Results of Proficiency Test Disperse dyes in textile March 2015

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## **1** INTRODUCTION

Coloured fabrics, when in contact with human skin, may cause Allergic Contact Dermatitis. The following twenty Dyestuffs are classified as allergenic. Textiles are not allowed to contain more than 50 mg/kg of the 20 below listed dyes according to Öko-tex Standard 100 edition 01/2012 (reference 13), of which 9 are mentioned in DIN54231:

C.I. Disperse Blue 1	CASno 2475-45-8	C.I.no 64 500	(in DIN54231)
C.I. Disperse Blue 3	CASno 2475-46-9	C.I.no 61 505	(in DIN54231)
C.I. Disperse Blue 7	CASno 3179-90-6	C.I.no 62 500	
C.I. Disperse Blue 26	CASno 3860-63-7	C.I.no 63 305	
C.I. Disperse Blue 35	CASno 12222-75-2 (*)		(in DIN54231)
C.I. Disperse Blue 102	CASno 12222-97-8		
C.I. Disperse Blue 106	CASno 12223-01-7		(in DIN54231)
C.I. Disperse Blue 124	CASno 61951-51-7		(in DIN54231)
C.I. Disperse Brown 1	CASno 23355-64-8		
C.I. Disperse Orange 1	CASno 2581-69-3	C.I.no 11 080	
C.I. Disperse Orange 3	CASno 730-40-5	C.I.no 11 005	(in DIN54231)
• C.I. Disperse Orange 37/76	CASno 13301-61-6	C.I.no 11 132	(in DIN54231)
C.I. Disperse Red 1	CASno 2872-52-8	C.I.no 11 110	(in DIN54231)
C.I. Disperse Red 11	CASno 2872-48-2	C.I.no 62 015	
C.I. Disperse Red 17	CASno 3179-89-3	C.I.no 11 210	
C.I. Disperse Yellow 1	CASno 119-15-3	C.I.no 10 345	
C.I. Disperse Yellow 3	CASno 2832-40-8	C.I.no 11 855	(in DIN54231)
C.I. Disperse Yellow 9	CASno 6373-73-5	C.I.no 10 375	
C.I. Disperse Yellow 39	CASno 12236-29-2		
C.I. Disperse Yellow 49	CASno 54824-37-2		

\* Disperse Blue 35 consists of a mixture of components, of which the monomethylated 1,8diamino-4,5-dihydroxyanthraquinone (CASno 56524-77-7) and the dimethylated 1,8diamino-4,5-dihydroxyanthraquinone (CASno 56524-76-6) are responsible for the sensitizing potency of Disperse Blue 35, see also report iis09A04X of May 2009.

The German ban on the above disperse dyes has become a widely publicised issue in the textile industry. Dyestuff manufacturers, processors and exporters are careful in the selection of disperse dyes. However, several dyestuffs that are skin sensitizers may still be in use for dyeing polyester and nylon.

In this context and in response to requests from several laboratories, the Institute for Interlaboratory Studies (iis) organises a proficiency test for disperse dyes in textile in the annual proficiency test program since 2003.

In the 2015 interlaboratory study 85 laboratories in 23 different countries registered for participation. See appendix 4 for the number of participants per country. In this report the results of the 2015 proficiency test are presented and discussed.

## 2 SET UP

The Institute for Interlaboratory Studies in Spijkenisse was the organizer of this proficiency test. It was decided to use in this proficiency test 2 different textile samples, treated with banned disperse dyestuffs. The textile samples were prepared by two different third parties and tested for homogeneity by an accredited laboratory. The participants were asked to report the analytical results with one extra figure using the indicated units on the report form. These results with an extra figure are 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% confidentially of participant's data. Feedback from the participants on the reported data is encouraged and customer's satisfaction is measured on regular basis by sending out questionnaires.

## 2.2 PROTOCOL

The protocol followed in the organisation was the one as described for proficiency testing in the report 'iis Interlaboratory Studies: Protocol for the Organisation, Statistics and Evaluation' of April 2014 (iis-protocol, version 3.3). This protocol can be downloaded via the FAQ page of the iis website http://www.iisnl.com.

## 2.3 CONFIDENTIALITY STATEMENT

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

## 2.4 SAMPLES

Two different bulk materials, prepared by two different third parties, were used in this proficiency test. The first bulk sample, a polyester fabric dyed with two banned Allergenic dyes, was cut in small pieces and homogenized. From this batch, 100 subsamples were prepared of 3 gram each and labelled #15023.

The second bulk sample, a cotton fabric dyed with two other banned Allergenic dyes, was also cut in small pieces and homogenized. From this batch also 100 subsamples were prepared of 1.5 gram each.

The homogeneity of the subsamples #15023 was checked by determination of Disperse Red 17 in accordance with DIN54231:05 on 8 stratified randomly selected samples. The homogeneity of the subsamples #15024 was checked by determination of Disperse Red 11 in accordance with DIN54231:05 on 8 stratified randomly selected samples. See the following tables for the test results.

	Disperse Red 17
	in mg/kg
sample #15023-1	98.3
sample #15023-2	96.1
sample #15023-3	93.2
sample #15023-4	101.4
sample #15023-5	103.1
sample #15023-6	107.5
sample #15023-7	105.1
sample #15023-8	108.2

table 1: homogeneity test of subsamples #15023

	Disperse Red 11 in mg/kg
sample #15024-1	26.7
sample #15024-2	28.7
sample #15024-3	29.7
sample #15024-4	26.6
sample #15024-5	26.7
sample #15024-6	30.1
sample #15024-7	29.8
sample #15024-8	27.1

table 2: homogeneity test of subsamples #15024

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

	Disperse Red 17 #15023 in mg/kg	Disperse Red 11 #15024 in mg/kg
r(calc)	15.1	4.4
Reference method	DIN54231:05	DIN54231:05
r(reference)	27.1	7.5

table 3: repeatabilities of subsamples #15023 and #15024

The repeatabilities of the test results of the determined disperse dyes were both in good agreement with the repeatability that is mentioned in DIN54231:05. Therefore homogeneity of the subsamples was assumed.

To each of the participating laboratories, one sample #15023 and one sample #15024 were sent on March 4, 2015.

#### 2.5 ANALYSES

The participants were asked to determine the concentrations of 20 forbidden allergenic dyes, applying the analysis procedure that is routinely used in the laboratory. To get comparable results a detailed report form, on which the requested dyestuffs and the units were pre-printed, was sent together with each set of samples. Furthermore an extra report form for reporting the analytical details was enclosed. Also a letter of instructions was added.

#### 3 RESULTS

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

Directly after the deadline, a reminder fax was sent to those laboratories that had not yet reported. Shortly after the deadline, the available results were screened for suspect data. A result was called suspect in case the Huber Elimination Rule (a robust outlier test) found it to be an outlier. The laboratories that produced these suspect data were asked to check the results. Additional or corrected data are placed under 'Remarks' in the result tables in appendix 1. A list of abbreviations used in the tables can be found in appendix 5.

#### 3.1 STATISTICS

Statistical calculations were performed as described in the report 'iis Interlaboratory Studies: Protocol for the Organization, Statistics and Evaluation' of April 2014 (iis-protocol, version 3.3)

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

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

In accordance to ISO 5725 (1986 and 1994) the original results per determination were submitted subsequently to Dixon and Grubbs outlier tests. Outliers are marked by D(0.01) for the Dixon test, by G(0.01) or DG(0.01) for the Grubbs test and by R(0.01) for the Rosner General ESD test (see appendix 5, no.18). Stragglers are marked by D(0.05) for the Dixon test, by G(0.05) or DG(0.05) for the Grubbs test and by R(0.05) for the Dixon test, by G(0.05) or DG(0.05) for the Grubbs test and by R(0.05) for the averages and the standard deviations.

For each assigned value, the uncertainty was determined in accordance with ISO13528. Subsequently the calculated uncertainty was evaluated against the respective requirement based on the target reproducibility in accordance with ISO13528. When the uncertainty passed the evaluation, no remarks are made in the report. However, when the uncertainty failed the evaluation it is mentioned in the report and it will have consequences for the evaluation of the test results.

Finally, the reproducibilities were calculated from the standard deviations by multiplying them with a factor of 2.8.

## 3.2 GRAPHICS

In order to visualise the data against the reproducibilities from literature, Gauss plots were made, using the sorted data for one determination (see appendix 1). On the Y-axis the reported analysis results are plotted. The corresponding laboratory numbers are on the X-axis. The straight horizontal line presents the consensus value (a trimmed mean). The four striped lines, parallel to the consensus value line, are the +3s, +2s, -2s and -3s target reproducibility limits of the selected standard. Outliers and other data, which were excluded from the calculations, are represented as a cross. Accepted data are represented as a triangle.

Furthermore, Kernel Density Graphs were made. This is a method for producing a smooth density approximation to a set of data that avoids some problems associated with histograms (see appendix 5; nos.16 and 17). Also a normal Gauss curve was projected over the Kernel Density Graph.

## 3.3 Z-SCORES

To evaluate the performance of the individual participating laboratories the z-scores were calculated. In order to be able to have an objective evaluation of the performance of the individual participants, it was decided to evaluate this performance against the literature requirements. Therefore the z-scores were calculated using a target standard deviation. This target standard deviation was calculated from the literature reproducibility by division with 2.8.

The z<sub>(target)</sub>-scores were calculated according to:

 $z_{\text{(target)}} = (\text{individual result} - \text{average of proficiency test}) / \text{target standard deviation}$ 

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

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

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

 $\begin{aligned} |z| < 1 & good \\ 1 < & |z| < 2 & satisfactory \\ 2 < & |z| < 3 & questionable \\ 3 < & |z| & unsatisfactory \end{aligned}$ 

#### 4 EVALUATION

During the execution of this proficiency test, problems occurred with the delivery of the samples to the laboratories in Bangladesh, P.R. of China, Pakistan, Tunisia and Turkey. These laboratories received the samples late. Twenty-three participants reported test results after the deadline and two participants did not report any test results at all. Finally, 83 participants reported 275 numerical results. Observed were no less than 46 outlying test results, which is 16.7% (!) of the numerical results. 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

In this section the results are discussed per sample. All test results reported on the textile samples are summarised in appendix 1. As in previous PTs almost all participants reported to have used DIN54231 as test method, only a small number of test details were requested to be reported (see appendix 3).

