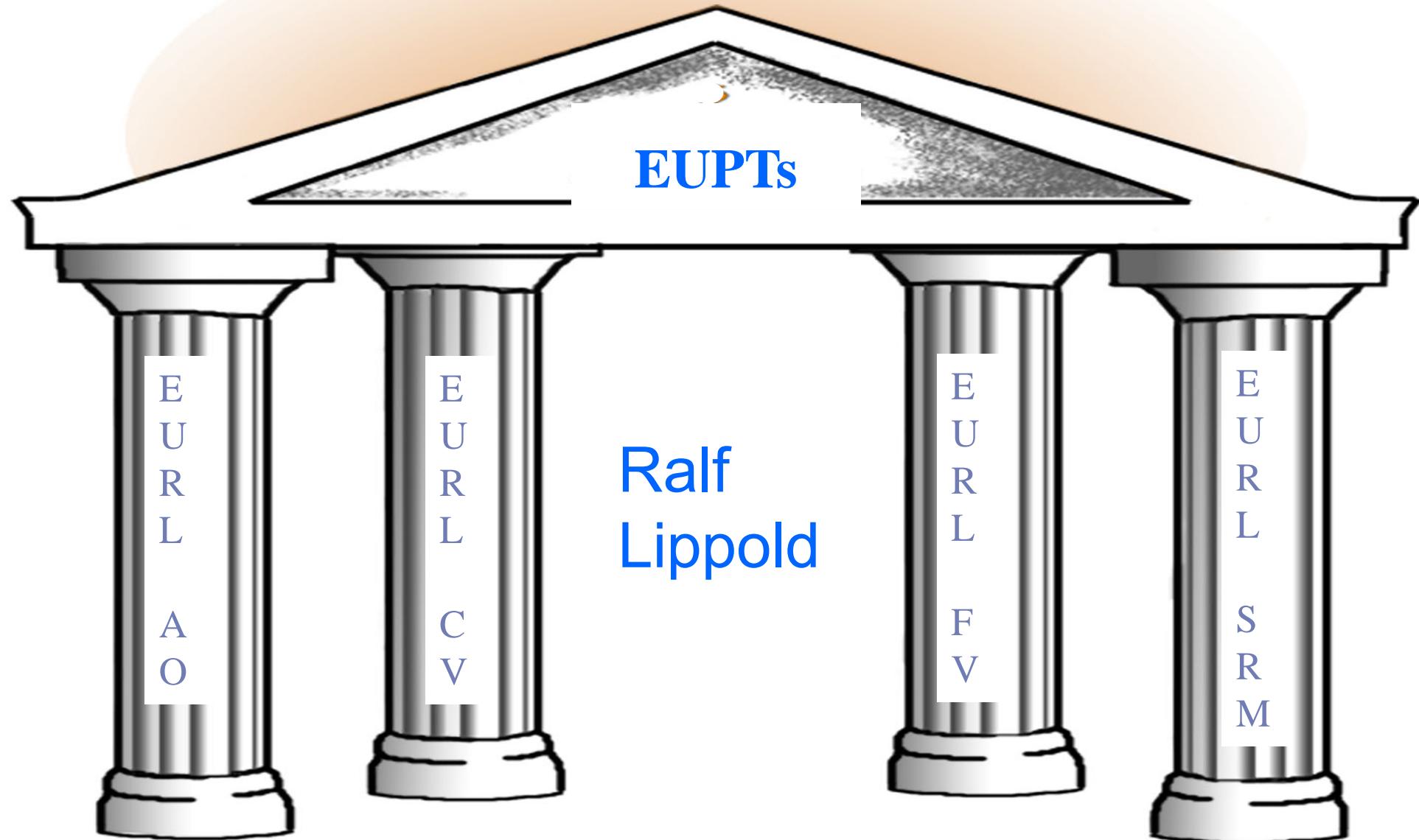


EUPTs for Pesticides



EUROPEAN UNION REFERENCE LABORATORY

PESTICIDE RESIDUES IN FOOD OF ANIMAL
ORIGIN & COMMODITIES WITH HIGH FAT CONTENT



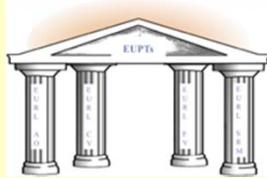
Scope

Proficiency test(s) organised by the Commission (EUPTs)

- Mandatory participation for all laboratories analysing samples for the official control of pesticide residues (396/2005/EC)
- Mandatory participation for all NRLs

Aim of EUPTs

- Obtaining information regarding quality, accuracy and comparability of the pesticide residue data
- Laboratories provided with an assessment of their analytical performance and the reliability of their data

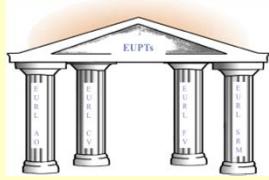


Harmonisation

Organisation of EUPTs by the 4 EURLs

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

1 Protocol with general procedures for all European Union proficiency tests (EUPTs)



Organisation of EUPTs

Local organisation teams

- Consisting of members of the responsible EURLs
- Responsible for all administrative and technical matters concerning the organisation of the EUPT

One common Scientific Committee (EUPT-Panel):

- Subgroup 1: Advisory Group (ADG)
- Subgroup 2: Independent Quality Control Group (QCG)

Scientists appointed by EURLs and approved by DG-SANCO



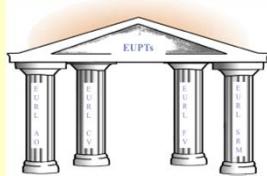
Role of the Scientific Committee

Helping in decisions concerning the design of the EUPTs:

- selection of pesticides to be included in the Target Pesticide List
- establishment of the minimum required reporting levels (MRRLs)
- evaluation and statistical treatment of the results

Additional functions of the Quality Control Group:

- supervises the quality of the EUPT
- assists the EURLs with confidential aspects:
 - choice of the pesticides and
 - levels to be present in the test material



Role of the EUPT-Panel

EURL
EU REFERENCE LABORATORIES FOR RESIDUES OF PESTICIDES
4th Edition, Revised 09 Jan. 2014

GENERAL PROTOCOL
for EU Proficiency Tests on Pesticide Residues
in Food and Feed

Introduction
This protocol contains general procedures valid for all European Union Proficiency Tests (EUPTs) organised on behalf of the European Commission, DG-SANCO¹ by the four European Union Reference Laboratories (EURLs) responsible for pesticide residues in food and feed. These EUPTs are directed at laboratories belonging to the Network² of National Reference Laboratories (NRLs) and Official Laboratories (OLs) of the EU Member States. OLs from EFTA countries and EU Candidate countries are also welcome to participate in the EUPTs. OLs from Third countries may be permitted to participate on a case-by-case basis.

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

- EURL for Fruits and Vegetables (EURL-FV),
- EURL for Cereals and Feedingstuffs (EURL-CP),
- EURL for Food of Animal Origin and Commodities with High Fat Content (EURL-AO) and
- EURL for pesticides requiring Single Residue Methods (EURL-GRM).

The aim of these EUPTs is to obtain information regarding the quality, accuracy and comparability of pesticide residue data in food and feed reported to the European Union within the framework of the national control programmes and the EU multiannual co-ordinated control programme³. Participating laboratories will be provided with an assessment of their analytical performance that

¹ DG-SANCO = European Commission, Health and Consumer Protection Directorate General
² For more information about the EURL/NRLs network please refer to the EURL web portal under: www.eurl-pesticides.eu
³ Regulation (EC) No 850/2004 of the European Parliament and of the Council on official controls performed to ensure the correct application with view to food safety, animal health and animal welfare rules. Measures at EU level. EU L191 of 26.05.2004

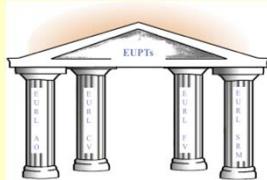
www.eurl-pesticides.eu

EURL-FV Almeria 23rd-25th October 2013

Flamenco Night :

ADVG Dancers

4th Joint Workshop of the European Union Reference Laboratories for Residues of Pesticides



Submission of Results and Information

Home - Windows Internet Explorer bereitgestellt von LGL
http://pesticides.food.dtu.dk/apex/f?p=150:1:7972799385457: Welcome: JOHN.DOE@TEST.NU Feedback Logout

Datei Bearbeiten Ansicht Favoriten Extras 2 Seite Sicherheit Extras ?>

Favoriten Home

European Commission EURL-AO EU Reference Laboratories for Residues of Pesticides

Main page EUPT AO-09

Links to subpages:	European Commission's Proficiency Test on Pesticide Residues in Food of Animal Origin - EUPT AO-09, 2014	Contact Persons:
0. Test Item receipt Acknowledge receipt of parcel with test sample.	<p>Welcome to the result submission pages of EUPT AO-09. This website is accessible from 23 April to 02 June 2014. Sub-pages 1-3 will close on 23 May 2014, 13:00 CET, whereas sub-page 4, concerning additional information, will be accessible from 27 May to 02 June 2014.</p> <p>As soon as you receive the package with the test items, please enter sub-page</p> 0. Test Item receipt to notify the organizer.	Björn Hardebusch, Ralf Lippold, European Union Reference Laboratory for Pesticides in Food of Animal Origin State Institute for Chemical and Veterinary Analysis of Food, P.O. Box 100462, D-79123 Freiburg / Germany eurl-pesticides@cvuafr.bwl.de
1. Pesticide scope Specify which pesticides you analysed for	To submit your EUPT AO-09 results, please use sub-pages 1-3. Each sub-page contains instructions on how to enter the data, and each sub-page must be saved separately.	Export to Excel
2. Results Enter your analytical results	Enter the sub-pages in order 1-3	When completed, you can download your results in an Excel file View and download your results...
3. Methods Describe the methods used for detected pesticides	1. Pesticide scope. Here you should indicate which of the 68 pesticides on the list you have analysed for, which you have detected and if they are within your routine scope.	
4. Additional information requested Describe the methods used for false negatives etc.	2. Results. Here you can enter your results for the pesticides you have detected in the samples - concentrations and recoveries.	
	3. Methods. Here you can enter information about the methods you have used. For each detected pesticide, please indicate details about the analytical procedure, e.g. sample weight, extraction solvents, clean-up, calibration, GC- and LC-detectors.	
	4. Additional information requested. The webpage will be open to everybody after the deadline on 27 May. Here you are requested to enter or update information about the methods you have used for all pesticides present in the test item. This includes both detected pesticides and false negatives. If no information on the method used is given, the organiser has the right not to accept the analytical results reported.	
	Remember to save each sub-page separately before you leave it! You can enter the pages as often as you wish until the website is closed. You can e.g. enter all data for the GC pesticides one day (on sub-page 1 to 3) and the LC results another day. Just remember to enter data in the right order from sub-page 1 to 3, because data on sub-page 1 is used on sub-page 2, etc. All data correction must be done before the deadline.	

