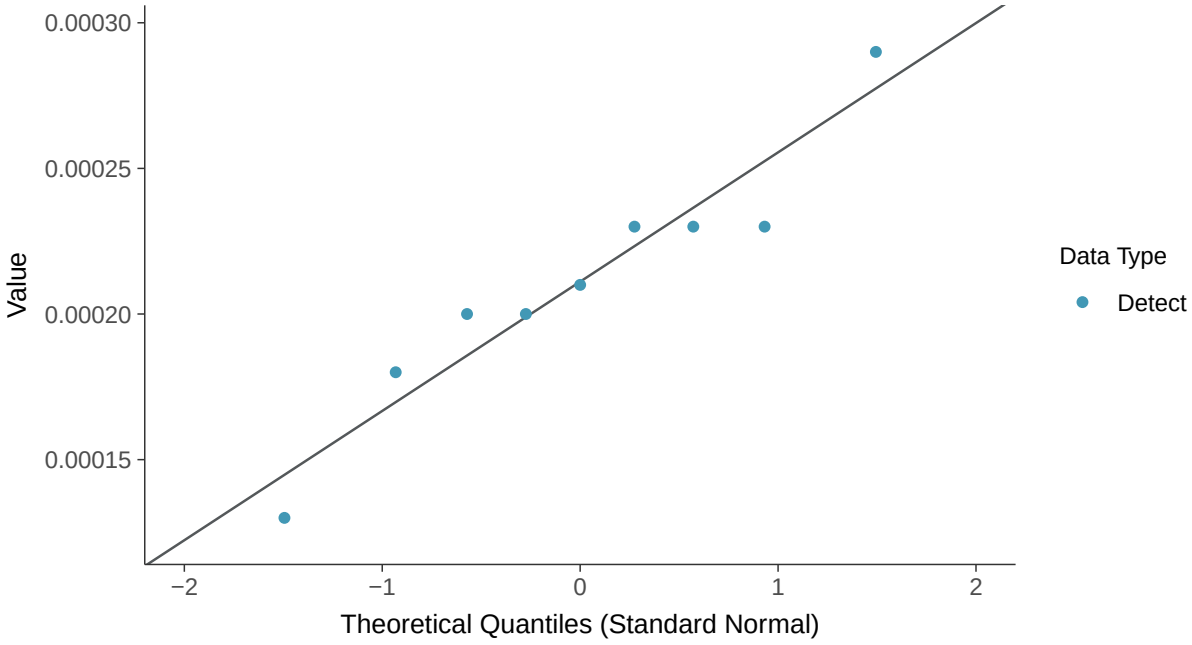
Boxplot by Season

Arsenic, MW-07 (mg/L)



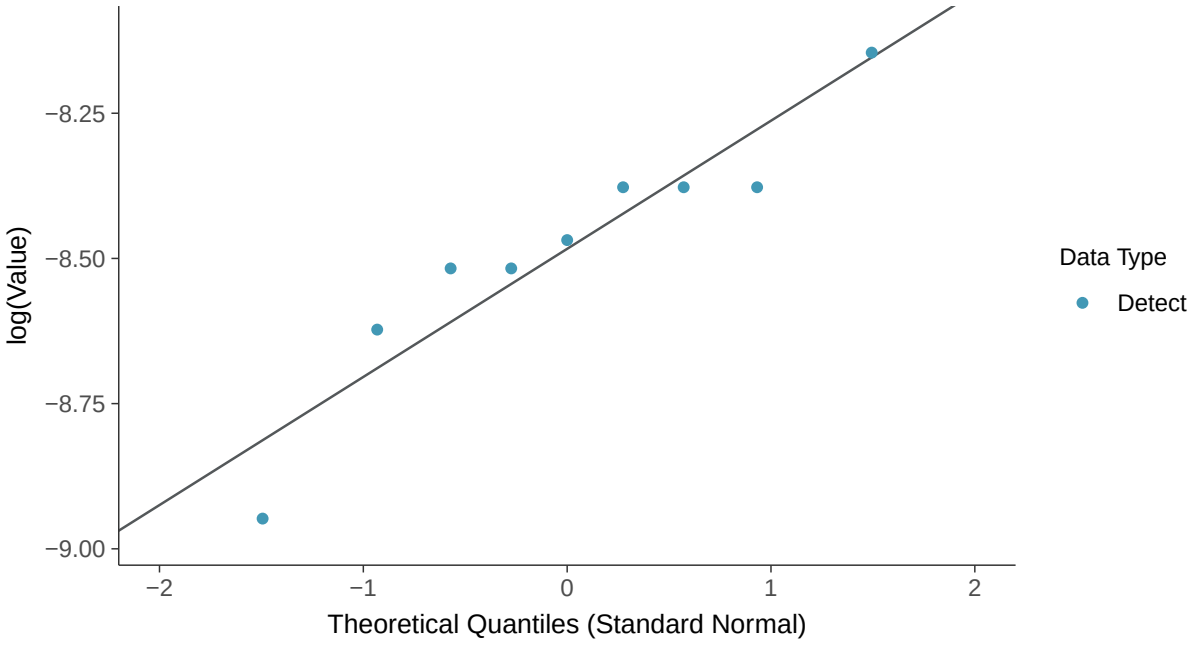
Normal Q-Q plot

Arsenic, MW-07 (mg/L)



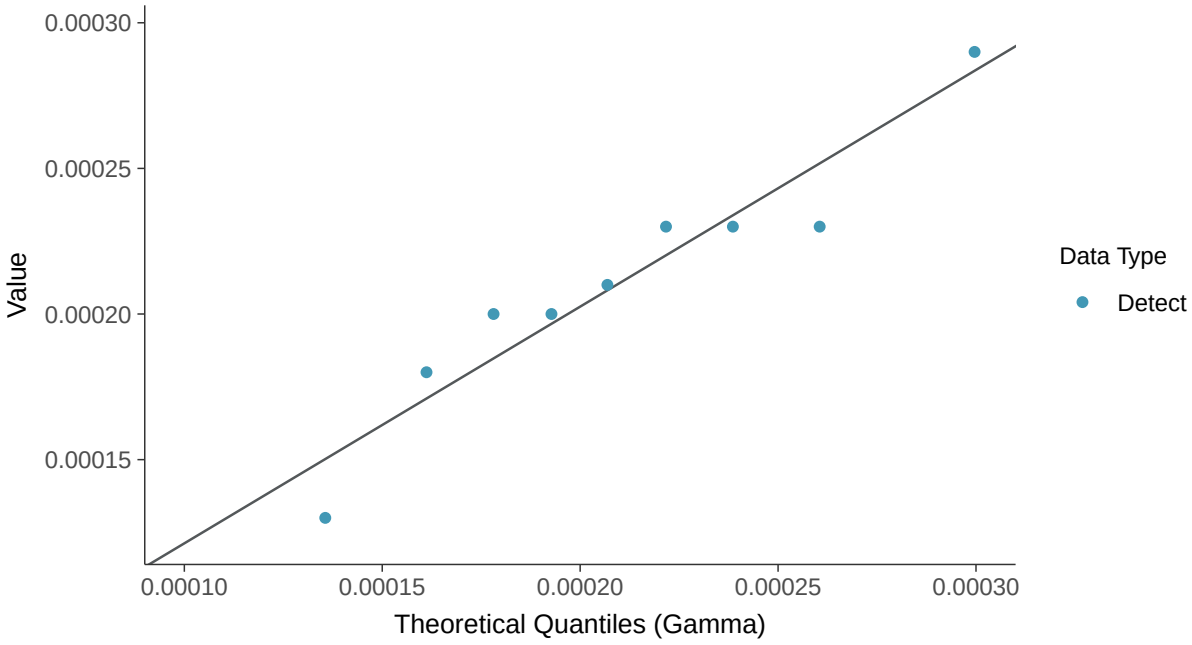
Lognormal Q-Q plot

Arsenic, MW-07 (mg/L)



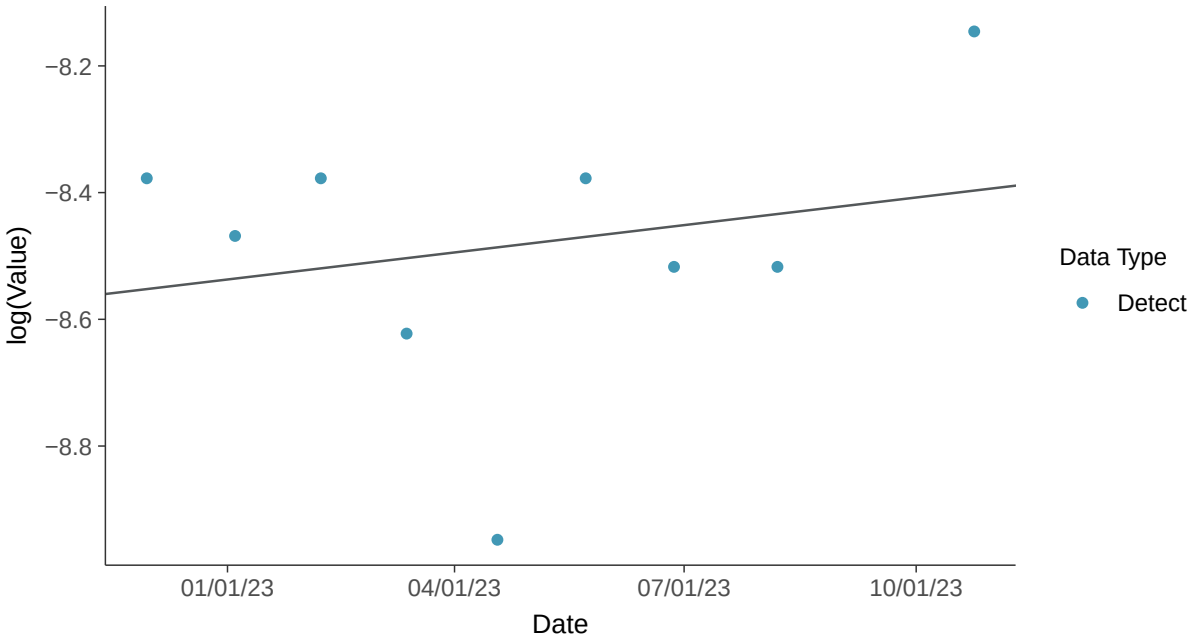
Gamma Q-Q plot

Arsenic, MW-07 (mg/L)



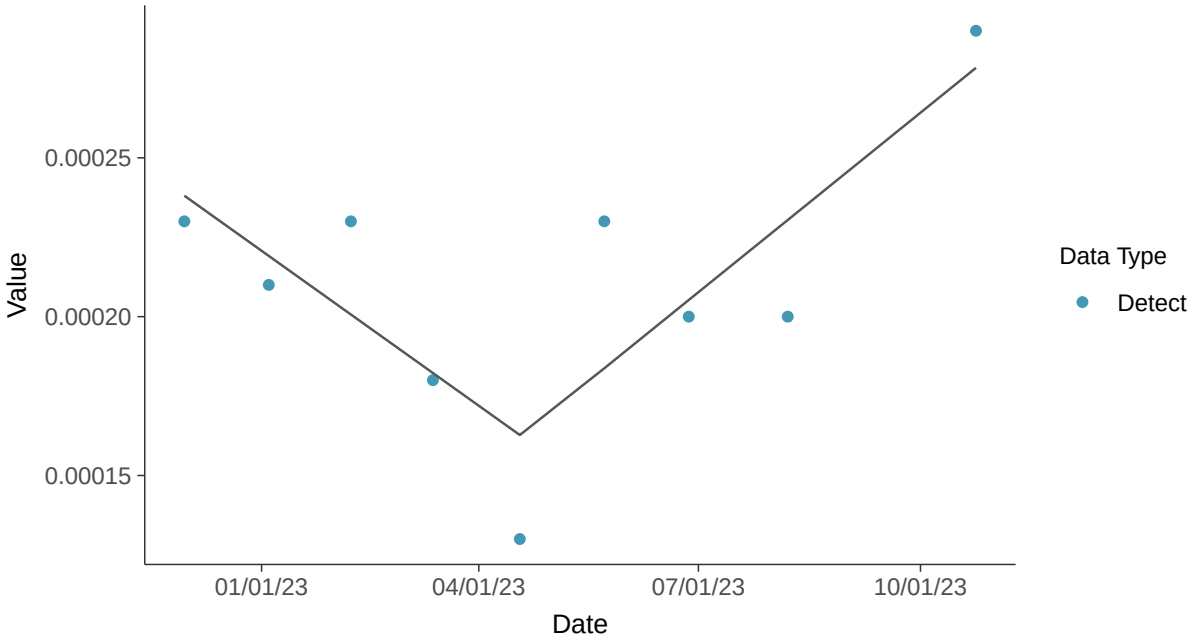
Trend Regression: Lognormal MLE

Arsenic, MW-07 (mg/L)



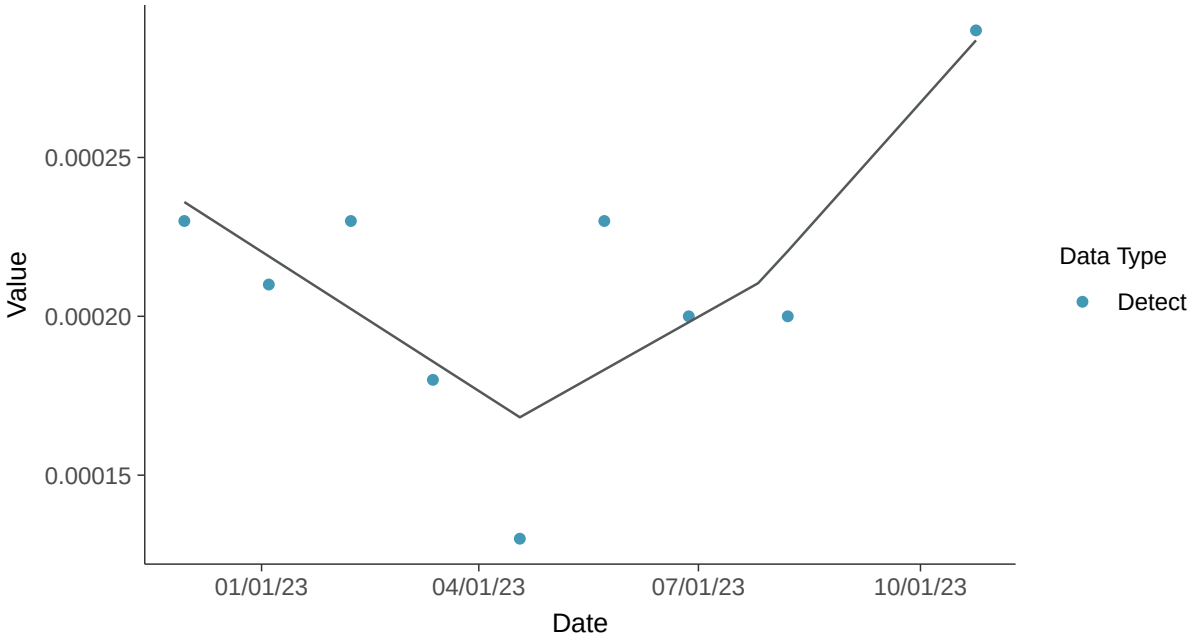
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-07 (mg/L)



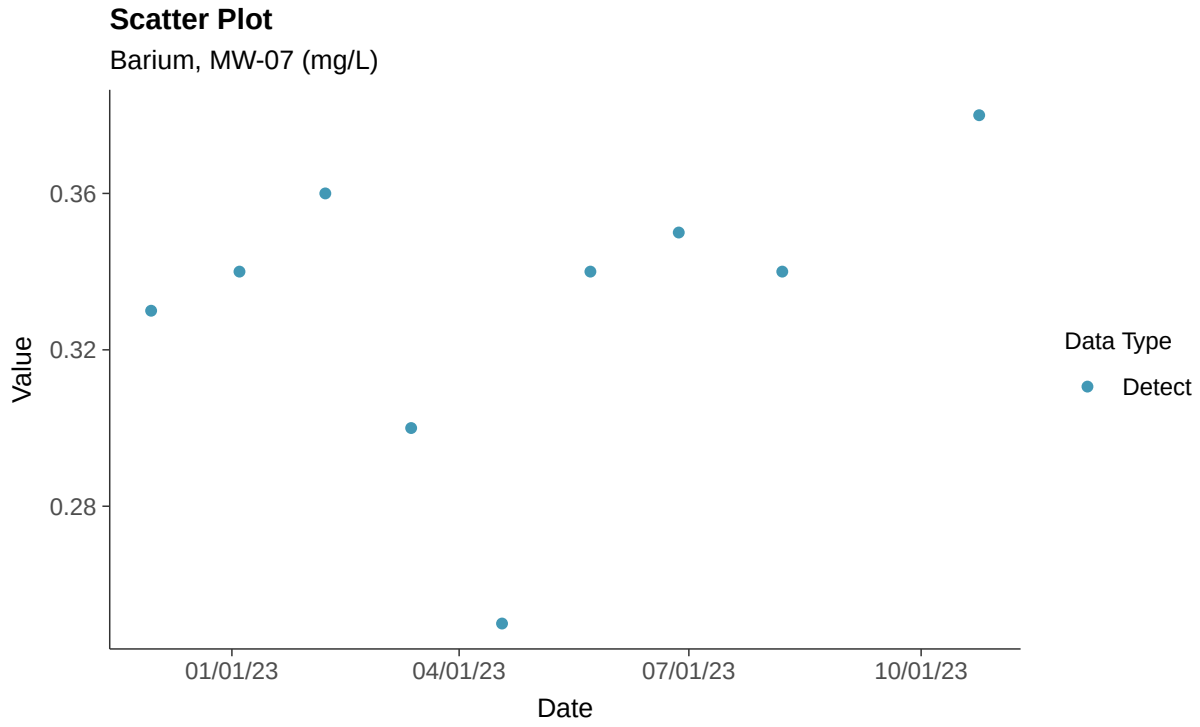
Trend Regression: Piecewise Linear-Linear-Linear

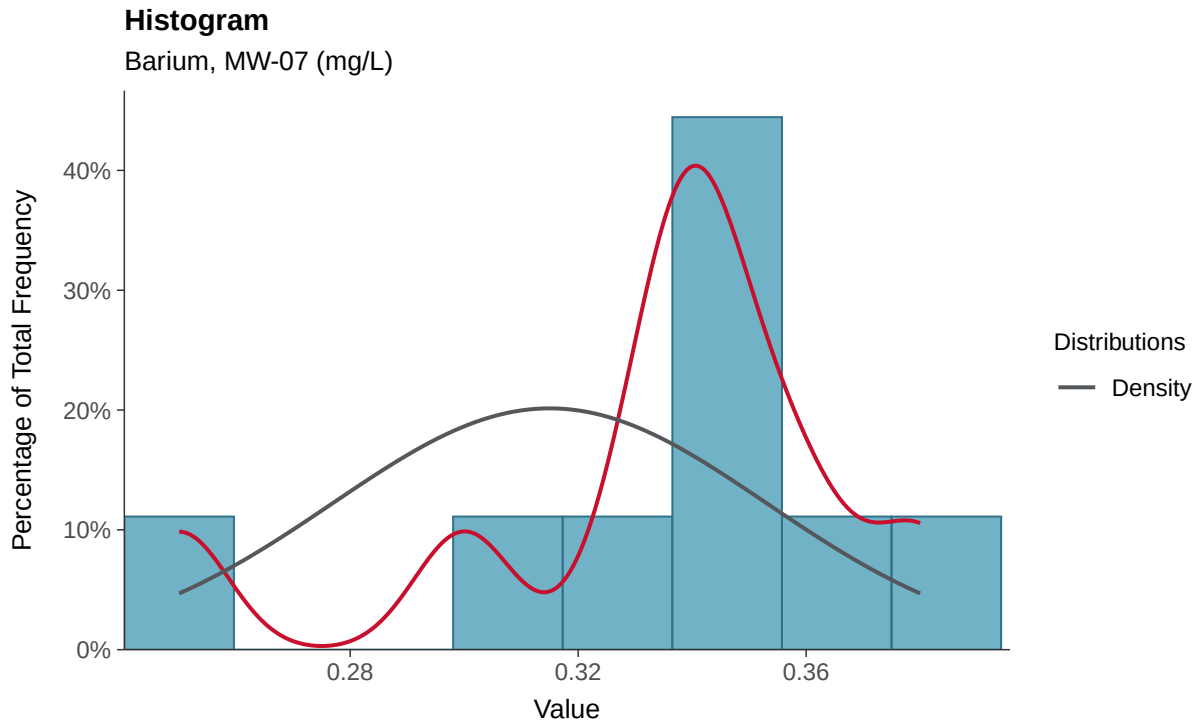
Arsenic, MW-07 (mg/L)



Appendix IV: Barium, MW-07

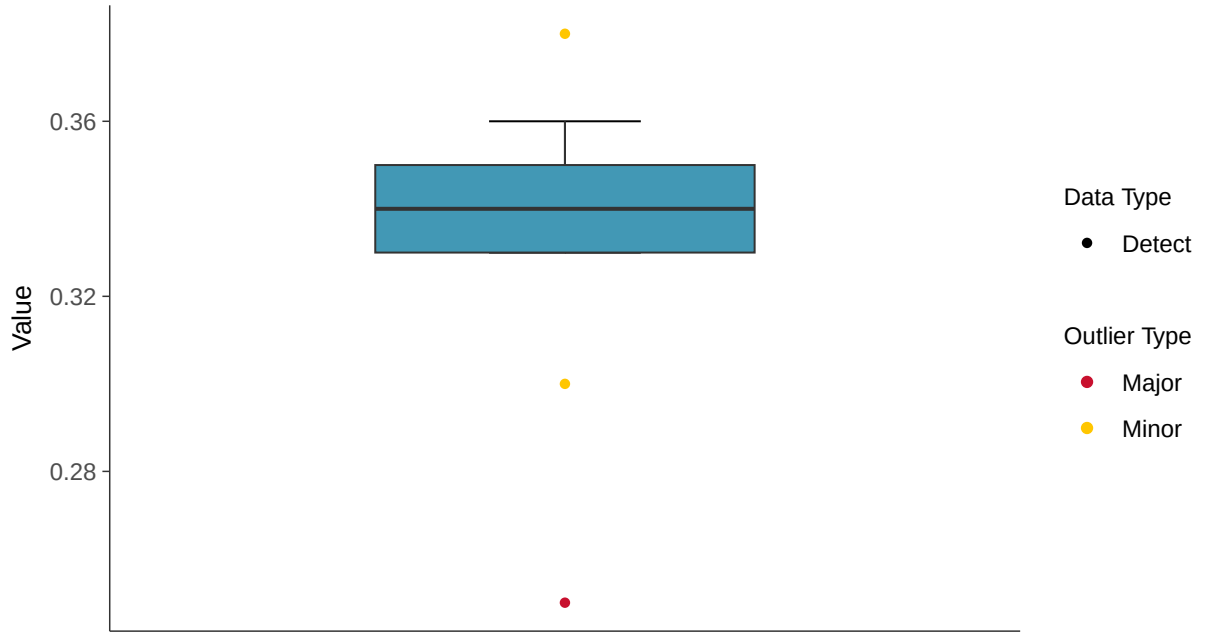
ID: 2_16_5_103





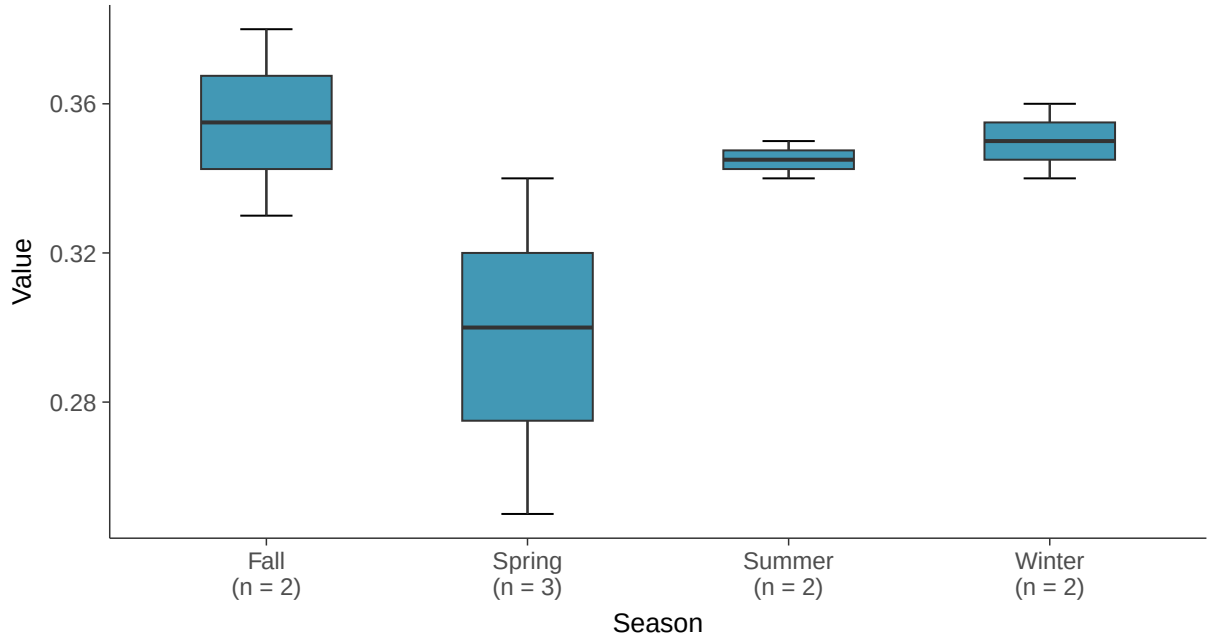
Boxplot

Barium, MW-07 (mg/L)



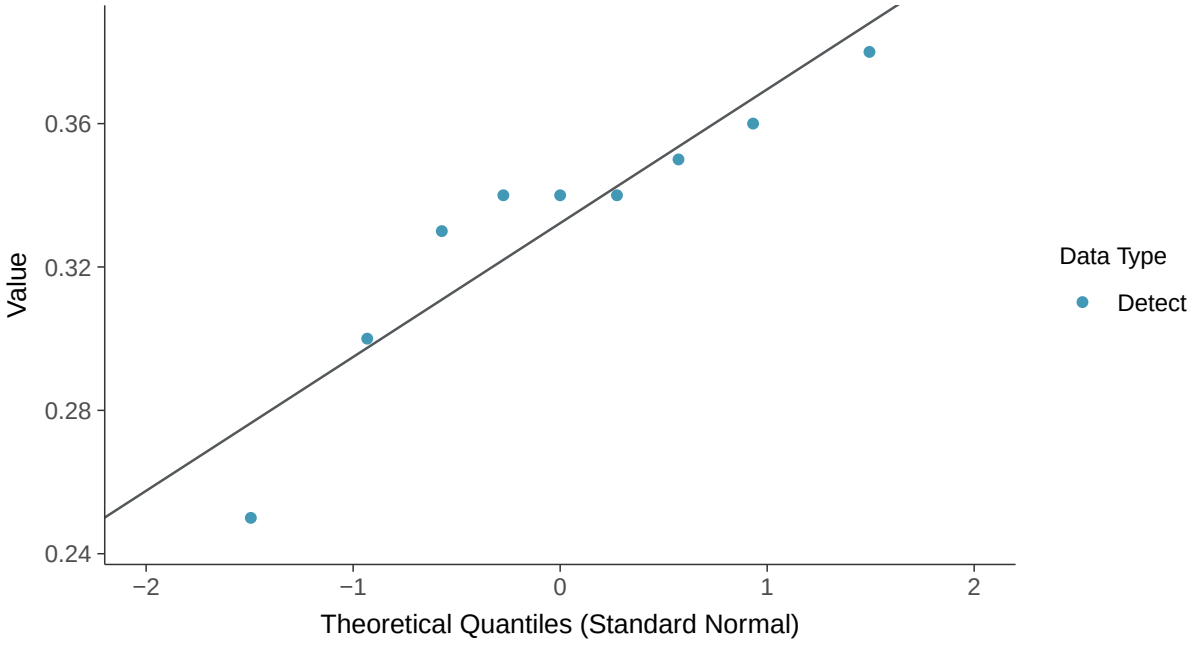
Boxplot by Season

Barium, MW-07 (mg/L)



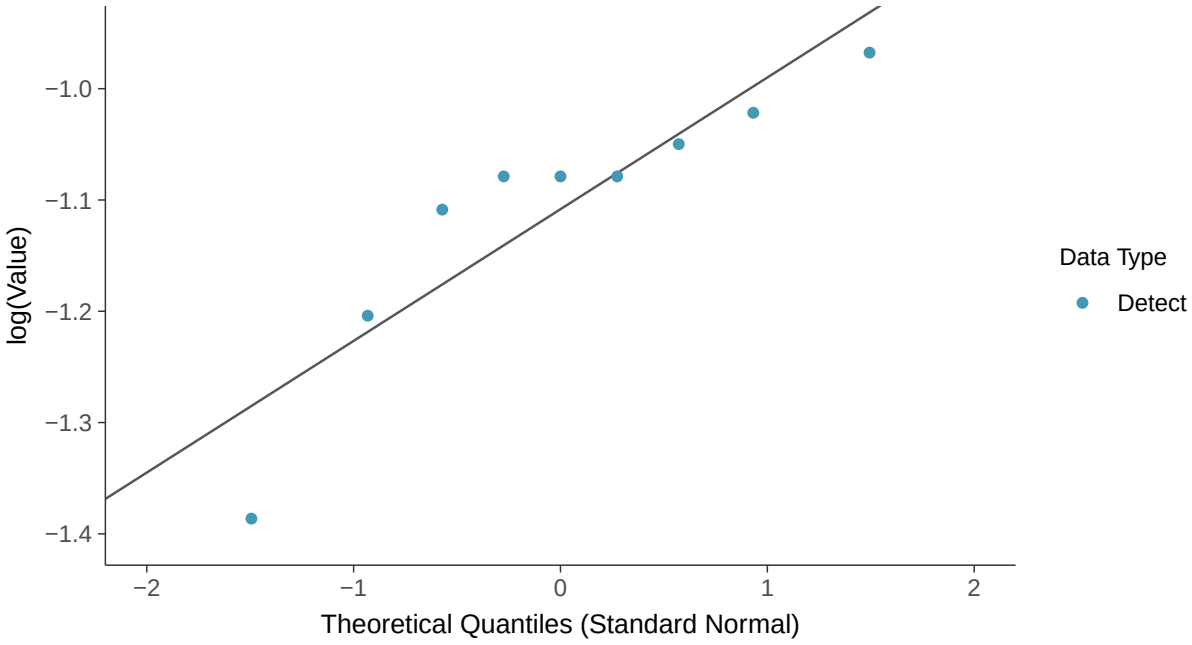
Normal Q-Q plot

Barium, MW-07 (mg/L)



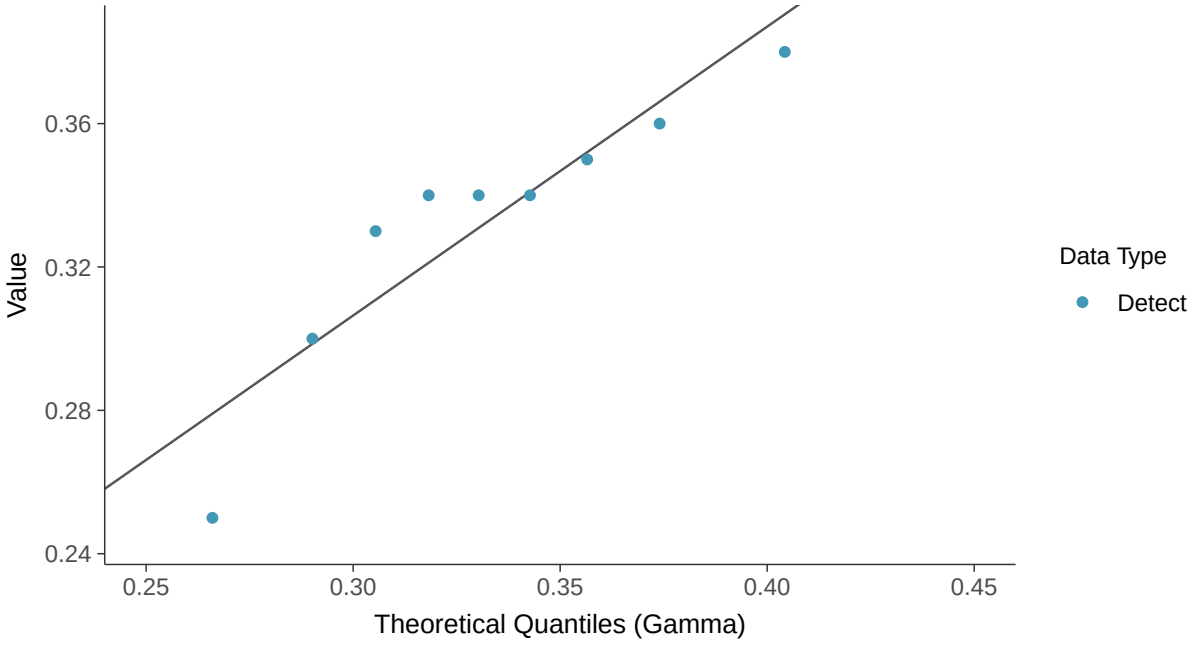
Lognormal Q-Q plot

Barium, MW-07 (mg/L)



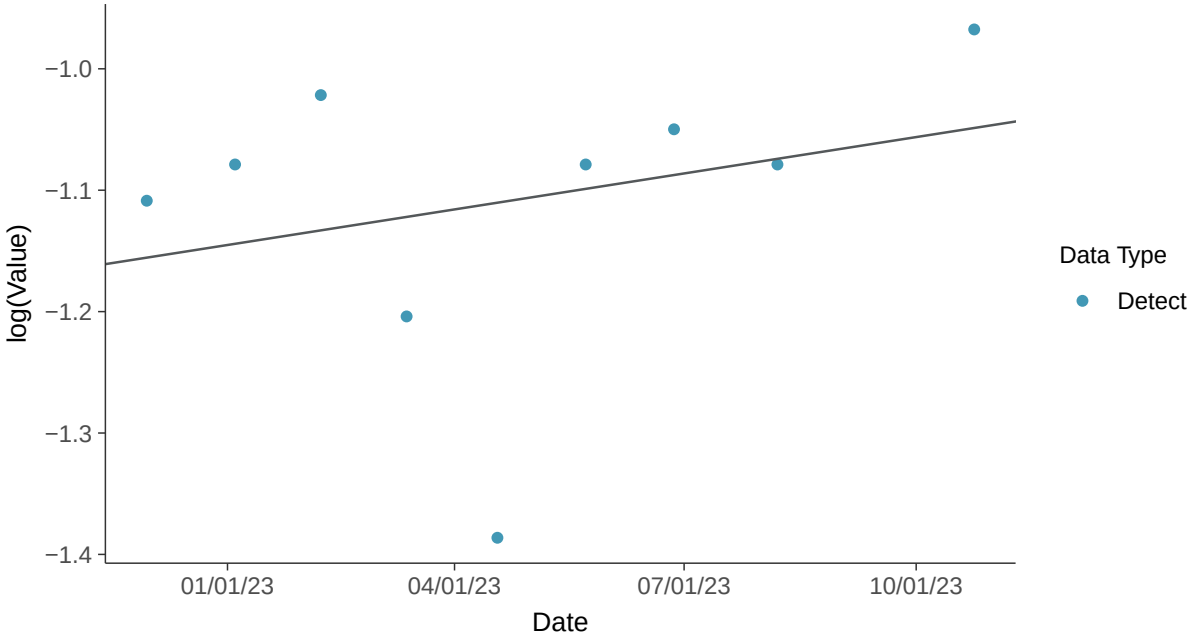
Gamma Q-Q plot

Barium, MW-07 (mg/L)



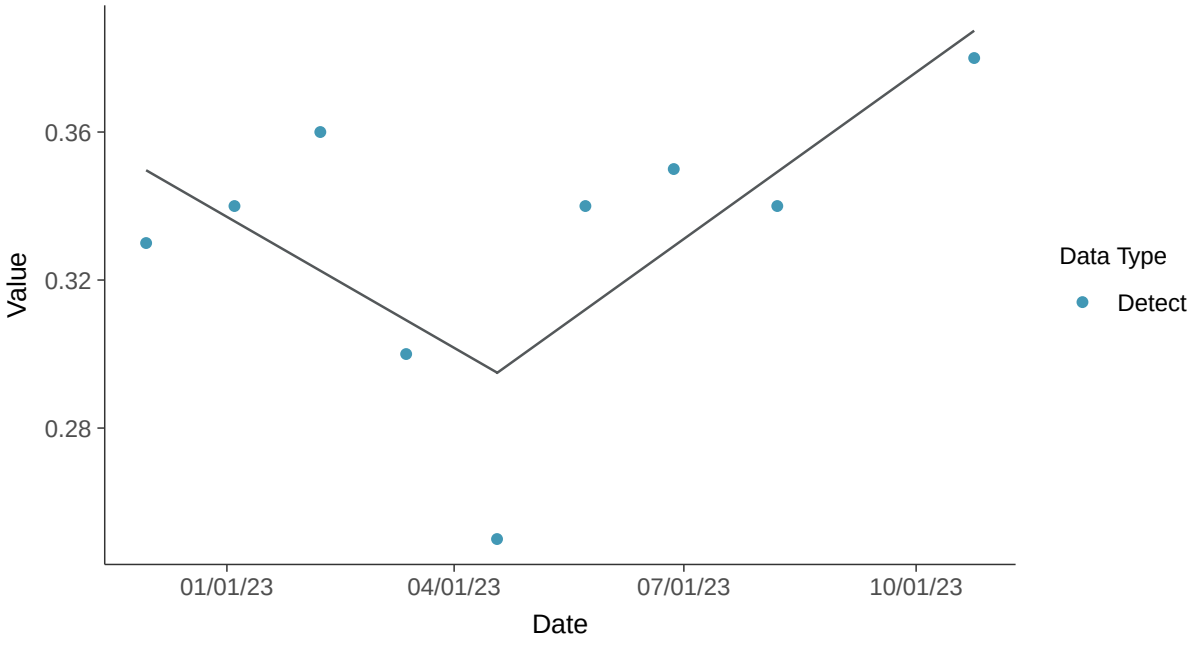
Trend Regression: Lognormal MLE

Barium, MW-07 (mg/L)



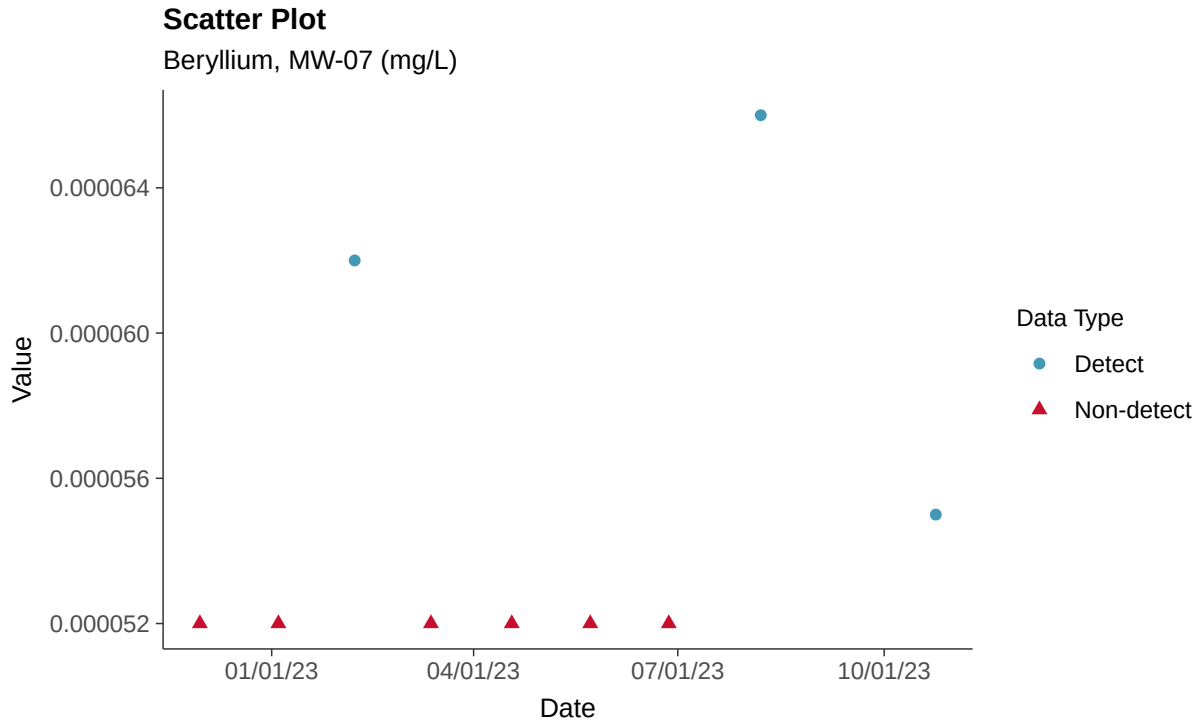
Trend Regression: Piecewise Linear-Linear

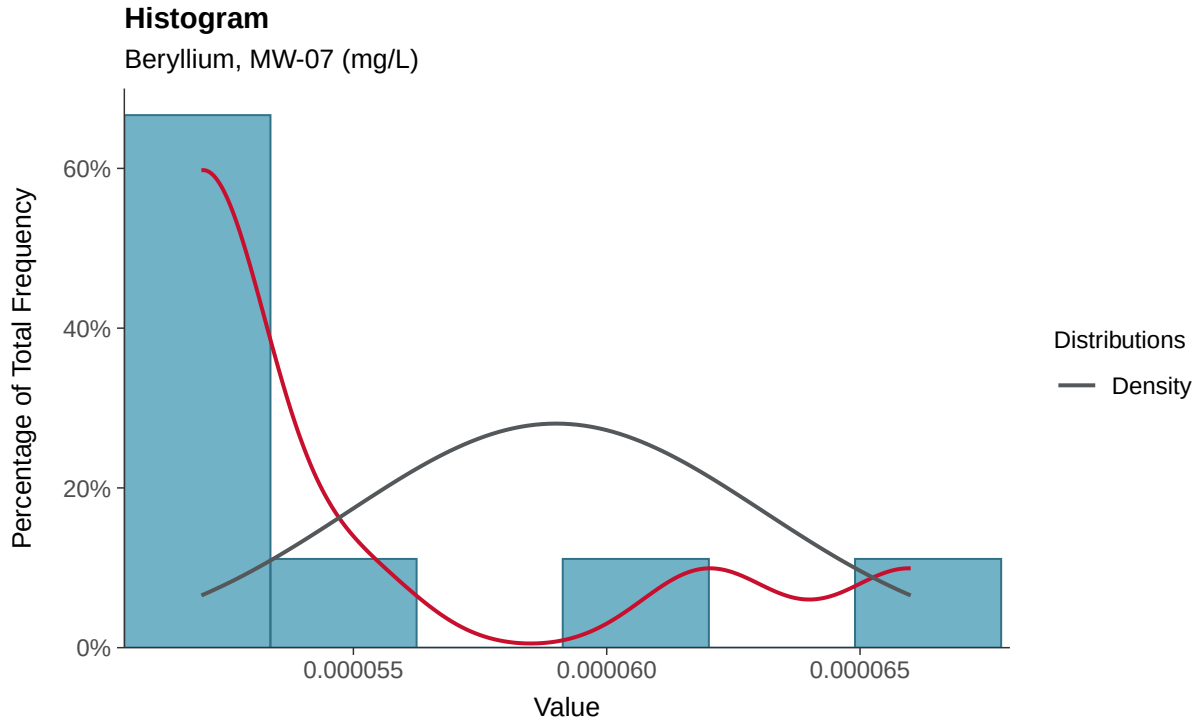
Barium, MW-07 (mg/L)



Appendix IV: Beryllium, MW-07

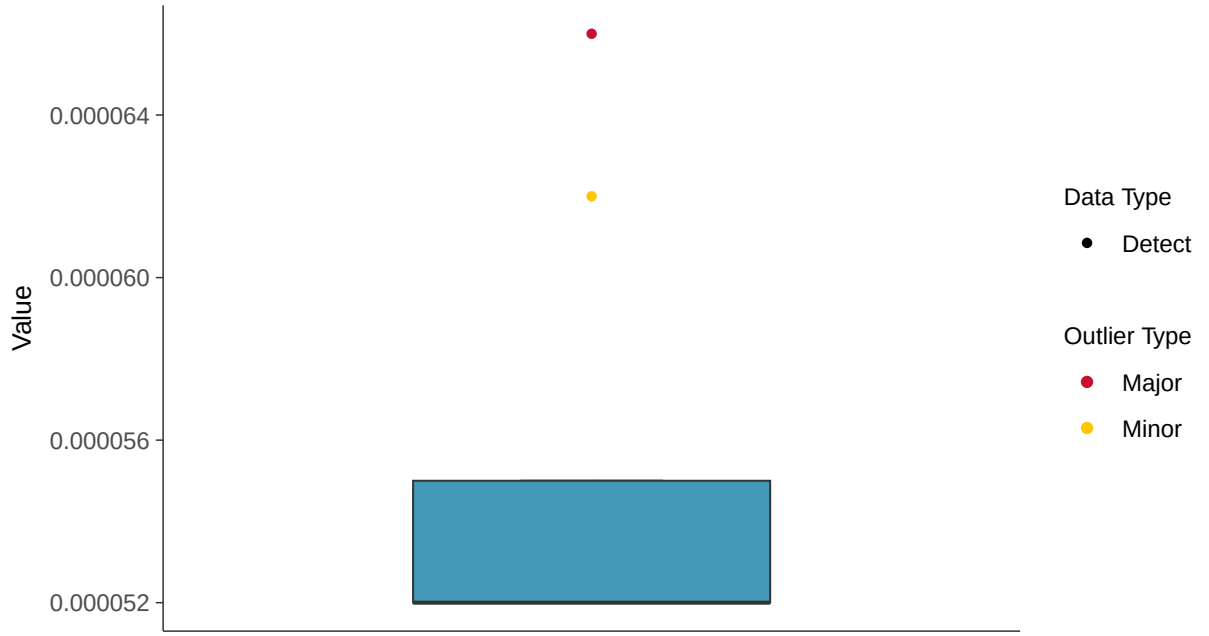
ID: 2_16_5_104





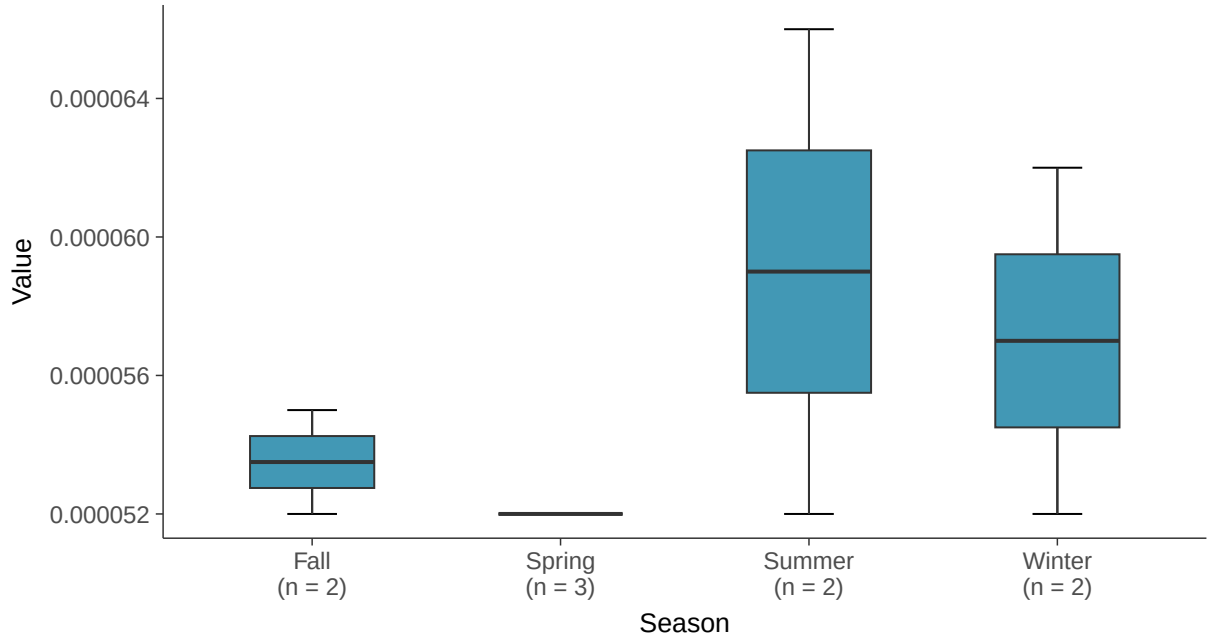
Boxplot

Beryllium, MW-07 (mg/L)



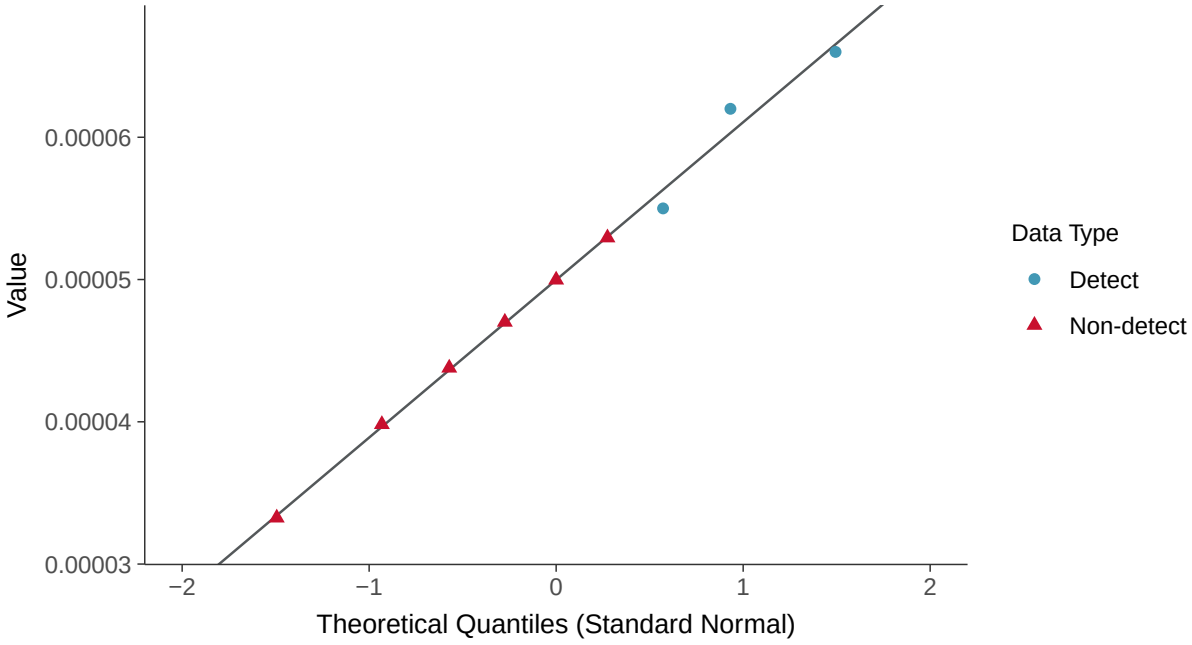
Boxplot by Season

Beryllium, MW-07 (mg/L)



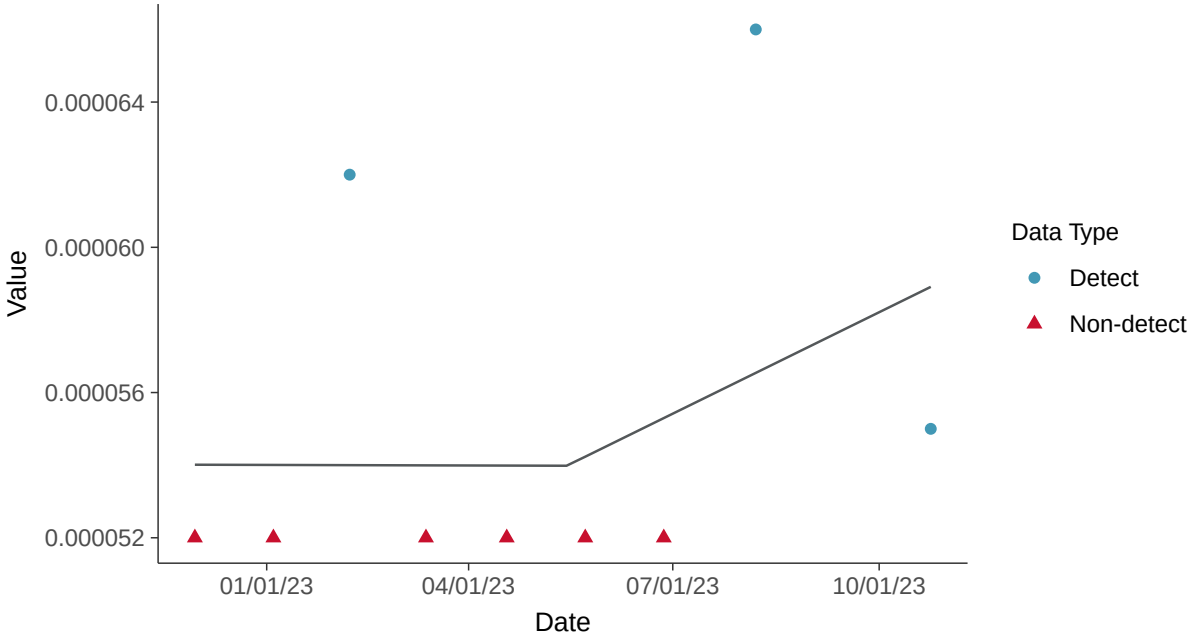
Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-07 (mg/L)



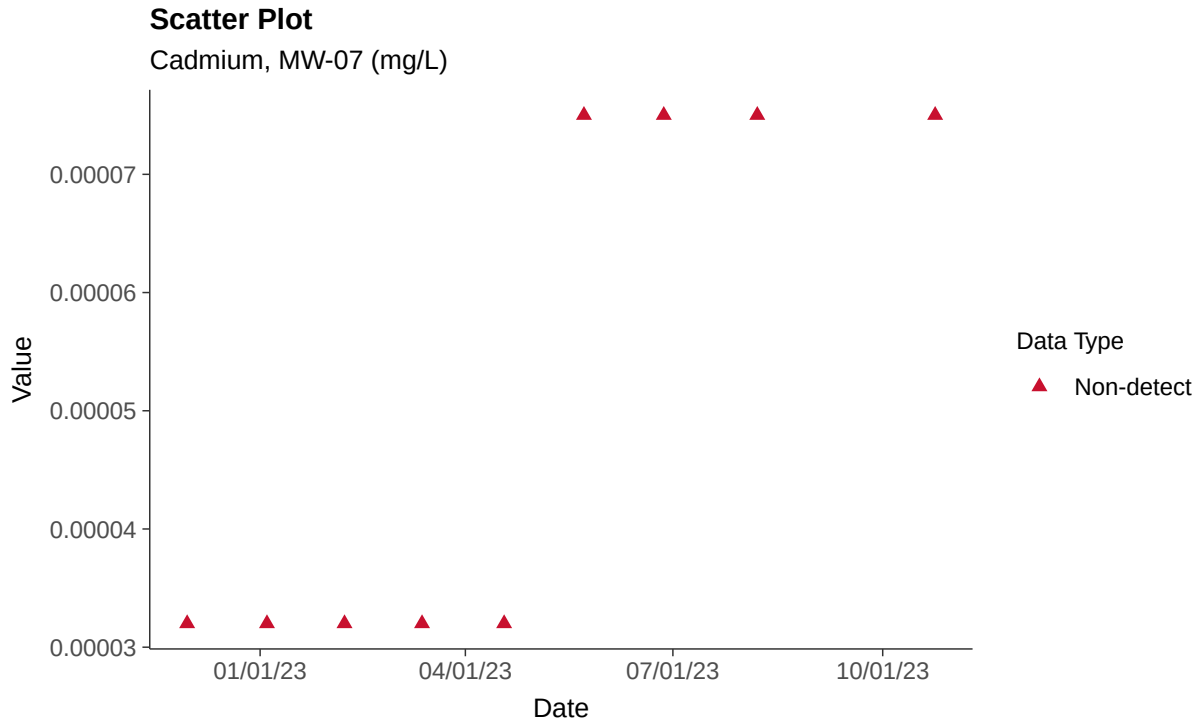
Trend Regression: Piecewise Linear-Linear

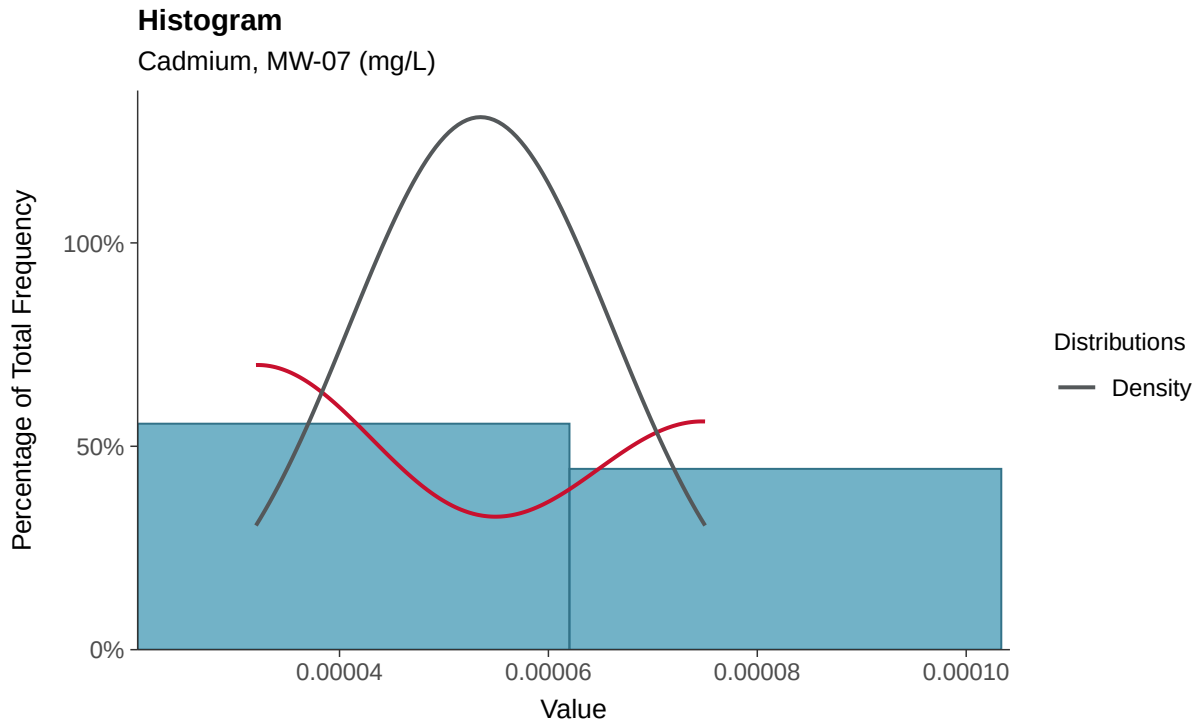
Beryllium, MW-07 (mg/L)



Appendix IV: Cadmium, MW-07

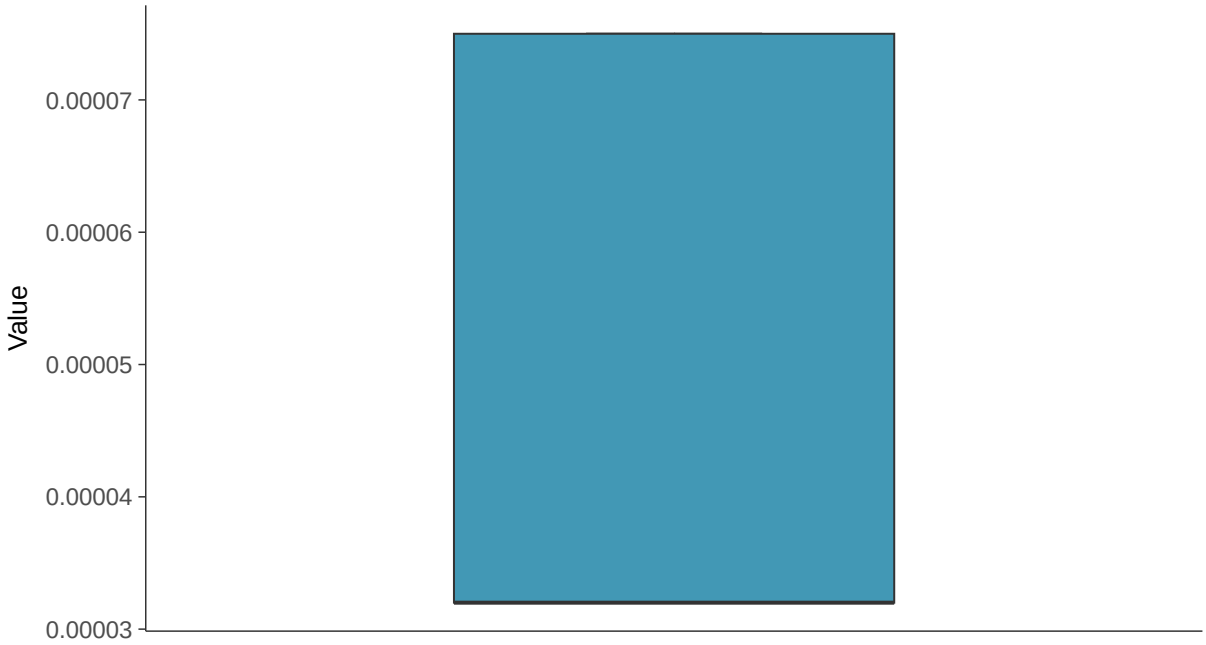
ID: 2_16_5_106





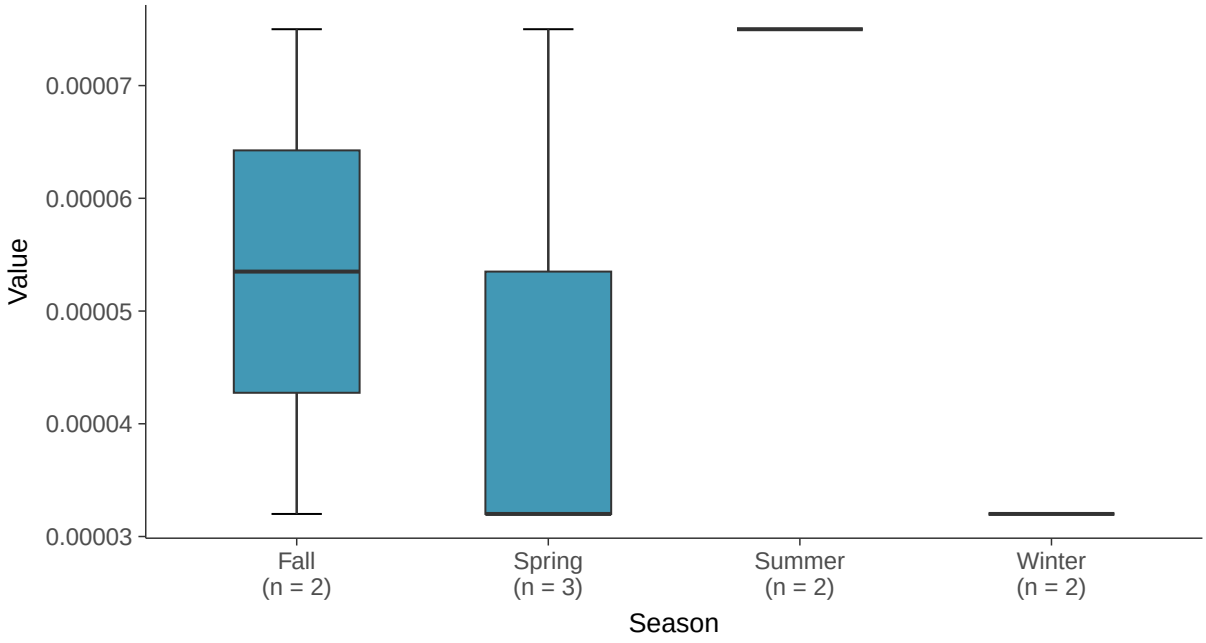
Boxplot

Cadmium, MW-07 (mg/L)



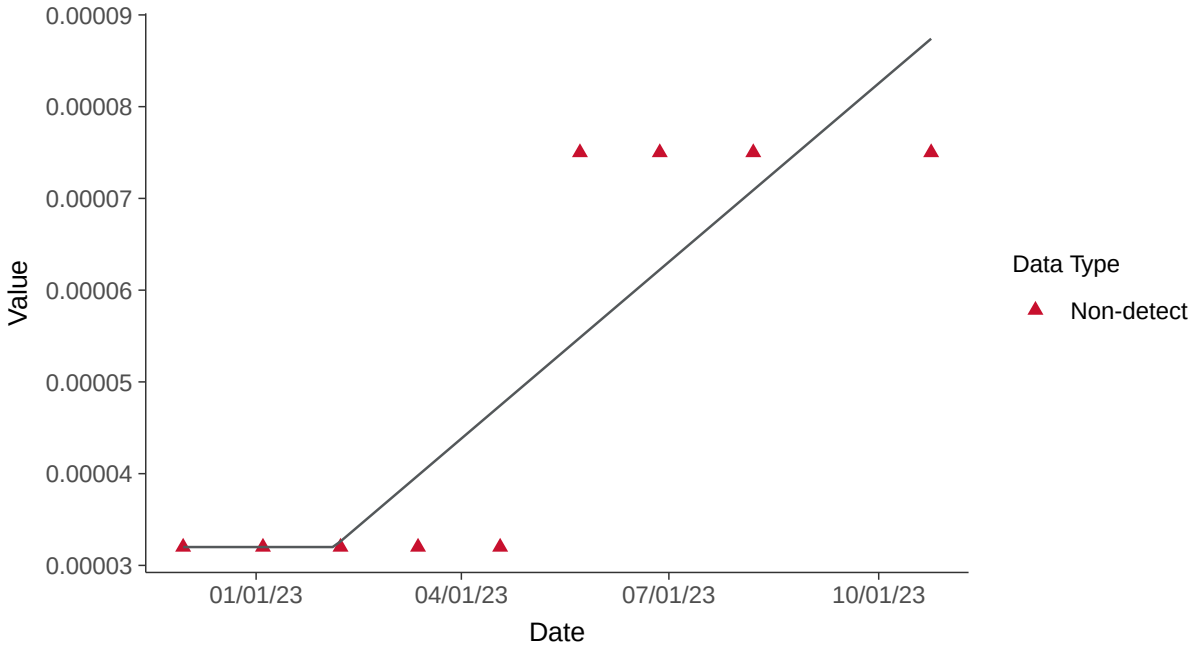
Boxplot by Season

Cadmium, MW-07 (mg/L)



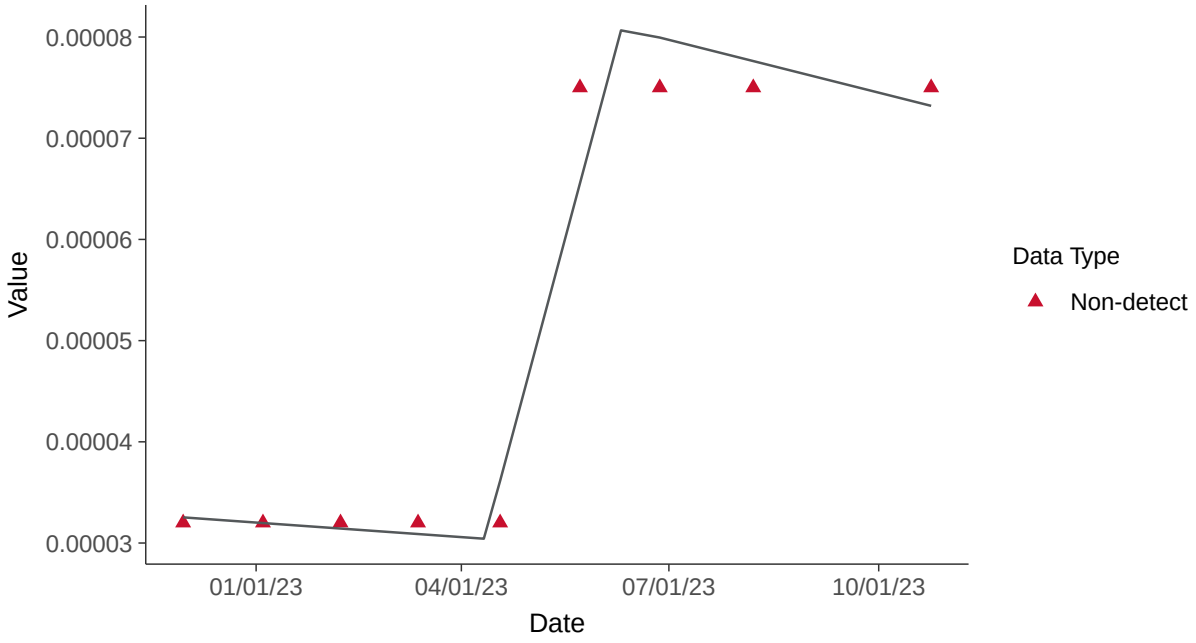
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-07 (mg/L)



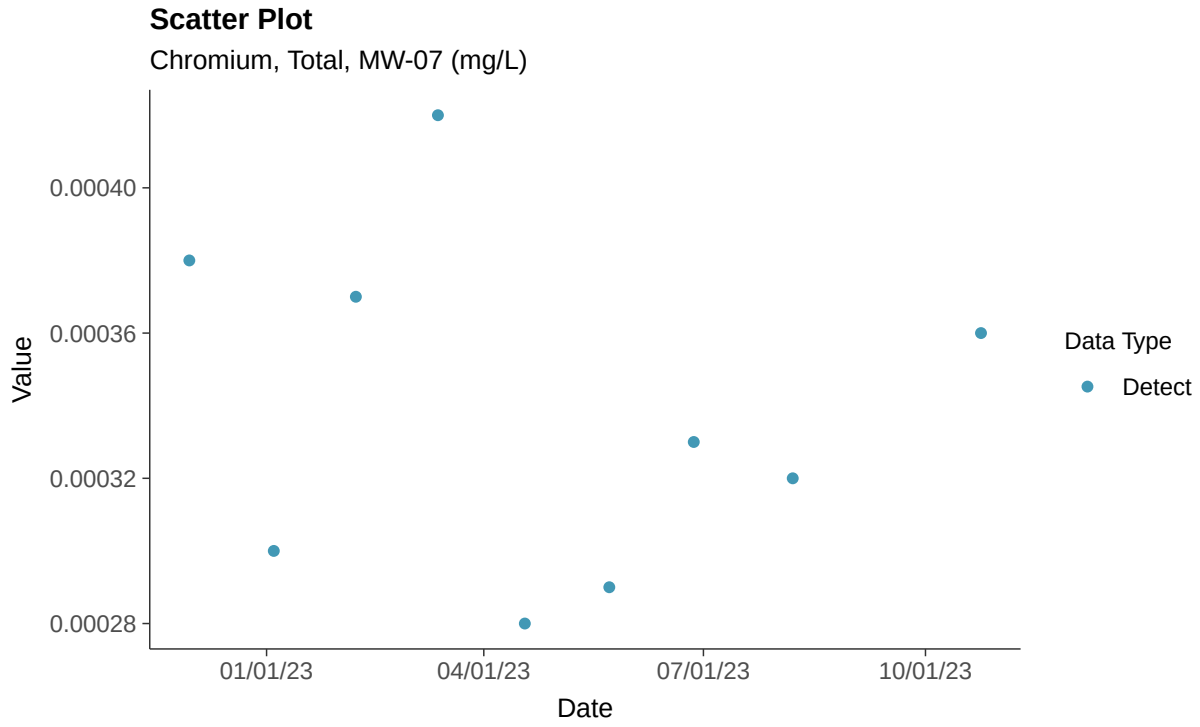
Trend Regression: Piecewise Linear-Linear-Linear

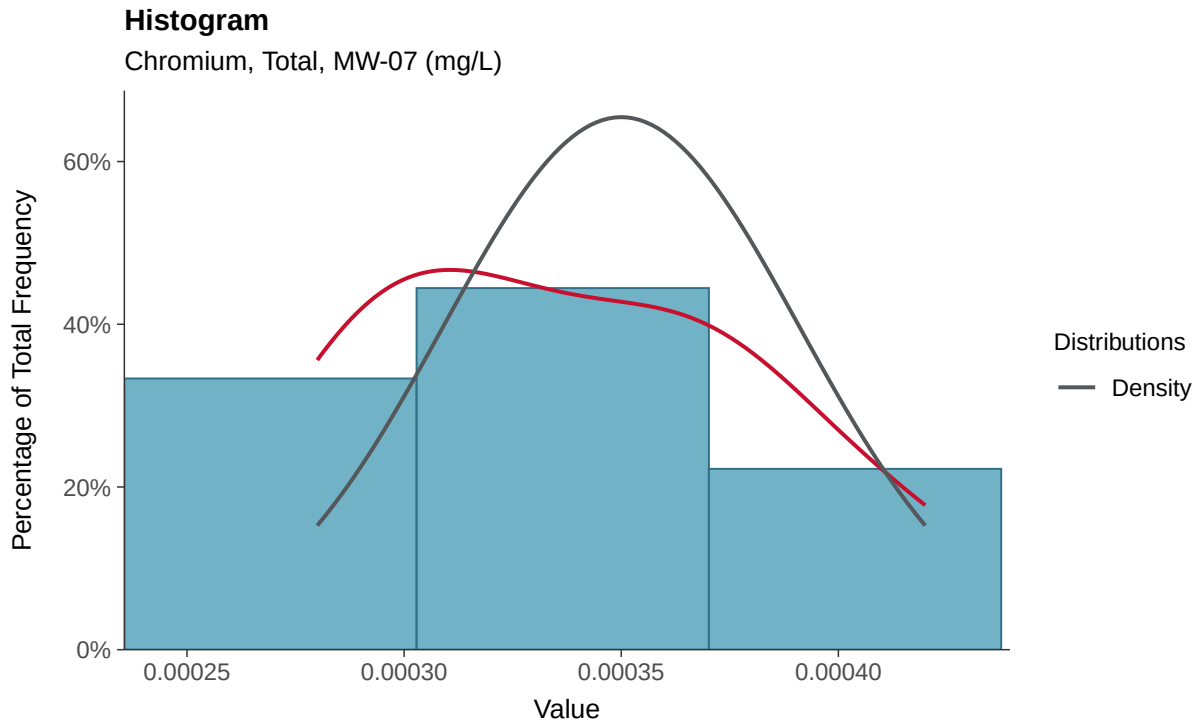
Cadmium, MW-07 (mg/L)



Appendix IV: Chromium, Total, MW-07

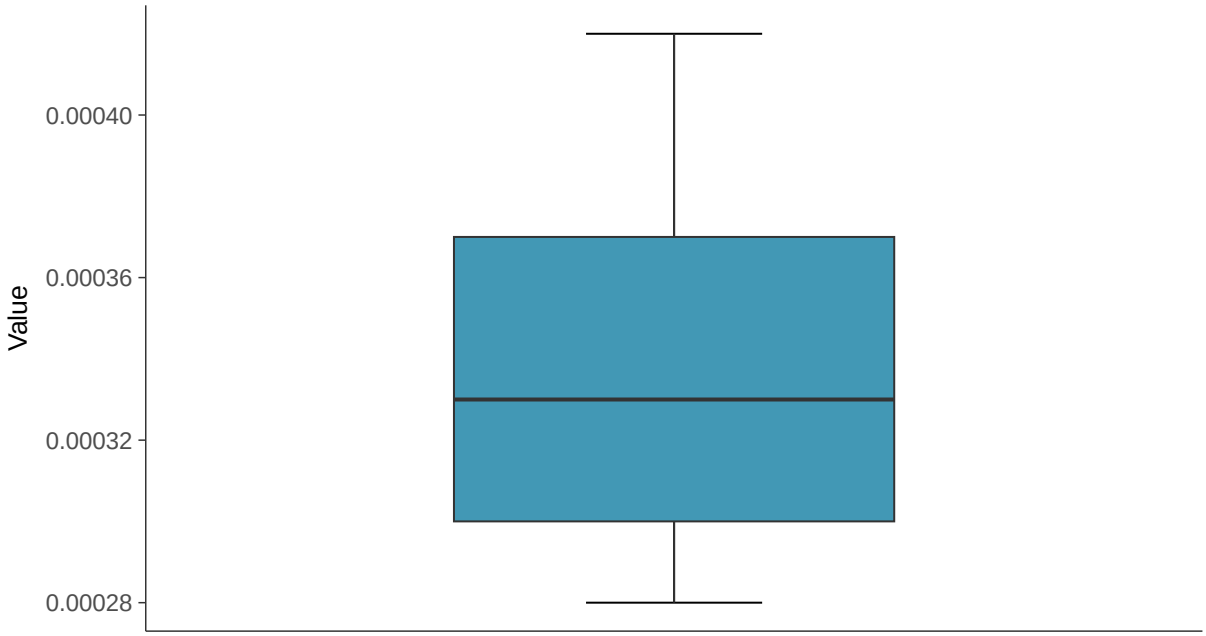
ID: 2_16_5_109





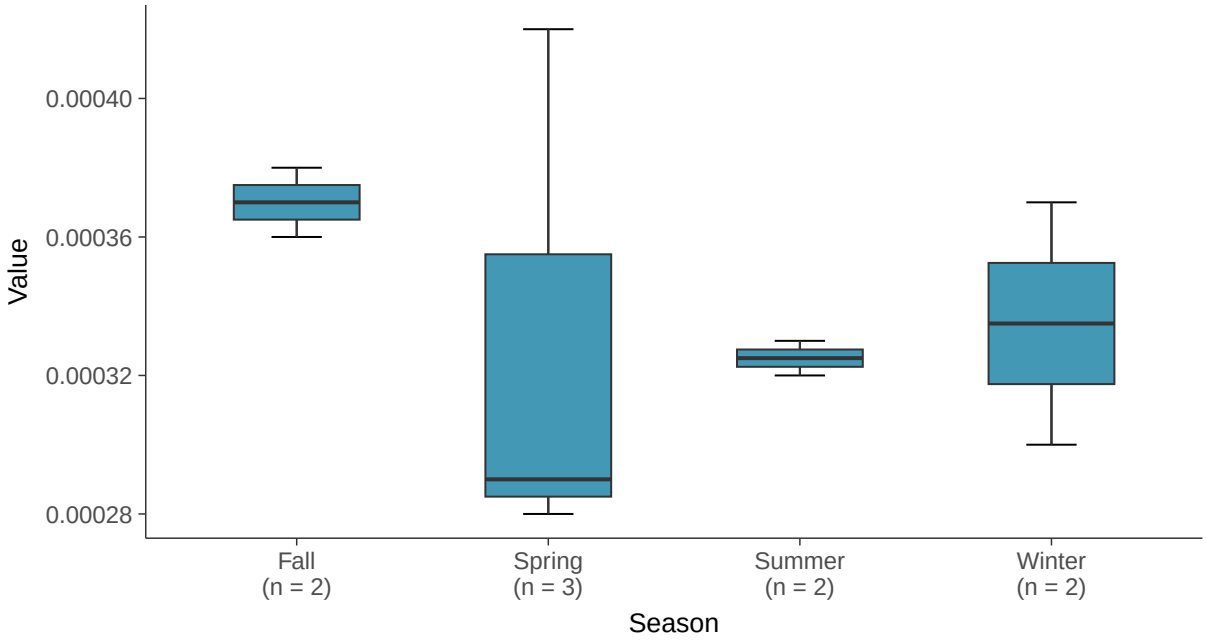
Boxplot

Chromium, Total, MW-07 (mg/L)



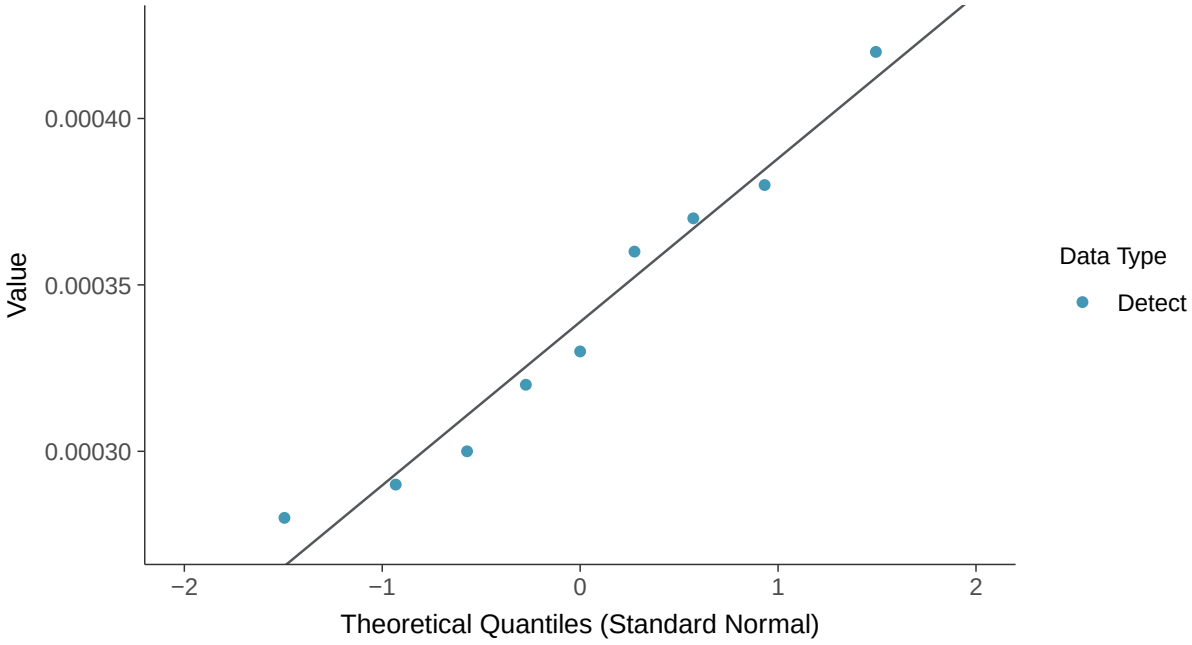
Boxplot by Season

Chromium, Total, MW-07 (mg/L)



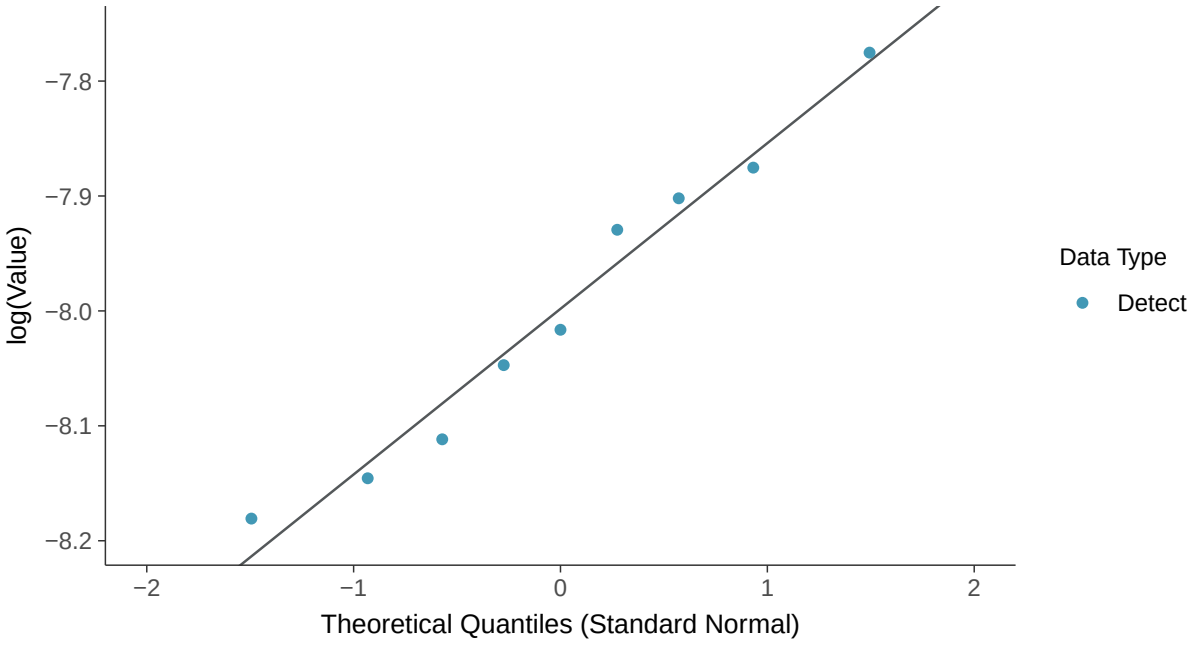
Normal Q-Q plot

Chromium, Total, MW-07 (mg/L)



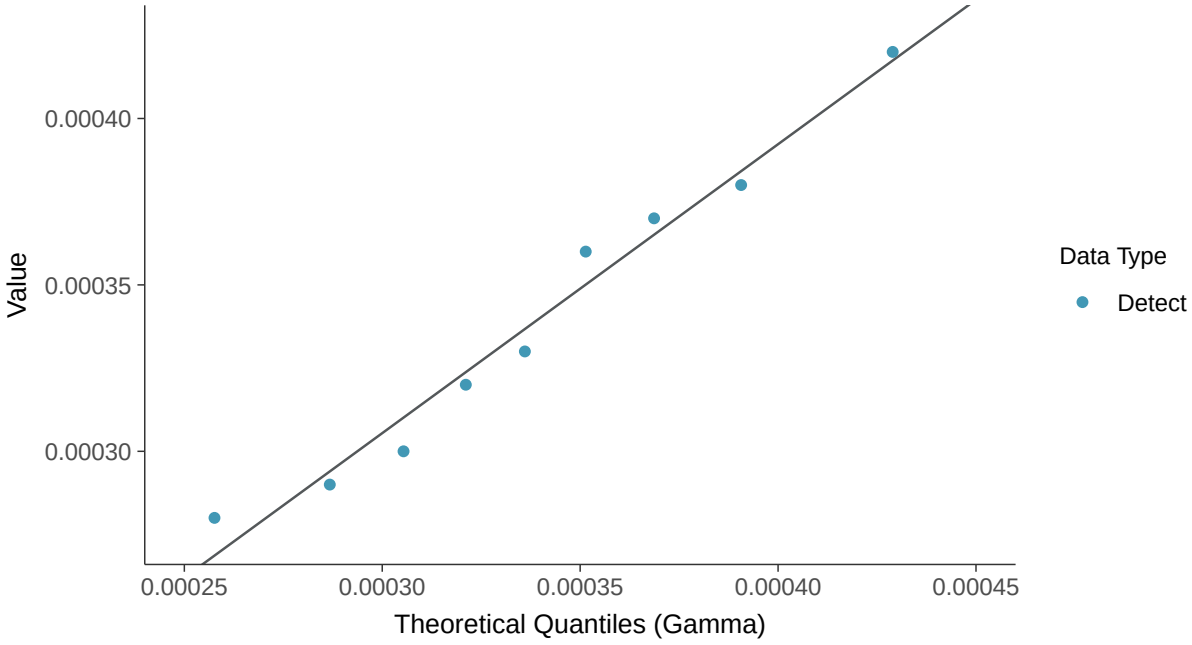
Lognormal Q-Q plot

Chromium, Total, MW-07 (mg/L)



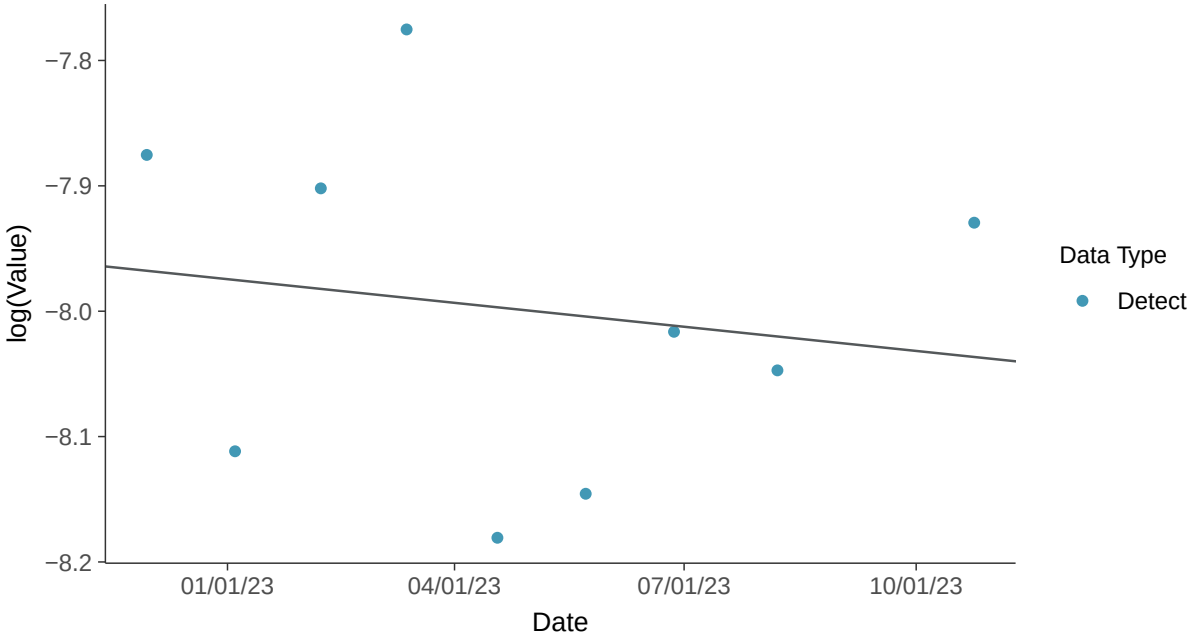
Gamma Q-Q plot

Chromium, Total, MW-07 (mg/L)



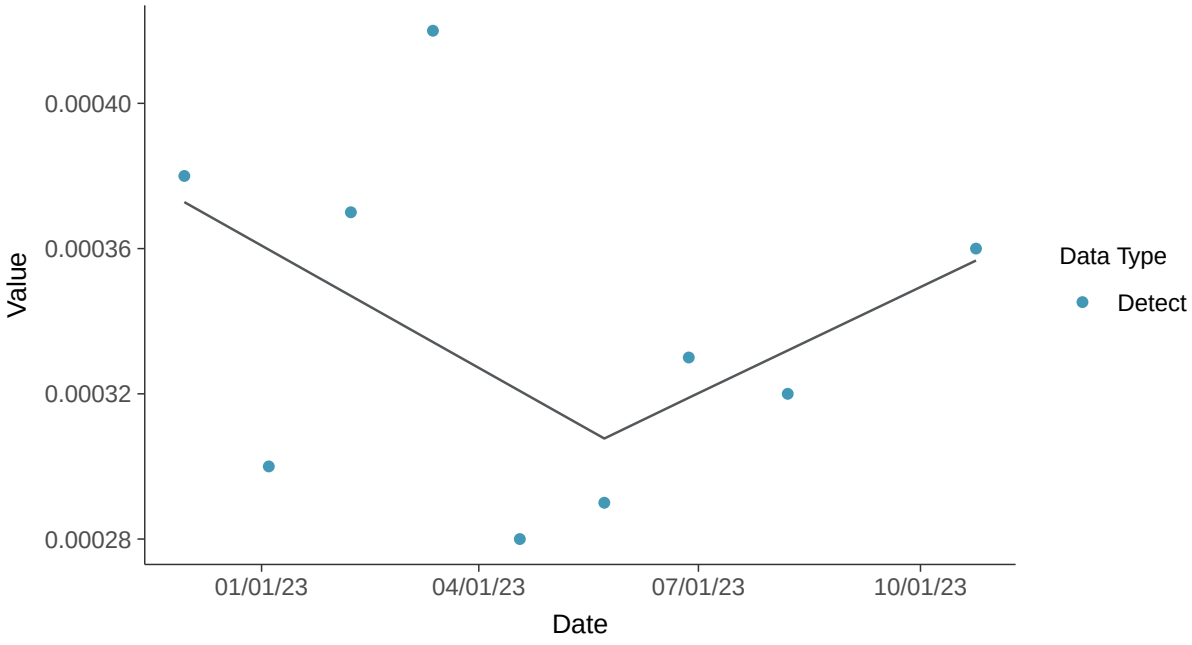
Trend Regression: Lognormal MLE

Chromium, Total, MW-07 (mg/L)



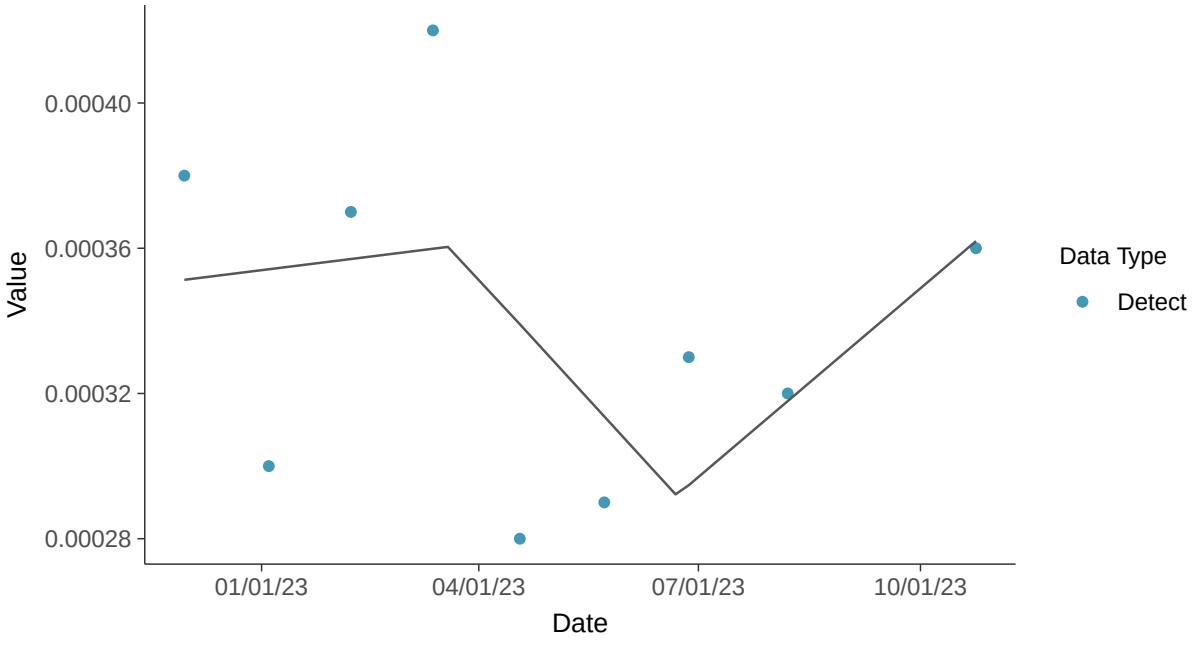
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-07 (mg/L)



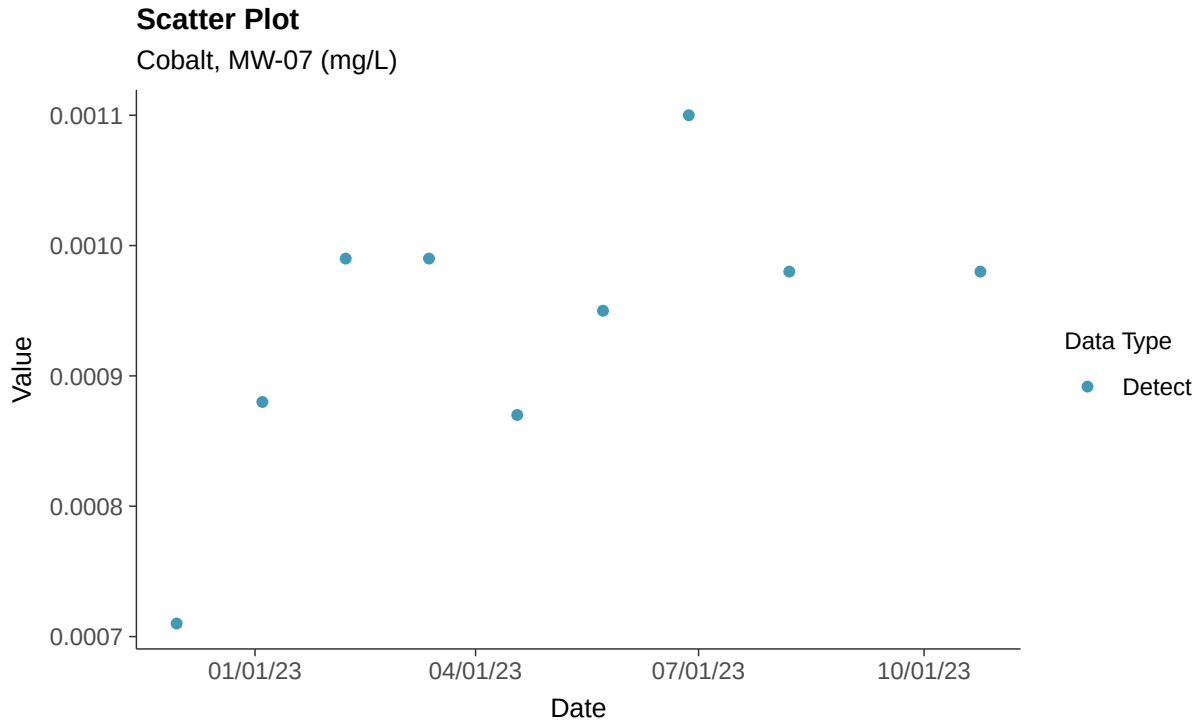
Trend Regression: Piecewise Linear-Linear-Linear

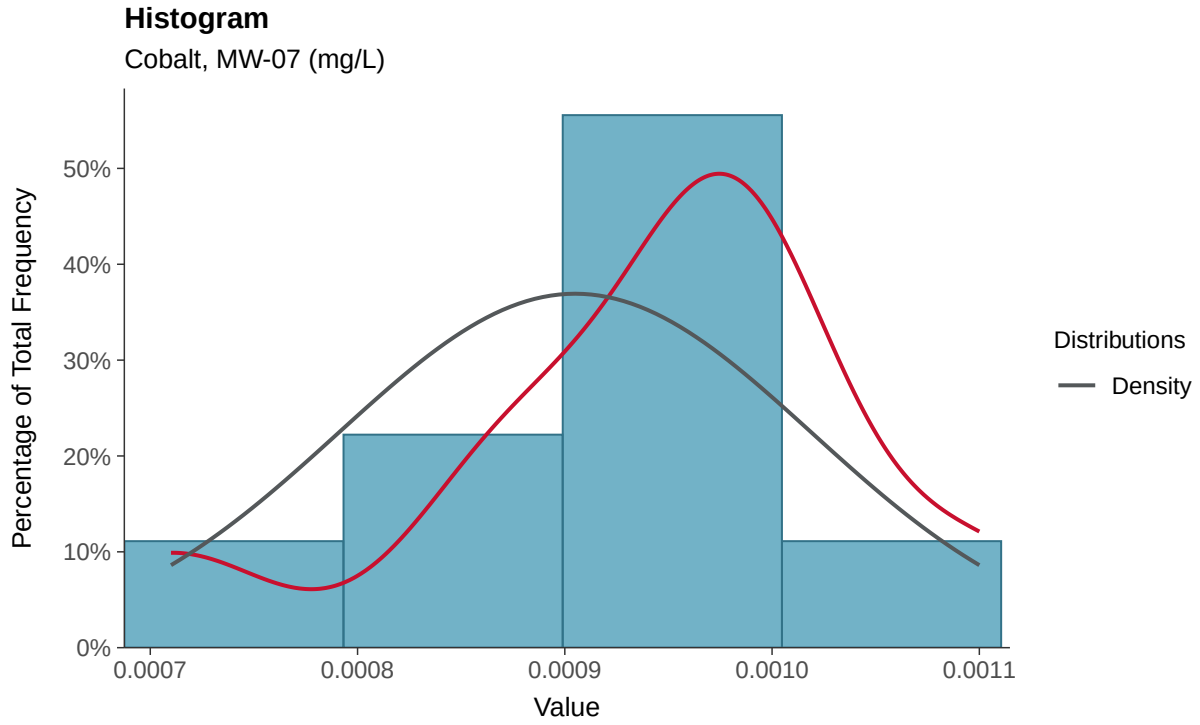
Chromium, Total, MW-07 (mg/L)



Appendix IV: Cobalt, MW-07

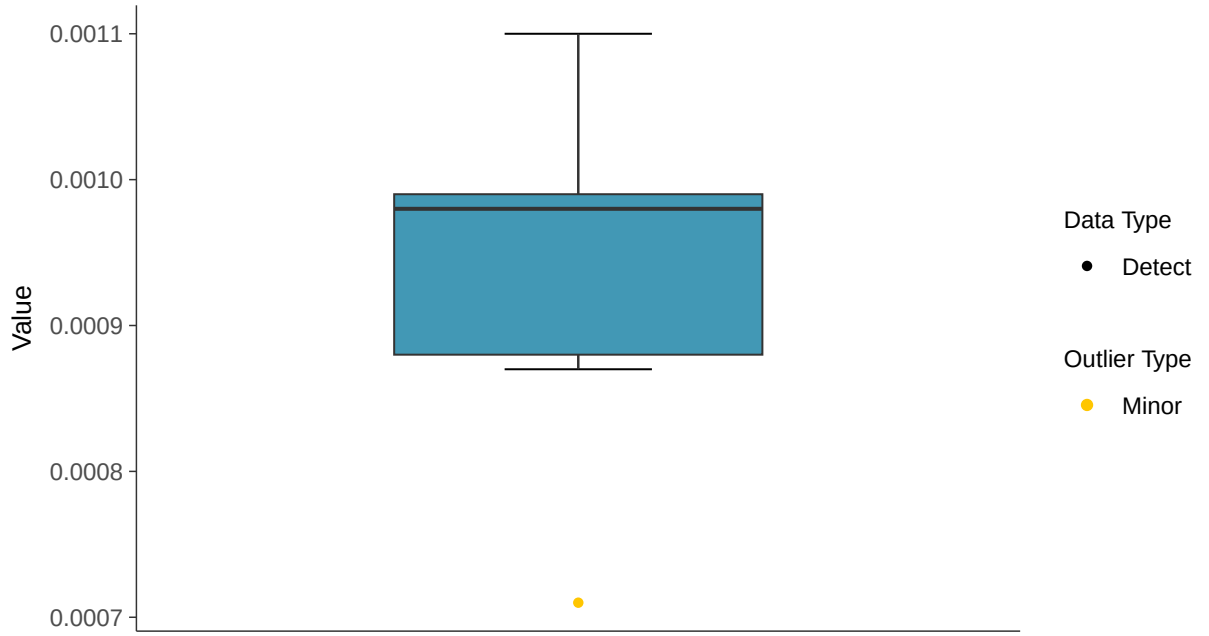
ID: 2_16_5_110





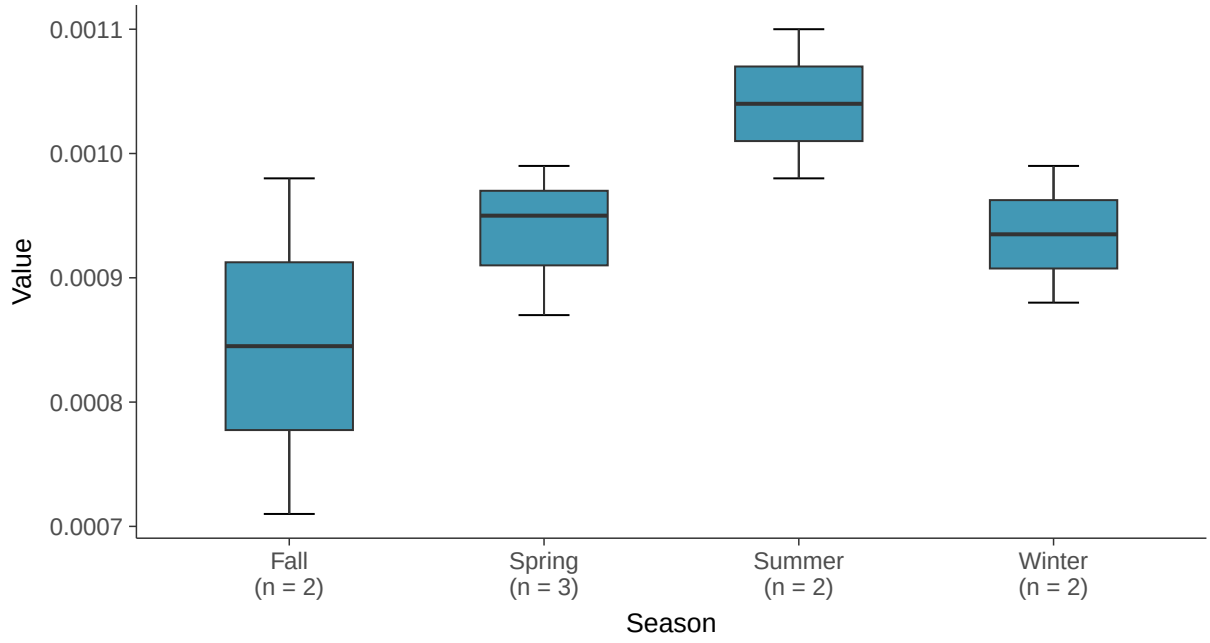
Boxplot

Cobalt, MW-07 (mg/L)



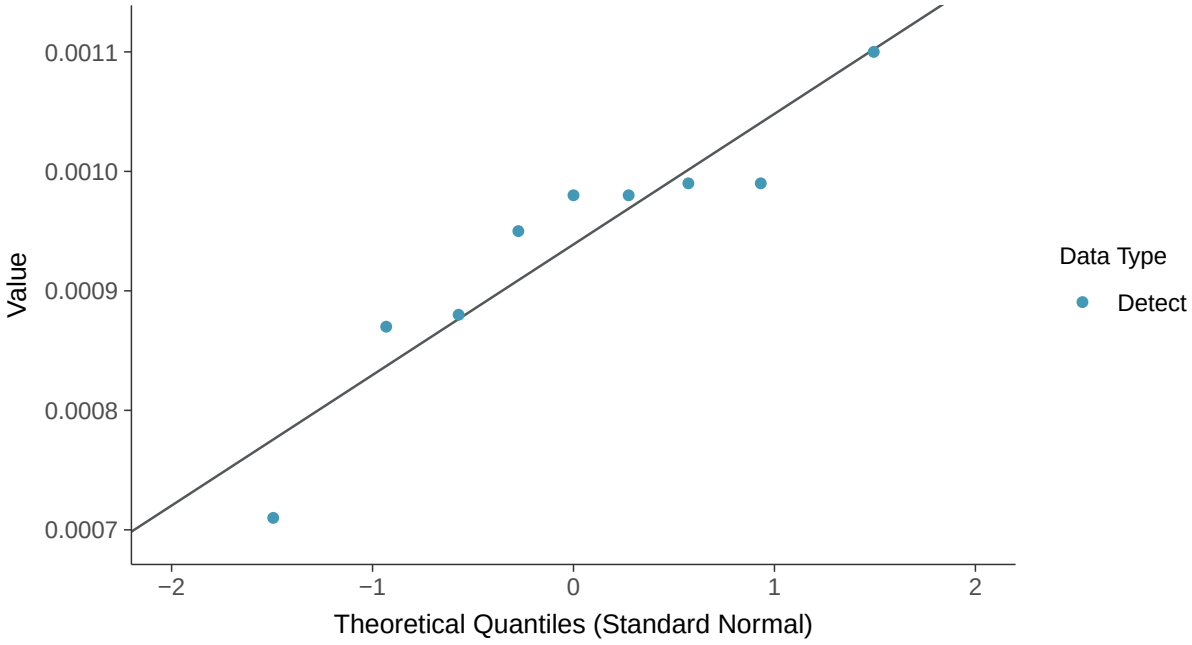
Boxplot by Season

Cobalt, MW-07 (mg/L)



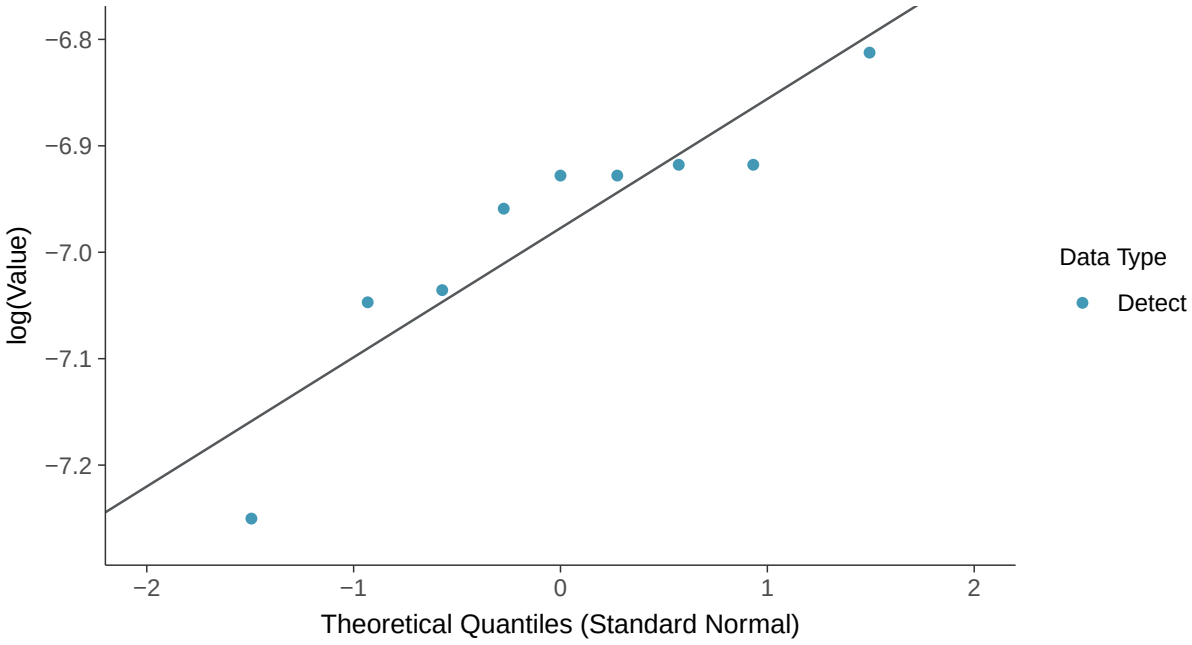
Normal Q-Q plot

Cobalt, MW-07 (mg/L)



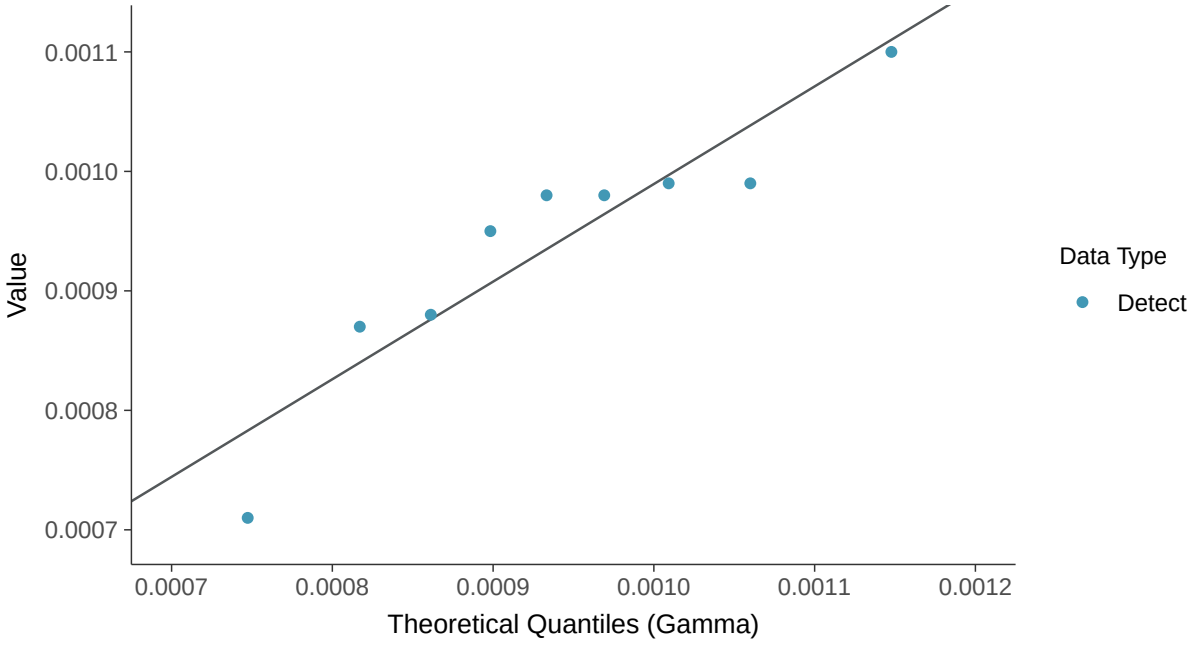
Lognormal Q-Q plot

Cobalt, MW-07 (mg/L)



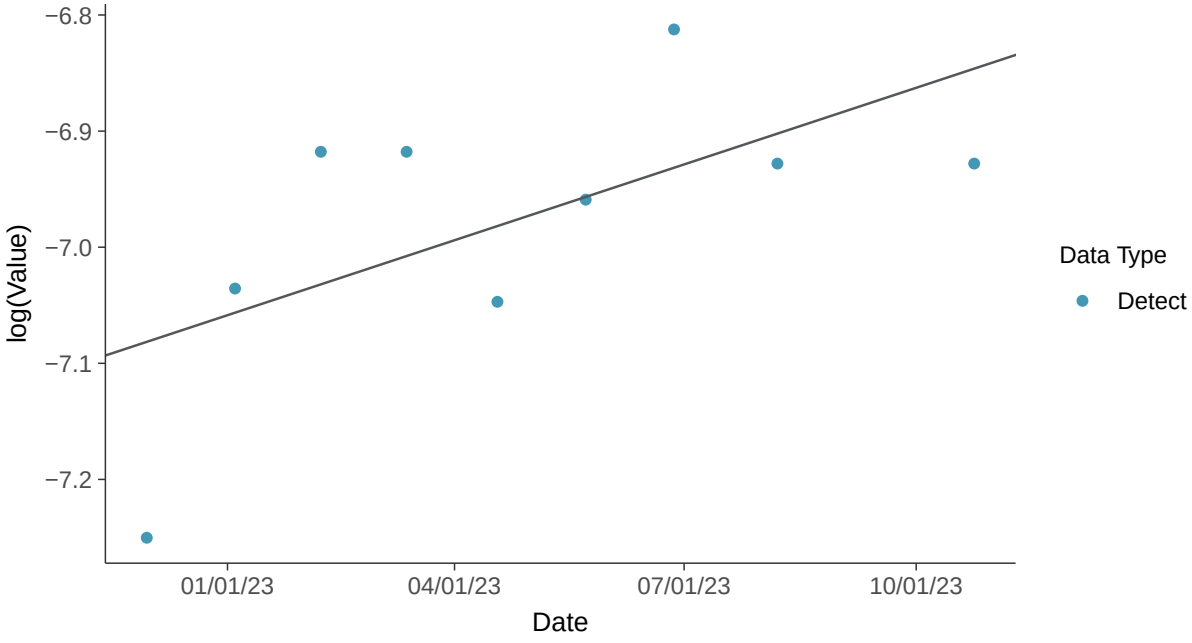
Gamma Q-Q plot

Cobalt, MW-07 (mg/L)



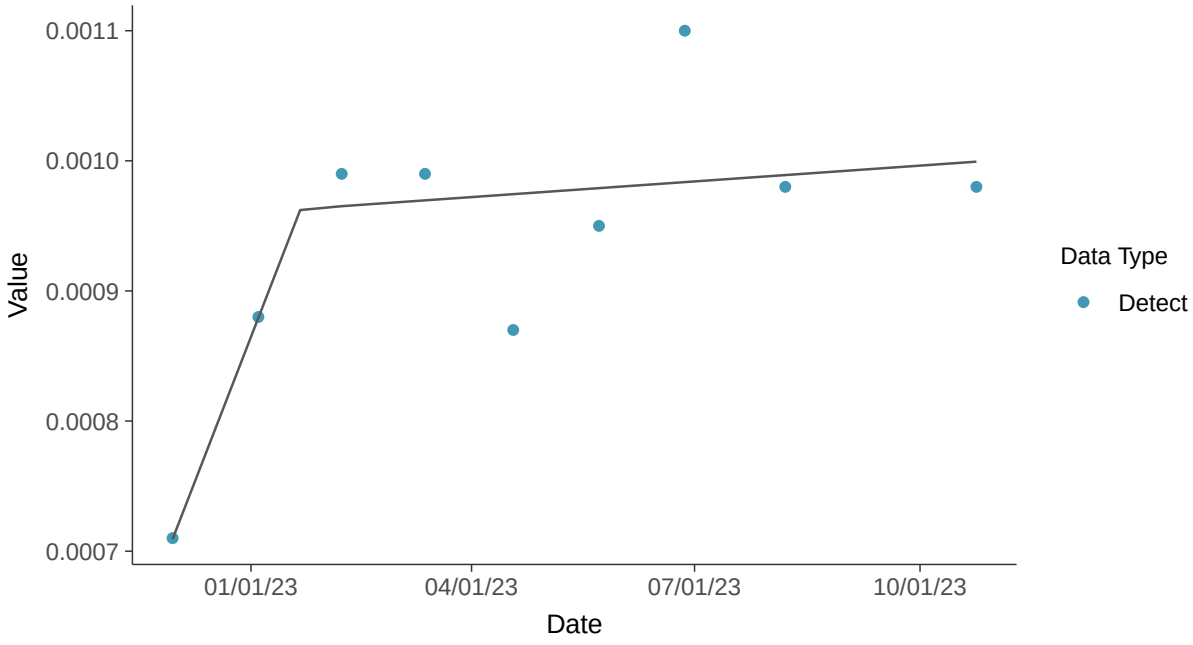
Trend Regression: Lognormal MLE

Cobalt, MW-07 (mg/L)



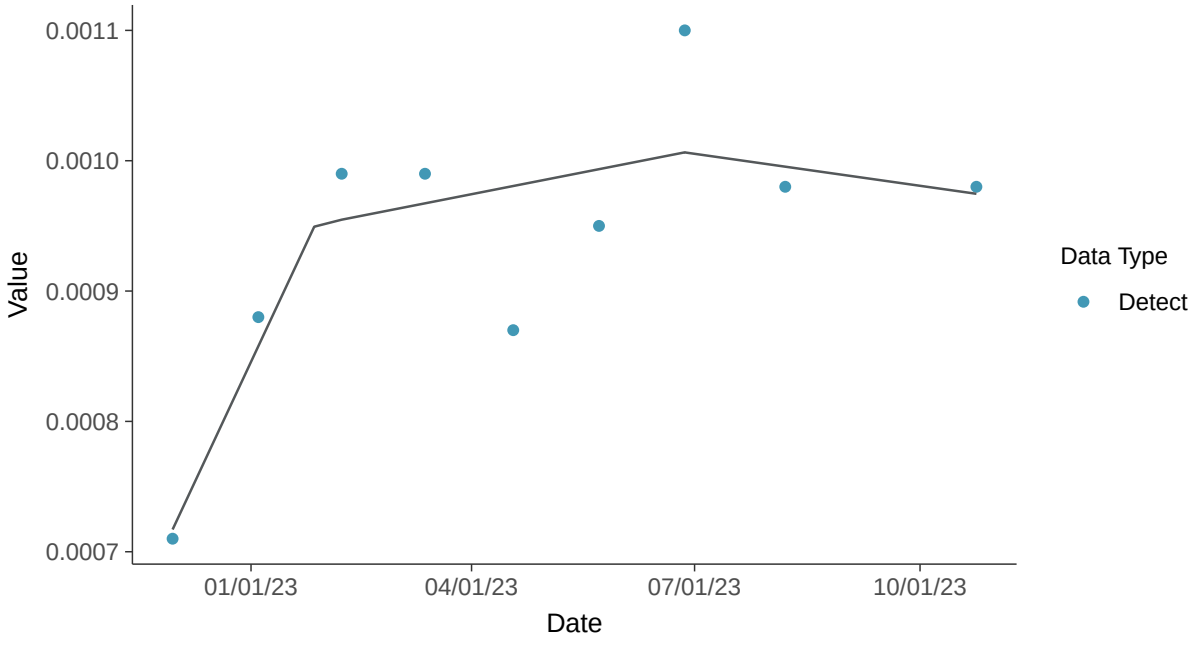
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-07 (mg/L)



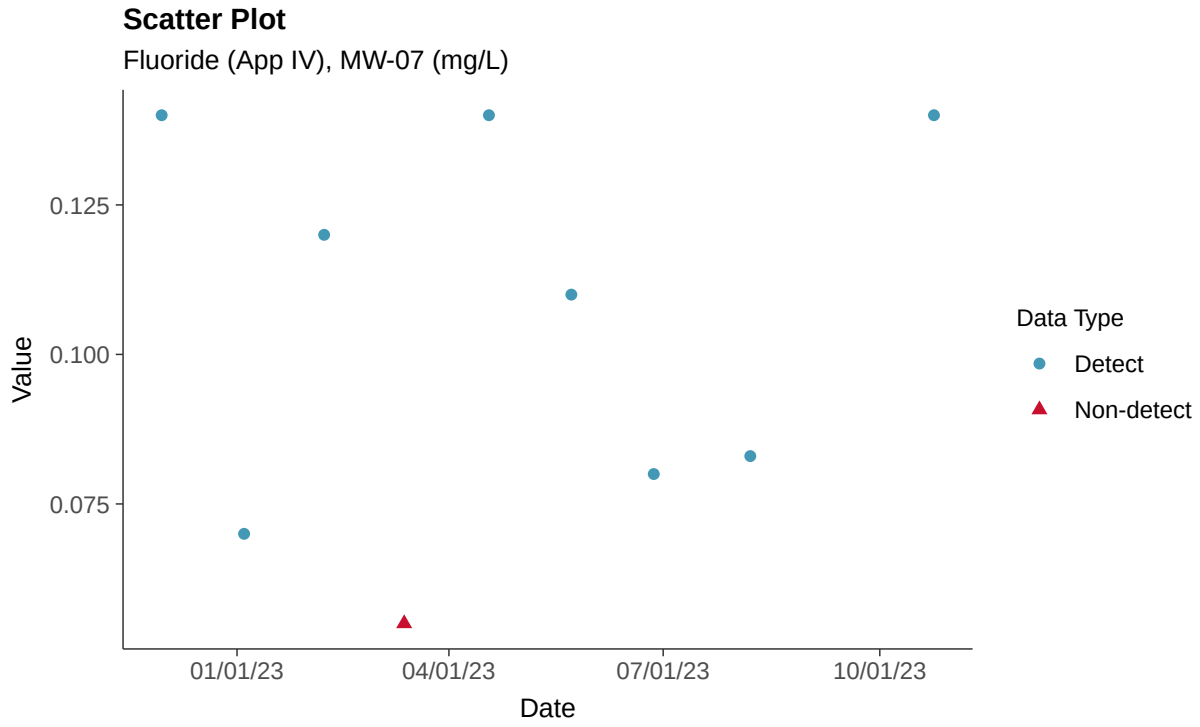
Trend Regression: Piecewise Linear-Linear-Linear

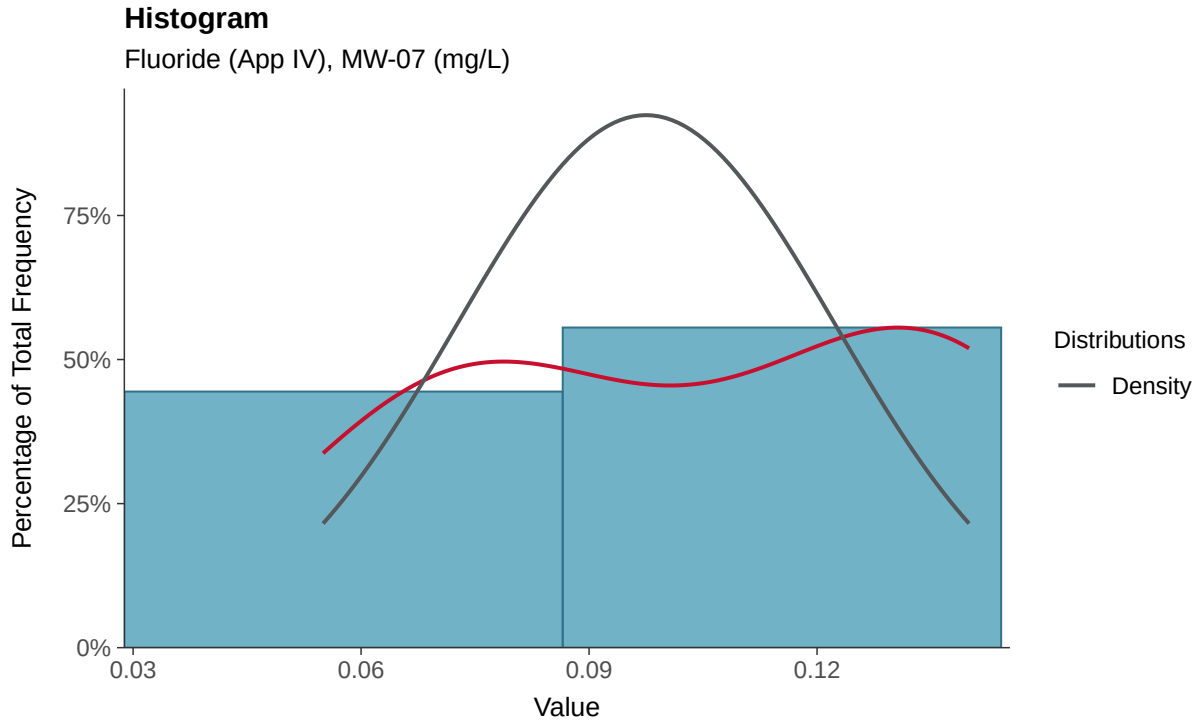
Cobalt, MW-07 (mg/L)



Appendix IV: Fluoride (App IV), MW-07

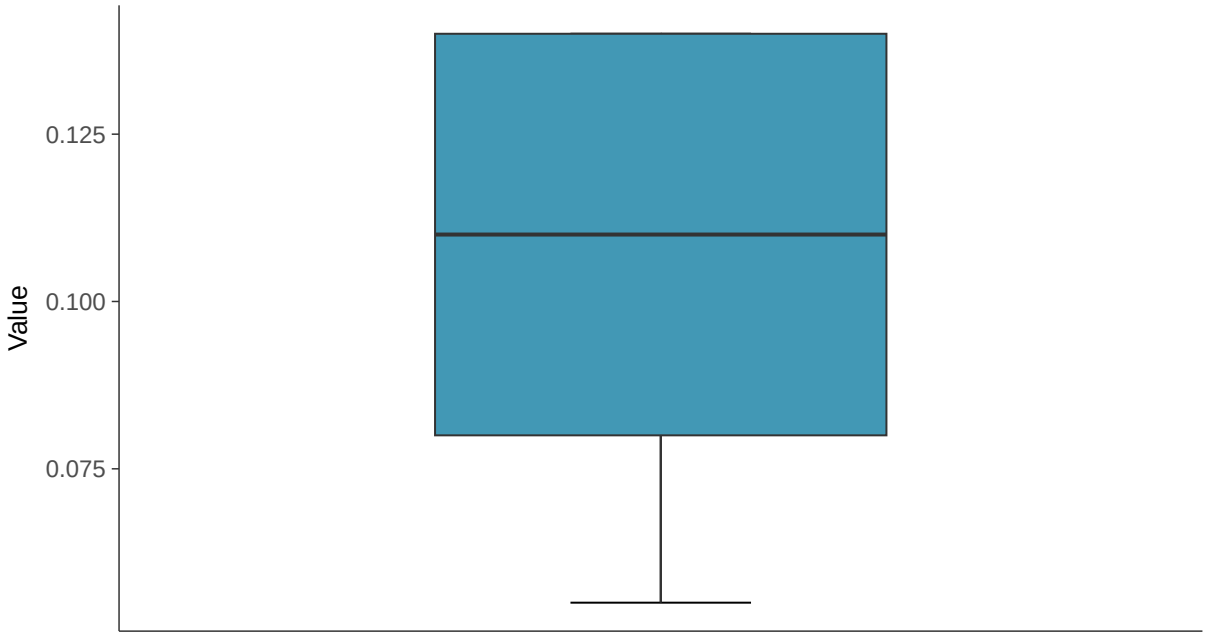
ID: 2_16_5_113





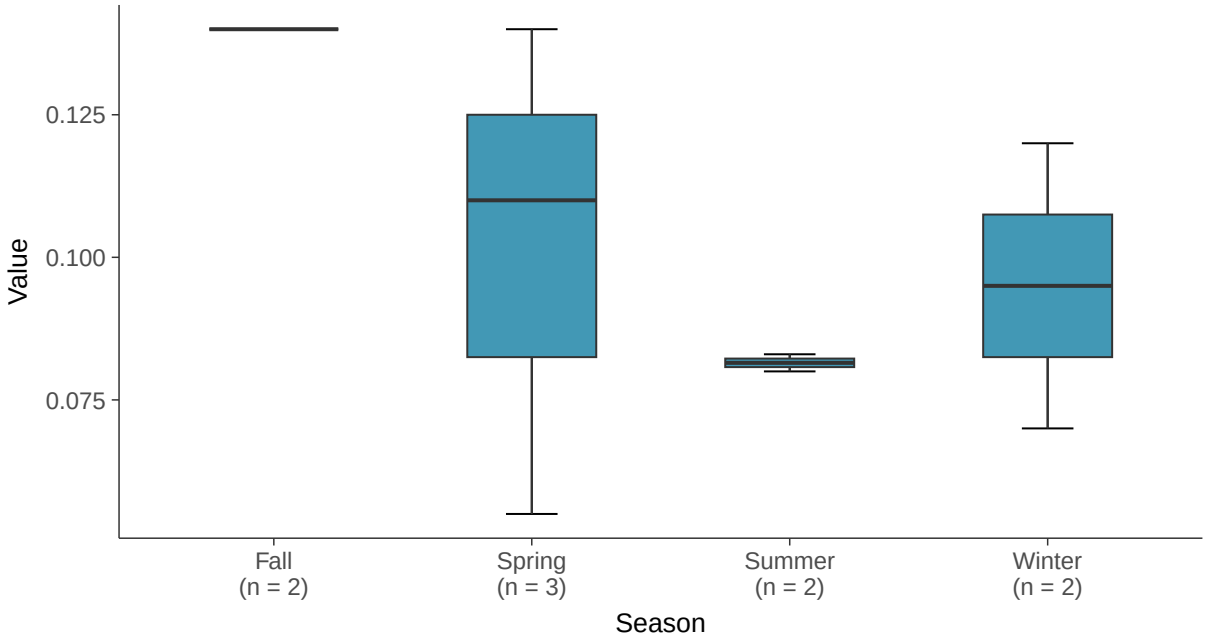
Boxplot

Fluoride (App IV), MW-07 (mg/L)



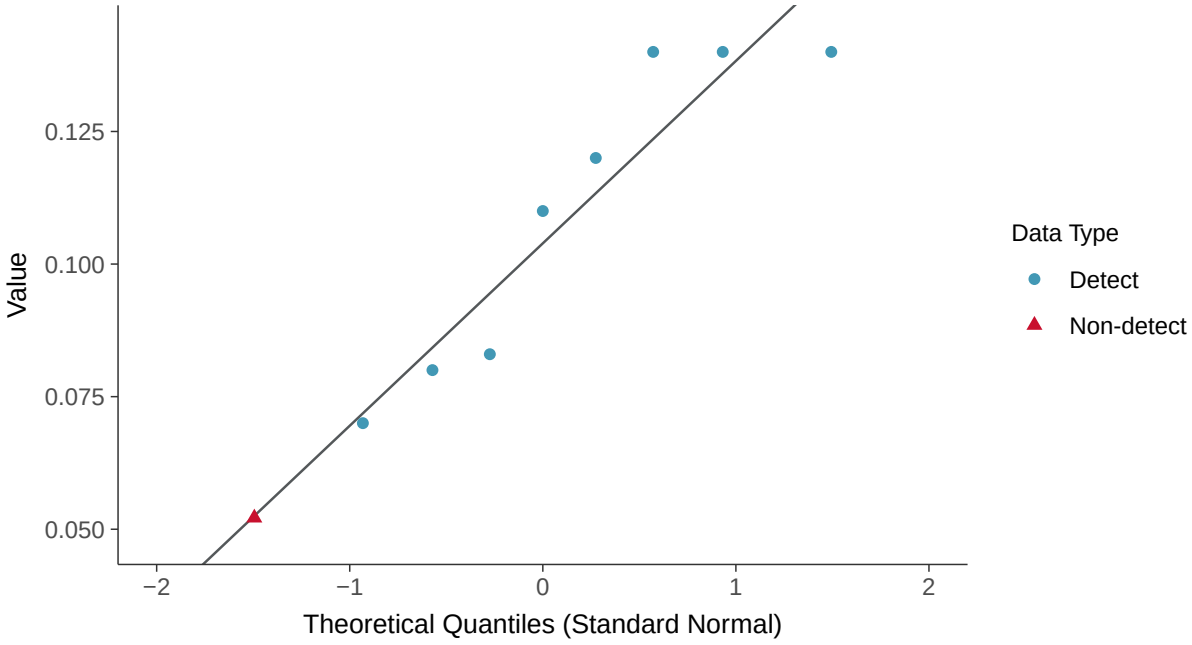
Boxplot by Season

Fluoride (App IV), MW-07 (mg/L)



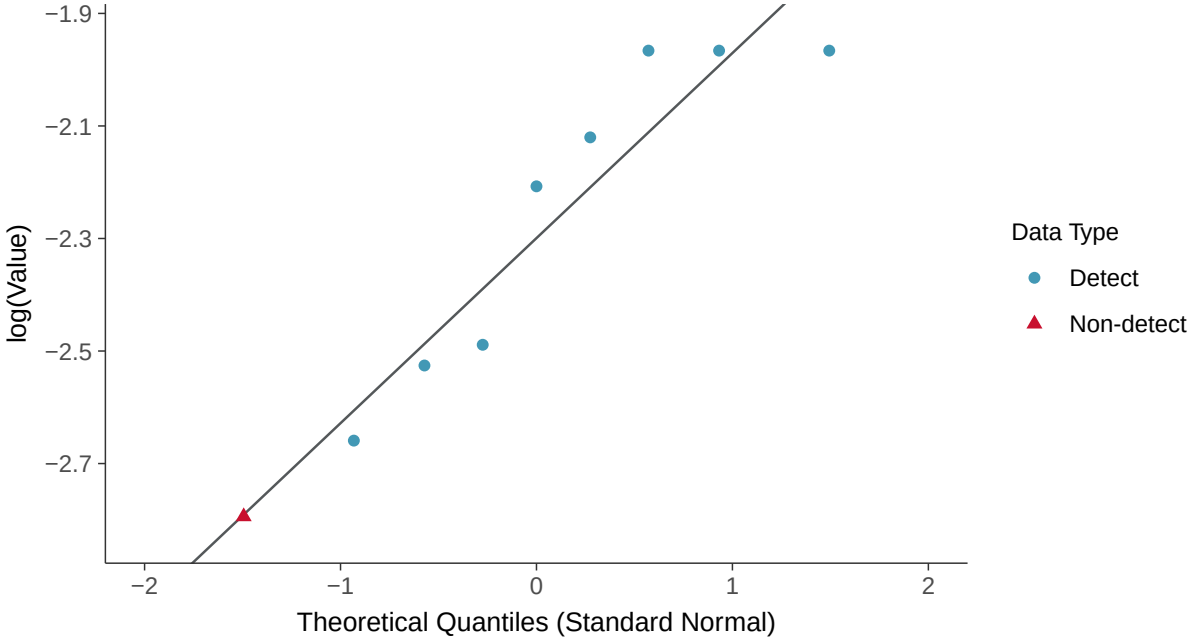
Normal Q-Q plot using ROS Imputed Estimates

Fluoride (App IV), MW-07 (mg/L)



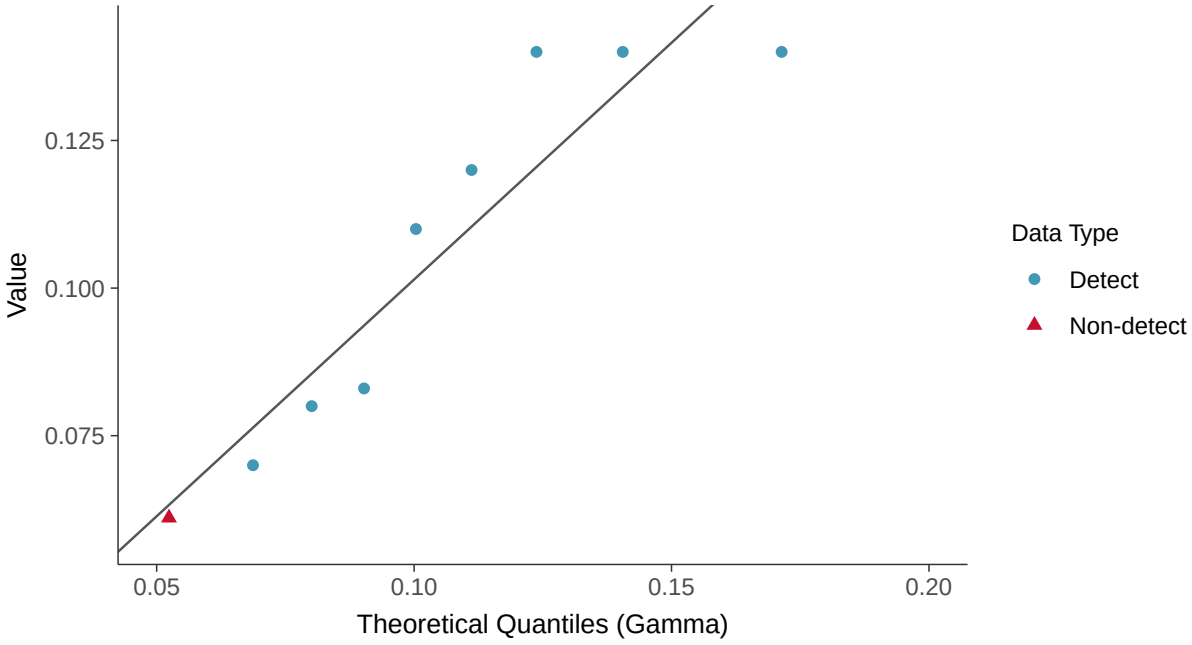
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride (App IV), MW-07 (mg/L)



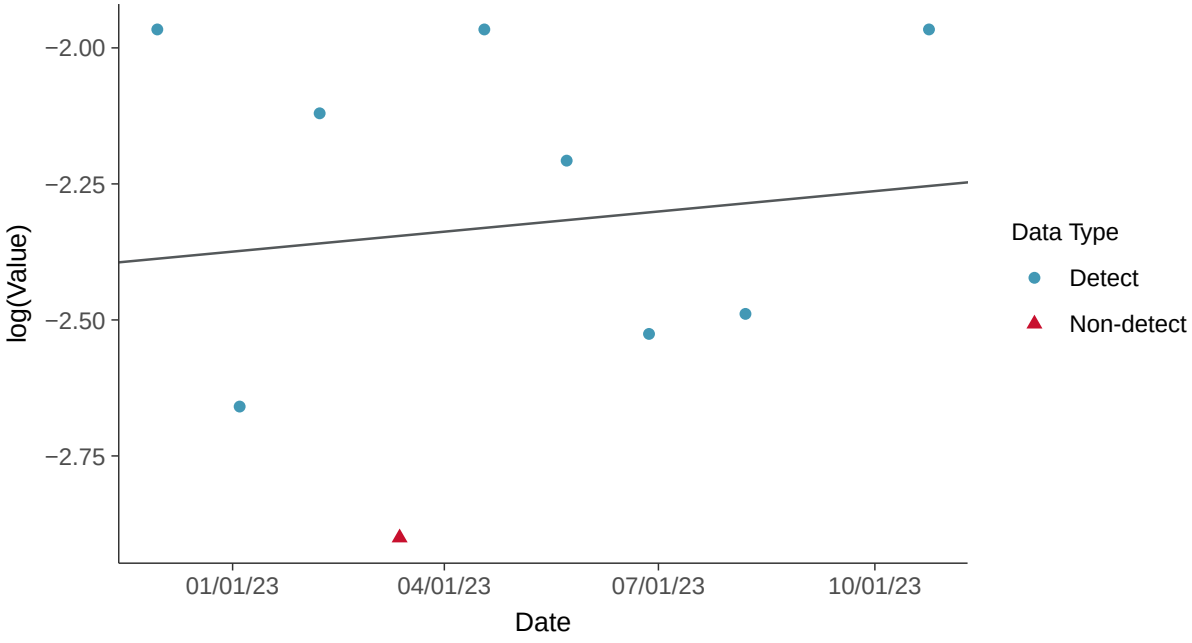
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride (App IV), MW-07 (mg/L)



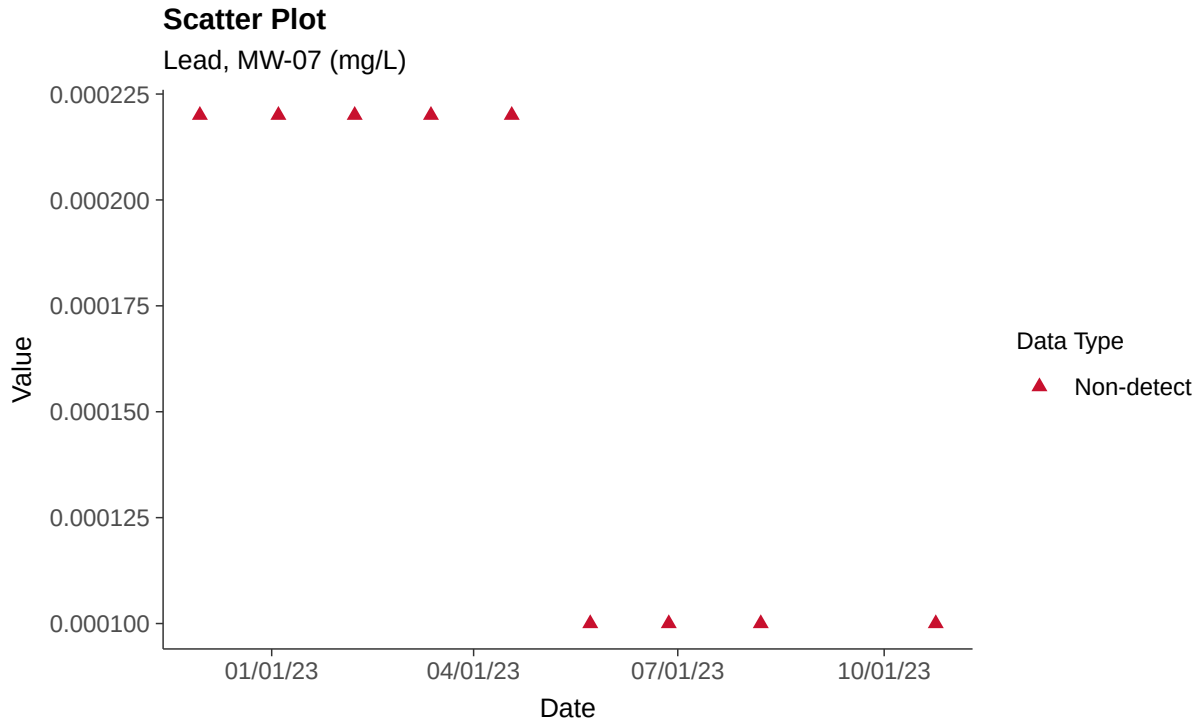
Trend Regression: Lognormal MLE

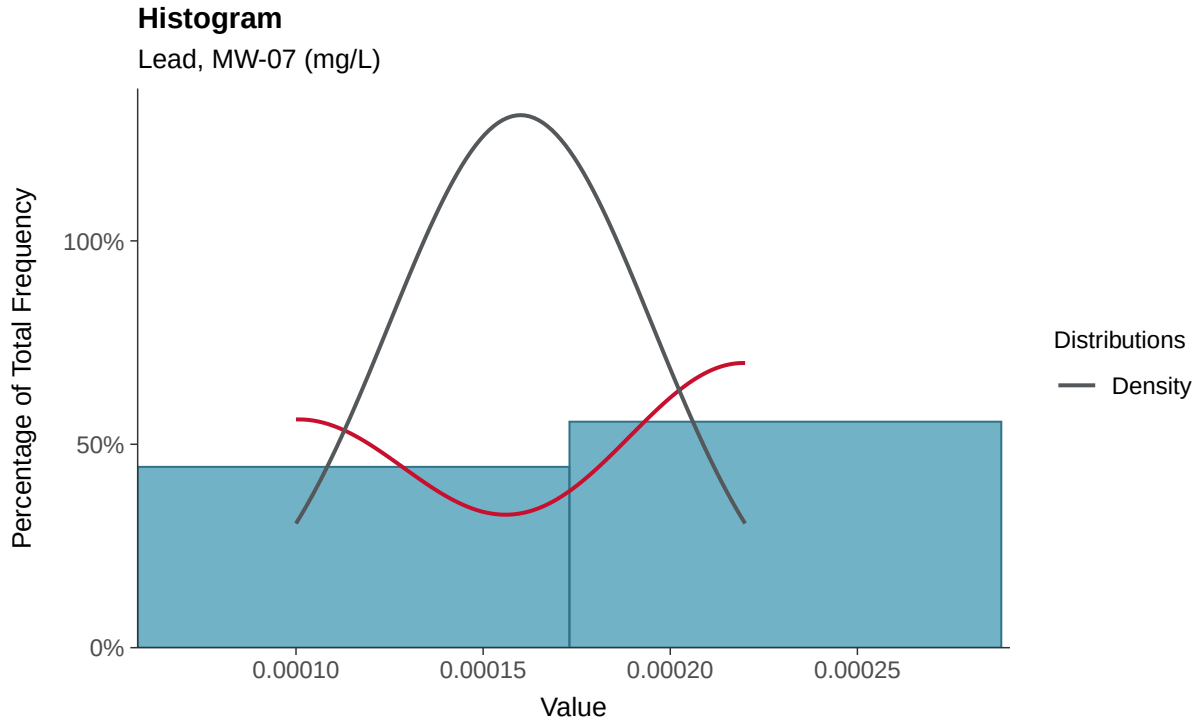
Fluoride (App IV), MW-07 (mg/L)



Appendix IV: Lead, MW-07

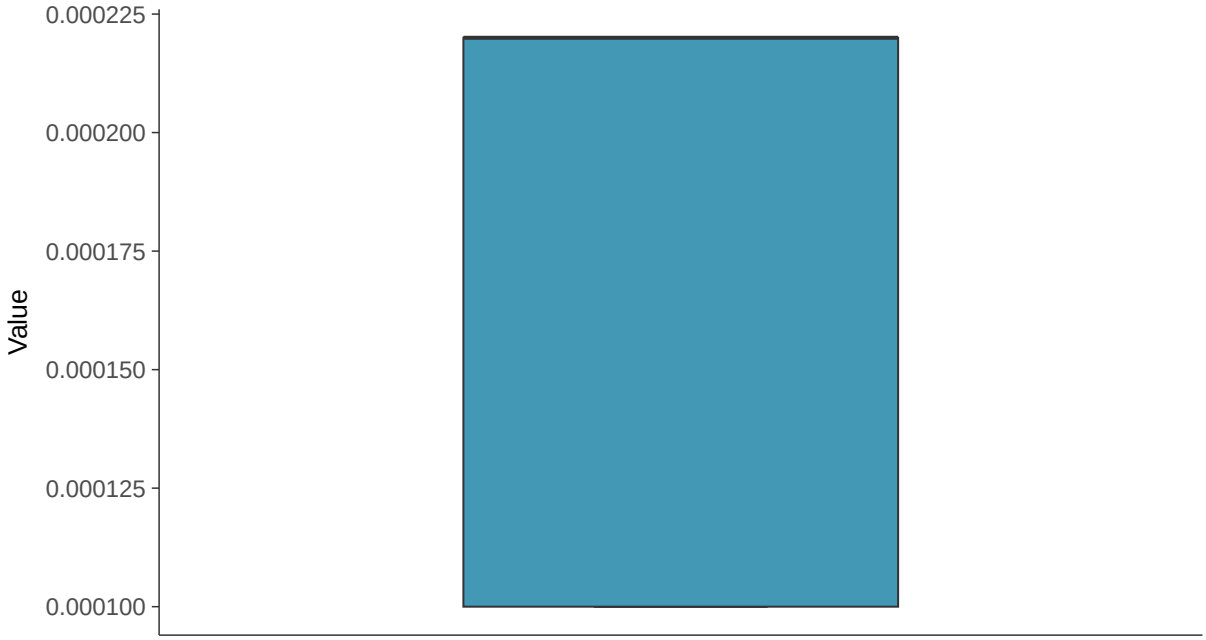
ID: 2_16_5_115





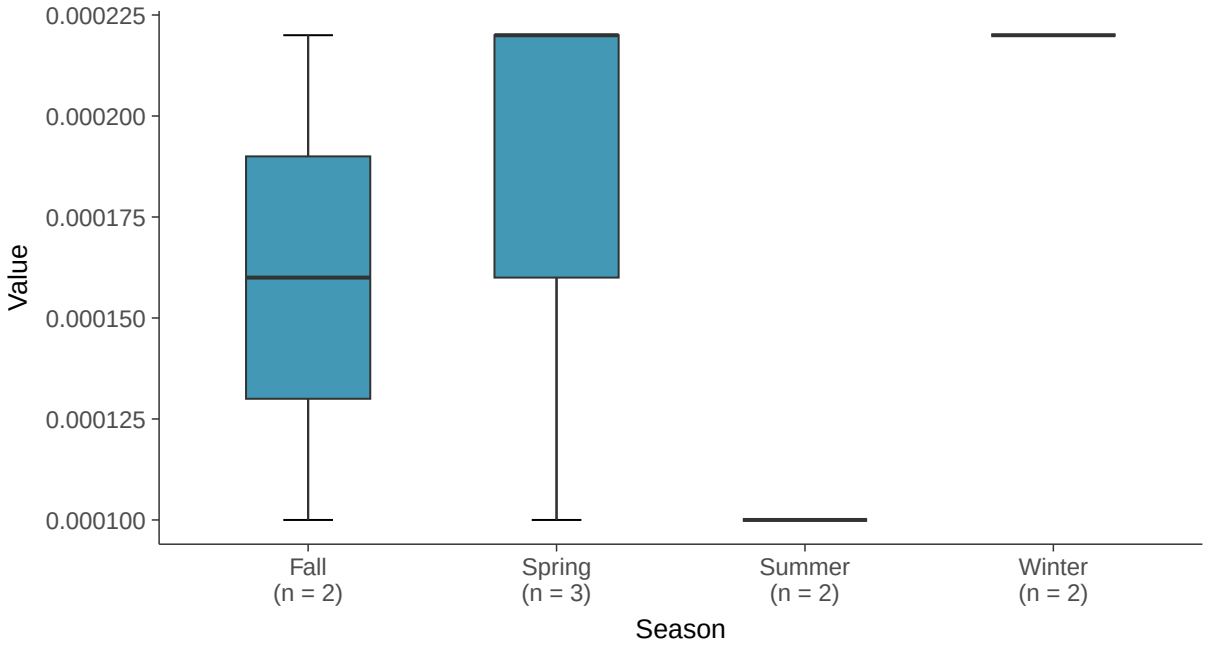
Boxplot

Lead, MW-07 (mg/L)



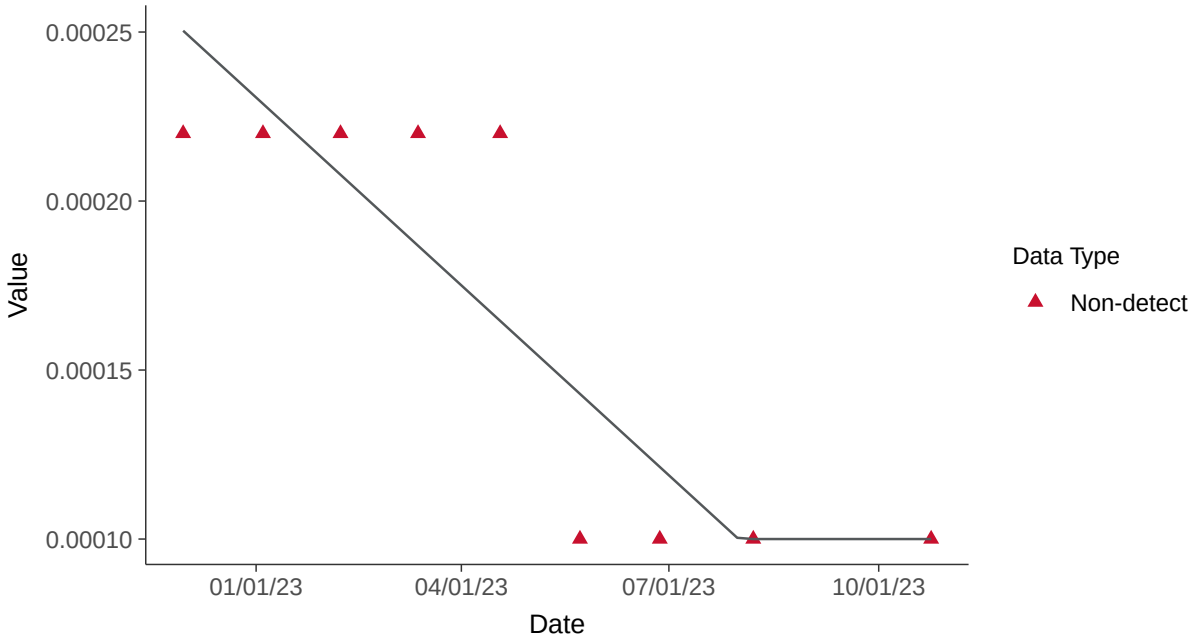
Boxplot by Season

Lead, MW-07 (mg/L)



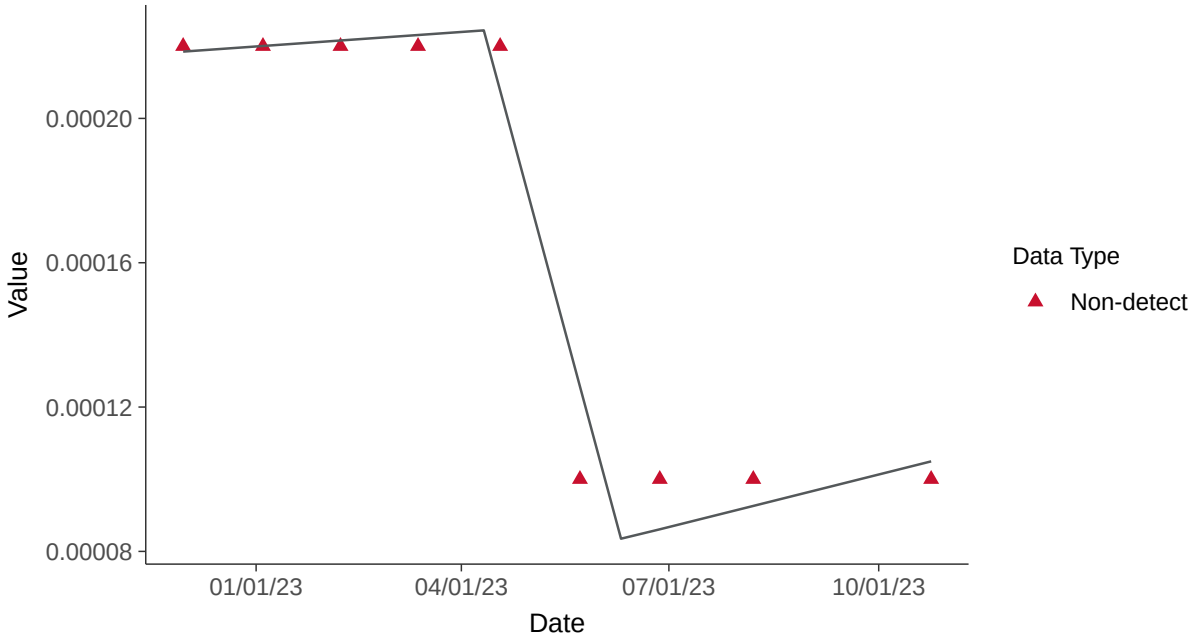
Trend Regression: Piecewise Linear-Linear

Lead, MW-07 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-07 (mg/L)

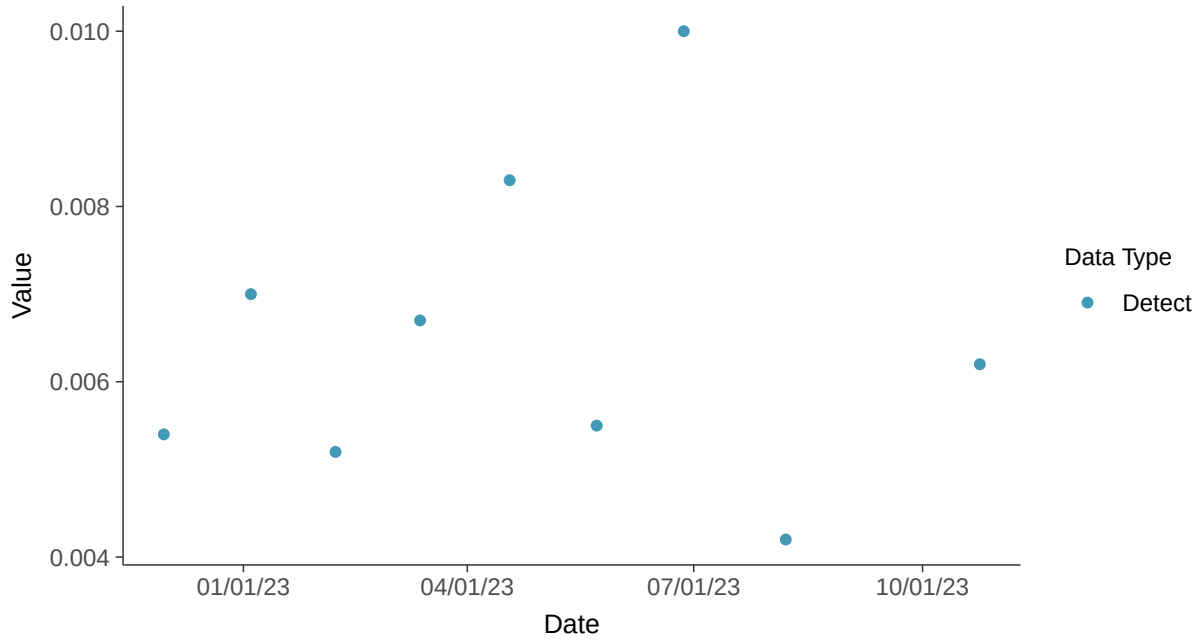


Appendix IV: Lithium, MW-07

ID: 2_16_5_116

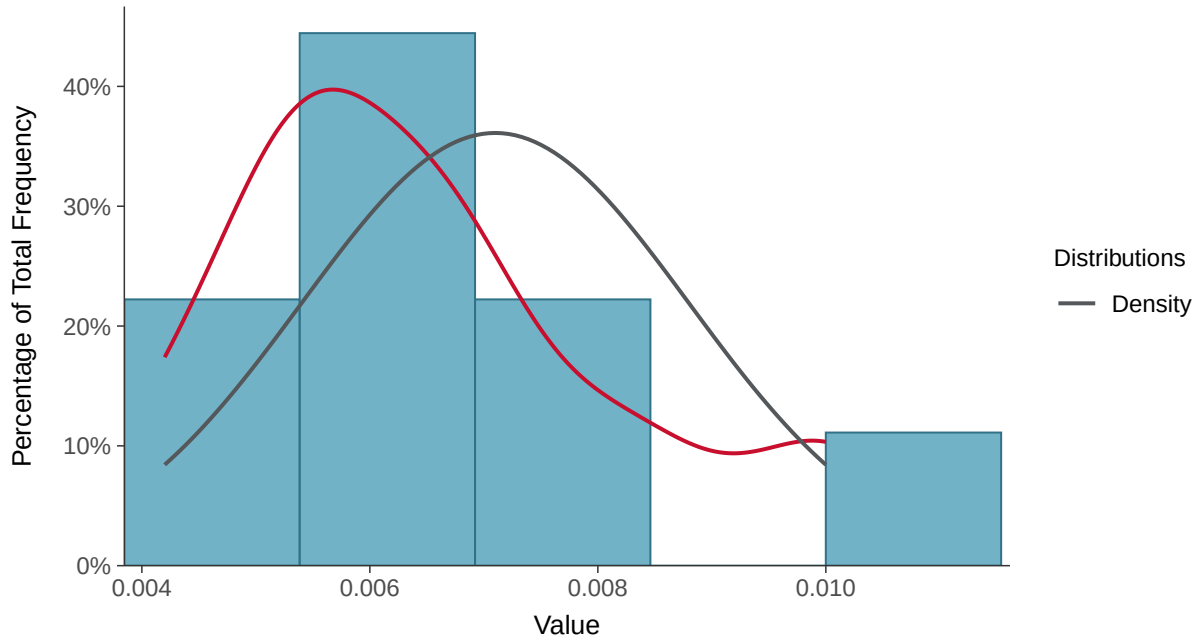
Scatter Plot

Lithium, MW-07 (mg/L)



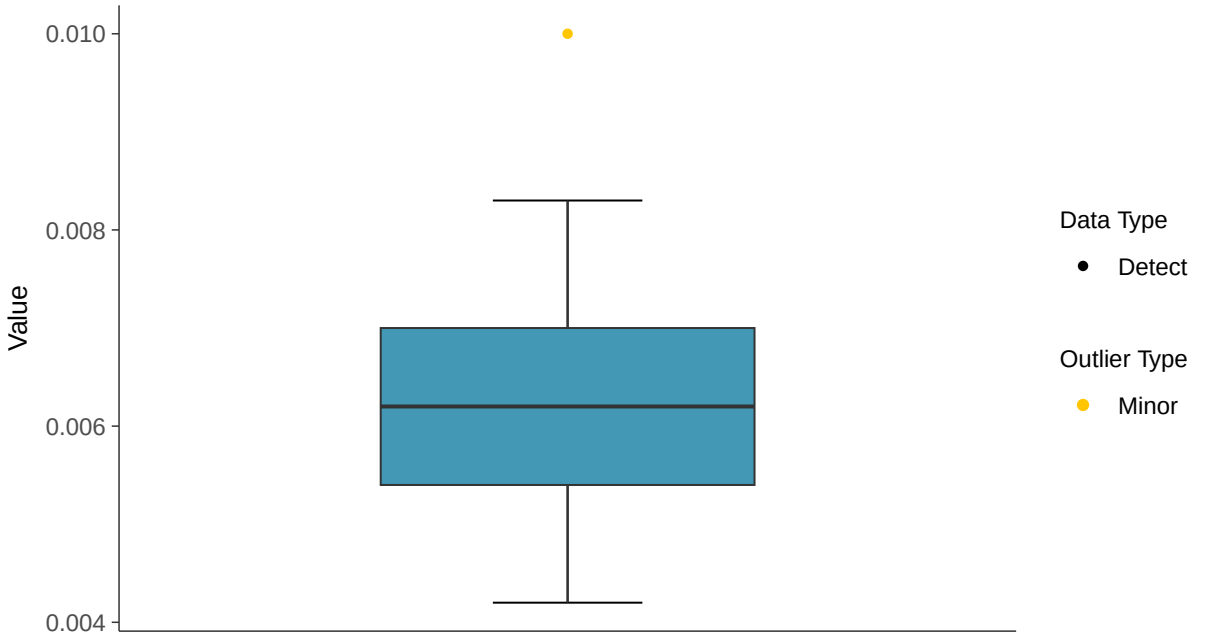
Histogram

Lithium, MW-07 (mg/L)



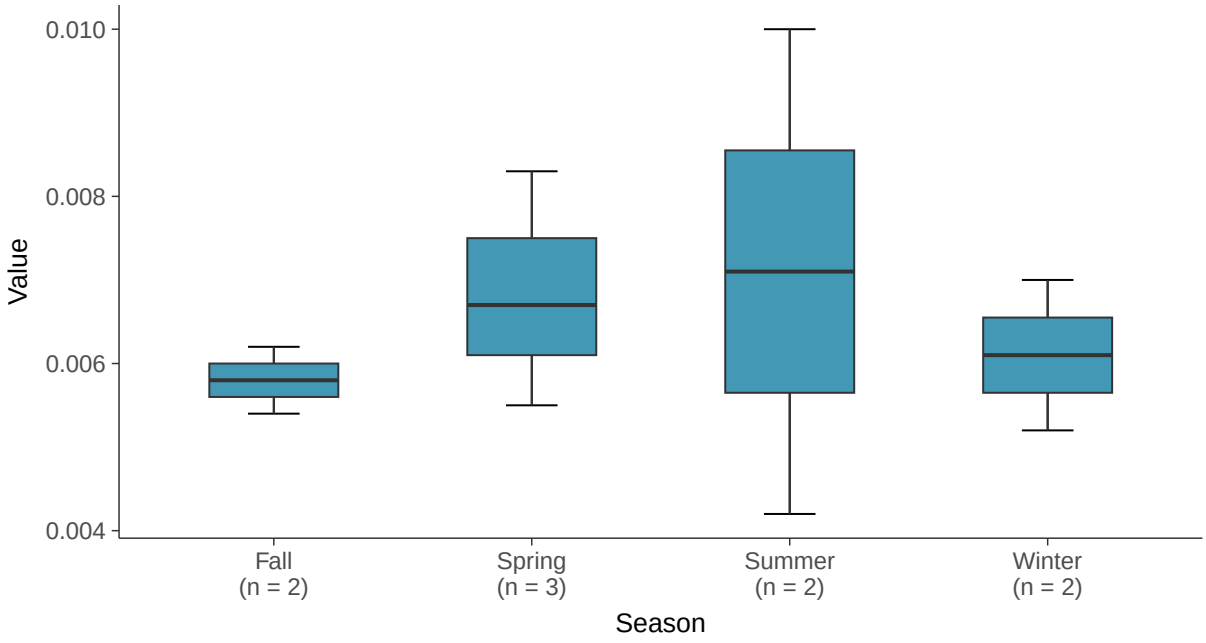
Boxplot

Lithium, MW-07 (mg/L)



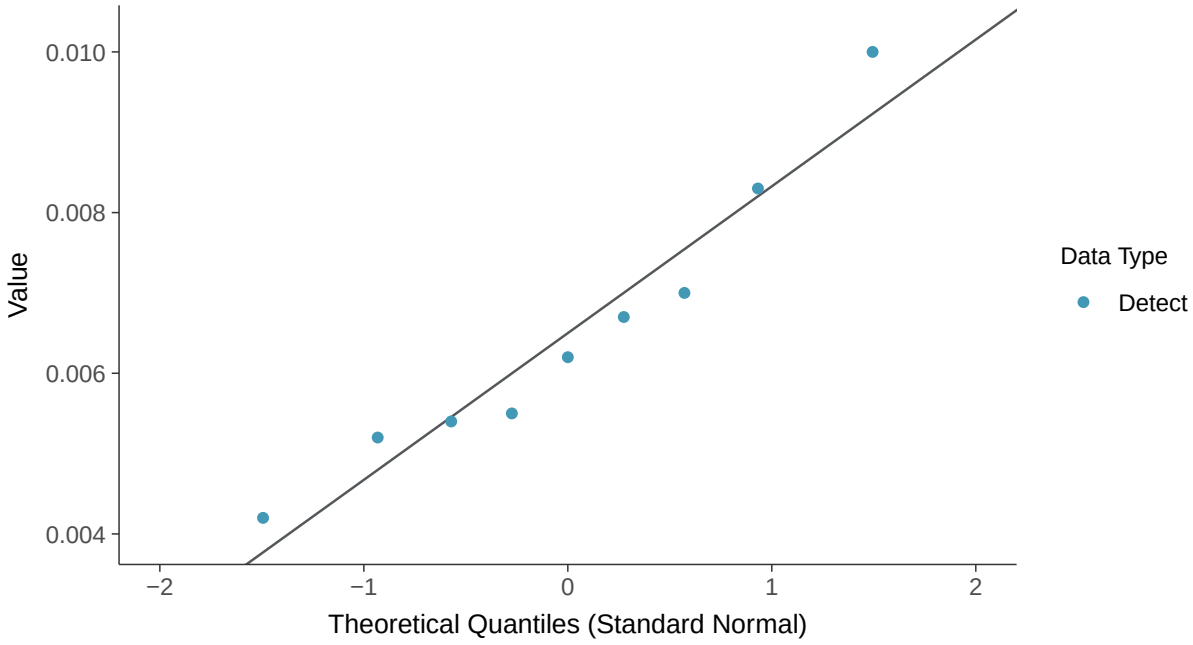
Boxplot by Season

Lithium, MW-07 (mg/L)



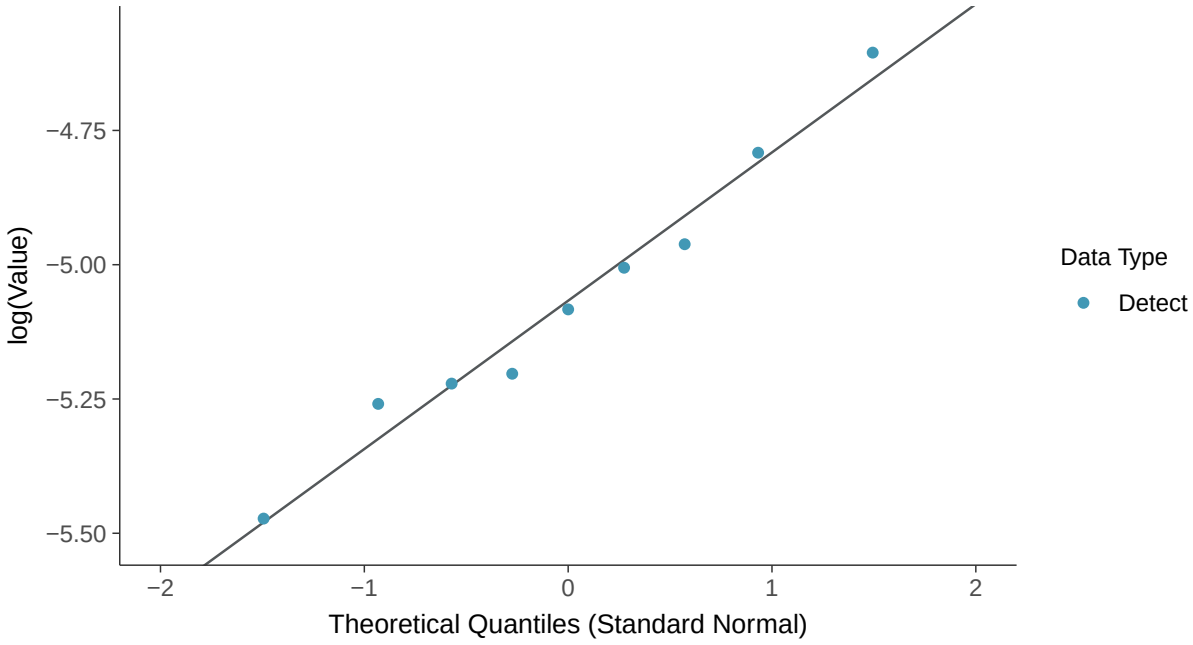
Normal Q-Q plot

Lithium, MW-07 (mg/L)



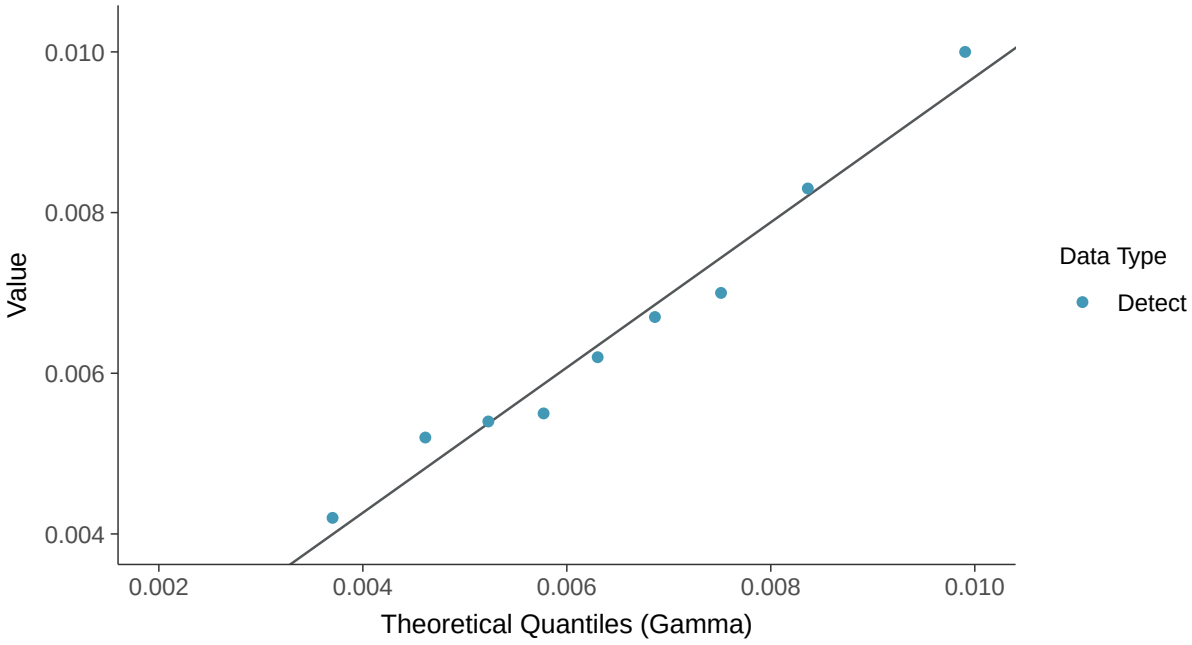
Lognormal Q-Q plot

Lithium, MW-07 (mg/L)



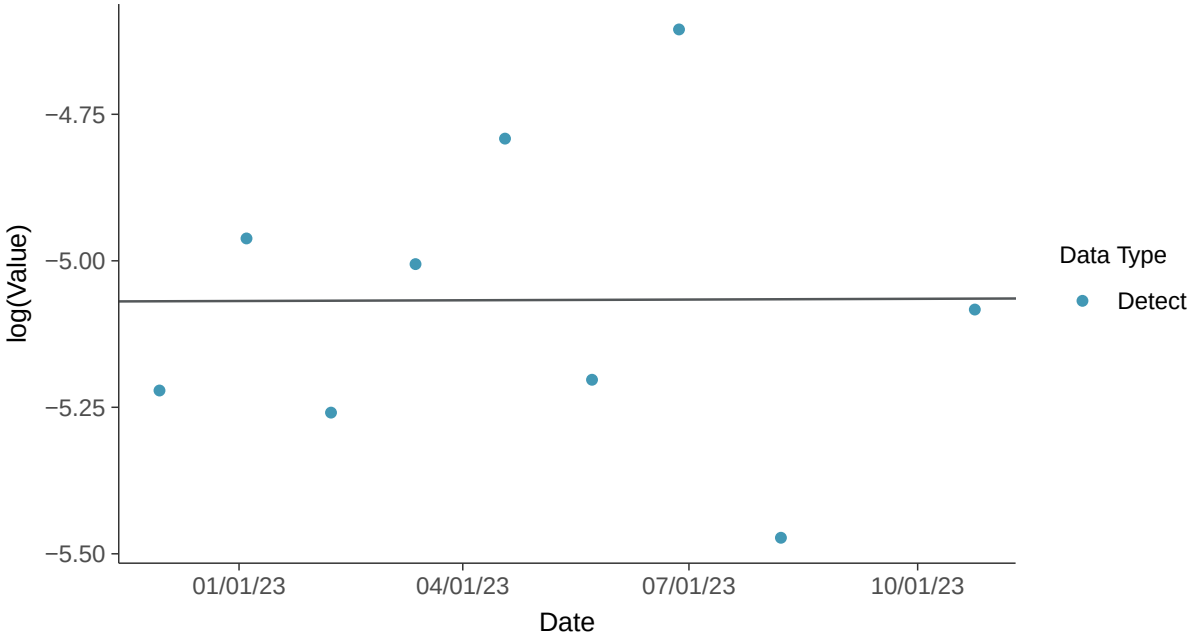
Gamma Q-Q plot

Lithium, MW-07 (mg/L)



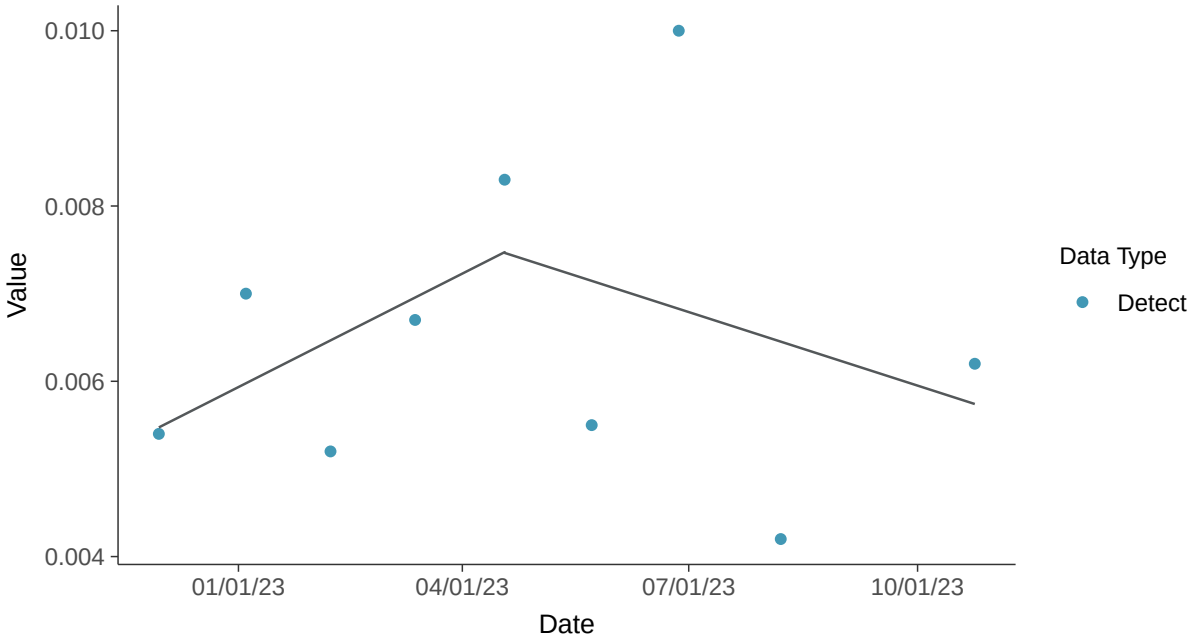
Trend Regression: Lognormal MLE

Lithium, MW-07 (mg/L)



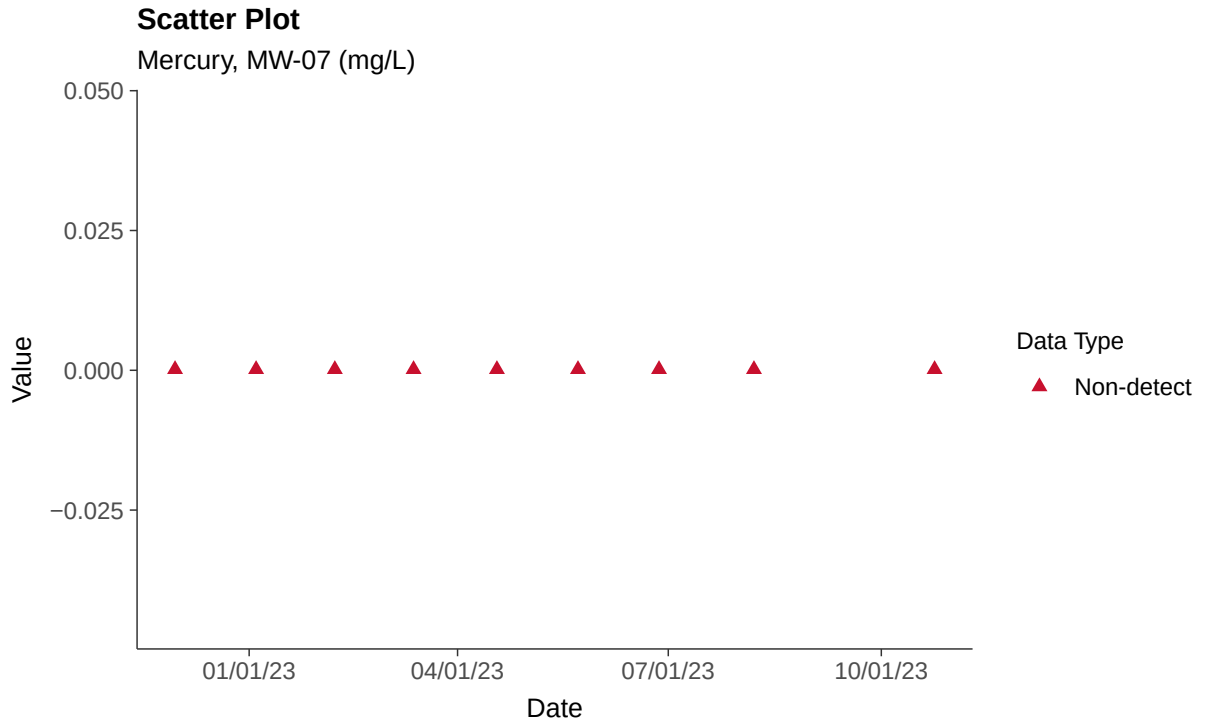
Trend Regression: Piecewise Linear-Linear

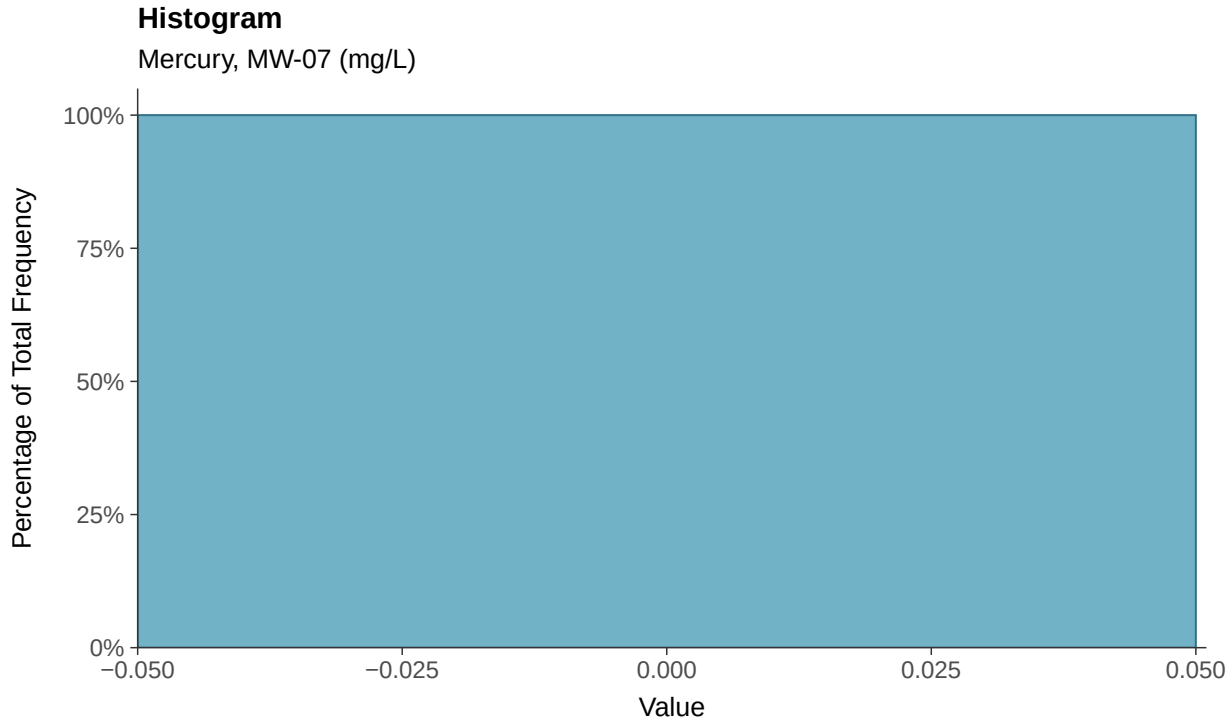
Lithium, MW-07 (mg/L)



