

**University of Stuttgart**  
Germany



# Analytische Qualitätssicherung Baden-Württemberg

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Proficiency Test 4/20  
- TW 05 – Pesticides with HPLC/MS in  
drinking water -

Final report

provided by  
AQS Baden-Württemberg at  
Institute for Sanitary Engineering, Water Quality and Solid Waste Management,  
University of Stuttgart  
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on behalf of the Ministry of Rural Affairs and  
Consumer Protection Baden-Württemberg

Stuttgart, in October 2020

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<b>Release of the report:</b>	Dr.-Ing. Michael Koch	on 16 Oct 2020
<b>Version of the report</b>	1	

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## 1. General

This PT was provided in the context of the AQS Baden-Württemberg drinking water PT scheme. In this round following parameter were to be determined.

- N,N-Dimethylsulfamide
- Methyl-desphenylchloridazon
- Desphenylchloridazon
- Metazachloric acid
- Metazachlor sulfonic acid
- Metolachloric acid
- Metolachlor sulfonic acid
- Glyphosate
- AMPA

The PT was executed according to the recommendations of the German Federal Environment Agency from December 2003. These recommendations “for the execution of PTs for the measurement of chemical parameter and indicator parameter for the external quality control of drinking water laboratories” (Bundesgesundheitsblatt 46 12, 1094-1095) require, that drinking water laboratories must demonstrate their competence for all parameters they are accredited for or they want to be accredited for by a successful participation in a PT round within a cycle of 2-3 years.

The PT was executed and evaluated according to the requirements of DIN 38402-A45 and ISO/TS 20612.

## 2. PT design

Each participant received the following samples:

- 3 samples for the determination of N,N-Dimethylsulfamide, methyl-desphenylchloridazon, desphenylchloridazon, metazachloric acid, metazachlor sulfonic acid, metolachloric acid, metolachlor sulfonic acid in 100-ml-glass-bottles with screw cap. Preservation by cooling.
- 3 samples for the determination of glyphosate and AMPA in 250-ml-glass bottles with screw cap. Preservation by cooling.

6 different concentration levels/batches were produced. The concentration levels were randomly allocated to the participants. It was ensured that each participant received one concentration level from the lower concentration range (level 1–2).

## 3. Sample preparation

The samples for the determination of the above mentioned parameters were based on a real ground water matrix.

The ground water was filtered by using 5 µm and 1 µm filter cartridges to eliminate particles. To reduce germs, the ground water was irradiated with ultraviolet light and pasteurised at 80°C in a stainless steel vessel overnight. During pasteurisation, the ground water was aerated with a mixture composed of carbon dioxide and nitrogen to prevent calcium carbonate precipitation.

The ground water was spiked with stock solutions and the concentrations covered drinking and ground water relevant ranges.

The samples were cooled directly after preparation and freezer packs were added for the shipment.

#### 4. Sample distribution

The samples were dispatched on 11 May 2020 by express service (GoExpress).

#### 5. Analytical methods

The participants were free to choose a suitable method, but a limit of quantification of 0,05 µg/l was required for all parameters.

The participants were informed that the samples had to be analysed in the own laboratory, with own personal and own equipment. Subcontracting of the analysis was not allowed.

The samples had to be analysed in duplicate over the complete method (sample preparation and measurement). The participants were asked to report the results in µg/l with three significant digits.

#### 6. Submission of the results

The deadline for the submission of results was on 5 June 2020.

## 7. Basic principle of evaluation and assessment

The basic principle of the evaluation and assessment of the PTs from AQS Baden-Württemberg are described in the document „Evaluation of the PTs and information for the report“, which can be downloaded from [www.aqsbw.de/pdf/ausw\\_berichte\\_v1\\_en.pdf](http://www.aqsbw.de/pdf/ausw_berichte_v1_en.pdf).

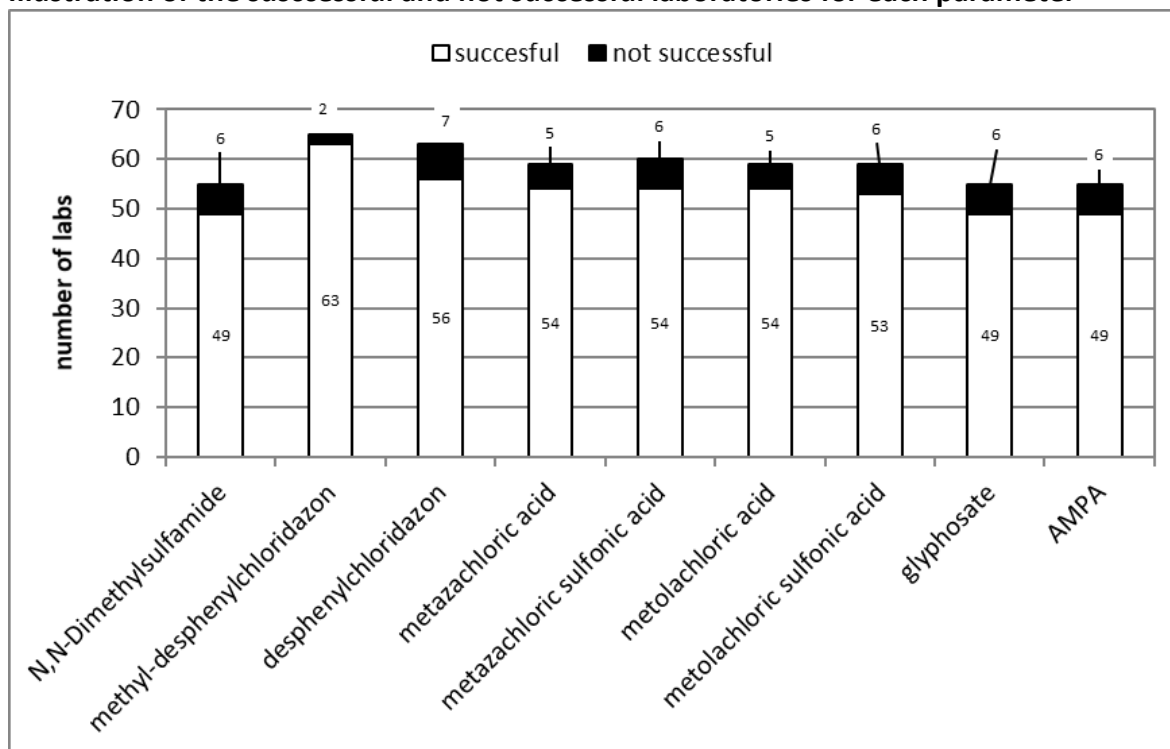
This PT was evaluated as follows:

<b>Assigned value <math>x_{pt}</math>:</b>	Consensus value (Hampel estimator)
<b>Standard deviation for proficiency assessment <math>\sigma_{pt}</math>:</b>	Q method Variance function
<b>Upper limit of <math>\sigma_{pt}</math>:</b>	25 %
<b>Lower limit of <math>\sigma_{pt}</math>:</b>	5 %
<b>Assessment:</b>	$z_U$ -Score
<b>Classification of the single results:</b>	$ z_u  \leq 2,0$ successful $2,0 <  z_u  < 3,0$ questionable $ z_u  \geq 3,0$ unsatisfactory
<b>Parameter assessment:</b>	A parameter was assessed as successful, if more than half of the values were correctly determined (2 out of 3 values are within the tolerance limits).

## 8. Evaluation

<b>Number of participants:</b>	74
<b>Number of reported values</b>	1585
<b>Number of accepted values:</b>	1421 (89,65%)

### Illustration of the successful and not successful laboratories for each parameter



## 9. Explanation for the appendices

The explanations for the appendices can be found in the document „Evaluation of the PTs and information for the report“, which can be downloaded from [www.agsbw.de/pdf/ausw\\_berichte\\_v1\\_en.pdf](http://www.agsbw.de/pdf/ausw_berichte_v1_en.pdf).

## 10. Measurement uncertainty

### General:

Number of labs with valid values	70
Number of labs with valid values and reported measurement uncertainties	39 (55,71%)
Number of valid values	1585
Number of valid values with measurement uncertainties	873 (55,08%)

**Measurement uncertainties against the accreditation status**

Accreditation status of the values	Number of values	Number of values with measurement uncertainty
accredited	1195	729 (61%)
not accredited	87	27 (31,03%)
not specified	303	117 (38,61 %)

**Interpretation of the reported measurement uncertainties:**

If measurement uncertainties are underestimated values assessed as “satisfactory” in the PT ( $|z_U| \leq 2$ ), will have a large  $\zeta$ -score.  $|\zeta| > 2$  means that the “own” requirements (defined in terms of estimated uncertainty) are not fulfilled.

<b>Number of values with reported measurement uncertainty having a <math> z_U  \leq 2,0</math></b>	766
<b>Number of values with a magnitude of <math>\zeta</math>-scores <math>&gt; 2</math></b> The own requirements of the laboratory are not fulfilled and the estimation of the measurement uncertainty is too low	94 (12,3%)

**11. Traceable reference values**

The explanations about traceable reference values can be found in the document „Evaluation of the PTs and information for the report“, which can be downloaded from [www.agsbw.de/pdf/ausw\\_berichte\\_v1\\_en.pdf](http://www.agsbw.de/pdf/ausw_berichte_v1_en.pdf)

**12. Internet**

The report is available on the following webpage:

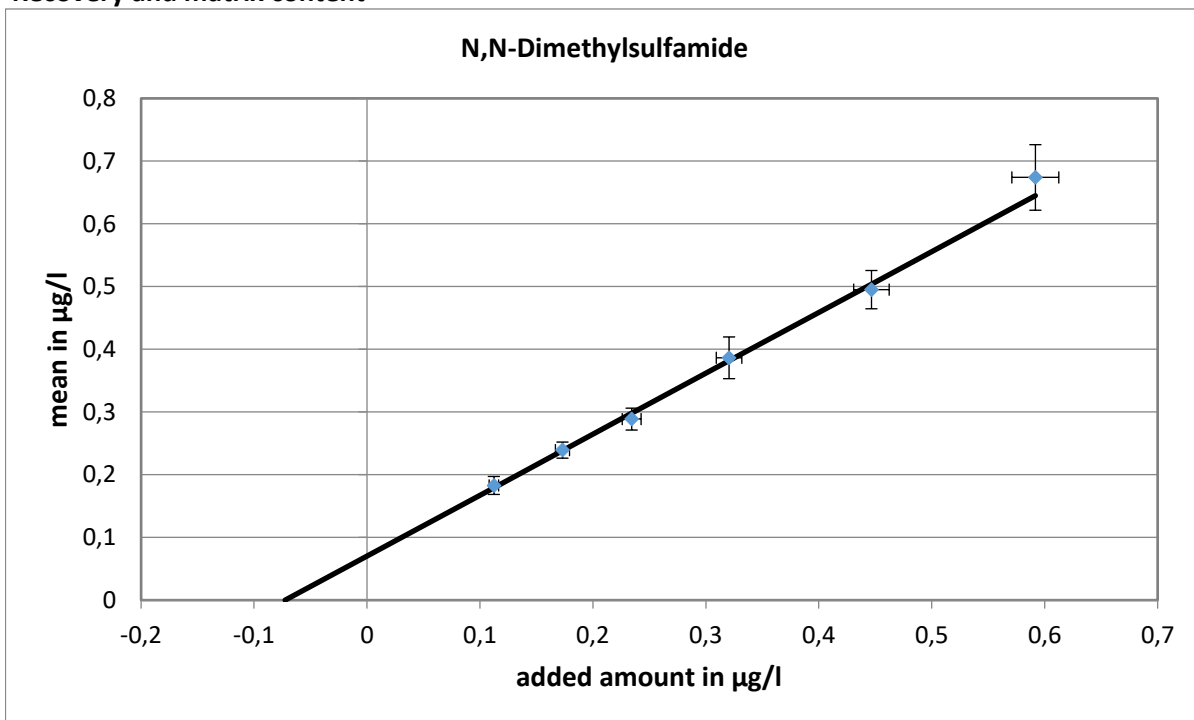
[http://www.agsbw/pdf/224/report\\_224.pdf](http://www.agsbw/pdf/224/report_224.pdf)



# N,N-Dimethylsulfamide

level	assigned value [µg/l]	expanded uncertainty of the assigned value [%]	standard deviation, calculated using robust statistics [µg/l]	standard deviation from variance function [µg/l]	standard deviation for proficiency assessment [µg/l]	standard deviation for proficiency assessment [%]	upper tolerance limit [µg/l]	lower tolerance limit [µg/l]	upper tolerance limit [%]	lower tolerance limit [%]	number of results	out below	out above	out [%]
1	0,1829	7,84	0,0309	0,0253	0,0253	13,86	0,2376	0,1352	29,92	-26,06	29	1	1	6,9
2	0,2393	5,37	0,0262	0,0337	0,0337	14,07	0,3120	0,1760	30,41	-26,43	26	3	0	11,5
3	0,2887	6,03	0,0375	0,0411	0,0411	14,22	0,3775	0,2116	30,77	-26,70	29	0	2	6,9
4	0,3864	8,60	0,0678	0,0559	0,0559	14,46	0,5074	0,2816	31,32	-27,12	26	1	4	19,2
5	0,4951	6,16	0,0610	0,0726	0,0726	14,66	0,6525	0,3591	31,80	-27,48	25	2	1	12,0
6	0,6740	7,75	0,1106	0,1005	0,1005	14,92	0,8924	0,4857	32,41	-27,93	28	3	0	10,7
sum											163	10	8	11,0

