EURL-PROFICIENCY TEST-FV-13, 2011

Pesticide Residues in Mandarin Homogenate
Final Report

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QCG: Quality Control Group
AG: Advisory Group

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EURL-EUROPEAN UNION PROFICIENCY TEST 13
FOR THE DETERMINATION OF PESTICIDES IN FRUIT AND VEGETABLES USING MULTIRESIDUE METHODS
2011

According to Article 28 of Regulation 396/2005/EC (23rd February, 2005) of the European Parliament and of the Council, concerning maximum residue levels for pesticides in or on food and feed of plant and animal origin[1], all laboratories analysing samples for the official control of pesticide residues shall participate in the European Union Proficiency Tests (EUPTs) for pesticide residues organised by the European Union. These proficiency tests are carried out on an annual basis in order to ensure the quality, accuracy and comparability of the residue data reported by EU Member States to the European Union, as well as other Member States, within the framework of the EU co-ordinated and national monitoring programmes.

Regulation (EC) No 882/2004[2] lays down the general tasks, duties and requirements for European Union Reference Laboratories (EURLs)[3] for Food, Feed and Animal Health. Among these tasks is the provision for independently-organised comparative tests. European Proficiency Test 13 has been organised by the EURL in Fruit and Vegetables at the University of Almería, Spain[4].

Participation in European Proficiency Test 13 was mandatory for all National Reference Laboratories, as well as all other EU official laboratories, involved in the determination of pesticide residues in fruit and vegetables for the EU-coordinated monitoring programme or for their own national programmes. Additionally, laboratories from Iceland, Norway, Switzerland, Brazil, Egypt, Turkey and Uruguay, who had been invited to take part in the previous test, again participated. Serbia and Israel participated in this test for the first time.

This report will be presented to the European Union Standing Committee for Animal Health and the Food Chain. In addition, DG-SANCO has full access to all data from EUPTs including the lab-code/lab-name key.

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[1] Regulation (EC) No 396/2005, published in the OJ of the EU L70 on 16.03.2005, last amended by Regulation 839/2008 published in the OJ of the EU L234 on 30.08.2008.

[2] Regulation (EC) No 882/2004 of the European Parliament and of the Council on official controls performed to ensure compliance verification with feed and food law, animal health and animal welfare rules. Published in the OJ of the EU L191 on 28.05.2004.

[3] The Community Reference Laboratory (CRL) changed its name to the European Union Reference Laboratory (EURL) on 1st December 2009 as a result of the Treaty of Lisbon. OJ of the EU C306 on 17.12.2007.

[4] Commission Regulation (EC) No 776/2006 of 23rd May 2006 - amending Annex VII to Regulation (EC) No 882/2004 of the European Parliament and of the Council as regards European Union Reference Laboratories.

1. INTRODUCTION

One hundred and fifty-four laboratories agreed to participate in European Union Proficiency Test 13.

The proficiency test was performed in 2011 using mandarin homogenate. The mandarins were grown in Valencia, Spain, and were treated post-harvest using commercial formulations and analytical standards - both were applied using a microspray technique. Nineteen pesticides were used for the treatments (fifteen as diluted commercial formulations and four as standards dissolved in solvent). Participating laboratories were also provided with a 'blank' mandarin homogenate as well as the treated test material.

The test materials, 300 g of mandarin homogenate containing pesticide residues together with 300 g of 'blank' mandarin homogenate, were shipped to participants on 24th January 2011. The deadline for result submission to the Organiser was 18th February 2011. The participants were provided with a list of one hundred and forty-four target pesticide residue definitions (Annex 1) and informed that any of these pesticides (and components within the residue definitions) might be present in the test material. They were asked to determine the residue levels of all the components that they detected and report the concentrations. This list of target pesticides also contained the Minimum Required Reporting Level (MRRL) for each pesticide fixed at 0.01 mg/Kg, except for the following pesticides which have lower MRRLs based on Regulation (EU) No. 396/2005 and EU Directive 2006/125/EU: cadusafos (0.006 mg/Kg); dimethoate and omethoate (0.003 mg/Kg); ethoprophos (0.008 mg/Kg); fipronil (0.004 mg/Kg) and oxydemeton-methyl and demeton-S-methylsulfone (0.006 mg/Kg).

Participants were asked to analyse the blank test material and report results for any of the pesticides they found which were included in the list. This 'blank' material was intended to be used in recovery experiments for the pesticides found in the test material and, if necessary, for the preparation of matrix-matched calibration standard solutions.

The median values of the analytical data submitted were used to obtain the assigned (true) values for each of the pesticide residues present. A fit-for-purpose relative target standard deviation (FFP RSD) of 25% was chosen to calculate the target standard deviations (σ) as well as the z-scores for each pesticide.

For the assessment of overall laboratory performance, two formulas have been used. The Sum of Weighted z-Scores (SWZ), as in previous proficiency tests, where the criteria of having demonstrated 'sufficient scope' and therefore being classified into Category A remained as laboratories having to detect at least 90% of the pesticides present in the test material and to report no false positives. Within Category A, the laboratories have also been subclassified as 'good', 'satisfactory' or 'unsatisfactory', in relation to the overall accuracy of the results that they reported.

As in the previous year, an additional formula has also been used to classify laboratories in Category A - the Sum of Squared z-Scores (SZ^2). The use of this formula involves the same criteria as the SWZ: that is to say, it requires laboratories to detect 90% of the pesticides present in the sample and not to report any false positives in order to have sufficient scope and thus be included in Category A.

All the other laboratories have been classified into Category B, because they have demonstrated 'insufficient scope'. For laboratories in Category B, individual z-scores have been calculated but their overall performance has not been assessed. They have been listed in order of the number of pesticides sought and the number of acceptable z-scores achieved. In addition, the laboratories in the Category B table have been ranked according to the number of pesticides detected from the total number of pesticides taken into account for the evaluation.

Laboratories that did not report results have not been classified into any category and are indicated in Annex 2 together with laboratories that are not members of the European Union or EFTA.

2. TEST MATERIALS

2.1 Analytical methods

The two analytical methods, described briefly below, were performed by the EURL-FV in order to conduct the homogeneity and stability tests. These were:

- GC method [1]: The sample is extracted with acetone followed by partition with dichlorometane/petroleum ether (1:1). The mixture is centrifuged and an aliquot of the extract is concentrated to dryness. The residue is redissolved in cyclohexane and injected into GC-MS/MS.
- LC method [2]: The sample is extracted with acetonitrile. After the addition of magnesium sulfate, sodium chloride and buffering citrate salts (pH 5-5.5), the mixture is shaken intensively and centrifuged. An aliquot of the organic phase is cleaned-up by dispersive SPE with PSA and $MgSO_4$. The extract is dissolved in acetonitrile and directly injected into LC-MS/MS.

Carbendazim, imazalil, indoxacarb, methomyl, oxamyl, prochloraz, spinosad and thiabendazole were determined using the LC based method described above. All other pesticides (chlorpyrifos, deltamethrin, diazinon, EPN, malathion, methidathion, orthophenylphenol, pendimethalin, phosalone, pyriproxyfen and tolylfluanid) were analysed using the GC based method described above. For confirmation purposes, MS/MS spectra were used.

2.2 Preparation of the treated test material

Before preparation of the test material, the pesticides and target residue levels were selected, following recommendations made by the Quality Control Group (QCG), which had been appointed specifically for Proficiency Test 13. One hundred and fifty kilograms of mandarin were treated, some with post-harvest commercial pesticide formulations dissolved in water (carbendazim, chlorpyrifos, deltamethrin, diazinon, imazalil, indoxacarb, malathion, methidathion, methomyl, oxamyl, pendimethalin, pyriproxyfen, spinosad, thiabendazole and tolylfluanid) and then applied to the mandarins using a microspray. Others were treated with analytical standards dissolved in solvent (EPN, orthophenylphenol, phosalone, prochloraz) then applied to the mandarins using a pipette. Both the formulations and the standard solutions were applied to the mandarins using a microspray. After all the pesticides had been applied, a portion of the treated mandarin was taken and analysed to check if the residue levels present were close to the target levels or whether any additional spraying was necessary. When the residue levels in the mandarins were close to those recommended by the QCG, the entire sample was frozen and processed using liquid nitrogen and a mincer. The frozen minced mandarins were mixed in a constantly-spinning container until a homogeneous material was obtained. 300g portions of the well-mixed homogenate were weighed out into screw-capped polyethylene plastic bottles, sealed and stored in a freezer at about - 20 °C prior to distribution to participants.

2.3 Preparation of 'blank' test material

The mandarins used for the production of the blank test material were organically grown in the same field as the test material. A homogenate was prepared in the same way as the treated test material described previously.

2.4 Homogeneity test

Ten bottles of treated test material were randomly chosen from those stored in the freezer and analyses were performed on duplicate portions taken from each bottle. The sequence of analyses was determined using a table of randomly-generated numbers. The injection sequence of the 20 extracts that were analysed by GC and LC was also randomly chosen. The quantification by GC and LC was performed using 3-point calibration curves constructed from matrix-matched standards prepared from the 'blank' mandarin test material.

The statistical evaluation was performed according to the International Harmonized Protocol published by IUPAC, ISO and AOAC [3]. The individual residue data from the homogeneity tests are given in Appendix 1. The results of the statistical analyses are given in Table 2.1. The acceptance criteria for the test material to be sufficiently homogenous for the proficiency test were that: $Ss^2 < c$, where Ss is the between-bottle sampling standard deviation and $c = F_1\sigma^2_{all} + F_2S^2_{an}$; F_1 and F_2 being constant values of 1.88 and 1.01, respectively, from the 10 samples taken, and σ^2_{all} = 0.3 x FFP RSD(25%) x the analytical sampling mean for all the pesticides.

Table 2.1. Statistical evaluation of the homogeneity test data (n = 20 analyses)

Pesticide	Mean Conc. (mg/Kg)	Ss^2	c	$Ss^2 < c$ Pass/Fail
Carbendazim	0.923	0	1.95×10^{-2}	Pass
Chlorpyrifos	0.678	1.30×10^{-3}	7.94×10^{-3}	Pass
Deltamethrin	0.127	6.67×10^{-5}	3.92×10^{-4}	Pass
Diazinon	0.144	0	1.34×10^{-3}	Pass
EPN	0.296	4.93×10^{-4}	1.38×10^{-3}	Pass
Imazalil	1.36	0	3.84×10^{-2}	Pass
Indoxacarb	0.659	3.07×10^{-4}	7.11×10^{-3}	Pass
Malathion	0.254	4.67×10^{-5}	1.06×10^{-3}	Pass
Methidathion	0.433	2.19×10^{-4}	3.18×10^{-3}	Pass
Methomyl	0.135	3.27×10^{-6}	4.16×10^{-4}	Pass
Orthophenylphenol	0.691	6.31×10^{-3}	6.51×10^{-3}	Pass
Oxamyl	0.113	0	9.79×10^{-4}	Pass

Pesticide	Mean Conc. (mg/Kg)	Ss^2	c	$Ss^2 < c$ Pass/Fail
Pendimethalin	0.491	4.74×10^{-5}	3.66×10^{-3}	Pass
Phosalone	0.198	2.09×10^{-4}	6.49×10^{-4}	Pass
Prochloraz	0.32	1.16×10^{-3}	7.46×10^{-3}	Pass
Pyriproxifen	0.336	7.44×10^{-5}	1.78×10^{-3}	Pass
Spinosad	0.602	1.39×10^{-3}	3.9×10^{-3}	Pass
Thiabendazole	0.713	3.01×10^{-4}	1.04×10^{-2}	Pass
Tolyfluanid	0.618	0	7.04×10^{-3}	Pass

S_s: Between-Sampling Standard Deviation

As can be seen from Table 2.1, all the pesticides used to treat the matrix passed the homogeneity test.

2.5 Stability tests

The two analytical methods described briefly in section 2.1 were also used for the stability tests. The tests were performed on two occasions. On each occasion, a single bottle stored in the freezer at -20°C was chosen randomly and duplicate analyses were performed.

The two occasions were:
- Day 1: coinciding with the first test materials shipments, which took place on 24th January 2011.
- Day 2: shortly after the deadline for reporting results, on 1st March 2011.

The individual results are given in Table 2.2. In general, these tests did not show any significant decrease in the pesticide levels. This demonstrates that, for the duration of the proficiency test and provided that the storage conditions prescribed were followed, the time elapsed until the participants performed the analysis would not have influenced their results.
Moreover, regarding the stability of the sample arriving not completely frozen, a duplicate analysis of a bottle reproducing the delivery conditions the samples have for 48 hours was performed – which found differences of no greater than 10%.
Laboratories could therefore be sufficiently confident in accepting the sample even if it was not completely frozen. Results for this 48 hours stability test are indicated in Table 2.3

Table 2.2. Statistical test for analytical precision and to demonstrate stability for results time elapse interval

Pesticide	Concentration (mg/kg)							
	Day 1 (1st analysis)	Day 1 (2nd analysis)	Mean 1	Day 2 (1st analysis)	Day 2 (2nd analysis)	Mean 2	(M2-M1) M1	%
Carbendazim	0.910	0.894	0.902	0.856	0.888	0.872	-0.033	-3
Chlorpyrifos	0.700	0.680	0.690	0.680	0.660	0.670	-0.029	-3
Deltamethrin	0.140	0.135	0.138	0.130	0.129	0.130	-0.058	-6
Diazinon	0.150	0.145	0.148	0.140	0.138	0.139	-0.058	-6
EPN	0.290	0.281	0.286	0.276	0.289	0.283	-0.011	-1
Imazalil	1.490	1.570	1.530	1.430	1.350	1.390	-0.092	-9
Indoxacarb	0.660	0.640	0.650	0.640	0.631	0.636	-0.022	-2
Malathion	0.254	0.261	0.258	0.241	0.239	0.240	-0.068	-7
Methidathion	0.421	0.436	0.429	0.427	0.439	0.433	0.011	1
Methomyl	0.129	0.116	0.123	0.134	0.127	0.131	0.065	7
Orthophenylphenol	0.681	0.670	0.676	0.694	0.641	0.668	-0.012	-1
Oxamyl	0.120	0.115	0.118	0.114	0.094	0.104	-0.115	-11
Pendimethalin	0.460	0.472	0.466	0.510	0.485	0.498	0.068	7
Phosalone	0.200	0.185	0.193	0.199	0.176	0.188	-0.026	-3
Prochloraz	0.316	0.321	0.319	0.291	0.299	0.295	-0.074	-7
Pyriproxifen	0.340	0.294	0.317	0.319	0.324	0.322	0.014	1
Spinosad	0.634	0.610	0.622	0.624	0.641	0.633	0.017	2
Thiabendazole	0.700	0.680	0.690	0.720	0.721	0.721	0.044	4
Tolyfluanid	0.600	0.627	0.614	0.560	0.536	0.548	-0.107	-11

Table 2.3. Statistical test for analytical precision and to demonstrate stability for 48 hours time elapse interval.

Pesticide	Concentration (mg/kg)							
	Day 1 (1st analysis)	Day 1 (2nd analysis)	Mean 1	48h (1st analysis)	48h (2nd analysis)	Mean 2	(M2-M1) M1	%
Carbendazim	0.910	0.894	0.902	0.987	0.943	0.965	0.0701	7
Chlorpyrifos	0.700	0.680	0.690	0.632	0.682	0.657	-0.0482	-5
Deltamethrin	0.140	0.135	0.138	0.126	0.124	0.125	-0.0915	-9
Diazinon	0.150	0.145	0.148	0.160	0.118	0.139	-0.0592	-6
EPN	0.290	0.281	0.286	0.298	0.248	0.273	-0.0445	-4
Imazalil	1.490	1.570	1.530	1.53	1.48	1.507	-0.0148	-1
Indoxacarb	0.660	0.640	0.650	0.601	0.660	0.630	-0.0301	-3

Pesticide	Concentration (mg/kg)							
	Day 1 (1st analysis)	Day 1 (2nd analysis)	Mean 1	48h (1st analysis)	48h (2nd analysis)	Mean 2	(M2-M1) M1	%
Malathion	0.254	0.261	0.258	0.250	0.246	0.248	-0.0363	-4
Methidathion	0.421	0.436	0.429	0.447	0.459	0.453	0.0574	6
Methomyl	0.129	0.116	0.123	0.120	0.124	0.122	-0.0036	0
Orthophenylphenol	0.681	0.670	0.676	0.698	0.701	0.700	0.0355	4
Oxamyl	0.120	0.115	0.118	0.114	0.102	0.108	-0.0817	-8
Pendimethalin	0.460	0.472	0.466	0.456	0.412	0.434	-0.0686	-7
Phosalone	0.200	0.185	0.193	0.195	0.163	0.179	-0.0694	-7
Prochloraz	0.316	0.321	0.319	0.323	0.313	0.318	-0.0018	0
Pyriproxifen	0.340	0.294	0.317	0.295	0.285	0.29	-0.0853	-9
Spinosad	0.634	0.610	0.622	0.600	0.589	0.595	-0.0442	-4
Thiabendazole	0.700	0.680	0.690	0.719	0.588	0.653	-0.0530	-5
Tolyfluanid	0.600	0.627	0.614	0.587	0.500	0.544	-0.1141	-11

2.6 Distribution of test material and protocol to participants

One bottle of frozen treated test material and one bottle of frozen 'blank' material were shipped to each participant in boxes containing dry ice. The samples were sent on 24th January 2011.

Before sample shipment, the laboratories received full instructions (Annex 1) for the receipt, storage and analysis of the test materials although they were encouraged to use their normal sample receipt procedure and method(s) of analysis. These instructions were uploaded onto the open site of the EURL-FV web page as part of the Specific Protocol. The Application Form was also available as an on-line form. When applying to participate in the test, each laboratory decided on their own password, which was required in order to enter the restricted zone where Forms 0-5 could be accessed on-line. This information was made available when laboratories received an e-mail from the Organiser confirming their acceptance along with their Lab Code and thus allowing them to participate. This ensured that confidentiality was maintained throughout the duration of Proficiency Test 13. The Target Pesticide List and the Minimum Required Reporting Levels (MRRLs), as established by the Organiser, were uploaded onto the EURL-FV open web site to allow laboratories sufficient time to purchase standards and to validate their methods.

3. STATISTICAL METHODS

3.1 False positives and negatives

3.1.1 False positives

These are results above the MRRLs that show the apparent presence of any pesticide that were listed in the Target Pesticide List, but which was: (i) not detected by the Organiser, even after repeated analyses, and (ii) not detected by most of the participating laboratories (i.e. 95% of the laboratories) that had targeted the specific pesticide.

Results reported which were lower than the MRRL have been disregarded and have not therefore been considered to be false positives.

No z-score values have been calculated for false positive results. Any laboratory reporting a false positive, even when reporting the necessary number of pesticides to obtain sufficient scope, has been classified into Category B.

3.1.2 False negatives

These are results for any pesticide reported by the laboratories as "analysed" but reported without numerical values, although they were used by the Organiser to treat the test material and were detected by the Organiser and the majority of the participants that had targeted this specific pesticide, at or above the MRRL.

z-Scores have been calculated for all pesticides detected and reported at levels at, or above, the MRRL, including false negatives. However, these z-scores were not taken into account in assessing the 90% of pesticides present in the sample needed to be classified into Category A.

3.2 Estimation of the assigned values

The assigned values for each pesticide were based on the median level of all the reported results, excluding outliers. Individual results without any numerical values reported, such as detected (D), were not considered. The spread of results for each pesticide was tested for multimodality.

3.3 Fixed target standard deviations

Based on the experience gained from previous EU proficiency tests and recommendations from the Advisory Group, a fixed relative standard deviation (FFP RSD) of 25 % was chosen [4]. This is in line with the internationally-accepted target Measurement Uncertainty of 50% for multiresidue analysis of pesticides [5], which is derived from, and linked to, the EUPTs. The same target RSD has been applied to all the pesticides, independent of concentration. The target standard deviation (σ) for each individual pesticide was calculated by multiplying this FFP RSD by the assigned value. The FFP-RSD for each pesticide was compared to Qn RSD [6].

3.4 z-Scores

An z-score for each laboratory/pesticide combination was calculated according to the following equation:

$$z = (x-X) / \sigma \qquad \text{Eq.1}$$

Where:

- x is the result reported by the participant, the MRRL or the RL (which ever one is lower) for those labs not having detected the presence of the pesticide in the sample.
- X is the assigned value.
- σ is the target standard deviation (the FFP-RSD of 25% multiplied by the assigned value).

z-Score classification is as follows:

$|z| \leq 2$ Acceptable

$2 < |z| \leq 3$ Questionable

$|z| > 3$ Unacceptable

- Any z-score values of $|z| > 5$ have been reported as '5'.
- No z-score calculations have been performed for false positive results.
- For false negative results, the MRRL (or RL) has been used to calculate the z-score. These z-scores have also been included in the graphical representation, and are marked with an asterisk.

3.5 Combined z-Scores

In order to evaluate each laboratory's overall performance according to the quality of its' results and its' scope, two classifications - Category A and B - were used. To be classified in Category A, laboratories had to detect (that is *sought and detected*) 90% or more of the total number of pesticides present in the test material and report no false positives. If these two requirements were met, then the combined z-scores were calculated. These were the 'Sum of Weighted z-Scores' (SWZ) and the 'Sum of Squared z-Scores' (SZ^2) [7]. Results, graphical representations and classification of laboratories were performed using both formulas.

3.5.1 The Sum of Weighted z-Scores (SWZ)

The 'Sum of Weighted z-Scores' - first introduced in EUPT 6 - was used. This formula consists of a weighting factor ω defined as follows:

$$\omega|Z_i| = \begin{cases} 1 & \text{if} \quad |Z| \le 2 \\ 3 & \text{if} \quad 2 < |Z| \le 3 \\ 5 & \text{if} \quad |Z| > 3 \end{cases}$$

Therefore, the 'Sum of Weighted z-Scores' (SWZ) formula is:

$$|SWZ| = \frac{\sum_{i=1}^{n} |Z_i| \omega(Z_i)}{n}$$

So for each lab:

- The first term is the sum of absolute values of z-scores between zero and two, multiplied by one.
- The second term is the sum of absolute values of z-scores greater than two, but less than or equal to three, multiplied by three.
- The third term is the sum of absolute values of z-scores greater than three, multiplied by five.

The sum is then divided by the number of z-scores (n) for each laboratory, including false negatives.

The 'Sum of Weighted z-Scores' has subsequently been used to produce an overall classification of laboratories with three sub-classifications: 'good', 'satisfactory' and 'unsatisfactory'.

$$|SWZ| \le 2 \quad \text{Good}$$

$$2 < |SWZ| \le 3 \quad \text{Satisfactory}$$

$$|SWZ| > 3 \quad \text{Unsatisfactory}$$

In this way, a simple, single, combined value is produced.

3.5.2 The Sum of Squared z-Scores (SZ^2)

The 'Sum of Squared z-Scores' was introduced for the first time in EUPT 12. This formula, analogous to the SWZ, also consists of a weighting factor ω defined as follows:

$$\omega(Z_i) = Z_i$$

But now the resultant Sum of Squared z-Score formula (SZ^2) is:

$$SZ^2 = \frac{\sum_{i=1}^{n} |Z_i| \omega(Z_i)}{n}$$

The resultant formula is the sum of the z-score value, multiplied by itself and divided by the number of z-scores (n) detected by each laboratory, including those from false negatives.

As with the previous formula, it is subsequently used to produce an overall classification of laboratories with three sub-classifications: 'good', 'satisfactory' and 'unsatisfactory'.

$$|SZ^2| \leq 2 \quad \text{Good}$$
$$2 < |SZ^2| \leq 3 \quad \text{Satisfactory}$$
$$|SZ^2| > 3 \quad \text{Unsatisfactory}$$

In this way, a simple, single, combined value is also achieved, as with the previous formula. However, this time, it is more mathematically justifiable as it uses the actual z-score value rather than the factors 1, 3 and 5. Again, the aim is to encourage laboratories to not only improve the accuracy of their results but also to analyse a greater number of pesticides.

Laboratories that did not detect sufficient pesticides, or reported a false positive, have been placed in Category B and no combined z-score has been calculated.
In Appendices 5 to 8, only results of laboratories in Category A have been presented in this report, along with their graphical representation.

4. RESULTS

4.1 Summary of reported results

One hundred and fifty-four laboratories agreed to participate in this proficiency test and all submitted results except two. The results reported by all the laboratories are presented in this report. However, only results reported by laboratories from EU-countries and EFTA-countries (Iceland, Norway, and Switzerland) have been included in the statistical treatment. The results from the laboratories in Brazil, Egypt, Israel, Serbia, Turkey, and Uruguay have not been included. This last group totals 8 laboratories.

Nineteen pesticides were used to treat the sample. For all of them, statistical results have been calculated and presented in this report.

A summary of the reported results can be seen below in Table 4.1.

Table 4.1 Summary of Reported Results

Pesticides	No. of Reported Results	No. of False Negative Results	No. of Not Analysed Results	Percentage of Reported Results *
Carbendazim	107	2	37	74%
Chlorpyrifos	141	1	4	98%
Deltamethrin	127	9	10	88%
Diazinon	141	1	4	98%
EPN	82	3	61	57%
Imazalil	126	1	19	88%
Indoxacarb	106	4	36	74%
Malathion	139	0	7	97%
Methidathion	137	3	6	95%
Methomyl	100	5	41	69%
Orthophenylphenol	97	1	48	67%
Oxamyl	99	3	44	69%
Pendimethalin	115	1	30	80%
Phosalone	138	1	7	96%
Prochloraz	112	4	30	78%
Pyriproxifen	111	0	35	77%
Spinosad	89	0	57	62%
Thiabendazole	116	3	27	81%
Tolyfluanid	124	1	21	86%

* The % of Reported Results comes from 144 laboratories. It does not take into account the 8 laboratories from Brazil, Egypt, Israel, Serbia, Turkey and Uruguay or the two laboratories not submitting results.

The laboratories that agreed to participate are listed in Annex 2. All analytical results reported by the participants are given in Appendix 3, whilst the analytical methods used are given in Appendix 9. For an explanation of the symbols used in these appendices, see Annex 1.

4.1.1 False positives

Nine laboratories reported results for additional pesticides that had not been used to treat the test material. These pesticides and the residue levels reported are presented in Table 4.2 together with the MRRL. Where the reported residue level of the erroneously-detected pesticide was higher than the assigned MRRL value in the Target Pesticide List (Annex 1), the result has been considered as a false positive.

Six out of these nine laboratories reporting a false positive result have not been classified into Category A despite achieving sufficient scope.

Table 4.2 Laboratories that reported as 'official concentration' results for pesticides that were not present in the treated test material

Laboratory Code	Pesticide	Concentration (mg/kg)	Determination Technique	RL (mg/Kg)	MRRL (mg/Kg)
Lab010	Captan	0.013	GC-ECD	0.01	0.01
Lab014	Triadimenol	0.017	GC-MSD	Not reported	0.01
Lab027	Penconazole	0.099	GC-MSD	0.02	0.01
Lab033	Oxydemeton-methyl	0.0555	GC-FPD	0.005	0.006
Lab034	Bifenthrin	1.717	GC-ECD	0.01	0.01
Lab061	Folpet	0.22	GC-MSD	0.01	0.01
Lab110	Captan	0.204	GC-MS/MS (QQQ)	0.01	0.01
Lab116	Parathion-ethyl	0.023	GC-MSD	0.01	0.01
Lab135	Tebuconazole	0.02	LC-MS/MS (QQQ)	0.01	0.01

False positives from Brazil, Egypt, Israel, Serbia, Turkey and Uruguay (if any) have not been included in this table.

If the residue levels reported were below the MRRLs, or if the pesticides did not appear in the pesticide list included in Annex I, then they were not considered to be false positives.

4.1.2 False negatives

Table 4.3 summarises the results from laboratories that reported false negatives.

Table 4.3. Laboratories that failed to report pesticides that were present in the treated test material.

Laboratory Code	Carbendazim (sum)	Chlorpyrifos	Deltamethrin	Diazinon	EPN	Imazalil	Indoxacarb	Methidathion	Methomyl	Orthophenylphenol	Oxamyl	Pendimethalin	Phosalone	Prochloraz	Thiabendazole	Tolylfluanid
007		ND	ND	ND					ND							
009										ND						
014														ND		
021							ND									
023												ND				
028							ND									
033														ND		
034													ND			
041									ND							
042											ND					
045									ND							
053			ND													
056	ND		ND		ND										ND	
063			ND		ND											
066			ND													
068			ND			ND	ND	ND	ND						ND	ND
071			ND								ND					
074					ND											
102			ND								ND					
104														ND		
115									ND							
129								ND								
132	ND															
133			ND				ND								ND	
135								ND								
137														ND		

False negatives from Brazil, Egypt, Israel, Serbia, Turkey and Uruguay (if any) have not been included in this table.

4.1.3 Distribution of data

The distributions of the residue levels of the nineteen pesticides reported by the laboratories have been plotted as histograms after removing results that were distant from the main population (results that gave rise to z-scores above 5.0 in the first round calculation) in Appendix 2.

4.2 Assigned values and target standard deviations

The assigned values were based on the median values calculated using all the reported results, but excluding those values that were far from the median, i.e. outliers. The assigned values for the nineteen pesticides are presented in Table 4.4.

The target standard deviation was calculated using a fixed FFP RSD value of 25%. For comparison, a robust standard deviation (Qn) was also calculated for informative purposes. These RSDs can be seen in Table 4.4.

Table 4.4 Median values and %RSDs for all pesticides present in the test material.

Pesticides	MRRL (mg/Kg)	Median (mg/Kg)	FFP RSD (%)	Qn RSD (%)
Carbendazim	0.01	1.25	25	30
Chlorpyrifos	0.01	0.786	25	24
Deltamethrin	0.01	0.133	25	25
Diazinon	0.01	0.189	25	24
EPN	0.01	0.422	25	26
Imazalil	0.01	1.30	25	24
Indoxacarb	0.01	0.792	25	25
Malathion	0.01	0.381	25	28
Methidathion	0.01	0.730	25	23
Methomyl	0.01	0.201	25	25
Orthophenylphenol	0.01	0.842	25	26
Oxamyl	0.01	0.132	25	22
Pendimethalin	0.01	0.583	25	19
Phosalone	0.01	0.280	25	28
Prochloraz	0.01	0.301	25	30
Pyriproxifen	0.01	0.443	25	22
Spinosad	0.01	0.608	25	31
Thiabendazole	0.01	0.810	25	28
Tolyfluanid	0.01	0.900	25	37

4.3 Assessment of laboratory performance

4.3.1 z-Scores

z-Scores were calculated using the FFP RSD of 25% for all the pesticides present. In Appendix 3, the individual z-scores are presented for each laboratory, together with the median values for each pesticide. The z-scores for Brazil, Egypt, Israel, Serbia, Turkey and Uruguay have been included in Appendix 3 but have not been considered in the following table.

Table 4.5 Classification of z-scores for the pesticides reported

Pesticides	Acceptable (%)	Questionable (%)	Unacceptable (%)
Carbendazim	83	6	11
Chlorpyrifos	94	4	1
Deltamethrin	86	4	10
Diazinon	94	5	1
EPN	89	5	6
Imazalil	93	3	4
Indoxacarb	88	6	5
Malathion	91	6	2
Methidathion	89	8	4
Methomyl	90	3	7
Orthophenylphenol	89	7	4
Oxamyl	92	4	4
Pendimethalin	97	2	2
Phosalone	88	9	2
Prochloraz	82	9	9
Pyriproxifen	97	2	1
Spinosad	79	4	17
Thiabendazole	83	8	8
Tolyfluanid	82	6	11

z-Scores for false negative results have been calculated using the MRRL value reported in the Target Pesticide List (Annex 1) or the RL value from the laboratory (whichever was lower).

In Appendix 4, graphical representations of the z-scores are presented. No z-scores have been calculated for false positive results. z-Scores for false negative results have been included on the chart and are indicated by an asterisk. The charts have been constructed using different colour bars according to the determination technique used for each particular pesticide.

The Organiser considers it important to clarify the Scientific Committee's decisions on two of the pesticides used to treat the sample. These are malathion and methomyl. Although the full residue definitions were requested for both pesticides, it was decided only to evaluate laboratories

performance based on the parent compound result as this was the one present in the test material. No evaluation was made for the overall pesticide residue definition. The 25%FFP-RSD was therefore only applied to the parent compound concentrations in order to calculate the z-score values.

4.3.2 Combined z-Scores

As previously mentioned in Section 3.5, two combined z-score formulas have been applied. Both SWZ and SZ^2 have been used to categorise the laboratories into Category A and B.

The table in Appendix 5 shows the values of individual z-scores for each pesticide and the combined 'Sum of Weighted z-Scores' for those laboratories in Category A. In this category are the laboratories that sought and detected 17, or more, compounds and did not report any false positive results. A graphical representation of the results for these laboratories can also be found in Appendix 6.

The table in Appendix 7 shows the values of individual z-scores for each pesticide and the combined 'Sum of Squared z-Scores' (SZ^2) for those laboratories in Category A. In this category are the laboratories that sought and detected 17, or more, compounds and did not report any false positive results. A graphical representation of the results for these laboratories can be found in Appendix 8.

Eighty-one of the one hundred and forty-four EU and EFTA laboratories that submitted results have been classified into Category A (56%).
From the SWZ, seventy-seven percent were classed as 'good', seven percent as 'satisfactory' and sixteen percent as 'unsatisfactory'.
From the SZ^2, eighty percent were classed as 'good', eight percent as 'satisfactory' and twelve percent as 'unsatisfactory'.
Of the sixty-three laboratories in Category B, six would have been in Category A if they had not reported a false positive result.

Table 4.6.1.1 shows the laboratories in Category A, the number of pesticides reported, the SWZ values and their subclassifications. Laboratories that reported false negative results in Category A are marked with an asterisk and laboratories with SWZ values greater than 3.0 have been marked with an '↑'.

Table 4.6.1.2 shows the laboratories in Category A, the number of pesticides reported, the SWZ values and their subclassifications. Laboratories that reported false negative results in Category A are marked with an asterisk and laboratories with SZ^2 values greater than 3.0 have been marked with an '↑'.

Table 4.6.2 shows the laboratories in Category B, the number of results reported, and the number of acceptable z-scores. Laboratories reporting a false negative are marked with an asterisk and laboratories reporting a false positive are marked with a '+'.

SWZ and SZ^2 graphical representations for laboratories classified into Category A can be seen in Appendices 6 and 8, respectively. The National Reference Laboratories for Fruit and Vegetables have been plotted using a different colour in both graphs.

The performance of the laboratories in the last three EUPTs has been summarised as follows:

- For EUPT-FV-13, out of 144 laboratories (EU and EFTA), 81 are in Category A with the following classess: 13 'unsatisfactory', 6 'satisfactory' and 62 'good' using the SWZ formula.
- For EUPT-FV-13, out of 144 laboratories (EU and EFTA), 81 are in Category A with the following classes: 10 'unsatisfactory', 6 'satisfactory' and 65 'good' using the SZ^2 formula.
- For EUPT-FV-12, out of 140 laboratories (EU and EFTA), 63 are in Category A with the following classes: 8 'unsatisfactory', 8 'satisfactory' and 47 'good'.
- For EUPT-FV-11, out of 148 laboratories, 76 were in Category A with the following classes: 9 'unsatisfactory', 7 'satisfactory' and 60 'good'.

Table 4.6.1.1 Performance and Classification of laboratories in Category A using the SWZ formula

Lab Code	No. of z-scores achieved in total (n)	SWZ	Classification
Lab002	19	0.3	Good
Lab136	17	0.3	Good
Lab005	19	0.3	Good
Lab032	19	0.3	Good
Lab150	19	0.3	Good
Lab013	19	0.3	Good
Lab004	19	0.4	Good
Lab097	19	0.4	Good
Lab024	19	0.4	Good
Lab120	19	0.4	Good
Lab096	19	0.4	Good
Lab094	19	0.4	Good
Lab029	19	0.5	Good
Lab145	19	0.5	Good
Lab019	19	0.5	Good
Lab085	19	0.5	Good
Lab008	19	0.5	Good
Lab117	19	0.5	Good
Lab036	19	0.5	Good
Lab073	19	0.5	Good
Lab149	18	0.6	Good

Lab Code	No. of z-scores achieved in total (n)	SWZ	Classification
Lab124	19	0.6	Good
Lab076	19	0.6	Good
Lab119	19	0.6	Good
Lab114	19	0.6	Good
Lab050	17	0.6	Good
Lab026	19	0.6	Good
Lab059	18	0.6	Good
Lab109	19	0.7	Good
Lab131	19	0.8	Good
Lab090	19	0.8	Good
Lab092	19	0.8	Good
Lab139	18	0.8	Good
Lab138	18	0.9	Good
Lab121	18	0.9	Good
Lab154	19	0.9	Good
Lab035	19	0.9	Good
Lab105	17	1.0	Good
Lab054	19	1.0	Good
Lab017	19	1.0	Good
Lab018	18	1.0	Good
Lab048	19	1.0	Good
Lab015	19	1.1	Good
Lab064	19	1.1	Good
Lab067	19	1.2	Good
Lab098	19	1.2	Good
Lab078	18	1.2	Good
Lab125	19	1.2	Good
Lab091	19	1.3	Good
Lab011	19	1.3	Good
Lab087	17	1.4	Good
Lab146	17	1.5	Good
Lab137*	19	1.5	Good
Lab128	19	1.5	Good
Lab142	18	1.5	Good
Lab037	19	1.6	Good
Lab074*	18	1.7	Good
Lab020	19	1.8	Good
Lab141	19	1.9	Good
Lab047	17	1.9	Good
Lab082	19	2.0	Good
Lab023*	19	2.0	Good
Lab009*	19	2.1	Satisfactory

Lab Code	No. of z-scores achieved in total (n)	SWZ	Classification
Lab057	19	2.1	Satisfactory
Lab099	19	2.1	Satisfactory
Lab012	19	2.2	Satisfactory
Lab101	18	2.7	Satisfactory
Lab130	18	3.0	Satisfactory
Lab104↑*	18	3.1	Unsatisfactory
Lab030↑	19	3.1	Unsatisfactory
Lab108↑	19	3.4	Unsatisfactory
Lab148↑	19	3.6	Unsatisfactory
Lab028↑*	19	3.9	Unsatisfactory
Lab049↑	19	4.3	Unsatisfactory
Lab069↑	18	4.6	Unsatisfactory
Lab063↑*	19	5.0	Unsatisfactory
Lab079↑	17	5.0	Unsatisfactory
Lab129↑*	18	5.0	Unsatisfactory
Lab115↑*	18	5.0	Unsatisfactory
Lab040↑	19	5.0	Unsatisfactory
Lab071↑*	19	5.0	Unsatisfactory

* Laboratories reporting a false negative result.
↑ Laboratories with SWZ values > 3

Table 4.6.1.2 Performance and subclassification of laboratories in Category A using the SZ^2 formula

Lab Code	No. of z-scores achieved in total (n)	SZ^2	Classification
Lab002	19	0.1	Good
Lab136	17	0.1	Good
Lab005	19	0.2	Good
Lab032	19	0.2	Good
Lab013	19	0.2	Good
Lab004	19	0.2	Good
Lab150	19	0.2	Good
Lab120	19	0.2	Good
Lab096	19	0.3	Good
Lab097	19	0.3	Good
Lab024	19	0.3	Good
Lab094	19	0.3	Good
Lab019	19	0.3	Good
Lab029	19	0.3	Good
Lab145	19	0.4	Good

Lab Code	No. of z-scores achieved in total (n)	SZ^2	Classification
Lab073	19	0.4	Good
Lab085	19	0.4	Good
Lab008	19	0.4	Good
Lab117	19	0.5	Good
Lab036	19	0.5	Good
Lab119	19	0.5	Good
Lab076	19	0.5	Good
Lab149	18	0.5	Good
Lab124	19	0.5	Good
Lab026	19	0.6	Good
Lab114	19	0.6	Good
Lab050	17	0.6	Good
Lab059	18	0.7	Good
Lab131	19	0.8	Good
Lab067	19	0.8	Good
Lab109	19	0.8	Good
Lab090	19	0.8	Good
Lab054	19	0.8	Good
Lab154	19	0.8	Good
Lab121	18	0.8	Good
Lab105	17	0.9	Good
Lab035	19	0.9	Good
Lab092	19	0.9	Good
Lab139	18	0.9	Good
Lab125	19	1.0	Good
Lab015	19	1.0	Good
Lab048	19	1.0	Good
Lab138	18	1.0	Good
Lab017	19	1.0	Good
Lab011	19	1.0	Good
Lab018	18	1.1	Good
Lab064	19	1.1	Good
Lab098	19	1.2	Good
Lab137*	19	1.2	Good
Lab087	17	1.2	Good
Lab128	19	1.3	Good
Lab078	18	1.3	Good
Lab074*	18	1.4	Good
Lab091	19	1.5	Good
Lab023*	19	1.6	Good
Lab082	19	1.7	Good
Lab012	19	1.7	Good

Lab Code	No. of z-scores achieved in total (n)	SZ^2	Classification
Lab146	17	1.7	Good
Lab037	19	1.7	Good
Lab020	19	1.7	Good
Lab009*	19	1.8	Good
Lab141	19	1.9	Good
Lab047	17	1.9	Good
Lab099	19	1.9	Good
Lab142	18	2.0	Good
Lab057	19	2.1	Satisfactory
Lab101	18	2.2	Satisfactory
Lab130	18	2.4	Satisfactory
Lab030	19	2.7	Satisfactory
Lab104*	18	2.7	Satisfactory
Lab148	19	2.9	Satisfactory
Lab108↑	19	3.3	Unsatisfactory
Lab028↑*	19	3.6	Unsatisfactory
Lab049↑	19	3.9	Unsatisfactory
Lab069↑	18	4.0	Unsatisfactory
Lab129↑*	18	4.6	Unsatisfactory
Lab115↑*	18	4.8	Unsatisfactory
Lab040↑	19	5.0	Unsatisfactory
Lab071↑*	19	5.0	Unsatisfactory
Lab079↑	17	5.0	Unsatisfactory
Lab063↑*	19	5.0	Unsatisfactory

* Laboratories reporting a false negative result.
↑ Laboratories with SZ^2 values > 3

Table 4.6.2 Performance of laboratories in Category B.

Lab Code	No. of acceptable z-scores	No. of pesticides detected	No. of total z-scores	% No. of detected z-scores / No. of pesticides present
Lab010+	16	19	19	100%
Lab061+	19	19	19	100%
Lab110+	19	19	19	100%
Lab116+	15	19	19	100%
Lab014*+	10	18	19	95%
Lab033*+	17	17	18	89%
Lab021*	10	16	17	84%
Lab077	14	16	16	84%
Lab147	9	16	16	84%
Lab016	15	15	15	79%
Lab038	15	15	15	79%
Lab058	14	15	15	79%

Lab Code	No. of acceptable z-scores	No. of pesticides detected	No. of total z-scores	% No. of detected z-scores / No. of pesticides present
Lab070	13	15	15	79%
Lab102*	13	15	17	79%
Lab135*+	14	15	16	79%
Lab003	14	14	14	74%
Lab053*	13	14	15	74%
Lab107	10	14	14	74%
Lab045*	13	13	14	68%
Lab046	13	13	13	68%
Lab066*	10	13	14	68%
Lab084	11	13	13	68%
Lab140	13	13	13	68%
Lab042*	10	12	13	63%
Lab062	10	12	12	63%
Lab075	11	12	12	63%
Lab080	12	12	12	63%
Lab086	11	12	12	63%
Lab007*	8	11	15	58%
Lab031	11	11	11	58%
Lab100	11	11	11	58%
Lab134	10	11	11	58%
Lab151	11	11	11	58%
Lab034*+	8	10	10	53%
Lab051	10	10	10	53%
Lab055	10	10	10	53%
Lab072	7	10	11	53%
Lab111	9	10	10	53%
Lab123	10	10	10	53%
Lab126	9	10	10	53%
Lab043	8	9	9	47%
Lab044	1	9	9	47%
Lab056*	8	9	13	47%
Lab060	8	9	9	47%
Lab083	9	9	9	47%
Lab089	9	9	9	47%
Lab132*	6	9	10	47%
Lab144	9	9	9	47%
Lab052	8	8	8	42%
Lab106	6	8	8	42%
Lab133*	6	8	11	42%
Lab022	7	7	7	37%
Lab027+	3	7	7	37%
Lab039	6	7	7	37%
Lab041*	6	7	7	37%
Lab081	7	7	7	37%

Lab Code	No. of acceptable z-scores	No. of pesticides detected	No. of total z-scores	% No. of detected z-scores / No. of pesticides present
Lab093	7	7	7	37%
Lab006	6	6	6	32%
Lab025	3	6	6	32%
Lab068*	4	6	12	32%
Lab153	4	5	5	26%
Lab001	3	4	4	21%
Lab088	4	4	4	21%
Lab065	1	1	1	5%

* Laboratories reporting a false negative result.
+ Laboratories reporting a false positive result.

5. CONCLUSIONS

One hundred and fifty-four laboratories agreed to participate in EUPT-FV-13. Out of these, only two did not submit results for the analysis of the treated mandarin homogenate test material. Eight of those submitting results were not from EU or EFTA countries, so no statistical analysis has been conducted on their results.

The pesticide residue levels in the treated mandarin test material were in close agreement with the target levels proposed by the Quality Control Group.

For each laboratory/pesticide combination, z-scores based on the FFP RSD of 25% have been calculated. The different chromatographic techniques used by the participant laboratories, either gas or liquid, are shown in the z-score graphs. Asterisks have been used to mark each bar of the chart to represent a false negative result reported as 'ND' by a laboratory. Classification of z-score values into 'acceptable', 'questionable' or 'unacceptable' has also been undertaken.

The criterion of using the Sum of Weighted z-Score formula, first introduced in the EUPT 6 Proficiency Test Report, was applied to the laboratory results and continues to demonstrate their overall performance. Parallel to this, a second criterion using the Sum of Squared z-Scores formula has been used for the second year. For both formulas, laboratories reporting seventeen or more results, and no false positive results, were considered to have sufficient scope and were therefore classified into Category A. Laboratories in Category A were also classed as 'good', 'satisfactory' or 'unsatisfactory'. Laboratories reporting false negatives were marked with an asterisk and those obtaining an SWZ or SZ^2 value greater than 3 were marked with an '↑'.

Both formulae placed the same number of laboratories into Category A, although the SWZ classed three laboratories as 'satisfacory' rather than 'good'.

Those laboratories that reported less than seventeen results were considered to have insufficient scope and were automatically classified into Category B, together with those reporting a false positive result. These laboratories have been categorised depending on the number of pesticides detected out of the total (19). Laboratories reporting false negatives were marked with an asterisk. Laboratories having reported a false positive have been marked with a '+'.

The median value for each pesticide was used as the assigned value or "true" concentration, which was also used to calculate the z-scores. Results were required from the laboratories not only for the pesticides, as defined by the MRL definition, but also for all the individual components that are included in the MRL definition. Only the parent compound concentrations that were reported as being present in the test material were used to calculate the median and to evaluate the performance of laboratories.

Overall, the results were very good with regard to the z-scores for each pesticide present in the test material. Most of the pesticides had only a few unacceptable z-scores. Therefore, laboratories generally achieved accurate results for the pesticides present in the test material - above 80% overall, except for spinosad at 79%.
A comparison of the results for some pesticides present in last year's test material, such as for oxamyl, appear to show that laboratories were reticent about including new pesticides into their scope. Therefore, the percentage for the number of results reported for this pesticide from EUPT-FV11 to EUPT-FV13 has been 60%, 66% and 68%, respectively. It is a continuing trend that there are still a few laboratories that are not analysing for all the mandatory pesticides that are included in Annex I of the EU coordinated multiannual control programme. The use of certain pesticides to treat the mandarins, such as EPN, which are not in the 2010 EU-Coordinated Control Programme but present in Regulation No. 669/2009, came as a result of the high number of positive findings and rapid alerts given on imported food from third countries. However, many laboratories have still not introduced this pesticide into their scope -demonstrated by the fact that, in the last two years, the percentage of the number of results reported has only been 46% and 56%, respectively.

A comparison to the previous year percentages for 'good' laboratories in Category A shows an increase from 45% last year to 56% this, probably because of a more common matrix being tested.

Participation in this year's European Proficiency Test 13 involved at least one laboratory from each Member State. Additionally, Iceland, Norway and Switzerland participated as EFTA countries. Non-European laboratories in Brazil, Egypt, Turkey and Uruguay also participated (as in previous years) although this year, they were joined by Israel and Serbia for the first time. These Non-EU laboratories, however, are official laboratories in their own countries. As is laid down in Article 32 of Regulation (EC) N° 882/2004, one of the EURL's duties is to collaborate with laboratories in third countries that are responsible for analysing feed and food samples and to help them improve the quality of their analyses.

6. SUGGESTIONS FOR FUTURE WORK

The following suggestions were made by the Organiser and the Scientific Committee for EUPT-FV13.

As a result of the continuing trend for performance improvement, the stricter criteria applied to EUPT-FV-13 will be carried forward to next year. The aim is that laboratories continue to increase the scope of their methods so that they are able to fully enforce EU legislation.

The harmonised MRRL will be maintained for all pesticides. The Target Pesticide List will contain individual analytes that must be sought and reported. No MRL residue definition will be requested. Evaluation will be done on individual components. This will allow a better statistical treatment of the data to be undertaken, and easier traceability of any possible analytical problems encountered by the laboratories.

Furtheron, the Sum of Weighted z-Score formula, first introduced in the EUPT 6, will not be used any more. The Sum of Squared z-Scores formula will be used to evaluate the laboratory overall performance.

The NRL-OfL network will be strengthened further by providing additional information to the NRLs on the performance of all the official laboratories in their country. This information will then be passed on to the OfLs and also be displayed on the EURL web site. This new measure will encourage more frequent communication and regular updates of information.

These changes are aimed at ensuring that, year on year, laboratories strive evermore to increase the scope of their methods, improve their performance (both in terms of correctly detecting the pesticides present in the test material, and also in accurately quantifying the concentrations present). It is recommended that laboratories should continue to evaluate and adopt new techniques/instrumentation that will help them to attain, or maintain, a Category A classification.

7. REFERENCES

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8. ACKNOWLEDGEMENTS

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APPENDIX 1. Homogeneity data.

Carbendazim (mg/Kg)		Chlorpyrifos (mg/Kg)		Deltamethrin (mg/Kg)		Diazinon (mg/Kg)	
Sample 1	Sample 2	Sample 1	Sample 2	Sample 1	Sample 2	Sample 1	Sample 2
0.940	0.910	0.549	0.577	0.122	0.135	0.108	0.162
0.982	1.02	0.647	0.699	0.112	0.134	0.128	0.144
0.926	1.00	0.661	0.711	0.110	0.138	0.104	0.170
0.880	1.05	0.679	0.645	0.121	0.124	0.135	0.125
0.892	0.982	0.679	0.663	0.126	0.086	0.207	0.115
0.900	0.958	0.677	0.736	0.114	0.130	0.108	0.165
0.853	1.02	0.768	0.613	0.133	0.141	0.135	0.169
0.795	0.957	0.685	0.616	0.120	0.113	0.124	0.155
0.732	1.06	0.698	0.718	0.125	0.139	0.147	0.155
0.788	0.827	0.845	0.701	0.170	0.142	0.176	0.147

EPN (mg/Kg)		Imazalil (mg/Kg)		Indoxacarb (mg/Kg)		Malathion (mg/Kg)	
Sample 1	Sample 2	Sample 1	Sample 2	Sample 1	Sample 2	Sample 1	Sample 2
0.254	0.239	1.32	1.15	0.614	0.595	0.226	0.258
0.287	0.257	1.36	1.50	0.591	0.642	0.222	0.253
0.281	0.293	1.34	1.51	0.714	0.691	0.245	0.256
0.246	0.319	1.29	1.55	0.718	0.639	0.237	0.235
0.327	0.306	1.35	1.52	0.610	0.789	0.280	0.222
0.321	0.294	1.33	1.40	0.626	0.639	0.274	0.270
0.321	0.312	1.41	1.55	0.654	0.596	0.279	0.267
0.295	0.324	1.21	1.54	0.626	0.643	0.260	0.248
0.280	0.282	1.13	1.38	0.678	0.737	0.246	0.245
0.346	0.330	1.20	1.26	0.697	0.670	0.299	0.258

Methidathion (mg/Kg)		Methomyl (mg/Kg)		Orthophenylphenol (mg/Kg)		Oxamyl (mg/Kg)	
Sample 1	Sample 2	Sample 1	Sample 2	Sample 1	Sample 2	Sample 1	Sample 2
0.370	0.433	0.146	0.157	0.566	0.577	0.112	0.156
0.382	0.421	0.141	0.154	0.613	0.579	0.110	0.148
0.438	0.427	0.136	0.150	0.654	0.626	0.106	0.138
0.412	0.381	0.133	0.140	0.601	0.689	0.098	0.139
0.480	0.413	0.140	0.135	0.770	0.798	0.097	0.124
0.467	0.448	0.123	0.132	0.724	0.693	0.098	0.124
0.464	0.452	0.125	0.144	0.876	0.773	0.088	0.127
0.439	0.435	0.100	0.140	0.699	0.747	0.068	0.130
0.411	0.429	0.109	0.150	0.633	0.662	0.079	0.137
0.536	0.428	0.116	0.126	0.737	0.796	0.075	0.099

APPENDIX 1. Homogeneity data.

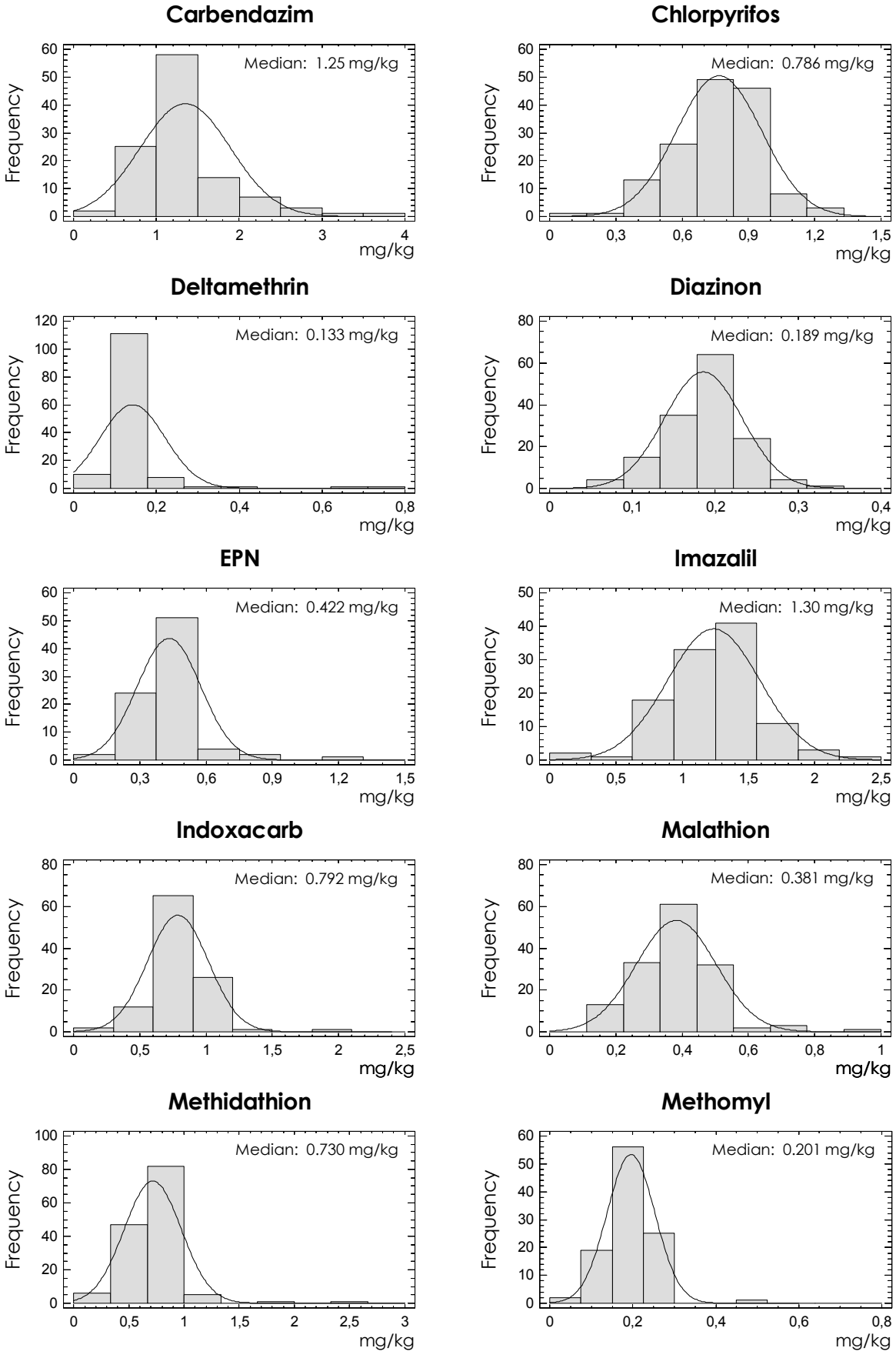
Pendimethalin (mg/Kg)		Phosalone (mg/Kg)		Prochloraz (mg/Kg)		Pyriproxifen (mg/Kg)	
Sample 1	Sample 2	Sample 1	Sample 2	Sample 1	Sample 2	Sample 1	Sample 2
0.462	0.487	0.172	0.159	0.356	0.371	0.329	0.312
0.450	0.489	0.188	0.169	0.377	0.380	0.304	0.324
0.447	0.489	0.187	0.203	0.368	0.322	0.319	0.350
0.465	0.463	0.173	0.220	0.346	0.138	0.322	0.300
0.555	0.459	0.221	0.208	0.294	0.181	0.379	0.320
0.520	0.521	0.219	0.192	0.291	0.215	0.367	0.341
0.498	0.509	0.215	0.207	0.370	0.125	0.358	0.357
0.473	0.493	0.199	0.222	0.356	0.392	0.317	0.334
0.481	0.487	0.180	0.187	0.358	0.384	0.314	0.339
0.582	0.489	0.226	0.220	0.390	0.389	0.397	0.330

Spinosad (mg/Kg)		Thiabendazole (mg/Kg)		Tolyfluanid (mg/Kg)	
Sample 1	Sample 2	Sample 1	Sample 2	Sample 1	Sample 2
0.594	0.591	0.751	0.606	0.588	0.619
0.609	0.602	0.804	0.788	0.568	0.628
0.600	0.591	0.710	0.802	0.537	0.626
0.604	0.601	0.695	0.798	0.529	0.581
0.610	0.614	0.790	0.729	0.724	0.576
0.606	0.605	0.740	0.736	0.691	0.645
0.604	0.595	0.663	0.741	0.659	0.639
0.603	0.593	0.593	0.735	0.614	0.608
0.608	0.607	0.592	0.706	0.585	0.622
0.607	0.590	0.580	0.710	0.729	0.592

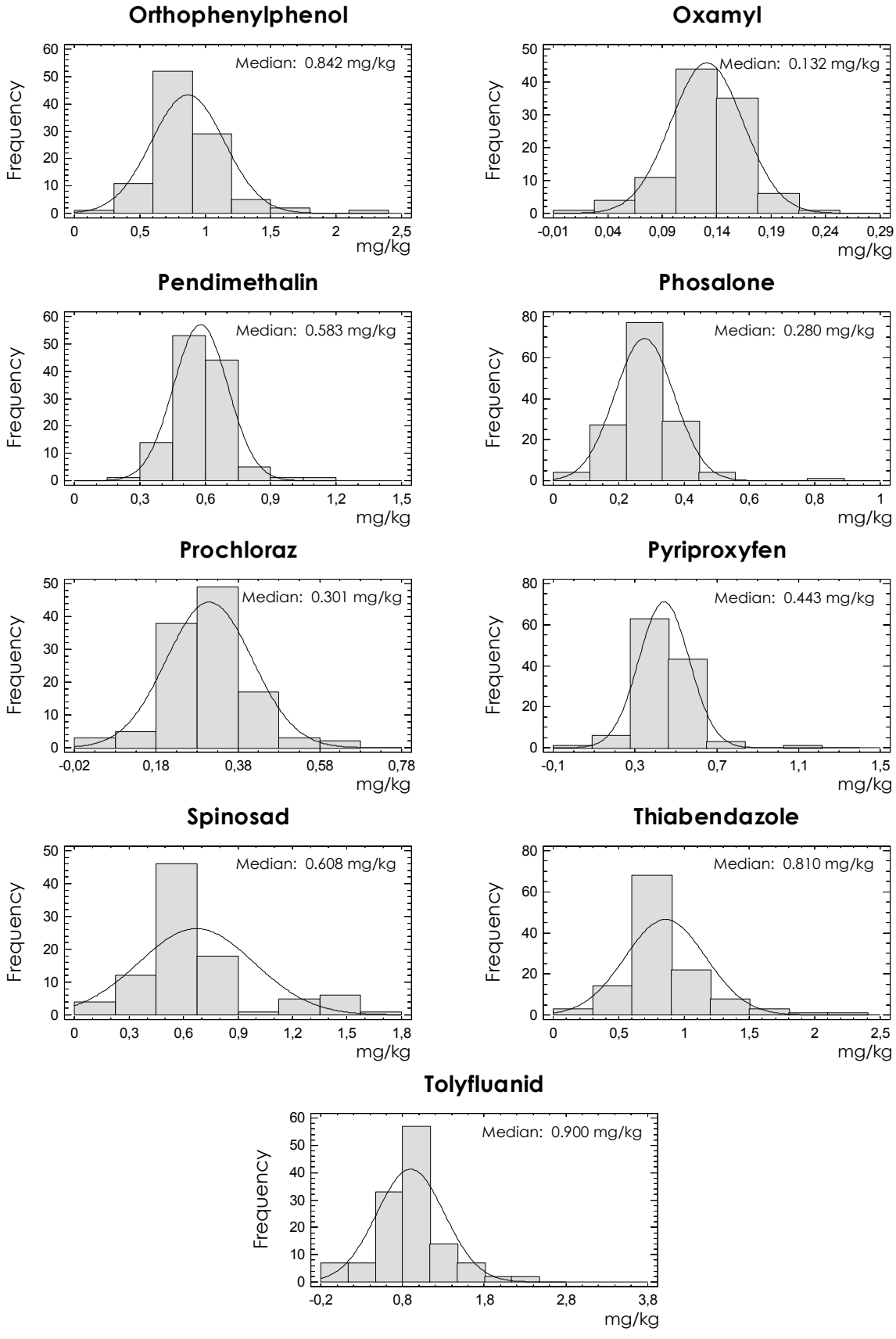
The sample numbers used for this test were: 8, 56, 83, 94, 114, 121, 131, 154, 170, and 199.

APPENDIX 2. Histograms of residue data for each pesticide from all the laboratories.

Results presented as histograms.



APPENDIX 2. Histograms of residue data for each pesticide from all the laboratories.



APPENDIX 3. Results (mg/kg) and z-scores for FFP RSD (25%).

Results given by the laboratories (mg/kg) and their calculated z-score value using FFP RSD 25%

Lab Code	Carbendazim	z-Score (FFP RSD 25%)	Chlorpyrifos	z-Score (FFP RSD 25%)	Deltamethrin	z-Score (FFP RSD 25%)	Diazinon	z-Score (FFP RSD 25%)	EPN	z-Score (FFP RSD 25%)	Imazalil	z-Score (FFP RSD 25%)	Indoxacarb	z-Score (FFP RSD 25%)	Malathion	z-Score (FFP RSD 25%)	Methidathion	z-Score (FFP RSD 25%)
MRRL	**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		**0.003**		**0.01**		**0.01**		**0.01**	
Median (mg/kg)	**1.25**		**0.786**		**0.133**		**0.189**		**0.422**		**1.30**		**0.792**		**0.381**		**0.730**	
Lab001	NA		0.665	-0.6	NA		0.276	1.8	NA		NA		NA		NA		NA	
Lab002	1.41	0.5	0.873	0.4	0.142	0.3	0.157	-0.7	0.374	-0.5	1.31	0.0	0.871	0.4	0.333	-0.5	0.783	0.3
Lab003	NA		0.524	-1.3	0.101	-1.0	0.137	-1.1	NA		0.981	-1.0	0.722	-0.4	NA		0.674	-0.3
Lab004	1.10	-0.5	0.854	0.3	0.125	-0.2	0.175	-0.3	0.369	-0.5	1.15	-0.5	0.638	-0.8	0.361	-0.2	0.709	-0.1
Lab005	1.28	0.1	0.866	0.4	0.122	-0.3	0.187	0.0	0.331	-0.9	1.19	-0.3	0.821	0.1	0.389	0.1	0.721	0.0
Lab006	1.21	-0.1	NA		NA		NA		NA		1.29	0.0	NA		NA		NA	
Lab007	1.00	-0.8	ND	-3.9	ND	-3.7	ND	-3.8	NA		1.12	-0.6	0.290	-2.5	0.230	-1.6	0.260	-2.6
Lab008	1.24	0.0	0.850	0.3	0.135	0.1	0.165	-0.5	0.458	0.3	1.21	-0.3	0.767	-0.1	0.284	-1.0	0.518	-1.2
Lab009	1.53	0.9	0.431	-1.8	0.152	0.6	0.208	0.4	0.461	0.4	1.60	0.9	0.908	0.6	0.342	-0.4	0.509	-1.2
Lab010	1.05	-0.6	1.27	2.4	0.169	1.1	0.226	0.8	0.648	2.1	1.61	1.0	0.903	0.6	0.723	3.6	0.813	0.5
Lab011	1.30	0.2	0.852	0.3	0.188	1.7	0.217	0.6	0.423	0.0	1.30	0.0	0.891	0.5	0.296	-0.9	0.735	0.0
Lab012	0.999	-0.8	0.724	-0.3	0.106	-0.8	0.160	-0.6	0.439	0.2	1.24	-0.2	0.662	-0.7	0.336	-0.5	0.613	-0.6
Lab013	1.33	0.3	0.822	0.2	0.158	0.8	0.180	-0.2	0.421	0.0	1.46	0.5	0.826	0.2	0.341	-0.4	0.750	0.1
Lab014	1.35	0.3	0.152	-3.2	0.161	0.8	0.246	1.2	0.517	0.9	2.18	2.7	0.908	0.6	0.736	3.7	2.50	5.0
Lab015	1.08	-0.5	0.970	0.9	0.160	0.8	0.200	0.2	0.550	1.2	1.62	1.0	0.950	0.8	0.440	0.6	0.840	0.6
Lab016	NA		0.857	0.4	0.117	-0.5	0.190	0.0	0.477	0.5	1.39	0.3	0.906	0.6	0.469	0.9	0.705	-0.1
Lab017	1.48	0.7	0.763	-0.1	0.145	0.4	0.220	0.7	0.570	1.4	1.56	0.8	0.914	0.6	0.415	0.4	0.877	0.8
Lab018	1.20	-0.2	0.840	0.3	0.164	0.9	0.239	1.1	NA		1.08	-0.7	1.10	1.6	0.394	0.1	0.798	0.4
Lab019	1.21	-0.1	0.680	-0.5	0.095	-1.1	0.158	-0.7	0.329	-0.9	1.04	-0.8	0.776	-0.1	0.318	-0.7	0.661	-0.4
Lab020	1.10	-0.5	0.900	0.6	0.130	-0.1	0.216	0.6	0.400	-0.2	1.30	0.0	0.840	0.2	0.420	0.4	0.600	-0.7
Lab021	2.68	4.6	1.05	1.3	0.218	2.6	0.280	1.9	NA		1.34	0.1	ND	-3.9	0.490	1.1	0.991	1.4
Lab022	NA		0.570	-1.1	NA		0.200	0.2	NA		0.900	-1.2	NA		0.320	-0.6	0.560	-0.9
Lab023	1.39	0.4	1.01	1.1	0.163	0.9	0.304	2.4	0.481	0.6	1.53	0.7	0.909	0.6	0.477	1.0	0.864	0.7
Lab024	0.812	-1.4	0.851	0.3	0.140	0.2	0.191	0.0	0.464	0.4	1.30	0.0	0.678	-0.6	0.420	0.4	0.790	0.3
Lab025	NA		0.540	-1.3	0.070	-1.9	0.090	-2.1	NA		NA		NA		0.210	-1.8	0.260	-2.6
Lab026	0.904	-1.1	0.876	0.5	0.130	-0.1	0.228	0.8	0.359	-0.6	1.45	0.5	0.852	0.3	0.340	-0.4	0.741	0.1
Lab027	NA		0.362	-2.2	0.397	5.0	0.236	1.0	NA		NA		NA		0.552	1.8	1.89	5.0
Lab028	1.18	-0.2	0.943	0.8	0.147	0.4	0.217	0.6	0.416	-0.1	1.35	0.2	ND	-3.9	0.381	0.0	0.746	0.1
Lab029	1.20	-0.2	0.820	0.2	0.140	0.2	0.220	0.7	0.390	-0.3	1.20	-0.3	0.750	-0.2	0.460	0.8	0.840	0.6
Lab030	1.20	-0.2	0.965	0.9	0.220	2.6	0.249	1.3	0.498	0.7	1.34	0.1	1.20	2.1	0.526	1.5	1.04	1.7
Lab031	1.10	-0.5	1.10	1.6	0.140	0.2	0.220	0.7	NA		1.20	-0.3	NA		0.430	0.5	0.580	-0.8
Lab032	1.32	0.2	0.727	-0.3	0.134	0.0	0.209	0.4	0.350	-0.7	1.51	0.6	0.787	0.0	0.388	0.1	0.855	0.7
Lab033	1.42	0.5	0.786	0.0	0.118	-0.5	0.184	-0.1	0.477	0.5	1.33	0.1	0.739	-0.3	0.400	0.2	0.818	0.5
Lab034	NA		0.700	-0.4	0.645	5.0	0.149	-0.8	NA		1.55	0.8	NA		0.192	-2.0	1.02	1.6
Lab035	1.91	2.1	0.848	0.3	0.109	-0.7	0.195	0.1	0.394	-0.3	1.43	0.4	1.08	1.5	0.275	-1.1	0.527	-1.1
Lab036	1.01	-0.8	0.985	1.0	0.141	0.2	0.216	0.6	0.556	1.3	1.77	1.4	0.898	0.5	0.417	0.4	0.846	0.6
Lab037	1.80	1.8	0.690	-0.5	0.071	-1.9	0.180	-0.2	0.330	-0.9	1.60	0.9	0.570	-1.1	0.340	-0.4	0.810	0.4
Lab038	NA		0.915	0.7	0.119	-0.4	0.251	1.3	0.521	0.9	1.12	-0.6	0.792	0.0	0.485	1.1	0.783	0.3
Lab039	NA		1.00	1.1	0.280	4.4	0.220	0.7	NA		1.45	0.5	NA		0.520	1.5	NA	
Lab040	3.71	5.0	0.728	-0.3	0.101	-1.0	0.188	0.0	0.464	0.4	1.98	2.1	1.09	1.5	0.275	-1.1	0.373	-2.0
Lab041	NA		0.686	-0.5	0.084	-1.5	0.148	-0.9	NA		NA		NA		0.309	-0.8	0.583	-0.8

APPENDIX 3. Results (mg/Kg) and z-scores for FFP RSD (25%).

