Test Group Summary Report
C77 Pesticides in Soil
January 2026 PT Round

Issued: March 2, 2026

PTC | Proficiency Testing Canada

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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.

Code:	The registration code that is unique to each analyte that a participant is registered for.
App:	If a participant is accredited by CALA, this three-digit number is the appendix number that the accredited method is assigned to.
N:	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.
Assigned:	The Assigned Value is the robust mean of the reported results, outliers excluded. This is often referred to as the "target" value.
± u:	The uncertainty of the assigned value.
Reported:	The result reported by the participant.
s:	The Standard Deviation of Proficiency Assessment (SDPA). This value is used to determine the acceptance limits for the PT evaluation.
z-Score:	A value assigned to each reported result that is a measure of the degree to which it deviates from the Assigned Value.
Score:	The composite score of the four results reported for each analyte. It is normalized to a score out of 100.
Bias:	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.PTCanada.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:

$$z - Score = \frac{(x - \bar{X})}{SDPA}$$

where: x = participant result;
$\overline{X}$ = the Assigned Value;
SDPA = the Standard Deviation for Proficiency Assessment.

The assigned value $\overline{X}$ 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 x 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.

$$RSZ = \frac{\sum z}{\sqrt{N}}$$

where z = the z- score
N = the number of samples

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

RSZ $\geq$ -2 and $\leq$ 2 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.

4,4'-DDT (p,p'-DDT)

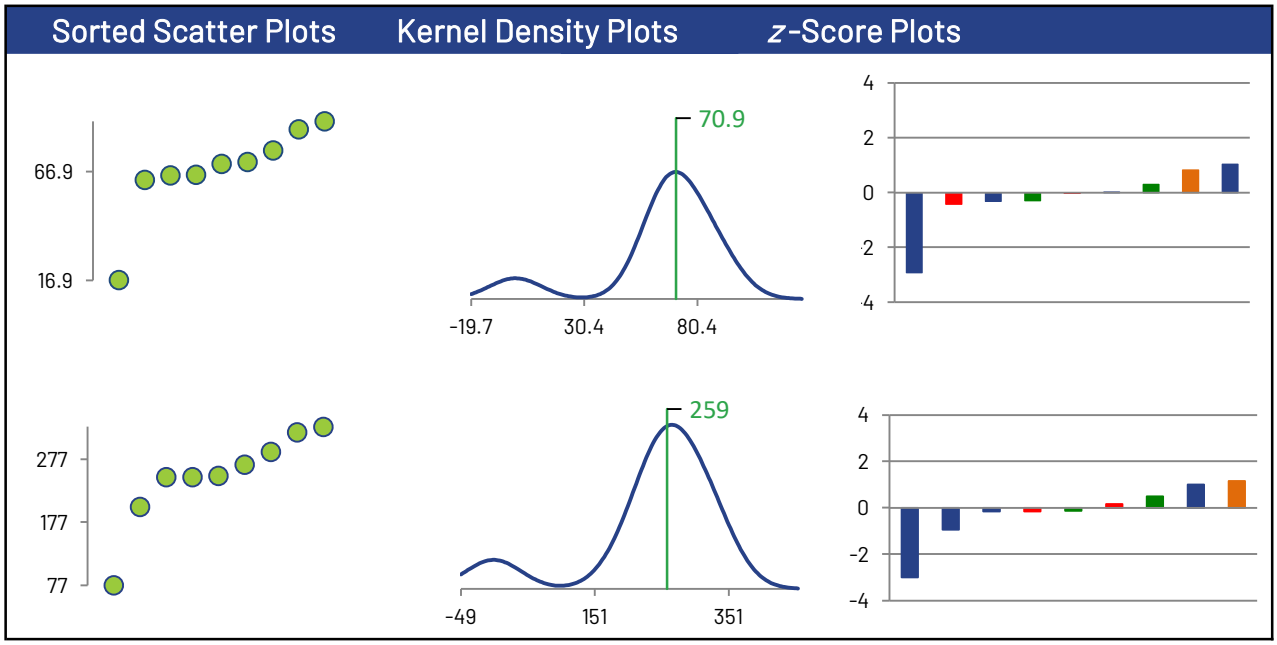
Summary Statistics

Statistic	C77-1	C77-2	C77-3	C77-4
No. of results used for summary statistics	9	9	9	9
Median µg/kg	70.4	251	317	162
Robust Mean µg/kg	70.9	259	324	150
Uncdrtainty of the Assigned Value µg/kg	5.75	24.0	28.6	22.3
Robust Standard Deviation µg/kg	13.8	57.5	68.6	53.6
Regression Standard Deviation µg/kg	18.5	60.7	75.3	36.2
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) µg/kg	18.5	60.7	75.3	53.6
Flagged Outliers	1	1	1	1
|z|>3.0	0	0	1	0
2<|z|<3	1	1	0	0
Failure Rate %*	20.0			

Methods Used

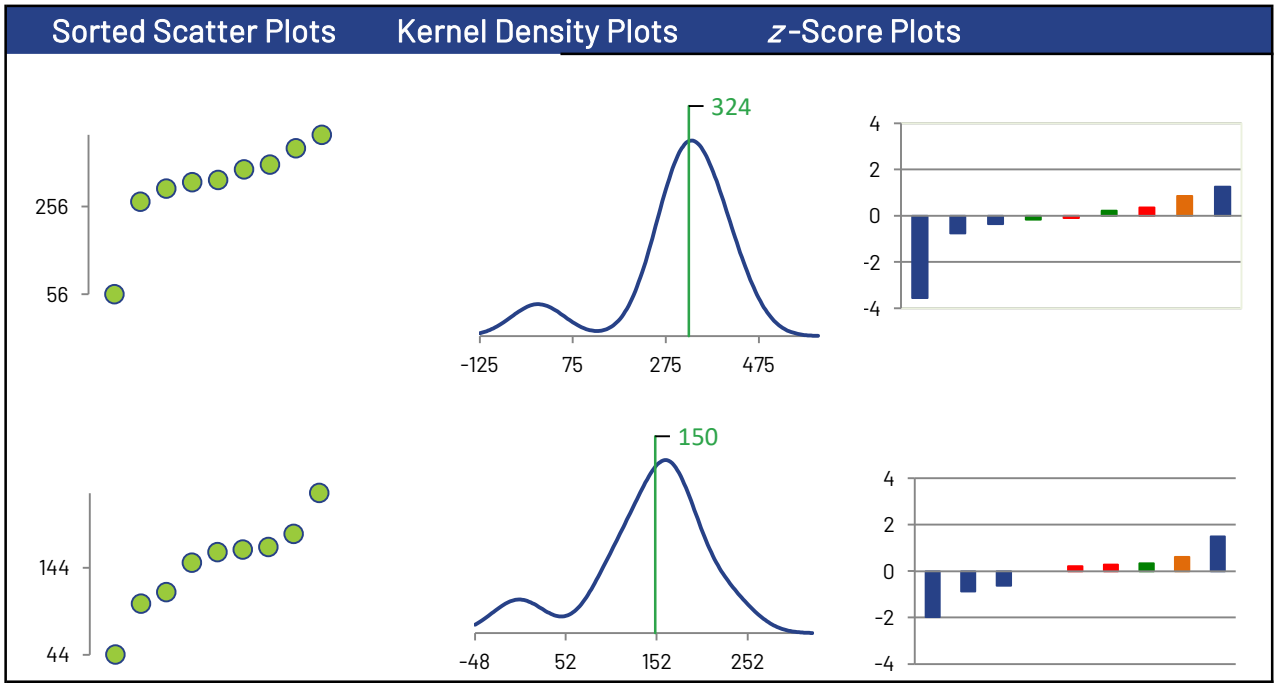
Method	C77-1	C77-2	C77-3	C77-4
GC/ECD - EXTRACTION (Blue)	4	4	4	4
GC/MS/MS (Red)	2	2	2	2
GC/MS - EXTRACTION (Green)	2	2	2	2
GC/ECD - SHAKE EXTRACTION (Orange)	1	1	1	1

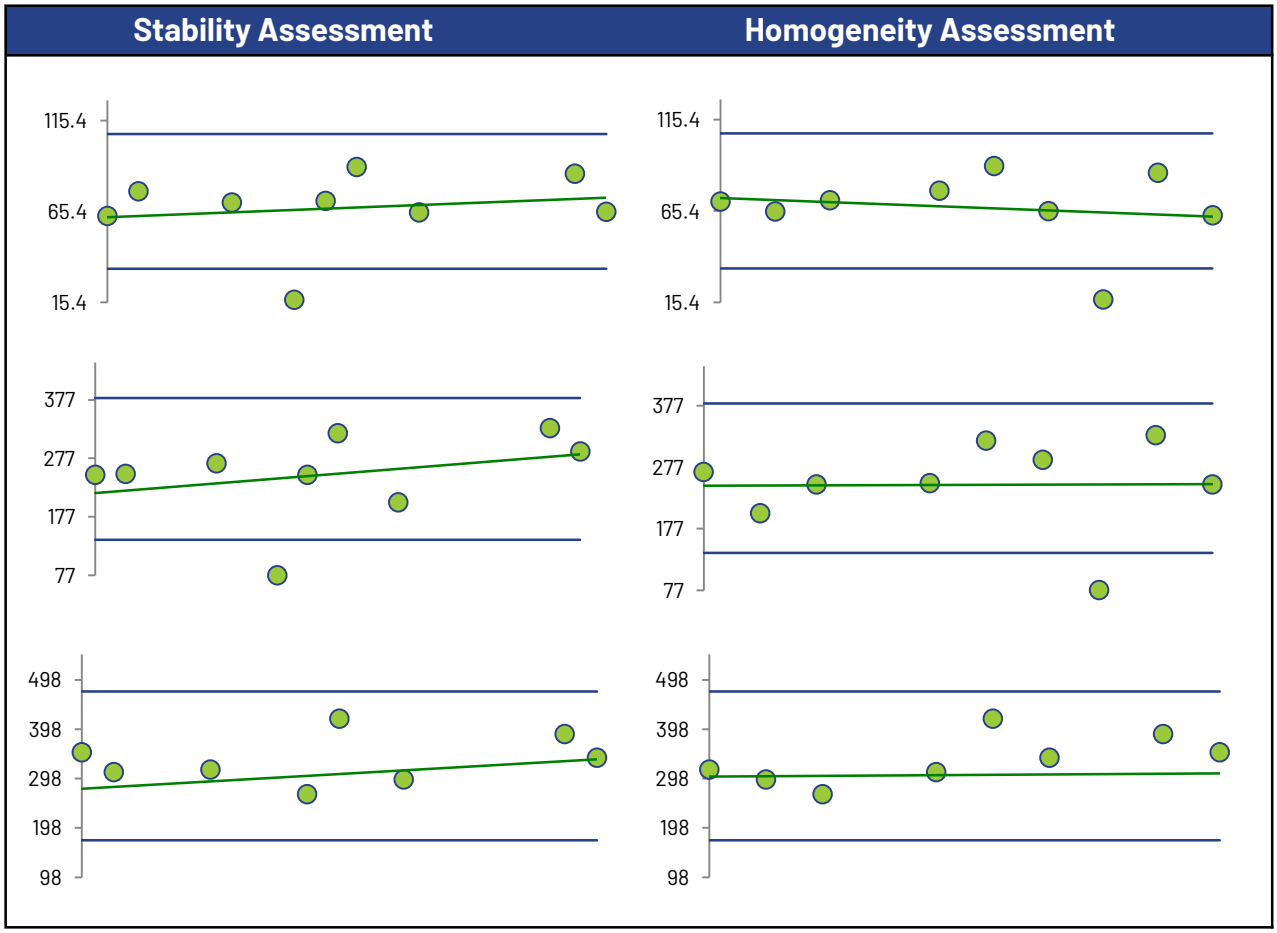
All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



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

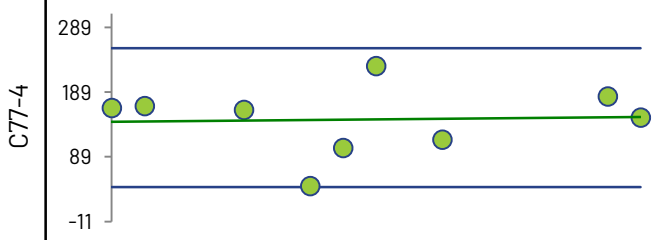
4,4'-DDT (p,p'-DDT)


Sorted Scatter Plots
Kernel Density Plots
z-Score Plots
C77-3
256
56
324
-125
75
275
475
4
2
0
-2
-4
C77-4
144
44
150
-48
52
152
252

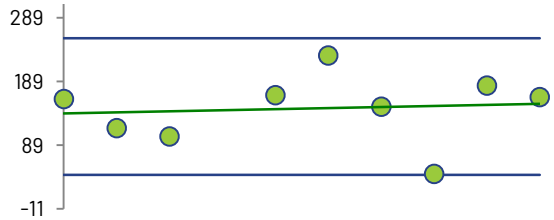

Stability Assessment
Homogeneity Assessment
C77-1
115.4
65.4
15.4
C77-2
377
277
177
77
C77-3
498
398
298
198
98

4,4'-DDT (p,p'-DDT)

Stability Assessment



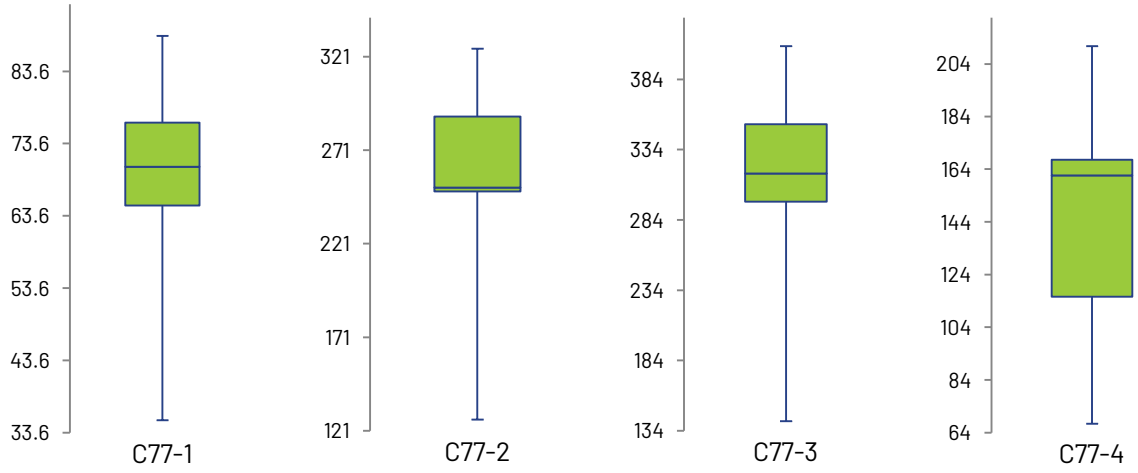
Homogeneity Assessment



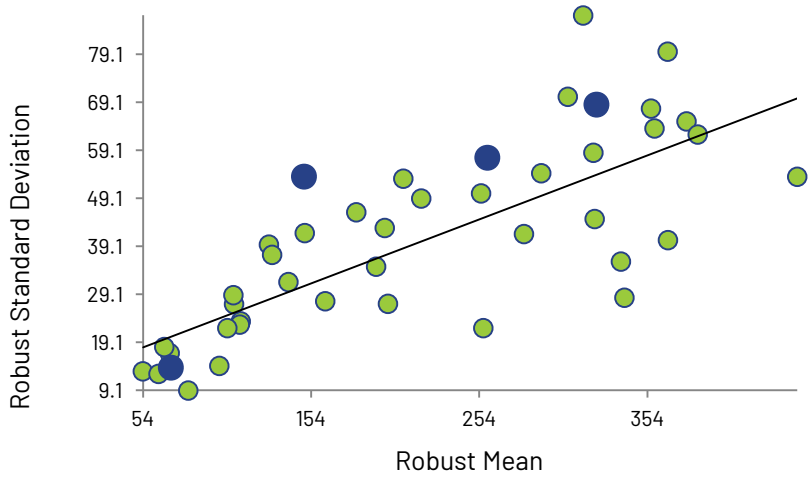
Stability assessments are regression analysis of reported result against date of analysis.

Homogeneity assessments are regression analysis of reported result against bottling order.

Box and Whisker Plots



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



4,4'-Methoxychlor (p,p'-Methoxychlor)

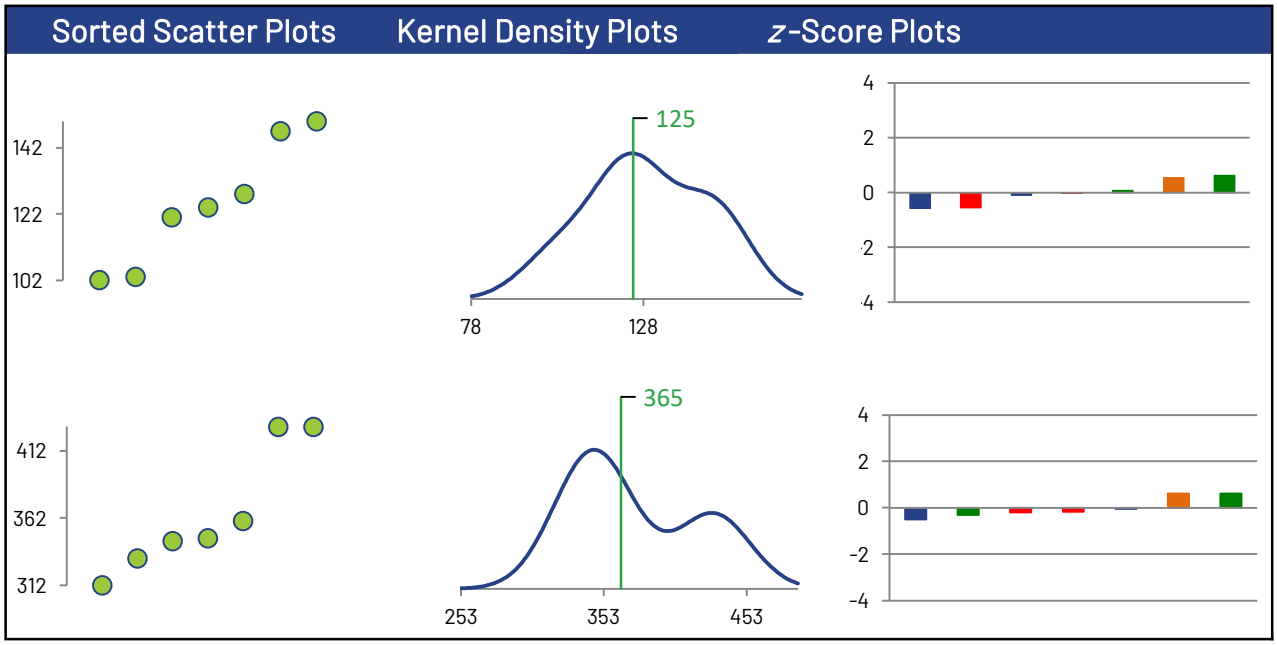
Summary Statistics

Statistic	C77-1	C77-2	C77-3	C77-4
No. of results used for summary statistics	7	7	7	7
Median µg/kg	124	347	254	445
Robust Mean µg/kg	125	365	247	455
Uncdrtainty of the Assigned Value µg/kg	10.2	25.0	16.8	37.5
Robust Standard Deviation µg/kg	21.5	53.0	35.6	79.4
Regression Standard Deviation µg/kg	39.8	105	72.7	129
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) µg/kg	39.8	105	72.7	129
Flagged Outliers	2	2	2	2
|z|>3.0	0	0	0	0
2<|z|<3	0	0	0	0
Failure Rate %*	22.2			

Methods Used

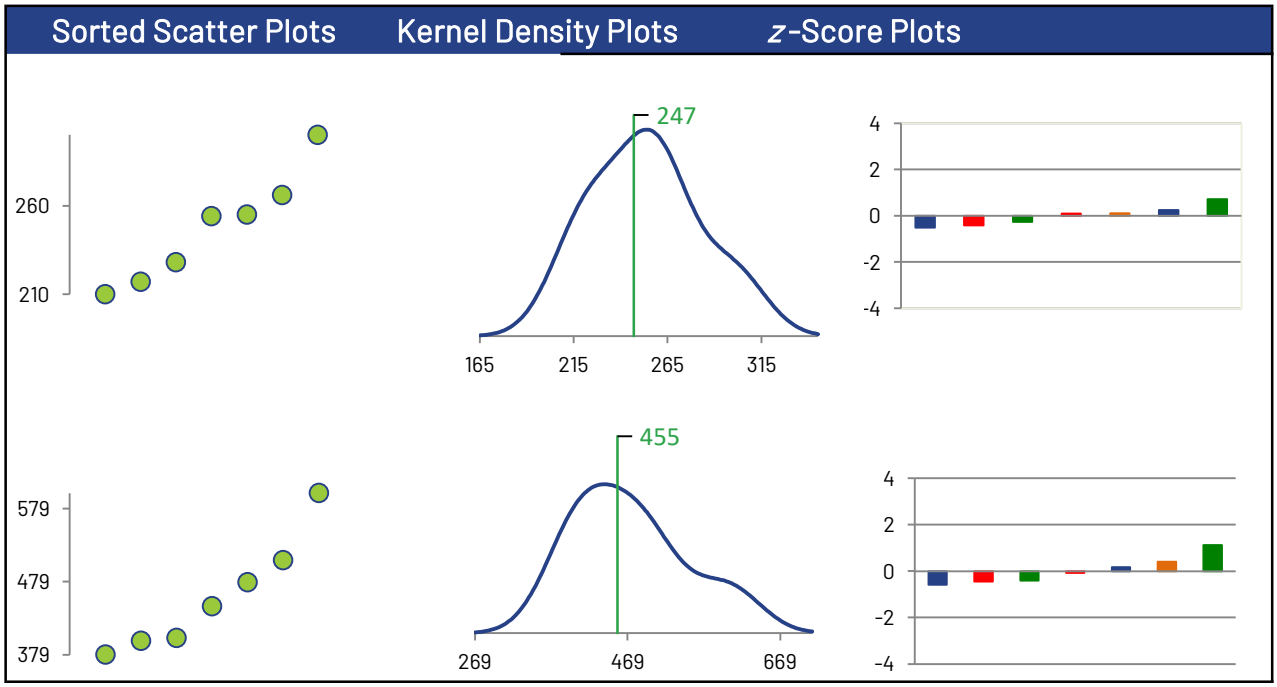
Method	C77-1	C77-2	C77-3	C77-4
GC/MS/MS (Blue)	2	2	2	2
GC/MS - EXTRACTION (Red)	2	2	2	2
GC/ECD - EXTRACTION (Green)	2	2	2	2
GC/ECD - SHAKE EXTRACTION (Orange)	1	1	1	1

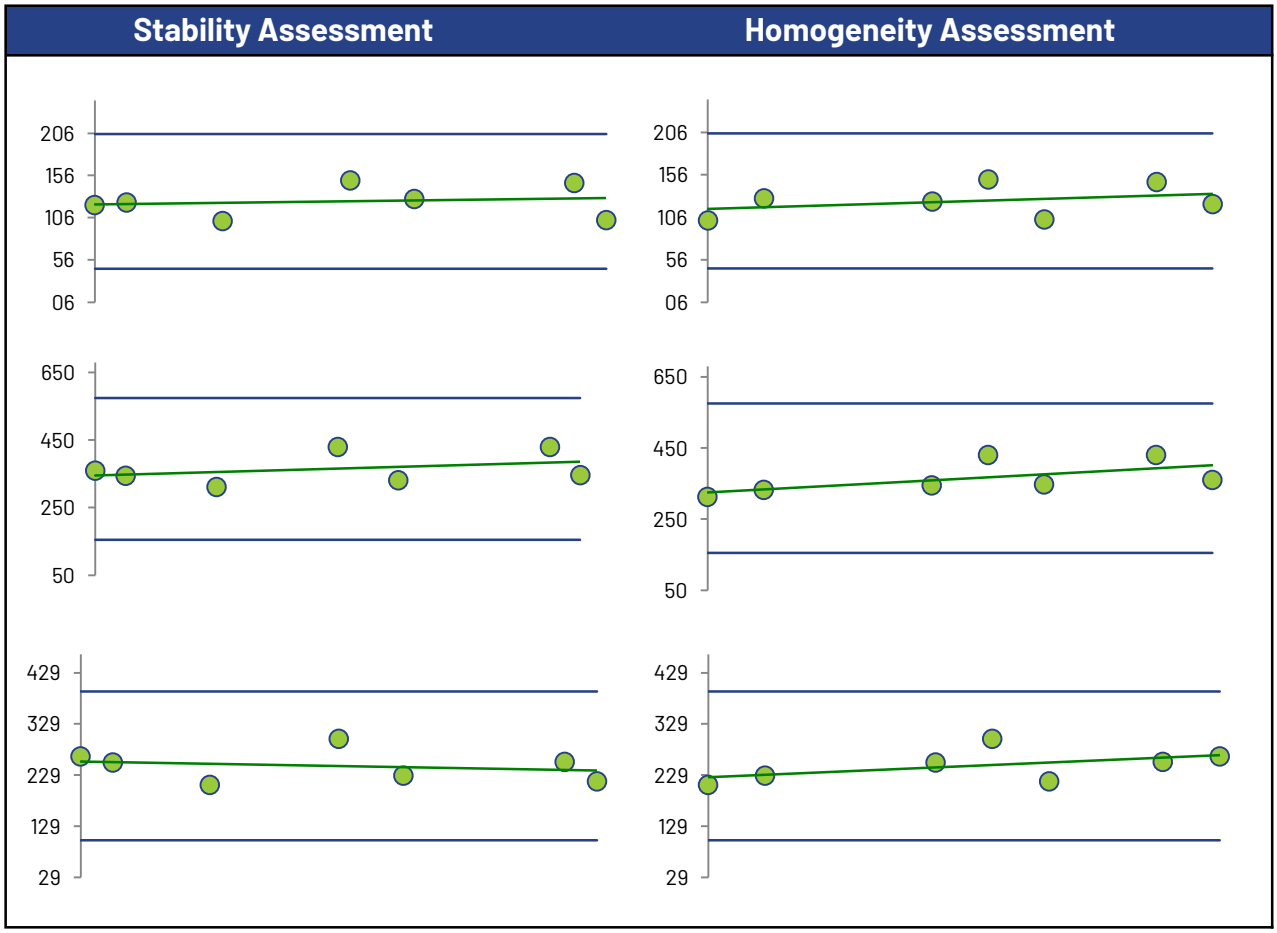
All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