## Recovery and matrix content

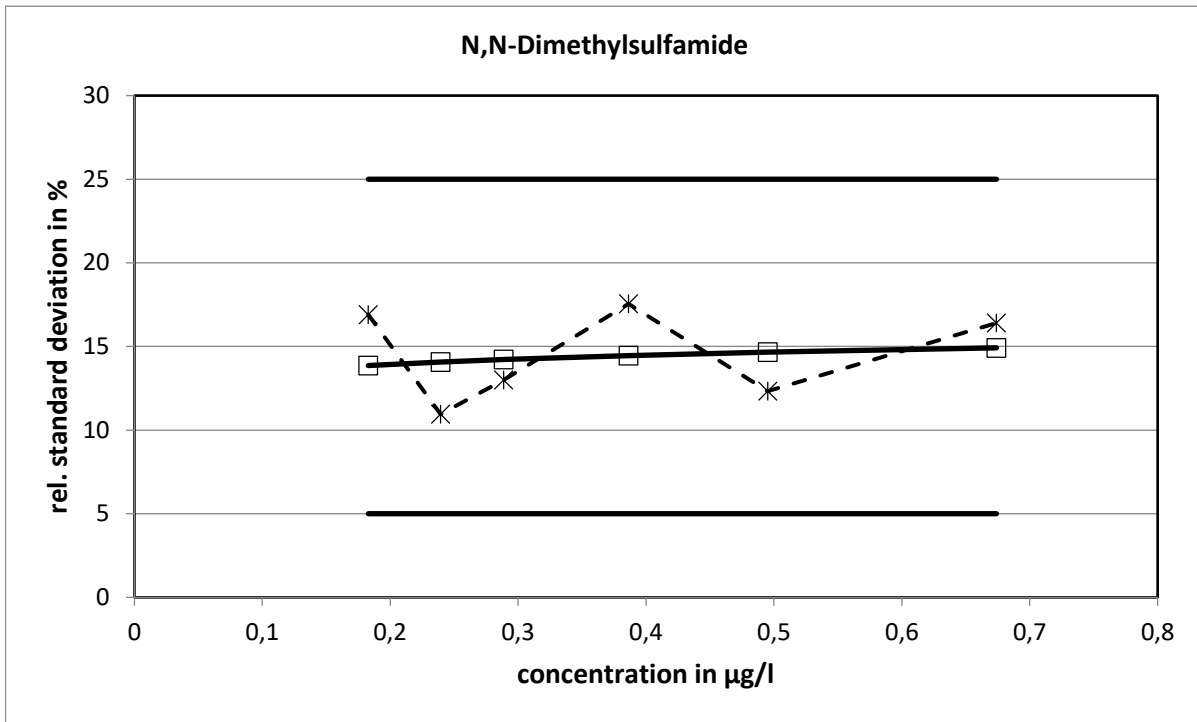


slope of the regression: 0,971; recovery rate: 97,1%

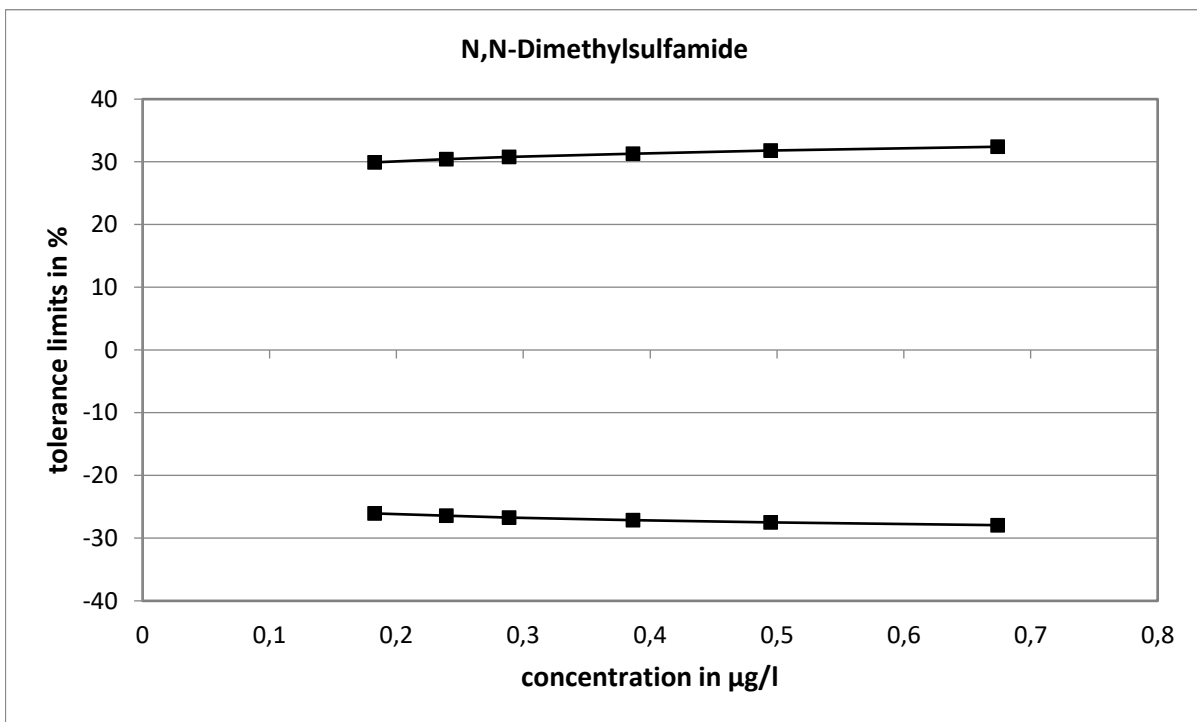
neg. x-axis intercept = matrix content: 0,073 µg/l

expanded uncertainty of the matrix content: 0,024 µg/l = 32,9%

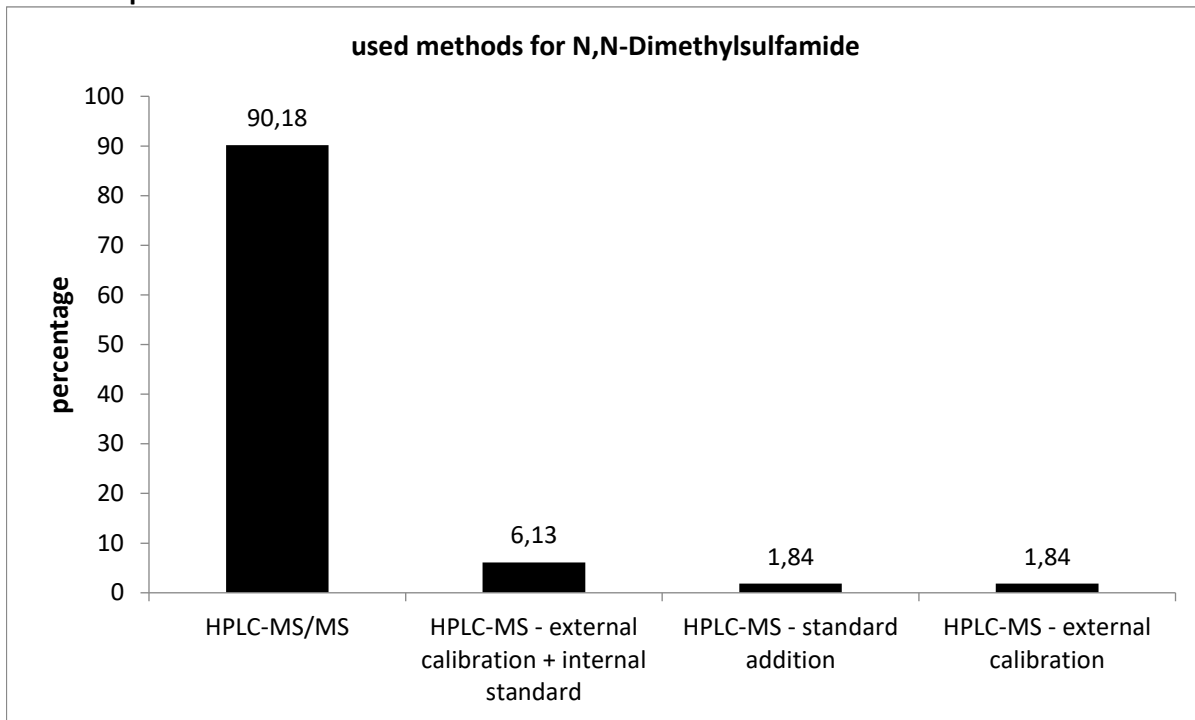
Relative standard deviation and tolerance limits



The relative standard deviations calculated from the variance function did not reach the limits.



