

Results of Proficiency Test
Phthalates in Plastics
May 2014

Organised by: Institute for Interlaboratory Studies
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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.

• bis(2-ethylhexyl)phthalate (DEHP) ¹⁾	CASno. 117-81-7	EINECS no. 204-211-0
• dibutylphthalate (DBP)	CASno. 84-74-2	EINECS no. 201-557-4
• benzylbutylphthalate (BBP)	CASno. 85-68-7	EINECS no. 201-622-7
• 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
• di-n-octylphthalate (DNOP)	CASno. 117-84-0	EINECS no. 204-214-7

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 2014.

In the 2014 iis interlaboratory study iis14P01, 172 laboratories in 35 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.

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 ensures strict adherence to protocols for sample preparation and statistical evaluation and 100% confidentiality of participant's data. Feedback from the participants on the reported data is encouraged and customer's satisfaction is measured on regular basis by sending out questionnaires.

2.2 PROTOCOL

The protocol followed in the 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 coloured PVC, to which small, known amounts of BBP, DIDP and DNOP were added. The batch of PVC was granulated after thoroughly mixing. From this batch 207 plastic bags of 3 gram each were prepared and labelled #14065.

The second sample was also a coloured PVC, to which small, known amounts of DINP and DEHP were added. The batch of PVC was granulated after thoroughly mixing. From this batch 207 plastic bags of 3 gram each were prepared and labelled #14066.

The homogeneity of the subsamples #14065 and #14066 was checked by determination of one phthalate on respective 3 and 4 stratified randomly selected subsamples.

	BBP in %M/M		DEHP in %M/M
Sample #14065-1	0.251	Sample #14066-1	0.541
Sample #14065-2	0.258	Sample #14066-2	0.565
Sample #14065-3	0.256	Sample #14066-3	0.534
-	-	Sample #14066-4	0.558

Table 1: homogeneity test results of the subsamples #14065 and #14066

From the above test results the repeatabilities were calculated and compared with 0.3 times the estimated reproducibility of EN14372:04 in agreement with the procedure of ISO 13528, Annex B2 in the next table;

	BBP in %M/M		DEHP in %M/M
r (observed) #14065	0.010	r (observed) #14066	0.040
reference method	EN14372:04	reference method	EN14372:04
0.3 x R (ref. method)	0.019	0.3 x R (ref. method)	0.042

Table 2: evaluation of repeatabilities of phthalate contents of the subsamples #14065 and #14066

As the observed repeatabilities of the results of the homogeneity tests were all in agreement with the target precision data, the homogeneity of subsamples #14065 and #14066 was assumed.

To each of the participating laboratories, one sample of approx. 3 grams granulate, labelled #14065 and one sample of approx. 3 grams granulate, labelled #14066 were sent on April 30, 2014.

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 #14065 and #14066.

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. These 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:

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

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:

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

4 EVALUATION

In this interlaboratory study some problems were encountered with the delivery of the samples to several laboratories in Bangladesh, Guatemala, India, Indonesia, Morocco, P.R. of China and Pakistan.

Three participants did not report any test results and thirty-five participants reported after the final reporting date.

Finally, 169 laboratories reported 1226 numerical results. Observed were 97 statistically outlying test results, which is 7.9% 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.

Many different test methods were used by the participating laboratories. Several participants reported to have used the standard test method: CPSC-CH-C1001-09 (dissolution in THF), but also some other standard test methods were used: EN14372 (Soxhlet extraction with diethyl ether) and ASTM D3421 (Soxhlet extraction with Chloroform) and in-house methods. Regretfully, the CPSC method does not contain any precision statements. Therefore, the requirements from the standardised method EN14372:04, "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 EN14372:04, 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 #14065 and #14066 correctly as PVC (see appendix 2). The presence of a significant amount (approx. 20%) of di-(2-propyl heptyl) phthalate (CAS 53306-54-0) in sample #14065 did not hamper the identification of the plastic by infrared.

The majority of the group identified all added phthalates correctly: #14065 contained BBP, DIDP and DNOP and sample #14066 contained DINP and DEHP.

Sample #14065

BBP: The determination of BBP may be problematic at the level of 0.23 %M/M. Sixteen statistical outliers were detected. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the estimated reproducibility of EN14372:04.

DIDP: The determination of DIDP may be very problematic at the level of 0.28 %M/M. Fifteen statistical outliers were detected. The calculated reproducibility after rejection of the statistical outliers is not at all in agreement with the estimated reproducibility of EN14372:04. Fifteen laboratories reported a false negative test result.

DNOP: The determination of DNOP may be problematic at the level of 0.23 %M/M. Nine 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. Six laboratories reported a false negative test result.

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

Sample #14066

DINP: The determination of DBP may be problematic at the level of 0.55 %M/M. Seventeen statistical outliers were detected. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the estimated reproducibility of EN14372:04. One laboratory reported a false negative test result.

DEHP: The determination of DEHP may be problematic at the level of 0.34 %M/M. Fifteen statistical outliers were detected. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the estimated reproducibility of EN14372:04. One laboratory reported a false negative test result.

For DBP, BBP, DIDP, DNOP, 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)
DBP	%M/M	143	0.017	0.008	(0.004)
BBP	%M/M	148	0.229	0.079	0.058
DIDP	%M/M	99	0.275	0.154	0.069
DNOP	%M/M	138	0.227	0.132	0.057
DEHP	%M/M	134	0.019	0.009	(0.005)

Table 4: overview of results for sample #14065

Parameter	Unit	n	Average	2.8 * sd	R (target)
DINP	%M/M	146	0.545	0.311	0.137
DEHP	%M/M	153	0.344	0.183	0.087

Table 5: overview of results for sample #14066

4.3 COMPARISON OF THE PROFICIENCY TEST OF MAY 2014 WITH PREVIOUS PTS

	May 2014	April 2013	February 2012	February 2011
Number of reporting labs	169	170	155	120
Number of results reported	1226	1085	935	1250
Statistical outliers	97	47	51	103
Percentage outliers	7.9%	4.3%	5.5%	8.2%

Table 6: comparison with previous proficiency tests

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

In table 7 the observed uncertainties in this PT are compared with the uncertainties as observed in previous PTs.

	May 2014	April 2013	February 2012	February 2011	February 2010	February 2009	February 2008	RSDR (EN14273)
DINP ¹⁾	20	20	26	12 – 17	15 ^T – 60 ^E	--	25 ^T - 26 ^E	9
DBP	17	14 – 74 ²⁾	11 – 16	17	14	19 ^T – 22 ^E	15 ^E – 29 ^T	9
DEHP	17 – 19	--	13 – 18	12 – 13	8 ^T – 55 ^E	16 ^E – 19 ^T	10 ^T - 19 ^E	9
BBP	12	13	11	13 – 15	14	21 ^E – 45 ^T	23 ^E – 28 ^T	9
DIDP	20	19 – 57 ²⁾	--	15	--	--	14 ^T - 18 ^E	9
DNOP	21	--	20	15	--	--	--	9
DHP	--	--	--	11	--	--	--	9

Table 7: 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.

The relative uncertainties for DBP and DIDP in 2013 were high, while in 2014 the uncertainties for DNOP and DIDP are in line with previous years.

Regretfully little or no quality improvement is visible over the years. See also the discussion in paragraph 5.

5 DISCUSSION

Significant differences were observed between EN14372 results and results from THF dissolution in the PTs in 2008, 2009 and 2010. This was caused by the significant differences in recovery between the two extraction methods. The recovery of the THF dissolution method will be close to 100%, while the recovery of the Soxhlet extraction with diethyl ether (EN14372) will strongly depend on the type of plastic, the grain size of the sample and the extraction time used.

In this year's PT, again differences in uncertainties were noticed between laboratories that used THF as extraction solvent and laboratories that used another solvent and/or other extraction technique (e.g. Soxhlet).

<i>Determination</i>	<i>THF extraction</i>	<i>Other solvent/ technique</i>
BBP (#14065)	12	14
DIDP (#14065)	16	25
DNOP (#1465)	20	23
DINP (#14066)	18	24
DEHP (#14066)	16	24

Table 8: Comparison of uncertainties (in %) for different techniques

From above table it is clear that in this proficiency test the uncertainty found for the laboratories that used THF as extraction solvent is small in comparison with the laboratories that used another technique and/or solvent.

It is clear from the figures in table 7 that the overall performance of the laboratories that tested phthalates in plastics did not improve. It is also clear that when a large concentration (approx. 37%) of a phthalate is present in the sample the determination of minor phthalates may be problematic. The problems will depend on the type of phthalate used and therefore, further improvement is still to be expected.

The determination of DIDP in PVC sample #14065 was very problematic. One group of 17 participants reported that DIDP was not present, while 112 participants reported a significantly positive test result for DIDP between 0.14 and 54.8 (!) %M/M.

This phenomenon was also present in the previous proficiency test iis13P01. Although this time a high concentration of a different phthalate was present in the sample, the identification may still be problematic. Differences in retention time and shape are only small and a part of the participating laboratories will have decided that the difference was too large to identify the observed group of peaks as DIDP, while the other laboratories decided that the difference was small enough to identify the observed group of peaks as DIDP.

This difference may partly be explained by the fact that DIDP does exist of a complex mixture of di-C9-, di-C10- and di-C11-branched alkyl esters of phthalic acid, but also by the existence of different mixtures (DIDP-1 and DIDP-2, see ref. 22). Sample #14065 may contain another mixture than the calibration standard.

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APPENDIX 1

Determination of DBP on sample #14065; results in %M/M

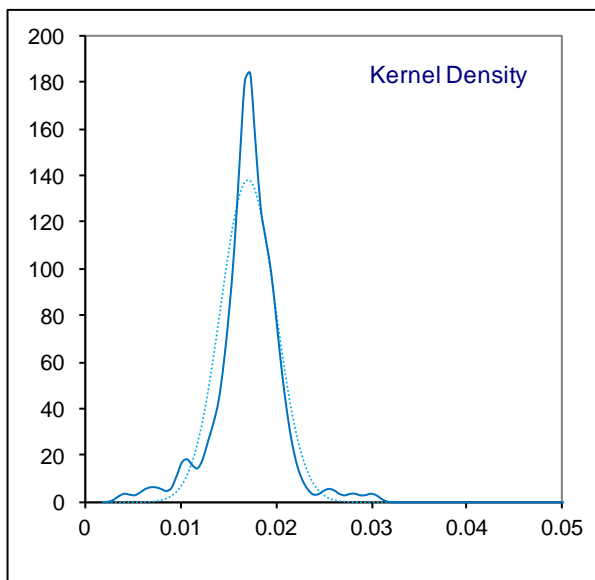
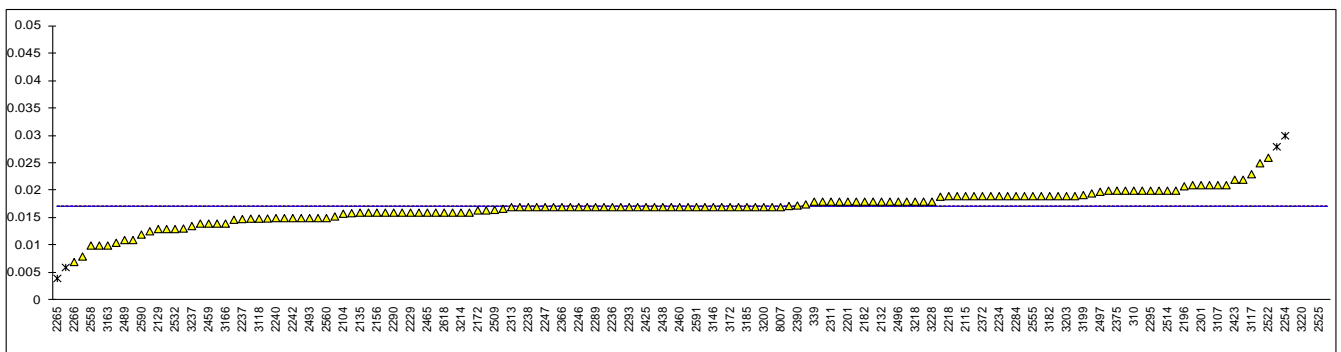
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110		0.0175		----	2375	EN14372	0.020		----
213		----		----	2380		0.020		----
310		0.020		----	2386	CPSC-CH-C1001-09.3	0.021		----
330		0.021		----	2390		0.0173		----
339	in house	0.018		----	2403		0.0140		----
362		0.020		----	2409		n.d.		----
551		0.016		----	2410		0.015		----
622		----		----	2413	CPSC-CH-C1001-09.2	n.d.		----
826		0.02		----	2423		0.022		----
1051	CPSC-CH-C1001-09.3	0.0195		----	2424	CPSC-CH-C1001-09.3	0.019		----
1132		<0.04		----	2425		0.017		----
1213		n.d.		----	2426		0.0172		----
1911		----		----	2429	CPSC-CH-C1001-09.3	0.017		----
2104		0.0158		----	2431	CPSC-CH-C1001-09.3	0.019		----
2108		----		----	2432	CPSC-CH-C1001-09.3	0.017		----
2115	CPSC-CH-C1001	0.019		----	2438		0.017		----
2127		0.018		----	2441	CPSC-CH-C1001-09.3	0.017		----
2129		0.013		----	2442	in house	0.02		----
2132	CPSC-CH-C1001-09.3	0.018		----	2452	CPSC-CH-C1001-09.1	0.018		----
2135		0.016		----	2459	CPSC-CH-C1001-09.3	0.014		----
2139	CPSC-CH-C1001-09.3	0.017		----	2460	CPSC-CH-C1001-09.3	0.017		----
2156		0.016		----	2464		----		----
2165	CPSC-CH-C1001-09.3	0.016		----	2465	CPSC-CH-C1001-09.3	0.016		----
2169	CPSC-CH-C1001-09.3	0.015		----	2470	CPSC-CH-C1001-09.3	0.028	R(0.05)	----
2172		0.0164		----	2475	in house	0.014		----
2182	CPSC-CH-C1001-09.3	0.018		----	2476		0.0126		----
2184	JTSS-ST2012	0.017		----	2482		0.0149		----
2190		0.018		----	2488	in house	0.0149289		----
2196		0.0208		----	2489		0.011		----
2201	CPSC-CH-C1001-09.3	0.018		----	2492		0.0167		----
2213		n.d.		----	2493		0.015		----
2217	CPSC-CH-C1001-09.3	0.017		----	2495		0.015		----
2218		0.019		----	2496	CPSC-CH-C1001-09.3	0.018		----
2225		0.0153		----	2497	CPSC-CH-C1001-09.3	0.0198	C	----
2229	EN14372	0.016		----	2503		----		----
2232		0.017		----	2507		<0.100		----
2234	GB/T 22048	0.019		----	2509	CPSC-CH-C1001-09.3	0.0165		----
2236		0.017		----	2511		0.019		----
2237	in house	0.014826		----	2514	CPSC-CH-C1001-09.3	0.020		----
2238	CPSC-CH-C1001-09.3	0.017		----	2516	EN14372	0.013		----
2240		0.015		----	2522		0.026		----
2242		0.015		----	2525	in house	0.300	C,R(0.01)	----
2245		0.018		----	2529		----		----
2246		0.017		----	2532	CPSC-CH-C1001-09.3	0.013		----
2247		0.017		----	2543		0.017		----
2251	EN14372	0.273	R(0.01)	----	2548	CPSC-CH-C1001-09.3	n.d.	C	----
2253		0.016		----	2549		0.016		----
2254	CPSC-CH-C1001-09.3	0.030	R(0.01)	----	2553		0.0164		----
2255	CPSC-CH-C1001-09.3	0.018		----	2555	CPSC-CH-C1001-09.3	0.019		----
2256		0.017		----	2558	EN15777	0.010		----
2258		1.960	R(0.01)	----	2560		0.015		----
2265		0.004	R(0.05)	----	2566		0.0131		----
2266	EN15777	0.007		----	2581	CPSC-CH-C1001-09.3	0.011		----
2267		0.008		----	2582	CPSC-CH-C1001-09.3	0.019		----
2269		0.0159		----	2590	ISO/TS16181	0.012		----
2271	EN14372	0.017		----	2591	CPSC-CH-C1001-09.3	0.017		----
2272		----		----	2595		0.006	R(0.05)	----
2284		0.019		----	2614		0.0147		----
2288	CPSC-CH-C1001-09.3	0.016		----	2616		----		----
2289	CPSC-CH-C1001-09.3	0.017		----	2618		0.016		----
2290	CPSC-CH-C1001-09.3	0.016		----	2622		<0.01		----
2293		0.017		----	2625	CPSC-CH-C1001-09	0.061	R(0.01)	----
2295	CPSC-CH-C1001-09.3	0.02		----	3100	GB/T 22048	0.016		----
2296		----		----	3107		0.021		----
2300	CPSC-CH-C1001-09.3	0.025		----	3116	EN14372	0.017		----
2301	CPSC-CH-C1001-09.3	0.021		----	3117		0.023		----
2310	CPSC-CH-C1001-09.3	0.017		----	3118		0.0149		----
2311	CPSC-CH-C1001-09.3	0.018		----	3122		0.010		----
2313	CPSC-CH-C1001-09.3	0.017		----	3146	CPSC	0.017		----
2359		0.019		----	3150		0.0105	C	----
2361	CPSC-CH-C1001-09.3	0.019		----	3153	CPSC-CH-C1001-09.3	0.017		----
2366	CPSC-CH-C1001-09.3	0.017		----	3163	in house	0.0100		----
2372	CPSC-CH-C1001-09.3	0.019		----	3166	in house	0.014		----