Fertig

Internet 120% ...



EUROPEAN UNION REFERENCE LABORATORY

PESTICIDE RESIDUES IN FOOD OF ANIMAL ORIGIN & COMMODITIES WITH HIGH FAT CONTENT



Treatment and Assessment of Results

Estimation of the true concentration (μ)

- Calculation of the median value for every compound
- Median used as the assigned value
- 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).

- From 2014 onwards: robust mean according algorithm A as assigned value



Treatment and Assessment of Results

Target standard deviation (δ)

- calculated using a Fit-For-Purpose Relative Standard Deviation (FFP-RSD) approach
- based on experience from previous EUPTs FFP-RSD is set at 25% ⁽¹⁾
- $\delta = b * \mu$

with $b = \text{FFP-RSD} = 0.25$

⁽¹⁾ The expanded measurement uncertainty U for the comparison of results from different pesticide laboratories is set to 50 % (Document SANCO 12471/2013 - Guidance Document on Analytical Quality Control and Method Validation Procedures for Pesticide Residues Analysis in Food and Feed)



Treatment and Assessment of Results

z-Scores

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

x_i - value reported by the laboratory

μ_i - the assigned value (median)

δ_i - standard deviation [level of the median for each pesticide (i)]

- z-scores of > 5 will be reported as "+5"



Treatment and Assessment of Results

Interpretation of z-Scores

z-Score	Evaluation
$ z \leq 2$	The analysis fulfils the requirements - satisfactory
$2 < z \leq 3$	The analysis should be examined - questionable
$ z > 3$	The analysis does not fulfil the requirements - unsatisfactory

- For false negative results z-scores will be calculated using the MRRL
- In cases RL < MRRL the RL will be used

- No calculation of z-scores for false positive results



Treatment and Assessment of Results

Category A and B classification

- Categorie A Laboratories
 - quantified at least 90% of the pesticides present in the sample
 - reported no false positives
 - sought all the pesticides mandatory present in the test material
- These laboratories demonstrate 'sufficient scope'

EUPTs organized by EURL-AO

<p>INTERNATIONAL STANDARD ISO/IEC 17043</p> <p>First edition 2010-02-01</p> <p>Conformity assessment — General requirements for proficiency testing</p> <p><i>Évaluation de la conformité — Exigences générales concernant les essais d'aptitude</i></p> <p>Reference number ISO/IEC 17043:2010(E)</p> <p>ISO logo</p>	<p>FINAL DRAFT</p> <p>ISO/TC 69/SC 8 Secretariat: IUPAC/USA Voting begins on: 2009-03-18 Voting terminates on: 2009-05-18</p> <p>Statistical methods for use in proficiency testing by interlaboratory comparisons</p> <p><i>Méthodes statistiques utilisées dans les essais d'aptitude par comparaison interlaboratoire</i></p> <p>Reference number ISO/CD 13528:2005(E)</p> <p>ISO logo</p>	<p>INTERNATIONAL STANDARD ISO/CD 13528</p> <p>Pure Appl. Chem., Vol. 78, No. 1, pp. 145–196, 2006. doi:10.1351/pac200678010145 © 2006 IUPAC</p> <p>INTERNATIONAL UNION OF PURE AND APPLIED CHEMISTRY</p> <p>ANALYTICAL CHEMISTRY DIVISION</p> <p>INTERDIVISIONAL WORKING PARTY FOR HARMONIZATION OF QUALITY ASSURANCE SCHEMES</p> <p>THE INTERNATIONAL HARMONIZED PROTOCOL FOR THE PROFICIENCY TESTING OF ANALYTICAL CHEMISTRY LABORATORIES</p> <p>(IUPAC Technical Report)</p> <p><i>Prepared for publication by MICHAEL THOMPSON, STEPHEN L. R. ELLISON¹, AND ROGER WOOD²</i></p> <p><i>¹ School of Biological and Chemical Sciences, Birkbeck College, University of London, Malet Street, London WC1E 7HX, UK; ² IGC Limited, Queens Road, Teddington Middlesex TW11 0LE, UK; Food Standards Agency, c/o Institute of Food Research, Norwich Research Park, Colney, Norwich NR4 7UA, UK</i></p> <p>*Membership of the Analytical Chemistry Division during the final preparation of this report was as follows: President: K. Powell (New Zealand); <i>Teakle</i> Members: D. Moore (USA); R. Lobinski (Poland); R. M. Smale (UK); M. A. Saiti (Italy); A. Taguchi (Japan); B. Hibert (Austria); J.-A. Jonsson (Sweden); E. Matosovic (Spain); A. G. Zelenski (Russia); J. A. C. da Costa (Brazil); Z. Czaplinski (Poland); J. P. G. Koen (Portugal); K. Marrs (USA); Y. Umarova (Kazakhstan); National Representative: J. Arnschuk (Austria); C. Belarmino (Bulgaria); D. A. Botelho (Argentina); K. Danzer (Germany); E. Dominguez (Spain); W. Lund (Sweden); Z. Moser (Canada); Provisional Member: N. Tots (Bolivia).</p> <p>*Corresponding author. E-mail: t.ellison@igc.org.uk</p> <p>Reference number ISO/CD 13528:2005(E)</p> <p>© ISO 2005</p>	<p>DAkkS Deutsche Akkreditierungsinstitut</p> <p>Einbeziehung von Eignungsprüfungen in die Akkreditierung</p> <p>71 50 0 00 Revision: 1.1 02. Mai 2013</p> <p>Geltungsbereich: Diese Regel dient der Implementierung der internationalen Anforderungen und der Zusammenfassung der nationalen Anforderungen zur Einbeziehung von Eignungsprüfungen in den Akkreditierungsbereich von Profi- und Kalibrierlaboratorien, medizinischen Laboratorien (im Folgenden als Laboratorien bezeichnet) sowie Inspektionsstellen¹. Sie beschreibt die Anforderungen zur Teilnahme an Eignungsprüfungen bei der Akkreditierung der o. g. Konformitätsbewertungsstellen (KBS) und trägt damit fachbereichsübergreifend zu einer harmonisierten Anwendung durch die Begründer bei. Weitere, durch die Setskonferenz der Deutschen Akkreditierungsmittel GmbH (DAkkS) erstellte konsistente Regeln zur Einbeziehung von Eignungsprüfungen in die Akkreditierung gelten analog.</p> <p>Datum der Bestätigung durch den Akkreditierungsbereich: 29.08.2012</p> <p>¹ Für Inspektionsstellen gelten die in diesem Dokument dargestellten Anforderungen für deren Inhaber/-innen, es gilt auch für die eigentliche Inspektionsqualität. Es wird accepted, dass Eignungsprüfungen für Inspektionsstellen aufgrund mangelnder Verfügbarkeit in vielen Bereichen nicht durchführbar sind.</p>
---	---	--	--

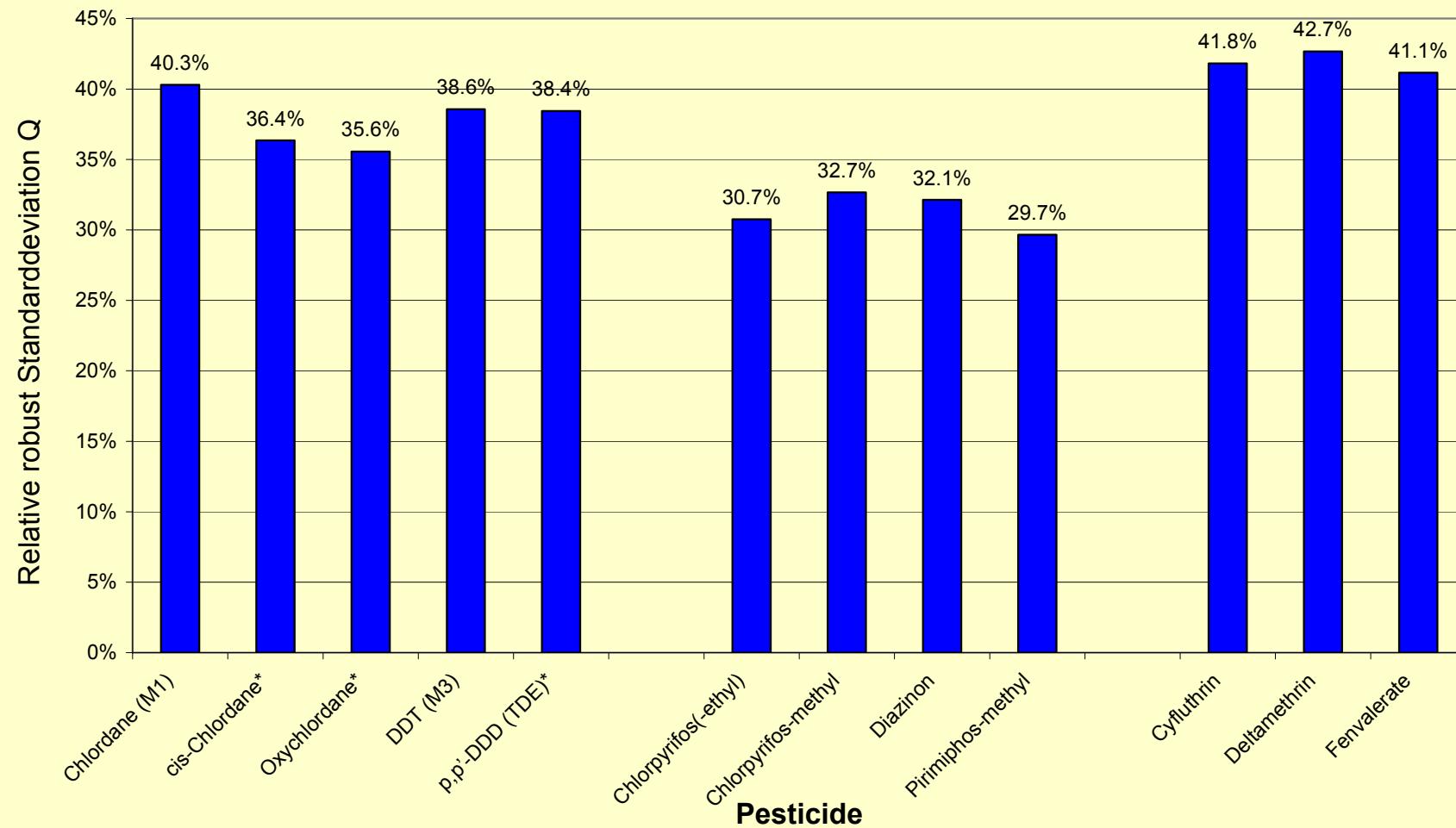
EUPTs organized by EURL-AO

Test Items

- Matrices Taken from the Multi Annual Coordinated Control Programme (MACCP) of the European Union
 - Commodity Group milk: butter (2009), cream (2012)
 - Commodity group eggs: hen's egg (2008 + 2014)
 - Commodity group meat (2010 – pork; 2011 + 2013 poultry):
 - Vegetable oil (2006 + 2007)
- Target Analytes
 - Pesticides to be analysed within the MACCP
 - Extension by additional pesticides