In DIN54231 no reproducibility is mentioned. Only the standard deviation for the repeatability is mentioned. Therefore, the target reproducibility was estimated as follows: the repeatability standard deviation was multiplied with 2.8 to get the target repeatability. And this was multiplied with 3 to get an estimate of the target reproducibility.

<u>Textile #15023</u>: This polyester was dyed by a third party with the banned dyes: Disperse Orange 1 and Disperse red 17. The results reported by the participating laboratories vary strongly (from 73.65 mg/kg – 1398 mg/kg for Disperse Orange 1 and from 35.8 mg/kg – 981 mg/kg for Disperse Red 17). For Disperse Orange 1, nine statistical outliers were observed and the calculated reproducibility after rejection of the statistical outliers is not in agreement with the estimated reproducibility of DIN54231:05. For Disperse Red 17, eleven statistical outliers were observed. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the estimated reproducibility of DIN54231:05. All laboratories would have rejected this sample for containing too much Allergenic Dyestuffs (acc. to the limit of Öko-tex Std.100 edition 01/2015 of 50 mg/kg).

Textile #15024: This fabric was dyed by a third party with the banned dye: Disperse Blue 35 and Disperse Red 11. The results reported by the participating laboratories vary strongly (from 2.1 mg/kg - 129 mg/kg for Disperse Blue 35 and from 4.3 mg/kg – 437 mg/kg for Disperse Red 11). For Disperse Blue 35, six statistical outliers were observed. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the estimated reproducibility of DIN54231:05. For Disperse Red 11, twenty statistical outliers were observed. The calculated reproducibility after rejection of the statistical outliers is not in agreement with the estimated reproducibility of DIN54231:05. Laboratory 2386 reported the presence of Disperse Red 1 in sample #15024. Possibly the peak of Disperse Red 11 was misidentified by this laboratory (as laboratory 2272 did initially). At least 29 laboratories would not have rejected this sample for containing too much Allergenic Dyestuffs (acc. to the limit of Öko-tex Std.100 edition 01/2012 of 50 mg/kg). All other laboratories would have rejected this sample.

## 4.2 **PERFORMANCE EVALUATION FOR THE GROUP OF LABORATORIES**

A comparison has been made between the reproducibilities as declared by the relevant standard method and the reproducibilities as found for the group of participating laboratories.

The number of significant results, the average results, the calculated reproducibilities (standard deviation\*2.8) and the target reproducibilities, derived from the official test method DIN54231:05 are compared in the next tables.

Parameter	unit	n	average	2.8 * sd	R (target)
Disperse Orange 1	mg/kg	71	226	266	181
Disperse Red 17	mg/kg	70	120	112	96

table 4: reproducibilities for sample #15023

Parameter	unit	n	average	2.8 * sd	R (target)
Disperse Blue 35	mg/kg	29	24	21	19
Disperse Red 11	mg/kg	59	29	33	23

table 5: reproducibilities for sample #15024

Without further statistical calculations it can be concluded that for the evaluated allergenic dyestuffs the group of participating laboratories may have difficulties with the analysis of Disperse Orange 1 and Disperse Red 11. See also the discussion in paragraphs 4.1 and 5.

### 5 DISCUSSION

The uncertainties in the test results of the evaluated Disperse dyes in the iis15A03 PT are listed in the next table and are comparable with previous proficiency tests.

	March 2015	March 2014	March 2013	March 2012	March 2011	2010 – 2006	target DIN54321
Disperse Blue 1	n.e.	n.e.	n.e.	n.e.	n.e.	43%	27%
Disperse Blue 3	n.e.	n.e.	56%	42%	51%	36 - 51%	27%
Disperse Blue 26	n.e.	n.e.	n.e.	68%	n.e.	47 - 56%	27%
Disperse Blue 35	31%	n.e.	n.e.	n.e.	n.e.	57 - 84%	27%
Disperse Blue 106	n.e.	28%	n.e.	n.e.	n.e.	n.e.	27%
Disperse Brown 1	n.e.	33%	n.e.	n.e.	n.e.	n.e.	27%
Disperse Orange 1	42%	n.e.	47%	n.e.	44%	n.e.	27%
Disperse Orange 3	n.e	31%	n.e.	n.e.	n.e.	24 – 54%	27%
Disperse Red 1	n.e.	n.e.	n.e.	n.e.	36%	63%	27%
Disperse Red 11	41%	n.e.	n.e.	65%	n.e.	45 - 56%	27%
Disperse Red 17	33%	n.e.	n.e.	n.e.	n.e.	n.e.	27%
Disperse Yellow 3	n.e.	n.e.	29%	n.e.	28%	n.e.	27%
Disperse Yellow 9	n.e.	n.e.	n.e.	n.e.	n.e.	31%	27%
Disperse Yellow 49	n.e.	n.e.	n.e.	n.e.	n.e.	54%	27%

table 6: development of uncertainties over the last years

From the above table it is clear that for all four Disperse dyes investigated in this PT, a quality improvement is observed. But all uncertainties are still above the target uncertainty of 27%, estimated from DIN 54231. All participants detected the added dyestuffs in both sample #15023 and sample #15024. However, a number of laboratories had difficulties to detect Disperse Blue 35, see also PT iis09A04.

From the details, it is clear that almost all participants used Methanol as extraction solvent. There is also little variation in temperature (except for two participants) and extraction time (except four participants) used: 70°C and 30 minutes. As intake 68 participants used 0.5 gram and 13 participants used 1.0 gram.

It is striking that all Kernel Density plots are quite similar. All plots show a heavy tail at the higher end. In these high end tails, 99% of all statistical outliers are present. A possible explanation for this phenomenon may be found in the calibration. DIN54231 prescribes a calibration at 6 concentrations, from 5 mg/l up to 50 mg/l methanol. When a laboratory prepares a stock solution of 500 mg/l for this purpose, it may encounter some difficulties with the dissolution of some of the dye(s) in methanol. Heating and sonication help to dissolve the dye(s). However, when the stock solution is kept at 4°C, something that a lab may do as standard procedure, part of the dye(s) may precipitate. This may be unnoticed due to the dark colour of the solution. The consequences of this may be lower actual concentrations of the calibration solutions and higher test results during the analysis of a sample. Skipping the cooling step at 4°C and direct dilution of the stock solution to the required calibration solution may prevent precipitation of the dyes and will result in reliable test results.

Determination of Disperse Orange 1 (CASno.2581-69-3) in sample #15023; results in mg/kg

