Results of Proficiency Test
Phthalates in Plastics
May 2015

Organised by: Institute for Interlaboratory Studies
Spijkenisse, the Netherlands

Author: ing. C.M. Nijssen-Wester
Corrector: dr. R.G. Visser & ing. N. Boelhouwer

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CONTENTS

1 INTRODUCTION 4

2 SET UP 5

2.1 ACCREDITATION 5

2.2 PROTOCOL 5

2.3 CONFIDENTIALITY STATEMENT 5

2.4 SAMPLES 5

2.5 ANALYSIS 7

3 RESULTS 7

3.1 STATISTICS 7

3.2 GRAPHICS 8

3.3 Z-SCORES 8

4 EVALUATION 9

4.1 EVALUATION PER PHTHALATE/SAMPLE 9

4.2 PERFORMANCE EVALUATION FOR THE GROUP OF LABORATORIES 11

4.3 COMPARISON OF THE PROFICIENCY TEST OF MAY 2015 WITH PREVIOUS PTS 11

Appendices:

1. Data, statistical results and graphic results 14
2. Method information 45
3. Number of participating laboratories per country 51
4. Abbreviations and literature 52

1 INTRODUCTION

Phthalates act as softeners and are commonly used as plasticizers in PVC. Phthalates may migrate fairly easily from PVC into the environment. Because phthalates appeared to have negative effects on health and the environment, regulations have been set up.
The manufacture and import of toys into the EC is regulated by the European Union's Toy Directive 88/378, with in addition the general product safety, which is covered by EU directive 2001/95 and Council Directive + amendments 76/769/EEC. These regulations govern conditions related to toys intended for children under 36 months of age (this group often suck or chew on toys and phthalates migrate easily). Therefore plastic toys are not allowed to contain either more than 0.1 %M/M of DEHP, DBP and BBP combined or more than 0.1%M/M of DINP (3 mixtures, ref. 21), DIDP (2 mixtures, ref 22) and DNOP combined. The following phthalates are banned or suspect.

• benzylbutylphthalate (BBP)	CASno. 85-68-7	EINECS no. 201-622-7
• bis(2-ethylhexyl)phthalate (DEHP)[1)]	CASno. 117-81-7	EINECS no. 204-211-0
• di-ethylphthalate (DEP)	CASno. 84-66-2	EINECS no. 201-550-6
• di-butylphthalate (DBP)	CASno. 84-74-2	EINECS no. 201-557-4
• di-isobutylphtalate (DiBP)	CASno. 84-69-2	EINECS no. 201-553-2
• di-n-pentylphthalate (DnPP)	CASno. 131-18-0	EINECS no. 205-017-9
• di-cyclohexylphthalate (DCHP)	CASno. 84-61-7	EINECS no. 201-545-9
• di-n-octylphthalate (DNOP)	CASno. 117-84-0	EINECS no. 204-214-7
• di-isononylphthalate (DINP-1)	CASno. 28553-12-0	EINECS no. 249-079-5
• di-isononylphthalate (DINP-2)	CASno. 68515-48-0	EINECS no. 271-090-9
• di-isononylphthalate (DINP-3)	CASno. 28552-12-0	EINECS no. 249-079-5
• di-isodecylphthalate (DIDP-1)	CASno. 26761-40-0	EINECS no. 247-977-1
• di-isodecylphthalate (DIDP-2)	CASno. 68515-49-1	EINECS no. 271-091-4

[1)] DEHP is also known as di-(iso)-octylphthalate (DOP).

The determination of phthalates in plastics is known to give problems with the comparability of laboratory results. The fact that phthalates, used in the plastic industry are not pure components, but complex (and overlapping) mixtures is one of the causes for these problems. However, no appropriate Plastic reference materials are yet available (ref. 20).
As an alternative, participation in a proficiency test may enable laboratories to check their performance. Therefore, a proficiency test (laboratory-evaluating interlaboratory study) for the determination of phthalates in plastics was again organized by the Institute for Interlaboratory Studies in May 2015.

In the 2015 iis interlaboratory study iis15P01, 188 laboratories in 41 different countries did participate. See appendix 3 for the number of participating laboratories per country.
In this report the results of the proficiency test are presented and discussed. This report is also electronically available through the iis internet site www.iisnl.com.

2 SET UP

The Institute for Interlaboratory Studies in Spijkenisse was the organiser of this proficiency test. It was decided to send two different PVC samples. Both batches were a PVC granulate, especially prepared by a Chinese factory by addition of technical mixtures of phthalates to PVC and subsequent homogenization. Analyses were subcontracted to an ISO17025 accredited laboratory.

2.1 ACCREDITATION

The Institute for Interlaboratory Studies in Spijkenisse, the Netherlands, is accredited in accordance with ISO/IEC 17043:2010, (R007), since January 2000, by the Dutch Accreditation Council (Raad voor Accreditatie, see also www.RVA.nl). This PT falls under the accredited scope. This ensures strict adherence to protocols for sample preparation and statistical evaluation and 100% confidentially 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 organisation was the one as described for proficiency testing in the report 'iis Interlaboratory Studies: Protocol for the Organisation, Statistics and Evaluation' of April 2014 (iis-protocol, version 3.3). This protocol can be downloaded via the FAQ page of the iis website http://www.iisnl.com.

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

Two samples were prepared from two different bulk materials.
The first sample was a purple coloured PVC, to which small, known amounts of DEP, DiBP, DEHP and DIDP were added, as well as tributyl acetyl citrate (TBAC). The batch of PVC was granulated after thoroughly mixing. From this batch, 200 plastic bags with 3 grams of granulate sample each were prepared and labelled #15065. The homogeneity of the subsamples #15065 was checked by determination of all added phthalates on 8 stratified, randomly selected subsamples.

	DEP in %M/M	DiBP in %M/M	DEHP in %M/M	DIDP in %M/M
Sample #15065-1	0.2025	0.1384	0.2966	0.3491
Sample #15065-2	0.2007	0.1360	0.3018	0.3463
Sample #15065-3	0.2053	0.1438	0.3104	0.3526
Sample #15065-4	0.1998	0.1361	0.2928	0.3353
Sample #15065-5	0.1985	0.1346	0.3039	0.3395
Sample #15065-6	0.1967	0.1351	0.2970	0.3486
Sample #15065-7	0.2017	0.1351	0.3025	0.3377
Sample #15065-8	0.2054	0.1405	0.3076	0.3436

Table 1: homogeneity test results of the subsamples #15065

From the above test results the repeatabilities were calculated and compared with the repeatability of EN14372 in agreement with the procedure of ISO 13528, Annex B2 in the next table;

	DEP in %M/M	DiBP in %M/M	DEHP in %M/M	DIDP in %M/M
r (observed) #15065	0.0086	0.0091	0.0165	0.0171
reference method	EN14372:04	EN14372:04	EN14372:04	EN14372:04
r (ref. method)	0.0169	0.0116	0.0253	0.0289

Table 2: evaluation of repeatabilities of phthalate contents of the subsamples #15065

The second sample was a green/blue coloured PVC, to which small, known amounts of DBP, DNOP, DCHP and DnPP were added as well as DEHT. The batch of PVC was granulated after thoroughly mixing. From this batch, 200 plastic bags of 3 gram of granulated sample each were prepared and labelled #15066. The homogeneity of the subsamples #15066 was checked by determination of all added phthalates on seven (or six) stratified, randomly selected subsamples.

	DBP in %M/M	DNOP in %M/M	DCHP in %M/M	DnPP in %M/M
Sample #15066-1	0.1876	0.1023	0.1307	0.0479
Sample #15066-2	0.1913	0.1058	0.1352	0.0502
Sample #15066-3	0.1961	0.1030	0.1339	0.0508
Sample #15066-4	0.1898	0.1023	0.1267	0.0489
Sample #15066-5	0.1884	0.0988	0.1275	0.0483
Sample #15066-6	0.1964	0.1004	0.1322	0.0506
Sample #15066-7	0.1846	0.1029	0.1297	-

Table 3: homogeneity test results of the subsamples #15066

From the above test results the repeatabilities were calculated and compared with the repeatibility of EN14372 in agreement with the procedure of ISO 13528, Annex B2 in the next table;

	DBP in %M/M	DNOP in %M/M	DCHP in %M/M	DnPP in %M/M
r (observed) #15066	0.0123	0.0062	0.0088	0.0035
reference method	EN14372:04	EN14372:04	EN14372:04	EN14372:04
0.3 x R (ref. method)	0.0160	0.0086	0.0110	0.0042

Table 4: evaluation of repeatabilities of phthalate contents of the subsamples #15066

As the observed repeatabilities of the results of the homogeneity tests were all in agreement with the respective target precision data, the homogeneity of subsamples #15065 and #15066 was assumed.

To each of the participating laboratories, one sample of approx. 3 grams granulate, labelled #15065 and one sample of approx. 3 grams granulate, labelled #15066 were sent on April 22, 2015.

2.5 ANALYSIS

The participants were requested to determine and report eight individual phthalates (DINP, DBP, BBP, DHP, DIDP, DNOP, DEHP and DiBP) and other phthalates on both samples #15065 and #15066.
The participants were explicitly asked to treat the samples as if they were routine samples and to report the analytical results using the indicated units on the report form and not to round the test results, but report as much significant figures as possible.
The participants were also asked 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. Also a letter of instructions was added to the package.
The laboratories were asked to complete the report form with the requested details of the methods used.

3 RESULTS

During four weeks after sample despatch, the results of the individual laboratories were gathered. The original data are tabulated in the appendices of this report. The laboratories are presented by their code numbers.

Directly after the deadline, a reminder fax was sent to those laboratories that had not yet reported. 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, see lit.5) found it to be an outlier. The laboratories that produced these suspect data were asked to check the results. Additional or corrected data are placed under 'Remarks' in the result tables in appendix 1. A list of abbreviations used in the tables can be found in appendix 3.

3.1 STATISTICS

Statistical calculations were performed as described in the report ’iis Interlaboratory Studies: Protocol for the Organisation, Statistics and Evaluation’ of April 2014 (iis-protocol, version 3.3)
For the statistical evaluation the *unrounded* (when available) figures were used instead of the rounded results. 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. Not all data sets proved to have a normal distribution, in which cases the statistical evaluation of the results should be used with due care.

According to ISO 5725 (1986 and 1994, lit.8 and 9) the original results per determination were submitted subsequently to Dixon’s, Grubbs' and Rosner 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 and by R(0.01) for the Rosner General ESD test (ref. 15). Stragglers are marked by D(0.05) for the Dixon’s test, by G(0.05) or DG(0.05) for the Grubbs’ test and by R(0.05) for the Rosner General ESD test (ref. 27). 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. When the uncertainty passed the evaluation no remarks are made in the report. However, when the uncertainty failed the evaluation it is mentioned in the report and it will have consequences for the evaluation of the test results.

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 is a method for producing a smooth density approximation to a set of data that avoids some problems associated with histograms (see appendix 4, nos.17-18). 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 reproducibilities, the z-scores were calculated using a target standard deviation. This results in an evaluation independent of the spread of this

interlaboratory study. The target standard deviation was calculated from the literature reproducibility by division with 2.8.

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.
In case no literature reproducibility was available, other target values were used. In some cases literature repeatability is available; in other cases a reproducibility of a former iis proficiency test could be used and also the Horwitz equation can be used to estimate target reproducibility.

The z-scores were calculated according to:

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

Absolute values for z<2 are very common and absolute values for z>3 are very rare. 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.
Four participants did not report any test results and twenty-nine participants reported after the final reporting date.
Finally, 184 laboratories reported 1014 numerical results. Observed were 43 statistically outlying test results, which is 4.2% of all results. In proficiency studies outlier percentages of 3% - 7.5% are quite normal.

4.1 EVALUATION PER PHTHALATE AND PER SAMPLE

In this section the results are discussed per component.
A test method was mentioned on the report form by 112 laboratories. Of this group, 81 laboratories performed CPSC-CH-C1001-09, a test method based on THF extraction. From the test details of all 184 reporting laboratories, it is clear that no less than 135 laboratories used THF as extraction solvent.

Some other standard test methods were also used: EN14372 (Soxhlet extraction with diethyl ether) and in-house methods. Regretfully, the CPSC method does not contain any precision statements. Therefore, the requirements from the standardised method EN14372, “Child use and care articles, Cutlery and feeding utensils, Safety requirements and tests” were used for evaluation of the results of this interlaboratory study.

In EN14372, only a relative within-laboratory standard deviation RSDr is given. Multiplication of RSDr by 2.8 gives the repeatability. Multiplication of the repeatability by 3 gives a good estimate of the target reproducibility.

General: Almost all laboratories did identify the materials of #15065 and #15066 correctly as PVC (see appendix 2). The majority of the group identified all added banned phthalates correctly: #15065 contained DIDP, DEHP, DiBP and DEP and sample #15066 contained DBP, DNOP, DnPP and DCHP.

Sample #15065

DIDP: The determination of DIDP may be problematic at the level of 0.417 %M/M. Fourteen statistical outliers were detected. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the estimated reproducibility of EN14372:04.

DEHP: The determination of DEHP may be problematic at the level of 0.324 %M/M. Eight statistical outliers were detected. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the estimated reproducibility of EN14372:04.

DiBP: The determination of DiBP may be problematic at the level of 0.124 %M/M. Three statistical outliers were detected. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the estimated reproducibility of EN14372:04.

DEP: The determination of DEP may be problematic at the level of 0.169 %M/M. Two statistical outliers were detected. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the estimated reproducibility of EN14372:04.

For DINP, DBP, BBP, DNOP, and DHP the group of participants agreed on a concentration below <0.05 or <0.02 %M/M. Therefore no significant conclusions were drawn.

Sample #15066

DBP: The determination of DBP may be problematic at the level of 0.182 %M/M. Five statistical outliers were detected. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the estimated reproducibility of EN14372:04.

DNOP: The determination of DNOP may be very problematic at the level of 0.089 %M/M. Seven statistical outliers were observed. The calculated reproducibility after rejection of the statistical outliers is not at all in agreement with the estimated reproducibility of EN14372:04. Eight laboratories reported a possibly false negative test result.

DnPP: The determination of DnPP may be problematic at the level of 0.052 %M/M. Two statistical outliers were detected. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the estimated reproducibility of EN14372:04.

DCHP: The determination of DCHP may be problematic at the level of 0.125 %M/M. Two statistical outliers were observed. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the estimated reproducibility of EN14372:04.

For DINP, BBP, DIDP, DEHP, DiBP and DHP the group of participants agreed on a concentration below <0.02 %M/M. Therefore no significant conclusions were drawn.

4.2 PERFORMANCE EVALUATION FOR THE GROUP OF LABORATORIES

A comparison has been made between the reproducibilities as found for the group of participating laboratories and the estimated reproducibilities of EN14372:2004 (R_{target}) in the next tables:

Parameter	Unit	n	Average	2.8 * sd	R (target)
DIDP	%M/M	166	0.417	0.202	0.105
DEHP	%M/M	176	0.324	0.120	0.082
DiBP	%M/M	162	0.124	0.047	0.031
DEP	%M/M	56	0.169	0.062	0.043

Table 5: overview of results for sample #15065

Parameter	Unit	n	Average	2.8 * sd	R (target)
DBP	%M/M	174	0.182	0.075	0.046
DNOP	%M/M	137	0.089	0.059	0.023
DnPP	%M/M	59	0.052	0.022	0.013
DCHP	%M/M	41	0.125	0.056	0.032

Table 6: overview of results for sample #15066

4.3 COMPARISON OF THE PROFICIENCY TEST OF MAY 2015 WITH PREVIOUS PTS

	May 2015	*May 2014*	*April 2013*	*February 2012*
Number of reporting labs	184	169	170	155
Number of results reported	1014	1226	1085	935
Statistical outliers	43	97	47	51
Percentage outliers	4.2%	7.9%	4.3%	5.5%

Table 7: comparison with previous proficiency tests

In proficiency tests, outlier percentages of 3% - 7.5% are quite normal.

In table 8 the observed uncertainties in this PT are compared with the uncertainties as observed in previous PTs.

	May 2014	*May 2014*	*April 2013*	*February 2012*	*February 2011*	*February 2010*	*February 2009*	*RSDR (EN14372)*
DINP [1)]	--	20	20	26	12 – 17	15^{T} – 60^{E}	--	9
DBP	15	17	14 – 74[2)]	11 – 16	17	14	19^{T} – 22^{E}	9
DEHP	13	17 – 19	--	13 – 18	12 – 13	8^{T} – 55^{E}	16^{E} – 19^{T}	9
BBP	--	12	13	11	13 – 15	14	21^{E} – 45^{T}	9
DIDP	17	20	19 – 57[2)]	--	15	--	--	9
DNOP	23	21	--	20	15	--	--	9
DHP	--	--	--	--	11	--	--	9
DiBP	14	--	--	--	--	--	--	9
DEP	13	--	--	--	--	--	--	9
DnPP	15	--	--	--	--	--	--	9
DCHP	16	--	--	--	--	--	--	9

Table 8: Comparison of uncertainties (relative in %) of phthalates in this PT and previous PTs (E=EN14372; T=THF dissolution)

1) Mix of DINP-1 and DINP-2 isomers

2) sample with 37% DINP present

From 2008 - 2010 significant differences between the EN14372 results and the results from THF dissolution were observed. In the PTs of 2011 – 2013 this was no longer the case.
In the proficiency test of 2015, the majority of laboratories used THF as extraction solvent.

The uncertainty appears to stabilise at 13-17% for all phthalates except DNOP.
The estimated target (RSDR) of 9%, derived from the repeatability coefficient of variation of EN14372 (RSDr = 3%) may be too strict to be met. A new precision statement in EN14372, containing a reproducibility value, is therefore needed. Perhaps the repeatability coefficient of variation of EN14372 is underestimated. From the observed RSDR range 13-17%, a repeatability coefficient of variation of 4-5% would be more realistic.