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

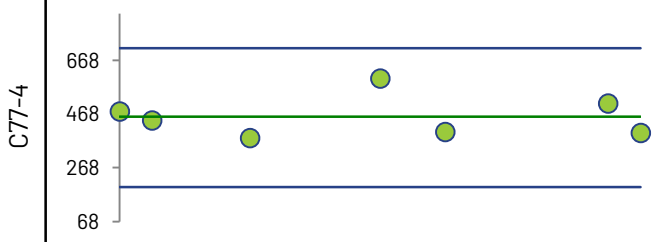
4,4'-Methoxychlor (p,p'-Methoxychlor)



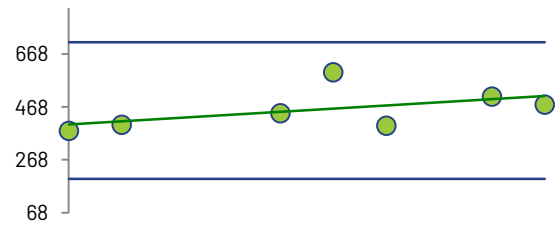


4,4'-Methoxychlor (p,p'-Methoxychlor)

Stability Assessment



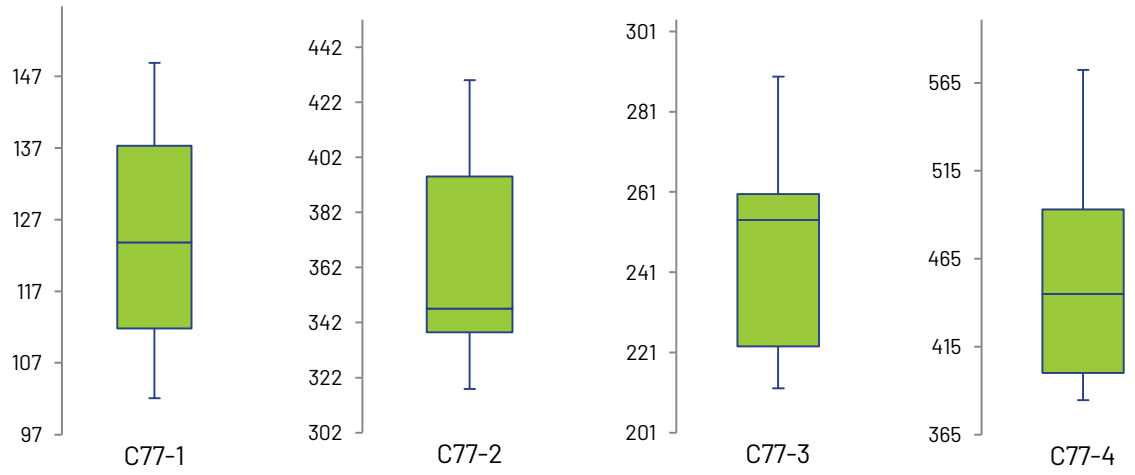
Homogeneity Assessment



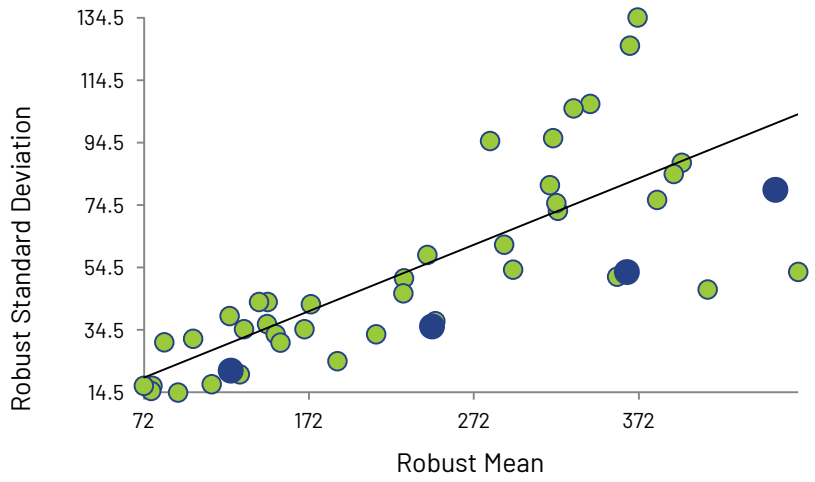
Stability assessments are regression analysis of reported result against date of analysis.

Homogeneity assessments are regression analysis of reported result against bottling order.

Box and Whisker Plots



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



Aldrin

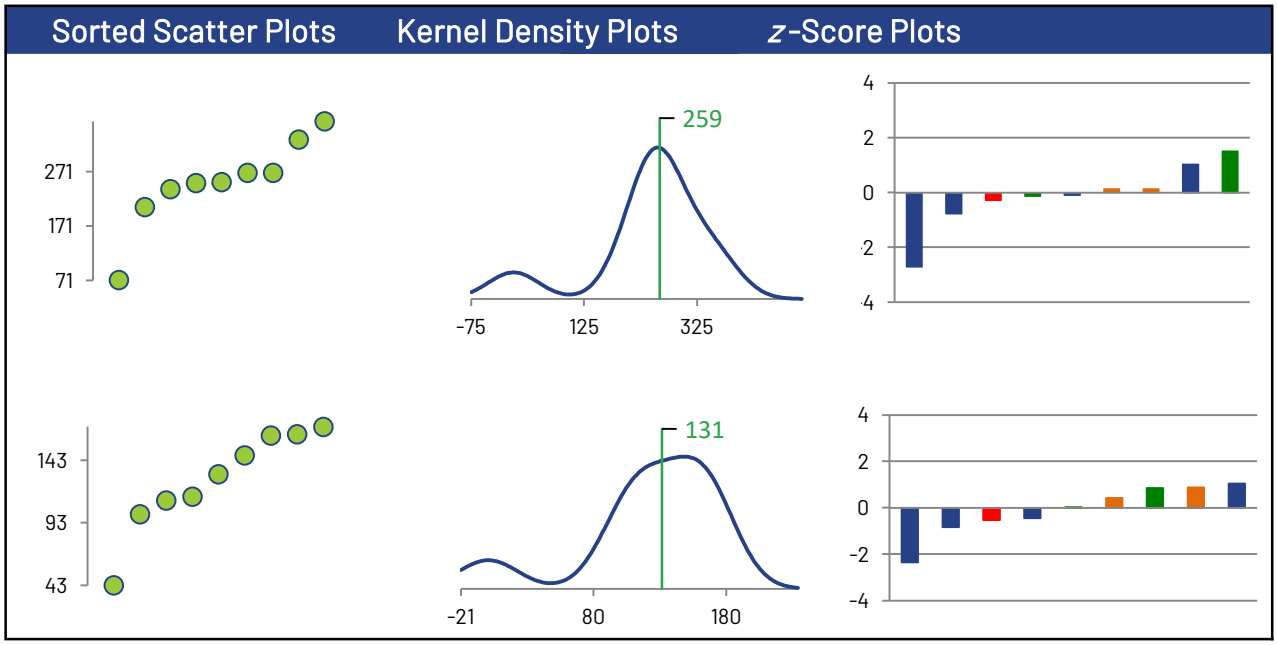
Summary Statistics

Statistic	C77-1	C77-2	C77-3	C77-4
No. of results used for summary statistics	9	9	9	9
Median µg/kg	252	132	70.7	336
Robust Mean µg/kg	259	131	74.3	321
Uncdrtainty of the Assigned Value µg/kg	28.8	15.6	11.6	54.2
Robust Standard Deviation µg/kg	69.1	37.5	27.8	130
Regression Standard Deviation µg/kg	54.3	28.3	16.9	66.9
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) µg/kg	69.1	37.5	27.8	130
Flagged Outliers	1	1	1	1
|z|>3.0	0	0	0	0
2<|z|<3	1	1	0	0
Failure Rate %*	20.0			

Methods Used

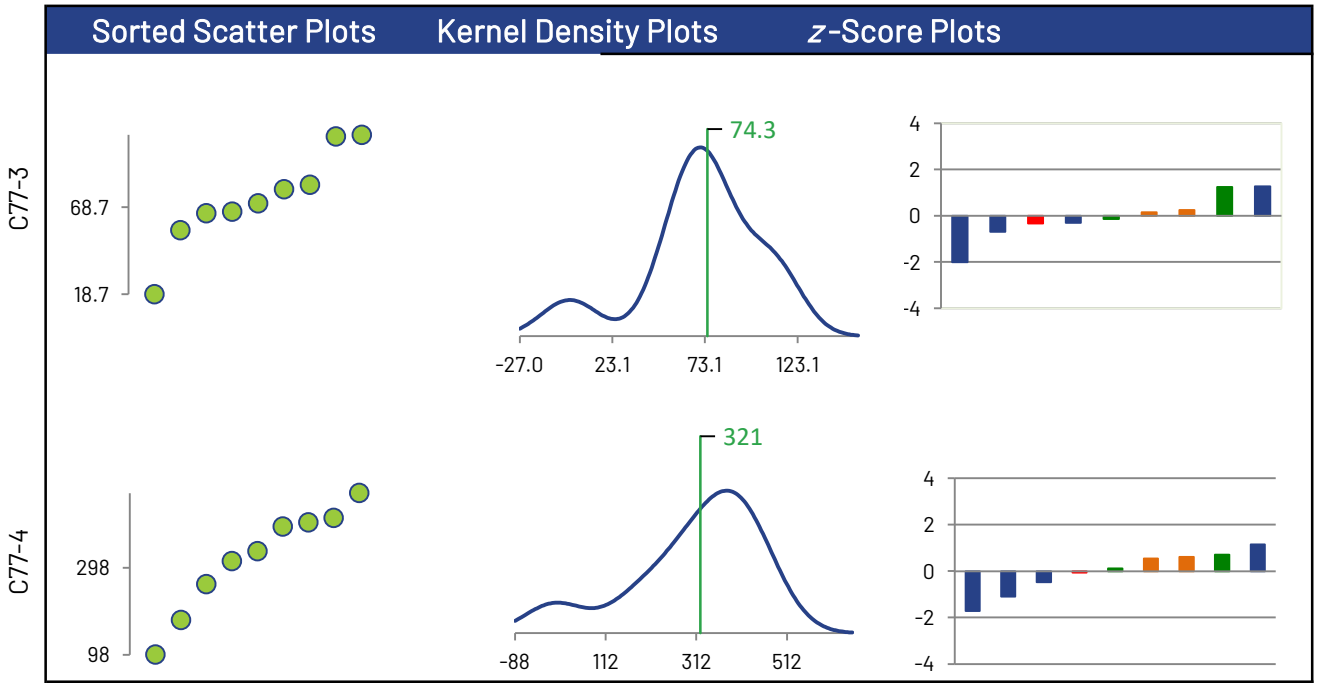
Method	C77-1	C77-2	C77-3	C77-4
GC/ECD - EXTRACTION (Blue)	4	4	4	4
GC/ECD - SHAKE EXTRACTION (Red)	1	1	1	1
GC/MS/MS (Green)	2	2	2	2
GC/MS - EXTRACTION (Orange)	2	2	2	2

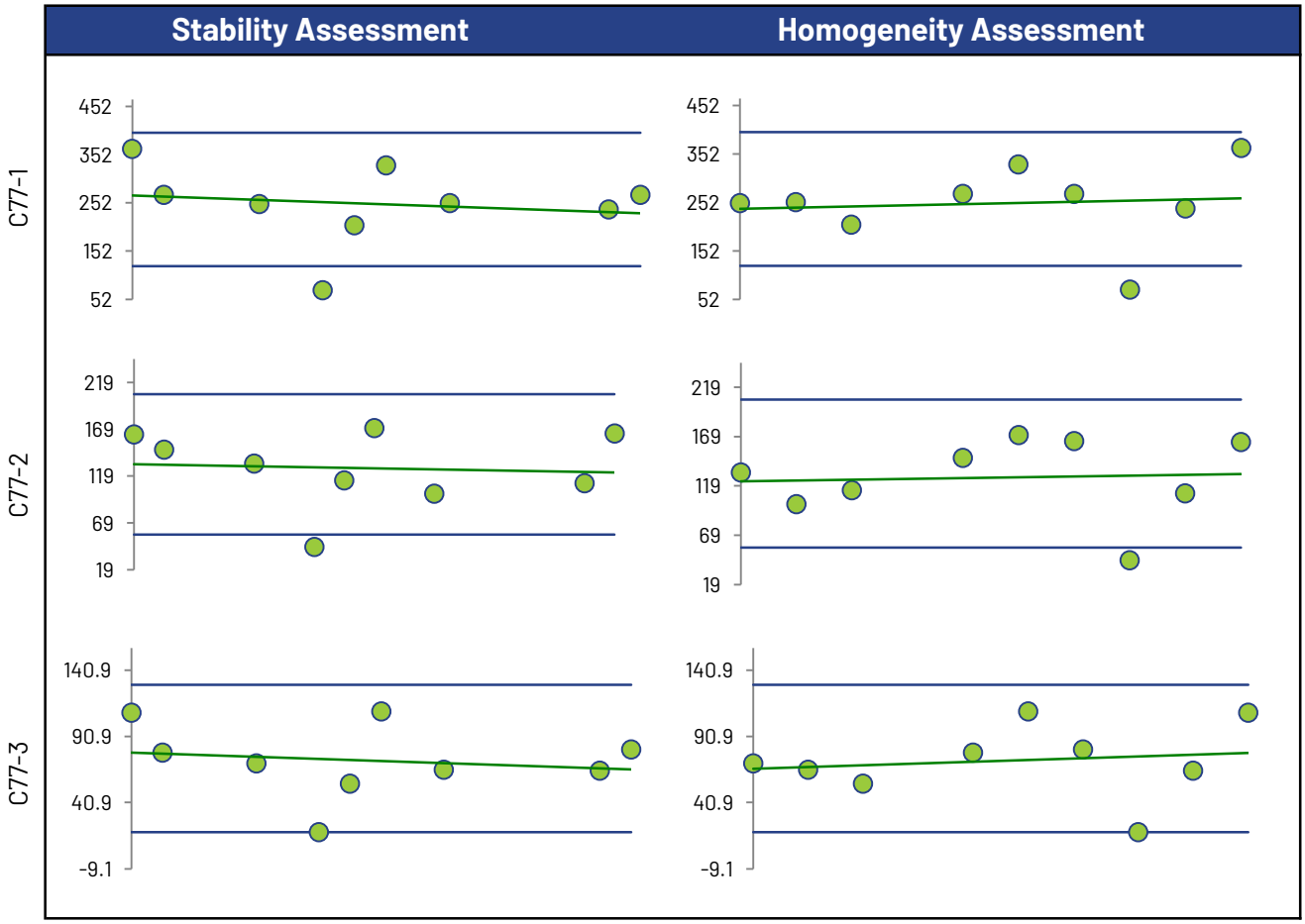
All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



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

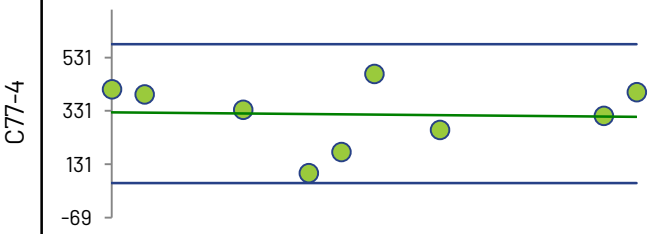
Aldrin


Sorted Scatter Plots
Kernel Density Plots
z-Score Plots
C77-3
68.7
18.7
74.3
-27.0
23.1
73.1
123.1
4
2
0
-2
-4
C77-4
298
98
321
-88
112
312
512

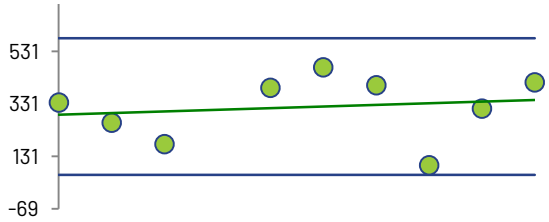

Stability Assessment
Homogeneity Assessment
C77-1
452
352
252
152
52
C77-2
219
169
119
69
19
C77-3
140.9
90.9
40.9
-9.1

Aldrin

Stability Assessment



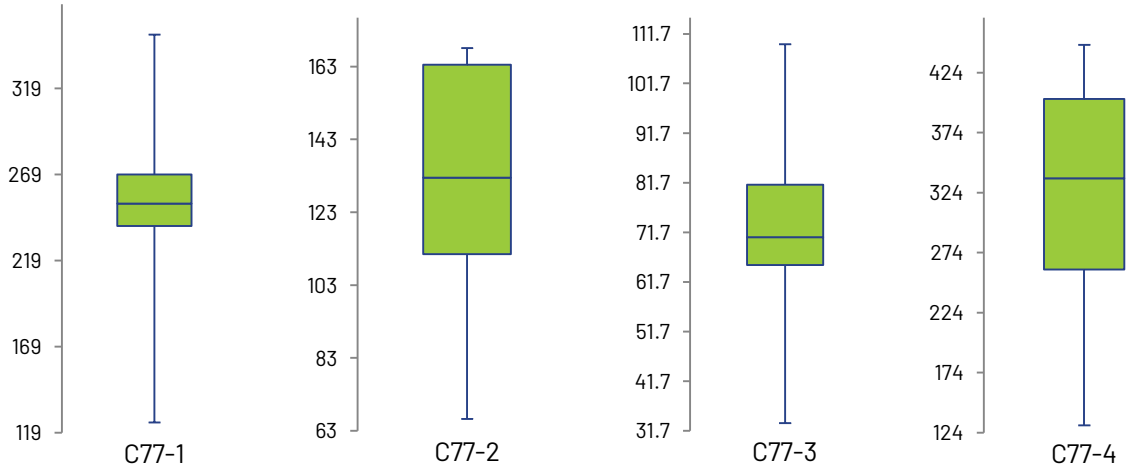
Homogeneity Assessment



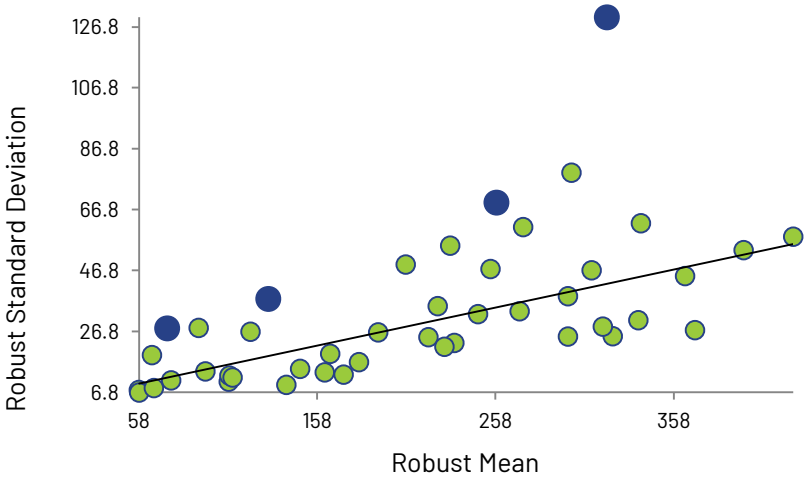
Stability assessments are regression analysis of reported result against date of analysis.

Homogeneity assessments are regression analysis of reported result against bottling order.

Box and Whisker Plots



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



alpha-BHC

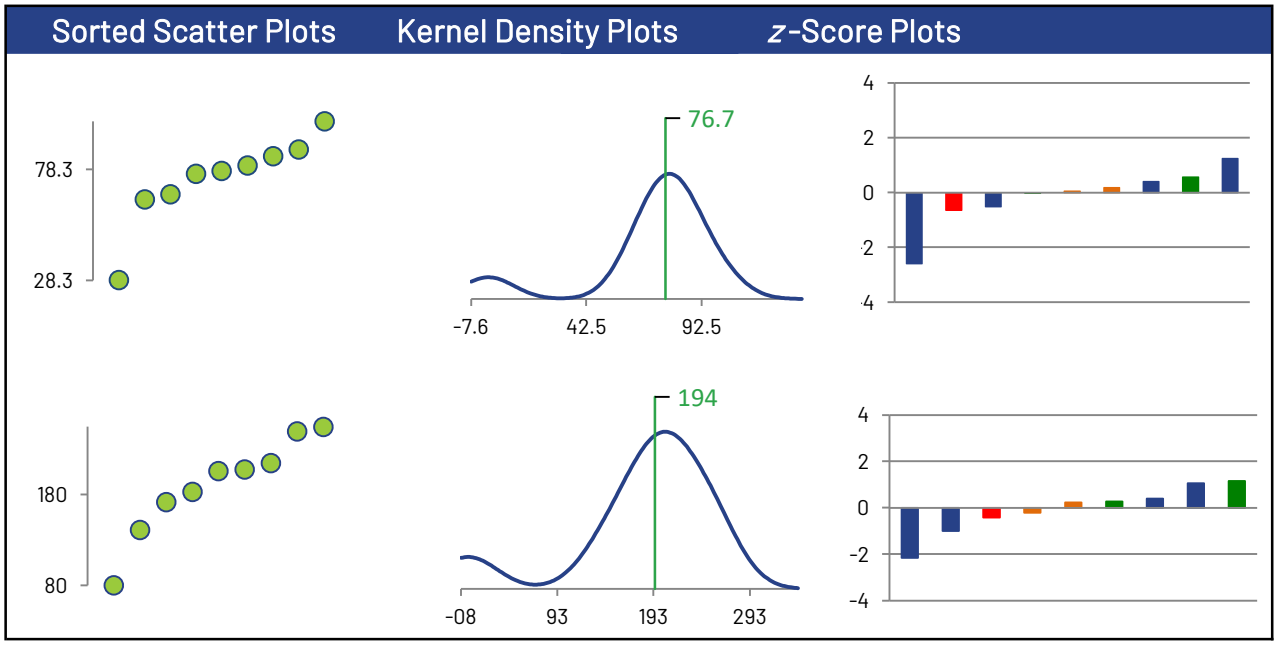
Summary Statistics

Statistic	C77-1	C77-2	C77-3	C77-4
No. of results used for summary statistics	9	9	9	9
Median µg/kg	77.6	206	342	129
Robust Mean µg/kg	76.7	194	345	124
Uncdrtainty of the Assigned Value µg/kg	6.46	22.0	35.2	20.5
Robust Standard Deviation µg/kg	15.5	52.8	84.5	49.1
Regression Standard Deviation µg/kg	18.6	42.0	72.4	28.1
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) µg/kg	18.6	52.8	84.5	49.1
Flagged Outliers	1	1	1	1
|z|>3.0	0	0	0	0
2<|z|<3	1	1	1	0
Failure Rate %*	20.0			

Methods Used

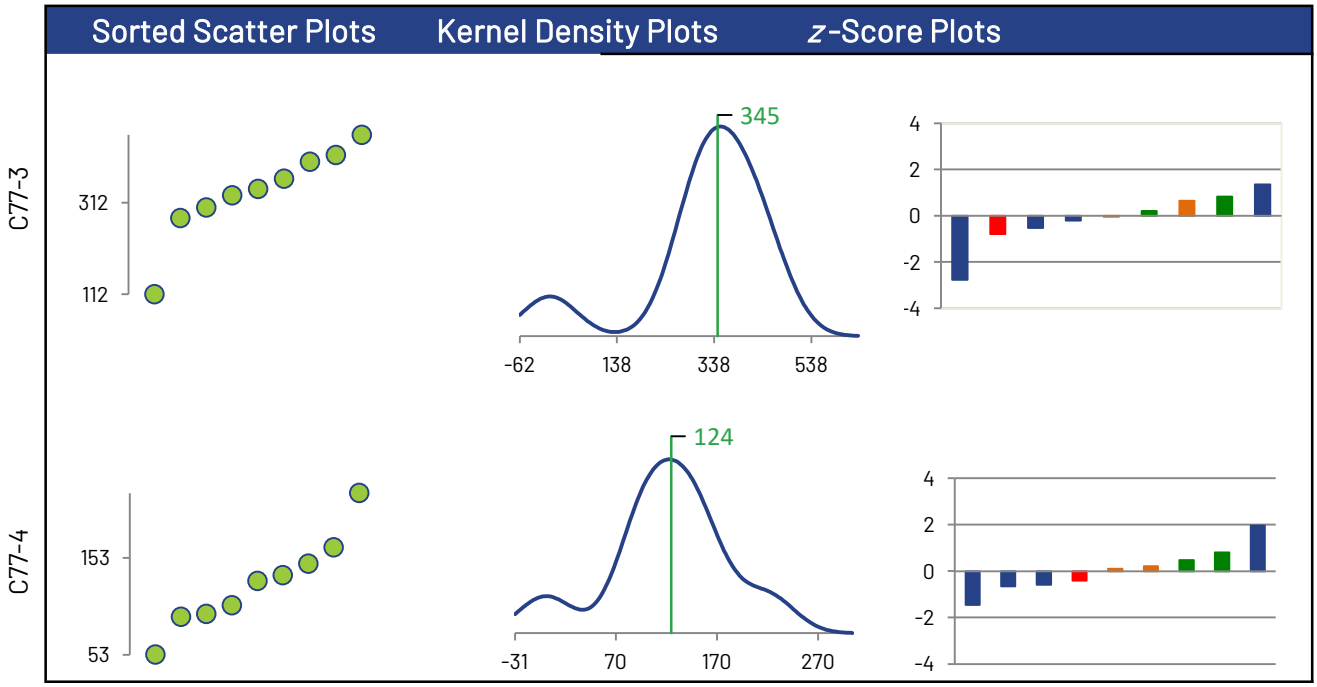
Method	C77-1	C77-2	C77-3	C77-4
GC/ECD - EXTRACTION (Blue)	4	4	4	4
GC/ECD - SHAKE EXTRACTION (Red)	1	1	1	1
GC/MS - EXTRACTION (Green)	2	2	2	2
GC/MS/MS (Orange)	2	2	2	2

