Results of Proficiency Test
Methanol
September 2020

Organized by: Institute for Interlaboratory Studies
Spijkenisse, the Netherlands

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1 INTRODUCTION

Since 1999 the Institute for Interlaboratory Studies (iis) organizes a proficiency test for Methanol every year. During the annual proficiency testing program 2020/2021 it was decided to continue the proficiency test for the analysis of Methanol in accordance with the latest version of the IMPCA specification. The latest version can be downloaded from www.impca.eu.

In the regular Methanol proficiency test 92 laboratories in 33 different countries registered for participation. In the proficiency test of UV in Methanol 59 laboratories in 25 different countries registered for participation. In total 94 laboratories in 34 different countries registered for these two rounds. See appendix 3 for the number of participants per country for both rounds. In this report the results of the Methanol proficiency test are presented and discussed. This report is also electronically available through the iis website www.iisnl.com.

2 SET UP

The Institute for Interlaboratory Studies (iis) in Spijkenisse, the Netherlands, was the organizer of this proficiency test (PT). Sample analyzes for fit-for-use and homogeneity testing were subcontracted to an ISO/IEC17025 accredited laboratory. It was decided to send 1L Methanol labelled #20160 and/or 100mL Methanol labelled #20161 for UV determination only dependent on the registration.
Participants were requested to report rounded and unrounded test results. The unrounded test results were preferably used for the statistical evaluation.

2.1 ACCREDITATION

The Institute for Interlaboratory Studies in Spijkenisse, the Netherlands, is accredited in agreement with ISO/IEC17043:2010 (R007), since January 2000, by the Dutch Accreditation Council (Raad voor Accreditatie). Both PTs fall under the accredited scope. This ensures strict adherence to protocols for sample preparation and statistical evaluation and 100% confidentiality of participant's data. Feedback from the participants on the reported data is encouraged and customer's satisfaction is measured on regular basis by sending out questionnaires.

2.2 PROTOCOL

The protocol followed in the organization of this proficiency test was the one as described for proficiency testing in the report 'iis Interlaboratory Studies: Protocol for the Organization, Statistics and Evaluation' of June 2018 (iis-protocol, version 3.5). This protocol is electronically available through the iis website www.iisnl.com, from the FAQ page.

2.3 CONFIDENTIALITY STATEMENT

All data presented in this report must be regarded as confidential and for use by the participating companies only. Disclosure of the information in this report is only allowed by means of the entire report. Use of the contents of this report for third parties is only allowed by written permission of the Institute for Interlaboratory Studies. Disclosure of the identity of

one or more of the participating companies will be done only after receipt of a written agreement of the companies involved.

2.4 SAMPLES

Approximately 116L of Methanol was obtained from a local supplier. This batch was spiked with Toluene and Thiophene. After homogenization of this batch 115 amber glass bottles of 1L were filled and labelled #20160. The homogeneity of the subsamples was checked by determination of Density at 20°C in accordance with ASTM D4052 on 8 stratified randomly selected subsamples.

	Density at 20°C in kg/L
sample #20160-1	0.79126
sample #20160-2	0.79127
sample #20160-3	0.79128
sample #20160-4	0.79128
sample #20160-5	0.79130
sample #20160-6	0.79128
sample #20160-7	0.79129
sample #20160-8	0.79128

Table 1: homogeneity test results of subsamples #20160

From the above test results the repeatability was calculated and compared with 0.3 times the reproducibility of the reference test method in agreement with the procedure of ISO13528, Annex B2 in the next table.

	Density at 20°C in kg/L
r (observed)	0.00003
reference test method	ISO12185:96
0.3 x R (reference test method)	0.00015

Table 2: evaluation of repeatability of the subsamples #20160

The calculated repeatability was in agreement with 0.3 times the reproducibility of the reference test method. Therefore, homogeneity of the subsamples was assumed.

For the Methanol UV-round approximately 9L of Methanol was obtained from a local supplier. After homogenization 84 amber glass bottles of 100mL were filled and labelled #20161. The homogeneity of the subsamples was checked by determination of UV absorbances at 220nm (using a 50 mm cuvette) according to IMPCA004 on 8 stratified randomly selected subsamples.
Unfortunately, the laboratory test results could not be used for the homogeneity determination. After consulting the laboratory, it was decided to declare the batch fit for purpose to use for the PT by highly exception. Fortunately, the reported test results of the participants underpin our assumption that the subsamples were filled homogenously.

Depending on the registration to the participants 1 bottle of 1L Methanol labelled #20160 and/or 1 bottle of 100mL Methanol labelled #20161 was sent on August 26, 2020. An SDS was added to the sample package.

2.5 STABILITY OF THE SAMPLES

The stability of Methanol packed in amber glass bottles was checked. The material was found sufficiently stable for the period of the proficiency test.

2.6 ANALYZES

The participants were requested to determine on sample #20160: Acidity as Acetic Acid, Appearance, Carbonizable substances Pt/Co, Inorganic Chloride as Cl, Color Pt/Co, Density at 20°C, Specific Gravity 20/20°C, Distillation (IBP, 50%, DP and Range), Iron as Fe, Miscibility with Water, Nonvolatile matter, Permanganate Time Test at 15°C, Purity by GC as received, Purity by GC on dry basis, Acetone, Benzene, Ethanol, Toluene, Total Sulfur, Trimethylamine and Water (Coulometric and Titrimetric).
On sample #20161 it was requested to determine the UV absorbances at 300, 268.5, 250, 240, 230 and 220 nm and an evaluation (Pass/Fail) of the UV scan.

It was explicitly requested to treat the samples as if they were routine samples and to report the test results using the indicated units on the report form and not to round the test results but report as much significant figures as possible. It was also requested not to report ‘less than’ test results, which are above the detection limit, because such test results cannot be used for meaningful statistical evaluations.
To get comparable test results, a detailed report form and a letter of instructions are prepared. On the report form the reporting units are given as well as the reference test methods that will be used during the evaluation. The detailed report form and the letter of instructions are both made available on the data entry portal www.kpmd.co.uk/sgs-iis/. The participating laboratories are also requested to confirm the sample receipt on this data entry portal. The letter of instructions can also be downloaded from the iis website www.iisnl.com.

3 RESULTS

During five weeks after sample dispatch the test results of the individual laboratories were gathered via the data entry portal www.kpmd.co.uk/sgs-iis/. The reported test results are tabulated per determination in appendix 1 and 2 of this report. The laboratories are presented by their code numbers.
Directly after the deadline, a reminder was sent to those laboratories that had not reported test results at that moment. Shortly after the deadline, the available test results were screened for suspect data. A test result was called suspect in case the Huber Elimination Rule (a robust outlier test) found it to be an outlier. The laboratories that produced these suspect data were asked to check the reported test results (no reanalysis). Additional or corrected test results are used for data analysis and the original test results are placed under ‘Remarks’ in the test result tables in appendix 1 and 2. Test results that came in after the deadline were not taken into account in this screening for suspect data and thus these participants were not requested for checks.

3.1 STATISTICS

The protocol followed in the organization of this proficiency test was the one as described for proficiency testing in the report 'iis Interlaboratory Studies: Protocol for the Organisation, Statistics and Evaluation' of June 2018 (iis-protocol, version 3.5).
For the statistical evaluation, the *unrounded* (when available) figures were used instead of the rounded test results. Test results reported as '<…' or '>…' were not used in the statistical evaluation.

First, the normality of the distribution of the various data sets per determination was checked by means of the Lilliefors-test, a variant of the Kolmogorov-Smirnov test and by the calculation of skewness and kurtosis. Evaluation of the three normality indicators in combination with the visual evaluation of the graphic Kernel density plot lead to judgement of the normality being either ‘unknown’, ‘OK’, ‘suspect’ or ‘not OK’. After removal of outliers this check was repeated. If a data set does not have a normal distribution, the (results of the) statistical evaluation should be used with due care.

According to ISO5725 the original test results per determination were submitted to Dixon’s, Grubbs' and/or Rosner’s outlier tests. Outliers are marked by D(0.01) for the Dixon’s test, by G(0.01) or DG(0.01) for the Grubbs’ test or by R(0.01) for the Rosner’s test. Stragglers are marked by D(0.05) for the Dixon’s test, by G(0.05) or DG(0.05) for the Grubbs’ test or by R(0.05) for the Rosner’s test. Both outliers and stragglers were not included in the calculations of averages and standard deviations.

For each assigned value, the uncertainty was determined in accordance with ISO13528. Subsequently the calculated uncertainty was evaluated against the respective requirement based on the target reproducibility in accordance with ISO13528. In this PT the criterion of ISO13528 paragraph 9.2.1. was met for all evaluated tests, therefore, the uncertainty of all assigned values may be negligible and need not be included in the PT report.

Finally, the reproducibilities were calculated from the standard deviations by multiplying these with a factor of 2.8.

3.2 GRAPHICS

In order to visualize the data against the reproducibilities from literature, Gauss plots were made, using the sorted data for one determination (see appendix 1). On the Y-axis, the reported test results are plotted. The corresponding laboratory numbers are on the X-axis. The straight horizontal line presents the consensus value (a trimmed mean). The four striped lines, parallel to the consensus value line, are the +3s, +2s, -2s and -3s target reproducibility limits of the selected reference test method. Outliers and other data, which were excluded from the calculations, are represented as a cross. Accepted data are represented as a triangle.

Furthermore, Kernel Density Graphs were made. This is a method for producing a smooth density approximation to a set of data that avoids some problems associated with histograms. Also, a normal Gauss curve was projected over the Kernel Density Graph for reference.

3.3 Z-SCORES

To evaluate the performance of the participating laboratories the z-scores were calculated. As it was decided to evaluate the performance of the participants in this proficiency test (PT) against the literature requirements, e.g. ASTM or IMPCA reproducibilities, the z-scores were calculated using a target standard deviation. This results in an evaluation independent of the variation in this interlaboratory study.

The target standard deviation was calculated from the literature reproducibility by division with 2.8. In case no literature reproducibility was available, other target values may be used, like Horwitz or an estimated reproducibility based on former iis proficiency tests.

When a laboratory did use a test method with a reproducibility that is significantly different from the reproducibility of the reference test method used in this report, it is strongly advised to recalculate the z-score, while using the reproducibility of the actual test method used, this in order to evaluate whether the reported test result is fit-for-use.

The z-scores were calculated according to:

$z_{(target)}$ = (test result - average of PT) / target standard deviation

The $z_{(target)}$ scores are listed in the result tables of appendix 1.

Absolute values for z<2 are very common and absolute values for z>3 are very rare. Therefore, the usual interpretation of z-scores is as follows:

	|z|	< 1	good
1 <	|z|	< 2	satisfactory
2 <	|z|	< 3	questionable
3 <	|z|		unsatisfactory

4 EVALUATION

Some problems were encountered with the dispatch of the samples due to COVID-19 pandemic and other reasons (e.g. customs clearance), especially to Brazil, India, Russian Federation and Saudi Arabia. In the regular round 13 participants did not report any test results. In the UV round 20 participants did not report any test results. Not all laboratories were able to report all analyzes requested. In total 81 participants reported 1314 test results. Observed were 49 outlying test results, which is 3.7% of the numerical test results. In proficiency studies, outlier percentages of 3% - 7.5% are quite normal.

Not all original data sets proved to have a normal Gaussian distribution. These are referred to as “not OK” or “suspect”. The statistical evaluation of these data sets should be used with due care, see also paragraph 3.1.

4.1 EVALUATION PER SAMPLE AND PER TEST

In this section the reported test results are discussed per sample and per test. The test methods, which are used by the various laboratories, were taken into account for explaining the observed differences when possible and applicable. These test methods are also listed in the tables together with the reported test results. The abbreviations, used in these tables, are explained in appendix 4.

Unfortunately, a suitable reference test method, providing the precision data, is not available for all determinations. For the tests, that have no available precision data, the calculated reproducibility was compared against the reproducibility estimated from the Horwitz equation.

In the iis PT reports ASTM test methods are referred to with a number (e.g. D1209) and an added designation for the year that the test method was adopted or revised (e.g. D1209:05). If applicable, a designation in parentheses is added to designate the year of reapproval (e.g. D1209:05(2019)). In the test results tables of appendix 1 only the test method number and year of adoption or revision (e.g. D1209.05) will be used.

Sample #20160

Acidity as Acetic Acid: This determination was not problematic. Four statistical outliers were observed. The calculated the reproducibility after rejection of the statistical outliers is in agreement with the requirements of ASTM D1613:17.

Appearance: This determination was not problematic. All reporting participants agreed about the appearance, which was bright, clear and free of suspended matter (Pass).

Carbonizable Substances: This determination was problematic. Two statistical outliers were observed. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the requirements of ASTM E346:08e1(withdrawn 2017).

Inorganic Chloride as Cl: This determination may not be problematic. All reporting participants, except four, agreed on a test result of less than 0.25 mg/kg. The Inorganic Chloride as Cl content was near or below the detection limit. Therefore, no z-scores were calculated.

Color as Pt/Co: This determination was not problematic. No statistical outliers were observed. The calculated reproducibility is in good agreement with the requirements of ASTM D1209:05(2019).

Density at 20°C: This determination was not problematic. Four statistical outliers were observed. The calculated reproducibility after rejection of the statistical outliers is in good agreement with the requirements of ISO12185:96.

Spec. Gravity 20/20°C: This determination was problematic for a number of laboratories. Seven statistical outliers were observed. The calculated reproducibility after rejection of the statistical outliers is in good agreement with the requirements of ISO12185:96.

Distillation: This determination was not problematic. In total two statistical outliers were observed. All three calculated reproducibilities after rejection of the statistical outliers were in good agreement with the respective requirements of ASTM D1078-A:11(2019).

Iron as Fe: This determination may not be problematic. All reporting participants agreed on a test result of less than 0.1 mg/kg. The Iron as Fe content was near or below the detection limit. Therefore, no z-scores were calculated.

Water Miscibility: This determination was not problematic. All reporting participants agreed about the Water Miscibility and reported “Pass”.

Nonvolatile Matter: This determination was problematic. Six statistical outliers were observed. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the requirements of ASTM D1353:13.

Permanganate Time Test: This determination was problematic. No statistical outlier was observed. The calculated reproducibility is not in agreement with the requirements of ASTM D1363:06(2019).

Purity by GC: This determination may not be problematic. In total six statistical outliers were observed for the determination of Purity by GC as received and on dry basis. The calculated reproducibilities after rejection of the statistical outliers were smaller when compared with the calculated reproducibilities of the 2019 iis19C10 proficiency test.

Acetone: This determination may not be problematic. All reporting participants agreed on a test result of less than <10 mg/kg. The Acetone content was near or below the detection limit. Therefore, no z-scores were calculated.

Benzene: This determination may not be problematic. All reporting participants agreed on a test result of less than <10 mg/kg. The Benzene content was near or below the detection limit. Therefore, no z-scores were calculated.

Ethanol: This determination may be problematic. No statistical outliers were observed. The calculated reproducibility is not in agreement with the estimated reproducibility estimated using the Horwitz equation.

Toluene: This determination was not problematic. No statistical outliers were observed. The calculated reproducibility is in good agreement with the estimated reproducibility estimated using the Horwitz equation.

Total Sulfur: This determination was not problematic. No statistical outliers were observed. The calculated reproducibility is in agreement with the requirements of ASTM D5453:19a.

TMA: This determination was problematic. One statistical outlier was observed. The calculated reproducibility after rejection of the statistical outlier is not in agreement with the requirements calculated from the repeatability of ASTM E346:08e1 (withdrawn 2017).

Water, Coulometric: This determination was problematic. Three statistical outliers were observed. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the requirements of ASTM E1064:16.

Water, Volumetric: This determination was not problematic. One statistical outlier was observed. The calculated reproducibility after rejection of the statistical outlier is in good agreement with the requirements of ASTM E203:16.

Sample #20161

UV-Absorbance: The test results determined with a 50 mm or a 10 mm cuvette were evaluated separately. Only 3 participants used a 10 mm cuvette. Due to this low number of test results, it was decided not to evaluate the test results measured with a 10 mm cuvette. The reported test results are given in appendix 2. Please note IMPCA004 describes the use of a 50 mm cuvette.
The determination with a 50 mm cuvette may be problematic depending on the wavelength. In total thirteen statistical outliers were observed. The calculated reproducibilities of 300 nm and 220 nm after rejection of the statistical outliers were in agreement with the requirements of IMPCA004:15. The calculated reproducibilities of 268.5 nm and 250 nm were not in agreement. Regretfully, for “UV at 240nm and 230nm” no precision data are available. All participants, except four, would have approved the sample with 'Pass'.

4.2 PERFORMANCE EVALUATION FOR THE GROUP OF LABORATORIES

A comparison has been made between the reproducibility as declared by the reference test method or as declared by the estimated reproducibility using Horwitz equation and the reproducibility as found for the group of participating laboratories. The number of significant test results, the average, the calculated reproducibility (2.8 * standard deviation) and the target reproducibility derived from literature reference test methods (in casu ASTM and IMPCA standards) are presented in the next tables.

Parameter	unit	n	average	2.8 * sd	R(lit)
Acidity as Acetic Acid	mg/kg	67	14.8	9.9	14
Appearance		76	CFSM	n.a.	n.a.
Carbonizable substances Pt/Co		48	10.2	14.5	8.1
Inorganic Chloride as Cl	mg/kg	50	<0.25	n.e.	n.e.

Parameter	unit	n	average	2.8 * sd	R(lit)
Color Pt/Co		61	1.9	2.5	7
Density at 20°C	kg/L	66	0.7913	0.0002	0.0005
Specific Gravity 20/20°C		67	0.7927	0.0002	0.0005
Initial Boiling Point	°C	66	64.4	0.3	1.0
50% recovered	°C	66	64.5	0.3	0.4
Dry Point	°C	64	64.7	0.4	0.7
Iron as Fe	mg/kg	56	<0.1	n.e.	n.e.
Miscibility with water		75	Pass	n.a.	n.a.
Nonvolatile Matter	mg/100mL	46	0.23	0.23	0.10
Permanganate Time Test at 15°C	minutes	60	89.3	26.2	22.5
Purity by GC as received	%M/M	46	99.973	0.011	n.e.
Purity by GC on dry basis	%M/M	59	99.992	0.007	n.e.
Acetone	mg/kg	63	<10	n.e.	n.e.
Benzene	mg/kg	53	<10	n.e.	n.e.
Ethanol	mg/kg	65	22.4	7.3	6.3
Toluene	mg/kg	54	15.8	4.2	4.7
Total Sulfur	mg/kg	49	2.1	0.8	1.0
Trimethylamine (TMA)	µg/kg	9	17.9	10.9	6.8
Water, Coulometric	mg/kg	68	197	49	31
Water, Volumetric	mg/kg	37	201	52	780

Table 3: reproducibilities of tests on sample #20160

Parameter	unit	n	average	2.8 * sd	R(lit)
UV absorbance at 300 nm		34	0.013	0.016	0.019
UV absorbance at 268.5 nm		34	0.042	0.031	0.011
UV absorbance at 250 nm		31	0.112	0.032	0.011
UV absorbance at 240 nm		26	0.247	0.041	n.a.
UV absorbance at 230 nm		28	0.606	0.122	n.a.
UV absorbance at 220 nm		34	1.196	0.233	0.343
Evaluation of UV scan		33	Pass	n.a.	n.a.

Table 4: reproducibilities of tests on sample #20161, 50 mm cuvette only

Without further statistical calculations, it can be concluded that for many tests there is a good compliance of the group of participating laboratories with the reference test methods. The tests that are problematic have been discussed in paragraph 4.1.

4.3 COMPARISON OF THE PROFICIENCY TEST OF SEPTEMBER 2020 WITH PREVIOUS PTS

	September 2020	September 2019	September 2018	September 2017	September 2016
Number of reporting laboratories	81	77	96	80	82
Number of test results	1314	1343	1412	1456	1540
Number of statistical outliers	49	48	62	54	56
Percentage of statistical outliers	3.7%	3.6%	4.4%	3.7%	3.6%

Table 5: comparison with previous proficiency tests.

