

Test Group Summary Report

C02B Metals in Water – High Range

October 2025 PT Round

Issued: November 28, 2025

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1.0 The Proficiency Testing Report

The Proficiency Testing Report consists of two parts.

- *PTC Proficiency Testing Report*: This report contains participant-specific data and other confidential information. This report is emailed to participants at the end of the PT round.
- *Test Group Summary Report*: A Test Group Summary Report is created for each quantified test group at the end of the PT round. These reports contain more detailed information on the round than is found in the participant-specific PTC Proficiency Testing Report. These reports do not contain any confidential information and are made available on the PTC web site.

2.0 Definitions

The participant-specific PTC Proficiency Testing Report contains some terms that new participants may not be familiar with.

<i>Code</i> :	The registration code that is unique to each analyte that a participant is registered for.
<i>App</i> :	If a participant is accredited by CALA, this three-digit number is the appendix number that the accredited method is assigned to.
<i>N</i> :	The number of participants results that were used to calculate the summary statistics. This excludes qualified data (e.g., <) and any results that were flagged as outliers.
<i>Assigned</i> :	The Assigned Value is the robust mean of the reported results, outliers excluded. This is often referred to as the “target” value.
<i>±u</i> :	The uncertainty of the assigned value.
<i>Reported</i> :	The result reported by the participant.
<i>s</i> :	The Standard Deviation of Proficiency Assessment (SDPA). This value is used to determine the acceptance limits for the PT evaluation.
<i>z-Score</i> :	A value assigned to each reported result that is a measure of the degree to which it deviates from the Assigned Value.
<i>Score</i> :	The composite score of the four results reported for each analyte. It is normalized to a score out of 100.
<i>Bias</i> :	A flag assigned if bias is detected using the re-scaled z-score procedure.

3.0 Scoring System

Participant performance is evaluated for each proficiency testing sample by a quantitative method that is consistent with ISO/IEC 17043 – *Conformity assessment- General requirements for the competence of proficiency testing providers*, the *International Harmonized Protocol for Proficiency Testing of (Chemical) Analytical Laboratories* (2006), and ISO 13528:2015 *Statistical methods for use in proficiency testing by interlaboratory comparisons*.

The following is a brief description of the evaluation procedure used by PTC. The detailed evaluation procedure is described in PROC09 – *PT Evaluation Procedure*, which is available on the PTC website (www.PTCCanada.org).

3.1 HOMOGENEITY AND STABILITY ASSESSMENT

Homogeneity and stability are assessed using participant data. Regression analysis is performed on reported result against order of sample production (Homogeneity) and reported result against date of analysis (Stability). If the slope is significantly different than zero for either then the Standard Deviation of Proficiency Assessment (s) is increased to minimize the impact.

3.2 THE Z SCORE

A "z-score" is calculated for each reported result as follows:

$$z - Score = \frac{(x - \bar{X})}{SDPA} \quad \text{where: } \begin{array}{l} x = \text{participant result;} \\ \bar{X} = \text{the Assigned Value;} \\ SDPA = \text{the Standard Deviation for Proficiency Assessment.} \end{array}$$

The assigned value \bar{X} is generally estimated from the inter-laboratory Robust mean after outliers due to obvious gross errors (e.g., reported in wrong units) have been removed.

The Standard Deviation for Proficiency Assessment, s, is determined as follows:

- The inter-laboratory Robust standard deviation ($Stdev_{rob}$) is calculated using reported results, obvious outliers removed;
- The regression equation standard deviation ($Stdev_{reg}$) is estimated from regression equations derived from previous studies (see PROC11- *PT Regression Equations* for details);
- The SDPA is the higher of $Stdev_{rob}$ and $Stdev_{reg}$;
- When a laboratory reports its detection limit, s will be estimated using a pooled variance procedure that uses both the inter-laboratory data and the reported detection limit.

3.2 COMPOSITE (PT) SCORE

Since each PT round involves four or two separate samples of distinct concentration for each test, it is necessary to calculate a composite PT score for each test to determine overall performance. The composite score is calculated by first averaging the absolute z-scores for the four results and then calculating a final score as $100 + (-15 \times \text{avg } |z|)$.

Acceptable PT Scores equal or exceed 70.

3.3 IDENTIFYING BIAS

The proficiency testing report provides flags for bias. These are determined using the re-scaled z-score procedure.

$$RSZ = \frac{\sum z}{\sqrt{N}} \quad \text{where } \begin{array}{l} z = \text{the z- score} \\ N = \text{the number of samples} \end{array}$$

Flags are assigned for each test group/parameter combination as follows:

$$RSZ \geq -2 \text{ and } \leq 2 \text{ no flag assigned}$$

RSZ > 2	H (High)
RSZ > 3	VH (Very High)
RSZ < -2	L (LOW)
RSZ < -3	VL (Very Low)

3.4 DEVIATIONS FROM EVALUATION PROCEDURE

Other than changes to the Standard Deviation of Proficiency Assessment due to homogeneity or stability flags, any deviation from the published evaluation procedure is described on the cover page(s) of the final *PTC Proficiency Testing Report*.

4.0 PT Round Specific Data Summary

The following pages provide more detailed information about the PT round indicated in the cover page of this report than is found in the participant-specific PTC Proficiency Testing Report. The graphical representations and the statistical summaries are based upon the data after outliers have been removed.

4.1 SUMMARY STATISTICS

In addition to some of the statistics found in the customer reports, this table includes additional summary statistics such as Median, different measures of dispersion, the number of outliers removed, the number of results in the Questionable range ($|z|$ between 2 and 3) and the Unacceptable range ($z > 3$), and whether a data set was flagged for Homogeneity or Stability. This section also includes sorted scatter plots of the data for each sample.

4.2 z - SCORE PLOTS

The z-scores for each sample are ranked in increasing order and plotted. When the data is normally distributed, the plot should show a slight sigmoidal curve, with an equal number of points above zero as below. Each bar in these plots is colour-coded to indicate the analytical method used by the participant.

4.3 KERNEL DENSITY PLOTS

Kernel density plots are generated for each data set. These plots are a graphical way to represent the overall data distribution and are used to visualize possible deviations from normality and unimodality.

4.4 STABILITY AND HOMOGENEITY PLOTS

Plots of reported result against analysis date, and reported result against order of bottling are displayed, along with the regression line. These regression analyses are used to determine if the SDPA should be adjusted due to homogeneity or stability.

4.5 BOX-AND-WHISKER PLOTS

Box-and-Whisker plots are another way to display the distribution of the data. The box denotes the first and third quartile and the whiskers are the 5th and 95th percentile.

4.6 HISTORIC COMPARISON PLOT

The Historic Comparison Plot is a plot of robust mean against robust standard deviation for the previous ten PT rounds as well as the current PT round. This plot can be used to identify possible changes in the sample formulation.

Aluminum

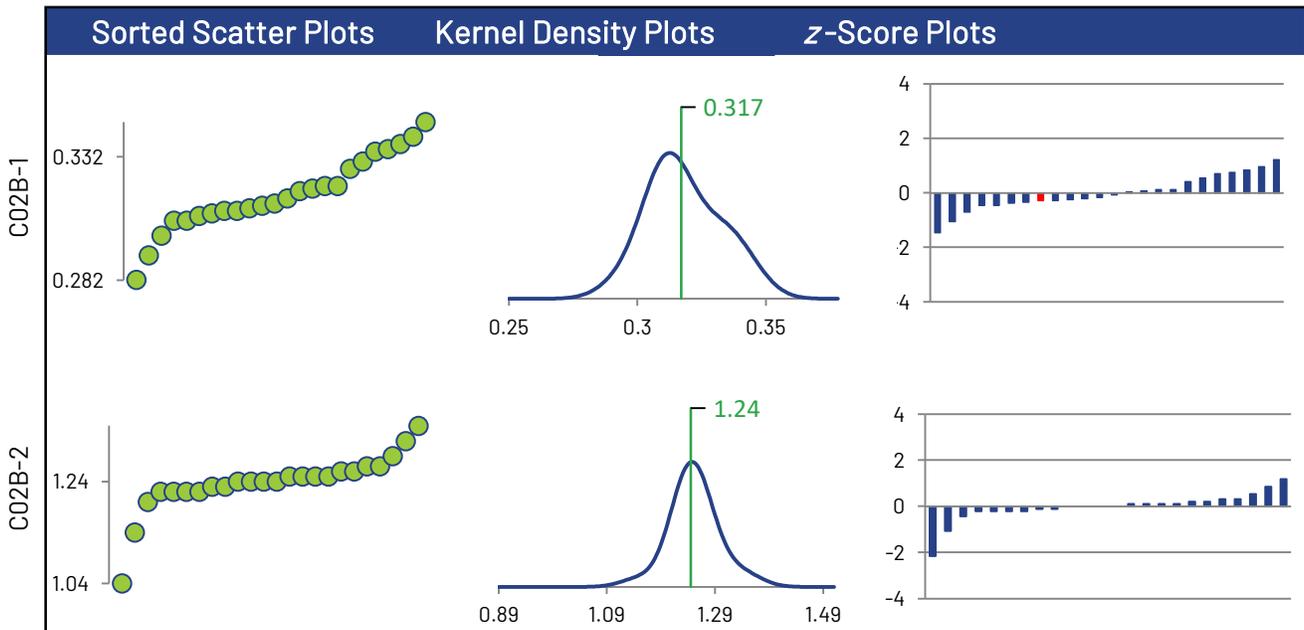
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	24	24	24	24
Median mg/L	0.314	1.24	1.06	0.808
Robust Mean mg/L	0.317	1.24	1.06	0.811
Uncertainty of the Assigned Value mg/L	0.00395	0.00799	0.00681	0.00663
Robust Standard Deviation mg/L	0.0155	0.0313	0.0267	0.0260
Regression Standard Deviation mg/L	0.0238	0.0932	0.0795	0.0608
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) mg/L	0.0238	0.0932	0.0795	0.0608
Flagged Outliers	0	0	0	0
z >3.0	0	0	0	0
2< z <3	0	1	0	0
Failure Rate %*	0.0			

Methods Used

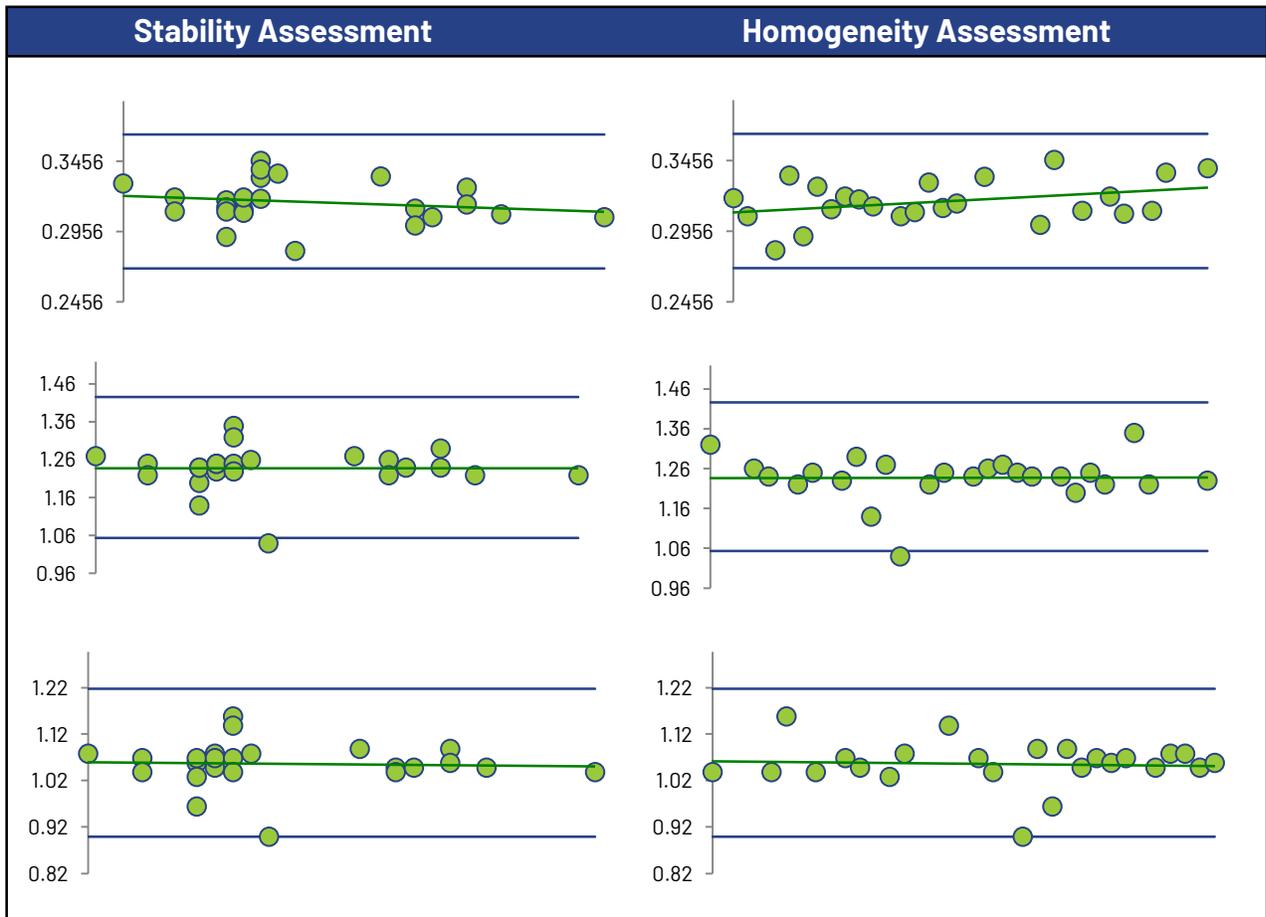
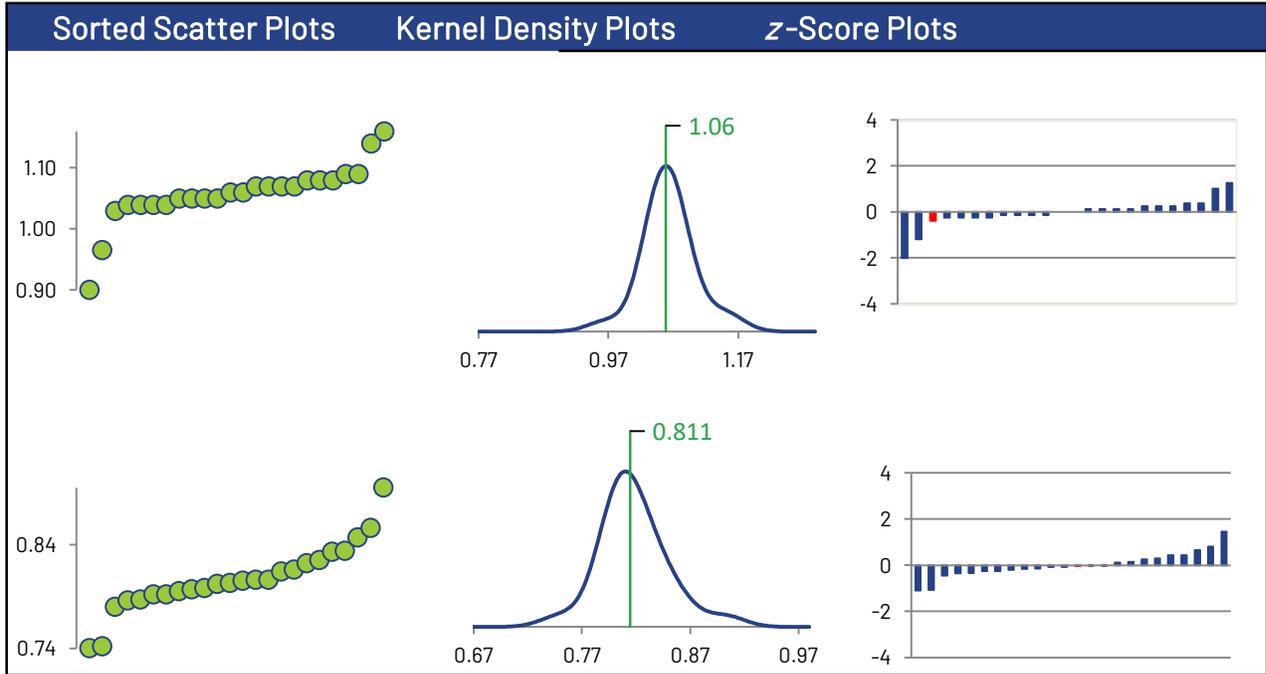
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	23	23	23	23
ICP/MS (Red)	1	1	1	1

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

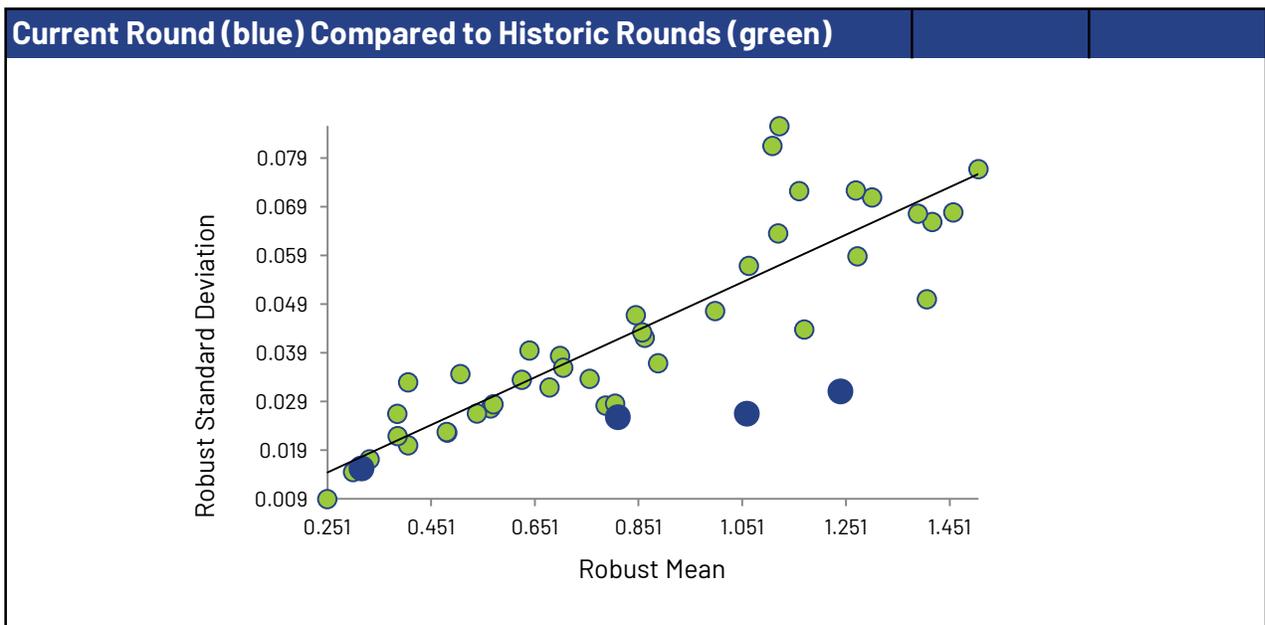
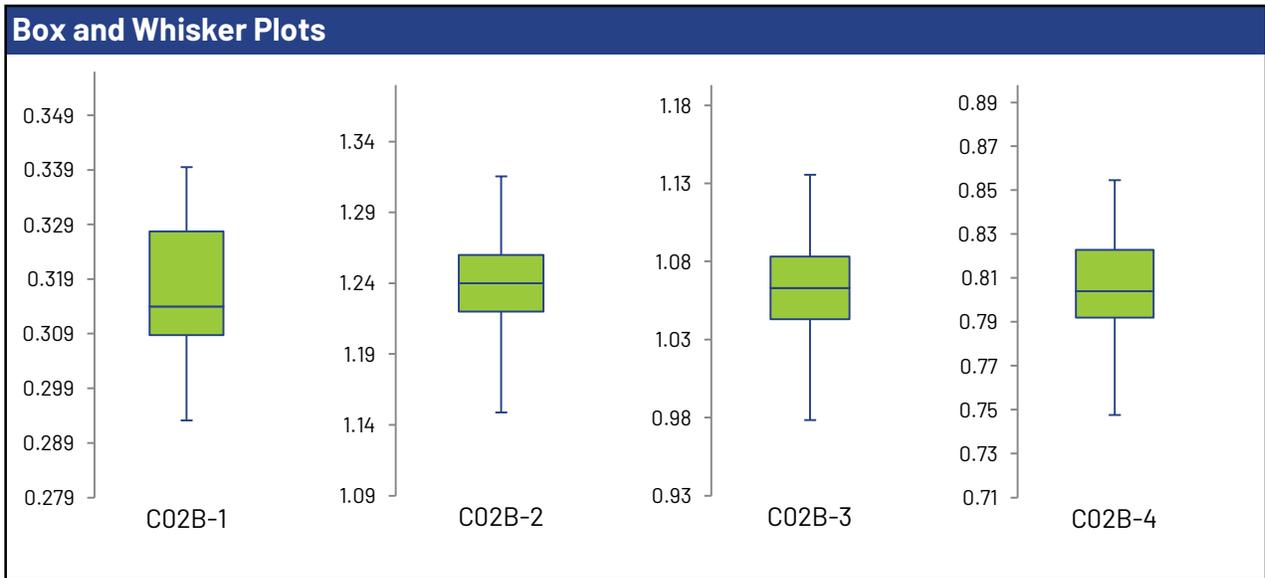
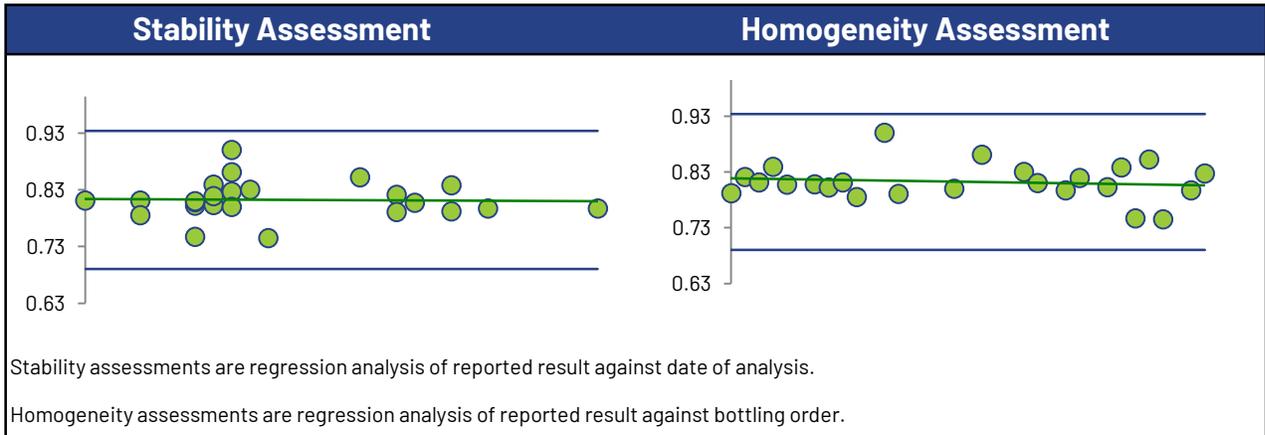


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Aluminum



Aluminum



Barium

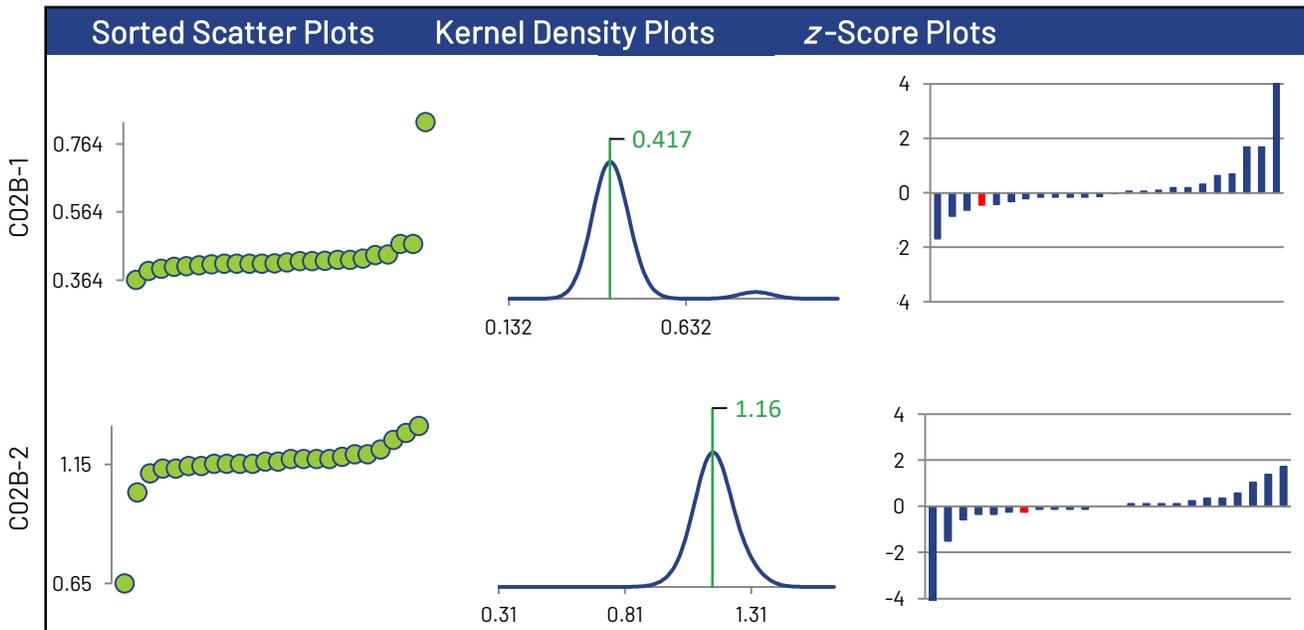
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	24	24	24	24
Median mg/L	0.415	1.16	1.23	0.541
Robust Mean mg/L	0.417	1.16	1.23	0.543
Uncertainty of the Assigned Value mg/L	0.00457	0.0103	0.00862	0.00459
Robust Standard Deviation mg/L	0.0179	0.0403	0.0338	0.0180
Regression Standard Deviation mg/L	0.0313	0.0872	0.0925	0.0407
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) mg/L	0.0313	0.0872	0.0925	0.0407
Flagged Outliers	0	0	0	0
z >3.0	1	1	1	1
2< z <3	0	0	1	1
Failure Rate %*	4.2			

Methods Used

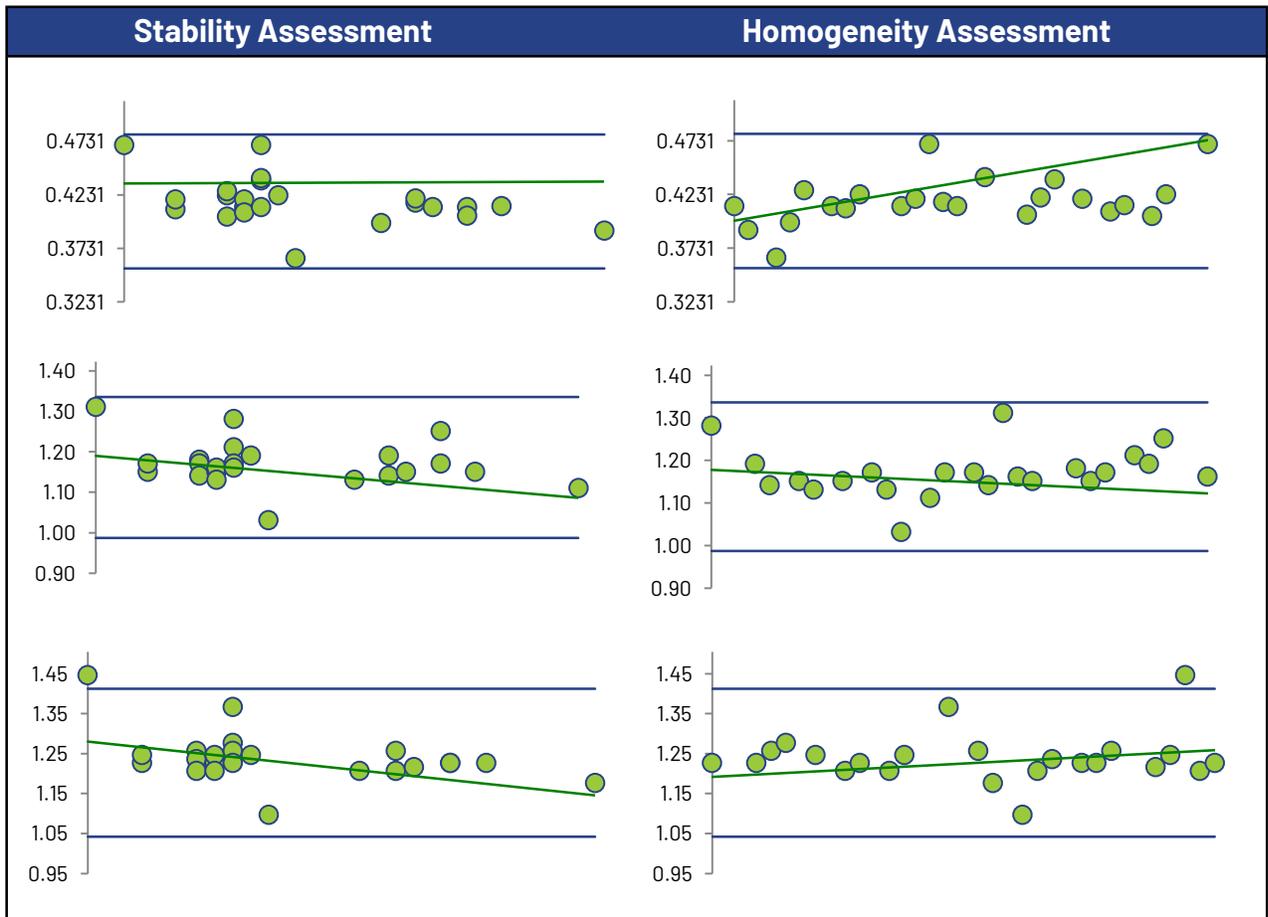
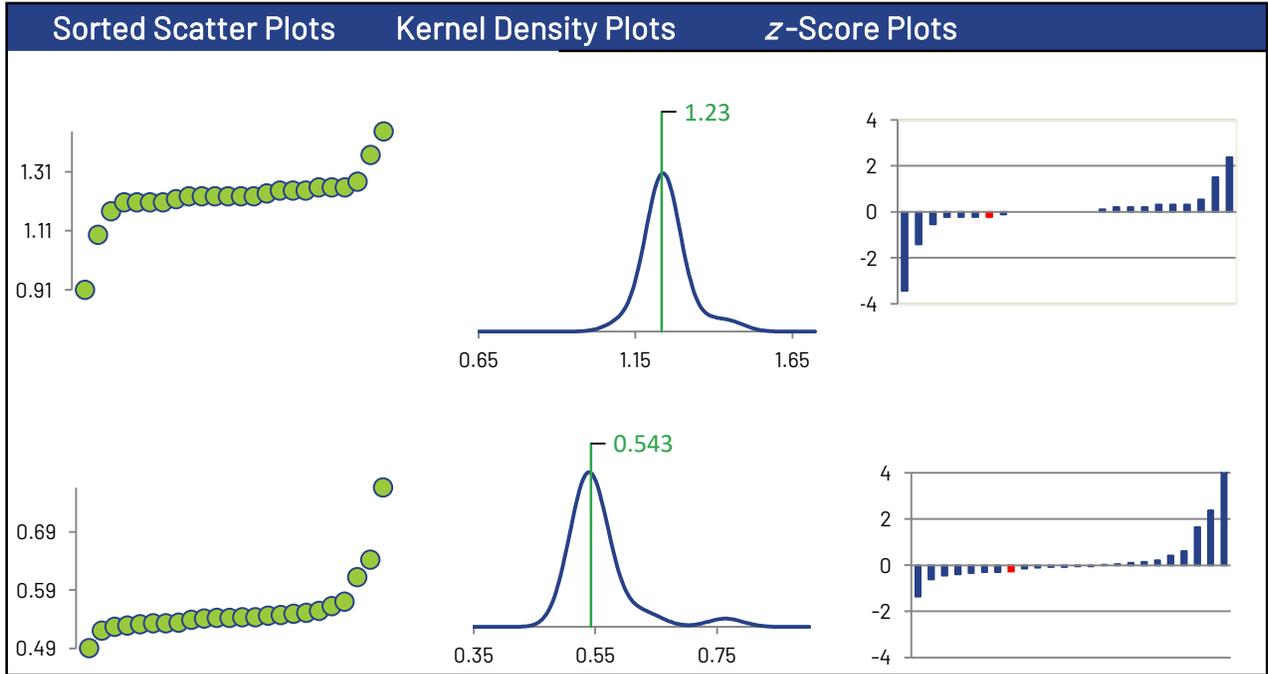
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	23	23	23	23
ICP/MS (Red)	1	1	1	1

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

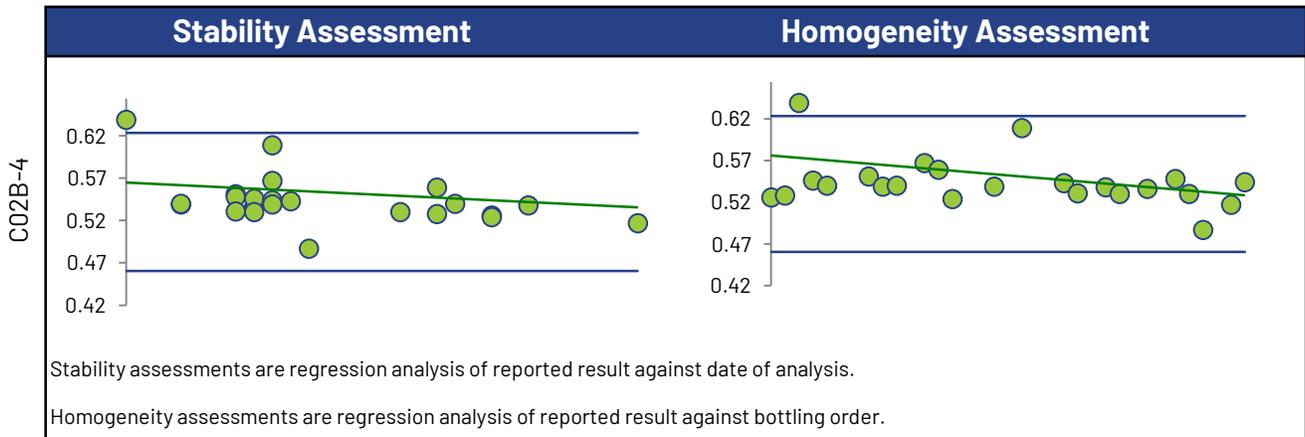


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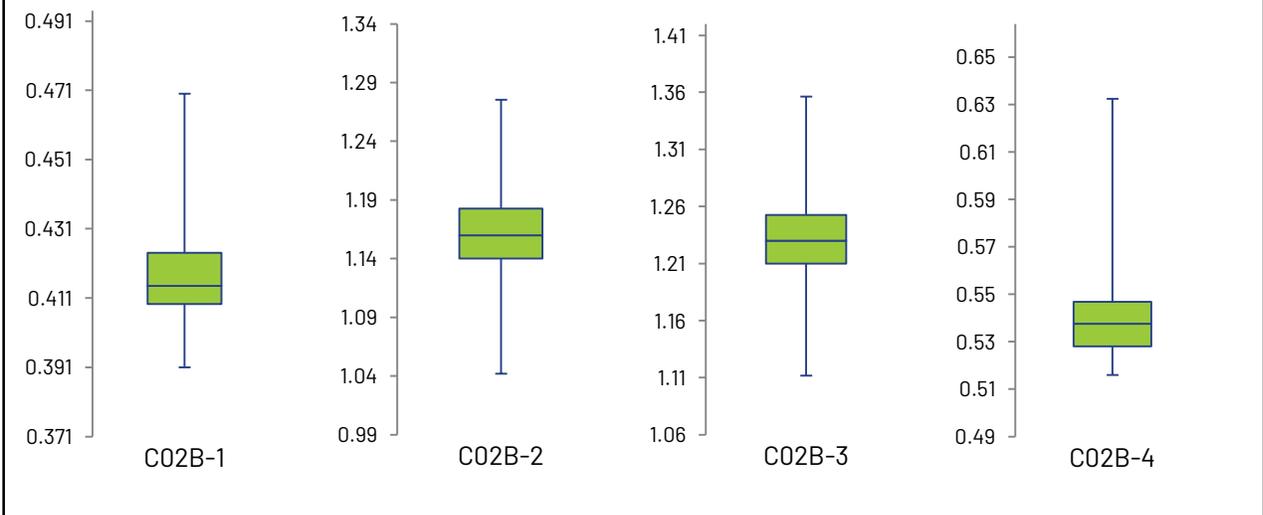
Barium



