EUPT AO 10

Preparation of Test Material

Homogeneity and Stability Tests

Evaluation of the Results

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Time schedule

EURL	First Information supplied to laboratories and call for participation	**Mid of January 2015**
Participant	Registration via EUPT website	**Starting 9 February 2015; ending 13 March 2015**
EURL	Shipment of test material	**By 7 April 2015**
Participant	Confirmation of test material receipt	**Within 7 days**
Participant	Reporting of test results and method information	**By 11 May 2015***
Participant	Reporting of additional method information	**Starting 12 May 2015; ending 20 May 2015**
EURL	Dispatch of a preliminary report to all participants (only results, no statistical treatment)	**By 22 June 2015**
EURL	Webinar about preliminary results	Effective by Midth of Juli
EURL	Dispatch of the final report as pdf-file	**End of 2015**

*) Please make sure to report your results on time as there will be **no extension of the deadline.**

Concept of the PT

- Extensive database and internet search for findings of pesticides in honey
- Compiling a list of the findings and preparing the target list of pesticides (all mandatory)
- For most of the new analytes LC-MSMS required
  - LC-MC/MC- Method published on CIRCA (QuEChERS based)
  - GC-MS/MS-Method published on CIRCA (EURL-AO-method)
- Mandatory list of pesticides containing 111 analytes
- 19 analytes spiked into test matrix

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Analyte	MRRL [mg/kg]	Analyte	MRRL [mg/kg]	Analyte	MRRL [mg/kg]	Analyte	MRRL [mg/kg]
Acetamiprid	0.01	Cyprodinil	0.01	Flutriafol	0.01	Pirimicarb	0.01
Aldrin	0.01	p,p´-DDD (TDE)	0.01	tau-Fluvalinate	0.01	Pirimicarb, Desmethyl-	0.01
DMF (2,4-Dimethylphenyl-formamid)	0.01	p,p´-DDE	0.01	alpha-HCH	0.01	Pirimiphos-Ethyl	0.01
DMPF (N-2,4-Dimethylphenyl-N-methylformamidin)	0.01	o,p´-DDT	0.01	beta-HCH	0.01	Pirimiphos-methyl	0.01
Azinphos-ethyl	0.01	p,p´-DDT	0.01	gamma-HCH (Lindane)	0.01	Prochloraz (parent only)	0.01
Azinphos-methyl	0.01	Deltamethrin	0.01	Heptachlor	0.01	Profenofos	0.01
Azoxystrobin	0.01	Diazinon	0.01	cis-Heptachlorepoxid	0.01	Propargite	0.01
Bifenthrin	0.01	Dieldrin	0.01	trans-Heptachlorepoxid	0.01	Prothioconazole-desthio	0.01
Bixafen (parent)	0.01	Diethyl-m-toluamid, N,N-, (DEET)	0.01	Heptenophos	0.01	Pyraclostrobin	0.01
Boscalid (parent only)	0.01	Difenoconazole	0.01	Hexachlorobenzene (HCB)	0.01	Pyrazophos	0.01
Brompropylat	0.01	Dimethoat	0.01	Hexythiazox	0.01	Pyrimethanil	0.01
Buprofezin	0.01	Dimethomorph	0.01	Imazalil	0.01	Resmethrin (sum of isomers)	0.01
Carbendazim (Carbendazim only)	0.01	Dimoxystrobin	0.01	Imidacloprid	0.01	Spinosyn A	0.01
Carbetamide	0.01	Endosulfan sulfate	0.01	Indoxacarb (sum of isomers)	0.01	Spinosyn D	0.01
cis-Chlordane	0.01	alpha-Endosulfan	0.01	Iprodione	0.01	Spiroxamine	0.01
trans-Chlordane	0.01	beta-Endosulfan	0.01	Malathion (parent only)	0.01	Tebuconazole	0.01
Chlorfenvinphos	0.01	Endrin	0.01	Metaflumizon (sum of isomers)	0.01	Tebufenozide	0.01
Chlorobenzilate	0.01	Epoxiconazole	0.01	Methidathion	0.01	Terbuthylazine	0.01
Chlorpropham (parent only)	0.01	Ethoprophos	0.01	Methiocarb (sum)	0.01	Tetraconazole	0.01
Chlorpyrifos(-ethyl)	0.01	Etofenprox	0.01	Methiocarb-Sulfone	0.01	Tetramethrin	0.01
Chlorpyrifos-methyl	0.01	Famoxadone	0.01	4,4´-Methoxychlor	0.01	Thiacloprid	0.01
Clothianidin	0.01	Fenhexamid	0.01	Myclobutanil	0.01	Thiamethoxam	0.01
Coumaphos	0.01	Fenitrothion	0.01	Oxychlordane	0.01	Thiophanate-Methyl	0.01
Cyfluthrin (sum of isomers)	0.01	Fenpropidin (parent only)	0.01	Parathion(-ethyl)	0.01	Triazophos	0.01
lambda-Cyhalothrin (sum of isomers)	0.01	Fenpropimorph (parent only)	0.01	Parathion-methyl (parent only)	0.01	Trichlorfon	0.01
Cymiazol	0.01	Fenvalerate/Esfenvalerate	0.01	Pendimethalin	0.01	Trifloxistrobin	0.01
Cypermethrin (sum of isomers)	0.01	Fluquinconazole	0.01	Permethrin (sum of isomers)	0.01	Vinclozolin (parent only)	0.01
Cyproconazole	0.01	Flusilazole (parent only)	0.01	Phosalone	0.01		

Colour of the Background
no background – first time in EUPT AO
mandatory in previous EUPT AO
voluntary pesticides from previous EUPTs

Preparation

- Honey from a big honey company
  - tested to be “free” of relevant pesticide residues
- 1 Certified spiking solution
  - custom made by LGC Promochem GmbH, Germany
  - checked against EURL-standards
- Spiking of 20 kg honey test material with 20 ml solution
- Disperse
- Sub-sampling to portions of about 65 g each (spiked sample and blank sample)
  - testing for homogeneity
  - shipment by overnight express

Extraction / Clean up

5 g sample

+ Internal Standards
➢ wait 10 min

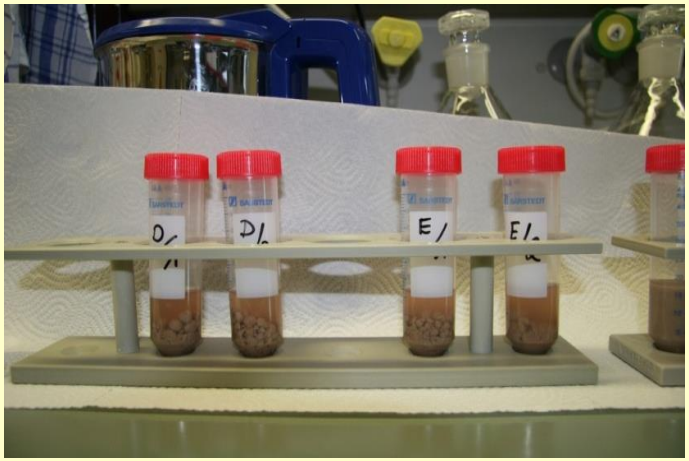
+ 5 ml water
+ citrate buffer salts

➢ Shake 10 sec

+ 10 ml ethylacetate/ cyclohexane (1+1/v+v)

➢ Shake 10 min

+ 10 g Na_2SO_4
+ 0,2 g PSA



Extraction / Clean up

5 g sample

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+ 10 ml ethylacetate/ cyclohexane (1+1/v+v)

➢ Shake 10 min

+ 10 g Na_2SO_4
+ 0,2 g PSA

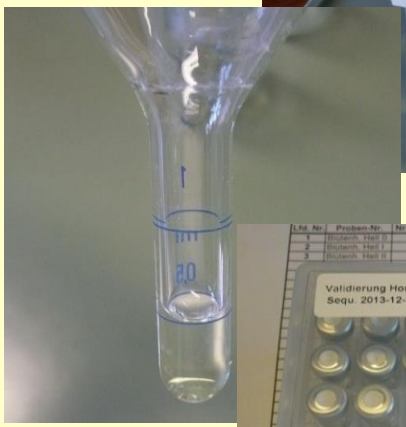
Centrifuge (2500 g)

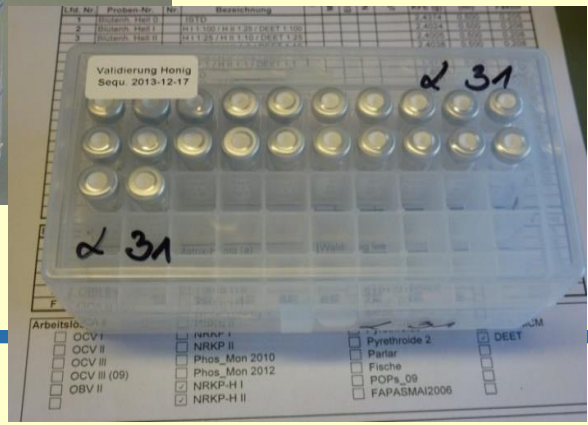
Use 5 ml extract for GPC-cleanup

➢ Evaporate

Re-dissolve in 0.5 mL cyclohexane

GC-MS/MS-Analysis





Extraction/clean up LC-MSMS

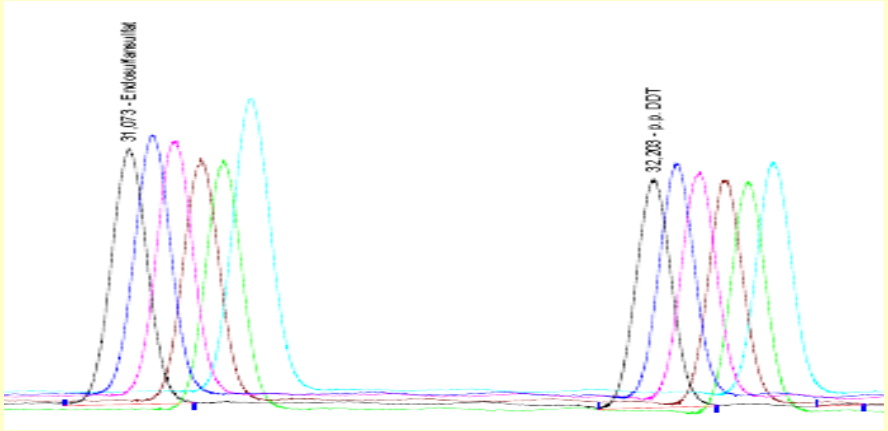
Procedural Matrix Calibration

	QuEChERS
Sample amount	5 g matrix of interest (honey, egg, cow´s milk, cheese, meat)
Extraction	50 mL centrifuge tube
	Addition of internal standard: 100 µl ISTD, wait 10 min
	Addition of 10 mL water, shake Addition of 10 mL acetonitrile 4 g $MgSO_4$ 1 g NaCl Citrate buffered (0,5 g Na2H-citrate x 6 H_2O, 1 g Na_3-citrate x 2 H_2O) Shake vigorously for 10 min Centrifugate for 6 min at 3000 g
Clean-up	15 mL centrifuge tube filled with : 900 mg $MgSO_4$ 150 mg PSA Add 6 mL supernatant Shake for 10 min Centrifugate for 6 min at 3000 g
Preparation before analysis	Transfer 5 mL into vial
Analysis	LC-MS/MS (QQQ: quan; Q-ToF: screen)

Homogeneity Test results

- 10 randomly selected test portions
  analysed in duplicate

- Statistical evaluation according to
  IUPAC/ISO/AOAC
  International Protocol
  for Proficiency Testing
  ISO 13528:2005



Homogeneity Test results in between average

Sample	Replicate	Acetamiprid	Amitraz Metabolite (DMF)	Amitraz Metabolite (DMPF)	Azoxystrobin	Boscalid (parent only)	Carbendazim (Carbendazim only)	Chlorfenvinphos	Clothianidin	Coumaphos	DEET	Dimethoat	Dimoxystrobin	alpha-Endosulfan	tau-Fluvalinate	Imidacloprid	Tebuconazole	Thiacloprid	Trifloxistrobin	Vinclozolin (parent only)
1	1	64.7	160.8	90.1	75.8	195.6	101.1	81.9	61.8	85.1	106.7	179.9	117.5	69.6	143.9	61.5	110.6	183.8	90.7	121.5
	2	62.8	163.0	92.9	74.7	189.1	106.0	81.9	68.7	83.8	105.3	181.7	119.2	69.6	108.7	59.8	109.9	187.7	89.5	126.0
33	1	64.5	162.6	89.8	75.9	196.2	105.1	81.1	65.1	84.3	108.2	183.7	121.9	69.6	144.2	61.4	107.5	183.3	90.9	123.0
	2	63.5	164.0	88.7	74.7	193.2	106.0	81.1	67.1	84.6	108.2	175.5	123.7	69.6	145.9	60.1	110.0	185.6	91.8	126.3
64	1	65.2	162.7	88.6	75.0	190.3	104.4	77.9	64.4	84.4	115.8	176.4	119.1	66.8	127.8	58.4	108.1	185.6	91.2	120.5
	2	64.5	163.7	88.1	74.6	194.8	104.9	77.9	64.8	83.6	115.8	177.2	119.6	66.8	139.1	60.5	109.5	185.8	88.7	121.8
119	1	66.7	166.6	92.2	77.5	194.2	106.0	83.2	66.6	84.4	117.4	179.3	121.6	67.7	148.1	62.5	107.4	185.7	91.5	120.8
	2	63.7	168.0	90.6	75.7	189.1	105.4	83.2	68.1	84.1	117.4	177.5	121.1	67.7	125.3	58.9	108.9	185.2	92.1	123.1
138	1	65.6	162.4	89.8	76.4	196.8	106.6	81.6	66.6	87.1	119.1	183.0	120.2	67.3	137.8	60.5	109.7	182.5	91.1	118.7
	2	64.1	165.5	88.7	77.5	184.8	106.0	81.6	67.9	84.2	119.1	181.1	122.9	67.3	136.2	62.5	112.6	188.5	90.9	123.6
160	1	67.4	163.9	93.0	75.4	190.1	105.2	79.7	64.7	83.4	111.4	181.1	119.3	68.6	146.2	61.0	108.4	184.6	91.6	115.3
	2	65.7	164.4	87.6	76.5	189.8	103.2	79.7	65.4	83.8	111.4	177.4	120.4	68.6	130.7	61.8	109.0	182.6	90.7	124.4
198	1	65.4	166.7	92.1	77.7	194.5	102.7	75.6	64.2	84.4	118.6	181.7	121.6	67.9	145.6	62.9	110.2	185.6	93.0	115.0
	2	65.4	168.0	90.7	76.3	186.0	107.0	75.6	68.7	84.5	118.6	180.7	121.2	67.9	125.3	62.7	110.7	186.8	91.7	123.5
221	1	65.2	165.2	91.3	77.6	190.9	108.5	79.8	67.6	84.7	121.6	179.5	122.0	68.1	149.2	60.2	111.5	185.2	93.2	115.1
	2	65.5	165.4	90.4	79.0	191.1	106.1	79.8	67.2	83.8	121.6	177.9	124.0	68.1	120.2	61.7	109.9	189.1	93.9	123.8
252	1	64.1	162.9	91.8	76.8	195.3	106.6	78.5	69.8	85.5	105.3	181.6	120.2	71.4	142.2	61.6	109.8	186.9	90.5	118.0
	2	67.5	170.2	90.0	79.1	190.6	104.9	78.5	66.8	83.7	105.3	178.7	119.9	68.5	120.2	60.5	116.0	184.6	92.9	122.7
260	1	65.0	165.3	91.3	74.7	192.1	102.0	74.4	67.3	82.8	112.1	180.7	117.0	60.7	143.1	62.6	112.5	183.2	89.5	114.8
	2	65.5	163.3	89.9	77.3	195.9	109.3	74.4	66.8	86.0	112.1	181.7	123.3	60.7	121.4	62.7	113.9	189.3	94.1	107.1
General average		65.1	164.7	90.4	76.4	192.0	105.4	79.4	66.5	84.4	113.6	179.8	120.8	67.6	135.1	61.2	110.3	185.6	91.5	120.3
Standard deviation		1.20	2.31	1.57	1.39	3.40	2.00	2.74	1.90	0.97	5.64	2.27	1.92	2.62	11.73	1.32	2.15	2.01	1.43	4.79
Cv		1.8%	1.4%	1.7%	1.8%	1.8%	1.9%	3.4%	2.9%	1.1%	5.0%	1.3%	1.6%	3.9%	8.7%	2.2%	2.0%	1.1%	1.6%	4.0%
sw (B.8)		1.44	1.79	1.72	1.06	4.41	1.29	1.50	2.13	1.04	2.58	2.42	1.73	0.72	13.82	1.43	1.63	2.23	1.01	3.11
cv(w)		2.2%	1.1%	1.9%	1.4%	2.3%	1.2%	1.9%	3.2%	1.2%	2.3%	1.3%	1.4%	1.1%	10.2%	2.3%	1.5%	1.2%	1.1%	2.6%
Spiking level [µg/kg honey]		65.0	160.0	90.0	75.0	190.0	105.0	75.0	65.0	85.0	90.0	180.0	120.0	70.0	130.0	60.0	105.0	180.0	90.0	125.0
Robust Mean [µg/kg honey]																				

