Results of Proficiency Test
Metals in Plastics
September 2010

Organised by: Institute for Interlaboratory Studies
Spijkenisse, the Netherlands

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1 INTRODUCTION

World-wide, many consumer products with plastic parts are produced and transported. These plastic parts are produced under strict regulations. For instant in the European Directive 2002/95/EC maximum concentrations are specified for metals in plastic: the sum of Lead (Pb), Mercury (Hg), Cadmium (Cd) and hexavalent Chromium (CrVI) may not exceed 0.1%M/M, while the maximum concentration for Cadmium may not exceed 100 mg/kg.
Products are tested for metals contents in the countries of origin as well in EU- and/or American countries. Sometimes, significantly different results are found, thus causing problems with the import of the products.

The determination of metals in plastics is known to give problems with regard to the comparability of laboratory results. However, still only few plastic reference materials are available (ref 16.). As an alternative, participation in a proficiency test may enable the laboratories to check their performance and thus to increase this comparability. Therefore, a proficiency testing scheme (laboratory-evaluating interlaboratory study) for the determination of metals in plastics is organised by the Institute for Interlaboratory Studies since 1998 (see reference 16). Starting with only total Cadmium, over the years the scope was extended with total Lead, total Chromium and Chromium (VI) and in the previous year with total Mercury.
In the international interlaboratory study of September 2010, 137 laboratories from 32 different countries participated (See appendix 3). In this report, the results of the proficiency test are presented and discussed.

2 SET UP

The Institute for Interlaboratory Studies (iis) in Spijkenisse, The Netherlands, was the organiser of this proficiency test. It was decided to send 2 different samples (approximately 5 gram each), labelled #1048 and #1049. Participants were requested to report some details of the methods used.

2.1 QUALITY SYSTEM

The Institute for Interlaboratory Studies in Spijkenisse, the Netherlands, has implemented a quality system based on ISO guide 43, ILAC-G13:2007 and ISO17043:2010. This ensures 100% confidentially of participant's data. Also customer's satisfaction is measured on a regular basis by sending out questionnaires.

2.2 PROTOCOL

The protocol followed in the organisation was the one as described for proficiency testing in the report 'iis Interlaboratory Studies: Protocol for the Organisation, Statistics and Evaluation' of January 2010 (iis-protocol, version 3.2). This protocol can be downloaded from the iis website http://www.iisnl.com.

2.3 CONFIDENTIALITY STATEMENT

All data present 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

Two different samples positive on one or more metals were selected. The first material (#1048) was a blue coloured plastic material. The second material (#1049) was a white coloured plastic material. Both batches were divided over plastic bags, about 5 grams per sample.
The homogeneity of the subsamples #1048 was checked by determination of Lead content according to IEC62321 on 4 stratified random selected subsamples. The homogeneity of the subsamples #1049 was checked by determination of Cadmium content according to EN1122 on 4 stratified random selected subsamples.

	Lead in #1048 in mg/kg	Cadmium in #1049 in mg/kg
Sample 1	172	68
Sample 2	174	69
Sample 3	171	70
Sample 4	173	66

Table 1: results of the homogeneity test on the subsamples #1048 and #1049

From the above results of the homogeneity test, the relative between sample standard deviations RSD_r were calculated and compared with 0.3 times the relative proficiency target standard deviations RSD_R in agreement with the procedure of ISO 13528, Annex B2 in the next table:

	Lead in #1048 in mg/kg	Cadmium in #1049 in mg/kg
RSD_r (observed)	0.8%	2.5%
reference method	Horwitz	EN1122:01
0.3 x RSD_R (reference method)	2.2%	2.7%

Table 2: relative standard deviations of the subsamples #1048 and #1049

The calculated variation coefficients RSDr are both in agreement with the estimated targets, calculated using the Horwitz equation and EN1122:01. Therefore, homogeneity of all subsamples was assumed.

To each of the participating laboratories one set of samples, (1* sample #1048 and 1* sample #1049) was sent on August 18, 2010.

2.5 ANALYSIS

The participants were requested to determine on both samples: total Cadmium, total Lead, total Chromium, total Mercury and hexavalent Chromium (VI). It was explicitly requested to treat the samples as if it were routine samples and to report the analytical results using the indicated units on the report form and not to round the results, but report as much significant figures as possible.
It was also requested not to report 'less than' results, which are above the detection limit, because such results can not be used for meaningful statistical calculations.
To get comparable results a detailed report form, on which the units were prescribed, was sent together with each set of samples. In addition, a letter of instructions was added to the package.
The laboratories were also requested to complete the report form with some details of the methods used.

3 RESULTS

During four weeks after sample despatch, the results of the individual laboratories were received. The original data are tabulated per sample in the appendix 1 of this report. The laboratories are represented by their code numbers.

Directly after deadline, a reminder fax was sent to those laboratories that did not report results at that moment.
Shortly after the deadline, the available results were screened for suspect data. A 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 results. Additional or corrected results are used for the data analysis and the original results are placed under 'Remarks' in the result tables in appendix 1.

3.1 STATISTICS

Statistical calculations were performed as described in the report 'iis Interlaboratory Studies: Protocol for the Organisation, Statistics and Evaluation' of January 2010 (iis-protocol, version 3.2).

First, the normality of the distribution of the various data sets per determination was checked by means of the Lilliefors-test. After removal of outliers this check was repeated. All data sets proved to have a normal distribution.

In accordance to ISO 5725 (1986 and 1994) the original results per determination were submitted subsequently to Dixon and Grubbs outlier tests. Outliers are marked by D(0.01) for the Dixon test, by G(0.01) or DG(0.01) for the Grubbs test. Stragglers are marked by D(0.05) for the Dixon test, by G(0.05) or DG(0.05) for the Grubbs test. Both outliers and stragglers were not included in the calculations of averages and standard deviations.

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

3.2 GRAPHICS

In order to visualise 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 analysis results are plotted. The corresponding laboratory numbers are under 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 standard. 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 method is producing a smooth density approximation to a set of data that avoids some problems associated with histograms (see appendix 4; nr.14 and 15).

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, the z-scores were calculated using a target standard deviation. This results in an evaluation independent of the spread of this interlaboratory study.

The literature requirements were taken from EN 1122:2001, “Determination of Cadmium in plastics with the method of the wet decomposition” for Cadmium. For Lead, Chromium, Chromium (VI) and total Mercury no literature requirements were available and requirements were estimated from the Horwitz function. See reference 16 for a justification of this choice.

The target standard deviation was calculated from the target reproducibility by division with 2.8. The z-scores were calculated in accordance with:

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

The $z_{(target)}$ scores are listed in the result tables in 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:

$\lvert z \rvert < 1$	good
$1 < \lvert z \rvert < 2$	satisfactory
$2 < \lvert z \rvert < 3$	questionable
$3 < \lvert z \rvert$	unsatisfactory

4 EVALUATION

In this interlaboratory study no problems were encountered with the dispatch of the samples.
Eight participants reported the results after the final reporting date and three participants did not report any results at all. Not all laboratories were able to report all analytes requested.
Finally, 134 of the 137 participants submitted analysis results. The 134 reporting laboratories sent in 840 numerical results. Observed were 43 outlying results, which is 4.9%. In proficiency studies, outlier percentages of 3% - 7.5% are quite normal.

4.1 PERFORMANCE EVALUATION OF THE GROUP OF LABORATORIES

A comparison has been made between the reproducibility as declared by the relevant standard and the reproducibility as found for the group of participating laboratories. The average results per sample, the calculated reproducibilities and the reproducibilities derived from EN1122 or from the Horwitz equation are compared in the next tables.

Parameter	unit	n	Average	2.8 * sd	R (target)
Total Cadmium as Cd	mg/kg	123	94.9	19.9	23.7
Total Chromium as Cr	mg/kg	117	91.2	25.2	20.7
Hexavalent Chromium (VI) as Cr	mg/kg	57	42.51	19.88	10.83
Total Lead as Pb	mg/kg	122	201.8	42.5	53.1
Total Mercury as Hg	mg/kg	104	21.4	19.2	6.0

Table 3: performance overview for sample #1048

Parameter	unit	n	Average	2.8 * sd	R (target)
Total Cadmium as Cd (*)	mg/kg	128	66.6	18.0 (*)	16.7
Total Chromium as Cr	mg/kg	66	3.59	4.52	(1.33)
Hexavalent Chromium (VI) as Cr	mg/kg	14	0.5	unknown	unknown
Total Lead as Pb	mg/kg	22	0.6	unknown	unknown
Total Mercury as Hg	mg/kg	18	0.6	unknown	unknown

Table 4: performance overview for sample #1049

*) #1049 was evaluated before as #0750 (determined for Cd: average 66.9 mg/kg and 2.8*sd = 15.4 mg/kg) and also as #0557 (determined for Cd: average 67.5 mg/kg, 2.8*sd = 14.4 mg/kg)

Without further statistical calculations, it can be concluded that there is a good compliance of the group of participating laboratories with the relevant standard for total Cadmium.

The analytes that were problematic are discussed in paragraph 4.2.

4.2 EVALUATION PER ELEMENT

In this section, the results are discussed per analyte.

Total Cadmium: This determination is problematic for a number of laboratories.
For sample #1048, the calculated reproducibility is, after rejection of eight statistical outliers, in agreement with the requirements of EN1122:01. When the EN1122 data is evaluated separately, the calculated reproducibility of the EN1122 results is somewhat larger than for the whole group, but again in agreement with the precision requirements of the standard.
For sample #1049, the calculated reproducibility, after rejection of two statistical outliers, is not in full agreement (but almost) with the requirements of EN1122:01. When the EN1122 data is evaluated separately, the calculated reproducibility of the EN1122 results is somewhat larger than for the whole group and now clearly not in agreement with the precision requirements of the standard.

Total Chromium: This determination may be problematic.
For sample #1048 the calculated reproducibility, after rejection of seven statistical outliers, is not in agreement with the estimated reproducibility limits calculated using the Horwitz equation.
For sample #1049 after rejection of six statistical outliers, the group agreed on an average result of less than 5 mg/kg, which may be near or below the detection limit of the test methods.

Chromium VI: This determination is very problematic.
For sample #1048 the chemical, that was used to add Chromium VI to the plastic material, was pure - readily soluble - Potassium chromate (K_2CrO_4). Therefore, the hexavalent Chromium content should in principle be equal to the total Chromium content. The majority of the reporting laboratories did detect Chromium VI in sample #1048 and they agreed on a result of approx 35.2 mg/kg. However, three participants reported a result of approx 89 mg/kg, being in full agreement with the assigned value of the total Chromium for sample #1048 (91 mg/kg). Although 89 mg/kg (n=3) may be a more traceable (more true) value than 42.5 mg/kg (n=57), it was decided to use 42.5 mg/kg as assigned value for calculation of the z-scores, because this lower value was supported by 71% of the participating laboratories.
For sample #1049 all laboratories agreed on a Chromium VI content of less than 5 mg/kg, which may be near or below the detection limit of the test methods.

Total Lead: This determination is problematic for a number of laboratories.
For sample #1048 the calculated reproducibility, after rejection of eight statistical outliers, is almost in agreement with the estimated reproducibility limits calculated using the Horwitz equation.
For sample #1049 the group agreed on an average result of less than 5 mg/kg, which may be near or below the detection limit of the test methods.

Total Mercury: This determination is very problematic.
For sample #1048 the calculated reproducibility, after rejection of four statistical outliers, is not at all in agreement with the estimated reproducibility calculated using the Horwitz equation. Several participants reported a false negative result.
For sample #1049 the group agreed on an average result of less than 5 mg/kg, which may be near or below the detection limit of the test methods.

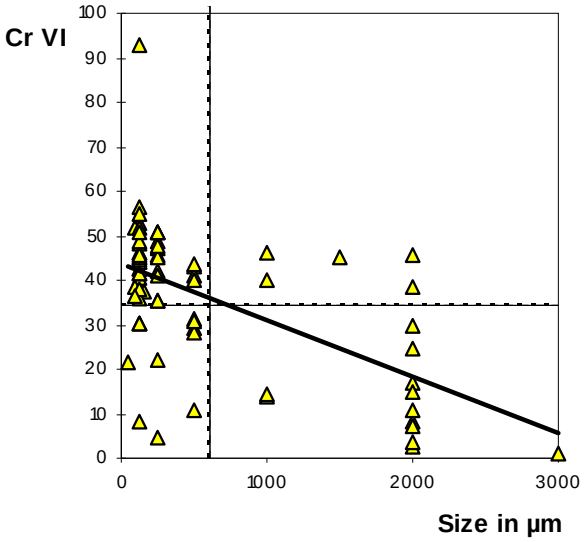
4.3 EVALUATION OF THE METHODS USED

The reported details of the methods that were used by the participants are listed in appendix 2.

For the determination of total Cadmium in plastics, the EN1122 method is considered to be the official EC test method. In this proficiency test only 50 participants (38% of all) used a version of EN1122. Most other participants used in-house, IEC62321 or EPA test methods based on acid digestion (wet ashing or microwave destruction), four participants used XRF and one INAA.
No correlation between the method used and the quality of the results could be found.
Only four laboratories did use XRF for the determination of metals and thus regretfully no significant conclusions could be drawn about the quality of the results of this technique.
It was concluded that the determination of Cadmium was not problematic for the evaluated samples.

For the determination of total Chromium in plastics, test method IEC62321 is available, regretfully without precision data.
In this interlaboratory study, the majority of the group used the IEC62321 or EPA 3050, 3051 or EPA 3052 methods. Two participants reported to have used EN 1122, which is only applicable for Cadmium. Two participants used XRF, one INAA and the other participants used in-house methods.
No correlation between method used and quality of the results could be found.
It can be concluded that the determination of total Chromium at a level of 91.2 mg/kg is problematic for a significant number of laboratories.

For determination of hexavalent Chromium in plastics test method IEC62321 is available, regretfully without precision data. The method is based on EPA 3060A and EPA 7196. In this interlaboratory study, 52 laboratories used this method and almost all other participants reported to have used EPA 3060A or an in house method. The test method for Chromium VI does contain several parts that may influence the test results strongly, for example the grain size of the plastic particles that is used to extract the CrVI ions.
Therefore, some important details (particle size, extraction technique and extraction conditions) were requested to be reported (see appendix 2). One can see that a large variation of details was used by the participants.
Although not all participating laboratories did provide the grain size, it was tried to determine whether a significant correlation could be detected between the grain size and the Cr VI concentration, see the plot on the next page.



In the graph the CrVI results are plotted against the grain sizes, as far as unambiguously reported. Sizes reported as <250 µm were used as 125 µm and for 'as received' 2000 µm was used.

Although a linear correlation (see the trend line) can not be detected, it may be clear that there are two main clusters visible. One with a center around 45 mg/kg Cr VI and 125-250 µm and the other around 10 mg/kg Cr VI and 2000 µm.