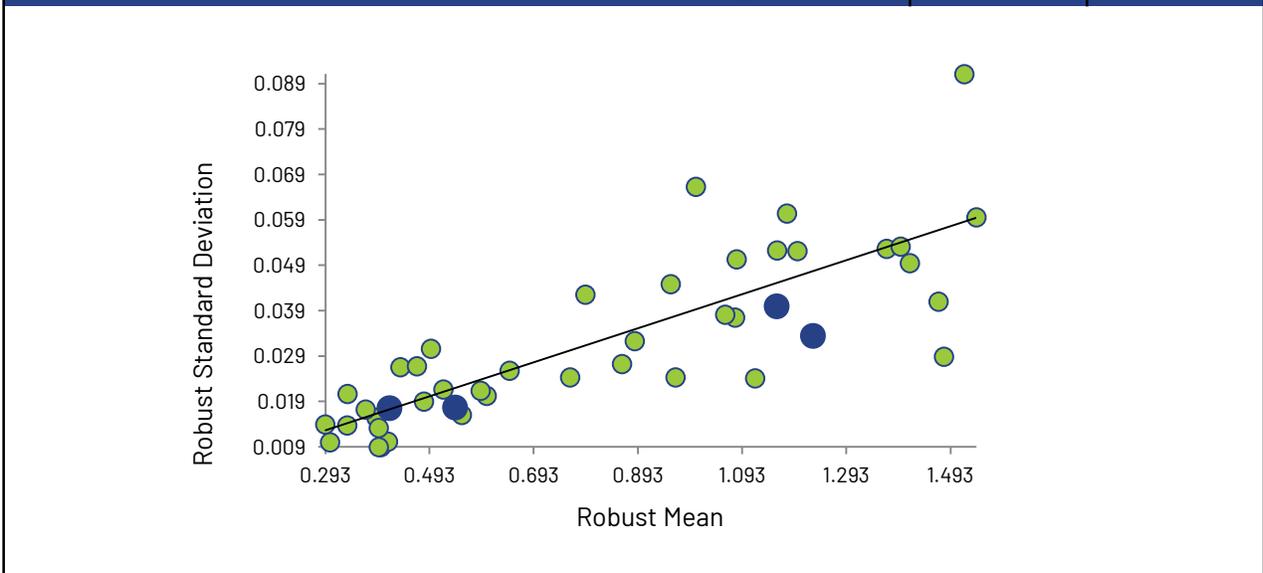
Barium



Box and Whisker Plots



Current Round (blue) Compared to Historic Rounds (green)



Bismuth

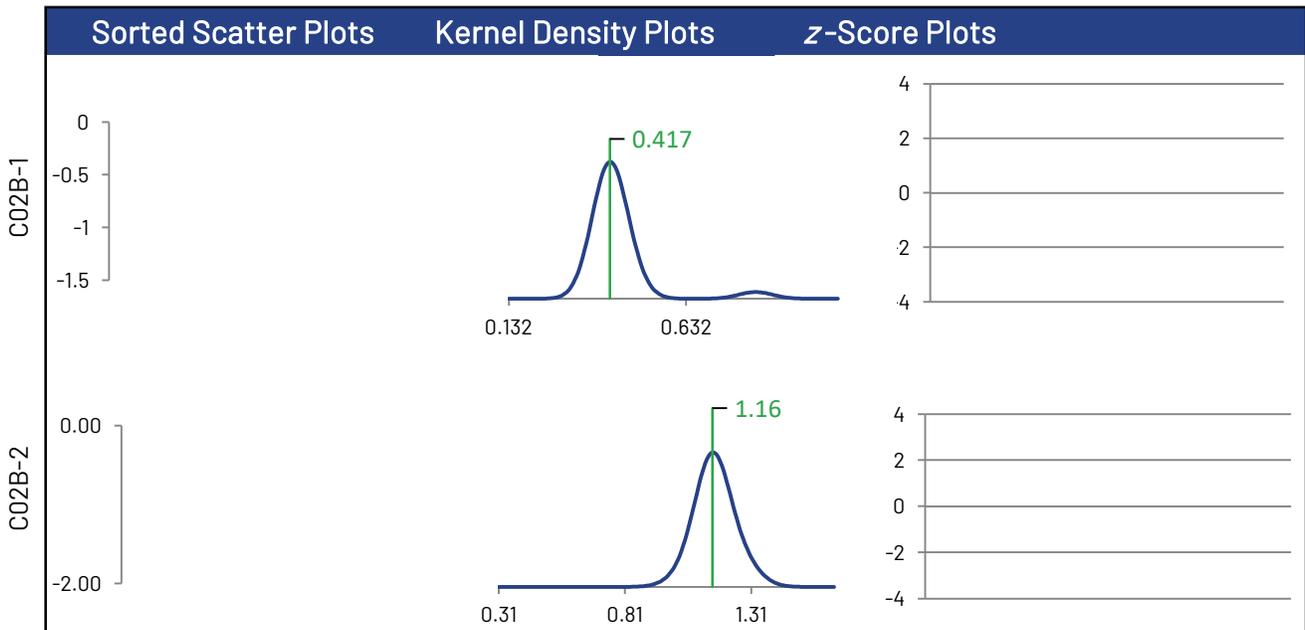
Summary Statistics

Statistic	Excluded			
	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	0	0	0	0
Median mg/L				
Robust Mean mg/L				
Uncertainty of the Assigned Value mg/L				
Robust Standard Deviation mg/L				
Regression Standard Deviation mg/L				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) mg/L				
Flagged Outliers	1	1	1	1
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	0	0	0
Failure Rate %*	100.0			

Methods Used

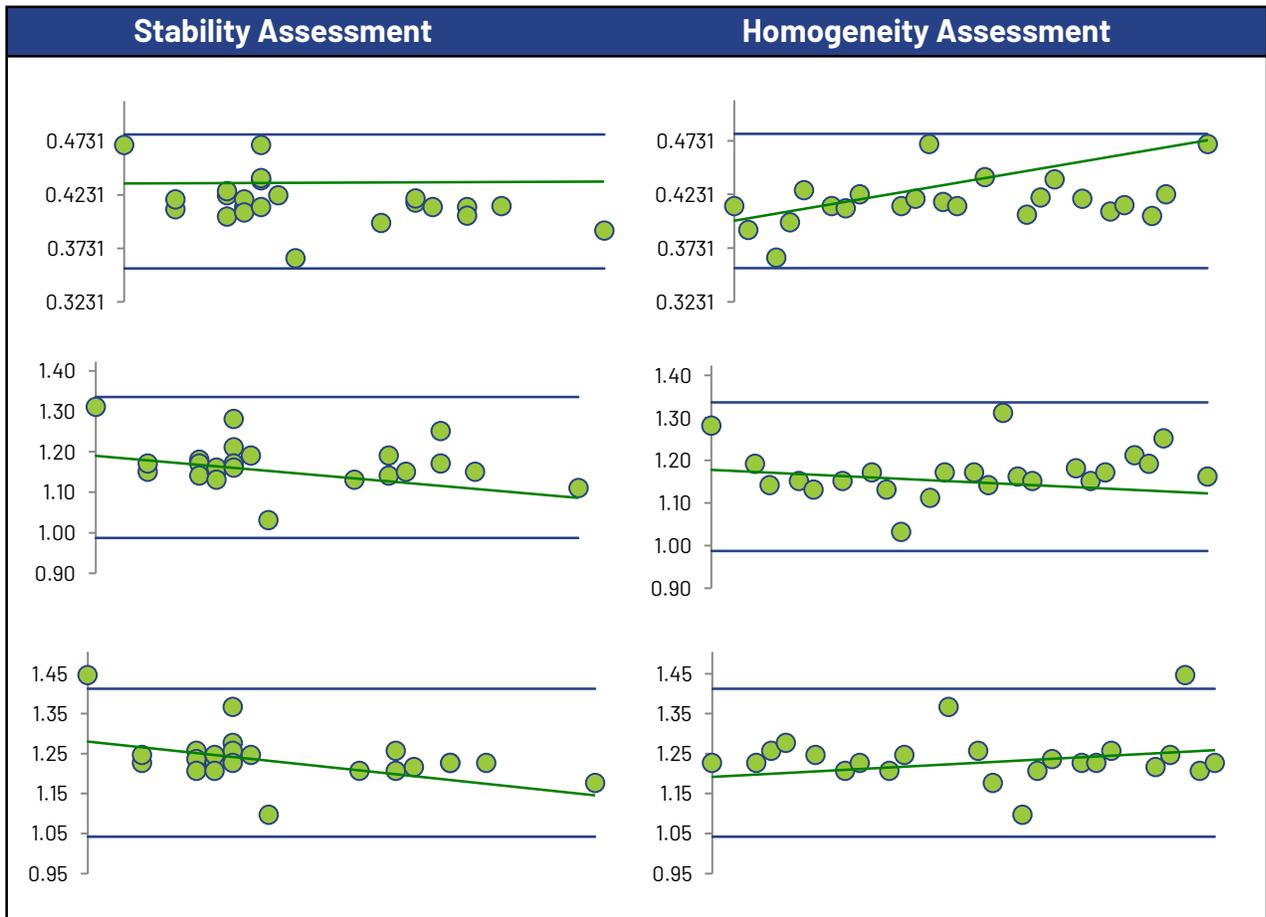
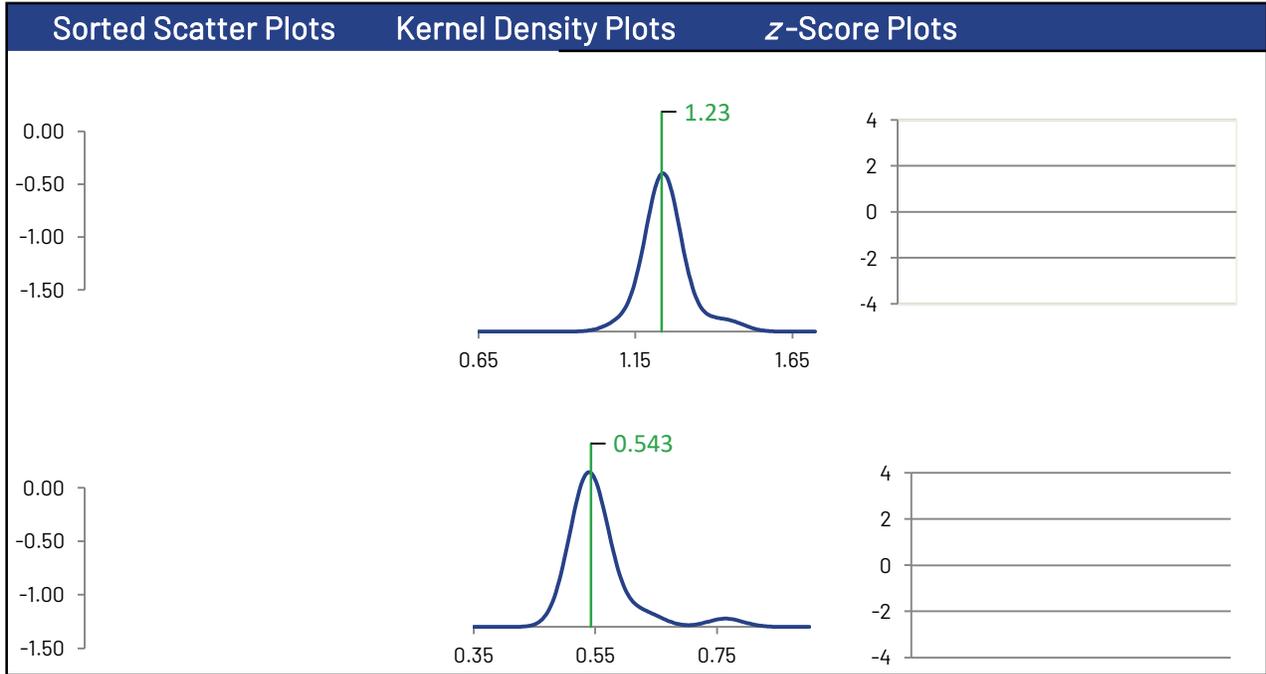
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	0	0	0	0
ICP/MS (Red)	0	0	0	0

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

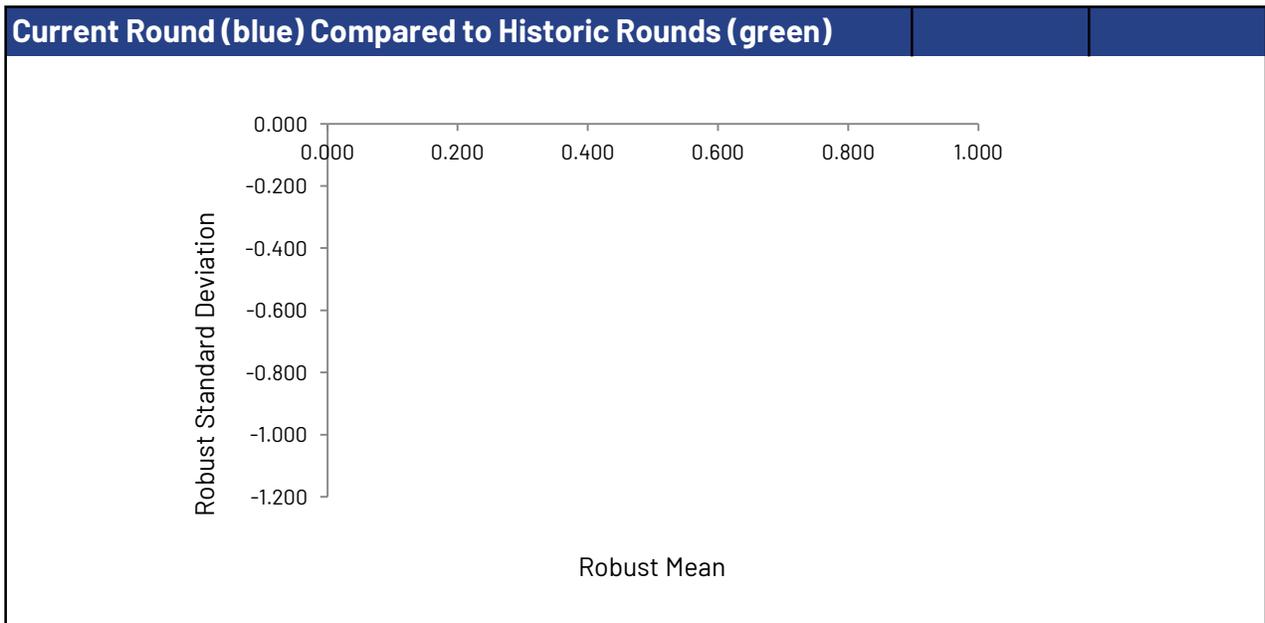
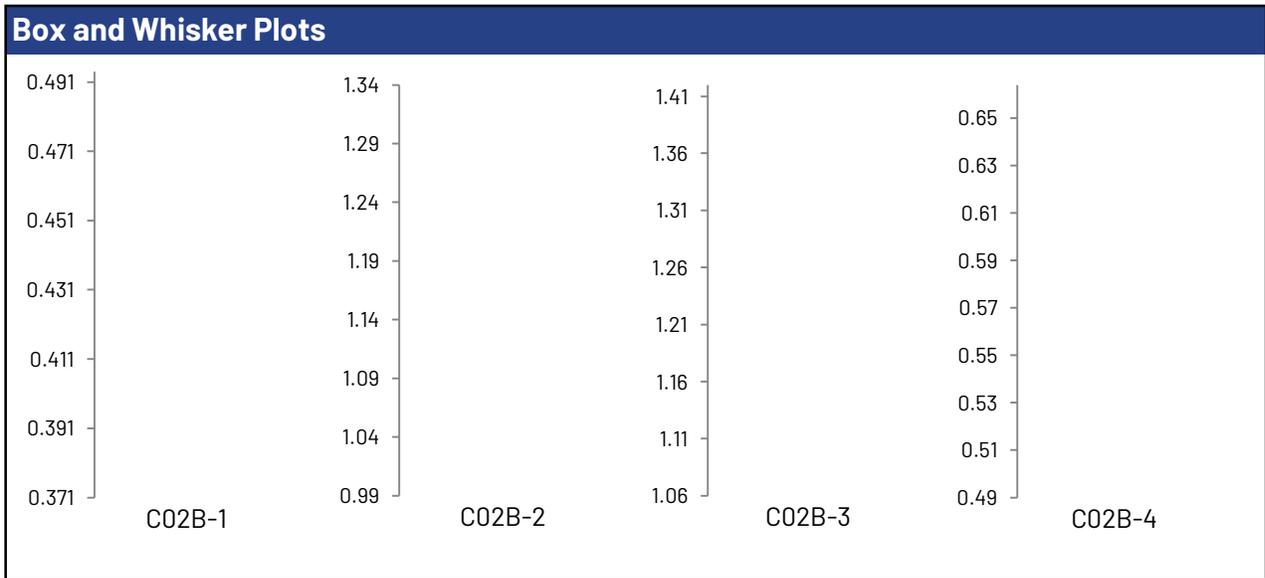
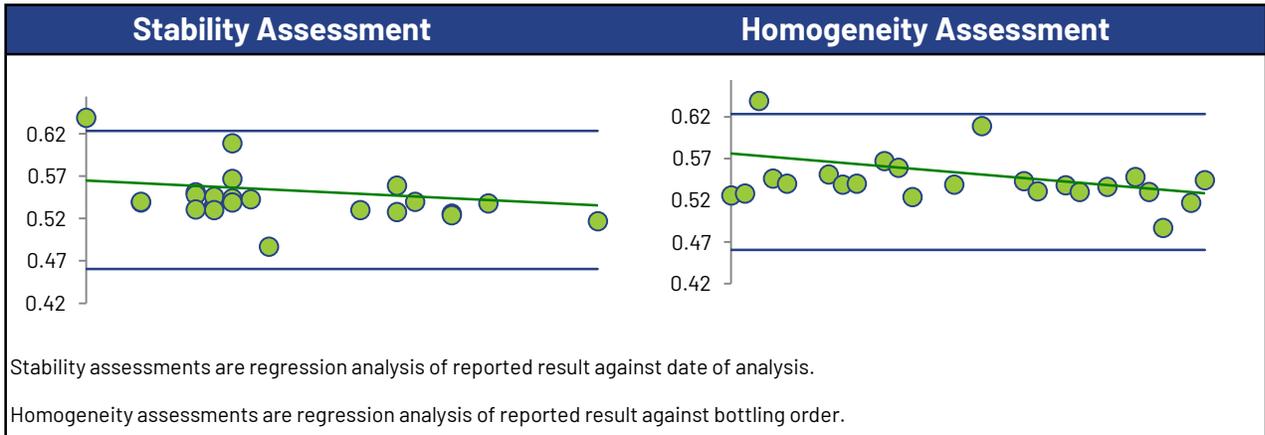


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Bismuth



Bismuth



Boron

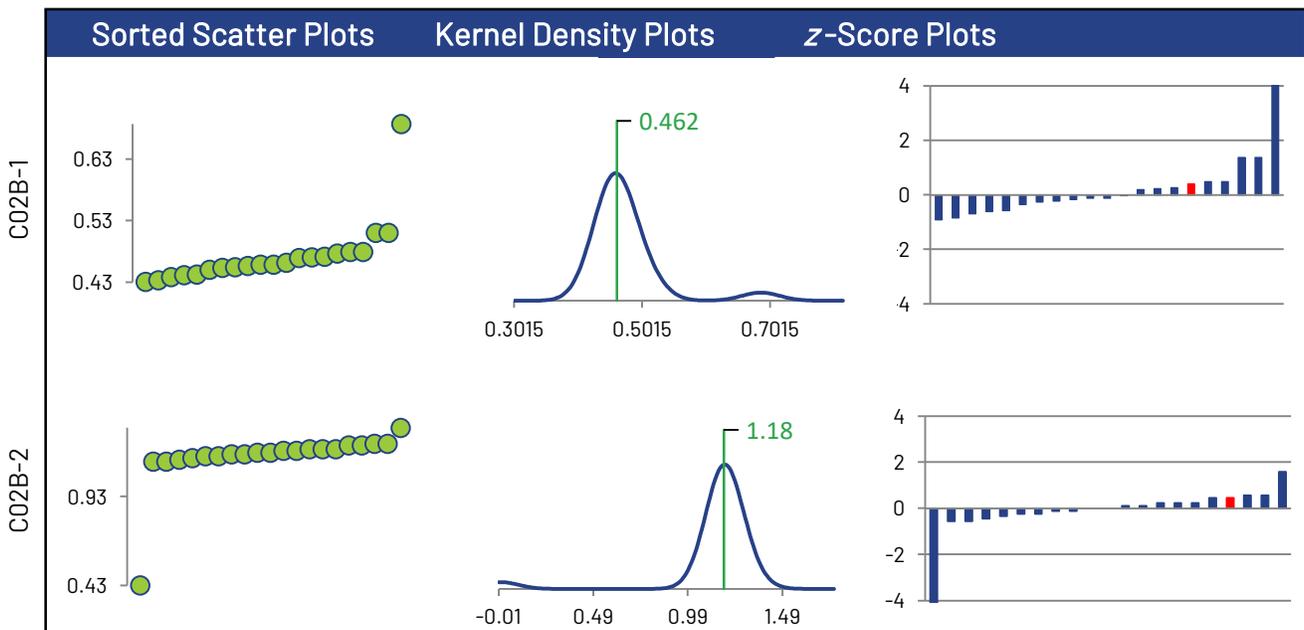
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	21	21	21	21
Median mg/L	0.458	1.18	1.15	0.864
Robust Mean mg/L	0.462	1.18	1.14	0.861
Uncertainty of the Assigned Value mg/L	0.00627	0.0110	0.0113	0.00895
Robust Standard Deviation mg/L	0.0230	0.0404	0.0414	0.0328
Regression Standard Deviation mg/L	0.0347	0.0886	0.0857	0.0646
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) mg/L	0.0347	0.0886	0.0857	0.0646
Flagged Outliers	0	0	0	0
z >3.0	1	1	1	1
2< z <3	0	0	0	0
Failure Rate %*	4.8			

Methods Used

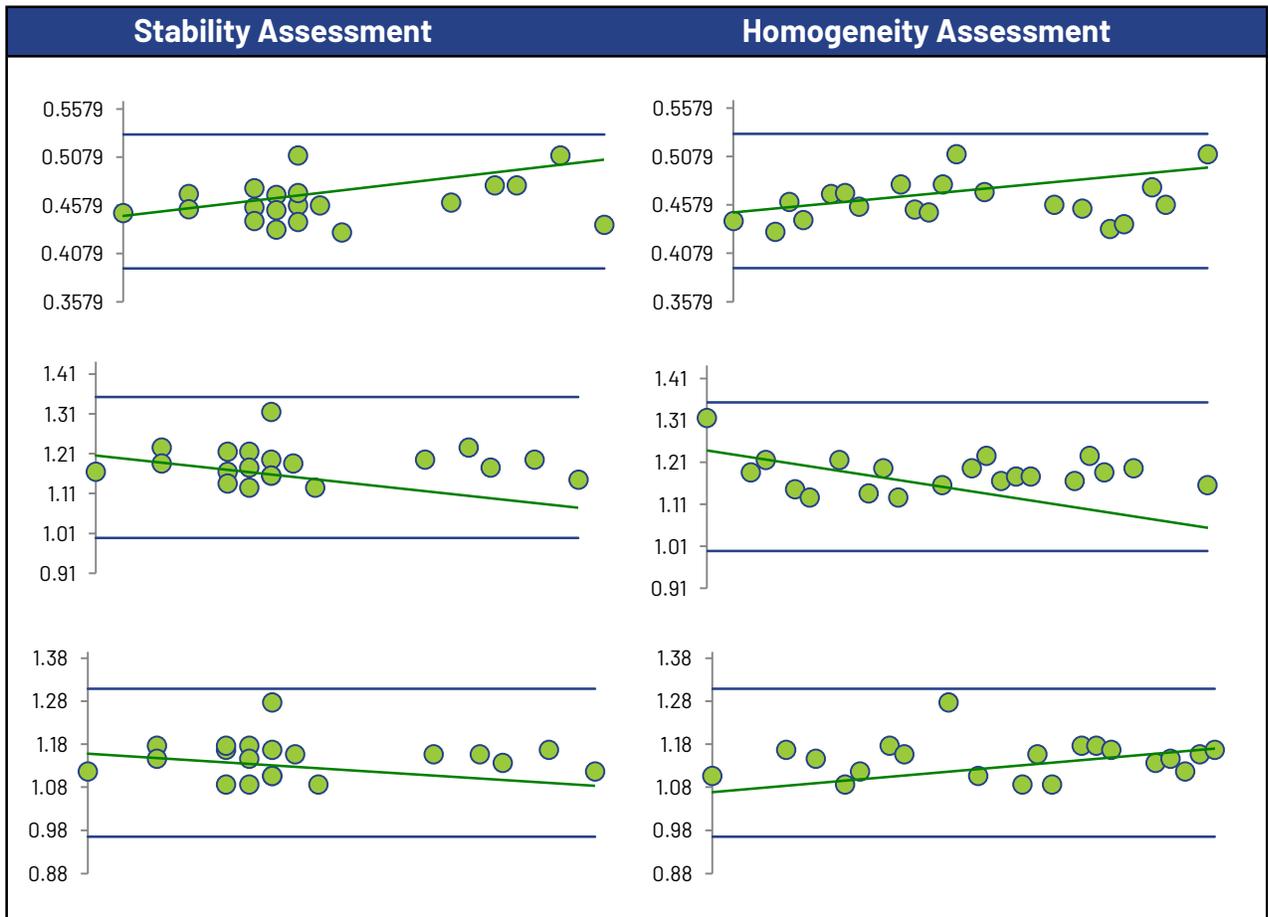
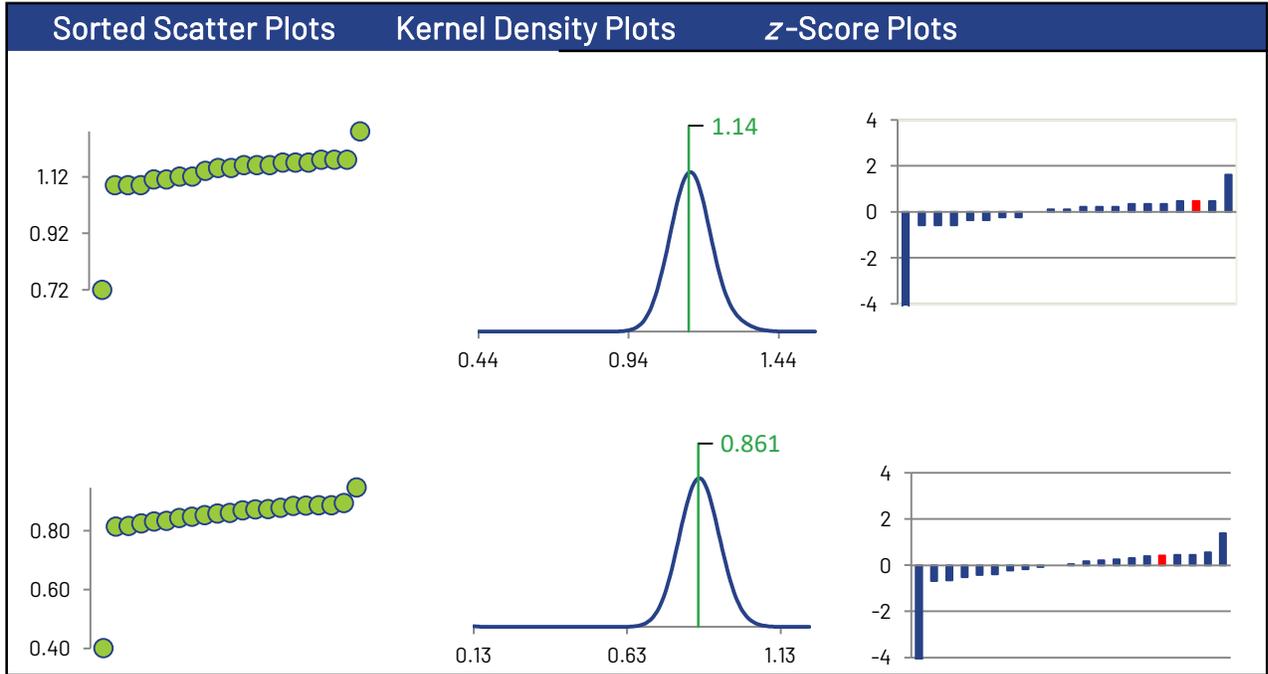
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	20	20	20	20
ICP/MS (Red)	1	1	1	1

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

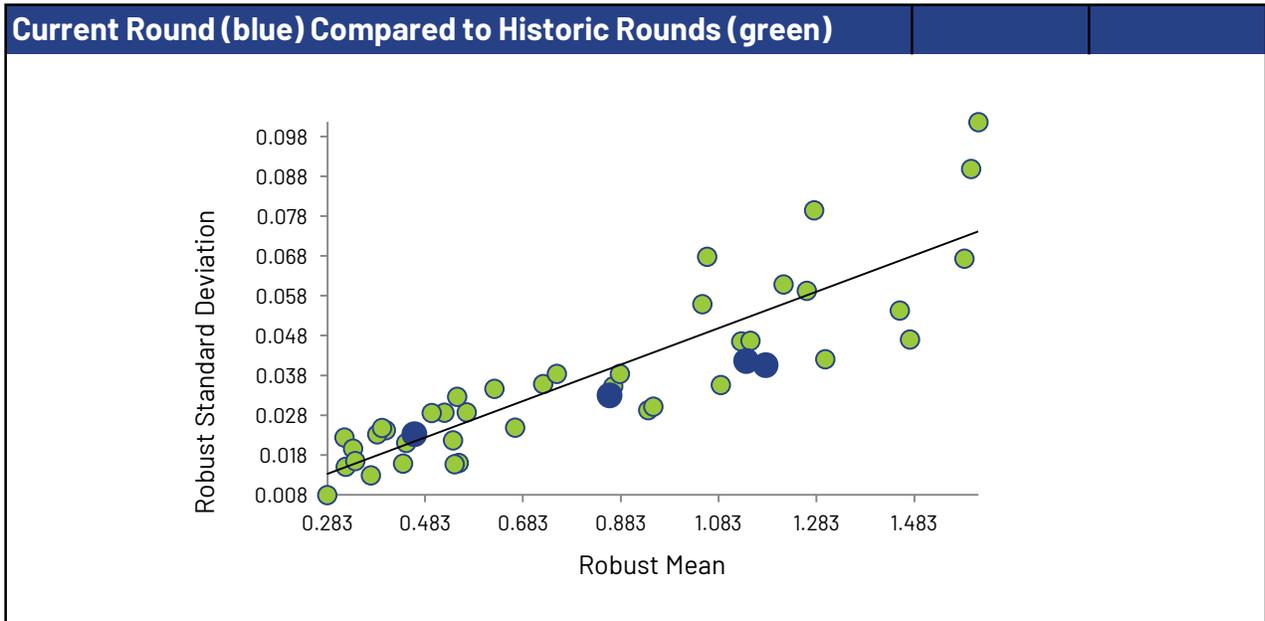
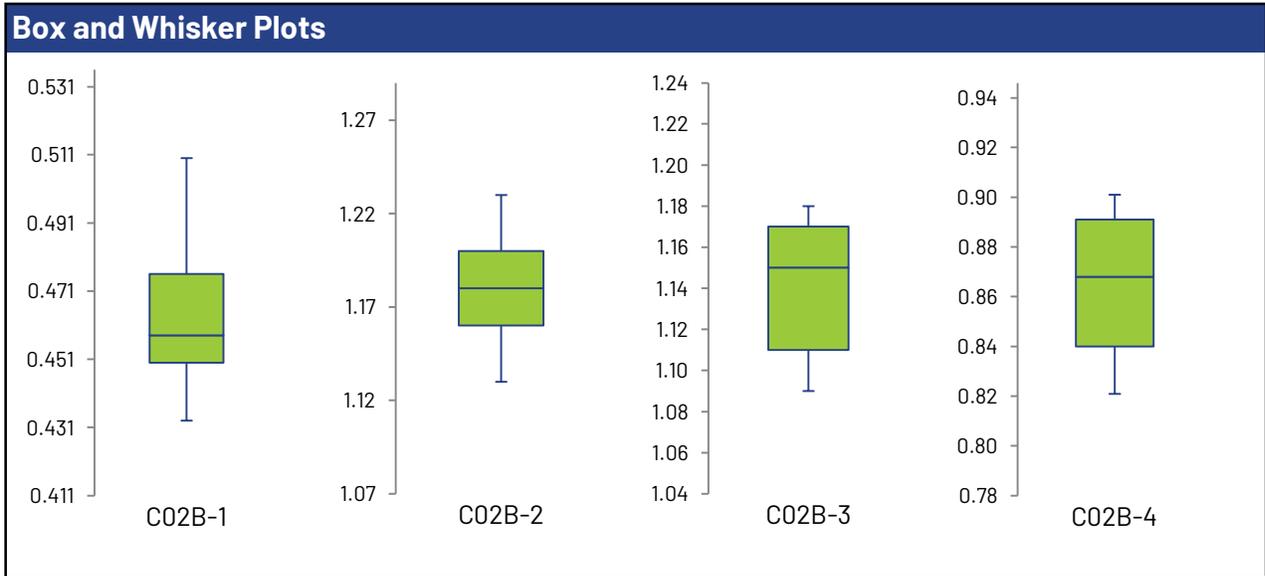
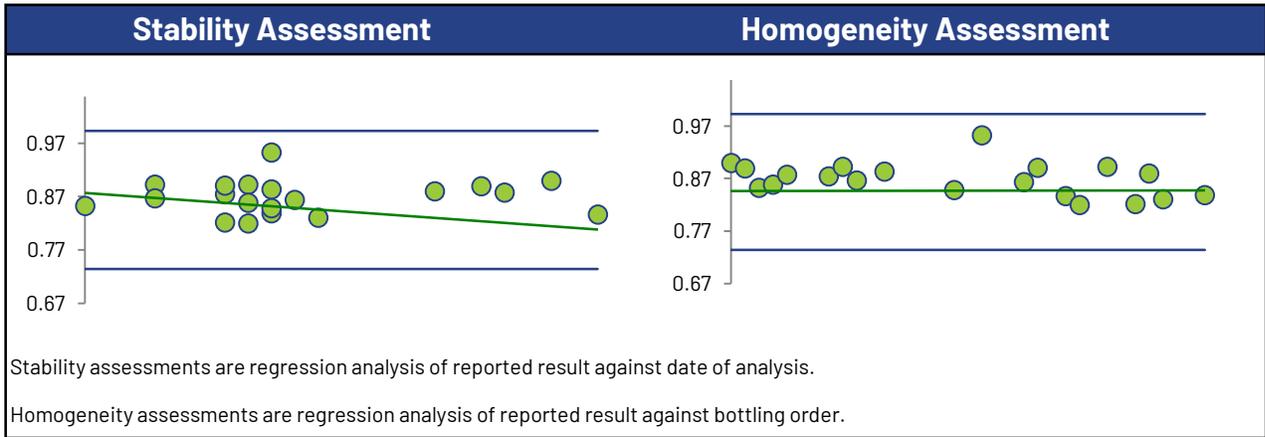


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Boron



Boron



Chromium

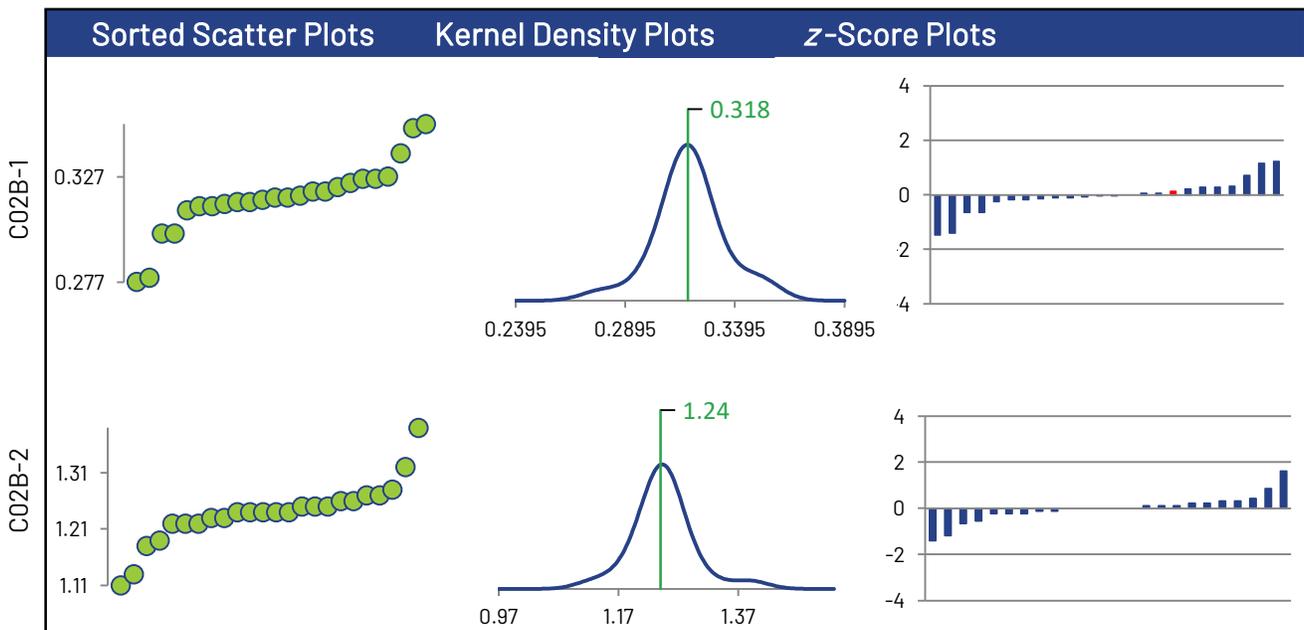
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	24	24	24	24
Median mg/L	0.317	1.24	1.23	0.620
Robust Mean mg/L	0.318	1.24	1.23	0.623
Uncertainty of the Assigned Value mg/L	0.00319	0.00911	0.00781	0.00518
Robust Standard Deviation mg/L	0.0125	0.0357	0.0306	0.0203
Regression Standard Deviation mg/L	0.0238	0.0929	0.0919	0.0467
Stability Flag				
Homogeneity Flag	Homogeneity			
Standard Deviation Used (SDPA) mg/L	0.0277	0.0929	0.0919	0.0467
Flagged Outliers	0	0	0	0
z >3.0	0	0	0	0
2< z <3	0	0	0	0
Failure Rate %*	0.0			

