Results of Proficiency Test
AZO dyes in textile
February 2017

Organised by: Institute for Interlaboratory Studies (iis)
Spijkenisse, the Netherlands

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1 INTRODUCTION

The Institute for Interlaboratory Studies (iis) organizes a proficiency test (PT) for banned aromatic amines from AZO dyes in textile every year since 1997. During the annual proficiency testing program 2016/2017, it was decided to continue the PT for the analyses of banned aromatic amines from AZO dyes in textile. In this interlaboratory study, 170 laboratories in 34 different countries registered for participation (see appendix 4).
In this report, the results of the 2017 PT are presented and discussed. This report is also electronically available through the iis website 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 2 different textile samples (a cotton sample, labelled #17515 and a polyamide sample, labelled #17516), each dyed with different AZO dyes. Both samples were especially prepared by a third party. The participants were requested to report test results using the indicated units and 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 PT 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, 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 different bulk textile samples were used in this proficiency test. The first one, a black cotton (sample #17515) was a real live sample (black jeans) and obtained from a participating laboratory. The other one, a rose polyamide textile (sample #17516) was dyed with different AZO-dyes. From the first batch, 194 samples with small pieces of fabric, of approximately 1.6 gram were prepared and labelled #17515. From the second batch, 170 samples with small pieces of fabric, of approximately 3 gram were prepared and labelled #17516.

The homogeneity of the subsamples of #17515 was checked by determination of 3,3'-dimethoxybenzidine on eigth stratified randomly selected samples, see table 1 for the test results.

	3,3'-dimethoxybenzidine in mg/kg
sample #17515-1	39.3
sample #17515-2	42.1
sample #17515-3	39.0
sample #17515-4	37.5
sample #17515-5	41.4
sample #17515-6	41.0
sample #17515-7	37.3
sample #17515-8	40.8

Table 1: homogeneity test results of subsamples #17515

From the above test results, the repeatability was calculated and compared with the corresponding repeatability of the target test method in the next table. Unfortunately, comparison of the repeatability with 0.3 times the reproducibility of the reference test method as in agreement with the procedure of ISO 13528, Annex B2 was not possible as R/r of the reference test method is smaller than 3.

	3,3'-dimethoxybenzidine in mg/kg
r (observed)	5.0
reference test method	EN14362-1:2012
0.3 * R (ref. test method)	4.2
r (reference test method)	5.1

Table 2: repeatability of subsamples #17515

The homogeneity of the subsamples of #17516 was checked by determination of 3,3'-dimethylbenzidine and 2,4-Xylidine on eigth stratified randomly selected subsamples. See table 3 for the test results.

	3,3'-dimethylbenzidine in mg/kg	*sum of Xylidines in mg/kg *)*
sample #17516-1	123.6	148.0
sample #17516-2	112.6	136.5
sample #17516-3	125.4	143.6
sample #17516-4	123.8	147.4
sample #17516-5	125.2	129.0
sample #17516-6	119.7	134.3
sample #17516-7	117.5	132.1
sample #17516-8	126.3	136.7

Table 3: homogeneity test results of subsamples #17516

*) the sum of 2,4-Xylidine and 2,5-Xylidine was determined. Sample #17516 does not contain 2,6-Xylidine, see the discussion in paragraph 5.

From the above test results, the repeatabilities were calculated and compared with 0.3 times the corresponding reproducibilities of the reference test method in agreement with the procedure of ISO 13528, Annex B2 in the next table:

	3,3'-dimethylbenzidine in mg/kg	*sum of Xylidines in mg/kg *)*
r (observed)	13.4	19.8
reference test method	EN14362-1:2012	EN14362-1:2012
0.3 * R (ref. test method)	17.9	26.6

Table 4: repeatabilities of subsamples #17516

*) see comment at table 3 above.

The calculated repeatabilities of the homogeneity test results were in agreement with the repeatabilities mentioned in (or estimated from) the reference test method. Therefore, homogeneity of the subsamples of #17515 and #17516 was assumed. To the participating laboratories was sent 1 sample labelled #17515 and 1 sample labelled #17516 on February 8, 2017. A letter of instructions was added to the sample package.

2.5 ANALYSES

The participants were asked to determine the concentrations of 23 forbidden aromatic amines and *o*-anisidine, applying the analysis procedure that is routinely used in the laboratory. Also some analytical details were requested to be reported. Furthermore, the participants were instructed not to analyse for 4-Aminoazobenzene in sample #17515 as the sample amount was small (1.6 g) and the sample did not contain 4-Aminoazobenzene. In general in iis proficiency tests the sample size is 3 g. Sample #17515 was a real life sample and to be able to serve as many as possible participants the sample size was lowered and an extra instruction was given by email that a smaller intake couldbe use because the sample was positive and also that no confirmation replicate had to be performed.

It was explicitly requested to treat the samples as if they were routine samples, but not to perform the extraction step with Chlorobenzene. It was also requested to report the test results using the indicated units on the report form and not to round the test results, but to 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 evaluation.

To get comparable test results a detailed report form and a letter of instructions are prepared. 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/. The participating laboratories were 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.iisn.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/. The reported test results are tabulated per sample and per component in the appendix 1 of this report. The laboratories are represented by their code numbers.

Directly after the deadline, a reminder was sent to those laboratories that did not report 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 test results are placed under 'Remarks' in the test 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 test 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 reference test method. 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, e.g. ISO reproducibilities, the z-scores were calculated using a target standard deviation. This results in an evaluation independent of the variation in 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, like Horwitz. In some cases, a reproducibility 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 should be done in order to evaluate whether the reported test results are fit-for-purpose.

The z-scores were calculated in accordance with:

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

The $z_{(target)}$ scores are listed in the test result tables in appendix 1.

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

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

4 EVALUATION

During the execution of this proficiency test some reporting problems occurred. Two participants reported the test results after the deadline and six participants did not report any test results. Finally, 164 participants did report 770 numerical test results. Observed were 18 outlying test results, which is 2.3% of the numerical test results. However, by exception 105 participants (14%!) reported a false positive concentration 2,6-Xylidine to be present in sample #17516 (see the discussion in paragraphs 4.1 and 5).
In proficiency studies, outlier percentages of 3% - 7.5% are quite normal.

Not all original data sets proved to have a normal Gaussian distribution. These are referred to as “not OK” or “suspect”. The statistical evaluation of these data sets should be used with due care, see also paragraph 3.1.

4.1 EVALUATION PER SAMPLE AND PER COMPONENT

In this section, the results are discussed per sample and per component. All statistical results reported on the textile samples are summarised in appendix 1 and all other reported test results of the most relevant aromatic amines present are summarised in appendix 2.

Textile sample #17515:

3,3'-Dimethoxybenzidine (CASno. 119-90-4): The determination of this aromatic amine at a concentration level of 44 mg/kg was problematic. Three statistical outliers were observed. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the reproducibility requirement estimated from the test method EN14362-1:2012.

Textile sample #17516:

3,3'-Dimethylbenzidine (CASno. 119-93-7): The determination of this aromatic amine at a concentration level of 44 mg/kg was very problematic. Three statistical outliers were observed and one test result was excluded (see appendix 1). The calculated reproducibility after rejection of the suspect data is not at all in agreement with the reproducibility requirement estimated from the test method EN14362-1:2012.

2,4-Xylidine (CASno. 95-68-1): The determination of this aromatic amine at a concentration level of 105 mg/kg was problematic. Nine statistical outliers were observed and four test results were excluded (see appendix 1). The calculated reproducibility after rejection of the suspect data is not in agreement with the reproducibility requirement estimated from the test method EN14362-1:2012. See for more discussion paragraph 5.

2,6-Xylidine (CASno. 87-62-7): The determination of this aromatic amine was very problematic. It appeared that sample #17516 did not contain 2,6-Xylidine but the isomer 2,5-Xylidine. The 2,5- isomer was falsly interpreted as 2,6-Xylidine by 105! participants. Most likely 18 laboratories were able to separate the isomers correctly and to identify the peaks in the chromatograms to the correct isomers. It is noteworthy that the calculated reproducibility over the test results from those 18 participants is in good agreement with the reproducibility requirement estimated from the test method EN 14362-1:2012. See also the discussion in paragraph 5.

General:

The large majority of participating laboratory did not detect any other banned aromatic amines than the four discussed above. Twelve participants reported also the presence of other banned aromatic amines at different concentration levels in sample #17515 (see Appendix 2). Seven participants reported also the presence of other banned aromatic amines at different concentration levels in sample #17516 (see Appendix 2).

4.2 PERFORMANCE EVALUATION FOR THE GROUP OF LABORATORIES

A comparison has been made between the reproducibilities as declared by the relevant reference test methods and the reproducibilities as found for the group of participating laboratories. The number of test results, the average results, the calculated reproducibilities (standard deviation*2.8) and the target reproducibilities, derived (or estimated) from the official test method EN14362-1 are compared in the next two tables.

Component	*unit*	*n*	*average*	*2.8 * sd*	R(lit)
3,3'-Dimethoxybenzidine	mg/kg	157	44	21	15

Table 5: reproducibilities of the aromatic amines in textile sample #17515

Component	*unit*	*n*	*average*	*2.8 * sd*	R(lit)
3,3'-Dimethylbenzidine	mg/kg	152	44	45	22
2,4-Xylidine	mg/kg	131	105	57	47

Table 6: reproducibilities of the aromatic amines in textile sample #17516

Without further statistical calculations, it can be concluded that the group of participating laboratories has some difficulties with the analyses at the investigated concentration levels, for the aromatic amines found. See also the discussion in paragraphs 4.1 and 5.

4.3 COMPARISON WITH PREVIOUS INTERLABORATORY STUDIES

The variations over the reported test results of 3,3'-Dimethoxybenzidine and 2,4-Xylidine in this proficiency test are in line with the variations as observed in previous PTs and almost in agreement with the target reproducibilities estimated from the reference test method EN14362-1:2012, see table 7. The variation over the reported test results of 3,3'-Dimethylbenzidine in this proficiency test is in line with the variations as observed in previous PTs but not at all in agreement with the target reproducibilities estimated from the reference test method EN14362-1:2012, see table 7.

Parameter	*Feb. 2017*	*Feb. 2016*	*March 2015*	*April 2014*	*March 2013*	*2004 - 2012 PTs*	*target*
4-Aminodiphenyl	n.e.	n.e.	n.e.	(21%)*	n.e.	18-36%	28%
Benzidine	n.e.	17-18%	20%	15%	n.e.	18-35%	14%
4-Chloro-o-toluidine	n.e.	n.e.	n.e.	24%	n.e.	n.e.	16%
2-Naphtylamine	n.e.	n.e.	n.e.	n.e.	n.e.	27-41%	18%
o-Aminoazotoluene	n.e.	n.e.	(48%)*	n.e.	n.e.	n.e.	28%
4-Chloroaniline	n.e.	n.e.	n.e.	n.e.	n.e.	27%	16%
2,4-Diaminoanisol	n.e.	n.e.	n.e.	n.e.	52%	24%	16%
4,4'-Diaminodiphenylmethane	n.e.	n.e.	n.e.	21%	n.e.	21%	15%
3,3'-Dimethoxybenzidine	17%	16%	n.e.	21%	16%	17-31%	13%
3,3'-Dimethylbenzidine	36%	n.e.	15%	n.e.	n.e.	17-32%	18%
4,4'-Diamino-3,3'-	n.e.	n.e.	n.e.	n.e.	n.e.	20-35%	16%

Parameter	*Feb. 2017*	*Feb. 2016*	*March 2015*	*April 2014*	*March 2013*	*2004 - 2012 PTs*	*target*
dichlorodiphenylmethane							
4,4'-Diaminodiphenylether	n.e.	n.e.	n.e.	n.e.	n.e.	15%	16%
4,4'-Diaminodiphenylsulfide	n.e.	n.e.	n.e.	n.e.	n.e.	18-26%	16%
4,4'-Methyl-bis(2-chloro-aniline)	n.e.	n.e.	n.e.	n.e.	n.e.	43%	22%
o-Toluidine	n.e.	n.e.	(70%)*	31%	27%	19-38%	22%
Sum of *o*-aminoazotoluene and *o*-Toluidine	n.e.	n.e.	34%	n.e.	n.e.	n.e.	36%
2,4-Xylidine	19%	n.e.	n.e.	n.e.	n.e.	n.e.	16%

Table 7: long term development of uncertainties of aromatic amines in textile samples

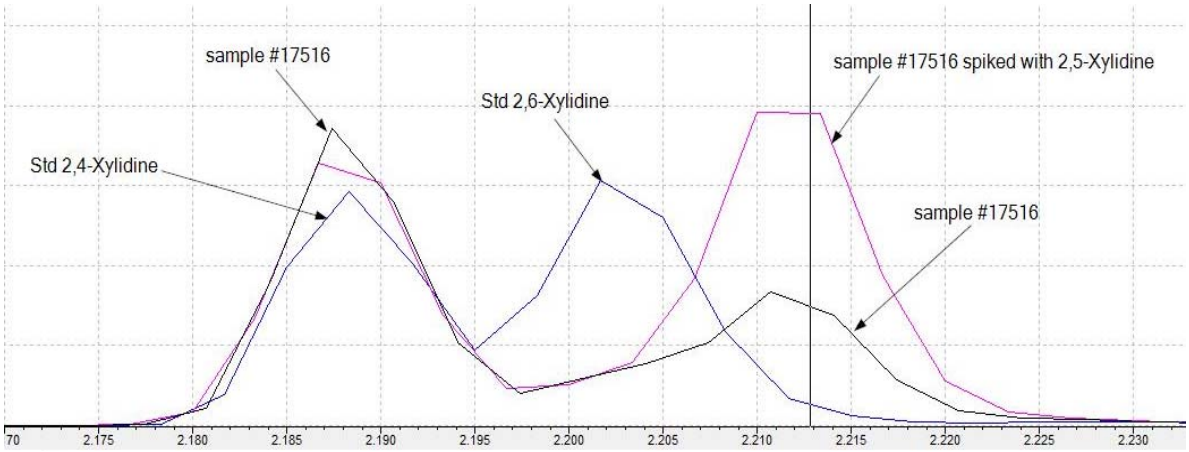
*) Concentration of this component was near or below detection limit or otherwise arbitrary

Aromatic amines not mentioned in table 7 are not determined in a PT of iis yet.