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APPENDIX 1

Determination of DIDP on sample #15065; results in %M/M

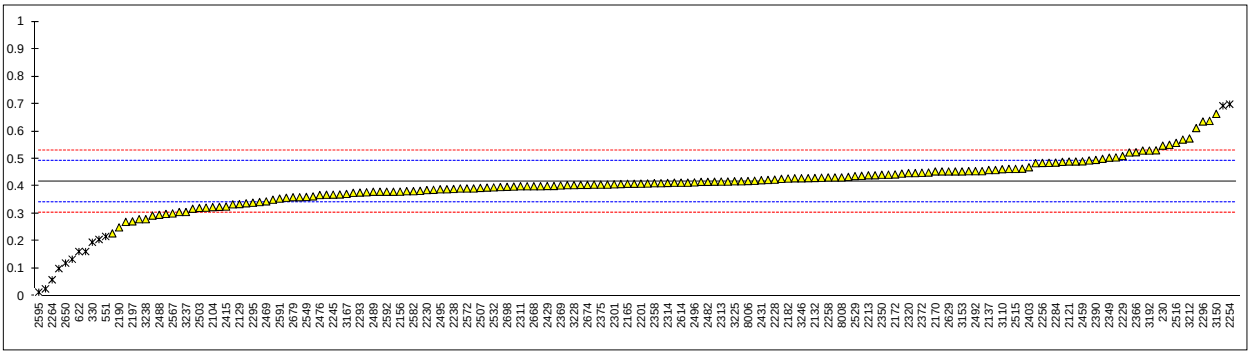
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213		-----		-----	2374		0.399		-0.48
230	ISO14389:2014	0.548		3.49	2375	ISO 16181	0.406		-0.29
310		0.693	R(0.05)	7.36	2386	CPSC-CH-C1001-09.3	0.378		-1.04
330		0.196	R(0.05)	-5.89	2390	CPSC-CH-C1001-09.3	0.496		2.11
339		0.454		0.99	2401	GB/T22048	0.4229		0.16
551		0.217	R(0.05)	-5.33	2403	CPSC-CH-C1001-09.3	0.469		1.39
622		0.162	C,R(0.05)	-6.79	2404		0.3832		-0.90
1051	CPSC-CH-C1001-09.3	0.505		2.35	2406	CPSC-CH-C1001-09.3	0.429		0.32
1170		-----		-----	2410	CPSC-CH-C1001-09.3	0.413		-0.11
2102		0.2283		-5.03	2413	CPSC-CH-C1001-09	10.305	R(0.01)	263.49
2104	CPSC-CH-C1001-09.3	0.324		-2.48	2415		0.326	C	-2.42
2108	ISO14389	0.570		4.08	2422		-----		-----
2115		0.416		-0.03	2425		0.322		-2.53
2121		0.490		1.95	2426	CPSC-CH-C1001-09.3	0.3424		-1.99
2129	ISO14389Mod.	0.335		-2.18	2429	CPSC-CH-C1001-09.3	0.401		-0.43
2132	CPSC-CH-C1001-09.3	0.430		0.35	2431	CPSC-CH-C1001-09.3	0.422		0.13
2137	CPSC-CH-C1001-09.3	0.459		1.12	2433		-----		-----
2138	INH-62321	0.382		-0.93	2442	in house	0.28		-3.65
2139	CPSC-CH-C1001-09.3	0.411		-0.16	2449	CPSC-CH-C1001-09.3	0.489		1.92
2146	CPSC-CH-C1001-09.3	0.358		-1.57	2452		0.306		-2.96
2156		0.3802		-0.98	2459	ISO14398	0.4907		1.96
2165	CPSC-CH-C1001-09.3	0.409		-0.21	2460		0.450		0.88
2169	CPSC-CH-C1001-09.3	0.334		-2.21	2464		0.392		-0.67
2170	CPSC-CH-C1001-09.3	0.454		0.99	2467		0.318		-2.64
2172		0.443		0.69	2469		0.345		-1.92
2182	CPSC-CH-C1001-09.3	0.428		0.29	2475	in house	0.401		-0.43
2184	JTSS-ST2012	0.409		-0.21	2476		0.368		-1.30
2190		0.25		-4.45	2477	CPSC-CH-C1001-09.3	0.523		2.83
2197		0.272		-3.86	2482	CPSC-CH-C1001-09.3	0.416		-0.03
2201	CPSC-CH-C1001-09.3	0.4095		-0.20	2488		0.296		-3.22
2213	CPSC-CH-C1001-09.3	0.44		0.61	2489		0.380		-0.99
2217	CPSC-CH-C1001-09.3	0.299		-3.14	2492	in house	0.455		1.01
2218	CPSC-CH-C1001-09.1	0.369		-1.28	2495	CPSC-CH-C1001-09.3	0.389		-0.75
2228		0.424	C	0.19	2496	CPSC-CH-C1001-09.3	0.414		-0.08
2229	EN14372:2004	0.51		2.48	2497	CPSC-CH-C1001-09.3	0.134	C,R(0.05)	-7.54
2230		0.386		-0.83	2499	CPSC-CH-C1001-09.3	0.363		-1.44
2232	CPSC-CH-C1001-09.3	0.531		3.04	2503	CPSC-CH-C1001-09.3	0.321		-2.56
2236	CPSC-CH-C1001-09.3	0.455		1.01	2504		0.612	C	5.20
2237		0.4294		0.33	2507	CPSC-CH-C1001-09.3	0.394		-0.61
2238	CPSC-CH-C1001-09.3	0.390		-0.72	2510	in house	0.351		-1.76
2242		0.4060		-0.29	2511	CPSC-CH-C1001-09.3	0.387		-0.80
2245		0.3694		-1.27	2514	CPSC-CH-C1001-09.3	0.338		-2.10
2246	CPSC-CH-C1001-09.3	0.434		0.45	2515		0.463		1.23
2247		0.463		1.23	2516	CPSC-CH-C1001-09.3	0.558		3.76
2254		0.699	R(0.05)	7.52	2522	CPSC-CH-C1001-09.3	0.484		1.79
2255	CPSC-CH-C1001-09.3	0.325		-2.45	2529	CPSC-CH-C1001-09.3	0.437		0.53
2256	EN14372	0.485		1.81	2532	CPSC-CH-C1001-09.2	0.3958		-0.56
2258		0.432		0.40	2538		0.464		1.25
2264	CPSC-CH-C1001-09.3	0.059	C,R(0.05)	-9.54	2549		0.361		-1.49
2267		0.206	R(0.05)	-5.62	2563	CPSC-CH-C1001-09.3	0.38		-0.99
2284	CPSC-CH-C1001-09.3	0.486		1.84	2566		0.4853		1.82
2288	CPSC-CH-C1001-09.3	0.53		3.01	2567	CPSC	0.301		-3.09
2289	CPSC-CH-C1001-09	0.427		0.27	2572		0.392		-0.67
2290	CPSC-CH-C1001-09.3	0.4480		0.83	2578		0.395		-0.59
2293	CPSC-CH-C1001-09.3	0.377		-1.07	2581	CPSC-CH-C1001-09.3	0.459	C	1.12
2295		0.340		-2.05	2582		0.382		-0.93
2296	CPSC-CH-C1001-09.3	0.636		5.84	2590	CPSC-CH-C1001-09.3	0.40		-0.45
2300		0.37		-1.25	2591		0.355		-1.65
2301		0.407		-0.27	2592		0.38		-0.99
2309	CPSC-CH-C1001-09.3	0.50		2.21	2595		0.014	C,R(0.05)	-10.74
2310	CPSC-CH-C1001-09.3	0.410		-0.19	2604		0.455		1.01
2311	CPSC-CH-C1001-09.3	0.40		-0.45	2614		0.413		-0.11
2313	CPSC-CH-C1001-09.3	0.417		0.00	2622		0.397		-0.53
2314		0.412		-0.13	2629	CPSC-CH-C1001-09.3	0.454		0.99
2320		0.448	C	0.83	2642	CPSC-CH-C1001-09.3	0.454		0.99
2330		-----		-----	2643	CPSC-CH-C1001-09.3	0.49		1.95
2349		0.504		2.32	2650		0.12	R(0.05)	-7.91
2350	CPSC-CH-C1001-09.3	0.4419		0.66	2658		-----		-----
2353	EN14372	0.405		-0.32	2668		0.400		-0.45
2358	CPSC-CH-C1001-09.3	0.411		-0.16	2670	EN14372:2004	0.026	C,R(0.05)	-10.42
2366	GB/T22048	0.524		2.85	2671		0.4167		-0.01
2369		0.403		-0.37	2672	in house	0.376	C	-1.09
2372	CPSC-CH-C1001-09.3	0.449		0.85	2674	CPSC-CH-C1001-09.3	0.405		-0.32

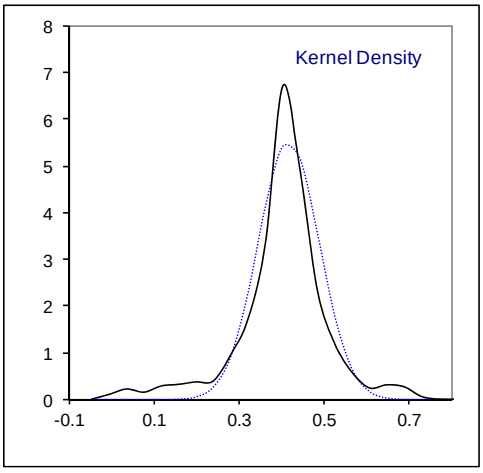
2678		0.42		0.08	3199		0.432		0.40
2679	SN/T2449	0.360		-1.52	3200		0.40		-0.45
2688	KS M 1991	0.404		-0.35	3210		0.293		-3.30
2698	CPSC-CH-C1001-09.3	0.398		-0.51	3212	CPSC-CH-C1001-09	0.574		4.18
3110	CPSC-CH-C1001-09.3	0.462		1.20	3214	CPSC-CH-C1001-09.3	0.442		0.67
3116	EN14372:2004	0.413		-0.11	3215		0.638		5.89
3117		0.389		-0.75	3218	CPSC-CH-C1001-09.3	0.431		0.37
3118	CPSC-CH-C1001-09.3	0.438		0.56	3220		0.44		0.61
3146	CPSC-CH-C1001-09.3	0.38		-0.99	3225	EN14372:2004	0.418		0.03
3150		0.6637		6.57	3228	CPSC-CH-C1001-09.3	0.404		-0.35
3153		0.454		0.99	3237		0.30606		-2.96
3163	in house	0.1000	R(0.05)	-8.45	3238	in house	0.28		-3.65
3166		-----		-----	3239	INH-134	0.162	C,R(0.05)	-6.79
3167	CPSC-CH-C1001-09.3	0.372		-1.20	3242	ISO14389:2014	0.392		-0.67
3172		0.408		-0.24	3246		0.429		0.32
3176		0.494		2.05	3248		0.417		0.00
3182	CPSC-CH-C1001-09.3	0.270		-3.92	8005		-----		-----
3190	CPSC-CH-C1001-09.3	0.446		0.77	8006	JTSS-ST2012	0.419		0.05
3191	CPSC-CH-C1001-09.3	0.551		3.57	8007	CPSC-CH-C1001	0.418		0.03
3192		0.53		3.01	8008	ST2012	0.432		0.40
3197	CPSC-CH-C1001-09.3	0.360		-1.52	8020	CPSC-CH-C1001-09.3	0.406		-0.29

normality	suspect
n	166
outliers	14
mean (n)	0.4170
st.dev. (n)	0.07210
R(calc.)	0.2019
R(EN14372:04)	0.1051

Compare R(Horwitz): 0.0799

Lab 622 first reported: n.d.
Lab 2138 also reported: 0.452 (LC-MS)
Lab 2228 first reported: 0.625
Lab 2264 first reported: 0.047
Lab 2320 first reported: 0.112
Lab 2415 first reported: 0.433
Lab 2497 first reported: 0.746
Lab 2504 first reported: 0.654
Lab 2581 first reported: 0.506
Lab 2595 first reported: 0.153
Lab 2670 first reported: 0.064
Lab 2672 first reported: 0.751
Lab 3239 first reported: 0.191





Determination of DEHP on sample #15065; results in %M/M

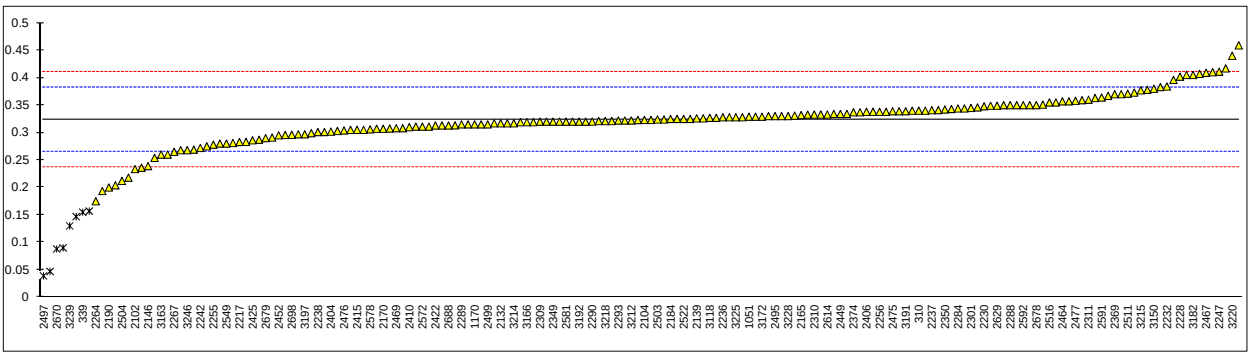
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213		-----		-----	2374		0.337		0.45
230	ISO14389:2014	0.378		1.86	2375	ISO 16181	0.311		-0.44
310		0.340		0.56	2386	CPSC-CH-C1001-09.3	0.340		0.56
330		0.157	R(0.05)	-5.72	2390	CPSC-CH-C1001-09.3	0.326	C	0.08
339		0.155	R(0.05)	-5.79	2401	GB/T22048	0.3075		-0.56
551		0.236		-3.01	2403	CPSC-CH-C1001-09.3	0.305		-0.64
622		0.344		0.69	2404		0.3018		-0.75
1051	CPSC-CH-C1001-09.3	0.329	C	0.18	2406	CPSC-CH-C1001-09.3	0.338		0.49
1170		0.315		-0.30	2410	CPSC-CH-C1001-09.3	0.310		-0.47
2102		0.2335		-3.10	2413	CPSC-CH-C1001-09	0.204		-4.11
2104	CPSC-CH-C1001-09.3	0.323		-0.03	2415		0.305	C	-0.64
2108	ISO14389	0.383		2.03	2422	KS M 1991	0.313		-0.37
2115		0.373		1.69	2425		0.286		-1.30
2121		0.147	R(0.05)	-6.07	2426	CPSC-CH-C1001-09.3	0.2956		-0.97
2129	ISO14389Mod.	0.349		0.87	2429	CPSC-CH-C1001-09.3	0.307		-0.58
2132	CPSC-CH-C1001-09.3	0.317		-0.23	2431	CPSC-CH-C1001-09.3	0.325		0.04
2137	CPSC-CH-C1001-09.3	0.334		0.35	2433		-----		-----
2138	INH-62321	0.315		-0.30	2442	in house	0.2811	C	-1.46
2139	CPSC-CH-C1001-09.3	0.326		0.08	2449	CPSC-CH-C1001-09.3	0.334		0.35
2146	CPSC-CH-C1001-09.3	0.239		-2.91	2452		0.295		-0.99
2156		0.3591		1.21	2459	ISO14398	0.3229		-0.03
2165	CPSC-CH-C1001-09.3	0.332		0.28	2460		0.315		-0.30
2169	CPSC-CH-C1001-09.3	0.331		0.25	2464		0.357		1.14
2170	CPSC-CH-C1001-09.3	0.307		-0.58	2467		0.409		2.93
2172		0.333		0.32	2469		0.308		-0.54
2182	CPSC-CH-C1001-09.3	0.334		0.35	2475	in house	0.339		0.52
2184	JTSS-ST2012	0.325		0.04	2476		0.304		-0.68
2190		0.20		-4.25	2477	CPSC-CH-C1001-09.3	0.358		1.18
2197		0.363		1.35	2482	CPSC-CH-C1001-09.3	0.268		-1.91
2201	CPSC-CH-C1001-09.3	0.3133		-0.36	2488		0.254		-2.39
2213	CPSC-CH-C1001-09.3	0.32	C	-0.13	2489		0.343		0.66
2217	CPSC-CH-C1001-09.3	0.283		-1.40	2492	in house	0.322		-0.06
2218	CPSC-CH-C1001-09.1	0.301		-0.78	2495	CPSC-CH-C1001-09.3	0.330		0.21
2228		0.402		2.69	2496	CPSC-CH-C1001-09.3	0.367		1.48
2229	EN14372:2004	0.33		0.21	2497	CPSC-CH-C1001-09.3	0.039	C,R(0.01)	-9.77
2230		0.348		0.83	2499	CPSC-CH-C1001-09.3	0.315		-0.30
2232	CPSC-CH-C1001-09.3	0.384		2.07	2503	CPSC-CH-C1001-09.3	0.324		0.01
2236	CPSC-CH-C1001-09.3	0.328		0.15	2504		0.212	C	-3.84
2237		0.3408		0.58	2507	CPSC-CH-C1001-09.3	0.459		4.64
2238	CPSC-CH-C1001-09.3	0.301		-0.78	2510	in house	0.269		-1.88
2242		0.272		-1.78	2511	CPSC-CH-C1001-09.3	0.371		1.62
2245		0.2831		-1.40	2514	CPSC-CH-C1001-09.3	0.280		-1.50
2246	CPSC-CH-C1001-09.3	0.319		-0.16	2515		0.370		1.59
2247		0.411		2.99	2516	CPSC-CH-C1001-09.3	0.355		1.07
2254		0.417		3.20	2522	CPSC-CH-C1001-09.3	0.325		0.04
2255	CPSC-CH-C1001-09.3	0.278		-1.57	2529	CPSC-CH-C1001-09.3	0.407		2.86
2256	EN14372	0.338		0.49	2532	CPSC-CH-C1001-09.2	0.3050		-0.64
2258		0.313		-0.37	2538		0.299		-0.85
2264	CPSC-CH-C1001-09.3	0.175	C	-5.11	2549		0.280		-1.50
2267		0.265		-2.02	2563	CPSC-CH-C1001-09.3	0.32		-0.13
2284	CPSC-CH-C1001-09.3	0.344		0.69	2566		0.3328		0.31
2288	CPSC-CH-C1001-09.3	0.35		0.90	2567	CPSC	0.275		-1.67
2289	CPSC-CH-C1001-09	0.315		-0.30	2572		0.311		-0.44
2290	CPSC-CH-C1001-09.3	0.3201		-0.13	2578		0.306		-0.61
2293	CPSC-CH-C1001-09.3	0.322		-0.06	2581	CPSC-CH-C1001-09.3	0.320	C	-0.13
2295		0.350	C	0.90	2582		0.324		0.01
2296	CPSC-CH-C1001-09.3	0.405	C	2.79	2590	CPSC-CH-C1001-09.3	0.41		2.96
2300		0.35		0.90	2591		0.364		1.38
2301		0.345		0.73	2592		0.35		0.90
2309	CPSC-CH-C1001-09.3	0.32		-0.13	2595		0.047	C,R(0.01)	-9.50
2310	CPSC-CH-C1001-09.3	0.333		0.32	2604		0.337		0.45
2311	CPSC-CH-C1001-09.3	0.36		1.24	2614		0.333		0.32
2313	CPSC-CH-C1001-09.3	0.303		-0.71	2622		0.339		0.52
2314		0.346		0.76	2629	CPSC-CH-C1001-09.3	0.349		0.87
2320		0.340		0.56	2642	CPSC-CH-C1001-09.3	0.351		0.93
2330		-----		-----	2643	CPSC-CH-C1001-09.3	0.35		0.90
2349		0.320		-0.13	2650		0.09	R(0.01)	-8.02
2350	CPSC-CH-C1001-09.3	0.3422		0.63	2658		-----		-----
2353	EN14372	0.338		0.49	2668		0.297		-0.92
2358	CPSC-CH-C1001-09.3	0.317		-0.23	2670	EN14372:2004	0.088	C,R(0.01)	-8.09
2366	GB/T22048	0.317		-0.23	2671		0.3230		-0.03
2369		0.370		1.59	2672	in house	0.218		-3.63
2372	CPSC-CH-C1001-09.3	0.396		2.48	2674	CPSC-CH-C1001-09.3	0.328		0.15

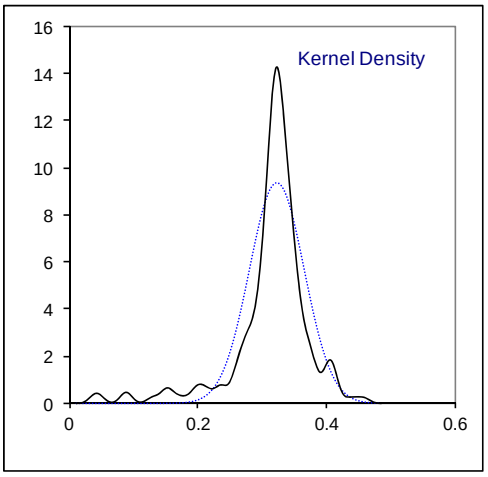
2678		0.35		0.90	3199		0.355		1.07
2679	SN/T2449	0.290		-1.16	3200		0.32		-0.13
2688	KS M 1991	0.313		-0.37	3210		0.287		-1.26
2698	CPSC-CH-C1001-09.3	0.296		-0.95	3212	CPSC-CH-C1001-09	0.322		-0.06
3110	CPSC-CH-C1001-09.3	0.330		0.21	3214	CPSC-CH-C1001-09.3	0.317		-0.23
3116	EN14372:2004	0.329		0.18	3215		0.377		1.83
3117		0.311		-0.44	3218	CPSC-CH-C1001-09.3	0.321		-0.09
3118	CPSC-CH-C1001-09.3	0.327		0.11	3220		0.44		3.99
3146	CPSC-CH-C1001-09.3	0.32		-0.13	3225	EN14372:2004	0.328		0.15
3150		0.3800		1.93	3228	CPSC-CH-C1001-09.3	0.330		0.21
3153		0.357		1.14	3237		0.19354	C	-4.47
3163	in house	0.2600		-2.19	3238	in house	0.26		-2.19
3166	in house	0.319		-0.16	3239	INH-134	0.130	C,R(0.05)	-6.65
3167	CPSC-CH-C1001-09.3	0.308		-0.54	3242	ISO14389:2014	0.291		-1.12
3172		0.329		0.18	3246		0.268		-1.91
3176		0.341		0.59	3248		0.338		0.49
3182	CPSC-CH-C1001-09.3	0.405	C	2.79	8005	ASTM F963	0.321		-0.09
3190	CPSC-CH-C1001-09.3	0.321		-0.09	8006	JTSS-ST2012	0.328		0.15
3191	CPSC-CH-C1001-09.3	0.339		0.52	8007	CPSC-CH-C1001	0.325		0.04
3192		0.32		-0.13	8008	ST2012	0.319		-0.16
3197	CPSC-CH-C1001-09.3	0.297		-0.92	8020	CPSC-CH-C1001-09.3	0.327		0.11

normality	not OK
n	176
outliers	8
mean (n)	0.3238
st.dev. (n)	0.04272
R(calc.)	0.1196
R(EN14372:04)	0.0816

Compare R(Horwitz): 0.0430

Lab 1051 first reported: 0.423
Lab 2213 first reported: 0.42
Lab 2264 first reported: 0.141
Lab 2295 first reported: 0.230
Lab 2296 first reported: 0.421
Lab 2390 first reported: 0.444
Lab 2415 first reported: 0.234
Lab 2442 first reported: 0.23
Lab 2497 first reported: 0.216
Lab 2504 first reported: 0.422
Lab 2581 first reported: 0.446
Lab 2595 first reported: <0.00001
Lab 2670 first reported: 0.096
Lab 3182 first reported: 0.212
Lab 3237 first reported: 0.22643
Lab 3239 first reported: 0.151