Regretfully there are a number of Cr VI results that seem not to be in line with any correlation at all. The approx 6 low Cr VI results reported for samples that were milled or grinded to small grain sizes may be caused by oxidation of Cr VI to the more stable Cr III. However, the approx 6 high Cr VI reported for samples without size reduction cannot be explained easily.
In general the total group of participating laboratories clearly shows major improvement in measuring Chromium VI in plastics in comparison with previous years. In this proficiency test the average Chromium VI recovery was 47%, much higher than found in the previous round robin iis09P02 (recoveries of only 13% and 28%).

For the determination of total Lead in plastics, test method IEC62321 is available, regretfully without precision data. In this interlaboratory study, the majority of the group used the IEC62321 or EPA 3052, 3051 or 3050-B methods. Three participants used XRF, one used INAA and the other participants used in-house methods.
No correlation between method used and quality of the results could be found.
It can be concluded that the determination of total Lead in the investigated at a level of 202 mg/kg was not problematic.

For the determination of total Mercury in plastics, test method IEC62321 is available, regretfully without precision data.
In this interlaboratory study, the majority of the group used the IEC62321 or EPA 3052, 3051 or 3050-B methods. Two participants used XRF, one INAA and the other participants used in-house methods based on acid digestion (wet ashing, microwave destruction or combustion).
No correlation between method used and quality of the results could be found.
It can be concluded that the determination of total Mercury at a level of 21.4 mg/kg was problematic for a number of laboratories.

Furthermore, it is remarkable to see that several laboratories that reported to have used IEC62321 also reported not to reduce the samples to a particle size of 500 µm or less prior to use.

4.4 COMPARISON WITH PREVIOUS PROFICIENCY TESTS

The number of participants increased from 66 in 2005 to 137 in this round. The percentage of outliers decreased over the years from 10.3% in 2005 to 4.9% of the numerical results in 2010.

The evolution of the reproducibilities for cadmium, lead, chromium, chromium VI and mercury as observed in this proficiency scheme and the comparison with the findings in previous rounds are visualized in table 6.

Range	25-250 mg Cd/kg	50-100 mg Pb/kg	50-250 mg Cr/kg	50-250 mg Cr VI/kg	5-25 mg Hg/kg
2002	51%	81%	--	--	--
2003	31%	100%	--	--	--
2004	33%	--	--	--	--
2005	21%	--	34%	--	--
2006	20%	26%	30%	--	--
2007	23%	22-30%	43%	--	--
2008	25%	24%	25%	159-212%	--
2009	28%	20-28%	27-32%	155-174%	104-129%
2010	21-27%	26%	28%	64%	90%
EN1122:01	25%	--	--	--	--
Horwitz	20-28%	22-25%	20-25%	20-25%	28-35%

Table 6: comparison of the relative Cd, Pb, Cr, CrVI and Hg reproducibilities (in %) in the previous rounds and in the present round

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APPENDIX 1

Determination of total Cadmium as Cd on sample #1048; results in mg/kg

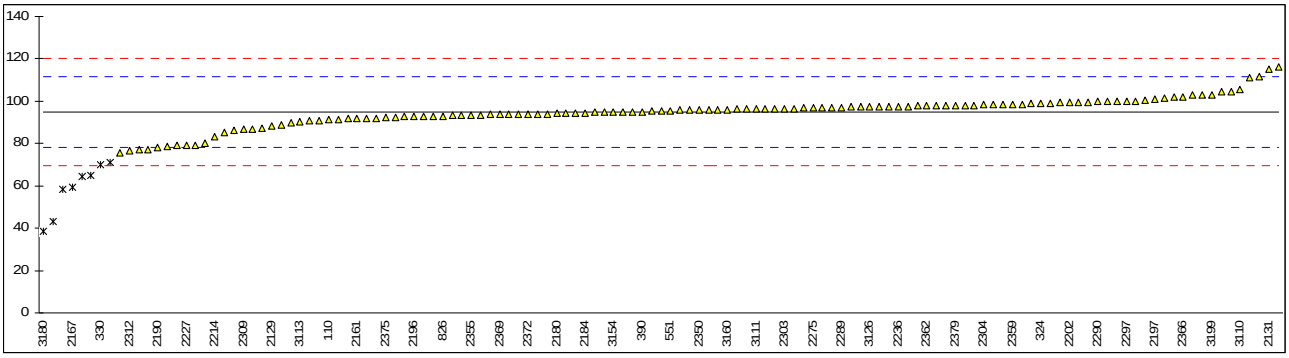
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110	INH-E&E002	91.133		-0.44	2295	EN1122	116		2.49
310	EN1122	77.2		-2.09	2296	EN1122	97.0		0.25
324	IEC62321	98.89		0.47	2297	EN1122	100.0		0.60
330	in house	70.11	DG(0.05)	-2.92	2298		-----		-----
339	EN1122	92.92		-0.23	2301	CPSC-CH-E1002-08.1	99.6		0.56
357	in house	94		-0.10	2303	in house	96.6		0.20
390	EPA3052/6020A	95.09		0.02	2304	in house	98.2664		0.40
452	EN1122	100.22		0.63	2305	IEC62321	88.61		-0.74
551	EPA3052	95.49		0.07	2306		-----		-----
607	EPA3052	95.88		0.12	2309	EN1122	86.89		-0.94
622	EN1122	90.75		-0.49	2310	EN1122	94.4		-0.06
623	EN1122	79.340		-1.83	2311	EN1122	96		0.13
632	EN1122	96.6		0.20	2312	EN1122	76.7		-2.15
826	IEC62321	93		-0.22	2350	IEC62321	95.93		0.12
840	IEC62321	95.93		0.12	2352	IEC62321	95.2		0.04
1051	EN1122	90.01		-0.57	2353	EN1122	93.9		-0.12
1121	in house	75.8		-2.25	2355	EPA3052	93.3321		-0.18
1126	XRF-Niton	64.5	G(0.05)	-3.59	2357	EN1122	97.2		0.27
1800	in house	104.4		1.12	2359	EN1122	98.60		0.44
2102	XRF-Niton	98.7		0.45	2362	EN1122	97.8		0.34
2115	CPSC	85.386		-1.12	2363	IEC62321	95.0		0.01
2117	in house	90.9		-0.47	2365	IEC62321	97.2		0.27
2129	EN1122	88.1		-0.80	2366	EN1122	102.1		0.85
2131	in house	115		2.37	2369	EN1122	93.6352		-0.15
2132	in house	92.02		-0.34	2370	IEC62321	94.0		-0.10
2146	EN1122	95.2		0.04	2372	IEC62321	94		-0.10
2152	EN1122	77.3		-2.08	2375	IEC62321	92.1		-0.33
2156	IEC62321	86.9		-0.94	2379	IEC62321	98.0		0.37
2160	in house	96.56		0.20	2380		-----		-----
2161	in house	91.9		-0.35	2385	EN1122	104.5		1.14
2165	EPA3052	98.4		0.42	3104	EN1122	94.69		-0.02
2167	IEC62321	59.47	C,G(0.05)	-4.18	3106		-----		-----
2169	IEC62321	97.6404		0.33	3107	in house	99.0		0.49
2172	EN1122	97.4		0.30	3110	EN1122	105.3		1.23
2173	IEC62321	93.23		-0.19	3111	in house	96.4		0.18
2176	IEC62321	97.7		0.33	3113	in house	90.15		-0.56
2180	ICP OES	94.11		-0.09	3116	EPA3051AMod.	98.04		0.37
2182	EN1122	94.43		-0.05	3122	in house	96.0		0.13
2184	EN1122	94.6		-0.03	3124	EPA3052	98.0		0.37
2187	EN1122	99.26		0.52	3126	INAA	97.2		0.27
2190	EN1122	78.3		-1.96	3134	in house	101.32		0.76
2196	EN1122	93		-0.22	3135	in house	100.1		0.62
2197	in house	100.7		0.69	3146	in house	102.8		0.93
2199	EPA3052	91.7		-0.38	3153	EN1122	96.2		0.16
2201	IEC62321	100		0.60	3154	EN1122	94.7		-0.02
2202	in house	99.3		0.52	3159	EN1122	93.31		-0.19
2212		-----		-----	3160	CPSC-CH-E1002-08	96.10		0.14
2214	XRF	83		-1.40	3163	XRF	71	DG(0.05)	-2.82
2215	EN1122	102.984		0.96	3166	XRF	86.1		-1.04
2216		-----		-----	3169	EN1122	95.021		0.02
2227	CPSD-AN-00065	79.2		-1.85	3172	EN1122	96.6		0.20
2228	CPSD-AN-00067	87.400		-0.88	3179	ISO17294-1	97		0.25
2229	in house	111.6		1.97	3180		38.7	G(0.01)	-6.63
2236	CPSC-1002-08	97.49		0.31	3182	IEC62321	93.00		-0.22
2241	IEC62321	93.4		-0.17	3185	IEC62321	99.59		0.56
2246	EN1122	98.55		0.43	3190	EN1122	97.0		0.25
2247	EN1122	98.6		0.44	3191	EN1122	98.1		0.38
2248		-----		-----	3199	CPSD-AN-00008	103.1		0.97
2251		-----		-----	3200	in house	93.59		-0.15
2253	EPA3052	97.18		0.27	3213	IEC62321	111.17		1.92
2254	in house	78.5		-1.93	3218	IEC62321	94.66		-0.03
2258	EPA3051A	58.36	G(0.05)	-4.31	3225	IEC62321	91.2		-0.43
2259	IEC62321	97.9		0.36	3228	IEC62321	96.3		0.17
2262	EN1122	64.7	G(0.05)	-3.56	3237	in house	43.2	C,G(0.01)	-6.10
2265	EN1122	93.910		-0.11	3239	IEC62321	79.11		-1.86
2271	EPA3052	92.0		-0.34	3243	EN1122	92.52		-0.28
2275	EN1122	97		0.25	3248	EN1122	93		-0.22
2284	EN1122	101.9		0.83	8005	EN1122	99.81		0.58
2289	EPA3051A/3052	97		0.25					
2290	in house	99.7		0.57					
2293	EN1122	79.9		-1.77					

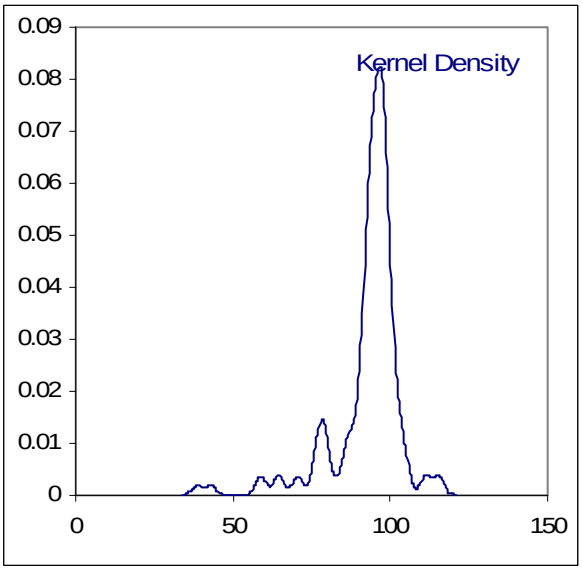
Only EN1122 data:

normality	not OK	not OK
n	123	49
outliers	8	1
mean (n)	94.88	94.46
st.dev. (n)	7.104	7.725
R(calc.)	19.89	21.63
R(EN1122:01)	23.72	23.62