Homogeneity Test results (average)

Sample	Acetamiprid	Amitraz Metabolite (DMF)	Amitraz Metabolite (DMPF)	Azoxystrobin	Boscalid (parent only)	Carbendazim (Carbendazim only)	Chlorfenvinphos	Clothianidin	Coumaphos	DEET	Dimethoat	Dimoxystrobin	alpha-Endosulfan	tau-Fluvalinate	Imidacloprid	Tebuconazole	Thiacloprid	Trifloxistrobin	Vinclozolin (parent only)
1	63.8	161.9	91.5	75.3	192.4	103.5	81.9	65.2	84.5	106.0	180.8	118.3	69.6	126.3	60.6	110.3	185.7	90.1	123.8
33	64.0	163.3	89.2	75.3	194.7	105.6	81.1	66.1	84.4	108.2	179.6	122.8	69.6	145.0	60.8	108.8	184.5	91.3	124.7
64	64.9	163.2	88.3	74.8	192.6	104.7	77.9	64.6	84.0	115.8	176.8	119.4	66.8	133.4	59.4	108.8	185.7	90.0	121.2
119	65.2	167.3	91.4	76.6	191.6	105.7	83.2	67.3	84.3	117.4	178.4	121.3	67.7	136.7	60.7	108.2	185.4	91.8	122.0
138	64.8	164.0	89.2	76.9	190.8	106.3	81.6	67.2	85.7	119.1	182.1	121.5	67.3	137.0	61.5	111.2	185.5	91.0	121.2
160	66.6	164.2	90.3	75.9	189.9	104.2	79.7	65.0	83.6	111.4	179.3	119.8	68.6	138.4	61.4	108.7	183.6	91.1	119.9
198	65.4	167.4	91.4	77.0	190.3	104.9	75.6	66.4	84.5	118.6	181.2	121.4	67.9	135.5	62.8	110.4	186.2	92.3	119.3
221	65.3	165.3	90.9	78.3	191.0	107.3	79.8	67.4	84.2	121.6	178.7	123.0	68.1	134.7	60.9	110.7	187.1	93.5	119.5
252	65.8	166.6	90.9	78.0	193.0	105.7	78.5	68.3	84.6	105.3	180.2	120.1	70.0	131.2	61.0	112.9	185.7	91.7	120.4
260	65.3	164.3	90.6	76.0	194.0	105.7	74.4	67.0	84.4	112.1	181.2	120.1	60.7	132.3	62.6	113.2	186.2	91.8	111.0
Average (B6)	65.1	164.7	90.4	76.4	192.0	105.4	79.4	66.5	84.4	113.6	179.8	120.8	67.6	135.1	61.2	110.3	185.6	91.5	120.3
Standard deviation sx (B7)	0.806	1.848	1.088	1.163	1.571	1.075	2.812	1.202	0.538	5.787	1.585	1.494	2.650	4.943	0.991	1.765	0.970	1.041	3.718
Cv	1.2%	1.1%	1.2%	1.5%	0.8%	1.0%	3.5%	1.8%	0.6%	5.1%	0.9%	1.2%	3.9%	3.7%	1.6%	1.6%	0.5%	1.1%	3.1%
Cv (target)	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Cv/Cv (target)	0.05	0.04	0.05	0.06	0.03	0.04	0.14	0.07	0.03	0.20	0.04	0.05	0.16	0.15	0.06	0.06	0.02	0.05	0.12
Homogeneity	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.	**o.k.**	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.
Ss (B.9)	0	1.350	0	0.888	0	0.563	2.604	0	0	5.493	0	0.862	2.600	0	0	1.339	0	0.760	2.996
Ss/s_{target}	0.00	0.03	0.00	0.05	0.00	0.02	0.13	0.00	0.00	0.19	0.00	0.03	0.15	0.00	0.00	0.05	0.00	0.03	0.10
Homogeneity	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.	**o.k.**	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.	o.k.

Stability Tests results overview

Date	Average	13.04.2015		13.04.2015		13.04.2015		Average	Recovery	12.05.2015		12.05.2015		12.05.2015		Average	Recovery	Recovery
Sample No.		16	16	119	119	252	252			16	16	119	119	252	252		Hom	13.04.
Acetamiprid	65.1	64.4	63.1	63.1	64.9	65.2	65.1	64.3	98.7	64.9	61.8	62.9	62.8	62.3	81.9	66.1	101.5	102.8
DMF	164.7	157.0	159.4	156.1	159.2	160.7	162.1	159.1	96.6	159.4	154.7	153.6	154.4	153.2	152.9	154.7	93.9	97.2
DMPF	90.4	87.0	85.5	87.1	88.3	88.1	86.6	87.1	96.4	84.2	81.9	81.9	83.0	78.3	81.9	81.9	90.6	94.0
Azoxystrobin	76.4	73.4	72.7	70.9	71.8	79.1	74.3	73.7	96.5	73.7	70.3	67.2	68.8	70.5	70.6	70.2	91.8	95.2
Boscalid (parent only)	192.0	168.4	180.3	176.2	180.5	182.7	181.9	178.3	92.9	187.2	166.0	174.9	179.7	179.8	171.8	176.6	92.0	99.0
Carbendazim (Carbendazim only)	105.4	103.4	103.2	103.5	103.9	105.3	106.1	104.2	98.9	104.3	101.2	102.1	101.5	100.9	99.2	101.5	96.4	97.4
Chlorfenvinphos	79.4	69.3	75.0	76.7	69.5	76.7	68.3	72.6	91.4	83.4	76.2	89.9	98.8	103.8	103.6	92.6	116.7	127.6
Clothianidin	66.5	62.4	62.5	60.5	61.5	64.7	66.9	63.1	94.9	63.6	62.6	59.6	58.2	62.8	60.7	61.3	92.2	97.1
Coumaphos	84.4	79.4	80.6	78.4	81.7	79.3	82.6	80.3	95.1	79.4	73.9	69.5	68.9	74.9	75.7	73.7	**87.3**	91.8
DEET	90.0	89.9	89.6	98.1	89.6	91.3	83.0	90.3	100.3	92.1	97.7	97.4	98.0	102.1	101.0	98.1	108.9	108.6
Dimethoat	179.8	170.3	169.5	166.9	172.2	172.8	172.4	170.7	94.9	160.7	156.2	156.9	157.7	154.5	155.9	157.0	**87.3**	92.0
Dimoxystrobin	120.8	110.6	111.3	110.2	112.9	114.7	114.7	112.4	93.1	107.9	105.1	105.0	102.2	103.2	105.6	104.8	**86.8**	93.3
alpha-Endosulfan	67.6	64.3	64.9	70.1	61.7	65.3	63.2	64.9	96.0	70.4	71.9	72.6	72.0	74.3	71.9	72.2	106.7	111.2
tau-Fluvalinate	135.1	120.9	122.7	122.3	127.2	116.6	136.6	124.4	92.1	127.0	116.9	122.6	128.7	126.5	120.4	123.7	91.6	99.4
Imidacloprid	61.2	58.8	57.7	56.7	58.6	57.2	60.7	58.3	95.3	57.7	55.1	52.7	54.3	56.1	57.3	55.5	90.7	95.2
Tebuconazole	110.3	106.3	103.9	104.8	103.9	106.9	106.7	105.4	95.6	103.4	101.9	100.8	101.8	104.4	102.3	102.4	92.9	97.2
Thiacloprid	185.6	180.6	178.9	178.6	184.3	183.9	184.1	181.7	97.9	185.1	177.7	177.7	180.4	178.6	177.6	179.5	96.7	98.8
Trifloxistrobin	91.5	86.73	82.73	77.14	80.34	87.14	90.1	84.0	91.9	83.15	83.88	75.31	77.22	84.07	85.48	81.5	**89.1**	97.0
Vinclozolin (parent only)	120.3	109.7	106.3	118.6	105.1	109.6	107.1	109.4	91.0	98.5	99.8	102.1	101.9	105.0	100.2	101.3	84.2	92.6

No degration of any analyte was observed (deviation < - 10%)

Shipment

- 106 boxes
- 106 letters
- shipment usually within 24 h with TNT

Thanks to the team!

Data - Participants

106 Participating Laboratories (2014: 111)

- 29 different countries
- All 28 Member States were represented by NRLs
- OFLs from different Member States, Switzerland and Norway
- 1 laboratory from Jamaica

Data - Participants

100 (2013: 106) Laboratories reported results

29 different countries

28 Member States were represented by NRLs

73 OFLs from different Member States, Norway and Switzerland

1 laboratory from a Third Country (Jamaica)

Data - Participants

Austria	2 (+1)	Germany	15 (-1)	Poland	4 (-4)
Belgium	6 (-2)	Greece	4 (+1)	Portugal	2
Bulgaria	1	Hungary	5	Romania	4
Croatia	1	Ireland	2 (+1)	Slovakia	1
Cyprus	1	Italy	14 (+4)	Slovenia	2 (+1)
Czech Republic	2	Latvia	1	Spain	12 (+2)
Denmark	2	Lithuania	1	Sweden	2
Estonia	3	Netherlands	2 (-1)	Switzerland	1
Finland	1	Norway	1	United Kingdom	2 (-1)
France	5 (-6)				
Summary		**European Union**	**26**	**EFTA**	**2**

+ 1 Jamaica

Result submission

New Web Server for Database

-> some „handicaps“ to be solved, again

- Maintenance workload on the servers during the first week
- Performance problems during result submission

False Positive Results

- Results exceeded the MRRL values will be considered as false positives.
- Results below the corresponding MRRL concentrations will be ignored.

➢ 2 false positive results from 2 different laboratories were observed.

  ➢ 88: Cyproconazole: 0,0135 mg/kg

  ➢ 99: Chlorpyrifos-methyl: 0.0155

Statistical Parameters

Evaluation since 2014

- Consensus value:
  robust mean according algorithm A instead of median value
- Robust standard deviation calculated according algorithm A

Since 2015: z-scores will be interpreted in the following way, as is set in the ISO 17043:2010:

$|z| \leq 2.0$ Acceptable
$2.0 < |z| < 3.0$ Questionable
$|z| \geq 3.0$ Unacceptable

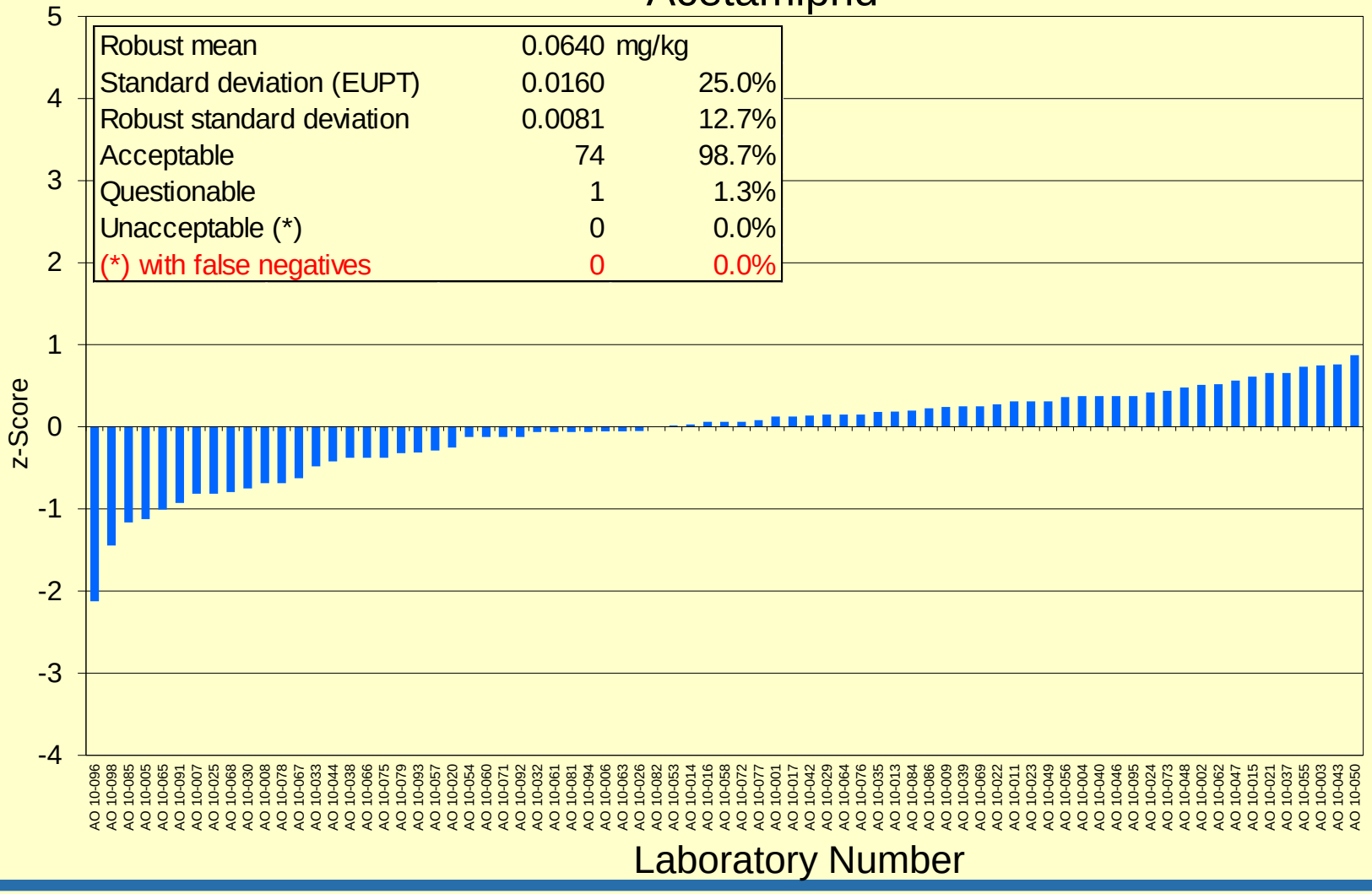
Results

	Robust mean [mg/kg]	robust RSD	number of results	Acceptable	Questionable	Unacceptable	False Negatives		Acceptable	Questionable	Unacceptable
Acetamiprid	0.0640	12.7%	75	74	1	0	0		98.7%	1.3%	0.0%
Endosulfan_alpha	0.0653	20.2%	93	81	4	9	3		87.1%	4.3%	9.7%
DMF	0.1461	17.0%	60	55	3	2	1		91.7%	5.0%	3.3%
DMPF	0.0934	24.1%	60	51	2	7	5		85.0%	3.3%	11.7%
Azoxystrobin	0.0745	12.1%	80	75	1	4	3		93.8%	1.3%	5.0%
Boscalid	0.1897	11.3%	80	77	1	2	0		96.3%	1.3%	2.5%
Carbendazim	0.0943	25.8%	75	66	3	6	2		88.0%	4.0%	8.0%
Chlorfenvinphos	0.0717	16.9%	86	78	6	2	0		90.7%	7.0%	2.3%
Clothianidin	0.0658	16.2%	72	69	1	2	0		95.8%	1.4%	2.8%
Coumaphos	0.0830	18.3%	80	72	4	4	1		90.0%	5.0%	5.0%
DEET	0.0926	13.4%	55	52	0	3	3		94.5%	0.0%	5.5%
Dimethoat	0.1602	16.2%	75	72	1	2	0		96.0%	1.3%	2.7%
Dimoxystrobin	0.1204	11.7%	58	57	0	1	0		98.3%	0.0%	1.7%
Imidacloprid	0.0611	15.3%	76	75	1	0	0		98.7%	1.3%	0.0%
tau-Fluvalinate	0.1174	19.3%	83	74	3	6	3		89.2%	3.6%	7.2%
Tebuconazole	0.1029	12.8%	81	77	1	3	2		95.1%	1.2%	3.7%
Thiacloprid	0.1751	14.3%	77	75	0	2	0		97.4%	0.0%	2.6%
Trifloxystrobin	0.0906	13.2%	79	77	2	0	0		97.5%	2.5%	0.0%
Vinclozolin	0.1158	16.3%	85	78	4	3	1		91.8%	4.7%	3.5%

