

**Results of Proficiency Test  
Phthalates in Polymers  
May 2017**

**Organised by:** Institute for Interlaboratory Studies  
Spijkenisse, the Netherlands

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## SUMMARY OF CHANGES

This revised report replaces the original report iis17P03 of July 2017.

After issue of the report iis17P03 it was found that for a number of laboratories an incorrect test method was mentioned for sample #17560. This was regretfully caused by a human copy/paste error. Therefore, the test methods in the tables of DEHP, DBP, DIDP and DINP on sample #17560 in appendix 1 were changed in this revised report.

The reported test results as presented in the original report did not contain any errors. Therefore the statistical evaluations were not affected and have remained unchanged.

Therefore the following pages in this report have been revised:

- Page 3: Table of contents (page numbering)
- Page 14: test methods of laboratories 2358 - 2743
- Page 16: test methods of laboratories 2358 - 2743
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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. 19), DIDP (2 mixtures, ref. 20) and DNOP combined.

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 may be available yet (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 2017.

In this interlaboratory study iis17P03, 191 laboratories in 43 different countries did register for participation. See appendix 5 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 website [www.iisnl.com](http://www.iisnl.com).

## 2 SET UP

The Institute for Interlaboratory Studies (iis) in Spijkenisse, the Netherlands was the organiser of this proficiency test (PT). Sample analyses for fit-for-use and homogeneity testing were subcontracted to an ISO/IEC 17025 accredited laboratory. It was decided to send two different plastic samples, one batch of PP rings and one batch of PVC rings. Both batches were especially prepared by a Chinese factory by addition of technical mixtures of phthalates to plastic (PP or PVC) and subsequent homogenization. The participants were requested to report rounded and unrounded test results. The unrounded test results were preferably used for statistical evaluation .

### 2.1 ACCREDITATION

The Institute for Interlaboratory Studies in Spijkenisse, the Netherlands, is accredited in agreement with ISO/IEC 17043:2010 (R007), since January 2000, by the Dutch Accreditation Council (Raad voor Accreditatie). This PT falls under the accredited scope. This ensures strict adherence to protocols for sample preparation and statistical evaluation and 100% confidentiality of participant's data. Feedback from the participants on the reported data is encouraged and customer's satisfaction is measured on regular basis by sending out questionnaires.

## 2.2 PROTOCOL

The protocol followed in the organisation of this proficiency test was the one as described for proficiency testing in the report 'iis Interlaboratory Studies: Protocol for the Organisation, Statistics and Evaluation' of March 2017 (iis-protocol, version 3.4). This protocol is electronically available through the iis website [www.iisnl.com](http://www.iisnl.com), from the FAQ page.

## 2.3 CONFIDENTIALITY STATEMENT

All data presented in this report must be regarded as confidential and for use by the participating companies only. Disclosure of the information in this report is only allowed by means of the entire report. Use of the contents of this report for third parties is only allowed by written permission of the Institute for Interlaboratory Studies. Disclosure of the identity of one or more of the participating companies will be done only after receipt of a written agreement of the companies involved.

## 2.4 SAMPLES

Two samples were prepared from two different bulk materials.

The first sample was a sea-green coloured PP, to which small, known amounts of DBP, DEHP and DINP were added. Subsamples with 3 grams material (PP rings) were prepared and labelled #17560. The homogeneity of the subsamples #17560 was checked by determination of all added phthalates on 8 stratified randomly selected subsamples.

	DBP in %M/M	DEHP in %M/M	DINP in %M/M
sample #17560-1	0.1009	0.4044	0.2397
sample #17560-2	0.0993	0.3872	0.2425
sample #17560-3	0.1050	0.3982	0.2386
sample #17560-4	0.0976	0.4087	0.2398
sample #17560-5	0.1036	0.4005	0.2328
sample #17560-6	0.1019	0.3987	0.2335
sample #17560-7	0.1052	0.4021	0.2396
sample #17560-8	0.1052	0.4047	0.2314

Table 1: homogeneity test results of subsamples #17560

From the above test results the repeatabilities were calculated and compared with 0.3 times the estimated reproducibilities calculated from the uncertainties (relative in %) of the PTs conducted from 2010 onwards (reference 24), and in agreement with the procedure of ISO 13528, Annex B2 in the next table:

	DBP in %M/M	DEHP in %M/M	DINP in %M/M
r (observed)	0.0081	0.0180	0.0114
0.3*R (iis-memo)	0.0144	0.0565	0.0335

Table 2: evaluation of the repeatabilities of subsamples #17560

The second sample was a white coloured PVC, to which small, known amounts of DBP, DNHP, DNPP and DEHP were added. Subsamples with 3 grams material (PVC rings) were prepared and labelled #17561. The homogeneity of the subsamples #17561 was checked by determination of all added phthalates on 8 stratified randomly selected subsamples.

	DBP in %M/M	DNHP in %M/M	DNPP in %M/M	DEHP in %M/M
sample #17561-1	0.1439	0.0355	0.1211	0.1146
sample #17561-2	0.1455	0.0334	0.1133	0.1139
sample #17561-3	0.1459	0.0331	0.1156	0.1075
sample #17561-4	0.1455	0.0334	0.1208	0.1178
sample #17561-5	0.1486	0.0358	0.1212	0.1111
sample #17561-6	0.1466	0.0350	0.1236	0.1133
sample #17561-7	0.1500	0.0357	0.1230	0.1117
sample #17561-8	0.1531	0.0362	0.1205	0.1139

Table 3: homogeneity test results of subsamples #17561

From the above test results the repeatabilities were calculated and compared with 0.3 times the estimated reproducibilities calculated from the uncertainties (relative in %) of the PTs conducted from 2010 onwards, and in agreement with the procedure of ISO 13528, Annex B2 in the next table:

	DBP in %M/M	DNHP in %M/M	DNPP in %M/M	DEHP in %M/M
r (observed) #17561	0.0084	0.0035	0.0100	0.0084
0.3*R (iis)	0.0208	0.0049	0.0169	0.0159

Table 4: evaluation of repeatabilities of subsamples #17561

The calculated repeatabilities were all in agreement with the respective target precision data. Therefore, the homogeneity of subsamples #17560 and #176561 was assumed.

To each of the participating laboratories, one sample of approx. 3 grams PP rings, labelled #17560 and one sample of approx. 3 grams PVC rings, labelled #17561 were sent on April 19, 2017.

## 2.5 ANALYSES

The participants were requested to determine on both samples #17560 and #17561, fourteen individual phthalates and other phthalates (when identified). Also some method details were requested to be reported.

It was explicitly requested to treat the samples as if they were routine samples and to report the test results using the indicated units on the report form and not to round the test results more, but report as much significant figures as possible. It was also requested not to report 'less than' test results, which are above the detection limit, because such test results cannot be used for meaningful statistical calculations.

To get comparable test results, a detailed report form and a letter of instructions are prepared. On the report form the reporting units are given as well as the reference test methods that will be used during the evaluation. The detailed report form and the letter of instructions are both made available on the data entry portal [www.kpmd.co.uk/sgs-iis-cts/](http://www.kpmd.co.uk/sgs-iis-cts/). The participating laboratories are also requested to confirm the sample receipt on this data entry portal. The letter of instructions can also be downloaded from the iis website [www.iisnl.com](http://www.iisnl.com).

### 3 RESULTS

During five weeks after sample dispatch, the test results of the individual laboratories were gathered via the data entry portal [www.kpmd.co.uk/sgs-iis-cts/](http://www.kpmd.co.uk/sgs-iis-cts/). The reported test results are tabulated per determination in appendix 1 of this report. The laboratories are represented by the code numbers.

Directly after the deadline, a reminder was sent to those laboratories that had not reported test results at that moment. Shortly after the deadline, the available test results were screened for suspect data. A test result was called suspect in case the Huber Elimination Rule (a robust outlier test) found it to be an outlier. The laboratories that produced these suspect data were asked to check the reported test results (no reanalyses). Additional or corrected test results are used for the data analysis and the original results are placed under 'Remarks' in the result tables in appendix 1. Test results that came in after the deadline were not taken into account in this screening for suspect data and thus these participants were not requested for checks.

#### 3.1 STATISTICS

The protocol followed in the organisation of this proficiency test was the one as described for proficiency testing in the report 'iis Interlaboratory Studies: Protocol for the Organisation, Statistics and Evaluation' of March 2017 (iis-protocol, version 3.4).

For the statistical evaluation the *unrounded* (when available) figures were used instead of the rounded test results. Test results reported as '<...' or '>...' were not used in the statistical evaluation.

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

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

For each assigned value the uncertainty was determined in accordance with ISO13528. Subsequently the calculated uncertainty was evaluated against the respective requirement based on the target reproducibility in accordance with ISO13528. 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 significant 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 on the X-axis.

The straight horizontal line presents the consensus value (a trimmed mean). The four striped lines, parallel to the consensus value line, are the +3s, +2s, -2s and -3s target reproducibility limits of the selected 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. The Kernel Density Graph is a method for producing a smooth density approximation to a set of data that avoids some problems associated with histograms. Also a normal Gauss curve was projected over the Kernel Density Graph for reference.

### 3.3 Z-SCORES

To evaluate the performance of the participating laboratories the z-scores were calculated. As it was decided to evaluate the performance of the participants in this proficiency test (PT) against the literature requirements, 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. In case no literature reproducibility was available, other target values were used. In some cases, a reproducibility of based on former iis proficiency tests could be used.

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

The z-scores were calculated according to:

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

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

Absolute values for  $z < 2$  are very common and absolute values for  $z > 3$  are very rare. 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 dispatch of the samples. Three participants reported after the final reporting date and five participants did not report any test results at all.

Finally, 186 laboratories reported 1339 numerical results. Observed were 18 statistically outlying test results, which is 1.3% of all results. In proficiency studies outlier percentages of 3% - 7.5% are quite normal.

### 4.1 EVALUATION PER SAMPLE AND PER TEST

In this section the reported test results are discussed per sample and per test. The test methods, which were used by the various laboratories were taken into account for explaining the observed differences when possible and applicable. These methods are also in the tables together with the original data. The abbreviations, used in these tables, are listed in appendix 6.

About 30% of the laboratories reported to have used ISO14389 as test method and about 20% of the laboratories reported to have used CPSC-CH-C1001-09.3 as test method. Both test methods are based on THF extraction. In this proficiency test, the majority of the laboratories used a test method based on THF extraction.

A few laboratories did use a different extraction solvent and a few laboratories adapted the extraction solvent to the material of the sample (eg dichloromethane for sample #17560 (PP) and THF for sample #17561 (PVC)). Details of the method information as reported by the participating laboratories are listed in appendix 4.

Regretfully, the CPSC method does not contain any precision statements. ISO14389:14 does provide a variety of precision data. There are precision data mentioned for 4 different procedures in ISO14389:14 of which procedure 4, prescribes the extraction with THF followed by precipitation with Acetonitril. The reproducibility  $RSD_R$  for 7 different phthalates ranges from 31.5% - 124.9%. Therefore it is not surprisingly that in Annex D of test method ISO14389:14 is mentioned that "*Results indicated that both the four methods for phthalates and the laboratories' performance have to be drastically improved*". After having used 31.5% as target reproducibility in the 2015 and 2016 PTs, it was now decided to use the iis PT data gathered since 2010, to estimate a more realistic target reproducibility. This estimate target target reproducibility of 47% was used for the evaluation of the test results in this PT.

**Sample #17560 (PP)**

- DEHP: The determination of DEHP may be problematic at the level of 0.35 %M/M. No statistical outliers were detected. However, the calculated reproducibility is not in agreement with the new target reproducibility as derived from the reproducibilities observed in the iis PTs.
- DBP: The determination of DBP may not be problematic. Five statistical outliers were detected. However, the calculated reproducibility after rejection of the statistical outliers is in full agreement with the new target reproducibility as derived from the reproducibilities observed in the iis PTs.
- DINP: The determination of DINP may be problematic at the level of 0.22 %M/M. Two statistical outliers were detected. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the new target reproducibility as derived from the reproducibilities observed in the iis PTs.

For BBP, DIDP, DNOP, DCHP, DEP, DMP, DNHP, DIBP, DPHP, DNPP and DUP the group of participants agreed on a concentration near or below the limit of detection. Therefore no significant conclusions were drawn for these phthalates.

**Sample #17561 (PVC)**

Two laboratories reported deviating results: at least two of the four test results of the added phthalates were statistical outliers for each of the laboratories 2121 and 2666. It was decided not to use any of the reported results of these laboratories for the statistical evaluation.

- DEHP: The determination of DEHP may not be problematic. Five statistical outliers were detected. However, the calculated reproducibility after rejection of the statistical outliers is in full agreement with the new target reproducibility as derived from the reproducibilities observed in the iis PTs.
- DBP: The determination of DBP may not be problematic. Three statistical outliers were observed. However, the calculated reproducibility after rejection of the statistical outliers is in good agreement with the new target reproducibility as derived from the reproducibilities observed in the iis PTs.
- DNHP: The determination of DNHP may not be problematic. One statistical outlier was observed and two other test results were excluded. However, the calculated reproducibility after rejection of the suspect data is in full agreement with the new target reproducibility as derived from the reproducibilities observed in the iis PTs.
- DNPP: The determination of DNPP may not be problematic. Two statistical outliers were observed and one test result was excluded. However, the calculated reproducibility after rejection of the suspect data is in full agreement with the new target reproducibility as derived from the reproducibilities observed in the iis PTs.

For BBP, DIDP, DINP, DNOP, DCHP, DEP, DMP, DIBP, DPHP and DUP the group of participants agreed on a concentration near or below the limit of detection. Therefore no significant conclusions were drawn for these phthalates.

#### 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 new target reproducibility as derived from the reproducibilities observed in the iis PTs (ref. 24) in the next tables:

Parameter	Unit	n	Average	$2.8 * \text{sd}$	R (target)
DEHP	%M/M	185	0.351	0.287	0.165
DBP	%M/M	179	0.093	0.044	0.044
DINP	%M/M	176	0.221	0.192	0.104

Table 5: reproducibilities of tests on sample #17560

Parameter	Unit	n	Average	$2.8 * \text{sd}$	R (target)
DEHP	%M/M	178	0.110	0.052	0.052
DBP	%M/M	182	0.134	0.059	0.063
DNHP	%M/M	125	0.034	0.016	0.016
DNPP	%M/M	113	0.101	0.044	0.048

Table 6: reproducibilities of tests on sample #17561

#### 4.3 COMPARISON OF THE PROFICIENCY TEST OF MAY 2017 WITH PREVIOUS PTS

	May 2017	May 2016	May 2015	May 2014
Number of reporting labs	186	170	184	169
Number of results reported	1339	1258	1014	1226
Statistical outliers	18	66	43	97
Percentage outliers	1.3%	5.2%	4.2%	7.9%

Table 7: comparison with previous proficiency tests

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

The evolution of the reproducibilities for DINP, DBP, DEHP, DNPP and DNHP content as observed in this proficiency scheme and the comparison with the findings in previous rounds are visualized in table 8.

	May 2017	May 2016	May 2015	May 2014	April 2013	Feb 2012	Feb 2011	Feb 2010	RSDR iis <sup>4)</sup>
DINP <sup>1)</sup>	31	19	--	20	20	26	12 – 17	15 <sup>T</sup> – 60 <sup>E</sup>	16
DBP	16 – 17	12	15	17	14 – 74 <sup>2)</sup>	11 – 16	17	14	16
DEHP	17 – 29	13 – 13	13	17 – 19	--	13 – 18	12 – 13	8 <sup>T</sup> – 55 <sup>E</sup>	16
BBP	--	13	--	12	13	11	13 – 15	14	16
DIDP	--	37 <sup>3)</sup>	17	20	19 – 57 <sup>2)</sup>	--	15	--	16
DNOP	--	18	23	21	--	20	15	--	16
DHP	--	--	--	--	--	--	11	--	16
DIBP	--	--	14	--	--	--	--	--	16
DEP	--	--	13	--	--	--	--	--	16
DNPP	16	--	15	--	--	--	--	--	16
DCHP	--	--	16	--	--	--	--	--	16
DMP	--	12	--	--	--	--	--	--	16
DNHP	17	--	--	--	--	--	--	--	16

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

3) consensus value near to or below the detection limit

4) see memo: precision data of Phthalates in plastic (ref. 24)

## 5 DISCUSSION

From 2008 - 2010 significant differences between the EN14372 results and the results from THF dissolution were observed. In the PTs of 2011 – 2014 this was no longer the case. In the proficiency test from 2015 onwards, the majority of laboratories used THF as extraction solvent.