Results of EUPT AO 06 – Poultry Meat

Overview about Results (EUPT AO 06 - Poultry Meat)



Conception

List of mandatory compounds

Analyte	MRRL [mg/kg]	Analyte	MRRL [mg/kg]	Analyte	MRRL [mg/kg]
Abamectin B1α (F)	0.005	Diazinon (F)	0.005	cis-Heptachlor epoxide (F)	0.002
Abamectin B1β (F)	0.005	Deltamethrin (F)	0.01	trans-Heptachlor epoxide (F)	0.002
Aldrin (F)	0.002	Dieldrin (F)	0.002	Malathion (parent only)	0.005
Azinphos-ethyl (F)	0.005	alpha-Endosulfan (F)	0.002	Methidathion	0.005
Bifenthrin (F)	0.005	beta-Endosulfan (F)	0.002	4,4'-Methoxychlor (F)	0.005
cis-Chlordane (F)	0.002	Endosulfan sulfate (F)	0.002	Parathion(-ethyl) (F)	0.005
trans-Chlordane (F)	0.002	Endrin (F)	0.002	Parathion-methyl (parent only)	0.005
Oxychlordane (F)	0.002	Fenthion (F)	0.005	Phosmet (parent only)	0.02
Chlorobenzilate (F)	0.01	Fenthion sulfoxide (F)	0.005	Phoxim (F)	0.02
Chlorgenvinphos (F)	0.005	Fenthion sulfone (F)	0.005	Pendimethalin (F)	0.02
Chlorpyrifos(-ethyl) (F)	0.005	Fenthion oxon (F)	0.005	Permethrin (sum)	0.01
Chlorpyrifos-methyl (F)	0.005	Fenthion oxon sulfoxide (F)	0.005	Pirimiphos-methyl (F)	0.01
Cyfluthrin (sum of isomers) (F)	0.01	Fenthion oxon sulfone (F)	0.005	Profenofos (F)	0.005
Cypermethrin (sum of isomers) (F)	0.01	Fenvalerate (F) (sum of RS/SR and RR/SS isomers)	0.005	Pyrazophos (F)	0.005
lambda-Cyhalothrin (F) (sum of isomers)	0.01	Hexachlorobenzene (HCB) (F)	0.002	Quintozone (parent only) (F)	0.002
p,p'-DDE (F)	0.002	alpha-HCH (F)	0.002	Resmethrin (F)	0.01
p,p'-DDD (TDE) (F)	0.002	beta-HCH (F)	0.002	Tecnazene (F)	0.005
p,p'-DDT (F)	0.002	gamma-HCH (Lindane) (F)	0.002	Triazophos (F)	0.005
o,p'-DDT (F)	0.002	Heptachlor (F)	0.002	Vinclozolin (parent only)	0.02

Conception

List of voluntary compounds

Analyte	MRRL [mg/kg]	Analyte	MRRL [mg/kg]
Bixafen (parent only)	0.01	Flusilazole (F) (parent only)	0.01
Boscalid (F) (parent only)	0.01	Indoxacarb (F) (sum of isomers)	0.01
Carbendazim (Carbendazim only)	0.01	Metazachlor (parent only)	0.01
Chlorpropham (F) (parent only)	0.01	Prochloraz (parent only)	0.01
Cyproconazole (F)	0.01	Prothioconazole-desthio	0.01
Epoxiconazole (F)	0.01	Spinosyn A (F)	0.01
Etofenprox (F)	0.01	Spinosyn D (F)	0.01
Famoxadone	0.01	tau-Fluvalinate (F)	0.01
Fenpropidin (parent only)	0.01	Tebuconazole	0.01
Fenpropimorph (parent only)	0.01	Tetraconazole (F)	0.01
Fluquinconazole (F)	0.01	Thiacloprid (F)	0.01
Additional pesticide spiked (not in target list):		Metaflumizone	

Spiked compounds

Conception

2013 Mandatory		MRL (VO 396/2005) mg/kg	MRRL mg/kg	spiking level (target)	Ratio spiking level to MRL	Ratio spiking level to MRRL	Ratio spiking level to MRRL
Group	Analyte	poultry		mg/kg		µg/kg meat	(worst case: 70% recovery)
Organochlorines	Oxychlordane* (F)	0.05	0.002	0.025	0.500	12.5	8.8
	o,p'-DDT (F)	1	0.002	0.030	0.300	15.0	10.5
	beta-Endosulfane* (F)	0.05	0.002	0.045	0.900	22.5	15.8
	Endosulfansulfate* (F)	0.05	0.002	0.060	1.200	30.0	21.0
	trans-Heptachlorepoxyd (F)	0.2	0.002	0.025	1.250	12.5	8.8
Organophosphorous	HCH beta (F)	0.1	0.002	0.015	1.500	7.5	5.3
	Diazinon* (F)	0.05	0.005	0.065	1.300	13.0	9.1
	Chlorpyrifos(-ethyl)* (F)	0.05	0.005	0.055	1.100	11.0	7.7
Pyrethroids	Phosmet	0.1	0.02	0.150	1.500	7.5	5.3
	Cypermethrin* (F)	0.05	0.01	0.080	1.600	8.0	5.6
	Deltamethrin (F)	0.1	0.01	0.095	9.500	9.5	6.7
"new compounds"	lambda-Cyhalothrin* (F)	0.02	0.01	0.115	5.750	11.5	8.1
2013 Voluntary		MRL (VO 396/2005) mg/kg	MRRL mg/kg	spiking level (target)	Ratio spiking level to MRL	Ratio spiking level to MRRL	Ratio spiking level to MRRL
Metaflumizone	0.02	0.01	0.080	4.000	8.0	5.6	
Prochloraz	0.1	0.01	0.095	0.950	9.5	6.7	
Tebuconazole	0.1	0.01	0.075	0.750	7.5	5.3	

Data - Participants

- 113 Participating Laboratories (2012: 106)
 - 27 different countries
 - 27 Member States were represented by NRLs
 - 1 NRL (EFTA-Countries)
 - 85 OFLs from different Member States and Norway

Data - Participants

- 108 (2012: 102) Laboratories reported results
 - 28 different countries
 - 26 Member States were represented by NRLs
(no result from Denmark)
 - 1 NRL (EFTA-Countries)
 - 81 OFLs from different Member States and Switzerland

Data - Participants

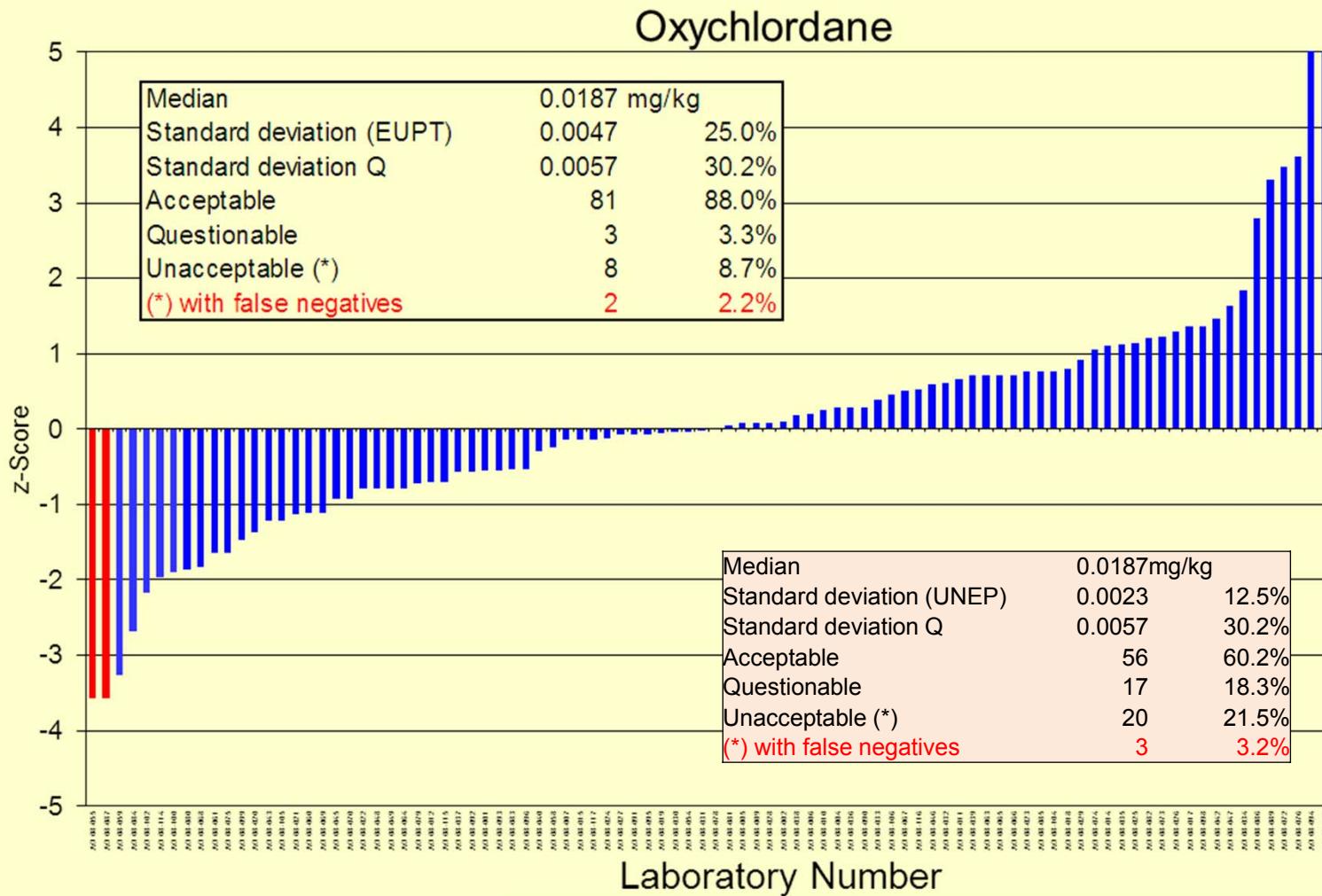
Austria	1	Germany	20 (+1)	Poland	9 (+1)
Belgium	5	Greece	3	Portugal	2 (+1)
Bulgaria	1	Hungary	5 (+2)	Romania	5 (+1)
Cyprus	1	Ireland	2	Slovakia	3 (+1)
Czech Republic	2	Italy	11 (-1)	Slovenia	1
Denmark	1 (-2)	Latvia	1	Spain	10 (+4)
Estonia	2	Lithuania	1	Sweden	2
Finland	1	Netherlands	3 (-1)	Switzerland	1
France	11 (-2)	Norway	1	United Kingdom	3
Summary		European Union	25	EFTA	2