From the above table it is clear that the quality for the detected banned dyes is quite stable over the last years.

5 DISCUSSION

It appeared that for the determination of 2,6-Xylidine in sample #17516 the majority of the participants (105!) could not recognise component 2,5-Xylidine correctly and had false positively identified this peak as 2,6-Xylidine. That sample #17516 did contain 2,5-Xylidine was not known to iis as the sum of 2,4- and 2,5-Xylidine was reported in the homogeneity test (see paragraph 2.4). Participants received a check email who did report for 2,6-Xylidine: "not detected" or "lower than". Fortunately, some participants responded very well to this check mail by showing to iis that the sample contained 2,5-Xylidine and not 2,6-Xylidine (see for example next chromatogram of one of these participants, (reported with permission)).

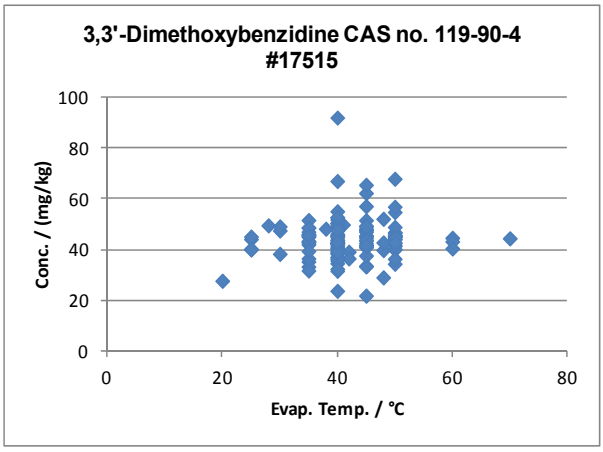


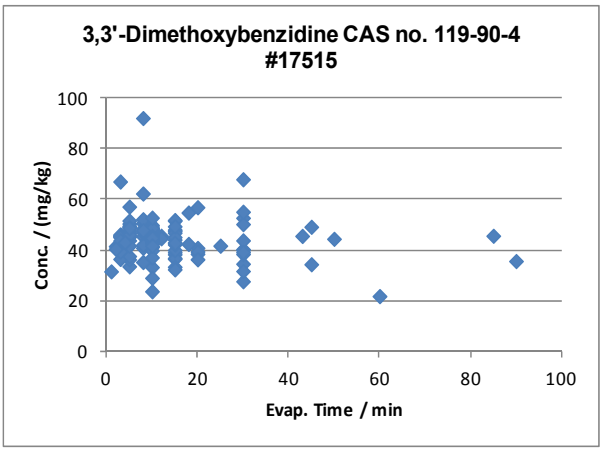
This participant explained that if Xylidine is found positively the sample is spiked with 2,5-Xylidine to be able to differentiate component 2,5-Xylidine (which is allowed) from 2,4-Xylidine and 2,6-Xylidine (both not allowed). "Corrected" test results to replace the "not detected" or "lower than" test results were ignored and "not detected" or "lower than" were kept in the test results table for 2,6-Xylidine. It appeared that 18 participants reported "not

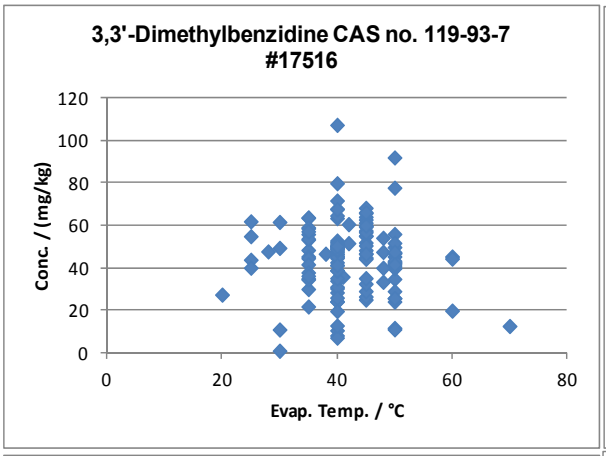
detected" or "lower than" or had made a remark in the comments for 2,6-Xylidine and reported also a test value for 2,4-Xylidine. When the average over these 18 test results of 2,4-Xylidine is calculated it appeared that this is in line with the whole group. Therefore it is concluded that in general the group was able to identify 2,4-Xylidine correctly. When participants had reported a test value for 2,4-Xylidine and also for 2,6-Xylidine the sum was calculated. Unfortunately, the calculated reproducibility over this sum was not better than the calculated reproducibility for 2,4-Xylidine alone. Some participants mentioned to report the sum of Xylidines or reported identical test results for 2,4-Xylidine and 2,6-Xylidine. These test values were excluded for the statistical analysis as it was not clear whether the reported values were the sum or ½ times the sum.

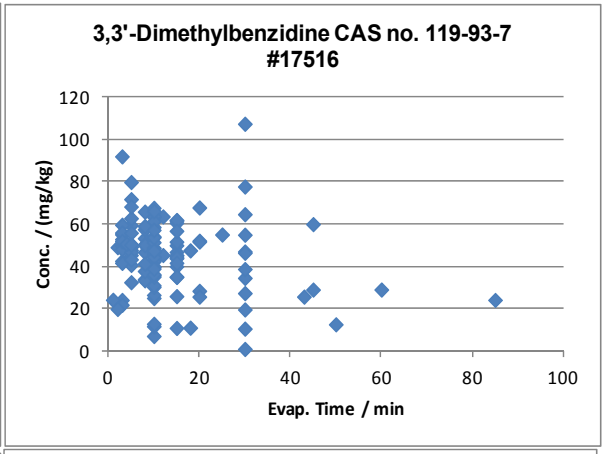
In this PT also some analytical details were asked (see appendix 3) to use for further analyses. It appeared that 92.5% of the participants is accredited for the determination of aromatic amines. As this is the majority of the group no separate statistical analysis has been performed.

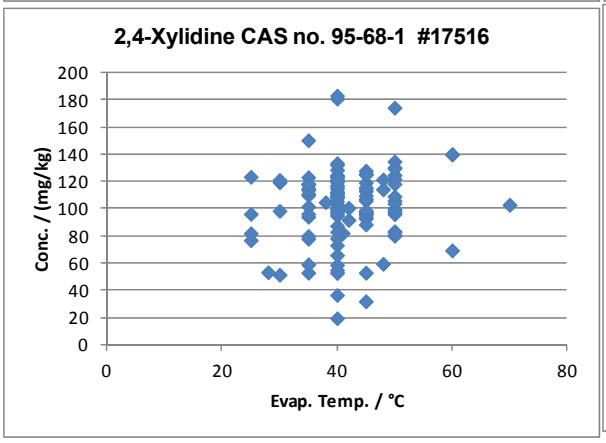
Another part of the analytical details was about the test conditions after cleavage at 70°C and before the analytical measurements. For example, the temperature during the evaporation of MTBE should not exceed 50°C, otherwise the aromatic amines may deteriorate and may not be detected anymore. Also the time needed between reduction and actual analysis may be important.
The time and temperatures used to evaporate the extraction solvent varies over a wide range from only 1 minute upto 90 minutes. The majority of the laboratories (62%) had used temperatures between 40 and 50°C during 1 to 20 minutes. And 24 laboratories (19%) used temperatures from room temperature till 40°C during 3 to 15 minutes.
Surprisingly no relation could be found between the conditions used and the concentration of aromatic amines detected, see below graphs in which evaporation temperature in °C or evaporation time in minutes is plotted against the reported concentrations in mg/kg.

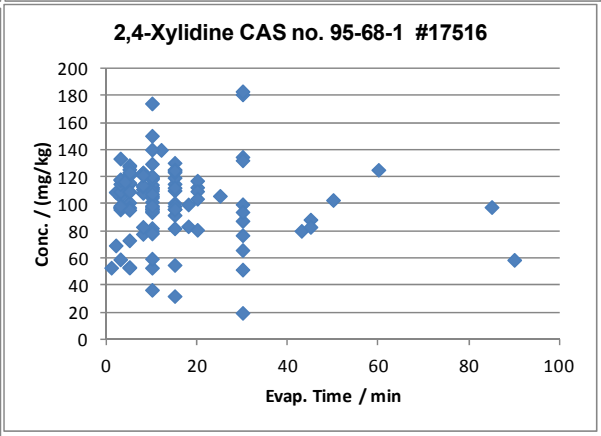




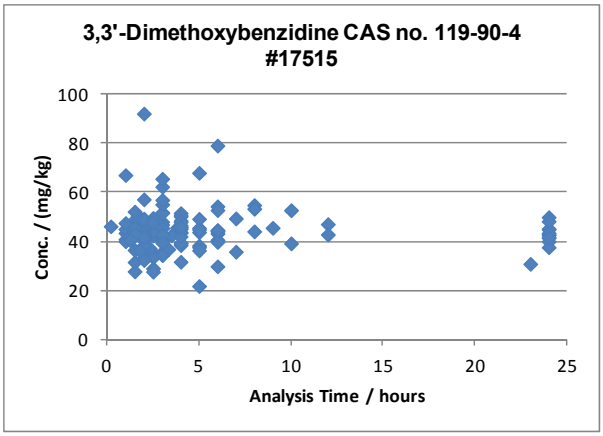


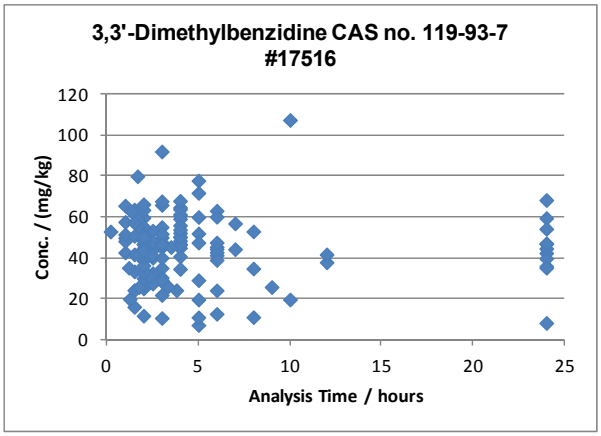


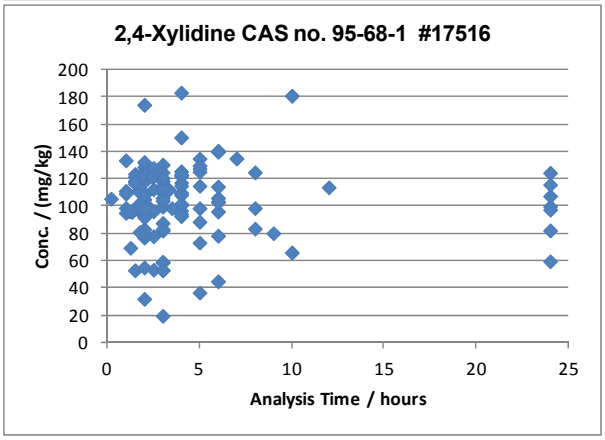




The total time from the start of the reduction step till start of HPLC/GC analysis varies over a wide range from 1.2 till 72 hours. The majority of the group (68%) completed the whole analysis with in 4 hours. Again no relation could be found between the analysis time needed and the concentration of aromatic amines detected, see below graphs.