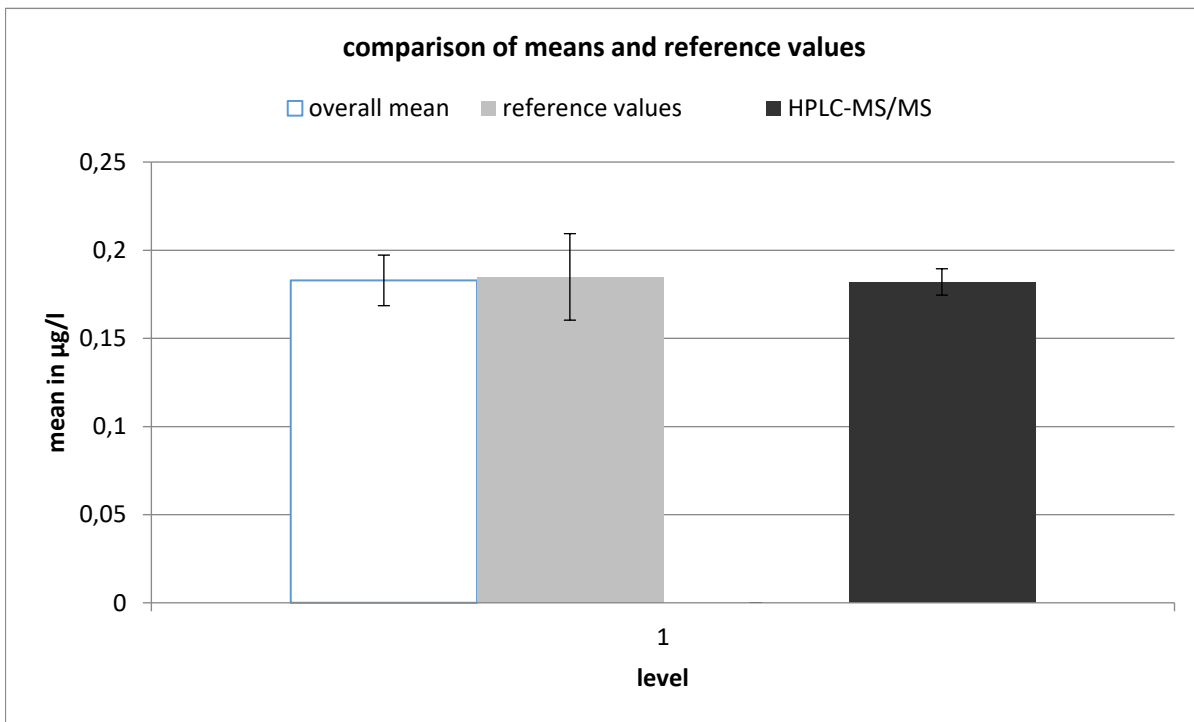
**Method specific evaluation**

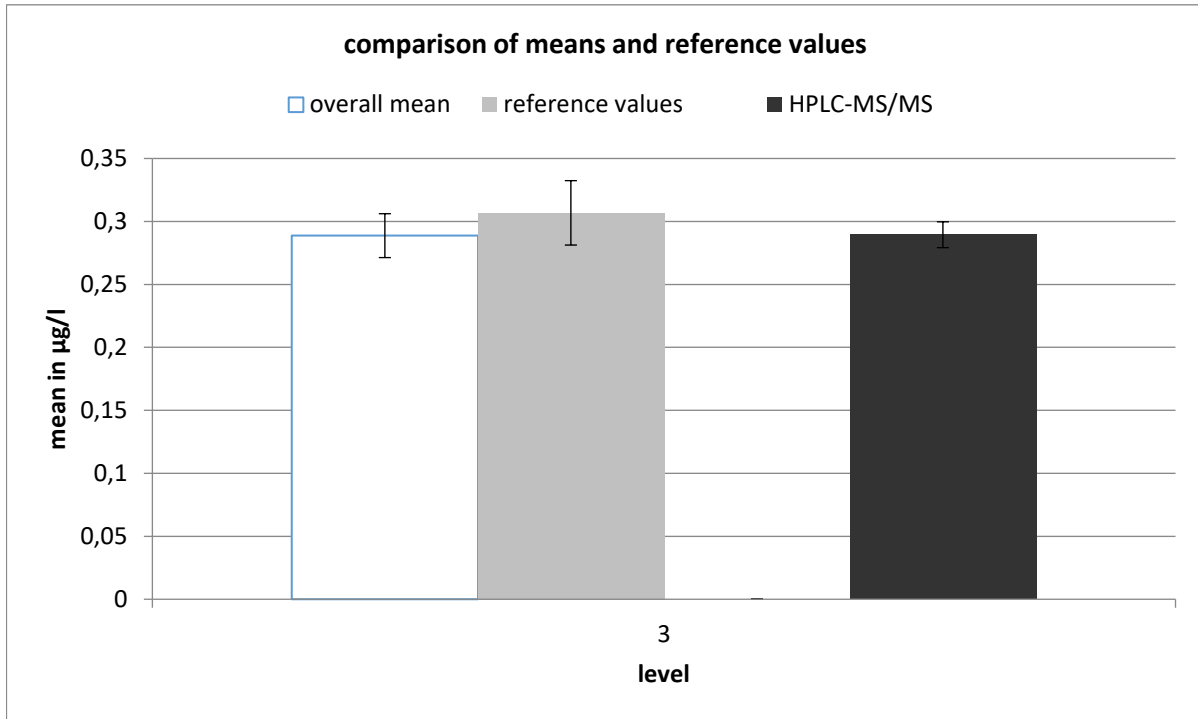
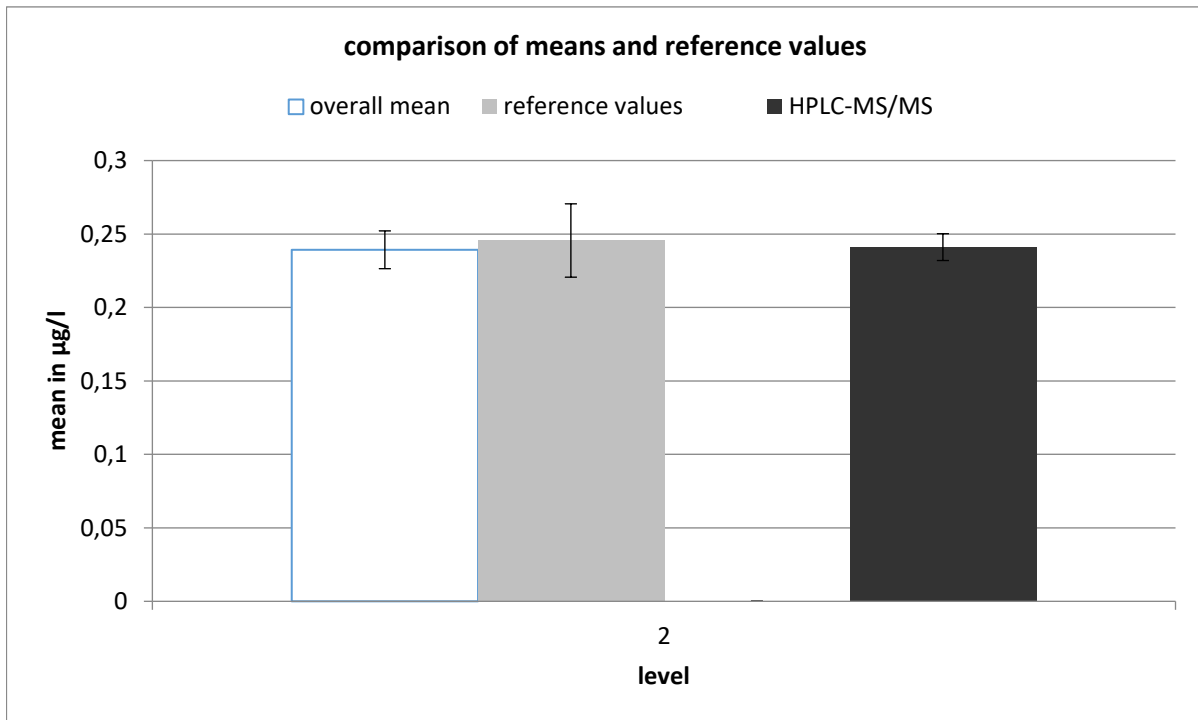


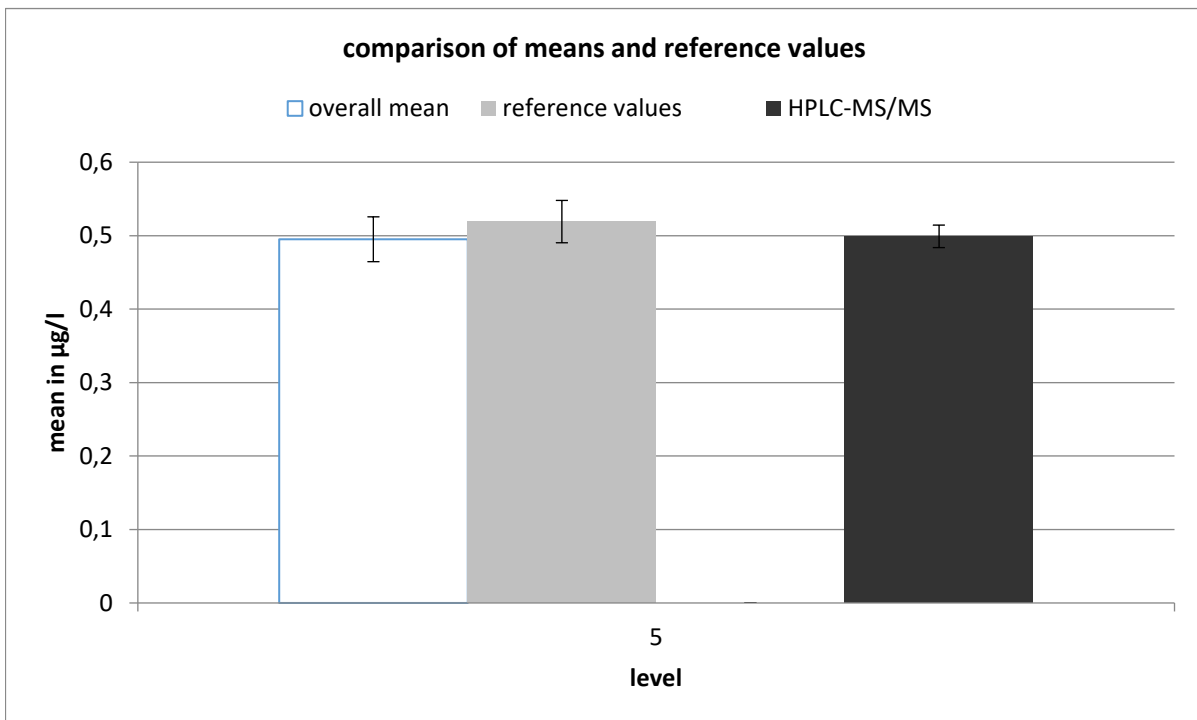
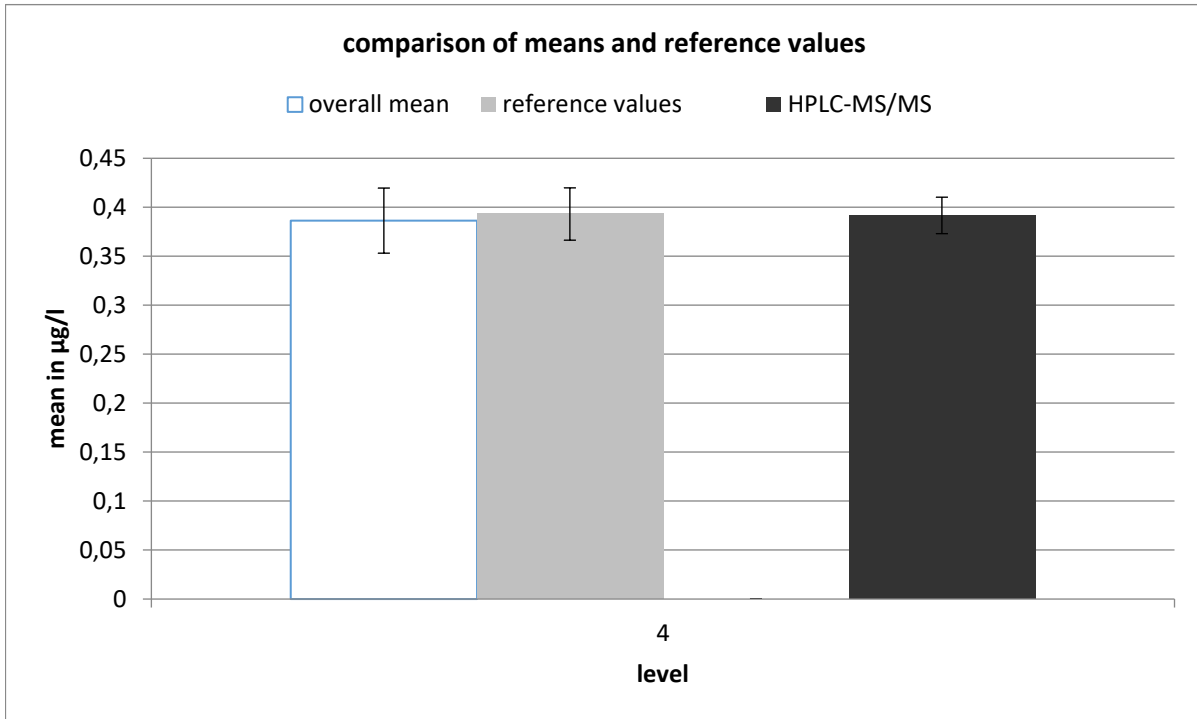
There is no method comparison, because almost all used HPLC-MS/MS.

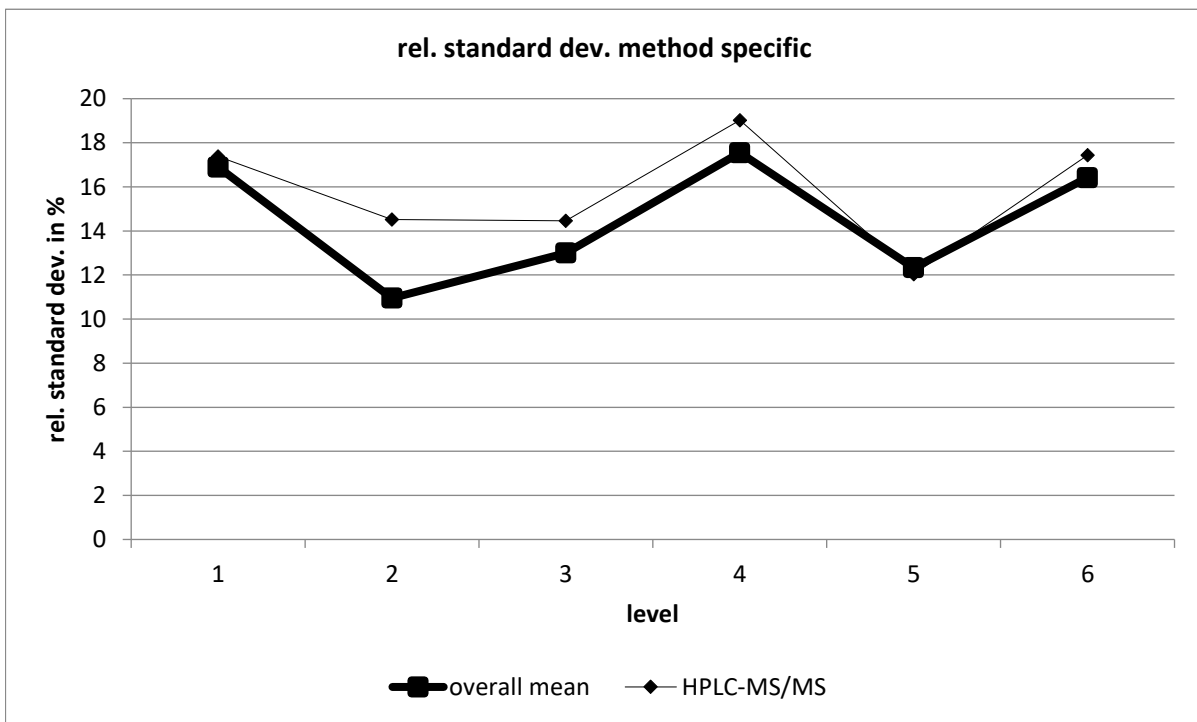
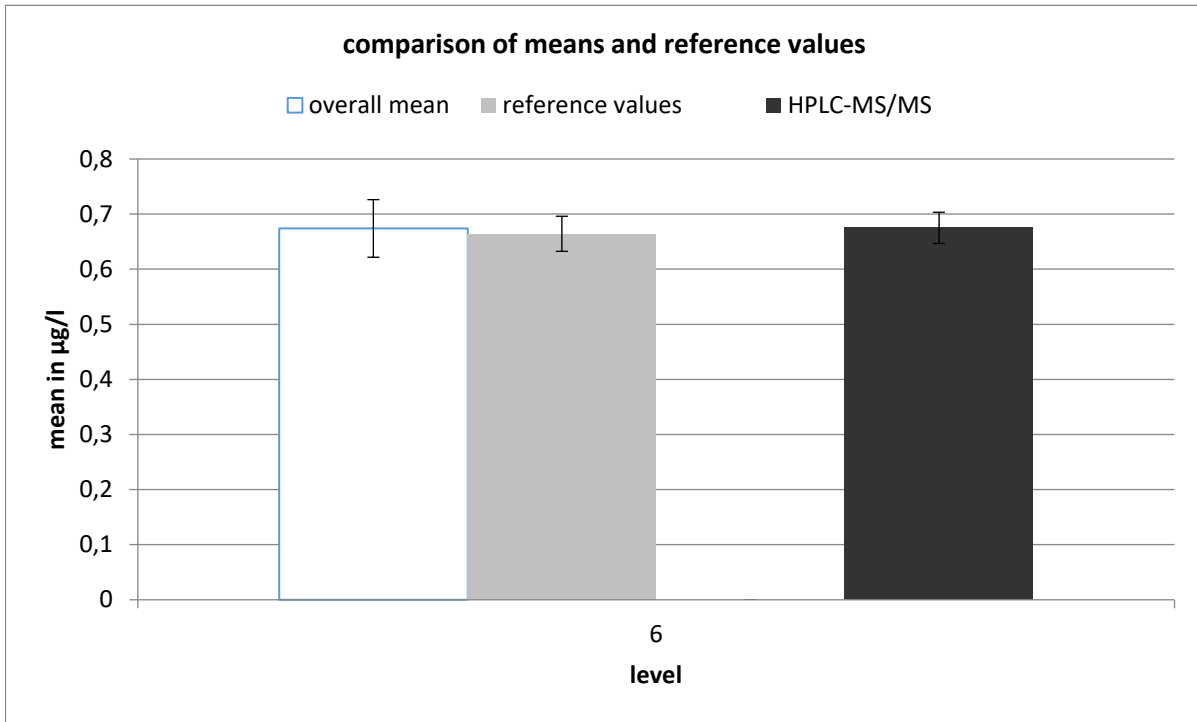
**Comparison of means and reference values**

level	Experimental Data			Reference Data		
	mean [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]	reference value [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]
1	0,1829	0,0143	7,8	0,1849	0,0245	13,3
2	0,2393	0,0128	5,4	0,2456	0,0250	10,2
3	0,2887	0,0174	6,0	0,3068	0,0256	8,3
4	0,3864	0,0332	8,6	0,3931	0,0267	6,8
5	0,4951	0,0305	6,2	0,5191	0,0288	5,6
6	0,6740	0,0523	7,8	0,6643	0,0319	4,8