Lab 2167 first reported 64.36

Lab 3237 first reported 63.60





Determination of total Cadmium as Cd on sample #1049; results in mg/kg

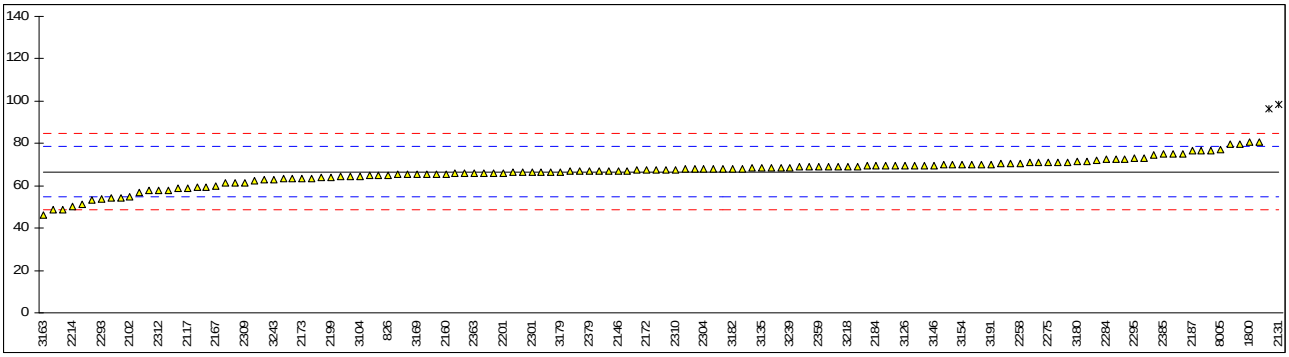
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110	INH-E&E002	66.266		-0.06	2295	EN1122	73		1.07
310	EN1122	53.5		-2.21	2296	EN1122	66.6		0.00
324	IEC62321	70.07		0.58	2297	EN1122	70.8		0.70
330	in house	61.19		-0.91	2298		-----		-----
339	EN1122 to IEC	63.25		-0.57	2301	CPSC-CH-E1002-08.1	66.5		-0.02
357	in house	63		-0.61	2303	in house	71.0		0.74
390	EPA3052/6020A	66.89		0.04	2304	in house	67.9429		0.22
452	EN1122	72.56		1.00	2305	IEC62321	65.66		-0.16
551	EPA3052	62.35		-0.72	2306		-----		-----
607	EPA3051A	69.68		0.51	2309	EN1122	61.63		-0.84
622	EN1122	48.45		-3.06	2310	EN1122	67.7		0.18
623	EN1122	57.639		-1.51	2311	EN1122	66		-0.11
632	EN1122	70.3		0.62	2312	EN1122	57.8		-1.48
826	IEC62321	65		-0.27	2350	IEC62321	68.67		0.34
840	IEC62321	69.15		0.42	2352	IEC62321	68.1		0.25
1051	EN1122	66.41		-0.04	2353	EN1122	63.5		-0.53
1121	in house	59.4		-1.21	2355	EPA3052	65.7974		-0.14
1126	XRF-Niton	54.5		-2.04	2357	EN1122	66.8		0.03
1800	in house	80.8		2.38	2359	EN1122/EPA3052	68.842		0.37
2102	XRF-Niton	54.8		-1.99	2362	EN1122	65.3		-0.22
2115	CPSC	68.462		0.31	2363	IEC62321	65.8		-0.14
2117	in house	58.8		-1.32	2365	IEC62321	67.6		0.16
2129	EN1122	54.3		-2.07	2366	EN1122	66.65		0.00
2131	in house	98.60	G(0.01)	5.38	2369	EN1122	67.7476		0.19
2132	in house	61.22		-0.91	2370	IEC62321	67.0		0.06
2146	EN1122	67.1		0.08	2372	IEC62321	67		0.06
2152	EN1122	56.7		-1.67	2375	IEC62321	65.7		-0.16
2156	IEC62321	64.3		-0.39	2379	IEC62321	67.0		0.06
2160	in house	65.67		-0.16	2380		-----		-----
2161	in house	64.2		-0.41	2385	EN1122	74.9		1.39
2165	EPA3052	69.5		0.48	3104	EN1122	64.49		-0.36
2167	IEC62321	60.01		-1.11	3106		-----		-----
2169	IEC62321	63.6484		-0.50	3107	EN1122	75.3		1.46
2172	EN1122	67.4		0.13	3110	EN1122	69.8		0.53
2173	IEC62321	63.57		-0.51	3111	in house	69.1		0.42
2176	IEC62321	69.6		0.50	3113	in house	64.70		-0.32
2180	ICP OES	67.30		0.11	3116	EPA3051AMod.	76.71		1.70
2182	EN1122	75.03		1.41	3122	in house	65.6		-0.17
2184	EN1122	69.4		0.47	3124	EPA3052	68.8		0.37
2187	EN1122	76.40		1.64	3126	INAA	69.5		0.48
2190	EN1122	48.9		-2.98	3134	in house	69.99		0.57
2196	EN1122	71		0.74	3135	in house	68.5		0.32
2197	in house	79.8		2.21	3146	in house	69.7		0.52
2199	EPA3052	64.1		-0.42	3153	EN1122	72.5		0.99
2201	IEC62321	66		-0.11	3154	EN1122	69.92		0.55
2202	in house	71.2		0.77	3159	EN1122	69.82		0.54
2212		-----		-----	3160	CPSC-CH-E1002-08	68.53		0.32
2214	XRF	50		-2.79	3163	XRF	46		-3.47
2215	EN1122	67.5322		0.15	3166	XRF	64.8		-0.31
2216		-----		-----	3169	EN1122	65.450		-0.20
2227	CPSD-AN-00065	65.95		-0.11	3172	EN1122	72.0		0.90
2228	CPSD-AN-00067	67.800		0.20	3179	ISO17294-1	66.7		0.01
2229	in house	80.9		2.40	3180		71.3		0.79
2236	CPSC-1002-08	71.66		0.85	3182	IEC62321	68.19		0.26
2241	IEC62321	65.4		-0.21	3185	IEC62321	69.31		0.45
2246	EN1122	74.67		1.35	3190	EN1122	68.2		0.26
2247	EN1122	73		1.07	3191	EN1122	70.1		0.58
2248		-----		-----	3199	CPSD-AN-00008	76.51		1.66
2251		-----		-----	3200	in house	67.20		0.10
2253	EPA3052	69.49		0.48	3213	IEC62321	79.84		2.22
2254	in house	58		-1.45	3218	IEC62321	69.14		0.42
2258	EPA3051A	70.53		0.66	3225	IEC62321	58.7		-1.33
2259	IEC62321	70.4		0.63	3228	EN1122	68.8		0.37
2262	EN1122	96.6	G(0.01)	5.04	3237	in house	59.4	C	-1.21
2265	EN1122	51.195	C	-2.59	3239	IEC62321	68.73		0.35
2271	EPA3052	68.9		0.38	3243	EN1122	63.05		-0.60
2275	EN1122	71		0.74	3248	EN1122	64		-0.44
2284	EN1122	72.3		0.95	8005	EN1122	77.19		1.78
2289	EPA3051A/3052	68		0.23					
2290		-----		-----					
2293	EN1122	53.9		-2.14					

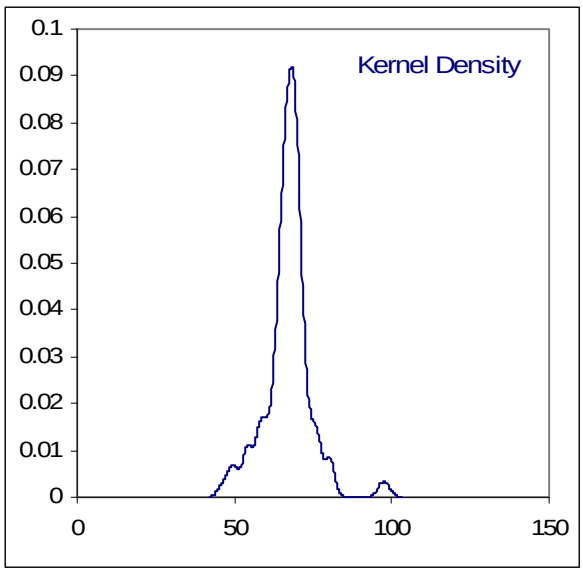
Only EN1122 data:

normality	not OK	not OK
n	128	52
outliers	2	1
mean (n)	66.63	66.56
st.dev. (n)	6.414	7.080
R(calc.)	17.96	19.82
R(EN1122:01)	16.64	16.64

Lab 2265 first reported 229.492

Lab 3237 first reported 92.1



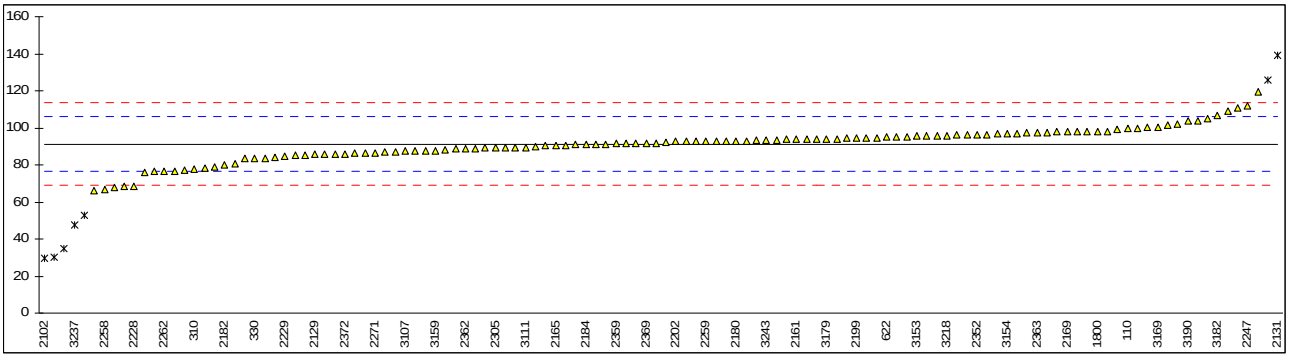


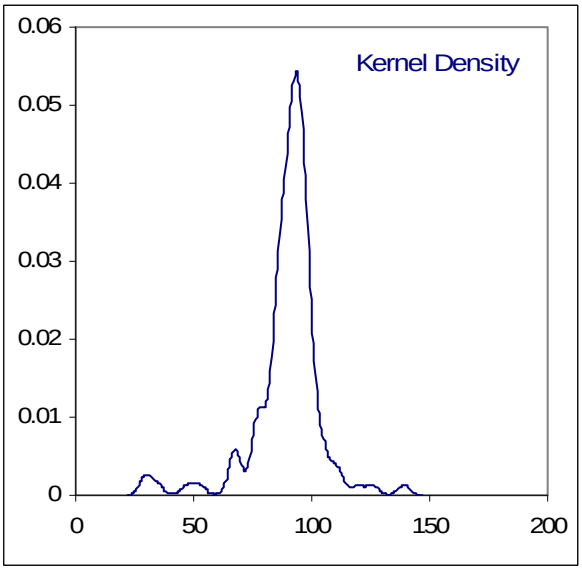
Determination of total Chromium as Cr on sample #1048; results in mg/kg

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110	INH-E&E-003	99.553		1.13	2295		126	G(0.05)	4.71
310		77.6		-1.83	2296	microwave	98.2		0.95
324	IEC62321	97.18		0.81	2297	IEC62321	89.4		-0.24
330	in house	83.27		-1.07	2298		-----		-----
339	EN1122 acc. to IEC	94.73		0.48	2301	CPSC-CH-E1002-08.1	110.9		2.67
357	in house	89		-0.29	2303	in house	93.6		0.33
390	EPA3052/6020A	85.24		-0.80	2304		-----		-----
452		-----		-----	2305	IEC62321	89.22	C	-0.26
551		119.50		3.83	2306		-----		-----
607	EPA3052	91.12		-0.01	2309	EPA3050B/3051A/3052	93.18		0.27
622	EN1122	94.85		0.50	2310	EPA3052	83.23		-1.07
623	EPA3052/6010C	93.710		0.34	2311	EPA3052	84		-0.97
632	IEC62321	94.5		0.45	2312	EPA3051A	76.0		-2.05
826	IEC62321	94		0.38	2350	IEC62321	96.02		0.66
840	IEC62321	86.17		-0.67	2352	IEC62321	96.1		0.67
1051		-----		-----	2353	EPA3051	94.6		0.47
1121	in house	77.3		-1.87	2355	EPA3052	90.1806		-0.13
1126	ICP	97.5		0.86	2357	IEC62321	91.5		0.05
1800	in house	98.0		0.92	2359	EPA3052	91.3277		0.02
2102	XRF-Niton	29.6	G(0.01)	-8.32	2362	IEC62321	88.6		-0.35
2115	CPSC	79.067		-1.64	2363	IEC62321	97.2		0.82
2117	in house	92.4		0.17	2365	IEC62321	92.8		0.22
2129	D1645	85.6		-0.75	2366	EPA3052	90.79		-0.05
2131	in house	139	G(0.05)	6.47	2369	IEC62321	91.6760		0.07
2132	in house	80.52		-1.44	2370	IEC62321	85.3		-0.79
2146		-----		-----	2372	IEC62321	86		-0.70
2152	in house	96.4		0.71	2375	IEC62321	94.9		0.51
2156	IEC62321	85.9		-0.71	2379	IEC62321	92.8		0.22
2160	in house	108.9		2.40	2380		-----		-----
2161	in house	93.8		0.36	2385		101.8		1.44
2165	EPA3052	90.4		-0.10	3104	EPA3051	96.80		0.76
2167	IEC62321	76.26		-2.01	3106		-----		-----
2169	IEC62321	97.7224		0.89	3107	in house	87.3		-0.52
2172	IEC62321	95.8		0.63	3110	EPA3052	85.8		-0.72
2173	IEC62321	101.3		1.37	3111	in house	89.4		-0.24
2176	IEC62321	89.3		-0.25	3113		-----		-----
2180	ICP OES	92.90		0.24	3116	EPA3051AMod.	88.77		-0.32
2182	EPA3051A	80.03		-1.51	3122	in house	91.6		0.06
2184	CPSC-CH-E1002-08.1	91.0		-0.02	3124	EPA3052	92.6		0.19
2187	EPA3052	96.66		0.74	3126	INAA	78.3		-1.74
2190	in house	66.3		-3.36	3134	in house	95.95		0.65
2196	IEC62321	90		-0.16	3135	in house	94		0.38
2197	in house	104.7		1.83	3146	in house	97.9		0.91
2199	EPA3052	94.5		0.45	3153	IEC62321	95.5		0.59
2201	IEC62321	93		0.25	3154	EN1122	96.74		0.75
2202	in house	92.6		0.19	3159	EPA3051A	87.75		-0.46
2212		-----		-----	3160	CPSC-CH-E1002-08	95.85		0.63
2214	XRF	35	G(0.01)	-7.59	3163	XRF	30	G(0.01)	-8.27
2215	EPA3051	87.6171		-0.48	3166		-----		-----
2216		-----		-----	3169	EPA3052	100.500		1.26
2227	CPSD-AN-00065	76.79		-1.94	3172	in house	99.0		1.06
2228	CPSD-AN-00067	68.400		-3.08	3179	ISO17294-1	94		0.38
2229	in house	84.4		-0.91	3180		68.3		-3.09
2236	CPSC-1002-08	88.46		-0.37	3182	IEC62321	106.50		2.07
2241	IEC62321	86.5		-0.63	3185	IEC62321	100.1		1.21
2246	in house	91.27		0.01	3190	IEC62321	103.7		1.70
2247	EPA3050	112		2.82	3191	IEC62321	91.7		0.07
2248		-----		-----	3199	CPSD-AN-00008	86.68		-0.61
2251		-----		-----	3200	in house	90.70		-0.06
2253	EPA3052	97.89		0.91	3213	IEC62321	83.60		-1.02
2254	in house	68		-3.13	3218	IEC62321	95.87		0.64
2258	EPA3051A	66.89		-3.28	3225	IEC62321	87.9		-0.44
2259	IEC62321	92.7		0.21	3228	IEC62321	93.9		0.37
2262	EN1122	76.5		-1.98	3237	in house	47.4	C,G(0.01)	-5.92
2265	DIN54233-1	52.6707	G(0.05)	-5.20	3239	IEC62321	87.70		-0.47
2271	EPA3052	86.6		-0.62	3243	EN1233	93.36		0.30
2275		104		1.74	3248	EPA3051	95		0.52
2284	EPA3052	92.7		0.21	8005	EPA3051AMod.	86.88		-0.58
2289	EPA3051A/3052	100		1.20					
2290	in house	97.7		0.88					
2293		-----		-----					

normality	not OK
n	117
outliers	7
mean (n)	91.16
st.dev. (n)	8.984
R(calc.)	25.16
R(Horwitz)	20.71

Lab 3237 first reported 39.59



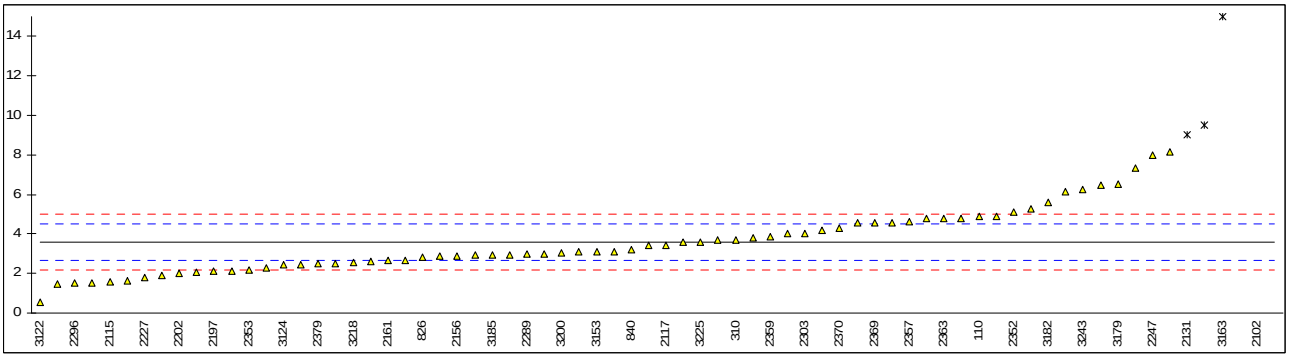


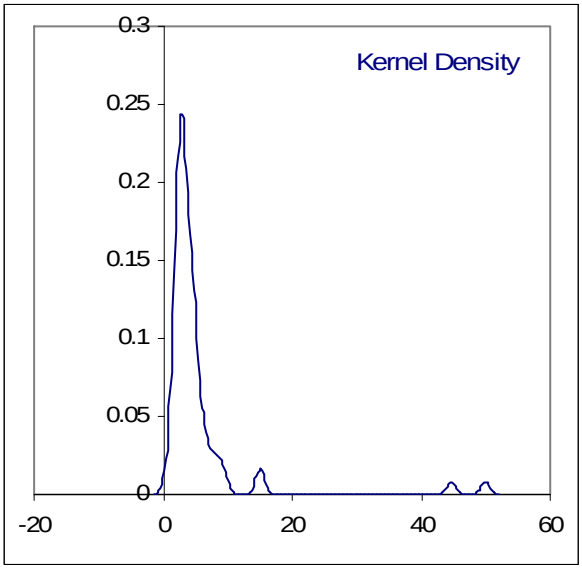
Determination of total Chromium as Cr on sample #1049; results in mg/kg