3167		0.0189	----	3214	CPSC-CH-C1001-09.3	0.016	----
3172		0.017	----	3218	CPSC-CH-C1001-09.3	0.018	----
3176		n.d.	----	3220	CPSC-CH-C1001-09.3	0.14	R(0.01) ----
3180		0.017	----	3225	CPSC-CH-C1001-09.3	0.018	----
3182		0.019	----	3228	CPSC-CH-C1001-09.3	0.018	----
3185	EN14372	0.017	----	3237		0.01355	----
3190	CPSC-CH-C1001-09.3	0.019	----	3238		0.021	----
3197		0.017	----	3242		0.020	----
3199	CPSD-AN-00095	0.0192	----	3246	in house	0.019	----
3200	CPSC-CH-C1001-09.3	0.017	----	3248		0.017	----
3201	in house	0.022	----	8005		-----	----
3203	CPSC-CH-C1001-09.3	0.019	----	8006	JTSS-ST2012	0.016	----
3210		0.018	----	8007	CPSC-CH-C1001	0.017	----

normality suspect
n 143
outliers 9
mean (n) 0.01698
st.dev. (n) 0.002880
R(calc.) 0.00806
R(EN14372:04) (0.00428)

Compare R(Horwitz) = 0.00351

Lab 2497: first reported 0.198
Lab 2525: first reported 0.003
Lab 2548: first reported 0.028
Lab 3150: first reported 0.0048



Determination of BBP on sample #14065; results in %M/M

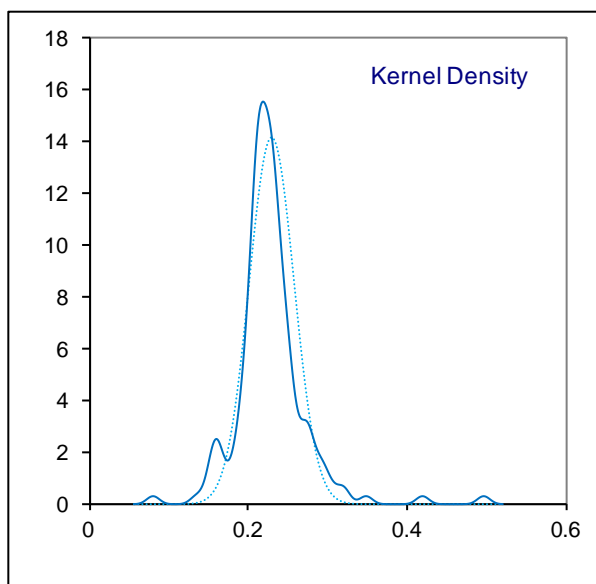
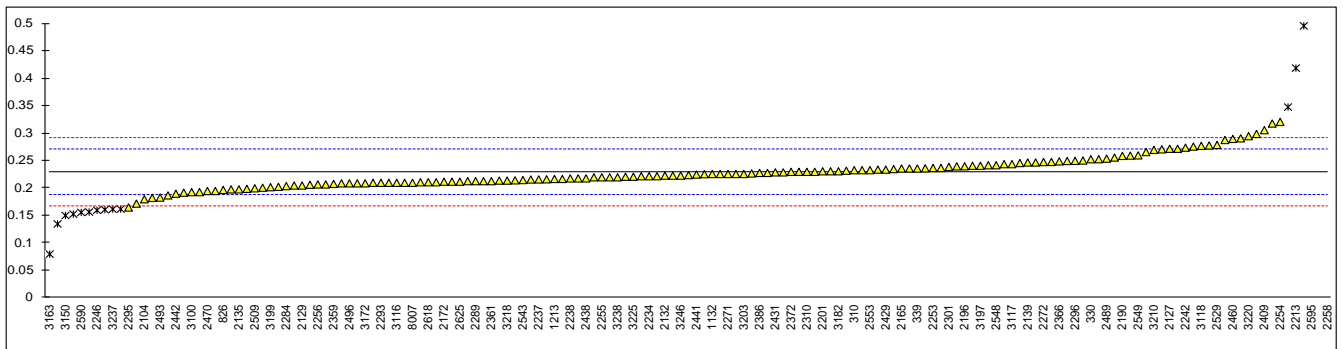
lab	Method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110		0.216		-0.64	2375	EN14372	0.271		2.03
213		-----		-----	2380		0.227		-0.11
310		0.233		0.18	2386	CPSC-CH-C1001-09.3	0.228		-0.06
330		0.253		1.15	2390		0.2026		-1.29
339	in house	0.236		0.33	2403		0.2595		1.47
362		0.278		2.37	2409		0.306	C	3.72
551		0.233		0.18	2410		0.248		0.91
622		-----		-----	2413	CPSC-CH-C1001-09.2	0.226		-0.16
826		0.197		-1.56	2423		0.230		0.04
1051	CPSC-CH-C1001-09.3	0.2497		0.99	2424	CPSC-CH-C1001-09.3	0.242		0.62
1132		0.226		-0.16	2425		0.21		-0.93
1213		0.217		-0.59	2426		0.2257		-0.17
1911		-----		-----	2429	CPSC-CH-C1001-09.3	0.234		0.23
2104		0.18		-2.39	2431	CPSC-CH-C1001-09.3	0.229		-0.01
2108	ISO14389	0.209		-0.98	2432	CPSC-CH-C1001-09.3	0.213		-0.79
2115	CPSC-CH-C1001	n.d.		-----	2438		0.218		-0.54
2127		0.272		2.07	2441	CPSC-CH-C1001-09.3	0.225		-0.20
2129		0.205		-1.17	2442	in house	0.19		-1.90
2132	CPSC-CH-C1001-09.3	0.223		-0.30	2452	CPSC-CH-C1001-09.1	0.201		-1.37
2135		0.198		-1.51	2459	CPSC-CH-C1001-09.3	0.222		-0.35
2139	CPSC-CH-C1001-09.3	0.247		0.86	2460	CPSC-CH-C1001-09.3	0.290		2.95
2156		0.198		-1.51	2464	CPSC-CH-C1001-09.3	0.230		0.04
2165	CPSC-CH-C1001-09.3	0.236		0.33	2465	CPSC-CH-C1001-09.3	0.253		1.15
2169	CPSC-CH-C1001-09.3	0.218		-0.54	2470	CPSC-CH-C1001-09.3	0.195		-1.66
2172		0.212		-0.83	2475	in house	0.246		0.81
2182	CPSC-CH-C1001-09.3	0.220		-0.45	2476		0.1920		-1.80
2184	JTSS-ST2012	0.234		0.23	2482		0.210		-0.93
2190		0.259		1.44	2488	in house	0.2163298		-0.62
2196		0.2401		0.53	2489		0.254		1.20
2201	CPSC-CH-C1001-09.3	0.231		0.09	2492		0.1567	R(0.01)	-3.51
2213		0.419	R(0.01)	9.20	2493		0.183		-2.24
2217	CPSC-CH-C1001-09.3	0.272	C	2.07	2495		0.187		-2.05
2218		0.247		0.86	2496	CPSC-CH-C1001-09.3	0.209		-0.98
2225		0.2064		-1.11	2497	CPSC-CH-C1001-09.3	0.199	C	-1.46
2229	EN14372	0.214		-0.74	2503		-----		-----
2232		0.244		0.72	2507		0.348	R(0.01)	5.76
2234	GB/T 22048	0.222		-0.35	2509	CPSC-CH-C1001-09.3	0.200		-1.42
2236		0.211		-0.88	2511		0.209		-0.98
2237	in house	0.21612		-0.63	2514	CPSC-CH-C1001-09.3	0.232		0.14
2238	CPSC-CH-C1001-09.3	0.218		-0.54	2516	EN14372	0.223		-0.30
2240		0.222		-0.35	2522		0.299		3.38
2242		0.274		2.17	2525	in house	3.400	C,R(0.01)	153.71
2245		0.205		-1.17	2529	CPSC-CH-C1001-09.3	0.279		2.41
2246		0.160	R(0.01)	-3.35	2532	CPSC-CH-C1001-09.3	0.266		1.78
2247		0.256		1.30	2543		0.215		-0.69
2251	EN14372	0.288		2.85	2548	CPSC-CH-C1001-09.3	0.242		0.62
2253		0.237		0.38	2549		0.26		1.49
2254	CPSC-CH-C1001-09.3	0.321		4.45	2553		0.2330		0.18
2255	CPSC-CH-C1001-09.3	0.22		-0.45	2555	CPSC-CH-C1001-09.3	0.237		0.38
2256		0.207		-1.08	2558	EN15777	0.172		-2.77
2258		18.680	R(0.01)	894.43	2560		0.212		-0.83
2265		-----		-----	2566		0.1825		-2.26
2266	EN15777	0.318		4.30	2581	CPSC-CH-C1001-09.3	0.161	R(0.01)	-3.31
2267		0.153	R(0.01)	-3.69	2582	CPSC-CH-C1001-09.3	0.276		2.27
2269		0.2506		1.04	2590	ISO/TS16181	0.156	R(0.01)	-3.55
2271	EN14372	0.226		-0.16	2591	CPSC-CH-C1001-09.3	0.231		0.09
2272		0.2478	C	0.90	2595		1.54	C,R(0.01)	63.54
2284		0.204		-1.22	2614		0.2145		-0.71
2288	CPSC-CH-C1001-09.3	0.23		0.04	2616		-----		-----
2289	CPSC-CH-C1001-09.3	0.213		-0.79	2618		0.211		-0.88
2290	CPSC-CH-C1001-09.3	0.241		0.57	2622		0.135	R(0.01)	-4.57
2293		0.210		-0.93	2625	CPSC-CH-C1001-09	0.212		-0.83
2295	CPSC-CH-C1001-09.3	0.165	C	-3.11	3100	GB/T 22048	0.193		-1.76
2296	CPSC-CH-C1001-09.3	0.250		1.01	3107		0.291		3.00
2300	CPSC-CH-C1001-09.3	0.496	R(0.01)	12.93	3116	EN14372	0.210		-0.93
2301	CPSC-CH-C1001-09.3	0.239		0.47	3117		0.244		0.72
2310	CPSC-CH-C1001-09.3	0.23		0.04	3118		0.2773		2.33
2311	CPSC-CH-C1001-09.3	0.236		0.33	3122		0.193	C	-1.76
2313	CPSC-CH-C1001-09.3	0.213		-0.79	3146	CPSC	0.24		0.52
2359		0.208		-1.03	3150		0.1504	C,R(0.01)	-3.82
2361	CPSC-CH-C1001-09.3	0.213		-0.79	3153	CPSC-CH-C1001-09.3	0.224		-0.25
2366	CPSC-CH-C1001-09.3	0.249		0.96	3163	in house	0.0800	R(0.01)	-7.23
2372	CPSC-CH-C1001-09.3	0.230		0.04	3166	in house	0.221		-0.40

3167		0.2364	0.35	3214	CPSC-CH-C1001-09.3	0.220	-0.45
3172		0.209	-0.98	3218	CPSC-CH-C1001-09.3	0.214	-0.74
3176		0.207	-1.08	3220	CPSC-CH-C1001-09.3	0.295	3.19
3180		0.162	R(0.01) -3.26	3225	CPSC-CH-C1001-09.3	0.221	-0.40
3182		0.231	0.09	3228	CPSC-CH-C1001-09.3	0.235	0.28
3185	EN14372	0.226	-0.16	3237		0.16194	R(0.01) -3.26
3190	CPSC-CH-C1001-09.3	0.229	-0.01	3238		0.22	-0.45
3197		0.241	0.57	3242		0.210	-0.93
3199	CPSD-AN-00095	0.202	-1.32	3246	in house	0.223	-0.30
3200	CPSC-CH-C1001-09.3	0.228	-0.06	3248		0.217	-0.59
3201	in house	0.195	-1.66	8005		-----	-----
3203	CPSC-CH-C1001-09.3	0.226	-0.16	8006	JTSS-ST2012	0.211	-0.88
3210		0.270	1.98	8007	CPSC-CH-C1001	0.210	-0.93

normality suspect
 n 148
 outliers 16
 mean (n) 0.2292
 st.dev. (n) 0.02819
 R(calc.) 0.0789
 R(EN14372:04) 0.0578
 Compare R(Horwitz) = 0.0320

Only THF	Other:
suspect	OK
103	47
8	8
0.2283	0.2330
0.02634	0.03278
0.0737	0.0918
0.0575	0.0587

Lab 2217: first reported 0.313
 Lab 2272: first reported 0.1297
 Lab 2295: first reported 0.44
 Lab 2409: first reported 0.094
 Lab 2497: first reported 1.992
 Lab 2525: first reported 0.034
 Lab 2595: first reported 0.033
 Lab 3122: first reported 0.115
 Lab 3150: first reported 0.0603