Determination of DiBP on sample #15065; results in %M/M

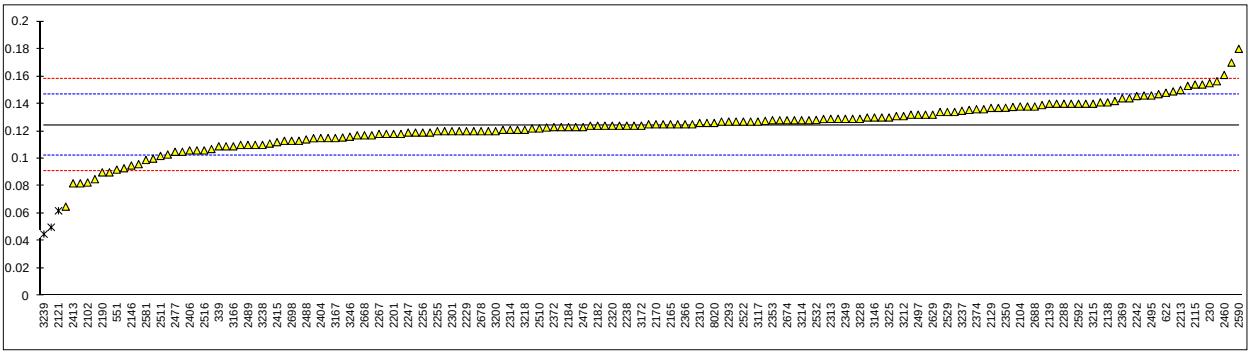
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213		-----		-----	2374		0.136		1.04
230	ISO14389:2014	0.155		2.74	2375	ISO 16181	0.124		-0.03
310		0.134		0.87	2386	CPSC-CH-C1001-09.3	0.138		1.22
330		0.093		-2.80	2390	CPSC-CH-C1001-09.3	0.096		-2.53
339		0.109		-1.37	2401	GB/T22048	0.1154		-0.80
551		0.092		-2.89	2403	CPSC-CH-C1001-09.3	0.119		-0.47
622		0.148		2.12	2404		0.1150		-0.83
1051		-----		-----	2406	CPSC-CH-C1001-09.3	0.106	C	-1.64
1170		-----		-----	2410	CPSC-CH-C1001-09.3	0.124		-0.03
2102		0.0826		-3.73	2413	CPSC-CH-C1001-09	0.082		-3.78
2104	CPSC-CH-C1001-09.3	0.138		1.22	2415		0.112	C	-1.10
2108	ISO14389	0.140		1.40	2422		-----		-----
2115		0.154		2.65	2425		0.103		-1.90
2121		0.0620	R(0.05)	-5.57	2426	CPSC-CH-C1001-09.3	0.1149		-0.84
2129	ISO14389Mod.	0.137		1.13	2429	CPSC-CH-C1001-09.3	0.124		-0.03
2132	CPSC-CH-C1001-09.3	0.125		0.06	2431	CPSC-CH-C1001-09.3	0.127		0.24
2137	CPSC-CH-C1001-09.3	0.139		1.31	2433		-----		-----
2138	INH-62321	0.141		1.49	2442	in house	0.09		-3.07
2139	CPSC-CH-C1001-09.3	0.140		1.40	2449	CPSC-CH-C1001-09.3	0.137		1.13
2146	CPSC-CH-C1001-09.3	0.095		-2.62	2452		0.085		-3.51
2156		0.1564		2.87	2459	ISO14398	0.1227		-0.14
2165	CPSC-CH-C1001-09.3	0.125		0.06	2460		0.161		3.28
2169	CPSC-CH-C1001-09.3	0.130		0.51	2464		-----		-----
2170	CPSC-CH-C1001-09.3	0.125		0.06	2467		0.122		-0.21
2172		0.118		-0.56	2469		0.147		2.03
2182	CPSC-CH-C1001-09.3	0.124		-0.03	2475	in house	0.149		2.21
2184	JTSS-ST2012	0.123		-0.12	2476		0.123		-0.12
2190		0.09		-3.07	2477	CPSC-CH-C1001-09.3	0.105		-1.73
2197		0.132		0.69	2482	CPSC-CH-C1001-09.3	0.109		-1.37
2201	CPSC-CH-C1001-09.3	0.1180		-0.56	2488		0.114		-0.92
2213	CPSC-CH-C1001-09.3	0.15		2.30	2489		0.110		-1.28
2217	CPSC-CH-C1001-09.3	0.125		0.06	2492	in house	0.115		-0.83
2218		-----		-----	2495	CPSC-CH-C1001-09.3	0.146		1.94
2228		0.141	C	1.49	2496	CPSC-CH-C1001-09.3	0.121		-0.30
2229	EN14372:2004	0.12		-0.39	2497	CPSC-CH-C1001-09.3	0.132		0.69
2230		0.128		0.33	2499		-----		-----
2232	CPSC-CH-C1001-09.3	0.140		1.40	2503		-----		-----
2236	CPSC-CH-C1001-09.3	0.129		0.42	2504		0.144	C	1.76
2237		0.1275		0.29	2507		-----		-----
2238	CPSC-CH-C1001-09.3	0.124		-0.03	2510	in house	0.122		-0.21
2242		0.1456		1.90	2511	CPSC-CH-C1001-09.3	0.102		-1.99
2245		0.1230		-0.12	2514	CPSC-CH-C1001-09.3	0.113		-1.01
2246	CPSC-CH-C1001-09.3	0.125		0.06	2515		0.153		2.56
2247		0.119		-0.47	2516	CPSC-CH-C1001-09.3	0.106		-1.64
2254		0.146		1.94	2522	CPSC-CH-C1001-09.3	0.127		0.24
2255	CPSC-CH-C1001-09.3	0.120		-0.39	2529	CPSC-CH-C1001-09.3	0.134		0.87
2256	EN14372	0.119		-0.47	2532	CPSC-CH-C1001-09.2	0.1282		0.35
2258		-----		-----	2538		detected		-----
2264	CPSC-CH-C1001-09.3	0.117		-0.65	2549		0.100		-2.17
2267		0.118		-0.56	2563	CPSC-CH-C1001-09.3	0.12		-0.39
2284	CPSC-CH-C1001-09.3	0.123		-0.12	2566		0.1355		1.00
2288	CPSC-CH-C1001-09.3	0.14		1.40	2567	CPSC	0.110		-1.28
2289	CPSC-CH-C1001-09	0.121		-0.30	2572		0.124		-0.03
2290	CPSC-CH-C1001-09.3	0.1289		0.41	2578		0.119		-0.47
2293	CPSC-CH-C1001-09.3	0.127		0.24	2581	CPSC-CH-C1001-09.3	0.099		-2.26
2295		0.106	C	-1.64	2582		0.129		0.42
2296	CPSC-CH-C1001-09.3	0.154	C	2.65	2590	CPSC-CH-C1001-09.3	0.18		4.98
2300		0.12		-0.39	2591		-----		-----
2301		0.120	C	-0.39	2592		0.14		1.40
2309	CPSC-CH-C1001-09.3	0.11		-1.28	2595		-----		-----
2310	CPSC-CH-C1001-09.3	0.126		0.15	2604		0.127		0.24
2311	CPSC-CH-C1001-09.3	0.12		-0.39	2614		0.132		0.69
2313	CPSC-CH-C1001-09.3	0.129		0.42	2622		0.118		-0.56
2314		0.121		-0.30	2629	CPSC-CH-C1001-09.3	0.132		0.69
2320		0.124		-0.03	2642		-----		-----
2330		-----		-----	2643	CPSC-CH-C1001-09.3	0.14		1.40
2349		0.129		0.42	2650		0.05	R(0.01)	-6.64
2350	CPSC-CH-C1001-09.3	0.1371		1.14	2658		-----		-----
2353	EN14372	0.128		0.33	2668		0.117		-0.65
2358	CPSC-CH-C1001-09.3	0.127		0.24	2670		-----		-----
2366	GB/T22048	0.125		0.06	2671		0.1310		0.60
2369		0.144		1.76	2672	in house	0.065		-5.30
2372	CPSC-CH-C1001-09.3	0.123		-0.12	2674	CPSC-CH-C1001-09.3	0.128		0.33

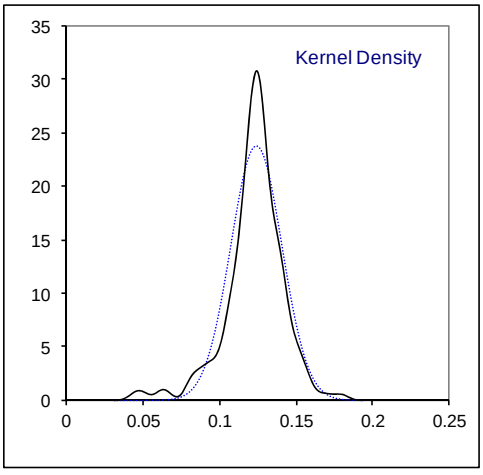
2678		0.12	-0.39	3199		0.142		1.58
2679	SN/T2449	0.105	-1.73	3200		0.12		-0.39
2688	KS M 1991	0.138	1.22	3210		0.107		-1.55
2698	CPSC-CH-C1001-09.3	0.113	-1.01	3212	CPSC-CH-C1001-09	0.131	C	0.60
3110	CPSC-CH-C1001-09.3	0.128	0.33	3214	CPSC-CH-C1001-09.3	0.128		0.33
3116		-----	-----	3215		0.140		1.40
3117		0.127	0.24	3218	CPSC-CH-C1001-09.3	0.121		-0.30
3118	CPSC-CH-C1001-09.3	0.126	0.15	3220		0.17		4.08
3146	CPSC-CH-C1001-09.3	0.13	0.51	3225	EN14372:2004	0.130		0.51
3150		0.1377	1.20	3228	CPSC-CH-C1001-09.3	0.129		0.42
3153		-----	-----	3237		0.13489		0.95
3163	in house	0.1200	-0.39	3238	in house	0.11		-1.28
3166	in house	0.109	-1.37	3239	INH-134	0.045	C,R(0.01)	-7.09
3167	CPSC-CH-C1001-09.3	0.115	-0.83	3242	ISO14389:2014	0.125		0.06
3172		0.124	-0.03	3246		0.116		-0.74
3176		0.082	-3.78	3248		0.113		-1.01
3182	CPSC-CH-C1001-09.3	0.111	-1.19	8005		-----		-----
3190	CPSC-CH-C1001-09.3	0.134	0.87	8006		-----		-----
3191	CPSC-CH-C1001-09.3	0.136	1.04	8007		-----		-----
3192		0.13	0.51	8008	ST2012	0.128		0.33
3197	CPSC-CH-C1001-09.3	0.117	-0.65	8020	CPSC-CH-C1001-09.3	0.126		0.15

normality	suspect
n	162
outliers	3
mean (n)	0.1243
st.dev. (n)	0.01678
R(calc.)	0.0470
R(EN14372:04)	0.0313

Compare R(Horwitz): 0.0286

Lab 2228 first reported: 0.179
Lab 2295 first reported as DHP
Lab 2296 first reported: 0.170
Lab 2301 first reported as DHP
Lab 2406 first reported: <0.010
Lab 2415 first reported: 0.076
Lab 2504 first reported: 0.072
Lab 3212 first reported: 0.210
Lab 3239 first reported: 0.056





Determination of DEP on sample #15065; results in %M/M

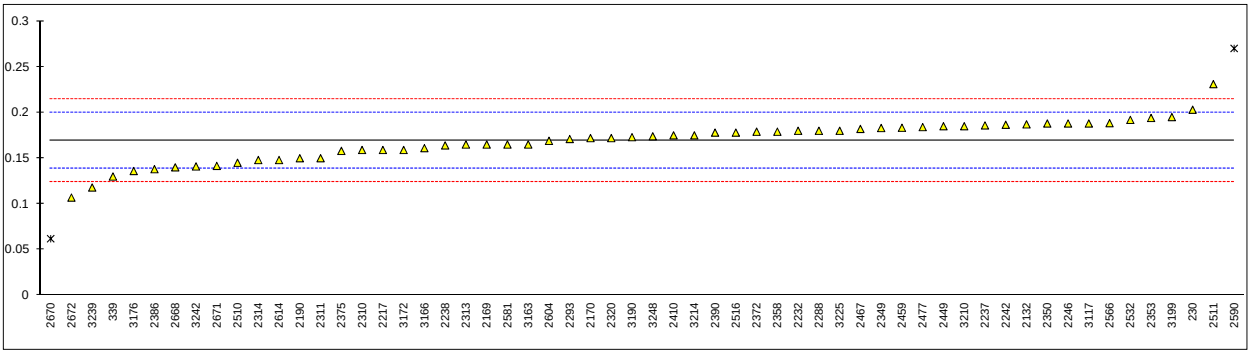
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213		-----		-----	2374		-----		-----
230	ISO14389:2014	0.203		2.22	2375	ISO 16181	0.158		-0.74
310		-----		-----	2386	CPSC-CH-C1001-09.3	0.138		-2.05
330		-----		-----	2390	CPSC-CH-C1001-09.3	0.178		0.58
339		0.130		-2.58	2401		-----		-----
551		-----		-----	2403		-----		-----
622		-----		-----	2404		-----		-----
1051		-----		-----	2406		-----		-----
1170		-----		-----	2410	CPSC-CH-C1001-09.3	0.175		0.38
2102		-----		-----	2413		-----		-----
2104		-----		-----	2415		-----		-----
2108		-----		-----	2422		-----		-----
2115		-----		-----	2425		-----		-----
2121		-----		-----	2426		-----		-----
2129		-----		-----	2429		-----		-----
2132	CPSC-CH-C1001-09.3	0.187		1.17	2431		-----		-----
2137		-----		-----	2433		-----		-----
2138		-----		-----	2442		-----		-----
2139		-----		-----	2449	CPSC-CH-C1001-09.3	0.185		1.04
2146		-----		-----	2452		-----		-----
2156		-----		-----	2459	ISO14398	0.1833		0.92
2165		-----		-----	2460		-----		-----
2169	CPSC-CH-C1001-09.3	0.165		-0.28	2464		-----		-----
2170	CPSC-CH-C1001-09.3	0.172		0.18	2467		0.182		0.84
2172		-----		-----	2469		-----		-----
2182		-----		-----	2475		-----		-----
2184		-----		-----	2476		-----		-----
2190		0.15		-1.26	2477	CPSC-CH-C1001-09.3	0.184		0.97
2197		-----		-----	2482		-----		-----
2201		-----		-----	2488		-----		-----
2213		-----		-----	2489		-----		-----
2217	CPSC-CH-C1001-09.3	0.159		-0.67	2492		-----		-----
2218		-----		-----	2495		-----		-----
2228		-----		-----	2496		-----		-----
2229		-----		-----	2497		-----		-----
2230		-----		-----	2499		-----		-----
2232	CPSC-CH-C1001-09.3	0.180		0.71	2503		-----		-----
2236		-----		-----	2504		-----		-----
2237		0.1859		1.09	2507		-----		-----
2238	CPSC-CH-C1001-09.3	0.164		-0.34	2510	in house	0.145		-1.59
2242		0.1866		1.14	2511	in house	0.231		4.06
2245		-----		-----	2514		-----		-----
2246	CPSC-CH-C1001-09.3	0.188		1.23	2515		-----		-----
2247		-----		-----	2516	CPSC-CH-C1001-09.3	0.178		0.58
2254		-----		-----	2522		-----		-----
2255		-----		-----	2529		-----		-----
2256		-----		-----	2532	CPSC-CH-C1001-09.2	0.1919		1.49
2258		-----		-----	2538		-----		-----
2264		-----		-----	2549		-----		-----
2267		-----		-----	2563		-----		-----
2284		-----		-----	2566		0.1883		1.25
2288	CPSC-CH-C1001-09.3	0.18		0.71	2567		-----		-----
2289		-----		-----	2572		-----		-----
2290		-----		-----	2578		-----		-----
2293	CPSC-CH-C1001-09.3	0.171		0.12	2581	CPSC-CH-C1001-09.3	0.165	C	-0.28
2295		-----		-----	2582		-----		-----
2296		-----		-----	2590	CPSC-CH-C1001-09.3	0.27	R(0.01)	6.62
2300		-----		-----	2591		-----		-----
2301		-----		-----	2592		-----		-----
2309		-----		-----	2595		-----		-----
2310	CPSC-CH-C1001-09.3	0.159		-0.67	2604		0.169		-0.01
2311	CPSC-CH-C1001-09.3	0.15		-1.26	2614		0.148		-1.39
2313	CPSC-CH-C1001-09.3	0.165		-0.28	2622		-----		-----
2314		0.148		-1.39	2629		-----		-----
2320		0.172		0.18	2642		-----		-----
2330		-----		-----	2643		-----		-----
2349		0.183		0.90	2650		-----		-----
2350	CPSC-CH-C1001-09.3	0.188		1.23	2658		-----		-----
2353	EN14372	0.194		1.63	2668		0.140		-1.92
2358	CPSC-CH-C1001-09.3	0.179		0.64	2670	EN14372:2004	0.062	C,R(0.01)	-7.04
2366		-----		-----	2671		0.1416		-1.81
2369		-----		-----	2672	in house	0.107		-4.09
2372	CPSC-CH-C1001-09.3	0.179		0.64	2674		-----		-----

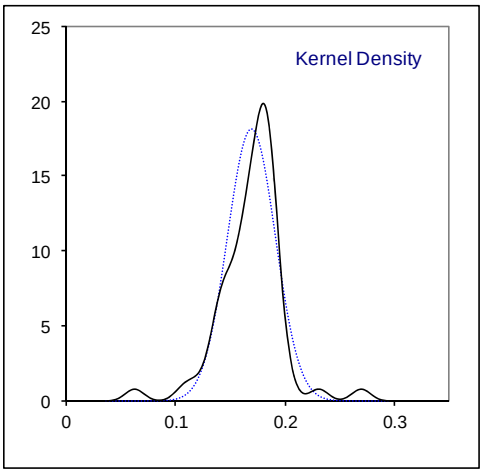
2678		-----	-----	3199		0.195	1.69
2679		-----	-----	3200		-----	-----
2688		-----	-----	3210		0.185	1.04
2698		-----	-----	3212		-----	-----
3110		-----	-----	3214	CPSC-CH-C1001-09.3	0.175	0.38
3116		-----	-----	3215		-----	-----
3117		0.188	1.23	3218		-----	-----
3118		-----	-----	3220		-----	-----
3146		-----	-----	3225	EN14372:2004	0.180	0.71
3150		-----	-----	3228		-----	-----
3153		-----	-----	3237		-----	-----
3163	in house	0.1650	-0.28	3238		-----	-----
3166	in house	0.161	-0.54	3239	INH-134	0.118	-3.36
3167		-----	-----	3242	ISO14389:2014	0.141	-1.85
3172		0.159	-0.67	3246		-----	-----
3176		0.136	-2.18	3248		0.174	0.31
3182		-----	-----	8005		-----	-----
3190	CPSC-CH-C1001-09.3	0.173	0.25	8006		-----	-----
3191		-----	-----	8007		-----	-----
3192		-----	-----	8008		-----	-----
3197		-----	-----	8020		-----	-----

normality	OK
n	56
outliers	2
mean (n)	0.1692
st.dev. (n)	0.02195
R(calc.)	0.0615
R(EN14372:04)	0.0426

Compare R(Horwitz): 0.0248

Lab 2581 first reported: 0.288
Lab 2670 first reported: 0.06





Determination of DINP, DBP and BBP on sample #15065; results in %M/M

Lab	method	DINP	mark	DBP	mark	BBP	mark	remark
213		-----		-----		-----		
230		-----		-----		-----		
310		-----		-----		-----		
330		0.014		0.001		<0.005		
339		0.030		0.003		<0.0001		
551		0.020		0.005		n.d.		
622		n.d.		n.d.		n.d.		
1051	CPSC-CH-C1001-09.3	<0.01		<0.01		<0.01		
1170		-----		-----		-----		
2102		0.0181		-----		-----		
2104	CPSC-CH-C1001-09.3	0.031		<0.0005		<0.0005		
2108	ISO14389	0.019		n.d.		n.d.		
2115		0.014		n.d.		n.d.		
2121		-----		-----		-----		
2129	ISO14389Mod.	<0.02		<0.02		<0.02		
2132	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2137	CPSC-CH-C1001-09.3	<0.001		<0.001		<0.001		
2138	INH-62321	n.d.		n.d.		n.d.		
2139	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		
2146		-----		-----		-----		
2156		0.005		0.005		0.005		
2165	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2169	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		
2170		-----		-----		-----		
2172		<0.005		<0.005		<0.005		
2182	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2184	JTSS-ST2012	n.d.		n.d.		n.d.		
2190		0.02		<0.01		<0.01		
2197		-----		-----		-----		
2201	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		
2213	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2217		-----		-----		-----		
2218	CPSC-CH-C1001-09.1	0.020		-----		-----		
2228		0.0		0.0		0.0		
2229	EN14372:2004	<0.02		<0.01		<0.01		
2230		n.d.		n.d.		n.d.		
2232		-----		-----		-----		
2236		-----		-----		-----		
2237		0.0154		<0.01		<0.01		
2238	CPSC-CH-C1001-09.3	0.017		<0.010		<0.010		
2242		-----		-----		-----		
2245		n.d.		n.d.		n.d.		
2246	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2247		n.d.		n.d.		n.d.		
2254		<0.010		<0.004		<0.004		
2255		-----		-----		-----		
2256	EN14372	n.d.		n.d.		n.d.		
2258		-----		-----		-----		
2264		-----		-----		-----		
2267		0.02		0		0		
2284	CPSC-CH-C1001-09.3	<0.005		<0.005		<0.005		
2288	CPSC-CH-C1001-09.3	0.019		<0.01		<0.01		
2289	CPSC-CH-C1001-09	0.019		n.d.		n.d.		
2290	CPSC-CH-C1001-09.3	<0.01		<0.01		<0.01		
2293	CPSC-CH-C1001-09.3	0.019		-----		-----		
2295		-----		-----		-----		
2296		-----		-----		-----		
2300		-----		0.02		-----		
2301		-----		-----		-----		
2309	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2310	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2311	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2313	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2314		n.d.		n.d.		n.d.		
2320		0.048	C	-----		-----		
2330		-----		-----		-----		
2349		n.d.		n.d.		n.d.		
2350	CPSC-CH-C1001-09.3	<0.005		<0.005		<0.005		
2353	EN14372	0.025		n.d.		n.d.		
2358	CPSC-CH-C1001-09.3	0.021		n.d.		n.d.		
2366	GB/T22048	n.d.		n.d.		n.d.		
2369		n.d.		n.d.		n.d.		
2372	CPSC-CH-C1001-09.3	0.020		n.d.		n.d.		