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110	INH-E&E-003	4.8692		-----	2295		3.1		-----
310		3.7		-----	2296	microwave	1.5		-----
324	IEC62321	4.77		-----	2297	IEC62321	n.d.		-----
330	in house	<20		-----	2298		-----		-----
339	EN1122 acc. to IEC	2.947		-----	2301	CPSC-CH-E1002-08.1	n.d.		-----
357	in house	<5		-----	2303	in house	4.0		-----
390	EPA3052/6020A	3		-----	2304		-----		-----
452		-----		-----	2305	IEC62321	n.d.		-----
551		9.50	DG(0.05)	-----	2306		-----		-----
607	EPA3052	2.933		-----	2309	EPA3050B/3051A/3052	4		-----
622	EN1122	<1		-----	2310	EPA3052	4.54		-----
623	EPA3052/6010C	1.610		-----	2311	EPA3052	4.9		-----
632	IEC62321	4.57		-----	2312	EPA3051A	n.d.		-----
826	IEC62321	2.8		-----	2350	IEC62321	2.062		-----
840	IEC62321	3.22		-----	2352	IEC62321	5.1		-----
1051		-----		-----	2353	EPA3051	2.2		-----
1121	in house	2.3		-----	2355	EPA3052	6.11821		-----
1126		-----		-----	2357	IEC62321	4.6		-----
1800	in house	<10		-----	2359	EPA3052	3.87942		-----
2102	XRF-Niton	44.7	G(0.01)	-----	2362	IEC62321	<5		-----
2115	CPSC	1.573		-----	2363	IEC62321	4.8		-----
2117	in house	3.42		-----	2365	IEC62321	4.2		-----
2129	D1645	2.5		-----	2366	EPA3052	n.d.		-----
2131	in house	9.02	DG(0.05)	-----	2369	IEC62321	4.56887		-----
2132	in house	3.57		-----	2370	IEC62321	4.30		-----
2146		-----		-----	2372	IEC62321	5.25		-----
2152	in house	<2		-----	2375	IEC62321	3.4		-----
2156	IEC62321	2.9		-----	2379	IEC62321	2.5		-----
2160	in house	<5		-----	2380		-----		-----
2161	in house	2.66		-----	2385		<5		-----
2165	EPA3052	<5		-----	3104	EPA3051	<50		-----
2167	IEC62321	6.48		-----	3106		-----		-----
2169	IEC62321	<10		-----	3107	in house	n.d.		-----
2172	IEC62321	<2		-----	3110	EPA3052	<5		-----
2173	IEC62321	n.d.		-----	3111	in house	2.69		-----
2176	IEC62321	n.d.		-----	3113		-----		-----
2180	ICP OES	2.90		-----	3116	EPA3051AMod.	<10		-----
2182	EPA3051A	n.d.		-----	3122	in house	0.53		-----
2184	CPSC-CH-E1002-08.1	3.1		-----	3124	EPA3052	2.46		-----
2187	EPA3052	1.52		-----	3126	INAA	1.9		-----
2190	in house	n.d.		-----	3134	in house	<7		-----
2196	IEC62321	<10		-----	3135	in house	2.6		-----
2197	in house	2.1		-----	3146	in house	<10		-----
2199	EPA3052	<2		-----	3153	IEC62321	3.1		-----
2201	IEC62321	n.d.		-----	3154	EN1122	7.33		-----
2202	in house	2.0		-----	3159	EPA3051A	<10		-----
2212		-----		-----	3160	CPSC-CH-E1002-08	<5		-----
2214	XRF	50	G(0.01)	-----	3163	XRF	15	G(0.01)	-----
2215	EPA3051	<2		-----	3166		-----		-----
2216		-----		-----	3169	EPA3052	<5		-----
2227	CPSD-AN-00065	1.775		-----	3172	in house	<20		-----
2228	CPSD-AN-00067	3.800		-----	3179	ISO17294-1	6.5		-----
2229	in house	n.d.		-----	3180		15.1	G(0.01)	-----
2236	CPSC-1002-08	<10		-----	3182	IEC62321	5.61		-----
2241	IEC62321	n.d.		-----	3185	IEC62321	2.935		-----
2246	in house	n.d.		-----	3190	IEC62321	<2.0		-----
2247	EPA3050	8		-----	3191	IEC62321	<5		-----
2248		-----		-----	3199	CPSD-AN-00008	1.445		-----
2251	EPA3060A/7196A	n.d.		-----	3200	in house	3.04		-----
2253	EPA3052	<5		-----	3213	IEC62321	2.47		-----
2254	in house	<4		-----	3218	IEC62321	2.55		-----
2258	EPA3051A	2.11		-----	3225	IEC62321	3.60		-----
2259	IEC62321	<5		-----	3228	IEC62321	<10		-----
2262	EN1122	<5		-----	3237	in house	4.8	C	-----
2265	DIN54233-1	8.1416		-----	3239	IEC62321	<2.0		-----
2271	EPA3052	<5.0		-----	3243	EN1233	6.243		-----
2275		n.d.		-----	3248	EPA3051	<10		-----
2284	EPA3052	<5		-----	8005	EPA3051AMod.	<10		-----
2289	EPA3051A/3052	3		-----					
2290	in house	3.7		-----					
2293		-----		-----					

normality	not OK	
n	66	
outliers	6	
mean (n)	3.59	Below detection limit
st.dev. (n)	1.615	
R(calc.)	4.52	
R(Horwitz)	(1.33)	

Lab 3237 first reported 0.6



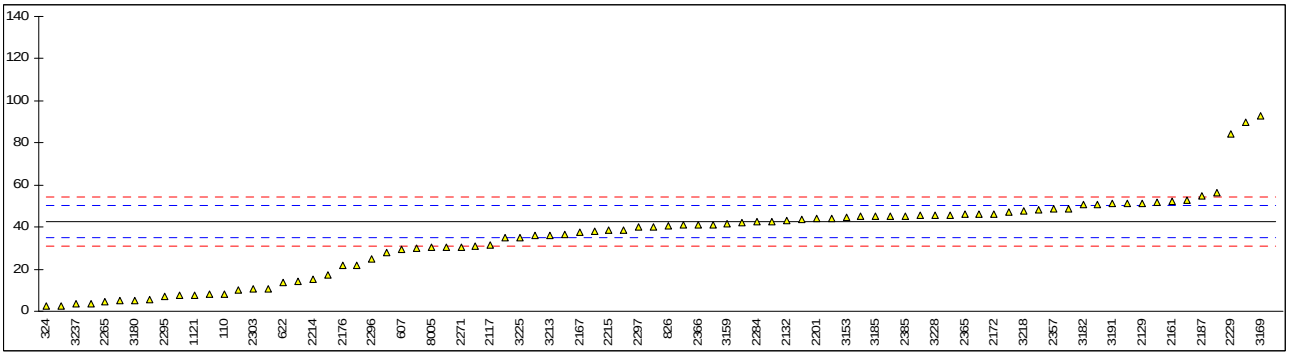


Determination of Hexavalent Chromium as Cr^{6+} on sample #1048; results in mg/kg

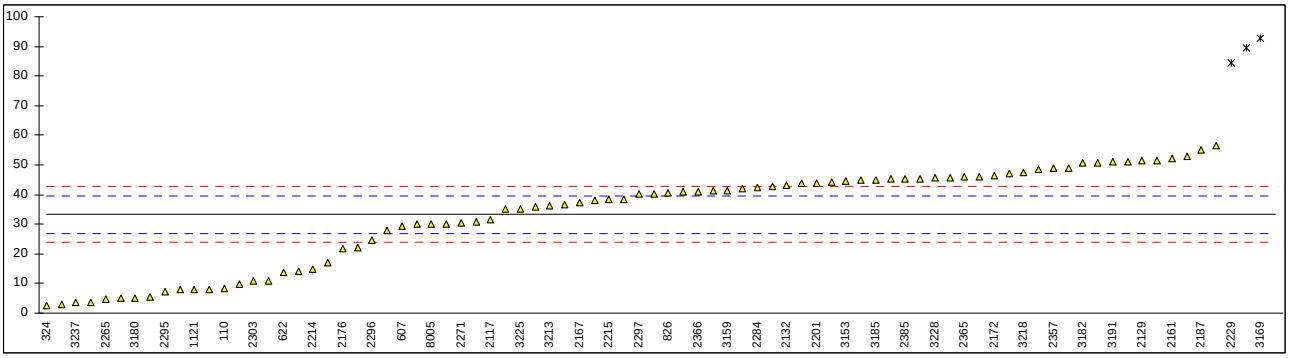
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110	IEC62321	8.274		-8.85	2295		7.1		-9.15
310		-----		-----	2296	ISO17075	24.8	C	-4.58
324	IEC62321	2.45		-10.36	2297	IEC62321	40.1		-0.62
330		-----		-----	2298		-----		-----
339	EN1122Acc to IEC	17		-6.60	2301		-----		-----
357		-----		-----	2303	IEC62321	10.7		-8.22
390		-----		-----	2304		-----		-----
452		-----		-----	2305		-----		-----
551		52.90		2.69	2306		-----		-----
607	EPA3060A/7196A	29.31		-3.41	2309	EPA3060A/7196A	8		-8.92
622	in house	13.85		-7.41	2310		-----		-----
623		-----		-----	2311		-----		-----
632	IEC62321	30.0		-3.23	2312	EPA3060A	10.9		-8.17
826	IEC62321	40.67		-0.48	2350	IEC62321	38.56		-1.02
840	IEC62321	42.79		0.07	2352	IEC62321	41.9		-0.16
1051		-----		-----	2353	EPA3060	38	C	-1.17
1121	in house	7.8		-8.97	2355	IEC62321	41.3190		-0.31
1126		-----		-----	2357	IEC62321	48.8		1.63
1800		-----		-----	2359	EPA3060A	44.0380		0.40
2102		-----		-----	2362	IEC62321	40.2	C	-0.60
2115		-----		-----	2363	IEC62321	45.4		0.75
2117	EN62321	31.4		-2.87	2365	IEC62321	46.0		0.90
2129	D1645	51.3		2.27	2366	IEC62321	41.10		-0.36
2131	in house	5.1		-9.67	2369	IEC62321	48.9287		1.66
2132	EPA3060A/7196A	43.06		0.14	2370	IEC62321	43.8		0.33
2146		-----		-----	2372	IEC62321	47		1.16
2152		-----		-----	2375	IEC62321	5.4		-9.59
2156	IEC62321	28		-3.75	2379	IEC62321	35.2		-1.89
2160		-----		-----	2380		-----		-----
2161	in house	52.0		2.45	2385	EPA3060A	45.2		0.70
2165	IEC62321	45.2		0.70	3104		-----		-----
2167	IEC62321	37.49		-1.30	3106		-----		-----
2169	IEC62321	56.3729		3.58	3107		-----		-----
2172	IEC62321	46.3		0.98	3110		-----		-----
2173	IEC62321	36.02		-1.68	3111		-----		-----
2176	in house	21.6		-5.41	3113		-----		-----
2180		-----		-----	3116	EPA3060A	30.2		-3.18
2182	IEC62321	30.95		-2.99	3122		-----		-----
2184	IEC62321	46.1		0.93	3124		-----		-----
2187	IEC62321	54.95		3.22	3126		-----		-----
2190	EPA3060A	n.d.		-----	3134		-----		-----
2196	IEC62321	41		-0.39	3135		-----		-----
2197		n.d.	false neg.	-----	3146	IEC62321	14.18		-7.32
2199	EPA3060	36.7		-1.50	3153	IEC62321	44.5		0.51
2201	IEC62321	44		0.39	3154		-----		-----
2202	in house	89.6		12.17	3159	IEC62321	41.35		-0.30
2212		-----		-----	3160		-----		-----
2214	IEC62321	15		-7.11	3163		-----		-----
2215	EPA3060	38.382		-1.07	3166	EPA3060A/7199	51.582		2.35
2216		-----		-----	3169	IEC62321	92.932		13.04
2227		-----		-----	3172		-----		-----
2228		-----		-----	3179	EPA3060A	7.8		-8.97
2229	in house	84.4		10.83	3180		5.22		-9.64
2236		-----		-----	3182	IEC62321	50.69		2.11
2241	IEC62321	50.7		2.12	3185	IEC62321	45.02		0.65
2246	IEC62321	48.39		1.52	3190	IEC62321	45.8		0.85
2247	IEC62321	9.9	C	-8.43	3191	IEC62321	51		2.20
2248		-----		-----	3199	CPSD-AN-00047	2.785		-10.27
2251	EPA3060A/7196A	375.7305	G(0.01)	86.15	3200	EPA3060A/7196	<2.0	false neg.	<-10.47
2253		-----		-----	3213	IEC62321	36.20		-1.63
2254		-----		-----	3218	IEC62321	47.58		1.31
2258		-----		-----	3225	IEC62321	35.2		-1.89
2259		-----		-----	3228	IEC62321	45.8		0.85
2262		-----		-----	3237	in house	3.77		-10.02
2265	DIN17075	4.7692		-9.76	3239	IEC62321	21.94	C	-5.32
2271	IEC62321	30.3		-3.16	3243	DIN38405-D24	3.77		-10.02
2275		-----		-----	3248	IEC62321	51		2.20
2284	EPA3060/7196A	42.4		-0.03	8005	EPA3060A	30.2		-3.18
2289	IEC62321	45		0.64					
2290		-----		-----					
2293		-----		-----					

	Group 2 data only		All data
normality	OK		not OK
N	57		80
outliers	0	(27 excl.)	4
mean (n)	42.51		33.193
st.dev. (n)	7.101		16.29
R(calc.)	19.88		45.61
R(Horwitz)	10.83		8.78