213         Inc.         Inc.         Inc.           252         In Nuclean         1338         R(0.01)         18.11           551         Inst221         162.3         -0.93         first reported.         1723.0           2119         Inst221         162.45         C. (R(0.01)         6.16         first reported:         848.34           2132         Inst221         162.45         C. (R(0.01)         6.16         first reported:         848.34           2132         Inst221         203.93         -0.30         1.16         first reported:         848.34           2130         Inst221         203.93         -0.30         1.170         1.050           2141         Inst221         171         -0.650         1.170         1.050           2141         Inst221         1171         -0.650         1.170         1.030           2142         Inst221         1171         -0.650         1.030         1.030         1.030           2144         Inst221         160         1.170         1.030         1.030         1.030         1.030         1.030         1.030         1.030         1.030         1.030         1.030         1.030         1.030         1	lab	method	value	mark	z(targ)	remarks
382         In house         1398         R(0.01)         18.14           663         DNN54231         165.6         -1.17           7110         DNN54231         113.6         -1.17           7111         DNN54231         30.3         -1.16           7112         DNN54231         30.3         -1.16           7113         DNN54231         30.3         -1.16           7113         DNN54231         30.3         -1.16           7113         DNN54231         30.3         -0.30           7114         -0.85         -0.30           7115         DNN54231         10.1           7114         -0.85           7115         DNN54231         10.1           7114         -0.85           7115         DNN54231         10.1           7114         -0.85           7115         DNN54231         12.6           7114         -0.85           7114         -0.85           7115         DNN54231         13.6           7114         -1.24           7115         DNN54231         14.1           7115         DNN54231         14.1           7115 <th>213</th> <th>moniou</th> <th></th> <th>mark</th> <th></th> <th>Tomarko</th>	213	moniou		mark		Tomarko
S51	362	in house	1398	R(0.01)	18.11	
425       DNR4231       150.6       -1.17         115       DNR4231       124.9       C. R(0.01)       6.16         1132       DNR4231       301.3       1.64         1133       DNR4231       306.3       1.64         1131       DNR4231       306.3       1.64         1131       DNR4231       306       1.70         1135       DNR4231       306       1.70         1146       DNR4231       323       1.50         1146       DNR4231       323       1.50         1147       DNR4231       323       1.50         1148       DNR4231       225       0.53         1141       -0.85       0.91         1142       DNR4231       225       0.54         1141       225       DNR4231       166.12       0.62         1141       115       -1.16       1.62         1151       DNR4231       144.8       -1.27         1151       DNR4231       144.8       -1.27         1151       DNR4231       150.9       -1.61         1151       DNR4231       150.9       -1.61         1151       DNR4231       150.9 </td <td>551</td> <td></td> <td></td> <td></td> <td></td> <td></td>	551					
100       100       100       100       100         1213       Initication       100       6.16       first reported: 172.0         1213       Initication       6.24.95       C.R(0.01)       6.16       first reported: 172.0         1213       Initication       206.39       -0.30       -0.30         1215       Initication       -0.70       -0.30         1217       Initication       -0.70         1218       Initication       -0.70         1219       Initication       -0.70         1211       Initication       -0.70         1212       Initication       -0.70         1213       2015       -0.36         2247       Initication       -1.25         10184231       202.5       -0.36         2239       Initication       -1.26         2311       Initication       -1.26         2312       Initication       -1.26         2313       Initication       -1.41         2330       Initication       -1.41         2331       Initication       -1.41         2335       Initication       -1.41         2335       Initication       -1.41 </td <td>623</td> <td>DIN54231</td> <td>150.6</td> <td></td> <td>-1.17</td> <td></td>	623	DIN54231	150.6		-1.17	
122       Dink4231       323       C,R(0.01)       6.16       inst reported: 848.34         133       Dink4231       301.3       1.16         133       Dink4231       306.39       1.30         134       Dink4231       308       1.70         135       Dink4231       181       -0.70         137       Dink4231       181       -0.70         138       Dink4231       181       -0.70         139       Dink4231       184       -0.70         131       Dink4231       285       0.91         12227       Dink4231       285       0.91         12280       Dink4231       126       0.91         12281       Dink4231       146       -1.24         139       Dink4231       146       -1.24         130       Dink4231       146       -1.24         130       Dink4231       145       -1.26         131       147       -0.82         1330       Dink4231       135       -1.14         1435       Dink4231       136       -1.18         1535       Dink4231       136       -1.18         1545       Dink4231 <td>2100</td> <td>DIN54231 DIN54231</td> <td>102.3</td> <td>C</td> <td>-0.99</td> <td>first reported: 1723.0</td>	2100	DIN54231 DIN54231	102.3	C	-0.99	first reported: 1723.0
2132       DNN64231       332.1       1.64         2133       DNN64231       206.39       4.030         2138       DNN64231       206.39       4.030         2165       DNN64231       171       4.045         2172       DNN64231       179       4.73         2184       DNN64231       202.5       4.05         2275       DNN64231       202.5       4.03         2271       DNN64231       202.5       4.03         22721       DNN64231       202.5       4.03         22722       DNN64231       407.9       2.81         2283       DNN64231       165       -1.24         2300       DNN64231       166       -1.24         2301       DNN64231       166       -1.24         2302       DNN64231       166       -1.24         2303       DNN64231       135       -1.16         2304       DNN64231       135       -1.47         2305       DNN64231       136       -1.47         2305       DNN64231       136       -1.47         2305       DNN64231       136       -1.47         2305       DNN64231       1	2129	in house	624.95	C,R(0.01)	6.16	first reported: 848.34
2137       DIN54231       301.3       1.16         2138       DIN54231       306       39       0.30         2139       DIN54231       306       39       0.30         2134       DIN54231       306       39       0.30         2141       DIN54231       107       0.66       0.33         2121       DIN54231       323       1.50       0.33         2222       DIN54231       202.5       0.50       0.51         2238       DIN54231       264       0.52       0.50         2249       DIN54231       164       -1.56         2230       DIN54231       164       -1.24         2330       DIN54231       164       -1.16         2330       DIN54231       151       -1.16         2330       DIN54231       152.0       -1.14         2350       DIN54231       152.0       -1.14         2351       DIN54231       152.0       -1.16         2352       DIN54231       152.0       -1.16         2352       DIN54231       156.9       -1.16         2352       DIN54231       156.9       -1.16         2350 <td< td=""><td>2132</td><td>DIN54231</td><td>332.1</td><td></td><td>1.64</td><td>'</td></td<>	2132	DIN54231	332.1		1.64	'
2138       DIN54231       206.39       -0.30         2185       DIN54231       171       -0.85         2181       DIN54231       171       -0.85         2247       DIN54231       350.8       133         2247       DIN54231       202.5       -0.36         2247       DIN54231       202.5       -0.36         2248       DIN54231       205.4       -0.91         2272       DIN54231       205.4       -0.91         2282       DIN54231       125.4       -1.24         2301       DIN54231       186.12       -0.62         2310       DIN54231       186.1       -1.12         2311       DIN54231       186.1       -1.14         2325       DIN54231       150       -1.14         2335       DIN54231       152.0       -1.14         2336       DIN54231       152.0       -1.14         2335       DIN54231       152.0       -1.14         2336       DIN54231       150       -1.47         2337       DIN54231       150       -1.18         2335       DIN54231       152.0       -1.18         2336       DIN54231 </td <td>2137</td> <td>DIN54231</td> <td>301.3</td> <td></td> <td>1.16</td> <td></td>	2137	DIN54231	301.3		1.16	
2136     Dirketabili     3.31     1.045       2117     Dirketabili     3.31     1.045       2118     Dirketabili     1.03       2114     Dirketabili     1.03       2124     Dirketabili     32.3     1.50       2247     Dirketabili     32.3     1.50       2255     Dirketabili     32.3     1.50       2271     Dirketabili     22.5     -0.36       2282     Dirketabili     22.5     -0.36       2290     Dirketabili     25.4     -1.56       2290     Dirketabili     146     -1.24       2310     Dirketabili     146.5     -1.26       2311     Dirketabili     146.6     -1.14       2320     Dirketabili     146.6     -1.14       2331     Dirketabili     146.6     -1.14       2332     Dirketabili     150.0     -1.14       2345     Dirketabili     150.0     -1.14       2355     Dirketabili     150.0     -1.47       2365     Dirketabili     150.0     -1.47       2365     Dirketabili     150.0     -1.47       2365     Dirketabili     150.9     -1.16       2370     Dirketabili     150.9     -1.1	2138	DIN54231	206.39		-0.30	
2172       DNK54231       181       -0.70         2140       DNK54231       350.8       1.93         2247       DNK54231       320.8       1.93         2247       DNK54231       225       -0.36         2271       DNK54231       407.9       2.81         2289       DNK54231       407.9       2.81         2280       DNK54231       186.1       -1.86         2281       DNK54231       186.1       -1.86         2381       DNK54231       146.1       -1.86         2381       DNK54231       146.1       -1.61         2390       DNK54231       149.6       -1.18         2390       DNK54231       135       -1.14         2385       DNK54231       136       -1.14         2385       DNK54231       137       -1.38         2385       DNK54231       150       -1.18         2386       DNK54231       150       -1.16         2386       DNK54231       150.9       -1.16         2386       DNK54231       156.5       -1.37         2446       64882.02.10       337.26       -1.72         2441       DNK54231	2165	DIN54231 DIN54231	171		-0.85	
2143       NIN54231       350.8       1.93         2247       NIN54231       323       1.50         2255       NIN54231       323       1.50         2272       NIN54231       285       0.91         2280       NIN54231       286       0.91         2281       NIN54231       164.8       R(0.01)       5.24         2283       DIN54231       186.12       -0.62         2310       DIN54231       146       -1.24         2331       DIN54231       146.1       -1.62         2332       DIN54231       146.1       -1.62         23330       DIN54231       142.5       -1.14         2332       DIN54231       150       -1.14         2335       DIN54231       152.0       -1.16         2356       DIN54231       151       -1.17         2365       DIN54231       151       -1.16         2375       DIN54231       156.3       -2.48         2380       DIN54231       156.3       -1.16         2375       DIN54231       156.3       -1.24         2380       DIN54231       156.3       -1.24         2380       <	2172	DIN54231	181		-0.70	