Appendix IV: Mercury, MW-07

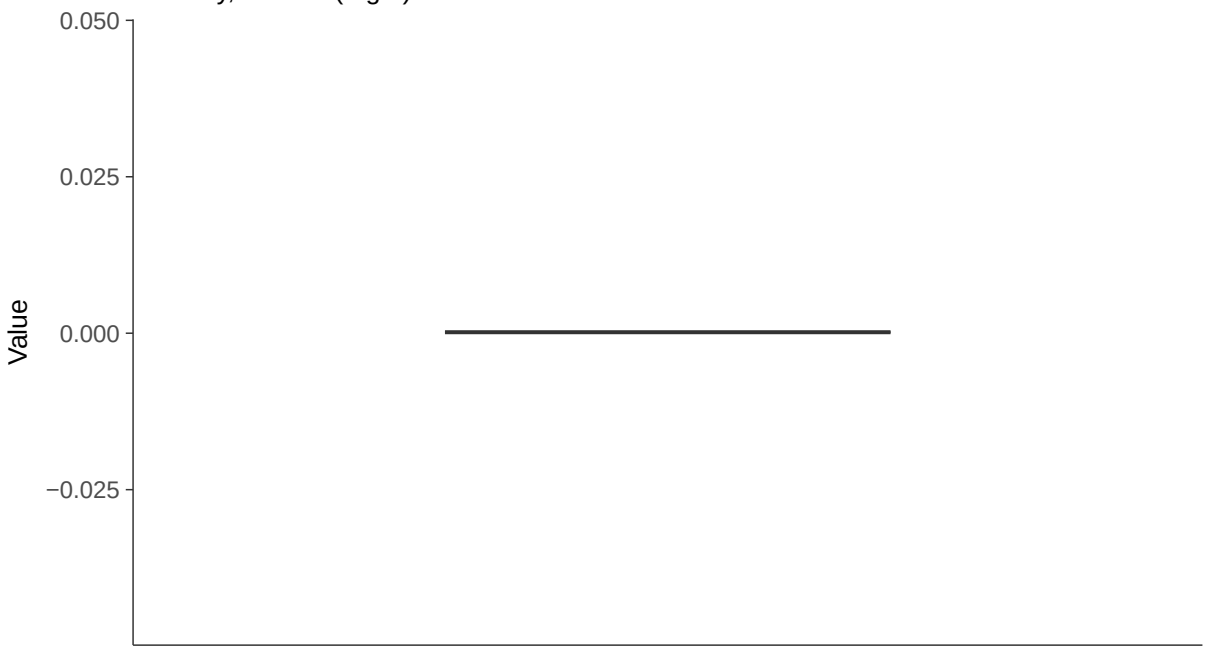
ID: 2_16_5_117





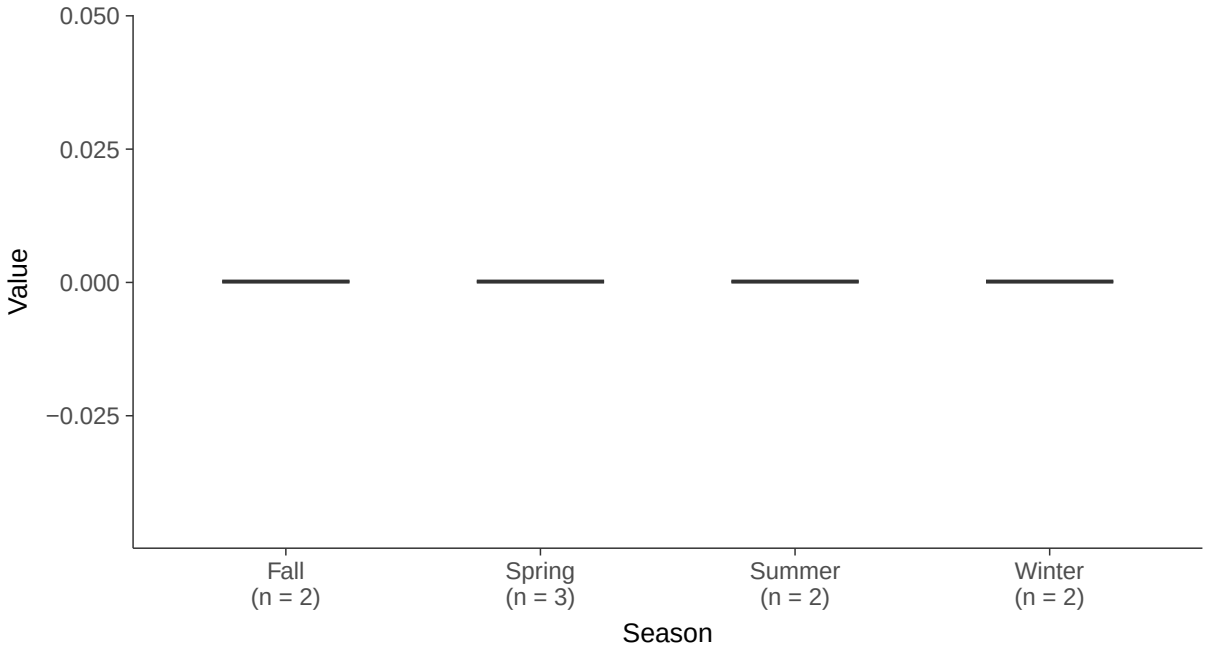
Boxplot

Mercury, MW-07 (mg/L)



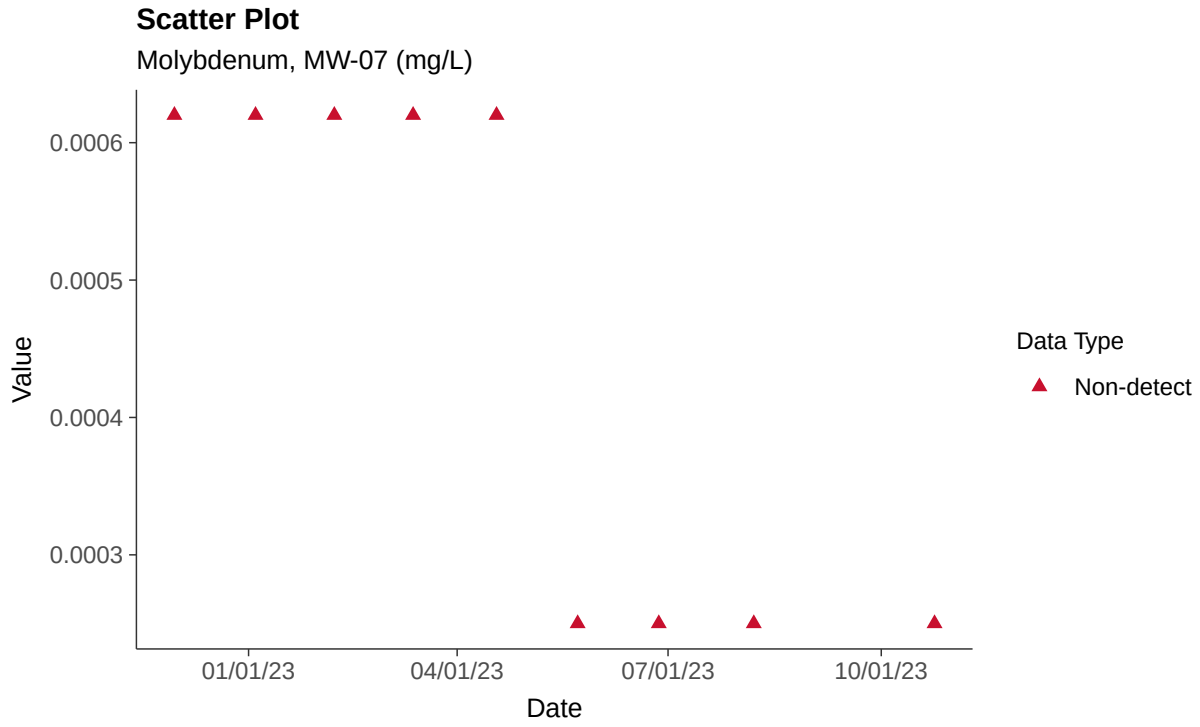
Boxplot by Season

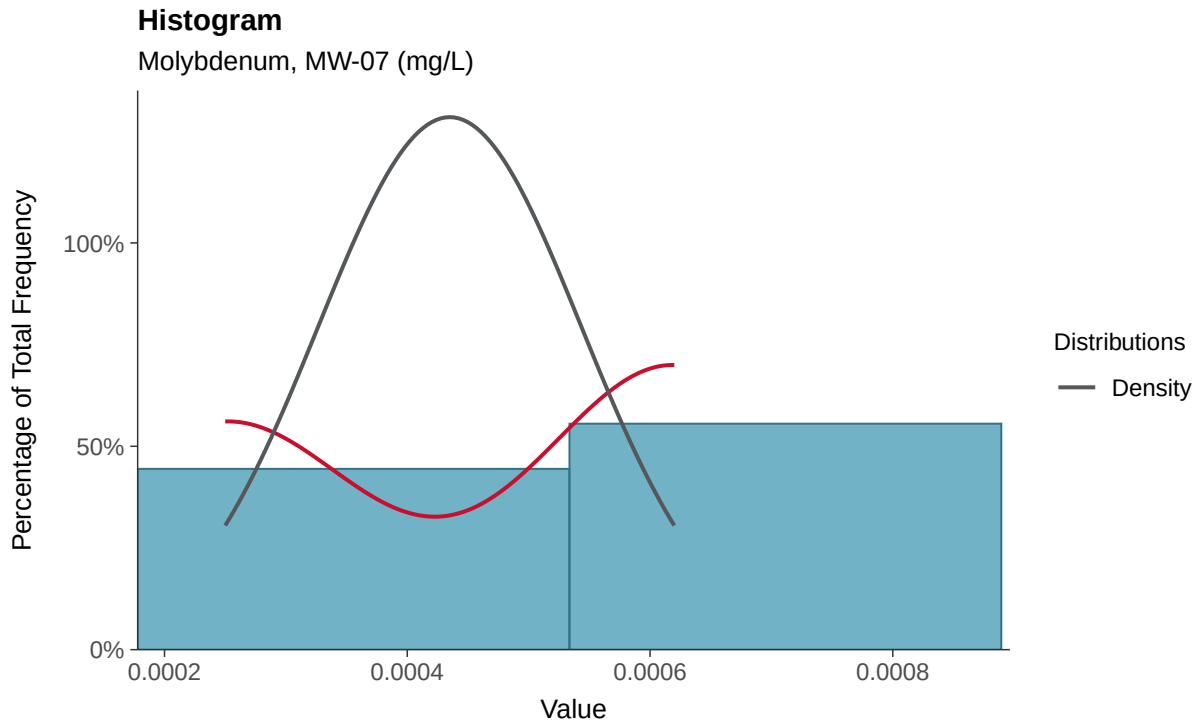
Mercury, MW-07 (mg/L)



Appendix IV: Molybdenum, MW-07

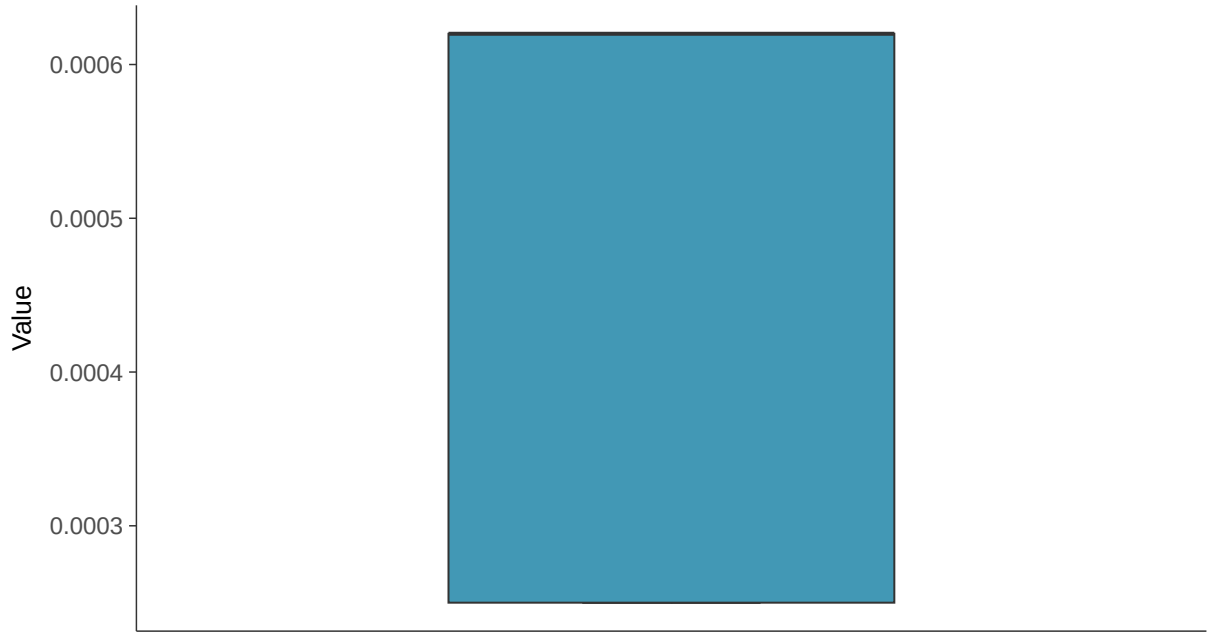
ID: 2_16_5_118





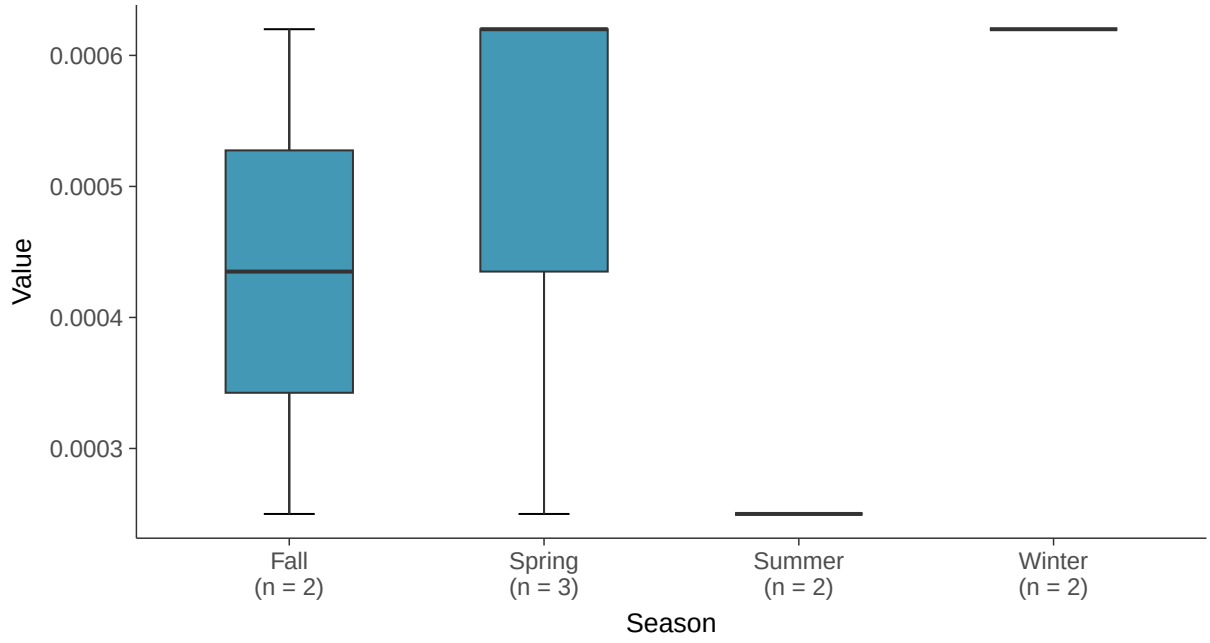
Boxplot

Molybdenum, MW-07 (mg/L)



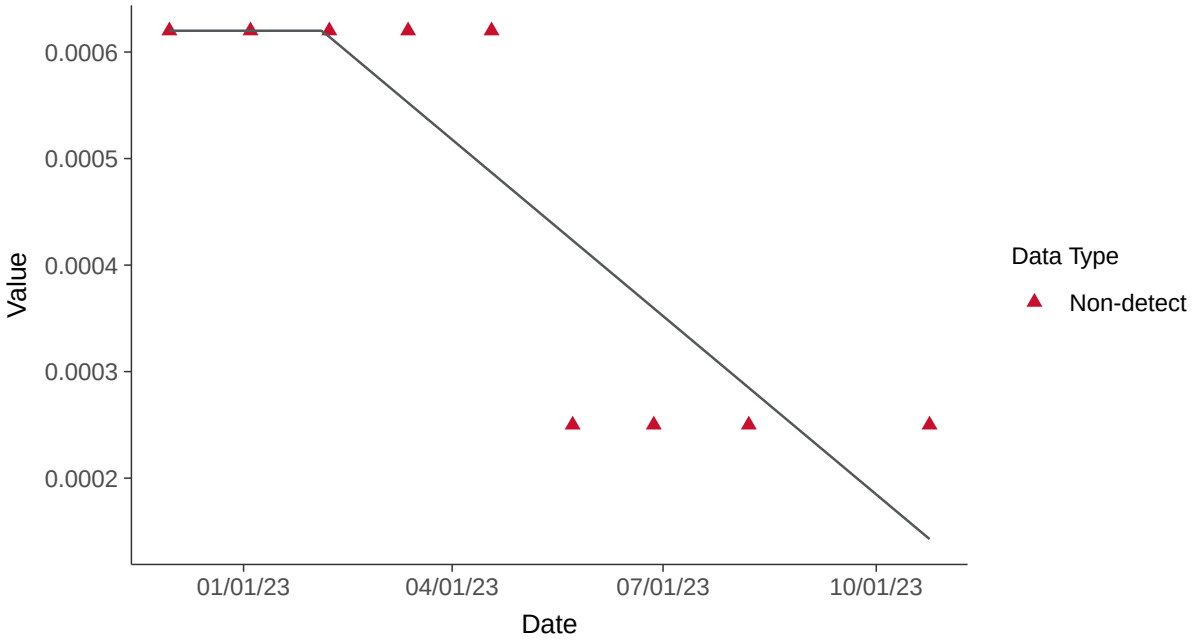
Boxplot by Season

Molybdenum, MW-07 (mg/L)



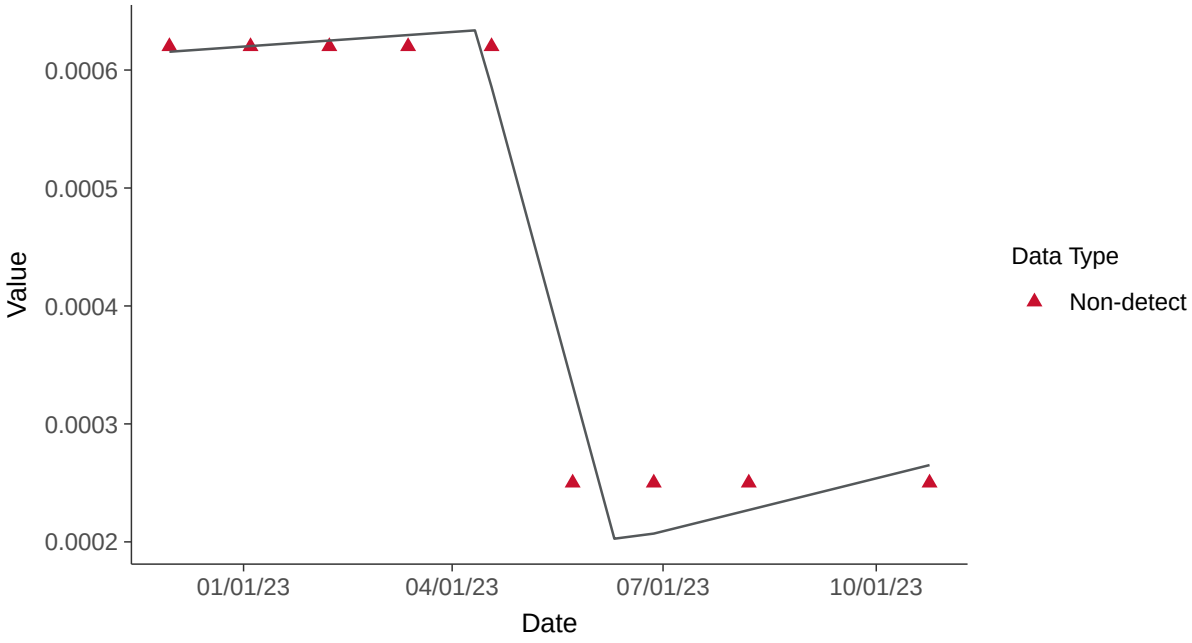
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-07 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-07 (mg/L)

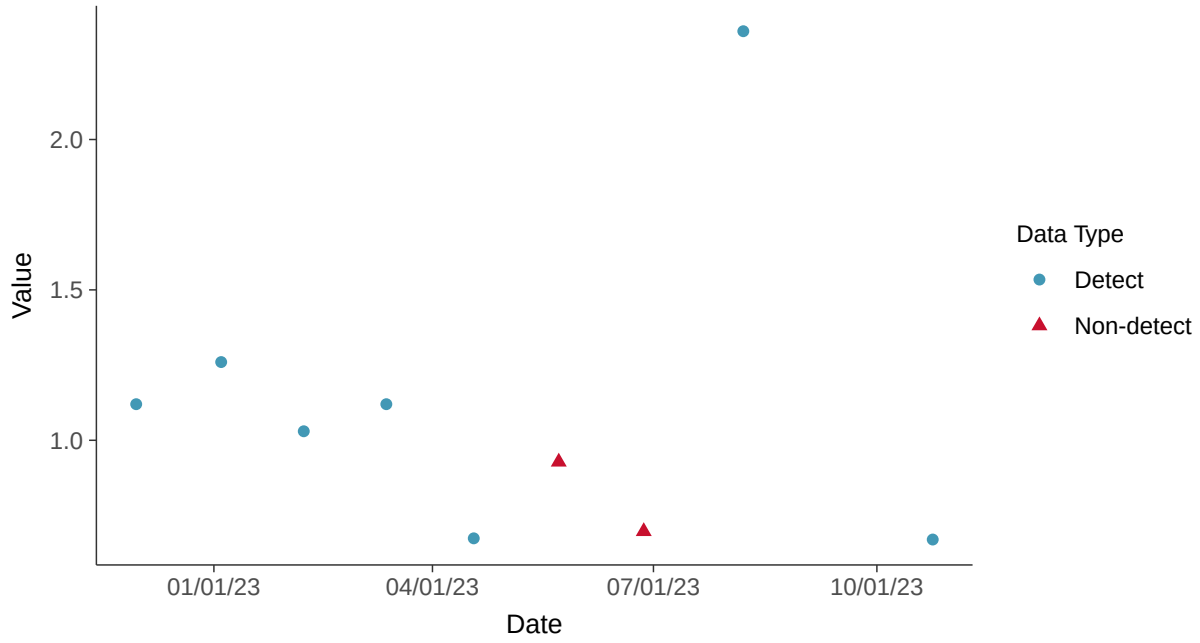


Appendix IV: Radium 226 and 228, MW-07

ID: 2_16_5_121

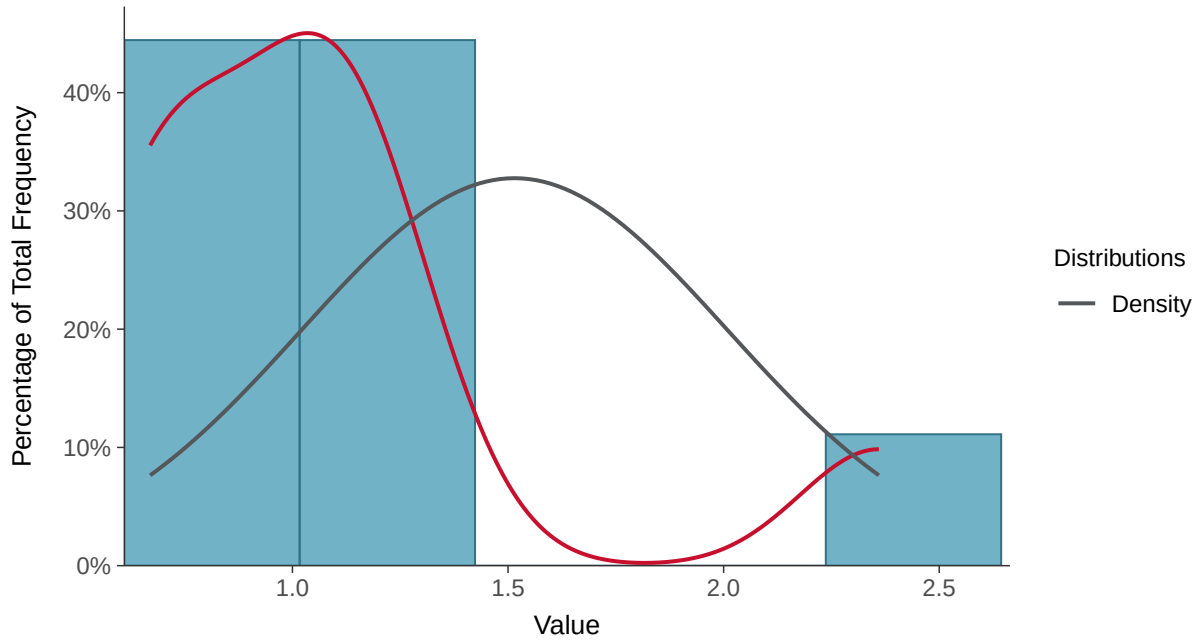
Scatter Plot

Radium 226 and 228, MW-07 (pCi/L)



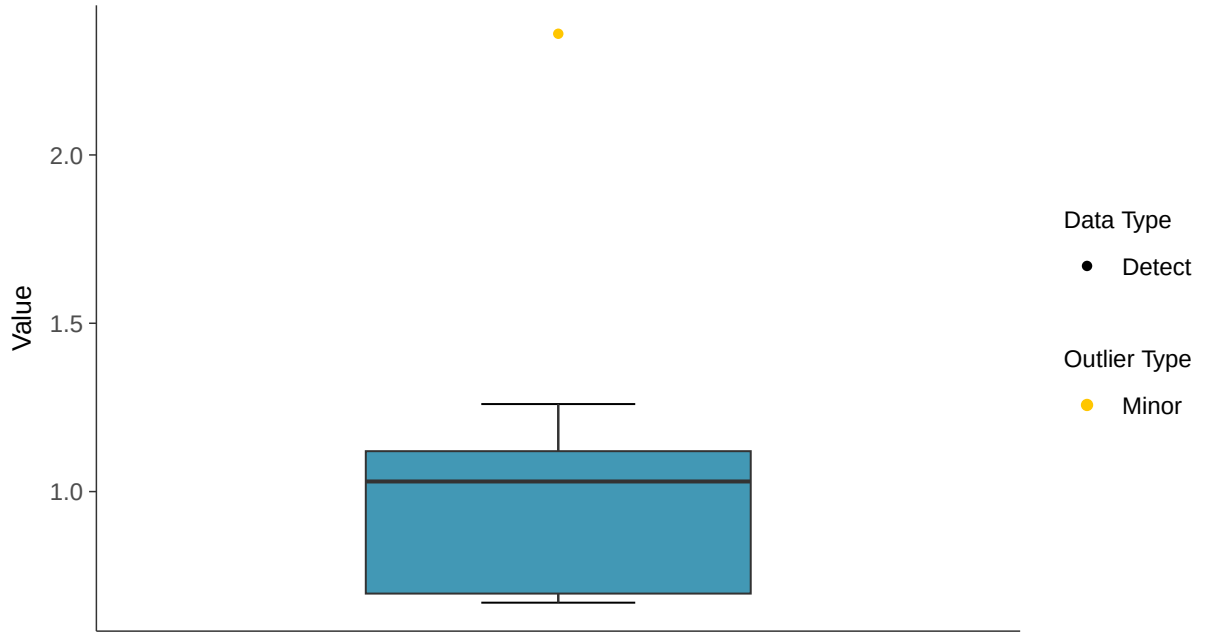
Histogram

Radium 226 and 228, MW-07 (pCi/L)



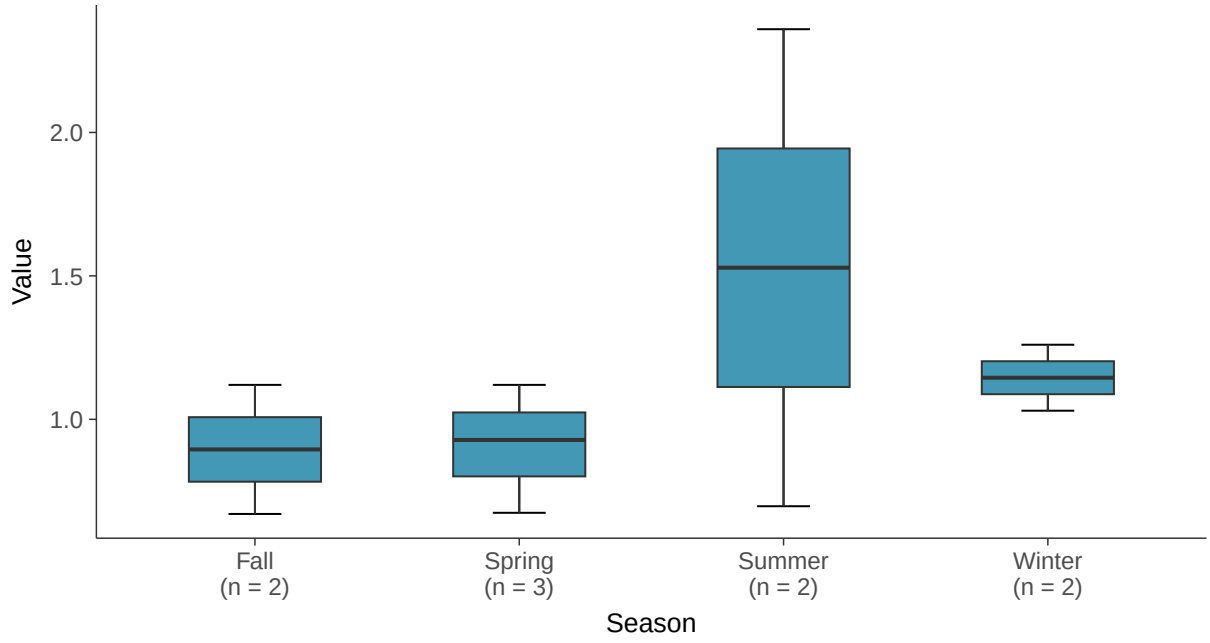
Boxplot

Radium 226 and 228, MW-07 (pCi/L)



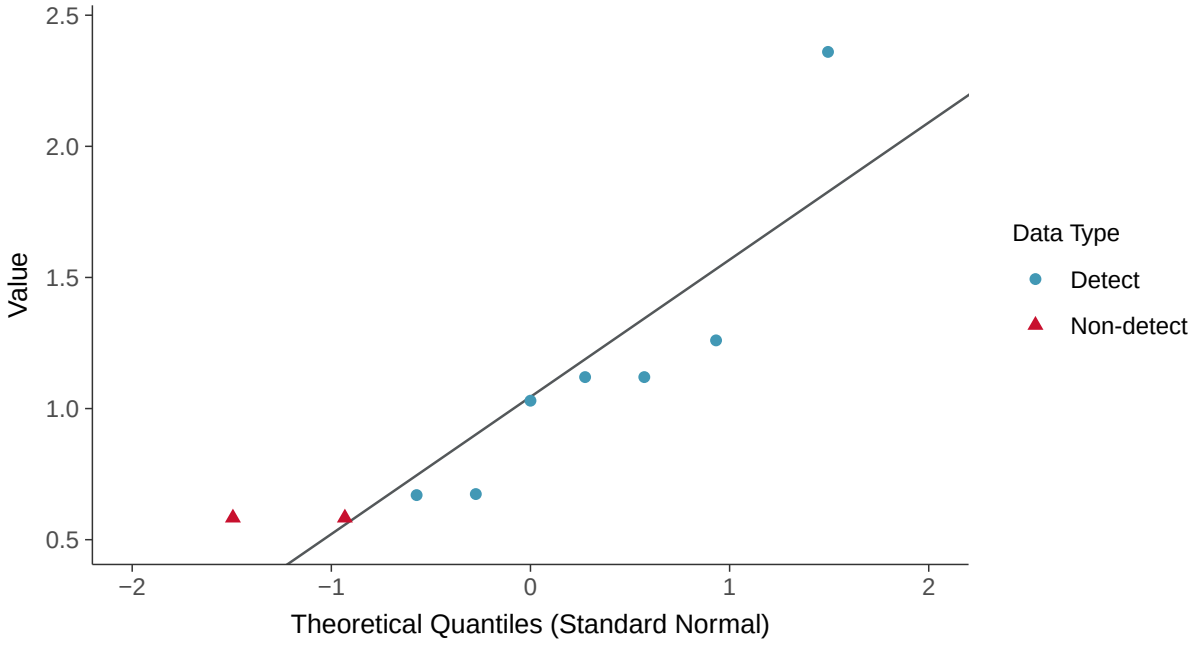
Boxplot by Season

Radium 226 and 228, MW-07 (pCi/L)



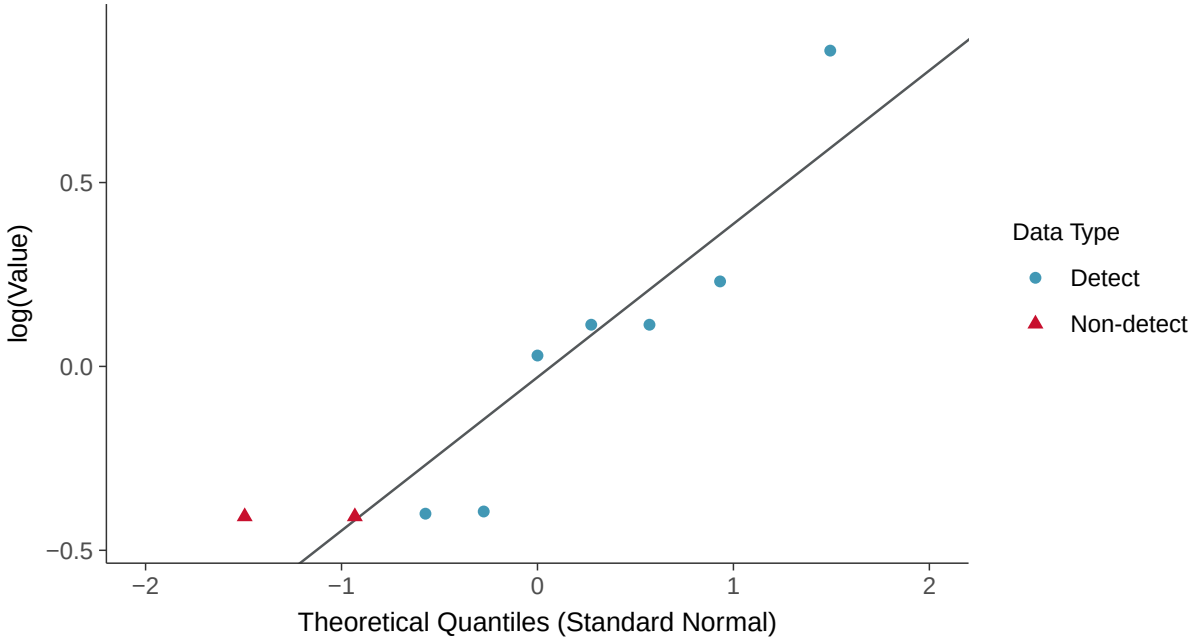
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-07 (pCi/L)



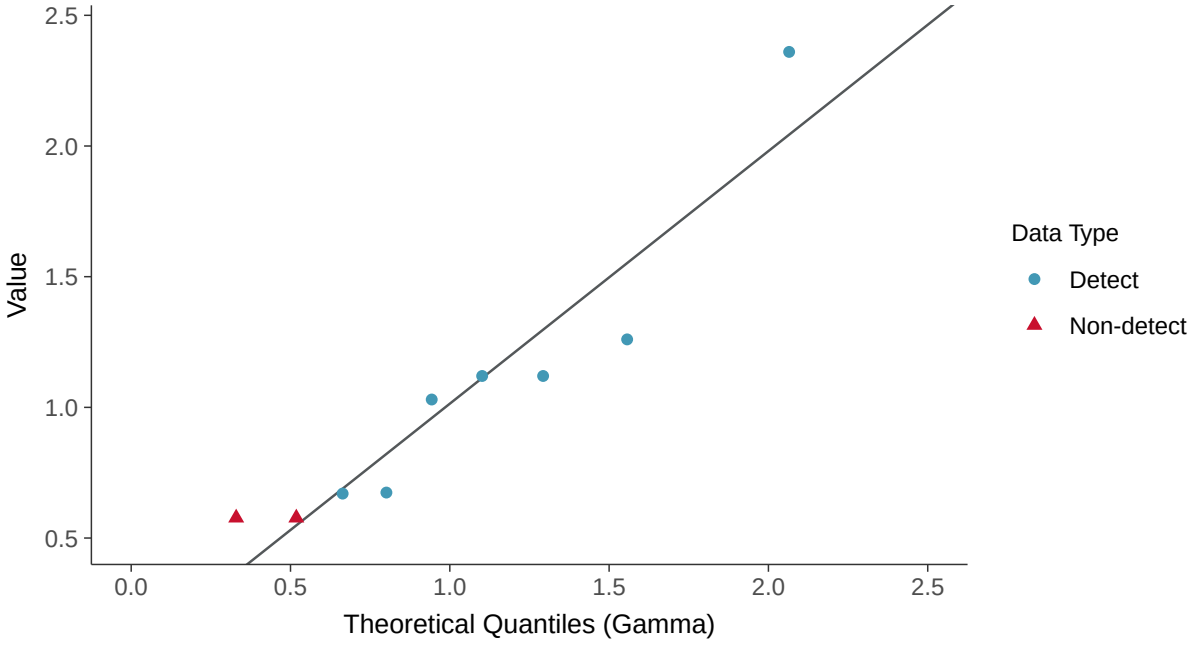
Lognormal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-07 (pCi/L)



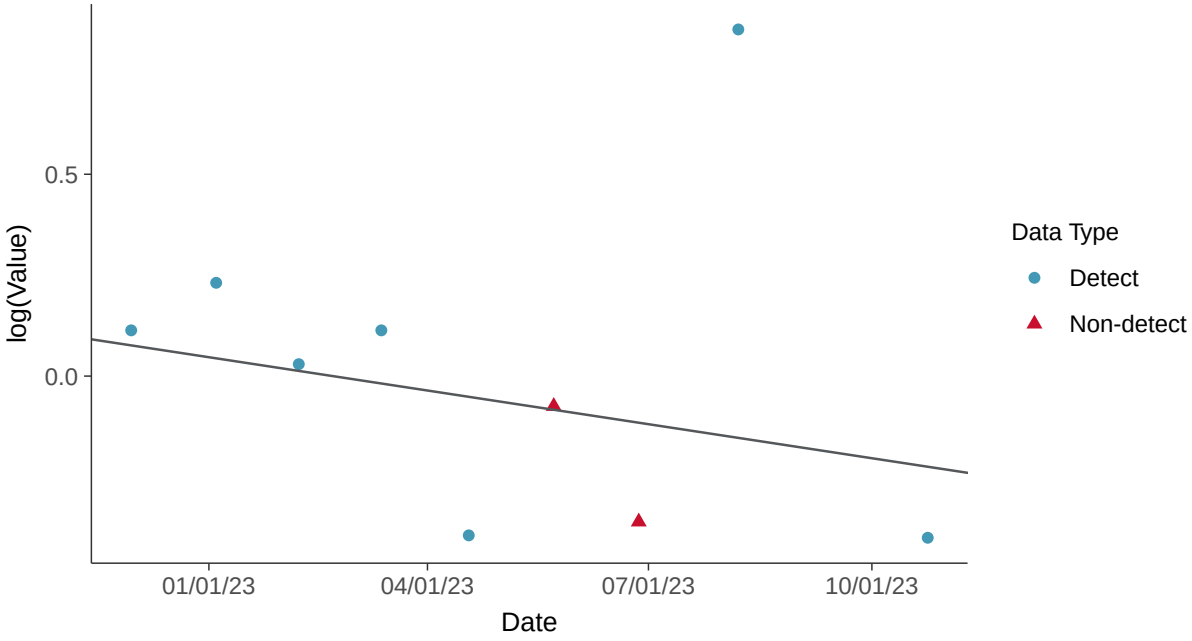
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-07 (pCi/L)



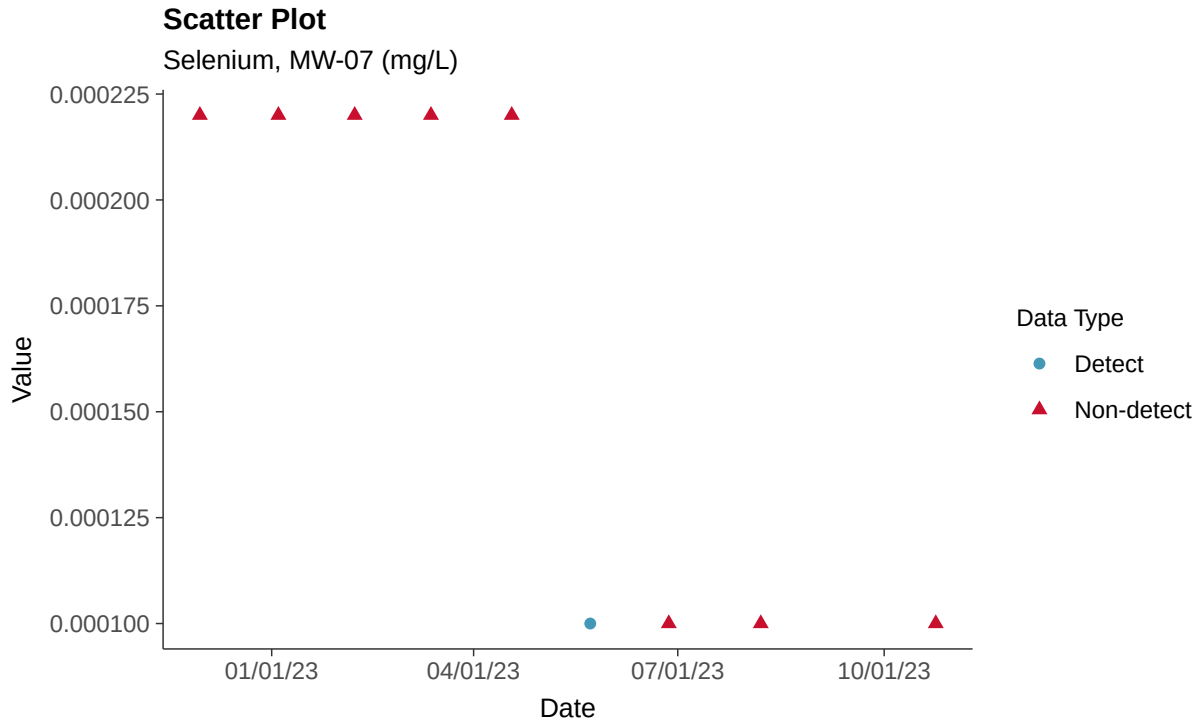
Trend Regression: Lognormal MLE

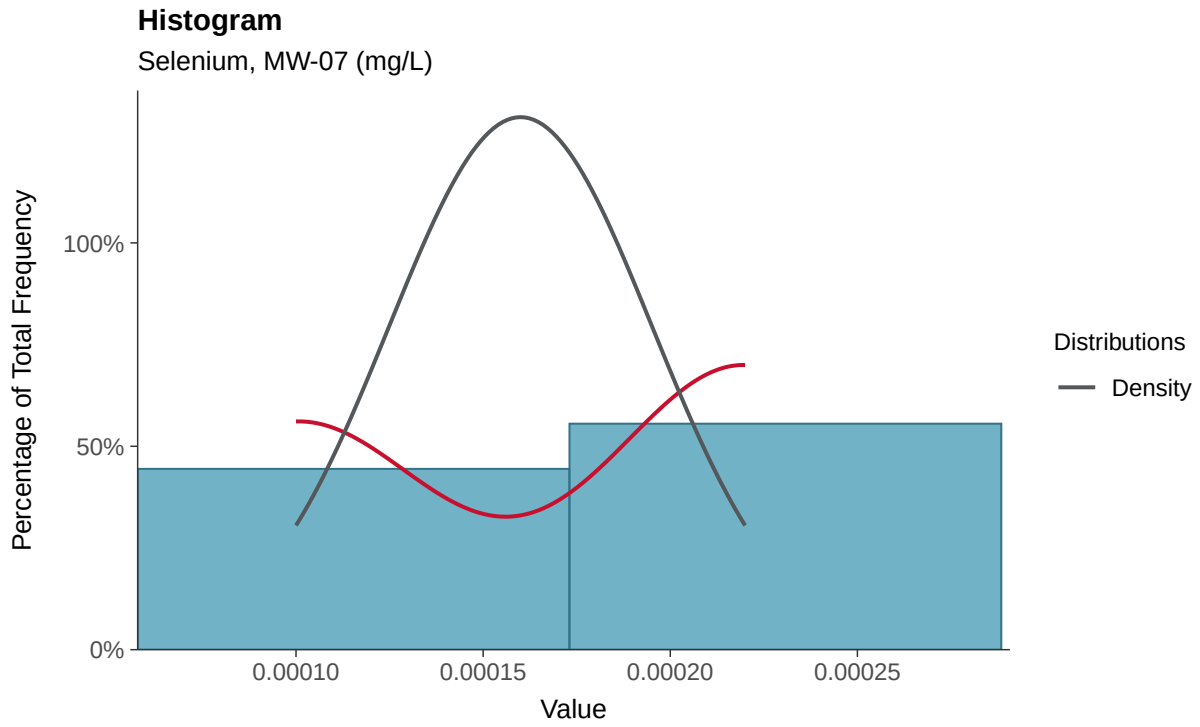
Radium 226 and 228, MW-07 (pCi/L)



Appendix IV: Selenium, MW-07

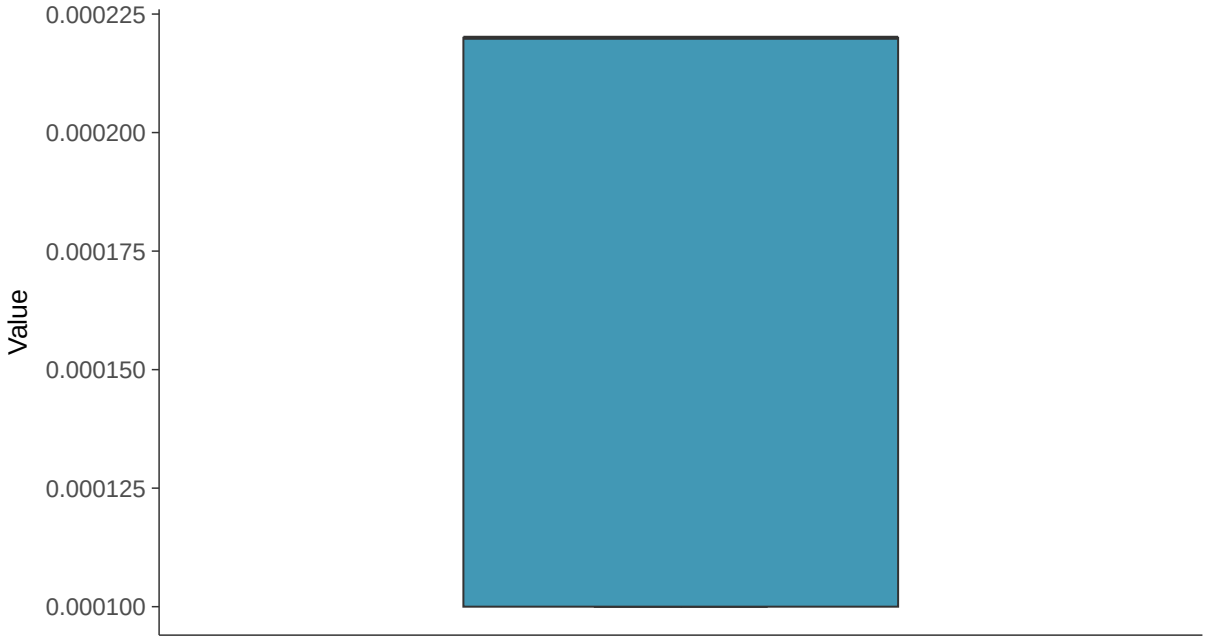
ID: 2_16_5_122





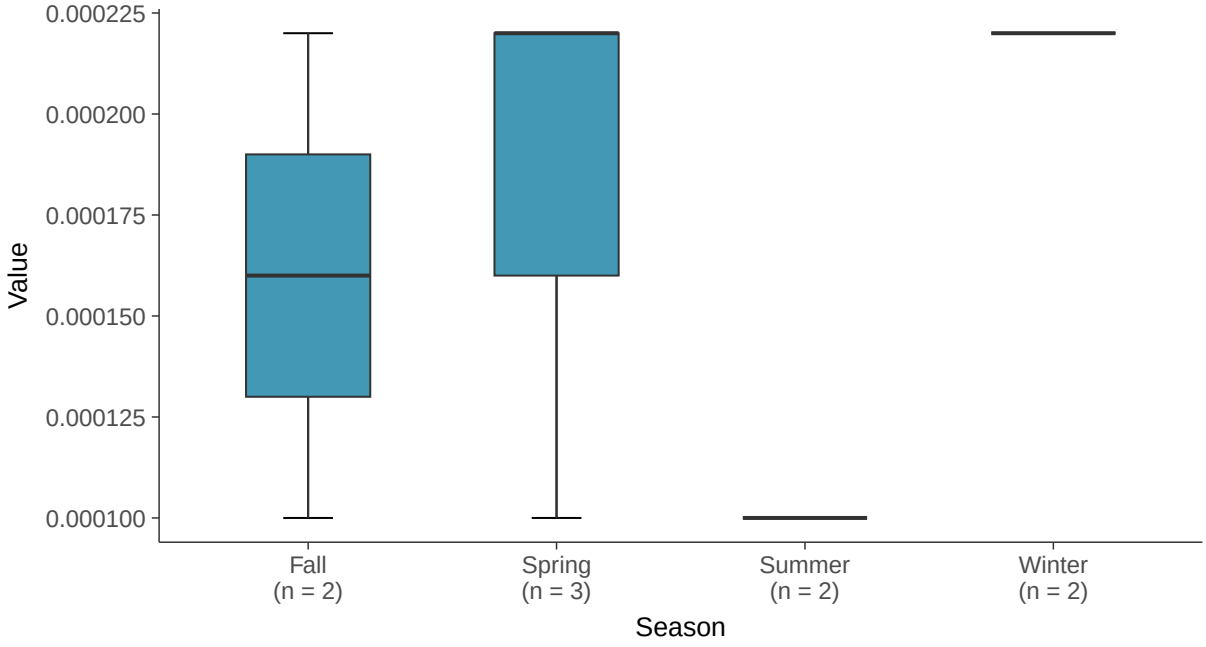
Boxplot

Selenium, MW-07 (mg/L)



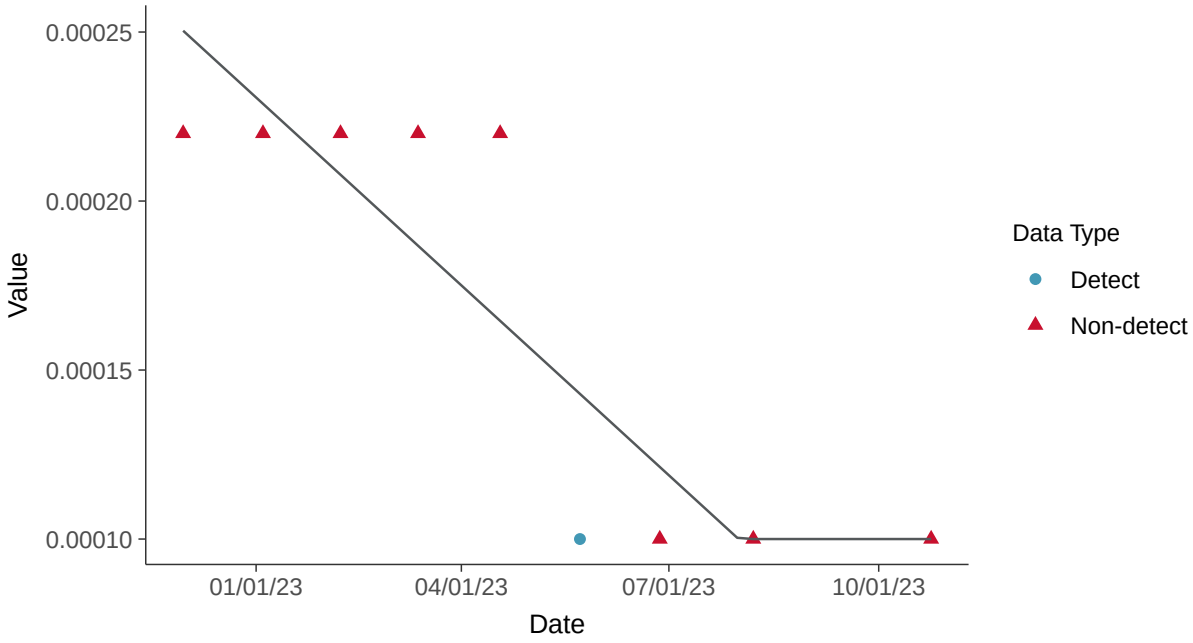
Boxplot by Season

Selenium, MW-07 (mg/L)



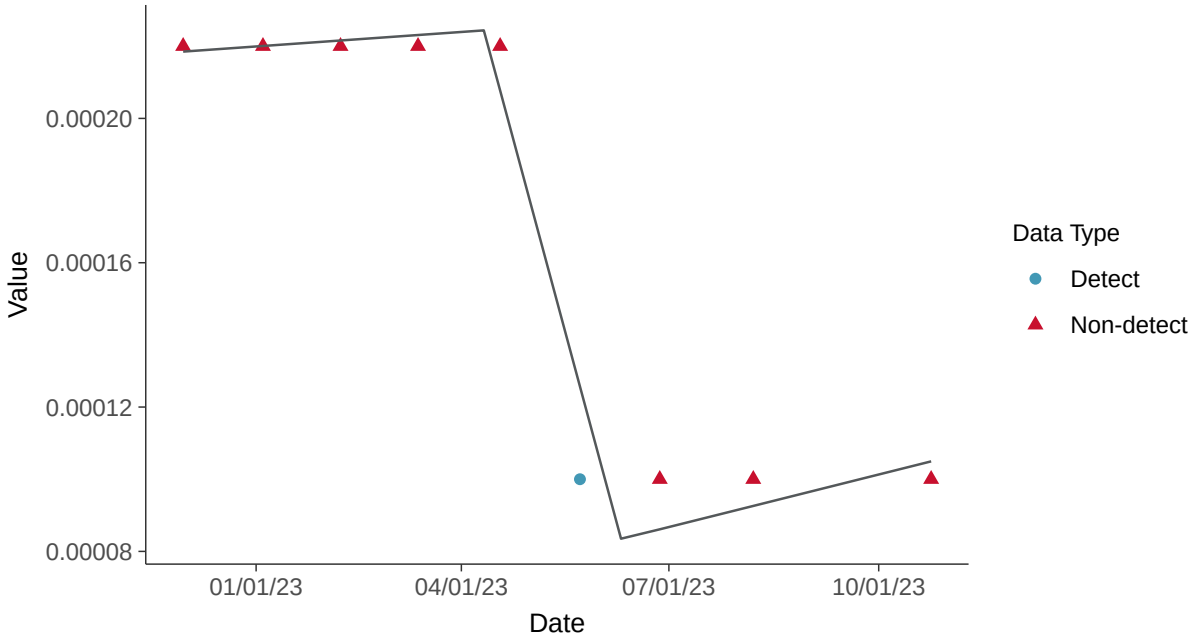
Trend Regression: Piecewise Linear-Linear

Selenium, MW-07 (mg/L)



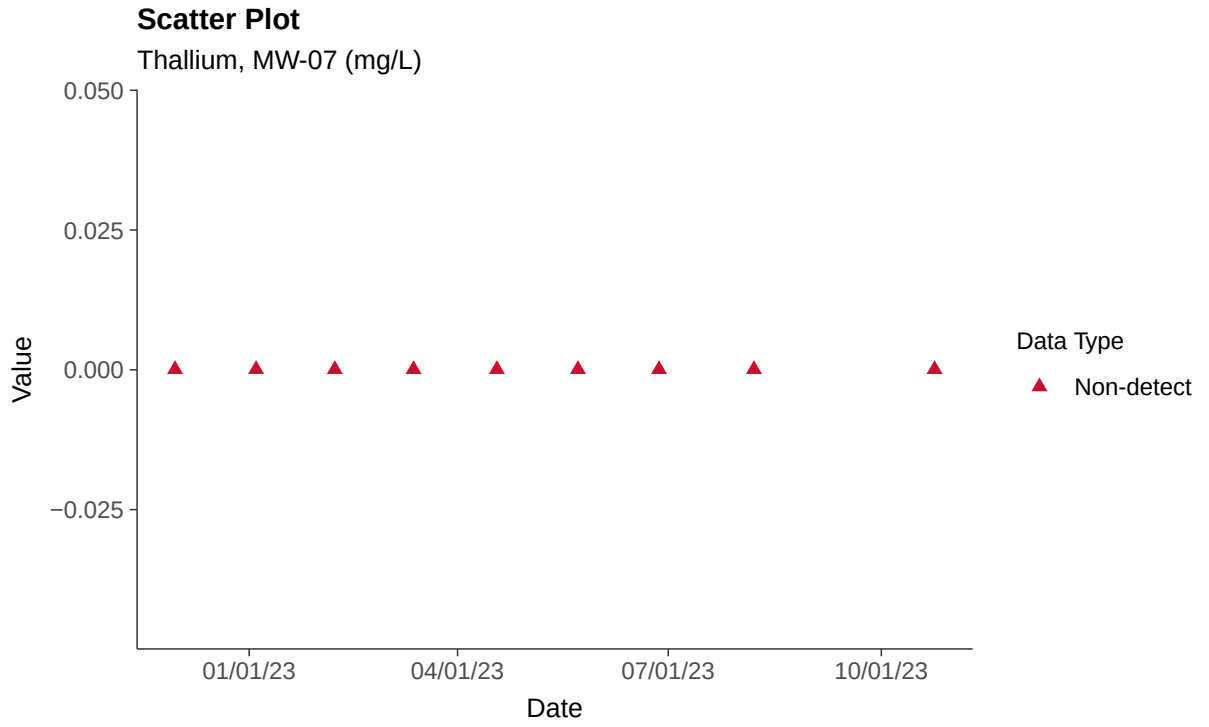
Trend Regression: Piecewise Linear-Linear-Linear

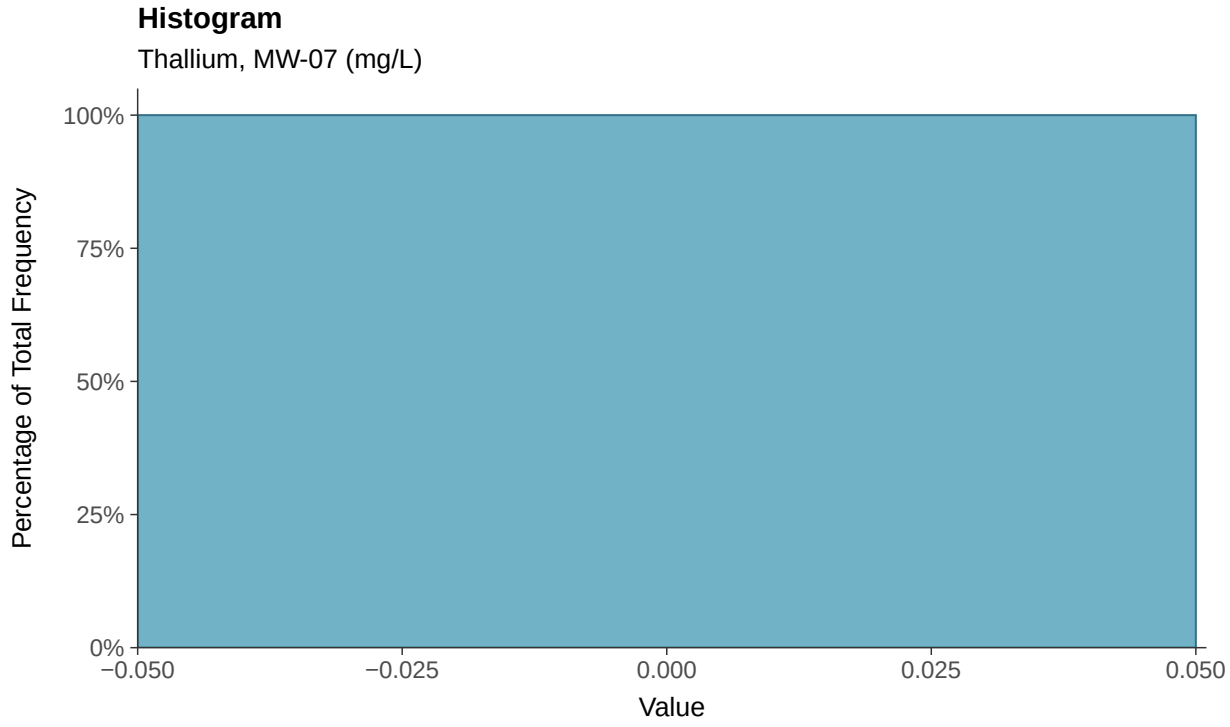
Selenium, MW-07 (mg/L)



Appendix IV: Thallium, MW-07

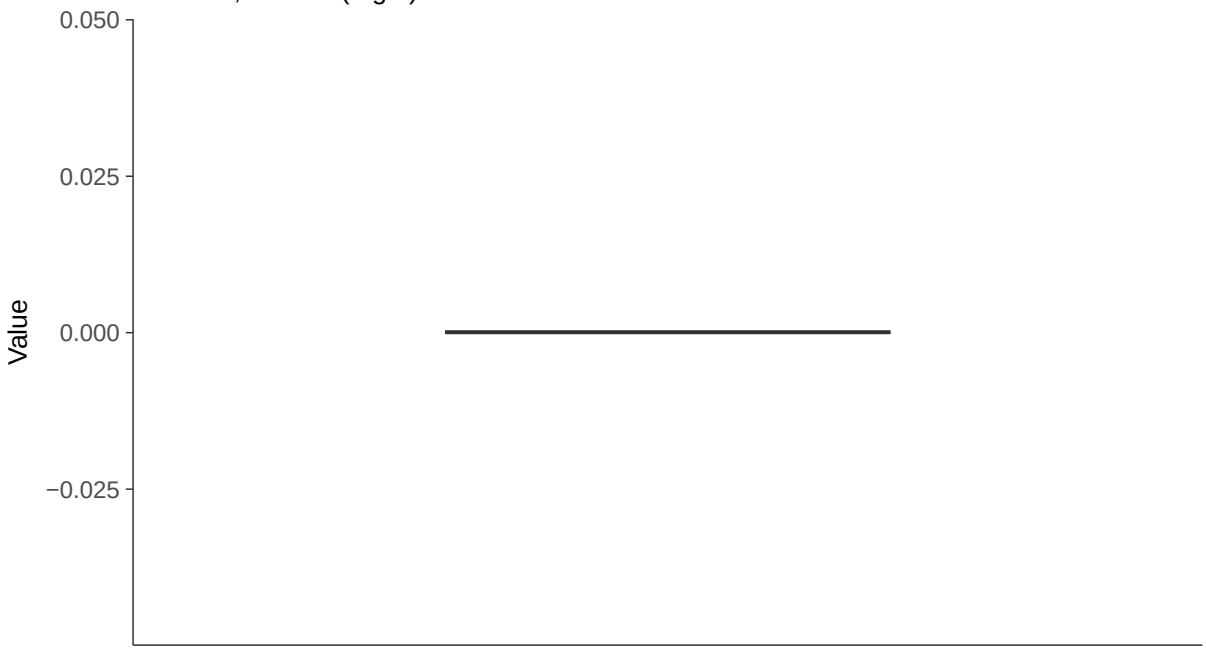
ID: 2_16_5_125





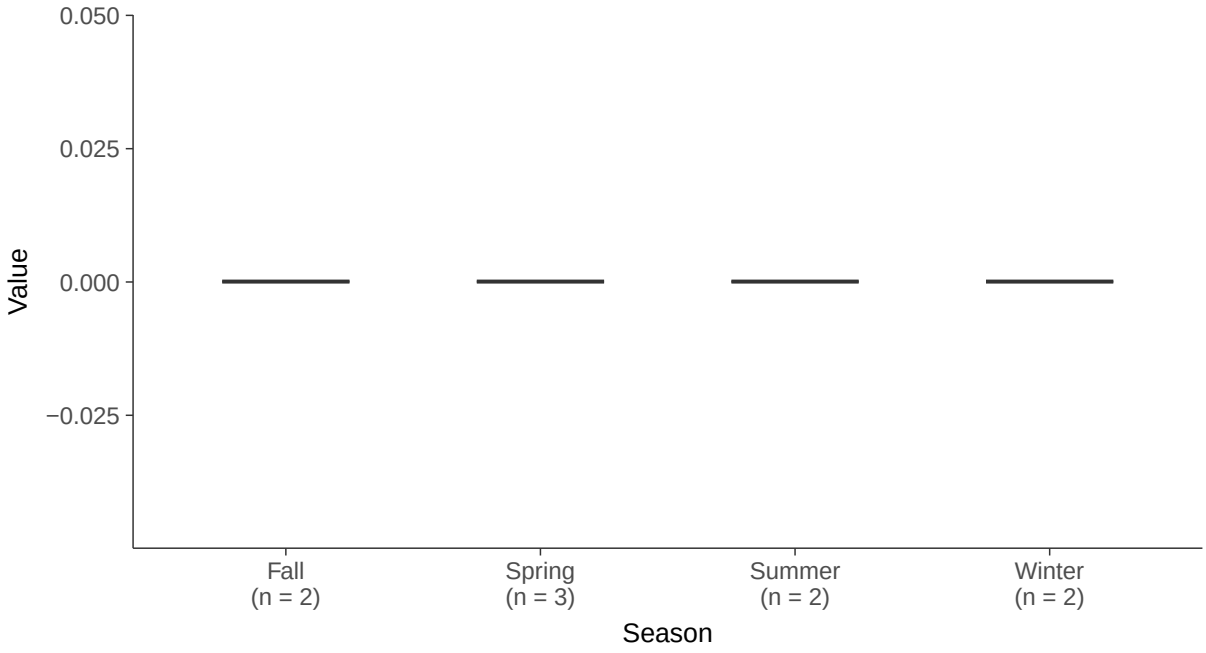
Boxplot

Thallium, MW-07 (mg/L)



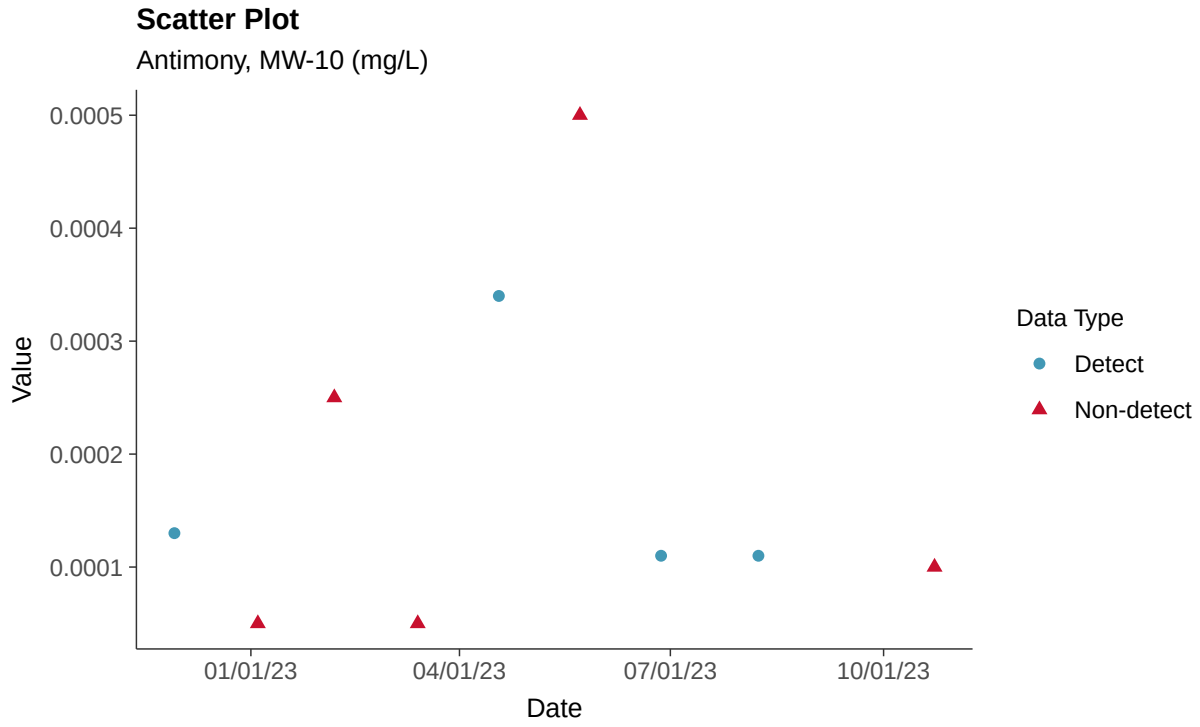
Boxplot by Season

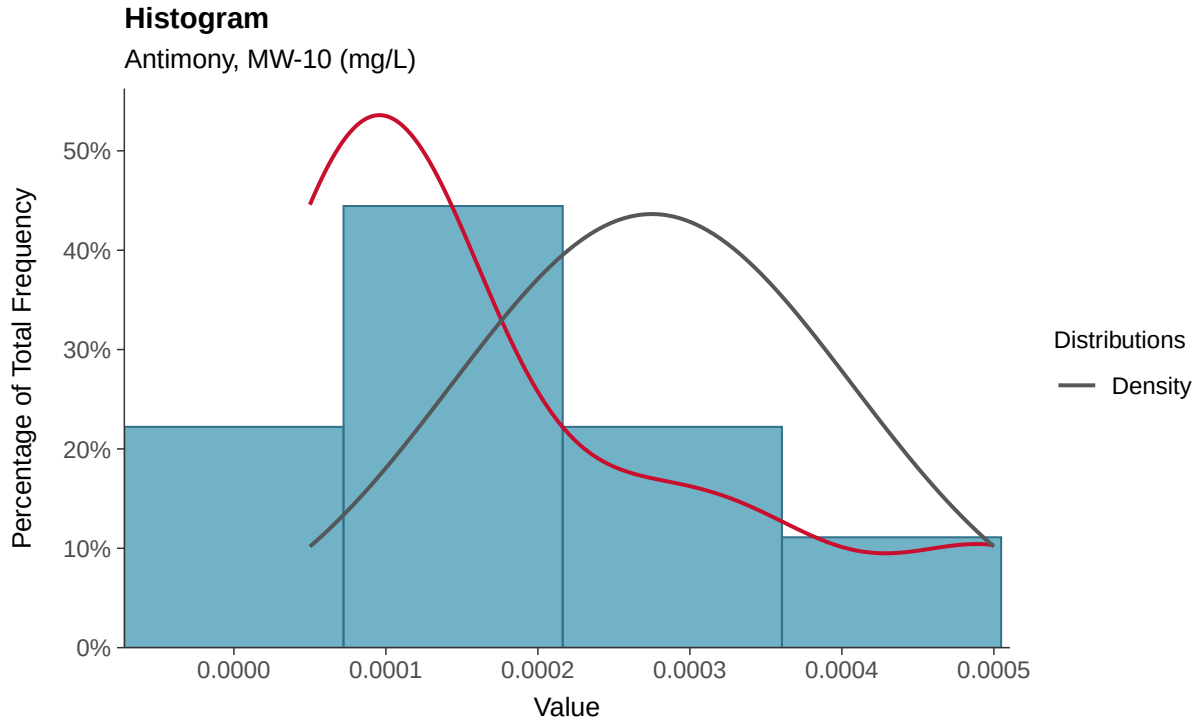
Thallium, MW-07 (mg/L)



Appendix IV: Antimony, MW-10

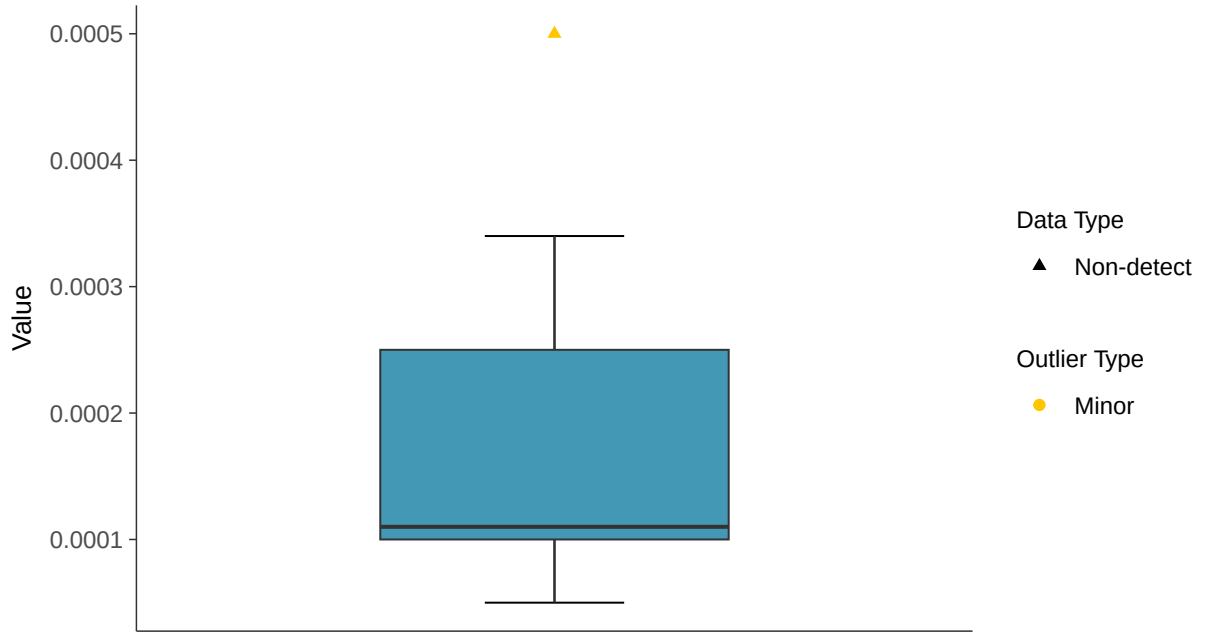
ID: 2_19_5_101





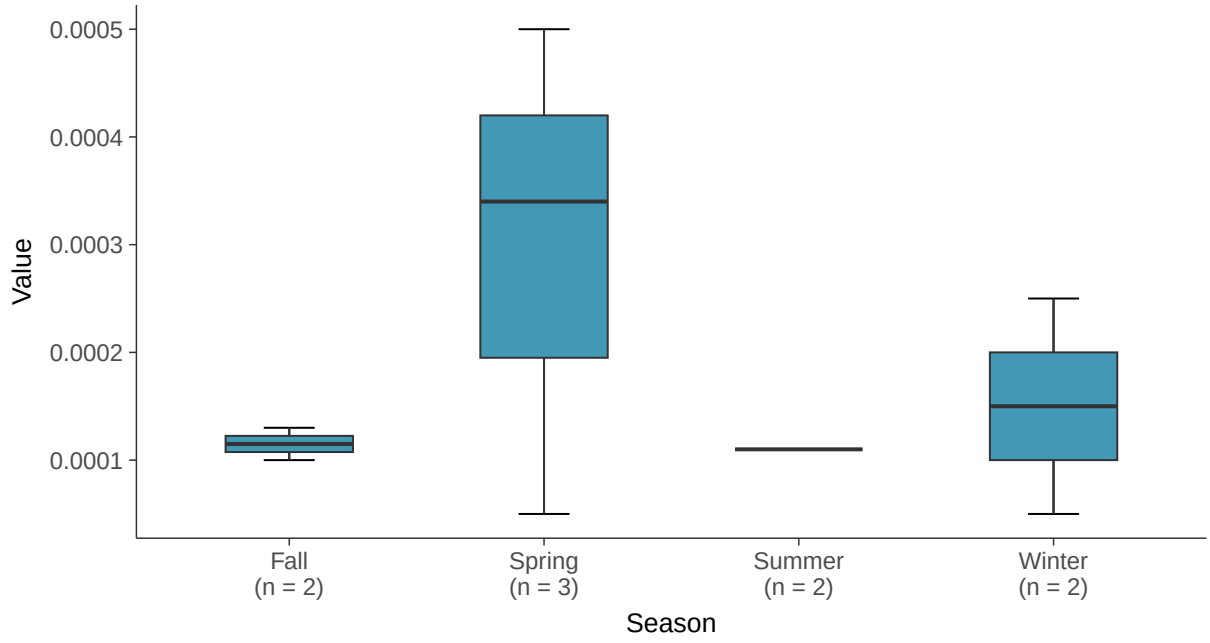
Boxplot

Antimony, MW-10 (mg/L)



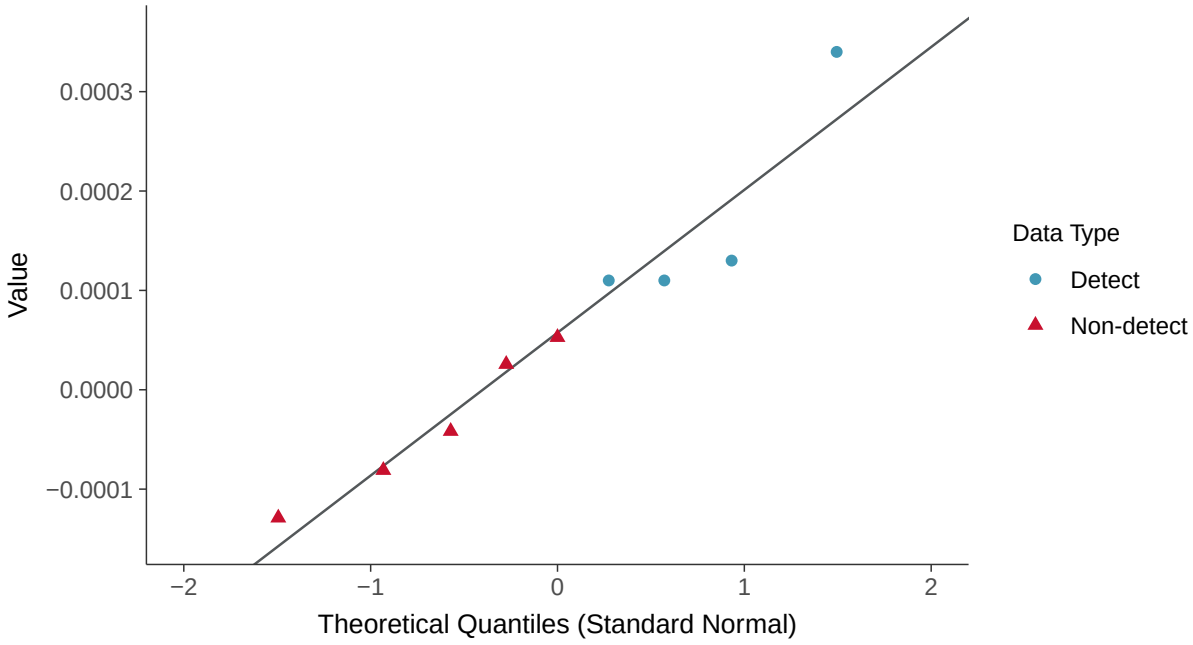
Boxplot by Season

Antimony, MW-10 (mg/L)



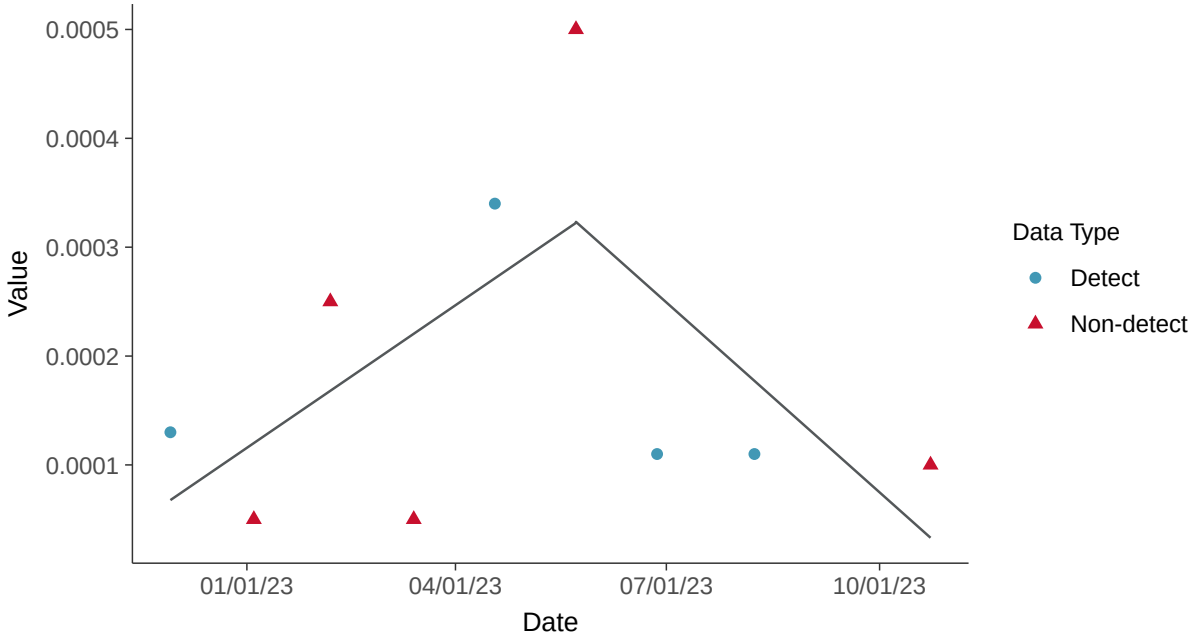
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-10 (mg/L)



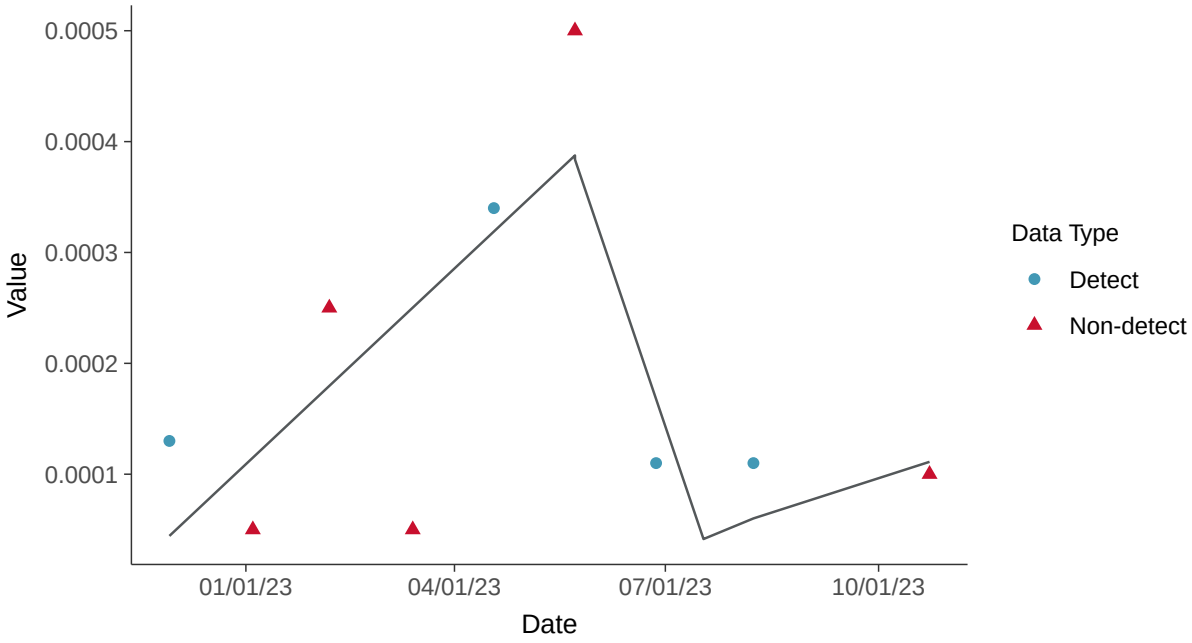
Trend Regression: Piecewise Linear-Linear

Antimony, MW-10 (mg/L)



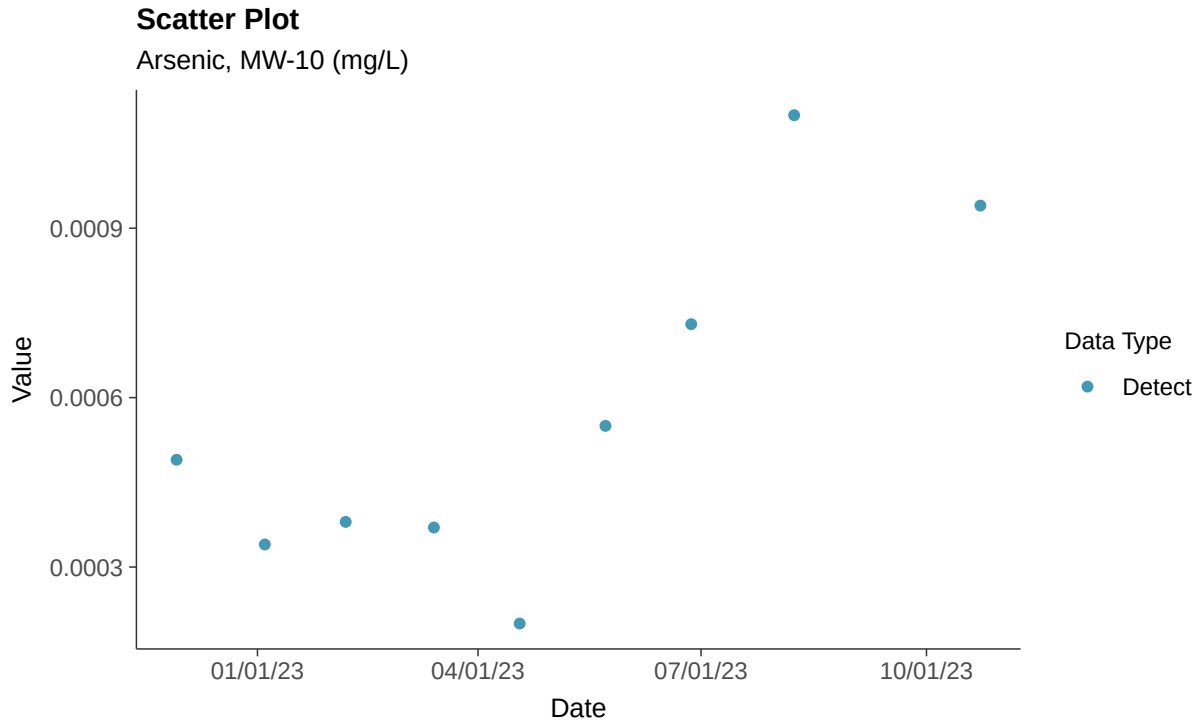
Trend Regression: Piecewise Linear-Linear-Linear

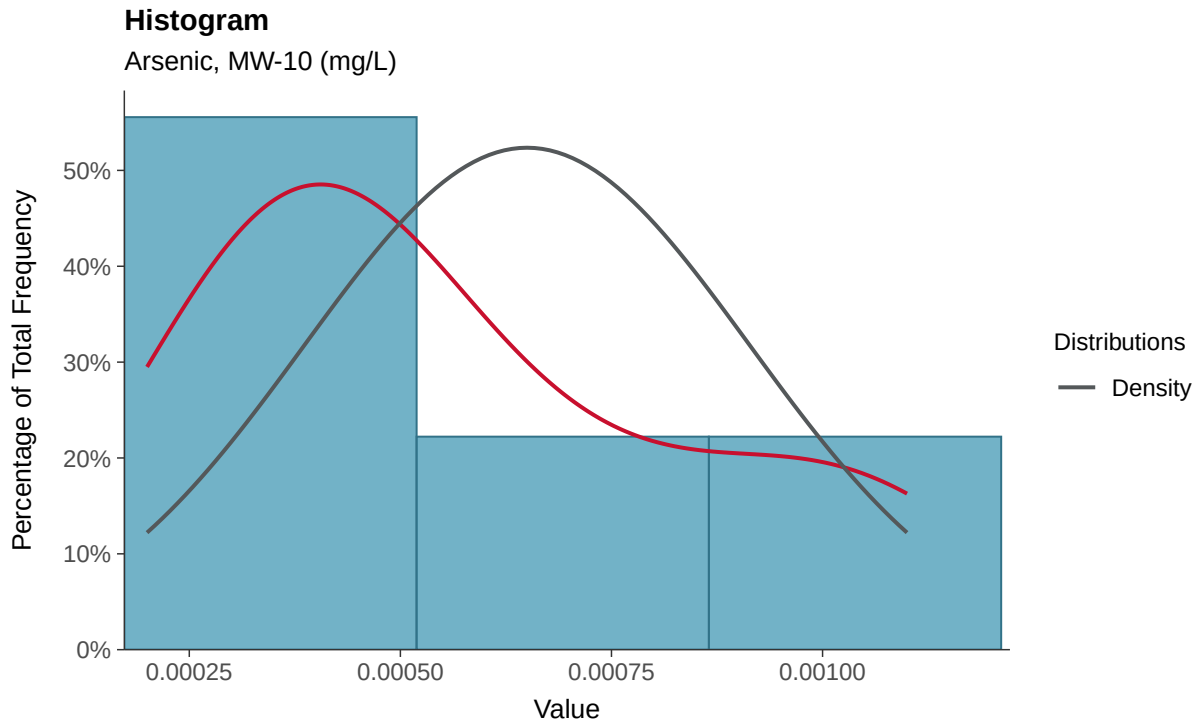
Antimony, MW-10 (mg/L)



Appendix IV: Arsenic, MW-10

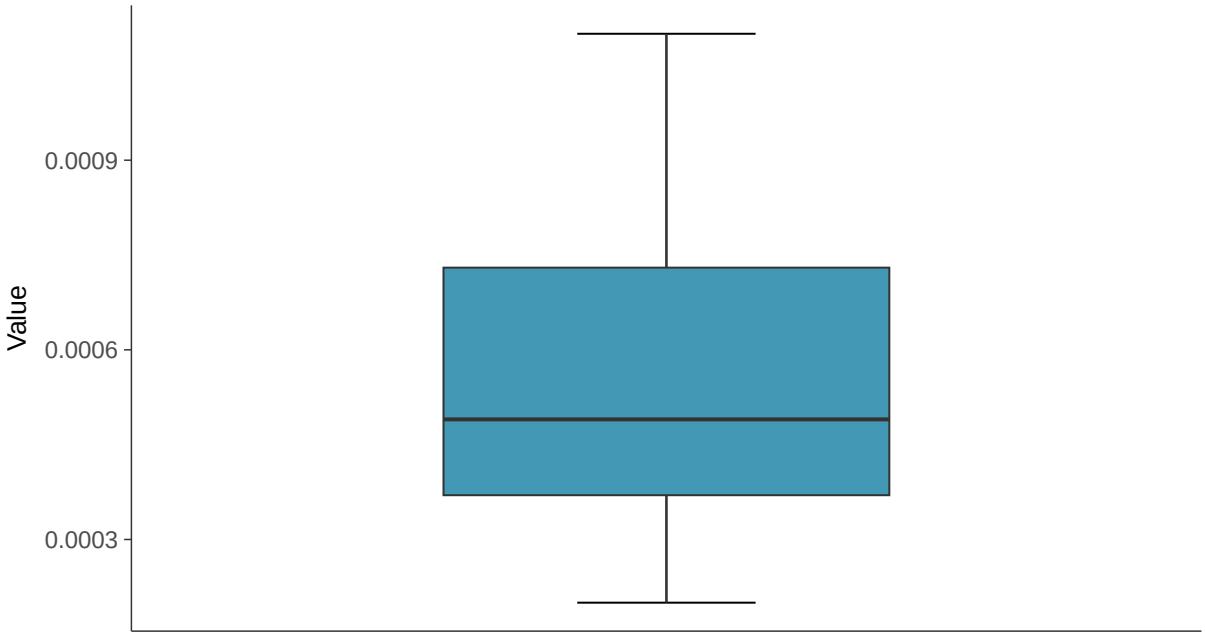
ID: 2_19_5_102





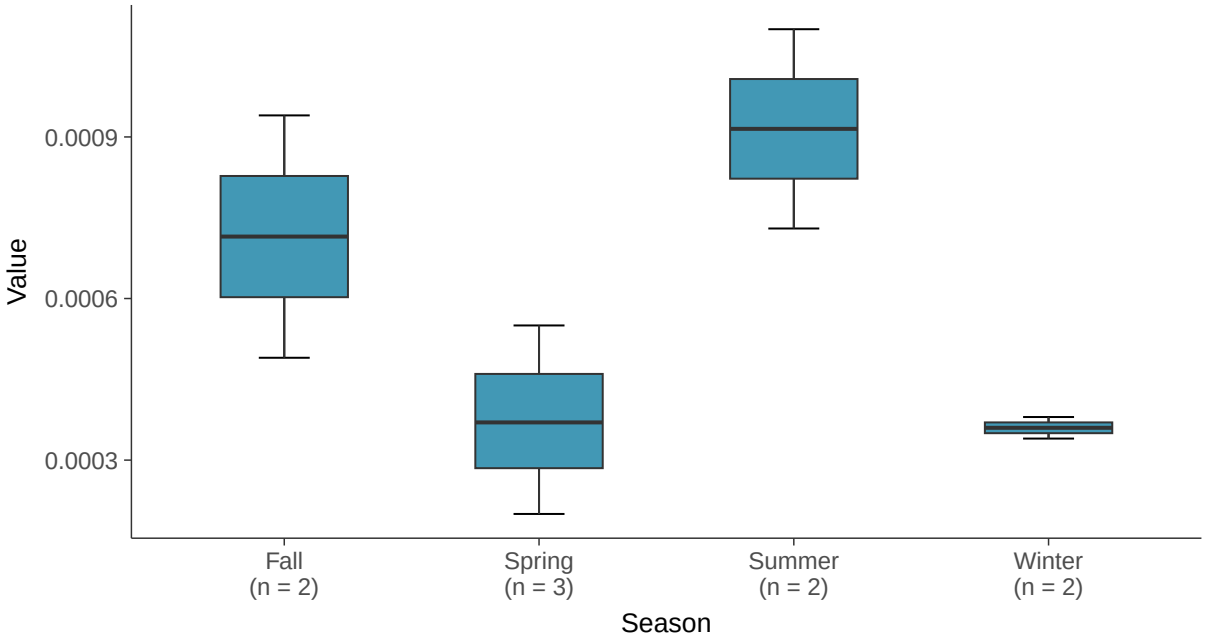
Boxplot

Arsenic, MW-10 (mg/L)



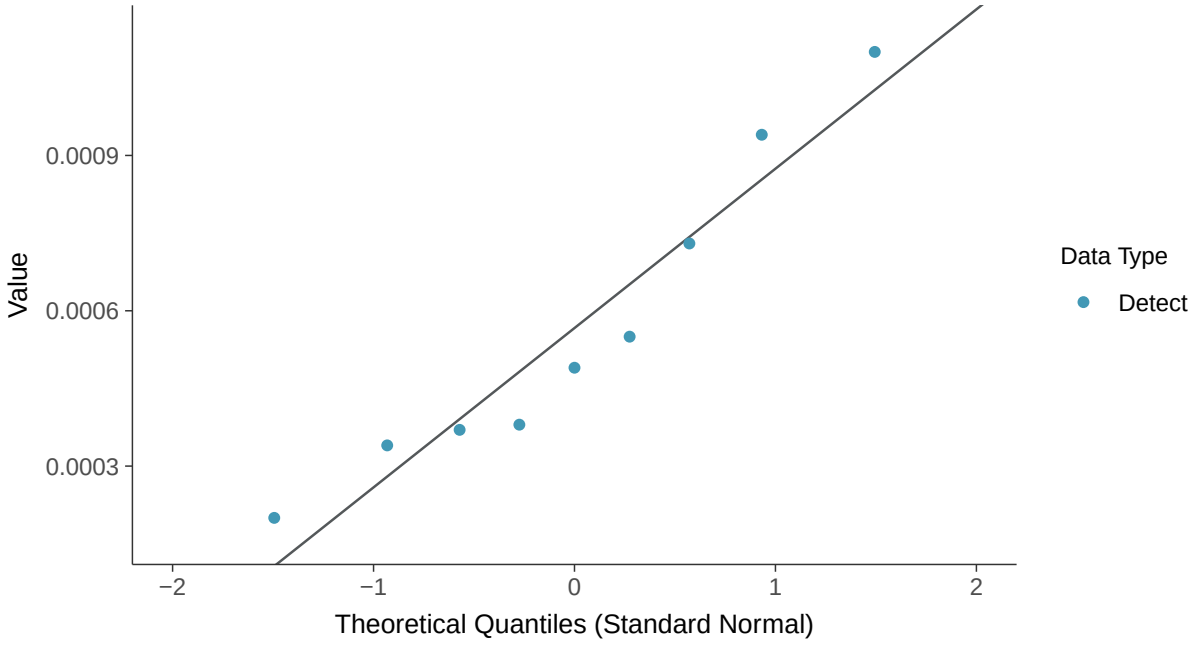
Boxplot by Season

Arsenic, MW-10 (mg/L)



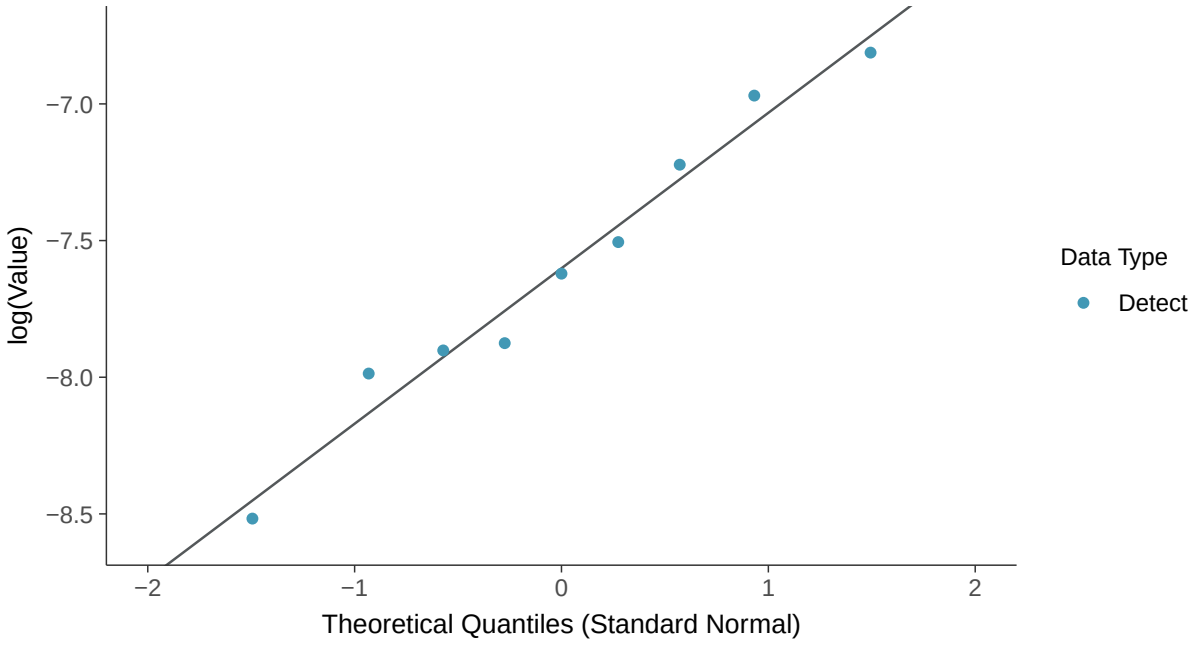
Normal Q-Q plot

Arsenic, MW-10 (mg/L)



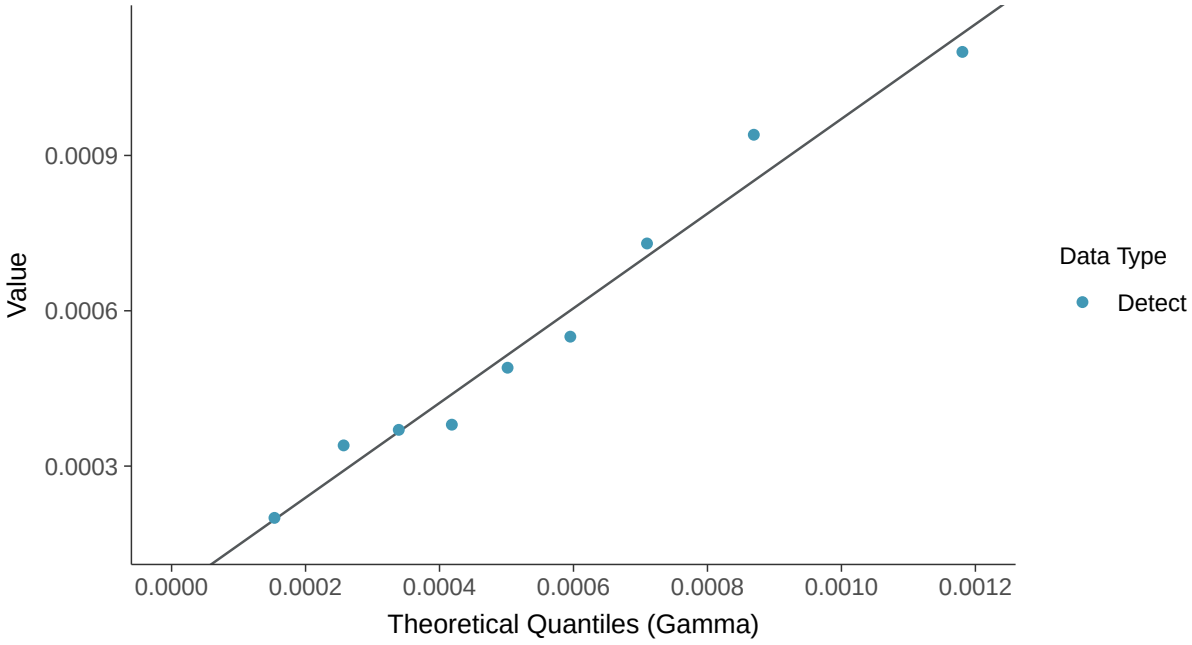
Lognormal Q-Q plot

Arsenic, MW-10 (mg/L)



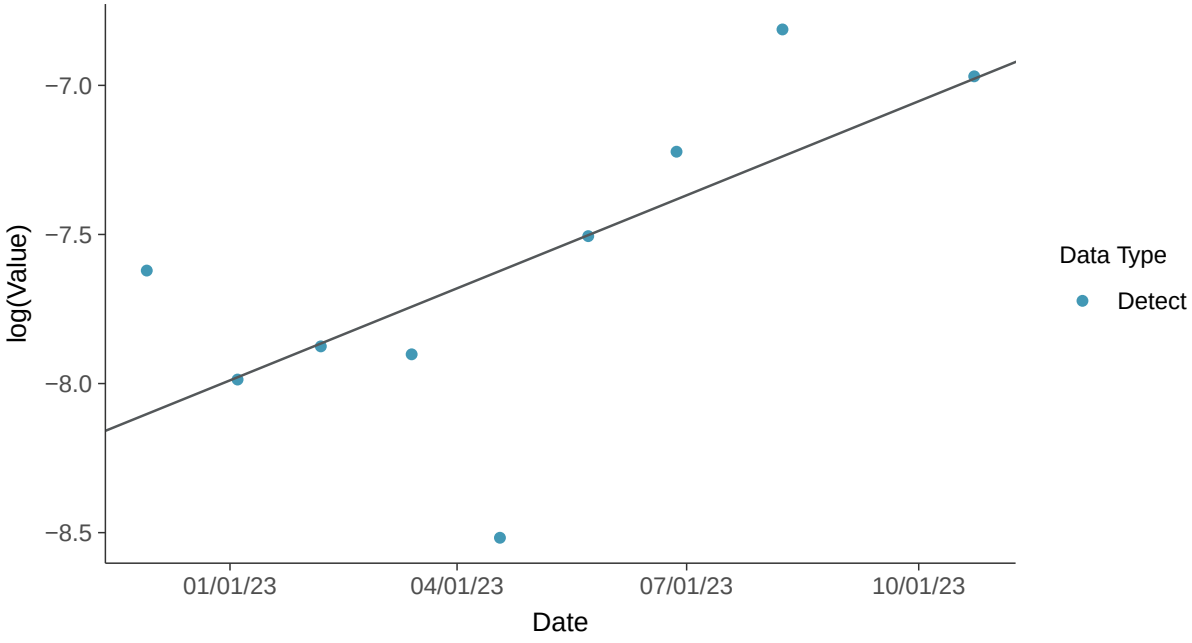
Gamma Q-Q plot

Arsenic, MW-10 (mg/L)



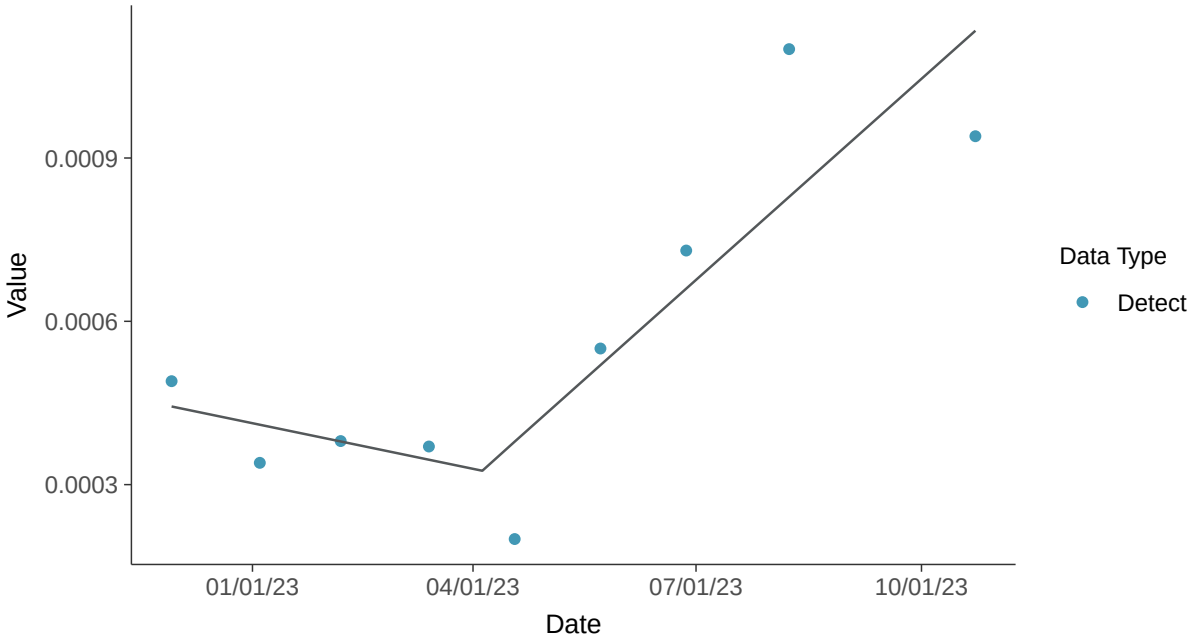
Trend Regression: Lognormal MLE

Arsenic, MW-10 (mg/L)



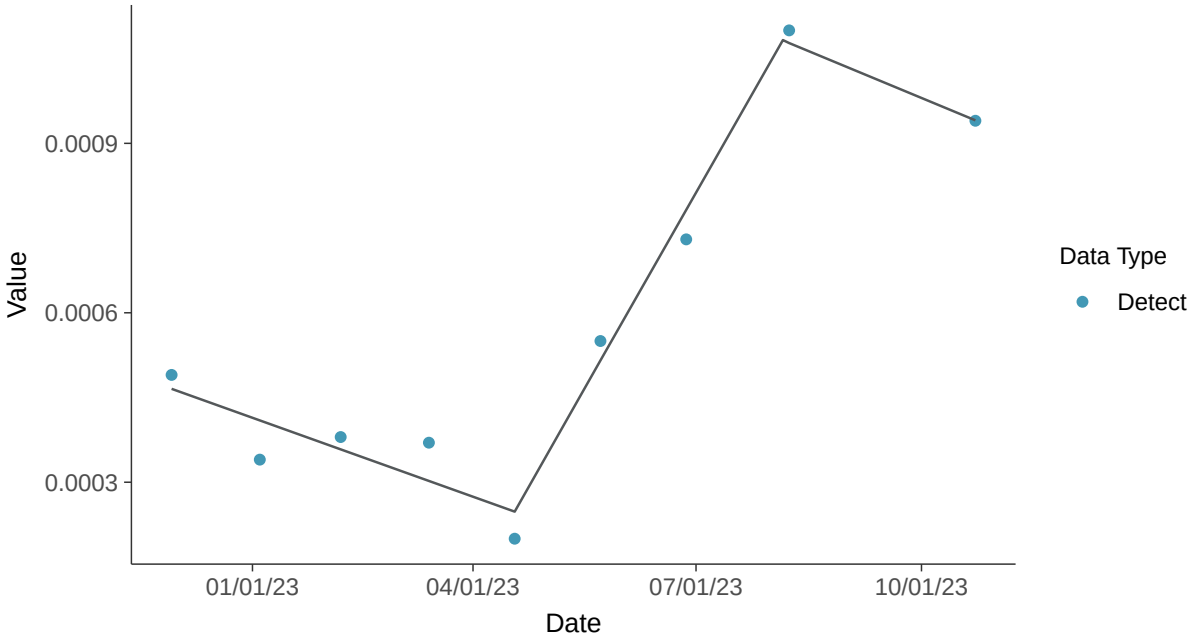
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-10 (mg/L)



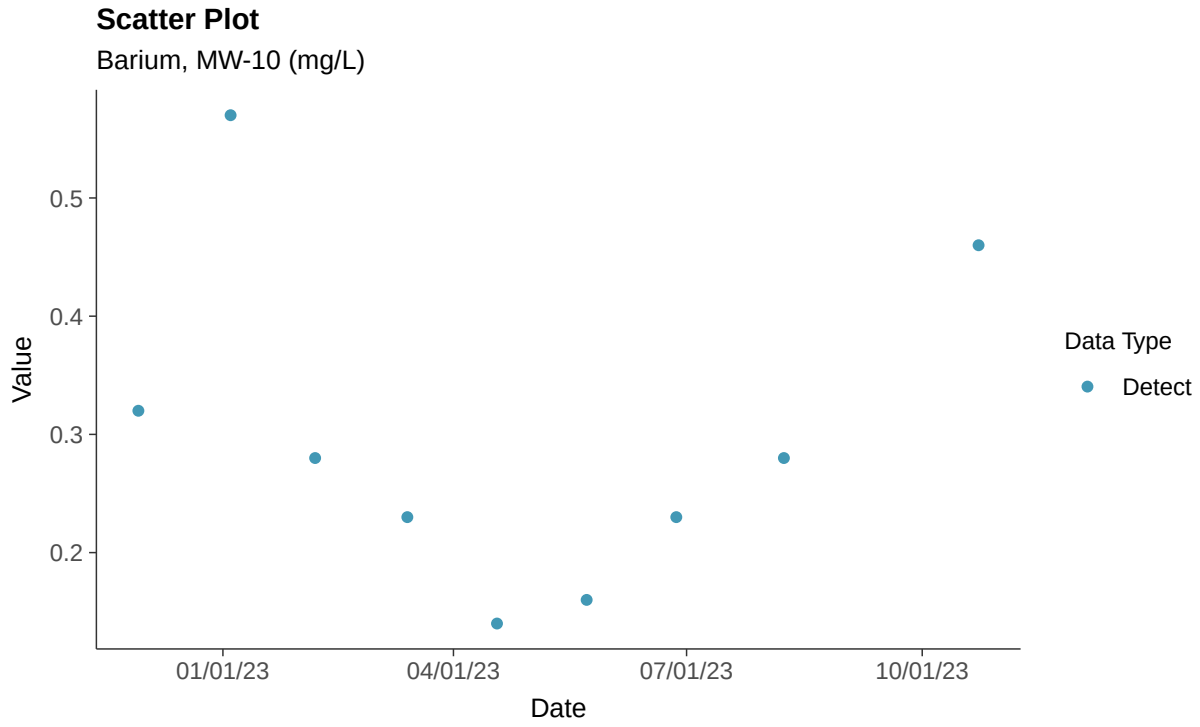
Trend Regression: Piecewise Linear-Linear-Linear

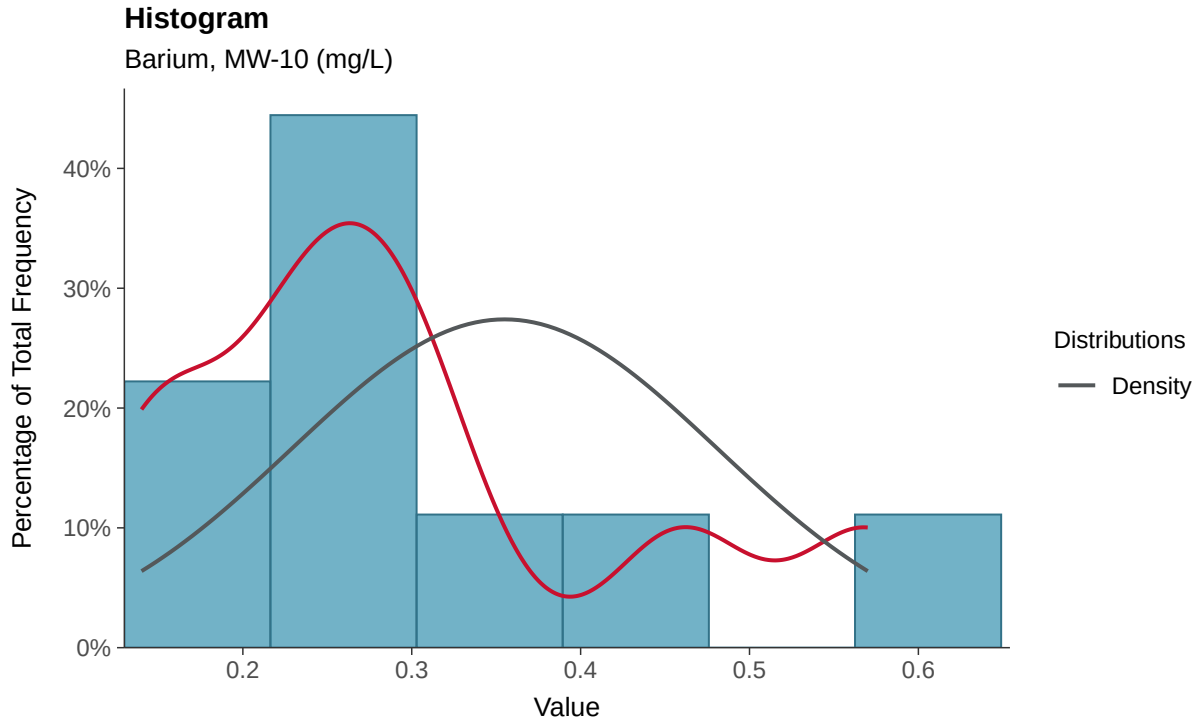
Arsenic, MW-10 (mg/L)



Appendix IV: Barium, MW-10

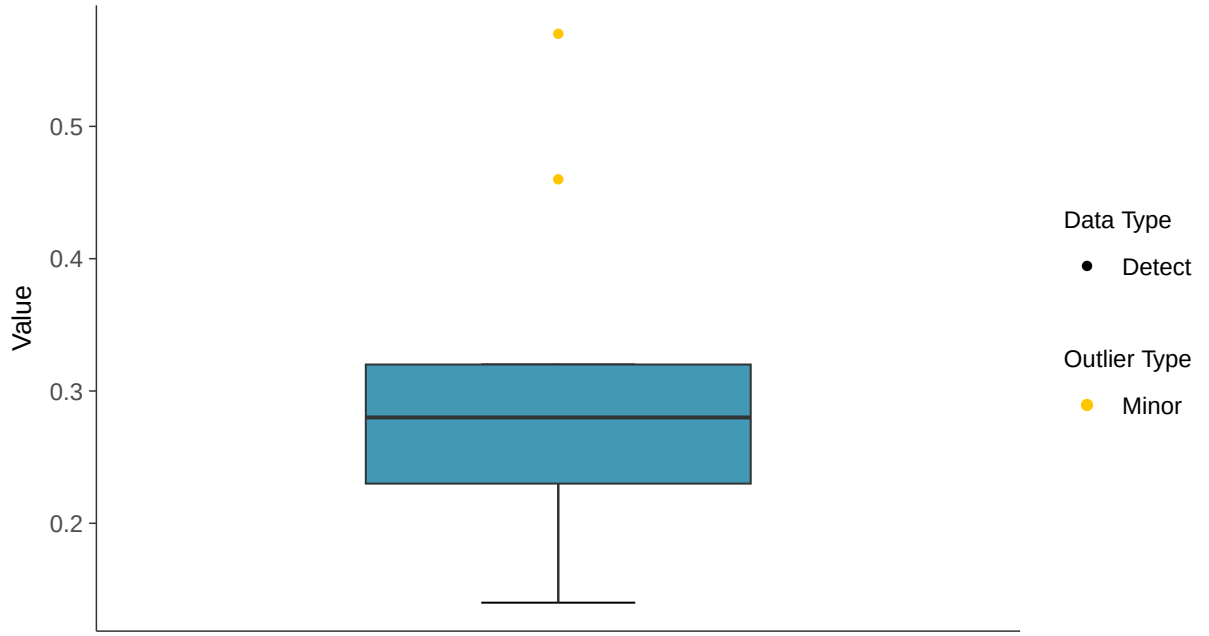
ID: 2_19_5_103





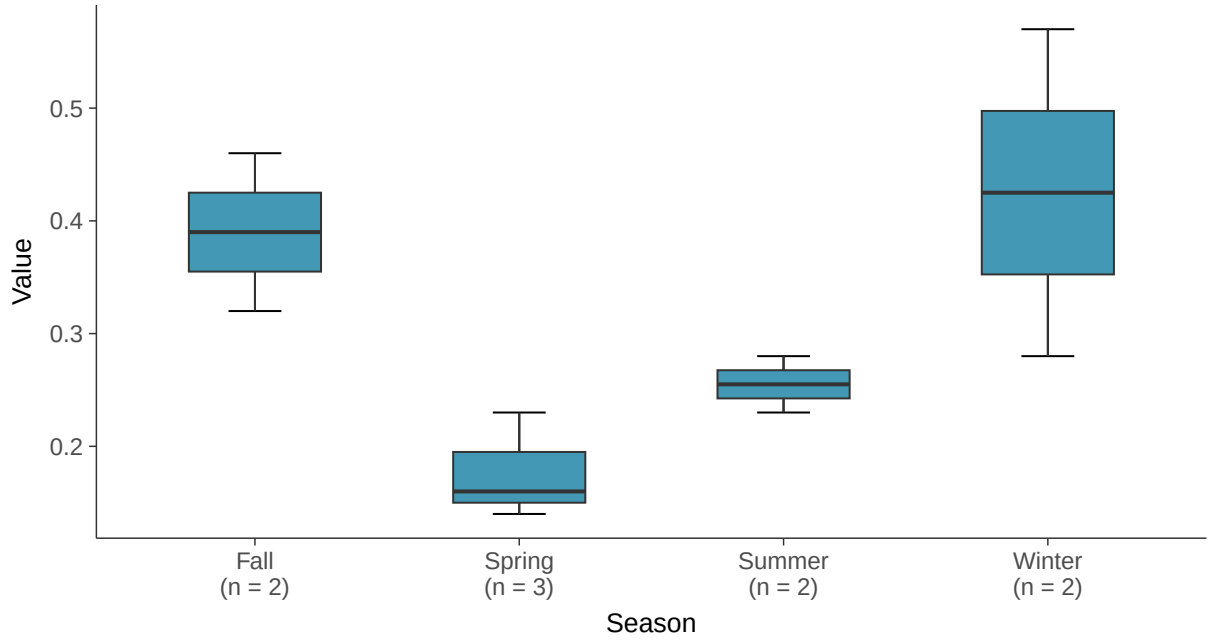
Boxplot

Barium, MW-10 (mg/L)



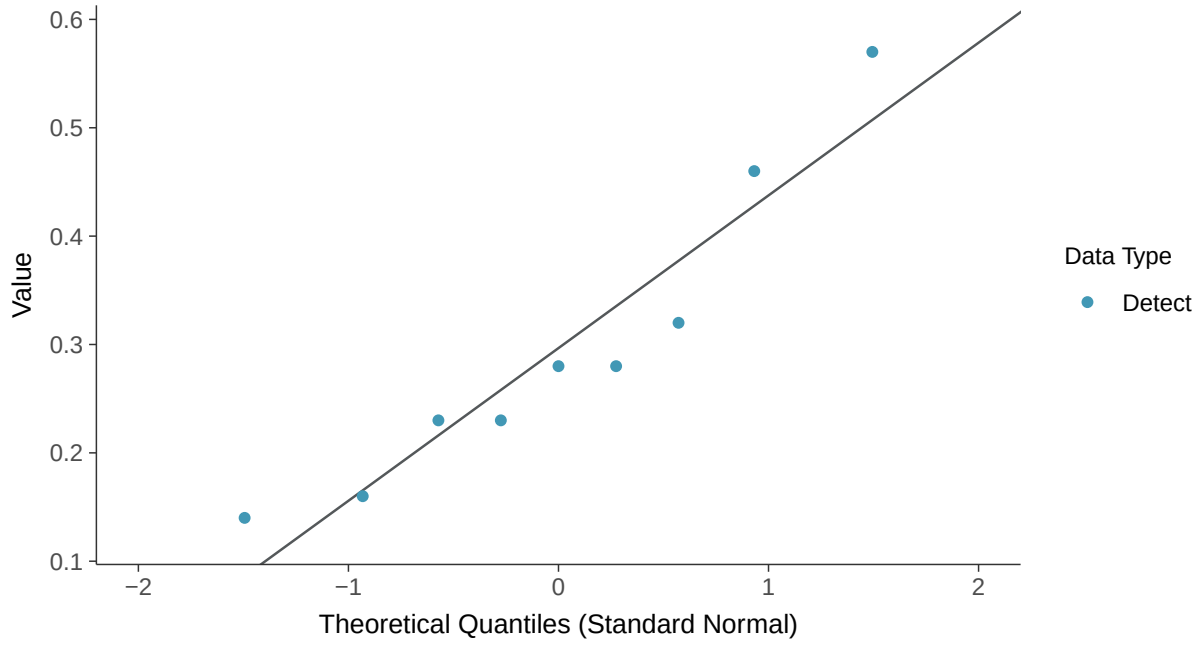
Boxplot by Season

Barium, MW-10 (mg/L)



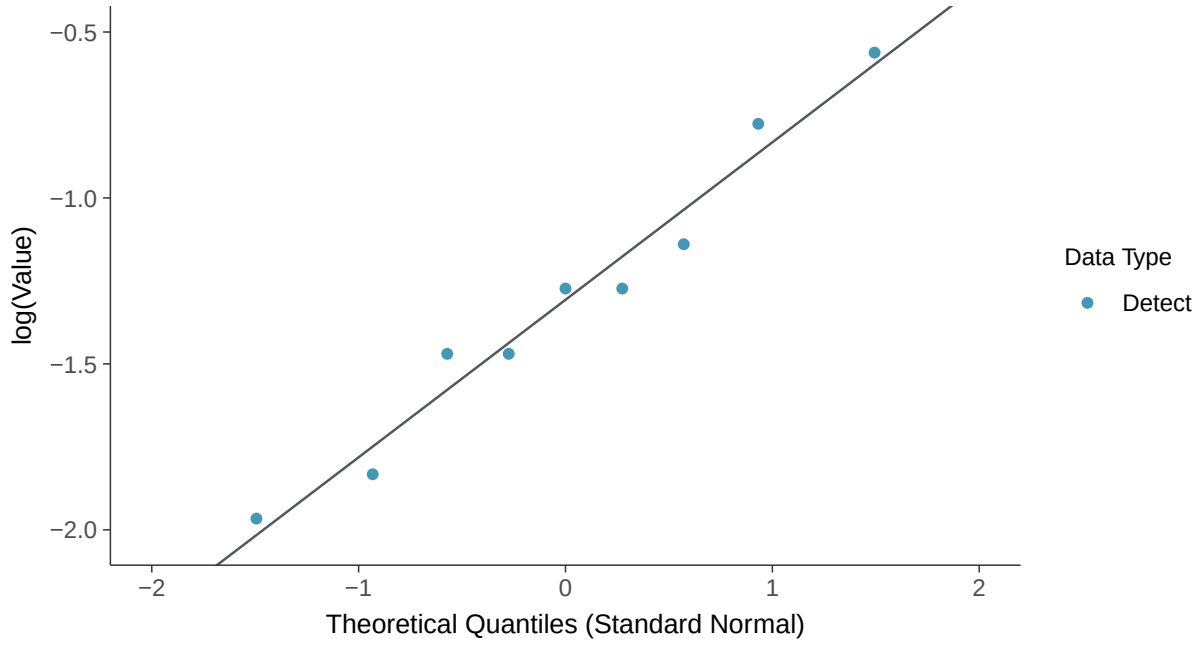
Normal Q-Q plot

Barium, MW-10 (mg/L)



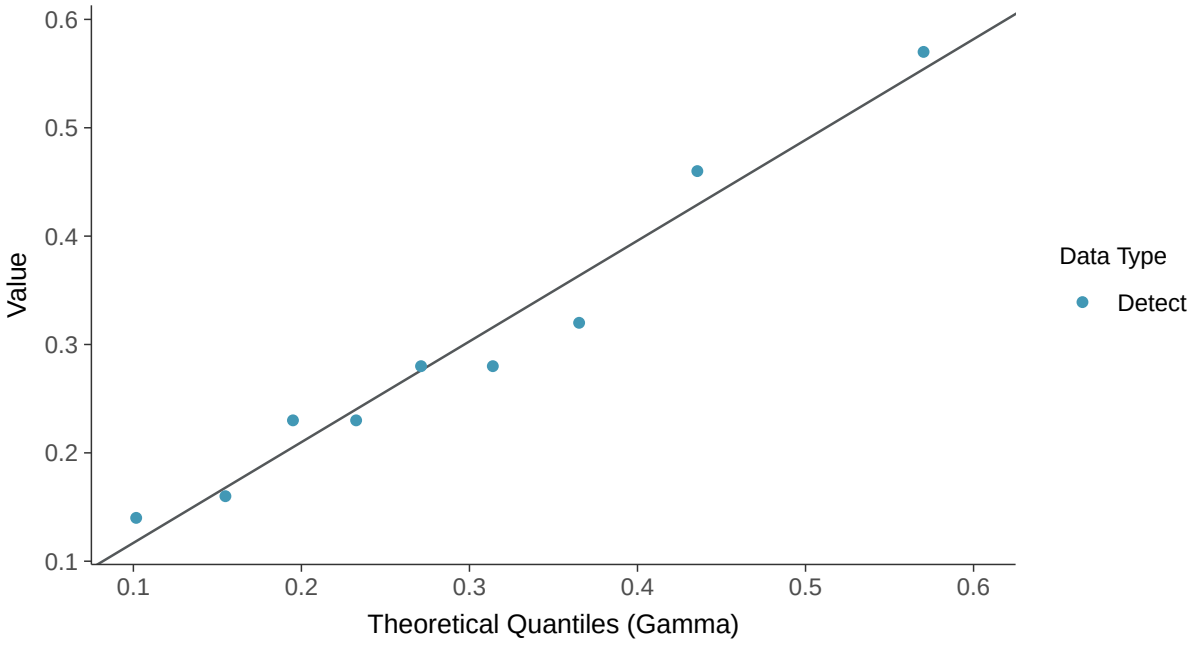
Lognormal Q-Q plot

Barium, MW-10 (mg/L)



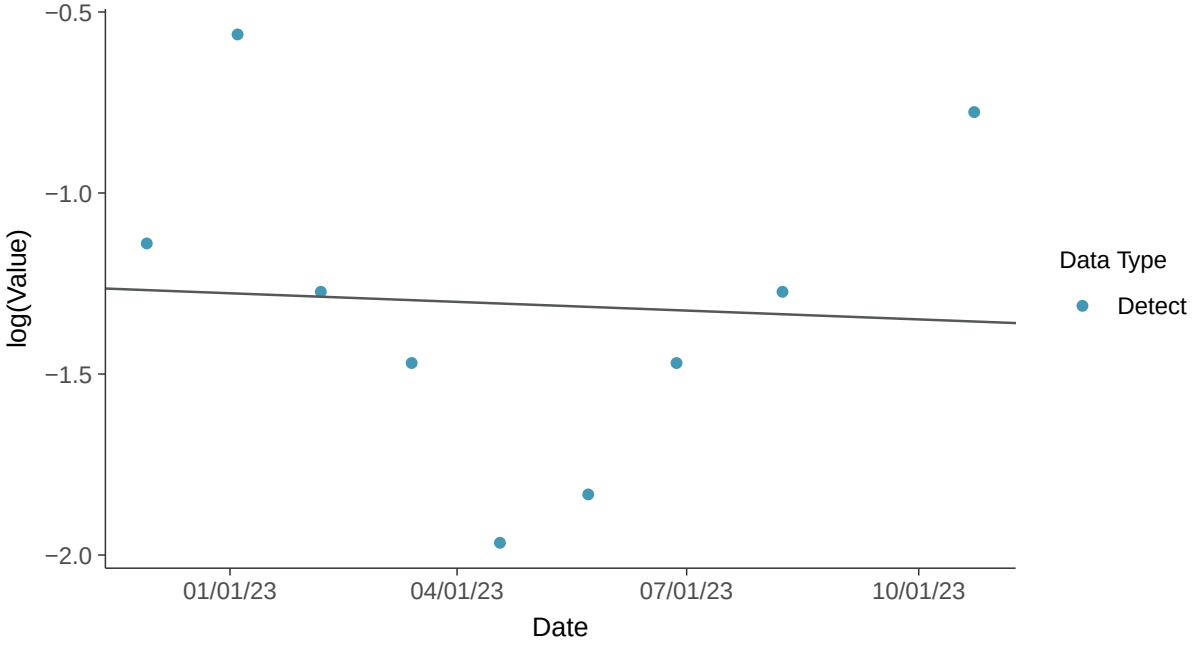
Gamma Q-Q plot

Barium, MW-10 (mg/L)



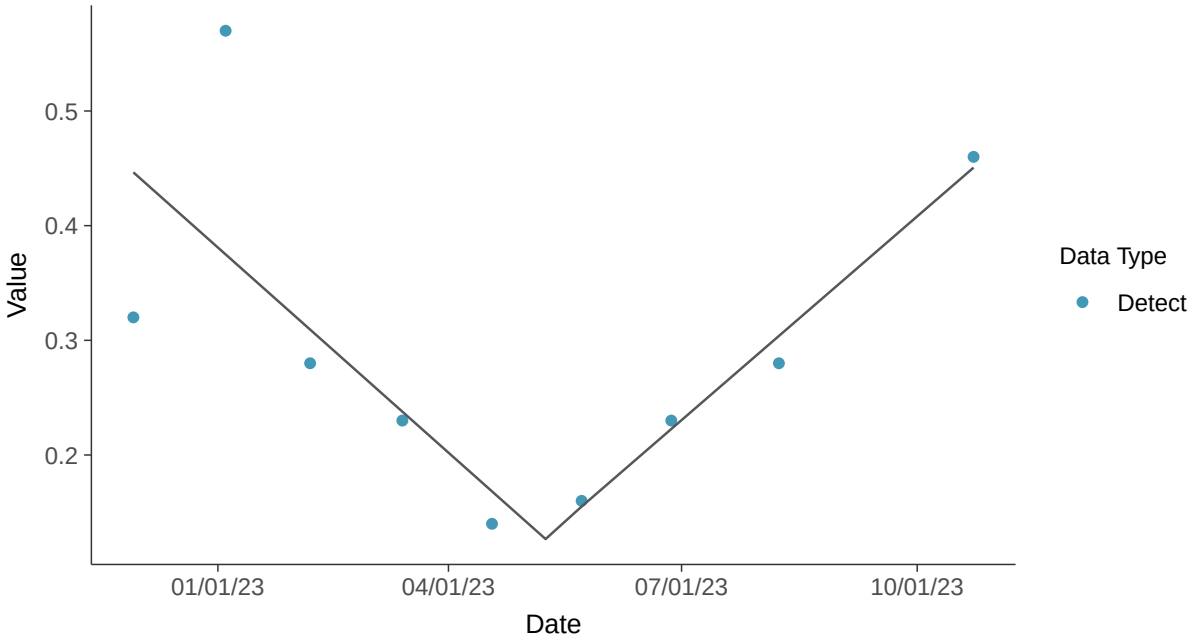
Trend Regression: Lognormal MLE

Barium, MW-10 (mg/L)



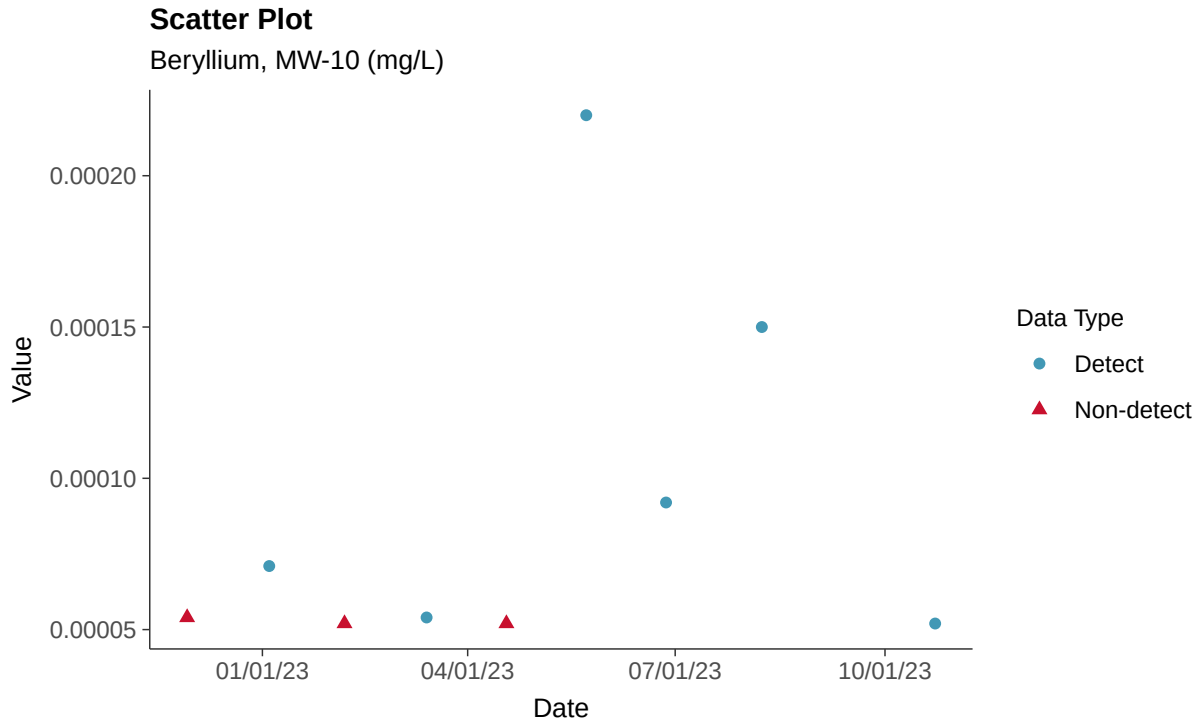
Trend Regression: Piecewise Linear-Linear

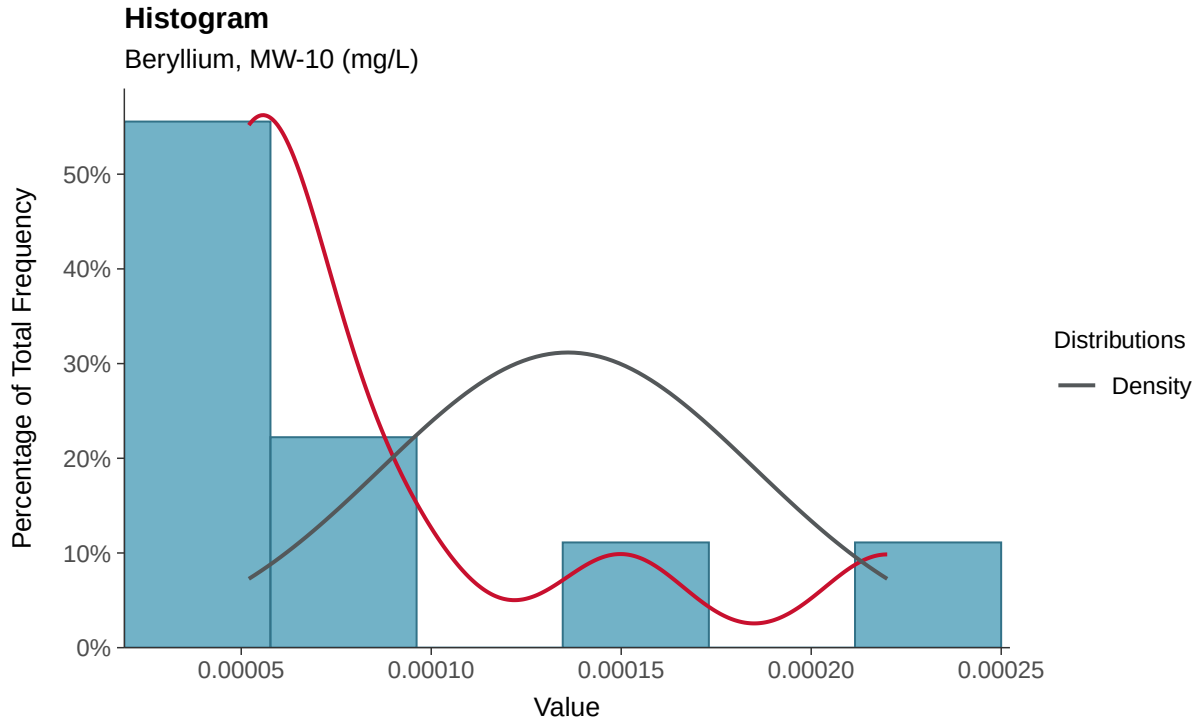
Barium, MW-10 (mg/L)



Appendix IV: Beryllium, MW-10

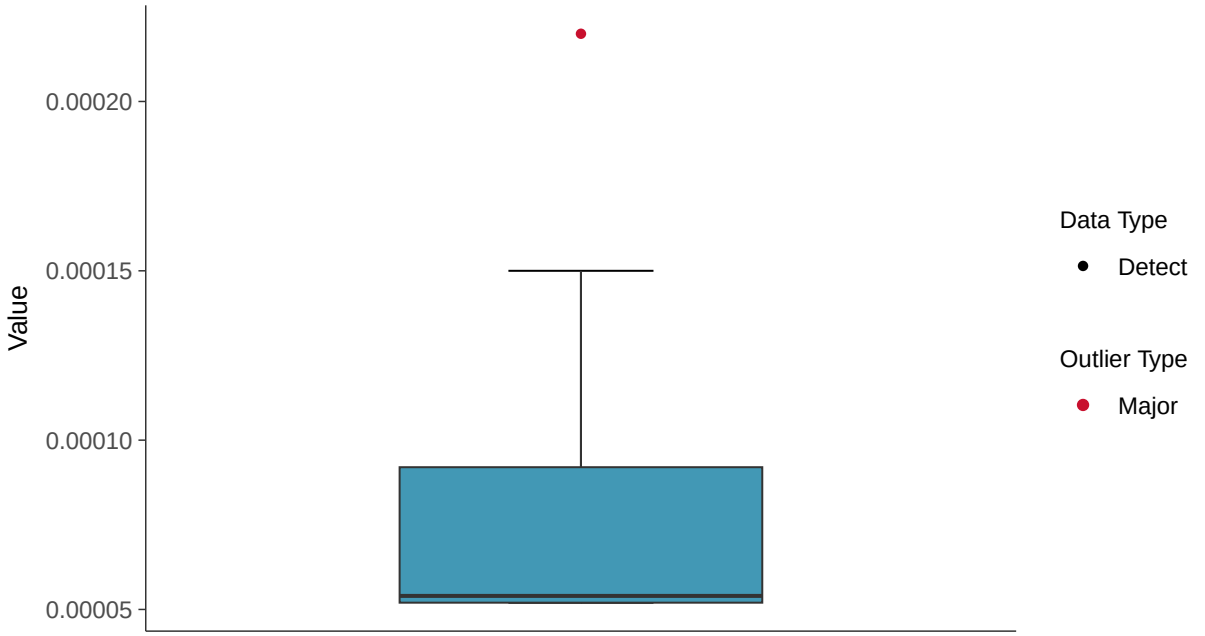
ID: 2_19_5_104





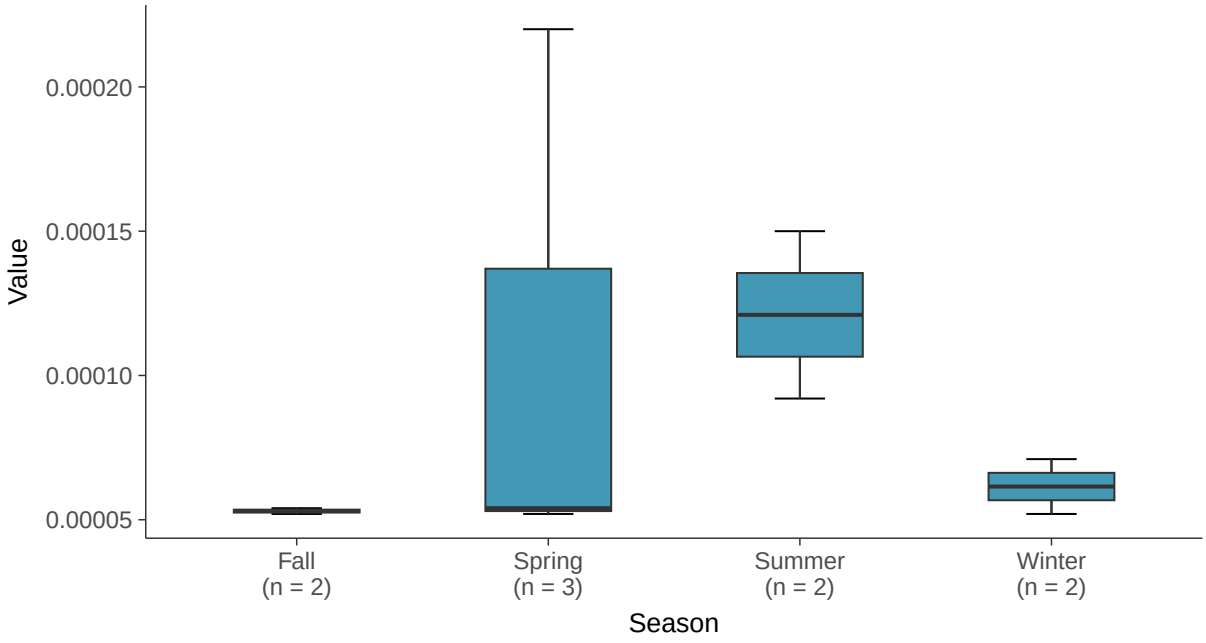
Boxplot

Beryllium, MW-10 (mg/L)



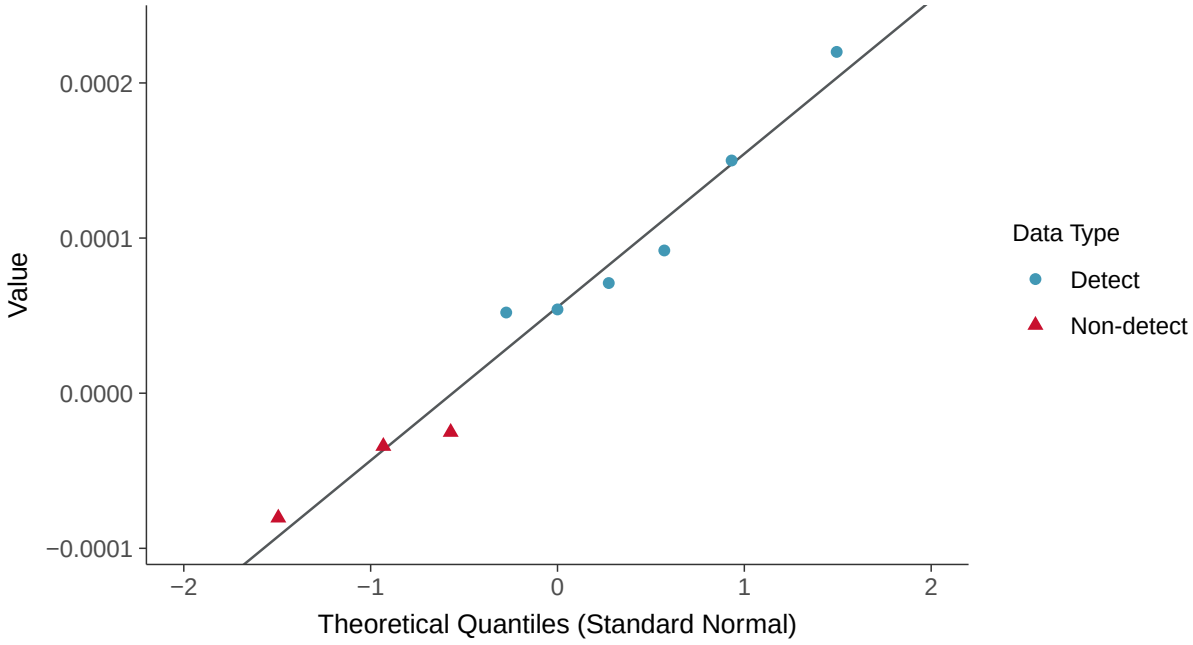
Boxplot by Season

Beryllium, MW-10 (mg/L)



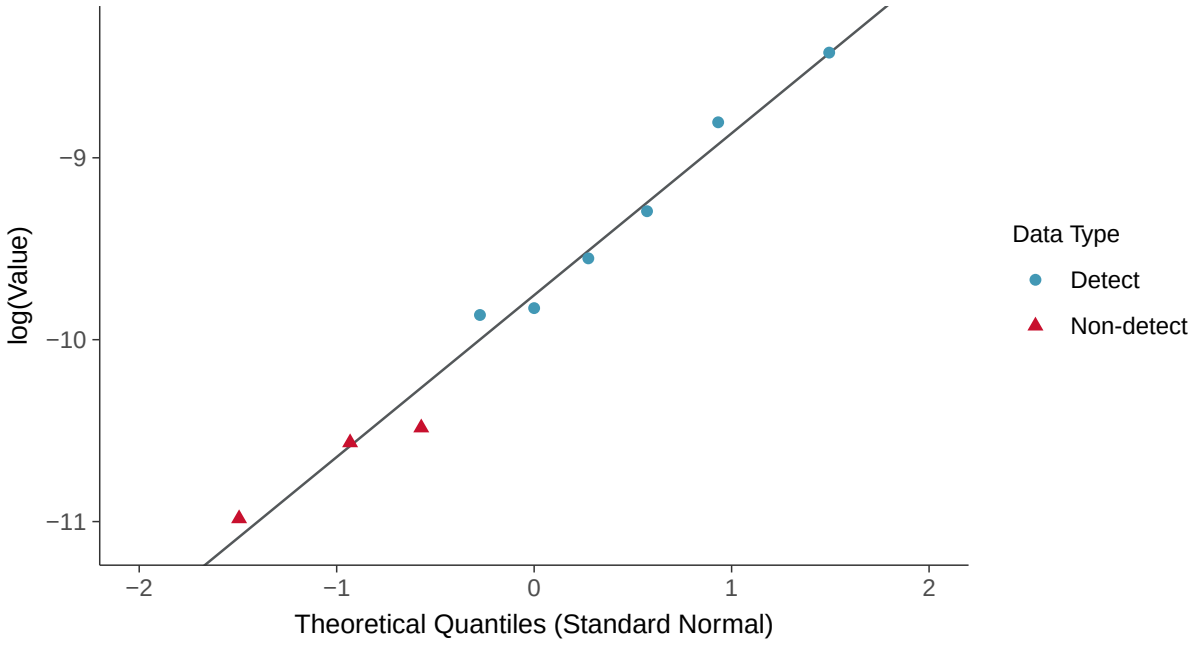
Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-10 (mg/L)



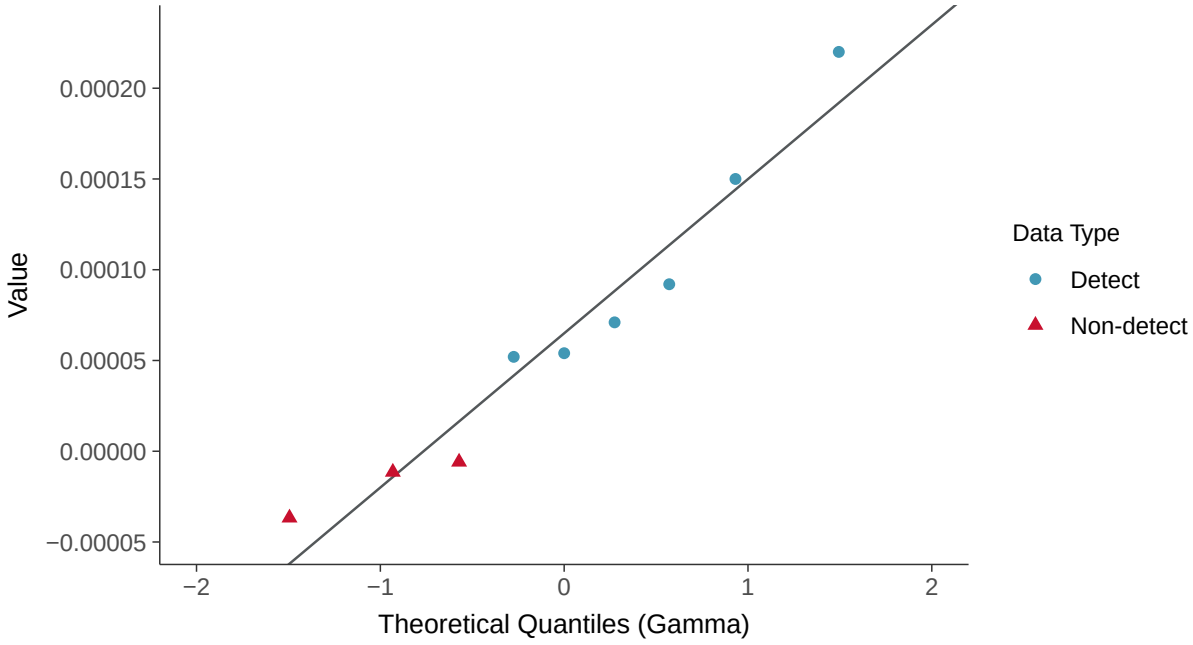
Lognormal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-10 (mg/L)



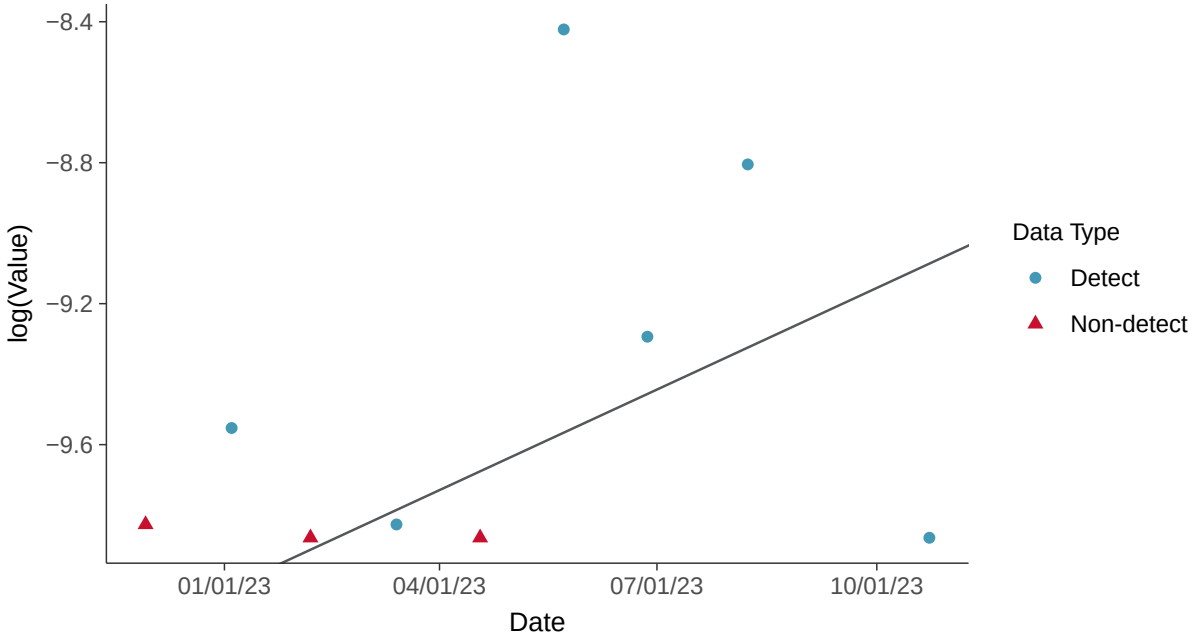
Gamma Q-Q plot using ROS Imputed Estimates

Beryllium, MW-10 (mg/L)



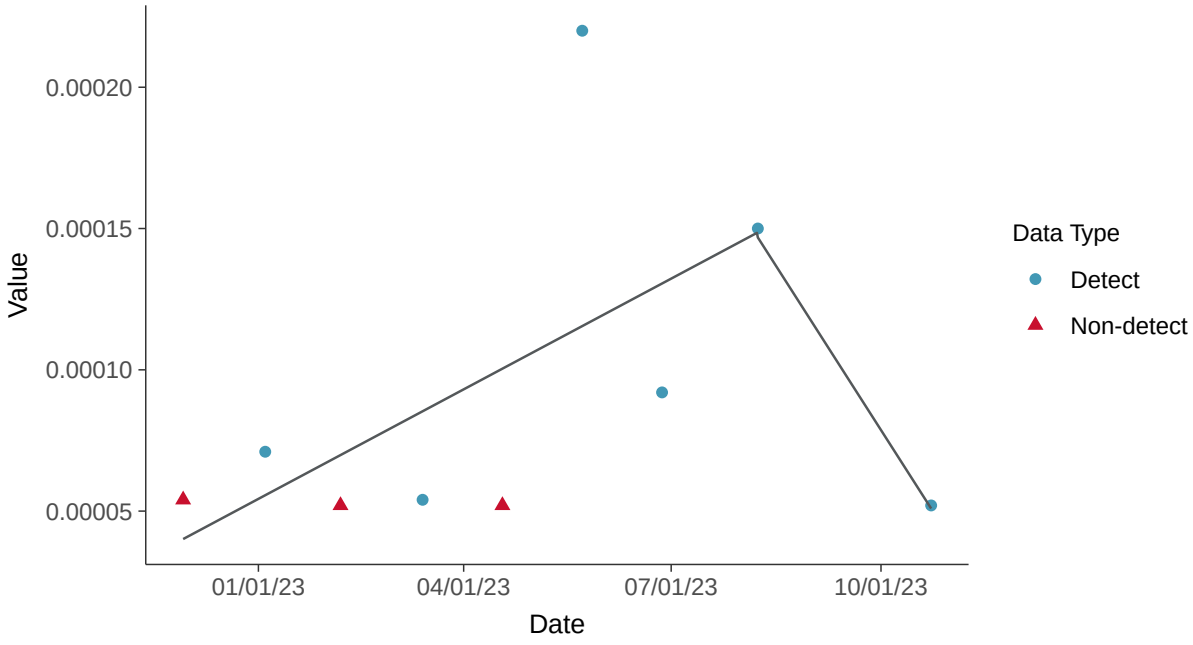
Trend Regression: Lognormal MLE

Beryllium, MW-10 (mg/L)



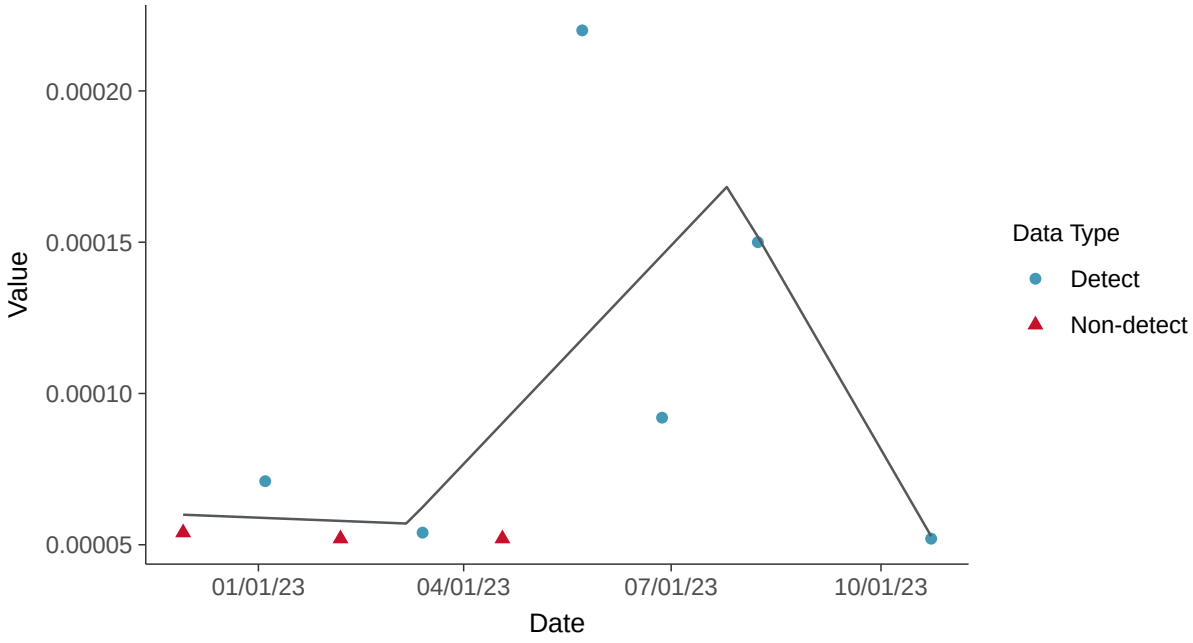
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-10 (mg/L)



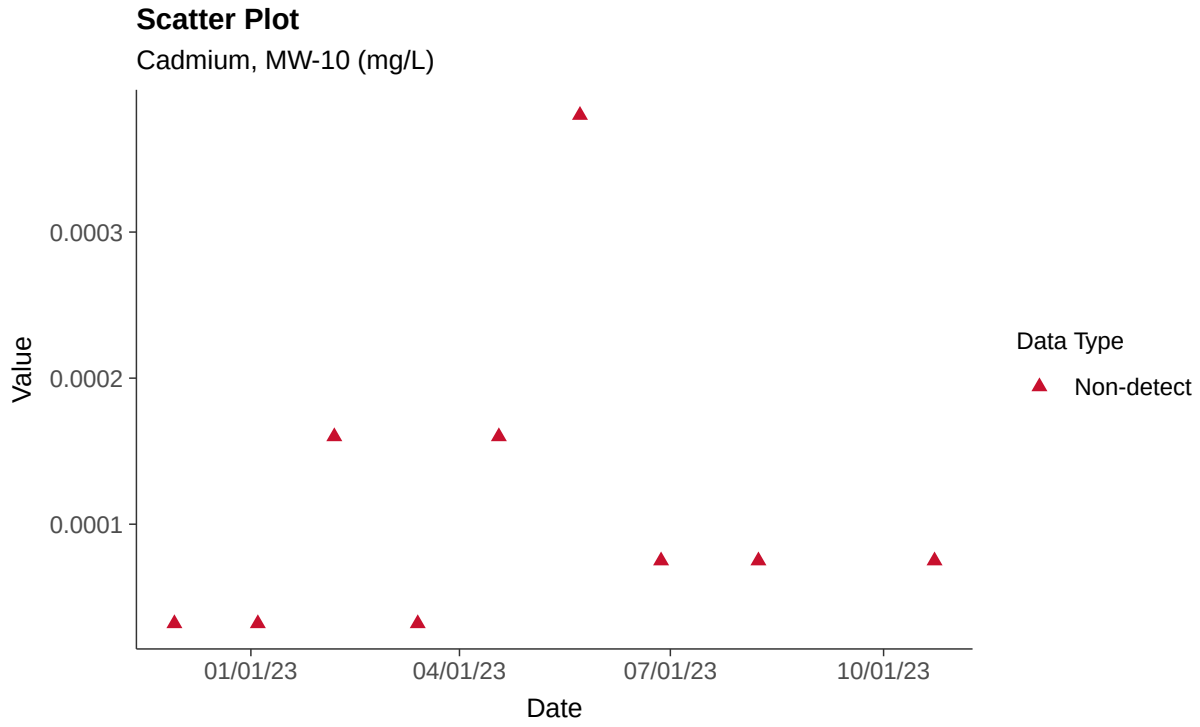
Trend Regression: Piecewise Linear-Linear-Linear

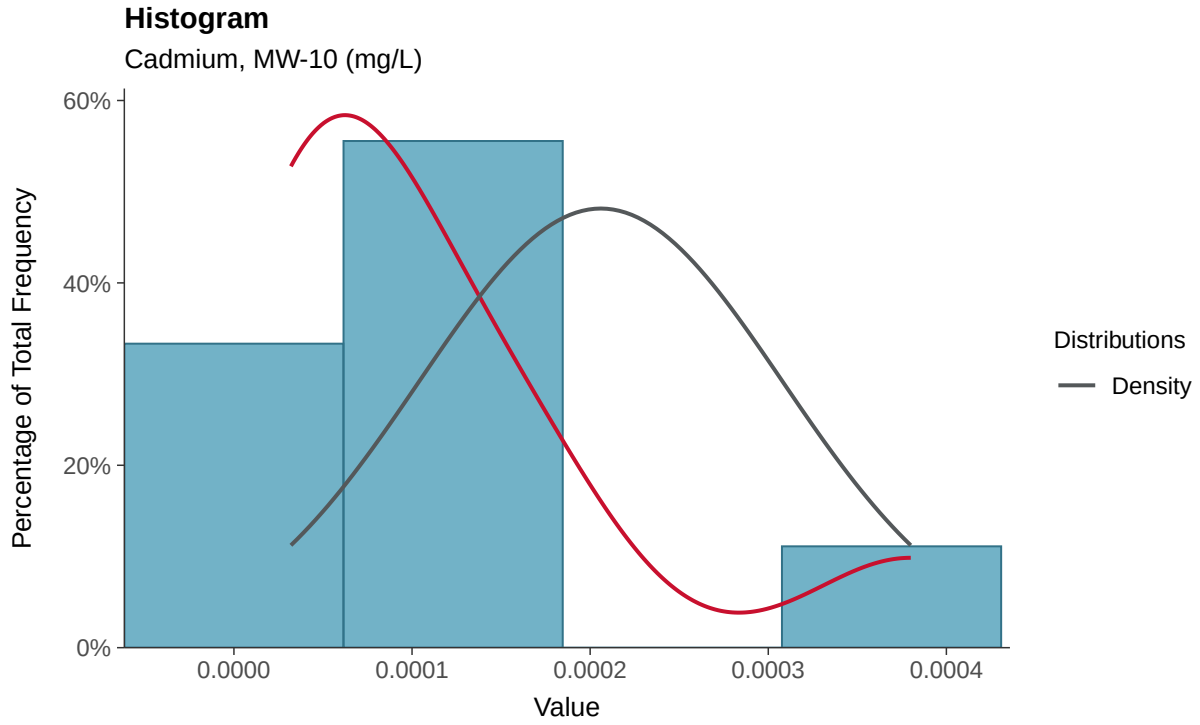
Beryllium, MW-10 (mg/L)



Appendix IV: Cadmium, MW-10

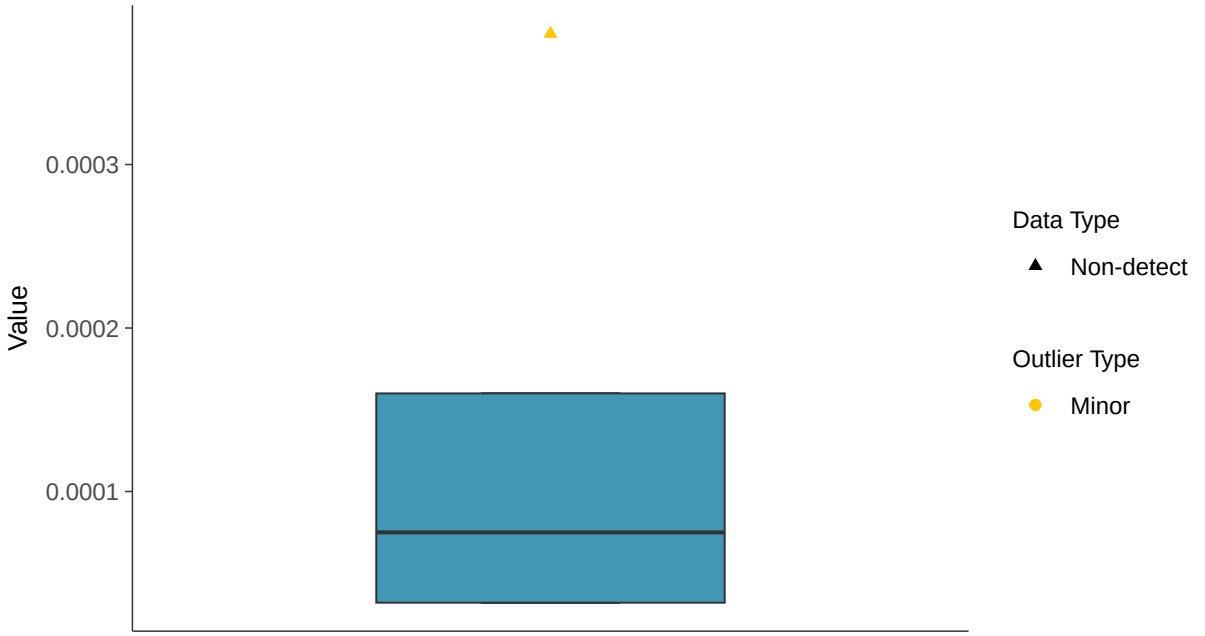
ID: 2_19_5_106





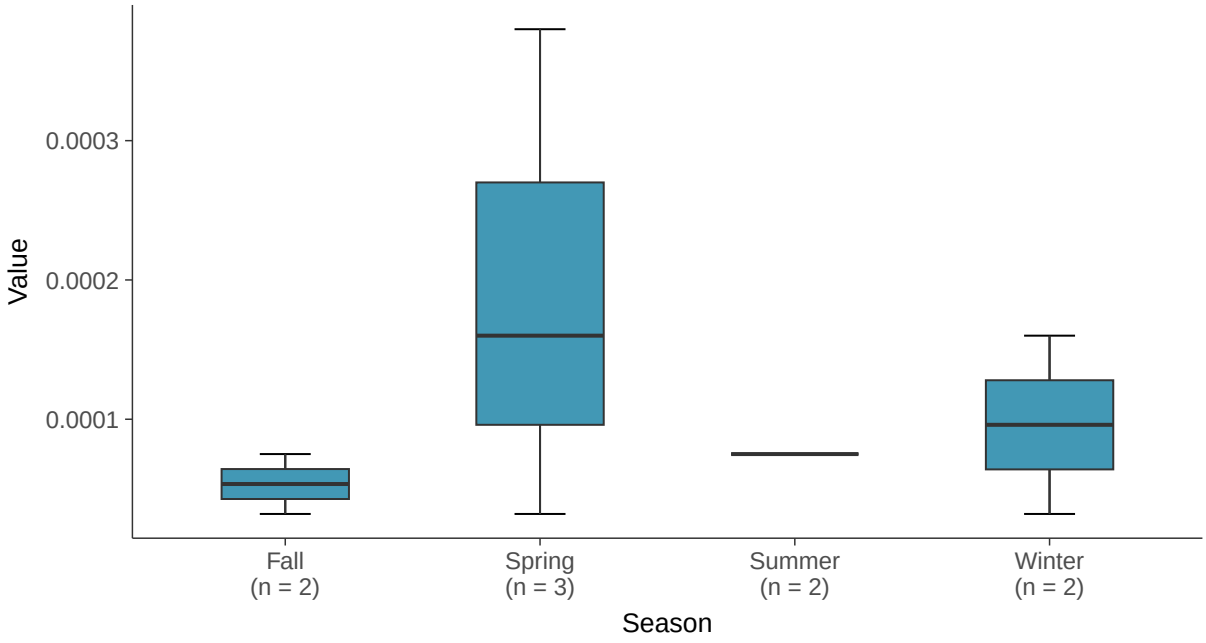
Boxplot

Cadmium, MW-10 (mg/L)



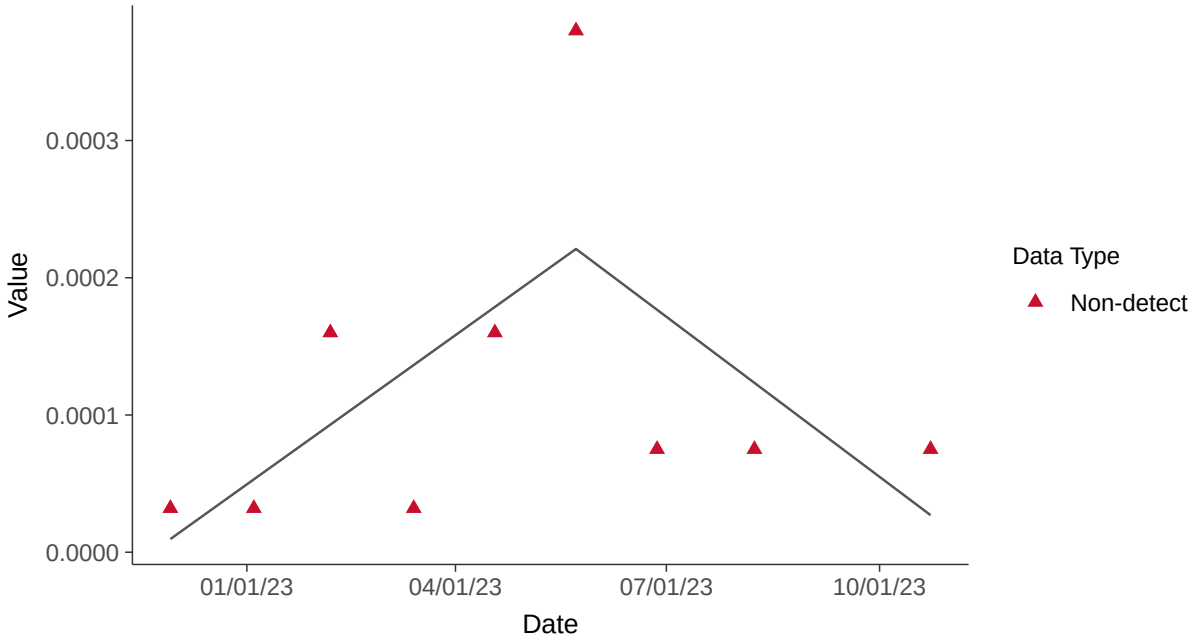
Boxplot by Season

Cadmium, MW-10 (mg/L)



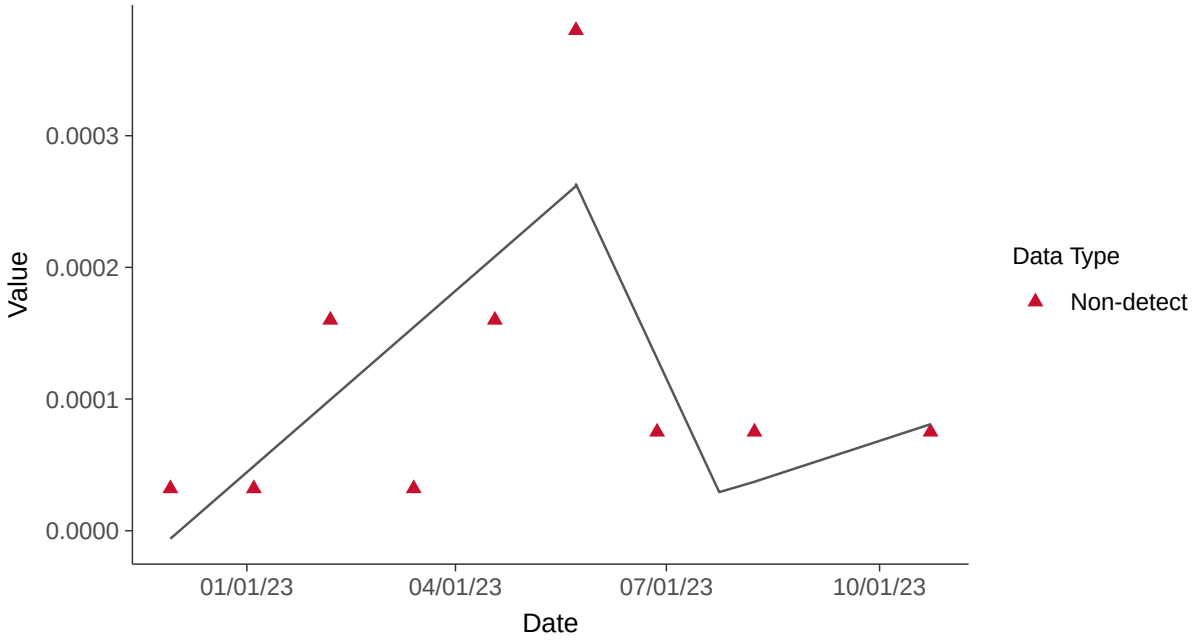
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-10 (mg/L)

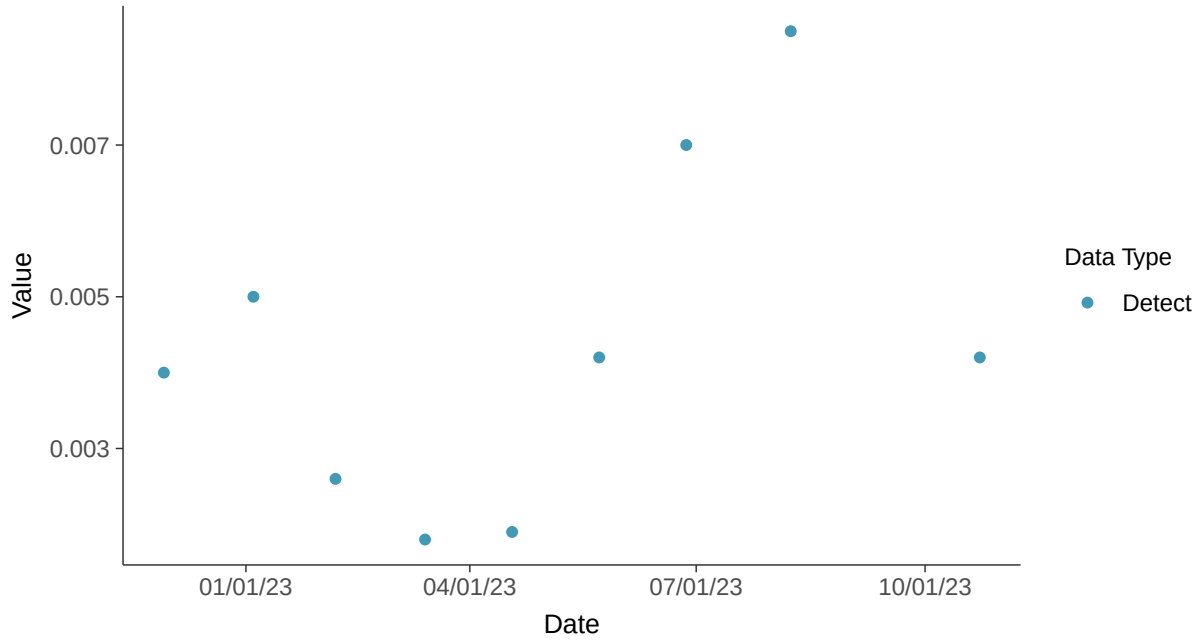


Appendix IV: Chromium, Total, MW-10

ID: 2_19_5_109

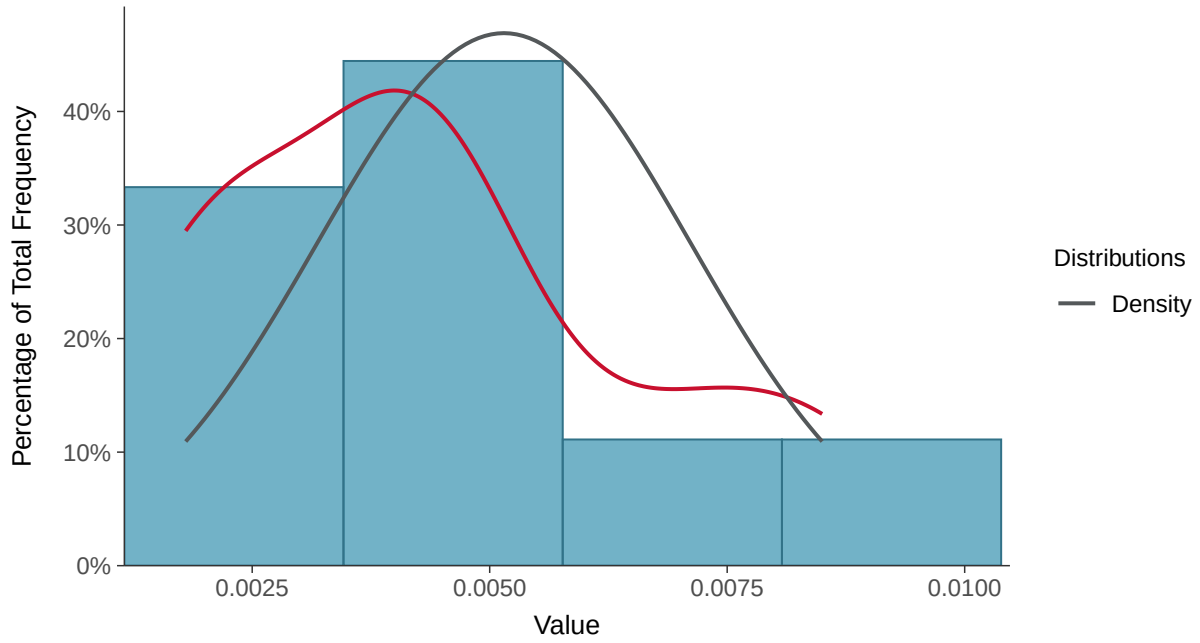
Scatter Plot

Chromium, Total, MW-10 (mg/L)



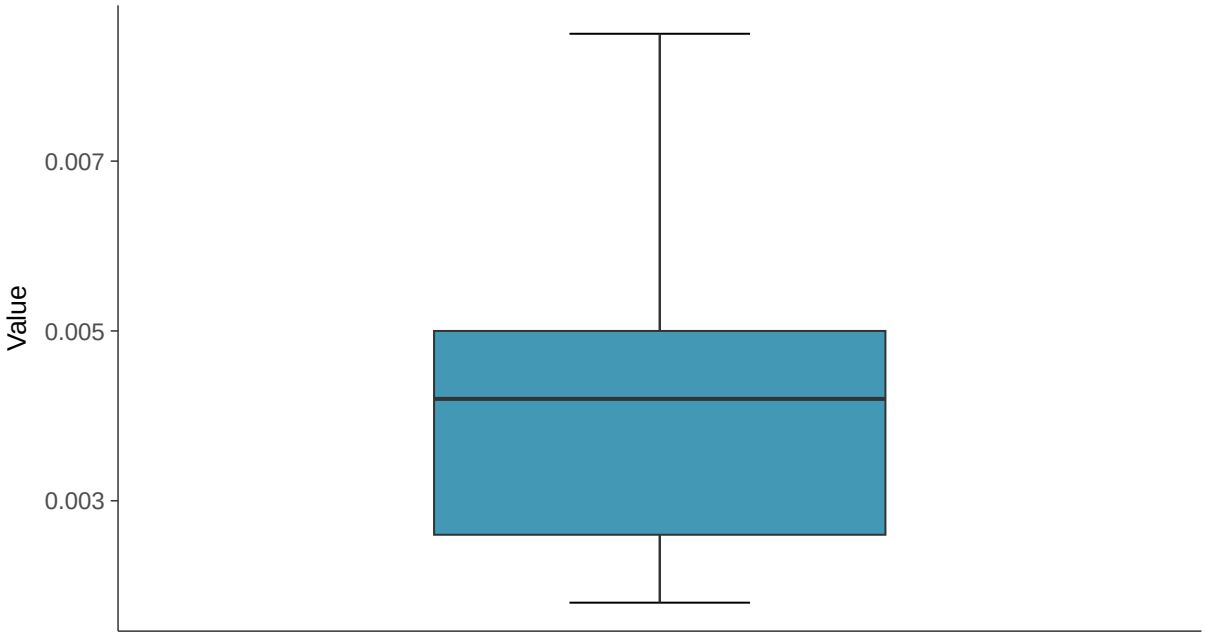
Histogram

Chromium, Total, MW-10 (mg/L)



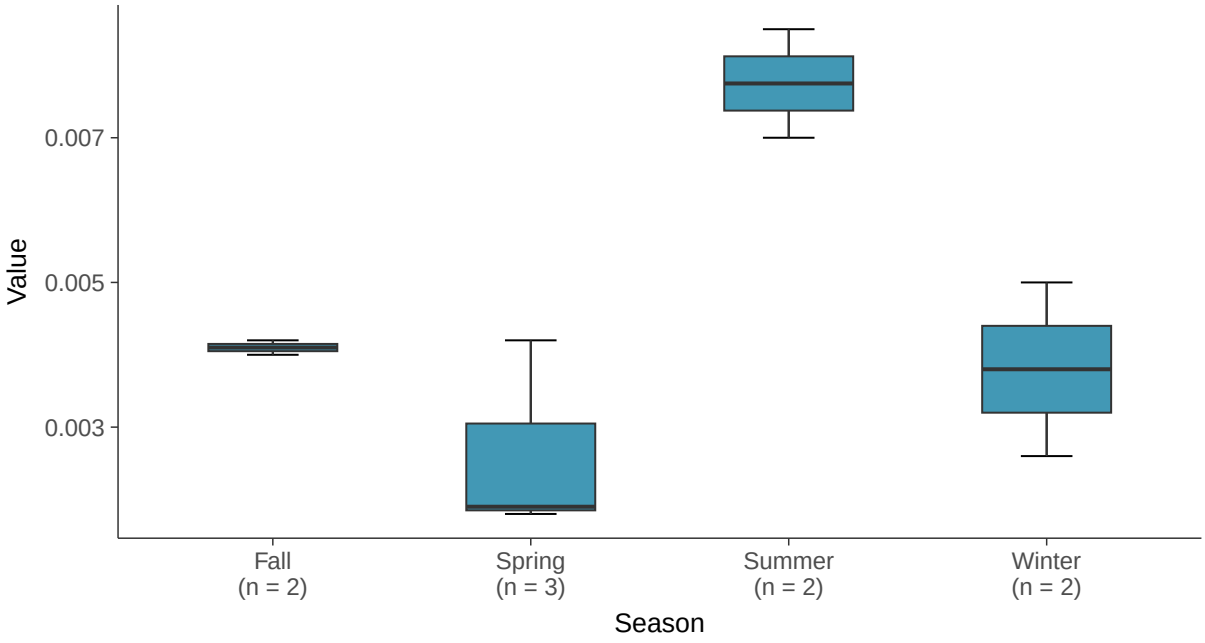
Boxplot

Chromium, Total, MW-10 (mg/L)



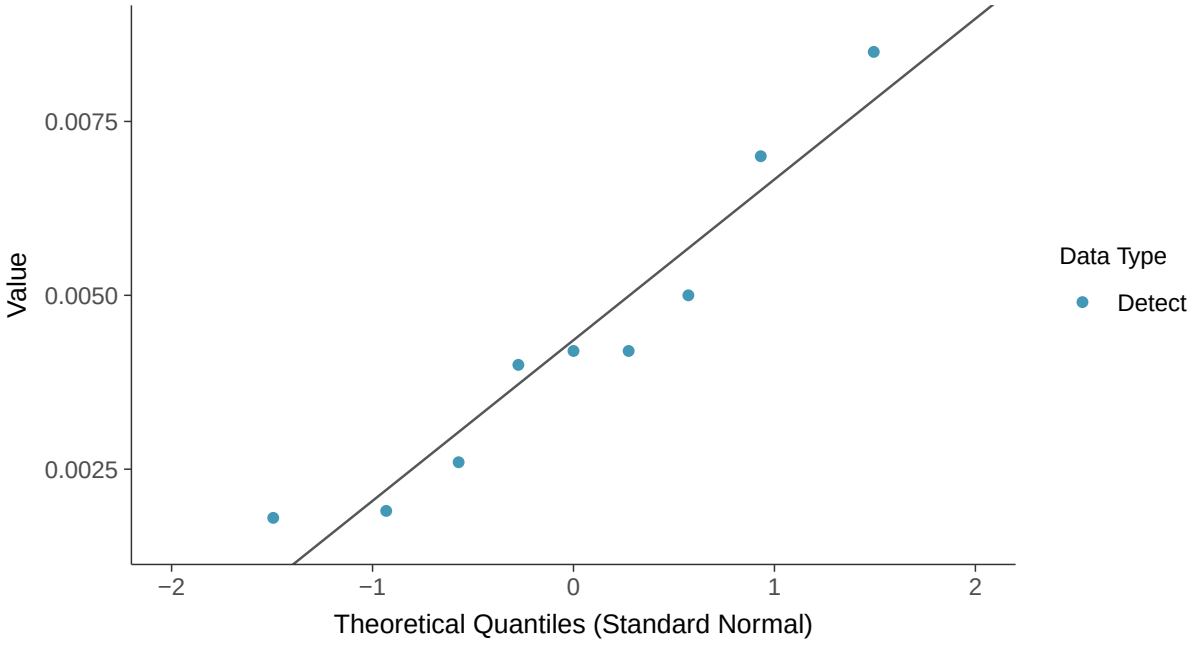
Boxplot by Season

Chromium, Total, MW-10 (mg/L)



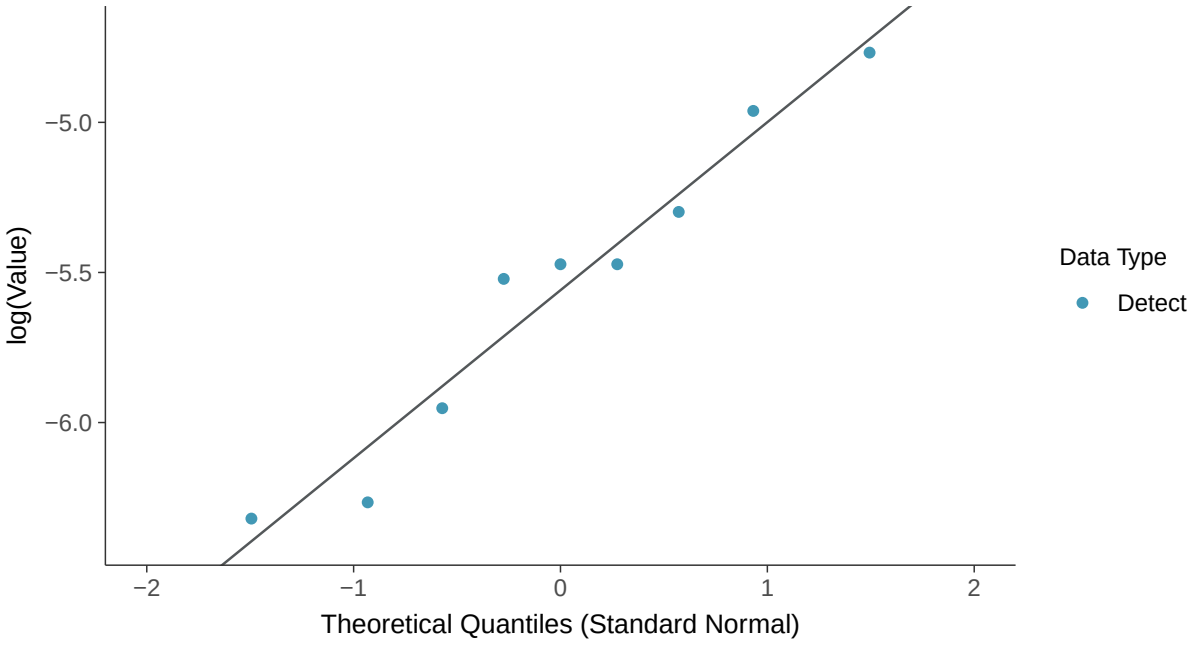
Normal Q-Q plot

Chromium, Total, MW-10 (mg/L)