In proficiency tests, outlier percentages of 3% - 7.5% are quite normal.
The performance of the determinations of the proficiency tests was compared against the requirements of the respective standards. The conclusions are given the following table.

	September 2020	September 2019	September 2018	September 2017	September 2016
Acidity as Acetic Acid	+	+	--	--	++
Carbonizable substances	-	+/-	-	+/-	+/-
Inorganic Chloride as Cl	n.e.	++	+	(+)	+
Color Pt/Co	++	++	++	++	++
Density at 20°C	++	++	++	++	++
Specific Gravity 20/20°C	++	++	++	++	++
Distillation	++	++	++	++	++
Iron as Fe	n.e.	-	--	n.e.	--
Nonvolatile Matter	--	--	--	--	--
Permanganate Time Test at 15°C	-	-	+	-	+
Acetone	n.e.	+/-	n.e.	-	-
Benzene	n.e.	+/-	n.e.	+	-
Ethanol	-	-	-	+/-	-
Toluene	+	n.e.	n.e.	n.e.	n.e.
Total Sulfur	+	n.e.	n.e.	n.e.	n.e.
Trimethylamine (TMA)	-	+/-	--	--	--
Water, Coulometric	-	+/-	+	+/-	-
Water, Titrimetric	++	++	++	++	++

Table 6: comparison determinations against the requirements of the reference test methods for sample #20160
Evaluation between brackets is for concentrations near or below the detection limits

	September 2020	September 2019	September 2018		September 2017		September 2016	
Cuvette (in mm)	50	50	50	10	50	10	50	10
UV absorbance at 300 nm	+	+/-	+/-	+/-	+/-	+/-	-	+/-
UV absorbance at 268.5 nm	--	++	++	++	+/-	--	--	-
UV absorbance at 250 nm	--	-	+	-	+/-	--	--	-
UV absorbance at 220 nm	+	++	+	+/-	++	-	-	++

Table 7: comparison determinations against the requirements of the reference test methods for sample #20161

NB The 10 mm test results were not evaluated since 2019

The following performance categories were used:

- ++: group performed much better than the reference test method
- + : group performed better than the reference test method
- +/-: group performance equals the reference test method
- - : group performed worse than the reference test method
- -- : group performed much worse than the reference test method
- n.e.: not evaluated

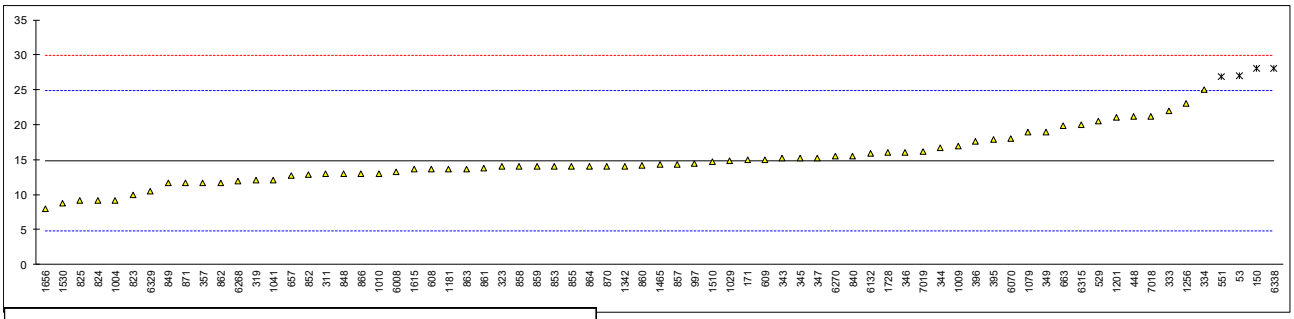
APPENDIX 1

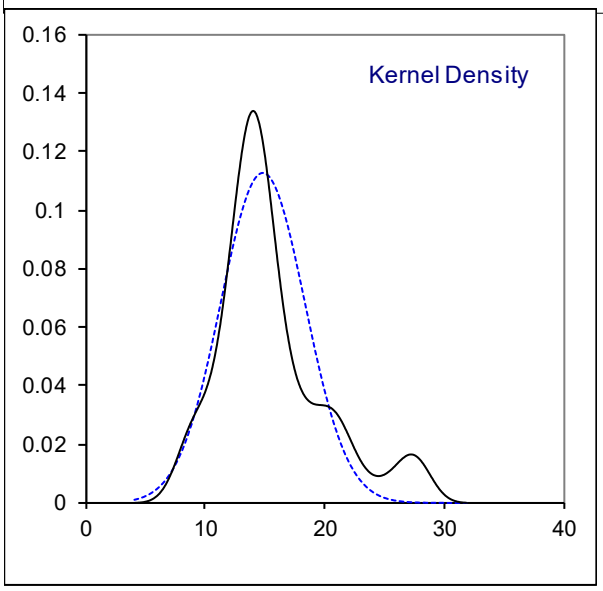
Determination of Acidity as Acetic Acid on sample #20160; results in mg/kg

lab	method	value	mark	z(targ)	remarks
53	D1613	27	R(0.05)	2.43	
150	D1613	28	R(0.05)	2.63	
171	D1613	15		0.03	
311	D1613	13		-0.37	
316		-----		-----	
319	D1613	12.0335		-0.56	
323	D1613	14		-0.17	
333	D1613	22		1.43	
334	D1613	25		2.03	
335		-----		-----	
343	D1613	15.2		0.07	
344	D1613	16.65		0.36	
345	D1613	15.2		0.07	
346	D1613	16.03		0.24	
347	D1613	15.2		0.07	
349	D1613	19	C	0.83	First reported 0.019
357	D1613	11.7		-0.63	
395	D1613	17.9		0.61	
396	D1613	17.6		0.55	
448	D1613	21.2		1.27	
529	D1613	20.47		1.12	
551	D1613	26.9	R(0.05)	2.41	
554		-----		-----	
557		-----		-----	
608	D1613	13.65		-0.24	
609	D1613	15		0.03	
646		-----		-----	
657	D1613	12.69		-0.43	
663	D1613	19.9		1.01	
823	D1613	10		-0.97	
824	D1613	9.1		-1.15	
825	D1613	9.1		-1.15	
840	D1613	15.5		0.13	
848	D1613	13.0		-0.37	
849	D1613	11.6		-0.65	
852	D1613	12.8		-0.41	
853	D1613	14		-0.17	
855	D1613	14		-0.17	
857	D1613	14.3		-0.11	
858	D1613	14		-0.17	
859	D1613	14		-0.17	
860	D1613	14.2		-0.13	
861	GB/T338	13.8		-0.21	
862	D1613	11.7		-0.63	
863	D1613	13.7		-0.23	
864	D1613	14		-0.17	
866	D1613	13.0		-0.37	
870	D1613	14		-0.17	
871	D1613	11.6		-0.65	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970		-----		-----	
974		-----		-----	
994		-----		-----	
997	D1613	14.5		-0.07	
1004	D1613	9.2		-1.13	
1009	D1613	17		0.43	
1010	D1613	13		-0.37	
1016		-----		-----	
1029	D1613	14.9		0.01	
1041	D1613	12.06		-0.56	
1079	D1613	18.9		0.81	
1120		-----		-----	
1181	D1613	13.6757		-0.23	
1201	D1613	21		1.23	
1246		-----		-----	
1256	D1613	23		1.63	
1264		-----		-----	
1342	D1613	14		-0.17	
1465	D1613	14.27		-0.12	
1510	D1613	14.67		-0.04	
1530	D1613	8.8		-1.21	

lab	method	value	mark	z(targ)	remarks
1615	D1613	13.64		-0.24	
1656	D1613	8		-1.37	
1728	D1613	16		0.23	
1886		-----		-----	
6008	D1613	13.2		-0.33	
6061		-----		-----	
6070	D1613	18	C	0.63	First reported 78
6119		-----		-----	
6132	D1613	15.95		0.22	
6262		-----		-----	
6267		-----		-----	
6268	D1613	11.9		-0.59	
6270	D1613	15.48		0.13	
6315	D1613	20		1.03	
6329	D1613	10.5		-0.87	
6338	D1613	28	R(0.05)	2.63	
7018	D1613	21.2		1.27	
7019	D1613	16.1		0.25	

normality	OK
n	67
outliers	4
mean (n)	14.847
st.dev. (n)	3.5377
R(calc.)	9.906
st.dev.(D1613:17)	5
R(D1613:17)	14





Determination of Appearance on sample #20160;

lab	method	value	mark	z(targ)	remarks
53	IMPCA003	Clear and Free		-----	
150	IMPCA003	C&B		-----	
171	E2680	Clear without any suspended matter		-----	
311	IMPCA003	clear, free of suspended matter		-----	
316		-----		-----	
319	IMPCA003	Clear and free of suspended matter		-----	
323	E2680	clear & bright		-----	
333	IMPCA003	Clear and free from suspended matter		-----	
334	IMPCA003	clear and bright FFSM		-----	
335		-----		-----	
343	IMPCA003	clear		-----	
344	IMPCA003	C&B		-----	
345	E2680	PASS		-----	
346	IMPCA003	Pass		-----	
347	IMPCA003	Pass		-----	
349	E2680	pass		-----	
357	IMPCA003	CFSM		-----	
395	IMPCA003	PASS		-----	
396	IMPCA003	Pass		-----	
448	IMPCA003	Clear and free of suspended solids		-----	
529	IMPCA003	pass		-----	
551	IMPCA003	PASS		-----	
554		-----		-----	
557		-----		-----	
608	IMPCA003	Clear and Free from Suspended Matter		-----	
609	IMPCA003	Clear and free of suspended matter		-----	
646		-----		-----	
657	IMPCA003	Pass		-----	
663	IMPCA003	Clear and free of suspended matter		-----	
823	IMPCA003	CFSM		-----	
824	IMPCA003	clear and free from suspended matter		-----	
825	IMPCA003	Clear and free form suspended matter		-----	
840	E2680	Pass		-----	
848	IMPCA003	B&C		-----	
849	E2680	Bright&Clear		-----	
852	IMPCA003	Clear and free of suspended matter		-----	
853	IMPCA003	Clear and free		-----	
855	E2680	Pass		-----	
857	IMPCA003	Clear and free of suspended matter		-----	
858	IMPCA003	Bright and Clear		-----	
859	IMPCA003	Pass		-----	
860		Pass		-----	
861	IMPCA003	Bright Clear		-----	
862	IMPCA003	Bright&clear		-----	
863	IMPCA003	CFSM		-----	
864	E2680	Pass		-----	
866	E2680	Pass		-----	
870	IMPCA003	Clear and free from suspended matter		-----	
871	IMPCA003	Bright&Clear		-----	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970	IMPCA003	Pass		-----	
974	IMPCA003	Pass		-----	
994		-----		-----	
997	IMPCA003	CFSM		-----	
1004	IMPCA003	CFFSM		-----	
1009	IMPCA003	CFSM		-----	
1010	IMPCA003	Cl&fsm		-----	
1016	In house	Pass		-----	
1029	IMPCA003	CFSM		-----	
1041	IMPCA003	CFSM		-----	
1079	IMPCA003	CFSM		-----	
1120	E346	pass		-----	
1181	IMPCA003	Bright, clear, free of suspended matter		-----	
1201	IMPCA003	Br&Cl		-----	
1246		-----		-----	
1256	IMPCA003	Clear and bright		-----	
1264		-----		-----	
1342	IMPCA003	CFSM		-----	
1465	IMPCA003	Clear & Free		-----	
1510	IMPCA003	Clear & Free From Suspended Matter		-----	
1530	IMPCA003	clear & bright		-----	
1615	IMPCA003	CFSM		-----	

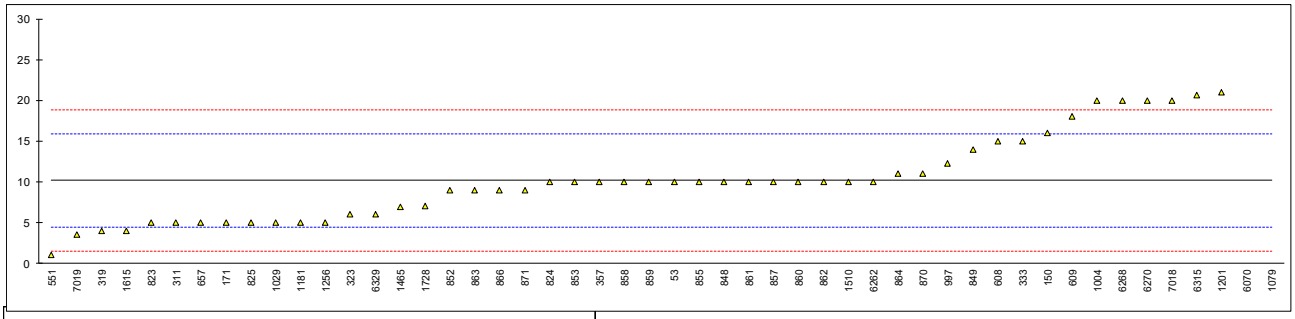
lab	method	value	mark	z(targ)	remarks
1656	IMPCA003	Pass		-----	
1728		CLEAR		-----	
1886		-----		-----	
6008	IMPCA003	Clear and free of suspended matter		-----	
6061		-----		-----	
6070	IMPCA003	Clear and Free from Suspended Matter		-----	
6119	IMPCA003	Pass		-----	
6132	IMPCA003	Clear and Free		-----	
6262	IMPCA003	Bright and clear		-----	
6267		-----		-----	
6268	IMPCA003	CFSM		-----	
6270	IMPCA003	CFSM		-----	
6315		-----		-----	
6329	IMPCA003	CFSM		-----	
6338	IMPCA003	Clear and free from suspended matter		-----	
7018	IMPCA003	CFSM		-----	
7019	IMPCA003	CFSM		-----	
	n	76			
	mean (n)	CFSM / Pass			

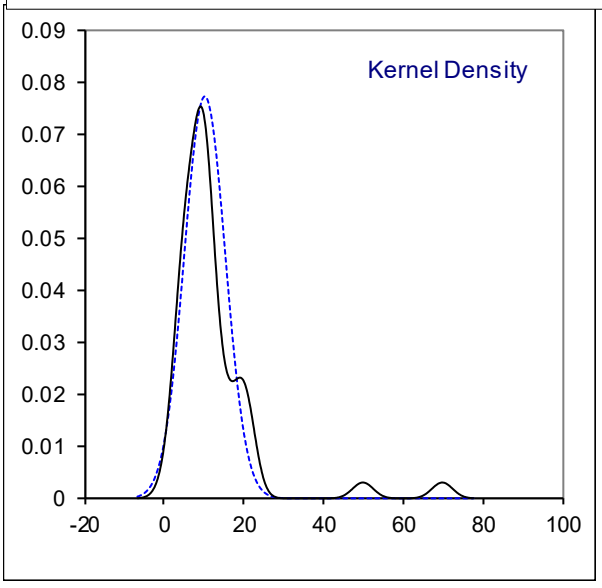
Determination of Carbonizable Substances Pt/Co on sample #20160;

lab	method	value	mark	z(targ)	remarks
53	E346	10		-0.06	
150	E346	16		2.02	
171	E346	5		-1.80	
311	E346	5		-1.80	
316		-----		-----	
319	E346	4		-2.14	
323	E346	6		-1.45	
333	E346	15		1.68	
334		-----		-----	
335		-----		-----	
343		-----		-----	
344	E346	<30		-----	
345		-----		-----	
346	E346	<30		-----	
347		-----		-----	
349		-----		-----	
357	E346	10		-0.06	
395	E346	<30		-----	
396	E346	<30		-----	
448		-----		-----	
529		-----		-----	
551	E346	1		-3.19	
554		-----		-----	
557		-----		-----	
608	E346	15		1.68	
609	E346	18		2.72	
646		-----		-----	
657	E346	5		-1.80	
663		-----		-----	
823	E346	5		-1.80	
824	E346	10		-0.06	
825	E346	5		-1.80	
840		-----		-----	
848	E346	10		-0.06	
849	E346	14		1.33	
852	E346	9		-0.41	
853	E346	10		-0.06	
855	E346	10		-0.06	
857	E346	10		-0.06	
858	E346	10		-0.06	
859	E346	10		-0.06	
860	E346	10		-0.06	
861	GB/T338	10		-0.06	
862	E346	10		-0.06	
863	E346	9		-0.41	
864	E346	11		0.29	
866	E346	9		-0.41	
870	E346	11		0.29	
871	E346	9		-0.41	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970		-----		-----	
974		-----		-----	
994		-----		-----	
997	E346	12.3		0.74	
1004	E346	20		3.41	
1009	E346	<30		-----	
1010		-----		-----	
1016		-----		-----	
1029	E346	5		-1.80	
1041		-----		-----	
1079	E346	70	R(0.01)	20.78	
1120		-----		-----	
1181	E346	5		-1.80	
1201	E346	21		3.76	
1246		-----		-----	
1256	E346	5		-1.80	
1264		-----		-----	
1342	E346	<5		-----	
1465	E346	6.9		-1.14	
1510	E346	10		-0.06	
1530		-----		-----	
1615	E346	4		-2.14	

lab	method	value	mark	z(targ)	remarks
1656		-----		-----	
1728	E346	7		-1.10	
1886		-----		-----	
6008	E346	<30		-----	
6061		-----		-----	
6070	E346	50	C,R(0.01)	13.84	First reported 48
6119		-----		-----	
6132	E346	<5		-----	
6262	E346	10	C	-0.06	First reported 42.3
6267		-----		-----	
6268	E346	20		3.41	
6270	E346	20		3.41	
6315	E346	20.6		3.62	
6329	E346	6		-1.45	
6338		-----		-----	
7018	E346	20		3.41	
7019	E346	3.5		-2.32	

normality	OK
n	48
outliers	2
mean (n)	10.173
st.dev. (n)	5.1676
R(calc.)	14.469
st.dev.(E346:08e1)	2.8786
R(E346:08e1)	8.060





Determination of Inorganic Chloride as Cl on sample #20160; results in mg/kg

lab	method	value	mark	z(targ)	remarks
53	IMPCA002	0.0079		-----	
150	IMPCA002	<0.25		-----	
171	IMPCA002	<0.25		-----	
311	IMPCA002	<0.25		-----	
316		-----		-----	
319	IMPCA002	0.035		-----	
323	IMPCA002	<0.3		-----	
333	IMPCA002	<0.25		-----	
334	IMPCA002	0.06		-----	
335	IMPCA002	< 0.25		-----	
343		-----		-----	
344		-----		-----	
345		-----		-----	
346	IMPCA002	<0,5		-----	
347	IMPCA002	0.1		-----	
349		-----		-----	
357	IMPCA002	<0.25	C	-----	First reported 0.57
395		-----		-----	
396		-----		-----	
448		-----		-----	
529		-----		-----	
551		-----		-----	
554		-----		-----	
557		-----		-----	
608	IMPCA002	0.338	C	-----	First reported 0.547
609		-----		-----	
646		-----		-----	
657	IMPCA002	< 0.25		-----	
663	IMPCA002	<0.25		-----	
823	IMPCA002	<0.25		-----	
824		-----		-----	
825	IMPCA002	0.02		-----	
840	IMPCA002	0.04		-----	
848	IMPCA002	<0.25		-----	
849	IMPCA002	<0.25		-----	
852	IMPCA002	<0.25		-----	
853	IMPCA002	<0.25		-----	
855	IMPCA002	<0.25		-----	
857	IMPCA002	<0.25		-----	
858	IMPCA002	<0.25		-----	
859	IMPCA002	<0.25		-----	
860	IMPCA002	<0.25		-----	
861	IMPCA002	<0.25		-----	
862	IMPCA002	<0.25		-----	
863	IMPCA002	<0.25		-----	
864	IMPCA002	<0.25		-----	
866		-----		-----	
870	IMPCA002	<0.25		-----	
871	IMPCA002	<0.25		-----	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970		-----		-----	
974		-----		-----	
994		-----		-----	
997	IMPCA002	0.3		-----	
1004	IMPCA002	0.106		-----	
1009	In house	0.01		-----	
1010		-----		-----	
1016		-----		-----	
1029	IMPCA002	<0.25		-----	
1041		-----		-----	
1079	IMPCA002	<0.1		-----	
1120		-----		-----	
1181	IMPCA002	0.0124		-----	
1201	IMPCA002	0.040		-----	
1246		-----		-----	
1256	IMPCA002	0.0087		-----	
1264		-----		-----	
1342	IMPCA002	0.18		-----	
1465	In house	0.03880		-----	
1510		-----		-----	
1530	IMPCA002	< 0,25		-----	
1615		-----		-----	

