Results of Proficiency Test
Phthalates in Plastics
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Organised by: Institute for Interlaboratory Studies
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1 INTRODUCTION

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

• bis(2-ethylhexyl)phthalate (DEHP)[1)]	CASno. 117-81-7	EINECS no. 204-211-0
• dibutylphthalate (DBP)	CASno. 84-74-2	EINECS no. 201-557-4
• benzylbutylphthalate (BBP)	CASno. 85-68-7	EINECS no. 201-622-7
• di-isononylphthalate (DINP-1)	CASno. 28553-12-0	EINECS no. 249-079-5
• di-isononylphthalate (DINP-2)	CASno. 68515-48-0	EINECS no. 271-090-9
• di-isononylphthalate (DINP-3)	CASno. 28552-12-0	EINECS no. 249-079-5
• di-isodecylphthalate (DIDP-1)	CASno. 26761-40-0	EINECS no. 247-977-1
• di-isodecylphthalate (DIDP-2)	CASno. 68515-49-1	EINECS no. 271-091-4
• di-n-octylphthalate (DNOP)	CASno. 117-84-0	EINECS no. 204-214-7

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

The determination of phthalates in plastics is known to give problems with the comparability of laboratory results. The fact that phthalates, used in the plastic industry are not pure components, but complex (and overlapping) mixtures is one of the causes for the problems. However, no appropriate PVC reference materials are yet available (ref. 20).
As an alternative, participation in a proficiency test may enable laboratories to check their performance. Therefore, a proficiency test (laboratory-evaluating interlaboratory study) for the determination of phthalates in plastics was again organized by the Institute for Interlaboratory Studies in February 2010.

In the 2010 iis interlaboratory study iis10P01, 136 laboratories in 32 different countries did participate. See appendix 3 for a list of the number of participating laboratories per country.
In this report the results of the proficiency test are presented and discussed.

2 SET UP

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

2.1 QUALITY SYSTEM

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

2.2 PROTOCOL

The protocol followed in the organisation of this proficiency test was the one as described for proficiency testing in the report 'i.i.s. Interlaboratory Studies: Protocol for the Organisation, Statistics and Evaluation' of January 2010 (i.i.s.-protocol, version 3.2).

2.3 CONFIDENTIALITY STATEMENT

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

2.4 SAMPLES

Two samples were prepared from two different bulk materials.
The first bulk material was a black coloured PVC, to which small amounts of 3 banned phthalates (3.12 g DBP, 3.16 g BBP and 2.04 g DEHP per kg raw material) were added and, to get the desired plasticity (to easify homogenization), 20-25% of a phthalate that is not banned. The material was cut into pieces, again mixed well, and divided over 150 plastic bags of 3 gram each and labelled #1013.

The homogeneity of the subsamples #1013 was checked by determination of phthalates on 8 stratified randomly selected subsamples.

	DEHP in %M/M	DBP in %M/M	BBP in %M/M
Sample #1013-1	0.236	0.338	0.354
Sample #1013-2	0.229	0.331	0.346
Sample #1013-3	0.233	0.342	0.325
Sample #1013-4	0.228	0.331	0.345
Sample #1013-5	0.231	0.326	0.343
Sample #1013-6	0.231	0.332	0.349
Sample #1013-7	0.233	0.335	0.351
Sample #1013-8	0.230	0.332	0.348

Table 1: results of the homogeneity test on the subsamples #1013

The second bulk material was a brown PVC, to which small, known amounts of DEHP and DINP were added to give a much more rigid material than the other PVC. This material was previously used as sample #0811 in PT iis08P01. The bulk material was thoroughly mixed, cut into pieces, again mixed well and subsequently distributed over 150 plastic bags (3 gram each) and labelled #1014.
The homogeneity of the subsamples was checked by determination of phthalates on 4 stratified randomly selected subsamples.

	DEHP in %M/M
Sample #1014-1	0.54
Sample #1014-2	0.57
Sample #1014-3	0.53
Sample #1014-4	0.56

Table 2: results of the homogeneity test on the subsamples #1014

From the test results of tables 1 and 2, the repeatabilities were calculated and compared with 0.3 times the corresponding target reproducibility in agreement with the procedure of ISO 13528, Annex B2 in the next table:

	DEHP in %M/M #1013	DBP in %M/M #1013	BBP in %M/M #1013	DEHP in %M/M #1014
r (observed)	0.007	0.014	0.025	0.051
reference method	EN14372:04	EN14372:04	EN14372:04	EN14372:04
0.3*R(reference method)	0.017	0.025	0.026	0.052

Table 3: evaluation of repeatabilities of phthalate contents of the subsamples #1013 and #1014

The observed repeatabilities of the results of homogeneity test were all in good agreement with 0.3 times the EN14372 reproducibilities. Therefore, homogeneity of subsamples #1013 and #1014 was assumed.

To each of the participating laboratories, one sample of approx. 3 grams of sample of #1013 and one sample of 3 grams of sample of #1014 were sent on February 18, 2010.

2.5 ANALYSIS

The participants were requested to determine six individual phthalates (DINP, DBP, BBP, DIDP, DNOP, DEHP) and other phthalates on both samples #1013 and #1014.
The participants were explicitly asked to treat the samples as if they were routine samples and to report the analytical results using the indicated units on the report form and not to round the test results, but report as much significant figures as possible.
The participants were also asked not to report ‘less than’ results which are above the detection limit, because such results can not be used for meaningful statistical calculations.
To get comparable results a detailed report form, on which the units were prescribed, was sent together with each set of samples. Also a letter of instructions was added to the package.

The laboratories were asked to complete the report form with the requested details of the methods used.

3 RESULTS

During four weeks after sample despatch the results of the individual laboratories were received. The original data are tabulated per sample in the appendix 1 of this report. The laboratories are presented by their code numbers.
Directly after deadline, a reminder fax was sent to those laboratories that did not report results at that moment. Shortly after the deadline the available results were screened for suspect data. A result was called suspect in case the Huber Elimination Rule (a robust outlier test) found it to be an outlier. The laboratories that produced these suspect data were asked to check the results. Additional or corrected results are used for the data analysis and the original results are placed under 'Remarks' in the result tables in appendix 1.

3.1 STATISTICS

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

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

Not all data sets proved to have a normal distribution, in which cases the statistical evaluation of the results should be used with due care.
In accordance to ISO 5725 (1986 and 1994) the original results per determination were submitted subsequently to Dixon and Grubbs outlier tests. Outliers are marked by D(0.01) for the Dixon test, by G(0.01) or DG(0.01) for the Grubbs test. Stragglers are marked by D(0.05) for the Dixon test, by G(0.05) or DG(0.05) for the Grubbs test. Both outliers and stragglers were not included in the calculations of averages and standard deviations.

Finally the reproducibilities were calculated from the standard deviations by multiplying them with a factor of 2.8.
Statistical calculations were performed as described in the report ‘i.i.s. Interlaboratory Studies: Protocol for the Organisation, Statistics and Evaluation’ of January 2010 (i.i.s.-protocol, version 3.2).

3.2 GRAPHICS

In order to visualise the data against the reproducibilities from literature, Gauss plots were made, using the sorted data for one determination (see appendix 1). On the Y-axis the reported analysis results are plotted. The corresponding laboratory numbers are under the X-axis.
The straight horizontal line presents the consensus value (a trimmed mean). The four striped lines, parallel to the consensus value line, are the +3s, +2s, -2s and -3s target reproducibility

limits of the selected standard. Outliers and other data, which were excluded from the calculations, are represented as a cross. Accepted data are represented as a triangle. Furthermore, Kernel Density Graphs were made. This is a method for producing a smooth density approximation to a set of data that avoids some problems associated with histograms (see appendix 3, nr.17-18).

3.3 z-scores

To evaluate the performance of the participating laboratories the z-scores were calculated. As it was decided to evaluate the performance of the participants in this proficiency test (PT) against the literature requirements, e.g. the EN14372 reproducibilities, the z-scores were calculated using a target standard deviation. This results in an evaluation independent of the spread of this interlaboratory study. The target standard deviation was calculated from the literature reproducibility by division with 2.8.

The z-scores were calculated according to:

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

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

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

4 Evaluation

In this interlaboratory study no large problems were encountered during the execution.
Two participants did not report any results. Finally 134 of the 136 participating laboratories reported 767 numerical results. Observed were 59 outlying results, which is 7.7% of all results. In proficiency studies outlier percentages of 3% - 7.5% are quite normal.

4.1 Evaluation per phthalate/sample

In this section the results are discussed per component.

Many different test methods were used by the participating laboratories, but 2 methods dominated. For sample #1013 most often EN14372 was used (Soxhlet extraction with diethyl ether) and for sample #1014 most often CPSC-CH-C1001-09.2 (dissolution in THF) was used. Regretfully the latter method does not contain a precision statement. Therefore, the requirements from the standardised method EN14372:04, “Child use and care articles, Cutlery and feeding utensils, Safety requirements and tests” were used for evaluation of the results of this interlaboratory study.

Regretfully, only a relative within-laboratory standard deviation RSDr is given in EN14372:04. Multiplication of the RSDr by 2.8 gives the repeatability. Multiplication of the repeatability by 3 gives a good estimate of the target reproducibility. For comparison also a target reproducibility based on the Horwitz equation is given for each phthalate.

EVALUATION OF PVC SAMPLE #1013:

General: Only 47 laboratories did identify the material of #1013 correctly as PVC.
The presence of a significant amount (approx. 24%) of di-(2-propylheptyl)phthalate (CAS 53306-54-0) hampered the identification of this material by infrared. Also the determination of DIDP in this sample was hardly possible due to the coelution of di-(2-propylheptyl)phthalate with DIDP.

DBP: The determination of DBP was somewhat problematic at the level of 0.3 %M/M in sample #1013. In total 8 statistical outliers (6%) were detected. The observed reproducibility is not in agreement with the EN14372:04 reproducibility, nor with the strict reproducibility estimated from the Horwitz equation.
When the results of EN14372 and CPSC-CH-C1001-09.2 are evaluated separately, the spread of the EN14372 results appears to be smallest and almost in agreement with the EN14372:04 reproducibility.
The effect of the phthalate releasing technique appears to be not significant for this sample as the assigned values for the EN14372 results and the CPSC-CH-C1001-09.2 results differ not significantly (0.28 vs 0.27 %M/M).

BBP: The determination of BBP was somewhat problematic at the level of 0.3 %M/M in sample #1013. In total 6 statistical outliers (4.5%) were detected. The observed reproducibility is not in agreement with the EN14372:04 reproducibility, nor with the strict reproducibility estimated from the Horwitz equation.
When the results of EN14372 and CPSC-CH-C1001-09.2 are evaluated separately, the spread of the EN14372 results appears to be smallest and almost in agreement with the EN14372:04 reproducibility.
The effect of the phthalate releasing technique appears to be not significant for this sample as the assigned values for the EN14372 results and the CPSC-CH-C1001-09.2 results differ not significantly (0.30 vs 0.29 %M/M).

DEHP: The determination of DEHP was somewhat problematic at the level of 0.2 %M/M in sample #1013. In total 10 statistical outliers (7.5%) were detected. The observed reproducibility is not in agreement with the EN14372:04 reproducibility, nor with the strict reproducibility estimated from the Horwitz equation.
When the results of EN14372 and CPSC-CH-C1001-09.2 are evaluated separately, the spread of the EN14372 results appears to be smallest and almost in agreement with the EN14372:04 reproducibility.
The effect of the phthalate releasing technique appears to be not significant for this sample as the assigned values for the EN14372 results and the CPSC-CH-C1001-09.2 results differ not significantly (0.21 vs 0.21 %M/M).

others: The presence of a high concentration of di-(2-propylheptyl)phthalate (CAS 53306-54-0) in sample #1013 did give problems with the identification and/or quantification of DIDP due to coelution. This will be the reason that in total 8 laboratories reported high concentrations of DIDP, a component that was not added to the material. Another 9 laboratories reported the presence of an unknown phthalate that looked like DIDP. Three laboratories reported that some didecylphthalate was present and 6 laboratories identified the didecylphthalate as di-(2-propylheptyl)phthalate. Remarkably, more than 100 laboratories did not report the presence of any phthalate, other than the 6 banned phthalates.

EVALUATION OF PVC SAMPLE #1014:

General: Only 54 laboratories did identify the material of #1014 correctly as PVC. The DINP present in this sample was not DINP-1 (CASno. 28553-12-0) like in sample #1013, but the more rare DINP-2 (CASno. 68515-48-0). The quantification of this phthalate was therefore not easy. See also the discussion in chapter 5.
This sample gave very different results for EN14372 and CPSC-CH-C1001-09.2, contradictory to sample #1013 for which no differences were observed. Therefore three evaluations were done. One for all results reported (and all test methods), one for EN14372 results only and one for results after THF-dissolution.

DINP: The determination of DINP was problematic at the level of 0.5 %M/M in sample #1014. Only 3 statistical outliers were detected. However, the observed reproducibility is not at all in agreement with the EN14372:04 reproducibility, nor with the strict reproducibility estimated from the Horwitz equation.
When the results of EN14372 and THF-dissolution are evaluated separately, the effect of the phthalate releasing technique appears to be very significant for this sample as the assigned values for the EN14372 results and the THF-dissolution results differ significantly (0.39 vs 0.56 %M/M). Also the spread of the results of the two techniques appears to be significantly different. The reproducibility of the results after THF dissolution is much smaller than the EN14372 results, but not small enough to be in agreement with the EN14372 reproducibility.

DEHP: The determination of DEHP was problematic at the level of 0.4 %M/M in sample #1014. In total 14 statistical outliers were detected. The observed reproducibility is not at all in agreement with the EN14372:04 reproducibility, nor with the strict reproducibility estimated from the Horwitz equation.
When the results of EN14372 and of THF-dissolution are evaluated separately, the effect of the phthalate releasing technique appears to be very significant for this sample as the assigned values for the EN14372 results and the THF-dissolution results differ significantly (0.26 vs 0.35 %M/M). Also the spread of the results of the two techniques appears to be significantly different. The reproducibility of the results after THF dissolution is much smaller than the EN14372 results and even in agreement with the EN14372 reproducibility.

4.2 PERFORMANCE EVALUATION FOR THE GROUP OF LABORATORIES

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

Parameter	Unit	n	Average	2.8 * sd	R (target)
DBP	%M/M	125	0.274	0.106	0.069
BBP	%M/M	127	0.291	0.114	0.073
DEHP	%M/M	123	0.203	0.073	0.051

Table 4: overview of results for sample #1013

Parameter	Unit	n	Average	2.8 * sd	R (target)
DINP – all results	**%/M/M**	**127**	**0.508**	**0.451**	**0.128**
DINP – EN14372	%/M/M	34	0.386	0.642	0.097
DINP – THF dissolution	%/M/M	54	0.559	0.234	0.141
DEHP – all results	**%/M/M**	**119**	**0.339**	**0.155**	**0.085**
DEHP – EN14372	%/M/M	34	0.259	0.396	0.065
DEHP – THF dissolution	%/M/M	54	0.350	0.075	0.088

Table 5: overview of results for sample #1014

4.3 COMPARISON WITH PREVIOUS INTERLABORATORY STUDIES

	February 2010	*February 2009*	*February 2008*	*February 2007*
Number of reporting labs	134	102	78	67
Number of results reported	767	797	760	394
Statistical outliers	59	33	25	31
Percentage outliers	7.7%	4.1%	3.3%	7.9%

Table 6: comparison with previous proficiency tests

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

In comparison with previous proficiency tests, significant improvements are observed for the evaluated components, see below table. Since 2008 a difference between the EN14372 results and the results from THF dissolution are observed.

R (%rel.)	*February 2010*	*February 2009*	*February 2008*	*February 2007*	*March 2006*
DINP	42^{T} – 167^{E}		69^{T} - 72^{E}	104	76
DBP	39	52^{T} – 61^{E}	42^{E} – 82^{T}	--	54
DEHP	21^{T} – 153^{E}	46^{E} – 54^{T}	29^{T} - 54^{E}	53 - 59	49 - 39
BBP	39	58^{E} – 127^{T}	64^{E} – 79^{T}	--	--
DIDP	--	--	39^{T} - 51^{E}	--	--
DIBP	--	--	--	--	38

Table 7: Relative reproducibilities of detected phthalates in this PT and the former PTs (E=EN14372; T=THF dissolution)

In this PT one of the samples from a previous PT (#0811 of iis08P01) was re-used as sample #1014. An overview of the differences in results is given in table 8:

		#0811 in iis08P01			#1014 in iis10P01		
Parameter	unit	n	average	2.8 * sd	n	average	2.8 * sd
DINP – EN14372	%/M/M	33	0.483	0.349	34	0.386	0.642
DINP – THF dissolution	%/M/M	12	0.551	0.378	54	0.559	0.234
DEHP – EN14372	%/M/M	36	0.312	0.169	34	0.259	0.396
DEHP – THF dissolution	%/M/M	12	0.348	0.100	54	0.350	0.075

table 8: comparison of results of identical samples in iis08P01 and iis10P01

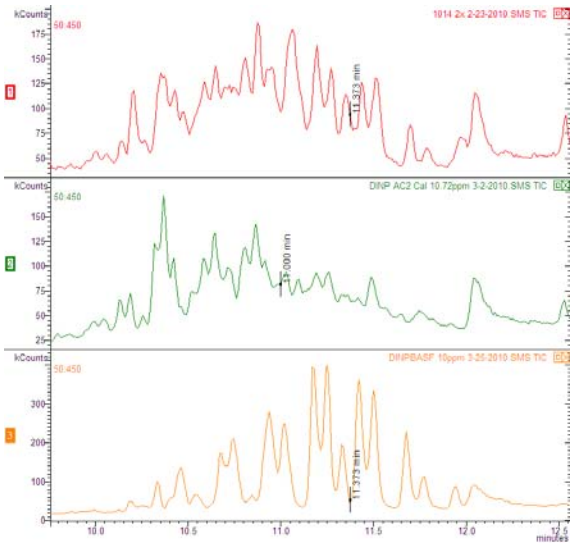
The agreement of the THF dissolution results from the PT iis08P01 and from the PT iis10P01 is striking (0.551 *vs* 0.559 and 0.348 *vs* 0.350) and does emphasize the robustness of this extraction technique.