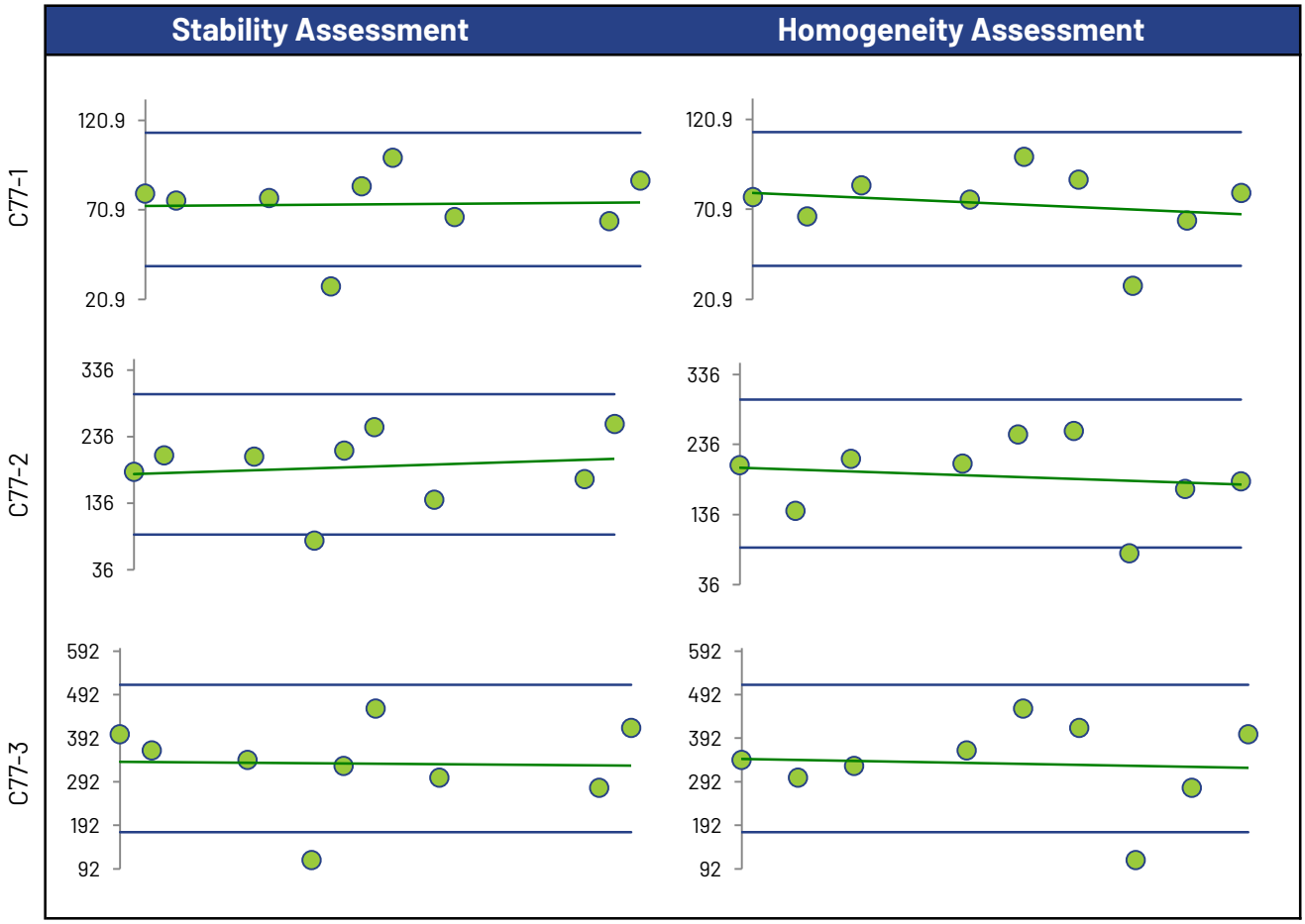
All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



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

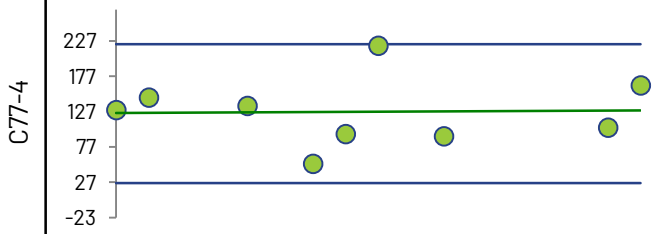
alpha-BHC


Sorted Scatter Plots
Kernel Density Plots
z-Score Plots
C77-3
312
112
345
-62
138
338
538
4
2
0
-2
-4
C77-4
153
53
124
-31
70
170
270

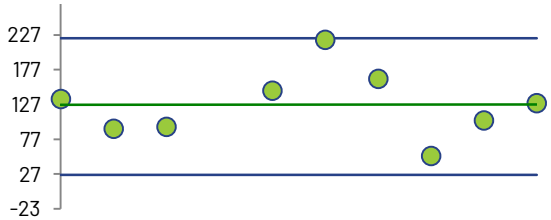

Stability Assessment
Homogeneity Assessment
C77-1
120.9
70.9
20.9
C77-2
336
236
136
36
C77-3
592
492
392
292
192
92

alpha-BHC

Stability Assessment



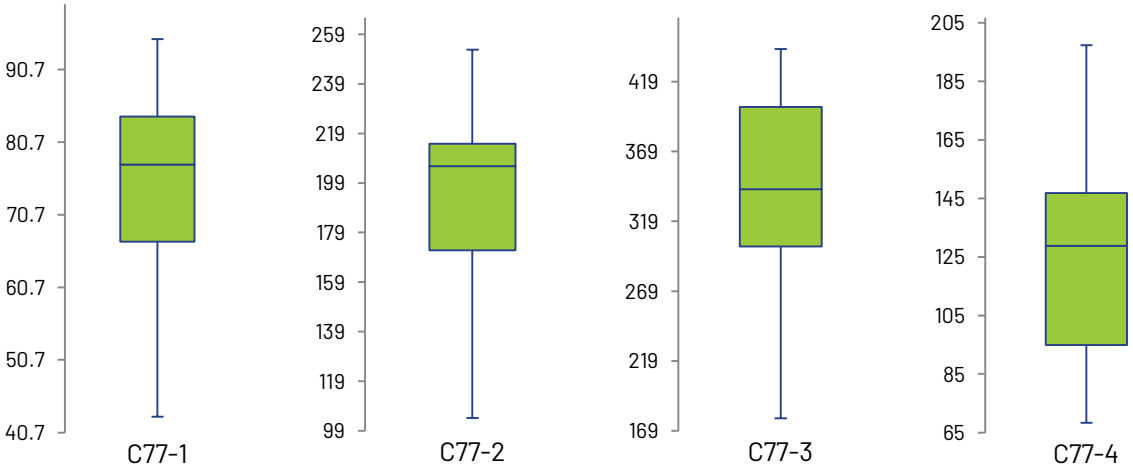
Homogeneity Assessment



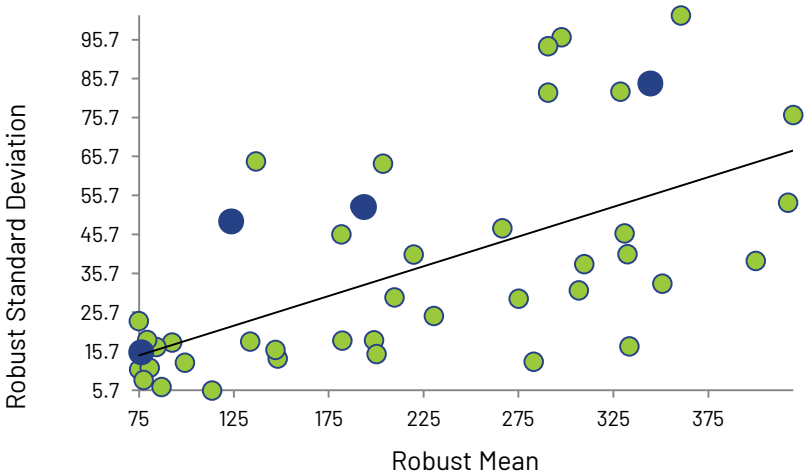
Stability assessments are regression analysis of reported result against date of analysis.

Homogeneity assessments are regression analysis of reported result against bottling order.

Box and Whisker Plots



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



alpha-Chlordane

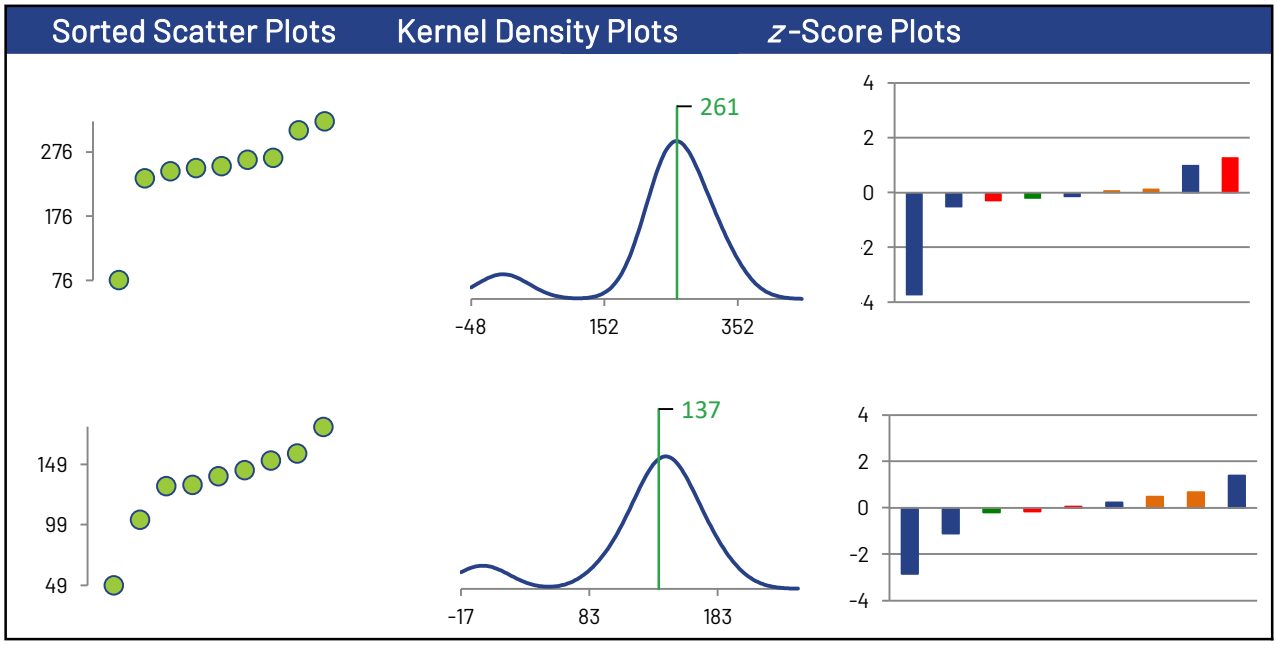
Summary Statistics

Statistic	C77-1	C77-2	C77-3	C77-4
No. of results used for summary statistics	9	9	9	9
Median µg/kg	254	139	326	52.8
Robust Mean µg/kg	261	137	335	48.9
Uncdrtainty of the Assigned Value µg/kg	17.9	12.9	32.0	6.88
Robust Standard Deviation µg/kg	42.9	31.0	76.9	16.5
Regression Standard Deviation µg/kg	49.6	26.3	63.5	9.86
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) µg/kg	49.6	31.0	76.9	16.5
Flagged Outliers	1	1	1	1
|z|>3.0	1	0	1	0
2<|z|<3	0	1	0	0
Failure Rate %*	20.0			

Methods Used

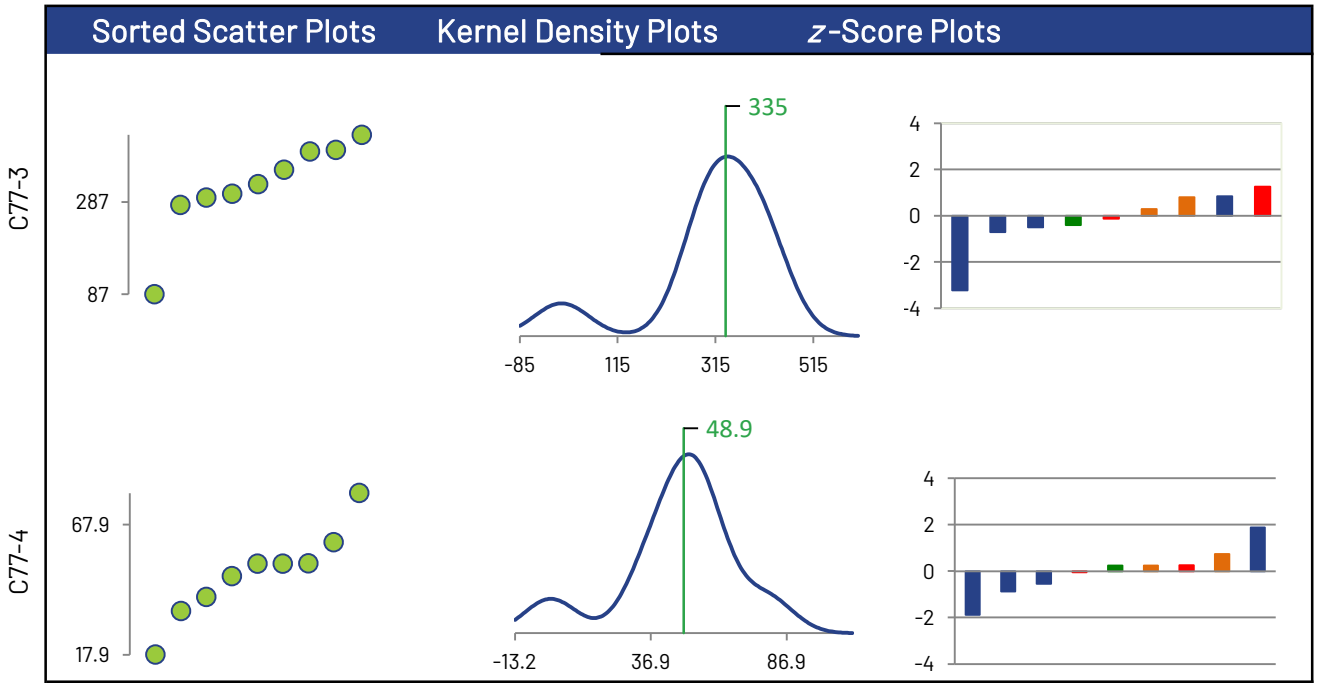
Method	C77-1	C77-2	C77-3	C77-4
GC/ECD - EXTRACTION (Blue)	4	4	4	4
GC/MS/MS (Red)	2	2	2	2
GC/ECD - SHAKE EXTRACTION (Green)	1	1	1	1
GC/MS - EXTRACTION (Orange)	2	2	2	2

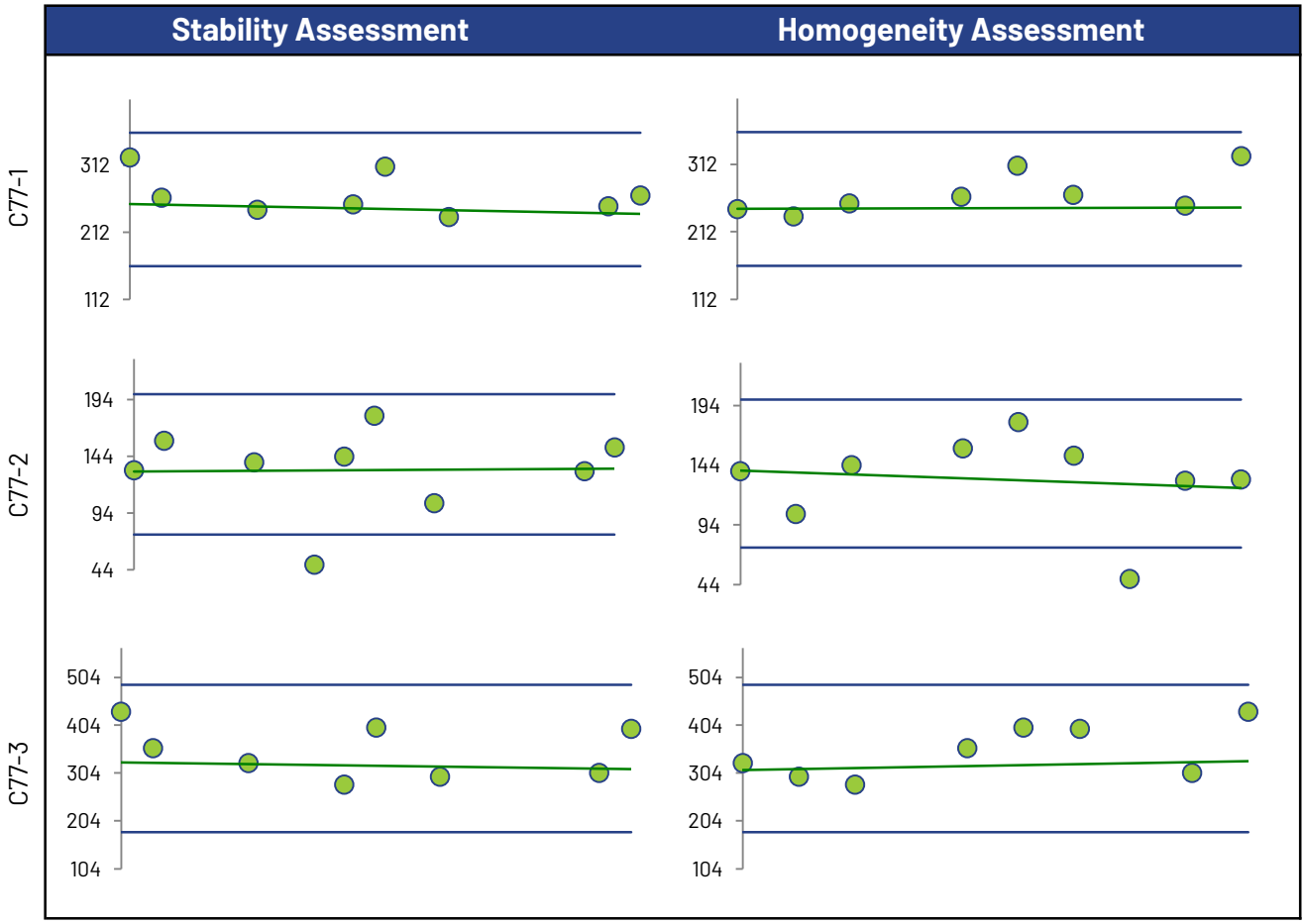
All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



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

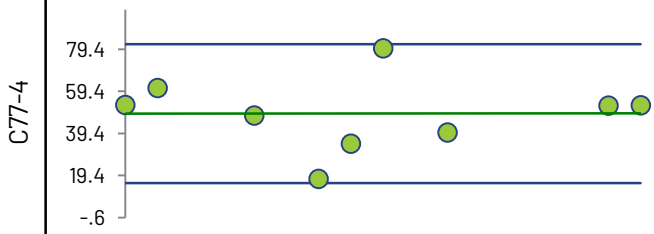
alpha-Chlordane



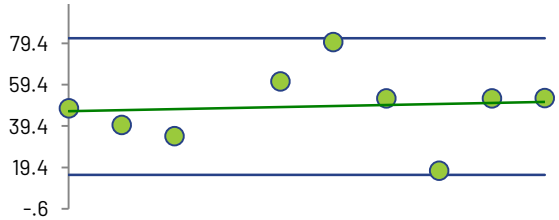


alpha-Chlordane

Stability Assessment



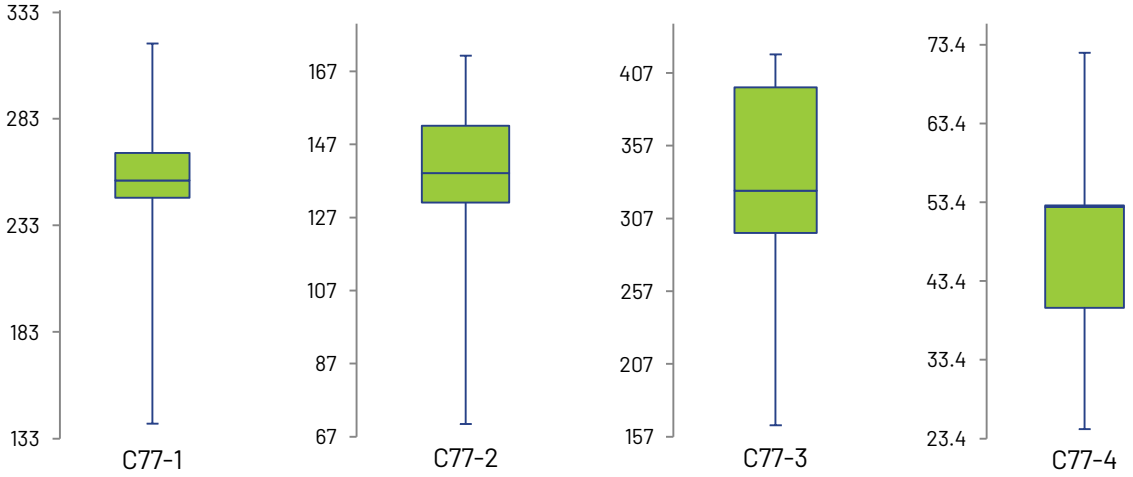
Homogeneity Assessment



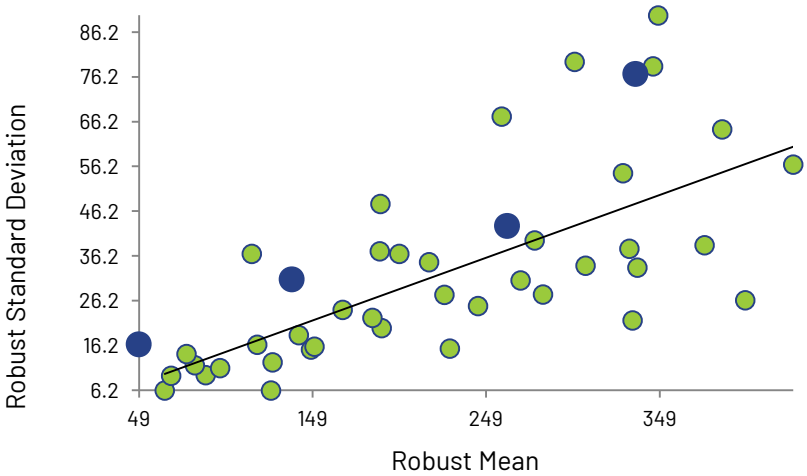
Stability assessments are regression analysis of reported result against date of analysis.

Homogeneity assessments are regression analysis of reported result against bottling order.