Also in this proficiency test the majority of the laboratories used THF as solvent to release the phthalates from the polymer material.

The material of sample #17561 is PVC and as described in several methods (for example ISO14389 Annex C) the THF method is suitable for the determination of phthalates in PVC.

The material of sample #17560 is PP and as some laboratories remarked (see appendix 4) THF is less suitable as solvent to release the phthalates from the polymer material PP. The material of sample #17560 (PP) in combination with the solvent used could be one of the reasons of the higher level of uncertainties for DINP and DEHP.

Another reason of the higher level of uncertainties for DINP and DEHP in sample #17560 could be the distribution of the test results. Due to this distribution no or only a few statistical outliers were found and (almost) all reported test results are included in the calculations of the averages and the standard deviations. A lower level of outliers, may give a higher standard deviation which results into a higher level of uncertainty.

In paragraph 4.3 it can be seen that the percentage of statistical outliers in this proficiency test of 1.3% is significantly below the usual percentage of 3% - 7.5%.

## 6 CONCLUSION

The majority of the group identified all added phthalates correctly: #17560 contained DEHP, DBP, and DINP and sample #17561 contained DEHP, DBP, DNHP and DNPP.

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. 19), DIDP (2 mixtures, ref 20) and DNOP combined (see §1 Introduction)

When the results of this interlaboratory study were compared to the above regulations, it is noticed that the majority of the reporting laboratories would reject sample #17560 for containing too much DEHP+DBP+BBP in total and/or too much DINP+DIDP+DNOP in total. Also sample #17561 would be rejected by the majority of the reporting laboratories for containing too much DEHP+DBP+BBP in total.

**APPENDIX 1**

Determination of DEHP – Bis-2-ethylhexylphthalate on sample #17560; results in %M/M

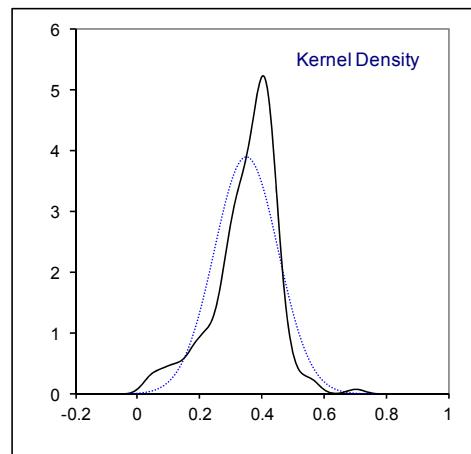
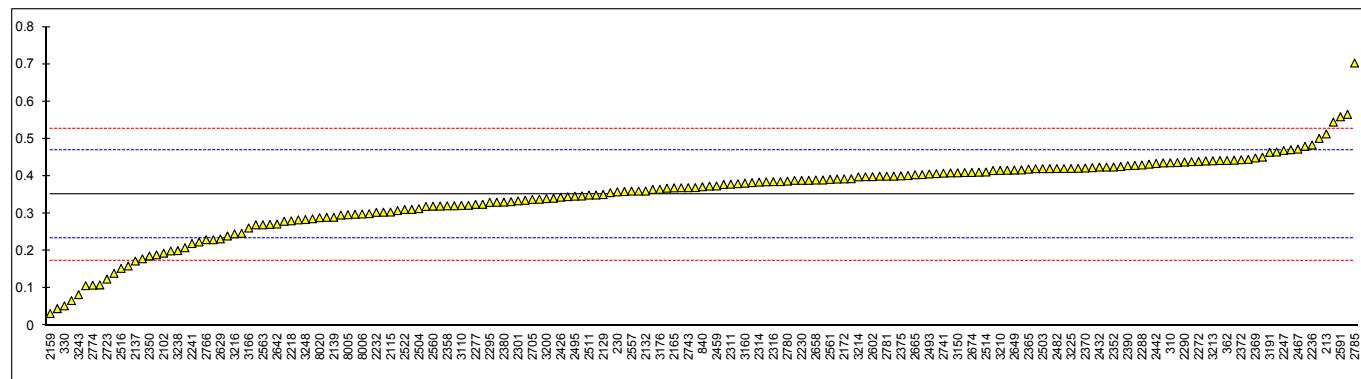
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213	CPSC-CH-C1001-09.3	0.513267		2.76	2358	CPSC-CH-C1001-09.3	0.3208		-0.51
230		0.3583		0.13	2363	ISO14389	0.417		1.13
310	In house	0.436		1.45	2365	IEC62321-8	0.41912		1.16
324	----	----		----	2366	CPSC method	0.4161		1.11
330	In house	0.053		-5.06	2369	ISO14389	0.449		1.67
339	In house	0.4201		1.18	2370	ISO14389	0.422		1.21
348	In house	0.407		0.96	2372	IEC62321-8	0.4441		1.59
357	CPSC-CH-C1001-09.3	0.4090		0.99	2375	ISO14389	0.401		0.86
362		0.442		1.55	2378	ISO14389	0.40423		0.91
523	----	----		----	2379	EN14372	0.322		-0.49
551	In house	0.0456	C	-5.18	2380	ISO14389	0.33074		-0.34
622	CPSC-CH-C1001-09.3	0.33043		-0.34	2381	ISO14389	0.33205		-0.32
623	----	----		----	2384	In house	0.3692	C	0.32
826	IEC62321-8	0.2000		-2.56	2386	ISO14389	0.3680		0.29
840	ISO14389	0.3719		0.36	2390	ISO14389	0.4283		1.32
841	ISO14389	0.24		-1.88	2426	ISO14389	0.344		-0.11
1051	CPSC-CH-C1001-09.3	0.31110		-0.67	2429	ISO14389	0.321		-0.50
1170	----	----		----	2431	CPSC-CH-C1001-09.3	0.4153		1.10
1213	CPSC-CH-C1001-09.3	0.47102		2.05	2432	CPSC-CH-C1001-09.3	0.42445		1.25
1911	In house	0.1897		-2.73	2442	In house	0.4341		1.42
2102	In house	0.194		-2.66	2453	ISO14389	0.441		1.54
2104	CPSC-CH-C1001-09.3	0.179		-2.92	2459	ISO14389	0.3739		0.40
2108	ISO14389	0.3889		0.65	2460	CPSC-CH-C1001-09.3	0.2700		-1.37
2115	ISO14389	0.304		-0.79	2467		0.4726		2.07
2120	CPSC-CH-C1001-09.3	0.545		3.30	2475		----		----
2121	ISO14389	0.14	C	-3.58	2476	CPSC-CH-C1001-09.3	0.3890	C	0.65
2129	ISO14389	0.351		0.01	2482	ISO/TS16181 mod.	0.4205		1.19
2131	In house	0.15973		-3.24	2486	In house	0.4002		0.84
2132	CPSC	0.3604		0.17	2489	ISO14389	0.385		0.58
2137	KS M1991	0.1730		-3.02	2492	In house	0.2833		-1.14
2139	CPSC-CH-C1001-09.3	0.29		-1.03	2493	ISO14389	0.40600		0.94
2146	CPSC-CH-C1001-09.3	0.290		-1.03	2495	ISO14389	0.34646		-0.07
2156	ISO8124-6	0.5011		2.56	2497		0.3601		0.16
2159	In house	0.0325	C	-5.41	2500	In house	0.341		-0.16
2165	CPSC-CH-C1001-09.3	0.369		0.31	2503		0.4201		1.18
2170	CPSC-CH-C1001-09.3	0.4389		1.50	2504	CPSC-CH-C1001-09.3	0.313		-0.64
2172	ISO14389	0.393		0.72	2510		----		----
2184	CPSC-CH-C1001-09.3	0.271		-1.35	2511	ISO14389	0.3494		-0.02
2213	ISO14389	0.3249		-0.44	2514	ISO14389	0.4113		1.03
2217	CPSC-CH-C1001-09.3	0.3931		0.72	2516		0.1533		-3.35
2218		0.28060		-1.19	2522	CPSC-CH-C1001-09.3	0.311		-0.67
2222	In house	0.224		-2.15	2529	CPSC-CH-C1001-09.3	0.4099		1.01
2230	In house	0.389		0.65	2531	ISO/TS16181	0.38		0.50
2232	In house	0.30315		-0.81	2532	ISO14389	0.3987		0.82
2236	CPSC-CH-C1001-09.3	0.4835		2.26	2538		0.3855		0.59
2241	In house	0.21991		-2.22	2553		0.107113	C	-4.14
2242	CPSC-CH-C1001-09.3	0.3037		-0.80	2557		0.36008		0.16
2247	CPSC-CH-C1001-09.3	0.469		2.01	2560	ISO14389	0.31979		-0.52
2255	ISO14389	0.3925		0.71	2561	ISO14389	0.39161		0.70
2256	CPSC-CH-C1001-09.3	0.402		0.87	2563	ISO14389	0.27		-1.37
2258		0.3081		-0.72	2567	CPSC-CH-C1001-09.3	0.4107		1.02
2272		0.4394		1.51	2569	ISO14389	0.40		0.84
2277	ISO14389	0.3246		-0.44	2572	ISO14389	0.4321		1.38
2288	CPSC-CH-C1001-09.3	0.43		1.35	2590	CPSC-CH-C1001-09.3	0.4290		1.33
2289	ISO14389	0.3471		-0.06	2591	CPSC-CH-C1001-09.3	0.5592		3.54
2290	ISO14389	0.438		1.48	2602	In house	0.3988		0.82
2293	CPSC-CH-C1001-09.3	0.4650		1.94	2629	ISO14389	0.232	C	-2.02
2295	ISO14389	0.33		-0.35	2642	CPSC-CH-C1001-09.3	0.272		-1.34
2301	In house	0.334		-0.28	2649	ISO14389	0.416602		1.12
2303	CPSC-CH-C1001-09.3	0.442		1.55	2658	In house	0.39		0.67
2309	CPSC-CH-C1001-09.3	0.378		0.46	2665	In house	0.404		0.91
2310	ISO14389	0.3829		0.55	2666	ISO14389	0.06711		-4.82
2311	In house	0.3786		0.47	2674	CPAS-CH-C1001-09.3	0.410		1.01
2313	ISO14389	0.3695		0.32	2678	CPSC-CH-C1001-09.3	0.421		1.20
2314		0.3841		0.57	2705	ISO14372	0.338		-0.21
2316	CPSC-CH-C1001-09.3	0.3854	C	0.59	2713	CPSC-CH-C1001-09.3	0.4205		1.19
2330	ISO14389	0.44299		1.57	2723		0.12472		-3.84
2347	ISO14389	0.423		1.23	2728	EN71-5	0.48		2.20
2350		0.18654		-2.79	2730	EN15777	0.109		-4.11
2352	ISO8124-6	0.4246		1.26	2736	CPSC-CH-C1001-09.3	0.39		0.67
2353	IEC62321-8	0.2999		-0.86	2737	ISO14389	0.445		1.60
2355	IEC62321-6	0.426		1.28	2741	ISO14389	0.4082		0.98
2357	ISO14389	0.4204		1.19	2743	ISO14389	0.36934		0.32

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
2766	CPSC-CH-C1001-09.3	0.23	C	-2.05	3200		0.34		-0.18
2773	ISO14389	0.319		-0.54	3205	In house	0.3647		0.24
2774	In house	0.1082		-4.12	3209	ISO14389	0.3202		-0.52
2780	In house	0.3869073		0.62	3210	ISO/TS16181	0.4155		1.10
2781	In house	0.40		0.84	3212		0.56559	C	3.65
2785	CPSIA	0.703		5.99	3213		0.4413		1.54
3110		0.3219		-0.49	3214	CPSC-CH-C1001-09.3	0.3984		0.81
3116		0.298		-0.89	3216	ISO14389	0.24573		-1.78
3118	ISO14389	0.45113		1.71	3220	ISO14389	0.2860		-1.10
3132	ISO14389	0.3591		0.14	3225	CPSC-CH-C1001-09.3	0.4206		1.19
3146	In house	0.4366		1.46	3228	CPSC-CH-C1001-09.3	0.356		0.09
3150	ISO14389	0.4092		0.99	3233	In house	0.24711		-1.76
3153	CPSC-CH-C1001-09.3	0.2795		-1.21	3237	In house	0.338565	C	-0.21
3154	ISO/TS16181	0.230		-2.05	3238	In house	0.201		-2.54
3160	In house	0.38135		0.52	3239	In house	0.34962		-0.02
3163	In house	0.3735587		0.39	3243	In house	0.083	C	-4.55
3166	In house	0.2615		-1.51	3248	In house	0.284		-1.13
3167	EN14372	0.2088		-2.41	8005		0.297		-0.91
3172	ISO14389	0.3356		-0.26	8006		0.299		-0.88
3176	CPSC-CH-C1001-09.3	0.365	C	0.24	8007		0.296		-0.93
3182	CPSC C1001	0.43574		1.45	8008		0.3451		-0.09
3191	CPSC-CH-C1001-09.3	0.4640		1.93	8020	ST2012	0.289		-1.05
3197	ISO14389	0.4245		1.25					

normality suspect  
n 185  
outliers 0  
mean (n) 0.3506  
st.dev. (n) 0.10266  
R(calc.) 0.2874  
R(iis) 0.1648

Lab 551: first reported 0.0239  
Lab 2121: first reported 0.12  
Lab 2159: first reported 0.1066  
Lab 2316: first reported 3854 mg/kg  
Lab 2384: first reported 3692  
Lab 2476: first reported 3890 ppm  
Lab 2553: first reported 1071.13 mg/kg

Lab 2629: first reported 0.1357  
Lab 2766: first reported 1.64  
Lab 3176: first reported 0.0654  
Lab 3212: first reported 5.65595  
Lab 3237: first reported 0.19665  
Lab 3243: first reported 0.072