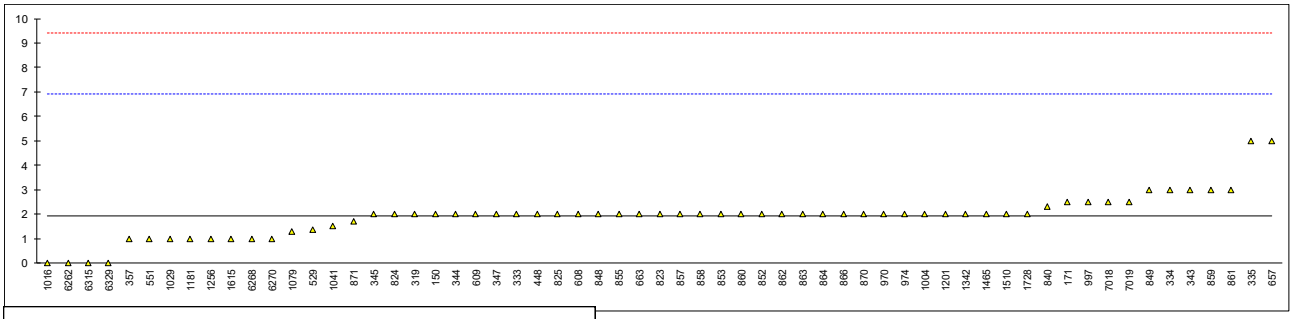
lab	method	value	mark	z(targ)	remarks
1656		-----		-----	
1728		-----		-----	
1886		-----		-----	
6008	IMPCA002	<0.25		-----	
6061		-----		-----	
6070	IMPCA002	0.0		-----	
6119		-----		-----	
6132	IMPCA002	<0.25		-----	
6262		-----		-----	
6267		-----		-----	
6268	IMPCA002	0.0458		-----	
6270	IMPCA002	0.02		-----	
6315	DIN51408	0		-----	
6329	IMPCA002	<0.25	C	-----	First reported 0.8
6338	IMPCA002	<0.25		-----	
7018	In house	<0.03		-----	
7019	D512	<0.02		-----	
	n	50			
	mean (n)	<0.25			

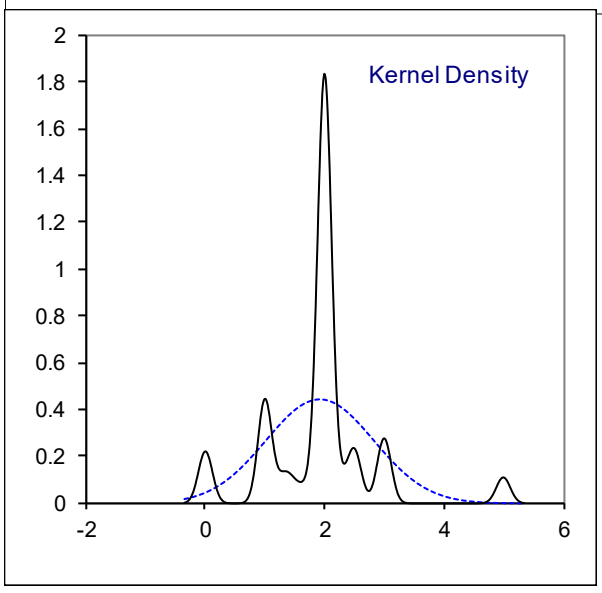
Determination of Color as Pt/Co on sample #20160;

lab	method	value	mark	z(targ)	remarks
53	D1209	<5		-----	
150	D5386	2		0.03	
171	D1209	2.5		0.23	
311	D1209	<5		-----	
316		-----		-----	
319	D1209	2		0.03	
323	D1209	<5		-----	
333	D1209	2		0.03	
334	D1209	3		0.43	
335	D1209	5		1.23	
343	D5386	3		0.43	
344	D1209	2.0		0.03	
345	D5386	2		0.03	
346	D1209	<5		-----	
347	D5386	2		0.03	
349		-----		-----	
357	D5386	1		-0.37	
395	D1209	<5		-----	
396	D1209	<5		-----	
448	D5386	2		0.03	
529	D1209	1.35		-0.23	
551	D1209	1		-0.37	
554		-----		-----	
557		-----		-----	
608	D1209	2		0.03	
609	D1209	2		0.03	
646		-----		-----	
657	D1209	5		1.23	
663	D1209	2		0.03	
823	D1209	2		0.03	
824	D5386	2		0.03	
825	D1209	2		0.03	
840	D5386	2.3		0.15	
848	D1209	2		0.03	
849	D1209	3		0.43	
852	D1209	2		0.03	
853	D1209	2		0.03	
855	D1209	2		0.03	
857	D1209	2		0.03	
858	D1209	2		0.03	
859	D1209	3		0.43	
860	D1209	2		0.03	
861	GB/T3143	3		0.43	
862	D1209	2		0.03	
863	D1209	2		0.03	
864	D1209	2		0.03	
866	D1209	2		0.03	
870	ISO6271	2		0.03	
871	D1209	1.7		-0.09	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970	D1209	2		0.03	
974	D1209	2		0.03	
994		-----		-----	
997	D1209	2.5		0.23	
1004	D1209	2		0.03	
1009	D1209	<5		-----	
1010		-----		-----	
1016	D1209	0		-0.77	
1029	D1209	1		-0.37	
1041	D1209	1.5		-0.17	
1079	D5386	1.3		-0.25	
1120		-----		-----	
1181	D1209	1		-0.37	
1201	D1209	2		0.03	
1246		-----		-----	
1256	D1209	1		-0.37	
1264		-----		-----	
1342	D1209	2		0.03	
1465	D1209	2.0		0.03	
1510	D1209	2		0.03	
1530	D1209	< 3		-----	
1615	D1209	1		-0.37	

lab	method	value	mark	z(targ)	remarks
1656	D1209	<5		-----	
1728	D1209	2		0.03	
1886		-----		-----	
6008	D1209	<5		-----	
6061		-----		-----	
6070	D1209	<5		-----	
6119		-----		-----	
6132	D1209	<5		-----	
6262	D1209	0.0		-0.77	
6267		-----		-----	
6268	D1209	1		-0.37	
6270	D1209	1		-0.37	
6315	ISO6271	0		-0.77	
6329	D5386	0		-0.77	
6338		-----		-----	
7018	D1209	2.5		0.23	
7019	D1209	2.5		0.23	

normality	not OK
n	61
outliers	0
mean (n)	1.92
st.dev. (n)	0.903
R(calc.)	2.53
st.dev.(D1209:05)	2.50
R(D1209:05)	7



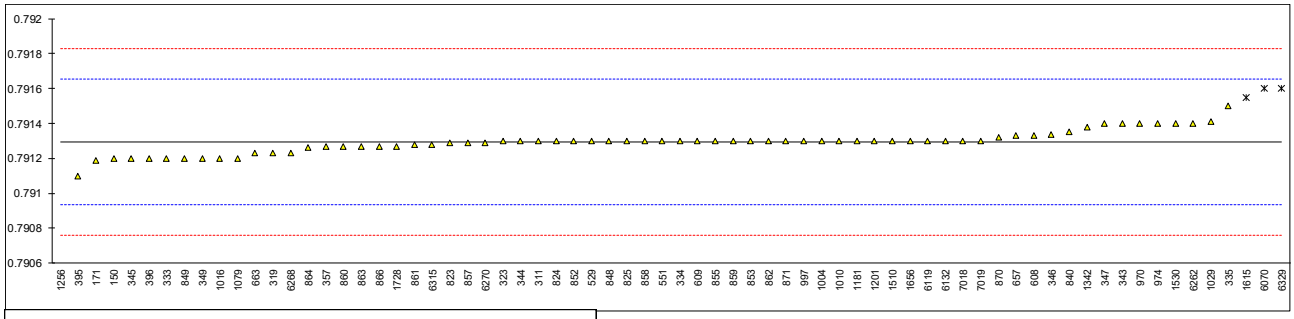


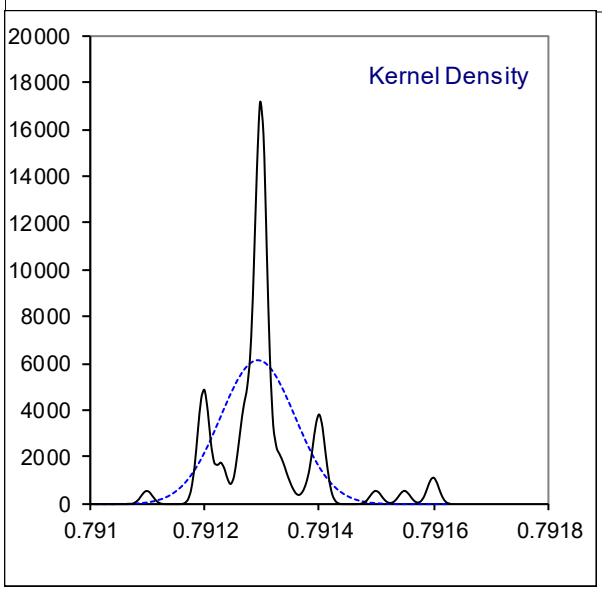
Determination of Density at 20°C on sample #20160; results in kg/L

lab	method	value	mark	z(targ)	remarks
53		-----		-----	
150	D4052	0.7912		-0.53	
171	D4052	0.79119	C	-0.58	First reported 0.7926
311	D4052	0.7913		0.03	
316		-----		-----	
319	D4052	0.79123		-0.36	
323	D4052	0.7913		0.03	
333	D4052	0.7912		-0.53	
334	ISO12185	0.7913		0.03	
335	ISO12185	0.7915	C	1.15	First reported 791.5 kg/L
343	D4052	0.7914		0.59	
344	D4052	0.7913		0.03	
345	D4052	0.7912		-0.53	
346	D1298	0.791336		0.24	
347	D4052	0.7914		0.59	
349	D4052	0.7912		-0.53	
357	D4052	0.79127		-0.13	
395	D4052	0.7911		-1.09	
396	D4052	0.7912		-0.53	
448		-----		-----	
529	D4052	0.7913		0.03	
551	D4052	0.7913		0.03	
554		-----		-----	
557		-----		-----	
608	D4052	0.79133		0.20	
609	D4052	0.7913		0.03	
646		-----		-----	
657	D4052	0.79133		0.20	
663	D4052	0.79123		-0.36	
823	D4052	0.79129		-0.02	
824	ISO12185	0.7913		0.03	
825	D4052	0.79130		0.03	
840	D4052	0.79135		0.31	
848	D4052	0.7913		0.03	
849	D4052	0.7912		-0.53	
852	D4052	0.7913		0.03	
853	D4052	0.7913		0.03	
855	D4052	0.7913		0.03	
857	D4052	0.79129		-0.02	
858	D4052	0.7913		0.03	
859	D4052	0.7913		0.03	
860	D4052	0.79127		-0.13	
861	SH/T0604	0.79128		-0.08	
862	D4052	0.7913		0.03	
863	D4052	0.79127		-0.13	
864	D4052	0.79126		-0.19	
866	D4052	0.79127		-0.13	
870	ISO12185	0.79132		0.15	
871	D4052	0.79130		0.03	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970	D4052	0.7914		0.59	
974	D4052	0.7914		0.59	
994		-----		-----	
997	ISO12185	0.7913		0.03	
1004	D4052	0.7913		0.03	
1009		-----		-----	
1010	D4052	0.7913		0.03	
1016	D4052	0.7912		-0.53	
1029	D4052	0.79141		0.65	
1041		-----		-----	
1079	ISO12185	0.7912		-0.53	
1120		-----		-----	
1181	D4052	0.7913		0.03	
1201	D4052	0.7913		0.03	
1246		-----		-----	
1256	D4052	0.7902	R(0.01)	-6.13	
1264		-----		-----	
1342	D4052	0.79138		0.48	
1465		-----		-----	
1510	ISO12185	0.7913		0.03	
1530	ISO12185	0.79140		0.59	
1615	D4052	0.79155	R(0.05)	1.43	

lab	method	value	mark	z(targ)	remarks
1656	D4052	0.7913		0.03	
1728	D4052	0.79127		-0.13	
1886		-----		-----	
6008		-----		-----	
6061		-----		-----	
6070	D4052	0.7916	R(0.01)	1.71	
6119	D4052	0.7913		0.03	
6132	D4052	0.7913		0.03	
6262	ISO12185	0.7914		0.59	
6267		-----		-----	
6268	D4052	0.79123		-0.36	
6270	D4052	0.79129		-0.02	
6315	ISO12185	0.79128	C	-0.08	First reported 791.28 kg/L
6329	D4052	0.7916	R(0.01)	1.71	
6338		-----		-----	
7018	D4052	0.7913		0.03	
7019	D4052	0.7913		0.03	

normality	suspect
n	66
outliers	4
mean (n)	0.79129
st.dev. (n)	0.000065
R(calc.)	0.00018
st.dev.(ISO12185:96)	0.000179
R(ISO12185:96)	0.0005



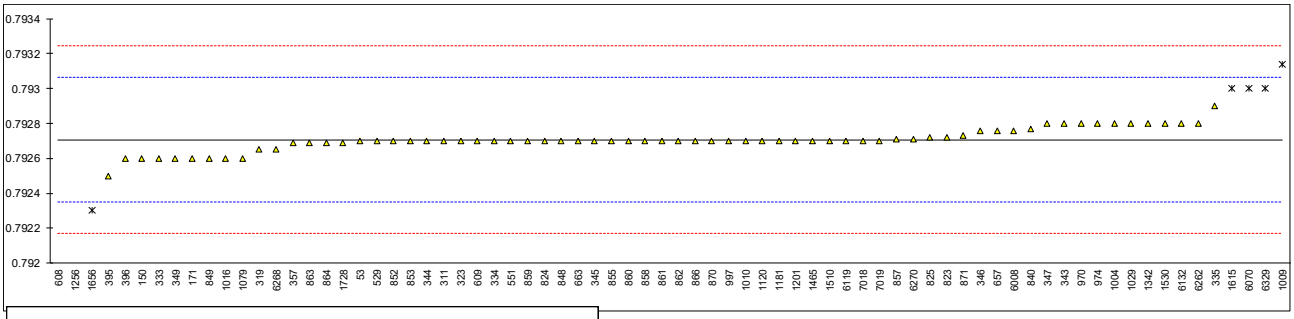


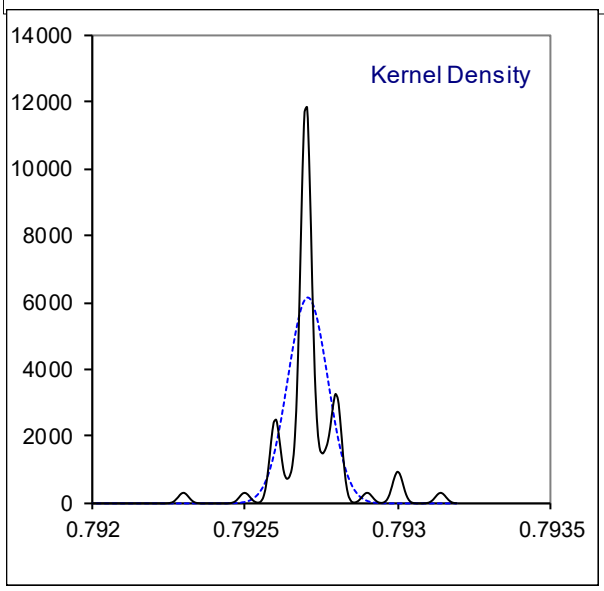
Determination of Specific Gravity 20/20°C on sample #20160;

lab	method	value	mark	z(targ)	remarks
53	D4052	0.7927		-0.03	
150	D4052	0.7926		-0.59	
171	D4052	0.7926	C	-0.59	First reported 0.79119
311	D4052	0.7927		-0.03	
316		-----		-----	
319	D4052	0.79265		-0.31	
323	D4052	0.7927		-0.03	
333	D4052	0.7926		-0.59	
334	ISO12185	0.7927		-0.03	
335	D4052	0.7929	C	1.09	First reported 792.9
343	D4052	0.7928		0.53	
344	D4052	0.7927		-0.03	
345	D4052	0.7927		-0.03	
346	D1298	0.792757		0.28	
347	D4052	0.7928		0.53	
349	D4052	0.7926		-0.59	
357	D4052	0.79269		-0.09	
395	D4052	0.7925		-1.15	
396	D4052	0.7926		-0.59	
448		-----		-----	
529	D4052	0.7927		-0.03	
551	D4052	0.7927		-0.03	
554		-----		-----	
557		-----		-----	
608	ISO12185	0.7911	C,R(0.01)	-8.99	First reported 0.796
609	D4052	0.7927		-0.03	
646		-----		-----	
657	D4052	0.79276		0.30	
663	D4052	0.79270		-0.03	
823	ISO12185	0.79272		0.08	
824	ISO12185	0.7927		-0.03	
825	ISO12185	0.79272		0.08	
840	D4052	0.79277		0.36	
848	D4052	0.7927		-0.03	
849	D4052	0.7926		-0.59	
852	D4052	0.7927		-0.03	
853	D4052	0.7927		-0.03	
855	D4052	0.7927		-0.03	
857	D4052	0.79271		0.02	
858	D4052	0.7927		-0.03	
859	D4052	0.7927		-0.03	
860	D4052	0.79270		-0.03	
861	SH/T0604	0.7927		-0.03	
862	D4052	0.7927		-0.03	
863	D4052	0.79269		-0.09	
864	D4052	0.79269		-0.09	
866	D4052	0.7927		-0.03	
870	ISO12185	0.7927		-0.03	
871	D4052	0.79273		0.13	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970	D4052	0.7928		0.53	
974	D4052	0.7928		0.53	
994		-----		-----	
997	ISO12185	0.7927		-0.03	
1004	D4052	0.7928		0.53	
1009	D4052	0.79314	R(0.01)	2.43	
1010	D4052	0.7927		-0.03	
1016	D4052	0.7926		-0.59	
1029	D4052	0.7928		0.53	
1041		-----		-----	
1079	ISO12185	0.7926		-0.59	
1120	E346	0.7927		-0.03	
1181	D4052	0.7927		-0.03	
1201	D4052	0.7927		-0.03	
1246		-----		-----	
1256	D4052	0.7916	R(0.01)	-6.19	
1264		-----		-----	
1342	D4052	0.7928		0.53	
1465	D4052	0.79270		-0.03	
1510	ISO12185	0.7927		-0.03	
1530	D4052	0.79280		0.53	
1615	D4052	0.7930	R(0.01)	1.65	

lab	method	value	mark	z(targ)	remarks
1656	D4052	0.7923	R(0.01)	-2.27	
1728	D4052	0.79269		-0.09	
1886		-----		-----	
6008	D4052	0.79276		0.30	
6061		-----		-----	
6070	D4052	0.7930	R(0.01)	1.65	
6119	D4052	0.7927		-0.03	
6132	D4052	0.7928		0.53	
6262	ISO12185	0.7928		0.53	
6267		-----		-----	
6268	D4052	0.79265		-0.31	
6270	D4052	0.79271		0.02	
6315		-----		-----	
6329	D4052	0.7930	R(0.01)	1.65	
6338		-----		-----	
7018	D4052	0.7927		-0.03	
7019	D4052	0.7927		-0.03	

normality	suspect
n	67
outliers	7
mean (n)	0.79271
st.dev. (n)	0.000065
R(calc.)	0.00018
st.dev.(ISO12185:96)	0.000179
R(ISO12185:96)	0.0005