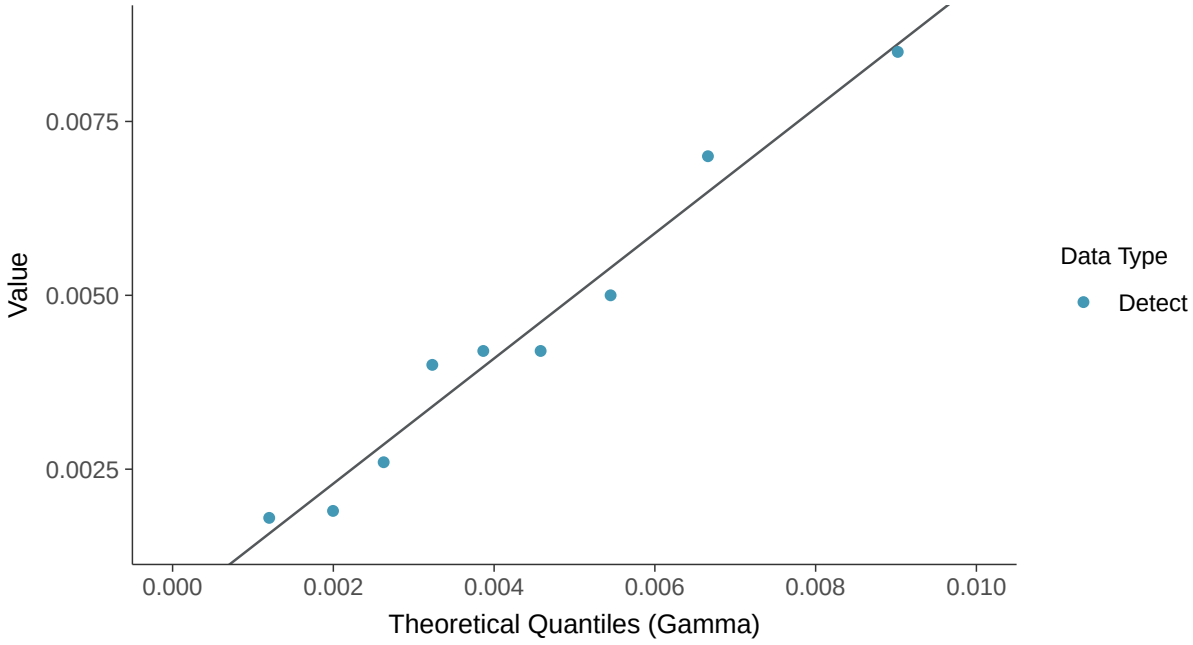
Lognormal Q-Q plot

Chromium, Total, MW-10 (mg/L)



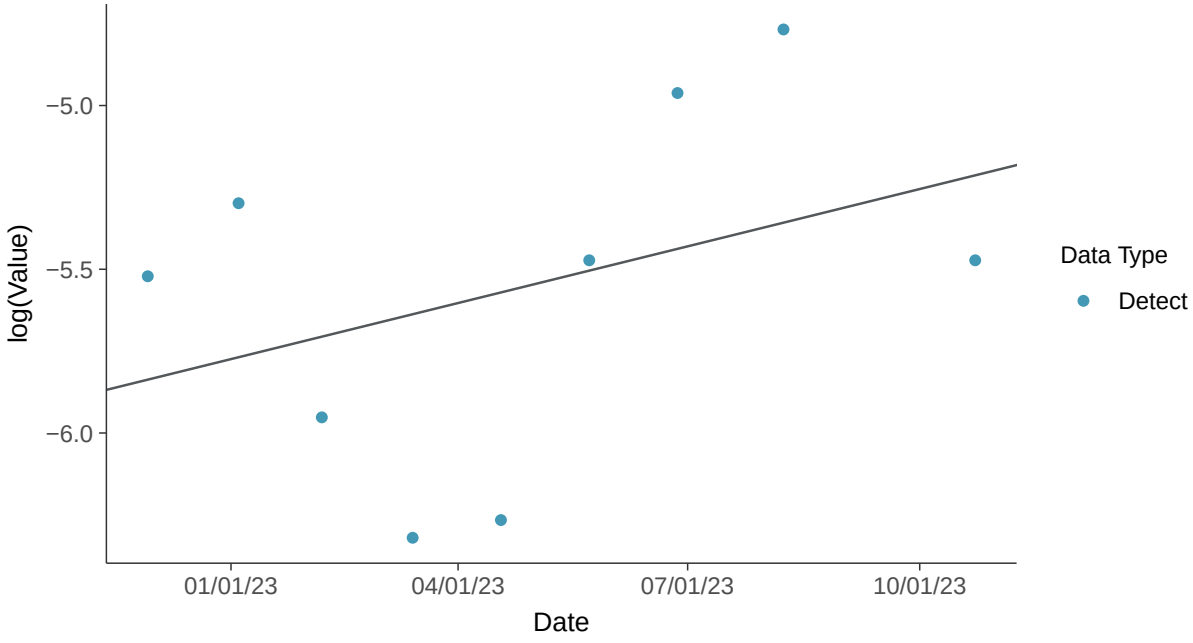
Gamma Q-Q plot

Chromium, Total, MW-10 (mg/L)



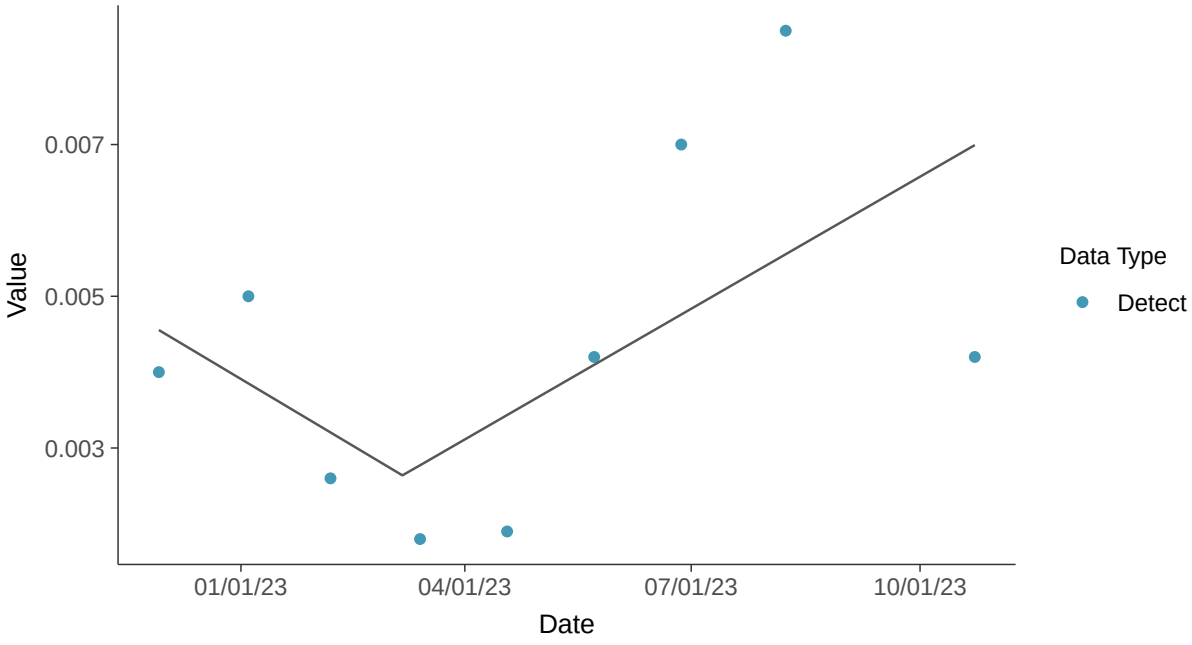
Trend Regression: Lognormal MLE

Chromium, Total, MW-10 (mg/L)



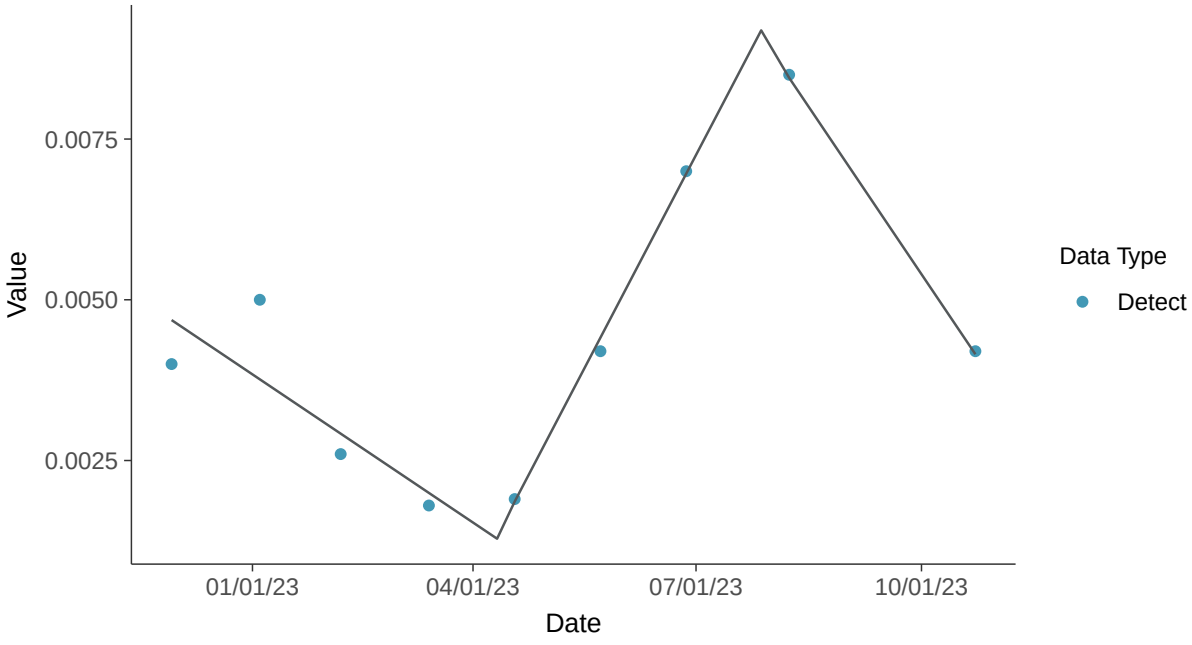
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-10 (mg/L)



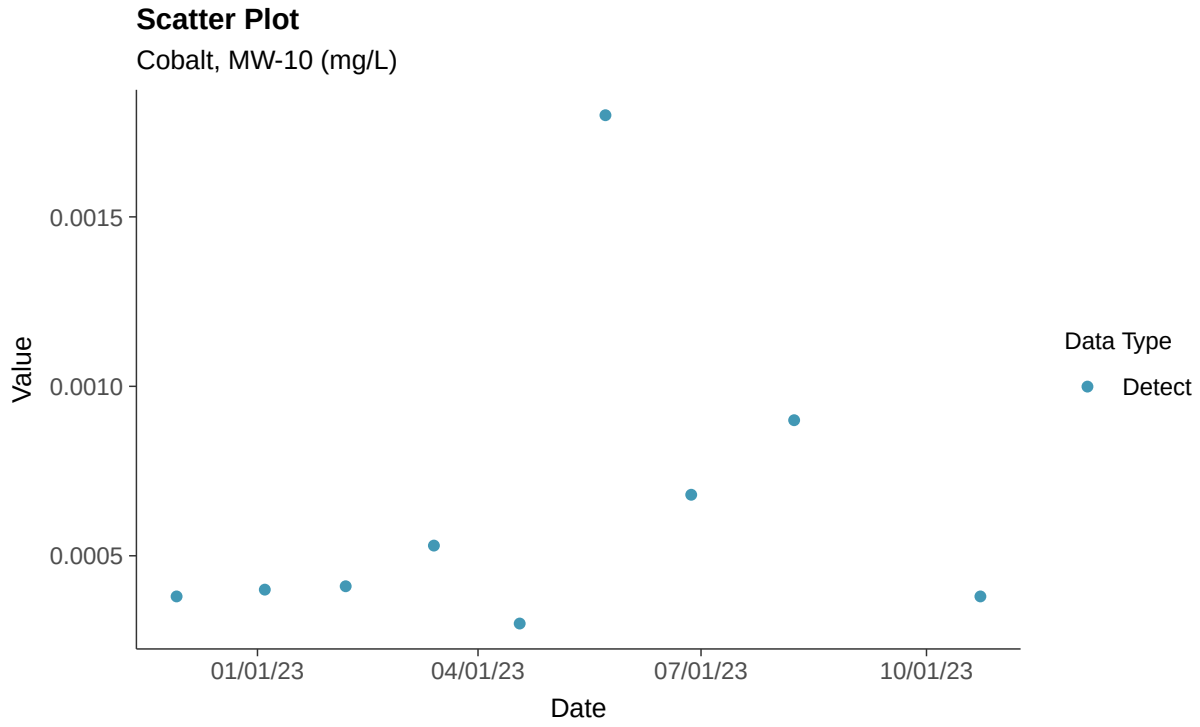
Trend Regression: Piecewise Linear-Linear-Linear

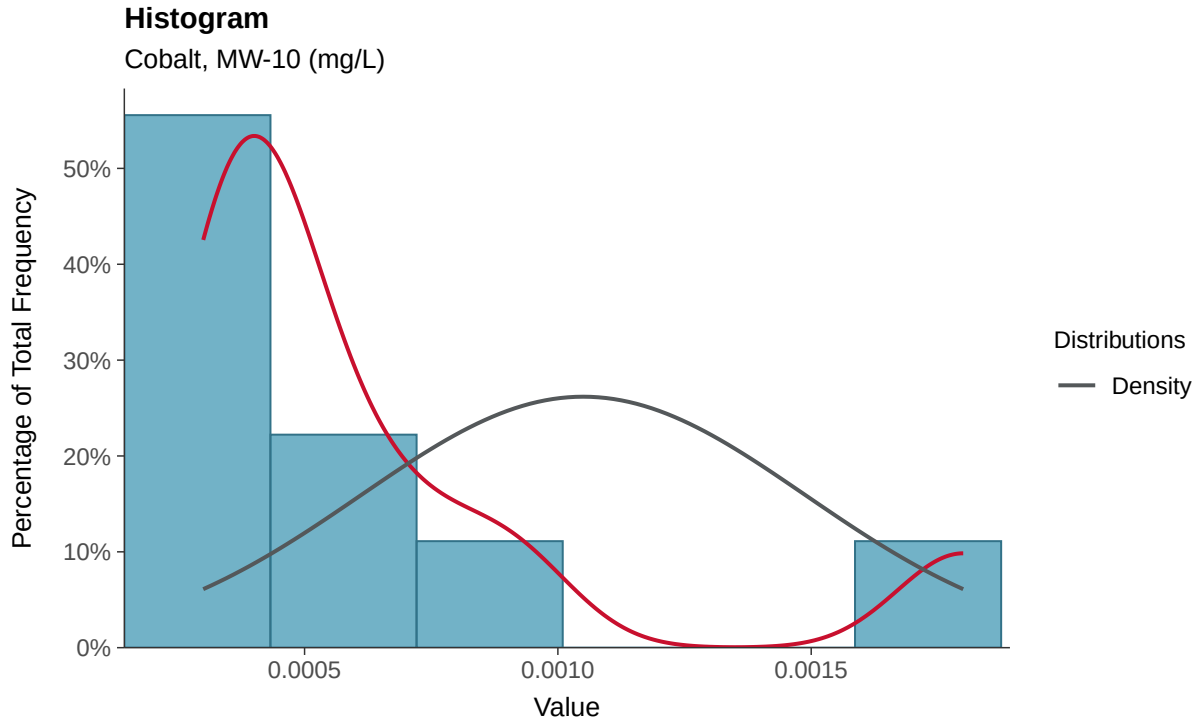
Chromium, Total, MW-10 (mg/L)



Appendix IV: Cobalt, MW-10

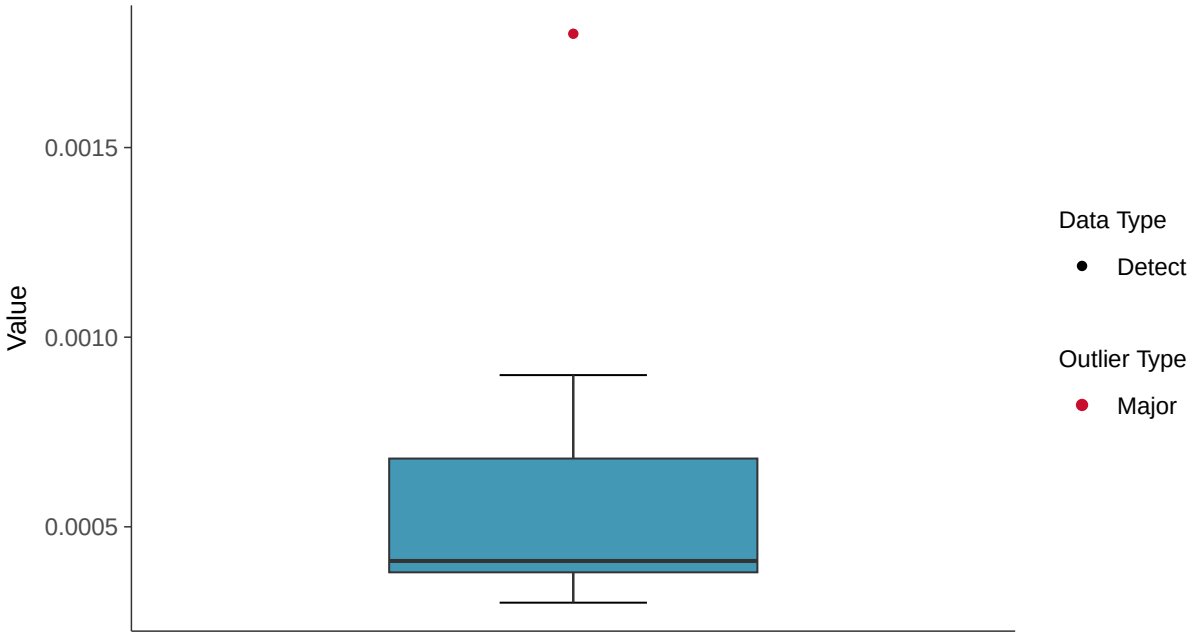
ID: 2_19_5_110





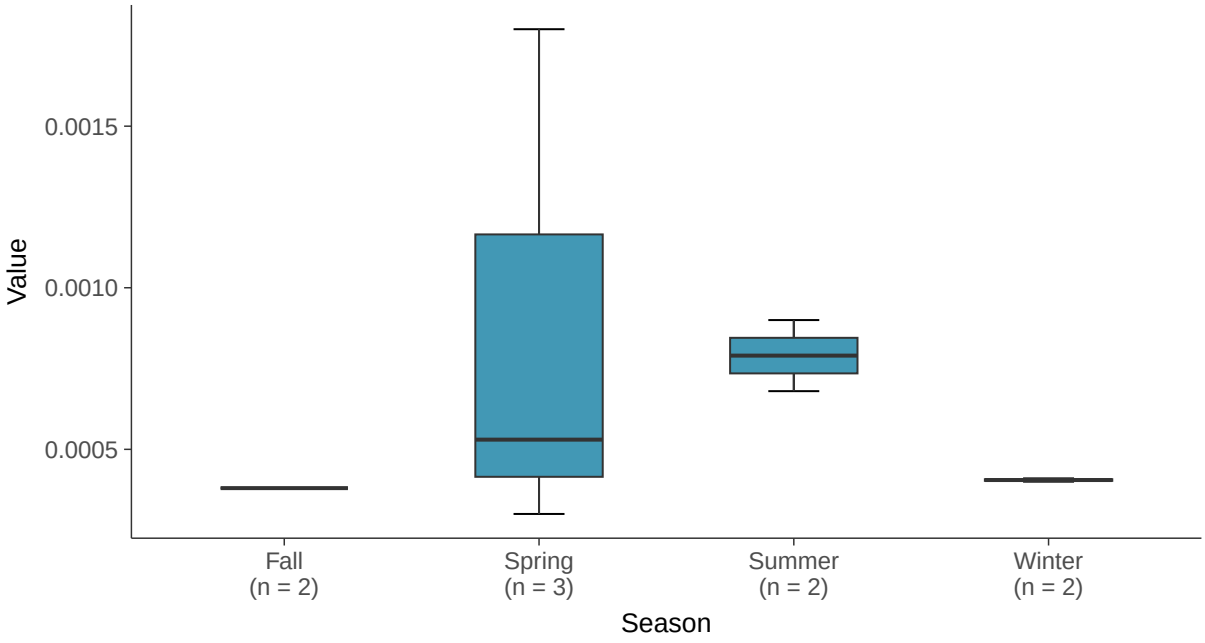
Boxplot

Cobalt, MW-10 (mg/L)



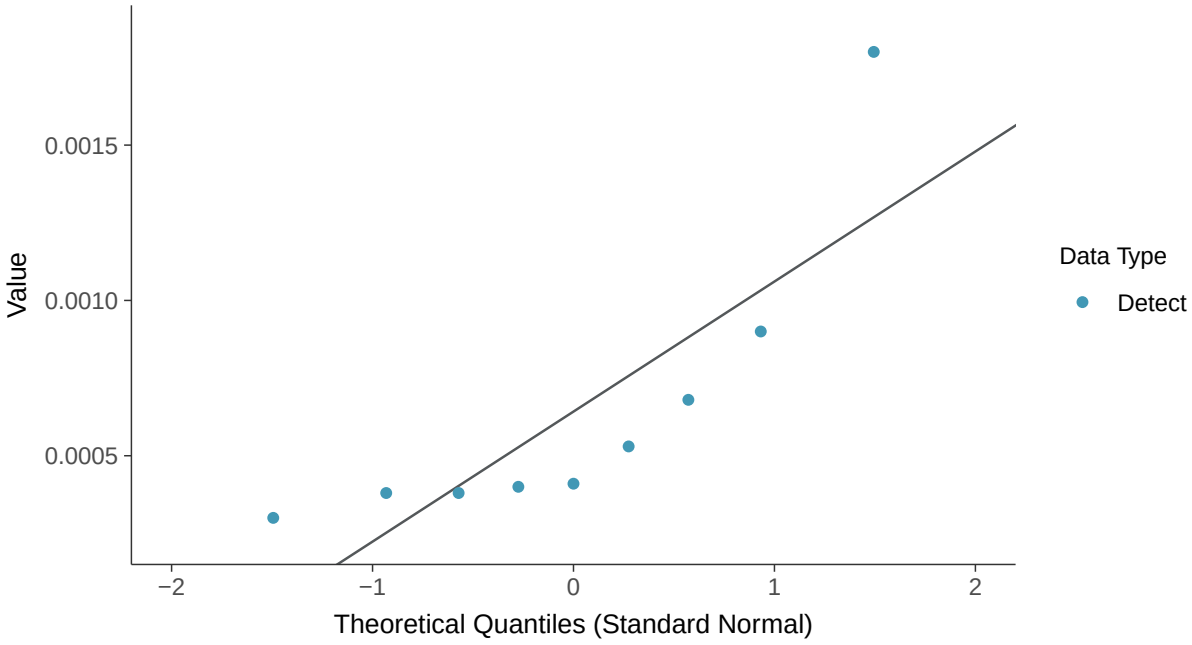
Boxplot by Season

Cobalt, MW-10 (mg/L)



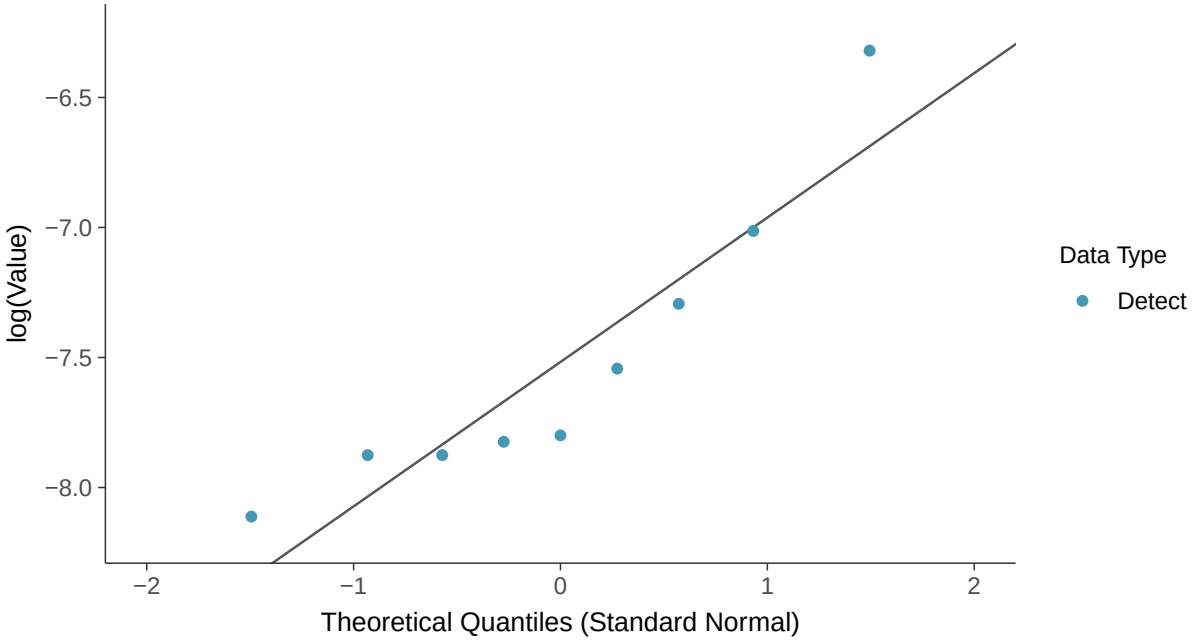
Normal Q-Q plot

Cobalt, MW-10 (mg/L)



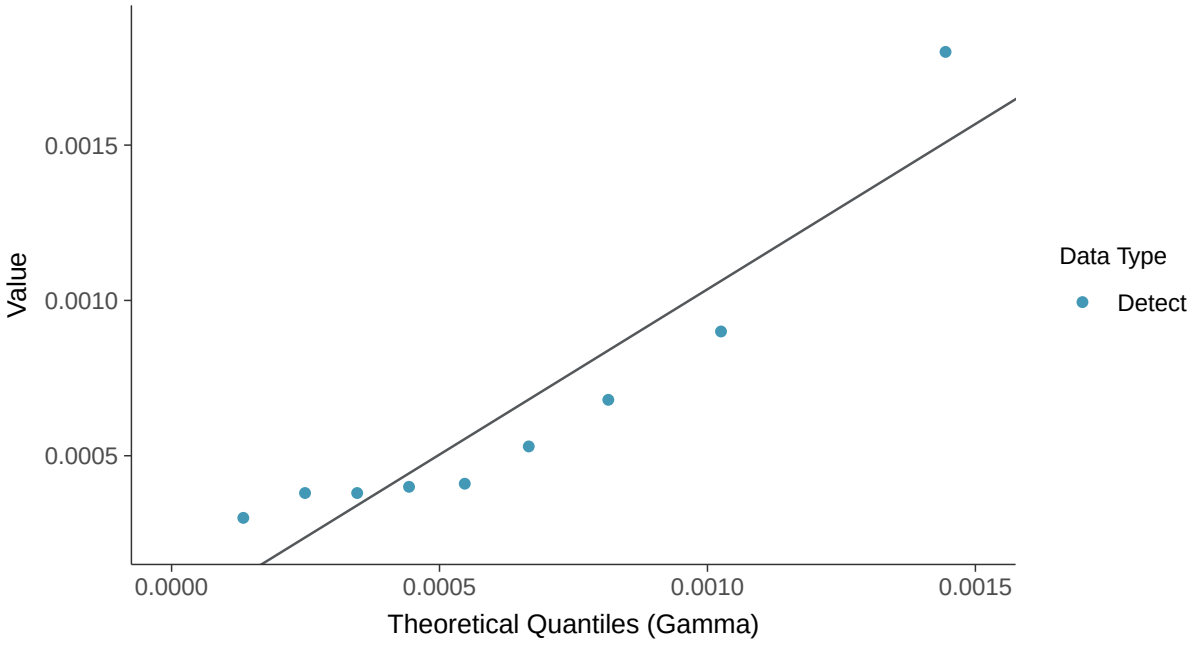
Lognormal Q-Q plot

Cobalt, MW-10 (mg/L)



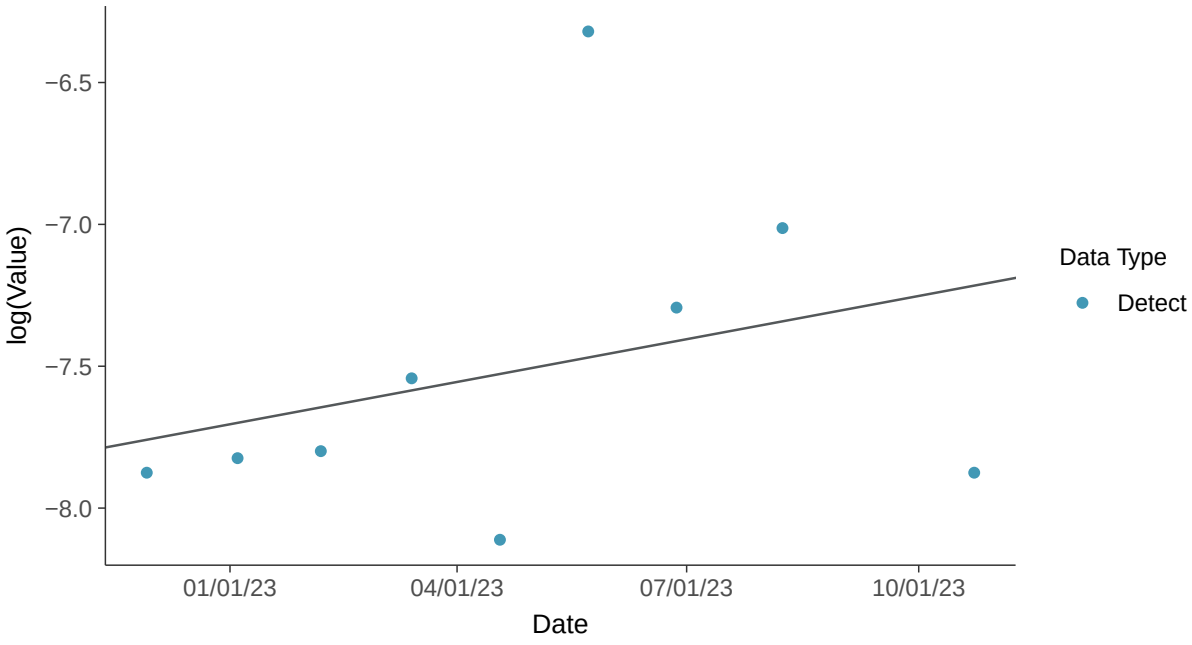
Gamma Q-Q plot

Cobalt, MW-10 (mg/L)



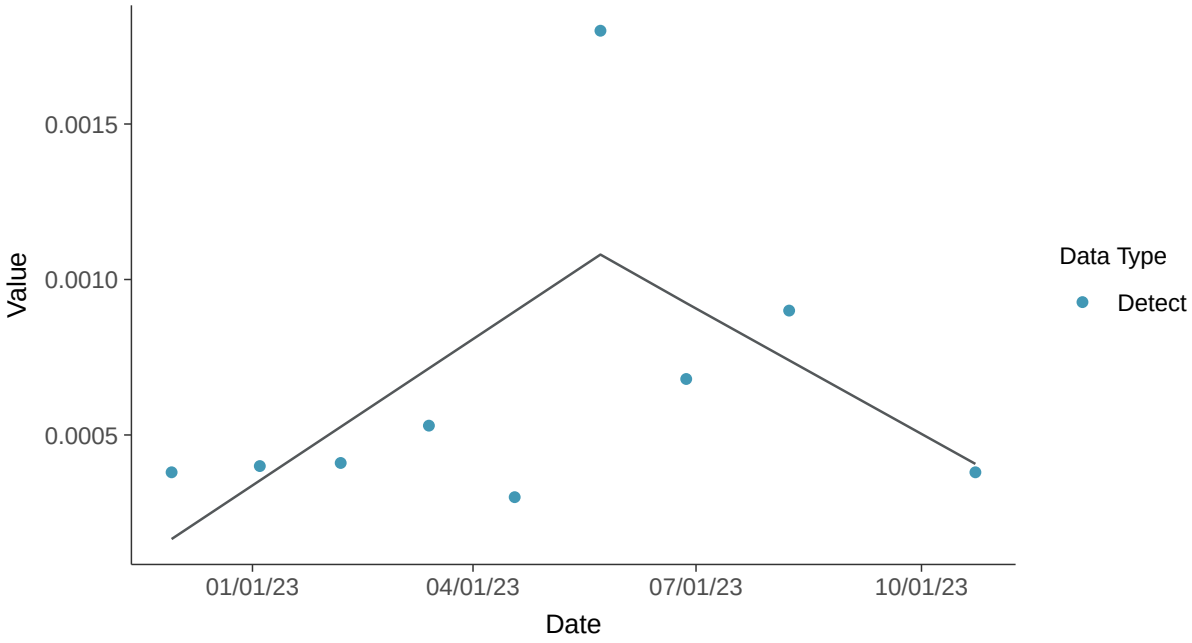
Trend Regression: Lognormal MLE

Cobalt, MW-10 (mg/L)



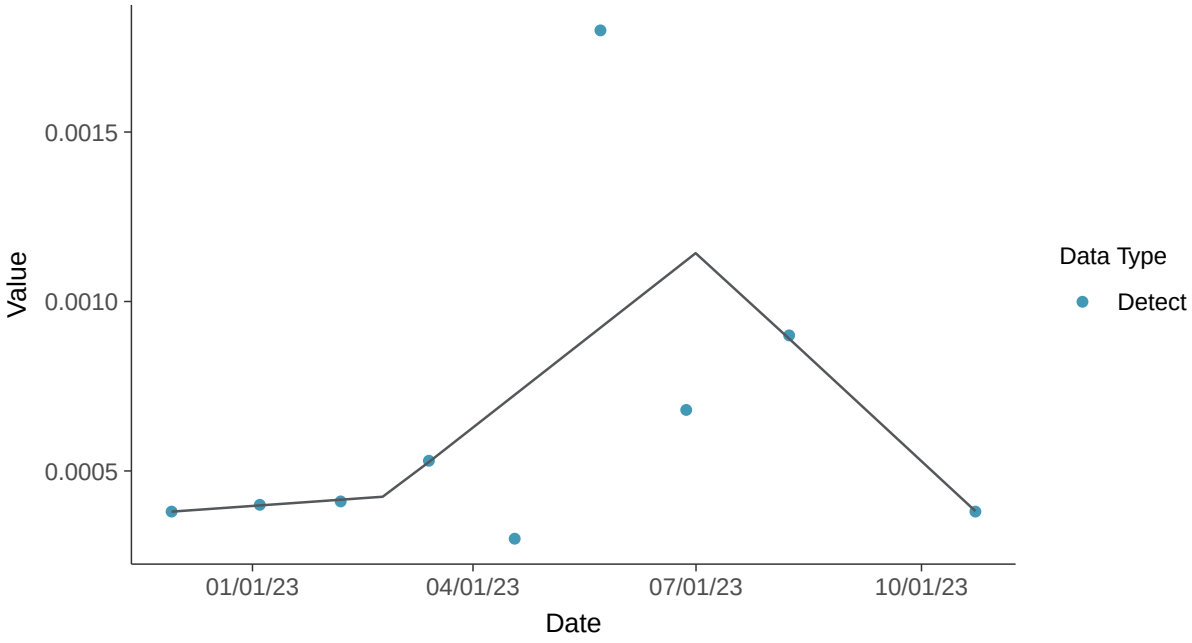
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-10 (mg/L)

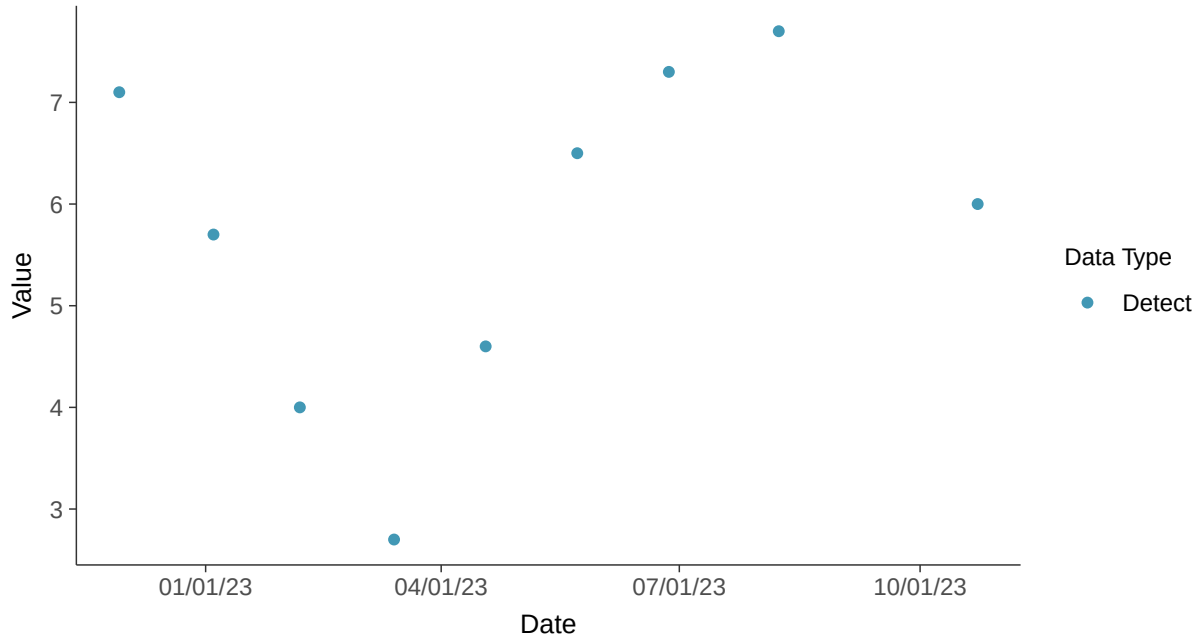


Appendix IV: Fluoride (App IV), MW-10

ID: 2_19_5_113

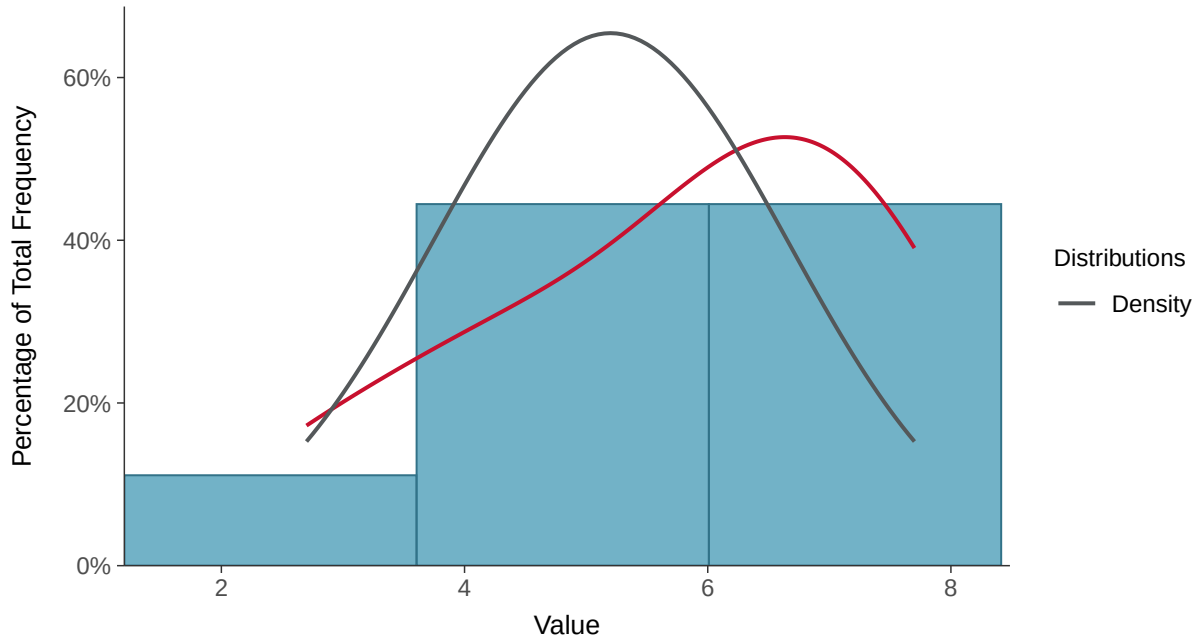
Scatter Plot

Fluoride (App IV), MW-10 (mg/L)



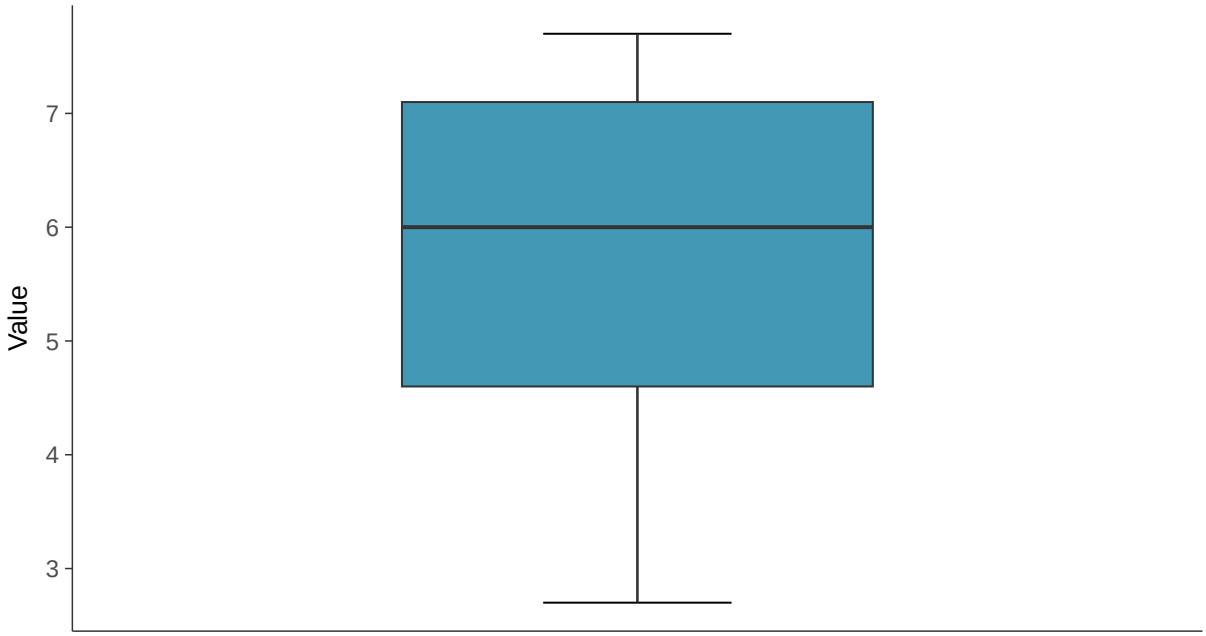
Histogram

Fluoride (App IV), MW-10 (mg/L)



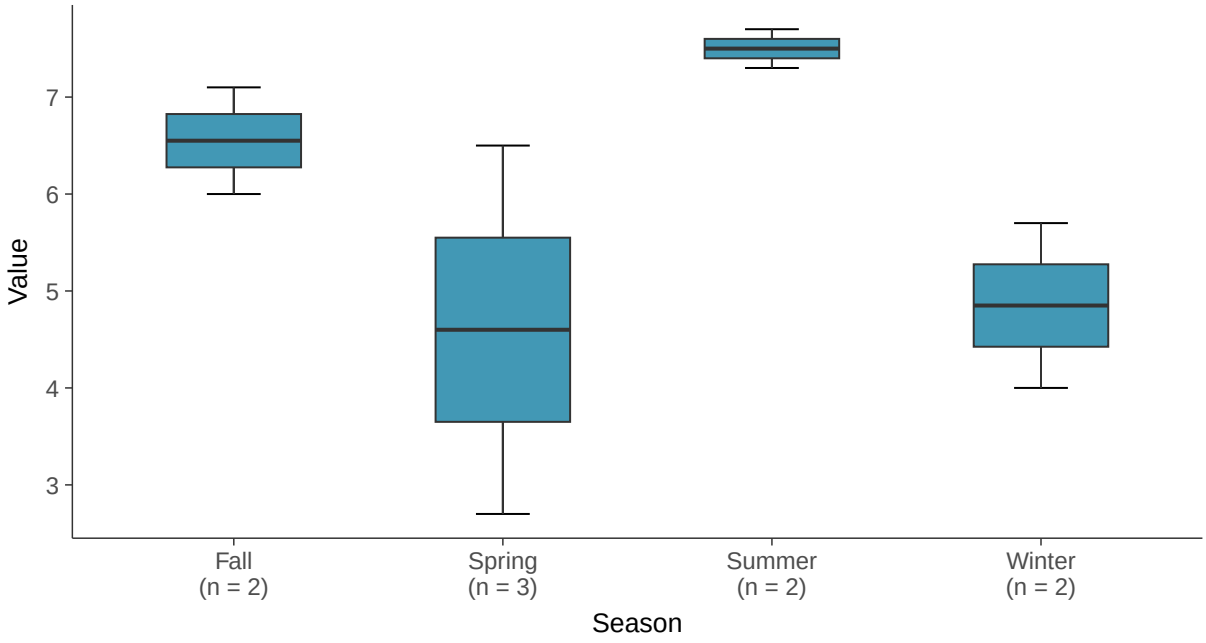
Boxplot

Fluoride (App IV), MW-10 (mg/L)



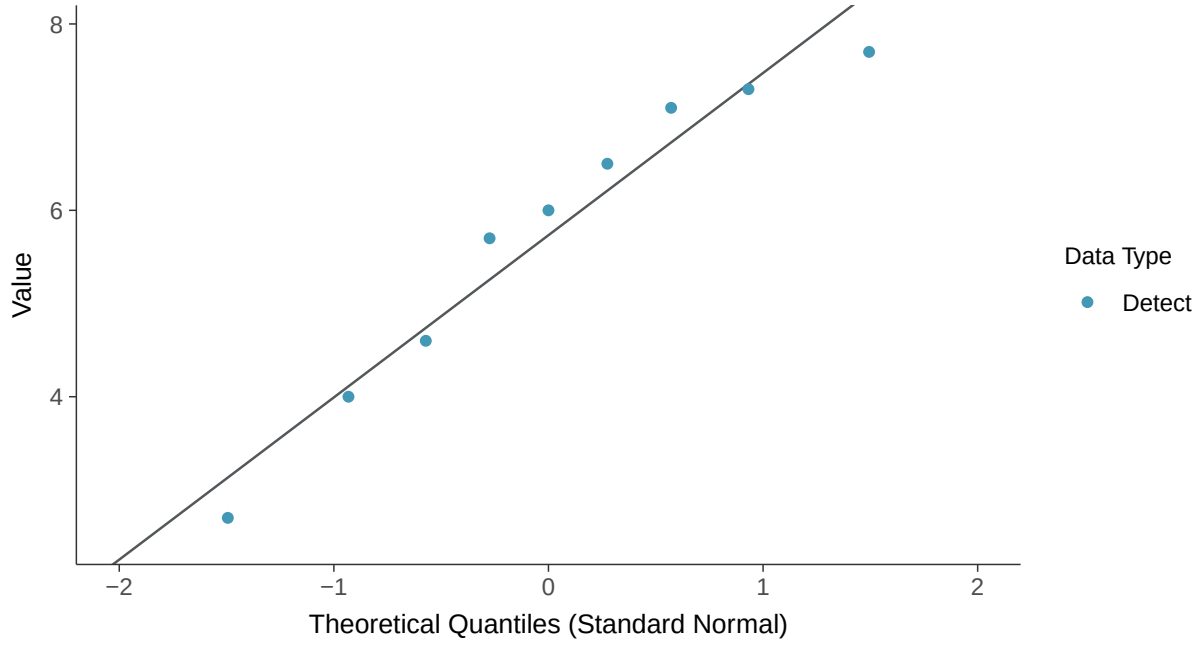
Boxplot by Season

Fluoride (App IV), MW-10 (mg/L)



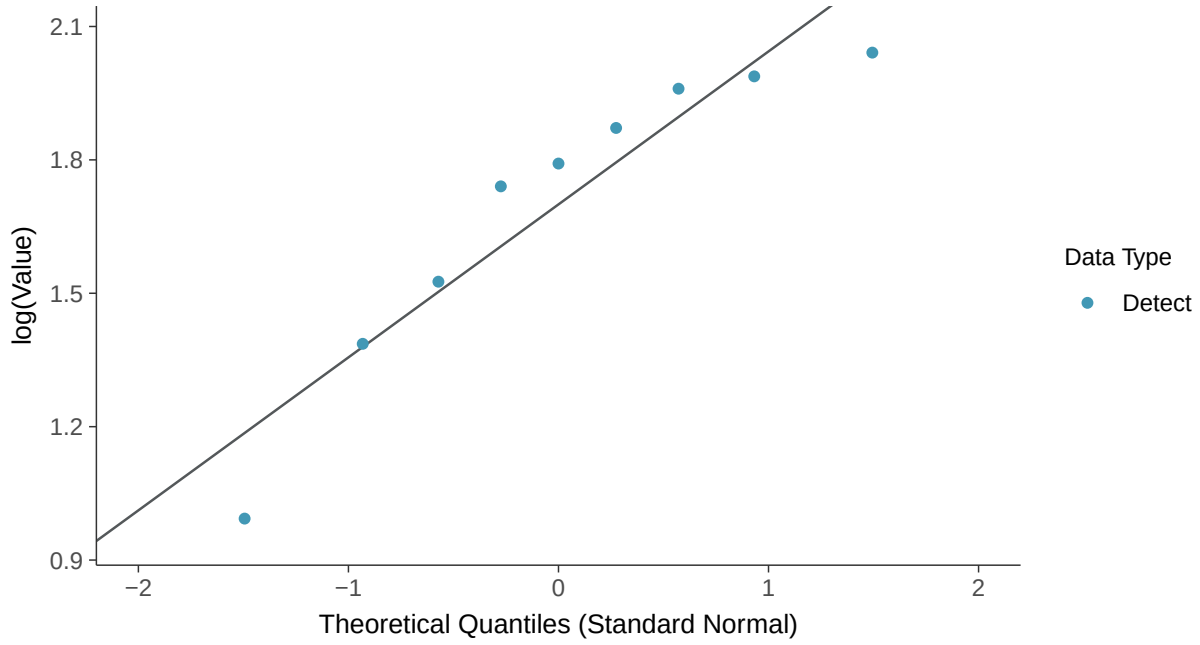
Normal Q-Q plot

Fluoride (App IV), MW-10 (mg/L)



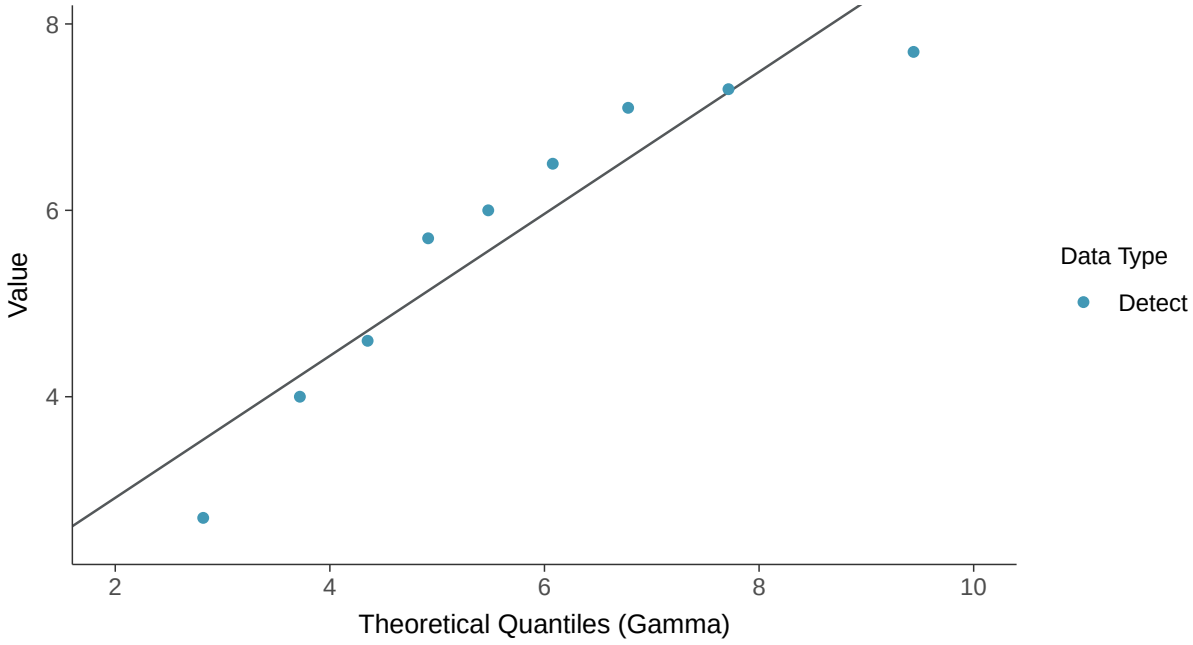
Lognormal Q-Q plot

Fluoride (App IV), MW-10 (mg/L)



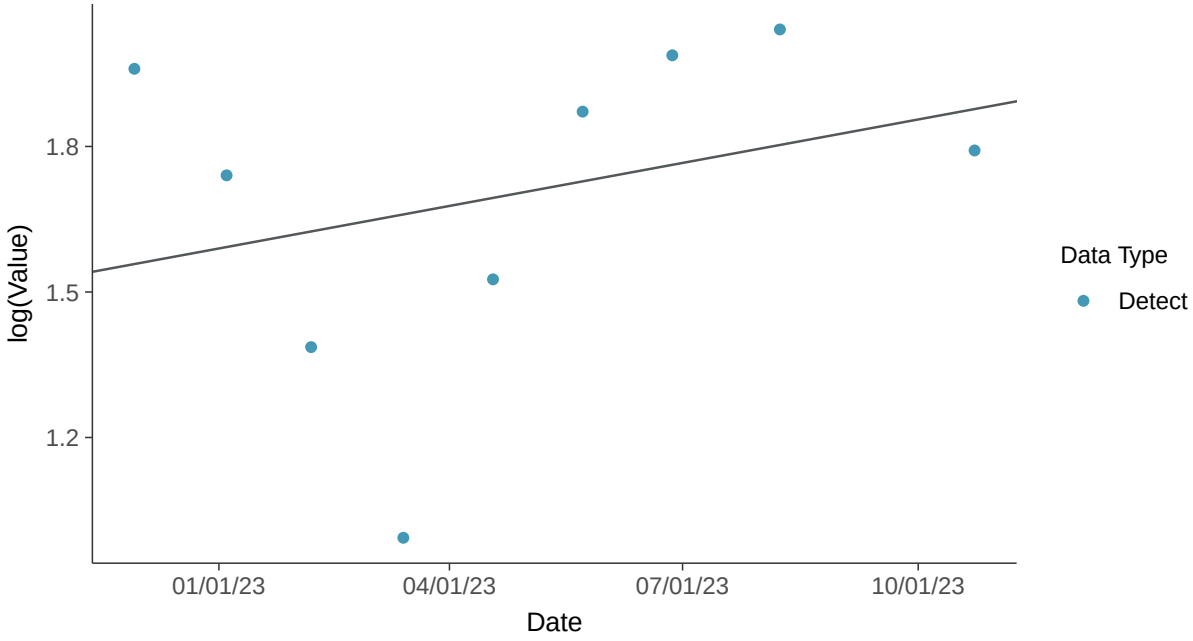
Gamma Q-Q plot

Fluoride (App IV), MW-10 (mg/L)



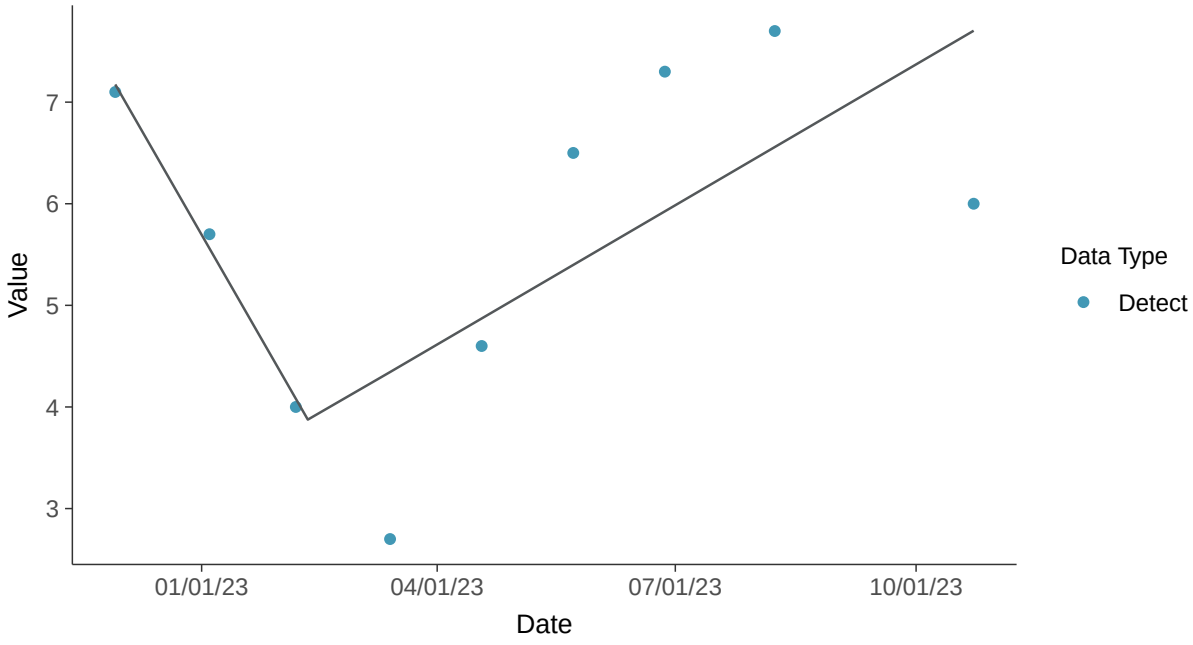
Trend Regression: Lognormal MLE

Fluoride (App IV), MW-10 (mg/L)



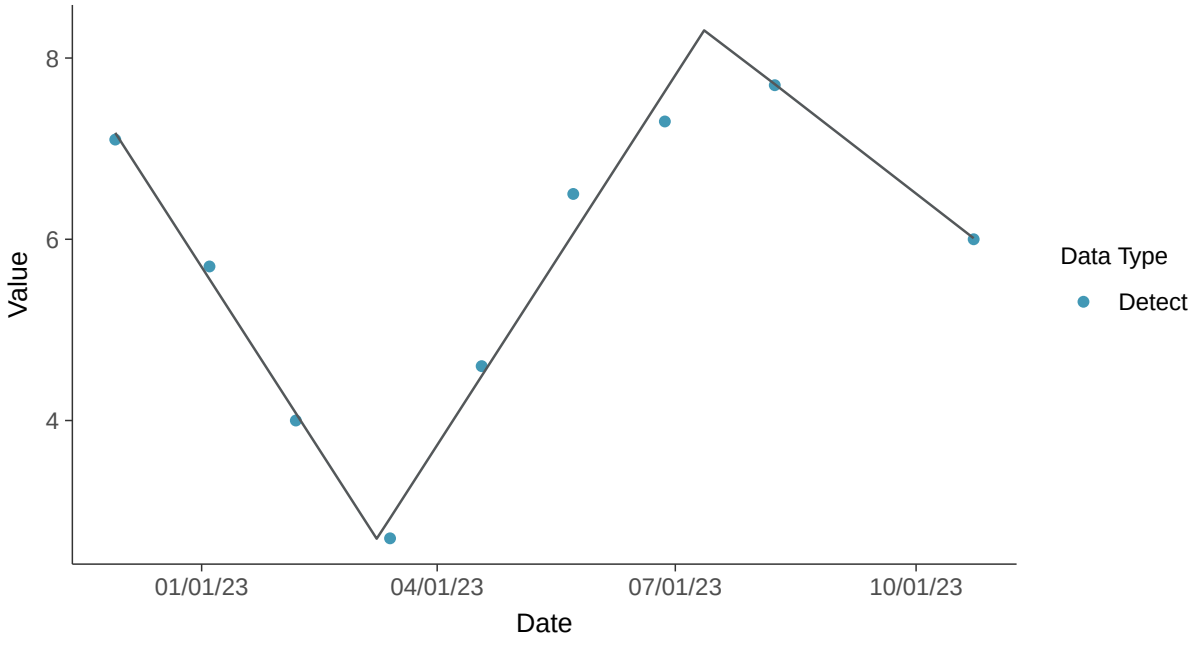
Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-10 (mg/L)



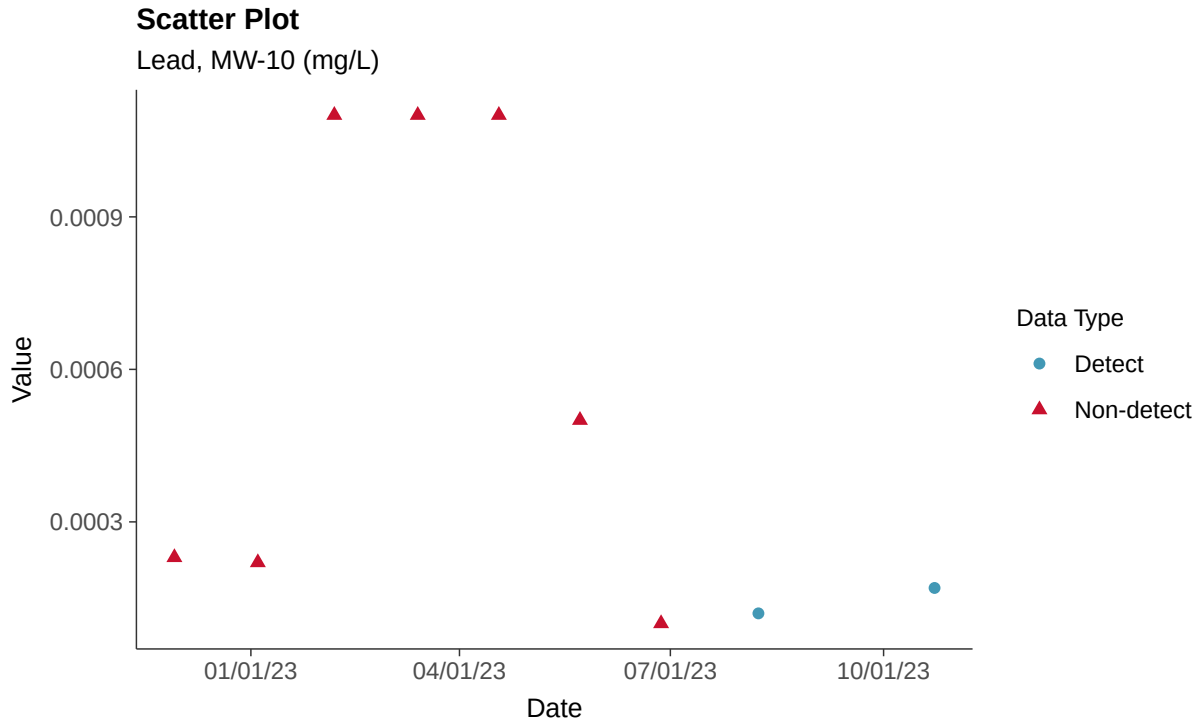
Trend Regression: Piecewise Linear-Linear-Linear

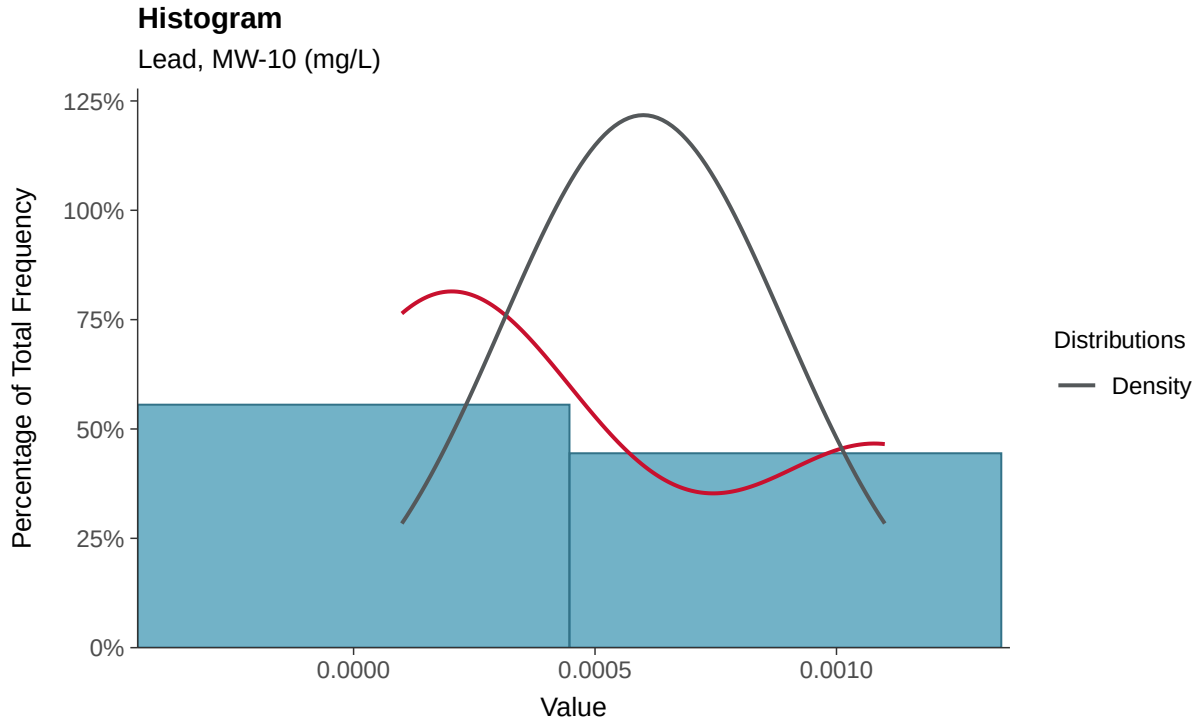
Fluoride (App IV), MW-10 (mg/L)



Appendix IV: Lead, MW-10

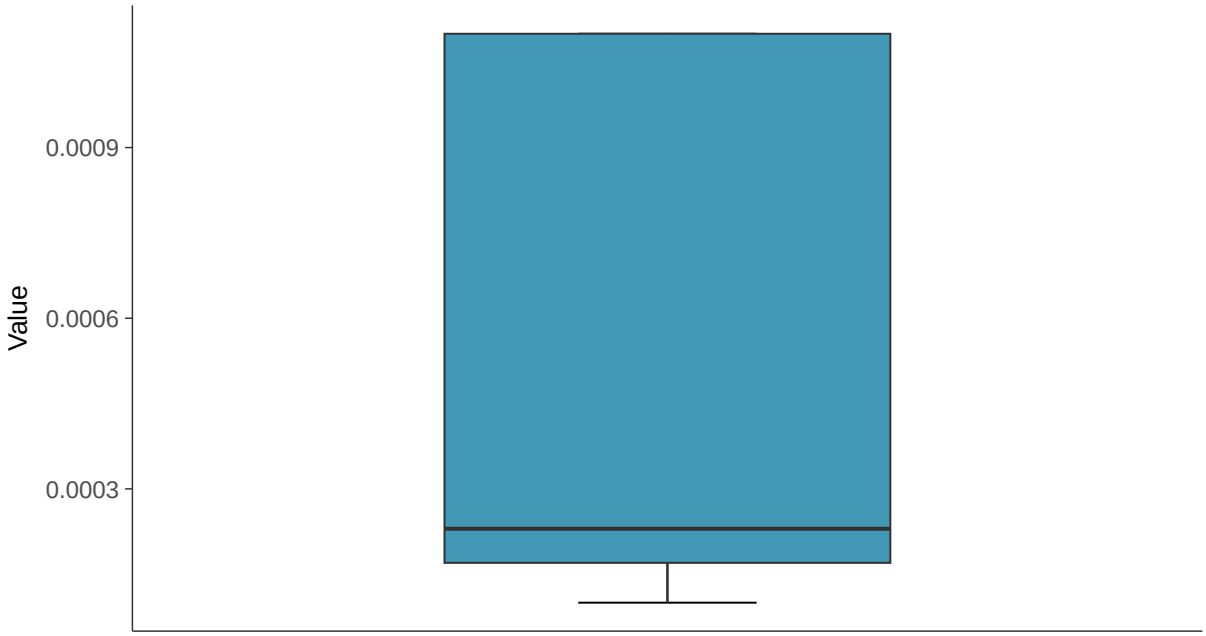
ID: 2_19_5_115





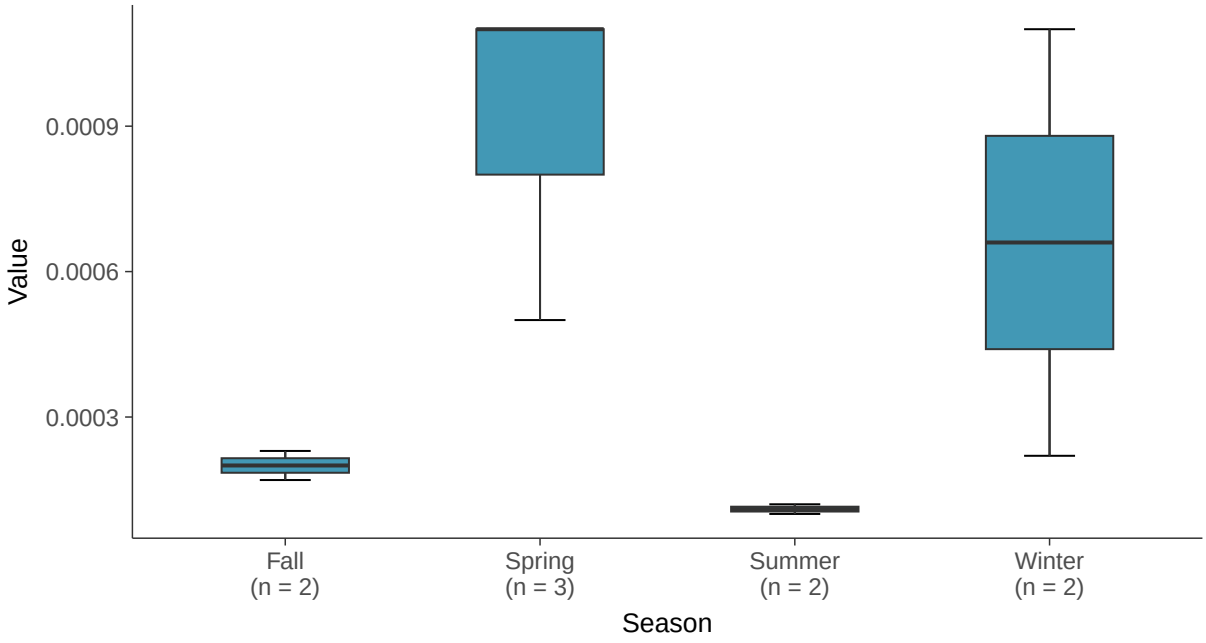
Boxplot

Lead, MW-10 (mg/L)



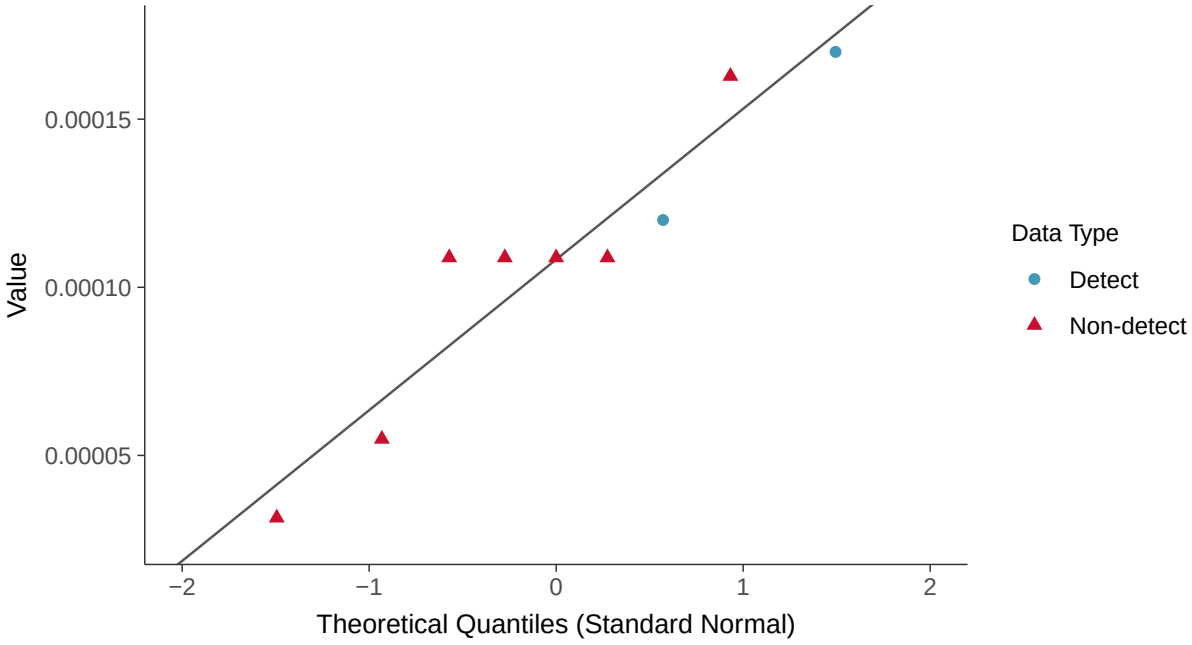
Boxplot by Season

Lead, MW-10 (mg/L)



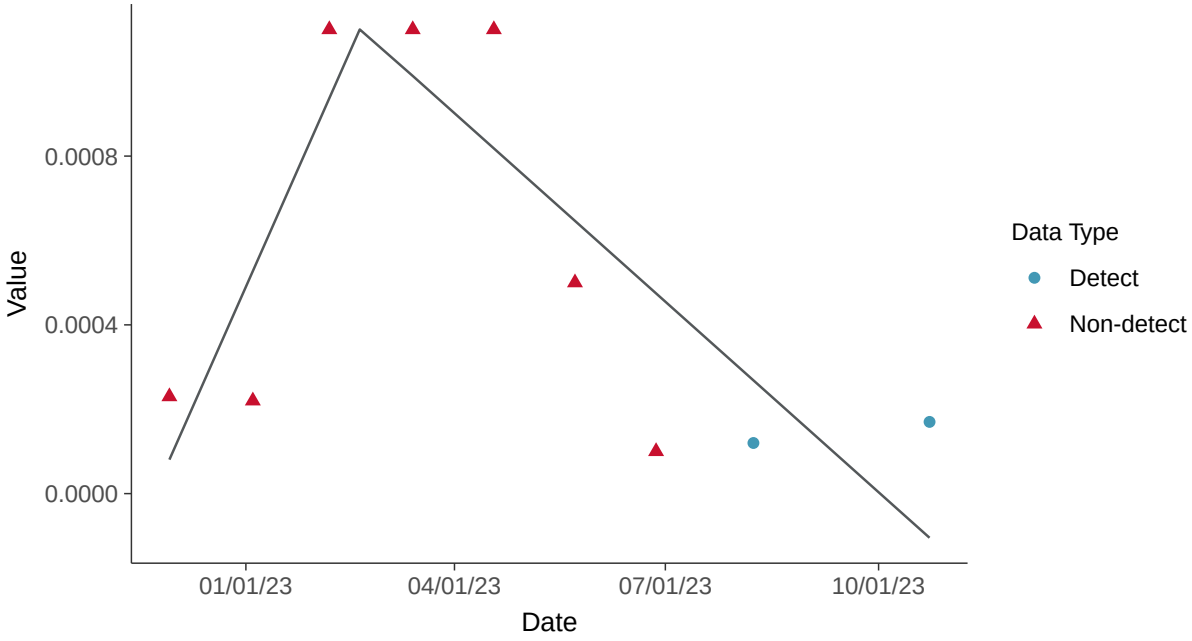
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-10 (mg/L)



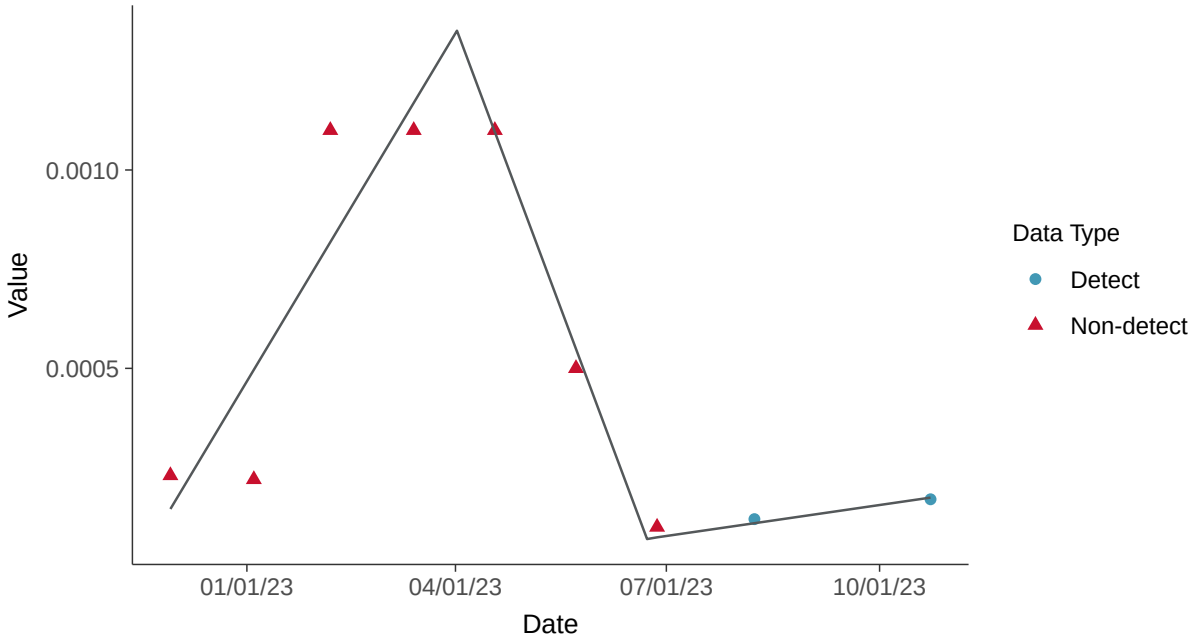
Trend Regression: Piecewise Linear-Linear

Lead, MW-10 (mg/L)



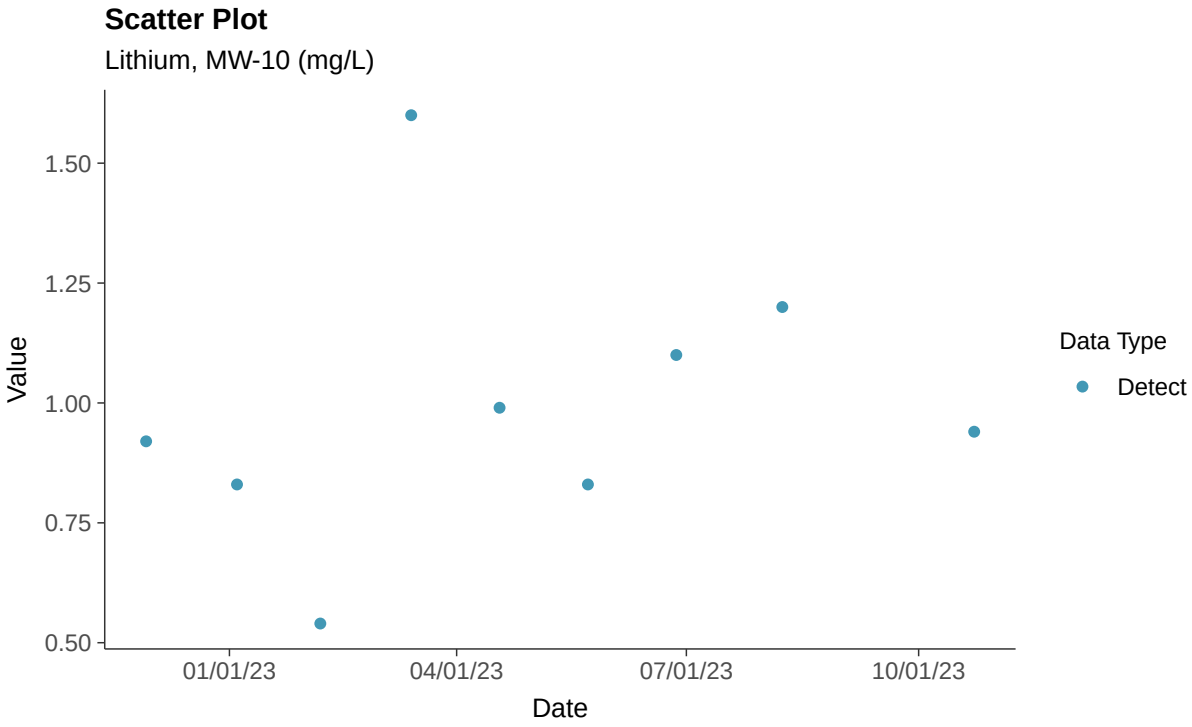
Trend Regression: Piecewise Linear-Linear-Linear

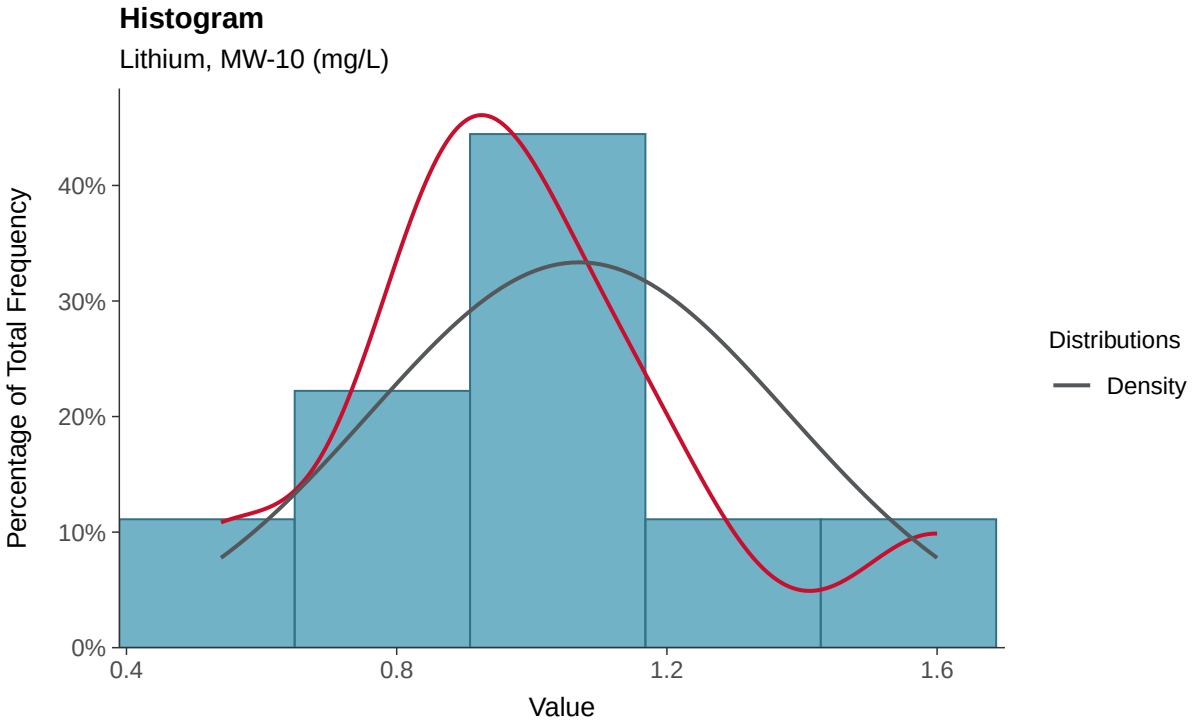
Lead, MW-10 (mg/L)



Appendix IV: Lithium, MW-10

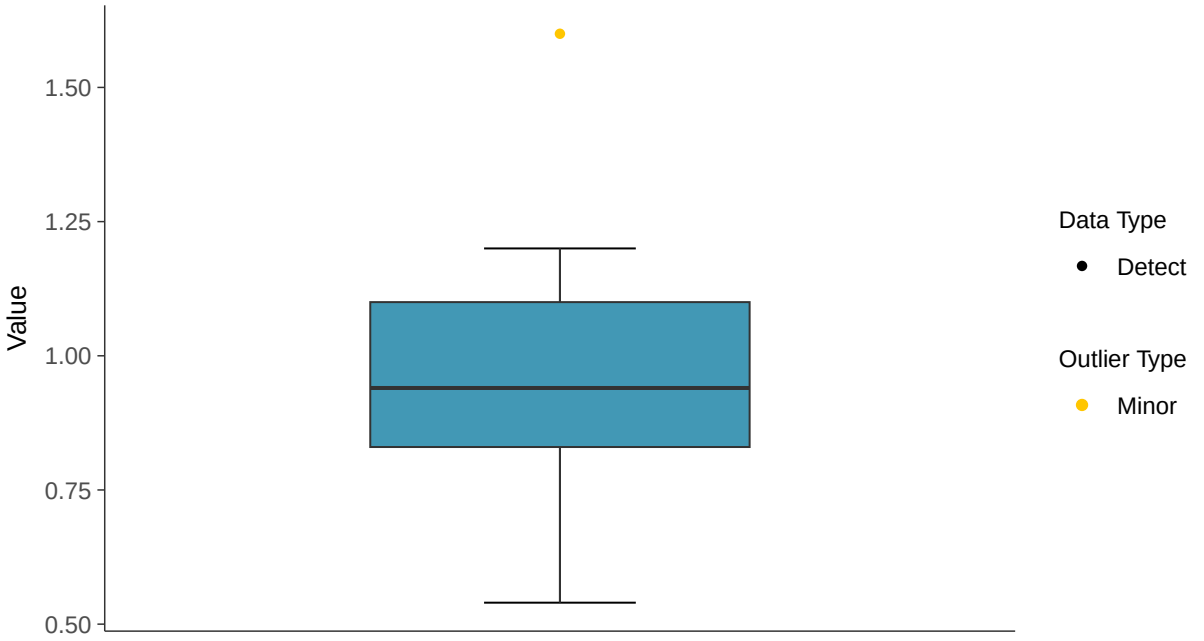
ID: 2_19_5_116





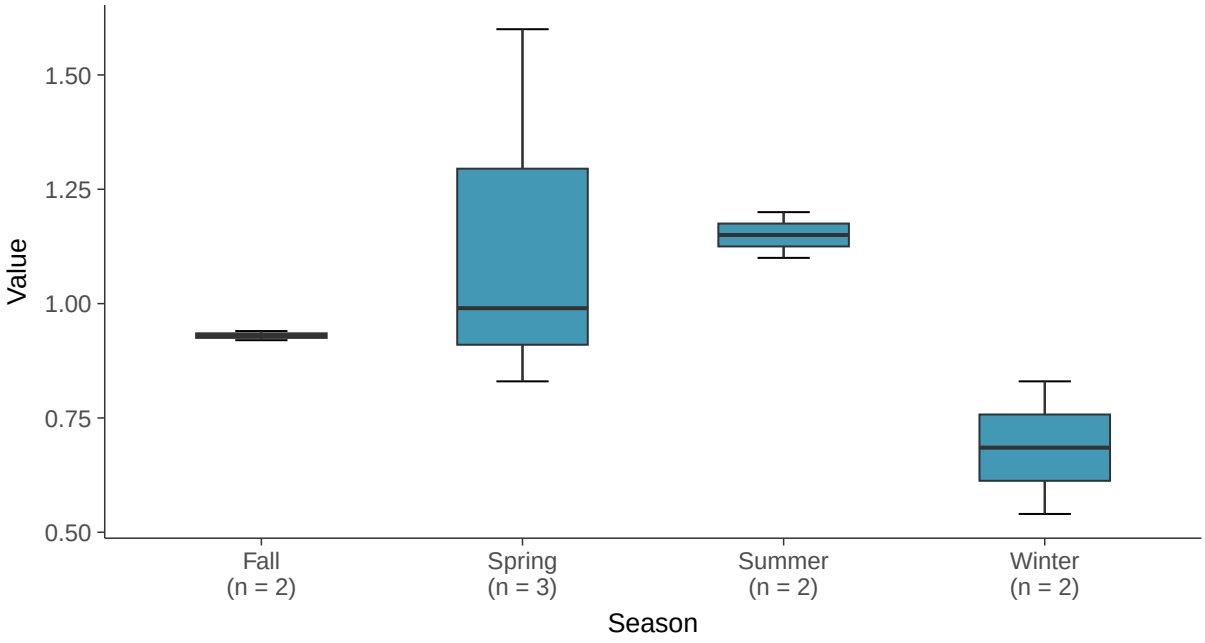
Boxplot

Lithium, MW-10 (mg/L)



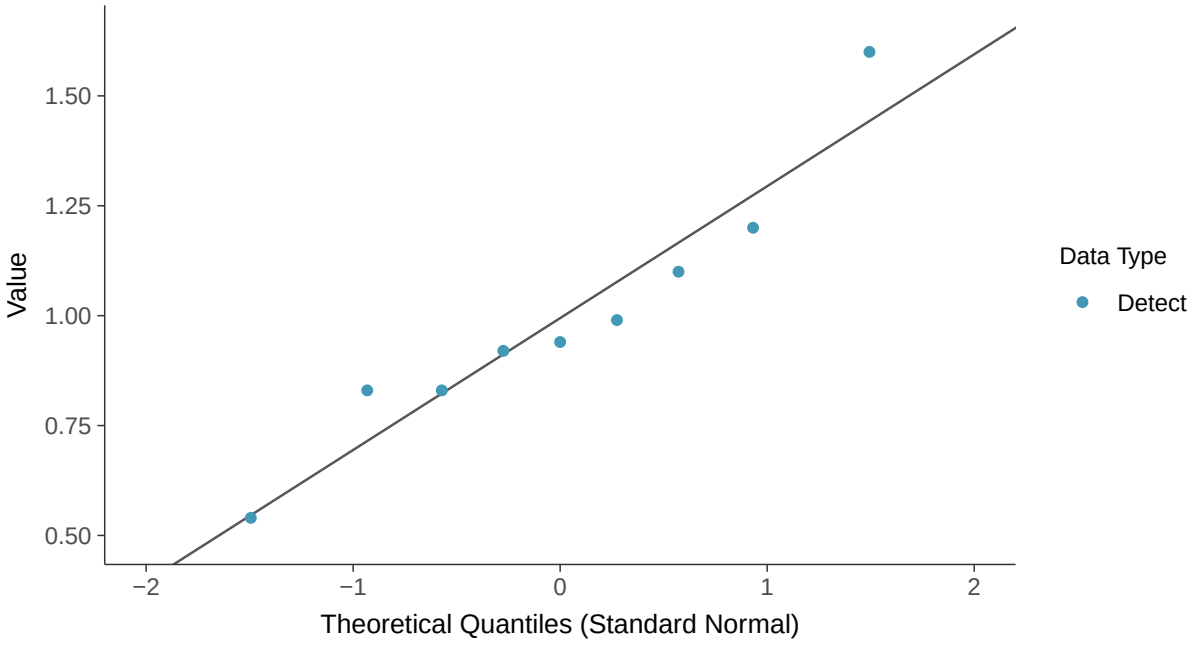
Boxplot by Season

Lithium, MW-10 (mg/L)



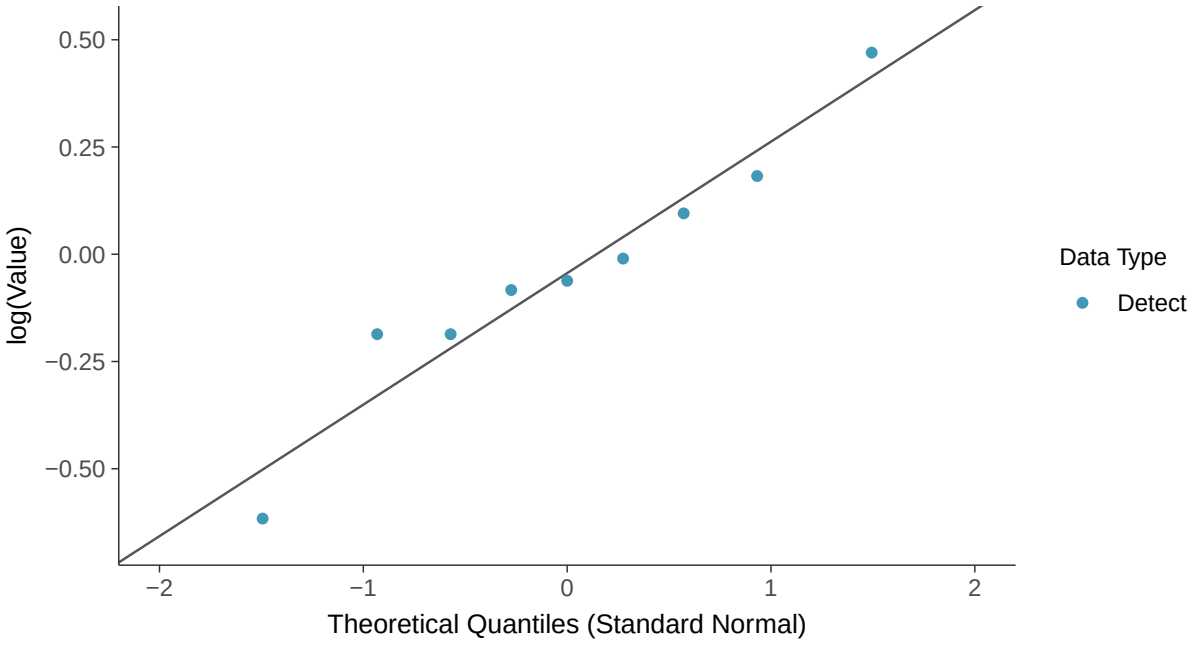
Normal Q-Q plot

Lithium, MW-10 (mg/L)



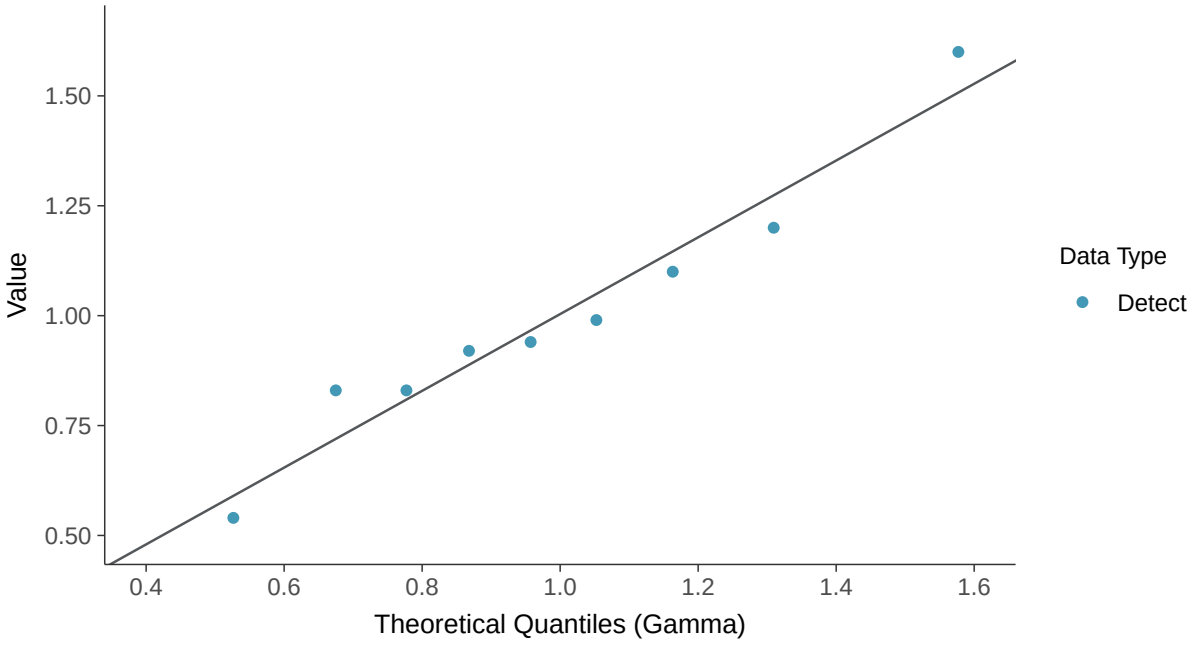
Lognormal Q-Q plot

Lithium, MW-10 (mg/L)



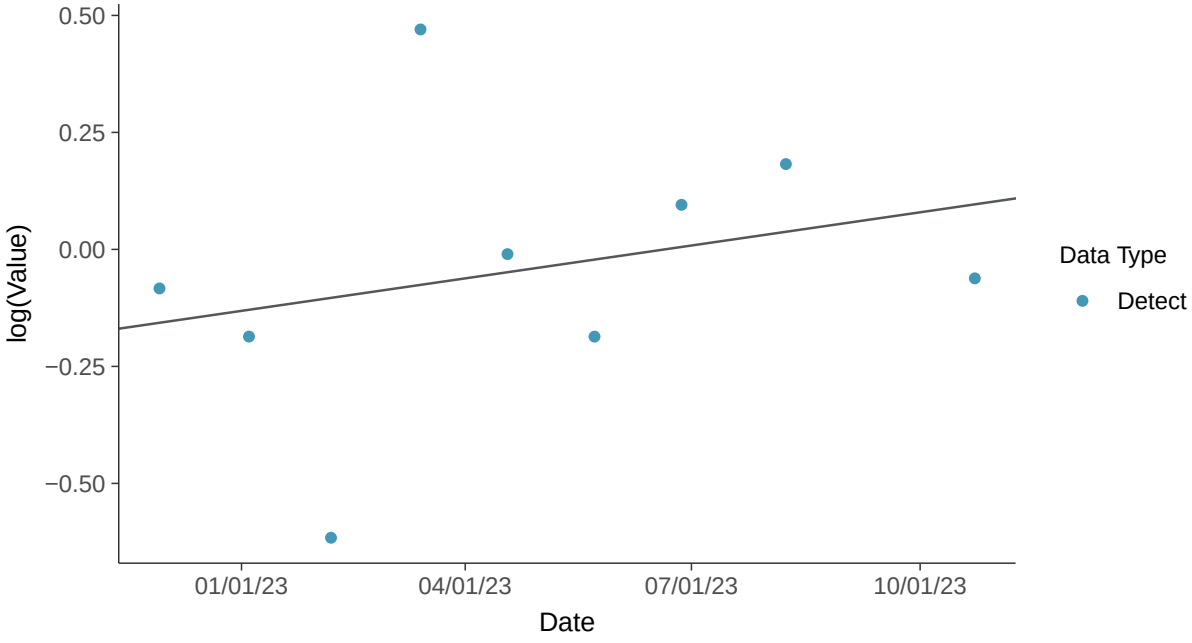
Gamma Q-Q plot

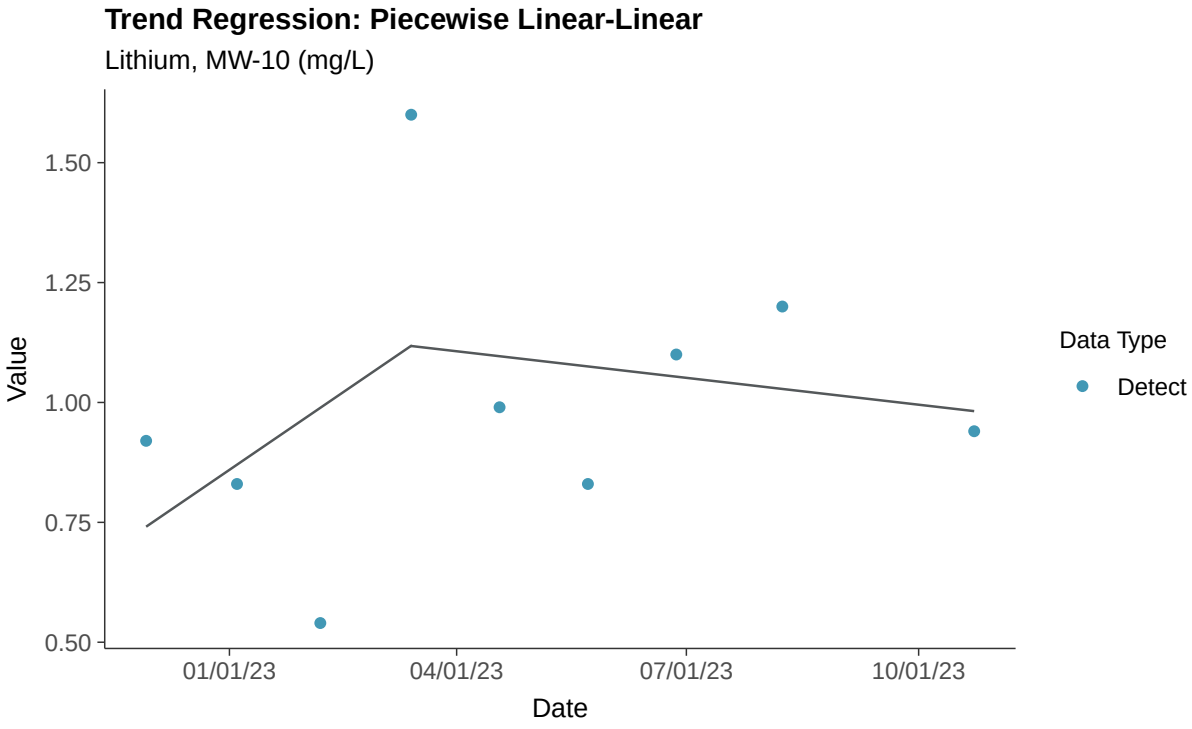
Lithium, MW-10 (mg/L)



Trend Regression: Lognormal MLE

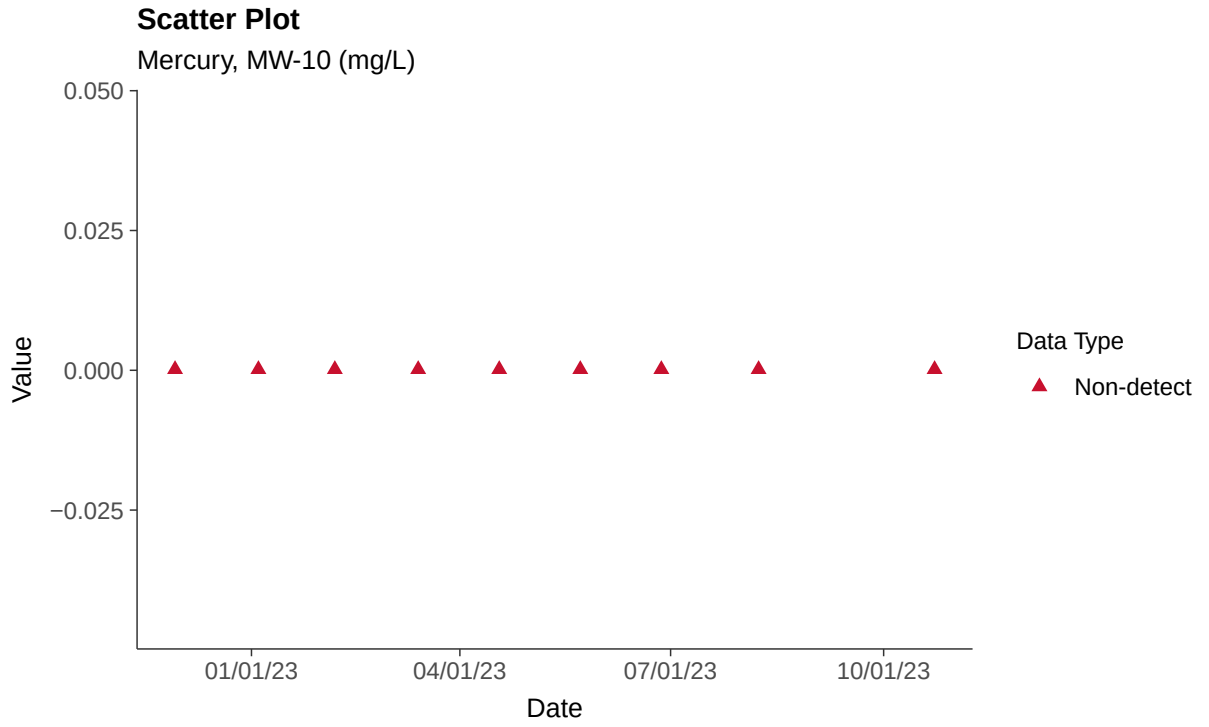
Lithium, MW-10 (mg/L)

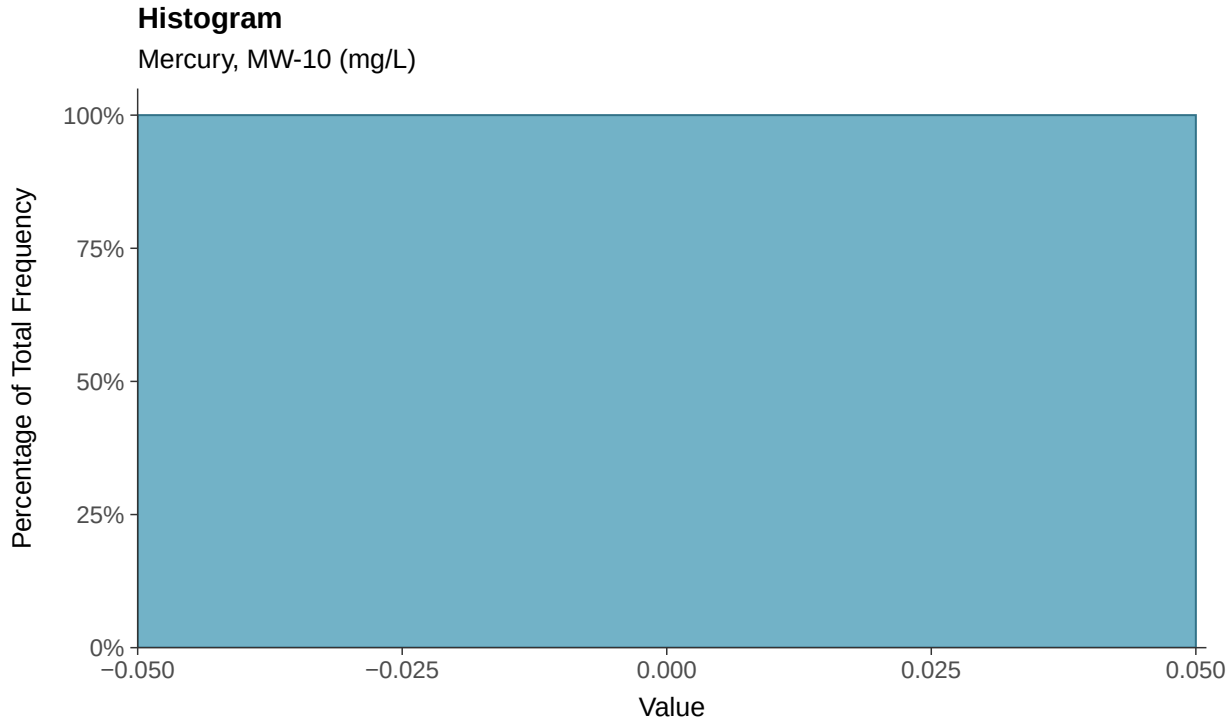



Trend Regression: Piecewise Linear-Linear
Lithium, MW-10 (mg/L)
Value
1.50
1.25
1.00
0.75
0.50
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect

Appendix IV: Mercury, MW-10

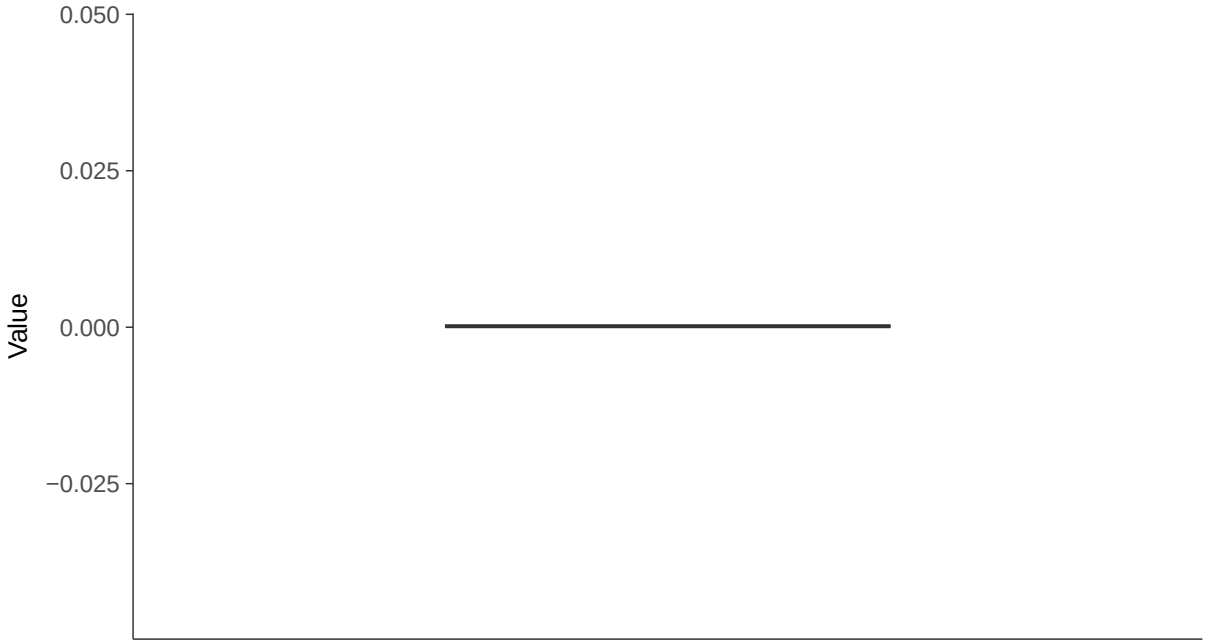
ID: 2_19_5_117





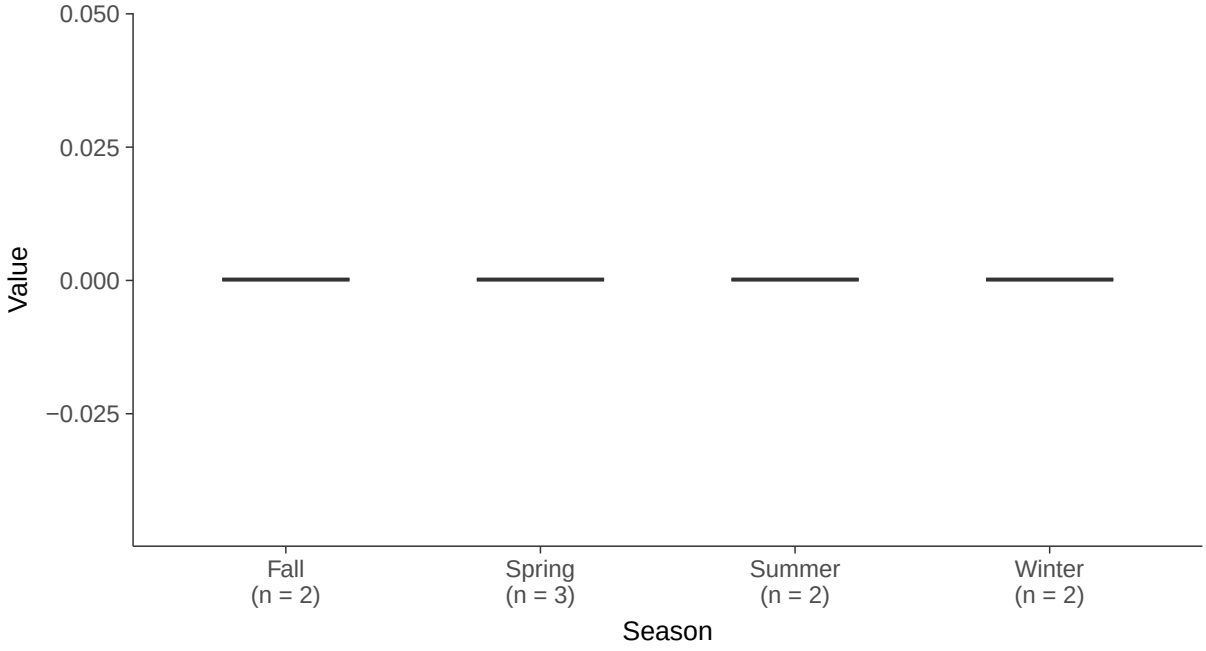
Boxplot

Mercury, MW-10 (mg/L)



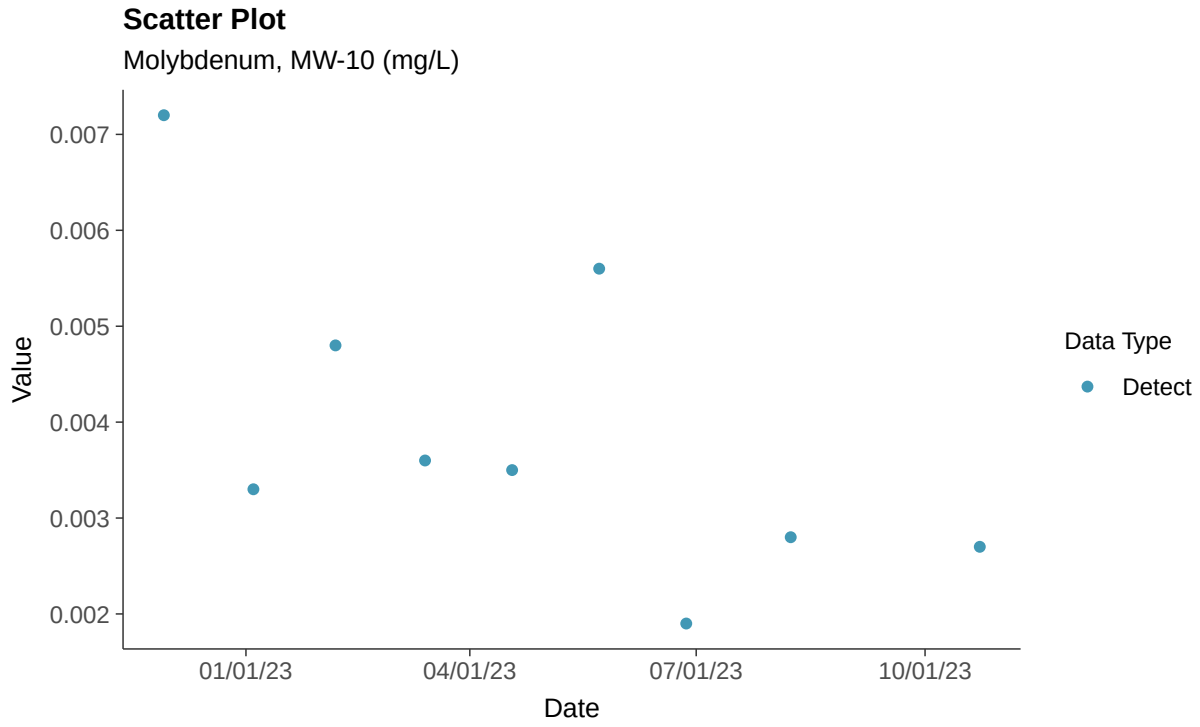
Boxplot by Season

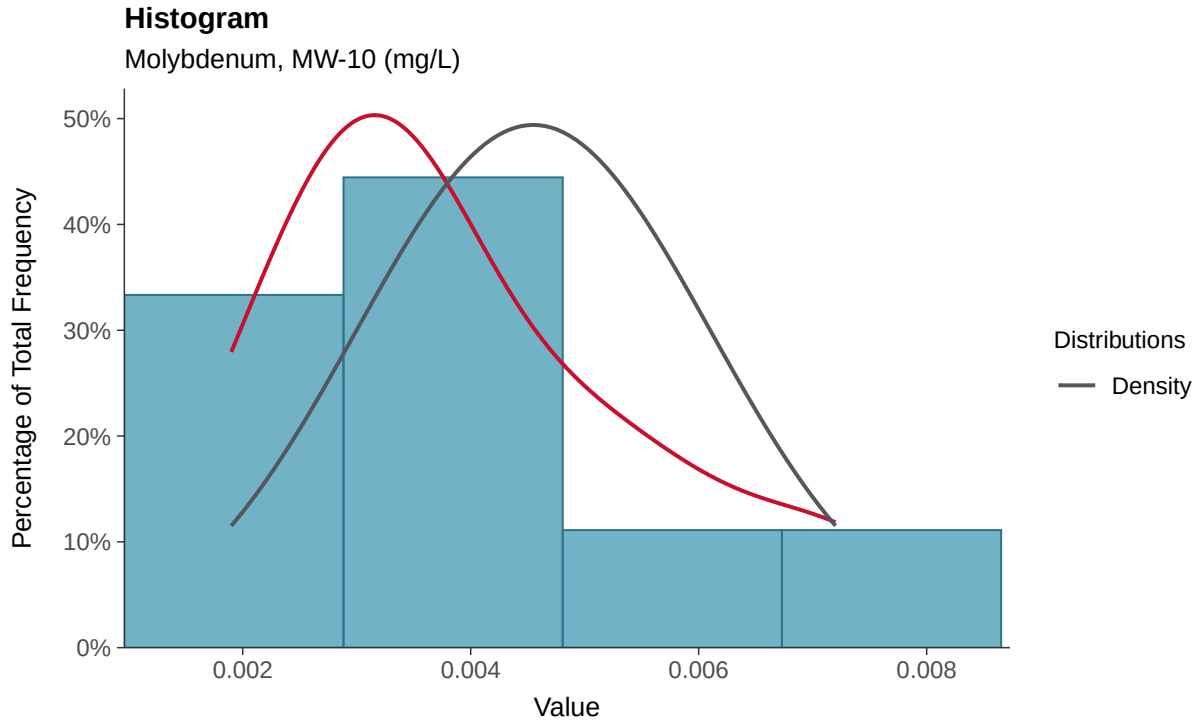
Mercury, MW-10 (mg/L)



Appendix IV: Molybdenum, MW-10

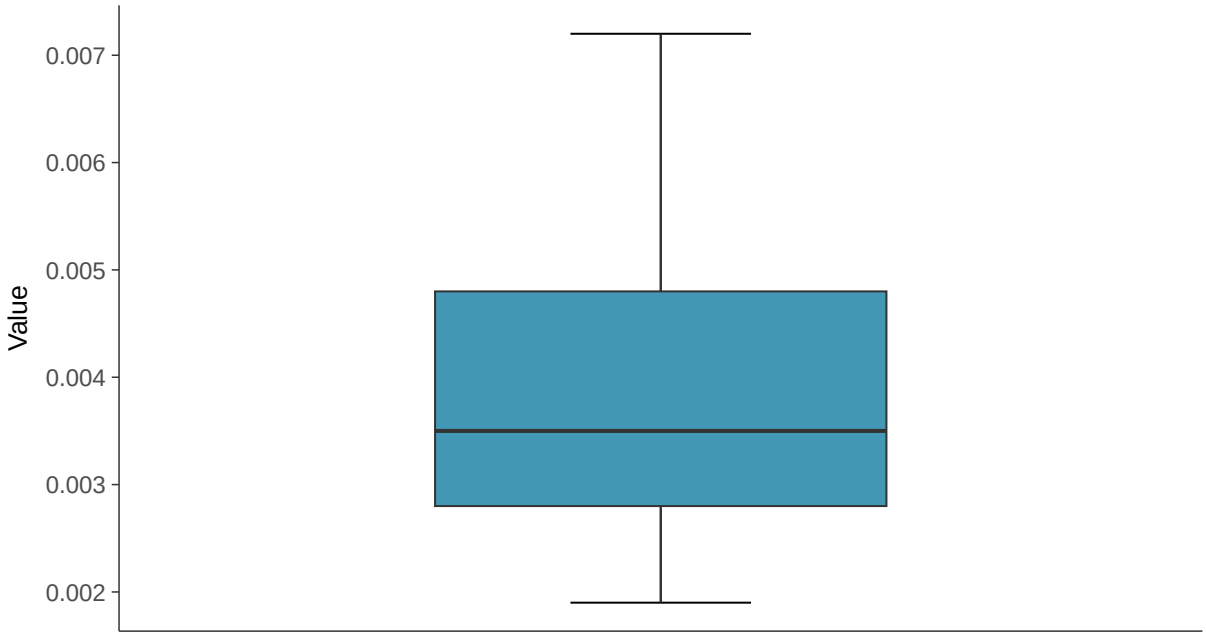
ID: 2_19_5_118





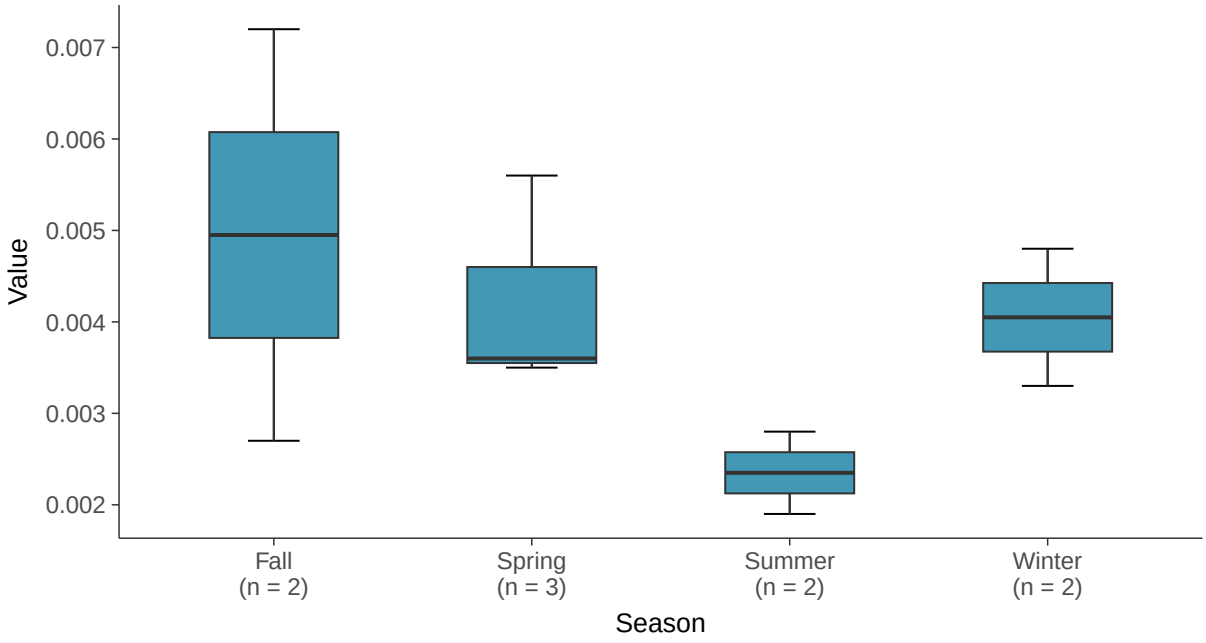
Boxplot

Molybdenum, MW-10 (mg/L)



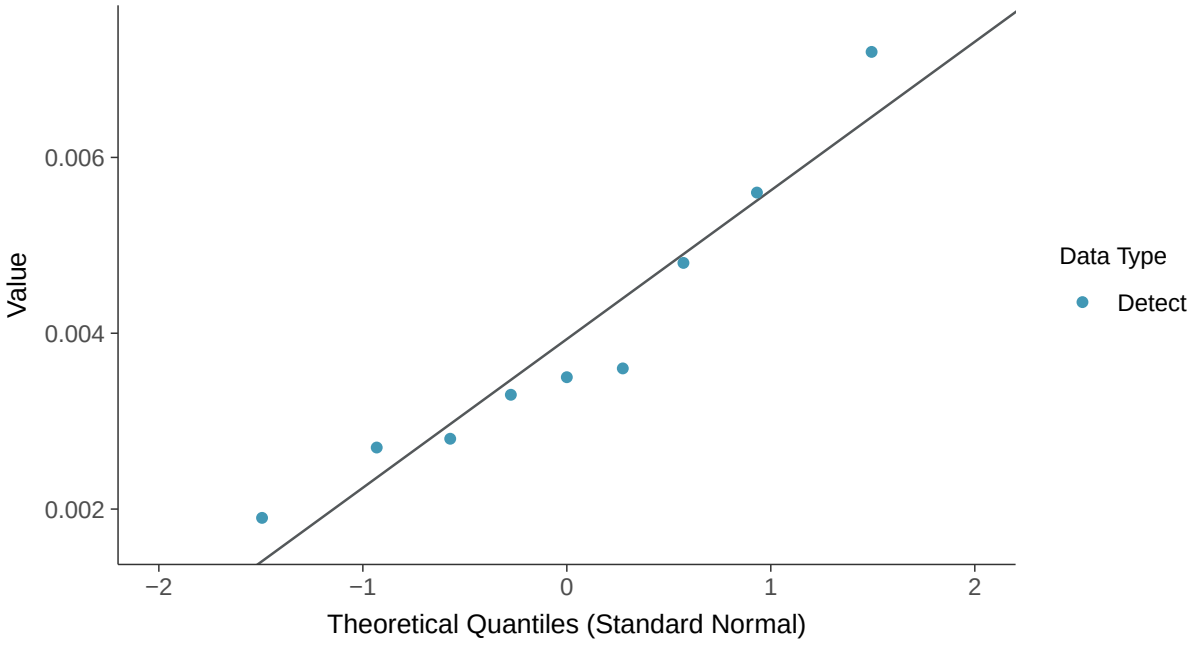
Boxplot by Season

Molybdenum, MW-10 (mg/L)



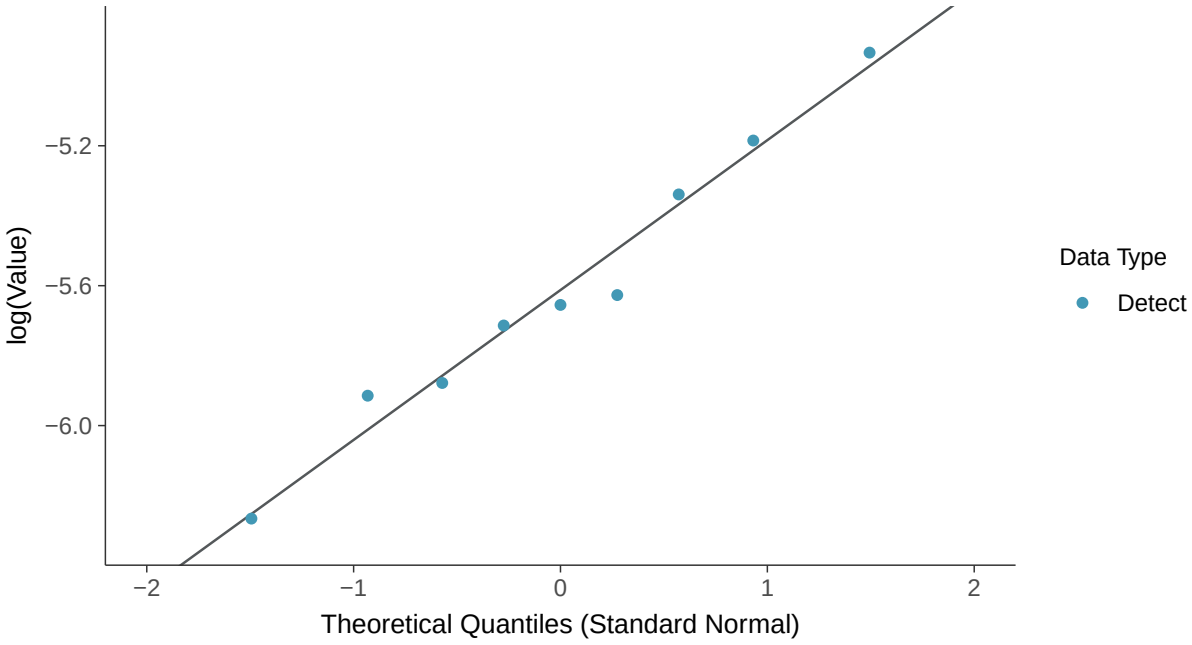
Normal Q-Q plot

Molybdenum, MW-10 (mg/L)



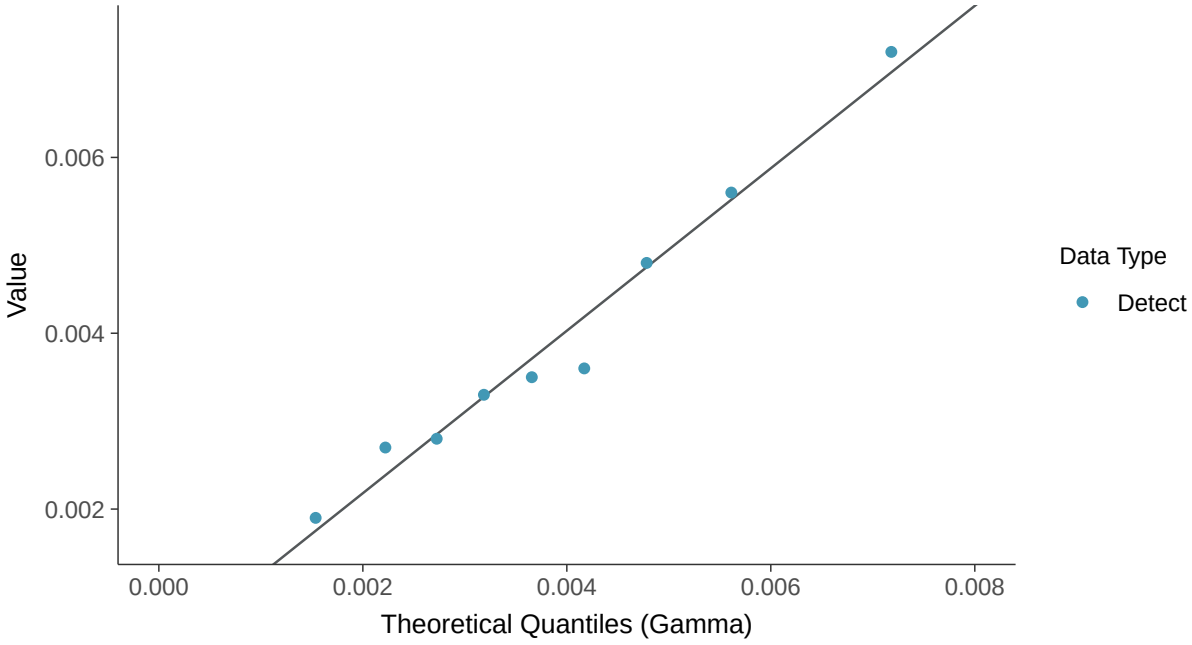
Lognormal Q-Q plot

Molybdenum, MW-10 (mg/L)



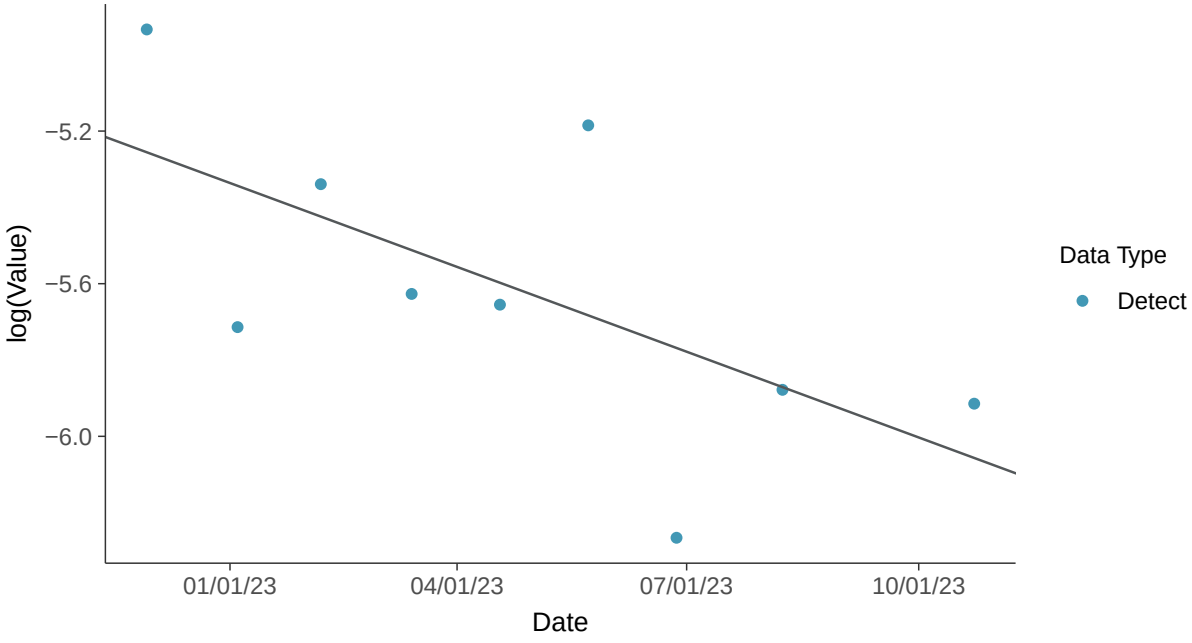
Gamma Q-Q plot

Molybdenum, MW-10 (mg/L)



Trend Regression: Lognormal MLE

Molybdenum, MW-10 (mg/L)

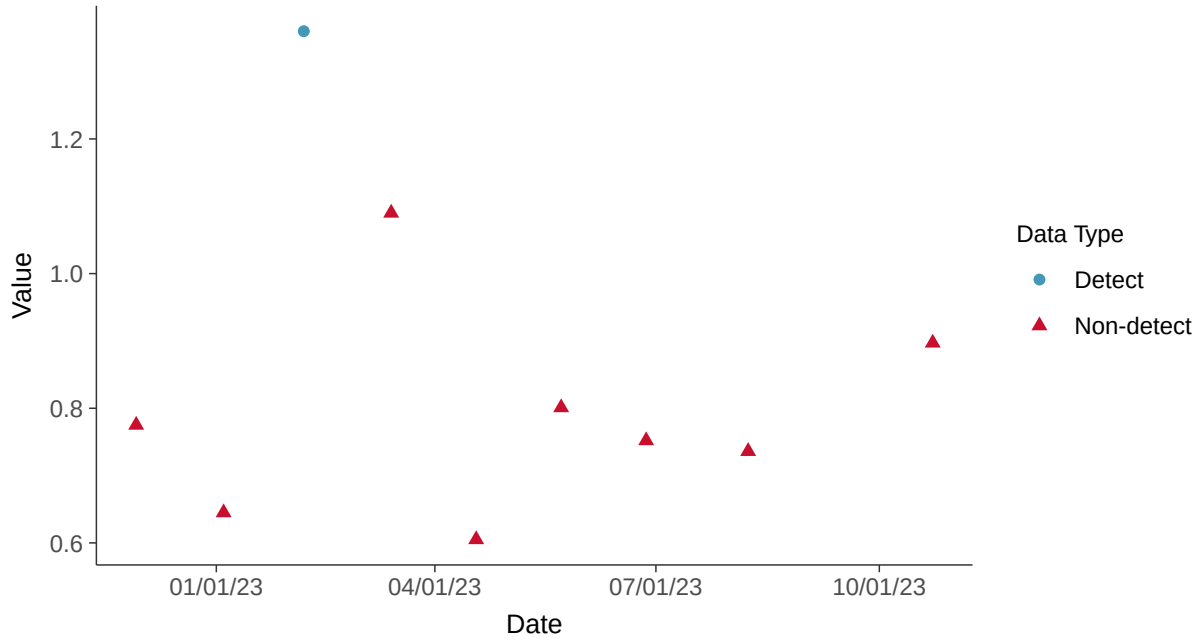


Appendix IV: Radium 226 and 228, MW-10

ID: 2_19_5_121

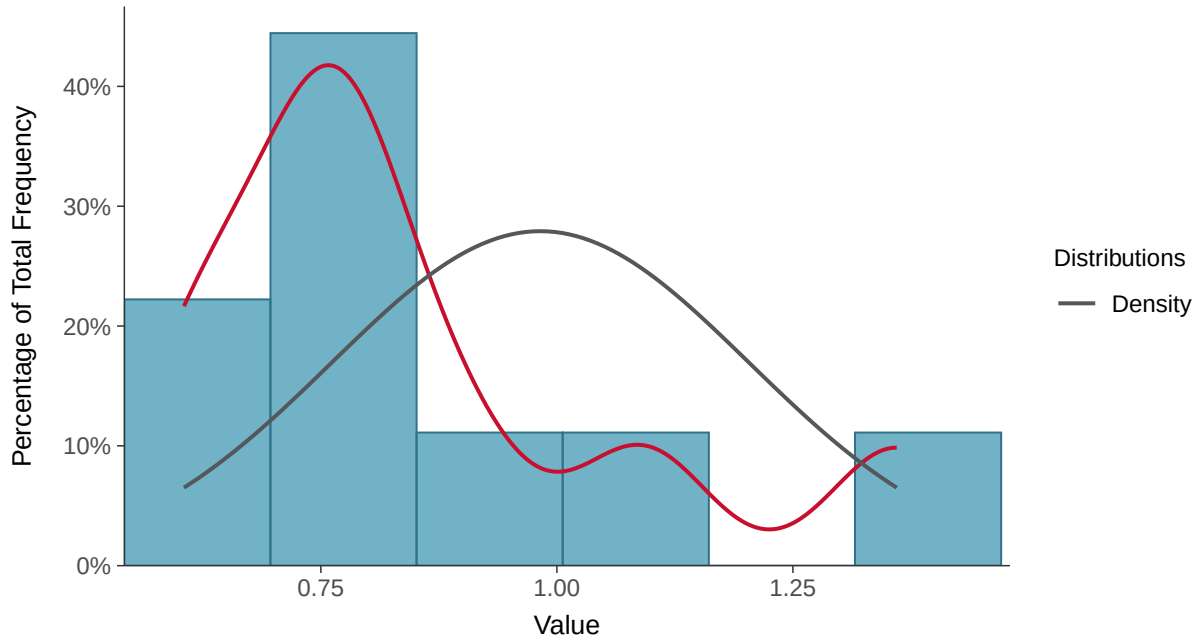
Scatter Plot

Radium 226 and 228, MW-10 (pCi/L)



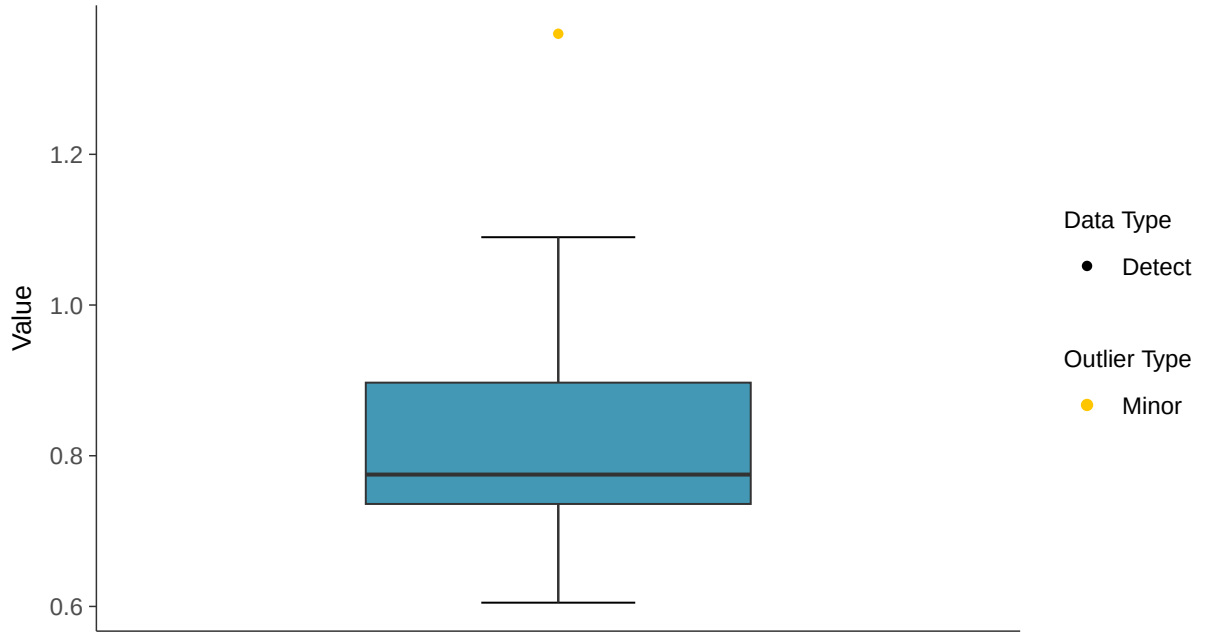
Histogram

Radium 226 and 228, MW-10 (pCi/L)



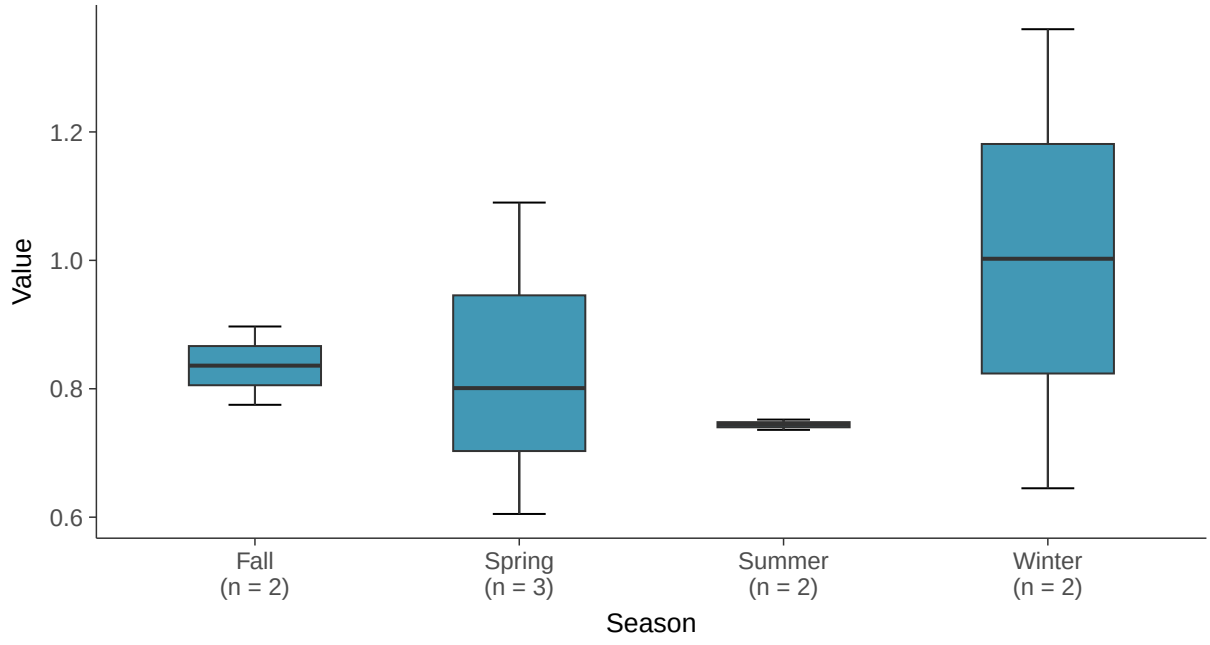
Boxplot

Radium 226 and 228, MW-10 (pCi/L)



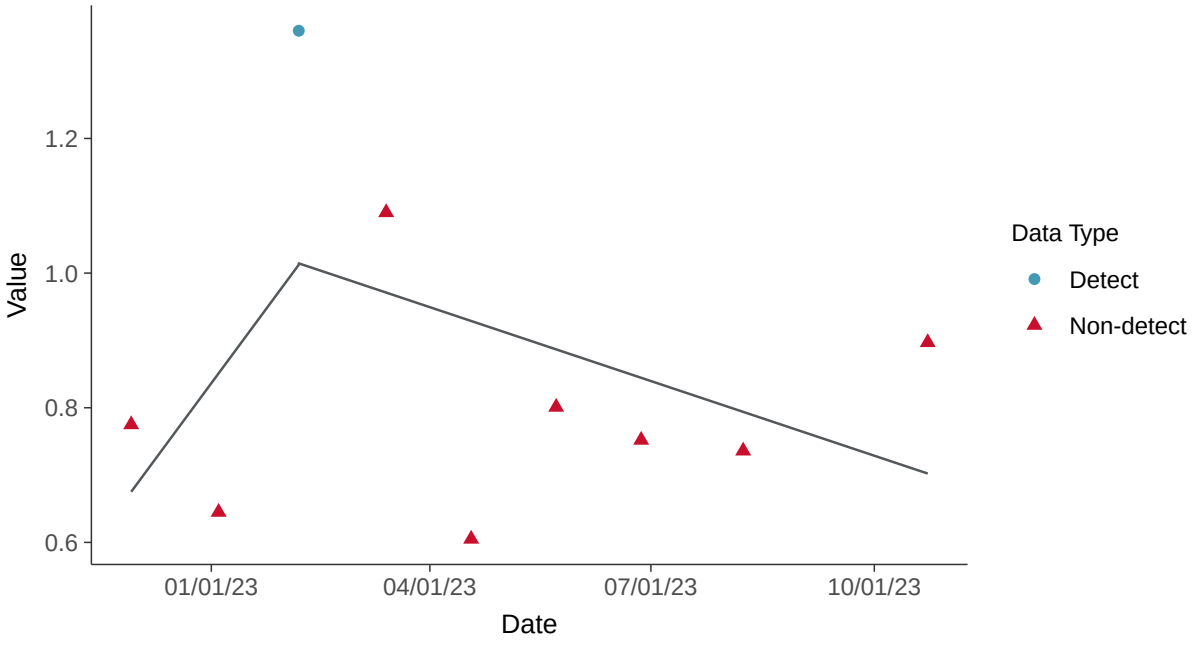
Boxplot by Season

Radium 226 and 228, MW-10 (pCi/L)



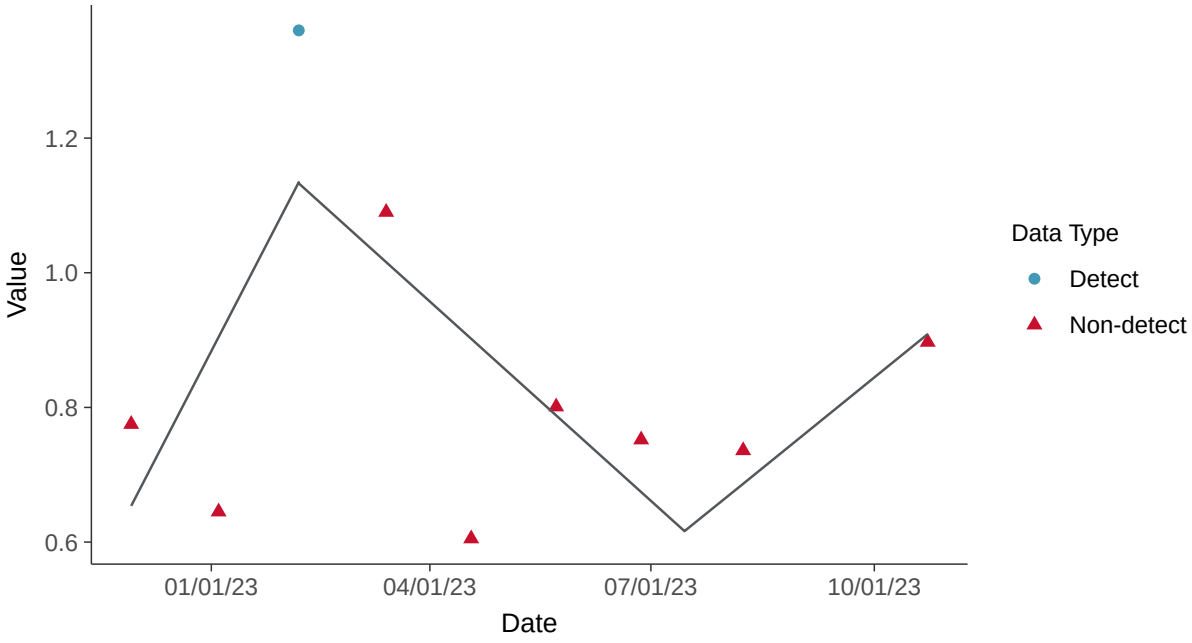
Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-10 (pCi/L)



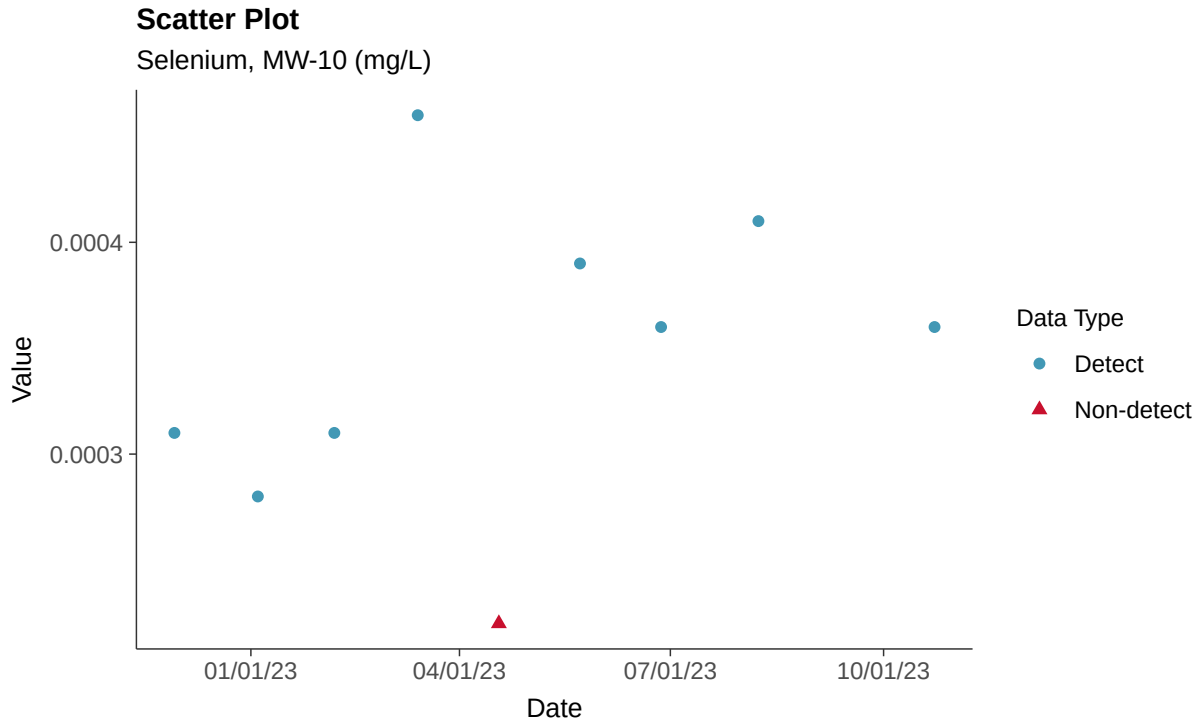
Trend Regression: Piecewise Linear-Linear-Linear

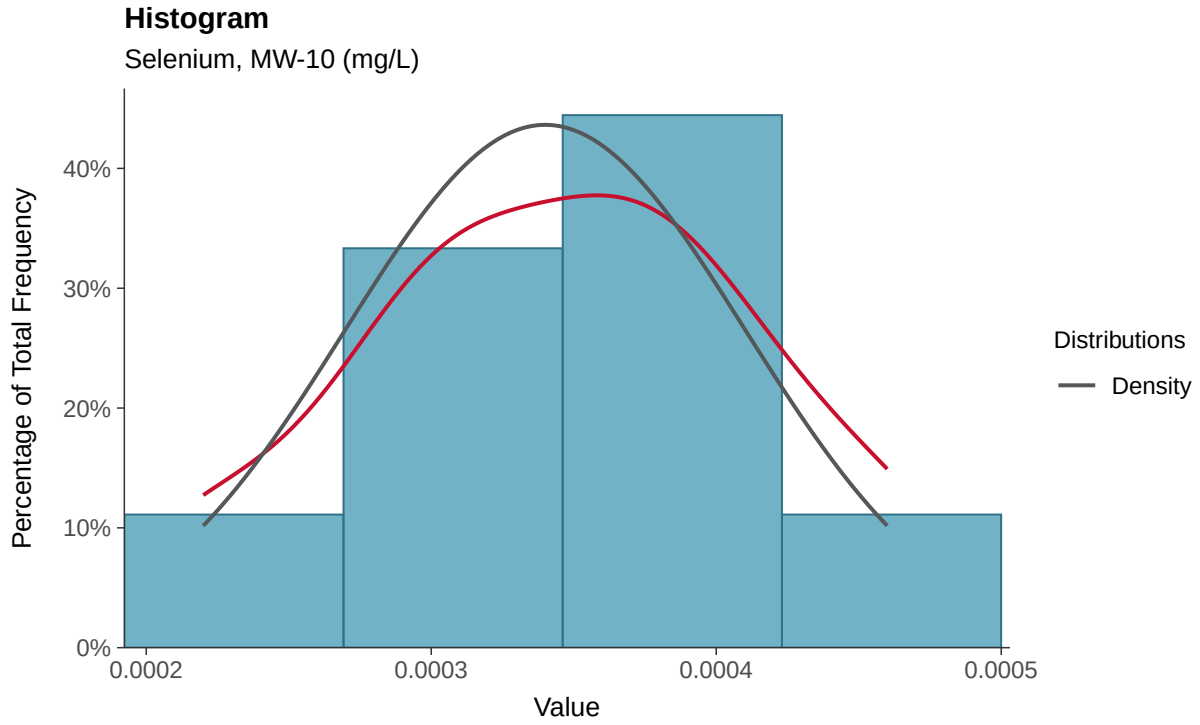
Radium 226 and 228, MW-10 (pCi/L)



Appendix IV: Selenium, MW-10

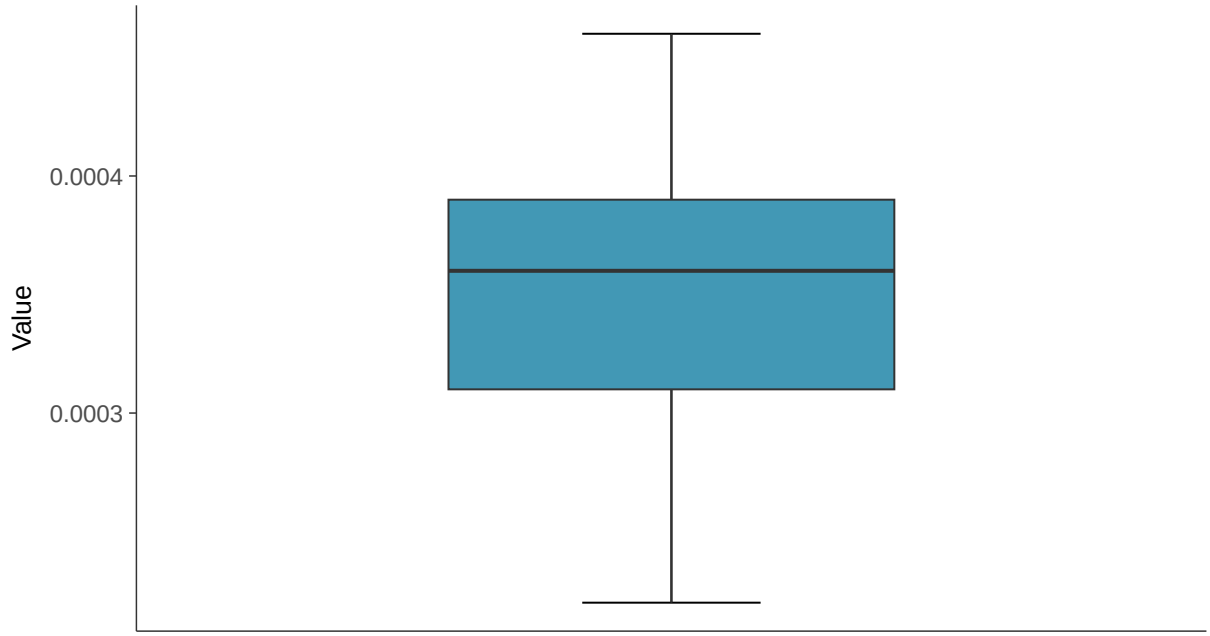
ID: 2_19_5_122





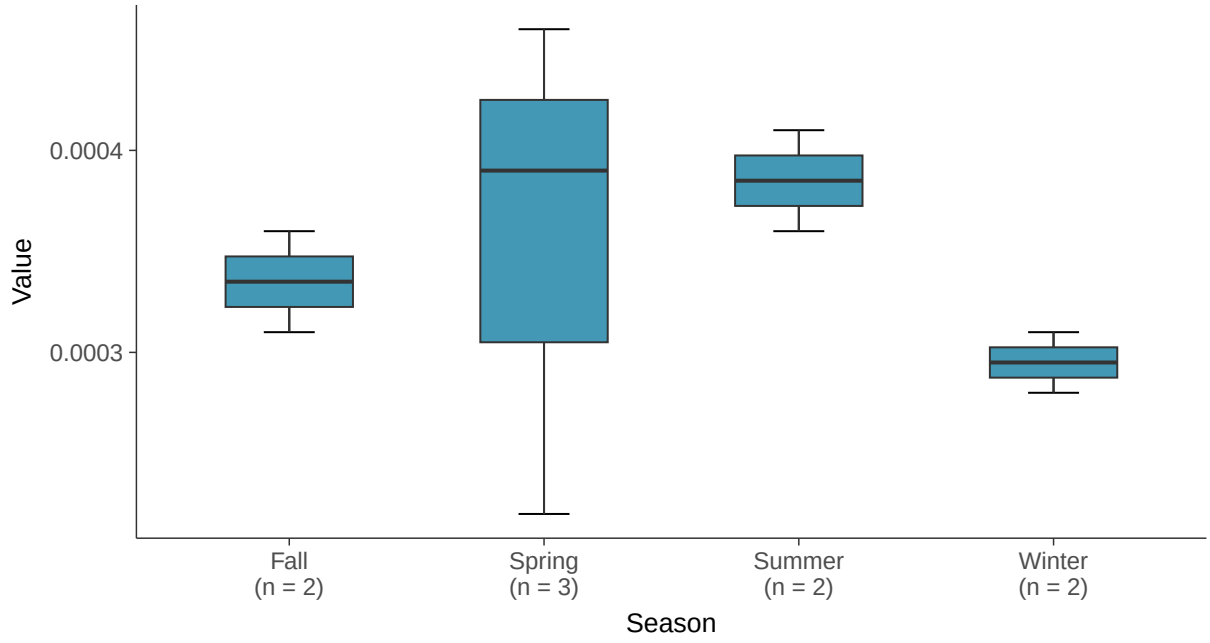
Boxplot

Selenium, MW-10 (mg/L)



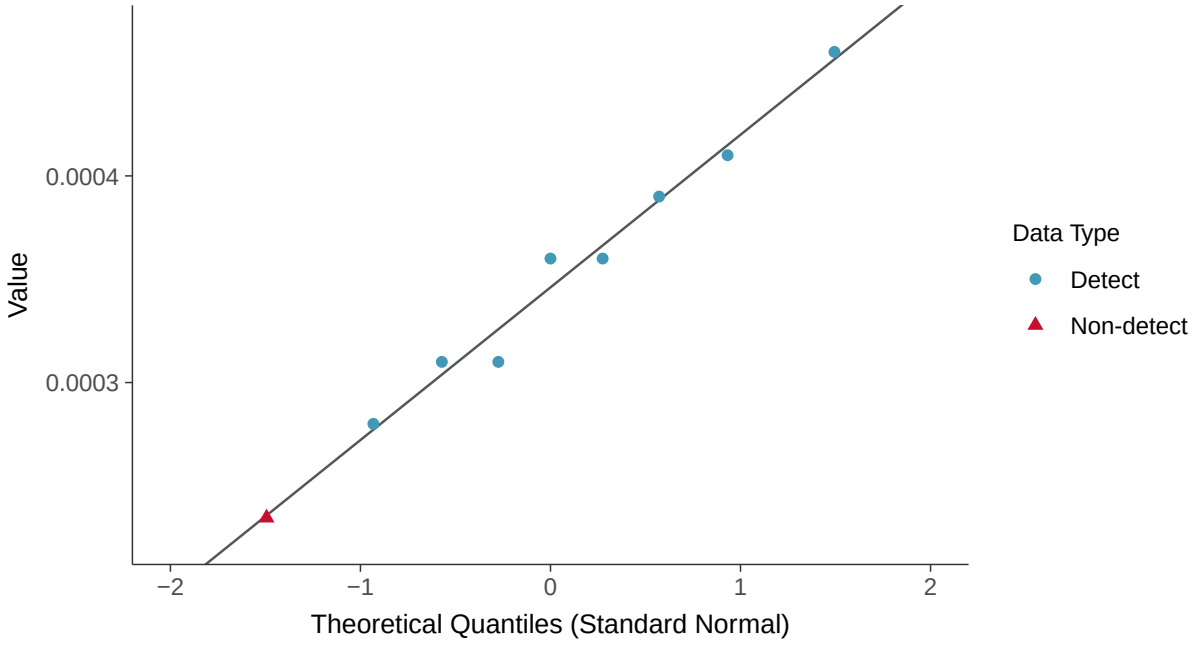
Boxplot by Season

Selenium, MW-10 (mg/L)



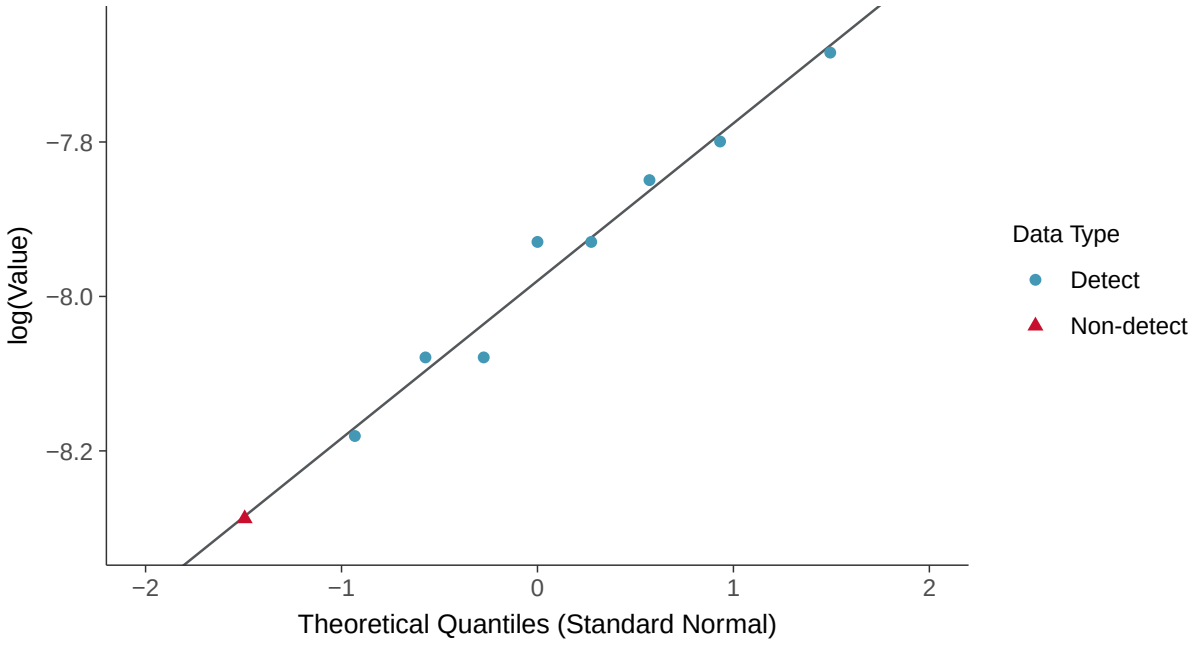
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-10 (mg/L)



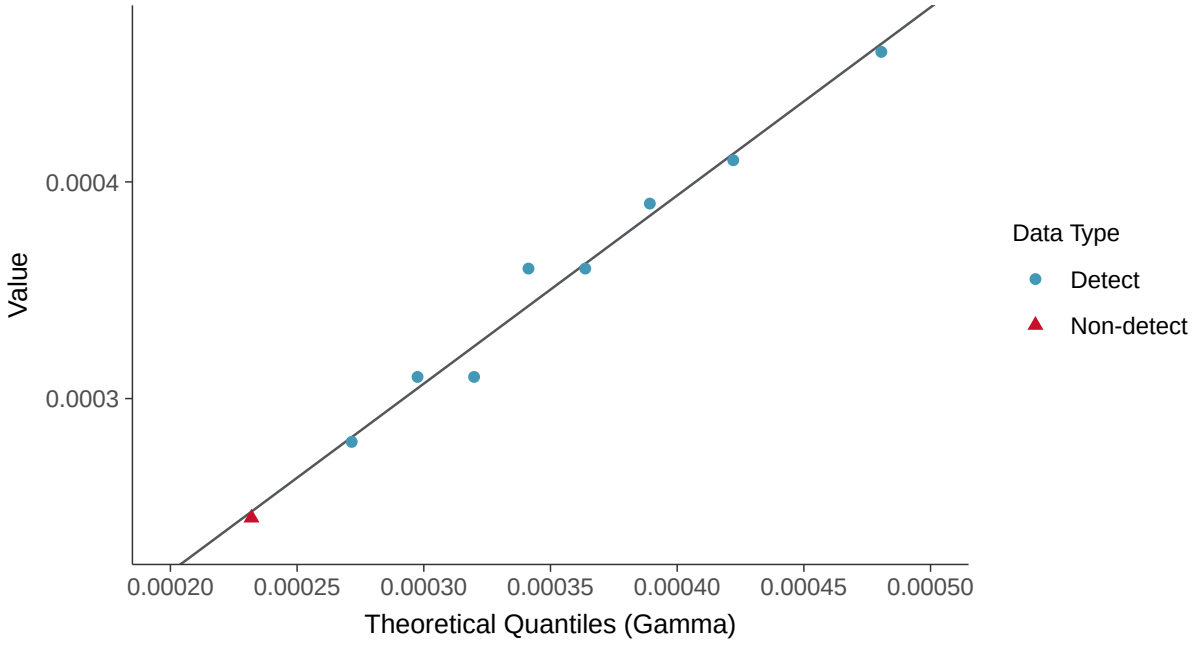
Lognormal Q-Q plot using ROS Imputed Estimates

Selenium, MW-10 (mg/L)



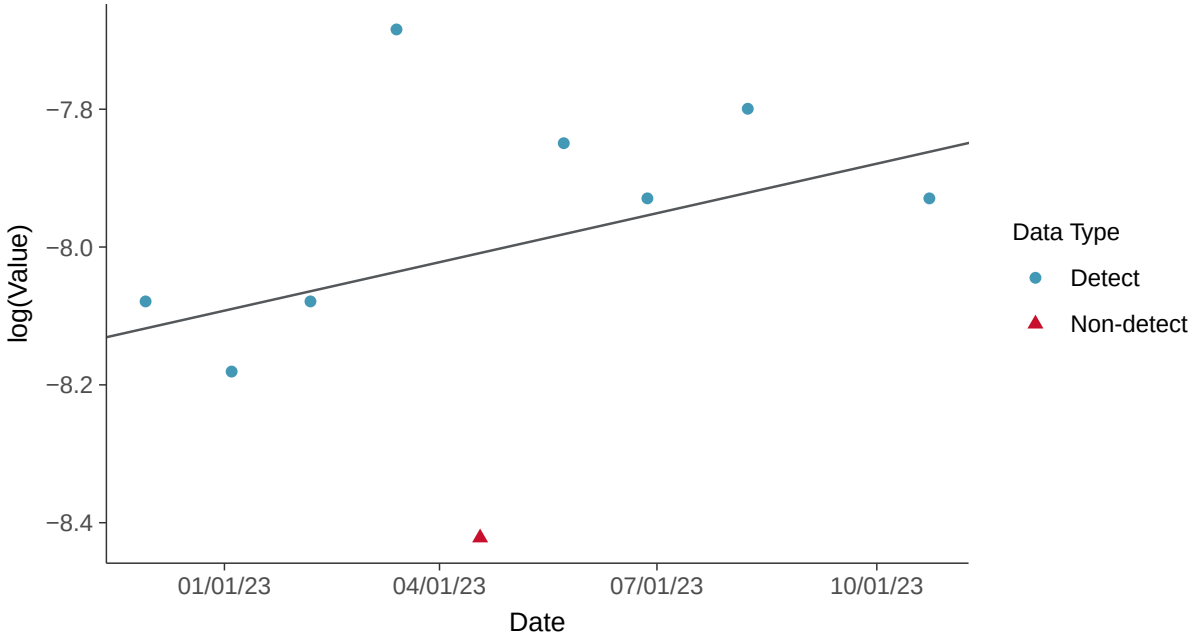
Gamma Q-Q plot using ROS Imputed Estimates

Selenium, MW-10 (mg/L)



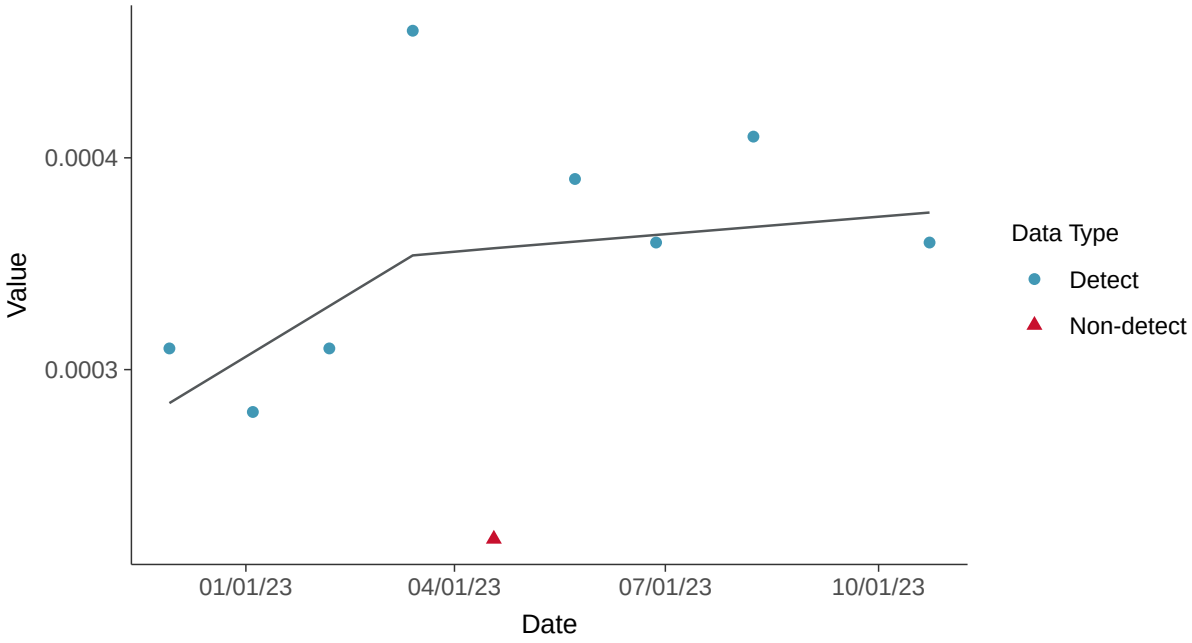
Trend Regression: Lognormal MLE

Selenium, MW-10 (mg/L)



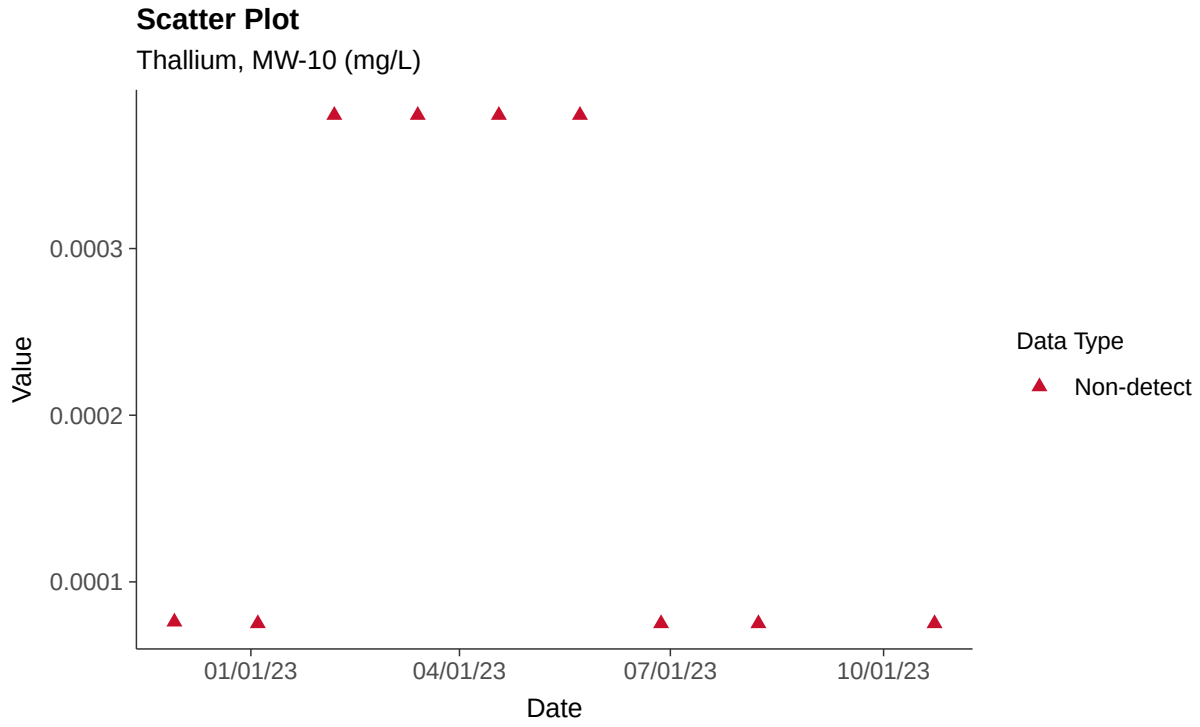
Trend Regression: Piecewise Linear-Linear

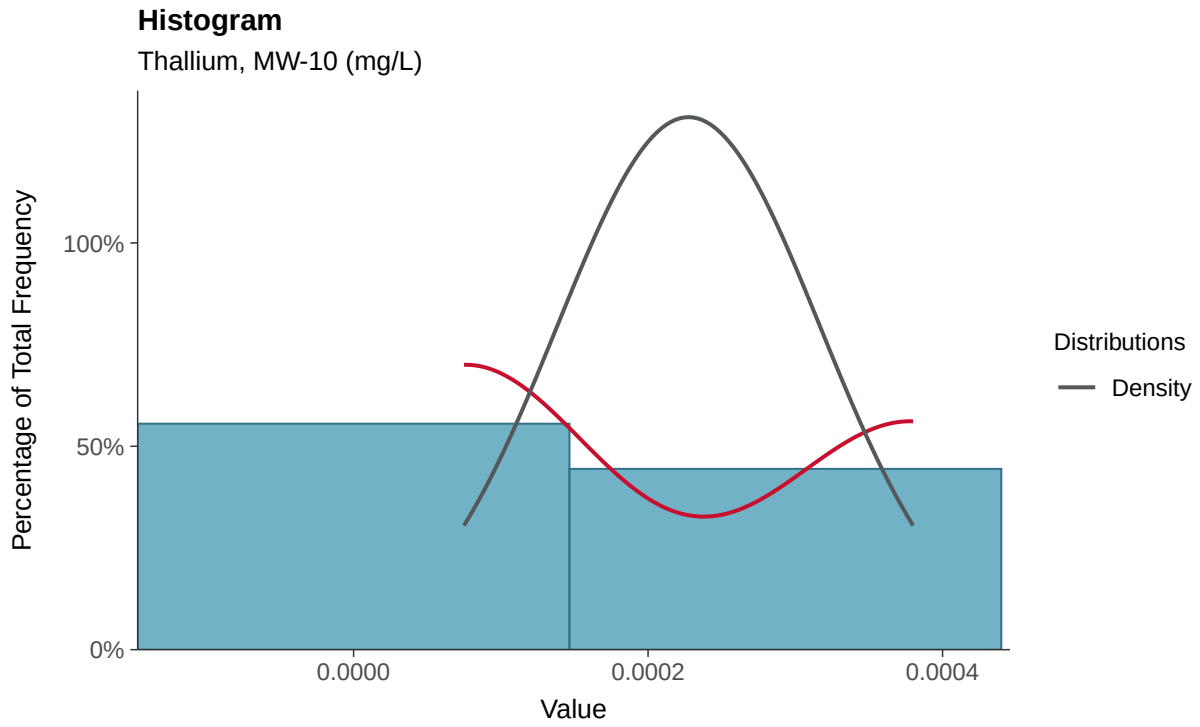
Selenium, MW-10 (mg/L)



Appendix IV: Thallium, MW-10

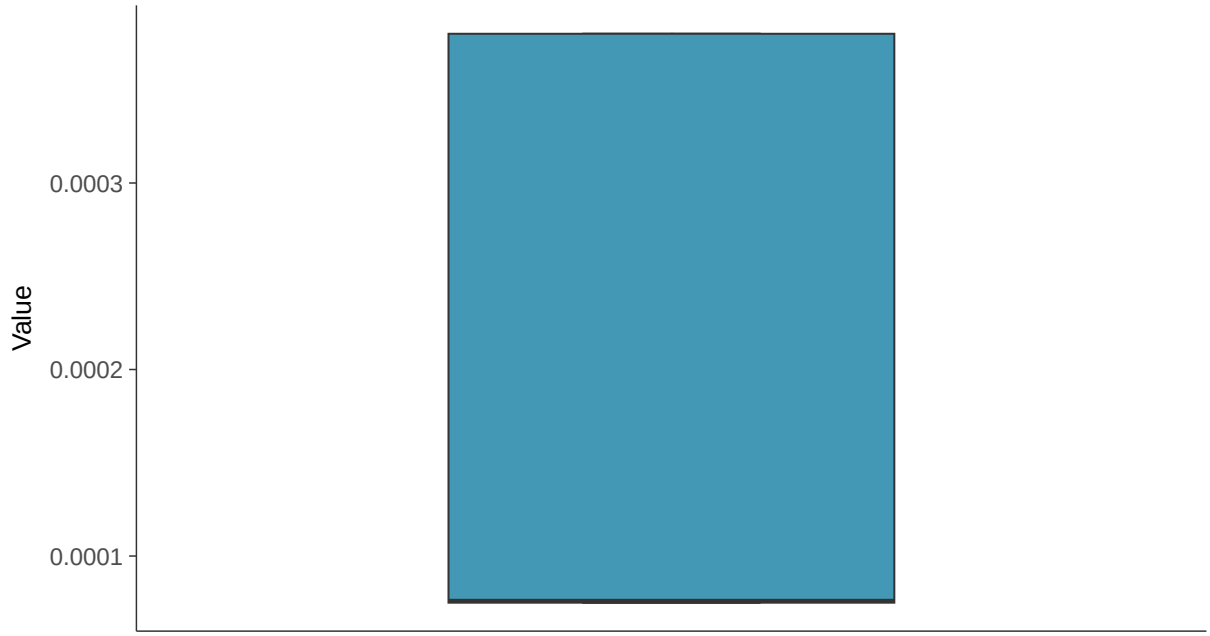
ID: 2_19_5_125





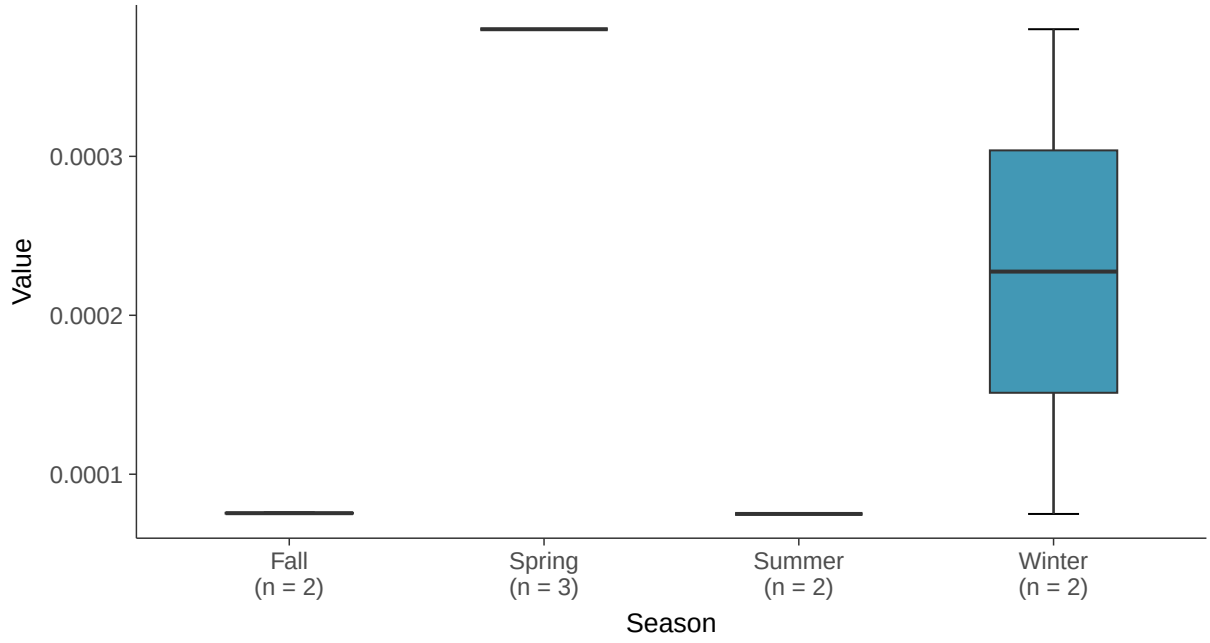
Boxplot

Thallium, MW-10 (mg/L)



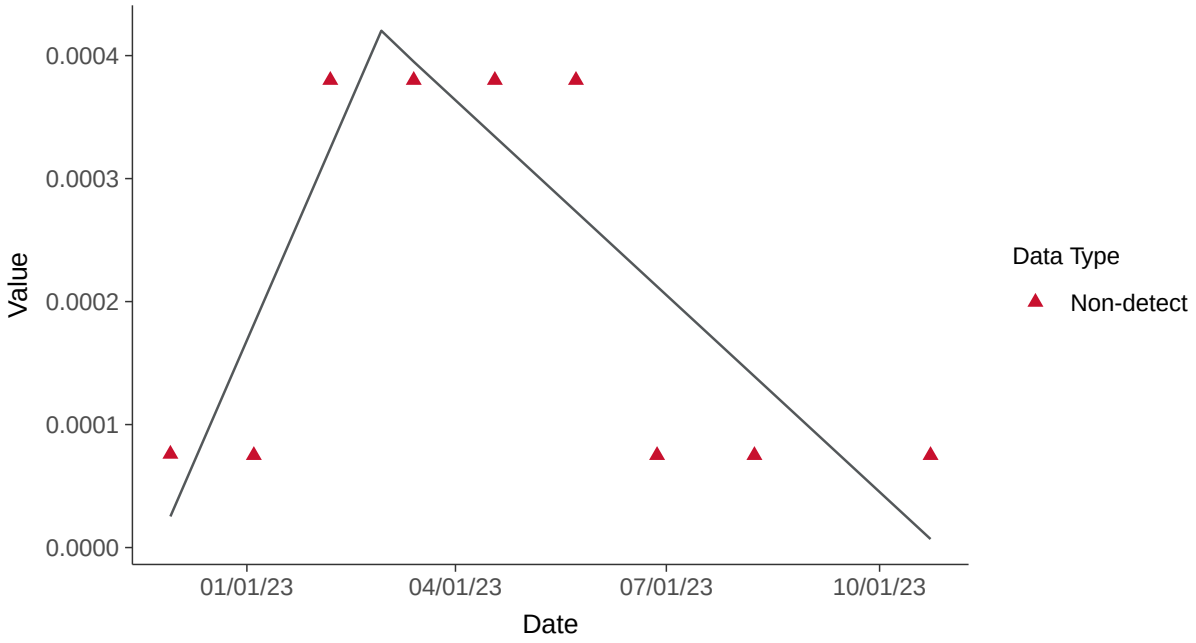
Boxplot by Season

Thallium, MW-10 (mg/L)



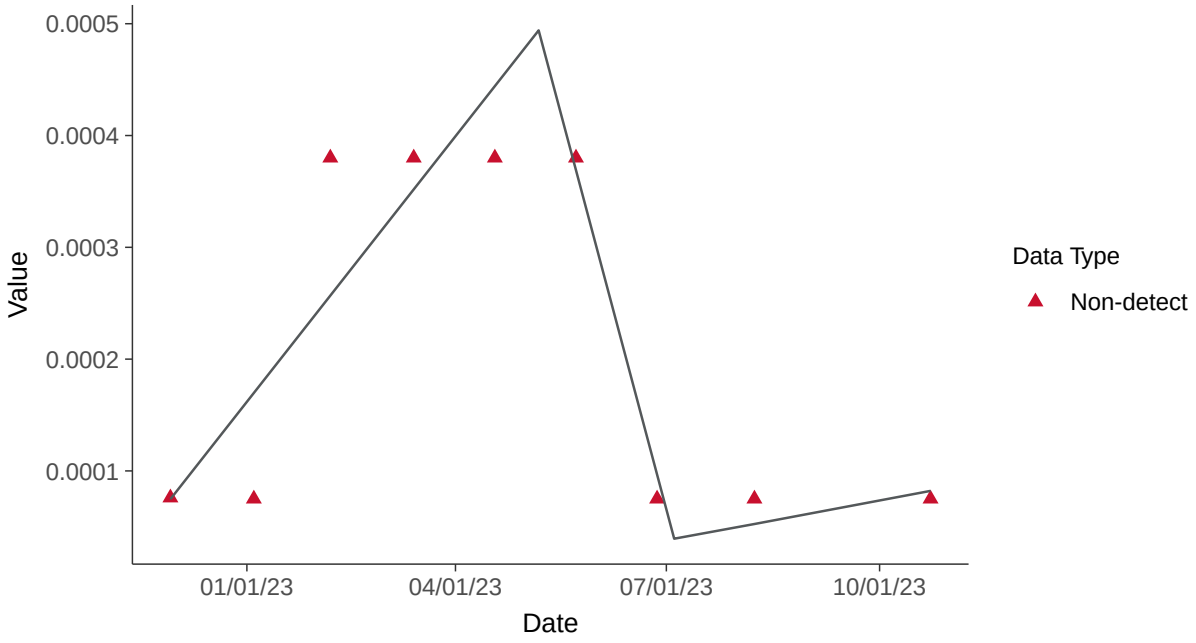
Trend Regression: Piecewise Linear-Linear