Box and Whisker Plots



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



beta-BHC

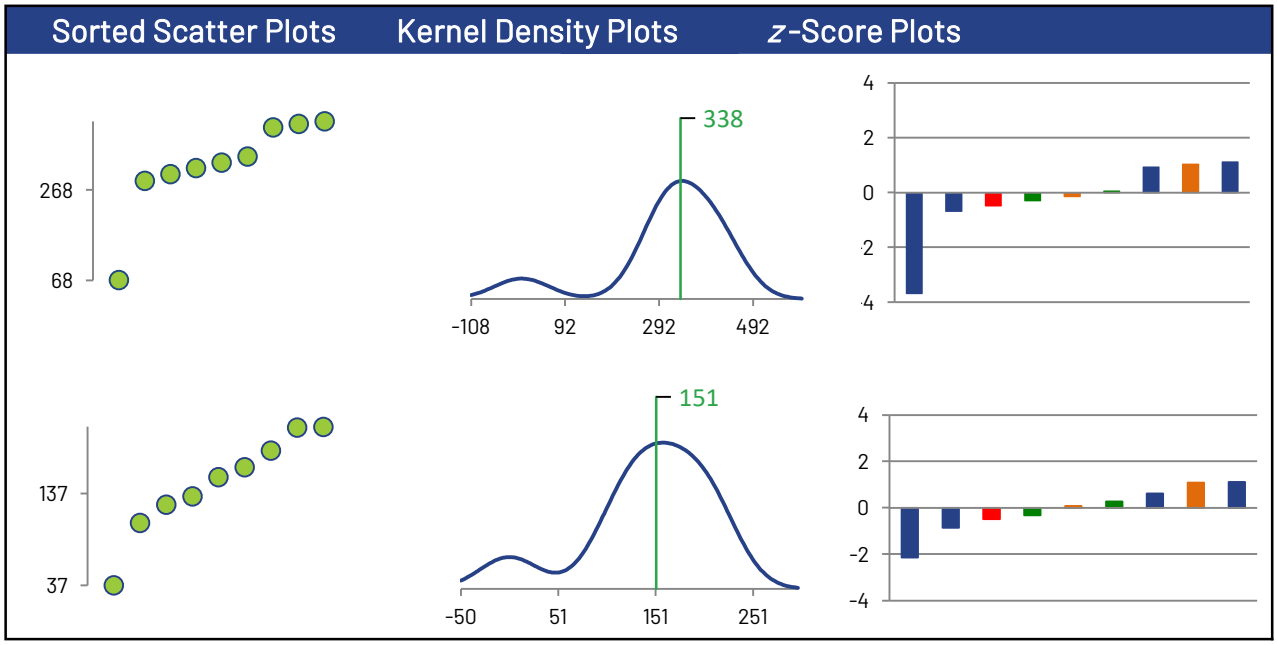
Summary Statistics

Statistic	C77-1	C77-2	C77-3	C77-4
No. of results used for summary statistics	9	9	9	9
Median µg/kg	328	155	78.9	250
Robust Mean µg/kg	338	151	81.2	267
Uncdrtainty of the Assigned Value µg/kg	30.6	22.2	13.6	46.3
Robust Standard Deviation µg/kg	73.4	53.2	32.6	111
Regression Standard Deviation µg/kg	69.9	36.4	23.9	57.1
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) µg/kg	73.4	53.2	32.6	111
Flagged Outliers	1	1	1	1
|z|>3.0	1	0	0	0
2<|z|<3	0	1	1	0
Failure Rate %*	20.0			

Methods Used

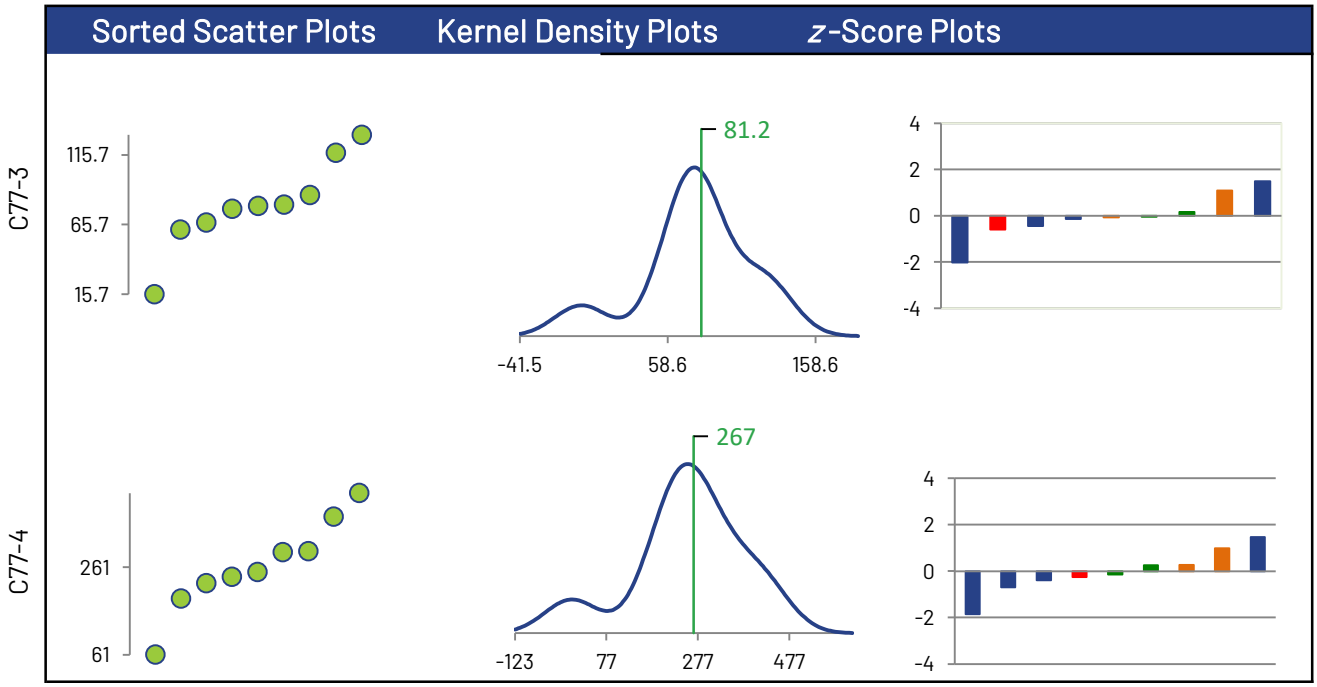
Method	C77-1	C77-2	C77-3	C77-4
GC/ECD - EXTRACTION (Blue)	4	4	4	4
GC/ECD - SHAKE EXTRACTION (Red)	1	1	1	1
GC/MS/MS (Green)	2	2	2	2
GC/MS - EXTRACTION (Orange)	2	2	2	2

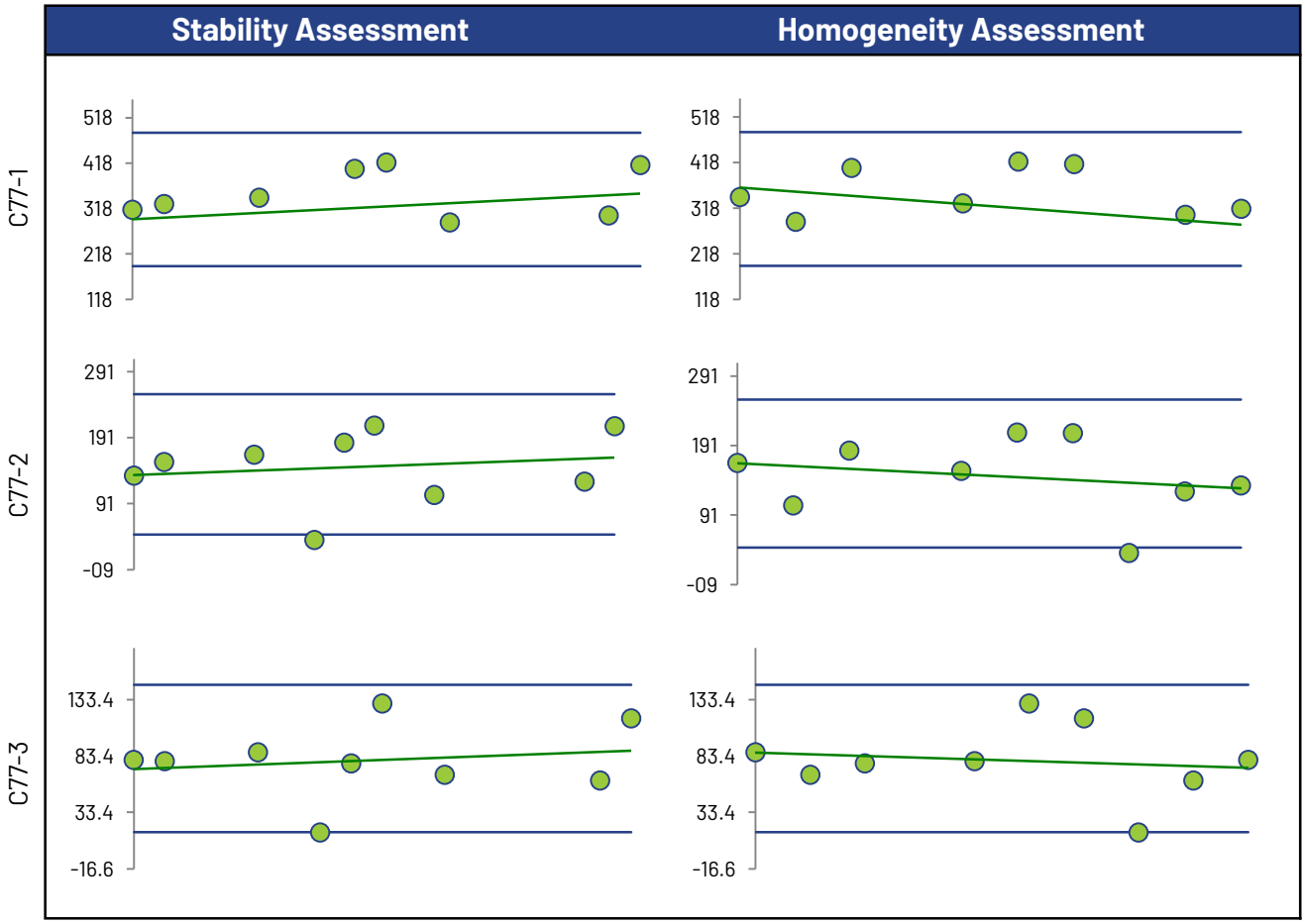
All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



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

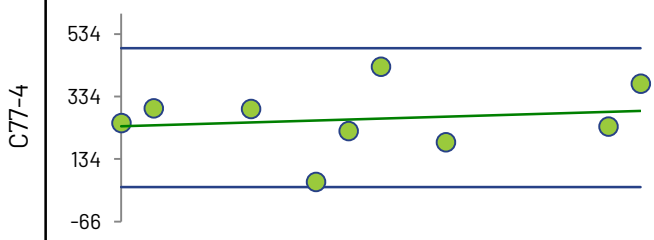
beta-BHC


Sorted Scatter Plots
Kernel Density Plots
z-Score Plots
C77-3
115.7
65.7
15.7
81.2
-41.5
58.6
158.6
4
2
0
-2
-4
C77-4
261
61
267
-123
77
277
477

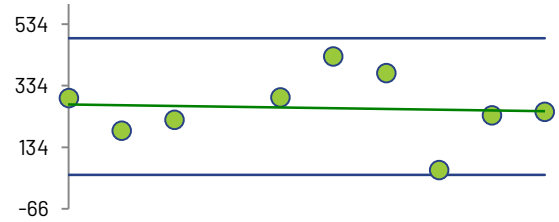

Stability Assessment
Homogeneity Assessment
C77-1
518
418
318
218
118
C77-2
291
191
91
-09
C77-3
133.4
83.4
33.4
-16.6

beta-BHC

Stability Assessment



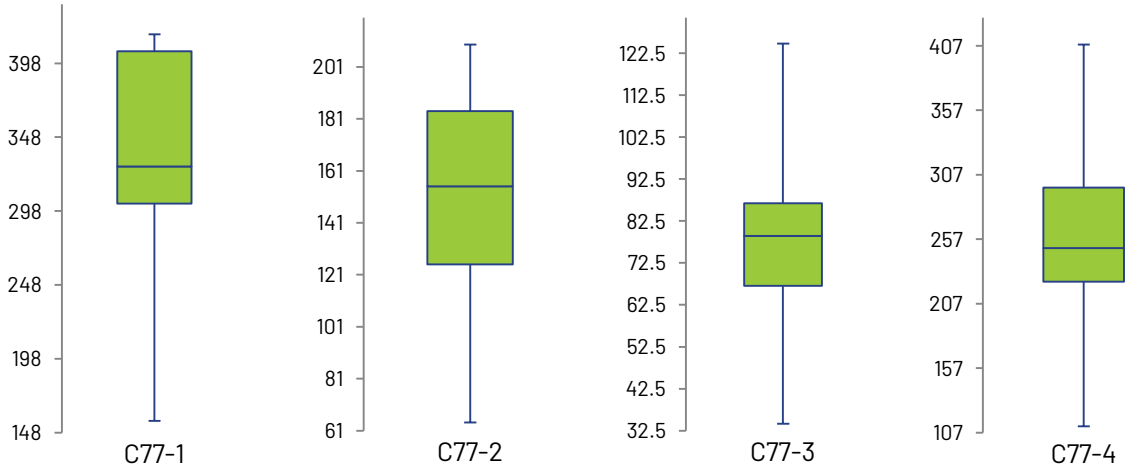
Homogeneity Assessment



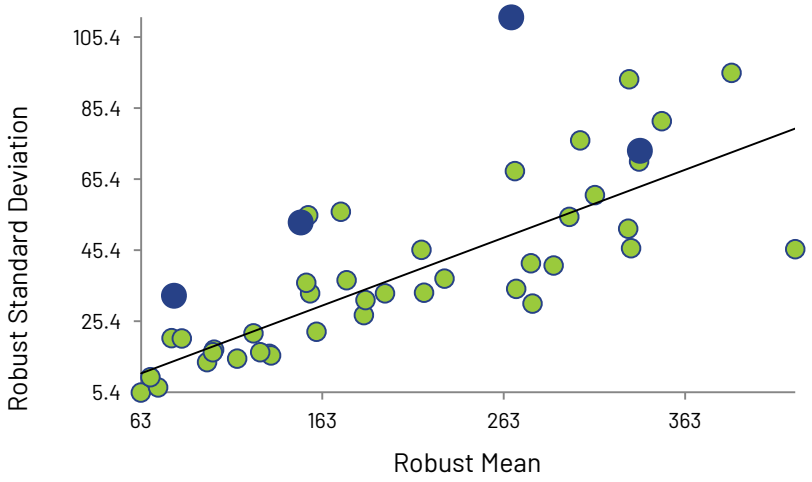
Stability assessments are regression analysis of reported result against date of analysis.

Homogeneity assessments are regression analysis of reported result against bottling order.

Box and Whisker Plots



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



Dieldrin

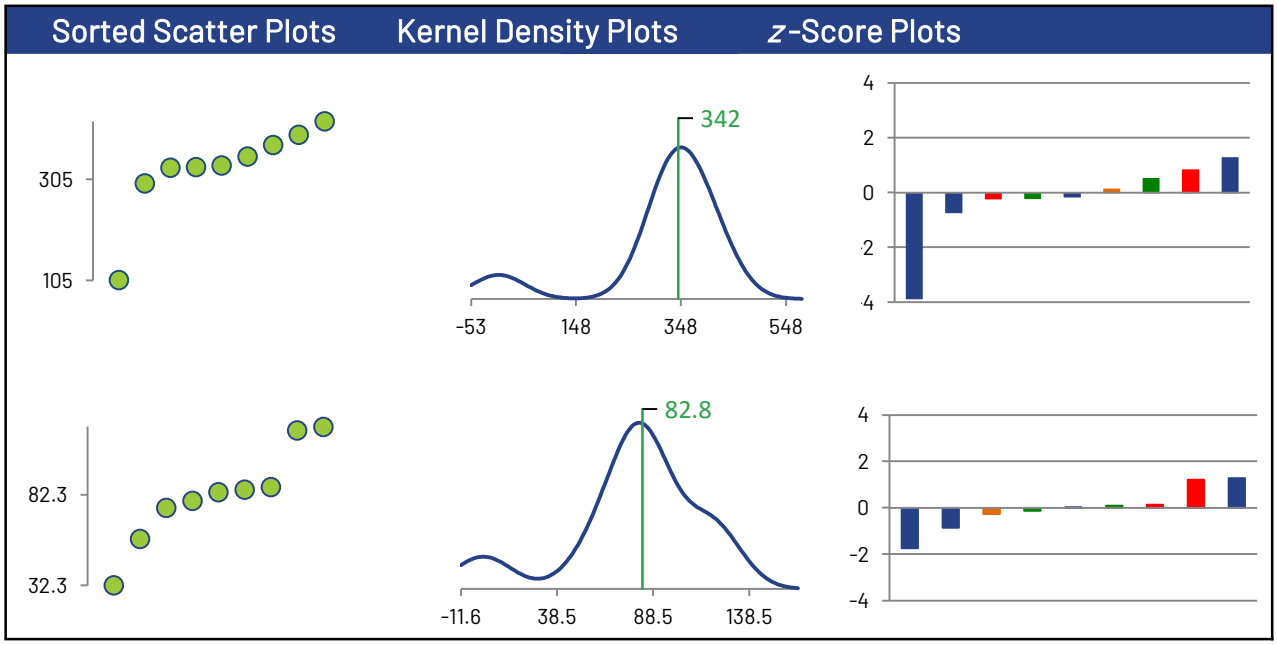
Summary Statistics

Statistic	C77-1	C77-2	C77-3	C77-4
No. of results used for summary statistics	9	9	9	9
Median µg/kg	332	83.8	149	267
Robust Mean µg/kg	342	82.8	147	257
Uncdrtainty of the Assigned Value µg/kg	23.0	12.1	18.9	39.6
Robust Standard Deviation µg/kg	55.3	29.0	45.4	95.0
Regression Standard Deviation µg/kg	61.3	17.9	28.7	46.9
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) µg/kg	61.3	29.0	45.4	95.0
Flagged Outliers	1	1	1	1
|z|>3.0	1	0	0	0
2<|z|<3	0	0	1	0
Failure Rate %*	20.0			

Methods Used

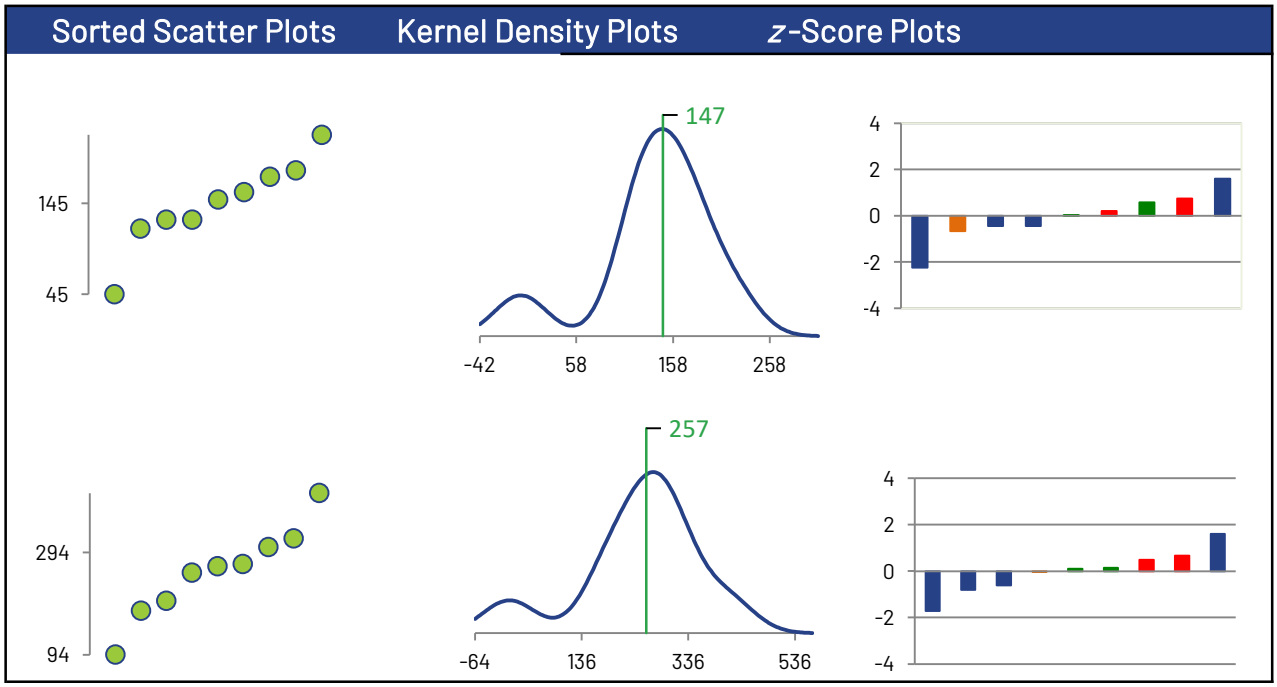
Method	C77-1	C77-2	C77-3	C77-4
GC/ECD - EXTRACTION (Blue)	4	4	4	4
GC/MS - EXTRACTION (Red)	2	2	2	2
GC/MS/MS (Green)	2	2	2	2
GC/ECD - SHAKE EXTRACTION (Orange)	1	1	1	1

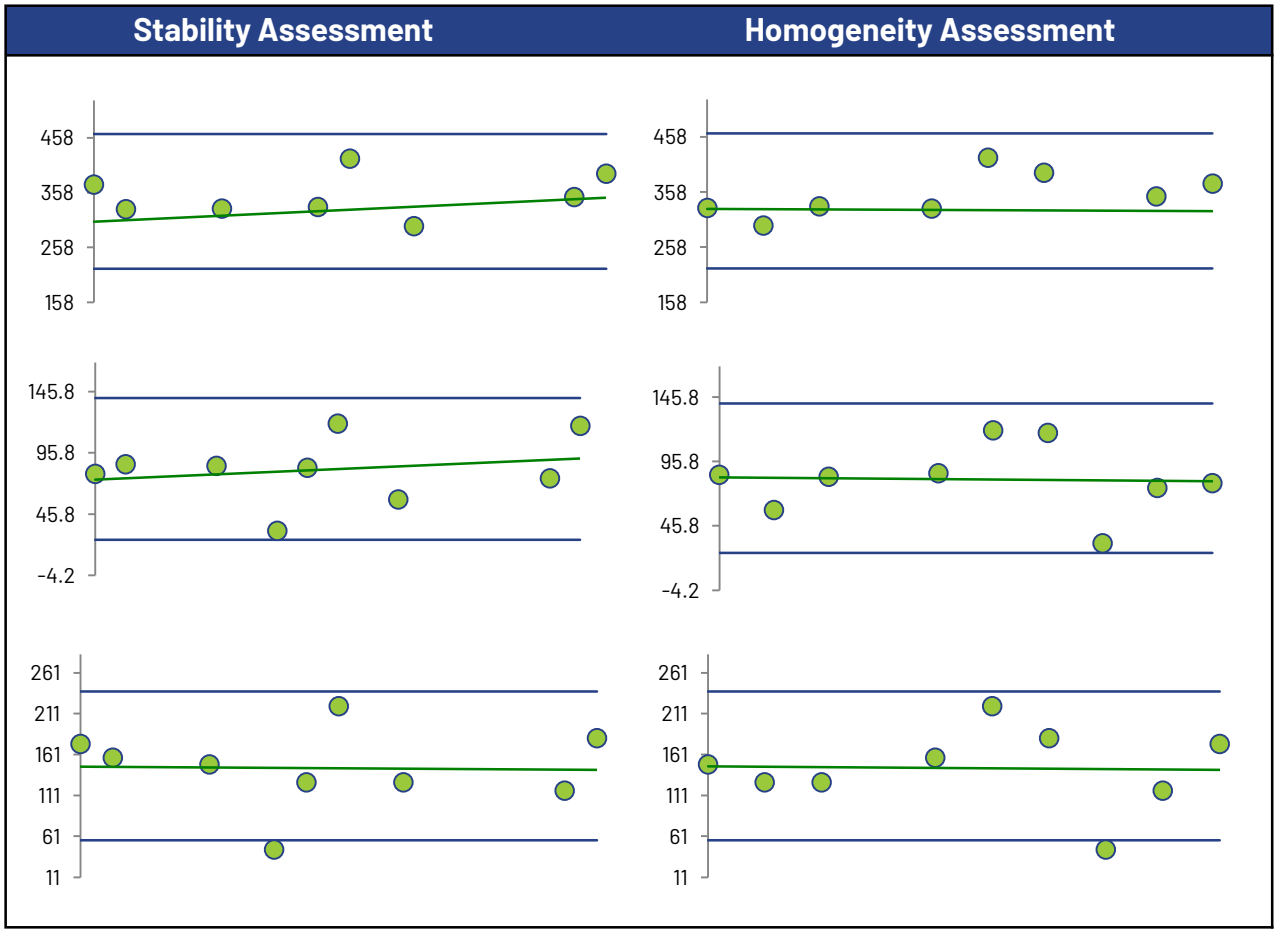
All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



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

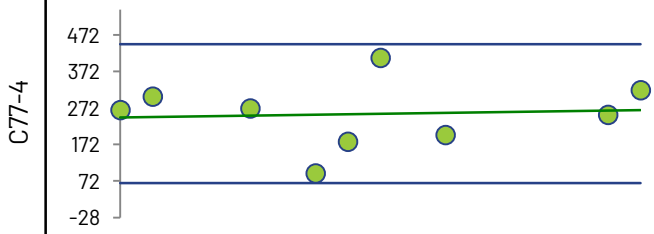
Dieldrin


Sorted Scatter Plots
Kernel Density Plots
z-Score Plots
C77-3
145
45
147
-42
58
158
258
4
2
0
-2
-4
C77-4
294
94
257
-64
136
336
536

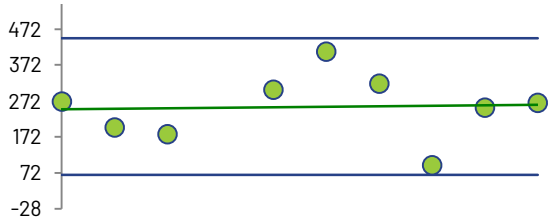

Stability Assessment
Homogeneity Assessment
C77-1
458
358
258
158
C77-2
145.8
95.8
45.8
-4.2
C77-3
261
211
161
111
61
11

Dieldrin

Stability Assessment



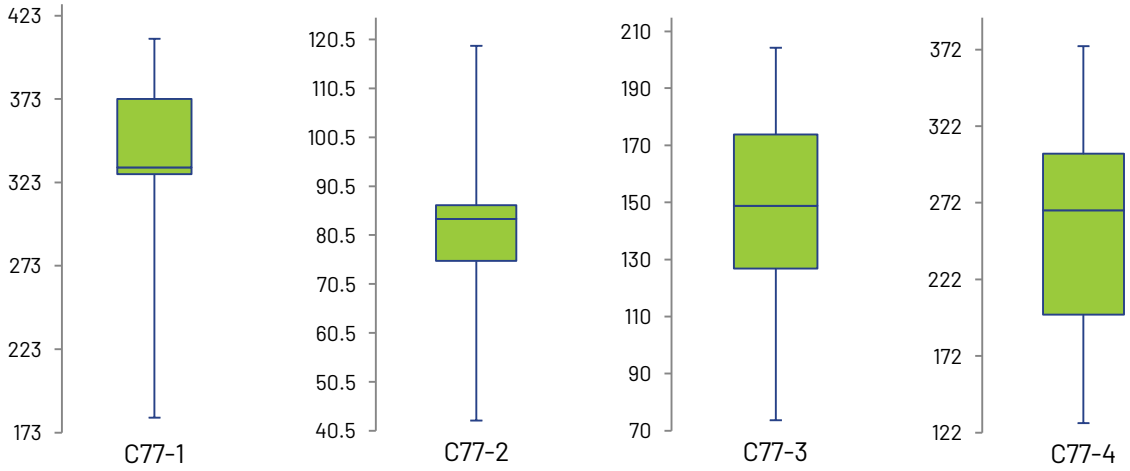
Homogeneity Assessment



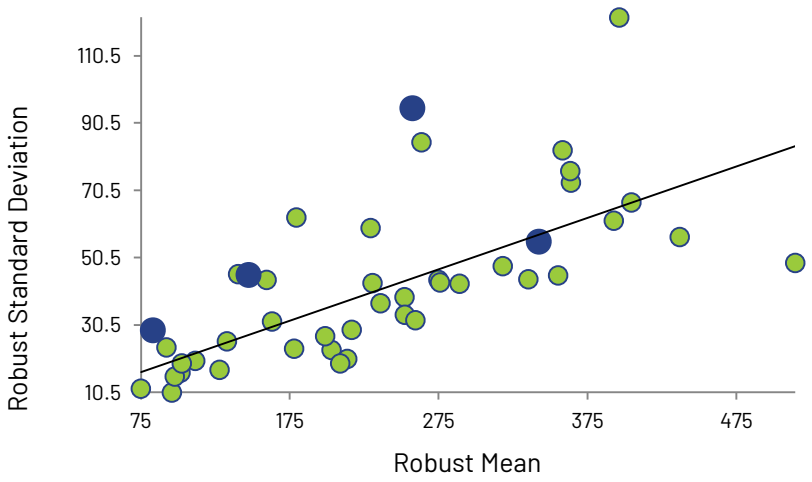
Stability assessments are regression analysis of reported result against date of analysis.