The tentative conclusion from the above investigation may be that the (in)stability of the investigated aromatic amines 3,3'-dimethoxybenzidine, 3,3'-dimethylbenzidine and 2,4-Xylidine is not the cause for the observed variation of the test results in this PT. Other factors like for example the calibration may be the cause of the observed variation.

6 CONCLUSION

The variation in the test results observed may be caused by the preparation of the sample (reduction to release the aromatic amine and subsequent concentration) and/or by the analytical identification and quantification (incl. calibration). Consequently, the reproducibility may not be improved by only one change in the analysis. Each laboratory has to evaluate its performance in this study and make decisions about necessary corrective actions. Therefore, participation on a regular basis in this scheme could be helpful to improve the performance and thus increase of the quality of the analytical results.

APPENDIX 1

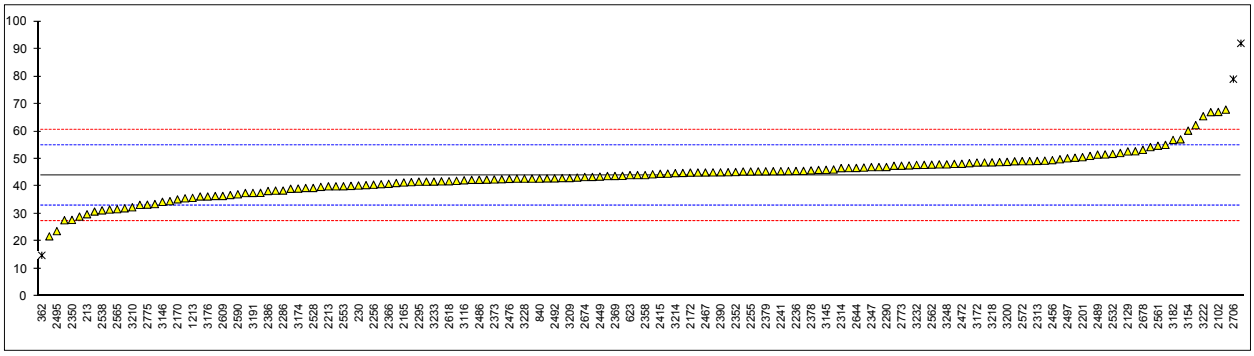
Determination of 3,3'-Dimethoxybenzidine (CASno. 119-90-4) in sample #17515; results in mg/kg

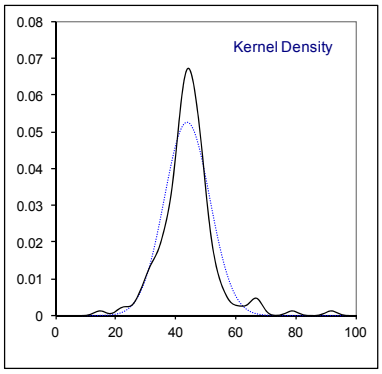
lab	method	value	mark	z(targ)	remarks
213	EN14362-1	29.84		-2.56	
230		40.3		-0.66	
348	In house	41.83		-0.38	
362	EN14362-1	14.9	C,R(0.05)	-5.27	first reported: 20.53
551	In house	51.06		1.29	
623	EN14362-1	44.086		0.03	
840	EN14362-1	42.82		-0.20	
841		46.65		0.49	
1213	EN14362-1	35.81		-1.48	
2102	EN14362-1	67.06		4.20	
2115	EN14362-1	40.17		-0.68	
2120	EN14362-1	40.8		-0.57	
2129	EN14362-1	52.7		1.59	
2132	EN14362-1	43		-0.17	
2146	EN14362-1	49.86		1.08	
2159	EN14362-1	50.41		1.18	
2165	EN14362-1	41.4		-0.46	
2166	EN14362-1	45.54		0.29	
2170	EN14362-1	35.27		-1.57	
2172		45.00		0.19	
2184	EN14362-1	42.6		-0.24	
2201	EN14362-1	50.62		1.21	
2213	EN14362-1	40		-0.71	
2232	EN14362-1	31.57		-2.25	
2236	EN14362-1	45.59		0.30	
2241	EN14362-1	45.52		0.29	
2247		48.00		0.74	
2255	EN14362-1	45.4		0.27	
2256	EN14362-1	40.6		-0.61	
2258		-----		-----	
2261	GB/T17592	33.26		-1.94	
2265	EN14362-1	67.9		4.35	
2286	EN14362-1	38.47		-0.99	
2287	EN14362-1	42.36		-0.29	
2289	EN14362-1	43.8		-0.02	
2290	EN14362-1	47.03		0.56	
2291	EN14362-1	39.12		-0.87	
2293		47.487		0.65	
2295		41.7		-0.41	
2301	In house	34.59		-1.70	
2303	EN14362-1	32.012		-2.16	
2310	EN14362-1	46.82		0.52	
2311	EN14362-1	49.12		0.94	
2313	EN14362-1	49.24		0.96	
2314	EN14362-1	46.63		0.49	
2330	EN14362-1	44.87		0.17	
2347	EN14362-1	47		0.56	
2350	EN14362-1	27.8		-2.93	
2352	EN14362-1	45.2		0.23	
2357	EN14362-1	45.61		0.30	
2358	ISO14362-1	44.10		0.03	
2364	EN14362-1	45.4		0.27	
2365	EN14362-1	42.89		-0.19	
2366	EN14362-1	40.9		-0.55	
2367	EN14362-1	46.13		0.40	
2369	EN14362-1	43.77		-0.03	
2370	EN14362-1	41.53		-0.44	
2373	EN14362-1	42.5		-0.26	
2375	EN14362-1	47.82		0.71	
2378	EN14362-1	45.8		0.34	
2379	EN14362-1	45.458		0.28	
2380	EN14362-1	44.62		0.12	
2381	EN14362-1	43.19		-0.14	
2386	EN14362-1	38.3		-1.02	
2389	ISO17234-1	43.42		-0.09	
2390	EN14362-1	45.10		0.21	
2403	EN14362-1	47.6		0.67	
2415	EN14362-1	44.57		0.12	
2425	EN14362-1	44.1		0.03	
2432	EN14362-1	45.13		0.22	
2439		-----		-----	
2442	In house	48.67		0.86	
2449	EN14362-1	43.538		-0.07	

lab	method	value	mark	z(targ)	remarks
2453	EN14362-1	45.44		0.27	
2456	EN14362-1	49.53		1.02	
2459		-----		-----	
2467	EN14362-1	45.04		0.20	
2472		48.20		0.77	
2475	EN14362-1	41.21		-0.49	
2476	EN14362-1	42.712		-0.22	
2477	EN14362-1	n.d.		-----	possibly a false negative test result?
2482	EN14362-1	45.085		0.21	
2483		-----		-----	
2486	EN14362-1	42.38		-0.28	
2489	EN14362-1	51.53		1.38	
2492	EN14362-1	42.9		-0.19	
2495	EN14362-1	23.72		-3.67	
2497	EN14362-1	50.21		1.14	
2499	EN14362-1	35.64		-1.51	
2500	EN14362-1	48.43		0.82	
2506	EN14362-1	66.99		4.19	
2511	ISO14362-1	45.03		0.20	
2514	EN14362-1	39.80		-0.75	
2516		-----		-----	
2520	EN14362-1	29	C	-2.71	first reported: 79.8
2521	In house	27.66596575548210		-2.95	
2528	EN14362-1	39.41		-0.82	
2532	EN14362-1	51.8		1.43	
2534	EN14362-1	51.6		1.39	
2536		-----		-----	
2538	EN14362-1	31.26		-2.30	
2546	EN14362-1	21.82		-4.02	
2553	EN14362-1	40.04		-0.71	
2560	EN14362-1	42.44		-0.27	
2561	EN14362-1	54.77		1.97	
2562	GB/T17592	47.9		0.72	
2563	EN14362-1	30.83		-2.38	
2565	EN14362-1	31.7		-2.22	
2567	EN14362-1	33.55		-1.89	
2572	EN14362-1	49.16		0.95	
2582	EN14362-1	92.027	R(0.01)	8.73	
2590	EN14362-1	37.11		-1.24	
2605	EN14362-1	42.0		-0.35	
2609	EN14362-1	36.5		-1.35	
2618	EN14362-1	41.85		-0.38	
2624	EN14362-1	n.d.		-----	possibly a false negative test result?
2629	EN14362-1	-----		-----	
2638	EN14362-1	52.124		1.49	
2643	In house	37.62		-1.15	
2644	EN14362-1	46.69		0.50	
2654	EN14362-1	42.81		-0.20	
2666	EN14362-1	48.17		0.77	
2671	EN14362-1	43.75		-0.03	
2674	EN14362-1	43.4		-0.10	
2678	EN14362-1	53.29		1.70	
2701		36.83		-1.29	
2706	In house	79	C,R(0.01)	6.37	first reported: 96
2713	EN14362-1	36.309600		-1.38	
2719	EN14362-1	57.1		2.39	
2728	INH-7334	< 8		<-6.52	possibly a false negative test result?
2730	EN14362-1	49.338		0.98	
2737		44.39		0.08	
2741	EN14362-1	49.16		0.95	
2766	EN14362-1	40		-0.71	
2767	EN14362-1	55.078		2.02	
2773	EN14362-1	47.5		0.65	
2775	EN14362-1	33.346665		-1.92	
3100	EN14362-1	45.98		0.37	
3110	EN14362-1	37.57		-1.16	
3116	EN14362-1	42.2		-0.31	
3118	EN14362-1	36.48		-1.35	
3145	EN14362-1	46.0		0.38	
3146	EN14362-1	34.37166667		-1.74	
3150	EN14362-1	62.25		3.33	
3151	EN14362-1	38.44		-1.00	
3153	EN14362-1	47.0		0.56	
3154	EN14362-1	60.25		2.96	
3167	EN14362-1	48.81		0.89	
3172	EN14362-1	48.66		0.86	

lab	method	value	mark	z(targ)	remarks
3174	EN14362-1	39.18		-0.86	
3176	EN14362-1	36.315		-1.38	
3182	EN14362-1	56.87	C	2.35	first reported: n.d. and test result as 3,3'-dimethylbenzidine
3185	EN14362-1	45.49		0.28	
3186	EN14362-1	54.28		1.88	
3191	EN14362-1	37.6		-1.15	
3192	EN14362-1	41.71		-0.40	
3197	EN14362-1	42.8		-0.21	
3200	EN14362-1	48.9		0.90	
3209	EN14362-1	43.01		-0.17	
3210	In house	32.38		-2.10	
3214	EN14362-1	44.8		0.16	
3216	EN14362-1	52.75		1.60	
3218	EN14362-1	48.72		0.87	
3220	EN14362-1	39.4		-0.82	
3222	EN14362-1	65.5		3.92	
3228	EN14362-1	42.8		-0.21	
3232	EN14362-1	47.79		0.70	
3233		41.72		-0.40	
3237	EN14362-1	40.45		-0.63	
3248	EN14362-1	48		0.74	

normality	suspect	
n	157	
outliers	3	
mean (n)	43.934	
st.dev. (n)	7.5838	
R(calc.)	21.235	
R(EN14362-1:12)	15.421	Compare R(ISO14362-1:17)=15.421





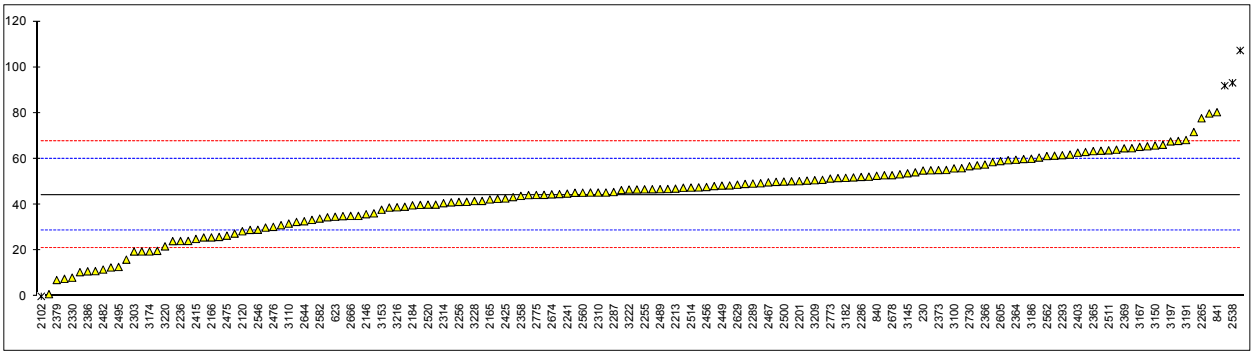
Determination of 3,3'-Dimethylbenzidine (CASno.119-93-7) in sample #17516; results in mg/kg