Methods Used

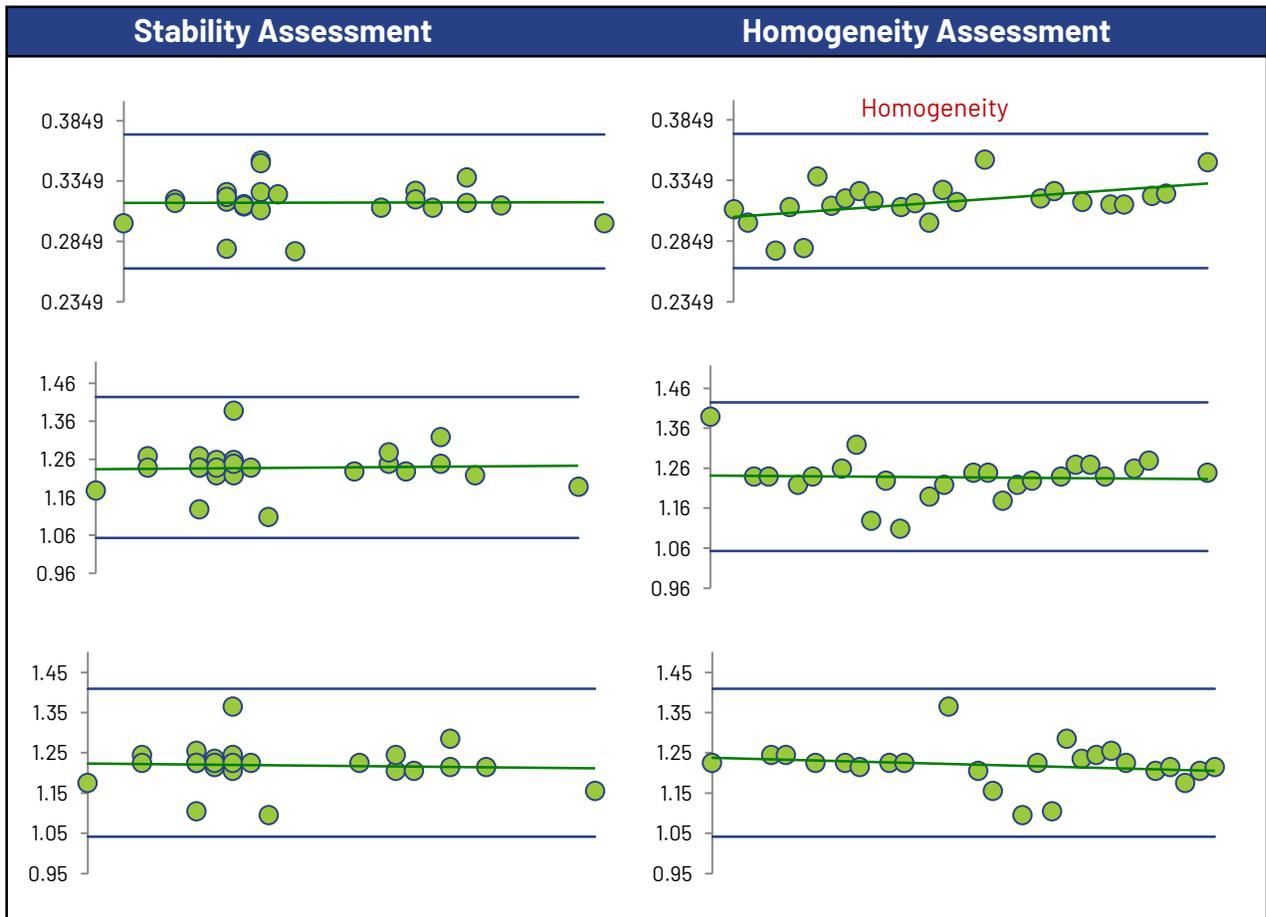
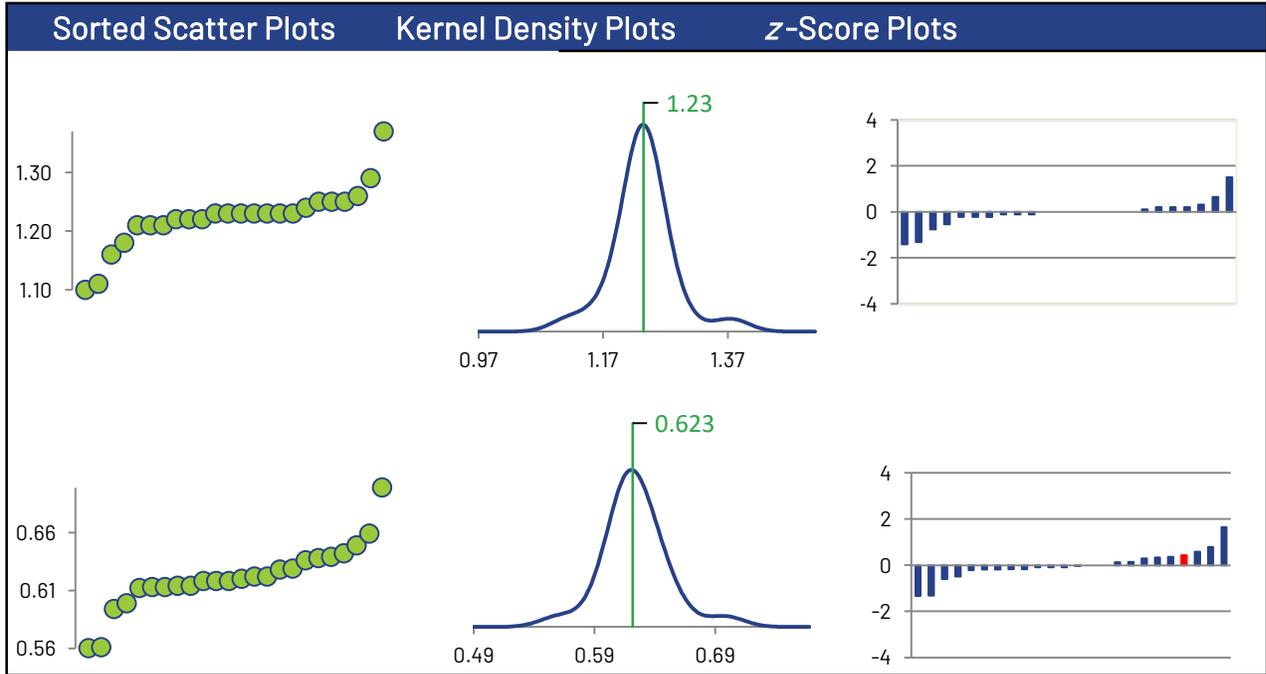
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	23	23	23	23
ICP/MS (Red)	1	1	1	1

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

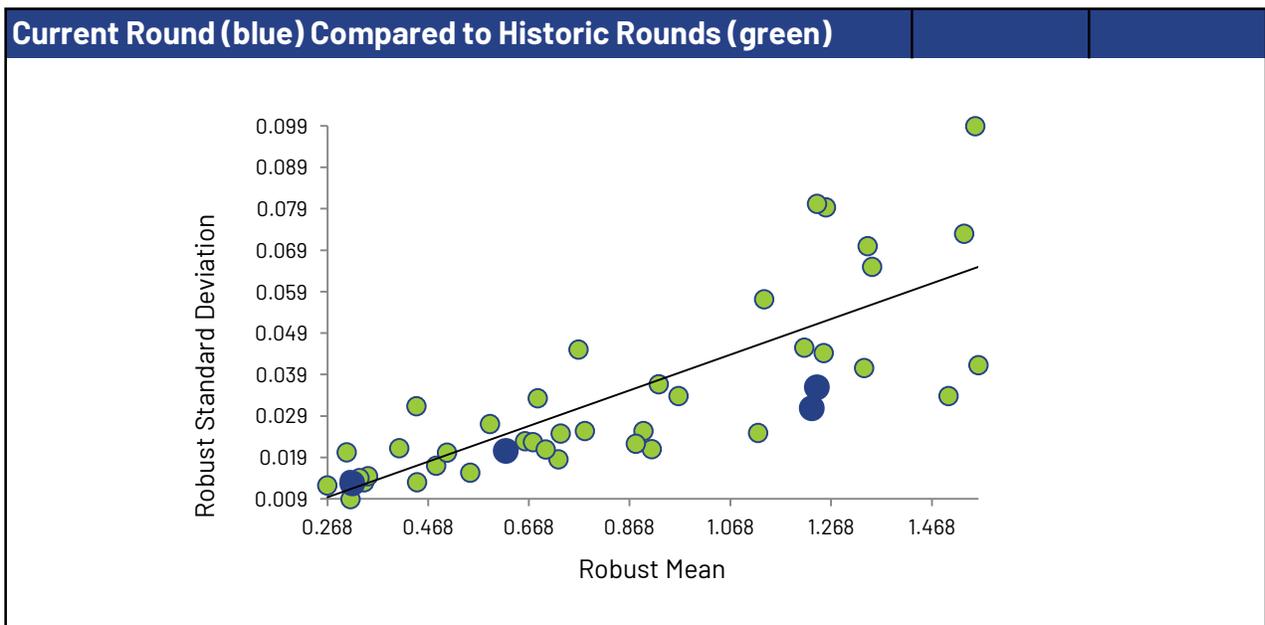
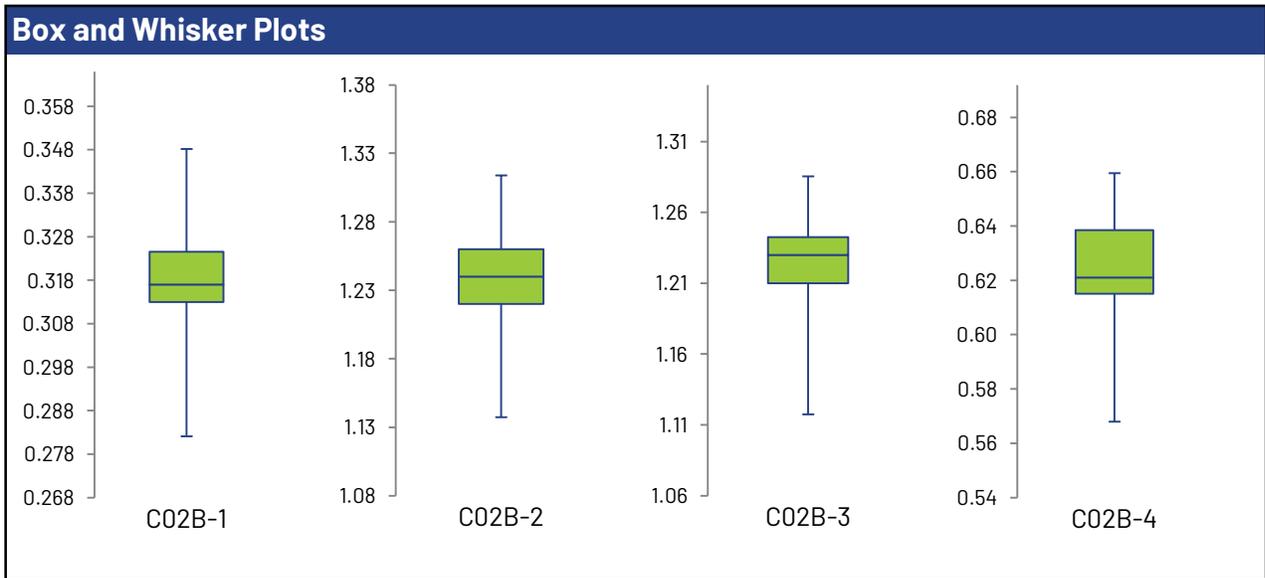
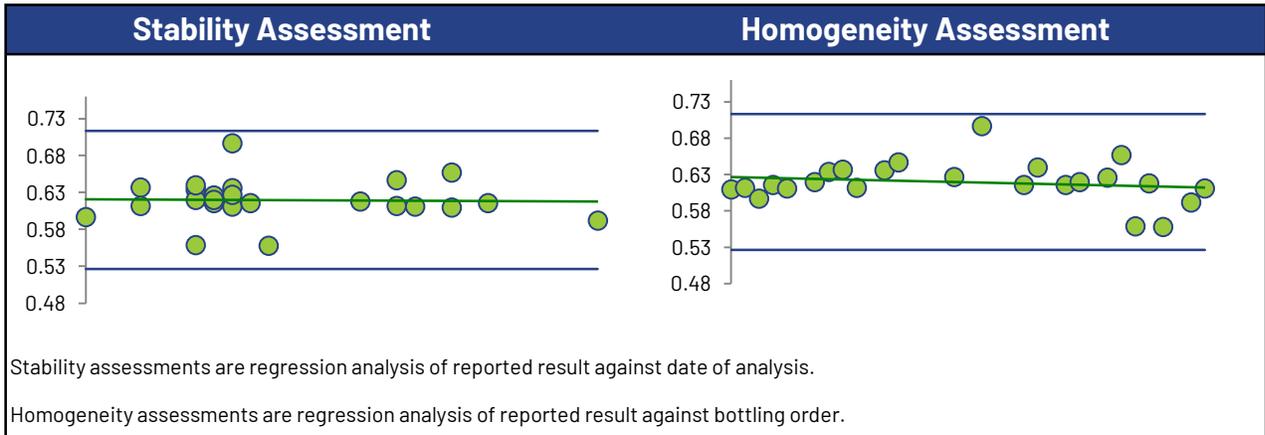


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Chromium



Chromium



Cobalt

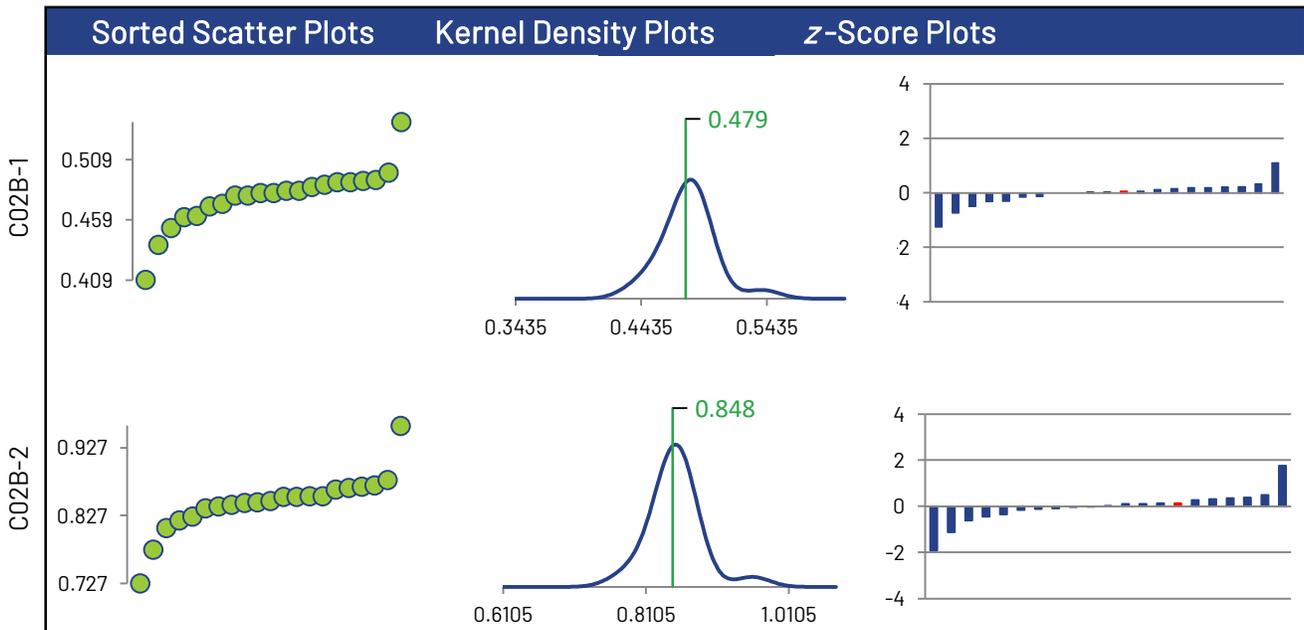
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	21	21	21	21
Median mg/L	0.481	0.849	1.31	0.755
Robust Mean mg/L	0.479	0.848	1.30	0.758
Uncertainty of the Assigned Value mg/L	0.00461	0.00715	0.0129	0.00674
Robust Standard Deviation mg/L	0.0169	0.0262	0.0473	0.0247
Regression Standard Deviation mg/L	0.0359	0.0636	0.0976	0.0568
Stability Flag				
Homogeneity Flag	Homogeneity			
Standard Deviation Used (SDPA) mg/L	0.0555	0.0636	0.0976	0.0568
Flagged Outliers	0	0	0	0
z >3.0	0	0	0	0
2< z <3	0	0	1	0
Failure Rate %*	0.0			

Methods Used

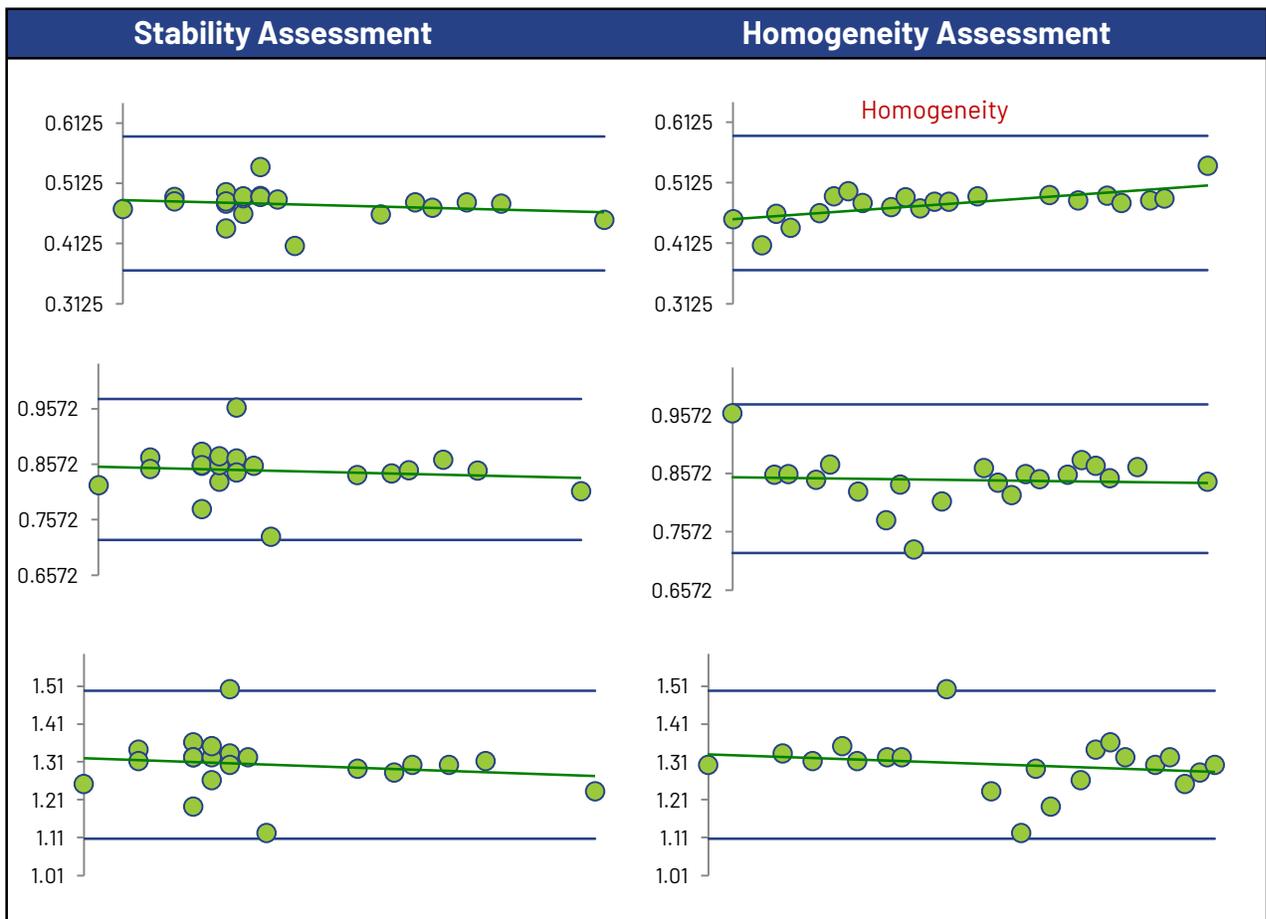
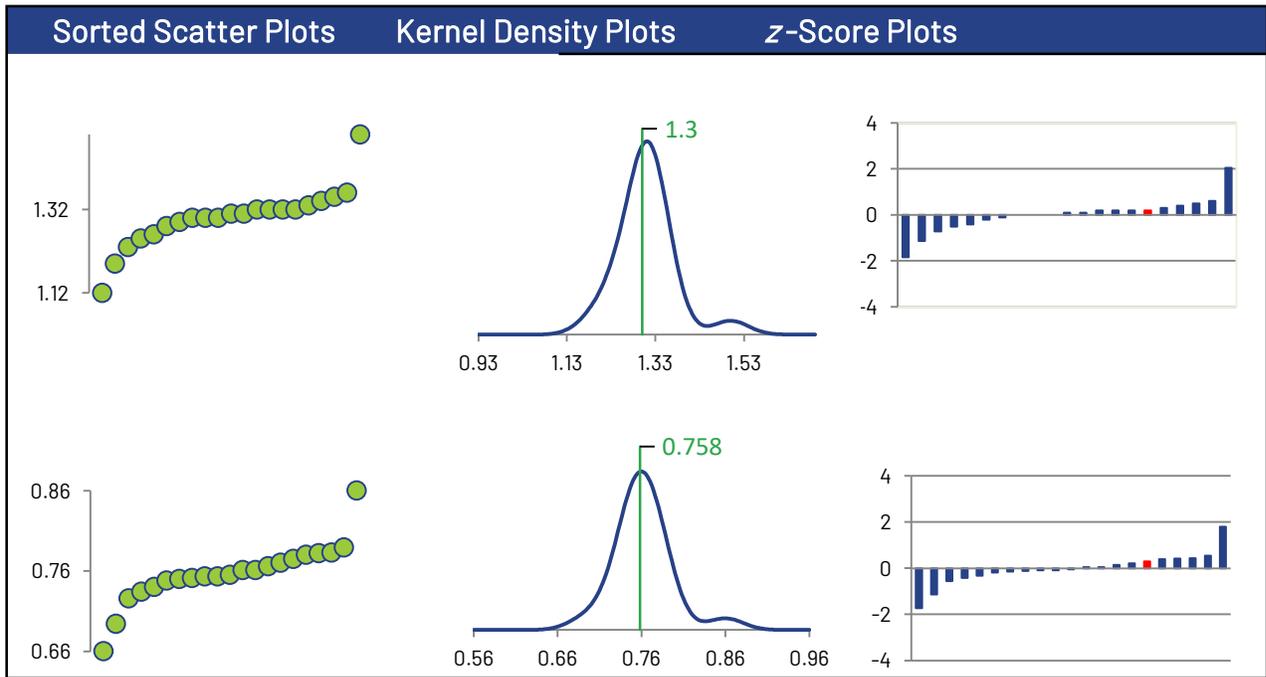
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	20	20	20	20
ICP/MS (Red)	1	1	1	1

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

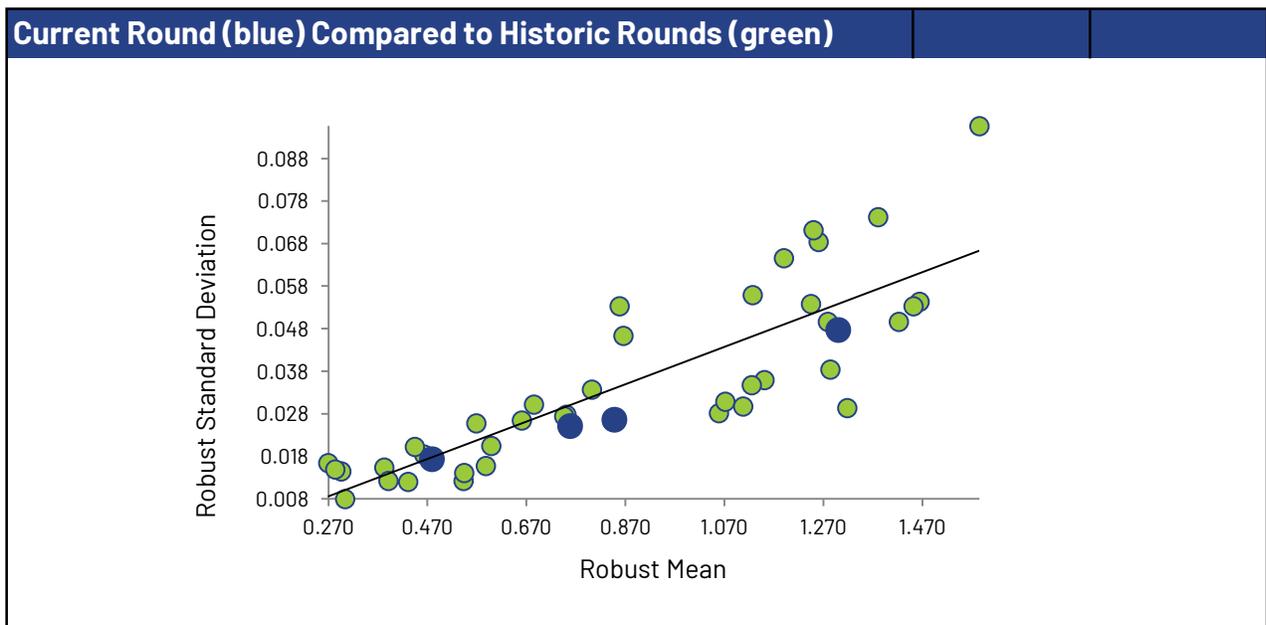
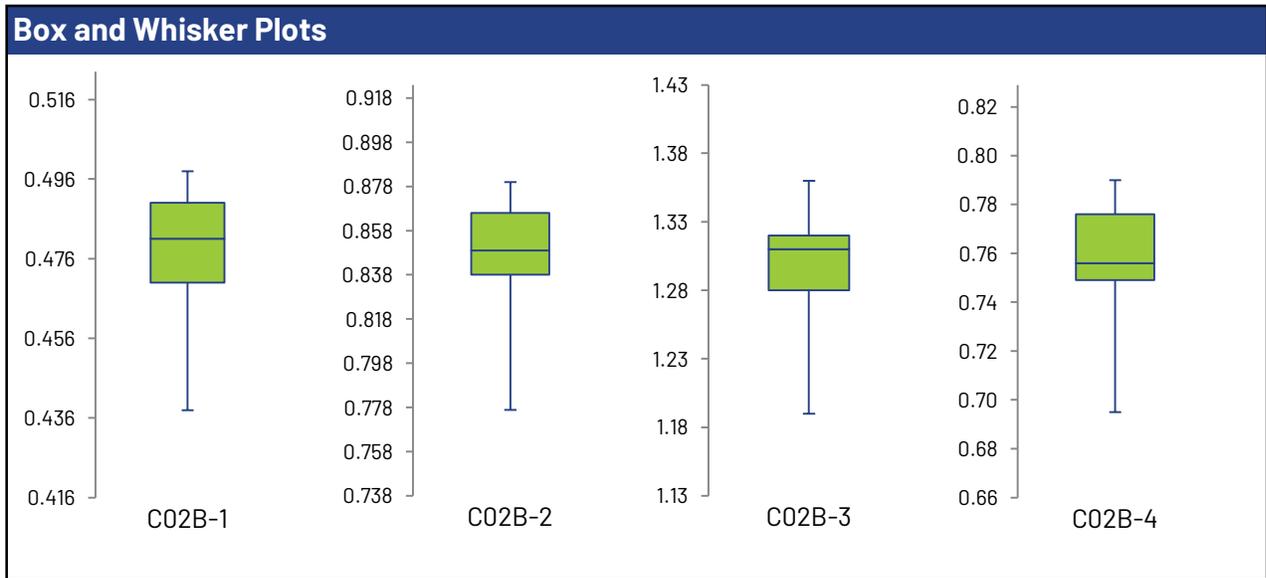
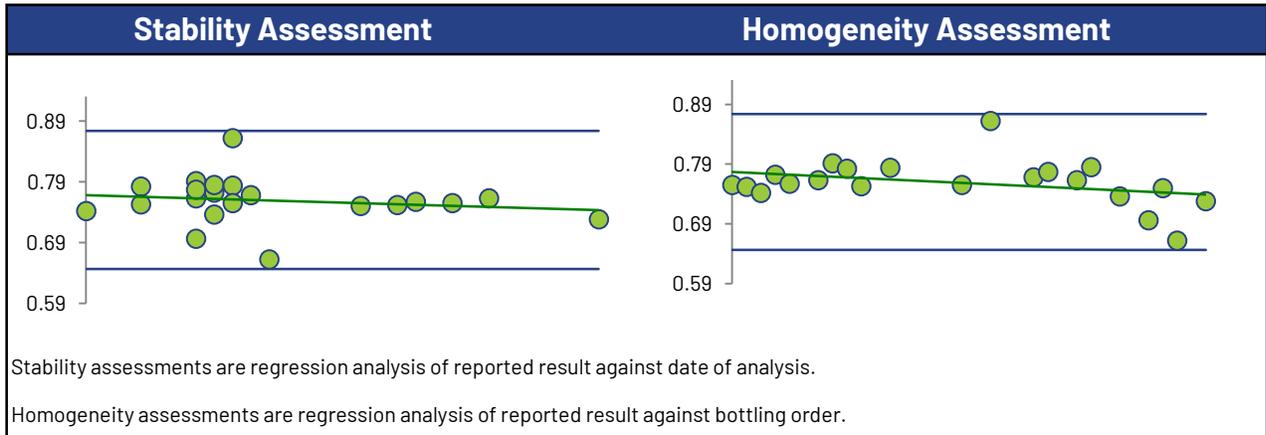


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Cobalt



Cobalt



Copper

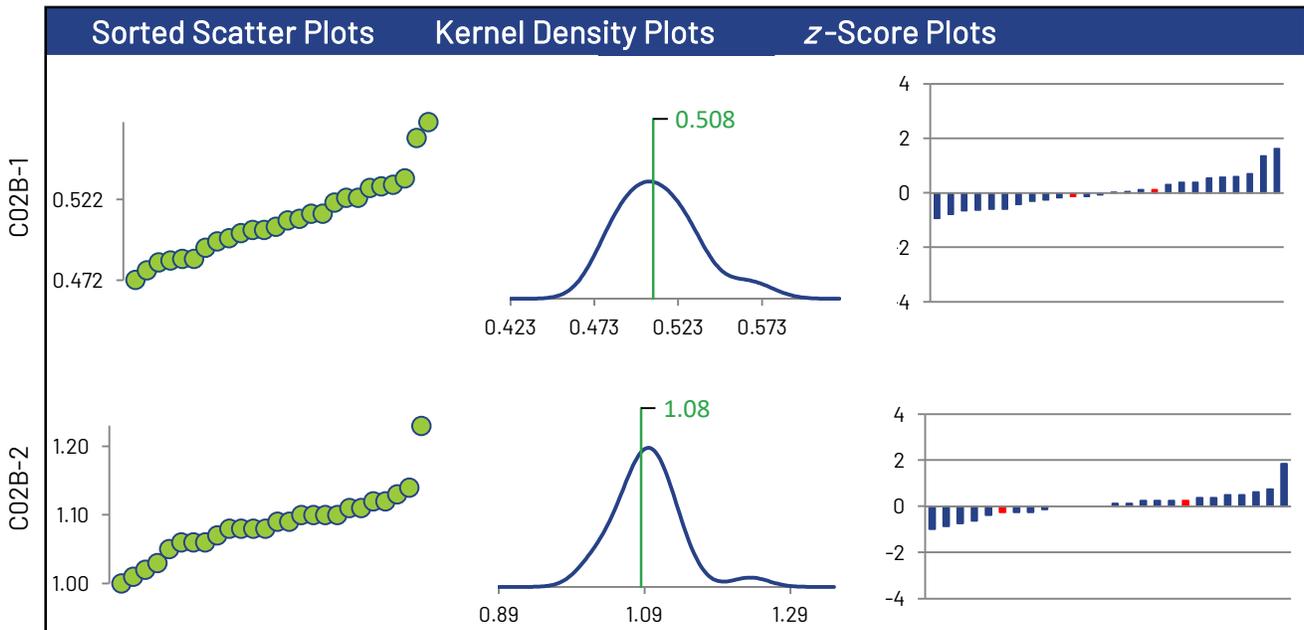
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	26	26	26	26
Median mg/L	0.507	1.09	1.41	0.816
Robust Mean mg/L	0.508	1.08	1.40	0.816
Uncertainty of the Assigned Value mg/L	0.00559	0.00973	0.0129	0.00708
Robust Standard Deviation mg/L	0.0228	0.0397	0.0528	0.0289
Regression Standard Deviation mg/L	0.0381	0.0813	0.105	0.0612
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) mg/L	0.0381	0.0813	0.105	0.0612
Flagged Outliers	0	0	0	0
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	0	0	0
Failure Rate %*	0.0			