2247     DNN54231     350.8     1.93       2247     DNN54231     202.5     -0.36       2251     DNN54231     202.5     -0.36       2272     DNN54231     261.4     -0.52       2280     DNN54231     125.4     -0.62       2280     DNN54231     126.4     -1.24       2301     DNN54231     186.1     -1.24       2302     DNN54231     186.1     -1.24       2303     DNN54231     185     -1.41       2334     DNN54231     185.0     -1.41       2335     DNN54231     137     -1.42       2336     DNN54231     137     -1.47       2337     DNN54231     137     -1.47       2338     DNN54231     136     -1.47       2339     DNN54231     136.3     -1.47       2340     DNN54231     136.3     -1.47       2351     DNN54231     136.8     -1.38       2360     DNN54231     136.83     -1.38       2375     DNN54231     136.83     -1.38       2440     DNN54231     367.03     2.26       2441     DNN54231     367.5     1.72       2442     DNN54231     367.5     1.72	2184	DIN54231	179		-0.73	
2247     DNN64231     323     1.50       2275     DNN64231     285     0.91       2272     DNN64231     285     0.91       2280     DNN64231     125.4     -1.56       2290     DNN64231     146     -1.24       2310     DNN64231     146.12     -0.62       2310     DNN64231     145     -1.16       2331     DNN64231     149.6     -1.18       2332     DNN64231     149.6     -1.16       2335     DNN64231     150     -1.41       2336     DNN64231     150     -1.41       2335     DNN64231     150     -1.41       2336     DNN64231     150     -1.41       23385     DNN64231     162     -0.99       23370     DNN64231     150     -1.47       23385     DNN64231     150     -1.16       2339     DNN64231     150.9     -1.16       2340     DNN64231     150.9     -1.16       2340     DNN64231     150.9     -1.16       2340     DNN64231     150.9     -1.16       2340     DNN64231     367.0     2.22       2441     DNN64231     37.6     1.72       2442	2201	DIN54231	350.8		1.93	
1227       DNR-104       108         2272       DNR-4231       60.8       R(0.01)       5.24         2280       DNR-4231       125.4       -1.56         2291       DNR-4231       146       -1.24         2301       DNR-4231       146.12       -0.62         2310       DNR-4231       146.12       -1.25         2330       DNR-4231       144.18       -1.27         2330       DNR-4231       135       -1.41         2332       DNR-4231       135.0       -1.41         2333       DNR-4231       135.0       -1.38         2334       DNR-4231       136       -1.47         2335       DNR-4231       136.1       -1.47         2336       DNR-4231       136.83       -1.38         2330       DNR-4231       136.83       -1.38         2340       DNR-4231       36.7535       2.48         2350       DNR-4231       36.7535       2.48         2360       DNR-4231       36.7535       2.48         2375       DNR-4231       36.7535       2.48         2380       DNR-4231       36.75       1.72         2446       6	2247	DIN54231 DIN54231	323		1.50	
2229       DNS4231       407.9       2.81         2290       DNS4231       125.4       R(0.01)       5.24         2290       DNS4231       125.4       R(0.01)       5.24         2301       DNS4231       186.12       -0.62         2310       DNS4231       145       -1.25         2311       DNS4231       144.18       -1.27         2330       DNS4231       150       -1.41         2357       DNS4231       152.0       -1.41         2358       DNS4231       150       -1.41         2365       DNS4231       150       -1.47         2366       DNS4231       150       -1.18         2375       DNS4231       150       -1.18         2380       DNS4231       150       -1.16         2390       DNS4231       156.9       -1.16         2390       DNS4231       156.9       -1.16         2390       DNS4231       156.9       -1.16         2390       DNS4231       136.7.5       2.48         2400       DNS4231       136.6      38         2410       DNS4231       136.6      226         2425 <td>2233</td> <td>DIN54231</td> <td>285</td> <td></td> <td>0.91</td> <td></td>	2233	DIN54231	285		0.91	
2280       DINS4231       125.4      6         2280       DINS4231       125.4      6         2281       DINS4231       186.12       -0.62         2310       DINS4231       145      1.6         2330       DINS4231       144.18      1.27         2330       DINS4231       143.6      1.18         2332       DINS4231       152.0      1.14         2338       DINS4231       150.0      1.6         2339       DINS4231       150.0      1.8         2339       DINS4231       150.0      1.8         2330       DINS4231       150.0      1.8         2330       DINS4231       150.9      1.18         2330       DINS4231       150.9      1.18         2330       DINS4231       150.9      1.18         2340       DINS4231       150.9      1.18         23410       DINS4231       156.9      14         2342       DINS4231       36.673.5       2.22         2442       DINS4231       36.632       .0.12         2445       DINS4231       26.65       .0.12         2445	2272	DIN54231	407.9		2.81	
2295       DINS4231       125.4       -1.56         2301       DINS4231       186.12       -0.62         2311       DINS4231       151       -1.25         23130       DINS4231       151       -1.6         2330       DINS4231       149.6       -1.27         2330       DINS4231       152.0       -1.6         2335       DINS4231       135       -1.41         2336       DINS4231       137       -1.38         23365       DINS4231       137       -1.6         23360       DINS4231       150       -1.14         2339       DINS4231       150       -1.14         2339       DINS4231       150       -1.14         23300       DINS4231       150       -1.14         23300       DINS4231       150       -1.16         23300       DINS4231       150.9       -1.16         23300       DINS4231       156.4       -2.36         2340       DINS4231       36.6       0.23         2451       DINS4231       37.6       -7.2         2452       DINS4231       261.0       1.39         2452       DINS4231	2289	DIN54231	564.8	R(0.01)	5.24	
2245       DINS4231       146       -1.24         2310       DINS4231       145       -1.25         2311       DINS4231       144.18       -1.27         2330       DINS4231       144.18       -1.27         2335       DINS4231       135       -1.14         2335       DINS4231       152.0       -1.14         2336       DINS4231       157       -1.38         2336       DINS4231       150       -1.47         2337       DINS4231       150       -1.14         2338       DINS4231       151       -1.47         2339       DINS4231       152       -0.99         2375       DINS4231       150.9       -1.14         2380       DINS4231       150.9       -1.14         2380       DINS4231       150.9       -1.16         2380       DINS4231       150.9       -1.16         2380       DINS4231       156.50       R(0.01)       5.7         2442       DINS4231       365.602       R(0.01)       5.7         2442       DINS4231       37.10       2.22       -2.36         24445       DINS4231       365.79       -0.29 </td <td>2290</td> <td>DIN54231</td> <td>125.4</td> <td></td> <td>-1.56</td> <td></td>	2290	DIN54231	125.4		-1.56	
2310       DIN4231       145       -1.26         2311       DIN54231       151       -1.16         23130       DIN54231       144.18       -1.27         23300       DIN54231       144.6       -1.81         2330       DIN54231       135       -1.41         2337       DIN54231       137       -1.38         2365       DIN54231       137       -1.38         2365       DIN54231       131       -1.47         2380       DIN54231       150       -1.18         2370       DIN54231       150       -1.18         2386       DIN54231       150       -1.16         2380       DIN54231       150       -1.16         2380       DIN54231       150.9       -1.16         2380       DIN54231       156.83       -1.38         2440       DIN54231       150.9       -1.16         2380       DIN54231       370.0       2.22         24410       DIN54231       370.0       2.22         24420       DIN54231       376.0       1.39         24421       DIN54231       377.0       2.18         24423       DIN54231	2295	DIN54231 DIN54231	146 186 12		-1.24	
2311       DIN54231       141       -1.16         2330       DIN54231       144.18       -1.27         2350       DIN54231       135       -1.14         2362       DIN54231       152.0       -1.14         2363       DIN54231       137       -1.38         2365       DIN54231       131       -1.47         2375       DIN54231       162       -0.99         2375       DIN54231       150       -1.18         2380       DIN54231       154       -1.17         2379       DIN54231       150.9       -1.16         2380       DIN54231       150.9       -1.14         2380       DIN54231       150.9       -1.14         2380       DIN54231       150.9       -1.14         2380       DIN54231       150.9       -1.16         2410       DIN54231       156.9       -1.22         2421       DIN54231       156.9       -1.22         2442       DIN54231       365.02       R(0.01)       5.7         2445       DIN54231       261.0       1.38         2446       DIN54231       261.0       1.32         2447	2310	DIN54231	145		-1.25	
2330       DINS4231       144.18       -1.27         2330       DINS4231       135       -1.18         2335       DINS4231       152.0       -1.14         2338       DINS4231       152.0       -1.14         2338       DINS4231       150.0       -1.56         2336       DINS4231       131       -1.47         2365       DINS4231       160       -1.18         2370       DINS4231       162       -0.99         2375       DINS4231       136.7535       -2.48         2380       DINS4231       154.1       -1.11         2380       DINS4231       156.1       -1.16         2380       DINS4231       156.1       -1.11         2380       DINS4231       156.2       -2.48         2380       DINS4231       156.1       -1.11         2380       DINS4231       36.75.5       -2.48         2380       DINS4231       370       2.22         24410       DINS4231       370       2.22         24452       DINS4231       36.0       1.39         24452       DINS4231       36.6       1.73         24452       DINS4231	2311	DIN54231	151		-1.16	
2350       DINS4231       149.6       -1.18         2357       DINS4231       135       -1.41         2357       DINS4231       125.0       -1.14         2368       DINS4231       137       -1.38         2365       DINS4231       130       -1.41         2369       DINS4231       130       -1.47         2369       DINS4231       150       -1.41         2370       DINS4231       150       -1.47         2370       DINS4231       150       -1.47         2370       DINS4231       150.9       -1.16         2380       DINS4231       150.9       -1.16         2380       DINS4231       136.52       R(0.01)       5.7         2410       DINS4231       366.502       R(0.01)       5.7         2426       DINS4231       366.502       R(0.01)       5.7         2446       6482.02.10       337.8       1.32         2442       DINS4231       366.50       3.71         2443       DINS4231       357.8       -1.02         2448       DINS4231       237.8       -1.02         2545       DINS4231       208.7       -0.27	2330	DIN54231	144.18		-1.27	
2352       DINS4231       133       -1.41         2356       DINS4231       152.00       -1.56         2363       DINS4231       131       -1.47         2369       DINS4231       150       -1.18         2370       DINS4231       150       -1.18         2370       DINS4231       150       -1.18         2371       DINS4231       152       -0.99         2375       DINS4231       154.1       -1.11         2386       DINS4231       154.1       -1.11         2386       DINS4231       156.1       -1.16         2380       DINS4231       156.2       -2.48         2380       DINS4231       156.2       -1.16         2380       DINS4231       156.2       -1.16         2380       DINS4231       36.83       -1.38         24410       DINS4231       370       2.22         2452       DINS4231       37.0       2.22         2462       DINS4231       37.1       2.18         2482       DINS4231       37.6       1.39         2483       DINS4231       2.05       -0.27         2544       DINS4231	2350	DIN54231	149.6		-1.18	