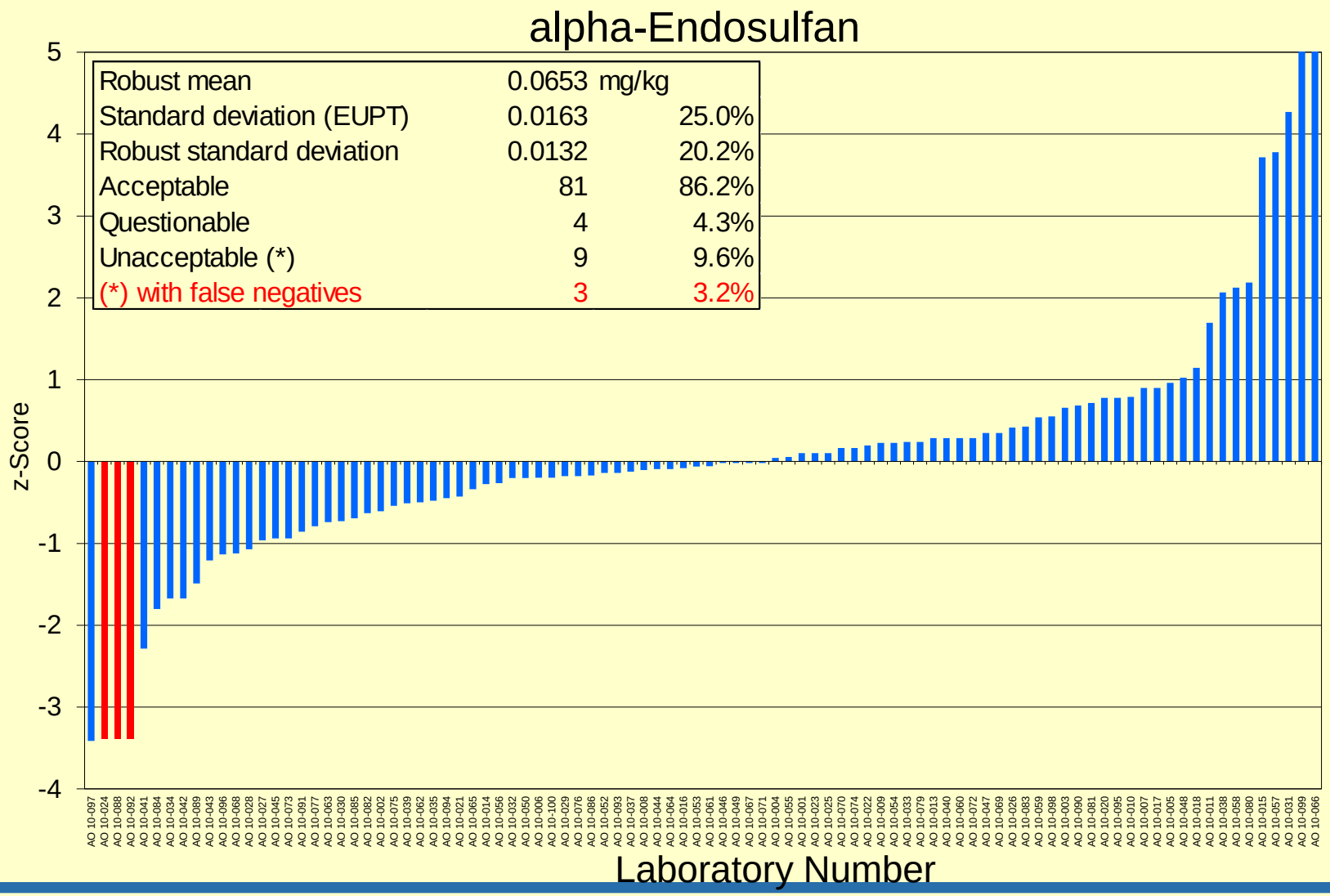
Results (Mandatory Pesticides)

Acetamiprid

Robust mean	0.0640 mg/kg	
Standard deviation (EUPT)	0.0160	25.0%
Robust standard deviation	0.0081	12.7%
Acceptable	74	98.7%
Questionable	1	1.3%
Unacceptable (*)	0	0.0%
(*) with false negatives	0	0.0%



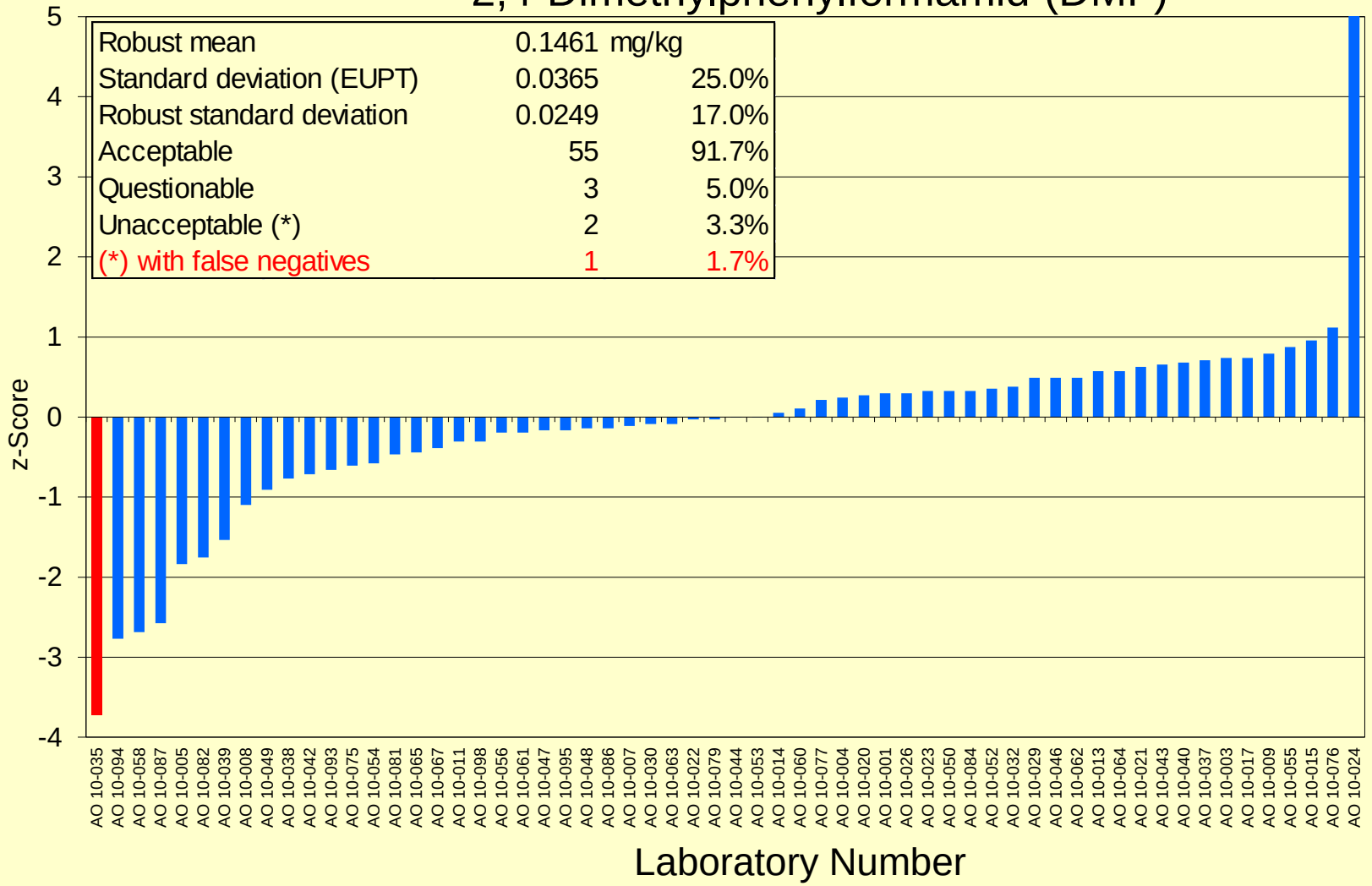
Results (Mandatory Pesticides)



Results (Mandatory Pesticides)

2,4-Dimethylphenylformamid (DMF)

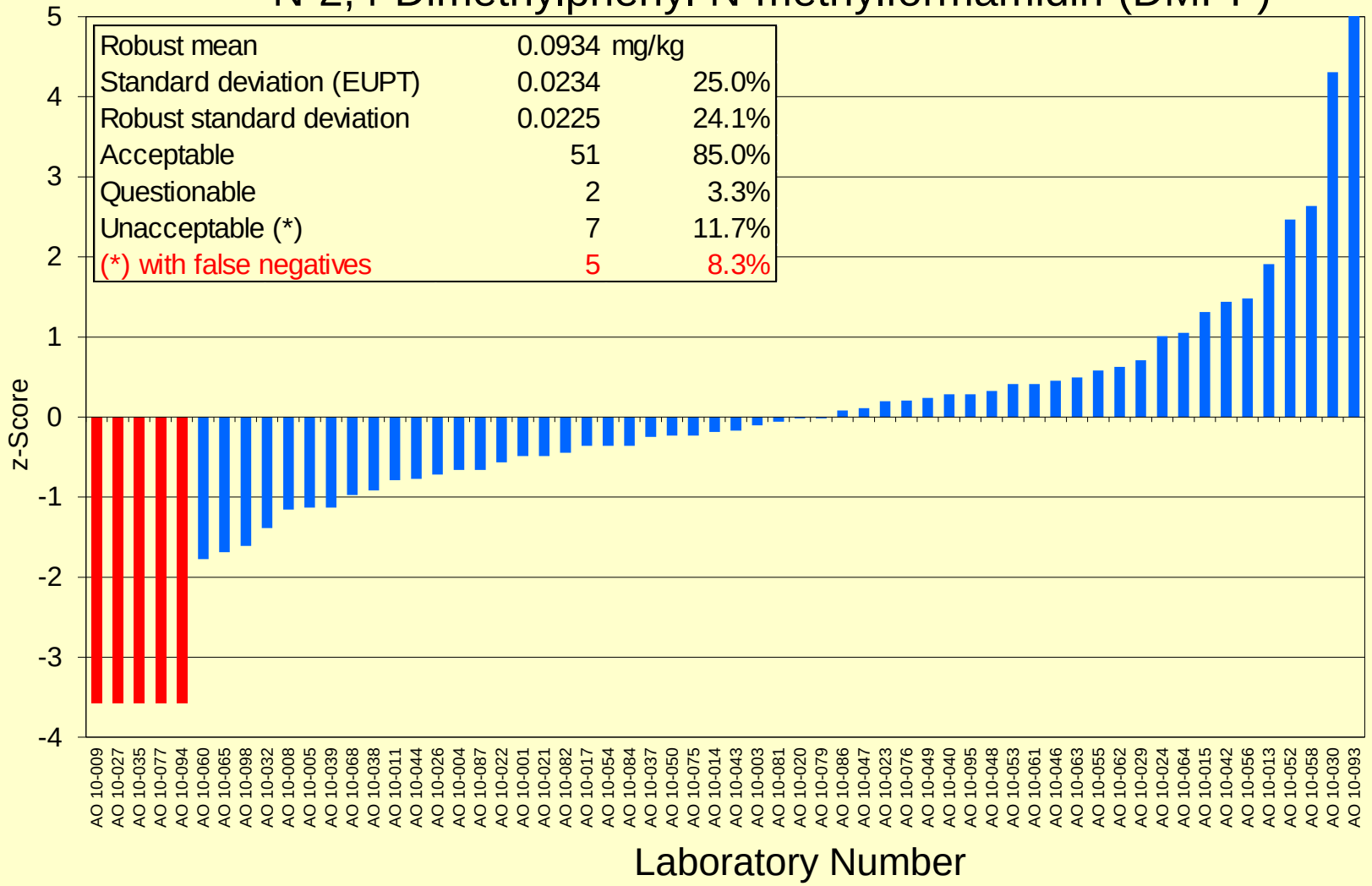
Robust mean	0.1461 mg/kg	
Standard deviation (EUPT)	0.0365	25.0%
Robust standard deviation	0.0249	17.0%
Acceptable	55	91.7%
Questionable	3	5.0%
Unacceptable (*)	2	3.3%
(*) with false negatives	1	1.7%



Results (Mandatory Pesticides)

N-2,4-Dimethylphenyl-N-methylformamidin (DMPF)

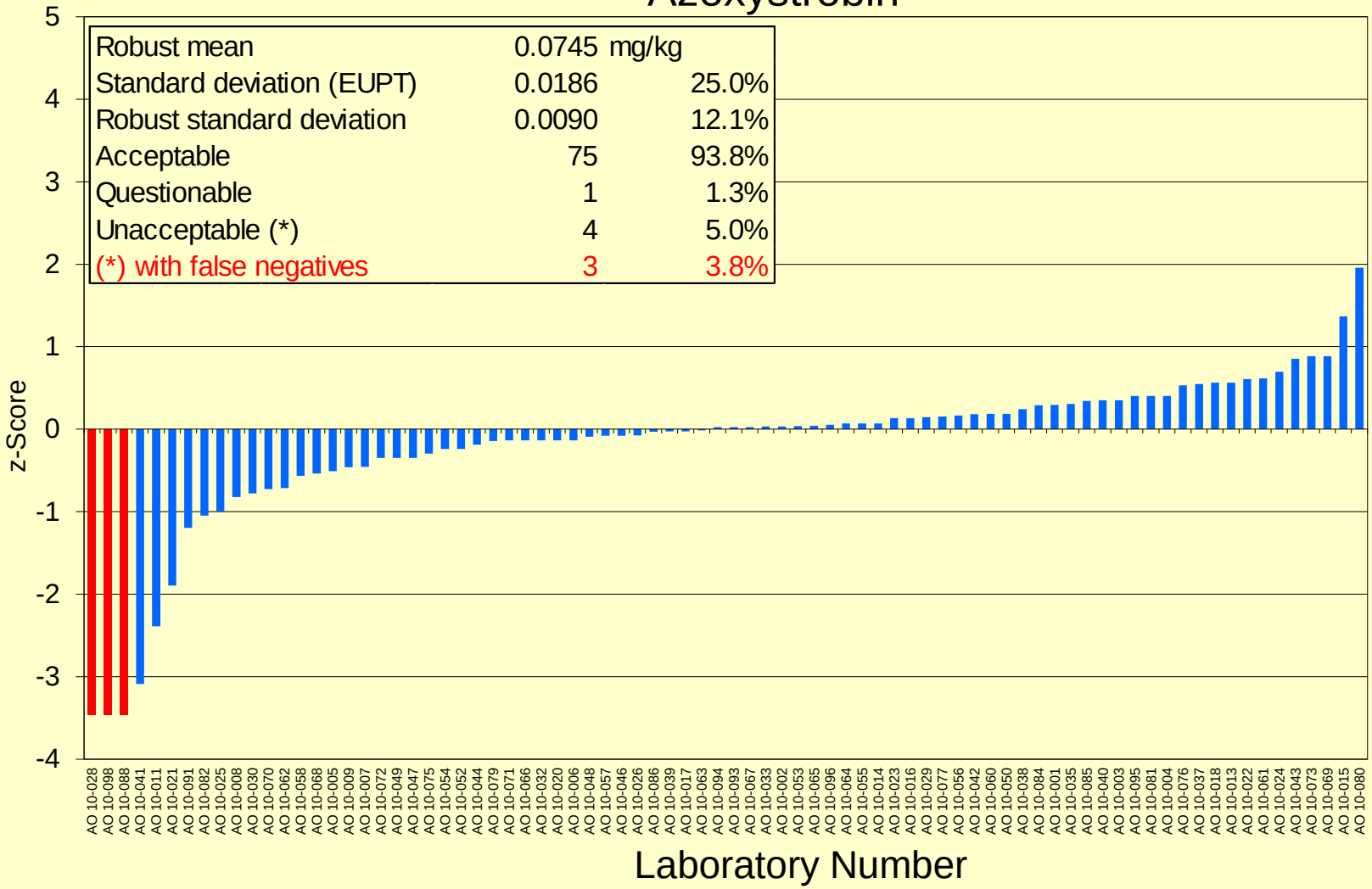
Robust mean	0.0934 mg/kg	
Standard deviation (EUPT)	0.0234	25.0%
Robust standard deviation	0.0225	24.1%
Acceptable	51	85.0%
Questionable	2	3.3%
Unacceptable (*)	7	11.7%
(*) with false negatives	5	8.3%



Results (Mandatory Pesticides)