## Determination of DBP – Dibutylphthalate on sample #17560; results in %M/M

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213	CPSC-CH-C1001-09.3	0.0885		-0.27	2358	CPSC-CH-C1001-09.3	0.0819		-0.69
230		0.0962		0.23	2363	ISO14389	0.093		0.02
310	In house	0.111		1.18	2365	IEC62321-8	0.09405		0.09
324	----	----		----	2366	CPSC method	0.0962		0.23
330	In house	0.021	R(0.01)	-4.61	2369	ISO14389	0.098		0.34
339	In house	0.1047		0.77	2370	ISO14389	0.101		0.53
348	In house	0.091		-0.11	2372	IEC62321-8	0.1024		0.62
357	CPSC-CH-C1001-09.3	0.0953		0.17	2375	ISO14389	0.102		0.60
362		0.111		1.18	2378	ISO14389	0.10053		0.50
523	----	----		----	2379	EN14372	0.107		0.92
551	In house	0.0246	C,R(0.01)	-4.38	2380	ISO14389	0.09222		-0.03
622	CPSC-CH-C1001-09.3	0.06431		-1.82	2381	ISO14389	0.09245		-0.02
623	----	----		----	2384	In house	0.1239	C	2.01
826	IEC62321-8	0.0712		-1.38	2386	ISO14389	0.1006		0.51
840	ISO14389	0.1349		2.71	2390	ISO14389	0.0939		0.08
841	ISO14389	0.07		-1.46	2426	ISO14389	0.084		-0.56
1051	CPSC-CH-C1001-09.3	0.06765		-1.61	2429	ISO14389	0.073		-1.27
1170	----	----		----	2431	CPSC-CH-C1001-09.3	0.1118		1.23
1213	CPSC-CH-C1001-09.3	0.08178		-0.70	2432	CPSC-CH-C1001-09.3	0.09158		-0.07
1911	In house	0.06413		-1.84	2442	In house	0.1068		0.91
2102	In house	0.062		-1.97	2453	ISO14389	0.113		1.30
2104	CPSC-CH-C1001-09.3	0.121		1.82	2459	ISO14389	0.0876		-0.33
2108	ISO14389	0.1067		0.90	2460	CPSC-CH-C1001-09.3	0.0740		-1.20
2115	ISO14389	0.088		-0.30	2467		0.0980		0.34
2120	CPSC-CH-C1001-09.3	0.121		1.82	2475		----		----
2121	ISO14389	0.02	C,R(0.01)	-4.67	2476	CPSC-CH-C1001-09.3	0.1022	C	0.61
2129	ISO14389	0.091		-0.11	2482	ISO/TS16181 mod.	0.1089		1.04
2131	In house	0.21473	R(0.01)	7.84	2486	In house	0.0921		-0.04
2132	CPSC	0.0996		0.44	2489	ISO14389	0.11		1.11
2137	KS M1991	0.0521		-2.61	2492	In house	0.0590		-2.17
2139	CPSC-CH-C1001-09.3	0.08		-0.82	2493	ISO14389	0.10700		0.92
2146	CPSC-CH-C1001-09.3	0.0735		-1.23	2495	ISO14389	0.090955		-0.11
2156	ISO8124-6	0.0974		0.30	2497		0.0848		-0.51
2159	In house	0.1066	C	0.89	2500	In house	0.083		-0.62
2165	CPSC-CH-C1001-09.3	0.087		-0.37	2503		0.1121		1.25
2170	CPSC-CH-C1001-09.3	0.1114		1.20	2504	CPSC-CH-C1001-09.3	0.0963		0.23
2172	ISO14389	0.0912		-0.10	2510		----		----
2184	CPSC-CH-C1001-09.3	0.081		-0.75	2511	ISO14389	0.0981		0.35
2213	ISO14389	0.0902		-0.16	2514	ISO14389	0.1002		0.48
2217	CPSC-CH-C1001-09.3	0.1093		1.07	2516		----		----
2218		0.07936		-0.86	2522	CPSC-CH-C1001-09.3	0.084		-0.56
2222	In house	0.068		-1.59	2529	CPSC-CH-C1001-09.3	0.0995		0.44
2230	In house	0.0984		0.37	2531	ISO/TS16181	0.10		0.47
2232	In house	0.09337		0.04	2532	ISO14389	0.1153		1.45
2236	CPSC-CH-C1001-09.3	0.1066		0.89	2538		0.1065		0.89
2241	In house	0.06358		-1.87	2553		0.052417	C	-2.59
2242	CPSC-CH-C1001-09.3	0.0867		-0.39	2557		0.09473		0.13
2247	CPSC-CH-C1001-09.3	0.095		0.15	2560	ISO14389	0.09494		0.14
2255	ISO14389	0.1010		0.53	2561	ISO14389	0.09496		0.15
2256	CPSC-CH-C1001-09.3	0.088		-0.30	2563	ISO14389	0.08		-0.82
2258		0.097	C	0.28	2567	CPSC-CH-C1001-09.3	0.1015		0.57
2272		0.1026		0.64	2569	ISO14389	0.10		0.47
2277	ISO14389	0.0921		-0.04	2572	ISO14389	0.0978		0.33
2288	CPSC-CH-C1001-09.3	0.10		0.47	2590	CPSC-CH-C1001-09.3	0.1073		0.94
2289	ISO14389	0.0862		-0.42	2591	CPSC-CH-C1001-09.3	0.1256		2.11
2290	ISO14389	0.099		0.40	2602	In house	0.0875		-0.33
2293	CPSC-CH-C1001-09.3	0.0753		-1.12	2629	ISO14389	0.0798		-0.83
2295	ISO14389	0.1		0.47	2642	CPSC-CH-C1001-09.3	0.092		-0.04
2301	In house	0.099		0.40	2649	ISO14389	0.092356		-0.02
2303	CPSC-CH-C1001-09.3	0.110		1.11	2658	In house	0.10		0.47
2309	CPSC-CH-C1001-09.3	0.098		0.34	2665	In house	0.093		0.02
2310	ISO14389	0.1026		0.64	2666	ISO14389	0.04009		-3.38
2311	In house	0.104		0.73	2674	CPAS-CH-C1001-09.3	0.093		0.02
2313	ISO14389	0.0979		0.33	2678	CPSC-CH-C1001-09.3	0.109		1.05
2314		0.1012		0.55	2705	ISO14372	0.091		-0.11
2316	CPSC-CH-C1001-09.3	0.0977	C	0.32	2713	CPSC-CH-C1001-09.3	0.1084		1.01
2330	ISO14389	0.09453		0.12	2723		0.08986		-0.18
2347	ISO14389	0.104		0.73	2728	EN71-5	0.11		1.11
2350		0.059136		-2.16	2730	EN15777	0.062		-1.97
2352	ISO8124-6	0.0962		0.23	2736	CPSC-CH-C1001-09.3	0.10		0.47
2353	IEC62321-8	0.083	C	-0.62	2737	ISO14389	0.119		1.69
2355	IEC62321-6	0.093		0.02	2741	ISO14389	0.109		1.05
2357	ISO14389	0.0934		0.05	2743	ISO14389	0.05616		-2.35

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
2766	CPSC-CH-C1001-09.3	0.07		-1.46	3200	ISO14389	0.08		-0.82
2773	ISO14389	0.0802		-0.80	3205	In house	0.0987		0.39
2774	In house	0.052		-2.62	3209	ISO14389	0.0896		-0.20
2780	In house	0.0891742		-0.23	3210	ISO/TS16181	0.0944		0.11
2781	In house	0.11		1.11	3212		0.09745	C	0.31
2785	CPSIA	0.114		1.37	3213		0.08874		-0.25
3110		0.0865		-0.40	3214	CPSC-CH-C1001-09.3	0.1020		0.60
3116		0.083		-0.62	3216	ISO14389	0.08001		-0.82
3118	ISO14389	0.10113		0.54	3220	ISO14389	0.0821		-0.68
3132	ISO14389	0.0954		0.17	3225	CPSC-CH-C1001-09.3	0.1000		0.47
3146	In house	0.10463		0.77	3228	CPSC-CH-C1001-09.3	0.094		0.08
3150	ISO14389	0.0899		-0.18	3233	In house	0.07408		-1.20
3153	CPSC-CH-C1001-09.3	0.0959		0.21	3237	In house	0.067425	C	-1.62
3154	ISO/TS16181	0.072		-1.33	3238	In house	0.052		-2.62
3160	In house	0.09669		0.26	3239	In house	0.07956		-0.84
3163	In house	0.09509465		0.15	3243	In house	0.024	C,R(0.01)	-4.42
3166	In house	0.0850		-0.49	3248	In house	0.093		0.02
3167	EN14372	0.1253		2.10	8005		0.082		-0.69
3172	ISO14389	0.1084		1.01	8006		0.081		-0.75
3176	CPSC-CH-C1001-09.3	0.088	C	-0.30	8007		0.080		-0.82
3182	CPSC C1001	0.10515		0.80	8008		0.0835		-0.59
3191	CPSC-CH-C1001-09.3	0.1046		0.76	8020	ST2012	0.091		-0.11
3197	ISO14389	0.1136		1.34					

normality OK  
n 179  
outliers 5  
mean (n) 0.0927  
st.dev. (n) 0.01575  
R(calc.) 0.0441  
R(iis) 0.0436

Lab 551: first reported 0.0108

Lab 2121: first reported 0.015

Lab 2159: first reported 0.0325

Lab 2258: first reported 0.027

Lab 2316: first reported 977 mg/kg

Lab 2353: first reported 0.184

Lab 2384: first reported 1239

Lab 2476: first reported 1022 ppm

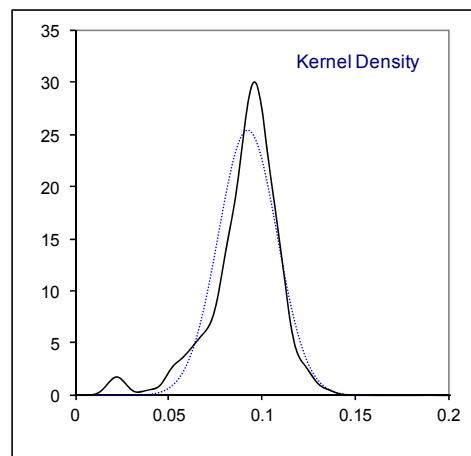
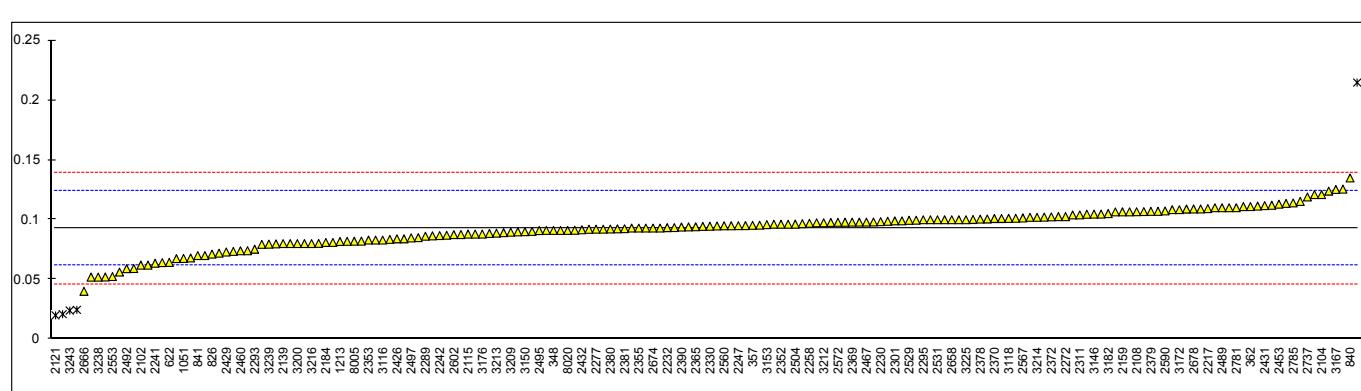
Lab 2553: first reported 524.17 mg/kg

Lab 3176: first reported 0.0181

Lab 3212: first reported 0.97455

Lab 3237: first reported 0.042042

Lab 3243: first reported 0.019



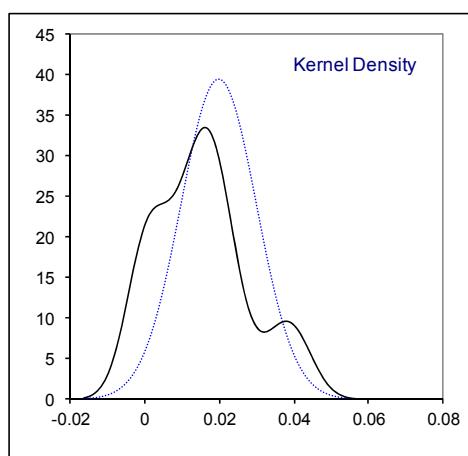
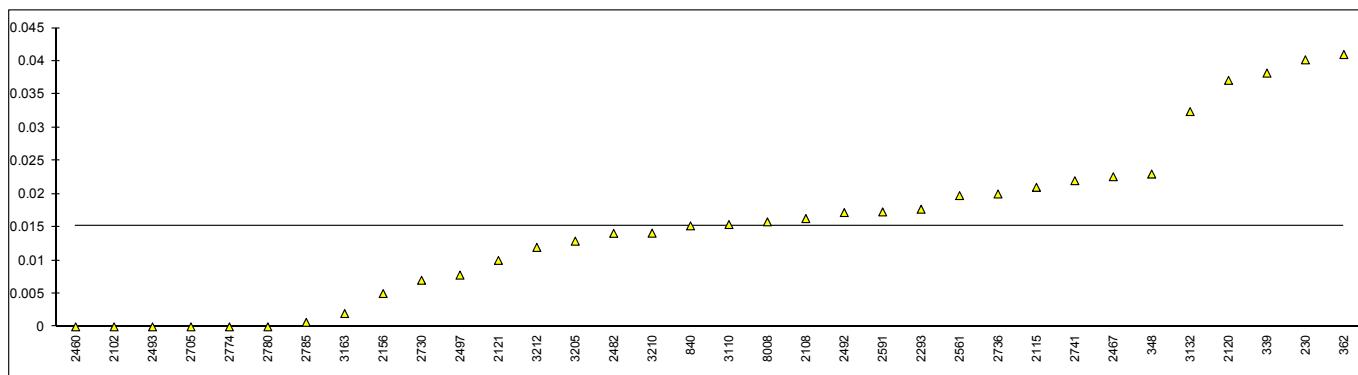
## Determination of DIDP – Diisodecylphthalate on sample #17560; results in %M/M

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213		----		----	2358		----		----
230		0.0402		----	2363	ISO14389	ND		----
310		----		----	2365	IEC62321-8	<0.0050		----
324		----		----	2366	CPSC method	<0.015		----
330	In house	<0.01		----	2369	ISO14389	<0.005		----
339	In house	0.0382		----	2370	ISO14389	N.D.		----
348	In house	0.023		----	2372	IEC62321-8	n.d.		----
357	CPSC-CH-C1001-09.3	<0.005		----	2375		----		----
362		0.041		----	2378	ISO14389	ND		----
523		----		----	2379	EN14372	n.d.		----
551	In house	N.D.		----	2380		----		----
622		----		----	2381		----		----
623		----		----	2384	in house	nd (<0.01)		----
826		----		----	2386	ISO14389	<0,01		----
840	ISO14389	0.0152		----	2390	ISO14389	ND		----
841	ISO14389	n.d.		----	2426	ISO14389	ND		----
1051	CPSC-CH-C1001-09.3	<0.005		----	2429	ISO14389	ND		----
1170		----		----	2431		----		----
1213	CPSC-CH-C1001-09.3	n.d.		----	2432		----		----
1911		----		----	2442		----		----
2102	In house	0		----	2453		----		----
2104	CPSC-CH-C1001-09.3	<0.003		----	2459		----		----
2108	ISO14389	0.0163		----	2460	CPSC-CH-C1001-09.3	0		----
2115	ISO14389	0.021		----	2467		0.0226		----
2120	CPSC-CH-C1001-09.3	0.0371		----	2475		----		----
2121	ISO14389	0.01		----	2476	CPSC-CH-C1001-09.3	ND		----
2129	ISO14389	<0,02		----	2482	ISO/TS16181 mod.	0.01407		----
2131		----		----	2486	in house	<0.005		----
2132	CPSC	<0.005		----	2489	ISO14389	ND		----
2137		----		----	2492	in house	0.0172		----
2139	CPSC-CH-C1001-09.3	< 0.01		----	2493	ISO14389	0		----
2146		----		----	2495	ISO14389	<0.009		----
2156	ISO8124-6	0.005		----	2497		0.00779		----
2159	In house	<0.005		----	2500	in house	ND		----
2165	CPSC-CH-C1001-09.3	ND		----	2503		----		----
2170	CPSC-CH-C1001-09.3	----		----	2504	CPSC-CH-C1001-09.3	<0.024		----
2172		----		----	2510		----		----
2184	CPSC-CH-C1001-09.3	n.d.		----	2511		----		----
2213	ISO14389	<0.005		----	2514		----		----
2217	CPSC-CH-C1001-09.3	n.d.		----	2516		----		----
2218		----		----	2522	CPSC-CH-C1001-09.3	<0.01		----
2222	In house	<0.02		----	2529		----		----
2230	In house	<0.005		----	2531	ISO/TS16181	<0.02		----
2232		----		----	2532	ISO14389	n.d.		----
2236	CPSC-CH-C1001-09.3	<0.005		----	2538		----		----
2241		----		----	2553		ND		----
2242		----		----	2557		----		----
2247	CPSC-CH-C1001-09.3	ND		----	2560	ISO14389	ND		----
2255	ISO14389	n.d.		----	2561	ISO14389	0.01976		----
2256		----		----	2563	ISO14389	n. d.		----
2258		<0.005		----	2567	CPSC-CH-C1001-09.3	<0.01		----
2272		----		----	2569		----		----
2277		----		----	2572	ISO14389	<0.01		----
2288	CPSC-CH-C1001-09.3	<0.03		----	2590		----		----
2289	ISO14389	<0.01		----	2591	CPSC-CH-C1001-09.3	0.0173		----
2290	ISO14389	< 0.01		----	2602		----		----
2293	CPSC-CH-C1001-09.3	0.0177		----	2629	ISO14389	ND (<0.005)		----
2295		----		----	2642	CPSC-CH-C1001-09.3	<0.03		----
2301	In house	ND		----	2649		----		----
2303	CPSC-CH-C1001-09.3	<0.02		----	2658	in house	ND		----
2309	CPSC-CH-C1001-09.3	nd (<0.005)		----	2665	in house	n.d.		----
2310	ISO14389	n.d.		----	2666		----		----
2311	In house	n.d.		----	2674	CPAS-CH-C1001-09.3	n.d.		----
2313	ISO14389	n.d.(<0.01)		----	2678	CPSC-CH-C1001-09.3	nd		----
2314		----		----	2705	ISO14372	0.0		----
2316	CPSC-CH-C1001-09.3	ND		----	2713	CPSC-CH-C1001-09.3	<50		----
2330	ISO14389	ND		----	2723		< 0.001		----
2347	ISO14389	<0.005		----	2728	EN71-5	ND		----
2350		<0.005		----	2730	EN15777	0.007		----
2352		----		----	2736	CPSC-CH-C1001-09.3	0.02		----
2353		----		----	2737		----		----
2355	IEC62321-6	<0.005		----	2741	ISO14389	0.022		----
2357	ISO14389	nd		----	2743	ISO14389	nd		----

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
2766		----			3200		<0.01		
2773	ISO14389	nd		----	3205	In house	0.0129		
2774	In house	0		----	3209	ISO14389	n.d.		
2780	In house	0.000		----	3210	ISO/TS16181	0.0141		
2781	In house	N.D		----	3212		0.01196	C	
2785	CPSIA	0.000667		----	3213		----		
3110		0.0154		----	3214		----		
3116		----		----	3216	ISO14389	n.d		
3118	ISO14389	ND		----	3220	ISO14389	ND (<0.005)		
3132	ISO14389	0.0324		----	3225	CPSC-CH-C1001-09.3	ND		
3146	In house	<0,02		----	3228	CPSC-CH-C1001-09.3	ND		
3150		----		----	3233	In house	ND		
3153		----		----	3237		----		
3154		----		----	3238		----		
3160	In house	n.d.		----	3239		----		
3163	In house	0.0020		----	3243	In house	n.d.		
3166		----		----	3248		----		
3167		----		----	8005		----		
3172	ISO14389	< 0.005		----	8006		----		
3176		----		----	8007		----		
3182	CPSC C1001	ND		----	8008		0.0158		
3191	CPSC-CH-C1001-09.3	<0.0150		----	8020	ST2012	n.d.		
3197	ISO14389	ND		----					

normality n.a.  
n 125  
outliers n.a.  
mean (n) <0.05  
st.dev. (n) n.a.  
R(calc.) n.a.  
R(iis) n.a.