2368         DIN54231         125.0         1.56           2383         DIN54231         137         -1.38           2385         DIN54231         150         -1.18           2386         DIN54231         160         -1.18           2370         DIN54231         131         -1.47           2380         DIN54231         150         -1.16           2375         DIN54231         154.1         -1.11           2380         DIN54231         156.755         2.48           2380         DIN54231         158.83         -1.38           2340         DIN54231         158.83         -1.38           2340         DIN54231         158.75         1.72           2442         DIN54231         366.502         R(0.01)         5.73           2442         DIN54231         37.6524         -2.36           2442         DIN54231         37.610         2.18           2442         DIN54231         367.10         2.18           24431         DIN54231         37.6         1.73           2515         DIN54231         272         0.71           2515         DIN54231         266.50         0.27	2352 2357	DIN54231 DIN54231	135		-1.41	
2363       DIN54231       137       - 1.38         2365       DIN54231       150       - 1.18         2370       DIN54231       162       - 0.99         2375       DIN54231       366.7535       2.48         2380       DIN54231       150.9       - 1.16         2380       DIN54231       156.9       - 1.16         2380       DIN54231       156.9       - 1.16         2380       DIN54231       37.0       2.22         2410       DIN54231       37.6       - 1.72         2425       DIN54231       37.6       2.26         2446       MIS4231       37.6       2.28         2447       DIN54231       37.6       2.28         2448       DIN54231       36.6.02       R0.01       5.57         2448       DIN54231       36.6       1.39         2449       DIN54231       36.6       3.71         2451       DIN54231       36.6       3.71         2452       DIN54231       2.65       3.71         2532       DIN54231       2.65       R0.01)       5.86         2540       DIN54231       2.06	2358	DIN54231	125.00		-1.56	
2365       DIN54231       131       -1.47         2369       DIN54231       162       -0.99         2375       DIN54231       131       -1.47         2379       DIN54231       136.7535       2.48         2380       DIN54231       156.9       -1.16         2380       DIN54231       136.83       -1.38         2410       DIN54231       136.83       -1.38         2410       DIN54231       586.502       R(0.01)       5.57         2442       DIN54231       73.6524       -2.36         2442       DIN54231       73.6524       -2.36         2442       DIN54231       367.10       2.18         2448       DIN54231       367.10       2.18         2448       DIN54231       366.35       3.71         2449       IDN54231       367.9       -1.02         24439       DIN54231       37.6       1.73         2511       DIN54231       25.7       -1.09         2522       DIN54231       26.5       3.71         2532       DIN54231       20.6       -0.21         2543       DIN54231       20.7       -0.22	2363	DIN54231	137		-1.38	
2339       DIN54231       150       -1.18         2370       DIN54231       131       -0.99         2375       DIN54231       131       -1.47         2380       DIN54231       150.9       -1.16         2380       DIN54231       150.9       -1.16         2380       DIN54231       150.9       -1.16         2390       DIN54231       136.83       -1.38         2410       DIN54231       597       R(0.01)       5.77         2446       6482.02.10       337.25       1.72         2442       DIN54231       73.6524       -2.36         2446       DIN54231       316.0       1.39         2448       DIN54231       316.0       1.39         2448       DIN54231       367.10       2.18         24497       IS01373       466.35       3.71         2511       DIN54231       357.8       -1.02         2522       DIN54231       260       -0.16         2532       DIN54231       207       -0.29         2566       DIN54231       206       -0.27         2580       DIN54231       208       -0.28         2644	2365	DIN54231	131		-1.47	
2375       DIN54231       102       -0.39         2375       DIN54231       131       -1.47         2380       DIN54231       156.1       -1.16         2386       DIN54231       150.9       -1.16         2390       DIN54231       136.83       -1.38         2410       DIN54231       136.85       -1.38         2412       DIN54231       597       R(0.01)       5.73         2442       DIN54231       586.50       R(0.01)       5.57         2442       DIN54231       73.6524       -2.36         2442       DIN54231       376.0       2.22         2443       DIN54231       367.10       2.18         2448       DIN54231       367.10       2.18         2499       in house       159.8       -1.02         2491       in Dis4231       375.79       -1.09         2515       DIN54231       155.79       -1.09         2515       DIN54231       272       0.71         2564       DIN54231       205       -0.27         2565       DIN54231       206.0       -0.27         2660	2369	DIN54231 DIN54231	150		-1.18	
2379       DINS4231       396,7535       2.48         2380       DINS4231       154.1       -1.11         2390       DINS4231       150.9       -1.16         2390       DINS4231       136.83       -1.38         2410       DINS4231       136.83       -1.38         2446       64882.02.10       337.25       1.72         2442       DINS4231       586.502       R(0.01)       5.57         2442       DINS4231       73.6524       -2.36         2448       DINS4231       367.10       2.18         2448       DINS4231       316.0       1.39         2448       DINS4231       316.0       1.39         24497       ISO13373       466.35       3.71         2511       DINS4231       357.9       -1.09         2522       DINS4231       265       0.42         2532       DINS4231       265.7      019         2532       DINS4231       265.7      029         2563       DINS4231       207       -0.29         2564       DINS4231       208      027         2560       DINS4231       208      028         <	2370	DIN54231 DIN54231	131		-0.99	
2380       DINS4231       154.1       -1.11         2386       DINS4231       150.9       -1.16         2390       DINS4231       136.83       -1.38         2410       DINS4231       597       R(0.01)       5.73         2446       GH82.02.10       337.25       1.72         2452       DINS4231       366.502       R(0.01)       5.57         2467       DINS4231       73.6524       -2.36         2482       DINS4231       376.57       0.23         2488       DINS4231       316.0       1.39         2492       in house       159.8       -1.02         2493       INS4231       357.9       -1.09         2515       DINS4231       155.79       -1.09         2515       DINS4231       272       0.71         2544       DINS4231       205       -0.29         2567       DINS4231       206       -0.29         2567       DINS4231       208.0       -0.28         2614       CPSD-AN-0048       208       -0.28         2614       DINS4231       219.741       -0.10         2614       DINS4231       219.741       -0.10	2379	DIN54231	386.7535		2.48	
2386       DINS4231       150.9       -1.16         2390       DINS4231       597       R(0.01)       5.73         2446       64B82.02.10       337.25       1.72         2442       DINS4231       586.502       R(0.01)       5.57         2462       DINS4231       370       2.22         2467       DINS4231       370       2.22         2467       DINS4231       241.278       0.23         2488       DINS4231       367.10       2.18         2499       INS4231       366.35       3.71         2493       DINS4231       253       0.42         24949       INS4231       37.8       -1.02         2497       ISO13373       466.35       3.71         2511       DINS4231       155.79       -1.09         2522       DINS4231       216       C       -0.16         2525       DINS4231       207       -0.29       -0.21         2566       DINS4231       206       -0.27       -0.29         2667       DINS4231       208.50       -0.27         2580            2640       DINS4231	2380	DIN54231	154.1		-1.11	
2390       DINS4231       136.83       -1.38         2410       DINS4231       597       R(0.01)       5.73         2442       DINS4231       370       2.22         2463       DINS4231       370       2.22         2464       DINS4231       73.6524       -2.36         2482       DINS4231       241.728       0.23         2488       DINS4231       367.10       2.18         2493       INS4231       366.35       3.71         2493       DINS4231       37.8       -1.02         2493       DINS4231       37.8       1.73         2515       DINS4231       37.8       1.73         2515       DINS4231       27.7       0.71         2554       DINS4231       206.50       -0.29         2567       DINS4231       206.50       -0.27         2580         withdrawn, first reported: 685.3         2640       DINS4231       219.741       -0.10         2641       DINS4231       219.741       -0.10         2642       DINS4231       219.741       -0.10         2643       DINS4231       219.741       -0.10     <	2386	DIN54231	150.9		-1.16	
2446       64882.02.10       337.25       1.72         2452       DIN54231       586.502       R(0.01)       5.57         2462       DIN54231       73.6524       -2.36         2488       DIN54231       367.10       2.18         2489       DIN54231       367.10       2.18         2489       DIN54231       367.10       2.18         2492       in house       159.8       -1.02         2493       DIN54231       37.8       1.72         2515       DIN54231       37.8       1.73         2515       DIN54231       155.79       -1.09         2532       DIN54231       272       0.71         2543       DIN54231       272       0.71         2545       DIN54231       206       -0.29         2567       DIN54231       207       -0.29         2560       DIN54231       208.50       -0.27         2604            2604           2614       CPSD-AN-00048       208       -0.28         2649       DIN54231       219.741       -0.48         2649       DIN54231 </td <td>2390</td> <td>DIN54231 DIN54231</td> <td>136.83</td> <td>R(0.01)</td> <td>-1.38</td> <td></td>	2390	DIN54231 DIN54231	136.83	R(0.01)	-1.38	
2452       DIN54231       586.502       R(0.01)       5.57         2462       DIN54231       370       2.22         2467       DIN54231       73.6524       -2.36         2482       DIN54231       367.10       2.18         2488       DIN54231       316.0       1.39         2492       in house       159.8       -1.02         2493       DIN54231       337.8       1.73         2511       DIN54231       337.8       1.73         2515       DIN54231       37.8       1.73         2515       DIN54231       272       0.71         2554       DIN54231       205       -0.27         2567       DIN54231       206       -0.27         2560        W          2602        W          2614       CPSD-AN-00048       208       -0.28         2643       DIN54231       195       -0.48         2649       DIN54231       219.741       -0.10         2643       DIN54231       195       -0.48         2649       DIN54231       257.1       0.48         2649       DIN5423	2446	64B82.02.10	337.25	1((0.01)	1.72	
2462       DIN54231       370       2.22         2467       DIN54231       73.6524       -2.36         2482       DIN54231       367.10       2.18         2488       DIN54231       367.10       1.39         2492       in house       159.8       -1.02         2493       DIN54231       253       0.42         2497       ISO13373       466.35       3.71         2511       DIN54231       337.8       1.73         2515       DIN54231       155.79       -1.09         2532       DIN54231       205       0.71         2554       DIN54231       206       -0.27         2567       DIN54231       207       -0.27         2580            2602        W          2614       CPSD-AN-00048       208       -0.28         2649       DIN54231       195       -0.48         2649       DIN54231       219.71       -0.48         2649       DIN54231       257.1       0.48         2649       DIN54231       267.7       -0.27         3116       DIN54231       2	2452	DIN54231	586.502	R(0.01)	5.57	