Azoxystrobin

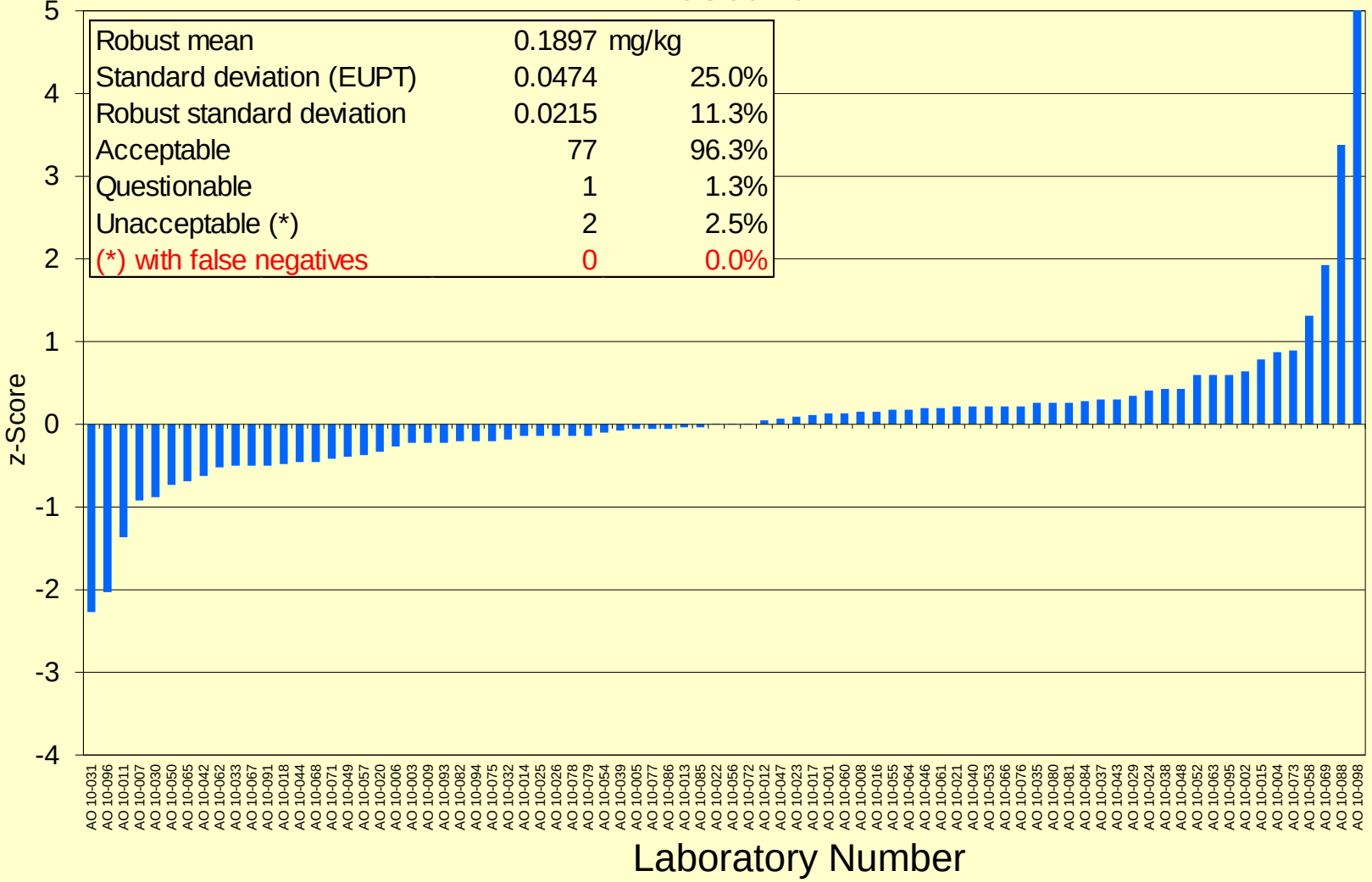
Robust mean	0.0745 mg/kg	
Standard deviation (EUPT)	0.0186	25.0%
Robust standard deviation	0.0090	12.1%
Acceptable	75	93.8%
Questionable	1	1.3%
Unacceptable (*)	4	5.0%
(*) with false negatives	3	3.8%



Results (Mandatory Pesticides)

Boscalid

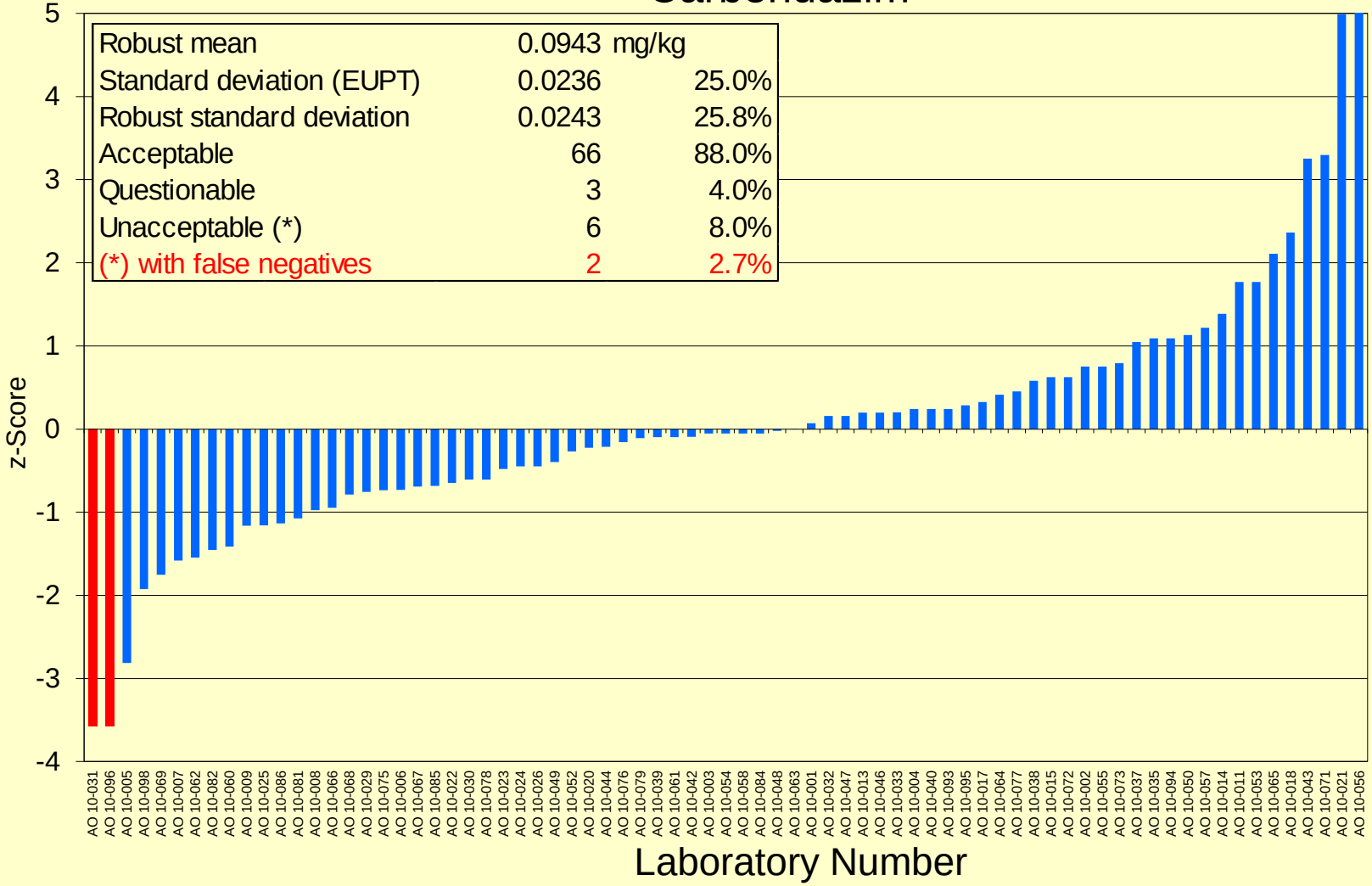
Robust mean	0.1897 mg/kg	
Standard deviation (EUPT)	0.0474	25.0%
Robust standard deviation	0.0215	11.3%
Acceptable	77	96.3%
Questionable	1	1.3%
Unacceptable (*)	2	2.5%
(*) with false negatives	0	0.0%



Results (Mandatory Pesticides)

Carbendazim

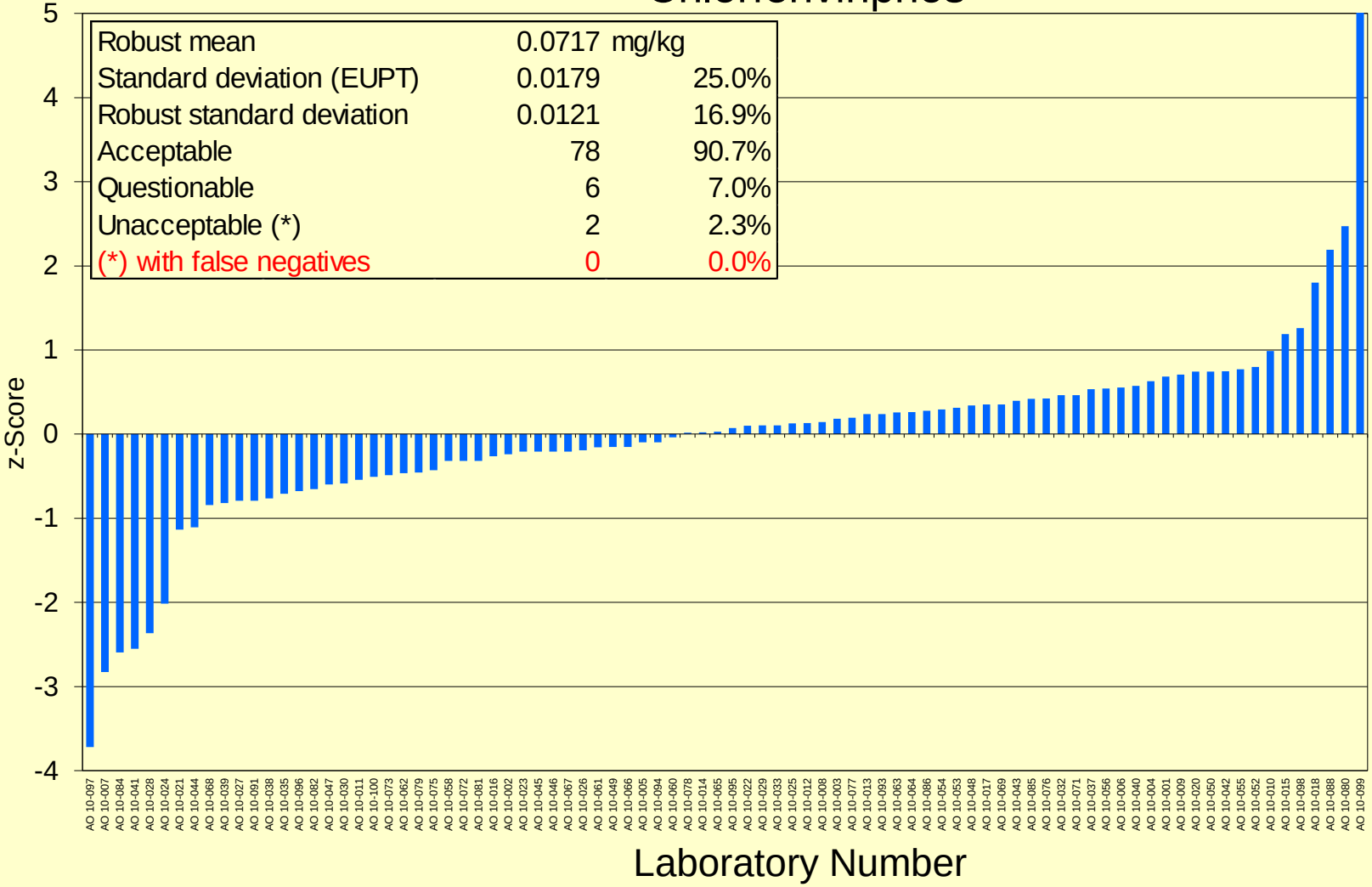
Robust mean	0.0943 mg/kg	
Standard deviation (EUPT)	0.0236	25.0%
Robust standard deviation	0.0243	25.8%
Acceptable	66	88.0%
Questionable	3	4.0%
Unacceptable (*)	6	8.0%
(*) with false negatives	2	2.7%



Results (Mandatory Pesticides)

Chlorfenvinphos

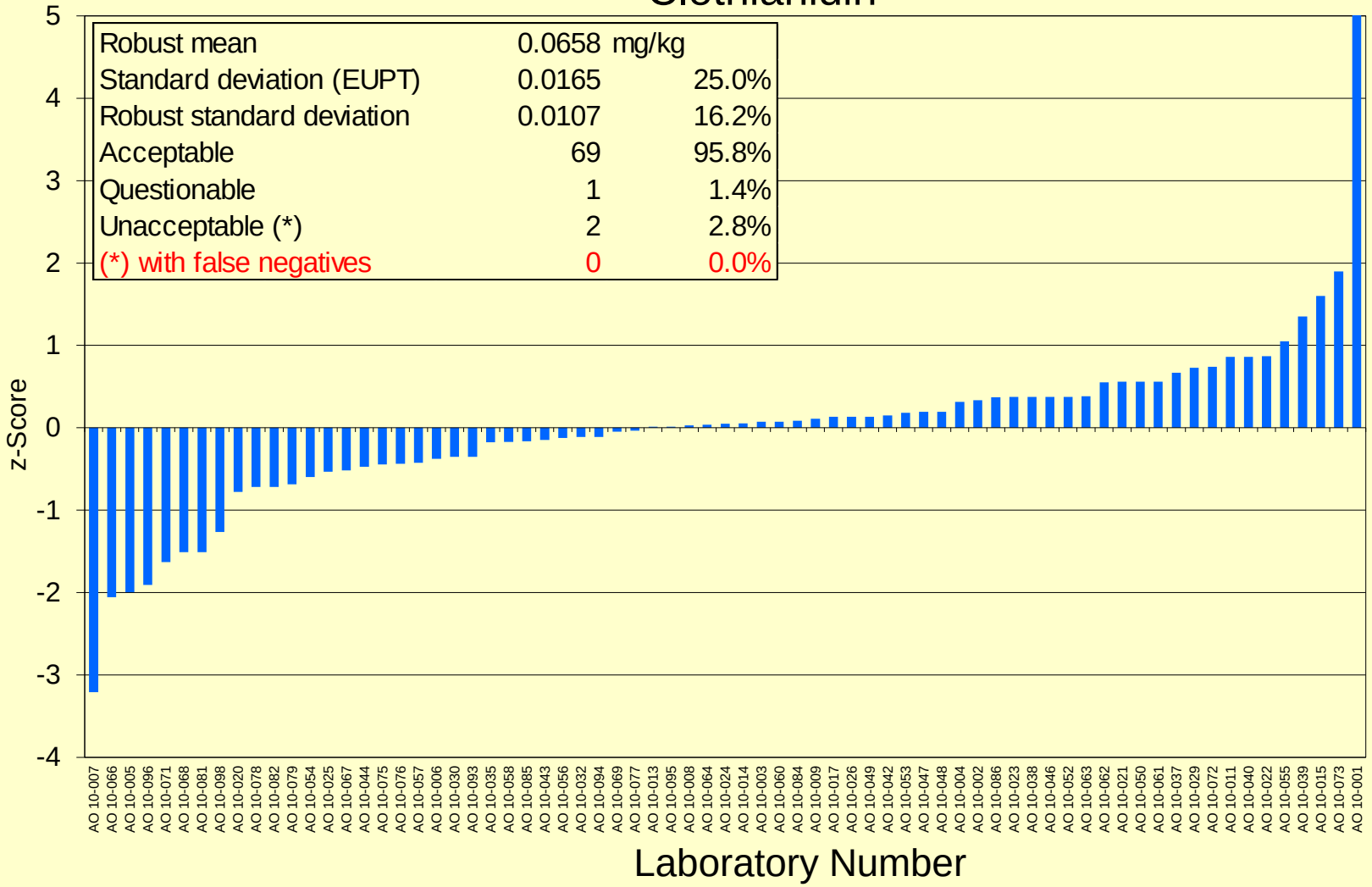
Robust mean	0.0717 mg/kg	
Standard deviation (EUPT)	0.0179	25.0%
Robust standard deviation	0.0121	16.9%
Acceptable	78	90.7%
Questionable	6	7.0%
Unacceptable (*)	2	2.3%
(*) with false negatives	0	0.0%



Results (Mandatory Pesticides)