5 DISCUSSION

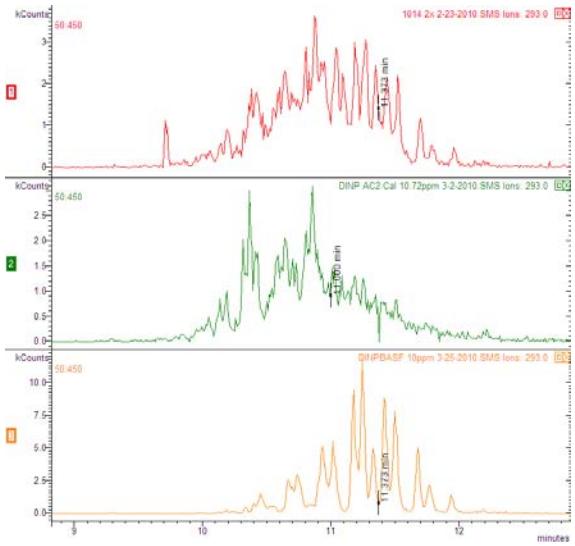
Although the determination of phthalates in plastics appears to be problematic as in previous PTs, some of these problems can be explained this time from possible causes.

The most striking fact is the difference in behaviour between sample #1013 and #1014.
Both are PVC materials and the only difference is the total concentration of phthalates present in each sample. The material of sample #1013 contains more than 20% of phthalates and the material of sample #1014 less than 1% (one percent). This obviously effects not only the softness and elasticity of the material, but also the release of phthalates from the plastic matrix.
A possible explanation for the observed difference may be that the soft material of sample #1013 will be getting more and more porous during a solvent extraction, due to the release of large amounts of phthalates. And this may have a positive effect on the extraction rendement of the phthalates that are present in low concentrations.
A similar effect will be present when the materials are dissolved in a solvent like THF (in ASTM D5226 a list of solvent(combinations) is listed). The soft sample #1013 dissolves readily in THF, but to dissolve the rather hard material of sample #1014 in THF the usual 30 min. at ambient temperature is not sufficient and more time (or elevated temperature) is needed for a complete dissolution.
And when the Soxhlet extraction with diethyl ether is performed on the rigid sample #1014 in accordance with EN14372, only a part of the phthalates is extracted in 6 hours. When the procedure is repeated on the residue of the Soxhlet extraction (another 6 hrs), another significant amount of phthalates is extracted. This means that the Soxhlet extraction as described in EN14372 fails to be exhausting on sample #1014 as it should have been. And this explains both the differences observed between the EN14372 results and the THF dissolution results as well as the very large spread of the EN14372 results on sample #1014.

Another noteworthy fact is the difference in standard deviations of the DINP results and the DEHP results of sample #1014. This is most clear in the THF dissolution results because these less troubled by the extraction problems than the EN14372 results. The relative standard deviation RSD_R of the DINP results after THF dissolution is 15% and the relative standard deviation RSD_R of the DEHP results after THF dissolution is only 7.5% for sample #1014.
This difference may partly be explained by the fact that DINP does exist of a complex mixture of di-C8-, di-C9- and diC10-branched alkyl esters of pthalic acid, but also by the existence of different mixtures (DINP-1 and DINP-2, see ref. 21). And sample #1014 did contain DINP-2. As this phthalate mixture DINP-2 is not readily available, some laboratories will have quantified the DINP using DINP-1 and others using DINP-2. The difference using mass 293 may be upto a factor 0.7 (see below ionchromatograms of DINP-1 and DINP-2), thus leading to different results for DINP when calibrated with DINP-1 or with DINP-2 and consequently an increase of the standard deviation of the PT test results of DINP in sample #1014.



TICs of #1014, DINP-1 and DINP-2 (ref. 23)



ion 293 of #1014, DINP-1 and DINP-2 (ref 23)

APPENDIX 1

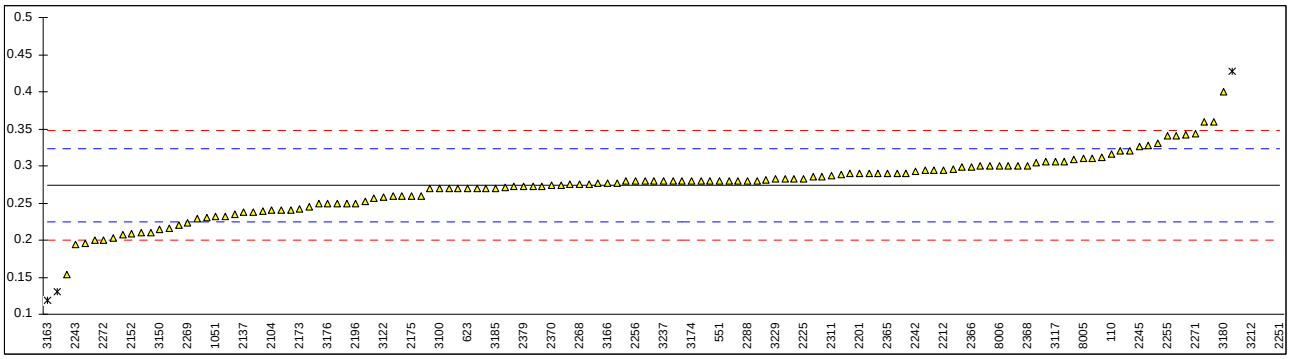
Determination of DBP on sample #1013; results in %M/M

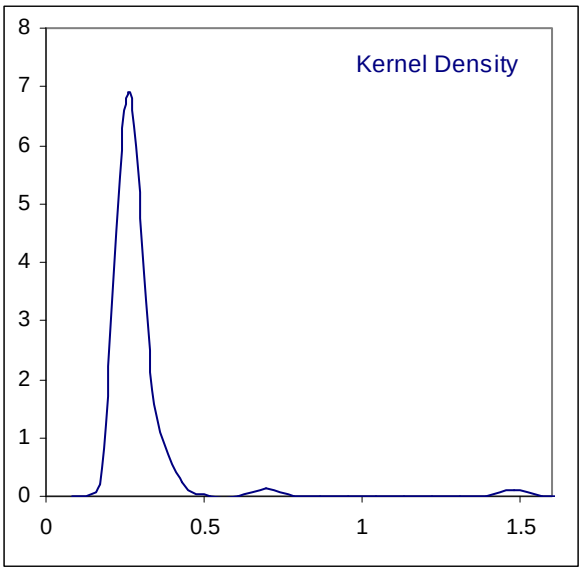
lab	method	value	mark	z(targ)	remarks
110	D3421	0.3153		1.67	
310	in house	0.32		1.86	
330	in house	0.21		-2.60	
339	GC/MS	0.428	G(0.05)	6.24	
551	EN14372	0.28		0.24	
622	EN14372	0.2153		-2.38	
623	in house	0.27		-0.16	
826	EN14372	0.273		-0.04	
840	EN14372	0.281		0.28	
1051	CPSC-CH-C1001-09.2	0.232		-1.70	
1124	EN14372	0.279		0.20	
2102	in house	0.306		1.30	
2104	in house	0.24		-1.38	
2127	in house	0.260		-0.57	
2129	in house/EPA1625	0.21		-2.60	
2131	in house	0.22		-2.19	
2132	EN14372	0.229		-1.83	
2137	CPSC-CH-C1001-09.2	0.237		-1.50	
2152	in house	0.209		-2.64	
2156	EN14372	0.24		-1.38	
2166	in house	2.41	G(0.01)	86.61	
2170	CPSC-CH-C1001-09.2	0.305		1.26	
2172	in house	0.25		-0.97	
2173	CPSC-CH-C1001-09.2	0.242		-1.30	
2175	EPA3550C/EPA8270	0.26		-0.57	
2179	EN14372	0.2525		-0.87	
2182	EN14372	0.283		0.36	
2184	EN14372	0.285		0.44	
2190	in house	0.29		0.65	
2196	EN14372	0.250		-0.97	
2197	LFBG B80.32	0.312		1.54	
2201	EN14372	0.29		0.65	
2212	CPSC-CH-C1001-09.2	0.294		0.81	
2215	EN14372	0.285		0.44	
2216	CPSC-CH-C1001-09.2	0.274		0.00	
2217	in house	0.28		0.24	
2225	EN14372	0.283		0.36	
2226	EN14372	0.2346		-1.60	
2227	in house	0.2693		-0.19	
2229	EN14372	0.23		-1.79	
2236	CPSC-CH-C1001-09.2	0.232		-1.70	
2240	EN14372	0.328		2.19	
2241	EN14372	0.276		0.08	
2242	CPSC-CH-C1001-09.2	0.293		0.77	
2243	EN14372mod	0.194		-3.24	reported EN14372, but used CH2Cl2, not diethyl ether
2245	EN14372	0.326		2.11	
2248	in house	0.25		-0.97	
2251	EN14372	22.3385	G(0.01)	894.66	reported normalized data
2253	CPSC-CH-C1001-09.2	0.26		-0.57	
2254		<0.004		<-10.95	false negative?
2255	in house	0.34		2.68	
2256	EN14372	0.279		0.20	
2258	in house	0.29		0.65	
2267	in house	0.2022		-2.91	
2268	EN14372	0.2752		0.05	
2269	in house	0.2235		-2.05	
2271	EN14372	0.343		2.80	
2272	in house	0.20		-3.00	
2275	EN14372	0.24		-1.38	
2277		-----		-----	
2279	EN14372	0.2935		0.79	
2281	EN14372	0.340		2.68	
2282	in house	0.245		-1.18	
2283	EN14372	0.309	C	1.42	first reported 0.332
2284	EN14372mod	0.249		-1.01	reported EN14372, but used MTBE, not diethyl ether
2288	in house	0.28		0.24	
2293	CPSC-CH-C1001-09.2	0.2		-3.00	
2294	CPSC-CH-C1001-09.2	1.5	G(0.01)	49.71	
2310	CPSC-CH-C1001-09.2	0.280		0.24	
2311	EN14372	0.287		0.53	
2312	EN14372	0.27		-0.16	
2320	D3421	0.28		0.24	
2350	EN14372	0.288		0.57	

2353	D3421	0.28		0.24	
2355	EN14372	0.280		0.24	
2357	EN14372	0.283		0.36	
2359	EN14372	0.271		-0.12	
2361	CPSC-CH-C1001-09.2	0.28		0.24	
2362	JIS/3	0.28		0.24	
2363	EN14372	0.273		-0.04	
2365	EN14372	0.290		0.65	
2366	EN14372	0.298		0.97	
2368	EN14372	0.300		1.05	
2369	EN14372	0.306		1.30	
2370	EN14372	0.274		0.00	
2372	EN14372	0.272		-0.08	
2375	D3421	0.3		1.05	
2379	EN14372	0.272		-0.08	
2380	EN14372	0.277		0.12	
2386	CPSC-CH-C1001-09.2	0.32		1.86	
2390	EN14372	0.27		-0.16	
3100	EN14372	0.27		-0.16	
3107	EN14372	0.27		-0.16	
3110	JIS/3	0.207		-2.72	
3116		-----		-----	
3117	EN14372	0.306		1.30	
3118	CPSC-CH-C1001-09.2	0.295		0.85	
3122	in house	0.258		-0.65	
3134	in house	0.294		0.81	
3150	in house	0.215		-2.39	
3151	in house	0.29		0.65	
3153	CPSC-CH-C1001-09.2	0.27		-0.16	
3154	in house	0.153		-4.91	
3159	EN14372	0.275		0.04	
3161	in house	0.708	G(0.01)	17.60	
3163	in house	0.1195	G(0.05)	-6.27	
3166	in house	0.277		0.12	
3167	EN14372	0.28		0.24	
3169	EN14372	0.298		0.97	
3172	EN14372	0.29		0.65	
3174	CPSC-CH-C1001-09.2	0.28		0.24	
3176	ISO15777	0.25		-0.97	
3180	in house	0.4		5.11	
3182	EN14372	0.277		0.12	
3185	CPSC-CH-C1001-09.2	0.27		-0.16	
3190	EN14372	0.30		1.05	
3197	EN14372	0.36	C	3.49	first reported 0.18
3199	in house	0.257		-0.69	
3200	EN14372	0.2386		-1.44	
3204	in house	0.195		-3.20	
3209	in house	0.238		-1.46	
3210	EN15777mod	0.13	G(0.05)	-5.84	
3212	EN14372	1.45	G(0.01)	47.68	
3218	EN14372	0.28		0.24	
3229	in house	0.283		0.36	
3233	in house	0.29		0.65	
3237	in house	0.28		0.24	
3238	in house	0.26		-0.57	
3239	in house	0.30		1.05	
3240	EN14372	0.3414		2.73	
3243	in house	0.36		3.49	
3246	in house	0.330		2.27	
3248	EN14372	0.300		1.05	
8005	JIS/3	0.31		1.46	
8006	EN14372	0.30		1.05	
8007	CPSC-CH-C1001-09.2	0.31		1.46	

		Only EN14372 results:	Only CPSC-CH-C1001-09.2:
normality	not OK	not OK	OK
n	125	58	19
outliers	8	2	1
mean (n)	0.274	0.282	0.269
st.dev. (n)	0.0380	0.0289	0.0317
R(calc.)	0.106	0.081	0.089
R(EN14372:04)	0.069	0.071	0.068
compare R(Horwitz)	0.038	0.038	0.037

Determination of DBP on sample #1013; results in %M/M, (continued)





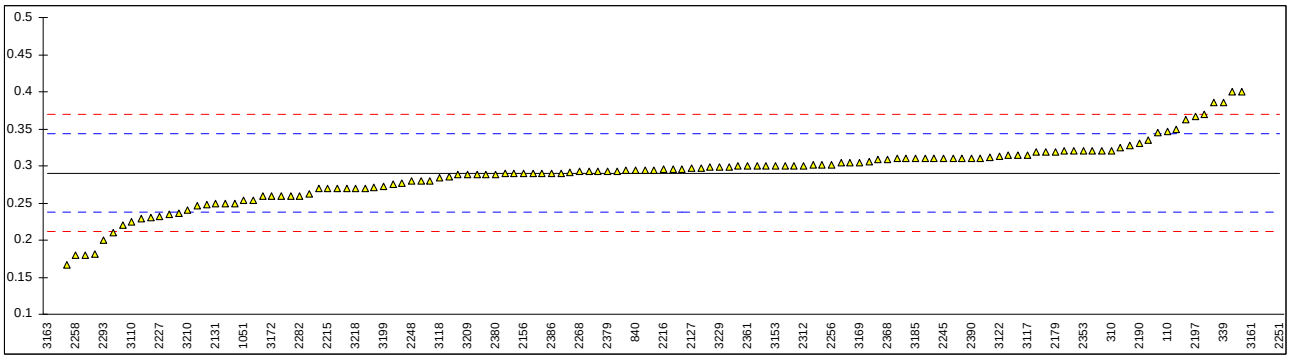
Determination of BBP on sample #1013; results in %M/M