Lab 3212: first reported 0.11958



## Determination of DINP – Diisononylphthalate on sample #17560; results in %M/M

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213	CPSC-CH-C1001-09.3	0.2427		0.60	2358	CPSC-CH-C1001-09.3	0.1817		-1.05
230		0.1958		-0.67	2363	ISO14389	0.235		0.39
310	In house	0.245		0.66	2365	IEC62321-8	0.22120		0.02
324	----	----		----	2366	CPSC method	0.2172		-0.09
330	In house	0.042		-4.82	2369	ISO14389	0.237		0.44
339	In house	0.2848		1.74	2370	ISO14389	0.256		0.96
348	In house	0.233		0.34	2372	IEC62321-8	0.2501		0.80
357	CPSC-CH-C1001-09.3	0.2161		-0.12	2375	ISO14389	0.201		-0.53
362		0.208		-0.34	2378	ISO14389	0.25762		1.00
523	----	----		----	2379	EN14372	0.194		-0.72
551	In house	0.0359	C	-4.99	2380	ISO14389	0.17851		-1.14
622	CPSC-CH-C1001-09.3	0.11992		-2.72	2381	ISO14389	0.17742		-1.17
623	----	----		----	2384	In house	0.3298	C	2.95
826	----	----		----	2386	ISO14389	0.2233		0.07
840	ISO14389	0.2406		0.54	2390	ISO14389	0.2214		0.02
841	ISO14389	0.14		-2.18	2426	ISO14389	0.220		-0.02
1051	CPSC-CH-C1001-09.3	0.15525		-1.76	2429	ISO14389	0.246		0.69
1170	----	----		----	2431	CPSC-CH-C1001-09.3	0.2152		-0.14
1213	CPSC-CH-C1001-09.3	0.35512		3.63	2432	CPSC-CH-C1001-09.3	0.30686		2.33
1911	In house	0.1026		-3.19	2442	In house	0.3045		2.27
2102	In house	0.136		-2.28	2453	ISO14389	0.256		0.96
2104	CPSC-CH-C1001-09.3	0.158		-1.69	2459	ISO14389	0.1635		-1.54
2108	ISO14389	0.2850		1.74	2460	CPSC-CH-C1001-09.3	0.1600		-1.64
2115	ISO14389	0.099		-3.28	2467		0.3248		2.82
2120	CPSC-CH-C1001-09.3	0.245		0.66	2475		----		----
2121	ISO14389	0.06		-4.34	2476	CPSC-CH-C1001-09.3	0.1910	C	-0.80
2129	ISO14389	0.231		0.28	2482	ISO/TS16181 mod.	0.2271		0.18
2131	----	----		----	2486	In house	0.2203		-0.01
2132	CPSC	0.2813		1.64	2489	ISO14389	0.2830		1.69
2137	KS M1991	0.1286		-2.48	2492	In house	0.2355		0.40
2139	CPSC-CH-C1001-09.3	0.19		-0.83	2493	ISO14389	0.37950		4.29
2146	CPSC-CH-C1001-09.3	0.227		0.17	2495	ISO14389	0.23879		0.49
2156	ISO8124-6	0.2330		0.34	2497		0.0982		-3.31
2159	In house	0.0605		-4.32	2500	In house	0.232		0.31
2165	CPSC-CH-C1001-09.3	0.205		-0.42	2503		0.2820		1.66
2170	CPSC-CH-C1001-09.3	0.2278		0.20	2504	CPSC-CH-C1001-09.3	0.3305		2.97
2172	ISO14389	0.236		0.42	2510		----		----
2184	CPSC-CH-C1001-09.3	0.198		-0.61	2511	ISO14389	0.2230		0.07
2213	ISO14389	0.2583		1.02	2514	ISO14389	0.2035		-0.46
2217	CPSC-CH-C1001-09.3	0.1968		-0.64	2516		0.1026		-3.19
2218		0.17994		-1.10	2522	CPSC-CH-C1001-09.3	0.177		-1.18
2222	In house	<0.02	False -?	<-5.39	2529	CPSC-CH-C1001-09.3	0.1971		-0.63
2230	In house	0.240		0.52	2531	ISO/TS16181	0.37		4.04
2232	In house	0.24756		0.73	2532	ISO14389	0.2863		1.78
2236	CPSC-CH-C1001-09.3	0.3474		3.43	2538		0.5817	R(0.01)	9.75
2241	In house	0.13981		-2.18	2553		0.051179	C	-4.58
2242	CPSC-CH-C1001-09.3	0.2881		1.82	2557		----		----
2247	CPSC-CH-C1001-09.3	0.267		1.25	2560	ISO14389	0.24484		0.66
2255	ISO14389	0.2030		-0.47	2561	ISO14389	0.30154		2.19
2256	CPSC-CH-C1001-09.3	0.238		0.47	2563	ISO14389	0.11		-2.99
2258		0.2078		-0.34	2567	CPSC-CH-C1001-09.3	0.2054		-0.41
2272		0.2198		-0.02	2569	ISO14389	0.23		0.25
2277	----	----		----	2572	ISO14389	0.2683		1.29
2288	CPSC-CH-C1001-09.3	0.25		0.80	2590	CPSC-CH-C1001-09.3	0.2988		2.11
2289	ISO14389	0.2844		1.72	2591	CPSC-CH-C1001-09.3	0.3958		4.73
2290	ISO14389	0.275		1.47	2602	In house	----		----
2293	CPSC-CH-C1001-09.3	0.2891		1.85	2629	ISO14389	0.154572		-1.78
2295	ISO14389	0.27		1.34	2642	CPSC-CH-C1001-09.3	0.178		-1.15
2301	In house	0.255		0.93	2649	ISO14389	0.319309		2.67
2303	CPSC-CH-C1001-09.3	0.262	C	1.12	2658	In house	0.26		1.07
2309	CPSC-CH-C1001-09.3	0.277		1.52	2665	In house	0.282		1.66
2310	ISO14389	0.2559		0.95	2666	ISO14389	0.26714		1.26
2311	In house	0.2423		0.59	2674	CPAS-CH-C1001-09.3	0.230		0.25
2313	ISO14389	0.2518		0.84	2678	CPSC-CH-C1001-09.3	0.216		-0.12
2314		0.2534		0.89	2705	ISO14372	0.207		-0.37
2316	CPSC-CH-C1001-09.3	0.2956	C	2.03	2713	CPSC-CH-C1001-09.3	0.2731		1.42
2330	ISO14389	0.17427		-1.25	2723		0.1		-3.26
2347	ISO14389	0.230		0.25	2728	EN71-5	0.28		1.61
2350		0.11837		-2.76	2730	EN15777	0.205		-0.42
2352	ISO8124-6	0.2344		0.37	2736	CPSC-CH-C1001-09.3	0.24		0.52
2353	IEC62321-8	0.184		-0.99	2737	ISO14389	0.207		-0.37
2355	IEC62321-6	0.229		0.23	2741	ISO14389	0.3536		3.59
2357	ISO14389	0.2556		0.95	2743	ISO14389	0.29172		1.92

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
2766	CPSC-CH-C1001-09.3	0.15		-1.91	3200		0.27		1.34
2773	ISO14389	0.2104		-0.27	3205	In house	0.1784		-1.14
2774	In house	0.0745		-3.95	3209	ISO14389	0.2416		0.57
2780	In house	0.250733		0.81	3210	ISO/TS16181	0.2022		-0.50
2781	In house	0.27		1.34	3212		0.21345	C	-0.19
2785	CPSIA	0.069		-4.09	3213		----		----
3110		0.1857		-0.94	3214	CPSC-CH-C1001-09.3	0.2357		0.41
3116		0.186		-0.93	3216	ISO14389	0.23505		0.39
3118	ISO14389	0.25914		1.04	3220	ISO14389	0.1709		-1.34
3132	ISO14389	0.0996		-3.27	3225	CPSC-CH-C1001-09.3	0.2075		-0.35
3146	In house	0.2688		1.30	3228	CPSC-CH-C1001-09.3	0.210		-0.29
3150	ISO14389	0.4581	C	6.42	3233	In house	0.22235		0.05
3153	CPSC-CH-C1001-09.3	0.2114		-0.25	3237	In house	0.234195	C	0.37
3154	ISO/TS16181	0.154		-1.80	3238	In house	0.180		-1.10
3160	In house	0.21260		-0.22	3239	In house	0.25048		0.81
3163	In house	0.15181018		-1.86	3243	In house	0.057	C	-4.42
3166	In house	0.0859		-3.64	3248	In house	0.213		-0.20
3167	EN14372	0.2729	C	1.41	8005		0.187		-0.91
3172	ISO14389	0.2471		0.72	8006		0.188		-0.88
3176	CPSC-CH-C1001-09.3	0.586	C,R(0.01)	9.87	8007		0.189		-0.85
3182	CPSC C1001	0.26024		1.07	8008		0.1974		-0.63
3191	CPSC-CH-C1001-09.3	0.2481		0.74	8020	ST2012	0.209		-0.31
3197	ISO14389	0.2365		0.43					

normality suspect  
n 176  
outliers 2  
mean (n) 0.2206  
st.dev. (n) 0.06865  
R(calc.) 0.1922  
R(iis) 0.1037

Lab 551: first reported 0.0192

Lab 2303: first reported 0.469

Lab 2316: first reported 2956 mg/kg

Lab 2384: first reported 3298

Lab 2476: first reported 1910 ppm

Lab 2553: first reported 511.79 mg/kg

Lab 3150: first reported 0.4975

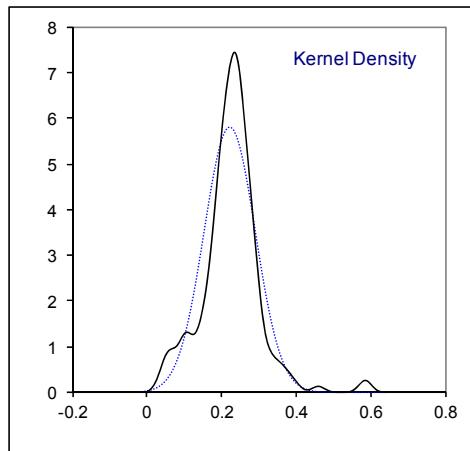
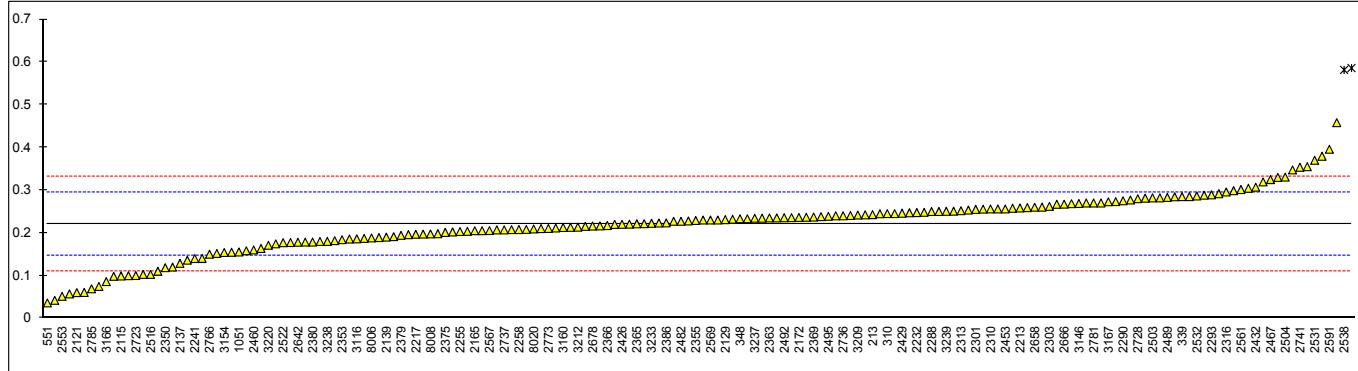
Lab 3167: first reported 0.4501