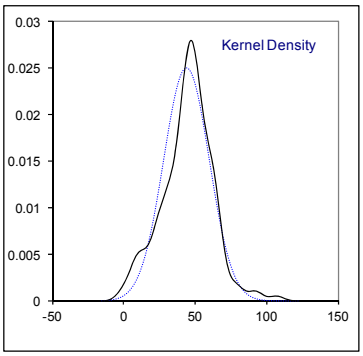
lab	method	value	mark	z(targ)	remarks
213	EN14362-1	-----		-----	
230	EN14362-1	54.9		1.37	
348	In house	46.73		0.32	
362		-----		-----	
551	In house	64.65		2.62	
623	EN14362-1	34.725		-1.23	
840	EN14362-1	52.60		1.07	
841		80.34		4.64	
1213	EN14362-1	44.18		-0.01	
2102	EN14362-1	0	ex	-5.70	test result excluded as 0 is not a true value
2115	EN14362-1	24.08		-2.60	
2120	EN14362-1	28.4		-2.05	
2129		107.3	R(0.01)	8.12	
2132	EN14362-1	35		-1.19	
2146		35.83		-1.09	
2159	EN14362-1	79.81		4.58	
2165	EN14362-1	42.3		-0.25	
2166	EN14362-1	25.70		-2.39	
2170	EN14362-1	53.25		1.16	
2172		39.10		-0.67	
2184	EN14362-1	39.7		-0.59	
2201	EN14362-1	50.26		0.77	
2213	EN14362-1	47		0.35	
2232	EN14362-1	24.17		-2.59	
2236	EN14362-1	24.13		-2.59	
2241	EN14362-1	44.82		0.07	
2247		49.95		0.73	
2255	EN14362-1	46.7		0.31	
2256	EN14362-1	41.2		-0.40	
2258		-----		-----	
2261	GB/T17592	48.39		0.53	
2265	EN14362-1	77.7		4.30	
2286	EN14362-1	52.10		1.01	
2287	EN14362-1	45.51		0.16	
2289	EN14362-1	49.2		0.63	
2290	EN14362-1	52.22		1.02	
2291	EN14362-1	60.56		2.10	
2293		61.596		2.23	
2295	EN14362-1	55		1.38	
2301	In house	10.55		-4.34	
2303	EN14362-1	19.558		-3.18	
2310	EN14362-1	45.30		0.13	
2311	EN14362-1	49.34		0.65	
2313	EN14362-1	44.63		0.05	
2314	EN14362-1	40.65		-0.47	
2330	EN14362-1	8.13		-4.66	
2347	EN14362-1	64		2.54	
2350	EN14362-1	16.0		-3.64	
2352	EN14362-1	59.4		1.95	
2357	EN14362-1	63.54		2.48	
2358	ISO14362-1	43.82		-0.06	
2364		59.6		1.97	
2365	EN14362-1	63.37		2.46	
2366	EN14362-1	57.5		1.70	
2367	EN14362-1	52.83		1.10	
2369		64.60		2.62	
2370	EN14362-1	49.04		0.61	
2373	EN14362-1	55.1		1.39	
2375	EN14362-1	61.38		2.20	
2378	EN14362-1	55.9		1.50	
2379	EN14362-1	7.109		-4.79	
2380	EN14362-1	45.30		0.13	
2381	EN14362-1	44.29		0.00	
2386	EN14362-1	10.9		-4.30	
2389	EN14362-1	65.46		2.73	
2390	EN14362-1	61.86		2.26	
2403	EN14362-1	62.7		2.37	
2415	EN14362-1	25.03		-2.48	
2425	EN14362-1	42.7		-0.20	
2432	EN14362-1	50.84		0.85	
2439		-----		-----	
2442	In house	58.55		1.84	
2449	EN14362-1	48.319		0.52	

lab	method	value	mark	z(targ)	remarks
2453	EN14362-1	91.93	R(0.05)	6.14	
2456	EN14362-1	47.71		0.44	
2459		-----		-----	
2467	EN14362-1	49.73		0.70	
2472	EN14362-1	46.62		0.30	
2475	EN14362-1	26.47		-2.29	
2476	EN14362-1	30.320		-1.80	
2477	EN14362-1	0.94		-5.58	
2482	EN14362-1	11.672		-4.20	
2483		-----		-----	
2486	EN14362-1	47.52		0.42	
2489	EN14362-1	46.75		0.32	
2492	EN14362-1	30.0		-1.84	
2495	EN14362-1	12.82		-4.05	
2497		46.36	C	0.27	first reported: 115.77
2499	EN14362-1	-----		-----	
2500	EN14362-1	50.08	C	0.75	first reported: n.d. and test result as 3,3'-dimethylbenzidine
2506	EN14362-1	42.57		-0.22	
2511	GB/T17592	63.71		2.50	
2514	EN14362-1	47.46		0.41	
2516		-----		-----	
2520	EN14362-1	40		-0.55	
2521	In house	27.36839471577260		-2.18	
2528	EN14362-1	67.81		3.03	
2532	EN14362-1	45.2		0.12	
2534	GB/T17592	45.3		0.13	
2536		-----		-----	
2538	EN14362-1	93.17	R(0.05)	6.30	
2546	EN14362-1	29.04		-1.96	
2553	EN14362-1	48.12		0.49	
2560	EN14362-1	45.23		0.12	
2561	EN14362-1	10.992		-4.29	
2562	GB/T17592	61.2		2.18	
2563	EN14362-1	-----		-----	
2565		34.5		-1.26	
2567	EN14362-1	32.47		-1.52	
2572	EN14362-1	55.13		1.40	
2582	EN14362-1	33.926		-1.33	
2590	EN14362-1	31.04		-1.70	
2605	EN14362-1	59.0		1.90	
2609	EN14362-1	51.6		0.94	
2618	EN14362-1	39.90		-0.56	
2624		-----		-----	
2629	EN14362-1	48.71		0.57	
2638	EN14362-1	33.361		-1.41	
2643	In house	19.57		-3.18	
2644	EN14362-1	32.76		-1.48	
2654	EN14362-1	54.12		1.27	
2666	EN14362-1	35.10		-1.18	
2671	EN14362-1	51.89		0.98	
2674	EN14362-1	44.5		0.03	
2678		52.86		1.11	
2701	EN14362-1	25.91		-2.37	
2706	In house	63.0		2.41	
2713	EN14362-1	71.6910		3.53	
2719	EN14362-1	50.5		0.80	
2728	INH-7334	< 8		<-4.67	possibly a false negative test result?
2730	EN14362-1	56.765		1.61	
2737		12.58		-4.08	
2741	EN14362-1	59.91		2.01	
2766	EN14362-1	40		-0.55	
2767	EN14362-1	<5		<-5.06	possibly a false negative test result?
2773	EN14362-1	51.4		0.92	
2775	EN14362-1	44.228156	C	-0.01	first reported: 0
3100	EN14362-1	55.84		1.49	
3110	EN14362-1	31.73		-1.62	
3116	EN14362-1	35.1		-1.18	
3118	EN14362-1	41.61		-0.34	
3145	EN14362-1	53.7		1.21	
3146	EN14362-1	28.983		-1.97	
3150	EN14362-1	65.81		2.77	
3151	EN14362-1	38.72		-0.72	
3153	EN14362-1	37.8		-0.83	
3154	EN14362-1	7.63		-4.72	
3167	EN14362-1	65.22		2.70	
3172	EN14362-1	36.22		-1.04	

lab	method	value	mark	z(targ)	remarks
3174	EN14362-1	19.60		-3.18	
3176	EN14362-1	25.69		-2.39	
3182	EN14362-1	51.70		0.96	
3185	EN14362-1	57.17		1.66	
3186	EN14362-1	60.04		2.03	
3191	EN14362-1	68.2		3.08	
3192	EN14362-1	46.82		0.33	
3197	EN14362-1	67.6		3.00	
3200	EN14362-1	43.3		-0.13	
3209	EN14362-1	50.66		0.82	
3210	In house	-----		-----	
3214	EN14362-1	47.4		0.40	
3216	EN14362-1	38.88	C	-0.70	first reported: 93.42
3218	EN14362-1	50.21		0.76	
3220	EN14362-1	21.8		-2.90	
3222		46.6		0.30	
3228	EN14362-1	41.6		-0.34	
3232	EN14362-1	41.23		-0.39	
3233		66.13		2.81	
3237	EN14362-1	19.84		-3.15	
3248	EN14362-1	41		-0.42	

normality	OK	
n	152	
outliers	3+1ex	
mean (n)	44.279	
st.dev. (n)	15.9542	
R(calc.)	44.672	
R(EN14362-1:12)	21.741	Compare R(ISO14362-1:17)=21.741





Determination of 2,4-Xylidine (CASno.95-68-1), 2,6-Xylidine (CASno.87-62-7) and sum of Xylidines in sample #17516; results in mg/kg

lab	method	24X	mark	z(targ)	26X	mark	z(targ)	sum of Xylidines	mark	z(targ)
213	EN14362-1	44.83	R(0.05)	-3.53	44.88	f+?	-----	44.88		-----
230	EN14362-1	76.9		-1.64	-----		-----	-----		-----
348	In house	105.03		0.02	64.84	f+?	-----	169.87		-----
362		104		-0.04	57.33	f+?	-----	161.33		-----
551	In house	n.d.	f-?	-----	n.d.		-----	n.d.		-----
623	EN14362-1	124.801		1.19	13.494	f+?	-----	138.295		-----
840	EN14362-1	110.10		0.32	56.20	f+?	-----	166.30		-----
841		100.13		-0.27	n.d.		-----	-----		-----
1213	EN14362-1	134.99		1.79	-----	see remarks	-----	-----		-----
2102	EN14362-1	25.25	R(0.01)	-4.69	130.53	f+?	-----	155.78		-----
2115	EN14362-1	96.01		-0.51	22.11	f+?	-----	118.12		-----
2120	EN14362-1	112.4		0.46	32.8	f+?	-----	145.2		-----
2129		181	R(0.01)	4.51	36.8	f+?	-----	217.8		-----
2132	EN14362-1	110		0.32	64	f+?	-----	174		-----
2146		82.14		-1.33	14.46	f+?	-----	96.60		-----
2159	EN14362-1	101.06		-0.21	72.11	f+?	-----	173.17		-----
2165	EN14362-1	-----		-----	-----		-----	-----		-----
2166	EN14362-1	80.12		-1.45	-----		-----	-----		-----
2170	EN14362-1	77.89		-1.58	-----		-----	-----		-----
2172		99.90		-0.28	56.90	f+?	-----	156.80		-----
2184	EN14362-1	-----		-----	-----		-----	-----		-----
2201	EN14362-1	123.21		1.10	74.05	f+?	-----	197.26		-----
2213	EN14362-1	99.8		-0.29	55.2	f+?	-----	155.0		-----
2232	EN14362-1	52.91		-3.06	35.60	f+?	-----	88.51		-----
2236	EN14362-1	97.73		-0.41	64.32	f+?	-----	162.05		-----
2241	EN14362-1	96.67		-0.47	<5		-----	-----		-----
2247		114.88		0.60	67.05	f+?	-----	181.93		-----
2255	EN14362-1	110.9		0.37	-----		-----	-----		-----
2256	EN14362-1	103.3		-0.08	52.6	f+?	-----	155.9		-----
2258		-----		-----	-----		-----	-----		-----
2261	GB/T17592	79.95	C	-1.46	76.57	f+?	-----	156.52		-----
2265	EN14362-1	134.8		1.78	15.6	f+?	-----	150.4		-----
2286	EN14362-1	117.20		0.74	74.39	f+?	-----	191.59		-----
2287	EN14362-1	112.41		0.46	69.80	f+?	-----	182.21		-----
2289	EN14362-1	128.7		1.42	73.1	f+?	-----	201.8		-----
2290	EN14362-1	130.21		1.51	73.13	f+?	-----	203.34		-----
2291	EN14362-1	100.68		-0.23	60.04	f+?	-----	160.72		-----
2293		119.48		0.88	66.527	f+?	-----	186.007		-----
2295	EN14362-1	106		0.08	-----		-----	-----		-----
2301	In house	87.52		-1.01	40.40	f+?	-----	127.92		-----
2303	EN14362-1	45.122	R(0.05)	-3.52	6.471	f+?	-----	51.593		-----
2310	EN14362-1	130.4		1.52	25.60	f+?	-----	156.00		-----
2311	EN14362-1	121.2		0.98	21.29	f+?	-----	142.49		-----
2313	EN14362-1	119.83		0.90	31.97	f+?	-----	151.80		-----
2314	EN14362-1	122.03		1.03	24.13	f+?	-----	146.16		-----
2330	EN14362-1	124.44		1.17	n.d.		-----	-----		-----
2347	EN14362-1	-----		-----	-----		-----	-----		-----
2350	EN14362-1	118.2		0.80	-----		-----	-----		-----
2352	EN14362-1	97.4		-0.43	23.0	f+?	-----	120.4		-----
2357	EN14362-1	-----		-----	-----		-----	-----		-----
2358	ISO14362-1	96.22		-0.50	57.37	f+?	-----	153.59		-----
2364		97.6		-0.42	20.3	f+?	-----	117.9		-----
2365	EN14362-1	-----		-----	-----		-----	-----		-----
2366	EN14362-1	-----		-----	-----		-----	-----		-----
2367	EN14362-1	105.46		0.05	24.38	f+?	-----	129.84		-----
2369		-----		-----	-----		-----	-----		-----
2370	EN14362-1	108.8		0.25	54.26	f+?	-----	163.06		-----
2373	EN14362-1	97.6		-0.42	19.8	f+?	-----	117.4		-----
2375	EN14362-1	120.57		0.94	23.19	f+?	-----	143.76		-----
2378	EN14362-1	97.2		-0.44	24.4	f+?	-----	121.6		-----
2379	EN14362-1	36.5381	C,R(0.01)	-4.02	32.742	f+?	-----	69.2801		-----
2380	EN14362-1	140.0		2.09	-----		-----	-----		-----
2381	EN14362-1	140.19		2.10	-----		-----	-----		-----
2386	EN14362-1	98.5		-0.36	< 5		-----	-----		-----
2389	EN14362-1	111.18		0.39	77.16	f+?	-----	188.34		-----
2390	EN14362-1	123.55		1.12	75.75	f+?	-----	199.30		-----
2403	EN14362-1	95.7		-0.53	41.5	f+?	-----	137.2		-----
2415	EN14362-1	93.98		-0.63	n.d.		-----	-----		-----
2425	EN14362-1	106.0		0.08	n.d.		-----	-----		-----
2432	EN14362-1	103.26		-0.08	-----		-----	-----		-----
2439		-----		-----	-----		-----	-----		-----