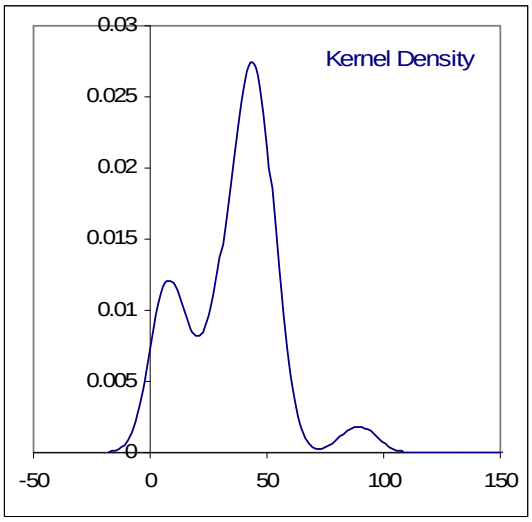
Lab 2247 first reported 6.5
Lab 2296 first reported 6.9
Lab 2353 first reported 10.5
Lab 2362 first reported 9.2
Lab 3239 first reported 2.10

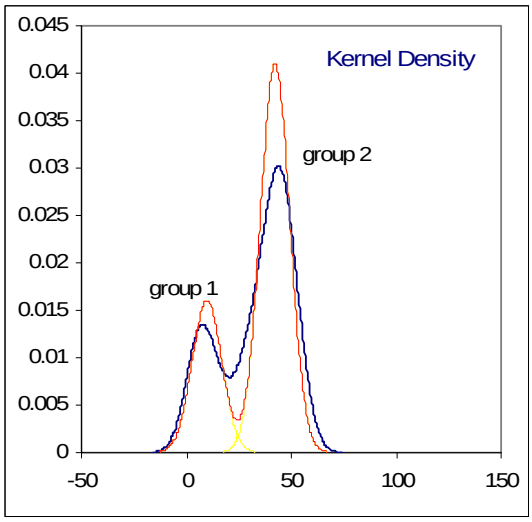


Group 2 only



All data





Determination of Hexavalent Chromium as Cr^{6+} on sample #1049; results in mg/kg

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110	IEC62321	n.d.		-----	2295		0		-----
310		-----		-----	2296	ISO17075	1.4		-----
324	IEC62321	0.65		-----	2297	IEC62321	N.D.		-----
330		-----		-----	2298		-----		-----
339	EN1122Acc to IEC	<10		-----	2301		-----		-----
357		-----		-----	2303	IEC62321	0		-----
390	IEC62321	<5		-----	2304		-----		-----
452		-----		-----	2305		-----		-----
551		n.d.		-----	2306		-----		-----
607	EPA3060A/7196A	n.d.		-----	2309	EPA3060A/7196A	<2		-----
622	in house	<1		-----	2310		-----		-----
623		-----		-----	2311		-----		-----
632	IEC62321	n.d.		-----	2312	EPA3060A	n.d.		-----
826	IEC62321	n.d.		-----	2350	IEC62321	n.d.		-----
840	IEC62321	<2		-----	2352	IEC62321	<2		-----
1051		-----		-----	2353	EPA3060	n.d.		-----
1121	in house	<1.0		-----	2355	IEC62321	<2		-----
1126		-----		-----	2357	IEC62321	n.d.		-----
1800		-----		-----	2359	EPA3060	0.5377		-----
2102		-----		-----	2362	IEC62321	<5		-----
2115		-----		-----	2363	IEC62321	<2		-----
2117	EN62321	<1		-----	2365	IEC62321	<2		-----
2129	in house	<0.5		-----	2366	IEC62321	n.d.		-----
2131	in house	N.D.		-----	2369	IEC62321	<2		-----
2132	EPA3060A/7196A	<2.0		-----	2370	IEC62321	n.d.		-----
2146		-----		-----	2372	IEC62321	n.d.		-----
2152		-----		-----	2375	IEC62321	n.d.		-----
2156	IEC62321	1		-----	2379	IEC62321	n.d.		-----
2160		-----		-----	2380		-----		-----
2161	in house	0.5		-----	2385	EPA3060A	<1		-----
2165	IEC62321	<5		-----	3104		-----		-----
2167	IEC62321	0.76		-----	3106		-----		-----
2169	IEC62321	<10		-----	3107		-----		-----
2172	IEC62321	<2		-----	3110		-----		-----
2173	IEC62321	n.d.		-----	3111		-----		-----
2176	in house	n.d.		-----	3113		-----		-----
2180		-----		-----	3116		-----		-----
2182	IEC62321	n.d.		-----	3122		-----		-----
2184	IEC62321	<2		-----	3124		-----		-----
2187	IEC62321	0.00		-----	3126		-----		-----
2190	EPA3060A	n.d.		-----	3134		-----		-----
2196	IEC62321	<1		-----	3135		-----		-----
2197		n.d.		-----	3146	IEC62321	<10		-----
2199	EPA3060	<2		-----	3153	IEC62321	n.d.		-----
2201	IEC62321	n.d.		-----	3154		-----		-----
2202	in house	n.d.		-----	3159	IEC62321	<2		-----
2212		-----		-----	3160		-----		-----
2214	IEC62321	n.d.		-----	3163		-----		-----
2215	EPA3060	<2		-----	3166	EPA3060A/7199	0.0465		-----
2216		-----		-----	3169	IEC62321	<5		-----
2227		-----		-----	3172		-----		-----
2228		-----		-----	3179	EPA3060A	<0.1		-----
2229	in house	n.d.		-----	3180		-----		-----
2236		-----		-----	3182	IEC62321	n.d.		-----
2241	IEC62321	n.d.		-----	3185	IEC62321	<1		-----
2246	IEC62321	n.d.		-----	3190	IEC62321	<1.0		-----
2247	IEC62321	0.6		-----	3191	IEC62321	<5		-----
2248		-----		-----	3199	CPSD-AN-00047	<2		-----
2251		-----		-----	3200	EPA3060A/7196	<2.0		-----
2253		-----		-----	3213	IEC62321	0.09		-----
2254		-----		-----	3218		-----		-----
2258		-----		-----	3225	IEC62321	<2.0		-----
2259		-----		-----	3228	IEC62321	<2		-----
2262		-----		-----	3237	in house	1.0		-----
2265		-----		-----	3239	IEC62321	<2.0		-----
2271	IEC62321	<2.0		-----	3243	DIN38405-D24	0.013		-----
2275		-----		-----	3248	IEC62321	<2		-----
2284	EPA3060A/7196A	<5		-----	8005		-----		-----
2289	IEC62321	<1		-----					
2290		-----		-----					
2293		-----		-----					

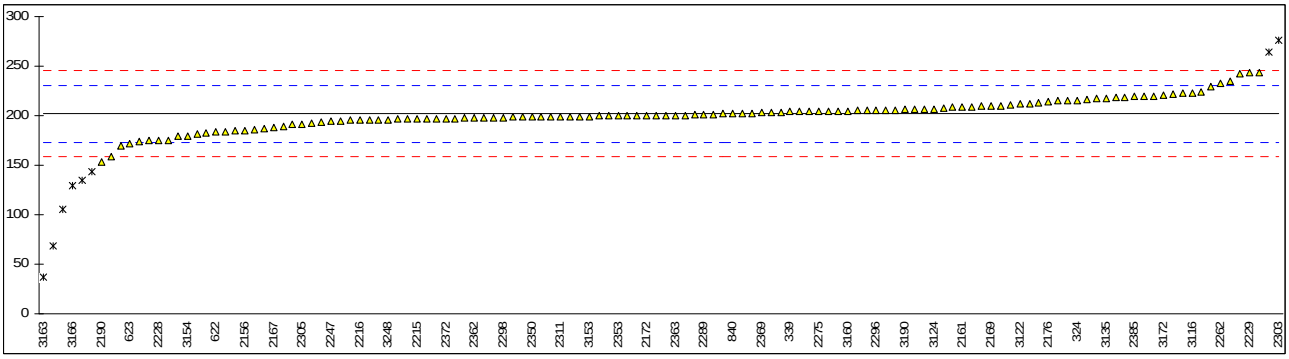
normality	OK	
n	14	
outliers	0	
mean (n)	0.47	Below detection limt
st.dev. (n)	0.461	
R(calc.)	1.29	
R(Horwitz)	(0.24)	

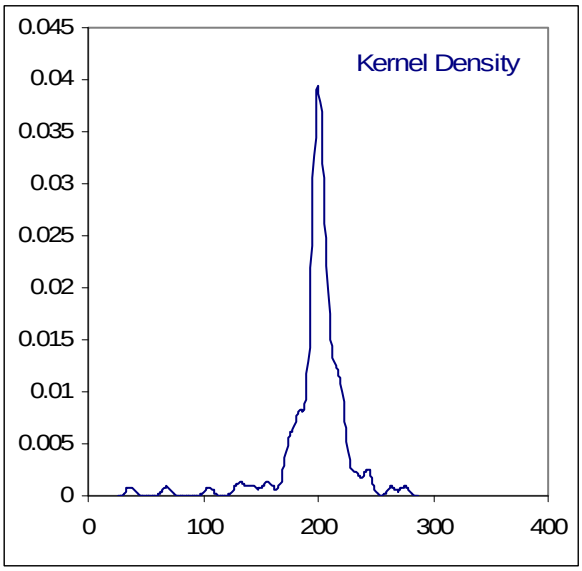
Determination of total Lead as Pb on sample #1048; results in mg/kg

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110	INH-E&E-003	195.01		-0.47	2295		244		2.91
310		159		-2.95	2296	microwave	205.5		0.25
324	IEC62321	215.6		0.95	2297	IEC62321	204.2		0.17
330	in house	175.44		-1.81	2298	CPSC-CH-E1002-08.1	198.333		-0.24
339	EN1122Acc to IEC	203.85		0.14	2301	CPSC-CH-E1002-08.1	222.2		1.40
357	in house	210		0.56	2303	in house	275.6	G(0.05)	5.08
390	EPA3052/6020A	206.7		0.34	2304	in house	209.025		0.50
452		-----		-----	2305	IEC62321	191.66	C	-0.70
551		203.9		0.14	2306		-----		-----
607	EPA3052	200.18		-0.11	2309	EPA3050B/3051A/3052	205.57		0.26
622	in house	183.33		-1.27	2310	EPA3052	208.2		0.44
623	EPA3052/6010C	172.140		-2.04	2311	EPA3052	199		-0.19
632	IEC62321	199		-0.19	2312	EPA3051A	201.3		-0.03
826	IEC62321	213		0.77	2350	IEC62321	198.9		-0.20
840	IEC62321	201.9		0.01	2352	IEC62321	196.3		-0.38
1051	CPSC-CH-E1002-08	189.42		-0.85	2353	EPA3051	200.0		-0.12
1121	in house	170.0		-2.19	2355	EPA3052	199.0115		-0.19
1126	ICP	201.9		0.01	2357	IEC62321	204		0.15
1800	in house	215.8	C	0.96	2359	EPA3052	198.851		-0.20
2102	XRF-Niton	195.3		-0.45	2362	CPSC-CH-E1002-08.1	197.5		-0.30
2115	CPSC	182.286		-1.34	2363	IEC62321	200.4		-0.10
2117	in house	199.6		-0.15	2365	IEC62321	201.0		-0.06
2129	D1645	193.9		-0.54	2366	EPA3052	206.5		0.32
2131	in house	264	G(0.05)	4.28	2369	IEC62321	202.926		0.08
2132	in house	212.17		0.71	2370	IEC62321	198		-0.26
2146		-----		-----	2372	IEC62321	197		-0.33
2152	in house	179.1		-1.56	2375	IEC62321	203		0.08
2156	IEC62321	185		-1.16	2379	IEC62321	204		0.15
2160	in house	181.3		-1.41	2380		-----		-----
2161	in house	208.7		0.47	2385		219.5		1.22
2165	EPA3052	209.5		0.53	3104	EPA3051	198.33		-0.24
2167	IEC62321	187.66		-0.97	3106		-----		-----
2169	IEC62321	209.7603		0.55	3107	in house	200		-0.12
2172	IEC62321	200.1		-0.12	3110	CPSC-CH-E1002-08.1	197.3		-0.31
2173	IEC62321	196.4		-0.37	3111	in house	200.0		-0.12
2176	IEC62321	213.7		0.82	3113	in house	205.74		0.27
2180	ICP OES	205.1		0.23	3116	CHPA C-02.3	222.71		1.44
2182	EPA3051A	183.48		-1.26	3122	CPSC-CH-E1003-09	211.8		0.69
2184	CPSC-CH-E1002-08.1	215		0.91	3124	EPA3052	207		0.36
2187	EPA3052	234.7		2.27	3126		-----		-----
2190	in house	153.6		-3.32	3134	in house	224.01		1.53
2196	IEC62321	199		-0.19	3135	in house	217		1.05
2197		-----		-----	3146	in house	215.2		0.92
2199	EPA3052	200.5		-0.09	3153	IEC62321	199.4		-0.17
2201	IEC62321	202		0.01	3154	EN1122	179.6		-1.53
2202	in house	218.8		1.17	3159	CPSC-CH-E1002-08	187.09		-1.01
2212	CPSC-CH-E1002-08.1	196.7		-0.35	3160	CPSC-CH-E1002-08	204.48		0.18
2214	XRF	200		-0.12	3163	XRF	37	G(0.01)	-11.35
2215	EPA3051	196.434		-0.37	3166	XRF	129.6	G(0.05)	-4.97
2216	CPSC-CH-E1002-08.1	195.60		-0.43	3169	CPSC-CH-E1002-08.0	174.278		-1.89
2227	CPSD-AN-00065	175.5		-1.81	3172	in house	221.0		1.32
2228	CPSD-AN-00067	175.500		-1.81	3179	ISO17294-1	220		1.25
2229	in house	244.0		2.91	3180		105.3	G(0.01)	-6.64
2236	CPSC-1002-08	211.2		0.65	3182	IEC62321	219.00		1.18
2241	IEC62321	198.8		-0.21	3185	IEC62321	205.3		0.24
2246	in house	196.74		-0.35	3190	IEC62321	206.0		0.29
2247	EPA3050	195		-0.47	3191	CPSC-CH-E1002	207.5		0.39
2248		-----		-----	3199	CPSD-AN-00008	222.7		1.44
2251		-----		-----	3200	in house	195.91		-0.41
2253	EPA3052	203.16		0.09	3213	IEC62321	184.31		-1.20
2254	in house	143.5	G(0.05)	-4.01	3218	IEC62321	200.4		-0.10
2258	EPA3051A	135.06	G(0.05)	-4.59	3225	IEC62321	197.2		-0.32
2259	IEC62321	216.9		1.04	3228	IEC62321	202.6		0.06
2262	CPSC-CH-E1002-08	232.7		2.13	3237	in house	68.05	G(0.01)	-9.21
2265	EN1122	229.492	C	1.91	3239	IEC62321	195.71		-0.42
2271	EPA3052	192.4		-0.65	3243	DIN38406-E6	185.6		-1.12
2275		204		0.15	3248	CPSC	196		-0.40
2284	EPA3052	199.2		-0.18	8005	CPSC-CH-E1002-08.1	219.99		1.25
2289	EPA3051A/3052	201		-0.06					
2290	in house	242.1		2.77					
2293	CPSC-CH-E1003-09	191.4		-0.72					

normality	not OK
n	122
outliers	8
mean (n)	201.80
st.dev. (n)	15.162
R(calc.)	42.45
R(Horwitz)	40.67