Lab 3176: first reported 0.0726

Lab 3212: first reported 2.13453

Lab 3237: first reported 0.133562

Lab 3243: first reported 0.048



## Determination of DEHP – Bis-2-ethylhexylphthalate on sample #17561; results in %M/M

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213	CPSC-CH-C1001-09.3	0.1308		1.14	2358	CPSC-CH-C1001-09.3	0.1206		0.59
230		0.1315		1.18	2363	ISO14389	0.107		-0.15
310	In house	0.117		0.39	2365	IEC62321-8	0.11610		0.35
324	----	-----		-----	2366	CPSC	0.1213		0.63
330	In house	0.146		1.97	2369	ISO14389	0.106		-0.20
339	In house	0.1207		0.60	2370	ISO14389	0.131		1.15
348	In house	0.096		-0.75	2372	IEC62321-8	0.1436		1.84
357	CPSC-CH-C1001-09.3	0.1281		1.00	2375	ISO14389	0.104		-0.31
362		0.136	C	1.43	2378	ISO14389	0.11185		0.12
523	----	-----		-----	2379	EN14372	0.080		-1.61
551	In house	N.D.		-----	2380	ISO14389	0.09473		-0.81
622	CPSC-CH-C1001-09.3	0.08149		-1.53	2381	ISO14389	0.09655		-0.72
623	----	-----		-----	2384	INH-206	0.0818	C	-1.52
826	IEC62321-8	0.1200		0.56	2386	ISO14389	0.1106		0.05
840	ISO14389	0.1299		1.10	2390	ISO14389	0.1007		-0.49
841	ISO14389	0.07		-2.16	2426	ISO14389	0.099		-0.58
1051	CPSC-CH-C1001-09.3	0.10195		-0.42	2429		0.078		-1.72
1170	----	-----		-----	2431	CPSC-CH-C1001-09.3	0.123		0.72
1213	CPSC-CH-C1001-09.3	0.11267		0.16	2432	CPSC-CH-C1001-09.3	0.11347		0.20
1911	In house	0.1002		-0.52	2442	In house	0.1176		0.43
2102		0.115		0.29	2453	ISO14389	0.099		-0.58
2104	CPSC-CH-C1001-09.3	0.085		-1.34	2459	ISO14389	0.1296		1.08
2108	ISO14389	0.1070		-0.15	2460	CPSC-CH-C1001-09.3	0.1220		0.67
2115		0.067		-2.32	2467	In house	0.1218		0.66
2120	ISO14389	0.1601		2.73	2475		-----		-----
2121	ISO14389	0.03	R(0.01)	-4.33	2476	CPSC-CH-C1001-09.3	0.1092	C	-0.03
2129	ISO14389	0.114		0.23	2482	ISO/TS16181Mod.	0.1049		-0.26
2131	In house	0.549025	R(0.01)	23.85	2486	In house	0.1081		-0.09
2132	CPSC	0.1205		0.58	2489	ISO14389	0.1125		0.15
2137	KS M1991	0.1139		0.23	2492	In house	0.110		0.01
2139	CPSC-CH-C1001-09.3	0.12		0.56	2493		0.12000		0.56
2146	CPSC-CH-C1001-09.3	0.121		0.61	2495	ISO14389	0.10544		-0.23
2156	ISO8124-6	0.1088		-0.05	2497	In house	0.0728		-2.00
2159	In house	0.1182		0.46	2500	In house	0.104		-0.31
2165	CPSC-CH-C1001-09.3	0.116		0.34	2503		0.1307		1.14
2170	CPSC-CH-C1001-09.3	0.1150		0.29	2504	CPSC-CH-C1001-09.3	0.1284		1.01
2172	ISO14389	0.108		-0.09	2510	In house	0.133		1.26
2184	CPSC-CH-C1001-09.3	0.119		0.50	2511	CPSC-CH-C1001-09.3	0.106		-0.20
2213	ISO14389	0.1034		-0.34	2514	ISO14389	0.1131		0.18
2217		0.0985		-0.61	2516		-----		-----
2218		0.10695		-0.15	2522	CPSC-CH-C1001-09.3	0.114		0.23
2222	In house	0.083		-1.45	2529	CPSC-CH-C1001-09.4	0.1056		-0.22
2230	In house	0.110		0.01	2531	ISO/TS16181	0.095		-0.80
2232	In house	0.09802		-0.64	2532	ISO14389	0.1172		0.41
2236	CPSC-CH-C1001-09.3	0.1276		0.97	2538		0.1163		0.36
2241	In house	0.10994		0.01	2553		0.059374	C	-2.73
2242	CPSC-CH-C1001-09.3	0.1022		-0.41	2557		0.12209		0.67
2247	CPSC-CH-C1001-09.3	0.114		0.23	2560		0.10406		-0.31
2255	ISO14389	0.1120		0.12	2561	ISO14389	0.12891		1.04
2256	CPSC-CH-C1001-09.3	0.096		-0.75	2563		0.1		-0.53
2258		0.087	C	-1.23	2567	CPSC-CH-C1001-09.3	0.116		0.34
2272	ISO14389	0.1077		-0.11	2569		0.10		-0.53
2277	ISO14389	0.0928		-0.92	2572	ISO14389	0.1099		0.01
2288	CPSC-CH-C1001-09.3	0.11		0.01	2590	CPSC-CH-C1001-09.3	0.1452		1.93
2289	ISO14389	0.0766		-1.80	2591	CPSC-CH-C1001-09.3	0.1486		2.11
2290	ISO14389	0.113		0.18	2602	In house	0.1356		1.40
2293	CPSC-CH-C1001-09.3	0.116		0.34	2629	ISO14389	0.1121		0.13
2295	ISO14389	0.098		-0.64	2642	CPSC-CH-E1001-9.3	0.1215		0.64
2301		0.099		-0.58	2649	ISO14389	0.10	C	-0.53
2303		0.104		-0.31	2658	In house	0.12		0.56
2309	CPSC-CH-C1001-09.3	0.107		-0.15	2665	In house	0.088		-1.18
2310	ISO14389	0.1052		-0.25	2666	ISO14389	0.01804	R(0.01)	-4.98
2311	ISO14389	0.0998		-0.54	2674	CPAS-CH-C1001-9.3	0.124		0.77
2313		0.1033		-0.35	2678	CPSC-CH-C1001-09.3	0.144		1.86
2314		0.1102		0.03	2705	ISO14372	0.114		0.23
2316	CPSC-CH-C1001-09.3	0.1008	C	-0.48	2713	CPSC-CH-C1001-09.3	0.1131		0.18
2330	ISO14389	0.09481		-0.81	2723	ISO14389	0.04760		-3.37
2347	ISO14389	0.113		0.18	2728	EN71-5	0.07		-2.16
2350		0.11456		0.26	2730	EN15777	0.026	R(0.01)	-4.55
2352	ISO8124-6	0.1035		-0.34	2736	CPSC-CH-C1001-09.3	0.10		-0.53
2353	IEC62321-8	0.1197		0.54	2737	ISO14389	0.099		-0.58
2355	IEC62321-6	0.117		0.39	2741		0.127		0.94
2357	ISO14389	0.1093		-0.02	2743	ISO14389	0.1210325		0.61

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
2766	CPSC-CH-C1001-09.3	0.09		-1.07	3200	ISO14389	0.10		-0.53
2773	ISO14389	0.0995		-0.56	3205	In house	0.1114		0.09
2774	In house	0.0885		-1.15	3209	ISO14389	0.0958		-0.76
2780	In house	0.1126685		0.16	3210	ISO/TS16181	0.1190		0.50
2781	In house	0.13		1.10	3212		0.05514	C	-2.96
2785	CPSIA	0.211	R(0.01)	5.50	3213		0.1536		2.38
3110		0.1171		0.40	3214	CPSC-CH-C1001-09.3	0.1188		0.49
3116		0.115		0.29	3216	ISO14389	0.08490		-1.35
3118	ISO14389	0.11001		0.02	3220	ISO14389	0.0895		-1.10
3132	ISO14389	0.1199		0.55	3225	CPSC-CH-C1001-09.3	0.0965		-0.72
3146	In house	0.1197		0.54	3228	CPSC-CH-C1001-09.3	0.106		-0.20
3150	CPSC-CH-C1001-09.3	0.0847		-1.36	3233	In house	0.10370		-0.33
3153	CPSC-CH-C1001-09.3	0.1191		0.51	3237	In house	0.167861		3.16
3154	ISO/TS16181	0.111		0.07	3238	In house	0.101		-0.47
3160	In house	0.12059		0.59	3239	In house	0.05573		-2.93
3163	----	----		----	3243	In house	0.14		1.64
3166	In house	0.1168		0.38	3248	In house	0.111		0.07
3167	EN14372	0.1013		-0.46	8005		0.116		0.34
3172	ISO14389	0.1025		-0.39	8006		0.117		0.39
3176	CPSC-CH-C1001-09.3	0.1035		-0.34	8007		0.118		0.45
3182	CPSC C1001	0.13829		1.55	8008		0.1004		-0.51
3191	ISO8124-6	0.1346		1.35	8020	ST2012	0.118		0.45
3197	ISO14389	0.1165		0.37					

**Compare solvent THF (mixture) only**

suspect

normality	suspect
n	178
outliers	5
mean (n)	0.1097
st.dev. (n)	0.01839
R(calc.)	0.0515
R(iis)	0.0516

Lab 362: first reported &lt;0.003

Lab 2258: first reported 0.23151

Lab 2316: first reported 1008 mg/kg

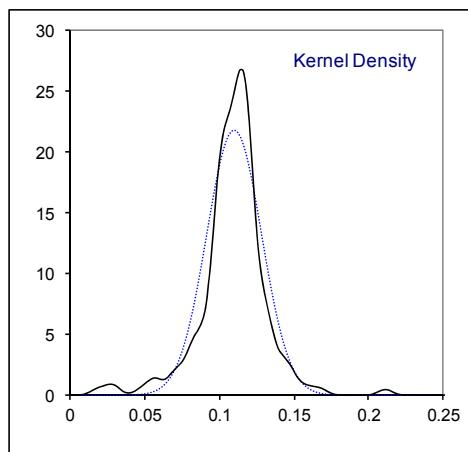
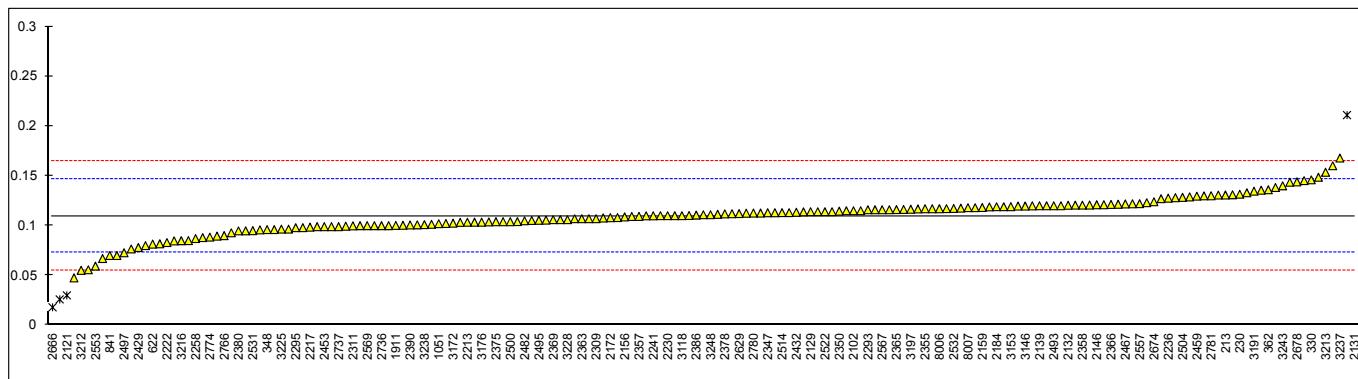
Lab 2384: first reported 818.0

Lab 2476: first reported 1092 ppm

Lab 2553: first reported 593.74 mg/kg

Lab 2649: first reported 0.04914

Lab 3212: first reported 0.55136



## Determination of DBP – Dibutylphthalate on sample #17561; results in %M/M

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213	CPSC-CH-C1001-09.3	0.1710		1.63	2358	CPSC-CH-C1001-09.3	0.1457		0.51
230		0.1524		0.81	2363	ISO14389	0.122		-0.54
310	In house	0.143		0.39	2365	IEC62321-8	0.12114		-0.58
324	----	----		----	2366	CPSC	0.1362		0.09
330	In house	0.171		1.63	2369	ISO14389	0.130		-0.19
339	In house	0.1513		0.76	2370	ISO14389	0.141		0.30
348	In house	0.147		0.57	2372	IEC62321-8	0.1656		1.39
357	CPSC-CH-C1001-09.3	0.1502		0.71	2375	ISO14389	0.142		0.34
362		0.176		1.85	2378	ISO14389	0.12335		-0.48
523	----	----		----	2379	EN14372	0.098		-1.61
551	In house	0.0714	C	-2.79	2380	ISO14389	0.10354		-1.36
622	CPSC-CH-C1001-09.3	0.09372		-1.80	2381	ISO14389	0.10459		-1.32
623	----	----		----	2384	INH-206	0.1035	C	-1.36
826	IEC62321-8	0.1400		0.26	2386	ISO14389	0.1432		0.40
840	ISO14389	0.1539		0.87	2390	ISO14389	0.1233		-0.49
841	ISO14389	0.10		-1.52	2426	ISO14389	0.142		0.34
1051	CPSC-CH-C1001-09.3	0.12625		-0.35	2429		0.096		-1.70
1170	----	----		----	2431	CPSC-CH-C1001-09.3	0.147		0.57
1213	CPSC-CH-C1001-09.3	0.11523		-0.84	2432	CPSC-CH-C1001-09.3	0.11543		-0.83
1911	In house	0.1207		-0.60	2442	In house	0.1437		0.42
2102		0.160		1.14	2453	ISO14389	0.151		0.74
2104	CPSC-CH-C1001-09.3	0.118		-0.72	2459	ISO14389	0.1524		0.81
2108	ISO14389	0.1403		0.27	2460	CPSC-CH-C1001-09.3	0.1370		0.12
2115		0.097		-1.65	2467	In house	0.1253		-0.40
2120	ISO14389	0.1874		2.36	2475		----		----
2121	ISO14389	0.04	R(0.01)	-4.18	2476	CPSC-CH-C1001-09.3	0.1466	C	0.55
2129	ISO14389	0.155		0.92	2482	ISO/TS16181Mod.	0.1369		0.12
2131	In house	0.133325		-0.04	2486	In house	0.1016		-1.45
2132	CPSC	0.1520		0.79	2489	ISO14389	0.1225		-0.52
2137	KS M1991	0.1357		0.07	2492	In house	0.1396		0.24
2139	CPSC-CH-C1001-09.3	0.16		1.14	2493		0.15330		0.85
2146	CPSC-CH-C1001-09.3	0.133		-0.05	2495	ISO14389	0.12617		-0.36
2156	ISO8124-6	0.1512		0.75	2497	In house	0.1171		-0.76
2159	In house	0.1369		0.12	2500	In house	0.102		-1.43
2165	CPSC-CH-C1001-09.3	0.151		0.74	2503		0.2052		3.15
2170	CPSC-CH-C1001-09.3	0.1525		0.81	2504	CPSC-CH-C1001-09.3	0.1673		1.47
2172	ISO14389	0.123		-0.50	2510	In house	0.144		0.43
2184	CPSC-CH-C1001-09.3	0.149		0.66	2511	CPSC-CH-C1001-09.3	0.139		0.21
2213	ISO14389	0.1306		-0.16	2514	ISO14389	0.1396		0.24
2217		0.1411		0.30	2516		0.1011		-1.47
2218		0.13366		-0.03	2522	CPSC-CH-C1001-09.3	0.144		0.43
2222	In house	0.108		-1.16	2529	CPSC-CH-C1001-09.4	0.1296		-0.21
2230	In house	0.127		-0.32	2531	ISO/TS16181	0.13		-0.19
2232	In house	0.13284		-0.06	2532	ISO14389	0.125		-0.41
2236	CPSC-CH-C1001-09.3	0.1444		0.45	2538		0.1445		0.46
2241	In house	0.14174		0.33	2553		0.093817	C	-1.79
2242	CPSC-CH-C1001-09.3	0.1402		0.26	2557		0.14348		0.41
2247	CPSC-CH-C1001-09.3	0.146		0.52	2560		0.12190		-0.55
2255	ISO14389	0.1355		0.06	2561	ISO14389	0.14610		0.53
2256	CPSC-CH-C1001-09.3	0.124		-0.45	2563		0.11		-1.08
2258		0.142		0.34	2567	CPSC-CH-C1001-09.3	0.1347		0.02
2272	ISO14389	0.1373		0.14	2569		0.12		-0.63
2277	ISO14389	0.1046		-1.32	2572	ISO14389	0.1350		0.03
2288	CPSC-CH-C1001-09.3	0.14		0.26	2590	CPSC-CH-C1001-09.3	0.1482		0.62
2289	ISO14389	0.0970		-1.65	2591	CPSC-CH-C1001-09.3	0.1817		2.11
2290	ISO14389	0.143		0.39	2602	In house	0.1400		0.26
2293	CPSC-CH-C1001-09.3	0.142		0.34	2629	ISO14389	0.1469		0.56
2295	ISO14389	0.14		0.26	2642	CPSC-CH-E1001-9.3	0.1475		0.59
2301		0.113		-0.94	2649	ISO14389	0.07413		-2.67
2303		0.143		0.39	2658	In house	0.13		-0.19
2309	CPSC-CH-C1001-09.3	0.123		-0.50	2665	In house	0.123		-0.50
2310	ISO14389	0.1323		-0.09	2666	ISO14389	0.05018	R(0.05)	-3.73
2311	ISO14389	0.1252		-0.40	2674	CPAS-CH-C1001-9.3	0.145		0.48
2313		0.1223		-0.53	2678	CPSC-CH-C1001-09.3	0.159		1.10
2314		0.1290		-0.23	2705	ISO14372	0.150		0.70
2316	CPSC-CH-C1001-09.3	0.1257	C	-0.38	2713	CPSC-CH-C1001-09.3	0.1357		0.07
2330	ISO14389	0.11050		-1.05	2723	ISO14389	0.14934		0.67
2347	ISO14389	0.125		-0.41	2728	EN71-5	0.08		-2.41
2350		0.14550		0.50	2730	EN15777	0.042	R(0.01)	-4.09
2352	ISO8124-6	0.1283		-0.26	2736	CPSC-CH-C1001-09.3	0.12		-0.63
2353	IEC62321-8	0.1424		0.36	2737	ISO14389	0.121		-0.59
2355	IEC62321-6	0.127		-0.32	2741		0.145		0.48
2357	ISO14389	0.1304		-0.17	2743	ISO14389	0.099165		-1.56
2766	CPSC-CH-C1001-09.3	0.12		-0.63	3200	ISO14389	0.13		-0.19