lab	method	24X	mark	z(targ)	26X	mark	z(targ)	sum of Xylidines	mark	z(targ)
2442	In house	111.09		0.38	-----		-----	-----		-----
2449	EN14362-1	92.7321		-0.70	37.5202	**f+?**	-----	130.2523		-----
2453	EN14362-1	118.30		0.81	38.44	**f+?**	-----	156.74		-----
2456	EN14362-1	53.32	ex	-3.03	53.32	**f+?**	-----	53.32		-----
2459		-----		-----	-----		-----	-----		-----
2467	EN14362-1	98.63	C	-0.36	54.03	**f+?**	-----	152.66		-----
2472	EN14362-1	104.83		0.01	31.63	**f+?**	-----	136.46		-----
2475	EN14362-1	119.2		0.86	25.14	**f+?**	-----	144.34		-----
2476	EN14362-1	112.20		0.45	68.710	**f+?**	-----	180.91		-----
2477	EN14362-1	51.48	ex	-3.14	51.48	**f+?**	-----	51.48		-----
2482	EN14362-1	174.361	R(0.01)	4.12	19.393	**f+?**	-----	193.754		-----
2483		-----		-----	-----		-----	-----		-----
2486	EN14362-1	99.64		-0.30	62.56	**f+?**	-----	162.20		-----
2489	EN14362-1	125.5		1.23	36	**f+?**	-----	161.5		-----
2492	EN14362-1	118.0		0.79	20.0	**f+?**	-----	138.0		-----
2495	EN14362-1	52.87		-3.06	29.38	**f+?**	-----	82.25		-----
2497		183.26	C,R(0.01)	4.65	43.08	**f+?**	-----	226.34		-----
2499	EN14362-1	58.69		-2.72	46.52	**f+?**	-----	105.21		-----
2500	EN14362-1	108.22		0.21	55.87	**f+?**	-----	164.09		-----
2506	EN14362-1	133.58		1.71	90.5	C, **f+?**	-----	224.08		-----
2511	GB/T17592	101.66		-0.18	-----	see remarks	-----	-----		-----
2514	EN14362-1	114.32		0.57	-----		-----	-----		-----
2516		-----		-----	-----		-----	-----		-----
2520	EN14362-1	-----		-----	-----		-----	-----		-----
2521	In house	-----		-----	-----		-----	-----		-----
2528	EN14362-1	109.49		0.29	68.06	**f+?**	-----	177.55		-----
2532	EN14362-1	124.7		1.18	35.2	**f+?**	-----	159.9		-----
2534	GB/T17592	53	C	-3.05	58.3	**f+?**	-----	111.3		-----
2536		-----		-----	-----		-----	-----		-----
2538	EN14362-1	101.48		-0.19	-----		-----	-----		-----
2546	EN14362-1	125.28	ex	1.22	**0**		-----	125.28		-----
2553	EN14362-1	109.17		0.27	32.21	**f+?**	-----	141.38		-----
2560	EN14362-1	98.44		-0.37	**n.d.**		-----	-----		-----
2561	EN14362-1	83.50		-1.25	**<30**		-----	-----		-----
2562	GB/T17592	109.8		0.30	40.2	**f+?**	-----	150.0		-----
2563	EN14362-1	< 3	**f-?**	<-6.01	**n.d.**		-----	n.d.		-----
2565		94.1		-0.62	60.7	**f+?**	-----	154.8		-----
2567	EN14362-1	128.0		1.38	**<5**		-----	-----		-----
2572	EN14362-1	135.79		1.84	77.21	**f+?**	-----	213.00		-----
2582	EN14362-1	83.076		-1.27	99.691	**f+?**	-----	182.77		-----
2590	EN14362-1	98.01		-0.39	65.13	**f+?**	-----	163.14		-----
2605	EN14362-1	123.2		1.10	70.6	**f+?**	-----	193.80		-----
2609	EN14362-1	91.8		-0.76	14.9	**f+?**	-----	106.70		-----
2618	EN14362-1	99.95		-0.28	-----		-----	-----		-----
2624		-----		-----	-----		-----	-----		-----
2629	EN14362-1	-----		-----	-----		-----	-----		-----
2638	EN14362-1	121.583		1.00	70.55	**f+?**	-----	192.13		-----
2643	In house	127.47		1.35	**< 5**		-----	-----		-----
2644	EN14362-1	108.39		0.22	12.86	**f+?**	-----	121.25		-----
2654	EN14362-1	59.56		-2.66	-----		-----	-----		-----
2666	EN14362-1	107.39		0.16	5.35	**f+?**	-----	112.74		-----
2671	EN14362-1	114.83		0.60	32.11	**f+?**	-----	146.94		-----
2674	EN14362-1	-----		-----	-----		-----	-----		-----
2678		98.52		-0.36	-----		-----	-----		-----
2701	EN14362-1	112.05		0.44	22.10	**f+?**	-----	134.15		-----
2706	In house	-----		-----	-----		-----	-----		-----
2713	EN14362-1	73.16056		-1.86	44.56360	**f+?**	-----	117.72		-----
2719	EN14362-1	125.6		1.24	**< 5**		-----	-----		-----
2728	INH-7334	< 8	**f-?**	<-5.71	**< 8**		-----	-----		-----
2730	EN14362-1	-----	C	-----	-----	C	-----	-----		-----
2737		102.94		-0.10	58.59	**f+?**	-----	161.53		-----
2741	EN14362-1	88.47		-0.96	**< 5**		-----	-----		-----
2766	EN14362-1	82.0		-1.34	58	**f+?**	-----	140.0		-----
2767	EN14362-1	19.5	C,R(0.01)	-5.03	23.5	C, **f+?**	-----	43.0		-----
2773	EN14362-1	95.0		-0.57	40.0	**f+?**	-----	135.0		-----
2775	EN14362-1	31.932626	C,R(0.01)	-4.30	62.334969	C, **f+?**	-----	94.267595		-----
3100	EN14362-1	114.90		0.61	66.17	**f+?**	-----	181.07		-----
3110	EN14362-1	-----		-----	-----		-----	-----		-----
3116	EN14362-1	96.2		-0.50	52.7	**f+?**	-----	148.9		-----
3118	EN14362-1	117.79		0.78	57.80	**f+?**	-----	175.59		-----
3145	EN14362-1	150.4		2.70	-----		-----	-----		-----
3146	EN14362-1	83.052		-1.28	**<30**		-----	-----		-----
3150	EN14362-1	113.0		0.49	**<5**		-----	162.4		-----
3151	EN14362-1	132.31		1.63	16.00	**f+?**	-----	148.31		-----
3153	EN14362-1	113.8		0.54	68.2	**f+?**	-----	182.0		-----

lab	method	24X	mark	z(targ)	26X	mark	z(targ)	sum of Xylidines	mark	z(targ)
3154	EN14362-1	65.59		-2.31	16.6	**f+?**	-----	82.19		-----
3167	EN14362-1	74.04		-1.81	-----		-----	-----		-----
3172	EN14362-1	96.18		-0.50	13.66	**f+?**	-----	109.84		-----
3174	EN14362-1	65.96		-2.29	38.78	**f+?**	-----	104.74		-----
3176	EN14362-1	80.90		-1.40	8.15	**f+?**	-----	89.05		-----
3182	EN14362-1	103.90		-0.04	70.26	**f+?**	-----	174.16		-----
3185	EN14362-1	118.50		0.82	64.74	**f+?**	-----	183.24		-----
3186	EN14362-1	140.51		2.12	85.01	**f+?**	-----	225.52		-----
3191	EN14362-1	115.8		0.66	63.1	**f+?**	-----	178.9		-----
3192	EN14362-1	-----		-----	-----		-----	-----		-----
3197	EN14362-1	120.6		0.94	**n.d.**		-----	-----		-----
3200	EN14362-1	109.2		0.27	56.6	**f+?**	-----	165.80		-----
3209	EN14362-1	116.49		0.70	**n.d.**		-----	-----		-----
3210	In house	54.96		-2.94	7.22	**f+?**	-----	62.18		-----
3214	EN14362-1	129.7		1.48	70.0	**f+?**	-----	199.7		-----
3216	EN14362-1	78.27		-1.56	10.58	**f+?**	-----	88.85		-----
3218	EN14362-1	123.40		1.11	72.72	**f+?**	-----	196.12		-----
3220	EN14362-1	59.1		-2.69	40.8	**f+?**	-----	99.9		-----
3222		53.0	ex	-3.05	-----		-----	53.0		-----
3228	EN14362-1	-----	C	-----	-----	C	-----	-----		-----
3232	EN14362-1	121.37		0.99	33.45	**f+?**	-----	154.82		-----
3233		98.77		-0.35	28.66	**f+?**	-----	127.43		-----
3237	EN14362-1	69.39		-2.08	-----		-----	-----		-----
3248	EN14362-1	114		0.55	70	**f+?**	-----	184		-----
			selected group *)							
normality		OK	OK		n.a.			OK		
n		131	18		18			109		
outliers		9+4ex	0		(105)	**(f+?)**		0		
mean (n)		104.650	107.833		n.d. or <..			146.318		
st.dev. (n)		20.3319	16.3773		n.a.			41.8150		
R(calc.)		56.929	45.857		n.a.			117.082		
R(EN14362-1:12) **)		47.386	48.827		n.a.			93.696		

*) Selected group of test results from labs who had most likely a good separation of the Xylidine isomers and indentified 2,4-Xylidine correctly.