False Positive Results

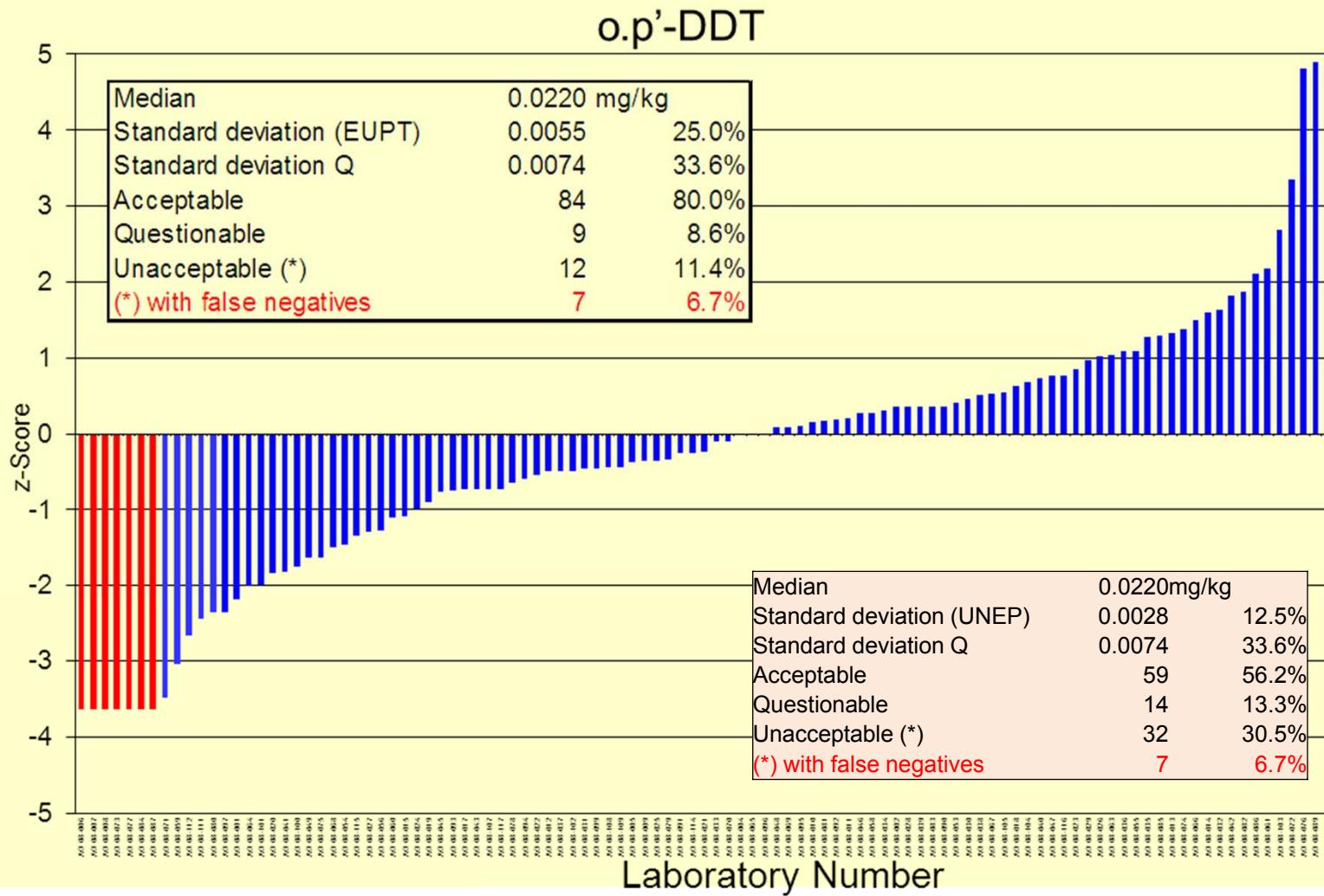
- Results exceeded the MRRL values will be considered as false positives.
 - Results below the corresponding MRRL concentrations will be ignored.
- 25 false positive results from 25 different laboratories were observed.

Pesticide	Number	Lab-Number (concentration - mg/kg)
Aldrin	1	108 (0.052)
p,p'-DDD (TDE)	5	6 (0.0078), 45 (0.0127), 80 (0.0090), 105 (0.0050), 106 (0.0259)
p,p'-DDT	2	71 (0.0054), 84 (0.0080)
Dieldrin	1	26 (0.0028)
alpha-Endosulfan	1	61 (0.0021)
alpha-HCH	1	7 (0.0040)
gamma-HCH (Lindane)	2	8 (0.130), 46 (0.0140)
cis-Heptachlor epoxide	11	13 (0.0105), 22 (0.0130), 42 (0.0276), 56 (0.0163), 58 (0.0043), 74 (0.0148), 75 (0.0110), 90 (0.0180), 93 (0.0175), 109 (0.0144), 111 (0.0085)
Cyproconazole	1	59 (0.0639)

EUPT-AO 08: Results (Mandatory Pesticides)



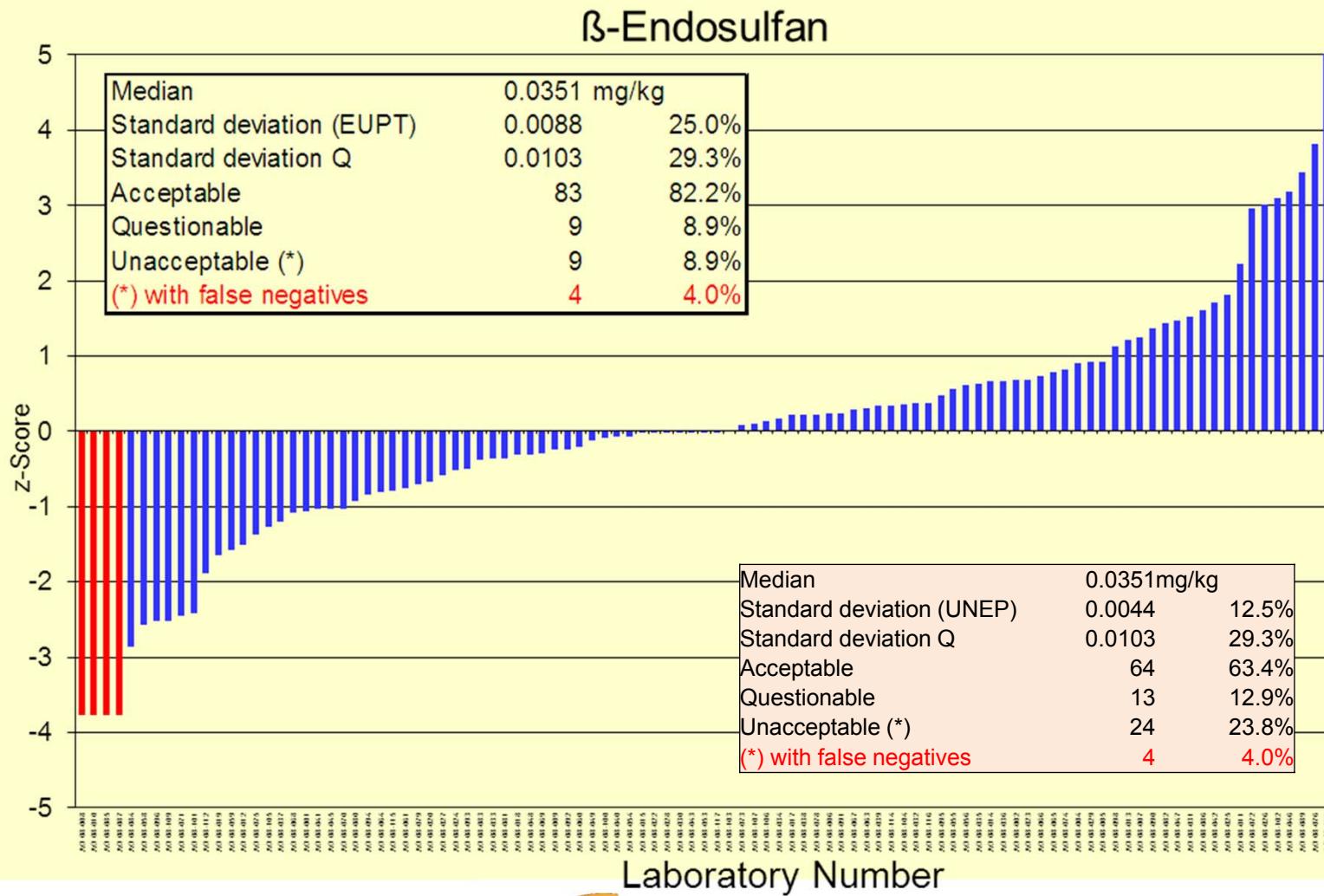
EUPT-AO 08: Results (Mandatory Pesticides)