Methods Used

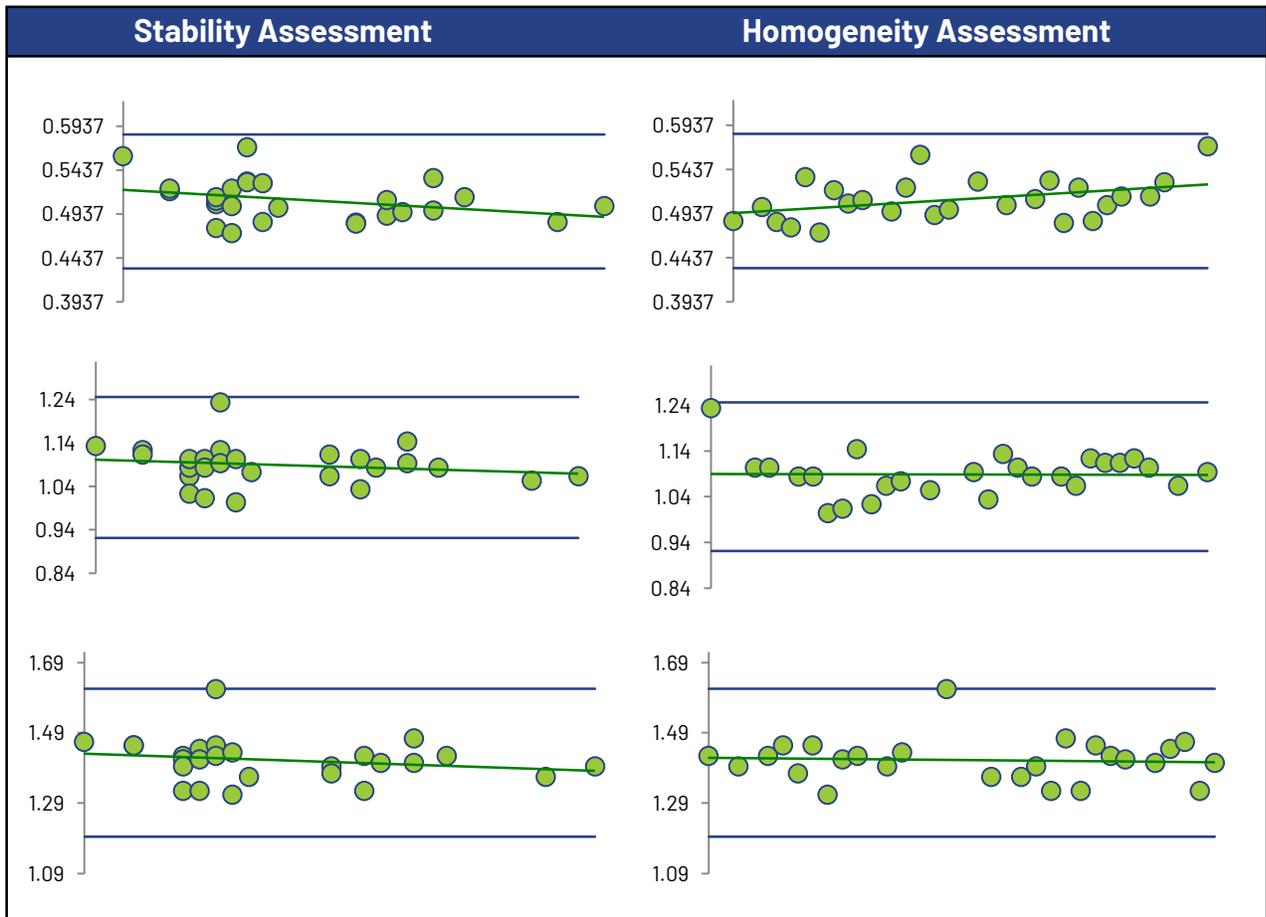
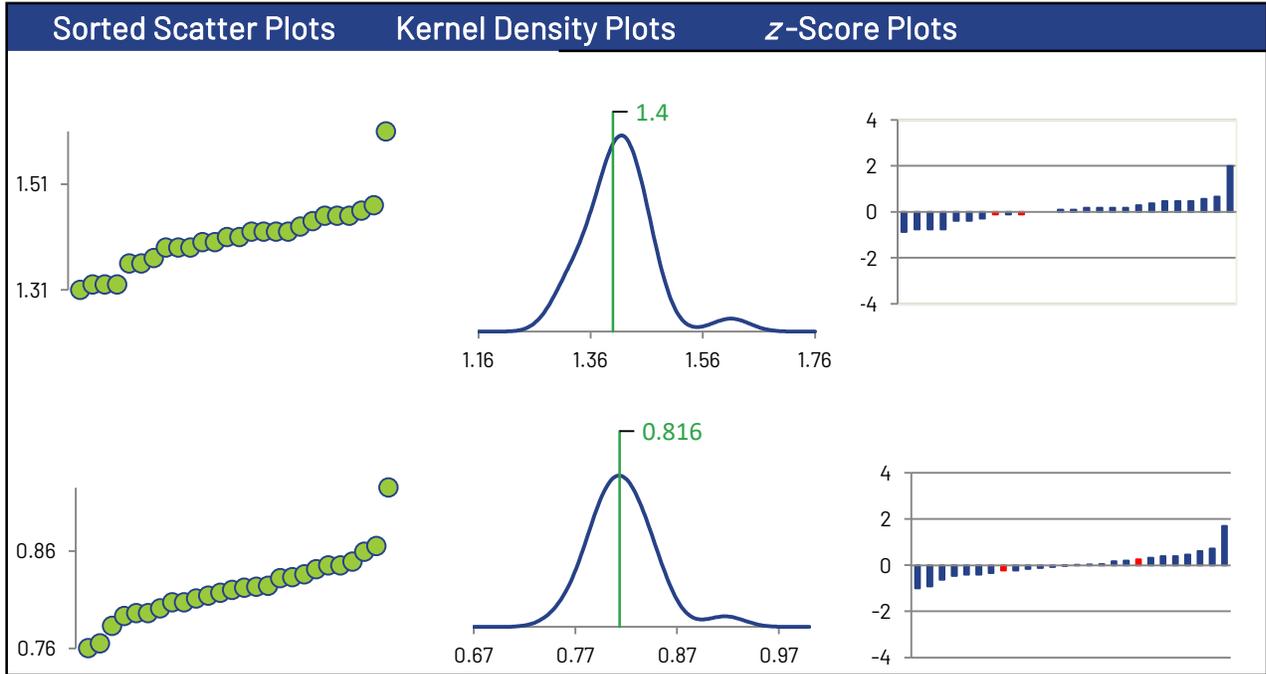
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	24	24	24	24
ICP/MS (Red)	2	2	2	2

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

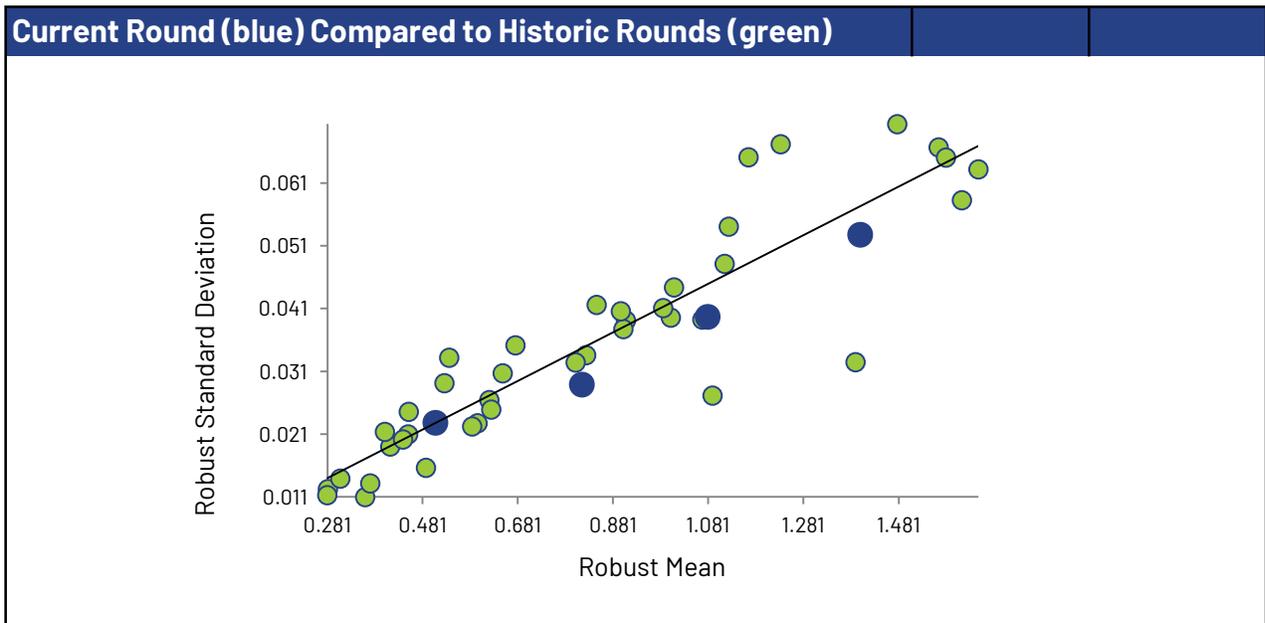
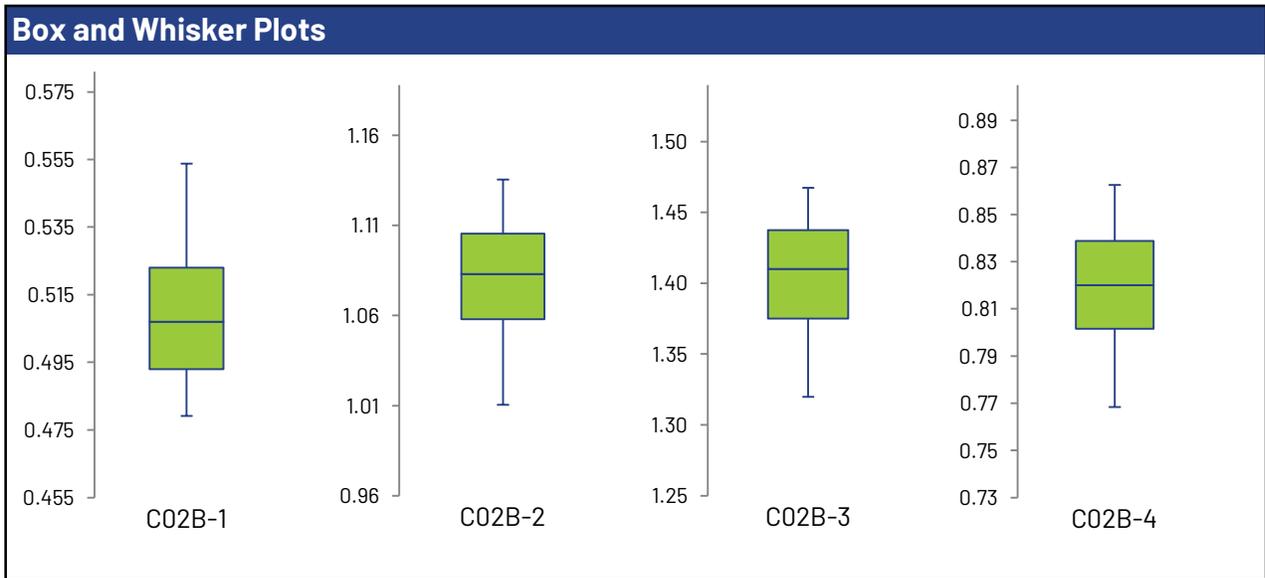
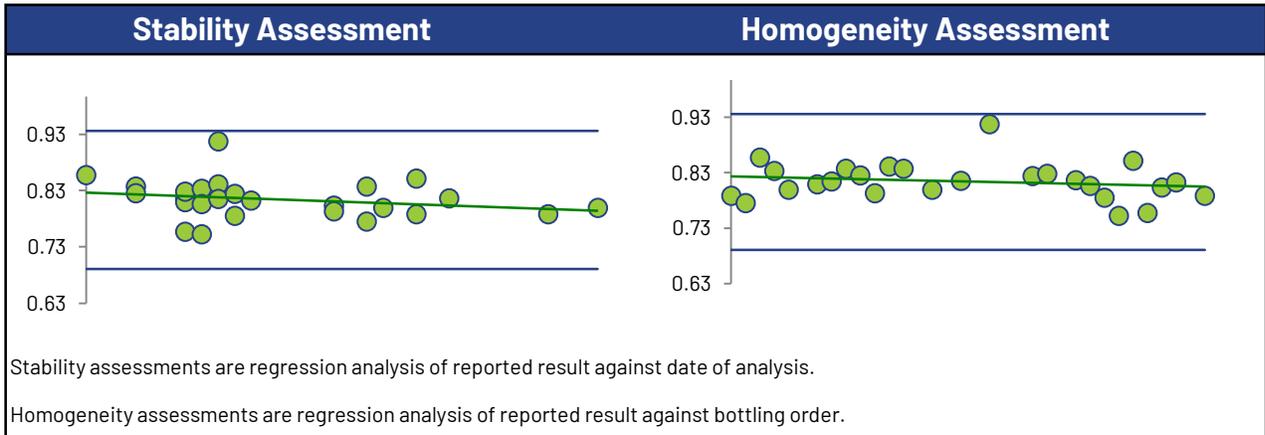


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Copper



Copper



Iron

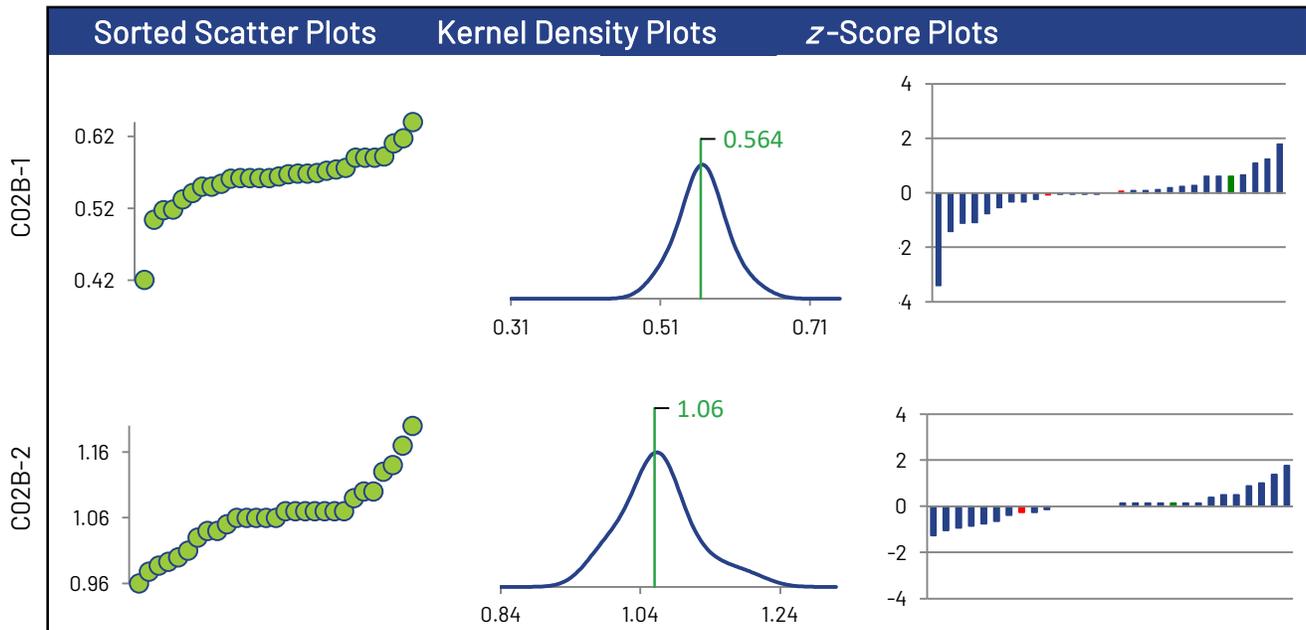
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	29	29	29	29
Median mg/L	0.564	1.06	1.39	0.730
Robust Mean mg/L	0.564	1.06	1.39	0.730
Uncertainty of the Assigned Value mg/L	0.00685	0.0118	0.0136	0.00631
Robust Standard Deviation mg/L	0.0295	0.0510	0.0586	0.0272
Regression Standard Deviation mg/L	0.0423	0.0795	0.104	0.0548
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) mg/L	0.0423	0.0795	0.104	0.0548
Flagged Outliers	0	0	0	0
$ z > 3.0$	1	0	0	0
$2 < z < 3$	0	0	0	0
Failure Rate %*	0.0			

Methods Used

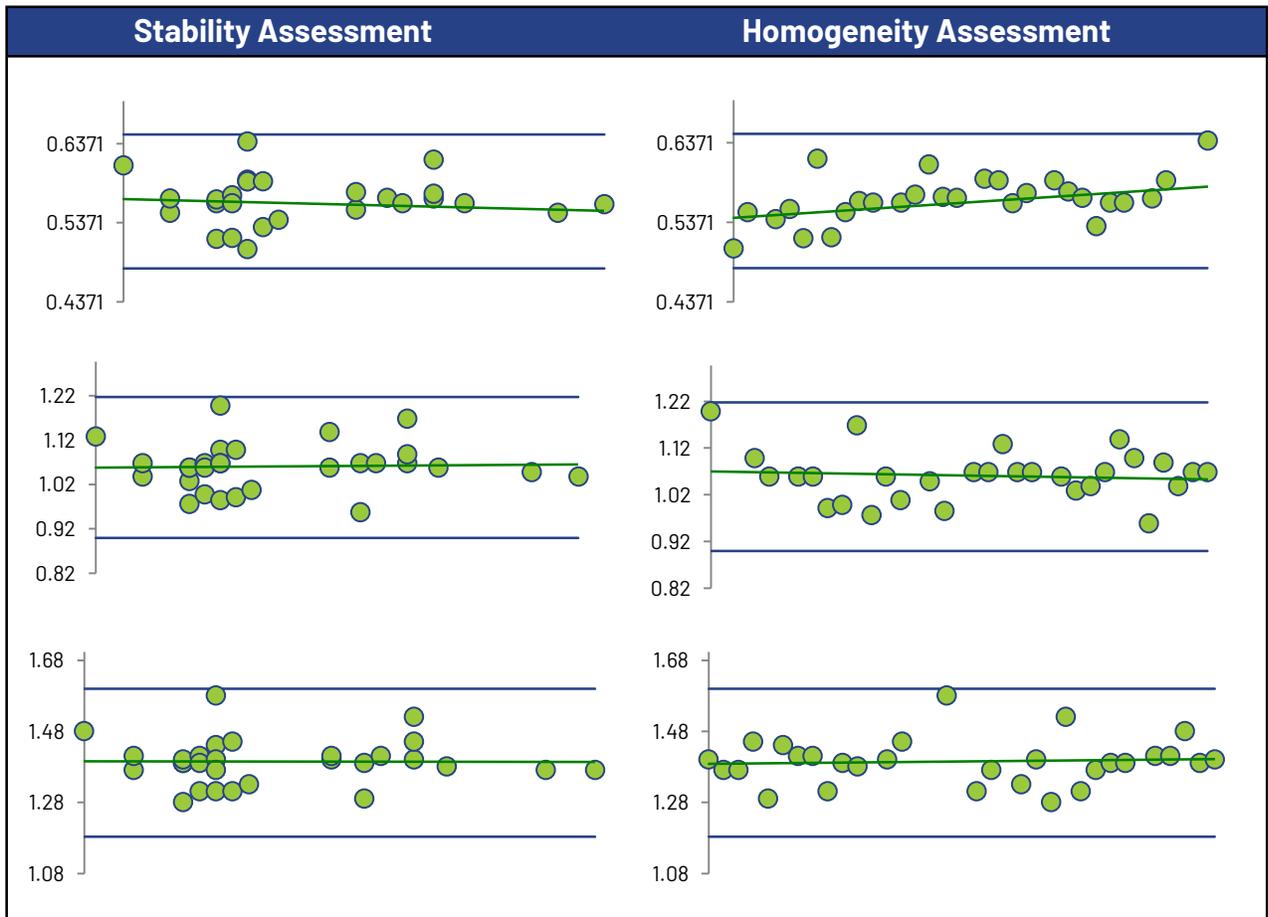
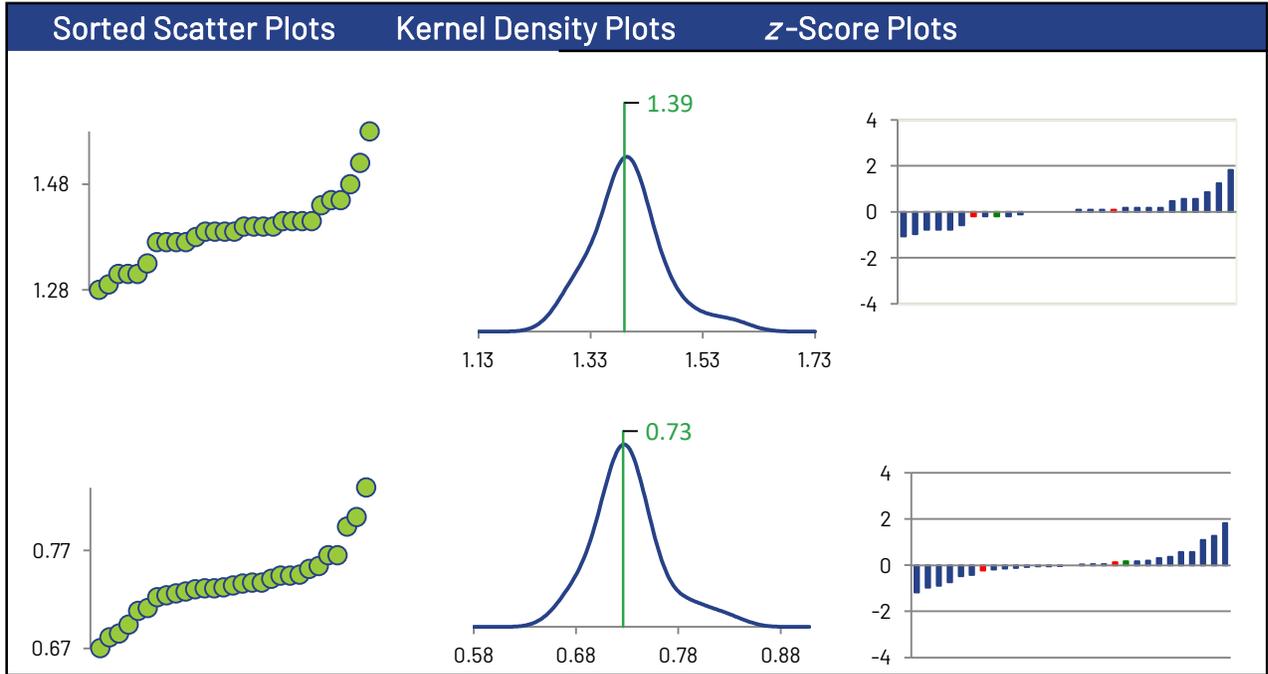
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	26	26	26	26
ICP/MS (Red)	2	2	2	2
COLORIMETRIC (Green)	1	1	1	1

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

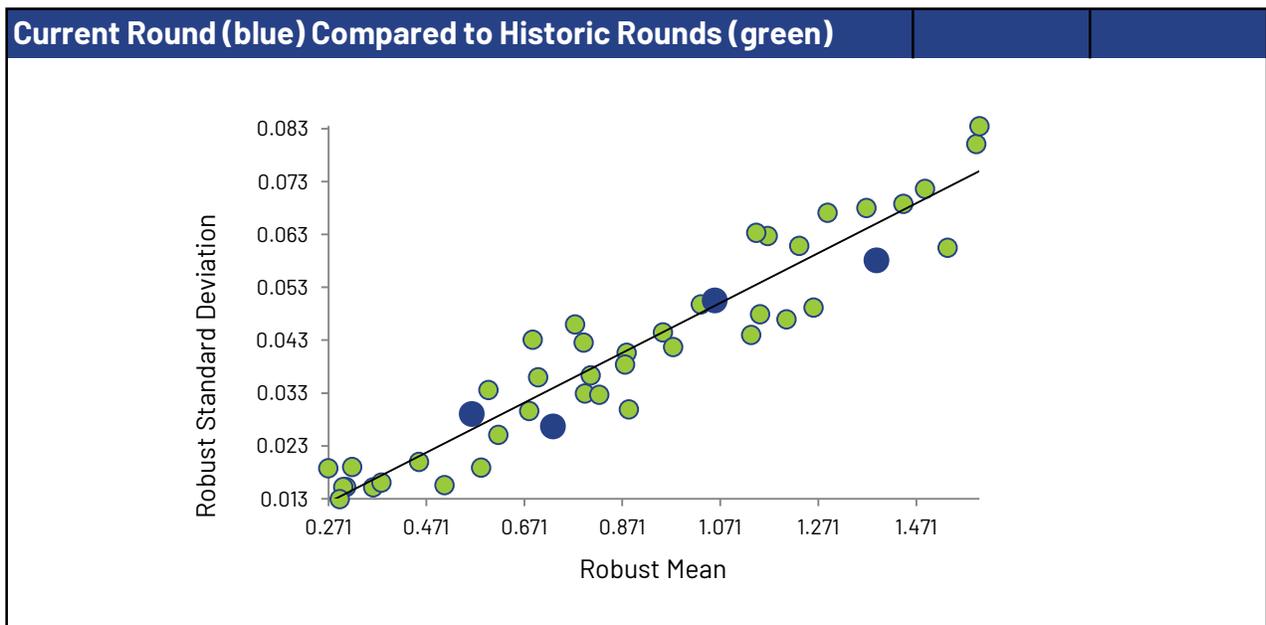
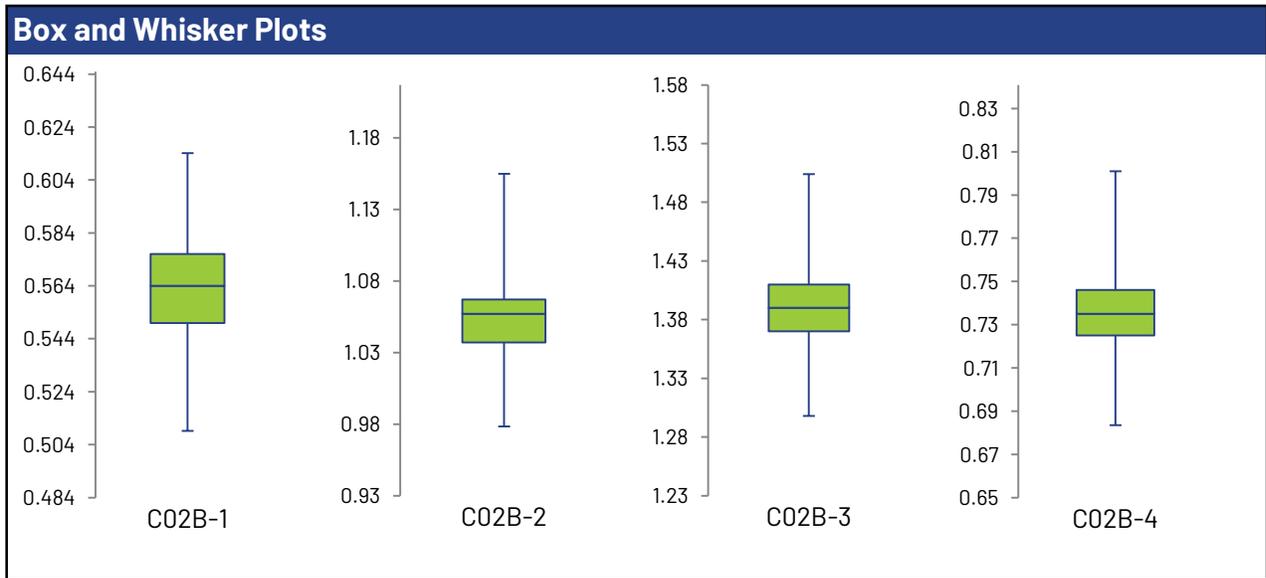
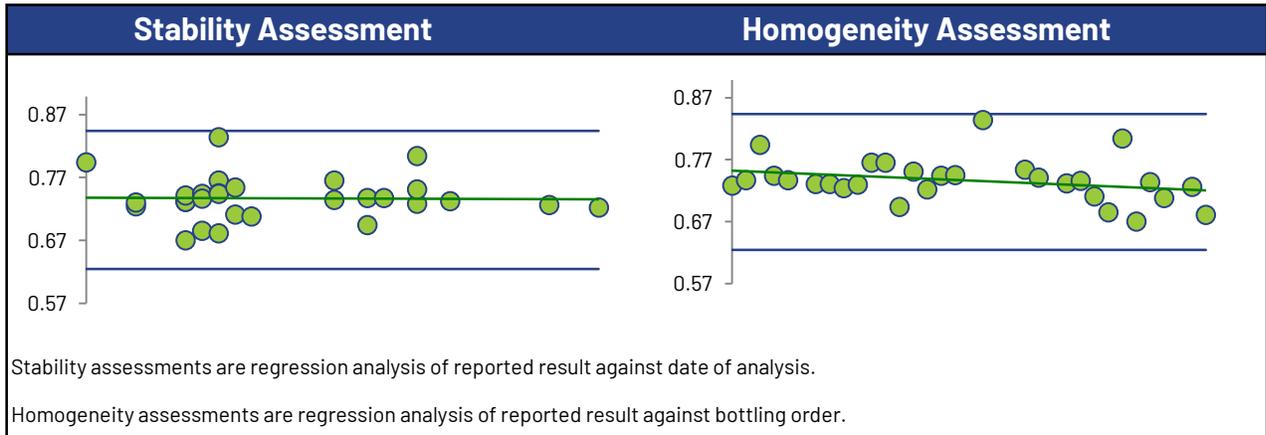


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Iron



Iron



Lead

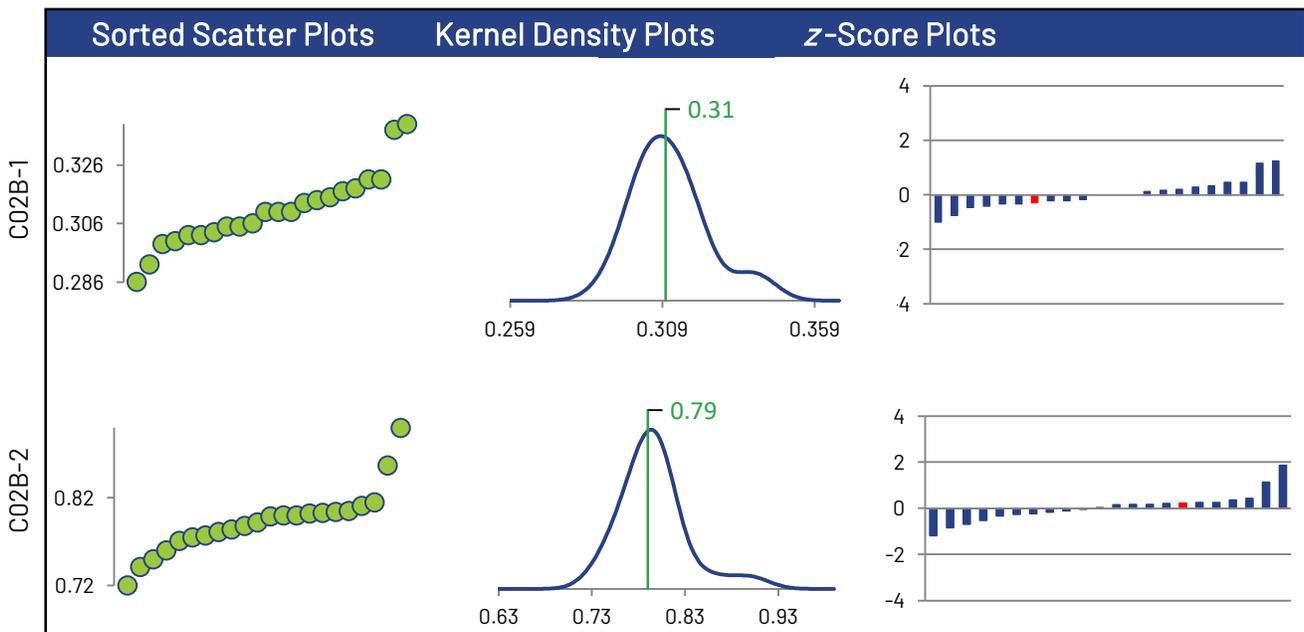
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	22	22	22	22
Median mg/L	0.310	0.796	1.23	0.492
Robust Mean mg/L	0.310	0.790	1.22	0.490
Uncertainty of the Assigned Value mg/L	0.00290	0.00725	0.0105	0.00469
Robust Standard Deviation mg/L	0.0109	0.0272	0.0393	0.0176
Regression Standard Deviation mg/L	0.0232	0.0592	0.0916	0.0368
Stability Flag				
Homogeneity Flag	Homogeneity			
Standard Deviation Used (SDPA) mg/L	0.0241	0.0592	0.0916	0.0368
Flagged Outliers	0	0	0	0
z >3.0	0	0	0	0
2< z <3	0	0	0	0
Failure Rate %*	0.0			

Methods Used

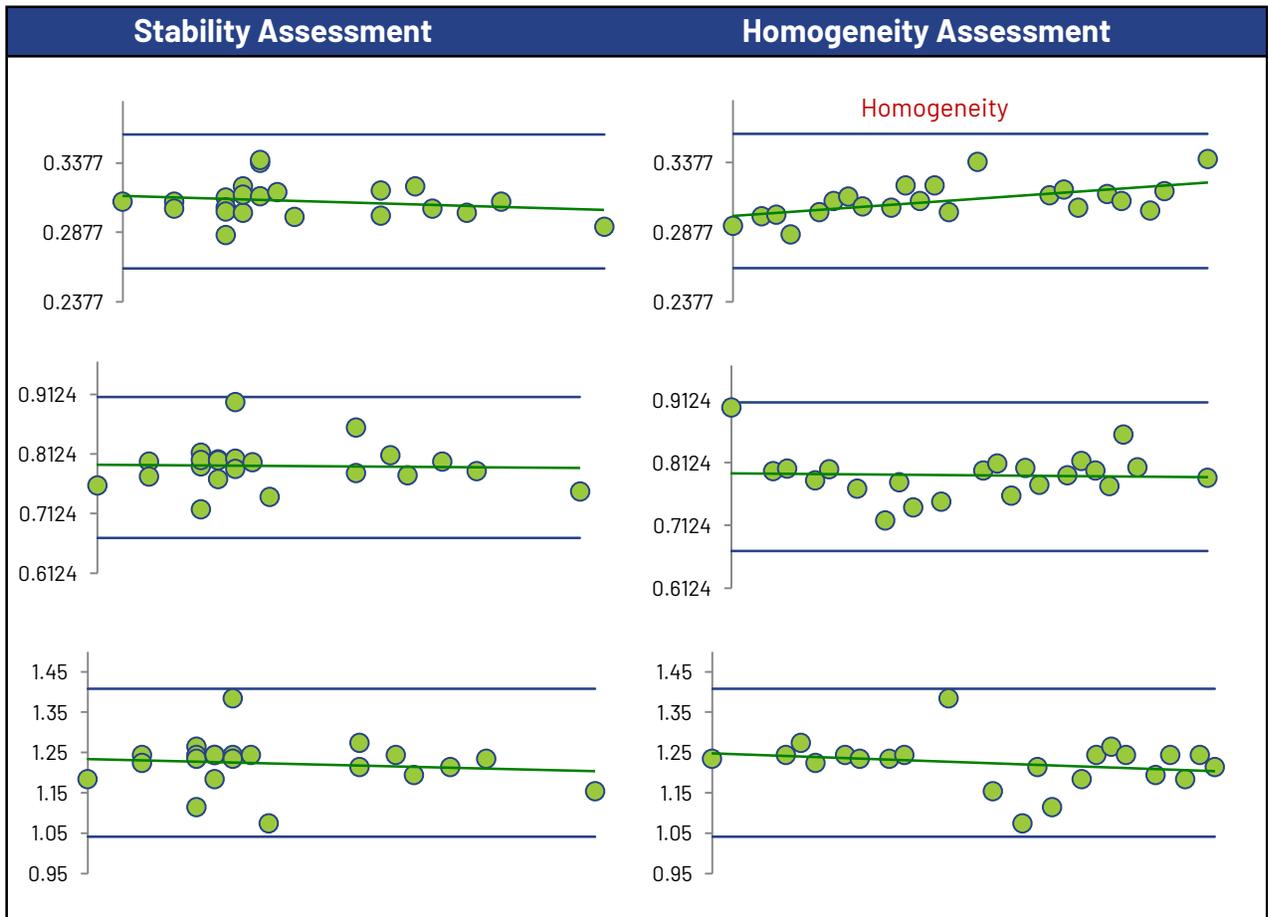
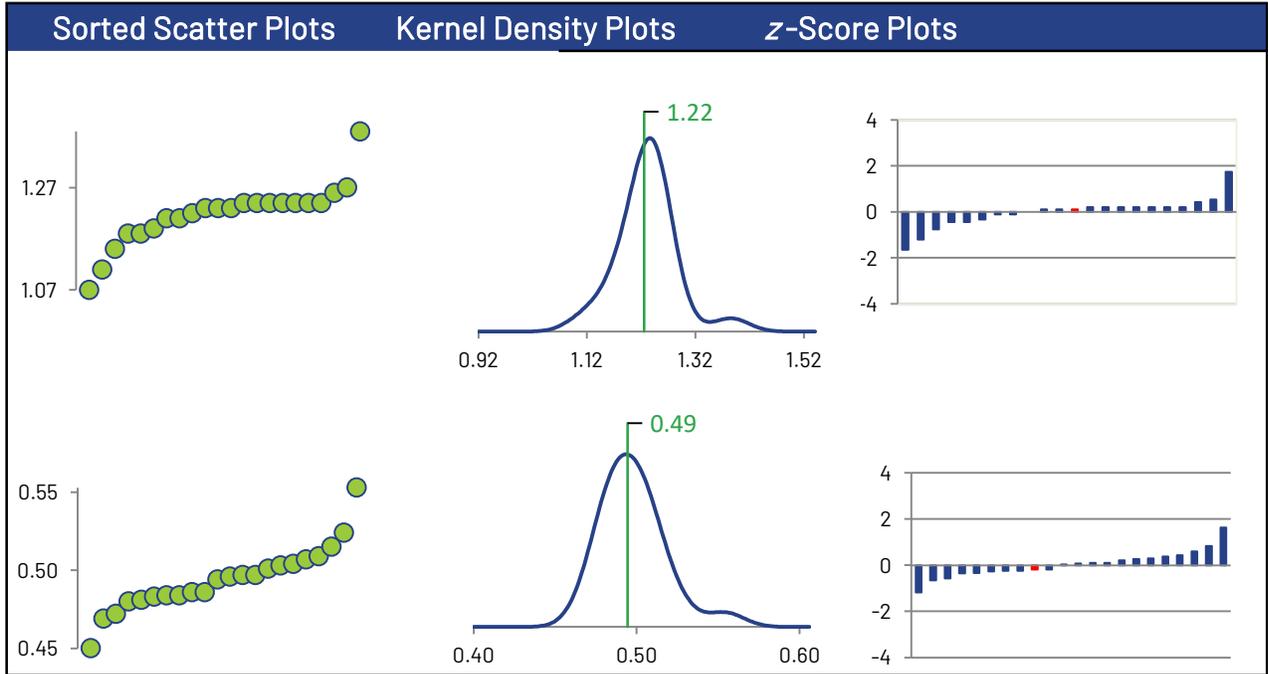
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	21	21	21	21
ICP/MS (Red)	1	1	1	1