Lab Code	Carbendazim	z-Score (FFP RSD 25%)	Chlorpyrifos	z-Score (FFP RSD 25%)	Deltamethrin	z-Score (FFP RSD 25%)	Diazinon	z-Score (FFP RSD 25%)	EPN	z-Score (FFP RSD 25%)	Imazalil	z-Score (FFP RSD 25%)	Indoxacarb	z-Score (FFP RSD 25%)	Malathion	z-Score (FFP RSD 25%)	Methidathion	z-Score (FFP RSD 25%)
MRRL	**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		**0.003**		**0.01**		**0.01**		**0.01**	
Median (mg/kg)	**1.25**		**0.786**		**0.133**		**0.189**		**0.422**		**1.30**		**0.792**		**0.381**		**0.730**	
Lab042	0.568	-2.2	0.648	-0.7	0.096	-1.1	0.141	-1.0	NA		0.941	-1.1	NA		0.328	-0.6	0.863	0.7
Lab043	NA		0.670	-0.6	0.120	-0.4	0.160	-0.6	NA		NA		0.690	-0.5	0.330	-0.5	0.620	-0.6
Lab044	NA		0.520	-1.4	NA		0.088	-2.1	0.163	-2.5	0.150	-3.5	NA		0.182	-2.1	0.210	-2.8
Lab045	1.39	0.4	0.683	-0.5	0.112	-0.6	0.208	0.4	NA		0.904	-1.2	1.01	1.1	0.495	1.2	0.748	0.1
Lab046	1.15	-0.3	0.833	0.2	0.125	-0.2	0.188	0.0	NA		1.28	-0.1	0.725	-0.3	0.436	0.6	0.862	0.7
Lab047	2.90	5.0	0.870	0.4	0.150	0.5	0.250	1.3	NA		1.30	0.0	0.870	0.4	0.380	0.0	0.760	0.2
Lab048	0.998	-0.8	0.700	-0.4	0.112	-0.6	0.164	-0.5	0.284	-1.3	1.01	-0.9	0.652	-0.7	0.629	2.6	0.638	-0.5
Lab049	1.40	0.5	1.08	1.5	0.151	0.5	0.191	0.0	0.408	-0.1	1.76	1.4	1.42	3.2	0.314	-0.7	0.990	1.4
Lab050	1.41	0.5	0.632	-0.8	0.110	-0.7	0.140	-1.0	NA		1.09	-0.7	0.804	0.1	0.312	-0.7	0.597	-0.7
Lab051	NA		0.630	-0.8	0.090	-1.3	0.180	-0.2	NA		0.750	-1.7	NA		0.300	-0.8	0.600	-0.7
Lab052	NA		0.786	0.0	0.146	0.4	0.178	-0.2	NA		NA		0.694	-0.5	0.389	0.1	0.721	0.0
Lab053	0.820	-1.4	0.650	-0.7	ND	-3.7	0.160	-0.6	0.310	-1.1	1.39	0.3	0.710	-0.4	0.320	-0.6	0.890	0.9
Lab054	1.24	0.0	0.888	0.5	0.153	0.6	0.237	1.0	0.501	0.7	1.50	0.6	0.962	0.9	0.520	1.5	0.892	0.9
Lab055	NA		0.790	0.0	0.130	-0.1	0.190	0.0	NA		1.40	0.3	NA		0.370	-0.1	0.750	0.1
Lab056	ND	-4.0	0.500	-1.5	ND	-3.7	0.170	-0.4	ND	-3.9	1.70	1.2	NA		0.230	-1.6	0.530	-1.1
Lab057	1.61	1.2	0.904	0.6	0.155	0.7	0.227	0.8	0.444	0.2	1.48	0.6	0.936	0.7	0.464	0.9	0.849	0.7
Lab058	NA		0.480	-1.6	0.100	-1.0	0.116	-1.5	0.216	-2.0	0.633	-2.1	0.485	-1.6	0.233	-1.5	0.500	-1.3
Lab059	0.860	-1.2	0.794	0.0	0.124	-0.3	0.193	0.1	NA		0.681	-1.9	0.437	-1.8	0.348	-0.3	0.644	-0.5
Lab060	NA		0.984	1.0	NA		0.198	0.2	NA		1.20	-0.3	NA		0.547	1.7	0.735	0.0
Lab061	1.10	-0.5	1.01	1.1	0.160	0.8	0.260	1.5	0.550	1.2	1.20	-0.3	0.770	-0.1	0.530	1.6	0.970	1.3
Lab062	NA		0.945	0.8	0.172	1.2	0.231	0.9	NA		1.46	0.5	NA		0.387	0.1	0.775	0.2
Lab063	2.46	3.9	0.320	-2.4	ND	-3.7	0.051	-2.9	ND	-3.9	1.68	1.2	0.615	-0.9	0.130	-2.6	0.231	-2.7
Lab064	1.40	0.5	0.900	0.6	0.170	1.1	0.260	1.5	0.390	-0.3	1.50	0.6	0.930	0.7	0.450	0.7	0.820	0.5
Lab065	NA		NA		0.130	-0.1	NA		NA		NA		NA		NA		NA	
Lab066	1.11	-0.4	0.800	0.1	ND	-3.7	0.211	0.5	0.604	1.7	7.53	5.0	NA		0.486	1.1	0.808	0.4
Lab067	1.05	-0.6	0.851	0.3	0.109	-0.7	0.202	0.3	0.440	0.2	1.29	0.0	0.752	-0.2	0.375	-0.1	0.640	-0.5
Lab068	NA		0.460	-1.7	ND	-3.7	0.150	-0.8	NA		ND	-4.0	ND	-3.9	0.610	2.4	ND	-3.9
Lab069	2.63	4.4	0.942	0.8	0.120	-0.4	0.285	2.0	NA		1.30	0.0	0.750	-0.2	0.430	0.5	0.782	0.3
Lab070	2.23	3.1	0.961	0.9	0.094	-1.2	0.197	0.2	0.456	0.3	1.58	0.9	NA		0.294	-0.9	0.669	-0.3
Lab071	1.20	-0.2	1.30	2.6	ND	-3.7	0.150	-0.8	0.510	0.8	1.90	1.8	2.10	5.0	0.420	0.4	1.20	2.6
Lab072	NA		0.620	-0.8	0.106	-0.8	0.168	-0.4	NA		NA		NA		0.301	-0.8	0.647	-0.5
Lab073	1.14	-0.4	0.705	-0.4	0.095	-1.1	0.154	-0.7	0.322	-0.9	1.08	-0.7	0.757	-0.2	0.362	-0.2	0.598	-0.7
Lab074	1.23	-0.1	0.900	0.6	0.139	0.2	0.226	0.8	ND	-3.9	1.36	0.2	0.912	0.6	0.482	1.1	0.823	0.5
Lab075	1.24	0.0	0.368	-2.1	NA		0.121	-1.4	NA		1.16	-0.4	0.456	-1.7	0.299	-0.9	0.508	-1.2
Lab076	1.60	1.1	1.00	1.1	0.094	-1.2	0.210	0.4	0.390	-0.3	1.40	0.3	0.900	0.5	0.490	1.1	0.810	0.4
Lab077	2.08	2.7	0.881	0.5	0.166	1.0	0.215	0.6	NA		1.48	0.6	0.660	-0.7	0.419	0.4	0.954	1.2
Lab078	1.02	-0.7	0.692	-0.5	0.134	0.0	0.119	-1.5	0.281	-1.3	0.818	-1.5	0.501	-1.5	0.213	-1.8	0.335	-2.2
Lab079	NA		1.31	2.7	0.156	0.7	0.261	1.5	NA		1.94	2.0	1.17	1.9	0.740	3.7	1.15	2.3
Lab080	NA		0.760	-0.1	0.130	-0.1	0.140	-1.0	NA		1.10	-0.6	0.790	0.0	0.370	-0.1	0.660	-0.4
Lab081	NA		0.784	0.0	0.084	-1.5	0.190	0.0	NA		NA		1.19	2.0	0.401	0.2	0.797	0.4
Lab082	2.45	3.8	0.667	-0.6	0.102	-0.9	0.169	-0.4	0.382	-0.4	0.861	-1.4	0.311	-2.4	0.322	-0.6	0.660	-0.4
Lab083	NA		0.820	0.2	0.140	0.2	0.190	0.0	NA		1.40	0.3	NA		0.470	0.9	0.740	0.1
Lab084	NA		0.699	-0.4	0.134	0.0	0.127	-1.3	0.529	1.0	0.936	-1.1	NA		0.145	-2.5	0.829	0.5
Lab085	1.21	-0.1	0.829	0.2	0.152	0.6	0.218	0.6	0.312	-1.0	1.44	0.4	0.758	-0.2	0.381	0.0	0.706	-0.1

APPENDIX 3. Results (mg/kg) and z-scores for FFP RSD (25%).

Lab Code	Carbendazim	z-Score (FFP RSD 25%)	Chlorpyrifos	z-Score (FFP RSD 25%)	Deltamethrin	z-Score (FFP RSD 25%)	Diazinon	z-Score (FFP RSD 25%)	EPN	z-Score (FFP RSD 25%)	Imazalil	z-Score (FFP RSD 25%)	Indoxacarb	z-Score (FFP RSD 25%)	Malathion	z-Score (FFP RSD 25%)	Methidathion	z-Score (FFP RSD 25%)
MRRL	**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		**0.003**		**0.01**		**0.01**		**0.01**	
Median (mg/kg)	**1.25**		**0.786**		**0.133**		**0.189**		**0.422**		**1.30**		**0.792**		**0.381**		**0.730**	
Lab086	1.35	0.3	0.495	-1.5	NA		0.185	-0.1	NA		0.876	-1.3	NA		0.362	-0.2	0.674	-0.3
Lab087	1.33	0.3	0.921	0.7	0.149	0.5	0.224	0.7	0.549	1.2	1.30	0.0	1.23	2.2	0.490	1.1	0.882	0.8
Lab088	NA		0.780	0.0	0.139	0.2	0.207	0.4	NA		NA		0.884	0.5	NA		NA	
Lab089	1.30	0.2	0.820	0.2	0.140	0.2	0.210	0.4	NA		NA		NA		0.500	1.2	0.900	0.9
Lab090	0.890	-1.2	0.580	-1.0	0.120	-0.4	0.160	-0.6	0.280	-1.3	0.940	-1.1	0.680	-0.6	0.390	0.1	0.490	-1.3
Lab091	0.750	-1.6	0.539	-1.3	0.118	-0.5	0.127	-1.3	0.202	-2.1	1.02	-0.9	0.605	-0.9	0.295	-0.9	0.396	-1.8
Lab092	0.633	-2.0	1.03	1.2	0.179	1.4	0.247	1.2	0.393	-0.3	1.45	0.5	0.869	0.4	0.340	-0.4	0.444	-1.6
Lab093	NA		0.561	-1.1	0.160	0.8	0.128	-1.3	NA		NA		NA		0.218	-1.7	0.705	-0.1
Lab094	1.24	0.0	0.771	-0.1	0.119	-0.4	0.200	0.2	0.304	-1.1	1.31	0.0	0.906	0.6	0.446	0.7	0.697	-0.2
Lab095	NA		ND	-3.9	NA		ND	-3.8	NA		NA		NA		NA		NA	
Lab096	1.38	0.4	0.880	0.5	0.144	0.3	0.183	-0.1	0.475	0.5	1.25	-0.2	0.896	0.5	0.396	0.2	0.782	0.3
Lab097	1.25	0.0	0.854	0.3	0.130	-0.1	0.230	0.9	0.300	-1.2	1.24	-0.2	0.811	0.1	0.415	0.4	0.809	0.4
Lab098	0.977	-0.9	0.497	-1.5	0.160	0.8	0.213	0.5	0.493	0.7	1.42	0.4	1.07	1.4	0.332	-0.5	0.777	0.3
Lab099	2.38	3.6	0.979	1.0	0.142	0.3	0.101	-1.9	0.403	-0.2	1.73	1.3	0.754	-0.2	0.289	-1.0	0.857	0.7
Lab100	NA		0.750	-0.2	0.110	-0.7	0.180	-0.2	NA		1.05	-0.8	NA		0.340	-0.4	0.670	-0.3
Lab101	2.30	3.4	0.860	0.4	0.092	-1.2	0.180	-0.2	NA		1.10	-0.6	0.910	0.6	0.290	-1.0	0.690	-0.2
Lab102	1.35	0.3	0.900	0.6	ND	-3.7	0.190	0.0	NA		1.47	0.5	0.360	-2.2	0.320	-0.6	0.450	-1.5
Lab103	No Reported Results																	
Lab104	1.55	1.0	0.657	-0.7	0.152	0.6	0.324	2.9	NA		1.32	0.1	1.03	1.2	0.426	0.5	0.499	-1.3
Lab105	0.619	-2.0	0.940	0.8	0.123	-0.3	0.225	0.8	0.455	0.3	0.880	-1.3	NA		0.433	0.5	0.843	0.6
Lab106	2.20	3.0	0.690	-0.5	0.720	5.0	0.140	-1.0	NA		NA		NA		0.350	-0.3	0.760	0.2
Lab107	NA		0.468	-1.6	0.142	0.3	0.115	-1.6	0.445	0.2	0.945	-1.1	0.285	-2.6	0.174	-2.2	0.335	-2.2
Lab108	0.939	-1.0	0.834	0.2	0.120	-0.4	0.190	0.0	1.16	5.0	1.19	-0.3	0.666	-0.6	0.447	0.7	0.706	-0.1
Lab109	0.940	-1.0	0.990	1.0	0.160	0.8	0.240	1.1	0.440	0.2	1.35	0.2	0.700	-0.5	0.500	1.2	0.730	0.0
Lab110	1.23	-0.1	0.720	-0.3	0.099	-1.0	0.163	-0.6	0.436	0.1	1.03	-0.8	0.650	-0.7	0.385	0.0	0.718	-0.1
Lab111	NA		0.970	0.9	0.100	-1.0	0.160	-0.6	NA		1.62	1.0	NA		0.450	0.7	0.690	-0.2
Lab112	1.94	2.2	0.848	0.3	0.137	0.1	0.197	0.2	0.912	4.6	1.26	-0.1	0.926	0.7	0.464	0.9	0.612	-0.6
Lab113	No Reported Results																	
Lab114	1.36	0.3	0.551	-1.2	0.161	0.8	0.150	-0.8	0.389	-0.3	1.30	0.0	0.743	-0.2	0.372	-0.1	0.662	-0.4
Lab115	0.900	-1.1	0.650	-0.7	0.170	1.1	0.130	-1.2	0.800	3.6	0.950	-1.1	1.05	1.3	0.320	-0.6	0.620	-0.6
Lab116	1.45	0.6	0.468	-1.6	0.097	-1.1	0.060	-2.7	0.129	-2.8	1.58	0.9	0.903	0.6	0.195	-1.9	0.282	-2.5
Lab117	1.24	0.0	0.747	-0.2	0.079	-1.6	0.158	-0.7	0.314	-1.0	1.29	0.0	0.886	0.5	0.439	0.6	0.735	0.0
Lab118	0.810	-1.4	0.460	-1.7	0.120	-0.4	0.120	-1.5	0.290	-1.3	0.790	-1.6	0.690	-0.5	0.260	-1.3	0.430	-1.6
Lab119	0.852	-1.3	0.711	-0.4	0.137	0.1	0.189	0.0	0.342	-0.8	1.00	-0.9	0.675	-0.6	0.404	0.2	0.743	0.1
Lab120	1.31	0.2	0.750	-0.2	0.162	0.9	0.180	-0.2	0.414	-0.1	1.08	-0.7	0.728	-0.3	0.336	-0.5	0.628	-0.6
Lab121	1.62	1.2	0.812	0.1	0.123	-0.3	0.189	0.0	0.424	0.0	1.52	0.7	0.831	0.2	0.403	0.2	0.770	0.2
Lab122	NA		0.950	0.8	0.100	-1.0	0.200	0.2	NA		1.10	-0.6	NA		0.390	0.1	0.590	-0.8
Lab123	NA		0.818	0.2	0.110	-0.7	0.206	0.4	NA		1.63	1.0	NA		0.417	0.4	0.758	0.2
Lab124	1.60	1.1	0.825	0.2	0.184	1.5	0.203	0.3	0.445	0.2	1.30	0.0	0.615	-0.9	0.441	0.6	0.711	-0.1
Lab125	1.12	-0.4	0.831	0.2	0.161	0.8	0.174	-0.3	0.438	0.2	1.16	-0.4	0.889	0.5	0.471	0.9	0.738	0.0
Lab126	NA		0.541	-1.2	0.062	-2.1	0.110	-1.7	NA		NA		0.515	-1.4	0.202	-1.9	0.360	-2.0
Lab127	ND	-4.0	0.840	0.3	0.130	-0.1	0.150	-0.8	NA		1.61	1.0	1.04	1.3	0.930	5.0	1.10	2.0
Lab128	1.31	0.2	0.753	-0.2	0.122	-0.3	0.184	-0.1	0.41	-0.1	1.32	0.1	0.744	-0.2	0.390	0.1	0.834	0.6
Lab129	0.335	-2.9	0.560	-1.2	0.087	-1.4	0.123	-1.4	NA		0.416	-2.7	0.562	-1.2	0.156	-2.3	ND	-3.9

APPENDIX 3. Results (mg/Kg) and z-scores for FFP RSD (25%).

Lab Code	Carbendazim	z-Score (FFP RSD 25%)	Chlorpyrifos	z-Score (FFP RSD 25%)	Deltamethrin	z-Score (FFP RSD 25%)	Diazinon	z-Score (FFP RSD 25%)	EPN	z-Score (FFP RSD 25%)	Imazalil	z-Score (FFP RSD 25%)	Indoxacarb	z-Score (FFP RSD 25%)	Malathion	z-Score (FFP RSD 25%)	Methidathion	z-Score (FFP RSD 25%)
MRRL	**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		**0.003**		**0.01**		**0.01**		**0.01**	
Median (mg/kg)	**1.25**		**0.786**		**0.133**		**0.189**		**0.422**		**1.30**		**0.792**		**0.381**		**0.730**	
Lab130	1.00	-0.8	1.00	1.1	0.210	2.3	0.210	0.4	NA		0.200	-3.4	1.20	2.1	0.360	-0.2	0.700	-0.2
Lab131	0.973	-0.9	0.575	-1.1	0.138	0.2	0.152	-0.8	0.318	-1.0	0.883	-1.3	0.647	-0.7	0.263	-1.2	0.414	-1.7
Lab132	ND	-4.0	0.670	-0.6	0.230	2.9	NA		NA		2.35	3.2	NA		0.340	-0.4	0.630	-0.5
Lab133	NA		1.07	1.4	ND	-3.7	0.253	1.4	NA		NA		ND	-3.9	0.530	1.6	1.14	2.3
Lab134	1.90	2.1	NA		NA		0.230	0.9	NA		1.50	0.6	0.910	0.6	0.450	0.7	0.850	0.7
Lab135	0.940	-1.0	1.10	1.6	0.170	1.1	0.190	0.0	0.600	1.7	1.12	-0.6	0.920	0.6	0.460	0.8	ND	-3.9
Lab136	1.31	0.2	0.801	0.1	0.115	-0.5	0.171	-0.4	NA		1.28	-0.1	0.738	-0.3	0.408	0.3	0.716	-0.1
Lab137	1.25	0.0	0.885	0.5	0.124	-0.3	0.178	-0.2	0.417	0.0	0.913	-1.2	0.793	0.0	0.364	-0.2	0.701	-0.2
Lab138	0.980	-0.9	0.522	-1.3	0.133	0.0	0.135	-1.1	0.330	-0.9	0.815	-1.5	0.640	-0.8	0.225	-1.6	0.440	-1.6
Lab139	1.73	1.5	0.661	-0.6	0.106	-0.8	0.242	1.1	0.469	0.4	0.920	-1.2	0.417	-1.9	0.416	0.4	0.930	1.1
Lab140	0.868	-1.2	0.644	-0.7	0.096	-1.1	0.125	-1.4	NA		NA		0.605	-0.9	0.238	-1.5	0.510	-1.2
Lab141	1.83	1.9	0.662	-0.6	0.114	-0.6	0.169	-0.4	0.403	-0.2	1.84	1.7	0.797	0.0	0.434	0.6	0.656	-0.4
Lab142	1.26	0.0	0.422	-1.9	0.140	0.2	0.145	-0.9	0.300	-1.2	0.745	-1.7	0.679	-0.6	0.275	-1.1	0.425	-1.7
Lab143	1.05	-0.6	0.675	-0.6	0.096	-1.1	0.185	-0.1	NA		1.31	0.0	0.792	0.0	0.338	-0.4	0.669	-0.3
Lab144	1.58	1.0	0.956	0.9	0.123	-0.3	0.190	0.0	NA		NA		NA		0.512	1.4	0.802	0.4
Lab145	1.50	0.8	0.824	0.2	0.142	0.3	0.211	0.5	0.500	0.7	1.47	0.5	0.792	0.0	0.458	0.8	0.856	0.7
Lab146	0.519	-2.3	0.715	-0.4	0.067	-2.0	0.144	-1.0	NA		0.890	-1.3	0.768	-0.1	0.244	-1.4	0.518	-1.2
Lab147	0.860	-1.2	0.400	-2.0	0.064	-2.1	0.076	-2.4	NA		1.10	-0.6	NA		0.130	-2.6	0.280	-2.5
Lab148	3.04	5.0	0.715	-0.4	0.139	0.2	0.189	0.0	0.543	1.1	1.35	0.1	0.530	-1.3	0.163	-2.3	0.651	-0.4
Lab149	1.41	0.5	0.660	-0.6	0.120	-0.4	0.18	-0.2	NA		0.870	-1.3	0.780	-0.1	0.340	-0.4	0.540	-1.0
Lab150	1.28	0.1	0.783	0.0	0.138	0.2	0.178	-0.2	0.455	0.3	1.49	0.6	0.853	0.3	0.408	0.3	0.813	0.5
Lab151	NA		0.570	-1.1	0.124	-0.3	0.182	-0.1	NA		1.15	-0.5	NA		0.360	-0.2	0.791	0.3
Lab152	0.221	-3.3	0.786	0.0	0.086	-1.4	0.094	-2.0	NA		0.958	-1.1	0.302	-2.5	0.349	-0.3	0.814	0.5
Lab153	NA		0.558	-1.2	NA		0.140	-1.0	NA		NA		NA		NA		0.529	-1.1
Lab154	1.74	1.6	0.940	0.8	0.190	1.7	0.240	1.1	0.340	-0.8	1.41	0.3	0.890	0.5	0.480	1.0	0.760	0.2

APPENDIX 3. Results (mg/kg) and z-scores for FFP RSD (25%).

Lab Code	Methomyl	z-Score (FFP RSD 25%)	Orthophenylphenol	z-Score (FFP RSD 25%)	Oxamyl	z-Score (FFP RSD 25%)	Pendimethalin	z-Score (FFP RSD 25%)	Phosalone	z-Score (FFP RSD 25%)	Prochloraz	z-Score (FFP RSD 25%)	Pyriproxifen	z-Score (FFP RSD 25%)	Spinosad	z-Score (FFP RSD 25%)	Thiabendazole	z-Score (FFP RSD 25%)	Tolyfluanid	z-Score (FFP RSD 25%)
MRRL	**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		0.01		0.01		0.01	
Median (mg/kg)	**0.201**		**0.842**		**0.132**		**0.583**		**0.280**		**0.301**		**0.443**		0.608		0.810		0.900	
Lab001	0.120	-1.6	NA		0.054	-2.4	NA		NA		NA		NA		NA		NA		NA	
Lab002	0.187	-0.3	0.782	-0.3	0.132	0.0	0.627	0.3	0.278	0.0	0.308	0.1	0.479	0.3	0.563	-0.3	0.795	-0.1	0.945	0.2
Lab003	0.164	-0.7	NA		0.126	-0.2	0.521	-0.4	0.231	-0.7	0.278	-0.3	0.399	-0.4	NA		0.646	-0.8	0.790	-0.5
Lab004	0.217	0.3	0.781	-0.3	0.138	0.2	0.601	0.1	0.247	-0.5	0.316	0.2	0.515	0.7	0.457	-1.0	0.846	0.2	0.883	-0.1
Lab005	0.223	0.4	0.838	0.0	0.143	0.3	0.604	0.1	0.267	-0.2	0.250	-0.7	0.423	-0.2	0.512	-0.6	0.896	0.4	1.02	0.5
Lab006	0.153	-1.0	NA		0.105	-0.8	NA		NA		0.407	1.4	NA		0.770	1.1	NA		NA	
Lab007	ND	-3.8	NA		0.090	-1.3	0.430	-1.0	0.120	-2.3	NA		0.270	-1.6	0.210	-2.6	0.750	-0.3	NA	
Lab008	0.197	-0.1	1.00	0.8	0.120	-0.4	0.631	0.3	0.344	0.9	0.304	0.0	0.418	-0.2	0.463	-0.9	0.676	-0.7	0.607	-1.3
Lab009	0.221	0.4	ND	-4.0	0.190	1.8	0.460	-0.8	0.252	-0.4	0.458	2.1	0.342	-0.9	0.684	0.5	0.865	0.3	0.663	-1.1
Lab010	0.210	0.2	0.561	-1.3	0.120	-0.4	0.711	0.9	0.310	0.4	0.220	-1.1	0.591	1.3	0.647	0.3	0.680	-0.6	1.30	1.8
Lab011	0.203	0.0	0.904	0.3	0.129	-0.1	0.638	0.4	0.298	0.3	0.280	-0.3	0.466	0.2	0.603	0.0	0.825	0.1	1.77	3.9
Lab012	0.209	0.2	0.826	-0.1	0.124	-0.2	0.584	0.0	0.299	0.3	0.294	-0.1	0.134	-2.8	0.204	-2.7	0.645	-0.8	0.067	-3.7
Lab013	0.220	0.4	0.886	0.2	0.153	0.6	0.632	0.3	0.305	0.4	0.353	0.7	0.518	0.7	0.659	0.3	0.875	0.3	0.915	0.1
Lab014	0.245	0.9	1.30	2.2	0.154	0.7	0.831	1.7	0.440	2.3	ND	-3.9	0.450	0.1	1.38	5.0	0.854	0.2	2.38	5.0
Lab015	0.240	0.8	0.850	0.0	0.170	1.2	0.650	0.5	0.290	0.1	0.500	2.6	0.430	-0.1	0.550	-0.4	0.640	-0.8	0.510	-1.7
Lab016	NA		0.891	0.2	NA		0.625	0.3	0.279	0.0	0.373	1.0	0.333	-1.0	NA		0.888	0.4	0.848	-0.2
Lab017	0.246	0.9	1.17	1.6	0.154	0.7	0.633	0.3	0.405	1.8	0.416	1.5	0.443	0.0	0.696	0.6	1.24	2.1	0.862	-0.2
Lab018	0.183	-0.4	1.04	0.9	0.132	0.0	0.584	0.0	0.390	1.6	0.465	2.2	0.342	-0.9	0.555	-0.3	0.604	-1.0	0.465	-1.9
Lab019	0.195	-0.1	0.706	-0.6	0.129	-0.1	0.479	-0.7	0.259	-0.3	0.277	-0.3	0.418	-0.2	0.527	-0.5	0.682	-0.6	0.817	-0.4
Lab020	0.140	-1.2	1.00	0.8	0.110	-0.7	0.550	-0.2	0.350	1.0	0.380	1.0	0.428	-0.1	1.50	5.0	1.00	0.9	1.08	0.8
Lab021	0.205	0.1	2.19	5.0	0.154	0.7	0.648	0.4	0.495	3.1	0.462	2.1	0.457	0.1	NA		0.997	0.9	1.89	4.4
Lab022	NA		NA		NA		NA		0.180	-1.4	NA		NA		NA		NA		0.910	0.0
Lab023	0.234	0.7	0.824	-0.1	0.152	0.6	ND	-4.0	0.269	-0.2	0.324	0.3	0.519	0.7	0.722	0.8	0.930	0.6	1.13	1.0
Lab024	0.178	-0.5	0.850	0.0	0.121	-0.3	0.640	0.4	0.290	0.1	0.315	0.2	0.420	-0.2	0.423	-1.2	0.795	-0.1	1.08	0.8
Lab025	NA		NA		NA		NA		0.080	-2.9	NA		NA		NA		NA		NA	
Lab026	0.160	-0.8	0.991	0.7	0.145	0.4	0.753	1.2	0.366	1.2	0.428	1.7	0.473	0.3	0.637	0.2	0.668	-0.7	0.955	0.2
Lab027	NA		NA		NA		NA		0.779	5.0	NA		NA		NA		NA		0.837	-0.3
Lab028	0.207	0.1	0.911	0.3	0.191	1.8	0.669	0.6	0.283	0.0	0.319	0.2	0.562	1.1	1.31	4.6	2.36	5.0	0.928	0.1
Lab029	0.210	0.2	1.10	1.2	0.140	0.2	0.600	0.1	0.240	-0.6	0.260	-0.5	0.450	0.1	0.680	0.5	0.720	-0.4	1.20	1.3
Lab030	0.153	-1.0	0.976	0.6	0.107	-0.8	0.652	0.5	0.474	2.8	0.562	3.5	0.363	-0.7	0.600	0.0	1.12	1.5	1.47	2.5
Lab031	NA		NA		NA		NA		0.380	1.4	0.320	0.3	0.610	1.5	NA		0.850	0.2	NA	
Lab032	0.201	0.0	0.841	0.0	0.141	0.3	0.668	0.6	0.237	-0.6	0.300	0.0	0.491	0.4	0.677	0.5	0.870	0.3	0.981	0.4
Lab033	0.204	0.1	1.06	1.0	0.128	-0.1	0.718	0.9	0.350	1.0	ND	-3.9	0.485	0.4	NA		0.837	0.1	1.13	1.0
Lab034	0.102	-2.0	NA		0.102	-0.9	NA		ND	-3.9	0.243	-0.8	NA		NA		NA		NA	
Lab035	0.180	-0.4	0.925	0.4	0.170	1.2	0.597	0.1	0.284	0.1	0.294	-0.1	0.502	0.5	0.774	1.1	0.900	0.4	0.471	-1.9
Lab036	0.205	0.1	0.658	-0.9	0.118	-0.4	0.567	-0.1	0.298	0.3	0.317	0.2	0.547	0.9	0.607	0.0	0.814	0.0	1.04	0.6
Lab037	0.260	1.2	0.510	-1.6	0.160	0.8	0.510	-0.5	0.150	-1.9	0.270	-0.4	0.480	0.3	0.270	-2.2	1.40	2.9	0.720	-0.8
Lab038	NA		1.15	1.5	NA		0.785	1.4	0.326	0.7	0.351	0.7	0.391	-0.5	NA		0.655	-0.8	0.945	0.2
Lab039	NA		0.950	0.5	NA		NA		0.280	0.0	NA		NA		NA		NA		NA	
Lab040	0.491	5.0	0.348	-2.3	0.164	1.0	0.524	-0.4	0.126	-2.2	0.340	0.5	0.386	-0.5	1.15	3.6	1.70	4.4	0.525	-1.7
Lab041	ND	-3.8	NA		NA		NA		0.211	-1.0	NA		NA		NA		NA		NA	
Lab042	NA		0.614	-1.1	ND	-3.7	0.549	-0.2	0.162	-1.7	0.212	-1.2	NA		NA		0.275	-2.6	NA	
Lab043	NA		NA		NA		NA		0.170	-1.6	0.040	-3.5	0.390	-0.5	NA		NA		NA	

APPENDIX 3. Results (mg/Kg) and z-scores for FFP RSD (25%).

Lab Code	Methomyl	z-Score (FFP RSD 25%)	Orthophenylphenol	z-Score (FFP RSD 25%)	Oxamyl	z-Score (FFP RSD 25%)	Pendimethalin	z-Score (FFP RSD 25%)	Phosalone	z-Score (FFP RSD 25%)	Prochloraz	z-Score (FFP RSD 25%)	Pyriproxifen	z-Score (FFP RSD 25%)	Spinosad	z-Score (FFP RSD 25%)	Thiabendazole	z-Score (FFP RSD 25%)	Tolyfluanid	z-Score (FFP RSD 25%)
MRRL	**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		0.01		0.01		0.01	
Median (mg/kg)	**0.201**		**0.842**		**0.132**		**0.583**		**0.280**		**0.301**		**0.443**		0.608		0.810		0.900	
Lab044	NA		NA		NA		NA		0.088	-2.7	0.060	-3.2	NA		NA		NA		0.370	-2.4
Lab045	ND	-3.8	NA		NA		NA		0.302	0.3	0.292	-0.1	0.426	-0.2	NA		1.12	1.5	1.03	0.6
Lab046	NA		NA		NA		0.607	0.2	0.266	-0.2	0.248	-0.7	0.420	-0.2	NA		NA		0.922	0.1
Lab047	0.200	0.0	0.860	0.1	0.140	0.2	0.630	0.3	0.340	0.9	0.240	-0.8	NA		0.650	0.3	0.740	-0.3	1.30	1.8
Lab048	0.130	-1.4	0.787	-0.3	0.125	-0.2	0.577	0.0	0.151	-1.8	0.221	-1.1	0.380	-0.6	0.621	0.1	0.676	-0.7	0.873	-0.1
Lab049	0.190	-0.2	1.05	1.0	0.123	-0.3	0.614	0.2	0.296	0.2	0.350	0.7	0.693	2.3	1.53	5.0	0.773	-0.2	2.20	5.0
Lab050	0.196	-0.1	NA		0.145	0.4	0.834	1.7	0.176	-1.5	0.375	1.0	0.447	0.0	0.626	0.1	0.755	-0.3	0.882	-0.1
Lab051	NA		NA		NA		0.310	-1.9	0.160	-1.7	0.280	-0.3	NA		NA		NA		0.990	0.4
Lab052	NA		NA		NA		NA		0.238	-0.6	NA		NA		NA		NA		1.08	0.8
Lab053	NA		0.770	-0.3	NA		0.490	-0.6	0.310	0.4	NA		0.540	0.9	NA		0.160	-3.2	0.770	-0.6
Lab054	0.217	0.3	1.01	0.8	0.148	0.5	0.704	0.8	0.371	1.3	0.386	1.1	0.521	0.7	0.672	0.4	0.901	0.5	1.36	2.0
Lab055	NA		NA		NA		0.370	-1.5	0.200	-1.1	NA		NA		NA		0.900	0.4	0.510	-1.7
Lab056	NA		NA		NA		0.360	-1.5	0.220	-0.9	NA		0.310	-1.2	NA		ND	-4.0	0.094	-3.6
Lab057	0.260	1.2	1.16	1.5	0.190	1.8	0.656	0.5	0.348	1.0	0.655	4.7	0.498	0.5	0.833	1.5	1.15	1.7	1.05	0.7
Lab058	NA		0.485	-1.7	NA		0.378	-1.4	0.160	-1.7	0.249	-0.7	0.290	-1.4	NA		0.586	-1.1	0.529	-1.6
Lab059	0.160	-0.8	0.780	-0.3	0.108	-0.7	0.542	-0.3	0.211	-1.0	0.334	0.4	0.368	-0.7	0.692	0.6	0.771	-0.2	0.922	0.1
Lab060	NA		1.05	1.0	NA		NA		0.387	1.5	NA		NA		NA		0.746	-0.3	0.104	-3.5
Lab061	0.190	-0.2	1.10	1.2	0.160	0.8	0.710	0.9	0.370	1.3	0.420	1.6	0.520	0.7	0.670	0.4	0.960	0.7	1.30	1.8
Lab062	NA		NA		NA		0.661	0.5	0.263	-0.2	0.310	0.1	0.513	0.6	NA		1.61	4.0	0.010	-4.0
Lab063	0.109	-1.8	0.420	-2.0	0.069	-1.9	0.380	-1.4	0.104	-2.5	0.260	-0.5	0.250	-1.7	1.42	5.0	1.59	3.9	0.120	-3.5
Lab064	0.240	0.8	0.820	-0.1	0.150	0.5	0.630	0.3	0.340	0.9	0.440	1.8	0.550	1.0	0.710	0.7	1.40	2.9	1.00	0.4
Lab065	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Lab066	NA		1.66	3.9	NA		0.542	-0.3	0.379	1.4	0.468	2.2	0.482	0.4	NA		NA		0.688	-0.9
Lab067	0.190	-0.2	0.849	0.0	0.130	-0.1	0.580	0.0	0.306	0.4	0.302	0.0	0.382	-0.6	1.12	3.4	0.859	0.2	1.15	1.1
Lab068	ND	-3.8	NA		NA		NA		0.270	-0.1	0.190	-1.5	NA		NA		ND	-4.0	ND	-4.0
Lab069	0.273	1.4	1.31	2.2	0.171	1.2	0.628	0.3	0.439	2.3	0.393	1.2	0.524	0.7	0.525	-0.5	1.33	2.6	2.07	5.0
Lab070	0.255	1.1	NA		0.134	0.1	0.685	0.7	0.324	0.6	NA		0.457	0.1	NA		2.05	5.0	0.584	-1.4
Lab071	0.270	1.4	1.80	4.6	ND	-3.7	1.10	3.5	0.470	2.7	0.480	2.4	0.660	2.0	0.420	-1.2	1.30	2.4	1.50	2.7
Lab072	NA		0.985	0.7	0.011	-3.7	NA		0.327	0.7	0.015	-3.8	0.014	-3.9	0.142	-3.1	NA		NA	
Lab073	0.167	-0.7	0.914	0.3	0.117	-0.5	0.539	-0.3	0.270	-0.1	0.260	-0.5	0.388	-0.5	0.521	-0.6	0.642	-0.8	1.06	0.7
Lab074	0.118	-1.7	NA		0.117	-0.5	0.693	0.8	0.253	-0.4	0.234	-0.9	0.466	0.2	0.706	0.7	0.761	-0.2	1.20	1.3
Lab075	0.167	-0.7	NA		0.101	-0.9	NA		0.159	-1.7	0.259	-0.6	NA		NA		0.593	-1.1	NA	
Lab076	0.210	0.2	1.10	1.2	0.130	-0.1	0.680	0.7	0.300	0.3	0.280	-0.3	0.520	0.7	0.690	0.5	0.790	-0.1	1.00	0.4
Lab077	0.254	1.1	1.11	1.3	0.137	0.2	NA		0.288	0.1	0.400	1.3	0.443	0.0	NA		0.721	-0.4	1.75	3.8
Lab078	0.234	0.7	0.704	-0.7	0.102	-0.9	0.528	-0.4	0.244	-0.5	0.369	0.9	0.388	-0.5	NA		0.555	-1.3	0.665	-1.0
Lab079	0.246	0.9	1.37	2.5	0.177	1.4	0.870	2.0	0.475	2.8	0.671	4.9	0.523	0.7	2.07	5.0	1.29	2.4	1.67	3.4
Lab080	NA		NA		NA		0.490	-0.6	0.250	-0.4	0.260	-0.5	0.480	0.3	NA		NA		1.04	0.6
Lab081	NA		NA		NA		NA		0.225	-0.8	NA		NA		NA		NA		NA	
Lab082	0.212	0.2	0.786	-0.3	0.125	-0.2	0.428	-1.1	0.223	-0.8	0.278	-0.3	0.659	2.0	0.451	-1.0	0.797	-0.1	0.766	-0.6
Lab083	NA		NA		NA		0.690	0.7	0.260	-0.3	NA		NA		NA		NA		1.00	0.4
Lab084	NA		NA		NA		0.581	0.0	0.109	-2.4	0.174	-1.7	0.647	1.8	NA		0.775	-0.2	1.04	0.6
Lab085	0.242	0.8	0.773	-0.3	0.164	1.0	0.451	-0.9	0.298	0.3	0.283	-0.2	0.455	0.1	0.822	1.4	0.650	-0.8	0.959	0.3
Lab086	0.207	0.1	0.541	-1.4	0.232	3.0	NA		0.246	-0.5	NA		NA		NA		0.973	0.8	0.794	-0.5
Lab087	0.146	-1.1	NA		NA		0.743	1.1	0.339	0.8	0.129	-2.3	0.538	0.9	0.611	0.0	0.719	-0.4	1.22	1.4

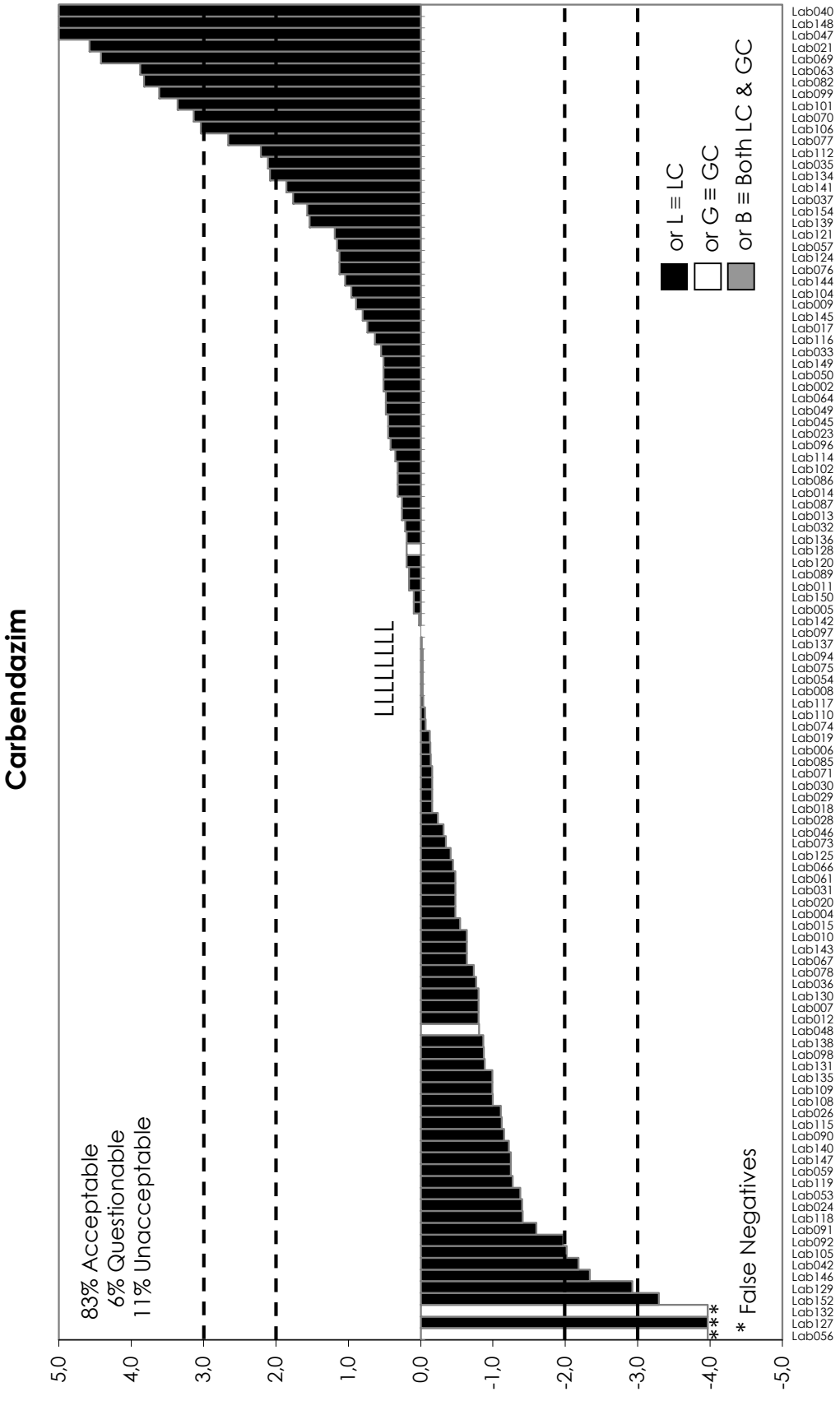
APPENDIX 3. Results (mg/kg) and z-scores for FFP RSD (25%).

Lab Code	Methomyl	z-Score (FFP RSD 25%)	Orthophenylphenol	z-Score (FFP RSD 25%)	Oxamyl	z-Score (FFP RSD 25%)	Pendimethalin	z-Score (FFP RSD 25%)	Phosalone	z-Score (FFP RSD 25%)	Prochloraz	z-Score (FFP RSD 25%)	Pyriproxifen	z-Score (FFP RSD 25%)	Spinosad	z-Score (FFP RSD 25%)	Thiabendazole	z-Score (FFP RSD 25%)	Tolyfluanid	z-Score (FFP RSD 25%)
MRRL	**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		0.01		0.01		0.01	
Median (mg/kg)	**0.201**		**0.842**		**0.132**		**0.583**		**0.280**		**0.301**		**0.443**		0.608		0.810		0.900	
Lab088	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Lab089	NA		NA		NA		0.580	0.0	0.320	0.6	NA		NA		NA		NA		0.930	0.1
Lab090	0.180	-0.4	0.550	-1.4	0.130	-0.1	0.470	-0.8	0.250	-0.4	0.270	-0.4	0.480	0.3	0.410	-1.3	0.640	-0.8	0.600	-1.3
Lab091	0.135	-1.3	0.800	-0.2	0.110	-0.7	0.405	-1.2	0.159	-1.7	0.260	-0.5	0.395	-0.4	0.505	-0.7	0.500	-1.5	0.586	-1.4
Lab092	0.141	-1.2	0.624	-1.0	0.126	-0.2	0.478	-0.7	0.202	-1.1	0.293	-0.1	0.413	-0.3	0.722	0.8	0.738	-0.4	0.795	-0.5
Lab093	NA		NA		NA		NA		0.229	-0.7	NA		NA		NA		NA		0.613	-1.3
Lab094	0.222	0.4	0.685	-0.7	0.155	0.7	0.570	-0.1	0.215	-0.9	0.364	0.8	0.515	0.7	0.629	0.1	0.865	0.3	0.838	-0.3
Lab095	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Lab096	0.201	0.0	0.697	-0.7	0.150	0.5	0.668	0.6	0.337	0.8	0.291	-0.1	0.467	0.2	0.455	-1.0	0.812	0.0	1.11	0.9
Lab097	0.166	-0.7	0.731	-0.5	0.136	0.1	0.582	0.0	0.215	-0.9	0.232	-0.9	0.427	-0.1	0.609	0.0	0.772	-0.2	0.872	-0.1
Lab098	0.140	-1.2	0.453	-1.8	0.112	-0.6	0.717	0.9	0.353	1.0	0.290	-0.1	0.517	0.7	0.571	-0.2	1.37	2.8	0.740	-0.7
Lab099	0.233	0.6	0.672	-0.8	0.145	0.4	0.464	-0.8	0.264	-0.2	0.374	1.0	0.338	-0.9	0.733	0.8	1.16	1.7	0.274	-2.8
Lab100	NA		0.940	0.5	NA		0.460	-0.8	0.320	0.6	NA		NA		NA		0.580	-1.1	1.05	0.7
Lab101	0.270	1.4	0.760	-0.4	0.180	1.5	0.550	-0.2	0.190	-1.3	0.270	-0.4	0.470	0.2	1.20	3.9	1.20	1.9	0.930	0.1
Lab102	0.240	0.8	0.730	-0.5	ND	-3.7	0.740	1.1	0.210	-1.0	NA		0.380	-0.6	1.41	5.0	1.02	1.0	0.780	-0.5
Lab103	No Reported Results																			
Lab104	0.212	0.2	0.805	-0.2	0.175	1.3	0.954	2.5	0.343	0.9	ND	-3.9	0.308	-1.2	0.825	1.4	0.958	0.7	1.52	2.8
Lab105	0.158	-0.9	0.842	0.0	0.140	0.2	0.507	-0.5	0.328	0.7	0.306	0.1	0.381	-0.6	0.346	-1.7	0.518	-1.4	NA	
Lab106	NA		NA		NA		NA		0.270	-0.1	NA		NA		NA		NA		0.910	0.0
Lab107	NA		NA		NA		0.429	-1.1	0.225	-0.8	0.099	-2.7	0.348	-0.9	NA		0.797	-0.1	0.684	-1.0
Lab108	0.226	0.5	1.03	0.9	0.141	0.3	0.636	0.4	0.343	0.9	0.370	0.9	0.468	0.2	1.55	5.0	0.399	-2.0	1.29	1.7
Lab109	0.220	0.4	1.00	0.8	0.150	0.5	0.640	0.4	0.290	0.1	0.330	0.4	0.540	0.9	0.580	-0.2	1.20	1.9	1.33	1.9
Lab110	0.171	-0.6	0.867	0.1	0.111	-0.6	0.576	0.0	0.242	-0.5	0.199	-1.4	0.416	-0.2	0.417	-1.3	0.658	-0.7	0.960	0.3
Lab111	NA		NA		NA		0.650	0.5	0.280	0.0	0.100	-2.7	NA		NA		NA		1.08	0.8
Lab112	0.224	0.5	0.845	0.0	0.140	0.2	0.633	0.3	0.262	-0.3	0.295	-0.1	0.454	0.1	0.641	0.2	0.838	0.1	1.17	1.2
Lab113	No Reported Results																			
Lab114	0.208	0.1	0.783	-0.3	0.145	0.4	0.359	-1.5	0.307	0.4	0.413	1.5	0.276	-1.5	0.654	0.3	0.983	0.9	0.810	-0.4
Lab115	ND	-3.8	0.850	0.0	NA		0.490	-0.6	0.280	0.0	0.290	-0.1	0.350	-0.8	1.30	4.6	2.20	5.0	0.500	-1.8
Lab116	0.230	0.6	0.548	-1.4	0.115	-0.5	0.390	-1.3	0.203	-1.1	0.202	-1.3	0.278	-1.5	0.580	-0.2	0.911	0.5	0.256	-2.9
Lab117	0.150	-1.0	0.649	-0.9	0.124	-0.2	0.521	-0.4	0.243	-0.5	0.302	0.0	0.490	0.4	0.570	-0.2	0.809	0.0	1.17	1.2
Lab118	0.140	-1.2	0.540	-1.4	0.054	-2.4	0.440	-1.0	0.270	-0.1	0.290	-0.1	0.270	-1.6	0.390	-1.4	0.530	-1.4	0.100	-3.6
Lab119	0.150	-1.0	0.721	-0.6	0.107	-0.8	0.545	-0.3	0.256	-0.3	0.258	-0.6	0.399	-0.4	0.519	-0.6	0.552	-1.3	0.693	-0.9
Lab120	0.218	0.3	0.950	0.5	0.139	0.2	0.547	-0.2	0.314	0.5	0.250	-0.7	0.406	-0.3	0.567	-0.3	1.02	1.0	0.878	-0.1
Lab121	0.281	1.6	0.871	0.1	0.179	1.4	0.488	-0.7	0.288	0.1	0.405	1.4	NA		0.576	-0.2	1.29	2.4	1.06	0.7
Lab122	NA		0.820	-0.1	NA		NA		NA		0.320	0.3	1.140	5.0	NA		0.610	-1.0	NA	
Lab123	NA		NA		NA		NA		0.224	-0.8	0.270	-0.4	NA		NA		0.852	0.2	0.889	0.0
Lab124	0.253	1.0	0.867	0.1	0.162	0.9	0.614	0.2	0.324	0.6	0.270	-0.4	0.341	-0.9	0.588	-0.1	0.865	0.3	1.21	1.4
Lab125	0.259	1.2	1.33	2.3	0.200	2.1	0.585	0.0	0.351	1.0	0.367	0.9	0.542	0.9	0.775	1.1	1.04	1.1	0.877	-0.1
Lab126	NA		NA		NA		0.433	-1.0	0.165	-1.6	NA		0.234	-1.9	NA		NA		0.510	-1.7
Lab127	ND	-3.8	NA		ND	-3.7	0.600	0.1	0.370	1.3	0.470	2.2	0.490	0.4	0.610	0.0	0.810	0.0	0.110	-3.5
Lab128	0.188	-0.3	0.902	0.3	0.121	-0.3	0.509	-0.5	0.358	1.1	0.439	1.8	0.391	-0.5	1.250	4.2	0.844	0.2	0.913	0.1
Lab129	0.048	-3.0	0.483	-1.7	0.057	-2.3	0.451	-0.9	0.132	-2.1	0.192	-1.4	0.256	-1.7	0.411	-1.3	0.284	-2.6	0.538	-1.6
Lab130	0.160	-0.8	0.280	-2.7	0.130	-0.1	0.640	0.4	0.290	0.1	0.310	0.1	0.650	1.9	0.170	-2.9	0.770	-0.2	0.810	-0.4
Lab131	0.164	-0.7	0.718	-0.6	0.108	-0.7	0.550	-0.2	0.271	-0.1	0.350	0.7	0.404	-0.4	0.547	-0.4	0.589	-1.1	0.672	-1.0

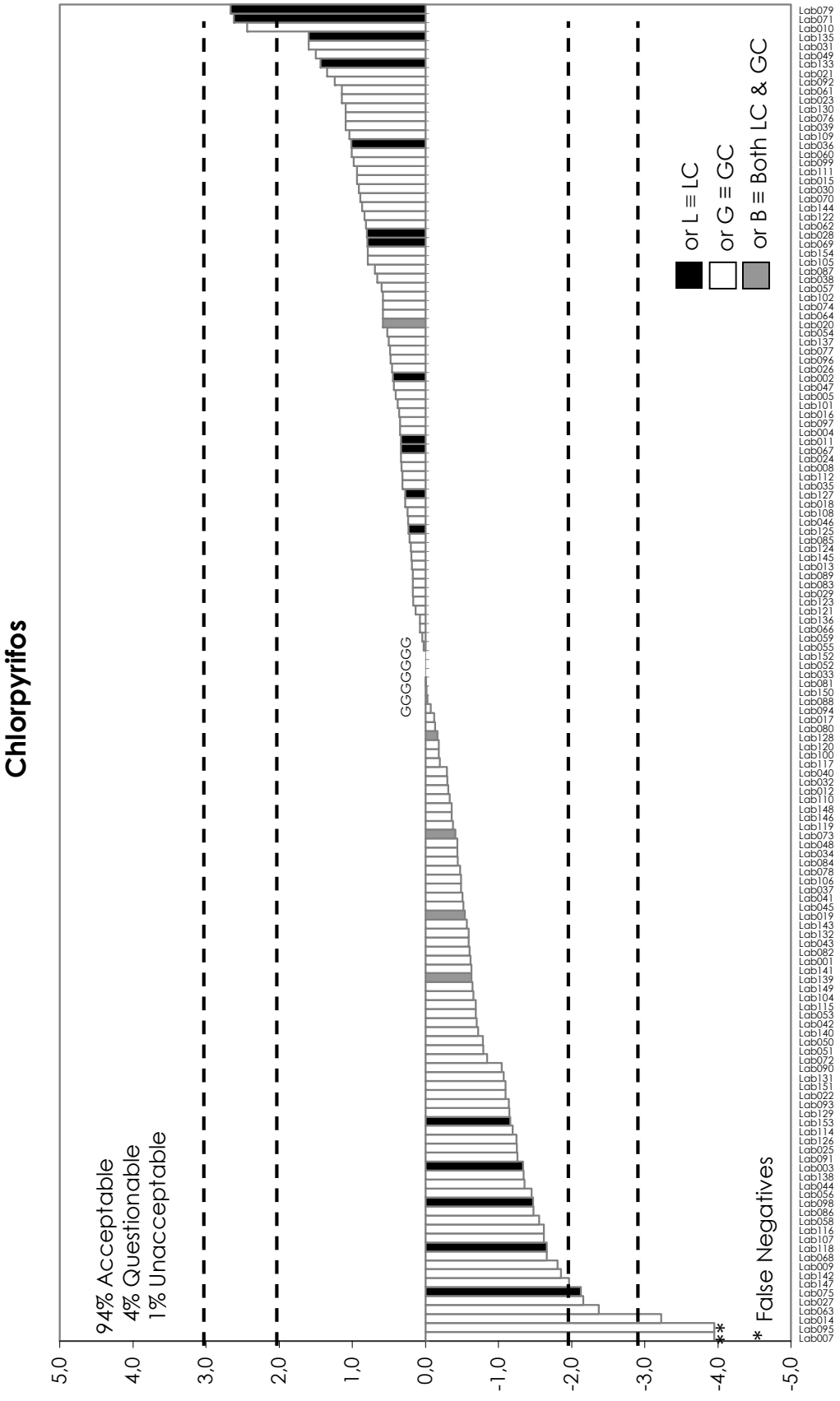
APPENDIX 3. Results (mg/Kg) and z-scores for FFP RSD (25%).

Lab Code	Methomyl	z-Score (FFP RSD 25%)	Orthophenylphenol	z-Score (FFP RSD 25%)	Oxamyl	z-Score (FFP RSD 25%)	Pendimethalin	z-Score (FFP RSD 25%)	Phosalone	z-Score (FFP RSD 25%)	Prochloraz	z-Score (FFP RSD 25%)	Pyriproxifen	z-Score (FFP RSD 25%)	Spinosad	z-Score (FFP RSD 25%)	Thiabendazole	z-Score (FFP RSD 25%)	Tolyfluanid	z-Score (FFP RSD 25%)
MRRL	**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		**0.01**		0.01		0.01		0.01	
Median (mg/kg)	**0.201**		**0.842**		**0.132**		**0.583**		**0.280**		**0.301**		**0.443**		0.608		0.810		0.900	
Lab132	NA		NA		NA		0.440	-1.0	0.310	0.4	0.500	2.6	NA		NA		1.12	1.5	NA	
Lab133	NA		NA		NA		0.693	0.8	0.307	0.4	NA		0.397	-0.4	NA		ND	-4.0	1.80	4.0
Lab134	0.200	0.0	NA		0.130	-0.1	NA		0.380	1.4	0.350	0.7	NA		NA		0.980	0.8	NA	
Lab135	0.090	-2.2	NA		0.080	-1.6	NA		NA		0.300	0.0	0.360	-0.7	0.500	-0.7	0.750	-0.3	0.910	0.0
Lab136	0.158	-0.9	NA		0.124	-0.2	0.650	0.5	0.284	0.1	0.274	-0.4	0.433	-0.1	0.629	0.1	0.960	0.7	0.843	-0.3
Lab137	0.251	1.0	0.910	0.3	0.164	1.0	0.510	-0.5	0.240	-0.6	ND	-3.9	0.424	-0.2	0.342	-1.7	0.729	-0.4	1.00	0.5
Lab138	0.165	-0.7	0.687	-0.7	0.102	-0.9	0.466	-0.8	0.255	-0.4	0.348	0.6	0.443	0.0	NA		0.573	-1.2	0.670	-1.0
Lab139	0.212	0.2	0.745	-0.5	0.094	-1.2	0.506	-0.5	0.288	0.1	0.308	0.1	0.619	1.6	0.490	-0.8	0.710	-0.5	NA	
Lab140	NA		0.858	0.1	NA		0.540	-0.3	0.247	-0.5	NA		0.330	-1.0	NA		0.665	-0.7	0.616	-1.3
Lab141	0.258	1.1	0.699	-0.7	0.142	0.3	0.622	0.3	0.335	0.8	0.346	0.6	0.465	0.2	1.58	5.0	0.884	0.4	0.878	-0.1
Lab142	0.300	2.0	0.641	-1.0	0.151	0.6	0.600	0.1	0.140	-2.0	0.126	-2.3	0.597	1.4	NA		0.449	-1.8	0.470	-1.9
Lab143	0.128	-1.5	0.646	-0.9	0.097	-1.1	0.495	-0.6	NA		0.199	-1.4	0.455	0.1	0.490	-0.8	0.761	-0.2	0.725	-0.8
Lab144	NA		NA		NA		NA		0.349	1.0	NA		NA		NA		0.952	0.7	1.16	1.2
Lab145	0.186	-0.3	0.756	-0.4	0.135	0.1	0.632	0.3	0.374	1.3	0.372	0.9	0.446	0.0	0.587	-0.1	0.894	0.4	1.06	0.7
Lab146	0.110	-1.8	0.695	-0.7	0.086	-1.4	0.495	-0.6	0.174	-1.5	0.224	-1.0	NA		0.431	-1.2	0.495	-1.6	0.735	-0.7
Lab147	0.140	-1.2	NA		0.120	-0.4	0.260	-2.2	0.130	-2.1	0.230	-0.9	0.290	-1.4	0.390	-1.4	0.520	-1.4	0.300	-2.7
Lab148	0.047	-3.1	0.975	0.6	0.065	-2.0	0.469	-0.8	0.337	0.8	0.301	0.0	0.375	-0.6	0.553	-0.4	0.721	-0.4	0.350	-2.4
Lab149	0.220	0.4	0.830	-0.1	0.120	-0.4	0.540	-0.3	0.260	-0.3	0.230	-0.9	0.390	-0.5	0.460	-1.0	0.760	-0.2	0.550	-1.6
Lab150	0.133	-1.4	0.805	-0.2	0.116	-0.5	0.513	-0.5	0.290	0.1	0.334	0.4	0.433	-0.1	0.600	0.0	0.875	0.3	0.975	0.3
Lab151	NA		NA		NA		0.578	0.0	0.252	-0.4	NA		0.451	0.1	NA		0.740	-0.3	0.848	-0.2
Lab152	ND	-3.8	NA		ND	-3.7	NA		0.259	-0.3	NA		0.392	-0.5	0.276	-2.2	ND	-4.0	0.219	-3.0
Lab153	0.090	-2.2	NA		0.088	-1.3	NA		NA		NA		NA		NA		NA		NA	
Lab154	0.200	0.0	1.35	2.4	0.140	0.2	0.650	0.5	0.290	0.1	0.310	0.1	0.490	0.4	0.700	0.6	0.770	-0.2	0.890	0.0

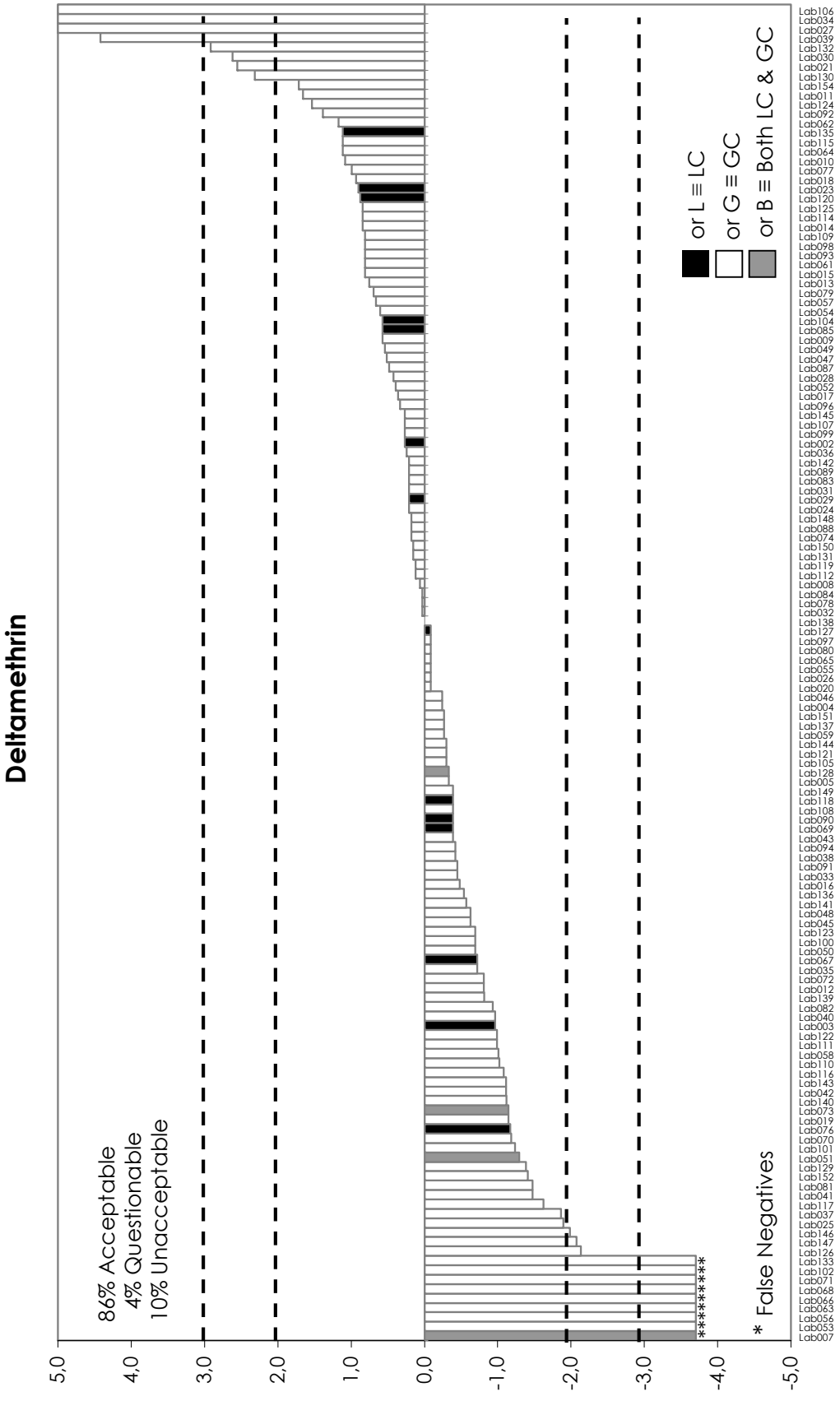
APPENDIX 4. Graphical representation of z-scores for FFP RSD (25%).