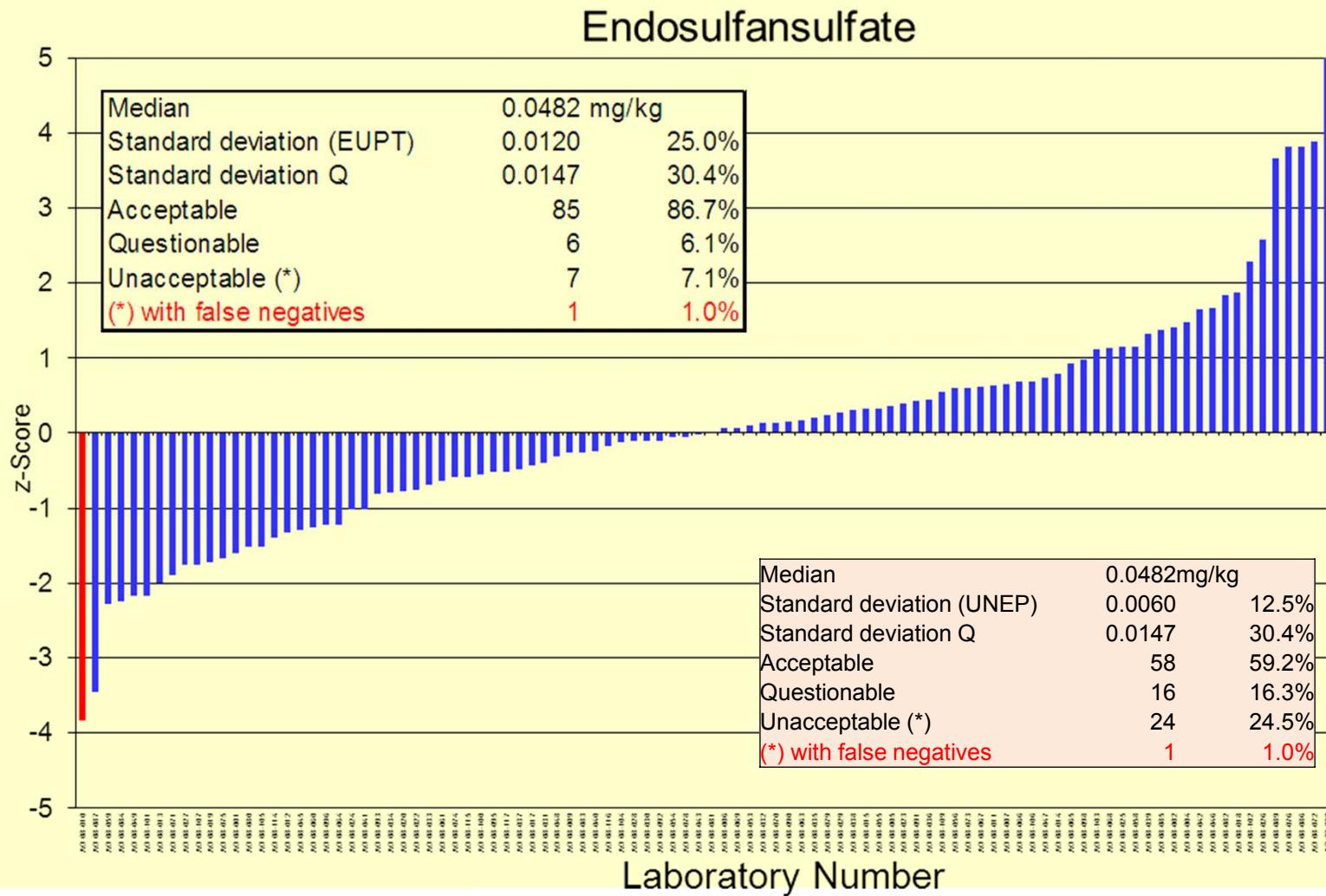
The “o.p’-DDT” case

- In EUPT AO 08 in total 7 labs reported o.p'-DDT as „nd“
(6, 7, 8, 73, 77, 84, 87)
 - 1 lab reported p.p'-DDD (TDE) instead
(6 (0.0078))
 - 1 lab reported p.p'-DDT instead
(84 (0.0080))

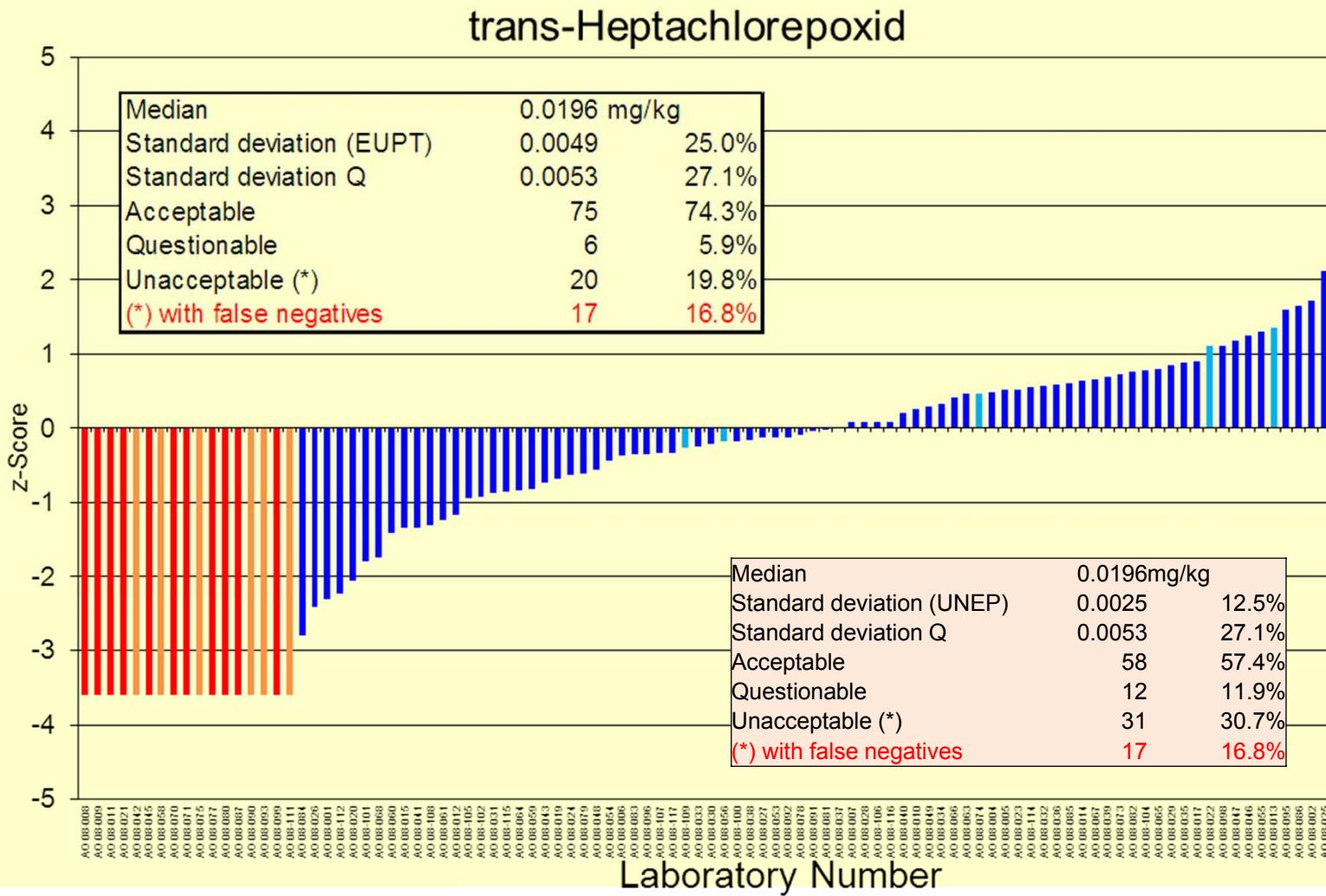
EUPT-AO 08: Results (Mandatory Pesticides)



EUPT-AO 08: Results (Mandatory Pesticides)



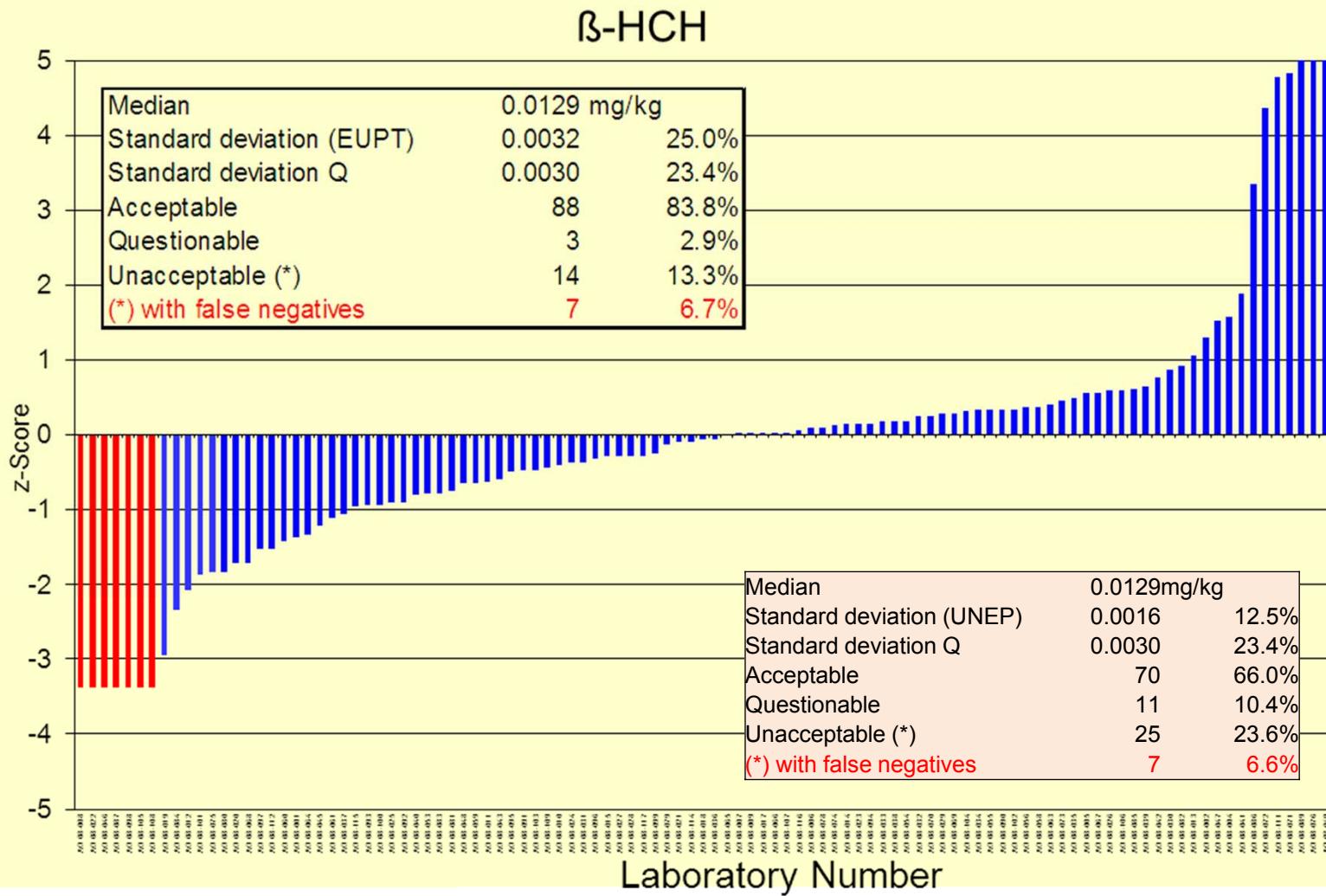
EUPT-AO 08: Results (Mandatory Pesticides)