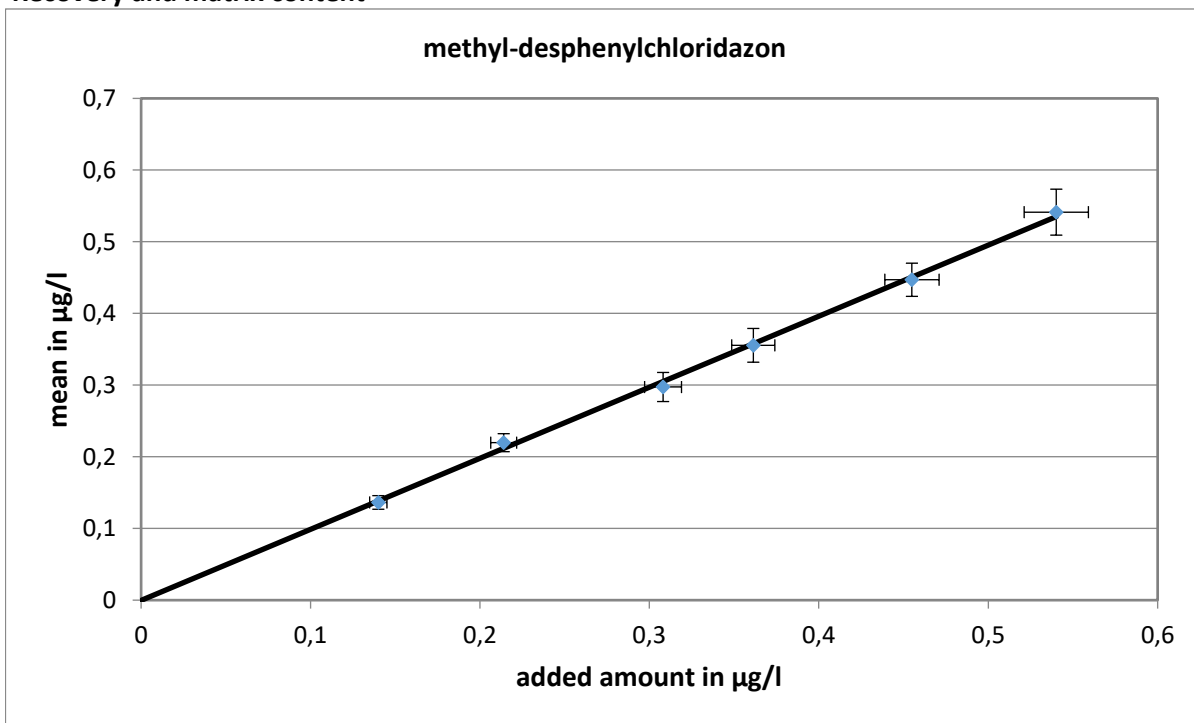
HPLC-MS/MS									
level	robust mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [%]	robust standard deviation [ $\mu\text{g/l}$ ]	robust standard deviation [%]	number of results	out below	out above	out [%]
1	0,182	0,007	4,104	0,032	17,37	28	2	1	10,7
2	0,241	0,009	3,785	0,035	14,52	23	3	0	13
3	0,289	0,01	3,545	0,042	14,46	26	0	2	7,69
4	0,392	0,019	4,756	0,075	19,02	25	1	1	8
5	0,499	0,015	3,071	0,06	12,04	24	3	1	16,7
6	0,675	0,028	4,196	0,118	17,44	27	4	0	14,8



# methyl-desphenylchloridazon

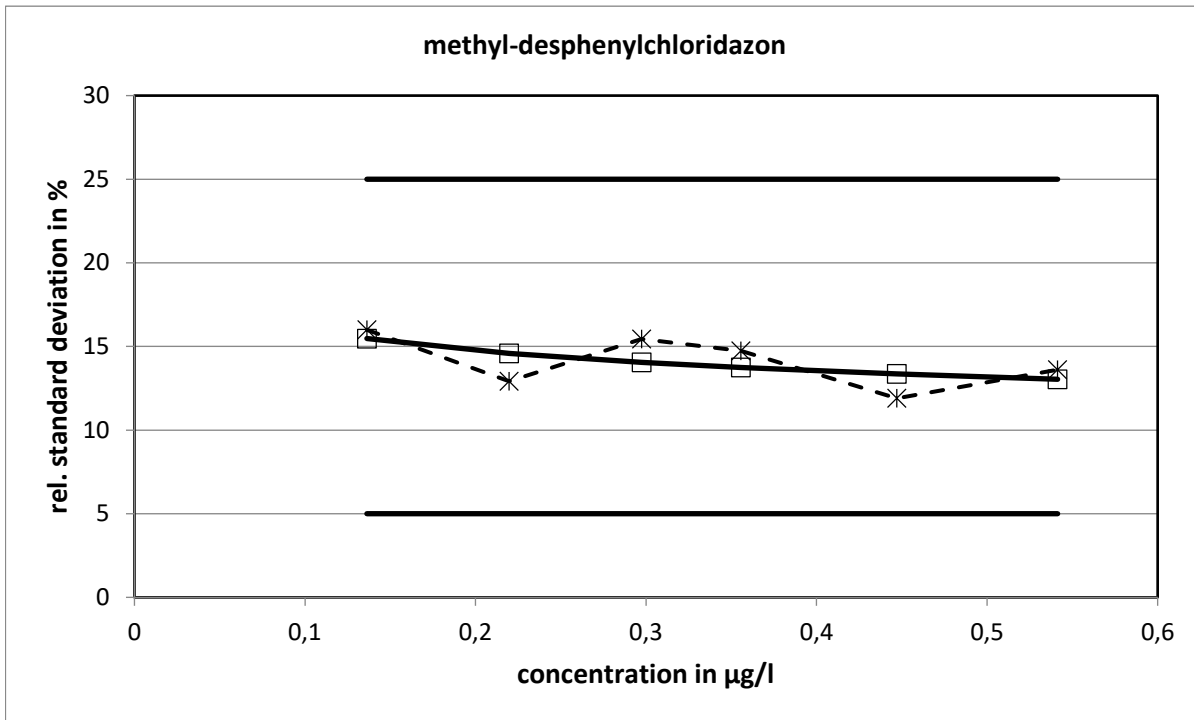
level	assigned value [µg/l]	expanded uncertainty of the assigned value [%]	standard deviation, calculated using robust statistics [µg/l]	standard deviation from variance function [µg/l]	standard deviation for proficiency assessment [µg/l]	standard deviation for proficiency assessment [%]	upper tolerance limit [µg/l]	lower tolerance limit [µg/l]	upper tolerance limit [%]	lower tolerance limit [%]	number of results	out below	out above	out [%]
1	0,1363	6,96	0,0218	0,0211	0,0211	15,47	0,1823	0,0969	33,73	-28,91	33	1	2	9,1
2	0,2197	5,71	0,0284	0,0320	0,0320	14,58	0,2891	0,1596	31,62	-27,34	32	0	0	0,0
3	0,2974	6,82	0,0459	0,0418	0,0418	14,05	0,3876	0,2189	30,35	-26,39	32	1	0	3,1
4	0,3555	6,62	0,0524	0,0488	0,0488	13,74	0,4609	0,2637	29,63	-25,84	31	2	2	12,9
5	0,4470	5,18	0,0532	0,0597	0,0597	13,35	0,5754	0,3346	28,74	-25,15	33	1	1	6,1
6	0,5413	5,92	0,0736	0,0706	0,0706	13,04	0,6930	0,4082	28,01	-24,59	33	1	1	6,1
sum											194	6	6	6,2

### Recovery and matrix content

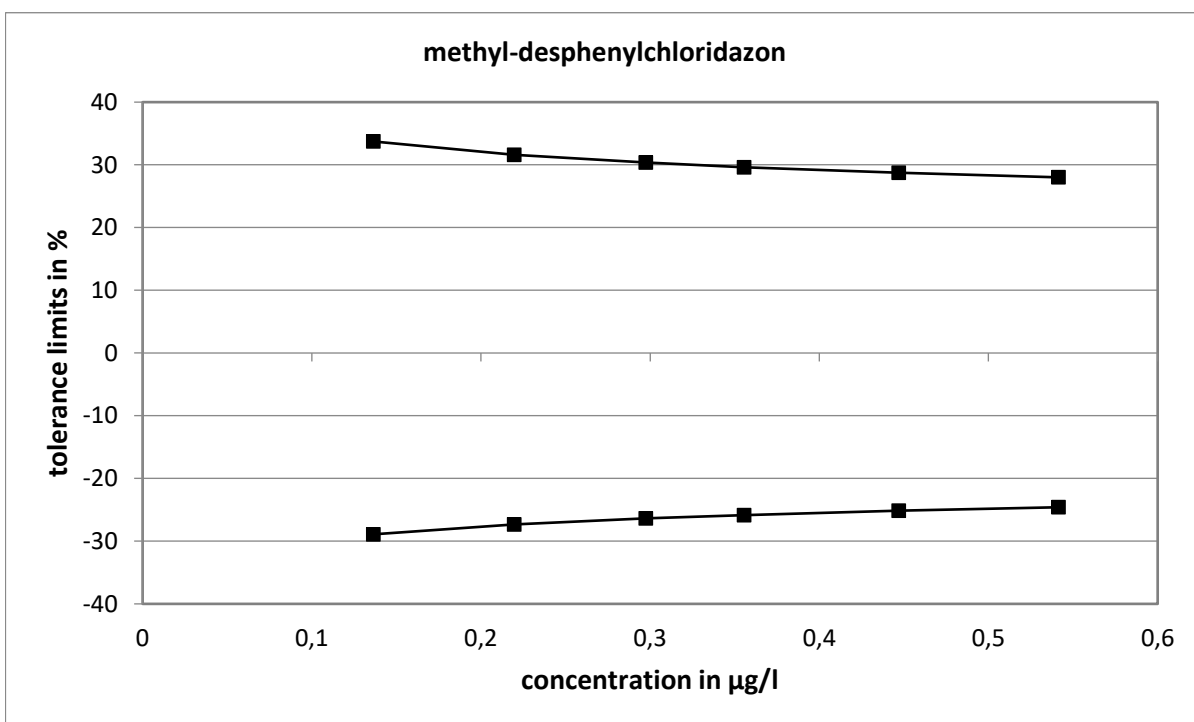


slope of the regression: 0,991; recovery rate: 99,1%  
 neg. x-axis intercept = matrix content: 0 µg/l  
 expanded uncertainty of the matrix content: 0,00033 µg/l = 0%