Homogeneity assessments are regression analysis of reported result against bottling order.

Box and Whisker Plots



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



Endosulfan I (a-Endosulfan)

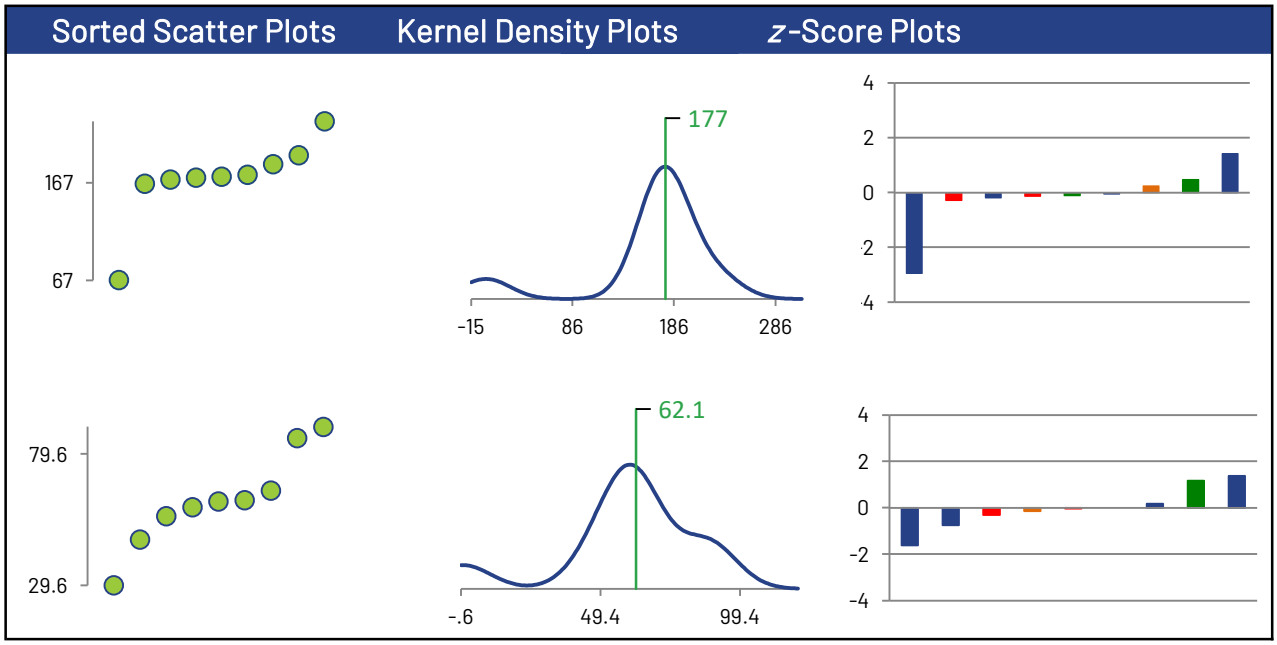
Summary Statistics

Statistic	C77-1	C77-2	C77-3	C77-4
No. of results used for summary statistics	9	9	9	9
Median µg/kg	173	61.5	250	248
Robust Mean µg/kg	177	62.1	251	232
Uncdrtainty of the Assigned Value µg/kg	7.71	8.42	22.1	37.8
Robust Standard Deviation µg/kg	18.5	20.2	53.1	90.7
Regression Standard Deviation µg/kg	37.3	16.4	50.9	47.4
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) µg/kg	37.3	20.2	53.1	90.7
Flagged Outliers	1	1	1	1
|z|>3.0	0	0	1	0
2<|z|<3	1	0	0	0
Failure Rate %*	20.0			

Methods Used

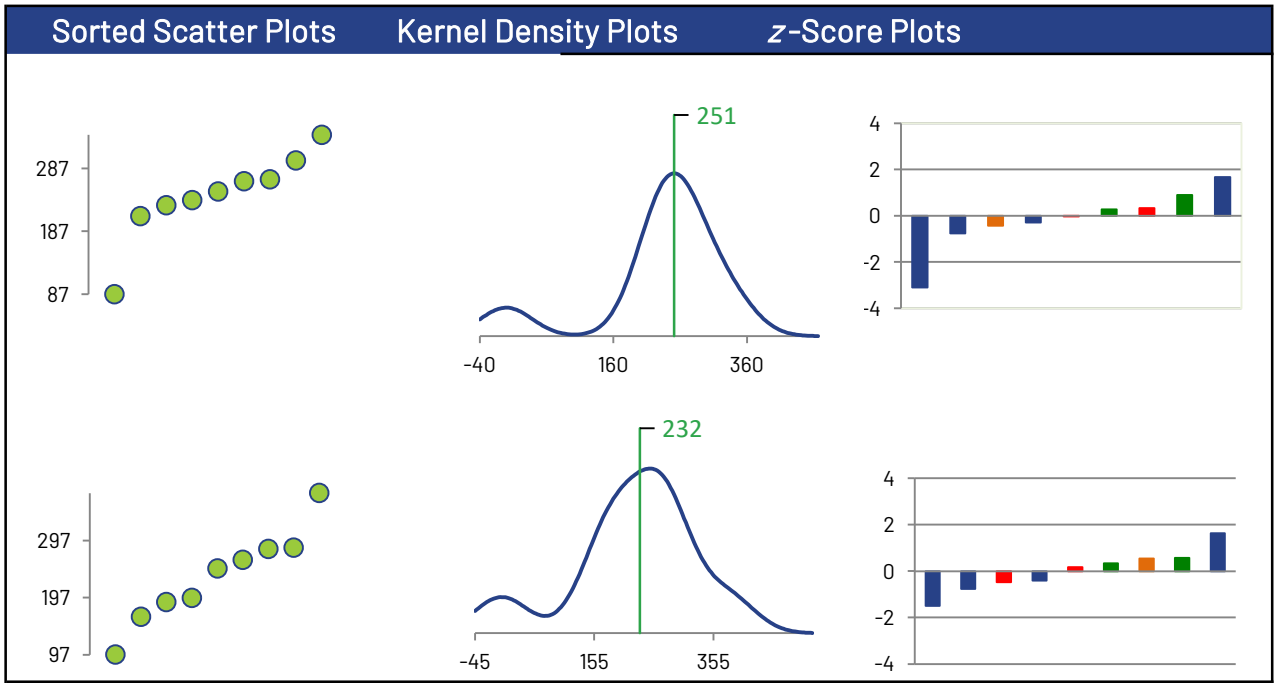
Method	C77-1	C77-2	C77-3	C77-4
GC/ECD - EXTRACTION (Blue)	4	4	4	4
GC/MS/MS (Red)	2	2	2	2
GC/MS - EXTRACTION (Green)	2	2	2	2
GC/ECD - SHAKE EXTRACTION (Orange)	1	1	1	1

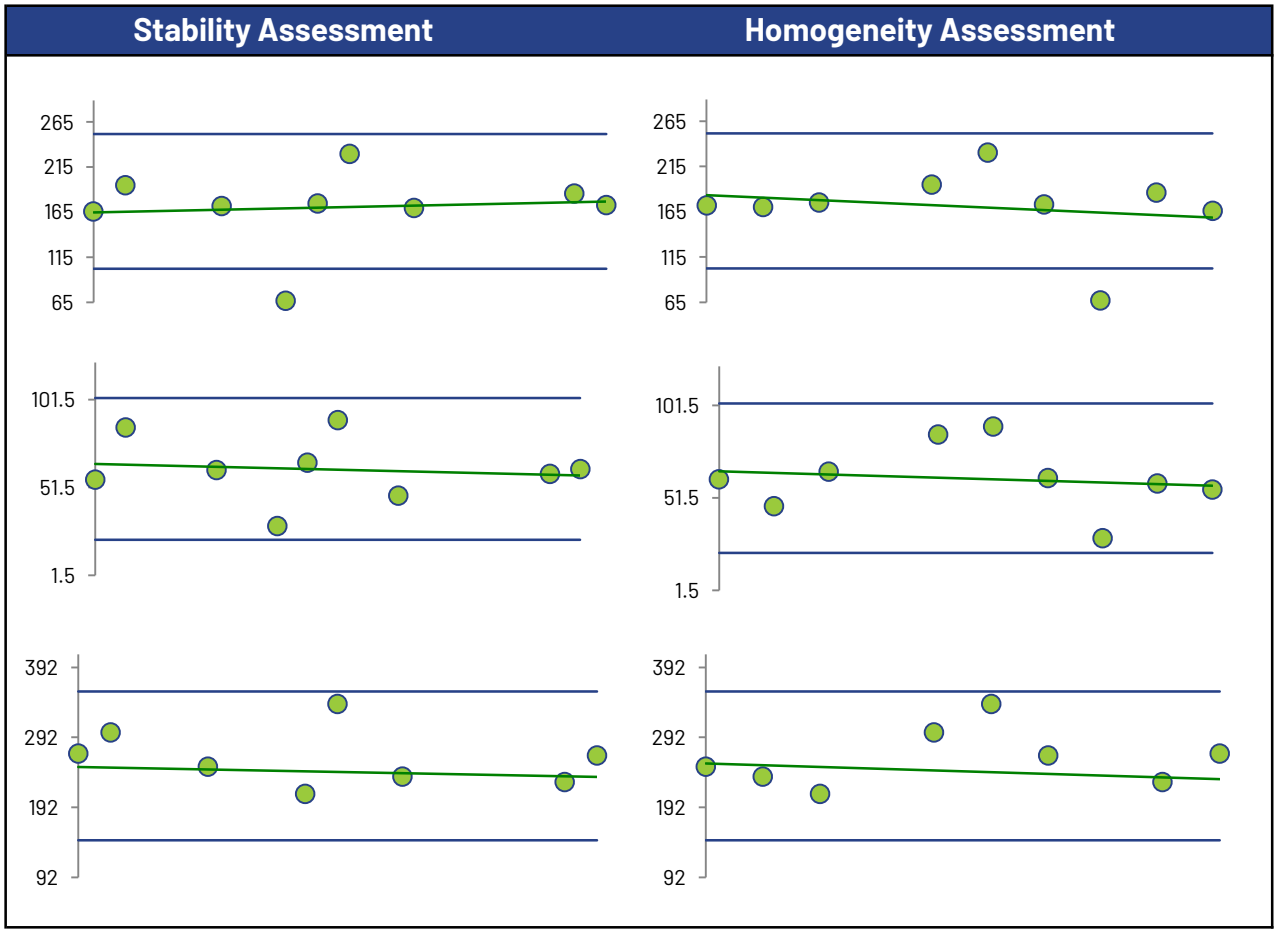
All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



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

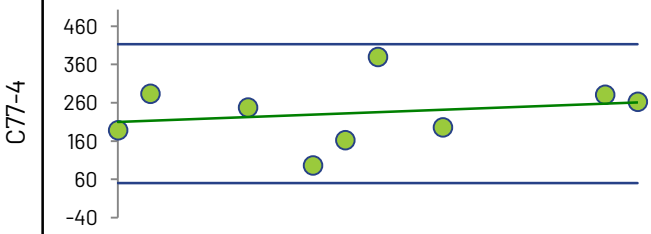
Endosulfan I (a-Endosulfan)



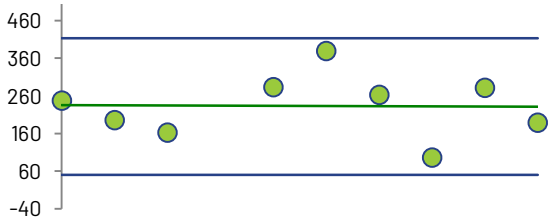


Endosulfan I (a-Endosulfan)

Stability Assessment



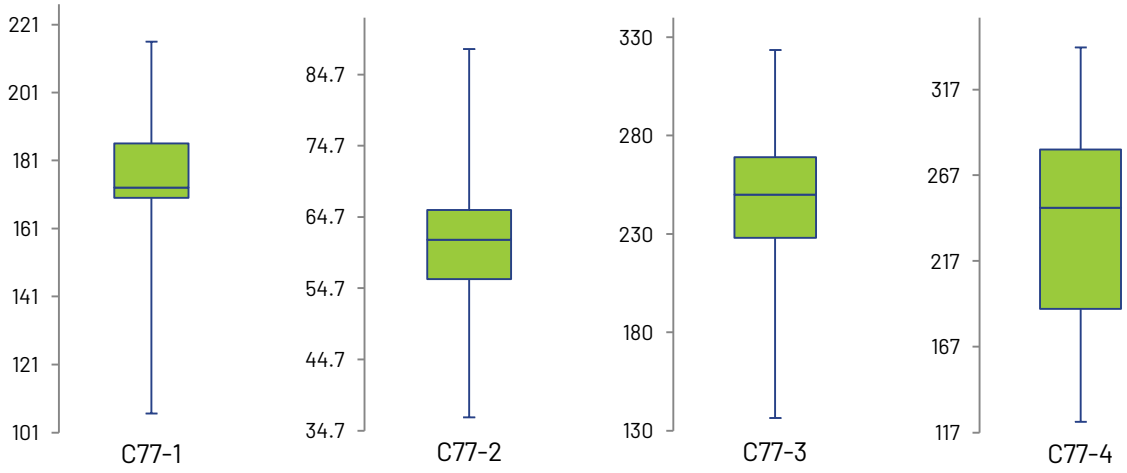
Homogeneity Assessment



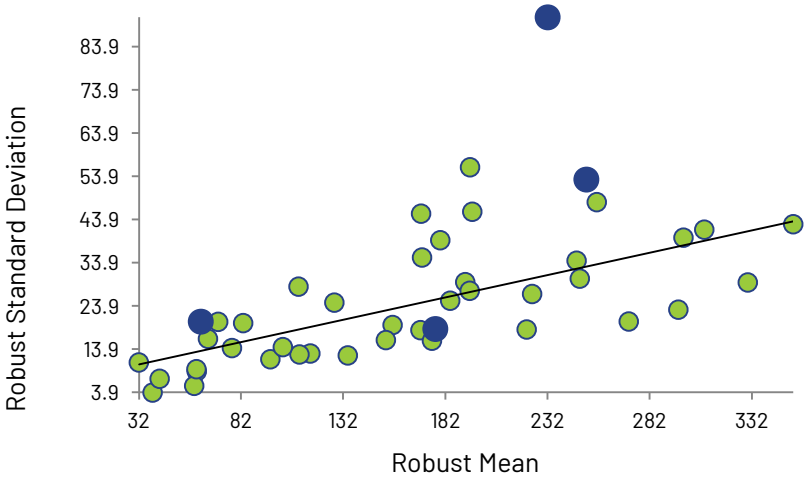
Stability assessments are regression analysis of reported result against date of analysis.

Homogeneity assessments are regression analysis of reported result against bottling order.

Box and Whisker Plots



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



Endosulfan II (b-Endosulfan)

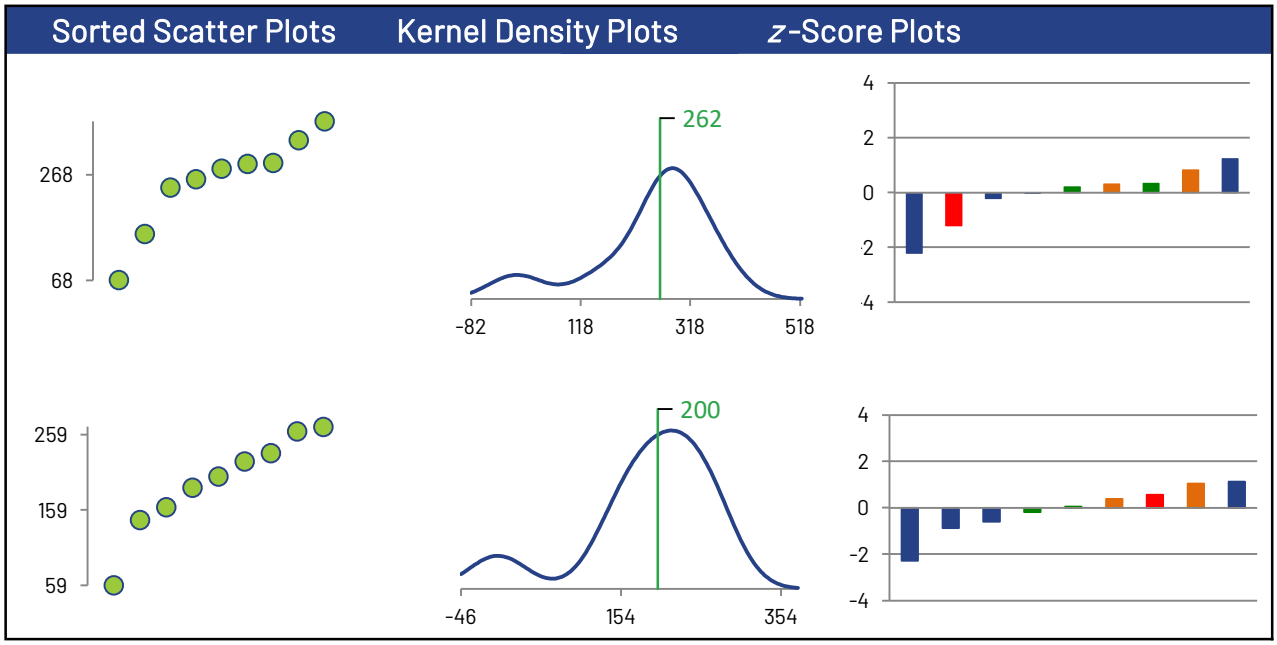
Summary Statistics

Statistic	C77-1	C77-2	C77-3	C77-4
No. of results used for summary statistics	9	9	9	9
Median µg/kg	280	204	107	37.7
Robust Mean µg/kg	262	200	111	39.5
Uncdrtainty of the Assigned Value µg/kg	36.5	25.8	21.7	8.54
Robust Standard Deviation µg/kg	87.5	61.8	52.0	20.5
Regression Standard Deviation µg/kg	56.2	43.8	25.7	11.2
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) µg/kg	87.5	61.8	52.0	20.5
Flagged Outliers	1	1	1	1
|z|>3.0	0	0	0	0
2<|z|<3	1	1	0	1
Failure Rate %*	10.0			

Methods Used

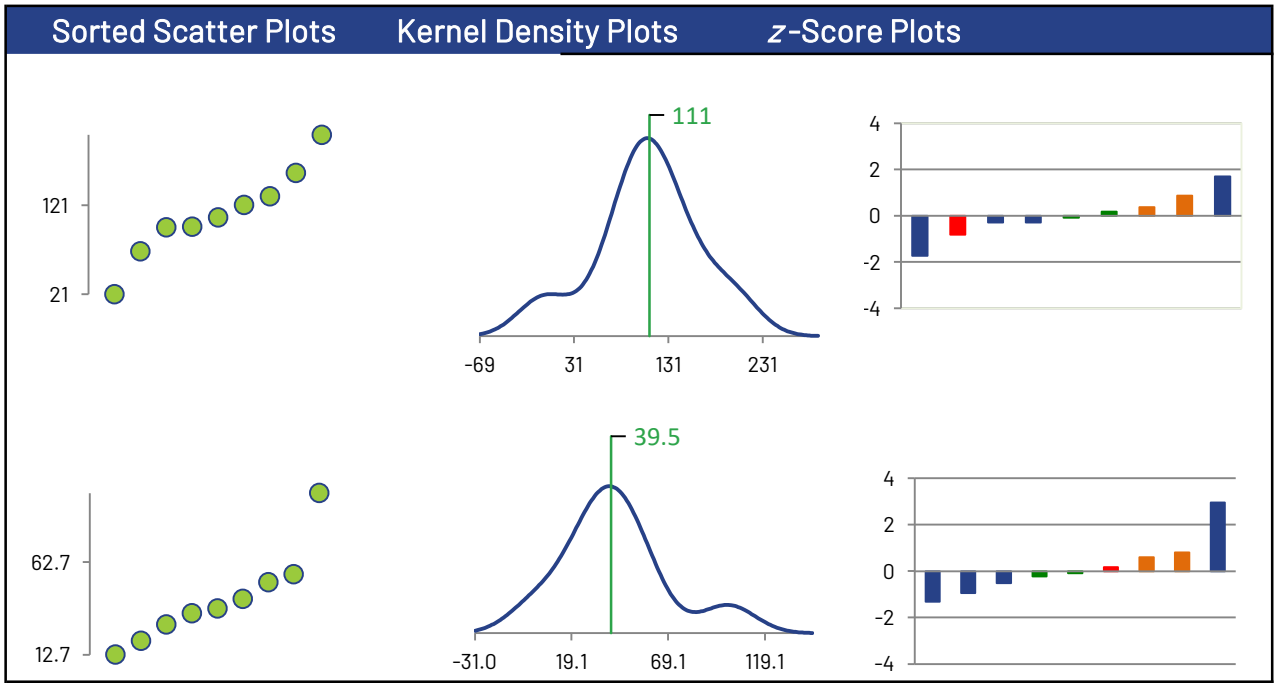
Method	C77-1	C77-2	C77-3	C77-4
GC/ECD - EXTRACTION (Blue)	4	4	4	4
GC/ECD - SHAKE EXTRACTION (Red)	1	1	1	1
GC/MS/MS (Green)	2	2	2	2
GC/MS - EXTRACTION (Orange)	2	2	2	2

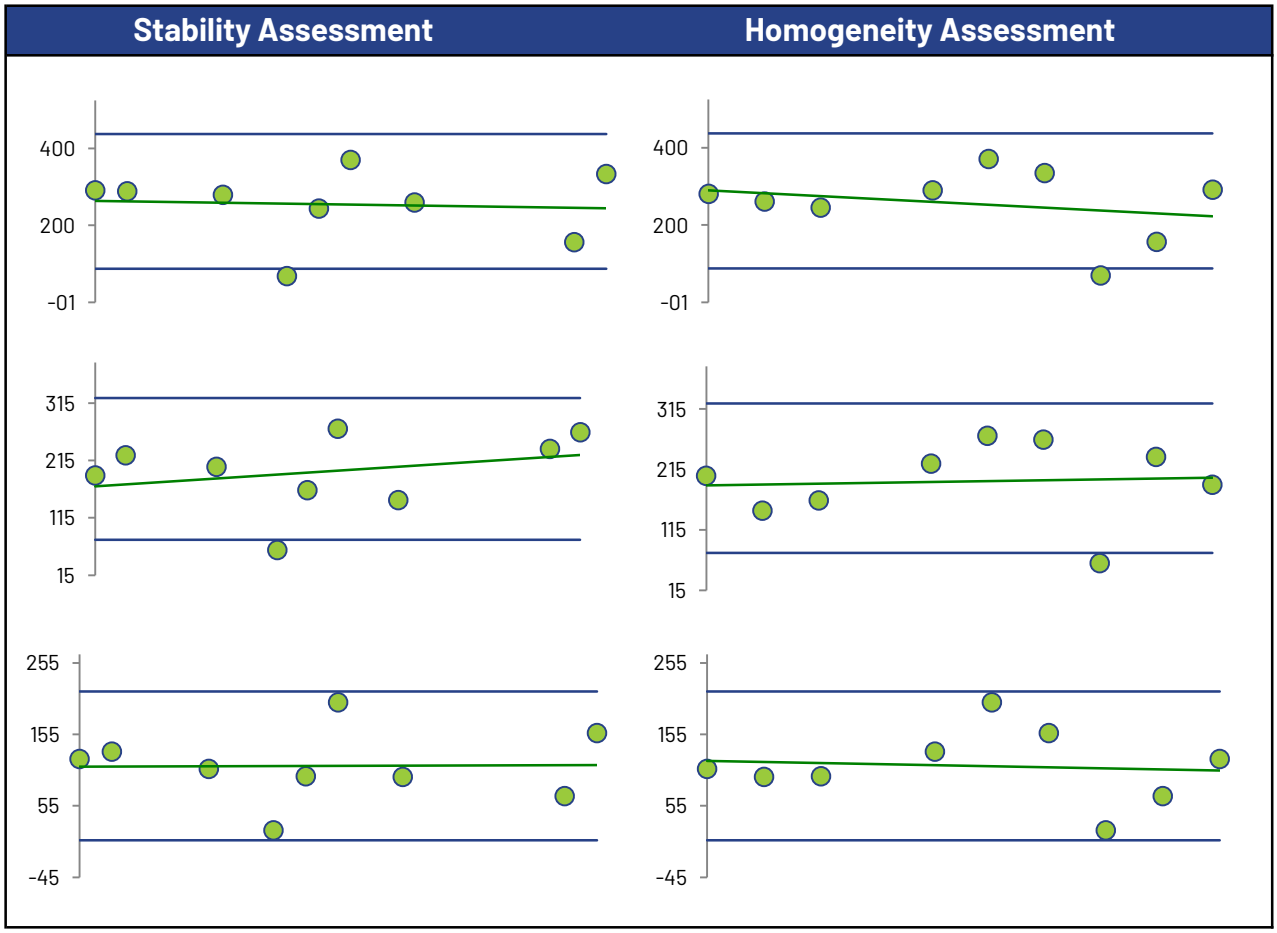
All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