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

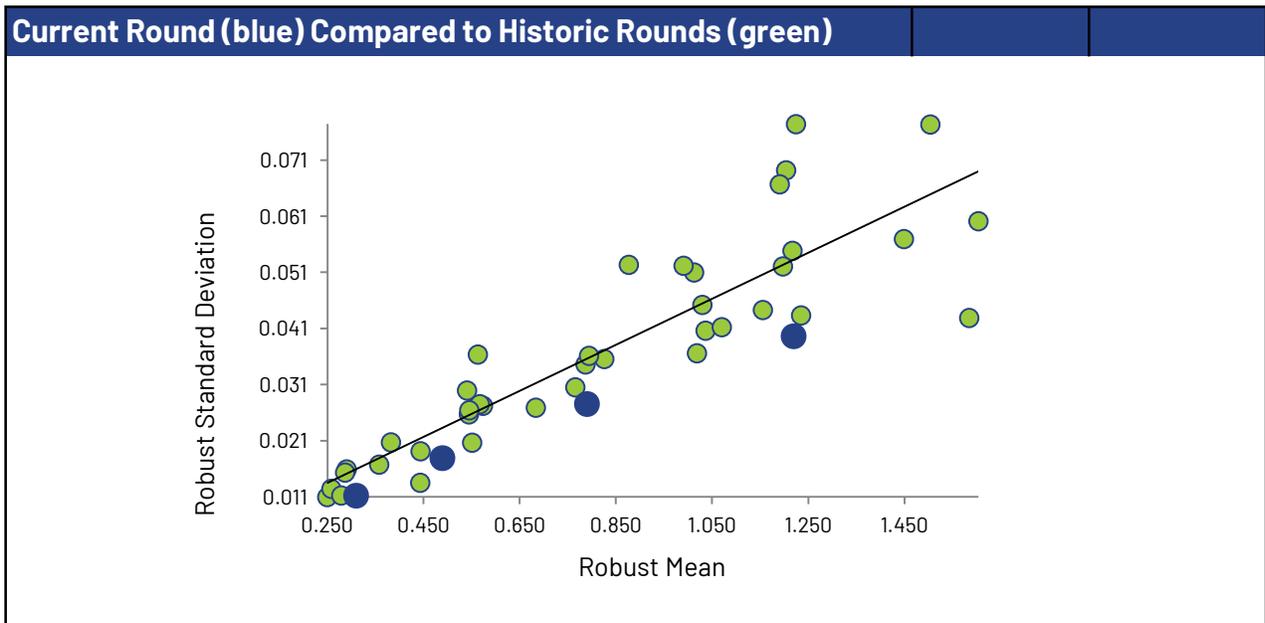
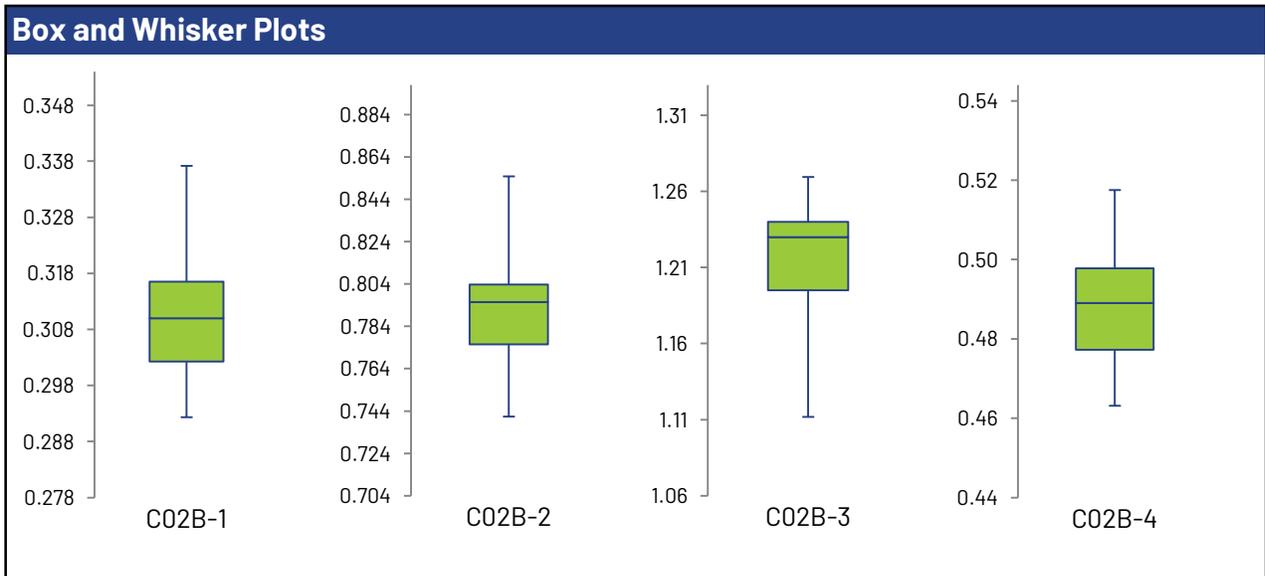
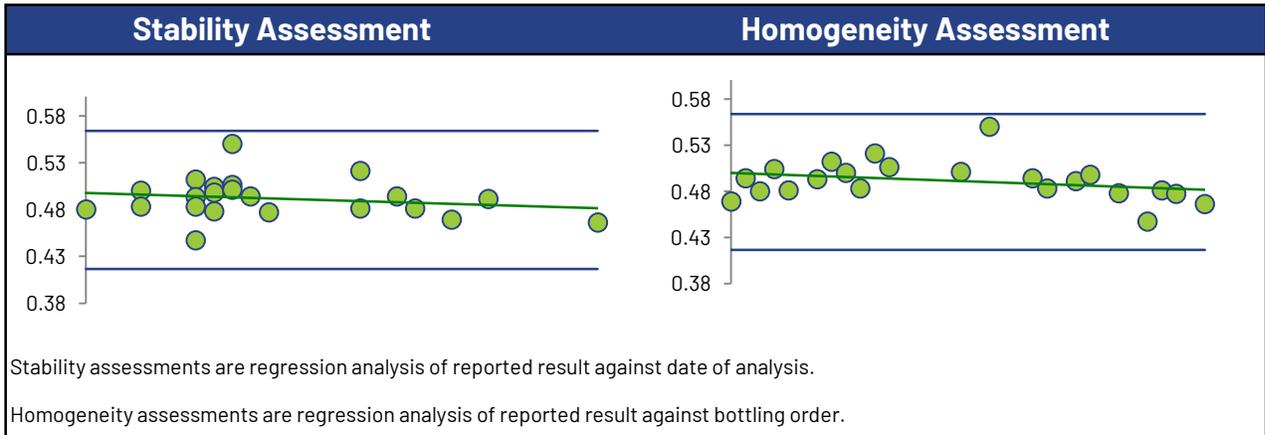


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Lead



Lead



Lithium

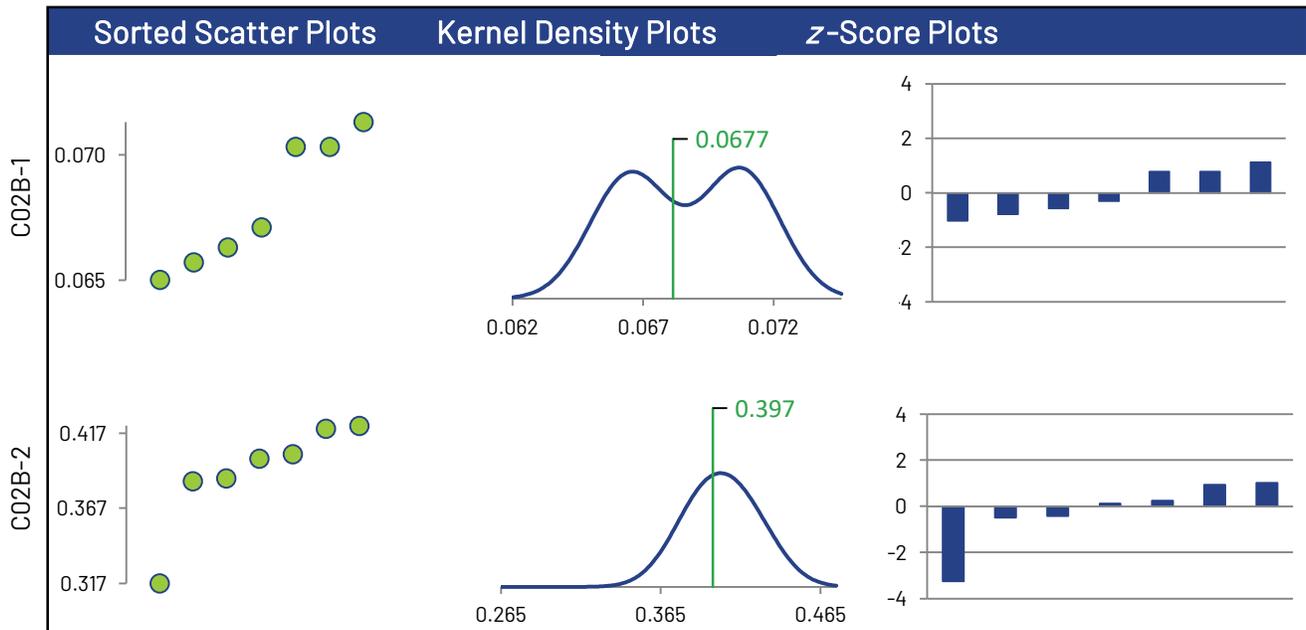
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	7	7	7	7
Median mg/L	0.0668	0.400	0.400	0.290
Robust Mean mg/L	0.0677	0.397	0.400	0.288
Uncertainty of the Assigned Value mg/L	0.00137	0.0116	0.0106	0.00557
Robust Standard Deviation mg/L	0.00291	0.0246	0.0224	0.0118
Regression Standard Deviation mg/L				
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) mg/L	0.00291	0.0246	0.0224	0.0118
Flagged Outliers	0	0	0	0
$ z > 3.0$	0	1	1	1
$2 < z < 3$	0	0	0	0
Failure Rate %*	0.0			

Methods Used

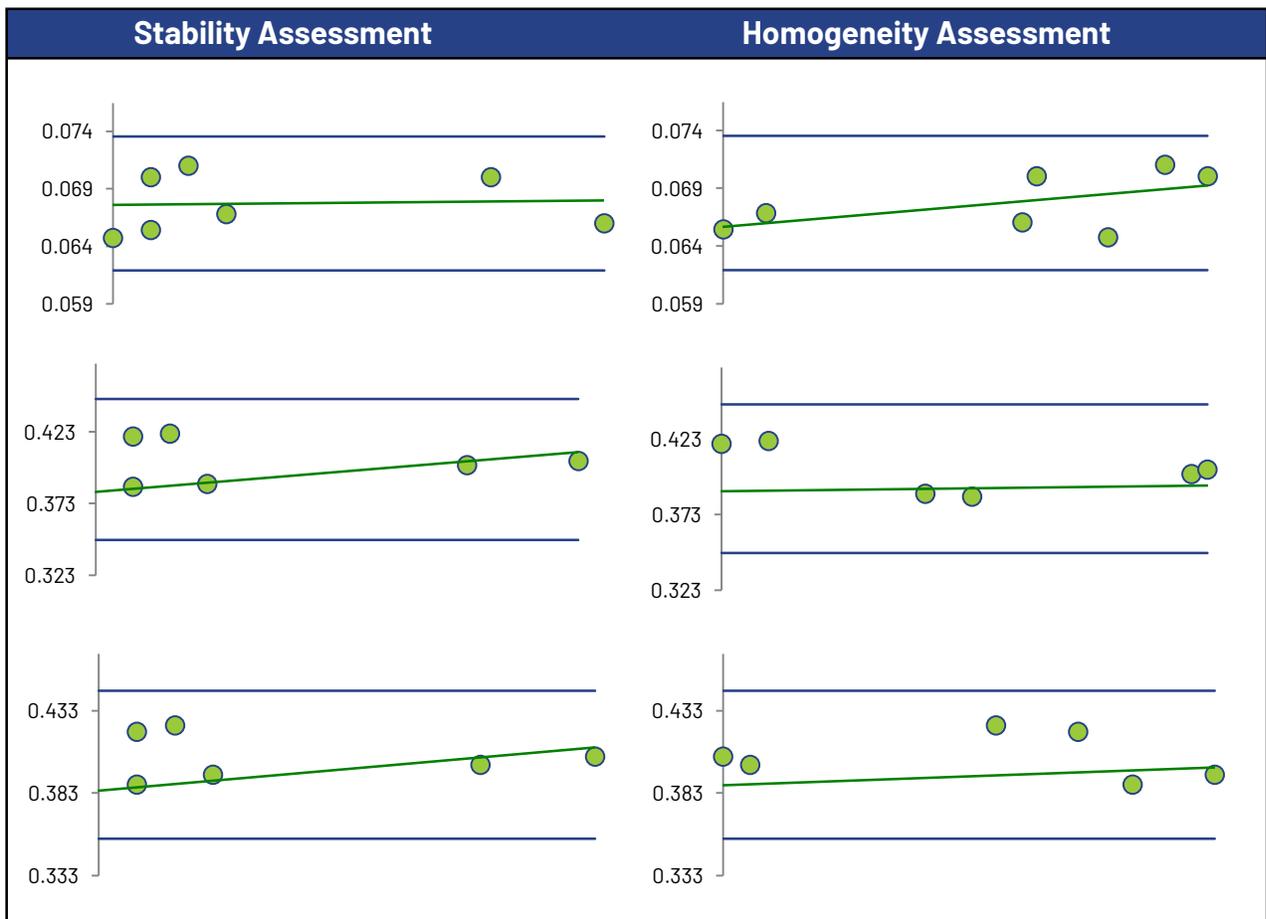
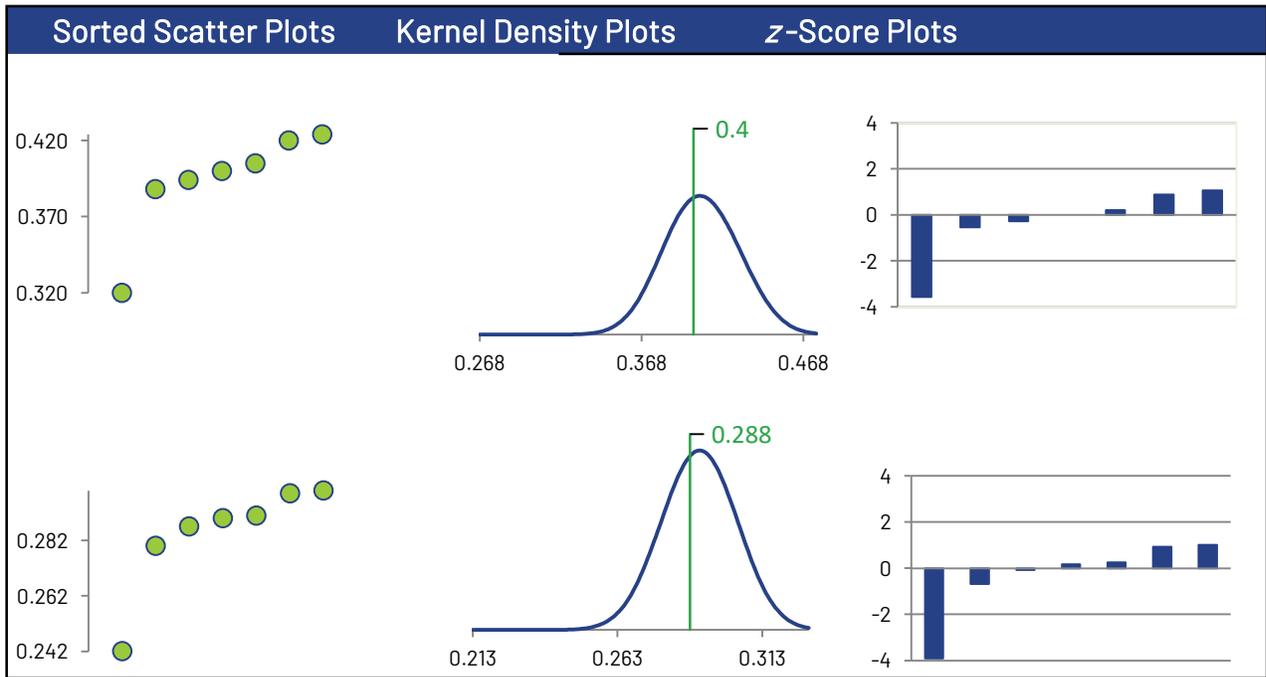
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	7	7	7	7

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

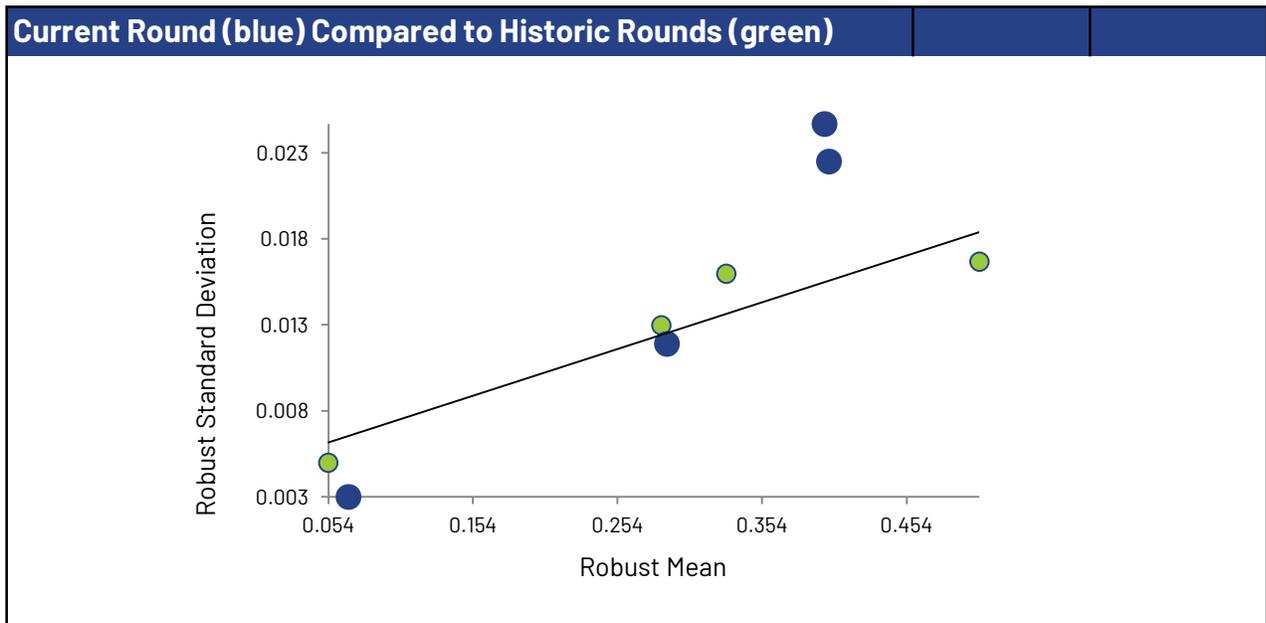
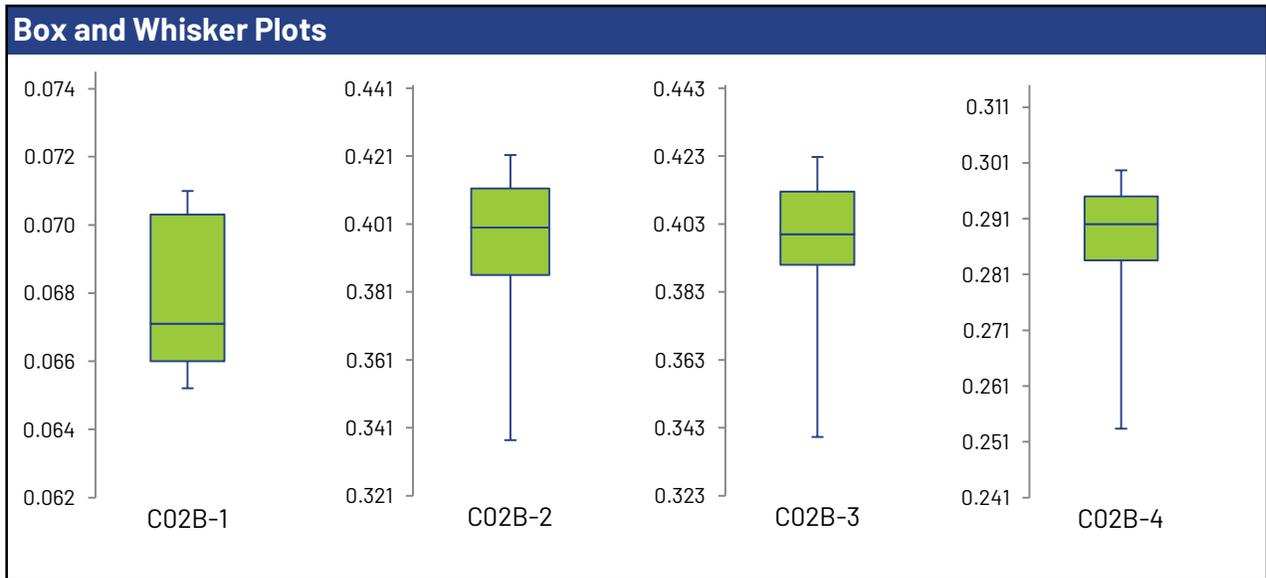
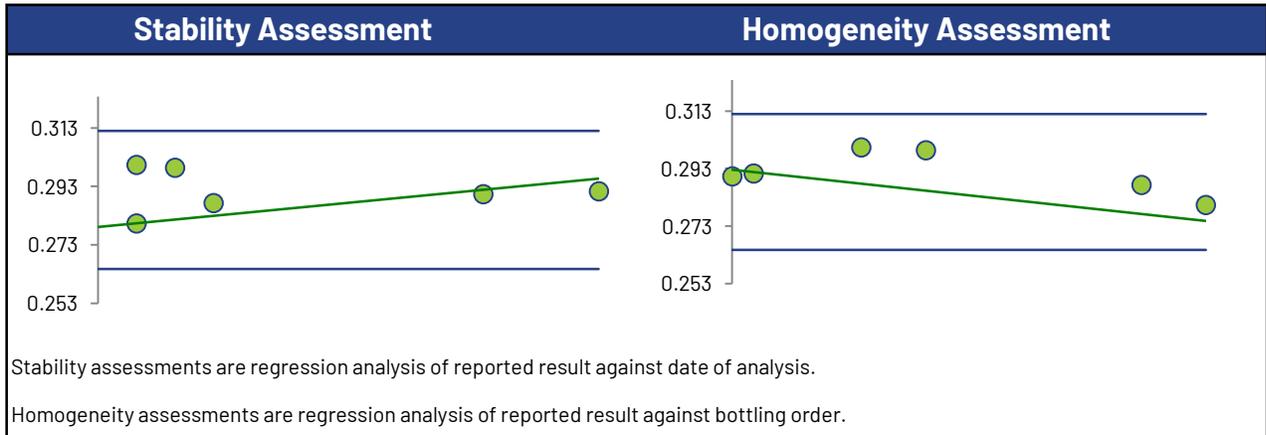


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Lithium



Lithium



Manganese

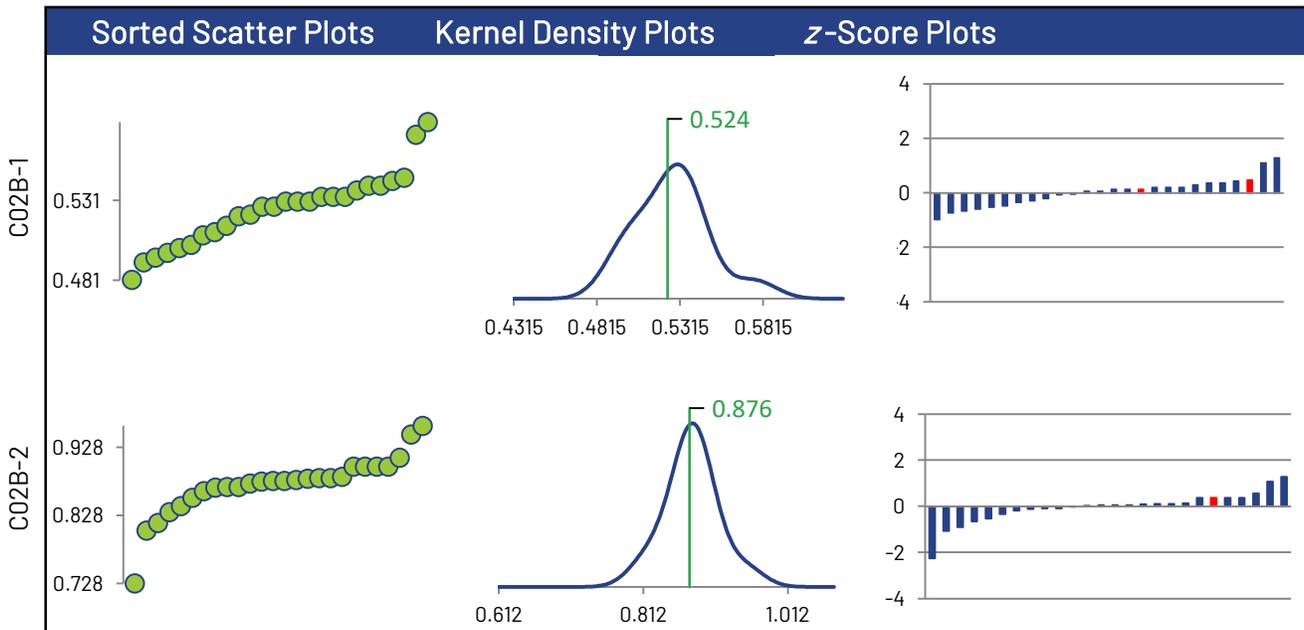
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	26	26	26	26
Median mg/L	0.529	0.879	1.26	0.463
Robust Mean mg/L	0.524	0.876	1.25	0.462
Uncertainty of the Assigned Value mg/L	0.00525	0.00750	0.0102	0.00417
Robust Standard Deviation mg/L	0.0214	0.0306	0.0418	0.0170
Regression Standard Deviation mg/L	0.0393	0.0657	0.0940	0.0347
Stability Flag				
Homogeneity Flag	Homogeneity			
Standard Deviation Used (SDPA) mg/L	0.0434	0.0657	0.0940	0.0347
Flagged Outliers	0	0	0	0
z >3.0	0	0	0	0
2< z <3	0	1	1	0
Failure Rate %*	0.0			

Methods Used

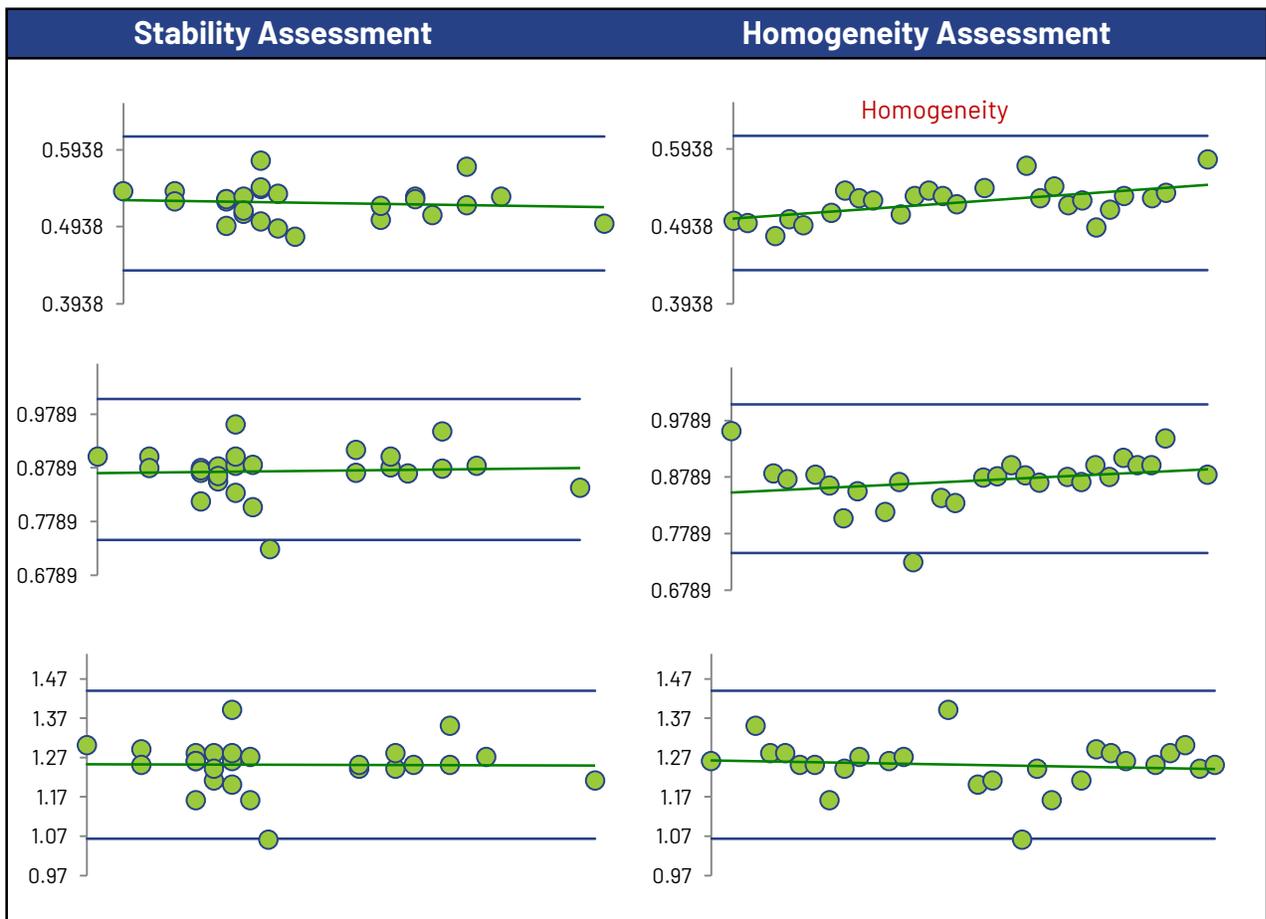
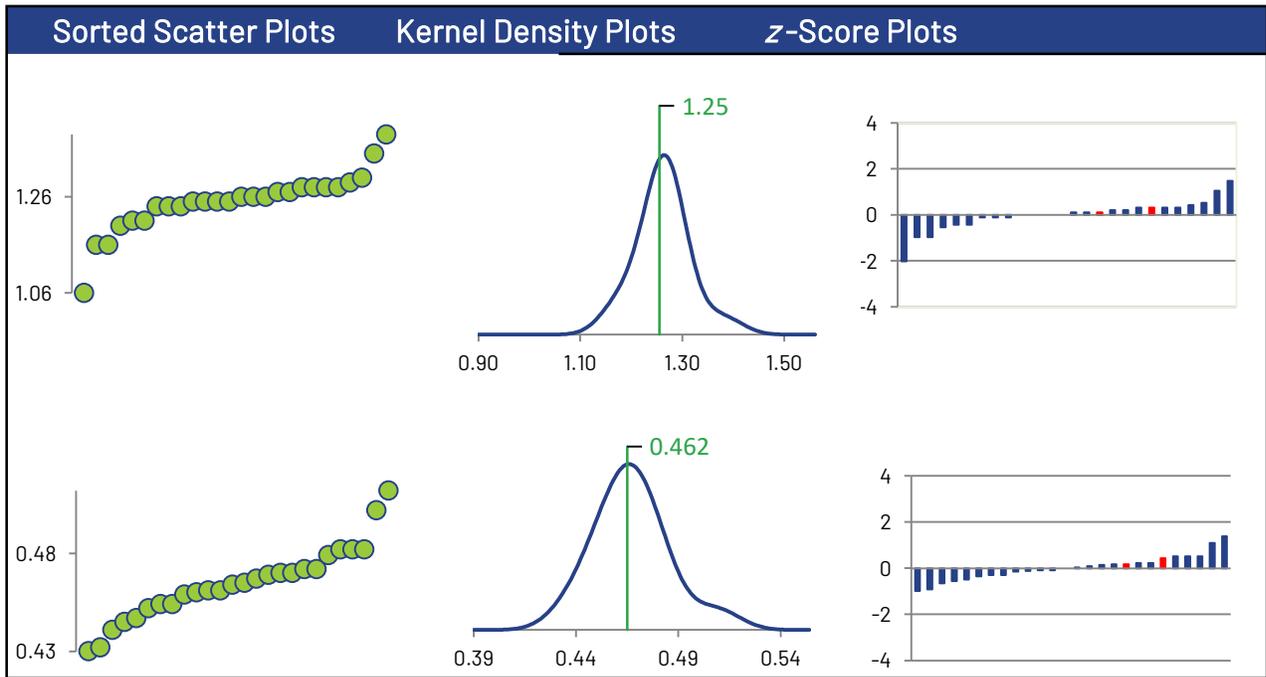
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	24	24	24	24
ICP/MS (Red)	2	2	2	2

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

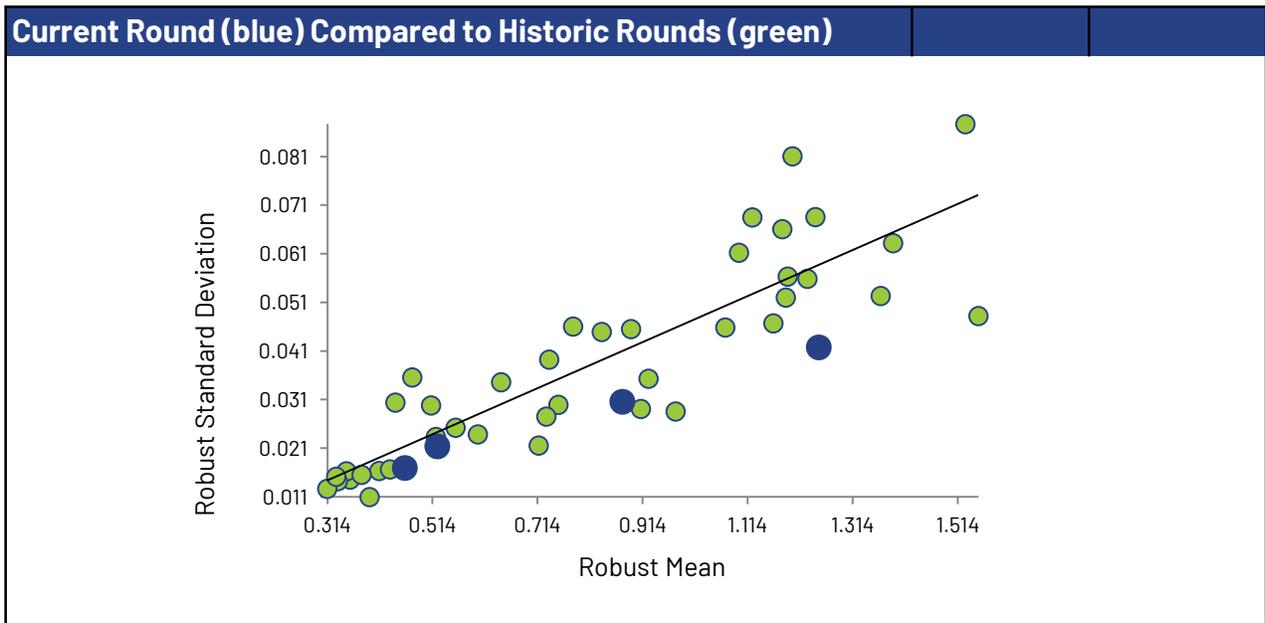
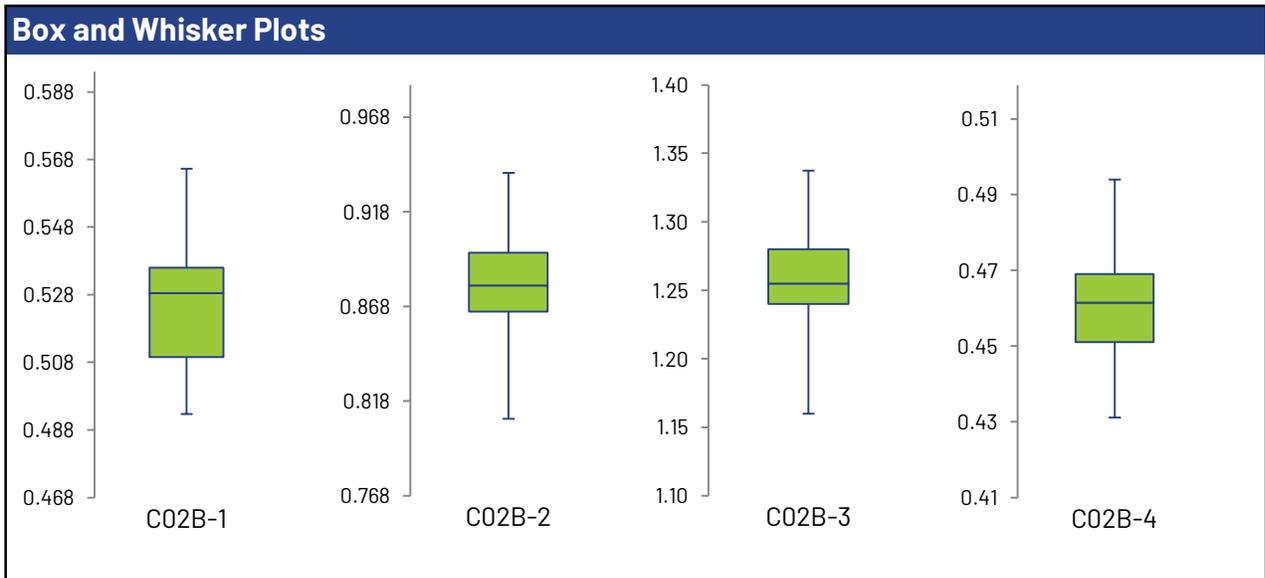
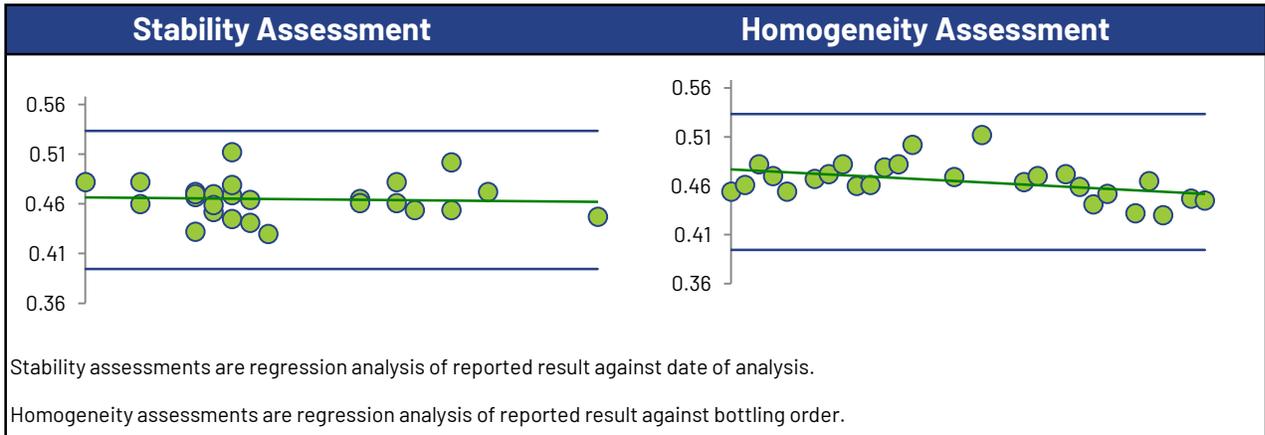