Thallium, MW-10 (mg/L)



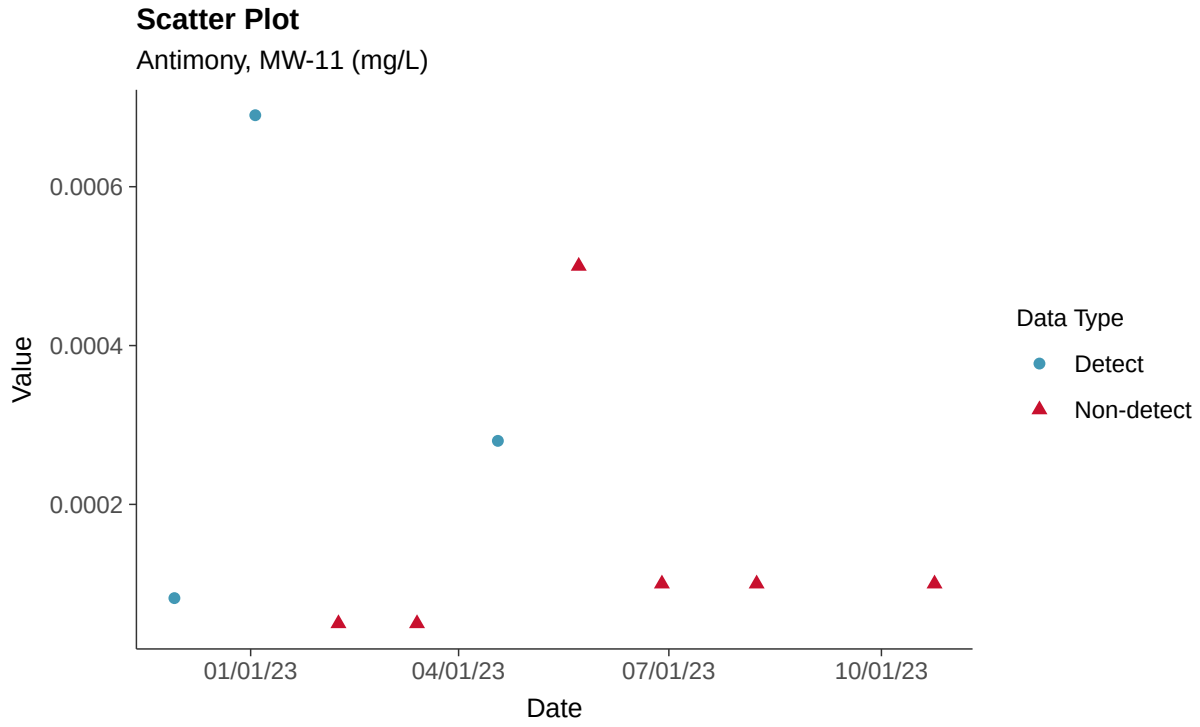
Trend Regression: Piecewise Linear-Linear-Linear

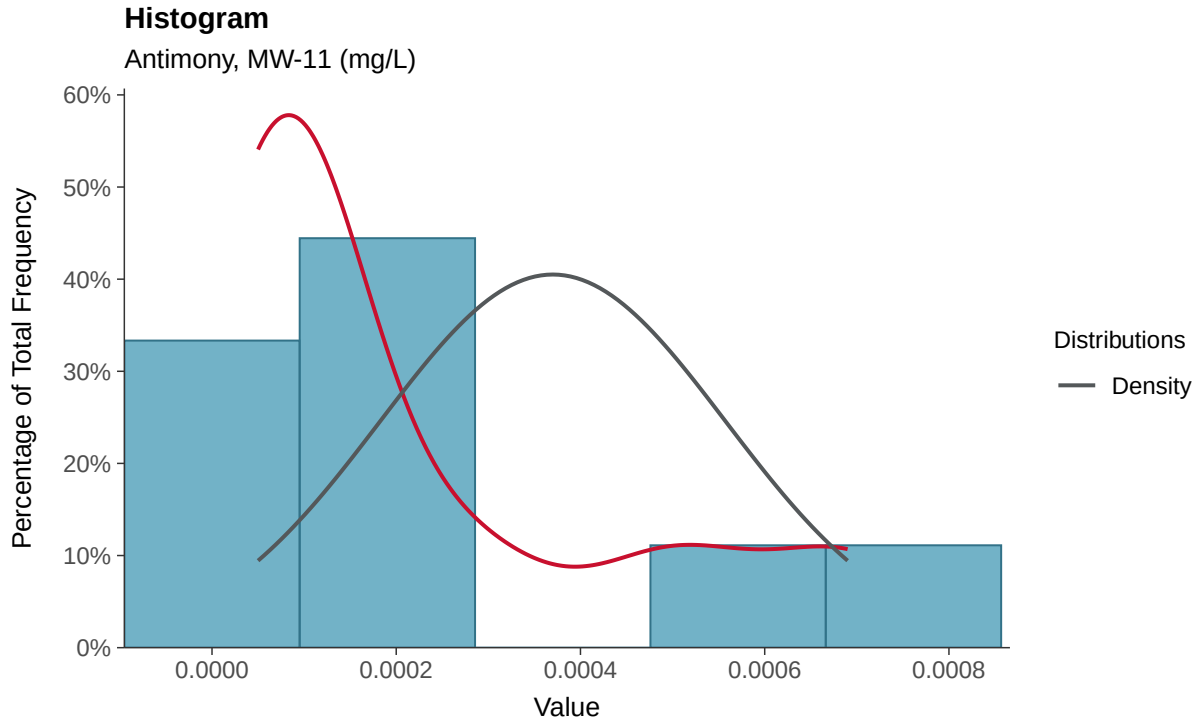
Thallium, MW-10 (mg/L)



Appendix IV: Antimony, MW-11

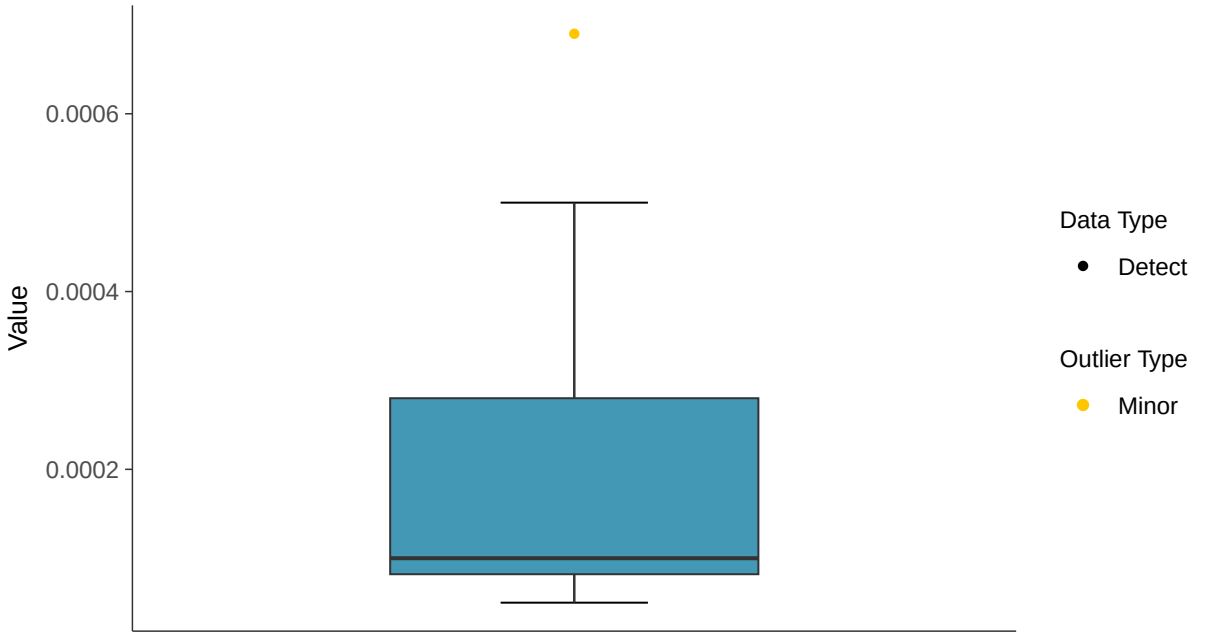
ID: 2_20_5_101





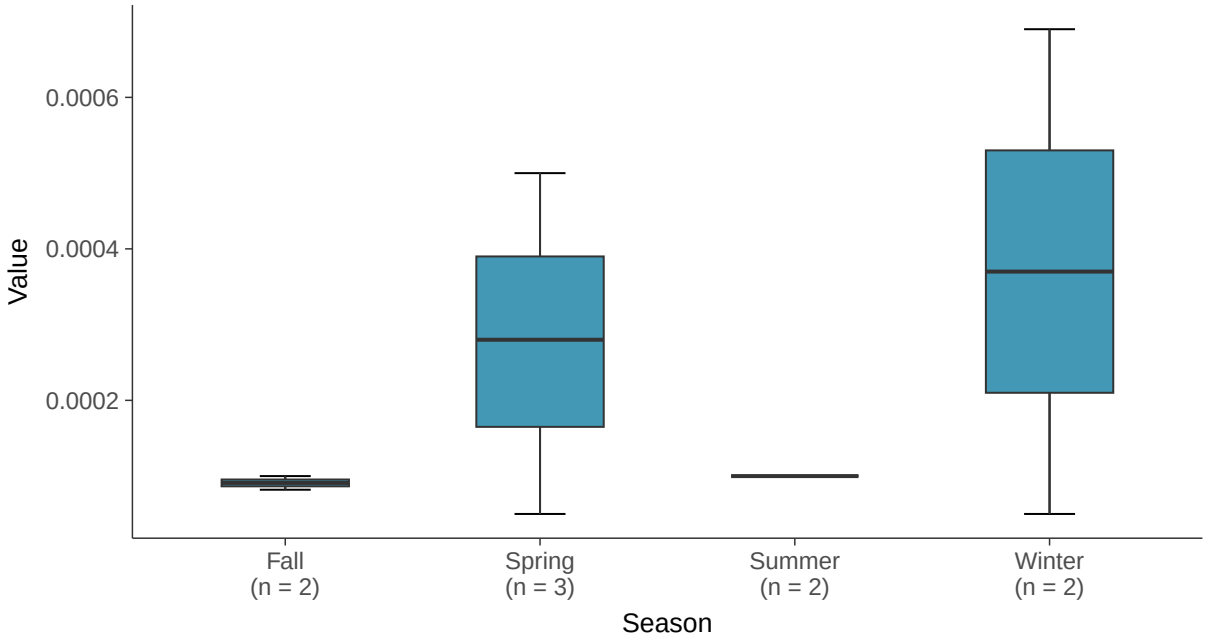
Boxplot

Antimony, MW-11 (mg/L)



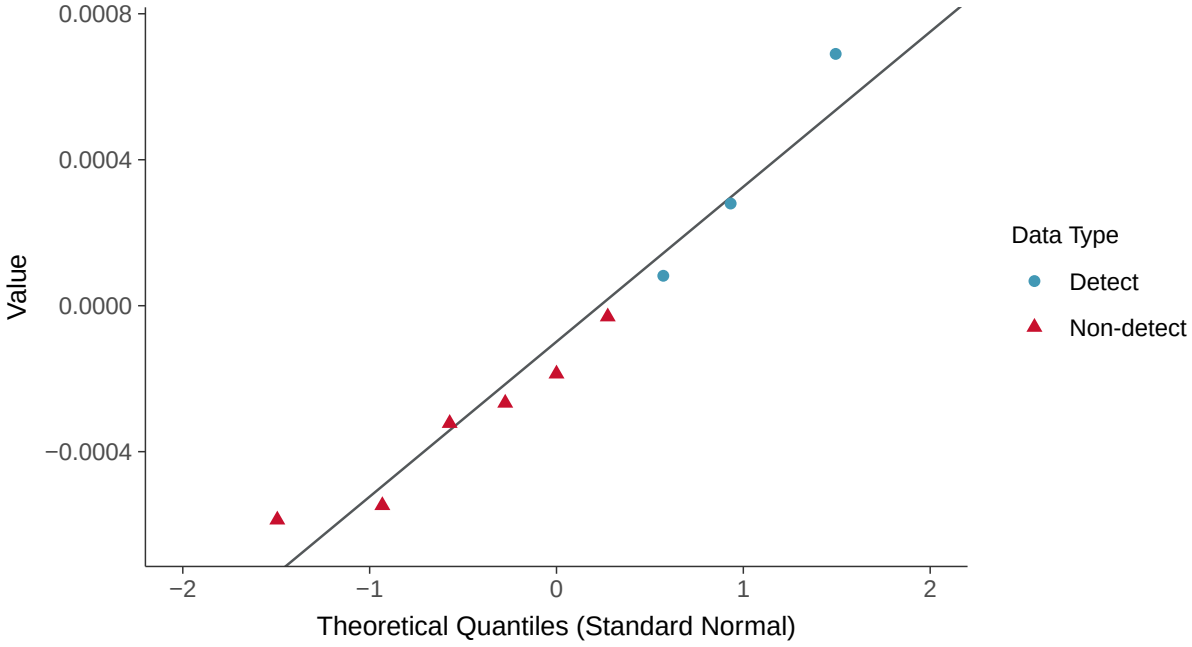
Boxplot by Season

Antimony, MW-11 (mg/L)



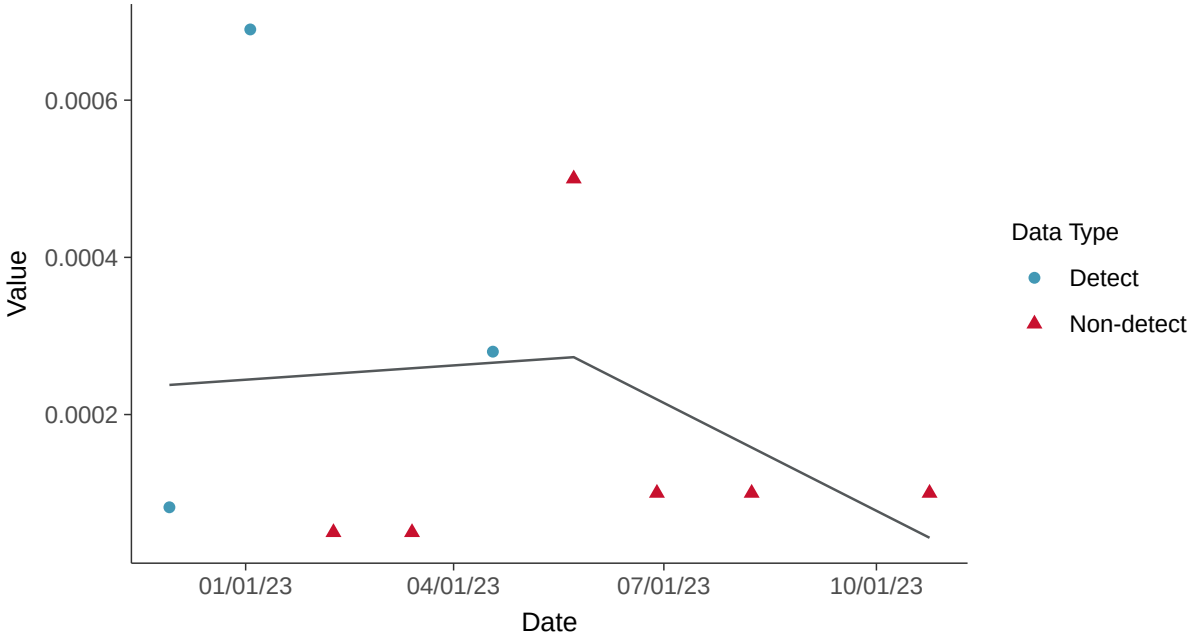
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-11 (mg/L)



Trend Regression: Piecewise Linear-Linear

Antimony, MW-11 (mg/L)

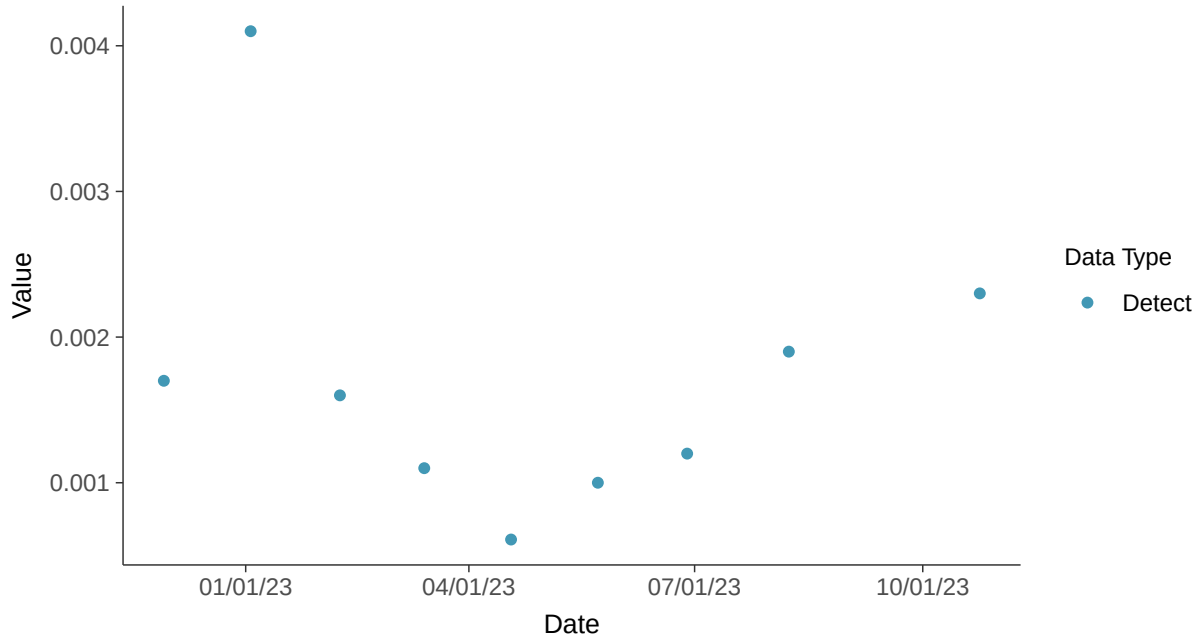


Appendix IV: Arsenic, MW-11

ID: 2_20_5_102

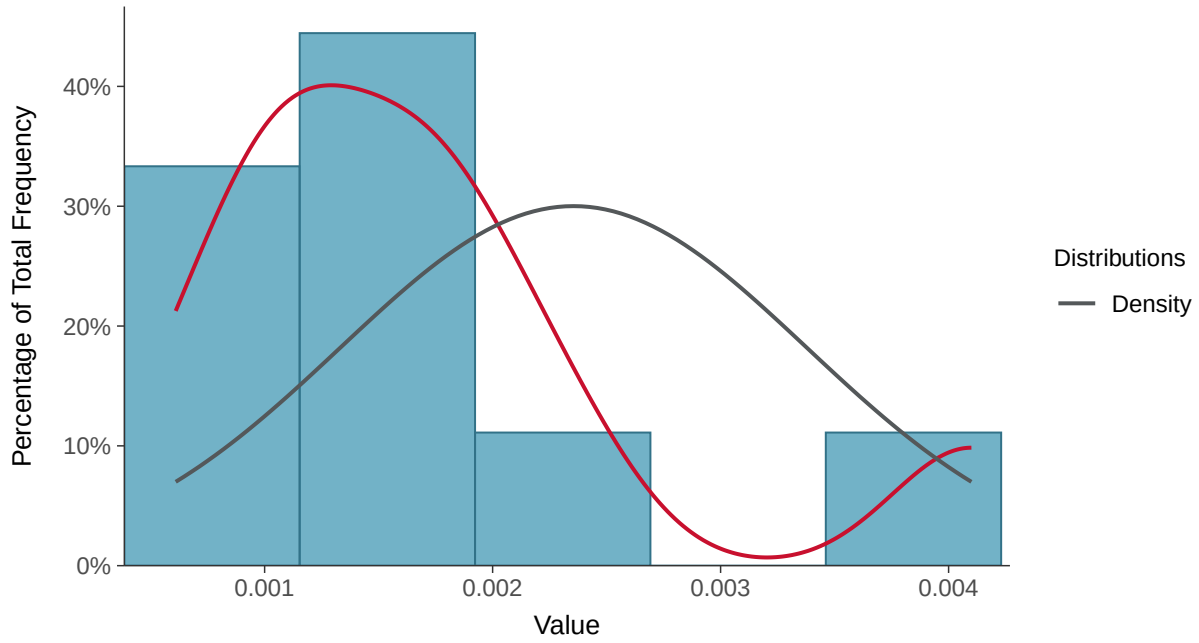
Scatter Plot

Arsenic, MW-11 (mg/L)



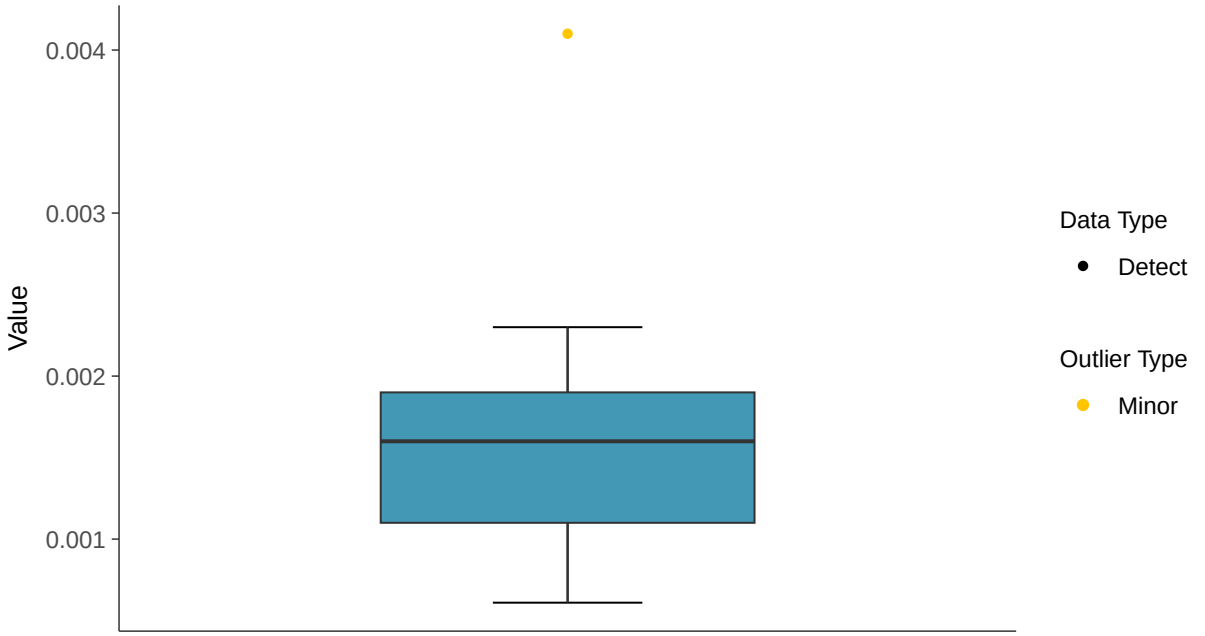
Histogram

Arsenic, MW-11 (mg/L)



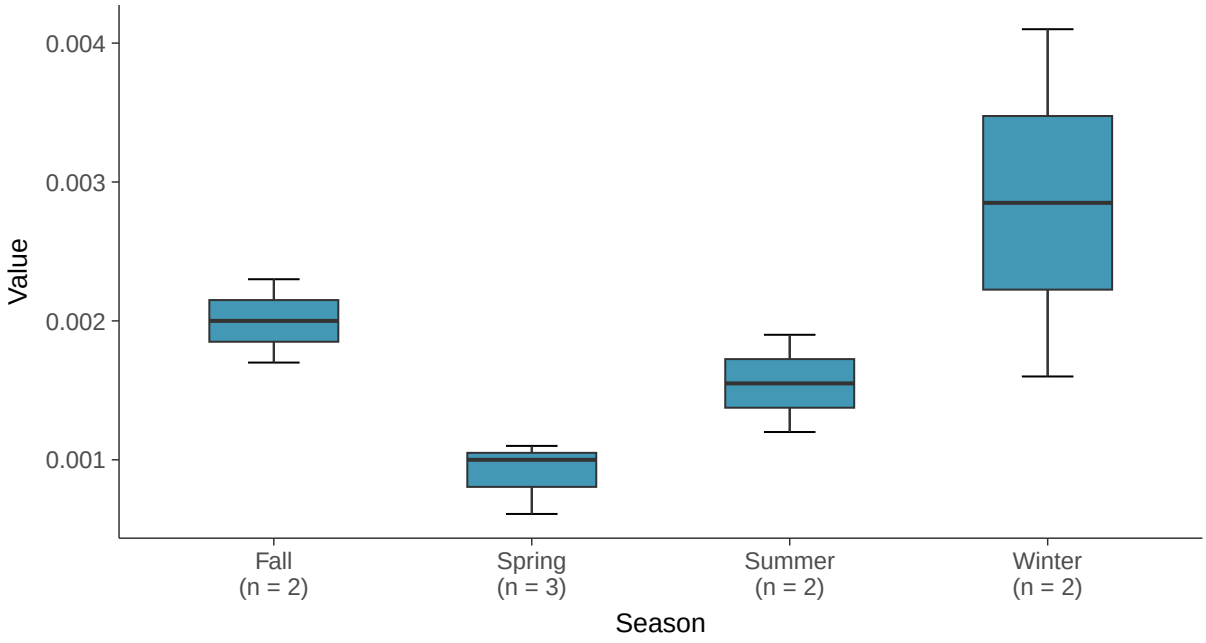
Boxplot

Arsenic, MW-11 (mg/L)



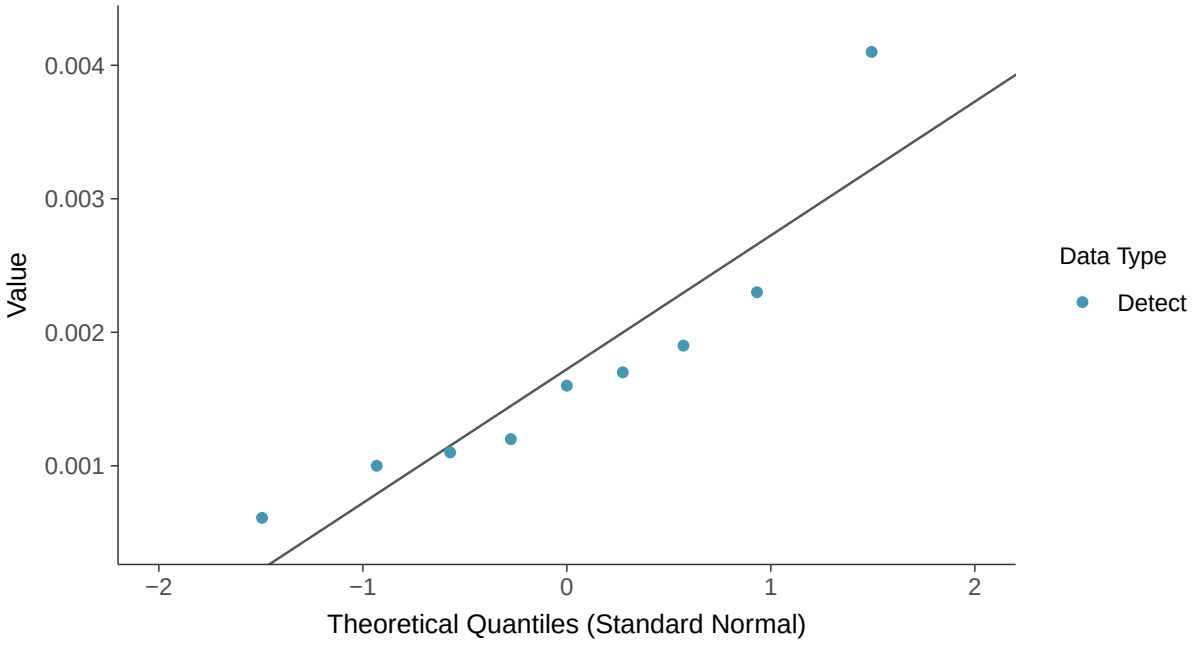
Boxplot by Season

Arsenic, MW-11 (mg/L)



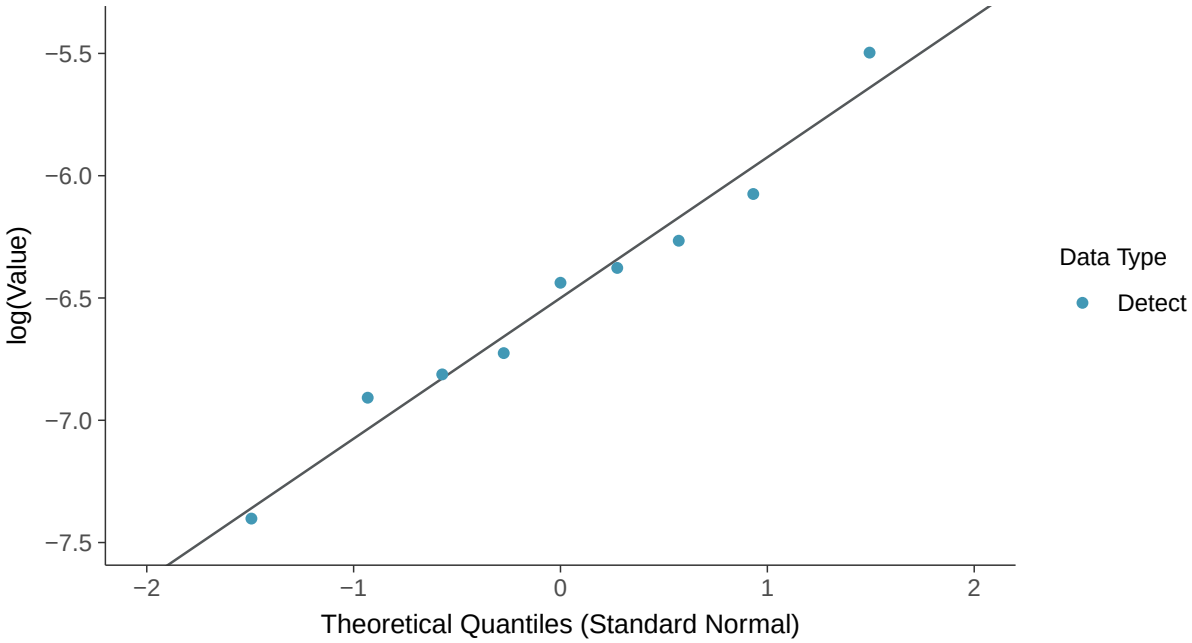
Normal Q-Q plot

Arsenic, MW-11 (mg/L)



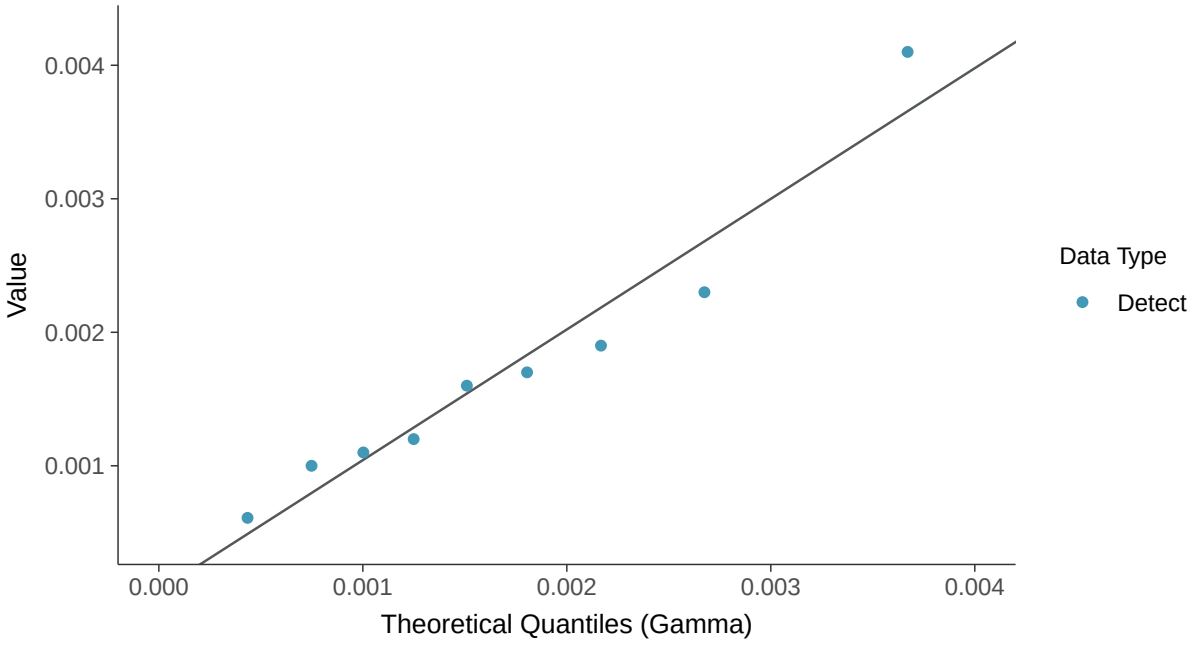
Lognormal Q-Q plot

Arsenic, MW-11 (mg/L)



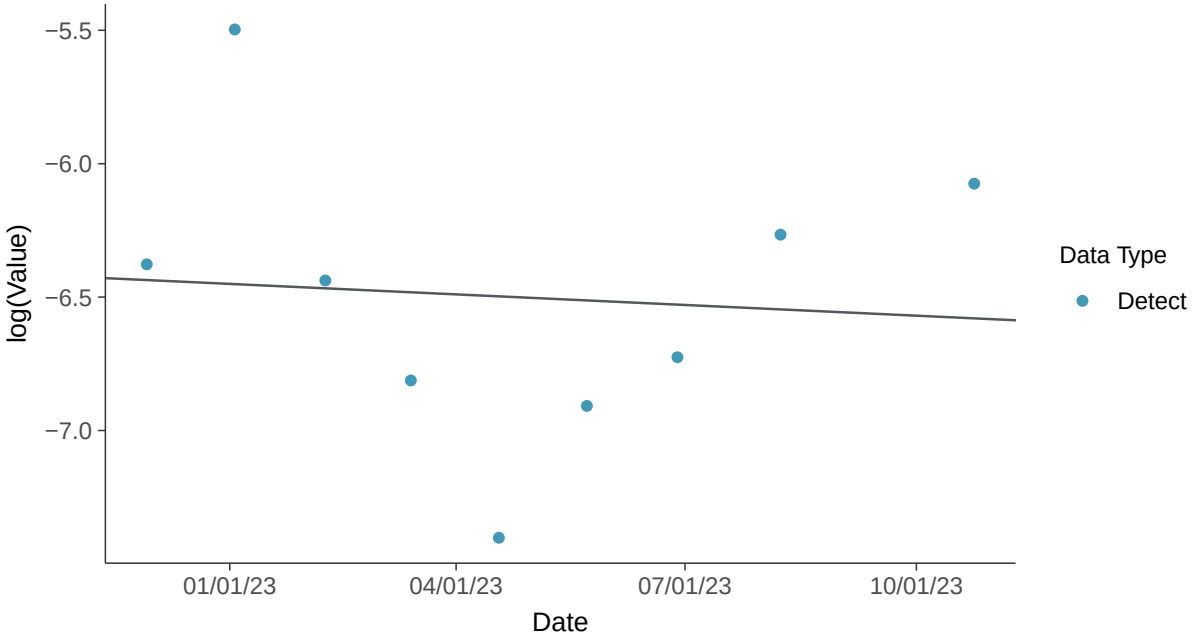
Gamma Q-Q plot

Arsenic, MW-11 (mg/L)



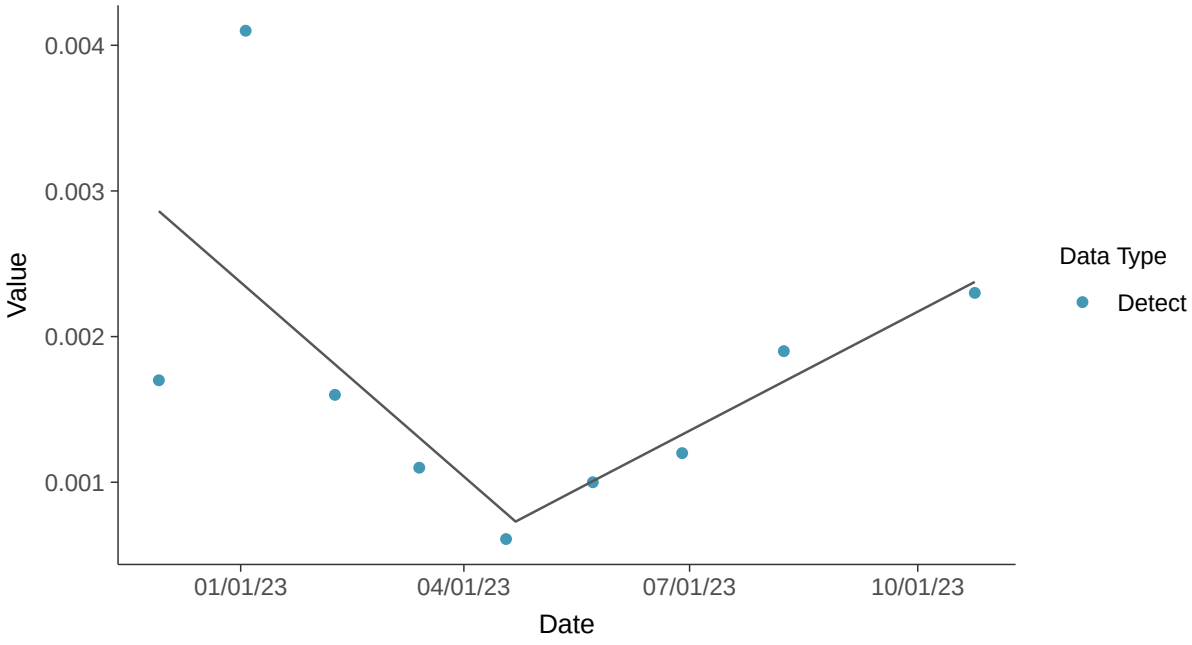
Trend Regression: Lognormal MLE

Arsenic, MW-11 (mg/L)



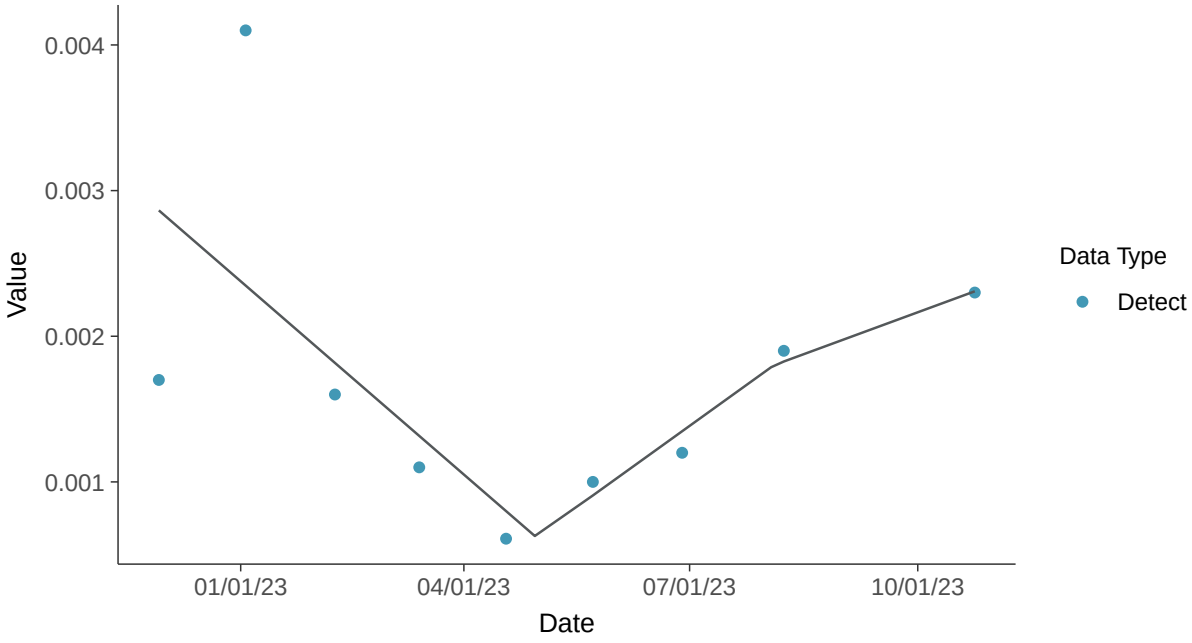
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-11 (mg/L)



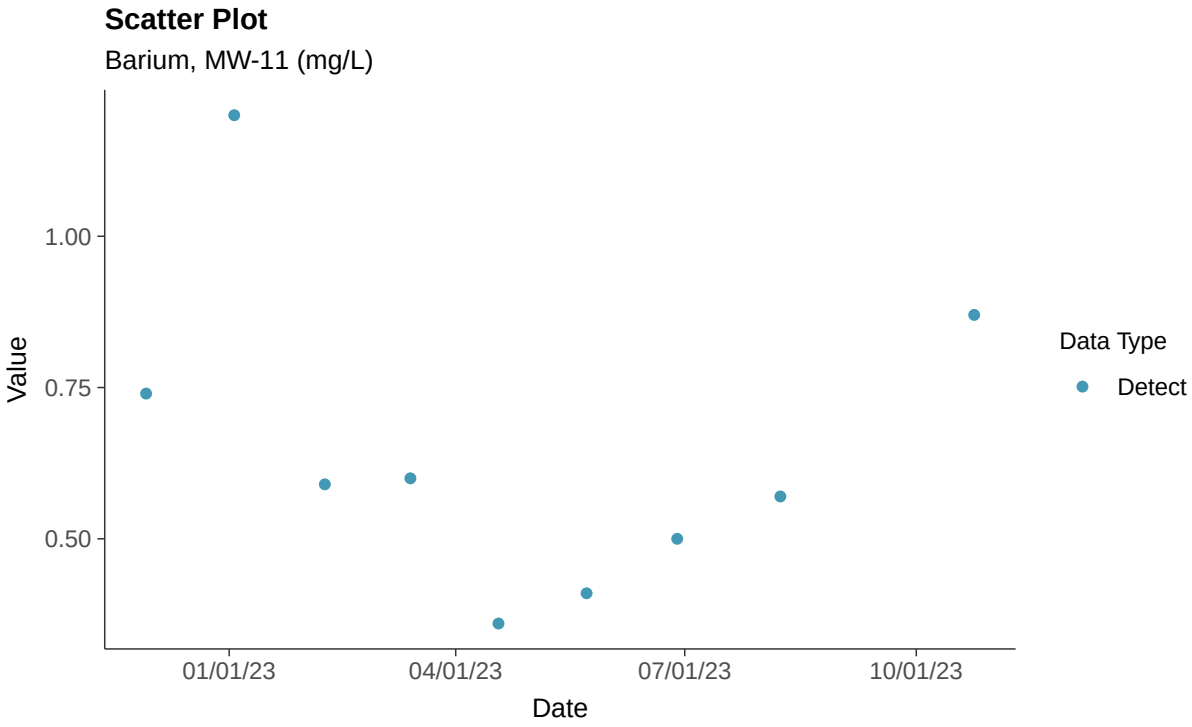
Trend Regression: Piecewise Linear-Linear-Linear

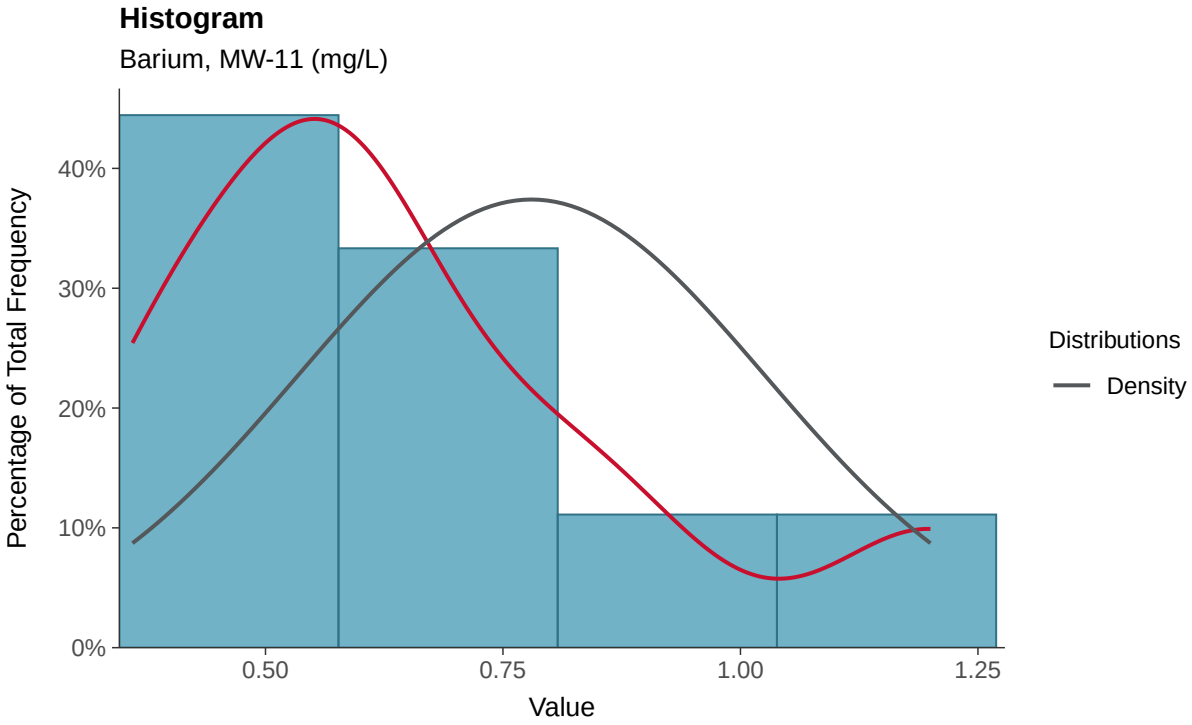
Arsenic, MW-11 (mg/L)



Appendix IV: Barium, MW-11

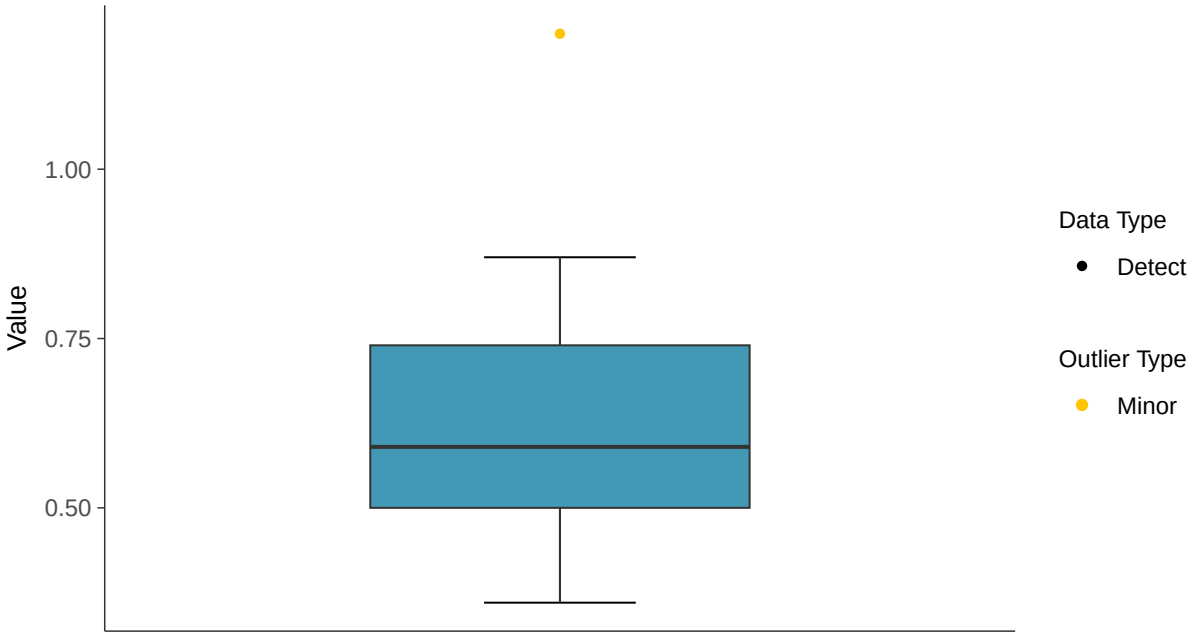
ID: 2_20_5_103





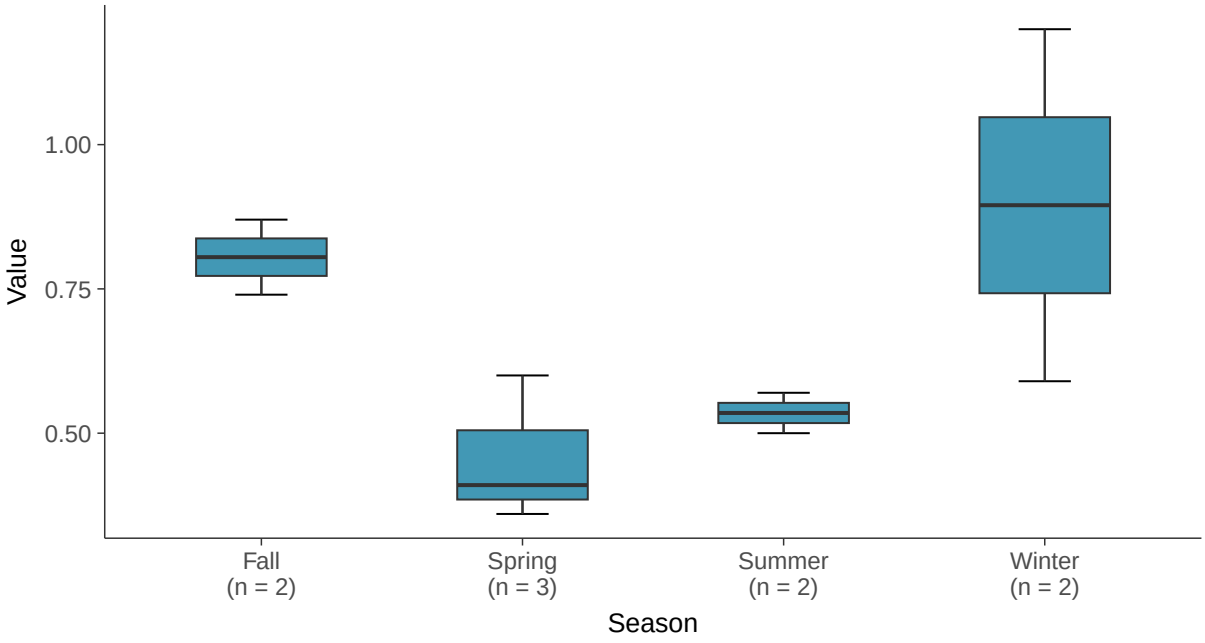
Boxplot

Barium, MW-11 (mg/L)



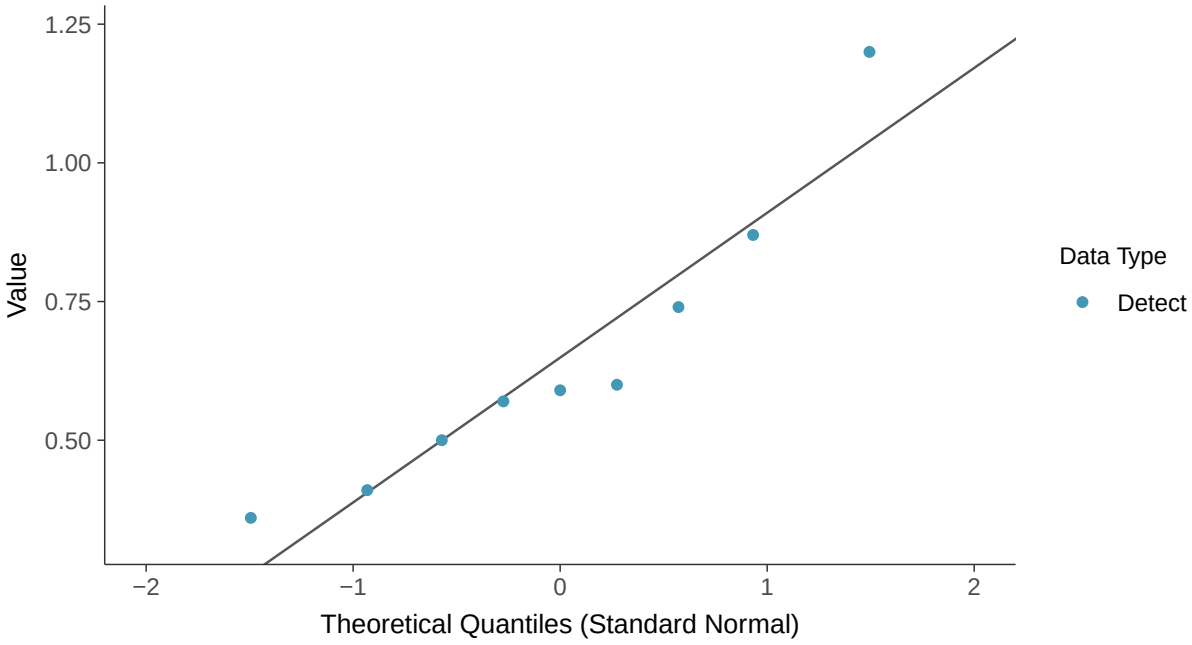
Boxplot by Season

Barium, MW-11 (mg/L)



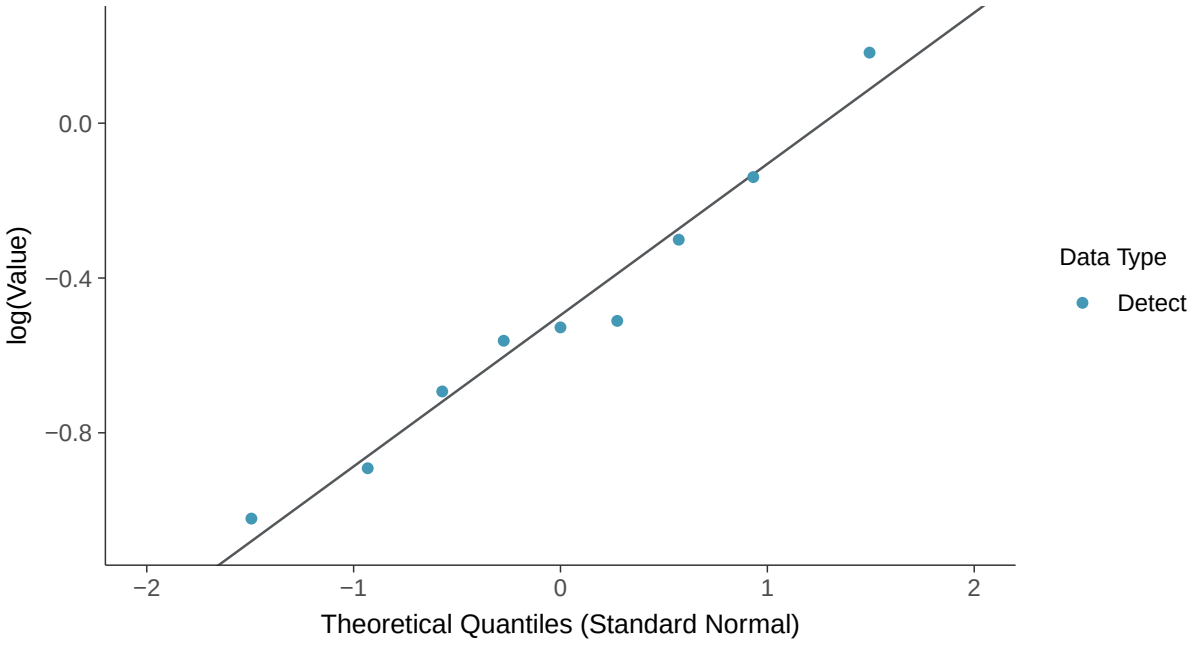
Normal Q-Q plot

Barium, MW-11 (mg/L)



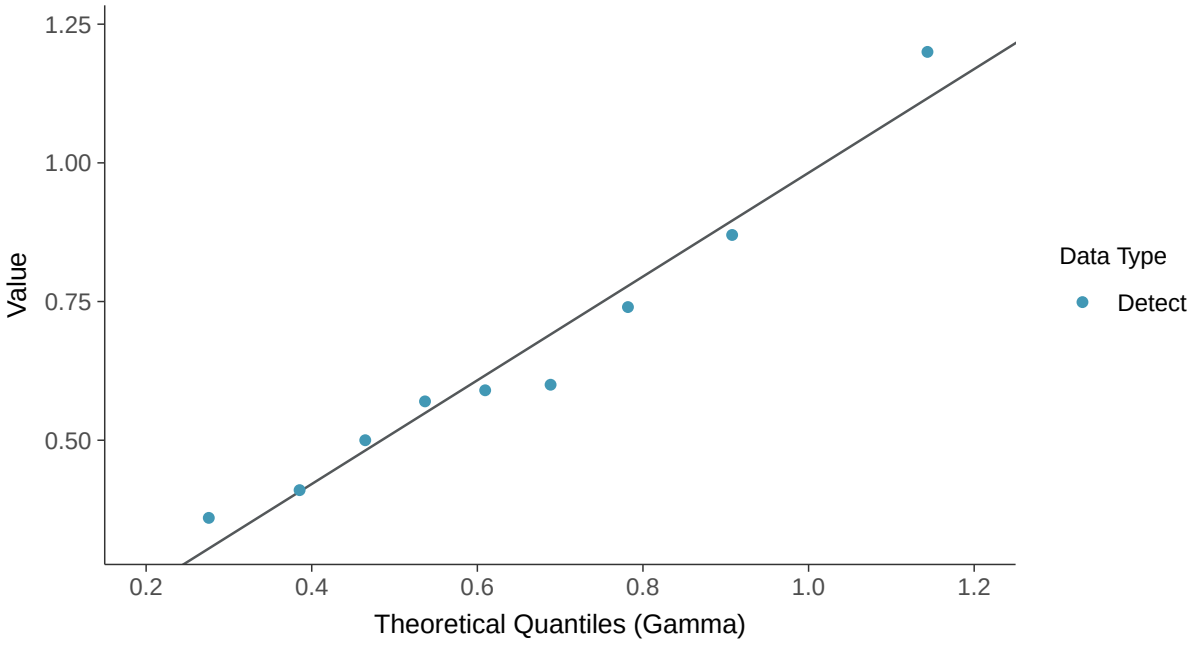
Lognormal Q-Q plot

Barium, MW-11 (mg/L)



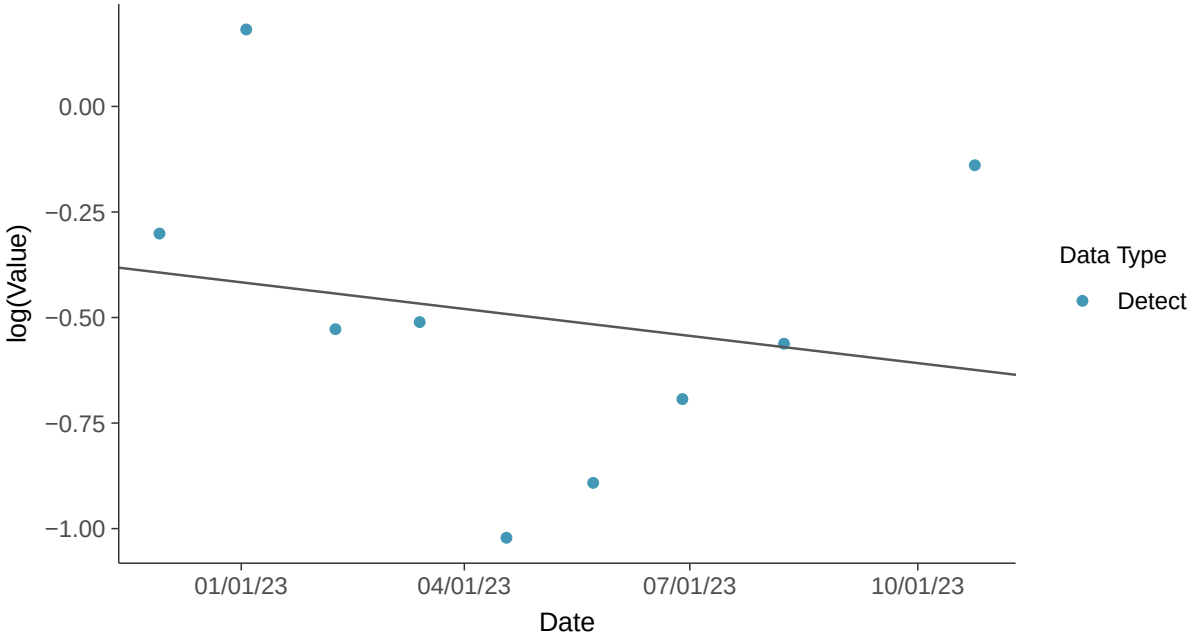
Gamma Q-Q plot

Barium, MW-11 (mg/L)



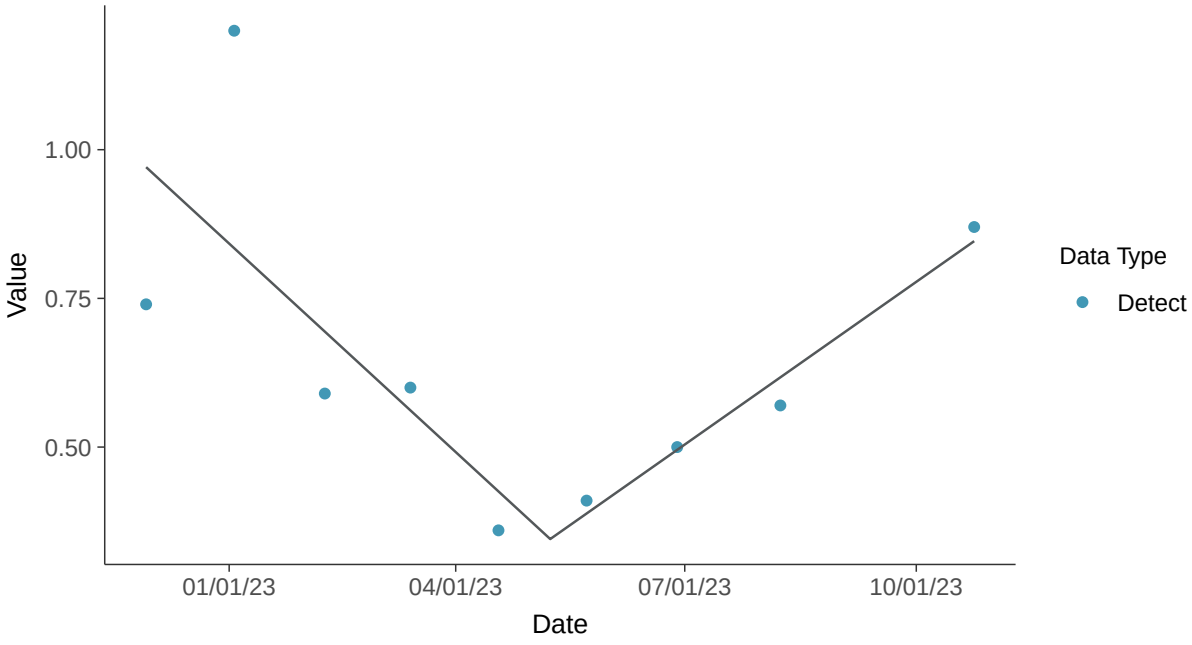
Trend Regression: Lognormal MLE

Barium, MW-11 (mg/L)



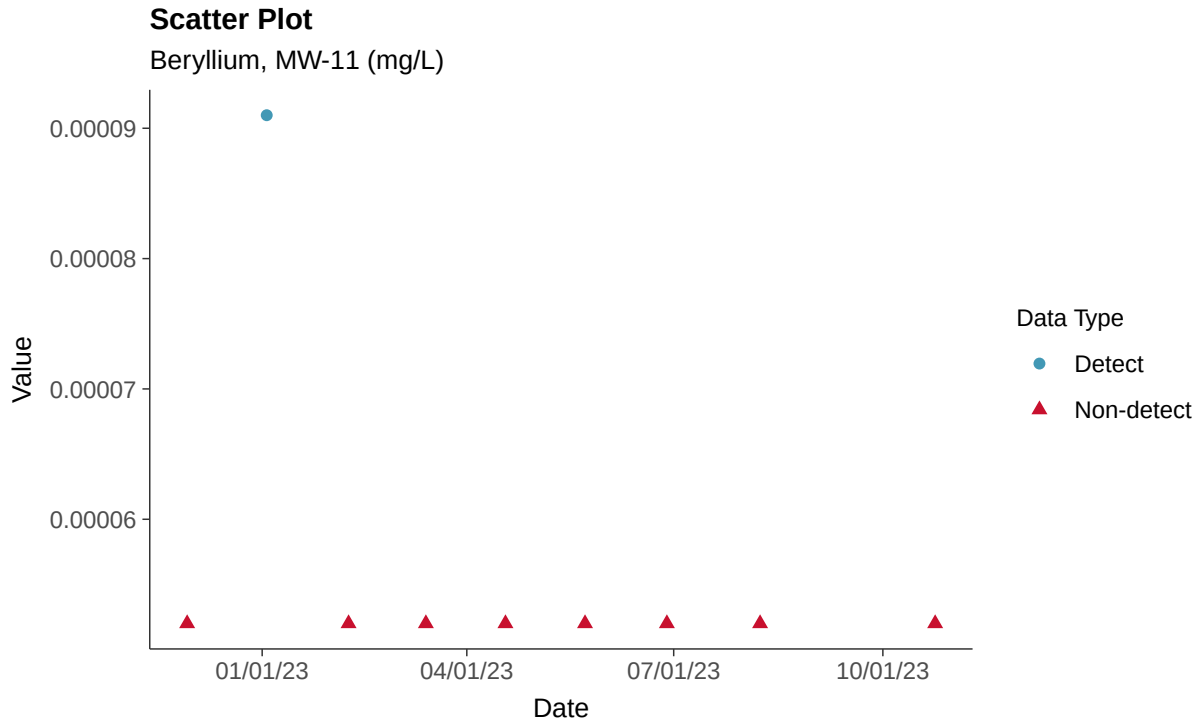
Trend Regression: Piecewise Linear-Linear

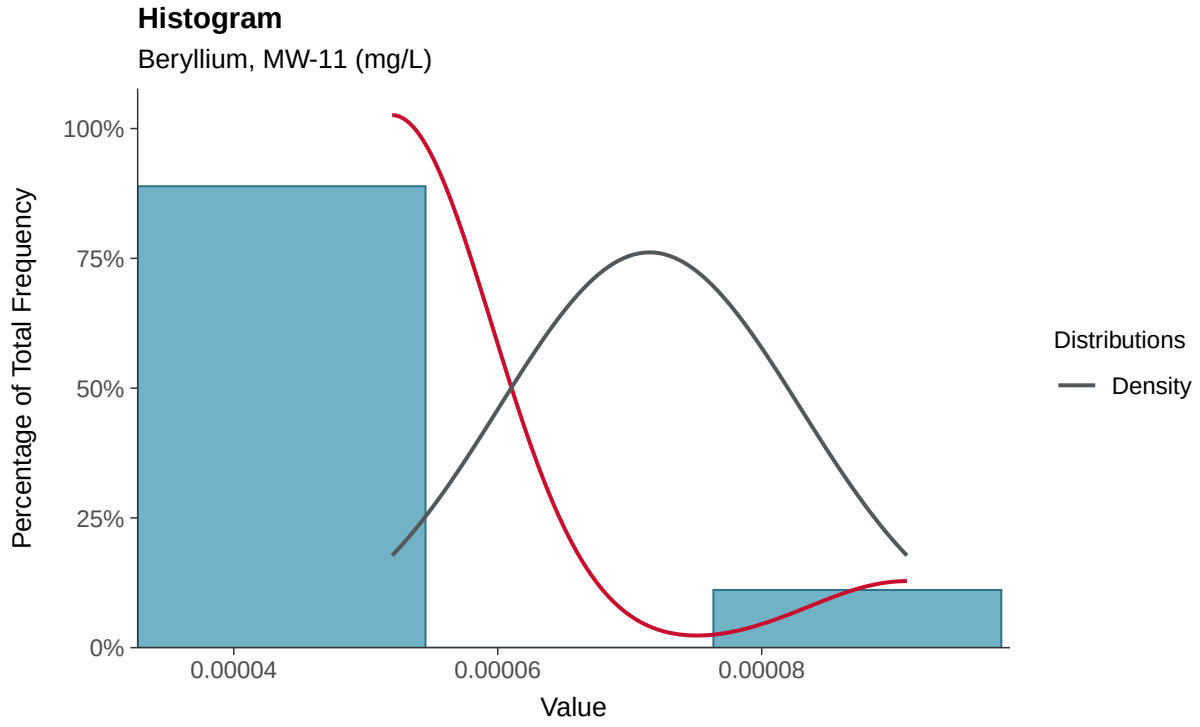
Barium, MW-11 (mg/L)



Appendix IV: Beryllium, MW-11

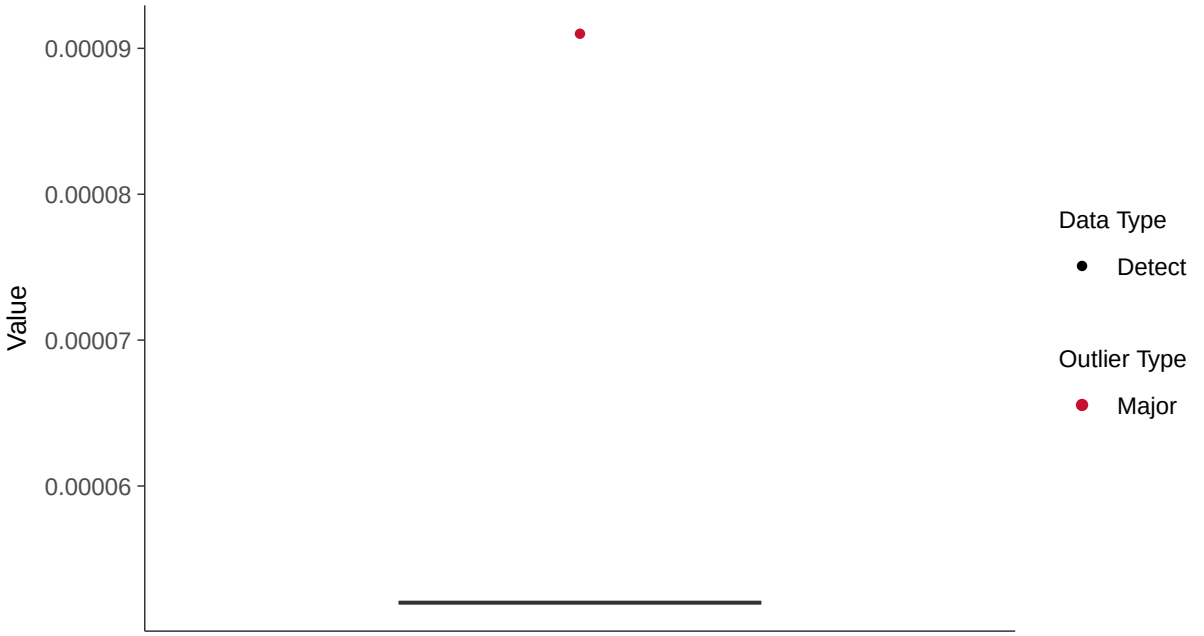
ID: 2_20_5_104





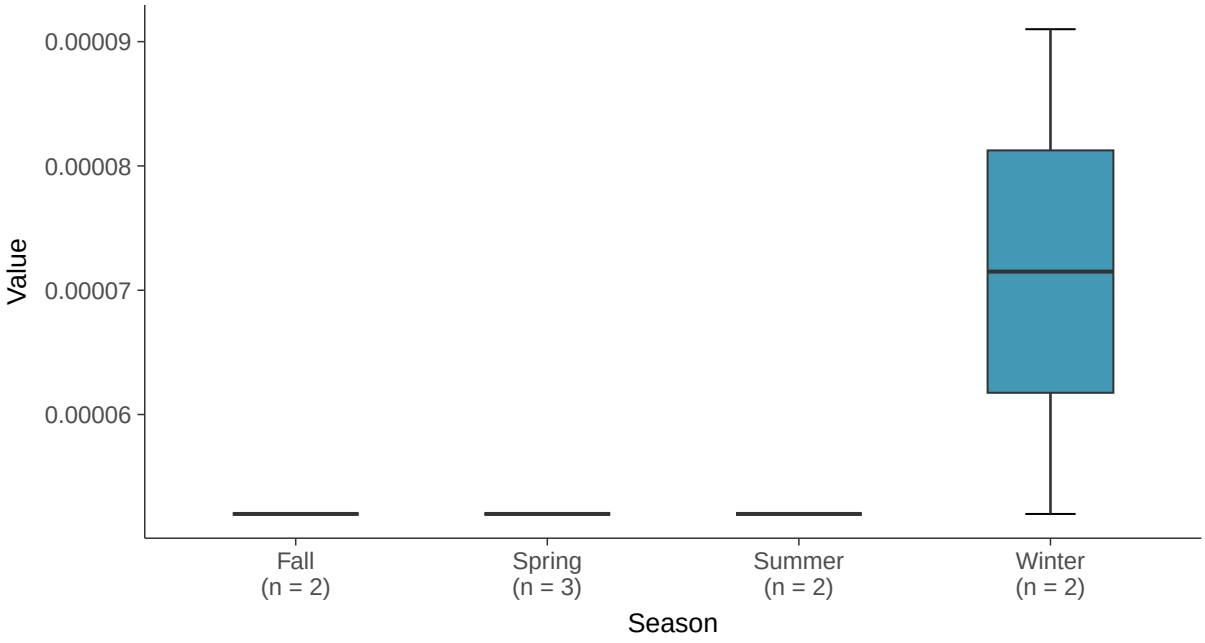
Boxplot

Beryllium, MW-11 (mg/L)



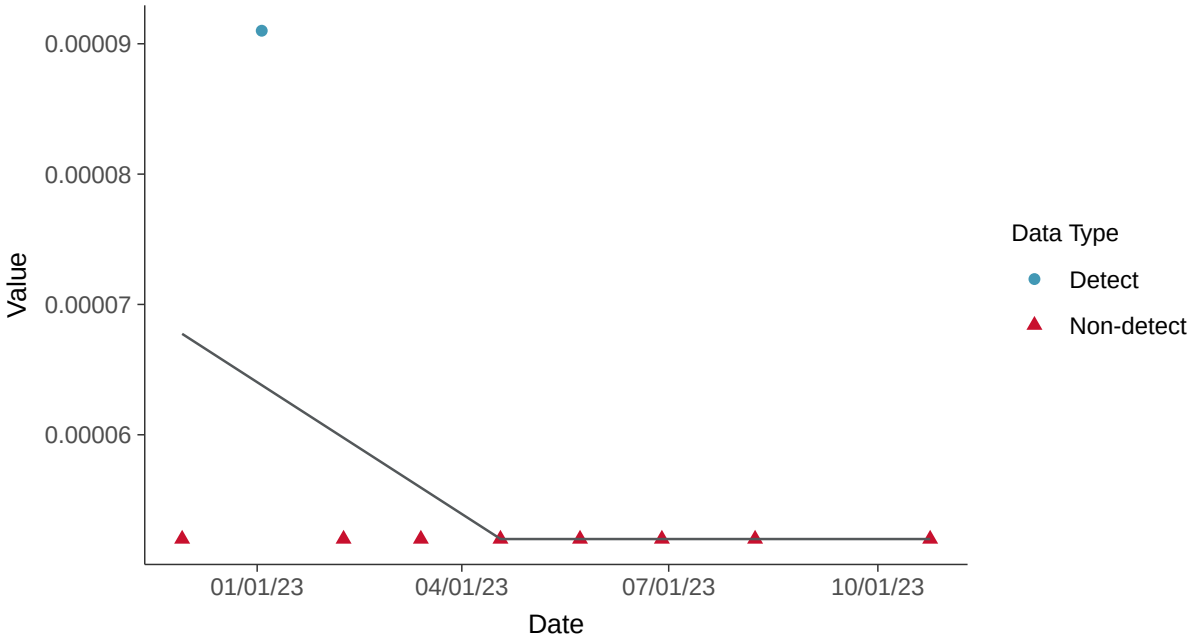
Boxplot by Season

Beryllium, MW-11 (mg/L)



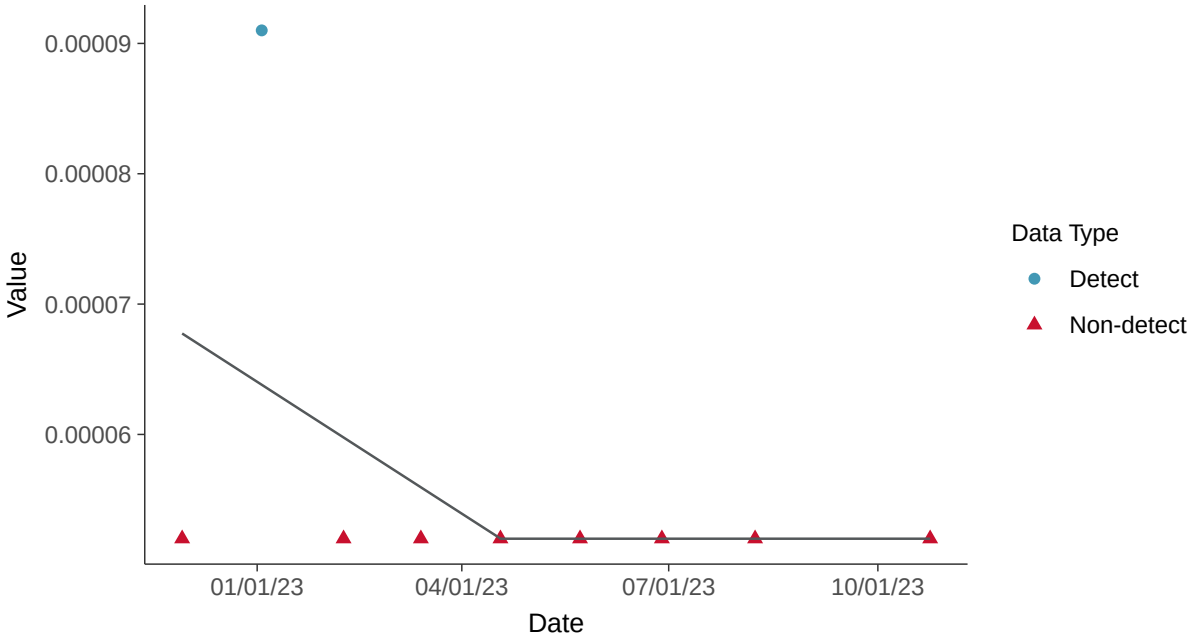
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-11 (mg/L)



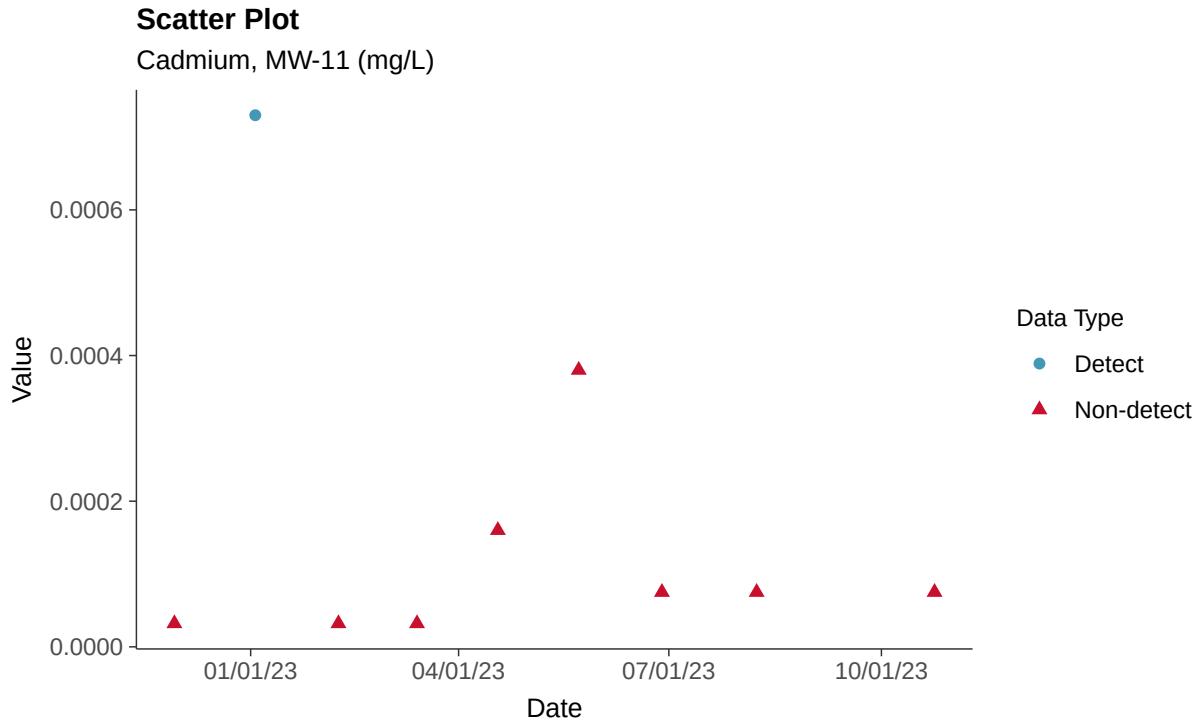
Trend Regression: Piecewise Linear-Linear-Linear

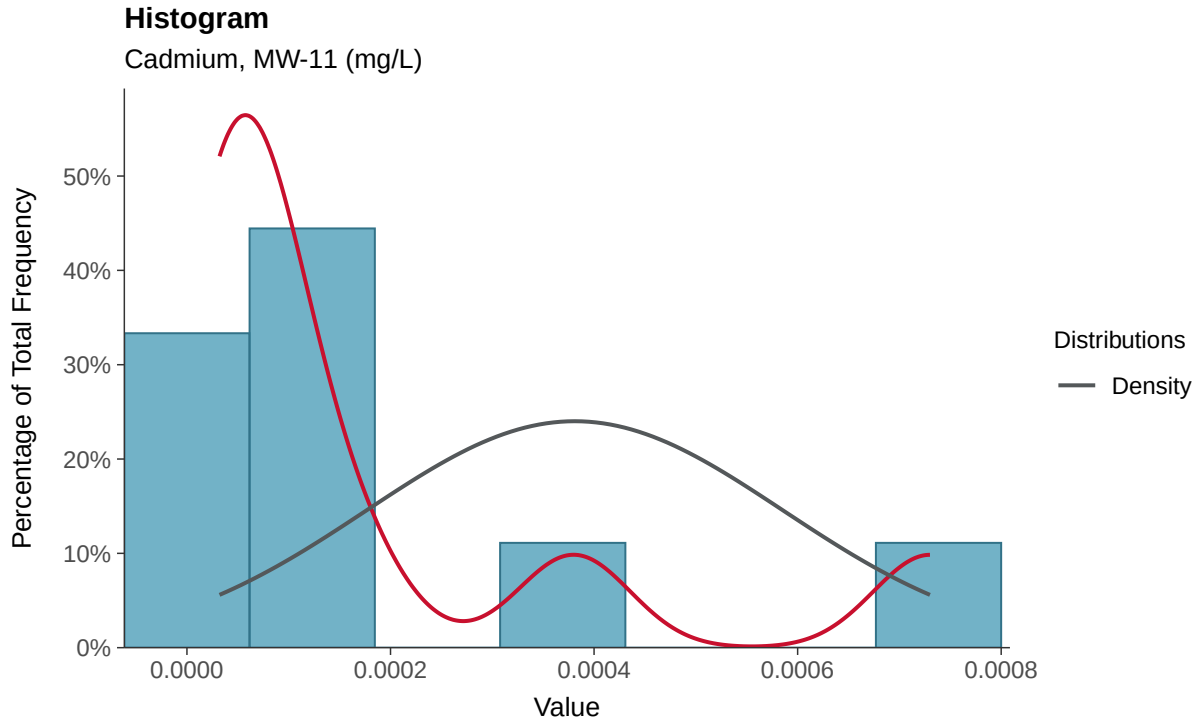
Beryllium, MW-11 (mg/L)



Appendix IV: Cadmium, MW-11

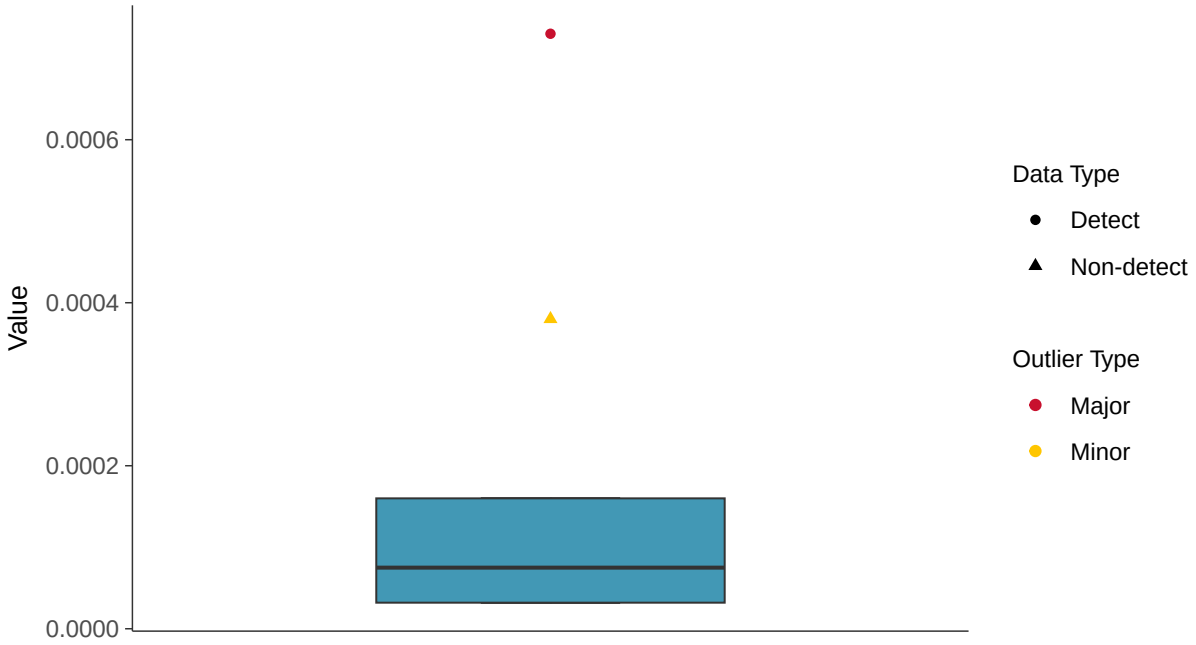
ID: 2_20_5_106





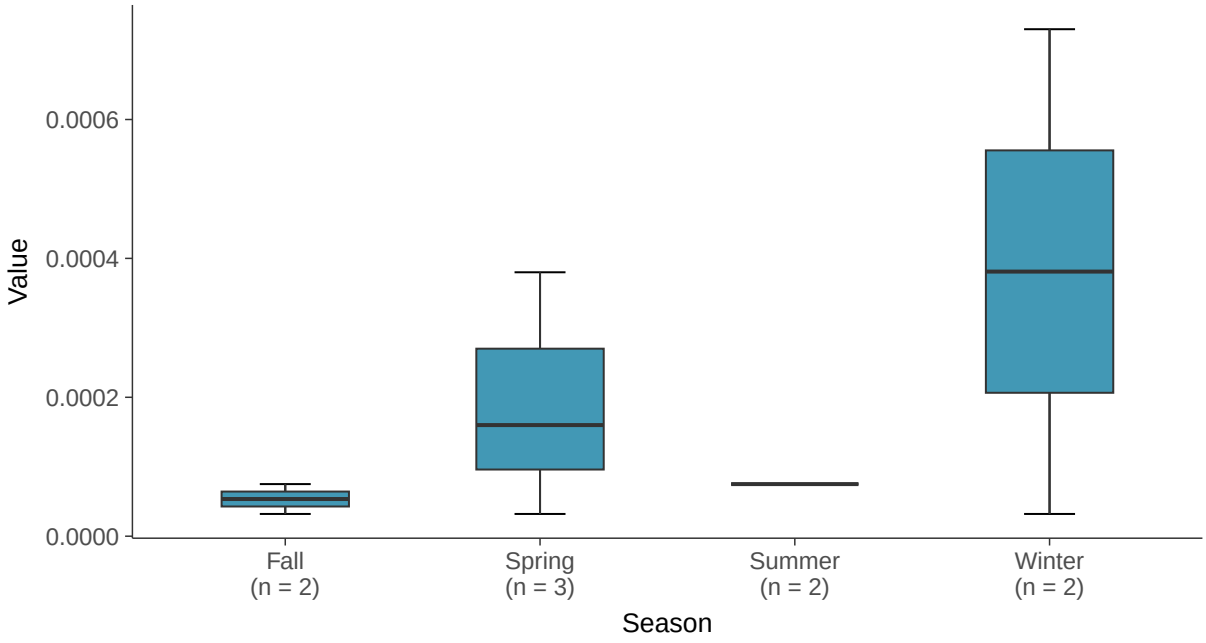
Boxplot

Cadmium, MW-11 (mg/L)



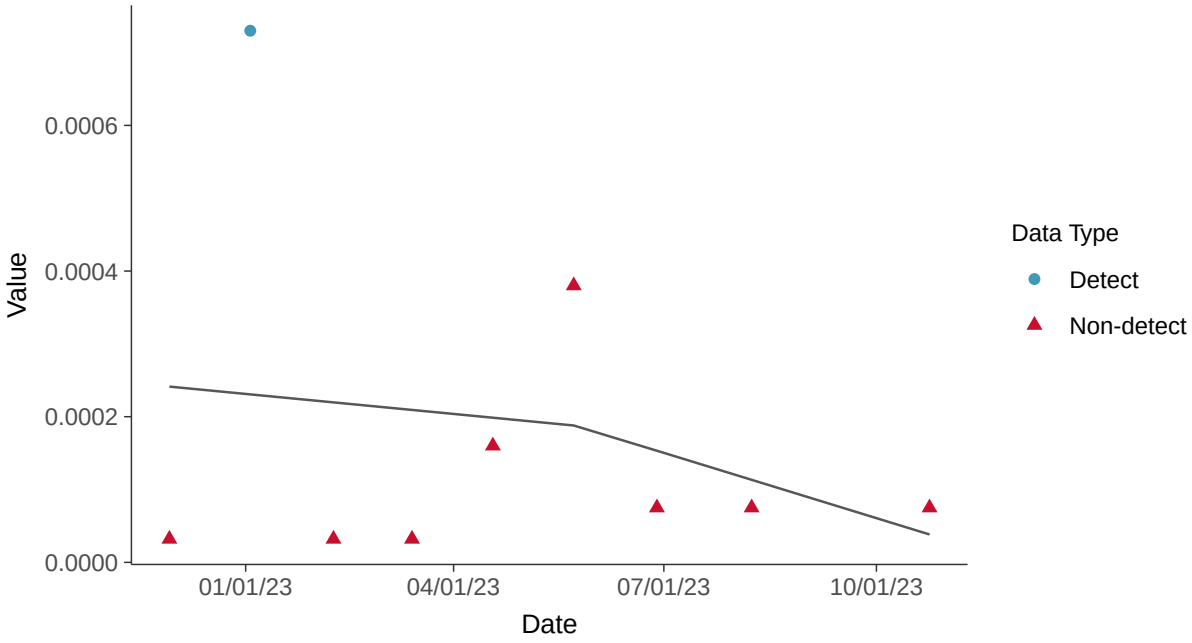
Boxplot by Season

Cadmium, MW-11 (mg/L)



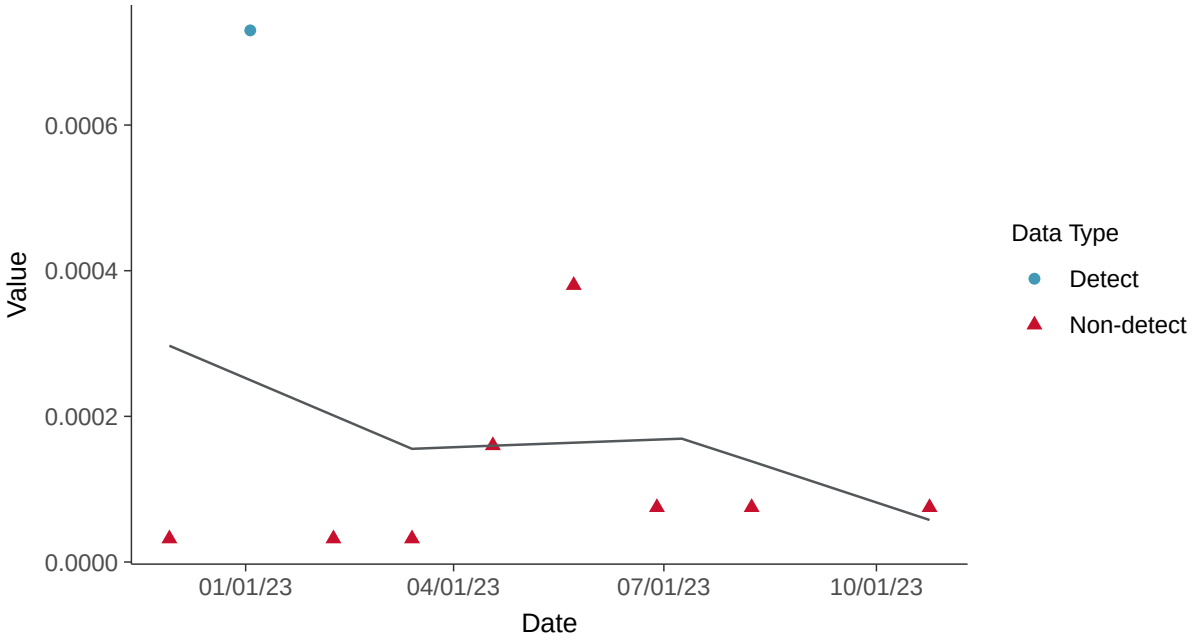
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-11 (mg/L)



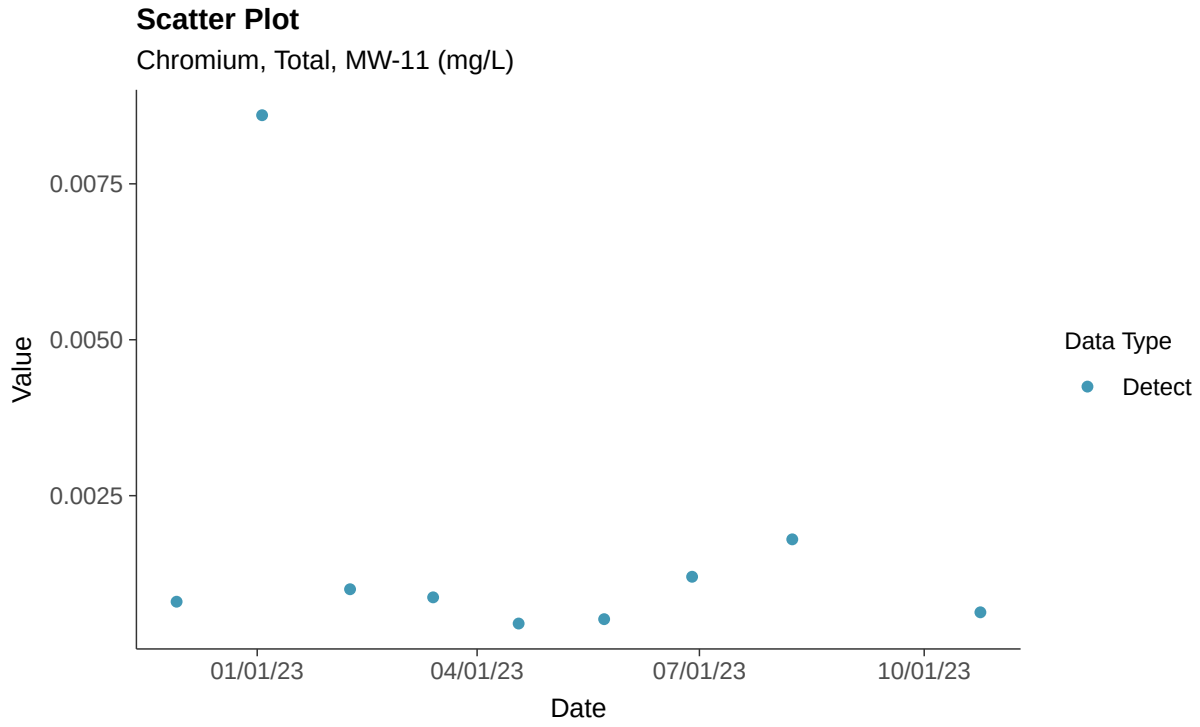
Trend Regression: Piecewise Linear-Linear-Linear

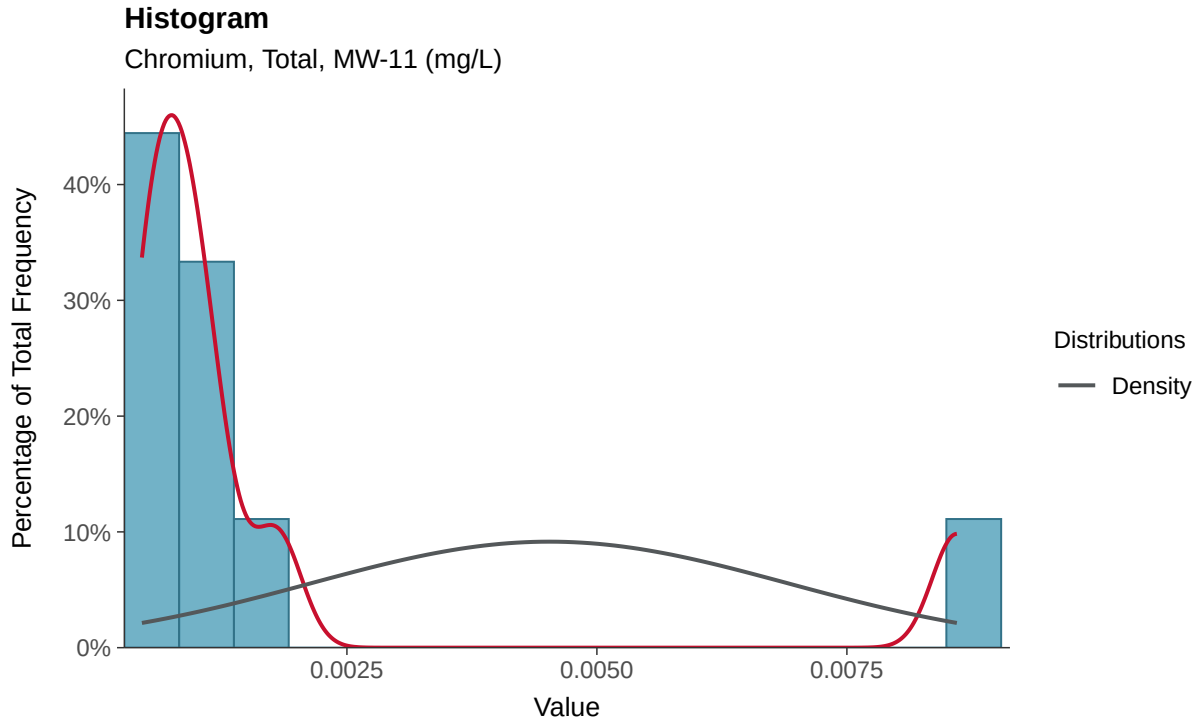
Cadmium, MW-11 (mg/L)



Appendix IV: Chromium, Total, MW-11

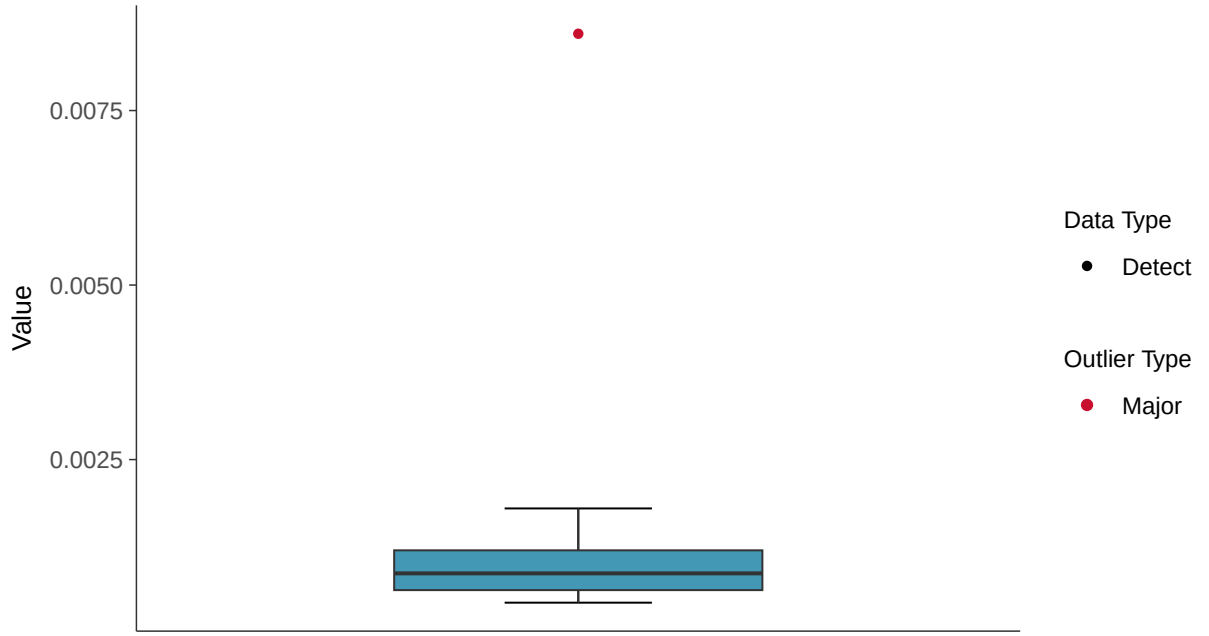
ID: 2_20_5_109





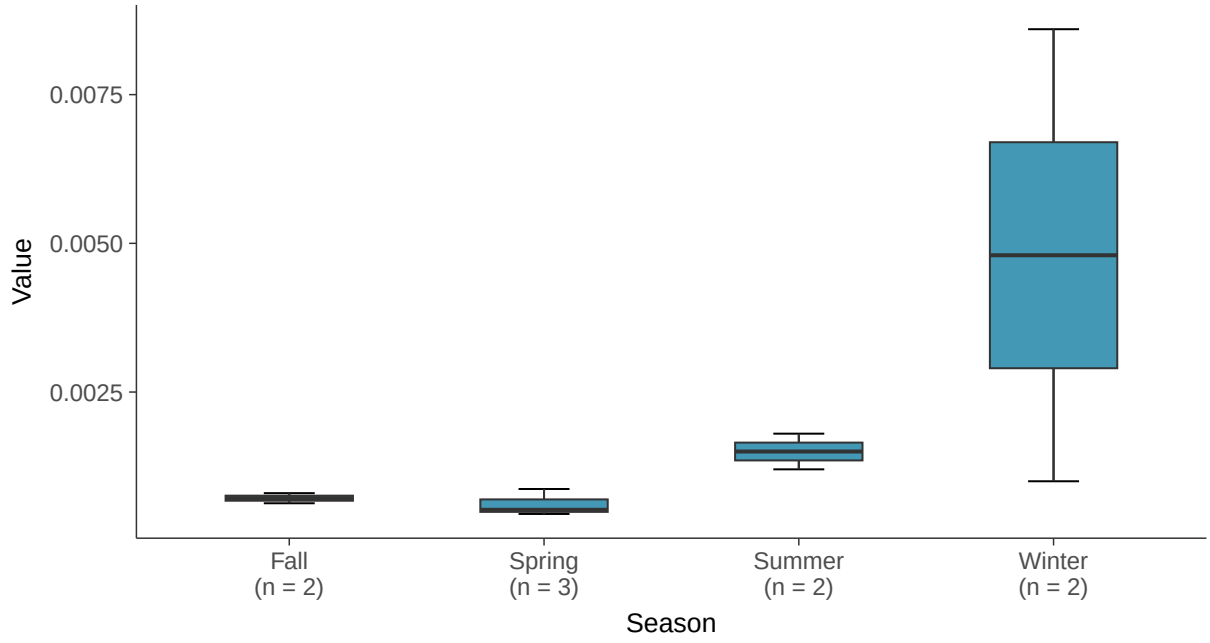
Boxplot

Chromium, Total, MW-11 (mg/L)



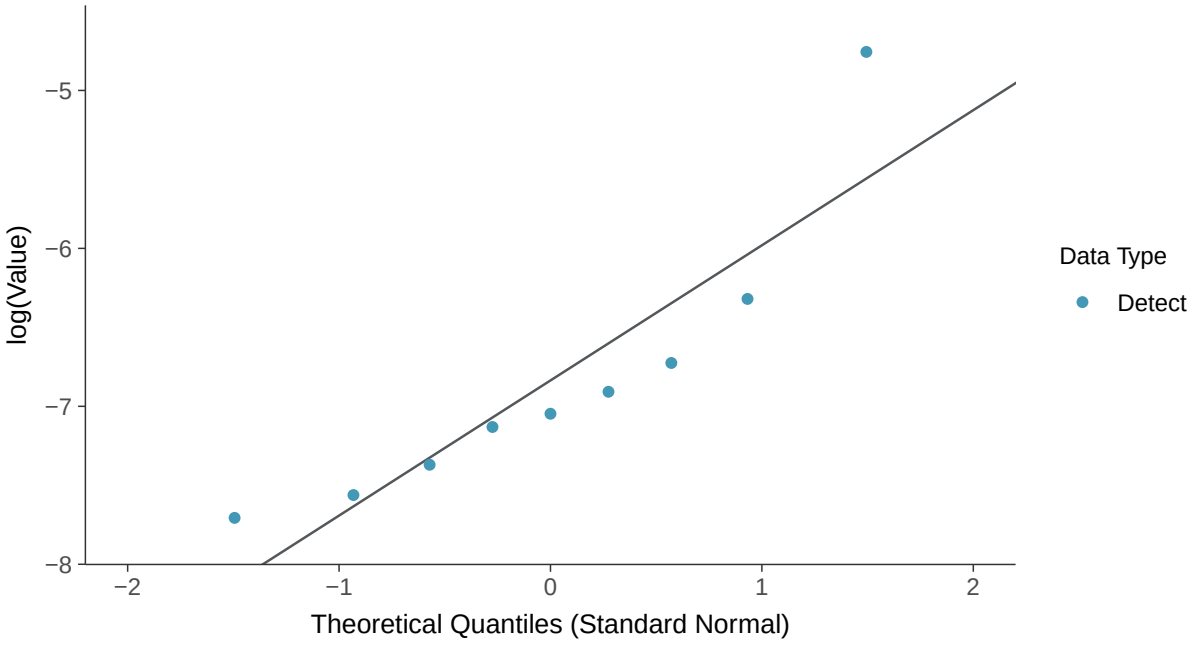
Boxplot by Season

Chromium, Total, MW-11 (mg/L)



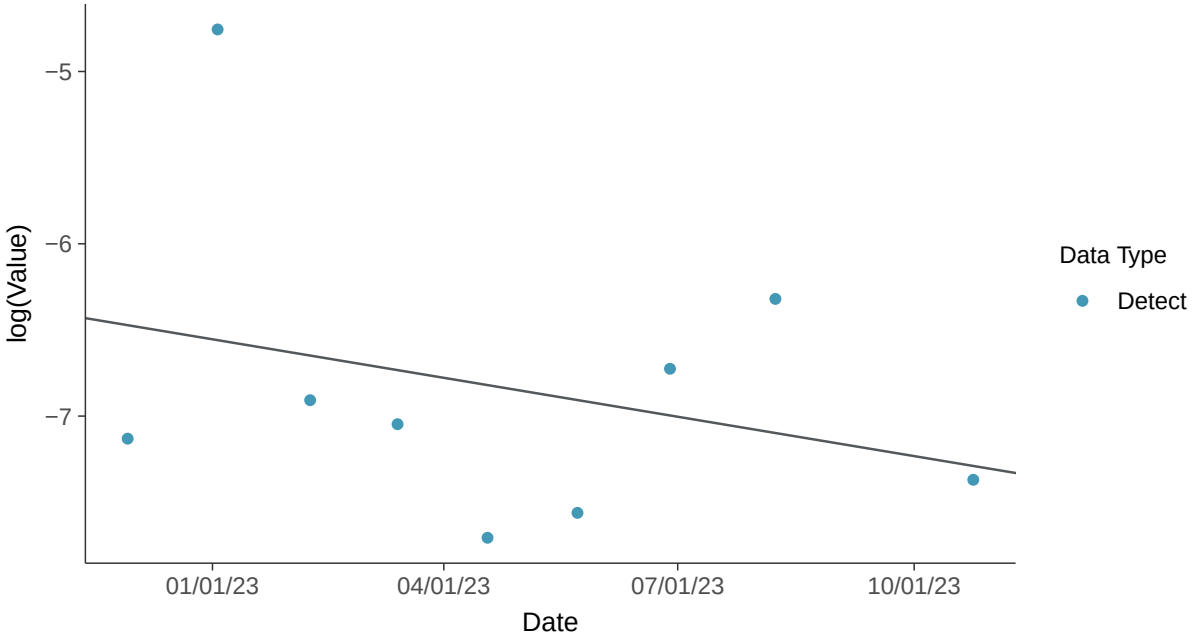
Lognormal Q-Q plot

Chromium, Total, MW-11 (mg/L)



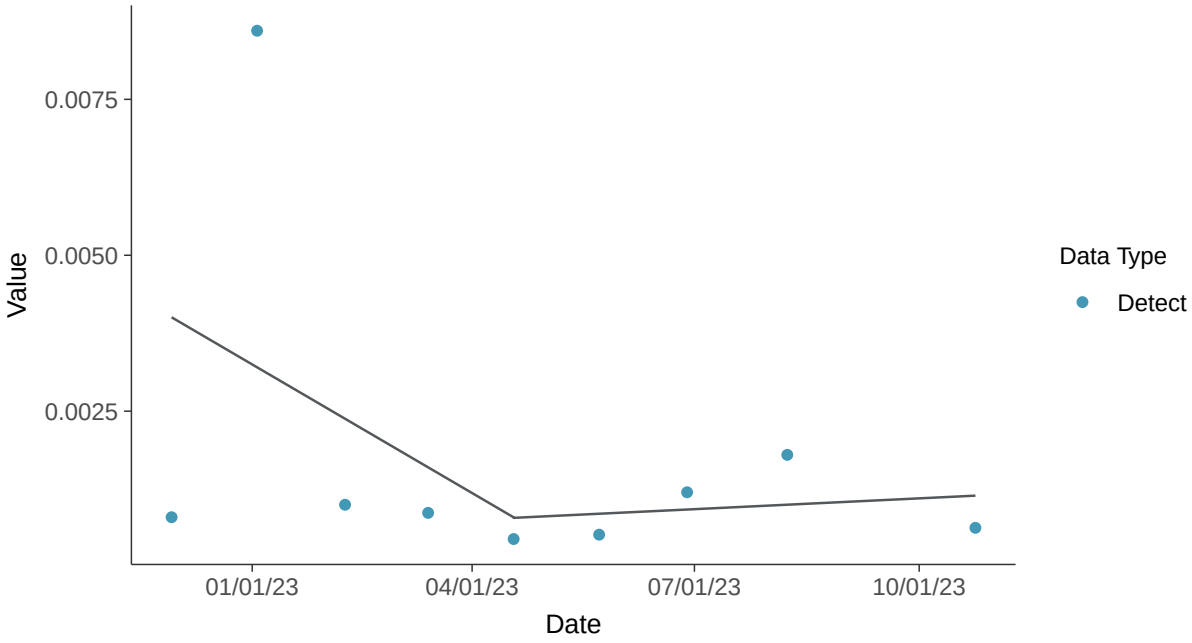
Trend Regression: Lognormal MLE

Chromium, Total, MW-11 (mg/L)



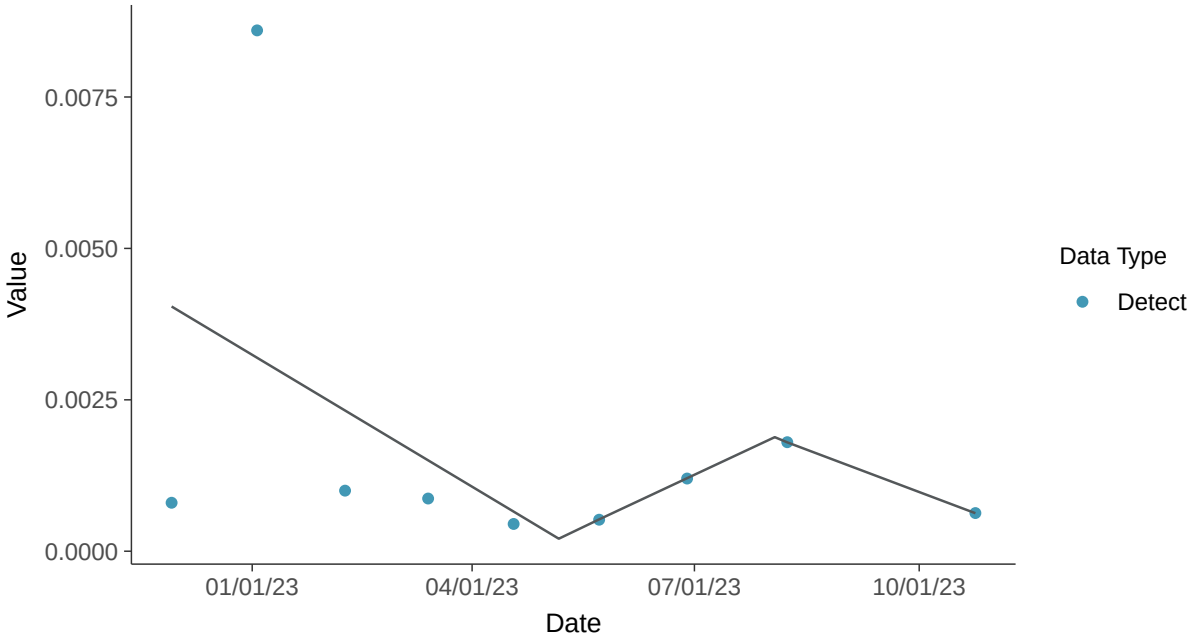
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-11 (mg/L)



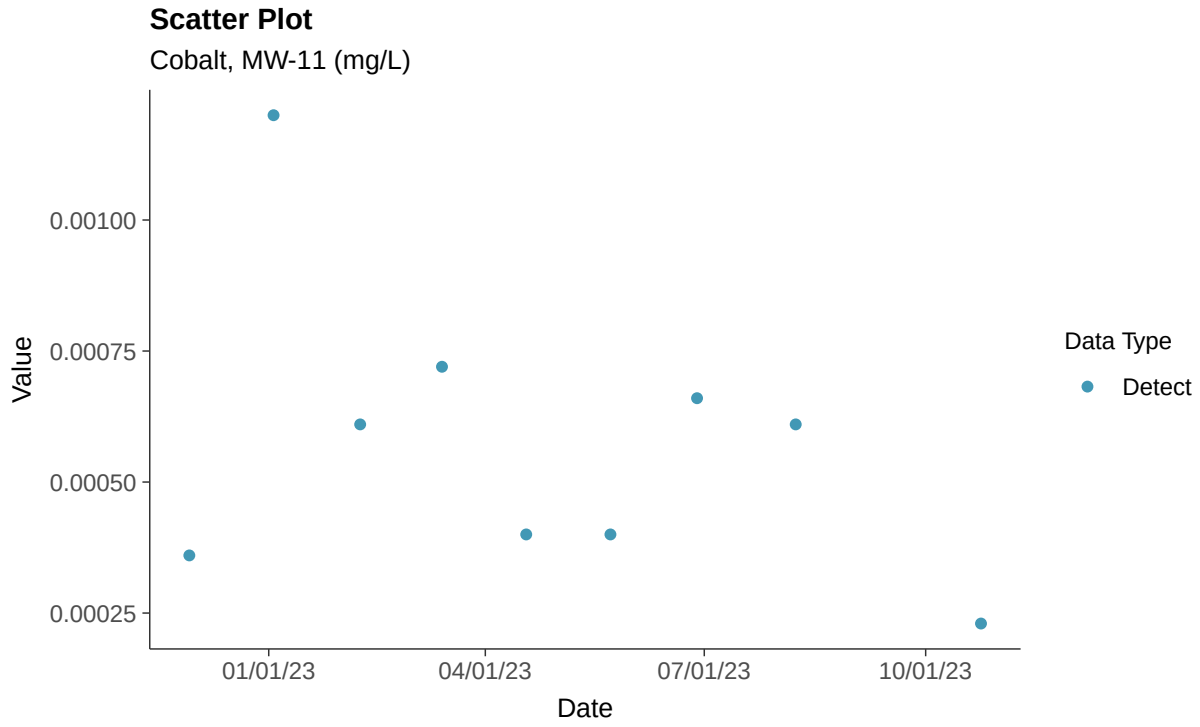
Trend Regression: Piecewise Linear-Linear-Linear

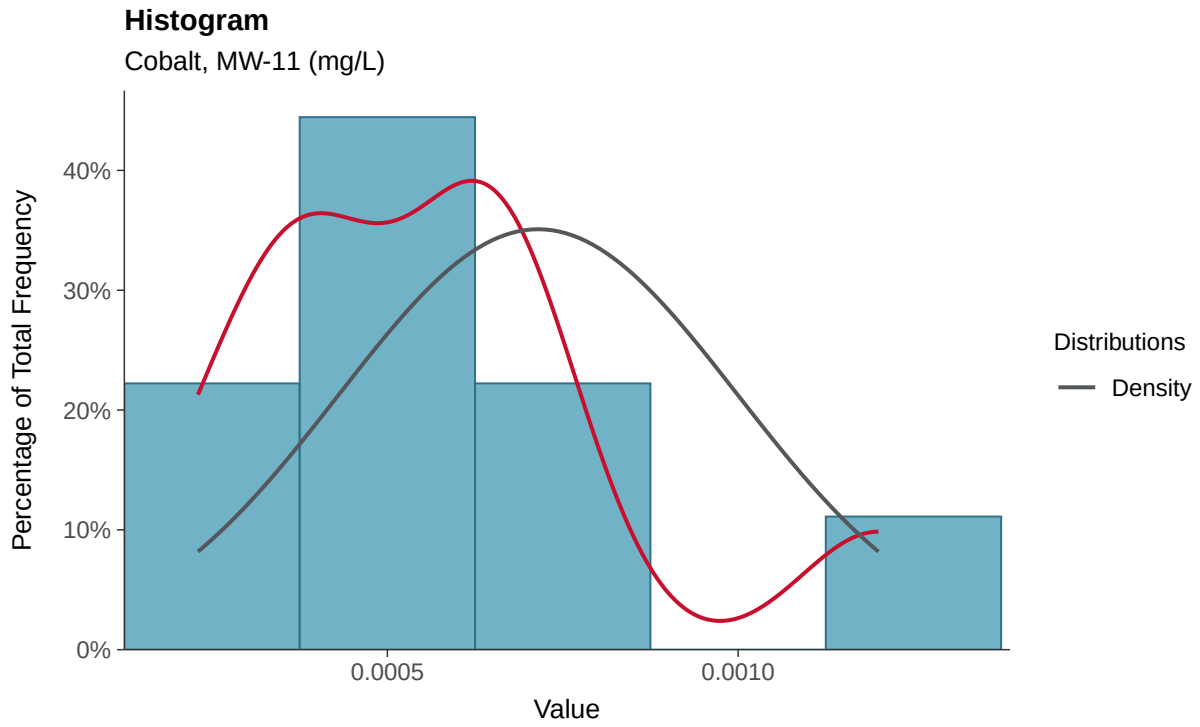
Chromium, Total, MW-11 (mg/L)



Appendix IV: Cobalt, MW-11

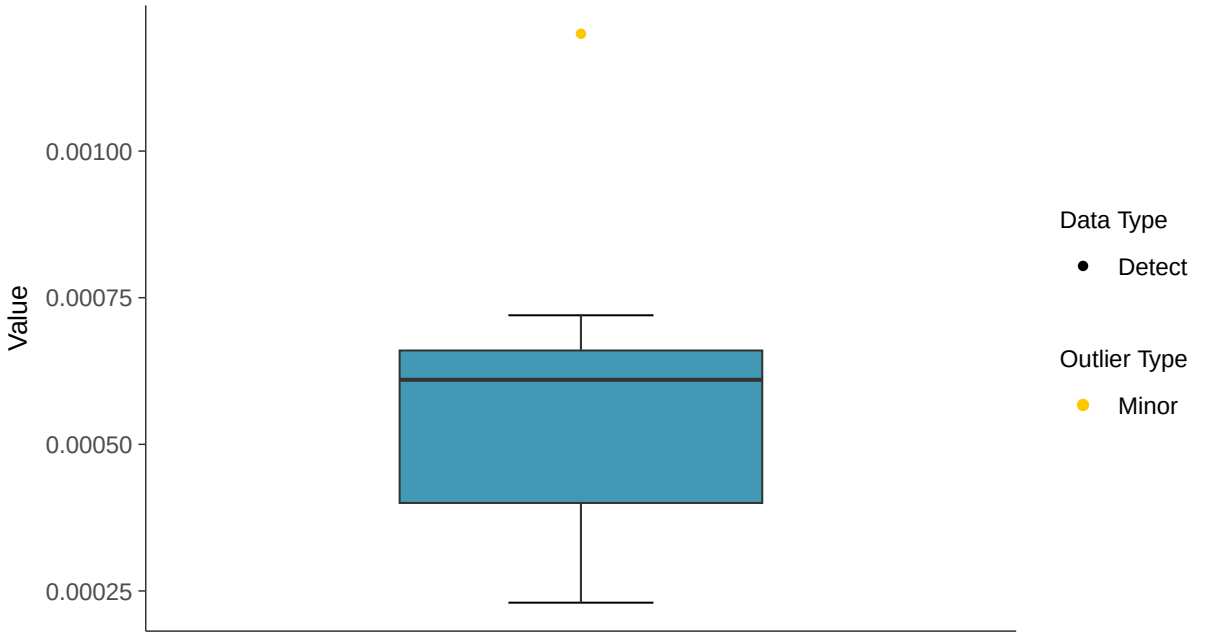
ID: 2_20_5_110





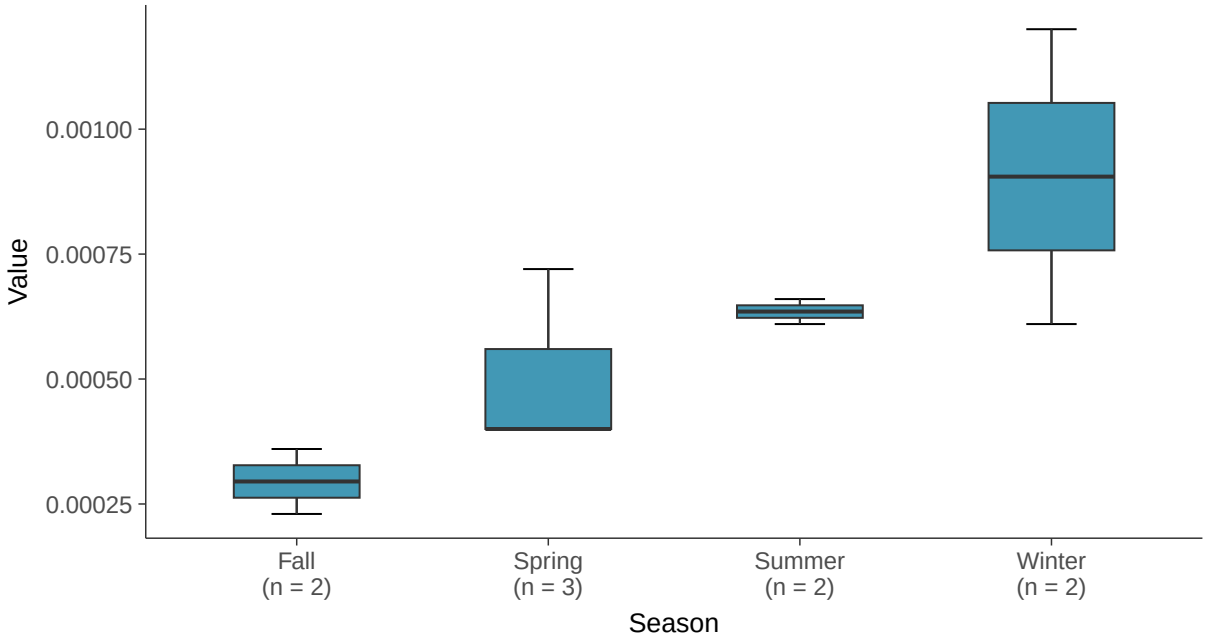
Boxplot

Cobalt, MW-11 (mg/L)



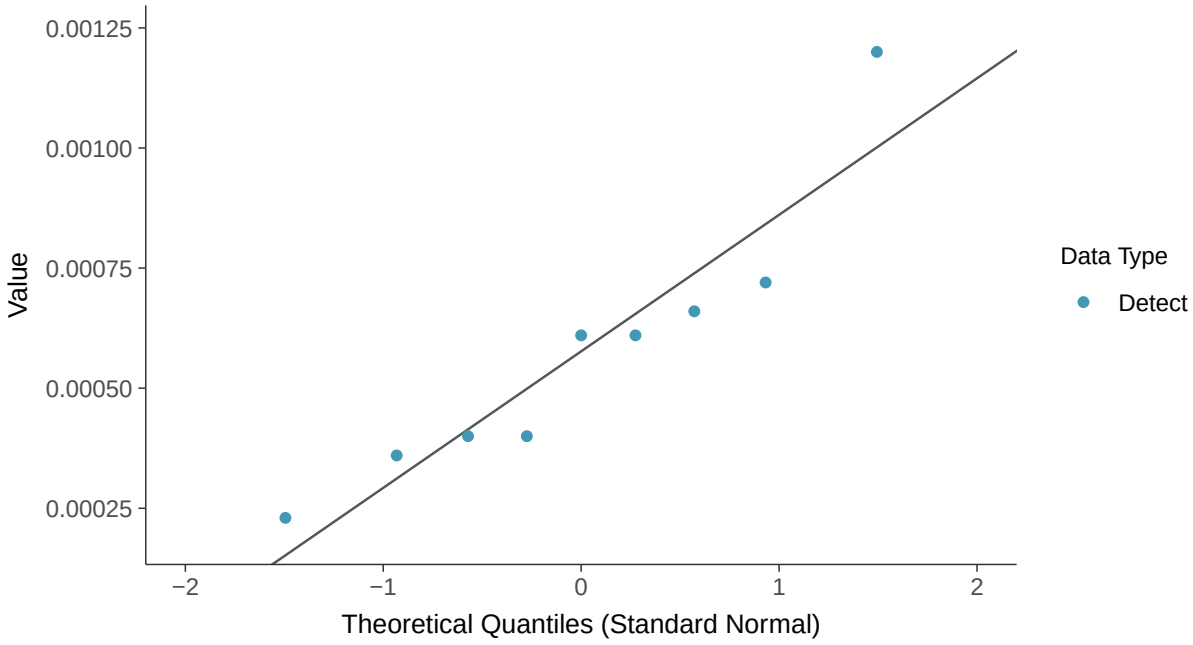
Boxplot by Season

Cobalt, MW-11 (mg/L)



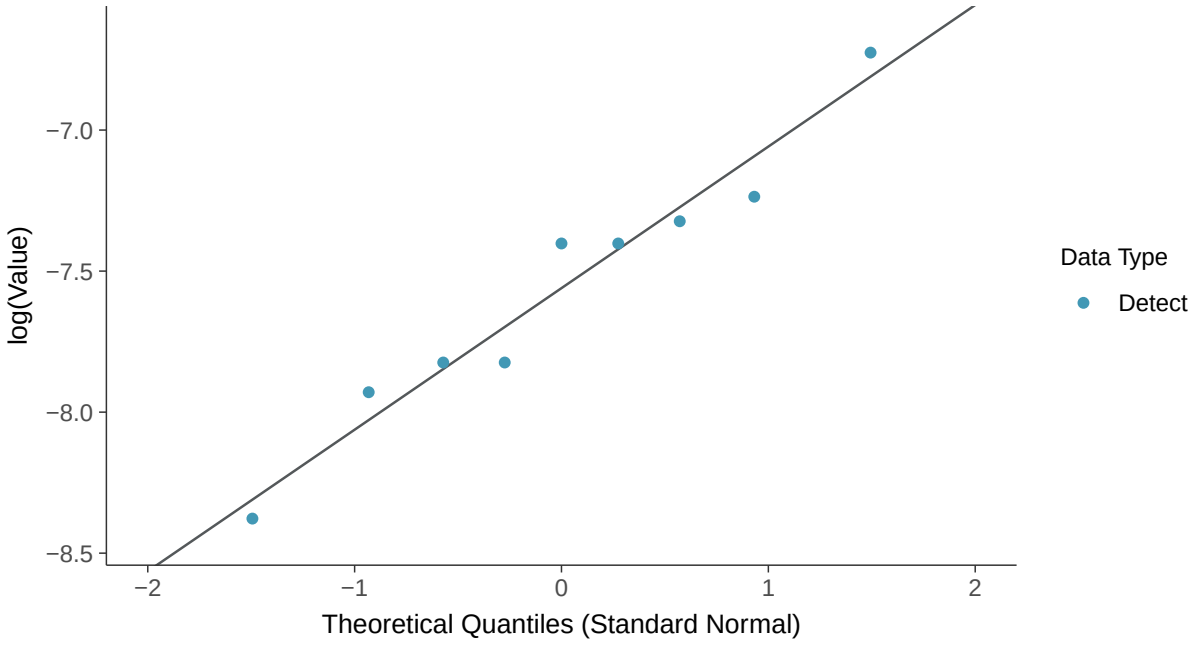
Normal Q-Q plot

Cobalt, MW-11 (mg/L)



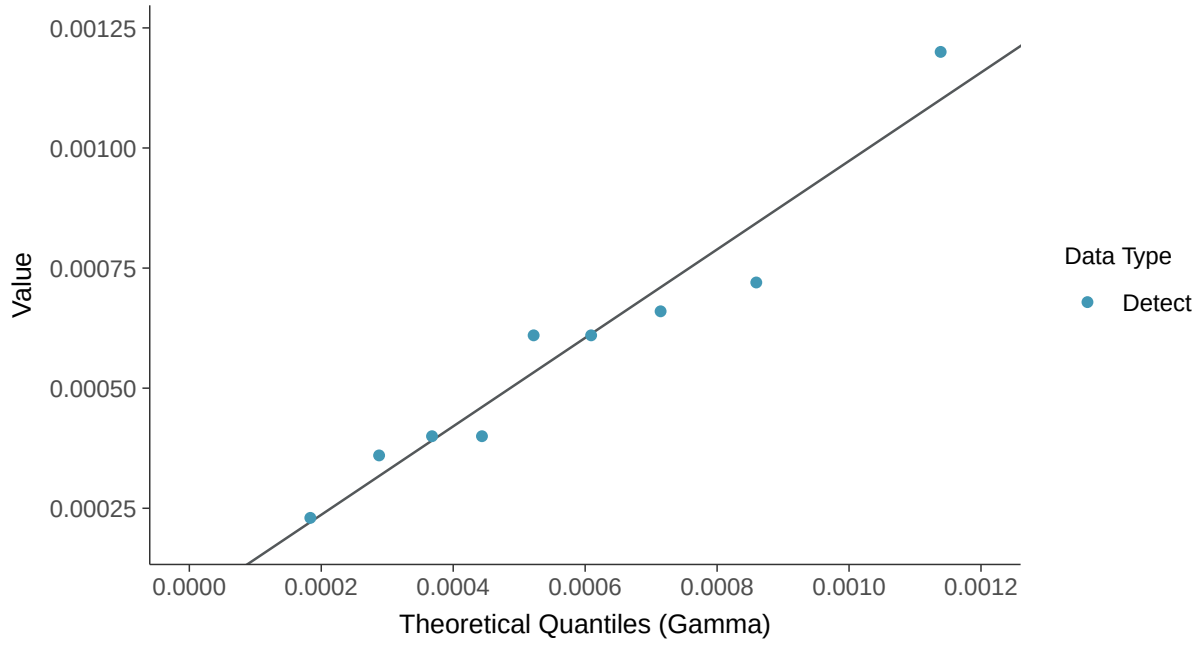
Lognormal Q-Q plot

Cobalt, MW-11 (mg/L)



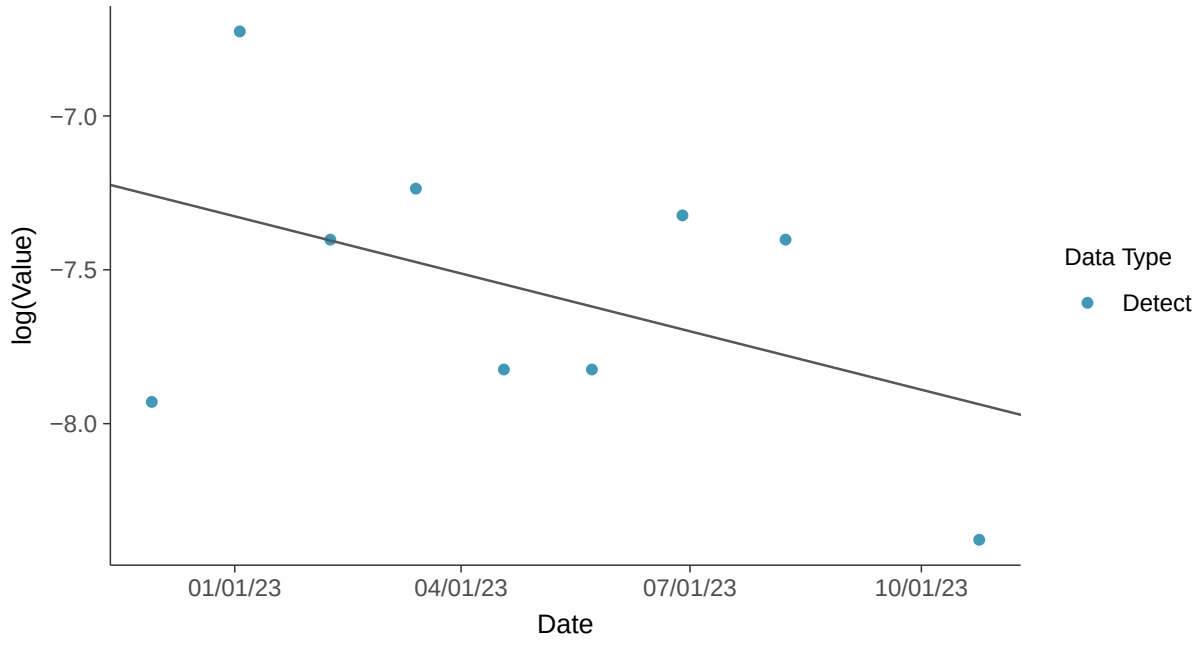
Gamma Q-Q plot

Cobalt, MW-11 (mg/L)



Trend Regression: Lognormal MLE

Cobalt, MW-11 (mg/L)

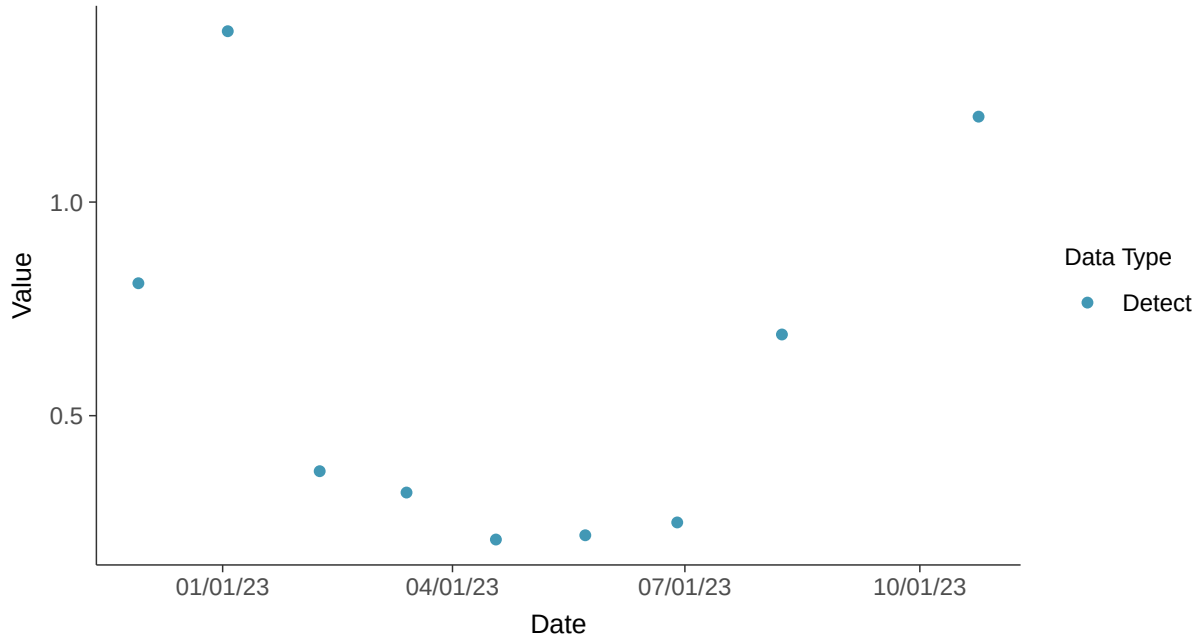


Appendix IV: Fluoride (App IV), MW-11

ID: 2_20_5_113

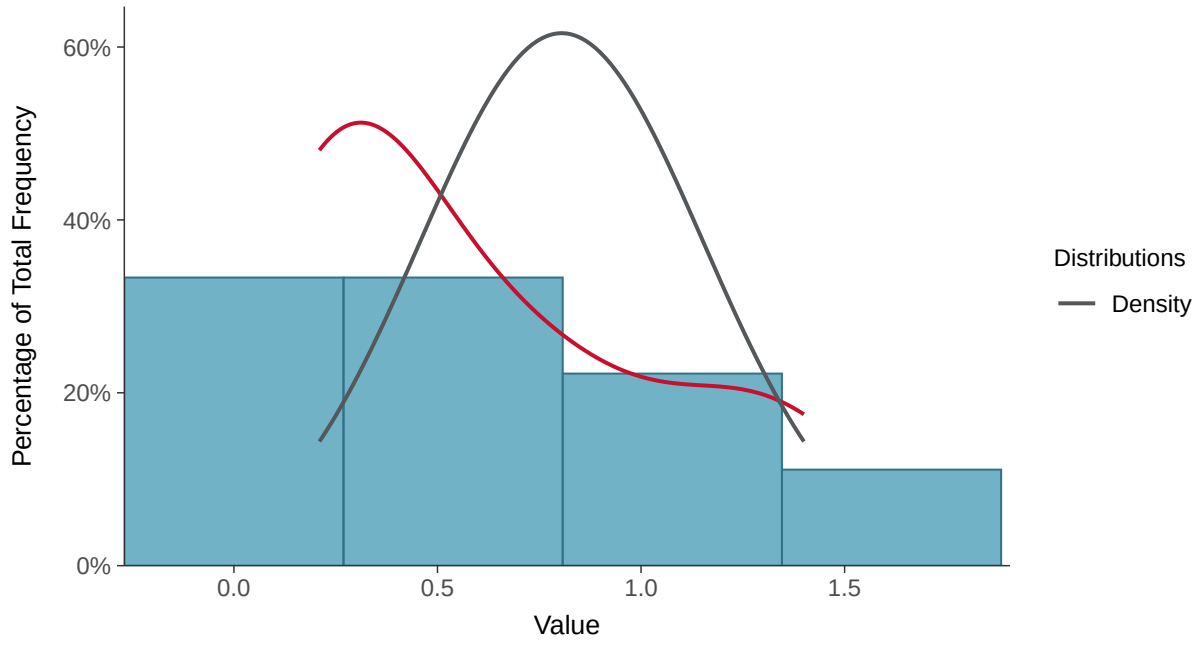
Scatter Plot

Fluoride (App IV), MW-11 (mg/L)



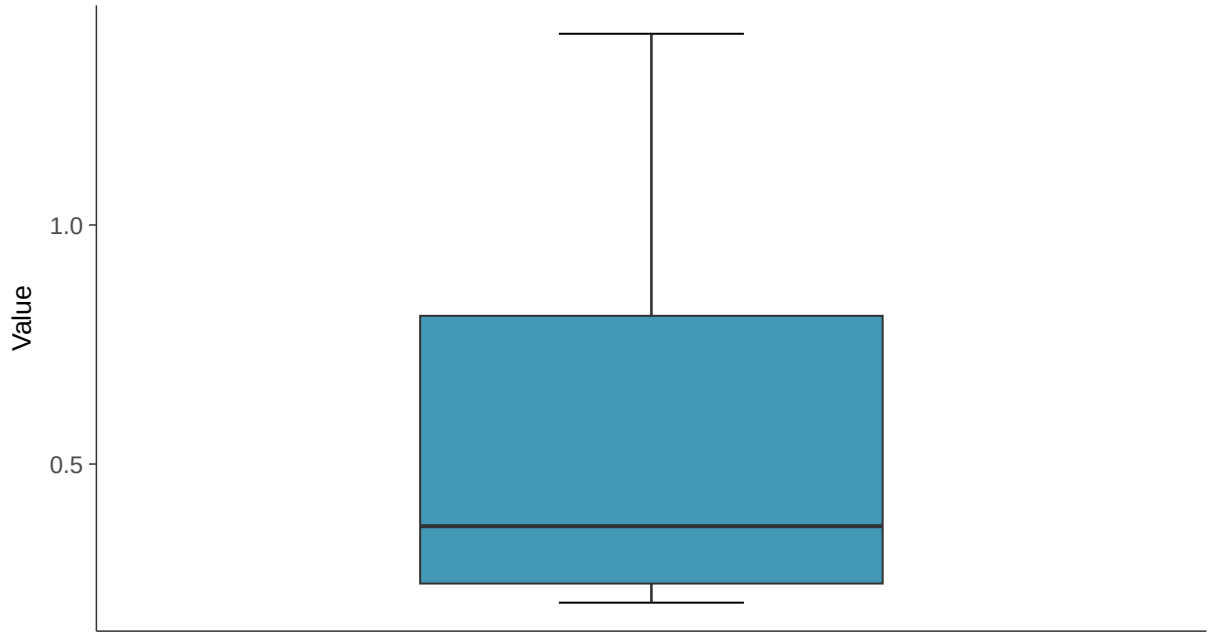
Histogram

Fluoride (App IV), MW-11 (mg/L)



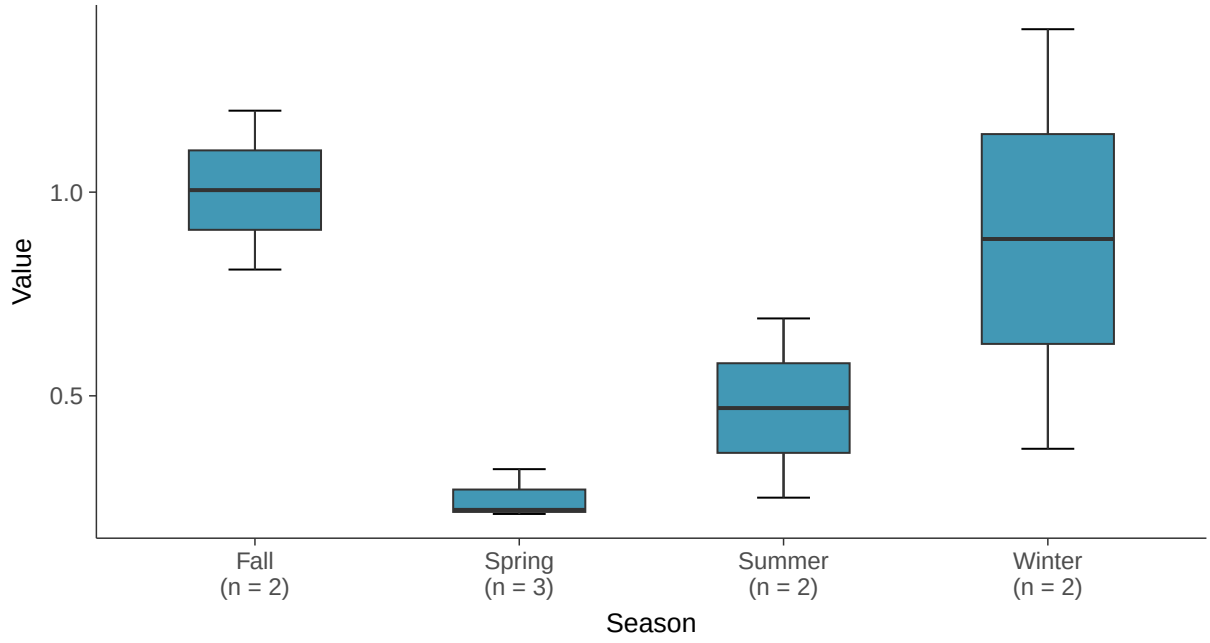
Boxplot

Fluoride (App IV), MW-11 (mg/L)



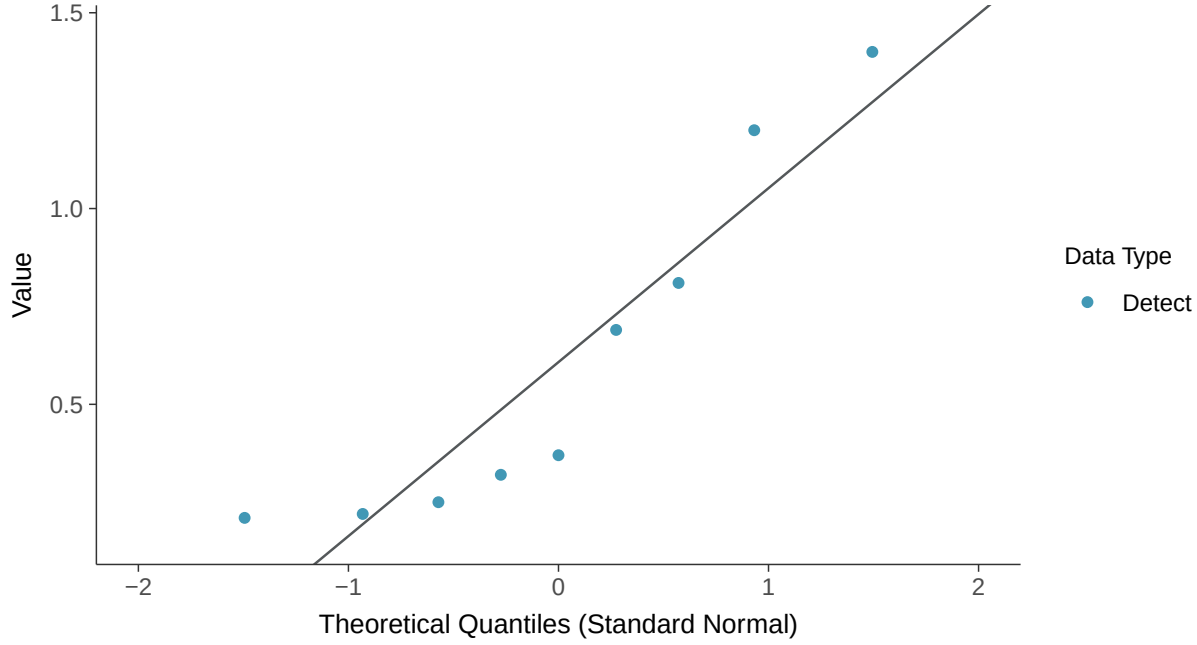
Boxplot by Season

Fluoride (App IV), MW-11 (mg/L)



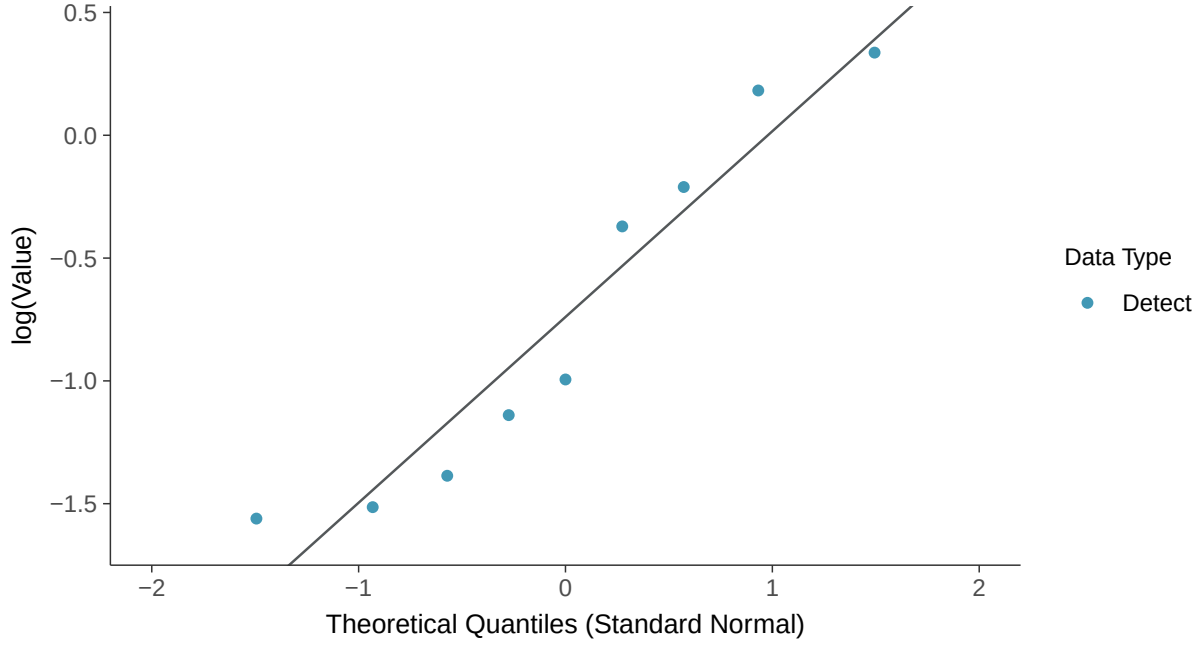
Normal Q-Q plot

Fluoride (App IV), MW-11 (mg/L)



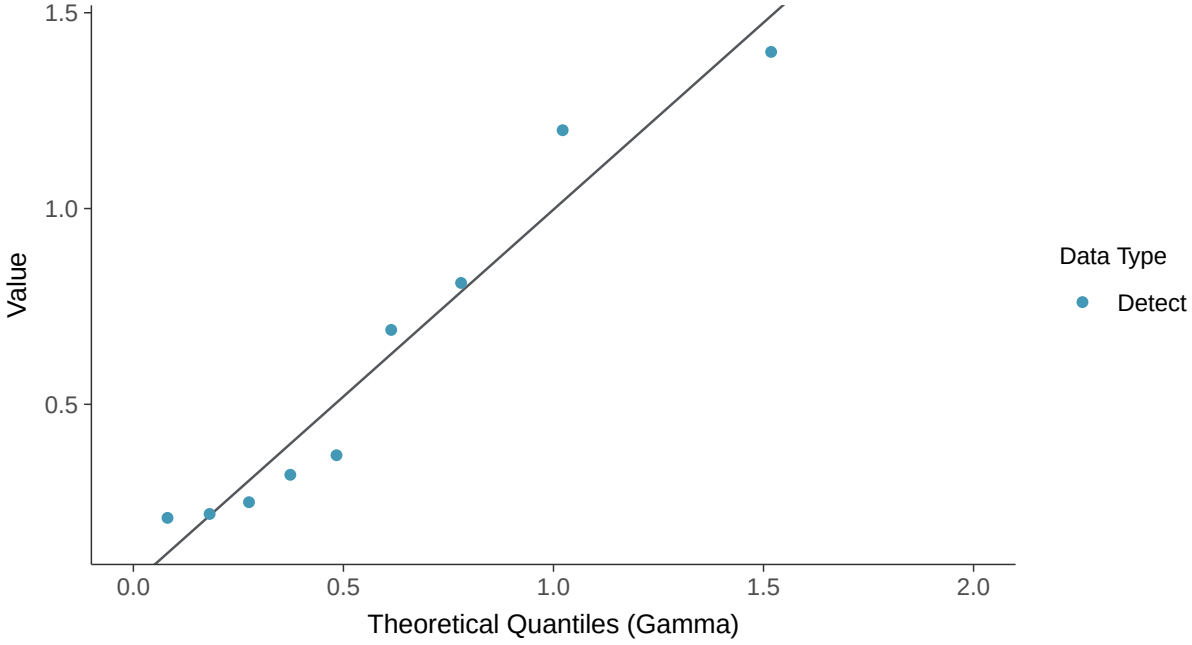
Lognormal Q-Q plot

Fluoride (App IV), MW-11 (mg/L)



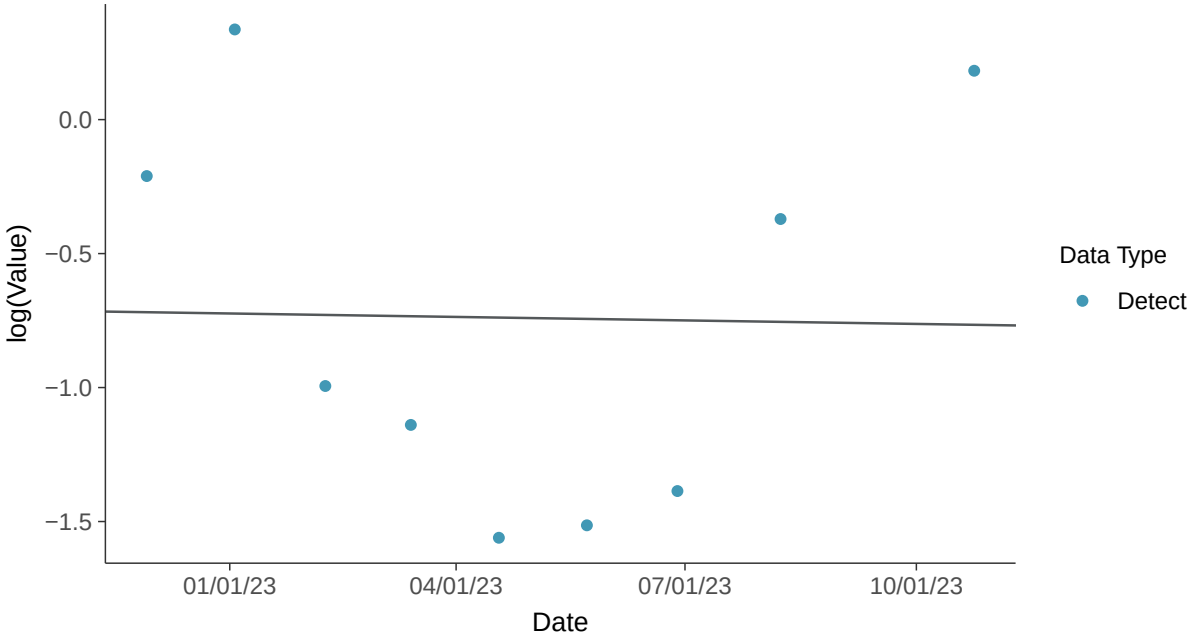
Gamma Q-Q plot

Fluoride (App IV), MW-11 (mg/L)



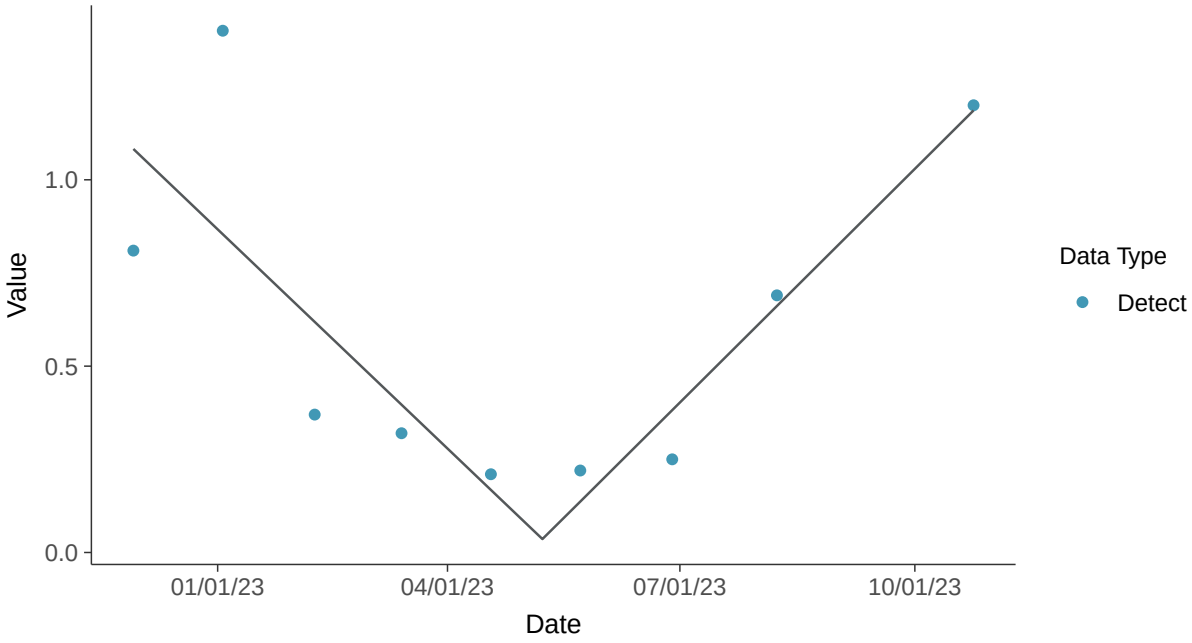
Trend Regression: Lognormal MLE

Fluoride (App IV), MW-11 (mg/L)



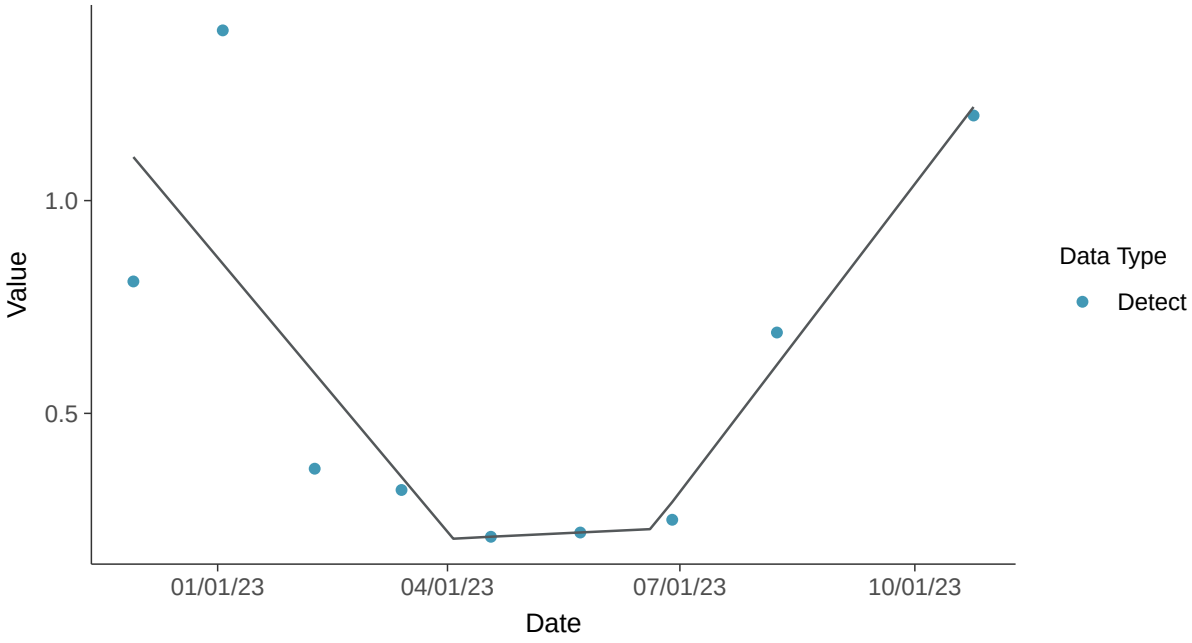
Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-11 (mg/L)



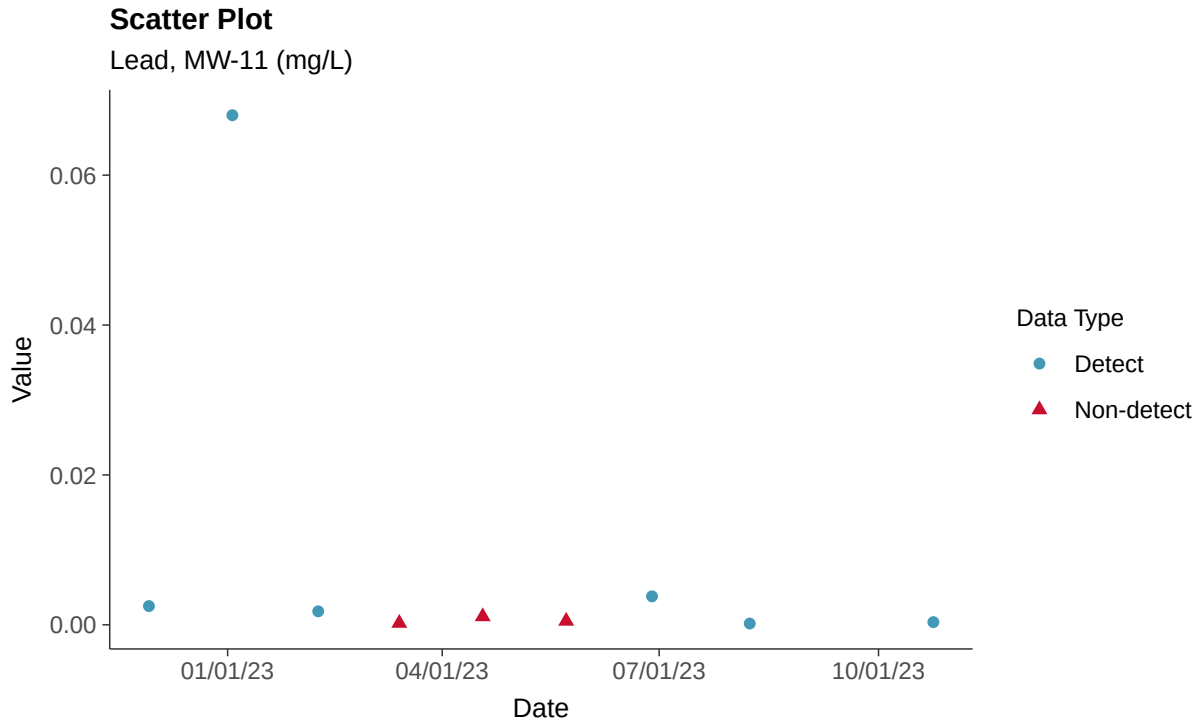
Trend Regression: Piecewise Linear-Linear-Linear

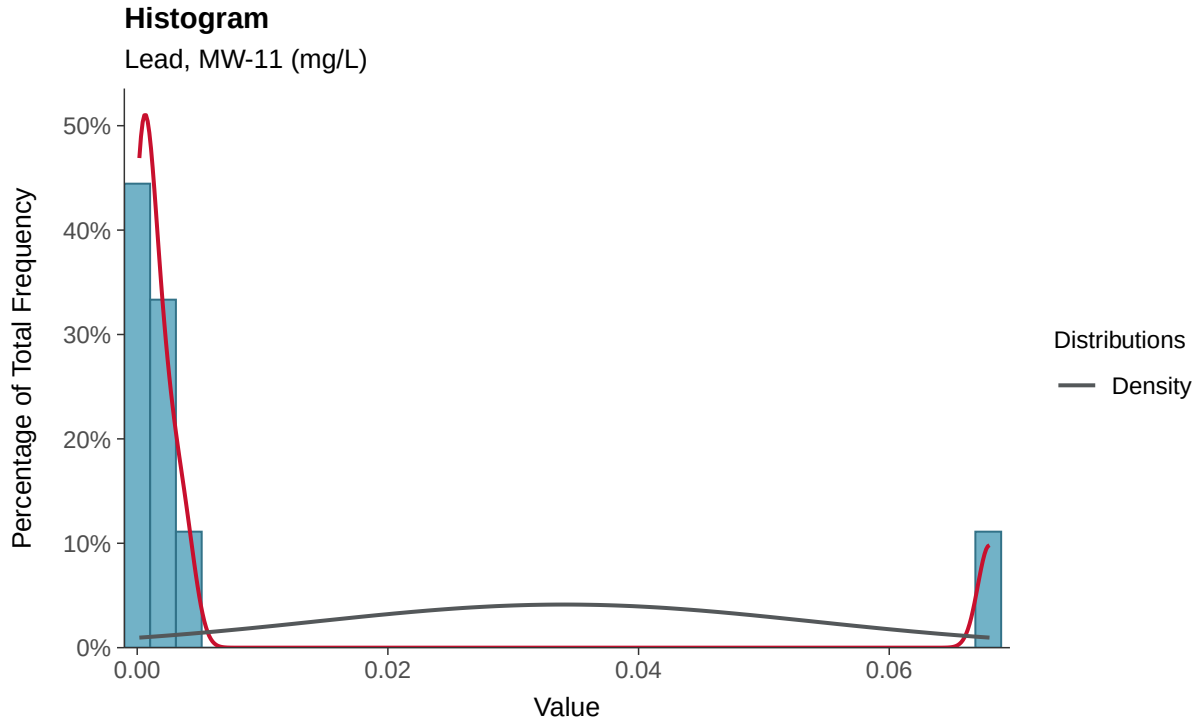
Fluoride (App IV), MW-11 (mg/L)



Appendix IV: Lead, MW-11

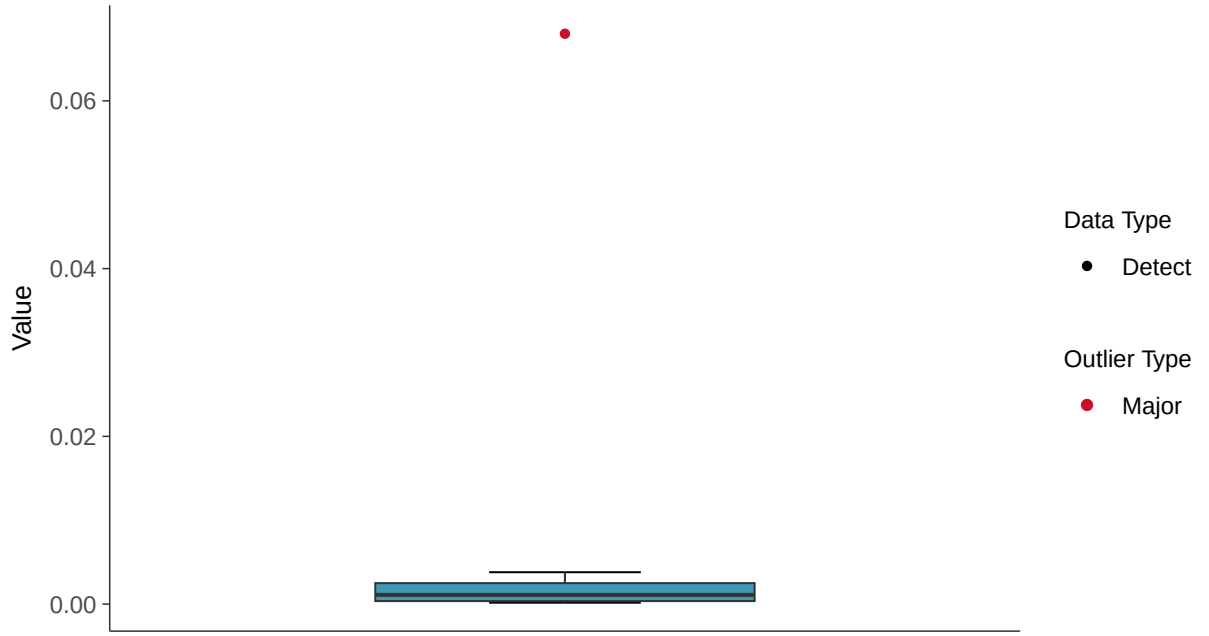
ID: 2_20_5_115





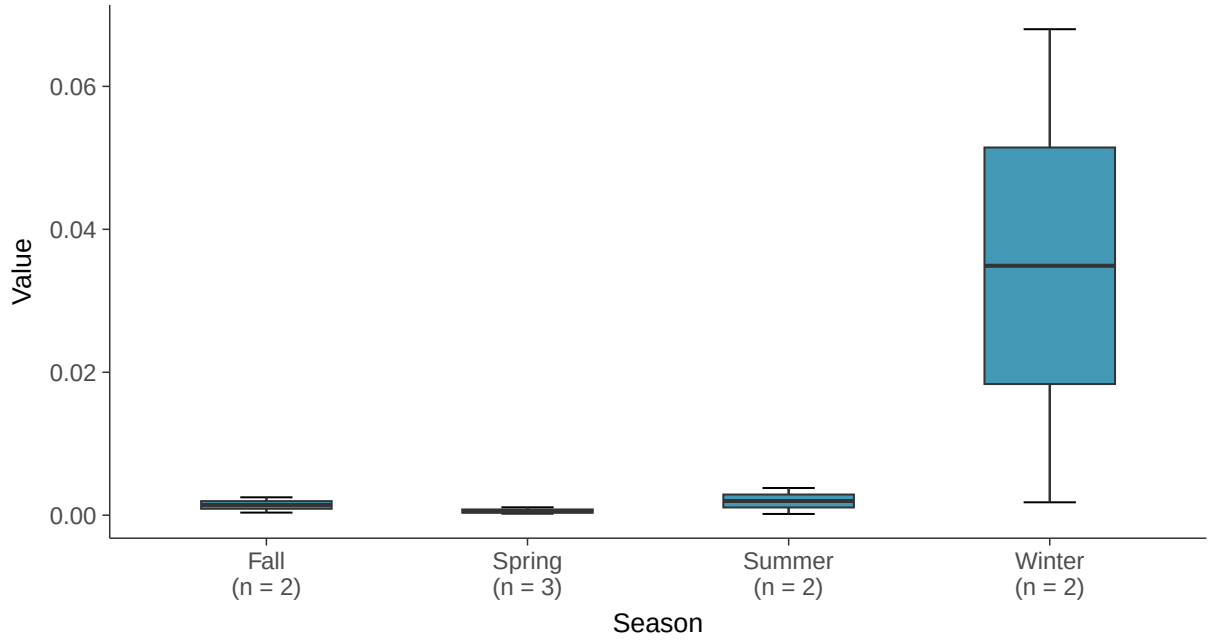
Boxplot

Lead, MW-11 (mg/L)



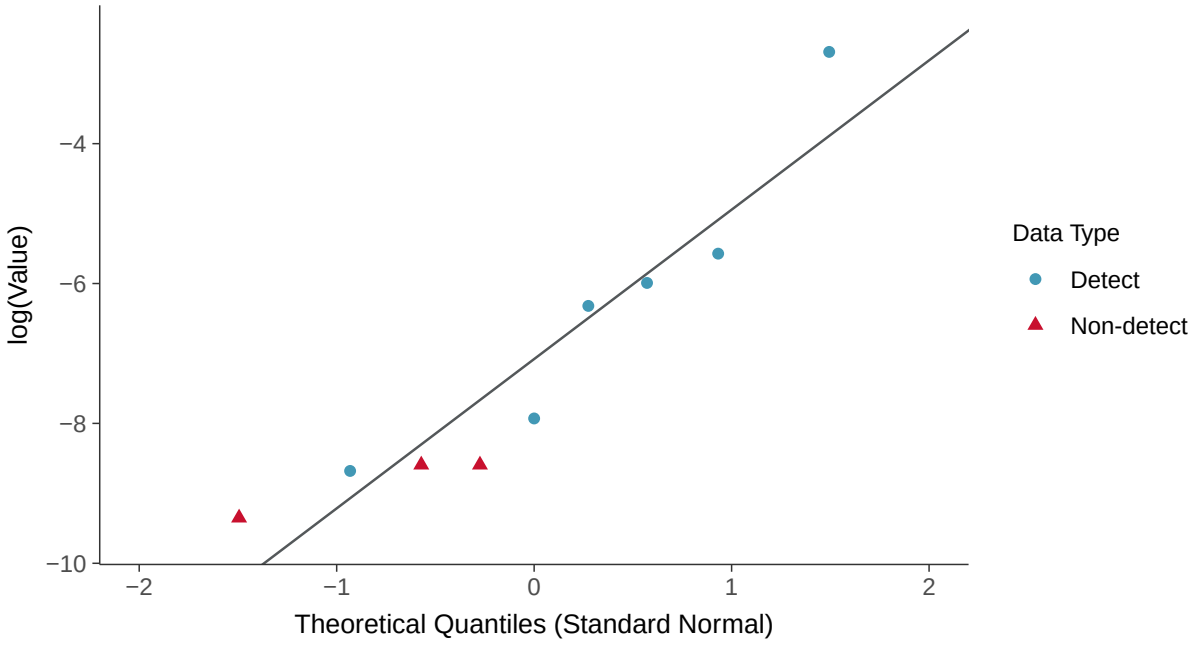
Boxplot by Season

Lead, MW-11 (mg/L)



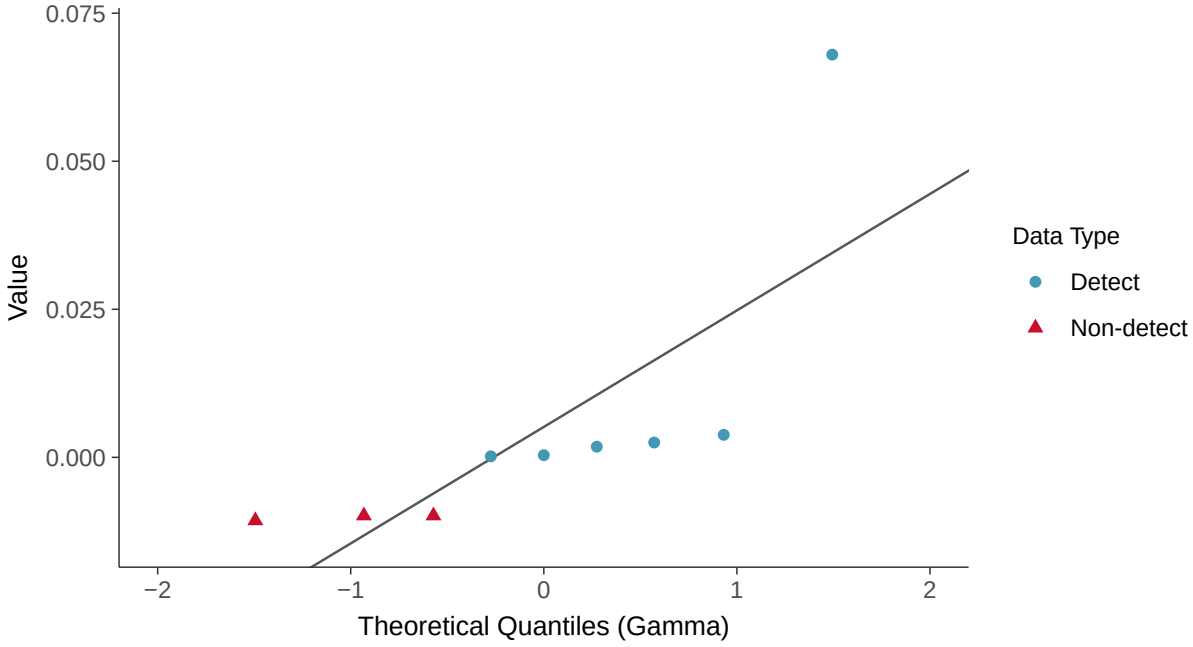
Lognormal Q-Q plot using ROS Imputed Estimates

Lead, MW-11 (mg/L)



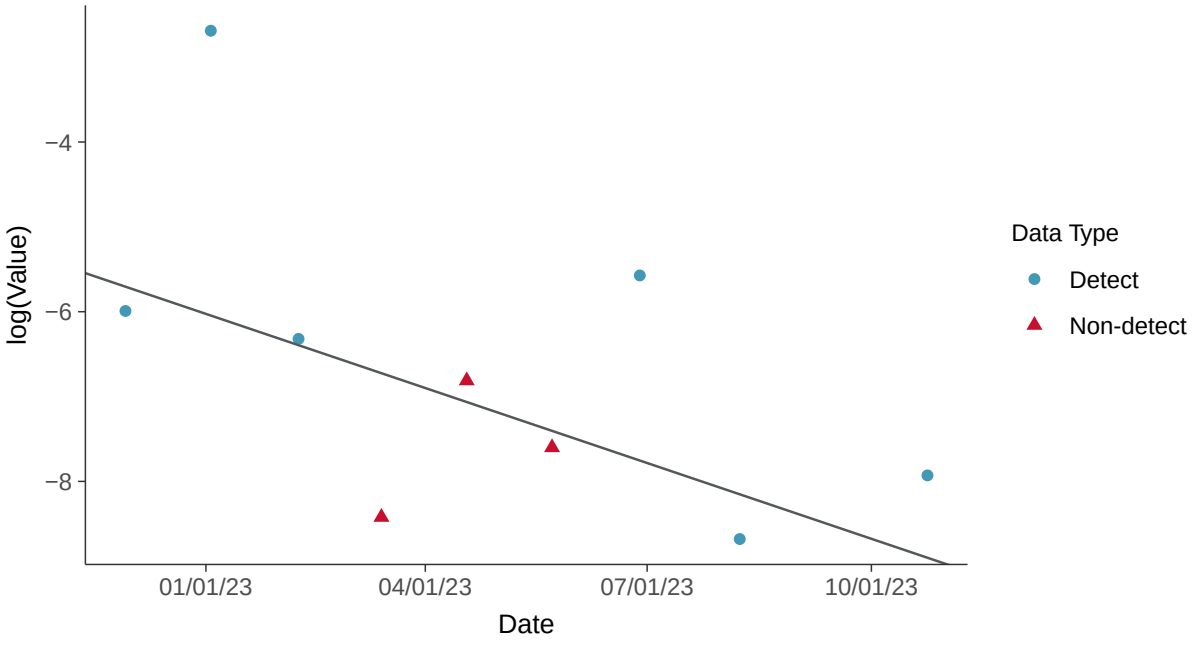
Gamma Q-Q plot using ROS Imputed Estimates

Lead, MW-11 (mg/L)



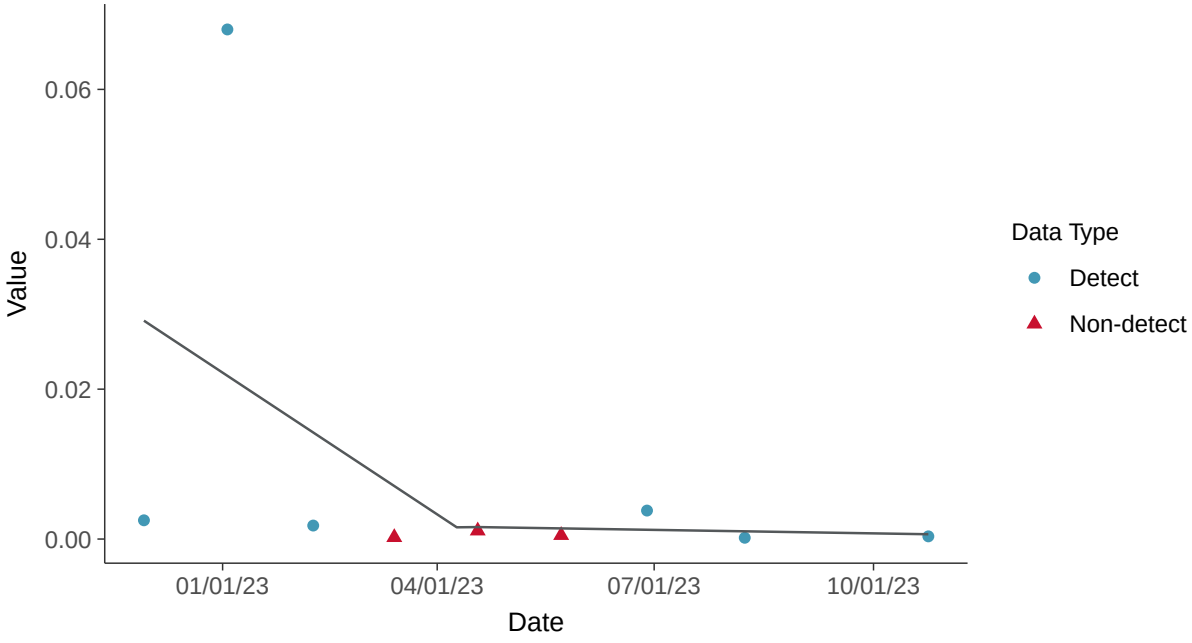
Trend Regression: Lognormal MLE

Lead, MW-11 (mg/L)



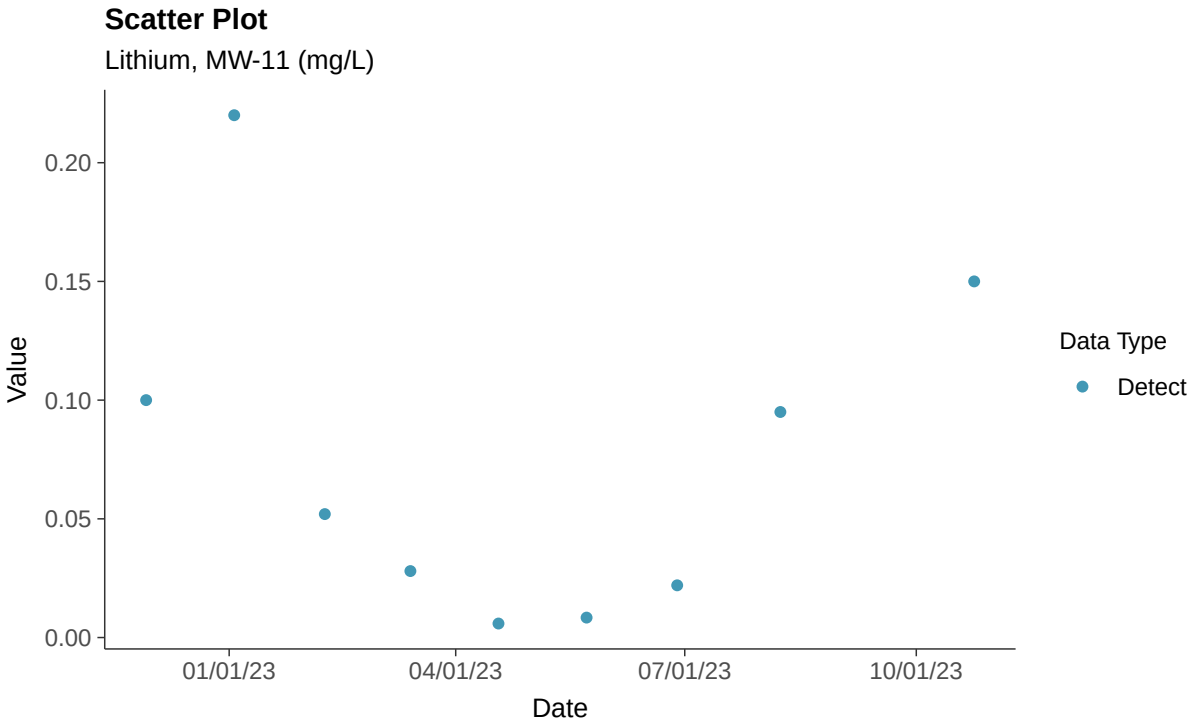
Trend Regression: Piecewise Linear-Linear

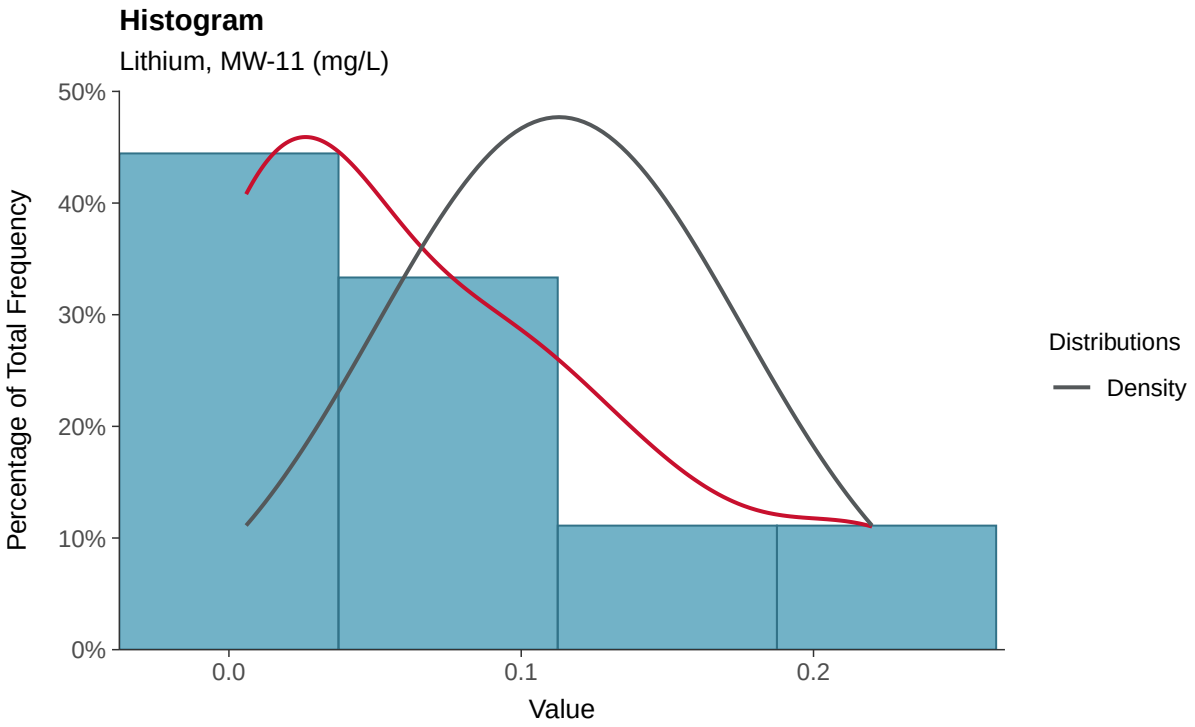
Lead, MW-11 (mg/L)