**) Based on the average of five reproducibilities mentioned in table B.2 of test method EN14362-1:2012

Lab 2261 first reported: 28.35 for 2,4-Xylidine

Lab 2379 first reported 43.759 for 2,4-Xylidine

Lab 2456: test result for 2,4-Xylidine excluded as the same value was reported for 2,6-Xylidine; it was not clear whether the isomers were co-eluted and the reported value was ½ * the sum of the isomers?

Lab 2467 first reported: 173.19 for 2,4-Xylidine

Lab 2477: test result for 2,4-Xylidine excluded as the same value was reported for 2,6-Xylidine; it was not clear whether the reported value was ½ * the sum of the isomers?

Lab 2497 first reported: 461.62 for 2,4-Xylidine

Lab 2506 first reported: 121.15 for 2,6-Xylidine

Lab 2534 first reported: n.d. for 2,4-Xylidine

Lab 2546: test result for 2,4-Xylidine excluded as the sum was reported of 2,4 and 2,6-Xylidine

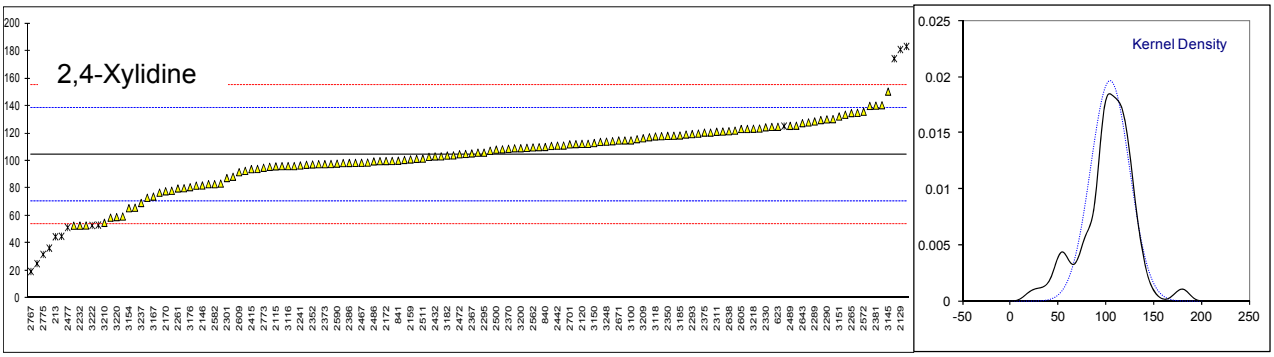
Lab 2730 first reported: n.d. for 2,4- and 2,6-Xylidine

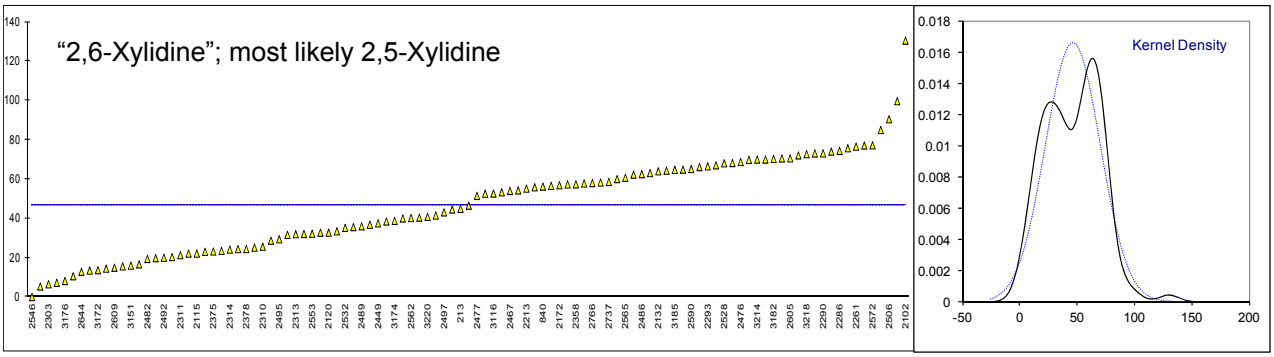
Lab 2767 first reported: n.d. for 2,4- and 2,6-Xylidine

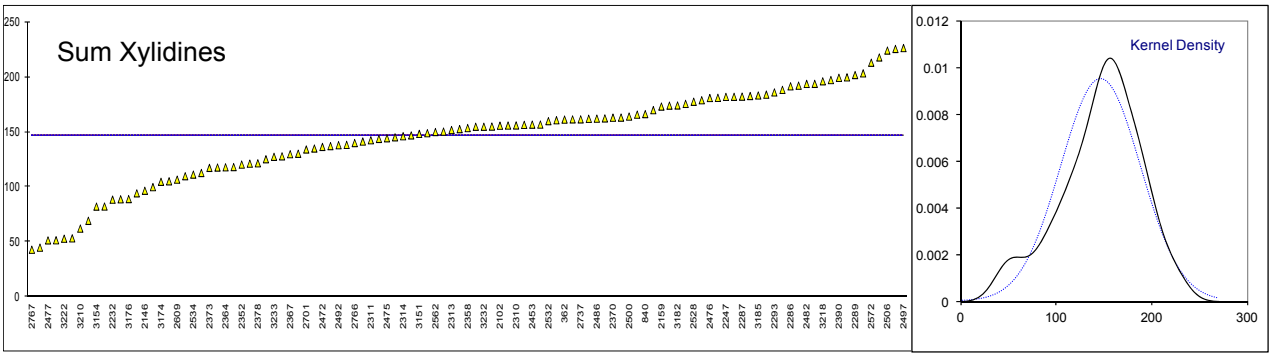
Lab 2775 first reported: 36.407299 for 2,4- and 0 for 2,6-Xylidine

Lab 3222: test result for 2,4-Xylidine excluded as the sum was reported of 2,4 and 2,6-Xylidine

Lab 3228 first reported: n.d. for 2,4- and 2,6-Xylidine


2,4-Xylidine
Kernel Density


“2,6-Xylidine”; most likely 2,5-Xylidine
Kernel Density


Sum Xylidines
Kernel Density

Remarks with respect to the determination of 2,4-Xylidine (CASno.95-68-1) and 2,6-Xylidine (CASno.87-62-7) in sample #17516

lab	remarks
1213	Found 2,6-Xylidine but also some impurities, so we can't release the final result. We suspect that the impurity is 2,5 –Xylidine
2129	2,5-Xylidine: 90 mg/kg. We find the isomers 2,5- and 2,6-Xylidine as well. The 2,4- and 2,5-Xylidine are difficult to separate.
2477	2,4-Xylidine and 2,6-Xylidine coelute, therefore we report them in sum
2511	Note: lot of issue to define if sample include 2,6-Xylidine or 2,5-Xylidine. We had really a very tough mission to separate them.
2521	2,4-Xylidine, 2,6-Xylidine compounds were determined in chromotogram but in our laboratory these compounds are not analyzed.
2546	We insert for 2,4 xylidine AZO23 CAS 95-68-1 together with 2,6 xylidine AZO24 CAS 87-62-7 because RTs are very close
2643	Confirmed that it is not 2,6-Xylidine, but 2,5-Xylidine. Could sepearate all isomers by using different columns.
2701	It seems that 2,6-Xylidine merged with isomer of other Xylidine in GC/MS analysis.
3150	2,5-Xylidine: 49,4mg/kg
3151	We found additional three Xylidine isomeres
3222	It's impossible to separate the 2,4-Xylidine and 2,6-Xylidine

APPENDIX 2

Summary of other reported aromatic amines in sample #17515

lab	compounds
362	11.82 mg/kg Benzidine (CASno. 92-87-5) & 8.00 mg/kg 2,4-Xylidine (CASno. 95-68-1)
2102	2.00 mg/kg 3,3'-dimethyl Benzidine (CASno. 119-93-7) & 0.29 mg/kg o-Anisidine (CASno. 90-04-0)
2293	6.761 mg/kg 4,4'-diAminodiphenyl Sulphide (CASno. 139-65-1)
2432	6.39 mg/kg Benzidine (CASno. 92-87-5)
2456	2.70 mg/kg Benzidine (CASno. 92-87-5)
2477	1.47 mg/kg 4-Chloraniline (CASno. 106-47-8) & 1.08 mg/kg o-Toluidine (CASno. 95-53-4) & 1.34 mg/kg o-Anisidine (CASno. 90-04-0) & 3.13 mg/kg 2,4-Xylidine (CASno. 95-68-1) & 3.13 mg/kg 2,6-Xylidine (CASno. 87-62-7)
2497	1.669 mg/kg 4,4'-diAminodiphenyl Sulphide (CASno. 139-65-1)
2520	99.7 mg/kg o-Toluidine (CASno. 95-53-4)
2654	3.93 mg/kg Benzidine (CASno. 92-87-5) & 5.06 mg/kg 4-Chloraniline (CASno. 106-47-8) & 1.84 mg/kg 4,4'-diAminodiphenyl Sulphide (CASno. 139-65-1)
3151	1.47 mg/kg Benzidine (CASno. 92-87-5)
3154	3.755 mg/kg 4-Amino-azobenzene (CASno. 60-09-3)
3222	1.9 mg/kg Benzidine (CASno. 92-87-5) & 1.7 mg/kg 4,4'-diAminodiphenyl Sulphide (CASno. 139-65-1)

Summary of reported remarks about sample #17515

lab	remarks
2115	Aniline 16.0 mg/kg 1,4- phenylenediamine 38.84 mg/kg
2120	Detected aniline and 1,4-phenylenodiamine but the amount of sample wasn't enought to test acoording the EN 14362-3. *NB All labs were instructed not to proceed with the determination of 4-Amino-azobenzene*
2129	further amines: Aniline: 24,4 mg/kg
2521	Aniline and 1,4-Phenylenediamine compounds were determined but in our laboratory the EN 14362-3 standard is not implemented so 4-Amino-azobenzene could not determined.
2654	Presence of aniline (CAS no. 6253-3) and 1,4-phenylenediamine (CAS no. 106-50-3)
3145	We detected Aniline and p-Phenylenediamine by GC/MS
3216	We have also determined 14,4 mg/kg of Aniline CAS no. 62-53-3, and 10,6 mg/kg of 1,4-Phenylenediamine CAS no.160-50-3. We did not analyzed 4-Amino-azobenzene because it has to be analyzed with the EN 14362-3 in case we determine a postive result of aniline. (we had not got enough sample to proceed) *NB All labs were instructed not to proceed with the determination of 4-Amino-azobenzene*
3220	We are also getting below mentions amines in sample but as per your instruction we didn't proceed for 4- Aminoazobenzene. Aniline 22.9mg/kg 1,4 phenylenediamine 199.4mg/kg

Summary of other reported aromatic amines in sample #17516

lab	compounts
2102	4.66 mg/kg o-Toluidine (CASno. 95-53-4)
2456	2.72 mg/kg o-Toluidine (CASno. 95-53-4)
2477	1.14 mg/kg o-Toluidine (CASno. 95-53-4) & 1.32 mg/kg 2,4,5-trimethyl Aniline (CASno. 137-17-7)
2520	30 (f.r. 109.6) mg/kg o-Toluidine (CASno. 95-53-4) & 15 (f.r. 49.5) mg/kg 4-Amino-azobenzene (CASno. 60-09-3)
2654	2.13 mg/kg o-Toluidine (CASno. 95-53-4)
3216	0.64 mg/kg o-Toluidine (CASno. 95-53-4)
3222	1.26 mg/kg o-Toluidine (CASno. 95-53-4)

Summary of reported remarks about sample #17516

lab	remarks
2453	Azo 3,3'-dimethylbenzidine CAS 119-93-7 is problematic. Sometimes gives a false positive according new ISO 14362-1
2775	For the textile specimen that are submitted to colorant extraction, sample must be cut into strips. The polyamide sample was cutted in pieces, so it was harder to hang it on the hook for the extraction. *NB. Lab ignored the extra instruction to all labs to skip the extraction step.*

Summary of aromatic amines in sample #17515

4AD = 4-Aminodiphenyl (CASNo. 92-67-1)
BD = Benzidine (CASNo. 92-87-5)
4CoT = 4-Chloro-o-toluidine (CASNo. 95-69-2)
2NA = 2-Naphtylamine (CASNo. 91-59-8)
oAAT = o-Aminoazotoluene (CASNo. 97-56-3)
ANT = 2-Amino-4-nitrotoluene (CASNo. 99-55-8)
4CA = 4-Chloraniline (CASNo. 106-47-8)
DAA = 2,4-Diaminoanisol (CASNo. 615-05-4)
DADM = 4,4'-Diaminodiphenyl methane (CASNo. 101-77-9)
DCB = 3,3'-Dichlorobenzidine (CASNo. 91-94-1)
DMB = 3,3'-Dimethylbenzidine (CASNo. 119-93-7)
DDDM = 3,3'-Dimethyl-4,4'-Diaminodiphenyl methane (CASNo. 838-88-0)