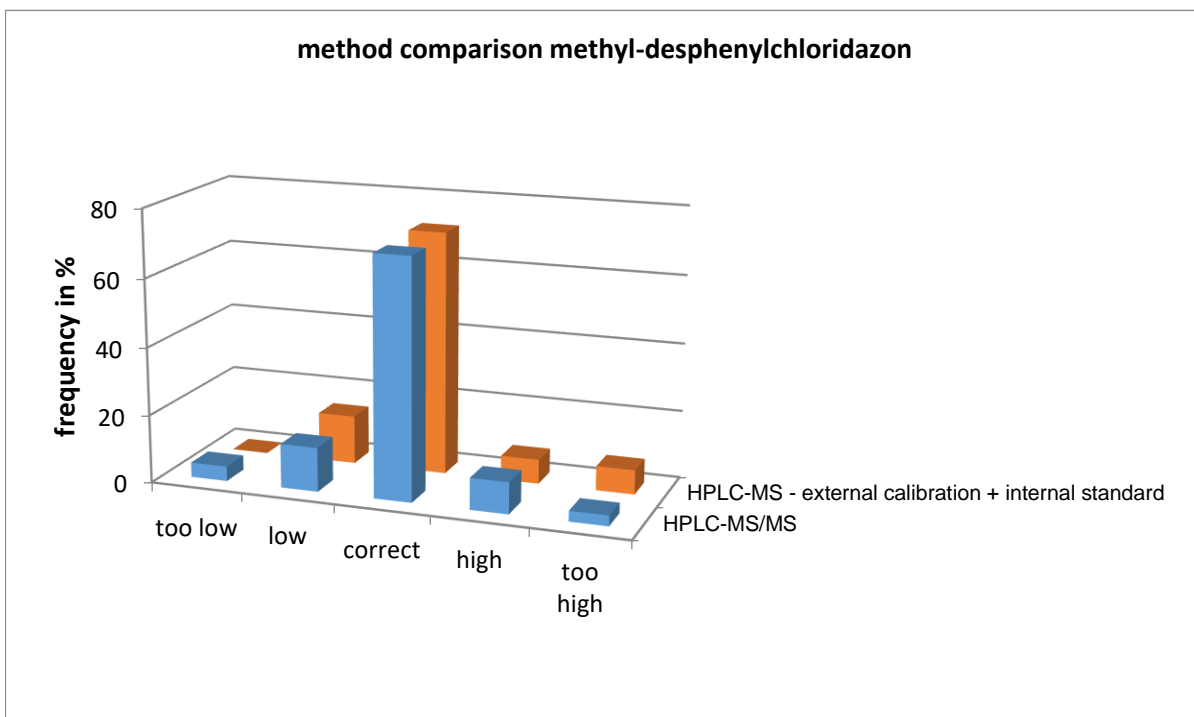
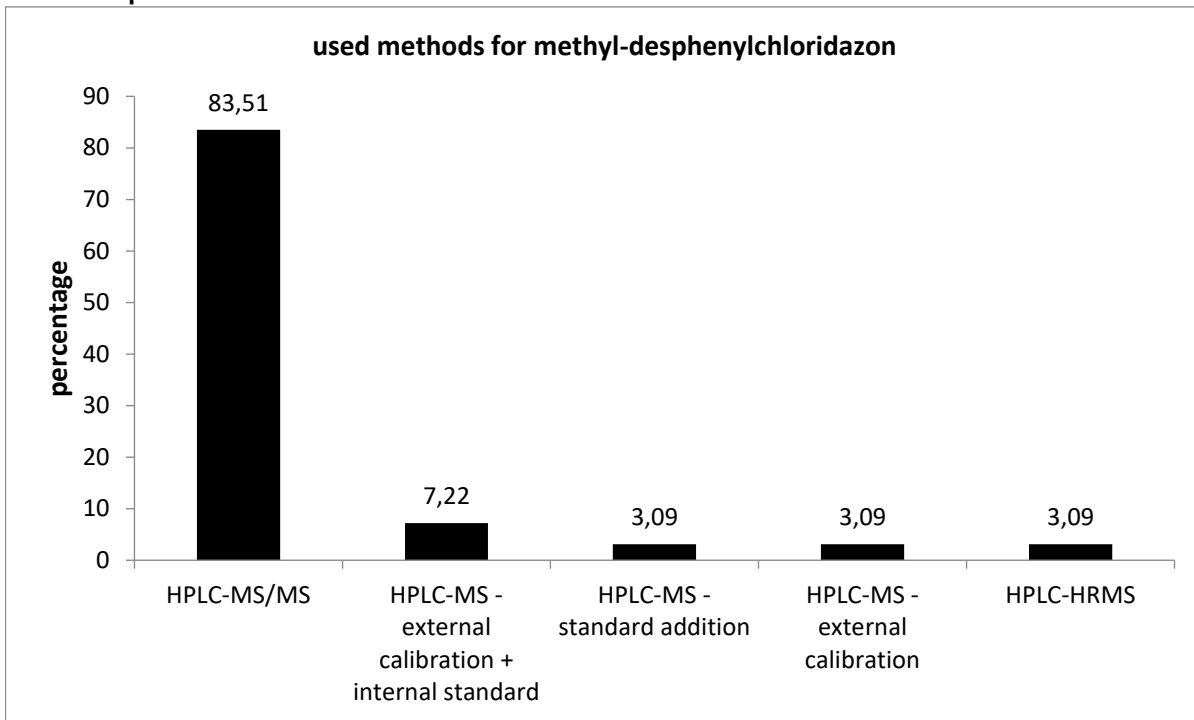
**Relative standard deviation and tolerance limits**



The relative standard deviations calculated from the variance function did not reach the limits.



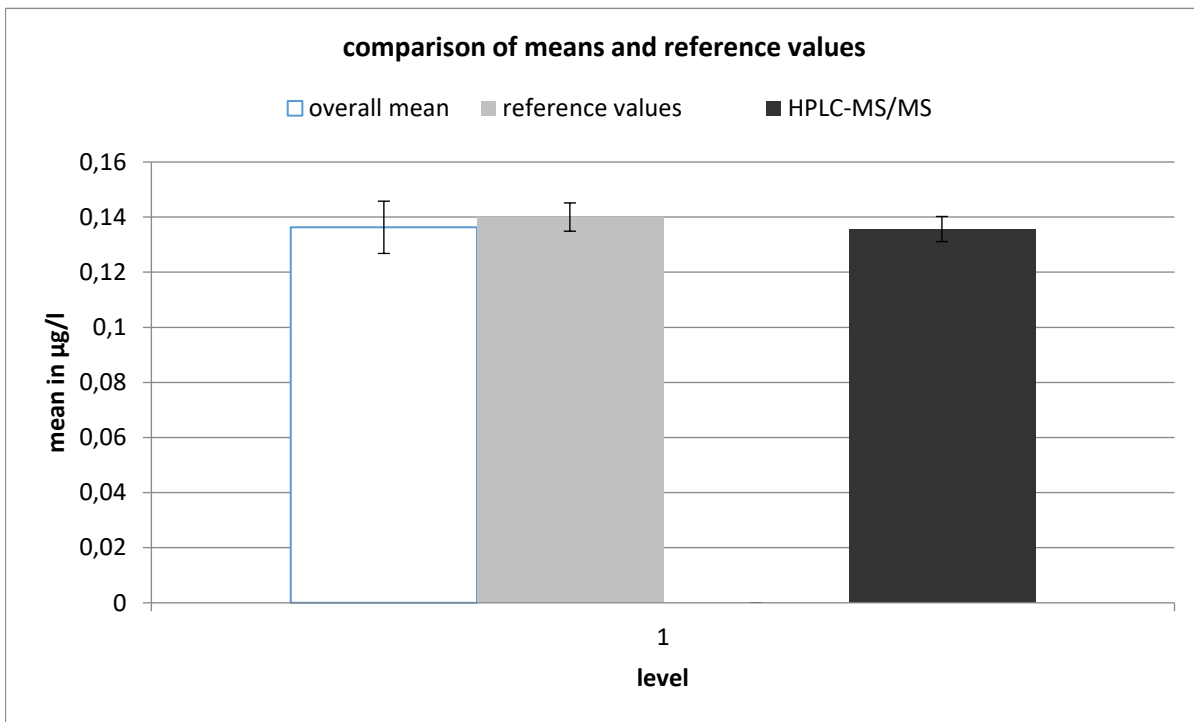
**Method specific evaluation**

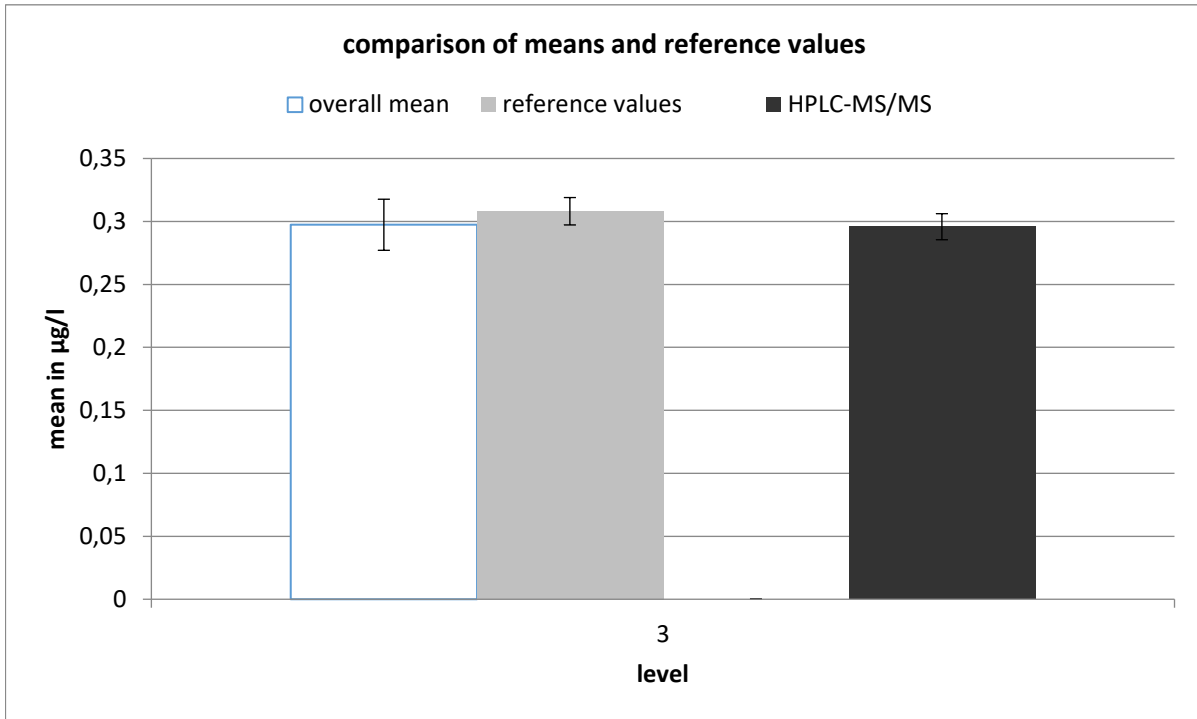
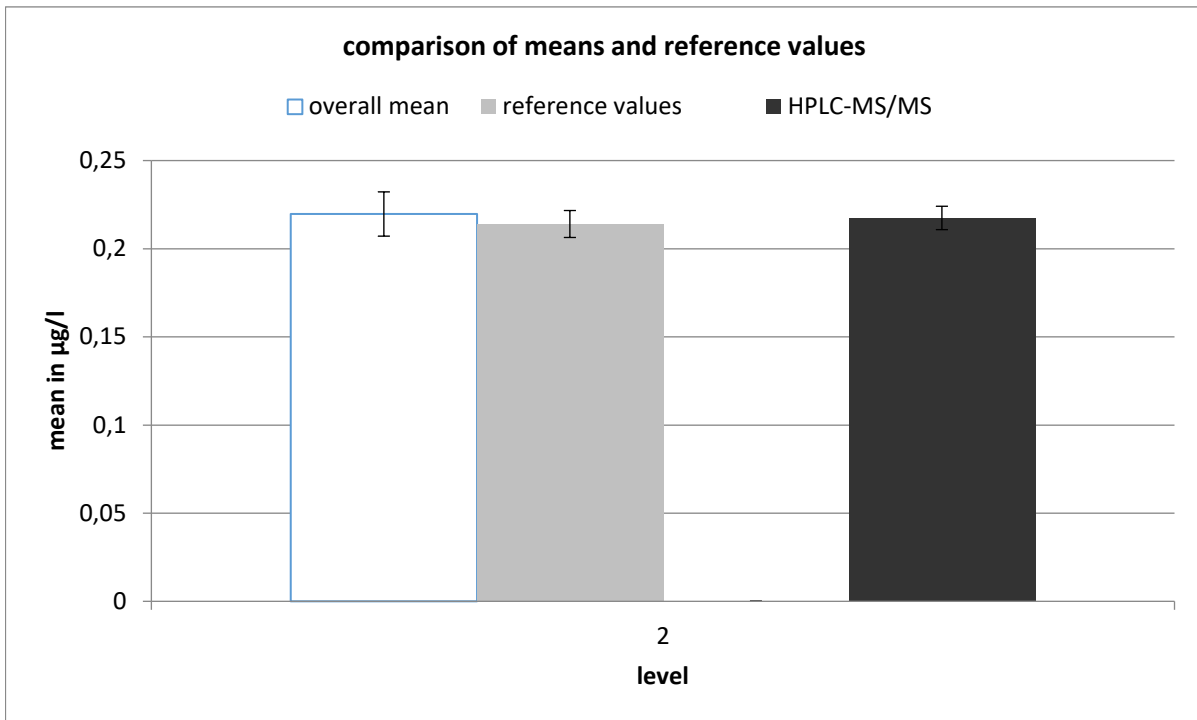