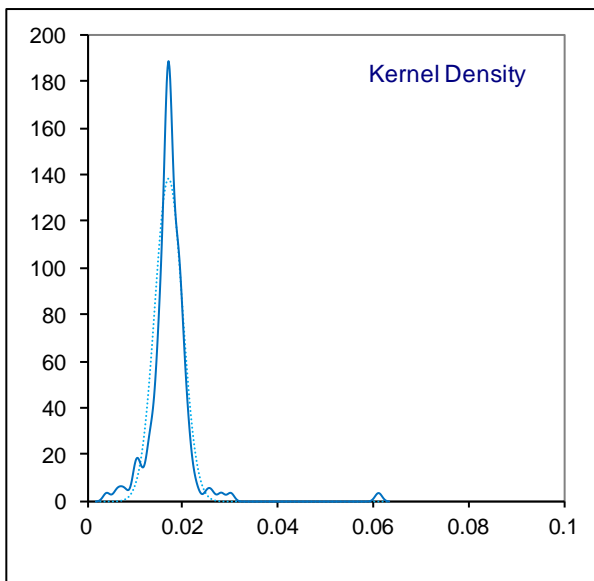
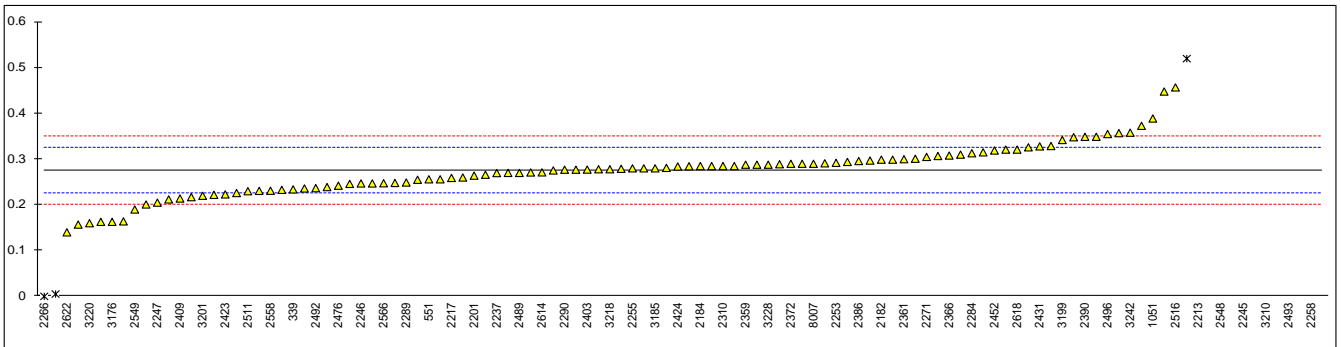
Determination of DIDP on sample #14065; results in %M/M

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110		0.297		0.89	2375	EN14372	0.246		-1.17
213		----		----	2380		0.315		1.61
310		----		----	2386	CPSC-CH-C1001-09.3	0.296		0.85
330		<0.01	false -	----	2390		0.3489		2.98
339	in house	0.234		-1.66	2403		0.2773	C	0.09
362		0.326		2.06	2409		0.214		-2.47
551		0.256		-0.77	2410		0.289		0.56
622		----		----	2413	CPSC-CH-C1001-09.2	6.817	R(0.01)	264.26
826		n.d.	false -	----	2423		0.223	C	-2.10
1051	CPSC-CH-C1001-09.3	0.389	C	4.60	2424	CPSC-CH-C1001-09.3	0.284		0.36
1132		<0.08	C,false -	----	2425		0.348		2.95
1213		----		----	2426		0.2846		0.39
1911		----		----	2429	CPSC-CH-C1001-09.3	0.255		-0.81
2104		0.226		-1.98	2431	CPSC-CH-C1001-09.3	0.328		2.14
2108	ISO14389	0.157		-4.77	2432		----		----
2115	CPSC-CH-C1001	n.d.	false -	----	2438		0.247		-1.13
2127		15.330	R(0.01)	608.13	2441	CPSC-CH-C1001-09.3	0.217		-2.35
2129		0.212		-2.55	2442		----		----
2132	CPSC-CH-C1001-09.3	0.278		0.12	2452	CPSC-CH-C1001-09.1	0.319		1.77
2135		----		----	2459		----		----
2139		----		----	2460	CPSC-CH-C1001-09.3	0.771	R(0.01)	20.03
2156		0.005	R(0.01)	-10.91	2464		----		----
2165	CPSC-CH-C1001-09.3	0.301		1.05	2465	CPSC-CH-C1001-09.3	0.000	R(0.01)	-2.14
2169		----		----	2470	CPSC-CH-C1001-09.3	<0.010	false -	----
2172		0.248		-1.09	2475		----	W	----
2182	CPSC-CH-C1001-09.3	0.299		0.97	2476		0.2420		-1.34
2184	JTSS-ST2012	0.285		0.40	2482		----		----
2190		0.448		6.99	2488		----		----
2196		0.3288		2.17	2489		0.270		-0.20
2201	CPSC-CH-C1001-09.3	0.264		-0.45	2492		0.2367		-1.55
2213		0.768	R(0.01)	19.91	2493		17.440	R(0.01)	693.36
2217	CPSC-CH-C1001-09.3	0.259		-0.65	2495		0.280	C	0.20
2218		----		----	2496	CPSC-CH-C1001-09.3	0.355		3.23
2225		----		----	2497		----		----
2229	EN14372	0.256		-0.77	2503		----		----
2232		----		----	2507		----		----
2234	GB/T 22048	<0.01	false -	----	2509		----		----
2236		----		----	2511		0.230		-1.82
2237	in house	0.26964		-0.22	2514	CPSC-CH-C1001-09.3	0.285		0.40
2238		----		----	2516	EN14372	0.457		7.35
2240		----		----	2522		----		----
2242		----		----	2525	in house	<0.001	false -	----
2245		7.554	R(0.01)	294.03	2529		----		----
2246		0.247		-1.13	2532	CPSC-CH-C1001-09.3	0.321		1.86
2247		0.205		-2.83	2543		n.d.	false -	----
2251	EN14372	n.d.	false -	----	2548	CPSC-CH-C1001-09.3	5.506	C,R(0.01)	211.30
2253		0.292		0.68	2549		0.190		-3.44
2254	CPSC-CH-C1001-09.3	<0.010	false -	----	2553		n.d.	false -	----
2255	CPSC-CH-C1001-09.3	0.28		0.20	2555	CPSC-CH-C1001-09.3	0.281		0.24
2256		0.310		1.41	2558	EN15777	0.231		-1.78
2258		42.310	R(0.01)	1697.97	2560		0.349		2.99
2265		----		----	2566		0.2474		-1.12
2266	EN15777	0.000	R(0.01)	-11.11	2581	CPSC-CH-C1001-09.3	0.163		-4.53
2267		0.307		1.29	2582	CPSC-CH-C1001-09.3	0.201		-2.99
2269		----		----	2590	ISO/TS16181	18.2	R(0.01)	724.06
2271	EN14372	0.305		1.21	2591	CPSC-CH-C1001-09.3	n.d.	false -	----
2272		----		----	2595		54.8	C,R(0.01)	2202.49
2284		0.313	C	1.53	2614		0.2712		-0.16
2288	CPSC-CH-C1001-09.3	0.27		-0.20	2616		----		----
2289	CPSC-CH-C1001-09.3	0.249		-1.05	2618		0.321		1.86
2290	CPSC-CH-C1001-09.3	0.277		0.08	2622		0.140		-5.46
2293		n.d.	false -	----	2625	CPSC-CH-C1001-09	0.373		3.96
2295	CPSC-CH-C1001-09.3	0.26		-0.61	3100	GB/T 22048	0.288		0.52
2296		----		----	3107		n.d.	false -	----
2300		----		----	3116	EN14372	0.290		0.60
2301		----		----	3117		0.271		-0.16
2310	CPSC-CH-C1001-09.3	0.285		0.40	3118		0.2754	C	0.01
2311	CPSC-CH-C1001-09.3	0.299		0.97	3122		0.164		-4.49
2313	CPSC-CH-C1001-09.3	0.285		0.40	3146	CPSC	<0.7		----
2359		0.288		0.52	3150		0.2307		-1.79
2361	CPSC-CH-C1001-09.3	0.300		1.01	3153	CPSC-CH-C1001-09.3	0.277		0.08
2366	CPSC-CH-C1001-09.3	0.308		1.33	3163	in house	11.54	R(0.01)	455.04
2372	CPSC-CH-C1001-09.3	0.290		0.60	3166		----		----

3167		0.5199	C,R(0.01)	9.89	3214	CPSC-CH-C1001-09.3	0.279	0.16
3172		0.266		-0.37	3218	CPSC-CH-C1001-09.3	0.278	0.12
3176		0.163		-4.53	3220	CPSC-CH-C1001-09.3	0.16	-4.65
3180		----		----	3225	CPSC-CH-C1001-09.3	0.294	0.76
3182		----		----	3228	CPSC-CH-C1001-09.3	0.288	0.52
3185	EN14372	0.280		0.20	3237		----	----
3190		----		----	3238		----	----
3197		0.233		-1.70	3242		0.358	3.35
3199	CPSD-AN-00095	0.342		2.70	3246	in house	n.d.	false -
3200	CPSC-CH-C1001-09.3	0.236		-1.58	3248		0.239	-1.46
3201	in house	0.220		-2.22	8005		----	----
3203	CPSC-CH-C1001-09.3	0.357		3.31	8006	JTSS-ST2012	0.291	0.64
3210		14.8	R(0.01)	586.72	8007	CPSC-CH-C1001	0.290	0.60

		Only THF	Other:
normality	suspect	OK	OK
n	99	66	33
outliers	15	9	9
mean (n)	0.2751	0.2717	0.2834
st.dev. (n)	0.05516	0.04471	0.07123
R(calc.)	0.1544	0.1252	0.1994
R(EN14372:04)	0.0693	0.0685	0.0714
Compare R(Horwitz) = 0.0562			

Lab 1051: first reported <0.005
 Lab 1132: first reported 12.006
 Lab 2284: first reported <0.005
 Lab 2403: first reported n.d.
 Lab 2423: first reported n.d.
 Lab 2465: first reported 0.000
 Lab 2475: result withdrawn, first reported n.d.
 Lab 2495: first reported 0.00
 Lab 2548: first reported n.d.
 Lab 2595: first reported 2.185
 Lab 3118: first reported n.d.



Determination of DNOP on sample #14065; results in %M/M

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110		0.222		-0.25	2375	EN14372	0.244		0.83
213		-----		-----	2380		0.213		-0.69
310		0.209		-0.88	2386	CPSC-CH-C1001-09.3	0.274		2.30
330		0.19		-1.81	2390		0.310		4.06
339	in house	0.217	C	-0.49	2403		0.2196		-0.37
362		<0.003	C, false -	-----	2409		0.124		-5.04
551		0.205		-1.08	2410		-----		-----
622		-----		-----	2413	CPSC-CH-C1001-09.2	0.208		-0.93
826		0.287		2.93	2423		0.219		-0.39
1051	CPSC-CH-C1001-09.3	0.2361		0.44	2424	CPSC-CH-C1001-09.3	0.289		3.03
1132		0.647	C,R(0.01)	20.55	2425		0.24		0.63
1213		-----		-----	2426		0.1931		-1.66
1911		-----		-----	2429	CPSC-CH-C1001-09.3	0.215		-0.59
2104		0.174		-2.60	2431	CPSC-CH-C1001-09.3	0.221		-0.30
2108	ISO14389	0.214		-0.64	2432	CPSC-CH-C1001-09.3	0.162		-3.18
2115	CPSC-CH-C1001	0.203		-1.18	2438		n.d.	false -	-----
2127		0.230		0.14	2441	CPSC-CH-C1001-09.3	0.206		-1.03
2129		0.338		5.43	2442	in house	0.18		-2.30
2132	CPSC-CH-C1001-09.3	0.237		0.49	2452	CPSC-CH-C1001-09.1	0.173		-2.65
2135		0.134		-4.55	2459	CPSC-CH-C1001-09.3	0.204		-1.13
2139		-----		-----	2460	CPSC-CH-C1001-09.3	0.282		2.69
2156		0.173		-2.65	2464	CPSC-CH-C1001-09.3	0.165		-3.04
2165	CPSC-CH-C1001-09.3	0.241		0.68	2465	CPSC-CH-C1001-09.3	0.246		0.93
2169	CPSC-CH-C1001-09.3	0.197		-1.47	2470	CPSC-CH-C1001-09.3	0.274		2.30
2172		0.218		-0.44	2475	in house	0.368		6.90
2182	CPSC-CH-C1001-09.3	0.226		-0.05	2476		0.1917		-1.73
2184	JTSS-ST2012	0.232		0.24	2482		-----		-----
2190		0.255		1.37	2488	in house	0.213311		-0.67
2196		0.2279		0.04	2489		0.213		-0.69
2201	CPSC-CH-C1001-09.3	0.206		-1.03	2492		0.1867		-1.98
2213		0.555	R(0.01)	16.05	2493		0.231		0.19
2217	CPSC-CH-C1001-09.3	0.337		5.38	2495		0.784	R(0.01)	27.25
2218		-----		-----	2496	CPSC-CH-C1001-09.3	0.230		0.14
2225		0.2826		2.72	2497	CPSC-CH-C1001-09.3	0.222	C	-0.25
2229	EN14372	0.204		-1.13	2503		-----		-----
2232		0.198		-1.42	2507		0.229		0.09
2234	GB/T 22048	0.245		0.88	2509	CPSC-CH-C1001-09.3	0.232		0.24
2236		0.225		-0.10	2511		0.213		-0.69
2237	in house	0.19972		-1.34	2514	CPSC-CH-C1001-09.3	0.229		0.09
2238	CPSC-CH-C1001-09.3	0.200		-1.32	2516	EN14372	0.208		-0.93
2240		0.225		-0.10	2522		0.354		6.21
2242		0.279		2.54	2525	in house	6.000	C,R(0.01)	282.49
2245		0.225		-0.10	2529	CPSC-CH-C1001-09.3	0.311		4.11
2246		0.173		-2.65	2532	CPSC-CH-C1001-09.3	0.245		0.88
2247		0.210		-0.84	2543		n.d.	false -	-----
2251	EN14372	n.d.	false -	-----	2548	CPSC-CH-C1001-09.3	0.258		1.51
2253		0.275		2.35	2549		0.28	C	2.59
2254	CPSC-CH-C1001-09.3	0.298		3.47	2553		0.1800		-2.30
2255	CPSC-CH-C1001-09.3	0.23		0.14	2555	CPSC-CH-C1001-09.3	0.219		-0.39
2256		0.221		-0.30	2558	EN15777	0.167		-2.94
2258		18.250	R(0.01)	881.93	2560		0.179		-2.35
2265		0.005	R(0.01)	-10.87	2566		0.2822		2.70
2266	EN15777	0.000	R(0.01)	-11.11	2581	CPSC-CH-C1001-09.3	0.157	C	-3.43
2267		0.0157	R(0.01)	-10.34	2582	CPSC-CH-C1001-09.3	0.202		-1.23
2269		0.2471		0.98	2590		-----		-----
2271	EN14372	0.215		-0.59	2591	CPSC-CH-C1001-09.3	0.137		-4.41
2272		-----		-----	2595		-----		-----
2284		0.230	C	0.14	2614		0.2801		2.60
2288	CPSC-CH-C1001-09.3	0.21		-0.84	2616		-----		-----
2289	CPSC-CH-C1001-09.3	0.220		-0.35	2618		0.196		-1.52
2290	CPSC-CH-C1001-09.3	0.217		-0.49	2622		0.380		7.48
2293		n.d.	false -	-----	2625	CPSC-CH-C1001-09	0.259		1.56
2295	CPSC-CH-C1001-09.3	0.195	C	-1.57	3100	GB/T 22048	0.208		-0.93
2296	CPSC-CH-C1001-09.3	0.197	C	-1.47	3107		n.d.	false -	-----
2300	CPSC-CH-C1001-09.3	0.311		4.11	3116	EN14372	0.218		-0.44
2301	CPSC-CH-C1001-09.3	0.351		6.06	3117		0.228		0.05
2310	CPSC-CH-C1001-09.3	0.25	C	1.12	3118		0.1830	C	-2.16
2311	CPSC-CH-C1001-09.3	0.206	C	-1.03	3122		0.121		-5.19
2313	CPSC-CH-C1001-09.3	0.28	C	2.59	3146	CPSC	0.22		-0.35
2359		0.202		-1.23	3150		0.2197		-0.36
2361	CPSC-CH-C1001-09.3	0.197		-1.47	3153	CPSC-CH-C1001-09.3	0.214		-0.64
2366	CPSC-CH-C1001-09.3	0.250		1.12	3163	in house	0.0400	R(0.05)	-9.15
2372	CPSC-CH-C1001-09.3	0.205		-1.08	3166		-----		-----