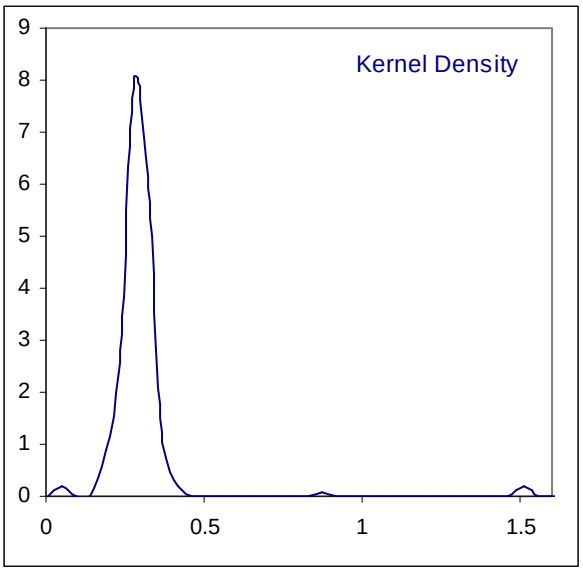
lab	method	value	mark	z(targ)	remarks
110	D3421	0.3457		2.11	
310	in house	0.32		1.13	
330	in house	0.25		-1.55	
339	GC/MS	0.386		3.65	
551	EN14372	0.29		-0.02	
622	EN14372	0.2363		-2.07	
623	in house	0.29		-0.02	
826	EN14372	0.304		0.52	
840	EN14372	0.294		0.13	
1051	CPSC-CH-C1001-09.2	0.253		-1.44	
1124	EN14372	0.315		0.94	
2102	in house	0.294		0.13	
2104	in house	0.27		-0.79	
2127	in house	0.297		0.25	
2129	in house/EPA1625	0.31		0.74	
2131	in house	0.25		-1.55	
2132	EN14372	0.248		-1.63	
2137	CPSC-CH-C1001-09.2	0.362		2.73	
2152	in house	0.285		-0.21	
2156	EN14372	0.29		-0.02	
2166	in house	2.5	G(0.01)	84.50	
2170	CPSC-CH-C1001-09.2	0.277		-0.52	
2172	in house	0.26		-1.17	
2173	CPSC-CH-C1001-09.2	0.246		-1.70	
2175	EPA3550C/EPA8270	0.37		3.04	
2179	EN14372	0.3194		1.10	
2182	EN14372	0.296		0.21	
2184	EN14372	0.319		1.09	
2190	in house	0.33		1.51	
2196	EN14372	0.288		-0.10	
2197	LFBG B80.32	0.366		2.89	
2201	EN14372	0.29		-0.02	
2212	CPSC-CH-C1001-09.2	0.294		0.13	
2215	EN14372	0.270		-0.79	
2216	CPSC-CH-C1001-09.2	0.295		0.17	
2217	in house	0.28		-0.40	
2225	EN14372	0.296		0.21	
2226	EN14372	0.2695		-0.80	
2227	in house	0.2326		-2.22	
2229	EN14372	0.21		-3.08	
2236	CPSC-CH-C1001-09.2	0.229		-2.35	
2240	EN14372	0.314		0.90	
2241	EN14372	0.301		0.40	
2242	CPSC-CH-C1001-09.2	0.327		1.39	
2243	EN14372mod	0.230		-2.31	
2245	EN14372	0.310		0.74	
2248	in house	0.28		-0.40	
2251	EN14372	11.5972	G(0.01)	432.42	reported normalized data
2253	CPSC-CH-C1001-09.2	0.31		0.74	
2254		<0.004		<-10.96	false negative?
2255	in house	0.3	C	0.36	first reported 0.08
2256	EN14372	0.302		0.44	
2258	in house	0.18		-4.23	
2267	in house	0.254	C	-1.40	first reported 0.1627
2268	EN14372	0.2929		0.09	
2269	in house	0.3252		1.33	
2271	EN14372	0.386		3.65	
2272	in house	0.18		-4.23	
2275	EN14372	0.22		-2.70	
2277		-----		-----	
2279	EN14372	0.3065		0.61	
2281	EN14372	0.297		0.25	
2282	in house	0.260		-1.17	
2283	EN14372	0.298	C	0.29	first reported 0.316
2284	EN14372mod	0.271		-0.75	
2288	in house	0.28		-0.40	
2293	CPSC-CH-C1001-09.2	0.2		-3.46	
2294	CPSC-CH-C1001-09.2	1.5	G(0.01)	46.26	
2310	CPSC-CH-C1001-09.2	0.288		-0.10	
2311	EN14372	0.288		-0.10	
2312	EN14372	0.30		0.36	
2320	D3421	0.30		0.36	
2350	EN14372	0.301		0.40	

2353	D3421	0.32		1.13	
2355	EN14372	0.319		1.09	
2357	EN14372	0.312		0.82	
2359	EN14372	0.290		-0.02	
2361	CPSC-CH-C1001-09.2	0.30		0.36	
2362	JIS/3	0.31		0.74	
2363	EN14372	0.304		0.52	
2365	EN14372	0.299		0.32	
2366	EN14372	0.293		0.09	
2368	EN14372	0.309		0.71	
2369	EN14372	0.320		1.13	
2370	EN14372	0.293		0.09	
2372	EN14372	0.293		0.09	
2375	D3421	0.3		0.36	
2379	EN14372	0.293		0.09	
2380	EN14372	0.289		-0.06	
2386	CPSC-CH-C1001-09.2	0.29		-0.02	
2390	EN14372	0.31		0.74	
3100	EN14372	0.31		0.74	
3107	EN14372	0.31		0.74	
3110	JIS/3	0.224		-2.54	
3116		-----		-----	
3117	EN14372	0.315		0.94	
3118	CPSC-CH-C1001-09.2	0.284		-0.25	
3122	in house	0.313		0.86	
3134	in house	0.294		0.13	
3150	in house	0.181		-4.19	
3151	in house	0.26		-1.17	
3153	CPSC-CH-C1001-09.2	0.30		0.36	
3154	in house	0.166		-4.76	
3159	EN14372	0.292		0.06	
3161	in house	0.888	G(0.01)	22.85	
3163	in house	0.0355	G(0.01)	-9.75	
3166	in house	0.276		-0.56	
3167	EN14372	0.29		-0.02	
3169	EN14372	0.305		0.55	
3172	EN14372	0.26		-1.17	
3174	CPSC-CH-C1001-09.2	0.35	C	2.27	first reported 0.46
3176	ISO15777	0.25		-1.55	
3180	in house	0.4		4.19	
3182	EN14372	0.345		2.08	
3185	CPSC-CH-C1001-09.2	0.31		0.74	
3190	EN14372	0.27		-0.79	
3197	EN14372	0.40	C	4.19	first reported 0.20
3199	in house	0.272		-0.71	
3200	EN14372	0.2616		-1.11	
3204	in house	0.235		-2.12	
3209	in house	0.288		-0.10	
3210	EN15777mod	0.24		-1.93	
3212	EN14372	0.065	G(0.01)	-8.63	
3218	EN14372	0.27		-0.79	
3229	in house	0.299		0.32	
3233	in house	0.32		1.13	
3237	in house	0.26		-1.17	
3238	in house	0.27		-0.79	
3239	in house	0.31		0.74	
3240	EN14372	0.3342		1.67	
3243	in house	0.32		1.13	
3246	in house	0.320		1.13	
3248	EN14372	0.309		0.71	
8005	JIS/3	0.30		0.36	
8006	EN14372	0.31		0.74	
8007	CPSC-CH-C1001-09.2	0.30		0.36	

		Only EN14372 results:	Only CPSC-CH-C1001-09.2:
normality	not OK	not OK	OK
n	127	58	19
outliers	6	2	1
mean (n)	0.291	0.297	0.290
st.dev. (n)	0.0407	0.0304	0.0385
R(calc.)	0.114	0.085	0.108
R(EN14372)	0.073	0.075	0.073
compare R(Horwitz)	0.039	0.040	0.039

Determination of BBP on sample #1013; results in %M/M, (continued)





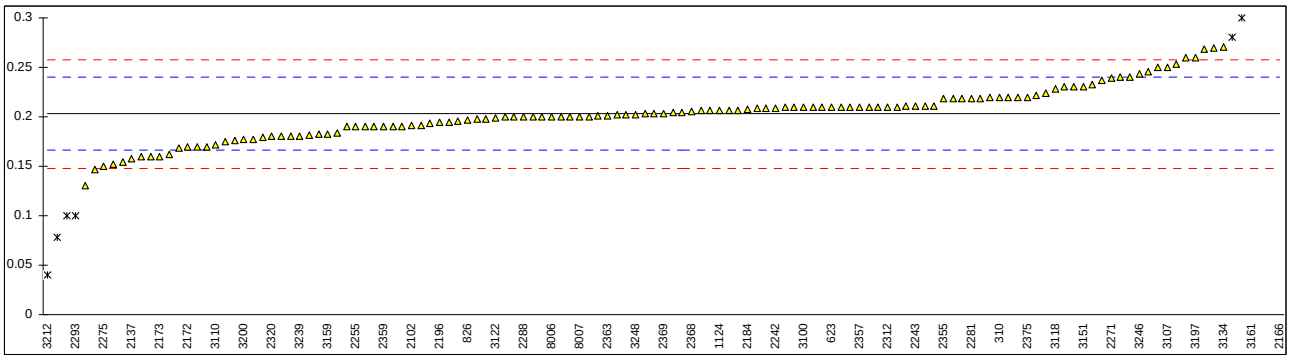
Determination of DEHP on sample #1013; results in %M/M

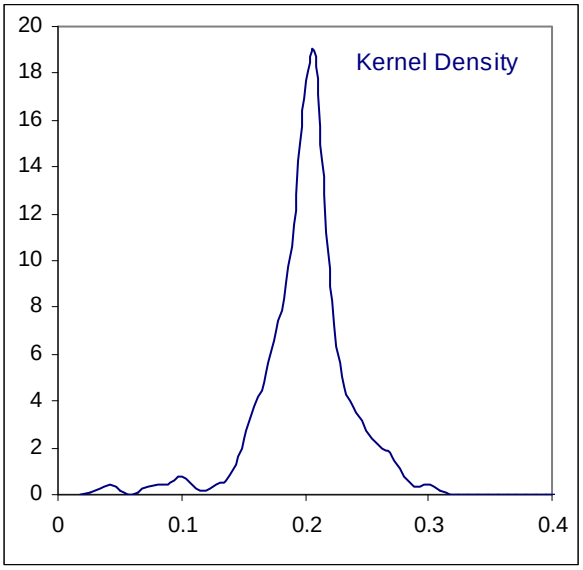
lab	method	value	mark	z(targ)	remarks
110	D3421	0.2456		2.32	
310	in house	0.22		0.92	
330	in house	0.17		-1.81	
339	in house	0.268		3.55	
551	EN14372	0.20		-0.17	
622	EN14372	0.1755		-1.51	
623	in house	0.21		0.37	
826	EN14372	0.197		-0.34	
840	EN14372	0.207		0.21	
1051	CPSC-CH-C1001-09.2	0.240		2.01	
1124	EN14372	0.207		0.21	
2102	in house	0.191		-0.67	
2104	in house	0.20	C	-0.17	first reported 0.38
2127	in house	0.182		-1.16	
2129	in house/EPA1625	0.18		-1.27	
2131	in house	0.17		-1.81	
2132	EN14372	0.168		-1.92	
2137	CPSC-CH-C1001-09.2	0.158		-2.47	
2152	in house	0.152		-2.80	
2156	EN14372	0.22		0.92	
2166	in house	2.0	G(0.01)	98.27	
2170	CPSC-CH-C1001-09.2	0.224		1.14	
2172	in house	0.17		-1.81	
2173	CPSC-CH-C1001-09.2	0.160		-2.36	
2175	EPA3550C	0.26	C	3.11	first reported 0.064
2179	EN14372	0.2531		2.73	
2182	EN14372	0.210		0.37	
2184	EN14372	0.208		0.26	
2190	in house	0.27		3.66	
2196	EN14372	0.195		-0.45	
2197	LFBG80.32	0.218		0.81	
2201	EN14372	0.20		-0.17	
2212	CPSC-CH-C1001-09.2	0.211		0.43	
2215	EN14372	0.219		0.87	
2216	CPSC-CH-C1001-09.2	0.201		-0.12	
2217	in house	0.19		-0.72	
2225	EN14372	0.206		0.15	
2226	EN14372	0.1769		-1.44	
2227	in house	0.1899		-0.73	
2229	EN14372	0.16		-2.36	
2236	CPSC-CH-C1001-09.2	0.176		-1.49	
2240	EN14372	0.195		-0.45	
2241	EN14372	0.209		0.32	
2242	CPSC-CH-C1001-09.2	0.209		0.32	
2243	in house	0.211		0.43	
2245	EN14372	0.230		1.47	
2248	in house	0.20		-0.17	
2251	EN14372	1.9280	G(0.01)	94.33	reported normalized data
2253	CPSC-CH-C1001-09.2	0.21		0.37	
2254	in house	<0.004		-----	false negative?
2255	in house	0.19		-0.72	
2256	EN14372	0.203		-0.01	
2258	in house	0.19		-0.72	
2267	in house	0.1622		-2.24	
2268	EN14372	0.2321		1.58	
2269	in house	0.1902		-0.71	
2271	EN14372	0.239		1.96	
2272	in house	0.10	DG(0.01)	-5.64	
2275	EN14372	0.15		-2.91	
2277		-----		-----	
2279	EN14372	0.2047		0.08	
2281	EN14372	0.219		0.87	
2282	in house	0.204		0.05	
2283	EN14372	0.203		-0.01	
2284	in house	0.207		0.21	
2288	in house	0.20		-0.17	
2293	CPSC-CH-C1001-09.2	0.1	DG(0.01)	-5.64	
2294	CPSC-CH-C1001-09.2	1.0	G(0.01)	43.58	
2310	CPSC-CH-C1001-09.2	0.211		0.43	
2311	EN14372	0.202		-0.06	
2312	EN14372	0.21		0.37	
2320	D3421	0.18		-1.27	
2350	EN14372	0.198		-0.28	

2353	D3421	0.21		0.37	
2355	EN14372	0.218		0.81	
2357	EN14372	0.210		0.37	
2359	EN14372	0.190		-0.72	
2361	CPSC-CH-C1001-09.2	0.20		-0.17	
2362	JIS/3	0.21		0.37	
2363	EN14372	0.201		-0.12	
2365	EN14372	0.209		0.32	
2366	EN14372	0.206		0.15	
2368	EN14372	0.205		0.10	
2369	EN14372	0.203		-0.01	
2370	EN14372	0.193		-0.56	
2372	EN14372	0.191		-0.67	
2375	D3421	0.22		0.92	
2379	EN14372	0.196		-0.39	
2380	EN14372	0.211		0.43	
2386	CPSC-CH-C1001-09.2	0.24		2.01	
2390	EN14372	0.20		-0.17	
3100	EN14372	0.21		0.37	
3107	EN14372	0.25		2.56	
3110	JIS/3	0.172		-1.70	
3116		-----		-----	
3117	EN14372	0.222		1.03	
3118	CPSC-CH-C1001-09.2	0.228		1.36	
3122	in house	0.199		-0.23	
3134	in house	0.271	C	3.71	first reported 0.312
3150	in house	0.179		-1.32	
3151	in house	0.23		1.47	
3153	CPSC-CH-C1001-09.2	0.23		1.47	
3154	in house	0.147		-3.07	
3159	EN14372	0.183		-1.10	
3161	in house	0.938	G(0.01)	40.19	
3163	in house	0.0781	G(0.05)	-6.84	
3166	in house	0.184		-1.05	
3167	EN14372	0.21		0.37	
3169	EN14372	0.218		0.81	
3172	EN14372	0.22		0.92	
3174	in house	0.21		0.37	
3176	ISO15777	0.19		-0.72	
3180	in house	0.3	DG(0.05)	5.30	
3182	EN14372	0.237		1.85	
3185	CPSC-CH-C1001-09.2	0.21		0.37	
3190	EN14372	0.22		0.92	
3197	EN14372	0.26		3.11	
3199	in house	0.198		-0.28	
3200	EN14372	0.1767		-1.45	
3204	in house	0.154		-2.69	
3209	in house	0.183		-1.10	
3210	EN15777	0.13		-4.00	
3212	EN14372	0.04	G(0.01)	-8.92	
3218	EN14372	0.20		-0.17	
3229	in house	0.202		-0.06	
3233	in house	0.25		2.56	
3237	in house	0.28	DG(0.05)	4.20	
3238	in house	0.16		-2.36	
3239	in house	0.18		-1.27	
3240	EN14372	0.2096		0.35	
3243	in house	0.18		-1.27	
3246	in house	0.243		2.18	
3248	EN14372	0.202		-0.06	
8005	JIS/3	0.21		0.37	
8006	EN14372	0.20		-0.17	
8007	CPSC-CH-C1001-09.2	0.20		-0.17	

		Only EN14372 results:	Only CPSC-CH-C1001-09.2:
normality	not OK	not OK	not OK
n	123	57	17
outliers	10	2	2
mean (n)	0.203	0.206	0.207
st.dev. (n)	0.0262	0.0204	0.0240
R(calc.)	0.073	0.057	0.067
R(EN14372)	0.051	0.052	0.052
compare R(Horwitz)	0.029	0.029	0.029

Determination of DEHP on sample #1013; results in %M/M, (continued)


0.3
0.25
0.2
0.15
0.1
0.05
0
3212 2293 2275 2137 2173 2172 3110 3200 2320 3239 3159 2255 2359 2102 2196 826 3122 2288 8006 8007 2363 3248 2369 2368 1124 2184 2242 3100 623 2357 2312 2243 2355 2281 310 2375 3118 3151 2271 3246 3107 3197 3134 3161 2166