Lab	4AD	BD	4CoT	2NA	oAAT	ANT	4CA	DAA	DADM	DCB	DMB	DDDM
213	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
230	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
348	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
362	-----	11.82	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
551	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
623	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
840	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
841	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
1213	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2102	0	0	0	0	0	0	0	0	0	0	2.00	0
2115	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2120	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2129	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2132	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2146	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2159	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2165	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2166	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2170	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2172	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2184	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2201	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2213	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2232	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2236	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2241	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2247	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2255	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2256	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2258	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2261	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2265	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2286	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2287	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2289	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2290	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2291	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2293	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2295	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2301	0	0	0	0	0	0	0	0	0	0	0	0
2303	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2310	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2311	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2313	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2314	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2330	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2347	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2350	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2352	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2357	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2358	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2364	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2365	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2366	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2367	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2369	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2370	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2373	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2375	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2378	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Lab	4AD	BD	4CoT	2NA	oAAT	ANT	4CA	DAA	DADM	DCB	DMB	DDDM
2379	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2380	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2381	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2386	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2389	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2390	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2403	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2415	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2425	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2432	-----	6.39	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2439	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2442	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2449	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2453	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2456	n.d.	2.70	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2459	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2467	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2472	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2475	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2476	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2477	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.47	n.d.	n.d.	n.d.	n.d.	n.d.
2482	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2483	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2486	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2489	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2492	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2495	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2497	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2499	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2500	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2506	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2511	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2514	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2516	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2520	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2521	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2528	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2532	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2534	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2536	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2538	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2546	0	0	0	0	0	0	0	0	0	0	0	0
2553	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2560	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2561	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
2562	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2563	n.d.	< 3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2565	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2567	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2572	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2582	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2590	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ
2605	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2609	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2618	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2624	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	-----	n.d.
2629	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2638	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2643	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2644	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2654	n.d.	3.93	n.d.	n.d.	n.d.	n.d.	5.06	n.d.	n.d.	n.d.	n.d.	n.d.
2666	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2671	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2674	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2678	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2701	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2706	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2713	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2719	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2728	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8
2730	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2737	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2741	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2766	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2767	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2773	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Lab	4AD	BD	4CoT	2NA	oAAT	ANT	4CA	DAA	DADM	DCB	DMB	DDDM
2775	0	0	0	0	0	0	0	0	0	0	0	0
3100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3110	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3116	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3118	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3145	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3146	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3150	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3151	-----	1.47	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3153	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3154	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3167	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3172	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
3174	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3176	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3182	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3185	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3186	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3191	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
3192	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
3197	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3209	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3214	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3216	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3218	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3220	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3222	-----	1.9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3228	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3232	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3233	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3237	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3248	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Summary of aromatic amines in sample #17515 continued

pC = p-Cresidine (CASno. 120-71-8)
DDM = 4,4'-Diamino-3,3'-dichlorodiphenyl methane (CASno. 101-14-4)
DDE = 4,4'-Diaminodiphenyl ether (CASno. 101-80-4)
DDS = 4,4'-Diaminodiphenyl sulphide (CASno. 139-65-1)
oT = o-Toluidine (CASno. 95-53-4)
24DAT = 2,4-Diaminotoluene (CASno. 95-80-7)
TMA = 2,4,5-Trimethylaniline (CASno. 137-17-7)
oA = o-Anisidine (CASno. 90-04-0)
4AAT = 4-Amino-azobenzene (CASno. 60-09-3)
24X = 2,4-Xylidine (CASno. 95-68-1)
26X = 2,6-Xylidine (CASno. 87-62-7)

Lab	pC	DDM	DDE	DDS	oT	24DAT	TMA	oA	4AAT	24X	26X
213	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
230	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
348	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
362	-----	-----	-----	-----	-----	-----	-----	-----	-----	8.00	-----
551	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
623	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
840	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
841	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
1213	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2102	0	0	0	0	0	0	0	0.29	0	0	0
2115	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2120	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	see app. 2	< 5	< 5
2129	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2132	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2146	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	-----	n.d.	n.d.
2159	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2165	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	-----	-----
2166	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2170	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2172	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2184	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	-----	-----
2201	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2213	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2232	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2236	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2241	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2247	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2255	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2256	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2258	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2261	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2265	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2286	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2287	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2289	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2290	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2291	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2293	n.d.	n.d.	n.d.	6.761	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2295	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2301	0	0	0	0	0	0	0	0	0	0	0
2303	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2310	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2311	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2313	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2314	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2330	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2347	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2350	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2352	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2357	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2358	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2364	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2365	<5	<5	<5	<5	<5	<5	<5	<5	<5	-----	-----
2366	<5	<5	<5	<5	<5	<5	<5	<5	<5	n.a.	n.a.
2367	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2369	<5	<5	<5	<5	<5	<5	<5	<5	<5	n.a.	n.a.
2370	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2373	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2375	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2378	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2379	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Lab	pC	DDM	DDE	DDS	oT	24DAT	TMA	oA	4AAT	24X	26X
2380	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2381	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2386	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2389	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2390	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2403	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2415	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2425	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2432	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2439	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2442	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2449	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2453	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2456	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2459	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2467	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2472	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2475	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2476	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2477	n.d.	n.d.	n.d.	n.d.	1.08	n.d.	n.d.	1.34	n.d.	3.13	3.13
2482	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2483	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2486	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2489	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2492	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2495	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2497	-----	-----	-----	1.669	-----	-----	-----	-----	-----	-----	-----
2499	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2500	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2506	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2511	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2514	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2516	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2520	-----	-----	-----	-----	99.7	-----	-----	-----	-----	-----	-----
2521	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2528	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2532	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2534	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2536	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2538	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2546	0	0	0	0	0	0	0	0	0	0	0
2553	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2560	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2561	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
2562	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2563	n.d.	n.d.	n.d.	< 3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2565	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2567	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2572	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2582	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2590	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ
2605	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2609	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2618	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2624	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2629	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2638	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2643	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2644	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2654	n.d.	n.d.	n.d.	1.84	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2666	<5	<5	<5	<5	<5	<5	<5	<5	-----	<5	<5
2671	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2674	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.a.	n.a.
2678	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	-----	-----	-----
2701	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2706	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2713	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2719	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2728	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	-----	< 8	< 8
2730	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2737	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2741	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2766	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2767	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2773	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2775	0	0	0	0	0	0	0	0	0	0	0

Lab	pC	DDM	DDE	DDS	oT	24DAT	TMA	oA	4AAT	24X	26X
3100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3110	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3116	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3118	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3145	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3146	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3150	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3151	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3153	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3154	-----	-----	-----	-----	-----	-----	-----	-----	3.755	-----	-----
3167	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3172	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
3174	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3176	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3182	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3185	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3186	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3191	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
3192	<30	<30	<30	<30	<30	<30	<30	<30	-----	-----	-----
3197	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3209	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3214	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3216	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	-----	n.d.	n.d.
3218	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3220	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3222	-----	-----	-----	1.7	-----	-----	-----	-----	-----	-----	-----
3228	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3232	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3233	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3237	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3248	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Summary of aromatic amines in sample #17516

4AD = 4-Aminodiphenyl (CASNo. 92-67-1)
BD = Benzidine (CASNo. 92-87-5)
4CoT = 4-Chloro-o-toluidine (CASNo. 95-69-2)
2NA = 2-Naphtylamine (CASNo. 91-59-8)
oAAT = o-Aminoazotoluene (CASNo. 97-56-3)
ANT = 2-Amino-4-nitrotoluene (CASNo. 99-55-8)
4CA = 4-Chloraniline (CASNo. 106-47-8)
DAA = 2,4-Diaminoanisol (CASNo. 615-05-4)
DADM = 4,4'-Diaminodiphenyl methane (CASNo. 101-77-9)
DCB = 3,3'-Dichlorobenzidine (CASNo. 91-94-1)

Lab	4AD	BD	4CoT	2NA	oAAT	ANT	4CA	DAA	DADM	DCB
213	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
230	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
348	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
362	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
551	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
623	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
840	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
841	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
1213	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2102	0	0	0	0	0	0	0	0	0	0
2115	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2120	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2129	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2132	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2146	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2159	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2165	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2166	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2170	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2172	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2184	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2201	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2213	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2232	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2236	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2241	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2247	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2255	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2256	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2258	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2261	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2265	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2286	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2287	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2289	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2290	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2291	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2293	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2295	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2301	0	0	0	0	0	0	0	0	0	0
2303	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2310	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2311	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2313	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2314	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2330	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2347	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2350	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2352	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2357	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2358	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2364	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2365	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2366	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2367	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2369	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2370	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2373	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2375	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2378	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2379	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2380	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Lab	4AD	BD	4CoT	2NA	oAAT	ANT	4CA	DAA	DADM	DCB
2381	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2386	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2389	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2390	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2403	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2415	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2425	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2432	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2439	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2442	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2449	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2453	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2456	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2459	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2467	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2472	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2475	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2476	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2477	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2482	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2483	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2486	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2489	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2492	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2495	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2497	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2499	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2500	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2506	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2511	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2514	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2516	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2520	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2521	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2528	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2532	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2534	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2536	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2538	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2546	0	0	0	0	0	0	0	0	0	0
2553	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2560	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2561	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
2562	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2563	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2565	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2567	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2572	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2582	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2590	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ
2605	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2609	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2618	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2624	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2629	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2638	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2643	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2644	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2654	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2666	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2671	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2674	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2678	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2701	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2706	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2713	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2719	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2728	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8
2730	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2737	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2741	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2766	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2767	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2773	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2775	0	0	0	0	0	0	0	0	0	0
3100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

Lab	4AD	BD	4CoT	2NA	oAAT	ANT	4CA	DAA	DADM	DCB
3110	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3116	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3118	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3145	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3146	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3150	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3151	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3153	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3154	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3167	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3172	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
3174	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3176	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3182	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3185	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3186	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3191	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
3192	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
3197	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3209	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3214	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3216	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3218	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3220	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3222	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3228	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3232	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3233	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3237	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3248	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Summary of aromatic amines in sample #17516, continued

DMoxB = 3,3'-Dimethoxybenzidine (CASNo. 119-90-4)
DDDM = 3,3'-Dimethyl-4,4'-Diaminodiphenyl methane (CASNo. 838-88-0)
pC = p-Cresidine (CASno. 120-71-8)
DDM = 4,4'-Diamino-3,3'-dichlorodiphenyl methane (CASno. 101-14-4)
DDE = 4,4'-Diaminodiphenyl ether (CASno. 101-80-4)
DDS = 4,4'-Diaminodiphenyl sulphide (CASno. 139-65-1)
oT = o-Toluidine (CASno. 95-53-4)
24DAT = 2,4-Diaminotoluene (CASno. 95-80-7)
TMA = 2,4,5-Trimethylaniline (CASno. 137-17-7)
oA = o-Anisidine (CASno. 90-04-0)
4AAT = 4-Amino-azobenzene (CASno. 60-09-3)

Lab	DMoxB	DDDM	pC	DDM	DDE	DDS	oT	24DAT	TMA	oA	4AAT
213	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
230	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
348	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
362	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
551	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
623	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
840	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
841	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
1213	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2102	0	0	0	0	0	0	4.66	0	0	0	0
2115	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2120	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2129	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2132	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2146	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	-----
2159	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2165	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2166	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2170	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2172	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2184	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2201	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2213	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2232	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2236	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2241	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2247	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2255	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2256	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2258	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2261	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2265	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2286	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2287	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2289	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2290	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2291	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2293	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2295	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2301	0	0	0	0	0	0	0	0	0	0	0
2303	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2310	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2311	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2313	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2314	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2330	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2347	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2350	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2352	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2357	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2358	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2364	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2365	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2366	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2367	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2369	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2370	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2373	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2375	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2378	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2379	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Lab	DMoxB	DDDM	pC	DDM	DDE	DDS	oT	24DAT	TMA	oA	4AAT
2380	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2381	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2386	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2389	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2390	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2403	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2415	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2425	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2432	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2439	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2442	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2449	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2453	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2456	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	2.72	n.d.	n.d.	n.d.	n.d.
2459	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2467	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2472	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2475	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2476	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2477	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.14	n.d.	1.32	n.d.	n.d.
2482	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2483	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2486	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2489	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2492	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2495	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2497	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2499	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2500	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2506	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2511	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2514	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2516	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2520	-----	-----	-----	-----	-----	-----	30	-----	-----	-----	15
2521	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2528	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2532	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2534	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2536	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2538	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2546	0	0	0	0	0	0	0	0	0	0	0
2553	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2560	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2561	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
2562	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2563	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2565	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2567	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2572	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2582	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2590	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ	<LOQ
2605	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2609	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2618	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2624	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2629	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2638	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2643	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2644	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2654	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	2.13	n.d.	n.d.	n.d.	n.d.
2666	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-----
2671	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2674	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2678	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	-----
2701	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2706	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2713	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2719	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2728	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	< 8	-----
2730	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2737	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2741	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
2766	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
2767	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2773	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
2775	0	0	0	0	0	0	0	0	0	0	0