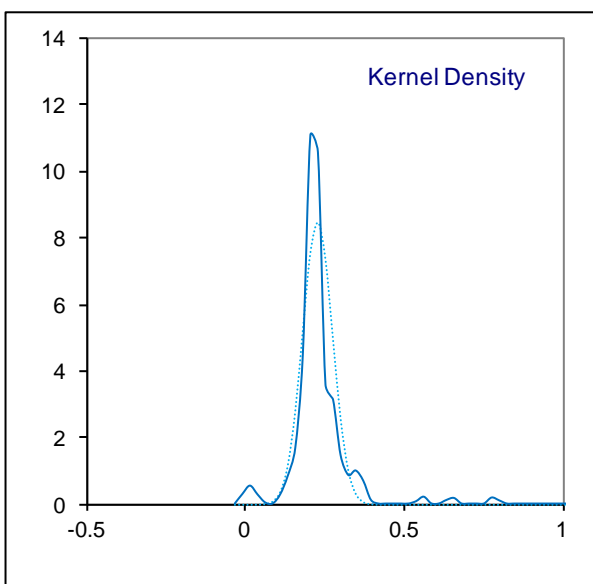
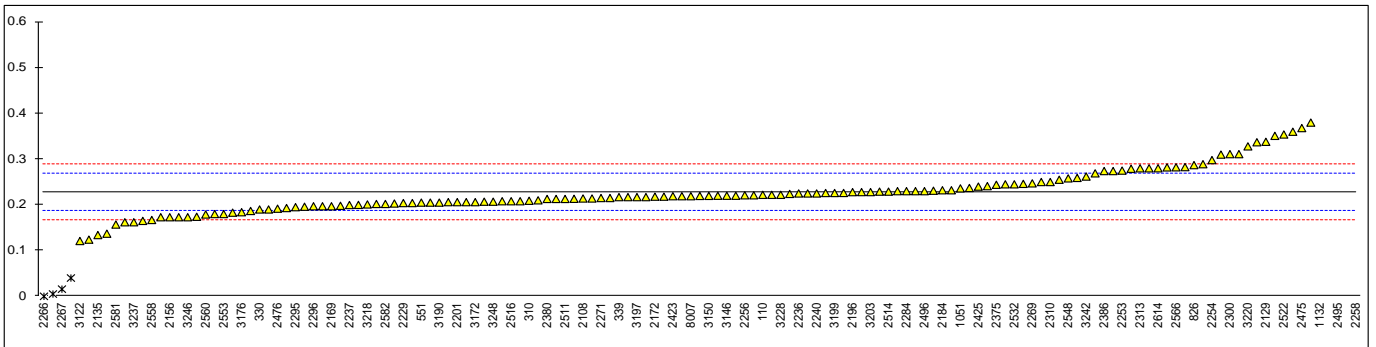
3167	0.2261	-0.05	3214	CPSC-CH-C1001-09.3	0.220	-0.35
3172	0.206	-1.03	3218	CPSC-CH-C1001-09.3	0.201	-1.28
3176	0.184	-2.11	3220	CPSC-CH-C1001-09.3	0.328	4.94
3180	-----	W	3225	CPSC-CH-C1001-09.3	0.224	-0.15
3182	-----		3228	CPSC-CH-C1001-09.3	0.222	-0.25
3185	EN14372	-0.98	3237		0.16204	-3.18
3190	CPSC-CH-C1001-09.3	-1.08	3238		0.36	6.51
3197	0.217	-0.49	3242		0.262	1.71
3199	CPSD-AN-00095	-0.05	3246	in house	0.173	C -2.65
3200	CPSC-CH-C1001-09.3	2.05	3248		0.207	-0.98
3201	in house	-1.81	8005		-----	-----
3203	CPSC-CH-C1001-09.3	0.05	8006	JTSS-ST2012	0.217	-0.49
3210	-----	-----	8007	CPSC-CH-C1001	0.219	-0.39

normality suspect
n 139
outliers 9
mean (n) 0.2271
st.dev. (n) 0.04717
R(calc.) 0.1321
R(EN14372:04) 0.0572
Compare R(Horwitz) = 0.04771

Only THF	Other:
not OK	not OK
100	41
5	5
0.2272	0.2257
0.04517	0.05171
0.1265	0.1448
0.0572	0.0569

Lab 339: first reported <10
Lab 362: first reported 0.906
Lab 1132: first reported 0.372
Lab 2284: first reported <0.005
Lab 2295: first reported n.d.
Lab 2296: first reported 1.970
Lab 2310: first reported n.d.
Lab 2311: first reported n.d.

Lab 2313: first reported n.d.
Lab 2497: first reported 2.223
Lab 2525: first reported 0.060
Lab 2549: first reported n.d.
Lab 2581: first reported <0.002
Lab 3118: first reported n.d.
Lab 3180: result withdrawn, first reported 0.574
Lab 3246: first reported n.d.



Determination of DEHP on sample #14065; results in %M/M

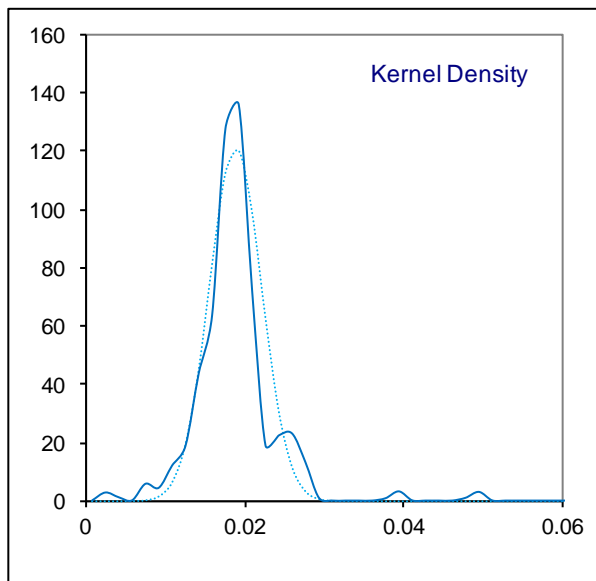
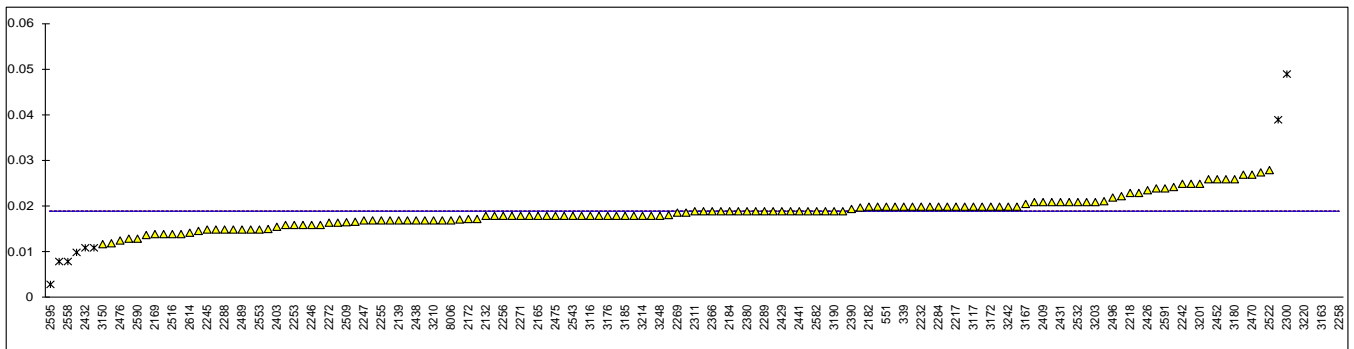
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110		0.01982		----	2375	EN14372	0.021		----
213		----		----	2380		0.019		----
310		0.019		----	2386	CPSC-CH-C1001-09.3	<0.010		----
330		0.020		----	2390		0.0195		----
339	in house	0.020		----	2403		0.0156		----
362		<0.003		----	2409		0.021		----
551		0.02		----	2410		0.019		----
622		0.4267	C,R(0.01)	----	2413	CPSC-CH-C1001-09.2	n.d.		----
826		0.015		----	2423		0.017	C	----
1051	CPSC-CH-C1001-09.3	0.0187		----	2424	CPSC-CH-C1001-09.3	0.020		----
1132		<0.04		----	2425		0.018		----
1213		n.d.	C	----	2426		0.0236		----
1911		----		----	2429	CPSC-CH-C1001-09.3	0.019		----
2104		0.0172		----	2431	CPSC-CH-C1001-09.3	0.021		----
2108		----		----	2432	CPSC-CH-C1001-09.3	0.011	R(0.01)	----
2115	CPSC-CH-C1001	0.021		----	2438		0.017		----
2127		0.019		----	2441	CPSC-CH-C1001-09.3	0.019		----
2129		<0.02		----	2442		----		----
2132	CPSC-CH-C1001-09.3	0.018		----	2452	CPSC-CH-C1001-09.1	0.026		----
2135		0.016		----	2459	CPSC-CH-C1001-09.3	0.014		----
2139	CPSC-CH-C1001-09.3	0.017		----	2460	CPSC-CH-C1001-09.3	0.021		----
2156		0.015		----	2464		----		----
2165	CPSC-CH-C1001-09.3	0.018		----	2465	CPSC-CH-C1001-09.3	0.018		----
2169	CPSC-CH-C1001-09.3	0.014		----	2470	CPSC-CH-C1001-09.3	0.027		----
2172		0.0173		----	2475	in house	0.018		----
2182	CPSC-CH-C1001-09.3	0.020		----	2476		0.0126		----
2184	JTSS-ST2012	0.019		----	2482		0.0147		----
2190		0.027		----	2488	in house	0.01730401		----
2196		0.0212		----	2489		0.015		----
2201	CPSC-CH-C1001-09.3	0.017		----	2492		0.0167		----
2213		0.076	R(0.01)	----	2493		0.019		----
2217	CPSC-CH-C1001-09.3	0.020		----	2495		0.015		----
2218		0.023		----	2496	CPSC-CH-C1001-09.3	0.022		----
2225		0.0165		----	2497	CPSC-CH-C1001-09.3	0.0275	C	----
2229	EN14372	0.018		----	2503		----		----
2232		0.020		----	2507		<0.100		----
2234	GB/T 22048	0.019		----	2509	CPSC-CH-C1001-09.3	0.0166		----
2236		0.017		----	2511		0.026		----
2237	in house	0.015119		----	2514	CPSC-CH-C1001-09.3	0.018		----
2238	CPSC-CH-C1001-09.3	0.019		----	2516	EN14372	0.014		----
2240		0.026		----	2522		0.028		----
2242		0.025		----	2525	in house	<0.001		----
2245		0.015		----	2529		----		----
2246		0.016		----	2532	CPSC-CH-C1001-09.3	0.021		----
2247		0.017		----	2543		0.018		----
2251	EN14372	0.202	R(0.01)	----	2548	CPSC-CH-C1001-09.3	n.d.	C	----
2253		0.016		----	2549		0.018		----
2254	CPSC-CH-C1001-09.3	<0.004		----	2553		0.0150		----
2255	CPSC-CH-C1001-09.3	0.017		----	2555	CPSC-CH-C1001-09.3	0.021		----
2256		0.018		----	2558	EN15777	0.008	R(0.01)	----
2258		1.560	R(0.01)	----	2560		0.020		----
2265		----		----	2566		0.0138		----
2266	EN15777	0.012		----	2581	CPSC-CH-C1001-09.3	0.010	R(0.01)	----
2267		0.008	R(0.01)	----	2582	CPSC-CH-C1001-09.3	0.019		----
2269		0.0187		----	2590	ISO/TS16181	0.013		----
2271	EN14372	0.018		----	2591	CPSC-CH-C1001-09.3	0.024		----
2272		0.0165		----	2595		0.003	R(0.01)	----
2284		0.020		----	2614		0.0143		----
2288	CPSC-CH-C1001-09.3	0.015		----	2616		----		----
2289	CPSC-CH-C1001-09.3	0.019		----	2618		0.019		----
2290	CPSC-CH-C1001-09.3	0.016		----	2622		<0.01		----
2293		0.013		----	2625	CPSC-CH-C1001-09	0.039	R(0.01)	----
2295	CPSC-CH-C1001-09.3	0.02		----	3100	GB/T 22048	0.017		----
2296		----		----	3107		0.025		----
2300	CPSC-CH-C1001-09.3	0.049	R(0.01)	----	3116	EN14372	0.018		----
2301	CPSC-CH-C1001-09.3	0.024	C	----	3117		0.020	C	----
2310	CPSC-CH-C1001-09.3	0.02		----	3118		0.0223		----
2311	CPSC-CH-C1001-09.3	0.019		----	3122		0.011	R(0.01)	----
2313	CPSC-CH-C1001-09.3	0.018		----	3146	CPSC	0.018		----
2359		0.020		----	3150		0.0118	C	----
2361	CPSC-CH-C1001-09.3	0.019		----	3153	CPSC-CH-C1001-09.3	0.020		----
2366	CPSC-CH-C1001-09.3	0.019		----	3163	in house	0.2100	R(0.01)	----
2372	CPSC-CH-C1001-09.3	0.016		----	3166	in house	0.014		----