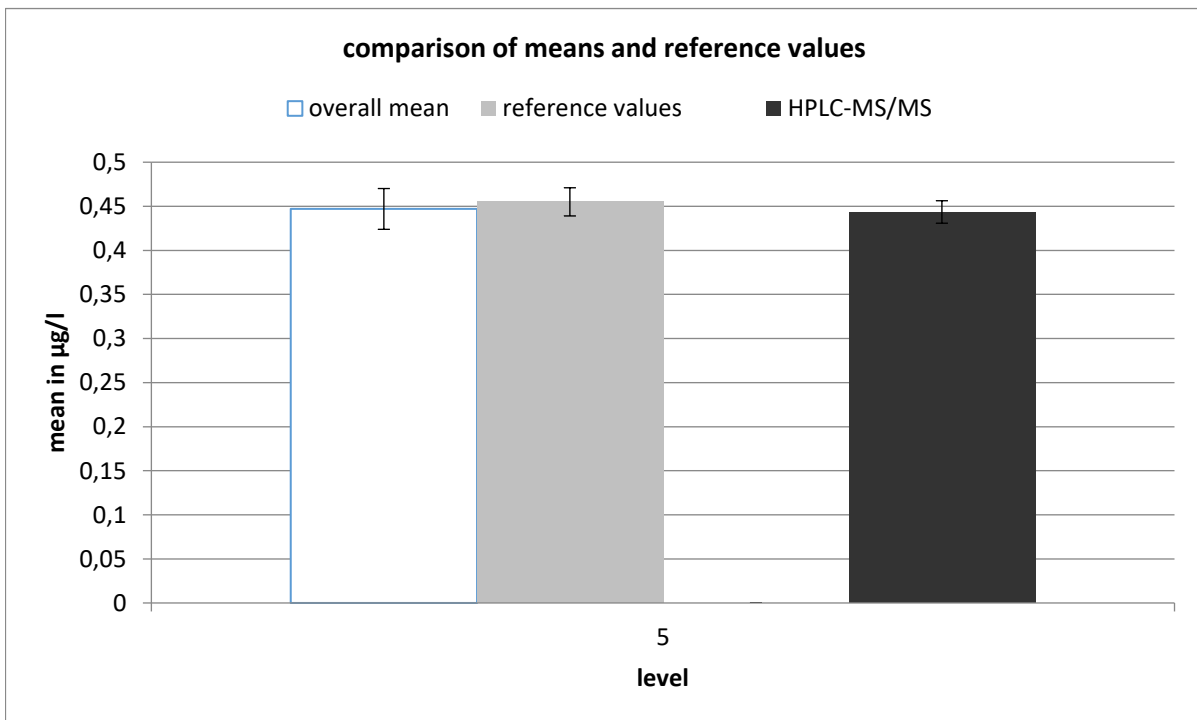
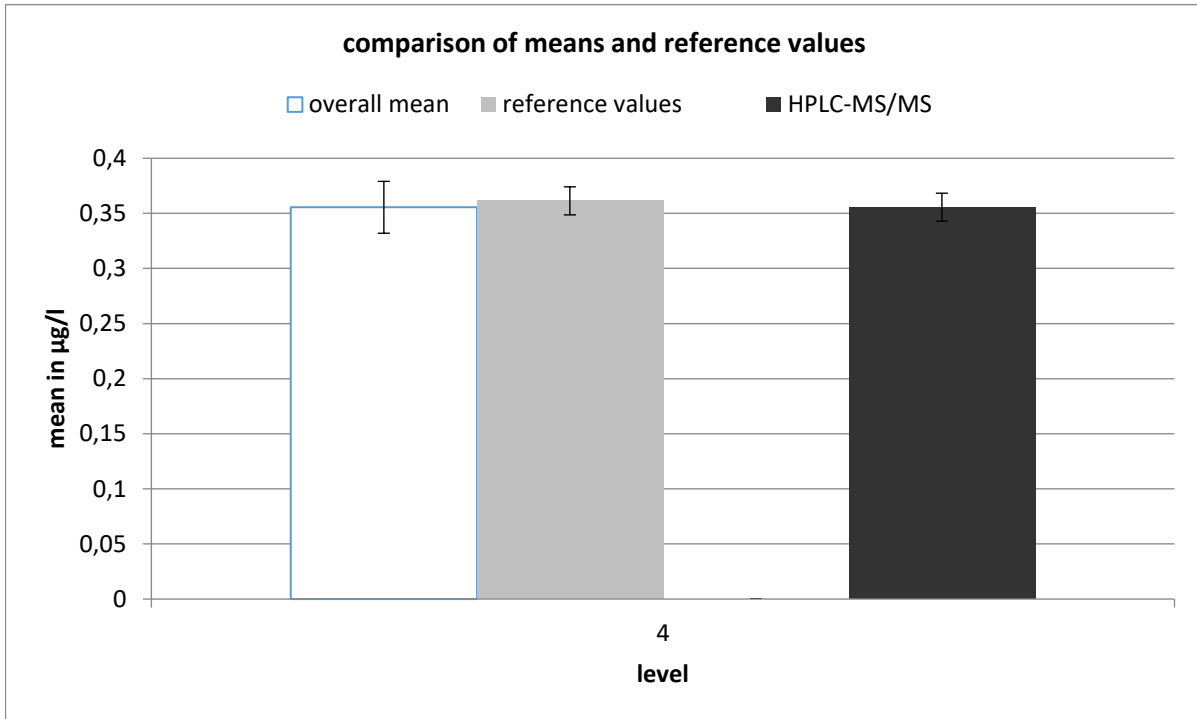
The differences between the methods were not significant.

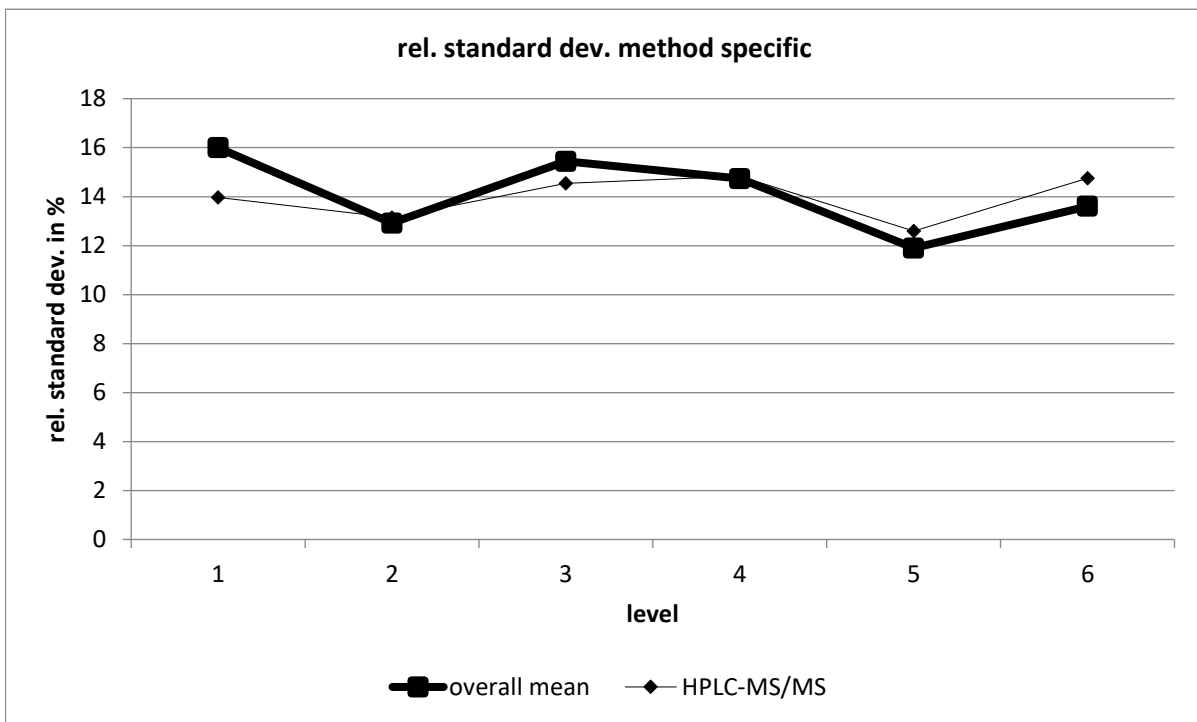
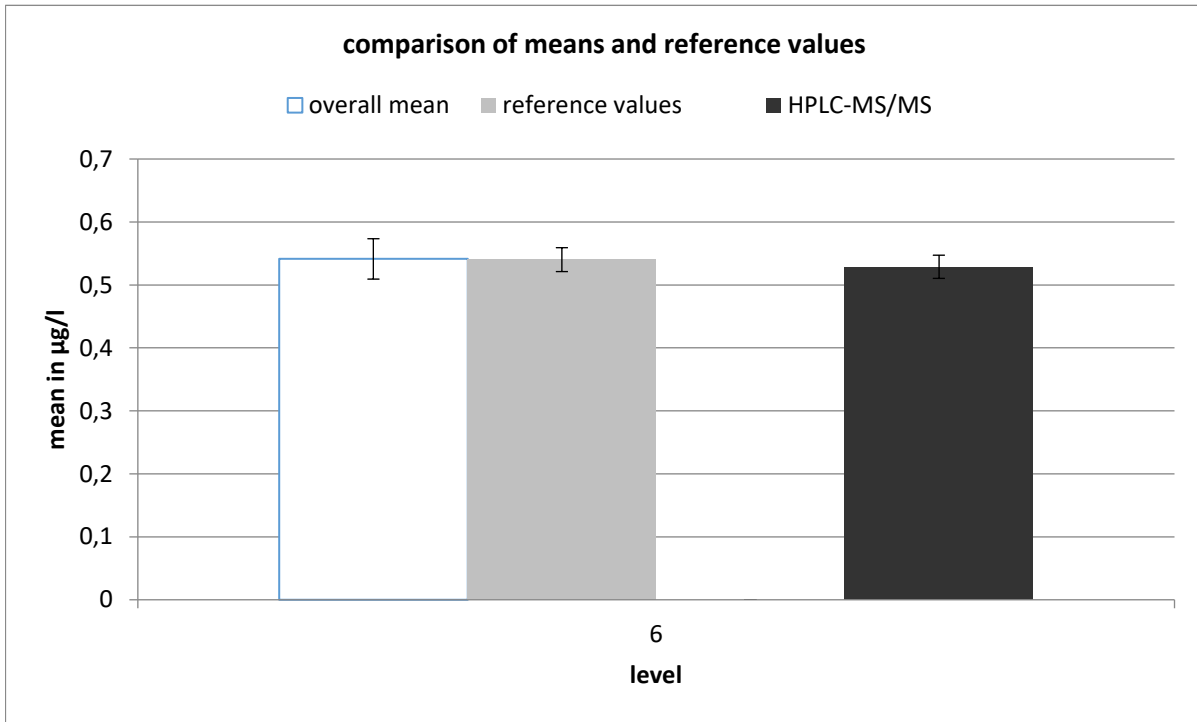
**Comparison of means and reference values**

level	Experimental Data			Reference Data		
	mean [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]	reference value [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]
1	0,1363	0,0095	7,0	0,1400	0,0051	3,7
2	0,2197	0,0125	5,7	0,2140	0,0077	3,6
3	0,2974	0,0203	6,8	0,3081	0,0109	3,5
4	0,3555	0,0235	6,6	0,3613	0,0127	3,5
5	0,4470	0,0231	5,2	0,4550	0,0160	3,5
6	0,5413	0,0320	5,9	0,5402	0,0190	3,5









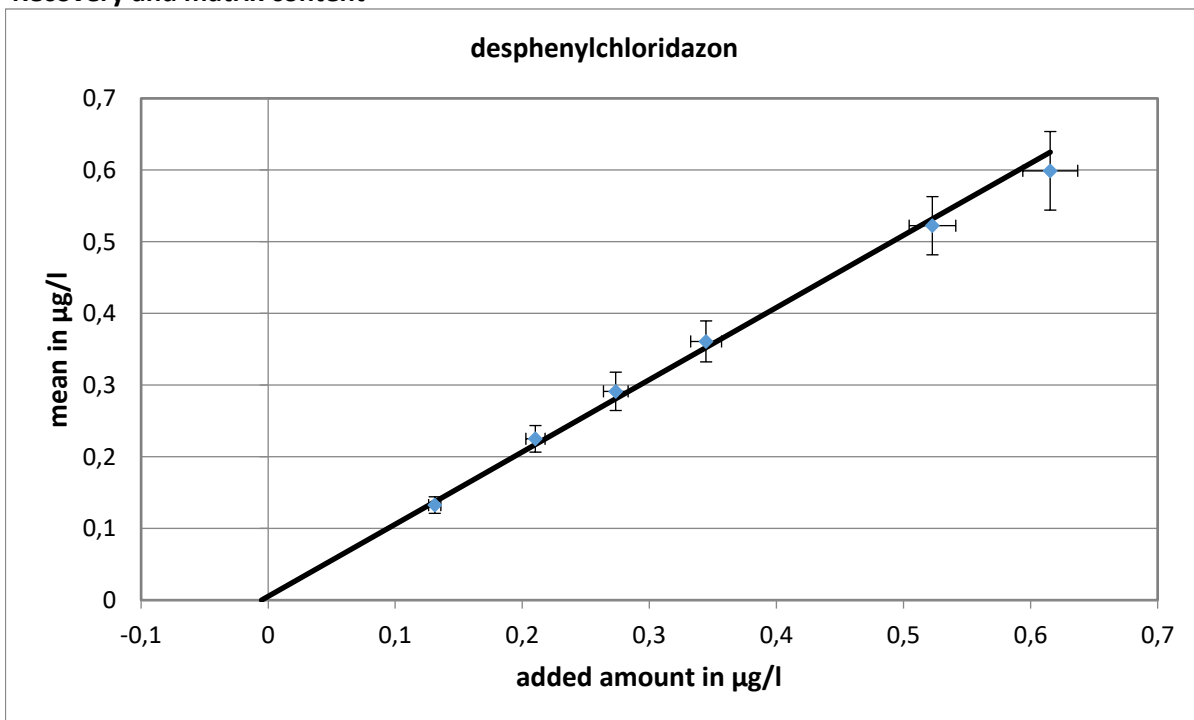
HPLC-MS/MS									
level	robust mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [%]	robust standard deviation [ $\mu\text{g/l}$ ]	robust standard deviation [%]	number of results	out below	out above	out [%]
1	0,136	0,005	3,36	0,019	13,97	27	1	1	7,41
2	0,217	0,007	3,05	0,029	13,14	29	1	0	3,45
3	0,296	0,01	3,497	0,043	14,54	27	1	0	3,7
4	0,356	0,013	3,568	0,053	14,83	27	2	2	14,8
5	0,444	0,013	2,874	0,056	12,59	30	2	1	10
6	0,529	0,018	3,484	0,078	14,75	28	2	1	10,7