2467       DIN54231       73.6524       -2.36         2482       DIN54231       241.278       0.23         2488       DIN54231       367.10       2.18         2499       DIN54231       316.0       1.39         2492       in house       159.8       -1.02         2493       DIN54231       253       0.42         2497       ISO13373       466.35       3.71         2511       DIN54231       337.8       1.73         2515       DIN54231       272       0.71         2553       DIN54231       207       -0.29         2567       DIN54231       206       -0.27         2560           2604           2604           2604           2614       CPSD-AN-0048       208       -0.28         2640       DIN54231       219.741       -0.10         2643       DIN54231       195       -0.48         2664       DIN54231       257.1       0.48         2668       DIN54231       267.1       0.48         2668	2462	DIN54231	370		2.22	
2488       DIN54231       367.10       2.18         2489       DIN54231       316.0       1.39         2492       in house       159.8       -1.02         2493       DIN54231       253       0.42         2497       ISO13373       466.35       3.71         2515       DIN54231       337.8       1.73         2515       DIN54231       272       0.71         2554       DIN54231       205       R(0.01)       5.86         2563       DIN54231       206       -0.29         2567       DIN54231       206       -0.29         2567       DIN54231       208.50       -0.27         2604            2614       CPSD-AN-00048       208       -0.28         2640       DIN54231       219.741       -0.10         2643       DIN54231       257.1       0.48         2666       DIN54231       257.1       0.48         2668       DIN54231       257.1       0.48         2649       DIN54231       257.1       0.48         2649       DIN54231       268.7       -0.27         3117	2467	DIN54231	73.6524		-2.36	
2489DINS4231316.01.392492in house159.8-1.022493DINS42312530.422497ISO13373466.353.712511DINS4231337.81.732515DINS4231155.79-1.092532DINS42312720.712554DINS4231216C2563DINS4231207-0.292567DINS4231207-0.292567DINS4231200-0.27260226042614CPSD-AN-00048208-0.282640DINS4231195-0.482643DINS4231257.10.483100DINS42313391.753117DINS4231208.7-0.273146DINS42314253.073150DINS42314253.073151DINS423113.6-1.74	2462 2488	DIN54231 DIN54231	367 10		0.23 2.18	
2492in house159.8-1.022493DIN542312530.422497ISO13373466.353.712511DIN54231337.81.732515DIN54231155.79-1.092532DIN54231605R(0.01)5.862563DIN54231216C-0.162564DIN54231207-0.292567DIN54231208.50-0.2725802602W2614CPSD-AN-00048208-0.282640DIN54231219.741-0.102643DIN54231257.10.482668DIN54231257.10.483100DIN54231208.7-0.273146DIN54231258.70.283150DIN54231358R(0.01)3151DIN5423113.6-1.74	2489	DIN54231	316.0		1.39	
2493       DIN54231       253       0.42         2497       ISO13373       466.35       3.71         2511       DIN54231       337.8       1.73         2515       DIN54231       155.79       -1.09         2532       DIN54231       605       R(0.01)       5.86         2563       DIN54231       216       C       -0.16         2566       DIN54231       207       -0.29         2567       DIN54231       208.50       -0.27         2580        W          2602        W          2614       CPSD-AN-00048       208       -0.28         2640       DIN54231       219.741       -0.10         2643       DIN54231       219.741       -0.10         2644       DIN54231       257.1       0.48         2668       DIN54231       257.1       0.48         3100       DIN54231       257.1       0.48         3100       DIN54231       268.7       -0.27         3146       DIN54231       268.7       -0.27         3146       DIN54231       257.1       0.48         3100	2492	in house	159.8		-1.02	
249/       ISU13373       460.35       3.71         2511       DIN54231       337.8       1.73         2515       DIN54231       155.79       -1.09         2532       DIN54231       272       0.71         2554       DIN54231       207       -0.29         2566       DIN54231       207       -0.29         2567       DIN54231       208.50       -0.27         2602        W          2604           2614       CPSD-AN-00048       208       -0.28         2640       DIN54231       219.741       -0.10         2643       DIN54231       219.741       -0.10         2643       DIN54231       195       -0.48         2644       DIN54231       257.1       0.48         2668       DIN54231       339       1.75         3117       DIN54231       208.7       -0.27         31146       DIN54231       208.7       -0.27         3150       DIN54231       425       3.07         3150       DIN54231       136       -1.74	2493	DIN54231	253		0.42	
2511       DIN54231       155.79       -1.09         2552       DIN54231       272       0.71         2554       DIN54231       605       R(0.01)       5.86         2563       DIN54231       216       C       -0.16         2566       DIN54231       207       -0.29         2567       DIN54231       208.50       -0.27         2580         withdrawn, first reported: 685.3         2602        W          2604           2604           2614       CPSD-AN-00048       208       -0.28         2640       DIN54231       195       -0.48         2643       DIN54231       195       -0.48         2668       DIN54231       257.1       0.48         2668       DIN54231       257.1       0.48         3100       DIN54231       208.7       -0.27         3117       DIN54231       208.7       -0.27         3146       DIN54231       425       3.07         3150       DIN54231       585       R(0.01)       5.55         3151	2497	ISU13373 DIN54231	466.35		3.71	
2532       DIN54231       272       0.71         2554       DIN54231       605       R(0.01)       5.86         2563       DIN54231       216       C       -0.16         2566       DIN54231       207       -0.29         2567       DIN54231       208.50       -0.27         2580           2602        W          2604           2614       CPSD-AN-00048       208       -0.28         2640       DIN54231       219.741       -0.10         2643       DIN54231       195       -0.48         2649       DIN54231       257.1       0.48         3100       DIN54231       339       1.75         3117       DIN54231       208.7       -0.27         3146       DIN54231       208.7       -0.27         3146       DIN54231       425       3.07         3150       DIN54231       585       R(0.01)       5.55         3151       DIN54231       113.6       -1.74	2515	DIN54231	155.79		-1.09	
2554       DIN54231       605       R(0.01)       5.86         2563       DIN54231       216       C       -0.16         2566       DIN54231       207       -0.29         2567       DIN54231       208.50       -0.27         2580            2602        W          2614       CPSD-AN-00048       208       -0.28         2640       DIN54231       219.741       -0.10         2643       DIN54231       219.741       -0.10         2643       DIN54231       257.1       0.48         2668       DIN54231       339       1.75         3110       DIN54231       208.7       -0.27         3146       DIN54231       208.7       -0.27         3146       DIN54231       425       3.07         3150       DIN54231       585       R(0.01)       5.55         3151       DIN54231       113.6       -1.74	2532	DIN54231	272		0.71	
2563       DIN54231       216       C       -0.16       first reported: 21.6         2566       DIN54231       207       -0.29         2567       DIN54231       208.50       -0.27         2580           2602        withdrawn, first reported: 685.3         2604           2614       CPSD-AN-00048       208       -0.28         2640       DIN54231       219.741       -0.10         2643       DIN54231       195       -0.48         2668       DIN54231       257.1       0.48         2668       DIN54231       339       1.75         3117       DIN54231       208.7       -0.27         3146       DIN54231       425       3.07         3150       DIN54231       585       R(0.01)       5.55         3151       DIN54231       113.6       -1.74	2554	DIN54231	605	R(0.01)	5.86	
2567       DIN54231       207       -0.23         2567       DIN54231       208.50          2600         withdrawn, first reported: 685.3         2604         withdrawn, first reported: 685.3         2614       CPSD-AN-00048       208       -0.28         2614       CPSD-AN-00048       208       -0.28         2640       DIN54231       219.741       -0.10         2643       DIN54231       195       -0.48         2668       DIN54231       257.1       0.48         2668       DIN54231       339       1.75         3117       DIN54231       208.7       -0.27         3146       DIN54231       425       3.07         3150       DIN54231       585       R(0.01)       5.55         3151       DIN54231       113.6       -1.74	2563	DIN54231	216	С	-0.16	first reported: 21.6
2580         withdrawn, first reported: 685.3         2602        W          2614       CPSD-AN-00048       208       -0.28         2640       DIN54231       219.741       -0.10         2643       DIN54231       195       -0.48         2668       DIN54231       257.1       0.48         2668       DIN54231       208.7       -0.27         3117       DIN54231       208.7       -0.27         3146       DIN54231       585       R(0.01)         5.55       3151       DIN54231       13.6	2567	DIN54231	207		-0.29	
2602        W        withdrawn, first reported: 685.3         2604         withdrawn, first reported: 685.3         2614       CPSD-AN-00048       208       -0.28         2640       DIN54231       219.741       -0.10         2643       DIN54231       478       3.89         2649       DIN54231       195       -0.48         2668       DIN54231       257.1       0.48         3100       DIN54231       339       1.75         3117       DIN54231       208.7       -0.27         3146       DIN54231       425       3.07         3150       DIN54231       585       R(0.01)       5.55         3151       DIN54231       113.6       -1.74	2580	2.1.10.1201				
2604 $2614$ CPSD-AN-00048 $208$ -0.28 $2640$ DIN54231 $219.741$ -0.10 $2643$ DIN54231 $478$ $3.89$ $2649$ DIN54231 $195$ -0.48 $2668$ DIN54231 $257.1$ 0.48 $3100$ DIN54231 $339$ 1.75 $3117$ DIN54231 $208.7$ -0.27 $3146$ DIN54231 $585$ $R(0.01)$ $5.55$ $3151$ DIN54231 $113.6$ $-1.74$ $-1.74$	2602			W		withdrawn, first reported: 685.3
2014       CFSD-AIN-00048       208       -0.28         2640       DIN54231       219.741       -0.10         2643       DIN54231       478       3.89         2649       DIN54231       195       -0.48         2668       DIN54231       257.1       0.48         3100       DIN54231       339       1.75         3117       DIN54231       208.7       -0.27         3146       DIN54231       425       3.07         3150       DIN54231       585       R(0.01)       5.55         3151       DIN54231       113.6       -1.74	2604					
2643       DIN54231       478       3.89         2649       DIN54231       195       -0.48         2668       DIN54231       257.1       0.48         3100       DIN54231       339       1.75         3117       DIN54231       208.7       -0.27         3146       DIN54231       585       R(0.01)       5.55         3151       DIN54231       113.6       -1.74	2614 2640	CPSD-AN-00048 DIN54231	∠∪ŏ 219 741		-0.28	
2649       DIN54231       195       -0.48         2668       DIN54231       257.1       0.48         3100       DIN54231       339       1.75         3117       DIN54231       208.7       -0.27         3146       DIN54231       425       3.07         3150       DIN54231       585       R(0.01)       5.55         3151       DIN54231       113.6       -1.74	2643	DIN54231	478		3.89	
2668       DIN54231       257.1       0.48         3100       DIN54231       339       1.75         3117       DIN54231       208.7       -0.27         3146       DIN54231       425       3.07         3150       DIN54231       585       R(0.01)       5.55         3151       DIN54231       113.6       -1.74	2649	DIN54231	195		-0.48	
3100     DIN54231     339     1.75       3117     DIN54231     208.7     -0.27       3146     DIN54231     425     3.07       3150     DIN54231     585     R(0.01)       5.55     3151     DIN54231     113.6	2668	DIN54231	257.1		0.48	
3146         DIN54231         425         3.07           3150         DIN54231         585         R(0.01)         5.55           3151         DIN54231         113.6         -1.74	3100 3117	DIN54231 DIN54231	১১৭ २०८ २		1./5 _0.27	
3150         DIN54231         585         R(0.01)         5.55           3151         DIN54231         113.6         -1.74	3146	DIN54231	425		3.07	
3151 DIN54231 113.6 -1.74	3150	DIN54231	585	R(0.01)	5.55	
	3151	DIN54231	113.6		-1.74	
3153 DIN54231 248 0.34 3154 DIN54231 188.98 -0.57	3153 3154	DIN54231 DIN54231	248 188 98		0.34	