Clothianidin

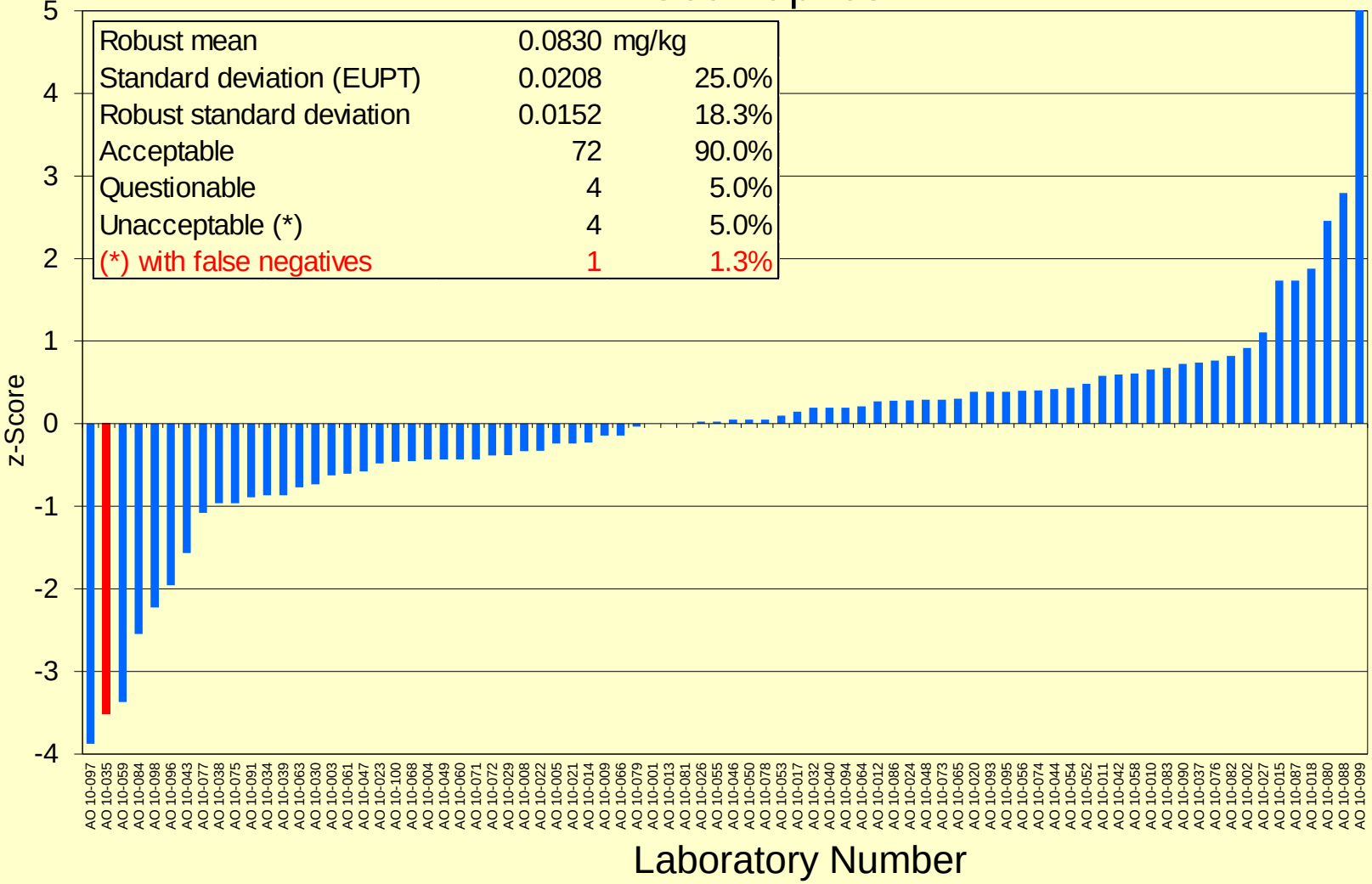
Robust mean	0.0658 mg/kg	
Standard deviation (EUPT)	0.0165	25.0%
Robust standard deviation	0.0107	16.2%
Acceptable	69	95.8%
Questionable	1	1.4%
Unacceptable (*)	2	2.8%
(*) with false negatives	0	0.0%



Results (Mandatory Pesticides)

Coumaphos

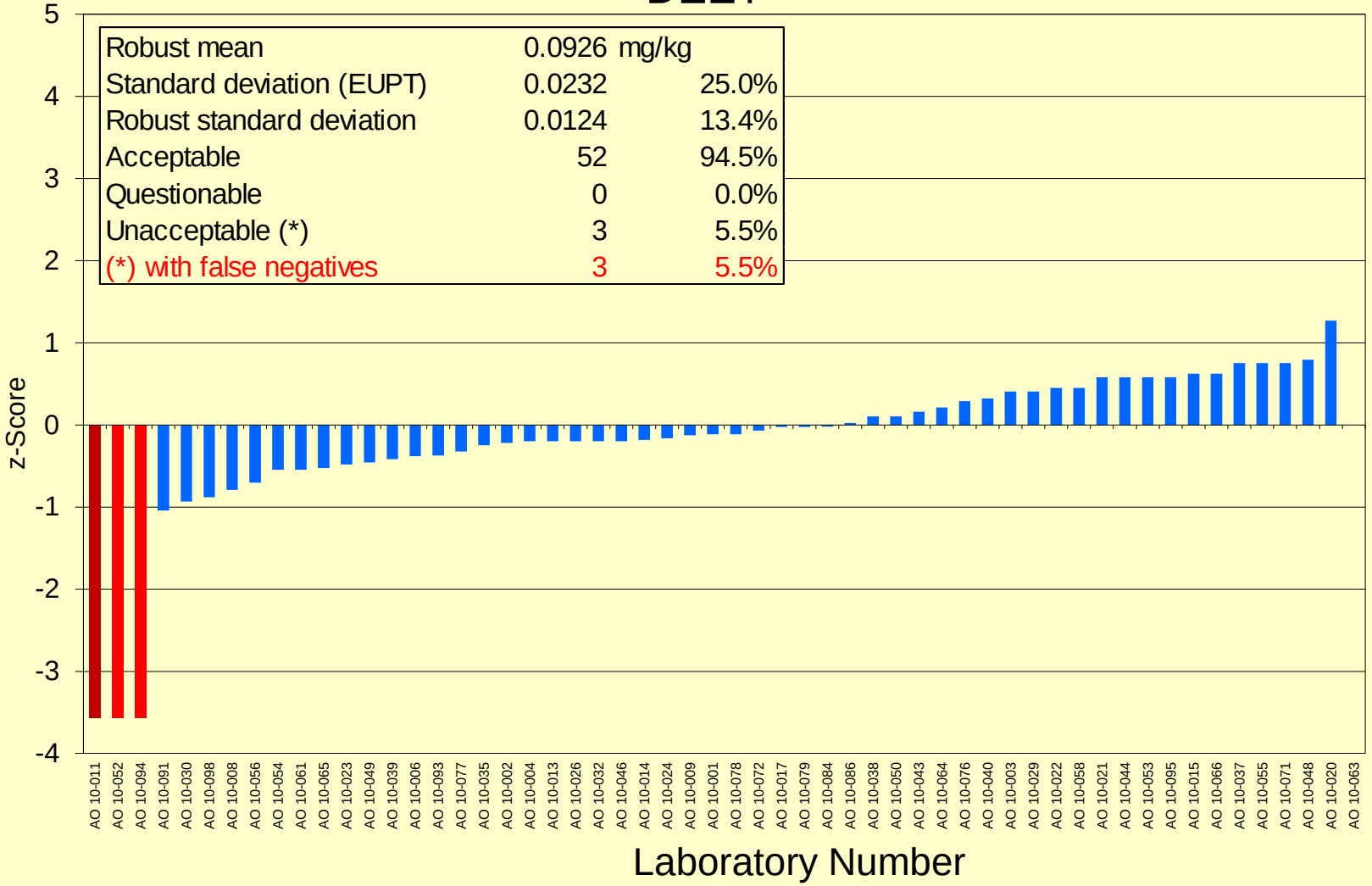
Robust mean	0.0830 mg/kg	
Standard deviation (EUPT)	0.0208	25.0%
Robust standard deviation	0.0152	18.3%
Acceptable	72	90.0%
Questionable	4	5.0%
Unacceptable (*)	4	5.0%
(*) with false negatives	1	1.3%



Results (Mandatory Pesticides)

DEET

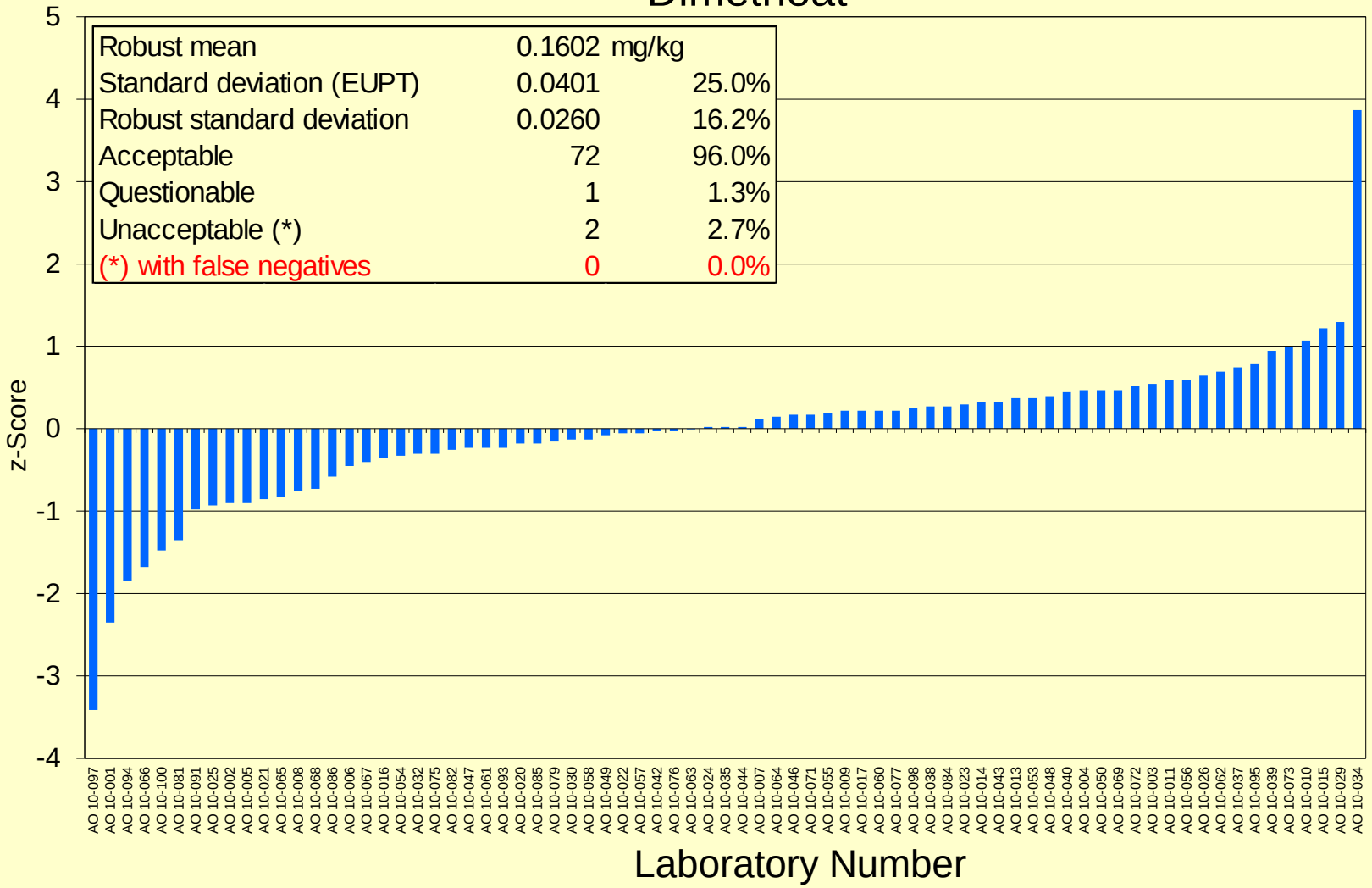
Robust mean	0.0926 mg/kg	
Standard deviation (EUPT)	0.0232	25.0%
Robust standard deviation	0.0124	13.4%
Acceptable	52	94.5%
Questionable	0	0.0%
Unacceptable (*)	3	5.5%
(*) with false negatives	3	5.5%



Results (Mandatory Pesticides)

Dimethoat

Robust mean	0.1602 mg/kg	
Standard deviation (EUPT)	0.0401	25.0%
Robust standard deviation	0.0260	16.2%
Acceptable	72	96.0%
Questionable	1	1.3%
Unacceptable (*)	2	2.7%
(*) with false negatives	0	0.0%

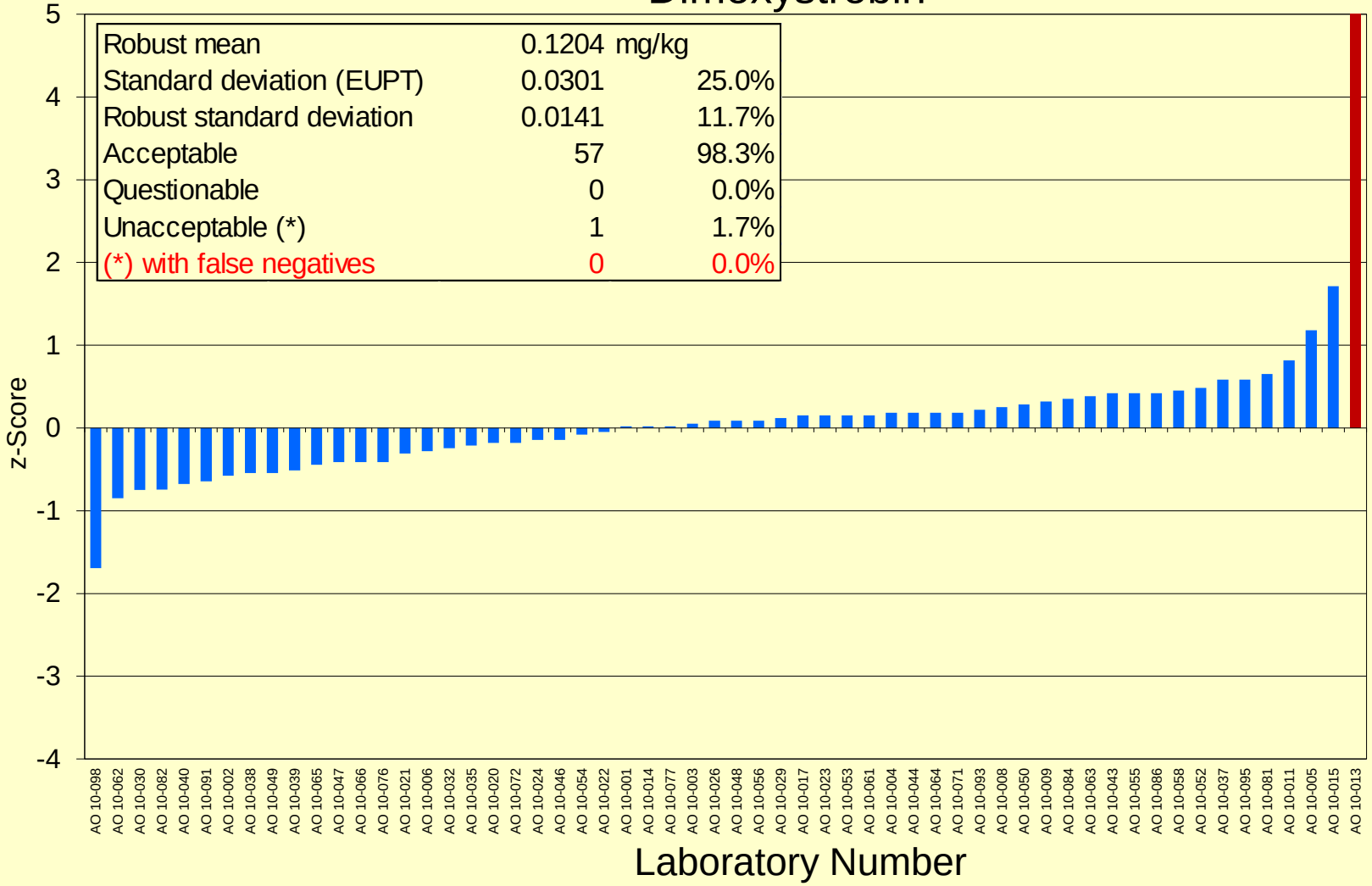


Results (Mandatory Pesticides)