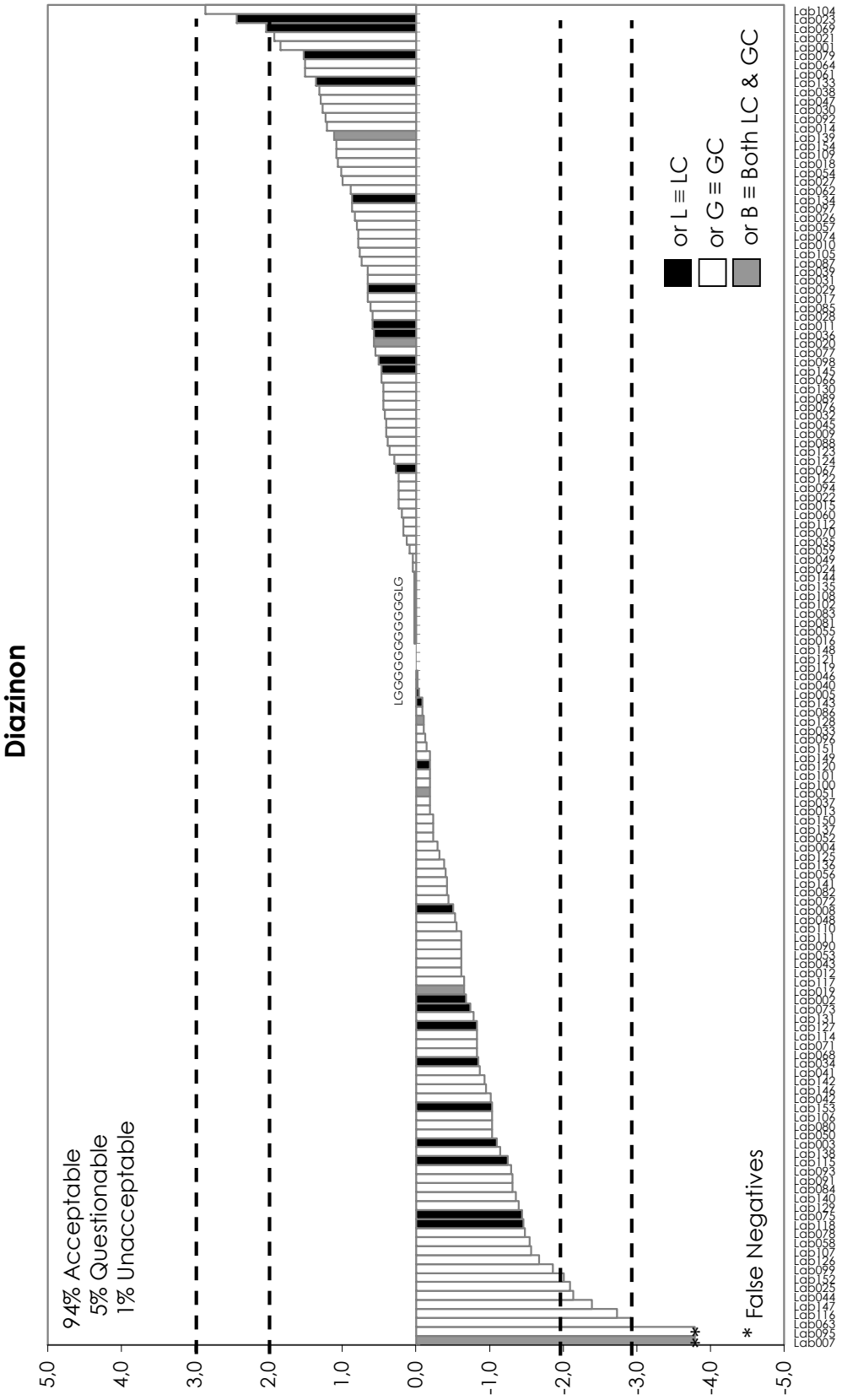
APPENDIX 4. Graphical Representation of z-scores for FFP RSD (25%).



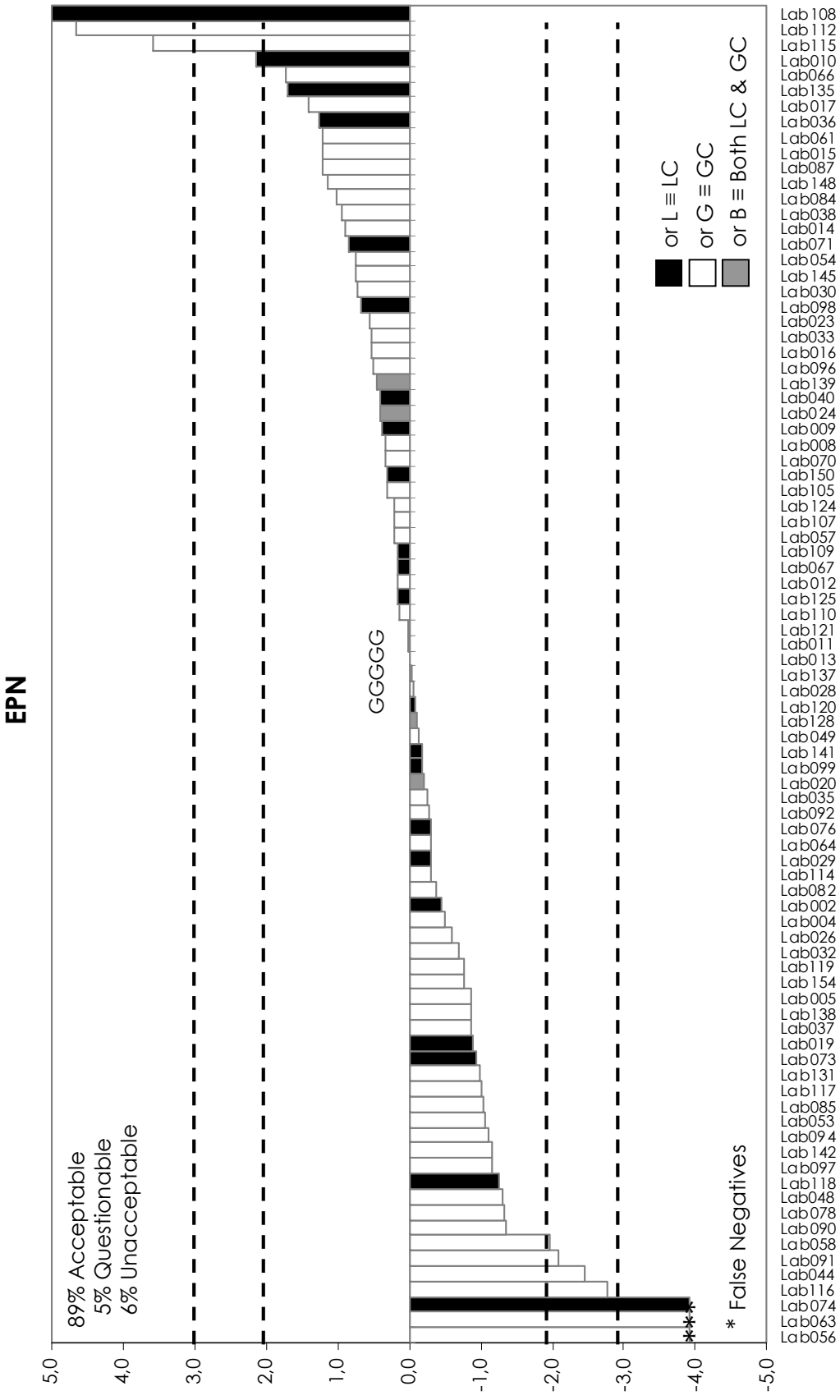
APPENDIX 4. Graphical representation of z-scores for FFP RSD (25%).



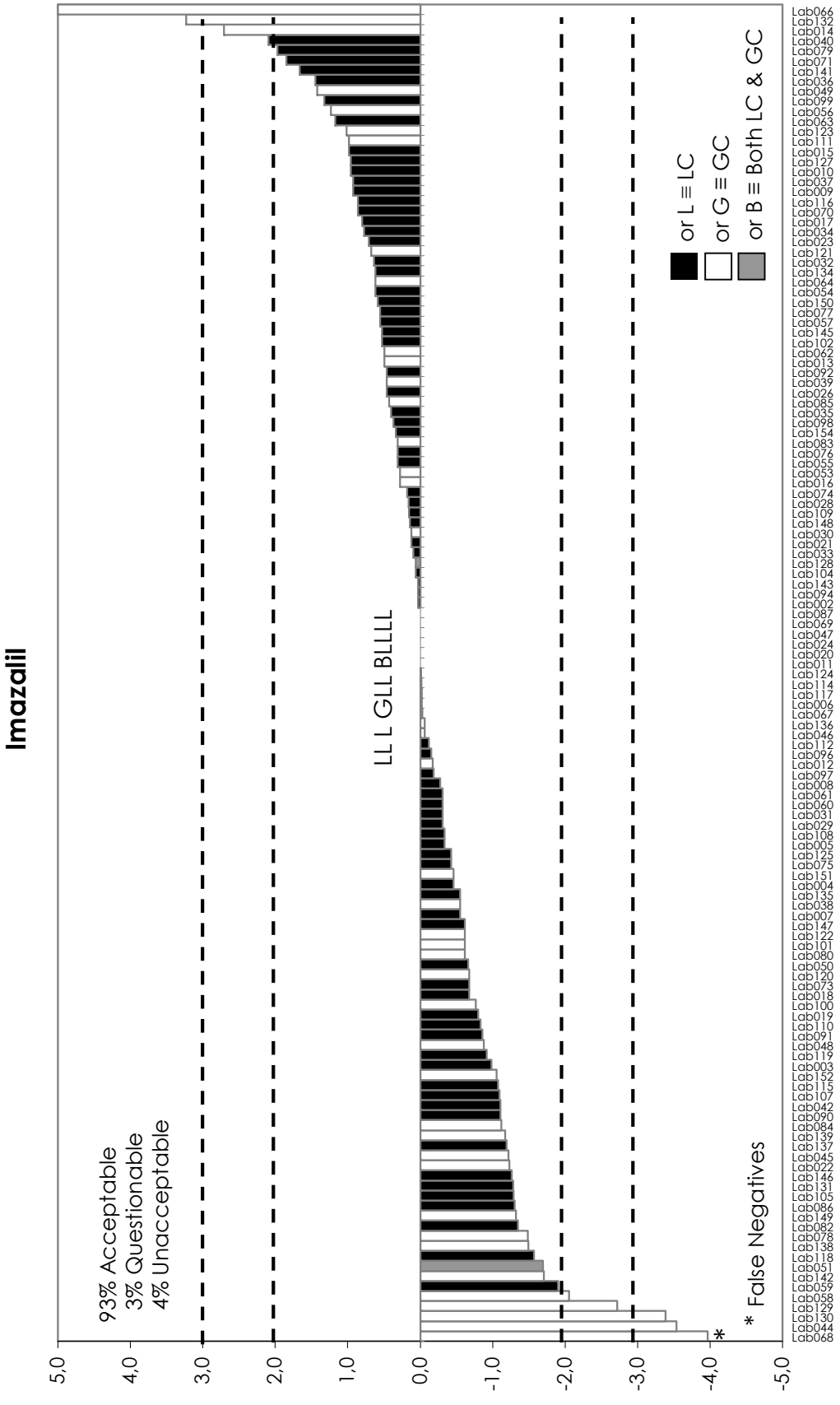
APPENDIX 4. Graphical Representation of z-scores for FFP RSD (25%).



APPENDIX 4. Graphical representation of z-scores for FFP RSD (25%).



APPENDIX 4. Graphical Representation of z-scores for FFP RSD (25%).



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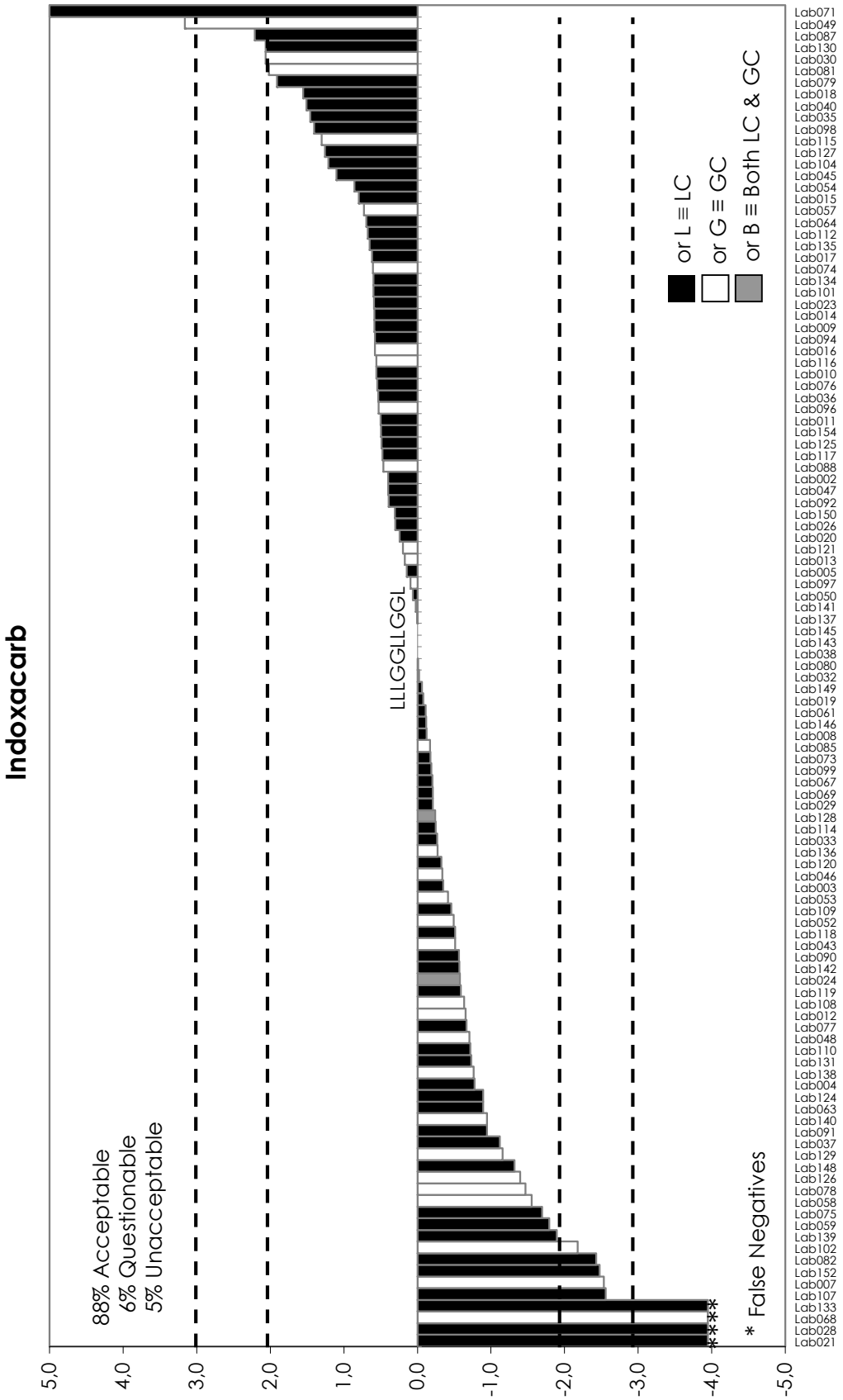
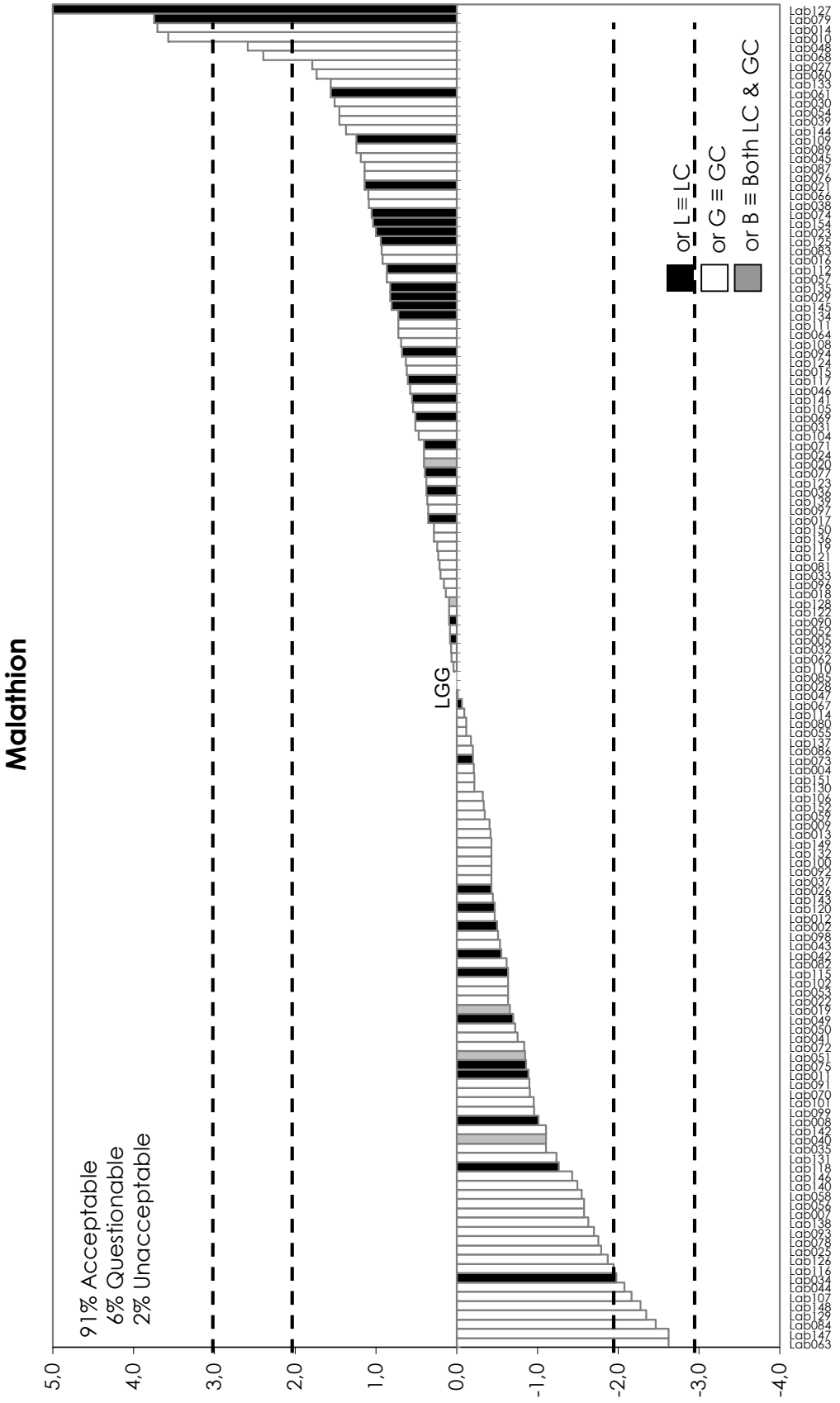


APPENDIX 4. Graphical Representation of z-scores for FFP RSD (25%).



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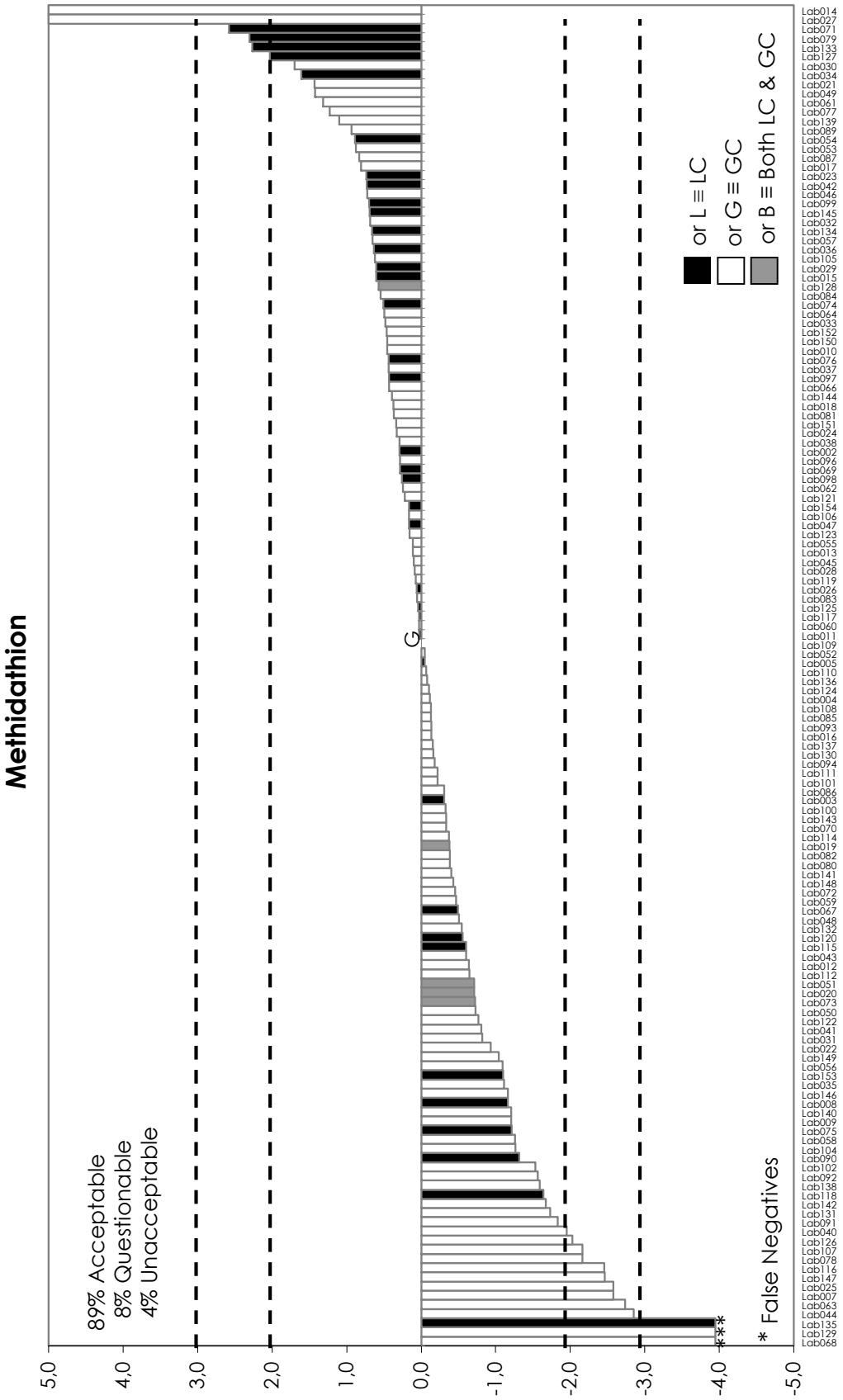
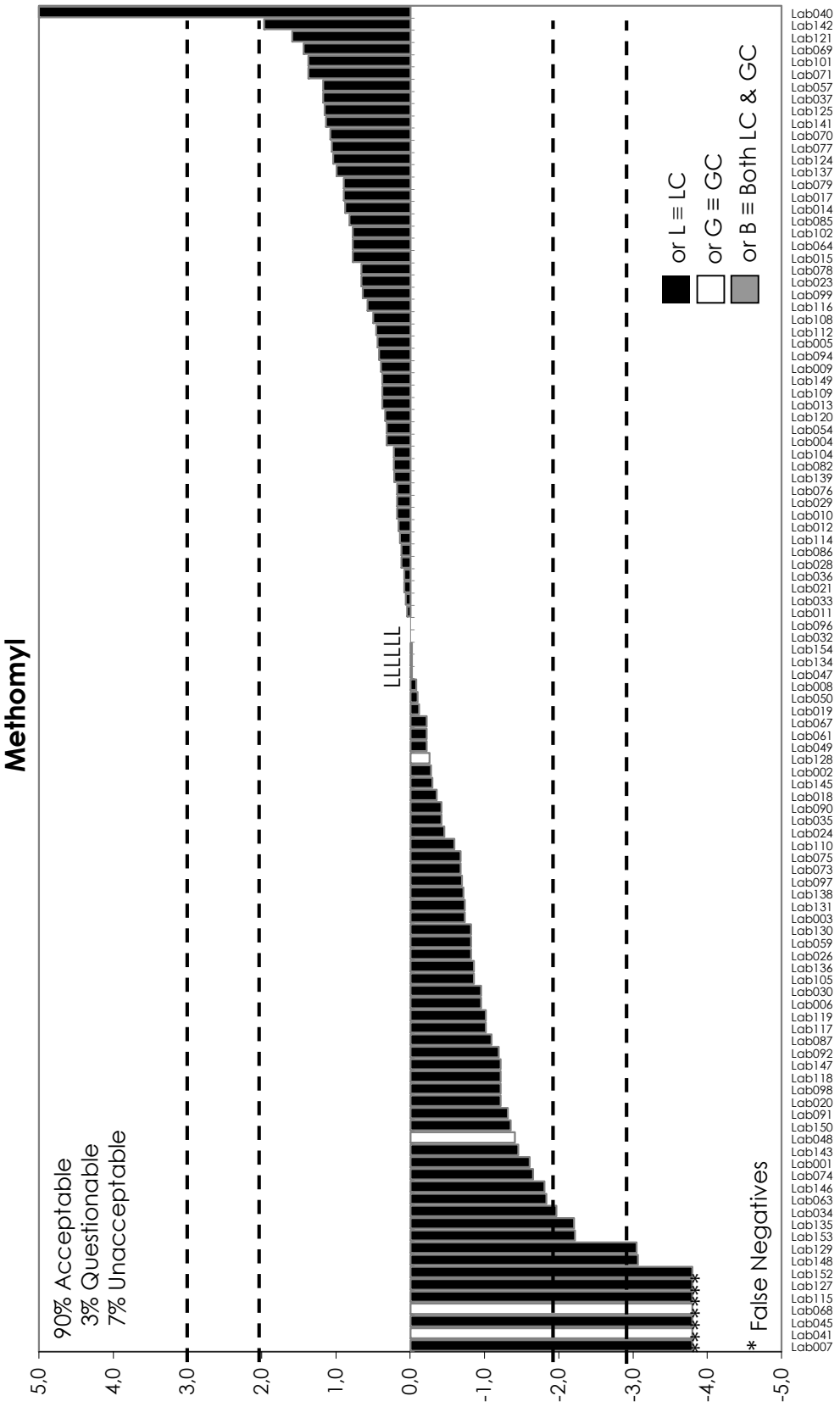
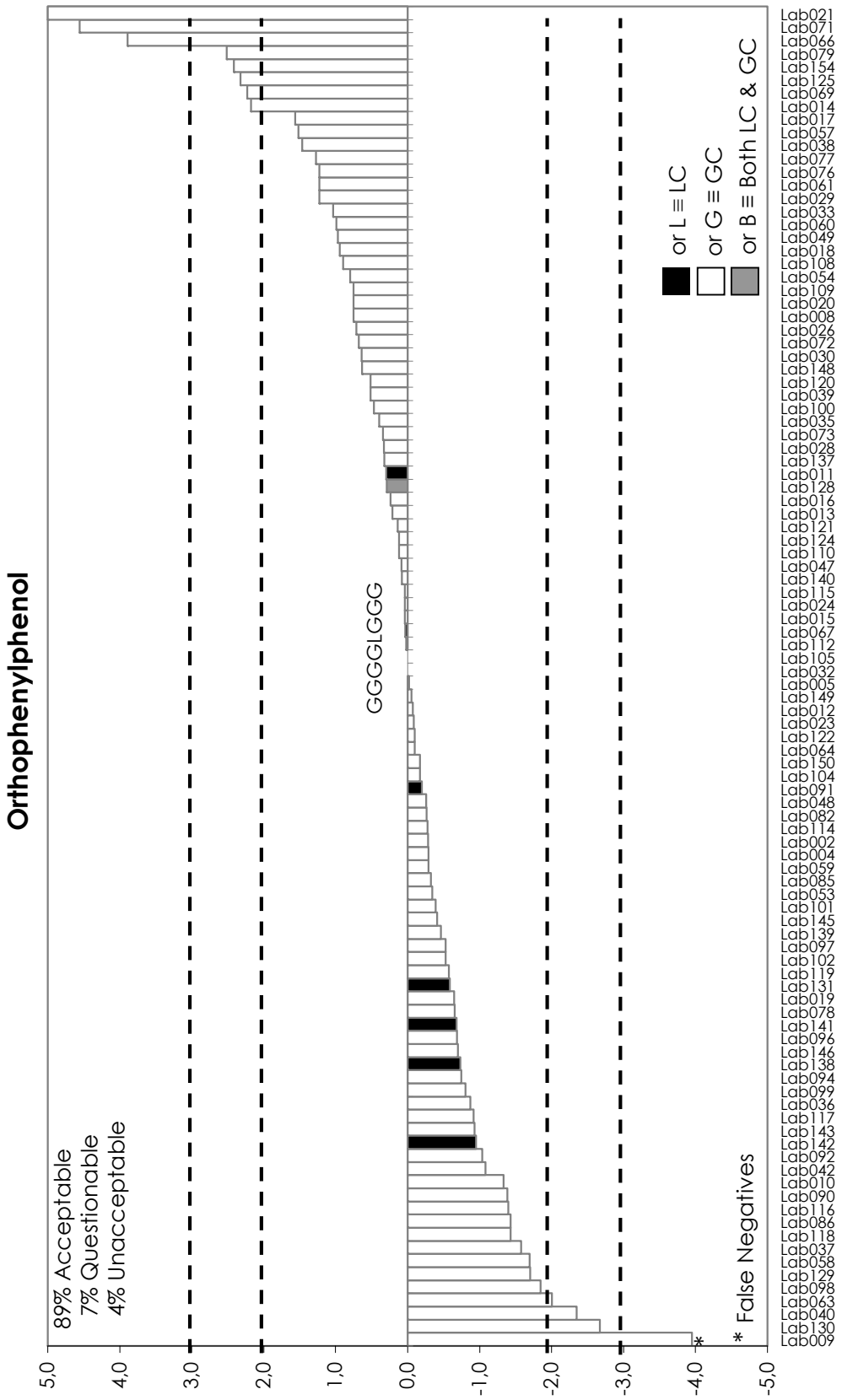


APPENDIX 4. Graphical Representation of z-scores for FFP RSD (25%).



APPENDIX 4. Graphical representation of z-scores for FFP RSD (25%).



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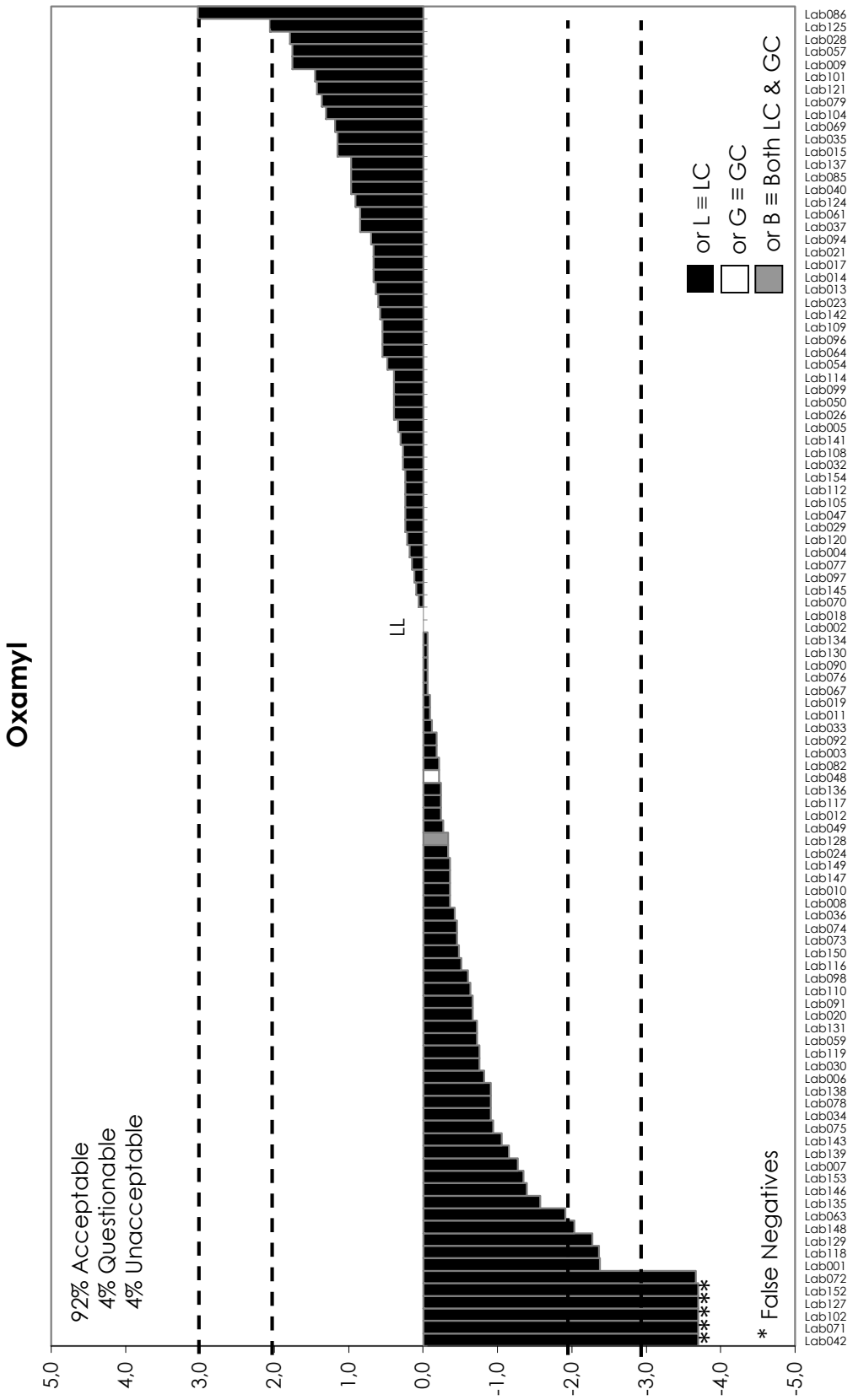

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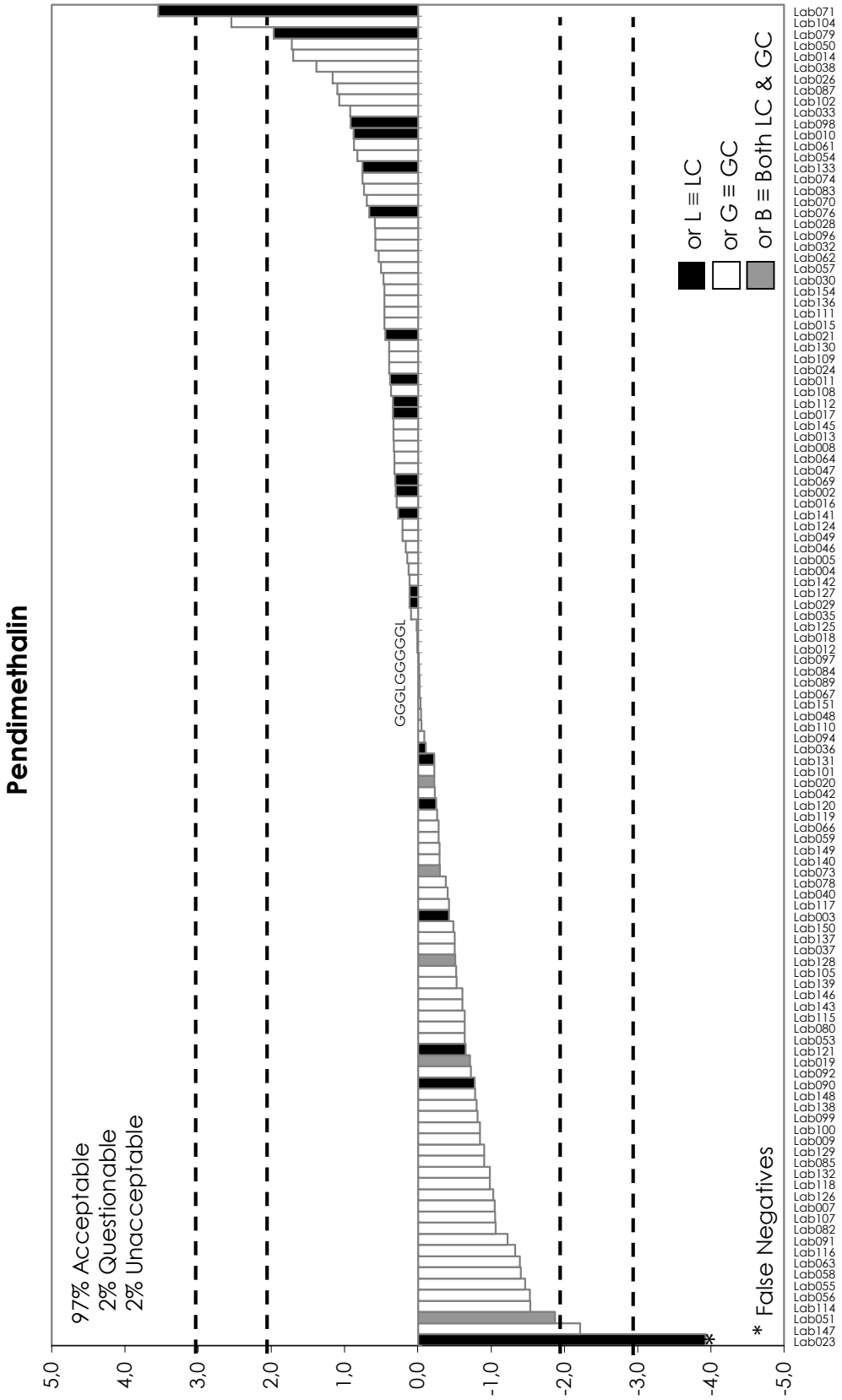
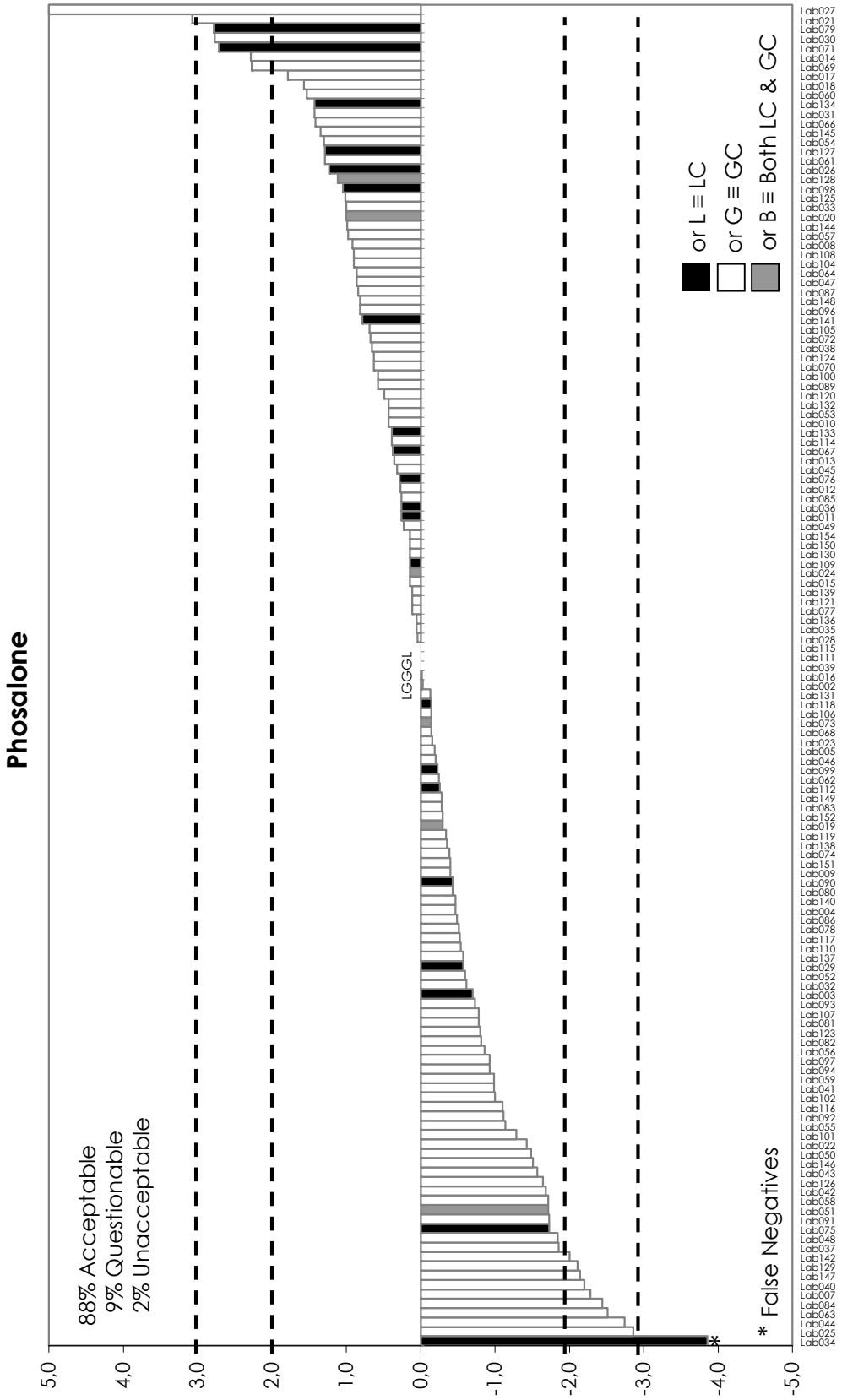


APPENDIX 4. Graphical Representation of z-scores for FFP RSD (25%).



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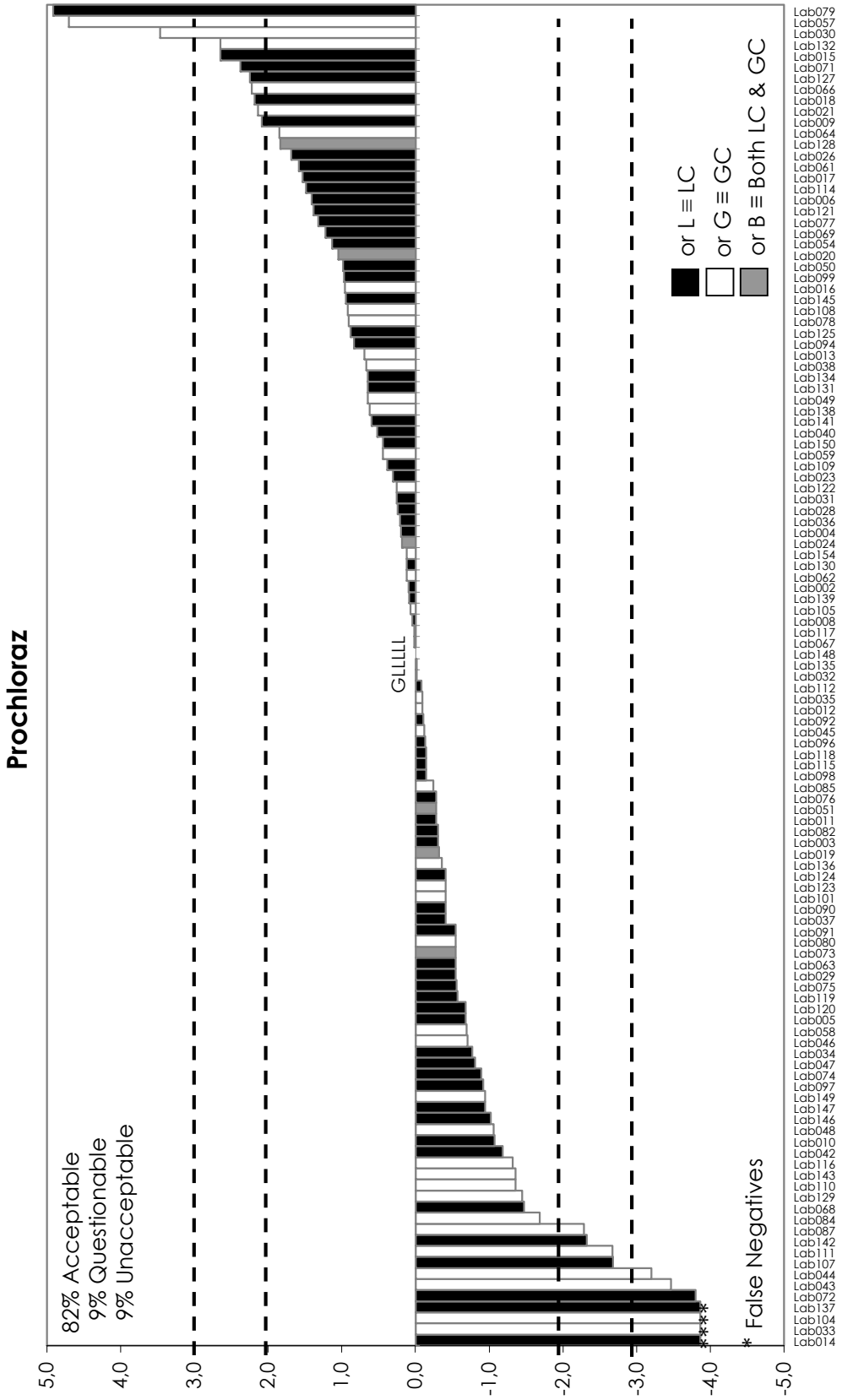
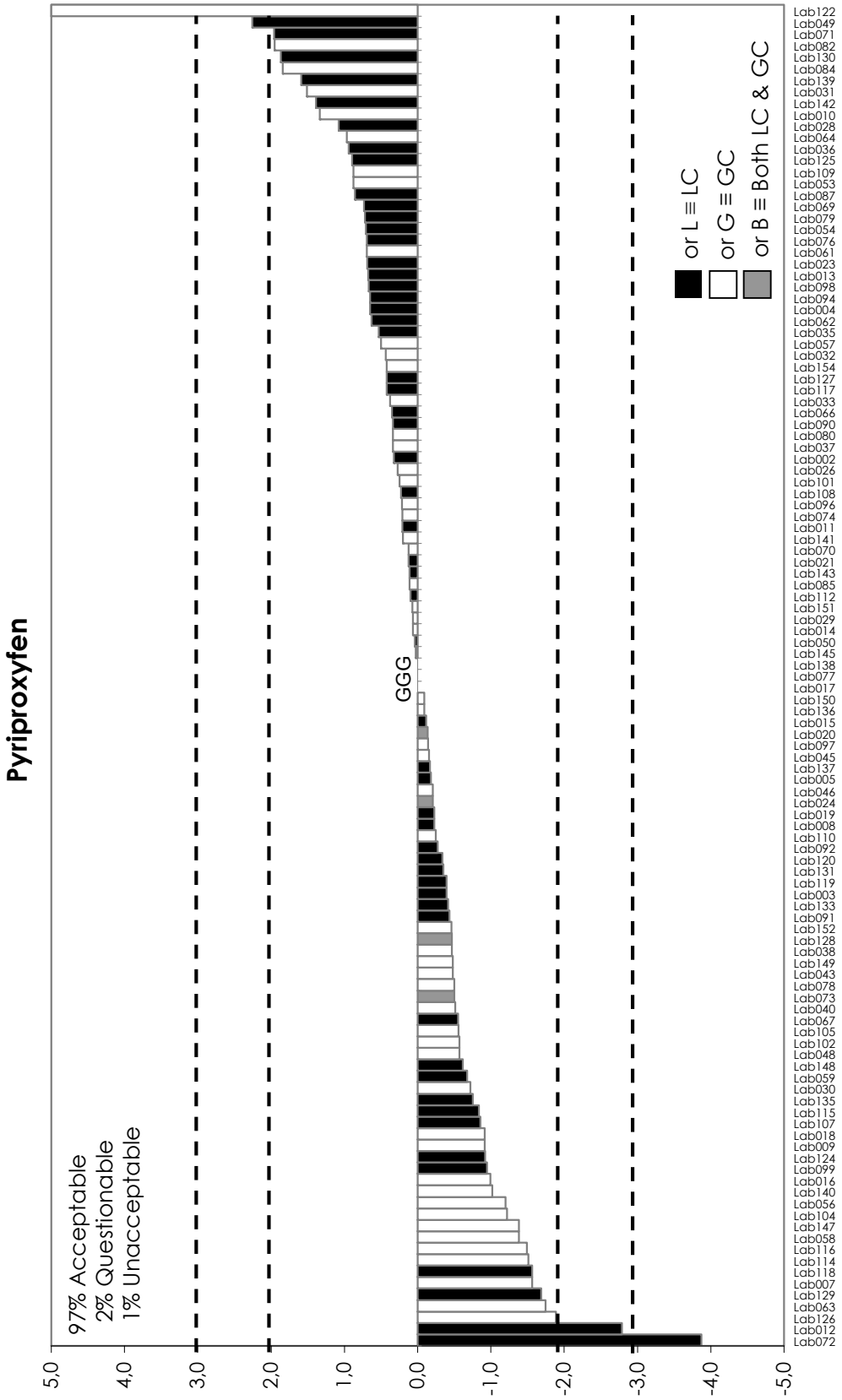


APPENDIX 4. Graphical Representation of z-scores for FFP RSD (25%).



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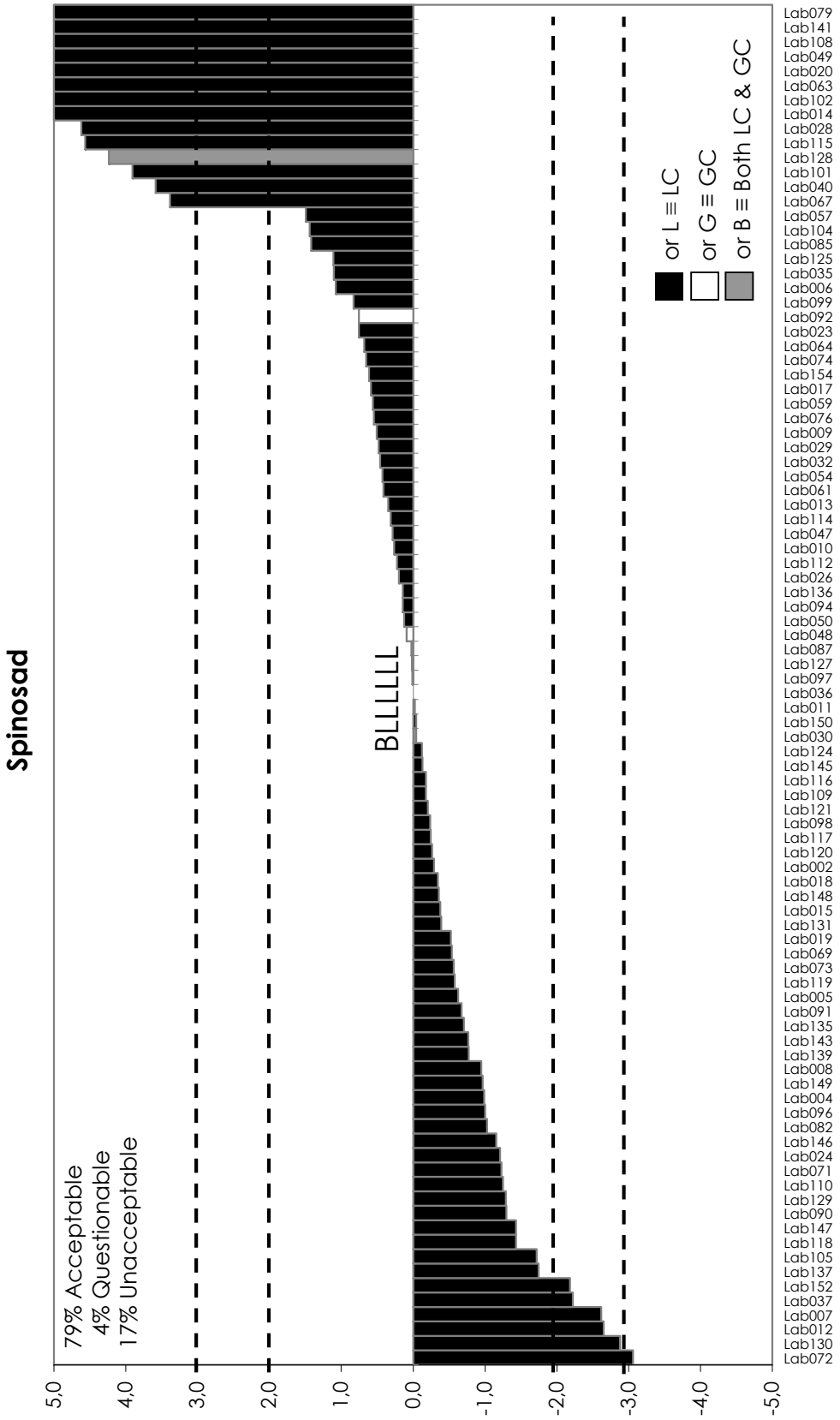

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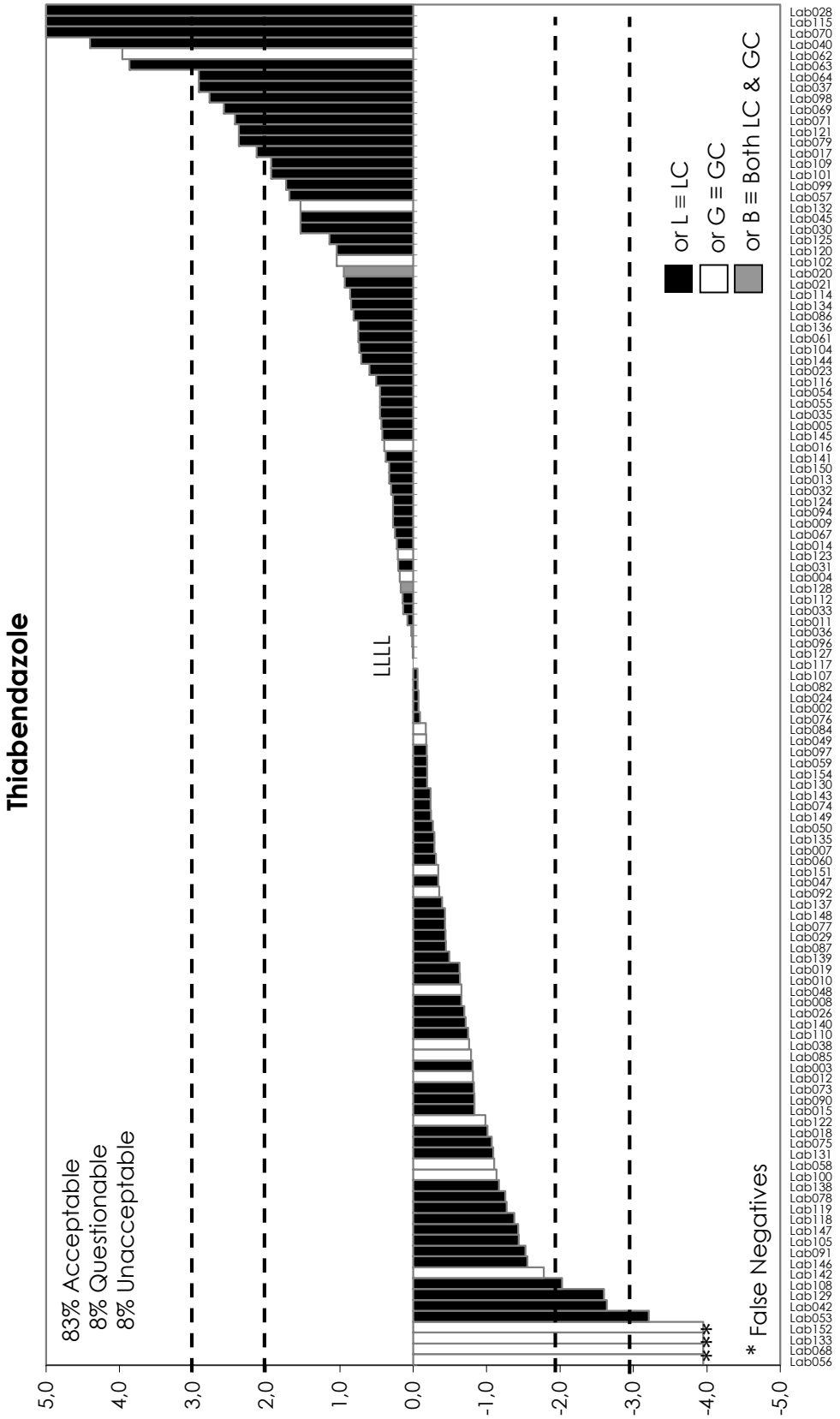

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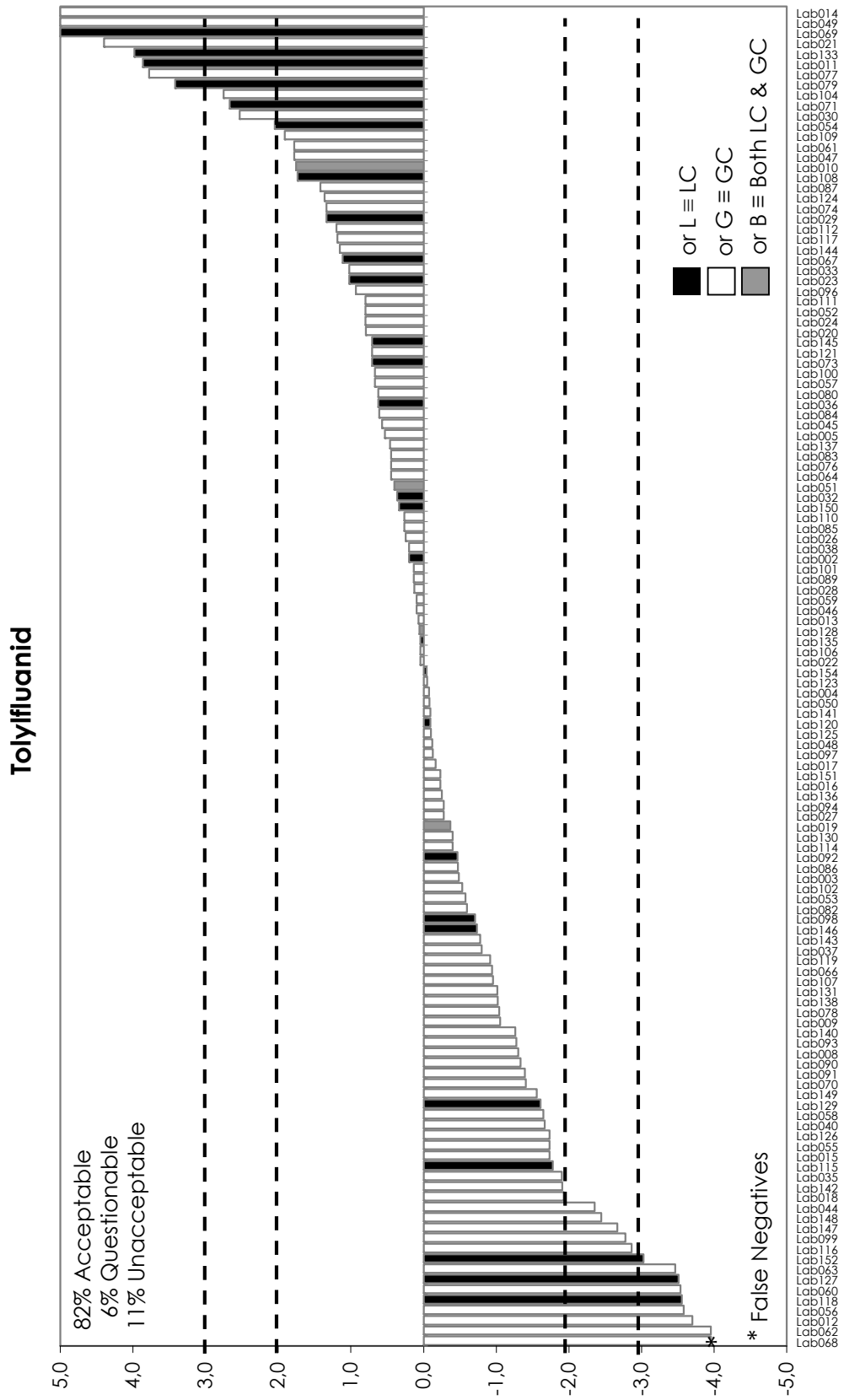


APPENDIX 5. 'Sum of Weighted z-Scores' (SWZ) for laboratories in Category A.

Lab Code	Carbendazim	Chlorpyrifos	Deltamethrin	Diazinon	EPN	Imazalil	Indoxacarb	Malathion	Methidathion	Methomyl	Orthophenylphenol	Oxamyl	Pendimethalin	Phosalone	Prochloraz	Pyriproxyfen	Spinosad	Thiabendazole	Tolylfluanid	No. of Pesticides	SWZ
	z-scores																				
002	0.5	0.4	0.3	-0.7	-0.5	0.0	0.4	-0.5	0.3	-0.3	-0.3	0.0	0.3	0.0	0.1	0.3	-0.3	-0.1	0.2	19	0.3
004	-0.5	0.3	-0.2	-0.3	-0.5	-0.5	-0.8	-0.2	-0.1	0.3	-0.3	0.2	0.1	-0.5	0.2	0.7	-1.0	0.2	-0.1	19	0.4
005	0.1	0.4	-0.3	0.0	-0.9	-0.3	0.1	0.1	0.0	0.4	0.0	0.3	0.1	-0.2	-0.7	-0.2	-0.6	0.4	0.5	19	0.3
008	0.0	0.3	0.1	-0.5	0.3	-0.3	-0.1	-1.0	-1.2	-0.1	0.8	-0.4	0.3	0.9	0.0	-0.2	-0.9	-0.7	-1.3	19	0.5
009	0.9	-1.8	0.6	0.4	0.4	0.9	0.6	-0.4	-1.2	0.4	-4.0	1.8	-0.8	-0.4	2.1	-0.9	0.5	0.3	-1.1	19	2.1
011	0.2	0.3	1.7	0.6	0.0	0.0	0.5	-0.9	0.0	0.0	0.3	-0.1	0.4	0.3	-0.3	0.2	0.0	0.1	3.9	19	1.3
012	-0.8	-0.3	-0.8	-0.6	0.2	-0.2	-0.7	-0.5	-0.6	0.2	-0.1	-0.2	0.0	0.3	-0.1	-2.8	-2.7	-0.8	-3.7	19	2.2
013	0.3	0.2	0.8	-0.2	0.0	0.5	0.2	-0.4	0.1	0.4	0.2	0.6	0.3	0.4	0.7	0.7	0.3	0.3	0.1	19	0.3
015	-0.5	0.9	0.8	0.2	1.2	1.0	0.8	0.6	0.6	0.8	0.0	1.2	0.5	0.1	2.6	-0.1	-0.4	-0.8	-1.7	19	1.1
017	0.7	-0.1	0.4	0.7	1.4	0.8	0.6	0.4	0.8	0.9	1.6	0.7	0.3	1.8	1.5	0.0	0.6	2.1	-0.2	19	1.0
018	-0.2	0.3	0.9	1.1		-0.7	1.6	0.1	0.4	-0.4	0.9	0.0	0.0	1.6	2.2	-0.9	-0.3	-1.0	-1.9	18	1.0
019	-0.1	-0.5	-1.1	-0.7	-0.9	-0.8	-0.1	-0.7	-0.4	-0.1	-0.6	-0.1	-0.7	-0.3	-0.3	-0.2	-0.5	-0.6	-0.4	19	0.5
020	-0.5	0.6	-0.1	0.6	-0.2	0.0	0.2	0.4	-0.7	-1.2	0.8	-0.7	-0.2	1.0	1.0	-0.1	5.0	0.9	0.8	19	1.8
023	0.4	1.1	0.9	2.4	0.6	0.7	0.6	1.0	0.7	0.7	-0.1	0.6	-4.0	-0.2	0.3	0.7	0.8	0.6	1.0	19	2.0
024	-1.4	0.3	0.2	0.0	0.4	0.0	-0.6	0.4	0.3	-0.5	0.0	-0.3	0.4	0.1	0.2	-0.2	-1.2	-0.1	0.8	19	0.4
026	-1.1	0.5	-0.1	0.8	-0.6	0.5	0.3	-0.4	0.1	-0.8	0.7	0.4	1.2	1.2	1.7	0.3	0.2	-0.7	0.2	19	0.6
028	-0.2	0.8	0.4	0.6	-0.1	0.2	-3.9	0.0	0.1	0.1	0.3	1.8	0.6	0.0	0.2	1.1	4.6	5.0	0.1	19	3.9
029	-0.2	0.2	0.2	0.7	-0.3	-0.3	-0.2	0.8	0.6	0.2	1.2	0.2	0.1	-0.6	-0.5	0.1	0.5	-0.4	1.3	19	0.5
030	-0.2	0.9	2.6	1.3	0.7	0.1	2.1	1.5	1.7	-1.0	0.6	-0.8	0.5	2.8	3.5	-0.7	0.0	1.5	2.5	19	3.1
032	0.2	-0.3	0.0	0.4	-0.7	0.6	0.0	0.1	0.7	0.0	0.0	0.3	0.6	-0.6	0.0	0.4	0.5	0.3	0.4	19	0.3
035	2.1	0.3	-0.7	0.1	-0.3	0.4	1.5	-1.1	-1.1	-0.4	0.4	1.2	0.1	0.1	-0.1	0.5	1.1	0.4	-1.9	19	0.9
036	-0.8	1.0	0.2	0.6	1.3	1.4	0.5	0.4	0.6	0.1	-0.9	-0.4	-0.1	0.3	0.2	0.9	0.0	0.0	0.6	19	0.5
037	1.8	-0.5	-1.9	-0.2	-0.9	0.9	-1.1	-0.4	0.4	1.2	-1.6	0.8	-0.5	-1.9	-0.4	0.3	-2.2	2.9	-0.8	19	1.6
040	5.0	-0.3	-1.0	0.0	0.4	2.1	1.5	-1.1	-2.0	5.0	-2.3	1.0	-0.4	-2.2	0.5	-0.5	3.6	4.4	-1.7	19	5.0
047	5.0	0.4	0.5	1.3		0.0	0.4	0.0	0.2	0.0	0.1	0.2	0.3	0.9	-0.8		0.3	-0.3	1.8	17	1.9
048	-0.8	-0.4	-0.6	-0.5	-1.3	-0.9	-0.7	2.6	-0.5	-1.4	-0.3	-0.2	0.0	-1.8	-1.1	-0.6	0.1	-0.7	-0.1	19	1.0
049	0.5	1.5	0.5	0.0	-0.1	1.4	3.2	-0.7	1.4	-0.2	1.0	-0.3	0.2	0.2	0.7	2.3	5.0	-0.2	5.0	19	4.3
050	0.5	-0.8	-0.7	-1.0		-0.7	0.1	-0.7	-0.7	-0.1		0.4	1.7	-1.5	1.0	0.0	0.1	-0.3	-0.1	17	0.6
054	0.0	0.5	0.6	1.0	0.7	0.6	0.9	1.5	0.9	0.3	0.8	0.5	0.8	1.3	1.1	0.7	0.4	0.5	2.0	19	1.0
057	1.2	0.6	0.7	0.8	0.2	0.6	0.7	0.9	0.7	1.2	1.5	1.8	0.5	1.0	4.7	0.5	1.5	1.7	0.7	19	2.1
059	-1.2	0.0	-0.3	0.1		-1.9	-1.8	-0.3	-0.5	-0.8	-0.3	-0.7	-0.3	-1.0	0.4	-0.7	0.6	-0.2	0.1	18	0.6

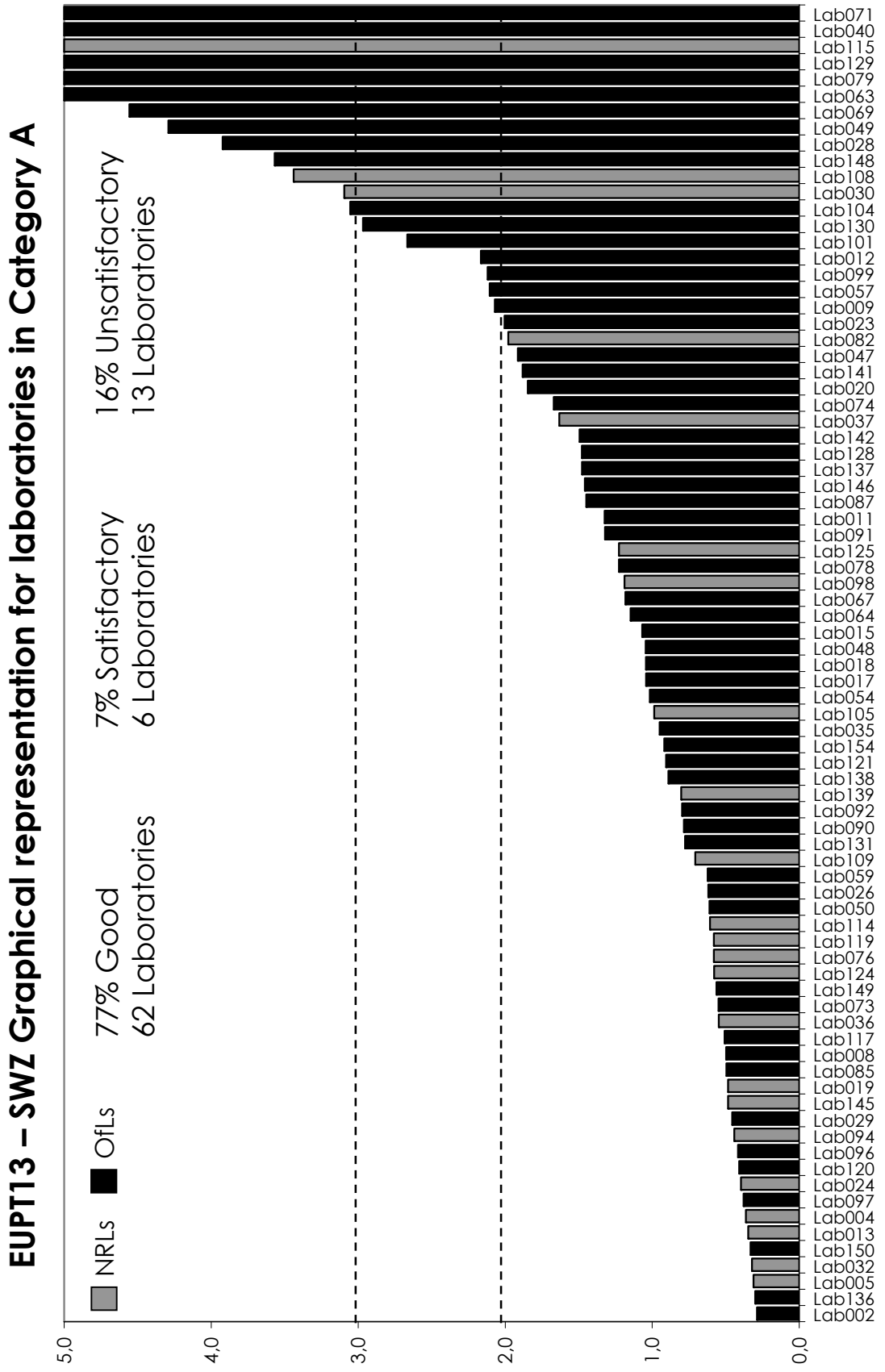
APPENDIX 5. 'Sum of Weighted z-Scores' (SWZ) for laboratories in Category A.