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
2773	ISO14389	0.149		0.66	3205	In house	0.143		0.39
2774	In house	0.1083		-1.15	3209	ISO14389	0.1364		0.10
2780	In house	0.1344998		0.01	3210	ISO/TS16181	0.1387		0.20
2781	In house	0.14		0.26	3212		0.08061	C	-2.38
2785	CPSIA	0.177		1.90	3213		0.1398		0.25
3110		0.1404		0.27	3214	CPSC-CH-C1001-09.3	0.1349		0.03
3116		0.145		0.48	3216	ISO14389	0.08545		-2.17
3118	ISO14389	0.13756		0.15	3220	ISO14389	0.1243		-0.44
3132	ISO14389	0.1337		-0.02	3225	CPSC-CH-C1001-09.3	0.1451		0.48
3146	In house	0.1419		0.34	3228	CPSC-CH-C1001-09.3	0.131		-0.14
3150	CPSC-CH-C1001-09.3	0.1122		-0.98	3233	In house	0.13073		-0.16
3153	CPSC-CH-C1001-09.3	0.1415		0.32	3237	In house	0.148192		0.62
3154	ISO/TS16181	0.144		0.43	3238	In house	0.153		0.83
3160	In house	0.14422		0.44	3239	In house	0.08553		-2.16
3163	----	----	----	----	3243	In house	0.19		2.48
3166	In house	0.1482		0.62	3248	In house	0.145		0.48
3167	EN14372	0.1152		-0.84	8005		0.146		0.52
3172	ISO14389	0.1174		-0.75	8006		0.147		0.57
3176	CPSC-CH-C1001-09.3	0.1313		-0.13	8007		0.148		0.61
3182	CPSC C1001	0.14712		0.57	8008		0.1402		0.26
3191	ISO8124-6	0.1615		1.21	8020	ST2012	0.146		0.52
3197	ISO14389	0.1508		0.74					

normality	suspect
n	182
outliers	3
mean (n)	0.1342
st.dev. (n)	0.02105
R(calc.)	0.0589
R(iis)	0.0631

Lab 551: first reported 0.0204

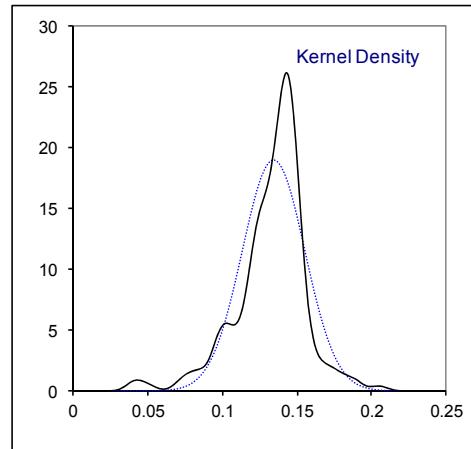
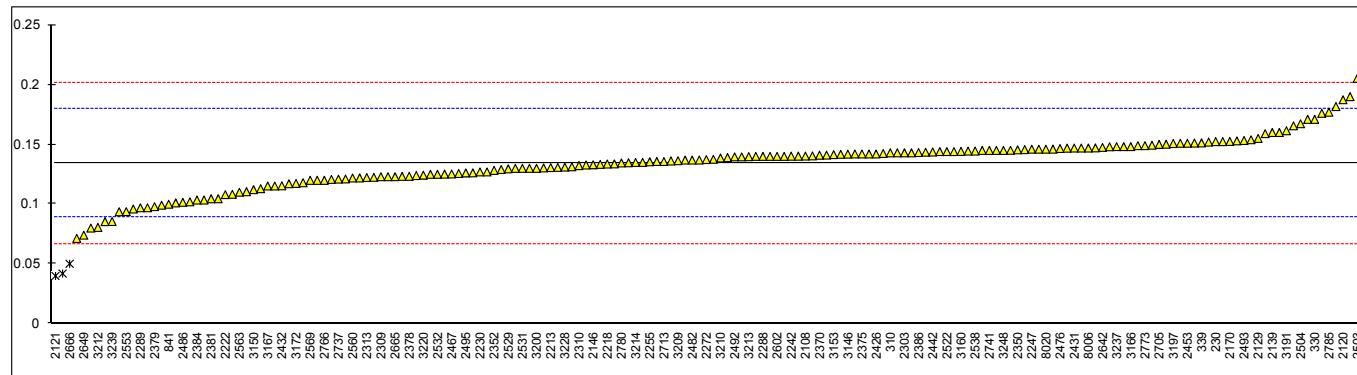
Lab 2316: first reported 1257 mg/kg

Lab 2384: first reported 1035

Lab 2476: first reported 1466 ppm

Lab 2553: first reported 938.17 mg/kg

Lab 3212: first reported 0.80612



## Determination of DNHP – Di-n-hexylphthalate on sample #17561; results in %M/M

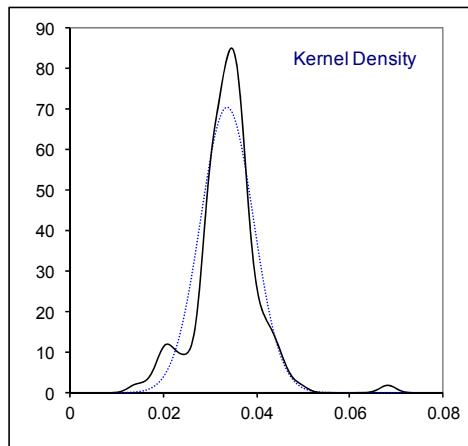
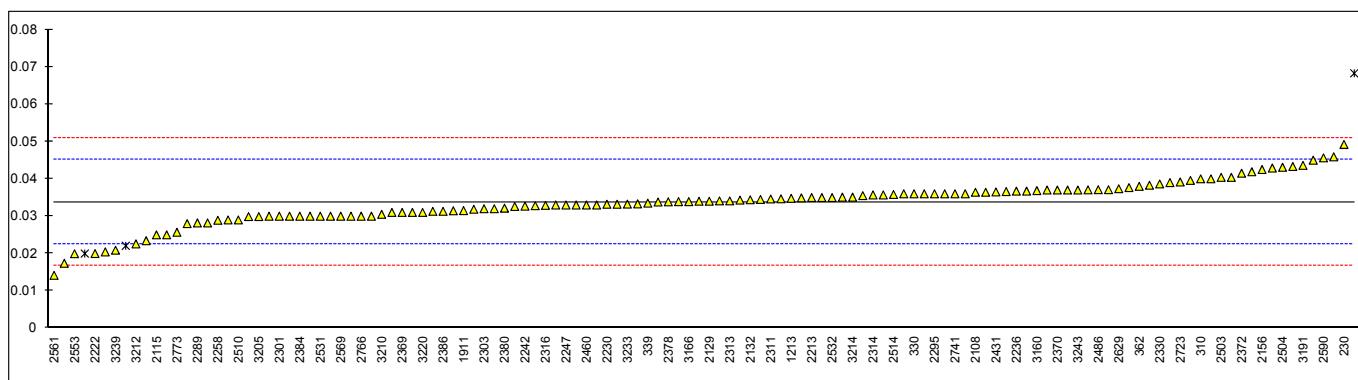
lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213	----				2358	----			
230		0.0492		2.73	2363	ISO14389	0.036		0.40
310	In house	0.040		1.10	2365	IEC62321-8	0.03465		0.16
324	----				2366	CPSC	0.0351		0.24
330	In house	0.036		0.40	2369	ISO14389	0.031		-0.48
339	In house	0.0335		-0.04	2370	ISO14389	0.037		0.57
348	----				2372	IEC62321-8	0.0415	C	1.37
357	CPSC-CH-C1001-09.3	<0.01	False -?	<-4.16	2375	ISO14389	0.036		0.40
362		0.038		0.75	2378	ISO14389	0.03386		0.02
523	----				2379	EN14372	0.029		-0.84
551	In house	N.D.			2380	ISO14389	0.03215		-0.28
622	CPSC-CH-C1001-09.3	0.02045		-2.35	2381	ISO14389	0.03145		-0.41
623	----				2384	INH-206	0.030	C	-0.66
826	----				2386	ISO14389	0.0313		-0.43
840	ISO14389	0.030		-0.66	2390	ISO14389	ND		
841	ISO14389	0.03		-0.66	2426	ISO14389	0.030		-0.66
1051	CPSC-CH-C1001-09.3	0.03380		0.01	2429		0.031		-0.48
1170	----				2431	CPSC-CH-C1001-09.3	0.0365		0.49
1213	CPSC-CH-C1001-09.3	0.03479		0.18	2432	CPSC-CH-C1001-09.3	0.03958		1.03
1911	In house	0.03150		-0.40	2442	In house	0.039		0.93
2102	----				2453	ISO14389	----		
2104	CPSC-CH-C1001-09.3	0.031		-0.48	2459	ISO14389	0.0429		1.62
2108	ISO14389	0.0364		0.47	2460	CPSC-CH-C1001-09.3	0.0330		-0.13
2115		0.025		-1.54	2467	In house	0.0174		-2.89
2120	----				2475		----		
2121	ISO14389	0.02	ex	-2.43	2476	CPSC-CH-C1001-09.3	NC		
2129	ISO14389	0.034		0.04	2482	ISO/TS16181Mod.	0.03447		0.13
2131	----				2486	In house	0.0371		0.59
2132	CPSC	0.0344		0.12	2489	ISO14389	0.033		-0.13
2137	----				2492	In house	0.0299		-0.68
2139	CPSC-CH-C1001-09.3	0.04	C	1.10	2493		0.03700		0.57
2146	----				2495	ISO14389	0.02344	C	-1.82
2156	ISO8124-6	0.0425		1.55	2497		----		
2159	In house	0.0343		0.10	2500	In house	0.032	C	-0.31
2165	----				2503		0.0404		1.17
2170	----				2504	CPSC-CH-C1001-09.3	0.0431		1.65
2172	ISO14389	0.0341		0.06	2510	In house	0.029		-0.84
2184	----				2511	CPSC-CH-C1001-09.3	----		
2213	ISO14389	0.0350		0.22	2514	ISO14389	0.0358		0.36
2217		0.0459		2.15	2516		----		
2218	----				2522		----		
2222	In house	0.02		-2.43	2529		----		
2230	In house	0.0332		-0.10	2531	ISO/TS16181	0.03		-0.66
2232	In house	0.06825	C,R(0.01)	6.09	2532	ISO14389	0.035		0.22
2236	CPSC-CH-C1001-09.3	0.0367		0.52	2538		----		
2241	In house	0.03550		0.31	2553		0.019944	C	-2.44
2242	CPSC-CH-C1001-09.3	0.0327		-0.18	2557		----		
2247	CPSC-CH-C1001-09.3	0.033		-0.13	2560		0.03766		0.69
2255	ISO14389	0.0366		0.50	2561	ISO14389	0.01417		-3.46
2256	----				2563		0.03		-0.66
2258		0.0289	C	-0.86	2567	CPSC-CH-C1001-09.3	0.0371		0.59
2272	ISO14389	0.0333		-0.08	2569		0.03		-0.66
2277	ISO14389	0.0313		-0.43	2572	ISO14389	0.0339		0.03
2288	----				2590	CPSC-CH-C1001-09.3	0.04561		2.09
2289	ISO14389	0.0282		-0.98	2591		----		
2290	ISO14389	0.035		0.22	2602	In house	0.0433		1.69
2293	CPSC-CH-C1001-09.3	0.037		0.57	2629	ISO14389	0.03734		0.63
2295	ISO14389	0.036		0.40	2642		----		
2301		0.030		-0.66	2649	ISO14389	ND	C	
2303		0.032		-0.31	2658		----		
2309	CPSC-CH-C1001-09.3	0.033		-0.13	2665	In house	0.025		-1.54
2310	ISO14389	0.0349		0.20	2666	ISO14389	0.02207	ex	-2.06
2311	ISO14389	0.0346		0.15	2674	CPAS-CH-C1001-9.3	N/A		
2313		0.0341		0.06	2678		----		
2314		0.0357		0.34	2705		----		
2316	CPSC-CH-C1001-09.3	0.0329	C	-0.15	2713		----		
2330	ISO14389	0.03863		0.86	2723	ISO14389	0.03916		0.96
2347	ISO14389	0.033		-0.13	2728	EN71-5	ND		
2350		0.036717		0.52	2730	EN15777	na		
2352	ISO8124-6	0.0332		-0.10	2736	CPSC-CH-C1001-09.3	0.03		-0.66
2353	----				2737	ISO14389	0.036		0.40
2355	IEC62321-6	0.034		0.04	2741		0.036		0.40
2357	ISO14389	0.0364		0.47	2743	ISO14389	0.037045		0.58

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
2766	CPSC-CH-C1001-09.3	0.03		-0.66	3200	ISO14389	0.03		-0.66
2773	ISO14389	0.0257		-1.42	3205	In house	0.0299		-0.68
2774	In house	0.0328		-0.17	3209	ISO14389	0.0326		-0.20
2780		----		----	3210	ISO/TS16181	0.0305		-0.57
2781		----		----	3212		0.02259	C	-1.97
2785		----		----	3213		----		----
3110		----		----	3214	CPSC-CH-C1001-09.3	0.0351		0.24
3116		----		----	3216		----		----
3118	ISO14389	0.03186		-0.33	3220	ISO14389	0.031	C	-0.48
3132		----		----	3225	CPSC-CH-C1001-09.3	NA		----
3146		----		----	3228	CPSC-CH-C1001-09.3	NA		----
3150	CPSC-CH-C1001-09.3	0.0404		1.17	3233	In house	0.03323		-0.09
3153		----		----	3237	In house	0.038284		0.80
3154	ISO/TS16181	0.028		-1.01	3238		----		----
3160	In house	0.03685		0.55	3239	In house	0.02089		-2.27
3163		----		----	3243	In house	0.037		0.57
3166	In house	0.0339		0.03	3248	In house	0.045		1.99
3167		----		----	8005		----		----
3172	ISO14389	0.0357		0.34	8006		----		----
3176	CPSC-CH-C1001-09.3	0.0282		-0.98	8007		----		----
3182	CPSC C1001	0.0419	C	1.44	8008		----		----
3191	ISO8124-6	0.0436		1.74	8020		----		----
3197	ISO14389	0.0360		0.40					

normality suspect  
n 125  
outliers 1 (+2 ex)  
mean (n) 0.0337  
st.dev. (n) 0.00569  
R(calc.) 0.0159  
R(iis) 0.0159

Lab 2139: first reported 0.08  
Lab 2232: first reported 0.05035  
Lab 2258: first reported 0.0761  
Lab 2316: first reported 329 mg/kg  
Lab 2372: first reported 0.1377  
Lab 2384: first reported 302.5  
Lab 2495: first reported 0.01531

Lab 2500: first reported 0.322  
Lab 2553: first reported 199.44  
Lab 2649: first reported 0.01555  
Lab 3182: first reported 0.05446  
Lab 3212: first reported 0.22592  
Lab 3220: first reported 0.1268