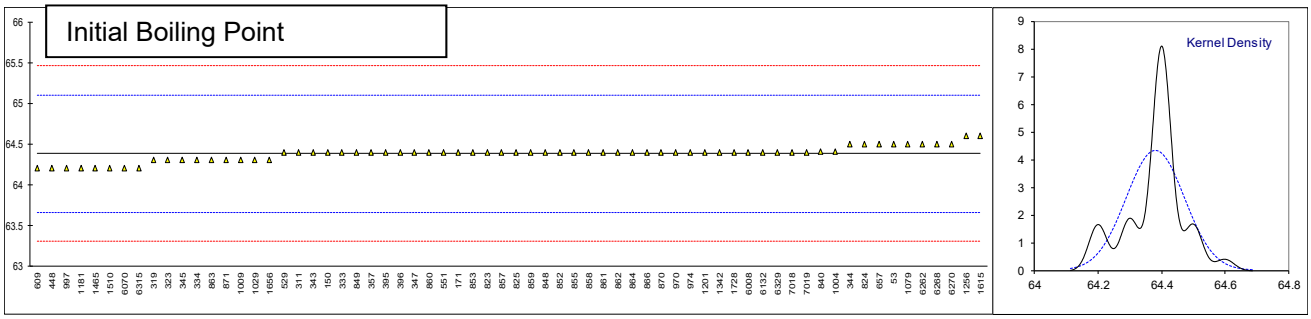


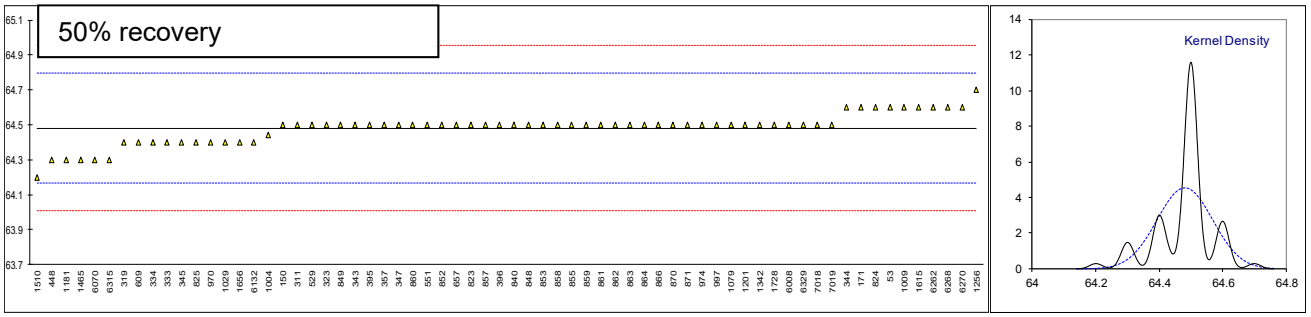


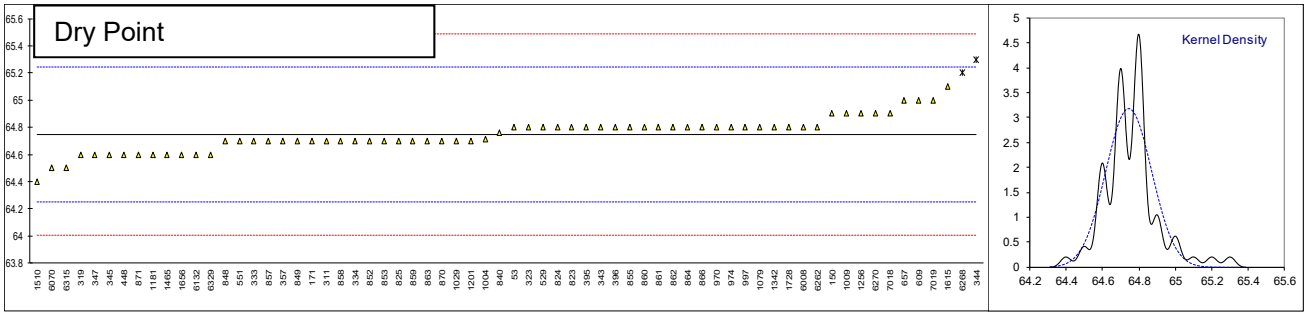
Determination of Initial Boiling Point, 50% recovered and Dry Point on sample #20160; results in °C

lab	method	IBP	mark	z(targ)	50% rec.	mark	z(targ)	DP	mark	z(targ)	range
53	D1078	64.5		0.33	64.6		0.76	64.8		0.22	0.3
150	D1078-automated	64.4		0.05	64.5		0.12	64.9		0.63	0.5
171	D1078-automated	64.4		0.05	64.6		0.76	64.7		-0.18	0.3
311	D1078-automated	64.4		0.05	64.5		0.12	64.7		-0.18	0.3
316		-----		-----	-----		-----	-----		-----	-----
319	D1078-automated	64.3		-0.22	64.4		-0.51	64.6		-0.59	0.3
323	D1078-manual	64.3		-0.22	64.5		0.12	64.8		0.22	0.5
333	D1078-automated	64.4		0.05	64.4		-0.51	64.7		-0.18	0.3
334	D1078-automated	64.3		-0.22	64.4		-0.51	64.7		-0.18	0.4
335		-----		-----	-----		-----	-----		-----	-----
343	D1078-automated	64.4		0.05	64.5		0.12	64.8		0.22	0.4
344	D1078-automated	64.5		0.33	64.6		0.76	65.3	R(0.05)	2.24	0.8
345	D1078-automated	64.3		-0.22	64.4		-0.51	64.6		-0.59	0.3
346		-----		-----	-----		-----	-----		-----	-----
347	D1078-automated	64.4		0.05	64.5		0.12	64.6		-0.59	0.2
349		-----		-----	-----		-----	-----		-----	-----
357	D1078-automated	64.4		0.05	64.5		0.12	64.7		-0.18	0.3
395	D1078-manual	64.4		0.05	64.5		0.12	64.8		0.22	0.4
396	D1078-manual	64.4		0.05	64.5		0.12	64.8		0.22	0.4
448	D1078-automated	64.2		-0.50	64.3		-1.15	64.6		-0.59	0.4
529	D1078-automated	64.4		0.05	64.5		0.12	64.8		0.22	0.4
551	D1078-automated	64.4		0.05	64.5		0.12	64.7		-0.18	0.3
554		-----		-----	-----		-----	-----		-----	-----
557		-----		-----	-----		-----	-----		-----	-----
608		-----		-----	-----		-----	-----		-----	-----
609	D1078-manual	64.2		-0.50	64.4		-0.51	65.0		1.03	0.1
646		-----		-----	-----		-----	-----		-----	-----
657	D1078-manual	64.5		0.33	64.5		0.12	65.0		1.03	0.5
663		-----		-----	-----		-----	-----		-----	-----
823	D1078-automated	64.4		0.05	64.5		0.12	64.8		0.22	0.4
824	D1078-automated	64.5		0.33	64.6		0.76	64.8		0.22	0.3
825	D1078-automated	64.4		0.05	64.4		-0.51	64.7		-0.18	0.3
840	D1078-automated	64.41		0.08	64.50		0.12	64.76		0.06	0.35
848	D1078-manual	64.4		0.05	64.5		0.12	64.7		-0.18	0.3
849	D1078-manual	64.4		0.05	64.5		0.12	64.7		-0.18	0.3
852	D1078-manual	64.4		0.05	64.5		0.12	64.7		-0.18	0.3
853	D1078-manual	64.4		0.05	64.5		0.12	64.7		-0.18	0.3
855	D1078-manual	64.4		0.05	64.5		0.12	64.8		0.22	0.4
857	D1078-manual	64.4		0.05	64.5		0.12	64.7		-0.18	0.3
858	D1078-manual	64.4		0.05	64.5		0.12	64.7		-0.18	0.3
859	D1078-manual	64.4		0.05	64.5		0.12	64.7		-0.18	0.3
860	D1078-manual	64.4		0.05	64.5		0.12	64.8		0.22	0.4
861	GB/T7534	64.4		0.05	64.5		0.12	64.8		0.22	0.4
862	D1078-manual	64.4		0.05	64.5		0.12	64.8		0.22	0.4
863	D1078-manual	64.3		-0.22	64.5		0.12	64.7		-0.18	0.4
864	D1078-automated	64.4		0.05	64.5		0.12	64.8		0.22	0.4
866	D1078-manual	64.4		0.05	64.5		0.12	64.8		0.22	0.4
870	D1078-manual	64.4		0.05	64.5		0.12	64.7		-0.18	0.3
871	D1078-manual	64.3		-0.22	64.5		0.12	64.6		-0.59	0.3
872		-----		-----	-----		-----	-----		-----	-----
912		-----		-----	-----		-----	-----		-----	-----
913		-----		-----	-----		-----	-----		-----	-----
963		-----		-----	-----		-----	-----		-----	-----
970	D1078	64.4		0.05	64.4		-0.51	64.8		0.22	0.4
974	D1078-automated	64.4		0.05	64.5		0.12	64.8		0.22	0.4
994		-----		-----	-----		-----	-----		-----	-----
997	D1078-manual	64.2		-0.50	64.5		0.12	64.8		0.22	0.6
1004	D1078-automated	64.41		0.08	64.44		-0.26	64.71		-0.14	0.30
1009	D1078-automated	64.3		-0.22	64.6		0.76	64.9		0.63	0.6
1010		-----		-----	-----		-----	-----		-----	-----
1016		-----		-----	-----		-----	-----		-----	-----
1029	D1078-automated	64.3		-0.22	64.4		-0.51	64.7		-0.18	-----
1041		-----		-----	-----		-----	-----		-----	-----
1079	D1078-automated	64.5		0.33	64.5		0.12	64.8		0.22	0.3
1120		-----		-----	-----		-----	-----		-----	-----
1181	D1078-automated	64.2		-0.50	64.3		-1.15	64.6		-0.59	0.4
1201	D1078-automated	64.4		0.05	64.5		0.12	64.7		-0.18	0.2
1246		-----		-----	-----		-----	-----		-----	-----
1256	D1078-manual	64.6		0.61	64.7		1.39	64.9		0.63	0.3
1264		-----		-----	-----		-----	-----		-----	-----
1342	D1078-automated	64.4		0.05	64.5		0.12	64.8		0.22	0.4
1465	D1078-automated	64.2		-0.50	64.3		-1.15	64.6		-0.59	0.4
1510	D1078-automated	64.2		-0.50	64.2		-1.79	64.4		-1.39	0.2

lab	method	IBP	mark	z(targ)	50% rec.	mark	z(targ)	DP	mark	z(targ)	range
1530		-----		-----	-----		-----	-----		-----	-----
1615	D1078-automated	64.6		0.61	64.6		0.76	65.1		1.44	0.5
1656	D1078-automated	64.3		-0.22	64.4		-0.51	64.6		-0.59	0.3
1728	D1078-manual	64.4		0.05	64.5		0.12	64.8		0.22	0.4
1886		-----		-----	-----		-----	-----		-----	-----
6008	D1078-automated	64.4		0.05	64.5		0.12	64.8		0.22	0.4
6061		-----		-----	-----		-----	-----		-----	-----
6070	D1078-automated	64.2		-0.50	64.3		-1.15	64.5		-0.99	0.3
6119		-----		-----	-----		-----	-----		-----	-----
6132	D1078-automated	64.4		0.05	64.4		-0.51	64.6		-0.59	0.2
6262	D1078-automated	64.5		0.33	64.6		0.76	64.8		0.22	0.3
6267		-----		-----	-----		-----	-----		-----	-----
6268	D1078-manual	64.5		0.33	64.6		0.76	65.2	R(0.05)	1.84	0.7
6270	D1078-manual	64.5		0.33	64.6		0.76	64.9		0.63	0.4
6315	D1078-automated	64.2		-0.50	64.3		-1.15	64.5		-0.99	0.3
6329	D1078-automated	64.4		0.05	64.5		0.12	64.6		-0.59	0.2
6338		-----		-----	-----		-----	-----		-----	-----
7018	D1078-manual	64.4		0.05	64.5		0.12	64.9		0.63	0.5
7019	D1078	64.4		0.05	64.5		0.12	65.0		1.03	0.6
	normality	OK			suspect			OK			
	n	66			66			64			
	outliers	0			0			2			
	mean (n)	64.38			64.48			64.74			
	st.dev. (n)	0.092			0.088			0.126			
	R(calc.)	0.26			0.25			0.35			
	st.dev.(D1078-A:11)	0.359			0.157			0.247			
	R(D1078-A:11)	1.00			0.44			0.69			
Compare											
	R(D1078-M:11)	0.69			0.42			0.84			







Determination of Iron as Fe on sample #20160; results in mg/kg

lab	method	value	mark	z(targ)	remarks
53	E394	0.004		-----	
150	E394	0.01		-----	
171	E394	<0.01		-----	
311	E394	<0.01		-----	
316		-----		-----	
319	E394	< 0.02		-----	
323	E394	0.01		-----	
333		-----		-----	
334		-----		-----	
335		-----		-----	
343	E394	<0.01		-----	
344	E394	<0.1		-----	
345	E394	<0.10		-----	
346	E394	<0,1		-----	
347	E394	0.01		-----	
349		-----		-----	
357	E394	< 0,02		-----	
395		-----		-----	
396		-----		-----	
448		-----		-----	
529		-----		-----	
551	E394	<0.01		-----	
554		-----		-----	
557		-----		-----	
608		-----		-----	
609		-----		-----	
646		-----		-----	
657	E394	< 0.01		-----	
663		-----		-----	
823	E394	0.01	C	-----	First reported 0.02
824	E394	<0.01		-----	
825	E394	0.01		-----	
840	E394	<0.01		-----	
848	E394	<0.01		-----	
849	E394	0.012		-----	
852	E394	<0.01		-----	
853	E394	<0.01		-----	
855	E394	0.01		-----	
857	E394	<0.01		-----	
858	E394	<0.01		-----	
859	E394	<0.01		-----	
860	E394	0.01		-----	
861	E394	<0.01		-----	
862	E394	<0.01		-----	
863	E394	<0.01		-----	
864	E394	0.01		-----	
866	E394	<0.01		-----	
870	E394	0.01		-----	
871	E394	0.01		-----	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970		-----		-----	
974		-----		-----	
994		-----		-----	
997	E394	0.014	C	-----	First reported 0.04
1004	E394	0.013		-----	
1009	In house	0.00858		-----	
1010		-----		-----	
1016		-----		-----	
1029	E394	<0.01		-----	
1041		-----		-----	
1079	E394	<0.01		-----	
1120		-----		-----	
1181	E394	0		-----	
1201	E394	0.01		-----	
1246		-----		-----	
1256	E394	<0.01		-----	
1264		-----		-----	
1342	E394	<0.05		-----	
1465	E394	0.0005		-----	
1510		-----		-----	
1530		-----		-----	
1615	E394	<0.10	C	-----	First reported 0.04

lab	method	value	mark	z(targ)	remarks
1656	E394	<0.1		-----	
1728	E394	0.06	C	-----	First reported 0.025
1886		-----		-----	
6008	E394	0.002		-----	
6061		-----		-----	
6070	E394	0.0045122		-----	
6119		-----		-----	
6132		-----		-----	
6262	E394	<0.01		-----	
6267		-----		-----	
6268	E394	0.00		-----	
6270	E394	0.00015		-----	
6315	E394	0		-----	
6329	E394	<0.01		-----	
6338		-----		-----	
7018	E394	<0.02		-----	
7019	E394	<0.02		-----	
	n	56			
	mean (n)	<0.1			

Determination of Miscibility with water (Hydrocarbons) on sample #20160;

lab	method	value	mark	z(targ)	remarks
53	D1722	Pass		-----	
150	D1722	Passes Test		-----	
171	D1722	Passes Test		-----	
311	D1722	pass		-----	
316		-----		-----	
319	D1722	pass test		-----	
323	D1722	pass		-----	
333	D1722	Pass test		-----	
334	D1722	pass		-----	
335	D1722	pass test		-----	
343	D1722	PASS		-----	
344	D1722	Pass		-----	
345	D1722	PASSES TEST		-----	
346	D1722	Pass		-----	
347	D1722	Pass		-----	
349		-----		-----	
357	D1722	Pass		-----	
395	D1722	PASS		-----	
396	D1722	Pass		-----	
448	D1722	Pass		-----	
529	D1722	pass		-----	
551	D1722	Pass		-----	
554		-----		-----	
557		-----		-----	
608	D1722	Passes test		-----	
609	D1722	Pass Test		-----	
646		-----		-----	
657	D1722	Pass		-----	
663	D1722	Passes Test		-----	
823	D1722	Pass		-----	
824	D1722	pass		-----	
825	D1722	passes Test		-----	
840	D1722	Passes test		-----	
848	D1722	passes		-----	
849	D1722	Passes test		-----	
852	D1722	pass test		-----	
853	D1722	Passes test		-----	
855	D1722	Pass		-----	
857	D1722	Passes test		-----	
858	D1722	pass		-----	
859	D1722	Pass		-----	
860	D1722	Pass		-----	
861	GB/T6324.1	Pass		-----	
862	D1722	pass		-----	
863	D1722	passes Test		-----	
864	D1722	Passes test		-----	
866	D1722	PASS		-----	
870	D1722	Pass		-----	
871	D1722	Pass		-----	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970	D1722	Pass		-----	
974	D1722	Pass		-----	
994		-----		-----	
997	D1722	pass		-----	
1004	D1722	Pass Test		-----	
1009	D1722	Pass		-----	
1010	D1722	Pass		-----	
1016	D1722	Passing test		-----	
1029	D1722	PASS		-----	
1041	D1722	pass		-----	
1079	D1722	pass		-----	
1120	E346	pass		-----	
1181	D1722	Pass		-----	
1201	D1722	pass		-----	
1246		-----		-----	
1256	D1722	Pass		-----	
1264		-----		-----	
1342	D1722	PASS		-----	
1465	D1722	Pass		-----	
1510	D1722	Pass		-----	
1530	D1722	pass		-----	
1615	D1722	Passes Test		-----	

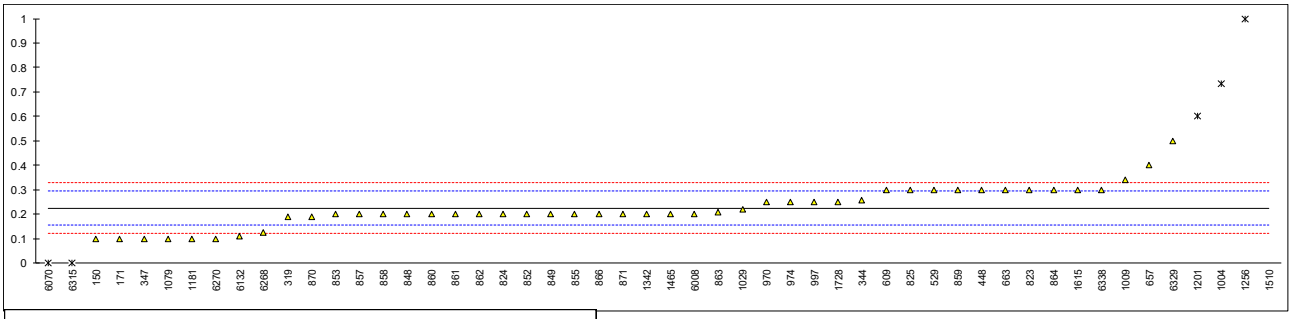
lab	method	value	mark	z(targ)	remarks
1656		-----		-----	
1728	D1722	PASS		-----	
1886		-----		-----	
6008	D1722	Pass		-----	
6061		-----		-----	
6070	D1722	Pass		-----	
6119		-----		-----	
6132	D1722	Pass		-----	
6262	D1722	passes		-----	
6267		-----		-----	
6268	D1722	Passes test		-----	
6270	D1722	Passes test		-----	
6315	D1722	passed		-----	
6329	D1722	Passes Test		-----	
6338	D1722	Pass test		-----	
7018	D1722	Passes Test		-----	
7019	D1722	Pass		-----	
	n	75			
	mean (n)	Passes Test			