2374		<0.005	<0.005	<0.005
2375	ISO 16181	n.d.	n.d.	n.d.
2386	CPSC-CH-C1001-09.3	0.020	<0.010	<0.010
2390		-----	-----	-----
2401	GB/T22048	n.d.	n.d.	n.d.
2403	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
2404		<0.010	<0.005	<0.005
2406	CPSC-CH-C1001-09.3	0.020	<0.010	<0.010
2410	CPSC-CH-C1001-09.3	<0.01	<0.01	<0.01
2413	CPSC-CH-C1001-09	n.d.	n.d.	n.d.
2415		n.d.	n.d.	n.d.
2422		-----	-----	-----
2425		-----	-----	-----
2426	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
2429	CPSC-CH-C1001-09.3	0.020	n.d.	n.d.
2431	CPSC-CH-C1001-09.3	0.021	<0.01	<0.01
2433		-----	-----	-----
2442		-----	-----	-----
2449	CPSC-CH-C1001-09.3	<0.005	<0.005	<0.005
2452		-----	-----	-----
2459		-----	-----	-----
2460		0	0.002	0
2464		-----	-----	-----
2467		0.000	0.000	0.000
2469		-----	-----	-----
2475		-----	-----	-----
2476		n.d.	n.d.	n.d.
2477	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
2482	CPSC-CH-C1001-09.3	0.0193	-----	-----
2488		0.023	-----	-----
2489		-----	-----	-----
2492	in house	0.022	-----	-----
2495		-----	<0.01	<0.01
2496	CPSC-CH-C1001-09.3	0.000	0.000	0.000
2497		-----	-----	-----
2499	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
2503		-----	-----	-----
2504		0.0	0.0	0.0
2507	CPSC-CH-C1001-09.3	<0.100	<0.100	<0.100
2510		-----	-----	-----
2511	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
2514		-----	-----	-----
2515		<0.005	<0.005	<0.005
2516	CPSC-CH-C1001-09.3	<0.01	<0.01	<0.01
2522	CPSC-CH-C1001-09.3	<0.01	<0.01	<0.01
2529		-----	-----	-----
2532	CPSC-CH-C1001-09.2	n.d.	n.d.	n.d.
2538		<0.4	<0.01	<0.01
2549		n.d.	n.d.	n.d.
2563		-----	-----	-----
2566		n.d.	n.d.	n.d.
2567	CPSC	n.d.	n.d.	n.d.
2572		<0.01	<0.01	<0.01
2578		n.d.	n.d.	n.d.
2581	CPSC-CH-C1001-09.3	0.017	<0.01	<0.01
2582		n.d.	n.d.	n.d.
2590		-----	-----	-----
2591		0.000	0.000	0.000
2592		-----	-----	-----
2595		<0.00001	<0.00001	<0.00001
2604		n.d.	n.d.	n.d.
2614		n.d.	n.d.	n.d.
2622		0.044	-----	-----
2629	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
2642	CPSC-CH-C1001-09.3	<0.03	<0.03	<0.03
2643	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
2650		-----	-----	-----
2658		-----	-----	-----
2668		n.d.	n.d.	n.d.
2670	EN14372:2004	n.d.	n.d.	C n.d.
2671		n.d.	n.d.	n.d.
2672	in house	<0.01	<0.01	<0.01
2674	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.

2678		0.01	n.d.	n.d.
2679	SN/T2449	n.d.	n.d.	n.d.
2688		-----	-----	-----
2698	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
3110	CPSC-CH-C1001-09.3	0.021	<0.01	<0.01
3116	EN14372:2004	n.d.	n.d.	n.d.
3117		0.016	-----	-----
3118	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
3146	CPSC-CH-C1001-09.3	<0.02	<0.02	<0.02
3150		-----	-----	-----
3153		-----	-----	-----
3163	in house	0.0200	-----	-----
3166		-----	-----	-----
3167	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
3172		0.020	-----	-----
3176		n.d.	n.d.	n.d.
3182	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
3190	CPSC-CH-C1001-09.3	0.019	<0.010	<0.010
3191	CPSC-CH-C1001-09.3	<0.010	<0.010	<0.010
3192		<0.1	<0.01	<0.01
3197		-----	-----	-----
3199		<0.005	<0.005	<0.005
3200		n.d.	n.d.	n.d.
3210		-----	-----	-----
3212		-----	-----	-----
3214	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
3215		n.d.	n.d.	n.d.
3218	CPSC-CH-C1001-09.3	<0.01	<0.01	<0.01
3220		n.d.	n.d.	n.d.
3225	EN14372:2004	0.0194	<0.005	<0.005
3228	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
3237		-----	-----	-----
3238		-----	-----	-----
3239		-----	-----	-----
3242	ISO14389:2014	n.d.	n.d.	n.d.
3246		0.016	-----	-----
3248		n.d.	n.d.	n.d.
8005		-----	-----	-----
8006	JTSS-ST2012	n.d.	n.d.	n.d.
8007	CPSC-CH-C1001	n.d.	n.d.	n.d.
8008	ST2012	0.021	<0.01	<0.01
8020	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
	normality	n.a.	n.a.	n.a.
	n	135	125	124
	outliers	0	0	0
	mean (n)	<0.05	<0.02	<0.02
	st.dev. (n)	n.a.	n.a.	n.a.
	R(calc.)	n.a.	n.a.	n.a.
	R(EN14372:04)	n.a.	n.a.	n.a.

Lab 2320 first reported for DNP: 0.012
Lab 2670 first reported for DBP: 0.036

Determination of DNOP, DHP and other phthalates on sample #15065; results in %M/M

Lab	method	DNOP	mark	DHP	mark	other	mark	remark
213		-----		-----		-----		
230		-----		-----		-----		
310		-----		-----		-----		
330		<0.020		<0.020		-----		
339		<0.0001		<0.0001		-----		
551		n.d.		n.d.		-----		
622		n.d.		n.d.		-----		
1051	CPSC-CH-C1001-09.3	<0.01		-----		-----		
1170		-----		-----		-----		
2102		-----		-----		-----		
2104	CPSC-CH-C1001-09.3	<0.0005		<0.0005		0.194		
2108	ISO14389	n.d.		n.d.		n.d.		
2115		n.d.		n.d.		-----		
2121		-----		-----		-----		
2129	ISO14389Mod.	<0.02		<0.02		<0.02		
2132	CPSC-CH-C1001-09.3	n.d.		n.d.		-----		
2137	CPSC-CH-C1001-09.3	<0.001		<0.001		<0.001		
2138	INH-62321	n.d.		n.d.		-----		
2139	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		
2146		-----		-----		-----		det. DEP and TBAC
2156		0.005		0.005		-----		
2165	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2169	CPSC-CH-C1001-09.3	<0.010		-----		-----		
2170		-----		-----		-----		
2172		<0.005		<0.005		<0.005		
2182	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2184	JTSS-ST2012	n.d.		n.d.		n.d.		
2190		<0.01		<0.01		0.15		
2197		-----		-----		-----		
2201	CPSC-CH-C1001-09.3	<0.010		<0.010		-----		
2213	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2217		-----		-----		-----		
2218		-----		-----		-----		
2228		0.0		0.0		-----		
2229	EN14372:2004	<0.01		<0.01		-----		
2230		n.d.		n.d.		n.d.		
2232		-----		-----		-----		
2236		-----		-----		-----		
2237		<0.01		<0.01		0.067		DMEP
2238	CPSC-CH-C1001-09.3	<0.010		<0.010		-----		
2242		-----		-----		-----		
2245		n.d.		n.d.		-----		
2246	CPSC-CH-C1001-09.3	n.d.		n.d.		-----		
2247		n.d.		n.d.		-----		
2254		<0.004		<0.004		-----		
2255		-----		-----		-----		
2256	EN14372	n.d.		n.d.		n.d.		
2258		-----		-----		-----		
2264		-----		-----		-----		
2267		0		0		-----		det. TBAC
2284	CPSC-CH-C1001-09.3	<0.005		<0.005		-----		
2288	CPSC-CH-C1001-09.3	<0.01		<0.01		-----		
2289	CPSC-CH-C1001-09	n.d.		n.d.		-----		
2290	CPSC-CH-C1001-09.3	<0.01		<0.01		-----		
2293		-----		-----		-----		
2295		-----		-----		-----		
2296		-----		-----		-----		
2300		-----		-----		-----		
2301		-----		-----		-----		
2309	CPSC-CH-C1001-09.3	n.d.		n.d.		-----		
2310	CPSC-CH-C1001-09.3	n.d.		n.d.		-----		
2311	CPSC-CH-C1001-09.3	n.d.		n.d.		-----		
2313	CPSC-CH-C1001-09.3	n.d.		n.d.		-----		
2314		n.d.		n.d.		-----		
2320		-----		-----		-----		
2330		-----		-----		-----		
2349		n.d.		n.d.		-----		
2350	CPSC-CH-C1001-09.3	<0.005		<0.005		<0.005		
2353	EN14372	n.d.		n.d.		-----		
2358	CPSC-CH-C1001-09.3	n.d.		n.d.		-----		
2366	GB/T22048	n.d.		n.d.		-----		
2369		n.d.		n.d.		n.d.		
2372	CPSC-CH-C1001-09.3	n.d.		n.d.		-----		

2374		<0.005	<0.005	-----	
2375	ISO 16181	n.d.	n.d.	-----	
2386	CPSC-CH-C1001-09.3	<0.010	<0.010	25.981	TBAC
2390		-----	-----	-----	
2401	GB/T22048	n.d.	n.d.	-----	
2403	CPSC-CH-C1001-09.3	n.d.	n.d.	-----	
2404		<0.005	-----	-----	
2406	CPSC-CH-C1001-09.3	<0.010	<0.010	<0.010	
2410	CPSC-CH-C1001-09.3	<0.01	<0.01	-----	
2413	CPSC-CH-C1001-09	n.d.	n.d.	-----	
2415		n.d.	n.d.	-----	
2422		-----	-----	-----	
2425		-----	-----	-----	
2426	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.	
2429	CPSC-CH-C1001-09.3	n.d.	n.d.	-----	
2431	CPSC-CH-C1001-09.3	<0.01	<0.01	<0.01	
2433		-----	-----	-----	
2442		-----	-----	-----	
2449	CPSC-CH-C1001-09.3	<0.005	<0.005	-----	
2452		-----	-----	-----	
2459		-----	-----	-----	
2460		0	0	-----	
2464		-----	-----	-----	
2467		0.000	0.000	-----	
2469		-----	-----	-----	
2475		-----	-----	-----	
2476		n.d.	n.d.	n.d.	
2477	CPSC-CH-C1001-09.3	n.d.	n.d.	-----	
2482		-----	-----	-----	
2488		-----	-----	-----	
2489		-----	-----	-----	
2492		-----	-----	-----	
2495	CPSC-CH-C1001-09.3	<0.01	<0.01	-----	
2496	CPSC-CH-C1001-09.3	0.000	0.000	-----	
2497		-----	-----	-----	
2499	CPSC-CH-C1001-09.3	n.d.	-----	-----	
2503		-----	-----	-----	
2504		0.0	0.0	0.0	
2507	CPSC-CH-C1001-09.3	<0.100	-----	-----	
2510		-----	-----	-----	
2511	CPSC-CH-C1001-09.3	n.d.	n.d.	-----	
2514		-----	-----	-----	
2515		<0.005	<0.005	-----	
2516	CPSC-CH-C1001-09.3	<0.01	<0.01	-----	
2522	CPSC-CH-C1001-09.3	<0.01	<0.01	-----	
2529		-----	-----	-----	
2532	CPSC-CH-C1001-09.2	n.d.	n.d.	-----	
2538		<0.01	<0.01	n.d.	
2549		n.d.	n.d.	-----	
2563		-----	-----	-----	
2566		n.d.	n.d.	-----	
2567	CPSC	n.d.	n.d.	-----	
2572		<0.01	<0.01	-----	
2578		n.d.	n.d.	n.d.	
2581	CPSC-CH-C1001-09.3	<0.01	<0.01	-----	
2582		n.d.	n.d.	-----	
2590		-----	-----	-----	
2591		0.000	-----	-----	
2592		-----	-----	-----	
2595		<0.00001	-----	-----	
2604		n.d.	n.d.	-----	
2614		n.d.	n.d.	-----	
2622		-----	-----	0.16	
2629	CPSC-CH-C1001-09.3	n.d.	n.d.	-----	
2642	CPSC-CH-C1001-09.3	<0.03	-----	-----	
2643	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.	
2650		-----	-----	-----	
2658		-----	-----	-----	
2668		n.d.	n.d.	-----	
2670	EN14372:2004	n.d.	-----	-----	
2671		n.d.	n.d.	-----	
2672	in house	<0.01	<0.01	-----	
2674	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.	

2678		n.d.	n.d.	-----
2679	SN/T2449	n.d.	n.d.	n.d.
2688		-----	-----	0.182
2698	CPSC-CH-C1001-09.3	n.d.	n.d.	-----
3110	CPSC-CH-C1001-09.3	<0.01	<0.01	-----
3116	EN14372:2004	n.d.	-----	-----
3117		-----	-----	-----
3118	CPSC-CH-C1001-09.3	n.d.	n.d.	-----
3146	CPSC-CH-C1001-09.3	<0.02	<0.02	-----
3150		-----	-----	-----
3153		-----	-----	-----
3163		-----	-----	-----
3166		-----	-----	-----
3167	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
3172		-----	-----	-----
3176		n.d.	n.d.	-----
3182	CPSC-CH-C1001-09.3	n.d.	n.d.	-----
3190	CPSC-CH-C1001-09.3	<0.010	<0.010	-----
3191	CPSC-CH-C1001-09.3	<0.010	<0.010	-----
3192		<0.01	-----	-----
3197		-----	-----	-----
3199		<0.005	<0.005	-----
3200		n.d.	n.d.	n.d.
3210		-----	-----	-----
3212		-----	-----	-----
3214	CPSC-CH-C1001-09.3	n.d.	n.d.	-----
3215		n.d.	n.d.	-----
3218	CPSC-CH-C1001-09.3	<0.01	<0.01	-----
3220		n.d.	n.d.	n.d.
3225	EN14372:2004	<0.005	<0.005	-----
3228	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
3237		-----	-----	-----
3238		-----	-----	-----
3239		-----	-----	-----
3242	ISO14389:2014	n.d.	n.d.	-----
3246		-----	-----	-----
3248		n.d.	n.d.	0.174
8005		-----	-----	-----
8006	JTSS-ST2012	n.d.	-----	-----
8007	CPSC-CH-C1001	n.d.	-----	-----
8008	ST2012	<0.01	<0.01	-----
8020	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
	normality	n.a.	n.a.	
	n	124	111	
	outliers	0	0	
	mean (n)	<0.02	<0.02	
	st.dev. (n)	n.a.	n.a.	
	R(calc.)	n.a.	n.a.	
	R(EN14372:04)	n.a.	n.a.	

Abbreviations:
det. = detected
TBAC = tributyl acetyl citrate
DMEP = di(methoxyethyl)phthalate

Determination of DBP on sample #15066; results in %M/M

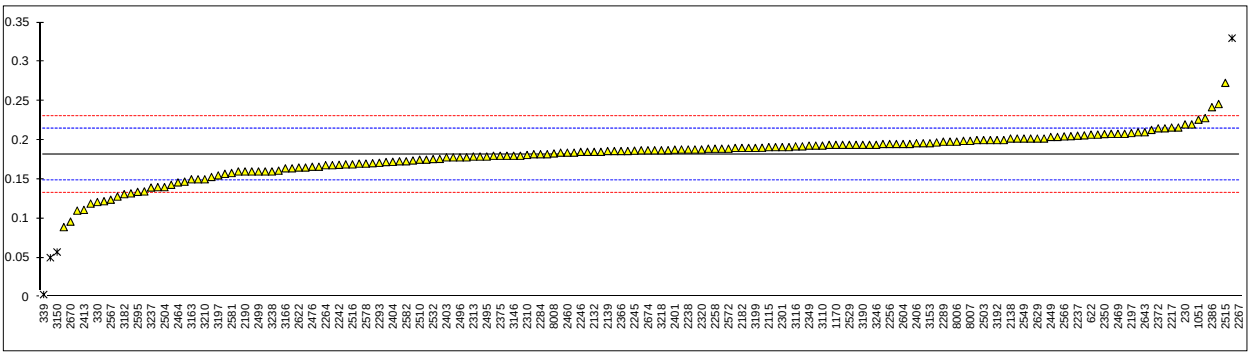
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213		-----		-----	2374		0.197		0.93
230	ISO14389:2014	0.220		2.34	2375	ISO 16181	0.180		-0.11
310		0.202		1.24	2386	CPSC-CH-C1001-09.3	0.242	C	3.69
330		0.121		-3.71	2390	CPSC-CH-C1001-09.3	0.195		0.81
339		0.003	R(0.01)	-10.93	2401	GB/T22048	0.1878		0.37
551		0.119		-3.84	2403	CPSC-CH-C1001-09.3	0.178		-0.23
622		0.207		1.55	2404		0.1723		-0.58
1051	CPSC-CH-C1001-09.3	0.226		2.71	2406	CPSC-CH-C1001-09.3	0.196		0.87
1170		0.194		0.75	2410	CPSC-CH-C1001-09.3	0.180		-0.11
2102		0.186		0.26	2413	CPSC-CH-C1001-09	0.111		-4.32
2104	CPSC-CH-C1001-09.3	0.191		0.57	2415		0.140		-2.55
2108	ISO14389	0.215		2.03	2422	KS M 1991	0.185		0.20
2115		0.191		0.57	2425		0.122		-3.65
2121		0.089		-5.67	2426	CPSC-CH-C1001-09.3	0.1705		-0.69
2129	ISO14389Mod.	0.246		3.93	2429	CPSC-CH-C1001-09.3	0.195		0.81
2132	CPSC-CH-C1001-09.3	0.185		0.20	2431	CPSC-CH-C1001-09.3	0.189		0.44
2137	CPSC-CH-C1001-09.3	0.205		1.42	2433		-----		-----
2138	INH-62321	0.202		1.24	2442	in house	0.1345	C	-2.89
2139	CPSC-CH-C1001-09.3	0.186		0.26	2449	CPSC-CH-C1001-09.3	0.204		1.36
2146	CPSC-CH-C1001-09.3	0.172		-0.59	2452		0.147		-2.12
2156		0.2280		2.83	2459	ISO14398	0.1871		0.33
2165	CPSC-CH-C1001-09.3	0.199		1.06	2460		0.184	C	0.14
2169	CPSC-CH-C1001-09.3	0.190		0.51	2464		0.146		-2.18
2170	CPSC-CH-C1001-09.3	0.188		0.38	2467		0.169		-0.78
2172		0.184		0.14	2469		0.208		1.61
2182	CPSC-CH-C1001-09.3	0.190		0.51	2475	in house	0.168		-0.84
2184	JTSS-ST2012	0.194		0.75	2476		0.166		-0.96
2190		0.16		-1.33	2477	CPSC-CH-C1001-09.3	0.176		-0.35
2197		0.209		1.67	2482	CPSC-CH-C1001-09.3	0.157		-1.51
2201	CPSC-CH-C1001-09.3	0.1870		0.32	2488		0.143		-2.37
2213	CPSC-CH-C1001-09.3	0.2		1.12	2489		0.173		-0.53
2217	CPSC-CH-C1001-09.3	0.216		2.10	2492	in house	0.178		-0.23
2218	CPSC-CH-C1001-09.1	0.193		0.69	2495	CPSC-CH-C1001-09.3	0.179		-0.17
2228		0.216		2.10	2496	CPSC-CH-C1001-09.3	0.178		-0.23
2229	EN14372:2004	0.17		-0.72	2497		-----		-----
2230		0.182		0.02	2499	CPSC-CH-C1001-09.3	0.160		-1.33
2232	CPSC-CH-C1001-09.3	0.208		1.61	2503	CPSC-CH-C1001-09.3	0.200		1.12
2236	CPSC-CH-C1001-09.3	0.188		0.38	2504		0.140	C	-2.55
2237		0.2056		1.46	2507	CPSC-CH-C1001-09.3	0.174		-0.47
2238	CPSC-CH-C1001-09.3	0.188		0.38	2510	in house	0.175		-0.41
2242		0.1685		-0.81	2511		-----	W	-----
2245		0.1865		0.29	2514	CPSC-CH-C1001-09.3	0.128		-3.29
2246	CPSC-CH-C1001-09.3	0.185		0.20	2515		0.273		5.58
2247		0.180		-0.11	2516	CPSC-CH-C1001-09.3	0.169		-0.78
2254		0.194		0.75	2522	CPSC-CH-C1001-09.3	0.186		0.26
2255	CPSC-CH-C1001-09.3	0.153	C	-1.76	2529	CPSC-CH-C1001-09.3	0.194		0.75
2256	EN14372	0.195		0.81	2532	CPSC-CH-C1001-09.2	0.1758		-0.36
2258		0.189		0.44	2538		0.194		0.75
2264	CPSC-CH-C1001-09.3	0.168		-0.84	2549		0.202		1.24
2267		0.432	C,R(0.01)	15.30	2563	CPSC-CH-C1001-09.3	0.16		-1.33
2284	CPSC-CH-C1001-09.3	0.182		0.02	2566		0.2047		1.40
2288	CPSC-CH-C1001-09.3	0.21		1.73	2567	CPSC	0.124		-3.53
2289	CPSC-CH-C1001-09	0.198		0.99	2572		0.189		0.44
2290	CPSC-CH-C1001-09.3	0.1902		0.52	2578		0.170		-0.72
2293	CPSC-CH-C1001-09.3	0.171		-0.66	2581	CPSC-CH-C1001-09.3	0.158		-1.45
2295		0.185	C	0.20	2582		0.173		-0.53
2296	CPSC-CH-C1001-09.3	0.179	C	-0.17	2590		-----		-----
2300		0.16		-1.33	2591		0.161		-1.27
2301		0.191		0.57	2592		0.33	C,R(0.01)	9.07
2309	CPSC-CH-C1001-09.3	0.16		-1.33	2595		0.134	C	-2.92
2310	CPSC-CH-C1001-09.3	0.181		-0.04	2604		0.195		0.81
2311	CPSC-CH-C1001-09.3	0.19		0.51	2614		0.202		1.24
2313	CPSC-CH-C1001-09.3	0.179		-0.17	2622		0.165		-1.02
2314		0.182		0.02	2629	CPSC-CH-C1001-09.3	0.202		1.24
2320		0.188		0.38	2642	CPSC-CH-C1001-09.3	0.208		1.61
2330		-----		-----	2643	CPSC-CH-C1001-09.3	0.21		1.73
2349		0.193		0.69	2650		0.05	R(0.01)	-8.05
2350	CPSC-CH-C1001-09.3	0.2077		1.59	2658		-----		-----
2353	EN14372	0.189		0.44	2668		0.165		-1.02
2358	CPSC-CH-C1001-09.3	0.204		1.36	2670	EN14372:2004	0.096	C	-5.24
2366	GB/T22048	0.186		0.26	2671		0.2020		1.24
2369		0.198		0.99	2672	in house	0.110		-4.39
2372	CPSC-CH-C1001-09.3	0.215		2.03	2674	CPSC-CH-C1001-09.3	0.187		0.32