Kernel Density
20
18
16
14
12
10
8
6
4
2
0
0
0.1
0.2
0.3
0.4

Determination of DINP, DIDP and DNOP on sample #1013; results in %M/M

lab	method	DINP	mark	DIDP	mark	DNOP	mark
110	D3421	n.d.		n.d.		n.d.	
310		-----		-----		-----	
330	in house	<0.02		<0.02		<0.02	
339	in house	<0.01		<0.01		<0.01	
551	EN14372	<0.01		<0.01		<0.01	
622	EN14372	n.d.		n.d.		n.d.	
623	in house	n.d.		n.d.		n.d.	
826	EN14372	n.d.		n.d.		n.d.	
840	EN14372	n.d.		n.d.		n.d.	
1051	CPSC-CH-C1001-09.2	<0.005		<0.005		<0.005	
1124	EN14372	0.186		<0.001		0.0733	
2102		interferences	present	n.d.		n.d.	
2104		-----		-----		-----	
2127	in house	<0.001		<0.001		<0.001	
2129	in house/EPA1625	<0.05		<0.05		<0.05	
2131	in house	n.d.		n.d.		n.d.	
2132	EN14372	n.d.		n.d.		n.d.	
2137	CPSC-CH-C1001-09.2	<0.01		<0.01		<0.01	
2152	in house	n.d.		n.d.		n.d.	
2156	EN14372	0.01		0.01		0.01	
2166	in house	0	ex (zero)	0	ex (zero)	0	ex (zero)
2170	CPSC-CH-C1001-09.2	<0.075	C, fr 170.28	<0.09		0.147	false+?
2172	in house	<0.005		<0.005		<0.005	
2173	CPSC-CH-C1001-09.2	0.180		8.836	ex, false+?	-----	
2175	EPA3550C	<0.0025		<0.0025		<0.0025	
2179	EN14372	n.d.		n.d.		n.d.	
2182	EN14372	<0.01		<0.01		<0.01	
2184	EN14372	n.d.		n.d.		n.d.	
2190	in house	<0.01		7.1	ex, false+?	<0.01	
2196	EN14372	<0.01		<0.01		<0.005	
2197		-----		-----		-----	
2201	EN14372	<0.01		<0.01		<0.01	
2212		-----		-----		-----	
2215	EN14372	n.d.		n.d.		n.d.	
2216		-----		-----		-----	
2217	in house	n.d.		n.d.		n.d.	
2225	EN14372	<0.01		<0.01		<0.005	
2226		-----		-----		0.0461	
2227	in house	<0.0050		<0.0050		<0.0050	
2229	EN14372	n.d.		n.d.		n.d.	
2236	CPSC-CH-C1001-09.2	<0.005		<0.005		<0.005	
2240	EN14372	n.d.		n.d.		n.d.	
2241	EN14372	n.d.		n.d.		n.d.	
2242		-----		-----		-----	
2243	in house	n.d.		n.d.		n.d.	
2245	EN14372	n.d.		n.d.		n.d.	
2248	in house	<0.05		14	ex, false+?	<0.05	
2251	EN14372	n.d.		n.d.		64.1361	ex, false+?
2253	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.	
2254	in house	<0.010		<0.010		<0.004	
2255		-----		n.d.	C, fr. 54.5	0.2	
2256	EN14372	n.d.		n.d.		n.d.	
2258	in house	0.07		4.85	ex, false+?	-----	
2267	in house	0.0547		<0.01		<0.01	
2268	EN14372	<0.01		<0.01		<0.005	
2269	in house	n.d.		n.d.		n.d.	
2271	EN14372	n.d.		n.d.		n.d.	
2272	in house	0.06	C, fr. n.d.	n.d.		n.d.	
2275	EN14372	n.d.		n.d.		n.d.	
2277		-----		-----		-----	
2279		-----		-----		-----	
2281	EN14372	n.d.		n.d.		n.d.	
2282	in house	0.084		<0.01		<0.003	
2283	EN14372	n.d.		n.d.		n.d.	
2284	in house	<0.01		<0.01		<0.005	
2288	in house	n.d.		n.d.		n.d.	
2293	CPSC-CH-C1001-09.2	-0.5	ex (neg.)	0.0	ex (zero)	0.0	ex (zero)
2294	CPSC-CH-C1001-09.2	<0.07		<0.07		<0.07	
2310	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.	
2311	EN14372	n.d.		n.d.		n.d.	
2312	EN14372	n.d.		n.d.		n.d.	
2320	D3421	n.d.		n.d.		n.d.	
2350	EN14372	n.d.		n.d.		n.d.	

2353	D3421	n.d.		n.d.		n.d.	
2355	EN14372	n.d.		n.d.		n.d.	
2357	EN14372	n.d.		n.d.		n.d.	
2359	EN14372	n.d.		n.d.		n.d.	
2361	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.	
2362	JIS/3	n.d.		n.d.		n.d.	
2363	EN14372	n.d.		n.d.		n.d.	
2365	EN14372	n.d.		n.d.		n.d.	
2366	EN14372	n.d.		n.d.		n.d.	
2368	EN14372	n.d.		n.d.		n.d.	
2369	EN14372	n.d.		n.d.		n.d.	
2370	EN14372	n.d.		n.d.		n.d.	
2372	EN14372	n.d.		n.d.		n.d.	
2375		-----		-----		-----	
2379	EN14372	n.d.		n.d.		n.d.	
2380	EN14372	n.d.		n.d.		n.d.	
2386	CPSC-CH-C1001-09.2	<0.01		<0.01		<0.01	
2390	EN14372	n.d.		n.d.		n.d.	
3100		-----		-----		-----	
3107	EN14372	0		0		0	
3110	JIS/3	<0.01		<0.01		<0.01	
3116		-----		-----		-----	
3117		-----		-----		-----	
3118	CPSC-CH-C1001-09.2	n.d.	C, fr. 160.28	n.d.		0.135	
3122		-----		8.636	ex, false+?	-----	
3134	in house	n.d.		n.d.		n.d.	
3150	in house	0.124		2.685	C, fr. 26.85	-----	
3151	in house	0.007		<0.005		<0.005	
3153	CPSC-CH-C1001-09.2	<0.01		<0.01		<0.01	
3154		-----		-----		-----	
3159	EN14372	<0.005		<0.005		<0.005	
3161	in house	n.d.		12.163	ex, false+	n.d.	
3163		-----		7.6209	ex, false+	0.0512	
3166		-----		-----		-----	
3167	EN14372	n.d.		n.d.		n.d.	
3169	EN14372	<0.01		<0.01		<0.01	
3172	EN14372	<0.005		10.54	ex, false+?	<0.005	
3174	in house	0.12		n.d.		n.d.	
3176		-----		-----		-----	
3180		-----		-----		-----	
3182	EN14372	n.d.		n.d.		n.d.	
3185	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.	
3190	EN14372	<0.01		<0.01		<0.01	
3197		-----		-----		-----	
3199	in house	<0.005		<0.005		<0.005	
3200	EN14372	n.d.		n.d.		n.d.	
3204		-----		-----		-----	
3209	in house	<0.005		<0.005		<0.005	
3210	EN15777	<0.1		<0.1		<0.1	
3212	EN14372	0.65	D(0.01)	0.43		0.012	
3218		-----		-----		-----	
3229	in house	<0.01		<0.01		<0.003	
3233	in house	n.d.		n.d.		n.d.	
3237		-----		-----		-----	
3238		-----		-----		-----	
3239		-----		-----		0.15	C, fr. 0.20
3240		-----		-----		-----	
3243	in house	n.d.		n.d.		n.d.	
3246	in house	n.d.		n.d.		n.d.	
3248	EN14372	<0.005		<0.005		<0.005	
8005		-----		-----		-----	
8006		-----		-----		-----	
8007		-----		-----		-----	
	normality	OK		OK		OK	
	n	11		4		10	
	outliers	1		0		0	
	mean (n)	0.081		0.781		0.082	
	st.dev. (n)	0.0652		1.2849		0.0705	
	R(calc.)	0.183		3.598		0.197	
	R(EN14372:04)	0.021		0.197		0.021	
	compare R(Horwitz)	0.020		0.136		0.013	

Determination of other phthalates on sample #1013; results in %M/M

lab	method	value	mark	z(targ)	remarks
110	D3421	-----			
310		20			DIDP look alike
330	in house	-----			
339	in house	-----			
551	EN14372	-----			
622	EN14372	n.d.			
623	in house	-----			
826	EN14372	-----			
840	EN14372	-----			
1051	CPSC-CH-C1001-09.2	-----			
1124	EN14372	-----			
2102		-----			#1013: two large peaks interfere with DINP
2104		7.01			DIDP look alike
2127	in house	-----			
2129	in house/EPA1625	-----			
2131	in house	-----			
2132	EN14372	n.d.			
2137	CPSC-CH-C1001-09.2	-----			
2152	in house	-----			
2156	EN14372	3.82			didecylphthalate
2166	in house	-----			
2170	CPSC-CH-C1001-09.2	-----			
2172	in house	-----			
2173	CPSC-CH-C1001-09.2	-----			reported 8.836 % of DIDP
2175	EPA3550C	-----			
2179	EN14372	-----			
2182	EN14372	-----			
2184	EN14372	8.50			DPHP
2190	in house	-----			reported 7.1 % of DIDP
2196	EN14372	-----			
2197		-----			
2201	EN14372	-----			
2212		-----			
2215	EN14372	-----			
2216		-----			
2217	in house	13.14			unknown phthalate present as main component
2225	EN14372	-----			
2226		-----			
2227	in house	-----			
2229	EN14372	-----			
2236	CPSC-CH-C1001-09.2	-----			
2240	EN14372	-----			
2241	EN14372	-----			
2242		-----			
2243	in house	-----			
2245	EN14372	-----			
2248	in house	-----			reported 14 % of DIDP
2251	EN14372	n.d.			reported a high concentration of DNOP
2253	CPSC-CH-C1001-09.2	-----			
2254	in house	-----			
2255		-----			first reported 54.5% DIDP
2256	EN14372	-----			
2258	in house	-----			reported 4.85 % of DIDP
2267	in house	pos.			3 peaks detected, but not identified as banned phthalates
2268	EN14372	-----			
2269	in house	-----			
2271	EN14372	n.d.			
2272	in house	-----			
2275	EN14372	-----			
2277		-----			
2279		-----			
2281	EN14372	-----			
2282	in house	-----			
2283	EN14372	-----			
2284	in house	-----			
2288	in house	-----			
2293	CPSC-CH-C1001-09.2	-----			
2294	CPSC-CH-C1001-09.2	-----			
2310	CPSC-CH-C1001-09.2	-----			
2311	EN14372	-----			
2312	EN14372	-----			
2320	D3421	-----			
2350	EN14372	-----			

2353	D3421	-----	
2355	EN14372	-----	
2357	EN14372	-----	
2359	EN14372	-----	
2361	CPSC-CH-C1001-09.2	-----	
2362	JIS/3	-----	
2363	EN14372	nil	
2365	EN14372	-----	
2366	EN14372	-----	
2368	EN14372	-----	
2369	EN14372	-----	
2370	EN14372	-----	
2372	EN14372	-----	
2375		-----	
2379	EN14372	n.d.	
2380	EN14372	-----	
2386	CPSC-CH-C1001-09.2	-----	
2390	EN14372	-----	
3100		-----	
3107	EN14372	13.8	DIDP like phthalate present
3110	JIS/3	-----	
3116		-----	
3117		-----	
3118	CPSC-CH-C1001-09.2	-----	
3122		8.636	Quantified as DIDP, although chromatogram differed from normal DIDP
3134	in house	-----	
3150	in house	-----	reported 2.685 % of DIDP
3151	in house	22.8	DPHP-E CAS no 53306-54-0
3153	CPSC-CH-C1001-09.2	-----	
3154		-----	
3159	EN14372	-----	
3161	in house	12.163	sum of DDP and DIDP
3163		-----	reported 7.6209 % of DIDP
3166		5.31	didecylphthalates, but pattern does not match DIDP
3167	EN14372	-----	
3169	EN14372	-----	
3172	EN14372	10.54	DPHP CAS no 53306-54-0, isomer of DIDP, comparable toxicity
3174	in house	-----	
3176		-----	
3180		0.02	DIBP
3182	EN14372	-----	
3185	CPSC-CH-C1001-09.2	-----	
3190	EN14372	-----	
3197		-----	
3199	in house	-----	
3200	EN14372	-----	
3204		-----	
3209	in house	-----	
3210	EN15777	-----	
3212	EN14372	-----	reported 0.43 % of DIDP
3218		-----	
3229	in house	-----	
3233	in house	n.d.	
3237		-----	
3238		-----	
3239		19.09	4.71% di-n-nonylP and 14.38% di-n-decylP
3240		-----	
3243	in house	7.1	unidentified phthalate
3246	in house	-----	
3248	EN14372	-----	
8005		7.8	#1013 contains also di(2-propylheptyl)phthalate
8006		8.1	#1013 contains also di(2-propylheptyl)phthalate
8007		7.9	#1013 contains also di(2-propylheptyl)phthalate

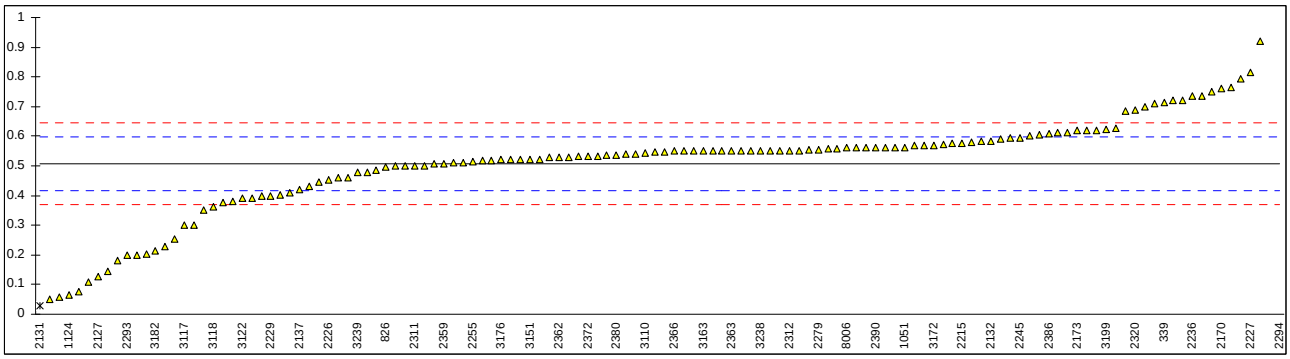
Determination of DINP on sample #1014; results in %M/M (all test methods)