3167		0.0206	----	3214	CPSC-CH-C1001-09.3	0.018	----
3172		0.020	----	3218	CPSC-CH-C1001-09.3	0.020	----
3176		0.018	----	3220	CPSC-CH-C1001-09.3	0.14	R(0.01) ----
3180		0.026	----	3225	CPSC-CH-C1001-09.3	0.018	----
3182		0.018	----	3228	CPSC-CH-C1001-09.3	0.017	----
3185	EN14372	0.018	----	3237		0.01817	----
3190	CPSC-CH-C1001-09.3	0.019	----	3238		----	----
3197		0.018	----	3242		0.020	----
3199	CPSD-AN-00095	0.0243	----	3246	in house	0.020	----
3200	CPSC-CH-C1001-09.3	0.023	----	3248		0.018	----
3201	in house	0.025	----	8005	ASTM F963	n.d.	----
3203	CPSC-CH-C1001-09.3	0.021	----	8006	JTSS-ST2012	0.017	----
3210		0.017	----	8007	CPSC-CH-C1001	0.019	----

normality OK
 n 135
 outliers 14
 mean (n) 0.0189
 st.dev. (n) 0.00329
 R(calc.) 0.0092
 R(EN14372:04) (0.0048)

Compare R(Horwitz) = 0.0038

- Lab 622: first reported 0.249
- Lab 1213: first reported 0.031
- Lab 2301: first reported 0.033
- Lab 2423: first reported 0.030
- Lab 2497: first reported 0.275
- Lab 2548: first reported 0.031
- Lab 3117: first reported 0.031
- Lab 3150: first reported 0.0052



Determination of DINP, DiBP, DHP and Other Phthalates on sample #14065; results in %M/M

lab	method	DINP	mark	DiBP	mark	DHP	mark	other	mark	remark
110		n.d.		n.d.		----		----		
213		----		----		----		----		
310		----		----		----		----		
330		<0.01		<0.02		----		<0.02		
339	in house	0.125	f+	<0.001		<0.001		----		
362		<0.010		<0.003		<0.003		----		
551		n.d.		n.d.		n.d.		----		
622		0.156	f+	----		----		----		
826		n.d.		n.d.		n.d.		----		
1051	CPSC-CH-C1001-09.3	<0.005		----		----		----		
1132		n.d.	C	----		----		----		
1213		n.d.		n.d.		n.d.		----		
1911		----		----		----		----		
2104		----		0.001		----		10		
2108		----		----		----		----		
2115	CPSC-CH-C1001	0.203	f+	n.d.		n.d.		n.d.		
2127		----		0.0001		----		----		
2129		<0.02	C	<0.02		<0.02		11.04		
2132	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		n.d.		
2135		----		----		----		----		
2139		----		----		----		----		
2156		0.005		0.005		0.005		----		
2165	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		n.d.		
2169	CPSC-CH-C1001-09.3	0.007		<0.001		<0.001		----		
2172		<0.005		<0.005		<0.005		----		
2182	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		n.d.		
2184	JTSS-ST2012	n.d.		n.d.		n.d.		n.d.		
2190		----		----		----		----		
2196		----		----		----		----		
2201	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		----		
2213		n.d.		n.d.		n.d.		n.d.		
2217		----		----		----		----		
2218		<0.010	C	----		----		----		
2225		<0.015		----		----		----		
2229	EN14372	<0.020		<0.010		<0.010		<0.010		
2232		----		----		----		----		
2234	GB/T 22048	<0.01		<0.003		<0.003		----		
2236		----		----		----		----		
2237	in house	<0.15		<0.001		<0.001		----		
2238	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		----		
2240		----		----		----		----		
2242		----		----		----		----		
2245		n.d.		n.d.		n.d.		----		
2246		<0.01		<0.01		<0.01		14.000		
2247		<0.005		<0.005		<0.005		0		
2251	EN14372	n.d.		----		----		----		
2253		n.d.		n.d.		n.d.		n.d.		
2254	CPSC-CH-C1001-09.3	<0.010		<0.004		----		----		
2255		----		----		----		----		
2256		n.d.		n.d.		n.d.		n.d.		
2258		----		----		----		----		
2265		----		----		0.016		----		
2266	EN15777	0.000		0.000		0.000		0.000		
2267		0		0		0		----		
2269		----		----		----		----		
2271	EN14372	<0.005		<0.005		<0.005		<0.005		
2272		----		----		----		----		
2284		<0.005		<0.005		<0.005		----		
2288	CPSC-CH-C1001-093	0.47	f+	<0.01		<0.01		----		
2289	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		----		
2290	CPSC-CH-C1001-09.3	<0.01		<0.01		<0.01		----		
2293		n.d.		n.d.		n.d.		n.d.		
2295	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		----		
2296		----		----		----		----		
2300	CPSC-CH-C1001-09.3	0.083	f+	0.005		----		----		
2301		----		----		----		----		
2310	CPSC-CH-C1001-09.3	n.d.		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.		n.d.		
2359		n.d.		n.d.		n.d.		----		
2361	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		----		
2366	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		----		
2372	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		----		

2375	EN14372	n.d.		n.d.	n.d.	----
2380		n.d.		n.d.	n.d.	----
2386	CPSC-CH-C1001-09.3	<0.010		<0.010	<0.010	4.698
2390		----		----	----	----
2403		n.d.		n.d.	n.d.	----
2409		n.d.		----	----	----
2410		----		----	----	----
2413	CPSC-CH-C1001-09.2	n.d.		n.d.	n.d.	n.d.
2423		n.d.		----	----	----
2424		----		----	----	----
2425		n.d.		n.d.	n.d.	n.d.
2426		n.d.		n.d.	n.d.	0
2429	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.	----
2431	CPSC-CH-C1001-09.3	<0.01		<0.01	<0.01	----
2432		----		----	----	----
2438		n.d.		n.d.	n.d.	----
2441		----		----	----	----
2442		----		----	----	----
2452		----		----	----	----
2459		----		----	----	----
2460	CPSC-CH-C1001-09.3	0		0.002	0	----
2464		----		----	----	----
2465	CPSC-CH-C1001-09.3	0.000		0.000	0.000	----
2470	CPSC-CH-C1001-09.3	<0.010		<0.005	----	----
2475	in house	n.d.		n.d.	n.d.	n.d.
2476		<0.006		<0.006	<0.006	n.d.
2482		----		----	----	----
2488		----		----	----	----
2489		<0.005		<0.005	<0.005	0
2492		0		0	0	0
2493		<0.010		<0.010	<0.010	----
2495		0.000		0.001	0.000	----
2496	CPSC-CH-C1001-09.3	0.000		0.000	0.000	----
2497		----		----	----	----
2503		----		----	----	----
2507		----		----	----	----
2509		----		----	----	----
2511		----		----	----	14.000
2514		----		----	----	----
2516	EN14372	0.255	f+	<0.005	<0.005	----
2522		----		----	----	----
2525	in house	<0.001		<0.001	<0.001	<0.001
2529		----		----	----	----
2532	CPSC-CH-C1001-09.3	<0.005		<0.005	<0.005	0
2543		0.278	f+	n.d.	n.d.	----
2548	CPSC-CH-C1001-09.3	n.d.		----	----	----
2549		n.d.		n.d.	n.d.	n.d.
2553		n.d.		n.d.	n.d.	----
2555	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.	n.d.
2558	EN15777	0		0	0	13.425
2560		<0.005		<0.005	<0.005	<0.005
2566		n.d.		n.d.	n.d.	n.d.
2581	CPSC-CH-C1001-09.3	<0.010		<0.002	<0.002	<0.002
2582	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.	----
2590		----		----	----	----
2591	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.	n.d.
2595		----		----	----	----
2614		n.d.		n.d.	n.d.	n.d.
2616		----		----	----	----
2618		n.d.		n.d.	n.d.	n.d.
2622		<0.01		<0.01	<0.01	<0.01
2625		----		----	----	----
3100	GB/T 22048	n.d.		n.d.	n.d.	n.d.
3107		n.d.		0.010	n.d.	----
3116	EN14372	n.d.		n.d.	n.d.	----
3117		----		----	----	----
3118		n.d.		n.d.	n.d.	----
3122		----		----	----	----
3146	CPSC	<0.01		<0.01	<0.01	----
3150		----		----	----	----
3153	CPSC-CH-C1001-09.3	<0.01		----	----	----
3163	in house	0.0600	f+	----	----	----
3166		----		----	----	6.736
3167		n.d.	C	----	----	----
3172		<0.01		----	----	----
3176		n.d.		n.d.	n.d.	n.d.
3180		----		----	----	13.452

3182		----		----	----	----
3185	EN14372	<0.010		<0.010	<0.010	<0.010
3190	CPSC-CH-C1001-09.3	<0.010		<0.010	<0.010	----
3197		----		----	----	----
3199	CPSD-AN-00095	0.0128		<0.005	<0.005	----
3200	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.	n.d.
3201	in house	0.012	C	n.d.	n.d.	13.9
3203	CPSC-CH-C1001-09.3	0.000		0.000	0.000	----
3210		----		----	----	----
3214	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.	n.d.
3218	CPSC-CH-C1001-09.3	<0.01		<0.01	<0.01	----
3220	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.	n.d.
3225	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.	n.d.
3228	CPSC-CH-C1001-09.3	n.d.		n.d.	n.d.	n.d.
3237		----		----	----	----
3238		----		----	----	----
3242		n.d.		n.d.	n.d.	----
3246	in house	n.d.		n.d.	n.d.	n.d.
3248		0.016		----	----	26.0
8005		----		----	----	----
8006	JTSS-ST2012	n.d.		n.d.	n.d.	----
8007	CPSC-CH-C1001	n.d.		n.d.	n.d.	----
	normality	n.a.		n.a.	n.a.	
	n	108		104	98	
	outliers	0 + 8 false pos.		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 1132: first reported 0.322

Lab 2129: first reported 0.122

Lab 2218: first reported 0.120

Lab 3167: first reported 0.5199

Lab 3201: first reported 0.120

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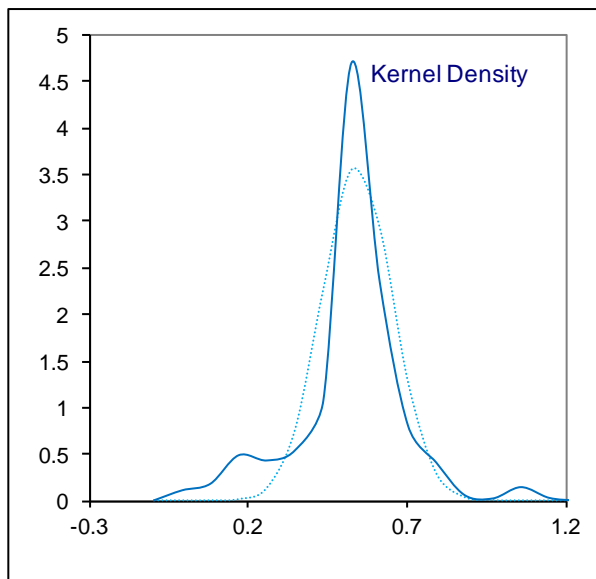
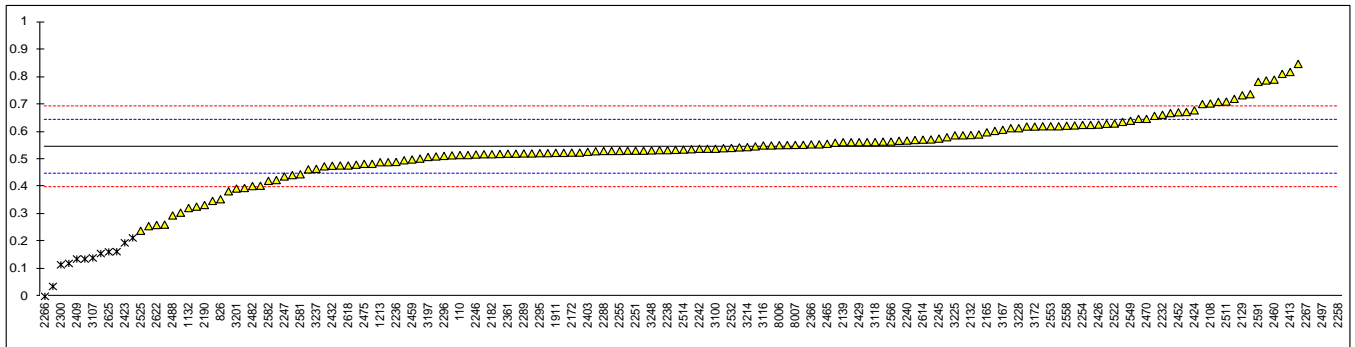
Determination of DINP on sample #14066; results in %M/M