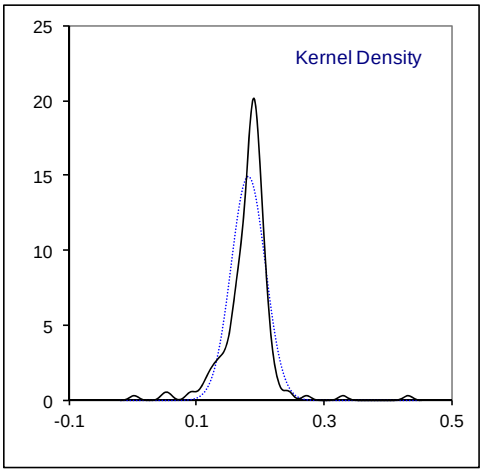
2678		0.20		1.12	3199		0.190	0.51
2679	SN/T2449	0.187		0.32	3200		0.18	-0.11
2688	KS M 1991	0.178		-0.23	3210		0.150	-1.94
2698	CPSC-CH-C1001-09.3	0.166		-0.96	3212	CPSC-CH-C1001-09	0.213	1.91
3110	CPSC-CH-C1001-09.3	0.193		0.69	3214	CPSC-CH-C1001-09.3	0.184	0.14
3116	EN14372:2004	0.192		0.63	3215		0.207	1.55
3117		0.175		-0.41	3218	CPSC-CH-C1001-09.3	0.187	0.32
3118	CPSC-CH-C1001-09.3	0.196		0.87	3220		0.22	2.34
3146	CPSC-CH-C1001-09.3	0.18		-0.11	3225	EN14372:2004	0.194	0.75
3150		0.0572	R(0.01)	-7.61	3228	CPSC-CH-C1001-09.3	0.191	0.57
3153		0.196		0.87	3237		0.13948	-2.58
3163	in house	0.1500		-1.94	3238	in house	0.16	-1.33
3166	in house	0.164		-1.08	3239	INH-134	0.132	-3.04
3167	CPSC-CH-C1001-09.3	0.164		-1.08	3242	ISO14389:2014	0.195	0.81
3172		-----		-----	3246		0.194	0.75
3176		0.150		-1.94	3248		0.200	1.12
3182	CPSC-CH-C1001-09.3	0.131		-3.10	8005		-----	-----
3190	CPSC-CH-C1001-09.3	0.194		0.75	8006	JTSS-ST2012	0.198	0.99
3191	CPSC-CH-C1001-09.3	0.206		1.48	8007	CPSC-CH-C1001	0.199	1.06
3192		0.20		1.12	8008	ST2012	0.183	0.08
3197	CPSC-CH-C1001-09.3	0.155		-1.63	8020	CPSC-CH-C1001-09.3	0.192	0.63

normality	suspect
n	174
outliers	5
mean (n)	0.1817
st.dev. (n)	0.02674
R(calc.)	0.0749
R(EN14372:04)	0.0458

Compare R(Horwitz): 0.0395

Lab 2255 first reported: 0.118
Lab 2267 first reported: 0.069
Lab 2295 first reported: 0.280
Lab 2296 first reported: 0.213
Lab 2386 first reported: 0.022
Lab 2442 first reported: 0.10
Lab 2460 first reported: 0
Lab 2504 first reported: 0.329
Lab 2511 first reported: 0.271
Lab 2592 first reported: 0.11
Lab 2595 first reported: <0.00001
Lab 2670 first reported: 0.092





Determination of DNOP on sample #15066; results in %M/M

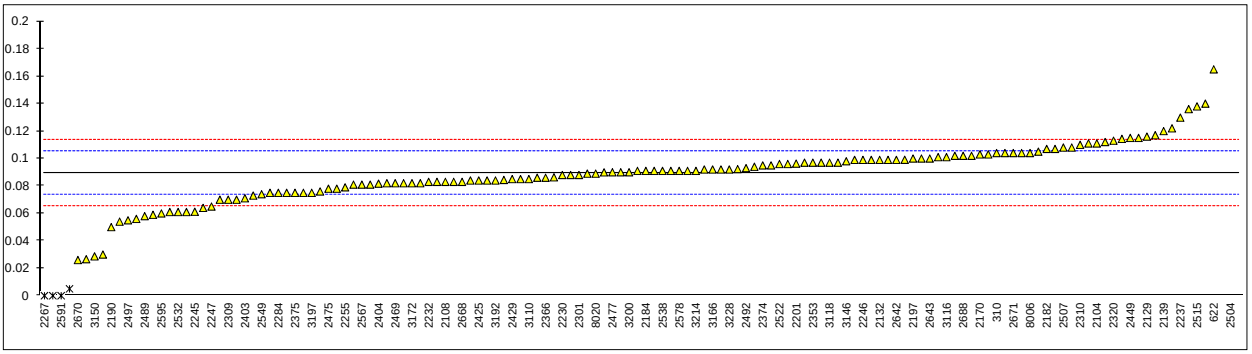
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213		-----		-----	2374		0.095		0.71
230		-----		-----	2375	ISO 16181	0.075		-1.78
310		0.104		1.83	2386	CPSC-CH-C1001-09.3	0.136	C	5.81
330		<0.020	**f-?**	<-8.62	2390		-----		-----
339		<0.0001	**f-?**	<-11.10	2401	GB/T22048	n.d.	**f-?**	-----
551		4.356	R(0.01)	530.86	2403	CPSC-CH-C1001-09.3	0.071		-2.28
622		0.165	C	9.42	2404		0.0817		-0.95
1051	CPSC-CH-C1001-09.3	0.091		0.21	2406	CPSC-CH-C1001-09.3	0.099	C	1.21
1170		-----		-----	2410	CPSC-CH-C1001-09.3	0.111		2.70
2102		-----		-----	2413	CPSC-CH-C1001-09	n.d.		-----
2104	CPSC-CH-C1001-09.3	0.111		2.70	2415		0.075	C	-1.78
2108	ISO14389	0.083		-0.78	2422		-----		-----
2115		0.082		-0.91	2425		0.084		-0.66
2121		0.368	R(0.01)	34.68	2426	CPSC-CH-C1001-09.3	0.0899		0.07
2129	ISO14389Mod.	0.116	C	3.32	2429	CPSC-CH-C1001-09.3	0.085		-0.54
2132	CPSC-CH-C1001-09.3	0.099		1.21	2431	CPSC-CH-C1001-09.3	0.097		0.96
2137	CPSC-CH-C1001-09.3	0.101		1.46	2433		-----		-----
2138	INH-62321	0.099	C	1.21	2442	in house	0.07		-2.40
2139	CPSC-CH-C1001-09.3	0.120		3.82	2449	CPSC-CH-C1001-09.3	0.115		3.20
2146		-----		-----	2452		-----		-----
2156		0.005	R(0.05)	-10.49	2459		-----		-----
2165	CPSC-CH-C1001-09.3	0.091		0.21	2460		0	R(0.05)	-11.11
2169	CPSC-CH-C1001-09.3	0.112		2.82	2464		-----		-----
2170	CPSC-CH-C1001-09.3	0.103		1.70	2467		0.094		0.58
2172		0.095	C	0.71	2469		0.082		-0.91
2182	CPSC-CH-C1001-09.3	0.107		2.20	2475	in house	0.078		-1.41
2184	JTSS-ST2012	0.091		0.21	2476		0.073		-2.03
2190		0.05	C	-4.89	2477	CPSC-CH-C1001-09.3	0.090		0.09
2197		0.100		1.33	2482	CPSC-CH-C1001-09.3	0.0844		-0.61
2201	CPSC-CH-C1001-09.3	0.0963		0.87	2488		-----		-----
2213	CPSC-CH-C1001-09.3	0.059	C	-3.77	2489		0.058		-3.89
2217	CPSC-CH-C1001-09.3	0.054		-4.39	2492	in house	0.093		0.46
2218		-----		-----	2495	CPSC-CH-C1001-09.3	0.056		-4.14
2228		0.099		1.21	2496	CPSC-CH-C1001-09.3	0.078		-1.41
2229	EN14372:2004	0.03	C	-7.38	2497	CPSC-CH-C1001-09.3	0.055		-4.27
2230		0.088	C	-0.16	2499	CPSC-CH-C1001-09.3	n.d.		-----
2232	CPSC-CH-C1001-09.3	0.083		-0.78	2503	CPSC-CH-C1001-09.3	0.140		6.31
2236	CPSC-CH-C1001-09.3	0.086		-0.41	2504		2.389	C,R(0.01)	286.13
2237		0.1298		5.04	2507	CPSC-CH-C1001-09.3	0.108		2.33
2238	CPSC-CH-C1001-09.3	0.083		-0.78	2510	in house	0.061		-3.52
2242		0.0863		-0.37	2511	CPSC-CH-C1001-09.3	0.097		0.96
2245		0.0612		-3.50	2514		-----		-----
2246	CPSC-CH-C1001-09.3	0.099		1.21	2515		0.138		6.06
2247		0.065		-3.02	2516	CPSC-CH-C1001-09.3	0.122	C	4.07
2254		<0.004	**f-?**	<-10.62	2522	CPSC-CH-C1001-09.3	0.096		0.83
2255	CPSC-CH-C1001-09.3	0.079		-1.28	2529	CPSC-CH-C1001-09.3	0.115		3.20
2256	EN14372	0.083	C	-0.78	2532	CPSC-CH-C1001-09.2	0.061		-3.52
2258		-----	W	-----	2538		0.091		0.21
2264		-----		-----	2549		0.074		-1.90
2267		0	R(0.05)	-11.11	2563		-----		-----
2284	CPSC-CH-C1001-09.3	0.075	C	-1.78	2566		0.1143		3.11
2288	CPSC-CH-C1001-09.3	0.084		-0.66	2567	CPSC	0.081	C	-1.03
2289	CPSC-CH-C1001-09	0.084		-0.66	2572		0.091		0.21
2290	CPSC-CH-C1001-09.3	0.0991		1.22	2578		0.091		0.21
2293		-----		-----	2581		-----		-----
2295		-----		-----	2582		0.061	C	-3.52
2296	CPSC-CH-C1001-09.3	0.104	C	1.83	2590		-----		-----
2300		-----		-----	2591		0.000	R(0.05)	-11.11
2301		0.088		-0.16	2592		-----		-----
2309	CPSC-CH-C1001-09.3	0.07		-2.40	2595		0.060	C	-3.65
2310	CPSC-CH-C1001-09.3	0.110		2.57	2604		0.085		-0.54
2311	CPSC-CH-C1001-09.3	0.10		1.33	2614		0.103		1.70
2313	CPSC-CH-C1001-09.3	0.105		1.95	2622		0.076		-1.66
2314		0.088		-0.16	2629	CPSC-CH-C1001-09.3	0.107		2.20
2320		0.113		2.95	2642	CPSC-CH-C1001-09.3	0.099		1.21
2330		-----		-----	2643	CPSC-CH-C1001-09.3	0.10		1.33
2349		0.081	C	-1.03	2650		-----		-----
2350	CPSC-CH-C1001-09.3	0.02666		-7.79	2658		-----		-----
2353	EN14372	0.097		0.96	2668		0.083		-0.78
2358	CPSC-CH-C1001-09.3	0.092		0.34	2670	EN14372:2004	0.026	C	-7.88
2366	GB/T22048	0.086	C	-0.41	2671		0.1040		1.83
2369		0.102		1.58	2672	in house	<0.01	**f-?**	<-9.87
2372	CPSC-CH-C1001-09.3	0.075	C	-1.78	2674	CPSC-CH-C1001-09.3	0.090		0.09

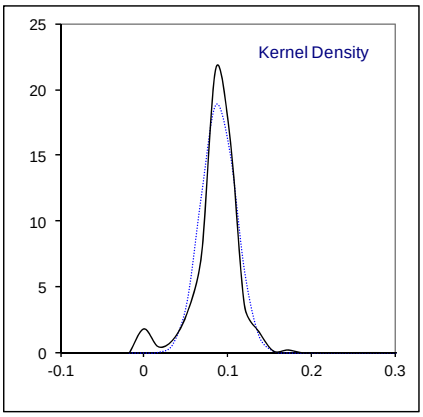
2678		n.d.	**f-?**	-----	3199		0.096		0.83
2679	SN/T2449	0.091		0.21	3200		0.09		0.09
2688	KS M 1991	0.102		1.58	3210		-----		-----
2698	CPSC-CH-C1001-09.3	0.082		-0.91	3212	CPSC-CH-C1001-09	0.064		-3.15
3110	CPSC-CH-C1001-09.3	0.085		-0.54	3214	CPSC-CH-C1001-09.3	0.091		0.21
3116	EN14372:2004	0.101		1.46	3215		0.082		-0.91
3117		-----		-----	3218	CPSC-CH-C1001-09.3	0.097		0.96
3118	CPSC-CH-C1001-09.3	0.097		0.96	3220		n.d.	**f-?**	-----
3146	CPSC-CH-C1001-09.3	0.098		1.08	3225	EN14372:2004	0.117		3.45
3150		0.0287		-7.54	3228	CPSC-CH-C1001-09.3	0.092		0.34
3153		0.102		1.58	3237		0.06999		-2.40
3163		-----		-----	3238		-----		-----
3166	in house	0.092		0.34	3239		-----		-----
3167	CPSC-CH-C1001-09.3	0.0923		0.37	3242	ISO14389:2014	0.081		-1.03
3172		0.082		-0.91	3246		-----		-----
3176		n.d.		-----	3248		0.104		1.83
3182	CPSC-CH-C1001-09.3	0.075		-1.78	8005		-----		-----
3190	CPSC-CH-C1001-09.3	0.092		0.34	8006	JTSS-ST2012	0.104		1.83
3191	CPSC-CH-C1001-09.3	<0.010	**f-?**	<-9.87	8007	CPSC-CH-C1001	0.108		2.33
3192		0.084		-0.66	8008	ST2012	0.089		-0.04
3197	CPSC-CH-C1001-09.3	0.075		-1.78	8020	CPSC-CH-C1001-09.3	0.089		-0.04

normality	not OK
n	137
outliers	7
mean (n)	0.0893
st.dev. (n)	0.02099
R(calc.)	0.0588
R(EN14372:04)	0.0225

Compare R(Horwitz): 0.0144

Lab 622 first reported: n.d.
Lab 2129 first reported: <0.02
Lab 2138 first reported: 0.993
Lab 2172 first reported: <0.005
Lab 2190 first reported: <0.01
Lab 2213 first reported: 0.039
Lab 2229 first reported: <0.01
Lab 2230 first reported: n.d.
Lab 2256 first reported: n.d.
Lab 2258 first reported: 0.037
Lab 2284 first reported: <0.005
Lab 2296 first reported: 0.144
Lab 2349 first reported: n.d.
Lab 2366 first reported: n.d.
Lab 2372 first reported: n.d.
Lab 2386 first reported: 0.013
Lab 2406 first reported: <0.010
Lab 2415 first reported: n.d.
Lab 2504 first reported: 4.676
Lab 2516 first reported: 0.162
Lab 2567 first reported: n.d.
Lab 2582 first reported: n.d.
Lab 2595 first reported: 1.341
Lab 2670 first reported: 0.032





Determination of DnPP on sample #15066; results in %M/M

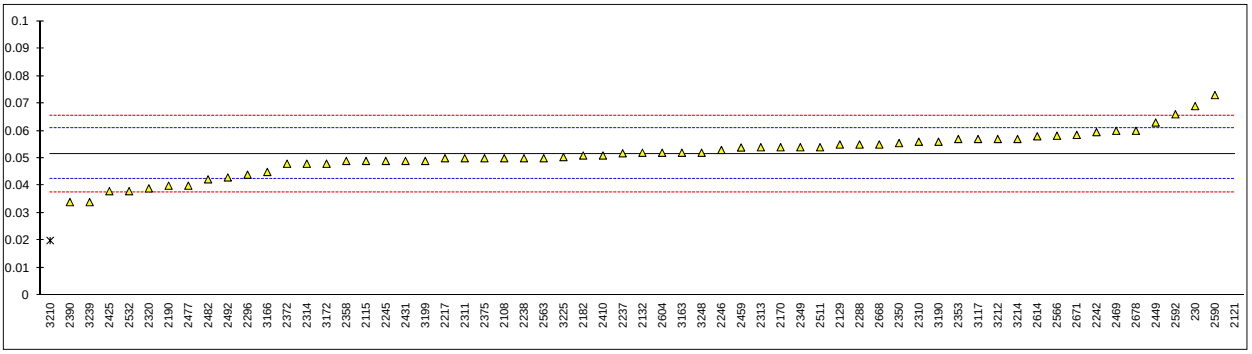
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213		-----		-----	2374		-----		-----
230	ISO14389:2014	0.069		3.73	2375	ISO 16181	0.050		-0.35
310		-----		-----	2386		-----		-----
330		-----		-----	2390	CPSC-CH-C1001-09.3	0.034		-3.80
339		-----		-----	2401		-----		-----
551		-----		-----	2403		-----		-----
622		-----		-----	2404		-----		-----
1051		-----		-----	2406		-----		-----
1170		-----		-----	2410	CPSC-CH-C1001-09.3	0.051		-0.14
2102		-----		-----	2413		-----		-----
2104		-----		-----	2415		-----		-----
2108	ISO14389	0.050		-0.35	2422		-----		-----
2115		0.049		-0.57	2425		0.038		-2.94
2121		0.256	R(0.01)	43.96	2426		-----		-----
2129	ISO14389Mod.	0.055		0.72	2429		-----		-----
2132	CPSC-CH-C1001-09.3	0.052		0.08	2431	CPSC-CH-C1001-09.3	0.049		-0.57
2137		-----		-----	2433		-----		-----
2138		-----		-----	2442		-----		-----
2139		-----		-----	2449	CPSC-CH-C1001-09.3	0.063		2.44
2146		-----		-----	2452		-----		-----
2156		-----		-----	2459	ISO14398	0.0539		0.48
2165		-----		-----	2460		-----		-----
2169		-----		-----	2464		-----		-----
2170	CPSC-CH-C1001-09.3	0.054		0.51	2467		-----		-----
2172		-----		-----	2469		0.060		1.80
2182	CPSC-CH-C1001-09.3	0.051		-0.14	2475		-----		-----
2184		-----		-----	2476		-----		-----
2190		0.04		-2.51	2477	CPSC-CH-C1001-09.3	0.040		-2.51
2197		-----		-----	2482	CPSC-CH-C1001-09.3	0.0423		-2.01
2201		-----		-----	2488		-----		-----
2213		-----		-----	2489		-----		-----
2217	CPSC-CH-C1001-09.3	0.050		-0.35	2492	in house	0.043		-1.86
2218		-----		-----	2495		-----		-----
2228		-----		-----	2496		-----		-----
2229		-----		-----	2497		-----		-----
2230		-----		-----	2499		-----		-----
2232		-----		-----	2503		-----		-----
2236		-----		-----	2504		-----		-----
2237		0.0518		0.03	2507		-----		-----
2238	CPSC-CH-C1001-09.3	0.050		-0.35	2510		-----		-----
2242		0.0595	C	1.69	2511	in house	0.054		0.51
2245		0.0490		-0.57	2514		-----		-----
2246	CPSC-CH-C1001-09.3	0.053		0.29	2515		-----		-----
2247		-----		-----	2516		-----		-----
2254		-----		-----	2522		-----		-----
2255		-----		-----	2529		-----		-----
2256		-----		-----	2532	CPSC-CH-C1001-09.2	0.038		-2.94
2258		-----		-----	2538		-----		-----
2264		-----		-----	2549		-----		-----
2267		-----		-----	2563	CPSC-CH-C1001-09.3	0.05		-0.35
2284		-----		-----	2566		0.0582		1.41
2288	CPSC-CH-C1001-09.3	0.055		0.72	2567		-----		-----
2289		-----		-----	2572		-----		-----
2290		-----		-----	2578		-----		-----
2293		-----		-----	2581		-----		-----
2295		-----		-----	2582		-----		-----
2296	CPSC-CH-C1001-09.3	0.044	C	-1.64	2590	CPSC-CH-C1001-09.3	0.073		4.59
2300		-----		-----	2591		-----		-----
2301		-----		-----	2592		0.066		3.09
2309		-----		-----	2595		-----		-----
2310	CPSC-CH-C1001-09.3	0.056		0.94	2604		0.052		0.08
2311	CPSC-CH-C1001-09.3	0.05		-0.35	2614		0.058		1.37
2313	CPSC-CH-C1001-09.3	0.054		0.51	2622		-----		-----
2314		0.048		-0.78	2629		-----		-----
2320		0.039		-2.72	2642		-----		-----
2330		-----		-----	2643		-----		-----
2349		0.054		0.51	2650		-----		-----
2350	CPSC-CH-C1001-09.3	0.05552		0.83	2658		-----		-----
2353	EN14372	0.057		1.15	2668		0.055		0.72
2358	CPSC-CH-C1001-09.3	0.049		-0.57	2670		-----		-----
2366		-----		-----	2671		0.0585		1.47
2369		-----		-----	2672		-----		-----
2372	CPSC-CH-C1001-09.3	0.048		-0.78	2674		-----		-----