Transscription error; decimal point missed: with decimal point: z-score = 0.1

Dimoxystrobin

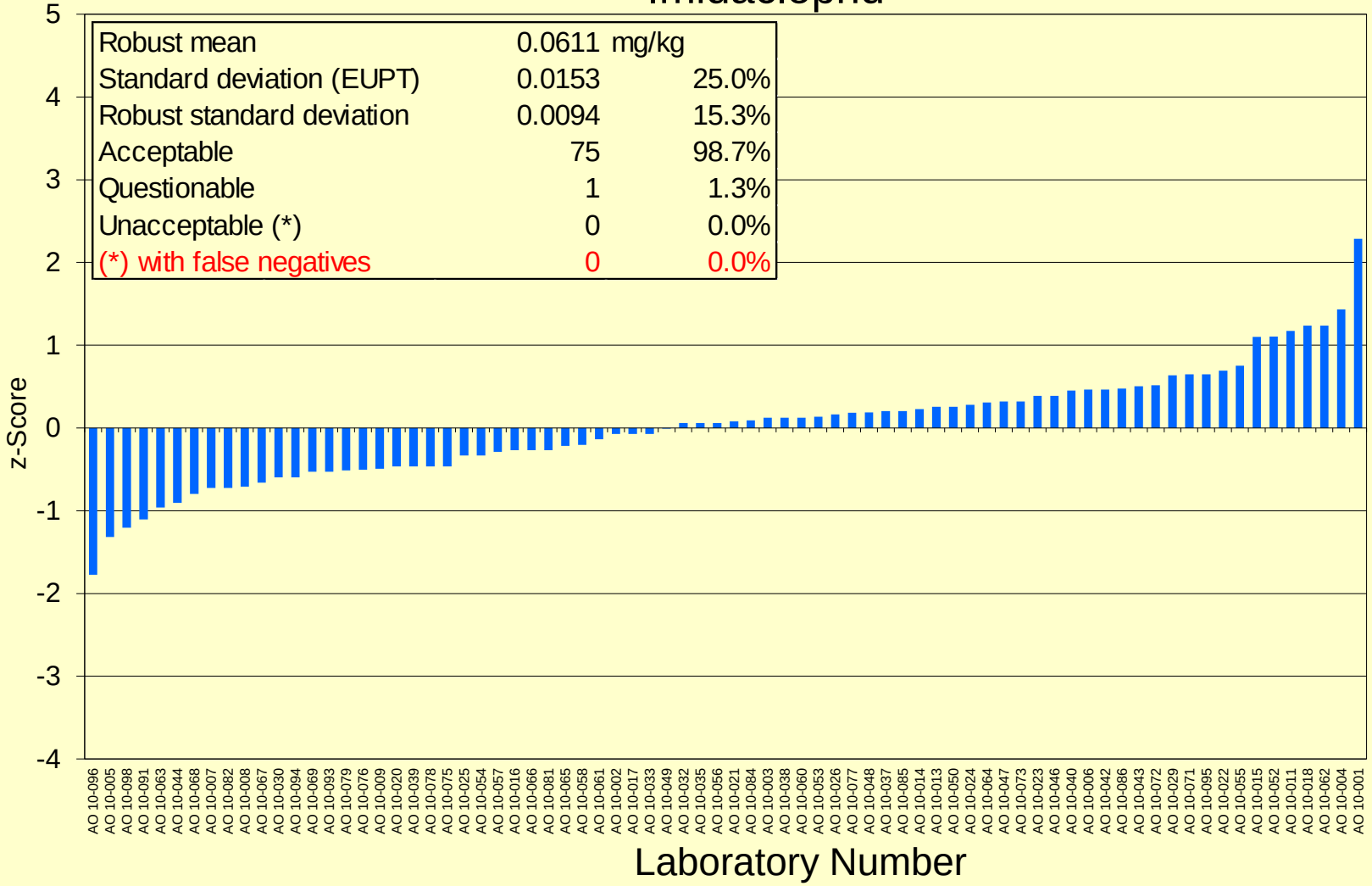
Robust mean	0.1204 mg/kg	
Standard deviation (EUPT)	0.0301	25.0%
Robust standard deviation	0.0141	11.7%
Acceptable	57	98.3%
Questionable	0	0.0%
Unacceptable (*)	1	1.7%
(*) with false negatives	0	0.0%



Results (Mandatory Pesticides)

Imidacloprid

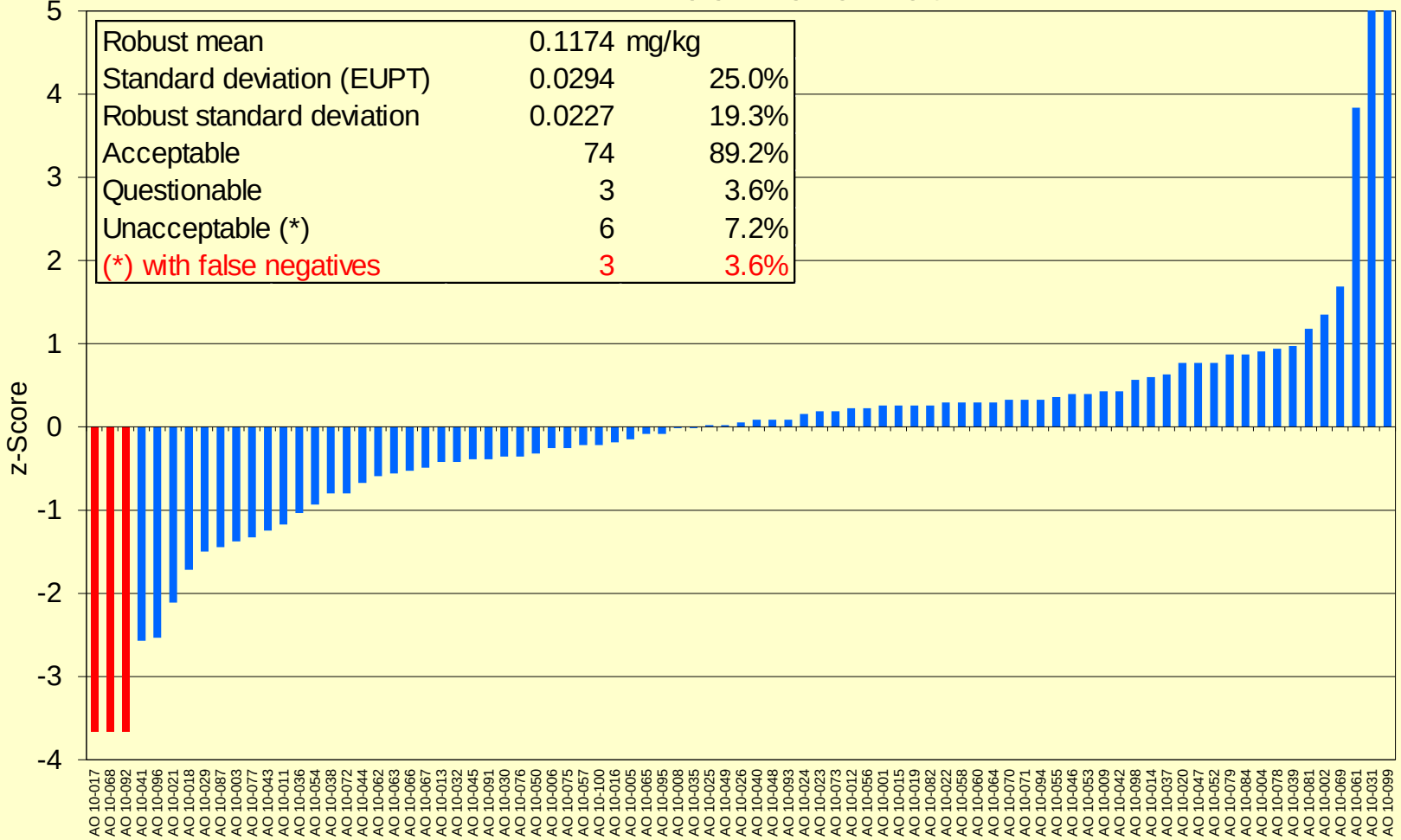
Robust mean	0.0611 mg/kg	
Standard deviation (EUPT)	0.0153	25.0%
Robust standard deviation	0.0094	15.3%
Acceptable	75	98.7%
Questionable	1	1.3%
Unacceptable (*)	0	0.0%
(*) with false negatives	0	0.0%



Results (Mandatory Pesticides)

Tau-Fluvalinat

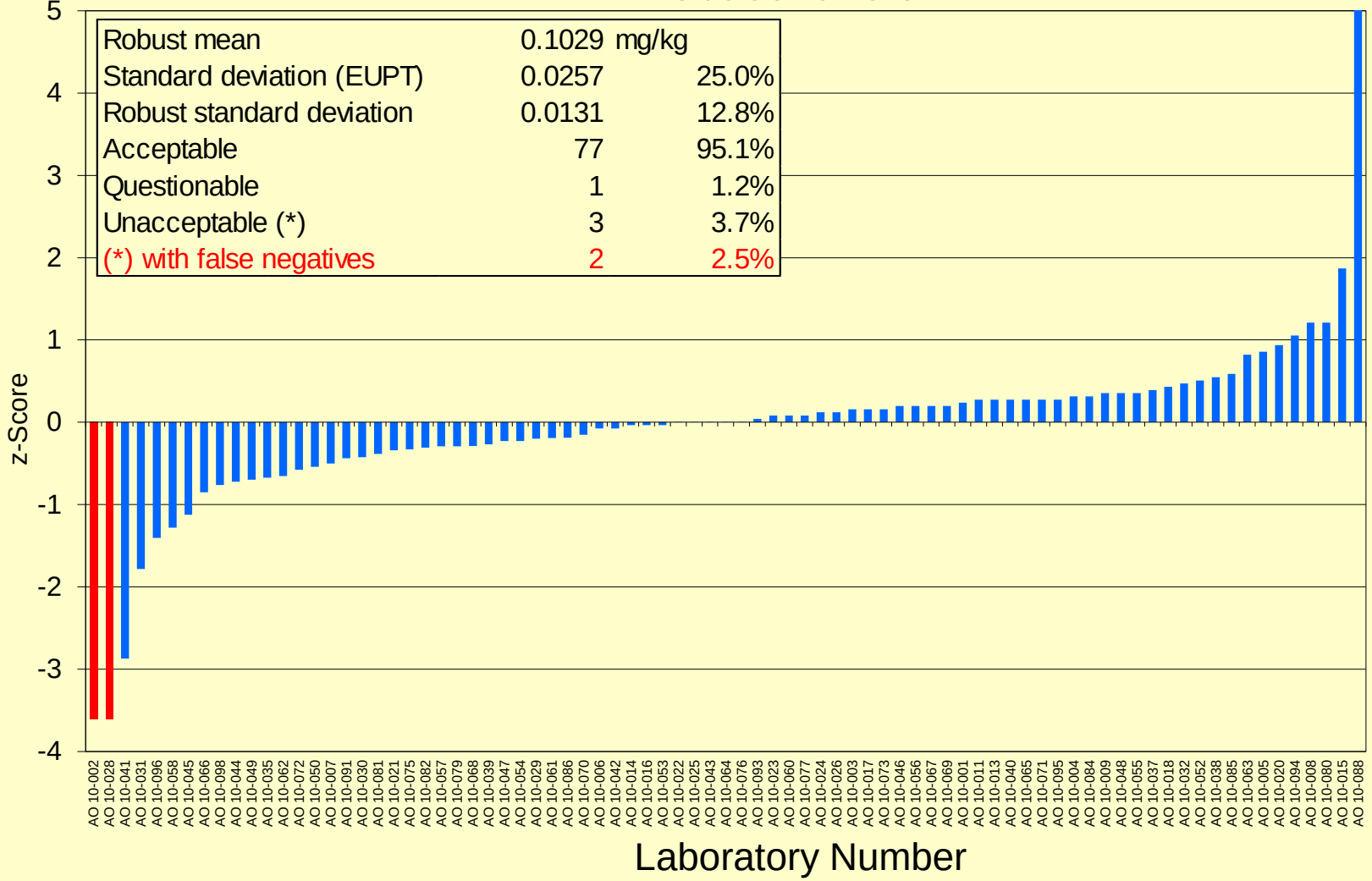
Robust mean	0.1174 mg/kg	
Standard deviation (EUPT)	0.0294	25.0%
Robust standard deviation	0.0227	19.3%
Acceptable	74	89.2%
Questionable	3	3.6%
Unacceptable (*)	6	7.2%
(*) with false negatives	3	3.6%



Results (Mandatory Pesticides)

Tebuconazole

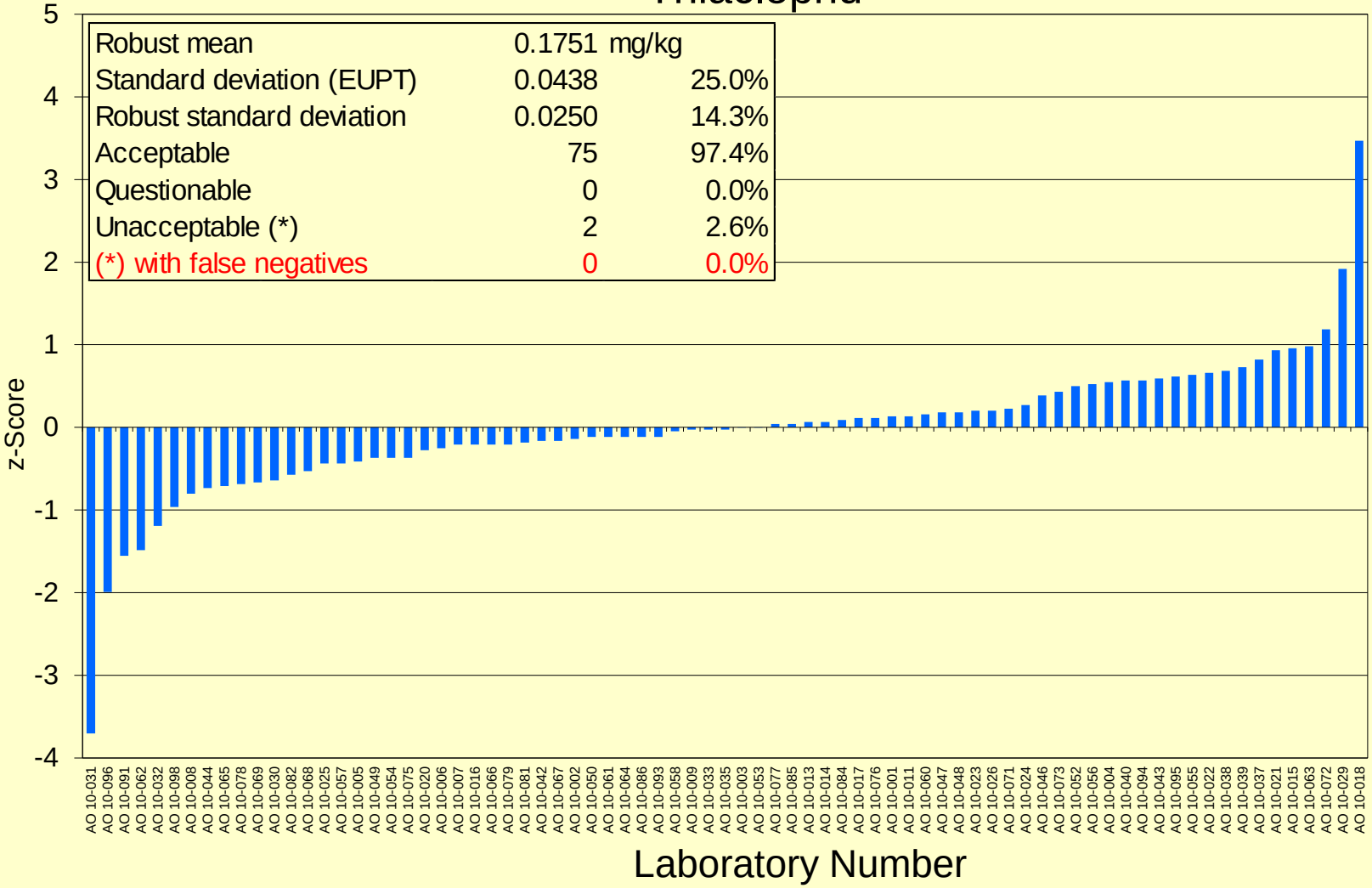
Robust mean	0.1029 mg/kg	
Standard deviation (EUPT)	0.0257	25.0%
Robust standard deviation	0.0131	12.8%
Acceptable	77	95.1%
Questionable	1	1.2%
Unacceptable (*)	3	3.7%
(*) with false negatives	2	2.5%



Results (Mandatory Pesticides)