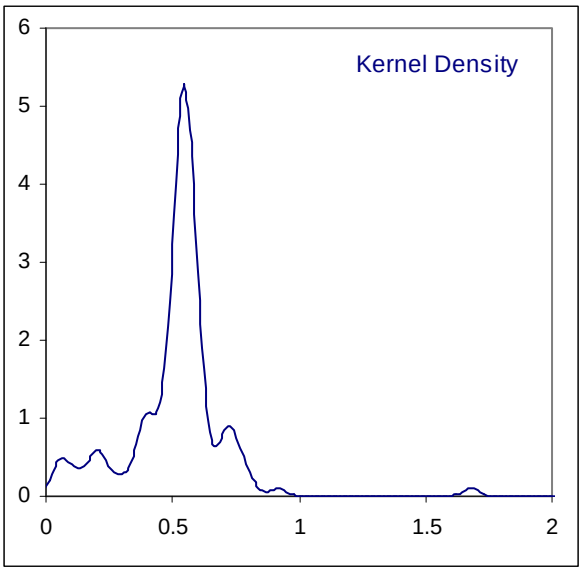
lab	method	value	mark	z(targ)	remarks
110	D3421	0.7364		4.99	
310	in house	0.75		5.29	
330	in house	0.72		4.64	
339	in house	0.712		4.46	
551	EN14372	0.55		0.92	
622	EN14372	0.0760	C	-9.45	first reported 0.0550
623	in house	0.57		1.36	
826	CPSC-CH-C1001-09.2	0.498		-0.22	
840	EN14372	0.559		1.11	
1051	CPSC-CH-C1001-09.2	0.562		1.18	
1124	EN14372	0.0657		-9.67	
2102	in house	0.605		2.12	
2104	in house	0.62		2.45	
2127	in house	0.128		-8.31	
2129	in house/EPA1625	0.70		4.20	
2131	in house	0.03	G(0.05)	-10.45	
2132	EN14372	0.584		1.66	
2137	CPSC-CH-C1001-09.2	0.419		-1.95	
2152	in house	0.392		-2.54	
2156	EN14372	0.92		9.01	
2166	in house	0.058		-9.84	
2170	CPSC-CH-C1001-09.2	0.760		5.51	
2172	in house	0.38		-2.80	
2173	CPSC-CH-C1001-09.2	0.618		2.41	
2175	EPA3550C	0.71		4.42	
2179	EN14372	0.4991		-0.20	
2182	EN14372	0.562		1.18	
2184	EN14372	0.534		0.57	
2190	in house	0.43		-1.71	
2196	EN14372	0.529		0.46	
2197	LFBG80.32	0.252		-5.60	
2201	CPSC-CH-C1001-09.2	0.56		1.14	
2212	CPSC-CH-C1001-09.2	0.574		1.44	
2215	EN14372	0.577		1.51	
2216	CPSC-CH-C1001-09.2	0.612		2.27	
2217	in house	0.52		0.26	
2225	CPSC-CH-C1001-09.2	0.553		0.98	
2226	EPA8270	0.4519		-1.23	
2227	in house	0.8136		6.68	
2229	EN14372	0.40		-2.36	
2236	CPSC-CH-C1001-09.2	0.735		4.96	
2240	EN14372	0.576		1.49	
2241	CPSC-CH-C1001-09.2	0.522		0.31	
2242	CPSC-CH-C1001-09.2	0.54	C	0.70	first reported 0.80
2243	in house	0.685		3.87	
2245	EN14372	0.596		1.92	
2248	in house	0.40		-2.36	
2251	EN14372	n.d.		-----	false negative?
2253	CPSC-CH-C1001-09.2	0.55		0.92	
2254	in house	0.108		-8.75	
2255	in house	0.514		0.13	
2256	EN14372	0.557		1.07	
2258	in house	1.68	G(0.01)	25.63	
2267	in house	<0.01		<-10.89	false negative?
2268	EN14372	0.4983		-0.21	
2269	in house	0.5487		0.89	
2271	EN14372	0.764		5.60	
2272	in house	0.23		-6.08	
2275	CPSC-CH-C1001-09.2	0.58		1.57	
2277		-----		-----	
2279	CPSC-CH-C1001-09.2	0.5538		1.00	
2281	EN14372	0.613		2.30	
2282	in house	0.795	C	6.28	first reported 1.069
2283	EN14372	0.401	C	-2.34	first reported 0.195
2284	in house	0.377	C	-2.87	first reported 0.524
2288	in house	0.57	C	1.36	first reported n.d.
2293	CPSC-CH-C1001-09.2	0.2		-6.74	
2294	CPSC-CH-C1001-09.2	3.0	G(0.01)	54.50	
2310	CPSC-CH-C1001-09.2	0.507		-0.02	
2311	CPSC-CH-C1001-09.2	0.500		-0.18	
2312	CPSC-CH-C1001-09.2	0.55		0.92	
2320	D3421	0.69		3.98	
2350	D3421	0.519		0.24	

2353	D3421	0.52		0.26	
2355	CPSC-CH-C1001-09.2	0.530		0.48	
2357	CPSC-CH-C1001-09.2	0.531		0.50	
2359	D3421	0.507		-0.02	
2361	CPSC-CH-C1001-09.2	0.51		0.04	
2362	JIS/3	0.53		0.48	
2363	CPSC-CH-C1001-09.2	0.550		0.92	
2365	CPSC-CH-C1001-09.2	0.560		1.14	
2366	CPSC-CH-C1001-09.2	0.549		0.90	
2368	CPSC-CH-C1001-09.2	0.518		0.22	
2369	CPSC-CH-C1001-09.2	0.537		0.63	
2370	CPSC-CH-C1001-09.2	0.541		0.72	
2372	CPSC-CH-C1001-09.2	0.533		0.55	
2375	D3421	0.55		0.92	
2379	CPSC-CH-C1001-09.2	0.511		0.07	
2380	CPSC-CH-C1001-09.2	0.537		0.63	
2386	CPSC-CH-C1001-09.2	0.61		2.23	
2390	D3421	0.56		1.14	
3100	CPSC-CH-C1001-09.2	0.55		0.92	
3107	EN14372	0.18		-7.17	
3110	JIS/3	0.542		0.74	
3116		-----		-----	
3117	EN14372	0.30	C	-4.55	first reported 0.121
3118	CPSC-CH-C1001-09.2	0.363	C	-3.17	first reported 0.750
3122	in house	0.390		-2.58	
3134	in house	0.444		-1.40	
3150	in house	0.146		-7.92	
3151	in house	0.52		0.26	
3153	CPSC-CH-C1001-09.2	0.55		0.92	
3154		-----		-----	
3159	EN14372	0.626		2.58	
3161	in house	0.410		-2.14	
3163	in house	0.5500		0.92	
3166	in house	0.619		2.43	
3167	EN14372	0.35	C	-3.46	first reported 0.090
3169	EN14372	0.592		1.84	
3172	EN14372	0.57		1.36	
3174	CPSIA	0.72		4.64	
3176	ISO15777	0.52		0.26	
3180	in house	0.2		-6.74	
3182	EN14372	0.213	C	-6.45	first reported 0.193
3185	CPSC-CH-C1001-09.2	0.55		0.92	
3190	CPSC-CH-C1001-09.2	0.55		0.92	
3197	EN14372	0.46		-1.05	
3199	in house	0.622	C	2.49	first reported 1.239
3200	EN14372	0.5958		1.92	
3204	in house	0.486		-0.48	
3209	in house	0.548		0.87	
3210	EN15777	0.30		-4.55	
3212	EN14372	0.051		-10.00	
3218	CPSC-CH-C1001-09.2	0.60		2.01	
3229	in house	0.480		-0.61	
3233	in house	0.46	C	-1.05	first reported 0.75
3237		-----		-----	
3238	in house	0.55		0.92	
3239	in house	0.48		-0.61	
3240	EN14372	0.2036	C	-6.66	first reported 0.1018
3243	in house	0.50	C	-0.18	first reported 0.29
3246	in house	0.56	C	1.14	first reported 0.350
3248	EN14372	0.583		1.64	
8005	JIS/3	0.55		0.92	
8006	EN14372	0.56		1.14	
8007	CPSC-CH-C1001-09.2	0.55		0.92	

normality	not OK
n	127
outliers	3
mean (n)	0.508
st.dev. (n)	0.1611
R(calc.)	0.451
R(EN14372:04)	0.128
compare R(Horwitz)	0.095

Determination of DINP on sample #1014; results in %M/M, (all test methods, continued)





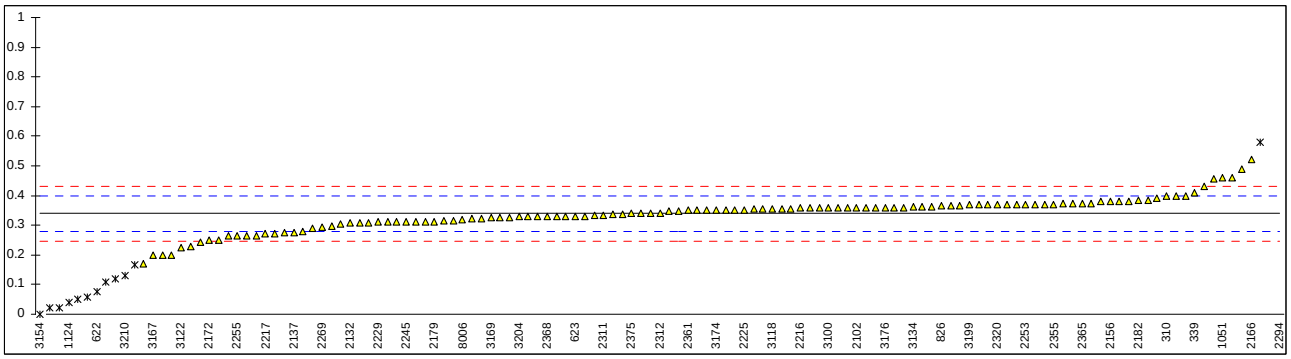
Determination of DEHP on sample #1014; results in %M/M (all test methods)

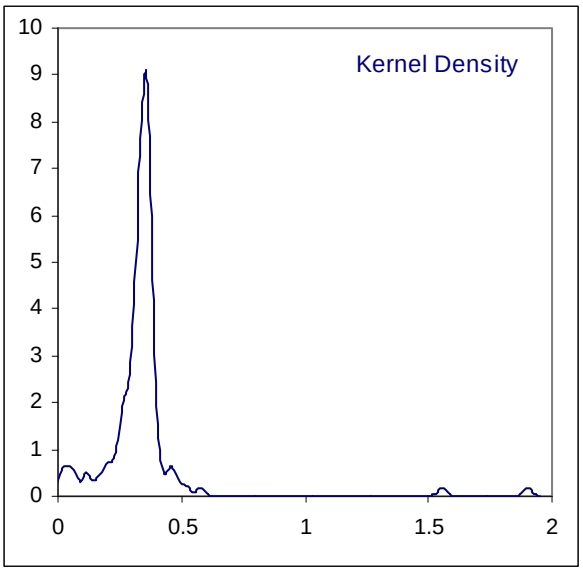
lab	method	value	mark	z(targ)	remarks
110	D3421	0.4612		4.01	
310	in house	0.40		2.01	
330	in house	0.27		-2.26	
339	in house	0.411		2.37	
551	EN14372	0.37		1.02	
622	EN14372	0.0744	C,G(0.05)	-8.67	first reported 0.0603
623	in house	0.33		-0.29	
826	CPSC-CH-C1001-09.2	0.365		0.86	
840	EN14372	0.370		1.02	
1051	CPSC-CH-C1001-09.2	0.461		4.01	
1124	EN14372	0.0382	DG(0.01)	-9.86	
2102	in house	0.360		0.69	
2104	in house	0.38		1.35	
2127	in house	0.364		0.82	
2129	in house/EPA1625	0.36		0.69	
2131	in house	0.05	DG(0.01)	-9.47	
2132	EN14372	0.307		-1.04	
2137	CPSC-CH-C1001-09.2	0.277		-2.03	
2152	in house	0.244		-3.11	
2156	EN14372	0.38		1.35	
2166	in house	0.52		5.94	
2170	CPSC-CH-C1001-09.2	0.375		1.19	
2172	in house	0.25		-2.91	
2173	CPSC-CH-C1001-09.2	0.332		-0.22	
2175	EPA3550C	0.31	C	-0.95	first reported 0.079
2179	EN14372	0.3127		-0.86	
2182	EN14372	0.383		1.45	
2184	EN14372	0.317		-0.72	
2190	in house	0.23		-3.57	
2196	EN14372	0.383		1.45	
2197	LFBG80.32	0.307		-1.04	
2201	CPSC-CH-C1001-09.2	0.37		1.02	
2212	CPSC-CH-C1001-09.2	0.326		-0.42	
2215	EN14372	0.367		0.92	
2216	CPSC-CH-C1001-09.2	0.357		0.60	
2217	in house	0.27		-2.26	
2225	CPSC-CH-C1001-09.2	0.352		0.43	
2226	EPA8270	0.3254		-0.44	
2227	in house	0.3534		0.48	
2229	EN14372	0.31		-0.95	
2236	CPSC-CH-C1001-09.2	0.296		-1.40	
2240	EN14372	0.329		-0.32	
2241	CPSC-CH-C1001-09.2	0.359		0.66	
2242	CPSC-CH-C1001-09.2	0.38		1.35	
2243	in house	0.322		-0.55	
2245	EN14372	0.310		-0.95	
2248	in house	0.35		0.37	
2251	EN14372	1.5584	G(0.01)	39.99	reported normalized data
2253	CPSC-CH-C1001-09.2	0.37		1.02	
2254	in house	0.022	DG(0.01)	-10.39	
2255	in house	0.264		-2.45	
2256	EN14372	0.374		1.15	
2258	in house	0.37		1.02	
2267	in house	<0.01		<-10.78	false negative?
2268	EN14372	0.3714		1.07	
2269	in house	0.2941		-1.47	
2271	EN14372	0.432		3.05	
2272	in house	0.17		-5.54	
2275	CPSC-CH-C1001-09.2	0.34		0.04	
2277		-----		-----	
2279	CPSC-CH-C1001-09.2	0.3479		0.30	
2281	EN14372	0.322		-0.55	
2282	in house	0.457		3.87	
2283	EN14372	0.264	C	-2.45	first reported 0.171
2284	in house	0.304	C	-1.14	first reported 0.196
2288	in house	0.37		1.02	
2293	CPSC-CH-C1001-09.2	0.2		-4.55	
2294	CPSC-CH-C1001-09.2	1.9	G(0.01)	51.19	
2310	CPSC-CH-C1001-09.2	0.317		-0.72	
2311	CPSC-CH-C1001-09.2	0.335		-0.13	
2312	CPSC-CH-C1001-09.2	0.34		0.04	
2320	D3421	0.37		1.02	
2350	D3421	0.356		0.56	

2353	D3421	0.35		0.37	
2355	CPSC-CH-C1001-09.2	0.371		1.05	
2357	CPSC-CH-C1001-09.2	0.359		0.66	
2359	D3421	0.338		-0.03	
2361	CPSC-CH-C1001-09.2	0.35		0.37	
2362	JIS/3	0.35		0.37	
2363	CPSC-CH-C1001-09.2	0.364		0.82	
2365	CPSC-CH-C1001-09.2	0.375		1.19	
2366	CPSC-CH-C1001-09.2	0.354		0.50	
2368	CPSC-CH-C1001-09.2	0.329		-0.32	
2369	CPSC-CH-C1001-09.2	0.356		0.56	
2370	CPSC-CH-C1001-09.2	0.336		-0.09	
2372	CPSC-CH-C1001-09.2	0.329		-0.32	
2375	D3421	0.34		0.04	
2379	CPSC-CH-C1001-09.2	0.329		-0.32	
2380	CPSC-CH-C1001-09.2	0.330		-0.29	
2386	CPSC-CH-C1001-09.2	0.36		0.69	
2390	D3421	0.35		0.37	
3100	CPSC-CH-C1001-09.2	0.36		0.69	
3107	EN14372	0.11	DG(0.01)	-7.50	
3110	JIS/3	0.265		-2.42	
3116		-----		-----	
3117	EN14372	0.58	C,G(0.05)	7.91	first reported 0.057
3118	CPSC-CH-C1001-09.2	0.355		0.53	
3122	in house	0.226		-3.70	
3134	in house	0.363		0.79	
3150	in house	0.0590	DG(0.01)	-9.18	
3151	in house	0.38	C	1.35	first reported 0.49
3153	CPSC-CH-C1001-09.2	0.36		0.69	
3154	in house	0.0003	DG(0.05)	-11.10	
3159	EN14372	0.312		-0.88	
3161	in house	0.309		-0.98	
3163	in house	0.1178	DG(0.01)	-7.25	
3166	in house	0.331		-0.26	
3167	EN14372	0.20	C	-4.55	first reported 0.058
3169	EN14372	0.325		-0.45	
3172	EN14372	0.36		0.69	
3174	CPSIA	0.35		0.37	
3176	ISO15777	0.36		0.69	
3180	in house	0.4		2.01	
3182	EN14372	0.20	C	-4.55	first reported 0.128
3185	CPSC-CH-C1001-09.2	0.36		0.69	
3190	CPSC-CH-C1001-09.2	0.39		1.68	
3197	EN14372	0.25		-2.91	
3199	in house	0.368		0.96	
3200	EN14372	0.3702		1.03	
3204	in house	0.328		-0.36	
3209	in house	0.275		-2.09	
3210	EN15777	0.13	DG(0.05)	-6.85	
3212	EN14372	0.0212	DG(0.05)	-10.42	
3218	CPSC-CH-C1001-09.2	0.36		0.69	
3229	in house	0.367		0.92	
3233	in house	0.40		2.01	
3237	in house	0.49	C	4.96	first reported 0.42
3238	in house	0.34		0.04	
3239	in house	0.28		-1.93	
3240	EN14372	0.1649	C,DG(0.05)	-5.70	first reported 0.0824
3243	in house	0.29		-1.60	
3246	in house	0.265		-2.42	
3248	EN14372	0.348		0.30	
8005	JIS/3	0.31		-0.95	
8006	EN14372	0.32		-0.62	
8007	CPSC-CH-C1001-09.2	0.31		-0.95	

normality	not OK
n	119
outliers	14
mean (n)	0.339
st.dev. (n)	0.0554
R(calc.)	0.155
R(EN14372:04)	0.085
compare R(Horwitz)	0.045

Determination of DEHP on sample #1014; results in %M/M, (all test methods, continued)