Lab Code	Carbendazim	Chlorpyrifos	Deltamethrin	Diazinon	EPN	Imazalil	Indoxacarb	Malathion	Methidathion	Methomyl	Orthophenylphenol	Oxamyl	Pendimethalin	Phosalone	Prochloraz	Pyriproxyfen	Spinosad	Thiabendazole	Tolylfluanid	No. of Pesticides	SWZ
	z-scores																				
063	3.9	-2.4	-3.7	-2.9	-3.9	1.2	-0.9	-2.6	-2.7	-1.8	-2.0	-1.9	-1.4	-2.5	-0.5	-1.7	5.0	3.9	-3.5	19	5.0
064	0.5	0.6	1.1	1.5	-0.3	0.6	0.7	0.7	0.5	0.8	-0.1	0.5	0.3	0.9	1.8	1.0	0.7	2.9	0.4	19	1.1
067	-0.6	0.3	-0.7	0.3	0.2	0.0	-0.2	-0.1	-0.5	-0.2	0.0	-0.1	0.0	0.4	0.0	-0.6	3.4	0.2	1.1	19	1.2
069	4.4	0.8	-0.4	2.0		0.0	-0.2	0.5	0.3	1.4	2.2	1.2	0.3	2.3	1.2	0.7	-0.5	2.6	5.0	18	4.6
071	-0.2	2.6	-3.7	-0.8	0.8	1.8	5.0	0.4	2.6	1.4	4.6	-3.7	3.5	2.7	2.4	2.0	-1.2	2.4	2.7	19	5.0
073	-0.4	-0.4	-1.1	-0.7	-0.9	-0.7	-0.2	-0.2	-0.7	-0.7	0.3	-0.5	-0.3	-0.1	-0.5	-0.5	-0.6	-0.8	0.7	19	0.5
074	-0.1	0.6	0.2	0.8	-3.9	0.2	0.6	1.1	0.5	-1.7		-0.5	0.8	-0.4	-0.9	0.2	0.7	-0.2	1.3	18	1.7
076	1.1	1.1	-1.2	0.4	-0.3	0.3	0.5	1.1	0.4	0.2	1.2	-0.1	0.7	0.3	-0.3	0.7	0.5	-0.1	0.4	19	0.6
078	-0.7	-0.5	0.0	-1.5	-1.3	-1.5	-1.5	-1.8	-2.2	0.7	-0.7	-0.9	-0.4	-0.5	0.9	-0.5		-1.3	-1.0	18	1.2
079		2.7	0.7	1.5		2.0	1.9	3.7	2.3	0.9	2.5	1.4	2.0	2.8	4.9	0.7	5.0	2.4	3.4	17	5.0
082	3.8	-0.6	-0.9	-0.4	-0.4	-1.4	-2.4	-0.6	-0.4	0.2	-0.3	-0.2	-1.1	-0.8	-0.3	2.0	-1.0	-0.1	-0.6	19	2.0
085	-0.1	0.2	0.6	0.6	-1.0	0.4	-0.2	0.0	-0.1	0.8	-0.3	1.0	-0.9	0.3	-0.2	0.1	1.4	-0.8	0.3	19	0.5
087	0.3	0.7	0.5	0.7	1.2	0.0	2.2	1.1	0.8	-1.1			1.1	0.8	-2.3	0.9	0.0	-0.4	1.4	17	1.4
090	-1.2	-1.0	-0.4	-0.6	-1.3	-1.1	-0.6	0.1	-1.3	-0.4	-1.4	-0.1	-0.8	-0.4	-0.4	0.3	-1.3	-0.8	-1.3	19	0.8
091	-1.6	-1.3	-0.5	-1.3	-2.1	-0.9	-0.9	-0.9	-1.8	-1.3	-0.2	-0.7	-1.2	-1.7	-0.5	-0.4	-0.7	-1.5	-1.4	19	1.3
092	-2.0	1.2	1.4	1.2	-0.3	0.5	0.4	-0.4	-1.6	-1.2	-1.0	-0.2	-0.7	-1.1	-0.1	-0.3	0.8	-0.4	-0.5	19	0.8
094	0.0	-0.1	-0.4	0.2	-1.1	0.0	0.6	0.7	-0.2	0.4	-0.7	0.7	-0.1	-0.9	0.8	0.7	0.1	0.3	-0.3	19	0.4
096	0.4	0.5	0.3	-0.1	0.5	-0.2	0.5	0.2	0.3	0.0	-0.7	0.5	0.6	0.8	-0.1	0.2	-1.0	0.0	0.9	19	0.4
097	0.0	0.3	-0.1	0.9	-1.2	-0.2	0.1	0.4	0.4	-0.7	-0.5	0.1	0.0	-0.9	-0.9	-0.1	0.0	-0.2	-0.1	19	0.4
098	-0.9	-1.5	0.8	0.5	0.7	0.4	1.4	-0.5	0.3	-1.2	-1.8	-0.6	0.9	1.0	-0.1	0.7	-0.2	2.8	-0.7	19	1.2
099	3.6	1.0	0.3	-1.9	-0.2	1.3	-0.2	-1.0	0.7	0.6	-0.8	0.4	-0.8	-0.2	1.0	-0.9	0.8	1.7	-2.8	19	2.1
101	3.4	0.4	-1.2	-0.2		-0.6	0.6	-1.0	-0.2	1.4	-0.4	1.5	-0.2	-1.3	-0.4	0.2	3.9	1.9	0.1	18	2.7
104	1.0	-0.7	0.6	2.9		0.1	1.2	0.5	-1.3	0.2	-0.2	1.3	2.5	0.9	-3.9	-1.2	1.4	0.7	2.8	18	3.1
105	-2.0	0.8	-0.3	0.8	0.3	-1.3		0.5	0.6	-0.9	0.0	0.2	-0.5	0.7	0.1	-0.6	-1.7	-1.4		17	1.0
108	-1.0	0.2	-0.4	0.0	5.0	-0.3	-0.6	0.7	-0.1	0.5	0.9	0.3	0.4	0.9	0.9	0.2	5.0	-2.0	1.7	19	3.4
109	-1.0	1.0	0.8	1.1	0.2	0.2	-0.5	1.2	0.0	0.4	0.8	0.5	0.4	0.1	0.4	0.9	-0.2	1.9	1.9	19	0.7
114	0.3	-1.2	0.8	-0.8	-0.3	0.0	-0.2	-0.1	-0.4	0.1	-0.3	0.4	-1.5	0.4	1.5	-1.5	0.3	0.9	-0.4	19	0.6
115	-1.1	-0.7	1.1	-1.2	3.6	-1.1	1.3	-0.6	-0.6	-3.8	0.0		-0.6	0.0	-0.1	-0.8	4.6	5.0	-1.8	18	5.0
117	0.0	-0.2	-1.6	-0.7	-1.0	0.0	0.5	0.6	0.0	-1.0	-0.9	-0.2	-0.4	-0.5	0.0	0.4	-0.2	0.0	1.2	19	0.5
119	-1.3	-0.4	0.1	0.0	-0.8	-0.9	-0.6	0.2	0.1	-1.0	-0.6	-0.8	-0.3	-0.3	-0.6	-0.4	-0.6	-1.3	-0.9	19	0.6
120	0.2	-0.2	0.9	-0.2	-0.1	-0.7	-0.3	-0.5	-0.6	0.3	0.5	0.2	-0.2	0.5	-0.7	-0.3	-0.3	1.0	-0.1	19	0.4
121	1.2	0.1	-0.3	0.0	0.0	0.7	0.2	0.2	0.2	1.6	0.1	1.4	-0.7	0.1	1.4		-0.2	2.4	0.7	18	0.9

APPENDIX 5. 'Sum of Weighted z-Scores' (SWZ) for laboratories in Category A.

Lab Code	Carbendazim	Chlorpyrifos	Deltamethrin	Diazinon	EPN	Imazalil	Indoxacarb	Malathion	Methidathion	Methomyl	Orthophenylphenol	Oxamyl	Pendimethalin	Phosalone	Prochloraz	Pyriproxyfen	Spinosad	Thiabendazole	Tolylfluanid	No. of Pesticides	SWZ
	z-scores																				
124	1.1	0.2	1.5	0.3	0.2	0.0	-0.9	0.6	-0.1	1.0	0.1	0.9	0.2	0.6	-0.4	-0.9	-0.1	0.3	1.4	19	0.6
125	-0.4	0.2	0.8	-0.3	0.2	-0.4	0.5	0.9	0.0	1.2	2.3	2.1	0.0	1.0	0.9	0.9	1.1	1.1	-0.1	19	1.2
128	0.2	-0.2	-0.3	-0.1	-0.1	0.1	-0.2	0.1	0.6	-0.3	0.3	-0.3	-0.5	1.1	1.8	-0.5	4.2	0.2	0.1	19	1.5
129	-2.9	-1.2	-1.4	-1.4		-2.7	-1.2	-2.3	-3.9	-3.0	-1.7	-2.3	-0.9	-2.1	-1.4	-1.7	-1.3	-2.6	-1.6	18	5.0
130	-0.8	1.1	2.3	0.4		-3.4	2.1	-0.2	-0.2	-0.8	-2.7	-0.1	0.4	0.1	0.1	1.9	-2.9	-0.2	-0.4	18	3.0
131	-0.9	-1.1	0.2	-0.8	-1.0	-1.3	-0.7	-1.2	-1.7	-0.7	-0.6	-0.7	-0.2	-0.1	0.7	-0.4	-0.4	-1.1	-1.0	19	0.8
136	0.2	0.1	-0.5	-0.4		-0.1	-0.3	0.3	-0.1	-0.9		-0.2	0.5	0.1	-0.4	-0.1	0.1	0.7	-0.3	17	0.3
137	0.0	0.5	-0.3	-0.2	0.0	-1.2	0.0	-0.2	-0.2	1.0	0.3	1.0	-0.5	-0.6	-3.9	-0.2	-1.7	-0.4	0.5	19	1.5
138	-0.9	-1.3	0.0	-1.1	-0.9	-1.5	-0.8	-1.6	-1.6	-0.7	-0.7	-0.9	-0.8	-0.4	0.6	0.0		-1.2	-1.0	18	0.9
139	1.5	-0.6	-0.8	1.1	0.4	-1.2	-1.9	0.4	1.1	0.2	-0.5	-1.2	-0.5	0.1	0.1	1.6	-0.8	-0.5		18	0.8
141	1.9	-0.6	-0.6	-0.4	-0.2	1.7	0.0	0.6	-0.4	1.1	-0.7	0.3	0.3	0.8	0.6	0.2	5.0	0.4	-0.1	19	1.9
142	0.0	-1.9	0.2	-0.9	-1.2	-1.7	-0.6	-1.1	-1.7	2.0	-1.0	0.6	0.1	-2.0	-2.3	1.4		-1.8	-1.9	18	1.5
145	0.8	0.2	0.3	0.5	0.7	0.5	0.0	0.8	0.7	-0.3	-0.4	0.1	0.3	1.3	0.9	0.0	-0.1	0.4	0.7	19	0.5
146	-2.3	-0.4	-2.0	-1.0		-1.3	-0.1	-1.4	-1.2	-1.8	-0.7	-1.4	-0.6	-1.5	-1.0		-1.2	-1.6	-0.7	17	1.5
148	5.0	-0.4	0.2	0.0	1.1	0.1	-1.3	-2.3	-0.4	-3.1	0.6	-2.0	-0.8	0.8	0.0	-0.6	-0.4	-0.4	-2.4	19	3.6
149	0.5	-0.6	-0.4	-0.2		-1.3	-0.1	-0.4	-1.0	0.4	-0.1	-0.4	-0.3	-0.3	-0.9	-0.5	-1.0	-0.2	-1.6	18	0.6
150	0.1	0.0	0.2	-0.2	0.3	0.6	0.3	0.3	0.5	-1.4	-0.2	-0.5	-0.5	0.1	0.4	-0.1	0.0	0.3	0.3	19	0.3
154	1.6	0.8	1.7	1.1	-0.8	0.3	0.5	1.0	0.2	0.0	2.4	0.2	0.5	0.1	0.1	0.4	0.6	-0.2	0.0	19	0.9

APPENDIX 6. EUPT 13 –SWZ – Graphical representation for laboratories in Category A.



APPENDIX 7. 'Squared Sum of z-Scores' (SZ^2) for laboratories in Category A.

Lab Code	Carbendazim	Chlorpyrifos	Deltamethrin	Diazinon	EPN	Imazalil	Indoxacarb	Malathion	Methidathion	Methomyl	Orthophenylphenol	Oxamyl	Pendimethalin	Phosalone	Prochloraz	Pyriproxyfen	Spinosad	Thiabendazole	Tolylfluanid	No. of Pesticides	SZ^2
	z-score																				
2	0.5	0.4	0.3	-0.7	-0.5	0.0	0.4	-0.5	0.3	-0.3	-0.3	0.0	0.3	0.0	0.1	0.3	-0.3	-0.1	0.2	19	0.1
4	-0.5	0.3	-0.2	-0.3	-0.5	-0.5	-0.8	-0.2	-0.1	0.3	-0.3	0.2	0.1	-0.5	0.2	0.7	-1.0	0.2	-0.1	19	0.2
5	0.1	0.4	-0.3	0.0	-0.9	-0.3	0.1	0.1	0.0	0.4	0.0	0.3	0.1	-0.2	-0.7	-0.2	-0.6	0.4	0.5	19	0.2
8	0.0	0.3	0.1	-0.5	0.3	-0.3	-0.1	-1.0	-1.2	-0.1	0.8	-0.4	0.3	0.9	0.0	-0.2	-0.9	-0.7	-1.3	19	0.4
9	0.9	-1.8	0.6	0.4	0.4	0.9	0.6	-0.4	-1.2	0.4	-4.0	1.8	-0.8	-0.4	2.1	-0.9	0.5	0.3	-1.1	19	1.8
11	0.2	0.3	1.7	0.6	0.0	0.0	0.5	-0.9	0.0	0.0	0.3	-0.1	0.4	0.3	-0.3	0.2	0.0	0.1	3.9	19	1.0
12	-0.8	-0.3	-0.8	-0.6	0.2	-0.2	-0.7	-0.5	-0.6	0.2	-0.1	-0.2	0.0	0.3	-0.1	-2.8	-2.7	-0.8	-3.7	19	1.7
13	0.3	0.2	0.8	-0.2	0.0	0.5	0.2	-0.4	0.1	0.4	0.2	0.6	0.3	0.4	0.7	0.7	0.3	0.3	0.1	19	0.2
15	-0.5	0.9	0.8	0.2	1.2	1.0	0.8	0.6	0.6	0.8	0.0	1.2	0.5	0.1	2.6	-0.1	-0.4	-0.8	-1.7	19	1.0
17	0.7	-0.1	0.4	0.7	1.4	0.8	0.6	0.4	0.8	0.9	1.6	0.7	0.3	1.8	1.5	0.0	0.6	2.1	-0.2	19	1.0
18	-0.2	0.3	0.9	1.1		-0.7	1.6	0.1	0.4	-0.4	0.9	0.0	0.0	1.6	2.2	-0.9	-0.3	-1.0	-1.9	18	1.1
19	-0.1	-0.5	-1.1	-0.7	-0.9	-0.8	-0.1	-0.7	-0.4	-0.1	-0.6	-0.1	-0.7	-0.3	-0.3	-0.2	-0.5	-0.6	-0.4	19	0.3
20	-0.5	0.6	-0.1	0.6	-0.2	0.0	0.2	0.4	-0.7	-1.2	0.8	-0.7	-0.2	1.0	1.0	-0.1	5.0	0.9	0.8	19	1.7
23	0.4	1.1	0.9	2.4	0.6	0.7	0.6	1.0	0.7	0.7	-0.1	0.6	-4.0	-0.2	0.3	0.7	0.8	0.6	1.0	19	1.6
24	-1.4	0.3	0.2	0.0	0.4	0.0	-0.6	0.4	0.3	-0.5	0.0	-0.3	0.4	0.1	0.2	-0.2	-1.2	-0.1	0.8	19	0.3
26	-1.1	0.5	-0.1	0.8	-0.6	0.5	0.3	-0.4	0.1	-0.8	0.7	0.4	1.2	1.2	1.7	0.3	0.2	-0.7	0.2	19	0.6
28	-0.2	0.8	0.4	0.6	-0.1	0.2	-3.9	0.0	0.1	0.1	0.3	1.8	0.6	0.0	0.2	1.1	4.6	5.0	0.1	19	3.6
29	-0.2	0.2	0.2	0.7	-0.3	-0.3	-0.2	0.8	0.6	0.2	1.2	0.2	0.1	-0.6	-0.5	0.1	0.5	-0.4	1.3	19	0.3
30	-0.2	0.9	2.6	1.3	0.7	0.1	2.1	1.5	1.7	-1.0	0.6	-0.8	0.5	2.8	3.5	-0.7	0.0	1.5	2.5	19	2.7
32	0.2	-0.3	0.0	0.4	-0.7	0.6	0.0	0.1	0.7	0.0	0.0	0.3	0.6	-0.6	0.0	0.4	0.5	0.3	0.4	19	0.2
35	2.1	0.3	-0.7	0.1	-0.3	0.4	1.5	-1.1	-1.1	-0.4	0.4	1.2	0.1	0.1	-0.1	0.5	1.1	0.4	-1.9	19	0.9
36	-0.8	1.0	0.2	0.6	1.3	1.4	0.5	0.4	0.6	0.1	-0.9	-0.4	-0.1	0.3	0.2	0.9	0.0	0.0	0.6	19	0.5
37	1.8	-0.5	-1.9	-0.2	-0.9	0.9	-1.1	-0.4	0.4	1.2	-1.6	0.8	-0.5	-1.9	-0.4	0.3	-2.2	2.9	-0.8	19	1.7
40	5.0	-0.3	-1.0	0.0	0.4	2.1	1.5	-1.1	-2.0	5.0	-2.3	1.0	-0.4	-2.2	0.5	-0.5	3.6	4.4	-1.7	19	5.0
47	5.0	0.4	0.5	1.3		0.0	0.4	0.0	0.2	0.0	0.1	0.2	0.3	0.9	-0.8		0.3	-0.3	1.8	17	1.9
48	-0.8	-0.4	-0.6	-0.5	-1.3	-0.9	-0.7	2.6	-0.5	-1.4	-0.3	-0.2	0.0	-1.8	-1.1	-0.6	0.1	-0.7	-0.1	19	1.0
49	0.5	1.5	0.5	0.0	-0.1	1.4	3.2	-0.7	1.4	-0.2	1.0	-0.3	0.2	0.2	0.7	2.3	5.0	-0.2	5.0	19	3.9
50	0.5	-0.8	-0.7	-1.0		-0.7	0.1	-0.7	-0.7	-0.1		0.4	1.7	-1.5	1.0	0.0	0.1	-0.3	-0.1	17	0.6
54	0.0	0.5	0.6	1.0	0.7	0.6	0.9	1.5	0.9	0.3	0.8	0.5	0.8	1.3	1.1	0.7	0.4	0.5	2.0	19	0.8
57	1.2	0.6	0.7	0.8	0.2	0.6	0.7	0.9	0.7	1.2	1.5	1.8	0.5	1.0	4.7	0.5	1.5	1.7	0.7	19	2.1
59	-1.2	0.0	-0.3	0.1		-1.9	-1.8	-0.3	-0.5	-0.8	-0.3	-0.7	-0.3	-1.0	0.4	-0.7	0.6	-0.2	0.1	18	0.7
63	3.9	-2.4	-3.7	-2.9	-3.9	1.2	-0.9	-2.6	-2.7	-1.8	-2.0	-1.9	-1.4	-2.5	-0.5	-1.7	5.0	3.9	-3.5	19	5.0

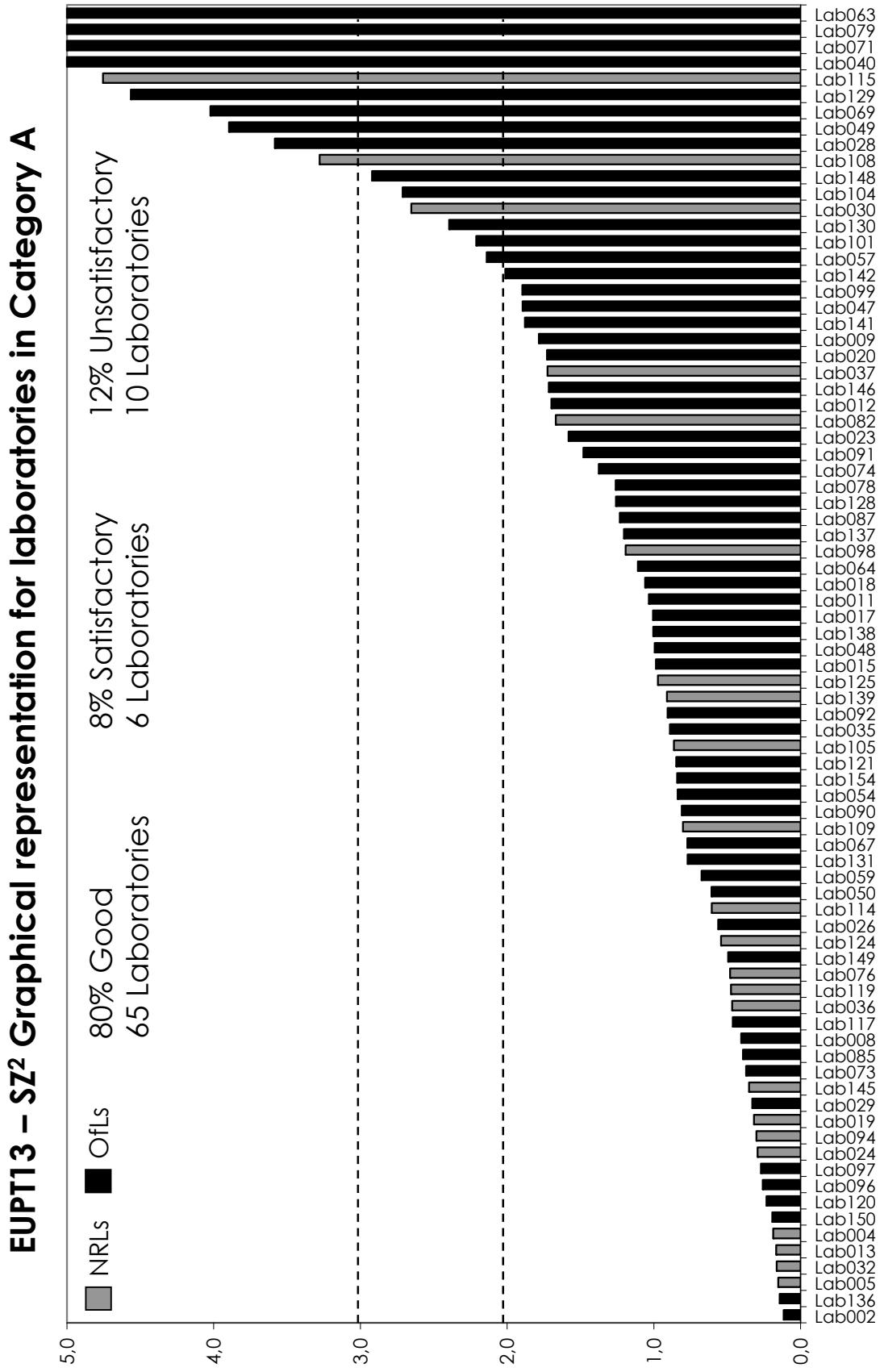
APPENDIX 7. 'Squared Sum of z-Scores' (SZ^2) for laboratories in Category A.

Lab Code	Carbendazim	Chlorpyrifos	Deltamethrin	Diazinon	EPN	Imazalil	Indoxacarb	Malathion	Methidathion	Methomyl	Orthophenylphenol	Oxamyl	Pendimethalin	Phosalone	Prochloraz	Pyriproxyfen	Spinosad	Thiabendazole	Tolylfluanid	No. of Pesticides	SZ^2
	z-score																				
64	0.5	0.6	1.1	1.5	-0.3	0.6	0.7	0.7	0.5	0.8	-0.1	0.5	0.3	0.9	1.8	1.0	0.7	2.9	0.4	19	1.1
67	-0.6	0.3	-0.7	0.3	0.2	0.0	-0.2	-0.1	-0.5	-0.2	0.0	-0.1	0.0	0.4	0.0	-0.6	3.4	0.2	1.1	19	0.8
69	4.4	0.8	-0.4	2.0		0.0	-0.2	0.5	0.3	1.4	2.2	1.2	0.3	2.3	1.2	0.7	-0.5	2.6	5.0	18	4.0
71	-0.2	2.6	-3.7	-0.8	0.8	1.8	5.0	0.4	2.6	1.4	4.6	-3.7	3.5	2.7	2.4	2.0	-1.2	2.4	2.7	19	5.0
73	-0.4	-0.4	-1.1	-0.7	-0.9	-0.7	-0.2	-0.2	-0.7	-0.7	0.3	-0.5	-0.3	-0.1	-0.5	-0.5	-0.6	-0.8	0.7	19	0.4
74	-0.1	0.6	0.2	0.8	-3.9	0.2	0.6	1.1	0.5	-1.7		-0.5	0.8	-0.4	-0.9	0.2	0.7	-0.2	1.3	18	1.4
76	1.1	1.1	-1.2	0.4	-0.3	0.3	0.5	1.1	0.4	0.2	1.2	-0.1	0.7	0.3	-0.3	0.7	0.5	-0.1	0.4	19	0.5
78	-0.7	-0.5	0.0	-1.5	-1.3	-1.5	-1.5	-1.8	-2.2	0.7	-0.7	-0.9	-0.4	-0.5	0.9	-0.5		-1.3	-1.0	18	1.3
79		2.7	0.7	1.5		2.0	1.9	3.7	2.3	0.9	2.5	1.4	2.0	2.8	4.9	0.7	5.0	2.4	3.4	17	5.0
82	3.8	-0.6	-0.9	-0.4	-0.4	-1.4	-2.4	-0.6	-0.4	0.2	-0.3	-0.2	-1.1	-0.8	-0.3	2.0	-1.0	-0.1	-0.6	19	1.7
85	-0.1	0.2	0.6	0.6	-1.0	0.4	-0.2	0.0	-0.1	0.8	-0.3	1.0	-0.9	0.3	-0.2	0.1	1.4	-0.8	0.3	19	0.4
87	0.3	0.7	0.5	0.7	1.2	0.0	2.2	1.1	0.8	-1.1			1.1	0.8	-2.3	0.9	0.0	-0.4	1.4	17	1.2
90	-1.2	-1.0	-0.4	-0.6	-1.3	-1.1	-0.6	0.1	-1.3	-0.4	-1.4	-0.1	-0.8	-0.4	-0.4	0.3	-1.3	-0.8	-1.3	19	0.8
91	-1.6	-1.3	-0.5	-1.3	-2.1	-0.9	-0.9	-0.9	-1.8	-1.3	-0.2	-0.7	-1.2	-1.7	-0.5	-0.4	-0.7	-1.5	-1.4	19	1.5
92	-2.0	1.2	1.4	1.2	-0.3	0.5	0.4	-0.4	-1.6	-1.2	-1.0	-0.2	-0.7	-1.1	-0.1	-0.3	0.8	-0.4	-0.5	19	0.9
94	0.0	-0.1	-0.4	0.2	-1.1	0.0	0.6	0.7	-0.2	0.4	-0.7	0.7	-0.1	-0.9	0.8	0.7	0.1	0.3	-0.3	19	0.3
96	0.4	0.5	0.3	-0.1	0.5	-0.2	0.5	0.2	0.3	0.0	-0.7	0.5	0.6	0.8	-0.1	0.2	-1.0	0.0	0.9	19	0.3
97	0.0	0.3	-0.1	0.9	-1.2	-0.2	0.1	0.4	0.4	-0.7	-0.5	0.1	0.0	-0.9	-0.9	-0.1	0.0	-0.2	-0.1	19	0.3
98	-0.9	-1.5	0.8	0.5	0.7	0.4	1.4	-0.5	0.3	-1.2	-1.8	-0.6	0.9	1.0	-0.1	0.7	-0.2	2.8	-0.7	19	1.2
99	3.6	1.0	0.3	-1.9	-0.2	1.3	-0.2	-1.0	0.7	0.6	-0.8	0.4	-0.8	-0.2	1.0	-0.9	0.8	1.7	-2.8	19	1.9
101	3.4	0.4	-1.2	-0.2		-0.6	0.6	-1.0	-0.2	1.4	-0.4	1.5	-0.2	-1.3	-0.4	0.2	3.9	1.9	0.1	18	2.2
104	1.0	-0.7	0.6	2.9		0.1	1.2	0.5	-1.3	0.2	-0.2	1.3	2.5	0.9	-3.9	-1.2	1.4	0.7	2.8	18	2.7
105	-2.0	0.8	-0.3	0.8	0.3	-1.3		0.5	0.6	-0.9	0.0	0.2	-0.5	0.7	0.1	-0.6	-1.7	-1.4		17	0.9
108	-1.0	0.2	-0.4	0.0	5.0	-0.3	-0.6	0.7	-0.1	0.5	0.9	0.3	0.4	0.9	0.9	0.2	5.0	-2.0	1.7	19	3.3
109	-1.0	1.0	0.8	1.1	0.2	0.2	-0.5	1.2	0.0	0.4	0.8	0.5	0.4	0.1	0.4	0.9	-0.2	1.9	1.9	19	0.8
114	0.3	-1.2	0.8	-0.8	-0.3	0.0	-0.2	-0.1	-0.4	0.1	-0.3	0.4	-1.5	0.4	1.5	-1.5	0.3	0.9	-0.4	19	0.6
115	-1.1	-0.7	1.1	-1.2	3.6	-1.1	1.3	-0.6	-0.6	-3.8	0.0		-0.6	0.0	-0.1	-0.8	4.6	5.0	-1.8	18	4.8
117	0.0	-0.2	-1.6	-0.7	-1.0	0.0	0.5	0.6	0.0	-1.0	-0.9	-0.2	-0.4	-0.5	0.0	0.4	-0.2	0.0	1.2	19	0.5
119	-1.3	-0.4	0.1	0.0	-0.8	-0.9	-0.6	0.2	0.1	-1.0	-0.6	-0.8	-0.3	-0.3	-0.6	-0.4	-0.6	-1.3	-0.9	19	0.5
120	0.2	-0.2	0.9	-0.2	-0.1	-0.7	-0.3	-0.5	-0.6	0.3	0.5	0.2	-0.2	0.5	-0.7	-0.3	-0.3	1.0	-0.1	19	0.2
121	1.2	0.1	-0.3	0.0	0.0	0.7	0.2	0.2	0.2	1.6	0.1	1.4	-0.7	0.1	1.4		-0.2	2.4	0.7	18	0.8
124	1.1	0.2	1.5	0.3	0.2	0.0	-0.9	0.6	-0.1	1.0	0.1	0.9	0.2	0.6	-0.4	-0.9	-0.1	0.3	1.4	19	0.5

APPENDIX 7. 'Squared Sum of z-Scores' (SZ^2) for laboratories in Category A.

Lab Code	Carbendazim	Chlorpyrifos	Deltamethrin	Diazinon	EPN	Imazalil	Indoxacarb	Malathion	Methidathion	Methomyl	Orthophenylphenol	Oxamyl	Pendimethalin	Phosalone	Prochloraz	Pyriproxyfen	Spinosad	Thiabendazole	Tolylfluanid	No. of Pesticides	SZ^2
	z-score																				
125	-0.4	0.2	0.8	-0.3	0.2	-0.4	0.5	0.9	0.0	1.2	2.3	2.1	0.0	1.0	0.9	0.9	1.1	1.1	-0.1	19	1.0
128	0.2	-0.2	-0.3	-0.1	-0.1	0.1	-0.2	0.1	0.6	-0.3	0.3	-0.3	-0.5	1.1	1.8	-0.5	4.2	0.2	0.1	19	1.3
129	-2.9	-1.2	-1.4	-1.4		-2.7	-1.2	-2.3	-3.9	-3.0	-1.7	-2.3	-0.9	-2.1	-1.4	-1.7	-1.3	-2.6	-1.6	18	4.6
130	-0.8	1.1	2.3	0.4		-3.4	2.1	-0.2	-0.2	-0.8	-2.7	-0.1	0.4	0.1	0.1	1.9	-2.9	-0.2	-0.4	18	2.4
131	-0.9	-1.1	0.2	-0.8	-1.0	-1.3	-0.7	-1.2	-1.7	-0.7	-0.6	-0.7	-0.2	-0.1	0.7	-0.4	-0.4	-1.1	-1.0	19	0.8
136	0.2	0.1	-0.5	-0.4		-0.1	-0.3	0.3	-0.1	-0.9		-0.2	0.5	0.1	-0.4	-0.1	0.1	0.7	-0.3	17	0.1
137	0.0	0.5	-0.3	-0.2	0.0	-1.2	0.0	-0.2	-0.2	1.0	0.3	1.0	-0.5	-0.6	-3.9	-0.2	-1.7	-0.4	0.5	19	1.2
138	-0.9	-1.3	0.0	-1.1	-0.9	-1.5	-0.8	-1.6	-1.6	-0.7	-0.7	-0.9	-0.8	-0.4	0.6	0.0		-1.2	-1.0	18	1.0
139	1.5	-0.6	-0.8	1.1	0.4	-1.2	-1.9	0.4	1.1	0.2	-0.5	-1.2	-0.5	0.1	0.1	1.6	-0.8	-0.5		18	0.9
141	1.9	-0.6	-0.6	-0.4	-0.2	1.7	0.0	0.6	-0.4	1.1	-0.7	0.3	0.3	0.8	0.6	0.2	5.0	0.4	-0.1	19	1.9
142	0.0	-1.9	0.2	-0.9	-1.2	-1.7	-0.6	-1.1	-1.7	2.0	-1.0	0.6	0.1	-2.0	-2.3	1.4		-1.8	-1.9	18	2.0
145	0.8	0.2	0.3	0.5	0.7	0.5	0.0	0.8	0.7	-0.3	-0.4	0.1	0.3	1.3	0.9	0.0	-0.1	0.4	0.7	19	0.4
146	-2.3	-0.4	-2.0	-1.0		-1.3	-0.1	-1.4	-1.2	-1.8	-0.7	-1.4	-0.6	-1.5	-1.0		-1.2	-1.6	-0.7	17	1.7
148	5.0	-0.4	0.2	0.0	1.1	0.1	-1.3	-2.3	-0.4	-3.1	0.6	-2.0	-0.8	0.8	0.0	-0.6	-0.4	-0.4	-2.4	19	2.9
149	0.5	-0.6	-0.4	-0.2		-1.3	-0.1	-0.4	-1.0	0.4	-0.1	-0.4	-0.3	-0.3	-0.9	-0.5	-1.0	-0.2	-1.6	18	0.5
150	0.1	0.0	0.2	-0.2	0.3	0.6	0.3	0.3	0.5	-1.4	-0.2	-0.5	-0.5	0.1	0.4	-0.1	0.0	0.3	0.3	19	0.2

APPENDIX 8. EUPT 13 – SZ² - Graphical representation for laboratories in Category A.



APPENDIX 9. Methods used by participants for determining pesticides.

CARBENDAZIM

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	References
001		NA																
002	0.01	D	1.41	91		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from validation data	TDCPP	UNI EN 15662
003		NA																
004	0.05	D	1.10	99		AcN			10			Matrix matched - Multiple level		ITQ	LC-ITQ	Rec. from same batch		EN 15662
005	0.01	D	1.28	100.1		EtOAc			10	Yes		Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		1
006	0.01	D	1.209	96		AcN			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
007	1.00	D	1.00	70 - 120		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
008	0.01	D	1.24	99		EtOAc			10	Yes	Filter	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	1.530	101		MeOH	DCM		10	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Chem Elut
010	0.01	D	1.051	94		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
011	0.05	D	1.30	88.6		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.999			MeOH			10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Cyprodinil	
013	0.005	D	1.33	98.6		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
014	0.01	D	1.35	85.5		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		UNI EN 15662:2009
015	0.01	D	1.08			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Desmetryn	QuEChERS
016		NA																
017	0.01	D	1.48	101		AcN			10			Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Pirimicarb D6	QuEChERS
018	0.01	D	1.20	102		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbofurane D3	QuEChERS
019	0.01	D	1.21	94.5		EtOAc			50	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EtOAc extraction
020		D	1.1	114	Yes	MeOH			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.01	D	2.68	114		MeOH	Water		10	No	Filter	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	FP086
022		NA																
023	0.005	D	1.39	106		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.812	88		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		QuEChERS
025		NA																
026	0.01	D	0.904	62.0		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
027		NA																
028	0.01	D	1.176			AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Atrazin D5	QuEChERS
029	0.01	D	1.2	94		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.01	D	1.20	85		EtOAc			25	Yes		Pure solvent - Multiple level		Fluorescence	LC-MS	Rec. from same batch		Interlaboratory validated method
031	0.05	D	1.1	84		Acetone	DCM		15	No	SPE	Pure solvent - Multiple level		Diode Array Detector		Rec. from same batch		MINILUKE
032	0.01	D	1.317	102		MeOH			10	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		ChemElute
033	0.01	D	1.42	85.8	Yes	AcN			10	Yes	DSPE	Matrix matched - Single level		MS/MS (QQQ)		Rec. from same batch		1
034		NA																
035	0.005	D	1.91	81		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
036	0.01	D	1.01	90.5		AcN	AcN		5	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TRIS	QuEChERS
037	0.01	D	1.8	105		Acetone	DCM		15	Yes	SPE	Pure solvent - Multiple level		ITQ	LC-MS/MS (QQQ)	Rec. from same batch	Benzimidazole	NF EN 14333-1
038		NA																
039		NA																
040	0.010	D	3.714	113		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
041		NA																
042	0.01	D	0.568	94		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		prEN 15662:2008
043		NA																
044		NA																
045	0.05	D	1.39	85		AcN			10	No	DSPE	Matrix matched - Single level		Diode Array Detector	LC-MS	Rec. from validation data		PN EN 15662
046	0.02	D	1.150	92.8	Yes	Acetone	DCM	AcN	20		SPE	Matrix matched - Single level		Diode Array Detector	Fluorescence			Internal Method
047	0.01	D	2.9	103		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
048	0.010	D	0.998	90.1		AcN			15	No	DSPE	Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TDCPP	EN15662

APPENDIX 9. Methods used by participants for determining pesticides.

CARBENDAZIM

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	References
049	0.01	D	1.400	80		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		PRES/069
050	0.01	D	1.41	89		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
051		NA																
052		NA																
053	0.05	D	0.82	80		DCM			10	No	SPE	Pure solvent - Multiple level		Diode Array Detector		Via Standard addition		Internal Method
054	0.002	D	1.24	90		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	Linuron-d6	QuEChERS, citrate buffered
055		NA																
056	0.1	ND	ND			EtOAc			16	Yes	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)		Fenclorfos 0.46 mg/l	Rapporti Istisan 1997/23 1997/24
057	0.002	D	1.61	92.8		MeOH			10	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		"BfR"-Methode according Â§64 LFGB, L 00.00-113 (cleanup diatomeenerde)
058		NA																
059	0.01	D	0.860	102		EtOAc			20	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		Internal Method
060		NA																
061	0.01	D	1.1	88		Acetone	DCM		10	No		Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
062		NA																
063	0.005	D	2.46	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS - NF EN 15662
064	0.01	D	1.4	107		EtOAc			25	Yes	Liquid/liquid partitioning	Pure solvent - Multiple level		Fluorescence	LC-MS/MS (QQQ)	Rec. from validation data		NF EN 14333-1
065		NA																
066	0.01	D	1.11	72		AcN			10		DSPE	Matrix matched - Multiple level		MS	LC-MS	Rec. from same batch		NF EN 15662
067	0.01	D	1.05			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068		NA																
069	0.01	D	2.63	111		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070	0.01	D	2.23			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)				QuEChERS
071	1.21	D	1.2	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072		NA																
073	0.01	D	1.14	105		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	1.229	81		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	In House Method
075	0.01	D	1.24	70		AcN	AcN	AcN	10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		modified EN 15662
076	0.01	D	1.6	85		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077	0.02	D	2.08	66.2		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	NF EN 15662
078	0.02	D	1.02	107		AcN			15	No	DSPE	Matrix matched - Multiple level		Diode Array Detector		Rec. from same batch		QuEChERS
079		NA																
080		NA																
081		NA																
082	0.01	D	2.445	97		Acetone	DCM	Petr. ether	7.5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		
083		NA																
084		NA																
085	0.0005	D	1.206	104		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
086	0.01	D	1.35	77		EtOAc			20		Liquid/liquid partitioning	Pure solvent - Multiple level		Diode Array Detector		Rec. from validation data		
087	0.01	D	1.33	89.0		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
088		NA																
089	0.1	D	1.3	69.2	Yes	MeOH+HCl	DCM		10	Yes	Liquid/liquid partitioning	Pure solvent - Multiple level		Diode Array Detector	HPLC	Rec. from validation data		
090	0.01	D	0.89	66		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
091	0.01	D	0.750	70		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS		Rec. from same batch		
092	0.01	D	0.633	50		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093		NA																
094	0.01	D	1.24	94		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	S.J. Lehotay et al, J. AOAC Int., vol 88, 615-629 (2005)
095		NA																
096	0.01	D	1.38	127		Acetone			10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TBP	In house

APPENDIX 9. Methods used by participants for determining pesticides.

CARBENDAZIM

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	References
097	0.01	D	1.25	80		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
098	0.01	D	0.977	92		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	2.38	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)		Via Standard addition		QuEChERS
100		NA																
101	0.01	D	2.3	111		AcN			10	Yes	PSA	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
102	0.01	D	1.35	80		AcN			12	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
103	No Results Reported																	
104	0.01	D	1.550	79		AcN			10	Yes	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
105	0.02	D	0.619	100		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		acetato de etilo
106	0.10	D	2.20	49	Yes	EtOAc	NaOH	HCl	25	Yes		Matrix matched - Multiple level		UV		Rec. from same batch		In house based in: Dosage des residus de fongicides a noyau Benzimidazole et des thiophanates dans les raisins, les jus de raisin et les vins et
107		NA																
108	0.01	D	0.939	75		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	QuEChERS
109	0.01	D	0.94	92		AcN			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	SOP
110	0.01	D	1.23	104.3		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
111		NA																
112	0.01	D	1.94	90	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		AOAC 2007.01
113	No Results Reported																	
114	0.01	D	1.359	89		MeOH			10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		chem elut
115	0.01	D	0.9	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662 : 2009
116	0.01	D	1.447	85		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Multiresidue Method using QuEChERS
117	0.005	D	1.238	71		AcN			25	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbendazim D4	CHEM 070
118	0.01	D	0.81	99		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		QuEChERS
119	0.01	D	0.852	76.8		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
120	0.004	D	1.31	94		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
121	0.01	D	1.62	103.4		Acetone	DCM	Pet.ether	8	No	SPE	Pure solvent - Single level		Fluorescence	LC-UV	Rec. from same batch	Benzimidazole	SIST EN 14333-1:2005
122		NA																
123		NA																
124	0.01	D	1.601	97		MeOH	Water		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Oxfendazole	
125	0.008	D	1.12	96		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
126		NA																
127		ND	ND			AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	1.31	89.2		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		LC-MSMS; CEN/TR 15641
129	0,01	D	0.335			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			QuEChERS
130	0.01	D	1.0	63		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.973	75.7		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		EN15662:2008
132		ND	ND			DCM			10		GPC	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	Biphenyl	Rapporti ISTISAN
133		NA																
134	0.01	D	1.9	71		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
135	0.94	D	0.94	81		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		
136	0.01	D	1.31	84		Acetone			20	Yes	SPE	Pure solvent - Multiple level		Diode Array Detector		Rec. from same batch		
137	0.01	D	1.245	Standard addition	Yes	EtOAc			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.980	96.6		AcN			10	No	SPE	Pure solvent - Multiple level		UV	Diode Array Detector	Rec. from validation data		MSZ EN 15662:2009
139	0.01	D	1.729	99.09		AcN			12	No	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	

APPENDIX 9. Methods used by participants for determining pesticides.

CARBENDAZIM																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	References
140	0.04	D	0.868	92.3		EtOAc			50	Yes	GPC	Pure solvent - Multiple level		Diode Array Detector		Rec. from same batch		EN 12393-2 Method
141	0.01	D	1.83	97.8		AcN			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		DAR-QuEChERS
142		D	1.257	98		AcN			15	No	SPE	Pure solvent - Multiple level		Diode Array Detector		Rec. from same batch		QuEChERS
143	0.005	D	1.05	73.8		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
144	0.050	D	1.575	88		EtOAc	Water		75	No	Liquid/liquid partitioning	Pure solvent - Multiple level		Fluorescence	HPLC/PDA	Rec. from same batch		PN-EN 14333-3:2005
145	0.01	D	1.50	90		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Quinalphos (injection control)	In House
146	0.05	D	0.519	38.3		AcN			9.937	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
147	0.01	D	0.86	101		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
148		D	3.041	95		AcN			10	Yes								QuEChERS
149	0.01	D	1.41	86.5		Acetone	DCM		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	TPP	Miniluke
150	0.01	D	1.28	83		AcN			15		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
151		NA																
152		D	0.221	94	Yes	AcN			10.15	No	DSPE	Matrix matched - Single level		MS	LC-MS	Via Standard addition	TDCPP	BS EN 15662
153		NA																
154	0.01	D	1.74	102		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

CHLORPYRIFOS

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	References
001	0.1	D	0.665	83		Acetone	DCM		15	No		Standard addition	IDT			Rec. from same batch		Analytical Methods for Pesticide Residues in Foodstuffs. Ministry of Welfare, Health & Cultural Affairs, Netherlands Multiresidue Method 1,3,1.2, 6t
002	0,01	D	0.873	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.524	96		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15662
004	0.01	D	0.854	111		AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS	Rec. from same batch	TPP	EN 15662
005	0.01	D	0.866	89.5		EtOAc			10	Yes		Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		2
006		NA																
007	0.01	ND	ND			Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	IDT	MS/MS (QQQ)		Rec. from same batch		
008	0.01	D	0.850	86		EtOAc			10	Yes	Filter	Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.431	90		Cyclohexane	EtOAc		75	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		DFG S19
010	0.01	D	1.265	95		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		QuEChERS
011	0.01	D	0.852	83.3		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.724			Acetone	Cyclohexane/ EtOAc		20	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	Nitrofen, TPP	
013	0.010	D	0.822	87.9		AcN			10	No		Matrix matched - Single level	ECD/NPD		GC-MS	Rec. from same batch		EN 15662
014	0.01	D	0.152		Yes	AcN			1			Standard addition	MSD		GC-MS	Via Standard addition		Internal Method based on Fillion et alt. JAOAC 78-5-1995
015	0.01	D	0.97			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		Desmetryn	QuEChERS
016	0.01	D	0.857	95		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	0.763	115		AcN			10		DSPE	Standard addition	MSD		GC-TOF	Rec. from same batch	Mirex	QuEChERS
018	0.01	D	0.840	101		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos-Me D6	QuEChERS
019	0.01	D	0.680	85.3		EtOAc			50	Yes	GPC	Matrix matched - Multiple level	FPD	MS/MS (QQQ)	GC-MS	Rec. from same batch		EtOAc extraction
020		D	0.9	75	Yes	MeOH			10		DSPE	Matrix matched - Multiple level	TOF	MS/MS (QQQ)	GC-TOF	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.01	D	1.05	86		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Caffein	QuEChERS European Method EN 15662
022	0.06	D	0.57	100		DCM			10	No	GPC	Standard addition	NPD		GC-MS	Via Standard addition		internal
023	0.01	D	1.01	110		AcN	Toluol		10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.851	93		Acetone	DCM	PE	15	No		Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		Luke
025	0.02	D	0.54			EtOAc			10			Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)		TPP	
026	0.01	D	0.876	114.5		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	EN 15662
027	0.01	D	0.362	95		Acetone	DCM	Petr. ether	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		Mini-Luke
028	0.01	D	0.943			AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Atrazin D5	QuEChERS
029	0.01	D	0.82	100		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.01	D	0.965	94		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TRIS	EN 15662:2008
031	0.05	D	1.1	114		AcN			10	No	DSPE	Matrix matched - Multiple level			GC-MS	Rec. from same batch		QuEChERS
032	0.01	D	0.727	101		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
033	0.01	D	0.786	99.4		EtOAc			25	Yes		Matrix matched - Single level	FPD		GC-MS	Rec. from same batch		2
034	0.01	D	0.700	70		AcN			10	No	DSPE	Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch		EN 15662
035	0.05	D	0.848	94		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TBP, TPP	QuEChERS
036	0.01	D	0.985		Yes	AcN	AcN		5.0	Yes	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	TRIS	QuEChERS
037	0.01	D	0.69	97		AcN			10	Yes	DSPE	Pure solvent - Multiple level	IDT			Rec. from same batch	Bromophos Methyl	NF EN 15662
038	0.01	D	0.915	101		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039	1.00	D	1.00	91.2		AcN			10	No	DSPE	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	TPP	QuEChERS
040	0.010	D	0.728	71		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
041	0.05	D	0.686	85.42		EtOAc			50	No		Matrix matched - Single level	NPD		Two columns	Rec. from same batch		MINISTRY OF WELFARE,NETHERLANDS,1996
042	0.01	D	0.648	97		AcN			10		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		prEN 15662:2008
043	0.01	D	0.67	84.4		EtOAc			15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	MA01

APPENDIX 9. Methods used by participants for determining pesticides.

CHLORPYRIFOS

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	References
044	0.01	D	0.520			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		TDCPP	EN 15662
045	0.05	D	0.683	90		AcN			10		DSPE	Pure solvent - Multiple level	ECD+NPD		GC-MS/MS Iontrap	Rec. from validation data		PN EN 15662
046	0.005	D	0.833	94.1	Yes	Acetone	EtOAc	Hexane	2			Matrix matched - Single level	ECD		Two columns			Internal Method
047	0.05	D	0.87	91		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	IDT		GC-MS/MS (ITD)	Rec. from same batch	TPP	miniLuke
048	0.010	D	0.700	95.0		AcN			15	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Rec. from same batch	TDCPP	EN15662
049	0.01	D	1.081	112		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch		PRES/069
050	0.01	D	0.632	95		AcN			10	No		Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		
051	<0.01	D	0.63	82	Yes	AcN	AcN	AcN	10	Yes	DSPE	Matrix matched - Single level	NPD	Diode Array Detector	GC-MS	Rec. from same batch	TPP	uni en 15662
052	0.01	D	0.786	95		Acetone	DCM		100	No	florisil	Matrix matched - Single level	ECD		Two columns	Rec. from validation data		Luke
053	0.05	D	0.65	85		DCM			15	No	GPC	Pure solvent - Multiple level	NPD		GC-MS	Via Standard addition	Ethion	Istisan 97/23
054	0.005	D	0.888	93		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	Triphenylmethane	QuEChERS, citrate buffered
055	0.01	D	0.79	104		AcN			10	Yes	DSPE	Standard addition	MSD		GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
056	0.01	D	0.50		Yes	EtOAc	EtOAc	EtOAc	16	Yes	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)		Fenclorfos	rapporti istisan 1997/23-1997/24
057	0.002	D	0.904	97.3		Acetone	EtOAc	Cyclohexane	25	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-TOF	Rec. from same batch		modulare Multimethode according Â§64 LFGB, L 00.00-34
058		D	0.480	79		DCM			10	No	DSPE	Pure solvent - Single level	NPD		GC-MS	Rec. from validation data	Ethion	
059	0.01	D	0.794	88.3		EtOAc			20	Yes		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		Internal Method
060	0.02	D	0.984	86		EtOAc			50			Matrix matched - Multiple level			GC-MS	Rec. from validation data		1) A. Anderson, H. Plashed, Fresenius J Anal Chem., 339 (1991) 365 2) A. Andersson, H. PÃ¥lsheden, Pesticide Analytical Methods in Sweden, Part 1,Ra
061	0.005	D	1.01	114		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	
062	0.01	D	0.945	82		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from ring test		EN 15662:2008
063	0.01	D	0.32	101		AcN			10	Yes	DSPE		MS/MS (QQQ)		GC-MS	Rec. from same batch	Bromophos Methyl	QuEChERS
064	0.01	D	0.90	120		EtOAc			10	Yes	SPE	Pure solvent - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch	Anthracene	Internal Method
065		NA																
066	0.01	D	0.800	81		AcN			10		DSPE	Pure solvent - Multiple level	MS trap		GC-MS	Rec. from same batch	TPP	NF EN 15662
067	0.01	D	0.851			AcN			10.0	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068	0.1	D	0.46	61		QuEChERS			10.19									CG-ECD-NPD
069	0.01	D	0.942	97		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070	0.01	D	0.961	119		AcN			10	No	DSPE	Matrix matched - Multiple level	FPD		GC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
071		D	1.33	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072	0.01	D	0.620	85		EtOAc			20		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Luke
073	0.01	D	0.705	104		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	0.900	98		EtOAc			10	No		Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	PCB-28	In House Method
075	0.01	D	0.368	82		AcN	AcN	AcN	10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		modified EN 15662
076	0.01	D	1.0	95		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
077	0.01	D	0.881	105.3		AcN			10	No	DSPE	Matrix matched - Multiple level	IDT			Via Standard addition	TriChloroNate	NF EN 15662
078	0.01	D	0.692	92		AcN			15	No	DSPE	Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		QuEChERS
079	0.01	D	1.31	100		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080	0.01	D	0.76	92		Acetone	DCM		100	No		Matrix matched - Multiple level	ECD		GC-MS	Rec. from validation data		Kadenczki i wspÃ,. (1992)JOAOAC Int. 75: 53-63
081	0.01	D	0.784	86		Acetone	DCM	Petr. ether	7.50	No		Matrix matched - Single level	NPD		Two columns	Rec. from same batch		MULTIRESIDUE METHOD, ANALYTICAL METHOD FOR PESTICIDE RESIDUES IN FOODSTUFFS 6TH EDITION
082	0.02	D	0.667	85		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	HCB	
083	0.01	D	0.82	98		Acetone	DCM		5	No	SPE	Pure solvent - Single level	ECD			Rec. from same batch		
084	0.01	D	0.699	97		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch	NO	Analytical methods for pesticide residues in foodstuffs. Sixth edithion. June 1996. Ministry of Public Health, Welfare and Sport. The Netherlands.
085	0.005	D	0.829	94		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

CHLORPYRIFOS

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	References
086	0.01	D	0.495	78.1		Acetone	MeOH		50		SPE	Pure solvent - Multiple level	MSD			Rec. from validation data	Fenclorfos	
087	0.01	D	0.921	97.0		EtOAc			25	No	Liquid/liquid partitioning	Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch		Multi-residue Method 5, Organophosphorus compounds, Analytical methods of residues of pesticides, 5th Edition, 1988. Dutch Ministry of Welfare, Healt
088	0.01	D	0.78	98.7		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch		GC NPD
089	0.01	D	0.82	92.6		DCM	Acetone		5	No	MSPD, silica gel/alumina	Pure solvent - Single level	NPD		GC/NPD, GC/ECD	Rec. from validation data		
090	0.01	D	0.58	78%		DCM			10	No	Extrelut	Pure solvent - Single level	ECD		GC-MS	Rec. from validation data	Bromophos Methyl	Rapp. ISTISAN 1997/23-met. B4
091	0.01	D	0.539	76		AcN			10	Yes	DSPE	Pure solvent - Multiple level	PFPD		GC-MS	Rec. from same batch		
092	0.01	D	1.03	73		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093	0.05	D	0.561	83		EtOAc	Cyclohexane		50	No	GPC	Pure solvent - Multiple level	NPD		Two columns	Rec. from same batch		EN12393
094	0.01	D	0.771	90		EtOAc			30		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPE	A.H. Roos et al, Anal Chim Acta, vol 196, 95-102 (1987)
095		D																
096	0.01	D	0.880	85		EtOAc			10	No	SPE	Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	TBP	In house
097	0.01	D	0.854	96		AcN			10	No	DSPE	Matrix matched - Single level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
098	0.01	D	0.497	105		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.979	100		AcN			10	No	DSPE	Standard addition	MS/MS (QQQ)			Via Standard addition	TPP	QuEChERS
100	0.01	D	0.75	96		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MSD		GC-MS	Via Standard addition	Propazine	Internal Method GC/MS
101	0.01	D	0.86	95		AcN			10	Yes	PSA	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS
102	0.05	D	0.90	98		AcN			12	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		EN 15662
103	No Results Reported																	
104	0.01	D	0.657	74		Acetone	DCM		50	No		Pure solvent - Multiple level	MSD		GC-MS	Rec. from same batch	Bromophos Methyl	EN 12393
105	0.03	D	0.940	100		Acetone	DCM		10	Yes		Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		Luke
106	0.02	D	0.69	104.5		EtOAc	NaOH	HCl	25	No		Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch		In house based in: Ministry of Walfare, health and cultural affairs, Netherlands Analytical Methods for residues of pesticides in foodstuffs.
107	0.01	D	0.468	98		AcN			10	No	DSPE	Pure solvent - Multiple level	ECD		GC-MS			QuEChERS
108	0.01	D	0.834	81		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
109	0.01	D	0.99	103		AcN			10	No	SPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	SOP
110	0.01	D	0.720	86.3		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	Mini Luke
111	0.97	D	0.97		Yes	Acetone	DCM		15			Matrix matched - Multiple level	ECD		GC-MS	Rec. from same batch		mini Luke
112	0.005	D	0.848	87	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.551	75		Acetone			20	No	SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	in house
115	0.01	D	0.65	100		AcN			10	No	DSPE	Standard addition	MSD			Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.468	81		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Analysis of pesticide residues in fruit and vegetables with EtOAc extraction
117	0.005	D	0.747	81		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Trifluralin D14	CHEM 014
118	0.01	D	0.46	102		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)				QuEChERS
119	0.01	D	0.711	86.2		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
120	0.004	D	0.750	101		EtOAc			13	No	GPC	Matrix matched - Multiple level	TOF			Rec. from same batch	TPP	
121	0.01	D	0.812	94.8		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		S-19
122	0.02	D	0.95	85		EtOAc			10			Matrix matched - Single level	MSD		GC-MS	Via Standard addition	TPP	AcOEt
123		D	0.818	100		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	PCB153, Anthracene, Ditalimphos	EN 15662:2008
124	0.01	D	0.825	90		Acetone			50	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
125	0.002	D	0.831	99		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	

APPENDIX 9. Methods used by participants for determining pesticides.

CHLORPYRIFOS

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	References
126	0.01	D	0.541	98		AcN			15	Yes	DSPE	Matrix matched - Multiple level	GC-IT-MS/MS		GC-IT-MS/MS	Rec. from validation data		QuEChERS
127		D	0.84	98.9		AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	0.753	93.7		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		GC-MSMS
129	0.01	D	0.560			AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS			QuEChERS
130	0.01	D	1.0	120		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.575	93.5		AcN			10	Yes	DSPE	Matrix matched - Multiple level	PFPD		GC-MS	Rec. from same batch	TDCPP	EN15662:2008
132	0.67	D	0.67	100		DCM			10		GPC	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	Biphenyl	Rapporti Istisan
133	1.067	D	1.068		Yes	AcN			10,03	No	DSPE	Matrix matched - Multiple level		MS		Via Standard addition		Metodo QuEChERS
134		NA																
135		D	1.10	92		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		
136	0.01	D	0.801	93		Acetone			20		Liquid/liquid partitioning	Matrix matched - Multiple level	ECD		NPD, two columns	Rec. from same batch		
137	0.01	D	0.885	Standard addition	Yes	EtOAc			15	No	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.522	101.5		AcN			10	No		Pure solvent - Multiple level	PFPD		GC-MS	Rec. from validation data		MSZ EN 15662:2009
139	0.01	D	0.6614	80		Acetone	DCM	Petr. ether	7.5	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
140	0.05	D	0.644	85		EtOAc			50	No	GPC	Matrix matched - Multiple level	TOF			Rec. from same batch	TPP	EN 12393-2
141	0.01	D	0.662	86.8		Acetone	DCM	Petr. ether 40-60	25	No		Matrix matched - Single level	NPD		Two columns	Rec. from same batch		IT.MP.DSLA.01.02
142		D	0.422	71		AcN			15	No		Pure solvent - Multiple level	NPD		Two columns	Rec. from same batch		QuEChERS
143	0.01	D	0.675	75.7		Acetone	DCM	Petr. ether	15	No		Matrix matched - Single level	MSD		GC-MS	Rec. from same batch		Mini-Luke
144	0.050	D	0.956	120	Yes	Acetone	DCM	EtOAc	100	No	GPC	Matrix matched - Multiple level	NPD		GC-MS	Rec. from validation data		PN-EN 12393-1,2,3:2009
145	0.01	D	0.824	94		Acetone	DCM	Light Pet (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level	ITD		GC-MS/MS (QQQ)	Rec. from same batch	Ethoprofos (injection control)	In House
146	0.05	D	0.715	79.4		AcN			9.952	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	TPP	QuEChERS
147	0.01	D	0.40	89		EtOAc			10	No		Matrix matched - Multiple level	GC-ITD-MSMS		GC-ITD-MSMS	Rec. from same batch		
148		D	0.715	86		Acetone	DCM	BENZINE	13	No								EXTRACTION+PARTITION
149	0.01	D	0.66	93.8		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.783	91		AcN			15		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		
151	0.05	D	0.570	95		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from validation data	TDCPP	UNI EN 15662
152		D	0.786	75	Yes	AcN			10.01	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Via Standard addition	PCB 31	BS EN 15662
153	0.05	D	0.558	100		AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			
154	0.01	D	0.94	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

DELTAMETHRIN																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001		NA																
002	0,01	D	0.142	97		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.101	101		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15662
004	0.02	D	0.125	105		EtOAc			18.5	No	GPC	Matrix matched - Multiple level	ECD		GC-MS	Rec. from same batch		EN 12393
005	0.01	D	0.122	89.2		EtOAc			10	Yes		Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		2
006		NA																
007	0.01	ND	ND			Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	IDT	MS/MS (QQQ)		Rec. from same batch		
008	0.01	D	0.135	95		EtOAc			10	Yes	Filter	Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.152	84		Cyclohexane	EtOAc		75	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		DFG S19
010	0.01	D	0.169	88		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		QuEChERS
011	0.02	D	0.188	66.3	Yes	MeOH	DCM	Isooctan/ Cyclohexane	50	No	GPC	Matrix matched - Multiple level	MSD			Rec. from same batch	Mirex	DGF S 19
012	0.01	D	0.106			Acetone	Cyclohexane/ EtOAc		20	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	Nitrofen TPP	
013	0.010	D	0.158	89.3		AcN			10	No		Matrix matched - Single level	ECD/NPD		GC-MS	Rec. from same batch		EN 15662
014	0.01	D	0.161		Yes	AcN			1			Standard addition	MSD		GC-MS	Via Standard addition		Internal Method based on Fillion et alt. JAOAC 78-5-1995
015	0.01	D	0.16			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		Desmetryn	QuEChERS
016	0.01	D	0.117	101		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	0.145	109		AcN			10		DSPE	Standard addition	MSD		GC-TOF	Rec. from same batch	Mirex	QuEChERS
018	0.01	D	0.164	115		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Cypermethrin D6	QuEChERS
019	0.02	D	0.0950	88.1		EtOAc			50	Yes		Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch		EtOAc extraction
020		D	0.13	74	Yes	MeOH			10		DSPE	Matrix matched - Multiple level	TOF		GC-TOF	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.005	D	0.218	93		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Caffeine	QuEChERS European Method EN 15662
022		NA																
023	0.01	D	0.163	113		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.140	90		Acetone	DCM	PE	15	No		Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		Luke
025	0.02	D	0.07			EtOAc			10			Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)		TPP	
026	0.01	D	0.130	72.9		Acetone	DCM	light Pet.	20	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Mini-Luke extraction
027	0.01	D	0.397	96		Acetone	DCM	Petr. ether	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		Mini-Luke
028		D	0.147		Yes	AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS			QuEChERS
029	0.01	D	0.14	100		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.02	D	0.220	120		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TRIS	EN 15662:2008
031	0.05	D	0.14	93		AcN			10	No	DSPE	Matrix matched - Multiple level			GC-MS	Rec. from same batch		QuEChERS
032	0.01	D	0.134	82		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
033	0.01	D	0.118	112.0		EtOAc			25	Yes		Matrix matched - Single level	MSD			Rec. from same batch		3
034	0.01	D	0.645	100		AcN			10	No	DSPE	Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch		EN 15662
035	0.05	D	0.109	80		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TBP, TPP	QuEChERS
036	0.01	D	0.141	101		AcN	AcN		5	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	PCB 209	QuEChERS
037	0.01	D	0.071	79		AcN			10	Yes	DSPE	Pure solvent - Multiple level	IDT			Rec. from same batch	Bromophos Methyl	NF EN 15662
038	0.01	D	0.119	91		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039		D	0.28	103.7		AcN			10	No	DSPE	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	TPP	QuEChERS
040	0.01	D	0.101	71		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
041	0.04	D	0.084	85		EtOAc			50	No	SPE	Matrix matched - Single level	ECD		Two columns	Rec. from same batch		MINISTRY OF WELFARE,NETHERLANDS,1996
042	0.01	D	0.096	81		AcN			10		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		prEN 15662:2008

APPENDIX 9. Methods used by participants for determining pesticides.