# desphenylchloridazon

level	assigned value [µg/l]	expanded uncertainty of the assigned value [%]	standard deviation, calculated using robust statistics [µg/l]	standard deviation from variance function [µg/l]	standard deviation for proficiency assessment [µg/l]	standard deviation for proficiency assessment [%]	upper tolerance limit [µg/l]	lower tolerance limit [µg/l]	upper tolerance limit [%]	lower tolerance limit [%]	number of results	out below	out above	out [%]
1	0,1326	8,69	0,0257	0,0257	0,0257	19,41	0,1902	0,0852	43,37	-35,74	31	1	3	12,9
2	0,2251	8,23	0,0419	0,0430	0,0430	19,11	0,3210	0,1458	42,62	-35,23	32	0	3	9,4
3	0,2913	9,19	0,0606	0,0553	0,0553	18,97	0,4144	0,1894	42,26	-34,98	32	1	3	12,5
4	0,3609	7,92	0,0647	0,0680	0,0680	18,85	0,5124	0,2354	41,96	-34,78	32	0	3	9,4
5	0,5224	7,77	0,0890	0,0974	0,0974	18,64	0,7389	0,3425	41,45	-34,42	30	2	3	16,1
6	0,5990	9,15	0,1201	0,1112	0,1112	18,57	0,8462	0,3936	41,27	-34,29	30	1	2	10,0
sum											187	5	17	11,8

## Recovery and matrix content

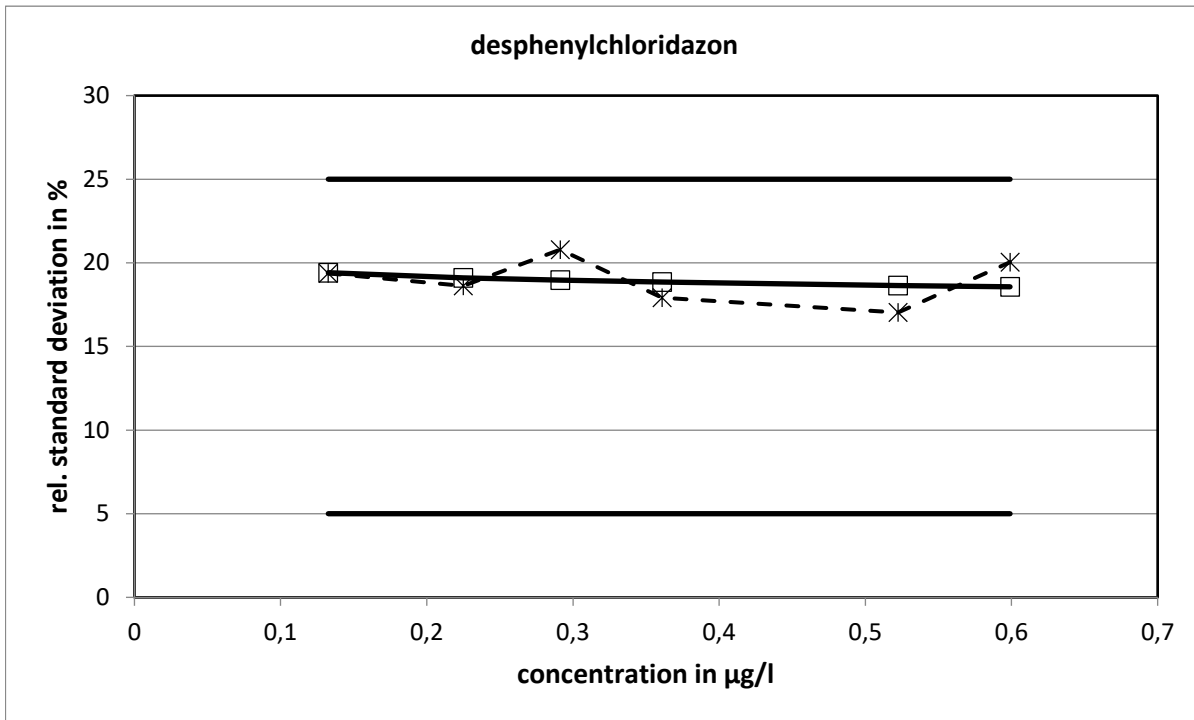


slope of the regression: 1,007; recovery rate: 100,7%

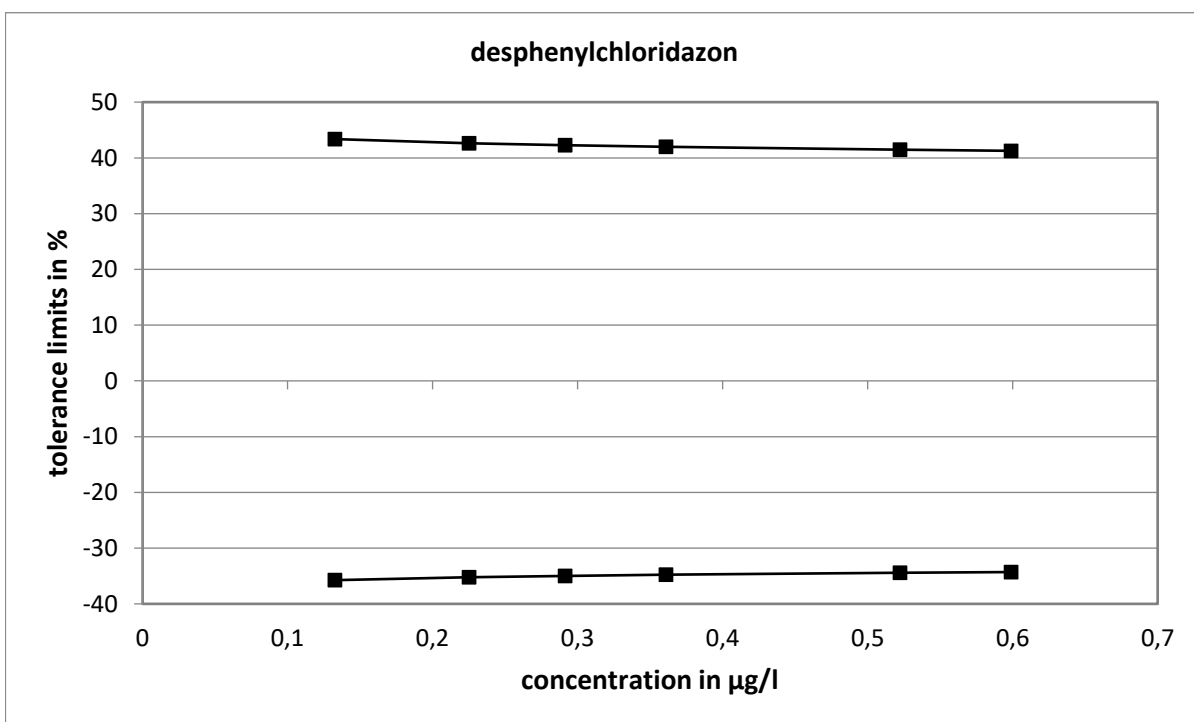
neg. x-axis intercept = matrix content: 0,0053 µg/l

expanded uncertainty of the matrix content: 0,0053 µg/l = 100%

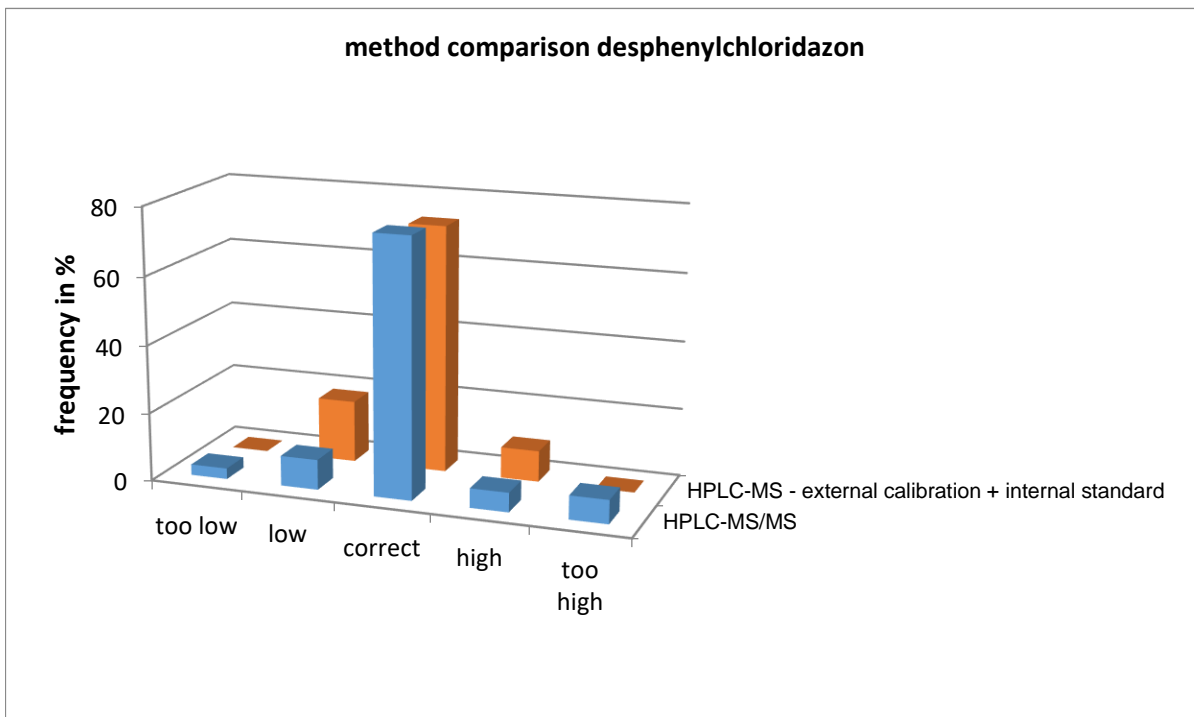
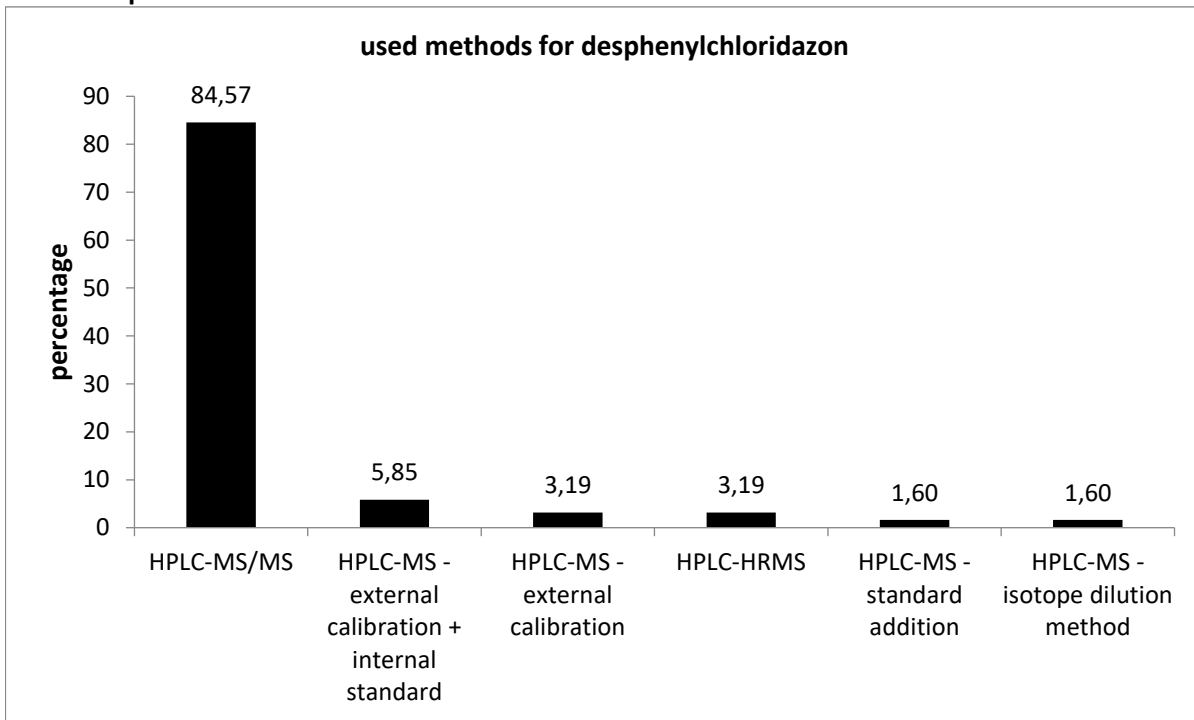
Relative standard deviation and tolerance limits



The relative standard deviations calculated from the variance function did not reach the limits.