Appendix IV: Lithium, MW-11

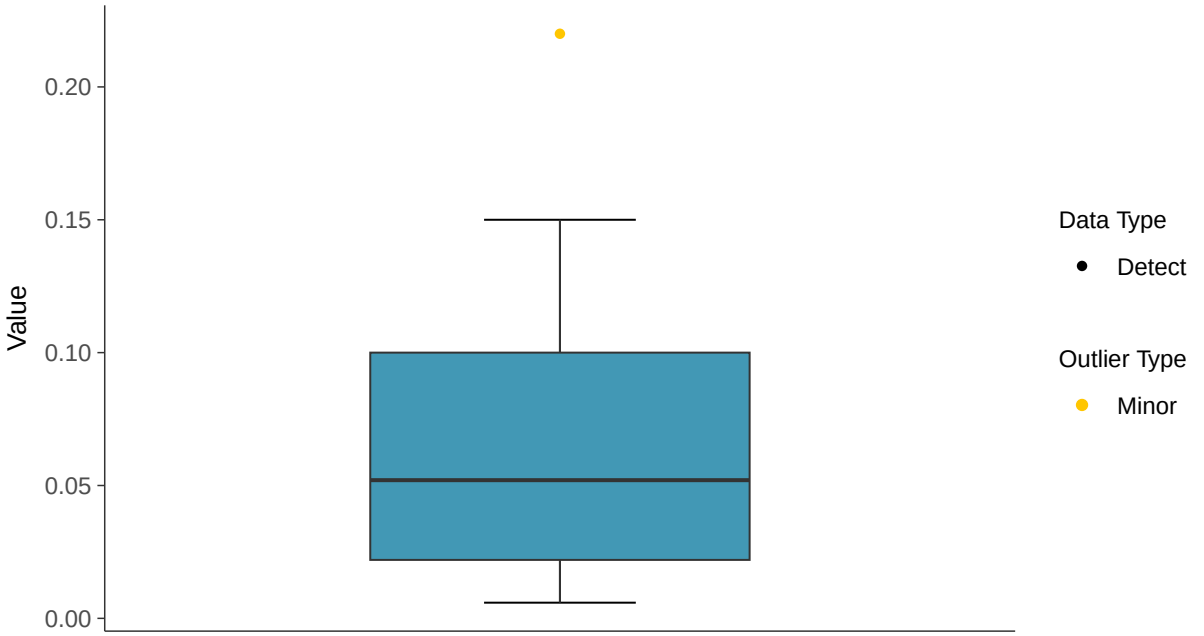
ID: 2_20_5_116





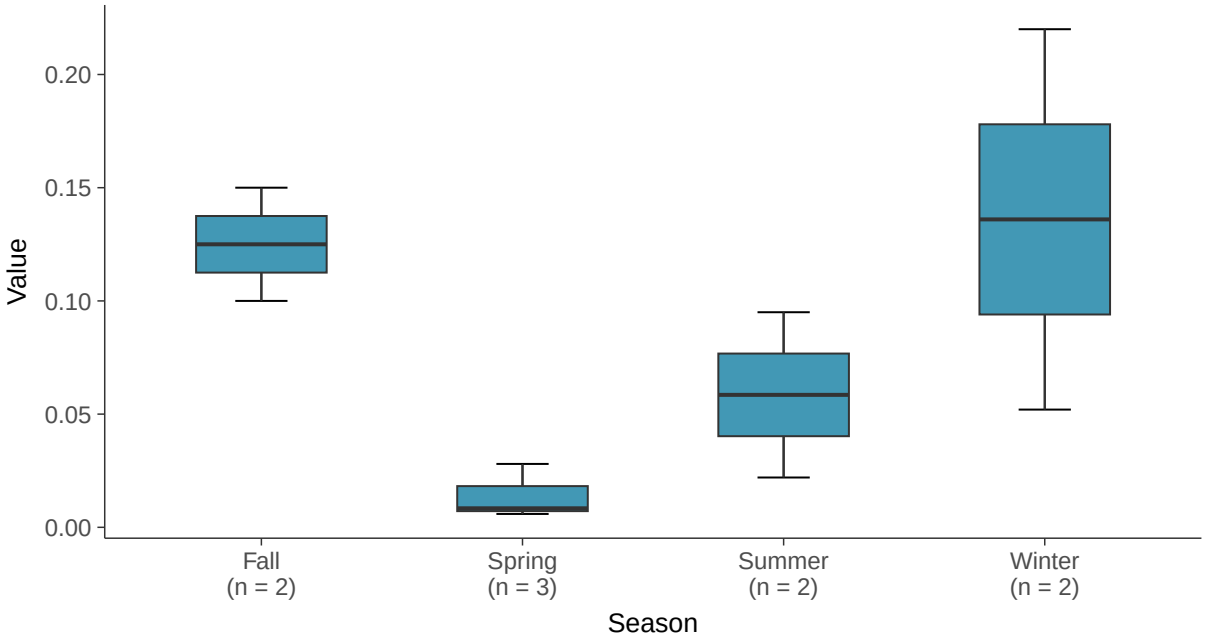
Boxplot

Lithium, MW-11 (mg/L)



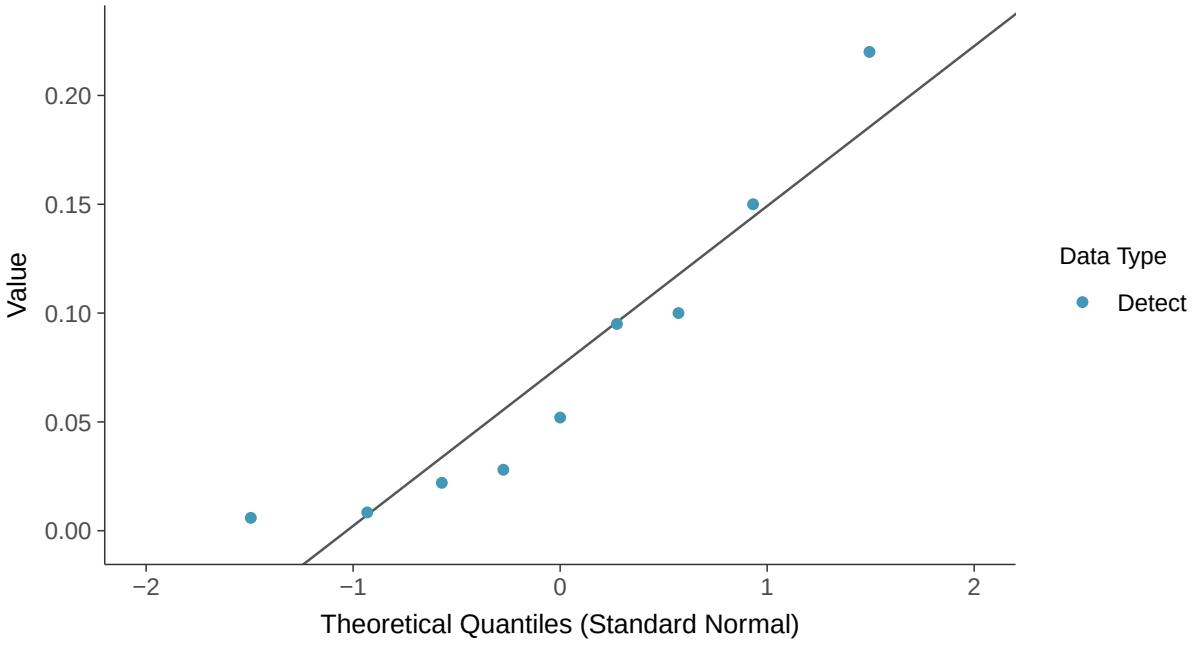
Boxplot by Season

Lithium, MW-11 (mg/L)



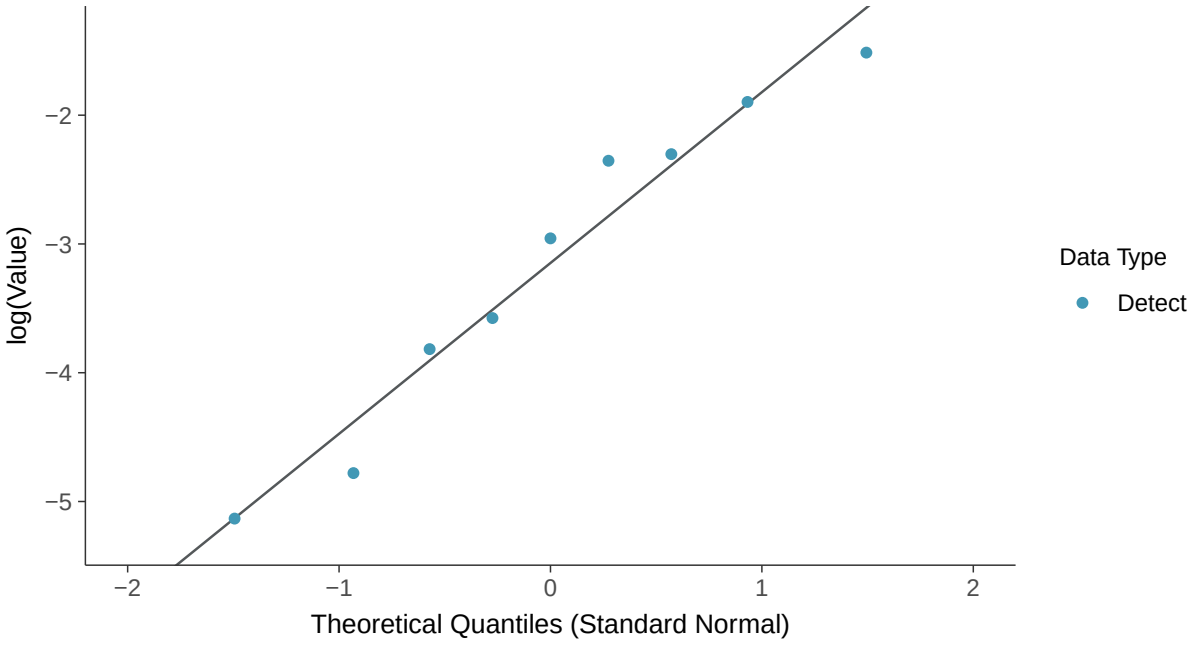
Normal Q-Q plot

Lithium, MW-11 (mg/L)



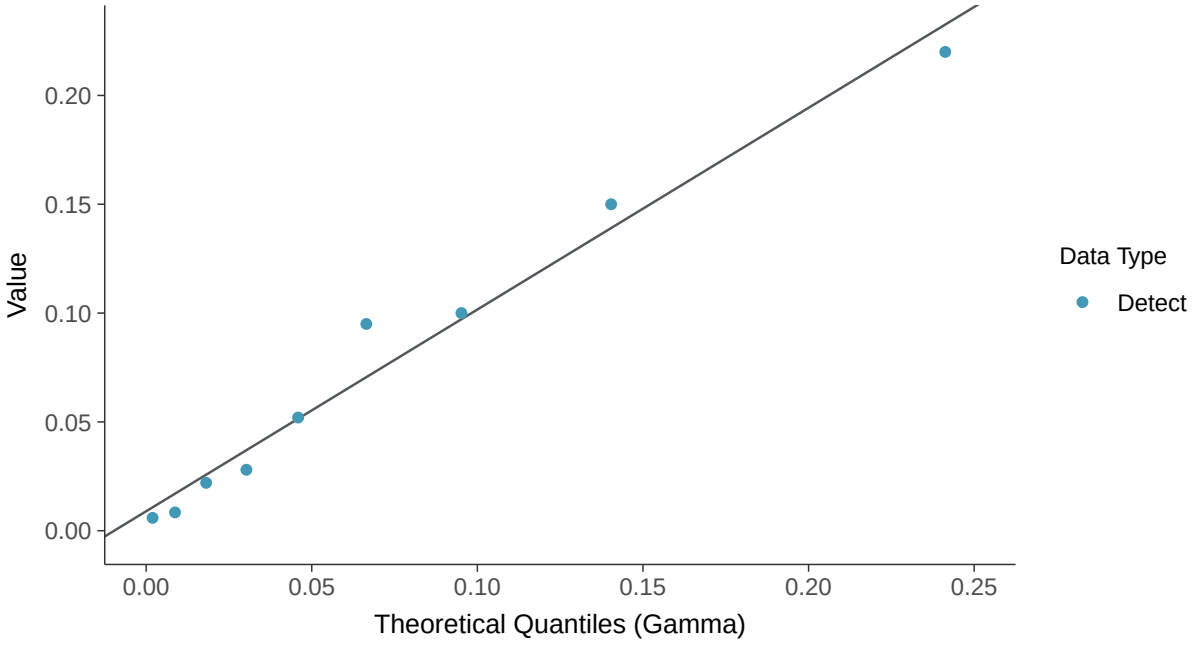
Lognormal Q-Q plot

Lithium, MW-11 (mg/L)



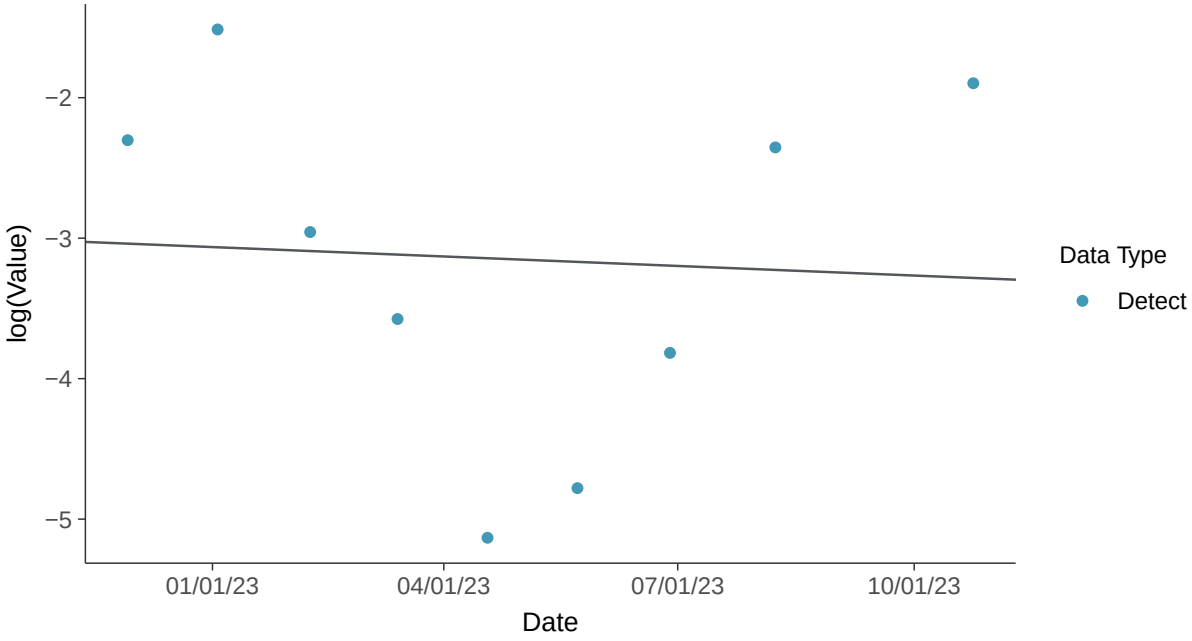
Gamma Q-Q plot

Lithium, MW-11 (mg/L)



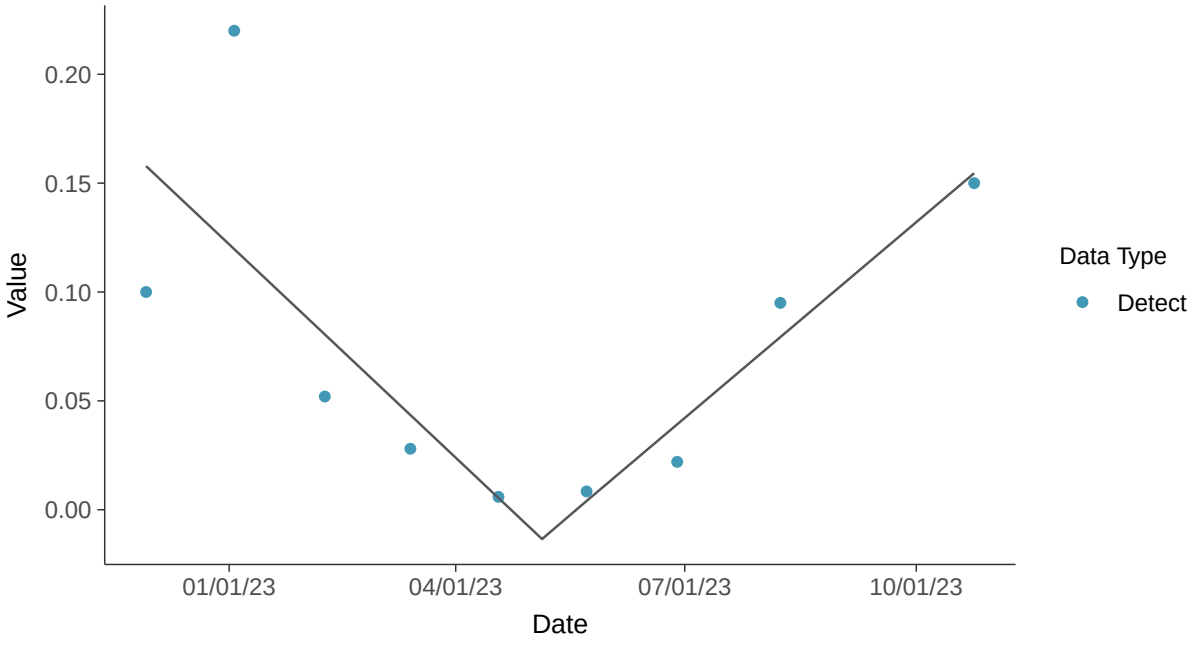
Trend Regression: Lognormal MLE

Lithium, MW-11 (mg/L)



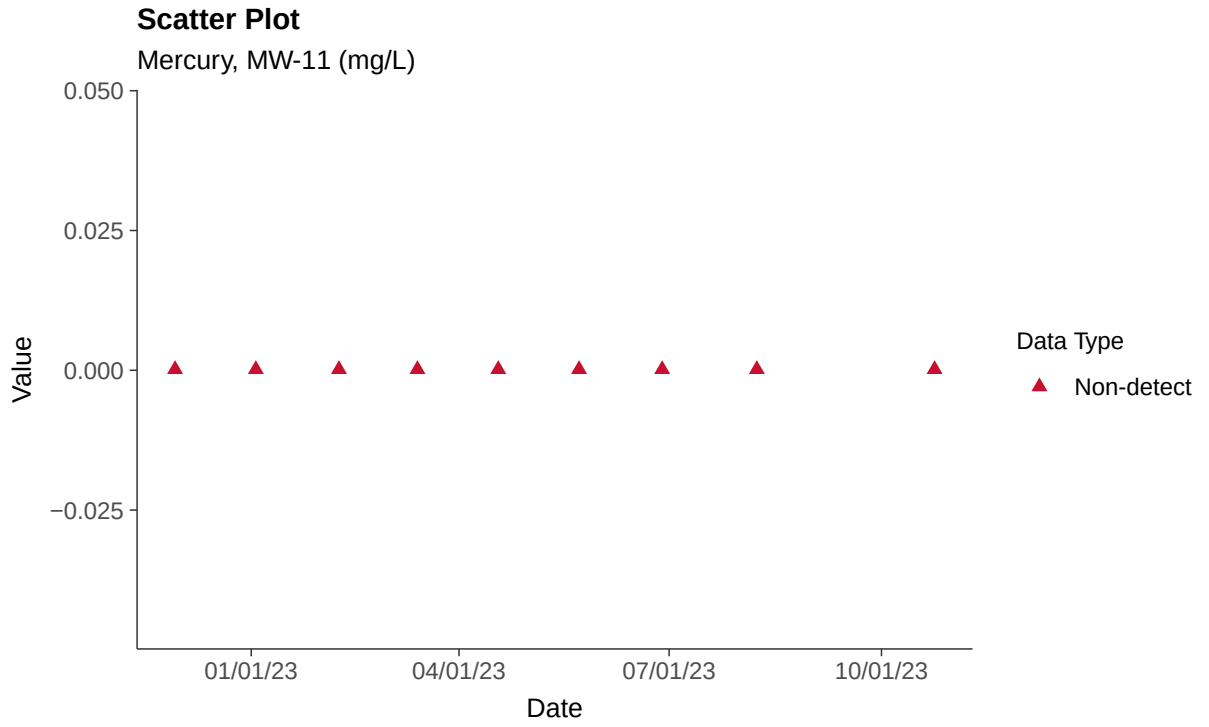
Trend Regression: Piecewise Linear-Linear

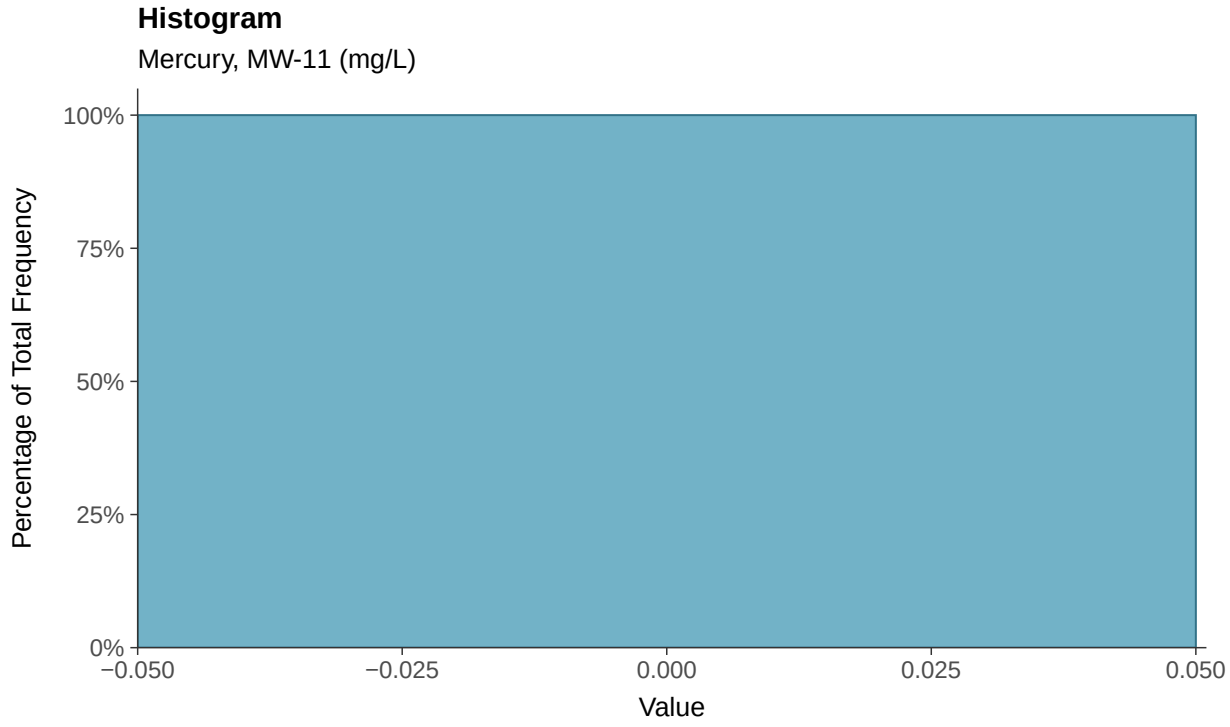
Lithium, MW-11 (mg/L)



Appendix IV: Mercury, MW-11

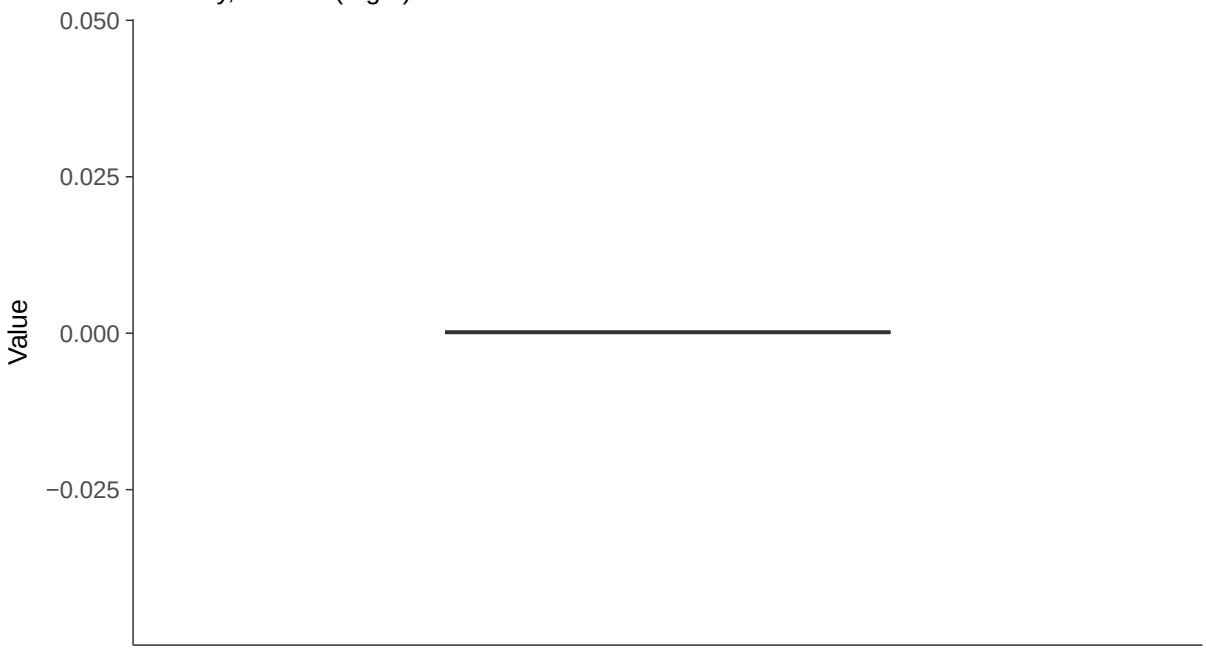
ID: 2_20_5_117





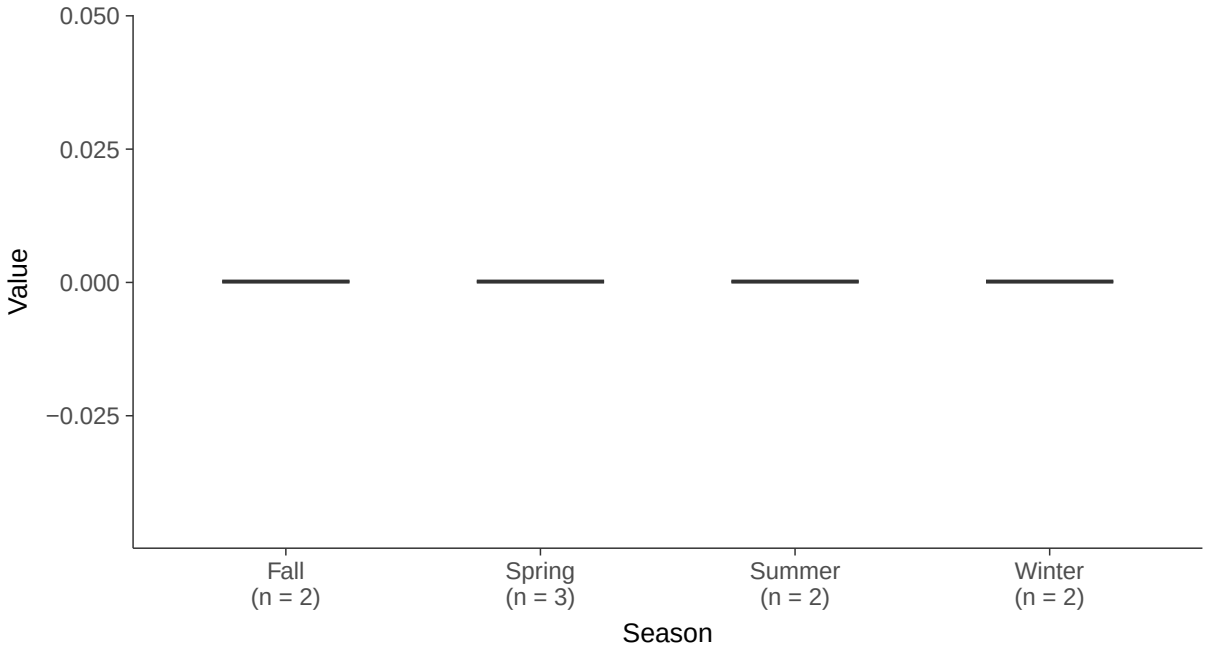
Boxplot

Mercury, MW-11 (mg/L)



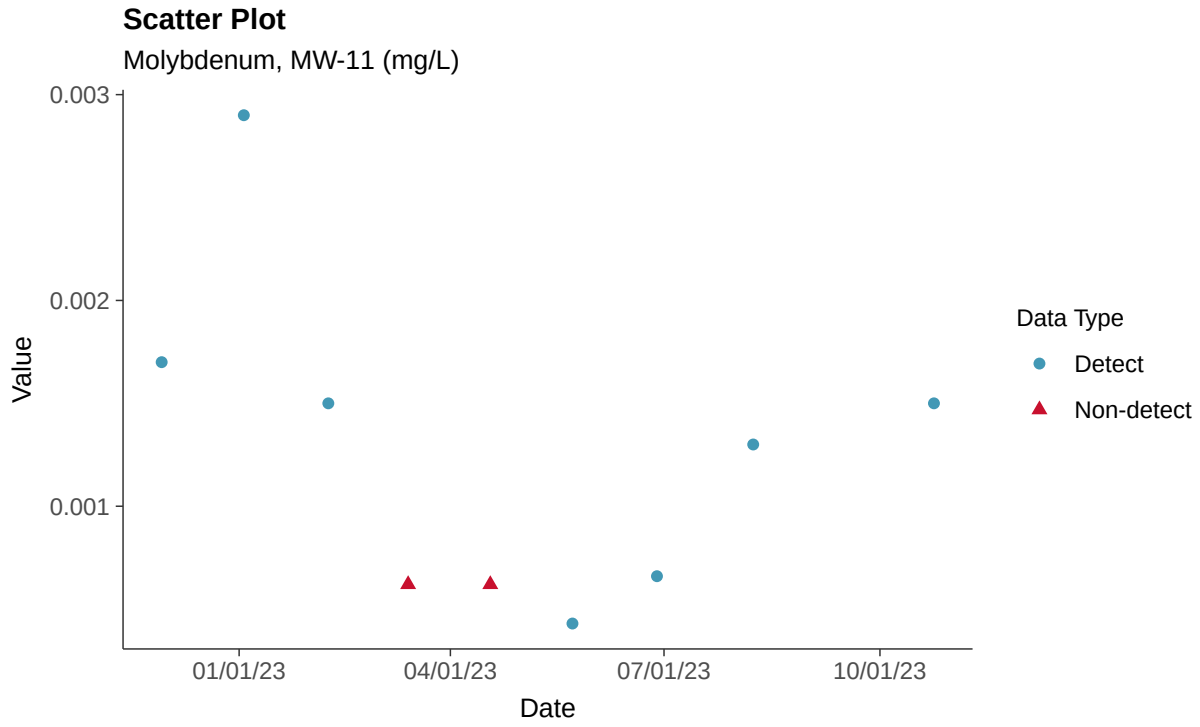
Boxplot by Season

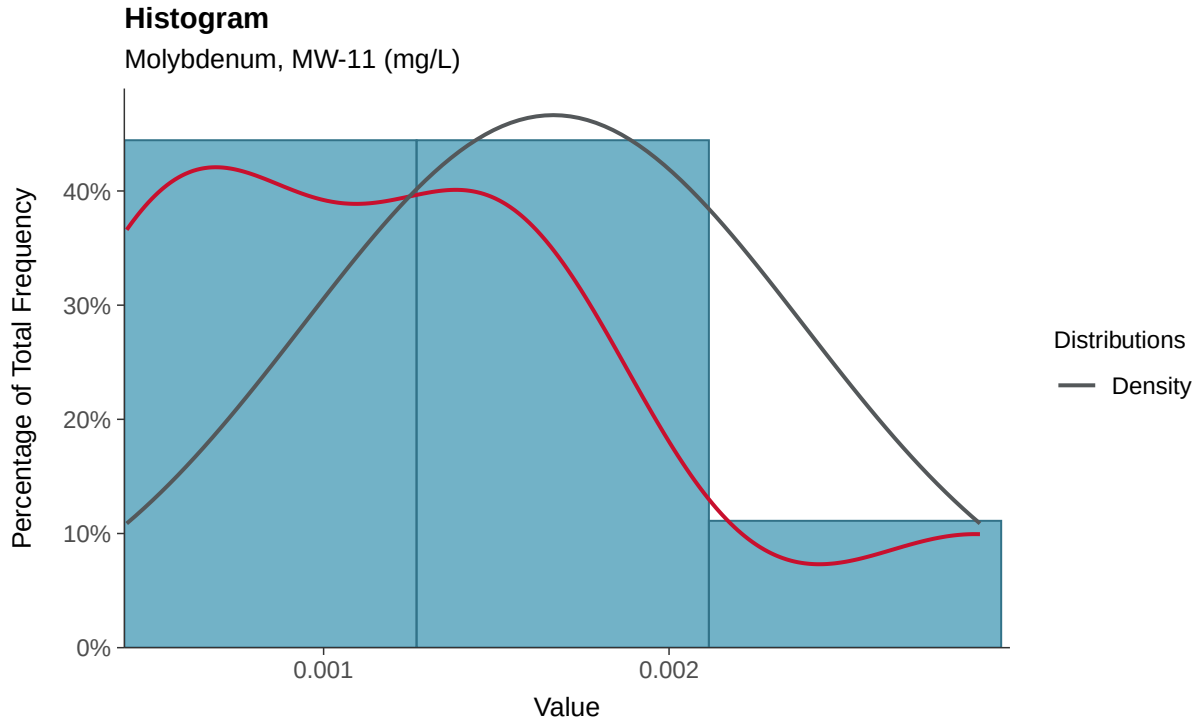
Mercury, MW-11 (mg/L)



Appendix IV: Molybdenum, MW-11

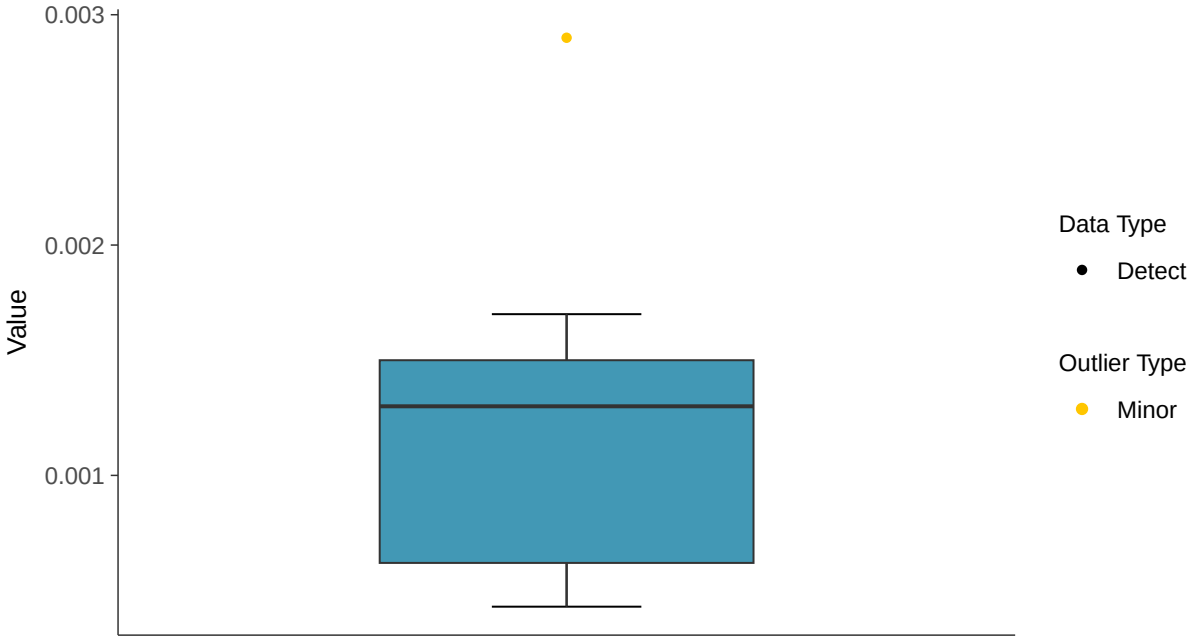
ID: 2_20_5_118





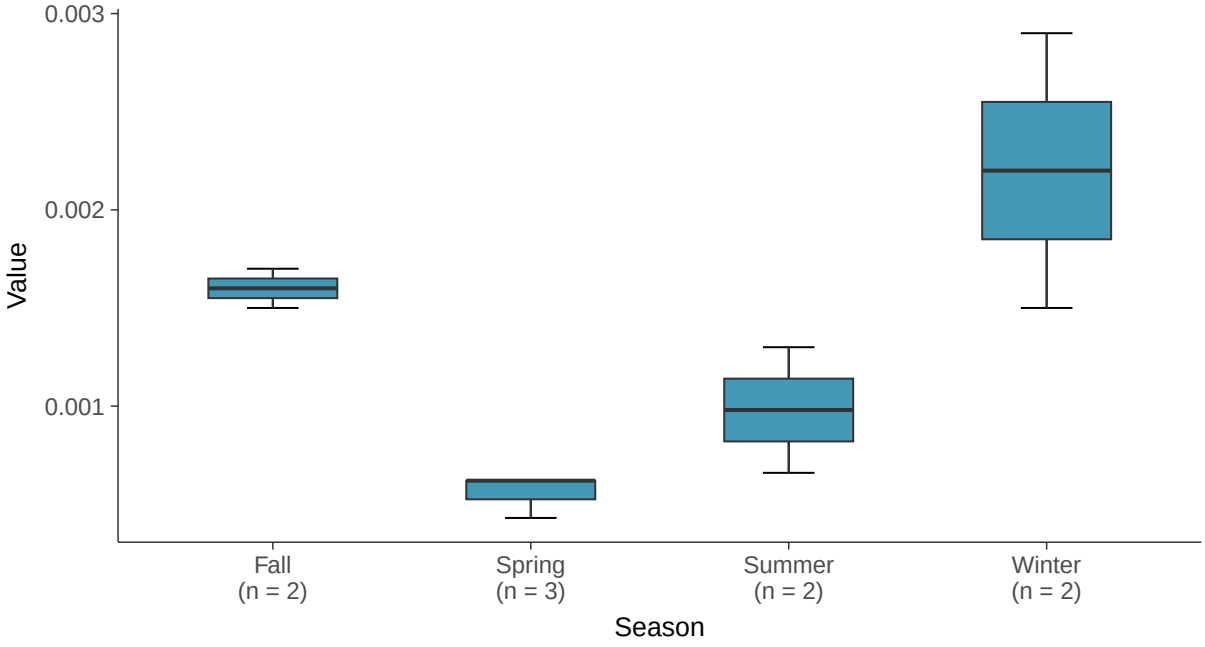
Boxplot

Molybdenum, MW-11 (mg/L)



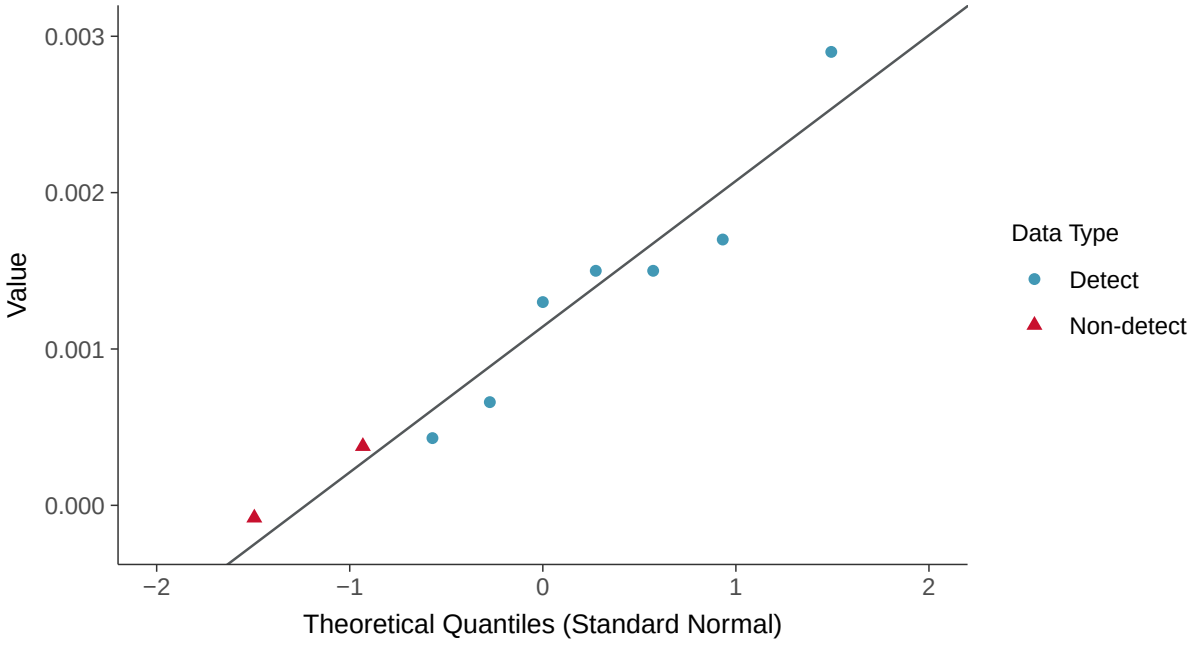
Boxplot by Season

Molybdenum, MW-11 (mg/L)



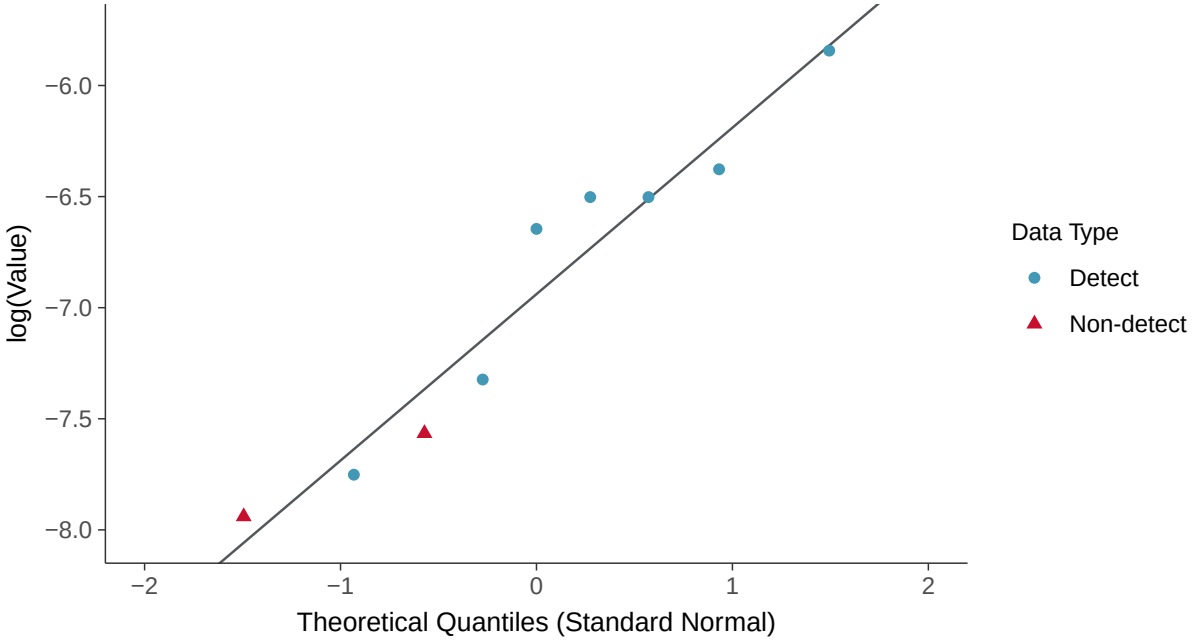
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-11 (mg/L)



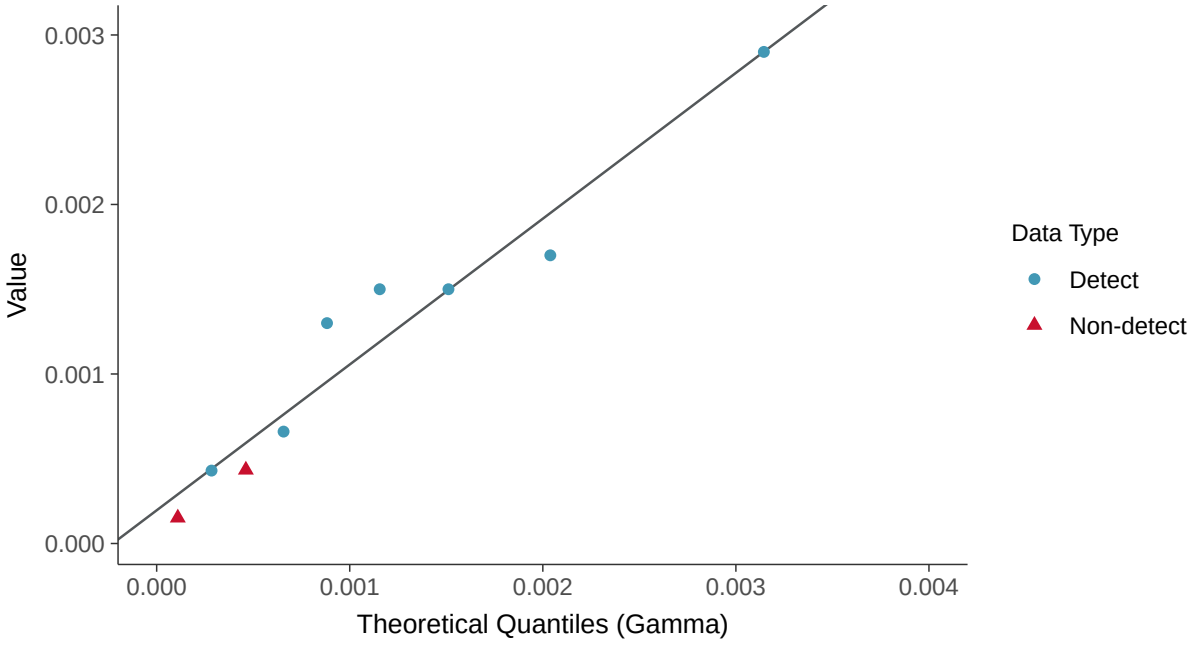
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-11 (mg/L)



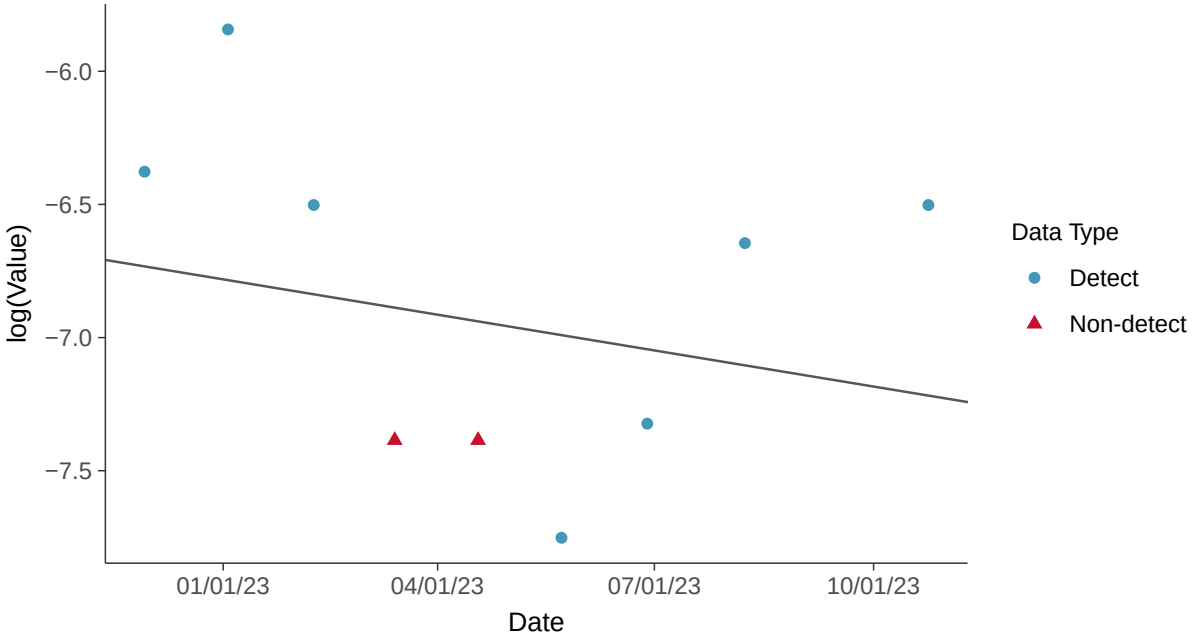
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-11 (mg/L)



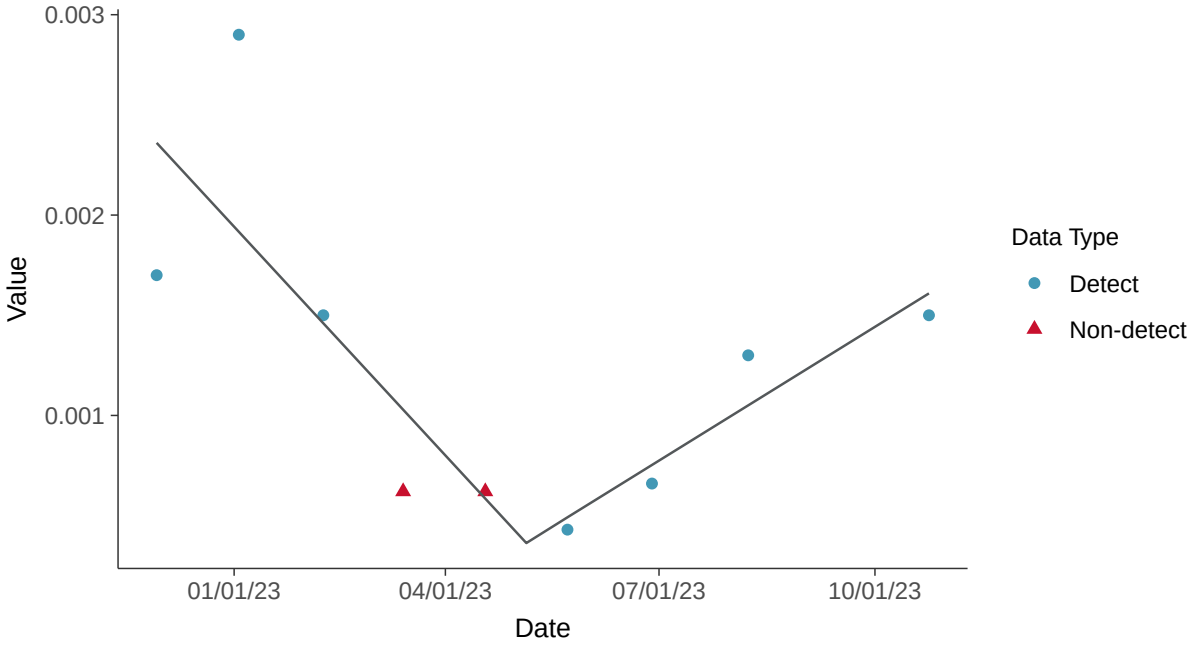
Trend Regression: Lognormal MLE

Molybdenum, MW-11 (mg/L)



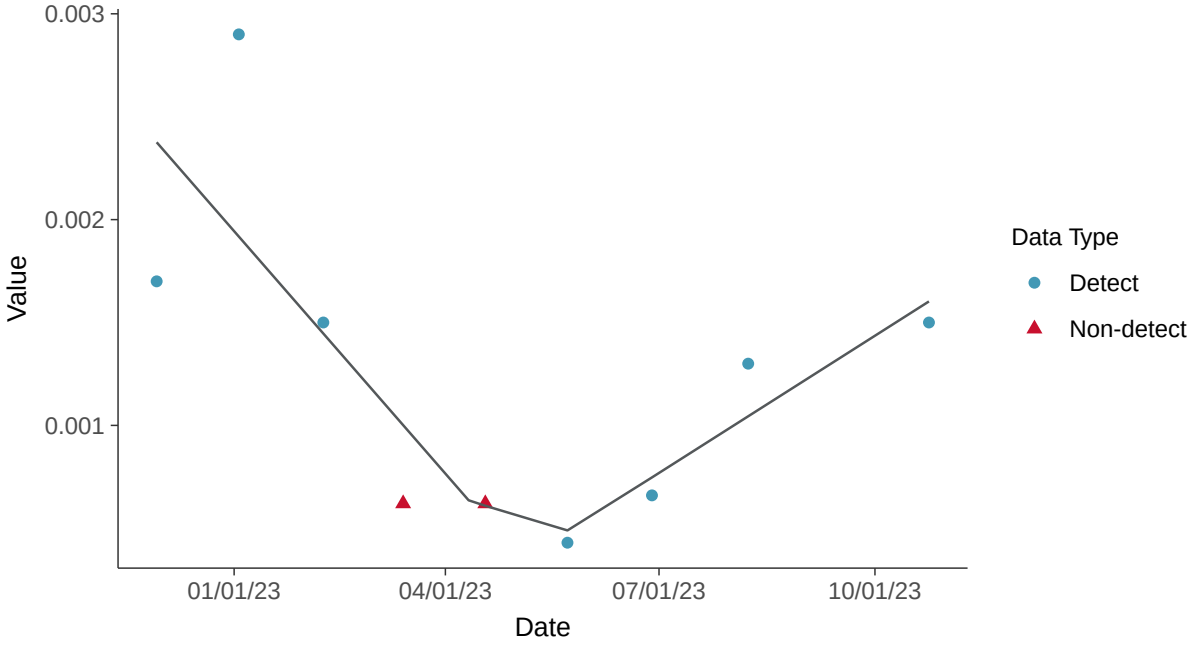
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-11 (mg/L)



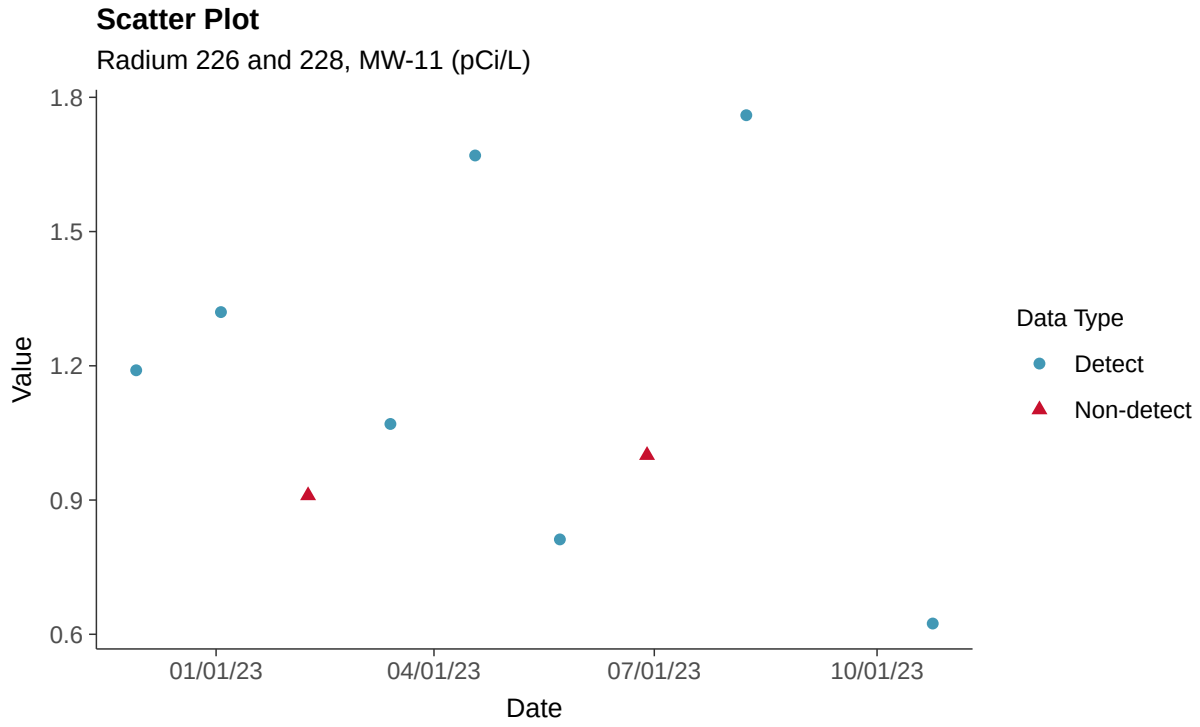
Trend Regression: Piecewise Linear-Linear-Linear

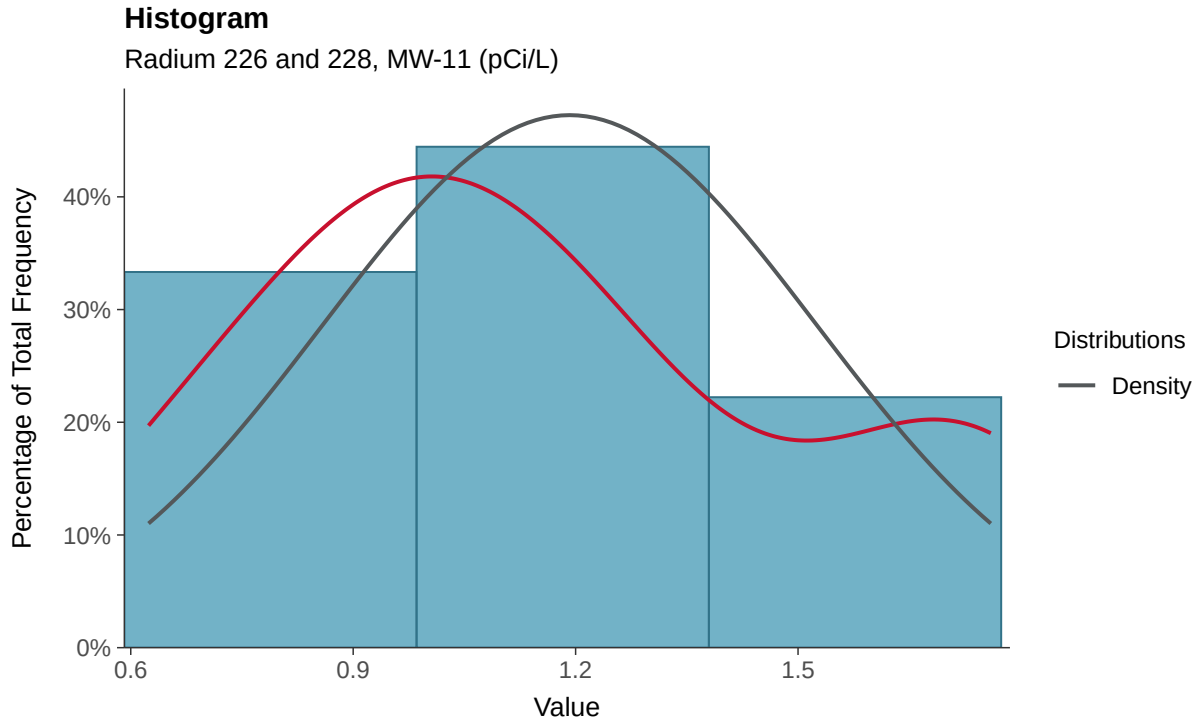
Molybdenum, MW-11 (mg/L)



Appendix IV: Radium 226 and 228, MW-11

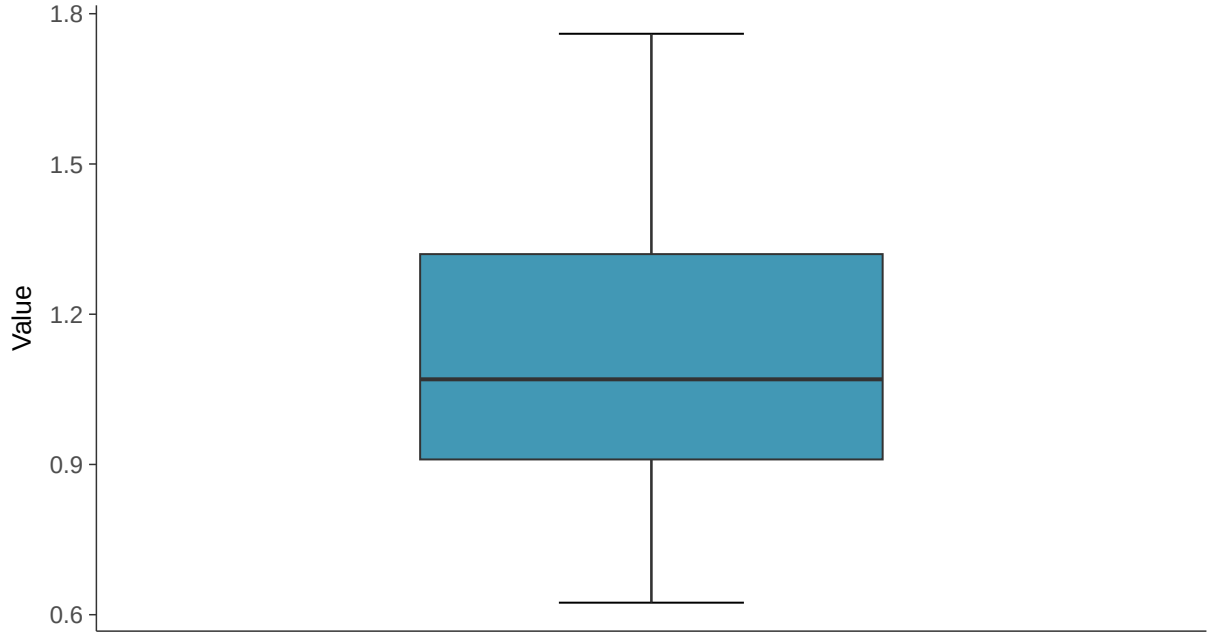
ID: 2_20_5_121





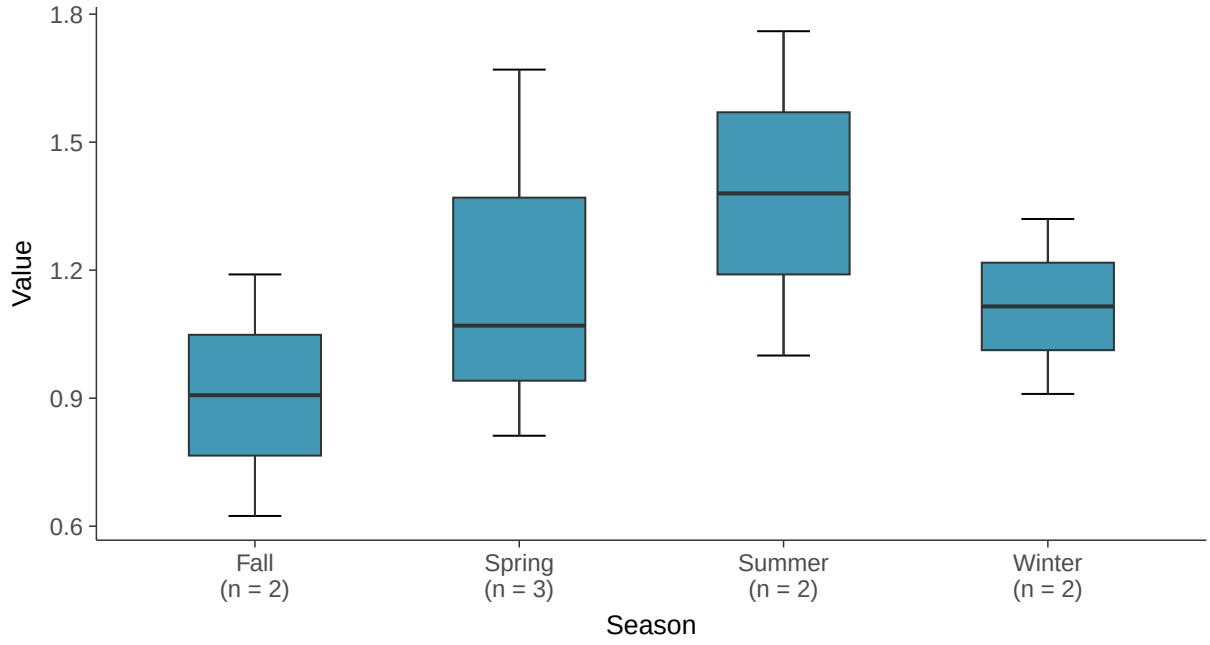
Boxplot

Radium 226 and 228, MW-11 (pCi/L)



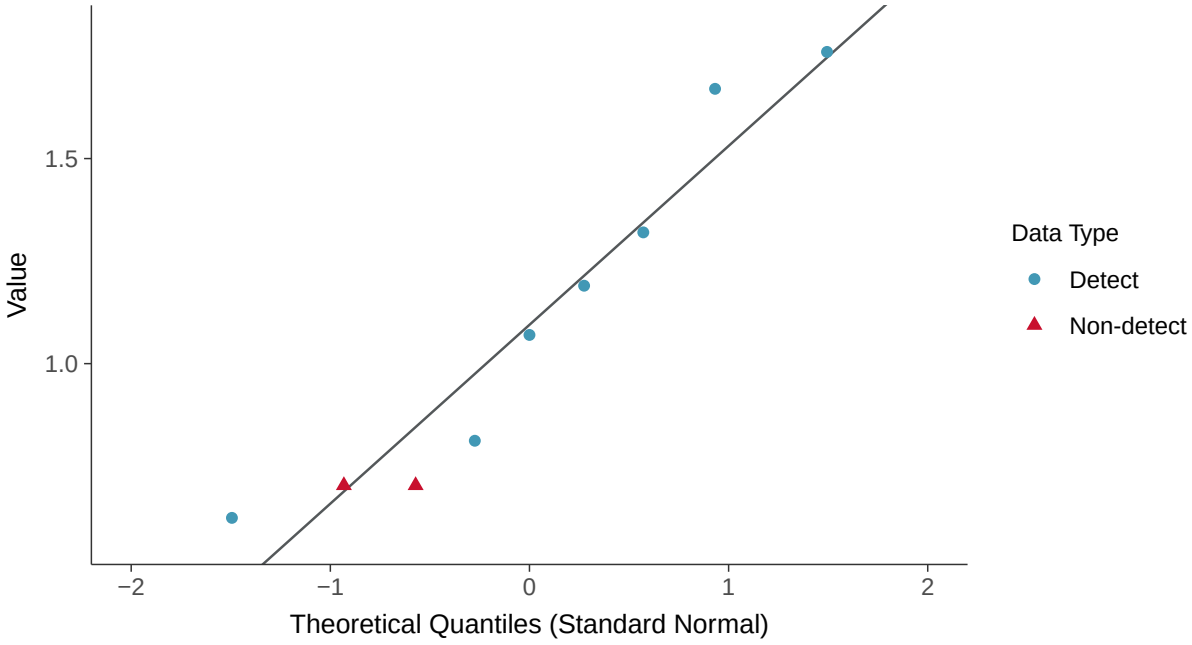
Boxplot by Season

Radium 226 and 228, MW-11 (pCi/L)



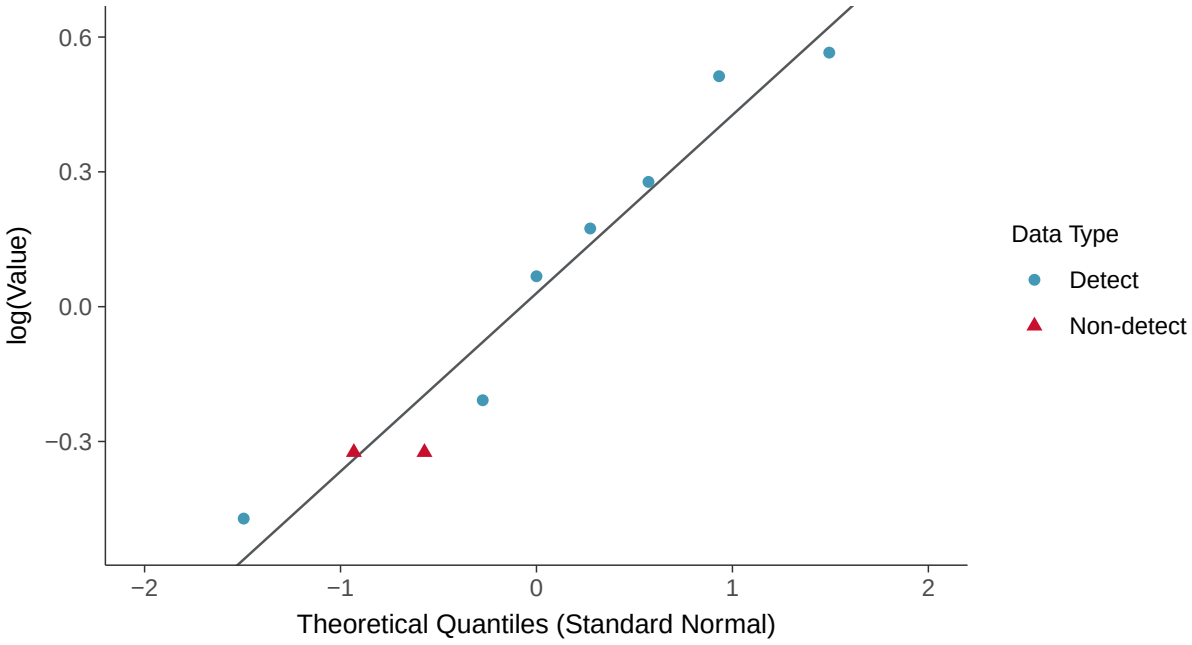
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-11 (pCi/L)



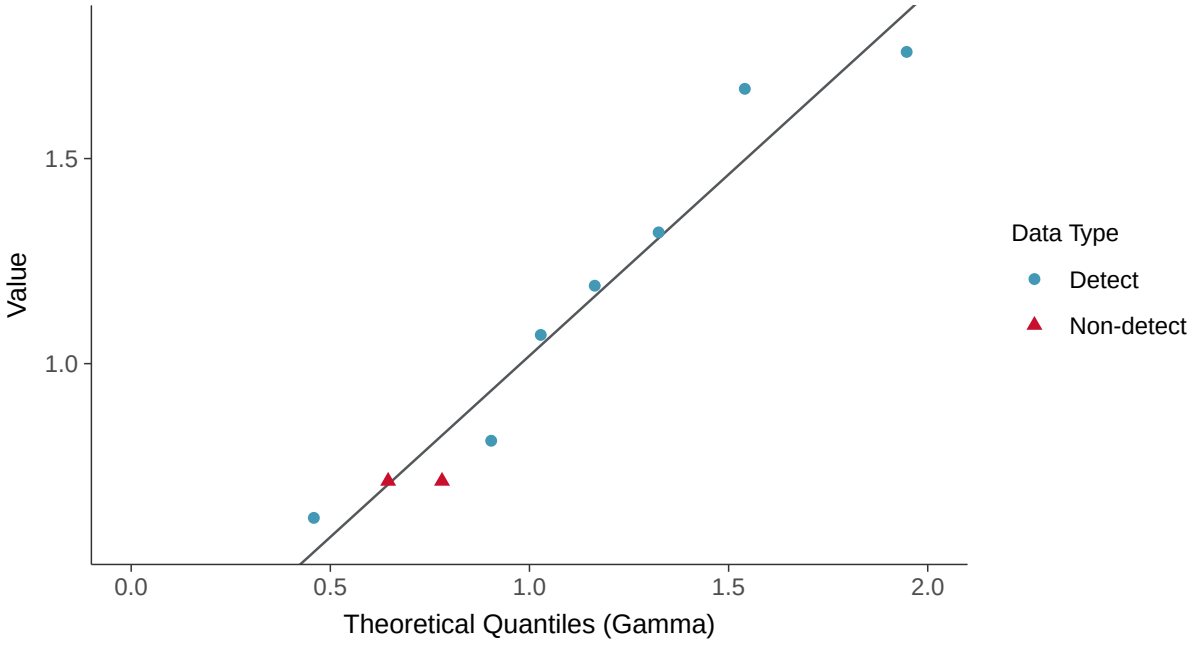
Lognormal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-11 (pCi/L)



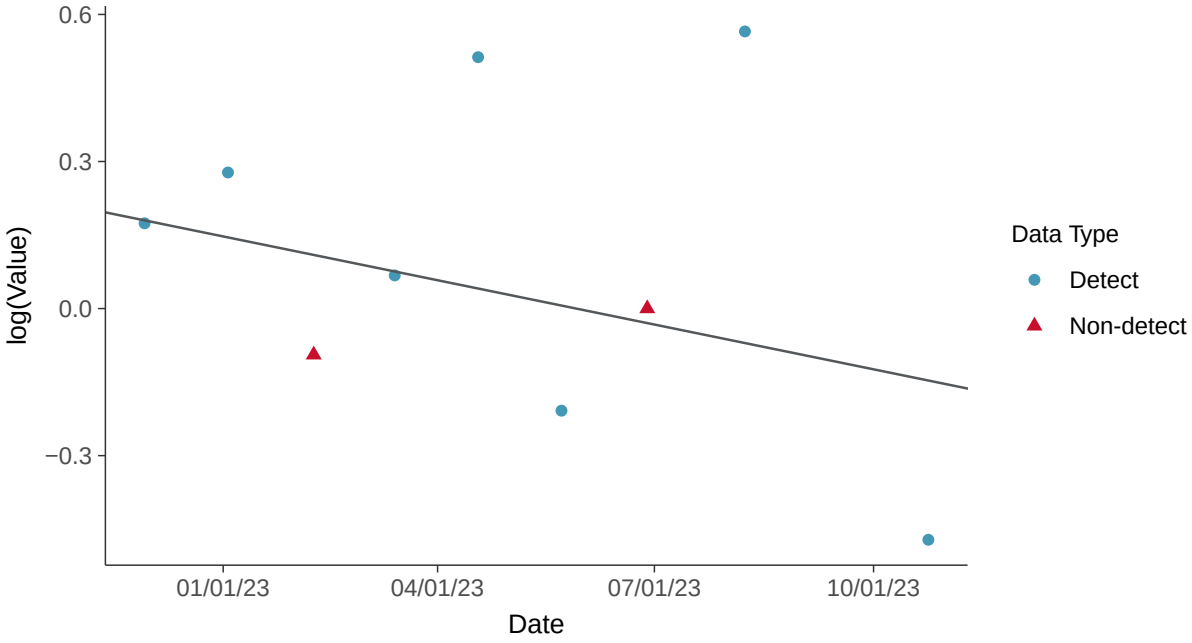
Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-11 (pCi/L)



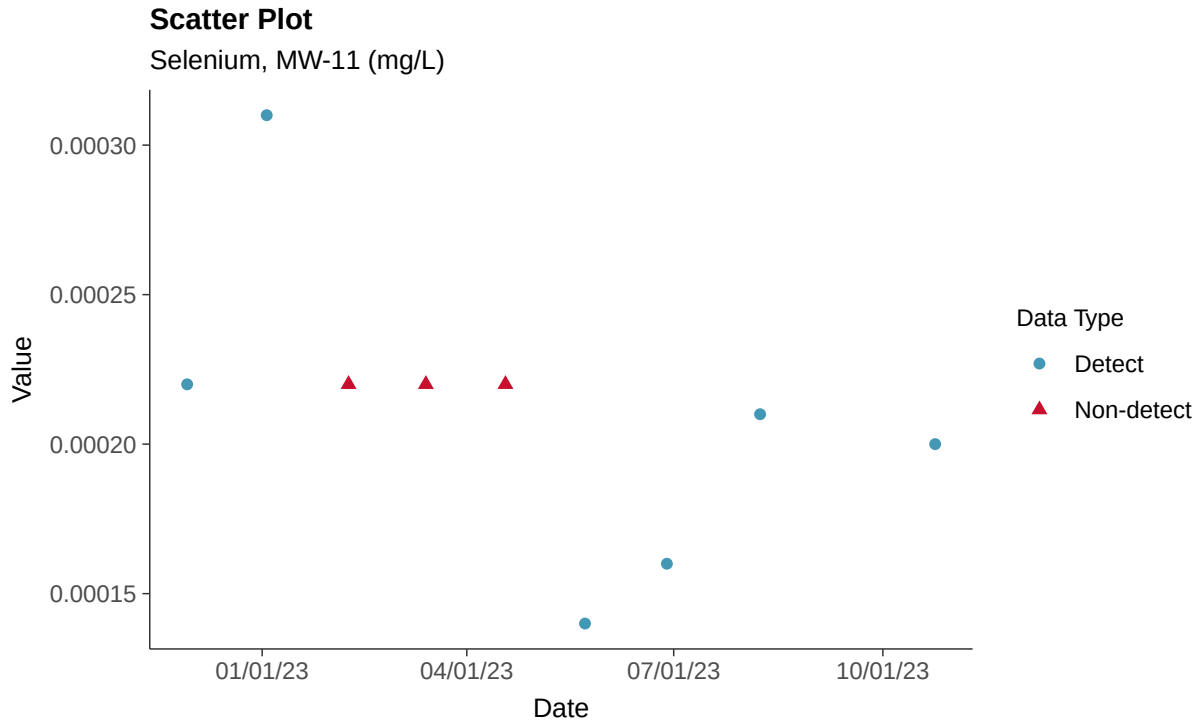
Trend Regression: Lognormal MLE

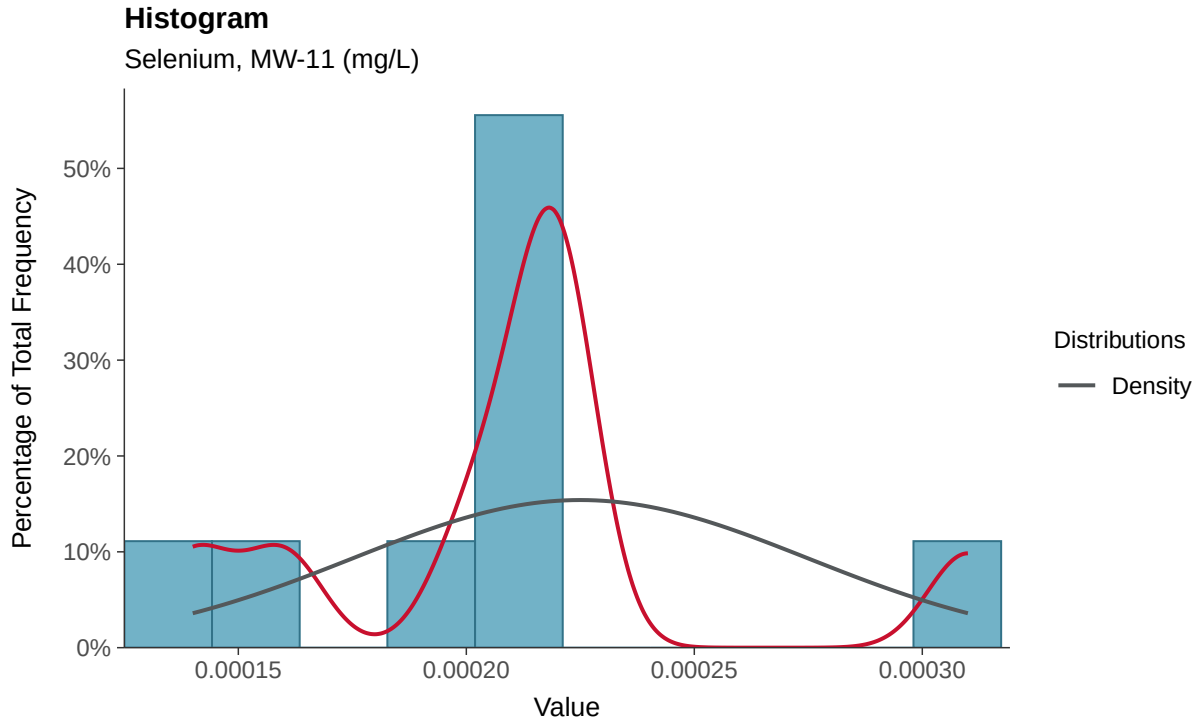
Radium 226 and 228, MW-11 (pCi/L)

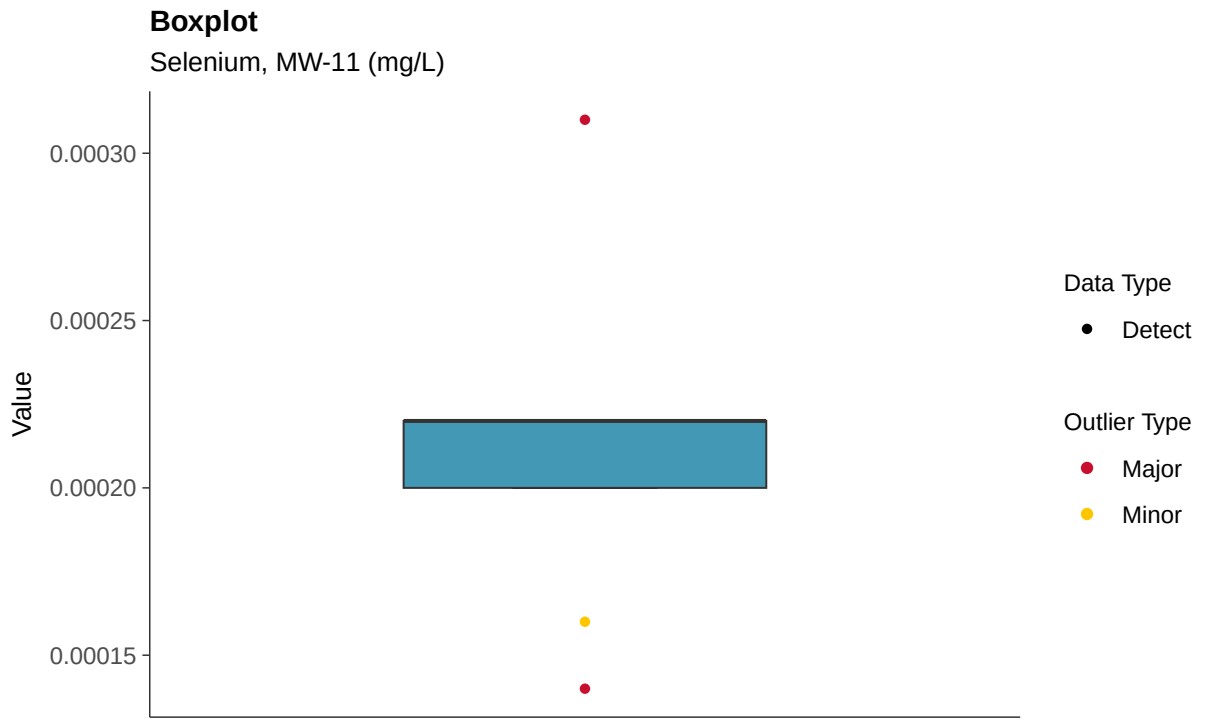


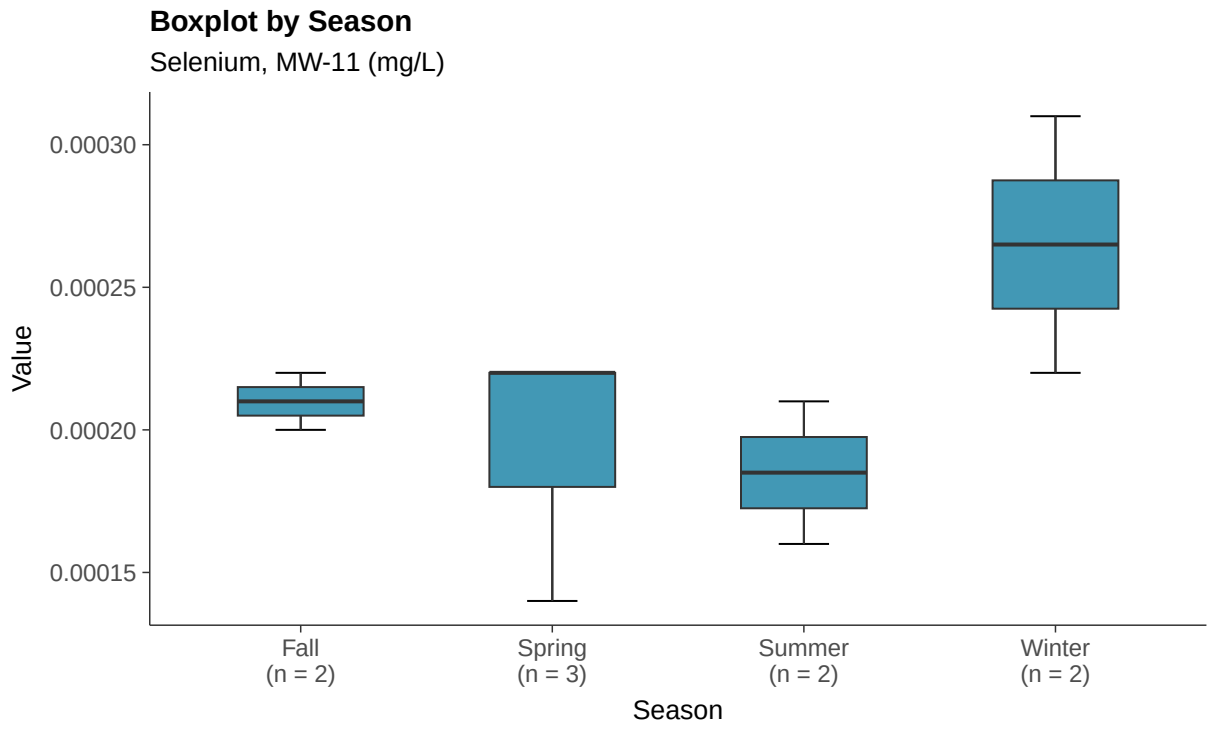
Appendix IV: Selenium, MW-11

ID: 2_20_5_122



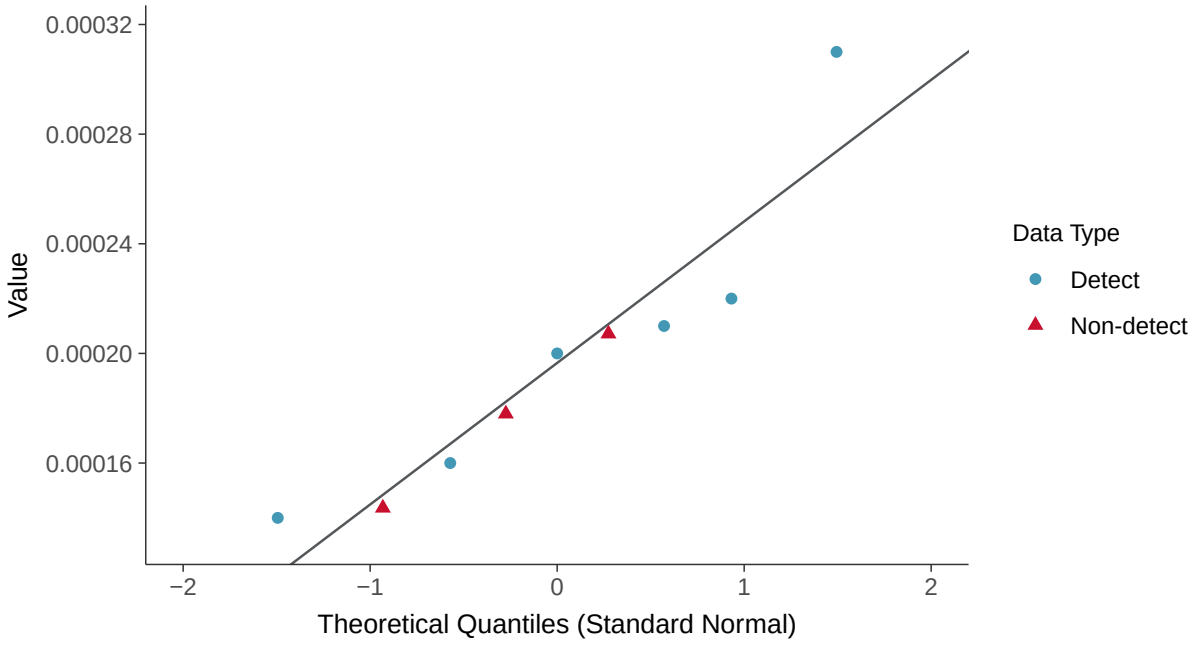



Boxplot
Selenium, MW-11 (mg/L)
0.00030
0.00025
0.00020
0.00015
Value
Data Type
Detect
Outlier Type
Major
Minor


Boxplot by Season
Selenium, MW-11 (mg/L)
0.00030
0.00025
0.00020
0.00015
Value
Fall
(n = 2)
Spring
(n = 3)
Summer
(n = 2)
Winter
(n = 2)
Season

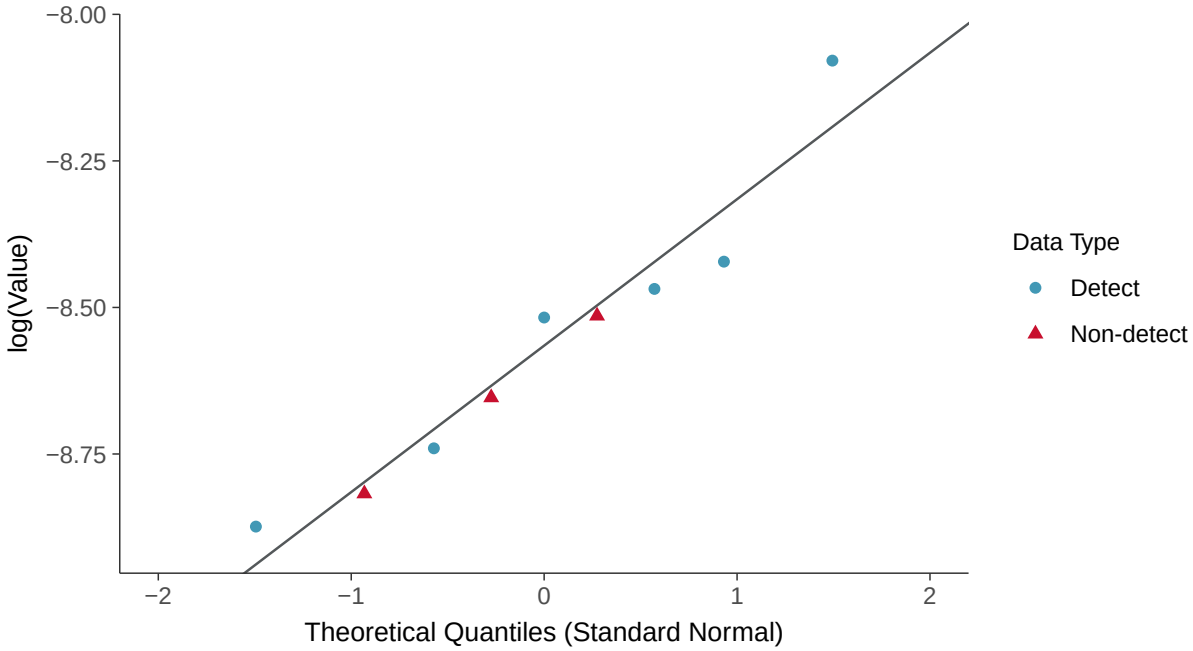
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-11 (mg/L)



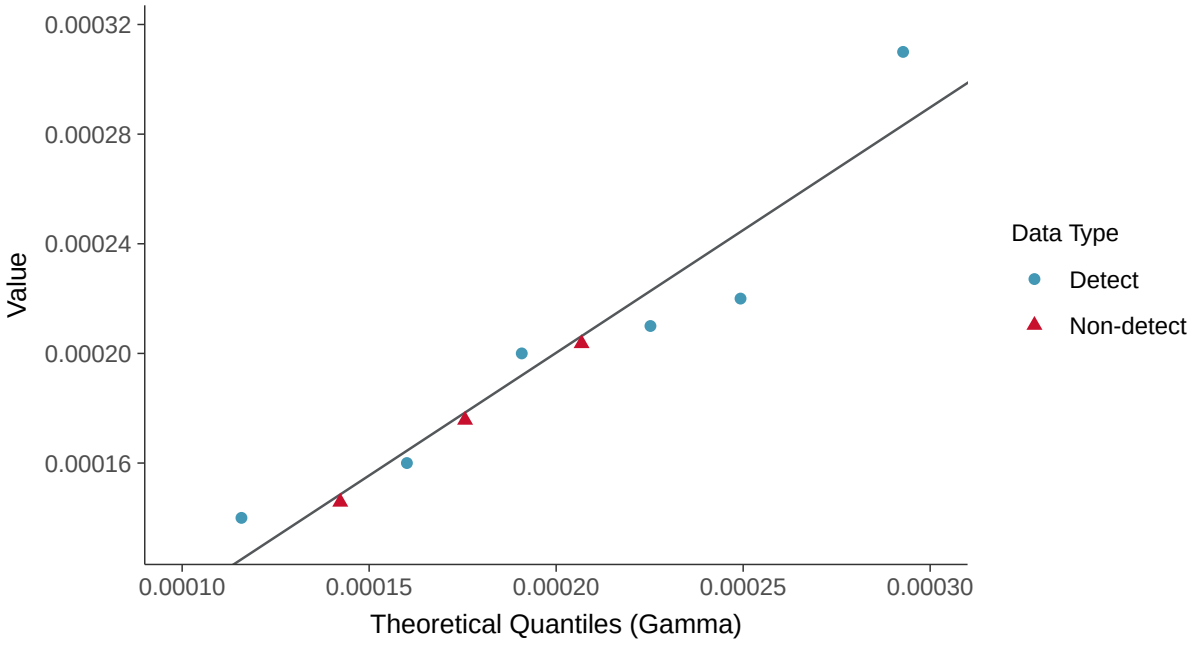
Lognormal Q-Q plot using ROS Imputed Estimates

Selenium, MW-11 (mg/L)



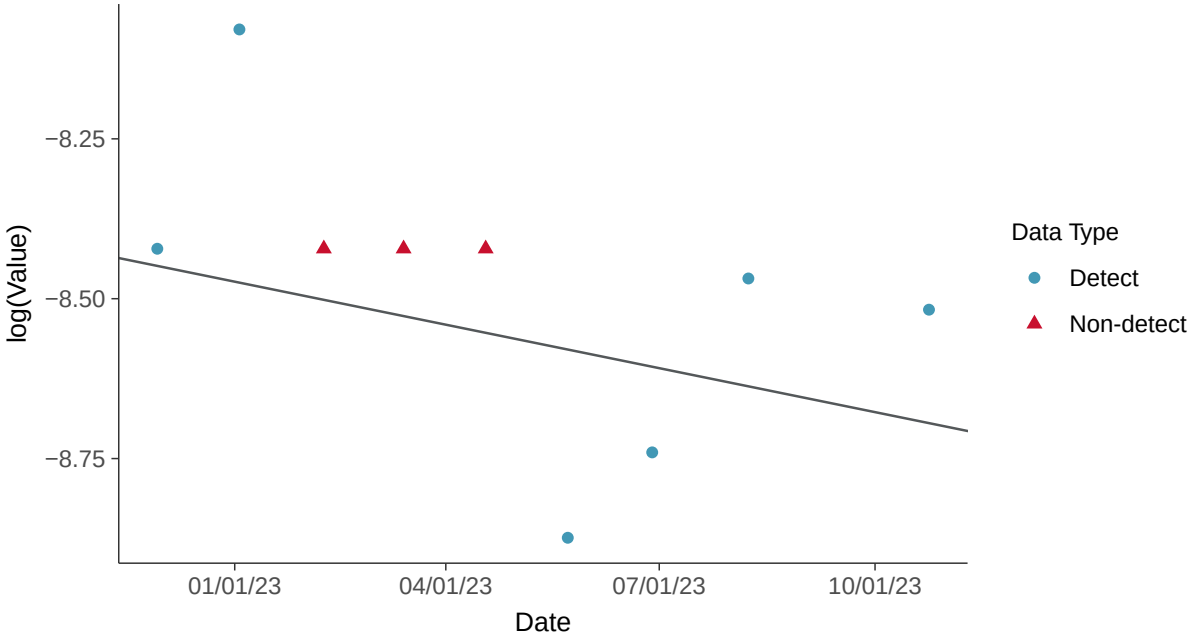
Gamma Q-Q plot using ROS Imputed Estimates

Selenium, MW-11 (mg/L)



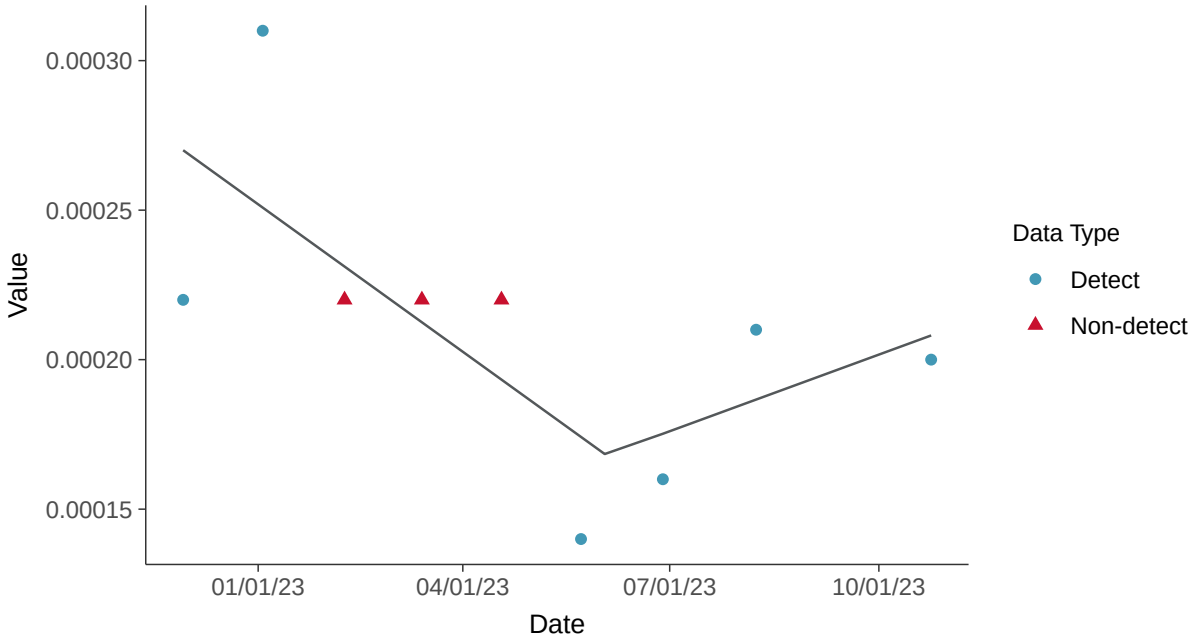
Trend Regression: Lognormal MLE

Selenium, MW-11 (mg/L)



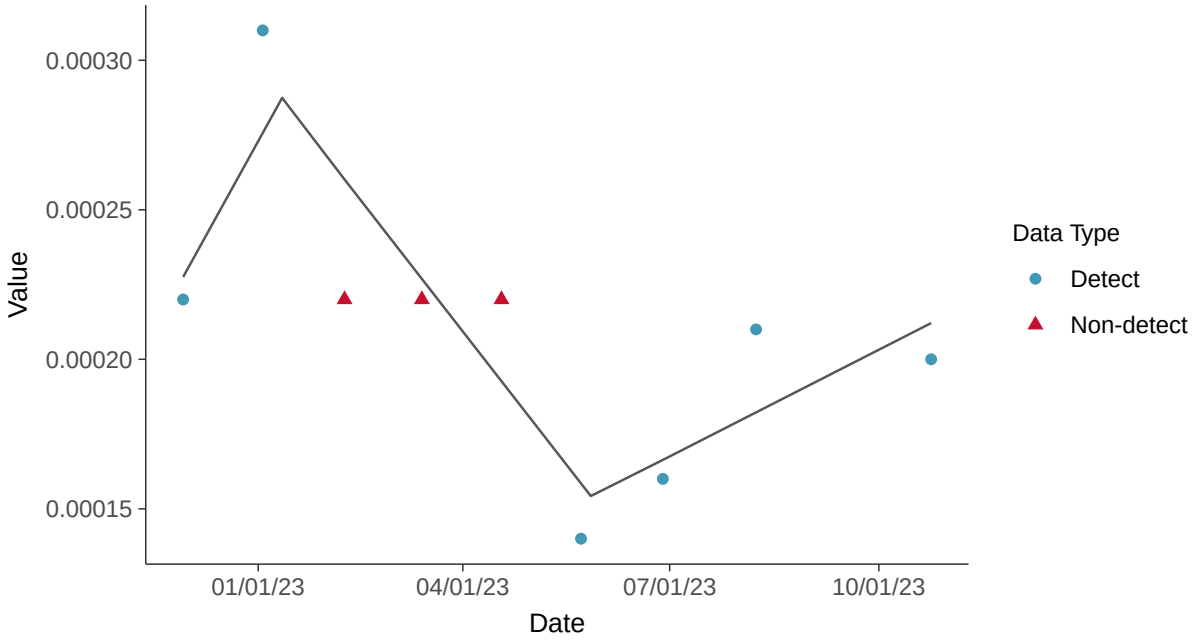
Trend Regression: Piecewise Linear-Linear

Selenium, MW-11 (mg/L)



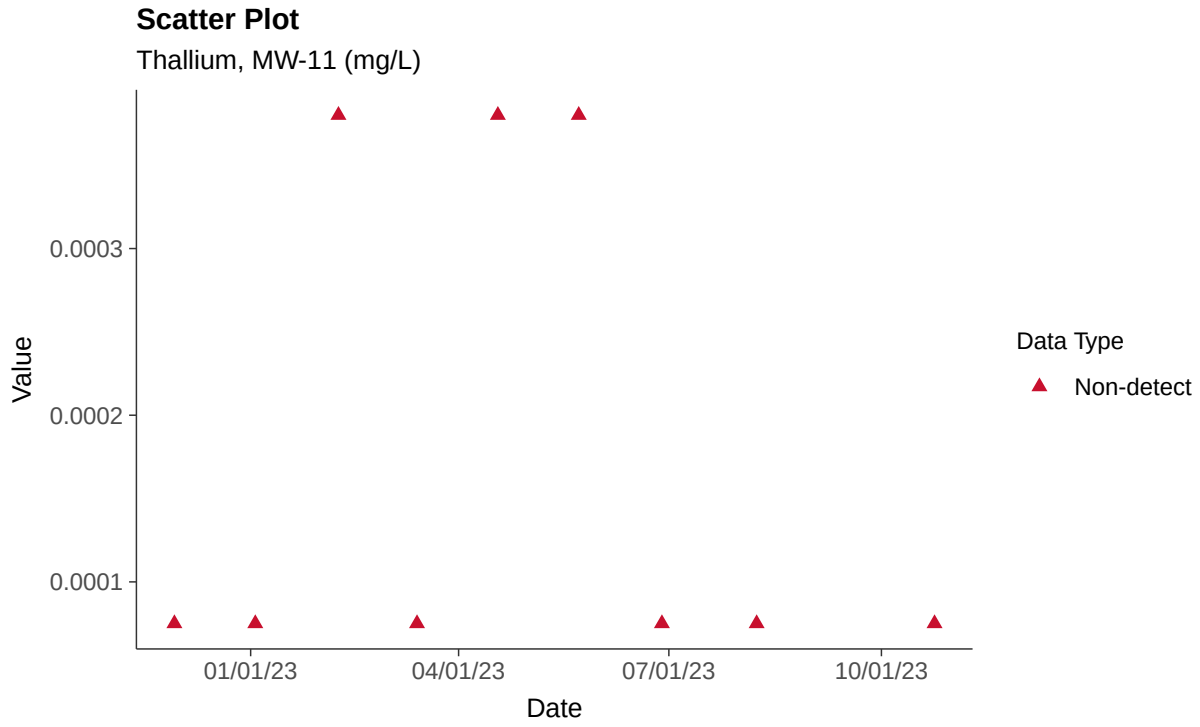
Trend Regression: Piecewise Linear-Linear-Linear

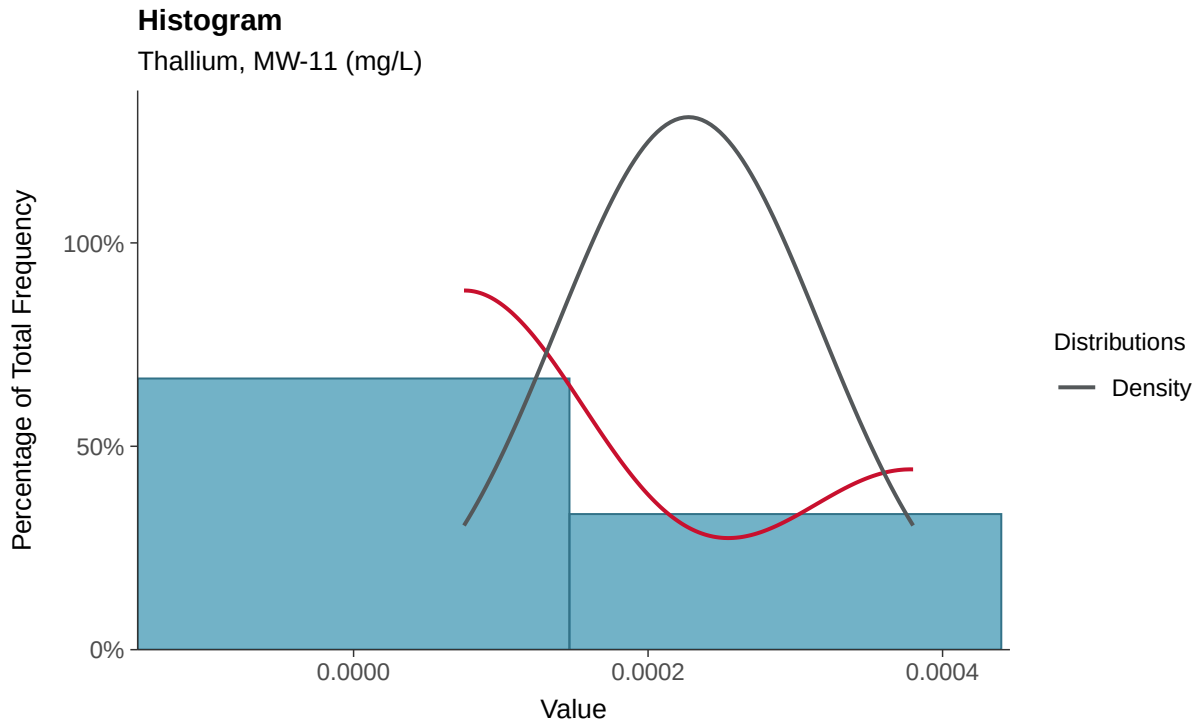
Selenium, MW-11 (mg/L)



Appendix IV: Thallium, MW-11

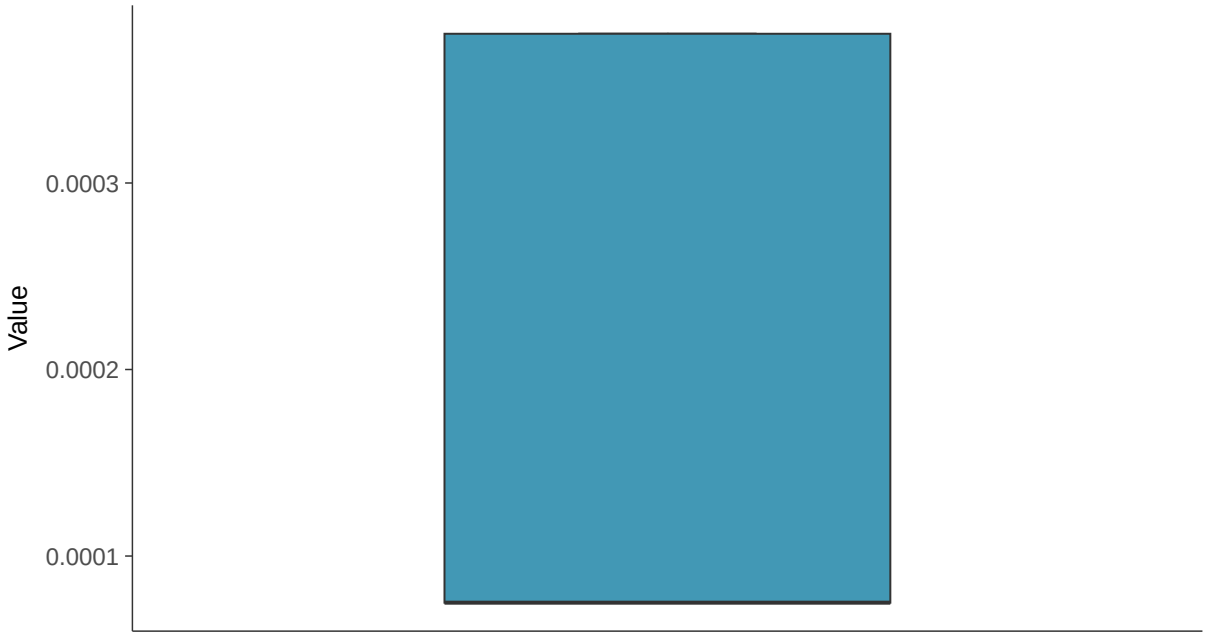
ID: 2_20_5_125





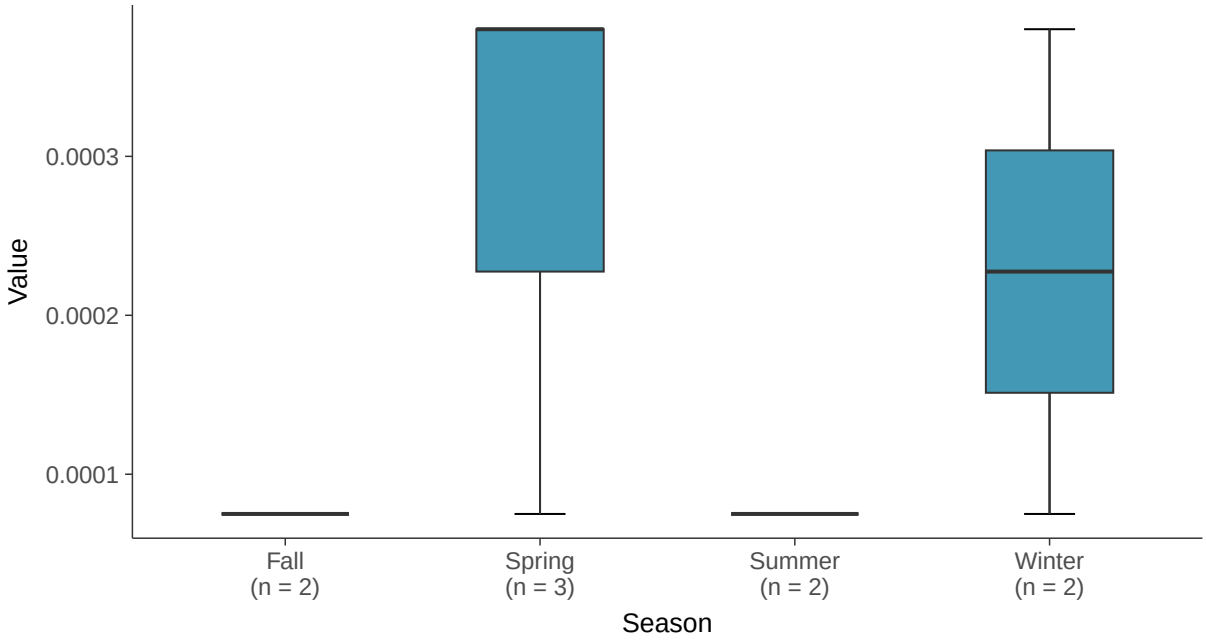
Boxplot

Thallium, MW-11 (mg/L)



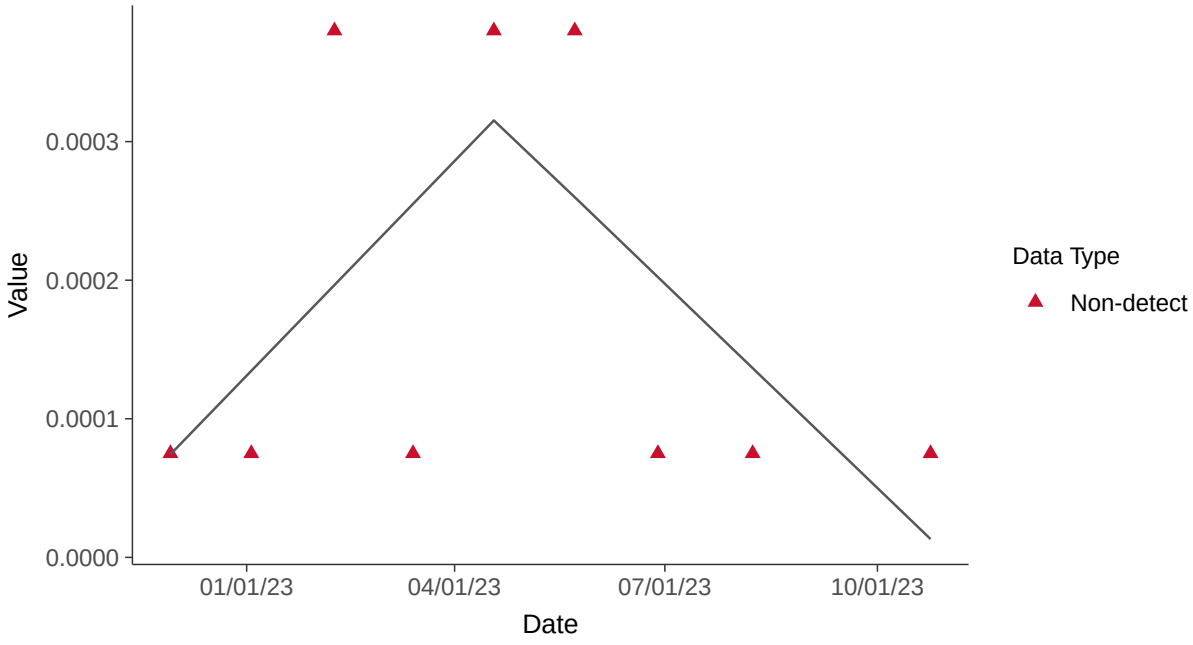
Boxplot by Season

Thallium, MW-11 (mg/L)



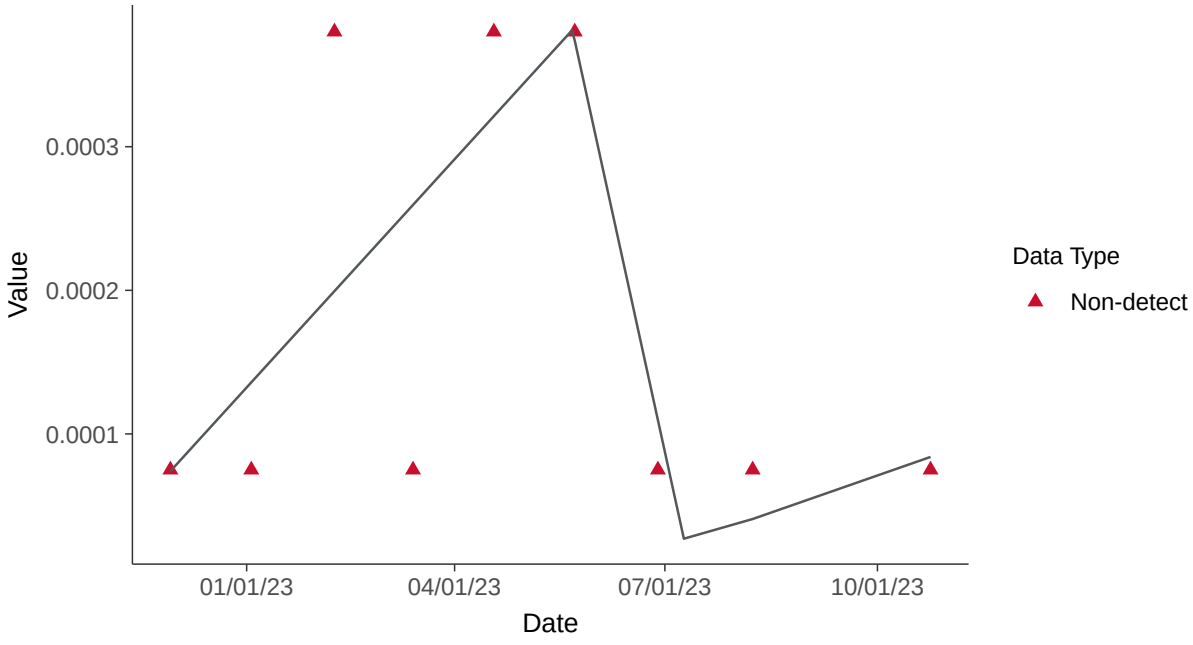
Trend Regression: Piecewise Linear-Linear

Thallium, MW-11 (mg/L)



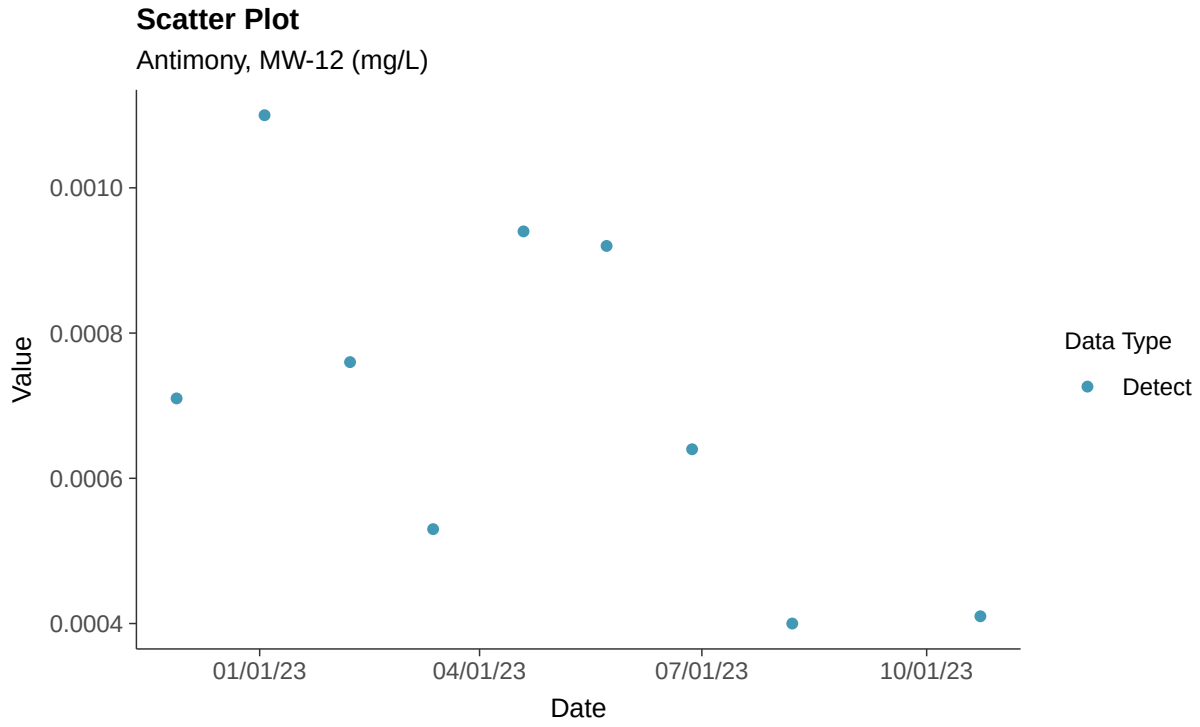
Trend Regression: Piecewise Linear-Linear-Linear

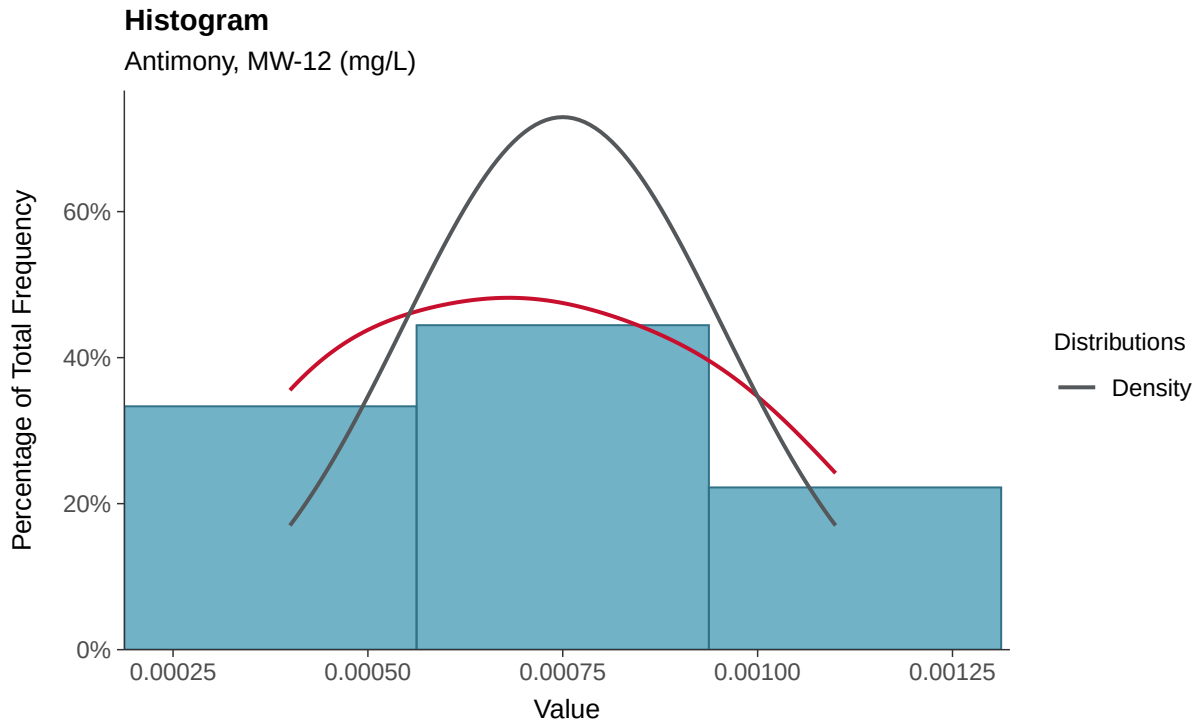
Thallium, MW-11 (mg/L)



Appendix IV: Antimony, MW-12

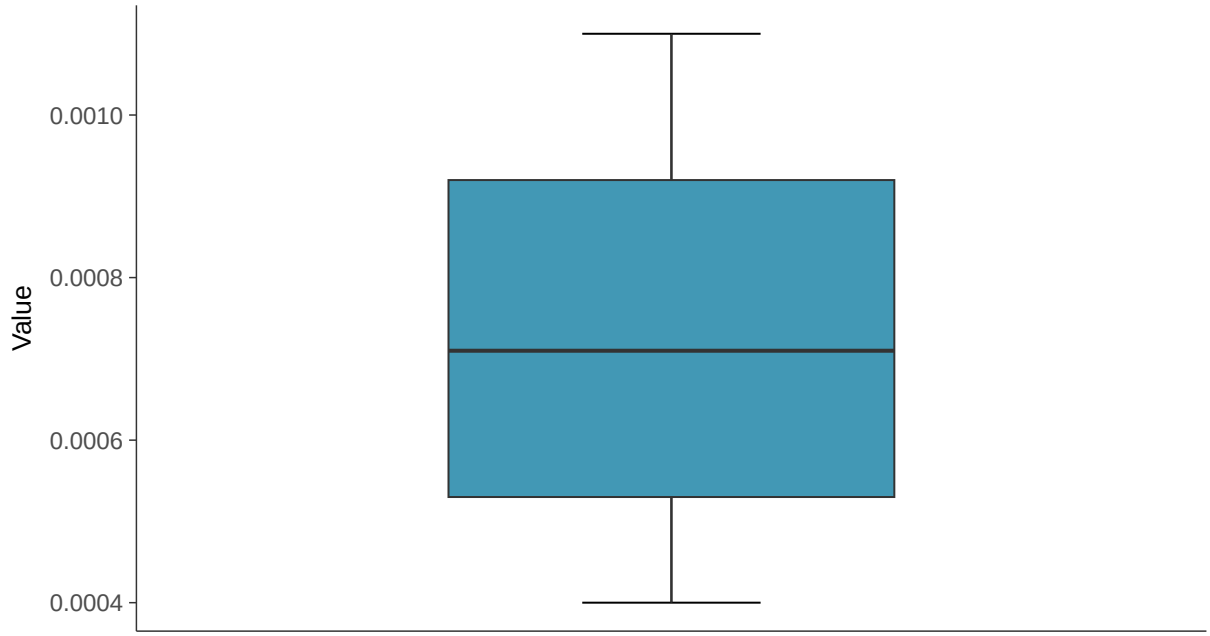
ID: 2_21_5_101





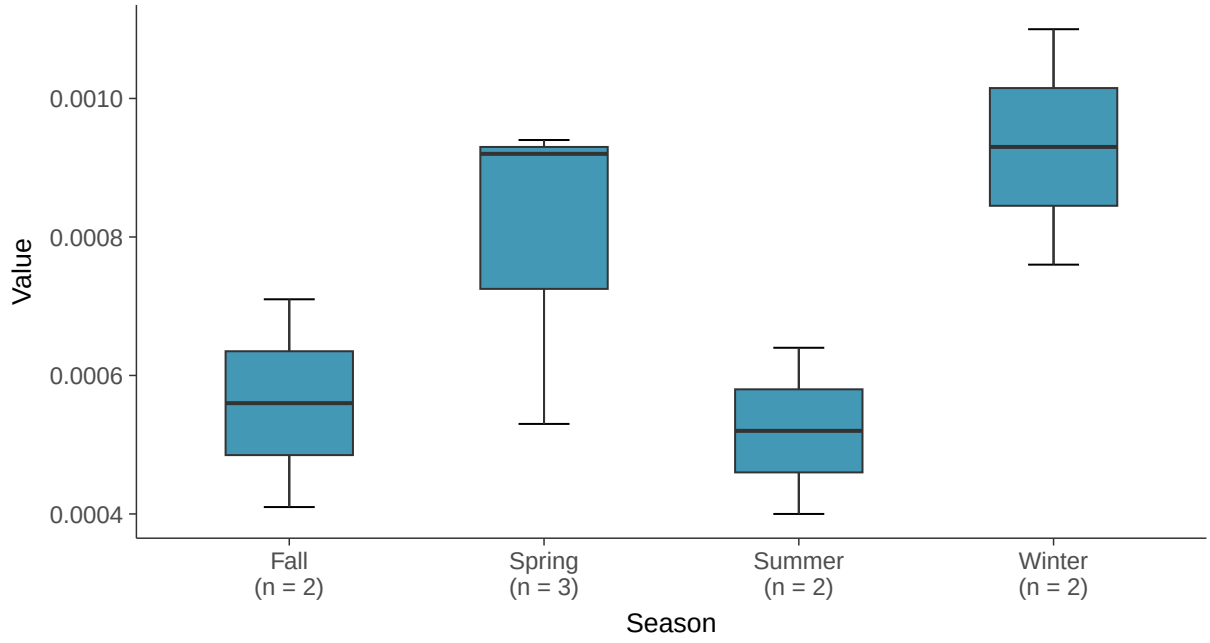
Boxplot

Antimony, MW-12 (mg/L)



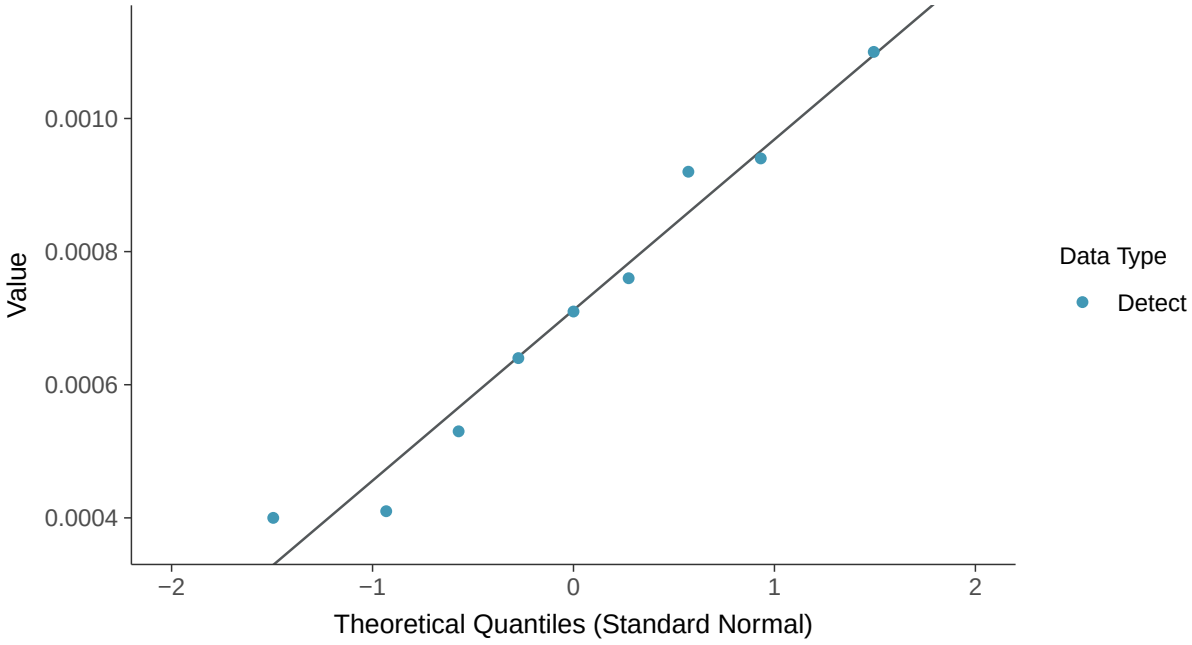
Boxplot by Season

Antimony, MW-12 (mg/L)



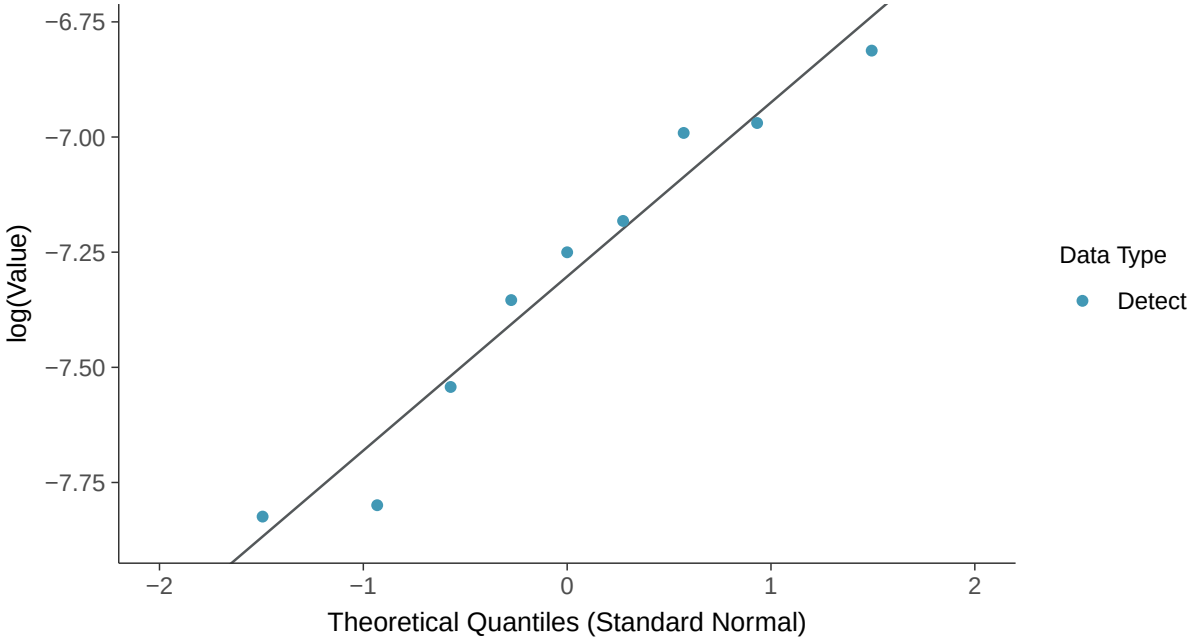
Normal Q-Q plot

Antimony, MW-12 (mg/L)



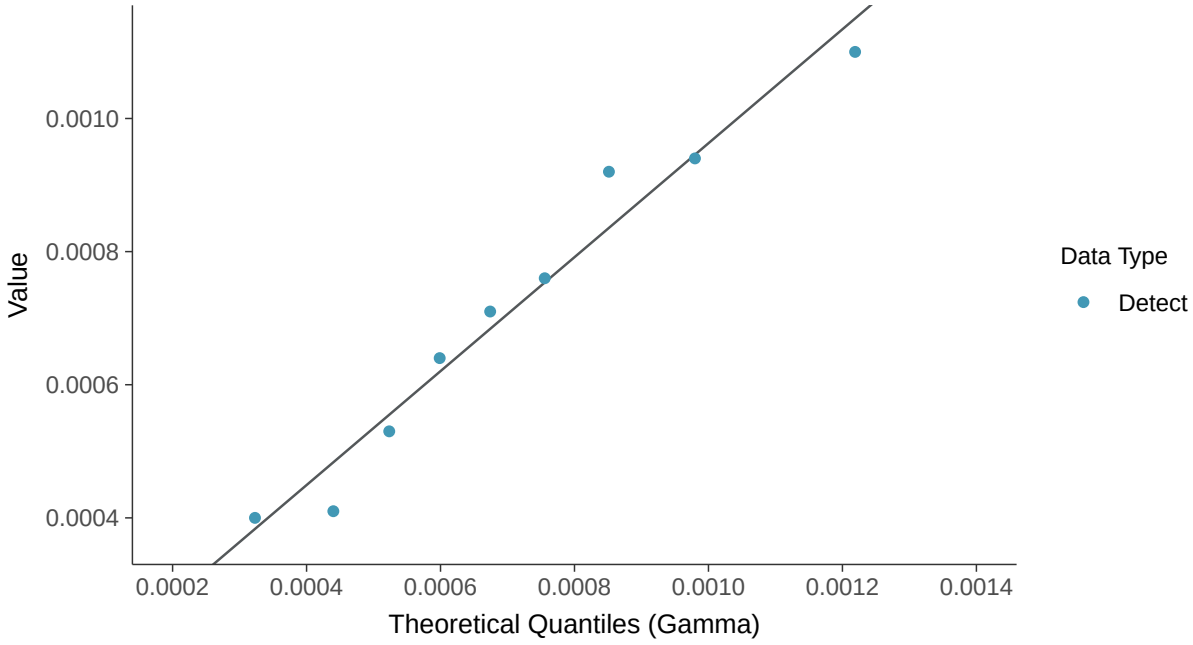
Lognormal Q-Q plot

Antimony, MW-12 (mg/L)



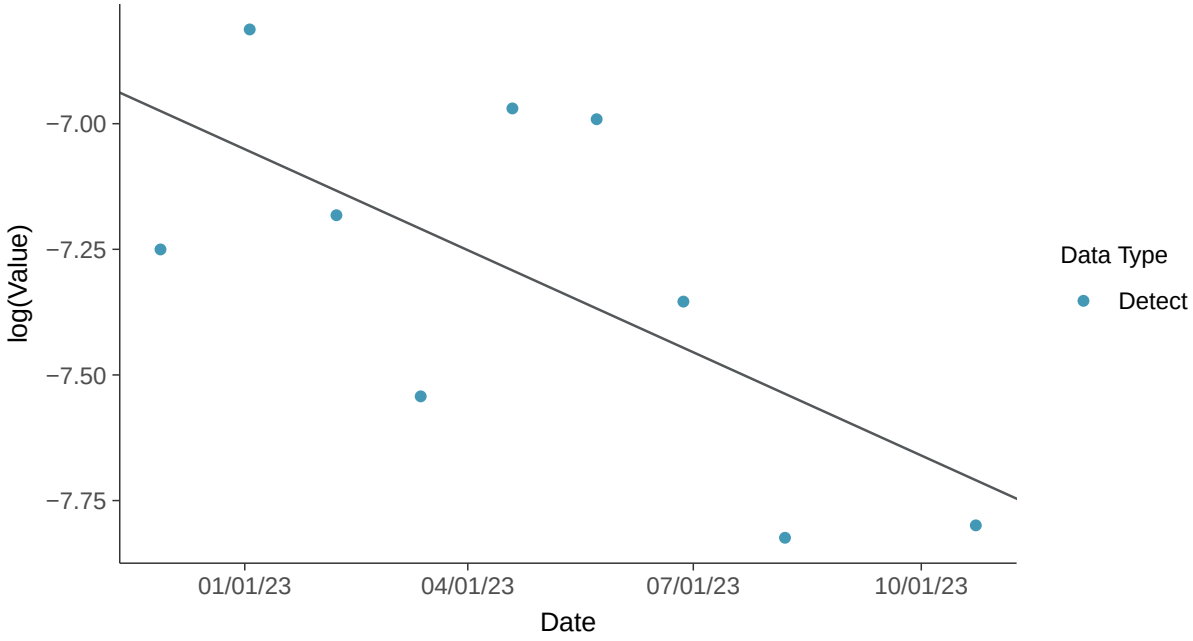
Gamma Q-Q plot

Antimony, MW-12 (mg/L)



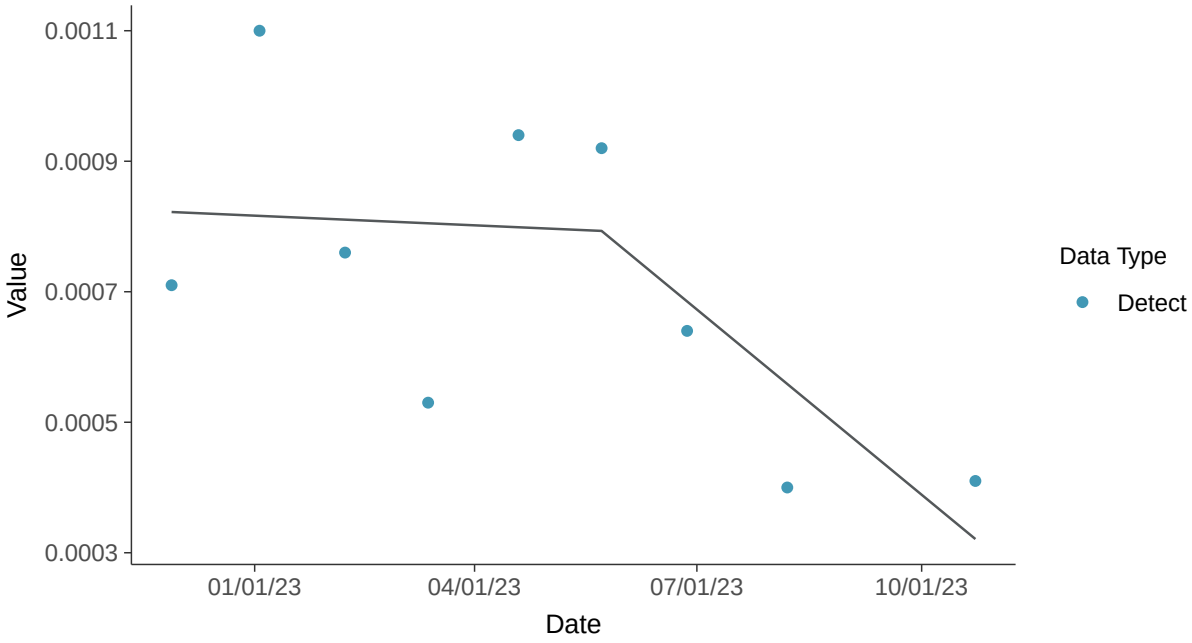
Trend Regression: Lognormal MLE

Antimony, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear

Antimony, MW-12 (mg/L)

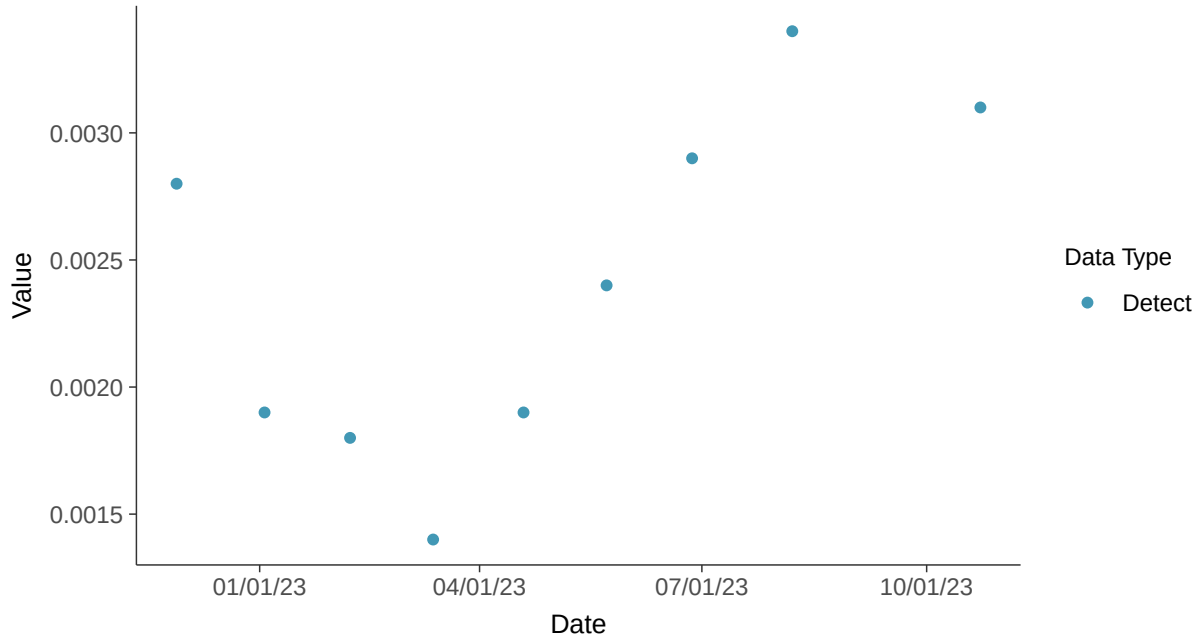


Appendix IV: Arsenic, MW-12

ID: 2_21_5_102

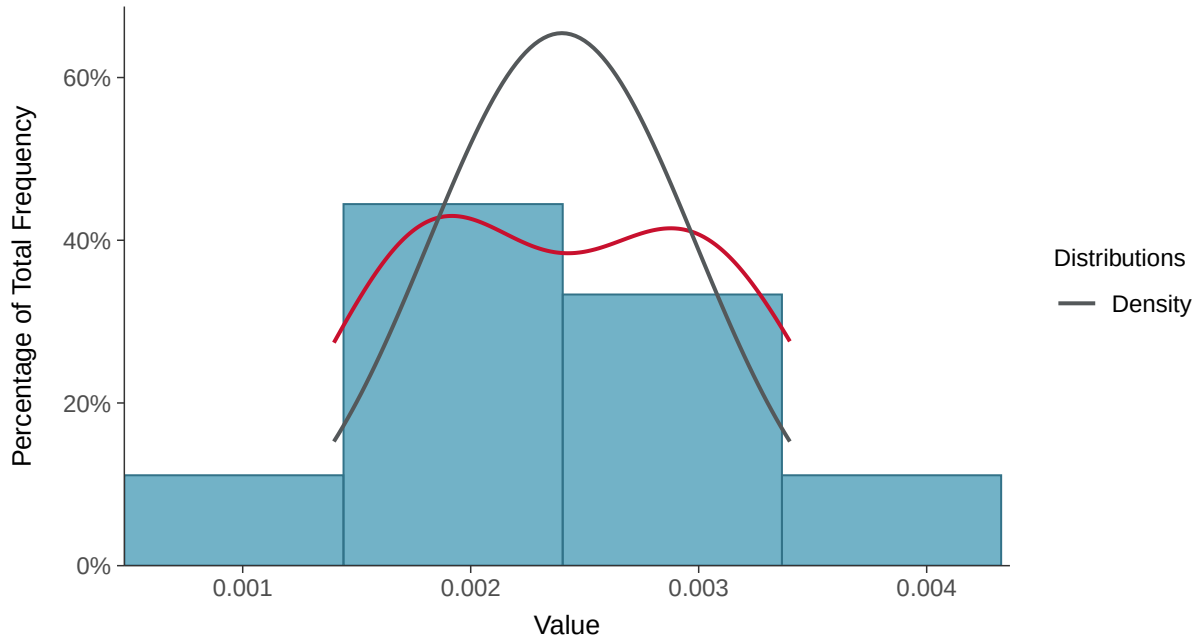
Scatter Plot

Arsenic, MW-12 (mg/L)



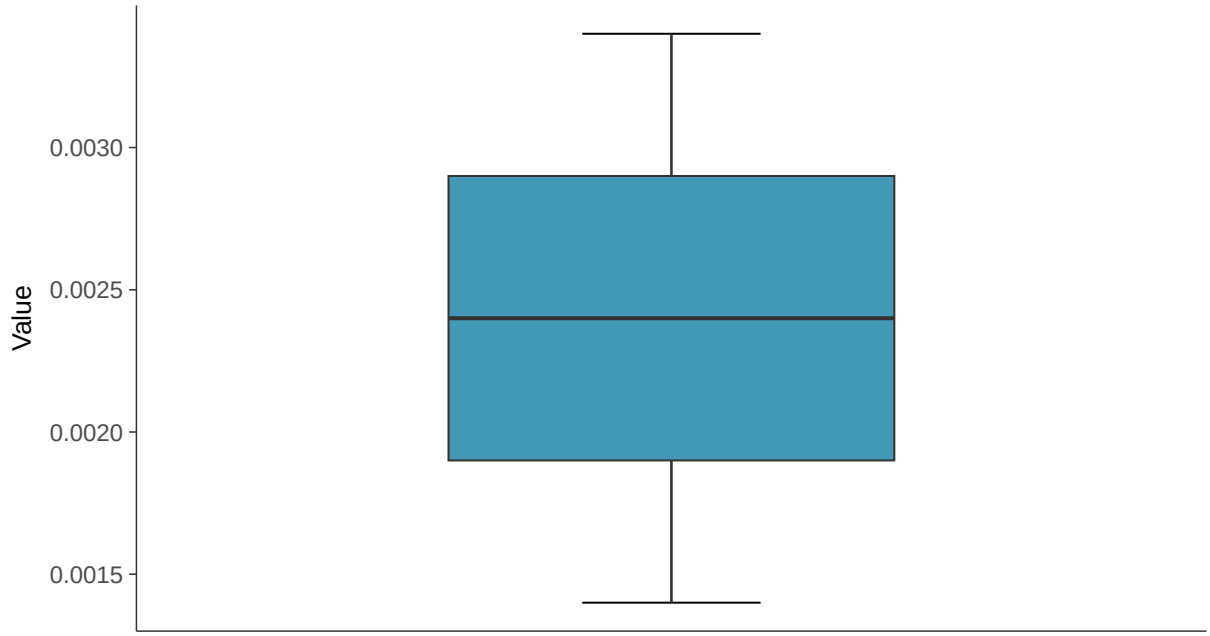
Histogram

Arsenic, MW-12 (mg/L)



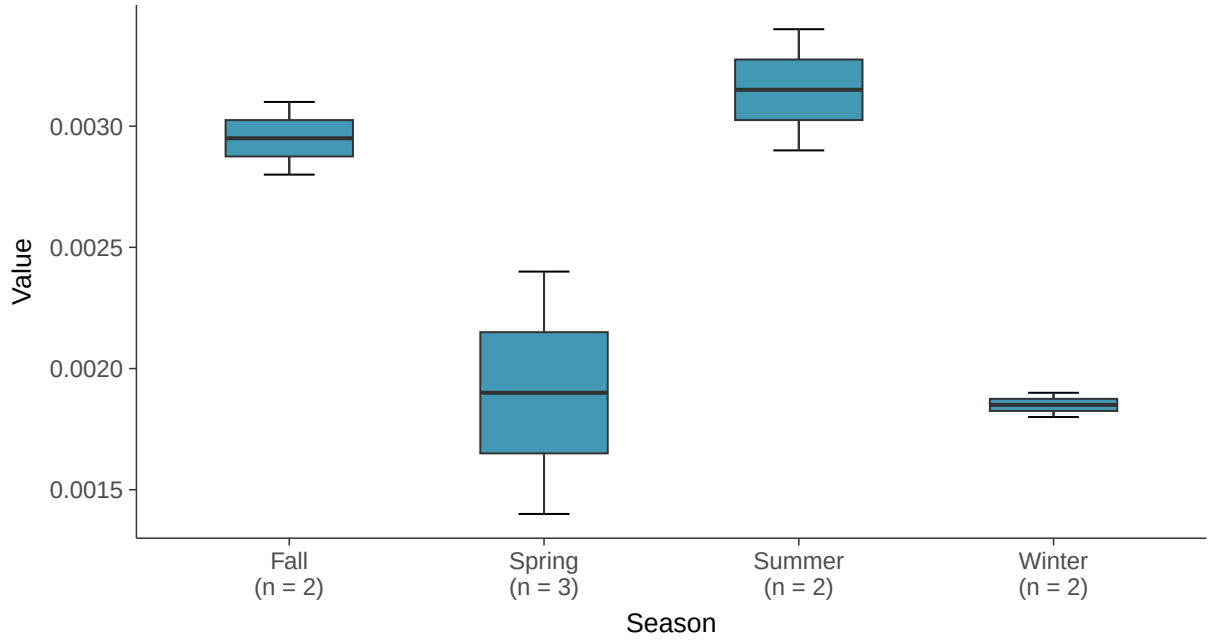
Boxplot

Arsenic, MW-12 (mg/L)



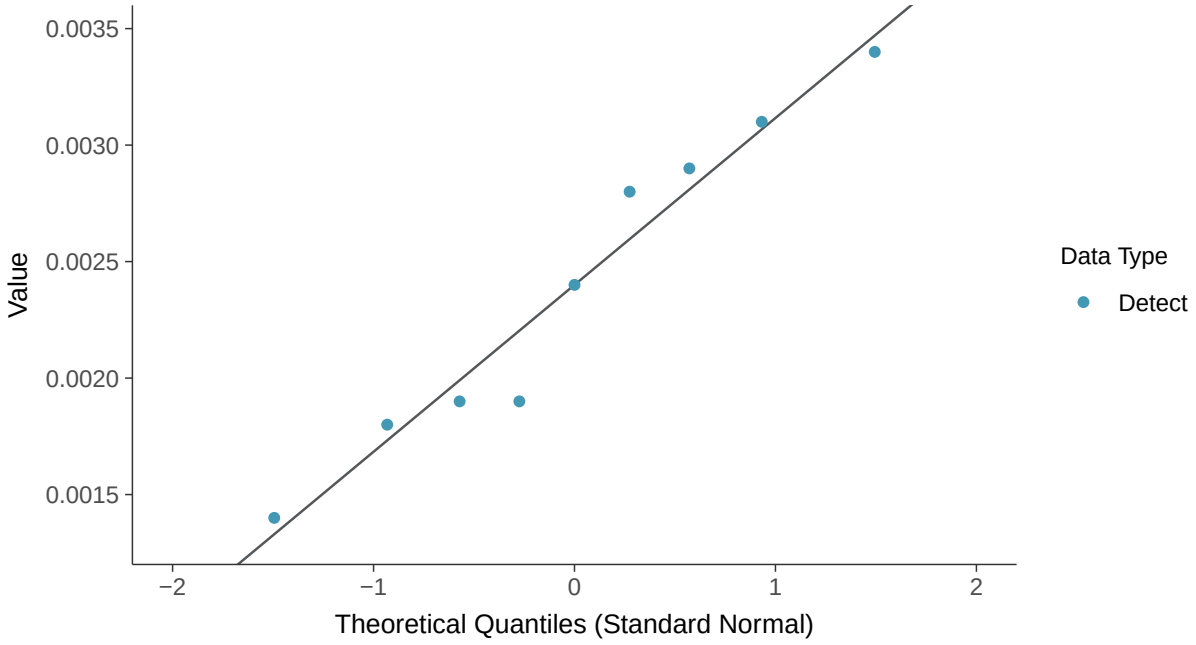
Boxplot by Season

Arsenic, MW-12 (mg/L)



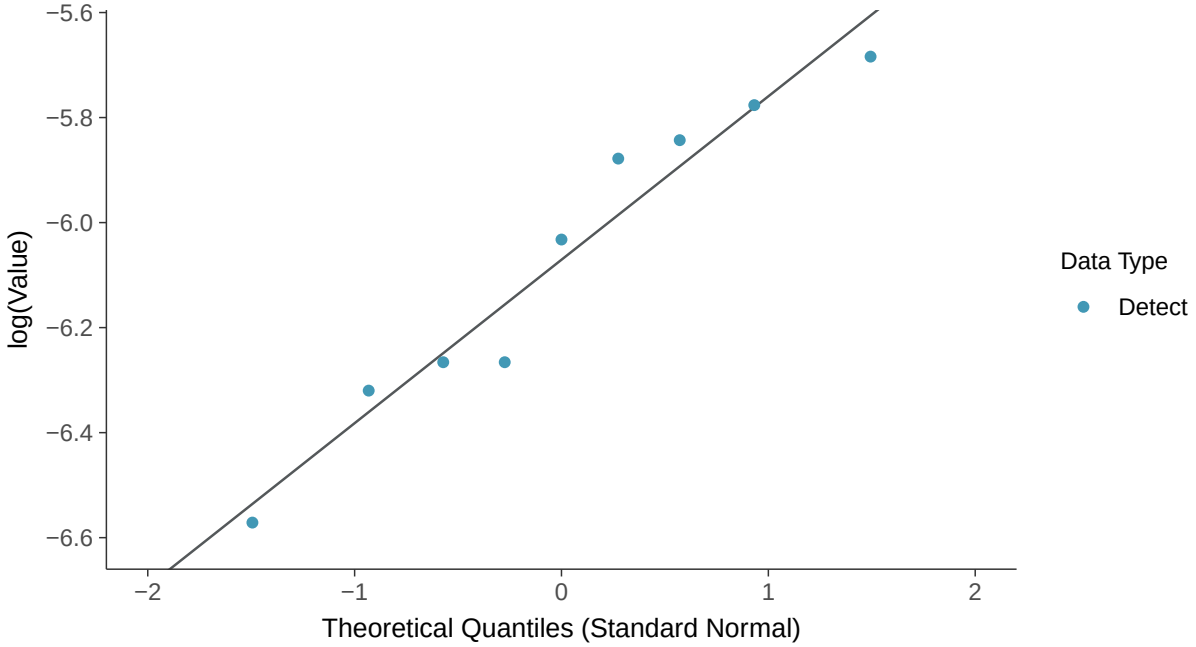
Normal Q-Q plot

Arsenic, MW-12 (mg/L)



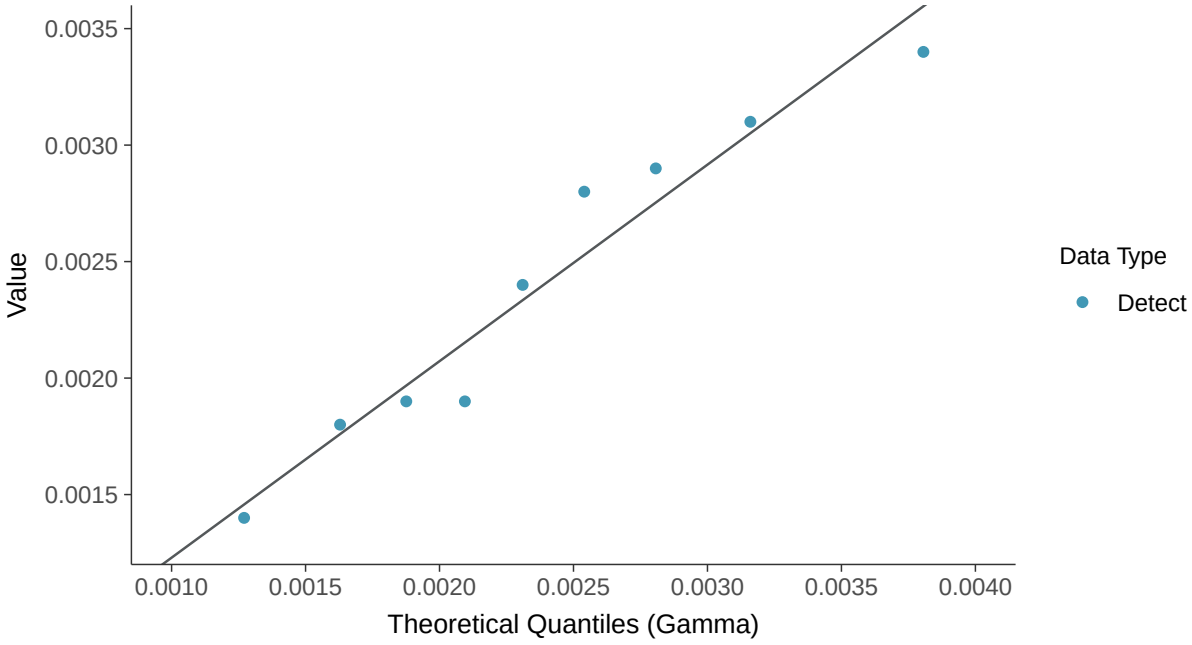
Lognormal Q-Q plot

Arsenic, MW-12 (mg/L)



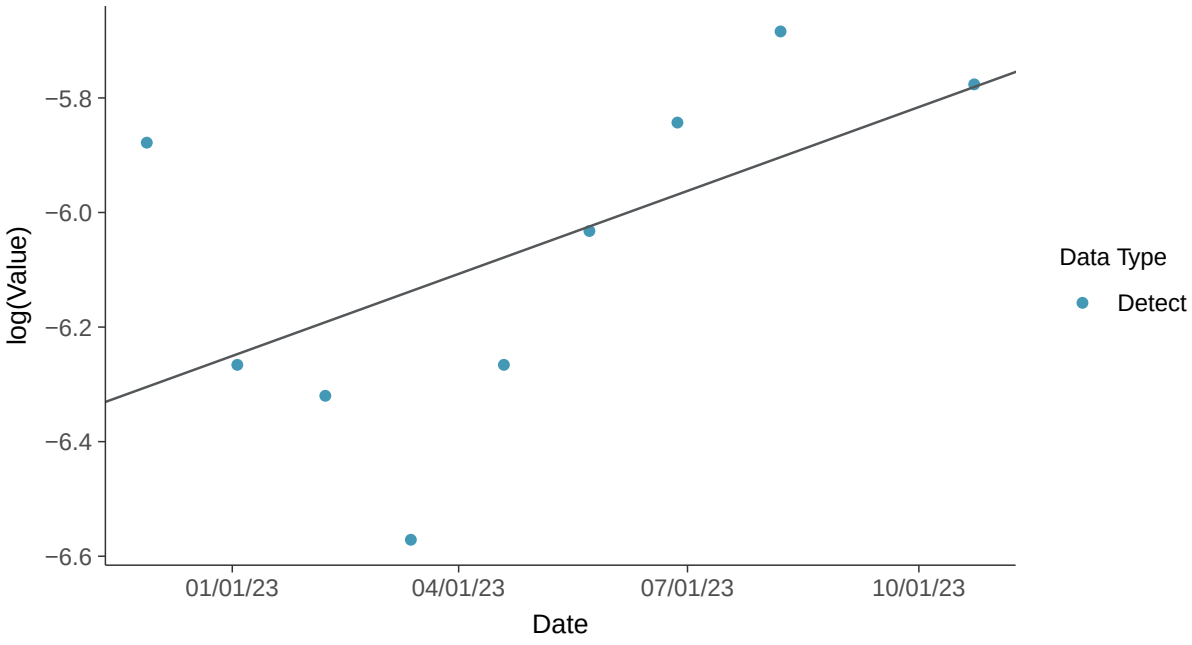
Gamma Q-Q plot

Arsenic, MW-12 (mg/L)



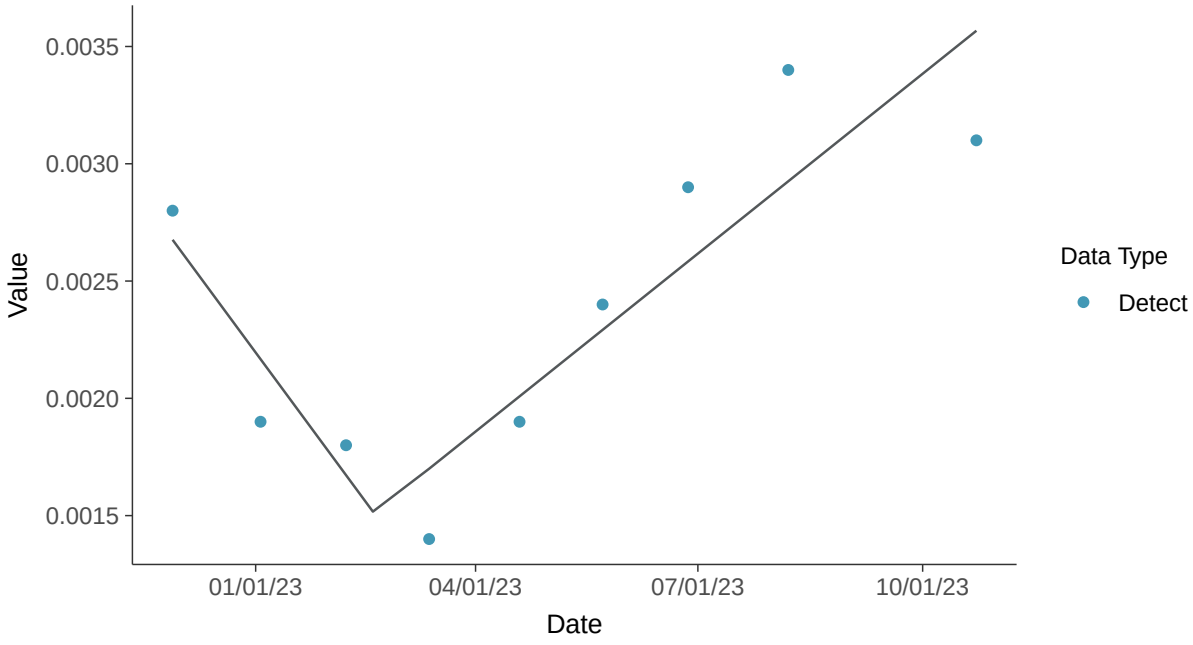
Trend Regression: Lognormal MLE

Arsenic, MW-12 (mg/L)



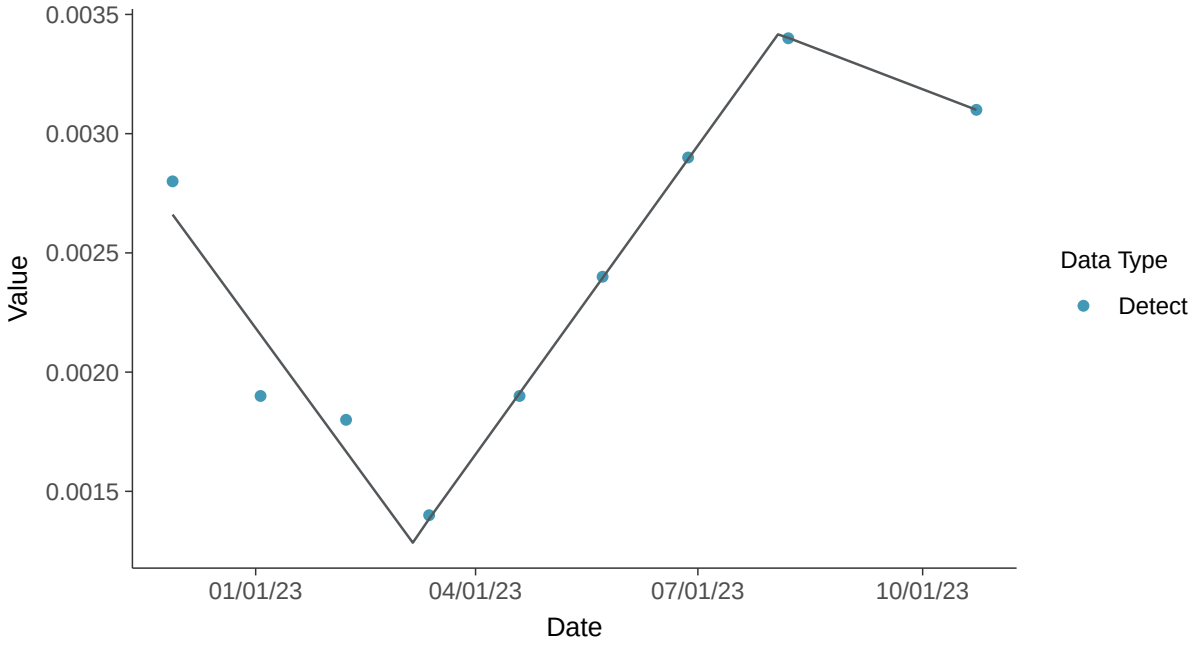
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-12 (mg/L)



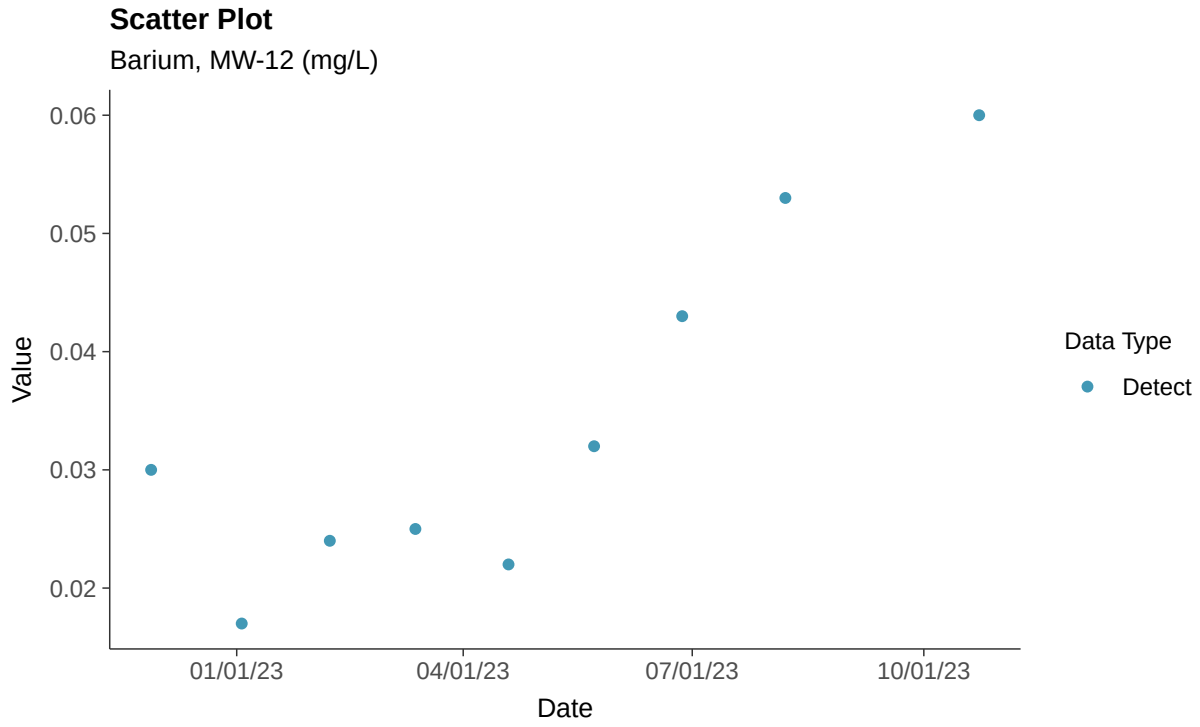
Trend Regression: Piecewise Linear-Linear-Linear

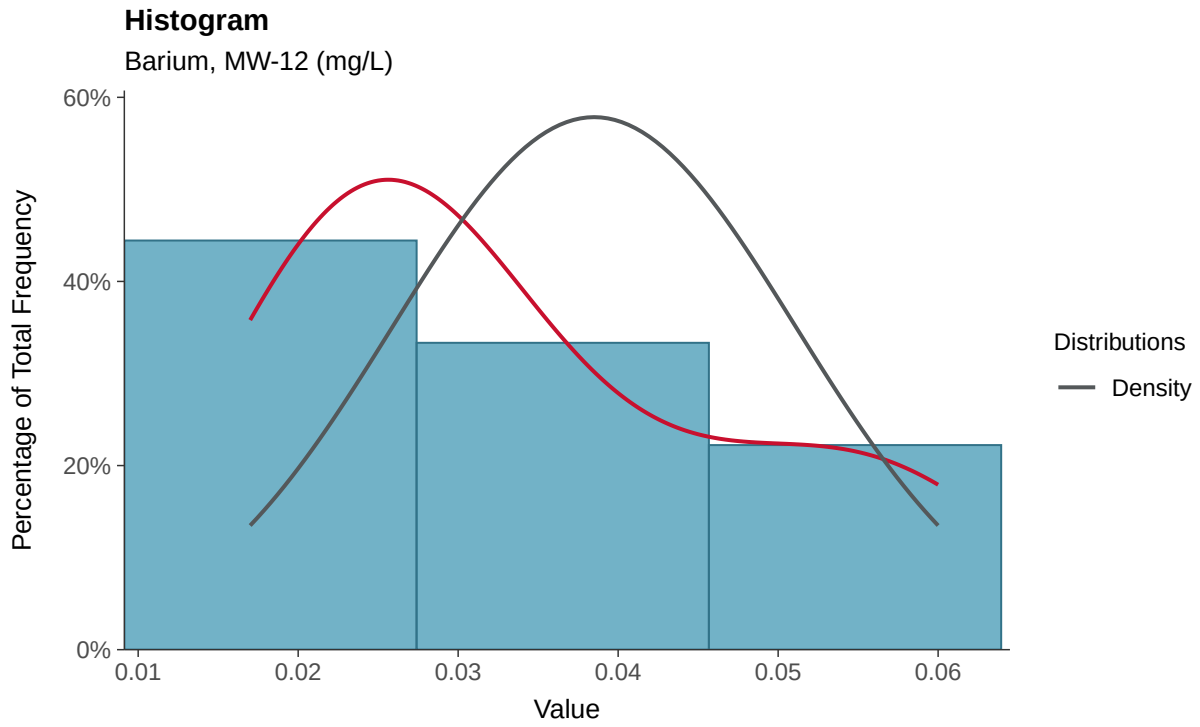
Arsenic, MW-12 (mg/L)



Appendix IV: Barium, MW-12

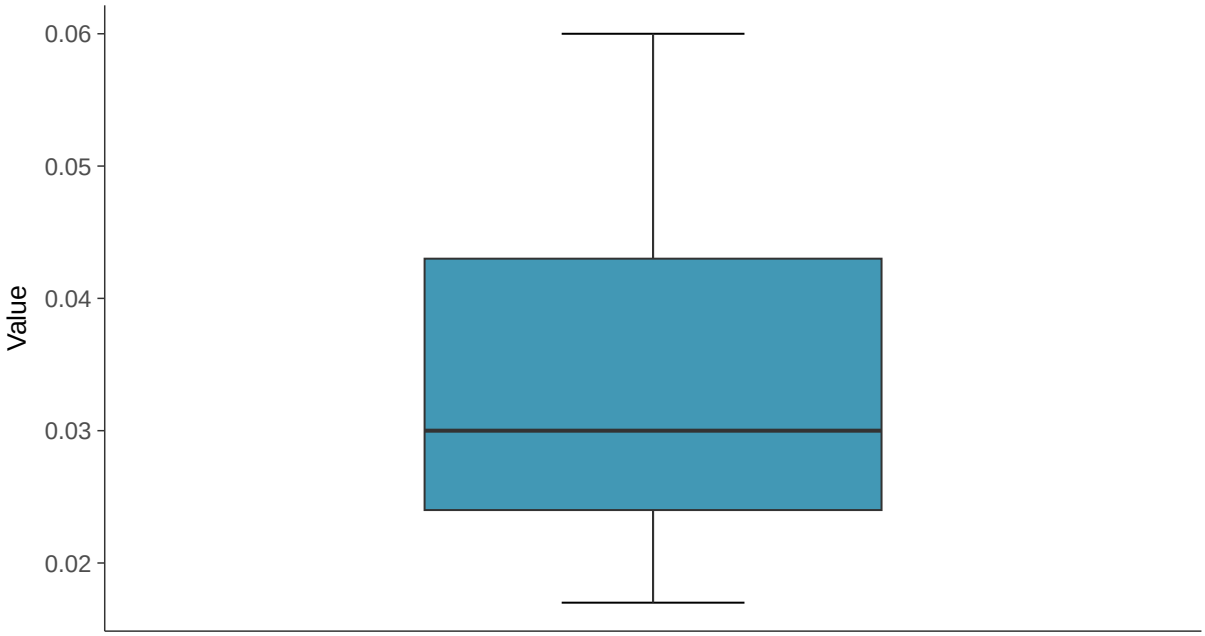
ID: 2_21_5_103





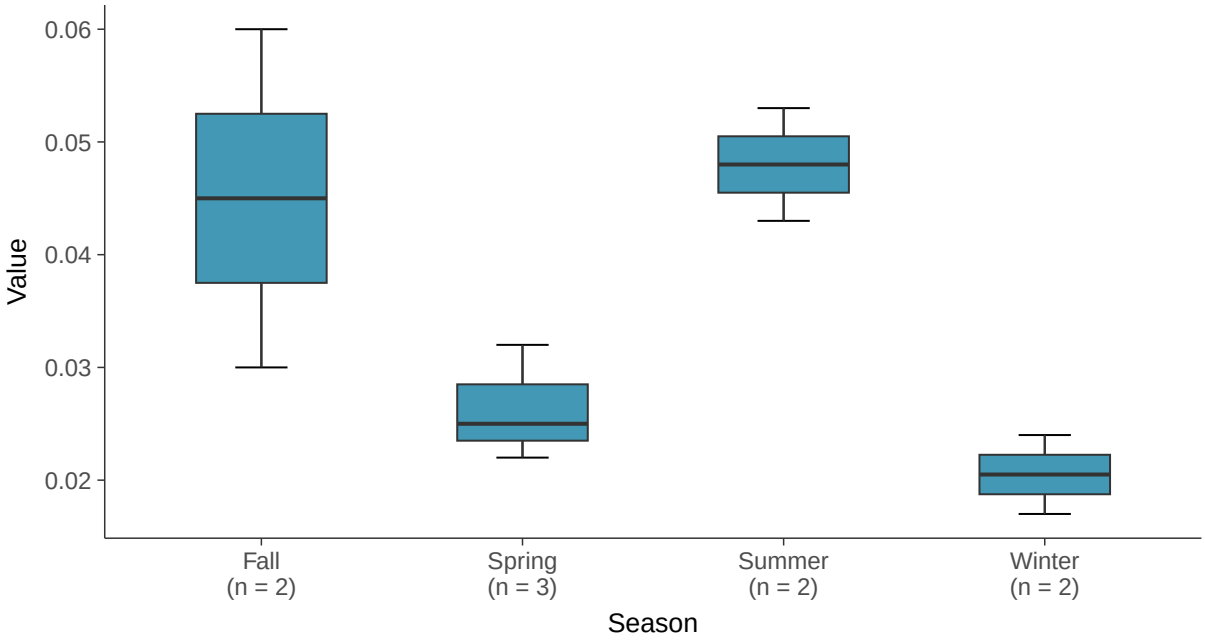
Boxplot

Barium, MW-12 (mg/L)



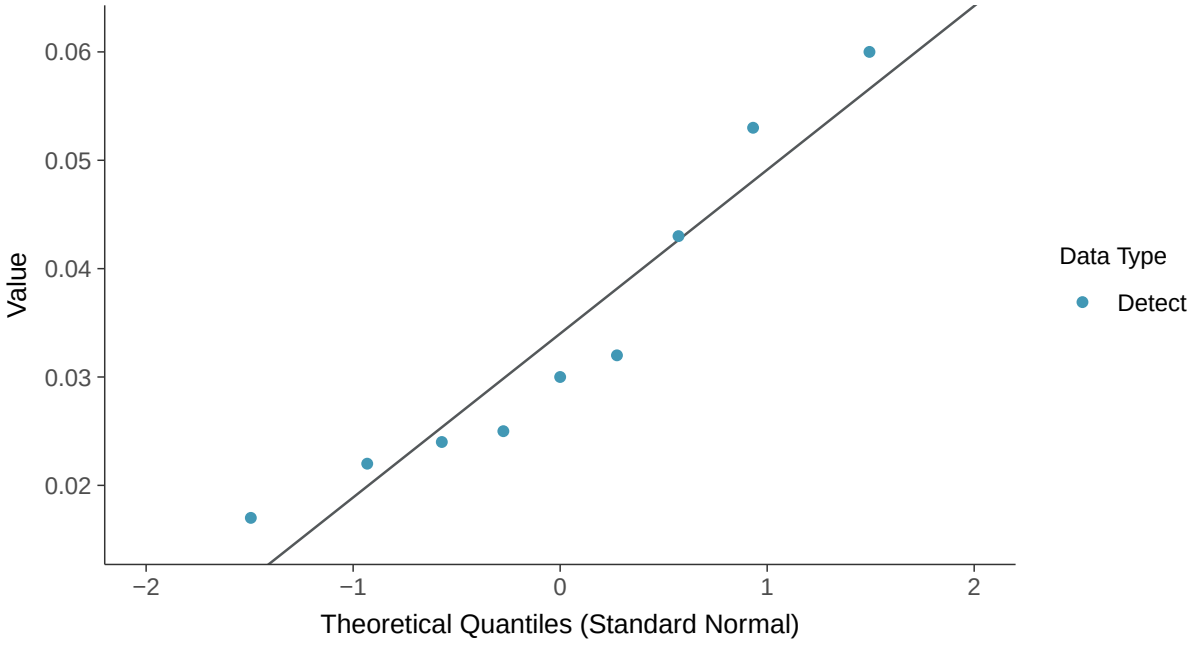
Boxplot by Season

Barium, MW-12 (mg/L)



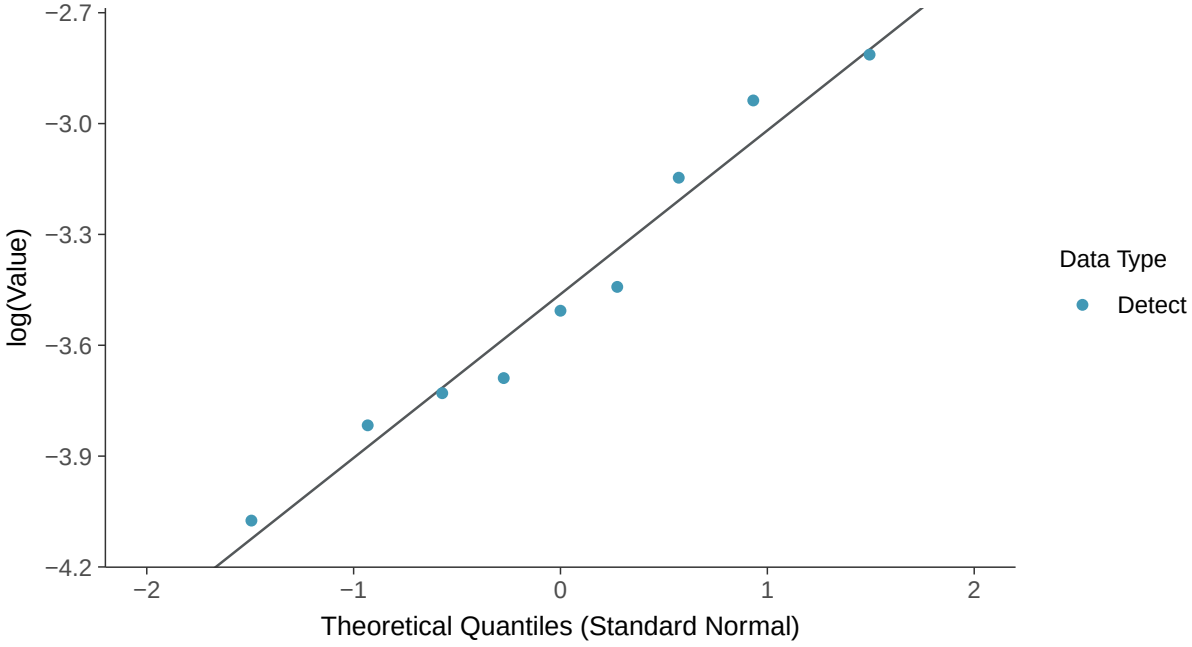
Normal Q-Q plot

Barium, MW-12 (mg/L)



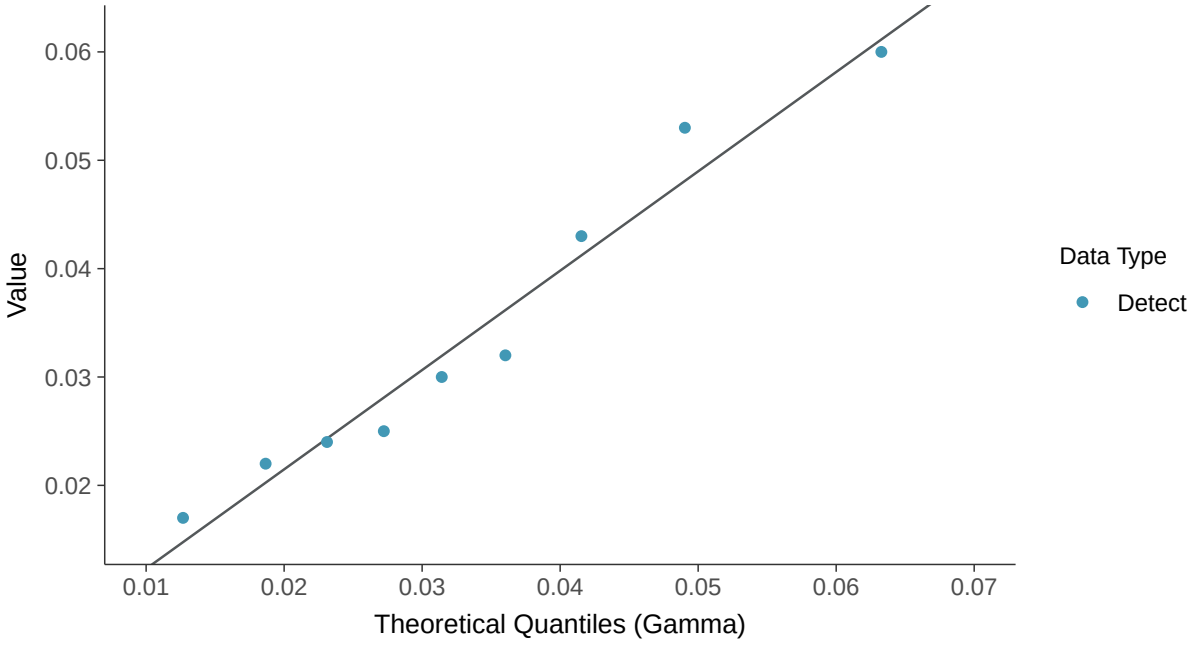
Lognormal Q-Q plot

Barium, MW-12 (mg/L)



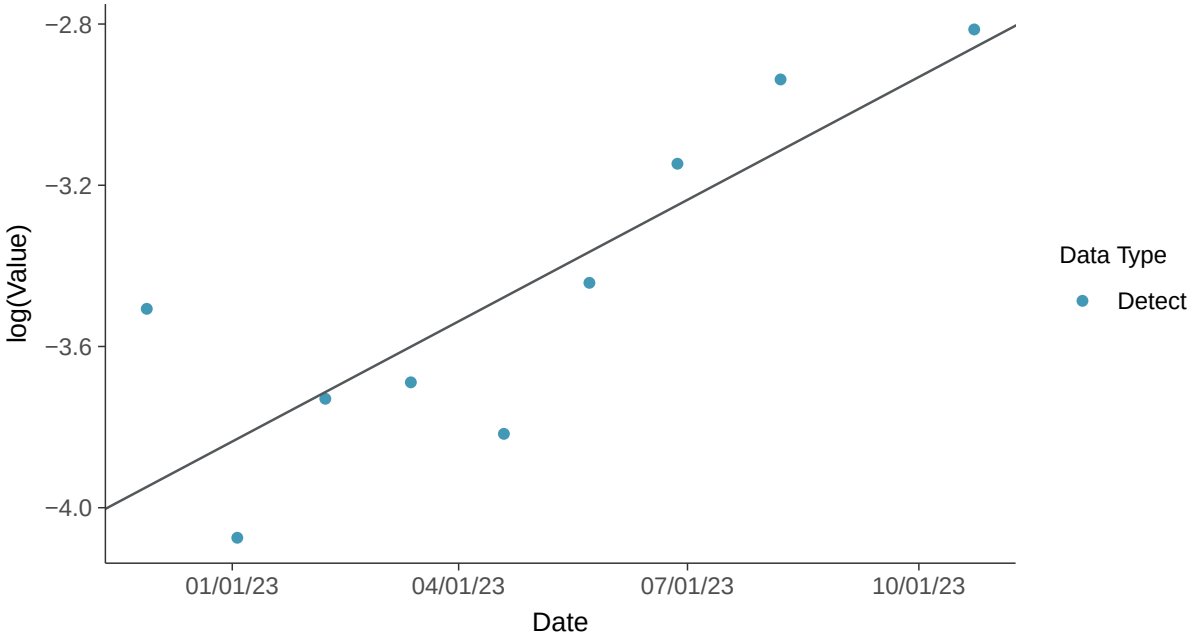
Gamma Q-Q plot

Barium, MW-12 (mg/L)