3172 3176 3190 3197 3210 3214 3218 3220 3228 3237 3242	DIN54231 DIN54231 DIN54231 DIN54231 in house DIN54231 DIN54231 DIN54231 DIN54231 DIN54231 DIN54231 DIN54231 DIN54231	152 350.7 159 224.2 310.94 1309 539.7 185 201.0 165 367.6694 215	R(0.01) R(0.01)	-1.14 1.93 -1.04 -0.03 1.31 16.74 4.85 -0.63 -0.39 -0.94 2.19 -0.17
3248	normality n outliers mean (n) st.dev. (n) R(calc.) R(DIN54231:05)	0K 71 9 226.076 95.1023 266.287 181.168		-1.02





# Determination of Disperse Red 17 (CASno.3179-89-3) in sample #15023; results in mg/kg

lab	method	value	mark	z(targ)	remarks
213					
362	in house	981	R(0.01)	25.04	
551	BINE (SS )				
623	DIN54231	109.3		-0.31	
2108	DIN54231 DIN54231	317.4	R(0.05)	-0.30 5.74	
2113	in house	160 74	IX(0.03)	1 18	
2132	DIN54231	327.5	R(0.05)	6.03	
2137	DIN54231	182.1	()	1.80	
2138	DIN54231	265.52	R(0.05)	4.23	
2139	DIN54231	78		-1.22	
2165	DIN54231	153		0.96	
2172	DIN54231 DIN54231	145		0.72	
2201	DIN54231	111.6		-0.25	
2247	DIN54231	83		-1.08	
2255	DIN54231	142.6		0.65	
2271	DIN54231	128		0.23	
2272	DIN54231	103.6		-0.48	
2209	DIN04231 DIN54231	115		-0.15	
2295	DIN54231	67		-0.03	
2301	DIN54231	207.64		2.55	
2310	DIN54231	106		-0.41	
2311	DIN54231	105		-0.44	
2330	DIN54231	110.30		-0.29	
2350	DIN54231 DIN54231	143.2		0.67	
2352	DIN54231	104		-0.47	
2358	DIN54231	98.74		-0.62	
2363	DIN54231	102		-0.53	
2365	DIN54231	103		-0.50	
2369	DIN54231	108		-0.35	
2370	DIN54231	112		-0.24	
2375	DIN54231 DIN54231	55 9079		-0.03	
2380	DIN54231	115.0		-0.15	
2386	DIN54231	121.4		0.04	
2390	DIN54231	150.51		0.88	
2410	DIN54231	132		0.35	
2446	64B82.02.10	80.10		-1.16	
2452	DIN54231 DIN54231	106.123		-0.41	
2402	DIN54231	48 6378		-2.08	
2482	DIN54231	122.906		0.08	
2488	DIN54231	131.96		0.34	
2489	DIN54231	90.4		-0.86	
2492	in house	80.2		-1.16	
2493	DIN54231	117		-0.09	
2497	DIN54231	73.30 293.0	R(0.05)	-1.30 5.03	
2515	DIN54231	198.81	11(0.00)	2.29	
2532	DIN54231	95		-0.73	
2554	DIN54231	127		0.20	
2563	DIN54231	70.35	C D(0.05)	-1.45	first reported:7.04
2566	DIN54231	255	R(0.05)	3.92	
2580	DIN04231	140.01			
2602	DIN54231	161.8		1.21	
2604					
2614	CPSD-AN-00048	253	R(0.05)	3.87	
2640	DIN54231	286.2505	R(0.05)	4.83	
2643	DIN54231 DIN54231	0∠ 208		-1.11 2 56	
2668	DIN54231	138.8		2.50	
3100	DIN54231	102		-0.53	
3117	DIN54231	95.7		-0.71	
3146	DIN54231	97.1		-0.67	
3150	DIN54231	118		-0.06	
3151	DIN34231 DIN54231	260 260	R(0.05)	1.18	
3154	DIN54231	236.46	13(0.05)	3.38	
3172	DIN54231	126		0.17	

3176 3190 3197 3199 3210 3214 3218 3220 3228	DIN54231 DIN54231 DIN54231 in house DIN54231 DIN54231 DIN54231 DIN54231 DIN54231	182.7 85.5 135.0 373.025 263 101.4 100 35.8 149	R(0.05) R(0.05)	1.82 -1.01 0.43 7.36 4.16 -0.54 -0.58 -2.45 0.84
3237	DIN54231	96.0025		-0.70
3242	DIN54231	119.5		-0.02
3248	DIN54231	235		3.34
	normality n outliers mean (n) st.dev. (n) R(calc.) R(DIN54231:05)	suspect 70 11 120.109 39.8473 111.572 96.250		





# Determination of Disperse Blue 35 (CASno.12222-75-2) in sample #15024; results in mg/kg

lah	mothed	value	mork	7(+0+-)	romarke
1 <b>ab</b> 213	method	value	mark	z(targ)	remarks
362	in house	<15.0			
551					
623	DIN54231	n.d.			
2108	DIN54231	n.d.	P(0.01)		
2110	DINJ4231		K(0.01)		
2132	DIN54231	22.5		-0.17	
2137	DIN54231	<5		<-2.75	false negative test result?
2138	DINE 4004				
2139	DIN54231 DIN54231	26		0.35	
2103	DIN54231	n.d.			
2184	DIN54231	21		-0.39	
2201	DIN54231	18.9		-0.70	
2247	DIN54231	n.d.		0.17	
2255	DIN54231 DIN54231	22.5		-0.17	
2272					
2289	DIN54231	13.9		-1.44	
2290	DIN54231	<15			
2295					
2310	DIN54231	n.d.			
2311	DIN54231	n.d.			
2330	DIN54231	n.d.			
2350	DIN54231	 n d			
2357	DIN54231	n.d.			
2358	DIN54231	n.d.			
2363	DIN54231	<15			
2365	DIN54231 DIN54231	<15 n d			
2309	DIN54231 DIN54231	n.d.			
2375					
2379	DIN54231	17.1760		-0.96	
2380	DIN54231	n.d.	P(0.01)	0.16	
2300	D11N34231		K(0.01)	9.10	
2410	DIN54231	49		3.75	
2446	64B82.02.10	61.53	R(0.01)	5.60	
2452	DINE4224				
2462 2467	DIN54231 DIN54231	n.a. n d			
2482	DIN54231	24.904		0.19	
2488	DIN54231	36.41		1.89	
2489	to have a				
2492 2493	IN NOUSE	17.4 25.1		-0.92	
2497	Dirto-201				
2511	DIN54231	20.8		-0.42	
2515	DIN54231	<15 n d			
2032 2554	DIN54231 DIN54231	n.d. 129	R(0.01)	15 57	
2563	DIN54231	19.39	C	-0.63	first reported: 1.94
2566	DIN54231	n.d.			
2567	DIN54231	21.5		-0.32	
2580	DIN54231	 124 8	R(0.01)	14 95	
2602	64LFGB82.02.10	n.d.	1((0.01)		
2614					
2640	DIN54231	13.9433		-1.43	
2643	DIN54231 DIN54231	n.d. 30		0.04	
2668	DIN54231	n.d.			
3100	DIN54231	16		-1.13	
3117	DIN54231	27.5	0	0.57	first son attack in d
3146 3150	DIN54231	<20	C		TIRST REPORTED: n.d
3151					
3153	DIN54231	<20			
3154	DINE			 	
3172	DIN54231	33		1.38	

3176	DIN54231	2.1	R(0.05)	-3.18
3190	DIN54231	16.5		-1.06
3197	DIN54231	22.6		-0.15
3199	in house	<15		
3210				
3214	DIN54231	14.1		-1.41
3218				
3220	DIN54231	27.0		0.50
3228	DIN54231	24		0.05
3237	DIN54231	27.3596		0.55
3242	DIN54231	n.d.		
3248	DIN54231	27		0.50
	normality	ОК		
	n	29		
	outliers	6		
	mean (n)	23.637		
	st.dev. (n)	7.4414		
	R(calc.)	20.836		
	R(DIN54231:05)	18.942		
	· /			