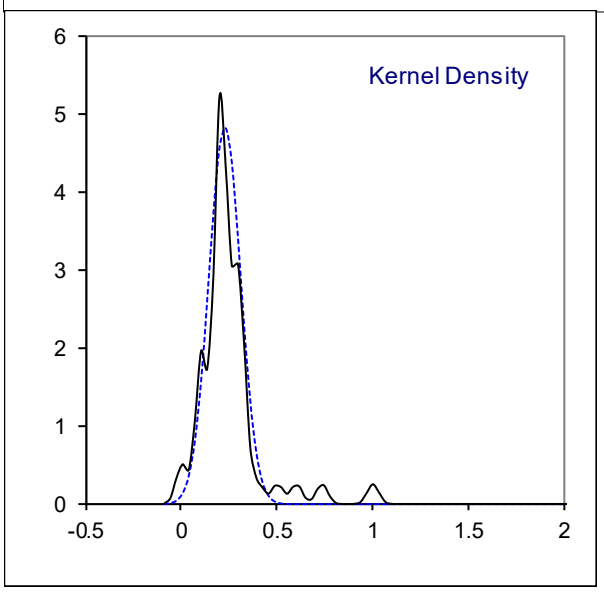
Determination of Nonvolatile Matter on sample #20160; results in mg/100 mL

lab	method	value	mark	z(targ)	remarks
53	D1353	<0.5		-----	
150	D1353	0.1	C	-3.60	First reported 0.8
171	D1353	0.10		-3.60	
311	D1353	<1		-----	
316		-----		-----	
319	D1353	0.19		-1.01	
323	D1353	<1		-----	
333		-----		-----	
334		-----		-----	
335		-----		-----	
343	D1353	<0.1		<-3.60	Possibly a false negative test result?
344	D1353	0.256		0.90	
345		-----		-----	
346		-----		-----	
347	D1353	0.1		-3.60	
349		-----		-----	
357	D1353	< 1		-----	
395		-----		-----	
396	D1353	<3		-----	
448	D1353	0.3		2.17	
529	D1353	0.30		2.17	
551		-----		-----	
554		-----		-----	
557		-----		-----	
608		-----		-----	
609	D1353	0.3	C	2.17	First reported 0.7
646		-----		-----	
657	D1353	0.4		5.05	
663	D1353	0.3		2.17	
823	D1353	0.3		2.17	
824	D1353	0.2		-0.72	
825	D1353	0.3		2.17	
840		-----		-----	
848	D1353	0.2		-0.72	
849	D1353	0.2		-0.72	
852	D1353	0.2		-0.72	
853	D1353	0.2		-0.72	
855	D1353	0.2		-0.72	
857	D1353	0.2		-0.72	
858	D1353	0.2		-0.72	
859	D1353	0.3		2.17	
860	D1353	0.2		-0.72	
861	GB/T6324.2	0.2		-0.72	
862	D1353	0.2		-0.72	
863	D1353	0.21		-0.43	
864	D1353	0.3		2.17	
866	D1353	0.20		-0.72	
870	D1353	0.19		-1.01	
871	D1353	0.2		-0.72	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970	D1353	0.25		0.73	
974	D1353	0.25		0.73	
994		-----		-----	
997	D1353	0.25		0.73	
1004	D1353	0.733	R(0.01)	14.67	
1009	D1353	0.34		3.32	
1010		-----		-----	
1016	D1353	<0.1		<-3.60	Possibly a false negative test result?
1029	D1353	0.221		-0.11	
1041	D1353	<0,1		<-3.60	Possibly a false negative test result?
1079	D1353	0.1		-3.60	
1120		-----		-----	
1181	D1353	0.1		-3.60	
1201	D1353	0.6	C,R(0.05)	10.83	First reported 6
1246		-----		-----	
1256	D1353	1	R(0.01)	22.37	
1264		-----		-----	
1342	D1353	0.2		-0.72	
1465	D1353	0.2		-0.72	
1510	D1353	8.0	R(0.01)	224.39	
1530		-----		-----	
1615	D1353	0.3		2.17	

lab	method	value	mark	z(targ)	remarks
1656	D1353	<1		-----	
1728	D1353	0.25		0.73	
1886		-----		-----	
6008	D1353	0.2		-0.72	
6061		-----		-----	
6070	D1353	0.0	R(0.01)	-6.49	
6119		-----		-----	
6132	D1353	0.11		-3.31	
6262	D1353	<1		-----	
6267		-----		-----	
6268	D1353	0.126		-2.85	
6270	D1353	0.1		-3.60	
6315	D1353	0	R(0.01)	-6.49	
6329	D1353	0.5		7.94	
6338	D1353	0.3		2.17	
7018	D1353	<0.5		-----	
7019		-----		-----	

normality	suspect
n	46
outliers	6
mean (n)	0.225
st.dev. (n)	0.0828
R(calc.)	0.232
st.dev.(D1353:13)	0.0347
R(D1353:13)	0.097



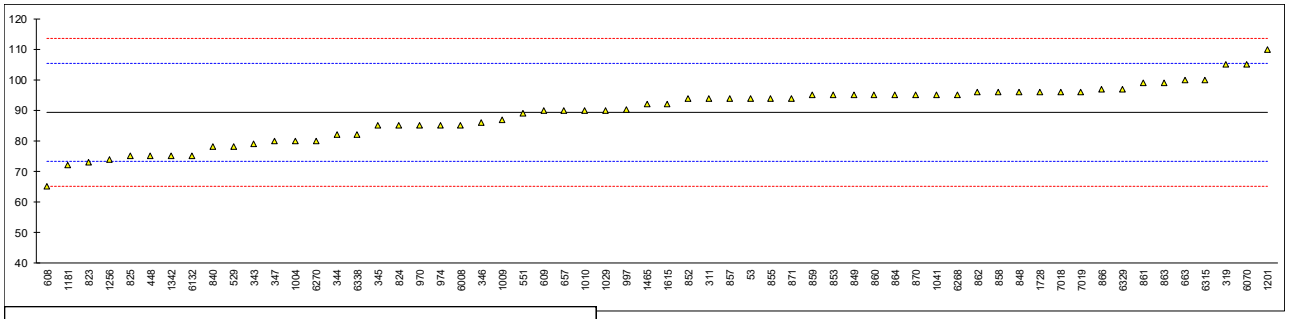


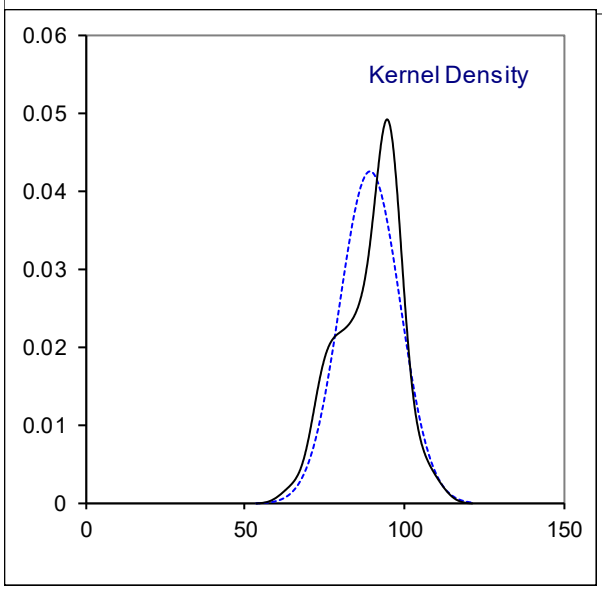
Determination of Permanganate Time Test at 15°C on sample #20160; results in minutes

lab	method	value	mark	z(targ)	remarks
53	D1363	94		0.59	
150	D1363	>60		-----	
171	D1363	>60		-----	
311	D1363	94		0.59	
316		-----		-----	
319	D1363	105		1.96	
323	D1363	>60		-----	
333	D1363	>60		-----	
334		-----		-----	
335	D1363	>60		-----	
343	D1363	79		-1.28	
344	D1363	82		-0.91	
345	D1363	85		-0.53	
346	D1363	86		-0.41	
347	D1363	80		-1.15	
349		-----		-----	
357	D1363	> 80		-----	
395		-----		-----	
396		-----		-----	
448	D1363	75		-1.78	
529	D1363	78		-1.40	
551	D1363	89		-0.03	
554		-----		-----	
557		-----		-----	
608	D1363	65		-3.02	
609	D1363	90		0.09	
646		-----		-----	
657	D1363	90		0.09	
663	D1363	100		1.34	
823	D1363	73		-2.03	
824	D1363	85		-0.53	
825	D1363	75		-1.78	
840	D1363	78		-1.40	
848	D1363	96		0.84	
849	D1363	95		0.71	
852	D1363	94		0.59	
853	D1363	95		0.71	
855	D1363	94		0.59	
857	D1363	94		0.59	
858	D1363	96		0.84	
859	D1363	95		0.71	
860	D1363	95		0.71	
861	GB/T6324.3	99		1.21	
862	D1363	96		0.84	
863	D1363	99		1.21	
864	D1363	95		0.71	
866	D1363	97		0.96	
870	D1363	95		0.71	
871	D1363	94		0.59	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970	D1363	85		-0.53	
974	D1363	85		-0.53	
994		-----		-----	
997	D1363	90.3		0.13	
1004	D1363	80		-1.15	
1009	D1363	87		-0.28	
1010	D1363	90		0.09	
1016		-----		-----	
1029	D1363	90		0.09	
1041	D1363	95		0.71	
1079	D1363	>50		-----	
1120		-----		-----	
1181	D1363	72		-2.15	
1201	D1363	110		2.58	
1246		-----		-----	
1256	D1363	74		-1.90	
1264		-----		-----	
1342	D1363	75		-1.78	
1465	D1363	92		0.34	
1510		-----		-----	
1530		-----		-----	
1615	D1363	92		0.34	

lab	method	value	mark	z(targ)	remarks
1656	D1363	>50		-----	
1728	D1363	96		0.84	
1886		-----		-----	
6008	D1363	85		-0.53	
6061		-----		-----	
6070	D1363	105		1.96	
6119		-----		-----	
6132	D1363	75		-1.78	
6262	D1363	>50		-----	
6267		-----		-----	
6268	D1363	95		0.71	
6270	D1363	80		-1.15	
6315	D1363	100		1.34	
6329	D1363	97		0.96	
6338	D1363	82		-0.91	
7018	D1363	96		0.84	
7019	D1363	96.0		0.84	

normality	OK
n	60
outliers	0
mean (n)	89.27
st.dev. (n)	9.370
R(calc.)	26.24
st.dev.(D1363:06)	8.034
R(D1363:06)	22.50





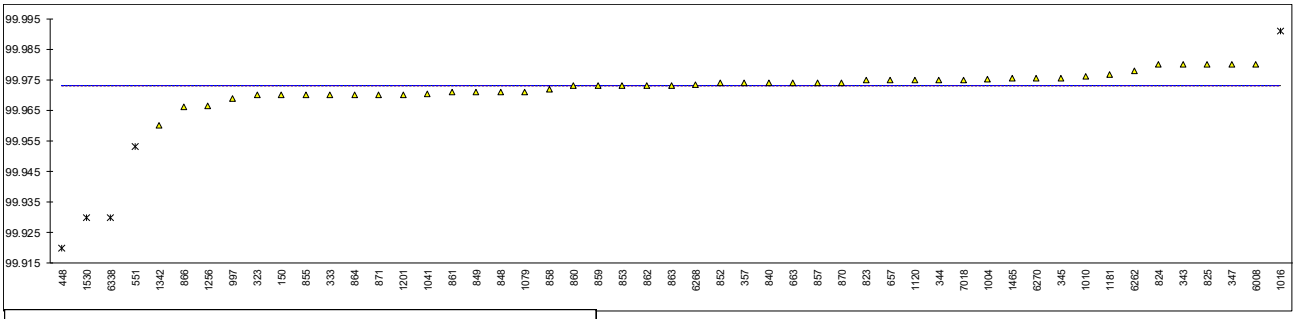
Determination of Purity by GC as received on sample #20160; results in %M/M

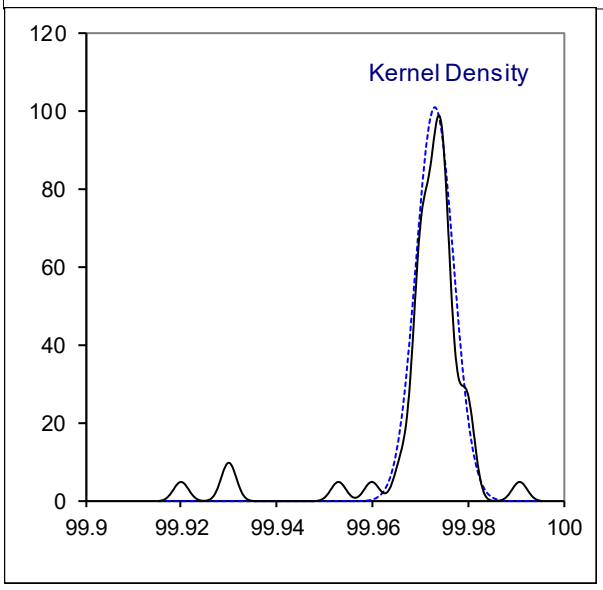
lab	method	value	mark	z(targ)	remarks
53		-----		-----	
150	IMPCA001	99.97		-----	
171		-----		-----	
311		-----		-----	
316		-----		-----	
319		-----		-----	
323	IMPCA001	99.97		-----	
333	IMPCA001	99.97		-----	
334		-----		-----	
335		-----		-----	
343	IMPCA001	99.98		-----	
344	IMPCA001	99.975		-----	
345	IMPCA001	99.9756		-----	
346		-----		-----	
347	IMPCA001	99.98		-----	
349		-----		-----	
357	IMPCA001	99.974		-----	
395		-----		-----	
396		-----		-----	
448	IMPCA001	99.92	C,R(0.01)	-----	First reported 99.99
529		-----		-----	
551	IMPCA001	99.953	R(0.01)	-----	
554		-----		-----	
557		-----		-----	
608		-----		-----	
609		-----		-----	
646		-----		-----	
657	IMPCA001	99.9749		-----	
663	IMPCA001	99.974		-----	
823	IMPCA001	99.9749		-----	
824	IMPCA001	99.98		-----	
825	IMPCA001	99.98		-----	
840	IMPCA001	99.974		-----	
848	IMPCA001	99.971		-----	
849	IMPCA001	99.971		-----	
852	IMPCA001	99.974		-----	
853	IMPCA001	99.973		-----	
855	IMPCA001	99.97		-----	
857	IMPCA001	99.974		-----	
858	IMPCA001	99.972		-----	
859	IMPCA001	99.973		-----	
860	IMPCA001	99.973		-----	
861	GB/T338	99.971		-----	
862	IMPCA001	99.973		-----	
863	IMPCA001	99.973		-----	
864	IMPCA001	99.97		-----	
866	IMPCA001	99.966		-----	
870	IMPCA001	99.974	C	-----	First reported 99.992
871	IMPCA001	99.970		-----	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970		-----		-----	
974		-----		-----	
994		-----		-----	
997	IMPCA001	99.969		-----	
1004	IMPCA001	99.9752		-----	
1009		-----		-----	
1010	IMPCA001	99.9762		-----	
1016	In house	99.991	R(0.01)	-----	
1029		-----		-----	
1041	IMPCA001	99.97035		-----	
1079	IMPCA001	99.971		-----	
1120	E346	99.9749		-----	
1181	IMPCA001	99.9767		-----	
1201	IMPCA001	99.97		-----	
1246		-----		-----	
1256	IMPCA001	99.9665		-----	
1264		-----		-----	
1342	IMPCA001	99.96		-----	
1465	IMPCA001	99.975425		-----	
1510		-----		-----	
1530	IMPCA001	99.93	C,R(0.01)	-----	First reported 99.952
1615		-----		-----	

lab	method	value	mark	z(targ)	remarks
1656		-----	W	-----	Test result withdrawn reported 99.99
1728		-----		-----	
1886		-----		-----	
6008	IMPCA001	99.98		-----	
6061		-----		-----	
6070		-----	W	-----	Test result withdrawn reported 99.99586
6119		-----		-----	
6132		-----		-----	
6262	IMPCA001	99.9779		-----	
6267		-----		-----	
6268	IMPCA001	99.9735		-----	
6270	IMPCA001	99.9755		-----	
6315		-----		-----	
6329		-----		-----	
6338	IMPCA001	99.93	C,R(0.01)	-----	First reported 99.94
7018	IMPCA001	99.975		-----	
7019		-----		-----	

	normality	suspect
	n	46
	outliers	5
	mean (n)	99.97321
	st.dev. (n)	0.003953
	R(calc.)	0.01107
	st.dev.(lit)	unknown
	R(lit)	unknown

Compare R(iis19C10) = 0.01615





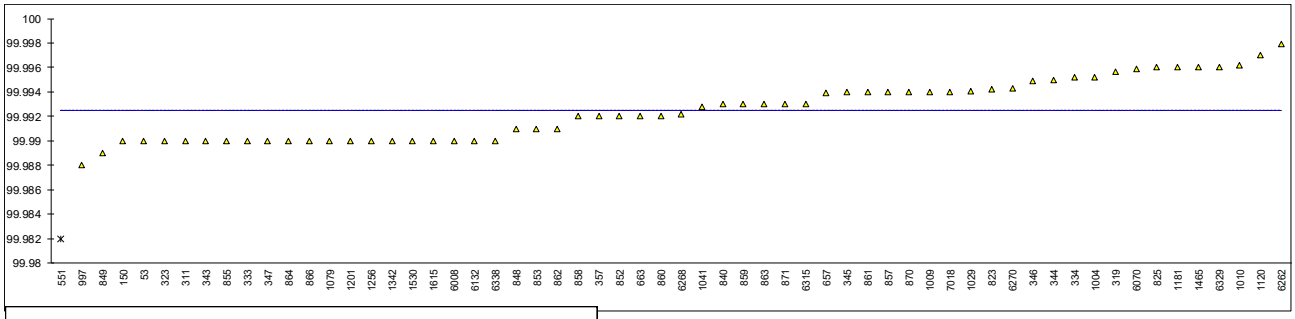
Determination of Purity by GC on dry basis on sample #20160; results in %M/M