Determination of DBP, BBP, DIDP and DNOP on sample #1014; results in %M/M (all methods)

lab	method	DBP	mark	BBP	mark	DIDP	mark	DNOP	mark
110	D3421	0.0021		n.d.		n.d.		n.d.	
310	in house	-----		-----		-----		-----	
330	in house	<0.02		<0.02		<0.02		<0.02	
339	in house	<0.01		<0.01		0.063		<0.01	
551	EN14372	<0.01		<0.01		<0.01		<0.01	
622	EN14372	0.0009		0.0008		n.d.		n.d.	
623	in house	n.d.		n.d.		n.d.		n.d.	
826	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
840	EN14372	n.d.		n.d.		n.d.		n.d.	
1051	CPSC-CH-C1001-09.2	0.013	C,fr.0.028	<0.005		<0.005		<0.005	
1124	EN14372	0.00041		0.00012		<0.001		0.0013	
2102	in house	n.d.		n.d.		0.025		n.d.	
2104	in house	0.0008		0.0005		0.025		-----	
2127	in house	<0.001		<0.001		<0.001		<0.001	
2129	in house/EPA1625	<0.05		<0.05		<0.05		<0.05	
2131	in house	n.d.		n.d.		n.d.		n.d.	
2132	EN14372	n.d.		n.d.		0.0191		n.d.	
2137	CPSC-CH-C1001-09.2	<0.01		<0.01		<0.01		<0.01	
2152	in house	n.d.		n.d.		0.0253		n.d.	
2156	EN14372	0.01		0.01		0.01		0.01	
2166	in house	0.0020		0	ex	0	ex	0	ex
2170	CPSC-CH-C1001-09.2	0.002		<0.002		0.069		0.007	
2172	in house	<0.005		<0.005		<0.005		<0.005	
2173	CPSC-CH-C1001-09.2	-----		-----		0.037		-----	
2175	EPA3550C	<0.0025		<0.0025		0.040		<0.0025	
2179	EN14372	n.d.		n.d.		n.d.		n.d.	
2182	EN14372	<0.01		<0.01		<0.01		<0.01	
2184	EN14372	n.d.		n.d.		n.d.		n.d.	
2190	in house	<0.01		<0.01		0.02		<0.01	
2196	EN14372	<0.005		<0.005		<0.01		<0.005	
2197	LFBG80.32	-----		-----		-----		-----	
2201	CPSC-CH-C1001-09.2	<0.01		<0.01		<0.01		<0.01	
2212	CPSC-CH-C1001-09.2	-----		-----		-----		-----	
2215	EN14372	n.d.		n.d.		n.d.		n.d.	
2216	CPSC-CH-C1001-09.2	-----		-----		-----		-----	
2217	in house	n.d.		n.d.		n.d.		n.d.	
2225	CPSC-CH-C1001-09.2	<0.015		<0.015		<0.015		<0.015	
2226	EPA8270	0.0111		-----		-----		-----	
2227	in house	<0.0050		<0.0050		<0.0050		<0.0050	
2229	EN14372	n.d.		n.d.		n.d.		n.d.	
2236	CPSC-CH-C1001-09.2	<0.005		<0.005		<0.005		<0.005	
2240	EN14372	n.d.		n.d.		n.d.		n.d.	
2241	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2242	CPSC-CH-C1001-09.2	-----		-----		-----		-----	
2243	in house	n.d.		n.d.		0.039		n.d.	
2245	EN14372	n.d.		n.d.		n.d.		n.d.	
2248	in house	<0.05		<0.05		<0.05		<0.05	
2251	EN14372	26.4115	G(0.01)	72.0299	G(0.01)	n.d.		n.d.	
2253	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2254	in house	<0.004		<0.004		<0.010		<0.004	
2255	in house	0.005		-----		-----		-----	
2256	EN14372	n.d.		n.d.		n.d.		n.d.	
2258	in house	-----		-----		-----		-----	
2267	in house	<0.01		<0.01		<0.01		<0.01	
2268	EN14372	<0.005		<0.005		<0.01		<0.005	
2269	in house	n.d.		n.d.		n.d.		n.d.	
2271	EN14372	n.d.		n.d.		n.d.		n.d.	
2272	in house	n.d.		n.d.		n.d.		n.d.	
2275	CPSC-CH-C1001-09.2	n.d.		n.d.		0.01		n.d.	
2277		-----		-----		-----		-----	
2279	CPSC-CH-C1001-09.2	-----		-----		-----		-----	
2281	EN14372	n.d.		n.d.		n.d.		n.d.	
2282	in house	<0.003		<0.003		<0.010		<0.003	
2283	EN14372	n.d.		n.d.		n.d.		n.d.	
2284	in house	<0.005		<0.005		<0.01		<0.005	
2288	in house	n.d.		n.d.		n.d.		n.d.	
2293	CPSC-CH-C1001-09.2	0.0	ex	0.0	ex	-0.1	ex	0.0	ex
2294	CPSC-CH-C1001-09.2	<0.07		<0.07		0.2	G(0.01)	<0.07	
2310	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2311	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2312	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2320	D3421	n.d.		n.d.		n.d.		n.d.	
2350	D3421	n.d.		n.d.		n.d.		n.d.	
2353	D3421	n.d.		n.d.		n.d.		n.d.	

2355	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2357	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2359	D3421	n.d.		n.d.		n.d.		n.d.	
2361	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2362	JIS/3	n.d.		n.d.		n.d.		n.d.	
2363	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2365	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2366	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2368	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2369	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2370	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2372	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2375	D3421	-----		-----		-----		-----	
2379	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2380	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
2386	CPSC-CH-C1001-09.2	0.01		<0.01		<0.01		<0.01	
2390	D3421	n.d.		n.d.		n.d.		n.d.	
3100	CPSC-CH-C1001-09.2	-----		-----		-----		-----	
3107	EN14372	0.01		0	ex	0	ex	0	ex
3110	JIS/3	<0.01		<0.01		0.018		<0.01	
3116		-----		-----		-----		-----	
3117	EN14372	-----		-----		-----		-----	
3118	CPSC-CH-C1001-09.2	0.003		n.d.		0.052		n.d.	
3122	in house	-----		-----		-----		-----	
3134	in house	n.d.		n.d.		n.d.		n.d.	
3150	in house	0.0014		-----		0.0047		-----	
3151	in house	<0.005		<0.005		<0.005		<0.005	
3153	CPSC-CH-C1001-09.2	<0.01		<0.01		0.032		<0.01	
3154	in house	-----		-----		-----		-----	
3159	EN14372	<0.005		<0.005		<0.005		<0.005	
3161	in house	0.053	G(0.05)	n.d.		n.d.		n.d.	
3163	in house	-----		-----		-----		-----	
3166	in house	-----		-----		-----		-----	
3167	EN14372	<0.005		<0.005		<0.01		<0.005	
3169	EN14372	<0.01		<0.01		<0.01		<0.01	
3172	EN14372	<0.005		<0.005		<0.005		<0.005	
3174	CPSIA	n.d.		n.d.		n.d.		n.d.	
3176	ISO15777	-----		-----		-----		-----	
3180	in house	-----		-----		-----		-----	
3182	EN14372	0.003		n.d.		0.005		n.d.	
3185	CPSC-CH-C1001-09.2	n.d.		n.d.		n.d.		n.d.	
3190	CPSC-CH-C1001-09.2	<0.01		<0.01		0.02		<0.01	
3197	EN14372	-----		-----		-----		-----	
3199	in house	<0.005		<0.005		<0.005		<0.005	
3200	EN14372	n.d.		n.d.		0.0324		n.d.	
3204	in house	-----		-----		-----		-----	
3209	in house	<0.005		<0.005		<0.005		<0.005	
3210	EN15777	<0.1		<0.1		<0.1		<0.1	
3212	EN14372	0.00328		0.0003		0.0003		0.0003	
3218	CPSC-CH-C1001-09.2	-----		-----		0.026		-----	
3229	in house	<0.003		<0.003		<0.01		<0.003	
3233	in house	n.d.		n.d.		n.d.		n.d.	
3237		-----		-----		0.42	G(0.01)	-----	
3238	in house	-----		-----		-----		-----	
3239	in house	-----		-----		-----		-----	
3240	EN14372	0.0060	C,fr.0.003	-----		-----		-----	
3243	in house	n.d.		n.d.		n.d.		n.d.	
3246	in house	n.d.		n.d.		0.012		n.d.	
3248	EN14372	<0.005		<0.005		0.020		<0.005	
8005	JIS/3	-----		-----		-----		-----	
8006	EN14372	-----		-----		-----		-----	
8007	CPSC-CH-C1001-09.2	-----		-----		-----		-----	
	normality	not OK		not OK		OK		OK	
	n	17		6		23		4	
	outliers	2		1		2		0	
	mean (n)	0.0049		0.0020		0.026		0.0047	
	st.dev. (n)	0.00421		0.00395		0.0178		0.00463	
	R(calc.)	0.0118		0.0111		0.050		0.0130	
	R(EN14372:04)	0.0012		0.0005		0.007		0.0012	
	compare R(Horwitz)	0.0012		0.0007		0.008		0.0012	

Determination of DINP on sample #1014; results in %M/M, (only EN14372)

lab	method	value	mark	z(targ)	remarks
110		-----		-----	
310		-----		-----	
330		-----		-----	
339		-----		-----	
551	EN14372	0.55		4.73	
622	EN14372	0.0760	C	-8.92	first reported 0.0550
623		-----		-----	
826		-----		-----	
840		-----		-----	
1051		-----		-----	
1124	EN14372	0.0657		-9.22	
2102		-----		-----	
2104		-----		-----	
2127		-----		-----	
2129		-----		-----	
2131		-----		-----	
2132	EN14372	0.584		5.71	
2137		-----		-----	
2152		-----		-----	
2156	EN14372	0.92		15.39	
2166	EN14372	0.058		-9.44	
2170		-----		-----	
2172		-----		-----	
2173		-----		-----	
2175		-----		-----	
2179		-----		-----	
2182	EN14372	0.562		5.08	
2184	EN14372	0.534		4.27	
2190		-----		-----	
2196		-----		-----	
2197		-----		-----	
2201	EN14372	0.11		-7.94	
2212		-----		-----	
2215	EN14372	0.577		5.51	
2216		-----		-----	
2217		-----		-----	
2225		-----		-----	
2226	EN14372	0.1006		-8.21	
2227		-----		-----	
2229	EN14372	0.40		0.41	
2236		-----		-----	
2240	EN14372	0.576		5.48	
2241		-----		-----	
2242		-----		-----	
2243		-----		-----	
2245	EN14372	0.596		6.06	
2248		-----		-----	
2251	EN14372	n.d.		-----	false negative?
2253		-----		-----	
2254		-----		-----	
2255		-----		-----	
2256	EN14372	0.557		4.93	
2258		-----		-----	
2267		-----		-----	
2268	EN14372	0.4983		3.24	
2269		-----		-----	
2271	EN14372	0.184		-5.81	
2272		-----		-----	
2275	EN14372	0.07		-9.09	
2277		-----		-----	
2279		-----		-----	
2281	EN14372	0.613		6.55	
2282		-----		-----	
2283	EN14372	0.401	C	0.44	first reported 0.195
2284		-----		-----	
2288		-----		-----	
2293		-----		-----	
2294		-----		-----	
2310		-----		-----	
2311		-----		-----	
2312		-----		-----	
2320		-----		-----	
2350		-----		-----	

2353		-----		-----	
2355		-----		-----	
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2361		-----		-----	
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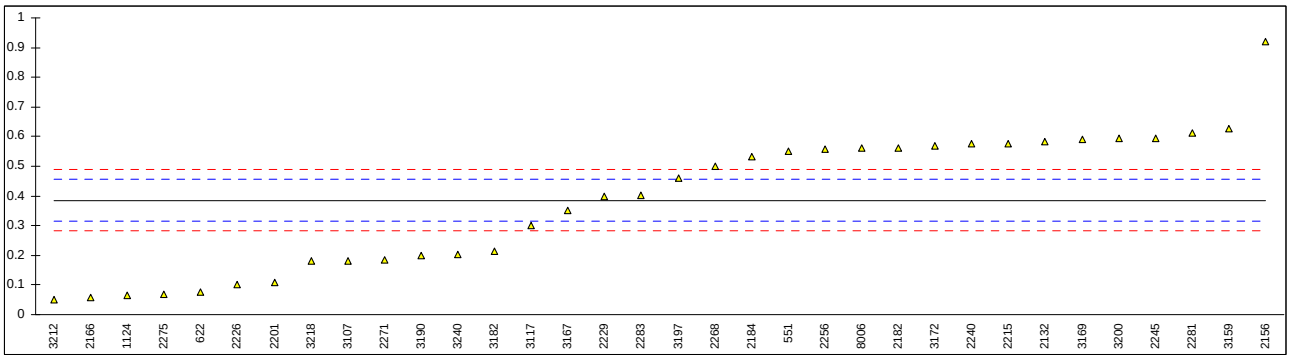
2363		-----		-----	
2365		-----		-----	
2366		-----		-----	
2368		-----		-----	
2369		-----		-----	
2370		-----		-----	
2372		-----		-----	
2375		-----		-----	
2379		-----		-----	
2380		-----		-----	
2386		-----		-----	
2390		-----		-----	
3100		-----		-----	
3107	EN14372	0.18		-5.93	
3110		-----		-----	
3116		-----		-----	
3117	EN14372	0.30	C	-2.47	first reported 0.121
3118		-----		-----	
3122		-----		-----	
3134		-----		-----	
3150		-----		-----	
3151		-----		-----	
3153		-----		-----	
3154		-----		-----	
3159	EN14372	0.626		6.92	
3161		-----		-----	
3163		-----		-----	
3166		-----		-----	
3167	EN14372	0.35	C	-1.03	first reported 0.090
3169	EN14372	0.592		5.94	
3172	EN14372	0.57		5.31	
3174		-----		-----	
3176		-----		-----	
3180		-----		-----	
3182	EN14372	0.213	C	-4.98	first reported 0.193
3185		-----		-----	
3190	EN14372	0.20		-5.35	
3197	EN14372	0.46		2.14	
3199		-----		-----	first reported 1.239
3200	EN14372	0.5958		6.05	
3204		-----		-----	
3209		-----		-----	
3210		-----		-----	
3212	EN14372	0.051		-9.64	
3218	EN14372	0.18		-5.93	
3229		-----		-----	
3233		-----		-----	
3237		-----		-----	
3238		-----		-----	
3239		-----		-----	
3240	EN14372	0.2036	C	-5.25	first reported 0.1018
3243		-----		-----	
3246		-----		-----	
3248		-----		-----	
8005		-----		-----	
8006	EN14372	0.56		5.02	
8007		-----		-----	

normality	not OK
n	34
outliers	0
mean (n)	0.386
st.dev. (n)	0.2294
R(calc.)	0.642
R(EN14372:04)	0.097
compare R(Horwitz)	0.075

Determination of DINP on sample #1014; results in %M/M, (only EN14372, continued)


1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
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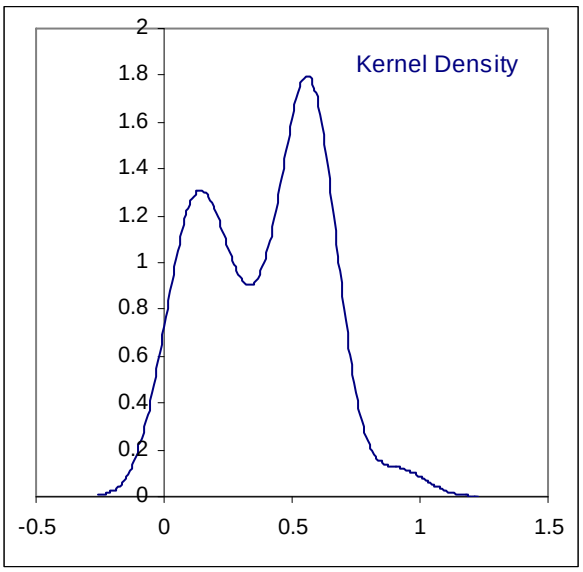
0
3212
2166
1124
2275
622
2226
2201
3218
3107
2271
3190
3240
3182
3117
3167
2229
2283
3197
2268
2184
551
2256
8006
2182
3172
2240
2215
2132
3169
3200
2245
2281
3159
2156


Kernel Density
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
-0.5
0
0.5
1
1.5