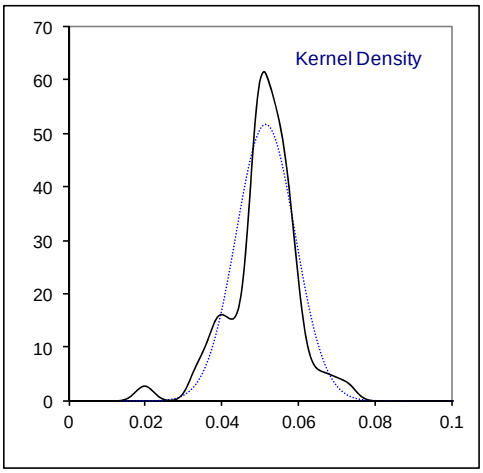
2678		0.06	1.80	3199		0.049		-0.57
2679		-----	-----	3200		-----		-----
2688		-----	-----	3210		0.020	R(0.01)	-6.81
2698		-----	-----	3212	CPSC-CH-C1001-09	0.057		1.15
3110		-----	-----	3214	CPSC-CH-C1001-09.3	0.057		1.15
3116		-----	-----	3215		-----		-----
3117		0.057	1.15	3218		-----		-----
3118		-----	-----	3220		-----		-----
3146		-----	-----	3225	EN14372:2004	0.0504		-0.27
3150		-----	-----	3228		-----		-----
3153		-----	-----	3237		-----		-----
3163	in house	0.0520	0.08	3238		-----		-----
3166	in house	0.045	-1.43	3239	INH-134	0.034	C	-3.80
3167		-----	-----	3242		-----		-----
3172		0.048	-0.78	3246		-----		-----
3176		-----	-----	3248		0.052		0.08
3182		-----	-----	8005		-----		-----
3190	CPSC-CH-C1001-09.3	0.056	0.94	8006		-----		-----
3191		-----	-----	8007		-----		-----
3192		-----	-----	8008		-----		-----
3197		-----	-----	8020		-----		-----

normality	OK
n	59
outliers	2
mean (n)	0.0516
st.dev. (n)	0.00770
R(calc.)	0.0216
R(EN14372:04)	0.0130

Compare R(Horwitz): 0.0136

Lab 2242 first reported: 0.0929
Lab 2296 first reported: 0.044
Lab 3239 first reported: 0.016





Determination of DCHP on sample #15066; results in %M/M

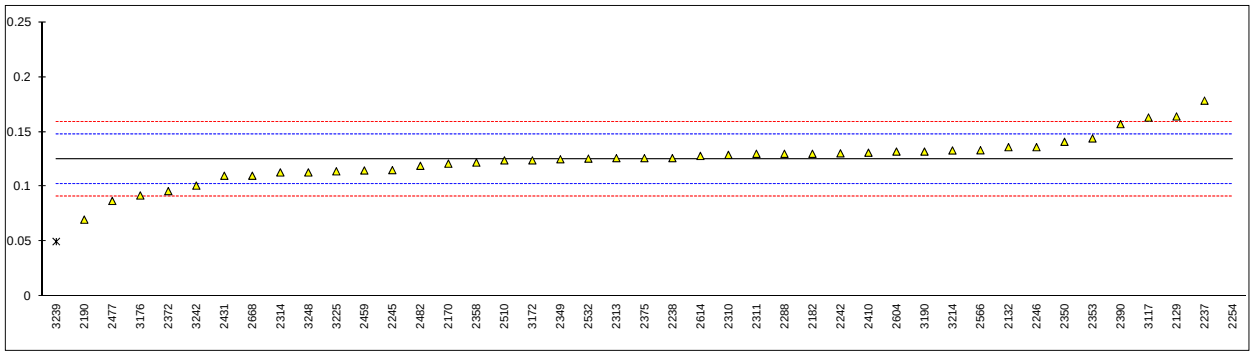
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213		-----		-----	2374		-----		-----
230		-----		-----	2375	ISO 16181	0.126		0.07
310		-----		-----	2386		-----		-----
330		-----		-----	2390	CPSC-CH-C1001-09.3	0.157		2.82
339		-----		-----	2401		-----		-----
551		-----		-----	2403		-----		-----
622		-----		-----	2404		-----		-----
1051		-----		-----	2406		-----		-----
1170		-----		-----	2410	CPSC-CH-C1001-09.3	0.131		0.52
2102		-----		-----	2413		-----		-----
2104		-----		-----	2415		-----		-----
2108		-----		-----	2422		-----		-----
2115		-----		-----	2425		-----		-----
2121		-----		-----	2426		-----		-----
2129	ISO14389Mod.	0.164		3.45	2429		-----		-----
2132	CPSC-CH-C1001-09.3	0.136		0.96	2431	CPSC-CH-C1001-09.3	0.110		-1.35
2137		-----		-----	2433		-----		-----
2138		-----		-----	2442		-----		-----
2139		-----		-----	2449		-----		-----
2146		-----		-----	2452		-----		-----
2156		-----		-----	2459	ISO14398	0.1148		-0.92
2165		-----		-----	2460		-----		-----
2169		-----		-----	2464		-----		-----
2170	CPSC-CH-C1001-09.3	0.121		-0.37	2467		-----		-----
2172		-----		-----	2469		-----		-----
2182	CPSC-CH-C1001-09.3	0.130		0.43	2475		-----		-----
2184		-----		-----	2476		-----		-----
2190		0.07		-4.90	2477	CPSC-CH-C1001-09.3	0.087		-3.39
2197		-----		-----	2482	CPSC-CH-C1001-09.3	0.119		-0.55
2201		-----		-----	2488		-----		-----
2213		-----		-----	2489		-----		-----
2217		-----		-----	2492		-----		-----
2218		-----		-----	2495		-----		-----
2228		-----		-----	2496		-----		-----
2229		-----		-----	2497		-----		-----
2230		-----		-----	2499		-----		-----
2232		-----		-----	2503		-----		-----
2236		-----		-----	2504		-----		-----
2237		0.1784		4.72	2507		-----		-----
2238	CPSC-CH-C1001-09.3	0.126		0.07	2510	in house	0.124		-0.10
2242		0.1304		0.46	2511		-----		-----
2245		0.1151		-0.89	2514		-----		-----
2246	CPSC-CH-C1001-09.3	0.136		0.96	2515		-----		-----
2247		-----		-----	2516		-----		-----
2254		0.735	R(0.01)	54.13	2522		-----		-----
2255		-----		-----	2529		-----		-----
2256		-----		-----	2532	CPSC-CH-C1001-09.2	0.1256		0.04
2258		-----		-----	2538		-----		-----
2264		-----		-----	2549		-----		-----
2267		-----		-----	2563		-----		-----
2284		-----		-----	2566		0.1332		0.71
2288	CPSC-CH-C1001-09.3	0.13		0.43	2567		-----		-----
2289		-----		-----	2572		-----		-----
2290		-----		-----	2578		-----		-----
2293		-----		-----	2581		-----		-----
2295		-----		-----	2582		-----		-----
2296		-----		-----	2590		-----		-----
2300		-----		-----	2591		-----		-----
2301		-----		-----	2592		-----		-----
2309		-----		-----	2595		-----		-----
2310	CPSC-CH-C1001-09.3	0.129		0.34	2604		0.132		0.61
2311	CPSC-CH-C1001-09.3	0.13		0.43	2614		0.128		0.25
2313	CPSC-CH-C1001-09.3	0.126		0.07	2622		-----		-----
2314		0.113		-1.08	2629		-----		-----
2320		-----		-----	2642		-----		-----
2330		-----		-----	2643		-----		-----
2349		0.125		-0.02	2650		-----		-----
2350	CPSC-CH-C1001-09.3	0.1409		1.40	2658		-----		-----
2353	EN14372	0.144		1.67	2668		0.110		-1.35
2358	CPSC-CH-C1001-09.3	0.122		-0.28	2670		-----		-----
2366		-----		-----	2671		-----		-----
2369		-----		-----	2672		-----		-----
2372	CPSC-CH-C1001-09.3	0.096		-2.59	2674		-----		-----

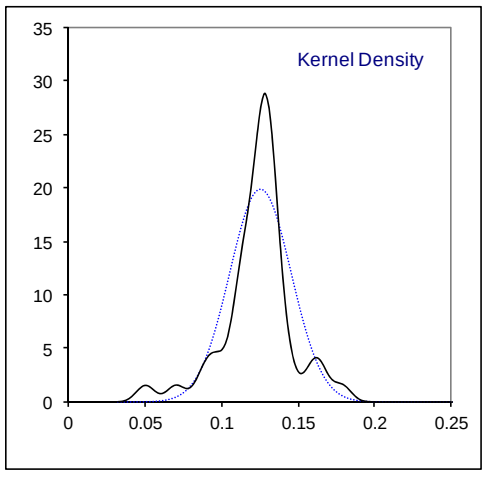
2678		-----	-----	3199		-----	-----
2679		-----	-----	3200		-----	-----
2688		-----	-----	3210		-----	-----
2698		-----	-----	3212		-----	-----
3110		-----	-----	3214	CPSC-CH-C1001-09.3	0.133	0.69
3116		-----	-----	3215		-----	-----
3117		0.163	3.36	3218		-----	-----
3118		-----	-----	3220		-----	-----
3146		-----	-----	3225	EN14372:2004	0.114	-0.99
3150		-----	-----	3228		-----	-----
3153		-----	-----	3237		-----	-----
3163		-----	-----	3238		-----	-----
3166		-----	-----	3239	INH-134	0.050 C,R(0.05)	-6.67
3167		-----	-----	3242	ISO14389:2014	0.101	-2.15
3172		0.124	-0.10	3246		-----	-----
3176		0.092	-2.95	3248		0.113	-1.08
3182		-----	-----	8005		-----	-----
3190	CPSC-CH-C1001-09.3	0.132	0.61	8006		-----	-----
3191		-----	-----	8007		-----	-----
3192		-----	-----	8008		-----	-----
3197		-----	-----	8020		-----	-----

normality	suspect
n	41
outliers	2
mean (n)	0.1252
st.dev. (n)	0.02012
R(calc.)	0.0563
R(EN14372:04)	0.0315

Compare R(Horwitz): 0.0288

Lab 3239 first reported: 0.059





Determination of DINP, BBP and DIDP on sample #15066; results in %M/M

lab	method	DINP	mark	BBP	mark	DIDP	mark	remark
213		-----		-----		-----		
230		-----		-----		-----		
310		-----		-----		-----		
330		<0.010		<0.005		<0.010		
339		0.030	f+?	<0.0001		0.550	f+?	
551		n.d.		n.d.		n.d.		
622		n.d.		n.d.		n.d.		
1051	CPSC-CH-C1001-09.3	<0.01		<0.01		<0.01		
1170		-----		-----		-----		
2102		-----		-----		-----		
2104	CPSC-CH-C1001-09.3	<0.003		<0.0005		<0.003		
2108	ISO14389	n.d.		n.d.		n.d.		
2115		n.d.		n.d.		n.d.		
2121		-----		-----		-----		
2129	ISO14389Mod.	<0.02		<0.02		<0.02		
2132	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2137	CPSC-CH-C1001-09.3	<0.001		<0.001		<0.001		
2138	INH-62321	n.d.		n.d.		n.d.		
2139	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		
2146		-----		-----		-----		
2156		0.005		0.005		0.005		
2165	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2169	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		
2170		-----		-----		-----		
2172		<0.005		<0.005		<0.005		
2182	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2184	JTSS-ST2012	n.d.		n.d.		n.d.		
2190		<0.01		<0.01		<0.01		
2197		-----		-----		-----		
2201	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		
2213	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2217		-----		-----		-----		
2218		-----		-----		-----		
2228		0.0		0.0		0.0		
2229	EN14372:2004	<0.02		<0.01		<0.02		
2230		n.d.		n.d.		n.d.		
2232		-----		-----		-----		
2236		-----		-----		-----		
2237		<0.01		<0.01		<0.01		
2238	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		
2242		-----		-----		-----		
2245		n.d.		n.d.		n.d.		
2246	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2247		n.d.		n.d.		n.d.		
2254		<0.010		<0.004		<0.010		
2255		-----		-----		-----		
2256	EN14372	n.d.		n.d.		n.d.		
2258		-----		-----		-----		
2264		-----		-----		-----		
2267		0		0		0		
2284	CPSC-CH-C1001-09.3	<0.005		<0.005		<0.005		
2288	CPSC-CH-C1001-09.3	<0.01		<0.01		<0.01		
2289	CPSC-CH-C1001-09	n.d.		n.d.		n.d.		
2290	CPSC-CH-C1001-09.3	<0.01		<0.01		<0.01		
2293		-----		-----		-----		
2295		-----		-----		-----		
2296		-----		-----		-----		
2300		-----		-----		-----		
2301		-----		-----		-----		
2309	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2310	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2311	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2313	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2314		n.d.		n.d.		n.d.		
2320		-----		-----		-----		
2330		-----		-----		-----		
2349		n.d.		n.d.		n.d.		
2350	CPSC-CH-C1001-09.3	<0.005		<0.005		<0.005		
2353	EN14372	n.d.		n.d.		n.d.		
2358	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2366	GB/T22048	n.d.		n.d.		n.d.		
2369		n.d.		n.d.		n.d.		
2372	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		

2374		<0.005		<0.005		<0.005
2375	ISO 16181	n.d.		n.d.		n.d.
2386	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010
2390		-----		-----		-----
2401	GB/T22048	n.d.		n.d.		n.d.
2403	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.
2404		<0.010		<0.005		<0.005
2406	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010
2410	CPSC-CH-C1001-09.3	<0.01		<0.01		<0.01
2413	CPSC-CH-C1001-09	n.d.		n.d.		n.d.
2415		n.d.		n.d.		n.d.
2422		-----		-----		-----
2425		-----		-----		-----
2426	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.
2429	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.
2431	CPSC-CH-C1001-09.3	<0.01		<0.01		<0.01
2433		-----		-----		-----
2442		-----		-----		-----
2449	CPSC-CH-C1001-09.3	<0.005		<0.005		<0.005
2452		-----		-----		-----
2459		-----		-----		-----
2460		0		0	C	0
2464		-----		-----		-----
2467		0.000		0.000		0.000
2469		-----		-----		-----
2475		-----		-----		-----
2476		n.d.		n.d.		n.d.
2477	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.
2482		-----		-----		-----
2488		-----		-----		-----
2489		-----		-----		-----
2492	in house	0.022	**f+?**	-----		-----
2495	CPSC-CH-C1001-09.3	<0.01		<0.01		<0.01
2496	CPSC-CH-C1001-09.3	0.000		0.000		0.000
2497		-----		-----		-----
2499	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.
2503		-----		-----		-----
2504		0.0		0.0		0.0
2507		-----		<0.100		<0.100
2510		-----		-----		-----
2511	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.
2514		-----		-----		-----
2515		<0.005		<0.005		<0.005
2516	CPSC-CH-C1001-09.3	<0.01		<0.01		<0.01
2522	CPSC-CH-C1001-09.3	<0.01		<0.01		<0.01
2529		-----		-----		-----
2532	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.
2538		<0.4		<0.01		<1
2549		0.015		n.d.		n.d.
2563		-----		-----		-----
2566		n.d.		n.d.		n.d.
2567	CPSC	n.d.		n.d.		n.d.
2572		<0.01		<0.01		<0.01
2578		n.d.		n.d.		n.d.
2581	CPSC-CH-C1001-09.3	<0.01		<0.01		<0.01
2582		n.d.		n.d.		n.d.
2590		-----		0.30	**f+?**	-----
2591		0.000		0.000		0.000
2592		-----		-----		-----
2595		<0.00001		<0.00001		<0.00001
2604		n.d.		n.d.		n.d.
2614		n.d.		n.d.		n.d.
2622		0.045	**f+?**	-----		-----
2629	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.
2642	CPSC-CH-C1001-09.3	<0.03		<0.03		<0.03
2643	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.
2650		-----		-----		-----
2658		-----		-----		-----
2668		n.d.		n.d.		n.d.
2670	EN14372:2004	n.d.		n.d.		n.d.
2671		n.d.		n.d.		n.d.
2672	in house	<0.01		<0.01		<0.01
2674	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.

2678		n.d.		n.d.	n.d.
2679	SN/T2449	n.d.		n.d.	n.d.
2688		-----		-----	-----
2698	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
3110	CPSC-CH-C1001-09.3	<0.01		<0.01	<0.01
3116	EN14372:2004	n.d.		n.d.	n.d.
3117		-----		-----	-----
3118	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
3146	CPSC-CH-C1001-09.3	<0.02		<0.02	<0.02
3150		-----		-----	-----
3153		-----		-----	-----
3163	in house	0.0300	**f+?**	-----	-----
3166		-----		-----	-----
3167	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
3172		-----		-----	-----
3176		n.d.		n.d.	n.d.
3182	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
3190	CPSC-CH-C1001-09.3	<0.010		<0.010	<0.010
3191	CPSC-CH-C1001-09.3	<0.010		<0.010	<0.010
3192		<0.1		<0.01	<0.1
3197		-----		-----	-----
3199		<0.005		<0.005	<0.005
3200		n.d.		n.d.	n.d.
3210		-----		-----	-----
3212		-----		-----	-----
3214	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
3215		n.d.		n.d.	n.d.
3218	CPSC-CH-C1001-09.3	<0.01		<0.01	<0.01
3220		n.d.		n.d.	n.d.
3225	EN14372:2004	<0.005		<0.005	<0.005
3228	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
3237		-----		-----	-----
3238		-----		-----	-----
3239		-----		-----	-----
3242	ISO14389:2014	n.d.		n.d.	n.d.
3246		-----		-----	-----
3248		n.d.		n.d.	n.d.
8005		-----		-----	-----
8006	JTSS-ST2012	n.d.		n.d.	n.d.
8007	CPSC-CH-C1001	n.d.		n.d.	n.d.
8008	ST2012	<0.01		<0.01	<0.01
8020	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
	normality	n.a.		n.a.	n.a.
	n	126		125	124
	outliers	0		0	0
	mean (n)	<0.02		<0.02	<0.02
	st.dev. (n)	n.a.		n.a.	n.a.
	R(calc.)	n.a.		n.a.	n.a.
	R(EN14372:04)	n.a.		n.a.	n.a.