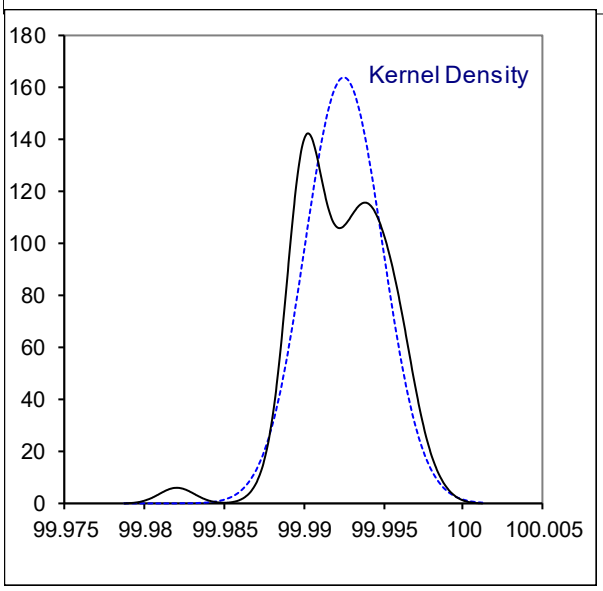
lab	method	value	mark	z(targ)	remarks
53	IMPCA001	99.99		-----	
150	IMPCA001	99.99		-----	
171		-----		-----	
311	IMPCA001	99.99		-----	
316		-----		-----	
319	IMPCA001	99.99563		-----	
323	IMPCA001	99.99		-----	
333	IMPCA001	99.99		-----	
334	IMPCA001	99.9952		-----	
335		-----		-----	
343	IMPCA001	99.99		-----	
344	IMPCA001	99.995		-----	
345	IMPCA001	99.9940		-----	
346	IMPCA001	99.9949		-----	
347	IMPCA001	99.99		-----	
349		-----		-----	
357	IMPCA001	99.992		-----	
395		-----		-----	
396		-----		-----	
448		-----		-----	
529		-----		-----	
551	IMPCA001	99.982	R(0.01)	-----	
554		-----		-----	
557		-----		-----	
608		-----		-----	
609		-----		-----	
646		-----		-----	
657	IMPCA001	99.9939		-----	
663	IMPCA001	99.992		-----	
823	IMPCA001	99.9942		-----	
824	IMPCA001	>99.99		-----	
825	IMPCA001	99.9960		-----	
840	IMPCA001	99.993		-----	
848	IMPCA001	99.991		-----	
849	IMPCA001	99.989		-----	
852	IMPCA001	99.992		-----	
853	IMPCA001	99.991		-----	
855	IMPCA001	99.99		-----	
857	IMPCA001	99.994		-----	
858	IMPCA001	99.992		-----	
859	IMPCA001	99.993		-----	
860	IMPCA001	99.992		-----	
861	GB/T338	99.994		-----	
862	IMPCA001	99.991		-----	
863	IMPCA001	99.993		-----	
864	IMPCA001	99.99		-----	
866	IMPCA001	99.99		-----	
870	IMPCA001	99.994		-----	
871	IMPCA001	99.993		-----	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970		-----		-----	
974		-----		-----	
994		-----		-----	
997	IMPCA001	99.988		-----	
1004	IMPCA001	99.9952		-----	
1009	IMPCA001	99.994		-----	
1010	IMPCA001	99.9962		-----	
1016		-----		-----	
1029	IMPCA001	99.9941		-----	
1041	IMPCA001	99.99275		-----	
1079	IMPCA001	99.990		-----	
1120	E346	99.997		-----	
1181	IMPCA001	99.996		-----	
1201	IMPCA001	99.99		-----	
1246		-----		-----	
1256	IMPCA001	99.99		-----	
1264		-----		-----	
1342	IMPCA001	99.99		-----	
1465	IMPCA001	99.996		-----	
1510		-----		-----	
1530	IMPCA001	99.99	C	-----	First reported 99.976
1615	IMPCA001	99.99		-----	

lab	method	value	mark	z(targ)	remarks
1656		-----		-----	
1728		-----		-----	
1886		-----		-----	
6008	IMPCA001	99.99		-----	
6061		-----		-----	
6070	IMPCA001	99.99586		-----	
6119		-----		-----	
6132	IMPCA001	99.99		-----	
6262	IMPCA001	99.9979		-----	
6267		-----		-----	
6268	IMPCA001	99.9922		-----	
6270	IMPCA001	99.9943		-----	
6315	IMPCA001	99.993		-----	
6329	IMPCA001	99.996		-----	
6338	IMPCA001	99.99		-----	
7018	IMPCA001	99.994		-----	
7019		-----		-----	

normality	OK
n	59
outliers	1
mean (n)	99.99249
st.dev. (n)	0.002439
R(calc.)	0.00683
st.dev.(lit)	unknown
R(lit)	unknown

Compare R(iis19C10) = 0.00825





Determination of Acetone on sample #20160; results in mg/kg

lab	method	value	mark	z(targ)	remarks
53	IMPCA001	<5		-----	
150	IMPCA001	<5		-----	
171		-----		-----	
311	IMPCA001	<5		-----	
316		-----		-----	
319	IMPCA001	0		-----	
323	IMPCA001	<5		-----	
333	IMPCA001	<10		-----	
334	IMPCA001	<10		-----	
335		-----		-----	
343	IMPCA001	<5		-----	
344	IMPCA001	0		-----	
345	IMPCA001	<5		-----	
346	IMPCA001	<5		-----	
347	IMPCA001	<5		-----	
349	IMPCA001	<5		-----	
357	IMPCA001	< 5		-----	
395		-----		-----	
396		-----		-----	
448	IMPCA001	0.0		-----	
529		-----		-----	
551	IMPCA001	<10		-----	
554		-----		-----	
557		-----		-----	
608		-----		-----	
609		-----		-----	
646		-----		-----	
657	IMPCA001	< 5		-----	
663	IMPCA001	<5		-----	
823	IMPCA001	<5		-----	
824	IMPCA001	<5		-----	
825	IMPCA001	0		-----	
840	IMPCA001	<5		-----	
848	IMPCA001	<5		-----	
849	IMPCA001	<5		-----	
852	IMPCA001	<5		-----	
853	IMPCA001	<5		-----	
855	IMPCA001	<5		-----	
857	IMPCA001	<5		-----	
858	IMPCA001	<5		-----	
859	IMPCA001	<5		-----	
860	IMPCA001	<5		-----	
861	GB/T338	<5		-----	
862	IMPCA001	<5		-----	
863	IMPCA001	<5		-----	
864	IMPCA001	<10		-----	
866	IMPCA001	<5		-----	
870	IMPCA001	<5		-----	
871	IMPCA001	<5		-----	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970		-----		-----	
974		-----		-----	
994		-----		-----	
997		-----		-----	
1004	IMPCA001	0.54		-----	
1009	IMPCA001	<5		-----	
1010	IMPCA001	<5		-----	
1016	In house	<10		-----	
1029	IMPCA001	<5		-----	
1041	IMPCA001	<5		-----	
1079	IMPCA001	6		-----	
1120	E346	Not detected		-----	
1181	IMPCA001	0		-----	
1201	IMPCA001	<1		-----	
1246		-----		-----	
1256	IMPCA001	0		-----	
1264		-----		-----	
1342	IMPCA001	0.0		-----	
1465	IMPCA001	0		-----	
1510		-----		-----	
1530	IMPCA001	<5	C	-----	First reported 26
1615	IMPCA001	<0.10		-----	

lab	method	value	mark	z(targ)	remarks
1656		-----		-----	
1728		-----		-----	
1886		-----		-----	
6008	IMPCA001	0		-----	
6061		-----		-----	
6070	IMPCA001	0.0		-----	
6119	In house	n.d.		-----	
6132	IMPCA001	<5		-----	
6262	IMPCA001	<1		-----	
6267		-----		-----	
6268	IMPCA001	0		-----	
6270	IMPCA001	0		-----	
6315	IMPCA001	<5		-----	
6329	IMPCA001	<5		-----	
6338	IMPCA001	<5		-----	
7018	IMPCA001	<5		-----	
7019	IMPCA001	<5.0		-----	
	n	63			
	mean (n)	<10			

Determination of Benzene on sample #20160; results in mg/kg

lab	method	value	mark	z(targ)	remarks
53		-----		-----	
150	IMPCA001	4.1		-----	
171		-----		-----	
311	IMPCA001	<5		-----	
316		-----		-----	
319	IMPCA001	3.5		-----	
323	IMPCA001	<5		-----	
333		-----		-----	
334	IMPCA001	3.1		-----	
335		-----		-----	
343	IMPCA001	<5		-----	
344	IMPCA001	2.95		-----	
345	IMPCA001	<5		-----	
346		-----		-----	
347		-----		-----	
349		-----		-----	
357	IMPCA001	3		-----	
395		-----		-----	
396		-----		-----	
448	IMPCA001	4.247		-----	
529		-----		-----	
551	IMPCA001	4		-----	
554		-----		-----	
557		-----		-----	
608		-----		-----	
609		-----		-----	
646		-----		-----	
657	IMPCA001	< 5		-----	
663	IMPCA001	5.18		-----	
823	IMPCA001	<5		-----	
824	IMPCA001	<5		-----	
825	IMPCA001	0		-----	
840	IMPCA001	<5		-----	
848	IMPCA001	<5		-----	
849	IMPCA001	<5		-----	
852	IMPCA001	<5		-----	
853	IMPCA001	<5		-----	
855	IMPCA001	<5		-----	
857	IMPCA001	<5		-----	
858	IMPCA001	<5		-----	
859	IMPCA001	<5		-----	
860	IMPCA001	4		-----	
861	GB/T338	<5		-----	
862	IMPCA001	<5		-----	
863	IMPCA001	<5		-----	
864	IMPCA001	<10		-----	
866	IMPCA001	<5		-----	
870	IMPCA001	<5		-----	
871	IMPCA001	<5		-----	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970		-----		-----	
974		-----		-----	
994		-----		-----	
997		-----		-----	
1004	IMPCA001	0.94		-----	
1009	IMPCA001	<5		-----	
1010	IMPCA001	<5		-----	
1016		-----		-----	
1029	IMPCA001	<5		-----	
1041		-----		-----	
1079	IMPCA001	0		-----	
1120		-----		-----	
1181	IMPCA001	4.19526		-----	
1201	IMPCA001	<1		-----	
1246		-----		-----	
1256		-----		-----	
1264		-----		-----	
1342	IMPCA001	4		-----	
1465	IMPCA001	0		-----	
1510		-----		-----	
1530	IMPCA001	8		-----	
1615	IMPCA001	4.56		-----	

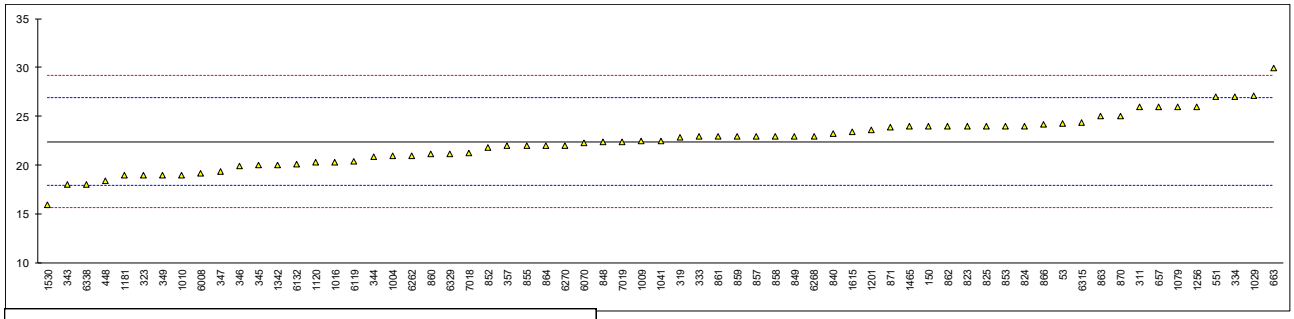
lab	method	value	mark	z(targ)	remarks
1656		-----		-----	
1728		-----		-----	
1886		-----		-----	
6008	IMPCA001	3.7		-----	
6061		-----		-----	
6070	IMPCA001	0.0		-----	
6119	In house	n.d.		-----	
6132	IMPCA001	<5		-----	
6262	IMPCA001	<1		-----	
6267		-----		-----	
6268	IMPCA001	0		-----	
6270	IMPCA001	0		-----	
6315	IMPCA001	<5		-----	
6329	IMPCA001	5.2		-----	
6338	IMPCA001	5		-----	
7018		-----		-----	
7019		-----		-----	
	n	53			
	mean (n)	<10			

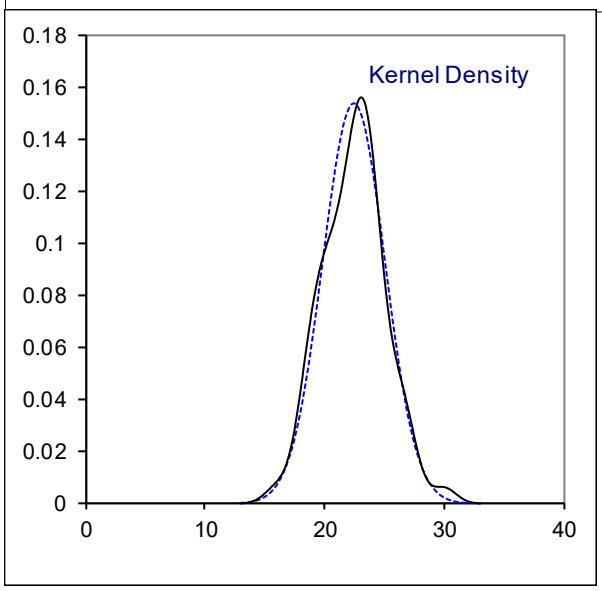
Determination of Ethanol on sample #20160; results in mg/kg

lab	method	value	mark	z(targ)	remarks
53	IMPCA001	24.3		0.83	
150	IMPCA001	24		0.69	
171		-----		-----	
311	IMPCA001	26		1.58	
316		-----		-----	
319	IMPCA001	22.9		0.21	
323	IMPCA001	19		-1.53	
333	IMPCA001	23		0.25	
334	IMPCA001	27		2.03	
335		-----		-----	
343	IMPCA001	18		-1.97	
344	IMPCA001	20.90		-0.68	
345	IMPCA001	20		-1.08	
346	IMPCA001	19.936		-1.11	
347	IMPCA001	19.4	C	-1.35	First reported 15.4
349	IMPCA001	19		-1.53	
357	IMPCA001	22		-0.19	
395		-----		-----	
396		-----		-----	
448	IMPCA001	18.458		-1.77	
529		-----		-----	
551	IMPCA001	27		2.03	
554		-----		-----	
557		-----		-----	
608		-----		-----	
609		-----		-----	
646		-----		-----	
657	IMPCA001	26		1.58	
663	IMPCA001	29.97	C	3.35	First reported 51.26
823	IMPCA001	24		0.69	
824	IMPCA001	24		0.69	
825	IMPCA001	24		0.69	
840	IMPCA001	23.2		0.34	
848	IMPCA001	22.4		-0.02	
849	IMPCA001	23		0.25	
852	IMPCA001	21.8		-0.28	
853	IMPCA001	24		0.69	
855	IMPCA001	22		-0.19	
857	IMPCA001	23		0.25	
858	IMPCA001	23		0.25	
859	IMPCA001	23		0.25	
860	IMPCA001	21.2		-0.55	
861	GB/T338	23		0.25	
862	IMPCA001	24		0.69	
863	IMPCA001	25		1.14	
864	IMPCA001	22		-0.19	
866	IMPCA001	24.2		0.78	
870	IMPCA001	25		1.14	
871	IMPCA001	23.9		0.65	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970		-----		-----	
974		-----		-----	
994		-----		-----	
997		-----		-----	
1004	IMPCA001	20.96		-0.66	
1009	IMPCA001	22.44		0.00	
1010	IMPCA001	19		-1.53	
1016	In house	20.330		-0.94	
1029	IMPCA001	27.1	C	2.07	First reported 34.5
1041	IMPCA001	22.5		0.03	
1079	IMPCA001	26		1.58	
1120	E346	20.30		-0.95	
1181	IMPCA001	18.9909		-1.53	
1201	IMPCA001	23.6		0.52	
1246		-----		-----	
1256	IMPCA001	26		1.58	
1264		-----		-----	
1342	IMPCA001	20		-1.08	
1465	IMPCA001	23.95		0.67	
1510		-----		-----	
1530	IMPCA001	16	C	-2.86	First reported 7
1615	IMPCA001	23.45	C	0.45	First reported 35.5

lab	method	value	mark	z(targ)	remarks
1656		-----		-----	
1728		-----		-----	
1886		-----		-----	
6008	IMPCA001	19.19		-1.44	
6061		-----		-----	
6070	IMPCA001	22.3004		-0.06	
6119	In house	20.4		-0.91	
6132	IMPCA001	20.08	C	-1.05	First reported 13.81
6262	IMPCA001	21		-0.64	
6267		-----		-----	
6268	IMPCA001	23		0.25	
6270	IMPCA001	22		-0.19	
6315	IMPCA001	24.4		0.87	
6329	IMPCA001	21.2		-0.55	
6338	IMPCA001	18		-1.97	
7018	IMPCA001	21.3		-0.51	
7019	IMPCA001	22.41		-0.01	

normality	OK
n	65
outliers	0
mean (n)	22.438
st.dev. (n)	2.5971
R(calc.)	7.272
st.dev.(Horwitz)	2.2478
R(Horwitz)	6.294



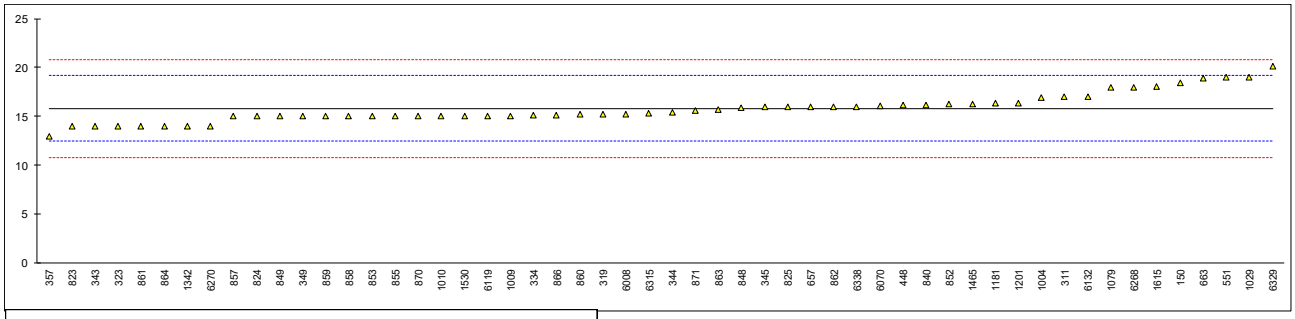


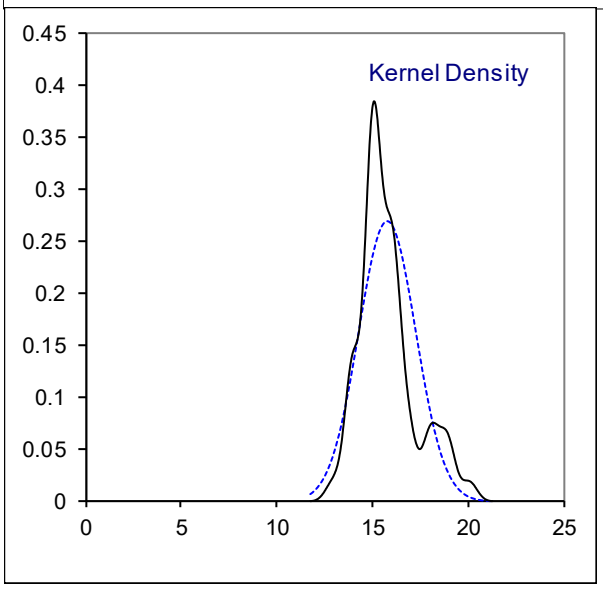
Determination of Toluene on sample #20160; results in mg/kg

lab	method	value	mark	z(targ)	remarks
53		-----		-----	
150	IMPCA001	18.4		1.55	
171		-----		-----	
311	IMPCA001	17		0.71	
316		-----		-----	
319	IMPCA001	15.2		-0.37	
323	IMPCA001	14		-1.09	
333		-----		-----	
334	IMPCA001	15.1		-0.43	
335		-----		-----	
343	IMPCA001	14		-1.09	
344	IMPCA001	15.4		-0.25	
345	IMPCA001	16		0.11	
346		-----		-----	
347		-----		-----	
349	IMPCA001	15		-0.49	
357	IMPCA001	13		-1.69	
395		-----		-----	
396		-----		-----	
448	IMPCA001	16.1231		0.19	
529		-----		-----	
551	IMPCA001	19		1.91	
554		-----		-----	
557		-----		-----	
608		-----		-----	
609		-----		-----	
646		-----		-----	
657	IMPCA001	16		0.11	
663	IMPCA001	18.92		1.86	
823	IMPCA001	14		-1.09	
824	IMPCA001	15		-0.49	
825	IMPCA001	16		0.11	
840	IMPCA001	16.2		0.23	
848	IMPCA001	15.9		0.05	
849	IMPCA001	15		-0.49	
852	IMPCA001	16.3		0.29	
853	IMPCA001	15		-0.49	
855	IMPCA001	15		-0.49	
857	IMPCA001	15		-0.49	
858	IMPCA001	15		-0.49	
859	IMPCA001	15		-0.49	
860	IMPCA001	15.2		-0.37	
861	GB/T338	14		-1.09	
862	IMPCA001	16		0.11	
863	IMPCA001	15.7		-0.07	
864	IMPCA001	14		-1.09	
866	IMPCA001	15.1		-0.43	
870	IMPCA001	15		-0.49	
871	IMPCA001	15.6		-0.13	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970		-----		-----	
974		-----		-----	
994		-----		-----	
997		-----		-----	
1004	IMPCA001	16.93		0.67	
1009	IMPCA001	15.08		-0.44	
1010	IMPCA001	15		-0.49	
1016		-----		-----	
1029	IMPCA001	19		1.91	
1041		-----		-----	
1079	IMPCA001	18		1.31	
1120		-----		-----	
1181	IMPCA001	16.39592		0.35	
1201	IMPCA001	16.4		0.35	
1246		-----		-----	
1256		-----		-----	
1264		-----		-----	
1342	IMPCA001	14		-1.09	
1465	IMPCA001	16.30		0.29	
1510		-----		-----	
1530	IMPCA001	15	C	-0.49	First reported 2
1615	IMPCA001	18.07		1.35	

lab	method	value	mark	z(targ)	remarks
1656		-----		-----	
1728		-----		-----	
1886		-----		-----	
6008	IMPCA001	15.2		-0.37	
6061		-----		-----	
6070	IMPCA001	16.0406		0.14	
6119	In house	15		-0.49	
6132	IMPCA001	17		0.71	
6262	IMPCA001	<1		<-8.87	Possibly a false negative test result?
6267		-----		-----	
6268	IMPCA001	18		1.31	
6270	IMPCA001	14		-1.09	
6315	IMPCA001	15.3		-0.31	
6329	IMPCA001	20.1		2.57	
6338	IMPCA001	16	C	0.11	First reported 30
7018		-----		-----	
7019		-----		-----	

normality	OK
n	54
outliers	0
mean (n)	15.814
st.dev. (n)	1.4885
R(calc.)	4.168
st.dev.(Horwitz)	1.6699
R(Horwitz)	4.676