Lab 1800 first reported 264.4
Lab 2265 first reported 51.195





Determination of total Lead as Pb on in PVC sample #1049; results in mg/kg

lab	method	value	mark	z(targ)
110	INH-E&E-003	n.d.		-----
310		<10		-----
324	IEC62321	<2		-----
330	in house	<20		-----
339	EN1122Acc to IEC	<5		-----
357	in house	<5		-----
390	EPA3052/6020A	<1		-----
452		-----		-----
551		n.d.		-----
607	EPA3051A	n.d.		-----
622	in house	<2		-----
623	EPA3052/6010C	n.d.		-----
632	IEC62321	n.d.		-----
826	IEC62321	n.d.		-----
840	IEC62321	<2		-----
1051	CPSC-CH-E1002-08	<10		-----
1121	in house	0.6		-----
1126		-----		-----
1800	in house	<50		-----
2102		-----		-----
2115	CPSC	2.266		-----
2117	in house	0.08		-----
2129	D1645	0.17		-----
2131	in house	0.16		-----
2132	in house	<10.3		-----
2146		-----		-----
2152	in house	<2		-----
2156	IEC62321	1		-----
2160	in house	<2		-----
2161	in house	0.6		-----
2165	EPA3052	<5		-----
2167	IEC62321	2.02		-----
2169	IEC62321	<10		-----
2172	IEC62321	<2		-----
2173	IEC62321	n.d.		-----
2176	IEC62321	n.d.		-----
2180	GFAAS	n.d.		-----
2182	EPA3051A	n.d.		-----
2184	CPSC-CH-E1002-08.1	<2		-----
2187	EPA3052	0.00		-----
2190	in house	n.d.		-----
2196	IEC62321	<10		-----
2197		-----		-----
2199	EPA3052	<2		-----
2201	IEC62321	n.d.		-----
2202	in house	n.d.		-----
2212	CPSC-CH-E1002-08.1	<4		-----
2214	XRF	4	DG(0.01)	-----
2215	EPA3051	<2		-----
2216	CPSC-CH-E1002-08.1	<2.00		-----
2227	CPSD-AN-00065	1		-----
2228	CPSD-AN-00067	0.000		-----
2229	in house	n.d.		-----
2236	CPSC-1002-08	<10		-----
2241	IEC62321	n.d.		-----
2246	in house	n.d.		-----
2247	EPA3050	0.9		-----
2248		-----		-----
2251		-----		-----
2253	EPA3052	<5		-----
2254	in house	<10		-----
2258	EPA3051A	0.41		-----
2259	IEC62321	<5		-----
2262	CPSC-CH-E1002-08	<5		-----
2265		-----		-----
2271	EPA3052	<5.0		-----
2275		n.d.		-----
2284	EPA3052	<5		-----
2289	EPA3051A/3052	<2		-----
2290	in house	2.0		-----
2293	CPSC-CH-E1003-09	n.d.		-----
2295		0		-----
2296	microwave	0.2		-----
2297	IEC62321	n.d.		-----
2298	CPSC-CH-E1002-08.1	<2.0		-----
2301	CPSC-CH-E1002-08.1	n.d.		-----
2303	in house	0		-----
2304	in house	n.d.		-----
2305	IEC62321	n.d.		-----
2306		-----		-----
2309	EPA3050B/3051A/3052	<2		-----
2310	EPA3052	<2		-----
2311	EPA3052	n.d.		-----
2312	EPA3051A	n.d.		-----
2350	IEC62321	n.d.		-----
2352	IEC62321	<2		-----
2353	EPA3051	n.d.		-----
2355	EPA3052	<2		-----
2357	IEC62321	n.d.		-----
2359	EPA3052	n.d.		-----
2362	CPSC-CH-E1002-08.1	<5		-----
2363	IEC62321	<2		-----
2365	IEC62321	<2		-----
2366	EPA3052	n.d.		-----
2369	IEC62321	<2		-----
2370	IEC62321	n.d.		-----
2372	IEC62321	n.d.		-----
2375	IEC62321	n.d.		-----
2379	IEC62321	n.d.		-----
2380		-----		-----
2385		<2		-----
3104	EPA3051	<50		-----
3106		-----		-----
3107		n.d.		-----
3110	CPSC-CH-E1002-08.1	<10		-----
3111	in house	0.85		-----
3113	in house	n.d.		-----
3116	CHPA C-02.3	<10		-----
3122	CPSC-CH-E1003-09	3.76	DG(0.01)	-----
3124	EPA3052	0.11		-----
3126		-----		-----
3134	in house	<3		-----
3135		-----		-----
3146	in house	<10		-----
3153	IEC62321	n.d.		-----
3154		-----		-----
3159	CPSC-CH-E1002-08	<10		-----
3160	CPSC-CH-E1002-08	<8		-----
3163	XRF	1		-----
3166		-----		-----
3169	CPSC-CH-E1002-08.0	<5		-----
3172	in house	<20		-----
3179	ISO17294-1	<2		-----
3180		-----		-----
3182	IEC62321	6.26	G(0.01)	-----
3185	IEC62321	<2		-----
3190	IEC62321	<2.0		-----
3191	CPSC-CH-E1002	<5		-----
3199	CPSD-AN-00008	<10		-----
3200	in house	<5.0		-----
3213	IEC62321	0.07		-----
3218		-----		-----
3225	IEC62321	<10.0		-----
3228	IEC62321	<10		-----
3237	in house	8.35	G(0.01)	-----
3239	IEC62321	<10.0		-----
3243	DIN38406-E6	0.160		-----
3248	CPSC	<10		-----
8005	CPSC-CH-E1002-08.1	<10		-----

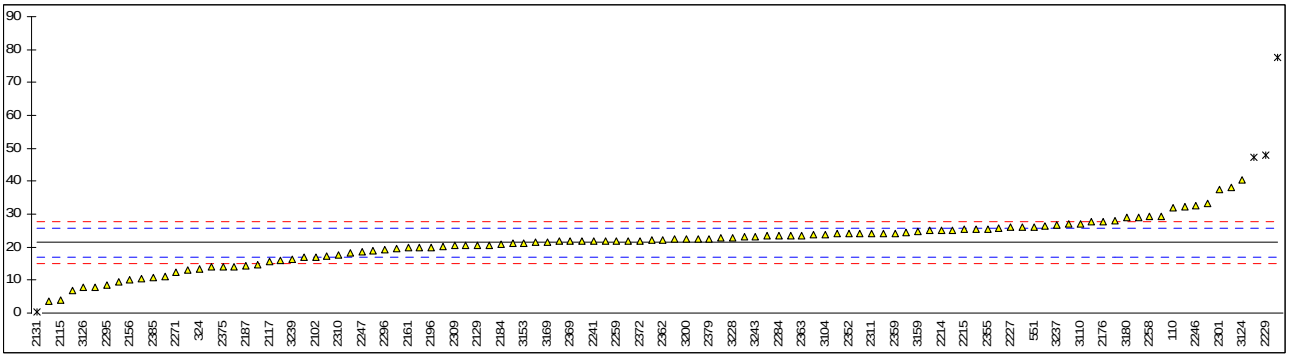
normality	not OK	
n	22	
outliers	4	
mean (n)	0.62	Below detection limit
st.dev. (n)	0.703	
R(calc.)	1.97	
R(Horwitz)	(0.30)	

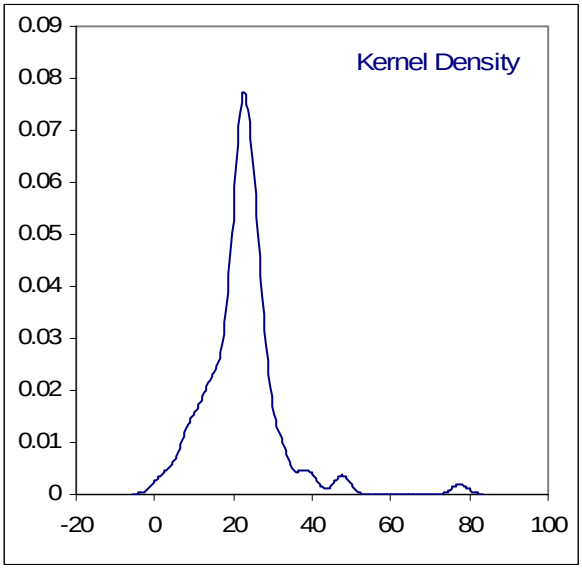
Determination of Mercury as Hg on sample #1048; results in mg/kg

lab	method	value	Mark	z(targ)	lab	method	value	mark	z(targ)
110	INH-E&E-003	32.036		4.93	2295		8.43		-6.00
310		<10	false neg.	<-5.28	2296	microwave	19.4		-0.92
324	IEC62321	13.3		-3.75	2297	IEC62321	26.3		2.28
330	in house	<20		-----	2298		-----		-----
339	EN1122Acc to IEC	16.9		-2.08	2301	CPSC-CH-E1002-08.1	37.4		7.42
357		-----		-----	2303	in house	47.3	DG(0.01)	12.01
390	EPA3052/6020A	24.00		1.21	2304		-----		-----
452		-----		-----	2305	IEC62321	18.30		-1.43
551		26.20		2.23	2306		-----		-----
607	EPA3052	21.05		-0.16	2309	EPA3051A/3052	20.39		-0.46
622	in house	21.69		0.14	2310	EPA3052	17.7		-1.71
623	EPA3052/6010C	7.710		-6.34	2311	EPA3052	24		1.21
632		-----		-----	2312	EPA3051A	20.1		-0.60
826	IEC62321	22		0.28	2350	IEC62321	23.0		0.75
840	IEC62321	20.53		-0.40	2352	IEC62321	24.0		1.21
1051		-----		-----	2353	EPA3051	23.5		0.98
1121	in house	10.5		-5.04	2355	EPA3052	25.4998		1.91
1126	ICP	16		-2.50	2357	IEC62321	24.1		1.26
1800		-----		-----	2359	EPA3052	24.1295		1.27
2102	XRF-Niton	17.0		-2.03	2362	IEC62321	22.3		0.42
2115	CPSC	3.812		-8.14	2363	IEC62321	23.6		1.03
2117	in house	15.6		-2.68	2365	IEC62321	25.0		1.67
2129	D1645	20.7		-0.32	2366	EPA3052	22.50		0.52
2131	in house	0.40	G(0.01)	-9.72	2369	IEC62321	21.6946		0.14
2132	in house	<10.0	false neg.	<-5.28	2370	IEC62321	20.0		-0.64
2146		-----		-----	2372	IEC62321	22		0.28
2152	in house	25.2		1.77	2375	IEC62321	14.1		-3.38
2156	IEC62321	10		-5.28	2379	IEC62321	22.5		0.52
2160	in house	21.74		0.16	2380		-----		-----
2161	in house	19.8		-0.74	2385		10.9		-4.86
2165	EPA3052	27.7		2.93	3104	EPA3051	23.74		1.09
2167	IEC62321	14.14		-3.36	3106		-----		-----
2169	IEC62321	<10	false neg.	<-5.28	3107		n.d.	false neg.	-----
2172	IEC62321	23.7		1.07	3110	EPA3052	27.1		2.65
2173	IEC62321	29.51		3.76	3111	in house	14.6		-3.14
2176	IEC62321	27.7		2.93	3113		-----		-----
2180		-----		-----	3116	EPA3051AMod.	25.41		1.86
2182	EPA3051A	29.16		3.60	3122		-----		-----
2184	CPSC-CH-E1002-08.1	20.9		-0.23	3124	EPA3052	40.4		8.81
2187	EPA3052	14.32		-3.27	3126	INAA	7.7		-6.34
2190	in house	n.d.	false neg.	-----	3134	in house	19.52		-0.87
2196	IEC62321	20		-0.64	3135		-----		-----
2197		n.d.	false neg.	-----	3146	in house	25.83		2.06
2199	EPA3052	9.3		-5.60	3153	IEC62321	21.2		-0.09
2201	IEC62321	28		3.06	3154	EN1122	38.3		7.84
2202	in house	n.d.	false neg.	-----	3159	EPA3051A	24.71		1.54
2212		-----		-----	3160	CPSC-CH-E1002-08	20.70		-0.32
2214	XRF	25		1.67	3163	XRF	7		-6.67
2215	EPA3051	25.3281		1.83	3166		-----		-----
2216		-----		-----	3169	EPA3052	21.475		0.04
2227	CPSD-AN-00065	26		2.14	3172	in house	32.4		5.10
2228	CPSD-AN-00067	12.900		-3.93	3179	ISO17294-1	14		-3.42
2229	in house	47.8	DG(0.01)	12.24	3180		29.0		3.53
2236	CPSC-1002-08	23.43		0.95	3182		-----		-----
2241	IEC62321	21.8		0.19	3185	IEC62321	22.40		0.47
2246	in house	32.63		5.21	3190	IEC62321	26.0		2.14
2247	EPA3050	18.5	C	-1.34	3191	IEC62321	21.8		0.19
2248		-----		-----	3199	CPSD-AN-00008	17.19		-1.94
2251		-----		-----	3200	in house	22.46		0.50
2253	EPA3052	21.47		0.04	3213	IEC62321	22.27		0.41
2254	in house	77.5	G(0.01)	26.00	3218	IEC62321	22.69		0.60
2258	EPA3051A	29.37		3.70	3225	IEC62321	11.05		-4.79
2259	IEC62321	21.9		0.24	3228	IEC62321	22.7		0.61
2262		-----		-----	3237	in house	26.80		2.51
2265	DIN54233	3.5943		-8.24	3239	IEC62321	16.19		-2.41
2271	EPA3052	12.4		-4.16	3243	EN1483	23.19		0.84
2275		27		2.60	3248	in house	19		-1.11
2284	EPA3052	23.5		0.98	8005	EPA3051AMod.	24.34		1.37
2289	EPA3051A/3052	24		1.21					
2290	in house	33.2		5.47					
2293		-----		-----					

normality	not OK
n	104
outliers	4
mean (n)	21.39
st.dev. (n)	6.854
R(calc.)	19.19
R(Horwitz)	6.04