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Manganese



Manganese



Molybdenum

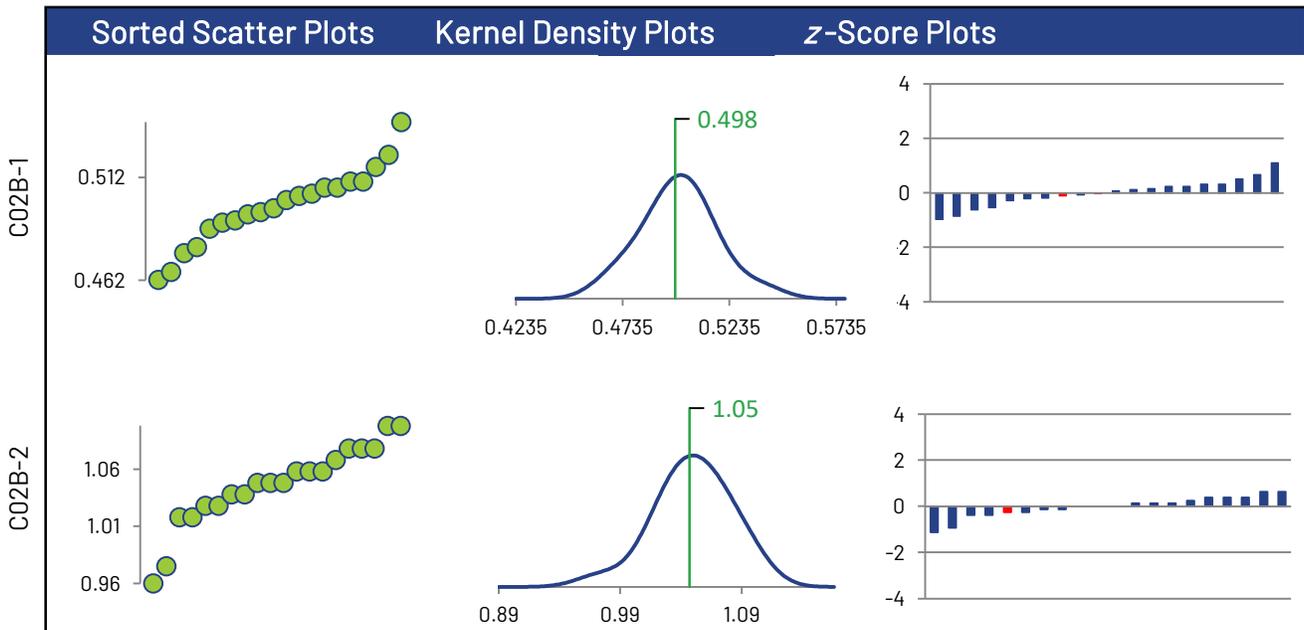
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	20	20	20	20
Median mg/L	0.499	1.05	1.25	0.614
Robust Mean mg/L	0.498	1.05	1.24	0.612
Uncertainty of the Assigned Value mg/L	0.00514	0.00911	0.0103	0.00478
Robust Standard Deviation mg/L	0.0184	0.0326	0.0367	0.0171
Regression Standard Deviation mg/L	0.0373	0.0788	0.0932	0.0459
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) mg/L	0.0373	0.0788	0.0932	0.0459
Flagged Outliers	0	0	0	0
z >3.0	0	0	0	0
2< z <3	0	0	0	0
Failure Rate %*	0.0			

Methods Used

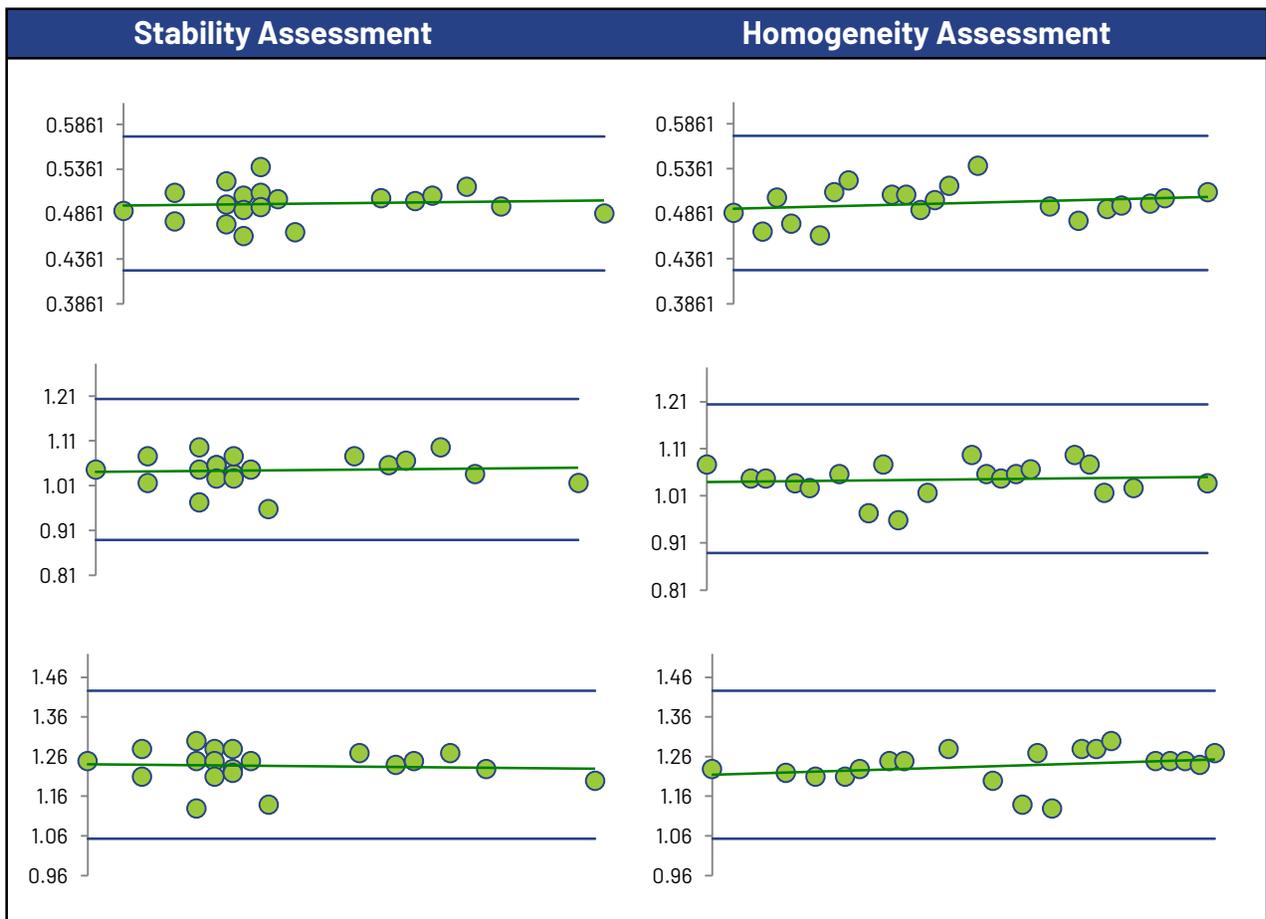
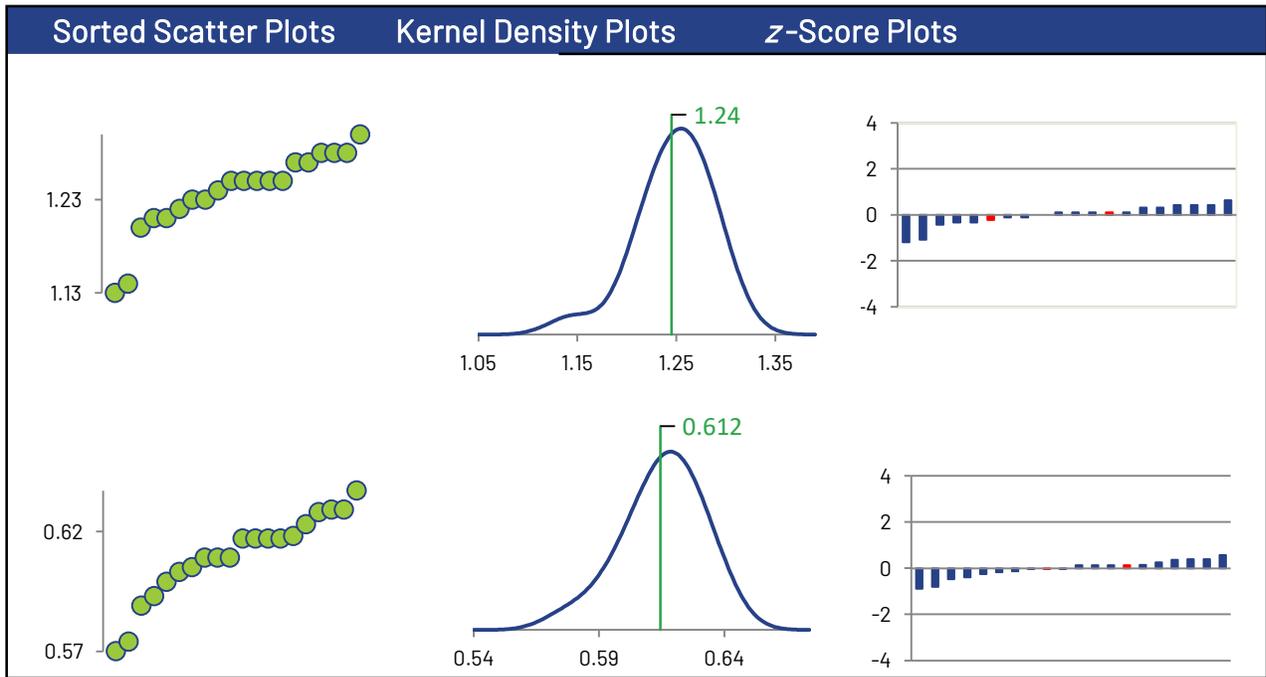
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	18	18	18	18
ICP/MS (Red)	2	2	2	2

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

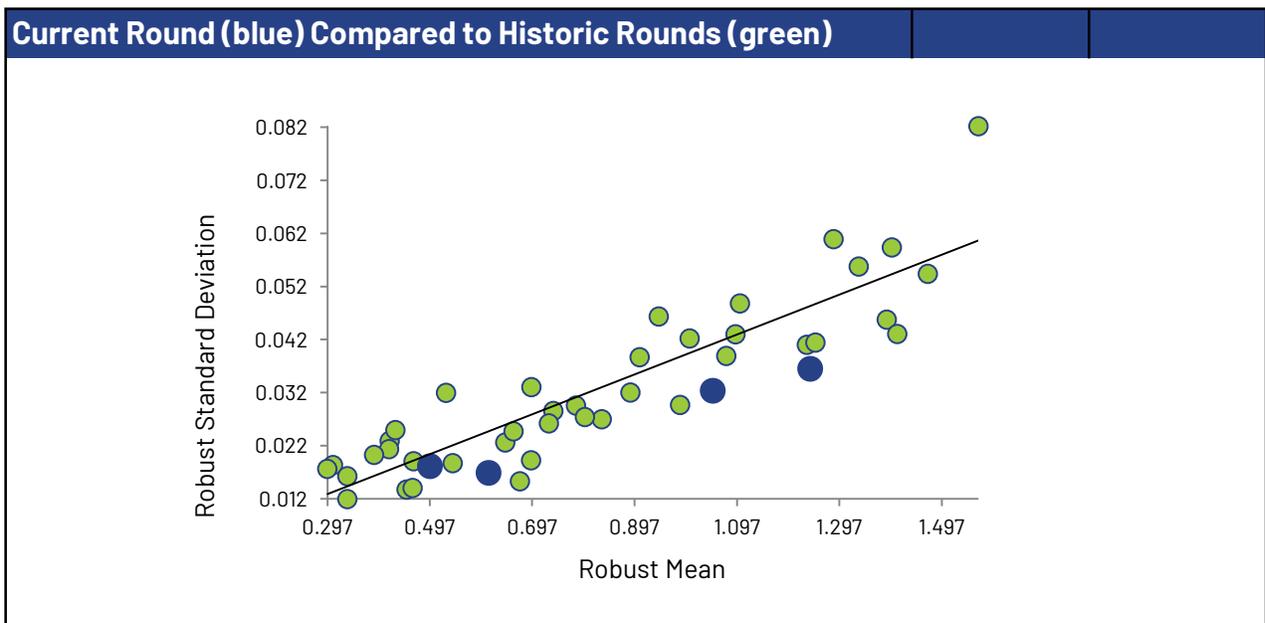
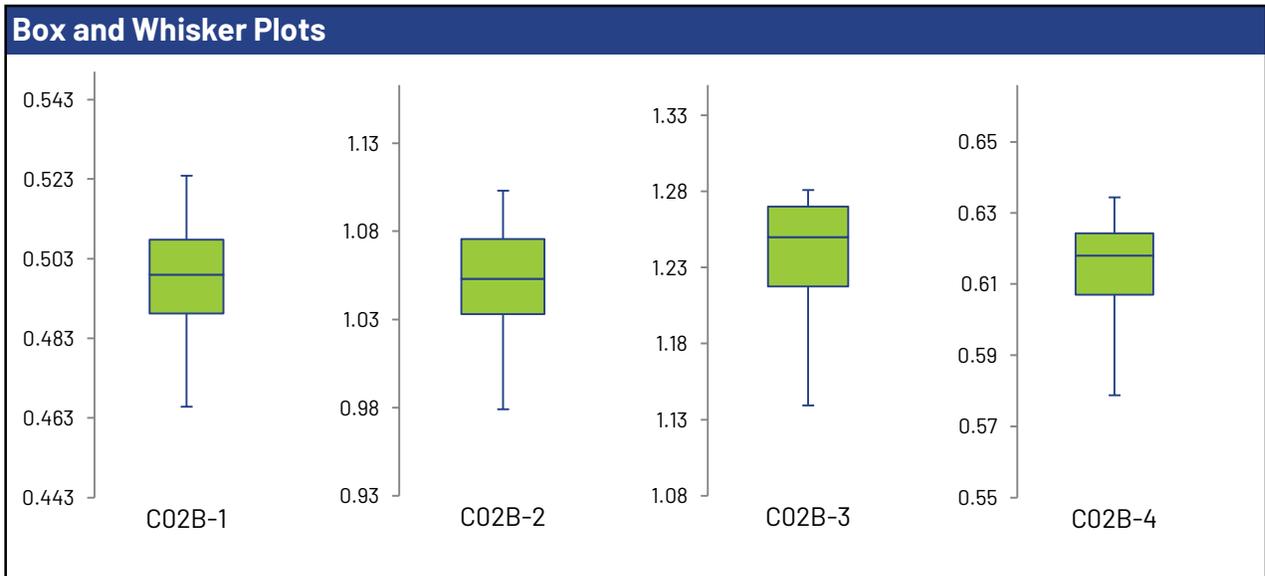
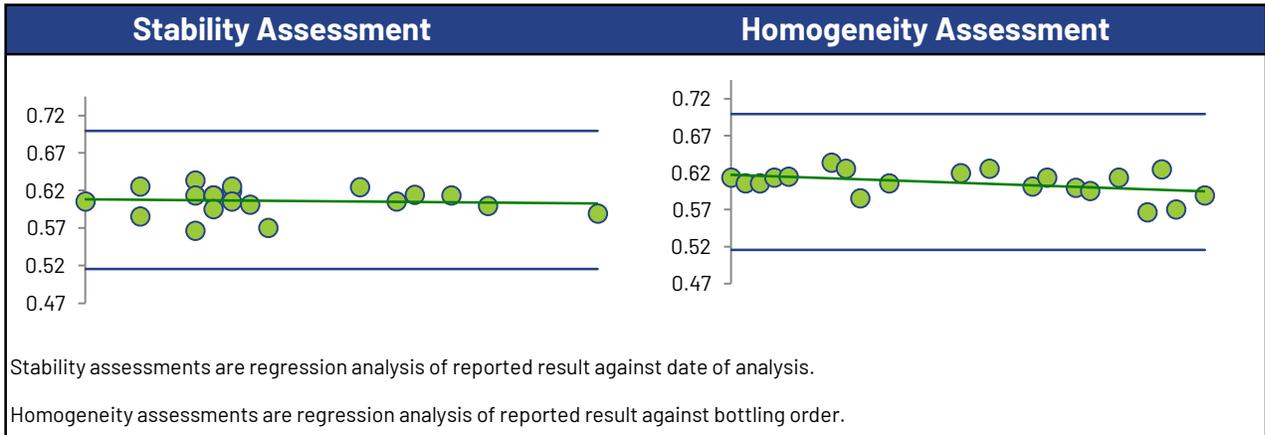


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Molybdenum



Molybdenum



Nickel

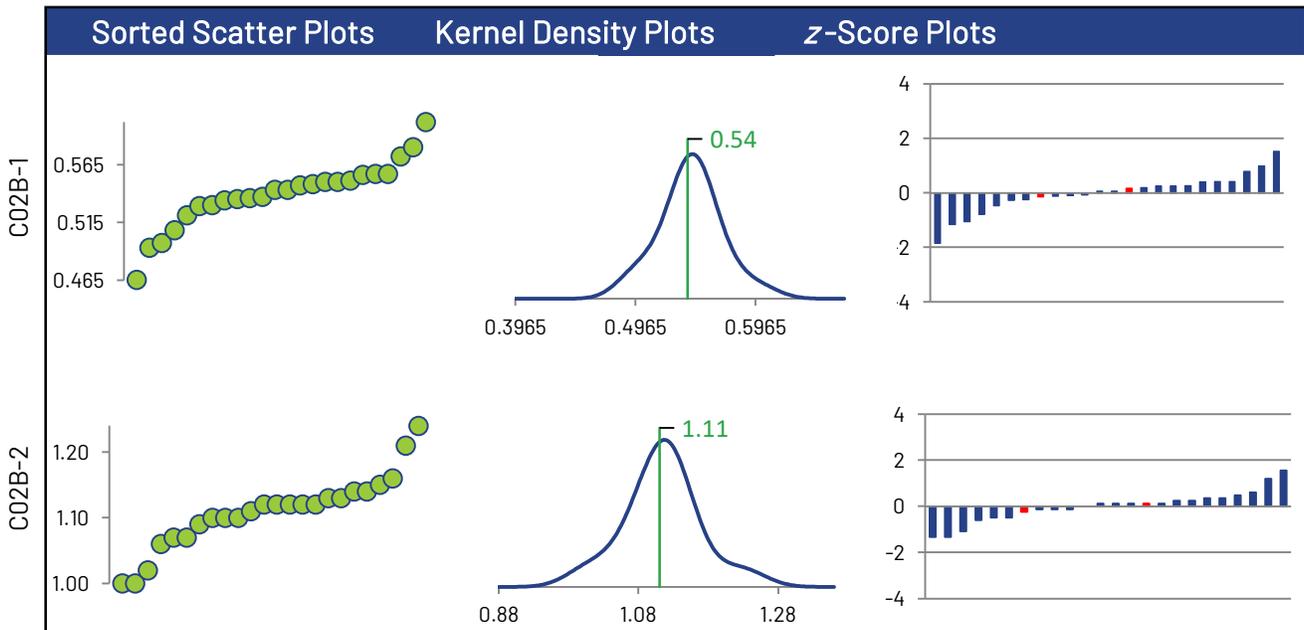
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	24	24	24	24
Median mg/L	0.543	1.12	1.50	0.730
Robust Mean mg/L	0.540	1.11	1.49	0.727
Uncertainty of the Assigned Value mg/L	0.00625	0.0116	0.0159	0.00860
Robust Standard Deviation mg/L	0.0245	0.0453	0.0625	0.0337
Regression Standard Deviation mg/L	0.0405	0.0832	0.112	0.0545
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) mg/L	0.0405	0.0832	0.112	0.0545
Flagged Outliers	0	0	0	0
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	0	0	0
Failure Rate %*	0.0			

Methods Used

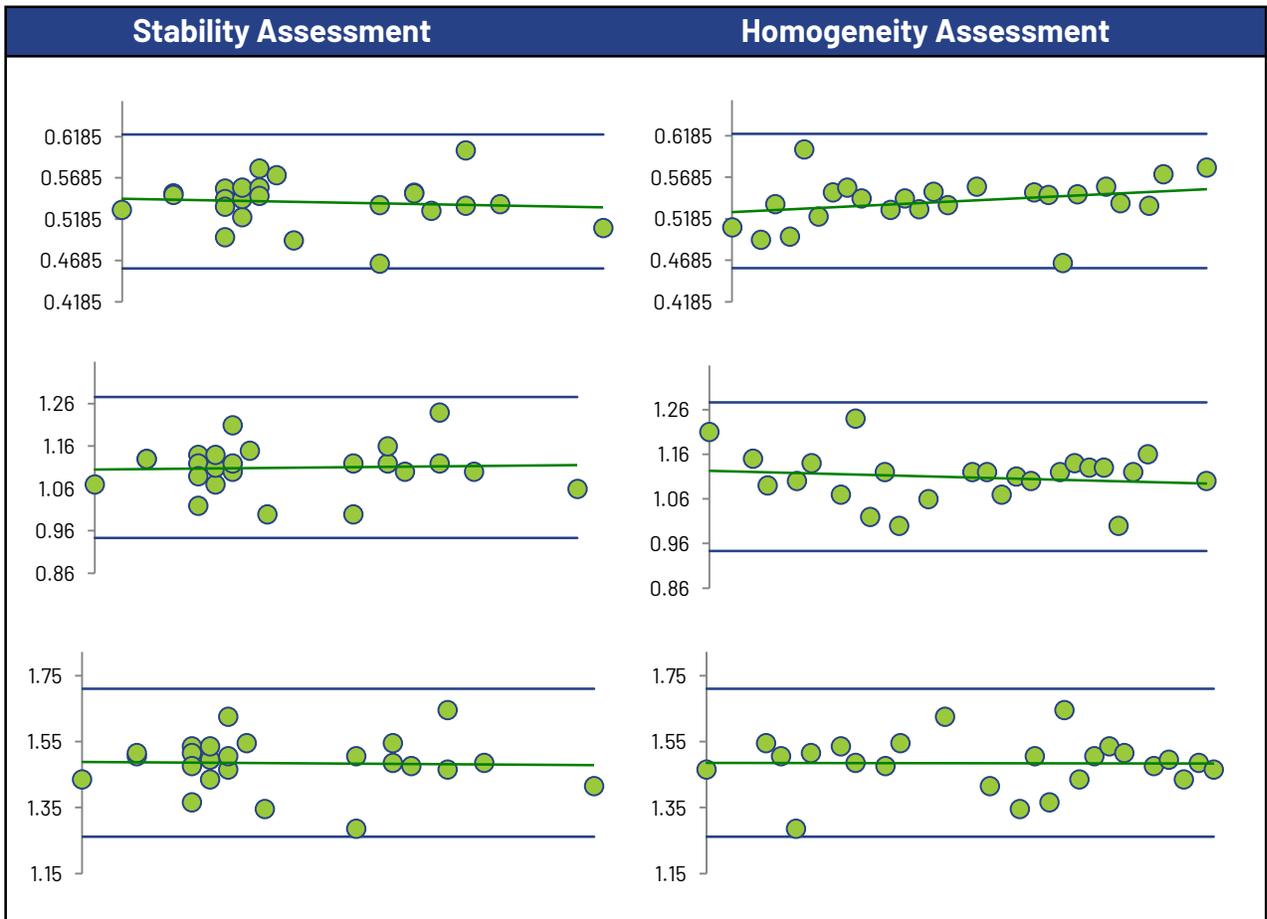
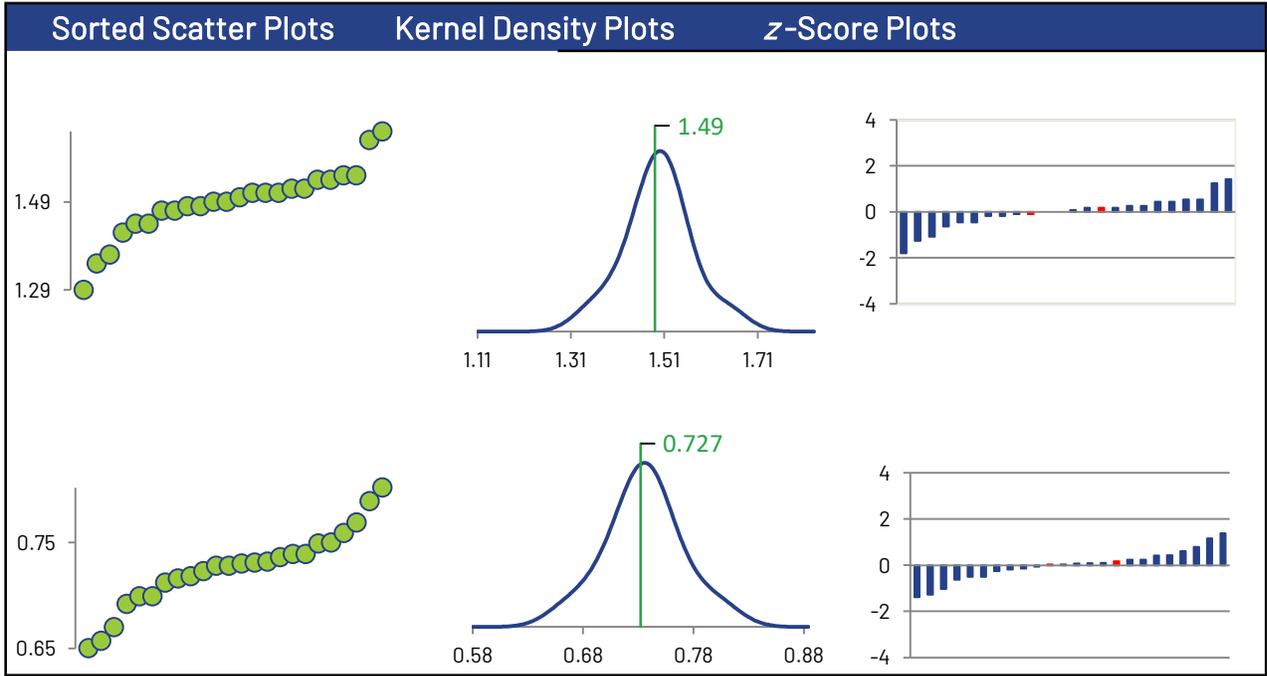
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	22	22	22	22
ICP/MS (Red)	2	2	2	2

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

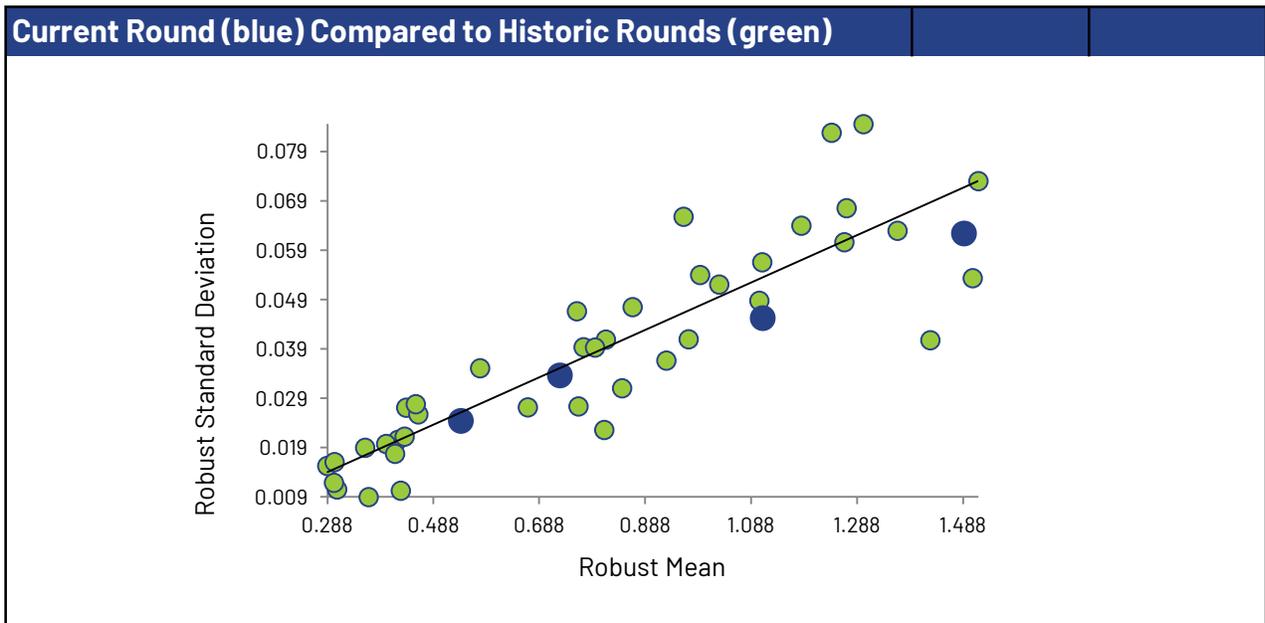
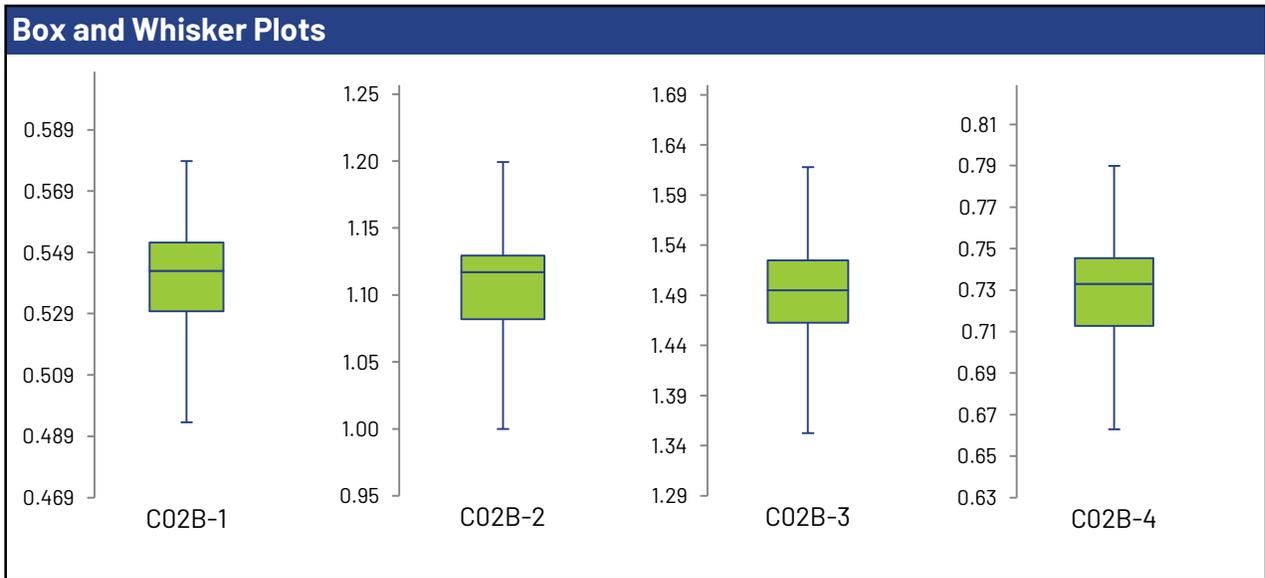
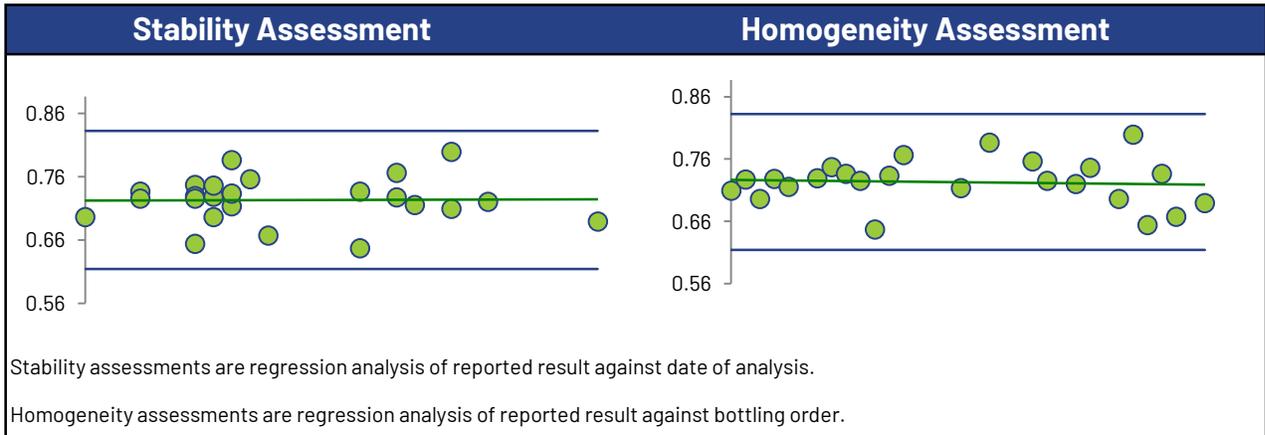