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

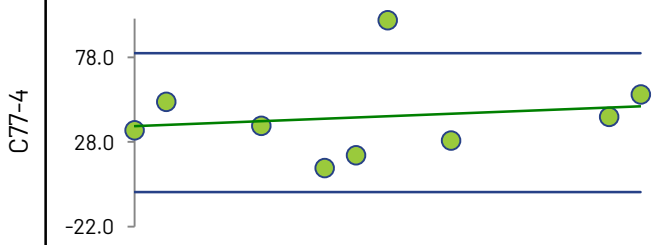
Endosulfan II (b-Endosulfan)



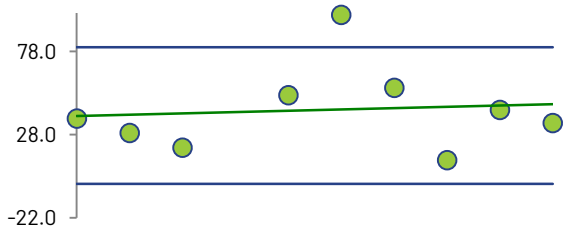


Endosulfan II (b-Endosulfan)

Stability Assessment



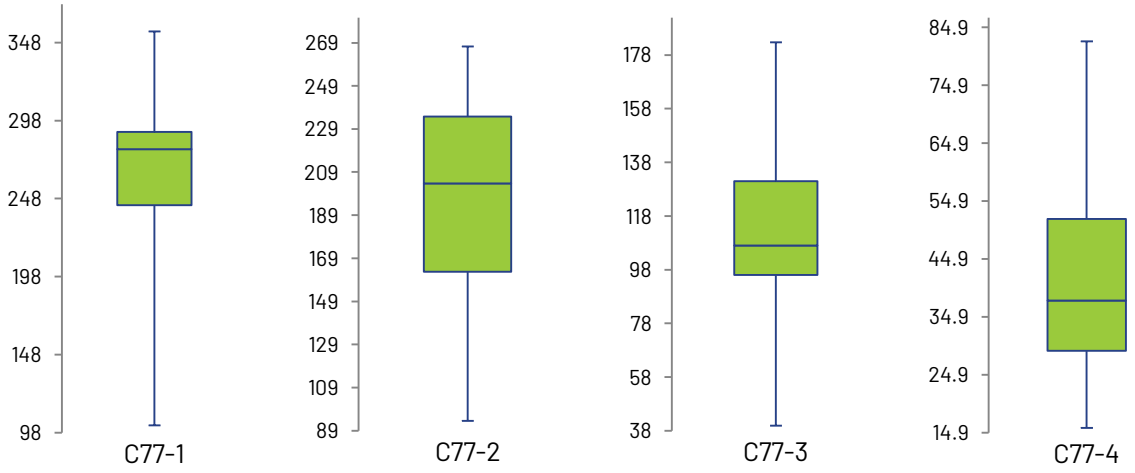
Homogeneity Assessment



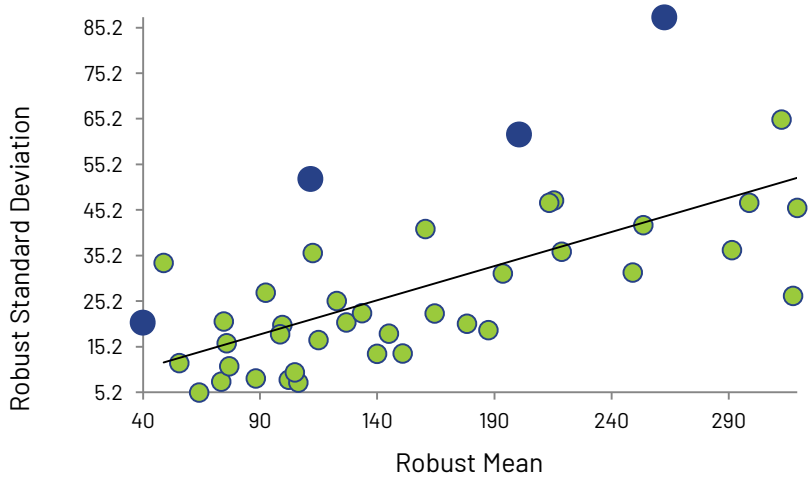
Stability assessments are regression analysis of reported result against date of analysis.

Homogeneity assessments are regression analysis of reported result against bottling order.

Box and Whisker Plots



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



Endrin

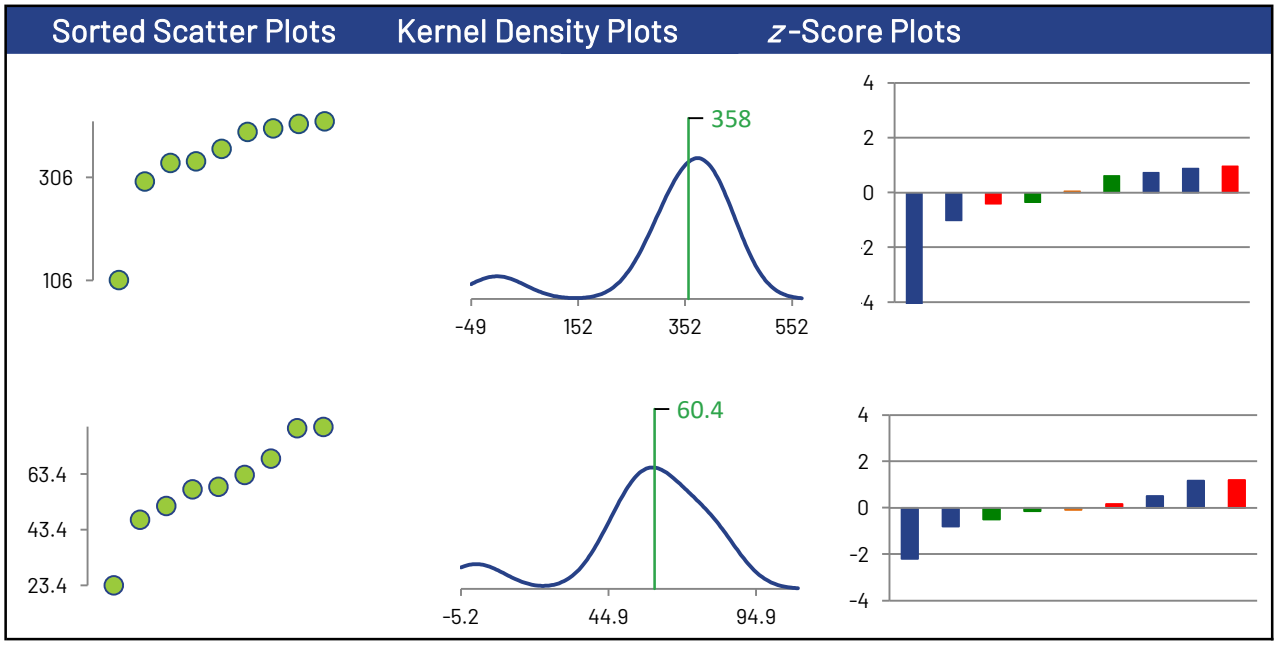
Summary Statistics

Statistic	C77-1	C77-2	C77-3	C77-4
No. of results used for summary statistics	9	9	9	9
Median µg/kg	361	58.9	238	166
Robust Mean µg/kg	358	60.4	242	168
Uncdrtainty of the Assigned Value µg/kg	24.5	7.00	27.4	28.8
Robust Standard Deviation µg/kg	58.9	16.8	65.8	69.0
Regression Standard Deviation µg/kg	58.5	15.8	41.9	31.3
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) µg/kg	58.9	16.8	65.8	69.0
Flagged Outliers	1	1	1	1
|z|>3.0	1	0	0	0
2<|z|<3	0	1	1	0
Failure Rate %*	20.0			

Methods Used

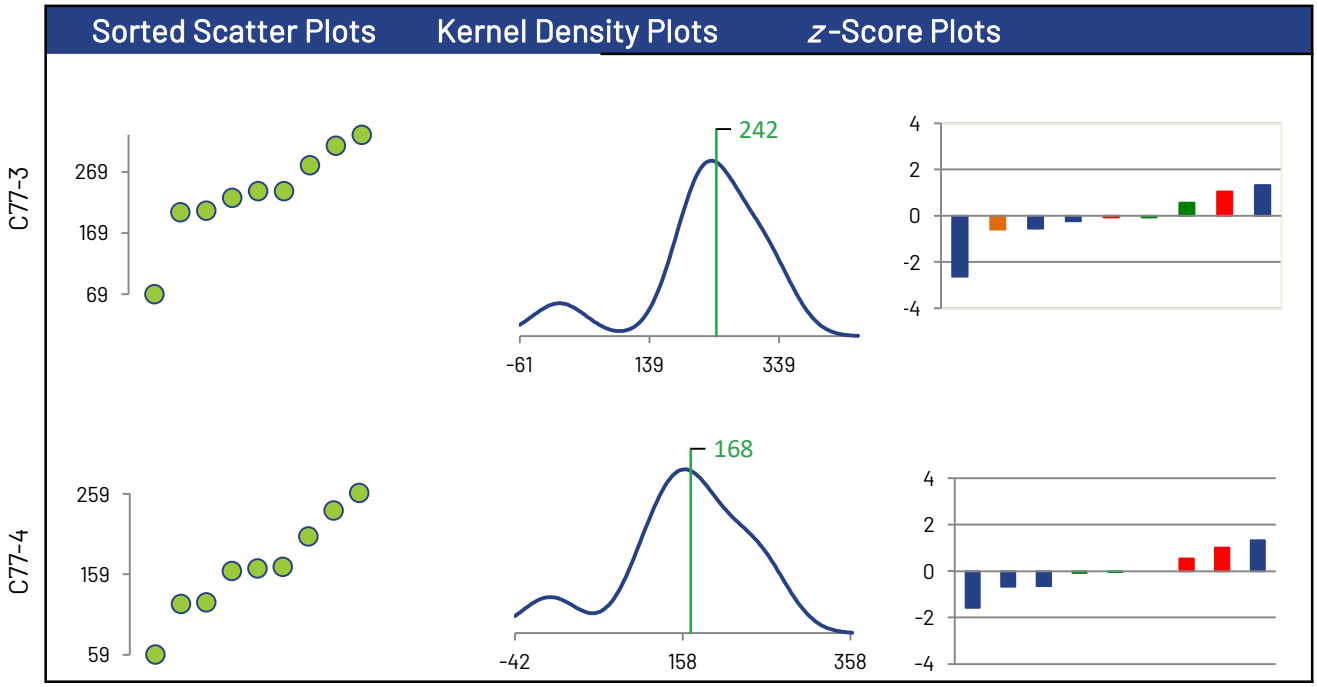
Method	C77-1	C77-2	C77-3	C77-4
GC/ECD - EXTRACTION (Blue)	4	4	4	4
GC/MS - EXTRACTION (Red)	2	2	2	2
GC/MS/MS (Green)	2	2	2	2
GC/ECD - SHAKE EXTRACTION (Orange)	1	1	1	1

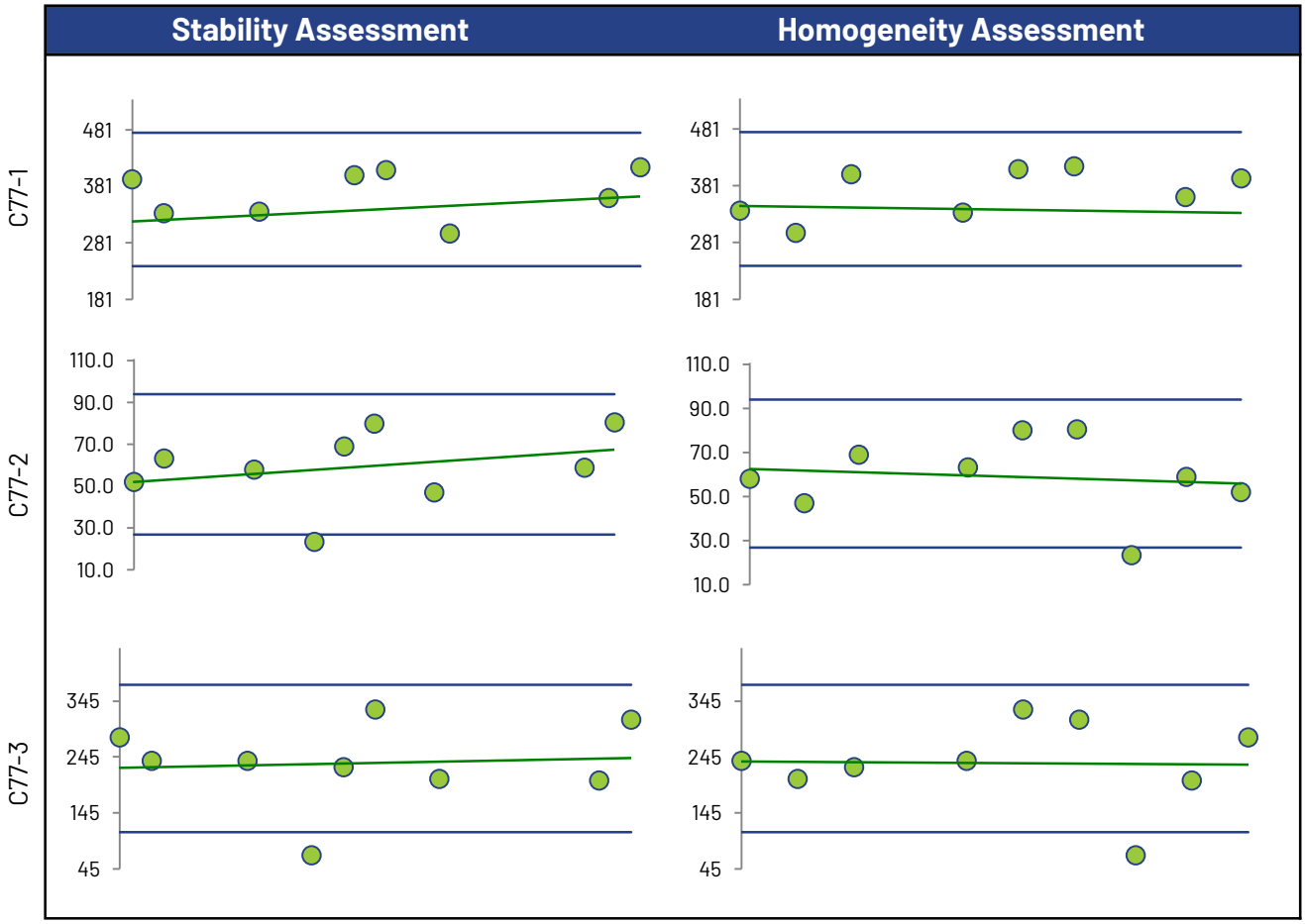
All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



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

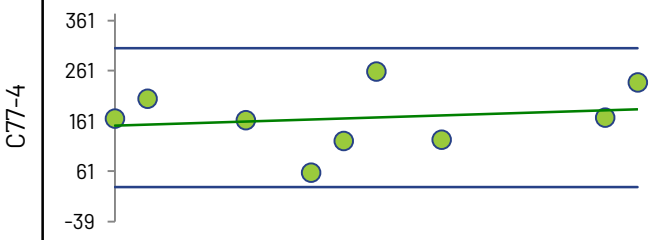
Endrin


Sorted Scatter Plots
Kernel Density Plots
z-Score Plots
C77-3
269
169
69
242
-61
139
339
4
2
0
-2
-4
C77-4
259
159
59
168
-42
158
358
4
2
0
-2
-4

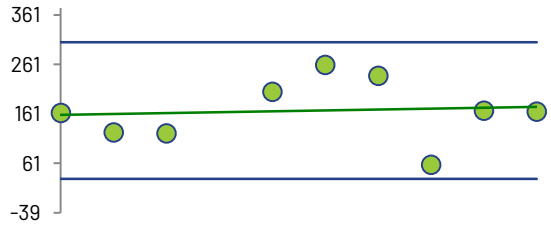

Stability Assessment
Homogeneity Assessment
C77-1
481
381
281
181
C77-2
110.0
90.0
70.0
50.0
30.0
10.0
C77-3
345
245
145
45

Endrin

Stability Assessment



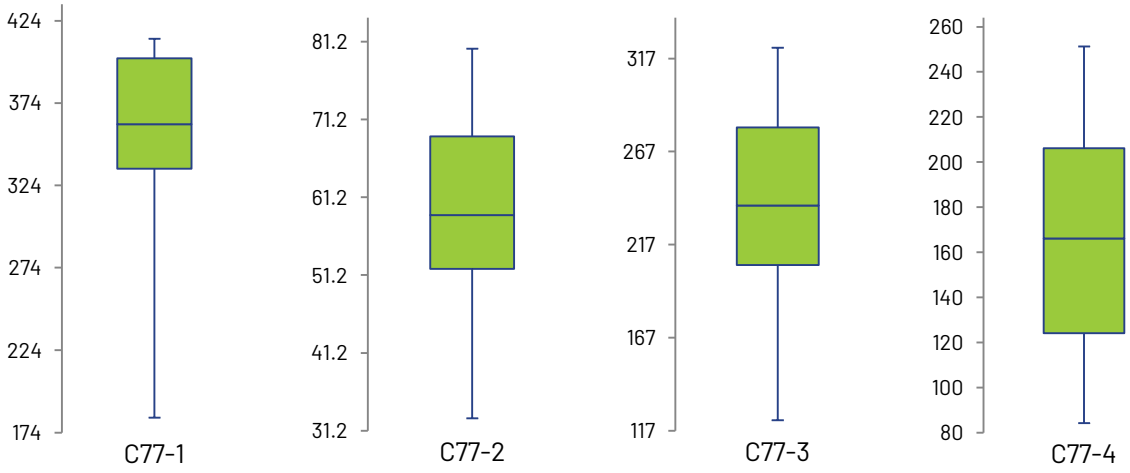
Homogeneity Assessment



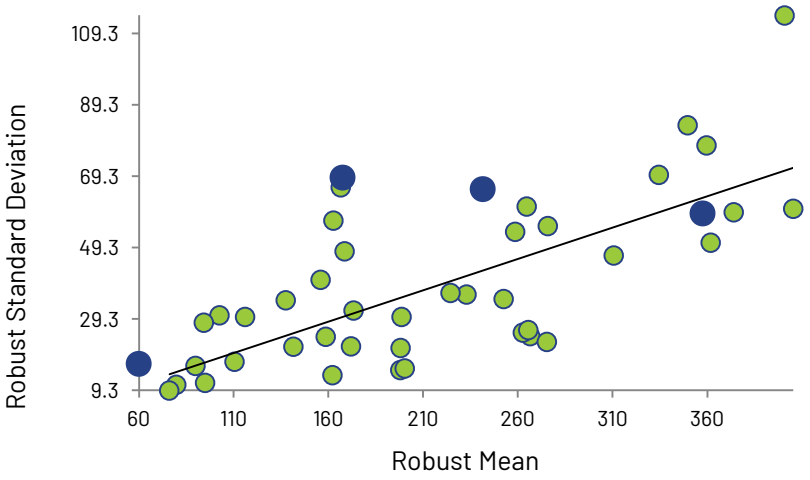
Stability assessments are regression analysis of reported result against date of analysis.

Homogeneity assessments are regression analysis of reported result against bottling order.

Box and Whisker Plots



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



gamma-Chlordane

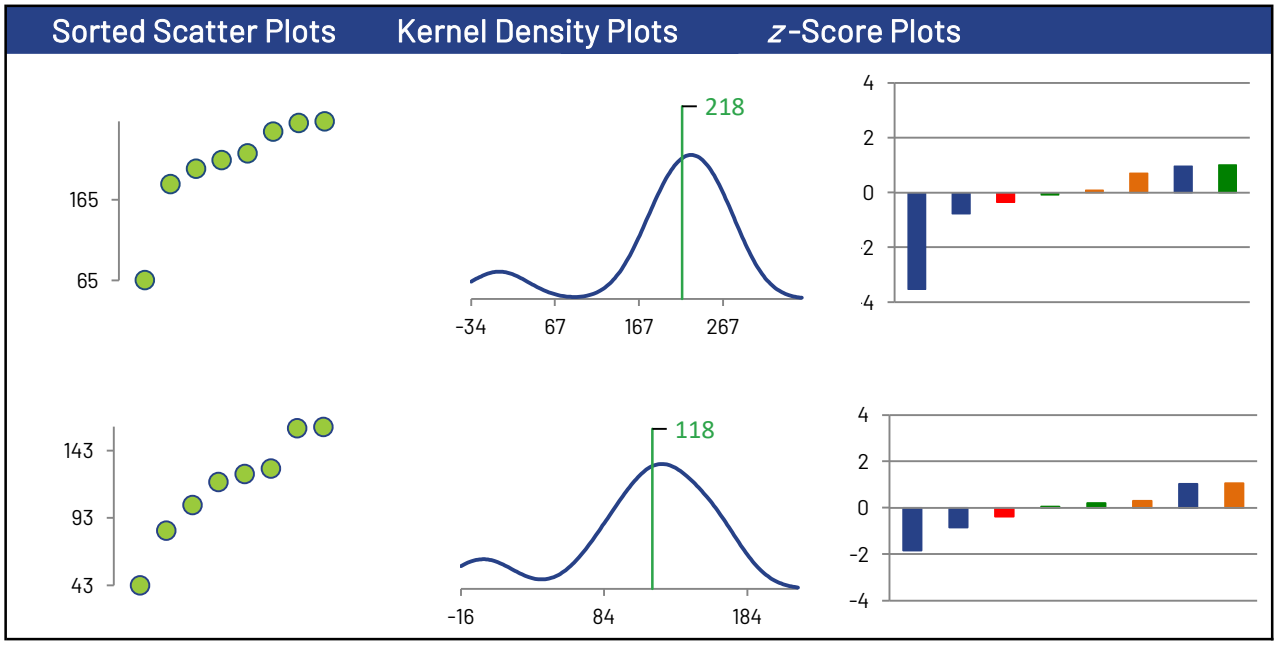
Summary Statistics

Statistic	C77-1	C77-2	C77-3	C77-4
No. of results used for summary statistics	8	8	8	8
Median µg/kg	218	123	86.1	302
Robust Mean µg/kg	218	118	85.8	290
Uncdrtainty of the Assigned Value µg/kg	19.2	17.9	11.1	42.1
Robust Standard Deviation µg/kg	43.4	40.6	25.1	95.2
Regression Standard Deviation µg/kg	38.4	21.6	16.3	50.4
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) µg/kg	43.4	40.6	25.1	95.2
Flagged Outliers	1	1	1	1
|z|>3.0	1	0	0	0
2<|z|<3	0	0	1	1
Failure Rate %*	22.2			

Methods Used

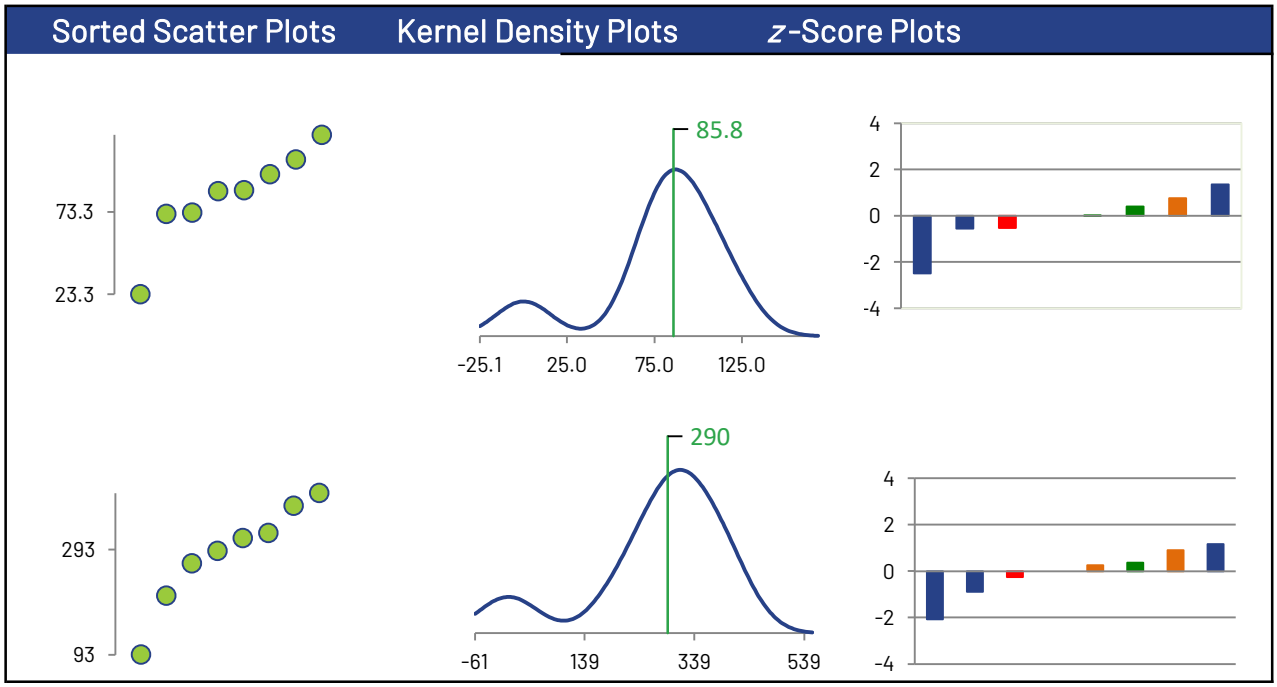
Method	C77-1	C77-2	C77-3	C77-4
GC/ECD - EXTRACTION (Blue)	3	3	3	3
GC/ECD - SHAKE EXTRACTION (Red)	1	1	1	1
GC/MS/MS (Green)	2	2	2	2
GC/MS - EXTRACTION (Orange)	2	2	2	2