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110		0.515		-0.61	2375	EN14372	0.737		3.91
213		-----		-----	2380		0.531		-0.29
310		0.518		-0.55	2386	CPSC-CH-C1001-09.3	0.534		-0.23
330		0.57		0.51	2390		1.0761	R(0.01)	10.82
339	in house	0.474		-1.45	2403		0.5269		-0.37
362		1.855	C,R(0.01)	26.70	2409		0.136	C,R(0.01)	-8.34
551		0.522		-0.47	2410		0.523		-0.45
622		-----		-----	2413	CPSC-CH-C1001-09.2	0.818		5.56
826		0.354		-3.90	2423		0.195	C,R(0.01)	-7.14
1051	CPSC-CH-C1001-09.3	0.8473		6.16	2424	CPSC-CH-C1001-09.3	0.678		2.71
1132		0.322	C	-4.55	2425		0.51		-0.72
1213		0.489		-1.14	2426		0.6261		1.65
1911	CPSC-CH-C1001-09.3	0.523		-0.45	2429	CPSC-CH-C1001-09.3	0.562		0.34
2104		0.383		-3.30	2431	CPSC-CH-C1001-09.3	0.524		-0.43
2108	ISO14389	0.703		3.22	2432	CPSC-CH-C1001-09.3	0.476		-1.41
2115	CPSC-CH-C1001	0.811		5.42	2438		0.623		1.59
2127		0.496		-1.00	2441	CPSC-CH-C1001-09.3	0.613		1.38
2129		0.733		3.83	2442	in house	0.48		-1.33
2132	CPSC-CH-C1001-09.3	0.588		0.87	2452	CPSC-CH-C1001-09.1	0.671		2.57
2135		0.256		-5.89	2459	CPSC-CH-C1001-09.3	0.499		-0.94
2139	CPSC-CH-C1001-09.3	0.562		0.34	2460	CPSC-CH-C1001-09.3	0.790		4.99
2156		0.502		-0.88	2464	CPSC-CH-C1001-09.3	0.701	C	3.18
2165	CPSC-CH-C1001-09.3	0.598		1.08	2465	CPSC-CH-C1001-09.3	0.556		0.22
2169	CPSC-CH-C1001-09.3	0.709		3.34	2470	CPSC-CH-C1001-09.3	0.647		2.08
2172		0.524		-0.43	2475	in house	0.483		-1.27
2182	CPSC-CH-C1001-09.3	0.518		-0.55	2476		0.5871		0.86
2184	JTSS-ST2012	0.603		1.18	2482		0.402		-2.92
2190		0.333		-4.32	2488	in house	0.2949024		-5.10
2196		0.5523		0.15	2489		0.514		-0.63
2201	CPSC-CH-C1001-09.3	0.572		0.55	2492		0.5467		0.03
2213		0.720		3.56	2493		0.787		4.93
2217	CPSC-CH-C1001-09.3	0.477		-1.39	2495		0.213	R(0.01)	-6.77
2218		0.560		0.30	2496	CPSC-CH-C1001-09.3	0.620		1.53
2225		0.5515		0.13	2497	CPSC-CH-C1001-09.3	1.0997	C,R(0.01)	11.30
2229	EN14372	0.672		2.59	2503		-----		-----
2232		0.662		2.38	2507		0.636		1.85
2234	GB/T 22048	0.562		0.34	2509	CPSC-CH-C1001-09.3	0.515		-0.61
2236		0.490		-1.12	2511		0.710		3.36
2237	in house	0.40316		-2.89	2514	CPSC-CH-C1001-09.3	0.535		-0.21
2238	CPSC-CH-C1001-09.3	0.533		-0.25	2516	EN14372	0.036	R(0.01)	-10.38
2240		0.568		0.47	2522		0.630		1.73
2242		0.538		-0.15	2525	in house	0.239		-6.24
2245		0.575		0.61	2529	CPSC-CH-C1001-09.3	0.463		-1.67
2246		0.517		-0.57	2532	CPSC-CH-C1001-09.3	0.541		-0.08
2247		0.437		-2.20	2543		0.668		2.50
2251	EN14372	0.531		-0.29	2548	CPSC-CH-C1001-09.3	0.348	C	-4.02
2253		0.5621		0.35	2549		0.640		1.93
2254	CPSC-CH-C1001-09.3	0.625		1.63	2553		0.6200		1.53
2255	CPSC-CH-C1001-09.3	0.53		-0.31	2555	CPSC-CH-C1001-09.3	0.538		-0.15
2256		0.519		-0.53	2558	EN15777	0.622		1.57
2258		22.47	R(0.01)	446.88	2560		0.424		-2.47
2265		-----		-----	2566		0.5642		0.39
2266	EN15777	0.000	R(0.01)	-11.11	2581	CPSC-CH-C1001-09.3	0.445		-2.04
2267		1.023	R(0.01)	9.74	2582	CPSC-CH-C1001-09.3	0.421		-2.53
2269		0.5363		-0.18	2590	ISO/TS16181	0.136	R(0.01)	-8.34
2271	EN14372	0.530		-0.31	2591	CPSC-CH-C1001-09.3	0.782		4.83
2272		0.2613		-5.79	2595		-----		-----
2284		0.442		-2.10	2614		0.5712		0.53
2288	CPSC-CH-C1001-09.3	0.53		-0.31	2616		-----		-----
2289	CPSC-CH-C1001-09.3	0.521		-0.49	2618		0.477		-1.39
2290	CPSC-CH-C1001-09.3	0.619		1.51	2622		0.260		-5.81
2293		0.305		-4.89	2625	CPSC-CH-C1001-09	0.162	R(0.01)	-7.81
2295	CPSC-CH-C1001-09.3	0.522	C	-0.47	3100	GB/T 22048	0.538		-0.15
2296	CPSC-CH-C1001-09.3	0.512		-0.68	3107		0.140	R(0.01)	-8.26
2300	CPSC-CH-C1001-09.3	0.115	R(0.01)	-8.77	3116	EN14372	0.550		0.10
2301	CPSC-CH-C1001-09.3	0.647		2.08	3117		0.620		1.53
2310	CPSC-CH-C1001-09.3	0.54		-0.10	3118		0.5622	C	0.35
2311	CPSC-CH-C1001-09.3	0.531		-0.29	3122		0.327		-4.45
2313	CPSC-CH-C1001-09.3	0.564		0.38	3146	CPSC	0.59		0.91
2359		0.520		-0.51	3150		0.1560	C,R(0.01)	-7.93
2361	CPSC-CH-C1001-09.3	0.520		-0.51	3153	CPSC-CH-C1001-09.3	0.629		1.71
2366	CPSC-CH-C1001-09.3	0.554		0.18	3163	in house	0.1200	R(0.01)	-8.67
2372	CPSC-CH-C1001-09.3	0.533		-0.25	3166	in house	0.489		-1.14

3167		0.6071	1.26	3214	CPSC-CH-C1001-09.3	0.544		-0.02
3172		0.619	1.51	3218	CPSC-CH-C1001-09.3	0.543		-0.04
3176		0.567	0.45	3220	CPSC-CH-C1001-09.3	n.d.	false -	-----
3180		-----	-----	3225	CPSC-CH-C1001-09.3	0.587		0.85
3182		0.163	C,R(0.01)	3228	CPSC-CH-C1001-09.3	0.613		1.38
3185	EN14372	0.529	-0.33	3237		0.46477		-1.64
3190	CPSC-CH-C1001-09.3	0.554	0.18	3238		0.58		0.71
3197		0.508	-0.76	3242		0.521		-0.49
3199	CPSD-AN-00095	0.483	-1.27	3246	in house	0.550		0.10
3200	CPSC-CH-C1001-09.3	0.658	2.30	3248		0.532		-0.27
3201	in house	0.393	-3.10	8005		-----		-----
3203	CPSC-CH-C1001-09.3	0.625	1.63	8006	JTSS-ST2012	0.551		0.12
3210		0.395	-3.06	8007	CPSC-CH-C1001	0.552		0.14

		Only THF	Other
normality	suspect	suspect	OK
n	146	103	45
outliers	17	8	9
mean (n)	0.5451	0.5569	0.5176
st.dev. (n)	0.11092	0.10114	0.12565
R(calc.)	0.3106	0.2832	0.3518
R(EN14372:04)	0.1374	0.1403	0.1304
Compare R(Horwitz) = 0.1003			

Lab 362: first reported 1.134
 Lab 1132: first reported 0.304
 Lab 2295: first reported 1.01
 Lab 2409: first reported 0.099
 Lab 2423: first reported 1.155
 Lab 2464: first reported 0.994
 Lab 2497: first reported 10.997
 Lab 2548: first reported 0.0348
 Lab 3118: first reported 0.1081
 Lab 3150: first reported 0.1122
 Lab 3182: first reported 0.092



Determination of DEHP on sample #14066; results in %M/M

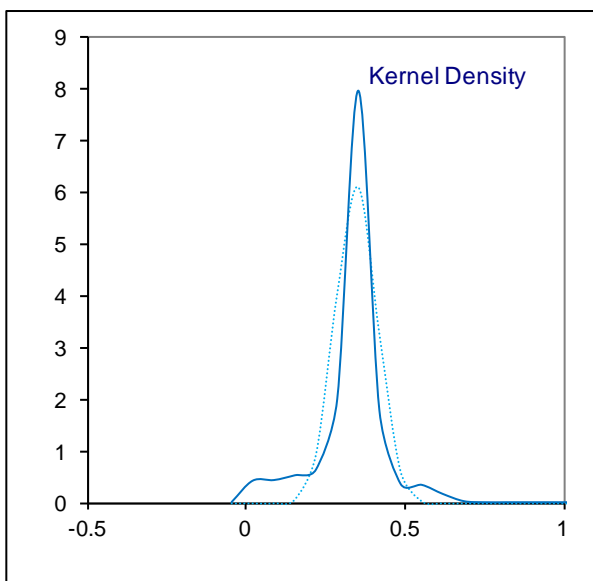
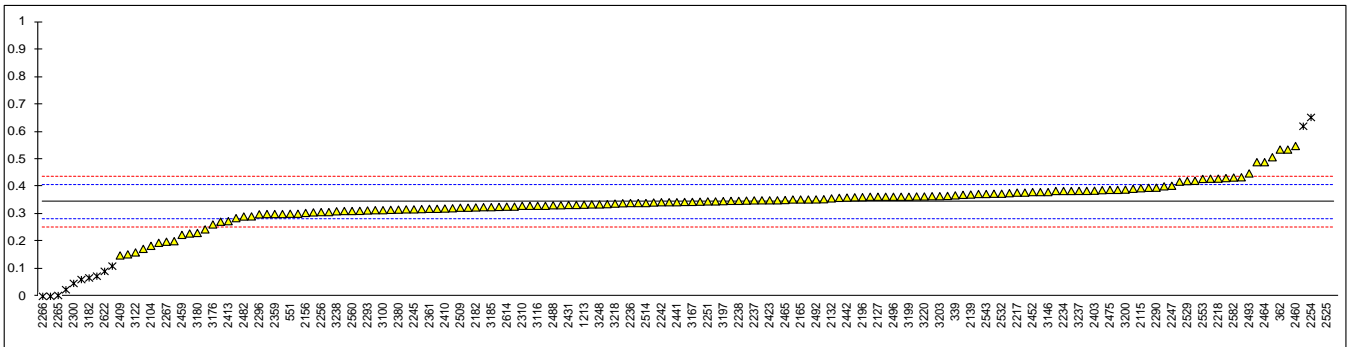
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
110		0.353		0.28	2375	EN14372	0.507		5.25
213		-----		-----	2380		0.316		-0.92
310		0.384		1.28	2386	CPSC-CH-C1001-09.3	3.614	R(0.01)	105.49
330		0.318		-0.85	2390		0.3153		-0.94
339	in house	0.368		0.76	2403		0.3850		1.31
362		0.535		6.15	2409		0.149	C	-6.30
551		0.301		-1.40	2410		0.320		-0.79
622		0.384	C	1.28	2413	CPSC-CH-C1001-09.2	0.274		-2.27
826		0.201		-4.63	2423		0.350		0.18
1051	CPSC-CH-C1001-09.3	0.3843		1.29	2424	CPSC-CH-C1001-09.3	0.374		0.96
1132		0.244		-3.24	2425		0.30		-1.43
1213		0.334		-0.33	2426		0.3489		0.15
1911		0.359		0.47	2429	CPSC-CH-C1001-09.3	0.343		-0.04
2104		0.184		-5.17	2431	CPSC-CH-C1001-09.3	0.333		-0.37
2108	ISO14389	0.535		6.15	2432	CPSC-CH-C1001-09.3	0.350		0.18
2115	CPSC-CH-C1001	0.394		1.60	2438		0.272		-2.34
2127		0.363		0.60	2441	CPSC-CH-C1001-09.3	0.343		-0.04
2129		0.364		0.63	2442	in house	0.36		0.50
2132	CPSC-CH-C1001-09.3	0.357		0.41	2452	CPSC-CH-C1001-09.1	0.380		1.15
2135		0.173		-5.53	2459	CPSC-CH-C1001-09.3	0.224		-3.88
2139	CPSC-CH-C1001-09.3	0.371		0.86	2460	CPSC-CH-C1001-09.3	0.548		6.57
2156		0.304		-1.30	2464	CPSC-CH-C1001-09.3	0.489		4.67
2165	CPSC-CH-C1001-09.3	0.353		0.28	2465	CPSC-CH-C1001-09.3	0.351		0.21
2169	CPSC-CH-C1001-09.3	0.392		1.54	2470	CPSC-CH-C1001-09.3	0.434		2.89
2172		0.300		-1.43	2475	in house	0.388		1.41
2182	CPSC-CH-C1001-09.3	0.324		-0.66	2476		0.4210		2.47
2184	JTSS-ST2012	0.348		0.12	2482		0.291		-1.72
2190		0.229		-3.72	2488	in house	0.3320	C	-0.40
2196		0.3614		0.55	2489		0.363		0.60
2201	CPSC-CH-C1001-09.3	0.365		0.67	2492		0.3533		0.29
2213		0.489		4.67	2493		0.448		3.34
2217	CPSC-CH-C1001-09.3	0.378		1.08	2495		0.306		-1.24
2218		0.429		2.73	2496	CPSC-CH-C1001-09.3	0.363		0.60
2225		0.3610		0.54	2497	CPSC-CH-C1001-09.3	0.3956	C	1.65
2229	EN14372	0.346		0.05	2503		-----		-----
2232		0.335		-0.30	2507		0.373		0.92
2234	GB/T 22048	0.384		1.28	2509	CPSC-CH-C1001-09.3	0.323		-0.69
2236		0.340		-0.14	2511		0.387		1.38
2237	in house	0.34977		0.17	2514	CPSC-CH-C1001-09.3	0.340		-0.14
2238	CPSC-CH-C1001-09.3	0.348		0.12	2516	EN14372	0.024	R(0.01)	-10.34
2240		0.363		0.60	2522		0.380		1.15
2242		0.343		-0.04	2525	in house	6.6000	C,R(0.01)	201.83
2245		0.317		-0.88	2529	CPSC-CH-C1001-09.3	0.420		2.44
2246		0.317		-0.88	2532	CPSC-CH-C1001-09.3	0.374		0.96
2247		0.403		1.89	2543		0.373		0.92
2251	EN14372	0.346		0.05	2548	CPSC-CH-C1001-09.3	0.376		1.02
2253		0.344		-0.01	2549		0.431		2.79
2254	CPSC-CH-C1001-09.3	0.652	R(0.01)	9.93	2553		0.4280		2.70
2255	CPSC-CH-C1001-09.3	0.34		-0.14	2555	CPSC-CH-C1001-09.3	0.363		0.60
2256		0.307		-1.21	2558	EN15777	0.418		2.38
2258		16.85	R(0.01)	532.54	2560		0.311		-1.08
2265		0.003	R(0.01)	-11.01	2566		0.3393		-0.16
2266	EN15777	0.000	R(0.01)	-11.11	2581	CPSC-CH-C1001-09.3	0.195		-4.82
2267		0.199		-4.69	2582	CPSC-CH-C1001-09.3	0.433		2.86
2269		0.3115		-1.06	2590	ISO/TS16181	0.153		-6.17
2271	EN14372	0.311		-1.08	2591	CPSC-CH-C1001-09.3	0.307		-1.21
2272		0.2914		-1.71	2595		0.00004	R(0.01)	-11.11
2284		0.330		-0.46	2614		0.3268		-0.57
2288	CPSC-CH-C1001-09.3	0.37		0.83	2616		-----		-----
2289	CPSC-CH-C1001-09.3	0.342		-0.08	2618		0.319		-0.82
2290	CPSC-CH-C1001-09.3	0.396		1.67	2622		0.091	R(0.01)	-8.18
2293		0.313		-1.01	2625	CPSC-CH-C1001-09	0.378		1.08
2295	CPSC-CH-C1001-09.3	0.321	C	-0.75	3100	GB/T 22048	0.314		-0.98
2296	CPSC-CH-C1001-09.3	0.299		-1.46	3107		0.061	R(0.01)	-9.14
2300	CPSC-CH-C1001-09.3	0.047	R(0.01)	-9.59	3116	EN14372	0.330		-0.46
2301	CPSC-CH-C1001-09.3	0.285		-1.92	3117		0.336		-0.27
2310	CPSC-CH-C1001-09.3	0.33		-0.46	3118		0.4287		2.72
2311	CPSC-CH-C1001-09.3	0.325		-0.63	3122		0.160		-5.95
2313	CPSC-CH-C1001-09.3	0.326		-0.59	3146	CPSC	0.38		1.15
2359		0.300		-1.43	3150		0.0734	C,R(0.01)	-8.74
2361	CPSC-CH-C1001-09.3	0.319		-0.82	3153	CPSC-CH-C1001-09.3	0.388		1.41
2366	CPSC-CH-C1001-09.3	0.350		0.18	3163	in house	0.1100	R(0.01)	-7.56
2372	CPSC-CH-C1001-09.3	0.314		-0.98	3166	in house	0.327		-0.56