Determination of DEHP on sample #1014; results in %M/M, (only EN14372)

lab	method	value	mark	z(targ)	remarks
110		-----		-----	
310		-----		-----	
330		-----		-----	
339		-----		-----	
551	EN14372	0.37		4.79	
622	EN14372	0.0744	C	-7.91	first reported 0.0603
623		-----		-----	
826		-----		-----	
840		-----		-----	
1051		-----		-----	
1124	EN14372	0.0382		-9.47	
2102		-----		-----	
2104		-----		-----	
2127		-----		-----	
2129		-----		-----	
2131		-----		-----	
2132	EN14372	0.307		2.08	
2137		-----		-----	
2152		-----		-----	
2156	EN14372	0.38		5.22	
2166	in house	0.52		11.23	
2170		-----		-----	
2172		-----		-----	
2173		-----		-----	
2175		-----		-----	f
2179		-----		-----	
2182	EN14372	0.383		5.35	
2184	EN14372	0.317		2.51	
2190		-----		-----	
2196		-----		-----	
2197		-----		-----	
2201	EN14372	0.07		-8.10	
2212		-----		-----	
2215	EN14372	0.367		4.66	
2216		-----		-----	
2217		-----		-----	
2225		-----		-----	
2226	EN14372	0.0453		-9.16	
2227		-----		-----	
2229	EN14372	0.31		2.21	
2236		-----		-----	
2240	EN14372	0.329		3.03	
2241		-----		-----	
2242		-----		-----	
2243		-----		-----	
2245	EN14372	0.310		2.21	
2248		-----		-----	
2251	EN14372	1.5584	G(0.01)	55.85	reported normalized data
2253		-----		-----	
2254		-----		-----	
2255		-----		-----	
2256	EN14372	0.374		4.96	
2258		-----		-----	
2267		-----		-----	
2268	EN14372	0.3714		4.85	
2269		-----		-----	
2271	EN14372	0.106		-6.56	
2272		-----		-----	
2275	EN14372	0.06		-8.53	
2277		-----		-----	
2279		-----		-----	
2281	EN14372	0.322		2.73	
2282		-----		-----	
2283	EN14372	0.264	C	0.23	first reported 0.171
2284		-----		-----	
2288		-----		-----	
2293		-----		-----	
2294		-----		-----	
2310		-----		-----	
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2312		-----		-----	
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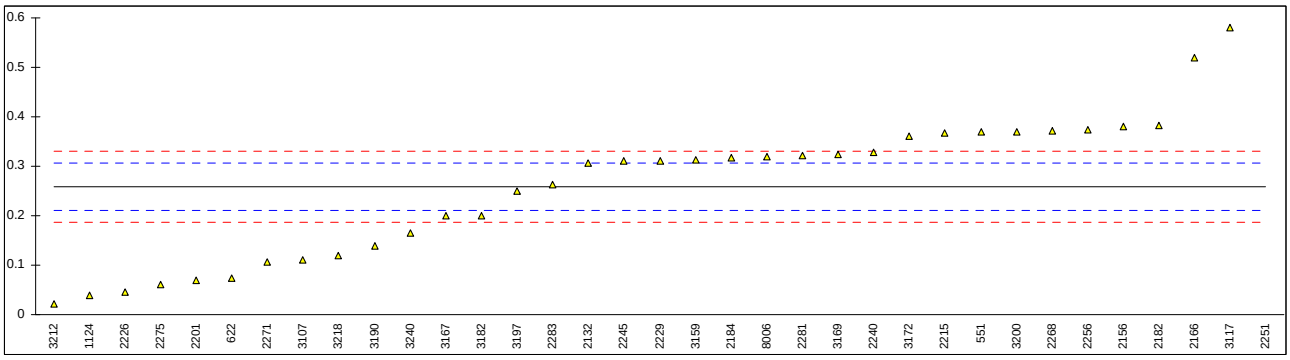
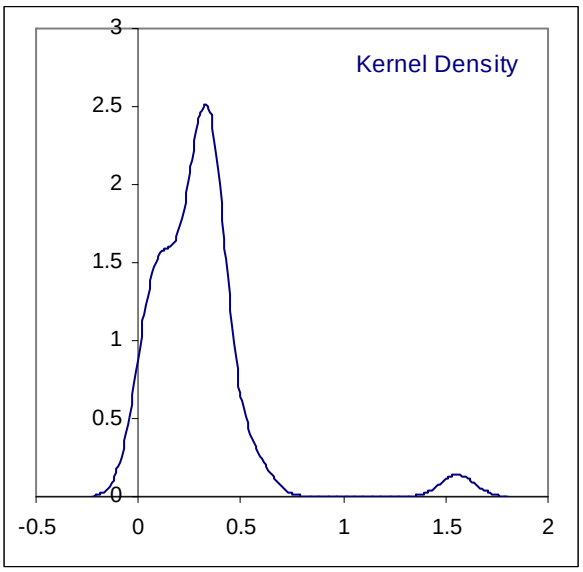
2369		-----		-----	
2370		-----		-----	
2372		-----		-----	
2375		-----		-----	
2379		-----		-----	
2380		-----		-----	
2386		-----		-----	
2390		-----		-----	
3100		-----		-----	
3107	EN14372	0.11		-6.38	
3110		-----		-----	
3116		-----		-----	
3117	EN14372	0.58	C	13.81	first reported 0.057
3118		-----		-----	
3122		-----		-----	
3134		-----		-----	
3150		-----		-----	
3151		-----		-----	
3153		-----		-----	
3154		-----		-----	
3159	EN14372	0.312		2.30	
3161		-----		-----	
3163		-----		-----	
3166		-----		-----	
3167	EN14372	0.20	C	-2.52	first reported 0.058
3169	EN14372	0.325		2.85	
3172	EN14372	0.36		4.36	
3174		-----		-----	
3176		-----		-----	
3180		-----		-----	
3182	EN14372	0.20	C	-2.52	first reported 0.128
3185		-----		-----	
3190	EN14372	0.14		-5.10	
3197	EN14372	0.25		-0.37	
3199		-----		-----	
3200	EN14372	0.3702		4.80	
3204		-----		-----	
3209		-----		-----	
3210		-----		-----	
3212	EN14372	0.0212		-10.20	
3218	EN14372	0.12		-5.95	
3229		-----		-----	
3233		-----		-----	
3237		-----		-----	
3238		-----		-----	
3239		-----		-----	
3240	EN14372	0.1649	C	-4.03	first reported 0.0824
3243		-----		-----	
3246		-----		-----	
3248		-----		-----	
8005		-----		-----	
8006	EN14372	0.32		2.64	
8007		-----		-----	

normality	not OK
n	34
outliers	1
mean (n)	0.259
st.dev. (n)	0.1414
R(calc.)	0.396
R(EN14372:04)	0.065
compare R(Horwitz)	0.036

Determination of DEHP on sample #1014; results in %M/M, (only EN14372, continued)


0.6
0.5
0.4
0.3
0.2
0.1
0
3212
1124
2226
2275
2201
622
2271
3107
3218
3190
3240
3167
3182
3197
2283
2132
2245
2229
3159
2184
8006
2281
3169
2240
3172
2215
551
3200
2268
2256
2156
2182
2166
3117
2251


Kernel Density
3
2.5
2
1.5
1
0.5
0
-0.5
0
0.5
1
1.5
2

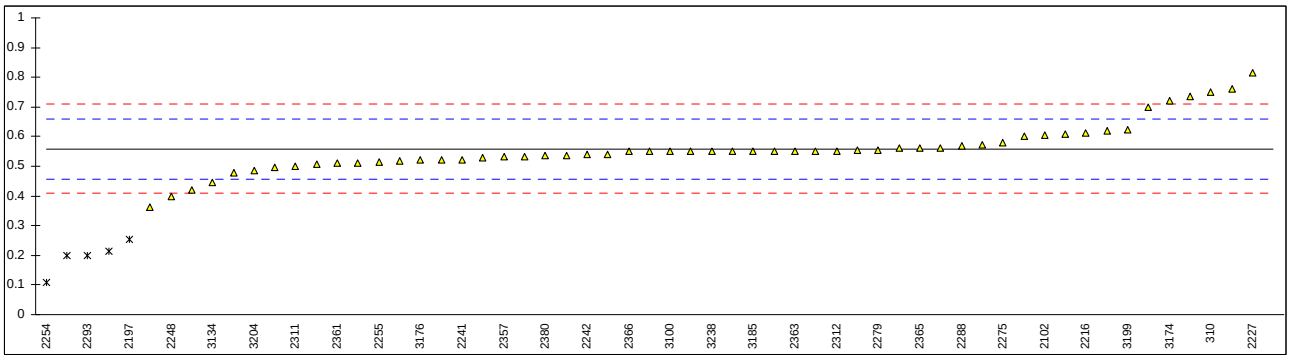
Determination of DINP on sample #1014; results in %M/M, (only THF dissolution)

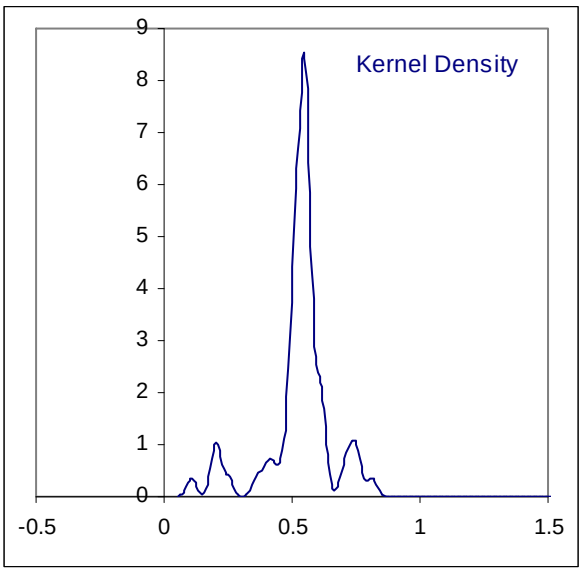
lab	method	value	mark	z(targ)	remarks
110		-----		-----	
310	in house	0.75		3.80	
330		-----		-----	
339		-----		-----	
551		-----		-----	
622		-----		-----	
623		-----		-----	
826	CPSC-CH-C1001-09.2	0.498		-1.21	
840		-----		-----	
1051	CPSC-CH-C1001-09.2	0.562		0.07	
1124		-----		-----	
2102	in house	0.605		0.92	
2104		-----		-----	
2127		-----		-----	
2129	in house/EPA1625	0.70		2.81	
2131		-----		-----	
2132		-----		-----	
2137	CPSC-CH-C1001-09.2	0.419		-2.78	
2152		-----		-----	
2156		-----		-----	
2166		-----		-----	
2170	CPSC-CH-C1001-09.2	0.760		4.00	
2172		-----		-----	
2173	CPSC-CH-C1001-09.2	0.618		1.18	
2175		-----		-----	
2179		-----		-----	
2182		-----		-----	
2184		-----		-----	
2190		-----		-----	
2196		-----		-----	
2197	LFBG B80.32	0.252	G(0.05)	-6.10	
2201	CPSC-CH-C1001-09.2	0.56		0.03	
2212	CPSC-CH-C1001-09.2	0.574		0.30	
2215		-----		-----	
2216	CPSC-CH-C1001-09.2	0.612		1.06	
2217		-----		-----	
2225	CPSC-CH-C1001-09.2	0.553		-0.11	
2226		-----		-----	
2227	in house	0.8136		5.07	
2229		-----		-----	
2236	CPSC-CH-C1001-09.2	0.735		3.51	
2240		-----		-----	
2241	CPSC-CH-C1001-09.2	0.522		-0.73	
2242	CPSC-CH-C1001-09.2	0.54	C	-0.37	first reported 0.80
2243		-----		-----	
2245		-----		-----	
2248	in house	0.40		-3.15	
2251		-----		-----	
2253	CPSC-CH-C1001-09.2	0.55		-0.17	
2254	in house	0.108	DG(0.05)	-8.96	
2255	in house	0.514		-0.89	
2256		-----		-----	
2258		-----		-----	
2267		-----		-----	
2268		-----		-----	
2269		-----		-----	
2271		-----		-----	
2272		-----		-----	
2275	CPSC-CH-C1001-09.2	0.58		0.42	
2277		-----		-----	
2279	CPSC-CH-C1001-09.2	0.5538		-0.10	
2281		-----		-----	
2282		-----		-----	
2283		-----		-----	
2284		-----		-----	
2288	in house	0.57	C	0.23	first reported n.d.
2293	CPSC-CH-C1001-09.2	0.2	DG(0.05)	-7.13	
2294	CPSC-CH-C1001-09.2	3.0	G(0.01)	48.54	
2310	CPSC-CH-C1001-09.2	0.507		-1.03	
2311	CPSC-CH-C1001-09.2	0.500		-1.17	
2312	CPSC-CH-C1001-09.2	0.55		-0.17	
2320		-----		-----	
2350		-----		-----	

2353		-----		-----	
2355	CPSC-CH-C1001-09.2	0.530		-0.57	
2357	CPSC-CH-C1001-09.2	0.531		-0.55	
2359		-----		-----	
2361	CPSC-CH-C1001-09.2	0.51		-0.97	
2362		-----		-----	
2363	CPSC-CH-C1001-09.2	0.550		-0.17	
2365	CPSC-CH-C1001-09.2	0.560		0.03	
2366	CPSC-CH-C1001-09.2	0.549		-0.19	
2368	CPSC-CH-C1001-09.2	0.518		-0.81	
2369	CPSC-CH-C1001-09.2	0.537		-0.43	
2370	CPSC-CH-C1001-09.2	0.541		-0.35	
2372	CPSC-CH-C1001-09.2	0.533		-0.51	
2375		-----		-----	
2379	CPSC-CH-C1001-09.2	0.511		-0.95	
2380	CPSC-CH-C1001-09.2	0.537		-0.43	
2386	CPSC-CH-C1001-09.2	0.61		1.02	
2390		-----		-----	
3100	CPSC-CH-C1001-09.2	0.55		-0.17	
3107		-----		-----	
3110		-----		-----	
3116		-----		-----	
3117		-----		-----	
3118	CPSC-CH-C1001-09.2	0.363	C	-3.89	first reported 0.750
3122		-----		-----	
3134	in house	0.444		-2.28	
3150		-----		-----	
3151	in house	0.52		-0.77	
3153	CPSC-CH-C1001-09.2	0.55		-0.17	
3154		-----		-----	
3159		-----		-----	
3161		-----		-----	
3163	in house	0.5500		-0.17	
3166		-----		-----	
3167		-----		-----	
3169		-----		-----	
3172		-----		-----	
3174	CPSIA	0.72		3.21	
3176	ISO15777	0.52		-0.77	
3180	in house	0.2	DG(0.05)	-7.13	
3182	EN14372	0.213	C,DG(0.05)	-6.87	first reported 0.193
3185	CPSC-CH-C1001-09.2	0.55		-0.17	
3190	CPSC-CH-C1001-09.2	0.55		-0.17	
3197		-----		-----	
3199	in house	0.622	C	1.26	first reported 1.239
3200		-----		-----	
3204	in house	0.486		-1.44	
3209		-----		-----	
3210		-----		-----	
3212		-----		-----	
3218	CPSC-CH-C1001-09.2	0.60		0.82	
3229	in house	0.480		-1.56	
3233		-----		-----	
3237		-----		-----	
3238	in house	0.55		-0.17	
3239		-----		-----	
3240		-----		-----	
3243		-----		-----	
3246		-----		-----	
3248		-----		-----	
8005		-----		-----	
8006		-----		-----	
8007	CPSC-CH-C1001-09.2	0.55		-0.17	

normality	not OK
n	54
outliers	6
mean (n)	0.559
st.dev. (n)	0.0837
R(calc.)	0.234
R(EN14372:04)	0.141
compare R(Horwitz)	0.103

Determination of DINP on sample #1014; results in %M/M, (only THF dissolution, continued)


1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
2254
2293
2197
2248
3134
3204
2311
2361
2255
3176
2241
2357
2380
2242
2366
3100
3238
3185
2363
2312
2279
2365
2288
2275
2102
2216
3199
3174
310
2227


Kernel Density
9
8
7
6
5
4
3
2
1
0
-0.5
0
0.5
1
1.5

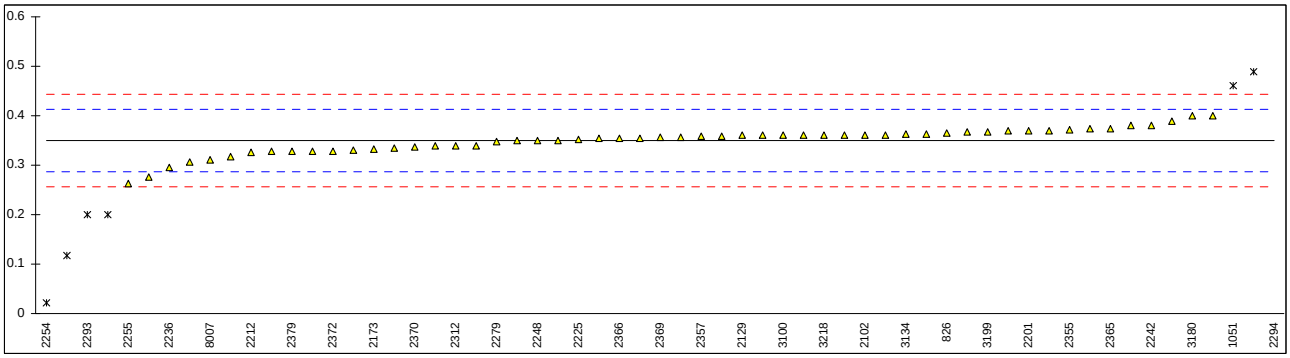
Determination of DEHP on sample #1014; results in %M/M, (only THF dissolution)