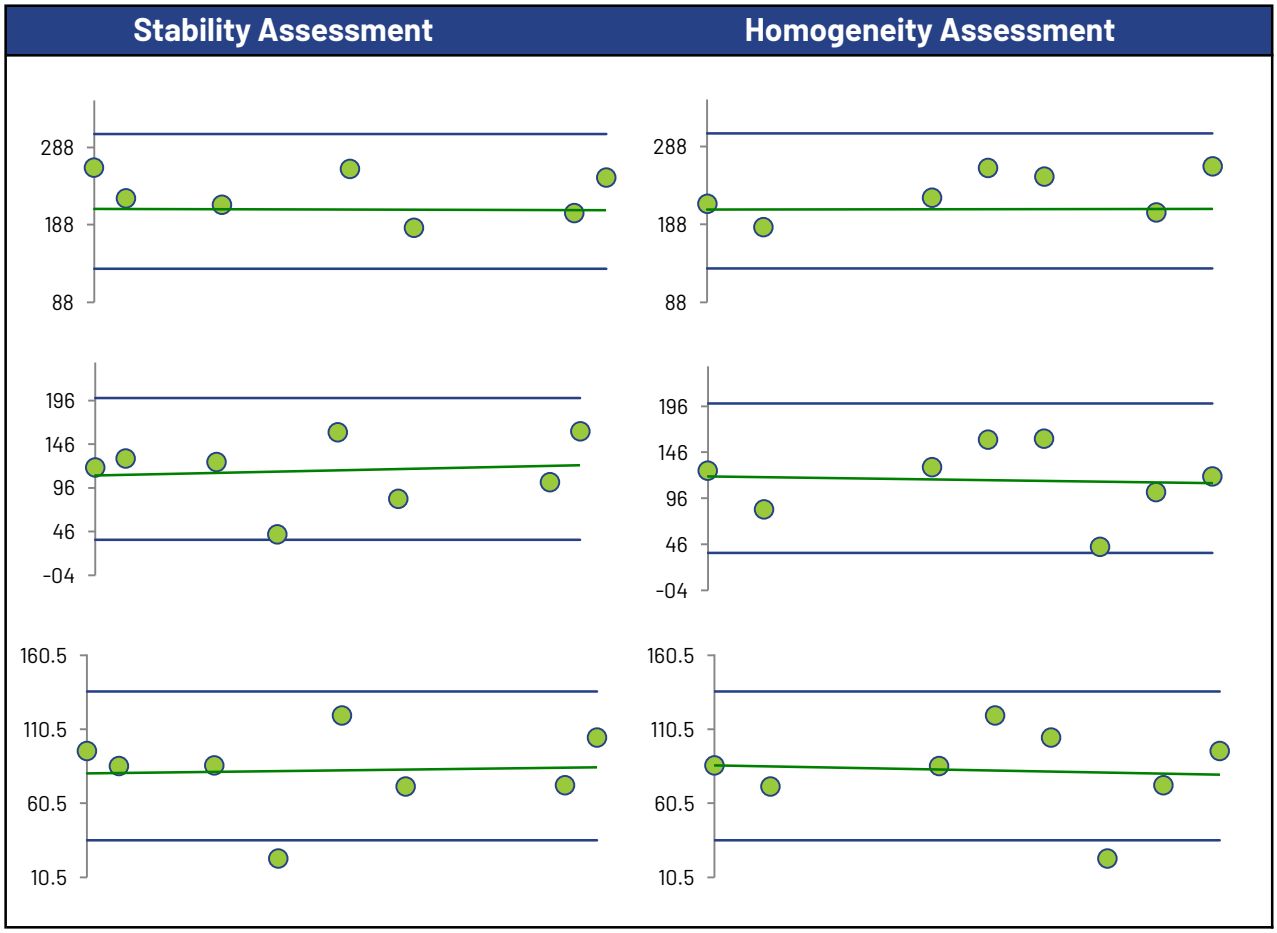
All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



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

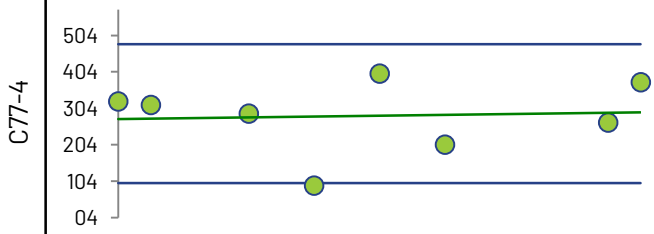
gamma-Chlordane



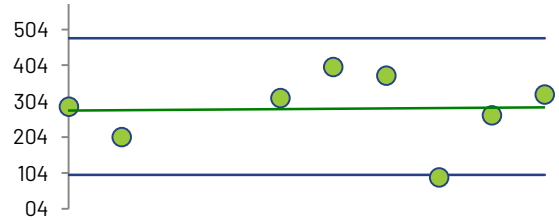


gamma-Chlordane

Stability Assessment



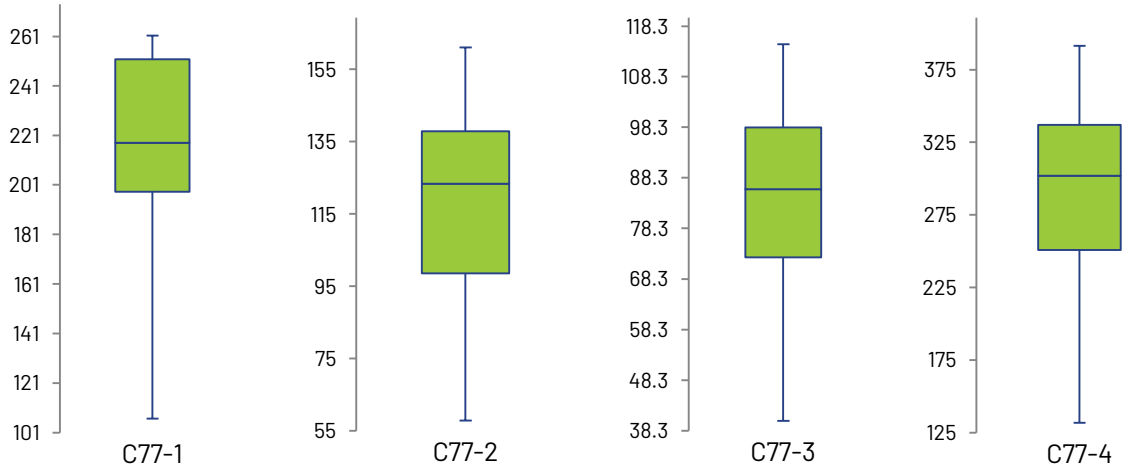
Homogeneity Assessment



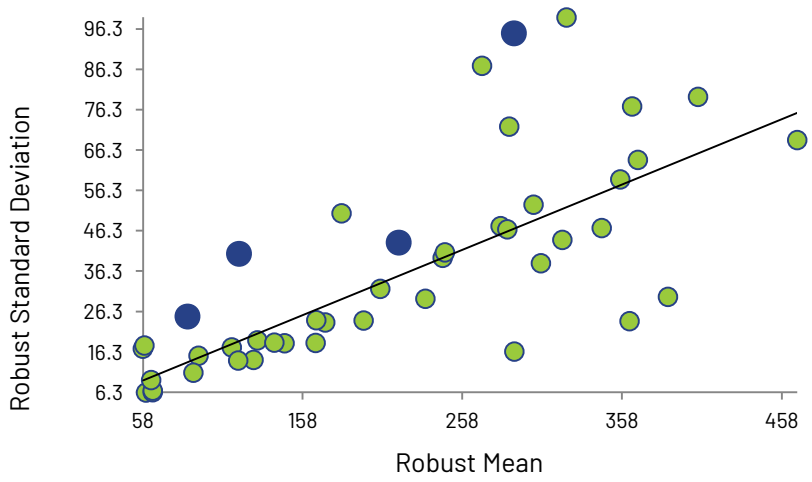
Stability assessments are regression analysis of reported result against date of analysis.

Homogeneity assessments are regression analysis of reported result against bottling order.

Box and Whisker Plots



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



Heptachlor

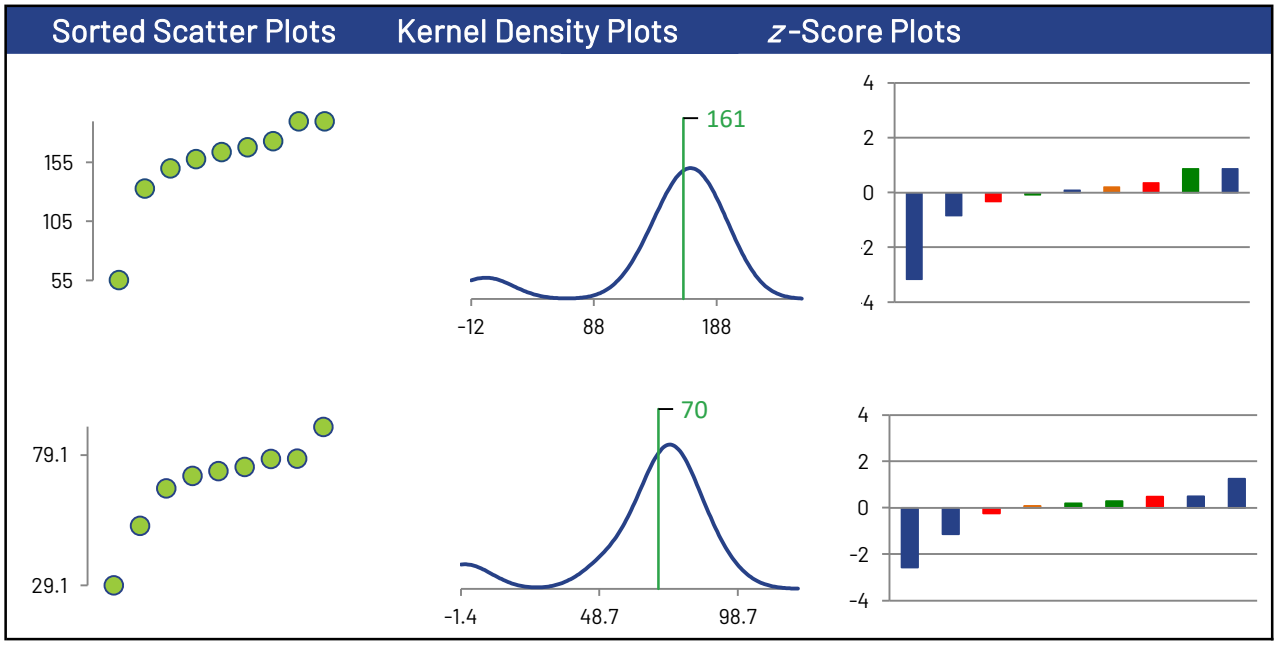
Summary Statistics

Statistic	C77-1	C77-2	C77-3	C77-4
No. of results used for summary statistics	9	9	9	9
Median µg/kg	164	73.0	335	216
Robust Mean µg/kg	161	70.0	331	199
Uncdrtainty of the Assigned Value µg/kg	11.1	6.21	31.1	29.0
Robust Standard Deviation µg/kg	26.6	14.9	74.6	69.5
Regression Standard Deviation µg/kg	33.3	15.9	65.9	40.5
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) µg/kg	33.3	15.9	74.6	69.5
Flagged Outliers	1	1	1	1
|z|>3.0	1	0	1	0
2<|z|<3	0	1	0	0
Failure Rate %*	20.0			

Methods Used

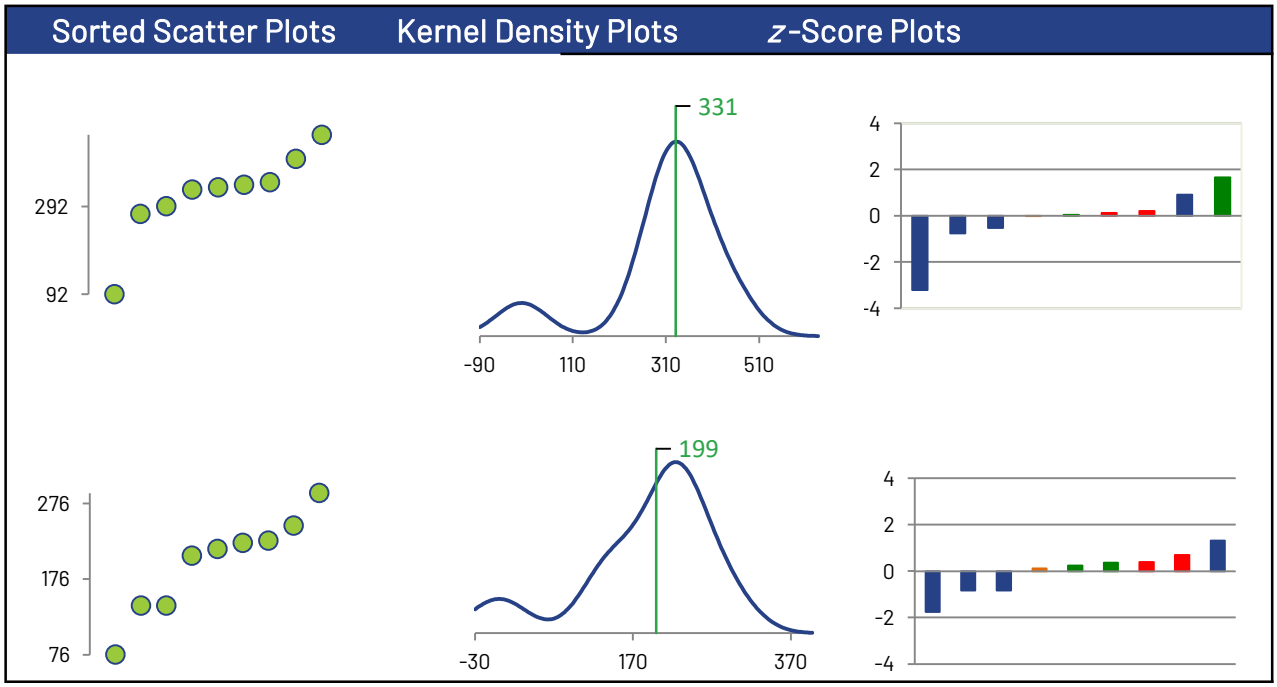
Method	C77-1	C77-2	C77-3	C77-4
GC/ECD - EXTRACTION (Blue)	4	4	4	4
GC/MS - EXTRACTION (Red)	2	2	2	2
GC/MS/MS (Green)	2	2	2	2
GC/ECD - SHAKE EXTRACTION (Orange)	1	1	1	1

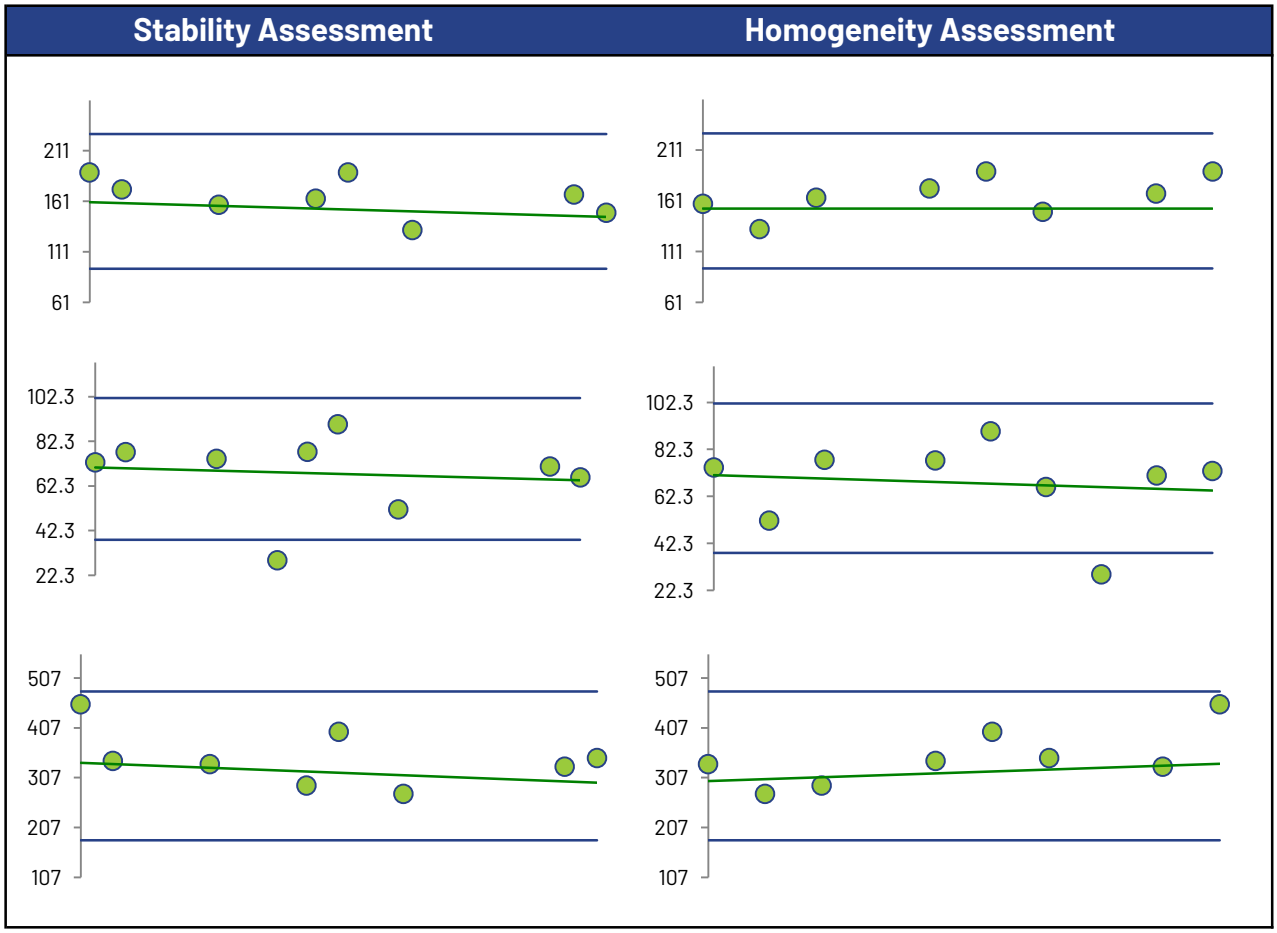
All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



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

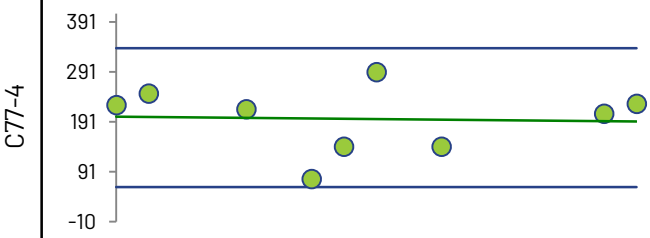
Heptachlor


Sorted Scatter Plots
Kernel Density Plots
z-Score Plots
C77-3
292
92
331
-90
110
310
510
4
2
0
-2
-4
C77-4
276
176
76
199
-30
170
370
4
2
0
-2
-4

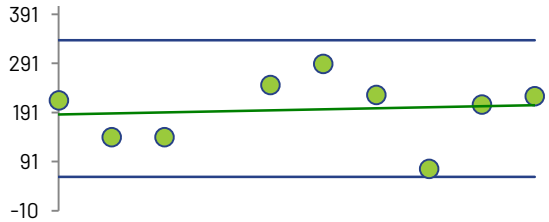

Stability Assessment
Homogeneity Assessment
C77-1
211
161
111
61
C77-2
102.3
82.3
62.3
42.3
22.3
C77-3
507
407
307
207
107

Heptachlor

Stability Assessment



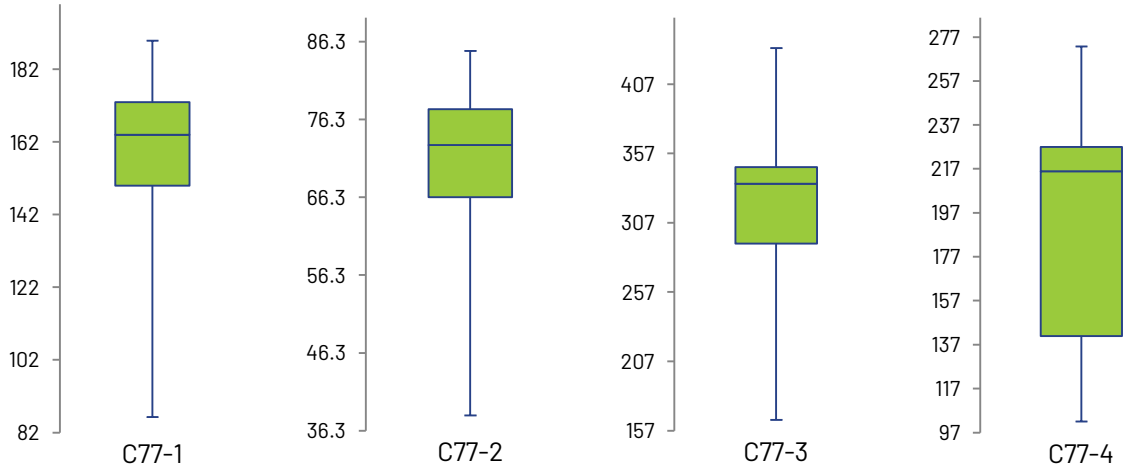
Homogeneity Assessment



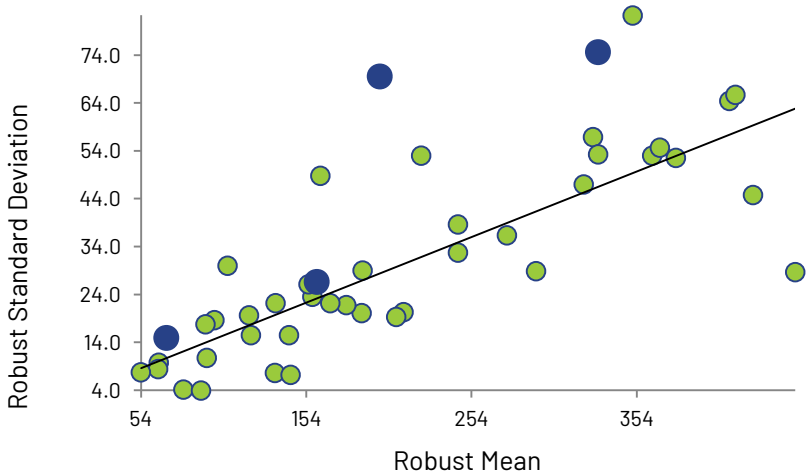
Stability assessments are regression analysis of reported result against date of analysis.

Homogeneity assessments are regression analysis of reported result against bottling order.