Lab	DMoxB	DDDM	pC	DDM	DDE	DDS	oT	24DAT	TMA	oA	4AAT
3100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3110	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3116	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3118	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3145	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3146	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3150	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3151	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3153	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3154	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3167	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3172	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
3174	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3176	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3182	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3185	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3186	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3191	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
3192	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	-----
3197	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3200	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3209	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3210	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3214	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3216	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	0.64	n.d.	n.d.	n.d.	-----
3218	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3220	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
3222	-----	-----	-----	-----	-----	-----	1.26	-----	-----	-----	-----
3228	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3232	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
3233	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3237	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
3248	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

APPENDIX 3

Analytical details

lab	ISO/IEC 17025 accredited for these components?	Temperature (°C) , time (minutes) for the evaporation of MTBE?	Time to perform the complete analysis (from the start of the reduction step till start of HPLC/GC analysis)	Remarks
213	Yes	---	6 hours	
230	Yes	Room T, 30 minutes	2 hours	
348	Yes	NA	1,5-2 hours	
362	Yes	---	---	
551	Yes	---	---	
623	Yes	50°C, until almost dry	8 hours	
840	Yes	---	---	
841	---	---	---	
1213	Yes	---	7 hours	liquid/ liquid-extraction method without diatomaceous earth
2102	Yes	---	---	
2115	Yes	50°C, ca 3 minutes	6 hours	
2120	No	40°C, 20 minutes	3 hours	
2129	Yes	40°C, 30 minutes	<10 hours	
2132	Yes	35°C, 15 minutes	ca 3 hours	
2146	Yes	41°C, 10 minutes	24 hours	
2159	Yes	40°C, 5 minutes	1 hour, 40 minutes	
2165	Yes	<50°C, ca 10 minutes	<24 hours	
2166	Yes	50°C, 43 minutes	9 hours	simultan evaporator with cooling area 1 ml; the samples are stored in vials in refrigerator
2170	Yes	35°C, 7-8 minutes	2.5 hours	
2172	Yes	---	---	
2184	Yes	<50°C, ca 10 minutes	ca 24 hours	
2201	Yes	40°C, ca 6-8 minutes	ca 4 hours	
2213	Yes	50°C, 30 minutes	24 hours	
2232	Yes	40°C, within 1 minute	1.5 hours	
2236	Yes	40°C, 85 minutes	3 hours, 48 minutes	
2241	Yes	45°C, 10 minutes	ca 4 hours	
2247	Yes	40°C, 10-15 minutes	ca 3 hours	
2255	Yes	40°C, 7-8 minutes	ca 3 hours	
2256	Yes	40°C	6 hours	
2258	---	---	---	
2261	Yes	35°C, 10 minutes	2 hours	
2265	Yes	50°C, 30 minutes	5 hours	
2286	No	40°C, 20 minutes	2-4 hours	
2287	Yes	40°C, 10 minutes	2.5 hours	
2289	Yes	40°C, 5 minutes	2 hours	
2290	Yes	---	---	
2291	Yes	42°C, 15 minutes	4 hours	
2293	No	30°C, 15 minutes	10 min. by GCMS, 20 min. by LCMSMS	
2295	Yes	45°C, 25 minutes	3 hours	
2301	Yes	40°C, 30 minutes	3 hours	
2303	Yes	---	---	
2310	Yes	50°C, 10-15 minutes	<3 hours	
2311	Yes	30°C, 5 minutes	2 hours	
2313	Yes	40°C, 10 minutes	2 hours	
2314	Yes	50°C, 5 minutes	4 hours	
2330	Yes	40°C	<24 hours	
2347	Yes	45°C	72 hours	
2350	Yes	NA	ca 1.5 hours	
2352	Yes	45°C, 3-5 minutes	<24 hours	
2357	Yes	35°C, 12 minutes	1.5 hours	
2358	Yes	25°C, 15 minutes	2.5 hours	
2364	Yes	45°C, 3 minutes	2 hours	
2365	Yes	40°C, 10 minutes	2 hours	
2366	Yes	45°C, 8 minutes	1 hour	
2367	Yes	40°C, 3 minutes	10 minutes	
2369	Yes	40°C, 30 minutes	4 hours	
2370	Yes	40°C, 2 minutes	2 hours	
2373	Yes	45°C, 3 minutes	2 hours	
2375	Yes	---	---	
2378	Yes	50°C, 3 minutes	1 hour, 40 minutes	
2379	Yes	40°C, 10 minutes	5 hours	
2380	Yes	40-60°C, 8-12 minutes	4-6 hours	
2381	Yes	45-60°C, 8-10 minutes	4-6 hours	

lab	ISO/IEC 17025 accredited for these components?	Temperature (°C) , time (minutes) for the evaporation of MTBE?	Time to perform the complete analysis (from the start of the reduction step till start of HPLC/GC analysis)	Remarks
2386	Yes	30°C, ca 15 minutes	ca 5 hours	
2389	Yes	---	1 hour	
2390	Yes	Room T, 15 minutes	1.5 hours	Screening Method used. Solvent Ethyl acetate
2403	Yes	45°C, 5 minutes	1 hour, 20 minutes	
2415	Yes	45°C, 10 minutes	2 hours	
2425	Yes	<50°C, ca 10 minutes	ca 6 hours	
2432	---	---	---	
2439	---	---	---	
2442	Yes	35°C, ca 10 minutes	1 hour, 40 minutes	
2449	Yes	45	4 hours	
2453	No	50°C, 3 minutes	3 hours	
2456	Yes	28°C, 5 minutes	2.5 hours	
2459	---	---	---	
2467	Yes	50°C, few minutes	1 hour	
2472	Yes	38 °C, 10 minutes	2 hours	
2475	Yes	45°C, 5-10 minutes	1.75-2 hours	
2476	Yes	40°C, 10 minutes	3 hours	
2477	No	30°C, 30 minutes	48 hours	
2482	Yes	<50°C, ca 10 minutes	ca 2 hours	
2483	---	---	---	
2486	Yes	40°C, 18 minutes	3 hours	
2489	Yes	45°C, 15 minutes	4 hours	
2492	Yes	35°C	2 hours	
2495	Yes	40°C, ca 10 minutes	72 hours	
2497	Yes	40°C, 30 minutes	4 hours	
2499	Yes	40°C, 90 minutes	ca 3 hours	
2500	Yes	40°C, ca 8 minutes	ca 4 hours	
2506	Yes	40°C, 3 minutes	ca 1 hour; 19 min. for GC	P=72 Kpa
2511	Yes	35°C, 5-10 minutes	4 hours	
2514	Yes	48°C, 10 minutes	6 Hours	
2516	---	---	---	
2520	Yes	48°C, 10 minutes	2.5 hours	
2521	Yes	20°C, 30 minutes	2.5 hours	
2528	Yes	40°C, 20 minutes	4 hours	
2532	Yes	40°C, 15 minutes	3 hours	
2534	Yes	35°C, 5 minutes	3 hours	
2536	---	---	---	
2538	Yes	---	72 hours	
2546	Yes	45°C, 60 minutes	4-5 hours	
2553	Yes	40°C, ca 3 minutes	ca 1 hour	
2560	Yes	40	3.5 hours	
2561	Yes	50°C, ca 18 minutes	8 hours	
2562	Yes	45°C, 10 minutes	4 hours	
2563	Yes	---	23 hours	
2565	Yes	35°C, ca 30 minutes	ca 4 hours	
2567	Yes	45°C, 4-5 minutes	ca 2.5 hours	
2572	Yes	---	---	
2582	Yes	40°C, 8 minutes	2 hours	
2590	Yes	40°C, 10 minutes	2 hours, 20 minutes	
2605	Yes	35°C, 8 minutes	4 hours	
2609	Yes	42°C, 15 minutes	2 hours	
2618	Yes	---	---	
2624	No	---	---	
2629	Yes	40°C, ca 10 minutes	2 hours	
2638	No	48°C , ca 8 minutes	1-1.5 hrs	
2643	---	NA	5 hours	
2644	Yes	45	2 hours	
2654	Yes	48°C, 10 minutes	<24 hours	
2666	No	45°C, 10 minutes	24 hours	
2671	Yes	45°C, 3 minutes	5 hours	
2674	Yes	35 °C, 10 minutes	<24 hours	
2678	Yes	---	8 hours	
2701	Yes	40°C, 15 minutes	3 hours, 20 minutes	
2706	No	na	3-6 hours	
2713	Yes	40°C, 5 minutes	ca 5 hours	
2719	Yes	45°C, 5 minutes	2 hours	
2728	Yes	48°C, 5 minutes	3 hours	
2730	No	45°C, 15 minutes	7 hours	
2737	Yes	70 °C, 50 minutes	3-6 hours	nitrogen blowing
2741	Yes	45°C, 45 minutes	<5 hours	
2766	Yes	25°C, 15 minutes	3 hours	

lab	ISO/IEC 17025 accredited for these components?	Temperature (°C) , time (minutes) for the evaporation of MTBE?	Time to perform the complete analysis (from the start of the reduction step till start of HPLC/GC analysis)	Remarks
2767	No	40°C, 30 minutes	3 hours	
2773	Yes	40°C, 10 minutes	ca 1 hour	
2775	Yes	45°C, 15 minutes	ca 2 hours	
3100	Yes	35°C, 4-5 minutes	4 hours	
3110	---	---	---	
3116	Yes	40°C, 15 minutes	1.2 hours	
3118	Yes	35°C, 3 minutes	1.5 hours	
3145	Yes	35°C, 10 minutes	3-4 hours	Turbo Vap, Ethylacetate depending on the sample amount
3146	Yes	50°C, ca 45 minutes	ca 2.5-3 hours	
3150	Yes	45°C, ca 8 minutes	3 hours	
3151	Yes	40°C, 30 minutes	2 hours	
3153	Yes	35°C, ca 8 minutes	<12 hours	
3154	Yes	---	---	
3167	Yes	---	---	
3172	Yes	35°C, 10 minutes	2 hours	
3174	Yes	40°C, 30 minutes	10 hours	
3176	Yes	50°C, 20 minutes	1 hour, 45 minutes	
3182	Yes	50°C, ca 20 minutes	2-3 hours	
3185	Yes	35°C, 5-10 minutes	ca 1-1.5 hours	
3186	Yes	40	6 hours	
3191	Yes	45°C, 5 minutes	<24 hours	
3192	Yes	50°C, ca 5 minutes	24 hours	to 1ml, 540-550 mbar, dryness with nitrogen
3197	Yes	40°C, 10 minutes	ca 3 hours	
3200	Yes	50°C, 5 minutes	2 hours	
3209	Yes	40°C, 4 minutes	1.5 hours	
3210	Yes	40°C, 15 minutes	2 hours	
3214	Yes	<50°C, 10 minutes	5 hours	
3216	Yes	40°C, 5-10 minutes	6 hours	
3218	Yes	40°C, ca 5 minutes	ca 2 hours	
3220	Yes	35°C, 3 minutes	3 hours	
3222	Yes	45°C	3 hours	
3228	Yes	<50°C, ca 15 minutes	<12 hours	
3232	Yes	40°C, 8 minutes	2 hours, 45 minutes	
3233	No	45°C, 10 minutes	2 hours	
3237	Yes	60°C, 2 minutes	1.25 hours	
3248	Yes	---	---	

APPENDIX 4

Number of participants per country

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

APPENDIX 5

Abbreviations:

C	= final test 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
ex	= test result excluded from statistical evaluation
n.a.	= not applicable
n.e.	= not evaluated
n.d.	= not detected

Literature:

1 iis-Interlaboratory Studies: Protocol for the Organisation, Statistics and Evaluation, March 2017
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11 W.J. Conover, Practical; Nonparametric Statistics, J. Wiley&Sons, NY, p.302, (1971)
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