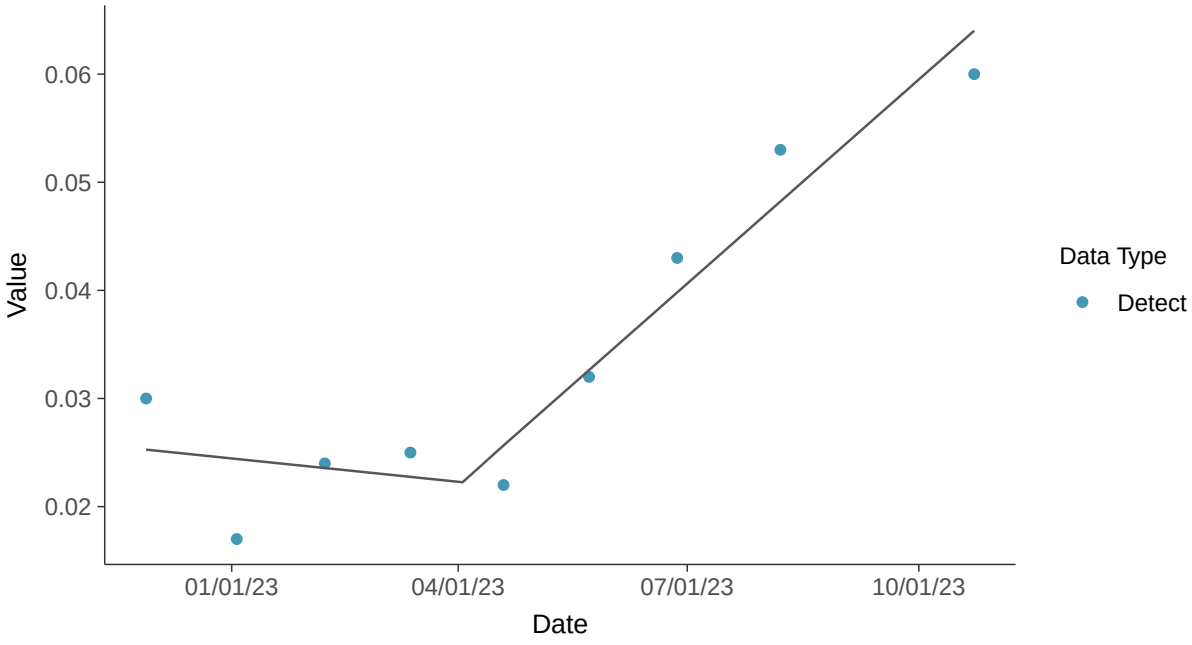
Trend Regression: Lognormal MLE

Barium, MW-12 (mg/L)



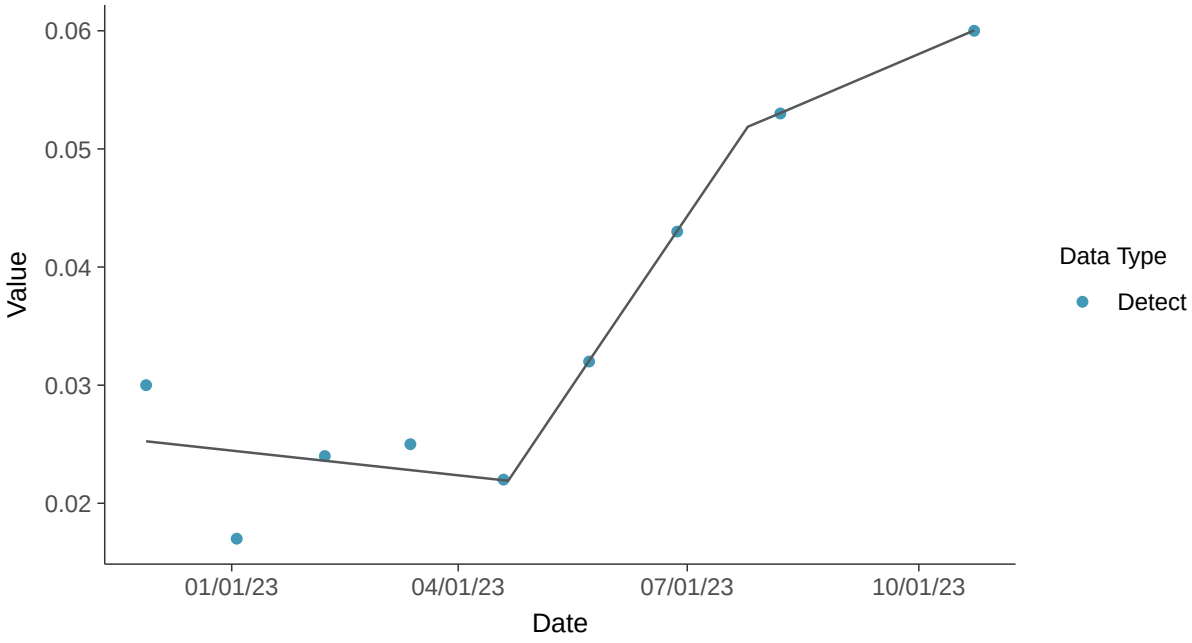
Trend Regression: Piecewise Linear-Linear

Barium, MW-12 (mg/L)



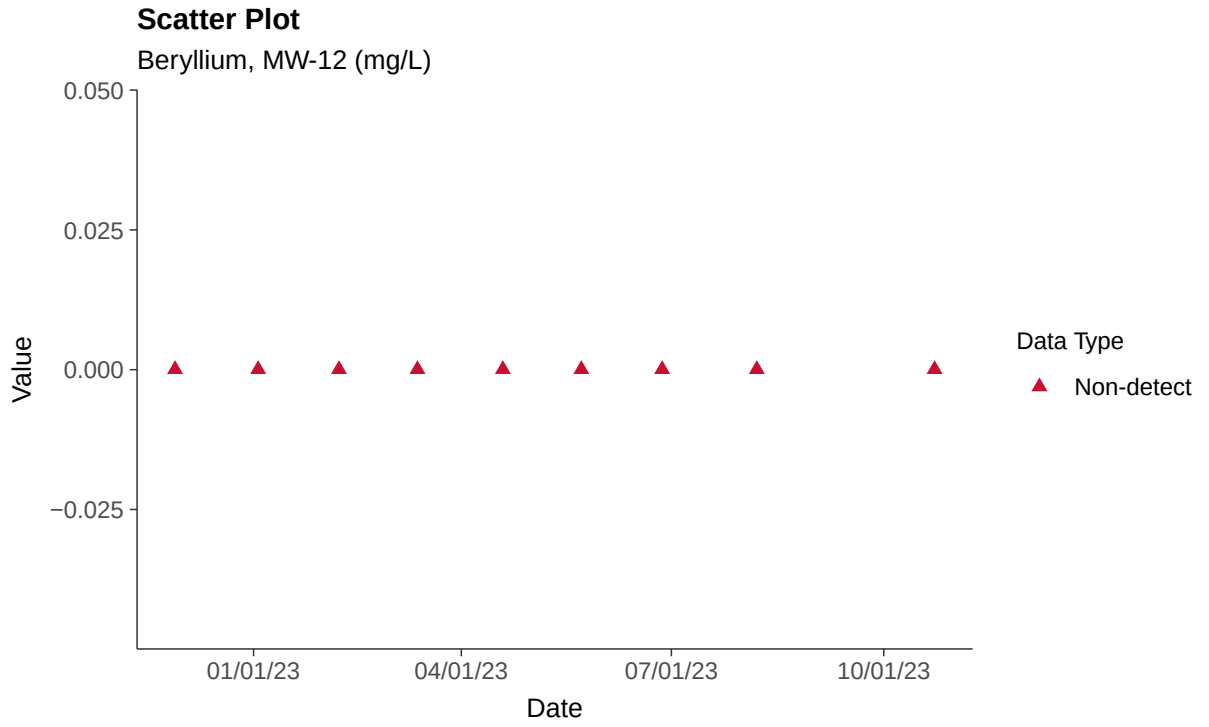
Trend Regression: Piecewise Linear-Linear-Linear

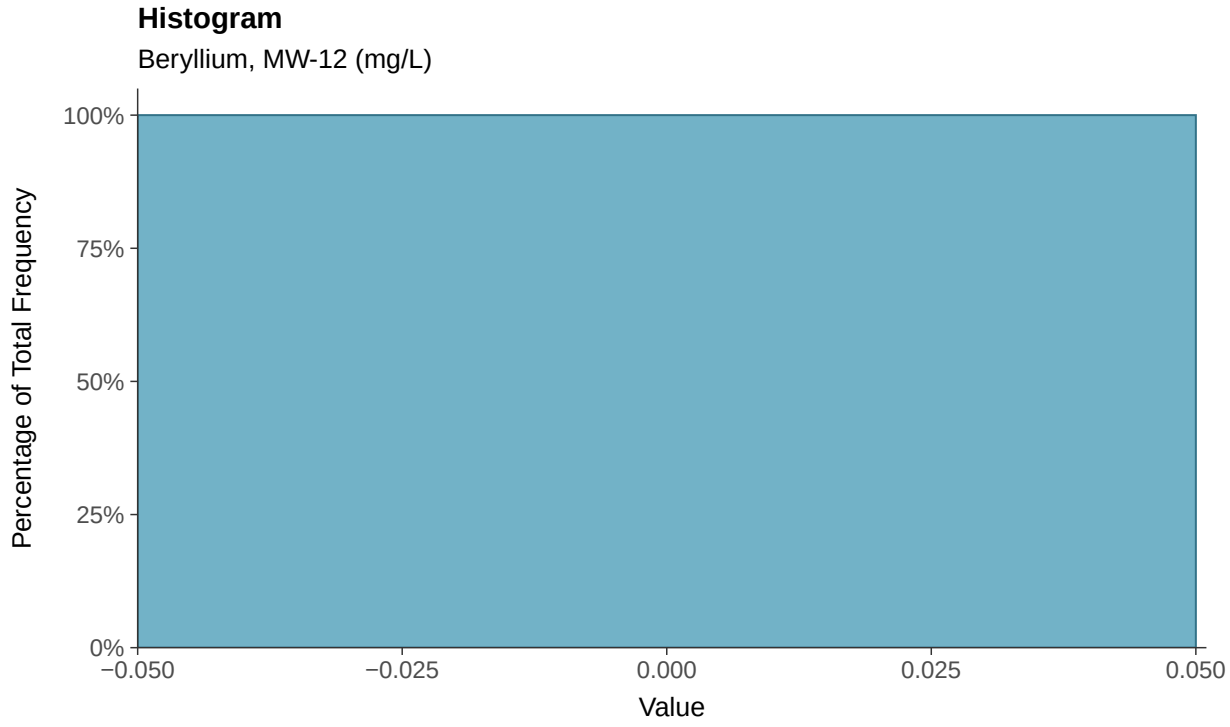
Barium, MW-12 (mg/L)



Appendix IV: Beryllium, MW-12

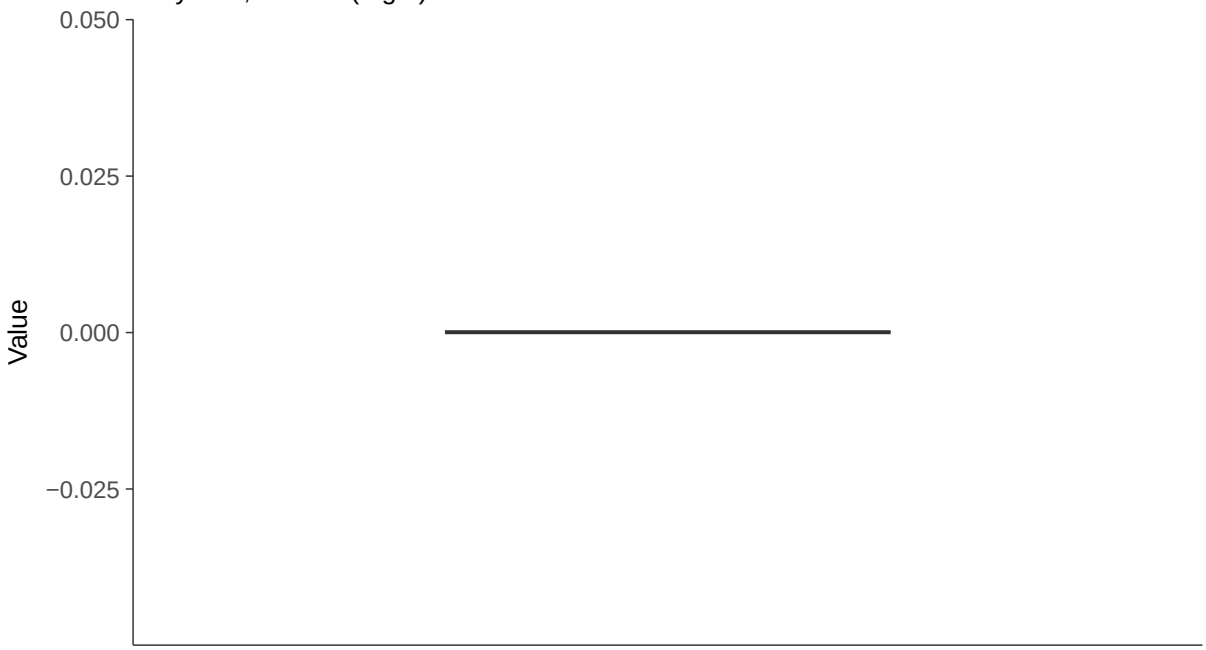
ID: 2_21_5_104





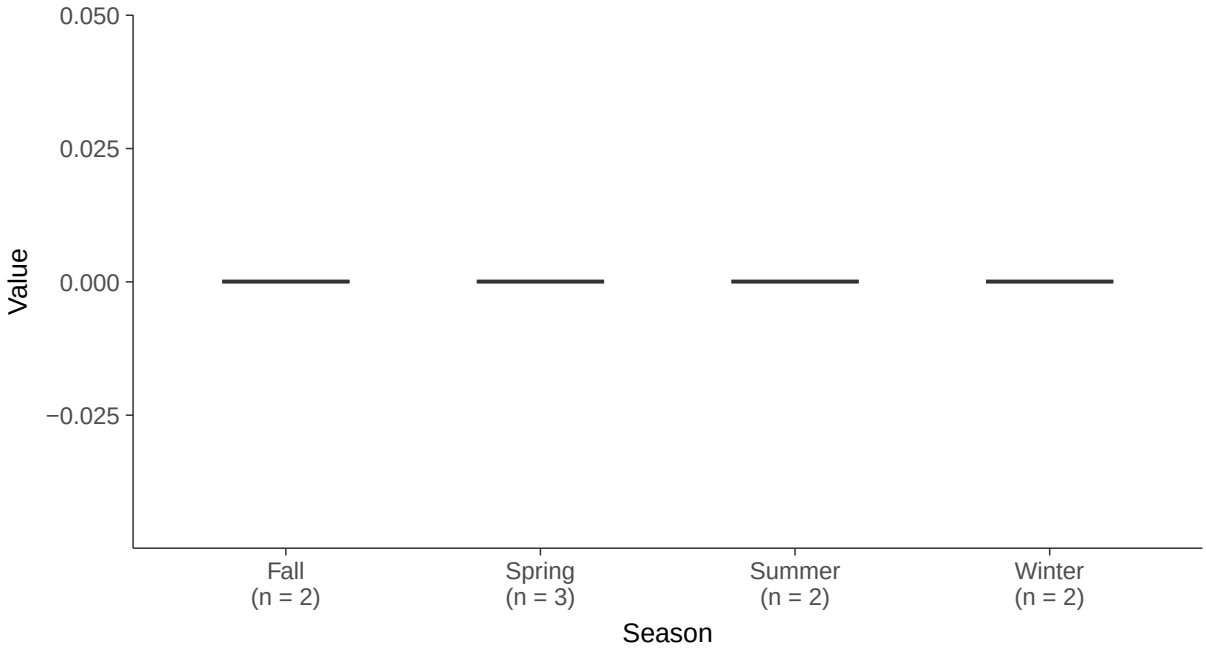
Boxplot

Beryllium, MW-12 (mg/L)



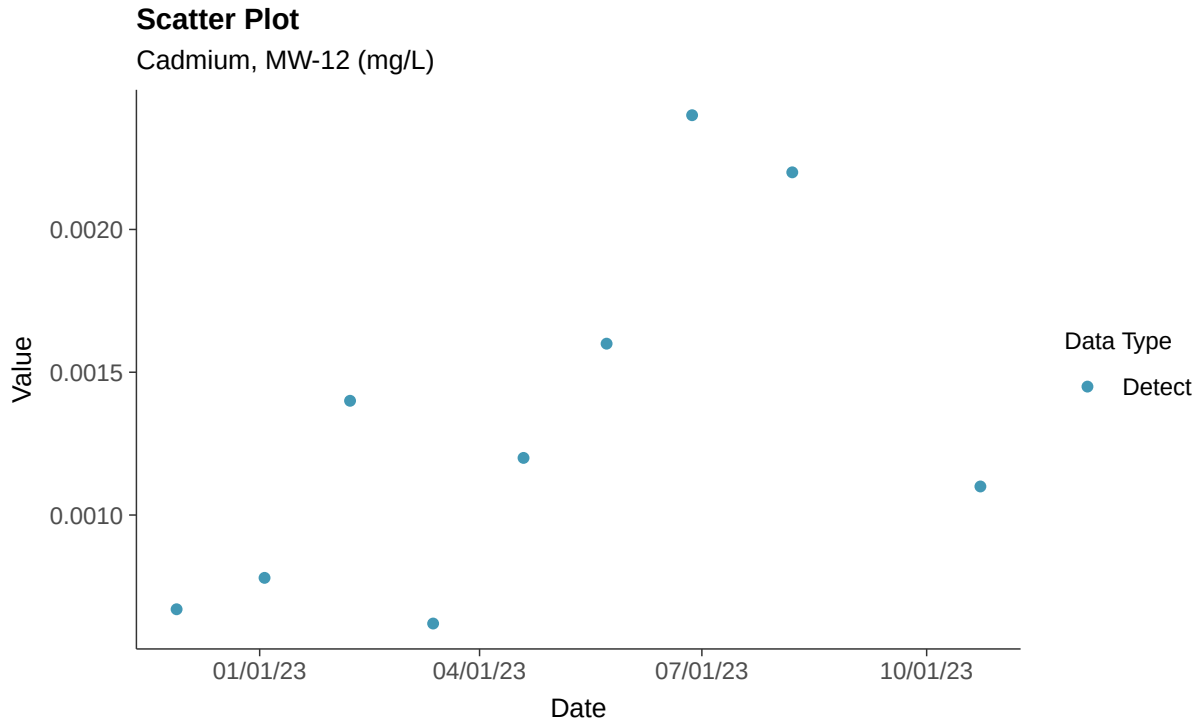
Boxplot by Season

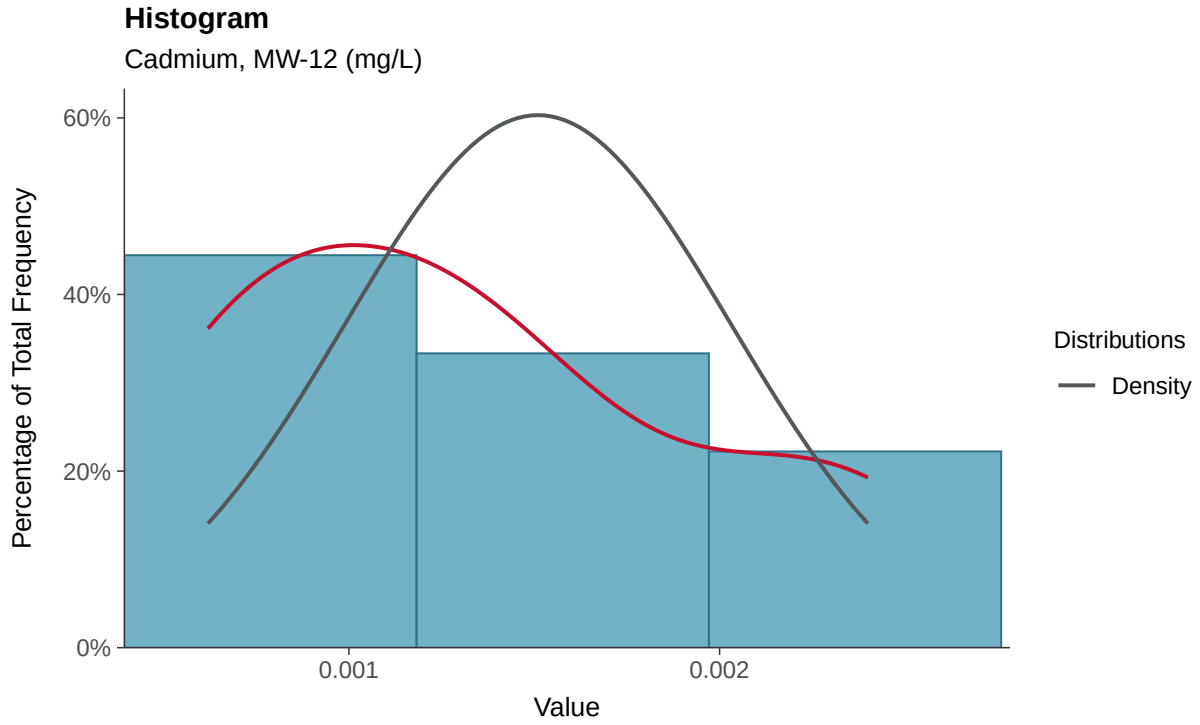
Beryllium, MW-12 (mg/L)



Appendix IV: Cadmium, MW-12

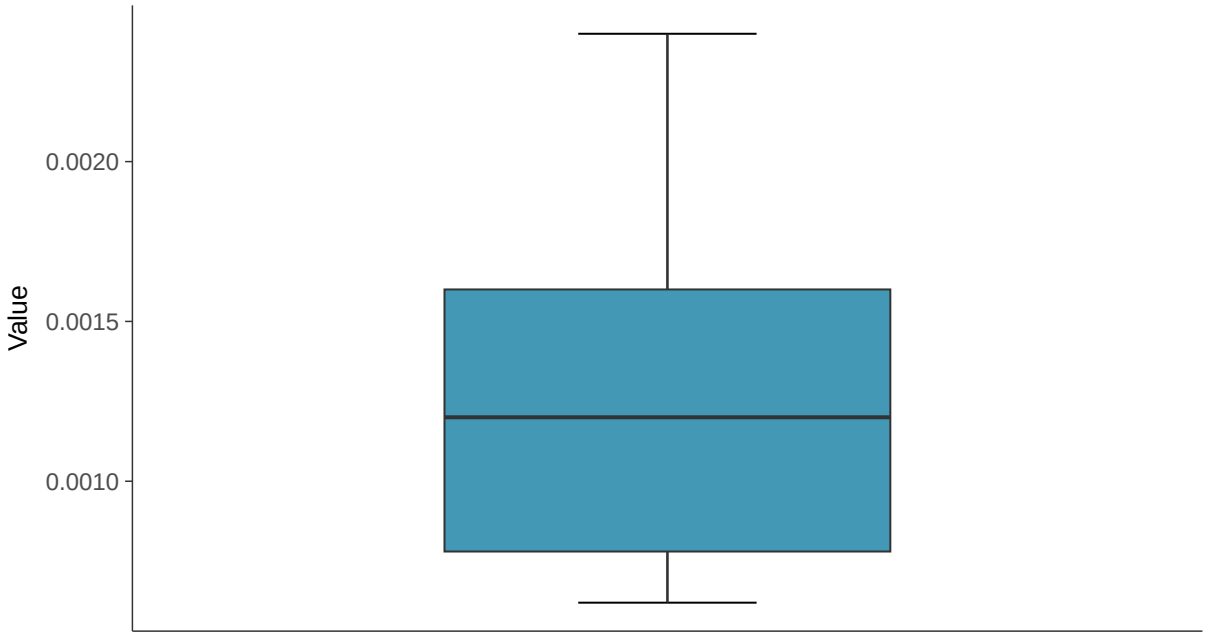
ID: 2_21_5_106





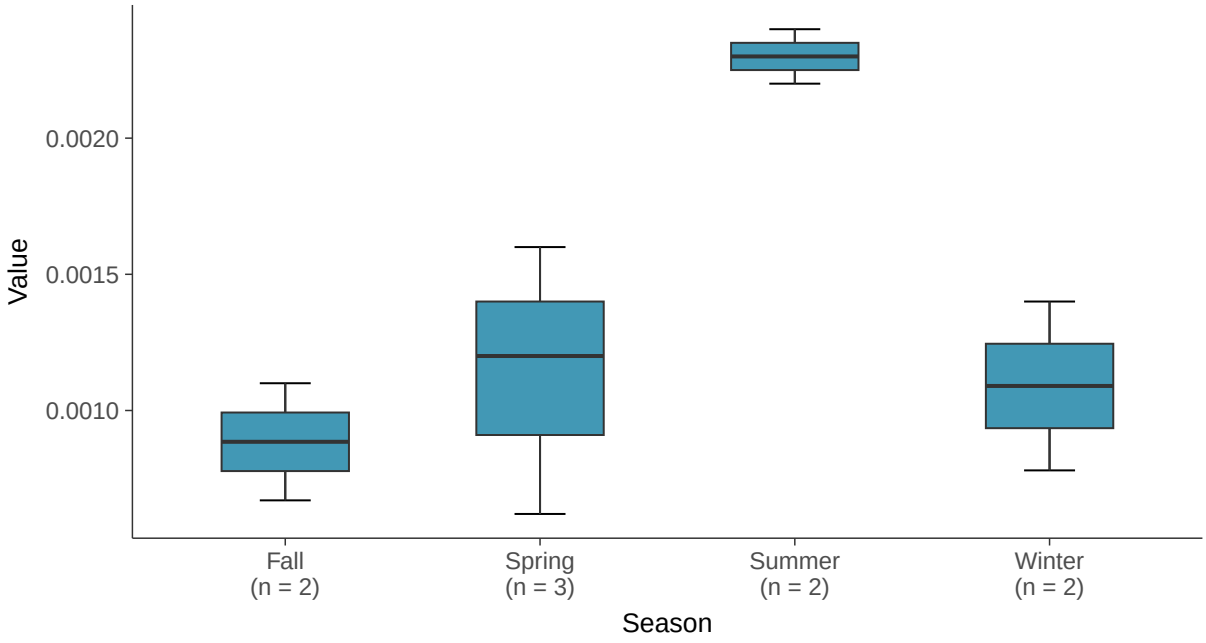
Boxplot

Cadmium, MW-12 (mg/L)



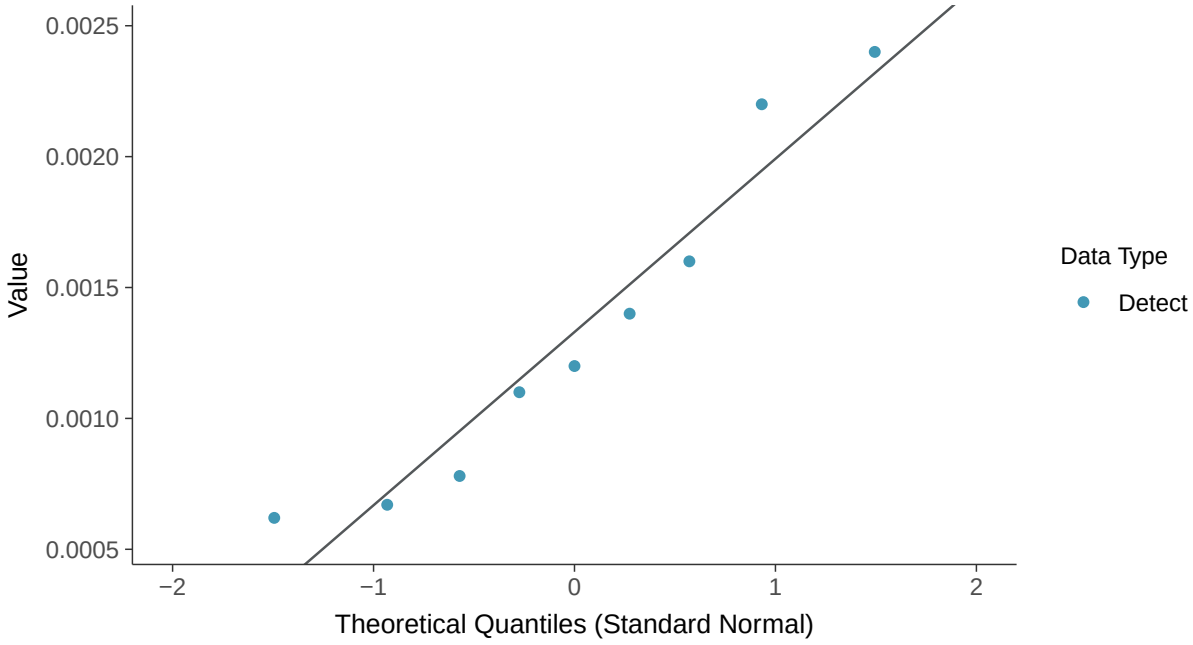
Boxplot by Season

Cadmium, MW-12 (mg/L)



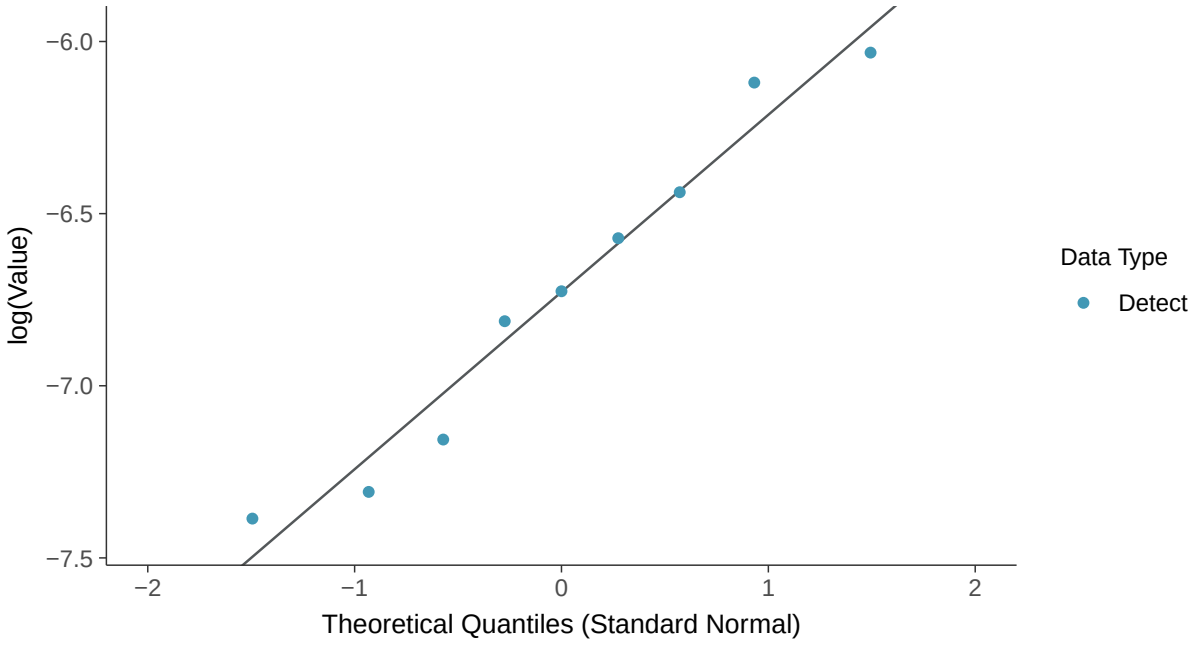
Normal Q-Q plot

Cadmium, MW-12 (mg/L)



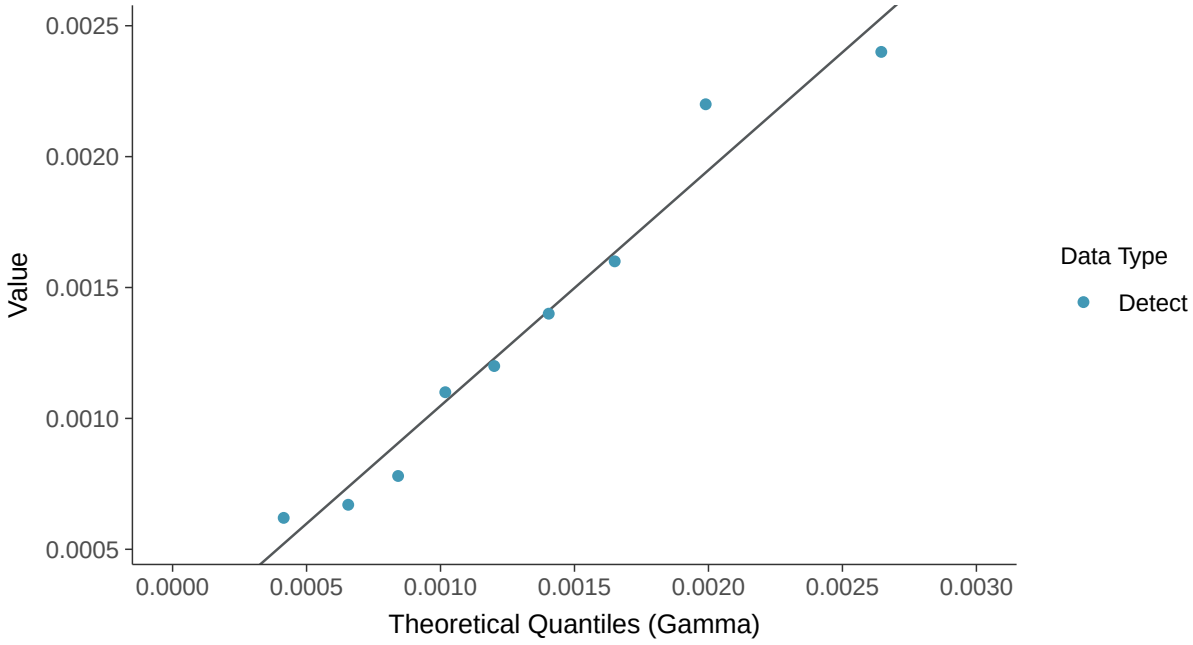
Lognormal Q-Q plot

Cadmium, MW-12 (mg/L)



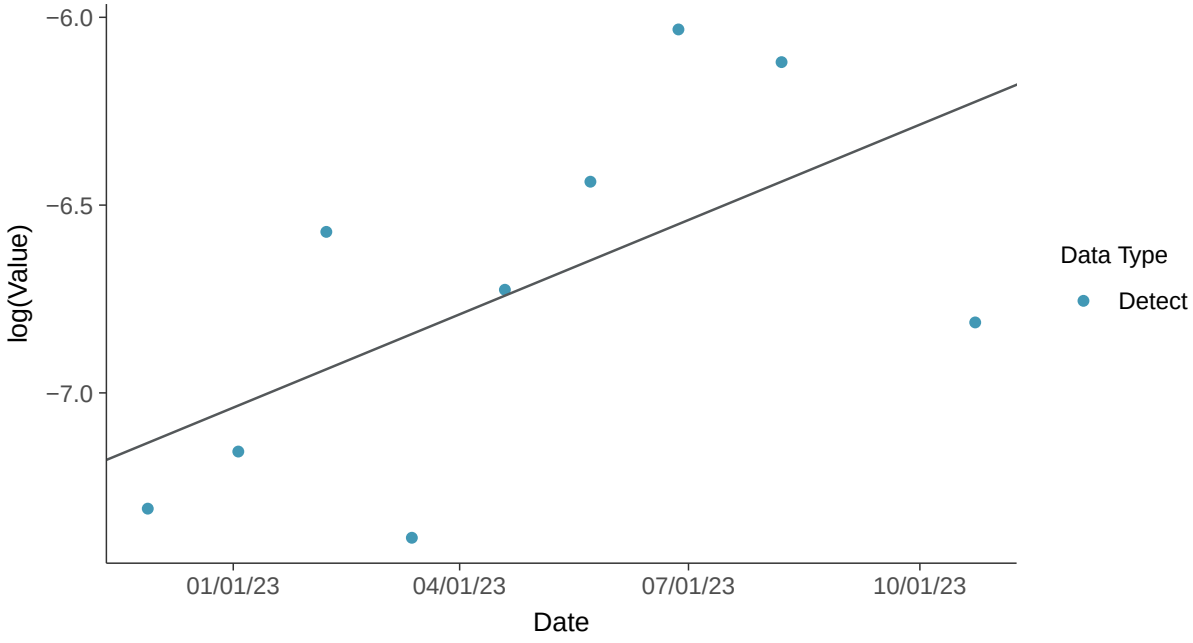
Gamma Q-Q plot

Cadmium, MW-12 (mg/L)



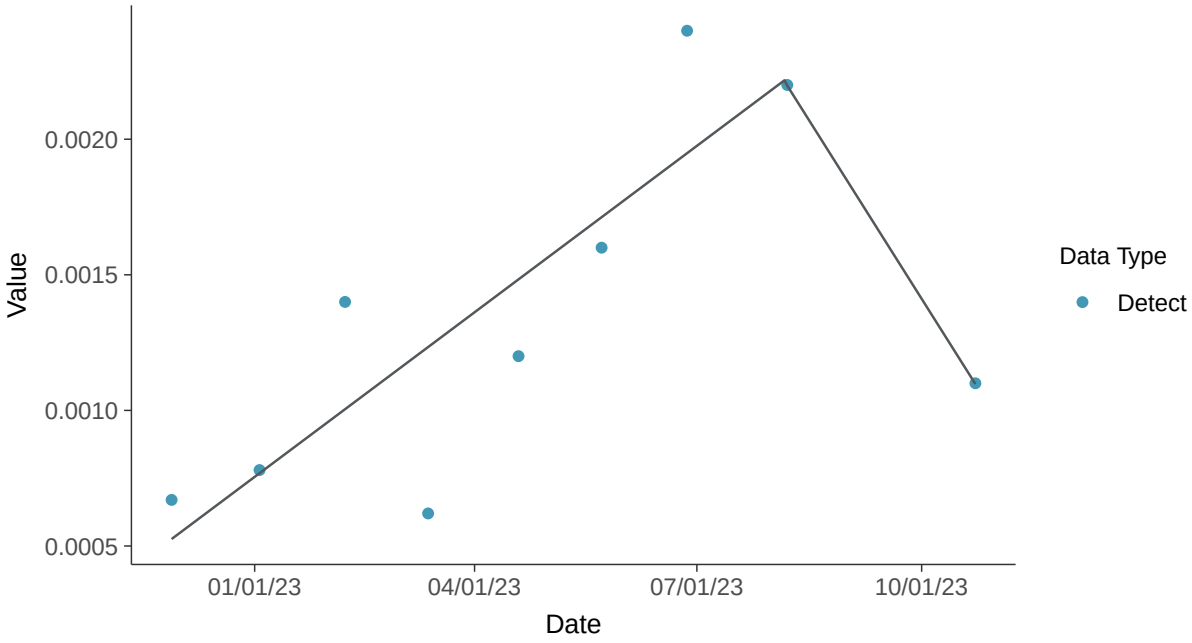
Trend Regression: Lognormal MLE

Cadmium, MW-12 (mg/L)



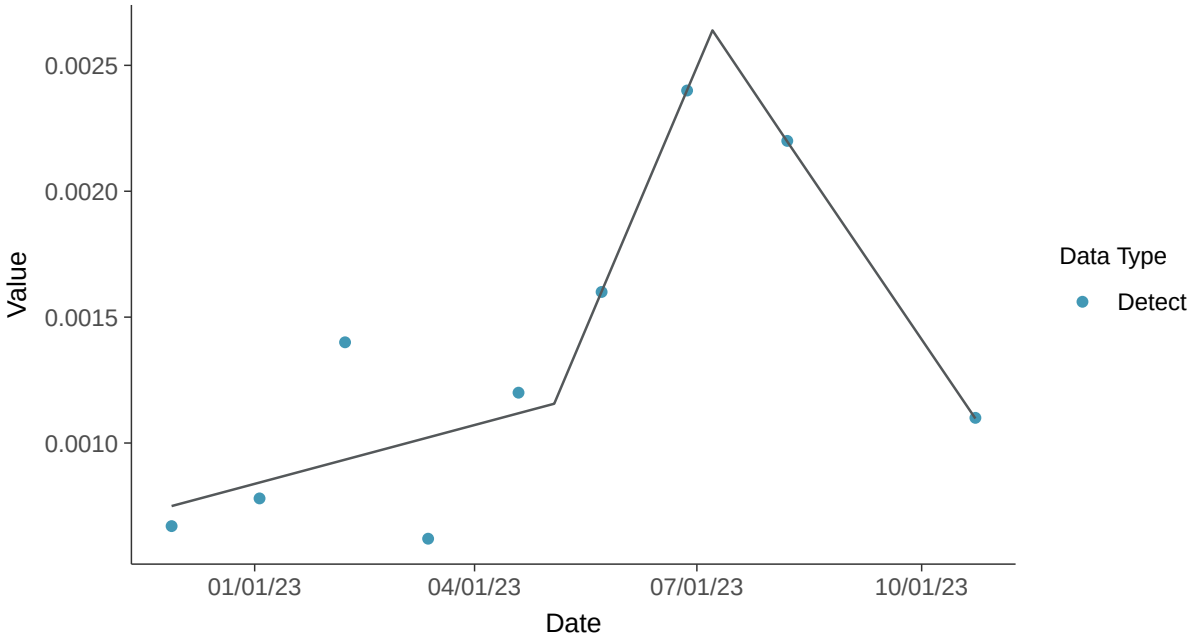
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-12 (mg/L)



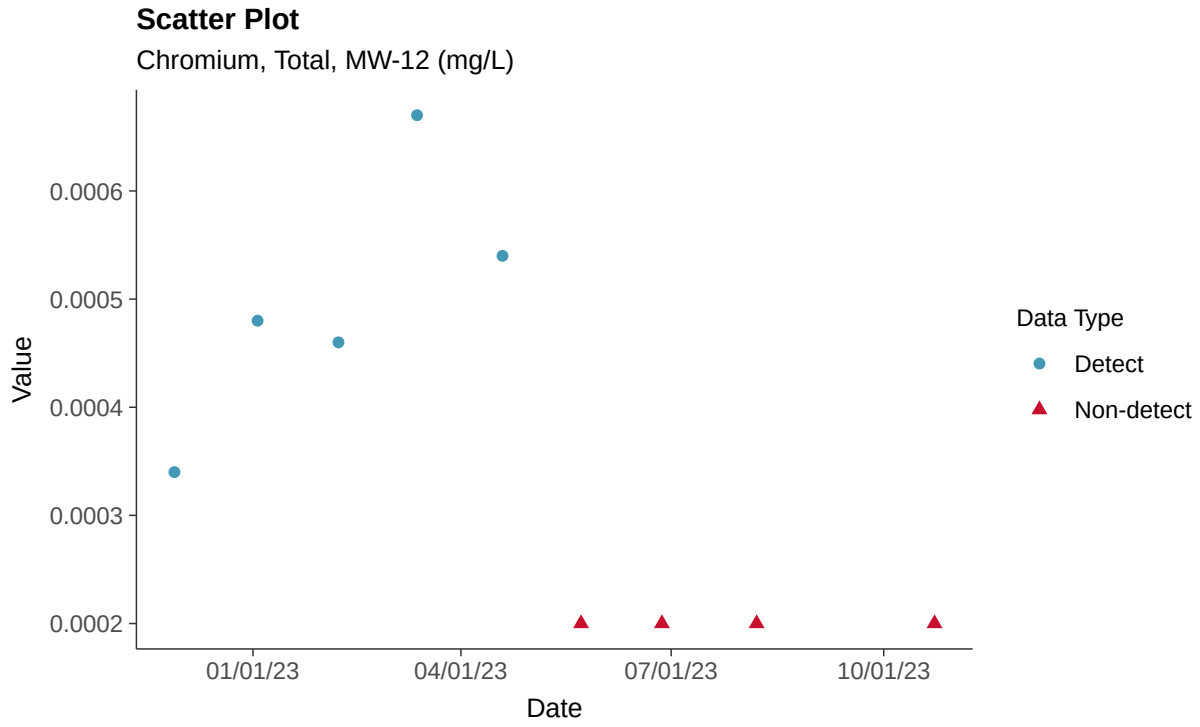
Trend Regression: Piecewise Linear-Linear-Linear

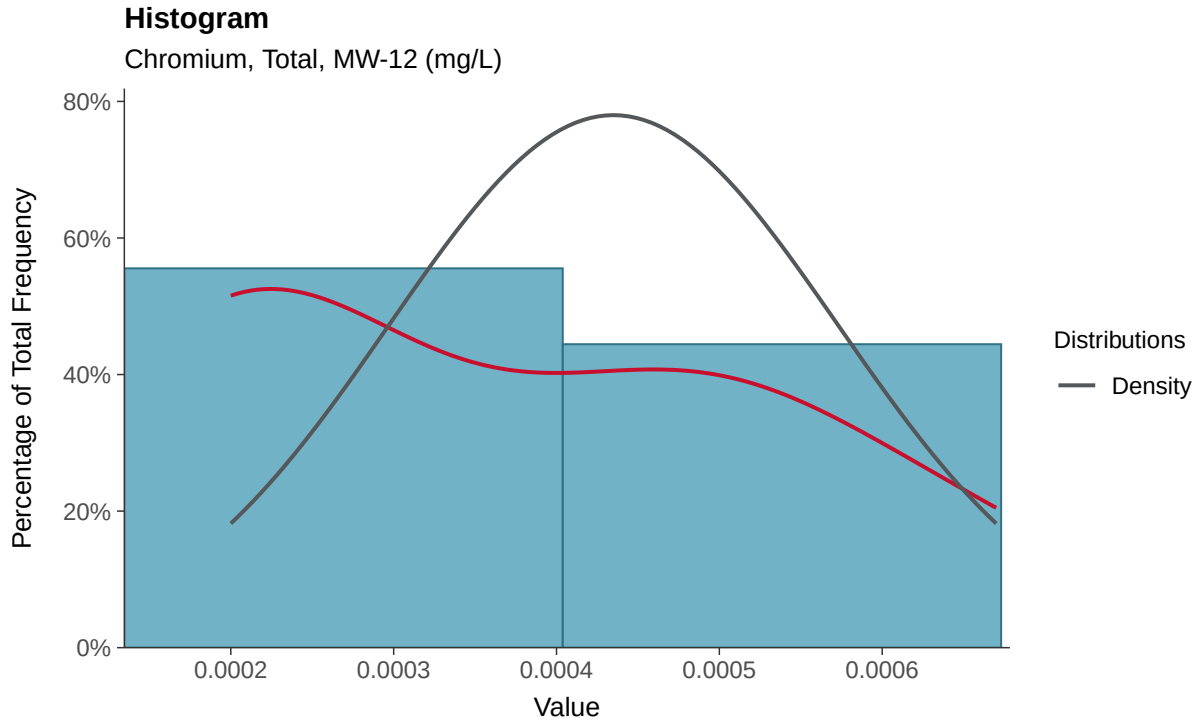
Cadmium, MW-12 (mg/L)



Appendix IV: Chromium, Total, MW-12

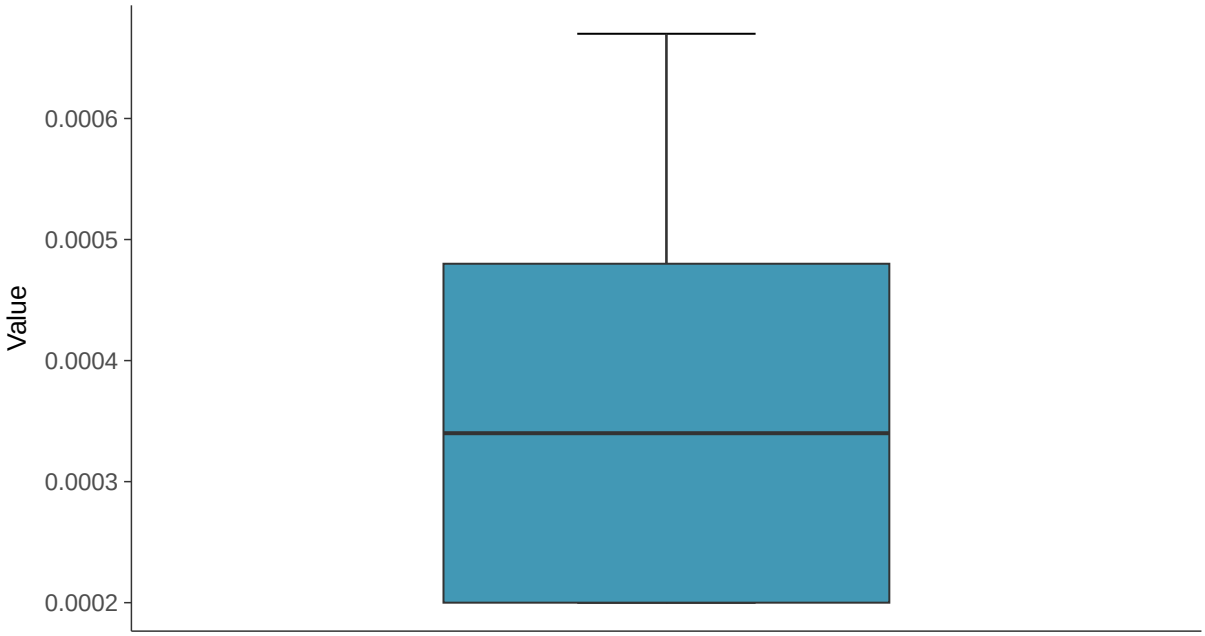
ID: 2_21_5_109





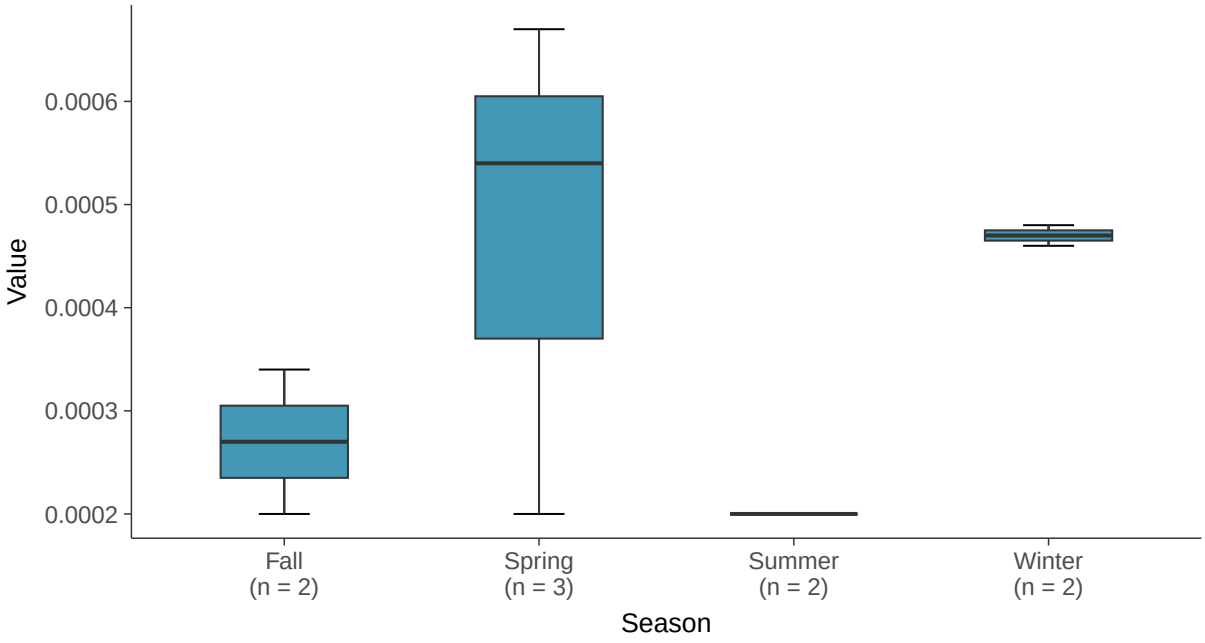
Boxplot

Chromium, Total, MW-12 (mg/L)



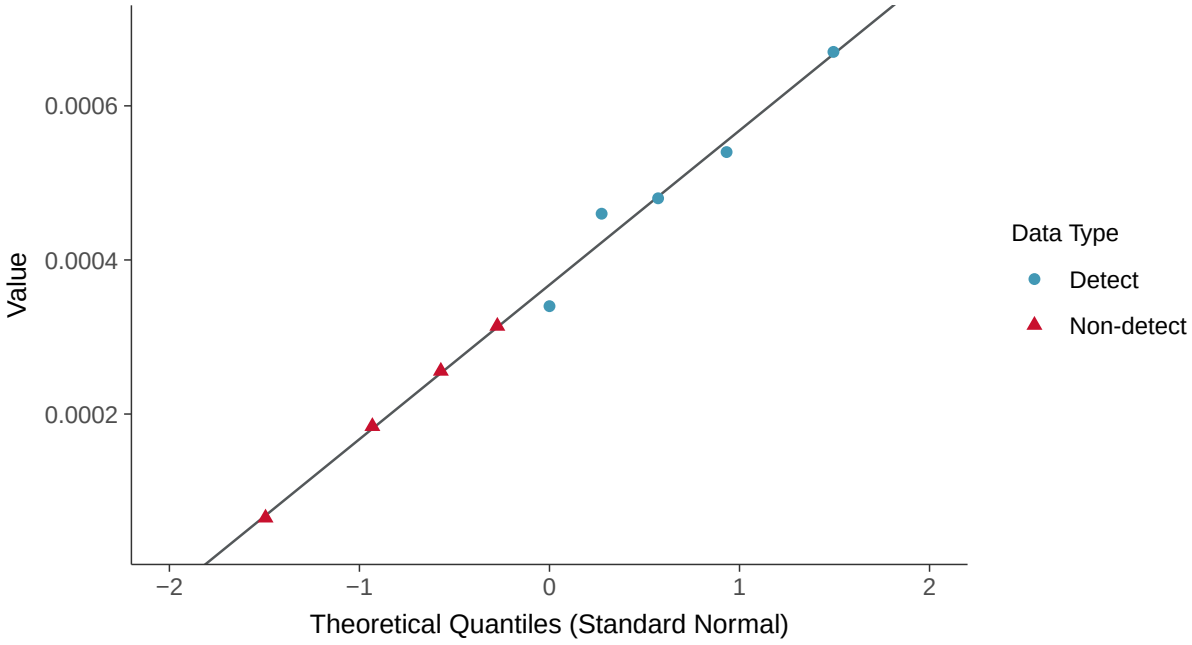
Boxplot by Season

Chromium, Total, MW-12 (mg/L)



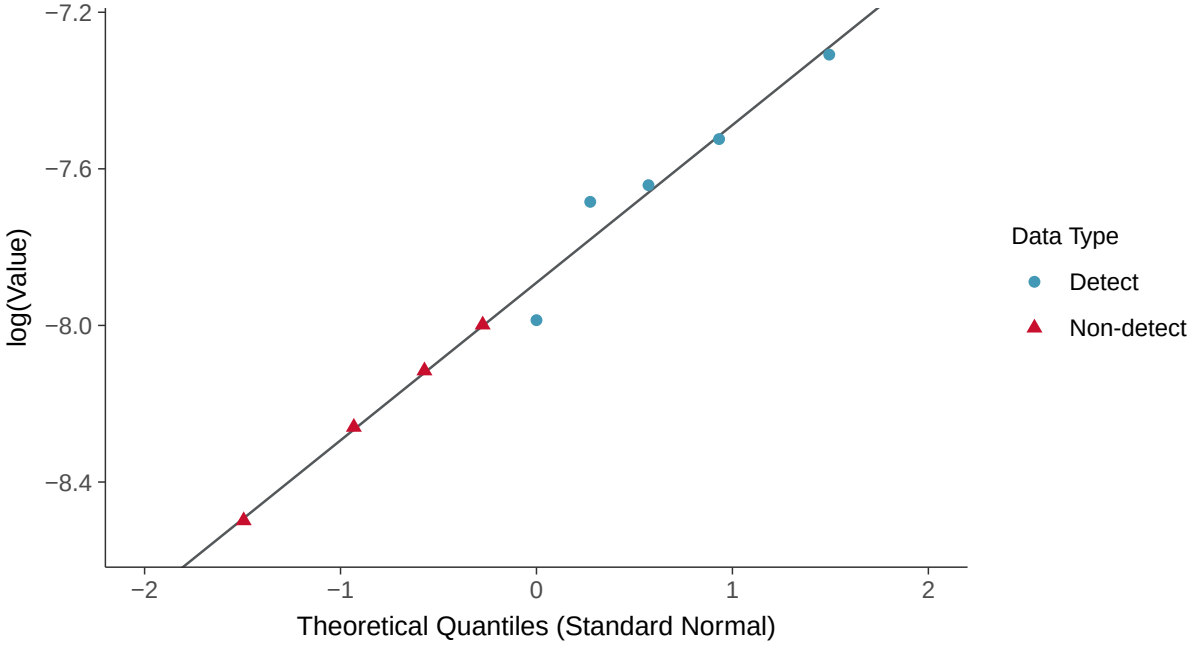
Normal Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-12 (mg/L)



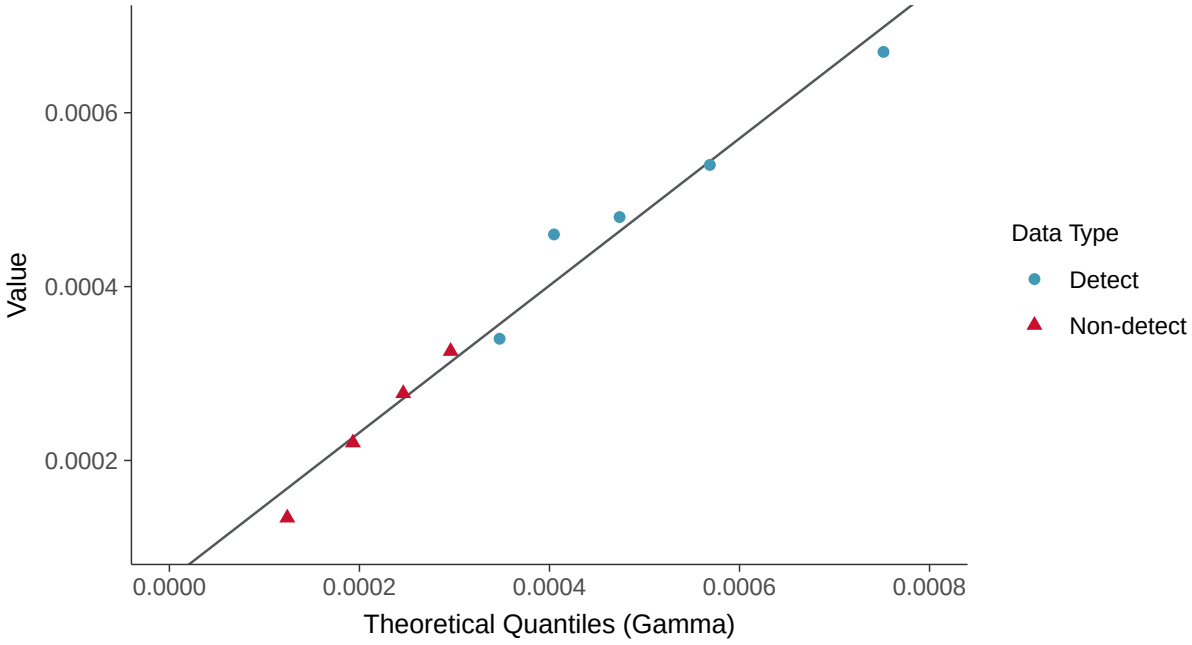
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-12 (mg/L)



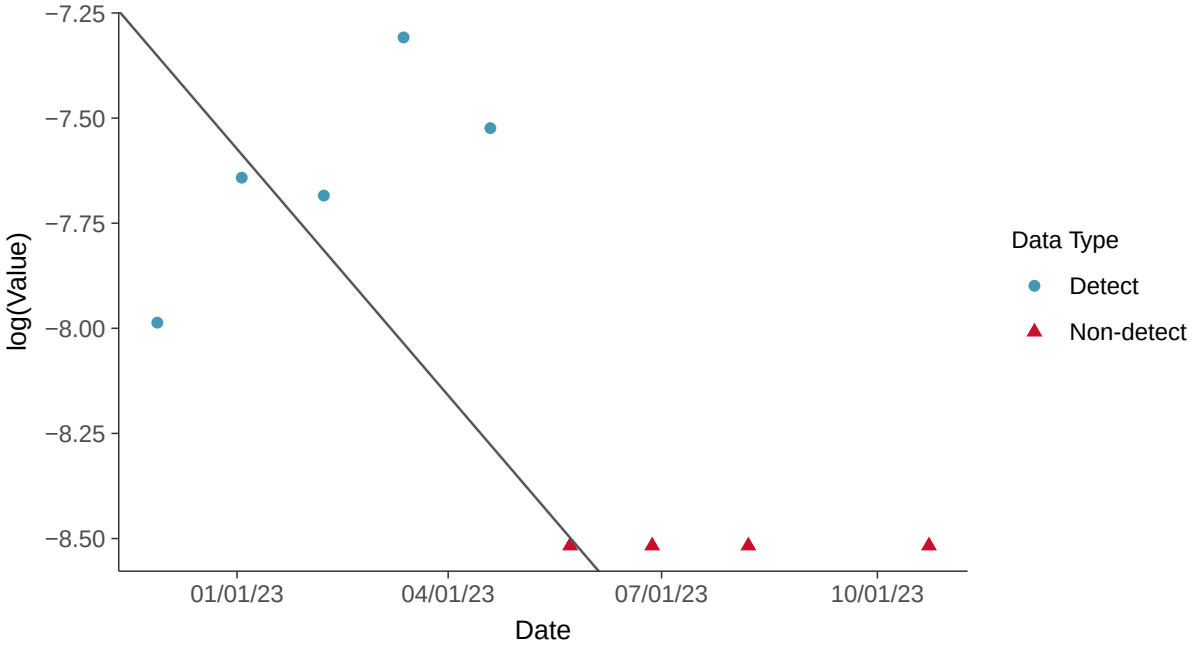
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-12 (mg/L)



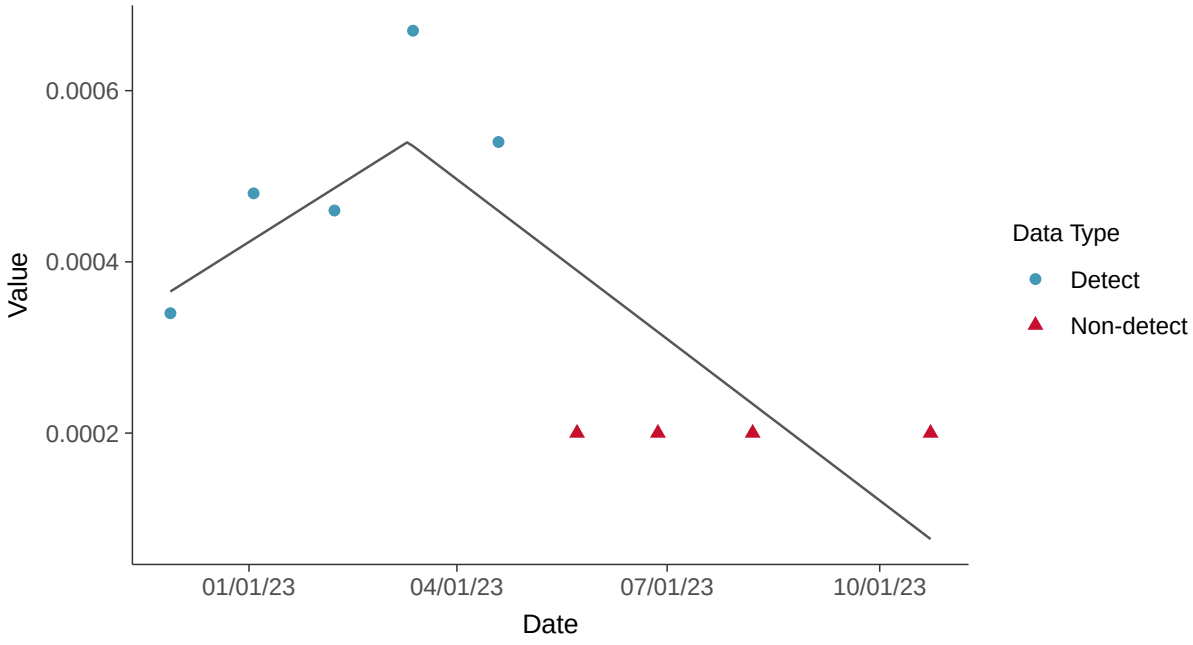
Trend Regression: Lognormal MLE

Chromium, Total, MW-12 (mg/L)



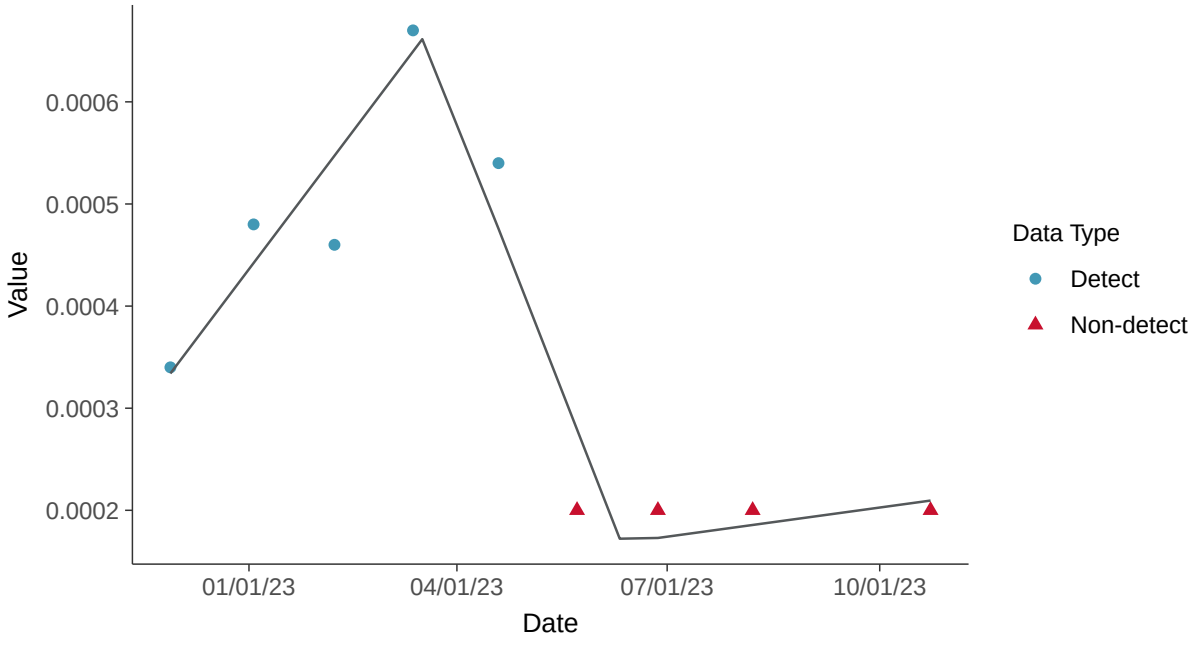
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-12 (mg/L)



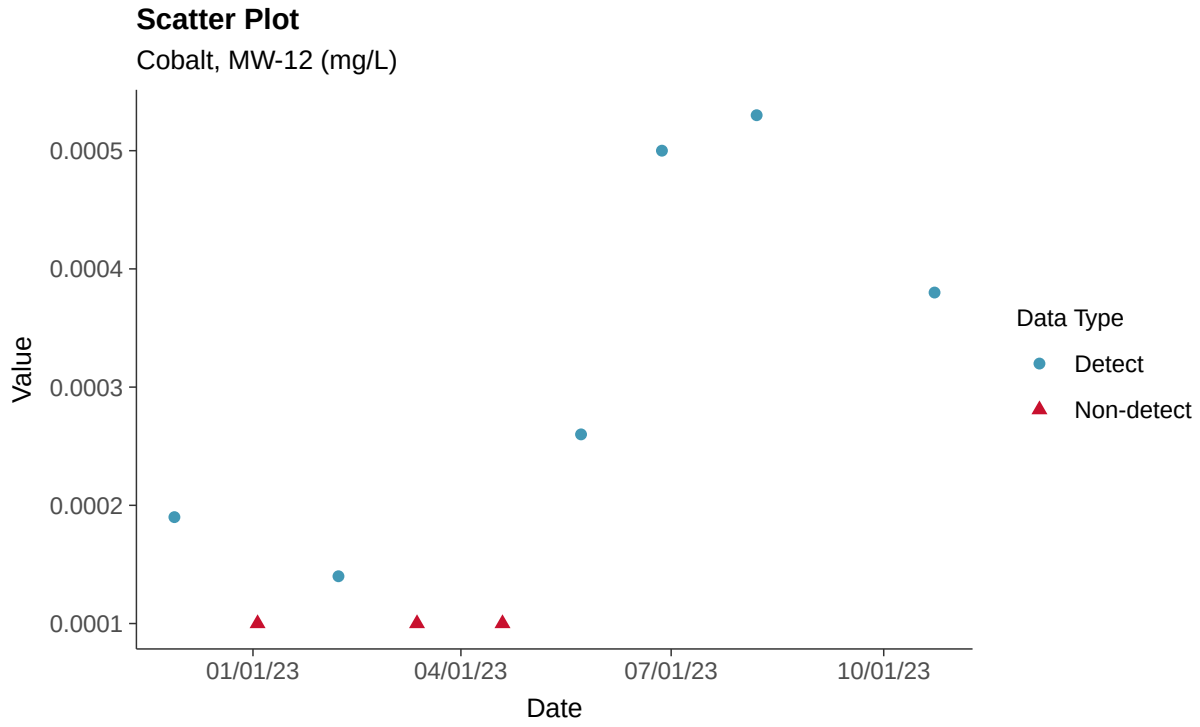
Trend Regression: Piecewise Linear-Linear-Linear

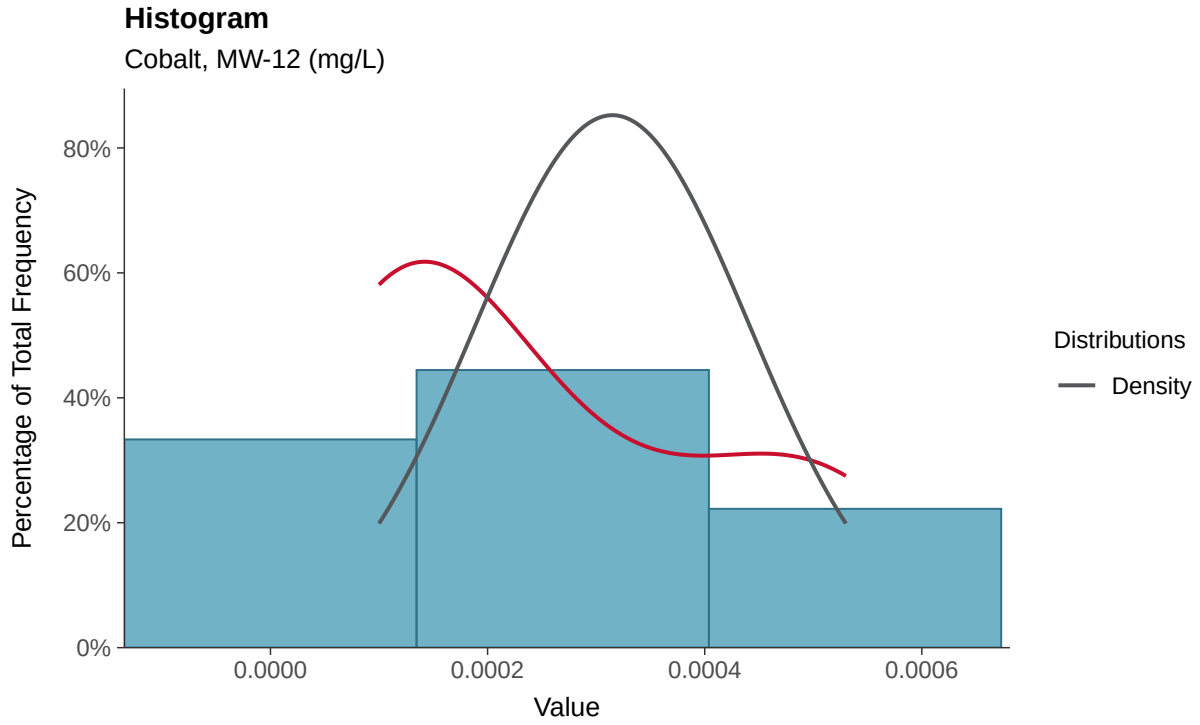
Chromium, Total, MW-12 (mg/L)



Appendix IV: Cobalt, MW-12

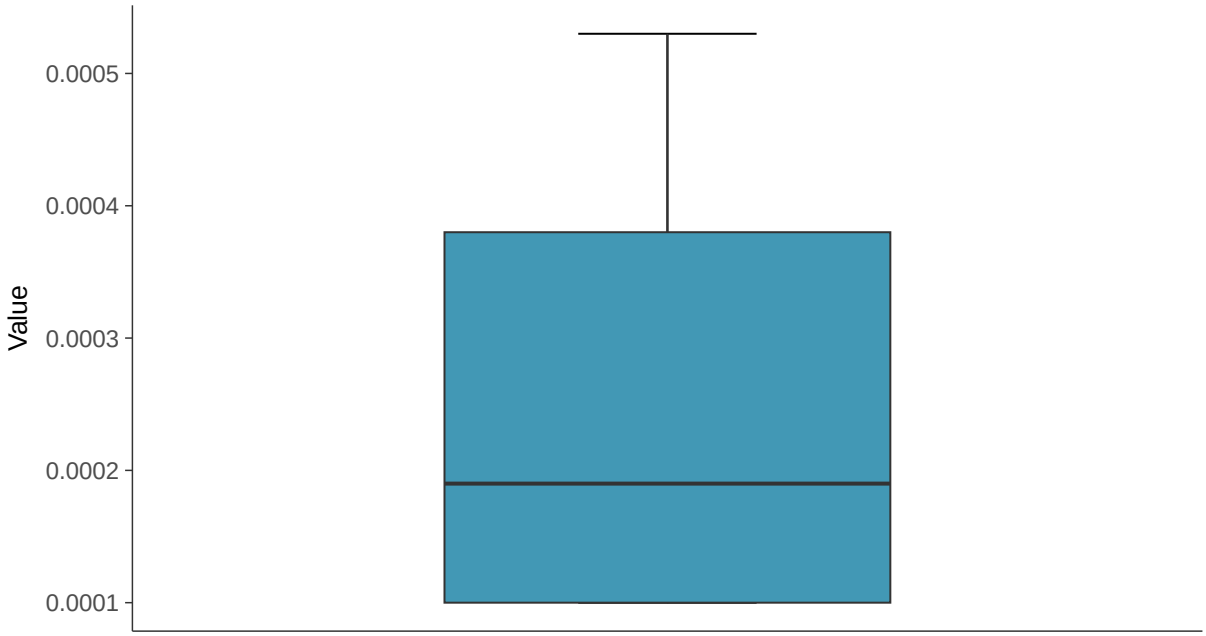
ID: 2_21_5_110





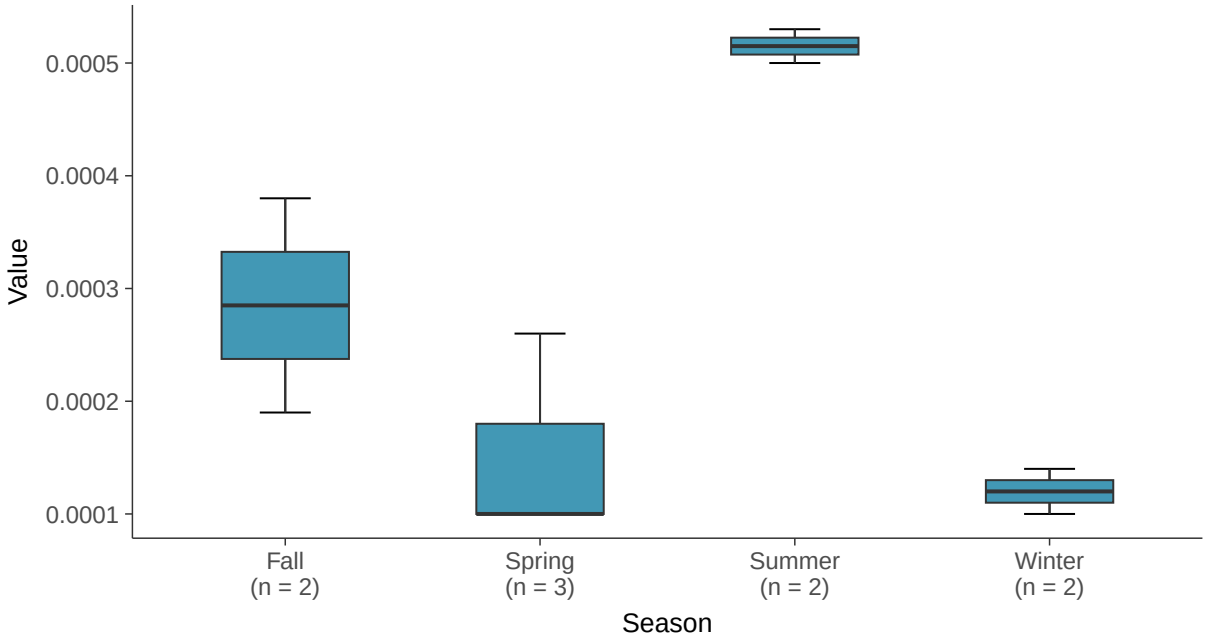
Boxplot

Cobalt, MW-12 (mg/L)



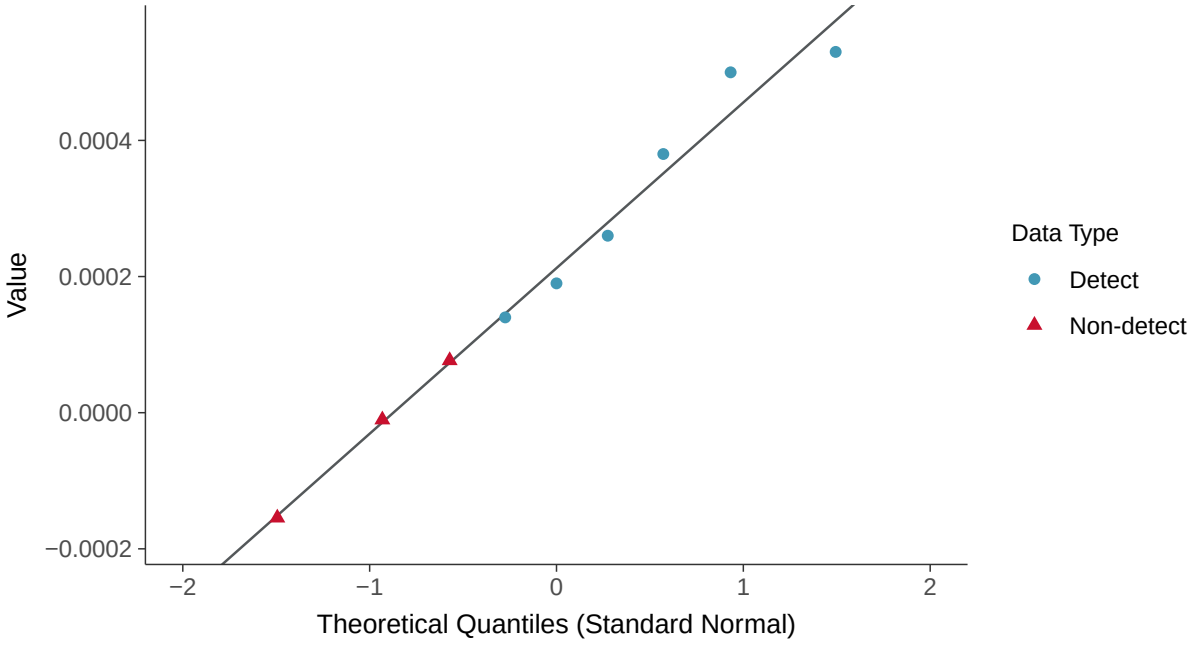
Boxplot by Season

Cobalt, MW-12 (mg/L)



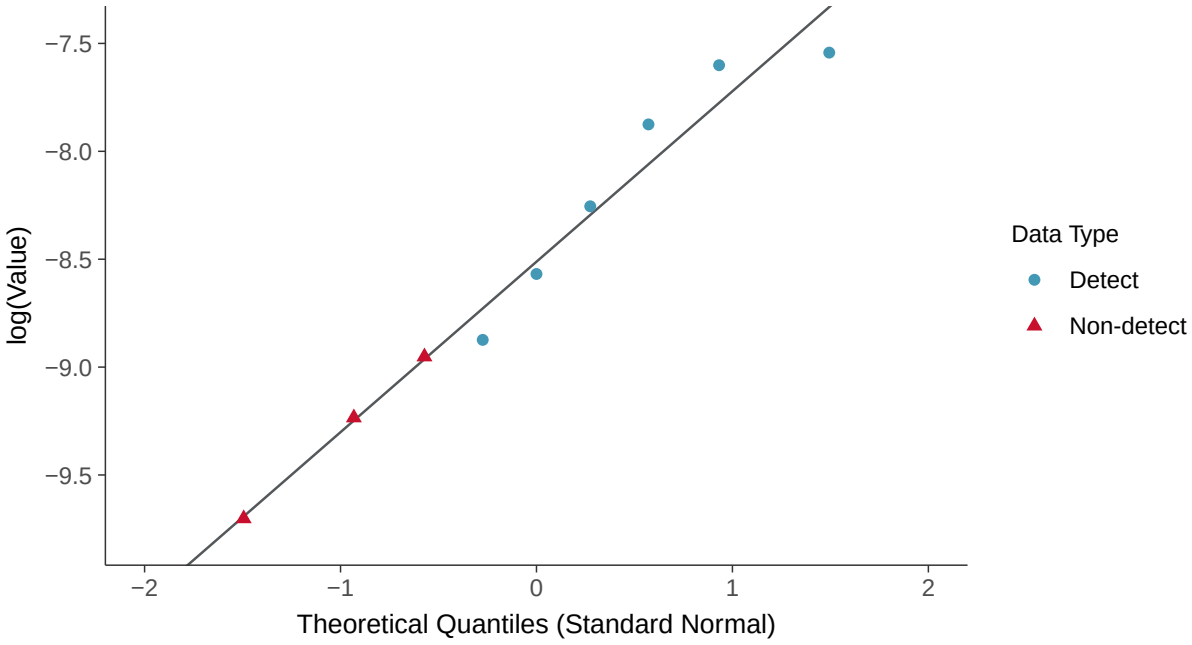
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-12 (mg/L)



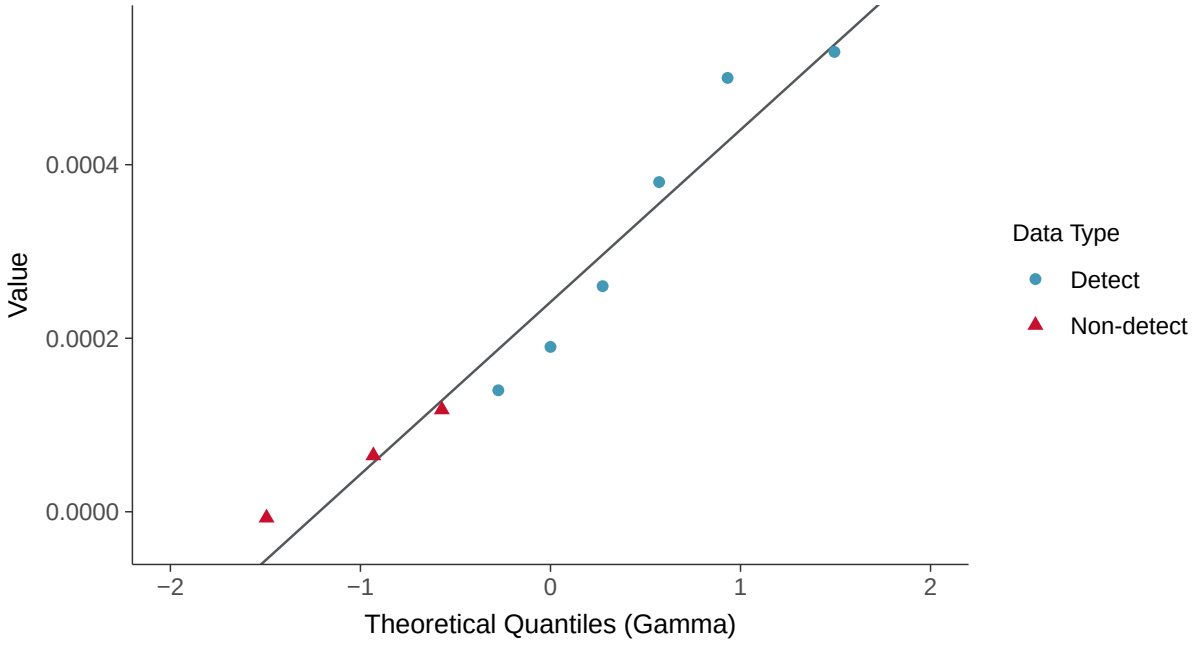
Lognormal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-12 (mg/L)



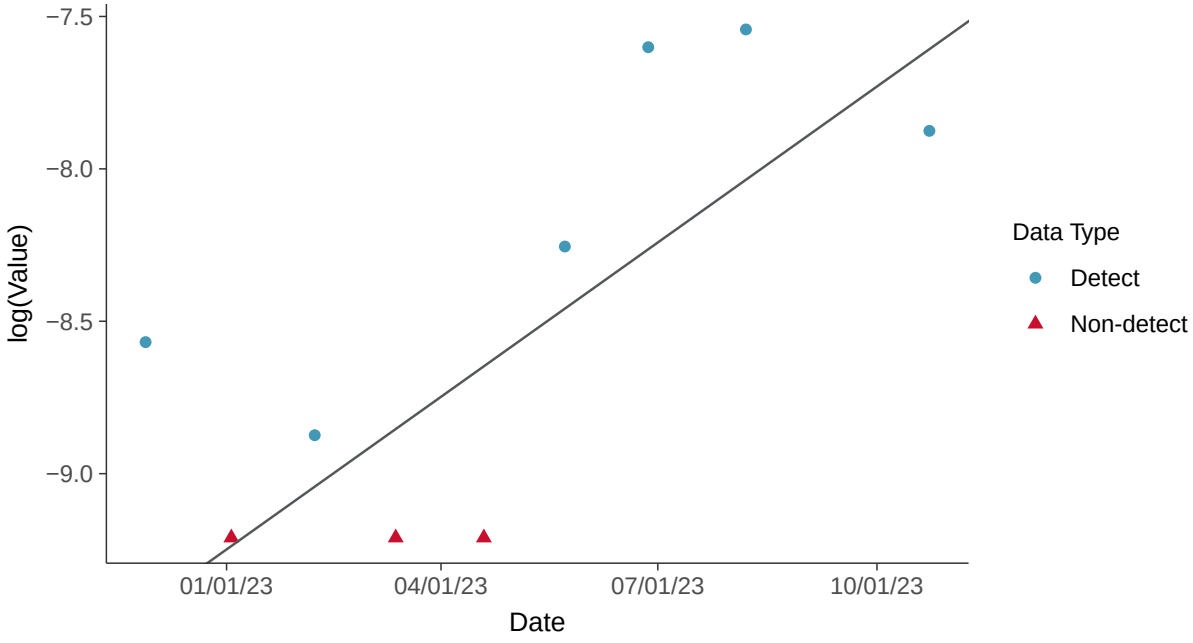
Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, MW-12 (mg/L)



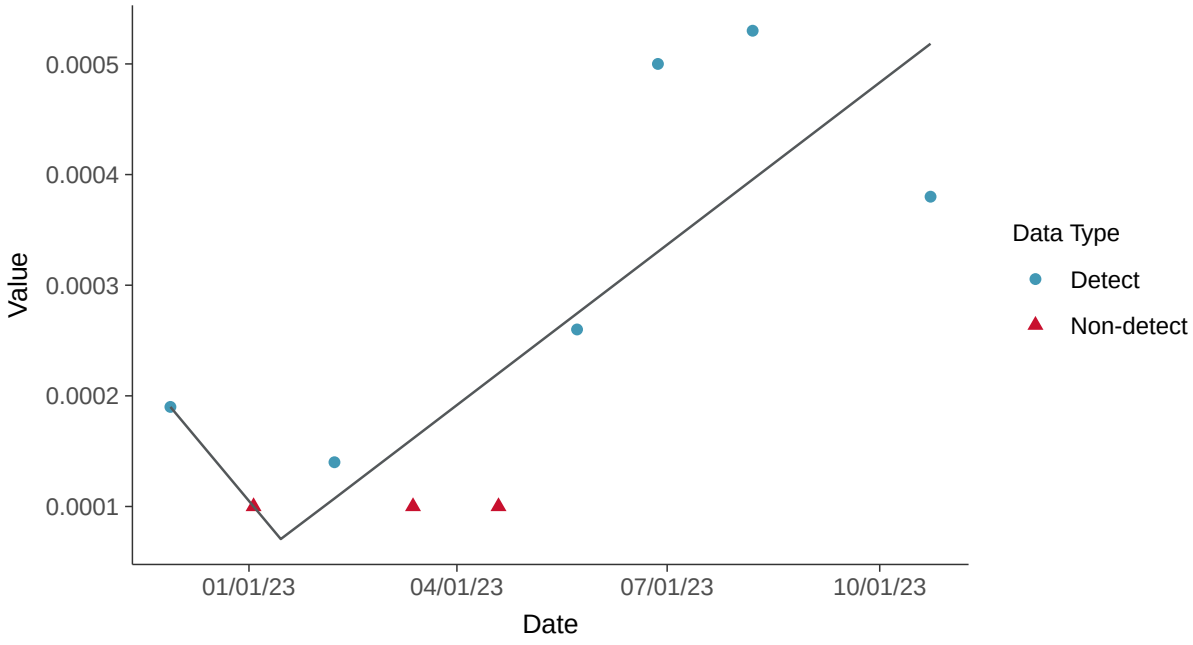
Trend Regression: Lognormal MLE

Cobalt, MW-12 (mg/L)



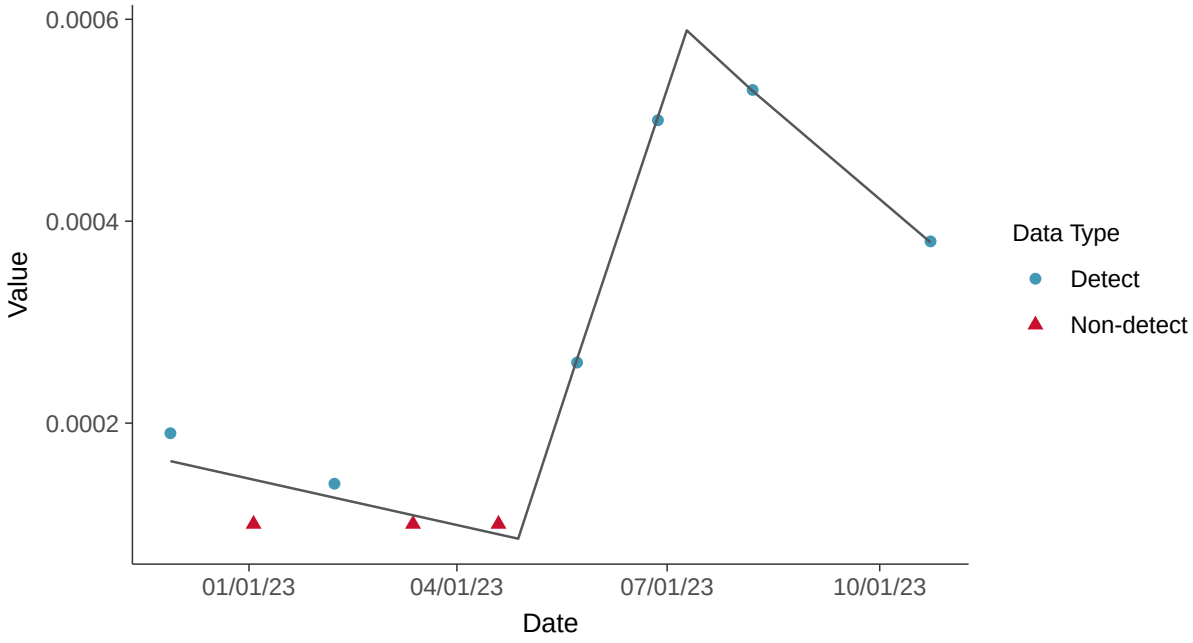
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-12 (mg/L)



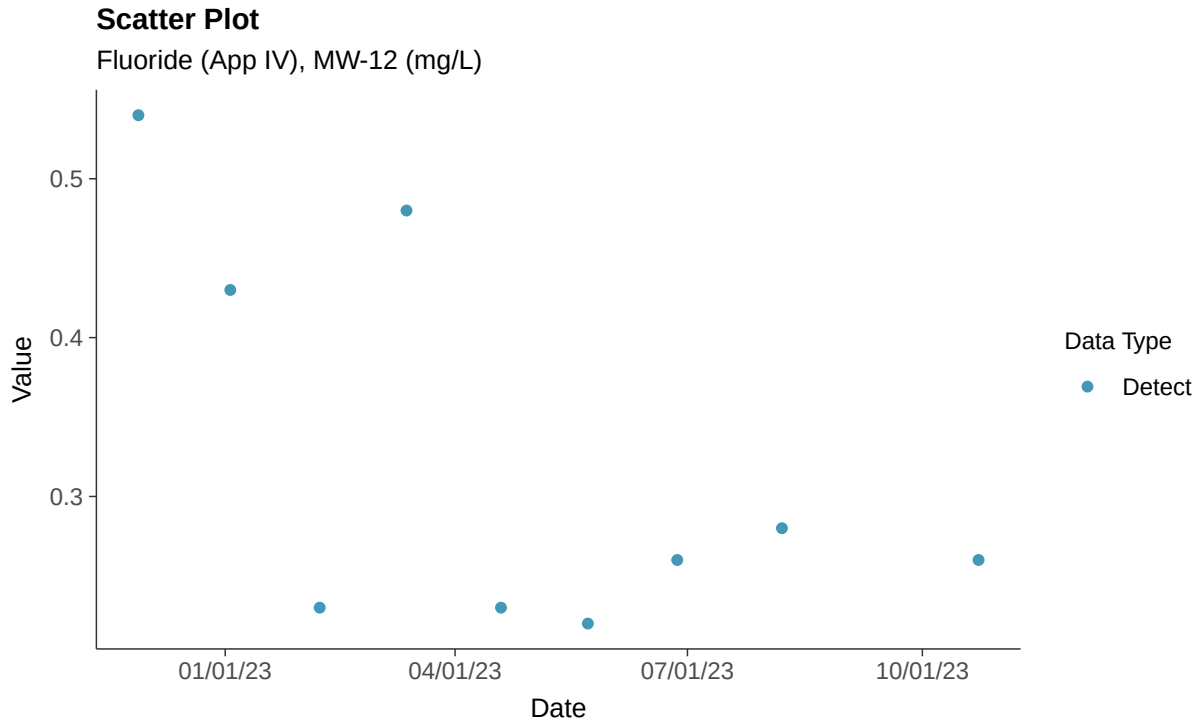
Trend Regression: Piecewise Linear-Linear-Linear

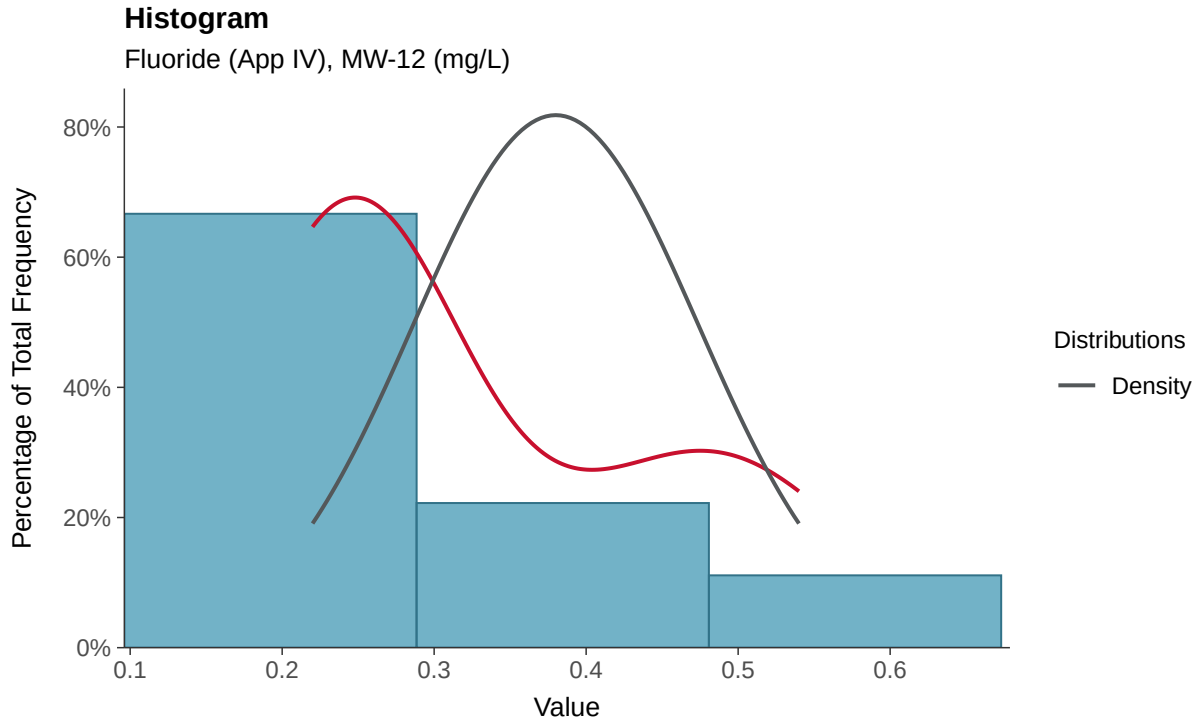
Cobalt, MW-12 (mg/L)



Appendix IV: Fluoride (App IV), MW-12

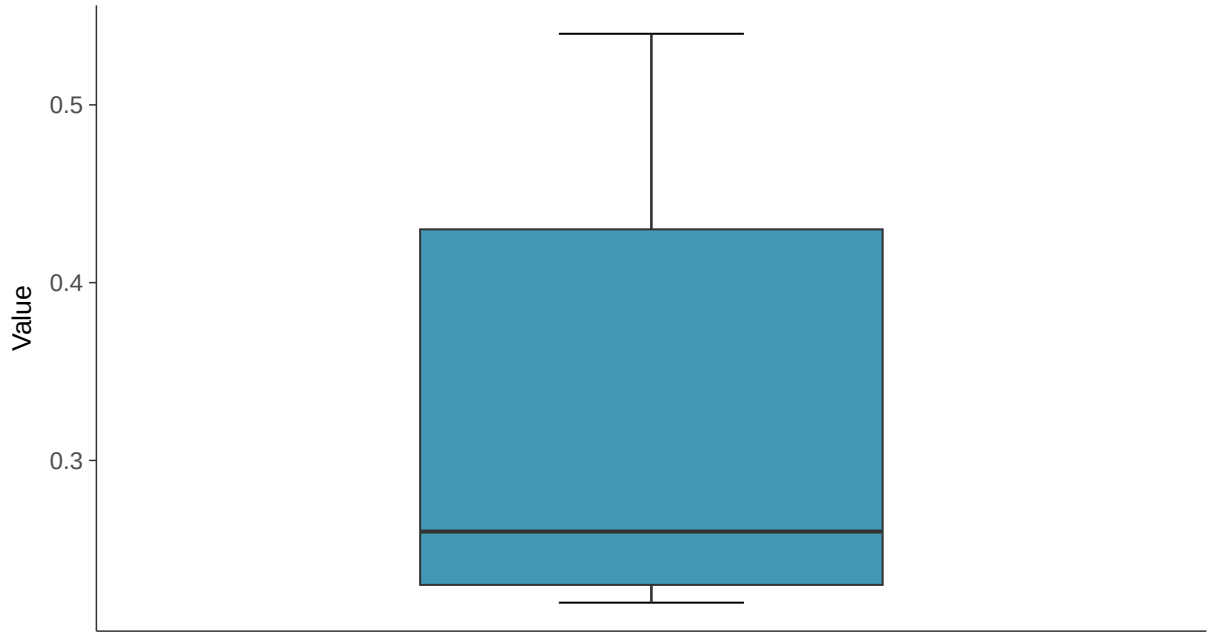
ID: 2_21_5_113





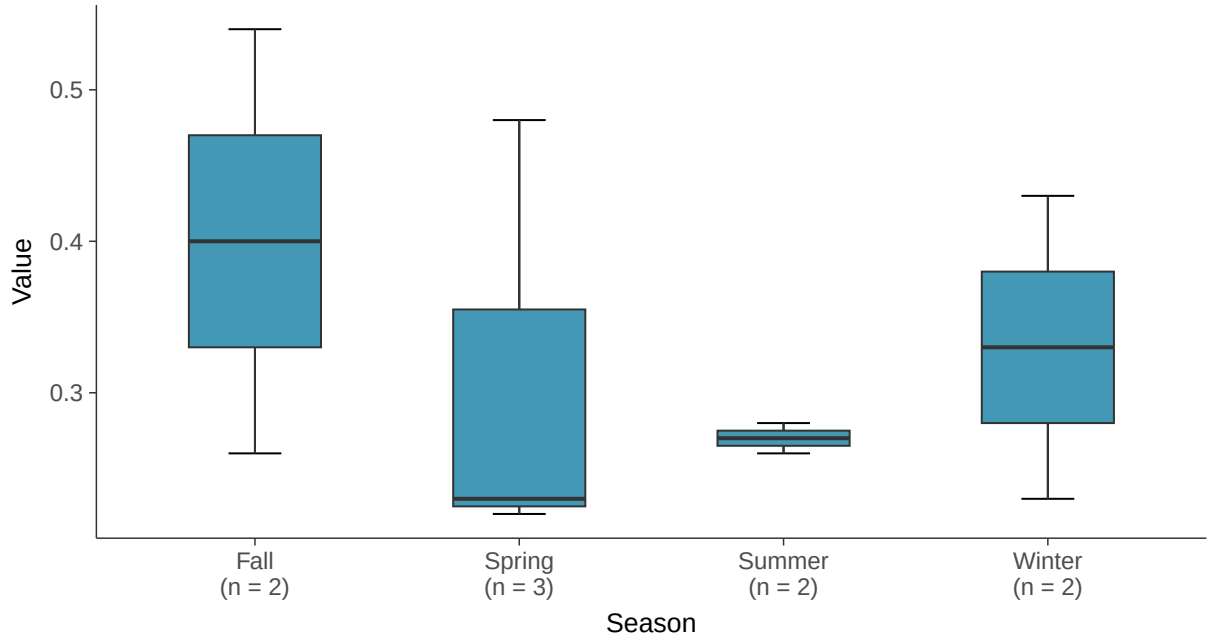
Boxplot

Fluoride (App IV), MW-12 (mg/L)



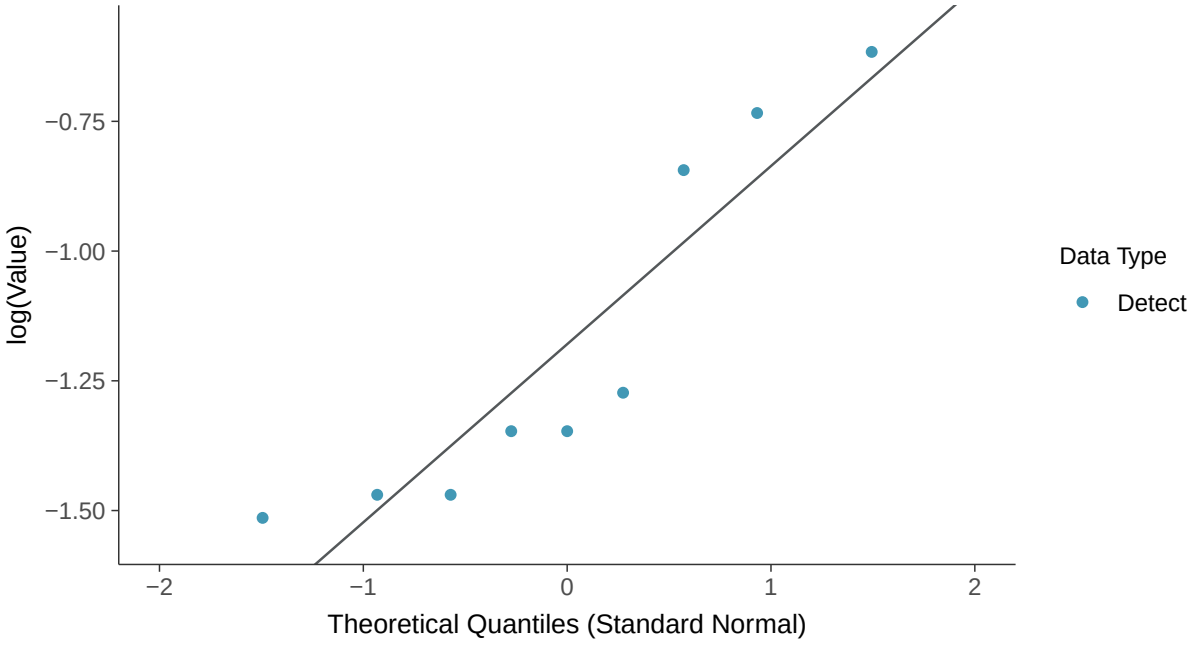
Boxplot by Season

Fluoride (App IV), MW-12 (mg/L)



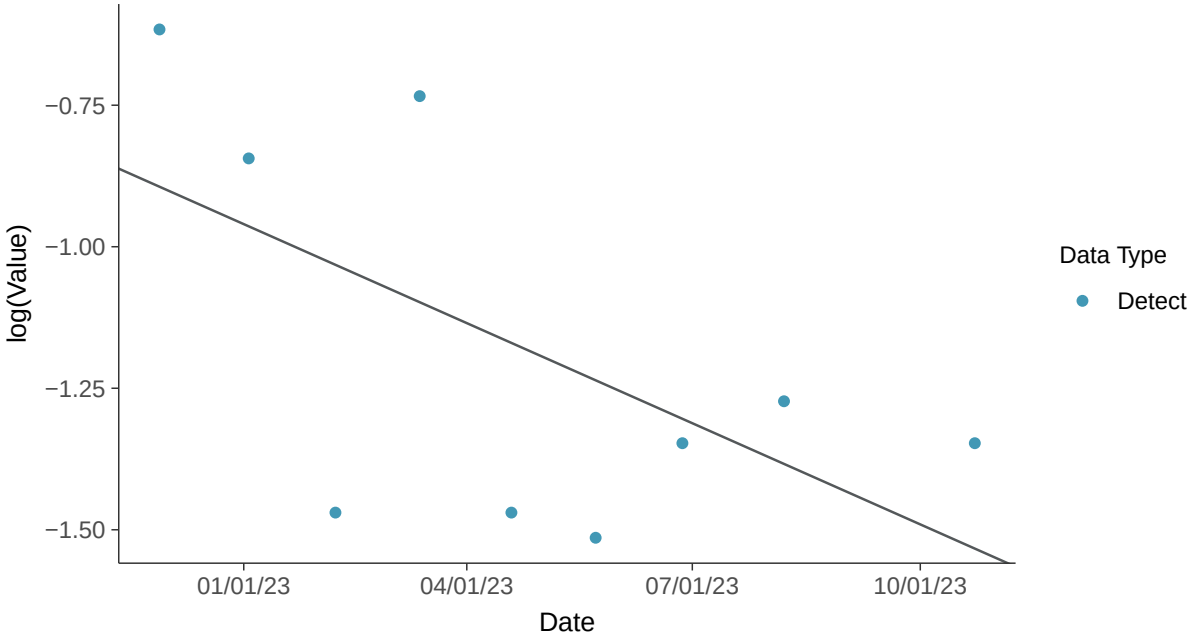
Lognormal Q-Q plot

Fluoride (App IV), MW-12 (mg/L)



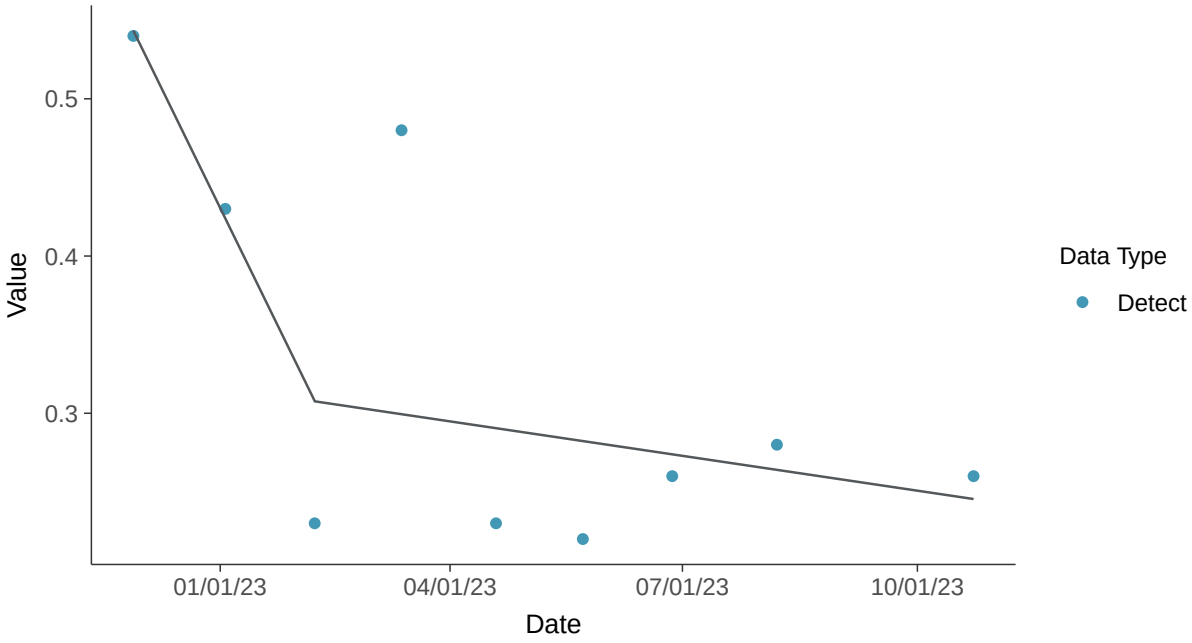
Trend Regression: Lognormal MLE

Fluoride (App IV), MW-12 (mg/L)



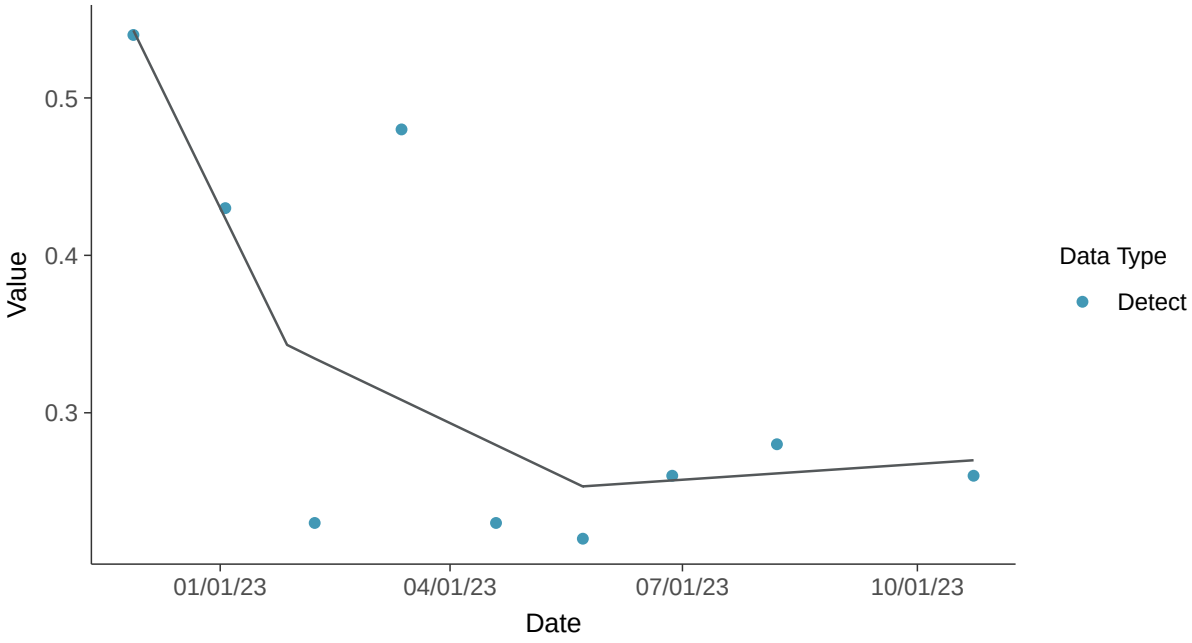
Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-12 (mg/L)



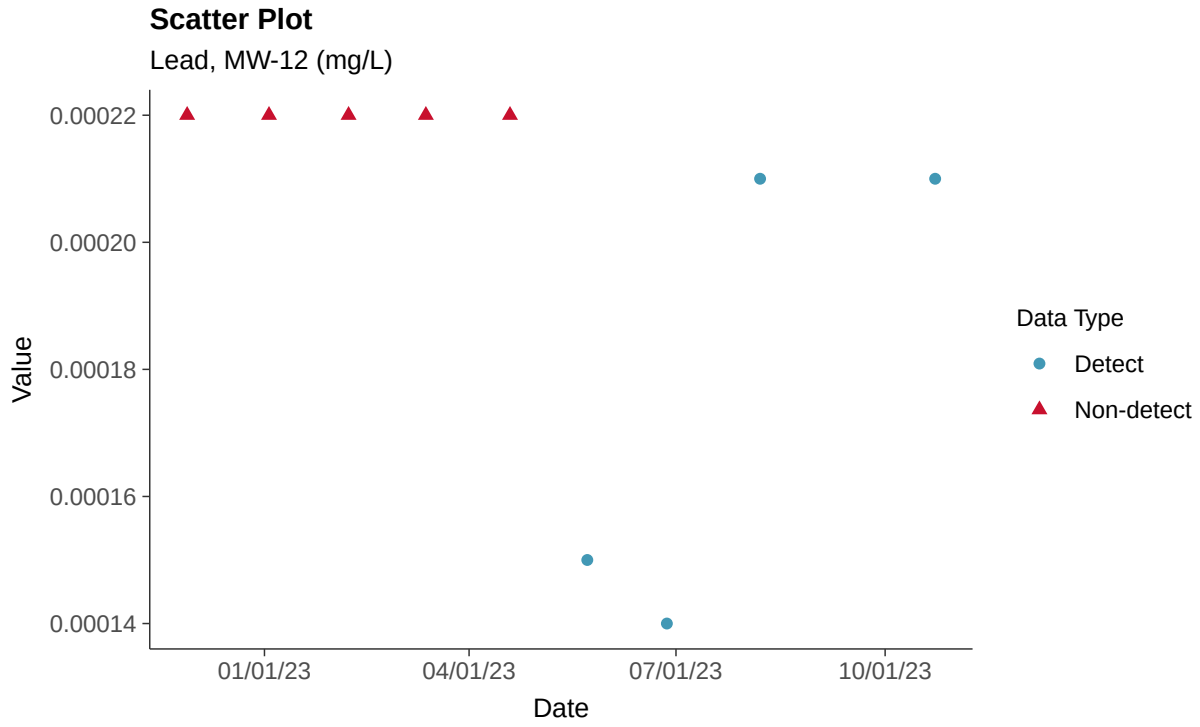
Trend Regression: Piecewise Linear-Linear-Linear

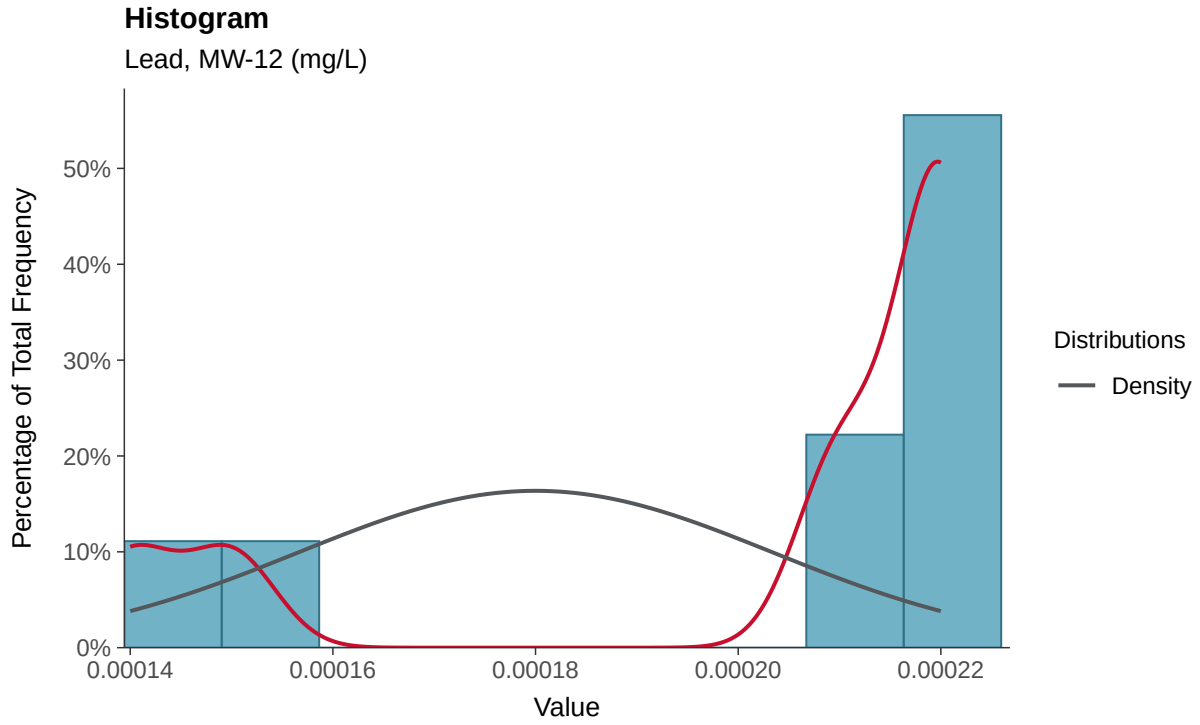
Fluoride (App IV), MW-12 (mg/L)



Appendix IV: Lead, MW-12

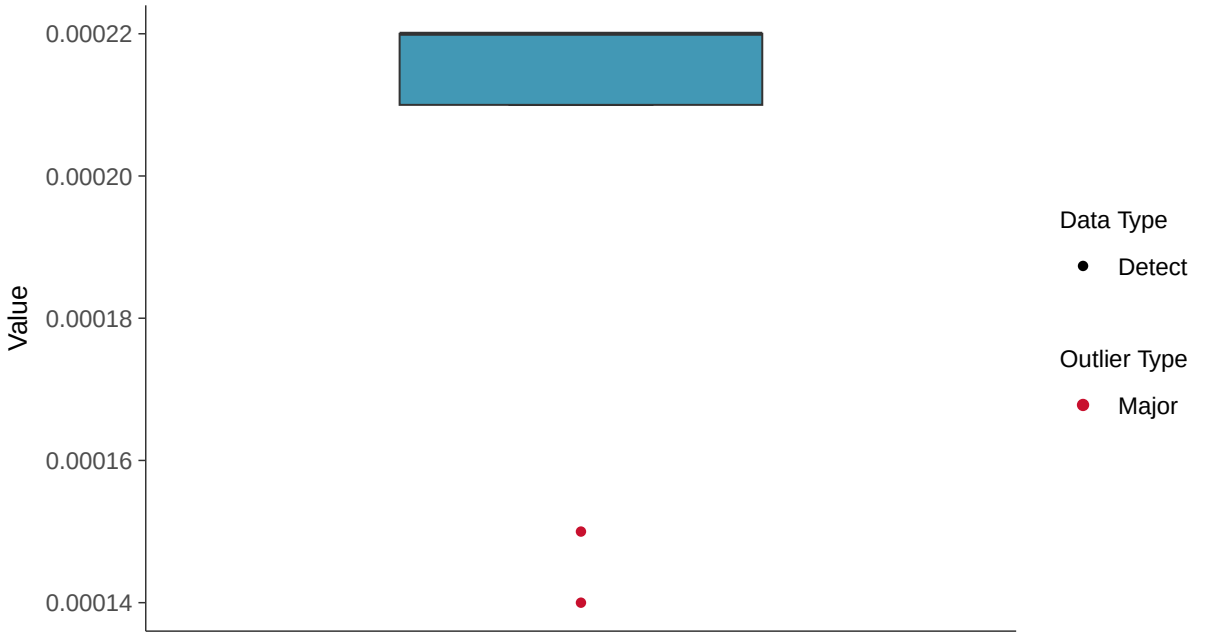
ID: 2_21_5_115





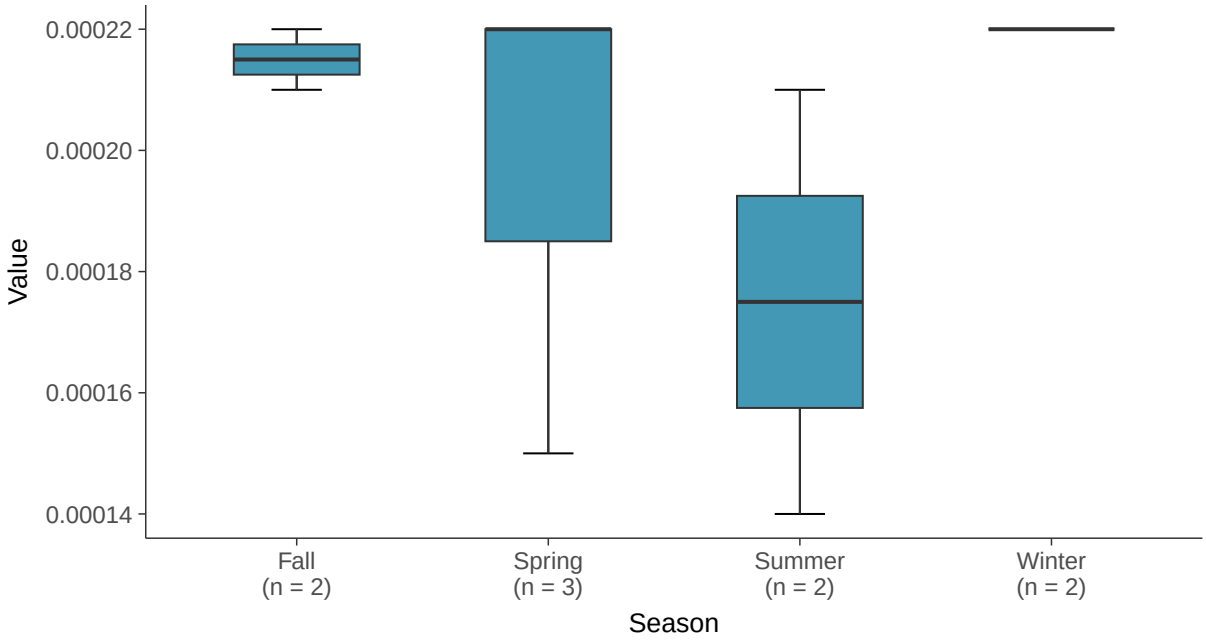
Boxplot

Lead, MW-12 (mg/L)



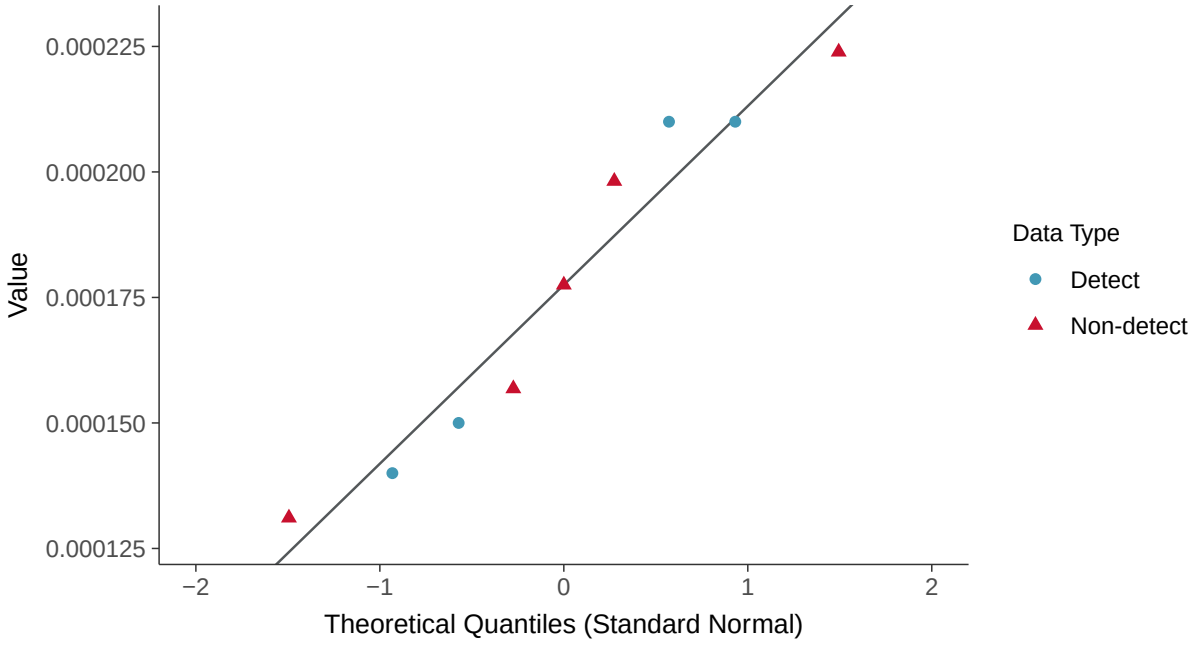
Boxplot by Season

Lead, MW-12 (mg/L)



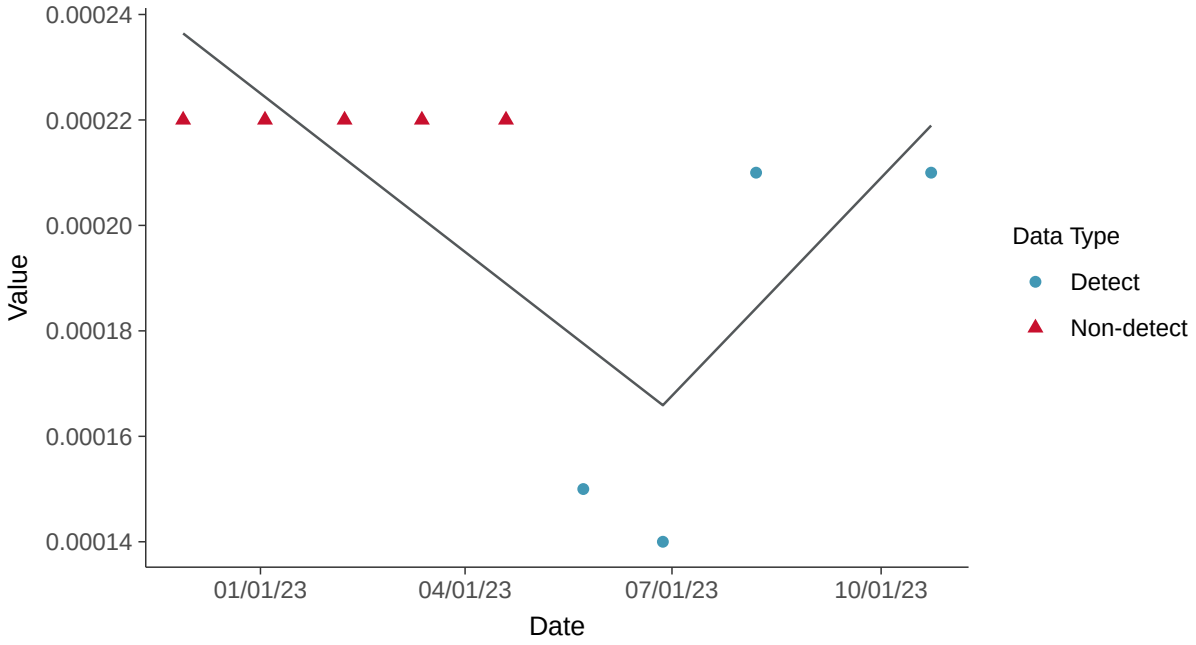
Normal Q-Q plot using ROS Imputed Estimates

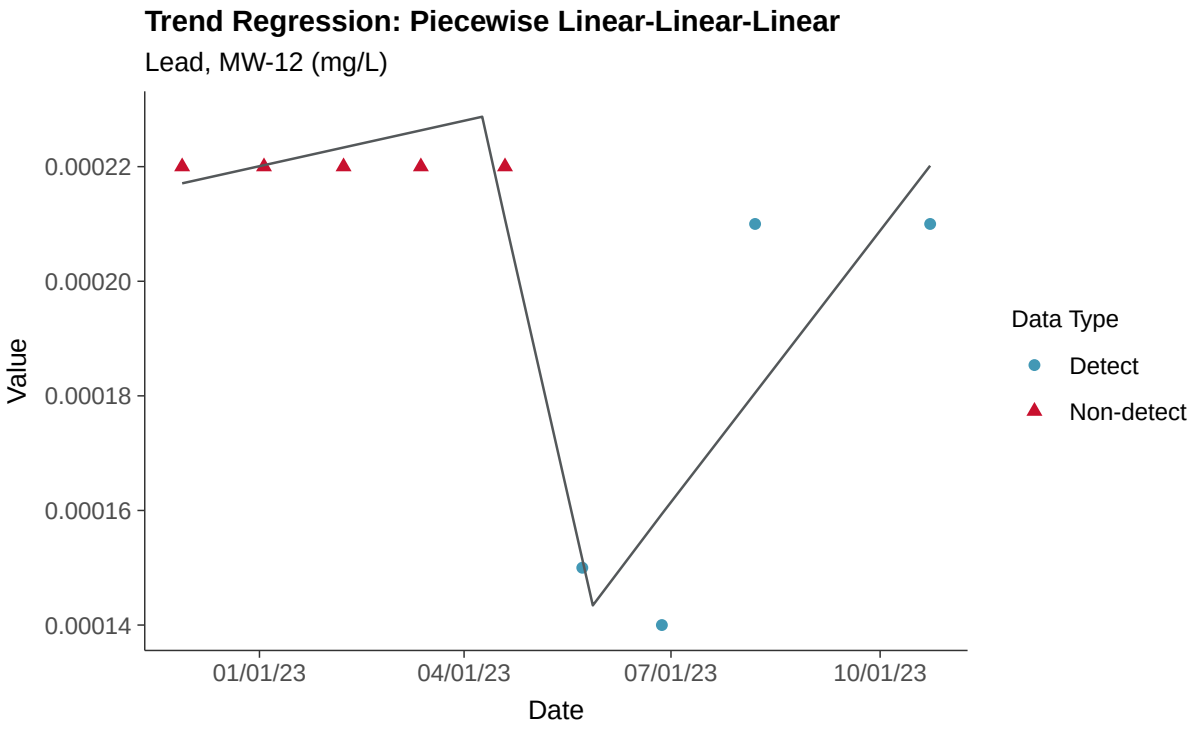
Lead, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear

Lead, MW-12 (mg/L)



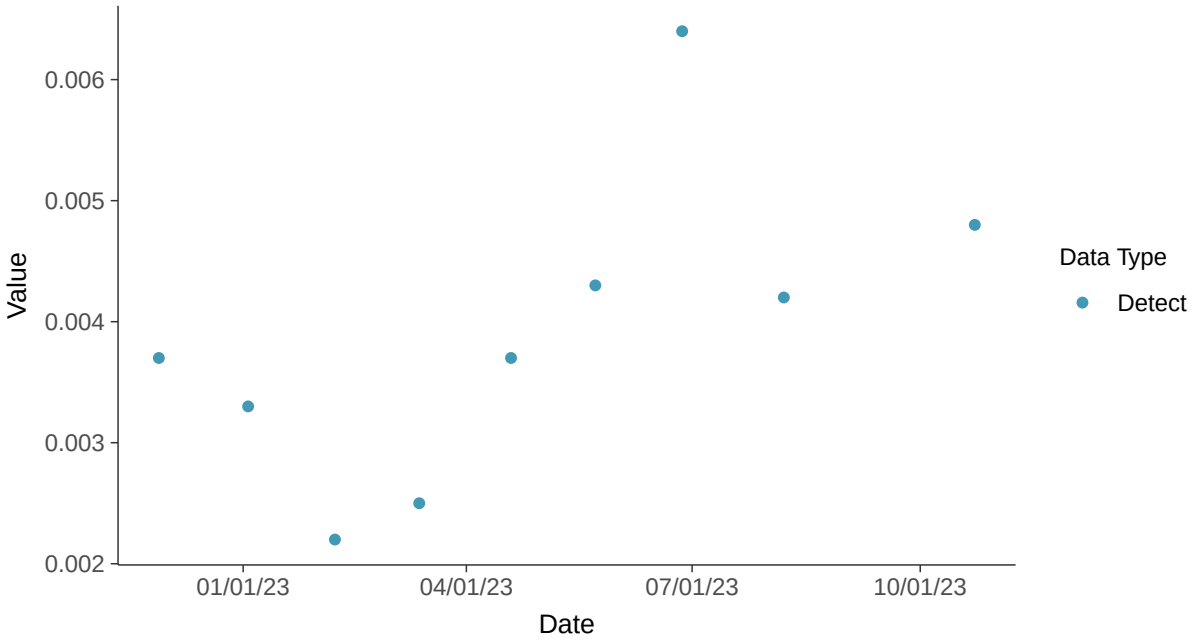

Trend Regression: Piecewise Linear-Linear-Linear
Lead, MW-12 (mg/L)
Value
0.00022
0.00020
0.00018
0.00016
0.00014
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect
Non-detect

Appendix IV: Lithium, MW-12

ID: 2_21_5_116

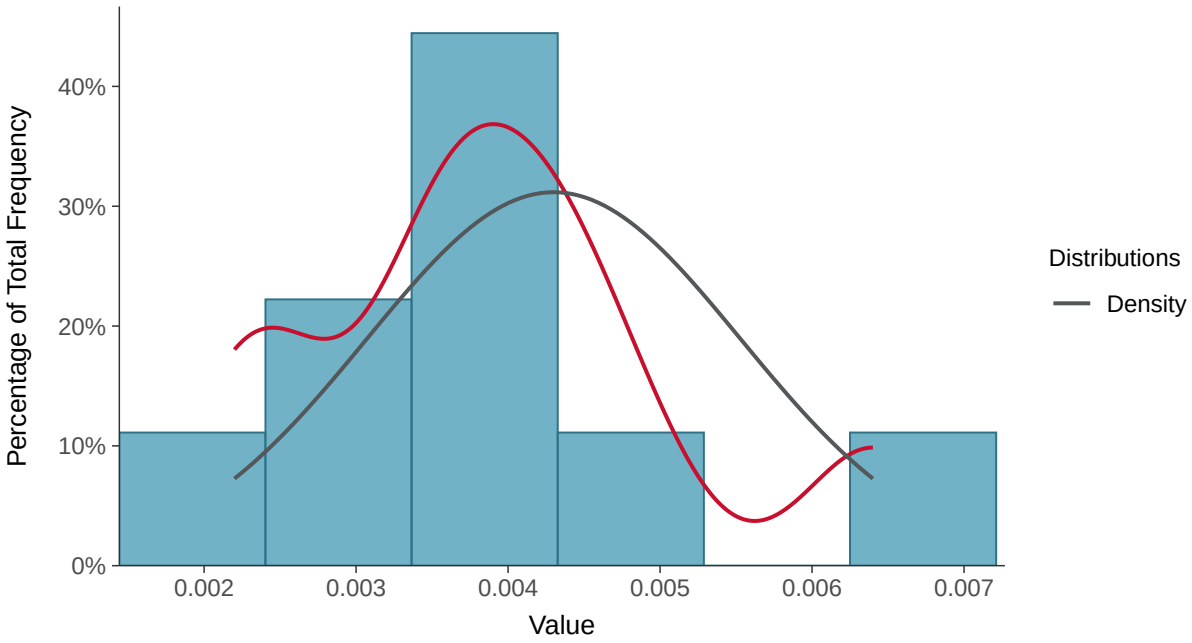
Scatter Plot

Lithium, MW-12 (mg/L)



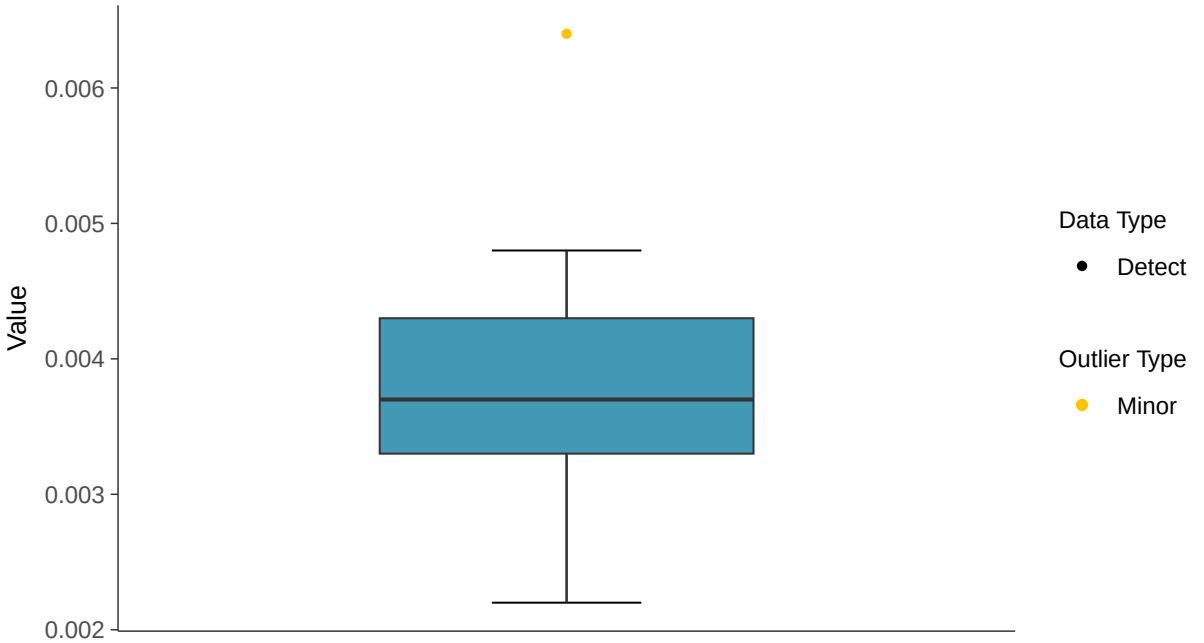
Histogram

Lithium, MW-12 (mg/L)



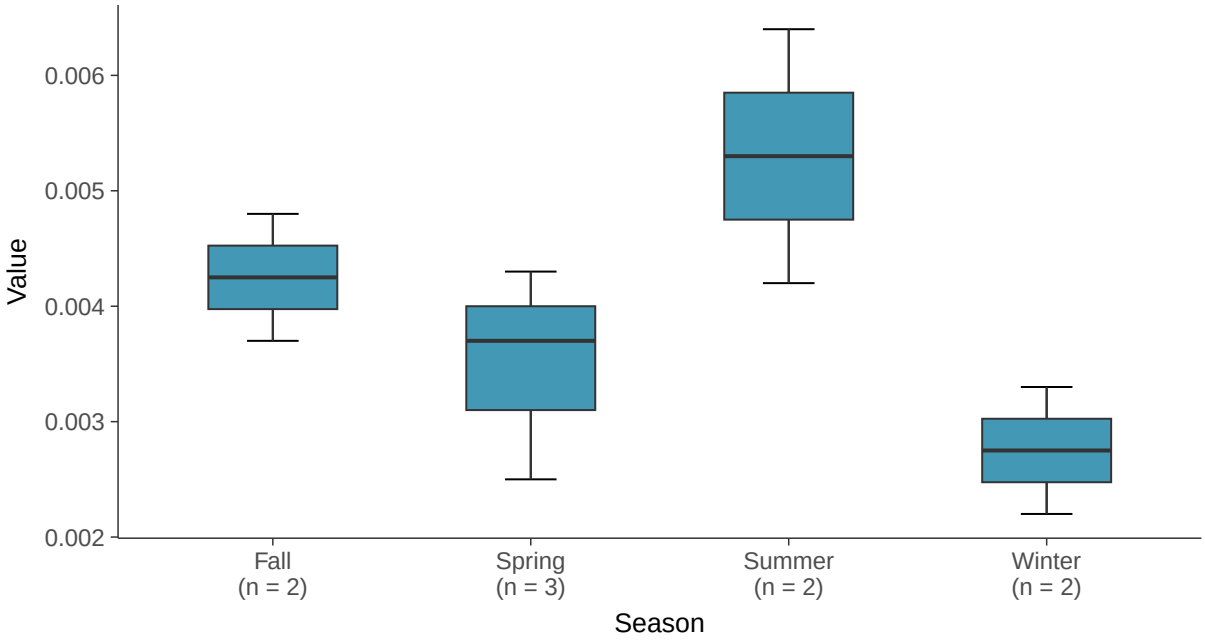
Boxplot

Lithium, MW-12 (mg/L)



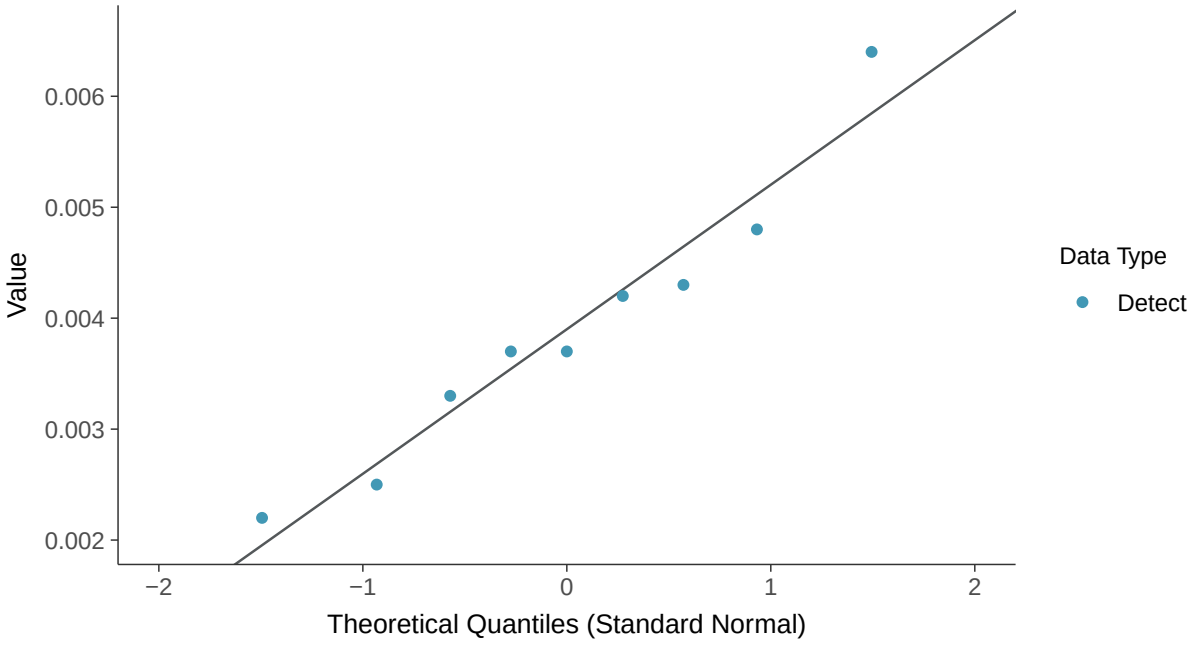
Boxplot by Season

Lithium, MW-12 (mg/L)



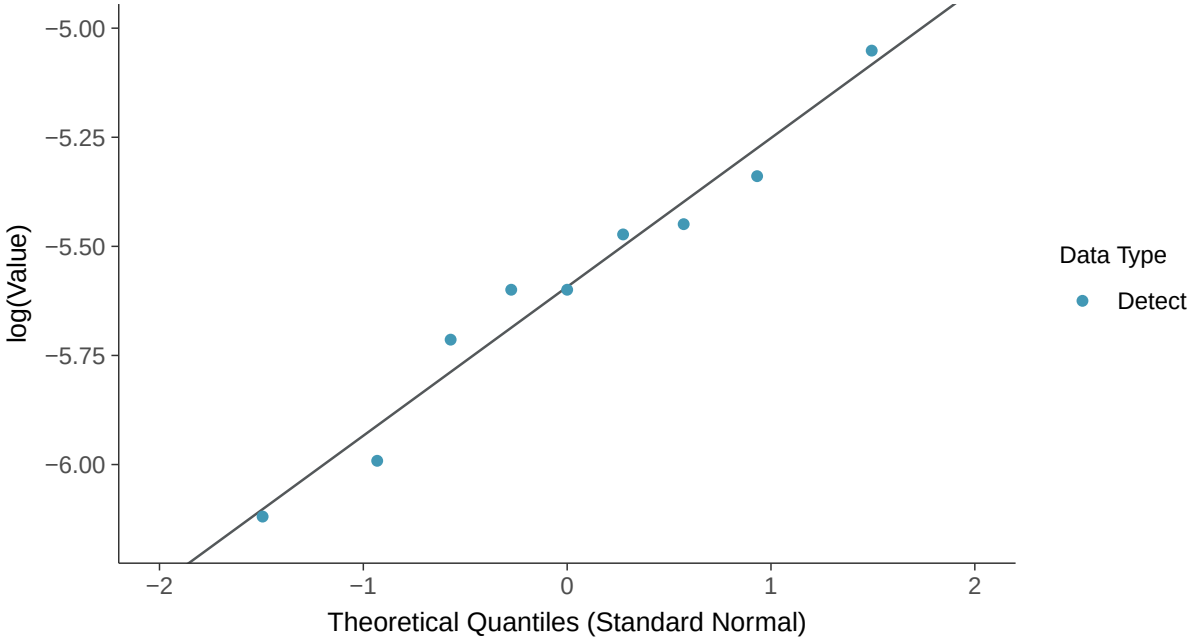
Normal Q-Q plot

Lithium, MW-12 (mg/L)



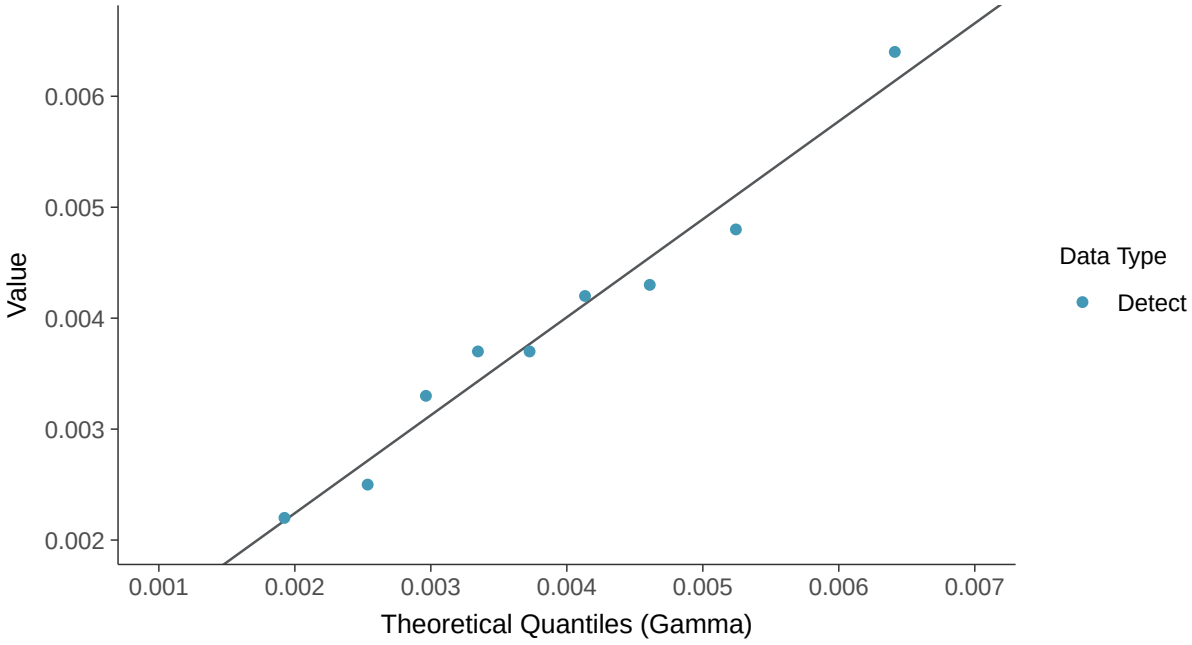
Lognormal Q-Q plot

Lithium, MW-12 (mg/L)



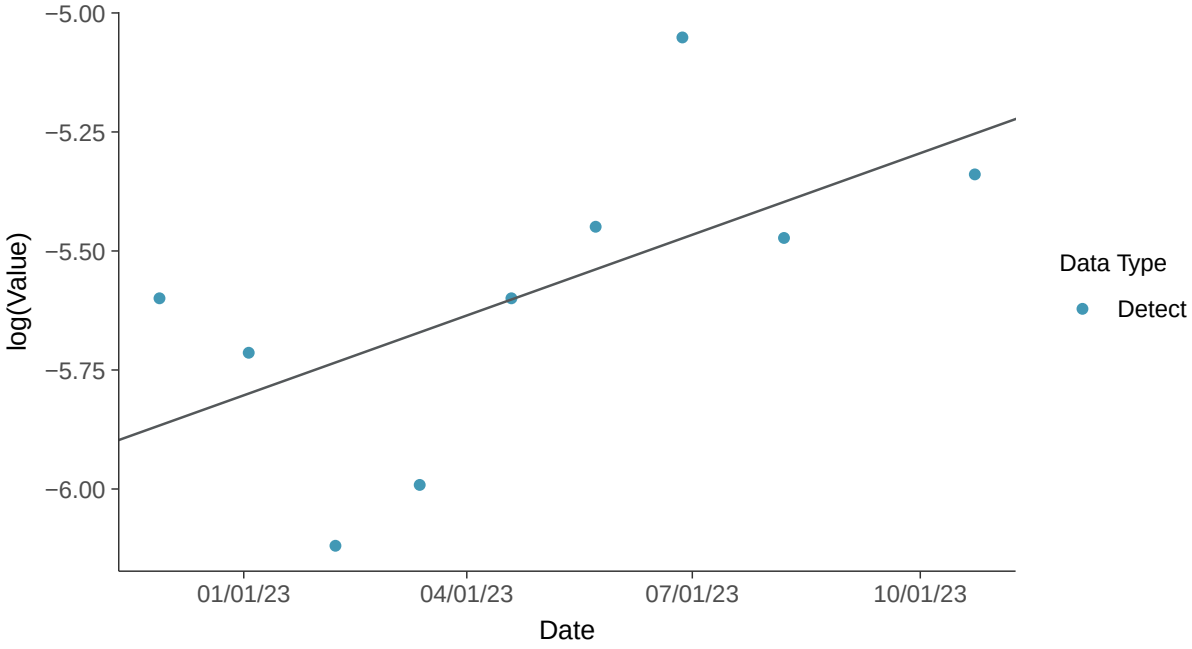
Gamma Q-Q plot

Lithium, MW-12 (mg/L)



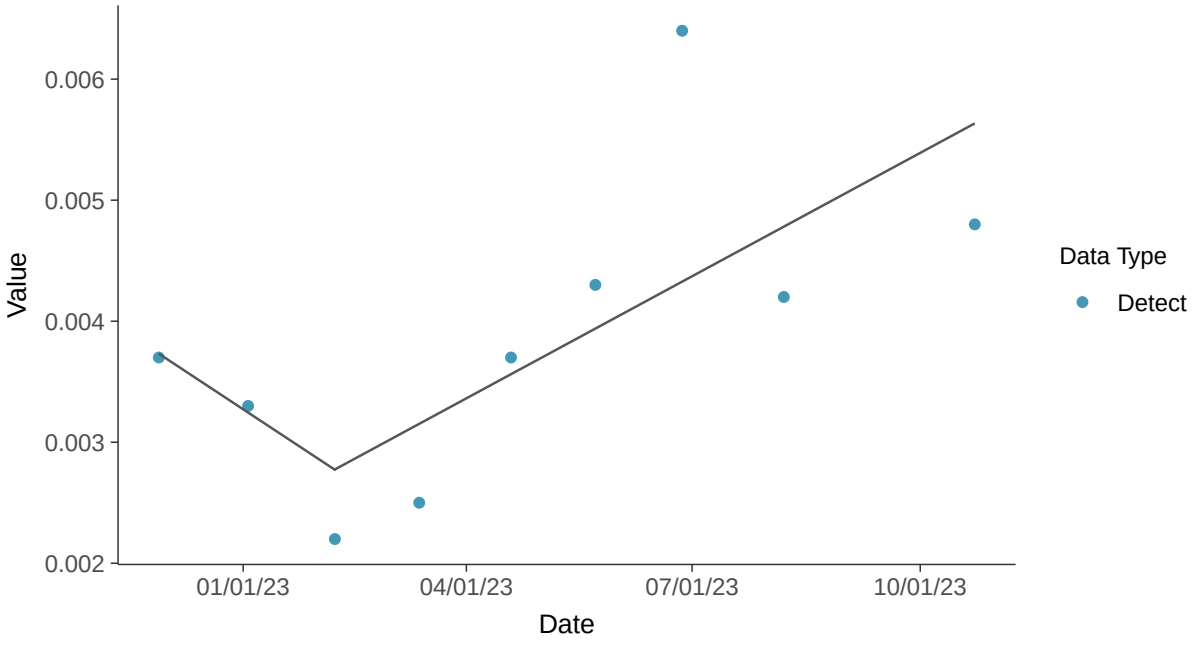
Trend Regression: Lognormal MLE

Lithium, MW-12 (mg/L)



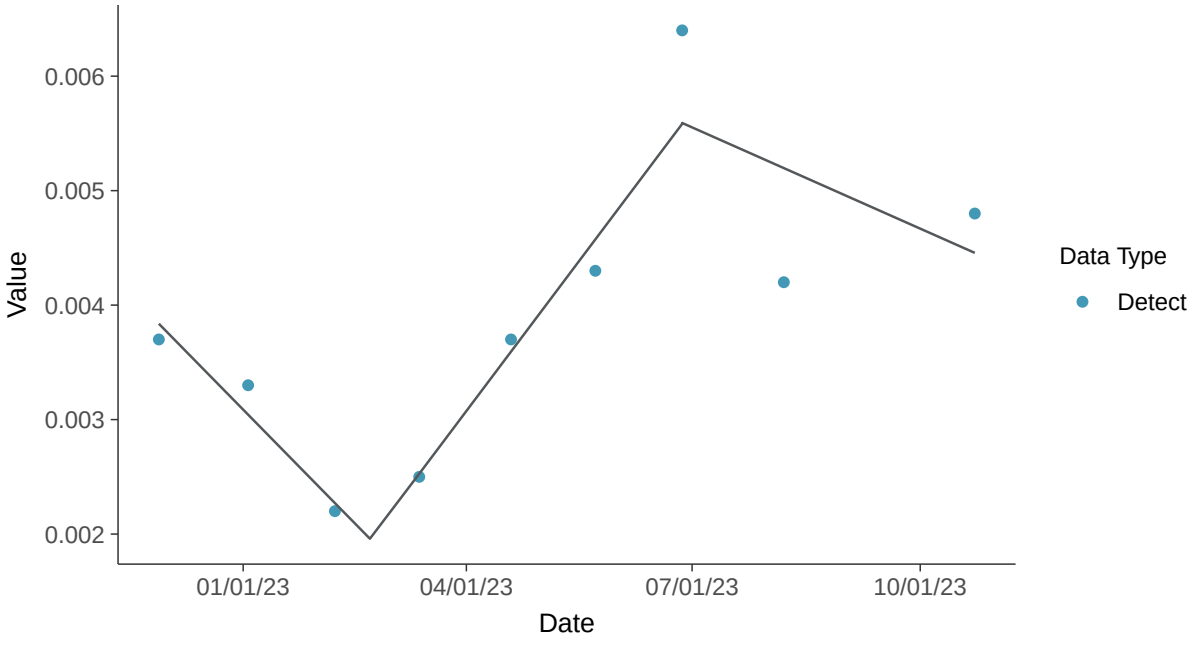
Trend Regression: Piecewise Linear-Linear

Lithium, MW-12 (mg/L)



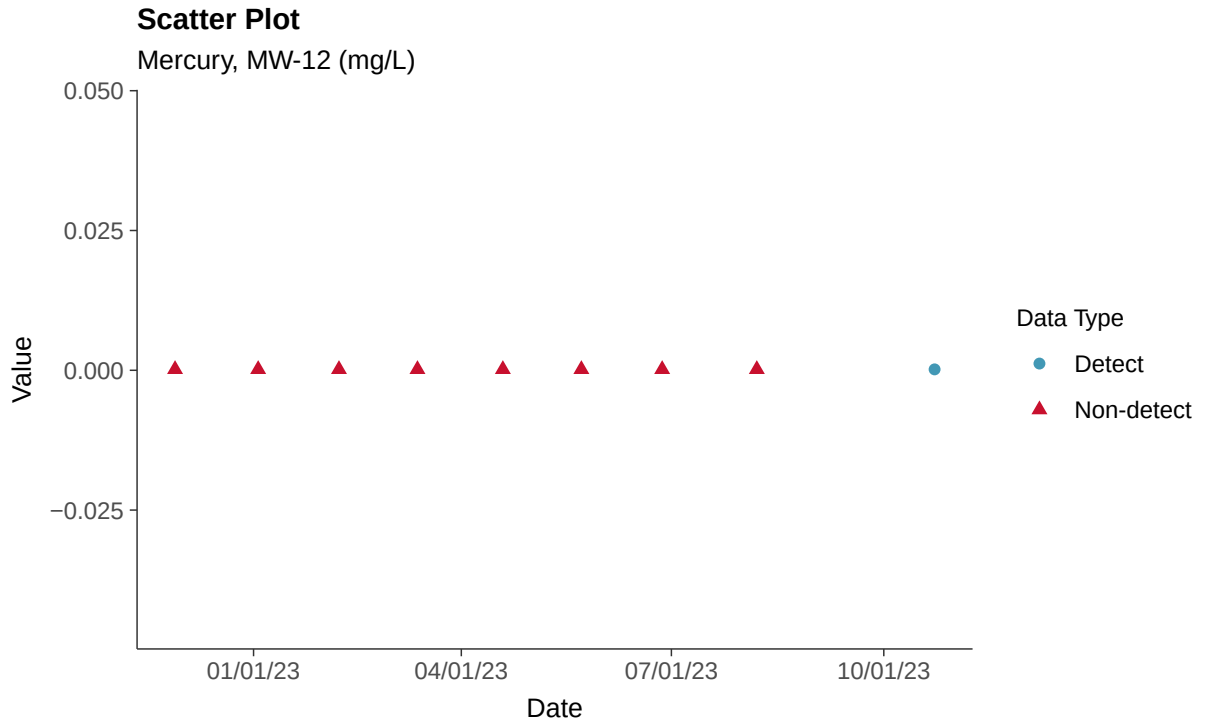
Trend Regression: Piecewise Linear-Linear-Linear

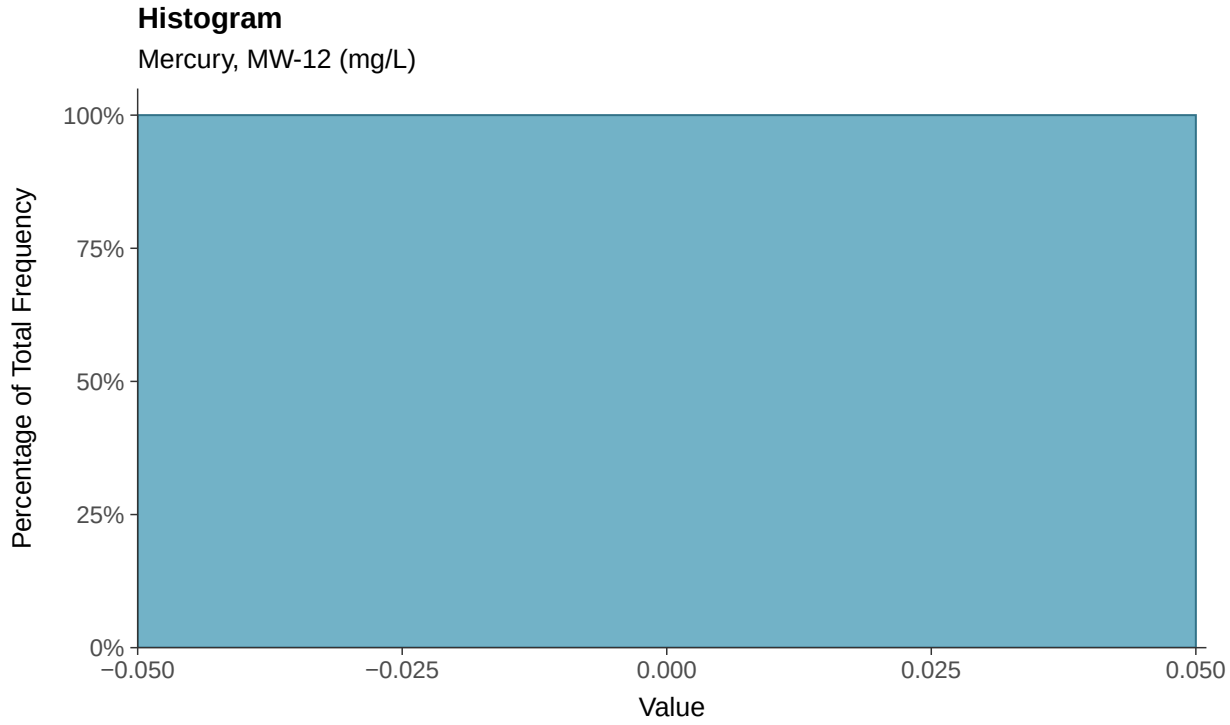
Lithium, MW-12 (mg/L)



Appendix IV: Mercury, MW-12

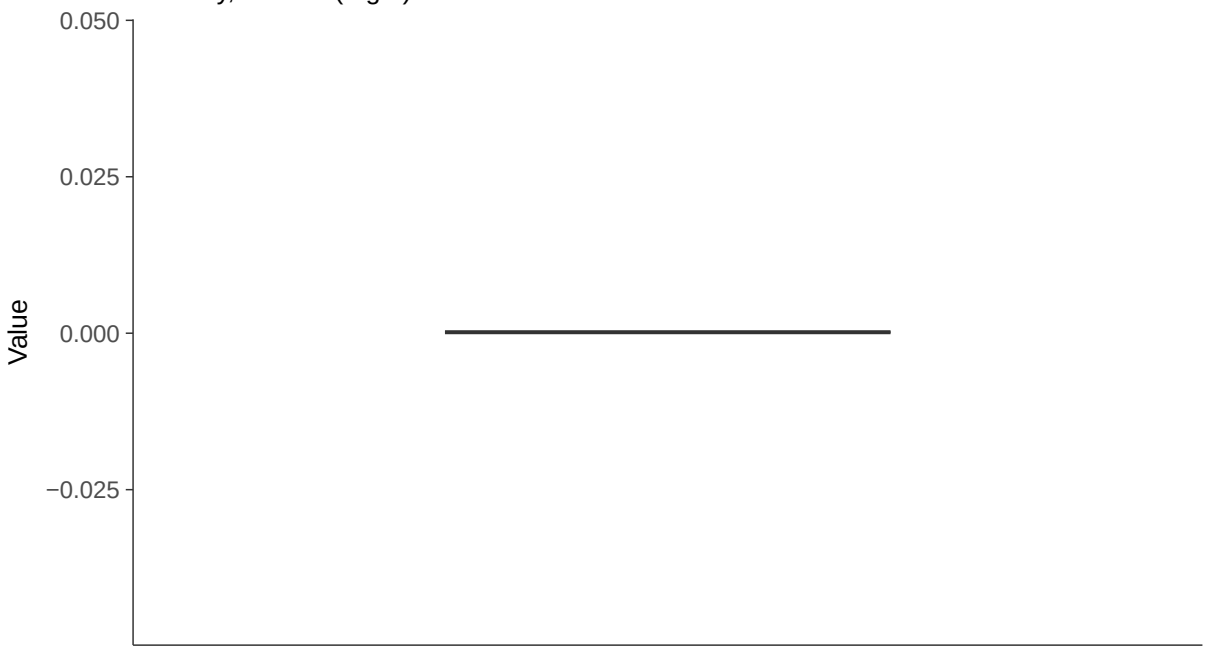
ID: 2_21_5_117





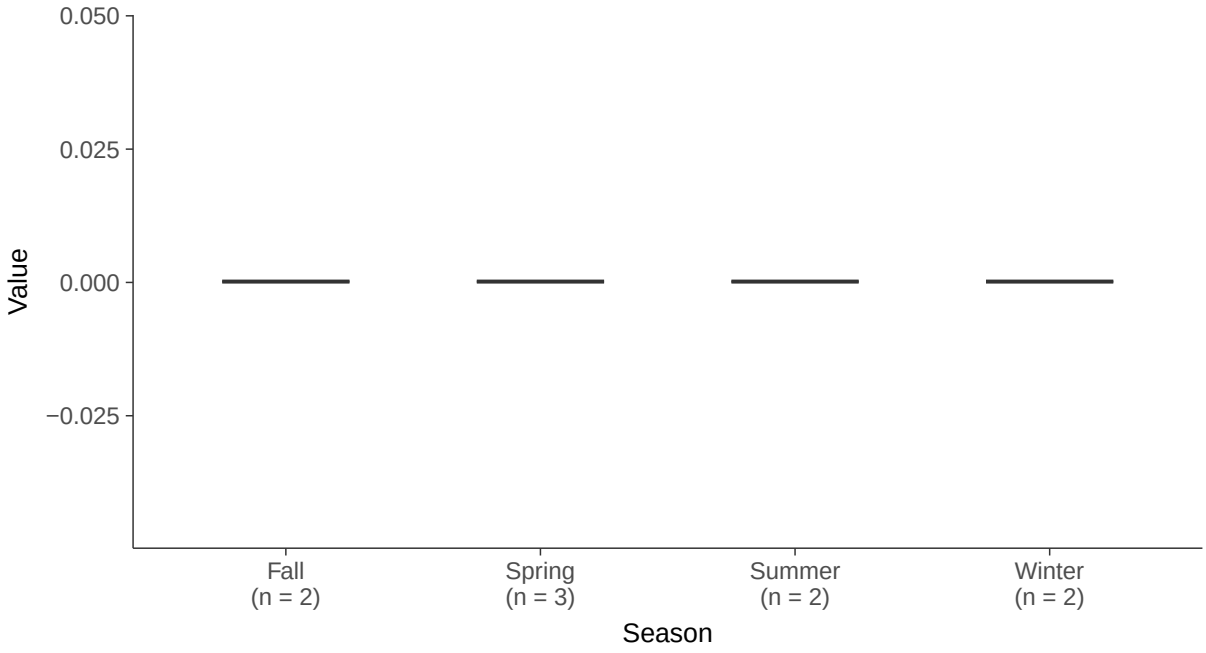
Boxplot

Mercury, MW-12 (mg/L)



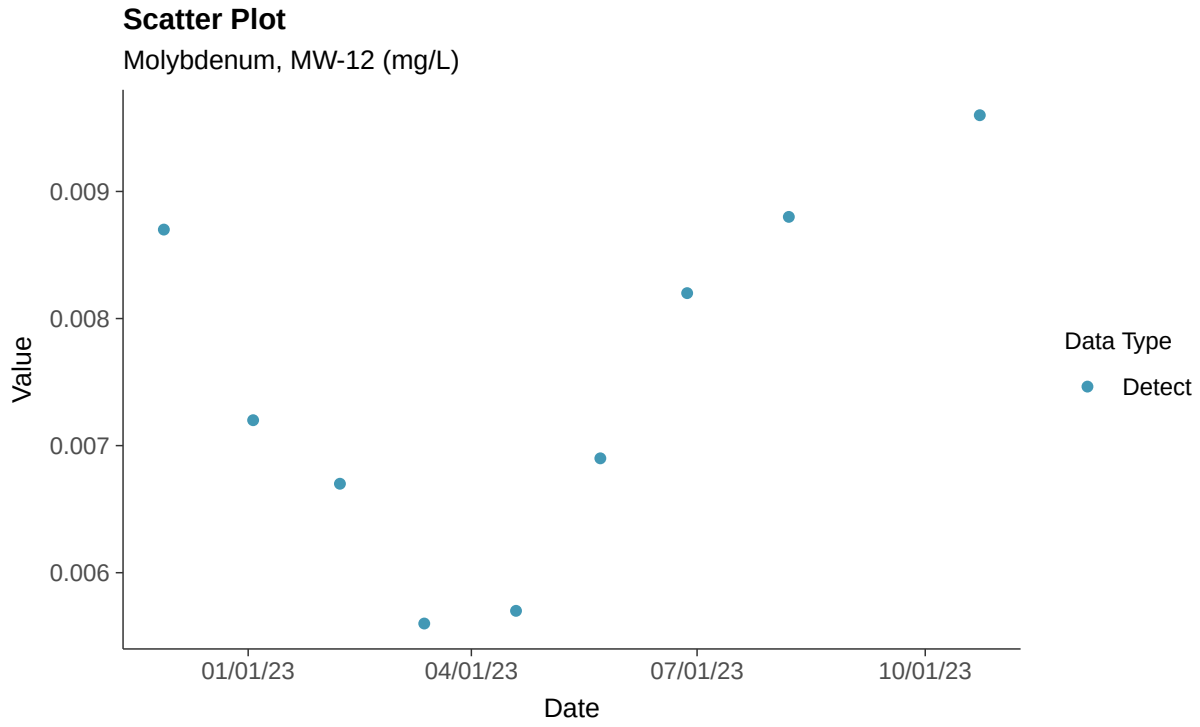
Boxplot by Season

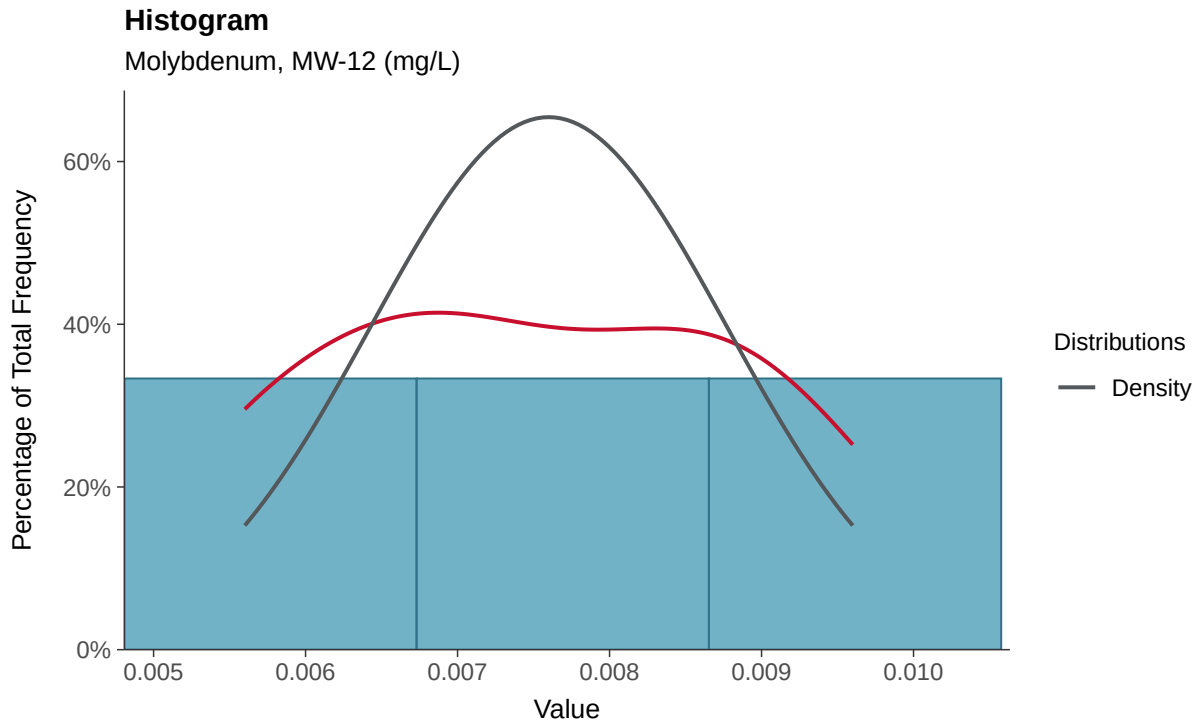
Mercury, MW-12 (mg/L)



Appendix IV: Molybdenum, MW-12

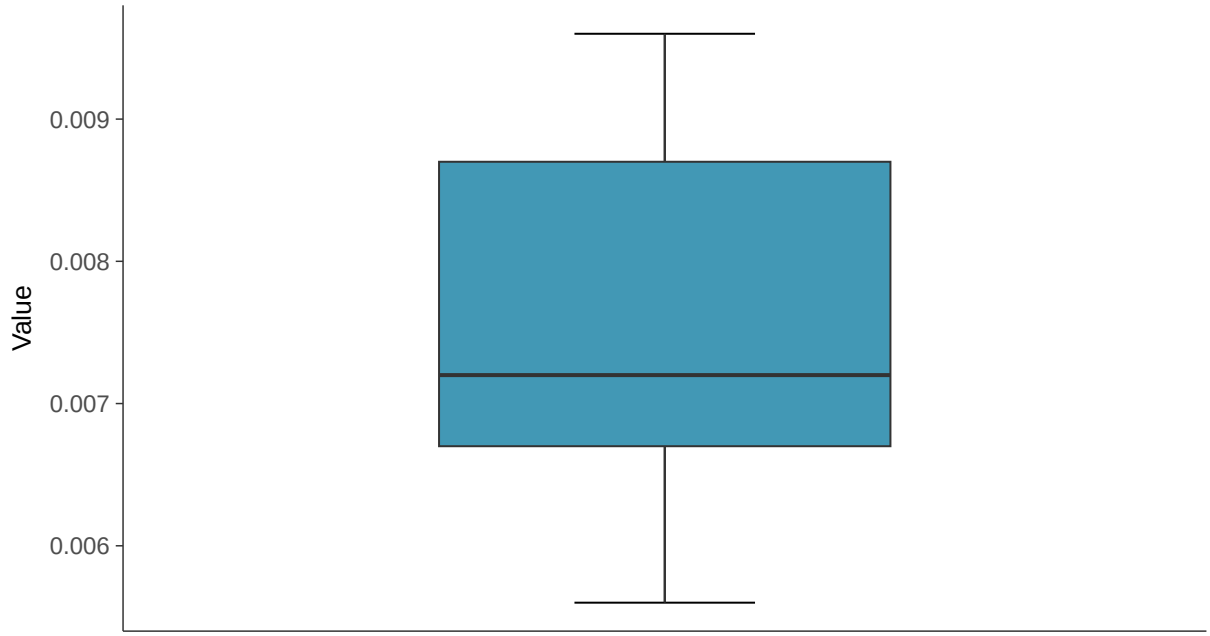
ID: 2_21_5_118





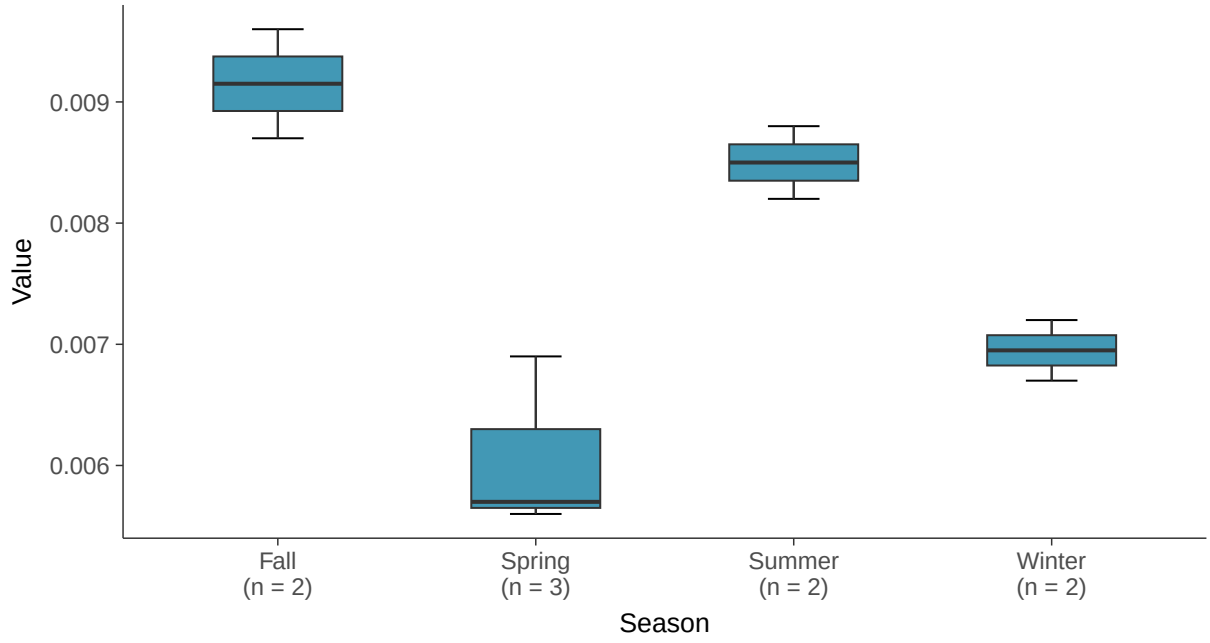
Boxplot

Molybdenum, MW-12 (mg/L)



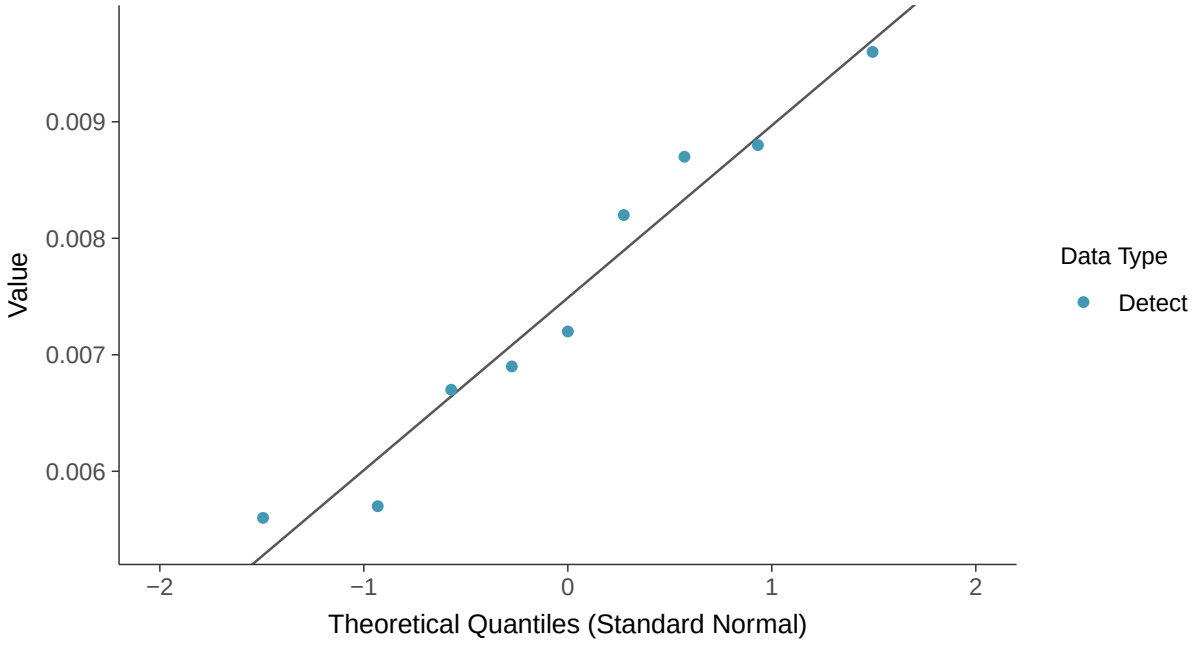
Boxplot by Season

Molybdenum, MW-12 (mg/L)



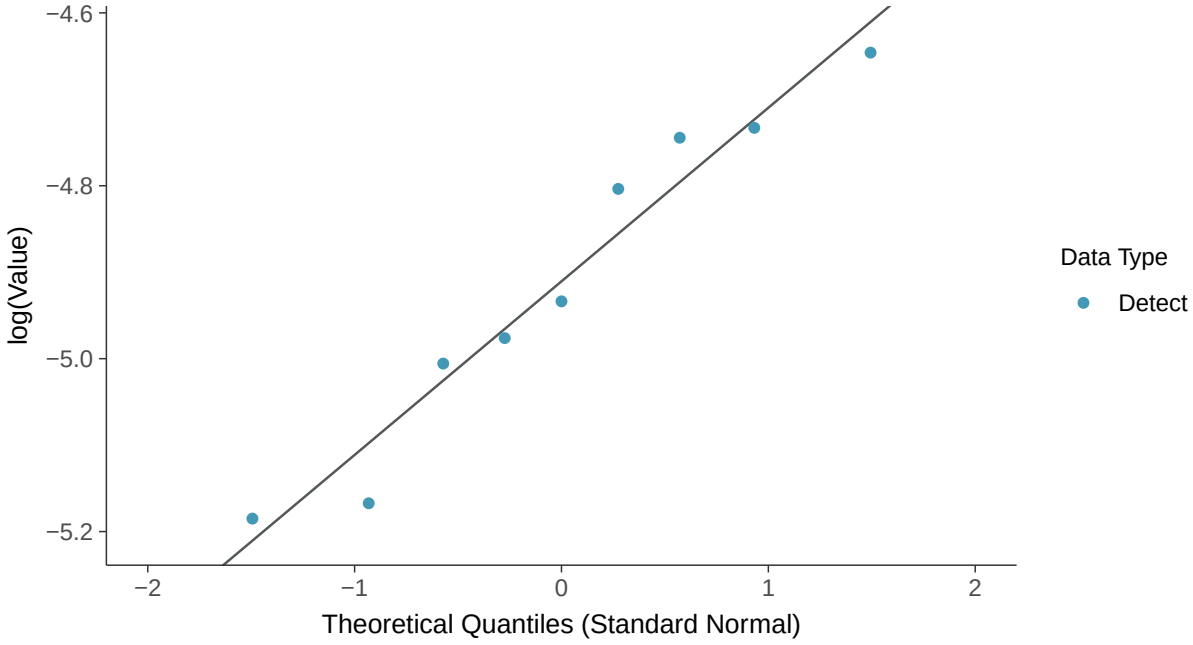
Normal Q-Q plot

Molybdenum, MW-12 (mg/L)



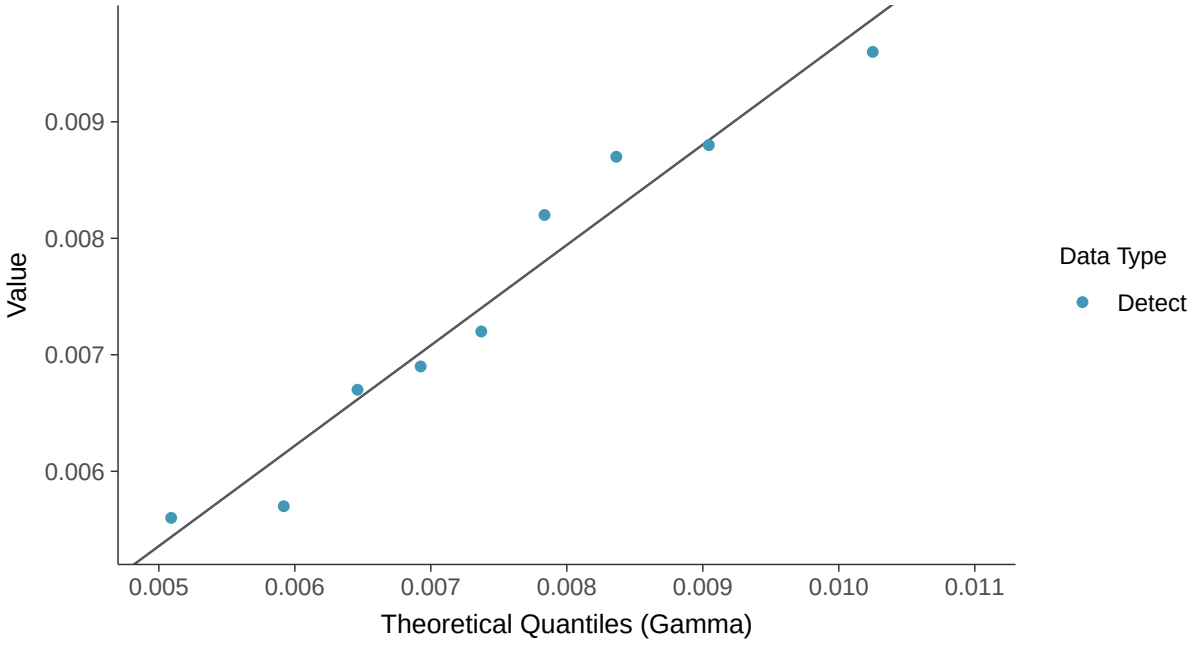
Lognormal Q-Q plot

Molybdenum, MW-12 (mg/L)



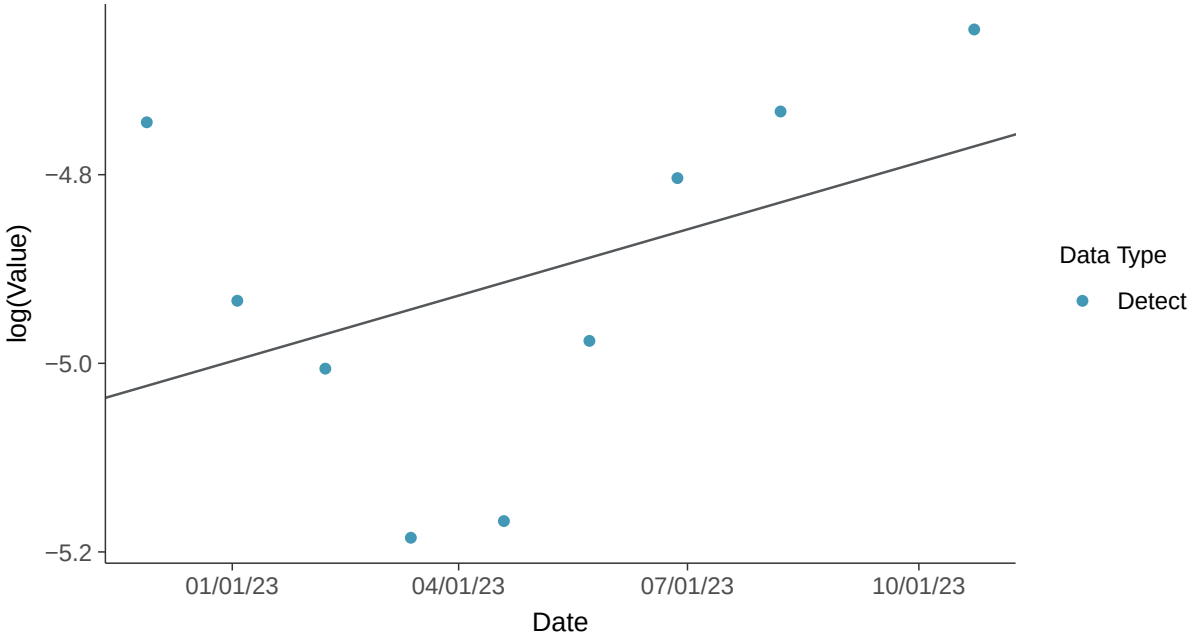
Gamma Q-Q plot

Molybdenum, MW-12 (mg/L)