Box and Whisker Plots



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



Heptachlor epoxide

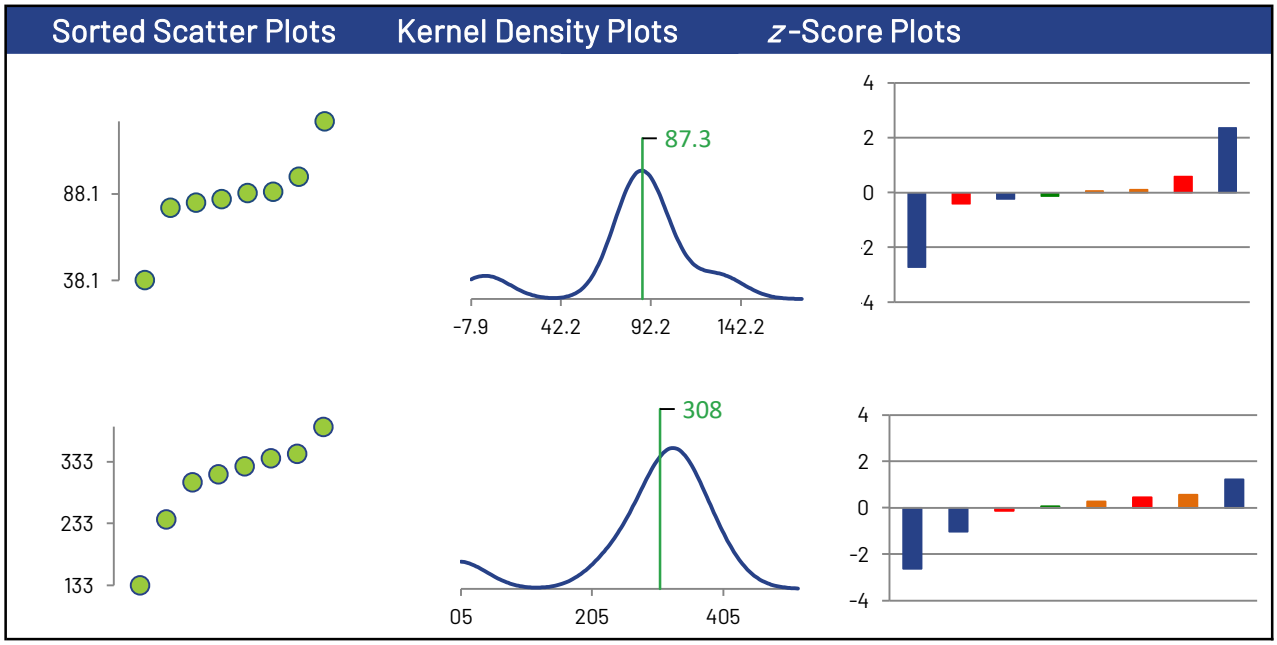
Summary Statistics

Statistic	C77-1	C77-2	C77-3	C77-4
No. of results used for summary statistics	8	8	8	8
Median µg/kg	86.7	320	231	133
Robust Mean µg/kg	87.3	308	235	134
Uncdrtainty of the Assigned Value µg/kg	5.88	29.5	24.1	20.5
Robust Standard Deviation µg/kg	13.3	66.7	54.5	46.4
Regression Standard Deviation µg/kg	18.0	57.4	44.5	26.4
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) µg/kg	18.0	66.7	54.5	46.4
Flagged Outliers	1	1	1	1
|z|>3.0	0	0	0	0
2<|z|<3	2	1	1	1
Failure Rate %*	22.2			

Methods Used

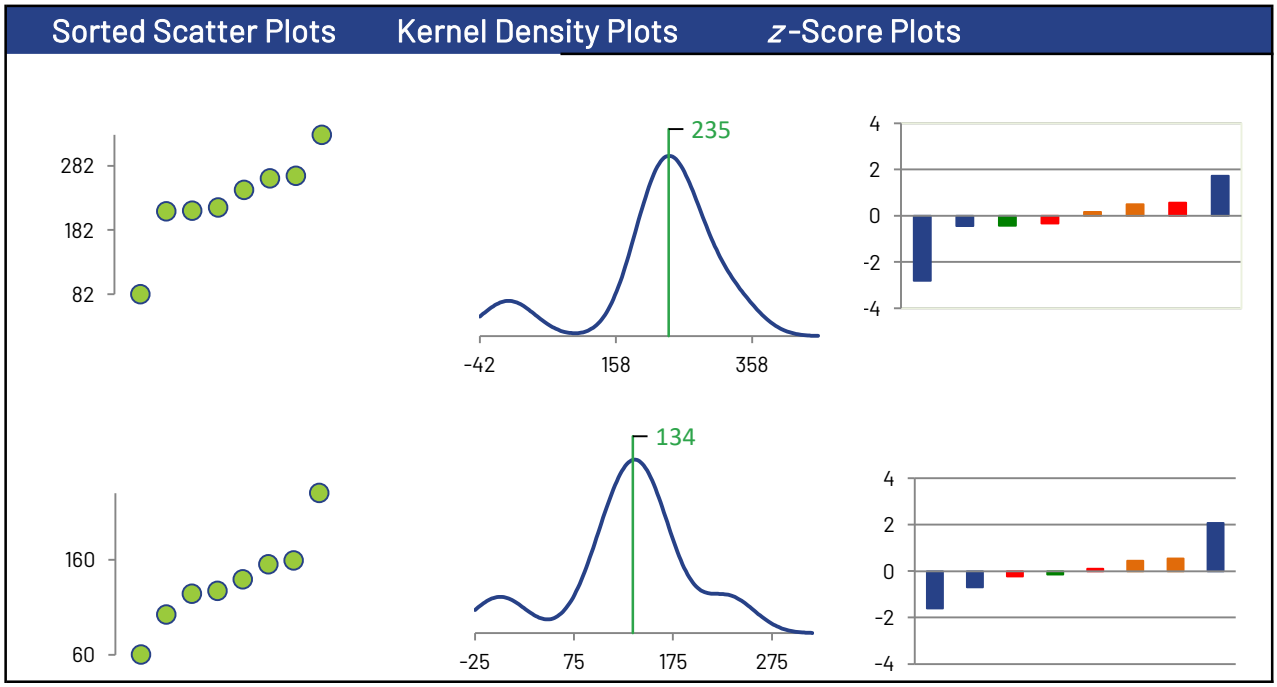
Method	C77-1	C77-2	C77-3	C77-4
GC/ECD - EXTRACTION (Blue)	3	3	3	3
GC/MS/MS (Red)	2	2	2	2
GC/ECD - SHAKE EXTRACTION (Green)	1	1	1	1
GC/MS - EXTRACTION (Orange)	2	2	2	2

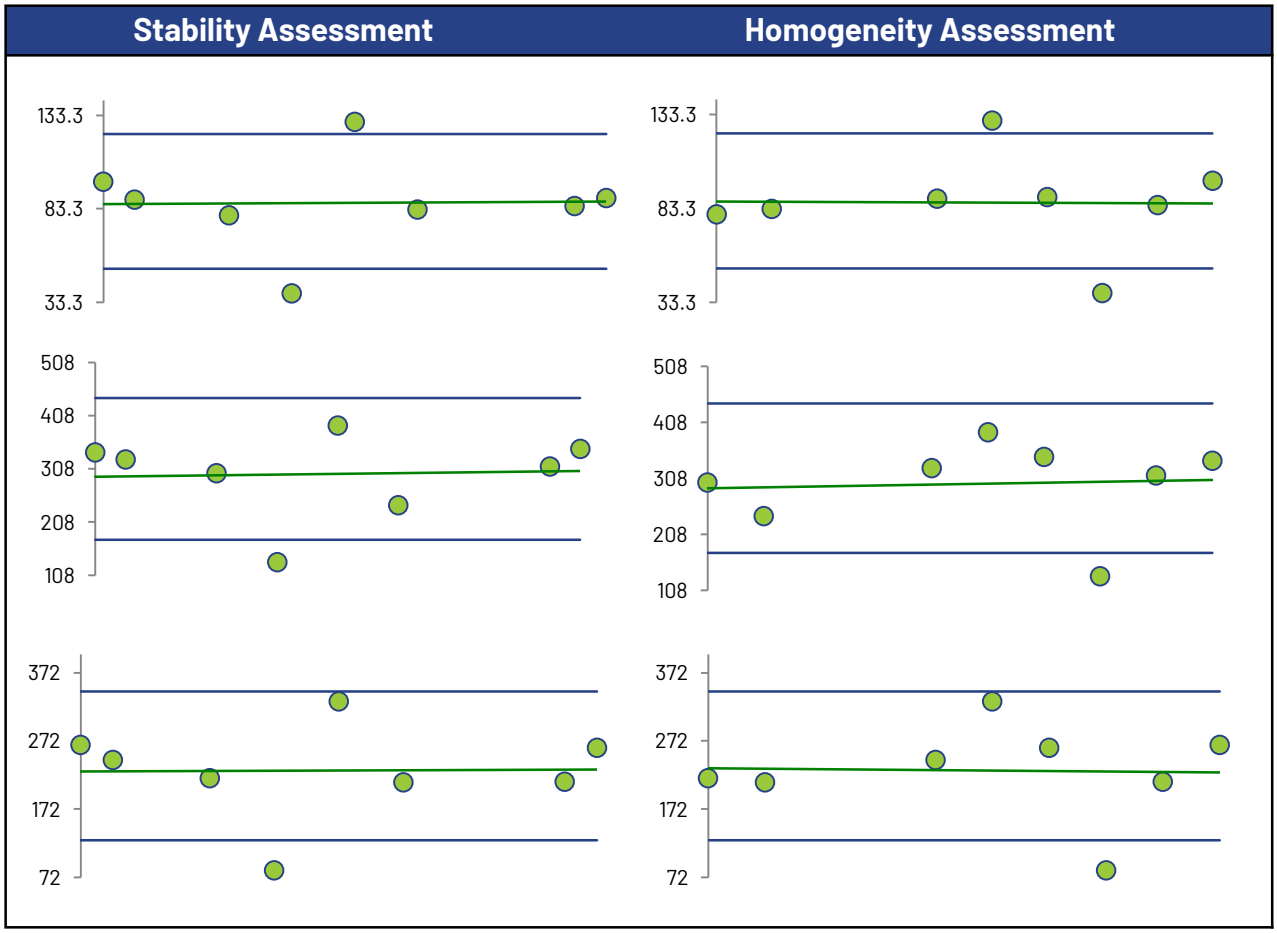
All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



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

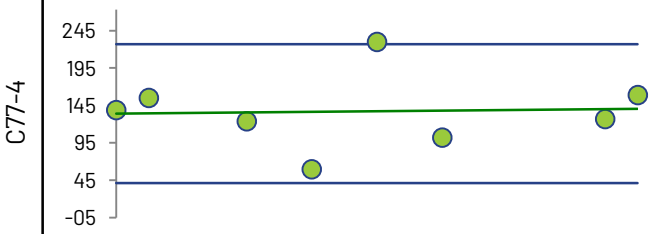
Heptachlor epoxide



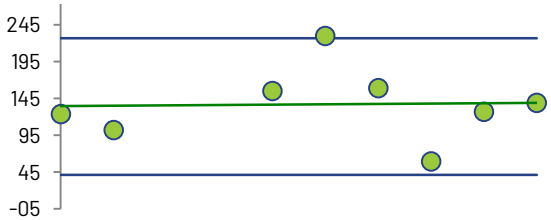


Heptachlor epoxide

Stability Assessment



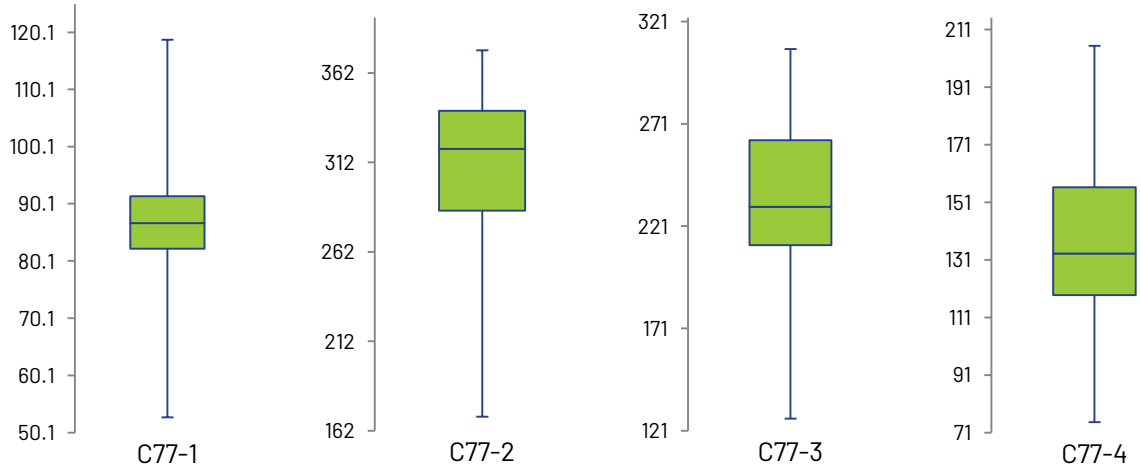
Homogeneity Assessment



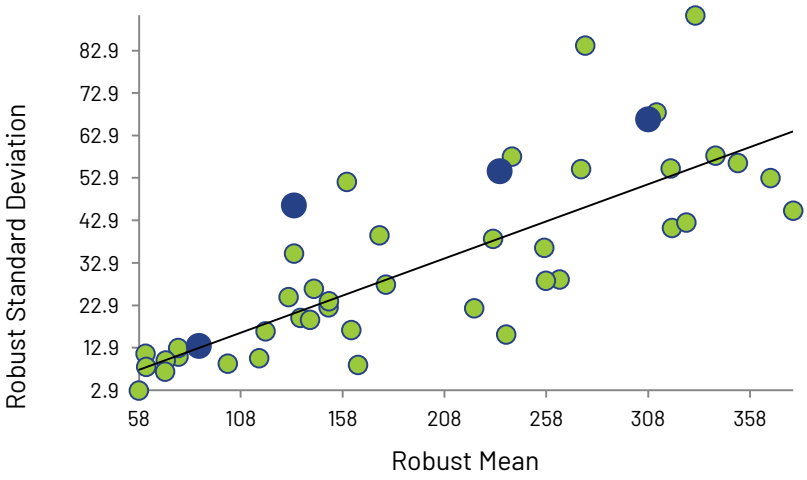
Stability assessments are regression analysis of reported result against date of analysis.

Homogeneity assessments are regression analysis of reported result against bottling order.

Box and Whisker Plots



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



Lindane (gamma-BHC)

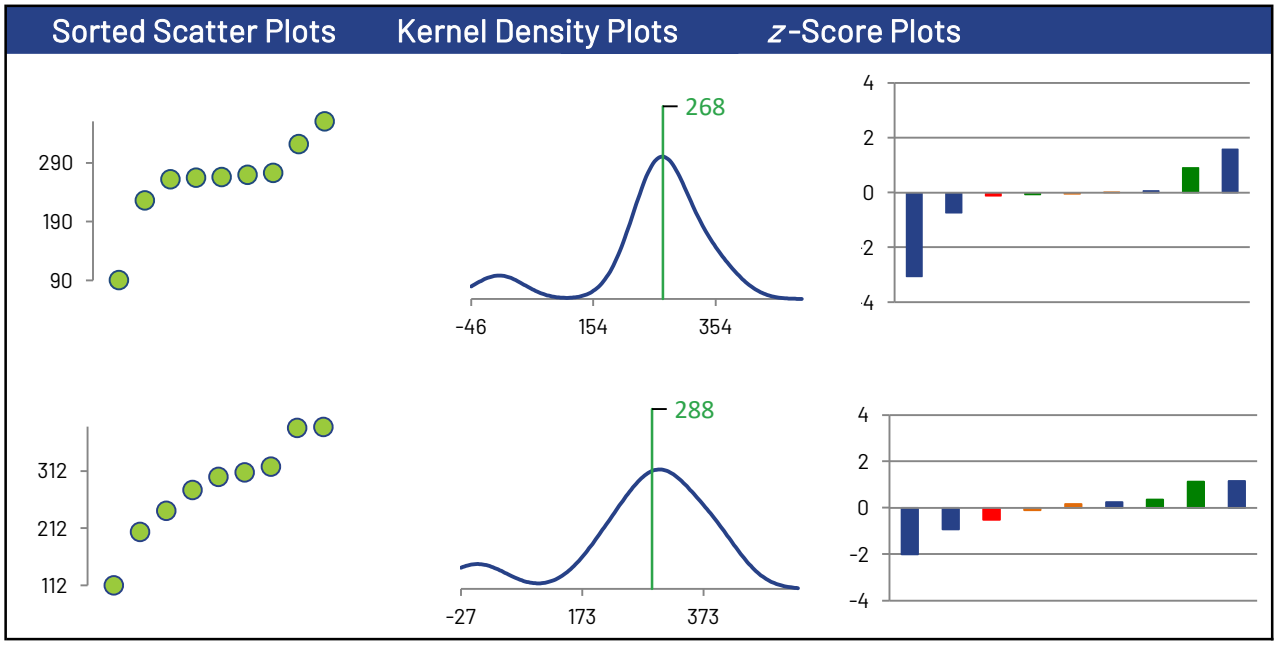
Summary Statistics

Statistic	C77-1	C77-2	C77-3	C77-4
No. of results used for summary statistics	9	9	9	9
Median µg/kg	265	302	99.1	137
Robust Mean µg/kg	268	288	98.2	137
Uncdrtainty of the Assigned Value µg/kg	21.4	36.8	12.8	24.6
Robust Standard Deviation µg/kg	51.3	88.2	30.6	59.0
Regression Standard Deviation µg/kg	58.4	62.3	25.2	32.8
Stability Flag				
Homogeneity Flag				
Standard Deviation Used (SDPA) µg/kg	58.4	88.2	30.6	59.0
Flagged Outliers	1	1	1	1
|z|>3.0	1	0	0	0
2<|z|<3	0	0	2	1
Failure Rate %*	20.0			

Methods Used

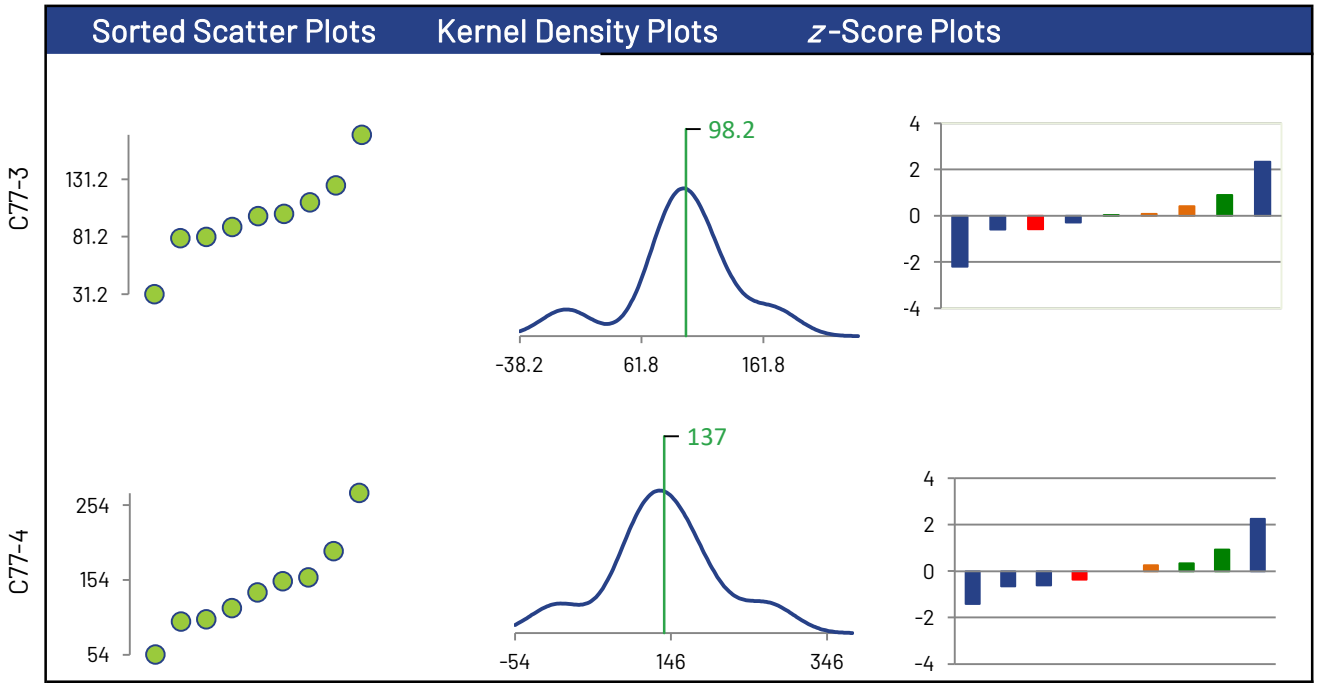
Method	C77-1	C77-2	C77-3	C77-4
GC/ECD - EXTRACTION (Blue)	4	4	4	4
GC/ECD - SHAKE EXTRACTION (Red)	1	1	1	1
GC/MS - EXTRACTION (Green)	2	2	2	2
GC/MS/MS (Orange)	2	2	2	2

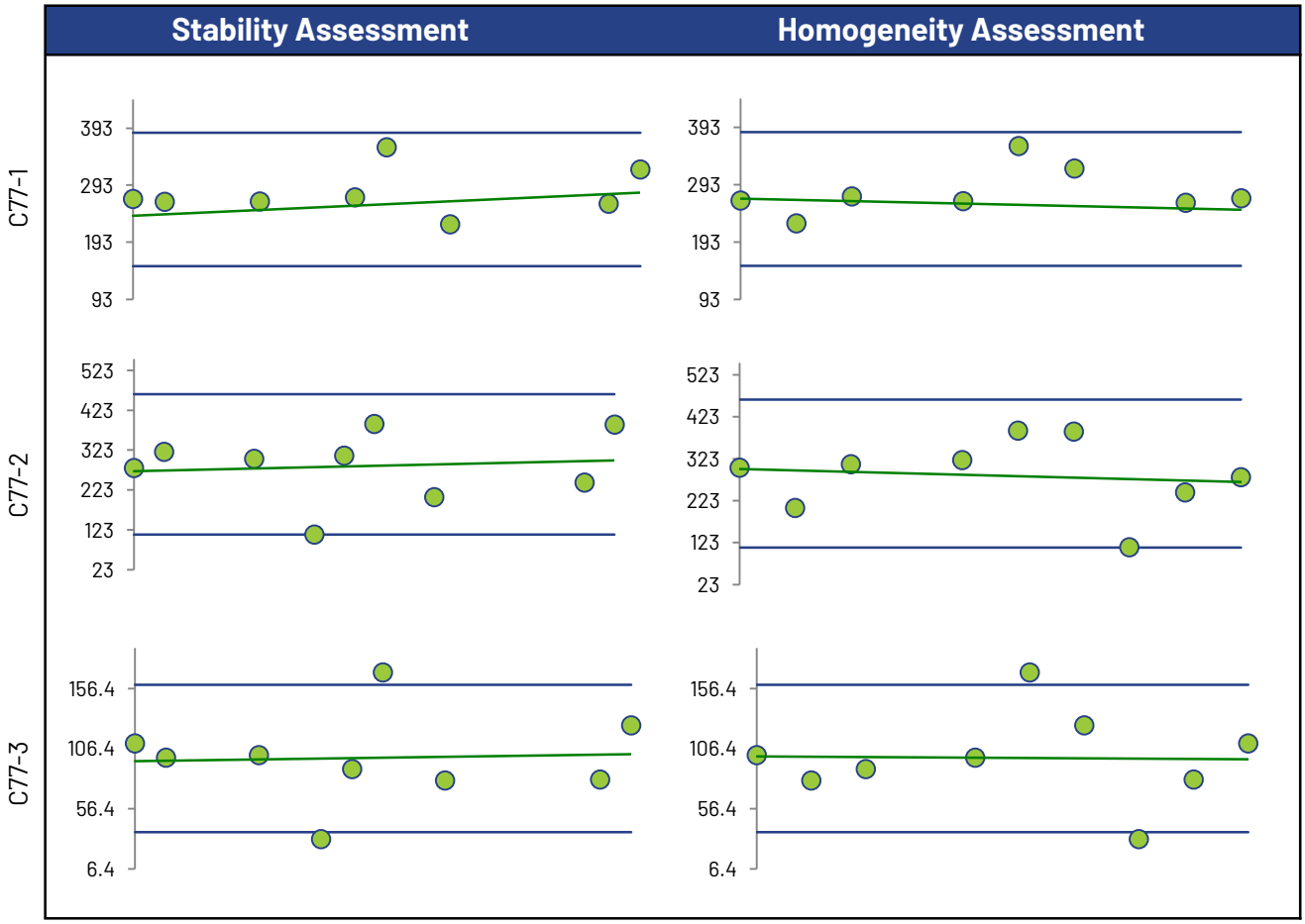
All summary stats, except the failure rate, and the plots below are based on the data excluding any flagged outliers



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

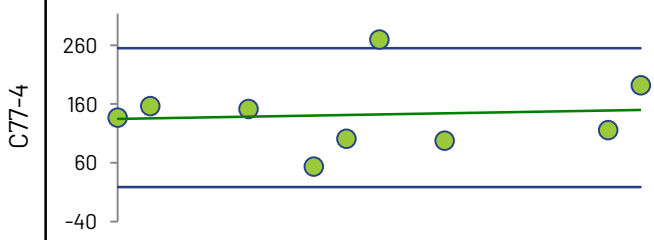
Lindane (gamma-BHC)



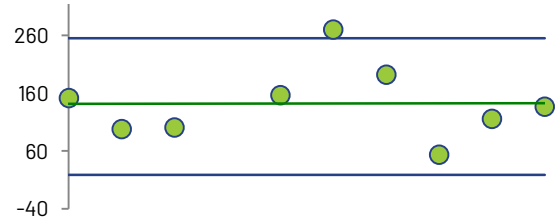


Lindane (gamma-BHC)

Stability Assessment



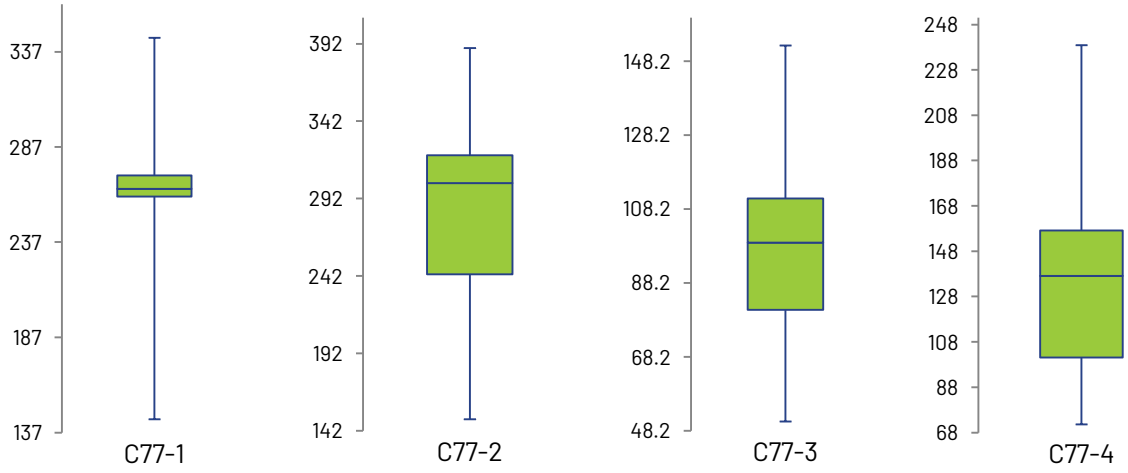
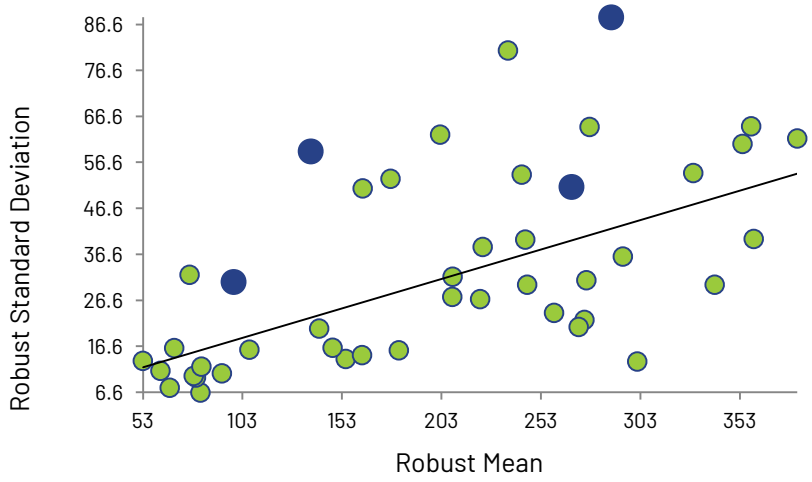
Homogeneity Assessment



Stability assessments are regression analysis of reported result against date of analysis.

Homogeneity assessments are regression analysis of reported result against bottling order.

Box and Whisker Plots



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