DELTAMETHRIN

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
043	0.01	D	0.12	91.5		EtOAc			15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	MA01
044		NA																
045	0.05	D	0.112	91		AcN			10		DSPE	Pure solvent - Multiple level	ECD+NPD		GC-MS/MS Iontrap	Rec. from validation data		PN EN 15662
046	0.02	D	0.125	98.3	Yes	Acetone	EtOAc	Hexane	2			Matrix matched - Single level	ECD		Two columns			Internal Method
047	0.02	D	0.15	68		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	IDT		GC-MS/MS (ITD)	Rec. from same batch	TPP	miniLuke
048	0.010	D	0.112	90.0		AcN			15	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Rec. from same batch	TDCPP	EN15662
049	0.01	D	0.151	86		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch		PRES/069
050	0.01	D	0.110	85		AcN			10	No		Matrix matched - Multiple level	ECD		GC-MS/MS (QQQ)	Rec. from same batch		
051	<0.01	D	0.09	77	Yes	AcN	AcN	AcN	10	Yes	DSPE	Matrix matched - Single level	NPD	Diode Array Detector	GC-MS	Rec. from same batch	TPP	uni en 15662
052	0.01	D	0.146	88		Acetone	DCM		100	No	florisil	Matrix matched - Single level	ECD		Two columns	Rec. from validation data		Luke
053	0.05	ND	ND			DCM			15	No	GPC	Pure solvent - Multiple level	ECD		GC-MS		Ethion	istisan 97/23
054	0.01	D	0.153	101		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	Triphenylmethane	QuEChERS, citrate buffered
055	0.01	D	0.13	90		AcN			10	Yes	DSPE	Standard addition	MSD		GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
056	0.01	ND	ND			EtOAc			16	Yes	DSPE	Pure solvent - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)		Fenclorfos 0.46 mg/l	Rapporti Istisan 1997/23 1997/24
057	0.004	D	0.155	88.1		Acetone	EtOAc	Cyclohexane	25	Yes	GPC	Matrix matched - Multiple level	ECD		GC-TOF	Rec. from same batch		modulare Multimethode according Ã§ 64 LFGB, L 00.00-34
058		D	0.0995	96		DCM			10	No	DSPE	Pure solvent - Single level	ECD		GC-MS	Rec. from validation data	Endosulfan Lactone	
059	0.01	D	0.124	87.3		EtOAc			20	Yes		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		Internal Method
060		NA																
061	0.01	D	0.16	106		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	
062	0.05	D	0.172	60		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from ring test		EN 15662:2008
063	0.01	ND	ND			AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	Bromophos Methyl	QuEChERS
064	0.01	D	0.17	109		EtOAc			10	Yes	SPE	Pure solvent - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch	Anthracene	Internal Method
065	0.01	D	0.13	82		Acetone	DCM	Petr. ether 40- 60	15	No		Matrix matched - Single level	ECD		Two columns	Rec. from same batch		GC-ECD
066	0.02	ND	ND			AcN			10		DSPE	Pure solvent - Multiple level	GC/MS trap			Rec. from same batch	TPP	NF EN 15662
067	0.01	D	0.109			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068	0.1	ND	ND			QuEChERS			10.19			Pure solvent - Multiple level	ECD					CG
069	0.01	D	0.120	87		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070		D	0.0937	95		AcN			10	No	DSPE	Matrix matched - Multiple level	ECD			Rec. from same batch		QuEChERS
071		ND	ND			Hexane			25	No	Liquid/liquid partitioning	Matrix matched - Multiple level	ITD		GC-MS	Rec. from same batch		
072	0.01	D	0.106	117														
073	0.01	D	0.095	80		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	0.139	106		EtOAc			10	No		Standard addition	MS/MS (QQQ)			Rec. from same batch	PCB-28	In House Method
075		NA																
076	0.01	D	0.094	69		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077	0.02	D	0.166	111.4		AcN			10	No	DSPE	Matrix matched - Multiple level	IDT			Via Standard addition	TriChloroNate	NF EN 15662
078	0.01	D	0.134	97		AcN			15	No	DSPE	Matrix matched - Multiple level	ECD		GC-MS	Rec. from same batch		QuEChERS
079	0.01	D	0.156	112		AcN			10	No	DSPE	Matrix matched - Single level	MS/MS (IT)			Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080	0.01	D	0.13	90		Acetone	DCM		100	No		Matrix matched - Multiple level	ECD		GC-MS	Rec. from validation data		Kadenczki i wspÅ,. (1992)JOAOAC Int. 75: 53-63
081	0.01	D	0.084	88		Acetone	DCM	Petr. ether	7.50	No		Matrix matched - Single level	ECD		Two columns	Rec. from same batch		MULTIRESIDUE METHOD, ANALYTICAL METHOD FOR PESTICIDE RESIDUES IN FOODSTUFFS 6TH EDITION
082	0.05	D	0.102	70		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	HCB	
083	0.01	D	0.14	95		Acetone	DCM		5	No	SPE	Pure solvent - Single level	ECD			Rec. from same batch		

APPENDIX 9. Methods used by participants for determining pesticides.

DELTAMETHRIN																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
084	0.05	D	0.134	96		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch	NO	Analytical methods for pesticide residues in foodstuffs. Sixth edithion. June 1996. Ministry of Public Health, Welfare and Sport. The Netherlands.
085	0.005	D	0.152	99		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
086		NA																
087	0.01	D	0.149	104.0		Toluene	Isopropanol		25	No	Liquid/liquid partitioning	Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch		Multi-residue Method 1, Electron-captive compounds, Analytical methods of residues of pesticides, 5th Edition, 1988. Dutch Ministry of Welfare, Healt
088	0,05	D	0.139	90,3		Acetone	DCM	Pet.ether	15	No		Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch		GC ECD
089	0.02	D	0.14	76,0		n-Hexane	Diethyl ether		5	No	MSPD, silica gel/alumina	Pure solvent - Single level	ECD		GC/ECD	Rec. from validation data		
090	0.01	D	0.12	80%		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
091	0.01	D	0.118	101		AcN			10	Yes	DSPE	Pure solvent - Multiple level	ECD		GC-MS	Rec. from same batch		
092	0.02	D	0.179	93		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093	0.05	D	0.160	111		EtOAc	Cyclohexane		50	No	GPC	Pure solvent - Multiple level	ECD		Two columns	Rec. from same batch		EN12393
094	0.01	D	0.119	87		EtOAc			30		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPE	A.H. Roos et al, Anal Chim Acta, vol 196, 95-102 (1987)
095		NA																
096	0.01	D	0.144	92		EtOAc			10	No	SPE	Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	TBP	In house
097	0.01	D	0.130	120		AcN			10	No	DSPE	Matrix matched - Single level	MS/MS (QQQ)		GC-MS	Rec. from same batch		QuEChERS
098	0.01	D	0.16	88		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.142	100		AcN			10	No	DSPE	Standard addition	MS/MS (QQQ)			Via Standard addition	TPP	QuEChERS
100	0.02	D	0.11	87		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MSD		GC-MS	Via Standard addition	Propazine	Internal Method GC/MS
101	0.01	D	0.092	110		AcN			10	Yes	PSA	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS
102	0.05	ND	ND			AcN			12	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS			CEN 15662
103	No Results Reported																	
104	0.02	D	0.152	100	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			EN 15662
105	0.04	D	0.123	95		Acetone	DCM		10			Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		luke
106	0.04	D	0.72	97.0		Isopropyl alcohol	Toluene		25	No	sodium sulfate anydrous	Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch		In house based in:Ministry of Welfare, health and cultural affairs, Netherlands. analytical methods for residues of pesticides in foodstuffs
107	0.01	D	0.142	97	Yes													
108	0.01	D	0.120	87		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
109	0.01	D	0.16	113		AcN			10	No	SPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	SOP
110	0.05	D	0.099	79,1		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	Mini Luke
111	0.10	D	0.10		Yes	Acetone	DCM		15.0			Matrix matched - Multiple level	ECD		GC-MS	Rec. from same batch		mini Luke
112	0.01	D	0.137	94	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.161	70		Acetone			20	No	SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	in house
115	0.01	D	0.17	100		AcN			10	No	DSPE	Standard addition	MSD			Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.097	108		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Analysis of pesticide residues in fruit and vegetables with EtOAc extraction
117	0.005	D	0.079	70		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	NCI GCMS		GC-MS/MS (QQQ)	Rec. from same batch	Trifluralin D14	CHEM 014
118	0.01	D	0.12	86		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)				QuEChERS
119	0.01	D	0.137	95.7		AcN			10	Yes	DSPE	Matrix matched - Multiple level	ECD		ECD diff. column	Rec. from same batch	TPP	QuEChERS
120	0.01	D	0.162	87		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

DELTAMETHRIN																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
121	0.02	D	0.123	83.0		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		S-19
122	0.03	D	0.10	125		EtOAc			10			Matrix matched - Single level	MSD		GC-MS	Via Standard addition	TPP	AcOEt
123		D	0.110	70		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	PCB153, Anthracene, Difalimphos	EN 15662:2008
124	0.01	D	0.184	0	Yes	Acetone			50	No	Liquid/liquid partitioning		MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		
125	0.04	D	0.161	91		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	TOF		GC-TOF	Rec. from same batch	TPP	
126	0.01	D	0.062	73		AcN			15	Yes	DSPE	Matrix matched - Multiple level	GC-IT-MS/MS		GC-IT-MS/MS	Rec. from validation data		QuEChERS
127		D	0.13	153		AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	0.122	94.7		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		GC-MSMS
129	0.01	D	0.087			AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS			QuEChERS
130	0.01	D	0.21	140		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.138	101.9		AcN			10	Yes	DSPE	Pure solvent - Multiple level	ECD		GC-MS	Rec. from same batch	TDCPP	EN15662:2008
132		D	0.23	100		DCM			10		GPC	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	Biphenyl	Rapporti Istisan
133		ND	ND															
134		NA																
135		D	0.17	85		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		
136	0.01	D	0.115	118		Acetone			20		Liquid/liquid partitioning	Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch		
137	0.01	D	0.124	Standard addition	Yes	EtOAc			15	No	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.133	100.6		AcN			10.0	No	SPE	Pure solvent - Multiple level	ECD		ECD	Rec. from same batch		MSZ EN 15662:2009
139	0.01	D	0.1059	93														
140	0.05	D	0.0957	91		EtOAc			50	No	GPC	Matrix matched - Multiple level	TOF			Rec. from same batch	TPP	EN 12393-2
141	0.01	D	0.114	105.5		Acetone	DCM	Petr. ether 40-60	25	No		Pure solvent - Multiple level	ECD		Two columns	Rec. from same batch		IT.MP.DSLA.01.02
142		D	0.140	105		AcN			15	No	SPE	Pure solvent - Multiple level	ECD		Two columns	Rec. from same batch		QuEChERS
143	0.05	D	0.096	73.9		Acetone	DCM	Petr. ether	15	No		Matrix matched - Single level	MSD		GC-MS	Rec. from same batch		Mini-Luke
144	0.050	D	0.123	100		Acetone	DCM	EtOAc	100	No	GPC	Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch		PN-EN 12393-1,2,3:2009
145	0.01	D	0.142	115		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level	ITD		GC-MS/MS (QQQ)	Rec. from same batch	Ethoprofos (injection control)	In House
146	0.05	D	0.067	43.2		AcN			9.952	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	TPP	QuEChERS
147	0.01	D	0.064	100														
148		D	0.139	82		Acetone	DCM	BENZINE	13	No								EXTRACTION+PARTITION
149	0.01	D	0.12	111		Acetone	EtOAc		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.138	109		AcN			15		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		
151	0.02	D	0.124	86		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from validation data	TDCPP	UNI EN 15662
152		D	0.086	109	Yes	AcN			10.01	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Via Standard addition	PCB 31	BS EN 15662
153		NA																
154	0.01	D	0.19	112		AcN			10	Yes	DSPE	Matrix matched - Multiple level	ECD		GC-MS	Rec. from validation data	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

DIAZINON

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction In Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001	0.1	D	0.276	98		Acetone	DCM		15	No		Standard addition	IDT			Rec. from same batch		Analytical Methods for Pesticide Residues in Foodstuffs. Ministry of Welfare, Health & Cultural Affairs, Netherlands Multiresidue Method 1,3.1.2, 6I
002	0,01	D	0.157	99		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.137	101		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15662
004	0.01	D	0.175	92		AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS	Rec. from same batch	TPP	EN 15662
005	0.01	D	0.187	100.6		EtOAc			10	Yes		Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		1
006		NA																
007	0.01	ND	ND			Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	IDT	MS/MS (QQQ)		Rec. from same batch		
008	0.01	D	0.165	79		EtOAc			10	Yes	Filter	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.208	90		Cyclohexane	EtOAc		75	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		DFG S19
010	0.01	D	0.226	94		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		QuEChERS
011	0.01	D	0.217	92.9		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.160			Acetone	Cyclohexane EtOAc		20	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	Nitrofen, TPP	
013	0.010	D	0.180	88.0		AcN			10	No		Matrix matched - Single level	ECD/NPD		GC-MS	Rec. from same batch		EN 15662
014	0.01	D	0.246		Yes	AcN			1			Standard addition	MSD		GC-MS	Via Standard addition		Internal Method based on Fillion et alt. JAOAC 78-5-1995
015	0.01	D	0.20			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		Desmetryn	QuEChERS
016	0.01	D	0.190	90		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	0.220	102		AcN			10		DSPE	Standard addition	MSD		GC-TOF	Rec. from same batch	PCB 138	QuEChERS
018	0.01	D	0.239	72		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos-Me D6	QuEChERS
019	0.01	D	0.158	93.1		EtOAc			50	Yes	GPC	Matrix matched - Multiple level	FPD	MS/MS (QQQ)	GC-MS	Rec. from same batch		EtOAc extraction
020		D	0.216	76	Yes	MeOH			10		DSPE	Matrix matched - Multiple level	TOF	MS/MS (QQQ)	GC-TOF	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.005	D	0.280	119		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Caffeine	QuEChERS European Method EN 15662
022	0.04	D	0.20	100		DCM			10	No	GPC	Standard addition	NPD		GC-MS	Via Standard addition		internal
023	0.01	D	0.304	128		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.191	85		Acetone	DCM	PE	15	No		Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		Luke
025	0.01	D	0.09			EtOAc			10			Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)		TPP	
026	0.01	D	0.228	122.5		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	EN 15662
027	0.02	D	0.236	85		Acetone	DCM	Petr. ether	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		Mini-Luke
028	0.01	D	0.217			AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS			QuEChERS
029	0.01	D	0.22	100		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.01	D	0.249	112		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TRIS	EN 15662:2008
031	0.01	D	0.22	92		AcN			10	No	DSPE	Matrix matched - Multiple level			GC-MS	Rec. from same batch		QuEChERS
032	0.01	D	0.209	103		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
033	0.01	D	0.184	98.6		EtOAc			25	Yes		Matrix matched - Single level	FPD		GC-MS	Rec. from same batch		2
034	0.01	D	0.149	85		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
035	0.02	D	0.195	99		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TBP, TPP	QuEChERS
036	0.01	D	0.216	100	Yes	AcN	AcN		5	Yes	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	TRIS	QuEChERS
037	0.01	D	0.18	94		AcN			10	Yes	DSPE	Pure solvent - Multiple level	IDT			Rec. from same batch	Bromophos Methyl	NF EN 15662
038	0.01	D	0.251	86		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039		D	0.22	83.4		AcN			10	No	DSPE	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	TPP	QuEChERS
040	0.01	D	0.188	78		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
041	0.04	D	0.148	82.57		EtOAc			50	No		Matrix matched - Single level	NPD		Two columns	Rec. from same batch		MINISTRY OF WELFARE,NETHERLANDS,1996
042	0.01	D	0.141	100		AcN			10		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		prEN 15662:2008
043	0.01	D	0.16	98.3		EtOAc			15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	MA01
044	0.01	D	0.088			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		TDCPP	EN 15662

APPENDIX 9. Methods used by participants for determining pesticides.

DIAZINON																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
045	0.01	D	0.208	82		AcN			10		DSPE	Pure solvent - Multiple level	ECD+NPD		GC-MS/MS Iontrap	Rec. from validation data		PN EN 15662
046	0.01	D	0.188	99.5	Yes	Acetone	EtOAc		2			Matrix matched - Single level	NPD		Two columns			Internal Method
047	0.01	D	0.25	86		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	IDT		GC-MS/MS (ITD)	Rec. from same batch	TPP	miniLuke
048	0.010	D	0.164	94.0		AcN			15	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Rec. from same batch	TDCPP	EN15662
049	0.01	D	0.191	82		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch		PRES/069
050	0.01	D	0.140	95		AcN			10	No		Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		
051	<0.01	D	0.18	85	Yes	AcN	AcN	AcN	10	Yes	DSPE	Matrix matched - Single level	NPD	Diode Array Detector	GC-MS	Rec. from same batch	TPP	uni en 15662
052	0.01	D	0.178	95		Acetone	DCM		100	No	florisil	Matrix matched - Single level	ECD		Two columns	Rec. from validation data		Luke
053	0.05	D	0.16	76		DCM			15	No	GPC	Pure solvent - Multiple level	NPD		GC-MS	Via Standard addition	Ethion	Istisan 97/23
054	0.005	D	0.237	95		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	Triphenylmethane	QuEChERS, citrate buffered
055	0.01	D	0.19	113		AcN			10	Yes	DSPE	Standard addition	MSD		GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
056	0.01	D	0.17	-		EtOAc	EtOAc	EtOAc	16	Yes	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)		Fenclorfos	rapporti istisan 1997/23-1997/24
057	0.002	D	0.227	97.7		Acetone	EtOAc	Cyclohexane	25	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-TOF	Rec. from same batch		modulare Multimethode according Â§64 LFGB, L 00.00-34
058		D	0.116	75		DCM			10	No	DSPE	Pure solvent - Single level	NPD		GC-MS	Rec. from validation data	Ethion	
059	0.01	D	0.193	82.3		EtOAc			20	Yes		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		Internal Method
060	0.02	D	0.198	83		EtOAc			50			Matrix matched - Multiple level			GC-MS	Rec. from validation data		1) A. Anderson, H. Plashed, Fresenius J Anal Chem., 339 (1991) 365 2) A. Andersson, H. PÃ¥lsheden, Pesticide Analytical Methods in Sweden, Part 1,Ra
061	0.01	D	0.26	116		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	
062	0.01	D	0.231	93		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from ring test		EN 15662:2008
063	0.01	D	0.051	93		AcN			10	Yes	DSPE		MS/MS (QQQ)		GC-MS	Rec. from same batch	Bromophos Methyl	QuEChERS
064	0.01	D	0.26	97		EtOAc			10	Yes	SPE	Pure solvent - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch	Anthracene	Internal Method
065		NA																
066	0.01	D	0.211	85		AcN			10		DSPE	Pure solvent - Multiple level	MS trap		GC-MS	Rec. from same batch	TPP	NF EN 15662
067	0.01	D	0.202			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068	0.1	D	0.15	-		QuEChERS			10.19									CG-ECD-NPD
069	0.01	D	0.285	76.5		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070	0.01	D	0.197	106		AcN			10	No	DSPE	Matrix matched - Multiple level	FPD			Rec. from same batch	TPP	QuEChERS
071		D	0.15	100		n-Hexane			25	No	Liquid/liquid partitioning	Matrix matched - Multiple level	ITD		GC-MS	Rec. from same batch		
072	0.01	D	0.168	103		EtOAc			20		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Luke
073	0.01	D	0.154	108		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	0.226	109		EtOAc			10	No		Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	PCB-28	In House Method
075	0.01	D	0.121	75		AcN	AcN	AcN	10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		modified EN 15662
076	0.01	D	0.21	95		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
077	0.01	D	0.215	95.6		AcN			10	No	DSPE	Matrix matched - Multiple level	IDT			Via Standard addition	TriChloroNate	NF EN 15662
078	0.01	D	0.119	102		AcN			15	No	DSPE	Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		QuEChERS
079	0.01	D	0.261	113		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080	0.01	D	0.14	83		Acetone	DCM		100	No		Matrix matched - Multiple level	NPD		GC-MS	Rec. from validation data		Kadenczki i wspÅ,. (1992)JOAOAC Int. 75: 53-63
081	0.01	D	0.190	88		Acetone	DCM	Petr. ether	7.50	No		Matrix matched - Single level	NPD		Two columns	Rec. from same batch		MULTIRESIDUE METHOD, ANALYTICAL METHOD FOR PESTICIDE RESIDUES IN FOODSTUFFS 6TH EDITION
082	0.01	D	0.169	77		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	HCB	
083	0.01	D	0.19	97		Acetone	DCM		5	No	SPE	Pure solvent - Single level	ECD			Rec. from same batch		
084	0.01	D	0.127	63		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch	NO	Analytical methods for pesticide residues in foodstuffs. Sixth edithion. June 1996. Ministry of Public Health, Welfare and Sport. The Netherlands.
085	0.005	D	0.218	99		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
086	0.01	D	0.185	89.1														

APPENDIX 9. Methods used by participants for determining pesticides.

DIAZINON																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
087	0.02	D	0.224	105.0		EtOAc			25	No	Liquid/liquid partitioning	Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch		Multi-residue Method 5, Organophosphorus compounds, Analytical methods of residues of pesticides, 5th Edition, 1988. Dutch Ministry of Welfare, Healt
088	0.05	D	0.207	94,3		Acetone	DCM	Pet.ether	15	No		Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch		GC ECD
089	0.01	D	0.21	91.6		DCM	Acetone		5	No	MSPD, silica gel/alumina	Pure solvent - Single level	NPD		GC/NPD, GC/ECD	Rec. from validation data		
090	0.01	D	0.16	76%		DCM			10	No	Extrelut	Pure solvent - Single level	ECD		GC-MS	Rec. from validation data	Bromophos Methyl	Rapp. ISTISAN 1997/23-met. B4
091	0.01	D	0.127	78		AcN			10	Yes	DSPE	Pure solvent - Multiple level	PFPD		GC-MS	Rec. from same batch		
092	0.01	D	0.247	74		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093	0.02	D	0.128	82		EtOAc	Cyclohexane		50	No	GPC	Pure solvent - Multiple level	NPD		Two columns	Rec. from same batch		EN12393
094	0.01	D	0.200	90		EtOAc			30		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPE	A.H. Roos et al, Anal Chim Acta, vol 196, 95-102 (1987)
095		D																
096	0.01	D	0.183	79		EtOAc			10	No	SPE	Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	TBP	In house
097	0.01	D	0.230	98		AcN			10	No	DSPE	Matrix matched - Single level	MS/MS (QQQ)		GC-MS	Rec. from same batch		QuEChERS
098	0.01	D	0.213	93		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.101	100		AcN			10	No	DSPE	Standard addition	MS/MS (QQQ)			Via Standard addition	TPP	QuEChERS
100	0.01	D	0.18	94		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MSD		GC-MS	Via Standard addition	Propazine	Internal Method GC/MS
101	0.01	D	0.18	86		AcN			10	Yes	PSA	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS
102	0.05	D	0.19	98		AcN			12	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		EN 15662
103	No Results Reported																	
104	0.05	D	0.324	120	Yes	Acetone	DCM		50	No		Pure solvent - Multiple level	MSD		GC-MS	Rec. from same batch	Bromophos Methyl	EN 12393
105	0.01	D	0.225	95		Acetone	DCM		10	Yes		Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		luke
106	0.02	D	0.14	109		EtOAc			25	No								In house based in: Ministry of Walfare, health and cultural affairs, Netherlands Analytical Methods for residues of pesticides in foodstuffs
107	0.01	D	0.115	99	Yes													
108	0.01	D	0.190	77		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
109	0.01	D	0.24	88		AcN			10	No	SPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	SOP
110	0.01	D	0.163	88.0		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	Mini Luke
111		D	0.16		Yes	Acetone	DCM		15			Matrix matched - Multiple level	NPD		GC-MS	Rec. from validation data		mini Luke
112	0.01	D	0.197	88	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.150	93		Acetone			20	No	SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	in house
115	0.01	D	0.13	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.060	80		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Analysis of pesticide residues in fruit and vegetables with EtOAc extraction
117	0.005	D	0.158	72		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Trifluralin D14	CHEM 014
118	0.01	D	0.12	90		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)				QuEChERS
119	0.01	D	0.189	98.0		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
120	0.004	D	0.180	100		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
121	0.01	D	0.189	90.3		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		S-19
122	0.02	D	0.20	109		EtOAc			10			Matrix matched - Single level	MSD		GC-MS	Via Standard addition	TPP	AcOEt
123		D	0.206	103		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	PCB153, Anthracene, Ditalimphos	EN 15662:2008
124	0.01	D	0.203	97		Acetone			50	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
125	0.008	D	0.174	78		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	TOF		GC-TOF	Rec. from same batch	TPP	
126	0.01	D	0.110	129		AcN			15	Yes	DSPE	Matrix matched - Multiple level	GC-IT-MS/MS		GC-IT-MS/MS	Rec. from validation data		QuEChERS
127	0,15	D	0.15	77.20		AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	0.184	87.9		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		GC-MSMS

APPENDIX 9. Methods used by participants for determining pesticides.

DIAZINON																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
129	0,01	D	0.123			AcN			10	No	DSPE	Matrix matched - Single level	IDT		GC-MS			QuEChERS
130	0.01	D	0.21	90		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.152	88.0		AcN			10	Yes	DSPE	Matrix matched - Multiple level	PFPD		GC-MS	Rec. from same batch	TDCPP	EN15662:2008
132		NA																
133		D	0.253		Yes	AcN			10,03	No	DSPE	Matrix matched - Multiple level		MS		Via Standard addition		Metodo QuEChERS
134	0.01	D	0.23	96		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
135	0.19	D	0.19	80		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		
136	0.01	D	0.171	89		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
137	0.01	D	0.178	Standard addition	Yes	EtOAc			15	No	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.135	98.2		AcN			10	No		Pure solvent - Multiple level	PFPD		GC-MS	Rec. from validation data		MSZ EN 15662:2009
139	0.01	D	0.2415	101.4		Acetone	DCM	Petr. ether	7.5	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	-
140	0.05	D	0.125	80		EtOAc			50	No	GPC	Matrix matched - Multiple level	NPD		GC-TOF	Rec. from same batch	TPP	EN 12393-2
141	0.01	D	0.169	84.8		Acetone	DCM	Petr. ether 40-60	25	No		Matrix matched - Single level	NPD		Two columns	Rec. from same batch		IT.MP.DSLA.01.02
142		D	0.145	75		AcN			15	No		Pure solvent - Multiple level	NPD		Two columns	Rec. from same batch		QuEChERS
143	0.005	D	0.185	92.6		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
144	0.010	D	0.190	118	Yes	Acetone	DCM	EtOAc	100	No	GPC	Matrix matched - Multiple level	NPD		GC-MS	Rec. from validation data		PN-EN 12393-1,2,3:2009
145	0.01	D	0.211	98		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Quinalphos (injection control)	In House
146	0.01	D	0.144	76.8		AcN			9.952	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	TPP	QuEChERS
147	0.01	D	0.076	100														
148		D	0.189	90		Acetone	DCM	BENZINE	13	No								EXTRACTION+PARTITION
149	0.01	D	0.18	90.4		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.178	82		AcN			15		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		
151	0.01	D	0.182	98		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from validation data	TDCPP	UNI EN 15662
152		D	0.094	72	Yes	AcN			10.01	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Via Standard addition	PCB 31	BS EN 15662
153	0.01	D	0.140	100		AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			
154	0.01	D	0.24	102		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

EPN																			
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001		NA																
002	0.01	D	0.374	95		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
003		NA																
004	0.01	D	0.369	95		AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS	Rec. from same batch	TPP	EN 15662
005	0.01	D	0.331	93.4		EtOAc			10	Yes		Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		2
006		NA																
007		NA																
008	0.01	D	0.458	83		EtOAc			10	Yes	Filter	Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.461	101		MeOH	DCM		10	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Chem Elut
010	0.01	D	0.648	115		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		QuEChERS
011	0.01	D	0.423	100		MeOH	DCM	Isooctan/ Cyclohexane	50	No	GPC	Matrix matched - Multiple level	ECD		GC-MS	Rec. from same batch	Mirex	DGF S 19
012	0.01	D	0.439			Acetone	Cyclohexane EtOAc		20	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	Nitrofen, TPP	
013	0.010	D	0.421	85.2		AcN			10	No		Matrix matched - Single level	ECD/NPD		GC-MS	Rec. from same batch		EN 15662
014	0.01	D	0.517		Yes	AcN			1			Standard addition	MSD		GC-MS	Via Standard addition		Internal Method based on Fillion et alt. JAOAC 78-5-1995
015	0.01	D	0.55	-		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		Desmetryn	QuEChERS
016	0.01	D	0.477	101		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	0.570	107		AcN			10		DSPE	Standard addition	MSD		GC-TOF	Rec. from same batch	PCB 138	QuEChERS
018		NA																
019	0.01	D	0.329	90.6		EtOAc			50	Yes	GPC	Matrix matched - Multiple level	FPD	MS/MS (QQQ)	GC-MS	Rec. from same batch		EtOAc extraction
020		D	0.4	85	Yes	MeOH			10		DSPE	Matrix matched - Multiple level	TOF	MS/MS (QQQ)	GC-TOF	Rec. from validation data	TPP	BfR (Alder, Klein)
021		NA																
022		NA																
023	0.01	D	0.481	108		AcN	Toluol		10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.464	82		Acetone	DCM	PE	15	No		Matrix matched - Multiple level	MSD	MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		Luke
025		NA																
026	0.01	D	0.359	93.5		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	EN 15662
027		NA																
028	0.01	D	0.416			AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS			QuEChERS
029	0.01	D	0.39	96		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.01	D	0.498	101		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TRIS	EN 15662:2008
031		NA																
032	0.01	D	0.350	101		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
033	0.01	D	0.477	100.4		EtOAc			25	Yes		Matrix matched - Single level	FPD		GC-MS	Rec. from same batch		2
034		NA																
035	0.02	D	0.394	96		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TBP, TPP	QuEChERS
036	0.01	D	0.556	106.7		AcN	AcN		5	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TRIS	QuEChERS
037	0.01	D	0.33	99		AcN			10	Yes	DSPE	Pure solvent - Multiple level	IDT		GC-MS	Rec. from same batch	Bromophos Methyl	NF EN 15662
038	0.01	D	0.521	87		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039		NA																
040	0.01	D	0.464	104		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
041		NA																
042		NA																
043		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

EPN																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
044	0.01	D	0.163			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		TDCPP	EN 15662
045		NA																
046		NA																
047		NA																
048	0.010	D	0.284	96.0		AcN			15	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Rec. from same batch	TDCPP	EN15662
049	0.01	D	0.408	109		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch		PRES/069
050		NA																
051		NA																
052		NA																
053	0.05	D	0.31	91		DCM			15	No	GPC	Pure solvent - Multiple level	NPD		GC-MS	Via Standard addition	Ethion	Istisan 97/23
054	0.005	D	0.501	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch	TPP	QuEChERS, citrate buffered
055		NA																
056	0.01	ND	ND			EtOAc			16	Yes	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)		Fenclorfos 0.46 mg/l	rapporti Istisan 1997/23 1997/24
057	0.005	D	0.444	81.8		Acetone	EtOAc	Cyclohexane	25	Yes	GPC	Matrix matched - Multiple level	ECD		GC-TOF	Rec. from same batch		modulare Multimethode according Â§64 LFGB, L 00.00-34
058	0.01	D	0.216	83		DCM			10	No	DSPE	Pure solvent - Single level	ECD		GC-MS	Rec. from validation data	Endosulfan Lactone	
059		NA																
060		NA																
061	0.01	D	0.55	112		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	
062		NA																
063	0.01	ND	ND			AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	Bromophos Methyl	QuEChERS
064	0.01	D	0.39	49		EtOAc			10	Yes	SPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS	Rec. from same batch	Anthracene	Internal Method
065		NA																
066	0.01	D	0.604	79		AcN			10		DSPE	Pure solvent - Multiple level	MS trap		GC-MS	Rec. from same batch	TPP	NF EN 15662
067	0.01	D	0.44			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068		NA																
069		NA																
070	0.01	D	0.456	118		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	TPP	QuEChERS
071	0.51	D	0.51	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072		NA																
073	0.01	D	0.322	104		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	ND	ND			AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	In House Method
075		NA																
076	0.01	D	0.39	93		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077		NA																
078	0.01	D	0.281	89		AcN			15	No	DSPE	Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		QuEChERS
079		NA																
080		NA																
081		NA																
082	0.02	D	0.382	98		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	HCB	
083		NA																
084	0.02	D	0.529	120		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch	NO	Analytical methods for pesticide residues in foodstuffs. Sixth edithion. June 1996. Ministry of Public Health, Welfare and Sport. The Netherlands.
085	0.005	D	0.312	100		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

EPN																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
086		NA																
087	0.01	D	0.549	98.0		EtOAc			25	No	Liquid/liquid partitioning	Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch		Multi-residue Method 5, Organophosphorus compounds, Analytical methods of residues of pesticides, 5th Edition, 1988. Dutch Ministry of Welfare, Healt
088		NA																
089		NA																
090	0.01	D	0.28	90		DCM			10	No	Extrelut	Pure solvent - Single level	MSD		GC-MS	Rec. from same batch	TPP	Rapp. ISTISAN 1997/23-met. B4
091	0.01	D	0.202	56		AcN			10	Yes	DSPE	Pure solvent - Multiple level	PFPD			Rec. from same batch		
092	0.02	D	0.393	97		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093		NA																
094	0.01	D	0.304	92		EtOAc			30		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPE	A.H. Roos et al, Anal Chim Acta, vol 196, 95-102 (1987)
095		NA																
096	0.01	D	0.475	84		EtOAc			10	No	SPE	Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	TBP	In house
097	0.01	D	0.300	96		AcN			10	No	DSPE	Matrix matched - Single level	MS/MS (QQQ)		GC-MS	Rec. from same batch		QuEChERS
098	0.01	D	0.493	91		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.403	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)		Via Standard addition		QuEChERS
100		NA																
101		NA																
102		NA																
103	No Results Reported																	
104		NA																
105	0.01	D	0.455	90		Acetone	DCM		10	Yes		Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		luke
106		NA																
107	0.01	D	0.445	99	Yes													
108	0.01	D	1.16	83		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-2,4-D	QuEChERS
109	0.01	D	0.44	102		AcN			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	SOP
110	0.01	D	0.436	104.3		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	Mini Luke
111		NA																
112	0.01	D	0.912	99		AcN			15	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.389	75		Acetone			20	No	SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	in house
115	0.01	D	0.8	100		AcN			10	No	DSPE	Standard addition	MSD			Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.129	104		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Analysis of pesticide residues in fruit and vegetables with EtOAc extraction
117	0.005	D	0.314	107		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Trifluralin D14	CHEM 014
118	0.01	D	0.29	85		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)				QuEChERS
119	0.01	D	0.342	88.8		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		PFPD	Rec. from same batch	TPP	QuEChERS
120	0.01	D	0.414	96		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
121	0.01	D	0.424	95.7		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		S-19
122		NA																
123		NA																
124	0.01	D	0.445	99		Acetone			50	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
125	0.002	D	0.438	119		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
126		NA																
127		NA																
128	0.01	D	0.410	82.2		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		GC-MSMS
129		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

EPN																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
130		NA																
131	0.01	D	0.318	84.4		AcN			10	Yes	DSPE	Matrix matched - Multiple level	PFPD		GC-MS	Rec. from same batch	TDCPP	EN15662:2008
132		NA																
133		NA																
134		NA																
135	0.60	D	0.60	72		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		
136		NA																
137	0.01	D	0.417	Standard addition	Yes	EtOAc			15	No	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.330	101.2		AcN			10	No		Pure solvent - Multiple level	PFPD		GC-MS	Rec. from validation data		MSZ EN 15662:2009
139	0.01	D	0.469	91.84		Acetone	Acetone	Petr. ether	7.5	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	-
140		NA																
141	0.01	D	0.403	109.5		AcN			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		DAR-QuEChERS
142		D	0.300	90		AcN			15	No		Pure solvent - Multiple level	NPD		Two columns	Rec. from same batch		QuEChERS
143		NA																
144		NA																
145	0.01	D	0.500	92		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level	ITD		GC-MS/MS (QQQ)	Rec. from same batch	Ethoprofos (injection control)	In House
146		NA																
147		NA																
148		D	0.543	77		AcN			10	Yes								QuEChERS
149		NA																
150	0.01	D	0.455	87		AcN			15		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
151		NA																
152		NA																
153		NA																
154	0.01	D	0.34	91		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

IMAZALIL																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001		NA																
002	0.01	D	1.31	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.981	100		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15662
004	0.01	D	1.15	91		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
005	0.01	D	1.19	99.3		EtOAc			10	Yes		Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		1
006	0.01	D	1.293	120		AcN			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
007	1.12	D	1.12	70 - 120		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
008	0.01	D	1.21	62		EtOAc			10	Yes	Filter	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	1.600	98		MeOH	DCM		10	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Chem Elut
010	0.01	D	1.610	82		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		QuEChERS
011	0.01	D	1.30	93.5		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	1.243			Acetone	Cyclohexane/ EtOAc		20	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	Nitrofen, TPP	
013	0.010	D	1.46	90.0		AcN			10	No		Matrix matched - Single level	ECD/NPD		GC-MS	Rec. from same batch		EN 15662
014	0.01	D	2.18		Yes	AcN			1			Standard addition	MSD		GC-MS	Via Standard addition		Internal Method based on Fillion et alt. JAOAC 78-5-1995
015	0.01	D	1.62			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Desmetryn	QuEChERS
016	0.01	D	1.39	93		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	1.56	106		AcN			10			Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Pirimicarb D6	QuEChERS
018	0.01	D	1.08	97		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbofurane D3	QuEChERS
019	0.01	D	1.04	87.7		EtOAc			50	Yes	GPC	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch		EtOAc extraction
020		D	1.3	84	Yes	MeOH			10		DSPE	Matrix matched - Multiple level	TOF	MS/MS (QQQ)	GC-TOF	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.01	D	1.34	121		MeOH	Water		10	No	Filter	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	FP086
022	0.1	D	0.90	100	Yes	DCM			10	No	GPC	Standard addition	NPD		GC-MS	Via Standard addition		internal
023	0.005	D	1.53	114		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	1.30	84		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch		QuEChERS
025		NA																
026	0.01	D	1.45	85.0		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
027		NA																
028	0.01	D	1.352			AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Atrazin D5	QuEChERS
029	0.01	D	1.2	99		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.02	D	1.34	112		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TRIS	EN 15662:2008
031	0.02	D	1.2	99		AcN			10	No	DSPE	Matrix matched - Multiple level			GC-MS	Rec. from same batch		QuEChERS
032	0.01	D	1.508	104		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch		QuEChERS
033	0.01	D	1.33	96.8		AcN			10	Yes	DSPE	Matrix matched - Single level		MS/MS (QQQ)		Rec. from same batch		1
034	0.01	D	1.552	87		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
035	0.005	D	1.43	77		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
036	0.01	D	1.77	-	Yes	AcN	AcN		5	Yes	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	TRIS	QuEChERS
037	0.01	D	1.6	88		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		NF EN 15662
038	0.01	D	1.12	105		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039		D	1.45	86.1		AcN			10	No	DSPE	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	TPP	QuEChERS
040	0.01	D	1.980	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
041		NA																
042	0.01	D	0.941	90		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		prEN 15662:2008

APPENDIX 9. Methods used by participants for determining pesticides.

IMAZALIL

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
043		NA																
044	0.1	D	0.150			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		TDCPP	EN 15662
045	0.05	D	0.904	79		AcN			10		DSPE	Pure solvent - Multiple level	ECD+NPD		GC-MS/MS Iontrap	Rec. from validation data		PN EN 15662
046	0.02	D	1.280	89.0	Yes	Acetone	EtOAc	Hexane	2			Matrix matched - Single level	ECD		Two columns			Internal Method
047	0.01	D	1.3	124		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
048	0.010	D	1.014	101.8		AcN			15	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Rec. from same batch	TDCPP	EN15662
049	0.01	D	1.761	110		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch		PRES/069
050	0.01	D	1.085	91		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
051	<0.01	D	0.75	81	Yes	AcN	AcN	AcN	10	Yes	DSPE	Matrix matched - Single level	NPD	Diode Array Detector	GC-MS	Rec. from same batch	TPP	uni en 15662
052		NA																
053	0.05	D	1.39	95		DCM			15	No	GPC	Pure solvent - Multiple level	NPD		GC-MS	Via Standard addition	Ethion	Istisan 97/23
054	0.005	D	1.50	93		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch	Linuron-d6	QuEChERS, citrate buffered
055	0.01	D	1.4	100	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		UNI EN 15662
056	0.01	D	1.7			EtOAc	EtOAc	EtOAc	16	Yes	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)		Fenclorfos	rapporti istisan 1997/23-1997/24
057	0.01	D	1.48	102.0		MeOH			10	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		"BfR"-Methode according Â§64 LFGB, L 00.00-113 (cleanup diatomeenerde)
058		D	0.633	62		DCM			10	No	DSPE	Pure solvent - Single level	ECD		GC-MS	Rec. from validation data	Endosulfan Lactone	
059	0.01	D	0.681	64	Yes	EtOAc			20	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		Internal Method
060	0.02	D	1.20	88		EtOAc			50			Matrix matched - Multiple level			GC-MS	Rec. from validation data		1) A. Anderson, H. Plashed, Fresenius J Anal Chem., 339 (1991) 365 2) A. Andersson, H. PÃ¥lsheden, Pesticide Analytical Methods in Sweden, Part 1,Ra
061	0.01	D	1.2	92		Acetone	DCM		10	No		Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
062	0.02	D	1.46	79		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from ring test		EN 15662:2008
063	0.005	D	1.68	95		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS - NF EN 15662
064	0.01	D	1.5	90		EtOAc			10	Yes	SPE	Pure solvent - Multiple level	MSD			Rec. from same batch	Anthracene	Internal Method
065		NA																
066	0.05	D	7.53	96		AcN			10		DSPE	Pure solvent - Multiple level	MS trap		GC-MS	Rec. from same batch	TPP	NF EN 15662
067	0.01	D	1.29			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068	0.1	ND	ND			QuEChERS			10.19			Pure solvent - Multiple level	ECD					CG
069	0.01	D	1.30	103.5		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070	0.01	D	1.58			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)				QuEChERS
071		D	1.92	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072		NA																
073	0.01	D	1.08	101		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	1.358	71		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	In House Method
075	0.02	D	1.16	76		AcN	AcN	AcN	10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		modified EN 15662
076	0.01	D	1.4	85		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077	0.01	D	1.48	95.8		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	NF EN 15662
078	0.01	D	0.818	87		AcN			15	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
079	0.01	D	1.94	102		AcN			10	No	DSPE	Pure solvent - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080	0.01	D	1.10	76		Acetone	DCM		100	No		Matrix matched - Multiple level	NPD		Two columns	Rec. from validation data		Kadenczki i wspÅ,. (1992)JOAOAC Int. 75: 53-63
081		NA																
082	0.01	D	0.861	76	Yes	Acetone	DCM	Petr. ether	7.5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		

APPENDIX 9. Methods used by participants for determining pesticides.

IMAZALIL																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
083	0.01	D	1.40	93		Acetone	DCM		5	No	SPE	Pure solvent - Single level	ECD			Rec. from same batch		
084	0.05	D	0.936	115		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch	NO	Analytical methods for pesticide residues in foodstuffs. Sixth edithion. June 1996. Ministry of Public Health, Welfare and Sport. The Netherlands.
085	0.005	D	1.440	90		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
086	0.01	D	0.876	79														
087	0.01	D	1.30	92.0		AcN			10.0	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
088		NA																
089		NA																
090	0.01	D	0.94	61%		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
091	0.01	D	1.02	82		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS		Rec. from same batch		
092	0.01	D	1.45	100		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093		NA																
094	0.02	D	1.31	94		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	S.J. Lehotay et al, J. AOAC Int., vol 88, 615-629 (2005)
095		NA																
096	0.01	D	1.25	93		Acetone			10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TBP	In house
097	0.01	D	1.24	94		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
098	0.01	D	1.42	91		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	1.73	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)		Via Standard addition		QuEChERS
100	0.01	D	1.05	73		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MSD		GC-MS	Via Standard addition	Propazine	Internal Method GC/MS
101	0.01	D	1.1	98		AcN			10	Yes	PSA	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS
102	0.01	D	1.47	93		AcN			12	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
103	No Results Reported																	
104	0.01	D	1.320	128	Yes	AcN			10	Yes	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
105	0.02	D	0.880	85		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		acetato de etilo
106		NA																
107	0.01	D	0.945	96	Yes													
108	0.01	D	1.19	98		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	QuEChERS
109	0.01	D	1.35	93		AcN			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	SOP
110	0.01	D	1.03	102.7		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
111		D	1.62		Yes	Acetone	DCM		15			Matrix matched - Multiple level	ECD		GC-MS	Rec. from validation data		mini Luke
112	0.01	D	1.26	91	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		AOAC 2007.01
113	No Results Reported																	
114	0.01	D	1.295	101		Acetone			20	No	SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	in house
115	0.01	D	0.95	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662 : 2009
116	0.01	D	1.580	83		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Multiresidue Method using QuEChERS
117	0.005	D	1.293	70		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbendazim D4	CHEM 014
118	0.01	D	0.79	95		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)				QuEChERS
119	0.01	D	1.002	107.5		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
120	0.004	D	1.08	99		EtOAc			13	No	GPC	Matrix matched - Multiple level	TOF			Rec. from same batch	TPP	
121	0.02	D	1.52	93.8		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		S-19
122	0.12	D	1.1	76		EtOAc			10			Matrix matched - Single level	MSD		GC-MS	Via Standard addition	TPP	AcOEt
123		D	1.63	108		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	PCB153, Anthracene, Ditalimphos	EN 15662:2008
124	0.01	D	1.296	93		MeOH	Water		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Oxfendazole	
125	0.002	D	1.16	100		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	

APPENDIX 9. Methods used by participants for determining pesticides.

IMAZALIL																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
126		NA																
127		D	1.61	75.4		AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	1.32	83.5		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		LC-MSMS; CEN/TR 15641
129	0.01	D	0.416			AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		LC-MS/MS (QQQ)			QuEChERS
130	0.01	D	0.20	80		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.883	84.9		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		EN15662:2008
132		D	2.35	100		DCM			10		GPC	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	Biphenyl	Rapporti Istisan
133		NA																
134	0.02	D	1.5	80.5		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
135		D	1.12	70		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		
136	0.01	D	1.28	137		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
137	0.01	D	0.913	Standard addition	Yes	EtOAc			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.815	98.0		AcN			10	No		Pure solvent - Multiple level	NPD		GC-MS	Rec. from same batch		MSZ EN 15662:2009
139	0.01	D	0.92	97		AcN			12	No	Freezing out	Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	TPP	
140		NA																
141	0.01	D	1.84	101.4		AcN			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		DAR-QuEChERS
142		D	0.745	124		AcN			15	No		Pure solvent - Multiple level	NPD			Rec. from same batch		QuEChERS
143	0.005	D	1.31	87.2		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
144		NA																
145	0.01	D	1.47	97		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Quinalphos (injection control)	In House
146	0.05	D	0.89	79.8		AcN			9.937	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
147	0.01	D	1.1	98														
148		D	1.345	84		AcN			10	Yes								QuEChERS
149	0.01	D	0.87	91		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	1.49	80		AcN			15		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
151	0.02	D	1.15	102		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from validation data	TDCPP	UNI EN 15662
152		D	0.958	76	Yes	AcN			10.01	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Via Standard addition	PCB 31	BS EN 15662
153		NA																
154	0.01	D	1.41	90,1		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

INDOXACARB																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001		NA																
002	0,01	D	0.871	101		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.722	116		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15662
004	0.02	D	0.638	99		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
005	0.01	D	0.821	97.9		EtOAc			10	Yes		Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		1
006		NA																
007	0.29	D	0.29	70 - 120		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
008	0.01	D	0.767	88		EtOAc			10	Yes	Filter	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.908	94		MeOH	DCM		10	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Chem Elut
010	0.01	D	0.903	104		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		QuEChERS
011	0.01	D	0.891	95.8		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.662			Acetone	Cyclohexane /EtOAc		20	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	Nitrofen, TPP	
013	0.010	D	0.826	91.0		AcN			10	No		Matrix matched - Single level	ECD/NPD		GC-MS	Rec. from same batch		EN 15662
014	0.01	D	0.908	107		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		UNI EN 15662:2009
015	0.01	D	0.95	-		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Desmetryn	QuEChERS
016	0.01	D	0.906	97		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	0.914	113		AcN			10			Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Pirimicarb D6	QuEChERS
018	0.01	D	1.10	106		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbofurane D3	QuEChERS
019	0.01	D	0.776	99.4		EtOAc			50	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EtOAc extraction
020		D	0.84	89	Yes	MeOH			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data	TPP	BfR (Alder, Klein)
021		ND	ND															-
022		NA																
023	0.005	D	0.909	108		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.678	80		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD	MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
025		NA																
026	0.01	D	0.852	94.8		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
027		NA																
028	0.01	ND	ND			AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS		Atrazin D5	QuEChERS
029	0.01	D	0.75	104		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.02	D	1.20	155	Yes	AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TRIS	EN 15662:2008
031		NA																
032	0.01	D	0.787	100		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
033	0.01	D	0.739	88.1		AcN			10	Yes	DSPE	Matrix matched - Single level		MS/MS (QQQ)		Rec. from same batch		1
034		NA																
035	0.005	D	1.08	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
036	0.01	D	0.898	102.4		AcN	AcN		5	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TRIS	QuEChERS
037	0.01	D	0.57	103		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		NF EN 15662
038	0.01	D	0.792	96		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039		NA																
040	0.01	D	1.090	75		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
041		NA																
042		NA																
043	0.01	D	0.69	98.8		EtOAc			15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	MA01
044		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

INDOXACARB																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
045	0.02	D	1.01	89		AcN			10	No	DSPE	Matrix matched - Single level		Diode Array Detector	LC-MS	Rec. from validation data		PN EN 15662
046	0.02	D	0.725	93.7	Yes	Acetone	EtOAc	Hexane	2			Matrix matched - Single level	ECD		Two columns			Internal Method
047	0.01	D	0.87	105		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
048	0.010	D	0.652	98.0		AcN			15	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Rec. from same batch	TDCPP	EN15662
049	0.01	D	1.418	109		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch		PRES/069
050	0.01	D	0.804	86		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
051		NA																
052	0.02	D	0.694	92		Acetone	DCM		100	No	florisil	Matrix matched - Single level	ECD		Two columns	Rec. from validation data		Luke
053	0.05	D	0.71	100		DCM			15	No	GPC	Pure solvent - Multiple level	NPD		GC-MS	Via Standard addition	Ethion	Istisan 97/23
054	0.005	D	0.962	95		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	Linuron-d6	QuEChERS, citrate buffered
055		NA																
056		NA																
057	0.005	D	0.936	97.4		Acetone	EtOAc	Cyclohexane	25	Yes	GPC	Matrix matched - Multiple level	ECD		GC-TOF	Rec. from same batch		modulare Multimethode according Â§64 LFGB, L 00.00-34
058	0.01	D	0.485	91		DCM			10	No	DSPE	Pure solvent - Single level	ECD		GC-MS	Rec. from validation data	Endosulfan Lactone	
059	0.01	D	0.437	73.3		EtOAc			20	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		Internal Method
060		NA																
061	0.01	D	0.77	90		Acetone	DCM		10	No		Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
062		NA																
063	0.005	D	0.615	91		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS - NF EN 15662
064	0.01	D	0.93	101		EtOAc			10	Yes	SPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	isoproturon D6	Internal Method
065		NA																
066		NA																
067	0.01	D	0.752			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068		ND	ND			QuEChERS			10.19			Pure solvent - Multiple level	ECD					CG
069	0.01	D	0.750	97.5		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070		NA																
071		D	2.08	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072		NA																
073	0.01	D	0.757	107		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	0.912	96		EtOAc			10	No		Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	PCB-28	In House Method
075	0.01	D	0.456	77		AcN	AcN	AcN	10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		modified EN 15662
076	0.01	D	0.90	97		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077	0.02	D	0.660	108.0		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	NF EN 15662
078	0.01	D	0.501	100		AcN			15	No	DSPE	Matrix matched - Multiple level	ECD		GC-MS	Rec. from same batch		QuEChERS
079	0.01	D	1.17	131		AcN			10	No	DSPE	Pure solvent - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080	0.01	D	0.79	84		Acetone	DCM		100	No		Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch		Kadenczki i wspÅ,. (1992)JOAOAC Int. 75: 53-63
081	0.01	D	1.192	102		Acetone	DCM	Petr. ether	7.50	No		Matrix matched - Single level	ECD		Two columns	Rec. from same batch		MULTIRESIDUE METHOD, ANALYTICAL METHOD FOR PESTICIDE RESIDUES IN FOODSTUFFS 6TH EDITION
082	0.01	D	0.311			Acetone	DCM	Petr. ether	7.5	No		Pure solvent - Multiple level		MS/MS (QQQ)				
083		NA																
084		NA																
085	0.005	D	0.758	104		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
086		NA																
087	0.01	D	1.23	98.0		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
088	0.05	D	0.884	109,8		Acetone	DCM	Pet.ether	15	No		Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch		GC ECD
089		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

INDOXACARB																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
090	0.01	D	0.68	68%		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
091	0.01	D	0.605	110		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS		Rec. from same batch		
092	0.01	D	0.869	110		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093		NA																
094	0.01	D	0.906	102		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	S.J. Lehotay et al, J. AOAC Int., vol 88, 615-629 (2005)
095		NA																
096	0.01	D	0.896	84		EtOAc			10	No	SPE	Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	TBP	In house
097	0.01	D	0.811	116		AcN			10	No	DSPE	Matrix matched - Single level	MS/MS (QQQ)		GC-MS	Rec. from same batch		QuEChERS
098	0.01	D	1.07	90		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.754	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)		Via Standard addition		QuEChERS
100		NA																
101	0.01	D	0.91	132		AcN			10	Yes	PSA	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
102	0.05	D	0.36	95		AcN			12	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		EN 15662
103	No Results Reported																	
104	0.01	D	1.032	123	Yes	AcN			10	Yes	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
105		NA																
106		NA																
107	0.01	D	0.285	95	Yes													
108	0.01	D	0.666	90		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
109	0.01	D	0.70	105		AcN			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	SOP
110	0.01	D	0.650	88.1		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
111		NA																
112	0.01	D	0.926	84	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.743	91		MeOH	Water		10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		chem elut
115	0.01	D	1.05	100		AcN			10	No	DSPE	Standard addition	MSD			Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.903	95		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Analysis of pesticide residues in fruit and vegetables with EtOAc extraction
117	0.005	D	0.886	78		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbendazim D4	CHEM 014
118	0.01	D	0.69	116		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)				QuEChERS
119	0.01	D	0.675	89.6		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
120	0.004	D	0.728	107		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
121	0.02	D	0.831	88.6		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		S-19
122		NA																
123		NA																
124	0.01	D	0.615	76		MeOH	Water		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Oxfendazole	
125	0.008	D	0.889	103		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
126	0.02	D	0.515	98		AcN			15	Yes	DSPE	Matrix matched - Multiple level	GC-IT-MS/MS		GC-IT-MS/MS	Rec. from validation data		QuEChERS
127		D	1.04	173		AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	0.744	90.68		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		LC-MSMS; CEN/TR 15641
129	0.01	D	0.562			AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS			QuEChERS
130	0.01	D	1.2	140		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.647	113.6		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		EN15662:2008
132		NA																
133		ND	ND															
134	0.01	D	0.91	85		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
135		D	0.92	75		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		

APPENDIX 9. Methods used by participants for determining pesticides.

INDOXACARB																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
136	0.01	D	0.738	139		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
137	0.01	D	0.793	Standard addition	Yes	EtOAc			15	No	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.640	105.4		AcN			10	No	SPE	Pure solvent - Multiple level	ECD		ECD	Rec. from same batch		MSZ EN 15662:2009
139	0.01	D	0.4172	75		AcN			12	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
140	0.05	D	0.605	107		EtOAc			50	No	GPC	Matrix matched - Multiple level	ECD		GC-TOF	Rec. from same batch		EN 12393-2
141	0.01	D	0.797	102.5		Acetone	DCM	Petr. ether 40-60	25	No		Pure solvent - Multiple level	ECD		Two columns	Rec. from same batch		IT.MP.DSLA.01.02
142		D	0.679	99		AcN			15	No	SPE	Pure solvent - Multiple level		Diode Array Detector		Rec. from same batch		QuEChERS
143	0.005	D	0.792	96.7		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
144		NA																
145	0.01	D	0.792	99		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Quinalphos (injection control)	In House
146	0.02	D	0.768	99.3		AcN			9.937	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
147		NA																
148		D	0.530	79		AcN			10	Yes								QuEChERS
149	0.01	D	0.78	80		Acetone	DCM		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.853	96		AcN			15		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
151		NA																
152		D	0.302	93	Yes	AcN			10.15	No	DSPE	Matrix matched - Single level		MS	LC-MS	Via Standard addition	TDCPP	BS EN 15662
153		NA																
154	0.01	D	0.89	87.8		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

MALATHION																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001		NA																
002	0.01	D	0.333	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.325	106		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15662
004	0.01	D	0.361	94		EtOAc			18.5	No	GPC	Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		EN 12393
005	0.01	D	0.389	101		EtOAc			10	Yes		Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		1
006		NA																
007		D	0.23	70 - 120		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
008	0.01	D	0.284	68		EtOAc			10	Yes	Filter	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.342	99		Cyclohexane	EtOAc		75	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		DFG S19
010	0.005	D	0.723	93		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		QuEChERS
011	0.01	D	0.296	136.7	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.336			Acetone	Cyclohexane/ EtOAc		20	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	Nitrofen, TPP	
013	0.010	D	0.341	93.0		AcN			10	No		Matrix matched - Single level	ECD/NPD		GC-MS	Rec. from same batch		EN 15662
014		D	0.736		Yes	AcN			1			Standard addition	MSD		GC-MS	Via Standard addition		Internal Method based on Fillion et alt. JAOAC 78-5-1995
015	0.01	D	0.44			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		Desmetryn	QuEChERS
016	0.01	D	0.469	104		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	0.415	107		AcN			10			Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Pirimicarb D6	QuEChERS
018	0.01	D	0.394	83		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos-Me D6	QuEChERS
019	0.01	D	0.318	86.3		EtOAc			50	Yes	GPC	Matrix matched - Multiple level	FPD	MS/MS (QQQ)	GC-MS	Rec. from same batch		EtOAc extraction
020		D	0.42	78	Yes	MeOH			10		DSPE	Matrix matched - Multiple level	TOF	MS/MS (QQQ)	GC-TOF	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.01	D	0.490	111		MeOH	Water		10	No	Filter	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	FP086
022	0.1	D	0.32	100	Yes	DCM			10	No	GPC	Standard addition	NPD		GC-MS	Via Standard addition		internal
023	0.01	D	0.477	106		AcN	Toluol		10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.420	87		Acetone	DCM	PE	15	No		Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		Luke
025	0.02	D	0.21			EtOAc			10			Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)		TPP	
026	0.01	D	0.340	73.8		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
027	0.02	D	0.552	91		Acetone	DCM	Petr. ether	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		Mini-Luke
028	0.01	D	0.381			AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS			QuEChERS
029	0.01	D	0.46	99		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.02	D	0.526	109		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TRIS	EN 15662:2008
031	0.02	D	0.43	102		AcN			10	No	DSPE	Matrix matched - Multiple level			GC-MS	Rec. from same batch		QuEChERS
032	0.01	D	0.388	94		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
033	0.01	D	0.400	99.2		EtOAc			25	Yes		Matrix matched - Single level	FPD		GC-MS	Rec. from same batch		2
034	0.01	D	0.192	65	Yes	AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
035	0.02	D	0.275	109		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from validation data	TBP, TPP	QuEChERS
036	0.01	D	0.417	90.8		AcN	AcN		5.0	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TRIS	QuEChERS
037	0.01	D	0.34	101		AcN			10	Yes	DSPE	Pure solvent - Multiple level	IDT			Rec. from same batch	Bromophos Methyl	NF EN 15662
038	0.01	D	0.485	91		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039		D	0.52	88.5		AcN			10	No	DSPE	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	TPP	QuEChERS
040	0.01	D	0.275	85		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
041	0.05	D	0.309	78.77		EtOAc			50	No		Matrix matched - Single level	NPD		Two columns	Rec. from same batch		MINISTRY OF WELFARE,NETHERLANDS,1996
042	0.01	D	0.328	94		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		prEN 15662:2008
043	0.01	D	0.33	88.0		EtOAc			15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	MA01
044	0.01	D	0.182			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		TDCPP	EN 15662
045	0.02	D	0.495	88		AcN			10		DSPE	Pure solvent - Multiple level	ECD+NPD		GC-MS/MS Iontrap	Rec. from validation data		PN EN 15662

APPENDIX 9. Methods used by participants for determining pesticides.

MALATHION

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
046	0.01	D	0.436	101.5	Yes	Acetone	EtOAc		2			Matrix matched - Single level	NPD		Two columns			Internal Method
047	0.01	D	0.38	100		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
048	0.010	D	0.629	102.0		AcN			15	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Rec. from same batch	TDCPP	EN15662
049	0.01	D	0.314	64		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		PRES/069
050	0.01	D	0.312	110		AcN			10	No		Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		
051	<0.01	D	0.30	82	Yes	AcN	AcN	AcN	10	Yes	DSPE	Matrix matched - Single level	NPD	Diode Array Detector	GC-MS	Rec. from same batch	TPP	uni en 15662
052	0.01	D	0.389	92		Acetone	DCM		100	No	Florisil	Matrix matched - Single level	ECD		Two columns	Rec. from validation data		Luke
053	0.05	D	0.32	83		DCM			15	No	GPC	Pure solvent - Multiple level	NPD		GC-MS	Via Standard addition	Ethion	Istisan 97/23
054	0.01	D	0.520	97		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	Triphenylmethane	QuEChERS, citrate buffered
055	0.01	D	0.37	96		AcN			10	Yes	DSPE	Standard addition	MSD		GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
056	0.01	D	0.23			EtOAc	EtOAc	EtOAc	16	Yes	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)		Fenclorfos	rapporti istisan 1997/23-1997/24
057	0.002	D	0.464	96.0		Acetone	EtOAc	Cyclohexane	25	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-TOF	Rec. from same batch		modulare Multimethode according Ã§64 LFGB, L 00.00-34
058		D	0.233	73		DCM			10	No	DSPE	Pure solvent - Single level	NPD		GC-MS	Rec. from validation data	Ethion	
059	0.01	D	0.348	69.1		EtOAc			20	Yes		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		Internal Method
060	0.01	D	0.547	87		EtOAc			50			Matrix matched - Multiple level			GC-MS	Rec. from validation data		1) A. Anderson, H. Plashed, Fresenius J Anal Chem., 339 (1991) 365 2) A. Andersson, H. PÃ¥sheden, Pesticide Analytical Methods in Sweden, Part 1,Ra
061	0.01	D	0.53	115		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	
062	0.01	D	0.387	41		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from ring test		EN 15662:2008
063	0.01	D	0.13	96		AcN			10	Yes	DSPE		MS/MS (QQQ)		GC-MS	Rec. from same batch	Bromophos Methyl	QuEChERS
064	0.01	D	0.45	42		EtOAc			10	Yes	SPE	Pure solvent - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch	Anthracene	Internal Method
065		NA																
066	0.01	D	0.486	98		AcN			10		DSPE	Pure solvent - Multiple level	MS trap		GC-MS	Rec. from same batch	TPP	NF EN 15662
067	0.01	D	0.375			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068	0.5	D	0.61			QuEChERS			10.2									CG-ECD-NPD
069	0.004	D	0.430	100		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070	0.01	D	0.294	120		AcN			10	No	DSPE	Matrix matched - Multiple level	FPD			Rec. from same batch	TPP	QuEChERS
071		D	0.42	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072	0.01	D	0.301	128		EtOAc			20		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Luke
073	0.01	D	0.362	112		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	0.482	94		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	In House Method
075	0.01	D	0.299	74		AcN	AcN	AcN	10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		modified EN 15662
076	0.01	D	0.49	92		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077	0.01	D	0.419	95.9		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Via Standard addition	TPP	NF EN 15662
078	0.01	D	0.213	81		AcN			15	No	DSPE	Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		QuEChERS
079	0.01	D	0.74	122		AcN			10	No	DSPE	Pure solvent - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080	0.01	D	0.37	92		Acetone	DCM		100	No		Matrix matched - Multiple level	NPD		GC-MS	Rec. from validation data		Kadenczki i wspÃ,. (1992)JOAOAC Int. 75: 53-63
081	0.01	D	0.401	98		Acetone	DCM	Petr. ether	7.50	No		Matrix matched - Single level	NPD		Two columns	Rec. from same batch		MULTIRESIDUE METHOD, ANALYTICAL METHOD FOR PESTICIDE RESIDUES IN FOODSTUFFS 6TH EDITION
082	0.02	D	0.322	72		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	HCB	
083	0.01	D	0.47	95		Acetone	DCM		5	No	SPE	Pure solvent - Single level	ECD			Rec. from same batch		
084	0.05	D	0.145	70		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch	NO	Analytical methods for pesticide residues in foodstuffs. Sixth edithion. June 1996. Ministry of Public Health, Welfare and Sport. The Netherlands.
085	0.010	D	0.381	100		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
086	0.01	D	0.362	100.3														
087	0.01	D	0.490	99.0		EtOAc			25	No	Liquid/liquid partitioning	Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch		Multi-residue Method 5, Organophosphorus compounds, Analytical methods of residues of pesticides, 5th Edition, 1988, Dutch Ministry of Welfare, Healt

APPENDIX 9. Methods used by participants for determining pesticides.