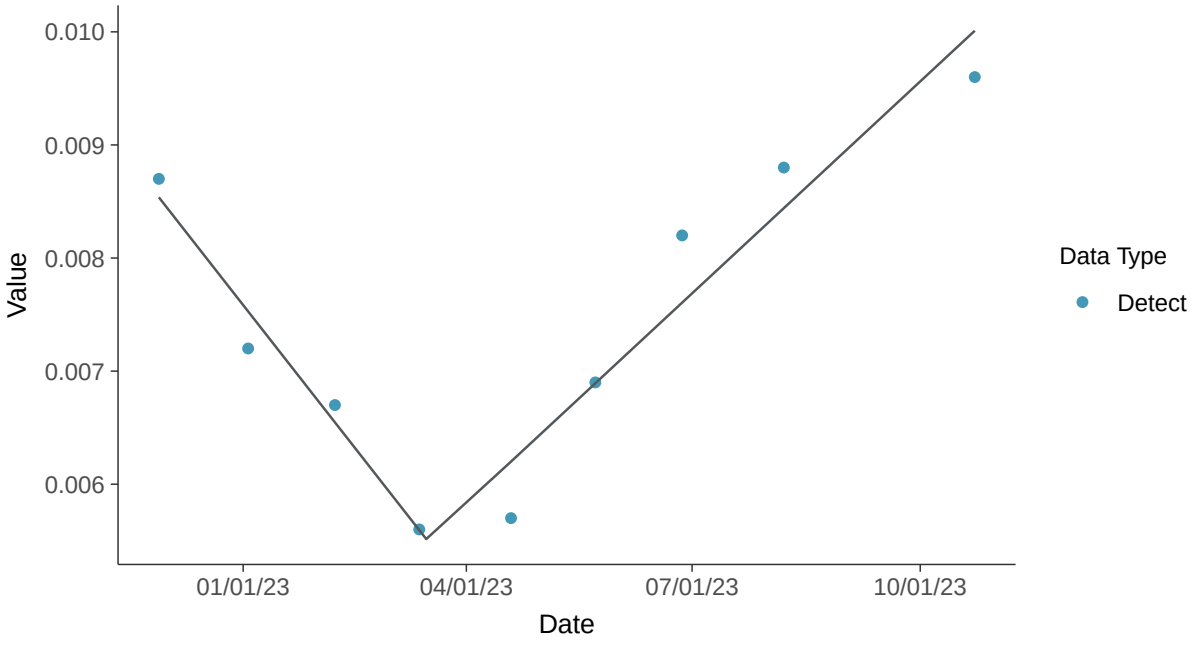
Trend Regression: Lognormal MLE

Molybdenum, MW-12 (mg/L)



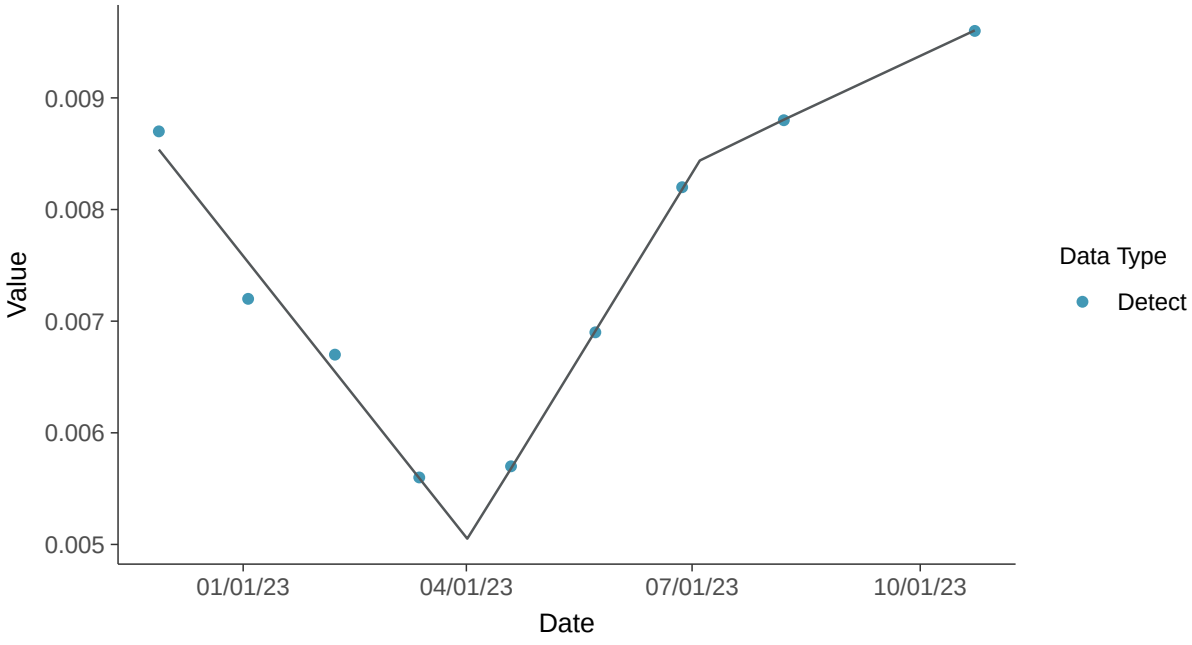
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-12 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-12 (mg/L)

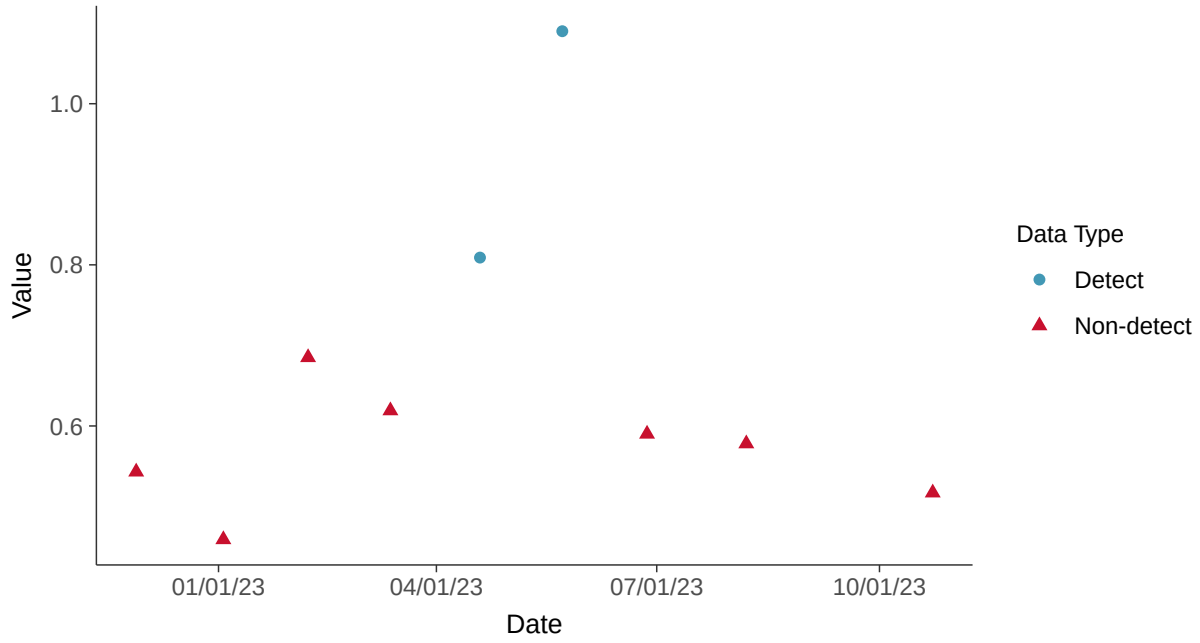


Appendix IV: Radium 226 and 228, MW-12

ID: 2_21_5_121

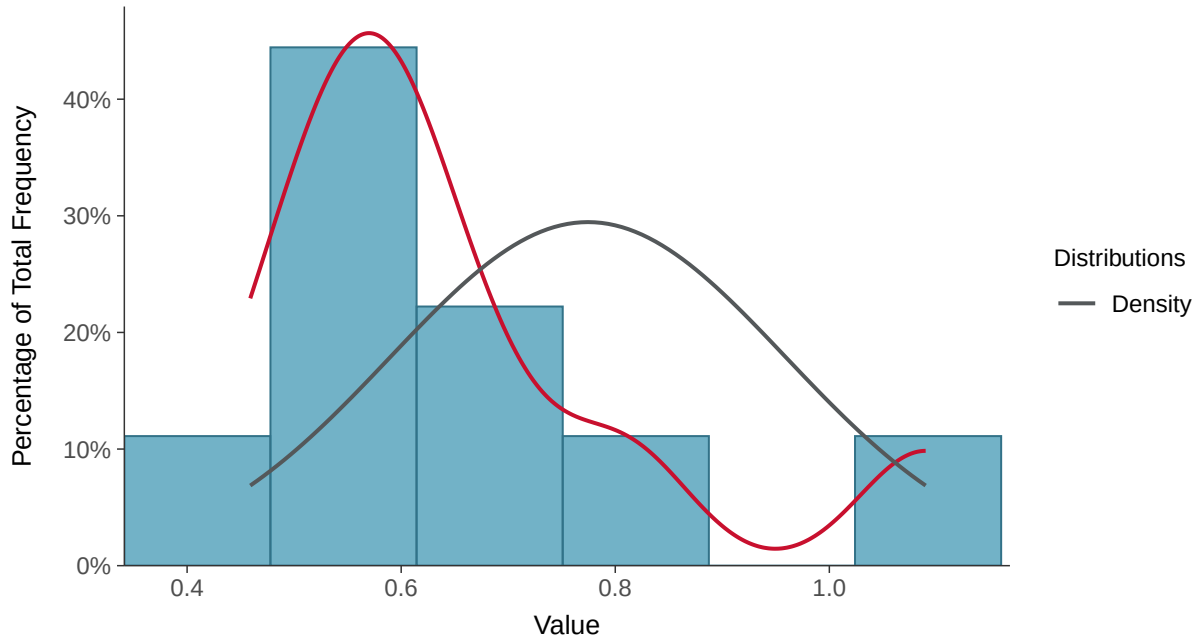
Scatter Plot

Radium 226 and 228, MW-12 (pCi/L)



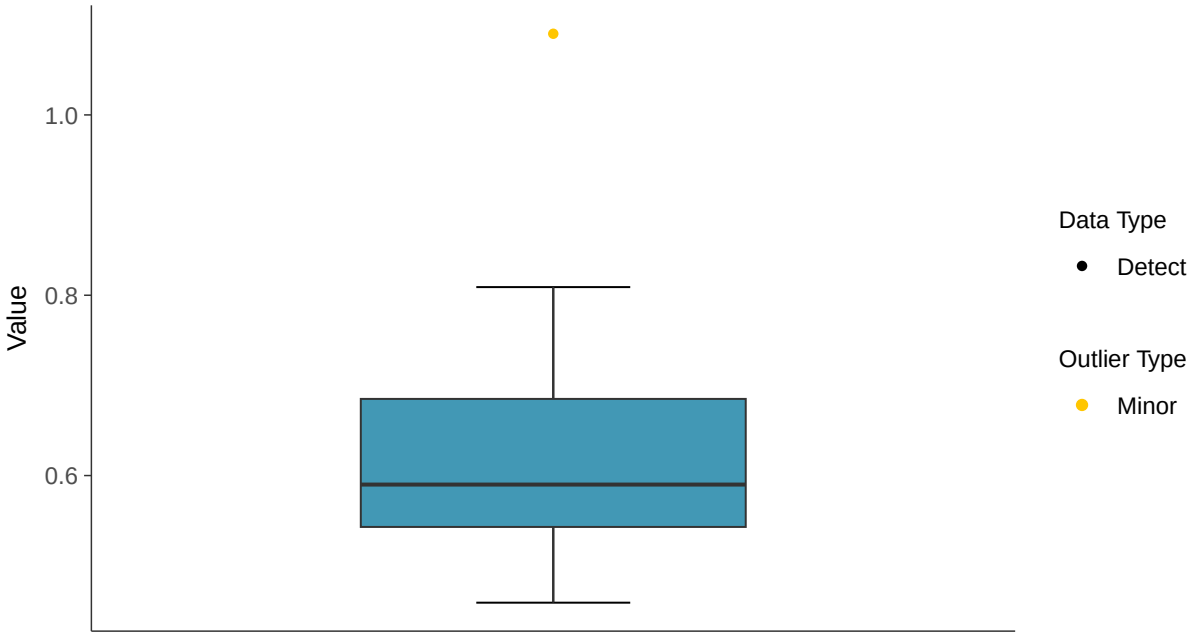
Histogram

Radium 226 and 228, MW-12 (pCi/L)



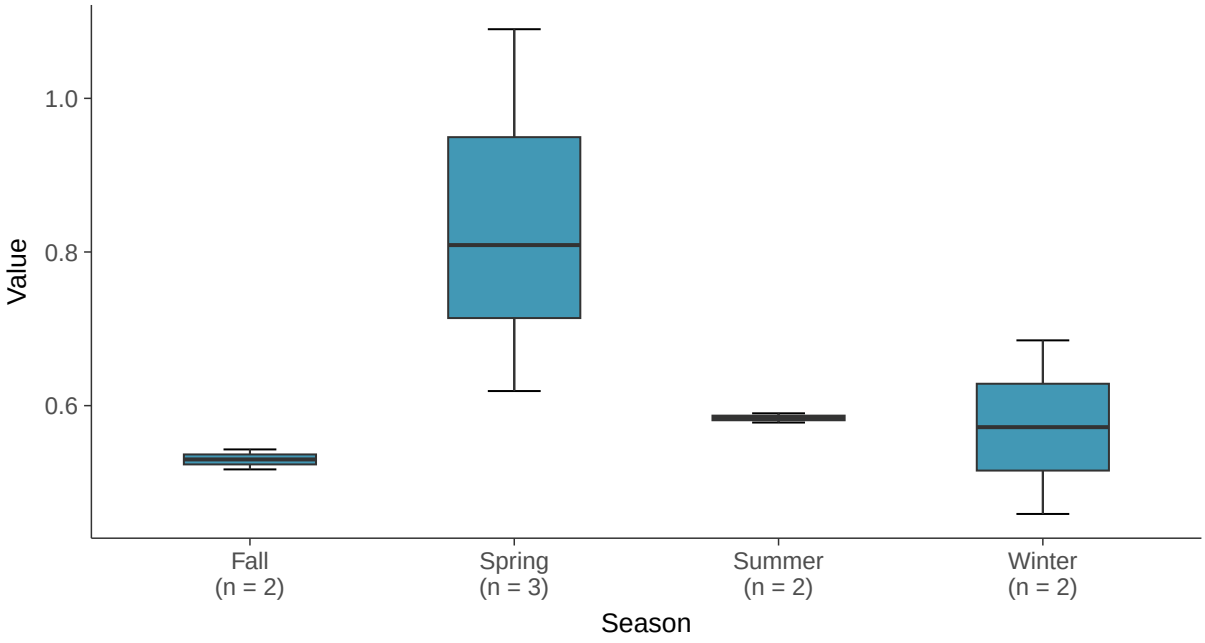
Boxplot

Radium 226 and 228, MW-12 (pCi/L)



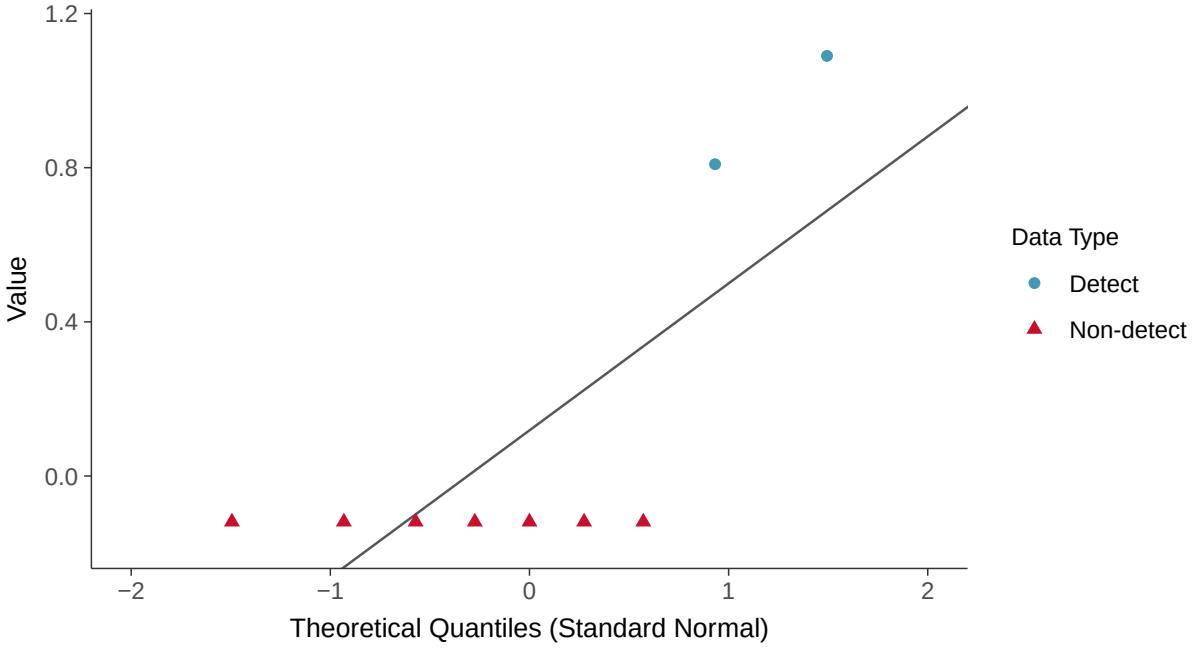
Boxplot by Season

Radium 226 and 228, MW-12 (pCi/L)



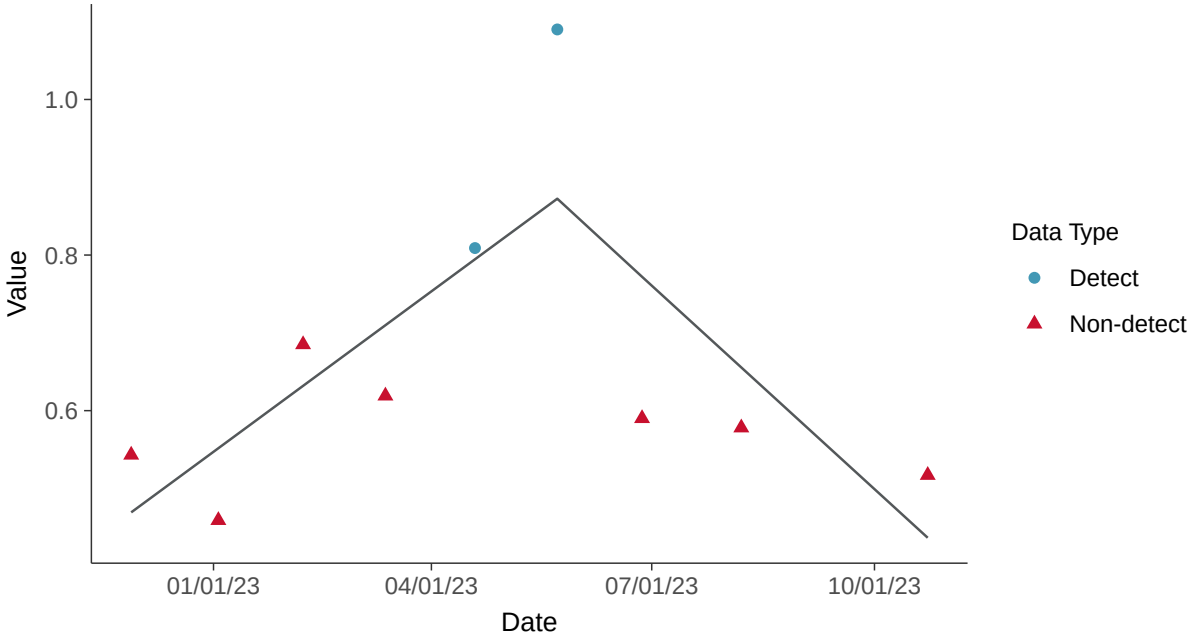
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-12 (pCi/L)



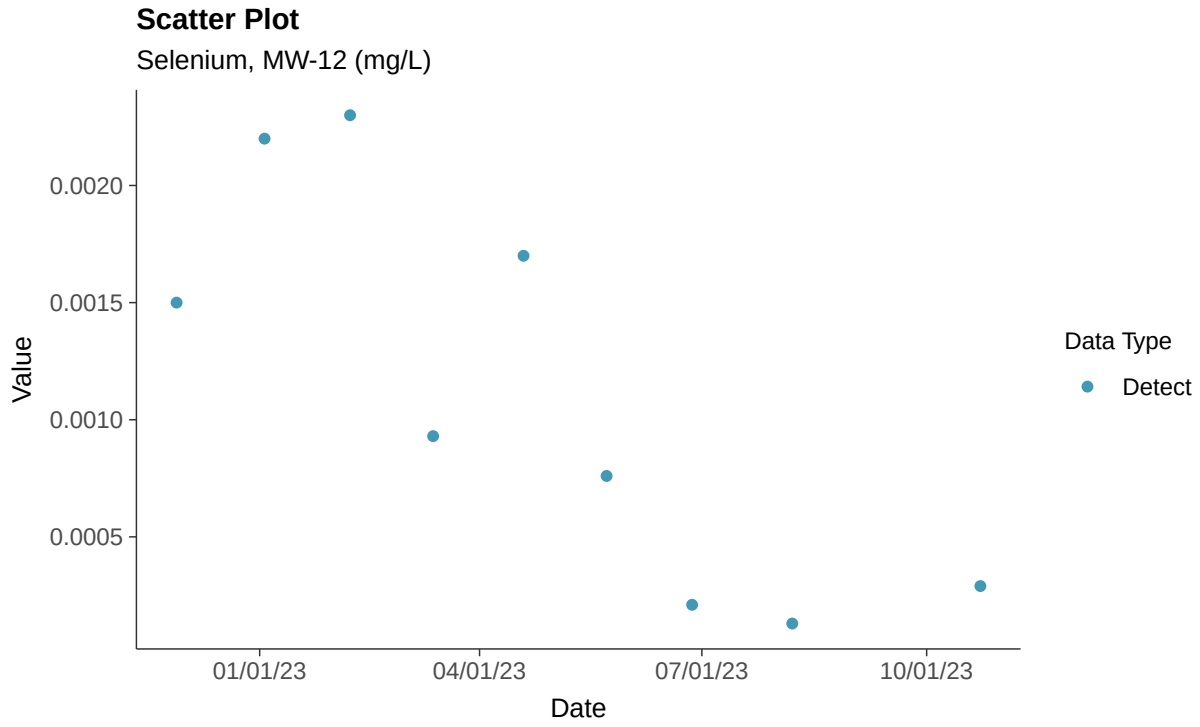
Trend Regression: Piecewise Linear-Linear

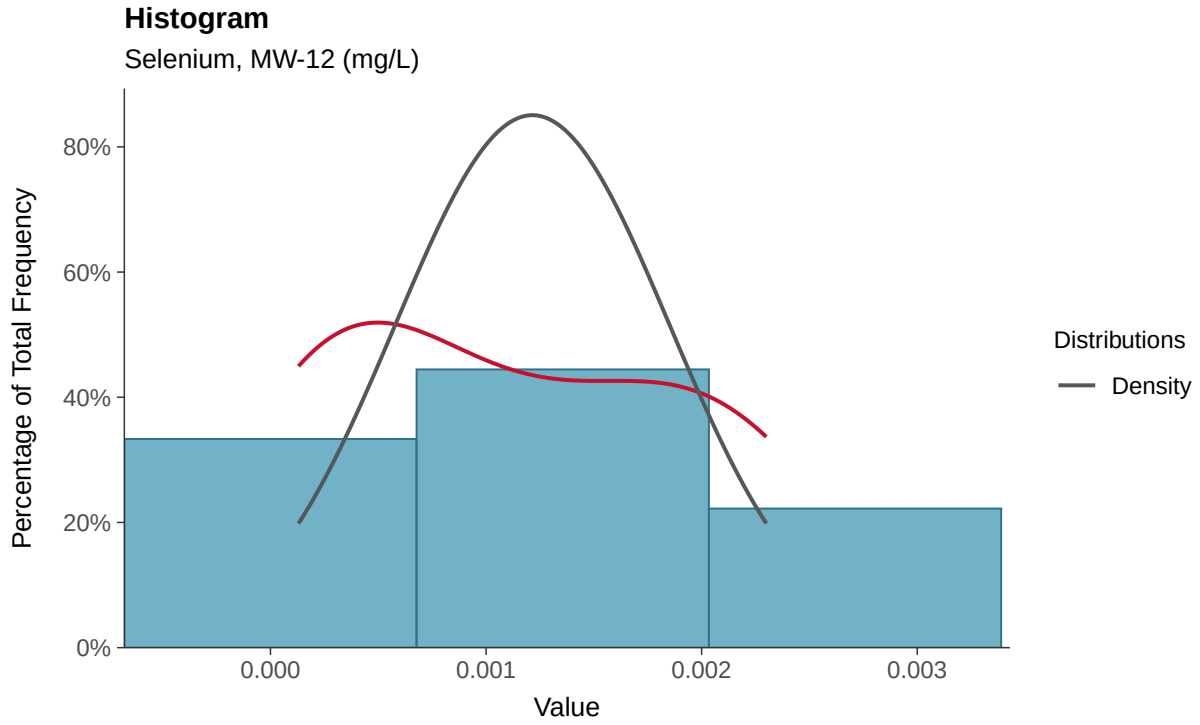
Radium 226 and 228, MW-12 (pCi/L)



Appendix IV: Selenium, MW-12

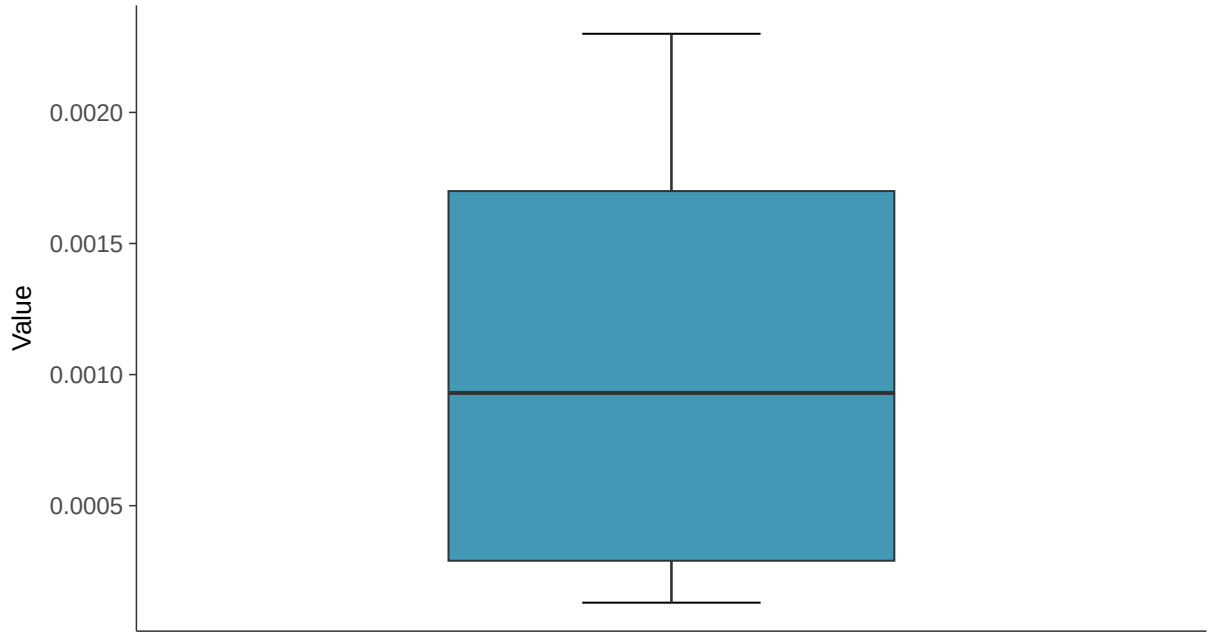
ID: 2_21_5_122





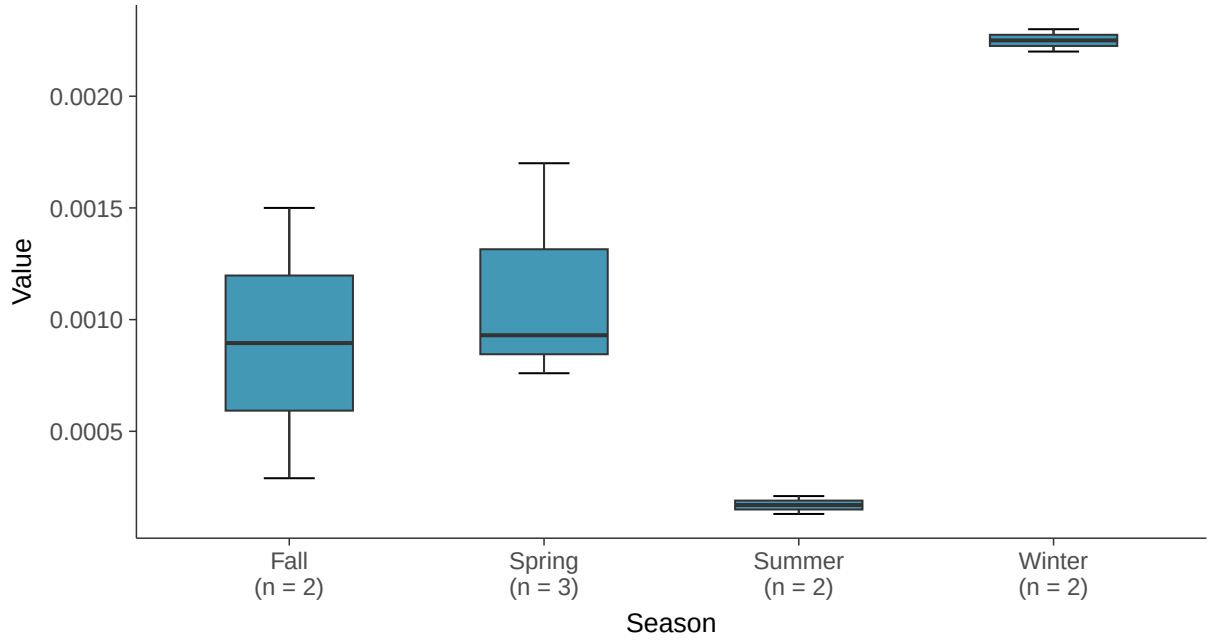
Boxplot

Selenium, MW-12 (mg/L)



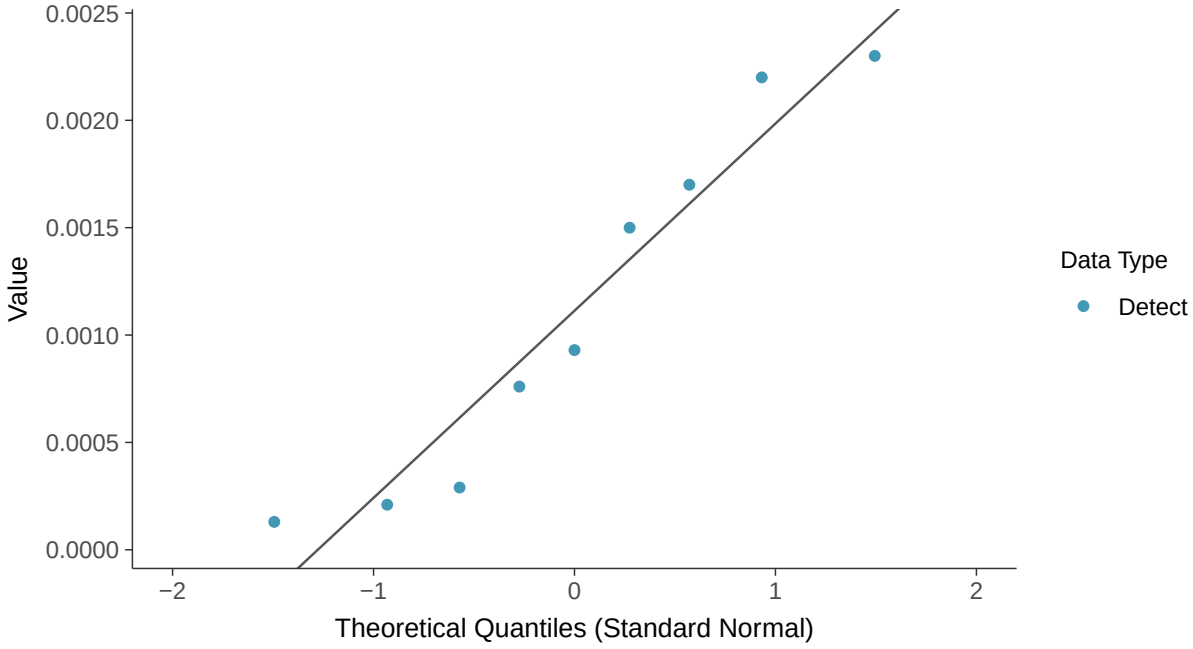
Boxplot by Season

Selenium, MW-12 (mg/L)



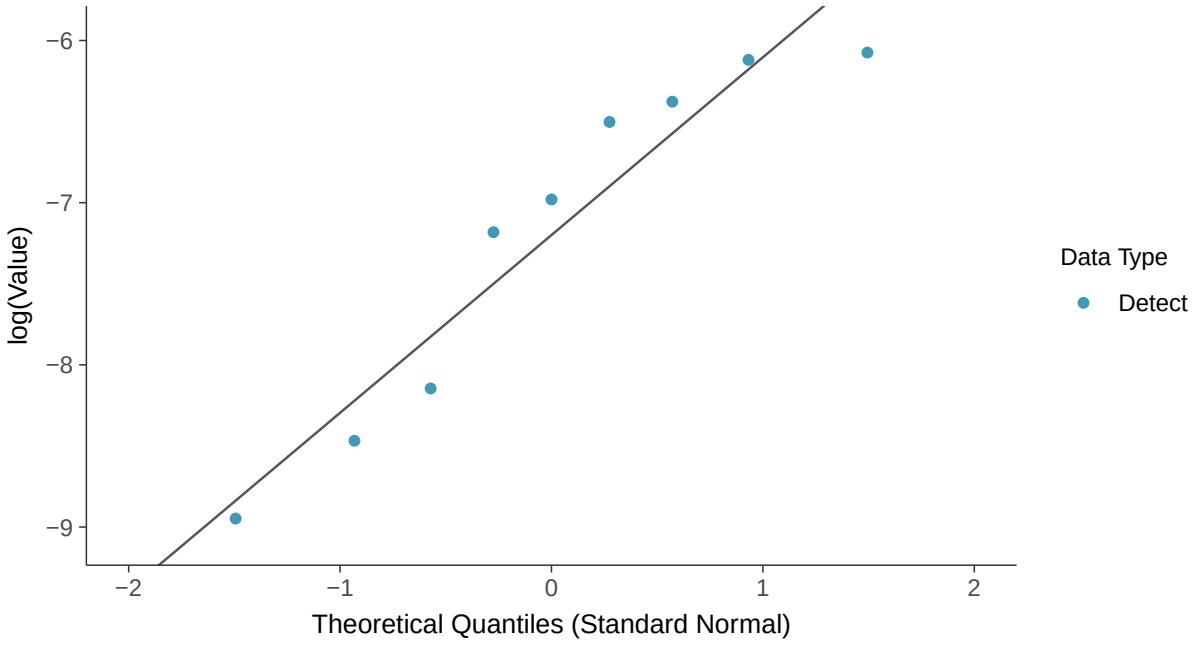
Normal Q-Q plot

Selenium, MW-12 (mg/L)



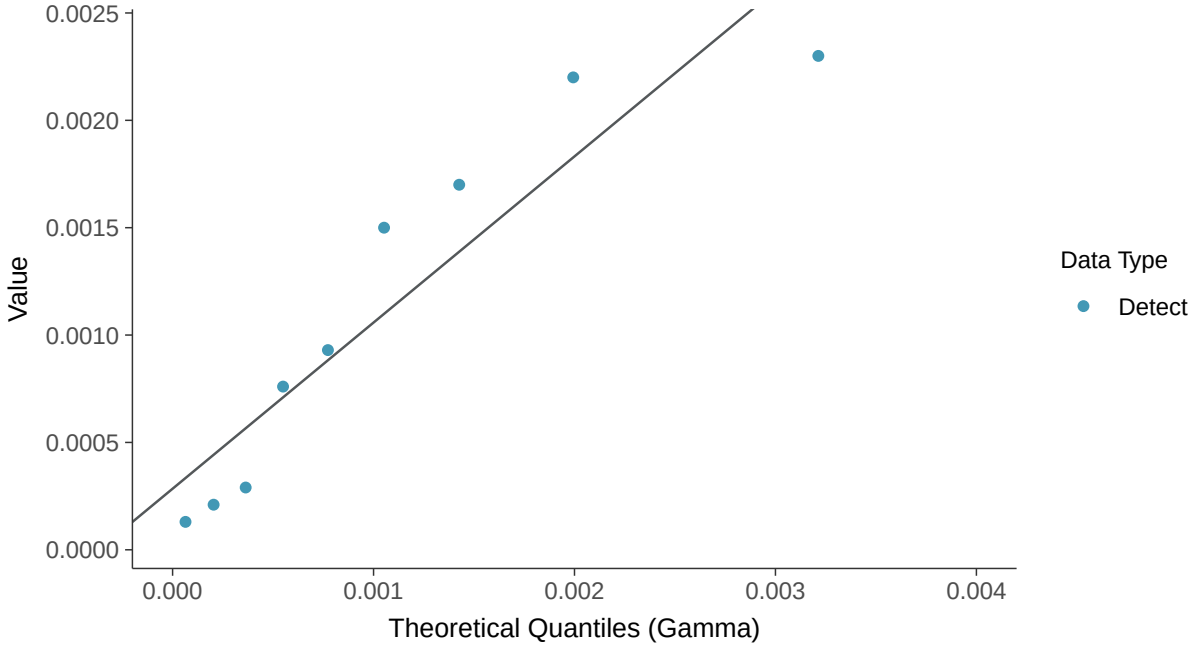
Lognormal Q-Q plot

Selenium, MW-12 (mg/L)



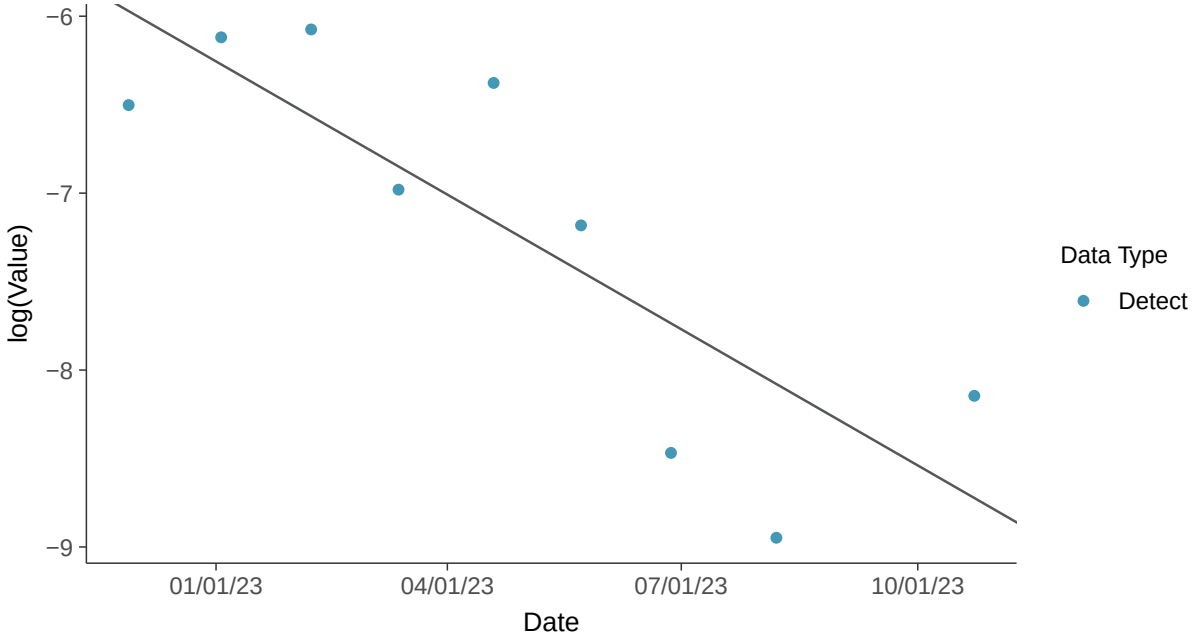
Gamma Q-Q plot

Selenium, MW-12 (mg/L)



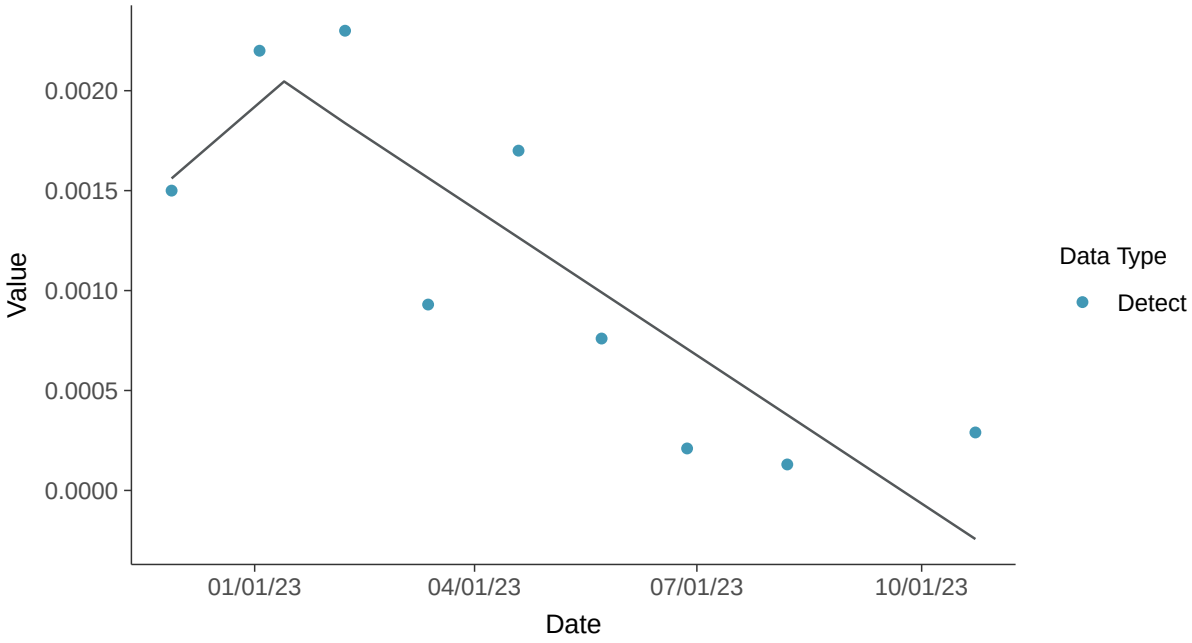
Trend Regression: Lognormal MLE

Selenium, MW-12 (mg/L)



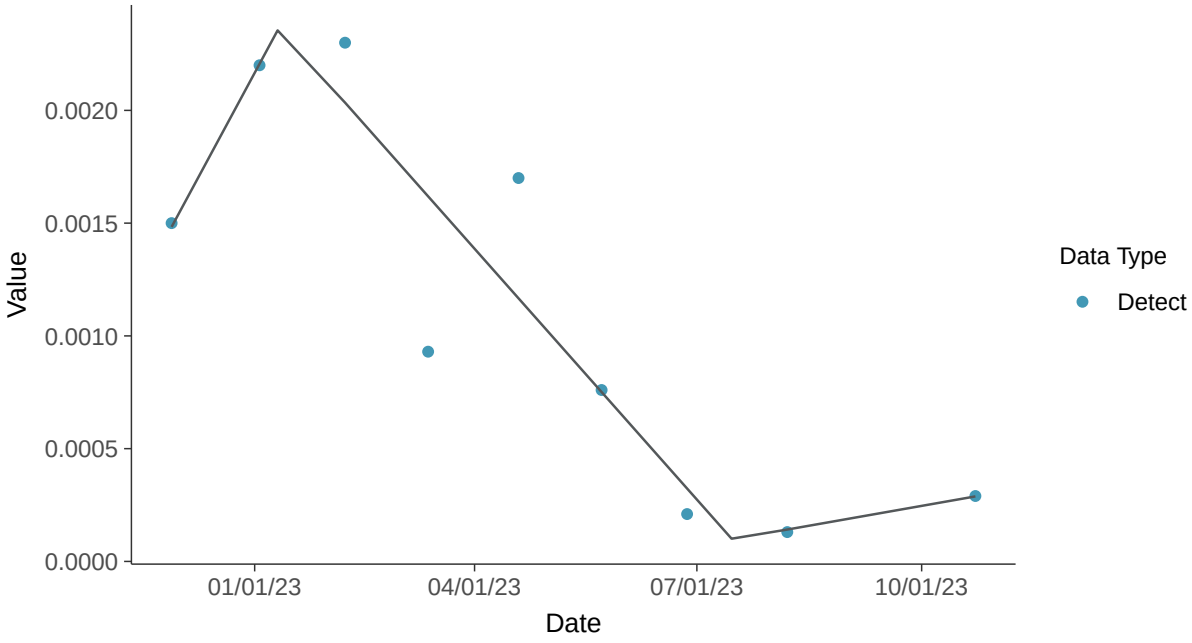
Trend Regression: Piecewise Linear-Linear

Selenium, MW-12 (mg/L)



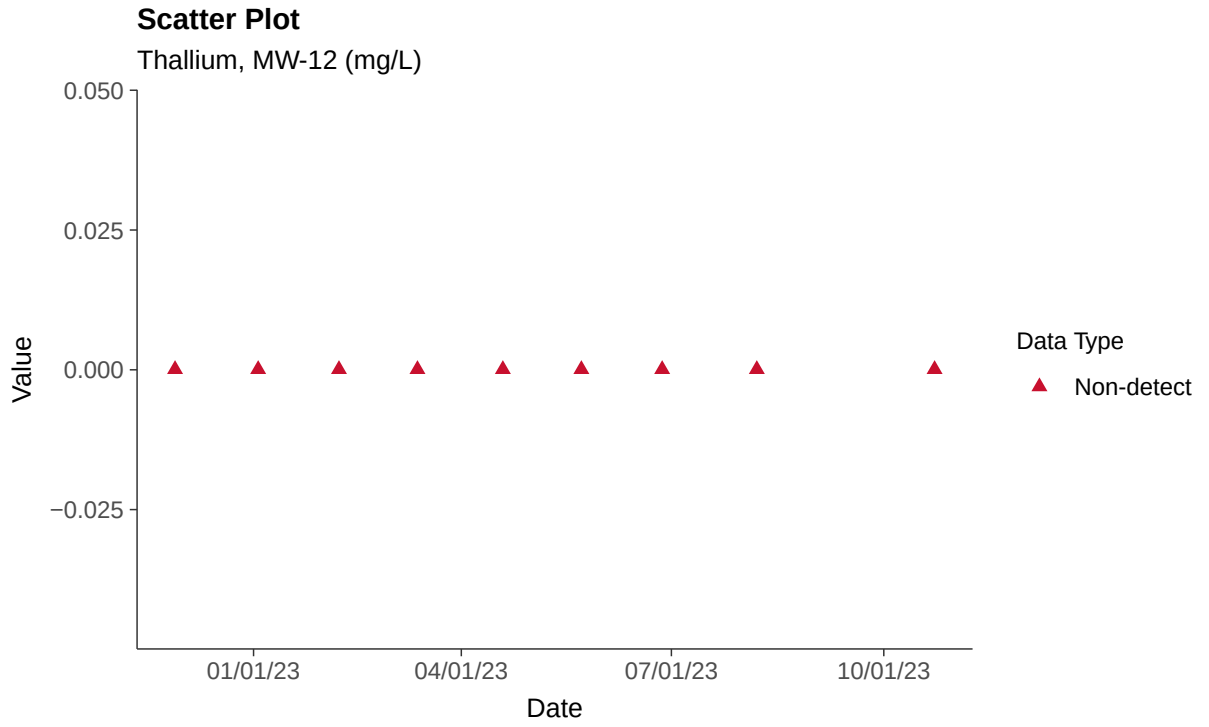
Trend Regression: Piecewise Linear-Linear-Linear

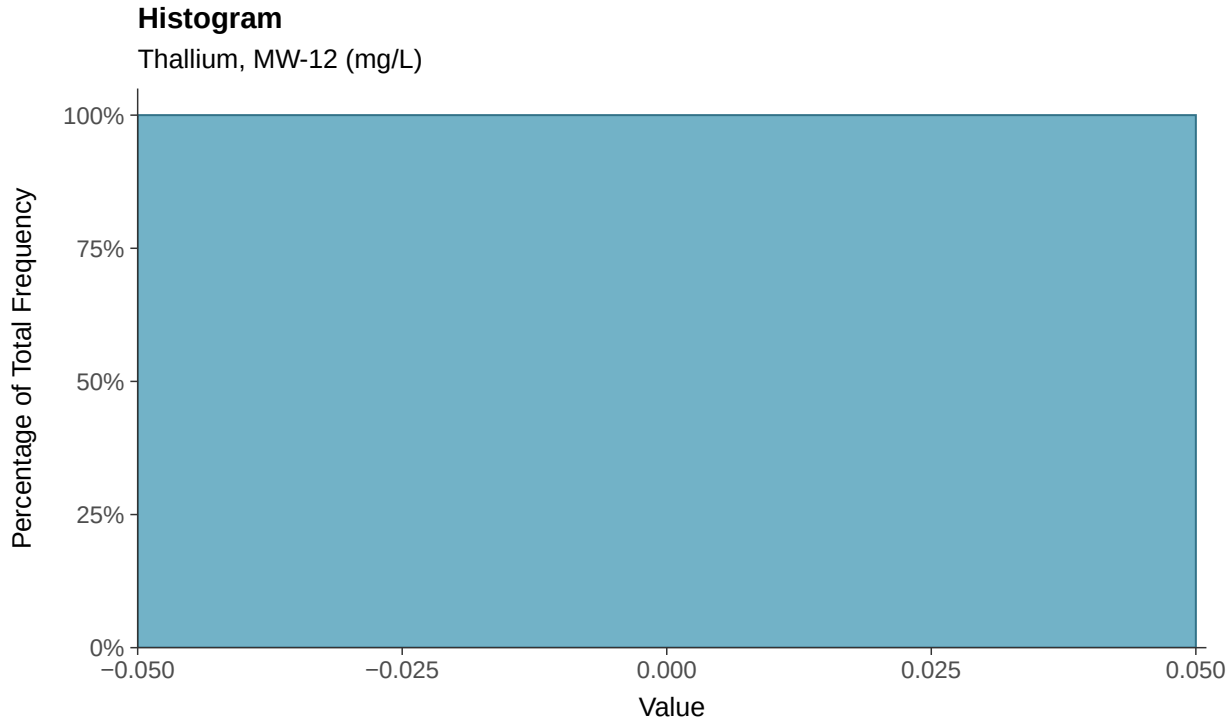
Selenium, MW-12 (mg/L)



Appendix IV: Thallium, MW-12

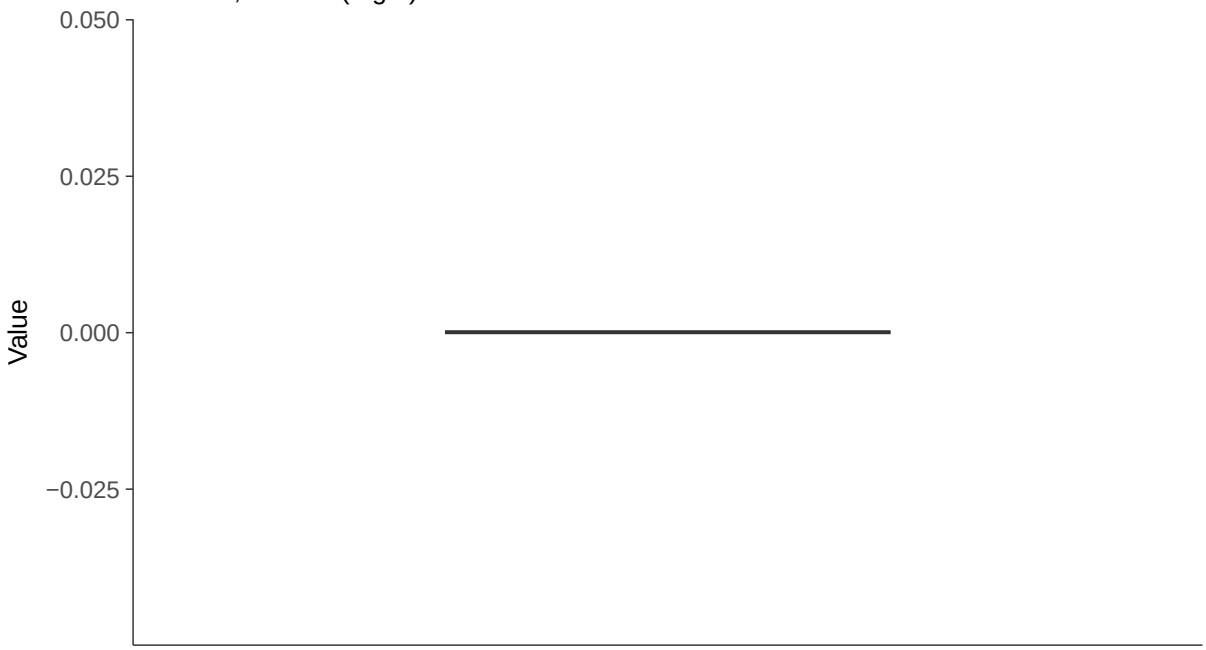
ID: 2_21_5_125





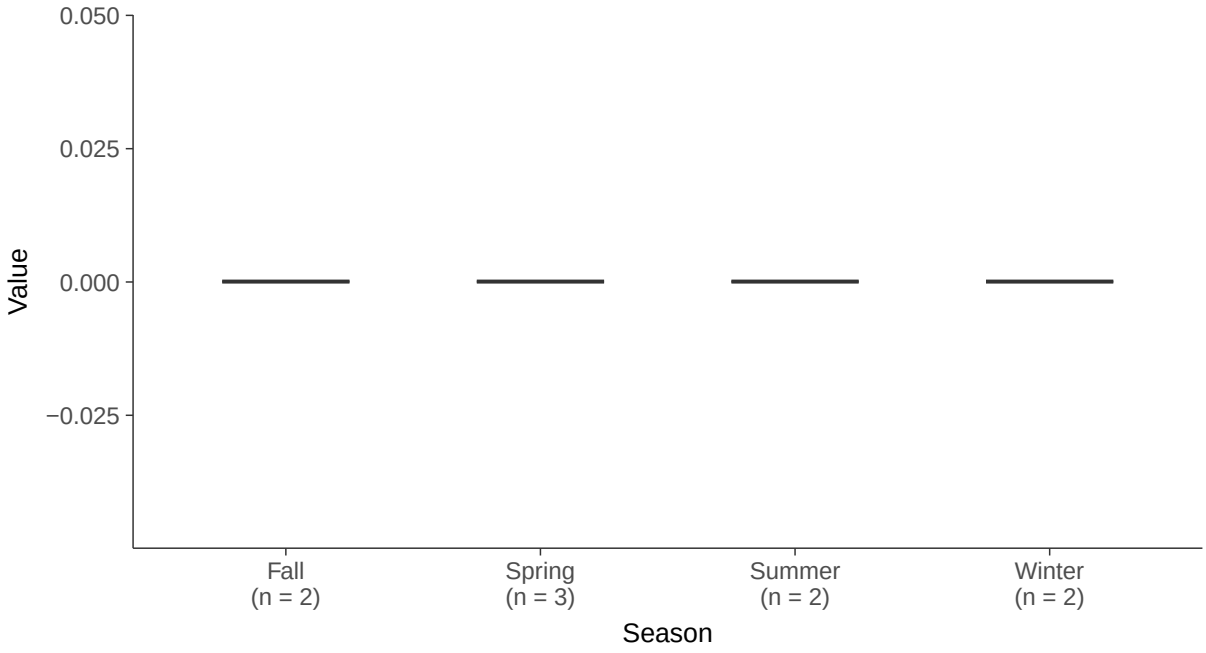
Boxplot

Thallium, MW-12 (mg/L)



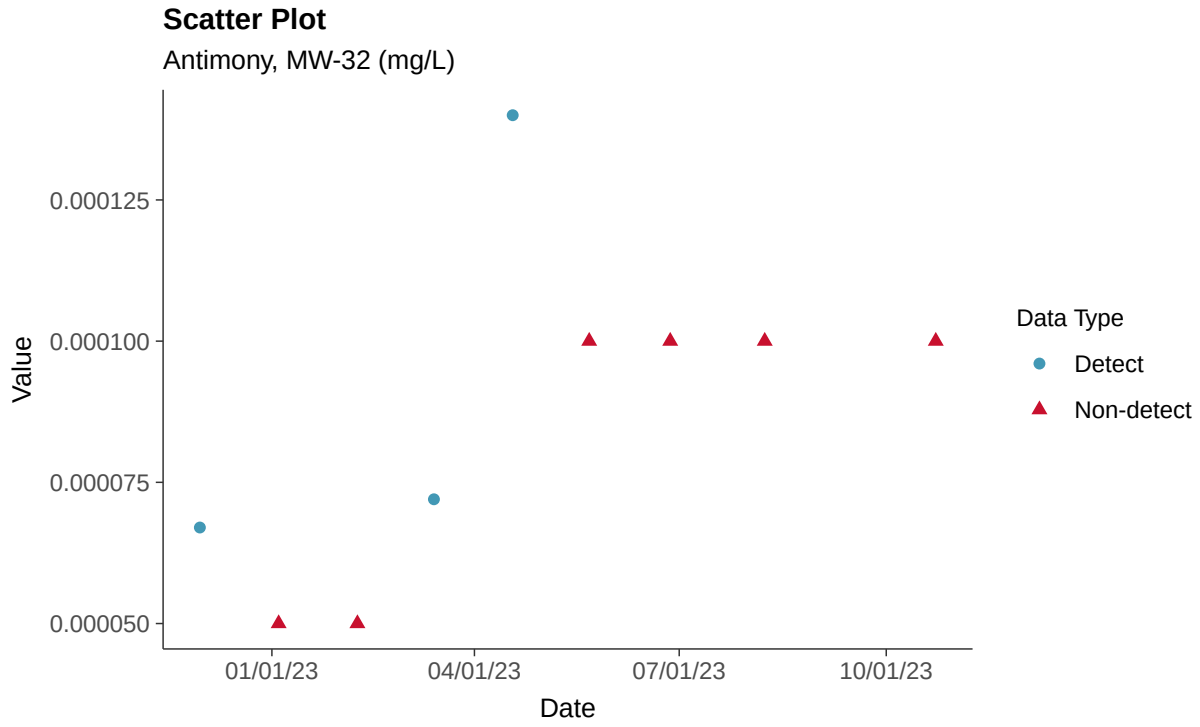
Boxplot by Season

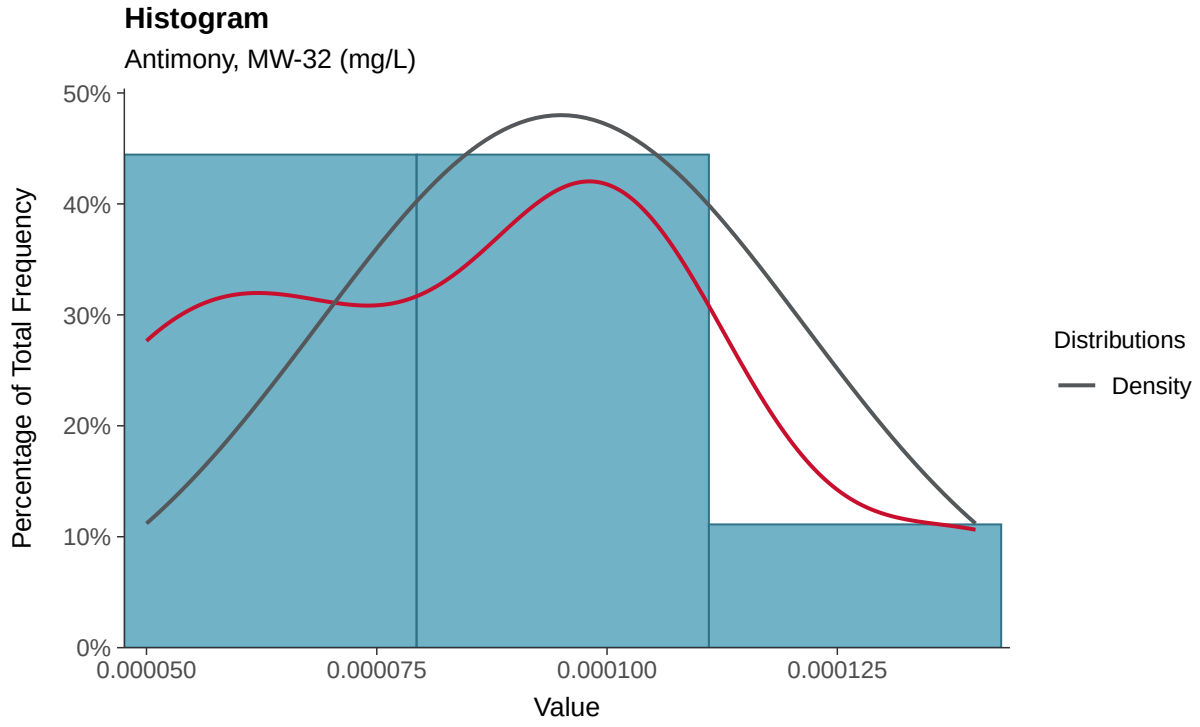
Thallium, MW-12 (mg/L)



Appendix IV: Antimony, MW-32

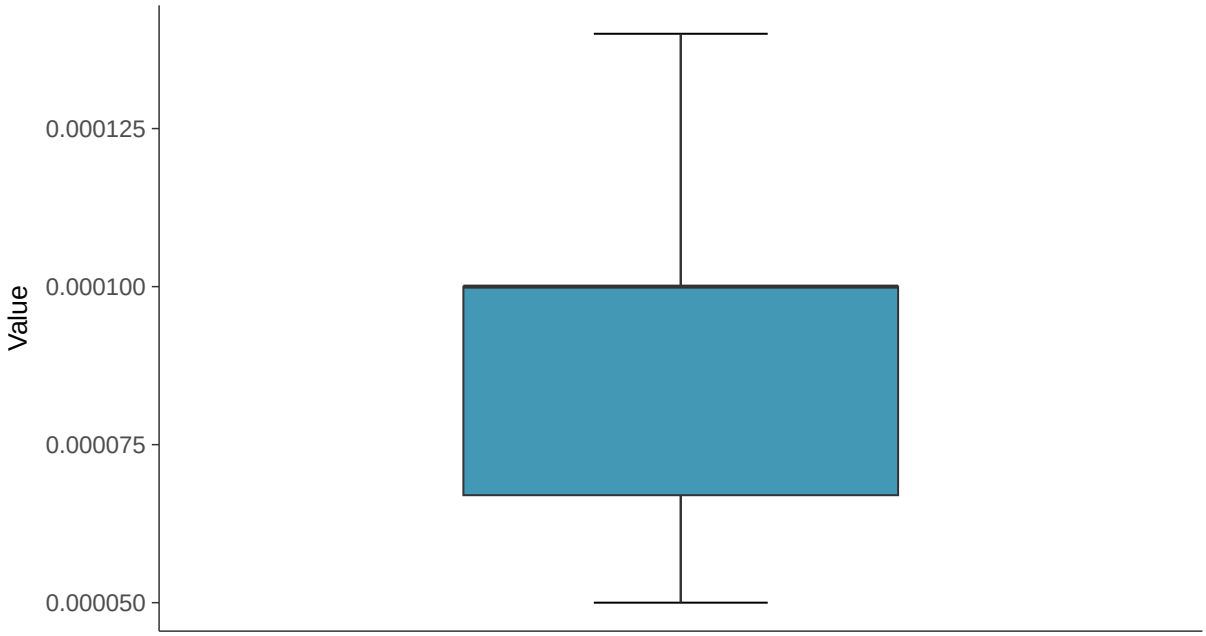
ID: 2_27_5_101





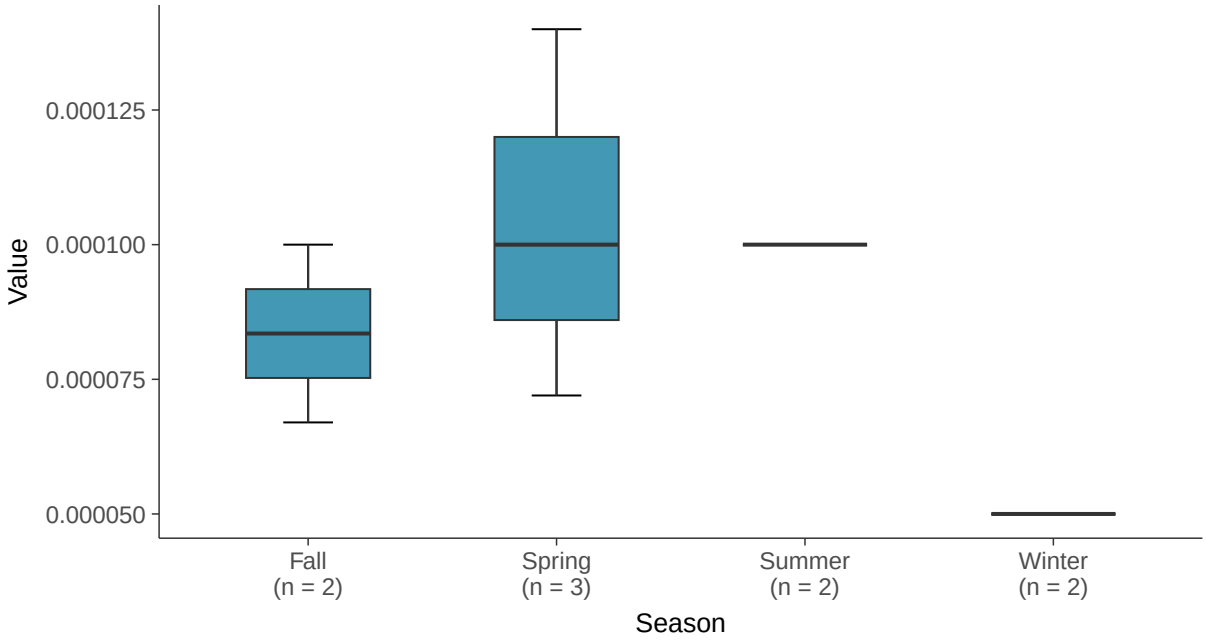
Boxplot

Antimony, MW-32 (mg/L)



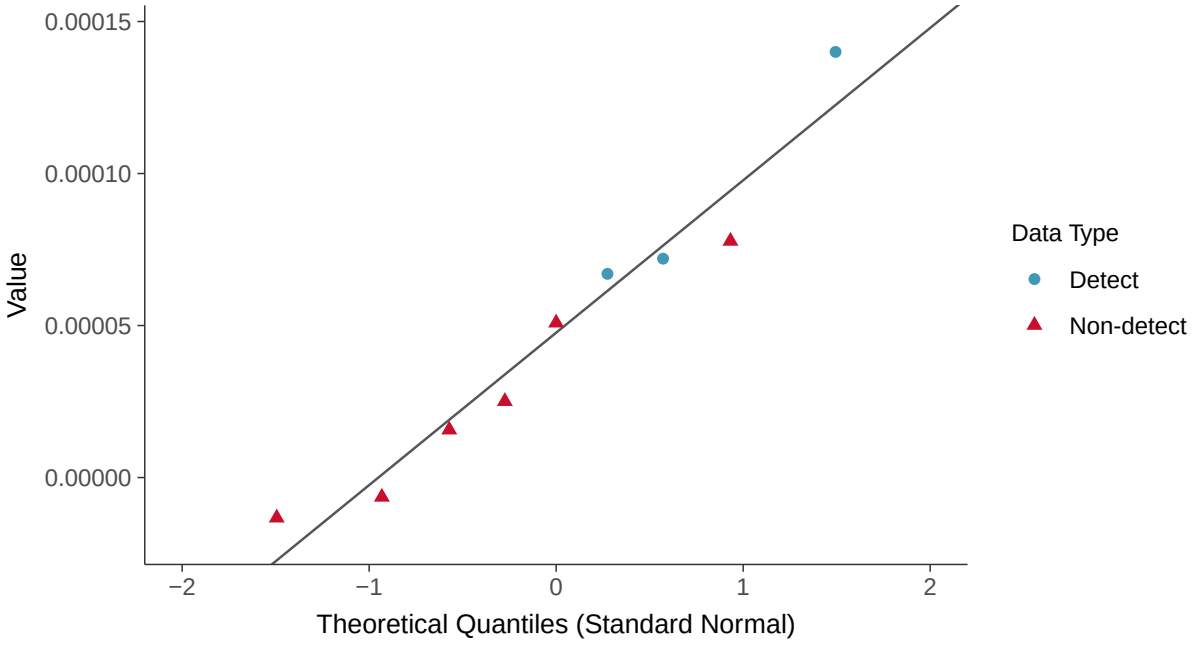
Boxplot by Season

Antimony, MW-32 (mg/L)



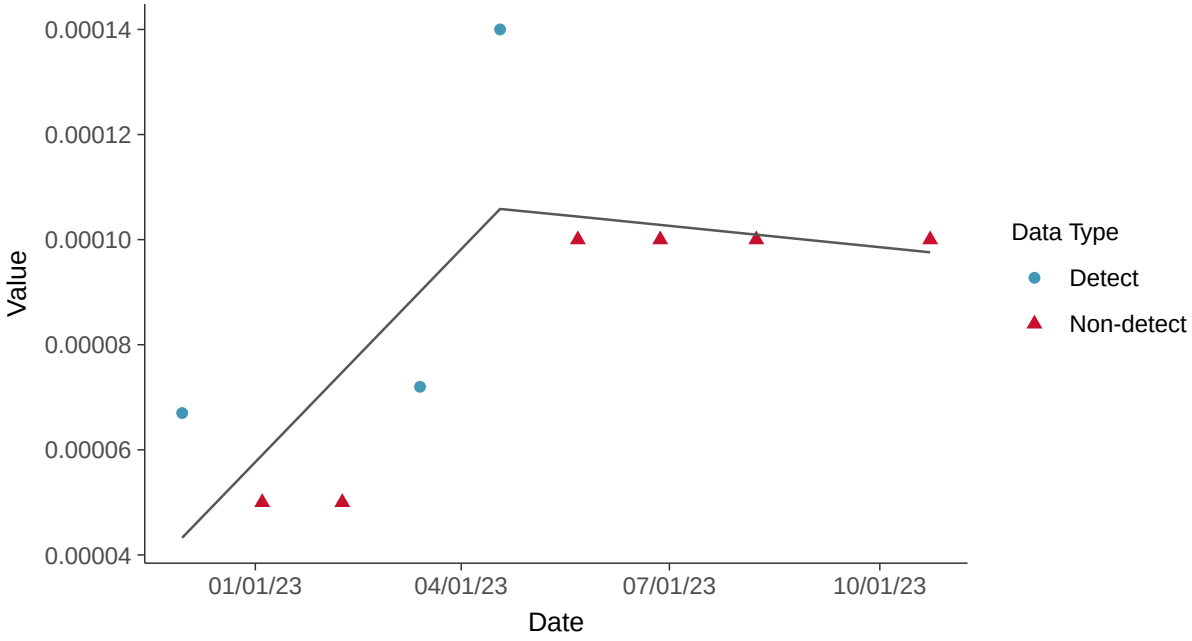
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-32 (mg/L)



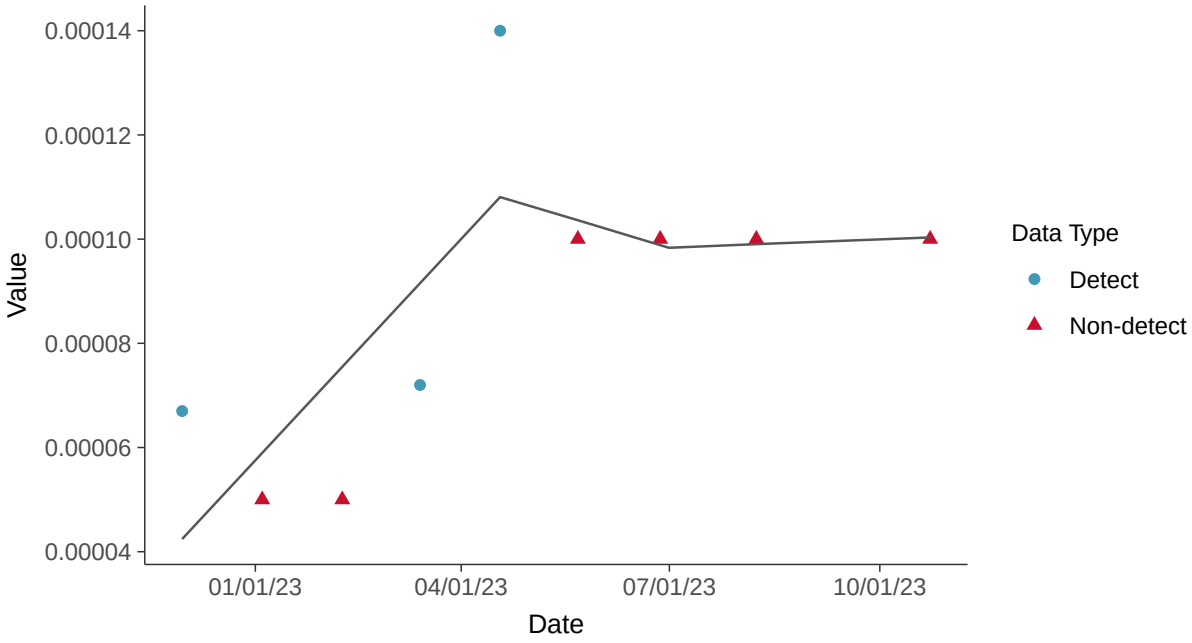
Trend Regression: Piecewise Linear-Linear

Antimony, MW-32 (mg/L)



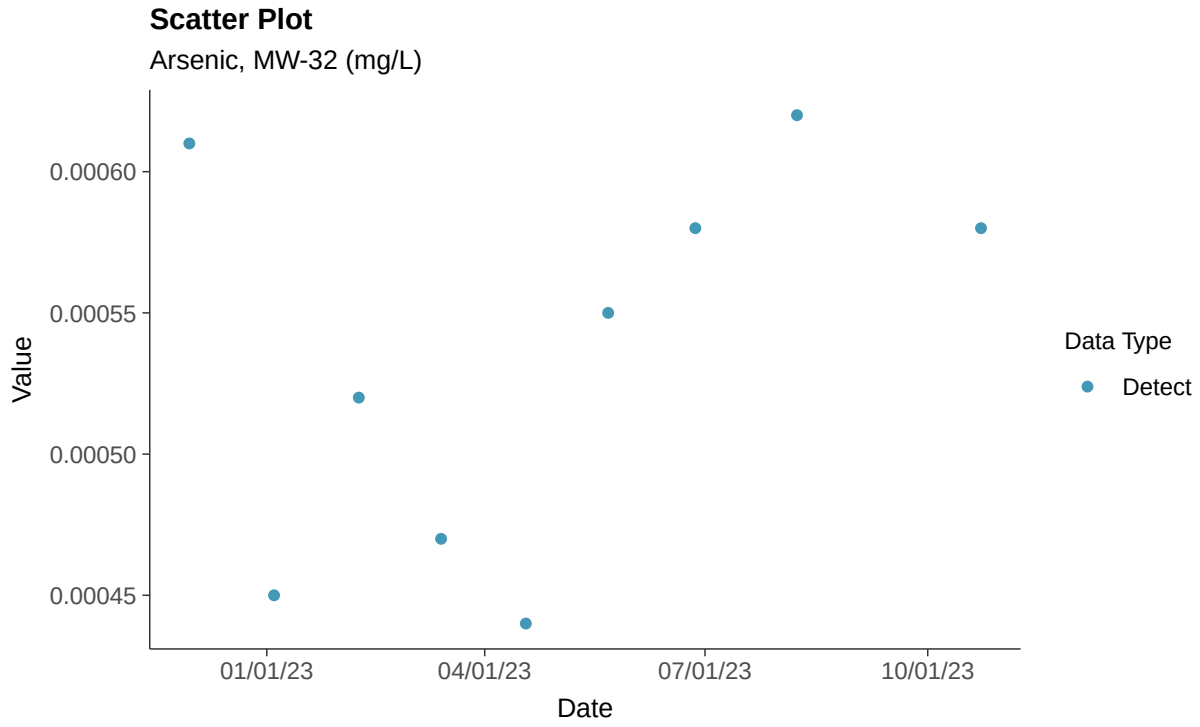
Trend Regression: Piecewise Linear-Linear-Linear

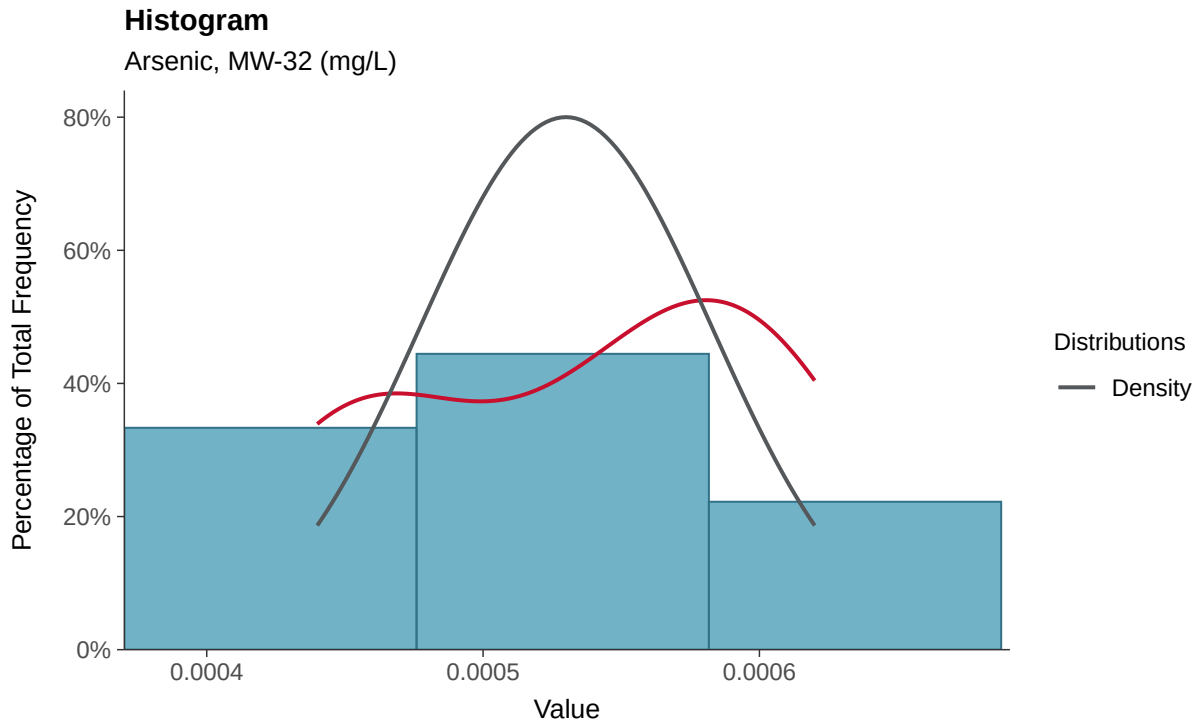
Antimony, MW-32 (mg/L)



Appendix IV: Arsenic, MW-32

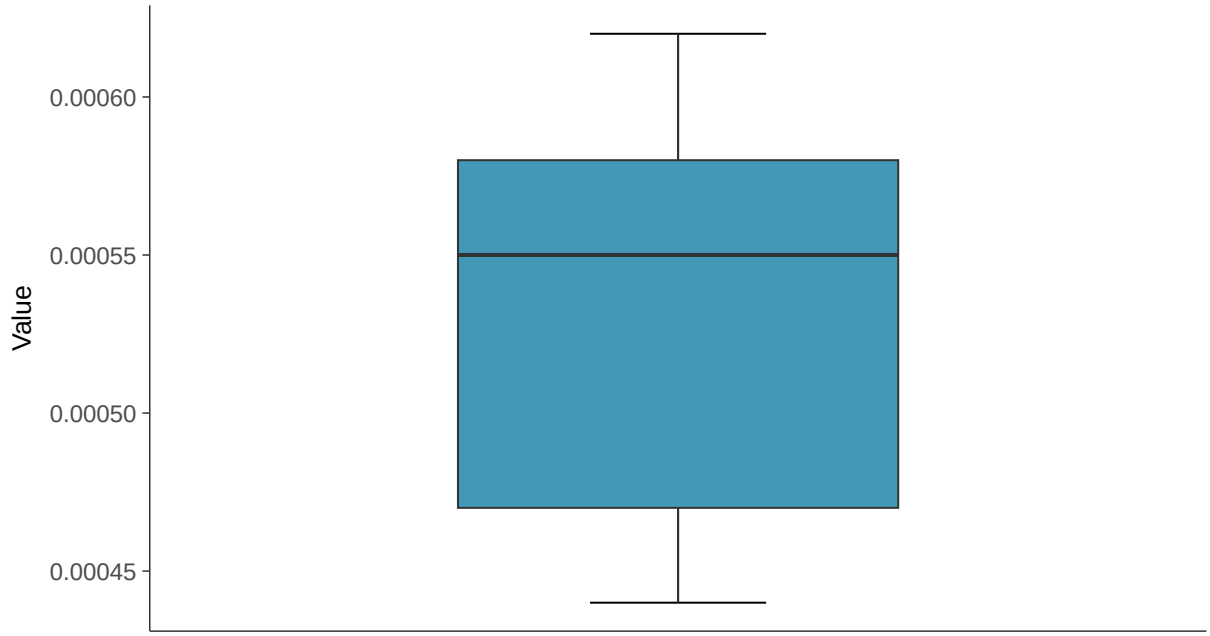
ID: 2_27_5_102





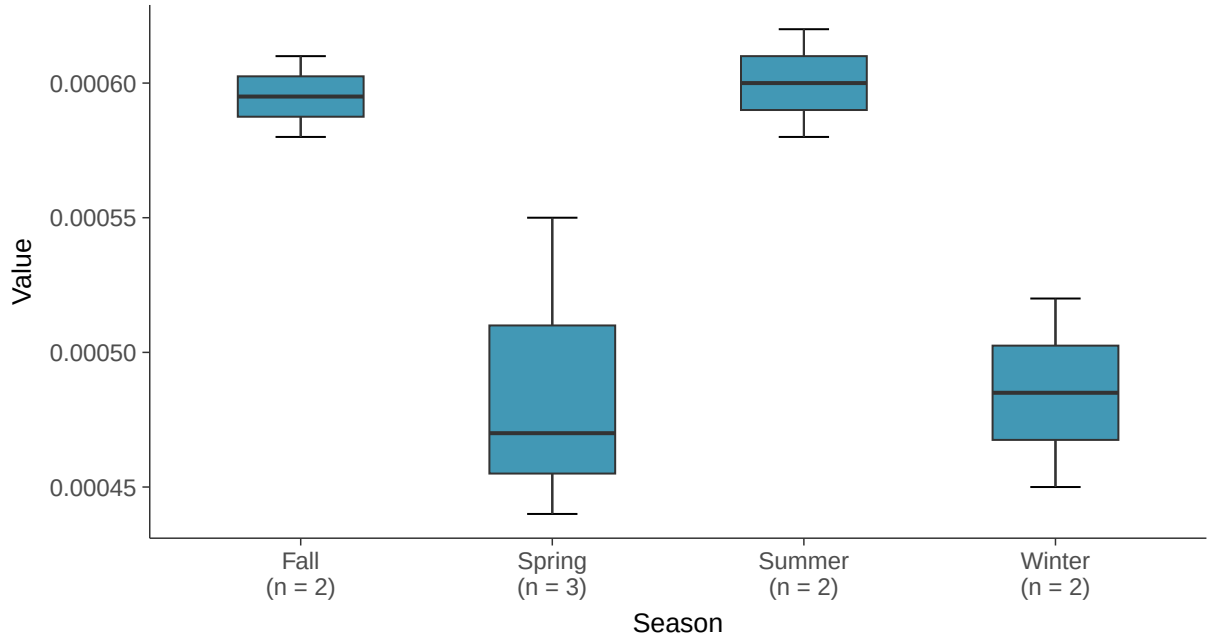
Boxplot

Arsenic, MW-32 (mg/L)



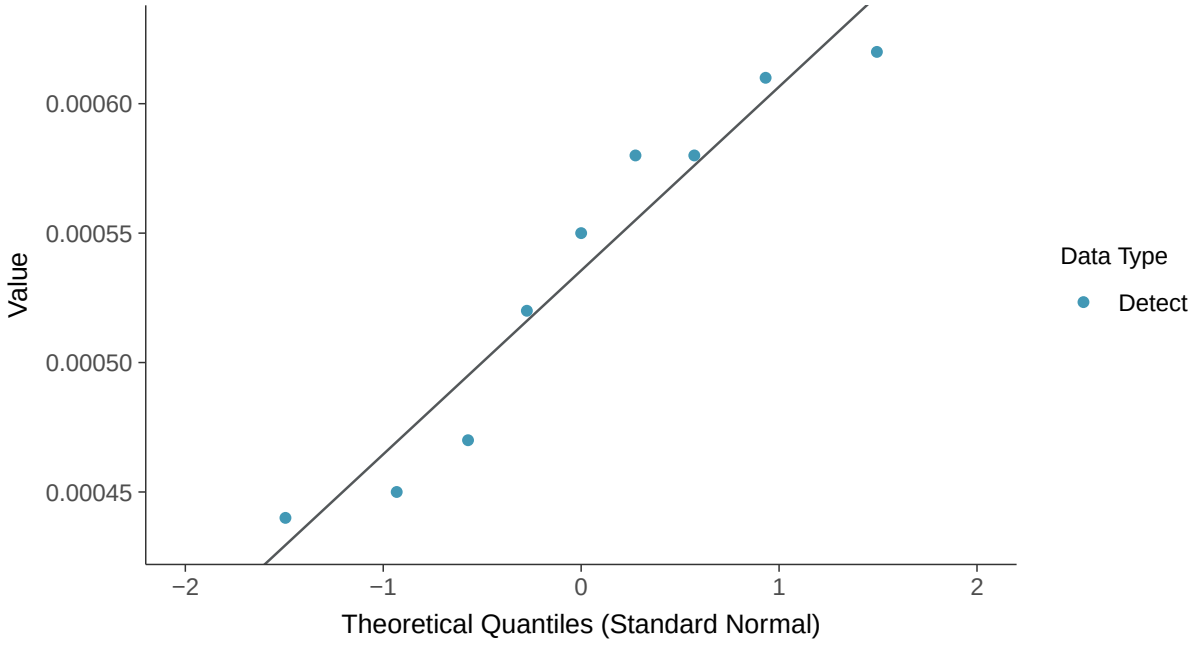
Boxplot by Season

Arsenic, MW-32 (mg/L)



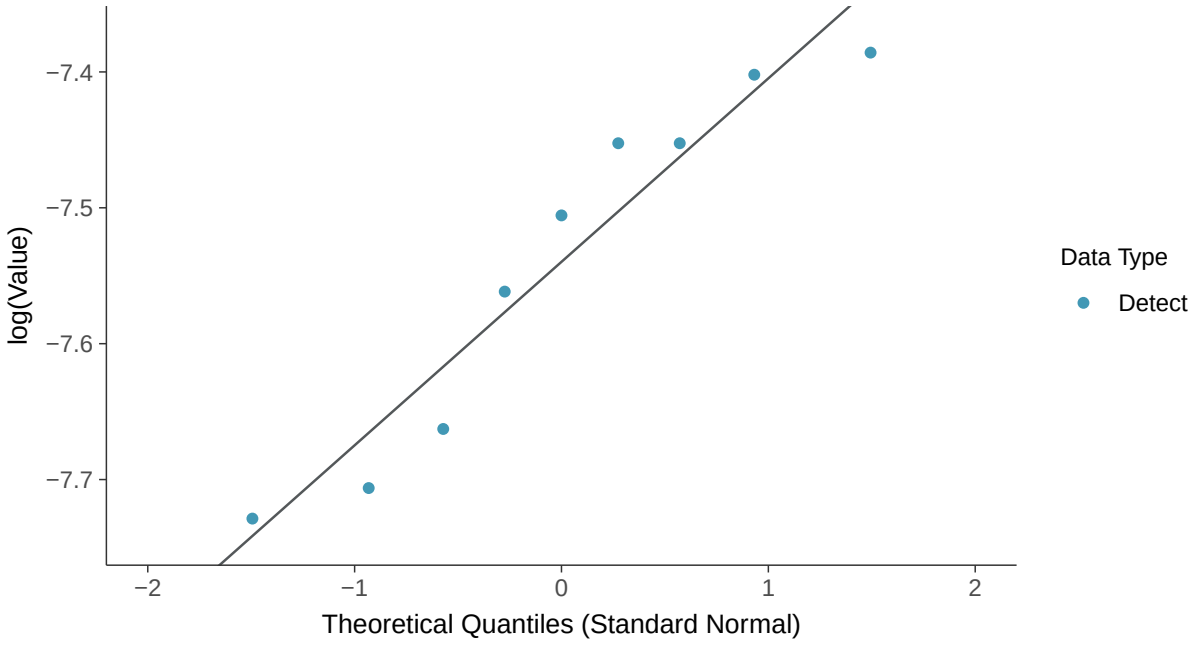
Normal Q-Q plot

Arsenic, MW-32 (mg/L)



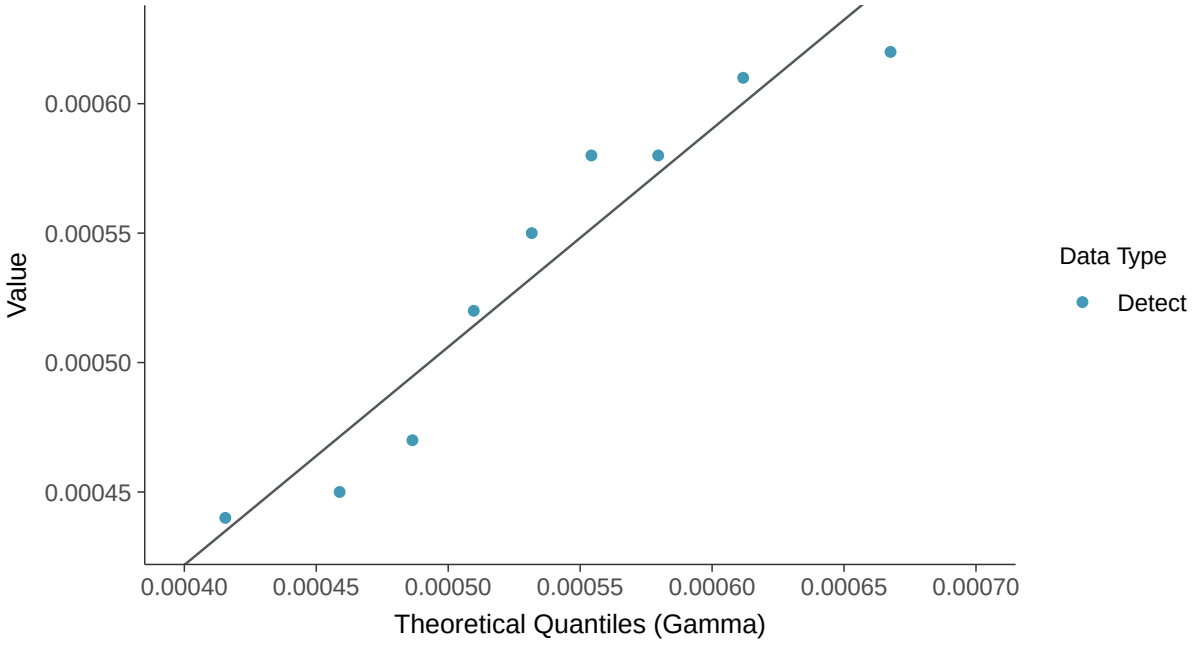
Lognormal Q-Q plot

Arsenic, MW-32 (mg/L)



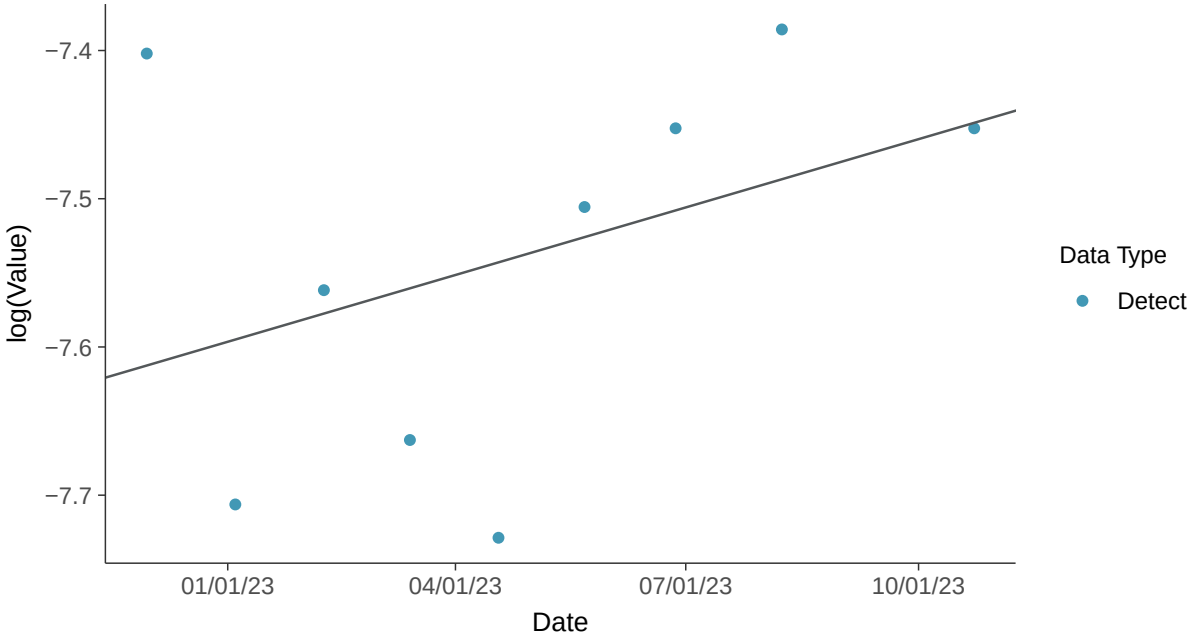
Gamma Q-Q plot

Arsenic, MW-32 (mg/L)



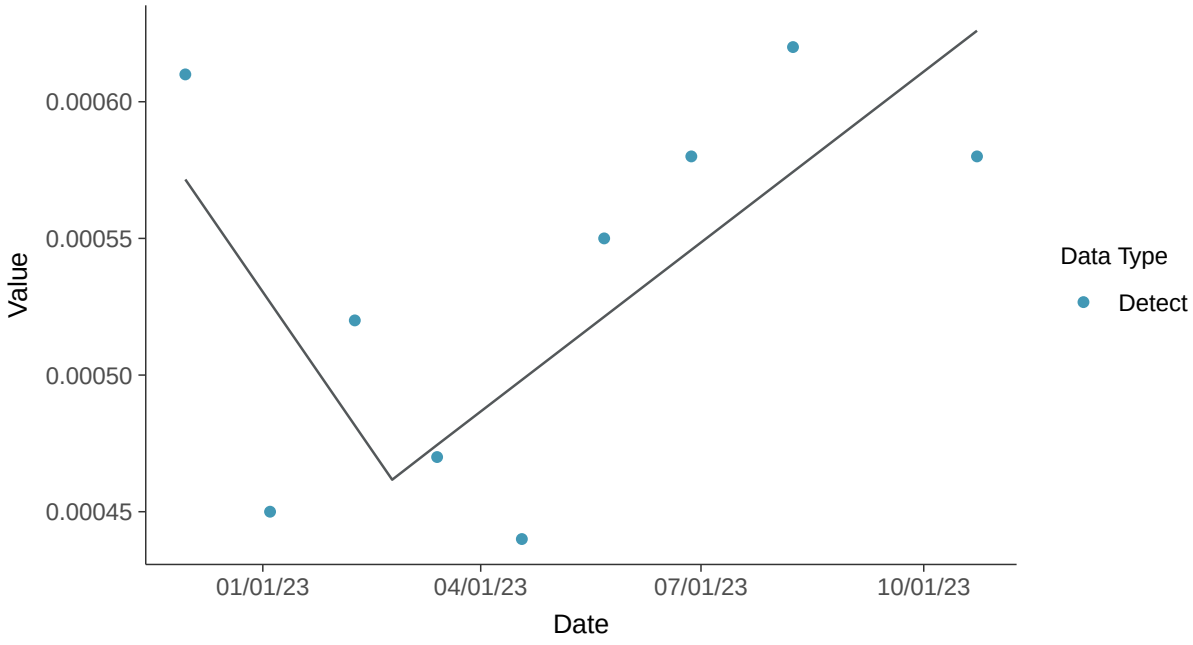
Trend Regression: Lognormal MLE

Arsenic, MW-32 (mg/L)



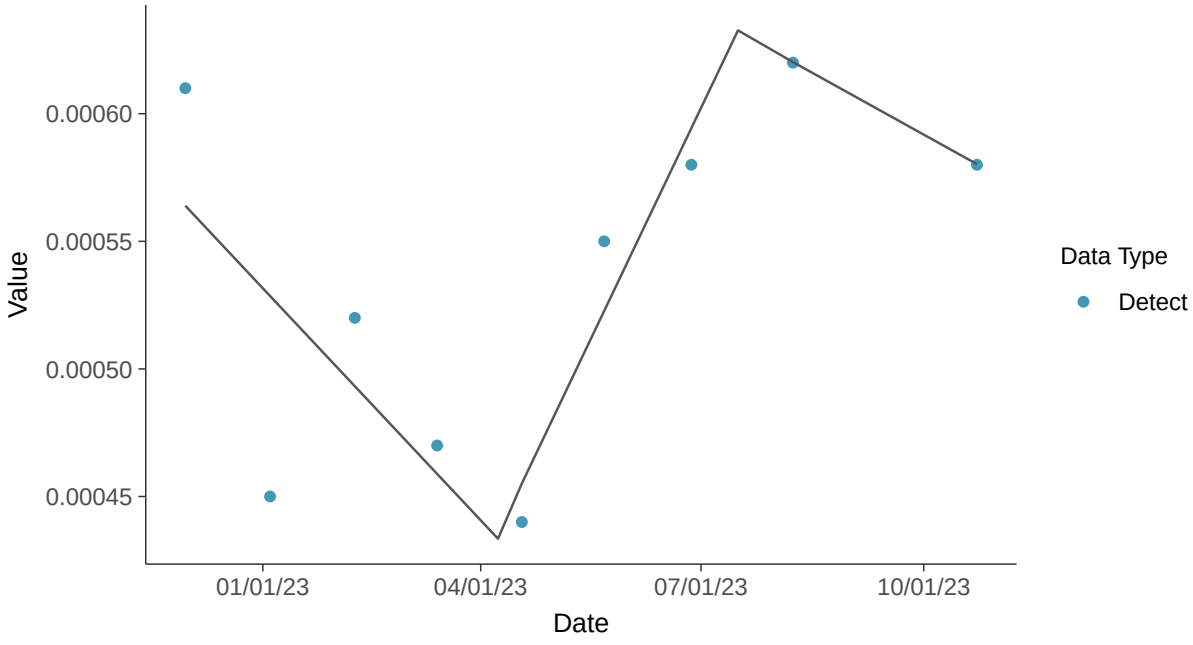
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-32 (mg/L)

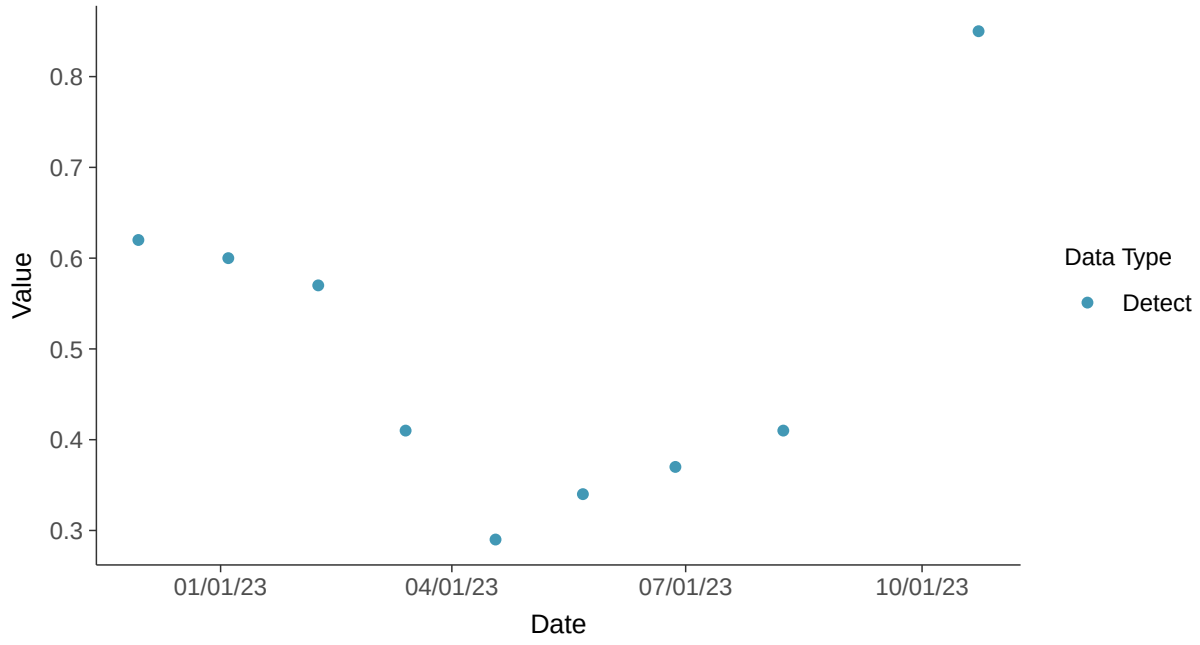


Appendix IV: Barium, MW-32

ID: 2_27_5_103

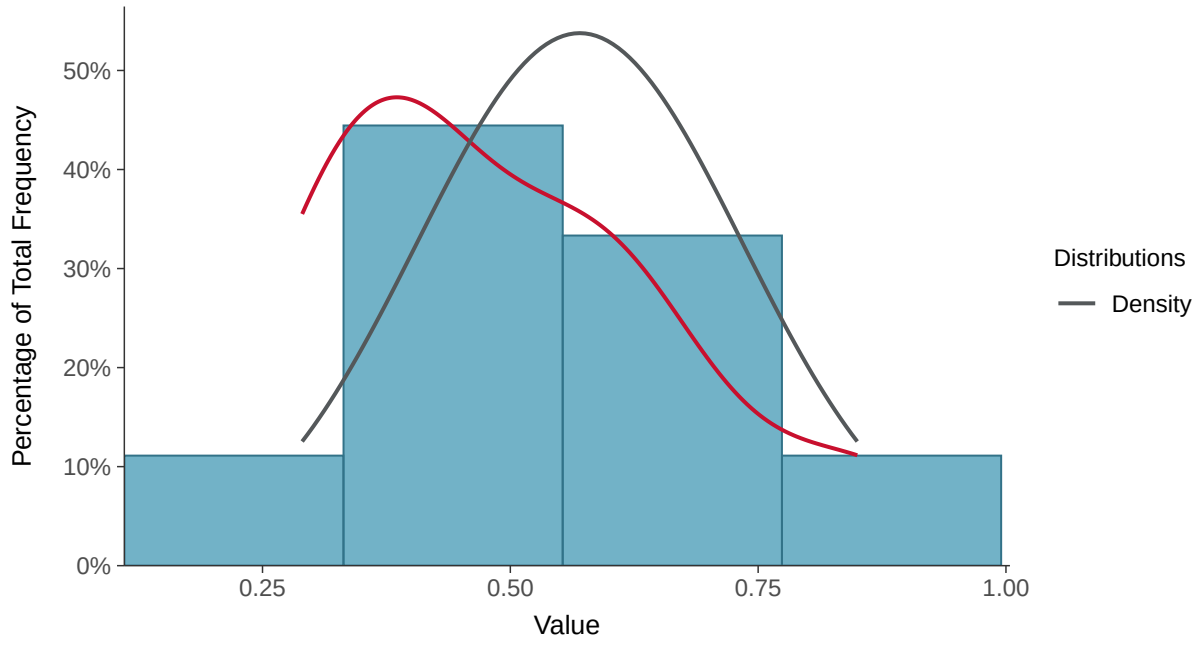
Scatter Plot

Barium, MW-32 (mg/L)



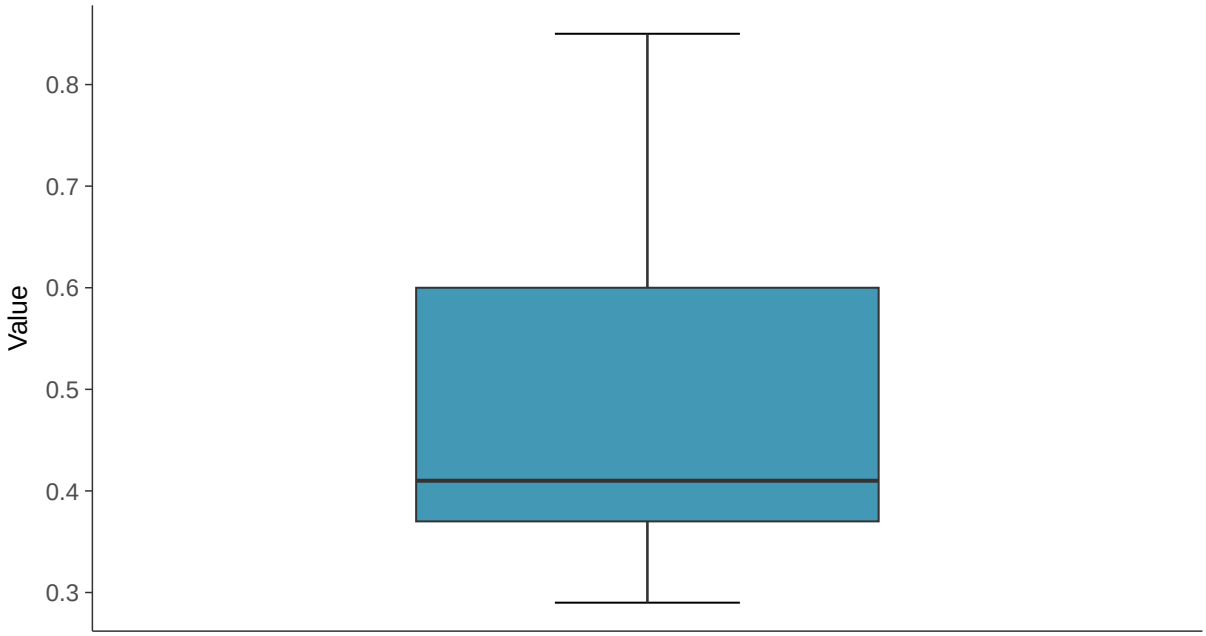
Histogram

Barium, MW-32 (mg/L)



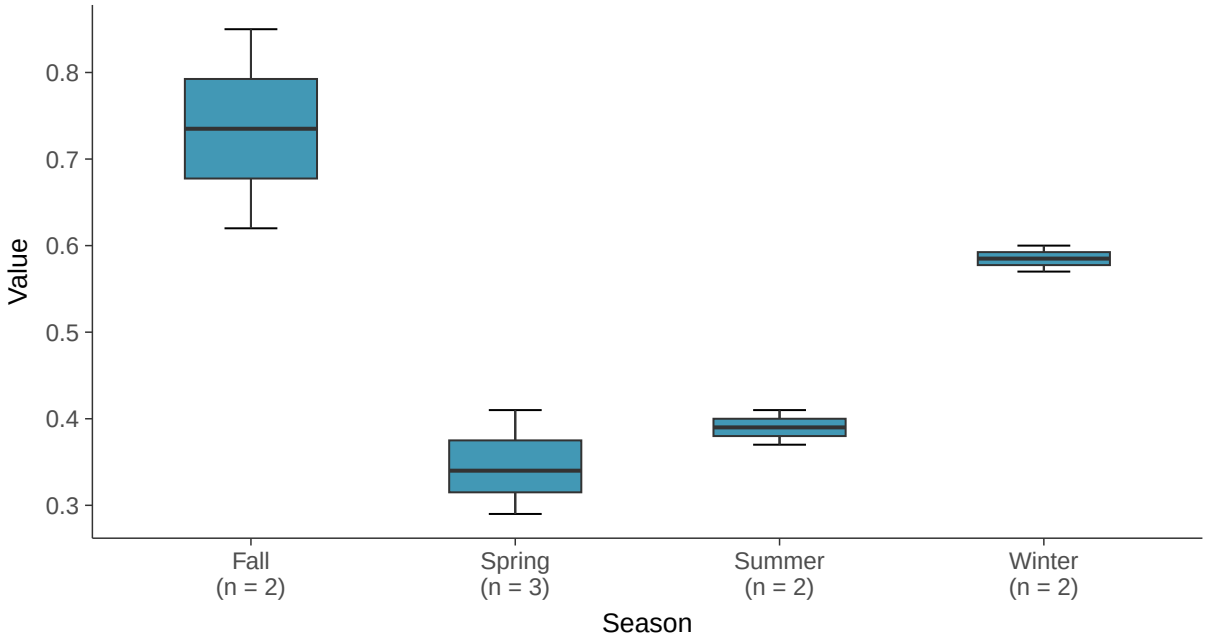
Boxplot

Barium, MW-32 (mg/L)



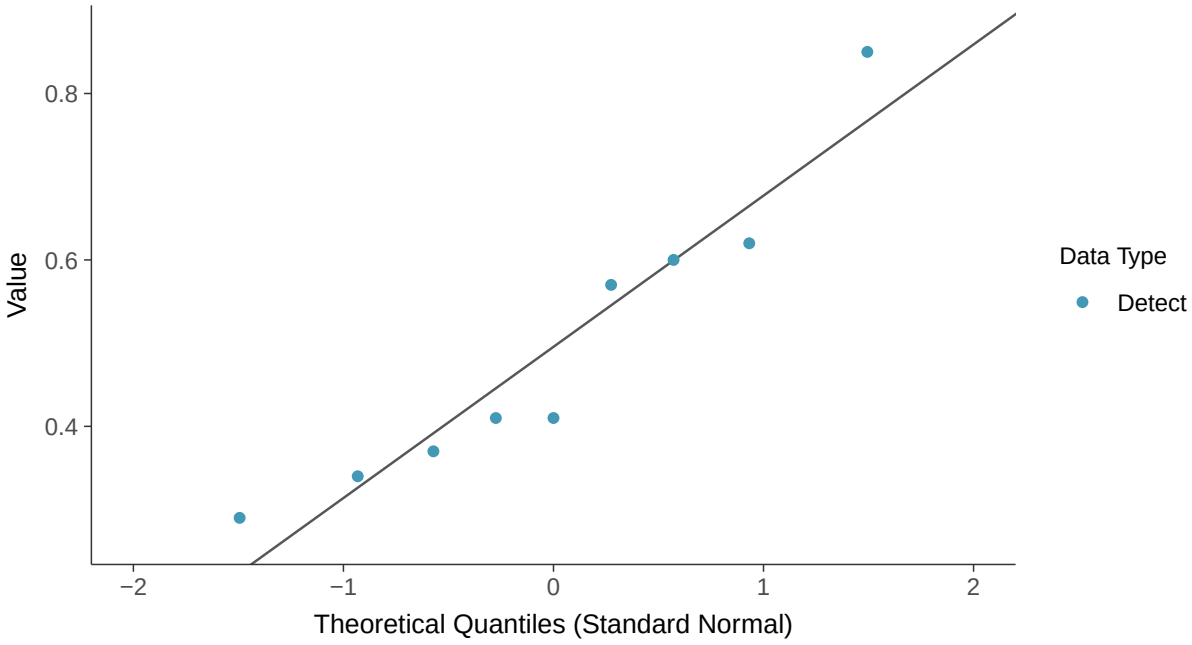
Boxplot by Season

Barium, MW-32 (mg/L)



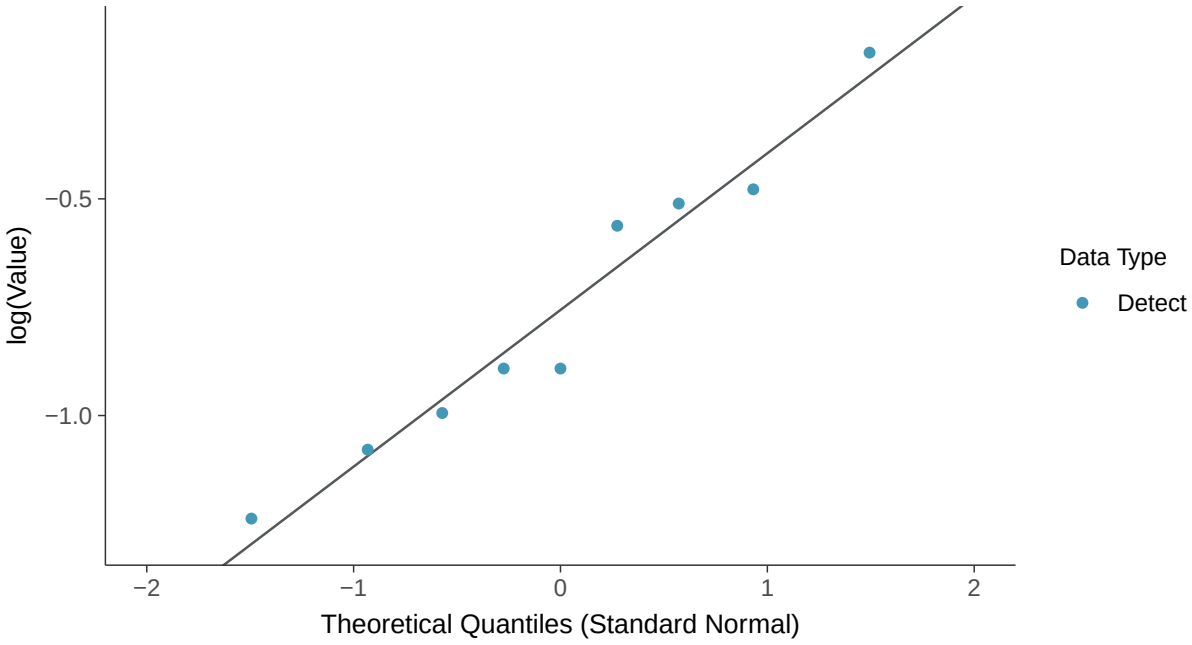
Normal Q-Q plot

Barium, MW-32 (mg/L)



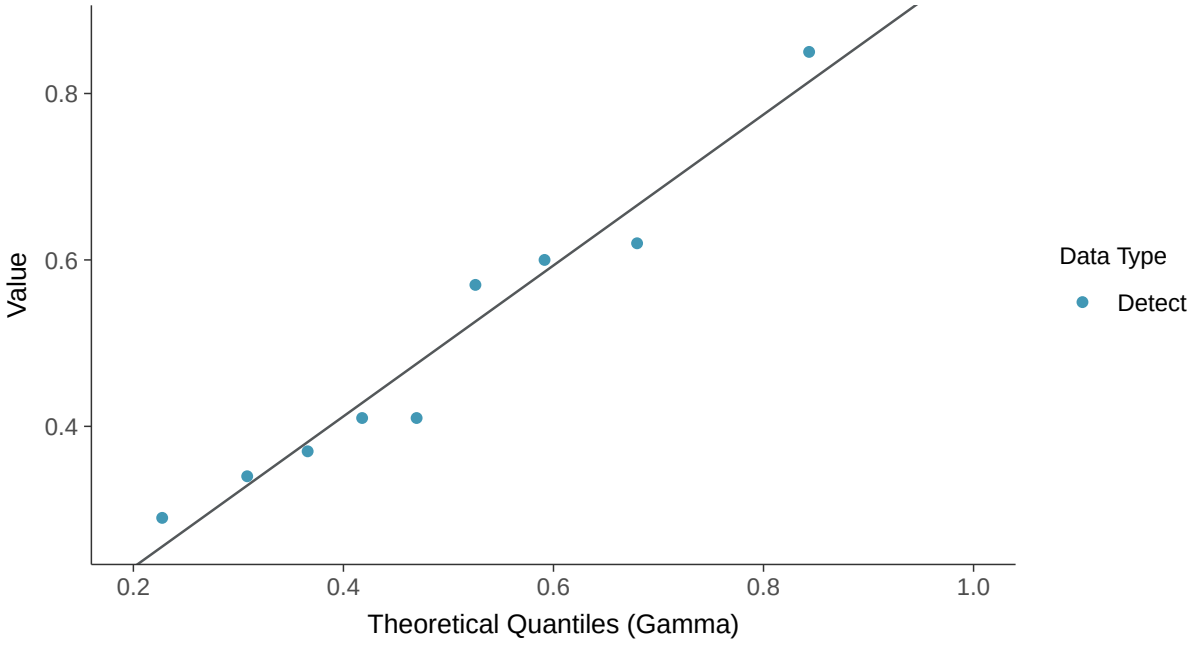
Lognormal Q-Q plot

Barium, MW-32 (mg/L)



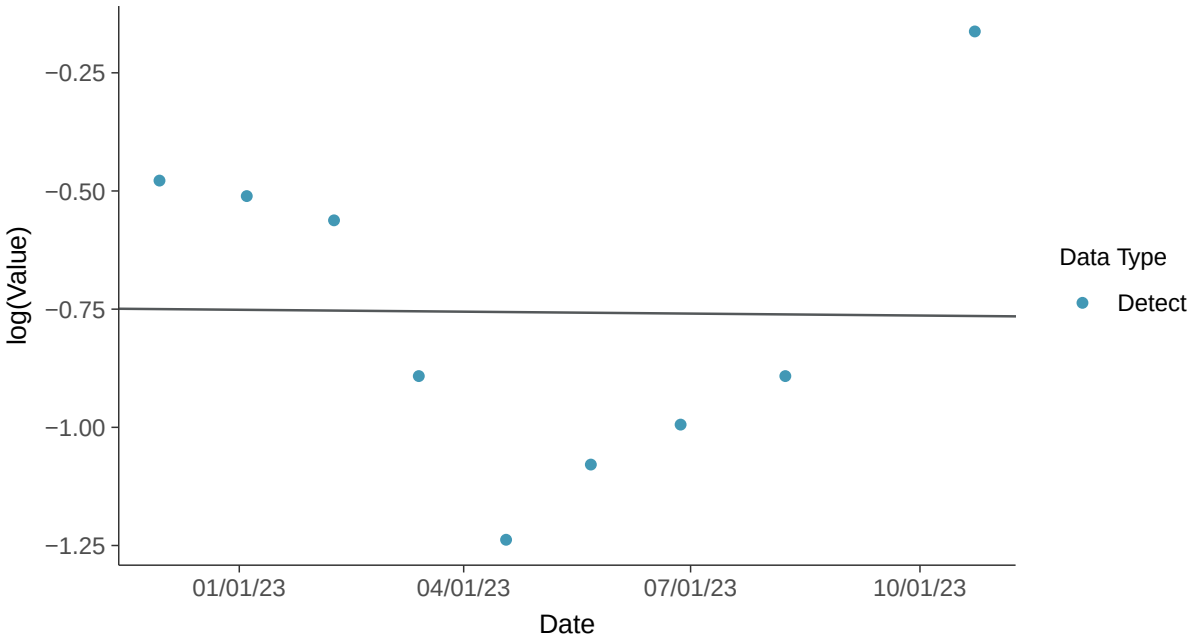
Gamma Q-Q plot

Barium, MW-32 (mg/L)



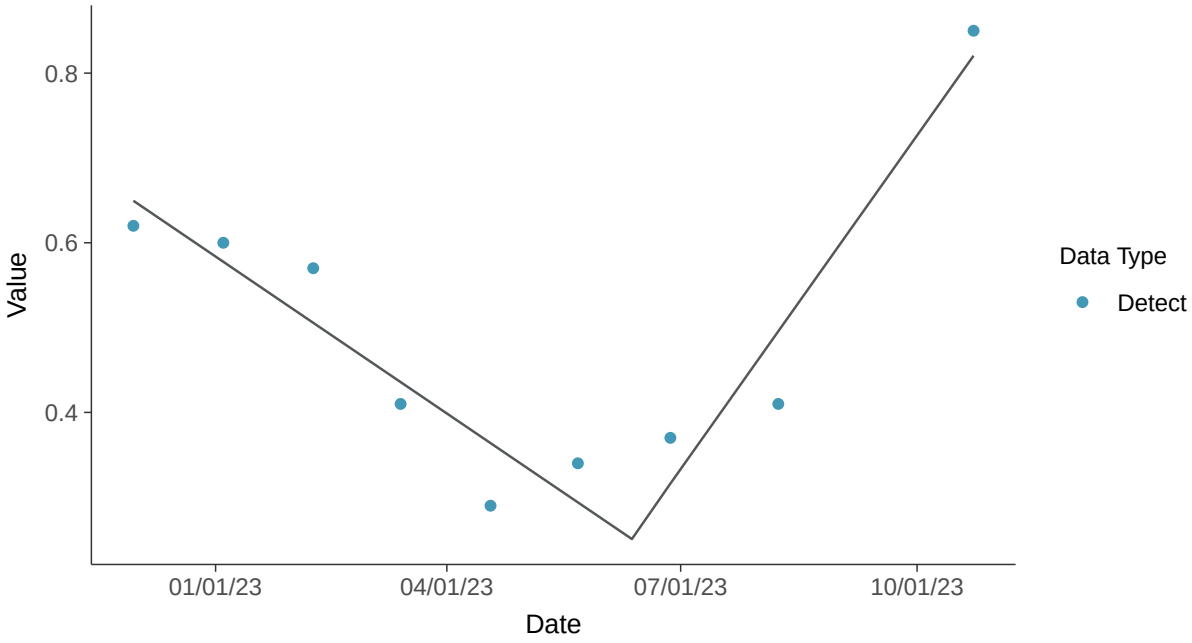
Trend Regression: Lognormal MLE

Barium, MW-32 (mg/L)



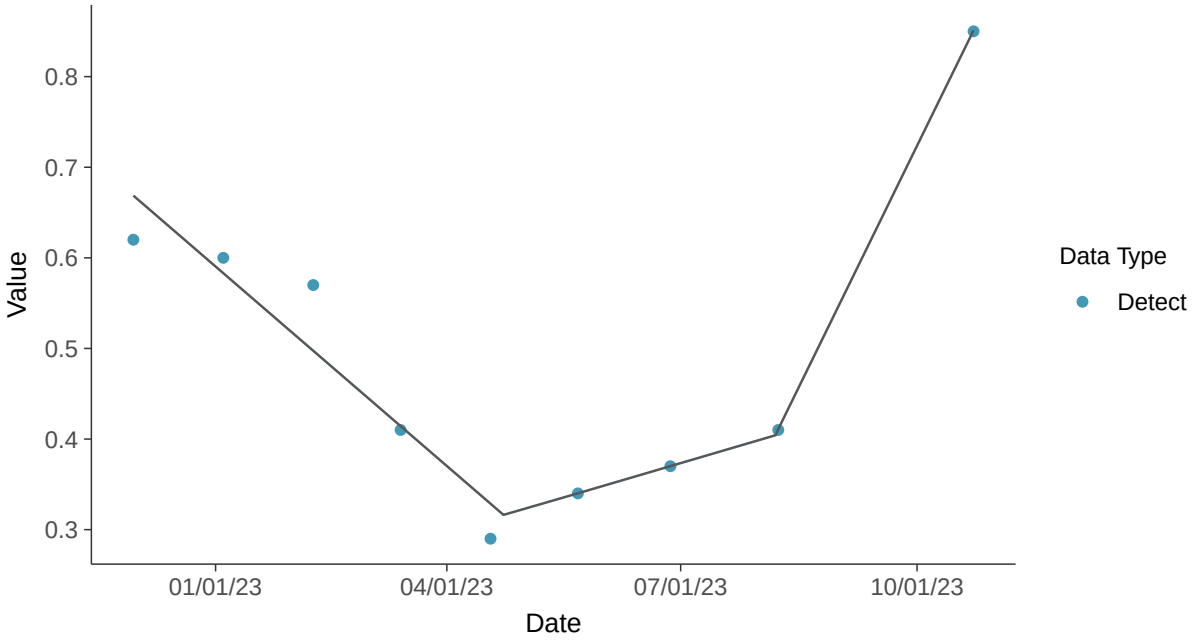
Trend Regression: Piecewise Linear-Linear

Barium, MW-32 (mg/L)



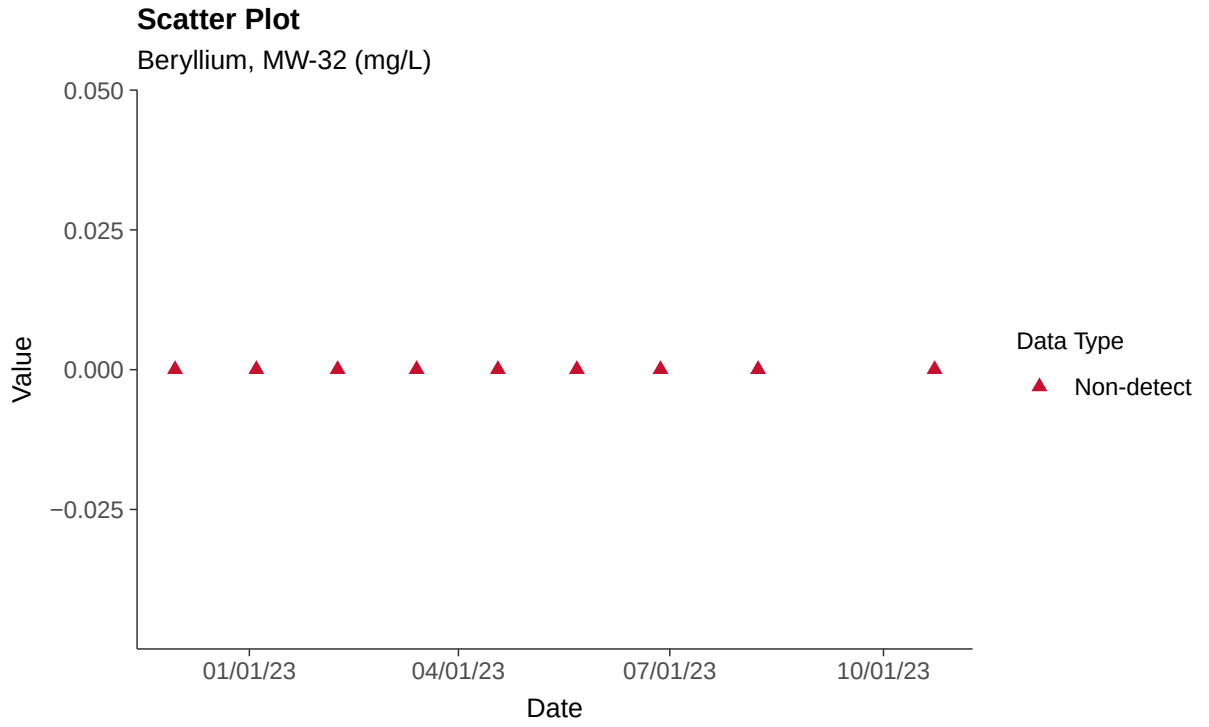
Trend Regression: Piecewise Linear-Linear-Linear

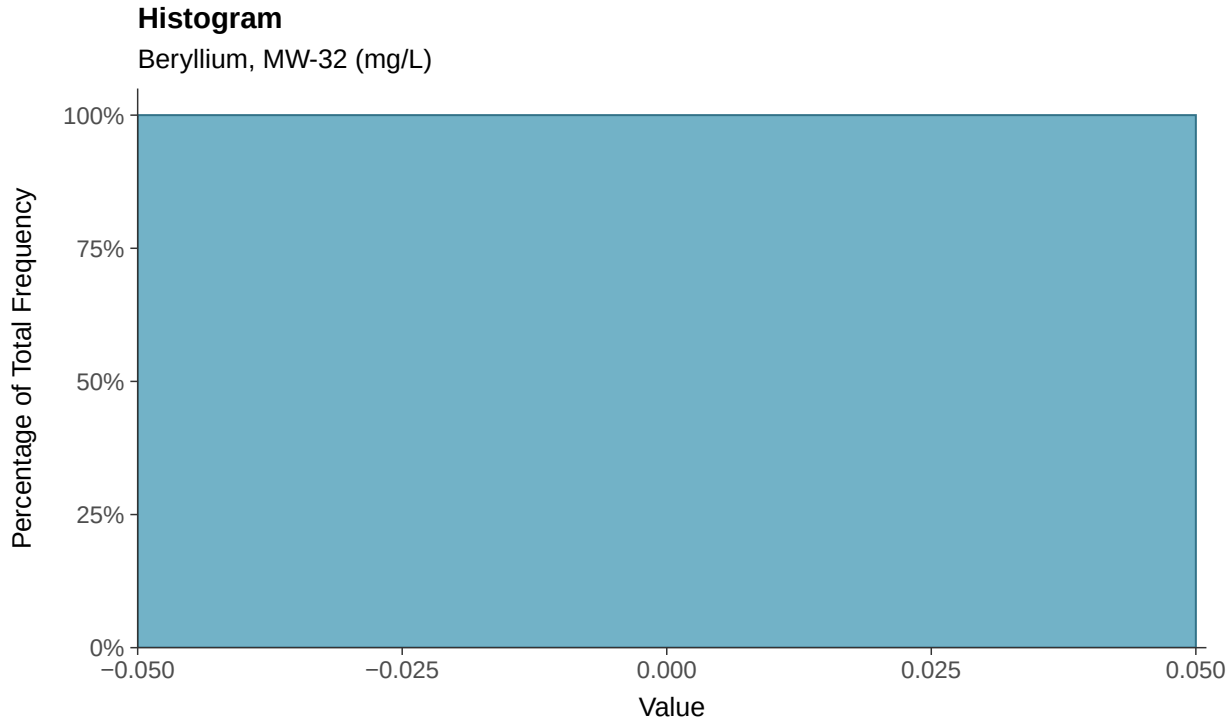
Barium, MW-32 (mg/L)



Appendix IV: Beryllium, MW-32

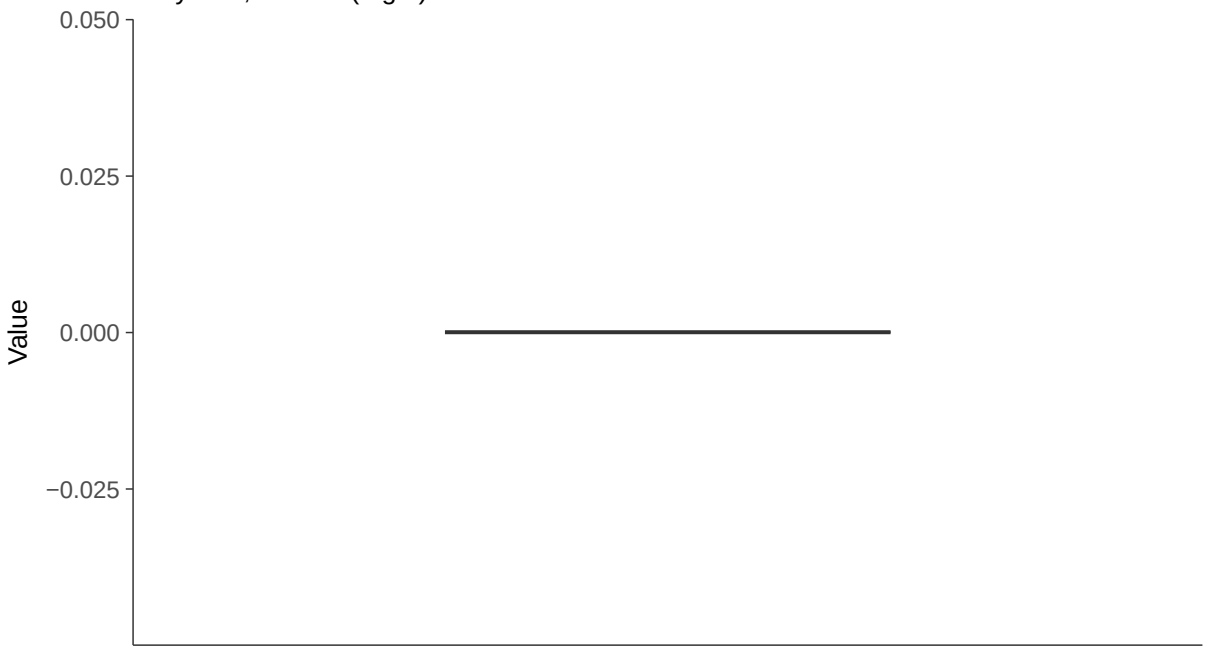
ID: 2_27_5_104





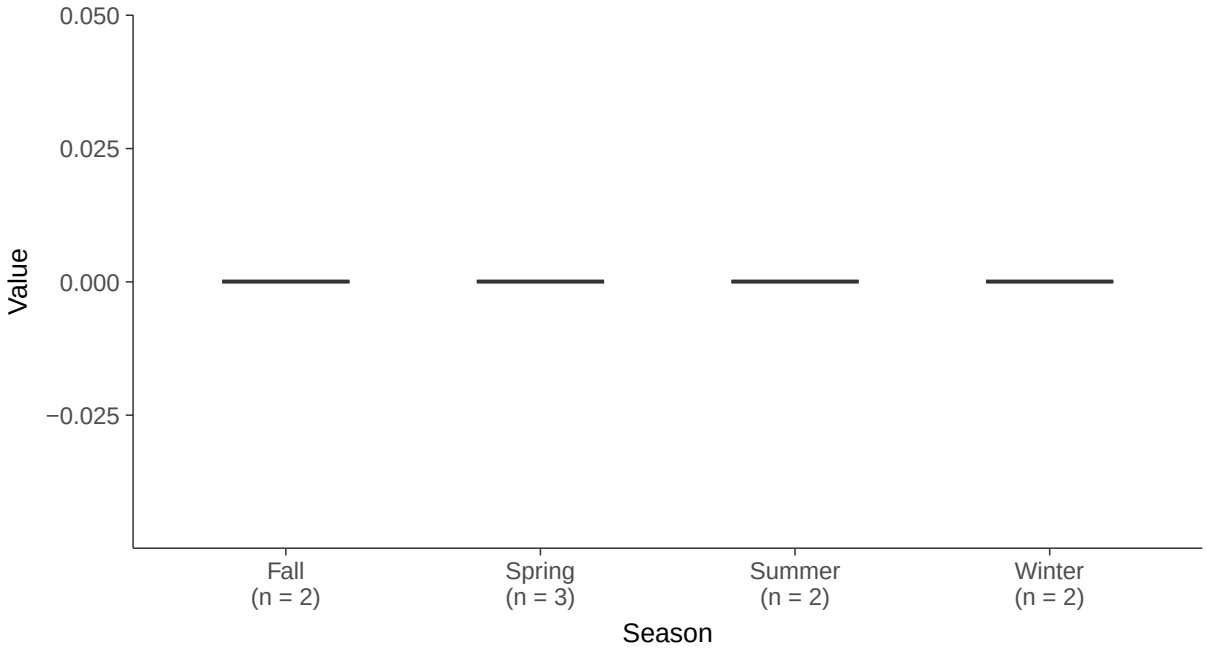
Boxplot

Beryllium, MW-32 (mg/L)



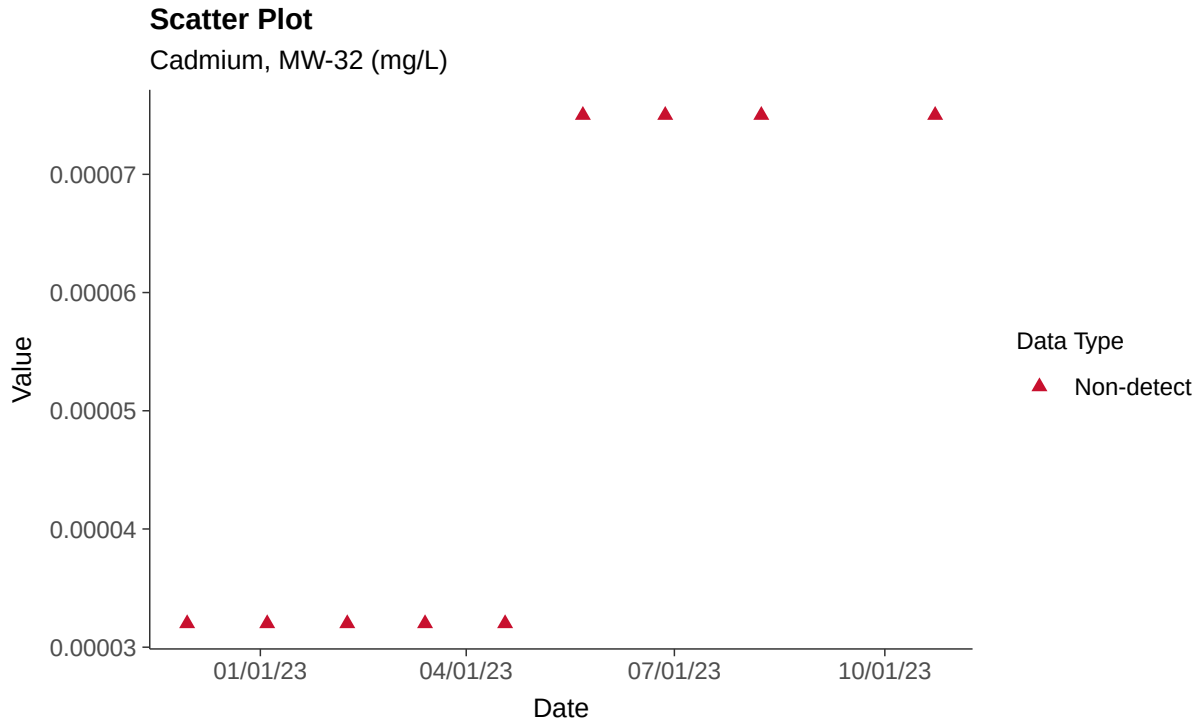
Boxplot by Season

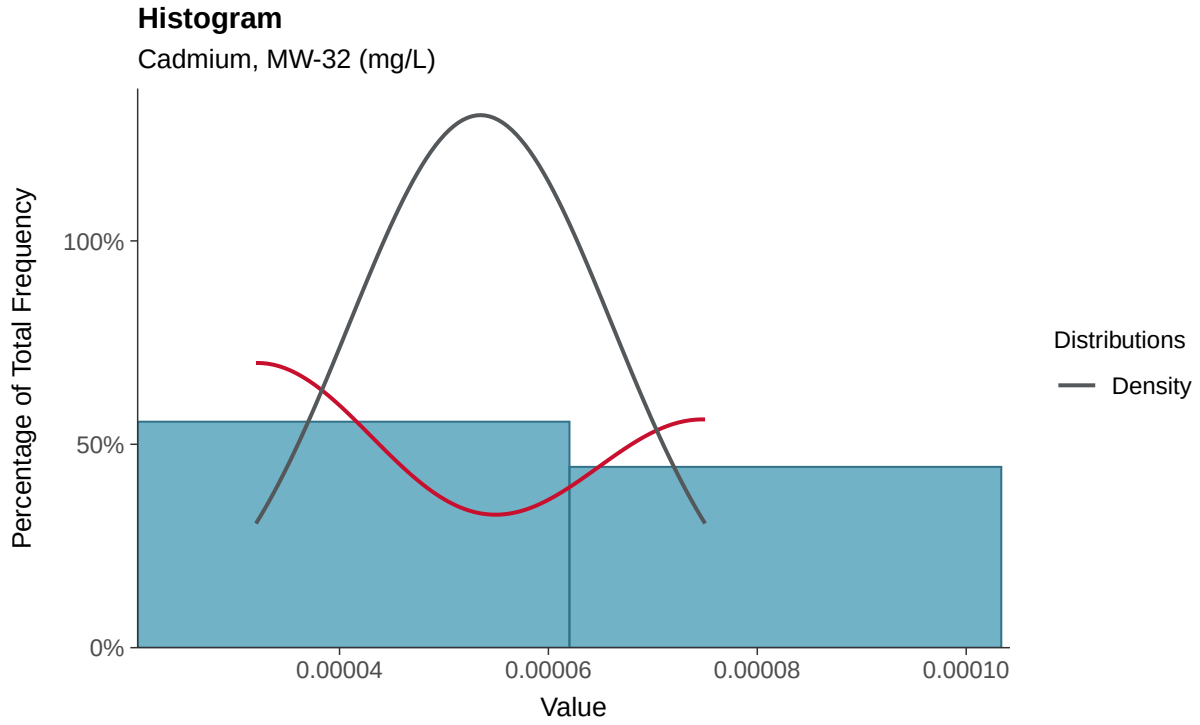
Beryllium, MW-32 (mg/L)



Appendix IV: Cadmium, MW-32

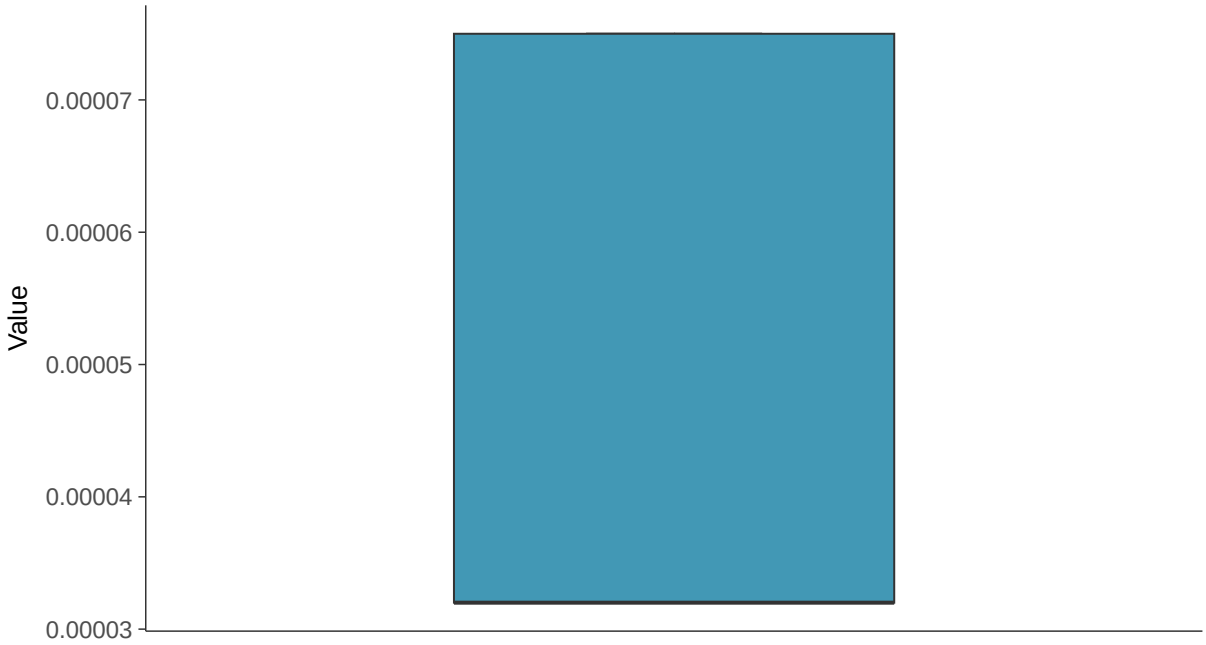
ID: 2_27_5_106





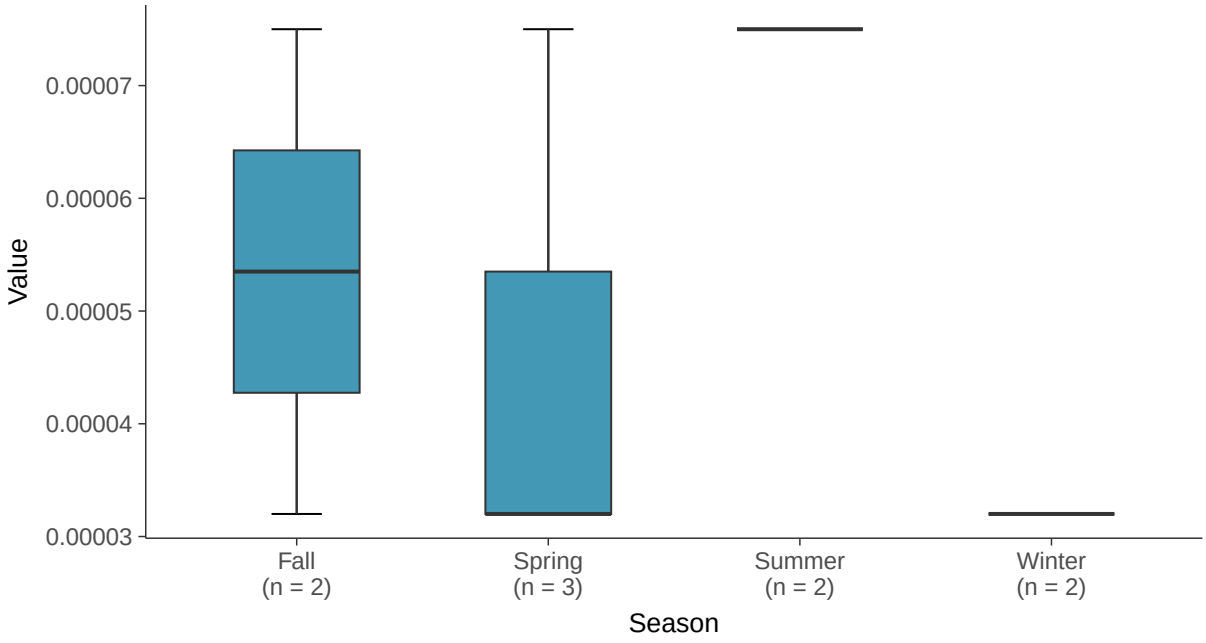
Boxplot

Cadmium, MW-32 (mg/L)



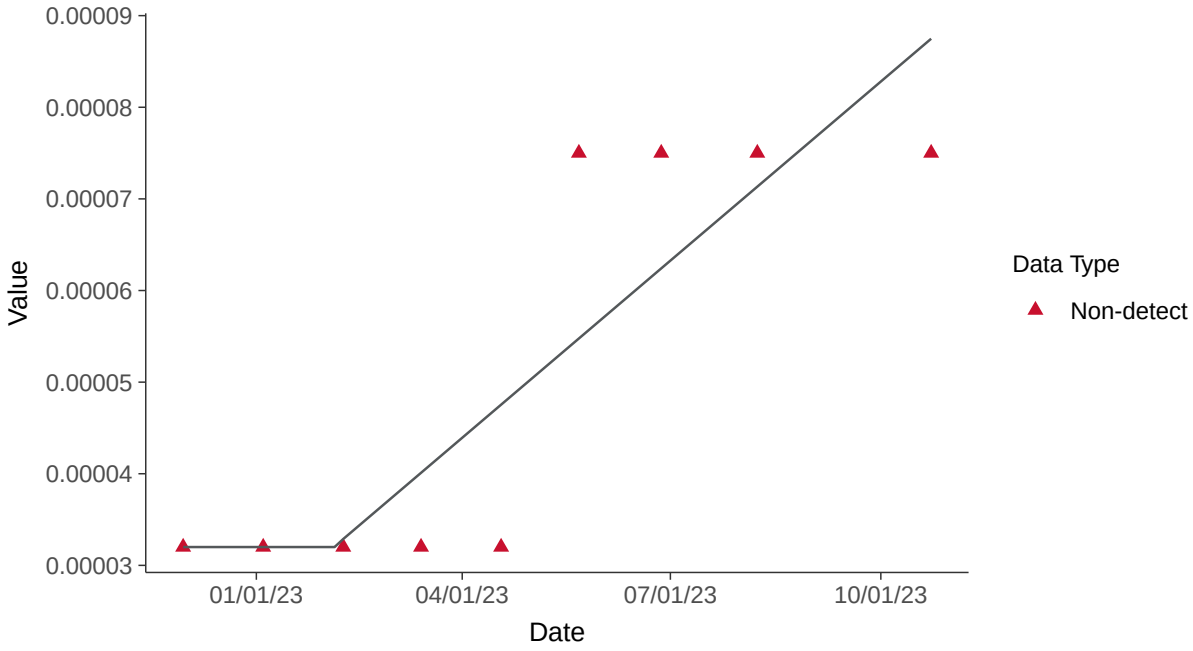
Boxplot by Season

Cadmium, MW-32 (mg/L)



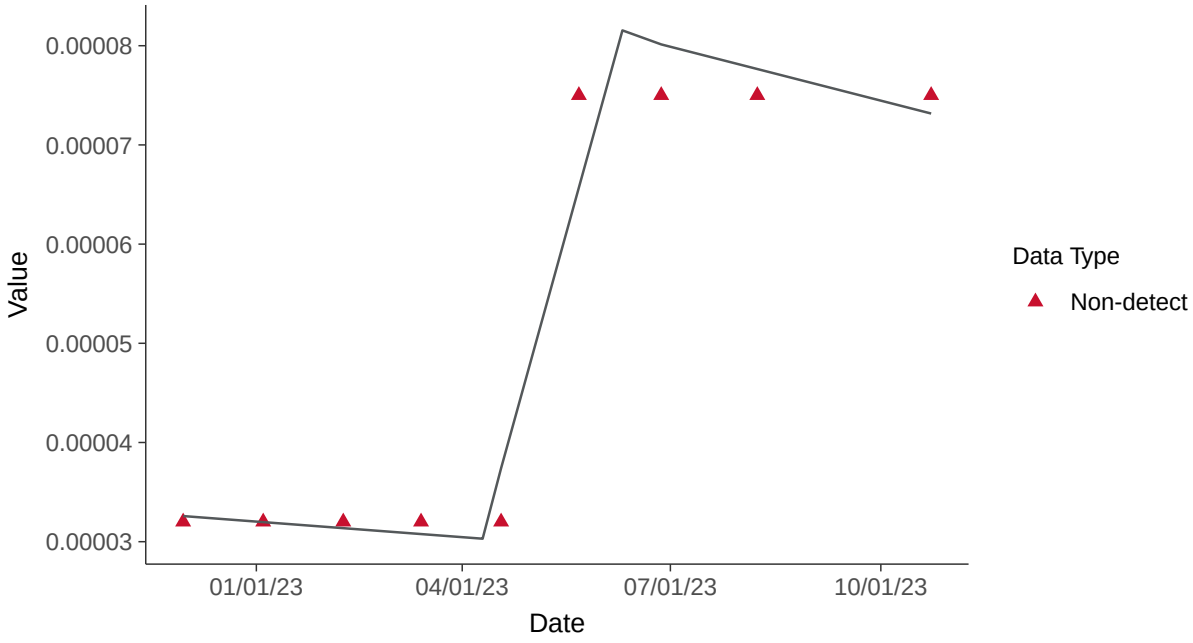
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-32 (mg/L)

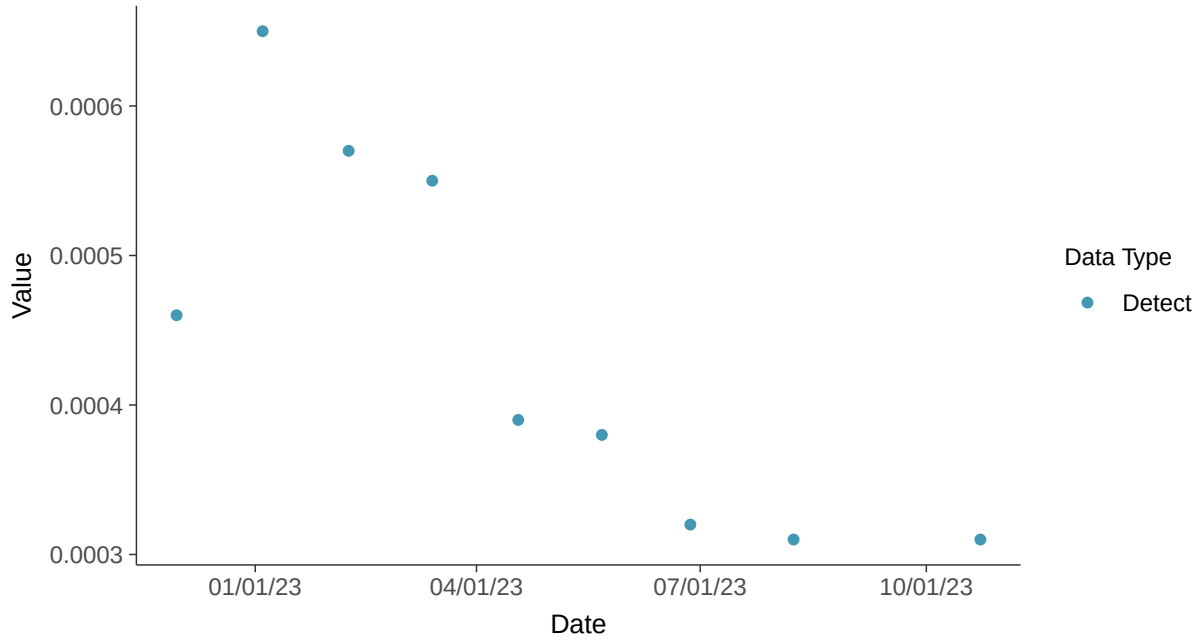


Appendix IV: Chromium, Total, MW-32

ID: 2_27_5_109

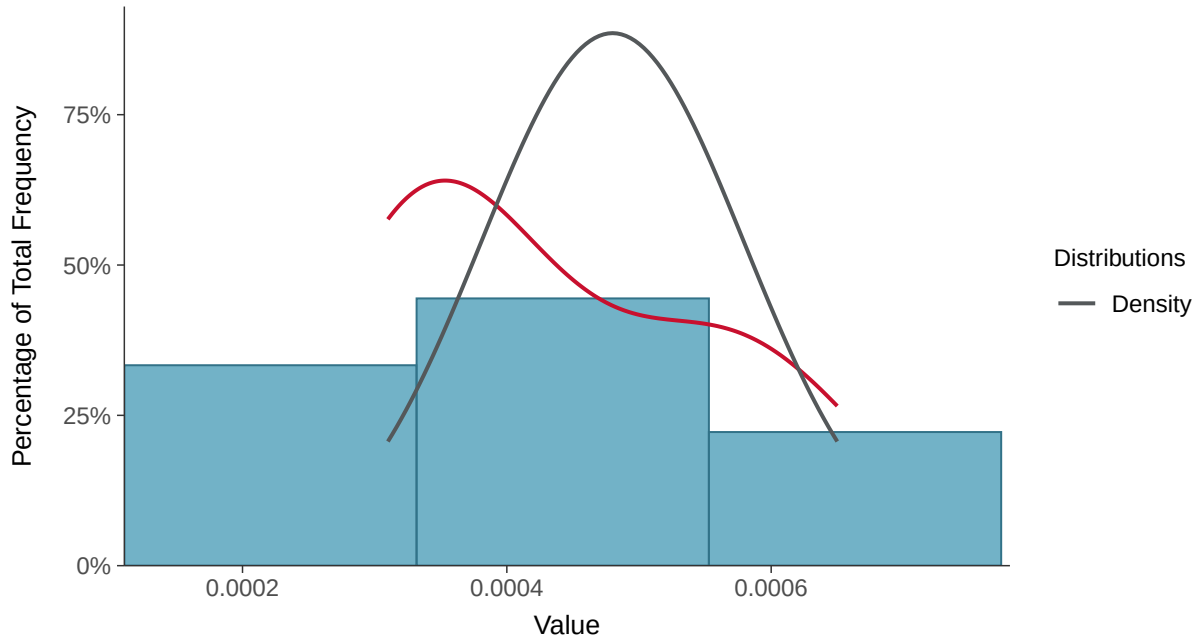
Scatter Plot

Chromium, Total, MW-32 (mg/L)



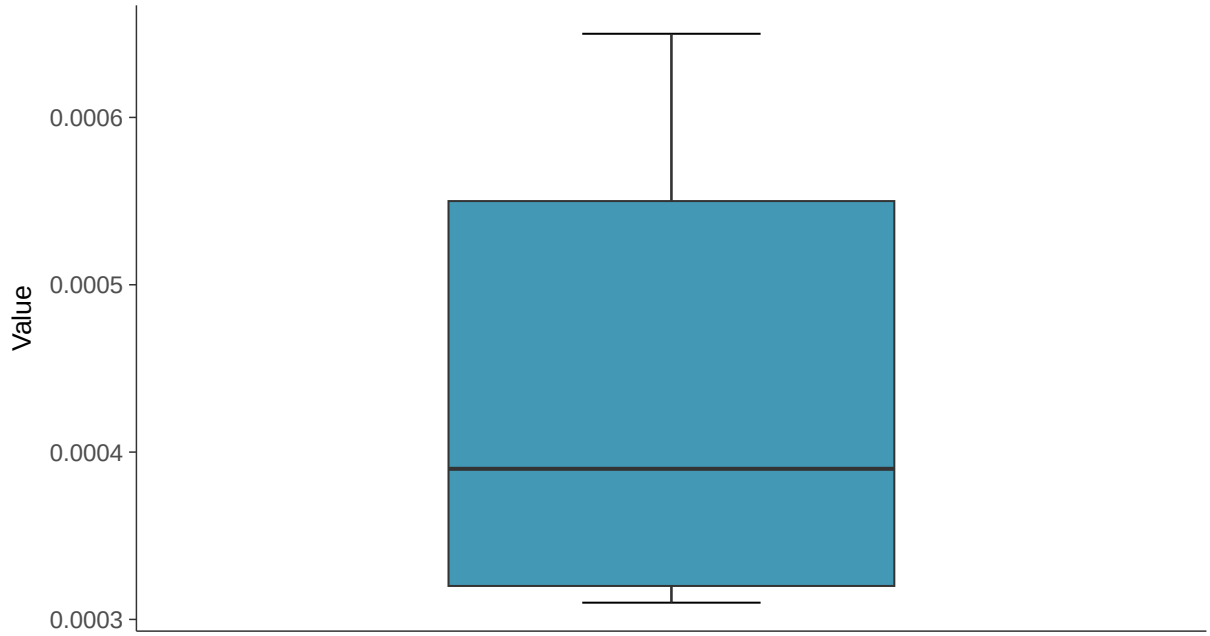
Histogram

Chromium, Total, MW-32 (mg/L)



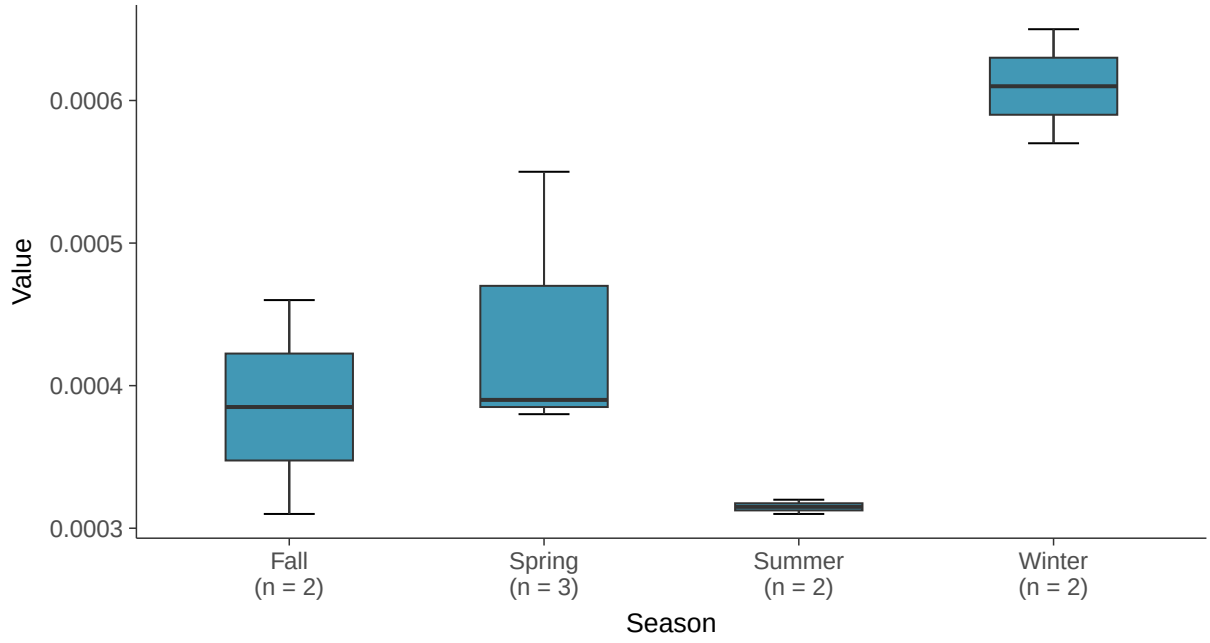
Boxplot

Chromium, Total, MW-32 (mg/L)



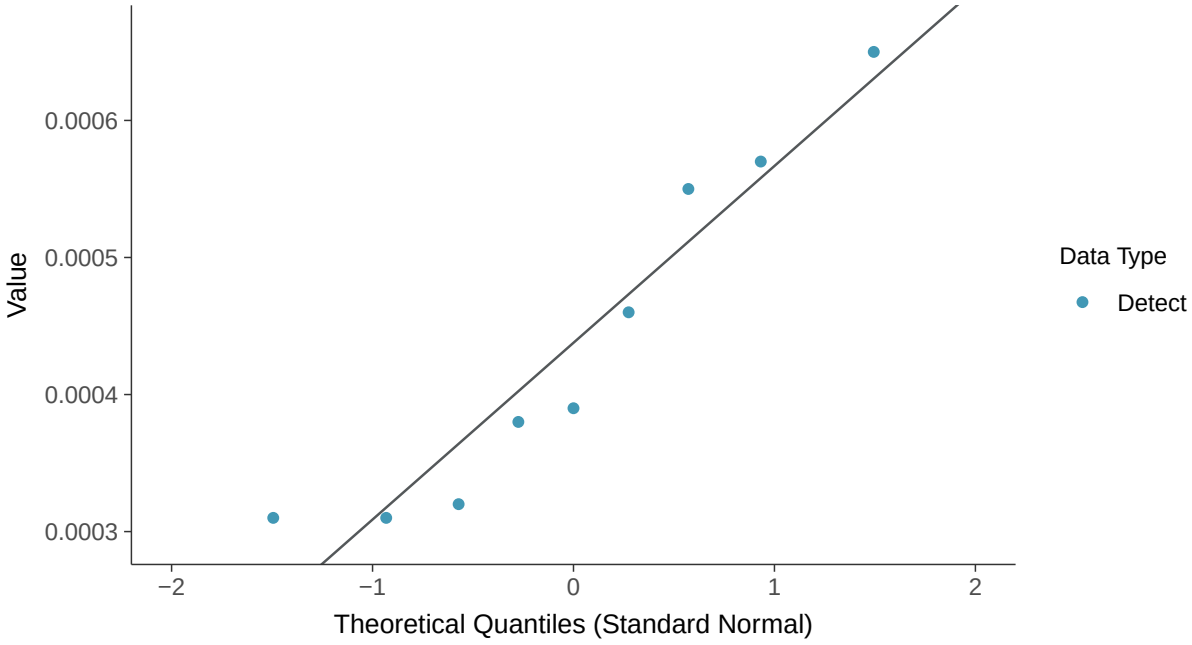
Boxplot by Season

Chromium, Total, MW-32 (mg/L)



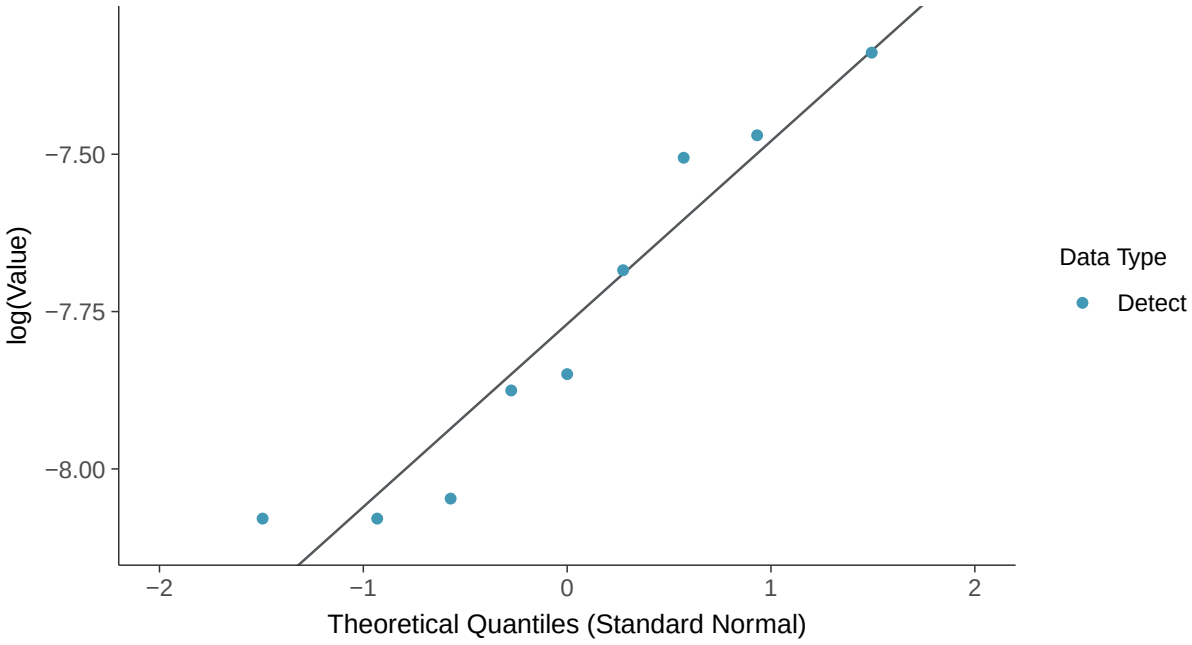
Normal Q-Q plot

Chromium, Total, MW-32 (mg/L)



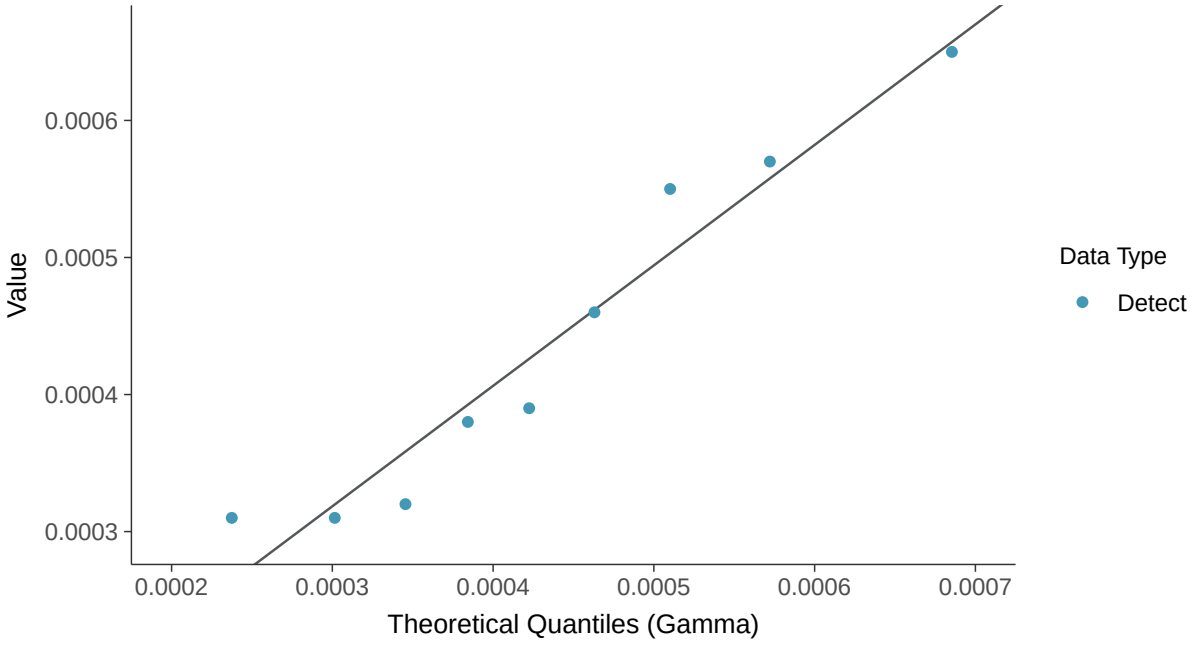
Lognormal Q-Q plot

Chromium, Total, MW-32 (mg/L)



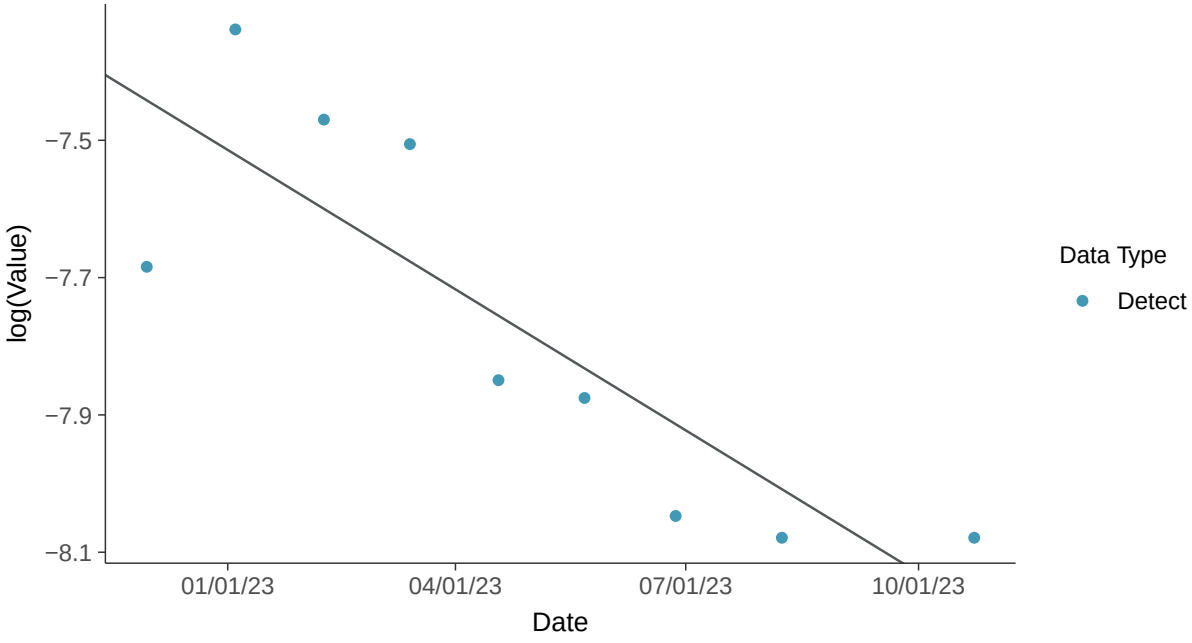
Gamma Q-Q plot

Chromium, Total, MW-32 (mg/L)



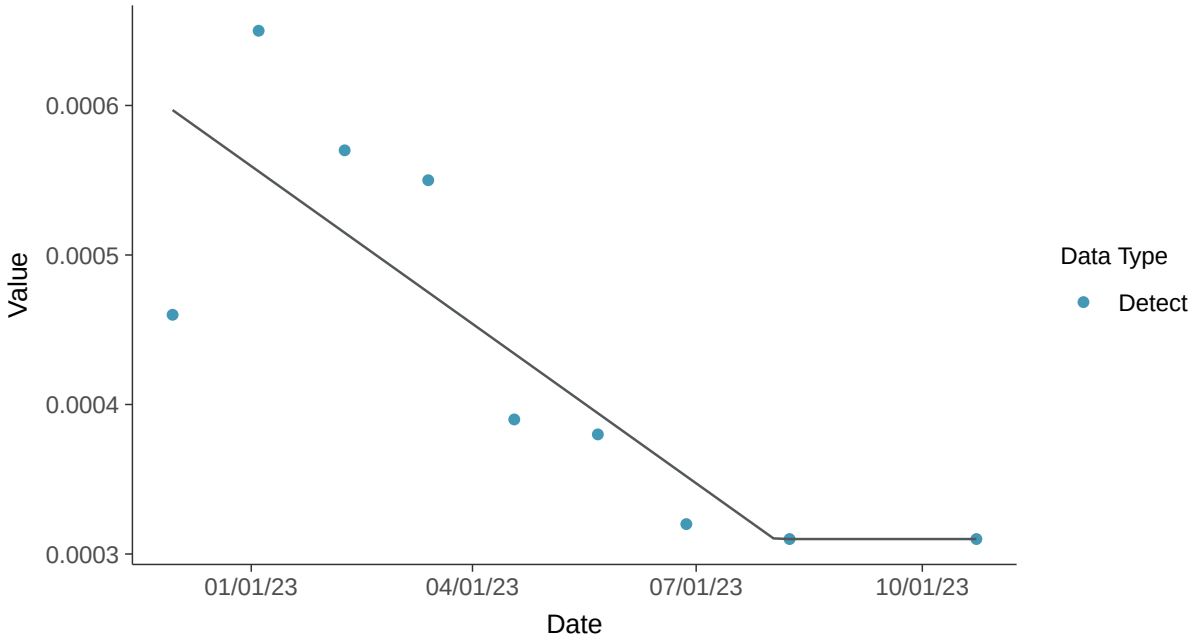
Trend Regression: Lognormal MLE

Chromium, Total, MW-32 (mg/L)



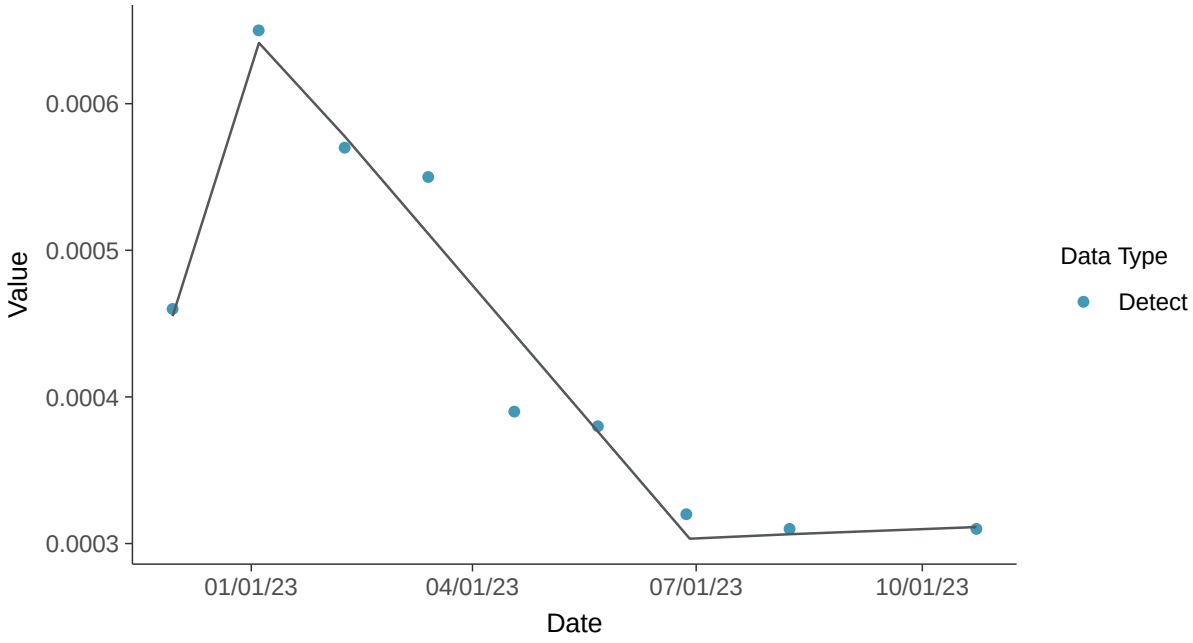
Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-32 (mg/L)



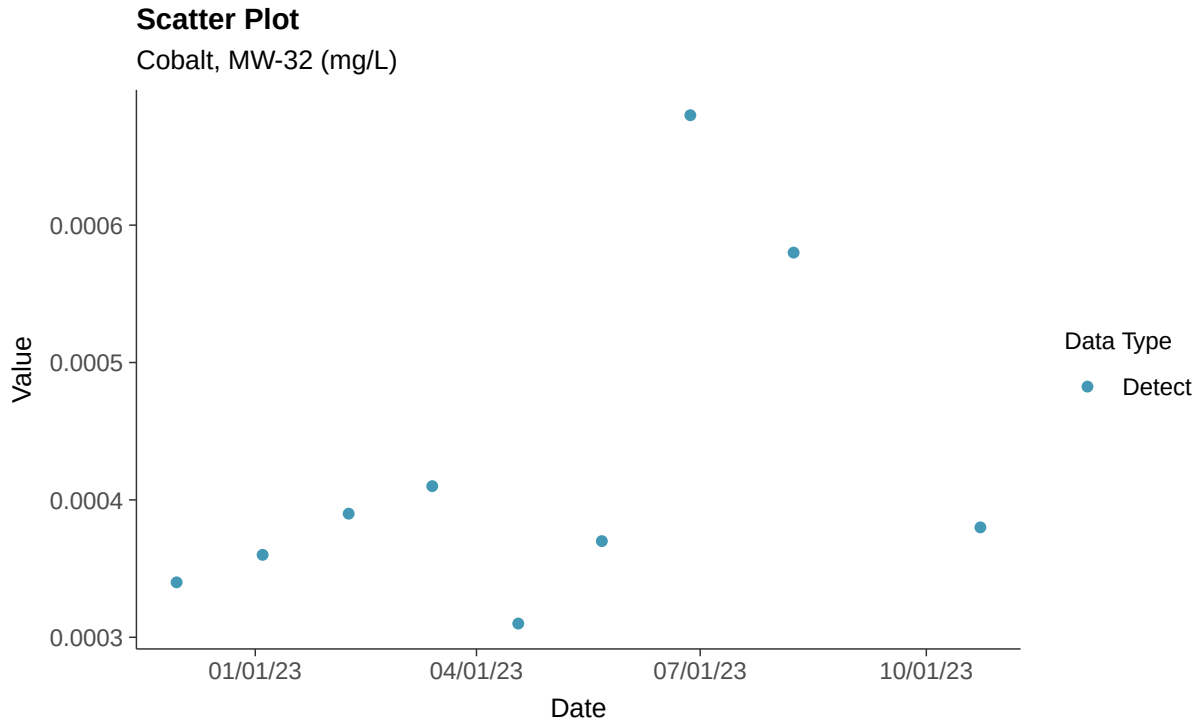
Trend Regression: Piecewise Linear-Linear-Linear

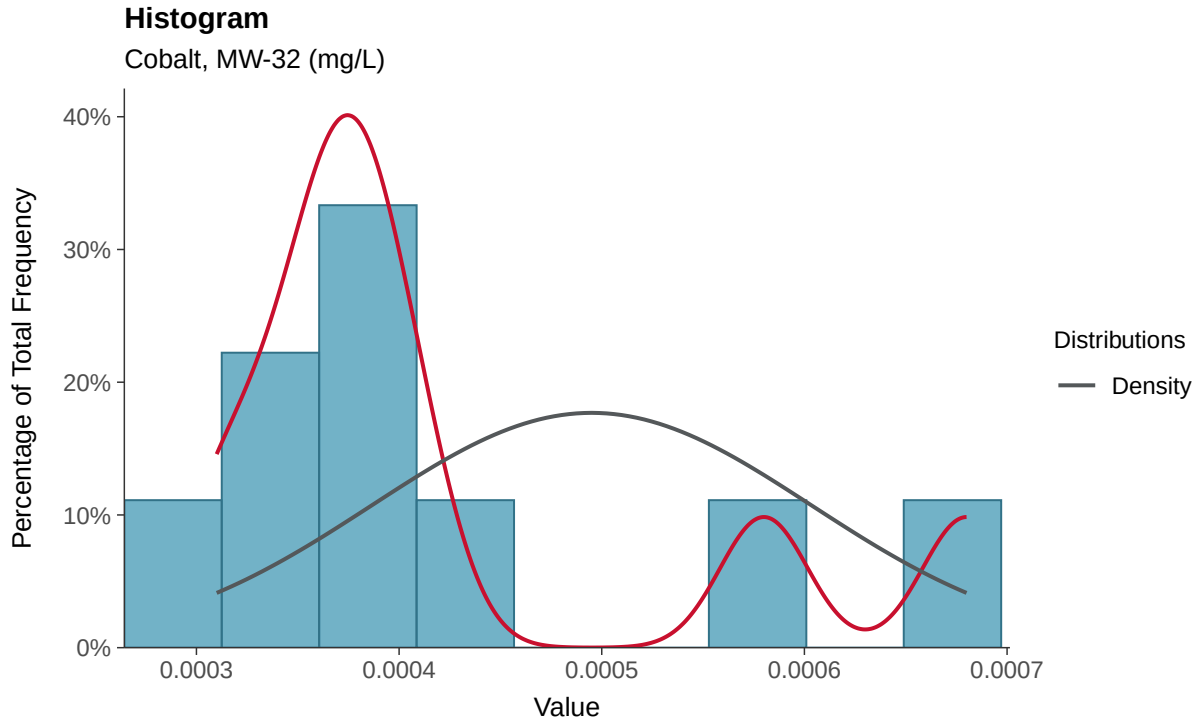
Chromium, Total, MW-32 (mg/L)



Appendix IV: Cobalt, MW-32

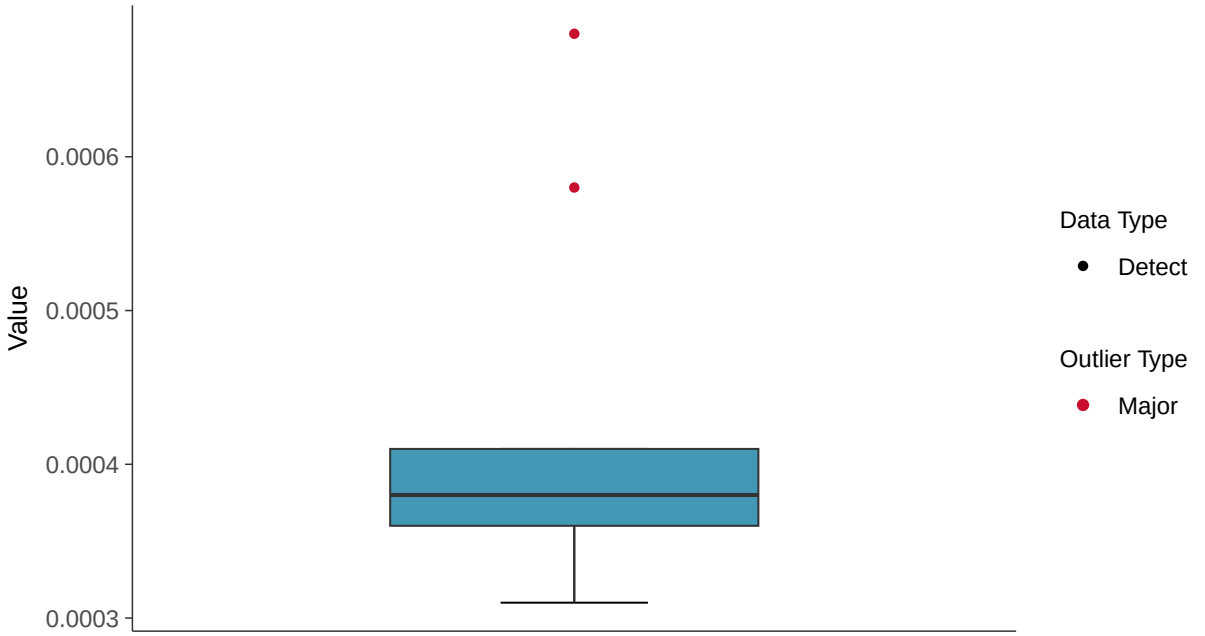
ID: 2_27_5_110





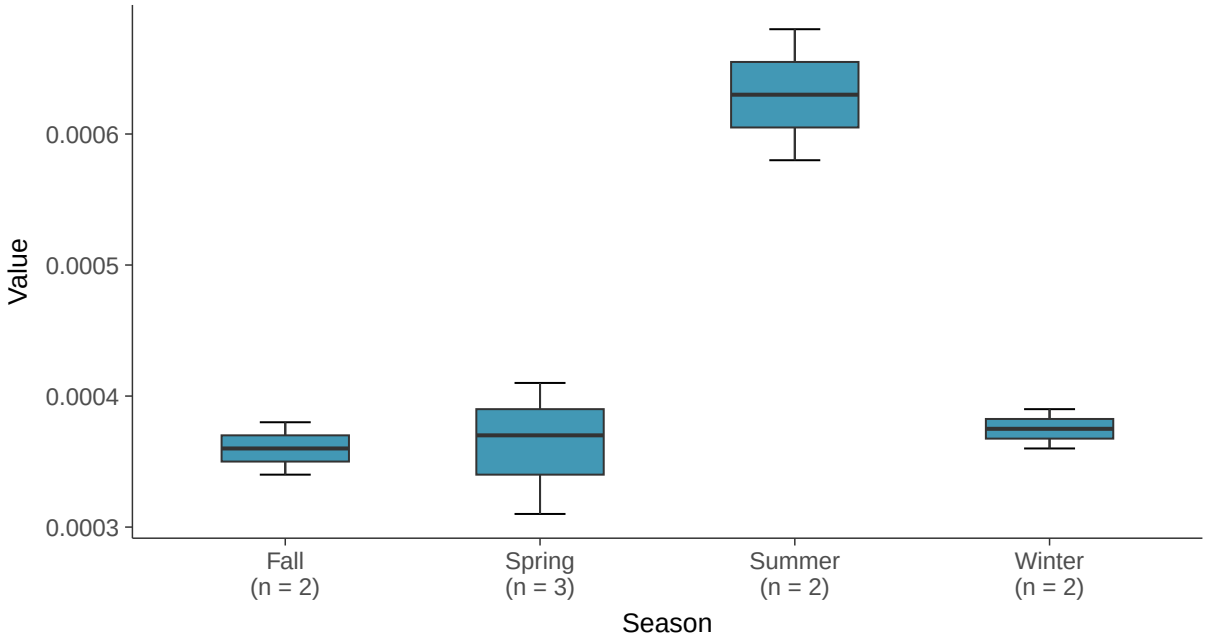
Boxplot

Cobalt, MW-32 (mg/L)