# Determination of Disperse Red 11 (CASno.2872-48-2) in sample #15024; results in mg/kg

lah	method	value	mark	z(targ)	remarks
213	method		IIIdi K	2(tary)	Telliar NS
362	in house	437	R(0.01)	48.70	
551 623	DIN5/231	 75 7	P(0.01)	 5 55	
2108	DIN54231	19.9	K(0.01)	-1.12	
2115	DIN54231	25.1		-0.50	
2129	in house	56.59	-	3.26	
2132	DIN54231	20.7	С	-1.02	first reported: 258.4
2137	DIN54231 DIN54231	30.9 25.52		0.20	
2139	DIN54231	22		-0.87	
2165	DIN54231	48		2.24	
2172	DIN54231	20.1		-1.09	
2184	DIN54231	51		2.60	
2201	DIN54231 DIN54231	21.3		-0.95	
2255	DIN54231	41.8		1.50	
2271	DIN54231	35		0.69	
2272	DIN54231	21.1	С	-0.97	first reported under disperse red 1
2289	DIN54231 DIN54231	25.5 17.9		-0.45	
2295	DIN54231	11		-2.18	
2301	DIN54231	24.13		-0.61	
2310	DIN54231	76.5	R(0.01)	5.64	
2311	DIN54231	80.8	R(0.01)	6.16 5.11	
2350	DIN54231	101.3	R(0.01)	8.60	
2352	DIN54231	88.2	R(0.01)	7.04	
2357	DIN54231	90.0	R(0.01)	7.26	
2358	DIN54231	84.92	R(0.01)	6.65	
2365	DIN54231 DIN54231	80 88	R(0.01) R(0.01)	6.06 7.02	
2369	DIN54231	90	R(0.01)	7.26	
2370	DIN54231	78.5	R(0.01)	5.88	
2375	DIN54231	75.8	R(0.01)	5.56	
2379	DIN54231	40.7968	P(0.01)	1.38	
2386	DIN54231	<15	K(0.01)		
2390	DIN54231	82.10	R(0.01)	6.31	
2410	DIN54231	40		1.28	
2446	64B82.02.10	16.31		-1.55	
2452 2462	DIN54231 DIN54231	35.646 38		0.76	
2467	DIN54231	20.1193		-1.09	
2482	DIN54231	16.079		-1.57	
2488	DIN54231	18.19		-1.32	
2489	DIN54231	30.0		0.09	
2492	DIN54231	152	R(0.01)	14.66	
2497	ISO13373	29.68	· · ·	0.05	
2511	DIN54231	277.7	R(0.01)	29.67	
2515	DIN54231	24.29		-0.59	
2552	DIN54231	31		0.03	
2563	DIN54231	17.61	С	-1.39	first reported: 1.76
2566	DIN54231	25.65		-0.43	
2567	DIN54231	29.12		-0.02	
2580	DIN54231	28.4		-0.10	
2604	2.1.10.1201				
2614	CPSD-AN-00048	28		-0.15	
2640	DIN54231	44.699		1.84	
∠043 2649	DIN54231 DIN54231	∠∠ 50		-0.87 2.48	
2668	DIN54231	31.72		0.29	
3100	DIN54231	26		-0.39	
3117	DIN54231	17.8		-1.37	
3146	DIN54231 DIN54231	24.1 24.2	C	-0.62	first reported:242
3151	DIN54231	24.2 18.0	U	-1.34	
3153	DIN54231	28.2		-0.13	
3154	DIN54231	24.43	<b>B</b> /	-0.58	
3172	DIN54231	122	R(0.01)	11.08	

3176	DIN54231	4.3		-2.98
3190	DIN54231	23.9		-0.64
3197	DIN54231	75.6	R(0.01)	5.54
3199	in house	38.5973		1.12
3210	DIN54231	53.7		2.92
3214	DIN54231	26.4		-0.34
3218	DIN54231	26.7		-0.31
3220	DIN54231	n.d.		
3228	DIN54231	50		2.48
3237	DIN54231	37.6504		1.00
3242	DIN54231	28.1		-0.14
3248	DIN54231	65		4.27
	normality	OK		
	normality	50		
	outlioro	20		
		20		
	mean (n)	29.255		
	st.dev. (n)	11.9639		
	R(calc.)	33.499		
	R(DIN54231:05)	23.444		





Summary of all other reported Disperse dyes in samples #15023; results in mg/kg

Lab Other reported Disperse Dyes on #15024

--- none

### Summary of all other reported Disperse dyes in samples #15024; results in mg/kg

 Lab
 Other reported Disperse Dyes on #15024

 2386
 Disperse Red 1 = 28.3 mg/kg; possibly misidentified the Disperse Red 11 peak; when 28.3 m/kg Disperse Red 11 z = -0.11

# Summary of reported analytical details

Lab	Mass in g.	Extraction solvent	Temp of ultrasonic bath in °C	Extraction time	Remarks
213					
362	1.0	15 ml. methanol	70 °C	30	
551		,			
623	1	15 ml methanol	70 °C	30	
2108	0.5	7.5 ml. methanol	70 °C	30	
2115	0.5	7.5 ml, methanol	70 °C	10	
2129	0.5	7.5 ml, methanol	70 °C	30.0	
2132	0.5	7.5 ml. methanol	70 °C	30	
2137	0.1-0.5	5-10 ml. methanol	70 °C	30	
2138	0.5000	7.5 ml. methanol	70 °C	30	
2139	0.5	10 ml. methanol	70 °C	30	
2165	0.5	7.5 ml. methanol	70 °C	30	
2172	0.5	7.5 ml. methanol	70 °C	30	
2184	0.5	7.5 ml. methanol	70 °C	30	
2201	0.5	7.5 ml. methanol	70 °C	30	
2247	0.5039/0.3692	7.5 ml. methanol	70 °C	30	
2255	0.5	7.5 ml. methanol	70 °C	30	
2271	0.5	7.5 ml. methanol	70 °C	30	
2272	0.5	7.5 ml. methanol	70 °C	30	
2289	0.5	7.5 ml. methanol	70 °C	30	
2290	0.5	7.5 ml. methanol	70 °C	30	
2295	0.5	7.5 ml. methanol	70 °C	30	
2301	0.5005	7.5 ml. methanol	70 °C	30	
2310	1	15 ml, methanol	70 °C	30	
2311	1.0	15 ml, methanol	70 °C	30	
2330	0.5	7.5 ml, methanol	70 °C	30	
2350	1.0	15 ml, methanol	70 °C	30	
2352	1	15 ml, methanol	70 °C	30	
2357	0.5	7.5 ml, methanol	70 °C	30	
2358	1.0	15 ml, methanol	70 °C	30	
2363	1	15 ml, methanol	70 °C	30	
2365	0.5	7.5 ml, methanol	70 °C	30	
2369	1.0	15 ml, methanol	70 ℃	30	
2370	0.5	7.5 ml, methanol	70 ℃	30	
2375	0.3	5 ml, methanol	70 ℃	30	
2379	1	15 ml, methanol	70 ℃	30	
2380	1.0	15 ml, methanol	70 ℃	30	
2386	0.5	15 ml, methanol	70 ℃	30	
2390	1	15 ml, methanol	70 ℃	30	
2410	0.5	7.5 ml, methanol	70 ℃	30	
2446	0.5	7.5 ml, methanol	70 ℃	30	
2452	0.5	7.5 ml, methanol	70 ℃	30	
2462	0.5	7.5 ml, methanol	70 °C	30	
2467	0.5022/0.5009	7.5 ml, methanol	70 °C	30	
2482	0.5	7.5 ml, methanol	70 °C	30	
2488	0.5	7.5 ml, methanol	70 °C	30	
2489	0.5001	7.5 ml. methanol	70 °C	30	

Lab	Mass in g.	Extraction solvent	Temp of ultrasonic bath in °C	Extraction time in min	Remarks
2492	0.5	7.5 ml, methanol	70 °C	30	
2493	0.1	3 ml, methanol	70 °C	30	
2497	0.5	pyridine/water 1:1	100 °C	35	
2511	0.5	7.5 ml. methanol	70 °C	30	
2515					
2532	0.5	7.5 ml methanol	70 °C	30	
2554	0.5	7.5 ml methanol	70 + °C	30	
2563	0.5	7.5 ml, methanol	70 °C	30	
2566	0.5	7.5 ml, methanol	70 °C	30	
2500	0.5	7.5 ml, methanol	70 °C	30	
2507	0.5		70 C	30	
2580	1/0.5	20 ml, 100% ethanol	25 °C	15	
2602	0.5	7.5 ml, methanol	70 °C	30	
2604	0.5	7.5 ml, methanol	70 °C	30	
2014	0.5015	7.5 ml, methanol	70°C	30	
2040	0.5	7.5 ml, methanol	70°C	30	
2043	0.5045	7.5 ml, methanol	70°C	30	
2668	0.5	7.5 ml, methanol	70 °C	30	
3100	0.5000	7.5 ml, methanol	70 °C	30	
3117	0.5	7.5 ml, methanol	70 °C	30	
3146	0.5	7.5 ml, methanol	70 °C	30	
3150	0.5	7.5 ml, methanol	70 °C	30	
3151	0.5	7.5 ml, methanol	70 °C	30	
3153	0.5	7.5 ml, methanol	70 °C	30	
3154	0.4	7.5 ml, methanol	70 °C	30	
3172					
3176	0.5	7.5 ml, methanol	70 °C	30	
3190	0.5	7.5 ml, methanol	70 °C	30	
3197	0.5	7.5 ml, methanol	70 °C	30	
3199	0.5023/0.5027	7.5 ml, methanol	70 °C	30	
3210	0.500	7.5 ml, methanol	70 °C	2	
3214	0.3	4.5 ml, methanol	70 °C	30	
3218	0.5	7.5 ml, methanol	70°C	30	
3220	0.5	7.5 ml, methanol	70 °C	30	
3228	1.00	15 ml methanol	70 °C	30	
3237	0.5	7.5 ml methanol	70 °C	30	
3248	0.5003	7.5 ml, methanol	70 °C	30	

#### Number of participants per country

3 labs in BANGLADESH 1 lab in BRAZIL 1 lab in BULGARIA 2 labs in CAMBODIA 1 lab in FRANCE 13 labs in GERMANY 6 labs in HONG KONG 1 lab in HUNGARY 10 labs in INDIA 2 labs in INDONESIA 3 labs in ITALY 6 labs in KOREA 1 lab in MOROCCO 18 labs in P.R. of CHINA 1 lab in PAKISTAN 1 lab in ROMANIA 2 labs in TAIWAN R.O.C. 1 lab in THAILAND 2 labs in TUNISIA 6 labs in TURKEY 1 lab in U.S.A. 1 lab in UNITED KINGDOM 2 labs in VIETNAM

#### Abbreviations:

- C = final result after checking of first reported suspect result
- D(0.01) = outlier in Dixon's outlier test
- D(0.05) = straggler in Dixon's outlier test
- G(0.01) = outlier in Grubbs' outlier test
- G(0.05) = straggler in Grubbs' outlier test
- DG(0.01) = outlier in Double Grubbs' outlier test
- DG(0.05) = straggler in Double Grubbs' outlier test
- R(0.01) = outlier in Rosner's outlier test
- R(0.05) = straggler in Rosner's outlier test
- n.e. = not evaluated
- n.d. = not detected

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