MALATHION																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
088		NA																
089	0.01	D	0.50	89.9		DCM	Acetone		5	No	MSPD, silica gel/alumina	Pure solvent - Single level	NPD		GC/NPD, GC/ECD	Rec. from validation data		
090	0.01	D	0.39	81%		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
091	0.005	D	0.295	56		AcN			10	Yes	DSPE	Pure solvent - Multiple level	PFPD		LC-MS	Rec. from same batch		
092	0.01	D	0.340	92		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093	0.03	D	0.218	85		EtOAc	Cyclohexane		50	No	GPC	Pure solvent - Multiple level	NPD		Two columns	Rec. from same batch		EN12393
094	0.01	D	0.446	103		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	S.J. Lehotay et al, J. AOAC Int., vol 88, 615-629 (2005)
095		ND	ND															
096	0.01	D	0.396	80		EtOAc			10	No	SPE	Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	TBP	In house
097	0.01	D	0.415	93		AcN			10	No	DSPE	Matrix matched - Single level	MSD		GC-FPD	Rec. from same batch		QuEChERS
098	0.01	D	0.332	96		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.289	100		AcN			10	No	DSPE	Standard addition	MS/MS (QQQ)			Via Standard addition	TPP	QuEChERS
100	0.01	D	0.34	88		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MSD		GC-MS	Via Standard addition	Propazine	Internal Method GC/MS
101	0.01	D	0.29	77		AcN			10	Yes	PSA	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS
102	0.05	D	0.32	80		AcN			12	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		EN 15662
103	No Results Reported																	
104	0.02	D	0.426	84	Yes	Acetone	DCM		50	No		Pure solvent - Multiple level	MSD		GC-MS	Rec. from same batch	Bromophos Methyl	EN 12393
105	0.01	D	0.433	100		Acetone	DCM		10	Yes		Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		luke
106	0.02	D	0.35	92		EtOAc			25	No								In house based in: Ministry of Walfare, health and cultural affairs, Netherlands Analytical Methods for residues of pesticides in foodstuffs. Mu
107	0.01	D	0.174	99.8	Yes													
108	0.01	D	0.447	92		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
109	0.01	D	0.50	95		AcN			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	SOP
110	0.01	D	0.385	87.6		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	Mini Luke
111		D	0.45		Yes	Acetone	DCM		15			Matrix matched - Multiple level	ECD		GC-MS	Rec. from validation data		mini Luke
112	0.01	D	0.464	100.5		AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.372	80		Acetone			20	No	SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	in house
115	0.01	D	0.32	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.195	105		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Analysis of pesticide residues in fruit and vegetables with EtOAc extraction
117	0.005	D	0.439	93	Yes	EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbendazim D4	CHEM 014
118	0.01	D	0.26	109		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)				QuEChERS
119	0.01	D	0.404	87.4		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		PFPD	Rec. from same batch	TPP	QuEChERS
120	0.004	D	0.336	96		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
121	0.05	D	0.403	88.3		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		S-19
122	0.02	D	0.39	87		EtOAc			10			Matrix matched - Single level	MSD		GC-MS	Via Standard addition	TPP	AcOEt
123		D	0.417	92		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	PCB153, Anthracene, Ditalimphos	EN 15662:2008
124	0.01	D	0.441	96		Acetone			50	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
125	0.002	D	0.471															
126	0.01	D	0.202	103		AcN			15	Yes	DSPE	Matrix matched - Multiple level	GC-IT-MS/MS		GC-IT-MS/MS	Rec. from validation data		QuEChERS
127		D	0.93	103		AcN	MeOH		5	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	0.390	90.2		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		LC-MSMS; CEN/TR 15641
129	0.01	D	0.156			AcN			10		DSPE	Matrix matched - Multiple level	IDT		GC-MS			QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

MALATHION																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
130	0.01	D	0.36	120		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.263	81.6		AcN			10	Yes	DSPE	Matrix matched - Multiple level	TSD		GC-MS	Rec. from same batch	TDCPP	EN15662:2008
132		D	0.34	100		DCM			10		GPC	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	Biphenyl	Rapporti Istisan
133		D	0.53		Yes	AcN			10	No	DSPE	Matrix matched - Multiple level		MS		Via Standard addition		Metodo QuEChERS
134	0.01	D	0.45	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
135		D	0.46	87		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		
136	0.01	D	0.408	95		Acetone			20		Liquid/liquid partitioning	Matrix matched - Multiple level	ECD		NPD, two columns	Rec. from same batch		
137	0.01	D	0.364	Standard addition	Yes	EtOAc			15	No	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.225	88.5		AcN			10	No		Pure solvent - Multiple level	PFPD		GC-MS	Rec. from validation data		MSZ EN 15662:2009
139	0.01	D	0.416	110	Yes	Acetone	DCM	Petr. ether	7.5	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)		LC-MS/MS (QQQ)	Rec. from same batch	TPP	-
140	0.05	D	0.238	66		EtOAc			50	No	GPC	Matrix matched - Multiple level	NPD		GC-TOF	Rec. from same batch	TPP	EN 12393-2
141	0.01	D	0.434	92.6		AcN			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		DAR-QuEChERS
142		D	0.275	98		AcN			15	No		Pure solvent - Multiple level	NPD		Two columns	Rec. from same batch		QuEChERS
143	0.01	D	0.338	74.6		Acetone	DCM	Petr. ether	15	No		Matrix matched - Single level	MSD		GC-MS	Rec. from same batch		Mini-Luke
144	0.010	D	0.512	105		Acetone	DCM	EtOAc	100	No	GPC	Matrix matched - Multiple level	NPD		GC-MS	Rec. from same batch		PN-EN 12393-1,2,3:2009
145	0.01	D	0.458	98		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Quinalphos (injection control)	In House
146	0.02	D	0.244	72.9		AcN			9.95	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	TPP	QuEChERS
147	0.01	D	0.13	93														
148		D	0.163	87		Acetone	DCM	BENZINE	13	No								EXTRACCTION+PARTITION
149	0.01	D	0.34	92.4		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.408	98		AcN			15		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		
151	0.05	D	0.360	89		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from validation data	TDCPP	UNI EN 15662
152		D	0.349	85	Yes	AcN			10	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Via Standard addition	PCB 31	BS EN 15662
153		NA																
154	0.01	D	0.48	116		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

METHIDATHION

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001		NA																
002	0.01	D	0.783	96		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.674	95		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15662
004	0.02	D	0.709	87		EtOAc			18.5	No	GPC	Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		EN 12393
005	0.01	D	0.721	101.7		EtOAc			10	Yes		Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
006		NA																
007		D	0.26	70 - 120		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
008	0.01	D	0.518	66		EtOAc			10	Yes	Filter	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.509	102		Cyclohexane	EtOAc		75	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		DFG S19
010	0.01	D	0.813	105		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		QuEChERS
011	0.01	D	0.735	88.4		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.613			Acetone	Cyclohexane EtOAc		20	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	Nitrofen, TPP	
013	0.010	D	0.750	89.2		AcN			10	No		Matrix matched - Single level	ECD/NPD		GC-MS	Rec. from same batch		EN 15662
014	0.01	D	2.50		Yes	AcN			1			Standard addition	MSD		GC-MS	Via Standard addition		Internal Method based on Fillion et alt. JAOAC 78-5-1995
015	0.01	D	0.84			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Desmetryn	QuEChERS
016	0.01	D	0.705	92		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	0.877	101		AcN			10		DSPE	Standard addition	MSD		GC-TOF	Rec. from same batch	PCB 138	QuEChERS
018	0.01	D	0.798	87		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos-Me D6	QuEChERS
019	0.01	D	0.661	98.7		EtOAc			50	Yes	GPC	Matrix matched - Multiple level	FPD	MS/MS (QQQ)	GC-MS	Rec. from same batch		EtOAc extraction
020		D	0.60	82	Yes	MeOH			10		DSPE	Matrix matched - Multiple level	TOF	MS/MS (QQQ)	GC-TOF	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.01	D	0.991	102		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Caffeine	QuEChERS European Method EN 15662
022	0.1	D	0.56	100		DCM			10	No	GPC	Standard addition	NPD		GC-MS	Via Standard addition		internal
023	0.01	D	0.864	110		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.790	86		Acetone	DCM	PE	15	No		Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		Luke
025	0.05	D	0.26			EtOAc			10			Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)		TPP	
026	0.01	D	0.741	94.5		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
027	0.02	D	1.89	82		Acetone	DCM	Petr. ether	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		Mini-Luke
028	0.01	D	0.746			AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS			QuEChERS
029	0.01	D	0.84	103		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.01	D	1.04	109		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TRIS	EN 15662:2008
031	0.02	D	0.58	112		AcN			10	No	DSPE	Matrix matched - Multiple level			GC-MS	Rec. from same batch		QuEChERS
032	0.01	D	0.855	85		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
033	0.01	D	0.818	103.9		EtOAc			25	Yes		Matrix matched - Single level	FPD		GC-MS	Rec. from same batch		
034	0.01	D	1.024	73		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
035	0.04	D	0.527	116		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from validation data	TBP, TPP	QuEChERS
036	0.01	D	0.846	95.6		AcN	AcN		5	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TRIS	QuEChERS
037	0.01	D	0.81	99		AcN			10	Yes	DSPE	Pure solvent - Multiple level	IDT			Rec. from same batch	Bromophos Methyl	NF EN 15662
038	0.01	D	0.783	92		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039		NA																
040	0.01	D	0.373	84		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
041	0.04	D	0.583	79.66		EtOAc			50	No		Matrix matched - Single level	NPD		Two columns	Rec. from same batch		MINISTRY OF WELFARE,NETHERLANDS,1996
042	0.01	D	0.863	99		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		prEN 15662:2008
043	0.01	D	0.62	90.0		EtOAc			15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	MA01
044	0.01	D	0.210			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		TDCPP	EN 15662
045	0.02	D	0.748	85		AcN			10		DSPE	Pure solvent - Multiple level	ECD+NPD		GC-MS/MS Iontrap	Rec. from validation data		PN EN 15662

APPENDIX 9. Methods used by participants for determining pesticides.

METHIDATHION																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
046	0.01	D	0.862	97.3	Yes	Acetone	EtOAc		2			Matrix matched - Single level	NPD		Two columns			Internal Method
047	0.01	D	0.76	132		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
048	0.010	D	0.638	106.0		AcN			15	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Rec. from same batch	TDCPP	EN15662
049	0.01	D	0.990	115		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch		PRES/069
050	0.01	D	0.597	75		AcN			10	No		Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		
051	<0.01	D	0.60	84	Yes	AcN	AcN	AcN	10	Yes	DSPE	Matrix matched - Single level	NPD	Diode Array Detector	GC-MS	Rec. from same batch	TPP	uni en 15662
052	0.01	D	0.721	90		Acetone	DCM		100	No	florisil	Matrix matched - Single level	ECD		Two columns	Rec. from validation data		Luke
053	0.05	D	0.89	107		DCM			15	No	GPC	Pure solvent - Multiple level	NPD		GC-MS	Via Standard addition	Ethion	Istisan 97/23
054	0.005	D	0.892	97		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch	Linuron-d6	QuEChERS, citrate buffered
055	0.01	D	0.75	98		AcN			10	Yes	DSPE	Standard addition	MSD		GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
056	0.01	D	0.53		Yes	EtOAc	EtOAc	EtOAc	16	Yes	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)		Fenclorfos	rapporti istisan 1997/23-1997/24
057	0.005	D	0.849	93.2		Acetone	EtOAc	Cyclohexane	25	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-TOF	Rec. from same batch		modulare Multimethode according Â§64 LFGB, L 00.00-34
058		D	0.500	71		DCM			10	No	DSPE	Pure solvent - Single level	NPD		GC-MS	Rec. from validation data	Ethion	
059	0.01	D	0.644	72.2														
060	0.02	D	0.735	84		EtOAc			50			Matrix matched - Multiple level			GC-MS	Rec. from validation data		1) A. Anderson, H. Plashed, Fresenius J Anal Chem., 339 (1991) 365 2) A. Andersson, H. PÃ¥lsheden, Pesticide Analytical Methods in Sweden, Part 1,Ra
061	0.01	D	0.97	110		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	
062	0.01	D	0.775	88		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from ring test		EN 15662:2008
063	0.01	D	0.231	98		AcN			10	Yes	DSPE		MS/MS (QQQ)		GC-MS	Rec. from same batch	Bromophos Methyl	QuEChERS
064	0.01	D	0.82	55		EtOAc			10	Yes	SPE	Pure solvent - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch	Anthracene	Internal Method
065		NA																
066	0.01	D	0.808	81		AcN			10		DSPE	Pure solvent - Multiple level	MS trap		GC-MS	Rec. from same batch	TPP	NF EN 15662
067	0.01	D	0.64			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068	0.01	ND	ND			QuEChERS			10.2			Pure solvent - Multiple level	ECD					CG
069	0.01	D	0.782	104		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070	0.01	D	0.669	108		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	TPP	QuEChERS
071		D	1.22	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072	0.01	D	0.647	109	Yes	EtOAc			20		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Luke
073	0.01	D	0.598	103		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	0.823	85		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	In House Method
075	0.01	D	0.508	70		AcN	AcN	AcN	10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		modified EN 15662
076	0.01	D	0.81	103		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077	0.02	D	0.954	100.5		AcN			10	No	DSPE	Matrix matched - Multiple level	IDT			Via Standard addition	TriChloroNate	NF EN 15662
078	0.01	D	0.335	77		AcN			15	No	DSPE	Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		QuEChERS
079	0.01	D	1.15	110		AcN			10	No	DSPE	Pure solvent - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080	0.01	D	0.66	82		Acetone	DCM		100	No		Matrix matched - Multiple level	NPD		Two columns	Rec. from validation data		Kadenczki i wspÃ,. (1992)JOAOAC Int. 75: 53-63
081	0.01	D	0.797	80		Acetone	DCM	Petr. ether	7.5	No		Matrix matched - Single level	NPD		Two columns	Rec. from same batch		MULTIRESIDUE METHOD, ANALYTICAL METHOD FOR PESTICIDE RESIDUES IN FOODSTUFFS 6TH EDITION
082	0.02	D	0.660	71		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	HCB	
083	0.01	D	0.74	95		Acetone	DCM		5	No	SPE	Pure solvent - Single level	ECD			Rec. from same batch		
084	0.02	D	0.829	106		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch	NO	Analytical methods for pesticide residues in foodstuffs. Sixth edithion. June 1996. Ministry of Public Health, Welfare and Sport. The Netherlands.
085	0.005	D	0.706	99		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
086	0.01	D	0.674	93.2														

APPENDIX 9. Methods used by participants for determining pesticides.

METHIDATHION

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
087	0.05	D	0.882	99.0		EtOAc			25	No	Liquid/liquid partitioning	Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch		Multi-residue Method 5, Organophosphorus compounds, Analytical methods of residues of pesticides, 5th Edition, 1988. Dutch Ministry of Welfare, Healt
088		NA																
089	0.02	D	0.90	94.0		DCM	Acetone		5	No	MSPD, silica gel/alumina	Pure solvent - Single level	NPD		GC/NPD, GC/ECD	Rec. from validation data		
090	0.01	D	0.49	55%		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
091	0.01	D	0.396	71		AcN			10	Yes	DSPE	Pure solvent - Multiple level	PFPD		GC-MS	Rec. from same batch		
092	0.01	D	0.444	80		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093	0.02	D	0.705	93		EtOAc	Cyclohexane		50	No	GPC	Pure solvent - Multiple level	NPD		Two columns	Rec. from same batch		EN12393
094	0.01	D	0.697	90		EtOAc			30		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPE	A.H. Roos et al, Anal Chim Acta, vol 196, 95-102 (1987)
095		NA																
096	0.01	D	0.782	78		EtOAc			10	No	SPE	Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	TBP	In house
097	0.01	D	0.809	95		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
098	0.01	D	0.777	86		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.857	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)		Via Standard addition		QuEChERS
100	0.01	D	0.67	105		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MSD		GC-MS	Via Standard addition	Propazine	Internal Method GC/MS
101	0.01	D	0.69	105		AcN			10	Yes	PSA	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS
102	0.05	D	0.45	88		AcN			12	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		EN 15662
103	No Results Reported																	
104	0.02	D	0.499	72	Yes	Acetone	DCM		50	No		Pure solvent - Multiple level	MSD		GC-MS	Rec. from same batch	Bromophos Methyl	EN 12393
105	0.02	D	0.843	110		Acetone	DCM		10	Yes		Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		luke
106	0.02	D	0.76	98.5		EtOAc			25	No								In house based in: Ministry of Walfare, health and cultural affairs, Netherlands Analytical Methods for residues of pesticides in foodstuffs. Mu
107	0.01	D	0.335	98	Yes													
108	0.01	D	0.706	86		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
109	0.01	D	0.73	119		AcN			10	No	SPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	SOP
110	0.01	D	0.718	85.1		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	Mini Luke
111		D	0.69		Yes	Acetone	DCM		15			Matrix matched - Multiple level	ECD		GC-MS	Rec. from validation data		mini Luke
112	0.01	D	0.612	95	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.662	98		Acetone			20	No	SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	in house
115	0.01	D	0.62	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.282	97		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Analysis of pesticide residues in fruit and vegetables with EtOAc extraction
117	0.005	D	0.735	69		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbendazim D4	CHEM 014
118	0.01	D	0.43	101		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)				QuEChERS
119	0.01	D	0.743	94.6		AcN			10	Yes	DSPE	Matrix matched - Multiple level	FPD		GC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
120	0.004	D	0.628	99		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
121	0.02	D	0.770	85.9		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		S-19
122	0.02	D	0.59	83		EtOAc			10			Matrix matched - Single level	MSD		GC-MS	Via Standard addition	TPP	AcOEt
123		D	0.758	80		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	PCB153, Anthracene, Ditalimphos	EN 15662:2008
124	0.01	D	0.711	93		Acetone			50	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
125	0.002	D	0.738	78		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	

APPENDIX 9. Methods used by participants for determining pesticides.

METHIDATHION																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
126	0.01	D	0.360	115		AcN			15	Yes	DSPE	Matrix matched - Multiple level	GC-IT-MS/MS		GC-IT-MS/MS	Rec. from validation data		QuEChERS
127		D	1.10	88.8		AcN	MeOH		5	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	0.834	83.1		Acetone	DCM	Pet.ether	15	No	Filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		LC-MSMS; CEN/TR 15641
129	0.01	ND	ND			AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS			QuEChERS
130	0.01	D	0.70	140		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.414	75.6		AcN			10	Yes	DSPE	Matrix matched - Multiple level	TSD		GC-MS	Rec. from same batch	TDCPP	EN15662:2008
132		D	0.63	100		DCM			10		GPC	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	Biphenyl	Rapporti Istisan
133		D	1.143		Yes	AcN			10	No	DSPE	Matrix matched - Multiple level		MS		Via Standard addition		Metodo QuEChERS
134	0.01	D	0.85	92		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
135		ND	ND			Acetone	EtOAc	DCM	15	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		mini-luke
136	0.01	D	0.716	96		Acetone			20		Liquid/liquid partitioning	Matrix matched - Multiple level	ECD		NPD, two columns	Rec. from same batch		
137	0.01	D	0.701	Standard addition	Yes	EtOAc			15	No	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.440	102.4		AcN			10	No		Pure solvent - Multiple level	PFPD		GC-MS	Rec. from validation data		MSZ EN 15662:2009
139	0.01	D	0.9301	101	Yes	Acetone	DCM	Petr. ether	7.5	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)		LC-MS/MS (QQQ)	Rec. from same batch	TPP	
140	0.02	D	0.510	77		EtOAc			50	No	GPC	Matrix matched - Multiple level	TOF			Rec. from same batch	TPP	EN 12393-2
141	0.01	D	0.656	71.5		Acetone	DCM	Petr. ether 40-60	25	No		Matrix matched - Single level	NPD		Two columns	Rec. from same batch		IT.MP.DSLA.01.02
142		D	0.425	95		AcN			15	No		Pure solvent - Multiple level	NPD		Two columns	Rec. from same batch		QuEChERS
143	0.01	D	0.669	72.8		Acetone	DCM	Petr. ether	15	No		Matrix matched - Single level	MSD		GC-MS	Rec. from same batch		Mini-Luke
144	0.020	D	0.802	116	Yes	Acetone	DCM	EtOAc	100	No	GPC	Matrix matched - Multiple level	NPD		GC-MS	Rec. from same batch		PN-EN 12393-1,2,3:2009
145	0.01	D	0.856	89		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Quinalphos (injection control)	In House
146	0.05	D	0.518	64.7		AcN			9.95	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	TPP	QuEChERS
147	0.01	D	0.28	96														
148		D	0.651	89		Acetone	DCM	BENZINE	13	No								EXTRACCTION+PARTITION
149	0.01	D	0.54	105.4		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.813	94		AcN			15		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		
151	0.02	D	0.791	93		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from validation data	TDCPP	UNI EN 15662
152		D	0.814	91	Yes	AcN			10.01	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Via Standard addition	PCB 31	BS EN 15662
153	0.01	D	0.529	100		AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			
154	0.01	D	0.76	114		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

METHOMYL																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001	0.01	D	0.120	82.29		DCM			50	No	SPE	Standard addition		Fluorescence		Rec. from same batch		531.1 REV 3.1.1995. National Exposure Research Laboratory US EPA, Cincinnati Ohio, 45268
002	0.01	D	0.187	91	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.164	85		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15662
004	0.05	D	0.217	85		AcN			10			Matrix matched - Multiple level		ITQ	LC-ITQ	Rec. from same batch		EN 15662
005	0.01	D	0.223	97.0		EtOAc			10	Yes		Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		1
006	0.01	D	0.153	103		AcN			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
007	0.01	ND	ND			Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	IDT	MS/MS (QQQ)		Rec. from same batch		
008	0.01	D	0.197	90		EtOAc			10	Yes	Filter	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.221	98		MeOH	DCM		10	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Chem Elut
010	0.005	D	0.210	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		QuEChERS
011	0.05	D	0.203	103.4		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.209			MeOH			10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Cyprodinil	
013	0.005	D	0.220	101		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
014		D	0.245	98.3		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		UNI EN 15662:2009
015	0.01	D	0.24			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Desmetryn	QuEChERS
016		NA																
017	0.01	D	0.246	113		AcN			10			Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Pirimicarb D6	QuEChERS
018	0.01	D	0.183	115		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbofurane D3	QuEChERS
019	0.01	D	0.195	98.6		EtOAc			50	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EtOAc extraction
020		D	0.14	107	Yes	MeOH			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.01	D	0.205	112		MeOH	Water		10	No	Filter	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	FP086
022		NA																
023	0.005	D	0.234	112		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.178	80		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		QuEChERS
025		NA																
026	0.01	D	0.160	61.5		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
027		NA																
028	0.01	D	0.207			AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Atrazin D5	QuEChERS
029	0.01	D	0.21	95		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.02	D	0.153	97		Acetone	DCM		25		SPE	Pure solvent - Multiple level		Fluorescence	LC-MS	Rec. from same batch		Interlaboratory validated method
031		NA																
032	0.01	D	0.201	93		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
033	0.01	D	0.204	97.1		AcN			10	Yes	DSPE	Matrix matched - Single level		MS/MS (QQQ)		Rec. from same batch		1
034	0.01	D	0.102	108		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
035	0.005	D	0.18	82		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
036	0.01	D	0.205	95.4		AcN	AcN		5	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TRIS	QuEChERS
037	0.01	D	0.26	83		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		NF EN 15662
038		NA																
039		NA																
040	0.01	D	0.491	112		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
041	0.50	ND	ND			EtOAc			50	No	SPE		ECD		Two columns	Rec. from validation data		MINISTRY OF WELFARE, NETHERLANDS,1996
042		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

METHOMYL																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
043		NA																
044		NA																
045	0.02	ND	ND															
046		NA																
047	0.01	D	0.20	84		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
048	0.010	D	0.130	90.7		AcN			15	No	DSPE	Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TDCPP	EN15662
049	0.01	D	0.159	66		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		PRES/069
050	0.01	D	0.196	76		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
051		NA																
052		NA																
053		NA																
054	0.005	D	0.217	91		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	Linuron-d6	QuEChERS, citrate buffered
055		NA																
056		NA																
057	0.01	D	0.26	107.0		MeOH			10	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		"BfR"-Methode according Ã§64 LFGB, L 00.00-113 (cleanup diatomeenerde)
058		NA																
059	0.01	D	0.160	112		EtOAc			20	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		Internal Method
060		NA																
061	0.01	D	0.19	88		Acetone	DCM		10	No		Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
062		NA																
063	0.005	D	0.109	103		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS - NF EN 15662
064	0.01	D	0.24	93		EtOAc			10	Yes	SPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	isoproturon D6	Internal Method
065		NA																
066		NA																
067	0.01	D	0.19			AcN			10.0	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068	0.05	ND	ND			QuEChERS			10.2			Pure solvent - Multiple level	NPD					CG
069		D	0.273	118		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070	0.01	D	0.255			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)				QuEChERS
071		D	0.27	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072		NA																
073	0.01	D	0.167	110		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	0.118	66		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	In House Method
075	0.01	D	0.167	70		AcN	AcN	AcN	10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		modified EN 15662
076	0.01	ND	ND			AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077	0.02	D	0.254	63.4		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	NF EN 15662
078	0.02	D	0.234	114		AcN			15	No	DSPE	Matrix matched - Multiple level		Diode Array Detector		Rec. from same batch		QuEChERS
079	0.01	D	0.246	115		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080		NA																
081		NA																
082	0.01	D	0.212	97		Acetone	DCM	Petr. ether	7.5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		
083		NA																
084		NA																
085	0.005	D	0.242	96		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

METHOMYL																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
086	0.004	D	0.207	91.3		DCM			20		GPC	Pure solvent - Multiple level		Fluorescence		Rec. from validation data		
087	0.01	D	0.146	72.0		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
088		NA																
089		NA																
090	0.01	D	0.18	80%		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
091	0.01	D	0.135	74		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS		Rec. from same batch		
092	0.01	D	0.141	85		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093		NA																
094	0.01	D	0.222	98		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	S.J. Lehotay et al, J. AOAC Int., vol 88, 615-629 (2005)
095		NA																
096	0.01	D	0.201	108		EtOAc			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TBP	In house
097	0.01	D	0.166	87		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
098	0.01	D	0.14	101		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.233	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)		Via Standard addition		QuEChERS
100		NA																
101	0.005	D	0.27	117		AcN			10	Yes	PSA	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
102	0.01	D	0.24	80		AcN			12	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
103	No Results Reported																	
104	0.02	D	0.212	100	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			EN 15662
105	0.05	D	0.158	105		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		acetato de etilo
106		NA																
107		NA																
108	0.01	D	0.226	76		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	QuEChERS
109	0.01	D	0.22	100		AcN			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	SOP
110	0.01	D	0.171	88.4		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
111		NA																
112	0.01	D	0.224	92.5	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.208	94		MeOH	Water		10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		chem elut
115	0.01	ND	ND			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
116	0.01	D	0.230	80		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Multiresidue Method using QuEChERS
117	0.005	D	0.150	79		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbendazim D4	CHEM 014
118	0.01	D	0.14	95		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			QuEChERS
119	0.01	D	0.15	84.0		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
120	0.01	D	0.218	102		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
121	0.005	D	0.281	97.2		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		S-19
122		NA																
123		NA																
124	0.01	D	0.253	116		MeOH	Water		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Oxfendazole	
125	0.008	D	0.259	106		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
126		NA																
127		ND	ND			AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	0.188	85.8		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		LC-MSMS; CEN/TR 15641
129	0.01	D	0.048			AcN			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

METHOMYL																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
130	0.01	D	0.16	66		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.164	86.2		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		EN15662:2008
132		NA																
133		NA																
134	0.01	D	0.20	75		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
135		D	0.09	74		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		
136	0.02	D	0.158	97		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		
137	0.01	D	0.251	Standard addition	Yes	EtOAc			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.165	92.4		AcN			10	No	SPE	Pure solvent - Multiple level		UV	Diode Array Detector	Rec. from validation data		MSZ EN 15662:2009
139	0.01	D	0.2117	100.1		AcN			12	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	-
140		NA																
141	0.01	ND	ND			AcN			15	No		Standard addition		MS/MS (QQQ)	GC-MS/MS (QQQ)	Via Standard addition		DAR-QuEChERS
142		D	0.300	95		AcN			15	No	SPE	Pure solvent - Multiple level		Diode Array Detector		Rec. from same batch		QuEChERS
143	0.005	D	0.128	86.8		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
144		NA																
145	0.01	D	0.186	83		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Quinalphos (injection control)	In House
146	0.02	D	0.11	67		AcN			9.94	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
147	0.01	D	0.14	107														
148		D	0.047	81		AcN			10	Yes								QuEChERS
149	0.01	D	0.22	83.5		Acetone	DCM		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.133	100		AcN			15		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
151		NA																
152		ND	ND			AcN			10	No	DSPE	Matrix matched - Single level		MS	LC-MS	Via Standard addition	TDCPP	BS EN 15662
153	0.01	D	0.0895	100		AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			
154	0.01	D	0.20	70		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

ORTHOPHENYLPHENOL

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001		NA																
002	0.01	D	0.782	100	Yes	AcN			10	Yes	DSPE	Standard addition	MSD			Rec. from validation data	TDCPP	UNI EN 15662
003		NA																
004	0.01	D	0.781	95		AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS	Rec. from same batch	TPP	EN 15662
005	0.01	D	0.838	90.8		EtOAc			10	Yes		Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		2
006		NA																
007		NA																
008	0.01	D	1.00	89		EtOAc			10	Yes	Filter	Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	ND	ND			Cyclohexane	EtOAc		75	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		DFG S 19
010	0.01	D	0.561	94	Yes	AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		QuEChERS
011	0.4	D	0.904	68	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.826			Acetone	Cyclohexane EtOAc		20	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	Nitrofen, TPP	
013	0.010	D	0.886	86		AcN			10	No		Matrix matched - Single level	ECD/NPD		GC-MS	Rec. from same batch		EN 15662
014	0.01	D	1.30		Yes	AcN			1			Standard addition	MSD		GC-MS	Via Standard addition		Internal Method based on Fillion et alt. JAOAC 78-5-1995
015	0.01	D	0.85			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		Desmetryn	QuEChERS
016	0.01	D	0.891	82		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	1.17	104		AcN			10		DSPE	Standard addition	MSD		GC-TOF	Rec. from same batch	PCB 138	QuEChERS
018	0.01	D	1.04	100		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Lindane D6	QuEChERS
019	0.01	D	0.706	83.7		EtOAc			50	Yes	GPC	Matrix matched - Multiple level			GC-MS	Rec. from same batch		EtOAc extraction
020		D	1.0	87	Yes	MeOH			10		DSPE	Matrix matched - Multiple level	TOF		GC-TOF	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.04	D	2.19	140		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Caffeine	QuEChERS European Method EN 15662
022		NA																
023	0.01	D	0.824	110		AcN	Toluol		10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.850	89		Acetone	DCM	PE	15	No		Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		Luke
025		NA																
026	0.01	D	0.991	94.5		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	EN 15662
027		NA																
028	0.01	D	0.911			AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS			QuEChERS
029	0.01	D	1.1	108		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.01	D	0.976	100		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TRIS	EN 15662:2008
031		NA																
032	0.01	D	0.841	106		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch		QuEChERS
033	0.01	D	1.06	105.9		EtOAc			25	Yes		Matrix matched - Single level	MSD			Rec. from same batch		3
034		NA																
035	0.02	D	0.925	75		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TBP, TPP	QuEChERS
036	0.01	D	0.658	99.2		AcN	AcN		5	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS
037	0.01	D	0.51	78		AcN			10	Yes	DSPE	Pure solvent - Multiple level	IDT		GC-MS	Rec. from same batch	Bromophos Methyl	NF EN 15662
038	0.01	D	1.15	93		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039		D	0.95	75.2		AcN			10	No	DSPE	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	TPP	QuEChERS
040	0.01	D	0.348	91		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
041		NA																
042	0.01	D	0.614	84		AcN			10		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		prEN 15662:2008
043		NA																
044		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

ORTHOPHENYLPHENOL

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
045		NA																
046		NA																
047	0.02	D	0.86	104		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	IDT		GC-MS/MS (ITD)	Rec. from same batch	TPP	miniLuke
048	0.010	D	0.787	101.0		AcN			15	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Rec. from same batch	TDCPP	EN15662
049	0.01	D	1.045	91		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch		PRES/069
050		NA																
051		NA																
052		NA																
053	0.05	D	0.77	79		DCM			15	No	GPC	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	Ethion	Istisan 97/23
054	0.01	D	1.01	93		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	Triphenylmethane	QuEChERS, citrate buffered
055		NA																
056		NA																
057	0.01	D	1.16	95.8		Acetone	EtOAc	Cyclohexane	25	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-TOF	Rec. from same batch		modulare Multimethode according Ã§64 LFGB, L 00.00-34
058		D	0.485	63		DCM			10	No	DSPE	Pure solvent - Single level	MSD		GC-MS	Rec. from validation data		
059	0.01	D	0.780	74.3		EtOAc			20	Yes		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		Internal Method
060	0.03	D	1.05	87		EtOAc			50			Matrix matched - Multiple level			GC-MS	Rec. from validation data		1) A. Anderson, H. Plashed, Fresenius J Anal Chem., 339 (1991) 365 2) A. Andersson, H. PÃ¥lsheden, Pesticide Analytical Methods in Sweden, Part 1,Ra
061	0.05	D	1.1	123		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	
062		NA																
063	0.005	D	0.42	100		AcN			10	Yes	DSPE		MS/MS (QQQ)		GC-MS	Rec. from same batch	Bromophos Methyl	QuEChERS
064	0.01	D	0.82	68		EtOAc			10	Yes	SPE	Pure solvent - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch	Anthracene	Internal Method
065		NA																
066	0.02	D	1.66	82		AcN			10		DSPE	Pure solvent - Multiple level	MS trap		GC-MS	Rec. from same batch	TPP	NF EN 15662
067	0.01	D	0.849			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068		NA																
069	0.01	D	1.31	100		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070		NA																
071		D	1.83	100		n-Hexane			25	No	Liquid/liquid partitioning	Matrix matched - Multiple level	ITD		GC-MS	Rec. from same batch		
072	0.01	D	0.985	107		EtOAc			20		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Luke
073	0.01	D	0.914	117		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS
074		NA																
075		NA																
076	0.01	D	1.1	101		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
077	0.1	D	1.11	119.3		AcN			10	No	DSPE	Pure solvent - Multiple level	IDT			Via Standard addition	TriChloroNate	NF EN 15662
078	0.01	D	0.704	80		AcN			15	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
079	0.01	D	1.37	94		AcN			10	No	DSPE	Matrix matched - Single level	MS/MS (IT)			Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080		NA																
081		NA																
082	0.02	D	0.786	82		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	HCB	
083		NA																
084		NA																
085	0.01	D	0.773	99		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
086	0.1	D	0.541	93.3														
087		NA																
088		NA																
089		NA																
090	0.01	D	0.55	72%		DCM			10	No	Extrelut	Pure solvent - Single level	MSD		GC-MS	Rec. from same batch	TPP	Rapp. ISTISAN 1997/23-met. B4

APPENDIX 9. Methods used by participants for determining pesticides.

ORTHOPHENYLPHENOL																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
091	0.01	D	0.800	50	Yes	AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS		Rec. from same batch		
092	0.01	D	0.624	71		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093		NA																
094	0.05	D	0.685	90		EtOAc			30		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPE	A.H. Roos et al, Anal Chim Acta, vol 196, 95-102 (1987)
095		NA																
096	0.01	D	0.697	80		EtOAc			10	No	SPE	Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	TBP	In house
097	0.01	D	0.731	100		AcN			10	No	DSPE	Matrix matched - Single level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
098	0.01	D	0.453	109		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.672	100		AcN			10	No	DSPE	Standard addition	MS/MS (QQQ)			Via Standard addition	TPP	QuEChERS
100	0.01	D	0.94	90		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MSD		GC-MS	Via Standard addition	Propazine	Internal Method GC/MS
101	0.01	D	0.76	78		AcN			10	Yes	PSA	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS
102	0.05	D	0.73	71		AcN			12	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		EN 15662
103	No Results Reported																	
104	0.01	D	0.805	63	Yes	Acetone	DCM		50	No		Pure solvent - Multiple level	MSD		GC-MS	Rec. from same batch	Bromophos Methyl	EN 12393
105	0.04	D	0.842	95		Acetone	DCM		10			Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		luke
106		NA																
107		NA																
108	0.01	D	1.03	62		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
109	0.01	D	1.00	110		AcN			10	No	SPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	SOP
110	0.01	D	0.867	97.5		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	Mini Luke
111		NA																
112	0.01	D	0.845	92	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.783	93		Acetone			20	No	SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	in house
115	0.01	D	0.85	100		AcN			10	No	DSPE	Standard addition	MSD			Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.548	88		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Analysis of pesticide residues in fruit and vegetables with EtOAc extraction
117	0.005	D	0.649	89		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Trifluralin D14	CHEM 014
118	0.01	D	0.54	104		AcN			10		DSPE	Matrix matched - Multiple level	MS/MS (QQQ)					QuEChERS
119	0.01	D	0.721	87.8		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	TPP	QuEChERS
120	0.007	D	0.95	85		EtOAc			13	No	GPC	Matrix matched - Multiple level	TOF			Rec. from same batch	TPP	
121	0.01	D	0.871	87.9		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		S-19
122	0.02	D	0.82	111		EtOAc			10			Matrix matched - Single level	MSD		GC-MS	Via Standard addition	TPP	AcOEt
123		NA																
124	0.05	D	0.867	89		Acetone			50	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
125	0.10	D	1.33	78		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	TOF		GC-TOF	Rec. from same batch	TPP	
126		NA																
127		NA																
128	0.01	D	0.902	95		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		GC-MSMS
129	0,01	D	0.483			AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS			QuEChERS
130	0.01	D	0.28	60		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.718	81.6		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		EN15662:2008
132		NA																
133		NA																
134		NA																
135		NA																
136		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

ORTHOPHENYLPHENOL																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
137	0.01	D	0.910	Standard addition	Yes	EtOAc			15	No	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.687	102.0		AcN			10	No	SPE	Pure solvent - Multiple level		UV	Diode Array Detector	Rec. from validation data		MSZ EN 15662:2009
139	0.01	D	0.745	90		Acetone	DCM	Petr. ether	7.5	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)		LC-MS/MS (QQQ)	Rec. from same batch	TPP	
140	0.05	D	0.858	76		EtOAc			50	No	GPC	Matrix matched - Multiple level	TOF			Rec. from same batch	TPP	EN 12393-2
141	0.01	D	0.699	82.2		AcN			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		DAR-QuEChERS
142		D	0.641	91		AcN			15	No	SPE	Pure solvent - Multiple level		Diode Array Detector		Rec. from same batch		QuEChERS
143	0.01	D	0.646	72.8		Acetone	DCM	Petr. ether	15	No		Matrix matched - Single level	MSD		GC-MS	Rec. from same batch		Mini-Luke
144		NA																
145	0.01	D	0.756	91		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level	ITD		GC-MS/MS (QQQ)	Rec. from same batch	Ethoprofos (injection control)	In House
146	0.01	D	0.695	74.6		AcN			9.95	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	TPP	QuEChERS
147		NA																
148		D	0.975	88		Acetone	DCM	BENZINE	13	No								EXTRACTION+PARTITION
149	0.01	D	0.83	82.8		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.05	D	0.805	91		AcN			15		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		
151		NA																
152		NA																
153		NA																
154	0.01	D	1.35	99		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

OXAMYL

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	ISTD Details
001	0.01	D	0.0536	73.99		DCM			50	No	SPE	Standard addition		Fluorescence		Rec. from same batch		531.1 REV 3.1.1995 National Exposure Research Laboratory US EPA, Cincinnati Ohio 45268
002	0.01	D	0.132	95	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.126	93		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15662
004	0.01	D	0.138	95		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
005	0.01	D	0.143	103.9		EtOAc			10	Yes		Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		1
006	0.01	D	0.105	84		AcN			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
007	0.09	D	0.09	70 - 120		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
008	0.01	D	0.120	84		EtOAc			10	Yes	Filter	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.190	99		MeOH	DCM		10	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Chem Elut
010	0.01	D	0.120	118		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		QuEChERS
011	0.025	D	0.129	88.8		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Ã§ 64 LFGB L 00.00-115
012	0.01	D	0.124			MeOH			10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Cyprodinil	
013	0.005	D	0.153	106		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
014	0.01	D	0.154	100.8		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		UNI EN 15662:2009
015	0.01	D	0.17			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Desmetryn	QuEChERS
016		NA																
017	0.01	D	0.154	101		AcN			10			Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Pirimicarb D6	QuEChERS
018	0.01	D	0.132	96		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Isoproturon D6	QuEChERS
019	0.01	D	0.129	98.2		EtOAc			50	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EtOAc extraction
020		D	0.11	101	Yes	MeOH			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.01	D	0.154	130		MeOH	Water		10	No	Filter	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	FP086
022		NA																
023	0.005	D	0.152	108		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.121	89		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		QuEChERS
025		NA																
026	0.01	D	0.145	102.0		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
027		NA																
028	0.01	D	0.191			AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Atrazin D5	QuEChERS
029	0.01	D	0.14	101		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.01	D	0.107	94		Acetone	DCM		25		SPE	Pure solvent - Multiple level		Fluorescence	LC-MS	Rec. from same batch		Interlaboratory validated method
031		NA																
032	0.01	D	0.141	113		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
033	0.01	D	0.128	92.5		AcN			10	Yes	DSPE	Matrix matched - Single level		MS/MS (QQQ)		Rec. from same batch		1
034	0.01	D	0.102	80		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
035	0.005	D	0.17	93		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
036	0.01	D	0.118	-	Yes	AcN	AcN		5	Yes	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	TRIS	QuEChERS
037	0.01	D	0.16	92		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		NF EN 15662
038		NA																
039		NA																
040	0.01	D	0.164	99		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
041		NA																
042	0.01	ND	ND			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		prEN15662:2008
043		NA																
044		NA																
045		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

OXAMYL																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	ISTD Details
046		NA																
047	0.01	D	0.14	74		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
048	0.010	D	0.125	90.1		AcN			15	No	DSPE	Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TDCPP	EN15662
049	0.01	D	0.123	76		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		PRES/069
050	0.01	D	0.145	81		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
051		NA																
052		NA																
053		NA																
054	0.005	D	0.148	92		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	Linuron-d6	QuEChERS, citrate buffered
055		NA																
056		NA																
057	0.01	D	0.190	97.9		MeOH			10	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		"BfR"-Methode according Â§64 LFGB, L 00.00-113 (cleanup diatomeenerde)
058		NA																
059	0.01	D	0.108	65.5	Yes	EtOAc			20	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		Internal Method
060		NA																
061	0.01	D	0.16	79		Acetone	DCM		10	No		Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
062		NA																
063	0.005	D	0.069	96		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS - NF EN 15662
064	0.01	D	0.15	83		EtOAc			10	Yes	SPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	isoproturon D6	Internal Method
065		NA																
066		NA																
067	0.01	D	0.13			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068		NA																
069	0.01	D	0.171	110.5		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070	0.01	D	0.134			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)				QuEChERS
071		ND	ND			EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072	0.01	D	0.011	0		EtOAc			20		GPC	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		Luke
073	0.01	D	0.117	101		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	0.117	77		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	In House Method
075	0.01	D	0.101	70		AcN	AcN	AcN	10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		modified EN 15662
076	0.01	D	0.13	97		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077	0.015	D	0.137	79.5		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	NF EN 15662
078	0.02	D	0.102	91		AcN			15	No	DSPE	Matrix matched - Multiple level		Diode Array Detector		Rec. from same batch		QuEChERS
079	0.01	D	0.177	109		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080		NA																
081		NA																
082	0.01	D	0.125	77		Acetone	DCM	Petr. ether	7.5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		
083		NA																
084		NA																
085	0.005	D	0.164	96		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
086	0.004	D	0.232	108.4														
087		NA																
088		NA																
089		NA																
090	0.01	D	0.13	87		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662

APPENDIX 9. Methods used by participants for determining pesticides.

OXAMYL																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	ISTD Details
091	0.01	D	0.110	78		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS		Rec. from same batch		
092	0.01	D	0.126	88		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093		NA																
094	0.01	D	0.155	100		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	S.J. Lehotay et al, J. AOAC Int., vol 88, 615-629 (2005)
095		NA																
096	0.01	D	0.150	103		EtOAc			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TBP	In house
097	0.01	D	0.136	84		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
098	0.01	D	0.112	83		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.145	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)		Via Standard addition		QuEChERS
100		NA																
101	0.01	D	0.18	112		AcN			10	Yes	PSA	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
102	0.05	ND	ND			AcN			12	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS			CEN 15662
103	No Results Reported																	
104	0.01	D	0.175	139	Yes	AcN			10	Yes	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
105	0.01	D	0.140	100		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		acetato de etilo
106		NA																
107		NA																
108	0.01	D	0.141	110		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	QuEChERS
109	0.01	D	0.15	92		AcN			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	SOP
110	0.01	D	0.111	92.4		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
111		NA																
112	0.01	D	0.140	95	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.145	107		MeOH	Water		10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		chem elut
115		NA																
116	0.01	D	0.115	85		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Multiresidue Method using QuEChERS
117	0.005	D	0.124	114		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbendazim D4	CHEM 014
118	0.01	D	0.054	95		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			QuEChERS
119	0.01	D	0.107	87.0		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
120	0.004	D	0.139	96		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
121	0.01	D	0.179	97.8		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		S-19
122		NA																
123		NA																
124	0.01	D	0.162	107		MeOH	Water		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Oxfendazole	
125	0.002	D	0.200	101		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
126		NA																
127		ND	ND			AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	0.121	79.1		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		LC-MSMS; CEN/TR 15641
129	0.01	D	0.057			AcN			10	No	DSPE	Matrix matched - Multiple level		MS	LC-MS/MS (QQQ)			QuEChERS
130	0.01	D	0.13	68		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.108	79.5		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		EN15662:2008
132		NA																
133		NA																
134	0.01	D	0.13	97		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
135		D	0.08	76		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		

APPENDIX 9. Methods used by participants for determining pesticides.

OXAMYL																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	ISTD Details
136	0.01	D	0.124	107		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		
137	0.01	D	0.164	Standard addition	Yes	EtOAc			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.102	96.1		AcN			10.0	No	SPE	Pure solvent - Multiple level		UV	Diode Array Detector	Rec. from validation data		MSZ EN 15662:2009
139	0.01	D	0.094	99.5		AcN			12	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
140		NA																
141	0.01	D	0.142	85.2		AcN			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		DAR-QuEChERS
142		D	0.151	95		AcN			15	No	SPE	Pure solvent - Multiple level		Diode Array Detector		Rec. from same batch		QuEChERS
143	0.005	D	0.0972	86.1		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
144		NA																
145	0.01	D	0.135	99		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Quinalphos (injection control)	In House
146	0.02	D	0.086	72.3		AcN			9.94	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
147	0.01	D	0.12	110														
148		D	0.065	85		AcN			10	Yes								QuEChERS
149	0.01	D	0.12	70		Acetone	DCM		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.116	94		AcN			15		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
151		NA																
152		ND	ND			AcN			10	No	DSPE	Matrix matched - Single level		MS	LC-MS	Via Standard addition	TDCPP	BS EN 15662
153	0.01	D	0.0875	100		AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			
154	0.01	D	0.14	71		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

PENDIMETHALIN

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001		NA																
002	0.01	D	0.627	98	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.521	95		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15662
004	0.01	D	0.601	103		AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS	Rec. from same batch	TPP	EN 15662
005	0.01	D	0.604	86.5		EtOAc			10	Yes		Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		2
006		NA																
007		D	0.43	70 - 120		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
008	0.01	D	0.631	86		EtOAc			10	Yes	Filter	Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.460	94		Cyclohexane	EtOAc		75	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		DFG S19
010	0.01	D	0.711	103		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		QuEChERS
011	0.01	D	0.638	94.8		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.584			Acetone	Cyclohexane EtOAc		20	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	Nitrofen, TPP	
013	0.010	D	0.632	93.2		AcN			10	No		Matrix matched - Single level	ECD/NPD		GC-MS	Rec. from same batch		EN 15662
014	0.01	D	0.831		Yes	AcN			1			Standard addition	MSD		GC-MS	Via Standard addition		Internal Method based on Fillion et alt. JAOAC 78-5-1995
015	0.01	D	0.65			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		Desmetryn	QuEChERS
016	0.01	D	0.625	98		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	0.633	113		AcN			10			Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Pirimicarb D6	QuEChERS
018	0.01	D	0.584	92		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos-MeD6	QuEChERS
019	0.01	D	0.479	91		EtOAc			50	Yes	GPC	Matrix matched - Multiple level	ECD	MS/MS (QQQ)	GC-MS	Rec. from same batch		EtOAc extraction
020		D	0.55	79	Yes	MeOH			10		DSPE	Matrix matched - Multiple level	TOF	MS/MS (QQQ)	GC-TOF	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.01	D	0.648	94		MeOH	Water		10	No	Filter	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	FP086
022		NA																
023	0.005	ND	ND			AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 151662 (QuEChERS-Citrate buffered)
024	0.01	D	0.640	84		Acetone	DCM	PE	15	No		Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		Luke
025		NA																
026	0.01	D	0.753	136.5		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	EN 15662
027		NA																
028	0.01	D	0.669			AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS			QuEChERS
029	0.01	D	0.60	102		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.01	D	0.652	73		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TRIS	EN 15662:2008
031		NA																
032	0.01	D	0.668	102		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
033	0.01	D	0.718	113.2		EtOAc			25	Yes		Matrix matched - Single level	MSD			Rec. from same batch		3
034		NA																
035	0.02	D	0.597	108		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TBP, TPP	QuEChERS
036	0.01	D	0.567		Yes	AcN	AcN		5	Yes	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	TRIS	QuEChERS
037	0.01	D	0.51	87		AcN			10	Yes	DSPE	Pure solvent - Multiple level	IDT		GC-MS	Rec. from same batch	Bromophos Methyl	NF EN 15662
038	0.01	D	0.785	104		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039		NA																
040	0.01	D	0.524	88		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
041		NA																
042	0.01	D	0.549	88		AcN			10		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		prEN 15662:2008
043		NA																
044		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

PENDIMETHALIN

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
045		NA																
046	0.01	D	0.607	93.9	Yes	Acetone	EtOAc	Hexane	2			Matrix matched - Single level	ECD		Two columns			Internal Method
047	0.02	D	0.63	104		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	IDT		GC-MS/MS (ITD)	Rec. from same batch	TPP	miniLuke
048	0.010	D	0.577	94.0		AcN			15	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Rec. from same batch	TDCPP	EN15662
049	0.01	D	0.614	125		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch		PRES/069
050	0.01	D	0.834	95		AcN			10	No		Matrix matched - Multiple level	ECD		GC-MS/MS (QQQ)	Rec. from same batch		
051	<0.01	D	0.31	77	Yes	AcN	AcN	AcN	10	Yes	DSPE	Matrix matched - Single level	NPD	Diode Array Detector	GC-MS	Rec. from same batch	TPP	uni en 15662
052		NA																
053	0.05	D	0.49	92		DCM			15	No	GPC	Pure solvent - Multiple level	NPD		GC-MS	Via Standard addition	Ethion	Istisan 97/23
054	0.005	D	0.704	92		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	Triphenylmethane	QuEChERS, citrate buffered
055	0.01	D	0.37	120		AcN			10	Yes	DSPE	Standard addition	MSD		GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
056	0.01	D	0.36			EtOAc	EtOAc	EtOAc	16	Yes	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)		Fenclorfos	rapporti istisan 1997/23-1997/24
057	0.005	D	0.656	91.7		Acetone	EtOAc	Cyclohexane	25	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-TOF	Rec. from same batch		modulare Multimethode according Â§64 LFGB, L 00.00-34
058		D	0.378	93		DCM			10	No	DSPE	Pure solvent - Single level	ECD		GC-MS	Rec. from validation data	Endosulfan Lactone	
059	0.01	D	0.542	90.3		EtOAc			20	Yes		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		Internal Method
060		NA																
061	0.01	D	0.71	111		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	
062	0.01	D	0.661	87		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from ring test		EN 15662:2008
063	0.01	D	0.38	91		AcN			10	Yes	DSPE		MS/MS (QQQ)		GC-MS	Rec. from same batch	Bromophos Methyl	QuEChERS
064	0.01	D	0.63	96		EtOAc			10	Yes	SPE	Pure solvent - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch	Anthracene	Internal Method
065		NA																
066	0.01	D	0.542	79		AcN			10		DSPE	Pure solvent - Multiple level	MS trap		GC-MS	Rec. from same batch	TPP	NF EN 15662
067	0.01	D	0.58			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068		NA																
069	0.01	D	0.628	96		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070	0.01	D	0.685	99		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
071		D	1.10	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072		NA																
073	0.01	D	0.539	107		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	0.693	116		EtOAc			10	No		Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	PCB-28	In House Method
075		NA																
076	0.01	D	0.68	93		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077		NA																
078	0.01	D	0.528	84		AcN			15	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
079	0.01	D	0.87	96		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080	0.01	D	0.49	70		Acetone	DCM		100	No		Matrix matched - Multiple level	ECD		Two columns	Rec. from validation data		Kadenczki i wspÅ,. (1992)JOAOAC Int. 75: 53-63
081		NA																
082	0.02	D	0.428	71		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	HCB	
083	0.01	D	0.69	94		Acetone	DCM		5	No	SPE	Pure solvent - Single level	ECD			Rec. from same batch		
084	0.02	D	0.581	107		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch	NO	Analytical methods for pesticide residues in foodstuffs. Sixth edithion. June 1996. Ministry of Public Health, Welfare and Sport. The Netherlands.
085	0.005	D	0.451	103		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
086		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

PENDIMETHALIN																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
087	0.01	D	0.743	99.0		EtOAc			25	No	Liquid/liquid partitioning	Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch		Multi-residue Method 5, Organophosphorus compounds, Analytical methods of residues of pesticides, 5th Edition, 1988. Dutch Ministry of Welfare, Healt
088		NA																
089	0.05	D	0.58	86.5		DCM	Acetone		5	No	MSPD, silica gel/alumina	Pure solvent - Single level	NPD		GC/NPD, GC/ECD	Rec. from validation data		
090	0.01	D	0.47	67%		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
091	0.01	D	0.405	102		AcN			10	Yes	DSPE	Pure solvent - Multiple level	ECD		GC-MS	Rec. from same batch		
092	0.01	D	0.478	79		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093		NA																
094	0.01	D	0.570	91		EtOAc			30		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPE	A.H. Roos et al, Anal Chim Acta, vol 196, 95-102 (1987)
095		NA																
096	0.01	D	0.668	87		EtOAc			10	No	SPE	Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	TBP	In house
097	0.01	D	0.582	84		AcN			10	No	DSPE	Matrix matched - Single level	MS/MS (QQQ)		GC-MS	Rec. from same batch		QuEChERS
098	0.01	D	0.717	94		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.464	100		AcN			10	No	DSPE	Standard addition	MS/MS (QQQ)			Via Standard addition	TPP	QuEChERS
100	0.01	D	0.46	75		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MSD		GC-MS	Via Standard addition	Propazine	Internal Method GC/MS
101	0.01	D	0.55	94		AcN			10	Yes	PSA	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS
102	0.05	D	0.74	104		AcN			12	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		EN 15662
103	No Results Reported																	
104	0.05	D	0.954	70	Yes	Acetone	DCM		50	No		Pure solvent - Multiple level	MSD		GC-MS	Rec. from validation data	Bromophos Methyl	EN 12393
105	0.04	D	0.507	95		Acetone	DCM		10			Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		luke
106		NA																
107	0.01	D	0.429	99	Yes													
108	0.01	D	0.636	77		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
109	0.01	D	0.64	98		AcN			10	No	SPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	SOP
110	0.01	D	0.576	113.9		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	Mini Luke
111		D	0.65		Yes	Acetone	DCM		15			Matrix matched - Multiple level	NPD		GC-MS	Rec. from validation data		mini Luke
112	0.01	D	0.633	82	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.359	75		Acetone			20	No	SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	in house
115	0.01	D	0.49	100		AcN			10	No	DSPE	Standard addition	MSD			Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.390	111		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Analysis of pesticide residues in fruit and vegetables with EtOAc extraction
117	0.005	D	0.521	71		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Trifluralin D14	CHEM 014
118	0.01	D	0.44	97		AcN			10		DSPE	Matrix matched - Multiple level	MS/MS (QQQ)					QuEChERS
119	0.01	D	0.545	86.7		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		ECD	Rec. from same batch	TPP	QuEChERS
120	0.004	D	0.547	103		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
121	0.01	D	0.488	100.4		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		S-19
122		NA																
123		NA																
124	0.01	D	0.614	90		Acetone			50	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
125	0.008	D	0.585	104		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
126	0.01	D	0.433	93		AcN			15	Yes	DSPE	Matrix matched - Multiple level	GC-IT-MS/MS		GC-IT-MS/MS	Rec. from validation data		QuEChERS
127		D	0.60	83.10		AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	0.509	82		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		GC-MSMS
129	0.01	D	0.451			AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS			QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

PENDIMETHALIN																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
130	0.01	D	0.64	110		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.550	87.6		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	GC-ECD	Rec. from same batch		EN15662:2008
132		D	0.44	100		DCM			10		GPC	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	Biphenyl	Rapporti Istisan
133		D	0.693		Yes	AcN			10,03	No	DSPE	Matrix matched - Multiple level		MS		Via Standard addition		Metodo QuEChERS
134		NA																
135		NA																
136	0.01	D	0.650	102		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
137	0.01	D	0.510	Standard addition	Yes	EtOAc			15	No	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.466	102.5		AcN			10	No	SPE	Pure solvent - Multiple level	ECD		ECD	Rec. from same batch		MSZ EN 15662:2009
139	0.01	D	0.506	119		Acetone	DCM	Petr. ether	7.5	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)		LC-MS/MS (QQQ)	Rec. from same batch	TPP	
140	0.01	D	0.540	104		EtOAc			50	No	GPC	Matrix matched - Multiple level	ECD		GC-TOF	Rec. from same batch		EN 12393-2
141	0.01	D	0.622	100.7		AcN			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		DAR-QuEChERS
142		D	0.600	96		AcN			15	No	SPE	Pure solvent - Multiple level	ECD		Two columns	Rec. from same batch		QuEChERS
143	0.01	D	0.495	72.3		Acetone	DCM	Petr. ether	15	No		Matrix matched - Single level	MSD		GC-MS	Rec. from same batch		Mini-Luke
144		NA																
145	0.01	D	0.632	97		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level	ITD		GC-MS/MS (QQQ)	Rec. from same batch	Ethoprofos (injection control)	In House
146	0.05	D	0.495	76.7		AcN			9.952	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	TPP	QuEChERS
147	0.01	D	0.26	75														
148		D	0.469	91		Acetone	DCM	BENZINE	13	No								EXTRACTION+PARTITION
149	0.01	D	0.54	110		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-TOF	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.513	91		AcN			15		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		
151	0.05	D	0.578	102		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from validation data	TDCPP	UNI EN 15662
152		NA																
153		NA																
154	0.01	D	0.65	104		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

PHOSALONE

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001		NA																
002	0.01	D	0.278	97	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.231	106		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15662
004	0.01	D	0.247	94		EtOAc			18.5	No	GPC	Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		EN 12393
005	0.01	D	0.267	93.9		EtOAc			10	Yes		Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		2
006		NA																
007		D	0.12	70 - 120		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
008	0.01	D	0.344	83		EtOAc			10	Yes	Filter	Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.252	91		Cyclohexane	EtOAc		75	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		DFG S19
010	0.01	D	0.310	101		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		QuEChERS
011	0.01	D	0.298	93.2		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.299			Acetone	Cyclohexane EtOAc		20	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	Nitrofen, TPP	
013	0.010	D	0.305	88.8		AcN			10	No		Matrix matched - Single level	ECD/NPD		GC-MS	Rec. from same batch		EN 15662
014	0.01	D	0.440		Yes	AcN			1			Standard addition	MSD		GC-MS	Via Standard addition		Internal Method based on Fillion et alt. JAOAC 78-5-1995
015	0.01	D	0.29			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		Desmetryn	QuEChERS
016	0.01	D	0.279	102		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	0.405	105		AcN			10		DSPE	Standard addition	MSD		GC-TOF	Rec. from same batch	PCB 138	QuEChERS
018	0.01	D	0.390	77		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	PCB 170	QuEChERS
019	0.01	D	0.259	93.1		EtOAc			50	Yes	GPC	Matrix matched - Multiple level	FPD	MS/MS (QQQ)	GC-MS	Rec. from same batch		EtOAc extraction
020		D	0.35	82	Yes	MeOH			10		DSPE	Matrix matched - Multiple level	TOF	MS/MS (QQQ)	GC-TOF	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.02	D	0.495	76		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Caffeine	QuEChERS European Method EN 15662
022	0.05	D	0.18	100		DCM			10	No	GPC	Standard addition	NPD		GC-MS	Via Standard addition		internal
023	0.01	D	0.269	96		AcN	Toluol		10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.290	85		Acetone	DCM	PE	15	No		Matrix matched - Multiple level	MSD	MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		Luke
025	0.05	D	0.08			EtOAc			10			Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)		TPP	
026	0.01	D	0.366	104.8		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
027	0.02	D	0.779	95		Acetone	DCM	Petr. ether	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		Mini-Luke
028	0.01	D	0.283			AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS			QuEChERS
029	0.01	D	0.24	104		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.01	D	0.474	118		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TRIS	EN 15662:2008
031	0.05	D	0.38	112		AcN			10	No	DSPE	Matrix matched - Multiple level			GC-MS	Rec. from same batch		QuEChERS
032	0.01	D	0.237	84		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
033	0.01	D	0.350	99.9		EtOAc			25	Yes		Matrix matched - Single level	FPD		GC-MS	Rec. from same batch		2
034	0.01	ND	ND			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15622
035	0.02	D	0.284	80		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TBP, TPP	QuEChERS
036	0.01	D	0.298	90.3		AcN	AcN		5	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TRIS	QuEChERS
037	0.01	D	0.15	101		AcN			10	Yes	DSPE	Pure solvent - Multiple level	IDT			Rec. from same batch	Bromophos Methyl	NF EN 15662
038	0.01	D	0.326	85		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039		D	0.28	118.8		AcN			10	No	DSPE	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	TPP	QuEChERS
040	0.01	D	0.126	76		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
041	0.05	D	0.211	82.97		EtOAc			50	No		Matrix matched - Single level	NPD		Two columns	Rec. from same batch		MINISTRY OF WELFARE,NETHERLANDS,1996
042	0.01	D	0.162	110		AcN			10		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		prEN 15662:2008
043	0.01	D	0.17	95.2		EtOAc			15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	MA01
044	0.01	D	0.088			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		TDCPP	EN 15662
045	0.05	D	0.302	76		AcN			10		DSPE	Pure solvent - Multiple level	ECD+NPD		GC-MS/MS Iontrap	Rec. from validation data		PN EN 15662
046	0.01	D	0.266	101.7	Yes	Acetone	EtOAc	Hexane	2			Matrix matched - Single level	ECD		Two columns			Internal Method

APPENDIX 9. Methods used by participants for determining pesticides.