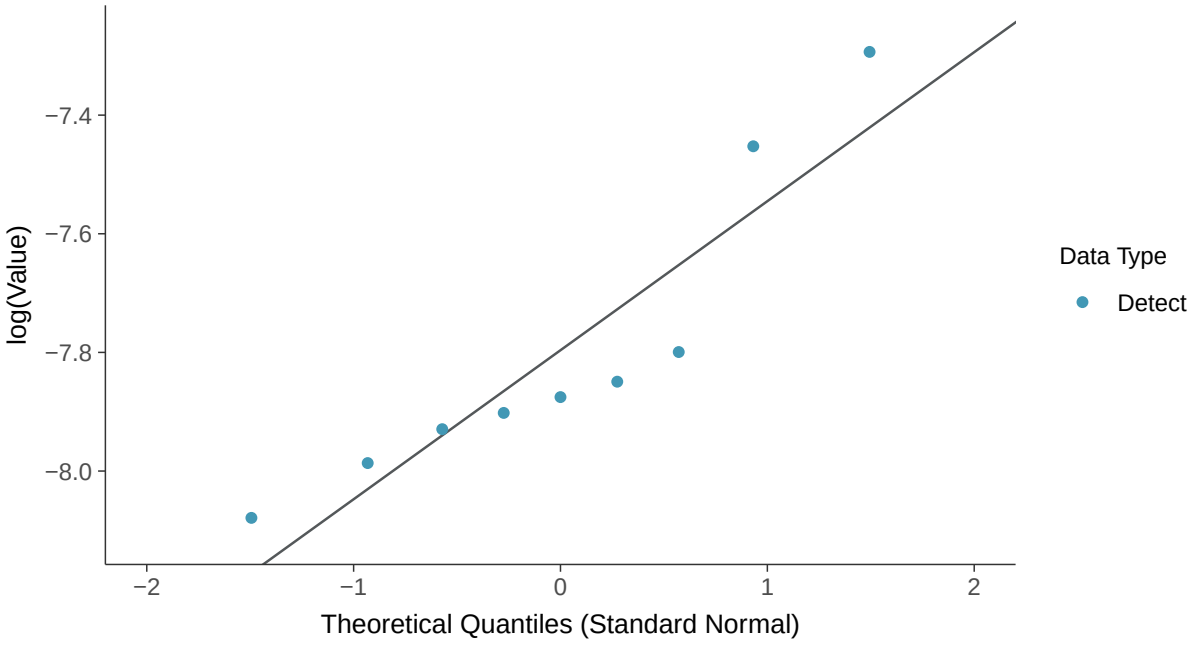
Boxplot by Season

Cobalt, MW-32 (mg/L)



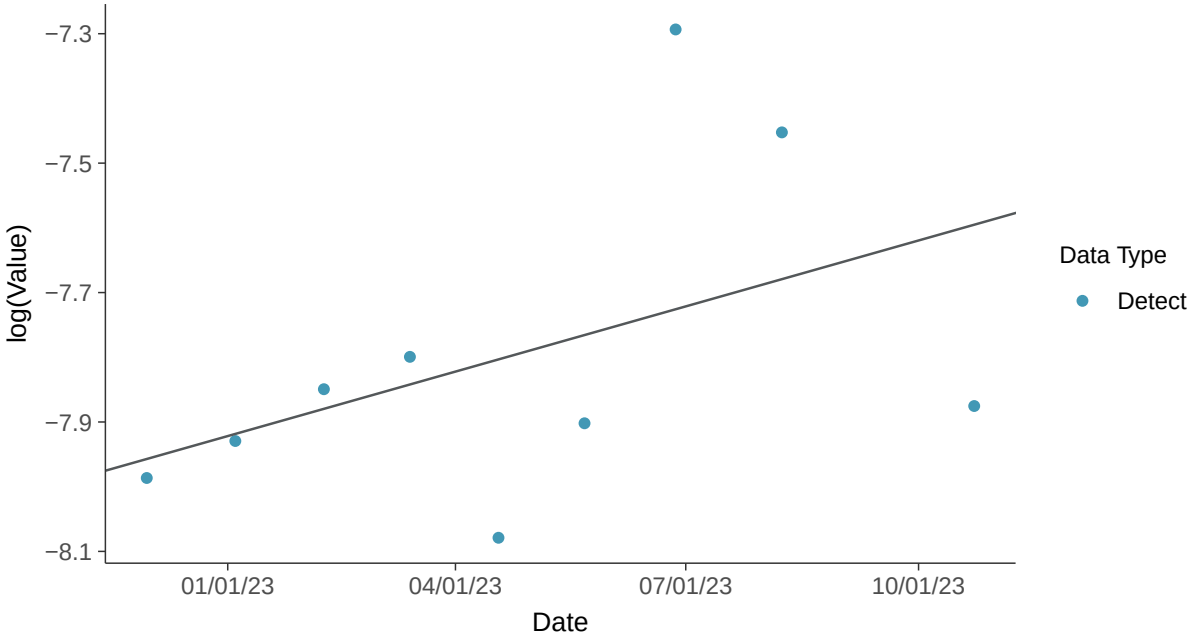
Lognormal Q-Q plot

Cobalt, MW-32 (mg/L)



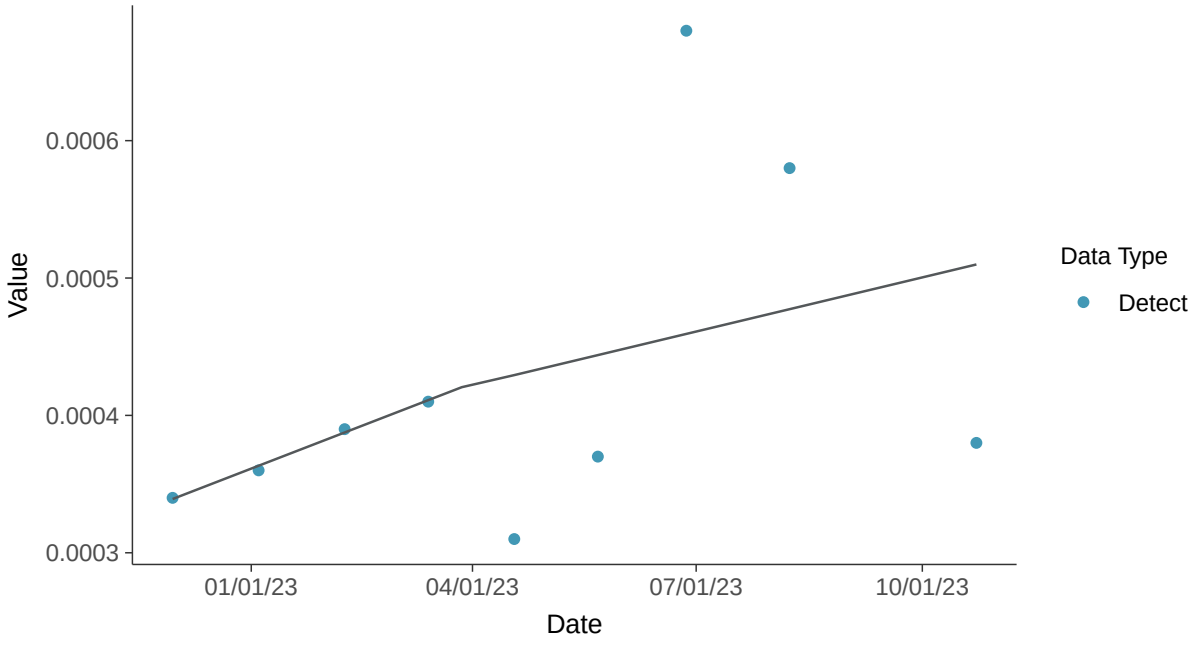
Trend Regression: Lognormal MLE

Cobalt, MW-32 (mg/L)



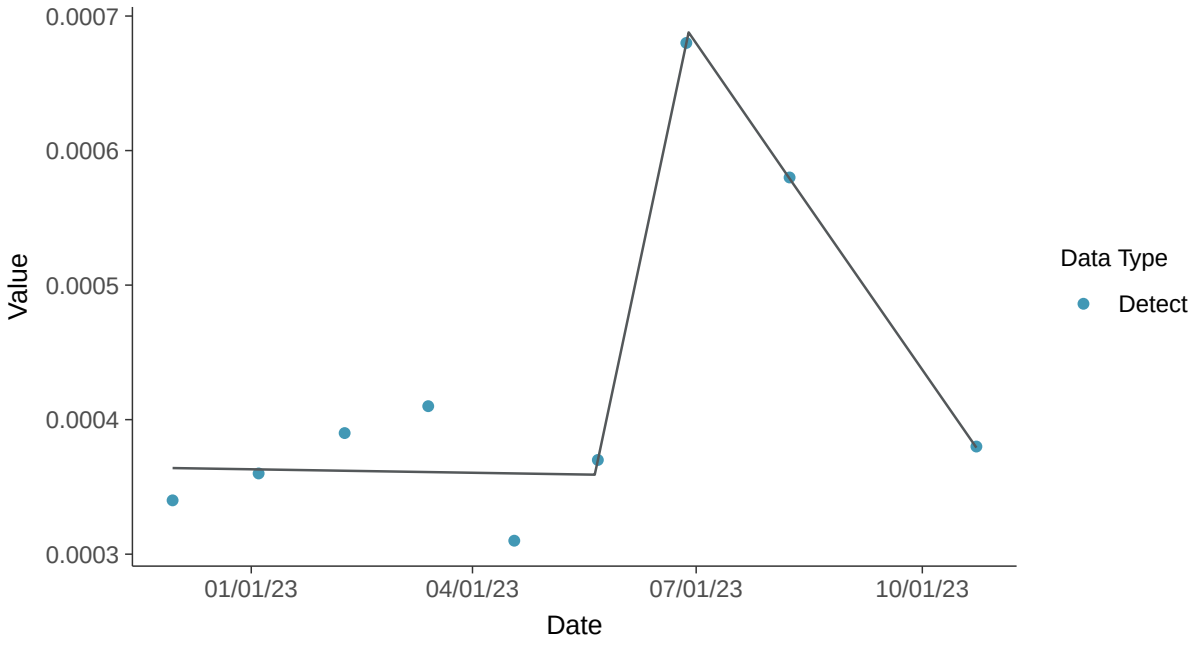
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-32 (mg/L)



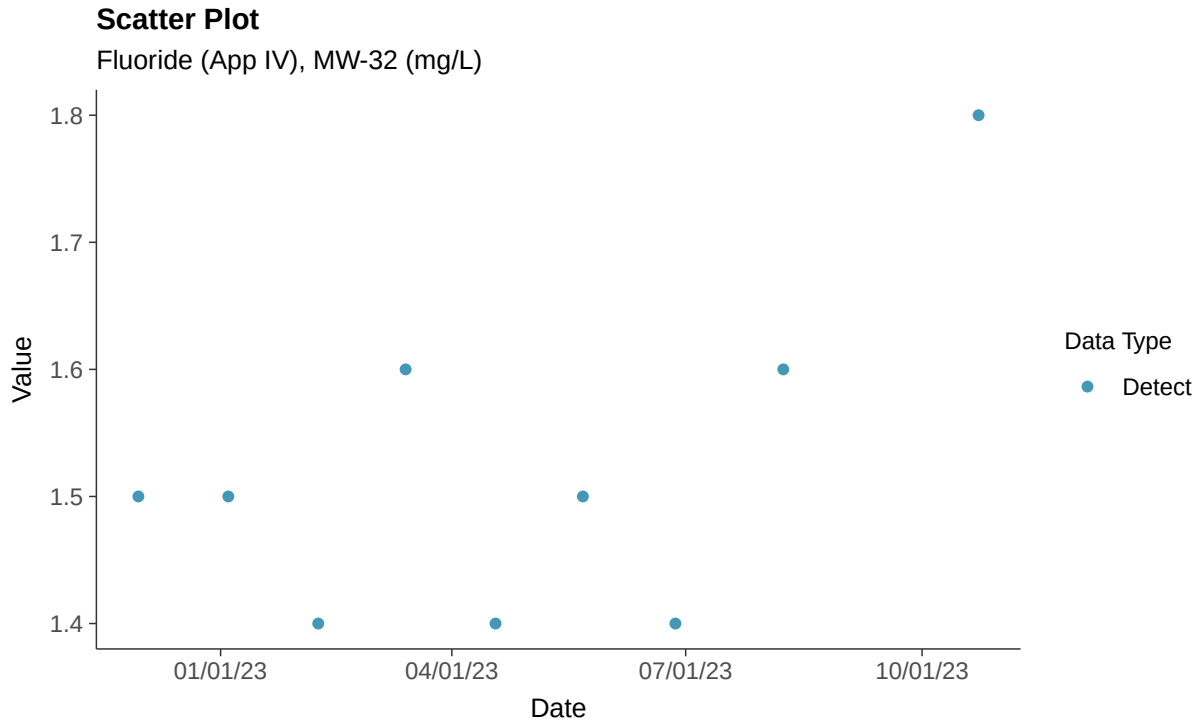
Trend Regression: Piecewise Linear-Linear-Linear

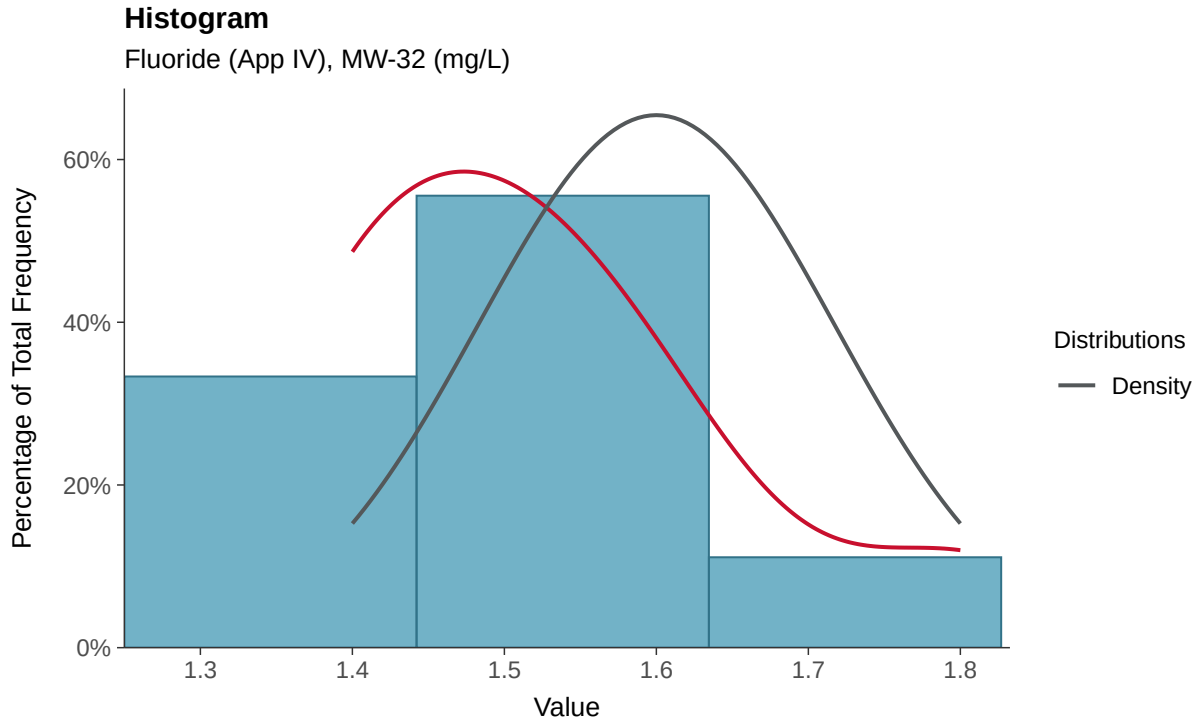
Cobalt, MW-32 (mg/L)



Appendix IV: Fluoride (App IV), MW-32

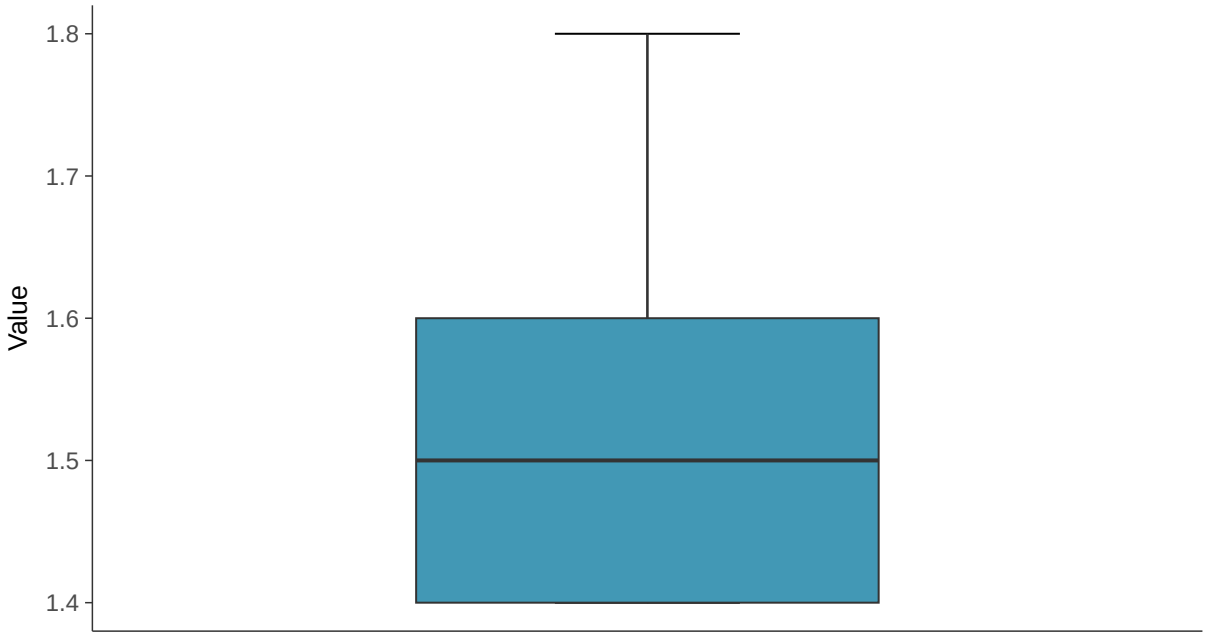
ID: 2_27_5_113





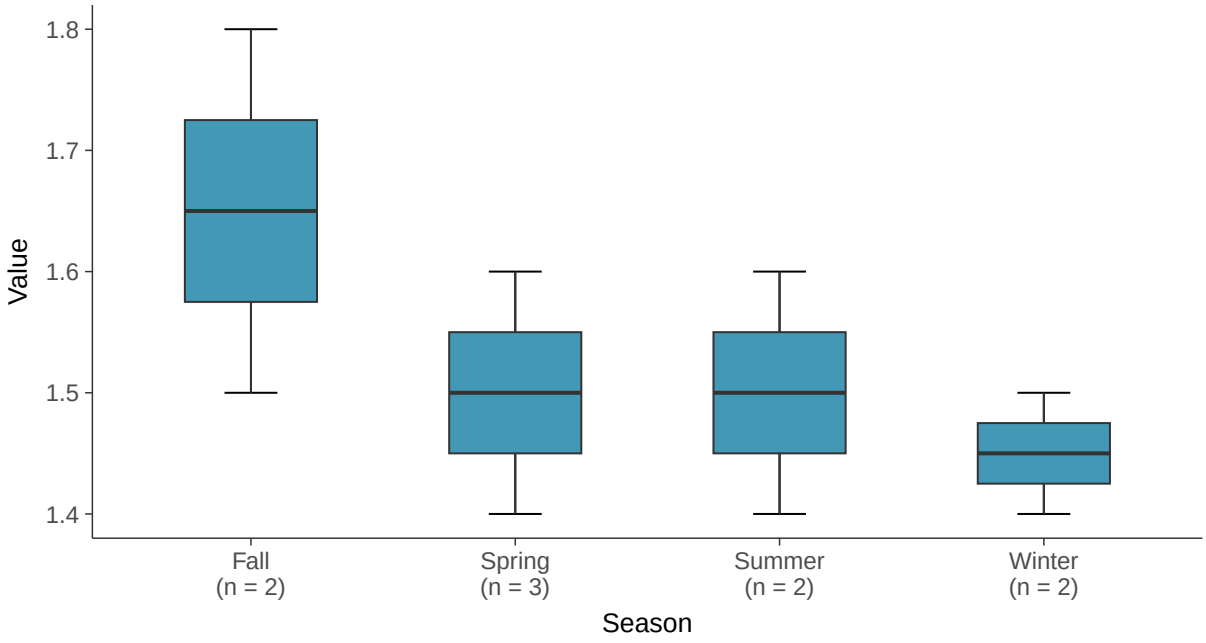
Boxplot

Fluoride (App IV), MW-32 (mg/L)



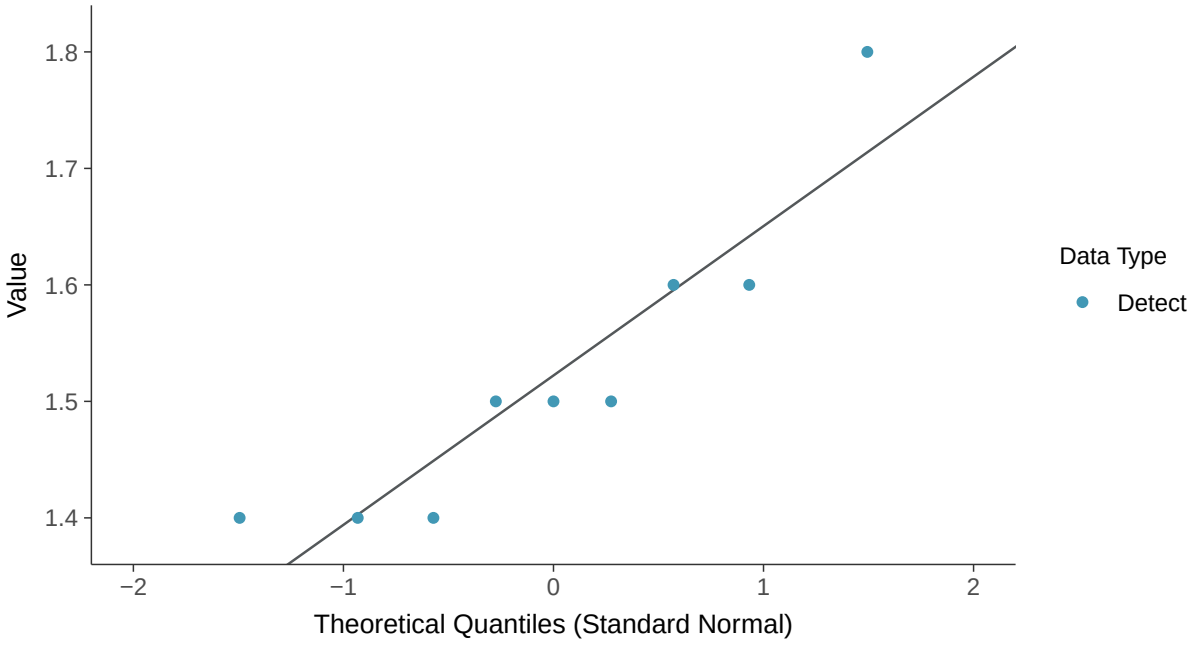
Boxplot by Season

Fluoride (App IV), MW-32 (mg/L)



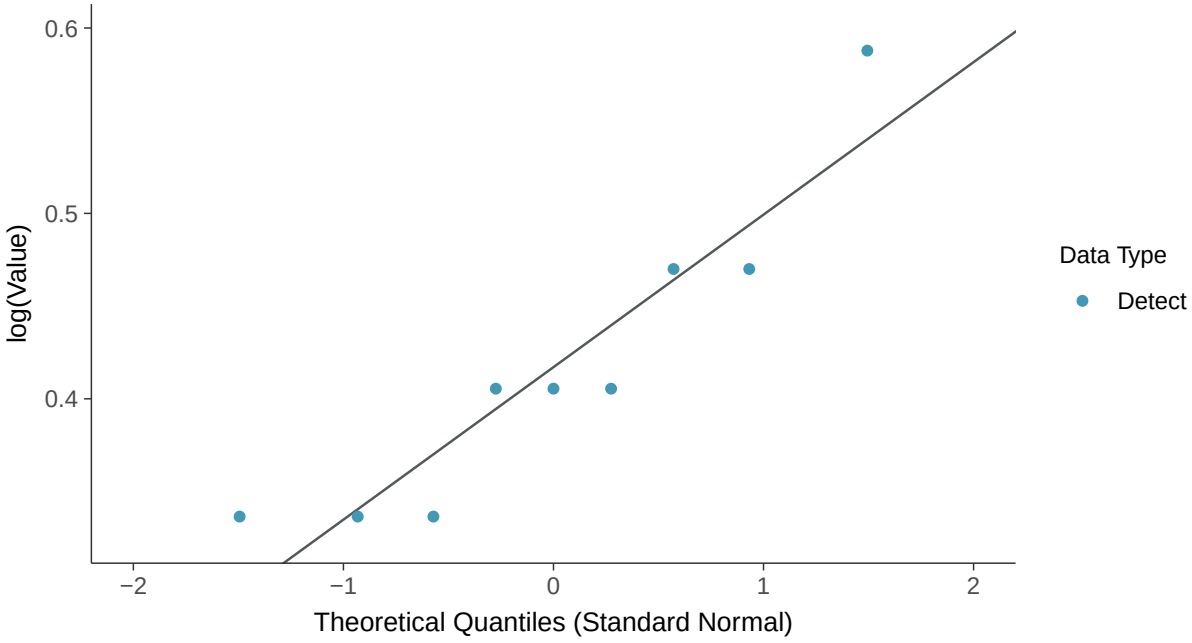
Normal Q-Q plot

Fluoride (App IV), MW-32 (mg/L)



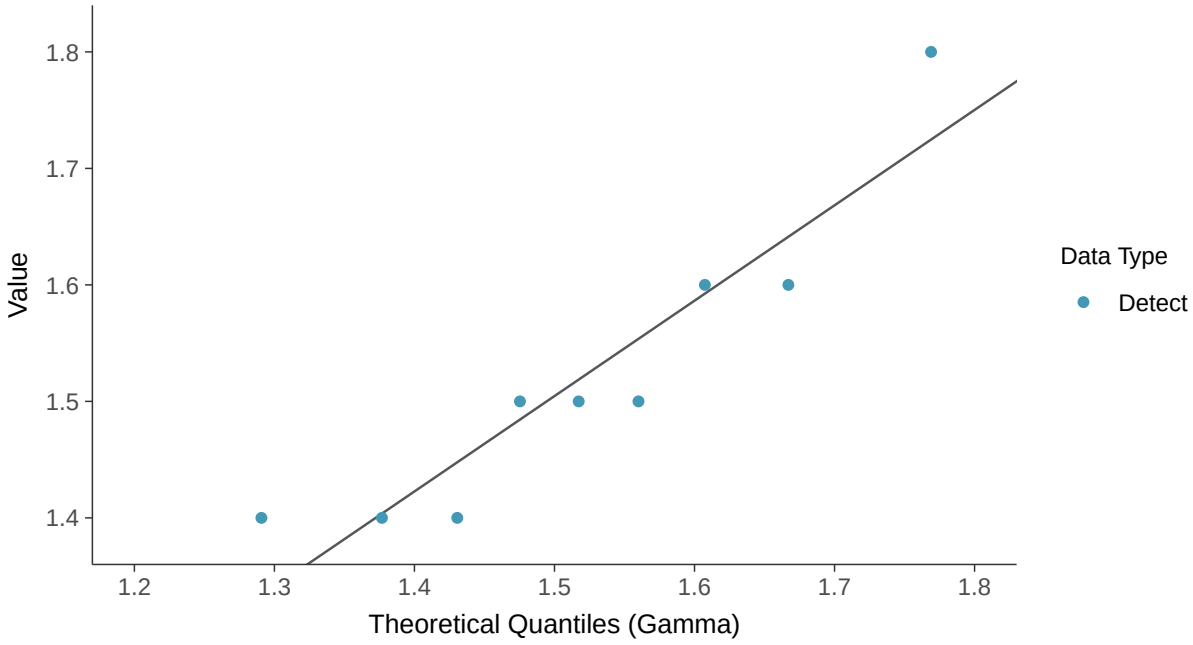
Lognormal Q-Q plot

Fluoride (App IV), MW-32 (mg/L)



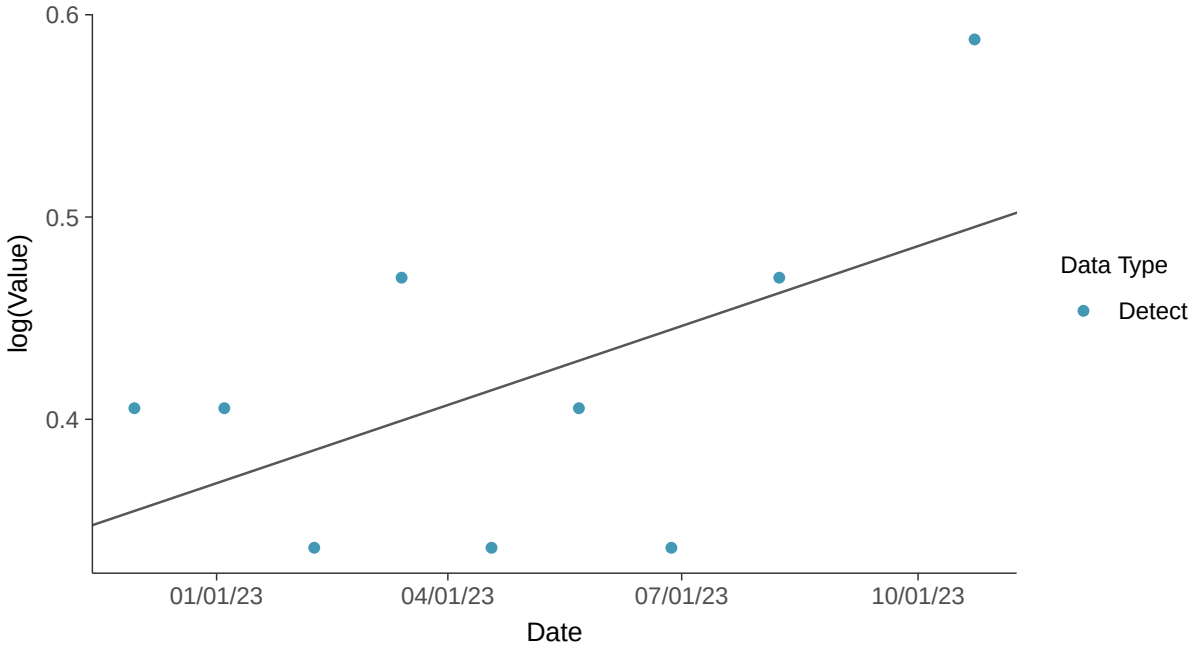
Gamma Q-Q plot

Fluoride (App IV), MW-32 (mg/L)



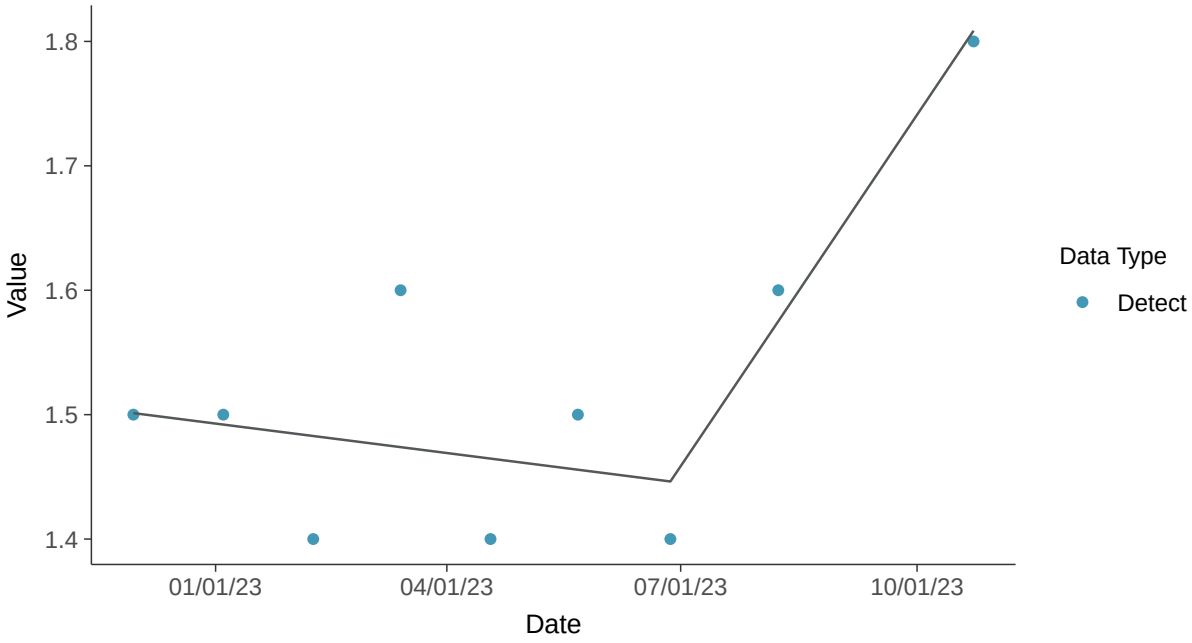
Trend Regression: Lognormal MLE

Fluoride (App IV), MW-32 (mg/L)



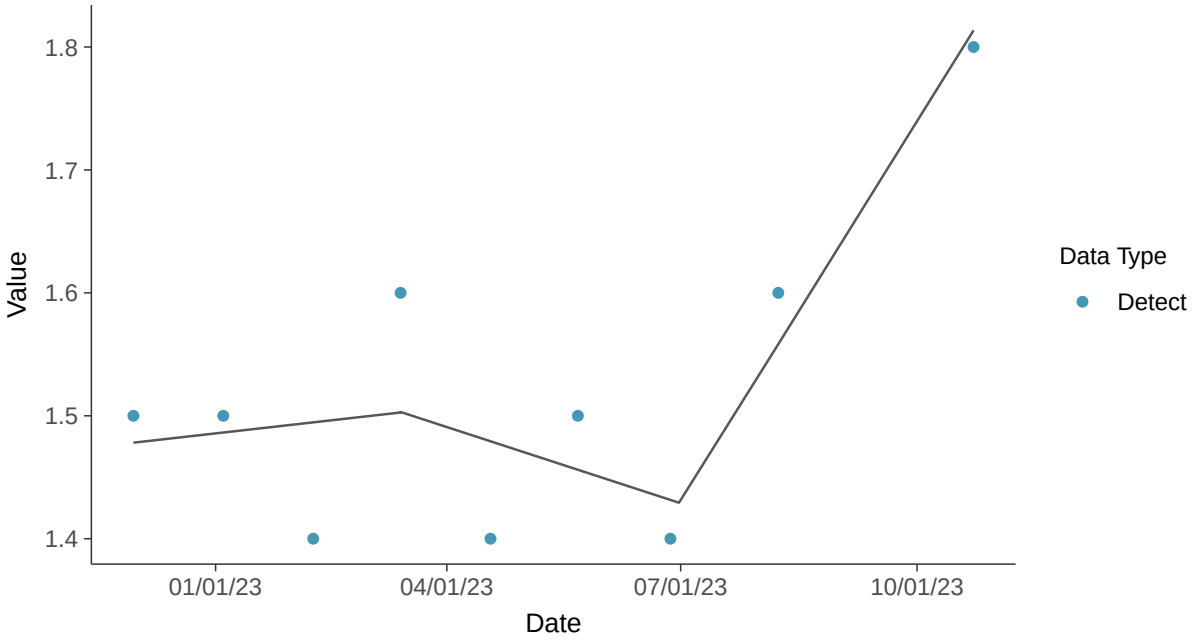
Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-32 (mg/L)



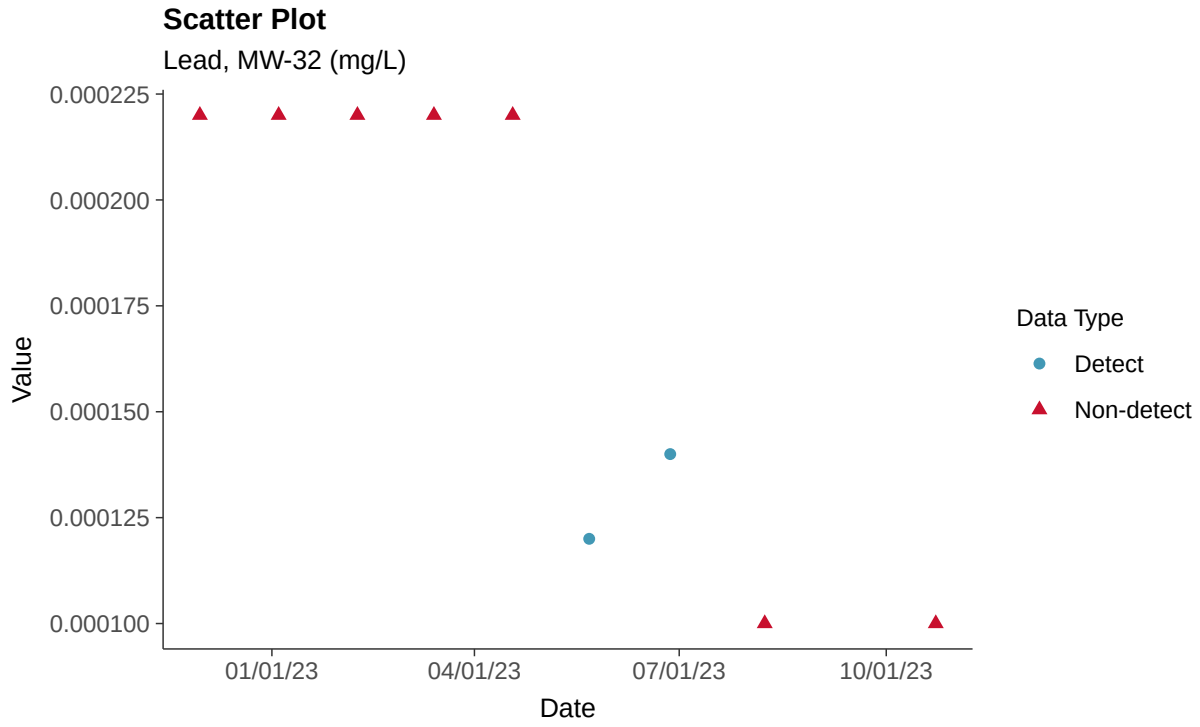
Trend Regression: Piecewise Linear-Linear-Linear

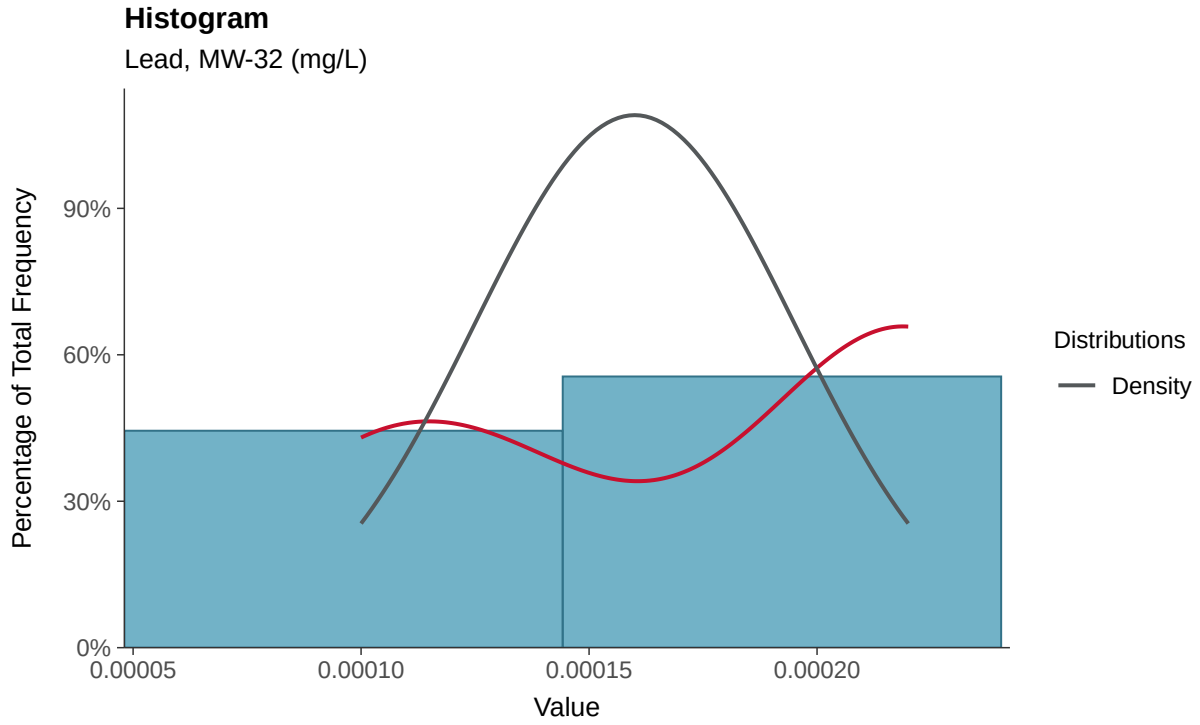
Fluoride (App IV), MW-32 (mg/L)

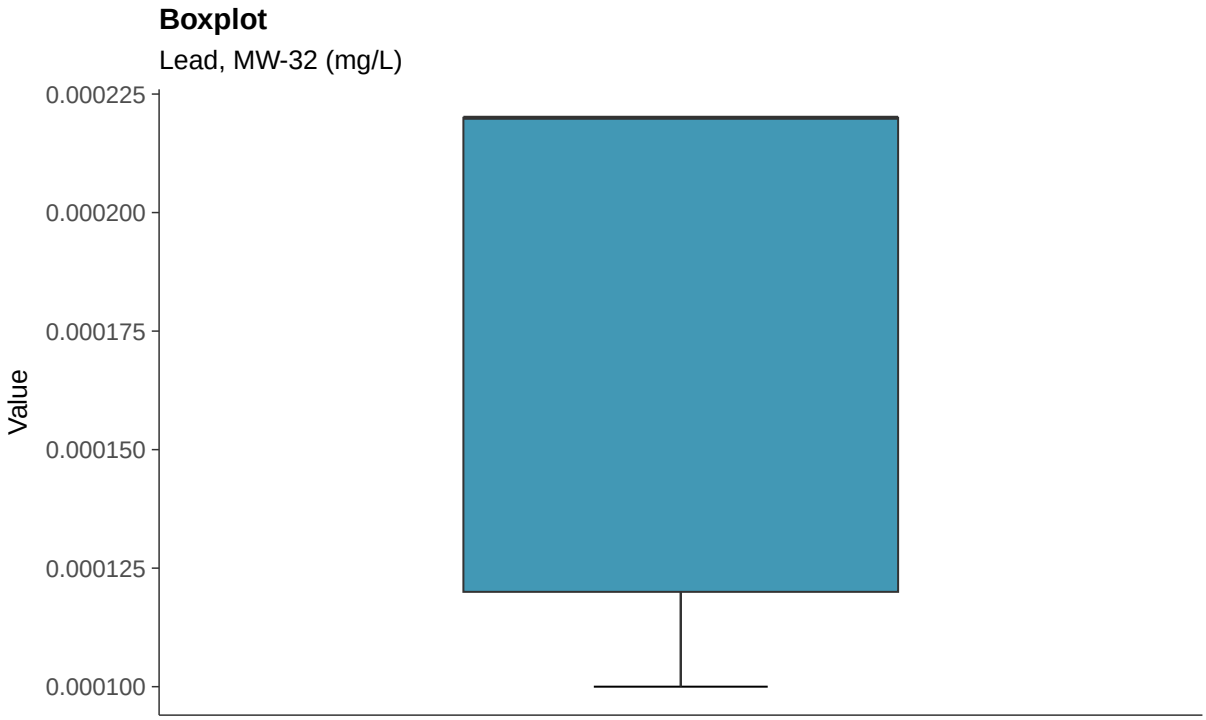


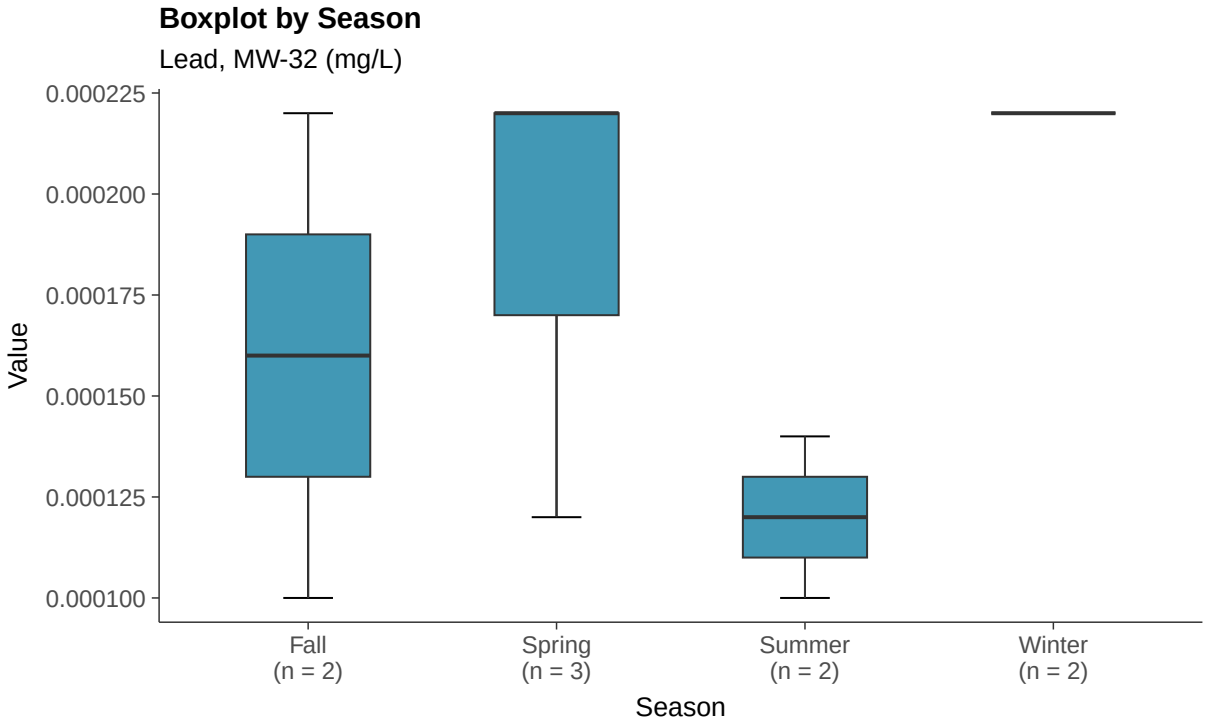
Appendix IV: Lead, MW-32

ID: 2_27_5_115



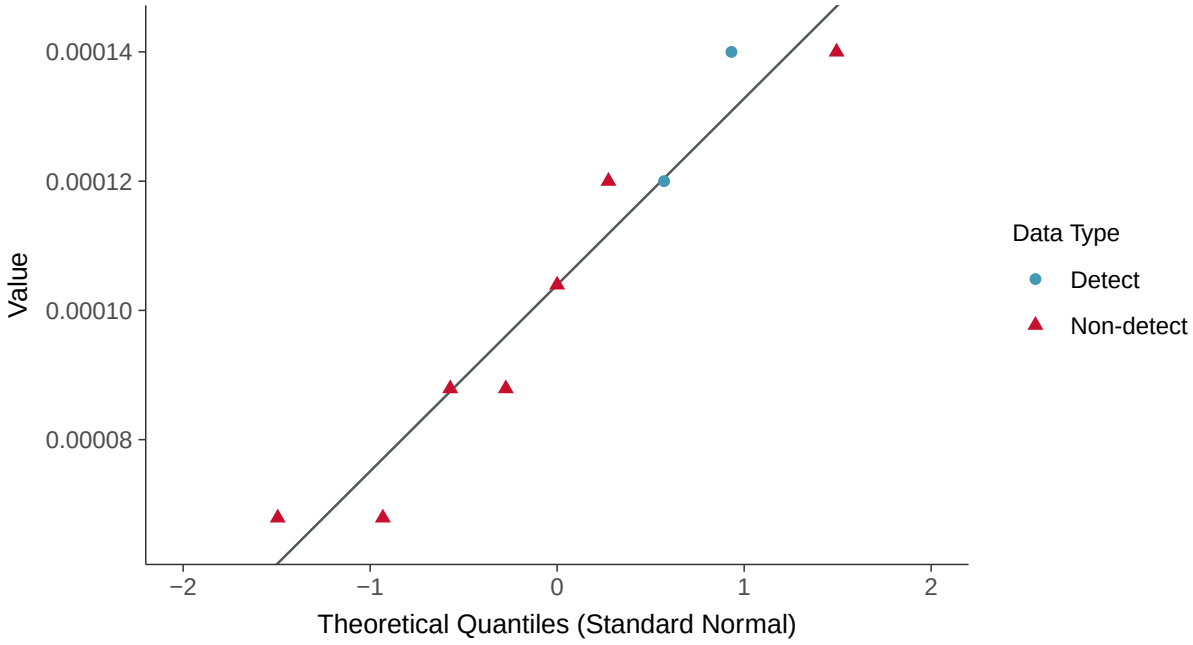



Boxplot
Lead, MW-32 (mg/L)
0.000225
0.000200
0.000175
0.000150
0.000125
0.000100
Value


Boxplot by Season
Lead, MW-32 (mg/L)
0.000225
0.000200
0.000175
0.000150
0.000125
0.000100
Value
Fall
(n = 2)
Spring
(n = 3)
Summer
(n = 2)
Winter
(n = 2)
Season

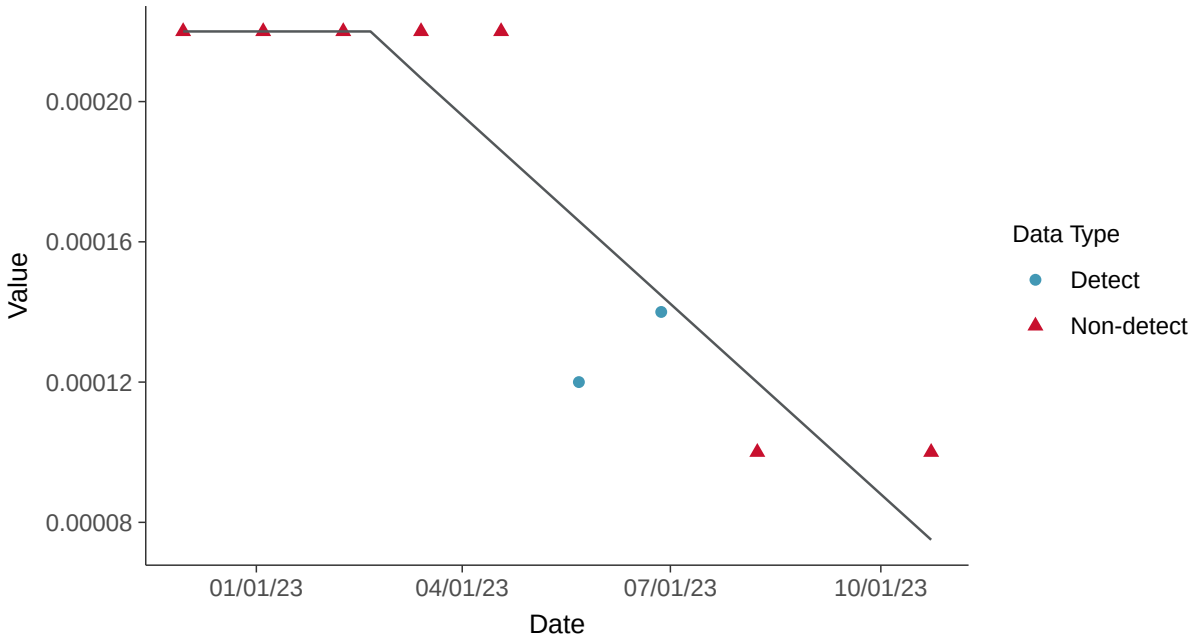
Normal Q-Q plot using ROS Imputed Estimates

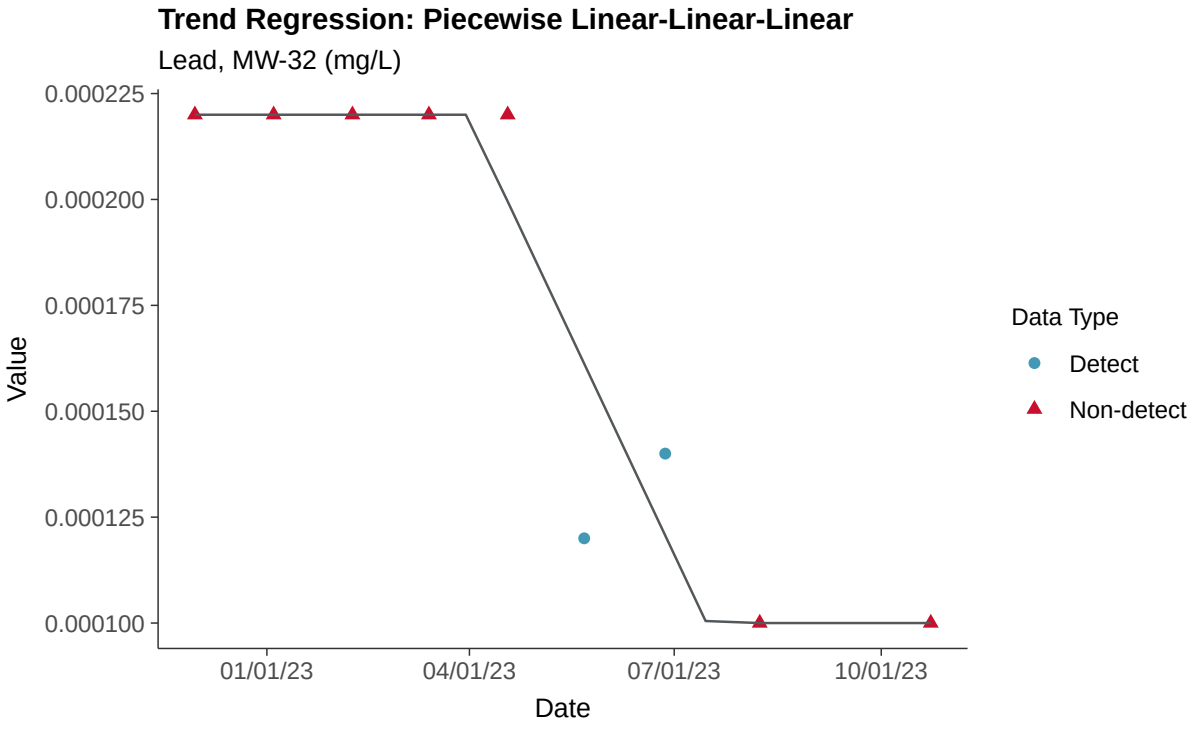
Lead, MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear

Lead, MW-32 (mg/L)



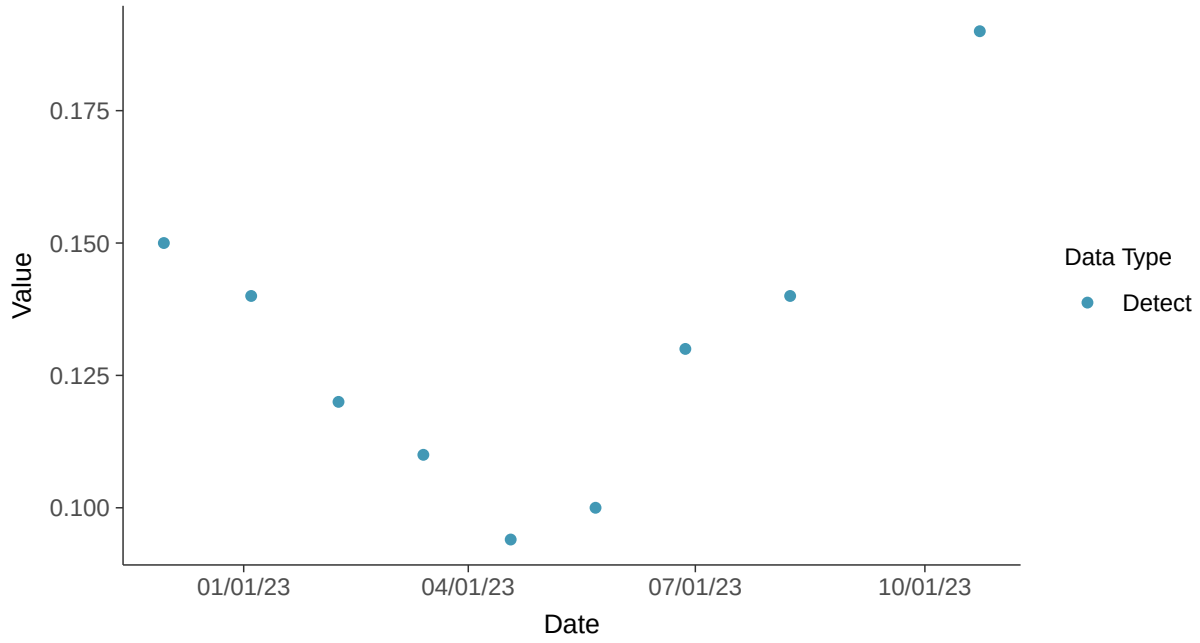

Trend Regression: Piecewise Linear-Linear-Linear
Lead, MW-32 (mg/L)
0.000225
0.000200
0.000175
0.000150
0.000125
0.000100
Value
01/01/23
04/01/23
07/01/23
10/01/23
Date
Data Type
Detect
Non-detect

Appendix IV: Lithium, MW-32

ID: 2_27_5_116

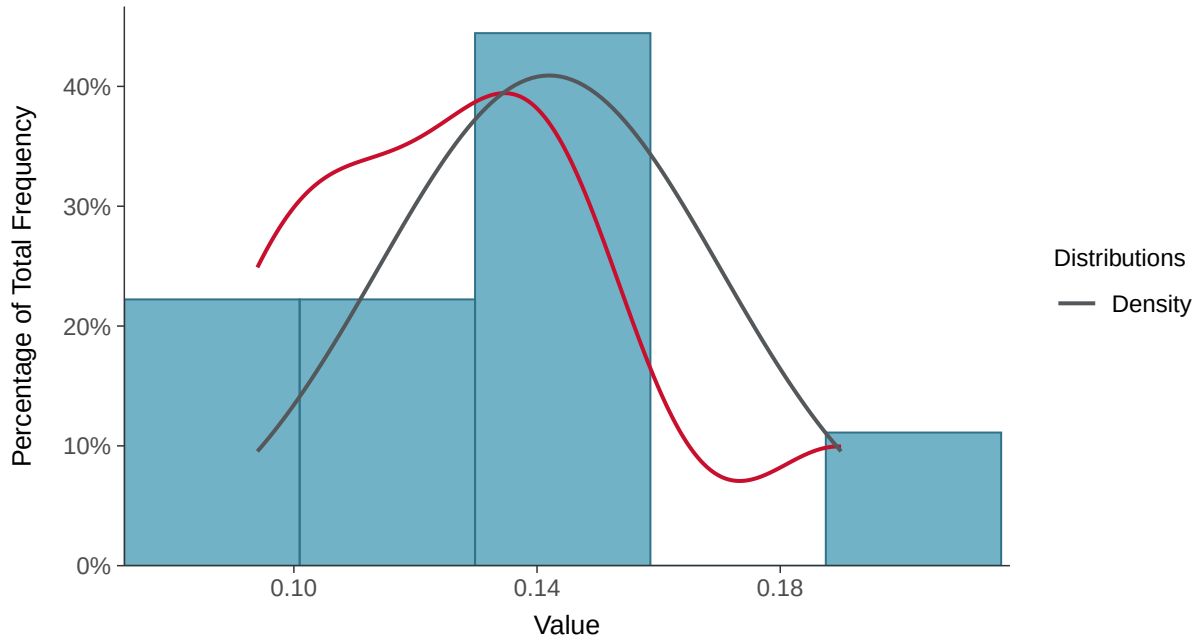
Scatter Plot

Lithium, MW-32 (mg/L)



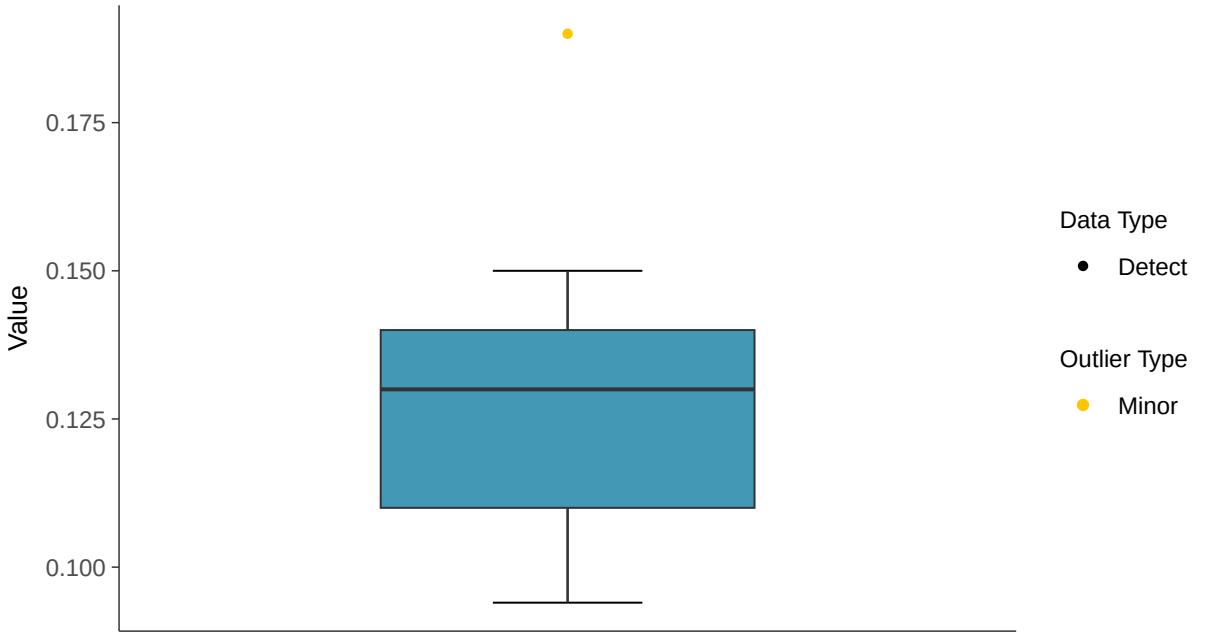
Histogram

Lithium, MW-32 (mg/L)



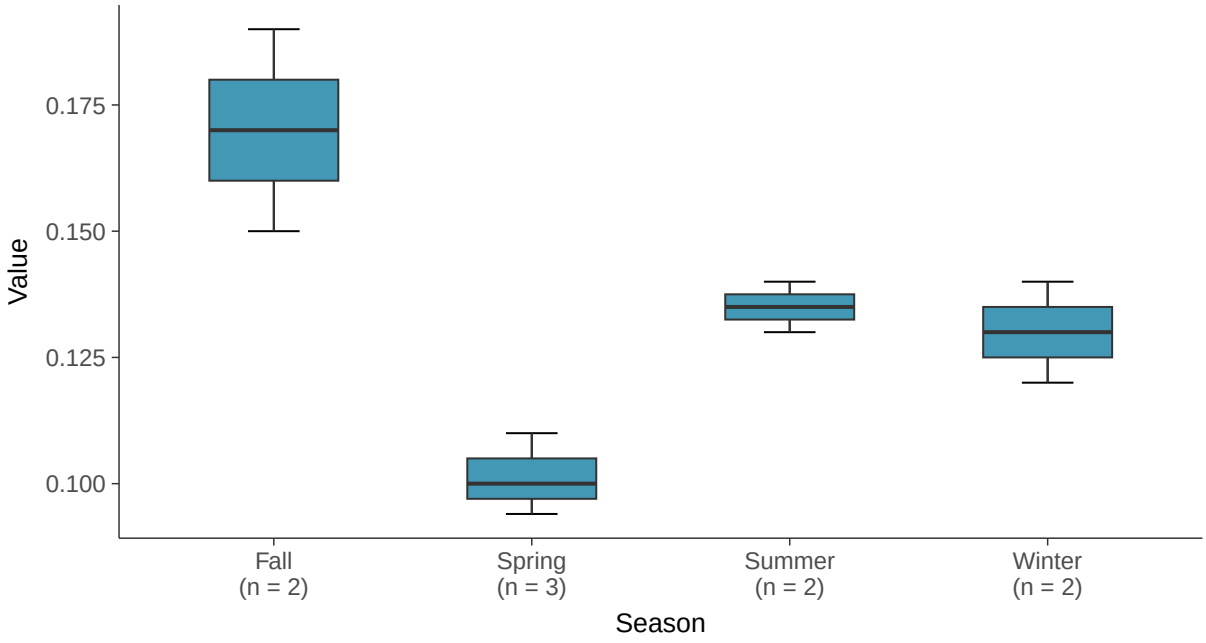
Boxplot

Lithium, MW-32 (mg/L)



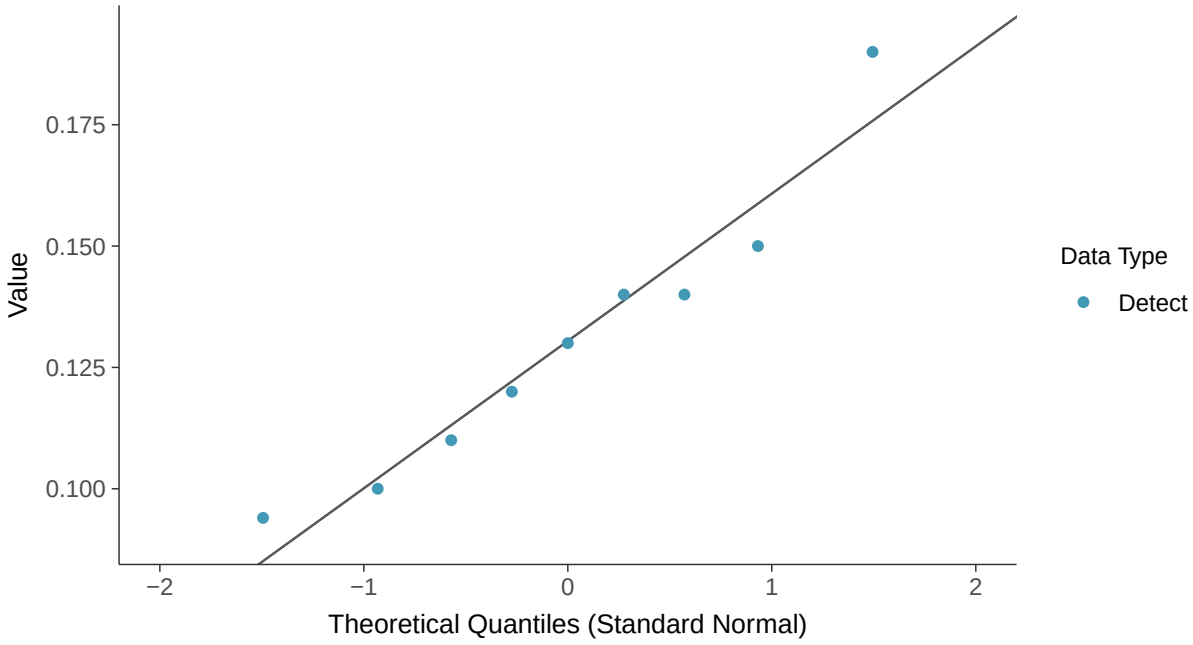
Boxplot by Season

Lithium, MW-32 (mg/L)



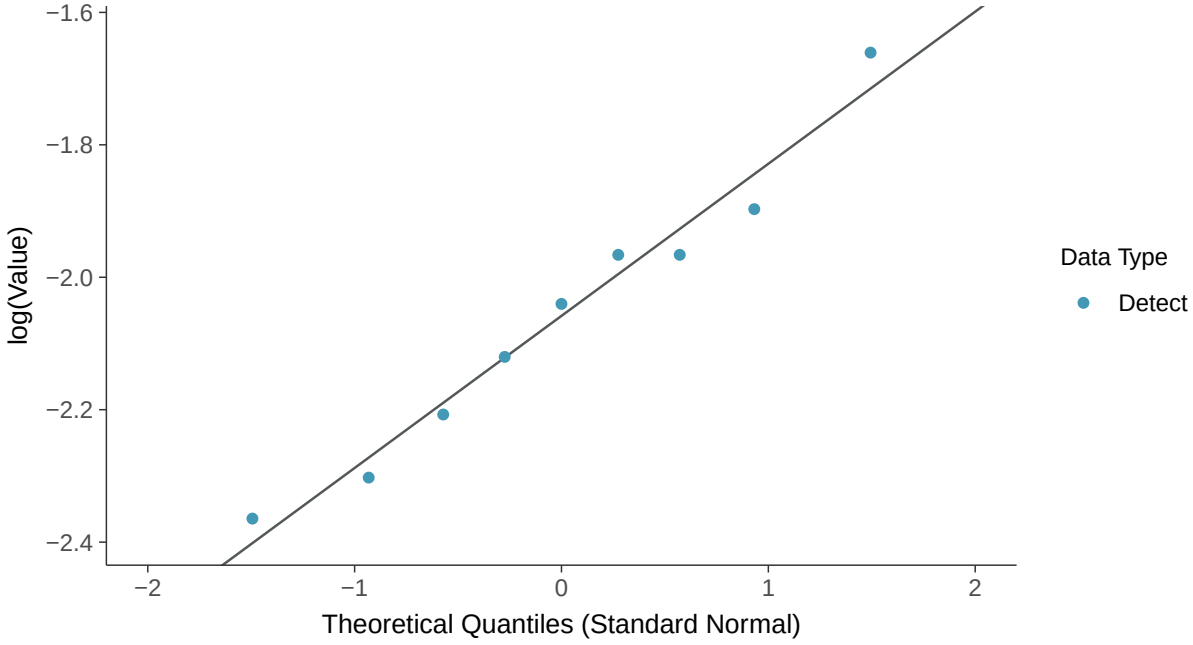
Normal Q-Q plot

Lithium, MW-32 (mg/L)



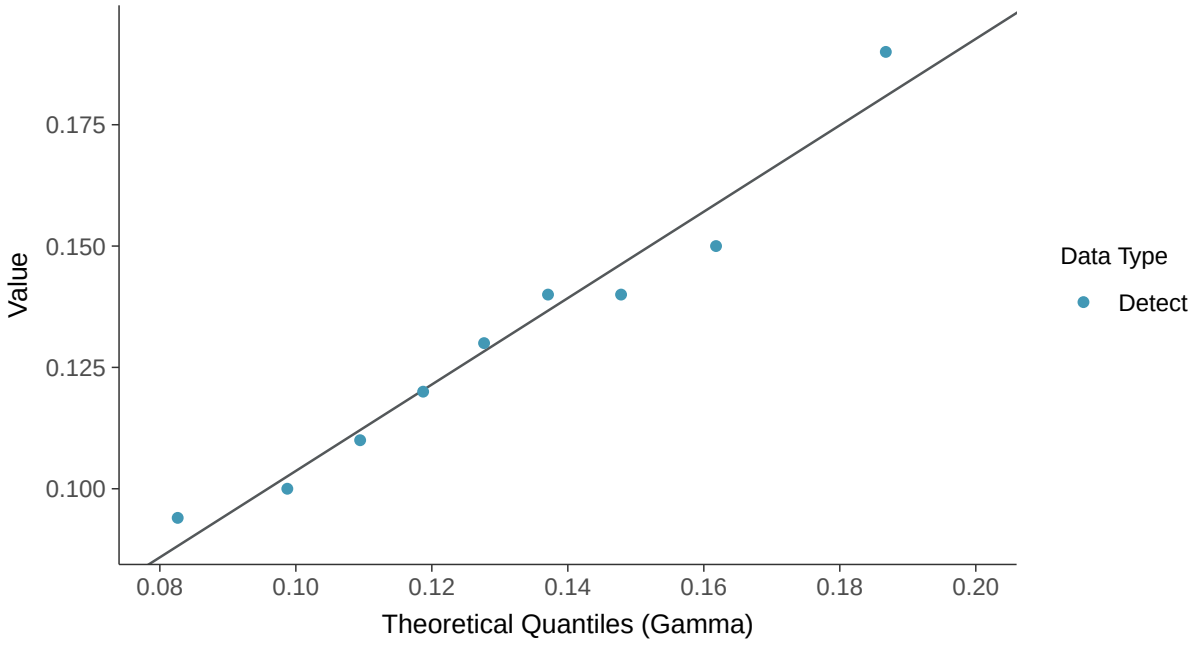
Lognormal Q-Q plot

Lithium, MW-32 (mg/L)



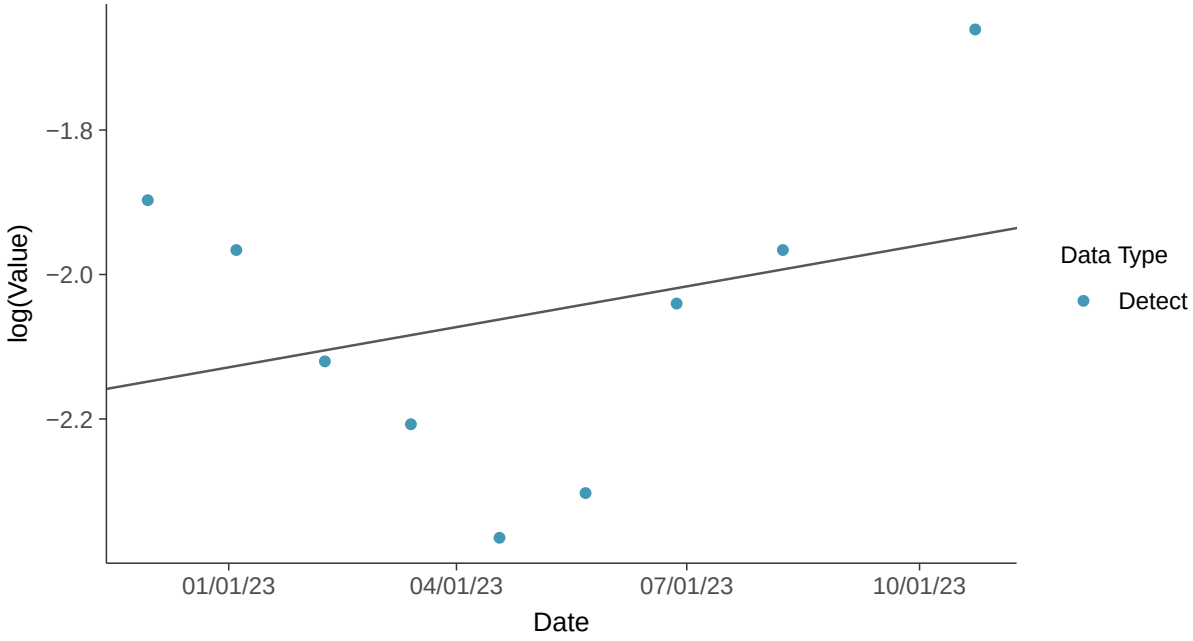
Gamma Q-Q plot

Lithium, MW-32 (mg/L)



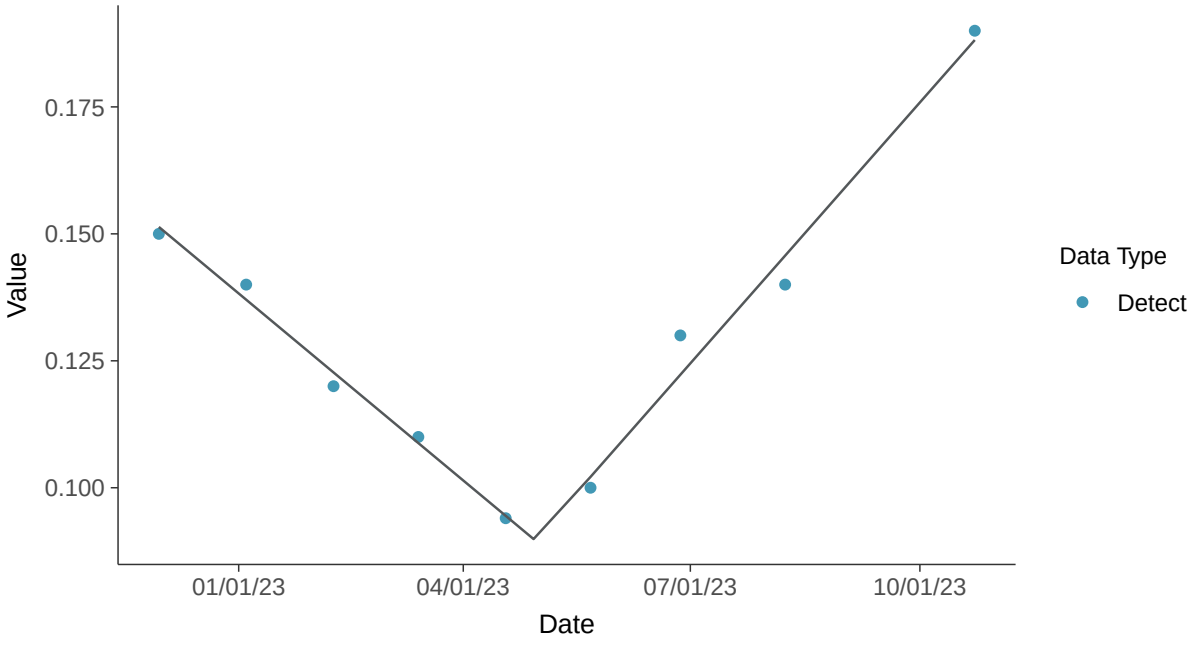
Trend Regression: Lognormal MLE

Lithium, MW-32 (mg/L)



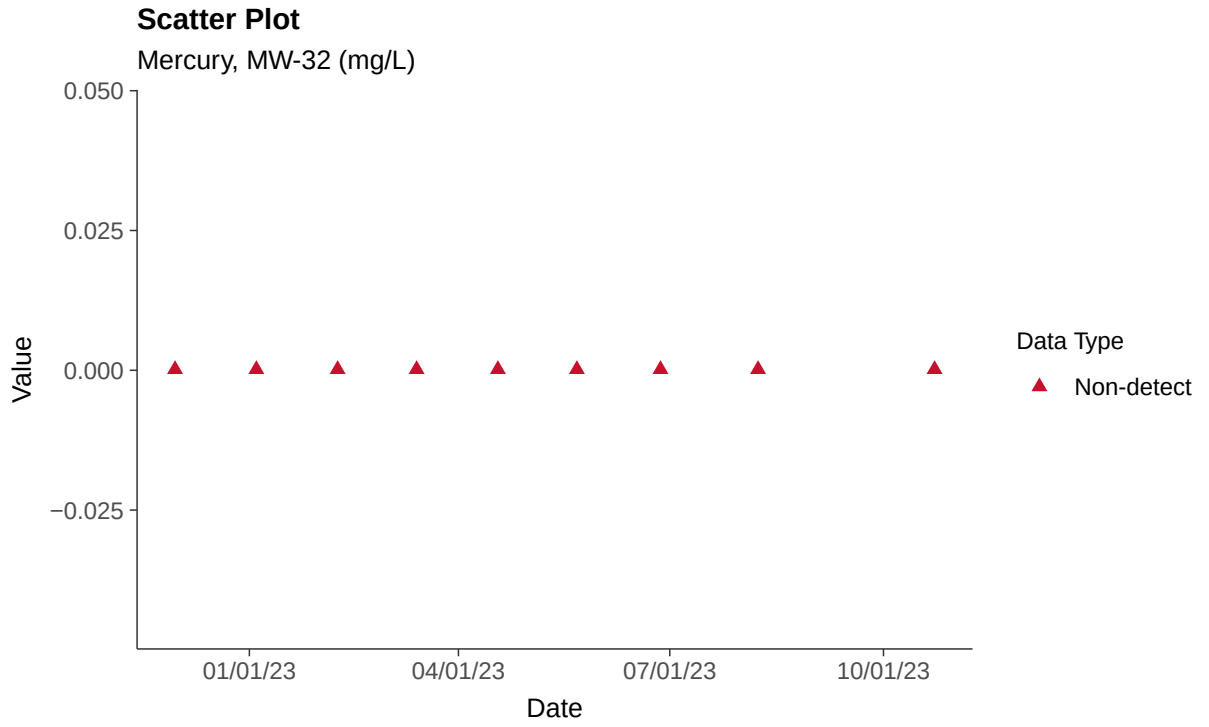
Trend Regression: Piecewise Linear-Linear

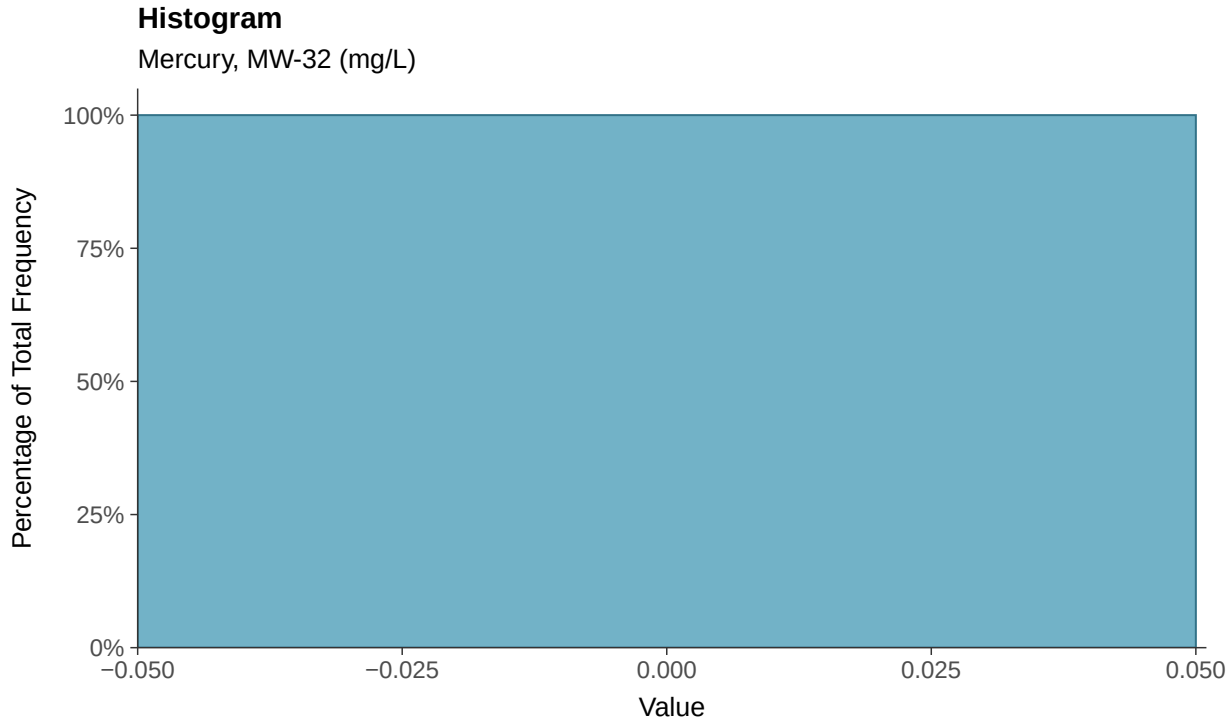
Lithium, MW-32 (mg/L)



Appendix IV: Mercury, MW-32

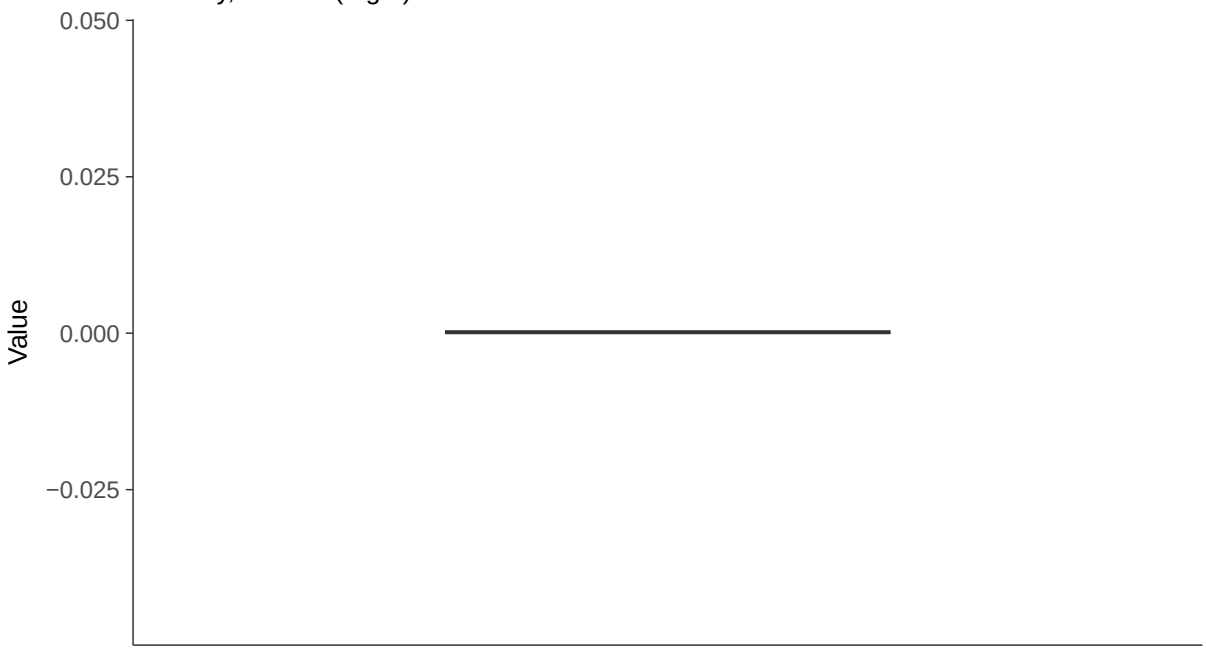
ID: 2_27_5_117





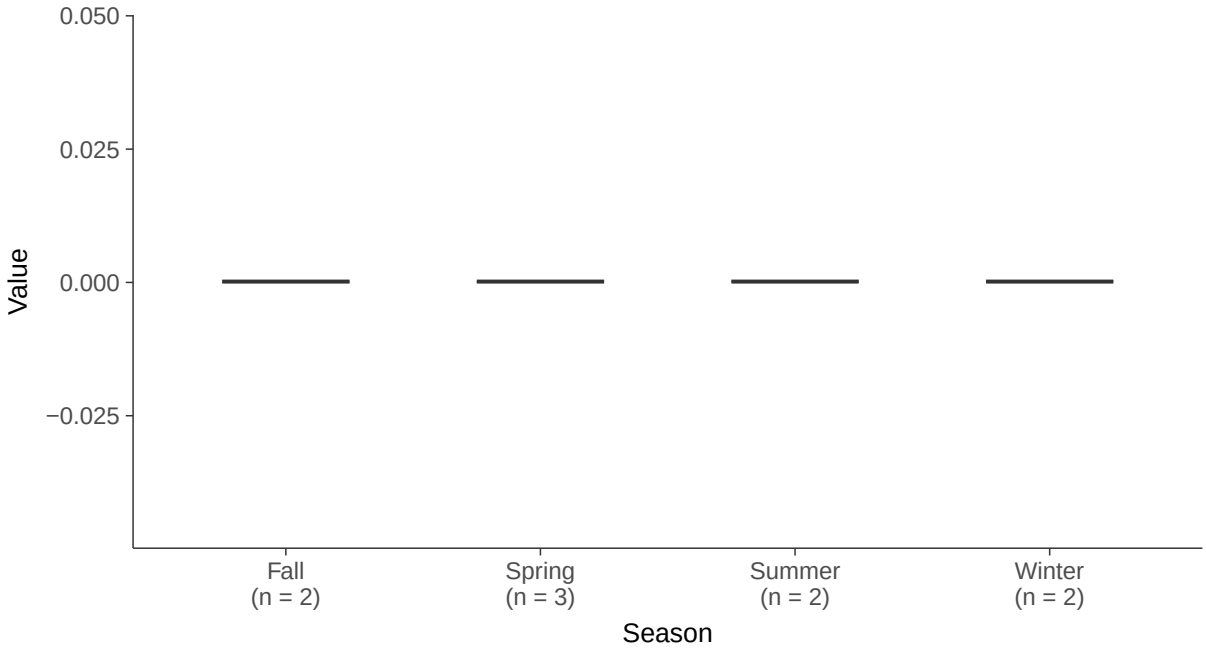
Boxplot

Mercury, MW-32 (mg/L)



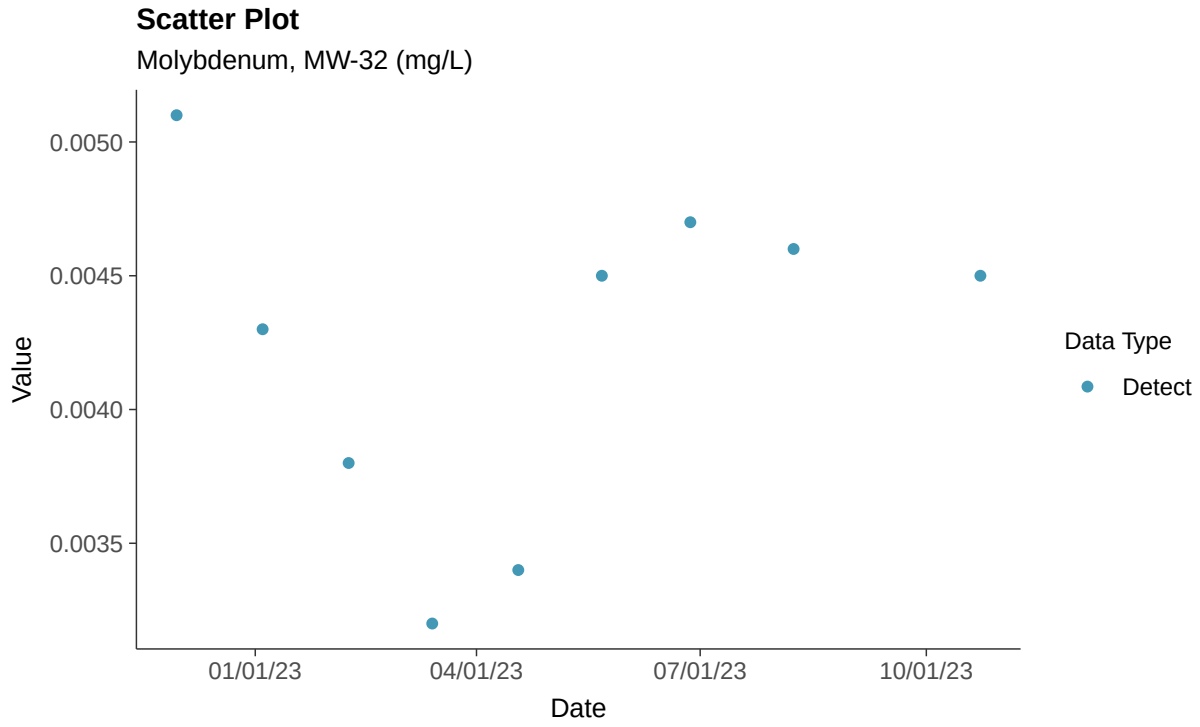
Boxplot by Season

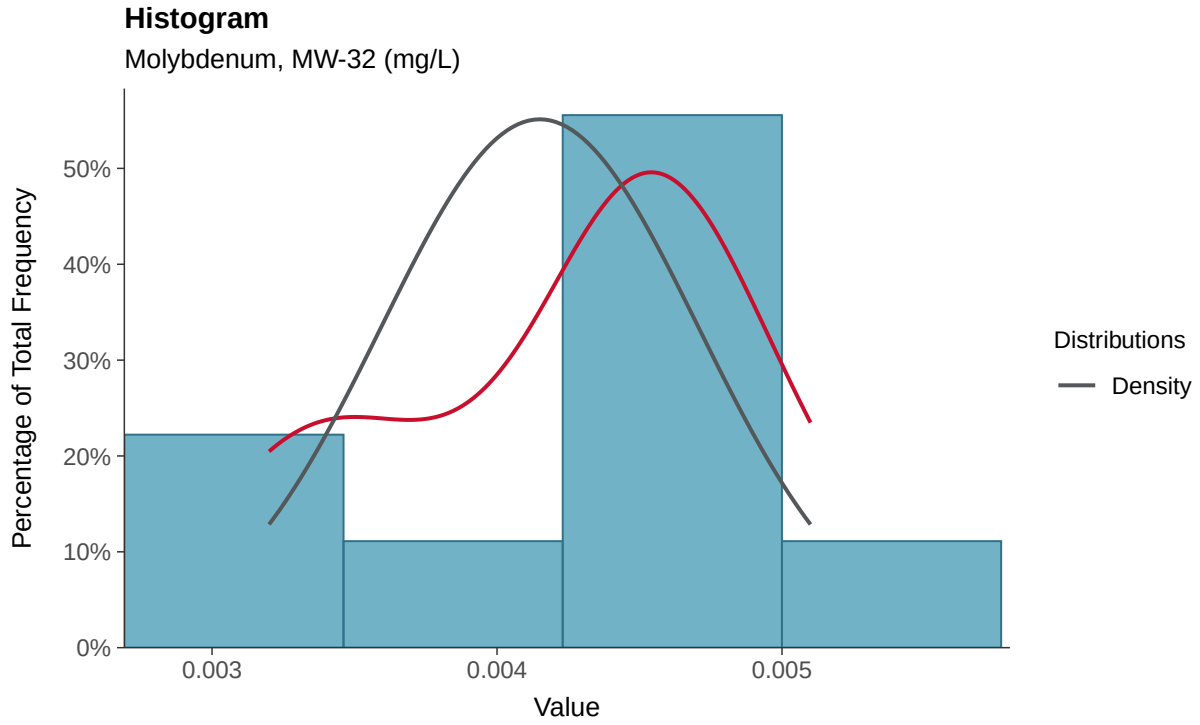
Mercury, MW-32 (mg/L)



Appendix IV: Molybdenum, MW-32

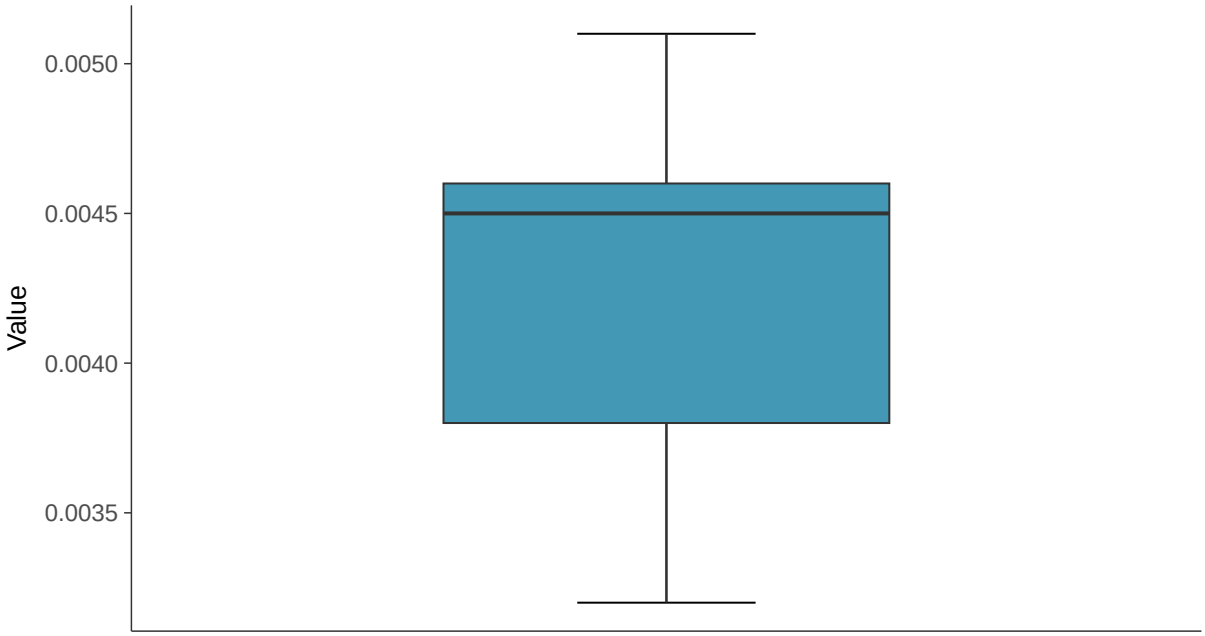
ID: 2_27_5_118





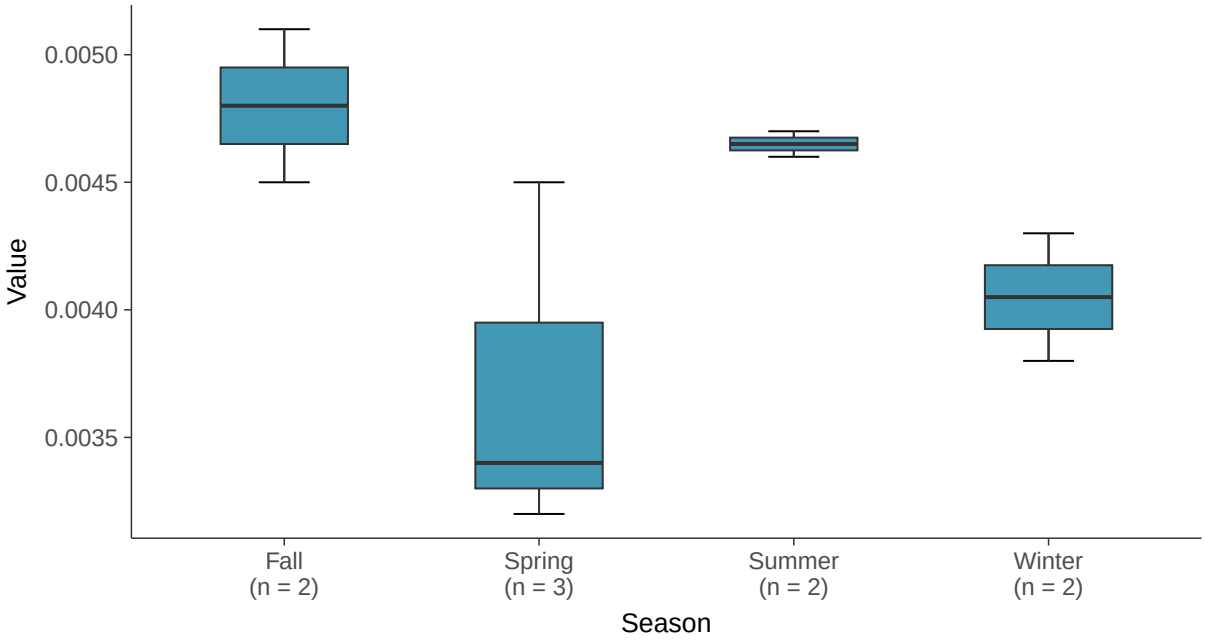
Boxplot

Molybdenum, MW-32 (mg/L)



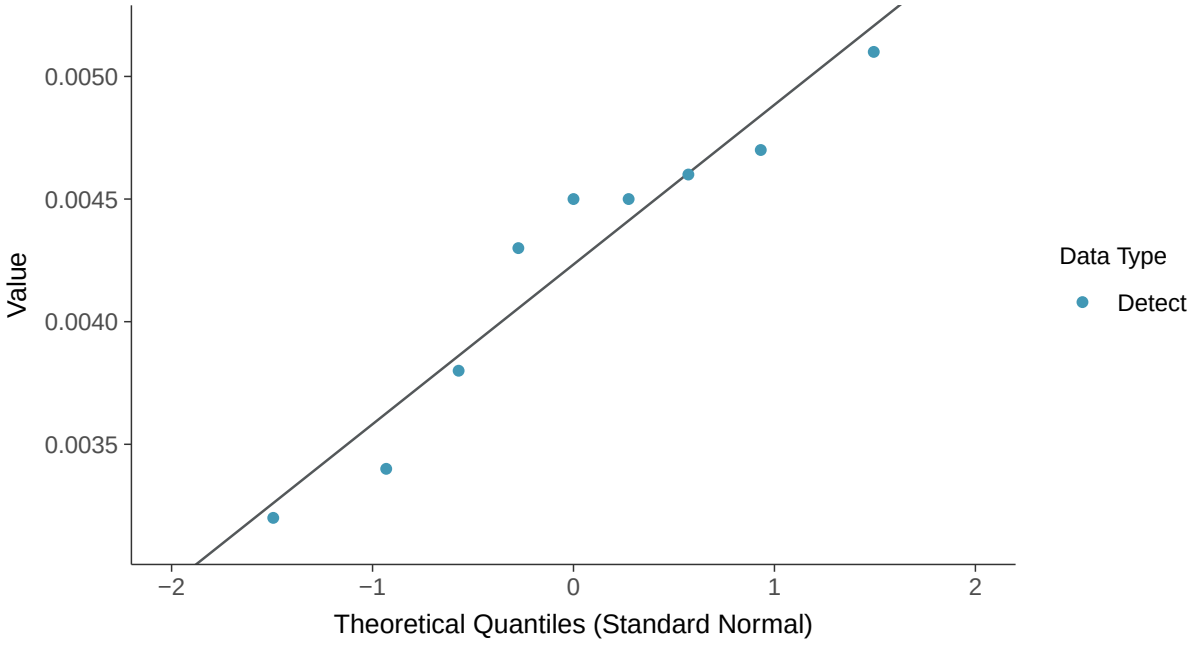
Boxplot by Season

Molybdenum, MW-32 (mg/L)



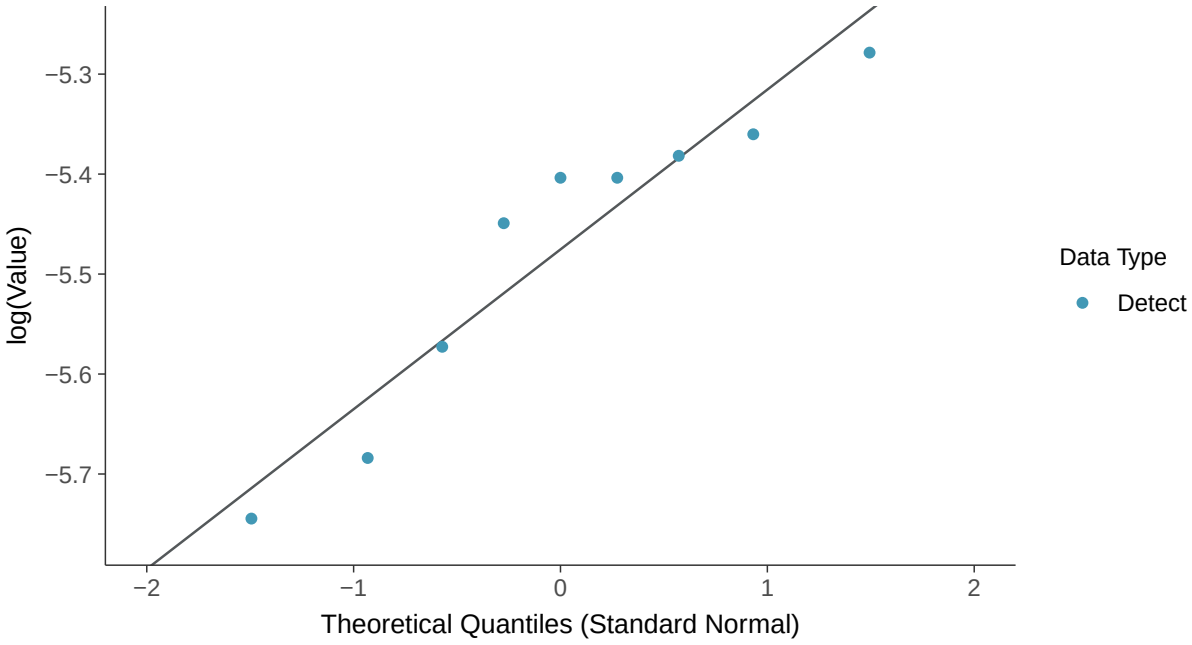
Normal Q-Q plot

Molybdenum, MW-32 (mg/L)



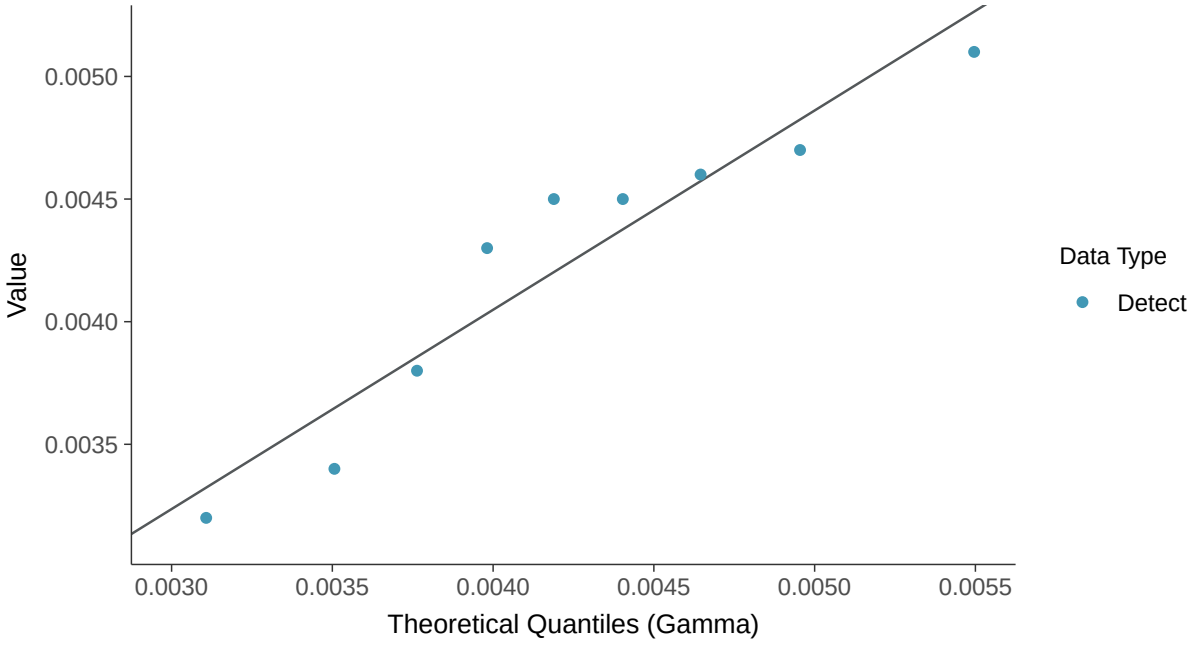
Lognormal Q-Q plot

Molybdenum, MW-32 (mg/L)



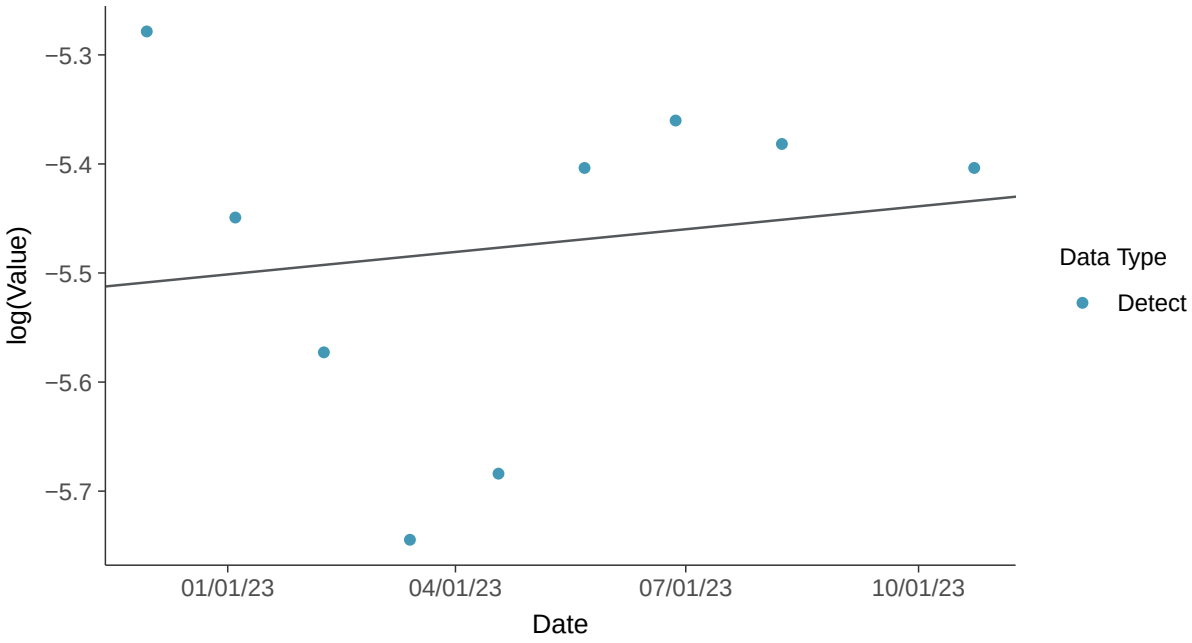
Gamma Q-Q plot

Molybdenum, MW-32 (mg/L)



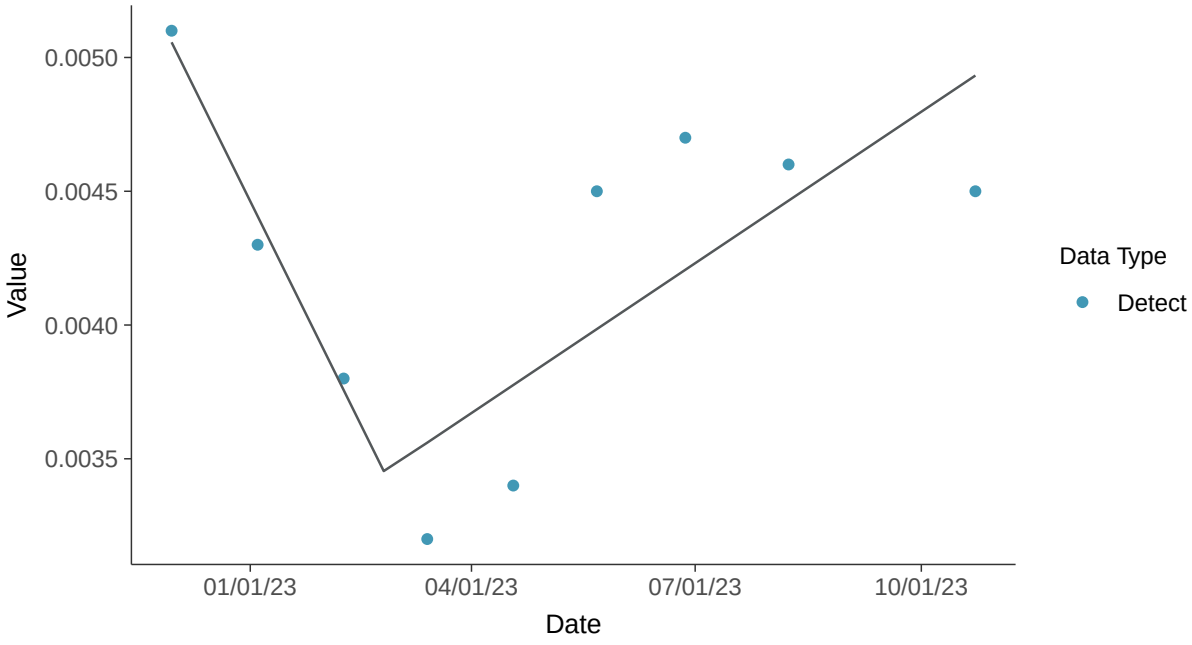
Trend Regression: Lognormal MLE

Molybdenum, MW-32 (mg/L)



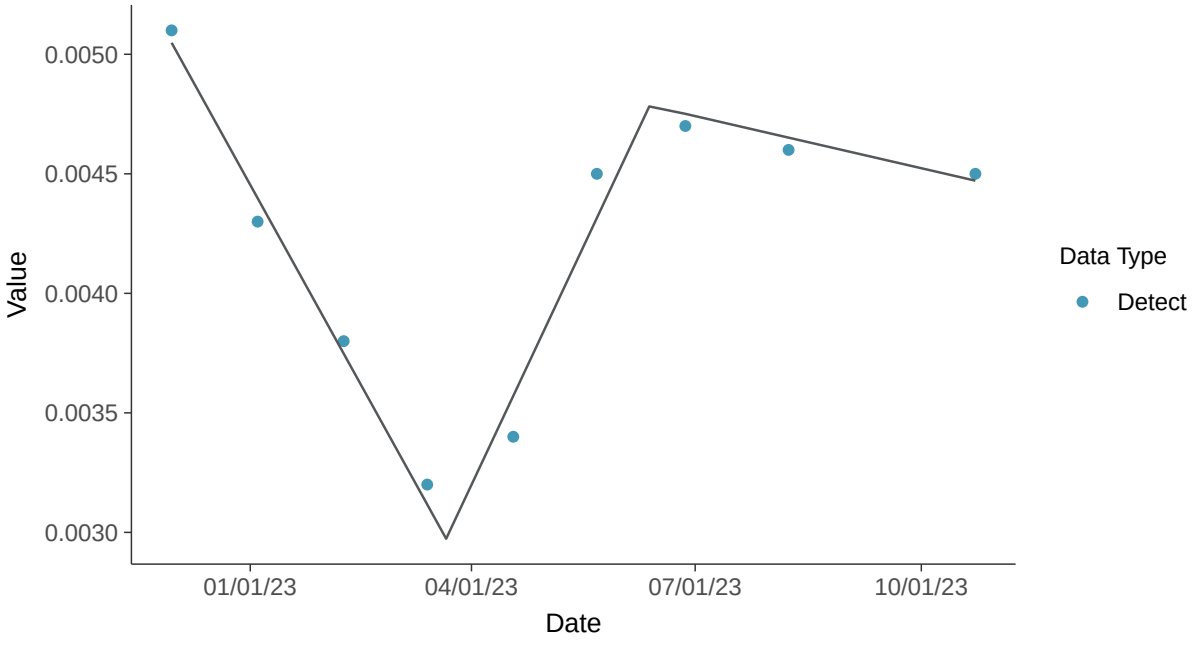
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-32 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-32 (mg/L)

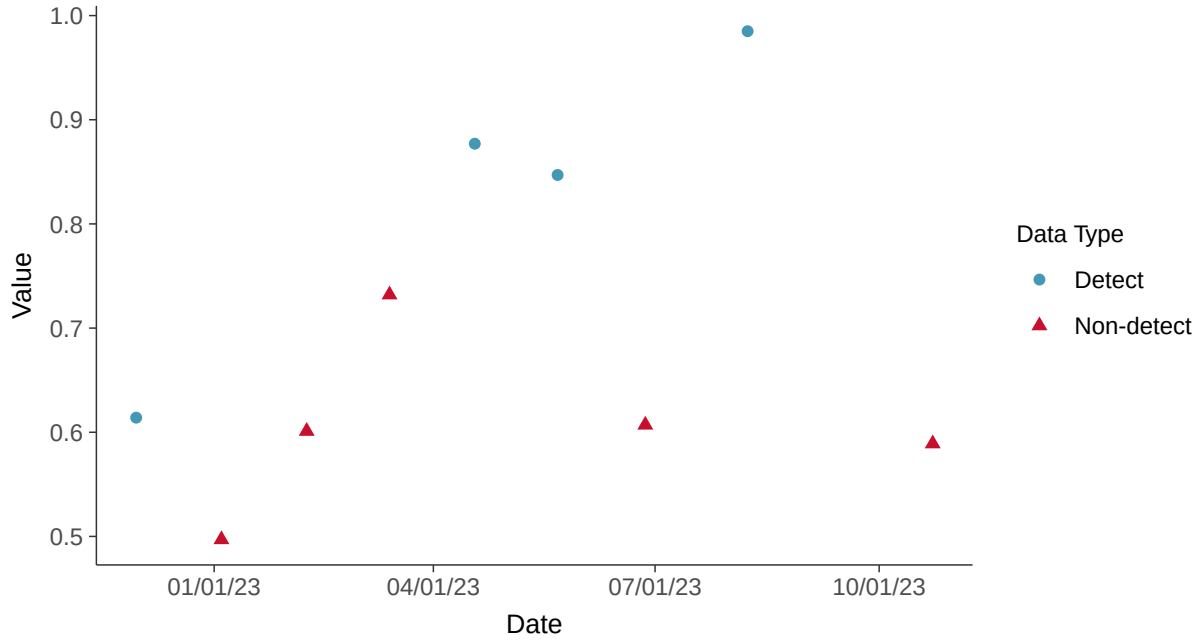


Appendix IV: Radium 226 and 228, MW-32

ID: 2_27_5_121

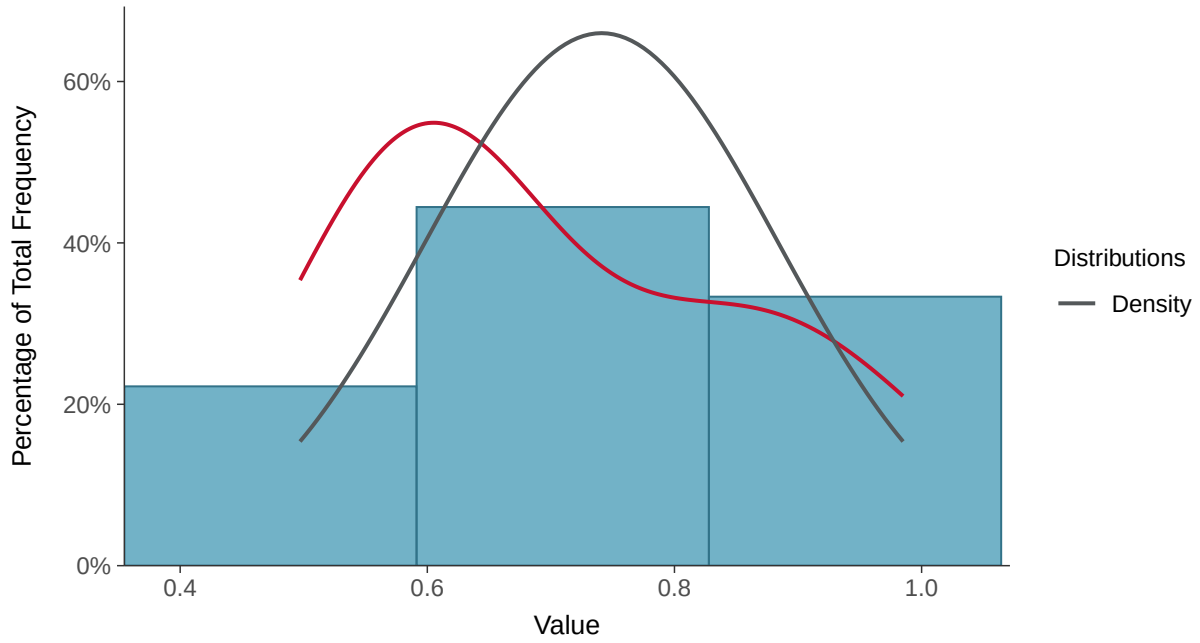
Scatter Plot

Radium 226 and 228, MW-32 (pCi/L)



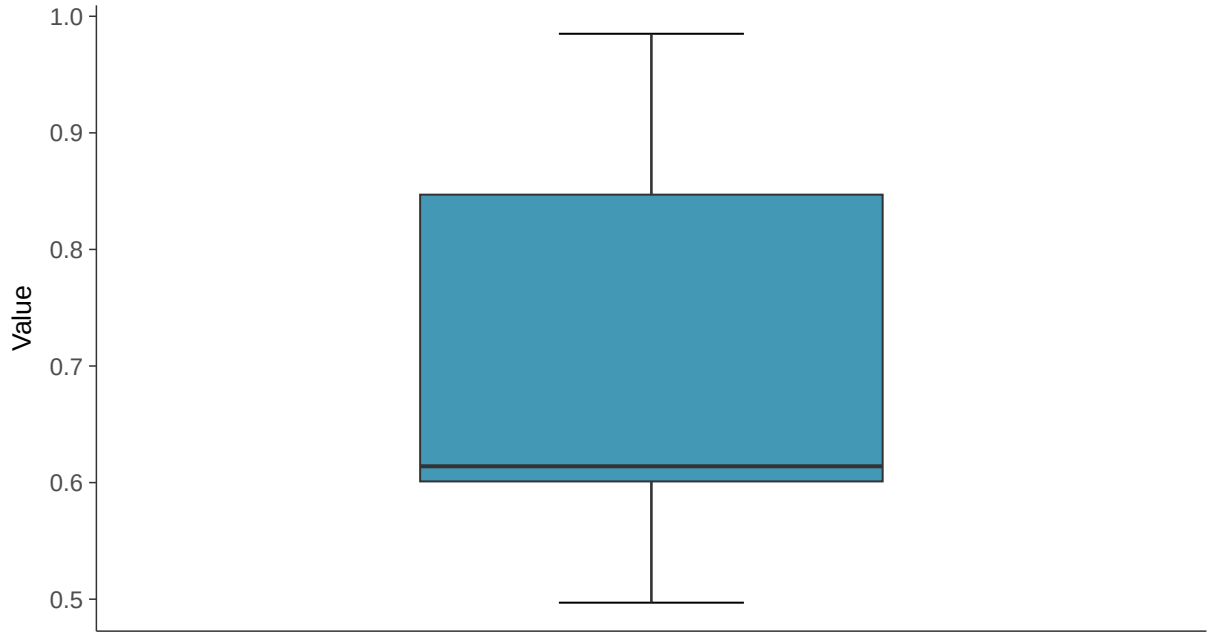
Histogram

Radium 226 and 228, MW-32 (pCi/L)



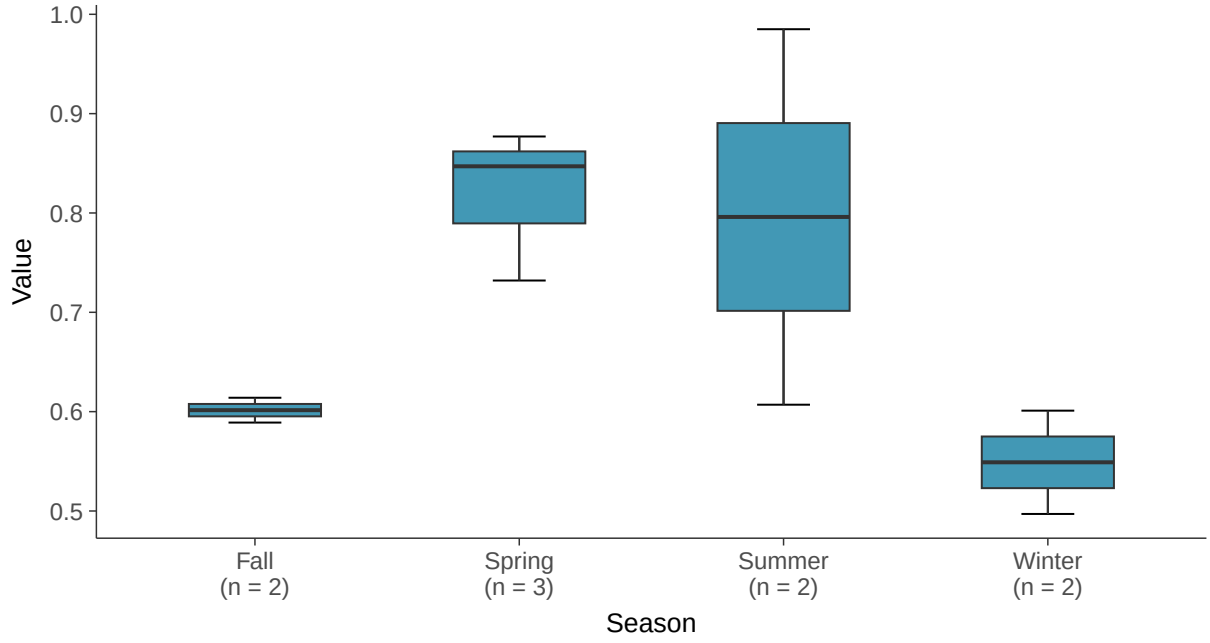
Boxplot

Radium 226 and 228, MW-32 (pCi/L)



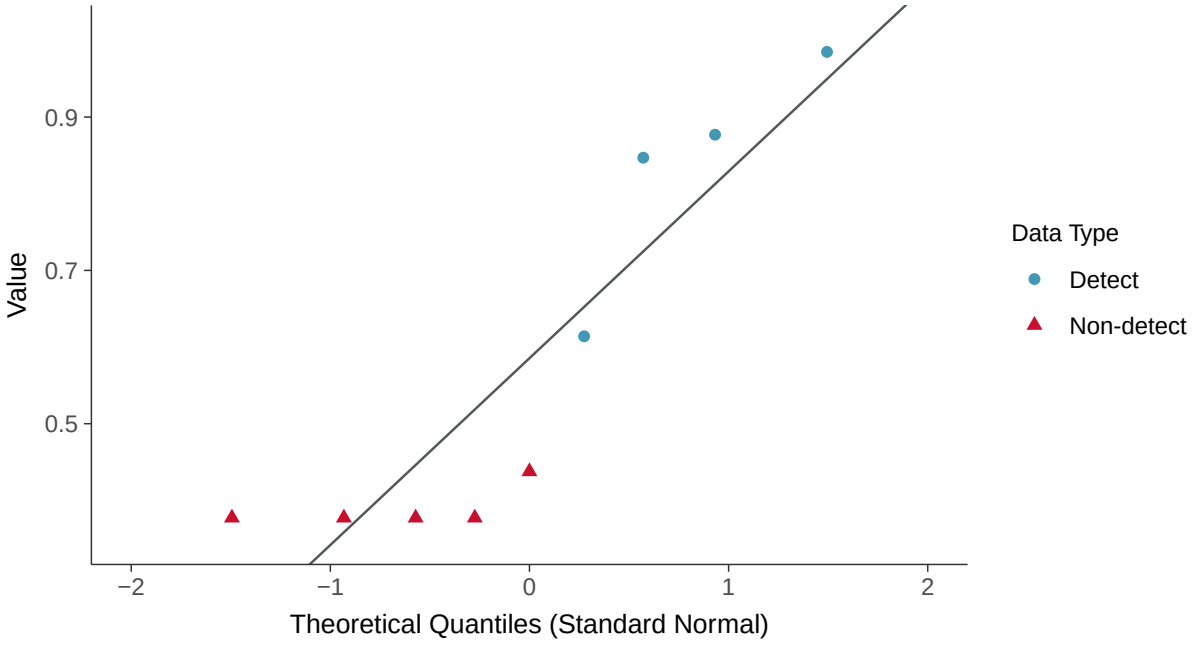
Boxplot by Season

Radium 226 and 228, MW-32 (pCi/L)



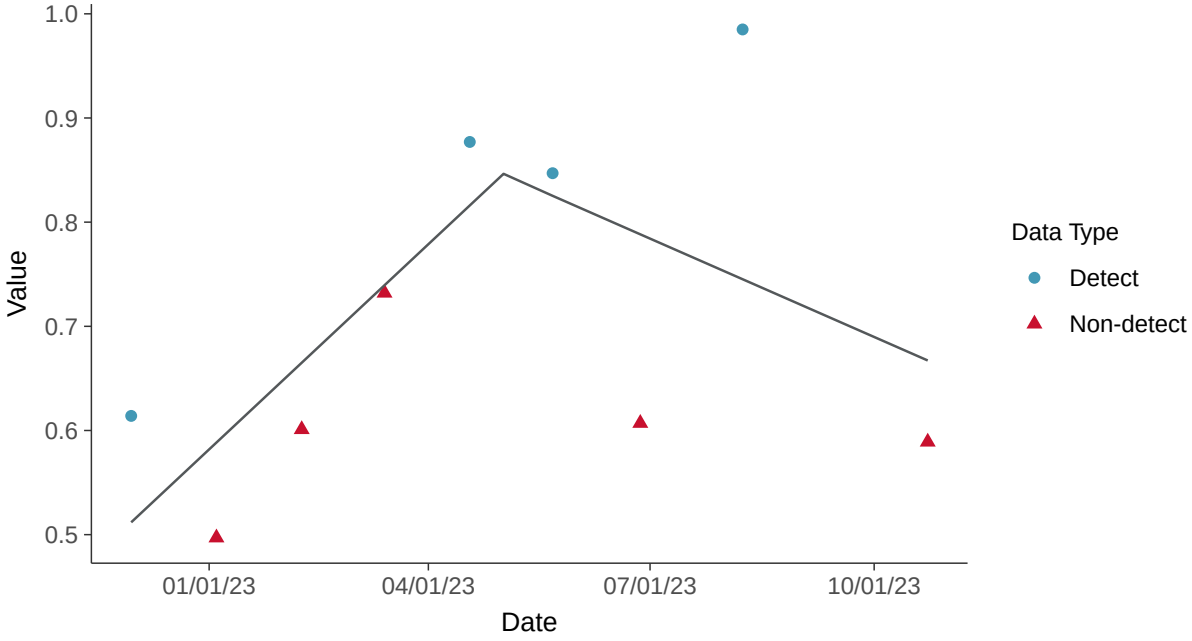
Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-32 (pCi/L)



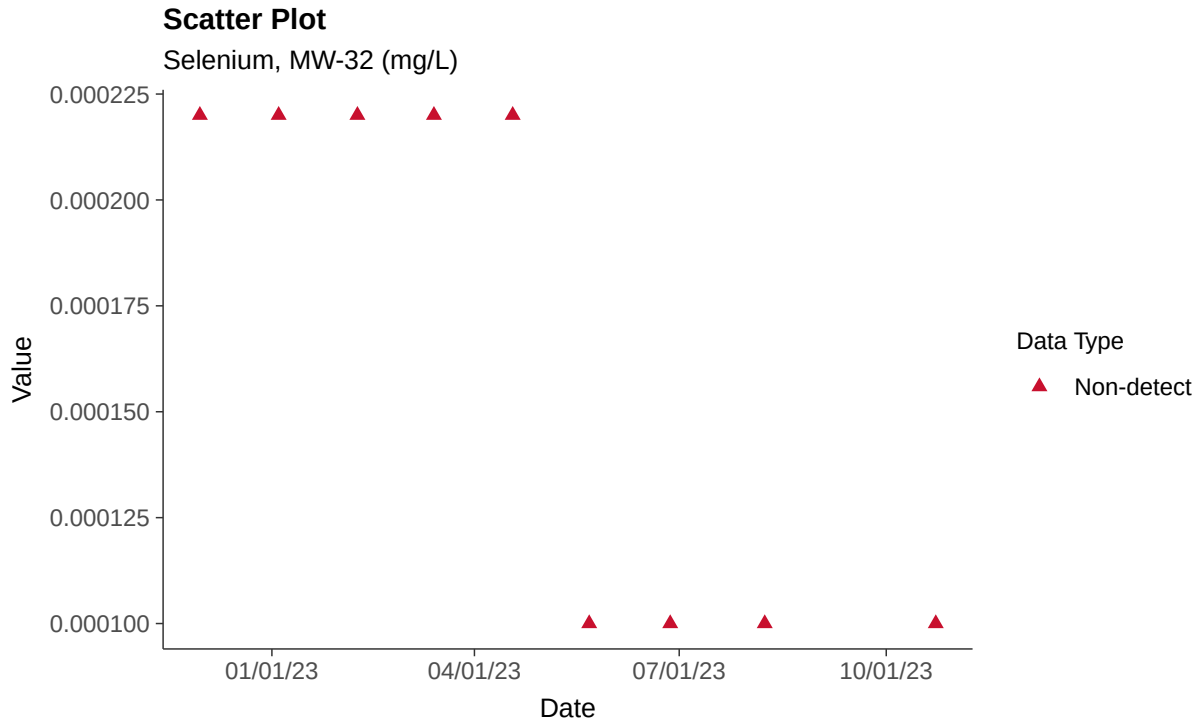
Trend Regression: Piecewise Linear-Linear

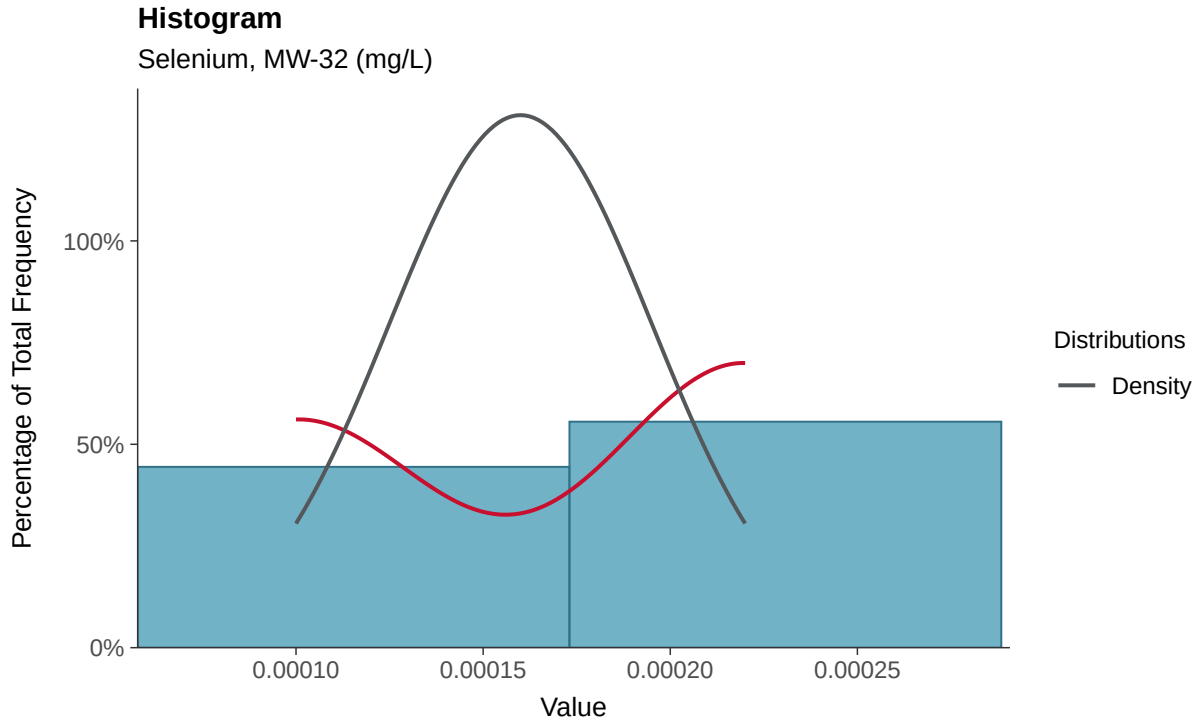
Radium 226 and 228, MW-32 (pCi/L)



Appendix IV: Selenium, MW-32

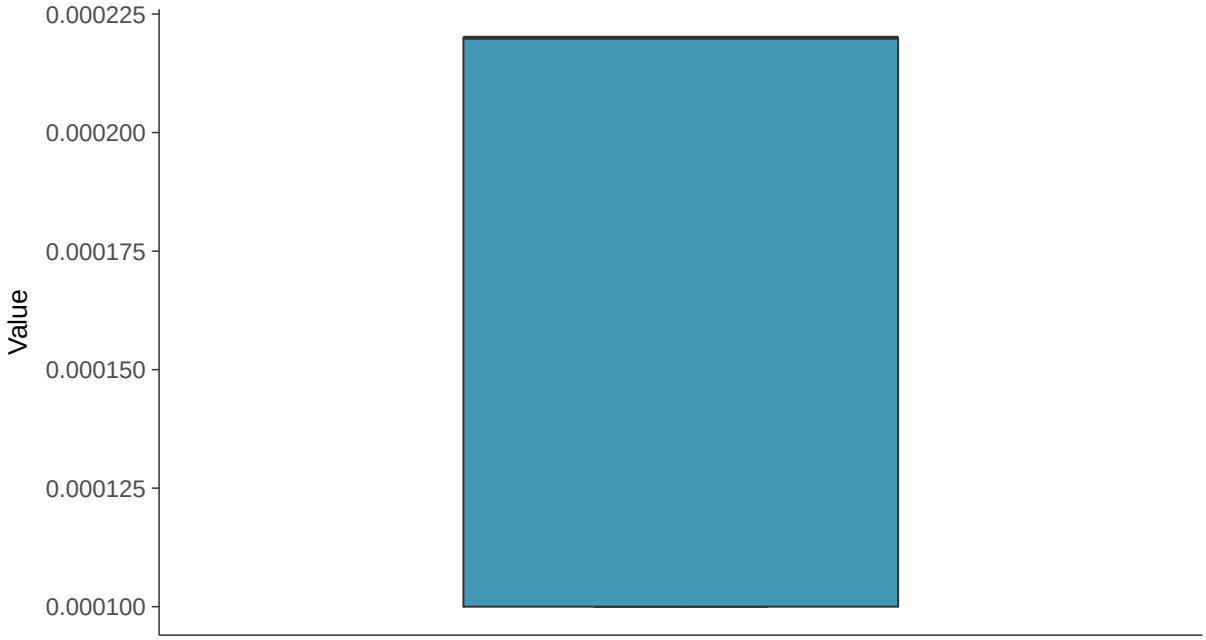
ID: 2_27_5_122





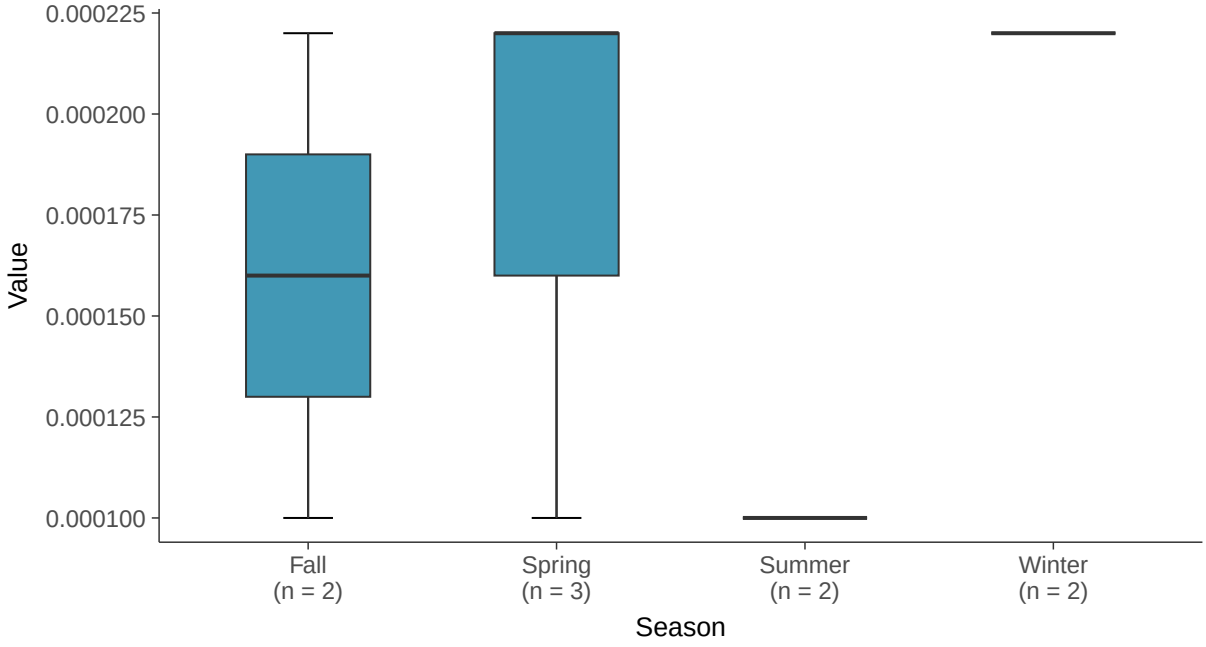
Boxplot

Selenium, MW-32 (mg/L)



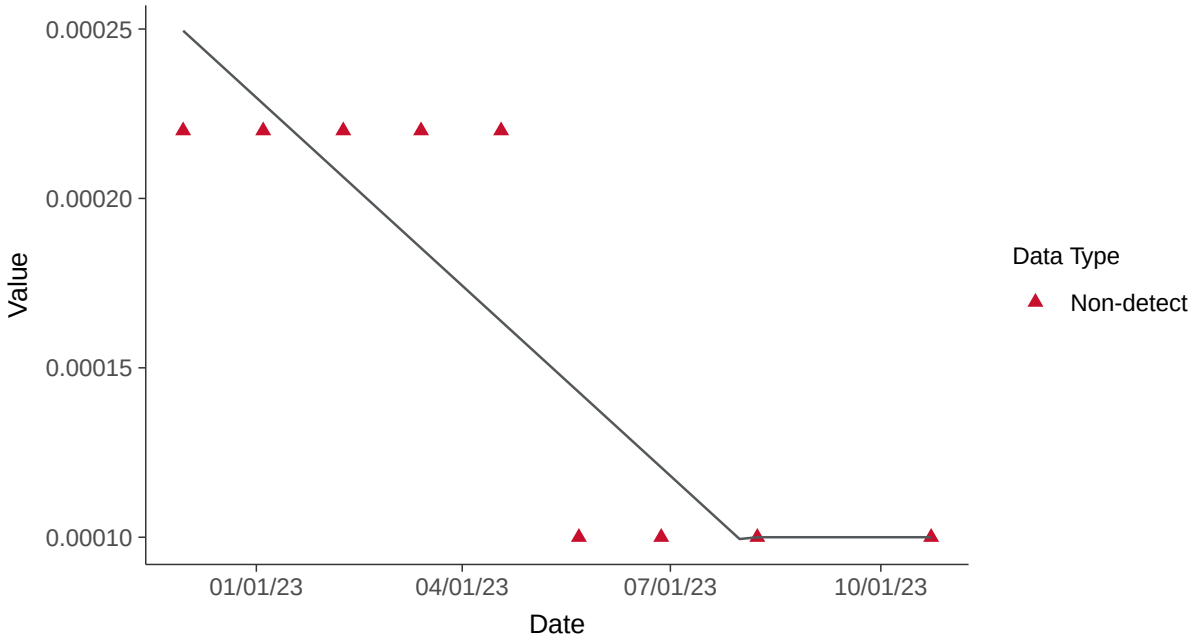
Boxplot by Season

Selenium, MW-32 (mg/L)



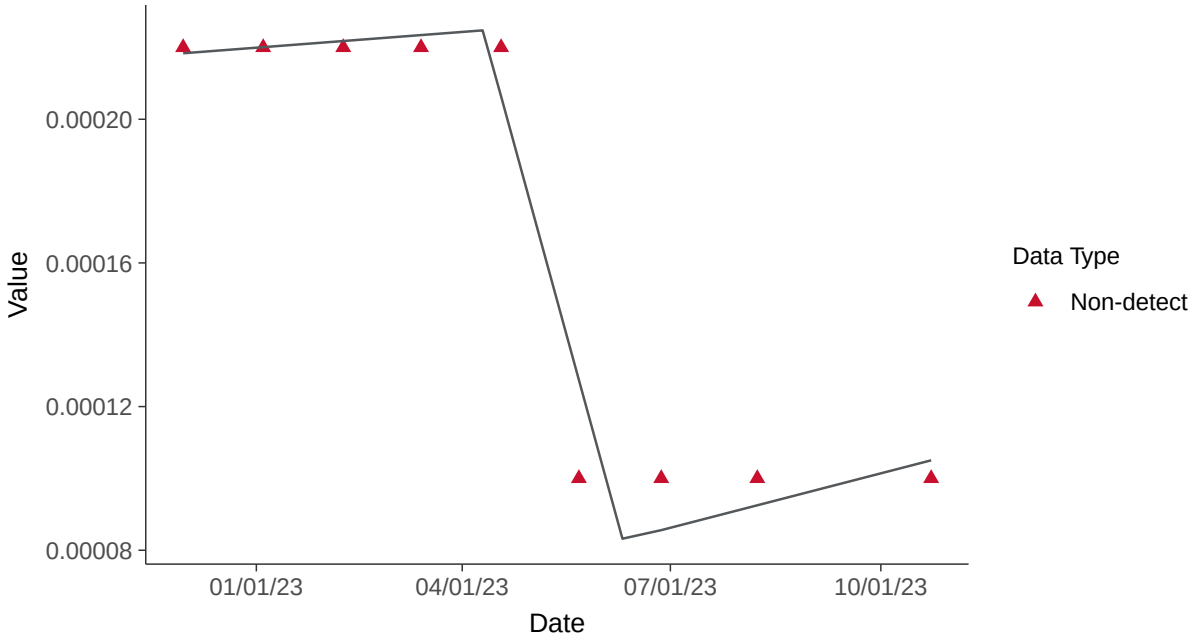
Trend Regression: Piecewise Linear-Linear

Selenium, MW-32 (mg/L)



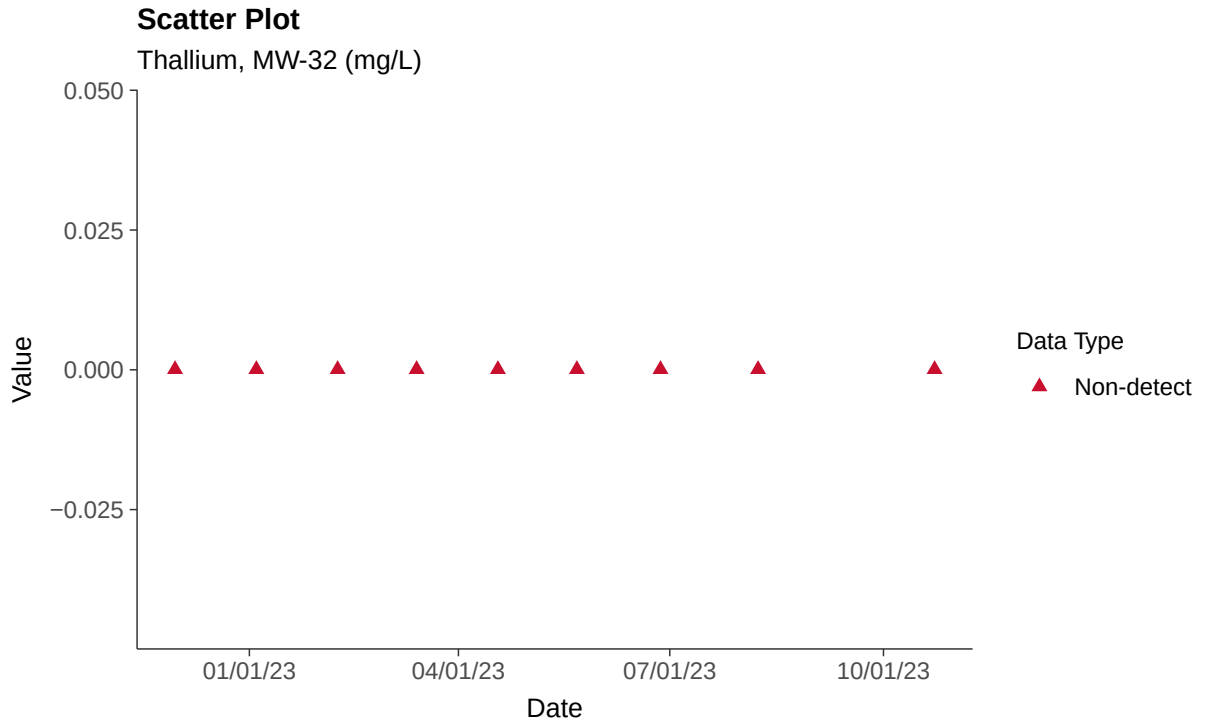
Trend Regression: Piecewise Linear-Linear-Linear

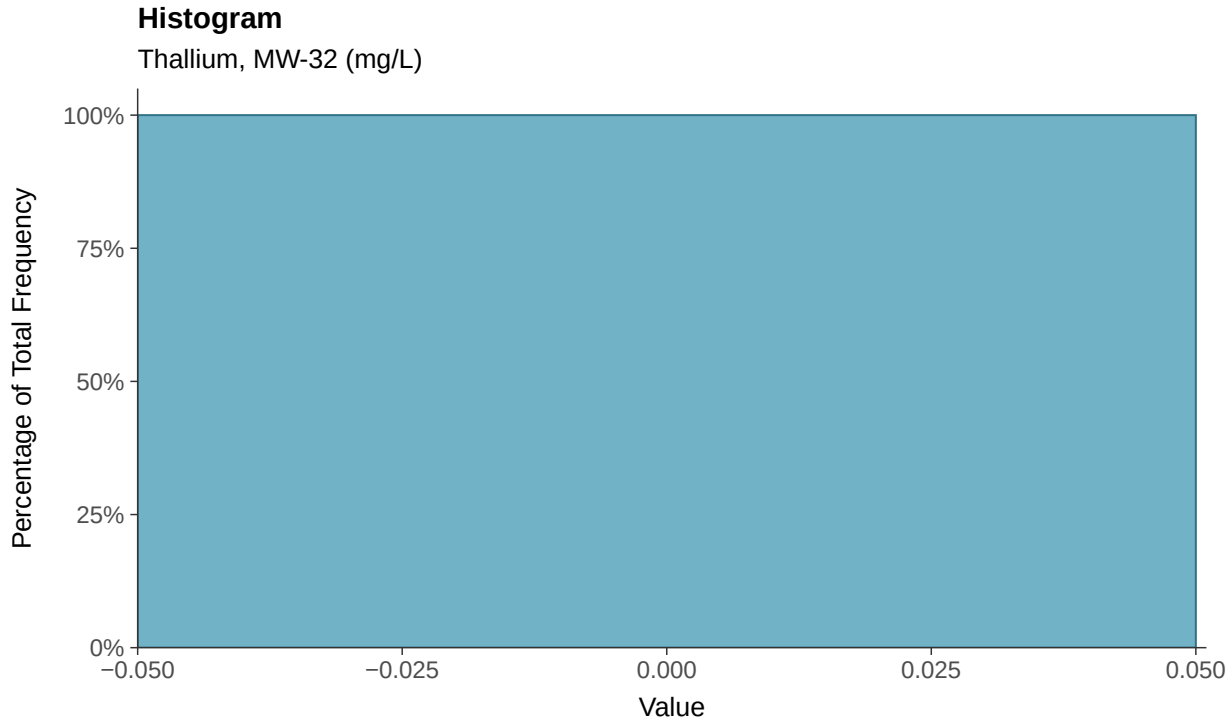
Selenium, MW-32 (mg/L)



Appendix IV: Thallium, MW-32

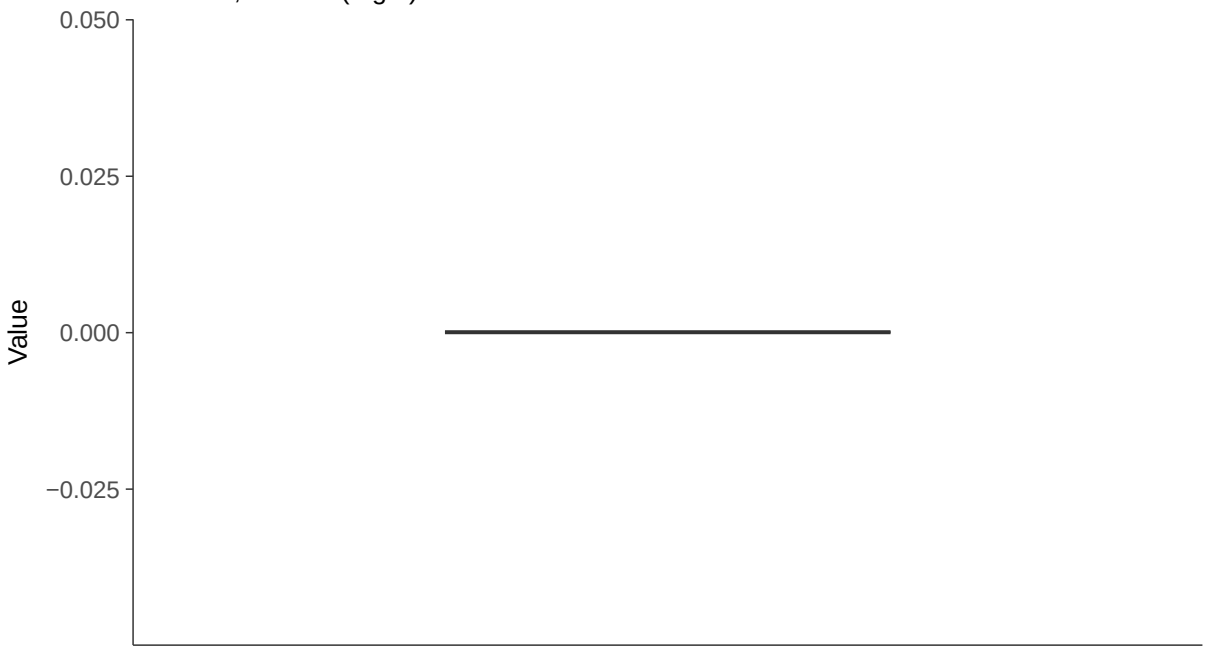
ID: 2_27_5_125





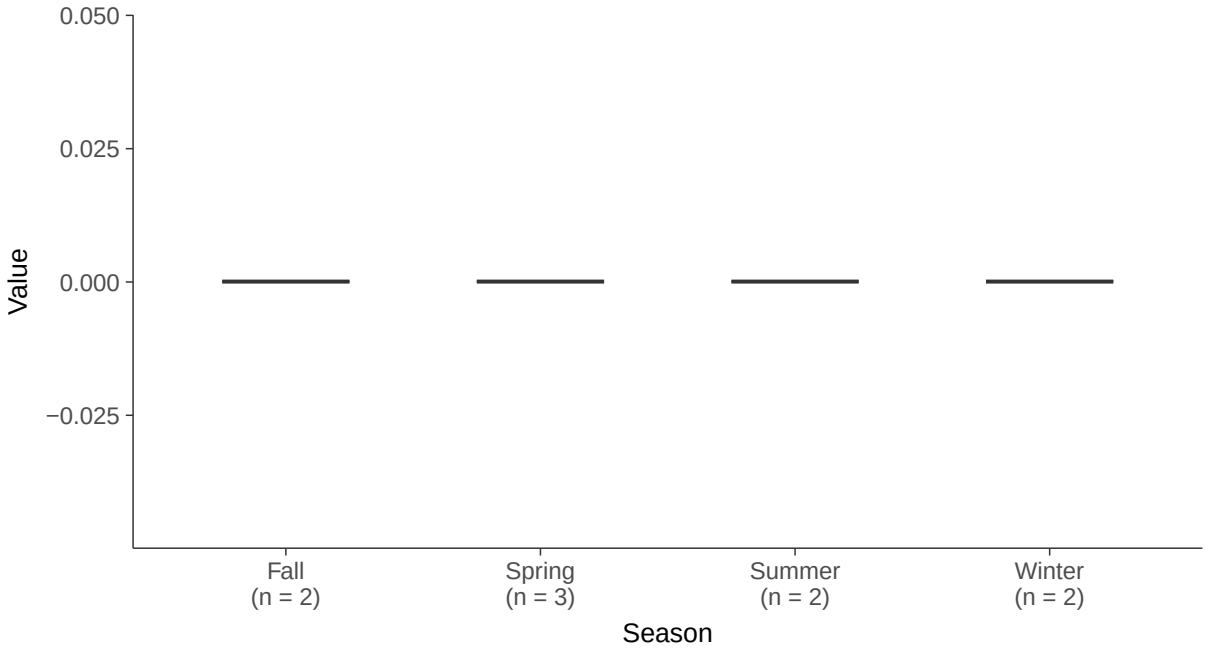
Boxplot

Thallium, MW-32 (mg/L)



Boxplot by Season

Thallium, MW-32 (mg/L)



Grand Haven (Federal Program): Unit 1/2 & 3A/B as of October, 2023

95% Lower Confidence Limits for Assessment Monitoring

ID	Well	Constituent Type	Constituent	Unit	n	% NDs	Date Range	Method	LCL
1_11_4_105	MW-01R	Appendix IV	Antimony	mg/L	9	22%	2022-11-29 to 2023-10-24	Gamma MLE Bootstrap LCL	0.00026
1_11_4_107	MW-01R	Appendix IV	Arsenic	mg/L	9	0%	2022-11-29 to 2023-10-24	Normal LCL	0.0011
1_11_4_108	MW-01R	Appendix IV	Barium	mg/L	9	0%	2022-11-29 to 2023-10-24	Adjusted Gamma LCL	0.25
1_11_4_112	MW-01R	Appendix IV	Beryllium	mg/L	9	0%	2022-11-29 to 2023-10-24	Normal LCL	0.00020
1_11_4_120	MW-01R	Appendix IV	Cadmium	mg/L	9	67%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.000062
1_11_4_124	MW-01R	Appendix IV	Chromium, Total	mg/L	9	0%	2022-11-29 to 2023-10-24	Normal LCL	0.0016
1_11_4_126	MW-01R	Appendix IV	Cobalt	mg/L	9	0%	2022-11-29 to 2023-10-24	Adjusted Gamma LCL	0.0012
1_11_5_101	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	8.8
1_11_5_102	MW-01R	Appendix IV	Lead	mg/L	9	22%	2022-11-29 to 2023-10-24	Gamma MLE Bootstrap LCL	0.00073
1_11_5_103	MW-01R	Appendix IV	Lithium	mg/L	9	0%	2022-11-29 to 2023-10-24	Normal LCL	2.0
1_11_5_104	MW-01R	Appendix IV	Mercury	mg/L	9	100%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.00016
1_11_5_106	MW-01R	Appendix IV	Molybdenum	mg/L	9	11%	2022-11-29 to 2023-10-24	Gamma MLE Bootstrap LCL	0.00066
1_11_5_109	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	9	56%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.656
1_11_5_110	MW-01R	Appendix IV	Selenium	mg/L	9	0%	2022-11-29 to 2023-10-24	Normal LCL	0.000527
1_11_5_113	MW-01R	Appendix IV	Thallium	mg/L	9	100%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.000075
1_11_5_115	MW-06	Appendix IV	Antimony	mg/L	9	78%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.000050
1_11_5_116	MW-06	Appendix IV	Arsenic	mg/L	9	0%	2022-11-29 to 2023-10-24	Normal LCL	0.00058
1_11_5_117	MW-06	Appendix IV	Barium	mg/L	9	0%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	1.3
1_11_5_118	MW-06	Appendix IV	Beryllium	mg/L	9	89%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.000052
1_11_5_121	MW-06	Appendix IV	Cadmium	mg/L	9	100%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.000032
1_11_5_122	MW-06	Appendix IV	Chromium, Total	mg/L	9	0%	2022-11-29 to 2023-10-24	Normal LCL	0.0016
1_11_5_125	MW-06	Appendix IV	Cobalt	mg/L	9	0%	2022-11-29 to 2023-10-24	Normal LCL	0.00052
1_15_4_105	MW-06	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-11-29 to 2023-10-24	Normal LCL	1.1
1_15_4_107	MW-06	Appendix IV	Lead	mg/L	9	67%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.00010
1_15_4_108	MW-06	Appendix IV	Lithium	mg/L	9	0%	2022-11-29 to 2023-10-24	Normal LCL	0.18
1_15_4_112	MW-06	Appendix IV	Mercury	mg/L	9	100%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.00016
1_15_4_120	MW-06	Appendix IV	Molybdenum	mg/L	9	67%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.00025
1_15_4_124	MW-06	Appendix IV	Radium 226 and 228	pCi/L	9	22%	2022-11-29 to 2023-10-24	Normal MLE LCL	0.682
1_15_4_126	MW-06	Appendix IV	Selenium	mg/L	9	56%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.00020
1_15_5_101	MW-06	Appendix IV	Thallium	mg/L	9	100%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.000075
1_15_5_102	MW-08	Appendix IV	Antimony	mg/L	9	33%	2022-12-01 to 2023-10-24	Normal MLE LCL	0.000045
1_15_5_103	MW-08	Appendix IV	Arsenic	mg/L	9	0%	2022-12-01 to 2023-10-24	Normal LCL	0.022
1_15_5_104	MW-08	Appendix IV	Barium	mg/L	9	0%	2022-12-01 to 2023-10-24	Normal LCL	1.2
1_15_5_106	MW-08	Appendix IV	Beryllium	mg/L	9	100%	2022-12-01 to 2023-10-24	Nonparametric LCL around the Median	0.000052
1_15_5_109	MW-08	Appendix IV	Cadmium	mg/L	9	100%	2022-12-01 to 2023-10-24	Nonparametric LCL around the Median	0.000032
1_15_5_110	MW-08	Appendix IV	Chromium, Total	mg/L	9	0%	2022-12-01 to 2023-10-24	Normal LCL	0.00079
1_15_5_113	MW-08	Appendix IV	Cobalt	mg/L	9	0%	2022-12-01 to 2023-10-24	Normal LCL	0.00045
1_15_5_115	MW-08	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-12-01 to 2023-10-24	Normal LCL	0.69
1_15_5_116	MW-08	Appendix IV	Lead	mg/L	9	78%	2022-12-01 to 2023-10-24	Nonparametric LCL around the Median	0.00010
1_15_5_117	MW-08	Appendix IV	Lithium	mg/L	9	0%	2022-12-01 to 2023-10-24	Normal LCL	0.095
1_15_5_118	MW-08	Appendix IV	Mercury	mg/L	9	100%	2022-12-01 to 2023-10-24	Nonparametric LCL around the Median	0.00016
1_15_5_121	MW-08	Appendix IV	Molybdenum	mg/L	9	0%	2022-12-01 to 2023-10-24	Normal LCL	0.00085
1_15_5_122	MW-08	Appendix IV	Radium 226 and 228	pCi/L	9	22%	2022-12-01 to 2023-10-24	Normal MLE LCL	0.761
1_15_5_125	MW-08	Appendix IV	Selenium	mg/L	9	56%	2022-12-01 to 2023-10-24	Nonparametric LCL around the Median	0.00014
1_17_4_105	MW-08	Appendix IV	Thallium	mg/L	9	100%	2022-12-01 to 2023-10-24	Nonparametric LCL around the Median	0.000075
1_17_4_107	MW-09	Appendix IV	Antimony	mg/L	9	56%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.000073
1_17_4_108	MW-09	Appendix IV	Arsenic	mg/L	9	0%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.0013
1_17_4_112	MW-09	Appendix IV	Barium	mg/L	9	0%	2022-11-28 to 2023-10-24	Lognormal H-LCL	0.30
1_17_4_120	MW-09	Appendix IV	Beryllium	mg/L	9	89%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.000052
1_17_4_124	MW-09	Appendix IV	Cadmium	mg/L	9	100%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.000032
1_17_4_126	MW-09	Appendix IV	Chromium, Total	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.0021
1_17_5_101	MW-09	Appendix IV	Cobalt	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.00041
1_17_5_102	MW-09	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	2.4
1_17_5_103	MW-09	Appendix IV	Lead	mg/L	9	100%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.00010
1_17_5_104	MW-09	Appendix IV	Lithium	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.29
1_17_5_106	MW-09	Appendix IV	Mercury	mg/L	9	89%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.00016
1_17_5_109	MW-09	Appendix IV	Molybdenum	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.018
1_17_5_110	MW-09	Appendix IV	Radium 226 and 228	pCi/L	9	89%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.678
1_17_5_113	MW-09	Appendix IV	Selenium	mg/L	9	22%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.00022
1_17_5_115	MW-09	Appendix IV	Thallium	mg/L	9	100%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.000075
1_17_5_116	MW-18	Appendix IV	Antimony	mg/L	9	22%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.00012
1_17_5_117	MW-18	Appendix IV	Arsenic	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.020
1_17_5_118	MW-18	Appendix IV	Barium	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.016
1_17_5_121	MW-18	Appendix IV	Beryllium	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.000052
1_17_5_122	MW-18	Appendix IV	Cadmium	mg/L	9	22%	2022-11-30 to 2023-10-24	Normal MLE LCL	0.00010
1_17_5_125	MW-18	Appendix IV	Chromium, Total	mg/L	9	89%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.00018
1_18_4_105	MW-18	Appendix IV	Cobalt	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.0024
1_18_4_107	MW-18	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	3.6
1_18_4_108	MW-18	Appendix IV	Lead	mg/L	9	67%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.00016
1_18_4_112	MW-18	Appendix IV	Lithium	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.031
1_18_4_120	MW-18	Appendix IV	Mercury	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.00016

1_18_4_124	MW-18	Appendix IV	Molybdenum	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.012
1_18_4_126	MW-18	Appendix IV	Radium 226 and 228	pCi/L	9	67%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.501
1_18_5_101	MW-18	Appendix IV	Selenium	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.00027
1_18_5_102	MW-18	Appendix IV	Thallium	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.000075
1_18_5_103	MW-19	Appendix IV	Antimony	mg/L	9	89%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.000050
1_18_5_104	MW-19	Appendix IV	Arsenic	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.0044
1_18_5_106	MW-19	Appendix IV	Barium	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.037
1_18_5_109	MW-19	Appendix IV	Beryllium	mg/L	9	33%	2022-11-30 to 2023-10-24	Normal MLE LCL	0.000053
1_18_5_110	MW-19	Appendix IV	Cadmium	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.000032
1_18_5_113	MW-19	Appendix IV	Chromium, Total	mg/L	9	44%	2022-11-30 to 2023-10-24	Normal MLE LCL	0.00011
1_18_5_115	MW-19	Appendix IV	Cobalt	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.00041
1_18_5_116	MW-19	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	1.9
1_18_5_117	MW-19	Appendix IV	Lead	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.00010
1_18_5_118	MW-19	Appendix IV	Lithium	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.091
1_18_5_121	MW-19	Appendix IV	Mercury	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.00016
1_18_5_122	MW-19	Appendix IV	Molybdenum	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.0089
1_18_5_125	MW-19	Appendix IV	Radium 226 and 228	pCi/L	9	33%	2022-11-30 to 2023-10-24	Normal MLE LCL	0.600
1_22_4_105	MW-19	Appendix IV	Selenium	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.00010
1_22_4_107	MW-19	Appendix IV	Thallium	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.000075
1_22_4_108	MW-20	Appendix IV	Antimony	mg/L	9	22%	2022-11-30 to 2023-10-24	Normal MLE LCL	0.000065
1_22_4_112	MW-20	Appendix IV	Arsenic	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.0013
1_22_4_120	MW-20	Appendix IV	Barium	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.39
1_22_4_124	MW-20	Appendix IV	Beryllium	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.000052
1_22_4_126	MW-20	Appendix IV	Cadmium	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.000032
1_22_5_101	MW-20	Appendix IV	Chromium, Total	mg/L	9	56%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.00019
1_22_5_102	MW-20	Appendix IV	Cobalt	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.0012
1_22_5_103	MW-20	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.21
1_22_5_104	MW-20	Appendix IV	Lead	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.0018
1_22_5_106	MW-20	Appendix IV	Lithium	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.059
1_22_5_109	MW-20	Appendix IV	Mercury	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.00016
1_22_5_110	MW-20	Appendix IV	Molybdenum	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.0040
1_22_5_113	MW-20	Appendix IV	Radium 226 and 228	pCi/L	9	56%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.499
1_22_5_115	MW-20	Appendix IV	Selenium	mg/L	9	56%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.00011
1_22_5_116	MW-20	Appendix IV	Thallium	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.000075
1_22_5_117	MW-30	Appendix IV	Antimony	mg/L	9	89%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.000050
1_22_5_118	MW-30	Appendix IV	Arsenic	mg/L	9	22%	2022-11-30 to 2023-10-23	Normal MLE LCL	0.00021
1_22_5_121	MW-30	Appendix IV	Barium	mg/L	9	0%	2022-11-30 to 2023-10-23	Normal LCL	0.054
1_22_5_122	MW-30	Appendix IV	Beryllium	mg/L	9	89%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.000052
1_22_5_125	MW-30	Appendix IV	Cadmium	mg/L	9	100%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.000032
1_23_4_105	MW-30	Appendix IV	Chromium, Total	mg/L	9	0%	2022-11-30 to 2023-10-23	Normal LCL	0.0079
1_23_4_107	MW-30	Appendix IV	Cobalt	mg/L	9	0%	2022-11-30 to 2023-10-23	Adjusted Gamma LCL	0.00095
1_23_4_108	MW-30	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-11-30 to 2023-10-23	Normal LCL	1.0
1_23_4_112	MW-30	Appendix IV	Lead	mg/L	9	100%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.00022
1_23_4_120	MW-30	Appendix IV	Lithium	mg/L	9	0%	2022-11-30 to 2023-10-23	Adjusted Gamma LCL	0.11
1_23_4_124	MW-30	Appendix IV	Mercury	mg/L	9	100%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.00016
1_23_4_126	MW-30	Appendix IV	Molybdenum	mg/L	9	33%	2022-11-30 to 2023-10-23	Normal MLE LCL	0.00026
1_23_5_101	MW-30	Appendix IV	Radium 226 and 228	pCi/L	9	56%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.526
1_23_5_102	MW-30	Appendix IV	Selenium	mg/L	9	67%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.00011
1_23_5_103	MW-30	Appendix IV	Thallium	mg/L	9	100%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.000075
1_23_5_104	MW-31	Appendix IV	Antimony	mg/L	9	44%	2022-12-01 to 2023-10-23	Normal MLE LCL	0.000052
1_23_5_106	MW-31	Appendix IV	Arsenic	mg/L	9	0%	2022-12-01 to 2023-10-23	Normal LCL	0.0012
1_23_5_109	MW-31	Appendix IV	Barium	mg/L	9	0%	2022-12-01 to 2023-10-23	Normal LCL	0.14
1_23_5_110	MW-31	Appendix IV	Beryllium	mg/L	9	100%	2022-12-01 to 2023-10-23	Nonparametric LCL around the Median	0.000052
1_23_5_113	MW-31	Appendix IV	Cadmium	mg/L	9	100%	2022-12-01 to 2023-10-23	Nonparametric LCL around the Median	0.000032
1_23_5_115	MW-31	Appendix IV	Chromium, Total	mg/L	9	0%	2022-12-01 to 2023-10-23	Normal LCL	0.0020
1_23_5_116	MW-31	Appendix IV	Cobalt	mg/L	9	0%	2022-12-01 to 2023-10-23	Normal LCL	0.00016
1_23_5_117	MW-31	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-12-01 to 2023-10-23	Normal LCL	4.7
1_23_5_118	MW-31	Appendix IV	Lead	mg/L	9	89%	2022-12-01 to 2023-10-23	Nonparametric LCL around the Median	0.00010
1_23_5_121	MW-31	Appendix IV	Lithium	mg/L	9	0%	2022-12-01 to 2023-10-23	Normal LCL	0.050
1_23_5_122	MW-31	Appendix IV	Mercury	mg/L	9	100%	2022-12-01 to 2023-10-23	Nonparametric LCL around the Median	0.00016
1_23_5_125	MW-31	Appendix IV	Molybdenum	mg/L	9	0%	2022-12-01 to 2023-10-23	Nonparametric LCL around the Median	0.0011
1_24_4_105	MW-31	Appendix IV	Radium 226 and 228	pCi/L	9	33%	2022-12-01 to 2023-10-23	Normal MLE LCL	0.441
1_24_4_107	MW-31	Appendix IV	Selenium	mg/L	9	56%	2022-12-01 to 2023-10-23	Nonparametric LCL around the Median	0.00012
1_24_4_108	MW-31	Appendix IV	Thallium	mg/L	9	100%	2022-12-01 to 2023-10-23	Nonparametric LCL around the Median	0.000075
1_24_4_112	MW-02	Appendix IV	Antimony	mg/L	9	22%	2022-11-28 to 2023-10-24	Normal MLE LCL	0.00013
1_24_4_120	MW-02	Appendix IV	Arsenic	mg/L	9	0%	2022-11-28 to 2023-10-24	Adjusted Gamma LCL	0.0077
1_24_4_124	MW-02	Appendix IV	Barium	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.44
1_24_4_126	MW-02	Appendix IV	Beryllium	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.00026
1_24_5_101	MW-02	Appendix IV	Cadmium	mg/L	9	67%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.000041
1_24_5_102	MW-02	Appendix IV	Chromium, Total	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.032
1_24_5_103	MW-02	Appendix IV	Cobalt	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.0048
1_24_5_104	MW-02	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	8.7
1_24_5_106	MW-02	Appendix IV	Lead	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.0019
1_24_5_109	MW-02	Appendix IV	Lithium	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	1.2

1_24_5_110	MW-02	Appendix IV	Mercury	mg/L	9	100%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.00016
1_24_5_113	MW-02	Appendix IV	Molybdenum	mg/L	9	0%	2022-11-28 to 2023-10-24	Lognormal H-LCL	0.0061
1_24_5_115	MW-02	Appendix IV	Radium 226 and 228	pCi/L	9	33%	2022-11-28 to 2023-10-24	Normal MLE LCL	0.897
1_24_5_116	MW-02	Appendix IV	Selenium	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.00092
1_24_5_117	MW-02	Appendix IV	Thallium	mg/L	9	89%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.000075
1_24_5_118	MW-03	Appendix IV	Antimony	mg/L	9	56%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.000092
1_24_5_121	MW-03	Appendix IV	Arsenic	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.00072
1_24_5_122	MW-03	Appendix IV	Barium	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.30
1_24_5_125	MW-03	Appendix IV	Beryllium	mg/L	9	78%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.000052
1_25_4_105	MW-03	Appendix IV	Cadmium	mg/L	9	89%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.000032
1_25_4_107	MW-03	Appendix IV	Chromium, Total	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.0040
1_25_4_108	MW-03	Appendix IV	Cobalt	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.00065
1_25_4_112	MW-03	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.54
1_25_4_120	MW-03	Appendix IV	Lead	mg/L	9	89%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.00022
1_25_4_124	MW-03	Appendix IV	Lithium	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.038
1_25_4_126	MW-03	Appendix IV	Mercury	mg/L	9	89%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.00016
1_25_5_101	MW-03	Appendix IV	Molybdenum	mg/L	9	78%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.00025
1_25_5_102	MW-03	Appendix IV	Radium 226 and 228	pCi/L	9	11%	2022-11-28 to 2023-10-24	Normal MLE LCL	0.937
1_25_5_103	MW-03	Appendix IV	Selenium	mg/L	9	33%	2022-11-28 to 2023-10-24	Normal MLE LCL	0.00020
1_25_5_104	MW-03	Appendix IV	Thallium	mg/L	9	89%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.000075
1_25_5_106	MW-04	Appendix IV	Antimony	mg/L	9	67%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.000050
1_25_5_109	MW-04	Appendix IV	Arsenic	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.00075
1_25_5_110	MW-04	Appendix IV	Barium	mg/L	9	0%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.11
1_25_5_113	MW-04	Appendix IV	Beryllium	mg/L	9	100%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.000052
1_25_5_115	MW-04	Appendix IV	Cadmium	mg/L	9	100%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.000032
1_25_5_116	MW-04	Appendix IV	Chromium, Total	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.0032
1_25_5_117	MW-04	Appendix IV	Cobalt	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.00043
1_25_5_118	MW-04	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	1.12
1_25_5_121	MW-04	Appendix IV	Lead	mg/L	9	100%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.00010
1_25_5_122	MW-04	Appendix IV	Lithium	mg/L	9	0%	2022-11-28 to 2023-10-24	Normal LCL	0.058
1_25_5_125	MW-04	Appendix IV	Mercury	mg/L	9	100%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.00016
1_26_4_105	MW-04	Appendix IV	Molybdenum	mg/L	9	22%	2022-11-28 to 2023-10-24	Normal MLE LCL	0.00056
1_26_4_107	MW-04	Appendix IV	Radium 226 and 228	pCi/L	9	11%	2022-11-28 to 2023-10-24	Normal MLE LCL	0.968
1_26_4_108	MW-04	Appendix IV	Selenium	mg/L	9	56%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.00017
1_26_4_112	MW-04	Appendix IV	Thallium	mg/L	9	100%	2022-11-28 to 2023-10-24	Nonparametric LCL around the Median	0.000075
1_26_4_120	MW-07	Appendix IV	Antimony	mg/L	9	89%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.000050
1_26_4_124	MW-07	Appendix IV	Arsenic	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.00018
1_26_4_126	MW-07	Appendix IV	Barium	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.31
1_26_5_101	MW-07	Appendix IV	Beryllium	mg/L	9	67%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.000052
1_26_5_102	MW-07	Appendix IV	Cadmium	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.000032
1_26_5_103	MW-07	Appendix IV	Chromium, Total	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.00031
1_26_5_104	MW-07	Appendix IV	Cobalt	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.00087
1_26_5_106	MW-07	Appendix IV	Fluoride (App IV)	mg/L	9	11%	2022-11-30 to 2023-10-24	Normal MLE LCL	0.081
1_26_5_109	MW-07	Appendix IV	Lead	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.00010
1_26_5_110	MW-07	Appendix IV	Lithium	mg/L	9	0%	2022-11-30 to 2023-10-24	Normal LCL	0.0054
1_26_5_113	MW-07	Appendix IV	Mercury	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.00016
1_26_5_115	MW-07	Appendix IV	Molybdenum	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.00025
1_26_5_116	MW-07	Appendix IV	Radium 226 and 228	pCi/L	9	22%	2022-11-30 to 2023-10-24	Normal MLE LCL	0.605
1_26_5_117	MW-07	Appendix IV	Selenium	mg/L	9	89%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.00010
1_26_5_118	MW-07	Appendix IV	Thallium	mg/L	9	100%	2022-11-30 to 2023-10-24	Nonparametric LCL around the Median	0.000075
1_26_5_121	MW-10	Appendix IV	Antimony	mg/L	9	56%	2022-11-29 to 2023-10-23	Nonparametric LCL around the Median	0.000050
1_26_5_122	MW-10	Appendix IV	Arsenic	mg/L	9	0%	2022-11-29 to 2023-10-23	Normal LCL	0.00038
1_26_5_125	MW-10	Appendix IV	Barium	mg/L	9	0%	2022-11-29 to 2023-10-23	Normal LCL	0.21
2_12_4_105	MW-10	Appendix IV	Beryllium	mg/L	9	33%	2022-11-29 to 2023-10-23	Normal MLE LCL	0.000013
2_12_4_107	MW-10	Appendix IV	Cadmium	mg/L	9	100%	2022-11-29 to 2023-10-23	Nonparametric LCL around the Median	0.000032
2_12_4_108	MW-10	Appendix IV	Chromium, Total	mg/L	9	0%	2022-11-29 to 2023-10-23	Normal LCL	0.0030
2_12_4_112	MW-10	Appendix IV	Cobalt	mg/L	9	0%	2022-11-29 to 2023-10-23	Normal LCL	0.00035
2_12_4_120	MW-10	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-11-29 to 2023-10-23	Normal LCL	4.7
2_12_4_124	MW-10	Appendix IV	Lead	mg/L	9	78%	2022-11-29 to 2023-10-23	Nonparametric LCL around the Median	0.00012
2_12_4_126	MW-10	Appendix IV	Lithium	mg/L	9	0%	2022-11-29 to 2023-10-23	Normal LCL	0.81
2_12_5_101	MW-10	Appendix IV	Mercury	mg/L	9	100%	2022-11-29 to 2023-10-23	Nonparametric LCL around the Median	0.00016
2_12_5_102	MW-10	Appendix IV	Molybdenum	mg/L	9	0%	2022-11-29 to 2023-10-23	Normal LCL	0.0029
2_12_5_103	MW-10	Appendix IV	Radium 226 and 228	pCi/L	9	89%	2022-11-29 to 2023-10-23	Nonparametric LCL around the Median	0.645
2_12_5_104	MW-10	Appendix IV	Selenium	mg/L	9	11%	2022-11-29 to 2023-10-23	Normal MLE LCL	0.00029
2_12_5_106	MW-10	Appendix IV	Thallium	mg/L	9	100%	2022-11-29 to 2023-10-23	Nonparametric LCL around the Median	0.000075
2_12_5_109	MW-11	Appendix IV	Antimony	mg/L	9	67%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.000050
2_12_5_110	MW-11	Appendix IV	Arsenic	mg/L	9	0%	2022-11-29 to 2023-10-24	Normal LCL	0.0011
2_12_5_113	MW-11	Appendix IV	Barium	mg/L	9	0%	2022-11-29 to 2023-10-24	Normal LCL	0.49
2_12_5_115	MW-11	Appendix IV	Beryllium	mg/L	9	89%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.000052
2_12_5_116	MW-11	Appendix IV	Cadmium	mg/L	9	89%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.000032
2_12_5_117	MW-11	Appendix IV	Chromium, Total	mg/L	9	0%	2022-11-29 to 2023-10-24	Lognormal H-LCL	0.00096
2_12_5_118	MW-11	Appendix IV	Cobalt	mg/L	9	0%	2022-11-29 to 2023-10-24	Normal LCL	0.00040
2_12_5_121	MW-11	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-11-29 to 2023-10-24	Normal LCL	0.33
2_12_5_122	MW-11	Appendix IV	Lead	mg/L	9	33%	2022-11-29 to 2023-10-24	Gamma MLE Bootstrap LCL	0.00066

2_12_5_125	MW-11	Appendix IV	Lithium	mg/L	9	0%	2022-11-29 to 2023-10-24	Adjusted Gamma LCL	0.040
2_13_4_105	MW-11	Appendix IV	Mercury	mg/L	9	100%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.00016
2_13_4_107	MW-11	Appendix IV	Molybdenum	mg/L	9	22%	2022-11-29 to 2023-10-24	Normal MLE LCL	0.00052
2_13_4_108	MW-11	Appendix IV	Radium 226 and 228	pCi/L	9	22%	2022-11-29 to 2023-10-24	Normal MLE LCL	0.794
2_13_4_112	MW-11	Appendix IV	Selenium	mg/L	9	33%	2022-11-29 to 2023-10-24	Normal MLE LCL	0.00015
2_13_4_120	MW-11	Appendix IV	Thallium	mg/L	9	100%	2022-11-29 to 2023-10-24	Nonparametric LCL around the Median	0.000075
2_13_4_124	MW-12	Appendix IV	Antimony	mg/L	9	0%	2022-11-28 to 2023-10-23	Normal LCL	0.00056
2_13_4_126	MW-12	Appendix IV	Arsenic	mg/L	9	0%	2022-11-28 to 2023-10-23	Normal LCL	0.0020
2_13_5_101	MW-12	Appendix IV	Barium	mg/L	9	0%	2022-11-28 to 2023-10-23	Normal LCL	0.025
2_13_5_102	MW-12	Appendix IV	Beryllium	mg/L	9	100%	2022-11-28 to 2023-10-23	Nonparametric LCL around the Median	0.000052
2_13_5_103	MW-12	Appendix IV	Cadmium	mg/L	9	0%	2022-11-28 to 2023-10-23	Normal LCL	0.00093
2_13_5_104	MW-12	Appendix IV	Chromium, Total	mg/L	9	44%	2022-11-28 to 2023-10-23	Normal MLE LCL	0.000020
2_13_5_106	MW-12	Appendix IV	Cobalt	mg/L	9	33%	2022-11-28 to 2023-10-23	Normal MLE LCL	0.000029
2_13_5_109	MW-12	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-11-28 to 2023-10-23	Lognormal H-LCL	0.27
2_13_5_110	MW-12	Appendix IV	Lead	mg/L	9	56%	2022-11-28 to 2023-10-23	Nonparametric LCL around the Median	0.00015
2_13_5_113	MW-12	Appendix IV	Lithium	mg/L	9	0%	2022-11-28 to 2023-10-23	Normal LCL	0.0031
2_13_5_115	MW-12	Appendix IV	Mercury	mg/L	9	89%	2022-11-28 to 2023-10-23	Nonparametric LCL around the Median	0.00016
2_13_5_116	MW-12	Appendix IV	Molybdenum	mg/L	9	0%	2022-11-28 to 2023-10-23	Normal LCL	0.0066
2_13_5_117	MW-12	Appendix IV	Radium 226 and 228	pCi/L	9	78%	2022-11-28 to 2023-10-23	Nonparametric LCL around the Median	0.517
2_13_5_118	MW-12	Appendix IV	Selenium	mg/L	9	0%	2022-11-28 to 2023-10-23	Adjusted Gamma LCL	0.00063
2_13_5_121	MW-12	Appendix IV	Thallium	mg/L	9	100%	2022-11-28 to 2023-10-23	Nonparametric LCL around the Median	0.000075
2_13_5_122	MW-32	Appendix IV	Antimony	mg/L	9	67%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.000050
2_13_5_125	MW-32	Appendix IV	Arsenic	mg/L	9	0%	2022-11-30 to 2023-10-23	Normal LCL	0.00049
2_14_4_105	MW-32	Appendix IV	Barium	mg/L	9	0%	2022-11-30 to 2023-10-23	Normal LCL	0.39
2_14_4_107	MW-32	Appendix IV	Beryllium	mg/L	9	100%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.000052
2_14_4_108	MW-32	Appendix IV	Cadmium	mg/L	9	100%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.000032
2_14_4_112	MW-32	Appendix IV	Chromium, Total	mg/L	9	0%	2022-11-30 to 2023-10-23	Normal LCL	0.00036
2_14_4_120	MW-32	Appendix IV	Cobalt	mg/L	9	0%	2022-11-30 to 2023-10-23	Lognormal H-LCL	0.00037
2_14_4_124	MW-32	Appendix IV	Fluoride (App IV)	mg/L	9	0%	2022-11-30 to 2023-10-23	Normal LCL	1.4
2_14_4_126	MW-32	Appendix IV	Lead	mg/L	9	78%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.00010
2_14_5_101	MW-32	Appendix IV	Lithium	mg/L	9	0%	2022-11-30 to 2023-10-23	Normal LCL	0.11
2_14_5_102	MW-32	Appendix IV	Mercury	mg/L	9	100%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.00016
2_14_5_103	MW-32	Appendix IV	Molybdenum	mg/L	9	0%	2022-11-30 to 2023-10-23	Normal LCL	0.0038
2_14_5_104	MW-32	Appendix IV	Radium 226 and 228	pCi/L	9	56%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.589
2_14_5_106	MW-32	Appendix IV	Selenium	mg/L	9	100%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.00010
2_14_5_109	MW-32	Appendix IV	Thallium	mg/L	9	100%	2022-11-30 to 2023-10-23	Nonparametric LCL around the Median	0.000075