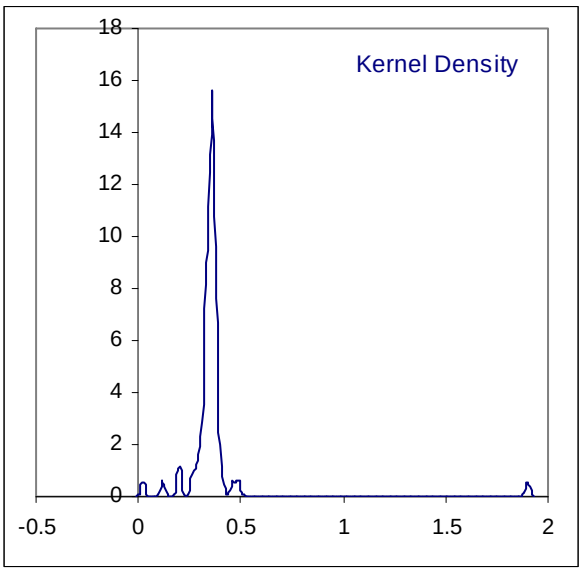
lab	method	value	mark	z(targ)	remarks
110		-----		-----	
310	in house	0.40		1.59	
330		-----		-----	
339		-----		-----	
551		-----		-----	
622		-----		-----	
623		-----		-----	
826	CPSC-CH-C1001-09.2	0.365		0.48	
840		-----		-----	
1051	CPSC-CH-C1001-09.2	0.461	G(0.01)	3.53	
1124		-----		-----	
2102	in house	0.360		0.32	
2104		-----		-----	
2127		-----		-----	
2129	in house/EPA1625	0.36		0.32	
2131		-----		-----	
2132		-----		-----	
2137	CPSC-CH-C1001-09.2	0.277		-2.32	
2152		-----		-----	
2156		-----		-----	
2166		-----		-----	
2170	CPSC-CH-C1001-09.2	0.375		0.80	
2172		-----		-----	
2173	CPSC-CH-C1001-09.2	0.332		-0.57	
2175		-----		-----	
2179		-----		-----	
2182		-----		-----	
2184		-----		-----	
2190		-----		-----	
2196		-----		-----	
2197	LFBG B80.32	0.307		-1.36	
2201	CPSC-CH-C1001-09.2	0.37		0.64	
2212	CPSC-CH-C1001-09.2	0.326		-0.76	
2215		-----		-----	
2216	CPSC-CH-C1001-09.2	0.357		0.22	
2217		-----		-----	
2225	CPSC-CH-C1001-09.2	0.352		0.07	
2226		-----		-----	
2227	in house	0.3534		0.11	
2229		-----		-----	
2236	CPSC-CH-C1001-09.2	0.296		-1.71	
2240		-----		-----	
2241	CPSC-CH-C1001-09.2	0.359		0.29	
2242	CPSC-CH-C1001-09.2	0.38		0.95	
2243		-----		-----	
2245		-----		-----	
2248	in house	0.35		0.00	
2251		-----		-----	
2253	CPSC-CH-C1001-09.2	0.37		0.64	
2254	in house	0.022	G(0.01)	-10.41	
2255	in house	0.264		-2.73	
2256		-----		-----	
2258		-----		-----	
2267		-----		-----	
2268		-----		-----	
2269		-----		-----	
2271		-----		-----	
2272		-----		-----	
2275	CPSC-CH-C1001-09.2	0.34		-0.32	
2277		-----		-----	
2279	CPSC-CH-C1001-09.2	0.3479		-0.06	
2281		-----		-----	
2282		-----		-----	
2283		-----		-----	
2284		-----		-----	
2288	in house	0.37		0.64	
2293	CPSC-CH-C1001-09.2	0.2	G(0.05)	-4.76	
2294	CPSC-CH-C1001-09.2	1.9	G(0.01)	49.22	
2310	CPSC-CH-C1001-09.2	0.317		-1.05	
2311	CPSC-CH-C1001-09.2	0.335		-0.47	
2312	CPSC-CH-C1001-09.2	0.34		-0.32	
2320		-----		-----	
2350		-----		-----	

2353		-----		-----	
2355	CPSC-CH-C1001-09.2	0.371		0.67	
2357	CPSC-CH-C1001-09.2	0.359		0.29	
2359		-----		-----	
2361	CPSC-CH-C1001-09.2	0.35		0.00	
2362		-----		-----	
2363	CPSC-CH-C1001-09.2	0.364		0.45	
2365	CPSC-CH-C1001-09.2	0.375		0.80	
2366	CPSC-CH-C1001-09.2	0.354		0.13	
2368	CPSC-CH-C1001-09.2	0.329		-0.66	
2369	CPSC-CH-C1001-09.2	0.356		0.19	
2370	CPSC-CH-C1001-09.2	0.336		-0.44	
2372	CPSC-CH-C1001-09.2	0.329		-0.66	
2375		-----		-----	
2379	CPSC-CH-C1001-09.2	0.329		-0.66	
2380	CPSC-CH-C1001-09.2	0.330		-0.63	
2386	CPSC-CH-C1001-09.2	0.36		0.32	
2390		-----		-----	
3100	CPSC-CH-C1001-09.2	0.36		0.32	
3107		-----		-----	
3110		-----		-----	
3116		-----		-----	
3117		-----		-----	
3118	CPSC-CH-C1001-09.2	0.355		0.16	
3122		-----		-----	
3134	in house	0.363		0.41	
3150		-----		-----	
3151	in house	0.38	C	0.95	first reported 0.49
3153	CPSC-CH-C1001-09.2	0.36		0.32	
3154		-----		-----	
3159		-----		-----	
3161		-----		-----	
3163	in house	0.1178	G(0.01)	-7.37	
3166		-----		-----	
3167		-----		-----	
3169		-----		-----	
3172		-----		-----	
3174	CPSIA	0.35		0.00	
3176	ISO15777	0.36		0.32	
3180	in house	0.4		1.59	
3182	EN14372	0.20	C,G(0.01)	-4.76	first reported 0.128
3185	CPSC-CH-C1001-09.2	0.36		0.32	
3190	CPSC-CH-C1001-09.2	0.39		1.27	
3197		-----		-----	
3199	in house	0.368		0.57	
3200		-----		-----	
3204	in house	0.328		-0.70	
3209		-----		-----	
3210		-----		-----	
3212		-----		-----	
3218	CPSC-CH-C1001-09.2	0.36		0.32	
3229	in house	0.367		0.54	
3233		-----		-----	
3237	in house	0.49	C,G(0.05)	4.45	first reported 0.42
3238	in house	0.34		-0.32	
3239		-----		-----	
3240		-----		-----	
3243		-----		-----	
3246		-----		-----	
3248		-----		-----	
8005		-----		-----	
8006		-----		-----	
8007	CPSC-CH-C1001-09.2	0.31		-1.27	

normality	not OK
n	54
outliers	7
mean (n)	0.350
st.dev. (n)	0.0266
R(calc.)	0.075
R(EN14372:04)	0.088
compare R(Horwitz)	0.046

Determination of DEHP on sample #1014; results in %M/M, (only THF dissolution, continued)





APPENDIX 2
Method information

lab	Type(s) of plastic identified	Technique	Solvent	Technique to detect and quantify	remarks
110	PVC	Ultrasonic	chloroform	GC/MS	
310	PVC	THF	THF	HPLC-DAD-MSD	
330		heating	chloroform	GC/MS	
339		Soxhlet	dichloromethane	GC/MS	
551	PVC	Soxhlet	diethylether	GC/MS	
622		Soxhlet	diethylether/hexane	GC/MS	
623		Soxhlet	Methanol	GC/MS	
826	PVC	Soxhlet/THF	diethyl ether/ THF	GC/MS/ ESTD	
840		Soxhlet	dichloromethane/ DEE/ MeOH	ext stand	
1051	PVC	Ultrasonic	THF	GC/MS	
1124		Soxhlet	diethylether	GC/MS	
2102		THF/ultrasonic	Hexane	GC/MS	
2104		shaking	dichloromethane	GC/MS, FIS	
2127		shaking	ethyl acetate	GC/MS	
2129	both PVC	Ultrasonic	THF	GC/MS	
2131	PVC	ASE	n-hexane	GC/MS	
2132	PVC	Soxhlet	diethylether/hexane	GC/MS	
2137	PVC	THF	Hexane	GC/MS, LC/MSD	
2152		Soxhlet	chloroform	GC/MS	
2156		Soxhlet	diethylether/hexane	GC/MS	
2166	PVC	Soxhlet	diethylether	GC/MS	
2170	PVC	THF	THF/heXANE	GC/MS	
2172	PVC	Ultrasonic	THF and methanol	GC/MS -ISTD	
2173	PVC	Ultrasonic/ THF	hexane/CHCl3	GC/MS	
2175		Ultrasonic	Acetone:Hexane (1:1)	GC/MS	
2179	PVC	Soxhlet	Toluene	GC/MS	
2182		Soxhlet	diethylether	GC/MS	
2184		Soxhlet	diethylether	GC/MS	
2190	PVC	ASE		GC/MS	
2196	PVC	Soxhlet			
2197		THF		GC/MS	
2201		Soxhlet	diethylether	GC/MS	
2212		THF	THF/n-hexane	GC/MS	
2215	PVC	Soxhlet	diethylether	GC/MS	
2216		THF	hexane	SIM	
2217		ultrasonic	tolune	GC/MS	
2225		Soxhlet/ultrasonic	diethyl ether/THF	GC/MS	
2226	PVC/PP	Soxhlet	diethylether	GC/MS	
2227		Ultrasonic	THF:ACN=1:2	LC/DAD/MS	
2229		Soxhlet	diethylether	GC/MS	
2236	PVC	sonication	THF	GC/MS	
2240	PVC	Soxhlet	diethylether	GC/MS	
2241		Soxhlet/ultrasonic	dichloromethane/ DEE/ MeOH	GC/MS	
2242		THF	THF/hexane	GC/MS	
2243		Soxhlet	dichloromethane	GC/MS	
2245	PVC	Soxhlet	diethylether/hexane	GC/MS	
2248	PVC		THF/methanol/hexane	GC/FID	
2251					
2253	PVC/other	THF	tetrahydrofuran/ hexane	GC/MS	
2254		THF	THF	GC/MS	
2255					
2256	PVC	Soxhlet	diethyl ether	GC/MS	
2258		Ultrasonic	acetonitrile	HPLC-DAD-MSD	
2267	PVC	Ultrasonic	hexane	GC/MS	
2268		Soxhlet	diethylether/hexane	EPA8270d	
2269	PVC	Soxhlet	dichlorometane	GC/MS	

2271		Soxhlet	diethylether	GC/MS/ ESTD	
2272		Ultrasonic	Hexane/Acetone	GC/MS	
2275	PVC	Soxhlet	diethylether	GC/MS	
2277					
2279		Soxhlet/ultrasonic	diethylether/THF	GC/MS	
2281	PVC	Soxhlet	diethylether/hexane	GC/MS	
2282	PVC	Soxhlet	dichlorometane	ext stand	
2283		Soxhlet	diethylether	GC/MS/ ESTD	
2284		Soxhlet	mtbe	GC/MS/ ISTD	
2288	#1013 PP; #1014 PVC	THF / ultrasonic	THF:hexane	GC/MS	
2293		Ultrasonic	THF:hexane=1:2	GC/MS	
2294		THF	THF+hexane	GC/MS	
2310		THF	THF	GC/MS	
2311		Soxhlet/shaking	1013 diethyl ether 1014 THF	MSD	
2312		Soxhlet/ultrasonic	diethylether/THF	MSD	
2320	PVC	Soxhlet	dichloromethane/ methanol	GC/MS	
2350		soxhlet	diethylether/methanol	GC/MS	
2353	PVC	soxhlet	dichloromethane/ methanol	GC/MSD	
2355		Soxhlet/ THF	diethyl ether/ THF	GC/MS	
2357	PVC	Soxhlet/ultrasonic	diethyl ether/ THF	GC/MSD	
2359		Soxhlet	dichloromethane/ methanol	GC/MS	
2361	PVC	THF	THF	GC/MSD	
2362	PVC	hexane	hexane	GC/MSD	
2363		Soxhlet/ THF/shaking	diethylether/hexane/THF	GC/MS	
2365		Soxhlet/ THF	diethylether/THF	GC/MS	
2366		Soxhlet/ THF/shaking	diethylether/hexane/THF	GC/MS	
2368		Soxhlet/ THF	diethylether/hexane	GC/MSD	
2369		Soxhlet/ultrasonic	aether /THF	GC/MSD	
2370	PE	Soxhlet/ultrasonic	diethylether/hexane/THF	GC/MS	
2372	PVC	Soxhlet	ether/dicholoromethane	GC/MS	
2375		Soxhlet	dicholoromethane/methanol	GC/MS	
2379		Soxhlet/ THF	diethyl ether/THF/hexane	GC/MSD	
2380	PP	Soxhlet/ THF	diethyl ether/THF/hexane	GC/MSD	
2386		ultrasonic	THF	GC/MS	
2390		Soxhlet	dichloromethane/ DEE/ MeOH	GC/MS	
3100	1013=other 1014=PVC	Soxhlet	diethylether/hexane	GC/MS	
3107		Soxhlet	diethylether	GC/MS	
3110	PVC	water bath shaking	hexane	GC/MSD	
3116					
3117		Soxhlet	ethyl ether	GC/MSD	
3118	PVC	THF	hexane, THF	GC/MS	
3122		Microwave	methanol	GC/MS	
3134		THF		HPLC	
3150		ultrasonic	hexane/toluene	GC/MS	
3151		ultrasonic	THF/methanol	GC/MS	
3153	PVC/other	THF	THF/hexane	GC/MS	
3154	PVC	ultrasonic	hexane	GC/MS	
3159	PU	Soxhlet	diethylether	GC/MS	
3161	1013=PU; 1014=PVC	Soxhlet	acetone:hexane=1:1	GC/MS	
3163			THF	GC/MS	
3166		ultrasonic	dichloromethane	GC/MS	
3167	PVC	Soxhlet	diethylether	GC/MS	
3169		Soxhlet	diethylether	GC/MS	
3172	PVC	Soxhlet	diethylether	GC/MS, LC/MSD	
3174		shaking	THF	GC/MS	
3176		THF ultrasonic	THF	hplc	
3180		Ultrasonic	THF	GC/MS	
3182		Soxhlet	diethylether	GC/MS	
3185	PVC	THF	THF/nhexane	GC/MS	

3190		Soxhlet	ethylether	GC/MS/ ESTD	
3197		Soxhlet	diethylether	GC/MS	
3199		THF/ ultrasonic	THF, acetonitril	GC/MS, LC/MSD	
3200	PP	Soxhlet	diethyl ether/n-hexane	GC/MS	
3204	PVC	THF	THF	GC-FID	
3209		Ultrasonic	chloroform	GC/MS	
3210		Microwave	Hexane/Acetone	GC/MS	
3212		Soxhlet	diethyl ether	GC/MS	
3218		Soxhlet	diethylether	GC/MS	
3229	PVC	THF	THF/methanol	GC/MS	
3233			dichloromethane	GC/MS	
3237		THF		HPLC-DAD	
3238	PVC	THF	Methanol	GC/MS	
3239	PVC/PP/PE	Soxhlet	dichloromethane	GC-FID	
3240	PVC	Soxhlet	diethylether/hexane	GC/MS	
3243		Ultrasonic	dichloromethane	GC/MS	
3246		liquid ext	MTBE	GC/MS	
3248	PVC	Soxhlet	diethyl ether/ acetonitrile	GC/MS	
8005	PVC	shaking	acetone and hexane	GC/MS, GC/FID	
8006	PVC	Soxhlet	diethylether	GC/MSD	
8007	PVC	Ultrasonic	THF/hexane	GC/MSD	

APPENDIX 3

Number of participating laboratories per country

1 lab in	AUSTRIA
2 labs in	BANGLADESH
1 lab in	BELGIUM
2 labs in	BRASIL
1 lab in	DENMARK
6 labs in	FRANCE
11 labs in	GERMANY
1 lab in	GREECE
2 labs in	GUATEMALA
18 labs in	HONG KONG
1 lab in	HUNGARY
3 labs in	INDIA
4 labs in	INDONESIA
1 lab in	ITALY
1 lab in	JAPAN
3 labs in	KOREA
1 lab in	LATVIA
1 lab in	MALAYSIA
3 labs in	MEXICO
39 labs in	P.R. of CHINA
1 lab in	PAKISTAN
3 labs in	SINGAPORE
1 lab in	SPAIN
1 lab in	SRI LANKA
3 labs in	SWITZERLAND
2 labs in	TAIWAN R.O.C.
4 labs in	THAILAND
4 labs in	THE NETHERLANDS
4 labs in	TURKEY
8 labs in	U.S.A.
1 lab in	UNITED KINGDOM
2 labs in	VIETNAM

APPENDIX 4

Abbreviations:

C	= final result after checking of first reported suspect result
D(0.01)	= outlier in Dixon's outlier test
D(0.05)	= straggler in Dixon's outlier test
G(0.01)	= outlier in Grubbs' outlier test
G(0.05)	= straggler in Grubbs' outlier test
DG(0.01)	= outlier in Double Grubbs' outlier test
DG(0.05)	= straggler in Double Grubbs' outlier test
n.a.	= not applicable
n.d.	= not detected
fr	= first reported result

Literature:

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22 EC I.03.103, JRS Ispra, Summary Risk Assessment Report DIDP (2003)
23 personal commication from Ms. Na Li, Berkeley Analytical Associates, Richmond, CA