Thiacloprid

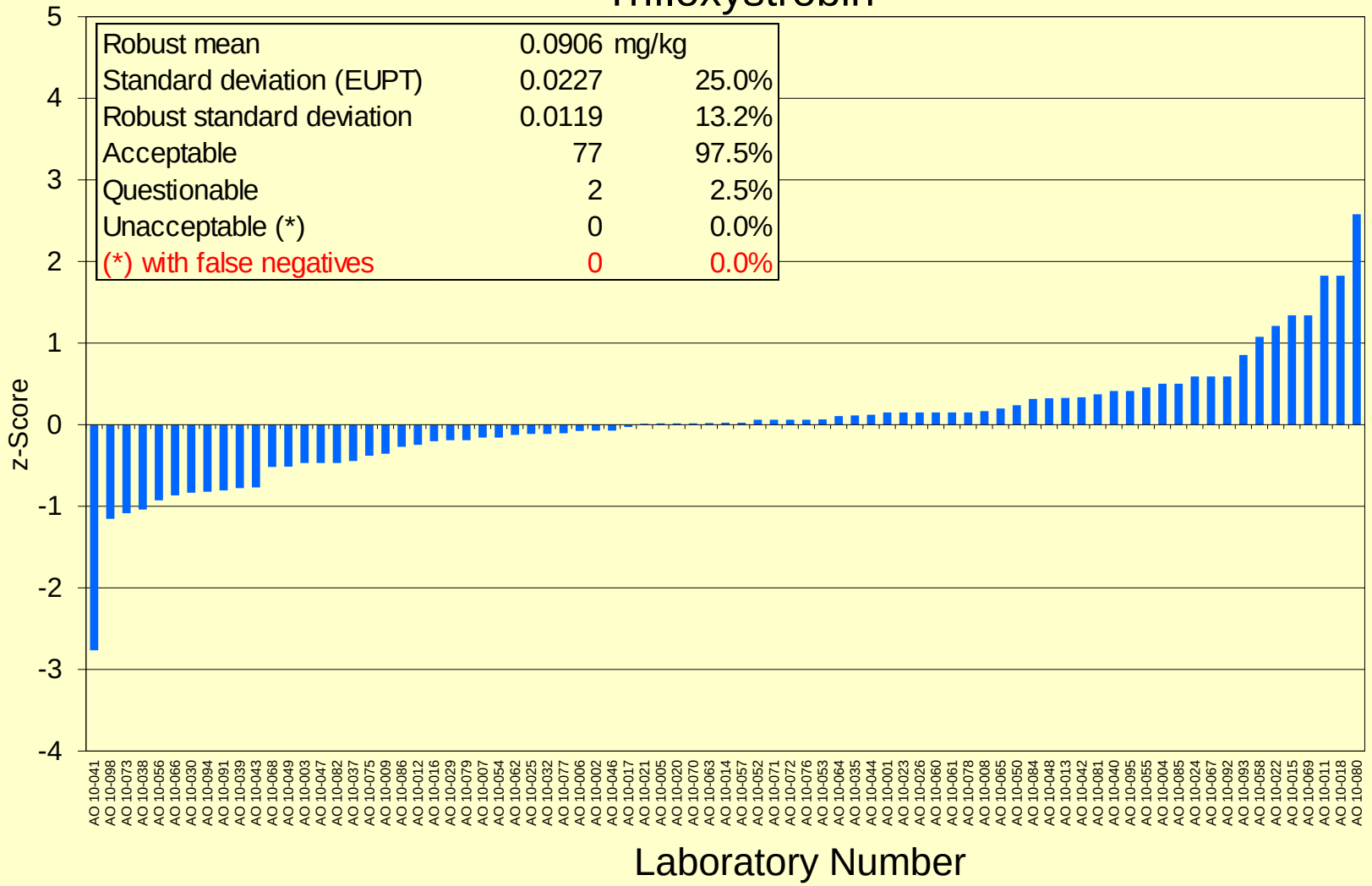
Robust mean	0.1751 mg/kg	
Standard deviation (EUPT)	0.0438	25.0%
Robust standard deviation	0.0250	14.3%
Acceptable	75	97.4%
Questionable	0	0.0%
Unacceptable (*)	2	2.6%
(*) with false negatives	0	0.0%



Results (Mandatory Pesticides)

Trifloxystrobin

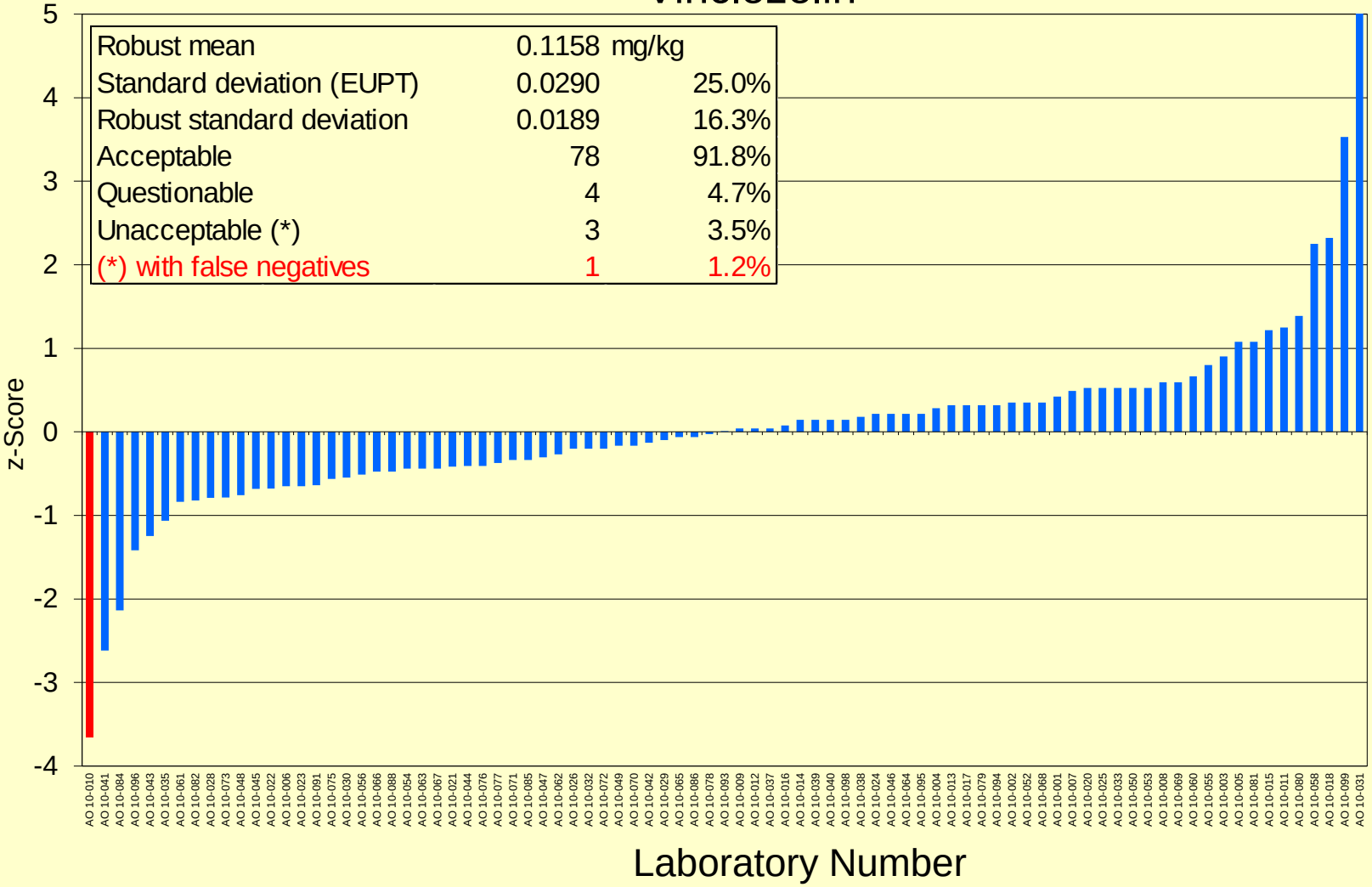
Robust mean	0.0906 mg/kg	
Standard deviation (EUPT)	0.0227	25.0%
Robust standard deviation	0.0119	13.2%
Acceptable	77	97.5%
Questionable	2	2.5%
Unacceptable (*)	0	0.0%
(*) with false negatives	0	0.0%



Results (Mandatory Pesticides)

Vinclozolin

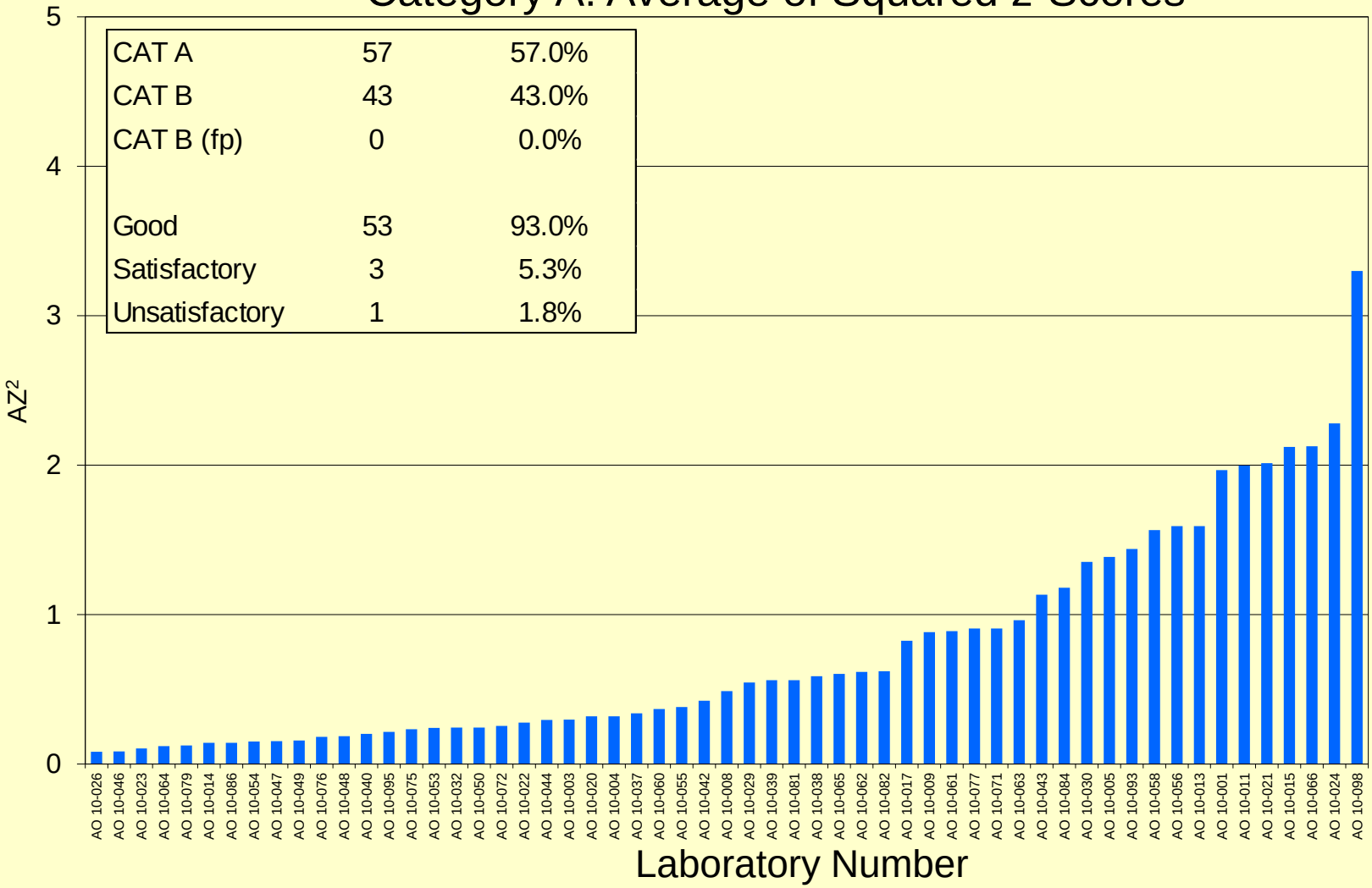
Robust mean	0.1158 mg/kg	
Standard deviation (EUPT)	0.0290	25.0%
Robust standard deviation	0.0189	16.3%
Acceptable	78	91.8%
Questionable	4	4.7%
Unacceptable (*)	3	3.5%
(*) with false negatives	1	1.2%



Results (Mandatory Pesticides)

Category A: Average of Squared z-Scores

CAT A	57	57.0%
CAT B	43	43.0%
CAT B (fp)	0	0.0%
Good	53	93.0%
Satisfactory	3	5.3%
Unsatisfactory	1	1.8%

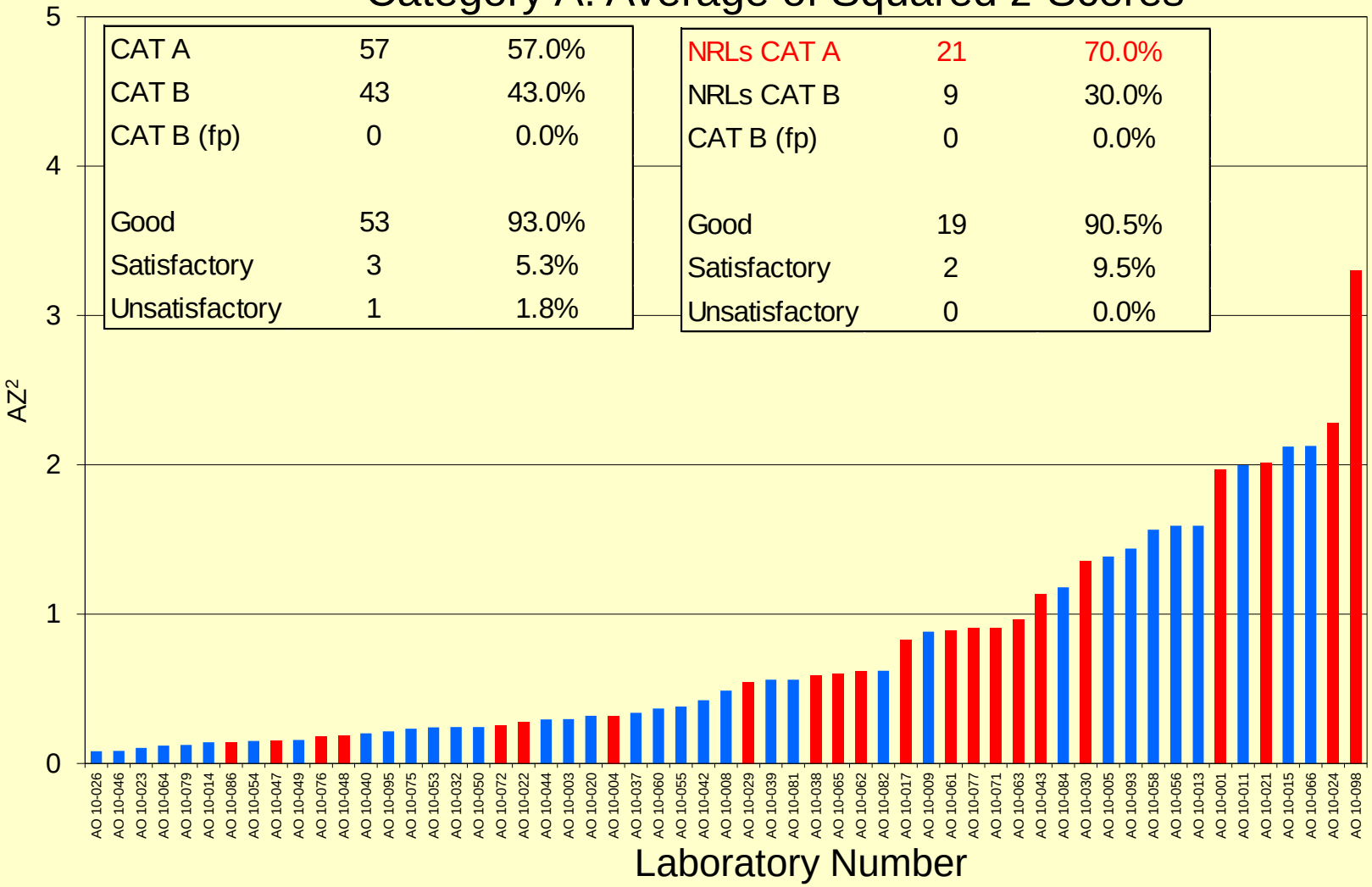


Results (Mandatory Pesticides)