The “cis-heptachlor epoxide” case

- In EUPT AO 08 in total 11 labs reported cis-heptachlor epoxide
- Blank material was free of cis-heptachlor epoxide
 - 6 labs reported no trans-heptachlor epoxide (42, 58, 75, 90, 93, 111)
 - 5 labs reported both, cis- and trans-heptachlor epoxide (13, 22, 56, 74, 109)

EUPT-AO 08: Results (Mandatory Pesticides)



Results (All Pesticides)

EUPT AO 08 (2013)	81.8%	2.9%	15.3%
Mandatory Pesticides	86.8%	3.3%	9.9%
Voluntary Pesticides	51.9%	0.5%	47.7%

Mandatory Pesticides		Number of Detects	Accepted Quantitative Results	Median Value	Q [%] all data	Acceptable	Questionable	Unacceptable	Number of False Negatives	Number of not analysed	Analysed by Labs [%]		Spike Value	Ratio (Median / Spike Level)
Group	Analyte	1125		[mg/kg]		1004	65	97	43	128			[mg/kg]	
Organochlorines	Oxychlordane	90	88	0.0187	30.2%	81	3	9	3	15	86.1%		0.025	74.6%
	o,p'-DDT	98	97	0.0220	33.6%	84	9	12	7	3	97.2%		0.030	73.3%
	beta-Endosulfane	98	96	0.0351	29.3%	83	9	9	4	6	94.4%		0.045	77.9%
	Endosulfansulfate	98	96	0.0482	30.4%	85	6	7	1	9	91.7%		0.060	80.3%
	trans-Heptachlorepoxyd	84	84	0.0196	27.1%	75	6	20	17	7	93.5%		0.025	78.4%
	beta-HCH	99	95	0.0129	23.4%	88	3	15	7	2	98.1%		0.015	86.0%
Organophosphorus	Diazinon	97	97	0.0536	23.9%	90	2	6	1	10	90.7%		0.065	82.5%
	Chlorpyrifos-(ethyl)	97	96	0.0458	22.0%	91	4	3	1	10	90.7%		0.055	83.3%
	Phosmet	80	77	0.127	29.6%	70	4	6	0	28	74.1%		0.150	84.7%
Pyrethroids	Cypermethrin	96	94	0.0582	28.0%	86	5	6	1	11	89.8%		0.080	72.8%
	Deltamethrin	96	95	0.0710	29.4%	88	7	2	1	11	89.8%		0.095	74.7%
	Iambda-Cyhalothrin	92	91	0.0857	27.6%	83	7	2	0	16	85.2%		0.115	74.5%
Voluntary Pesticides		112			102	4	7	1	103					
Facultatives	Metaflumizone*													
	Prochloraz*	55	53	0.0798	26.0%	50	2	4	1	52	51.9%		0.095	84.0%
	Tebuconazole*	57	54	0.0647	24.8%	52	2	3	0	51	52.8%		0.075	86.2%

* not included for calculating the average of the squared z-scores (AZ^2)

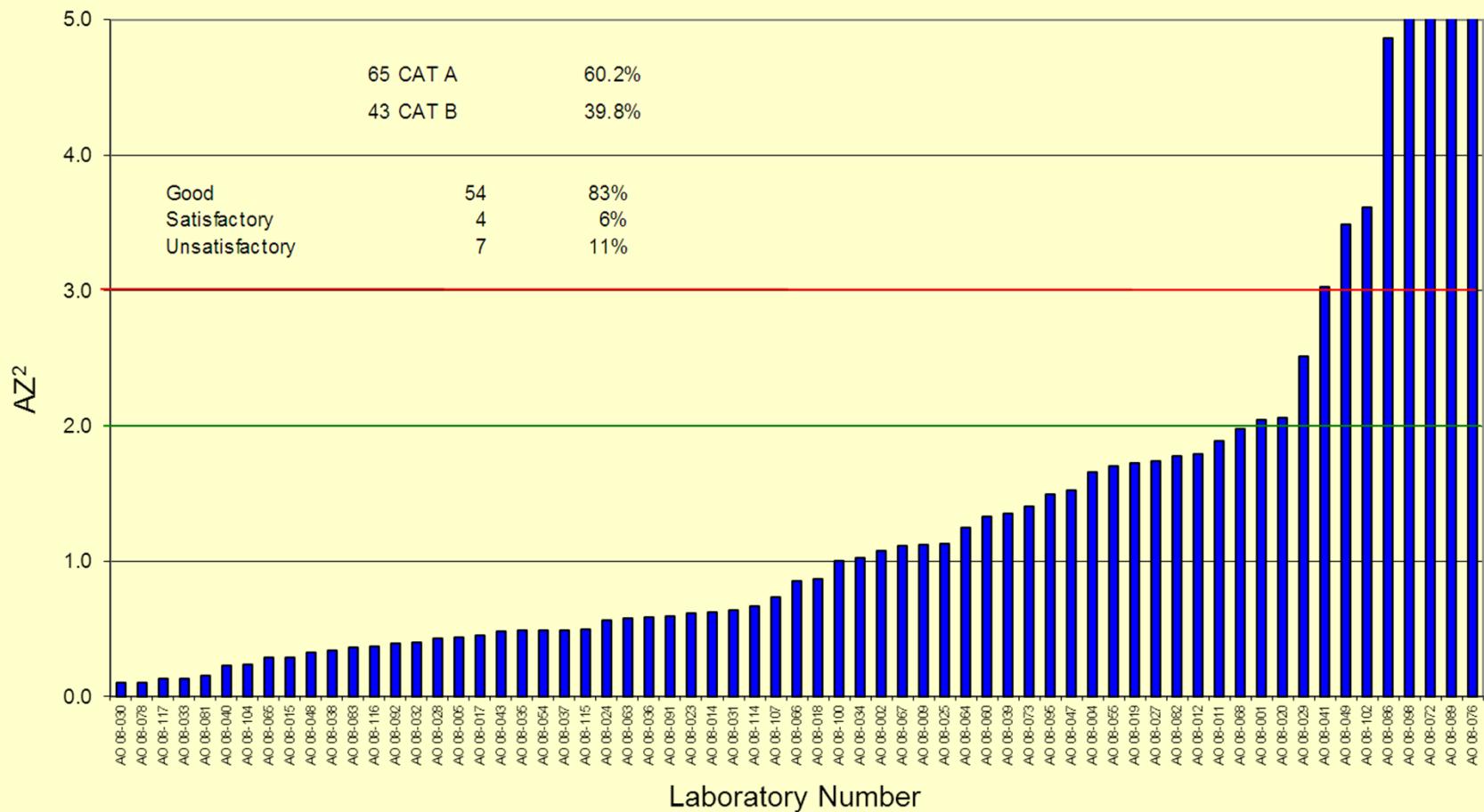


EUROPEAN UNION REFERENCE LABORATORY

PESTICIDE RESIDUES IN FOOD OF ANIMAL
ORIGIN & COMMODITIES WITH HIGH FAT CONTENT

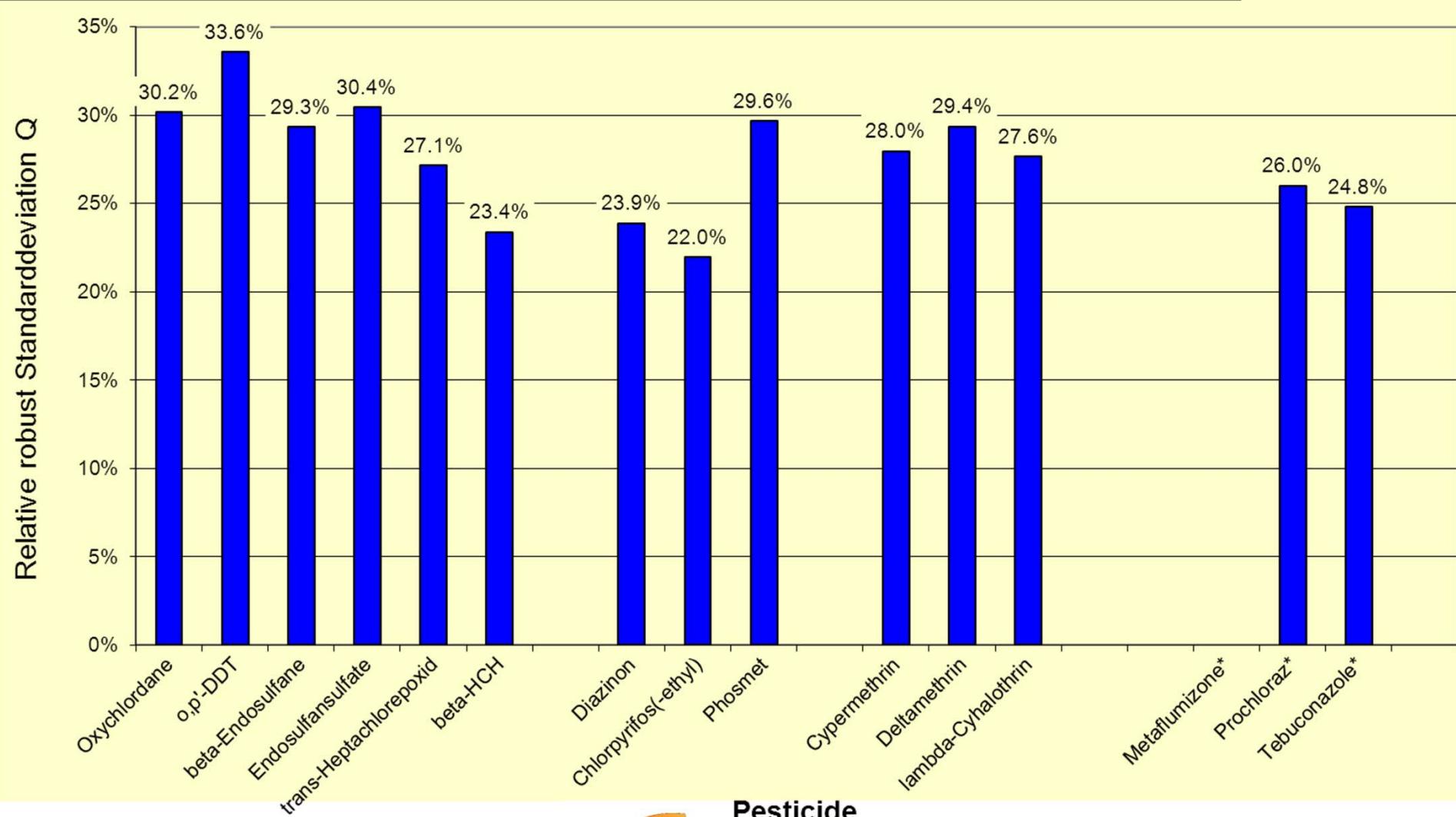
Results (Mandatory Pesticides)