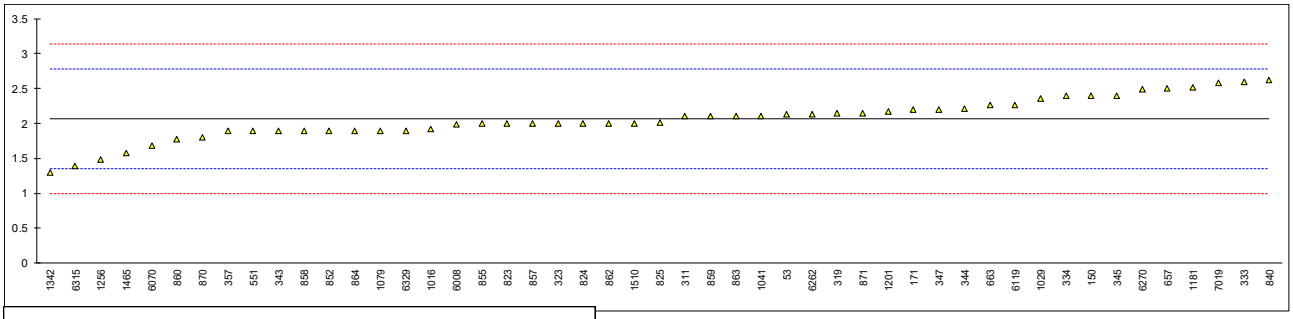


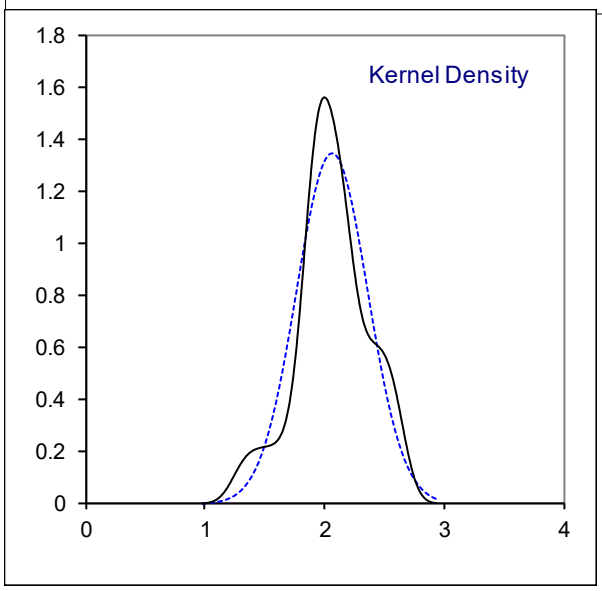
Determination of Total Sulfur on sample #20160; results in mg/kg

lab	method	value	mark	z(targ)	remarks
53	D5453	2.137		0.20	
150	D5453	2.4		0.94	
171	D5453	2.2		0.37	
311	D5453	2.1		0.09	
316		-----		-----	
319	D5453	2.14		0.21	
323	D5453	2		-0.19	
333	D5453	2.6		1.50	
334	D5453	2.4		0.94	
335		-----		-----	
343	D5453	1.9		-0.47	
344	D5453	2.21		0.40	
345	D5453	2.4		0.94	
346		-----		-----	
347	D5453	2.2		0.37	
349		-----		-----	
357	D5453	1.9		-0.47	
395		-----		-----	
396		-----		-----	
448		-----		-----	
529		-----		-----	
551	D5453	1.9		-0.47	
554		-----		-----	
557		-----		-----	
608		-----		-----	
609		-----		-----	
646		-----		-----	
657	D5453	2.5		1.22	
663	D5453	2.27		0.57	
823	D5453	2.0		-0.19	
824	D5453	2.0		-0.19	
825	D5453	2.01		-0.16	
840	D5453	2.62		1.55	
848		-----		-----	
849		-----		-----	
852	D3120	1.9		-0.47	
853		-----		-----	
855	D5453	2.0		-0.19	
857	D5453	2.0		-0.19	
858	D5453	1.9		-0.47	
859	D5453	2.1		0.09	
860	D3120	1.77		-0.83	
861		-----		-----	
862	D5453	2.0		-0.19	
863	D5453	2.1		0.09	
864	D5453	1.9		-0.47	
866		-----		-----	
870	D3120	1.8		-0.75	
871	D5453	2.14		0.21	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970		-----		-----	
974		-----		-----	
994		-----		-----	
997	D5453	<1	C	<-2.99	First reported 0.14. Possibly a false negative test result?
1004	D5453	<0.5		<-4.39	Possibly a false negative test result?
1009		-----		-----	
1010		-----		-----	
1016	ISO20846	1.923		-0.40	
1029	D5453	2.35		0.80	
1041	D5453	2.1		0.09	
1079	ISO20846	1.9		-0.47	
1120		-----		-----	
1181	D5453	2.52		1.27	
1201	D5453	2.17		0.29	
1246		-----		-----	
1256	D5453	1.49		-1.62	
1264		-----		-----	
1342	D5453	1.3		-2.15	
1465	D5453	1.57665		-1.37	
1510	D5453	2.0		-0.19	
1530		-----		-----	
1615		-----		-----	

lab	method	value	mark	z(targ)	remarks
1656		-----		-----	
1728	D5453	<1		<-2.99	Possibly a false negative test result?
1886		-----		-----	
6008	D5453	1.982		-0.24	
6061		-----		-----	
6070	D5453	1.676		-1.09	
6119	D5453	2.27		0.57	
6132	D5453	<0.5		<-4.39	Possibly a false negative test result?
6262	D5453	2.138		0.20	
6267		-----		-----	
6268		-----		-----	
6270	D5453	2.485		1.17	
6315	ISO20846	1.39		-1.90	
6329	D5453	1.9		-0.47	
6338		-----		-----	
7018		-----		-----	
7019	D5453	2.58		1.44	

normality	OK
n	49
outliers	0
mean (n)	2.066
st.dev. (n)	0.2967
R(calc.)	0.831
st.dev.(D5453:19a)	0.3568
R(D5453:19a)	0.999



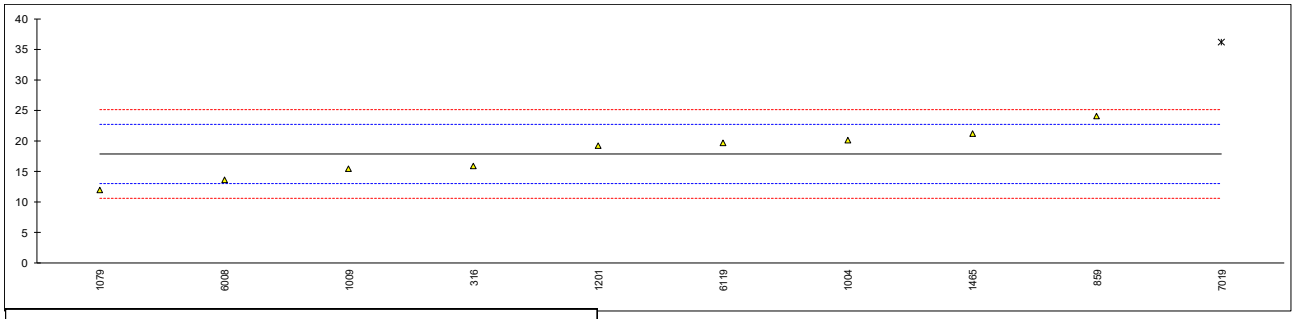


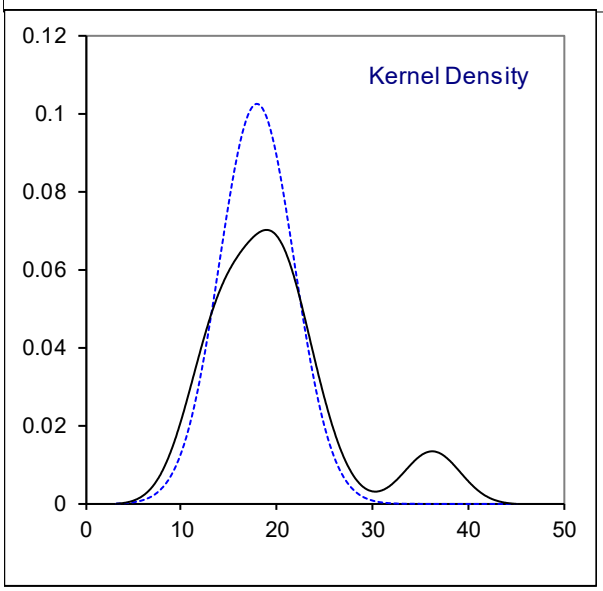
Determination of Trimethylamine (TMA) on sample #20160; results in µg/kg

lab	method	value	mark	z(targ)	remarks
53		-----		-----	
150		-----		-----	
171		-----		-----	
311		-----		-----	
316	INH-601	15.85		-0.85	
319		-----		-----	
323		-----		-----	
333		-----		-----	
334		-----		-----	
335		-----		-----	
343		-----		-----	
344		-----		-----	
345		-----		-----	
346		-----		-----	
347		-----		-----	
349		-----		-----	
357		-----		-----	
395		-----		-----	
396		-----		-----	
448		-----		-----	
529		-----		-----	
551		-----		-----	
554		-----		-----	
557		-----		-----	
608		-----		-----	
609		-----		-----	
646		-----		-----	
657		-----		-----	
663		-----		-----	
823		-----		-----	
824		-----		-----	
825		-----		-----	
840		-----		-----	
848		-----		-----	
849		-----		-----	
852		-----		-----	
853		-----		-----	
855		-----		-----	
857		-----		-----	
858		-----		-----	
859	E346	24		2.53	
860		-----		-----	
861		-----		-----	
862		-----		-----	
863		-----		-----	
864		-----		-----	
866		-----		-----	
870		-----		-----	
871		-----		-----	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970		-----		-----	
974		-----		-----	
994		-----		-----	
997		-----		-----	
1004	E346	20.2		0.95	
1009	E346	15.43		-1.02	
1010		-----		-----	
1016		-----		-----	
1029	E346	<10		<-3.27	Possibly a false negative test result?
1041	E346	<100		-----	
1079	E346	12		-2.44	
1120		-----		-----	
1181		-----		-----	
1201	E346	19.2		0.54	
1246		-----		-----	
1256		-----		-----	
1264		-----		-----	
1342		-----		-----	
1465	E346	21.1728		1.36	
1510		-----		-----	
1530		-----		-----	
1615	E346	<100		-----	

lab	method	value	mark	z(targ)	remarks
1656		-----		-----	
1728		-----		-----	
1886		-----		-----	
6008	E346	13.6		-1.78	
6061		-----		-----	
6070		-----		-----	
6119	In house	19.6		0.71	
6132		-----		-----	
6262		-----		-----	
6267		-----		-----	
6268		-----		-----	
6270		-----		-----	
6315		-----		-----	
6329		-----		-----	
6338		-----		-----	
7018	E346	<20		-----	
7019	E346	36.2	G(0.05)	7.58	

normality	OK
n	9
outliers	1
mean (n)	17.89
st.dev. (n)	3.895
R(calc.)	10.91
st.dev.(E346:08e1)	2.416
R(E346:08e1)	6.76



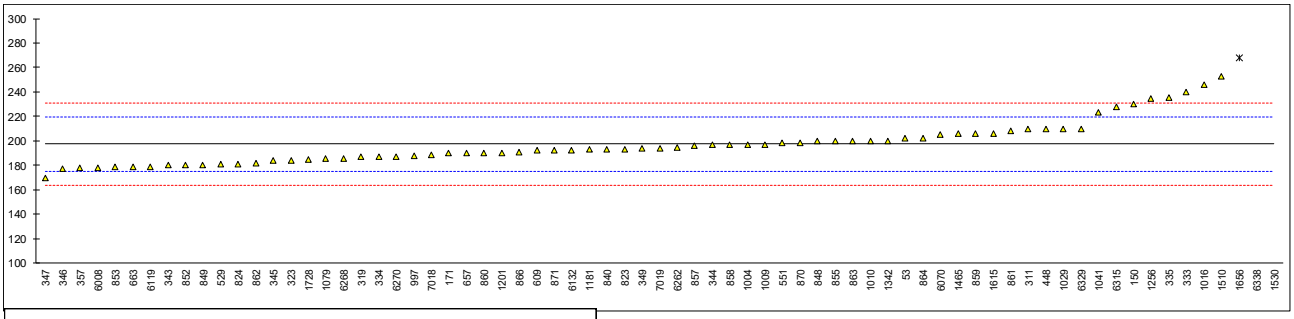


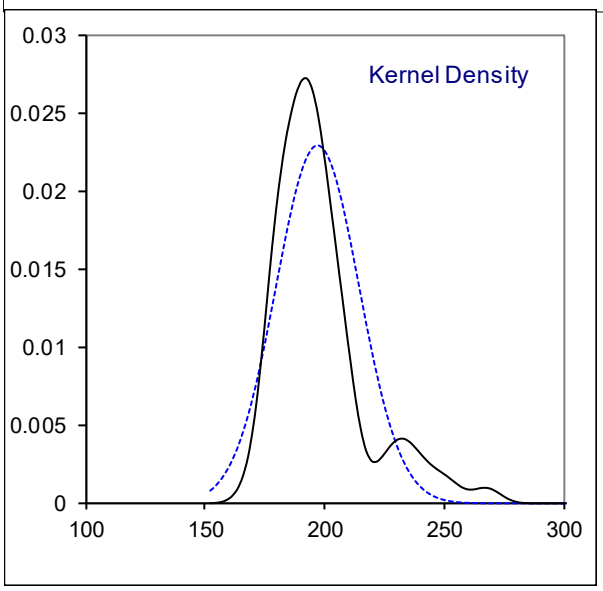
Determination of Water, Coulometric on sample #20160; results in mg/kg

lab	method	value	mark	z(targ)	remarks
53	E1064	201.9		0.41	
150	E1064	230		2.92	
171	E1064	190		-0.65	
311	E1064	210		1.13	
316		-----		-----	
319	E1064	187		-0.92	
323	E1064	184		-1.19	
333	E1064	240		3.81	
334	E1064	187		-0.92	
335	E1064	235.1		3.37	
343	E1064	180		-1.55	
344	E1064	197		-0.03	
345	E1064	184		-1.19	
346	E1064	177		-1.81	
347	E1064	170		-2.44	
349	D6304A	194		-0.30	
357	E1064	178		-1.73	
395		-----		-----	
396		-----		-----	
448	E1064	210	C	1.13	First reported 0.021 mg/kg
529	E1064	180.69		-1.49	
551	E1064	198		0.06	
554		-----		-----	
557		-----		-----	
608		-----		-----	
609	E1064	192		-0.48	
646		-----		-----	
657	E1064	190		-0.65	
663	E1064	179		-1.64	
823	E1064	193		-0.39	
824	E1064	180.7		-1.48	
825		-----		-----	
840	E1064	193		-0.39	
848	E1064	200		0.24	
849	E1064	180		-1.55	
852	E1064	180		-1.55	
853	E1064	179	C	-1.64	First reported 0.0179 mg/kg
855	E1064	200		0.24	
857	E1064	196		-0.12	
858	E1064	197		-0.03	
859	E1064	206		0.77	
860	E1064	190		-0.65	
861	GB/T6283	208		0.95	
862	E1064	182		-1.37	
863	E1064	200		0.24	
864	E1064	202		0.42	
866	E1064	191.0		-0.57	
870	E1064	198		0.06	
871	E1064	192		-0.48	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970		-----		-----	
974		-----		-----	
994		-----		-----	
997	E1064	188		-0.83	
1004	E1064	197		-0.03	
1009	E1064	197		-0.03	
1010	E1064	200		0.24	
1016	E1064	246.0		4.34	
1029	E1064	210	C	1.13	First reported 244
1041		223.5		2.33	
1079	E1064	185.5		-1.06	
1120		-----		-----	
1181	E1064	192.938		-0.39	
1201	E1064	190		-0.65	
1246		-----		-----	
1256	E1064	234.5		3.32	
1264		-----		-----	
1342	E1064	200		0.24	
1465	E1064	205.75		0.75	
1510	E1064	253		4.97	
1530	E1064	709	C,R(0.01)	45.66	First reported 236.4
1615	E1064	206	C	0.77	First reported 240

lab	method	value	mark	z(targ)	remarks
1656	E1064	268	R(0.01)	6.31	
1728	E1064	185		-1.10	
1886		-----		-----	
6008	E1064	178		-1.73	
6061		-----		-----	
6070	E1064	205.04		0.69	
6119	E1064	179.1		-1.63	
6132	E1064	192.26		-0.45	
6262	E1064	194.5		-0.25	
6267		-----		-----	
6268	E1064	185.6		-1.05	
6270	E1064	187.3		-0.90	
6315	ISO12936	228		2.74	
6329	E1064	210		1.13	
6338	E1064	654	C,R(0.01)	40.75	First reported 537
7018	E1064	188.2		-0.82	
7019	E1064	194.2		-0.28	

normality	not OK
n	68
outliers	3
mean (n)	197.33
st.dev. (n)	17.364
R(calc.)	48.62
st.dev.(E1064:16)	11.206
R(E1064:16)	31.38