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Nickel



Nickel



Strontium

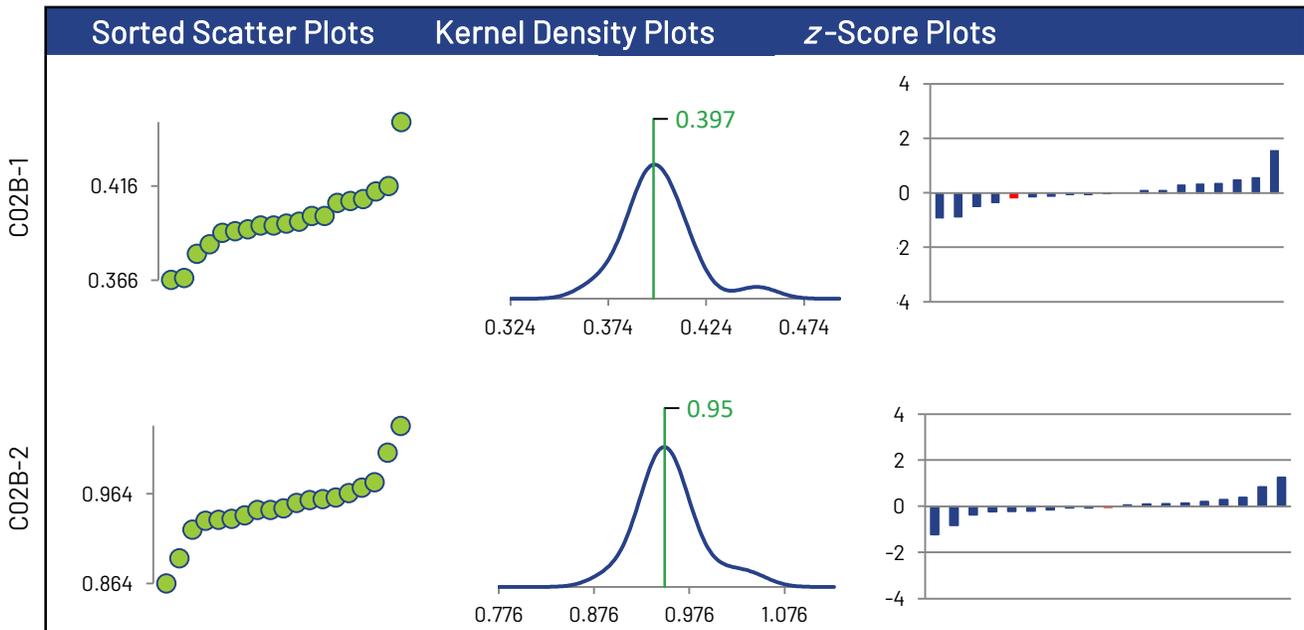
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	19	19	19	19
Median mg/L	0.396	0.948	1.46	0.750
Robust Mean mg/L	0.397	0.950	1.46	0.748
Uncertainty of the Assigned Value mg/L	0.00413	0.00705	0.0131	0.00579
Robust Standard Deviation mg/L	0.0144	0.0246	0.0458	0.0202
Regression Standard Deviation mg/L	0.0298	0.0713	0.110	0.0561
Stability Flag				
Homogeneity Flag	Homogeneity			
Standard Deviation Used (SDPA) mg/L	0.0342	0.0713	0.110	0.0561
Flagged Outliers	0	0	0	0
$ z > 3.0$	0	0	0	0
$2 < z < 3$	0	0	0	0
Failure Rate %*	0.0			

Methods Used

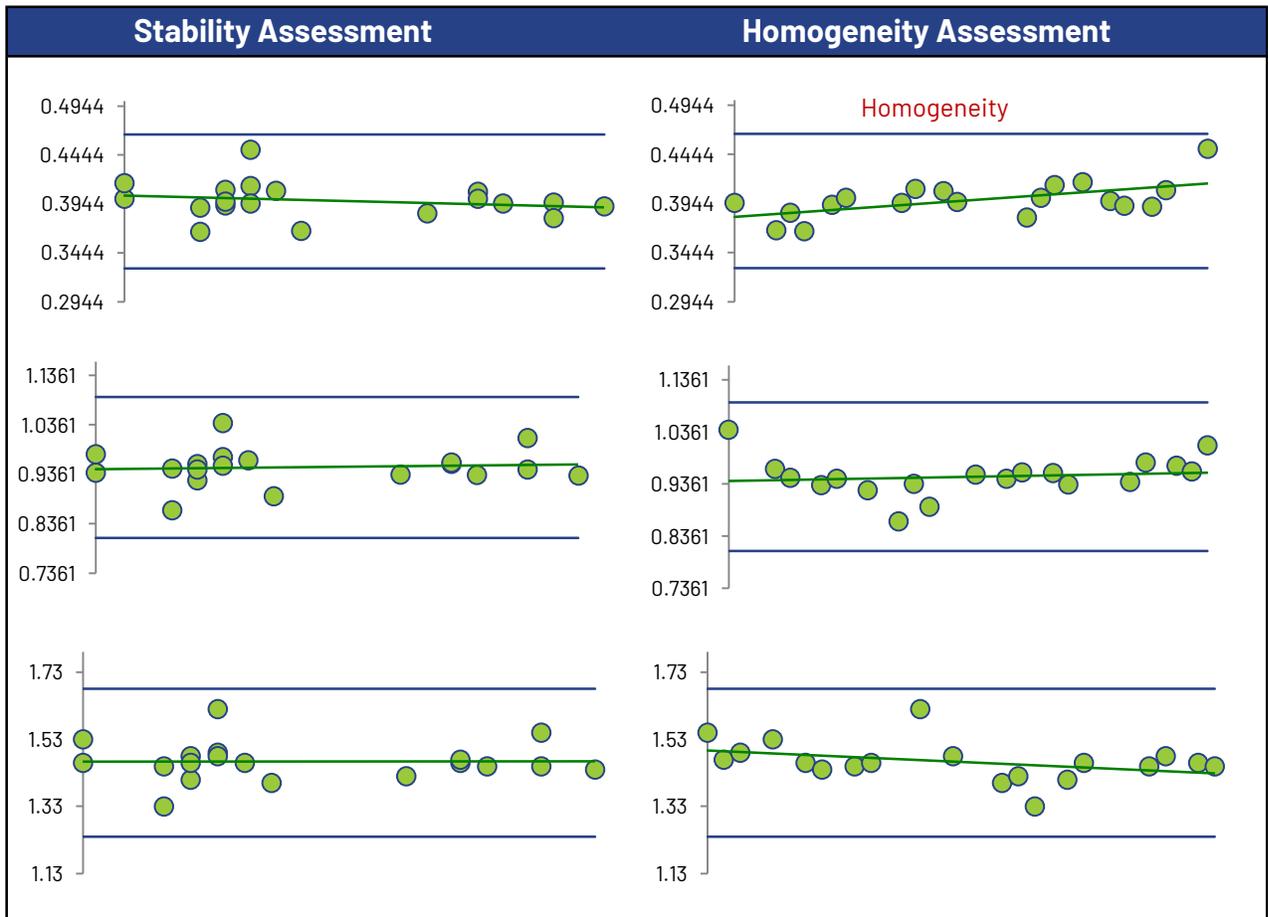
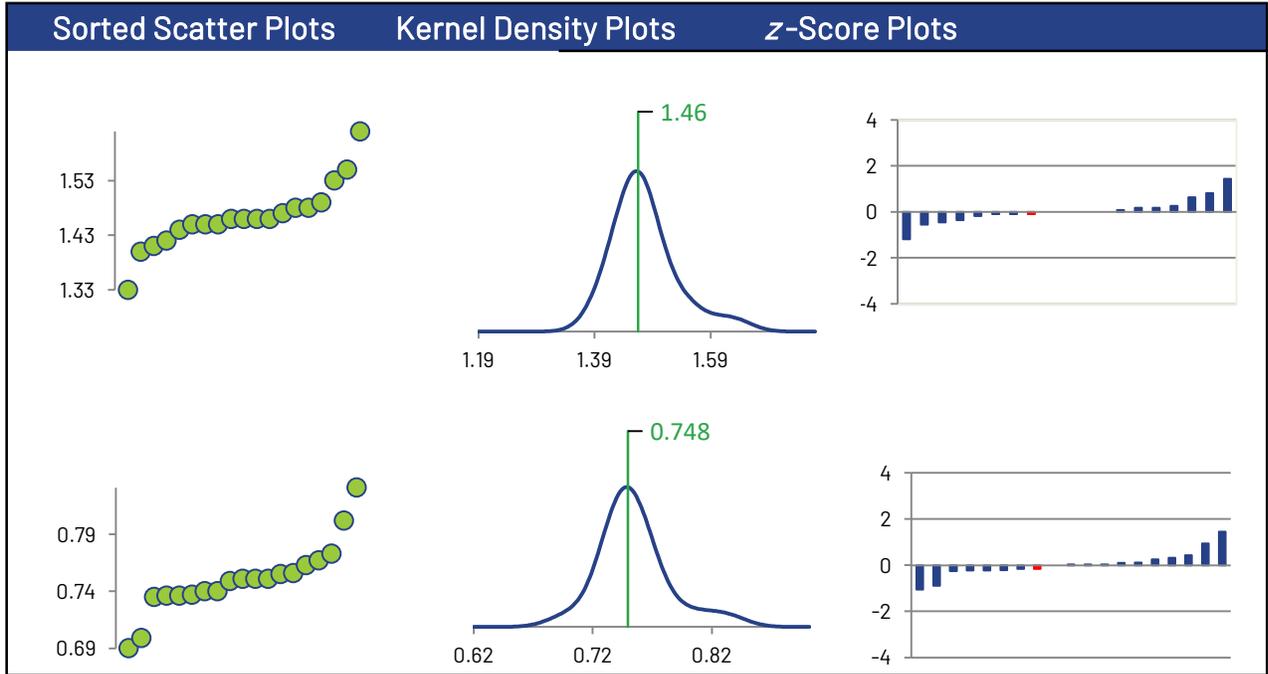
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	18	18	18	18
ICP/MS (Red)	1	1	1	1

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

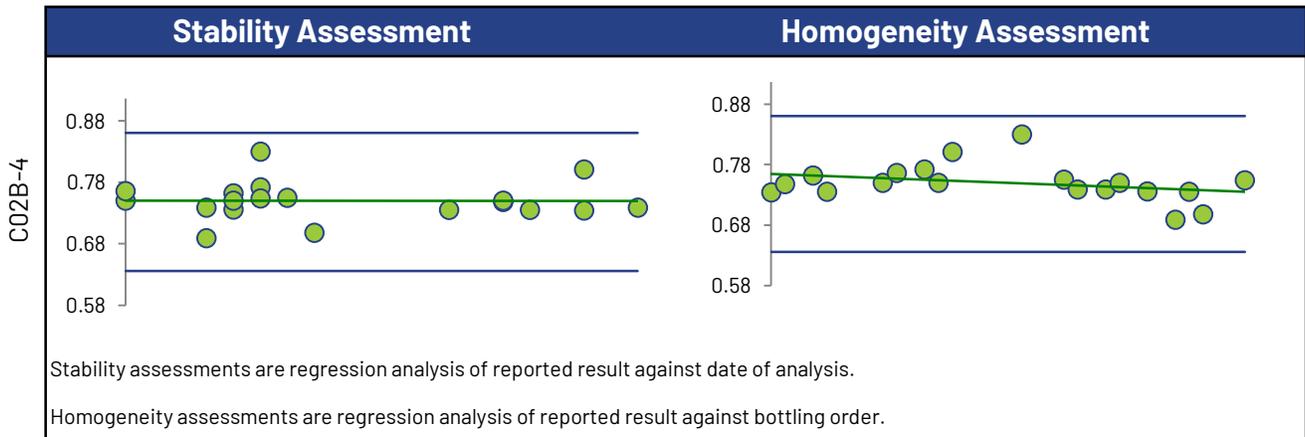


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

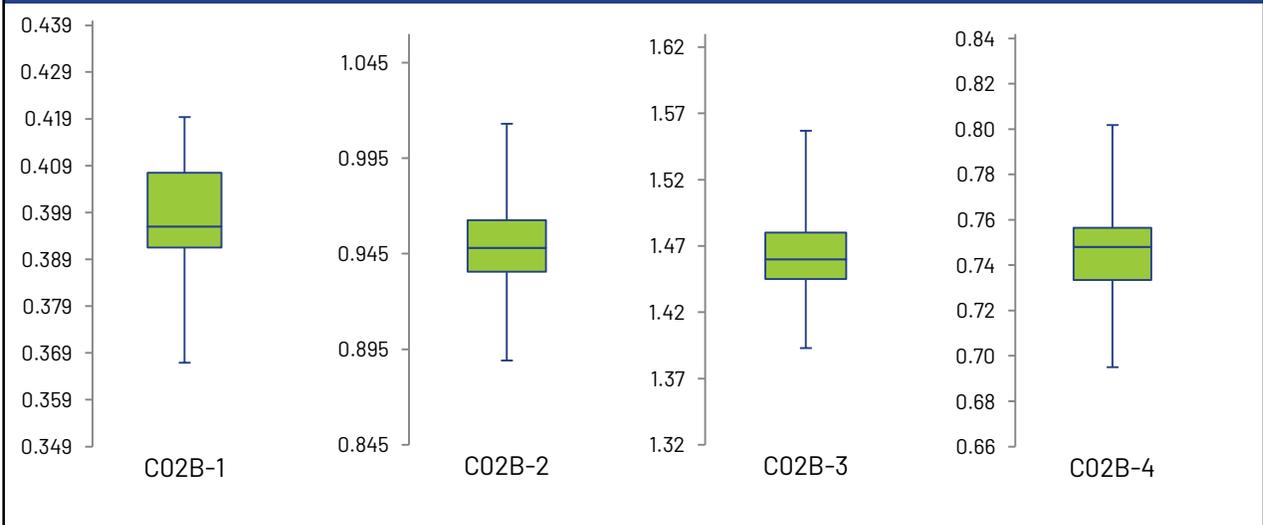
Strontium



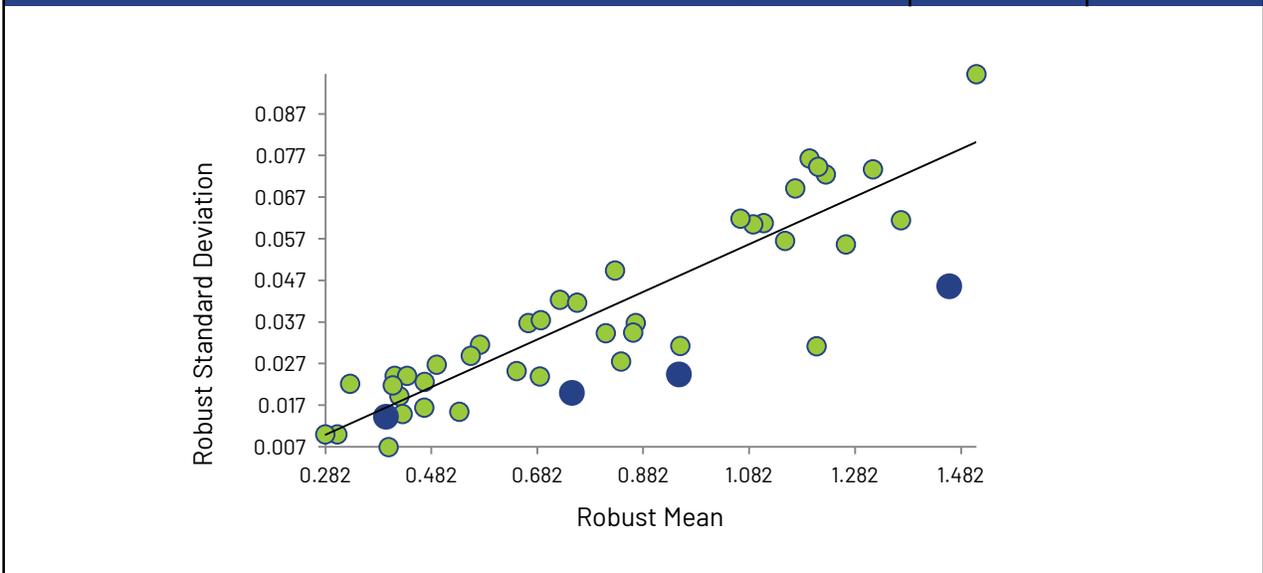
Strontium



Box and Whisker Plots



Current Round (blue) Compared to Historic Rounds (green)



Thallium

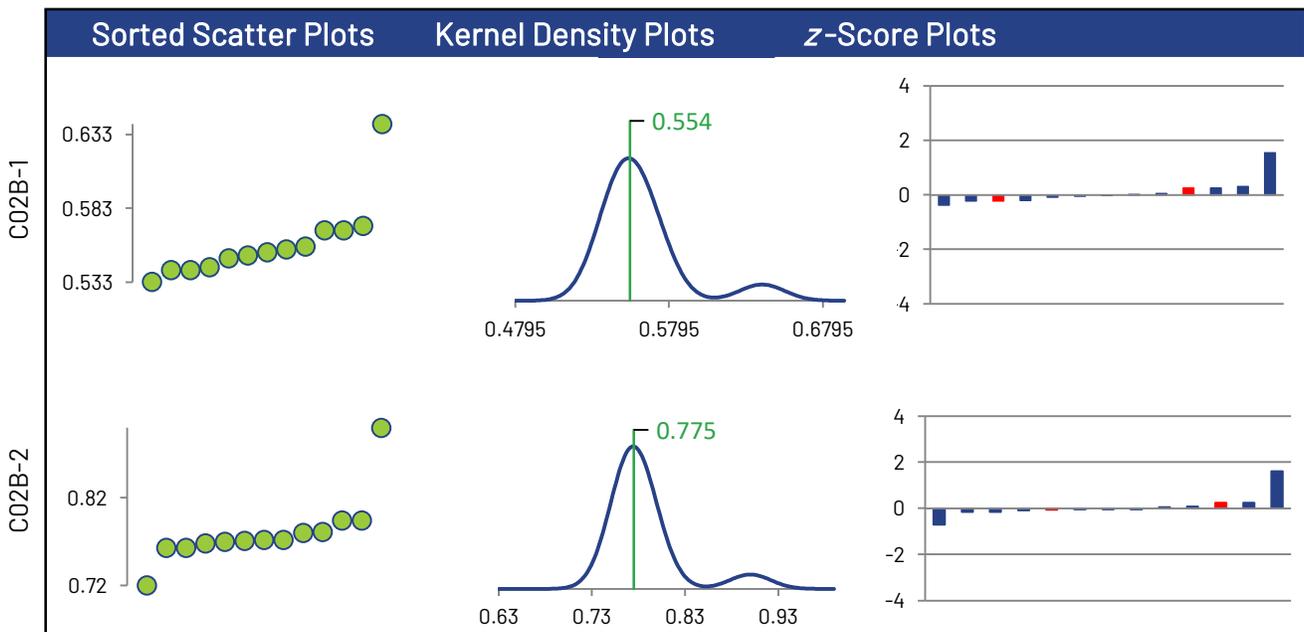
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	13	13	13	13
Median mg/L	0.553	0.772	1.31	0.769
Robust Mean mg/L	0.554	0.775	1.31	0.772
Uncertainty of the Assigned Value mg/L	0.00527	0.00541	0.0000	0.00683
Robust Standard Deviation mg/L	0.0152	0.0156	0.000	0.0197
Regression Standard Deviation mg/L	0.0554	0.0775	0.131	0.0772
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) mg/L	0.0554	0.0775	0.131	0.0772
Flagged Outliers	0	0	0	0
z >3.0	0	0	0	0
2< z <3	0	0	0	1
Failure Rate %*	0.0			

Methods Used

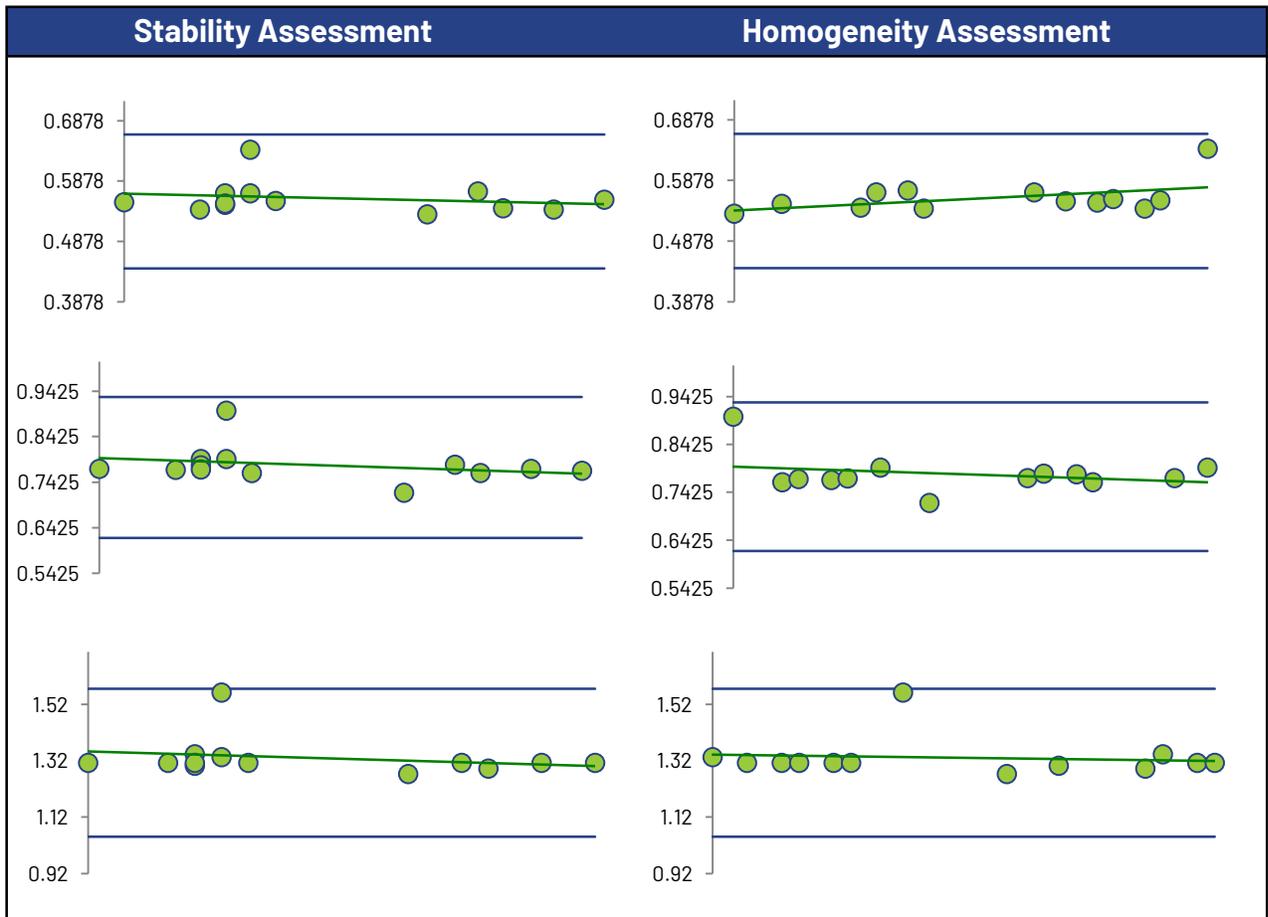
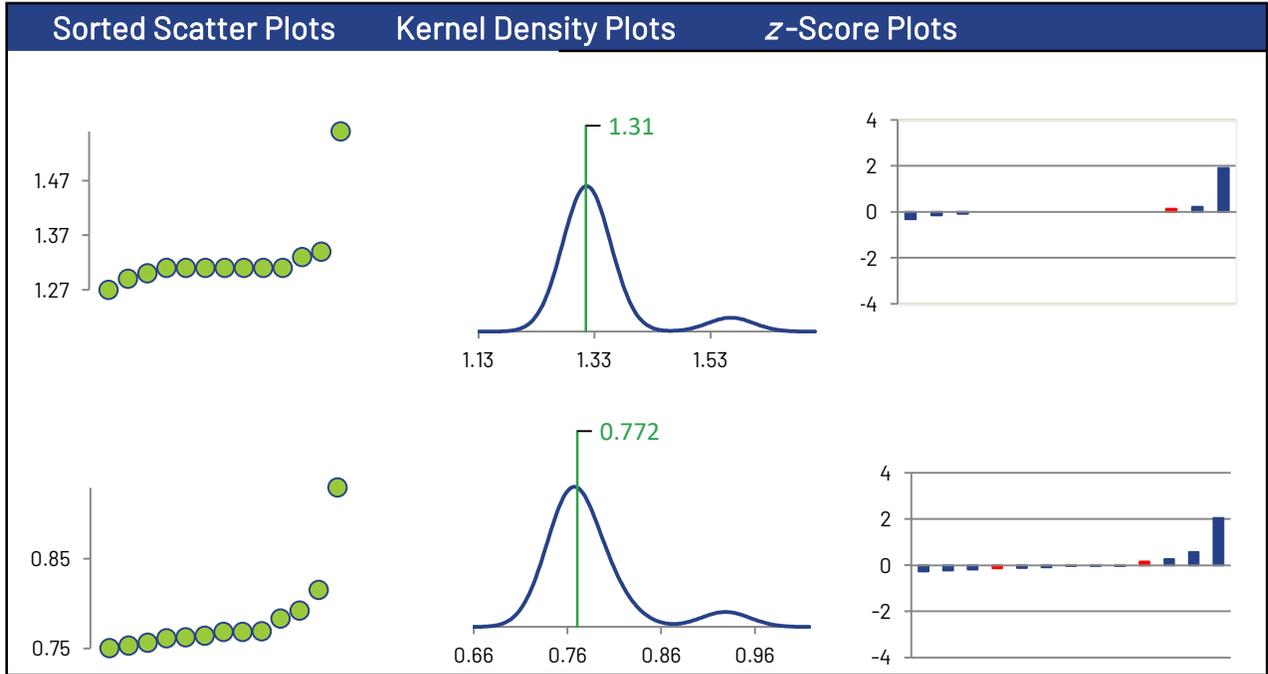
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	11	11	11	11
ICP/MS (Red)	2	2	2	2

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

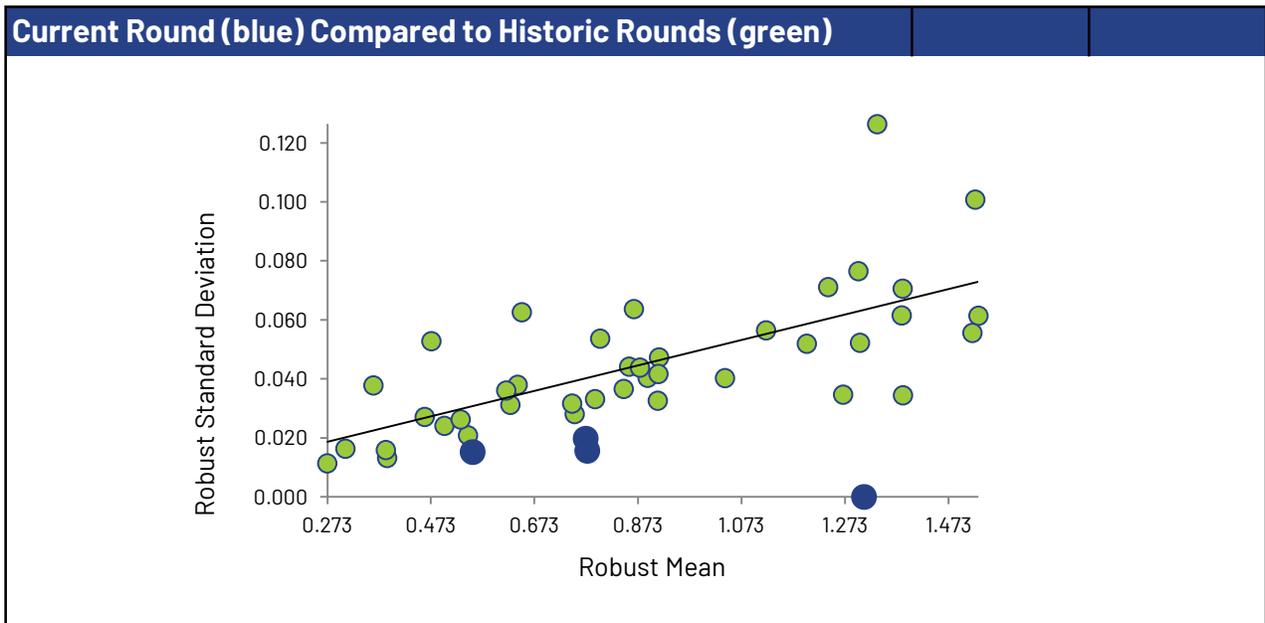
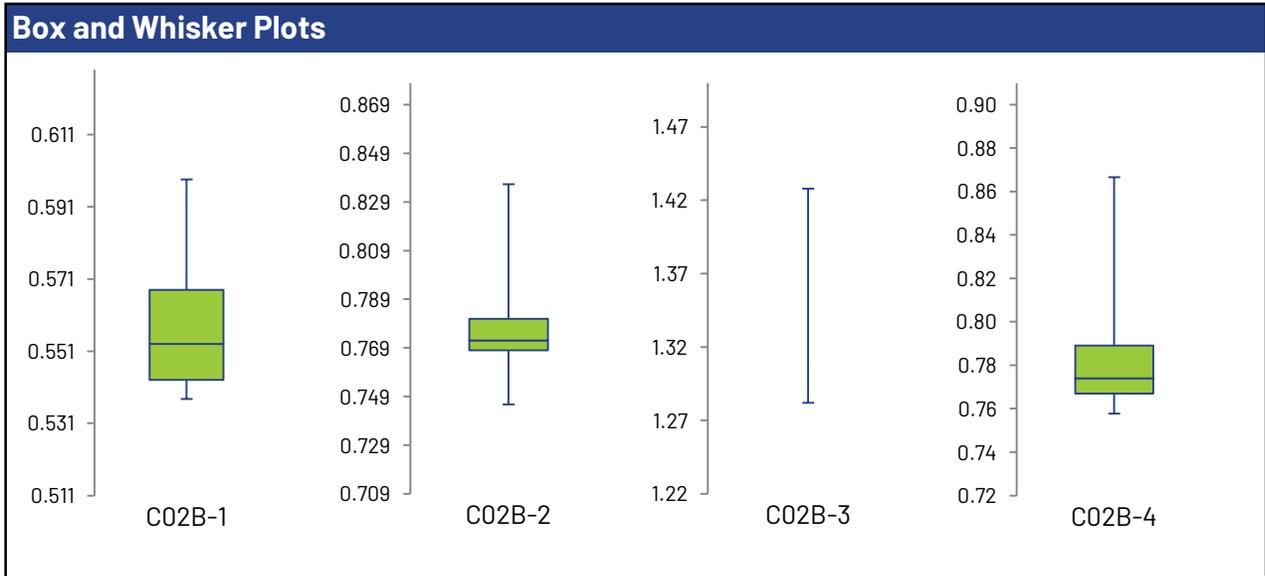
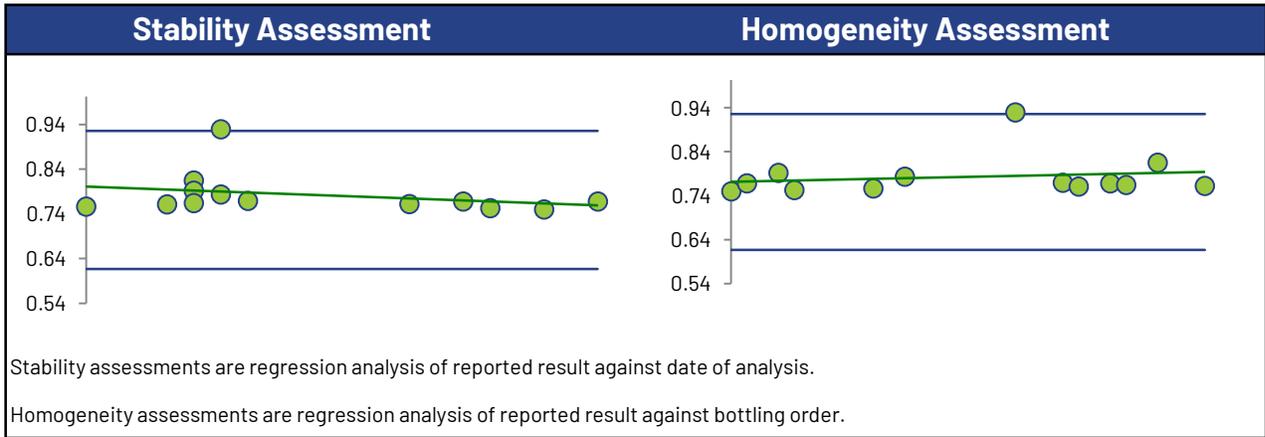


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Thallium



Thallium



Titanium

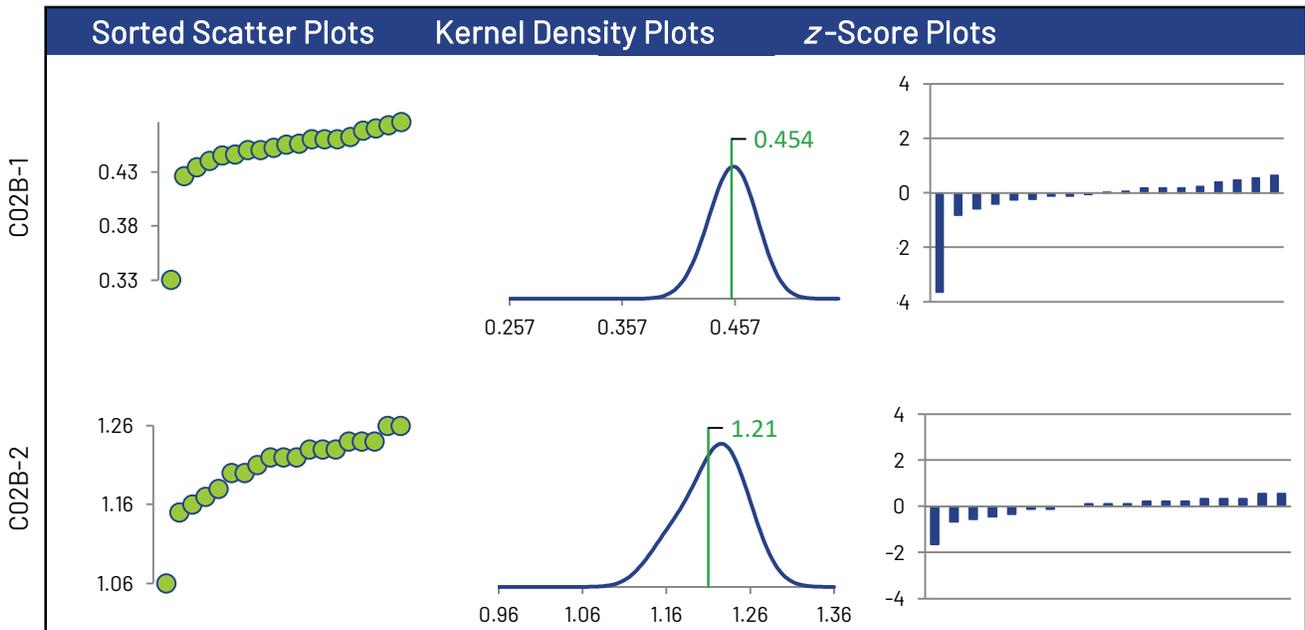
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	19	19	19	19
Median mg/L	0.455	1.22	1.26	0.830
Robust Mean mg/L	0.454	1.21	1.25	0.825
Uncertainty of the Assigned Value mg/L	0.00444	0.0110	0.0118	0.00789
Robust Standard Deviation mg/L	0.0155	0.0384	0.0412	0.0275
Regression Standard Deviation mg/L	0.0340	0.0909	0.0936	0.0619
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) mg/L	0.0340	0.0909	0.0936	0.0619
Flagged Outliers	0	0	0	0
$ z > 3.0$	1	0	0	0
$2 < z < 3$	0	0	0	0
Failure Rate %*	0.0			