## Determination of DNPP – Di-n-pentylphthalate on sample #17561; results in %M/M

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
213		----		----	2358		----		----
230		0.1225		1.25	2363	ISO14389	0.12		1.10
310	In house	----		----	2365	IEC62321-8	0.11294		0.68
324		----		----	2366	CPSC	0.1213		1.18
330	In house	0.151		2.92	2369	ISO14389	0.110		0.51
339	In house	0.1170		0.92	2370	ISO14389	0.114		0.75
348		----		----	2372	IEC62321-8	0.1377	C	2.14
357	CPSC-CH-C1001-09.3	0.1114		0.59	2375	ISO14389	0.112		0.63
362		0.098		-0.19	2378	ISO14389	0.09827		-0.18
523		----		----	2379	EN14372	0.075		-1.55
551	In house	N.D.		----	2380	ISO14389	0.08708		-0.84
622	CPSC-CH-C1001-09.3	0.07259		-1.69	2381	ISO14389	0.08513		-0.95
623		----		----	2384	INH-206	0.091	C	-0.61
826	IEC62321-8	0.0919		-0.55	2386	ISO14389	0.0999		-0.08
840	ISO14389	0.1024		0.06	2390	ISO14389	0.0925	C	-0.52
841	ISO14389	n.d		----	2426	ISO14389	0.091		-0.61
1051		----		----	2429		0.070		-1.84
1170		----		----	2431	CPSC-CH-C1001-09.3	0.1152		0.82
1213	CPSC-CH-C1001-09.3	0.08582		-0.91	2432	CPSC-CH-C1001-09.3	0.08978		-0.68
1911	In house	0.02985	R(0.01)	-4.20	2442	In house	0.1189		1.03
2102		----		----	2453	ISO14389	0.099		-0.14
2104	CPSC-CH-C1001-09.3	0.114		0.75	2459	ISO14389	0.0983		-0.18
2108	ISO14389	0.1032		0.11	2460		----		----
2115		----		----	2467	In house	0.0910		-0.61
2120	ISO14389	0.0832		-1.06	2475		----		----
2121	ISO14389	0.02	R(0.01)	-4.78	2476	CPSC-CH-C1001-09.3	NC		----
2129	ISO14389	0.095		-0.37	2482	ISO/TS16181Mod.	0.09800		-0.19
2131		----		----	2486	In house	0.1087		0.43
2132	CPSC	0.0946		-0.39	2489	ISO14389	0.125		1.39
2137		----		----	2492	In house	0.0894		-0.70
2139	CPSC-CH-C1001-09.3	0.14		2.28	2493		0.11000		0.51
2146		----		----	2495	ISO14389	0.08893		-0.73
2156	ISO8124-6	0.0939		-0.44	2497	In house	0.0773		-1.41
2159	In house	0.1033		0.12	2500	In house	0.098		-0.19
2165		----		----	2503		----		----
2170	CPSC-CH-C1001-09.3	0.1102		0.52	2504	CPSC-CH-C1001-09.3	n.a.		----
2172	ISO14389	0.108		0.39	2510		----		----
2184		----		----	2511		----		----
2213	ISO14389	0.0984		-0.17	2514	ISO14389	0.086		-0.90
2217		0.1249		1.39	2516		----		----
2218		----		----	2522		----		----
2222		----		----	2529		----		----
2230	In house	0.112		0.63	2531	ISO/TS16181	0.105		0.22
2232	In house	0.13254	C	1.84	2532	ISO14389	0.1238		1.32
2236		----		----	2538		----		----
2241	In house	0.09801		-0.19	2553		ND		----
2242	CPSC-CH-C1001-09.3	0.1106		0.55	2557		----		----
2247	CPSC-CH-C1001-09.3	0.092		-0.55	2560		0.08719		-0.83
2255	ISO14389	0.0875		-0.81	2561		----		----
2256		----		----	2563		0.1		-0.08
2258		----		----	2567	CPSC-CH-C1001-09.3	0.0892		-0.71
2272	ISO14389	0.0974		-0.23	2569		0.11	C	0.51
2277	ISO14389	0.0919		-0.55	2572	ISO14389	0.0905		-0.64
2288	CPSC-CH-C1001-09.3	0.10		-0.08	2590	CPSC-CH-C1001-09.3	0.1260		1.45
2289	ISO14389	0.0575		-2.58	2591	CPSC-CH-C1001-09.3	----		----
2290	ISO14389	0.093		-0.49	2602	In house	0.1300		1.69
2293		----		----	2629	ISO14389	0.114585		0.78
2295	ISO14389	0.1		-0.08	2642		----		----
2301		0.121	C	1.16	2649	ISO14389	0.105	C	0.22
2303		0.104		0.16	2658		----		----
2309	CPSC-CH-C1001-09.3	nd (<0.005)	False -?	<-5.61	2665	In house	0.086		-0.90
2310	ISO14389	0.0948		-0.38	2666	ISO14389	0.05577	ex	-2.68
2311	ISO14389	0.0903		-0.65	2674	CPAS-CH-C1001-9.3	N/A		----
2313		0.0908		-0.62	2678		----		----
2314		0.0991		-0.13	2705		----		----
2316	CPSC-CH-C1001-09.3	0.0925	C	-0.52	2713		----		----
2330	ISO14389	0.08971		-0.68	2723	ISO14389	0.11711		0.93
2347	ISO14389	0.109		0.45	2728	EN71-5	ND		----
2350		0.10623		0.29	2730	EN15777	na		----
2352	ISO8124-6	0.0994		-0.11	2736		----		----
2353		----		----	2737		----		----
2355	IEC62321-6	0.100		-0.08	2741		0.096		-0.31
2357	ISO14389	0.1046		0.19	2743	ISO14389	0.082095		-1.13

lab	method	value	mark	z(targ)	lab	method	value	mark	z(targ)
2766		----		----	3200	ISO14389	0.09		-0.66
2773	ISO14389	0.1097		0.49	3205	In house	0.0977		-0.21
2774	In house	0.0933		-0.47	3209	ISO14389	0.1006		-0.04
2780		----		----	3210	ISO/TS16181	0.0954		-0.35
2781		----		----	3212		0.05796	C	-2.55
2785		----		----	3213		----		----
3110		----		----	3214	CPSC-CH-C1001-09.3	0.1007		-0.04
3116		----		----	3216		----		----
3118	ISO14389	0.09615		-0.30	3220	ISO14389	nd (<0.005)	False -?	<-5.61
3132		----		----	3225	CPSC-CH-C1001-09.3	NA		----
3146		----		----	3228	CPSC-CH-C1001-09.3	NA		----
3150	CPSC-CH-C1001-09.3	0.1087		0.43	3233	In house	0.09970		-0.09
3153		----		----	3237	In house	0.106742		0.32
3154	ISO/TS16181	0.110		0.51	3238		----		----
3160	In house	0.10805		0.40	3239	In house	0.05600		-2.66
3163		----		----	3243	In house	0.10		-0.08
3166	In house	0.1064		0.30	3248		----		----
3167		----		----	8005		----		----
3172	ISO14389	0.1021		0.05	8006		----		----
3176		----		----	8007		----		----
3182	CPSC C1001	0.11064		0.55	8008		----		----
3191	ISO8124-6	0.1196		1.08	8020		----		----
3197	ISO14389	0.1089		0.45					

normality suspect  
n 113  
outliers 2 (+1 ex)  
mean (n) 0.1013  
st.dev. (n) 0.01579  
R(calc.) 0.0442  
R(iis) 0.0476

Lab 2232: first reported 0.17458

Lab 2390: first reported 0.0486

Lab 2301: first reported 0.182

Lab 2569: first reported 0.15

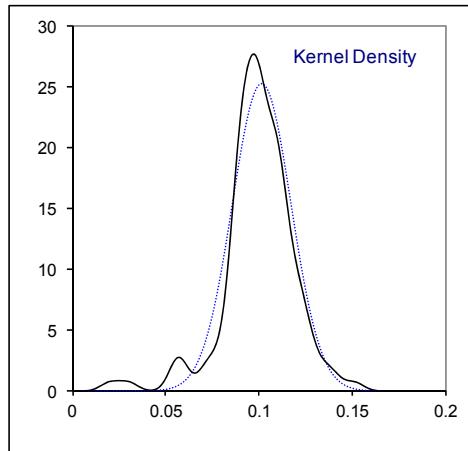
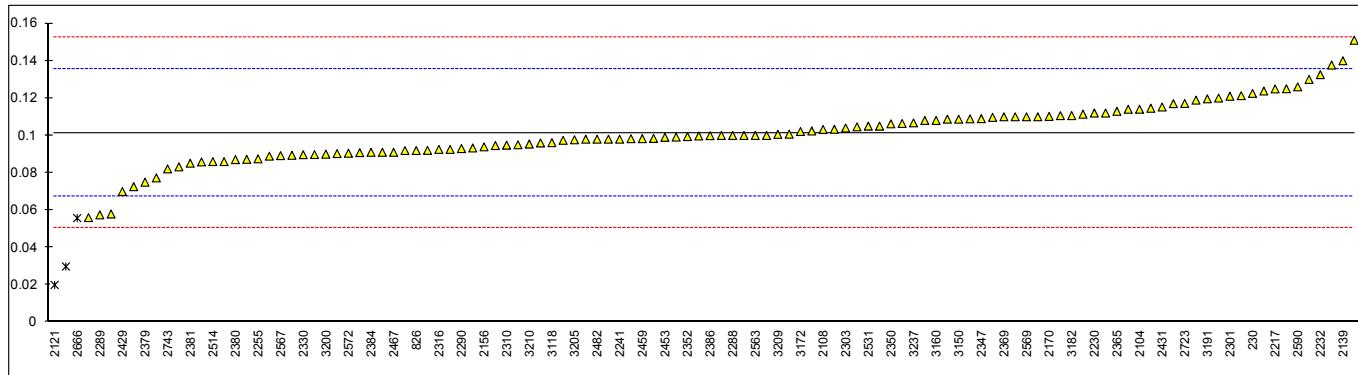
Lab 2316: first reported 925 mg/kg

Lab 2649: first reported 0.039803

Lab 2372: first reported 0.0415

Lab 3212: first reported 0.5796

Lab 2384: first reported 912.2



**APPENDIX 2**

Summary of other reported phthalates in sample #17560; results in %M/M

lab	method
2115	DPP = 0.06 (in sample #17560 and/or #17561)
2131	DNHP = 0.03774; DNPP = 0.13316
2467	other phthalate = 0.3555
2785	BBP = 0.0783

Summary of other reported phthalates in sample #17561; results in %M/M

lab	method
551	BBP = 0.0519; DNOP = 0.0341; DUP = 0.0331
1911	Other phthalate (Bis(2-ethylhexyl) terephthalate ; Cas No. 6422-86-2) = 20.64
2115	DPP = 0.06 (in sample #17560 and/or #17561)
2120	Other phthalate (Di-isohexylphthalate; CAS nr 68515-50-4) = 0.0301
2129	Other phthalate (DEHT) = 28
2131	DINP = 0.250445
2222	Other phthalate (DEHTP) >10
2309	Other phthalate = 0.093
2497	DEP = 0.0151
2504	DNOP = 0.0241
2561	Other phthalate = 0.10544
2730	BBP = 0.025
2785	BBP = 0.028; DIDP = 0.0237; DINP = 0.103
3160	Other phthalate (DOTP) = 21.33 (first reported 21.54)
3205	Other phthalate (Diethylterephthalate) ≈ 27
3212	DIDP = 0.00950 (first reported 0.09499); DINP = 0.31388
3216	Other phthalate = 0.06611

**Abbreviations of components:**

BBP =	Benzylbutylphthalate
DIDP =	Diisodecylphthalate
DINP =	Diisononylphthalate
DNOP =	Di-n-octylphthalate
DCHP =	Dicyclohexylphthalate
DEP =	Diethylphthalate
DMP =	Dimethylphthalate
DNHP =	Di-n-hexylphthalate
DIBP =	Diisobutylphthalate
DPHP =	Di(2-propylheptyl)phthalate
DNPP =	Di-n-pentylphthalate
DUP =	Diundecylphthalate





Lab	BBP	DNOP	DCHP	DEP	DMP	DNHP	DIBP	DPHP	DNPP	DUP	other
2780	0.000	0.000	----	----	----	----	----	----	----	----	----
2781	N.D	N.D	----	----	----	----	----	----	----	----	----
2785	0.0783	0.0	----	----	----	----	----	----	----	----	----
3110	----	----	----	----	----	----	----	----	----	----	----
3116	----	----	----	----	----	----	----	----	----	----	----
3118	ND	----	ND	ND	----						
3132	----	----	----	----	----	----	----	----	----	----	----
3146	----	----	----	----	----	----	----	----	----	----	----
3150	----	----	----	----	----	----	----	----	----	----	----
3153	----	----	----	----	----	----	----	----	----	----	----
3154	----	----	----	----	----	----	----	----	----	----	----
3160	n.d.	----	n.d.	----	n.d.						
3163	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.000215	0.0020	0.0020	0.0020	----
3166	----	----	----	----	----	----	----	----	----	----	----
3167	----	----	----	----	----	----	----	----	----	----	----
3172	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
3176	----	----	----	----	----	----	----	----	----	----	----
3182	ND	ND	ND	ND	ND						
3191	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
3197	ND	ND	ND	ND	ND						
3200	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3205	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	----
3209	n.d.	n.d.	n.d.	n.d.	n.d.						
3210	<0.002	<0.002	----	<0.002	<0.002	<0.002	<0.002	<0.002	----	<0.002	<0.005
3212	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	----	0.000000	----	----
3213	----	----	----	----	----	----	----	----	----	----	----
3214	----	----	----	----	----	----	----	----	----	----	----
3216	n.d.	n.d.	----	----	----	----	n.d.	----	----	----	n.d.
3220	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----	< 0.005	----	----
3225	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
3228	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	ND
3233	ND	ND	ND	ND	ND						
3237	----	----	----	----	----	----	----	----	----	----	----
3238	----	----	----	----	----	----	----	----	----	----	----
3239	----	----	----	----	----	----	----	----	----	----	----
3243	n.d.	n.d.	n.d.	n.d.	n.d.						
3248	----	----	----	----	----	----	----	----	----	----	----
8005	----	----	----	----	----	----	----	----	----	----	----
8006	----	----	----	----	----	----	----	----	----	----	----
8007	----	----	----	----	----	----	----	----	----	----	----
8008	----	----	----	----	----	----	----	----	----	----	----
8020	n.d.	n.d.	----	----	----	----	----	----	----	----	----





Lab	BBP	DIDP	DINP	DNOP	DCHP	DEP	DMP	DIBP	DPHP	DUP	other
3110	----	----	----	----	----	----	----	----	----	----	----
3116	----	----	----	----	----	----	----	----	----	----	----
3118	ND	ND	ND	ND	----						
3132	----	----	----	----	----	----	----	----	----	----	----
3146	----	----	<0,05	----	----	----	----	----	----	----	----
3150	----	----	----	----	----	----	----	----	----	----	----
3153	----	----	----	----	----	----	----	----	----	----	----
3154	----	----	----	----	----	----	----	----	----	----	----
3160	n.d.	n.d.	----	21.33	----						
3163	----	----	----	----	----	----	----	----	----	----	----
3166	----	----	----	----	----	----	----	----	----	----	----
3167	----	----	----	----	----	----	----	----	----	----	----
3172	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
3176	----	----	----	----	----	----	----	----	----	----	----
3182	ND	ND	ND	ND	ND						
3191	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
3197	ND	ND	ND	ND	ND						
3200	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
3205	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	≈27
3209	n.d.	n.d.	n.d.	n.d.	n.d.						
3210	<0.002	<0.005	<0.005	<0.002	----	<0.002	<0.002	<0.002	----	<0.005	----
3212	0.00000	0.00950	0.31388	0.00000	0.00000	0.00000	0.00000	0.00000	----	----	----
3213	----	----	----	----	----	----	----	----	----	----	----
3214	----	----	----	----	----	----	----	----	----	----	----
3216	----	----	----	----	----	----	----	----	----	----	0.06611
3220	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	----	----	----
3225	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA
3228	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	ND
3233	ND	ND	ND	ND	ND						
3237	----	----	----	----	----	----	----	----	----	----	----
3238	----	----	----	----	----	----	detected	----	----	detected	----
3239	----	----	----	----	----	----	----	----	----	----	----
3243	n.d.	n.d.	n.d.	n.d.	n.d.						
3248	----	----	----	----	----	----	----	----	----	----	----
8005	----	----	----	----	----	----	----	----	----	----	----
8006	----	----	----	----	----	----	----	----	----	----	----
8007	----	----	----	----	----	----	----	----	----	----	----
8008	----	----	----	----	----	----	----	----	----	----	----
8020	n.d.	n.d.	n.d.	n.d.	----	----	----	----	----	----	----