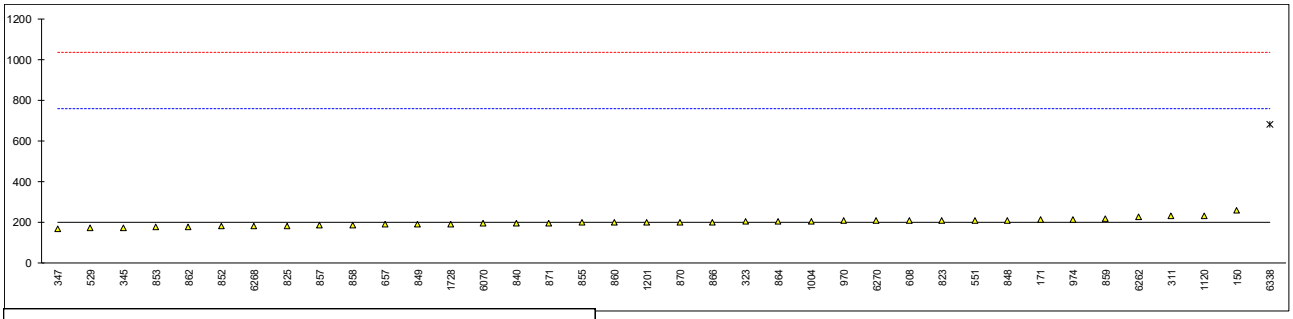


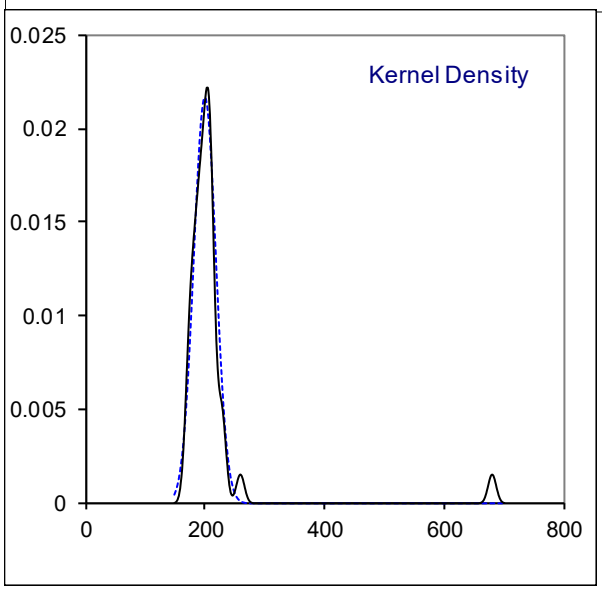
Determination of Water, Volumetric on sample #20160; results in mg/kg

lab	method	value	mark	z(targ)	remarks
53		-----		-----	
150	E203	260		0.21	
171	E203	214		0.05	
311	E203	230		0.11	
316		-----		-----	
319		-----		-----	
323	E203	205		0.02	
333		-----		-----	
334		-----		-----	
335		-----		-----	
343		-----		-----	
344		-----		-----	
345	E203	175		-0.09	
346		-----		-----	
347	E203	170		-0.11	
349		-----		-----	
357		-----		-----	
395		-----		-----	
396		-----		-----	
448		-----		-----	
529	E203	174.12		-0.10	
551	E203	210		0.03	
554		-----		-----	
557		-----		-----	
608	E203	208.50		0.03	
609		-----		-----	
646		-----		-----	
657	E203	190		-0.04	
663		-----		-----	
823	E203	210		0.03	
824		-----		-----	
825	E203	184.0		-0.06	
840	E203	195		-0.02	
848	E203	210		0.03	
849	E203	190		-0.04	
852	E203	180		-0.07	
853	E203	177		-0.08	
855	E203	200		0.00	
857	E203	189		-0.04	
858	E203	189		-0.04	
859	E203	217		0.06	
860	E203	200		0.00	
861		-----		-----	
862	E203	179		-0.08	
863		-----		-----	
864	E203	206		0.02	
866	E203	202.0		0.00	
870	E203	201		0.00	
871	E203	196		-0.02	
872		-----		-----	
912		-----		-----	
913		-----		-----	
963		-----		-----	
970	E203	208		0.03	
974	E203	214		0.05	
994		-----		-----	
997		-----		-----	
1004	E203	207		0.02	
1009		-----		-----	
1010		-----		-----	
1016		-----		-----	
1029		-----		-----	
1041		-----		-----	
1079		-----		-----	
1120	E346	230		0.11	
1181		-----		-----	
1201	E203	200		0.00	
1246		-----		-----	
1256		-----		-----	
1264		-----		-----	
1342		-----		-----	
1465		-----		-----	
1510		-----		-----	
1530		-----		-----	
1615		-----		-----	

lab	method	value	mark	z(targ)	remarks
1656		-----		-----	
1728	E203	190		-0.04	
1886		-----		-----	
6008		-----		-----	
6061		-----		-----	
6070	E203	194.1		-0.02	
6119		-----		-----	
6132		-----		-----	
6262	E203	228		0.10	
6267		-----		-----	
6268	E203	182.2		-0.07	
6270	E203	208.0		0.03	
6315		-----		-----	
6329		-----		-----	
6338	E203	681	C,R(0.01)	1.72	First reported 544
7018		-----		-----	
7019		-----		-----	

normality	suspect
n	37
outliers	1
mean (n)	200.62
st.dev. (n)	18.425
R(calc.)	51.59
st.dev.(E203:16)	278.571
R(E203:16)	780

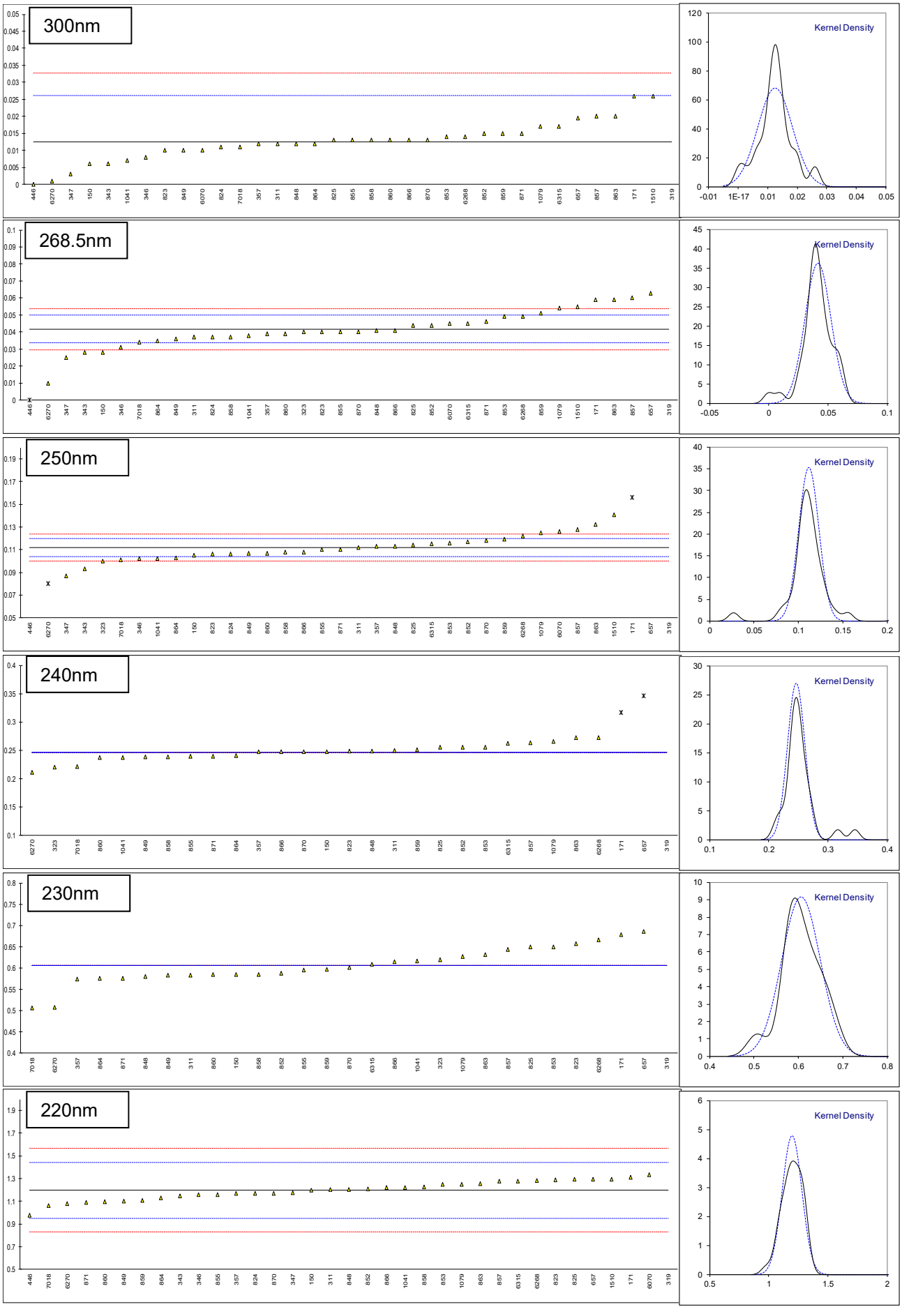




Determination of UV Absorbance (50 mm cuvette) on sample #20161

lab	method	300nm	268.5nm	250nm	240nm	230nm	220nm	Pass/Fail
150	IMPCA004	0.006	0.028	0.105	0.248	0.585	1.198	Pass
171	IMPCA004	0.026	0.059	0.156 R(1)	0.317 R(1)	0.678	1.311	Pass
311	IMPCA004	0.012	0.037	0.112	0.250	0.583	1.203	Pass
319	IMPCA004	0.121 R(1)	0.377 (R1)	0.408 R(1)	0.634 R(1)	2.190 R(1)	3.084 R(1)	Fail
323	IMPCA004	<0.01	0.04	0.10	0.22	0.62	>1.00	Pass
343	IMPCA004	0.006	0.028	0.093	-----	-----	1.149	Pass
346	IMPCA004	0.008	0.031	0.102	-----	-----	1.157	Pass
347	IMPCA004	0.003	0.025	0.087	-----	-----	1.177	Pass
357	IMPCA004	0.012	0.039	0.113	0.247	0.574	1.167	Pass
395		-----	-----	-----	-----	-----	-----	-----
396		-----	-----	-----	-----	-----	-----	-----
446	IMPCA004	0	0 R(5)	0.027 R(1)	-----	-----	0.978	Pass
529		-----	-----	-----	-----	-----	-----	-----
609		-----	-----	-----	-----	-----	-----	-----
657	IMPCA004	0.01945	0.06288	0.2147 CR(1)	0.3458 CR(1)	0.6856	1.294	Fail
663		-----	-----	-----	-----	-----	-----	-----
823	IMPCA004	0.010	0.040	0.106	0.249	0.657	1.289	Pass
824	IMPCA004	0.011	0.037	0.106	-----	-----	1.169	Pass
825	IMPCA004	0.013	0.044	0.114	0.255	0.650	1.294	Pass
848	IMPCA004	0.012	0.041	0.113	0.249	0.580	1.204	Pass
849	IMPCA004	0.010	0.036	0.107	0.239	0.583	1.104	Pass
852	IMPCA004	0.015	0.044	0.117	0.255	0.588	1.207	Pass
853	IMPCA004	0.014	0.049	0.116	0.255	0.650	1.247	Pass
855	IMPCA004	0.013	0.040	0.110	0.240	0.595	1.160	Pass
857	IMPCA004	0.020	0.060	0.128	0.263	0.643	1.275	Pass
858	IMPCA004	0.013	0.037	0.108	0.239	0.585	1.225	Pass
859	IMPCA004	0.015	0.051	0.119	0.251	0.597	1.106	Pass
860	IMPCA004	0.013	0.039	0.107	0.237	0.584	1.098	Pass
861		-----	-----	-----	-----	-----	-----	-----
862		-----	-----	-----	-----	-----	-----	-----
863	IMPCA004	0.020	0.059	0.132	0.272	0.631	1.254	Pass
864	IMPCA004	0.012	0.035	0.103	0.241	0.575	1.13	Pass
866	IMPCA004	0.013	0.041	0.108	0.247	0.615	1.218	Pass
870	IMPCA004	0.013	0.040	0.118	0.247	0.602	1.172	Pass
871	IMPCA004	0.015	0.046	0.110	0.240	0.575	1.090	Pass
872		-----	-----	-----	-----	-----	-----	-----
912		-----	-----	-----	-----	-----	-----	-----
913		-----	-----	-----	-----	-----	-----	-----
963		-----	-----	-----	-----	-----	-----	-----
994		-----	-----	-----	-----	-----	-----	-----
1004		-----	-----	-----	-----	-----	-----	-----
1041	IMPCA004	0.007 C	0.038 C	0.102 C	0.237 C	0.617 C	1.220 C	Pass
1079	IMPCA004	0.017	0.054	0.125	0.266	0.627	1.247	Pass
1201		-----	-----	-----	-----	-----	-----	-----
1256		-----	-----	-----	-----	-----	-----	-----
1264		-----	-----	-----	-----	-----	-----	-----
1342	IMPCA004	-----	-----	-----	-----	-----	-----	Pass
1438		-----	-----	-----	-----	-----	-----	-----
1510	IMPCA004	0.026	0.055	0.141	-----	-----	1.294	Fail
1656		-----	-----	-----	-----	-----	-----	-----
1886		-----	-----	-----	-----	-----	-----	-----
6070	IMPCA004	0.010	0.045	0.126	-----	-----	1.334	Pass
6262		-----	-----	-----	-----	-----	-----	-----
6267		-----	-----	-----	-----	-----	-----	-----
6268	IMPCA004	0.014	0.049	0.122	0.273	0.667	1.281	Fail
6270	IMPCA004	0.001	0.010	0.080 R(1)	0.211	0.507	1.078	Pass
6315	IMPCA004	0.017	0.045	0.115	0.2619	0.6092	1.276	Pass
6329		-----	-----	-----	-----	-----	-----	-----
7018	IMPCA004	0.011	0.034	0.101	0.222	0.506	1.061	Pass
	normality	OK	suspect	OK	OK	OK	OK	
	n	34	34	31	26	28	34	33 Pass
	outliers	1	2	5	3	1	1	4 Fail
	mean (n)	0.01257	0.04173	0.11181	0.24673	0.60603	1.19609	
	st.dev. (n)	0.005848	0.010971	0.011321	0.014800	0.043439	0.083352	
	R(calc.)	0.01637	0.03072	0.03170	0.04144	0.12163	0.23338	
	st.dev.(IMPCA004	0.006735	0.004039	0.004033	unknown	unknown	0.122599	
	R(IMPCA004:15)	0.01886	0.01131	0.01129	unknown	unknown	0.34328	

Lab 657: First reported 0.2666, 0.402
Lab 1041: First reported 0.000, 0.008, 0.021, 0.047, 0.123, 0.244


300nm
Kernel Density
268.5nm
Kernel Density
250nm
Kernel Density
240nm
Kernel Density
230nm
Kernel Density
220nm
Kernel Density

z-scores UV Absorbance (50 mm cuvette)

lab	300nm	268.5nm	250nm	240nm	230nm	220nm
150	-0.98	-3.40	-1.69	-----	-----	0.02
171	1.99	4.28	10.96	-----	-----	0.94
311	-0.08	-1.17	0.05	-----	-----	0.06
319	16.10	83.01	73.44	-----	-----	15.40
323	-----	-0.43	-2.93	-----	-----	-----
343	-0.98	-3.40	-4.66	-----	-----	-0.38
346	-0.68	-2.66	-2.43	-----	-----	-0.32
347	-1.42	-4.14	-6.15	-----	-----	-0.16
357	-0.08	-0.68	0.30	-----	-----	-0.24
395	-----	-----	-----	-----	-----	-----
396	-----	-----	-----	-----	-----	-----
446	-1.87	-10.33	-21.03	-----	-----	-1.78
529	-----	-----	-----	-----	-----	-----
609	-----	-----	-----	-----	-----	-----
657	1.02	5.24	25.51	-----	-----	0.80
663	-----	-----	-----	-----	-----	-----
823	-0.38	-0.43	-1.44	-----	-----	0.76
824	-0.23	-1.17	-1.44	-----	-----	-0.22
825	0.06	0.56	0.54	-----	-----	0.80
848	-0.08	-0.18	0.30	-----	-----	0.06
849	-0.38	-1.42	-1.19	-----	-----	-0.75
852	0.36	0.56	1.29	-----	-----	0.09
853	0.21	1.80	1.04	-----	-----	0.42
855	0.06	-0.43	-0.45	-----	-----	-0.29
857	1.10	4.52	4.02	-----	-----	0.64
858	0.06	-1.17	-0.94	-----	-----	0.24
859	0.36	2.29	1.78	-----	-----	-0.73
860	0.06	-0.68	-1.19	-----	-----	-0.80
861	-----	-----	-----	-----	-----	-----
862	-----	-----	-----	-----	-----	-----
863	1.10	4.28	5.01	-----	-----	0.47
864	-0.08	-1.67	-2.18	-----	-----	-0.54
866	0.06	-0.18	-0.94	-----	-----	0.18
870	0.06	-0.43	1.54	-----	-----	-0.20
871	0.36	1.06	-0.45	-----	-----	-0.87
872	-----	-----	-----	-----	-----	-----
912	-----	-----	-----	-----	-----	-----
913	-----	-----	-----	-----	-----	-----
963	-----	-----	-----	-----	-----	-----
994	-----	-----	-----	-----	-----	-----
1004	-----	-----	-----	-----	-----	-----
1041	-0.83	-0.92	-2.43	-----	-----	0.20
1079	0.66	3.04	3.27	-----	-----	0.42
1201	-----	-----	-----	-----	-----	-----
1256	-----	-----	-----	-----	-----	-----
1264	-----	-----	-----	-----	-----	-----
1342	-----	-----	-----	-----	-----	-----
1438	-----	-----	-----	-----	-----	-----
1510	1.99	3.28	7.24	-----	-----	0.80
1656	-----	-----	-----	-----	-----	-----
1886	-----	-----	-----	-----	-----	-----
6070	-0.38	0.81	3.52	-----	-----	1.12
6262	-----	-----	-----	-----	-----	-----
6267	-----	-----	-----	-----	-----	-----
6268	0.21	1.80	2.53	-----	-----	0.69
6270	-1.72	-7.86	-7.89	-----	-----	-0.96
6315	0.66	0.81	0.79	-----	-----	0.65
6329	-----	-----	-----	-----	-----	-----
7018	-0.23	-1.91	-2.68	-----	-----	-1.10

APPENDIX 2

Determination of UV Absorbance (10 mm cuvette) on sample #20161, not evaluated

lab	method	300nm	268.5nm	250nm	240nm	230nm	220nm	Pass/Fail
395	IMPCA004	0.0010	-----	0.0213	-----	0.1125	0.2274	Pass
1004	IMPCA004	0.0000	0.0096	0.0251	0.0549	0.1314	0.2430	Pass
1438	IMPCA004	-----	-----	-----	-----	0.12	-----	Pass

APPENDIX 3

Number of participants per country

1 lab in AZERBAIJAN
1 lab in BAHRAIN
3 labs in BELGIUM
3 labs in BRAZIL
3 labs in CANADA
16 labs in CHINA, People's Republic
1 lab in EGYPT
1 lab in FINLAND
4 labs in FRANCE
1 lab in GEORGIA
4 labs in GERMANY
2 labs in INDIA
3 labs in IRAN, Islamic Republic of
1 lab in ISRAEL
2 labs in ITALY
2 labs in JAPAN
4 labs in MALAYSIA
1 lab in MEXICO
5 labs in NETHERLANDS
3 labs in NEW ZEALAND
1 lab in NORWAY
1 lab in OMAN
1 lab in ROMANIA
1 lab in RUSSIAN FEDERATION
4 labs in SAUDI ARABIA
1 lab in SINGAPORE
3 labs in SOUTH KOREA
6 labs in SPAIN
1 lab in THAILAND
1 lab in TRINIDAD and TOBAGO W.I.
1 lab in UNITED ARAB EMIRATES
4 labs in UNITED KINGDOM
7 labs in UNITED STATES OF AMERICA
1 lab in VIETNAM

APPENDIX 4

Abbreviations

C	= final test result after checking of first reported suspect test result
D(0.01)	= outlier in Dixon's outlier test
D(0.05)	= straggler in Dixon's outlier test
G(0.01)	= outlier in Grubbs' outlier test
G(0.05)	= straggler in Grubbs' outlier test
DG(0.01)	= outlier in Double Grubbs' outlier test
DG(0.05)	= straggler in Double Grubbs' outlier test
R(0.01)	= outlier in Rosner's outlier test
R(0.05)	= straggler in Rosner's outlier test
R(1)	= R(0.01)
R(5)	= R(0.05)
E	= possibly an error in calculations
W	= test result withdrawn on request of participant
ex	= test result excluded from statistical evaluation
n.a.	= not applicable
n.e.	= not evaluated
n.d.	= not detected
fr.	= first reported
SDS	= Safety Data Sheet

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