Lab 2460 first reported for BBP: 0.184

Determination of DEHP, DiBP and DHP on sample #15066; results in %M/M

lab	method	DEHP	mark	DiBP	mark	DHP	mark	remark
213		-----		-----		-----		
230		-----		0.003		-----		
310		-----		-----		-----		
330		<0.003		<0.020		<0.020		
339		0.177	**f+?**	0.111	**f+?**	<0.0001		
551		0.056	**f+?**	n.d.		n.d.		
622		n.d.		n.d.		n.d.		
1051	CPSC-CH-C1001-09.3	<0.01		-----		-----		
1170		0.199	C, **f+?**	-----		-----		
2102		-----		-----		-----		
2104	CPSC-CH-C1001-09.3	<0.0005		0.0006		<0.0005		
2108	ISO14389	n.d.		n.d.		n.d.		
2115		0.005		0.004		n.d.		
2121		-----		-----		-----		
2129	ISO14389Mod.	<0.02		<0.02		<0.02		
2132	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2137	CPSC-CH-C1001-09.3	<0.001		<0.001		<0.001		
2138	INH-62321	n.d.		n.d.		n.d.		
2139	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		
2146		-----		-----		-----		
2156		0.005	C	0.005		0.005		
2165	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2169	CPSC-CH-C1001-09.3	<0.010		<0.010		-----		
2170		-----		-----		-----		
2172		<0.005		<0.005		<0.005		
2182	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2184	JTSS-ST2012	n.d.		n.d.		n.d.		
2190		<0.01		<0.01		<0.01		
2197		-----		-----		-----		
2201	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		
2213	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2217		-----		-----		-----		
2218		-----		-----		-----		
2228		0.0		0.0		0.0		
2229	EN14372:2004	<0.01	C	<0.01		<0.01		
2230		n.d.		n.d.		n.d.		
2232		-----		-----		-----		
2236		-----		-----		-----		
2237		<0.01		<0.01		<0.01		
2238	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		
2242		-----		0.0015		-----		
2245		n.d.		0.0116		n.d.		
2246	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2247		n.d.		n.d.		n.d.		
2254		<0.004		<0.004		<0.004		
2255		-----		-----		-----		
2256	EN14372	n.d.		n.d.		n.d.		
2258		-----		-----		-----		
2264		-----		-----		-----		
2267		0		0		0		
2284	CPSC-CH-C1001-09.3	<0.005		<0.005		<0.005		
2288	CPSC-CH-C1001-09.3	0.12	**f+?**	<0.01		<0.01		
2289	CPSC-CH-C1001-09	n.d.		n.d.		n.d.		
2290	CPSC-CH-C1001-09.3	<0.01		<0.01		<0.01		
2293		-----		-----		-----		
2295		-----		-----		-----		
2296		-----		-----		-----		
2300		-----		-----		-----		
2301		-----		-----		-----		
2309	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2310	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2311	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2313	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2314		n.d.		n.d.		n.d.		
2320		0.006		0.002		-----		
2330		-----		-----		-----		
2349		n.d.		n.d.		n.d.		
2350	CPSC-CH-C1001-09.3	<0.005		<0.005		<0.005		
2353	EN14372	n.d.		n.d.		n.d.		
2358	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2366	GB/T22048	n.d.		n.d.		n.d.		
2369		n.d.		n.d.		n.d.		
2372	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		

2374		<0.005		<0.005	<0.005
2375	ISO 16181	n.d.		n.d.	n.d.
2386	CPSC-CH-C1001-09.3	<0.010		<0.010	<0.010
2390		-----		-----	-----
2401	GB/T22048	n.d.		n.d.	n.d.
2403	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
2404		<0.005		<0.005	-----
2406	CPSC-CH-C1001-09.3	<0.010		<0.010	<0.010
2410	CPSC-CH-C1001-09.3	<0.01		<0.01	<0.01
2413	CPSC-CH-C1001-09	n.d.		n.d.	n.d.
2415		n.d.		n.d.	n.d.
2422		-----		-----	-----
2425		-----		-----	-----
2426	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
2429	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
2431	CPSC-CH-C1001-09.3	<0.01		<0.01	<0.01
2433		-----		-----	-----
2442		-----		-----	-----
2449	CPSC-CH-C1001-09.3	<0.005		<0.005	<0.005
2452		-----		-----	-----
2459		-----		-----	-----
2460		0		0.001	0
2464		-----		-----	-----
2467		0.000		0.000	0.000
2469		-----		-----	-----
2475		-----		-----	-----
2476		n.d.		n.d.	n.d.
2477	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
2482		-----		-----	-----
2488		-----		-----	-----
2489		-----		-----	-----
2492		-----		-----	-----
2495	CPSC-CH-C1001-09.3	<0.01		<0.01	<0.01
2496	CPSC-CH-C1001-09.3	0.000		0.000	0.000
2497		-----		0.009	-----
2499	CPSC-CH-C1001-09.3	n.d.		-----	-----
2503		-----		-----	-----
2504		0.0		0.0	0.0
2507	CPSC-CH-C1001-09.3	<0.100		-----	-----
2510		-----		-----	-----
2511	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
2514		-----		-----	-----
2515		<0.005		<0.005	<0.005
2516	CPSC-CH-C1001-09.3	<0.01		<0.01	<0.01
2522	CPSC-CH-C1001-09.3	<0.01		<0.01	<0.01
2529		-----		-----	-----
2532	CPSC-CH-C1001-09.2	n.d.		n.d.	n.d.
2538		<0.01		<0.05	<0.05
2549		n.d.		n.d.	n.d.
2563		-----		-----	-----
2566		n.d.		n.d.	n.d.
2567	CPSC	n.d.		n.d.	n.d.
2572		<0.01		<0.01	<0.01
2578		n.d.		n.d.	n.d.
2581	CPSC-CH-C1001-09.3	<0.01		<0.01	<0.01
2582		n.d.		n.d.	n.d.
2590		-----		-----	-----
2591		0.000		-----	-----
2592		-----		-----	-----
2595		<0.00001		-----	-----
2604		n.d.		n.d.	n.d.
2614		n.d.		n.d.	n.d.
2622		-----		-----	0.101 **f+?**
2629	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
2642	CPSC-CH-C1001-09.3	<0.03		-----	-----
2643	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
2650		-----		-----	-----
2658		-----		-----	-----
2668		n.d.		n.d.	n.d.
2670	EN14372:2004	0.043	**f+?**	-----	-----
2671		n.d.		n.d.	n.d.
2672	in house	<0.01		<0.01	<0.01
2674	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.

2678		n.d.		n.d.	n.d.
2679	SN/T2449	n.d.		n.d.	n.d.
2688		-----		-----	-----
2698	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
3110	CPSC-CH-C1001-09.3	<0.01		<0.01	<0.01
3116	EN14372:2004	n.d.		-----	-----
3117		0.003		0.001	-----
3118	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
3146	CPSC-CH-C1001-09.3	<0.02		<0.02	<0.02
3150		-----		-----	-----
3153		-----		-----	-----
3163	in house	0.0160		-----	-----
3166		-----		-----	-----
3167	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
3172		-----		-----	-----
3176		n.d.		n.d.	n.d.
3182	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
3190	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
3191	CPSC-CH-C1001-09.3	<0.010		<0.010	<0.010
3192		<0.01		<0.01	-----
3197		-----		-----	-----
3199		<0.005		<0.005	<0.005
3200		n.d.		n.d.	n.d.
3210		-----		-----	-----
3212		-----		-----	-----
3214	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
3215		n.d.		n.d.	n.d.
3218	CPSC-CH-C1001-09.3	<0.01		<0.01	<0.01
3220		n.d.		n.d.	n.d.
3225	EN14372:2004	<0.005		<0.005	<0.005
3228	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
3237		-----		-----	-----
3238	in house	0.11	**f+?**	-----	-----
3239		-----		-----	-----
3242	ISO14389:2014	n.d.		n.d.	n.d.
3246		-----		-----	-----
3248		n.d.		n.d.	n.d.
8005	ASTM F963	n.d.		-----	-----
8006	JTSS-ST2012	n.d.		-----	-----
8007	CPSC-CH-C1001	n.d.		-----	-----
8008	ST2012	<0.01		<0.01	<0.01
8020	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.
	normality	n.a.		n.a.	n.a.
	n	130		119	112
	outliers	0		0	0
	mean (n)	<0.02		<0.02	<0.02
	st.dev. (n)	n.a.		n.a.	n.a.
	R(calc.)	n.a.		n.a.	n.a.
	R(EN14372)	n.a.		n.a.	n.a.

Lab 1170 first reported for DEHP: 0.169
Lab 2156 first reported for DEHP: 0.1788
Lab 2229 first reported for DEHP: 0.14

Determination other Phthalates on sample #15066; results in %M/M

lab	method	value	mark	z(targ)	remarks
213		-----		-----	
230		-----		-----	
310		-----		-----	
330		-----		-----	
339		0.142		-----	DEP
551		-----		-----	
622		-----		-----	
1051		-----		-----	
1170		-----		-----	
2102		-----		-----	
2104	CPSC-CH-C1001-09.3	0.125		-----	
2108		-----		-----	
2115		-----		-----	
2121		-----		-----	
2129		-----		-----	
2132		-----		-----	
2137	CPSC-CH-C1001-09.3	<0.001		-----	
2138		-----		-----	detected: DPP and DCHP
2139	CPSC-CH-C1001-09.3	<0.010		-----	
2146		-----		-----	detected: DnPP and DEHT (DOTP)
2156		-----		-----	
2165	CPSC-CH-C1001-09.3	n.d.		-----	
2169		<0.010		-----	DEP
2170		-----		-----	
2172		<0.005		-----	
2182		-----		-----	
2184	JTSS-ST2012	n.d.		-----	
2190		0.11		-----	
2197		-----		-----	
2201		-----		-----	
2213	CPSC-CH-C1001-09.3	n.d.		-----	
2217		-----		-----	
2218		-----		-----	
2228		-----		-----	
2229		-----		-----	
2230		n.d.		-----	
2232		-----		-----	
2236		-----		-----	
2237		25.42		-----	DEHT
2238		-----		-----	
2242		-----		-----	
2245		-----		-----	
2246		-----		-----	
2247		-----		-----	
2254		-----		-----	
2255		-----		-----	
2256	EN14372	n.d.		-----	
2258		-----		-----	
2264		-----		-----	
2267		-----		-----	detected:diamyl phthalate (DnPP), DCHP and DEHT
2284		-----		-----	
2288		-----		-----	
2289		-----		-----	
2290		-----		-----	
2293		-----		-----	
2295		-----		-----	
2296		-----		-----	
2300		-----		-----	
2301		-----		-----	
2309		-----		-----	
2310		-----		-----	
2311		-----		-----	
2313		-----		-----	
2314		-----		-----	
2320		0.004		-----	DEP
2330		-----		-----	
2349		29.9		-----	DEHT (DOTP)
2350		-----		-----	
2353		-----		-----	
2358		-----		-----	
2366		-----		-----	
2369		n.d.		-----	
2372		12.4		-----	DEHT (DOTP)

2374		-----	-----	
2375		-----	-----	
2386		26.500	-----	DEHT
2390		-----	-----	
2401	GB/T22048	n.d.	-----	
2403		-----	-----	
2404		-----	-----	
2406	CPSC-CH-C1001-09.3	<0.010	-----	
2410		-----	-----	
2413		-----	-----	
2415		-----	-----	
2422		-----	-----	
2425		-----	-----	
2426	CPSC-CH-C1001-09.3	n.d.	-----	
2429		-----	-----	
2431		-----	-----	
2433		-----	-----	
2442		-----	-----	
2449		-----	-----	
2452		-----	-----	
2459		-----	-----	
2460		-----	-----	
2464		-----	-----	
2467		0.000	-----	
2469		-----	-----	
2475		-----	-----	
2476		n.d.	-----	
2477		-----	-----	
2482		-----	-----	
2488		-----	-----	
2489		-----	-----	
2492		-----	-----	
2495		-----	-----	
2496		-----	-----	
2497		-----	-----	
2499		-----	-----	
2503		-----	-----	
2504		0.0	-----	
2507		-----	-----	
2510		24.385	-----	DEHT
2511		-----	-----	
2514		-----	-----	
2515		-----	-----	
2516		-----	-----	
2522		-----	-----	
2529		-----	-----	detected: DPENP and DCHP
2532		-----	-----	
2538		n.d.	-----	
2549		-----	-----	
2563		-----	-----	
2566		-----	-----	
2567		-----	-----	
2572		-----	-----	
2578		n.d.	-----	
2581	CPSC-CH-C1001-09.3	<0.01	-----	
2582		-----	-----	
2590		-----	-----	
2591		-----	-----	
2592		-----	-----	
2595		-----	-----	
2604		-----	-----	
2614		-----	-----	
2622		-----	-----	
2629		-----	-----	
2642		-----	-----	
2643	CPSC-CH-C1001-09.3	n.d.	-----	
2650		-----	-----	
2658		-----	-----	
2668		-----	-----	
2670		-----	-----	
2671		-----	-----	
2672		-----	-----	detected: DnPP and DCHP
2674	CPSC-CH-C1001-09.3	n.d.	-----	

2678		-----	-----	
2679	SN/T2449	n.d.	-----	
2688	KS M 1991	0.168	-----	
2698		-----	-----	
3110		-----	-----	
3116		-----	-----	
3117		0.002	-----	DEP
3118		-----	-----	
3146		-----	-----	
3150		-----	-----	
3153		-----	-----	
3163		0.0040	-----	DEP
3166		12.8	-----	DEHT
3167	CPSC-CH-C1001-09.3	n.d.	-----	
3172		-----	-----	
3176		-----	-----	
3182		-----	-----	
3190		-----	-----	
3191		-----	-----	
3192		-----	-----	
3197		-----	-----	
3199		-----	-----	
3200		n.d.	-----	
3210		-----	-----	
3212		-----	-----	
3214		-----	-----	
3215		-----	-----	
3218		-----	-----	
3220		n.d.	-----	
3225		-----	-----	
3228	CPSC-CH-C1001-09.3	n.d.	-----	
3237		-----	-----	
3238		-----	-----	
3239		-----	-----	
3242		-----	-----	
3246		-----	-----	
3248		-----	-----	
8005		-----	-----	
8006		-----	-----	
8007		-----	-----	
8008		-----	-----	
8020	CPSC-CH-C1001-09.3	n.d.	-----	

APPENDIX 2
Method information #15065

Lab	type of plastics	identified plastic	sample grinded or cut	final particle size	technique used	extraction solvent used
213						
230			NO		Ultrasonic	THF
310	PVC	FTIR	NO	As received	Dissolve overnight	THF
330					Ultrasonic	CH2CL2/MeOH (50/50)
339			NO	As received	Soxhlet	Methanol/MethyleneChloride(50/50)
551	Not ident.		Cut	2mm * 2mm* 2mm	Ultrasonic	THF
622			YES		Ultrasonic	THF
1051			NO	As received	Ultrasonic	THF
1170			NO		Ultrasonic	THF
2102			NO	As received	Ultrasonic	THF
2104					Extraction	Dichloromethane
2108			NO	As received	Ultrasonic	THF
2115	PVC	IR	NO		Extraction by solvent	THF
2121	PVC	Beilstein test	YES	0.027 mm3	Ultrasonic	THF
2129	PVC	FTIR	Cut	1-2 mm	Ultrasonic	THF
2132	PVC	FTIR	NO	3mm * 3mm	Mechanical shaking	THF
2137	PVC/PP	FTIR	Cut	1-2 mm	Ultrasonic	THF, hexane
2138	PP		NO	3mm * 3mm	Soxhlet	DCM+Acetone, Chloroform
2139	PV Acetate	FTIR	YES	Powder	Ultrasonic	THF
2146	PVC	IR	NO	As received		THF
2156			YES	2mm	Soxhlet	DCM
2165			NO	2mm * 2mm	Ultrasonic	THF
2169	Tygon	FTIR	Cut	<2mm	Ultrasonic	THF, hexane
2170			Cut	0.18cm * 0.18cm	Ultrasonic	THF
2172	PVC	FTIR	YES	2mm * 2mm	Ultrasonic	THF
2182	PVC	Flame test	Cut	<5mm * 5mm	Ultrasonic	THF
2184			NO	3mm * 3mm	Shaking	Acetone, n-hexane
2190	PVC	IRTF-Flame test	NO		ASE = acc.solv.extr.	Hexane/Ethylacetate (60-40)
2197	PVC	Beilstein test				THF
2201			Cut	2mm * 2mm	Ultrasonic	THF
2213	n.a.	n.a.	NO	n.a.	Ultrasonic	THF
2217			Cut	3-4mm	Ultrasonic	THF
2218					Ultrasonic	THF
2228	Poly film	FTIR	NO	3mm * 3mm	Ultrasonic	THF
2229	PVC	Burn	YES	1mm	Soxhlet	DEE
2230	PVC	FTIR	NO	2mm * 2mm	Ultrasonic	THF. CAN
2232	Acetyl-	FTIR	NO	0.3g	Ultrasonic	THF
2236			Cut	2mm * 2mm * 2mm	Ultrasonic	THF
2237			YES	<1mm	Ultrasonic	DMF:Toluol (1:4)
2238			Cut	2mm * 2mm	Shake 275r/min	THF, hexane
2242					Solvent by THF	THF, hexane
2245			Cut	<2mm	Soxhlet	DCM
2246	PVC	FTIR	NO	3mm * 3mm	Ultrasonic	THF, hexane
2247	PVC	FTIR	Cut	<5mm	Ultrasonic	THF
2254			Cut	1mm	Orbital shaker	THF
2255			NO	As received	Ultrasonic	THF, hexane
2256	PVC	FTIR	Cut	<5mm * 5mm	Soxhlet	DEE
2258	PVC	Beilstein test	NO	As received	Ultrasonic	THF
2264			Cut	0.5 micras	Ultrasonic	THF
2267	Acetyl-	FTIR			Ultrasonic, soxhlet	THF, hexane
2284	PVC	FTIR	NO	3mm * 3mm	Ultrasonic	Trichloromethane
2288						
2289	PVC	FTIR	NO	3mm * 3mm	Ultrasonic	THF, hexane
2290			Cut	<2mm * 2mm	Shaker	THF
2293						
2295						
2296	PVC	Beilstein test	NO	2-3 mm2	Ultrasonic	THF
2300	PVC	THF	Cut	<1mm	Ultrasonic	THF, hexane
2301	PVC	FTIR	NO		Ultrasonic	THF
2309	PVC	FTIR	Grinded	<500µm	Ultrasonic	THF
2310	PVC	FTIR	NO	2.97mm	Ultrasonic	THF, hexane
2311	PVC	Beilstein test	Cut	<2mm * 2mm	Ultrasonic	THF
2313	PVC	Beilstein test	NO	3mm	Ultrasonic	THF
2314	PVC	FTIR	NO	2mm * 2mm	Ultrasonic	THF
2320	PVC	Visually	Cut	2mm * 2mm * 2mm	Soxhlet	DEE
2330						

2349	PVC	Burning	YES	1mm * 1mm	Soxhlet	THF
2350	PE	FTIR	Cut	1.5mm * 1.5mm * 1.5mm	Ultrasonic	THF
2353	PVC	FTIR	NO	3 mm * 3mm * 2mm	Soxhlet	DEE
2358			NO	3 mm * 3mm * 2mm	Shaking	THF
2366			YES	2mm * 2mm * 2mm	Soxhlet	Dichloromethane
2369			YES	2mm * 2mm	Ultrasonic	THF
2372	PVC	FTIR	NO	0.3mm	Ultrasonic	THF
2374			Cut	2mm * 2mm	Ultrasonic	THF
2375	PVC	FTIR	Cut	2mm * 2mm	Ultrasonic	Hexane/Acetone (4:1)
2386	PVC	Beilstein test	Cut	3mm * 3mm	Ultrasonic	THF
2390	PVC	FTIR	Cut	2mm * 2mm * 2mm	Ultrasonic	THF, hexane
2401			Cut	4 mm * 4mm	Soxhlet	Methylene Chloride
2403			NO	2mm * 2mm	Ultrasonic	THF
2404	PVC	Hardness	YES	<2mm	Ultrasonic	THF
2406	PVC	Beilstein test	Cut	<2mm	Ultrasonic	THF
2410	PVC	IR	NO	2mm	Ultrasonic	THF
2413	ND		NO		Ultrasonic	THF
2415			YES	3mm	Ultrasonic	Chloroform
2422			NO		Ultrasonic	THF
2425	PVC	Bielstein	No change	No change	Ultrasonic	THF, ACN
2426						
2429			YES	1mm * 1mm	Shaking	THF
2431			Cut	2mm	Ultrasonic	THF
2433						
2442			Cut	1.62mm	Ultrasonic	THF
2449	PVC	Beilstein test	YES	1mm * 1mm	Ultrasonic	THF
2452						
2459						
2460			Cut	1-2mm	Ultrasonic	THF
2464	PVC	FTIR	Cut	0.7mm	Dissolution	THF, cyclohexane
2467			NO	As received	Shaking	THF
2469	PVC	THF	NO	3mm * 4mm	Ultrasonic	THF
2475					Ultrasonic	Toluene
2476			NO	As received	Ultrasonic	THF
2477	PVC	IR	Cut	<2mm	Shaking	THF
2482	ND		NO	As received	Ultrasonic	THF
2488						
2489	PVC	Beilstein test	Cut	<5mm	Soxhlet	DEE
2492			NO		Ultrasonic	THF
2495			NO	ND	Ultrasonic	THF
2496	PCT	FTIR	Cut	1mm * 1mm	Ultrasonic	THF
2497	Vinyl	IR	NO		Ultrasonic	THF, hexane
2499	PVC	IR	NO	As received	Ultrasonic	THF, hexane
2503			Cut	0.05gr	Ultrasonic	THF
2504			Cut	2mm * 2mm	Ultrasonic	THF
2507			YES	0.5mm	Ultrasonic	THF, hexane
2510	PVC	FTIR	YES		Vortexing	THF
2511			YES	2mm * 2mm	Ultrasonic	THF
2514			NO	As received	Ultrasonic	THF, hexane
2515	PVC	Beilstein test	NO	2mm * 2mm	Ultrasonic	THF
2516	PVC	IR	Cut	1-2mm	Ultrasonic	THF
2522			YES	2mm * 2mm	Ultrasonic	THF
2529	PVC	FTIR, XRF	NO		Dissolution in THF	THF, hexane
2532	PVProp/Ac	FTIR	YES	0.1mm	Ultrasonic	THF, hexane
2538	PVC	FTIR	NO	3mm * 3mm	Soxhlet	DEE
2549	PVC	Appearance	Cut	3m * 3m	Ultrasonic	THF
2563	PVC	Beilstein test	NO		Ultrasonic	THF
2566	PVA	FTIR	NO	As received	Ultrasonic	THF, ACN
2567			NO	As received	Ultrasonic	THF, hexane
2572			YES	1mm	Ultrasonic	THF
2578	PVC	IR	Cut	<5mm	Soxhlet	
2581			YES	<2mm	Ultrasonic	THF
2582	PVC	FTIR	Cut		Ultrasonic	THF
2590			NO		Ultrasonic	THF
2591	PVC	Green flame	NO	20mm3	Ultrasonic	THF
2592			NO		Ultrasonic	THF
2595			Grinded	0.5mm	Ultrasonic	THF
2604	PVC	FTIR	Cut	1mm3	Dissolve in THF	THF
2614	Polyvinyl	FTIR	NO	2mm * 2mm	Ultrasonic	THF
2622			Grinded	<5mm * 5mm	Ultrasonic	Hexane/acetone (80:20)
2629			YES	<1mm	Ultrasonic	THF
2642			Cut	0.3cm	Ultrasonic	THF