PHOSALONE

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
047	0.01	D	0.34	60		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	IDT		GC-MS/MS (ITD)	Rec. from same batch	TPP	miniLuke
048	0.010	D	0.151	101.2		AcN			15	No	DSPE	Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TDCPP	EN15662
049	0.01	D	0.296	127		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch		PRES/069
050	0.01	D	0.176	80		AcN			10	No		Matrix matched - Multiple level	ECD		GC-MS/MS (QQQ)	Rec. from same batch		
051	<0.01	D	0.16	78	Yes	AcN	AcN	AcN	10	Yes	DSPE	Matrix matched - Single level	NPD	Diode Array Detector	GC-MS	Rec. from same batch	TPP	uni en 15662
052	0.01	D	0.238	88		Acetone	DCM		100	No	Florisil	Matrix matched - Single level	ECD		Two columns	Rec. from validation data		Luke
053	0.05	D	0.31	116		DCM			15	No	GPC	Pure solvent - Multiple level	NPD		GC-MS	Via Standard addition	Ethion	Istisan 97/23
054	0.005	D	0.371	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	Triphenylmethane	QuEChERS, citrate buffered
055	0.01	D	0.20	107		AcN			10	Yes	DSPE	Standard addition	MSD		GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
056	0.01	D	0.22			EtOAc	EtOAc	EtOAc	16	Yes	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)		Fenclorfos	rapporti istisan 1997/23-1997/24
057	0.005	D	0.348	87.2		Acetone	EtOAc	Cyclohexane	25	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-TOF	Rec. from same batch		modulare Multimethode according Â§64 LFGB, L 00.00-34
058		D	0.160	76		DCM			10	No	DSPE	Pure solvent - Single level	NPD		GC-MS	Rec. from validation data	Ethion	
059	0.01	D	0.211	77.3		EtOAc			20	Yes		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		Internal Method
060	0.02	D	0.387	85		EtOAc			50			Matrix matched - Multiple level			GC-MS	Rec. from validation data		1) A. Anderson, H. Plashed, Fresenius J Anal Chem., 339 (1991) 365 2) A. Andersson, H. PÄlsheden, Pesticide Analytical Methods in Sweden, Part 1,Ra
061	0.01	D	0.37	112		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	
062	0.01	D	0.263	84		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from ring test		EN 15662:2008
063	0.01	D	0.104	89		AcN			10	Yes	DSPE		MS/MS (QQQ)		GC-MS	Rec. from same batch	Bromophos Methyl	QuEChERS
064	0.01	D	0.34	59		EtOAc			10	Yes	SPE	Pure solvent - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch	Anthracene	Internal Method
065		NA																
066	0.01	D	0.379	94		AcN			10		DSPE	Pure solvent - Multiple level	MS trap		GC-MS	Rec. from same batch	TPP	NF EN 15662
067	0.01	D	0.306			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068	0.2	D	0.27			QuEChERS			10.19									CG-ECD-NPD
069	0.01	D	0.439	101		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070	0.01	D	0.324	110		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	TPP	QuEChERS
071		D	0.47	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072	0.01	D	0.327	103		EtOAc			20		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Luke
073	0.01	D	0.270	109		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	0.253	91		EtOAc			10	No		Standard addition	MS/MS (QQQ)			Rec. from same batch	PCB-28	In House Method
075	0.01	D	0.159	75		AcN	AcN	AcN	10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		modified EN 15662
076	0.01	D	0.30	109		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077	0.02	D	0.288	102.9		AcN			10	No	DSPE	Matrix matched - Multiple level	IDT			Via Standard addition	TriChloroNate	NF EN 15662
078	0.01	D	0.244	92		AcN			15	No	DSPE	Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		QuEChERS
079	0.01	D	0.475	122		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080	0.01	D	0.25	84		Acetone	DCM		100	No		Matrix matched - Multiple level	ECD		Two columns	Rec. from validation data		Kadenczki i wspÂ., (1992)JOAOAC Int. 75: 53-63
081	0.01	D	0.225	83		Acetone	DCM	Petr. ether	7.5	No		Matrix matched - Single level	NPD		Two columns	Rec. from same batch		MULTIRESIDUE METHOD, ANALYTICAL METHOD FOR PESTICIDE RESIDUES IN FOODSTUFFS 6TH EDITION
082	0.02	D	0.223	78		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	HCB	
083	0.01	D	0.26	98		Acetone	DCM		5	No	SPE	Pure solvent - Single level	ECD			Rec. from same batch		
084	0.02	D	0.109	99		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch	NO	Analytical methods for pesticide residues in foodstuffs, Sixth edithion. June 1996. Ministry of Public Health, Welfare and Sport. The Netherlands.
085	0.005	D	0.298	96		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
086	0.01	D	0.246	90.9														
087	0.01	D	0.339	97.0		EtOAc			25	No	Liquid/liquid partitioning	Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch		Multi-residue Method 5, Organophosphorus compounds, Analytical methods of residues of pesticides, 5th Edition, 1988. Dutch Ministry of Welfare, Healt
088		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

PHOSALONE

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
089	0.01	D	0.32	79.7		DCM	Acetone		5	No	MSPD, silica gel/alumina	Pure solvent - Single level	NPD		GC/NPD, GC/ECD	Rec. from validation data		
090	0.01	D	0.25	92%		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
091	0.01	D	0.159	95														
092	0.01	D	0.202	81		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093	0.03	D	0.229	96		EtOAc	Cyclohexane		50	No	GPC	Pure solvent - Multiple level	NPD		Two columns	Rec. from same batch		EN12393
094	0.01	D	0.215	88		EtOAc			30		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPE	A.H. Roos et al, Anal Chim Acta, vol 196, 95-102 (1987)
095		NA																
096	0.01	D	0.337	77		EtOAc			10	No	SPE	Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	TBP	In house
097	0.01	D	0.215	86		AcN			10	No	DSPE	Matrix matched - Single level	MS/MS (QQQ)		GC-FPD	Rec. from same batch		QuEChERS
098	0.01	D	0.353	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.264	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)		Via Standard addition		QuEChERS
100	0.01	D	0.32	99		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MSD		GC-MS	Via Standard addition	Propazine	Internal Method GC/MS
101	0.01	D	0.19	78		AcN			10	Yes	PSA	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS
102	0.05	D	0.21	87		AcN			12	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		EN 15662
103	No Results Reported																	
104	0.02	D	0.343	112	Yes	Acetone	DCM		50	No		Pure solvent - Multiple level	MSD		GC-MS	Rec. from same batch	Bromophos Methyl	EN 12393
105	0.03	D	0.328	90		Acetone	DCM		10	Yes		Matrix matched - Multiple level	FPD		GC-MS	Rec. from same batch		luke
106	0.02	D	0.27	101.5		EtOAc			25	No								In house based in: Ministry of Welfare, health and cultural affairs, Netherlands Analytical Methods for residues of pesticides in foodstuffs. Mu
107	0.01	D	0.225	97	Yes													
108	0.01	D	0.343	88		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
109	0.01	D	0.29	101		AcN			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	SOP
110	0.01	D	0.242	82.5		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	Mini Luke
111		D	0.28		Yes	Acetone	DCM		15			Matrix matched - Multiple level	ECD		GC-MS	Rec. from same batch		mini Luke
112	0.01	D	0.262	87	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.307	100		Acetone			20	No	SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	in house
115	0.01	D	0.28	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.203	104		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Analysis of pesticide residues in fruit and vegetables with EtOAc extraction
117	0.005	D	0.243	70		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Trifluralin D14	CHEM 014
118	0.01	D	0.27	120		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			QuEChERS
119	0.01	D	0.256	93.8		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		PFPD	Rec. from same batch	TPP	QuEChERS
120	0.004	D	0.314	99		EtOAc			13	No	GPC	Matrix matched - Multiple level	TOF			Rec. from same batch	TPP	
121	0.01	D	0.288	83.9		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		S-19
122		NA																
123		D	0.224	88		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	PCB153, Anthracene, Ditalimphos	EN 15662:2008
124	0.01	D	0.324	100		Acetone			50	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
125	0.008	D	0.351	79		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	TOF		GC-TOF	Rec. from same batch	TPP	
126	0.02	D	0.165	74		AcN			15	Yes	DSPE	Matrix matched - Multiple level	GC-IT-MS/MS		GC-IT-MS/MS	Rec. from validation data		QuEChERS
127		D	0.37	118		AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	0.358	100		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		LC-MSMS; CEN/TR 15641
129	0.01	D	0.132			AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS			QuEChERS
130	0.01	D	0.29	130		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.271	80.4		AcN			10	Yes	DSPE	Matrix matched - Multiple level	PFPD		GC-MS	Rec. from same batch	TDCPP	EN15662:2008
132		D	0.31	100		DCM			10		GPC	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	Biphenyl	Rapporti Istisan
133		D	0.307		Yes	AcN			10	No	DSPE	Matrix matched - Multiple level		MS		Via Standard addition		Metodo QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

PHOSALONE																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
134	0.01	D	0.38	91		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
135		NA																
136	0.01	D	0.284	94		Acetone			20		Liquid/liquid partitioning	Matrix matched - Multiple level	ECD		NPD, two columns	Rec. from same batch		
137	0.01	D	0.240	Standard addition	Yes	EtOAc			15	No	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.255	95.5		AcN			10	No		Pure solvent - Multiple level	PFPD		GC-MS	Rec. from validation data		MSZ EN 15662:2009
139	0.01	D	0.288	95		Acetone	DCM	Petr. ether	7.5	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)		LC-MS/MS (QQQ)	Rec. from same batch	TPP	
140	0.05	D	0.247	90		EtOAc			50	No	GPC	Matrix matched - Multiple level	TOF			Rec. from same batch	TPP	EN 12393-2
141	0.01	D	0.335	93.9		AcN			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		DAR-QuEChERS
142		D	0.140	69		AcN			15	No		Pure solvent - Multiple level	NPD		Two columns	Rec. from same batch		QuEChERS
143		NA																
144	0.026	D	0.349	122	Yes	Acetone	DCM	EtOAc	100	No	GPC	Matrix matched - Multiple level	NPD		GC-MS	Rec. from same batch		PN-EN 12393-1,2,3:2009
145	0.01	D	0.374	90		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Quinalphos (injection control)	In House
146	0.05	D	0.174	69.7		AcN			9.952	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	TPP	QuEChERS
147	0.01	D	0.13	93														
148		D	0.337	79		Acetone	DCM	BENZINE	13	No								EXTRACTION+PARTITION
149	0.01	D	0.26	107.2		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.290	97		AcN			15		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		
151	0.05	D	0.252	85		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from validation data	TDCPP	UNI EN 15662
152		D	0.259	93	Yes	AcN			10.01	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Via Standard addition	PCB 31	BS EN 15662
153		NA																
154	0.01	D	0.29	82		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

PROCHLORAZ																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001		NA																
002	0.01	D	0.308	98	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.278	105		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15662
004	0.01	D	0.316	99		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
005	0.01	D	0.250	101.3		EtOAc			10	Yes		Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		1
006	0.01	D	0.407	120		AcN			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
007		NA																
008	0.01	D	0.304	68		EtOAc			10	Yes	Filter	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.458	91		MeOH	DCM		10	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Chem Elut
010	0.01	D	0.220	103		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		QuEChERS
011	0.01	D	0.280	95.5		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.294			Acetone	Cyclohexane EtOAc		20	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	Nitrofen, TPP	
013	0.010	D	0.353	97.5		AcN			10	No		Matrix matched - Single level	ECD/NPD		GC-MS	Rec. from same batch		EN 15662
014	0.01	ND	ND			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		UNI EN 15662
015	0.01	D	0.50			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Desmetryn	QuEChERS
016	0.01	D	0.373	97		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	0.416	112		AcN			10			Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Pirimicarb D6	QuEChERS
018	0.01	D	0.465	85		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Propiconazole D5	QuEChERS
019	0.01	D	0.277	103.1		EtOAc			50	Yes		Matrix matched - Multiple level	ECD	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EtOAc extraction
020		D	0.38	101	Yes	MeOH			10		DSPE	Matrix matched - Multiple level	TOF	MS/MS (QQQ)	GC-TOF	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.02	D	0.462	109		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Caffeine	QuEChERS European Method EN 15662
022		NA																
023	0.015	D	0.324	108		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.315	93		Acetone	DCM	PE	15	No		Matrix matched - Multiple level	MSD	MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		Luke
025		NA																
026	0.01	D	0.428	114.3		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
027		NA																
028	0.01	D	0.319			AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Atrazin D5	QuEChERS
029	0.01	D	0.26	100		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.02	D	0.562	113		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TRIS	EN 15662:2008
031	0.05	D	0.32	95		AcN			10	No	DSPE	Matrix matched - Multiple level			GC-MS	Rec. from same batch		QuEChERS
032	0.01	D	0.3	96		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
033		ND	ND			EtOAc			25	Yes			MSD					1
034	0.01	D	0.243	110		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
035	0.05	D	0.294	75		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TBP, TPP	QuEChERS
036	0.01	D	0.317	91.0		AcN	AcN		5	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TRIS	QuEChERS
037	0.01	D	0.27	88		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		NF EN 15662
038	0.01	D	0.351	88		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039		NA																
040	0.01	D	0.340	110		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
041		NA																
042	0.01	D	0.212	94		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		prEN 15662:2008
043	0.01	D	0.04	77.5		EtOAc			15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	MA01

APPENDIX 9. Methods used by participants for determining pesticides.

PROCHLORAZ																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
044	0.01	D	0.060			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		TDCPP	EN 15662
045	0.05	D	0.292	83		AcN			10		DSPE	Pure solvent - Multiple level	ECD+NPD		GC-MS/MS Iontrap	Rec. from validation data		PN EN 15662
046	0.01	D	0.248	101.6	Yes	Acetone	EtOAc	Hexane	2			Matrix matched - Single level	ECD		Two columns			Internal Method
047	0.01	D	0.24	97		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
048	0.010	D	0.221	97.6		AcN			15	No	DSPE	Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TDCPP	EN15662
049	0.01	D	0.350	102		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch		PRES/069
050	0.01	D	0.375	85		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
051	<0.01	D	0.28	81	Yes	AcN	AcN	AcN	10.0	Yes	DSPE	Matrix matched - Single level	NPD	Diode Array Detector	GC-MS	Rec. from same batch	TPP	uni en 15662
052		NA																
053		NA																
054	0.01	D	0.386	102		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch	Linuron-d6	QuEChERS, citrate buffered
055		NA																
056		NA																
057	0.005	D	0.655	101.0		Acetone	EtOAc	Cyclohexane	25	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-TOF	Rec. from same batch		modulare Multimethode according Â§64 LFGB, L 00.00-34
058		D	0.249	66		DCM			10	No	DSPE	Pure solvent - Single level	NPD		GC-MS	Rec. from validation data	Ethion	
059	0.01	D	0.334	57.5	Yes	EtOAc			20	Yes		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		Internal Method
060		NA																
061	0.01	D	0.42	110		Acetone	DCM		10	No		Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
062	0.01	D	0.310	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from ring test		EN 15662:2008
063	0.005	D	0.26	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS - NF EN 15662
064	0.01	D	0.44	77		EtOAc			10	Yes	SPE	Pure solvent - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch	Anthracene	Internal Method
065		NA																
066	0.02	D	0.468	110		AcN			10		DSPE	Pure solvent - Multiple level	MS trap		GC-MS	Rec. from same batch	TPP	NF EN 15662
067	0.01	D	0.302			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068	0.02	D	0.19	-		QuEChERS			10.19									CG-ECD-NPD
069	0.01	D	0.393	85.5		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070		NA																
071		D	0.48	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072	0.01	D	0.015	0		EtOAc			20		GPC	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		Luke
073	0.01	D	0.260	107		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	0.234	82		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	In House Method
075	0.01	D	0.259	77		AcN	AcN	AcN	10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		modified EN 15662
076	0.01	D	0.28	76		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077	0.01	D	0.400	96.4		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	NF EN 15662
078	0.01	D	0.369	91		AcN			15	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
079	0.01	D	0.671	106		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080	0.01	D	0.26	79		Acetone	DCM		100	No		Matrix matched - Multiple level	ECD		Two columns	Rec. from validation data		Kadenczki i wspÃ,. (1992)JOAOAC Int. 75: 53-63
081		NA																
082	0.01	D	0.278	71		Acetone	DCM	Petr. ether	7.5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		
083		NA																
084	0.05	D	0.174	126		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch	NO	Analytical methods for pesticide residues in foodstuffs. Sixth edithion. June 1996. Ministry of Public Health, Welfare and Sport. The Netherlands.
085	0.005	D	0.283	97		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

PROCHLORAZ																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
086		NA																
087	0.02	D	0.129	81.0		Toluene	Isopropanol		25	No	Liquid/liquid partitioning	Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch		Multi-residue Method 1, Electron-captive compounds, Analytical methods of residues of pesticides, 5th Edition, 1988, Dutch Ministry of Welfare, Healt
088		NA																
089		NA																
090	0.01	D	0.27	90%		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
091	0.01	D	0.260	50	Yes	AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS		Rec. from same batch		
092	0.01	D	0.293	111		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093		NA																
094	0.01	D	0.364	103		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	S.J. Lehotay et al, J. AOAC Int., vol 88, 615-629 (2005)
095		NA																
096	0.01	D	0.291	88		EtOAc			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TBP	In house
097	0.01	D	0.232	83		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
098	0.01	D	0.290	93		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.374	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)		Via Standard addition		QuEChERS
100		NA																
101	0.01	D	0.27	84		AcN			10	Yes	PSA	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS
102		NA																
103	No Results Reported																	
104		ND	ND			Acetone	DCM		50	No		Pure solvent - Multiple level	MSD		GC-MS	Rec. from validation data	Bromophos Methyl	EN NF 12393
105	0.04	D	0.306	80		Acetone	DCM		10	Yes		Matrix matched - Multiple level	ECD		GC-MS	Rec. from same batch		luke
106		NA																
107	0.01	D	0.0992	99.5	Yes													
108	0.01	D	0.370	82		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
109	0.01	D	0.33	100		AcN			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	SOP
110	0.01	D	0.199	58.2		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	Mini Luke
111	0.1	D	0.10		Yes	Acetone	DCM		15			Matrix matched - Multiple level	ECD		GC-MS	Rec. from validation data		mini Luke
112	0.01	D	0.295	98	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.413	93		MeOH	Water		10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		chem elut
115	0.01	D	0.29	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.202	114		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Analysis of pesticide residues in fruit and vegetables with EtOAc extraction
117	0.005	D	0.302	72		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbendazim D4	CHEM 014
118	0.01	D	0.29	110		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			QuEChERS
119	0.01	D	0.258	96.0		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
120	0.004	D	0.250	97		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
121	0.01	D	0.405	103.2		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		S-19
122	0.08	D	0.32	116		EtOAc			10			Matrix matched - Single level	MSD		GC-MS	Via Standard addition	TPP	AcOEt
123		D	0.270	74		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	PCB153, Anthracene, Ditalimphos	EN 15662:2008
124	0.01	D	0.270	93		MeOH	Water		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Oxfendazole	
125	0.002	D	0.367	101		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
126		NA																
127		D	0.47	100		AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	0.439	96.4		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		LC-MSMS; CEN/TR 15641

APPENDIX 9. Methods used by participants for determining pesticides.

PROCHLORAZ																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
129	0.01	D	0.192			AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS			QuEChERS
130	0.01	D	0.31	73		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.350	93.9		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	GC-ECD	Rec. from same batch		EN15662:2008
132		D	0.50	100		DCM			10		GPC	Pure solvent - Multiple level	MSD		GC-TOF	Via Standard addition	Biphenyl	Rapporti Istisan
133		NA																
134	0.02	D	0.35	93		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
135		D	0.30	81		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		
136	0.01	D	0.274	69		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
137	0.01	ND	ND			EtOAc			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.348	96.1		AcN			10	No	SPE	Pure solvent - Multiple level	ECD		ECD	Rec. from same batch		MSZ EN 15662:2009
139	0.01	D	0.3075	71.28		AcN			12						LC-MS/MS (QQQ)	Rec. from same batch	TPP	-
140		NA																
141	0.01	D	0.346	70.2		AcN			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		DAR-QuEChERS
142		D	0.126	101		AcN			15	No	SPE	Pure solvent - Multiple level		Diode Array Detector		Rec. from same batch		QuEChERS
143	0.05	D	0.199	63.0		Acetone	DCM	Petr. ether	15.0	No		Matrix matched - Single level	MSD		GC-MS	Rec. from same batch		Mini-Luke
144		NA																
145	0.01	D	0.372	90		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Quinalphos (injection control)	In House
146	0.05	D	0.224	96.8		AcN			9.937	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
147	0.01	D	0.23	89														
148		D	0.301	77		AcN			10	Yes								QuEChERS
149	0.01	D	0.23	72.4		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.334	85		AcN			15		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
151		NA																
152		NA																
153		NA																
154	0.01	D	0.31	86		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

PYRIPROXYFEN

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001		NA																
002	0.01	D	0.479	100	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.399	102		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15662
004	0.01	D	0.515	97		AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS	Rec. from same batch	TPP	EN 15662
005	0.01	D	0.423	100.5		EtOAc			10	Yes		Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		1
006		NA																
007		D	0.27	70 - 120		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
008	0.01	D	0.418	92		EtOAc			10	Yes	Filter	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.342	87		Cyclohexane	EtOAc		75	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		DFG S19
010	0.01	D	0.591	97		AcN			10	No	DSPE	Standard addition	MSD	MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		QuEChERS
011	0.01	D	0.466	74		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.134			MeOH			10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Cyprodinil	
013	0.005	D	0.518	110		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
014	0.01	D	0.450		Yes	AcN			1			Standard addition	MSD		GC-MS	Via Standard addition		Internal Method based on Fillion et alt. JAOAC 78-5-1995
015	0.01	D	0.43			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Desmetryn	QuEChERS
016	0.01	D	0.333	94		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	0.443	104		AcN			10		DSPE	Standard addition	MSD		GC-TOF	Rec. from same batch	PCB 138	QuEChERS
018	0.01	D	0.342	83		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	PCB 170	QuEChERS
019	0.01	D	0.418	109.1		EtOAc			50	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EtOAc extraction
020		D	0.428	76	Yes	MeOH			10		DSPE	Matrix matched - Multiple level	TOF	MS/MS (QQQ)	GC-TOF	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.01	D	0.457	113		MeOH	Water		10	No	Filter	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	FP086
022		NA																
023	0.005	D	0.519	108		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.420	79		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD	MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
025		NA																
026	0.01	D	0.473	119.0		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	EN 15662
027		NA																
028	0.01	D	0.562			AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Atrazin D5	QuEChERS
029	0.01	D	0.45	99		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.02	D	0.363	95		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TRIS	EN 15662:2008
031	0.05	D	0.61	121		AcN			10	No	DSPE	Matrix matched - Multiple level			GC-MS	Rec. from same batch		QuEChERS
032	0.01	D	0.491	103		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
033	0.01	D	0.485	113.7		EtOAc			25	Yes		Matrix matched - Single level	MSD			Rec. from same batch		3
034		NA																
035	0.02	D	0.502	120		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TBP, TPP	QuEChERS
036	0.01	D	0.547	106.4		AcN	AcN		5.0	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TRIS	QuEChERS
037	0.01	D	0.48	93		AcN			10	Yes	DSPE	Pure solvent - Multiple level	IDT		GC-MS	Rec. from same batch	Bromophos Methyl	NF EN 15662
038	0.01	D	0.391	93		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039		NA																
040	0.01	D	0.386	91		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
041		NA																
042		NA																
043	0.01	D	0.39	76.0		EtOAc			15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	MA01

APPENDIX 9. Methods used by participants for determining pesticides.

PYRIPROXYFEN																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
044		NA																
045	0.05	D	0.426	81		AcN			10		DSPE	Pure solvent - Multiple level	ECD+NPD		GC-MS/MS Iontrap	Rec. from validation data		PN EN 15662
046	0.02	D	0.420	97.7	Yes	Acetone	EtOAc		2			Matrix matched - Single level	NPD		Two columns			Internal Method
047		NA																
048	0.010	D	0.380	95.0		AcN			15	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Rec. from same batch	TDCPP	EN15662
049	0.01	D	0.693	130		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		PRES/069
050	0.01	D	0.447	85		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
051		NA																
052		NA																
053	0.05	D	0.54	120		DCM			15	No	GPC	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	Ethion	Istisan 97/23
054	0.005	D	0.521	97		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch	Linuron-d6	QuEChERS, citrate buffered
055		NA																
056	0.01	D	0.31			EtOAc	EtOAc	EtOAc	16	Yes	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)		Fenclorfos	rapporti istisan 1997/23-1997/24
057	0.01	D	0.498	91.1		Acetone	EtOAc	Cyclohexane	25	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-TOF	Rec. from same batch		modulare Multimethode according Â§64 LFGB, L 00.00-34
058	0.01	D	0.290	77		DCM			10	No	DSPE	Pure solvent - Single level	NPD		GC-MS	Rec. from validation data	Ethion	
059	0.01	D	0.368	84.5		EtOAc			20	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		Internal Method
060		NA																
061	0.01	D	0.52	112		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	
062	0.01	D	0.513	93		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from ring test		EN 15662:2008
063	0.01	D	0.25	89		AcN			10	Yes	DSPE		MS/MS (QQQ)		GC-MS	Rec. from same batch	Bromophos Methyl	QuEChERS
064	0.01	D	0.55	99		EtOAc			10	Yes	SPE	Pure solvent - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch	Anthracene	Internal Method
065		NA																
066	0.02	D	0.482	98		AcN			10		DSPE	Pure solvent - Multiple level	MS trap		GC-MS	Rec. from same batch	TPP	NF EN 15662
067	0.01	D	0.382			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068		NA																
069	0.01	D	0.524	94		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070	0.01	D	0.457	70		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
071		D	0.66	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072	0.01	D	0.014	0		EtOAc			20		GPC	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		Luke
073	0.01	D	0.388	112		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	0.466	117		EtOAc			10	No		Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	PCB-28	In House Method
075		NA																
076	0.01	D	0.52	108		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077	0.01	D	0.443	109.6		AcN			10	No	DSPE	Pure solvent - Multiple level	IDT			Via Standard addition	TriChloroNate	NF EN 15662
078	0.01	D	0.388	99		AcN			15	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
079	0.01	D	0.523	105		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080	0.01	D	0.48	90		Acetone	DCM		100	No		Matrix matched - Multiple level	NPD		GC-MS	Rec. from same batch		Kadenczki i wspÅ‚. (1992)JOAOAC Int. 75: 53-63
081		NA																
082		D	0.659			Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	TOF		GC-MS			
083		NA																
084	0.05	D	0.647	106		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch	NO	Analytical methods for pesticide residues in foodstuffs. Sixth edithion. June 1996. Ministry of Public Health, Welfare and Sport. The Netherlands.
085	0.005	D	0.455	96		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
086		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

PYRIPROXYFEN																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
087	0.01	D	0.538	93.0		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
088		NA																
089		NA																
090	0.01	D	0.48	101%		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
091	0.01	D	0.395	120		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS		Rec. from same batch		
092	0.01	D	0.413	92		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093		NA																
094	0.01	D	0.515	102		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	S.J. Lehotay et al, J. AOAC Int., vol 88, 615-629 (2005)
095		NA																
096	0.01	D	0.467	83		EtOAc			10	No	SPE	Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	TBP	In house
097	0.01	D	0.427	84		AcN			10	No	DSPE	Matrix matched - Single level	MS/MS (QQQ)		GC-MS	Rec. from same batch		QuEChERS
098	0.01	D	0.517	97		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.338	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)		Via Standard addition		QuEChERS
100		NA																
101	0.01	D	0.47	80		AcN			10	Yes	PSA	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS
102	0.05	D	0.38	97		AcN			12	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		EN 15662
103	No Results Reported																	
104	0.01	D	0.308	81	Yes	Acetone	DCM		50	No		Pure solvent - Multiple level	MSD		GC-MS	Rec. from same batch	Bromophos Methyl	EN 12393
105	0.04	D	0.381	95		Acetone	DCM		10			Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		luke
106		NA																
107	0.01	D	0.348	96	Yes													
108	0.01	D	0.468	93		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	QuEChERS
109	0.01	D	0.54	116		AcN			10	No	SPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	SOP
110	0.01	D	0.416	96.1		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	Mini Luke
111		NA																
112	0.01	D	0.454	82.5	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.276	75		Acetone			20	No	SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	in house
115	0.01	D	0.35	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.278	89		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Analysis of pesticide residues in fruit and vegetables with EtOAc extraction
117	0.005	D	0.490	85		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbendazim D4	CHEM 014
118	0.01	D	0.27	79		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			QuEChERS
119	0.01	D	0.399	98.6		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
120	0.004	D	0.406	107		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
121		NA																
122	0.02	D	1.14	127	Yes	EtOAc			10			Matrix matched - Single level	MSD		GC-MS	Via Standard addition	TPP	AcOEt
123		NA																
124	0.01	D	0.341	100		MeOH	Water		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Oxfendazole	
125	0.002	D	0.542	98														
126	0.01	D	0.234	93		AcN			15	Yes	DSPE	Matrix matched - Multiple level	GC-IT-MS/MS		GC-IT-MS/MS	Rec. from validation data		QuEChERS
127		D	0.49	89.20		AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	0.391	93		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		LC-MSMS: CEN/TR 15641
129	0.01	D	0.256			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

PYRIPROXYFEN																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
130	0.01	D	0.65	140		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.404	83.6		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		EN15662:2008
132		NA																
133		D	0.397		Yes	AcN			10,03	No	DSPE	Matrix matched - Multiple level		MS		Via Standard addition		Metodo QuEChERS
134		NA																
135		D	0.36	76		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		
136	0.01	D	0.433	126		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
137	0.01	D	0.424	Standard addition	Yes	EtOAc			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.443	98.0		AcN			10	No		Pure solvent - Multiple level	NPD		GC-MS	Rec. from same batch		MSZ EN 15662:2009
139	0.025	D	0.619	105		AcN			12	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	-
140	0.05	D	0.330	76		EtOAc			50	No	GPC	Matrix matched - Multiple level	TOF			Rec. from same batch	TPP	EN 12393-2
141	0.01	D	0.465	86.2		AcN			15	No		Matrix matched - Multiple level	TOF			Rec. from same batch		DAR-QuEChERS
142		D	0.597	91		AcN			15	No	SPE	Pure solvent - Multiple level		Diode Array Detector		Rec. from same batch		QuEChERS
143	0.005	D	0.455	106.4		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
144		NA																
145	0.01	D	0.446	97		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Quinalphos (injection control)	In House
146		NA																
147	0.01	D	0.29	102														
148		D	0.375	91		Acetone	DCM	BENZINE	13	No								EXTRACTION+PARTITION
149	0.01	D	0.39	92.4		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.433	95		AcN			15		DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		
151	0.02	D	0.451	98		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from validation data	TDCPP	UNI EN 15662
152		D	0.392	75	Yes	AcN			10,01	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Via Standard addition	PCB 31	BS EN 15662
153		NA																
154	0.01	D	0.49	100		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

SPINOSAD																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001		NA																
002	0.01	D	0.563	93	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from validation data	TDCPP	UNI EN 15662
003		NA																
004	0.01	D	0.457	89		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
005	0.01	D	0.512	93.0		EtOAc			10	Yes		Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		1
006	0.01	D	0.770	114		AcN			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
007		D	0.21	70 - 120		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
008	0.01	D	0.463	68		EtOAc			10	Yes	Filter	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.684	91		MeOH	DCM		10	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Chem Elut
010	0.01	D	0.647	103		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
011	0.01	D	0.603	93.2		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.204			MeOH			10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Cyprodinil	
013	0.005	D	0.659	100		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
014	0.01	D	1.38	96.5		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		UNI EN 15662:2009
015	0.01	D	0.55			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Desmetryn	QuEChERS
016		NA																
017	0.01	D	0.696	113		AcN			10			Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Pirimicarb D6	QuEChERS
018	0.01	D	0.555	97		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Isoproturon D6	QuEChERS
019	0.01	D	0.527	103		EtOAc			50	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EtOAc extraction
020		D	1.5	92	Yes	MeOH			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data	TPP	BfR (Alder, Klein)
021		NA																
022		NA																
023	0.005	D	0.722	112		AcN			10.0	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.423	95		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		QuEChERS
025		NA																
026	0.01	D	0.637	93.6		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
027		NA																
028	0.01	D	1.308			AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Atrazin D5	QuEChERS
029	0.01	D	0.68	101		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.05	D	0.6	72		AcN			10	No	DSPE	Pure solvent - Multiple level	MSD	MS	LC-MS	Rec. from same batch		EN 15662:2008
031		NA																
032	0.01	D	0.677	116		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
033		NA																
034		NA																
035	0.01	D	0.774	105		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
036	0.01	D	0.607	96.6		AcN	AcN		5	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TRIS	QuEChERS
037	0.01	D	0.27	88		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		NF EN 15662
038		NA																
039		NA																
040	0.01	D	1.151	128		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
041		NA																
042		NA																
043		NA																
044		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

SPINOSAD																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
045		NA																
046		NA																
047	0.01	D	0.65	120		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
048	0.010	D	0.621	105.0		AcN			15	No	DSPE	Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TDCPP	EN15662
049	0.01	D	1.531	80		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		PRES/069
050	0.01	D	0.626	86		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
051		NA																
052		NA																
053		NA																
054	0.005	D	0.672	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	Linuron-d6	QuEChERS, citrate buffered
055		NA																
056		NA																
057	0.01	D	0.833	97.9		MeOH			10	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		"BfR"-Methode according Â§64 LFGB, L 00.00-113 (cleanup diatomeenerde)
058		NA																
059	0.01	D	0.692	71.6		EtOAc			20	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		Internal Method
060																		
061	0.01	D	0.67	85		Acetone	DCM		10	No		Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
062		NA																
063	0.005	D	1.42	99		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS - NF EN 15662
064	0.01	D	0.71	78		EtOAc			10	Yes	SPE	Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch	isoproturon D6	Internal Method
065		NA																
066		NA																
067	0.01	D	1.12			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068		NA																
069	0.01	D	0.525	80		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070		NA																
071		D	0.42	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072	0.01	D	0.142	0		EtOAc			20		GPC	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		Luke
073	0.01	D	0.521	106		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	0.706	96		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	In House Method
075		NA																
076	0.01	D	0.69	93		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077		NA																
078		NA																
079	0.01	D	2.07	125		AcN			10	No	DSPE	Pure solvent - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080		NA																
081		NA																
082	0.01	D	0.451			Acetone	DCM	Petr. ether	7.5	No		Pure solvent - Multiple level		MS/MS (QQQ)				
083		NA																
084		NA																
085	0.005	D	0.822	102		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
086		NA																
087	0.01	D	0.611	107.0		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
088		NA																
089		NA																
090	0.01	D	0.41	69%		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662

APPENDIX 9. Methods used by participants for determining pesticides.

SPINOSAD																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
091	0.01	D	0.505	87		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS		Rec. from same batch		
092	0.02	D	0.722	106		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093		NA																
094	0.01	D	0.629	105		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	S.J. Lehotay et al, J. AOAC Int., vol 88, 615-629 (2005)
095		NA																
096	0.01	D	0.455	93		EtOAc			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TBP	In house
097	0.01	D	0.609	106		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
098	0.01	D	0.571	100		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.733	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)		Via Standard addition		QuEChERS
100		NA																
101	0.01	D	1.2	111		AcN			10	Yes	PSA	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
102	0.01	D	1.41	111		AcN			12	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
103	No Results Reported																	
104	0.01	D	0.825	118	Yes	AcN			10	Yes	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
105	0.02	D	0.346	80		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		acetato de etilo
106		NA																
107		NA																
108	0.01	D	1.55	97		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	QuEChERS
109	0.01	D	0.58	100		AcN			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	SOP
110	0.01	D	0.417	86.6		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
111		NA																
112	0.01	D	0.641	94.5	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.654	89		MeOH			10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		chem elut
115	0.01	D	1.3	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.580	93		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Multiresidue Method using QuEChERS
117	0.005	D	0.570	72		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbendazim D4	CHEM 014
118	0.01	D	0.39	108		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			QuEChERS
119	0.01	D	0.519	86.2		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
120	0.004	D	0.567	89		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
121	0.01	D	0.576	102.5		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS/MS (QQQ)	Rec. from same batch		S-19
122		NA																
123		NA																
124	0.01	D	0.588	101		MeOH	Water		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Oxfendazole	
125	0.008	D	0.775	104		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
126		NA																
127		D	0.61	66		AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	1.25	87.4		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		LC-MSMS; CEN/TR 15641
129	0.01	D	0.411			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			QuEChERS
130	0.01	D	0.17	60		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.547	101.5		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		EN15662:2008
132		NA																
133		NA																
134		NA																
135		D	0.50	89		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		

APPENDIX 9. Methods used by participants for determining pesticides.

SPINOSAD																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
136	0.01	D	0.629	134		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		
137	0.01	D	0.342	Standard addition	Yes	EtOAc			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		
138		NA																
139	0.01	D	0.4895	81		AcN			12	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
140		NA																
141	0.01	D	1.58	99.6		AcN			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		DAR-QuEChERS
142		NA																
143	0.005	D	0.490	98.9		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
144		NA																
145	0.01	D	0.587	97		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Quinalphos (injection control)	In House
146	0.05	D	0.431	95.5		AcN			9.937	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
147	0.01	D	0.39	100														
148		D	0.553	79		AcN			10	Yes								QuEChERS
149	0.01	D	0.46	90		Acetone	DCM		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.600	90		AcN			15		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
151		NA																
152		D	0.276	86	Yes	AcN			10.15	No	DSPE	Matrix matched - Single level		MS	LC-MS	Via Standard addition	TDCPP	BS EN 15662
153		NA																
154	0.01	D	0.70	89,7		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

THIABENDAZOLE																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001		NA																
002	0.01	D	0.795	92	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.646	79		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN15662
004	0.02	D	0.846	87		AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		GC-MS	Rec. from same batch	TPP	EN 15662
005	0.01	D	0.896	100.9		EtOAc			10	Yes		Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		1
006		NA																
007		D	0.75	70 - 120	Yes	Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
008	0.01	D	0.676	79		EtOAc			10	Yes	Filter	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.865	103		MeOH	DCM		10	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Chem Elut
010	0.01	D	0.680	91		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
011	0.01	D	0.825	93		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.645			Acetone	Cyclohexane EtOAc		20	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	Nitrofen, TPP	
013	0.005	D	0.875	95.0		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
014	0.01	D	0.854	71		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		UNI EN 15662:2009
015	0.01	D	0.64			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Desmetryn	QuEChERS
016	0.01	D	0.888	93		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	1.24	117		AcN			10			Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	Pirimicarb D6	QuEChERS
018	0.01	D	0.604	110		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbofurane D3	QuEChERS
019	0.01	D	0.682	84.9		EtOAc			50	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch		EtOAc extraction
020		D	1.0	105	Yes	MeOH			10		DSPE	Matrix matched - Multiple level	TOF	MS/MS (QQQ)	GC-TOF	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.02	D	0.997	129		MeOH	Water		10	No	Filter	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	FP086
022		NA																
023	0.005	D	0.930	103		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	0.795	86		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		QuEChERS
025		NA																
026	0.01	D	0.668	87.8		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
027		NA																
028	0.01	D	2.358			AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)		Atrazin D5	QuEChERS
029	0.01	D	0.72	91		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.05	D	1.12	86		EtOAc			25	Yes		Pure solvent - Multiple level		Fluorescence	GC-MS	Rec. from same batch		Interlaboratory validated method
031	0.05	D	0.85	89		Acetone	DCM		15	No	SPE	Pure solvent - Multiple level		Diode Array Detector		Rec. from same batch		MINILUKE
032	0.01	D	0.870	102		MeOH			10	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		ChemElute
033	0.01	D	0.837	86.2		AcN			10	Yes	DSPE	Matrix matched - Single level		MS/MS (QQQ)		Rec. from same batch		1
034		NA																
035	0.005	D	0.9	83		AcN			10	yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
036	0.01	D	0.814	80.4		AcN	AcN		5	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TRIS	QuEChERS
037	0.01	D	1.4	100		Acetone	DCM		15	Yes	SPE	Pure solvent - Multiple level		ITQ	LC-MS/MS (QQQ)	Rec. from same batch	Benzimidazole	NF EN 14333-1
038	0.01	D	0.655	90		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039		NA																
040	0.01	D	1.700	89		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
041		NA																
042	0.01	D	0.275	76		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		prEN 15662:2008
043		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

THIABENDAZOLE

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
044		NA																
045	0.025	D	1.12	86		AcN			10	No	DSPE	Matrix matched - Single level		Diode Array Detector	LC-MS	Rec. from validation data		PN EN 15662
046		NA																
047	0.01	D	0.74	60		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
048	0.010	D	0.676	117.4		AcN			15	No	DSPE	Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TDCPP	EN15662
049	0.01	D	0.773	120		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch		PRES/069
050	0.01	D	0.755	80		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
051		NA																
052		NA																
053	0.05	D	0.16	80		DCM			10	No	SPE	Pure solvent - Multiple level		Diode Array Detector		Via Standard addition		Internal Method
054	0.005	D	0.901	90		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch	Linuron-d6	QuEChERS, citrate buffered
055	0.01	D	0.9	100	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		UNI EN 15662
056	0.1	ND	ND			EtOAc			16	Yes	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)		Fenclorfos 0.46 mg/l	rapporti Istisan 1997/23 1997/24
057	0.02	D	1.15	104.0		MeOH			10	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		"BfR"-Methode according Â§64 LFGB, L 00.00-113 (cleanup diatomeenerde)
058	0.01	D	0.586	76		DCM			10	No	DSPE	Pure solvent - Single level	MSD		GC-MS	Rec. from validation data		
059	0.01	D	0.771	119		EtOAc			20	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		Internal Method
060	0.06	D	0.746	84		EtOAc			50			Matrix matched - Multiple level			GC-MS	Rec. from validation data		1) A. Anderson, H. Plashed, Fresenius J Anal Chem., 339 (1991) 365 2) A. Andersson, H. PÃ¥lsheden, Pesticide Analytical Methods in Sweden, Part 1,Ra
061	0.01	D	0.96	95		Acetone	DCM		10	No		Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
062	0.05	D	1.61	100		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from ring test		EN 15662:2008
063	0.005	D	1.59	100		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS - NF EN 15662
064	0.01	D	1.4	118		EtOAc			25	Yes	Liquid/liquid partitioning	Pure solvent - Multiple level		Fluorescence	LC-MS/MS (QQQ)	Rec. from validation data		NF EN 14333-1
065		NA																
066		NA																
067	0.01	D	0.859			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068	0.02	ND	ND			QuEChERS			10.19			Pure solvent - Multiple level	NPD					CG
069	0.01	D	1.33	119.5		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070	0.01	D	2.05			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)				QuEChERS
071		D	1.3	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072		NA																
073	0.01	D	0.642	93		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	0.761	75	Yes	AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	In House Method
075	0.01	D	0.593	58		AcN	AcN	AcN	10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		modified EN 15662
076	0.01	D	0.79	84		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
077	0.01	D	0.721	78.8		AcN			10	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Via Standard addition	TPP	NF EN 15662
078	0.02	D	0.555	88		AcN			15	No	DSPE	Matrix matched - Multiple level		Diode Array Detector		Rec. from same batch		QuEChERS
079	0.01	D	1.29	79		AcN			10	No	DSPE	Pure solvent - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080		NA																
081		NA																
082	0.01	D	0.797	75		Acetone	DCM	Petr. ether	7.5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		
083		NA																

APPENDIX 9. Methods used by participants for determining pesticides.

THIABENDAZOLE

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
084	0.05	D	0.775	89		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch	NO	Analytical methods for pesticide residues in foodstuffs. Sixth edithion. June 1996. Ministry of Public Health, Welfare and Sport. The Netherlands.
085	0.005	D	0.650	93		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
086	0.01	D	0.973	83														
087	0.01	D	0.719	68.0	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
088		NA																
089		NA																
090	0.01	D	0.64	71%		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
091	0.01	D	0.500	60	Yes	AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS		Rec. from same batch		
092	0.01	D	0.738	66		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		LC-Orbitrap	Rec. from same batch		Â§ 64 LFGB L00.00-115
093		NA																
094	0.05	D	0.865	90		AcN			10			Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	S.J. Lehotay et al, J. AOAC Int., vol 88, 615-629 (2005)
095		NA																
096	0.01	D	0.812	102		Acetone			10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TBP	In house
097	0.01	D	0.772	77		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
098	0.01	D	1.37	86		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	1.16	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)		Via Standard addition		QuEChERS
100	0.01	D	0.58	72		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MSD		GC-MS	Via Standard addition	Propazine	Internal Method GC/MS
101	0.01	D	1.2	114		AcN			10	Yes	PSA	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
102	0.1	D	1.02	68		AcN			12	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		EN 15662
103	No Results Reported																	
104	0.01	D	0.958	73	Yes	AcN			10	Yes	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662
105	0.02	D	0.518	85		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		acetato de etilo
106		NA																
107	0.02	D	0.797	98	Yes													
108	0.01	D	0.399	75		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	QuEChERS
109	0.01	D	1.20	96		AcN			10	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	SOP
110	0.01	D	0.658	96.1		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
111																		
112	0.01	D	0.838	81.5	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		AOAC 2007.01
113	No Results Reported																	
114	0.01	D	0.983	87		MeOH			10	Yes	SPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		chem elut
115	0.01	D	2.2	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.911	72		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		Multiresidue Method using QuEChERS
117	0.005	D	0.809	71		EtOAc			10	Yes		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Carbendazim D4	CHEM 014
118	0.01	D	0.53	90		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			QuEChERS
119	0.01	D	0.552	69.6		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
120	0.004	D	1.02	84		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
121	0.05	D	1.29	101.1		Acetone	DCM	Pet.ether	8	No	SPE	Pure solvent - Single level		Fluorescence	LC-UV	Rec. from same batch	Benzimidazole	SIST EN 14333-1:2005
122	0.02	D	0.61	76		EtOAc			10			Matrix matched - Single level	MSD		GC-MS	Via Standard addition	TPP	AcOEt
123		D	0.852	98		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	PCB153, Anthracene, Ditalimphos	EN 15662:2008
124	0.01	D	0.865	111		MeOH	Water		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Oxfendazole	
125	0.002	D	1.04	97		AcN			10	Yes	Freezing out	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
126																		
127		D	0.81	87.4		AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS

APPENDIX 9. Methods used by participants for determining pesticides.

THIABENDAZOLE																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
128	0.01	D	0.844	100		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		LC-MSMS; CEN/TR 15641
129	0.01	D	0.284			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			QuEChERS
130	0.01	D	0.77	60		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.589	79.3		AcN			10	Yes	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		EN15662:2008
132		D	1.12	100		DCM			10		GPC	Pure solvent - Multiple level	MSD		GC-MS	Via Standard addition	Biphenyl	Rapporti Istisan
133		ND	ND															
134	0.01	D	0.98	75		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
135		D	0.75	72		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		
136	0.05	D	0.96	85		Acetone			20	Yes	SPE	Pure solvent - Multiple level		Diode Array Detector		Rec. from same batch		
137	0.01	D	0.729	Standard addition	Yes	EtOAc			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.573	85.0		AcN			10	No	SPE	Pure solvent - Multiple level		UV	Diode Array Detector	Rec. from validation data		MSZ EN 15662:2009
139	0.01	D	0.71	74.12		AcN			12	No	SPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	
140	0.02	D	0.665	126		EtOAc			50	Yes	GPC	Pure solvent - Multiple level		Diode Array Detector		Rec. from same batch		EN 12393-2 Method
141	0.01	D	0.884	81.9		AcN			15	No		Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition		DAR-QuEChERS
142		D	0.449	83		AcN			15	No		Pure solvent - Multiple level	NPD		Two columns	Rec. from same batch		QuEChERS
143	0.005	D	0.761	83.2		AcN			15	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
144	0.050	D	0.952	89		EtOAc	Water		75	No	Liquid/liquid partitioning	Pure solvent - Multiple level		Fluorescence	HPLC/PDA	Rec. from same batch		PN-EN 14333-3:2005
145	0.01	D	0.894	106		Acetone	DCM	Light Pet. (40-60 C)	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Quinalphos (injection control)	In House
146	0.05	D	0.495	34.3		AcN			9.937	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
147	0.01	D	0.52	101														
148		D	0.721	82		AcN			10	Yes								QuEChERS
149	0.01	D	0.76	74.5		Acetone	DCM		10	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.875	78		AcN			15		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
151	0.05	D	0.740	78		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from validation data	TDCPP	UNI EN 15662
152		ND	ND			AcN			10.01	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Via Standard addition	PCB 31	BS EN 15662
153		NA																
154	0.01	D	0.77	86		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS

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TOLYLFLUANID																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
001		NA																
002	0.01	D	0.945	85	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
003	0.01	D	0.790	93		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		EN15662
004	0.02	D	0.883	94		EtOAc			18.5	No	GPC	Matrix matched - Multiple level	ECD		GC-MS	Rec. from same batch		EN 12393
005	0.01	D	1.02	86.9		EtOAc			10	Yes		Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		2
006		NA																
007		NA																
008	0.01	D	0.607	72		EtOAc			10	Yes	Filter	Matrix matched - Single level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Pirimicarb-D6	EtOAc (NFA-SE)
009	0.01	D	0.663	92		Cyclohexane	EtOAc		75	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		DFG S19
010	0.01	D	1.295	106		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD	MS/MS (QQQ)	GC-MS	Rec. from validation data		QuEChERS
011	0.1	D	1.77	52.7	Yes	AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch		ASU Â§ 64 LFGB L 00.00-115
012	0.01	D	0.067			Acetone	Cyclohexane/EtOAc		20	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	Nitrofen, TPP	
013	0.010	D	0.915	95.5		AcN			10	No		Matrix matched - Single level	ECD/NPD		GC-MS	Rec. from same batch		EN 15662
014	0.01	D	2.38		Yes	AcN			1			Standard addition	MSD		GC-MS	Via Standard addition		Internal Method based on Fillion et alt. JAOAC 78-5-1995
015	0.01	D	0.51			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		Desmetryn	QuEChERS
016	0.01	D	0.848	88		AcN			10		SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	QuEChERS
017	0.01	D	0.862	103		AcN			10		DSPE	Standard addition	MSD		GC-TOF	Rec. from same batch	Mirex	QuEChERS
018	0.01	D	0.465	96		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos-Me D6	QuEChERS
019	0.01	D	0.817	60.6	Yes	EtOAc			50	Yes	GPC	Matrix matched - Multiple level	ECD	MS/MS (QQQ)	GC-MS	Rec. from same batch		EtOAc extraction
020		D	1.078	82	Yes	MeOH			10		DSPE	Matrix matched - Multiple level	TOF		GC-TOF	Rec. from validation data	TPP	BfR (Alder, Klein)
021	0.01	D	1.89	74		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Caffeine	QuEChERS European Method EN 15662
022	0.1	D	0.91	100		DCM			10	No	GPC	Standard addition	NPD		GC-MS	Via Standard addition		internal
023	0.006	D	1.13	103		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 151662 (QuEChERS - Citrate buffered)
024	0.01	D	1.08	85		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch		Luke
025		NA																
026	0.02	D	0.955	60.2		Acetone	DCM	Light Pet.	20	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Mini-Luke extraction
027	0.02	D	0.837	102		Acetone	DCM	Petr. ether	15	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		Mini-Luke
028	0.01	D	0.928			AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS			QuEChERS
029	0.01	D	1.2	106		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Q-TOF	Rec. from same batch	Chlorpyrifos D10	QuEChERS, citrate buffered
030	0.02	D	1.47	110		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TRIS	EN 15662:2008
031																		
032	0.01	D	0.981	82		AcN			10	No		Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch		QuEChERS
033	0.01	D	1.13	114.5		EtOAc			25	Yes		Matrix matched - Single level	MSD			Rec. from same batch		3
034		NA																
035	0.05	D	0.471	91		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from validation data	TBP, TPP	QuEChERS
036	0.01	D	1.04	95.7		AcN	AcN		5.0	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TRIS	QuEChERS
037	0.01	D	0.72	72		AcN			10	Yes	DSPE	Pure solvent - Multiple level	IDT		GC-MS	Rec. from same batch	Bromophos Methyl	NF EN 15662
038	0.01	D	0.945	94		AcN			10	Yes	DSPE	Pure solvent - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	en 15662
039		NA																
040	0.01	D	0.525	80		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
041		NA																
042		NA																
043		NA																
044	0.01	D	0.370			AcN			10	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS		TDCPP	EN 15662
045	0.05	D	1.028	93		AcN			10		DSPE	Pure solvent - Multiple level	ECD+NPD		GC-MS/MS Iontrap	Rec. from validation data		PN EN 15662
046	0.02	D	0.922	96.5	Yes	Acetone	EtOAc	Hexane	2			Matrix matched - Single level	ECD		Two columns			Internal Method

APPENDIX 9. Methods used by participants for determining pesticides.

TOLYLFLUANID

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
047	0.02	D	1.3	68		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	IDT		GC-MS/MS (ITD)	Rec. from same batch	TPP	miniLuke
048	0.010	D	0.873	96.0		AcN			15	No	DSPE	Matrix matched - Single level	MSD		GC-MS	Rec. from same batch	TDCPP	EN15662
049	0.01	D	2.197	105		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch		PRES/069
050	0.01	D	0.882	79		AcN			10	No		Matrix matched - Multiple level	ECD		GC-MS/MS (QQQ)	Rec. from same batch		
051	<0.01	D	0.99	86	Yes	AcN	AcN	AcN	10	Yes	DSPE	Matrix matched - Single level	NPD	Diode Array Detector	GC-MS	Rec. from same batch	TPP	uni en 15662
052	0.01	D	1.08	95		Acetone	DCM		100	No	Florisil	Matrix matched - Single level	ECD		Two columns	Rec. from validation data		Luke
053	0.05	D	0.77	78		DCM			15	No	GPC	Pure solvent - Multiple level	NPD		GC-MS	Via Standard addition	Ethion	Istisan 97/23
054	0.01	D	1.36	102		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch	Linuron-d6	QuEChERS, citrate buffered
055	0.01	D	0.51	90		AcN			10	Yes	DSPE	Standard addition	MSD		GC-MS	Rec. from validation data	TDCPP	UNI EN 15662
056	0.01	D	0.094			EtOAc	EtOAc	EtOAc	16	Yes	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)		Fenclorfos	rapporti istisan 1997/23-1997/24
057	0.004	D	1.05	95.7		Acetone	EtOAc	Cyclohexane	25	Yes	GPC	Matrix matched - Multiple level	ECD		GC-TOF	Rec. from same batch		modulare Multimethode according Â§64 LFGB, L 00.00-34
058		D	0.529	85		DCM			10	No	DSPE	Pure solvent - Single level	ECD		GC-MS	Rec. from validation data	Endosulfan Lactone	
059	0.01	D	0.922	88.2		EtOAc			20	Yes		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		Internal Method
060	0.02	D	0.104	89		EtOAc			50			Matrix matched - Multiple level			GC-MS	Rec. from validation data		1) A. Anderson, H. Plashed, Fresenius J Anal Chem., 339 (1991) 365 2) A. Andersson, H. PÃ¥sheden, Pesticide Analytical Methods in Sweden, Part 1,Ra
061	0.05	D	1.3	123		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	
062	0.01	D	0.0100	5		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from ring test		EN 15662:2008
063	0.01	D	0.120	99		AcN			10	Yes	DSPE		MS/MS (QQQ)		GC-MS	Rec. from same batch	Bromophos Methyl	QuEChERS
064	0.01	D	1.0	70		EtOAc			10	Yes	SPE	Pure solvent - Multiple level	MSD		GC-MS/MS (QQQ)	Rec. from same batch	Anthracene	Internal Method
065		NA																
066	0.01	D	0.688	103		AcN			10		DSPE	Pure solvent - Multiple level	MS trap		GC-MS	Rec. from same batch	TPP	NF EN 15662
067	0.01	D	1.15			AcN			10	Yes	SPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		QuEChERS
068	0.2	ND	ND			QuEChERS			10.19			Pure solvent - Multiple level	ECD					CG
069	0.01	D	2.07	89		Acetone			25	No	Liquid/liquid partitioning	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Atrazine D5	Internal Method adapted of NF EN 12393
070	0.01	D	0.584	102		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	TPP	QuEChERS
071		D	1.5	100		EtOAc			20	Yes	Liquid/liquid partitioning	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		
072		NA																
073	0.01	D	1.06	100		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	GC-MS	Rec. from same batch	TPP, Pirimicarb-D6	QuEChERS
074	0.01	D	1.20	101		EtOAc			10	No		Matrix matched - Multiple level	MS/MS (QQQ)			Rec. from same batch	PCB-28	In House Method
075		NA																
076	0.01	D	1.0	77		AcN			10	No	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS
077	0.01	D	1.75	116.4		AcN			10	No	DSPE	Matrix matched - Multiple level	IDT		LC-MS/MS (QQQ)	Via Standard addition	TriChloroNate	NF EN 15662
078	0.01	D	0.665	74	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
079	0.01	D	1.67	129		AcN			10	No	DSPE	Matrix matched - Single level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Chlorpyrifos D10	NF EN 15662
080	0.01	D	1.04	87		Acetone	DCM		100	No		Matrix matched - Multiple level	ECD		GC-MS	Rec. from validation data		Kadenczki i wspÅ,. (1992)JOAOAC Int. 75: 53-63
081		NA																
082	0.02	D	0.766	70		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	HCB	
083	0.01	D	1.0	97		Acetone	DCM		5	No	SPE	Pure solvent - Single level	ECD			Rec. from same batch		
084	0.05	D	1.038	110		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	ECD		Two columns	Rec. from same batch	NO	Analytical methods for pesticide residues in foodstuffs. Sixth edition. June 1996. Ministry of Public Health, Welfare and Sport. The Netherlands.
085	0.005	D	0.959	96		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		QuEChERS
086	0.01	D	0.794	99.7														
087	0.01	D	1.22	91.0		EtOAc			25	No	Liquid/liquid partitioning	Matrix matched - Multiple level	NPD		Two columns	Rec. from same batch		Multi-residue Method 5, Organophosphorus compounds, Analytical methods of residues of pesticides, 5th Edition, 1988. Dutch Ministry of Welfare, Healt

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TOLYLFLUANID

Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
088		NA																
089	0.02	D	0.93	89.1		DCM	Acetone		5	No	MSPD, silica gel/alumina	Pure solvent - Single level	NPD		GC/NPD, GC/ECD	Rec. from validation data		
090	0.01	D	0.6	75		DCM			10	No	Extrelut	Pure solvent - Single level	ECD		GC-MS	Rec. from validation data	Bromophos Methyl	Rapp. ISTISAN 1997/23-met. B4
091	0.01	D	0.586	69	Yes	AcN			10	Yes	DSPE	Pure solvent - Multiple level	ECD		GC-MS	Rec. from same batch		
092	0.01	D	0.795	82		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-Orbitrap	Rec. from same batch		Âß 64 LFGB L00.00-115
093	0.05	D	0.613	79		EtOAc	Cyclohexane		50	No	GPC	Pure solvent - Multiple level	ECD		Two columns	Rec. from same batch		EN12393
094	0.01	D	0.838	76		EtOAc			30		GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPE	A.H. Roos et al, Anal Chim Acta, vol 196, 95-102 (1987)
095		NA																
096	0.01	D	1.11	72		EtOAc			10	No	SPE	Matrix matched - Multiple level	TOF		GC-MS	Rec. from same batch	TBP	In house
097	0.01	D	0.872	83		AcN			10		DSPE	Matrix matched - Single level	ECD		GC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
098	0.01	D	0.74	90		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
099	0.01	D	0.274	100		AcN			10	No	DSPE	Standard addition	MS/MS (QQQ)			Via Standard addition	TPP	QuEChERS
100	0.01	D	1.05	108		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MSD		GC-MS	Via Standard addition	Propazine	Internal Method GC/MS
101	0.01	D	0.93	65		AcN			10	Yes	PSA	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	QuEChERS
102	0.05	D	0.78	93		AcN			12	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from validation data		EN 15662
103												No Results Reported						
104	0.02	D	1.519	85	Yes	Acetone	DCM		50	No		Pure solvent - Multiple level	MSD		GC-MS	Rec. from same batch	Bromophos Methyl	EN 12393
105		NA																
106	0.02	D	0.91	97		isopropyl alcohol	Toluene		25	No								In house based in:Ministry of Welfare, health and cultural affairs, Netherlands. analytical methods for residues of pesticides in foodstuffs
107	0.04	D	0.684	95	Yes													
108	0.01	D	1.29	90		AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	C13-carbaryl	QuEChERS
109	0.01	D	1.33	99		AcN			10	No	SPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	SOP
110	0.01	D	0.960	84.8		Acetone	DCM	Petr. ether	15	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP	Mini Luke
111		D	1.08		Yes	Acetone	DCM		15			Matrix matched - Multiple level	ECD		GC-MS	Rec. from validation data		mini Luke
112	0.01	D	1.17	108.5	Yes	AcN			15	No	DSPE	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch	TPP	AOAC 2007.01
113												No Results Reported						
114	0.01	D	0.810	86		Acetone			20	No	SPE	Matrix matched - Multiple level	MSD			Rec. from same batch	TPP	in house
115	0.01	D	0.5	100		AcN			10	No	DSPE	Standard addition		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		EN 15662 : 2009
116	0.01	D	0.256	103		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		Analysis of pesticide residues in fruit and vegetables with EtOAc extraction
117	0.005	D	1.167	70		EtOAc			10	Yes	GPC	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	Trifluralin D14	CHEM 014
118	0.01	D	0.1	77		AcN			10		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			QuEChERS
119	0.01	D	0.693	65.3		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		ECD	Rec. from same batch	TPP	QuEChERS
120	0.004	D	0.878	100		AcN			5	No		Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
121	0.01	D	1.06	77.1		Acetone	DCM	Pet.ether	20	Yes	GPC	Matrix matched - Multiple level	MSD		GC-MS	Rec. from same batch		S-19
122		NA																
123		D	0.889	75		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MSD			Rec. from same batch	PCB153, Anthracene, Ditalimphos	EN 15662:2008
124	0.01	D	1.207	95		Acetone			50	No	Liquid/liquid partitioning	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch		
125	0.008	D	0.877	80		AcN			10	Yes	Freezing out	Matrix matched - Multiple level	TOF		GC-TOF	Rec. from same batch	TPP	
126	0.01	D	0.510	95		AcN			15	Yes	DSPE	Matrix matched - Multiple level	GC-IT-MS/MS		GC-IT-MS/MS	Rec. from validation data		QuEChERS
127		D	0.11	85.7		AcN	MeOH		5	No	DSPE	Pure solvent - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		QuEChERS
128	0.01	D	0.913	76.1		Acetone	DCM	Pet.ether	15	No	filter	Matrix matched - Multiple level	MS/MS (QQQ)	MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch		LC-MSMS; CEN/TR 15641
129	0.01	D	0.538			AcN			10	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)			QuEChERS
130	0.01	D	0.81	80		AcN			10	Yes	DSPE	Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Rec. from same batch	TPP, as an extraction controller	QuEChERS
131	0.01	D	0.672	81.0		AcN			10	Yes	DSPE	Pure solvent - Multiple level	ECD		GC-MS	Rec. from same batch	TDCPP	EN15662:2008
132																		

APPENDIX 9. Methods used by participants for determining pesticides.

TOLYLFLUANID																		
Lab. Code	Reporting Level (mg/kg)	Scope of Method	Official Concentration (mg/kg)	Recovery %	Recovery Correction in Routine Work?	Solvent 1	Solvent 2	Solvent 3	Sample Weight (g)	pH Adjustement	Clean Up	Calibration	GC Detector	HPLC Detector	Confirmation Method	Recovery Approach	ISTD Used	Reference
133		D	1.796		Yes	AcN			10,03	No	DSPE	Matrix matched - Multiple level		MS		Via Standard addition		Metodo QuEChERS
134																		
135		D	0.91	72		Acetone	DCM	Petr. ether	15	No		Pure solvent - Multiple level		MS/MS (QQQ)		Rec. from same batch		
136	0.01	D	0.843	92		Acetone			20		Liquid/liquid partitioning	Matrix matched - Multiple level	ECD		NPD, two columns	Rec. from same batch		
137	0.01	D	1.003	Standard addition	Yes	EtOAc			15	No	DSPE	Standard addition	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition		
138	0.01	D	0.670	90.9		AcN			10	No	SPE	Pure solvent - Multiple level	ECD		ECD	Rec. from same batch		MSZ EN 15662:2009
139		NA																
140	0.05	D	0.616	76.8		EtOAc			50	No	GPC	Matrix matched - Multiple level	ECD		GC-TOF	Rec. from same batch		EN 12393-2
141	0.01	D	0.878	77.2		AcN			15	No		Matrix matched - Multiple level	TOF			Rec. from same batch		DAR-QuEChERS
142		D	0.470	90		AcN			15	No	SPE	Pure solvent - Multiple level	ECD		Two columns	Rec. from same batch		QuEChERS
143	0.03	D	0.725	75.7		Acetone	DCM	Petr. ether	15	No		Matrix matched - Single level	MSD		GC-MS	Rec. from same batch		Mini-Luke
144	0.025	D	1.159	107		Acetone	DCM	EtOAc	100	No	GPC	Matrix matched - Multiple level	ECD		GC-MS	Rec. from same batch		PN-EN 12393-1,2,3:2009
145	0.01	D	1.06	97		Acetone	DCM	Light Pet. (40-60 C)	15	No		Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	Quinalphos (injection control)	In House
146	0.05	D	0.735	16.5		AcN			9.937	No	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)		Rec. from same batch	TPP	QuEChERS
147	0.01	D	0.30	111														
148		D	0.350	84		Acetone	DCM	BENZINE	13	No								EXTRACTION+PARTITION
149	0.01	D	0.55	85.4		Acetone	DCM		10	No		Matrix matched - Multiple level	MS/MS (QQQ)		GC-MS/MS (QQQ)	Via Standard addition	TPP	MINILUKE
150	0.01	D	0.975	60		AcN			15		DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from validation data		
151	0.02	D	0.848	105		AcN			10	No	DSPE	Matrix matched - Multiple level	MSD			Rec. from validation data	TDCPP	UNI EN 15662
152		D	0.219	95	Yes	AcN			10.15	No	DSPE	Matrix matched - Single level		MS	LC-MS	Via Standard addition	TDCPP	BS EN 15662
153		NA																
154	0.01	D	0.89	65		AcN			10	Yes	DSPE	Matrix matched - Multiple level		MS/MS (QQQ)	LC-MS/MS (QQQ)	Rec. from same batch	TPP	QuEChERS

ANNEX 1. Protocol and Instructions. List of pesticides to be sought.

GENERAL PROTOCOL

for EU Proficiency Tests for Pesticide Residues in Food and Feed

Introduction

This protocol contains general procedures valid for all European Union Proficiency Tests (EUPTs) organised on behalf of DG-SANCO[5] by the four European Union Reference Laboratories (EURLs) for pesticide residues in food and feed. These EUPTs are directed at all National Reference Laboratories (NRLs) and Official Laboratories (OfLs) in the EU Member States. Laboratories outside this EURL/NRL/OfL-Network[6] may be permitted to participate on a case-by-case basis after consultation with DG- SANCO.

The following four EURLs for pesticide residues were appointed by DG-SANCO based on regulation 882/2004/EC[7]:

- EURL for Fruits and Vegetables (EURL-FV),
- EURL for Cereals and Feedingstuff (EURL-CF),
- EURL for Food of Animal Origin and Commodities with high Fat Content (EURL-AO) and
- EURL for Single Residue Methods (EURL-SRM)

NRLs are appointed by the National Food or Feed Authorities based on the provisions of Regulation 882/2004/EC, whereas OfLs are laboratories that are actively involved in official controls in the sense of Article 26 of Regulation 396/2004/EC (e.g. by conducting pesticide residue analyses within the frame of national and/or EU control programmes).

According to Article 28 (3) of Regulation 396/2005/EC[8] all laboratories analysing samples for the official controls on pesticide residues shall participate in the European Union Proficiency Test(s) organised by the European Union. The aim of these EUPTs is to obtain information regarding the quality, accuracy and comparability of the pesticide residue data in food and feed sent to the European Union within the framework of the national control programmes and the co-ordinated multiannual community control programme. Participating laboratories will be provided with an assessment of their analytical performance and the reliability of their data – compared to the other participating laboratories.

EUPT-Panel

EUPTs are organised by individual EURLs or by more than one EURL in cooperation with one another.

An Organising Team from the EURL(s) in charge is appointed. This team is responsible for all administrative and technical matters concerning the organisation of the PT, e.g. PT-announcement, production of the test material, undertaking the homogeneity and stability tests, packing and shipment of test material, and the handling and first assessment of participants' results.

Approved by DG SANCO, expert scientists with long experience in pesticide residue analysis will be chosen as members for a joint EUPT-Scientific Committee (SC). This Committee entitles the following two subgroups:

a) An independent Quality Control Group (QCG) and

b) An Advisory Group (AG)

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[5] DG-SANCO = European Union, Health and Consumer Protection Directorate-General

[6] For more information about the EURL/NRL/OfL-Network please refer to the EURL-Web-portal under: http://www.eurl-pesticides.eu

[7] Regulation (EC) No 882/2004 of the European Parliament and of the Council on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules. Published at OJ of the EU L191 of 28.05.2004

[8] Regulation (EC) No 396/2005, published at OJ of the EU L70 of 16.03.2005, as last amended by Regulation 839/2008 published at OJ of the EU L234 of 30.08.2008.

ANNEX 1. Protocol and Instructions. List of pesticides to be sought.

The role of the SC is to help the organisers in making decisions concerning the design of the EUPT: selection of pesticides to be included in the Target Pesticide List (see below), the establishment of the Minimum Required Reporting Levels (MRRLs), the evaluation and statistical treatment of the results and the drafting of the protocol and final report. The QCG has the additional function of supervising the quality of the EUPT and to assist the EURL in confidential aspects such as the choice of the pesticides to be present in the test material and the concentration levels at which they should be present in the test material.

The EUPT-Organising Team and the EUPT-Scientific Committee (the AG and the QCG) together form the EUPT-Panel.

The present EUPT General Protocol was drafted by the EUPT-Panel and was approved by DG-SANCO.

EUPT Participants

Eligible, and at the same time legally obliged, to participate in EUPTs are all NRLs covering the same area as the organising EURL as well as all OfLs, the scope of which overlaps with that of the EUPT. The list of eligible labs will be generated using the Lab-Network Database within the EURL-Data Pool and based on the entries concerning the commodity scope of each lab. This list will be communicated to all relevant parties before each EUPT.

NRLs are responsible to check whether all relevant OfLs within their network are included in the list of eligible laboratories and whether the contact information is correct.

OfLs are responsible for keeping their profiles within the EURL-DataPool up-to-date, especially their commodity and pesticide scopes as well as their contact information.

DG-SANCO expects from each eligible lab not intending to participate in a given EUPT to explain the reasons of non-participation. This also applies to initially participating laboratories that do not deliver results.

In special cases the Organisers upon consultation with DG-SANCO will allow laboratories outside of the EURL/NRL/OfL-Network to participate in EUPTs.

Confidentiality:

The owner of all EUPT data is DG-SANCO and has thus access to all information.

In each EUPT the laboratories are given a unique code initially only known to themselves and the Organisers. In the final EUPT-Report the list of participating laboratories will not be linked to their laboratory codes. It should be noted that the organisers, at the request of the Commission, may present the results to the Standing Committee on the Food Chain and Animal Health on a country-to-country basis. It is therefore possible that a link between codes and National Reference Laboratories could be made, especially for those Member States where only one laboratory has participated.

As laid down in Regulation 882/2004, NRLs are responsible for evaluating and improving their OfL network. For this reason, the EURLs will confide the laboratory codes of OfLs to their NRLs together with the final report. This will allow the NRLs to obtain the correlation between the laboratories within their network and their performance. The EURLs furthermore reserve the right to share the EUPT-results and codes among them, for example for the purpose of evaluating the overall lab-performance as requested by DG-SANCO.

Communication

The official language used in all EUPTs is English.

Communication between participating laboratories during the test on matters concerning this PT exercise is not permitted.

Announcement / Invitation Letter

The announcement of the individual EUPT will be issued at least 3 months before the test material is distributed to the laboratories. The announcement will be published on the EURL portal and additionally distributed via mail to the NRL/OfL mailing list available to the EURLs. The announcement will contain an invitation letter, details on how to register and where to find additional related documents, and some preliminary information on the specific protocol such as the tentative calendar, the name of the commodity expected to be used, and the tentative Target Pesticide List.

ANNEX 1. Protocol and Instructions. List of pesticides to be sought.

Target Pesticide List

This list contains all pesticides, metabolites and residue definitions to be tested as well as the Minimum Required Reporting Levels (MRRLs) valid for the EUPT in question. The MRRLs are basically based upon the lowest MRLs of Regulation 396/2005/EC or the Commission Directive 2006/125/EC (Baby Food Directive).

The current residue definitions listed in the Target Pesticide List are to be followed in the EUPT. In certain justified cases these residue definitions may differ from the legal ones.