Category A: Average of Squared z-Scores

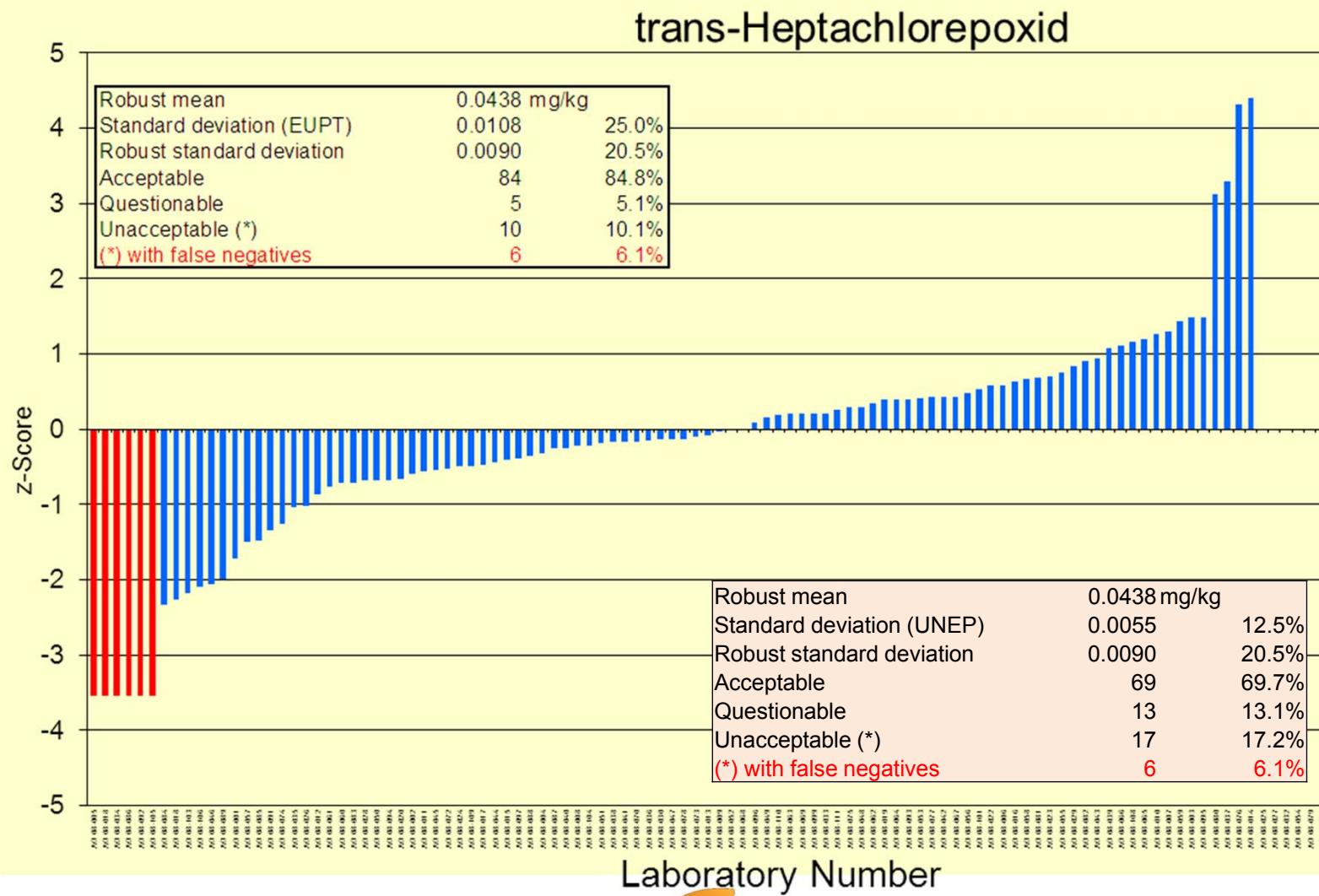


Results

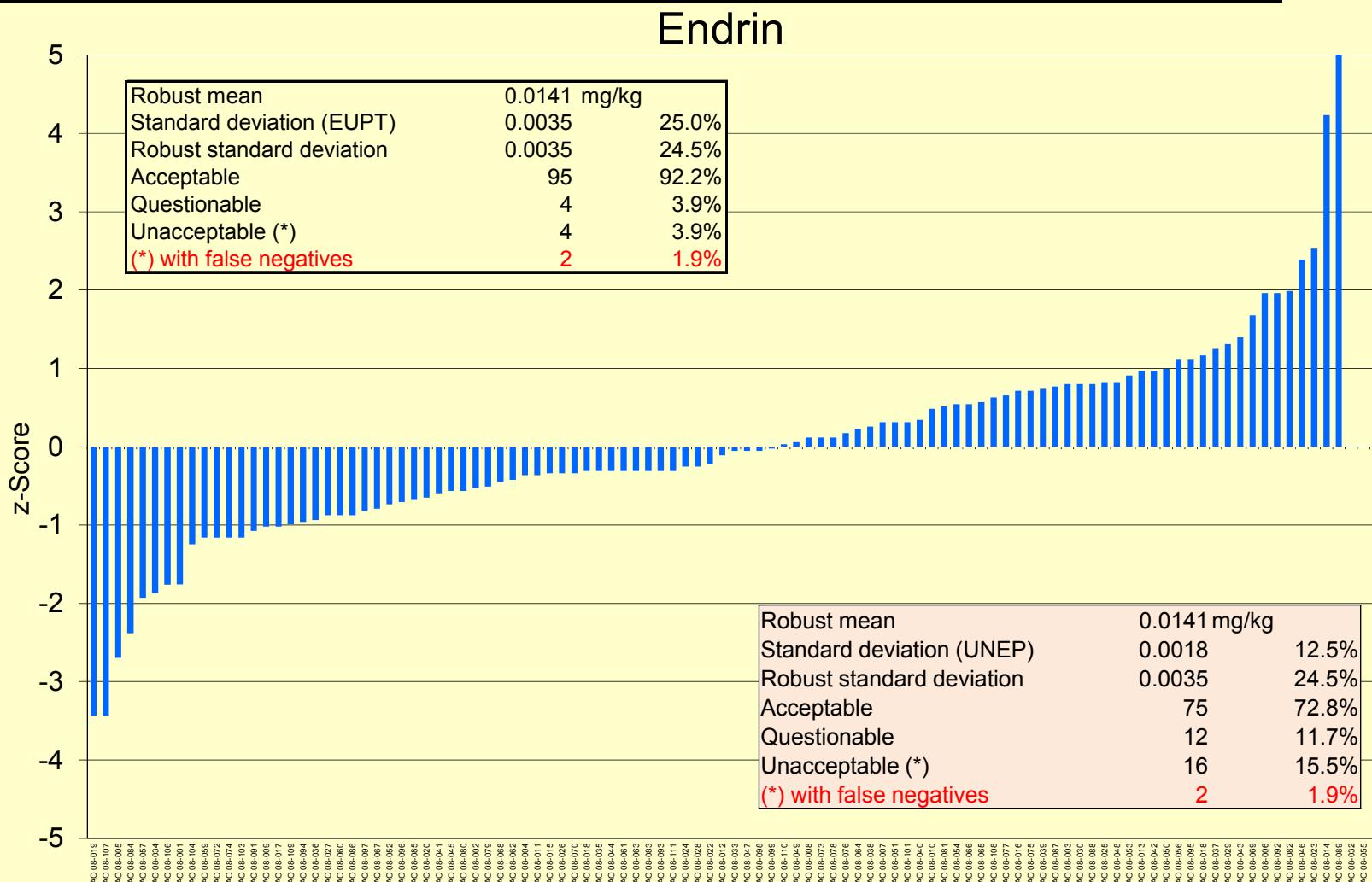
Overview about Results (EUPT AO 08 - Raw Poultry Meat)