Category A: Average of Squared z-Scores

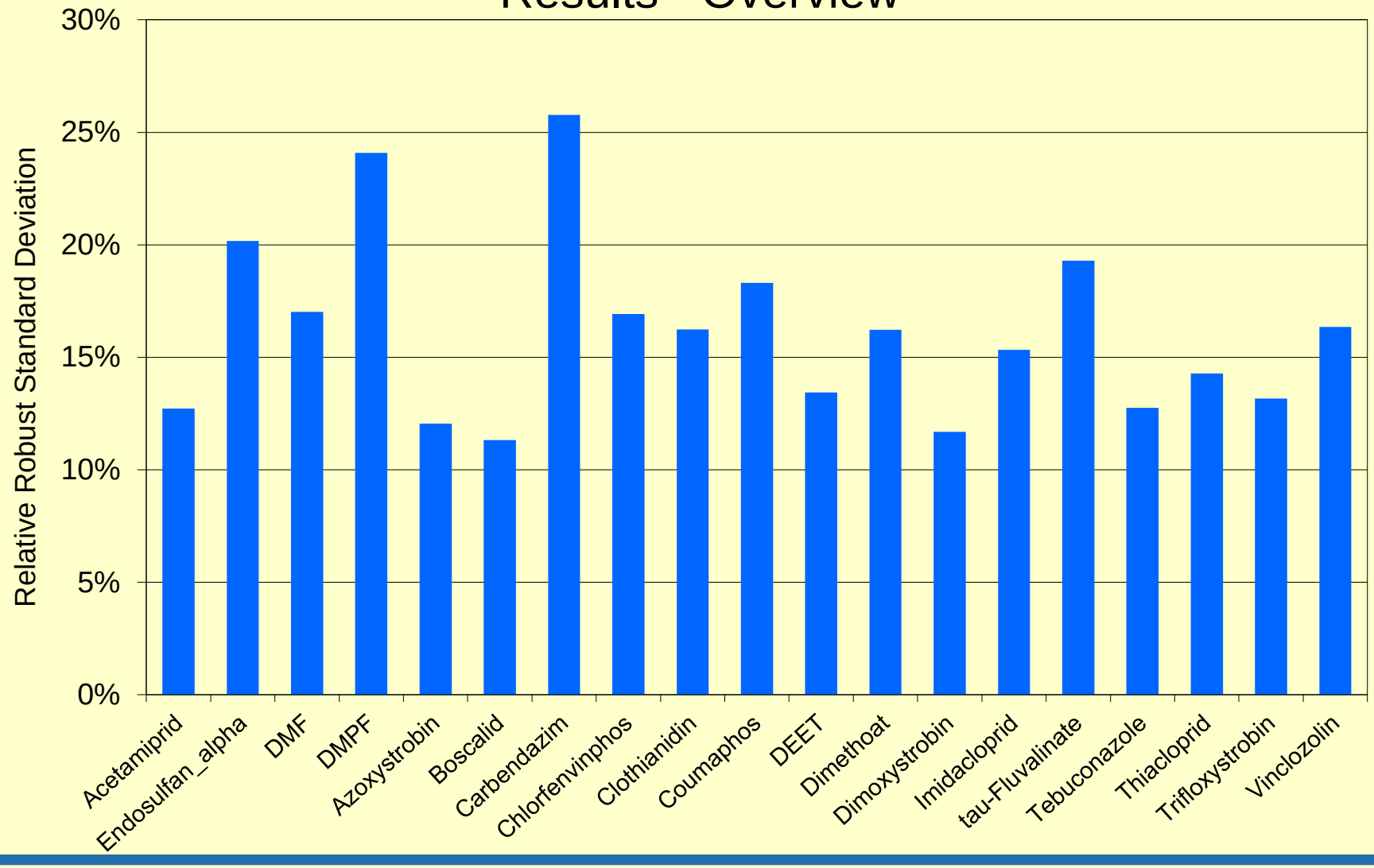
CAT A	57	57.0%
CAT B	43	43.0%
CAT B (fp)	0	0.0%
Good	53	93.0%
Satisfactory	3	5.3%
Unsatisfactory	1	1.8%

NRLs CAT A	21	70.0%
NRLs CAT B	9	30.0%
CAT B (fp)	0	0.0%
Good	19	90.5%
Satisfactory	2	9.5%
Unsatisfactory	0	0.0%

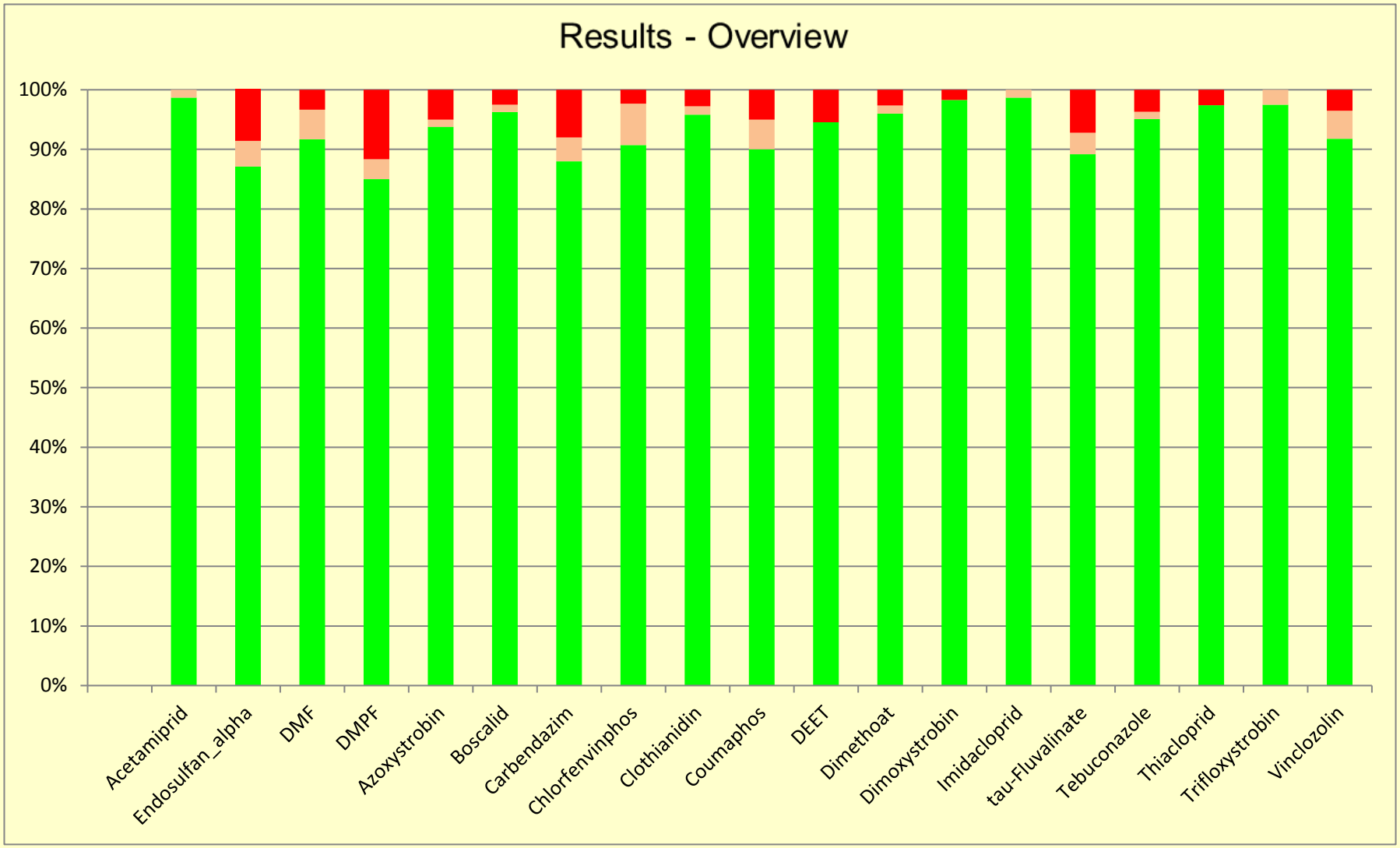


Results

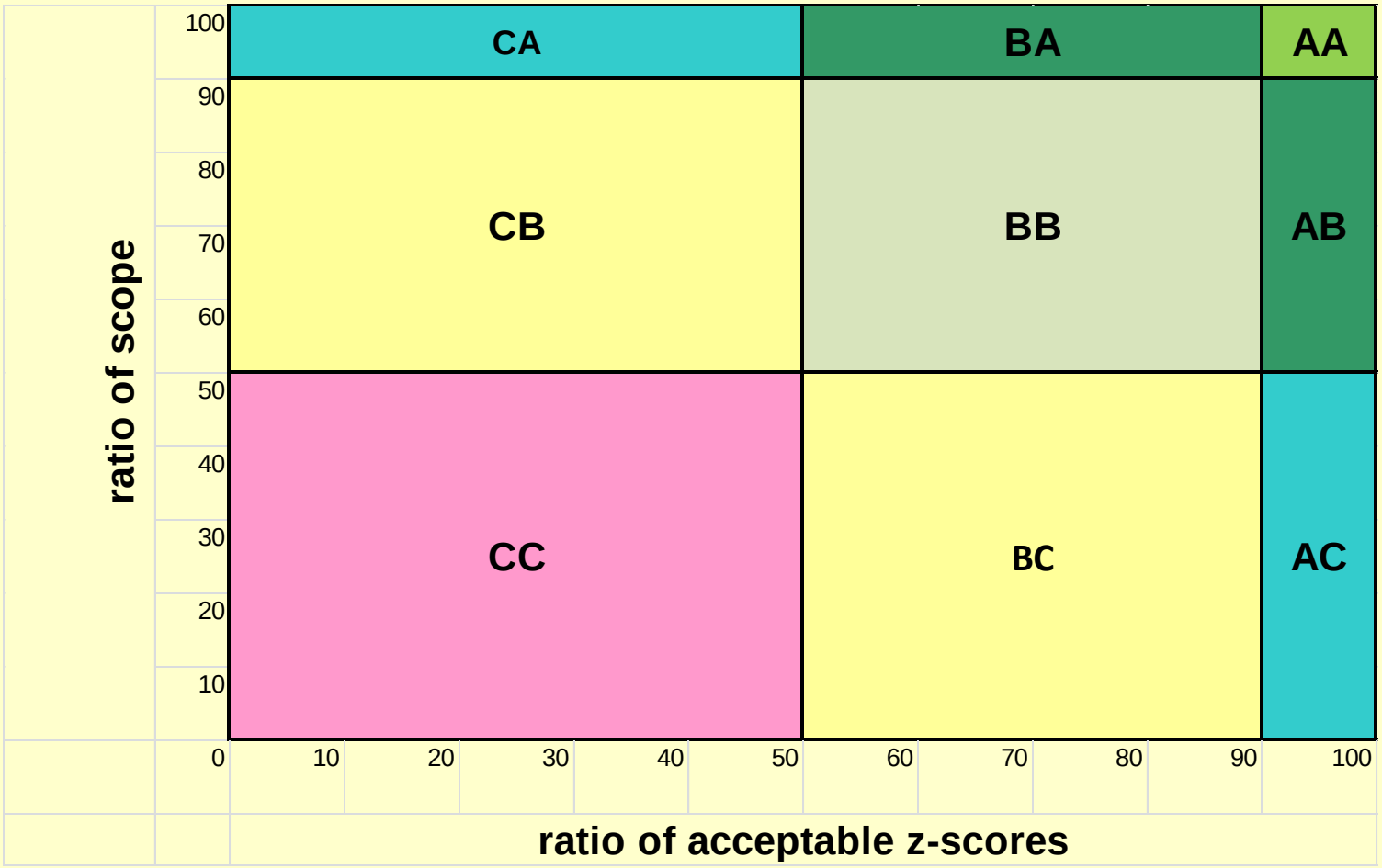
Results - Overview



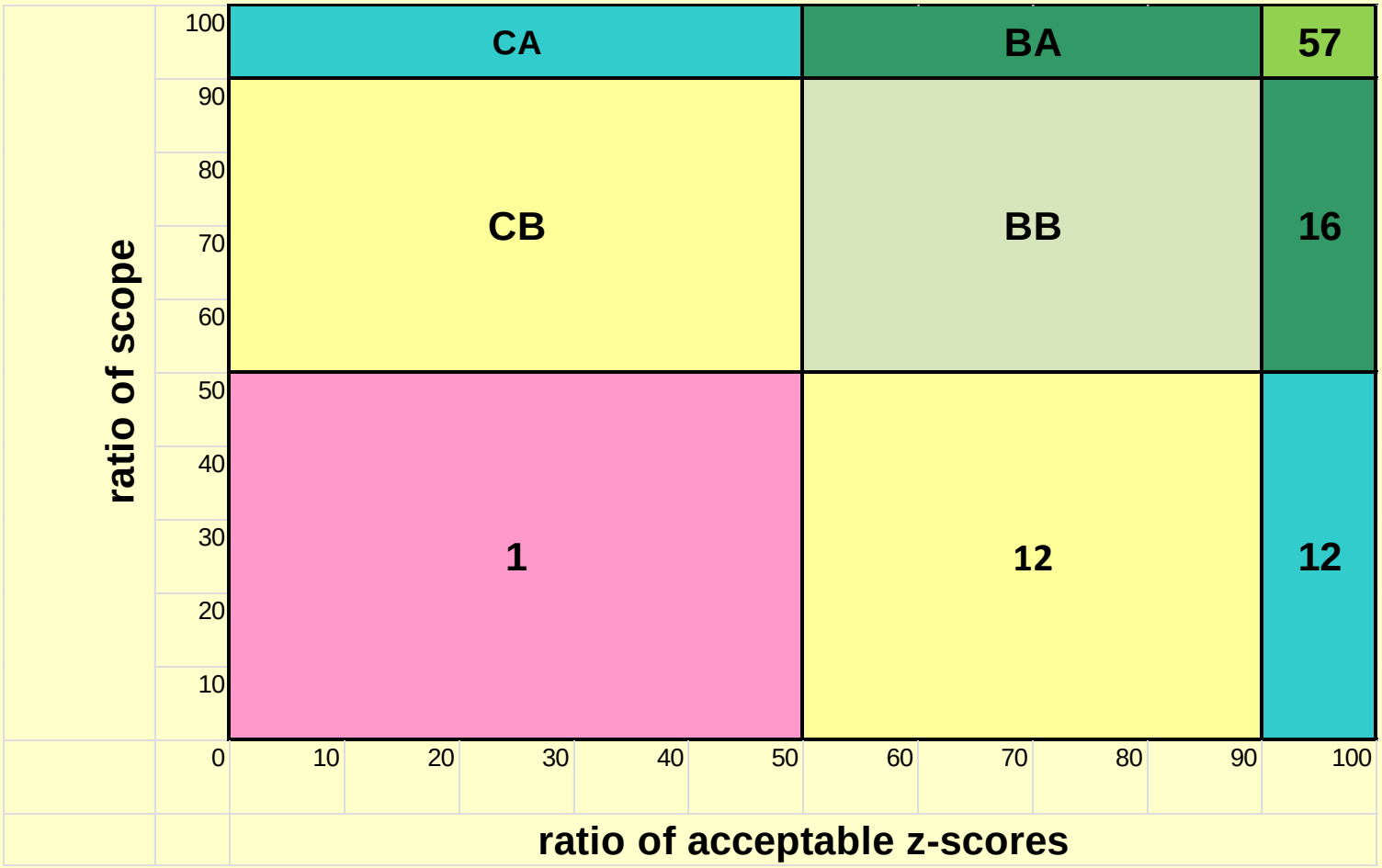
Results


Results - Overview
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Acetamiprid
Endosulfan_alpha
DMF
DMPF
Azoxystrobin
Boscalid
Carbendazim
Chlorfenvinphos
Clothianidin
Coumaphos
DEET
Dimethoat
Dimoxystrobin
Imidacloprid
tau-Fluvalinate
Tebuconazole
Thiacloprid
Trifloxystrobin
Vinclozolin

Results


CA
BA
AA
CB
BB
AB
CC
BC
AC
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
ratio of scope
ratio of acceptable z-scores

Results


CA
BA
57
CB
BB
16
1
12
12
ratio of scope
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
ratio of acceptable z-scores

Stability of Retention Times

	delta RT <= 0.1	delta RT <= 0.2	delta RT > 0.2
Acetamiprid	93,9%	4,1%	2,0%
alpha-Endosulfan	98,0%	2,0%	0,0%
DMF	92,5%	5,0%	2,5%
DMPF	91,4%	5,7%	2,9%
Azoxystrobin	95,7%	4,3%	0,0%
Boscalid	98,0%	2,0%	0,0%
Carbendazim	91,3%	6,5%	2,2%
Chlorfenvinphos	96,1%	3,9%	0,0%
Clothianidin	93,5%	4,3%	2,2%
Coumaphos	97,8%	2,2%	0,0%
DEET	96,9%	3,1%	0,0%
Dimethoat	95,8%	2,1%	2,1%
Dimoxystrobin	97,2%	2,8%	0,0%
Imidacloprid	91,7%	6,3%	2,1%
Tau_Fluvalinat	95,9%	4,1%	0,0%
Tebuconazole	97,9%	2,1%	0,0%
Thiacloprid	91,7%	6,3%	2,1%
Trifloxystrobin	97,9%	2,1%	0,0%
Vinclozolin	96,1%	2,0%	2,0%

EUPT AO 10

Winston Churchill:

There are lies, bloody lies and statistics

Questions?