Lab 2247 first reported 0.074





Determination of Mercury as Hg on sample #1049; results in mg/kg

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110	INH-E&E-003	2.8021		-----	2295		0.202		-----
310		<10		-----	2296	microwave	1.8		-----
324	IEC62321	<0.1		-----	2297	IEC62321	n.d.		-----
330	in house	<20		-----	2298		-----		-----
339	EN1122Acc to IEC	<0.1		-----	2301	CPSC-CH-E1002-08.1	n.d.		-----
357		-----		-----	2303	in house	0		-----
390	EPA3052/6020A	<1		-----	2304		-----		-----
452		-----		-----	2305	IEC62321	n.d.		-----
551		n.d.		-----	2306		-----		-----
607	EPA3051A	n.d.		-----	2309	EPA3051A/3052	<2		-----
622	in house	<1		-----	2310	EPA3052	<2		-----
623		-----		-----	2311	EPA3052	n.d.		-----
632	IEC62321	n.d.		-----	2312	EPA3051A	n.d.		-----
826	IEC62321	n.d.		-----	2350	IEC62321	n.d.		-----
840	IEC62321	<2		-----	2352	IEC62321	<2		-----
1051		-----		-----	2353	EPA3051	n.d.		-----
1121	in house	0.32		-----	2355	EPA3052	<2		-----
1126		-----		-----	2357	IEC62321	n.d.		-----
1800		-----		-----	2359	EPA3052	n.d.		-----
2102		-----		-----	2362	IEC62321	<5		-----
2115	CPSC	n.d.		-----	2363	IEC62321	<2		-----
2117	in house	<0.05		-----	2365	IEC62321	<2		-----
2129	D1645	0.01		-----	2366	EPA3052	n.d.		-----
2131	in house	<0.01		-----	2369	IEC62321	<2		-----
2132	in house	<10.0		-----	2370	IEC62321	n.d.		-----
2146		-----		-----	2372	IEC62321	n.d.		-----
2152	in house	<2		-----	2375	IEC62321	n.d.		-----
2156	IEC62321	1		-----	2379	IEC62321	n.d.		-----
2160	in house	<2		-----	2380		-----		-----
2161	in house	0.2		-----	2385		<0.1		-----
2165	EPA3052	<5		-----	3104	EPA3051	<10		-----
2167	IEC62321	0.10		-----	3106		-----		-----
2169	IEC62321	<10		-----	3107		n.d.		-----
2172	IEC62321	<2		-----	3110	EPA3052	<5		-----
2173	IEC62321	n.d.		-----	3111	in house	0.15		-----
2176	IEC62321	n.d.		-----	3113		-----		-----
2180		-----		-----	3116	EPA3051AMod.	<10		-----
2182	EPA3051A	n.d.		-----	3122		-----		-----
2184	CPSC-CH-E1002-08.1	<2		-----	3124	EPA3052	-0.032		-----
2187	EPA3052	0.00		-----	3126		-----		-----
2190	in house	n.d.		-----	3134	in house	<1		-----
2196	IEC62321	<10		-----	3135		-----		-----
2197		n.d.		-----	3146	in house	<5		-----
2199	EPA3052	<2		-----	3153	IEC62321	n.d.		-----
2201	IEC62321	n.d.		-----	3154		-----		-----
2202	in house	n.d.		-----	3159	EPA3051A	<10		-----
2212		-----		-----	3160	CPSC-CH-E1002-08	<1		-----
2214	XRF	7	G(0.01)	-----	3163	XRF	2		-----
2215	EPA3051	<2		-----	3166		-----		-----
2216		-----		-----	3169	EPA3052	<5		-----
2227	CPSD-AN-00065	<10		-----	3172	in house	<20		-----
2228	CPSD-AN-00067	0		-----	3179	ISO17294-1	<1		-----
2229	in house	n.d.		-----	3180		-----		-----
2236	CPSC-1002-08	<10		-----	3182		-----		-----
2241	IEC62321	n.d.		-----	3185	IEC62321	<2		-----
2246	in house	n.d.		-----	3190	IEC62321	<2.0		-----
2247	EPA3050	0.1236		-----	3191	IEC62321	<1		-----
2248		-----		-----	3199	CPSD-AN-00008	<5		-----
2251		-----		-----	3200	in house	<2.0		-----
2253	EPA3052	<5		-----	3213	IEC62321	n.d.		-----
2254	in house	77.5	G(0.01)	-----	3218		-----		-----
2258	EPA3051A	n.d.		-----	3225	IEC62321	<10.0		-----
2259	IEC62321	<5		-----	3228	IEC62321	<10		-----
2262		-----		-----	3237	in house	100.4	G(0.01)	-----
2265	din54233-1	0.5198		-----	3239	IEC62321	<2.0		-----
2271	EPA3052	<5.0		-----	3243	EN1483	0.233		-----
2275		n.d.		-----	3248	in house	<0.078		-----
2284	EPA3052	<5		-----	8005	EPA3051AMod.	<10		-----
2289	EPA3051A/3052	<2		-----					
2290	in house	1.7		-----					
2293		-----		-----					

normality	not OK	
n	18	
outliers	3	
mean (n)	0.62	Below detection limit
st.dev. (n)	0.863	
R(calc.)	2.42	
R(Horwitz)	(0.30)	

APPENDIX 2; Analytical details regarding total Mercury determination

Lab	Analysis method	Technique to used release the metals	Acid / acid mixture used	Solid/liquid ratio (g/mL)	Technique to detect & quantify	Corrected for rec.
110	INH-E&E-003	Acid digestion microwave	HNO3+H2O2	0.2g/11mL	ICP-MS	NO
310						
324	IEC62321					
330	in house	Acid digestion microwave	HNO3+H2O2	0.1g/20 mL	ICP-OES	NO
339	EN1122Acc to IEC	Acid digestion microwave	HNO3	0.5g/50mL	FAVF	NO
357						
390	EPA3052/6020A	Acid digestion microwave	HNO3+H2O2	0.01	ICP-MS	NO
452						
551		Acid digestion microwave	HNO3	0.20g/25mL	ICP-OES	NO
607	EPA3051A	Acid digestion microwave	HNO3+HF	0.2g/11mL	ICP-OES	NO
622	in house	Mix Acid digestion	HNO3+H2SO4	0.5g/100mL	AAS	NO
623		Microwave	HNO3+H2O2	1g/14mL	ICP-OES	NO
632	IEC62321	Acid digestion microwave	HNO3+HF	0.20g/50mL	AAS	NO
826	IEC62321	Acid digestion microwave	HNO3		ICP	NO
840	IEC62321	Acid digestion microwave	HNO3+H2O2	0.25g/12mL	ICP-OES	NO
1051						
1121	in house	Acid digestion microwave	H2O	0.25g/5mL	ICP-MS	NO
1126		Acid digestion microwave	HNO3+HCl+H2O2	0.1g/7mL	ICP	NO
1800						
2102	XRF-Niton				XRF	NO
2115	CPSC	Acid digestion microwave	HNO3	0.15g/5mL	ICP-OES	NO
2117	in house	Acid digestion microwave	HNO3	0.15g/10mL	ICP-MS+ICP-AES	NO
2129	D1645	Acid digestion microwave	HNO3	1g/mL	ICP-MS	NO
2131	in house	Acid digestion microwave	HNO3	0.2g/10mL	ICP-MS	NO
2132	in house	Acid digestion microwave	HNO3	0.1g/5mL	ICP	NO
2146						
2152	in house	Acid digestion microwave	HNO3	0.03g/mL	ICP-OES	NO
2156	IEC62321	Acid digestion microwave	HNO3+H2O2	0.5g/100mL	ICP-OES	NO
2160	in house	Other			EDXRF	NO
2161	in house	Acid digestion microwave	HNO3+H2SO4	0.025	AAS	NO
2165	EPA3052	Acid digestion microwave	HNO3	0.1g/10mL	ICP	NO
2167	IEC62321	Acid digestion microwave	HNO3	1g/10mL	ICP+AAS (VGA)	NO
2169	IEC62321	Acid digestion microwave	HNO3	0.05g/50mL	ICP-MS	NO
2172	IEC62321	Acid digestion microwave	HNO3		ICP	NO
2173	IEC62321	Acid digestion microwave	HNO3+HBF4+H2O2+H2O	0.1g/9mL	ICP	NO
2176	IEC62321	Acid digestion microwave	HNO3+HBF4+H2O2+H2O	0.1g/9mL	ICP	NO
2180						
2182	EPA3051A	Acid digestion microwave	HNO3	0.03g/mL	ICP	NO
2184	CPSC-CH-E1002-08.1	Acid digestion microwave	HNO3	0.15g/5mL	ICP-OES	NO
2187	EPA3052	Acid digestion microwave	HNO3	0.1g/10mL	ICP	YES
2190	in house	Acid digestion microwave	H2SO4	0.5g/100mL	ICP-AES	NO
2196	IEC62321	Acid digestion microwave	HNO3+H2O2	0.25g/50mL	ICP	NO
2197						
2199	EPA3052	Acid digestion microwave	HNO3+HF+H2O2+HCL	0.025g/mL	AAS	NO
2201	IEC62321	Acid digestion microwave	HNO3	0.1-0.2g/8mL	ICP	NO
2202	in house	Acid digestion microwave	HNO3+HF	0.15g/40mL	ICP-OES	NO
2212						
2214	XRF	XRF				
2215	EPA3051	Acid digestion microwave	HNO3+H2O2		ICP-OES	NO
2216						
2227	CPSD-AN-00065	Acid digestion microwave	HNO3+H2O2	0.2g/25mL	ICP-OES	NO
2228	CPSD-AN-00067	Acid digestion microwave	HNO3	0.2g/25mL	ICP-MS	NO
2229	in house	Acid digestion microwave	HNO3+HCl	0.1g/15mL	ICP	NO
2236	CPSC-1002-08	Acid digestion microwave	HNO3	0.1g/5mL	ICP	NO
2241	IEC62321	Acid digestion microwave	HNO3+H2O2	0.1g/7mL	FIMS	NO
2246	in house	Acid digestion microwave	HNO3+H2O2	0.15g/10mL	ICP-OES	NO
2247	EPA3050	Acid digestion microwave	HNO3	0.1g/6mL	AAS+VGA	NO
2248						
2251						
2253	EPA3052	Acid digestion microwave	HNO3	0.1113g/10mL	ICP	YES
2254	in house	Acid digestion microwave	HNO3+H2O2+HCl	0.2g/25mL	AAS+VGA	NO
2258	EPA3051A	Acid digestion microwave	HNO3+H2O2	0.2006g/11mL	ICP	
2259	IEC62321	Acid digestion microwave	HNO3	0.2g+0.1g/5mL	ICP-MS	NO
2262		Acid digestion microwave	HNO3+H2O2	0.25g/10mL	AAS	
2265	din54233-1	Acid digestion microwave	HNO3+H2O2+H2O	mg/mL	AAS	NO
2271	EPA3052	Acid digestion microwave	HNO3+HCl	0.2g/10mL	ICP-OES	NO
2275		Acid digestion microwave	H2SO4+H2O	1:3	ICP	NO
2284	EPA3052	Acid digestion microwave	HNO3	0.2g/25mL	ICP	NO

2289	EPA3051A/3052	Acid digestion microwave	HNO3	1:50	ICP-OES	YES
2290	in house	Acid digestion microwave	HNO3	0.2g + 0.1g	ICP	YES
2293						
2295		Acid digestion microwave	H2SO4+H2O2	0.5g/100mL	ICP	NO
2296	microwave	Acid digestion microwave	HNO3	0.2g	ICP-OES	NO
2297	IEC62321	Acid digestion microwave	HNO3	0.2g/10mL	ICP-MS	NO
2298						
2301	CPSC-CH-E1002-08.1	Acid digestion microwave	HNO3	0.1g/5mL	ICP	NO
2303	in house	Acid digestion microwave	HNO3	0.1g/100mL	ICP-MS	NO
2304						
2305	IEC62321	Acid digestion microwave	HNO3+H2O2+HF	0.2g/7.5mL	ICP-OES	NO
2306						
2309	EPA3051A/3052	Acid digestion microwave	HNO3	0.2g/10mL	ICP-OES	NA
2310	EPA3052	Acid digestion microwave	HNO3+H2O2	1:100	ICP-MS	NO
2311	EPA3052	Acid digestion microwave	HNO3+H2O2	1:40	AAS (VGA)	NO
2312	EPA3051A	Acid digestion microwave	HNO3	0.005g/ml	ICP-MS	NO
2350	IEC62321	Acid digestion microwave	HNO3	0.2g/25mL	ICP-OES	NO
2352	IEC62321	Acid digestion microwave	HNO3+H2O2	0.25g/25mL	ICP-OES	NO
2353	EPA3051	Acid digestion microwave	HNO3+HF	0.25g/25mL	ICP-OES	NO
2355	EPA3052	Acid digestion microwave	HNO3+HF	0.02	ICP	NO
2357	IEC62321	Acid digestion microwave	HNO3	0.2g/10mL	ICP	NO
2359	EPA3052	Acid digestion microwave	HNO3+H2O2	0.1g/25mL	ICP	NO
2362	IEC62321	Acid digestion microwave	HNO3	0.1g/50mL	ICP-AES	NO
2363	IEC62321	Acid digestion microwave	HNO3+H2O2	0.25g/25mL	ICP-OES	NO
2365	IEC62321	Acid digestion microwave	HNO3+H2O2+HBF4	0.2g/25mL	ICP-OES	NO
2366	EPA3052	Acid digestion microwave	HNO3+H2O2	0.1g/10mL	DMA	NO
2369	IEC62321	Acid digestion microwave	HNO3	0.25g/25mL	ICP	NO
2370	IEC62321	Acid digestion microwave	HNO3	0.1g/5mL	ICP-AES	NO
2372	IEC62321	Acid digestion microwave	HNO3+HF+HCl	0.2g/13.5mL	ICP	NO
2375	IEC62321	Acid digestion microwave	HNO3+H2O2	0.25g/10mL	ICP	NO
2379	IEC62321	Acid digestion microwave	HNO3	0.25g/10mL	ICP	NO
2380						
2385		Acid digestion microwave	HNO3+H2O2	0.2g/6mL	CV-AAS	NO
3104	EPA3051	Acid digestion microwave	HNO3	0.1g/10mL	AAS	NO
3106						
3107		Acid digestion microwave	HNO3	1:100	ICP-OES	NO
3110	EPA3052	Acid digestion microwave	HNO3	0.15g/25mL	ICP-OES	NO
3111	in house	Acid digestion microwave	HNO3	0.2g/8mL	ICP-OES	NO
3113						
3116	EPA3051AMod.	Acid digestion microwave	HNO3	0.2g/25mL	ICP	NO
3122		Acid digestion microwave	HNO3	0.2g/5mL	ICP	NO
3124	EPA3052	Acid digestion microwave	HNO3+HF+HCl	0.25g/11mL	ICP-MS	NO
3126	INAA				INAA	
3134	in house	Acid digestion microwave	HNO3+H2O2		AAS	NO
3135						
3146	in house	Acid digestion microwave	HNO3+H2O2	0.3g/50mL	AAS	NO
3153	IEC62321	Acid digestion microwave	HNO3	0.2g/25mL	ICP	NO
3154		Acid digestion microwave	HNO3+H2O2	0.1g/8mL	ICP	NO
3159	EPA3051A	Acid digestion microwave	HNO3+H2O2	0.2g/10mL	ICP-OES	NO
3160	CPSC-CH-E1002-08	Acid digestion microwave	HNO3+H2O2+HCl	0.3g/12mL	ICP-AES	NO
3163	XRF				XRF	NO
3166						
3169	EPA3052	Acid digestion microwave	HNO3	0.1g/5mL	ICP-OES	NO
3172	in house	Acid digestion microwave	HNO3	0.045g/25mL	ICP	NO
3179	ISO17294-1	Acid digestion microwave	HNO3+H2O2+HF	0.15g/50mL	ICP-MS	NO
3180		Acid digestion microwave	HNO3+HCl		AAS	
3182		Acid digestion microwave	HNO3		ICP	NO
3185	IEC62321	Acid digestion microwave	HNO3	0.2g/25mL	ICP-OES	NO
3190	IEC62321	Acid digestion microwave	HNO3	0.002g/mL	ICP	NO
3191	IEC62321	Acid digestion microwave	HNO3	0.2g/50mL	CV-AAS	NO
3199	CPSD-AN-00008	Acid digestion microwave	HNO3+H2O2	0.2g/11mL	ICP	NO
3200	in house	Acid digestion microwave	HNO3	0.2g/10mL	ICP	NO
3213	IEC62321	Acid digestion microwave	HNO3	0.2g/8mL	ICP-MS	NO
3218		Acid digestion microwave	HNO3	0.2g/10mL	ICP	NO
3225	IEC62321	Acid digestion microwave	HNO3	0.008g/mL	ICP+AAS-FIAS	NO
3228	IEC62321	Acid digestion microwave	HNO3	0.25g/8mL	ICP-OES	NO
3237	in house	Acid digestion microwave	HNO3	0.2g/10mL	ICP-MS	YES
3239	IEC62321	Acid digestion microwave	HNO3+HCl		ICP-OES	NO
3243	EN1483	Acid digestion microwave	HNO3+HCl	0.1g/25mL	AAS	YES
3248	in house	Acid digestion microwave	HNO3	0.15g/5mL	ICP-MS	YES
8005	EPA3051AMod.	Acid digestion microwave	HNO3	0.2g/25mL	ICP	NO