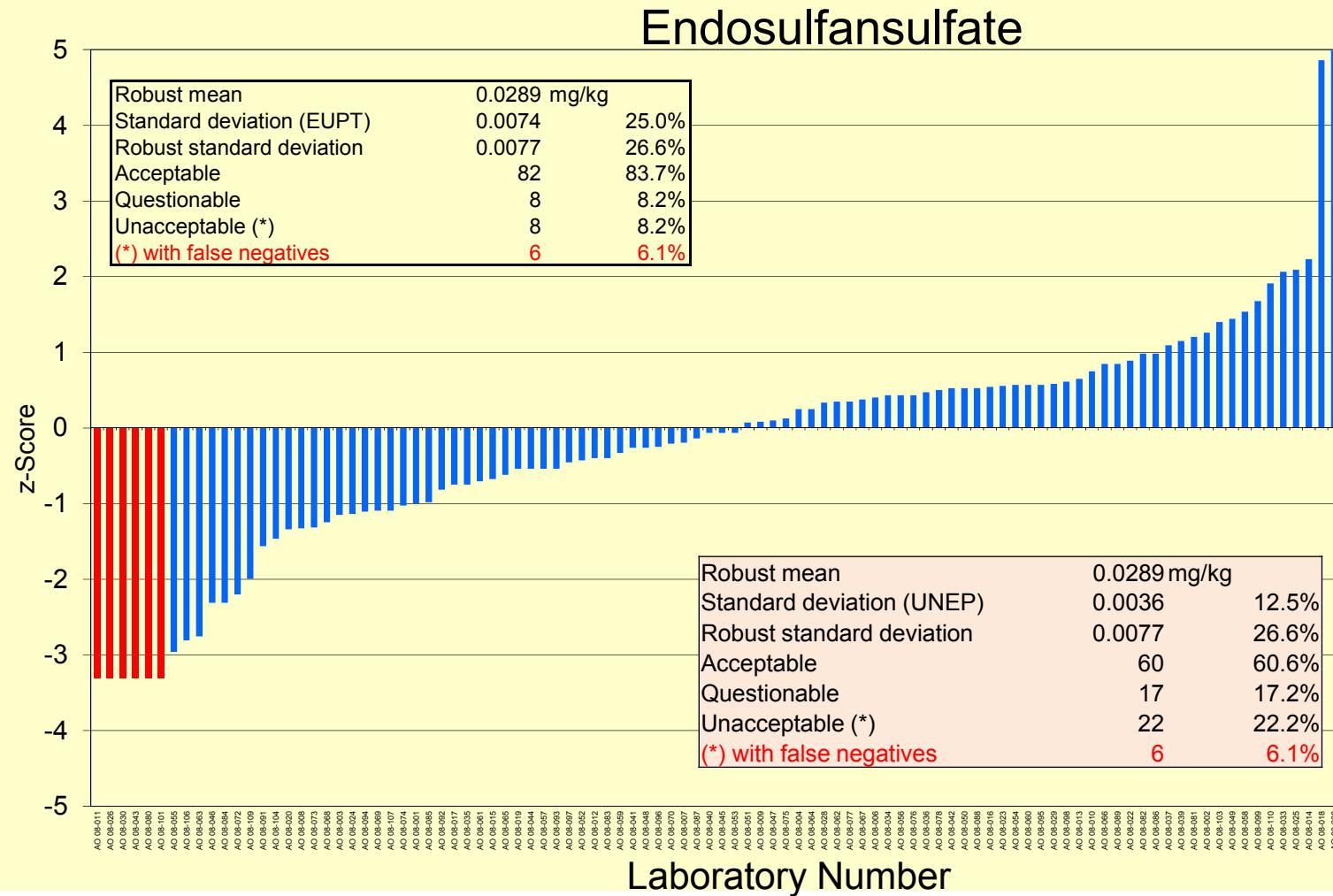
EUPT-AO 09: Results (Mandatory Pesticides)



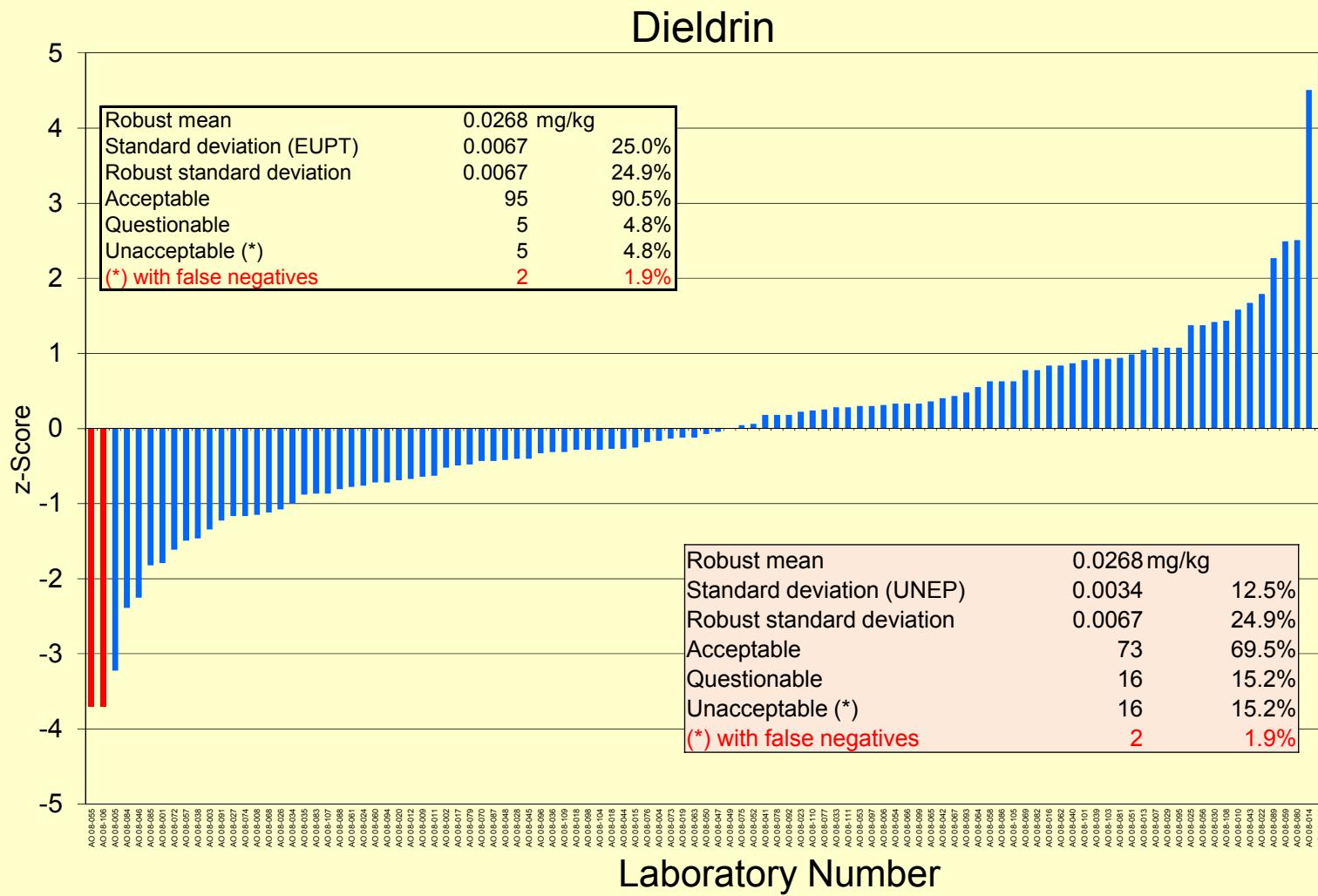
EUPT-AO 09: Results (Mandatory Pesticides)



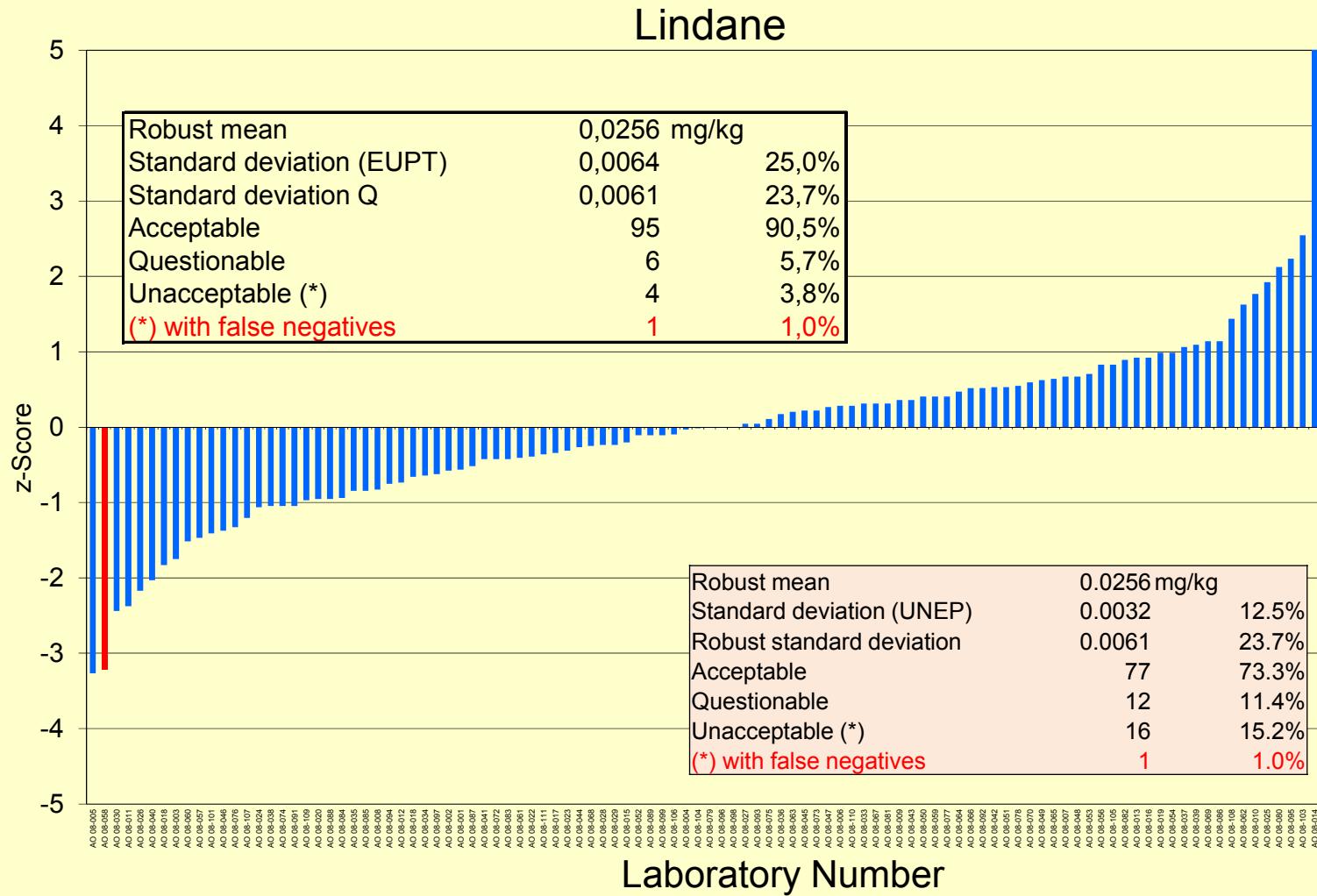
EUPT-AO 09: Results (Mandatory Pesticides)



EUPT-AO 09: Results (Mandatory Pesticides)



EUPT-AO 09: Results (Mandatory Pesticides)



Summary

- EURLs offer one EUPT on a yearly basis, at least
 - Number of participating laboratories increased (EUPT AO: ± 110)
 - Number of analytes increases (EUPT AO: ± 85)
 - Scope of laboratories increases
 - Quality of results increases
-
- But, due to large workload of the laboratories -> number of errors during reporting increases!