Methods Used

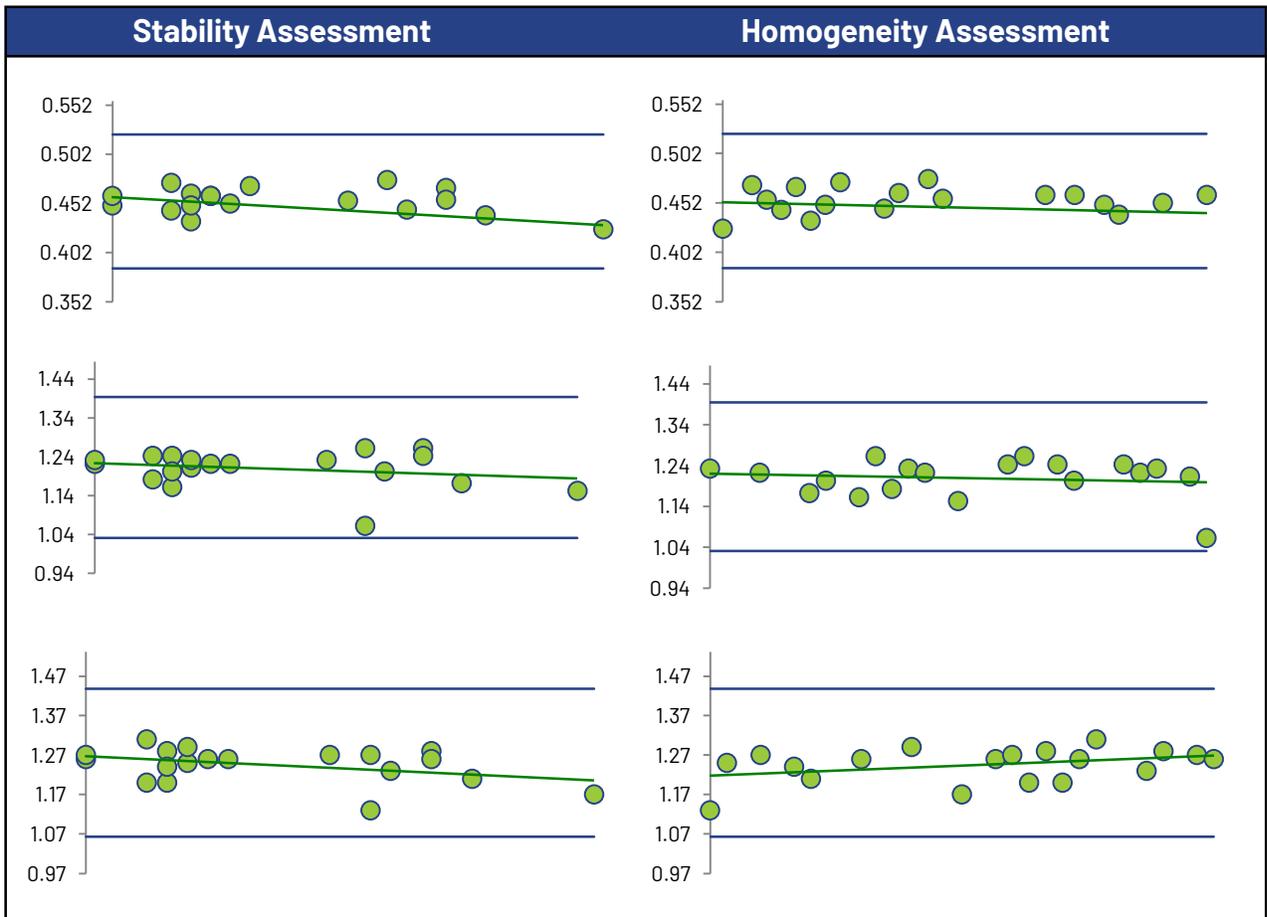
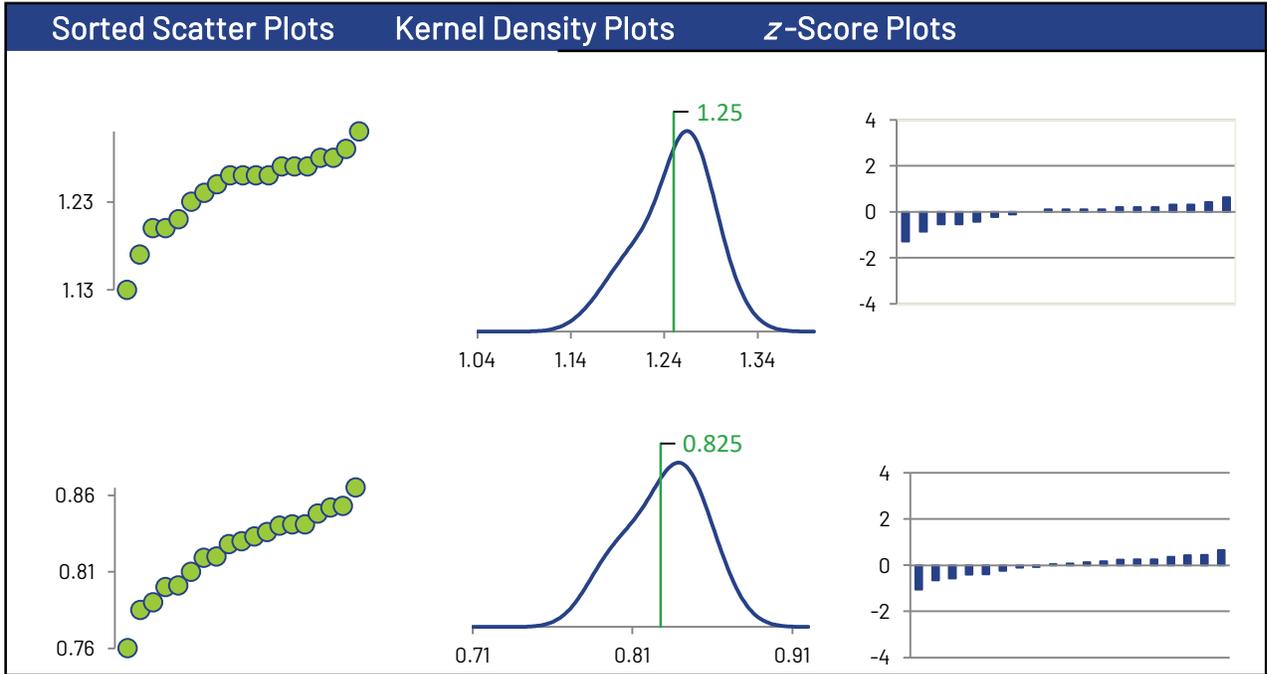
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	19	19	19	19

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

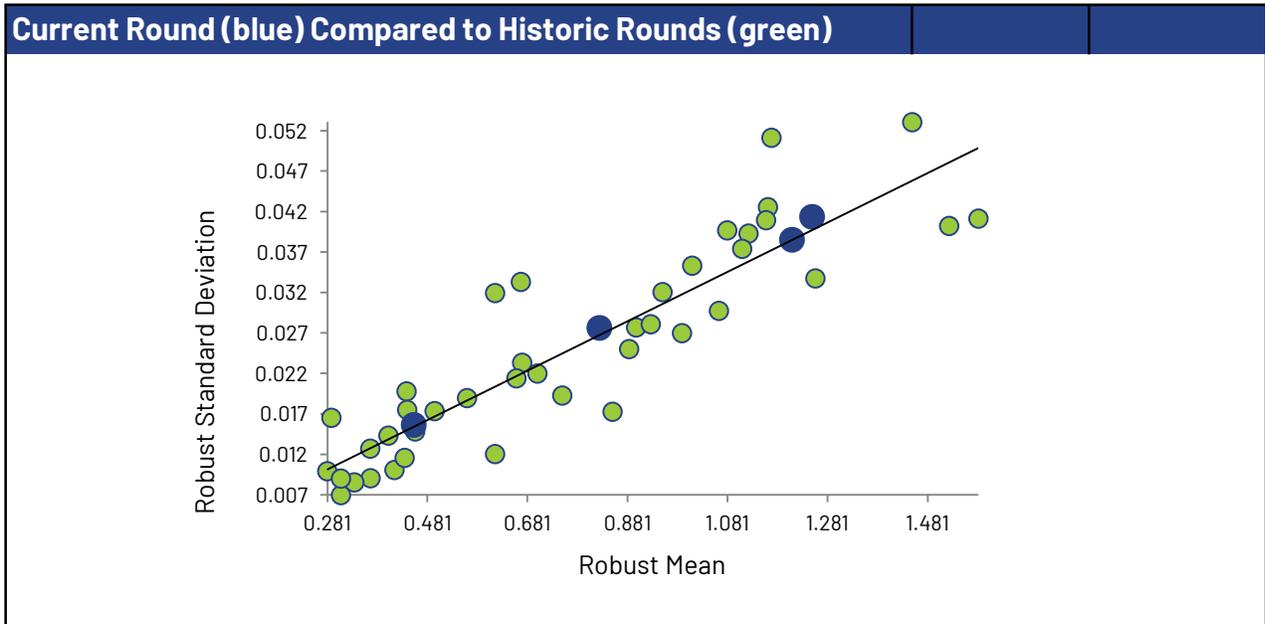
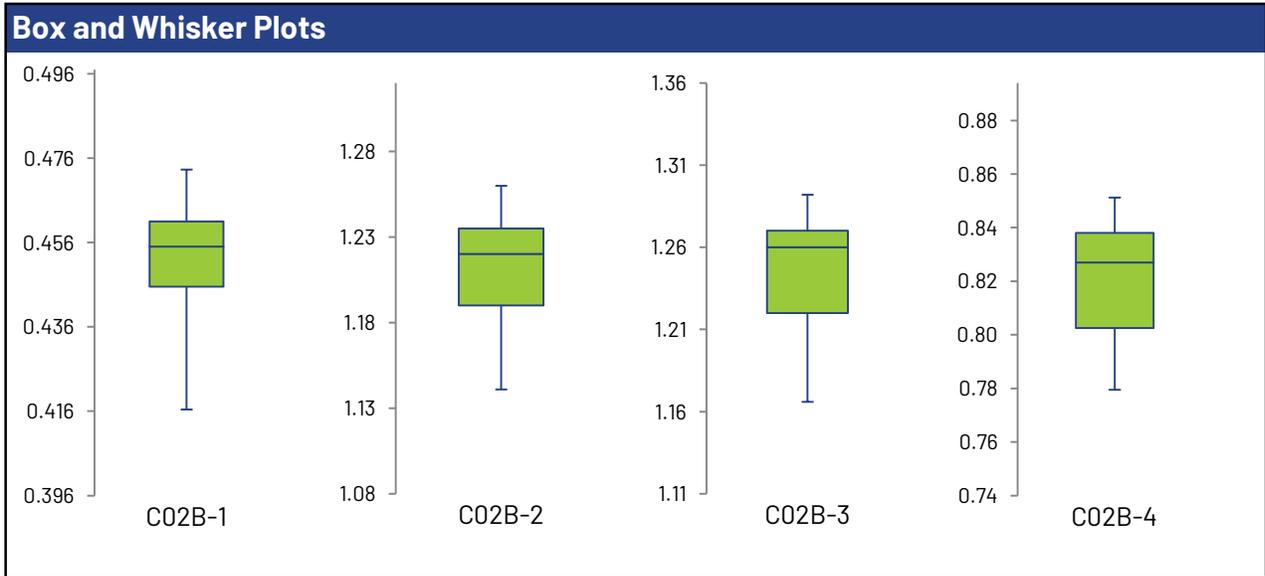
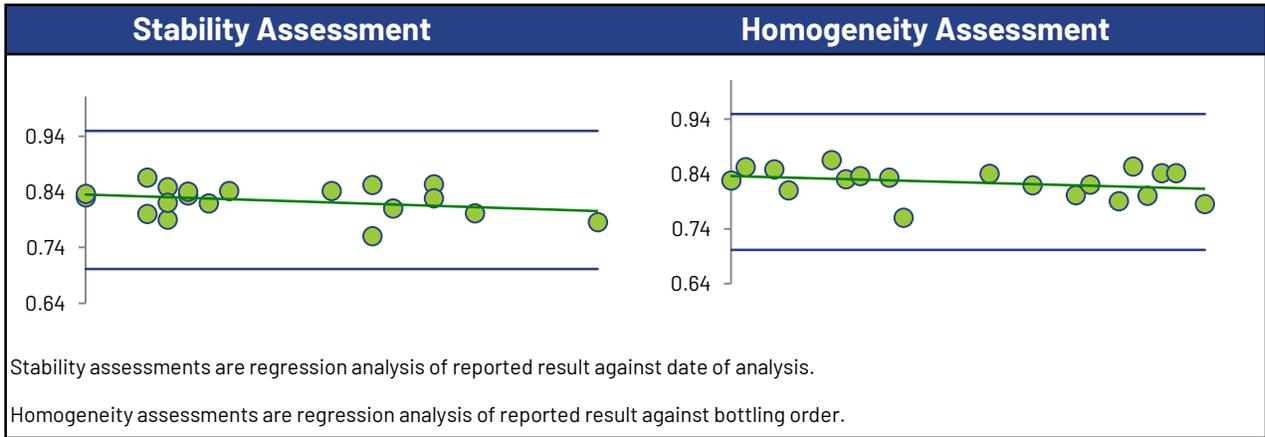


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Titanium



Titanium



Vanadium

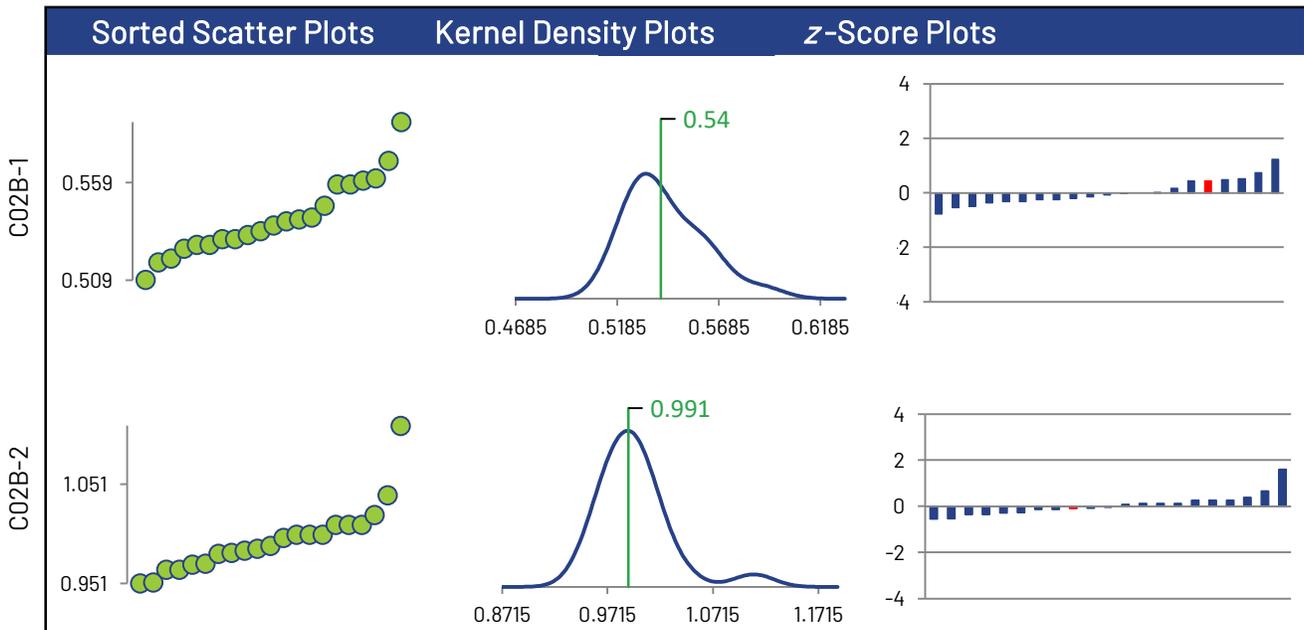
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	21	21	21	21
Median mg/L	0.537	0.989	1.34	0.394
Robust Mean mg/L	0.540	0.991	1.34	0.398
Uncertainty of the Assigned Value mg/L	0.00526	0.00720	0.0107	0.00368
Robust Standard Deviation mg/L	0.0193	0.0264	0.0391	0.0135
Regression Standard Deviation mg/L	0.0405	0.0743	0.100	0.0298
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) mg/L	0.0405	0.0743	0.100	0.0298
Flagged Outliers	0	0	0	0
z >3.0	0	0	0	0
2< z <3	0	0	0	0
Failure Rate %*	0.0			

Methods Used

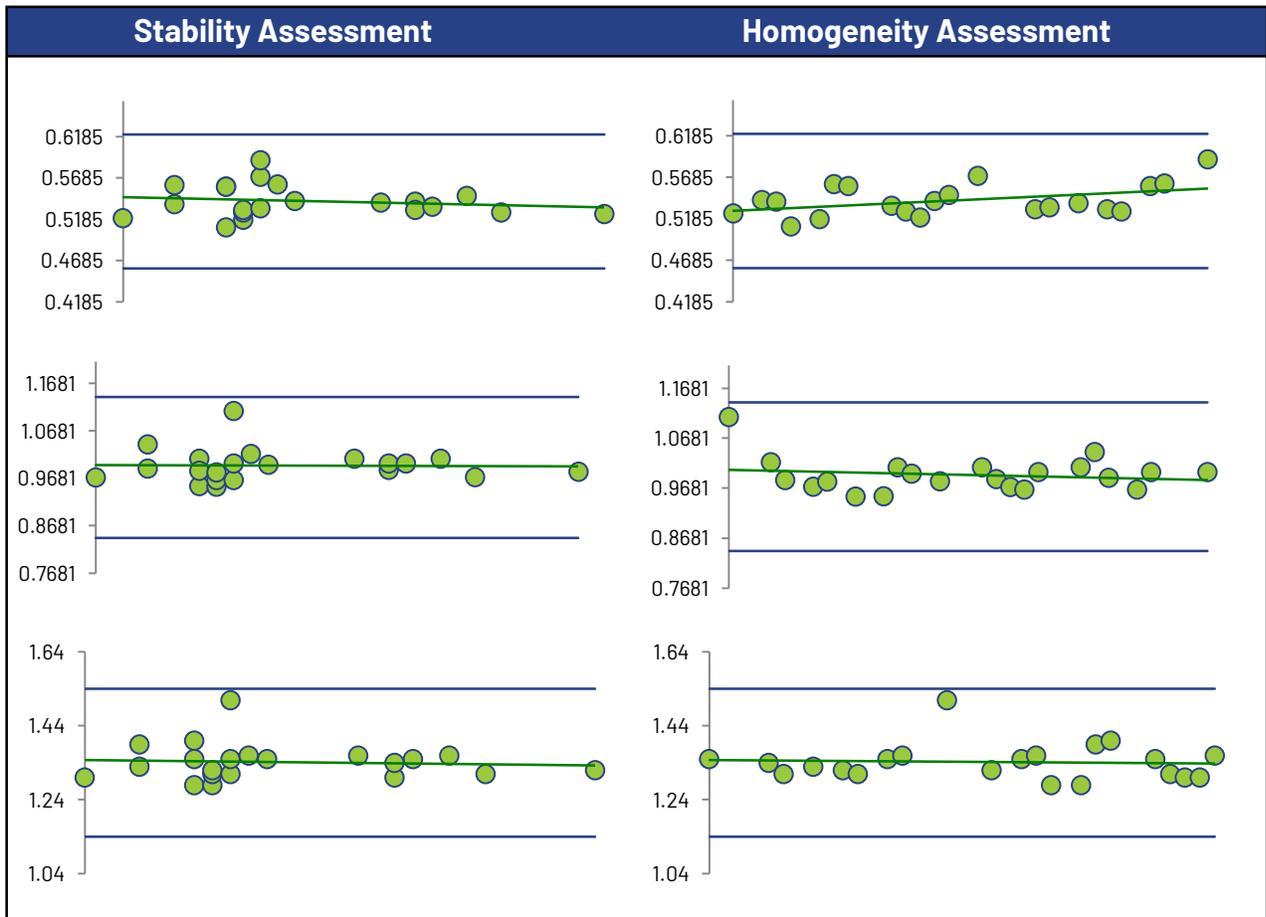
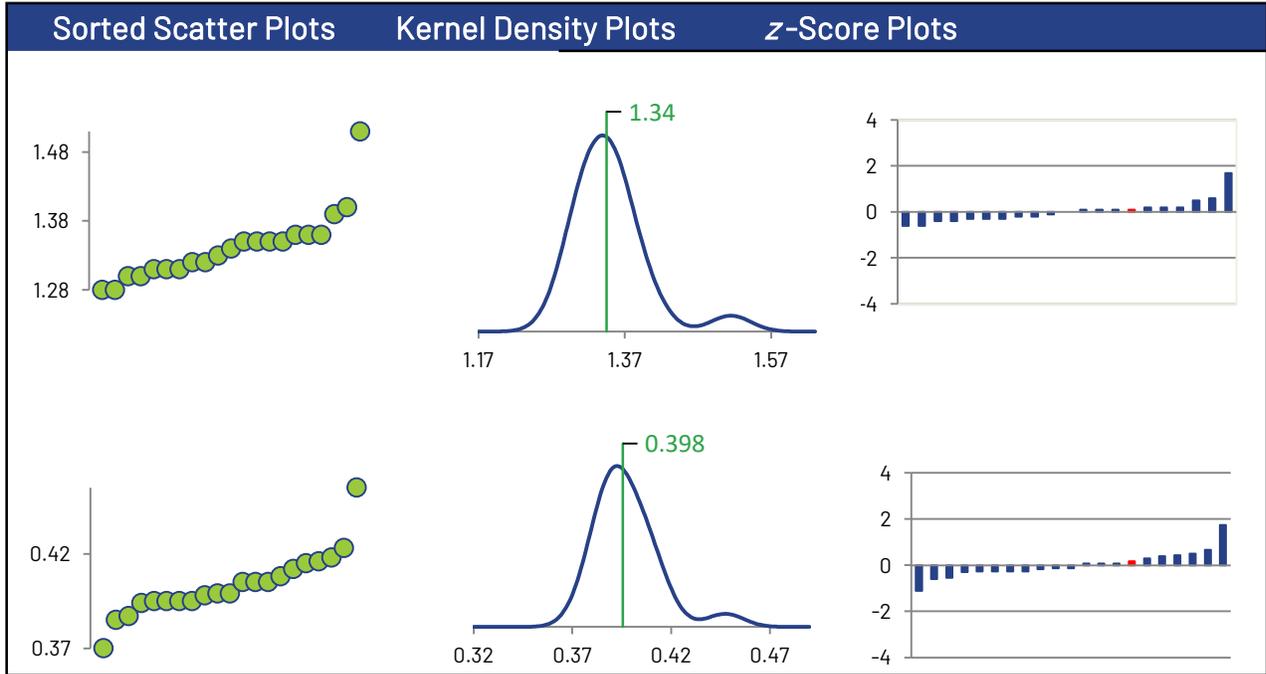
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	20	20	20	20
ICP/MS (Red)	1	1	1	1

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers

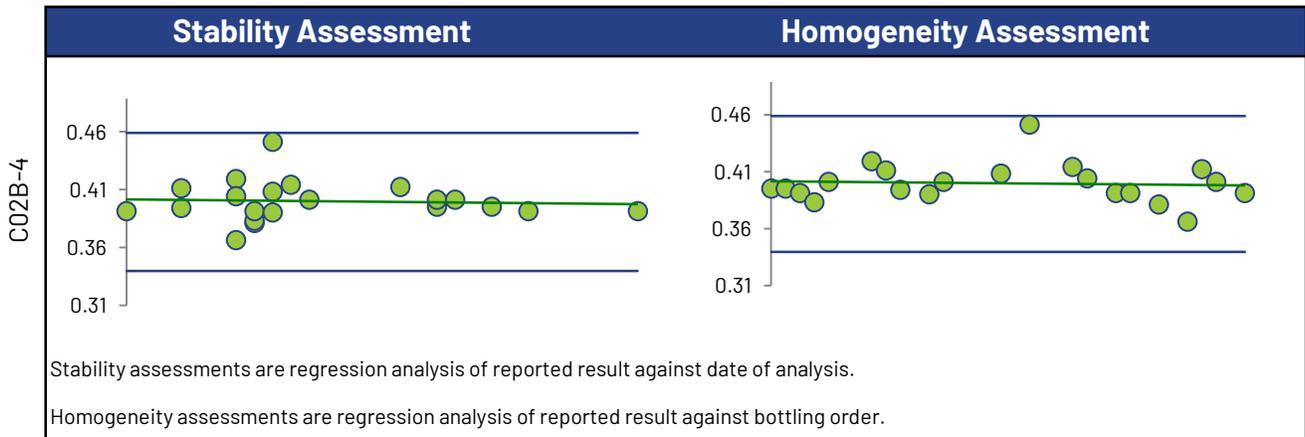


* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

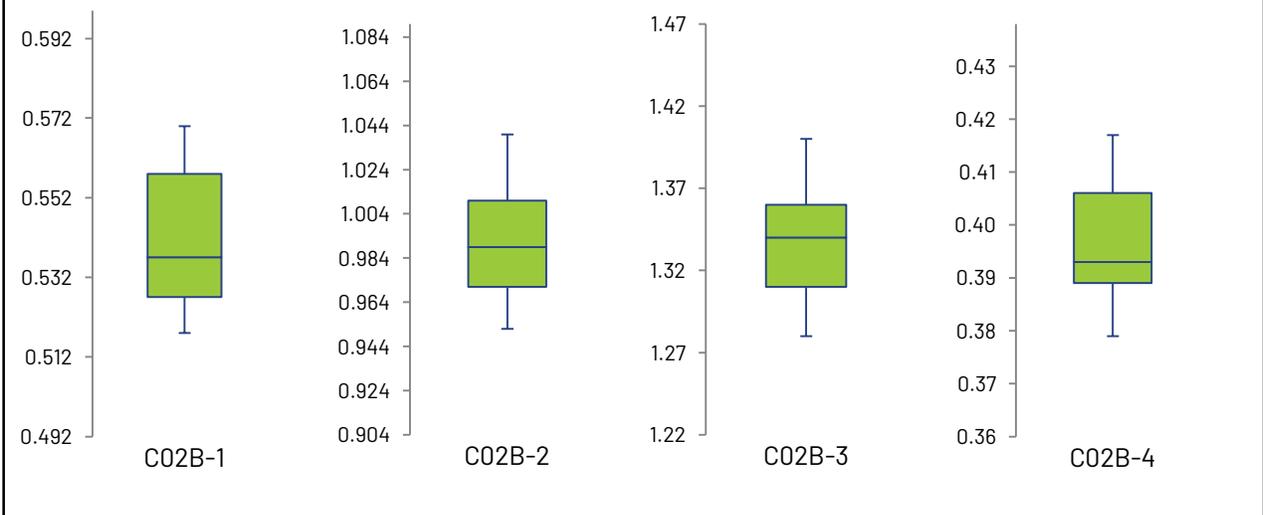
Vanadium



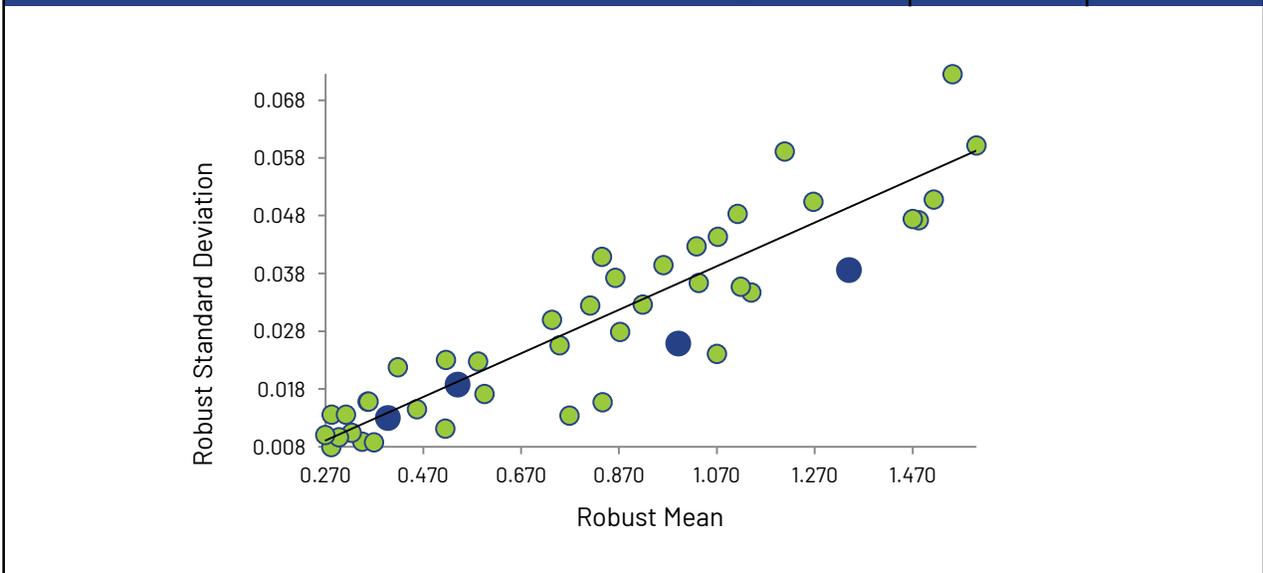
Vanadium



Box and Whisker Plots



Current Round (blue) Compared to Historic Rounds (green)



Zinc

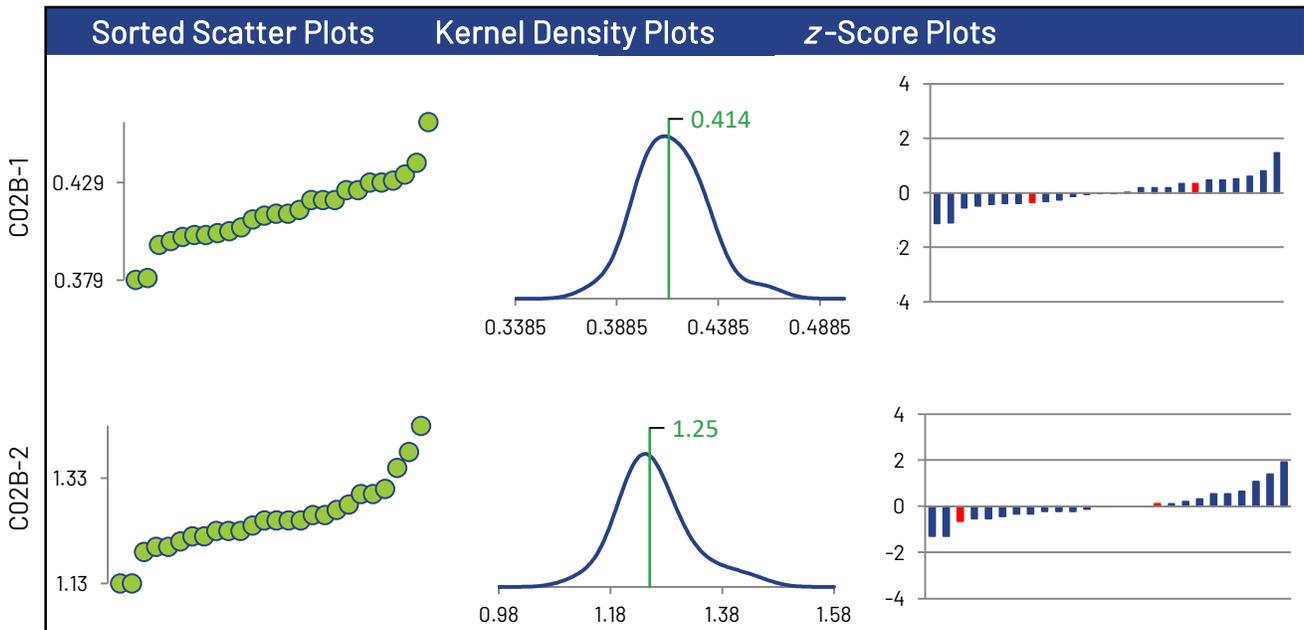
Summary Statistics

Statistic	C02B-1	C02B-2	C02B-3	C02B-4
No. of results used for summary statistics	26	26	26	26
Median mg/L	0.413	1.25	1.06	0.863
Robust Mean mg/L	0.414	1.25	1.06	0.867
Uncertainty of the Assigned Value mg/L	0.00395	0.0130	0.00932	0.00824
Robust Standard Deviation mg/L	0.0161	0.0532	0.0380	0.0336
Regression Standard Deviation mg/L	0.0310	0.0937	0.0793	0.0651
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) mg/L	0.0310	0.0937	0.0793	0.0651
Flagged Outliers	0	0	0	0
z >3.0	0	0	0	0
2< z <3	0	0	0	0
Failure Rate %*	0.0			

Methods Used

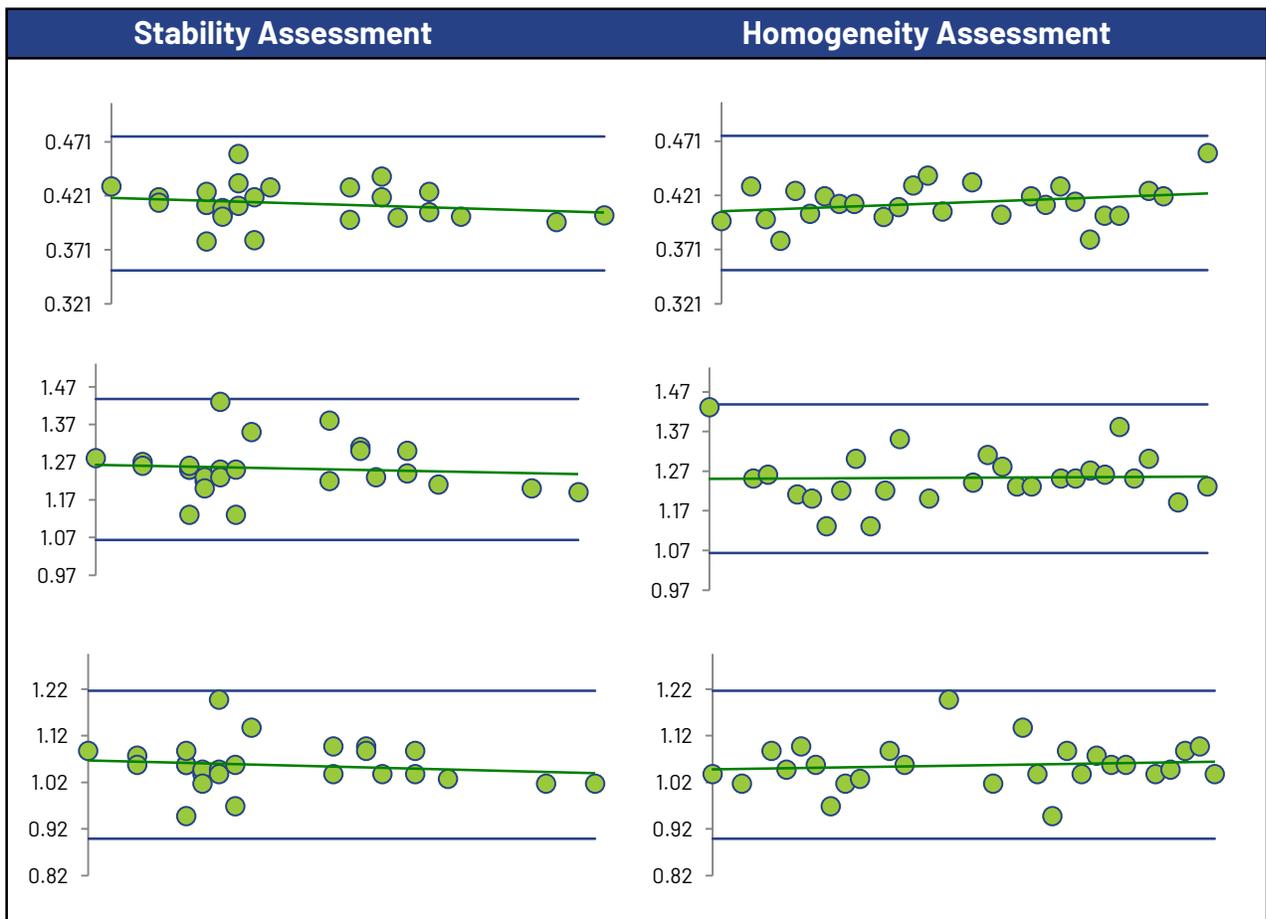
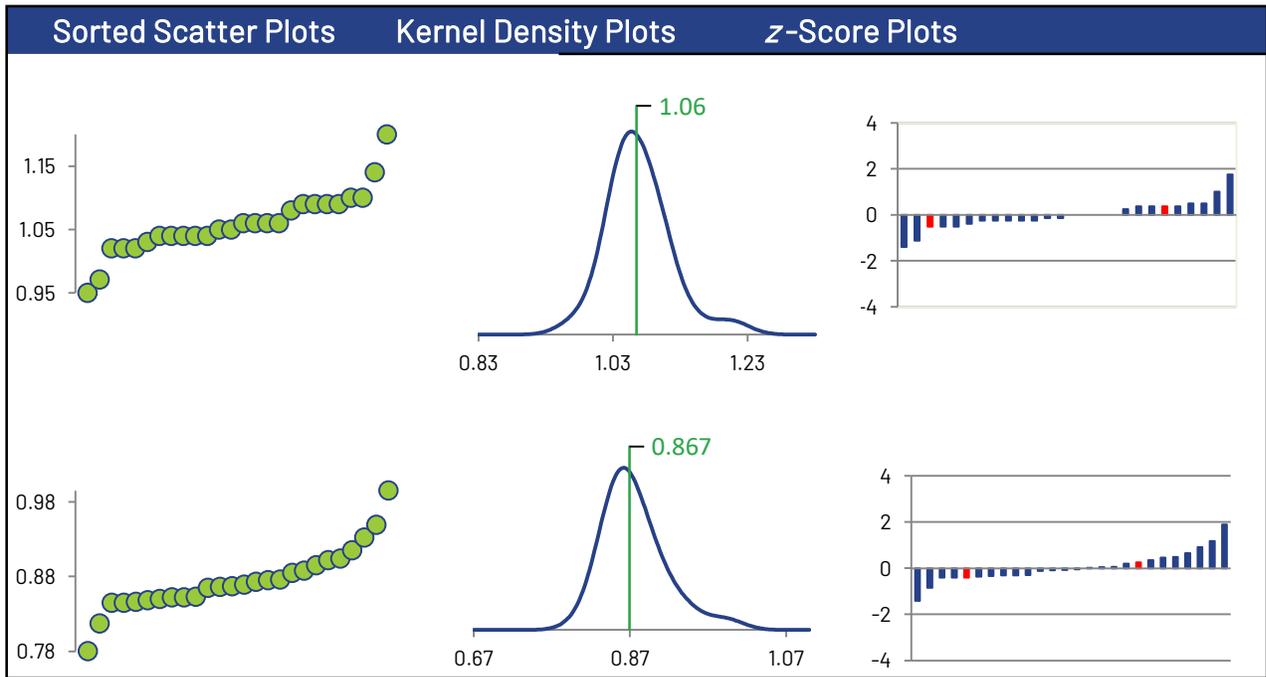
Method	C02B-1	C02B-2	C02B-3	C02B-4
ICP/OES (Blue)	24	24	24	24
ICP/MS (Red)	2	2	2	2

All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



* Displayed failure rate does not account for the RDL modified z-Scores or inaccurately reported non-detects.

Zinc



Zinc