3167		0.3442	-0.01	3214	CPSC-CH-C1001-09.3	0.333	-0.37
3172		0.345	0.02	3218	CPSC-CH-C1001-09.3	0.338	-0.21
3176		0.262	-2.66	3220	CPSC-CH-C1001-09.3	0.364	0.63
3180		0.231	-3.66	3225	CPSC-CH-C1001-09.3	0.353	0.28
3182		0.067	R(0.01)	3228	CPSC-CH-C1001-09.3	0.354	0.31
3185	EN14372	0.325	-0.63	3237		0.38428	1.29
3190	CPSC-CH-C1001-09.3	0.366	0.70	3238		0.31	-1.11
3197		0.347	0.08	3242		0.301	-1.40
3199	CPSD-AN-00095	0.363	0.60	3246	in house	0.401	1.83
3200	CPSC-CH-C1001-09.3	0.389	1.44	3248		0.335	-0.30
3201	in house	0.62	C,R(0.01)	8005	ASTM F963	n.d.	false -
3203	CPSC-CH-C1001-09.3	0.365	0.67	8006	JTSS-ST2012	0.330	-0.46
3210		0.323	-0.69	8007	CPSC-CH-C1001	0.332	-0.40

normality not OK
n 153
outliers 15
mean (n) 0.3444
st.dev. (n) 0.06529
R(calc.) 0.1828
R(EN14372:04) 0.0868
Compare R(Horwitz) = 0.0500

Only THF	Other
not OK	suspect
108	47
6	10
0.3523	0.3283
0.05668	0.07977
0.1587	0.2234
0.0888	0.0827

Lab 622: first reported 0.269
Lab 2295: first reported 1.28
Lab 2409: first reported 0.057
Lab 2488: first reported 0.13204
Lab 2497: first reported 3.956
Lab 2525: first reported 0.066
Lab 3150: first reported 0.0301
Lab 3201: first reported 0.123



Determination of DBP, BBP, DIDP and DNOP on sample #14066; results in %M/M

lab	method	DBP	mark	BBP	mark	DIDP	mark	DNOP	mark	remark
110		n.d.		n.d.		n.d.		n.d.		
213		----		----		----		----		
310		----		----		----		----		
330		<0.002		<0.005		0.02		<0.02		
339	in house	0.0008		0.0005		0.0194		<0.0001		
362		<0.003		<0.003		<0.010		<0.003		
551		0.003992		0.050232	f+	n.d.		0.115135	f+	
622		----		----		----		----		
826		n.d.		n.d.		n.d.		n.d.		
1051	CPSC-CH-C1001-09.3	<0.005		<0.005		<0.005		<0.005		
1132		n.d.		n.d.		<0.08	C	n.d.		
1213		n.d.		n.d.		n.d.		n.d.		
1911		----		----		----		----		
2104		----		----		0.0114		----		
2108		----		----		----		----		
2115	CPSC-CH-C1001	n.d.		n.d.		n.d.		n.d.		
2127		0.001		0.001		0.0211	f+	0.0001		
2129		<0.02		<0.02		0.023	f+	<0.02		
2132	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		n.d.		
2135		----		----		----		----		
2139		----		----		----		----		
2156		0.005		0.005		0.005		0.005		
2165	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		n.d.		
2169	CPSC-CH-C1001-09.3	<0.001		<0.001		0.002		0.002		
2172		<0.005		<0.005		<0.005		<0.005		
2182	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		n.d.		
2184	JTSS-ST2012	n.d.		n.d.		n.d.		n.d.		
2190		----		----		----		----		
2196		----		----		----		----		
2201	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		<0.010		
2213		n.d.		n.d.		n.d.		n.d.		
2217		----		----		----		----		
2218		----		----		0.026	f+	----		
2225		<0.015		<0.015		<0.015		<0.015		
2229	EN14372	<0.010		<0.010		<0.020		<0.010		
2232		----		----		----		----		
2234	GB/T 22048	<0.003		<0.003		<0.01		<0.003		
2236		----		----		----		----		
2237	in house	<0.001		<0.001		0.013710		<0.001		
2238	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		<0.010		
2240		----		----		----		----		
2242		----		----		----		----		
2245		n.d.		n.d.		n.d.		n.d.		
2246		<0.01		<0.01		<0.01		<0.01		
2247		<0.005		<0.005		<0.005		<0.005		
2251	EN14372	n.d.		n.d.		n.d.		n.d.		
2253		n.d.		n.d.		n.d.		n.d.		
2254	CPSC-CH-C1001-09.3	<0.004		<0.004		<0.010		<0.004		
2255		----		----		----		----		
2256		n.d.		n.d.		n.d.		n.d.		
2258		5.87	f+	----		----		----		
2265		----		----		----		----		
2266	EN15777	0.000		0.000		0.000		0.000		
2267		0		0		0.106	f+	0		
2269		----		----		----		----		
2271	EN14372	<0.005		<0.005		<0.005		<0.005		
2272		----		----		----		----		
2284		<0.005		<0.005		0.020		<0.005		
2288	CPSC-CH-C1001-09.3	<0.01		<0.01		0.023	f+	<0.01		
2289	CPSC-CH-C1001-09.3	<0.010		<0.010		<0.010		<0.010		
2290	CPSC-CH-C1001-09.3	<0.01		<0.01		<0.01		<0.01		
2293		n.d.		n.d.		n.d.		n.d.		
2295	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		n.d.		
2296		----		----		----		----		
2300		----		----		----		----		
2301		----		----		----		----		
2310	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		n.d.		
2311	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		n.d.		
2313	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		n.d.		
2359		n.d.		n.d.		n.d.		n.d.		
2361	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		n.d.		

2366	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.	n.d.		
2372	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.	n.d.		
2375	EN14372	n.d.	n.d.	n.d.	n.d.		
2380		n.d.	n.d.	n.d.	n.d.		
2386	CPSC-CH-C1001-09.3	<0.010	<0.010	<0.010	<0.010		
2390		----	----	0.0369	----		
2403		n.d.	n.d.	n.d.	n.d.		
2409		n.d.	n.d.	n.d.	n.d.		
2410		----	----	----	----		
2413	CPSC-CH-C1001-09.2	n.d.	n.d.	n.d.	n.d.		
2423		n.d.	n.d.	n.d.	0.037		f+
2424		----	----	0.026	----	f+	
2425		n.d.	n.d.	n.d.	n.d.		
2426		n.d.	n.d.	n.d.	n.d.		
2429	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.	n.d.		
2431	CPSC-CH-C1001-09.3	<0.01	<0.01	<0.01	<0.01		
2432		----	----	----	----		
2438		n.d.	n.d.	0.022	n.d.	f+	
2441		----	----	----	----		
2442	in house	0.02	----	----	----		
2452		----	----	----	----		
2459		----	----	----	----		
2460	CPSC-CH-C1001-09.3	0	0	0	0		
2464		----	----	----	----		
2465	CPSC-CH-C1001-09.3	0.000	0.000	0.000	0.000		
2470	CPSC-CH-C1001-09.3	<0.005	<0.005	<0.010	<0.005		
2475	in house	n.d.	n.d.	0.014	n.d.		
2476		<0.006	<0.006	<0.006	<0.006		
2482		----	----	0.0177	----		
2488		----	----	----	----		
2489		<0.005	<0.005	<0.005	<0.005		
2492		0	0	0	0		
2493		<0.010	<0.010	<0.010	<0.010		
2495		0.001	0.000	0.017	0.000		
2496	CPSC-CH-C1001-09.3	0.000	0.000	0.000	0.000		
2497		----	----	----	----		
2503		----	----	----	----		
2507		<0.100	<0.100	<0.100	<0.100		
2509		----	----	----	----		
2511		----	----	----	----		
2514		----	----	----	----		
2516	EN14372	<0.005	<0.005	0.005	<0.005		
2522		----	----	----	----		
2525	in house	<0.001	<0.001	<0.001	<0.001		
2529		----	----	----	----		
2532	CPSC-CH-C1001-09.3	<0.005	<0.005	<0.005	<0.005		
2543		n.d.	n.d.	0.023	n.d.	f+	
2548	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.	n.d.		
2549		n.d.	n.d.	n.d.	n.d.		
2553		n.d.	n.d.	n.d.	n.d.		
2555	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.	n.d.		
2558	EN15777	0	0	0	0		
2560		<0.005	<0.005	<0.005	<0.005		
2566		n.d.	n.d.	n.d.	n.d.		
2581	CPSC-CH-C1001-09.3	<0.002	<0.002	0.012	0.002		
2582	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.	n.d.		
2590		----	----	----	----		
2591	CPSC-CH-C1001-09.3	n.d.	0.003	n.d.	n.d.		
2595		0.00007	----	----	0.013		
2614		n.d.	n.d.	n.d.	n.d.		
2616		----	----	----	----		
2618		n.d.	n.d.	n.d.	n.d.		
2622		<0.01	<0.01	<0.01	<0.01		
2625		----	----	----	----		
3100	GB/T 22048	n.d.	n.d.	n.d.	n.d.		
3107		0.003	n.d.	n.d.	n.d.		
3116	EN14372	n.d.	n.d.	n.d.	n.d.		
3117		----	----	----	----		
3118		n.d.	n.d.	n.d.	n.d.		
3122		----	----	----	----		
3146	CPSC	<0.01	<0.01	<0.01	<0.01		
3150		----	----	0.0032	----		
3153	CPSC-CH-C1001-09.3	<0.01	<0.01	<0.01	<0.01		
3163		----	----	----	----		
3166		----	----	----	----		
3167		----	----	0.0217	----	f+	
3172		<0.01	<0.01	<0.01	<0.01		

3176		n.d.	n.d.	n.d.	n.d.
3180		----	----	----	----
3182		----	----	----	----
3185	EN14372	<0.010	<0.010	<0.010	<0.010
3190	CPSC-CH-C1001-09.3	<0.010	<0.010	<0.010	<0.010
3197		----	----	----	----
3199	CPSD-AN-00095	<0.005	<0.005	<0.005	<0.005
3200	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.	n.d.
3201	in house	n.d.	n.d.	n.d.	n.d.
3203	CPSC-CH-C1001-09.3	0.000	0.000	0.000	0.000
3210		----	----	----	----
3214	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.	n.d.
3218	CPSC-CH-C1001-09.3	<0.01	<0.01	<0.01	<0.01
3220	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.	n.d.
3225	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.	n.d.
3228	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.	n.d.
3237		----	----	----	----
3238		----	----	----	----
3242		n.d.	n.d.	n.d.	n.d.
3246	in house	n.d.	n.d.	n.d.	n.d.
3248		----	----	----	----
8005		----	----	----	----
8006	JTSS-ST2012	n.d.	n.d.	n.d.	n.d.
8007	CPSC-CH-C1001	n.d.	n.d.	n.d.	n.d.
	normality	n.a.	n.a.	n.a.	n.a.
	n	112	106	108	109
	outliers	0 + 1 false pos.	0 + 1 false pos.	0 + 9 false pos.	0 + 2 false pos
	mean (n)	<0.02	<0.02	<0.02	<0.02
	st.dev. (n)	n.a.	n.a.	n.a.	n.a.
	R(calc.)	n.a.	n.a.	n.a.	n.a.
	R(EN14372)	n.a.	n.a.	n.a.	n.a.

Lab 1132: first reported 0.023

Determination of DiBP, DHP and Other Phthalates on sample #14066; results in %M/M

lab	method	DiBP	mark	DHP	mark	other	mark	remark
110		n.d.		n.d.		----		
213		----		----		----		
310		----		----		----		
330		<0.02		----		<0.02		
339	in house	<0.0001		<0.0001		----		
362		<0.003		<0.003		----		
551		n.d.		n.d.		----		
622		----		----		----		
826		n.d.		n.d.		----		
1051		----		----		----		
1132		----		----		----		
1213		n.d.		n.d.		----		
1911		----		----		----		
2104		0.0011		----		----		
2108		----		----		----		
2115	CPSC-CH-C1001	n.d.		n.d.		n.d.		
2127		0.0001		----		----		
2129		<0.02		<0.02		<0.02		
2132	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2135		----		----		----		
2139		----		----		----		
2156		0.005		0.005		----		
2165	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2169	CPSC-CH-C1001-09.3	<0.001		<0.001		----		
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		----		----		----		
2196		----		----		----		
2201	CPSC-CH-C1001-09.3	<0.010		<0.010		----		
2213		n.d.		n.d.		n.d.		
2217		----		----		----		
2218		----		----		----		
2225		----		----		----		
2229	EN14372	<0.010		<0.010		<0.010		
2232		----		----		----		
2234	GB/T 22048	<0.003		<0.003		----		
2236		----		----		----		
2237	in house	<0.001		<0.001		----		
2238	CPSC-CH-C1001-09.3	<0.010		<0.010		----		
2240		----		----		----		
2242		----		----		----		
2245		n.d.		n.d.		----		
2246		<0.01		<0.01		<0.01		
2247		<0.005		<0.005		0		
2251		----		----		----		
2253		n.d.		n.d.		n.d.		
2254	CPSC-CH-C1001-09.3	<0.004		----		----		
2255		----		----		----		
2256		n.d.		n.d.		n.d.		
2258		----		----		----		
2265		----		----		0.005		
2266	EN15777	0.000		0.000		0.000		
2267		0		0		0		
2269		----		----		----		
2271	EN14372	<0.005		<0.005		<0.005		
2272		----		----		----		
2284		<0.005		<0.005		----		
2288	CPSC-CH-C1001-09.3	<0.01		<0.01		----		
2289	CPSC-CH-C1001-09.3	<0.010		<0.010		----		
2290	CPSC-CH-C1001-09.3	<0.01		<0.01		----		
2293		n.d.		n.d.		n.d.		
2295	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2296		----		----		----		
2300		----		----		----		
2301		----		----		----		
2310	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2311	CPSC-CH-C1001-09.3	n.d.		n.d.		----		
2313	CPSC-CH-C1001-09.3	n.d.		n.d.		n.d.		
2359		n.d.		n.d.		----		
2361	CPSC-CH-C1001-09.3	n.d.		n.d.		----		
2366	CPSC-CH-C1001-09.3	n.d.		n.d.		----		
2372	CPSC-CH-C1001-09.3	n.d.		n.d.		----		