Specific Protocol

For each EUPT a Specific Protocol will be published at least 2 weeks before the test material is distributed to the laboratories. This protocol will contain all the information included in the invitation in its final version, information on payment for delivery service and/or participation. Furthermore, it will also include instructions on how to handle the test material upon receipt, on how to submit results, and other relevant information.

General procedures for reporting results

Laboratories are responsible for reporting their results to the Organiser within the stipulated deadlines. Each laboratory must only report one result for each of the analytes present in the test material, using the analytical procedure(s) that they would routinely use for each compound for monitoring purposes although more than one method may be used to cover all the compounds to be sought. The results (residue levels of the pesticides detected) are expressed in mg/kg and in some cases of products of Animal Origin in µg/kg fat. The laboratories will be requested to not only report individual pesticides and metabolites but also to express the residue as stated in the residue definition according to the Target Pesticide List.

Correction of results for recovery

According to the Method Validation and Quality Control Procedures for Pesticide Residues Analysis in Food and Feed, (Document SANCO) it is common practice that pesticide analysis results are not corrected for recovery, but may be corrected if the average recovery is significantly different from 100% (typically if outside of the range 70-120%, with good precision) therefore if residues data are adjusted for recovery, then this must be indicated on the specific field of the 'reporting result form'. Laboratories are required to report whether their results were adjusted for recovery and if this was the case, the recovery factor used. No recovery data is required where recovery adjustments resulted from using the 'standard addition(s)' approach, or from the use of isotopically labelled internal standards (in both cases with spiking of the test material at the beginning of the extraction procedures). In this case, the laboratories should report the technique used for calculation of the results instead of the recovery.

Evaluation of the Results

The procedures used for the treatment and assessment of results are described below.

- *False Positives*

These are the results above the MRRLs that show the apparent presence of pesticides that were listed in the Target Pesticide List, but which were: (i) not detected by the organiser, even after repeated analysis, (ii) and not detected by most of the participating laboratories (e.g. 95% of the laboratories) that have targeted the specific pesticide. However, in certain instances case-by-case decisions by the EUPT-Panel will be necessary.

Any results reported that are lower than the MRRL will not be considered as false positives, even though these results should not have been reported.

- *False Negatives*

These are results for pesticides reported by the laboratories as "analysed" but without reporting numerical values, although they were used by the Organiser to treat the test material and were detected by the Organiser and the majority of the participants that have targeted this specific pesticide, at or above the MRRL. However, in certain instances case-by-case decisions by the EUPT-Panel will be necessary.

In cases of the median value being less than a factor of 4 times the MRRL, false negatives will not be assigned as this is statistically not justifiable.

- ***Estimation of the true concentration (μ)***

The "true" concentration (assigned value) will be typically estimated using the robust median of all the results. In special justifiable cases, the EUPT-Panel may decide to use only part of the population of results to establish the median (e.g. using only results with z-scores ≤ 5.0 or by excluding results generated by a method that demonstrably generates significantly biased results e.g. due to incomplete extraction).

- ***Standard deviation of the assigned value (target standard deviation)***

The target standard deviation (δ) of the assigned value will be calculated using a Fit-For-Purpose Relative Standard Deviation (FFP-RSD) approach, as follows:

$$\delta = b_i * \mu_i \qquad \text{with } b_i = 0.25 \text{ (25\% FFP-RSD)}$$

The percentage FFP-RSD is set at 25% based on experience from previous EUPTs. The EUPT-Panel reserves the right to also employ other approaches on a case-by-case basis considering analytical difficulties, and experience gained from previous proficiency tests.

- ***z-scores***

This parameter is calculated using the following formula:

$$z_i = (x_i - \mu_i) / \delta_i$$

Where: x_i is the value reported by the laboratory, μ_i the assigned value, and δ_i the standard deviation at that level for each pesticide (i).

Any z-scores of > 5 will be reported as "5" particularly where summed z-scores of many pesticides are calculated (see SWZ and SZ2 below).

z-Scores will be interpreted in the following way:

$|z| \leq 2$ Acceptable

$2 < |z| \leq 3$ Questionable

$|z| > 3$ Unacceptable

For results that are considered to be false negatives, z-scores will be calculated using the MRRL or RL (the laboratory's Reporting Limit) if the RL < MRRL.

The EUPT-Panel will consider whether, or not, these values should appear in the z-score histograms.

However, a z-score will not be calculated for any false positive result.

- ***Category A and B classification***

The EUPT-Panel will decide whether to classify the laboratories in two groups, A and B. Laboratories that detect a sufficiently high percentage of the pesticides present in the test material (e.g. at least 90%) and reported no false positives will have demonstrated 'sufficient scope' and will therefore be classified in Category A. The 90% criterion will be applied following Table 1.

Table 1. No. of Pesticides needed to be detected to have sufficient scope.

No. of Pesticides Present in the Sample (N)	90%	No. of Pesticides needed to be detected to have sufficient scope (n)	n
3	2.7	3	N
4	3.6	4	
5	4.5	4	N - 1
6	5.4	5	
7	6.3	6	
8	7.2	7	
9	8.1	8	
10	9.0	9	
11	9.9	10	
12	10.8	11	
13	11.7	12	
14	12.6	13	
15	13.5	13	N - 2
16	14.4	14	
17	15.3	15	
18	16.2	16	
19	17.1	17	
20	18.0	18	
21	18.9	19	
22	19.8	20	
23	20.7	21	
24	21.6	22	
25	22.5	22	N - 3
26	23.4	23	

- ***Combined z-scores***

  a. For evaluation of the overall performance of the laboratories within Category A, two formulas will be used.

i. Sum of Weighted z-Scores (SWZ)

The sum of weighted z-scores formula uses the z-scores with a fixed maximum value of 5 for individual z-scores, using the following formula:

$$SWZ = \frac{\sum_{Zi=0}^{|Zi|\le 2} |z_i| \cdot 1 + \sum_{|Zi|>2}^{|Zi|\le 3} |z_i| \cdot 3 + \sum_{|Zi|>3}^{\infty} |z_i| \cdot 5}{n}$$

n = number of detected results

ii. Sum of Squared z-Scores (SZ^2)

The sum of squared z-scores formula multiplies each z-score by itself and not by an arbitrary number, using the following formula:

$$SZ^2 = \frac{\sum_{i=1}^{n} |Z_i||Z_i|}{n}$$

The SWZ and the SZ^2 have the following classification similar to the z-score:

Formula	Good	Satisfactory	Unsatisfactory
SWZ	≤ 2	2 < SWZ ≤ 3	SWZ > 3
SZ^2	≤ 2	2 < SZ^2 ≤ 3	SZ^2 > 3

Both, SWZ and SZ^2 are considered to be of lesser importance than the individual z-scores. The EUPT-Panel retains the right not to use them if they are considered not useful.

b. Laboratories in Category B will be ranked according to the percentage of pesticides detected from the total number of pesticides present in the sample. The number of acceptable z-score achieved will be recall too.

Publication of results

The preliminary results from the EUPTs will be reported to the participants within 2 months from the deadline for result submission.

The final report will be published shortly after the EUPT-Panel has discussed the results. Taking into account that the EUPT-Panel meets normally only once a year to discuss the results of all EUPTs organised by the EURLs each year, the final report may be published up to 8 months after the deadline for results submission.

Follow-up activities

Laboratories are expected to undertake activities towards tracing back the sources of erroneous or strongly deviating results including all false positives and false negatives as well as results with $|z|>2$.

Upon request the corresponding NRL or EURL of a lab are to be informed about the outcome of these traceability activities.

Disclaimer

The EUPT-Panel retains the right to change any parts of this EUPT – General Protocol based on new scientific or technical information. Any changes will be communicated in due course.

Laboratory Rights

After the Final Report has been sent, the laboratories will have the right to communicate the nonconformity of their result evaluation in a written form. Any detected errors in the preliminary report should also be reported to the Organiser. The Organiser, assisted by the Scientific Committee, will decide upon a re-evaluation and will give an explanation.

EUPT-FV13 SPECIFIC PROTOCOL

For European Union Proficiency Test for Pesticide Residues in Fruits and Vegetables (2011)

Introduction
This protocol is complementary to the General protocol for EU Proficiency Tests (EUPT) for Pesticide Residues in Food and Feed. This Proficiency Test is organised by the EU-RL[9] for Pesticide Residues in Fruits and Vegetables and covers Multiresidue Methods (MRM) of analysis.

Test material
This proficiency test is based on the pesticide residues analysis of mandarins. The mandarins were grown in Málaga, Spain.
The pesticide treatments will be carried out post-harvest using either commercial formulations in micro-spray solutions or using standard solutions. The test material will be frozen (using liquid nitrogen), chopped, homogenised and sub-sampled into polyethylene bottles that have previously been coded.
Ten of these bottles containing the test material, will be chosen randomly, and analysed to check for homogeneity.
The test material will be stored frozen (–20ºC) prior to shipment to participants.
Two bottles, again chosen randomly, will be analysed over a period of time to confirm the stability of the pesticides in the test material (firstly when the test materials are shipped, and then a few days after the deadline for receipt of participants´ results). There will be an extra analysis during this period reproducing the sample shipment; this is, maintaining the sample at room temperature for a few days, to see if there is any degradation of any of the pesticides present in the test material.
These results will not be included in the statistical analysis of the proficiency test. The aim is solely to check pesticide stability during the shipping process and for the duration of the proficiency test.
All the analytical determinations concerning the test material treatment analysis will be performed in a laboratory accredited to ISO 17025.

Steps to follow
This Proficiency Test will be made up of the following 8 essential steps:

1. To participate, each laboratory must complete the Application Form on-line, available on the EURL-FV Web page, before the deadline stipulated on the Calendar. It is recommended that laboratories download the Target Pesticide List from this web site. Laboratories should carefully read the Target Pesticide List, where important information about the reporting of the results, as well as the Minimum Required Reporting Limits (MRRLs), is given. Labs should take note that the pesticide residue definitions within this PT do not always follow Regulation 396/2005. Also, the MRRLs do not always correspond with the EU MRLs set for mandarin.

2. Laboratories will then receive an e-mail confirming their participation in this exercise, and assigning them each a Laboratory Code. Laboratories with this code will be able to access the restricted area containing the replying forms using their login information - consisting of their **USER**

[9] By the Treaty of Lisbon approved on the 1st of December 2009, the Community Union becomes the European Union.

NAME which is the Laboratory Code expressed as **Labxxx** (three digits with no spaces between them) and their **PASSWORD**, as chosen on the application form.

3. The sample delivery will cost **150 Euros**. The payment procedure must have started before the 24th January. An e-mail showing the bank transfer confirmation, or similar, must have been sent beforehand. **Payments without a Laboratory Code or Invoice Number to identify them will not be considered as paid.**

4. This year, a new **Form 0** will be placed in the restricted area named **Laboratory Scope.** It will be open to participants from the 10th – 19th January 2011, prior to test material shipment. The aim is that laboratories provide information regarding their scope of analysis before receipt of the test material.

5. When the participant laboratories receive the test material (and not before), they must enter the restricted area and submit the **Test Material Receipt Form 1** on-line to inform the Organiser that they have accepted the test material. This Form has a deadline: 28th January 2011, that must be met. If no test material has been received by this deadline, please contact the Organiser by e-mail (pmedina@ual.es or omalato@ual.es)

6. The participant laboratories must respect the deadline for submitting the results - 18th February 2011 - using the '**Detected for' (Form 2)**, '**Results' (Form 3)** and '**Methods Form' (Form 4)** on-line.

7. One last **Form 5 'Additional Information'** must be filled in after the deadline is over. This Form will be available from 21st – 25th February 2011. Not all the laboratories may need to fill this in. It will depend upon the information reported on previous Forms.

8. The Organiser will evaluate the results at the end of the proficiency test, once the deadline for receipt of results has passed. The Organiser will send a hard copy of the Final Report to each participant laboratory, and before this, an electronic version will be uploaded on the EURL-FV web site. This report will include information regarding the design of the test, the homogeneity and stability results, a statistical evaluation of the participant's results as well as graphical displays of the results and any conclusions. Any other relevant information considered of value may also be included.

Laboratory Scope – Form 0
Before the participant laboratories receive the sample, the restricted area will be open so their laboratory scopes can be recorded. A Form 0 will need to be filled in, to ascertain which of the pesticides in the Target Pesticide List were actually sought. It could happen that the laboratory, after receipt the test material performs further validations for some of the pesticides and then reports results for these pesticides. Therefore, the information on this Form will be made available again for possible modification in Form 2.

Analytical parameters
The test material will contain several pesticides from the Target Pesticide List. Laboratories should carefully read through the Target Pesticide List, where important information about the reporting of the results, as well as the Minimum Required Reporting Levels (MRRLs), is given. Where the residue definition in the Target Pesticide List, includes more than one component, the results for the individual components, as well as the respective sum of components, calculated as stated in the residue definition, are to be reported.
For each pesticide included in the residue definitions, MRRL values have been set. The MRRL and the participants own Reporting Levels will be used to help to identify false negative results.

Amount of Test Material
Participants will receive:
- Approximately 300 g of mandarin test material treated with pesticides
- Approximately 300 g of 'blank' mandarin test material.

Shipment of Test Materials
All Test Materials will be frozen and packed in polystyrene boxes surrounded by dry ice and packed into cardboard boxes.
The shipment of the test materials will be carried out over a one-week period from the 24th January 2011. The Organiser will try to ensure that all the packages arrive on the same day in each laboratory. An information message will be sent out by e-mail before shipment. Laboratories

must make their own arrangements for the receipt of the package. They must inform the Organiser of any public holidays in their country/city during the delivery period given in the calendar, as well as making the necessary arrangements to receive the shipment, even if the laboratory is closed.

Advice on Test Material Handling
Once received, the test material should be stored deep frozen (-18°C or less) prior to analysis to avoid any possible deterioration/spoilage. The test material should be mixed thoroughly, before taking the analytical portion(s).
All participants should use their own routine standard operating procedures for extraction, clean-up and analytical measurement and their own reference standards for identification and quantification.

Test Material Receipt – Form 1
Once the laboratory has received the test materials it must be reported to the organiser using Form 1 in the restricted area by filling in the date of receipt, the condition of the test material, and its acceptance. The deadline for acceptance, or not, is the 28th January 2011. If the laboratory does not respond by this deadline the organiser will assume that the test material has been received and accepted.
If any laboratory has not received the test material by 28th January, they must inform the Organiser **immediately** by e-mail (pmedina@ual.es and omalato@ual.es)

Submission of results:
Once the laboratory has analysed the test material and is ready to submit their data, they must enter their results in 3 different steps on 3 forms by accessing the restricted area in the EURL –FV web site: http://www.eurl-pesticides.eu

Detected Pesticides – Form 2
In this step, the laboratory should indicate the pesticides that have been detected. The information entered in Form 0 – Laboratory Scope, will be made available in this Form. Those new pesticides sought should be indicated in this step, together with the reporting level in mg/kg. This field will not be obligatory for those pesticides that where the MRL definition is the sum of two or more components. The laboratory must save every page of results that are entered. This form can be filled in at different stages, so once entered the data will be safe, and you can add further data at a later date.

Results – Form 3
In this step, the laboratory should report the concentrations measured for each determination. Results are requested to be reported in three different ways, one without correction for recovery, a second after correction for recovery and the third one, as you would normally report in routine analyses, in other words in the way you would routinely report to your customer(s). All concentrations must be expressed in mg/kg together with the percentage recovery.
The numbers of significant figures should be based on the guidelines provided in SANCO/10684/2009. Additional significant figures may be recorded for the purpose of statistical analysis. So bare this in mind when reporting data:

- Residue levels <0.010 mg/kg - to be expressed to two significant figures (e.g. 0.0058 mg/kg)
- Residue levels ≥ 0.010 mg/kg - to be expressed to three significant figures (e.g. 0.0792, 0.156, 1.64, 10.3 mg/kg)

Results should not be reported where a pesticide was not detected or was detected below the RL (Reporting Limit) of the laboratory. In both cases, it should be recorded as 'ND' or <RL. If a pesticide was not sought, it should be recorded as 'NA' (Not Analysed). The actual results/residue levels measured must be reported as numbers.

Methods – Form 4
In this step, the laboratory must report the details of the analytical methods they used. A list with all the pesticides detected in the sample will show-up with a pesticide reference number. Laboratories may describe a method for the first pesticide and use this pesticide reference number to refer to other pesticides determined using the same method.

ANNEX 1. Protocol and Instructions. List of pesticides to be sought.

On the Reference Method field a published reference is needed for the method used. Use either one from the list or provide details of your own. It is not necessary to give internal country references as this will be of little value in the final report.
Again in this form, information must always be saved so that you can come back to it and continue at any time before the final reporting deadline, which for all the forms is the 18th February 2011. Any results reported after the deadline will not be included in the statistical treatment, or in the final report.
Before entering the results please read carefully the Target Pesticide List to be aware of the residue definitions requested. For pesticides where the residue definition is the sum of a parent pesticide and other components, results for both the sum and the individual components must be reported.
It should **not** be assumed that only pesticides registered for use on mandarin are present in the test material.

False Negatives or Further Information – Form 5
This Form will be available only for laboratories that have reported that they sought a pesticide present in the test material but no method has been reported in Form 4. If the laboratory access this Form and it is empty, this will mean that there is no need to enter further information. This Form will be available after the deadline is over, from the 21st – 25th February 2011.

Calendar

ACTIVITY	DATE
- Publication of the Target Pesticide List, Calendar and Matrix on the Web page	October 2010
- Receiving Application Form from invited laboratories.	1st – 30th November 2010
- Specific Protocol published on the Web site	3rd January 2011 at the latest
- Receiving Form 0 – Laboratory Scope from participants	10th – 19th January 2011
- Test Material distribution.	24th January 2011
- Deadline for Test Material acceptance: Form 1	28th January 2011
- Deadline for receipt of results: Form 2, Form 3 and Form 4	18th February 2011
- Filling in Form 5: additional information	21st – 25th February 2011
- Preliminary Report: only results, no statistical treatment.	March 2011

Cost for shipment of the test material
All laboratories will be charged **150€** for the cost of shipment. For the payment procedures, each laboratory can specify their details and requests for invoices when applying for the test. Payment details are as follows:

BANK NAME: CAJAMAR - Caja Rural Sociedad Corporativa de Crédito
BANK ACCOUNT OWNER: Universidad de Almeria
BANK ADDRESS: Office Number 990. Universidad de Almeria. Spain
ACCOUNT NUMBER: 30580130172731005000
IBAN: ES0730580130172731005000
SWIFT: CCRIES2A
CONCEPT: Invoice No. or Lab Code

Contact information
The official organising group details are as follows:
Universidad de Almería. Edificio Químicas CITE I
Ctra. Sacramento s/n
04120 Almería - Spain
Fax No.: +34 950015483

ANNEX 1. Protocol and Instructions. List of pesticides to be sought.

Organising team (e-mail and phone no.):
Amadeo R. Fernández-Alba EURL-FV amadeo@ual.es +34 950015034
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Octavio Malato Rodríguez EURL-FV omalato@ual.es +34 950015531

Quality Control Group
Dr. Antonio Valverde, University of Almería, Spain
Mr. Stewart Reynolds, senior Chemist, FERA, York, United Kingdom

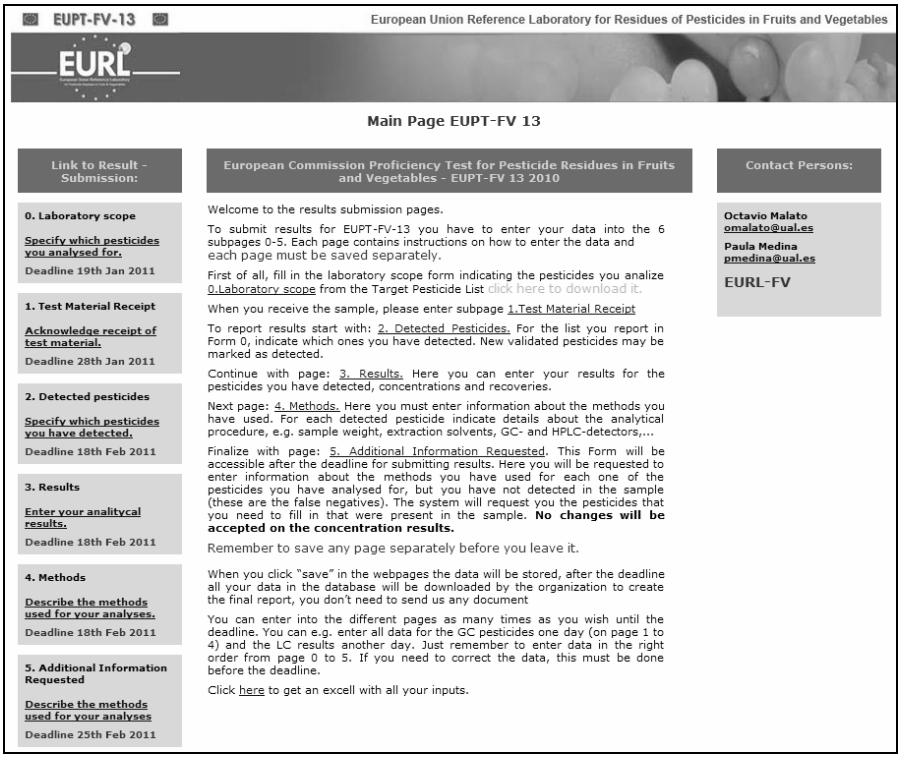
Statistical Group
Dr. Carmelo Rodriguez, senior Mathematician, University of Almeria, Spain

Advisory Group
Dr. André de Kok, senior Chemist, VWA, Amsterdam, The Netherlands.
Dr. Metter Erecius Poulsen, senior Chemist, NFI, Copenhagen, Denmark.
Dr. Miguel Gamón, senior Chemist, Laboratorio Agroalimentario, Valencia, Spain.
Dr. Tuija Pihlström, senior Chemist NFA, Uppsala, Sweden.
Dr. Sonja Masselter, senior Chemist, AGES, Innsbruck, Austria.
Dr. Michelangelo Anastassiades, senior Chemist, CVUA, Stuttgart, Germany.
Dr. Ralf Lippold, senior Chemist, CVUA, Freiburg, Germany.
Dr. Magnus Jezussek, senior Chemist, Erlangen, Germany.
Dr. Darinka Stajnbaher, senior Chemist, Maribor, Slovenia.

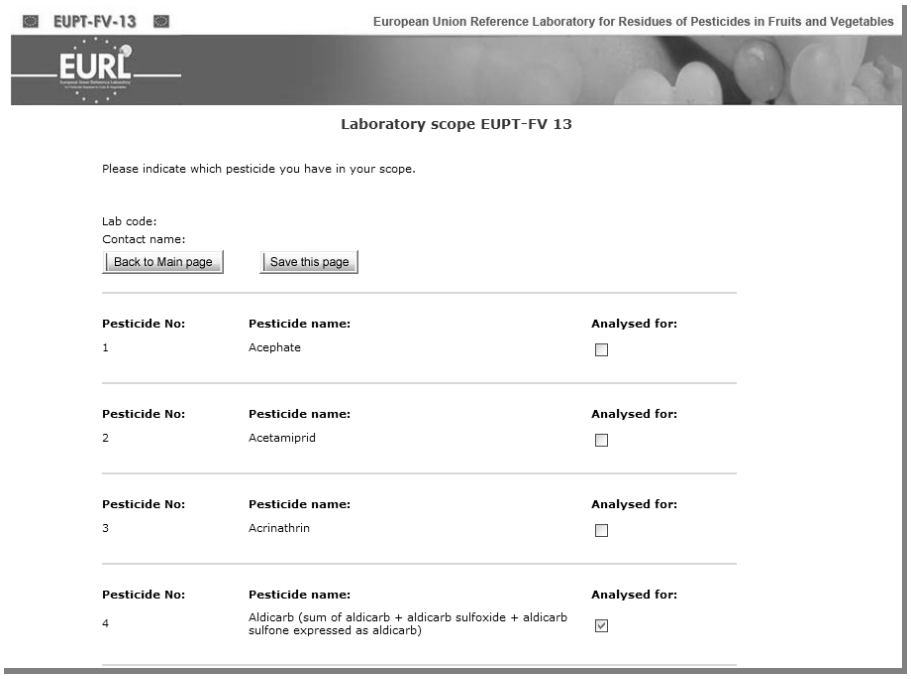
ANNEX 1. Protocol and Instructions. List of pesticides to be sought.

EUPT-FV-13 WEBPAGE

EUPT-FV-13 Main Page

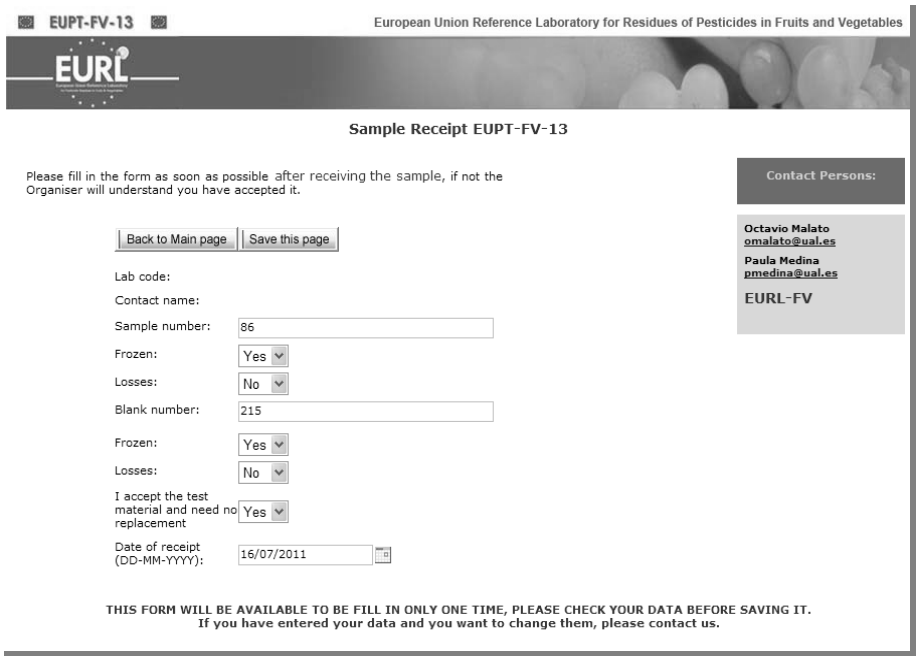


EUPT-FV-13 Form 0 – Scope of your method



ANNEX 1. Protocol and Instructions. List of pesticides to be sought.

EUPT-FV-13 Form 1 – Sample Receipt



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European Union Reference Laboratory for Residues of Pesticides in Fruits and Vegetables

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Sample Receipt EUPT-FV-13

Please fill in the form as soon as possible after receiving the sample, if not the Organiser will understand you have accepted it.

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Lab code:

Contact name:

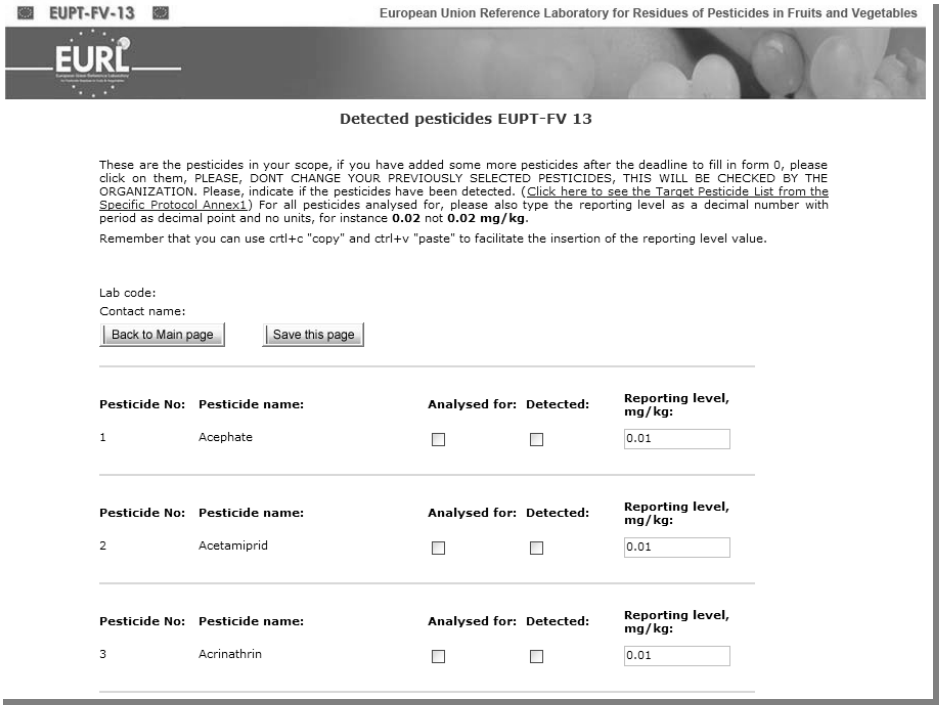
Sample number:	86
Frozen:	Yes
Losses:	No
Blank number:	215
Frozen:	Yes
Losses:	No
I accept the test material and need no replacement	Yes
Date of receipt (DD-MM-YYYY):	16/07/2011

Contact Persons:

Octavio Malato
omalato@ual.es
Paula Medina
pmedina@ual.es
EURL-FV

THIS FORM WILL BE AVAILABLE TO BE FILL IN ONLY ONE TIME, PLEASE CHECK YOUR DATA BEFORE SAVING IT.
If you have entered your data and you want to change them, please contact us.

EUPT-FV-13 Form 2 – Detected Pesticides



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Detected pesticides EUPT-FV 13

These are the pesticides in your scope, if you have added some more pesticides after the deadline to fill in form 0, please click on them, PLEASE, DONT CHANGE YOUR PREVIOUSLY SELECTED PESTICIDES, THIS WILL BE CHECKED BY THE ORGANIZATION. Please, indicate if the pesticides have been detected. (Click here to see the Target Pesticide List from the Specific Protocol Annex1) For all pesticides analysed for, please also type the reporting level as a decimal number with period as decimal point and no units, for instance **0.02** not **0.02 mg/kg**.

Remember that you can use crtl+c "copy" and ctrl+v "paste" to facilitate the insertion of the reporting level value.

Lab code:

Contact name:

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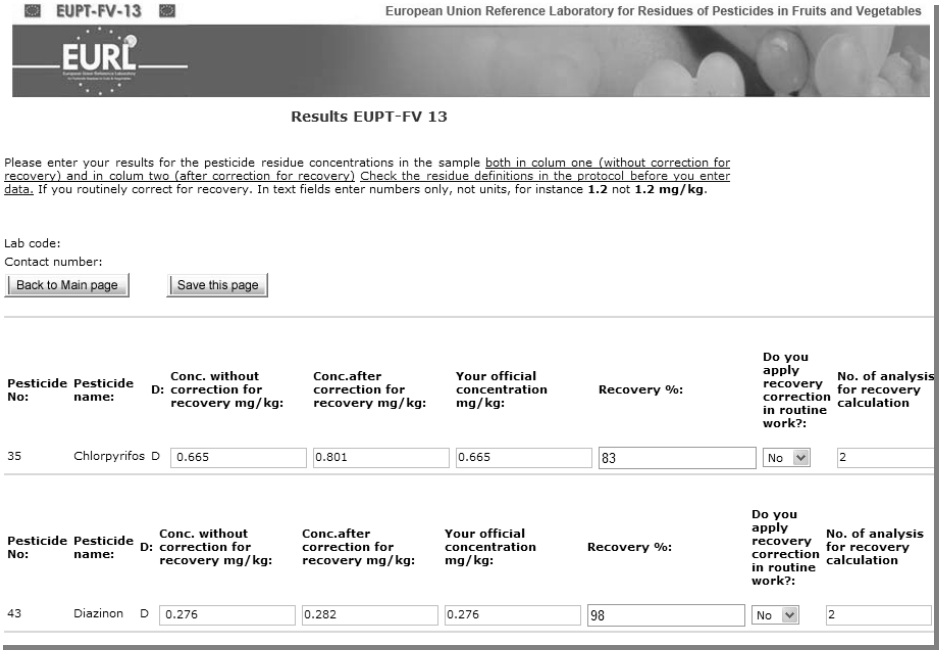
Pesticide No:	Pesticide name:	Analysed for:	Detected:	Reporting level, mg/kg:
1	Acephate	☐	☐	0.01
2	Acetamiprid	☐	☐	0.01
3	Acrinathrin	☐	☐	0.01

EUPT-FV-13 Form 3 – Results



EUPT-FV-13 — European Union Reference Laboratory for Residues of Pesticides in Fruits and Vegetables

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Results EUPT-FV 13

Please enter your results for the pesticide residue concentrations in the sample both in colum one (without correction for recovery) and in colum two (after correction for recovery) Check the residue definitions in the protocol before you enter data. If you routinely correct for recovery. In text fields enter numbers only, not units, for instance **1.2** not **1.2 mg/kg**.

Lab code:
Contact number:

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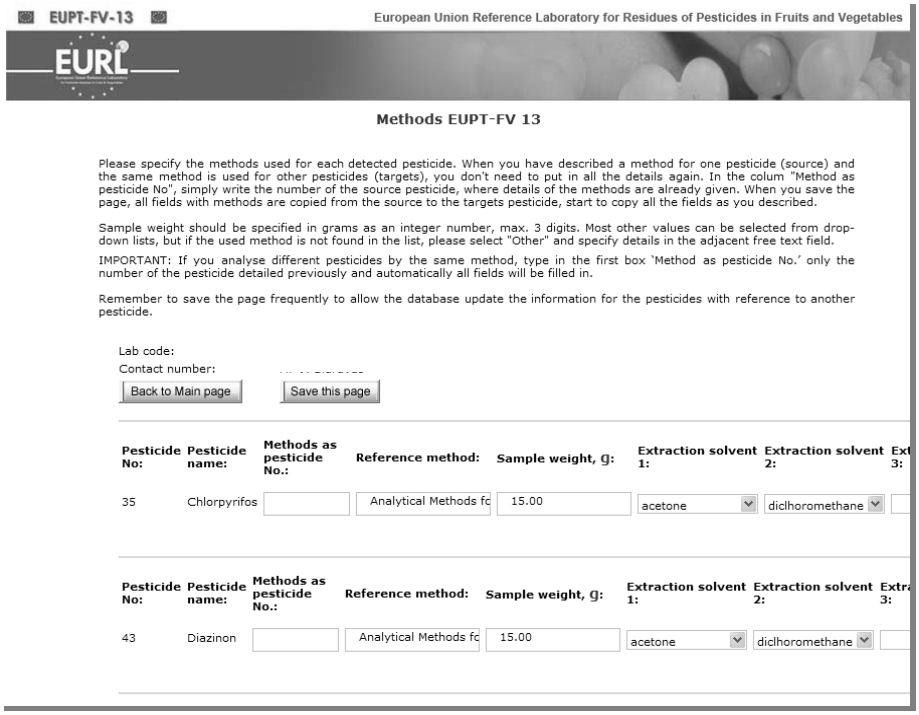
Pesticide No:	Pesticide name:	D:	Conc. without correction for recovery mg/kg:	Conc.after correction for recovery mg/kg:	Your official concentration mg/kg:	Recovery %:	Do you apply recovery correction in routine work?:	No. of analysis for recovery calculation
35	Chlorpyrifos	D	0.665	0.801	0.665	83	No	2

Pesticide No:	Pesticide name:	D:	Conc. without correction for recovery mg/kg:	Conc.after correction for recovery mg/kg:	Your official concentration mg/kg:	Recovery %:	Do you apply recovery correction in routine work?:	No. of analysis for recovery calculation
43	Diazinon	D	0.276	0.282	0.276	98	No	2

EUPT-FV-13 Form 4 – Methods



EUPT-FV-13 — European Union Reference Laboratory for Residues of Pesticides in Fruits and Vegetables

EURL

Methods EUPT-FV 13

Please specify the methods used for each detected pesticide. When you have described a method for one pesticide (source) and the same method is used for other pesticides (targets), you don't need to put in all the details again. In the colum "Method as pesticide No", simply write the number of the source pesticide, where details of the methods are already given. When you save the page, all fields with methods are copied from the source to the targets pesticide, start to copy all the fields as you described.

Sample weight should be specified in grams as an integer number, max. 3 digits. Most other values can be selected from drop-down lists, but if the used method is not found in the list, please select "Other" and specify details in the adjacent free text field.

IMPORTANT: If you analyse different pesticides by the same method, type in the first box 'Method as pesticide No.' only the number of the pesticide detailed previously and automatically all fields will be filled in.

Remember to save the page frequently to allow the database update the information for the pesticides with reference to another pesticide.

Lab code:
Contact number:

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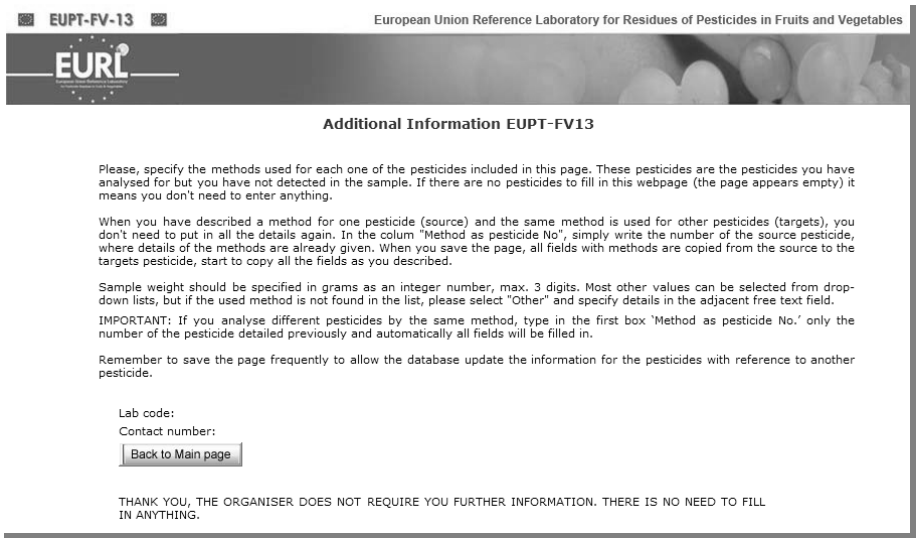
Pesticide No:	Pesticide name:	Methods as pesticide No.:	Reference method:	Sample weight, g:	Extraction solvent 1:	Extraction solvent 2:	Ext 3:
35	Chlorpyrifos		Analytical Methods fc	15.00	acetone	diclhoromethane	

Pesticide No:	Pesticide name:	Methods as pesticide No.:	Reference method:	Sample weight, g:	Extraction solvent 1:	Extraction solvent 2:	Extra 3:
43	Diazinon		Analytical Methods fc	15.00	acetone	diclhoromethane	

EUPT-FV-13 Form 5 – Additional Information



EUPT-FV-13 European Union Reference Laboratory for Residues of Pesticides in Fruits and Vegetables

EURL

Additional Information EUPT-FV13

Please, specify the methods used for each one of the pesticides included in this page. These pesticides are the pesticides you have analysed for but you have not detected in the sample. If there are no pesticides to fill in this webpage (the page appears empty) it means you don't need to enter anything.

When you have described a method for one pesticide (source) and the same method is used for other pesticides (targets), you don't need to put in all the details again. In the colum "Method as pesticide No", simply write the number of the source pesticide, where details of the methods are already given. When you save the page, all fields with methods are copied from the source to the targets pesticide, start to copy all the fields as you described.

Sample weight should be specified in grams as an integer number, max. 3 digits. Most other values can be selected from drop-down lists, but if the used method is not found in the list, please select "Other" and specify details in the adjacent free text field.

IMPORTANT: If you analyse different pesticides by the same method, type in the first box 'Method as pesticide No.' only the number of the pesticide detailed previously and automatically all fields will be filled in.

Remember to save the page frequently to allow the database update the information for the pesticides with reference to another pesticide.

Lab code:

Contact number:

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THANK YOU, THE ORGANISER DOES NOT REQUIRE YOU FURTHER INFORMATION. THERE IS NO NEED TO FILL IN ANYTHING.

ANNEX 1. Protocol and Instructions. List of pesticides to be sought.

TARGET PESTICIDE LIST FOR THE EUPT-FV 13

Pesticide	MRRL (mg/Kg)
Acephate	0.01
Acetamiprid	0.01
Acrinathrin	0.01
Aldicarb (sum of aldicarb + aldicarb sulfoxide + aldicarb sulfone expressed as aldicarb)	0.01
Aldicarb	
Aldicarb Sulfoxide	
Aldicarb Sulfone	
Amitraz (do not expressed it as amitraz sum)	
Amitraz	
DMPF (N-2,4-Dimethylphenyl-N-Methyl-formamidine)	
DMF (2,4-Dimethylformanilide)	
Azinphos-methyl	0.01
Azoxystrobin	0.01
Benfuracarb	0.01
Bifenthrin	0.01
Bitertanol	0.01
Boscalid	0.01
Bromopropylate	0.01
Bromuconazole	0.01
Bupirimate	0.01
Buprofezin	0.01
Cadusafos	**0.006**
Captan	0.01
Carbaryl	0.01
Carbendazim (sum of benomyl and carbendazim expressed as carbendazim)	0.01
Carbofuran (sum of carbofuran and 3-hydroxy-carbofuran expressed as carbofuran)	0.01
Carbofuran	
3-hydroxy-carbofuran	
Carbosulfan	0.01
Chlorfenapyr	0.01
Chlorfenvinphos	0.01
Chlorobenzilate	0.01
Chlorothalonil	0.01
Chlorpropham (only parent compound)	0.01
Chlorpyrifos	0.01
Chlorpyrifos-methyl	0.01
Clofentezine (only parent compound)	0.01
Cyfluthrin (cyfluthrin incl. other mixtures of constituent isomers (sum of isomers))	0.01
Cypermethrin (cypermethrin incl. other mixtures of constituent isomers (sum of isomers))	0.01
Cyproconazole	0.01
Cyprodinil	0.01
Deltamethrin	0.01
Diazinon	0.01
Dichlofluanid (only parent compound)	0.01
Dichlorvos	0.01
Dicloran	0.01
Dicofol	0.01
Difenoconazole	0.01
Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	**0.003**
Dimethoate	
Omethoate	
Dimethomorph	0.01
Diphenylamine	0.01
Endosulfan (sum of alpha- and beta-isomers and endosulfan sulfate expressed as endosulfan)	0.01
Endosulfan alpha	
Endosulfan beta	
Endosulfan sulfate	
EPN	0.01
Epoxiconazole	0.01
Ethion	0.01
Etofenprox	0.01
Ethoprophos	**0.008**

Fenamiphos (sum of fenamiphos and its sulfoxide and sulfone expressed as fenamiphos)	0.01
Fenamiphos	
Fenamiphos sulfoxide	
Fenamiphos sulfone	
Fenarimol	0.01
Fenazaquin	0.01
Fenbuconazole	0.01
Fenhexamid	0.01
Fenitrothion	0.01
Fenoxycarb	0.01
Fenpropathrin	0.01
Fenpropimorph	0.01
Fenthion (sum of fenthion and its oxigen analogue, their sulfoxides and sulfone expressed as fenthion)	0.01
Fenthion	
Fenthion sulfoxide	
Fenthion sulfone	
Fenthion oxon	
Fenthion oxon sulfoxide	
Fenthion oxon sulfone	
Fipronil (only parent compound)	**0.004**
Fludioxonil	0.01
Flufenoxuron	0.01
Fluquinconazole	0.01
Flusilazole	0.01
Flutriafol	0.01
Folpet	0.01
Fosthiazate	0.01
Hexaconazole	0.01
Hexythiazox	0.01
Imazalil	0.01
Imidacloprid	0.01
Indoxacarb (Indoxacarb as sum of the isomers S and R)	0.01
Iprodione	0.01
Iprovalicarb	0.01
Isofenphos-methyl	0.01
Kresoxim-methyl	0.01
Lambda-Cyhalothrin	0.01
Linuron	0.01
Lufenuron	0.01
Malathion (sum of malathion and malaoxon expressed as malathion)	0.01
Malathion	
Malaoxon	
Mepanipyrim (only parent compound)	0.01
Metalaxyl and metalaxyl-M	0.01
Metaflumizone	0.01
Metconazole	0.01
Methamidophos	0.01
Methidathion	0.01
Methiocarb (sum of methiocarb + methiocarb sulfone + methiocarb sulfoxide expressed as methiocarb)	0.01
Methiocarb	
Methiocarb sulfone	
Methiocarb sulfoxide	
Methomyl and Thiodicarb (sum of methomyl and thiodicarb expressed as methomyl)	0.01
Methomyl	
Thiodicarb	
Methoxyfenozide	0.01
Monocrotophos	0.01
Myclobutanil	0.01
Orthophenylphenol	0.01
Oxadixyl	0.01
Oxamyl	0.01
Oxydemeton-methyl (sum of oxydemeton-methyl and demeton-S-methylsulfone expressed as oxydemeton-methyl)	**0.006**
Oxydemeton-methyl	
Demeton-S-methylsulfone	
Paclobutrazole	0.01

ANNEX 1. Protocol and Instructions. List of pesticides to be sought.

Parathion-ethyl	0.01
Parathion-methyl (sum of parathion-methyl and paraoxon-methyl expressed as parathion-methyl)	0.01
Parathion-methyl	
Paraoxon-methyl	
Pencycuron	0.01
Penconazole	0.01
Pendimethalin	0.01
Phenthoate	0.01
Phosalone	0.01
Phosmet (Phosmet and Phosmet oxon expr. as Phosmet)	0.01
Phosmet	
Phosmet oxon	
Phoxim	0.01
Pyraclostrobin	0.01
Pirimicarb (sum of pirimicarb and desmethyl pirimicarb expr. as pirimicarb)	0.01
Pirimicarb	
Desmethyl-pirimicarb	
Pirimiphos-methyl	0.01
Prochloraz (only parent compound)	0.01
Procymidone	0.01
Profenofos	0.01
Propargite	0.01
Propiconazole	0.01
Propyzamide	0.01
Prothioconazole (Prothioconazole-desthio)	0.01
Prothiofos	0.01
Pyridaben	0.01
Pyrimethanil	0.01
Pyriproxyfen	0.01
Quinoxyfen	0.01
Spinosad (sum of spinosyn A and spinosyn D, expr. as spinosad)	0.01
Spiroxamine	0.01
Tau-Fluvalinate	0.01
Tebuconazole	0.01
Tebufenozide	0.01
Tebufenpyrad	0.01
Teflubenzuron	0.01
Tefluthrin	0.01
Tetraconazole	0.01
Tetradifon	0.01
Thiabendazole	0.01
Thiamethoxam (sum of thiamethoxam and clothianidin expressed as thiamethoxam)	0.01
Thiamethoxam	
Clothianidin	
Thiacloprid	0.01
Thiophanate-methyl	0.01
Tolclofos-methyl	0.01
Tolylfluanid (only parent compound)	0.01
Triadimefon and Triadimenol (sum of triadimefon and triadimenol)	0.01
Triadimefon	
Triadimenol	
Triazophos	0.01
Trichlorfon (only parent compound)	0.01
Trifloxystrobin	0.01
Triflumuron	0.01
Trifluralin	0.01
Triticonazole	0.01
Vinclozolin (only parent compound)	0.01
Zoxamide	0.01
There are no new pesticides this year.	

This list is based on Commission Regulation (EC) No 915/2010 and 669/2009.
The MRRLs are based in Regulation (EC) No. 396/2005 and Commission Directive 2006/125/EC.

ANNEX 2. List of laboratories that agreed to participate in PT-FV13.

COUNTRY	LABORATORY NAME	CITY	REPORTED RESULTS
AUSTRIA	AGES COMPETENCE CENTER FOR RESIDUES OF PLANT PROTECTION PRODUCTS, AGES GMBH	Innsbruck	YES
BELGIUM	LOVAP NV	Geel	YES
BELGIUM	FYTOLAB	Zwijnaarde	YES
BELGIUM	SCIENTIFIC INSTITUTE OF PUBLIC HEALTH	Bruxelles	YES
BELGIUM	GROND- GEWAS- EN MILIEULABORATORIUM "ZEEUWS-VLAANDEREN" B.V.	Graauw (The Netherlands)	YES
BELGIUM	HANDELSABORATORIUM DR A VERWEY-SILLIKER	Rotterdam (The Netherlands)	YES
BRAZIL	LABORATORY OF PESTICIDES AND CONTAMINNATS IN FOOD AND OF ALCOHOLIC PRODUCTS – LABTOX INSTITUTE OF TECHNOLOGY OF PERNAMBUCO - ITEP	Recife	NO
BRAZIL	BIOENSAIOS ANÁLISES E CONSULTORIA AMBIENTAL LTDA.	Viamão	YES
BULGARIA	PLANT PROTECTION INSTITUTE, DEPARTMENT ON TOXICOLOGY	Kostinbrod	YES
BULGARIA	CENTRAL LABORATORY FOR CHEMICAL TESTING AND CONTROL	Sofia	YES
CYPRUS	PESTICIDES RESIDUES LABORATORY OF SGL	Nicosia	YES
CZECH REPUBLIC	INSTITUTE OF CHEMICAL TECHNOLOGY PRAGUE, DEPT. OF FOOD CHEMISTRY AND ANALYSIS	Prague	YES
CZECH REPUBLIC	CZECH AGRICULTURE AND FOOD INSPECTION AUTHORITY	Praha	YES
DENMARK	DANISH VETERINARY AND FOOD ADMINISTRATION, REGIN EAST	Denmark	YES
DENMARK	DTU NATIONAL FOOD INSTITUTE	Soeborg	YES
EGYPT	CENTRAL LAB OF RESIDUE ANALYSIS OF PESTICIDES AND HEAVY METALS IN FOODS	Giza	YES
ESTONIA	LABORATORY FOR RESIDUES AND CONTAMINANTS OF AGRICULTURAL RESEARCH CENTRE	Saku	YES
ESTONIA	TARTU LABORATORY OF HEALTH BOARD	Tartu	YES
FINLAND	FINNISH CUSTOMS LABORATORY	Espoo	YES
FINLAND	METROPOLILAB OY	Helsinki	YES
FRANCE	LABORATOIRE DEPARTEMENTAL DE LA SARTHE	Le Mans	YES
FRANCE	LABORATOIRE DU SCL	Montpellier	YES
FRANCE	CERECO SUD	Garons	YES
FRANCE	SERVICE COMMUN DES LABORATOIRES SCL D'ILE DE FRANCE - MASSY	Massy Cedex - France	YES
FRANCE	CENTRE ANALYSE MÉDITERRANÉE PYRÉNÉES	Perpignan	YES
FRANCE	SERVICE COMMUN DES LABORATOIRES SCL BORDEAUX-PESSAC	Pessac Cedex	YES
FRANCE	TRISKALIA - CAPINOV	Landerneau - France	YES
FRANCE	SERVICE COMMUN DES LABORATOIRES SCL - 35	Rennes	YES

ANNEX 2. List of laboratories that agreed to participate in PT-FV13.

COUNTRY	LABORATORY NAME	CITY	REPORTED RESULTS
FRANCE	GIRPA	Beaucouze	YES
FRANCE	INSTITUT DEPARTEMENTAL D'ANALYSE ET DE CONSEIL (IDAC)	NANTES Cedex3	YES
FRANCE	SERVICE COMMUN DES LABORATOIRES SAINT DENIS REUNION	Saint Denis	NO
FRANCE	SCL LABORATOIR DE STRASBOURG	Illkirch	YES
GERMANY	THUERINGER LANDESAMT FUER LEBENSMITTELSICHERHEIT UND VERBRAUCHERSCHUTZ	Bad Langensalza	YES
GERMANY	LANDESUNTERSUCHUNGSAMT FÜR CHEMIE, HYGIENE UND VETERINÄRMEDIZIN BREMEN	Bremen	YES
GERMANY	LANDESUNTERSUCHUNGSAMT RHEINLAND-PFALZ ILC SPEYER	Speyer	YES
GERMANY	LANDESAMT FÜR SOZIALES, GESUNDHEIT UND VERBRAUCHERSCHUTZ	Saarbrücken	YES
GERMANY	LANDESBETRIEB HESSISCHES LANDESLABOR	Kassel	YES
GERMANY	NIEDERSAECHSISCHES LANDESAMT FÜR VERBRAUCHERSCHUTZ UND LEBENSMITTELSICHERHEIT	Oldenburg	YES
GERMANY	LANDESLABOR BERLIN-BRANDENBURG	Frankfurt (Oder)	YES
GERMANY	LANDESLABOR SCHLESWIG-HOLSTEIN	Neumünster	YES
GERMANY	AMT FÜR VERBRAUCHERSCHUTZ DUESSELDORF	Duesseldorf	YES
GERMANY	CHEMISCHES UND VETERINÄRUNTERSUCHUNGSAMT STUTTGART (CVUAS)	Fellbach	YES
GERMANY	CVUA-RRW CHEMISCHES UND VETERINÄRUNTERSUCHUNGSAMT RHEIN-RUHR-WUPPER	Essen	YES
GERMANY	FEDERAL OFFICE OF CONSUMER PROTECTION AND FOOD SAFETY (BVL)	Berlin	YES
GERMANY	BAYERISCHES LANDESAMT FUER GESUNDHEIT UND LEBENSMITTELSICHERHEIT	Erlangen	YES
GERMANY	LAV SACHSEN-ANHALT	Halle/Saale	YES
GERMANY	LUA SACHSEN, GERMANY	Dresden	YES
GERMANY	LANDESAMT FÜR LANDWIRTSCHAFT, LEBENSMITTELSICHERHEIT UND FISCHEREI MECKLENBURG-VORPOMMERN	Rostock	YES
GERMANY	CVUA-OWL	Detmold	YES
GERMANY	CHEMISCHES UND VETERNIÄRUNTERSUCHUNGSAMT MÜNSTERLAND-EMSCHER-LIPPE (CVUA-MEL)	Muenster	YES
GERMANY	CVUA RHEINLAND	Bonn	YES
GERMANY	INSTITUT FUER HYGIENE UND UMWELT	Hamburg	YES
GERMANY	CHEMISCHES UND LEBENSMITTELUNTERSUCHUNGSAMT DER STADT DORTMUND	Bochum	YES
GREECE	MINISTRY OF RURAL DEVELOPMENT & FOOD, RURAL CENTRE OF CROP PROTECTION & QUALITY CONTROL OF IOANNINA LABORATORY OF PESTICIDE ANALYSIS IN PRODUCTS OF PLANT ORIGIN	Ioannina	YES
GREECE	REGIONAL CENTER OF PLANT PROTECTION AND QUALITY CONTROL OF IRAKLION, LABORATORY OF PESTICIDE RESIDUES.	Iraklion Crete	YES
GREECE	GENERAL CHEMICAL STATE LABORATORY, PESTICIDE	Athens	YES

ANNEX 2. List of laboratories that agreed to participate in PT-FV13.

COUNTRY	LABORATORY NAME	CITY	REPORTED RESULTS
	RESIDUES LABORATORY		
GREECE	REGIONAL CENTER OF PLANT PROTECTION AND QUALITY CONTROL OF ACHAIA, LAB. OF PESTICIDE RESIDUES	Patras	YES
GREECE	REGIONAL CENTER OF PLANT PROTECTION & QUALITY CONTROL OF MAGNESIA, LABORATORY OF PESTICIDES RESIDUE	Volos	YES
GREECE	PERIPHERAL CENTER OF PLANT PROTECTION AND QUALITY CONTROL OF KAVALA-MINISTRY OF RURAL DEVELOPMENT & FOOD	Kavala	YES
GREECE	REGIONAL CENTER OF PLANT PROTECTION AND QUALITY CONTROL. LABORATORY OF PESTICIDE RESIDUES	Thessaloniki	YES
GREECE	LAB OF PESTICIDE RESIDUES OF NAFPLIO	Nafplio	YES
GREECE	PESTICIDE RESIDUES LAB., BENAKI PHYTOPATHOLOGICAL INSTITUTE	Kiphissia, Athens	YES
GREECE	PESTICIDE RESIDUE LABORATORY OF REGIONAL CENTRE OF PLANT PROTECTION AND QUALITY CONTROL OF PIRAEUS	Lykovryssi, Athens	YES
HUNGARY	AGRICULTURAL OFFICE OF SOMOGY COUNTY, PLANT PROT. & SOIL CONS. DIRECTORATE, PESTICIDE ANALYTICAL LABORATORY	Kaposvar	YES
HUNGARY	AGRICULTURAL OFFICE OF COUNTY VAS, PLANT PROTECTION AND SOIL CONSERVATION DIRECTORATE PESTICIDE RESIDUE ANALYTICAL LABORATORY	Tanakajd	YES
HUNGARY	AGRICULTURAL OFFICE OF BAZ COUNTY PLANT PROTECTION AND SOIL CONSERVATION DIRECTORATE PESTICIDE RESIDUE ANALYTICAL LABORATORY	Miskolc	YES
HUNGARY	AGRICULTURAL OFFICE OF COUNTY FEJER, PPSCD, PESTICIDE RESIDUE ANALYTICAL LABORATORY	Velence	YES
HUNGARY	PLANT PROTECTION AND SOIL CONSERVATION DIRECTORATE OF JOSZ-NAGYKUN-SZOLNOK COUNTY	Szolnok	YES
HUNGARY	AGRICULTURAL OFFICE OF COUNTY CSONGRÁD, DIRECTORATE OF PLANT PROTECTION AND SOIL CONSERVATION	Hodmezovasarhely	YES
ICELAND	MATÍS OHF.	Akureyri	YES
IRELAND	PESTICIDE CONTROL LABORATORY	Celbridge	YES
ISRAEL	PESTICIDE RESIDUES LABORATORY, PLANT PROTECTION AND INSPECTION SERVICES (PPIS)	Bet-Dagan	YES
ITALY	LANDESAGENTUR FÜR UMWELT - LABOR FÜR CHROMATOGRAPHIE	Bozen	YES
ITALY	ARPA EMILIA-ROMAGNA RAR FITOFARMACI	Ferrara	YES
ITALY	ARPA LIGURIA - DIPARTIMENTO DI LA SPEZIA	La Spezia	YES
ITALY	ASL DELLA PROVINCIA DI VARESE - U.O. LABORATORIO CHIMICO	Varese	YES
ITALY	ISTITUTO SUPERIORE DI SANITA' - DIPARTIMENTO AMPP - REPARTO ANTIPARASSITARI	Rome	YES
ITALY	LABORATORIO CONTAMINANTI AMBIENTALI IZ	Perugia	YES
ITALY	ARPA PUGLIA - DIPARTIMENTO DI BARI -	Bari	YES
ITALY	ARPA FVG LABORATORIO UNICO MULTISITO - SEDE DI PORDENONE	Pordenone	YES
ITALY	LABORATORIO DI PREVENZIONE - AZIENDA SANITARIA LOCALE MILANO 1	Parabiago	YES

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ITALY	LABORATORIO DI SANITA PUBBLICA ASL DI BERGAMO	Bergamo	YES
ITALY	ARPA VALLE D'AOSTA	Saint Christophe	YES
ITALY	LABORATORIO DI PREVENZIONE	Milano	YES
ITALY	ARPA LAZIO	Rome	YES
ITALY	APPA TRENTO	Trento	YES
ITALY	AGENZIA REGIONALE PER LA PROTEZIONE AMBIENTALE DELLA TOSCANA - DIPARTIMENTO DI AREZZO (A.R.P.A.T. - AREZZO)	Arezzo	YES
ITALY	ISTITUTO ZOOPROFILATTICO SPERIMENTALE LOMBARDIA EMILIA ROMAGNA - REPARTO CHIMICA DEGLI ALIMENTI - LAB. CONTAMINANTI AMBIENTALI	Brescia	YES
ITALY	ARPA PIEMONTE	La Loggia	YES
ITALY	A.R.P.A.V. - SERVIZIO LABORATORI VERONA	Verona	YES
ITALY	UNITÀ OPERATIVA LABORATORIO MULTISITO (UOLM) PERUGIA - ARPA UMBRIA -	Perugia	YES
ITALY	ARPALAZIO SEZIONE DI LATINA	Latina	YES
ITALY	ISTITUTO ZOOPROFILATTICO SPERIMENTALE DELLE VENEZIE	Legnaro, Padova	YES
ITALY	ARPA MARCHE- DIP. MACERATA	Villapotenza-Macerata	YES
LATVIA	INSTITUT OF FOOD SAFETY, ANIMAL HEALTH AND ENVIRONMENT "BIOR"	Riga	YES
LITHUANIA	NATIONAL FOOD AND VETERINARY RISK ASSESSMENT INSTITUTE	Vilnius	YES
LUXEMBOURG	LABORATOIRE NATIONAL DE SANTE - ALI	Luxembourg	YES
NORWAY	BIOFORSK, PLANT HEALTH AND PLANT PROTECTION, PESTICIDE CHEMISTRY	Aas	YES
POLAND	WOJEWÓDZKA STACJA SANITARNO-EPIDEMIOLOGICZNA W ŁODZI	Łódź	YES
POLAND	LABORATORIUM BADANIA POZOSTAŁOSCI SRODKOW OCHRONY ROSLIN W BIAŁYMSTOKU	Białystok	YES
POLAND	INSTITUTE OF PLANT PROTECTION – NATIONAL RESEARCH INSTITUTE, RESIDUE ANALYSES LABORATORY, REGIONAL EXPERIMENTAL STATION IN RZESZOW	Rzeszow	YES
POLAND	INSTITUTE OF PLANT PROTECTION-NATIONAL INSTITUTE SOSNICOWICE BRANCH	Sosnicowice	YES
POLAND	LABORATORIUM BADANIA POZOSTAŁOŚCI W TRZEBNICY	Trzebnica	YES
POLAND	MAIN INSPECTORATE OF PLANT HEALTH AND SEED INSPECTION, CENTRAL LABORATORY	Torun	YES
POLAND	INSTITUTUTE OF PLANT PROTECTION, DEPARTMENT OF PESTICIDE RESIDUE RESEARCH	Poznan	YES
POLAND	WOJEWÓDZKA STACJA SANITARNO-EPIDEMIOLOGICZNA WE WROCŁAWIU - DZIAŁ LABORATORYJNY	Wrocław	YES
PORTUGAL	LABORATÓRIO DE QUIMICA AGRICOLA E AMBIENTAL DA DRAPN	Senhora Da Hora	YES
PORTUGAL	L-INIA - LABORATÓRIO DE RESÍDUOS DE PESTICIDAS	Oeiras	YES

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PORTUGAL	LABORATÓRIO REGIONAL DE VETERINÁRIA E SEGURANÇA ALIMENTAR	Funchal	YES
ROMANIA	LABORATORY FOR PESTICIDES RESIDUES CONTROL IN PLANTS AND VEGETABLE PRODUCTS	Bucharest	YES
ROMANIA	SANITARY VETERINARY AND FOOD SAFETY DIRECTORATE	Bucharest	YES
SERBIA	CENTER FOR FOOD ANALYSIS	Belgrade	YES
SERBIA	SP LABORATORIJA A.D	Becej	YES
SLOVAKIA	STATE VETEČRINARY AND FOOD INSTITUTE	Bratislava	YES
SLOVAKIA	NATIONAL REFERENCE CENTRE FOR PESTICIDE RESIDUES, PUBLIC HEALTH AUTHORITY OF SLOVAK REPUBLIC	Bratislava	YES
SLOVENIA	ZAVOD ZA ZDRAVSTVENO VARSTVO MARIBOR (INSTITUTE OF PUBLIC HEALTH MARIBOR)	Maribor	YES
SLOVENIA	INSTITUTE OF PUBLIC HEALTH	Ljubljana	YES
SLOVENIA	KMETIJSKI INŠTITUT SLOVENIJE (AGRICULTURAL INSTITUTE OF SLOVENIA)	Ljubljana	YES
SPAIN	LABORATORIO AGROALIMENTARIO DE GRANADA	Santa Fe, Granada	YES
SPAIN	LABORATORIO ARBITRAL AGROALIMENTARIO	Madrid	YES
SPAIN	NASERSA	Villava	YES
SPAIN	LABORATORIO AGRARIO Y FITOPATOLOGICO DE GALICIA	Abegondo, A Coruña	YES
SPAIN	LABORATORIO AGRARIO REGIONAL. JUNTA DE CASTILLA Y LEON	Burgos	YES
SPAIN	LABORATORIO AGROALIMENTARIO DE LA GENERALITAT VALENCIANA	Burjassot	YES
SPAIN	LABORATORIO REGIONAL DE LA CCAA DE LA RIOJA	Logroño	YES
SPAIN	LABORATORIO DE PRODUCCIÓN Y SANIDAD VEGTAL DE ALMERIA	La Mojonera, Almería	YES
SPAIN	LABORATORIO AGROALIMENTARIO DE ZARAGOZA, GOBIERNO DE ARAGÓN, SPAIN.	Zaragoza	YES
SPAIN	L. AGROALIMENTARIO DE EXTREMADURA	Cáceres	YES
SPAIN	LABORATORI AGROALIMENTARI - DAR	Cabrils, Barcelona	YES
SPAIN	LABORATORIO AGROALIMENTARIO Y DE SANIDAD ANIMAL	El Palmar, Murcia	YES
SPAIN	CENTRO NACIONAL DE ALIMENTACIÓN (AESAN)	Madrid	YES
SPAIN	LABORATORIO AGRARIO REGIONAL ALBACETE	Albacete	YES
SPAIN	LABORATORIO DE SANIDAD VEGETAL	Oviedo	YES
SPAIN	LABORATORIO DE RESIDUOS - INSTITUTO TECNOLÓGICO DE CANARIAS (ITC)	Agüimes	YES
SPAIN	LABORATORIO DE PRODUCCION Y SANIDAD VEGETAL DE JAEN	Mengibar, Jaén	YES
SPAIN	CNTA-LABORATORIO DEL EBRO	San Adrian, Navarra	YES
SPAIN	LABORATORIO DE PRODUCCIÓN Y SANIDAD VEGETAL DE HUELVA	Huelva	YES

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SPAIN	LABORATORIO PROVINCIAL DE SALUD PUBLICA DE ALMERÍA	Almería	YES
SPAIN	LABORATORIOS ECOSUR S.A.	Lorquí, Murcia	YES
SPAIN	LABS & TECHNOLOGICAL SERVICES AGQ, S.L.	Burguillos, Sevilla	YES
SPAIN	AINIA	Valencia	YES
SPAIN	LABORATORIO DE SALUD PÚBLICA DE PALMA	Palma de Mallorca	YES
SWEDEN	NATIONAL FOOD ADMINISTRATION (LIVSMEDELSVERKET)	Uppsala	YES
SWEDEN	EUROFINS FOOD&AGRO SWEDEN AB	Lidköping	YES
SWITZERLAND	SERVICE DE LA CONSOMMATION ET DES AFFAIRES VETERINAIRES (SCAV)	Genève	YES
SWITZERLAND	AMT FUER VERBRAUCHERSCHUTZ AARGAU (CANTONAL OFFICE OF CONSUMER PROTECTION AARGAU)	Aarau	YES
SWITZERLAND	KANTONALES LABOR ZÜRICH	Zürich	YES
THE NETHERLANDS	VWA - FOOD AND CONSUMER PRODUCT SAFETY AUTHORITY, AMSTERDAM	Amsterdam	YES
TURKEY	MSM FOOD CONTROL LABORATORY	Mersin	YES
UNITED KINGDOM	SASA	Edinburgh	YES
UNITED KINGDOM	EUROFINS LABORATORIES LTD	Wolverhampton	YES
UNITED KINGDOM	THE FOOD AND ENVIRONMENT RESEARCH AGENCY	York	YES
UNITED KINGDOM	LABORATORY OF THE GOVERNMENT CHEMIST (LGC)	Teddington	YES
URUGUAY	CATEDRA DE FARMACOGNOSIA Y PRODUCTOS NATURALES FACULTAD DE QUIMICA	Montevideo	YES