Analytical details regarding Hexavalent Chromium determination

Lab	Analysis method	Size of reduced sample	Solvent	ratio g/mL	Extraction conditions	Corr for recov.	Other details
110	IEC62321	2x2x0.6mm	NaOH+NA2CO3	1.74g/50mL	95°C 3hr stirring	NO	---
310							---
324	IEC62321						---
330							
339	EN1122Acc to IEC	2 mm	H2O+NaOH	0.5g/50mL	90-95°C 3hr s shaking	NO	---
357							
390			NaOH+Na2CO3		95°C 3hr	NO	---
452							---
551		<250µm	Alkaline solution	2.5g/50mL	95°C 3hr	NO	---
607	EPA3060A/7196A	<1µm	NaOH+Na2CO3	2g/50mL	90°C 1hr	NO	---
622	in house	1 mm	NaOH+Na2CO3	0.5g/50mL	90-94°C 1hr s shaking	NO	---
623							---
632	IEC62321	<2x2x2mm	Alkaline digestion	2.5g/100mL	90-95°C 3hr s	NO	---
826	IEC62321	ground to a powder	Alkaline solution pH>11.5		90-95°C 1hr shaking	NO	---
840	IEC62321	powder <250µm	NaOH+Na2CO3	1.25g/25mL	90-95°C 3hr stirring	NO	---
1051							---
1121	in house		HCl	1g/20mL	37°C 1hr	NO	---
1126							---
1800							---
2102							---
2115							---
2117	EN62321	500µm	NaOH+Na2CO3	0.5g/50mL	90-95°C 3hr	NO	---
2129	D1645			0.07g/mL		NO	---
2131	in house						---
2132	EPA3060A/7196A	500µm	Diphenylcarbazide Solution	2.5g/50mL	90-95°C 1hr stirring	NO	---
2146							---
2152							---
2156	IEC62321	500µm	Alkaline digestion	2.5g/100mL	95°C 3hr	NO	---
2160							---
2161	in house	Powder by frost	Alkaline digestion	0.005	95°C 1hr	NO	---
2165	IEC62321	<250µm	NaOH+Na2CO3	1.0g/25mL	92.5°C 3hr	NO	---
2167	IEC62321	150µm	NaOH+Na2CO3	1g/50mL	95°C 1hr	YES	---
2169	IEC62321	<250µm	NaOH+Na2CO3	0.05g/100mL	90-95°C 3hr	NO	---
2172	IEC62321	1x1mm	NaOH+Na2CO3+Triton X		95°C 3hr	NO	---
2173	IEC62321	<250µm	NaOH+NaCO3	2.5g/50mL	90-95°C 3hr	NO	---
2176	in house	40µm	NaOH+Na2CO3	0.5g/50mL	90-95°C 3hr	NO	---
2180							---
2182	IEC62321	500µm	NaOH+NA2CO3 pH>11.5	0.02g/mL	95°C 3hr waterbath	NO	---
2184	IEC62321	Milling	NaOH+Na2CO3+Triton X	0.1g/25mL	90°C 3hr	NO	---
2187	IEC62321	Powder	NaOH+Na2CO3	1.0g/40mL	90-95°C 3hr	YES	---
2190	EPA3060A	No reduction	Alkaline solution	1.5g/100mL	90°C 1hr	NO	---
2196	IEC62321	500µm	NaOH+Na2CO3	2.5g/100mL	90-95°C 3hr	NO	---
2197							---
2199	EPA3060		NaOH	0.02g/mL	95°C	NO	---
2201	IEC62321	powder <250µm	NaOH+Na2CO3	0.5g/50mL	95°C 3hr shaking	NO	---
2202	in house	no grinding	THF + Alkaline digestion	0.1g/40mL0	10 min shaking	NO	---
2212							---
2214	IEC62321	Used as it is	Alkaline digestion	1g/25mL	95°C 2hr	YES	---
2215	EPA3060	Used as it is	Alkaline digestion		90-95°C 1hr	NO	---
2216							---
2227		5x5mm	NaOH+Na2CO3	0.5g/100mL	95°C 3hr waterbath	NO	---
2228							---
2229	in house						---
2236							Plastic did not dissolve
2241	IEC62321	<500µm	NaOH+Na2CO3	2.5g/50mL	90-95°C 3hr	NO	---
2246	IEC62321	Powder form	NaOH+Na2CO3+MgCl2	1.0942g/22mL	90-95°C 3hr stirring	NO	---
2247	IEC62321		Digestion Solution	1g/50mL	temperaline	NO	---
2248							---
2251	EPA3060A/7196A	5mm	NaOH+Na2CO3+Phosphate buffer	1.653/50mL	92°C 1hr	NO	---
2253							---
2254							---
2258							---
2259							---
2262							---
2265	DIN17075	Reduced powder	Distilled water	mg/mL	15min room temp	NO	---
2271	IEC62321	<250µm	NaOH+Na2CO3	1.25g/100mL	93°C 3hr	NO	---
2275							---
2284	EPA3060/7196A	<250µm	NaOH+Na2CO3	1g/50mL	90°C 3hr bath	NO	---
2289	IEC62321	Approx: 1.5mm	Alkaline solution	1:20	95°C 3hr stirring	YES	---

2290							---
2293							---
2295		Used as it is	NaOH+Na2CO3	2.5g/100mL	Alkaline extraction, 90°C	NO	---
2296	ISO17075	Not reduced	K2HPO4 trihydrate	2g/100mL	room temp 3hr rotation	NO	---
2297	IEC62321	1x1mm	NaOH+Na2CO3	1g/50mL	95°C 3hr	NO	---
2298							---
2301							---
2303	IEC62321	As received	NaOH+Na2CO3	0.5g/100mL	95°C 3hr block digestion	NO	---
2304							---
2305							---
2306							---
2309	EPA3060A/7196A	<250µm	Alkaline digestion	2.5g/100mL	90°C 3hr	NO	---
2310							---
2311							---
2312	EPA3060A	<1x1mm	Alkaline digestion	0.05g/mL	90°C 3hr	NO	---
2350	IEC62321	Freezing powder	NaOH+Na2CO3	1.2g/50mL,	90-95°C 3hr s shaking	NO	---
2352	IEC62321	250µm	NaOH+Na2CO3	2.5g/50mL	90-95°C 3hr s stirring	NO	---
2353	EPA3060	<250x250x250mm	NaOH+Na2CO3	1.25g/25mL	90-95°C 3hr s shaking	NO	---
2355	IEC62321	<250µm	NaOH+Na2CO3	0.05	92.5°C 3hrs shaking	NO	---
2357	IEC62321	<0.5mm	NaOH+Na2CO3	1g/50mL	92.5°C 3hrs stirring	NO	---
2359	EPA3060A	Powder	Alkaline extraction	2.5g/100mL	90-95°C 3hr	NO	---
2362	IEC62321	500µm	NaOH+Na2CO3	2.5g/50mL	95°C 3hr	NO	---
2363	IEC62321	250µm	NaOH+Na2CO3	2.5g/50mL	90-95°C 3hrs stirring	NO	---
2365	IEC62321	<0.25x0.25x0.25mm	Digestion Solution	2.5g/100mL	90-95°C 3hrs stirring	NO	---
2366	IEC62321	<500µm	NaOH+Na2CO3	1.25g/50mL	90°C 3hr shaking	NO	---
2369	IEC62321	<250x250x250µm	NaOH+Na2CO3	2.5g/500mL	92.5°C 3hr stirring	NO	---
2370	IEC62321	0.5x0.5mm	NaOH+Na2CO3	2.5g/50mL	90°C 3hrs stirring	NO	---
2372	IEC62321	<0.5mm	NaOH+Na2CO3	2.5g/100mL	90-95°C 3hr	NO	---
2375	IEC62321	Grinded sample	Digestion Solution	2.5g/50mL	90-95°C 3hr	NO	---
2379	IEC62321	250µm	Alkaline extraction	1.0g/25mL	90°C 3hr s extraction	NO	---
2380							---
2385	EPA3060A	<0.5mm	NaOH+Na2CO3	1g/50mL	90-95°C 1hr	NO	---
3104							---
3106							---
3107							---
3110							---
3111							---
3113							
3116	EPA3060A	powder <250µm	NaOH+Na2CO3	2.5g/50mL	95°C 3hr	NO	
3122							
3124							
3126							
3134							
3135							
3146	IEC62321	1x1mm	NaOH+Na2CO3	1.0g/25mL	95°C 3hr stirring	NO	
3153	IEC62321	Grind into powder	NaOH+Na2CO3+Phosphate buffer	2.5g/50mL	90-95°C 3hr stirring	NO	
3154							
3159	IEC62321	<250µm	NaOH+Na2CO3	1.0g/50mL	90-95°C 3hr	NO	
3160							
3163							
3166	EPA3060A/7199	Milled	NaOH+Na2CO3	0.02g/mL	90°C 1hr	NO	
3169	IEC62321	<250µm	NaOH+Na2CO3	1.0g/20mL	90-95°C 3hr shaking	NO	
3172							
3179	EPA3060A		NaOH+Na2CO3	5.0g/50mL	90-95°C 1hr	NO	
3180							
3182	IEC62321	250 µm	NaOH+Na2CO3	1.0g/50mL	90°C 3hr waterbath	NO	
3185	IEC62321	<250µm	NaOH+Na2CO3	1.25g/25mL	90-95°C 3hr s stirring	NO	
3190	IEC62321	No reduction	NaOH+Na2CO3	0.05g/mL	95°C 3hrs stirring	NO	
3191	IEC62321	<250µm	NaOH+Na2CO3	1.0g/50mL	90°C 3hr waterbath	NO	
3199	CPSD-AN-00047	5x2mm	NaOH+Na2CO3	0.5g/50mL	90-95°C 1hr waterbath	NO	
3200	EPA3060A/7196	#1048 3x3mm	NaOH+Na2CO3	1.5g/50mL	90-95°C 1hr	NO	
3213	IEC62321	Freezer mill	NaOH+Na2CO3	0.5g/50mL	95°C 1hr stirring	NO	
3218	IEC62321	250 µm	NaOH+Na2CO3	1.0g/50mL	95°C 3hr	NO	
3225	IEC62321	<500µm	NaOH+Na2CO3	0.012g/mL	95°C 3hr stirring	NO	
3228	IEC62321	<250µm	NaOH+Na2CO3	2.5g/50mL	90-95°C 3hrs stirring	NO	
3237	in house	5x5mm	Artificial Acidic Sweat Solution	1.0g/50mL	37.7°C 1hr shaked	YES	
3239	IEC62321	<500µm	NaOH+Na2CO3	2.5g/50mL	95°C 3hr	NO	
3243	DIN38405-D24		Phosphate buffer	2.0g/100mL	3hr rotating	YES	
3248	IEC62321	<500µm	NaOH+Na2CO3	1.0g/50mL	95°C 2hr	YES	
8005	EPA3060A	powder <250µm	NaOH+Na2CO3	2.5g/50mL	95°C 3hr	NO	

APPENDIX 3

Number of participating laboratories per country

1 laboratory in	AUSTRIA
2 laboratories in	BANGLADESH
1 laboratory in	BELGIUM
2 laboratories in	BRASIL
2 laboratories in	DENMARK
2 laboratories in	FINLAND
4 laboratories in	FRANCE
9 laboratories in	GERMANY
1 laboratory in	GREECE
2 laboratories in	GUATEMALA
19 laboratories in	HONG KONG
5 laboratories in	INDIA
2 laboratories in	INDONESIA
1 laboratory in	ISRAEL
3 laboratories in	ITALY
4 laboratories in	JAPAN
5 laboratories in	KOREA
2 laboratories in	MALAYSIA
1 laboratory in	MEXICO
30 laboratories in	P.R. of CHINA
1 laboratory in	PHILIPPINES
3 laboratories in	SINGAPORE
2 laboratories in	SPAIN
4 laboratories in	SWITZERLAND
2 laboratories in	TAIWAN R.O.C.
3 laboratories in	THAILAND
5 laboratories in	THE NETHERLANDS
4 laboratories in	TURKEY
9 laboratories in	U.S.A.
6 laboratories in	UNITED KINGDOM
2 laboratories in	VIETNAM

APPENDIX 4

Abbreviations:

C	= final result after checking of first reported suspect 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
n.a.	= not applicable

Literature:

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2 EN 1122:2001, "Determination of Cadmium in plastics with the method of the wet decomposition".
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8 M. Thompson and R. Wood, J. AOAC Int, 76, 926, (1993)
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