2375	EN14372	n.d.	n.d.	----
2380		n.d.	n.d.	n.d.
2386	CPSC-CH-C1001-09.3	<0.010	<0.010	----
2390		----	----	----
2403		n.d.	n.d.	----
2409		----	----	----
2410		----	----	----
2413	CPSC-CH-C1001-09.2	n.d.	n.d.	n.d.
2423		----	----	----
2424		----	----	----
2425		n.d.	n.d.	n.d.
2426		n.d.	n.d.	0
2429	CPSC-CH-C1001-09.3	n.d.	n.d.	----
2431	CPSC-CH-C1001-09.3	<0.01	<0.01	----
2432		----	----	----
2438		n.d.	n.d.	----
2441		----	----	----
2442		----	----	----
2452		----	----	----
2459		----	----	----
2460	CPSC-CH-C1001-09.3	0	0	----
2464		----	----	----
2465	CPSC-CH-C1001-09.3	0.000	0.000	----
2470	CPSC-CH-C1001-09.3	<0.005	----	----
2475	in house	n.d.	n.d.	n.d.
2476		<0.006	<0.006	n.d.
2482		----	----	----
2488		----	----	----
2489		<0.005	<0.005	0
2492		0	0	0
2493		<0.010	<0.010	----
2495		0.000	0.000	----
2496	CPSC-CH-C1001-09.3	0.000	0.000	----
2497		----	----	----
2503		----	----	----
2507		----	----	----
2509		----	----	----
2511		----	----	----
2514		----	----	----
2516	EN14372	<0.005	<0.005	----
2522		----	----	----
2525	in house	<0.001	<0.001	<0.001
2529		----	----	----
2532	CPSC-CH-C1001-09.3	<0.005	<0.005	0
2543		n.d.	n.d.	----
2548		----	----	----
2549		n.d.	n.d.	n.d.
2553		n.d.	n.d.	----
2555	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
2558	EN15777	0	0	0
2560		<0.005	<0.005	<0.005
2566		n.d.	n.d.	n.d.
2581	CPSC-CH-C1001-09.3	<0.002	<0.002	<0.002
2582	CPSC-CH-C1001-09.3	n.d.	n.d.	----
2590		----	----	----
2591	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
2595		----	----	----
2614		n.d.	n.d.	----
2616		----	----	----
2618		n.d.	n.d.	n.d.
2622		<0.01	<0.01	<0.01
2625		----	----	----
3100	GB/T 22048	n.d.	n.d.	n.d.
3107		0.010	n.d.	----
3116	EN14372	n.d.	n.d.	----
3117		----	----	----
3118		n.d.	n.d.	----
3122		----	----	----
3146	CPSC	<0.01	<0.01	----
3150		----	----	----
3153		----	----	----
3163		----	----	----
3166		----	----	----
3167		----	----	----
3172		----	----	----
3176		n.d.	n.d.	n.d.
3180		----	----	----

3182		----	----	----
3185	EN14372	<0.010	<0.010	<0.010
3190	CPSC-CH-C1001-09.3	<0.010	<0.010	----
3197		----	----	----
3199	CPSD-AN-00095	<0.005	<0.005	----
3200	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
3201	in house	n.d.	n.d.	n.d.
3203	CPSC-CH-C1001-09.3	0.000	0.000	----
3210		----	----	----
3214	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
3218	CPSC-CH-C1001-09.3	<0.01	<0.01	----
3220	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
3225	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
3228	CPSC-CH-C1001-09.3	n.d.	n.d.	n.d.
3237		----	----	----
3238		----	----	----
3242		n.d.	n.d.	----
3246	in house	0.0012	n.d.	n.d.
3248		----	----	----
8005		----	----	----
8006	JTSS-ST2012	n.d.	n.d.	----
8007	CPSC-CH-C1001	n.d.	n.d.	----
	normality	n.a.	n.a.	
	n	103	98	
	outliers	0	0	
	mean (n)	<0.02	<0.02	
	st.dev. (n)	n.a.	n.a.	
	R(calc.)	n.a.	n.a.	
	R(EN14372)	n.a.	n.a.	

APPENDIX 2**Method information**

lab	Type(s) of plastic identified	Identification Technique	Extraction Technique	Solvent used
110	unknown	FTIR	Ultrasonic	THF:hexane
213	--	--	--	--
310	Polyester / PVC	FTIR	Ultrasonic	THF
330	--	--	Soxhlet	DCM:methanol
339	--	--	Soxhlet	DCM:methanol
362	--	--	Ultrasonic	Chloroform
551	--	--	Ultrasonic	THF: hexane
622	--	--	Ultrasonic	THF
826	Poly pallet	--	Soxhlet	DCM:methanol
1051	--	--	Soxhlet	Diethylether:THF
1132	PVC	FTIR	Ultrasonic	THF
1213	--	--	Ultrasonic	THF
1911	PVC	Beilsteintest	Soxhlet	DCM
2104	--	--	--	DCM
2108	PVC	Beilsteintest	Ultrasonic	THF
2115	PVC / PVC	IR	Mechanical Shaker	THF
2127	--	--	--	--
2129	PVC	FTIR	Ultrasonic	THF
2132	PVC	FTIR	Mechanical Shaker	THF
2135	--	--	Ultrasonic	THF:methanol
2139	PVC	FTIR	Ultrasonic	THF
2156	--	--	Soxhlet	DCM
2165	--	--	Ultrasonic	THF
2169	Calciumcarbonate/PVC	FTIR	Ultrasonic	THF:hexane
2172	PVC	FTIR	Ultrasonic	THF
2182	PVC	Flame test	Ultrasonic	THF
2184	--	--	Shaking	Acetone:hexane
2190	PVC	FTIR	ASE	Hexane:Ethylacetate
2196	PP/PVC	--	Ultrasonic	THF
2201	--	--	Ultrasonic	THF:n-hexane
2213	--	--	Ultrasonic	THF
2217	--	--	Ultrasonic	Toluene / THF
2218	--	--	Ultrasonic	THF
2225	--	--	Ultrasonic	THF
2229	--	--	Soxhlet / Ultrasonic	Ethylether / DCM
2232	PVC / PVC	FTIR	Ultrasonic	THF
2234	--	--	Soxhlet	DCM
2236	PVC / PVC	FTIR	Ultrasonic	THF
2237	--	--	Ultrasonic	DMF:toluene
2238	--	--	shaking	THF:hexane
2240	--	--	Ultrasonic	THF
2242	--	--	--	THF:hexane
2245	--	--	Soxhlet	Diethylether
2246	PVC	FTIR	Ultrasonic	THF
2247	PVC / PVC	FTIR	Ultrasonic	THF
2251	PVC / PVC	FTIR	Soxhlet	Chloroform:methanol
2253	PVC / PVC	--	Ultrasonic	THF
2254	PVC / PVC	FTIR	--	THF
2255	--	--	Ultrasonic	THF:hexane
2256	--	--	Ultrasonic	THF
2258	--	Belstein	Ultrasonic	THF
2265	--	--	Ultrasonic	Hexane
2266	PVC / PVC	FTIR	Randall	Hexane
2267	PVC;PET / PVC	FTIR	Ultrasonic	Hexane:acetone
2269	--	--	Ultrasonic	DCM
2271	--	--	Soxhlet	Diethylether
2272	PU / PVC	FTIR	Ultrasonic	THF
2284	--	--	Ultrasonic	Chloroform
2288	PVC / PVC	FTIR	Ultrasonic	THF:hexane
2289	--	--	Shaking / Ultrasonic	THF
2290	--	--	Shaking	THF
2293	PET / PVC	FTIR	Ultrasonic	THF
2295	--	--	Ultrasonic	THF
2296	PVC / PVC	Beilstein	Ultrasonic	THF
2300	PVC / polystyrene-PE	Beilstein/ Thermocole burning	Ultrasonic	THF:hexane
2301	PVC / PVC	FTIR	Ultrasonic	THF
2310	PVC / PVC	FTIR	Ultrasonic	THF:hexane

2311	PVC / PVC	Beilstein	Ultrasonic	THF
2313	PVC / PVC	Beilstein	Ultrasonic	THF
2359	--	--	Shaking	THF
2361	--	--	Shaking	THF
2366	PVC / PVC	Beilstein	Soxhlet	THF
2372	PVC / PVC	FTIR	Ultrasonic	THF
2375	--	--	Soxhlet	Diethylether
2380	--	--	Ultrasonic	Chloroform
2386	PVC	Beilstein	--	THF
2390	PVC / PVC	FTIR	Soxhlet	DCM;methanol
2403	--	--	Ultrasonic	THF
2409	PP-PE / PP-PE	GC-MS	Soxhlet	Diethylether
2410	PVC / PVC	FTIR	Ultrasonic	THF:hexane
2413	PVC / PVC	FTIR-Beilstein	Ultrasonic	THF
2423	PVC / PVC	solubility	Stirrer	THF
2424	--	--	Ultrasonic	Hexane:acetone:MTBE
2425	PVC / PVC	Beilstein	Ultrasonic	DCM
2426	PVC / PVC	Beilstein	Shaking	THF
2429	--	--	Shaking	THF
2431	--	--	Ultrasonic	THF
2432	--	--	Ultrasonic	THF
2438	PVC / PVC	FTIR	Speed extraction	Chloroform:methanol
2441	--	--	Ultrasonic	THF
2442	--	--	Ultrasonic	THF
2452	--	--	Ultrasonic	THF:hexane
2459	PVC / PVC	Beilstein	Ultrasonic	THF
2460	--	--	Ultrasonic	THF
2464	PVC / PVC	FTIR	Dissolution	THF: methanol
2465	PVC / PVC	Flame characteristics	Ultrasonic	THF
2470	--	--	Ultrasonic	THF
2475	--	--	Ultrasonic	Toluene
2476	--	--	Ultrasonic	THF
2482	--	--	Ultrasonic	Toluene
2488	--	--	Ultrasonic	MTBE
2489	PVC / PVC	FTIR	Ultrasonic	THF
2492	--	--	Soxhlet	Hexane
2493	PVC / PVC	Flame	Ultrasonic	THF
2495	--	--	Ultrasonic	THF
2496	PVC / PVC	FTIR	Ultrasonic	THF
2497	PVC-PVA / PVC	FTIR	Ultrasonic	THF
2503	--	--	--	--
2507	--	--	Ultrasonic	THF:hexane
2509	--	--	Ultrasonic	THF
2511	--	--	Ultrasonic	THF
2514	--	--	Ultrasonic	THF:hexane
2516	PVC / PVC	FTIR	Soxhlet	Diethylether
2522	--	--	Ultrasonic	THF
2525	PVC / PVC	FTIR	Ultrasonic	Toluene:Ethylacetate
2529	Non-PVC / PVC	XRF / FTIR	Ultrasonic	THF
2532	PVC / PVC	FTIR	Ultrasonic	THF
2543	PVC / PVC	FTIR	Soxhlet	Chloroform; methanol
2548	Calcium carbonate / PVC	FTIR	Wirst Shaker	THF
2549	--	--	Ultrasonic	DCM
2553	PVC / PVC	Beilstein	Ultrasonic	THF
2555	PVC / PVC	FTIR	Ultrasonic	THF:hexane
2558	PVC / PVC	IR-ATR	Soxhlet	Acetone:hexane
2560	PVC / PVC	Beilstein-FTIR	Ultrasonic	THF-hexane
2566	PVC / PVC	FTIR	Ultrasonic	THF
2581	--	--	Ultrasonic	THF
2582	PVC / PVC	FTIR	Ultrasonic	THF
2590	--	--	Ultrasonic	Hexane:acetone
2591	--	--	Ultrasonic	THF
2595	--	--	Ultrasonic	DCM
2614	PVC / PVC	FTIR	Ultrasonic	THF
2616	--	--	--	--
2618	PVC / PVC	--	Ultrasonic	THF
2622	--	--	ASE	Hexane:acetone
2625	PVC / PVC	FTIR	Shaking	THF:hexane
3100	--	--	Ultrasonic	THF
3107	--	--	Soxhlet	Diethylether
3116	PVC / PVC	FTIR	Soxhlet	Diethylether

3117	PVC / PVC	FTIR	Soxhlet / Ultrasonic	Diethylether / THF
3118	--	--	--	--
3122	PVC / PVC	FTIR	Microwave	Methanol
3146	PVC / PVC	FTIR-ATR	Ultrasonic	THF:hexane
3150	--	--	Ultrasonic	Hexane:acetone
3153	PVC / PVC	FTIR	Dissolution	THF
3163	--	--	--	--
3166	--	--	Ultrasonic	DCM
3167	--	--	Soxhlet	Diethylether
3172	--	--	Ultrasonic	THF
3176	PVC / PVC	FTIR	Ultrasonic	THF
3180	--	--	Ultrasonic	THF
3182	--	--	Ultrasonic	THF:hexane
3185	PVC / PVC	Beilstein-FTIR	Soxhlet	Diethylether
3190	--	--	Ultrasonic	THF:hexane
3197	--	--	Ultrasonic	THF
3199	--	--	Ultrasonic	THF
3200	--	--	Ultrasonic	THF
3201	PVC / PVC	FTIR	ASE	Hexane
3203	PVC / PVC	FTIR	Ultrasonic	Chloroform
3210	--	--	Ultrasonic	Hexane:acetone
3214	PVC / PVC	FTIR	Ultrasonic	THF
3218	PVC / PVC	FTIR	Ultrasonic	THF
3220	--	--	Ultrasonic	THF:hexane
3225	--	--	Ultrasonic	THF
3228	--	--	Ultrasonic	THF
3237	--/ PVC	FTIR	Ultrasonic	THF
3238	PVC / PVC	Copper-flame	Soxhlet	THF-methanol
3242	PVC / other	FTIR	Soxhlet	DCM:methanol
3246	--	--	Ultrasonic	n-Hexane:acetone:MTBE /THF
3248	PVC / PVC	flame	Ultrasonic	THF:ACN
8005	PVC / PVC	FTIR	Soxhlet	DCM:methanol
8006	PVC / PVC	FTIR	Shaking	Acetone; hexane
8007	PVC / PVC	FTIR	Ultrasonic	THF

APPENDIX 3**Number of participating laboratories per country**

7 labs in BANGLADESH
5 labs in BRAZIL
1 lab in BULGARIA
1 lab in CANADA
1 lab in DENMARK
1 lab in EGYPT
7 labs in FRANCE
13 labs in GERMANY
2 labs in GUATEMALA
19 labs in HONG KONG
2 labs in HUNGARY
13 labs in INDIA
4 labs in INDONESIA
7 labs in ITALY
3 labs in JAPAN
3 labs in KOREA
2 labs in MALAYSIA
1 lab in MEXICO
1 lab in MOROCCO
31 labs in P.R. of CHINA
3 labs in PAKISTAN
1 lab in POLAND
1 lab in SERBIA
1 lab in SINGAPORE
2 labs in SPAIN
2 labs in SRI LANKA
1 lab in SWITZERLAND
3 labs in TAIWAN R.O.C.
4 labs in THAILAND
3 labs in THE NETHERLANDS
2 labs in TUNESIA
6 labs in TURKEY
13 labs in U.S.A.
2 labs in UNITED KINGDOM
3 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+	= false positive test result

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