\*) Lab 2780: DNOP first reported 7.603256

**APPENDIX 4**

Method information as reported by the participating laboratories

Lab	Is the laboratory ISO17025 accredited for the test?	Sample grinded or cut prior to use or used as received?	What was the final estimated particle size before analysis?	Which technique was used to release/extract the analyte?	What solvent (mixture) was used to release the analyte?	Other remarks, comments
213	No	Cut		Ultrasonic	THF/Hexane	
230	Yes	Cut		Ultrasonic	THF	
310	No	as received	as original	Ultrasonic	THF	
324	---	---		---		
330	No	as received		Ultrasonic	CHCL2/MeOH	
339	No	Cut	#17560 : 2x2 mm	Ultrasonic	THF + MEOH	17561 : 2x4 mm
348	No	Cut	<2x2x2 mm	Ultrasonic	THF	
357	No	as received		Ultrasonic	THF	
362	Yes	as received		Ultrasonic	THF/Hexane	
523	---	---		---		
551	Yes	Cut	2mm x 2mm	Ultrasonic	THF	
622	Yes	Cut	< 1 mm	Ultrasonic	THF + n-Hexane	
623	---	---		---		
826	Yes	Grinded	1mmx1mmx1mm	Soxhlet	THF	
840	Yes	Cut	<1mm	Ultrasonic	THF	
841	---	---		---		
1051	Yes	Cut	< 2mm	Ultrasonic	THF and Hexane	
1170	---	---		---		
1213	Yes	Grinded	<200 µm	Ultrasonic	THF	Grinded into powder
1911	No	as received	as received	Other	Dichloromethane	Automated Soxtec
2102	Yes	as received		Ultrasonic	THF/hexane	
2104	Yes	Cut	-	Mech. Shaking	Dichloromethane	
2108	Yes	as received	<5mm	Ultrasonic	THF	
2115	Yes	as received		Ultrasonic	THF - Hexane	
2120	No	Grinded	2 mm	Ultrasonic	THF: 60°C/ 60 min	Precipitation: n-hexane
2121	Yes	as received		Ultrasonic	THF/Hexane	
2129	Yes	as received	as received	Ultrasonic	THF: 60°C/ 60 min	Precipitation: hexane
2131	Yes	as received		Ultrasonic	THF/n-hexane	
2132	Yes	Cut	1mm x 1mm	Ultrasonic	THF	
2137	Yes	as received	2 mm	Ultrasonic	THF+MeOH	
2139	Yes	as received	5 mm x 2 mm	Ultrasonic	THF / Hexane	
2146	Yes	Other	#17560:as received	Ultrasonic	THF	#17561: cut into 4 parts from 1 ring
2156	No	Cut	<5 mm	Soxhlet	Dichloromethane	
2159	Yes	Cut	2 mm x 2 mm	Ultrasonic	THF / ACN (1/2)	
2165	Yes	as received	3mm X 3mm	Ultrasonic	THF	#17560: cannot be dissolved
2170	Yes	Cut	less than 2mm	Ultrasonic	THF and Hexane	#17560: not dissolved completely
2172	Yes	Cut	2mm*2mm	Ultrasonic	THF:ACN=1:2	
2184	Yes	as received	3mm x 3mm	Ultrasonic	THF	
2213	Yes	Cut	5X5 mm	Ultrasonic	THF/n-Hexane	#17560: cannot be dissolved
2217	Yes	as received		Ultrasonic	THF	
2218	Yes	Cut		Ultrasonic	THF/hexane	
2222	No	as received		Other	solvent :THF	phthalates extracted using isoctane.
2230	Yes	Cut	2mm x 2mm	Mech. Shaking	THF	
2232	Yes	as received	2mm*2mm*2mm	Ultrasonic	THF:ACN	
2236	Yes	Cut	2 mm x 2 mm	Ultrasonic	Tetrahydrofuran	#17560: not dissolved completely
2241	Yes	Cut	2mm*2mm	Ultrasonic	THF	
2242	Yes	Cut	Less than 2mm	Other	THF and Hexane	
2247	Yes	Cut	Approx 2 mm	Ultrasonic	THF and Hexane	#17560: not dissolved completely
2255	Yes	as received		Ultrasonic	THF and n-Hexane	
2256	Yes	Cut	1mm*1mm	Ultrasonic	See remarks	THF/Hexane/cyclohexane
2258	Yes	as received	2 mm x 2 mm	Ultrasonic	THF/ACN (1:2)	#17561: cut
2272	Yes	Cut	<2mm	Ultrasonic	THF+hexane	
2277	Yes	Cut	2mm X 2mm	Ultrasonic	DCM	
2288	Yes	Cut	Visual: < 2mm	Ultrasonic	THF and Hexane	Identification type of plastic with FT-IR
2289	Yes	Cut	2mm*2mm	Ultrasonic	THF and ACN	
2290	---	---		---		
2293	Yes	Cut	2.55 mm (#17560)	Ultrasonic	THF:Hexane (5:10)	3.1 mm (#17561)
2295	Yes	Cut		Ultrasonic	THF and n-hexane	
2301	Yes	as received	2mm x 2mm	Ultrasonic	THF:ACN (1:2)	
2303	Yes	Cut	2mm	Ultrasonic	THF/Hexane	Accr. DBP,BBP,DEHP,DINP,DNOP+DIDP
2309	Yes	Grinded	250 micron	Ultrasonic	THF	
2310	Yes	Cut	2 mm * 2 mm	Ultrasonic	THF and hexane	
2311	Yes	Cut	< 2mm x 2mm	Ultrasonic	THF + Hexane	

Lab	Is the laboratory ISO17025 accredited for the test?	Sample grinded or cut prior to use or used as received?	What was the final estimated particle size before analysis?	Which technique was used to release/extract the analyte?	What solvent (mixture) was used to release the analyte?	Other remarks, comments
2313	Yes	Cut	ca 2mmX2mm	Ultrasonic	THF and n Hexane	
2314	Yes	Cut	3mmx3mm	Ultrasonic	THF + Hexane	
2316	Yes	Cut	< 2 mm	Mech. Shaking	THF and n-Hexane	
2330	No	as received	2mm X 2mm	Ultrasonic	THF : Hexane	
2347	Yes	Cut	2mm*2mm	Ultrasonic	THF	
2350	Yes	as received	2 mm	Ultrasonic	THF + ACN	
2352	Yes	Cut	no large than 5mm	Soxhlet	Dichloromethane	
2353	Yes	Cut	0.2mm x 0.2mm	Ultrasonic	ACN, n- hexane	
2355	Yes	Cut	2mm*2mm	Ultrasonic	THF:ACN	
2357	Yes	Cut	2mm*2mm*2mm	Ultrasonic	THF	
2358	Yes	Cut	2mmx2mmx2mm	Mech. Shaking	THF/hexane	
2363	Yes	Cut	2*2*2MM	Ultrasonic	THF	
2365	Yes	Cut	2mm*2mm*2mm	Soxhlet (#17560)	n-hexane	#17561 extract by ultrasonic
2366	Yes	Cut	2mm*2mm*2mm	Mech. Shaking	Hexane /THF	
2369	Yes	---	---	---		
2370	Yes	as received	#17560: 3x2x1mm	Ultrasonic	THF	#17561: 8 x 2 x 1 mm (cut)
2372	Yes	Cut	<2mm	Ultrasonic	THF	
2375	Yes	Cut	2 x 2 mm	Ultrasonic	Hexane-THF (1:1)	
2378	Yes	Cut	3mm*3mm	Ultrasonic	THF	
2379	Yes	Cut	2x2 mm	Soxhlet	Hexane	
2380	Yes	as received	2X3 mm	Ultrasonic	THF	
2381	Yes	as received	2mm X 3mm	Ultrasonic	THF	
2384	Yes	Cut	<500mm	Ultrasonic	THF	
2386	Yes	as received		Ultrasonic	n-Hexane/THF	
2390	Yes	Cut	2 x 2 mm	Ultrasonic	THF and n-Hexane	
2426	Yes	Cut	Approx 2-3 mm	Mech. Shaking	THF / n - Hexane	
2429	Yes	Cut	3mm*2mm	Ultrasonic	THF and n-Hexane	HPLC
2431	Yes	Cut	<2mm x 2mm	Ultrasonic	THF, n-Hexane	0.05g
2432	---	---	---	---		
2442	Yes	Cut	0.58	Ultrasonic	THF	
2453	No	Cut	2 mm	Ultrasonic	THF	
2459	Yes	as received	2.5mm	Ultrasonic	THF	
2460	Yes	Cut	2.5 mm	Ultrasonic	THF/HEXANE	
2467	Yes	Cut	#17560 : 2mm	Mech. Shaking	THF	#175614-5mm, (#17560 not dissolved?)
2475	---	---	---	---		
2476	Yes	as received	as received	Ultrasonic	THF-Hexane	
2482	Yes	as received		Ultrasonic	Toluene	
2486	Yes	as received	2mm	Ultrasonic	THF:ACN=1:2	Sonification time extended
2489	Yes	Cut	2X2 MM	Ultrasonic	THF/n-HEXANE	
2492	---	---	---	---		
2493	Yes	Cut	3mm	Ultrasonic	THF	
2495	Yes	as received		Ultrasonic	THF 100%	
2497	Yes	as received		Ultrasonic	hexane	#17561: solvent THF
2500	Yes	Cut	2mm X 2mm	Ultrasonic	THF/ACN	
2503	Yes	Cut	0.05 grams	Ultrasonic	THF	GC-MS
2504	Yes	Cut	2 mm	Ultrasonic	THF/ Hexane	
2510	No	as received	NA	Mech. Shaking	THF	
2511	---	---	---	---		
2514	Yes	Cut	less than 5 mm	Ultrasonic	THF and n-Hexane	
2516	No	Cut	less than 1mm	Other	THF/hexane	
2522	Yes	Cut	less than 2mm	Ultrasonic	THF	accr. DBP,BBP,DEHP,DINP,DNOP+DIDP
2529	No	Grind (17560)	not estimated	Ultrasonic	THF/hexane mix	
2531	Yes	Cut	2 mm	Ultrasonic	Hexane/Acetone	Hexane/Acetone 80/20
2532	Yes	Cut	<2mm	Ultrasonic	THF -> n-Hexane	#17560: not dissolved completely
2538	Yes	as received	3-5 g	Soxhlet	Diethylether	Soxhlet: Diethylether. Solvent: n-Hexane
2553	Yes	Cut	2mm x 2mm	Ultrasonic	THF	
2557	Yes	Cut	2mm square	Mech. Shaking	THF,n-Hexane	
2560	Yes	Other	ca 2mmX2mm	Ultrasonic	THF and n-hexane	#17560 as received, #17561 cut
2561	Yes	Cut	2 x 2 mm	Ultrasonic	10ml THF	Precipitation: 20ml Hexane
2563	Yes	Cut	~4x4 mm	Ultrasonic	THF	
2567	Yes	Cut	2mm X 2mm	Ultrasonic	THF and n-Hexane	
2569	Yes	Cut		Ultrasonic	THF and n-Hexane	THF followed by n-Hexane
2572	Yes	---	---	---		
2590	No	as received		Ultrasonic	THF	
2591	Yes	Cut	3mm	Ultrasonic	THF/n-Hexane	
2602	Yes	Other	as received (17560)	Mech. Shaking	THF and n-Hexane	#17561: 0,5 x 0,3 cm (Cut)
2629	Yes	as received		Ultrasonic	THF	
2642	Yes	Cut	3mm	Ultrasonic	THF/ Hexane	

Lab	Is the laboratory ISO17025 accredited for the test?	Sample grinded or cut prior to use or used as received?	What was the final estimated particle size before analysis?	Which technique was used to release/extract the analyte?	What solvent (mixture) was used to release the analyte?	Other remarks, comments
2649	Yes	Cut as received	2 mm × 2 mm	Soxhlet	n-hexane	
2658	Yes	as received		Ultrasonic		
2665	Yes	as received	as received	Other	Xylene (#71560)	THF (#17561)
2666	No	as received		Ultrasonic	THF	
2674	Yes	as received	3mm*3mm	Ultrasonic	THF	
2678	Yes	Cut	2mm	Mech. Shaking	THF+Hexane	#17560: not dissolved completely
2705	Yes	as received		Soxhlet	Diethylether	
2713	Yes	Cut	<2 mm × 2 mm	Ultrasonic	THF:Hexane (1:2)	
2723	Yes	Cut	0.2 x 0.4mm	Ultrasonic	THF (Extract)	Precipitation: hexane
2728	Yes	Cut	4 mm	Soxhlet	n-Hexane	
2730	No	as received		Soxhlet	n-hexane	
2736	Yes	Grinded		Ultrasonic	THF, hexane	
2737	Yes	as received	use as received	Ultrasonic	THF:n-hexane=1:2	
2741	No	Cut	2 mm x 2 mm	Ultrasonic	THF	
2743	Yes	as received	not applicable	Ultrasonic	THF	Hexane for precipitation of insoluble Solvent #17560: hot ODCB
2766	Yes	Cut	1 mm square	Ultrasonic	THF, extr. Hexane	
2773	Yes	Cut	3x3mm	Ultrasonic	n-Hexane, THF	
2774	Yes	as received		Ultrasonic	THF/ACN 1:2	
2780	Yes	as received	0.5089 grams	Soxhlet	CHCL3/MeOH 2:1	Method info sample #17560
2780	Yes	Cut	0.5066 grams	Ultrasonic	THF and Hexane	Method info sample #17561
2781	No	as received		Ultrasonic		
2785	Yes	Grinded	100 micron	Ultrasonic	THF/Hexane	
3110	---	---	---	---		
3116	Yes	Cut		---		
3118	No	Cut	2 mm	Ultrasonic	THF : Hexane	
3132	No	as received		Ultrasonic	THF/Hexane	
3146	Yes	Cut	2X2 mm	Ultrasonic	THF: ACN(5+10)	
3150	Yes	Cut	2mm x 2mm	Ultrasonic	THF	
3153	Yes	Cut	2 mm x 2 mm	Mech. Shaking	THF	
3154	Yes	as received		Ultrasonic	Hexane/Acetone	
3160	Yes	Cut	17560: 2,2x1,3 mm	Ultrasonic	Hexane:Acetone	17561: 3,5 mm x 1,9 mm.
3163	No	as received	5 mm	Ultrasonic	Toluene	
3166	Yes	as received		Stirrer	DCM	
3167	Yes	Cut		Soxhlet	methylene chloride	
3172	Yes	Cut	3x3mm	Ultrasonic	THF-ACN	
3176	Yes	Cut		Ultrasonic	THF +ACN	
3182	Yes	Grinded	500 um	Ultrasonic	THF:Hexane (1:2)	
3191	Yes	Cut	less than 5*5mm	Ultrasonic	THF	Method info sample #17560
3191	Yes	Cut	less than 5*5mm	Soxhlet	Dichloromethane	Method info sample #17561
3197	Yes	Cut	<2 mm	Ultrasonic	THF:Hexane	
3200	Yes	Cut	0.2*0.2cm	Ultrasonic	THF:n-hexane=1:2	
3205	Yes	as received		Ultrasonic	THF	
3209	Yes	Cut	2mm x 2mm	Ultrasonic	THF	
3210	No	Cut		Ultrasonic	Acetone/hexane	
3212	No	Cut	2mm	Soxhlet	hexane	Soxhlet followed by GC-MS
3213	Yes	---		Soxhlet	THF	
3214	Yes	Grinded	< (2mmx2mm)	Ultrasonic	THF and Hexane	
3216	No	as received	as received	Ultrasonic	THF and ACN	
3220	Yes	Other	Cut-0.5mm (17561)	Ultrasonic	THF, Hexane	#17560:as received, not dissolved
3225	Yes	Cut	2mm x 2mm	Ultrasonic	THF, Hexane	
3228	Yes	as received	3mm*3mm	Ultrasonic	THF	#17560: cannot be dissolved
3233	No	Cut (#17561)	2x2 mm	Ultrasonic	ACN / THF	#17560:as received
3237	Yes	as received	Used as received	Ultrasonic	ACN + THF	
3238	Yes	as received	3 mm	Stirrer	THF/EtOH	
3239	Yes	Grinded	less than 50mm	Soxhlet	Methylene Chloride	
3243	No	Cut	2mmx2mm	Ultrasonic	Dichlormethan	
3248	Yes	as received		---		
8005	Yes	Cut		---		
8006	Yes	Cut		---		
8007	Yes	Cut		---		
8008	---	---		---		
8020	Yes	as received	3 mm x 3mm	Mech. Shaking	Acetone, Hexane	#17560: problematic

**APPENDIX 5****Number of participating laboratories per country**

8 labs in BANGLADESH  
2 labs in BELGIUM  
2 labs in BRAZIL  
1 lab in BULGARIA  
1 lab in CAMBODIA, Kingdom of  
1 lab in CAMBODIA, Kingdom of  
1 lab in DENMARK  
1 lab in EGYPT  
2 labs in FINLAND  
9 labs in FRANCE  
14 labs in GERMANY  
2 labs in GUATEMALA  
19 labs in HONG KONG  
2 labs in HUNGARY  
14 labs in INDIA  
5 labs in INDONESIA  
1 lab in IRELAND  
8 labs in ITALY  
3 labs in JAPAN  
5 labs in KOREA  
2 labs in LUXEMBOURG  
2 labs in MALAYSIA  
1 lab in MAURITIUS  
3 labs in MEXICO  
1 lab in MOROCCO  
1 lab in NORWAY  
26 labs in P.R. of CHINA  
3 labs in PAKISTAN  
1 lab in POLAND  
2 labs in PORTUGAL  
1 lab in ROMANIA  
3 labs in SINGAPORE  
4 labs in SPAIN  
1 lab in SRI LANKA  
2 labs in SWITZERLAND  
4 labs in TAIWAN R.O.C.  
3 labs in THAILAND  
3 labs in THE NETHERLANDS  
2 labs in TUNISIA  
9 labs in TURKEY  
7 labs in U.S.A.  
2 labs in UNITED KINGDOM  
7 labs in VIETNAM

**APPENDIX 6****Abbreviations:**

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

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