2643			YES	<2mm	Ultrasonic	THF
2650		IR	YES	tha same	Soxhlet	Hexane
2658						
2668	PVC	FTIR	NO	As received	Ultrasonic	THF, ACN
2670			Cut	5mm	Soxhlet	Dichloromethane
2671			NO	As received	Ultrasonic	THF
2672			Cut	1mm * 1mm * 1mm	Ultrasonic	Toluene
2674			NO	3mm * 3mm	Ultrasonic	Acetone, nhexane, MTBE
2678			Cut		Ultrasonic	THF
2679		Melting point	NO		Microwave	Acetic ether
2688	PVC	FTIR, FT-NMR	YES	0.1mm	Ultrasonic	THF
2698			YES	<2mm	Ultrasonic	THF
3110			YES	0.2mm	Ultrasonic	THF, hexane
3116	PVC	FTIR	NO	5mm * 5mm	Soxhlet	Diethyl ether
3117			NO		Soxhlet	Diethyl ether
3118			NO	As received	Ultrasonic	THF
3146	PVC	IR	NO	As received	Ultrasonic	THF, hexane
3150			NO		Ultrasonic	THF
3153	PVC	FTIR	Grinded	Powder	Dissolve in THF	THF
3163			NO		Ultrasonic	Dichloromethane
3166	PVC	XRF	YES	2mm	Ultrasonic	THF
3167						
3172						
3176	PVC	FTIR	NO	As received	Ultrasonic	THF
3182			Cut	2mm * 2mm	Ultrasonic	THF: hexane (2:1)
3190			NO	As received	Shaking	THF, hexane
3191			NO	2mm * 2mm	Shaking	THF
3192	PVC	FTIR, XRF	Grinded	<1-2mm	Ultrasonic	DEE
3197	PVC	FTIR	Grinded	<0.5mm	Ultrasonic	THF
3199			NO		Ultrasonic	THF
3200			NO	As received	Ultrasonic	THF
3210					Ultrasonic	Hexane:Acetone (80:20)
3212			NO		Ultrasonic	THF
3214	PVC	FTIR	NO	3mm * 3mm * 3mm	Ultrasonic	THF
3215	PVC	IR	YES	<5mm	Ultrasonic	Ethyl Acetate
3218	PVC	FTIR	NO		Ultrasonic	THF
3220			Cut	0.1mm	Ultrasonic	THF, hexane
3225			Cut	2mm * 2mm	Soxhlet	Chloroform
3228			NO	2mm * 2mm	Ultrasonic	THF
3237		FTIR	NO		Ultrasonic	THF
3238	PVC		NO		THF/Methanol	THF/Methanol
3239	PVC	FTIR	Milled	<1mm	Soxhlet	Methylene Chloride
3242	PVC	FTIR + beilstein test	NO	As received	Ultrasonic	THF, hexane
3246			YES	2-5mm	Ultrasonic	tBME-Hexane-Acetond (1:1:1)
3248	PVC	Flame test	YES	5mm * 5mm	Ultrasonic	THF
8005	PVC	FTIR	NO	5mm * 5mm	Soxhlet	Methylene Chloride and Methanol
8006	PVC	FTIR	NO	5mm * 5mm	Shaking	Acetone, hexane
8007	PVC	FTIR	YES	2mm * 2mm	Ultrasonic	THF
8008			YES	0.2mm	Stand overnight	Acetone, hexane
8020			NO	2mm * 2mm	Ultrasonic	THF

Method information #15066

Lab	type of plastics	identified plastic	sample grinded or cut	final particle size	technique used	extraction solvent used
213						
230			NO		Ultrasonic	THF
310	PET?	FTIR	NO	As received	Dissolve overnight	THF
330					Ultrasonic	CH2CL2/MeOH (50/50)
339			NO	As received	Soxhlet	Methanol/MethyleneChloride(50/50)
551	Not ident.		Cut	2mm * 2mm * 2mm	Ultrasonic	THF
622			YES		Ultrasonic	THF
1051			NO	As received	Ultrasonic	THF
1170			NO		Ultrasonic	THF
2102			NO	As received	Ultrasonic	THF
2104					Extraction	Dichloromethane
2108			NO	As received	Ultrasonic	THF
2115	PVC	IR	NO		Extraction by solvent	THF
2121	PVC	Beilstein test	YES	0.027 mm3	Ultrasonic	THF
2129	PVC	FTIR	Cut	1-2 mm	Ultrasonic	THF
2132	PVC	FTIR	NO	3mm * 3mm	Mechanical shaking	THF
2137	PVC/PP	FTIR	Cut	1-2 mm	Ultrasonic	THF, hexane
2138	PP		NO	3mm * 3mm	Soxhlet	DCM+Acetone, Chloroform
2139	Polyester	FTIR	YES	Powder	Ultrasonic	THF
2146	PVC	IR	NO	As received		THF
2156			YES	2mm	Soxhlet	DCM
2165			NO	2mm * 2mm	Ultrasonic	THF
2169	PBT	FTIR	Cut	<2mm	Ultrasonic	THF, hexane
2170			Cut	0.18cm * 0.18cm	Ultrasonic	THF
2172	PVC	FTIR	YES	2mm * 2mm	Ultrasonic	THF
2182	PVC	Flame test	Cut	<5mm * 5mm	Ultrasonic	THF
2184			NO	3mm * 3mm	Shaking	Acetone, n-hexane
2190	PVC	IRTF-Flame test	NO		ASE = acc.solv.extr.	Hexane/Ethylacetate (60-40)
2197	PVC	Beilstein test				THF
2201			Cut	2mm * 2mm	Ultrasonic	THF
2213	n.a.	n.a.	NO	n.a.	Ultrasonic	THF
2217			Cut	3-4mm	Ultrasonic	THF
2218					Ultrasonic	THF
2228	Polyester	FTIR	NO	3mm * 3mm	Ultrasonic	THF
2229	PVC	Burn	YES	1mm	Soxhlet	DEE
2230	PVC	FTIR	NO	2mm * 2mm	Ultrasonic	THF. CAN
2232	PET	FTIR	NO	0.3g	Ultrasonic	THF
2236			Cut	2mm * 2mm * 2mm	Ultrasonic	THF
2237			YES	<1mm	Ultrasonic	DMF:Toluol (1:4)
2238			Cut	2mm * 2mm	Shake 275r/min	THF, hexane
2242					Solvent by THF	THF, hexane
2245			Cut	<2mm	Soxhlet	DCM
2246	PVC	FTIR	NO	3mm * 3mm	Ultrasonic	THF, hexane
2247	PVC	FTIR	Cut	<5mm	Ultrasonic	THF
2254			Cut	1mm	Orbital shaker	THF
2255			NO	As received	Ultrasonic	THF, hexane
2256	PVC	FTIR	Cut	<5mm * 5mm	Soxhlet	DEE
2258	PVC	Beilstein test	NO	As received	Ultrasonic	THF
2264			Cut	0.5 micras	Ultrasonic	THF
2267	Polyester	FTIR			Ultrasonic, soxhlet	THF, hexane
2284	PVC	FTIR	NO	3mm * 3mm	Ultrasonic	Trichloromethane
2288						
2289	PVC	FTIR	NO	3mm * 3mm	Ultrasonic	THF, hexane
2290			Cut	<2mm * 2mm	Shaker	THF
2293						
2295						
2296	PVC	Beilstein test	NO	3-4 mm2	Ultrasonic	THF
2300	PVC	THF	Cut	<1mm	Ultrasonic	THF, hexane
2301	PVC	FTIR	NO		Ultrasonic	THF
2309	PVC	FTIR	Grinded	<500µm	Ultrasonic	THF
2310	PVC	FTIR	NO	3.2mm	Ultrasonic	THF, hexane
2311	PVC	FTIR	Cut	<2mm * 2mm	Ultrasonic	THF
2313	PVC	FTIR	NO	3mm	Ultrasonic	THF
2314	PVC	FTIR	NO	2mm * 2mm	Ultrasonic	THF
2320	PVC	Visually	Cut	2mm * 2mm * 2mm	Soxhlet	DEE
2330						
2349	PVC	Burning	YES	1mm * 1mm	Soxhlet	THF
2350	PE	FTIR	Cut	1.5mm * 1.5mm * 1.5mm	Ultrasonic	THF

2353	PVC	FTIR	NO	3 mm * 3mm * 2mm	Soxhlet	DEE
2358			NO	3 mm * 3mm * 2mm	Shaking	THF
2366			YES	2mm * 2mm * 2mm	Soxhlet	Methylene dichloride
2369			YES	2mm * 2mm	Ultrasonic	THF
2372	PVC	FTIR	NO	0.3mm	Ultrasonic	THF
2374			Cut	2mm * 2mm	Ultrasonic	THF
2375	PVC	FTIR	Cut	2mm * 2mm	Ultrasonic	Hexane/Acetone (4:1)
2386	PVC	Beilstein test	Cut	3mm * 3mm	Ultrasonic	THF
2390	PVC	FTIR	Cut	2mm * 2mm * 2mm	Ultrasonic	THF, hexane
2401			Cut	4mm * 4mm	Soxhlet	Methylene Chloride
2403			NO	2mm * 2mm	Ultrasonic	THF
2404	PVC	Hardness	YES	<2mm	Ultrasonic	THF
2406	PVC	Beilstein test	Cut	<2mm	Ultrasonic	THF
2410	PVC	IR	NO	2mm	Ultrasonic	THF
2413	ND		NO		Ultrasonic	THF
2415			YES	3mm	Ultrasonic	Chloroform
2422			NO		Ultrasonic	THF
2425	PVC	Bielstein	No change	No change	Ultrasonic	THF, ACN
2426						
2429			YES	1mm * 1mm	Shaking	THF
2431			Cut	2mm	Ultrasonic	THF
2433						
2442			Cut	1.85mm	Ultrasonic	THF
2449	PVC	Beilstein test	YES	1mm * 1mm	Ultrasonic	THF
2452						
2459						
2460			Cut	1-2mm	Ultrasonic	THF
2464	PVC	FTIR	Cut	0.7mm	Dissolution	THF, cyclohexane
2467			NO	As received	Shaking	THF
2469	PVC	THF	NO	3mm * 4mm	Ultrasonic	THF
2475					Ultrasonic	Toluene
2476			NO	As received	Ultrasonic	THF
2477	PET	IR	Cut	<2mm	Shaking	THF
2482	ND		NO	As received	Ultrasonic	THF
2488						
2489	PVC	Beilstein test	Cut	<5mm	Soxhlet	DEE
2492			NO		Ultrasonic	THF
2495			NO	ND	Ultrasonic	THF
2496	PCT	FTIR	Cut	1mm * 1mm	Ultrasonic	THF
2497	Polyester	IR	NO		Ultrasonic	THF, hexane
2499	PVC	IR	NO	As received	Ultrasonic	THF, hexane
2503			Cut	0.05gr	Ultrasonic	THF
2504			Cut	2mm * 2mm	Ultrasonic	THF
2507			YES	0.5mm	Ultrasonic	THF, hexane
2510	PVC	FTIR	YES		Vortexing	THF
2511			YES	2mm * 2mm	Ultrasonic	THF
2514			NO	As received	Ultrasonic	THF, hexane
2515	PVC	Beilstein test	NO	2mm * 2mm	Ultrasonic	THF
2516	PVC	IR	Cut	1-2mm	Ultrasonic	THF
2522			YES	2mm * 2mm	Ultrasonic	THF
2529	PVC	FTIR, XRF	NO		Dissolution in THF	THF, hexane
2532	Polyester	FTIR	YES	0.1mm	Ultrasonic	THF, hexane
2538	PVC	FTIR	NO	3mm * 3mm	Soxhlet	DEE
2549	PVC	Appearance	Cut	3m * 3m	Ultrasonic	THF
2563	PVC	Beilstein test	NO		Ultrasonic	THF
2566	PVC	FTIR	NO	As received	Ultrasonic	THF, ACN
2567			NO	As received	Ultrasonic	THF, hexane
2572			YES	1mm	Ultrasonic	THF
2578	PVC	FTIR			Ultrasonic	
2581			YES	<2mm	Ultrasonic	THF
2582	PVC	FTIR	Cut		Ultrasonic	THF
2590			NO		Ultrasonic	THF
2591	PVC	Green flame	NO	35mm2	Ultrasonic	THF
2592			NO		Ultrasonic	THF
2595			Grinded	0.5mm	Ultrasonic	THF
2604	PVC	FTIR	Cut	1mm3	Dissolve in THF	THF
2614	PVC	FTIR	NO	2mm * 2mm	Ultrasonic	THF
2622			Grinded+cut	<5mm * 5mm	Ultrasonic	Hexane/acetone (80:20)
2629			YES	<1mm	Ultrasonic	THF
2642			Cut	0.3cm	Ultrasonic	THF
2643			YES	<2mm	Ultrasonic	THF
2650	PVC	IR	YES	the same	Soxhlet	Hexane

2658						
2668	PVC	FTIR	NO	As received	Ultrasonic	THF, ACN
2670			Cut	5mm	Soxhlet	Dichloromethane
2671			NO	As received	Ultrasonic	THF
2672			Cut	1mm * 1mm * 1mm	Ultrasonic	Toluene
2674			NO	3mm * 3mm	Ultrasonic	Acetone, nhexane, MTBE
2678			Cut		Ultrasonic	THF
2679		Melting point	NO		Microwave	Acetic ether
2688	PVC	FTIR, FT-NMR	YES	0.1mm	Ultrasonic	THF
2698			YES	<2mm	Ultrasonic	THF
3110			YES	0.2mm	Ultrasonic	THF, hexane
3116	PVC	FTIR	NO	5mm * 5mm	Soxhlet	Diethyl ether
3117			NO		Soxhlet	Diethyl ether
3118			NO	As received	Ultrasonic	THF
3146	PVC	IR	NO	As received	Ultrasonic	THF, hexane
3150			NO		Ultrasonic	THF
3153	PVC	FTIR	Grinded	Powder	Dissolve in THF	THF
3163			NO		Ultrasonic	Dichloromethane
3166	PVC	XRF	YES	2mm	Ultrasonic	THF
3167						
3172						
3176	Polyester	FTIR	NO	As received	Ultrasonic	THF
3182			Cut	2mm * 2mm	Ultrasonic	THF: hexane (2:1)
3190			NO	As received	Shaking	THF, hexane
3191			NO	2mm * 2mm	Shaking	THF
3192	PVC	FTIR	Grinded	<1-2mm	Ultrasonic	DEE
3197	PVC	FTIR	Grinded	<0.5mm	Ultrasonic	THF
3199			NO		Ultrasonic	THF
3200			NO	As received	Ultrasonic	THF
3210					Ultrasonic	Hexane:Acetone (80:20)
3212			NO		Ultrasonic	THF
3214	PVC	FTIR	NO	3mm * 3mm * 3mm	Ultrasonic	THF
3215	PVC	IR	YES	<5mm	Ultrasonic	Ethyl Acetate
3218	PVC	FTIR	NO		Ultrasonic	THF
3220			Cut	0.1mm	Ultrasonic	THF, hexane
3225			Cut	2mm * 2mm	Soxhlet	Chloroform
3228			NO	2mm * 2mm	Ultrasonic	THF
3237	PVC	FTIR	NO		Ultrasonic	THF
3238	PVC		NO		THF/Methanol	THF/Methanol
3239	Polyester	FTIR	Milled	<1mm	Soxhlet	Methylene Chloride
3242	PVC	FTIR + beilstein test	NO	As received	Ultrasonic	THF, hexane
3246			YES	2-5mm	Ultrasonic	tBME-Hexane-Acetond (1:1:1)
3248	PVC	Flame test	YES	5mm * 5mm	Ultrasonic	THF
8005	PVC	FTIR	NO	5mm * 5mm	Soxhlet	Methylene Chloride and Methanol
8006	PVC	FTIR	NO	5mm * 5mm	Shaking	Acetone, hexane
8007	PVC	FTIR	YES	2mm * 2mm	Ultrasonic	THF
8008			YES	0.2mm	Stand overnight	Acetone, hexane
8020			NO	2mm * 2mm	Ultrasonic	THF

APPENDIX 3

Number of participating laboratories per country

4 labs in BANGLADESH
1 lab in BELGIUM
2 labs in BRAZIL
2 labs in CAMBODIA
1 lab in CANADA
1 lab in CROATIA
1 lab in DENMARK
1 lab in EGYPT
1 lab in FINLAND
7 labs in FRANCE
13 labs in GERMANY
2 labs in GUATEMALA
23 labs in HONG KONG
1 lab in HUNGARY
17 labs in INDIA
3 labs in INDONESIA
1 lab in IRELAND
9 labs in ITALY
3 labs in JAPAN
8 labs in KOREA
1 lab in MALAYSIA
1 lab in MAURITIUS
3 labs in MEXICO
1 lab in MOROCCO
1 lab in NORWAY
31 labs in P.R. of CHINA
4 labs in PAKISTAN
1 lab in PERU
1 lab in PHILIPPINES
1 lab in ROMANIA
3 labs in SINGAPORE
3 labs in SPAIN
2 labs in SRI LANKA
3 labs in TAIWAN R.O.C.
2 labs in THAILAND
4 labs in THE NETHERLANDS
3 labs in TUNISIA
7 labs in TURKEY
8 labs in U.S.A.
1 lab in UNITED KINGDOM
6 labs 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
R(0.01) = outlier in Rosner' outlier test
R(0.05) = straggler in Rosner' outlier test
n.a. = not applicable
n.d. = not detected
fr = first reported test result
f+? / f-? = possibly a false positive / false negative test result

Literature:

1 iis Interlaboratory Studies, Protocol for the Organisation, Statistics & Evaluation, April 2014
2 ASTM D3421:75: "extraction and analysis of plasticizer mixtures from vinyl chloride plastics".
3 Chromatographia, Vol.47, "Gas Chromatographic Analysis of Phthalate Esters in Plastic Toys" S.C. Rastogi
4 ASTM E178-02
5 ASTM E1301-03
6 ISO 5725: 1986
7 ISO 5725, parts 1-6, 1994
8 2001/804/EC, Official Journal of the European Communities, L304/26, (2001)
9 98/485/EC, Official Journal of the European Comminities, L217/35, (1998)
10 M. Thompson and R. Wood, J. AOAC Int, 76, 926, (1993)
11 W.J. Youden and E.H. Steiner, Statistical Manual of the AOAC, (1975)
12 IP 367/84
13 DIN 38402 T41/42
14 P.L. Davies, Fr. Z. Anal. Chem, 331, 513, (1988)
15 J.N. Miller, Analyst, 118, 455, (1993)
16 ASTM F963:"standard consumer safety specification on toy safety"
17 Analytical Methods Committee Technical brief, No4 January 2001.
18 The Royal Society of Chemistry 2002, Analyst 2002, 127 pages 1359-1364, P.J. Lowthian and M. Thompson
19 ISO/FDIS 13528, 2005e, Statistical methods for use in proficiency testing by interlaboratory comparisons
20 R.G. Visser, Reliability of proficiency test results for metals and phthalates in plastics, Accred Qual Assur, 14:29-34 (2009)
21 EC I.03.101, JRS Ispra, Summary Risk Assessment Report DINP (2003)
22 EC I.03.103, JRS Ispra, Summary Risk Assessment Report DIDP (2003)
23 Annex XVII to REACH Regulation 1907/2006
24 Guideline on the interpretation of the concept "which can be placed in the mouth" as laid down in the entry 52 of Annex XVII to REACH Regulation 1907/2006, published July 18, 2012 on http://echa.europe.eu
25 16 C.F.R. Part 1501 and 16 C.F.R. 1500.50-53
26 16 C.F.R. 1199, Federal Register /Vol. 78, No. 31 /Thursday, February 14, 2013
27 Bernard Rosner, Percentage Points for a Generalized ESD Many-Outlier Procedure, T*echnometrics*, 25(2), pp. 165-172, (1983)