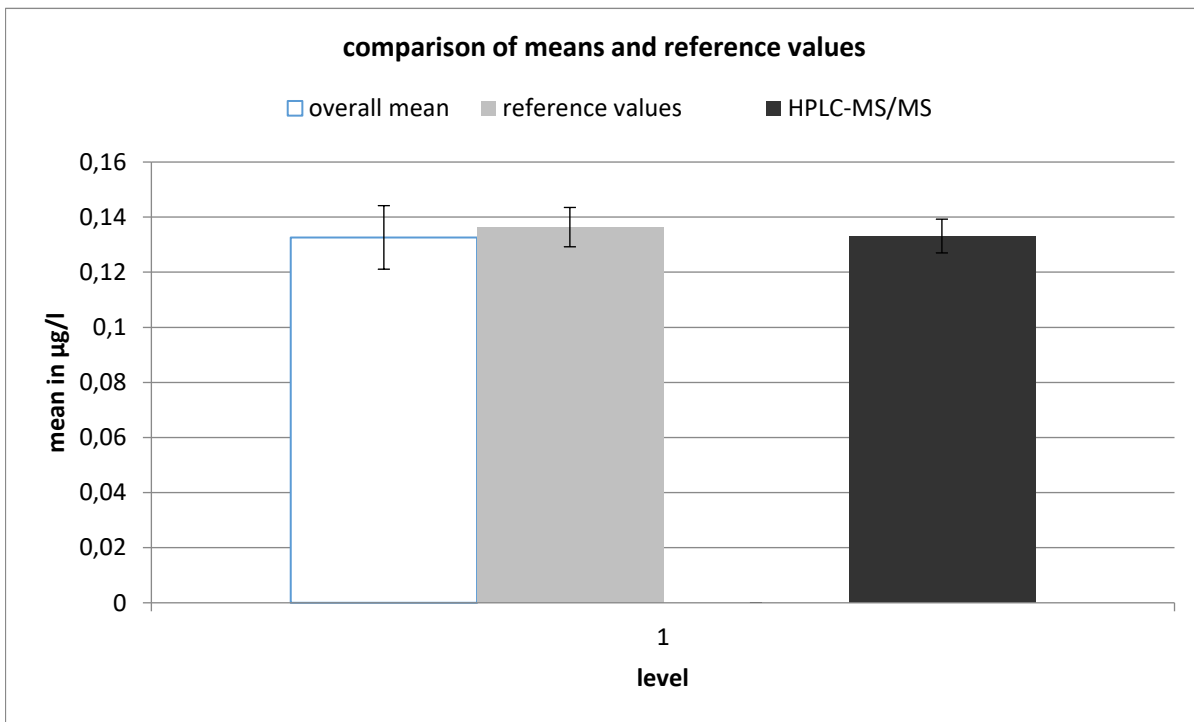
**Method specific evaluation**

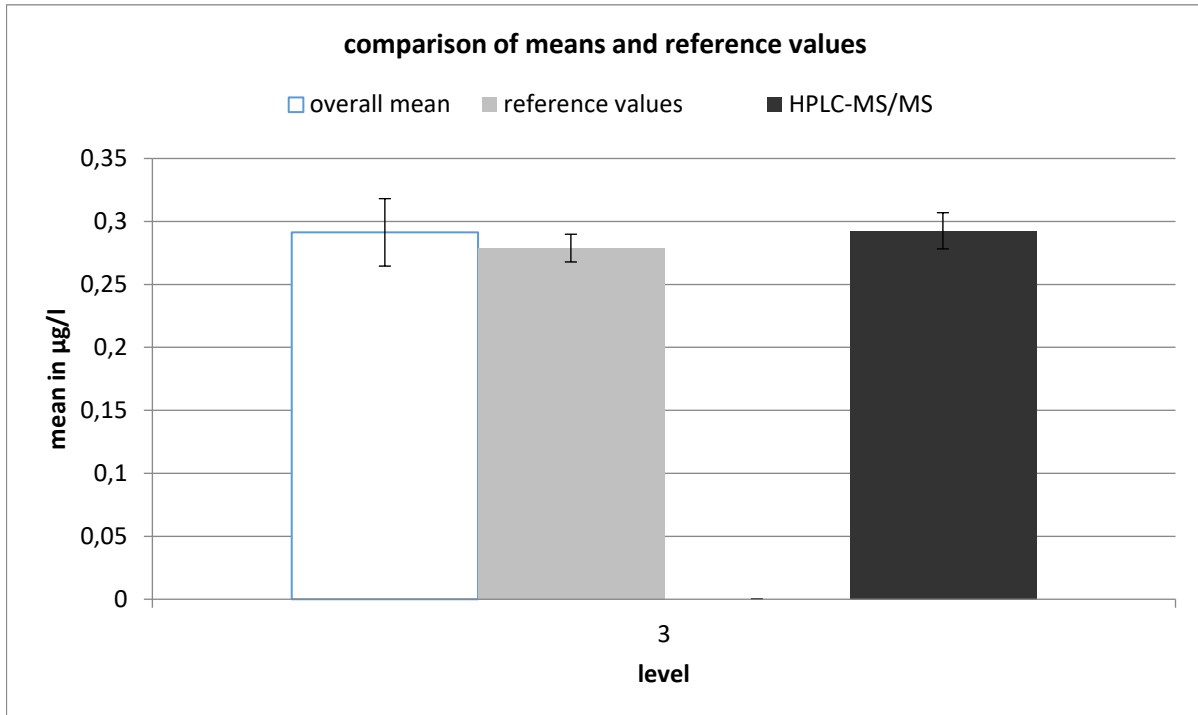
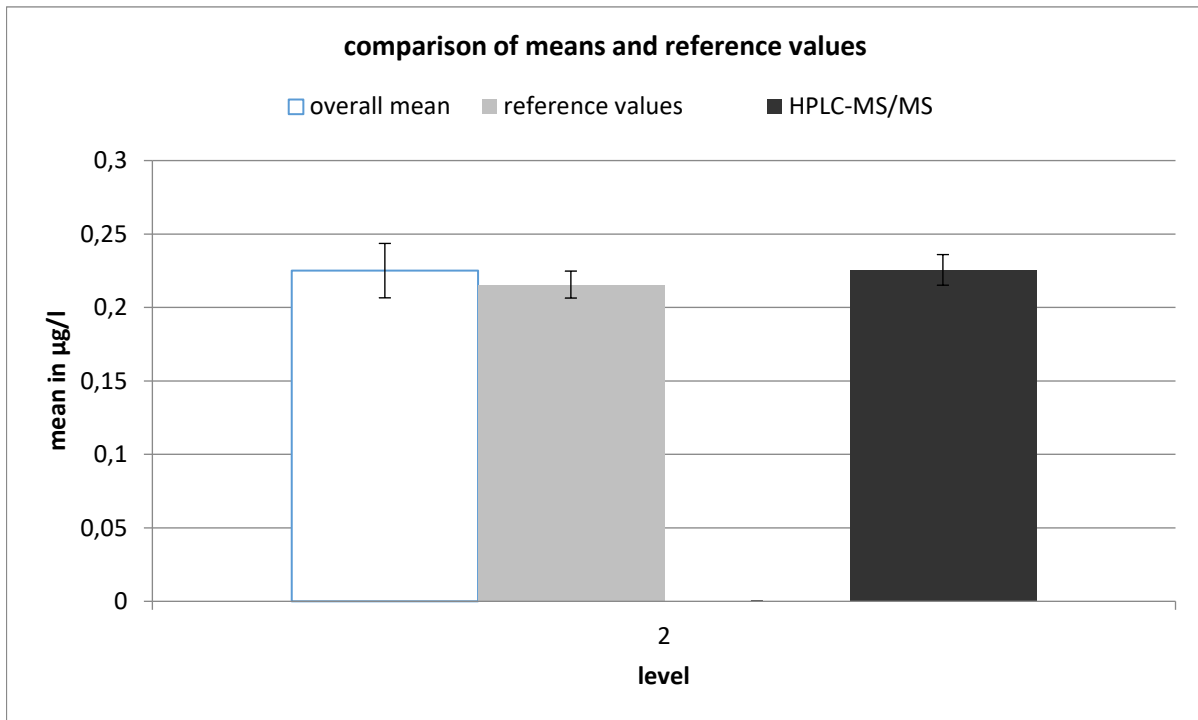


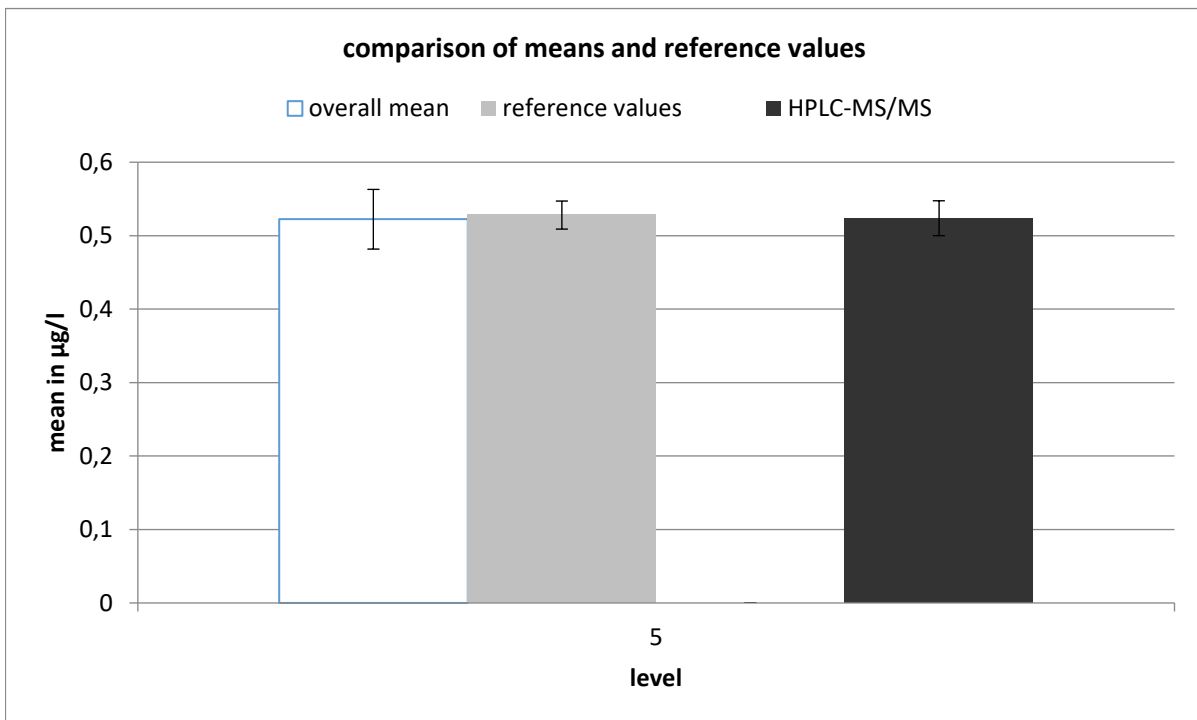
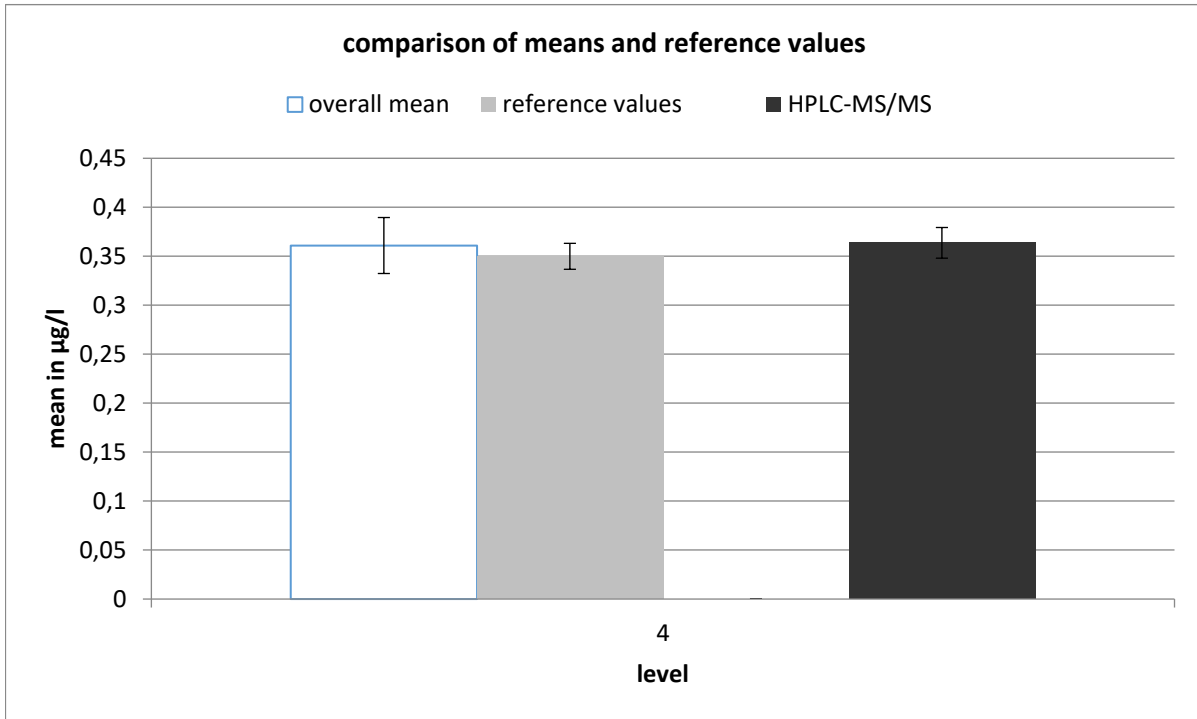
The differences between the methods were not significant.

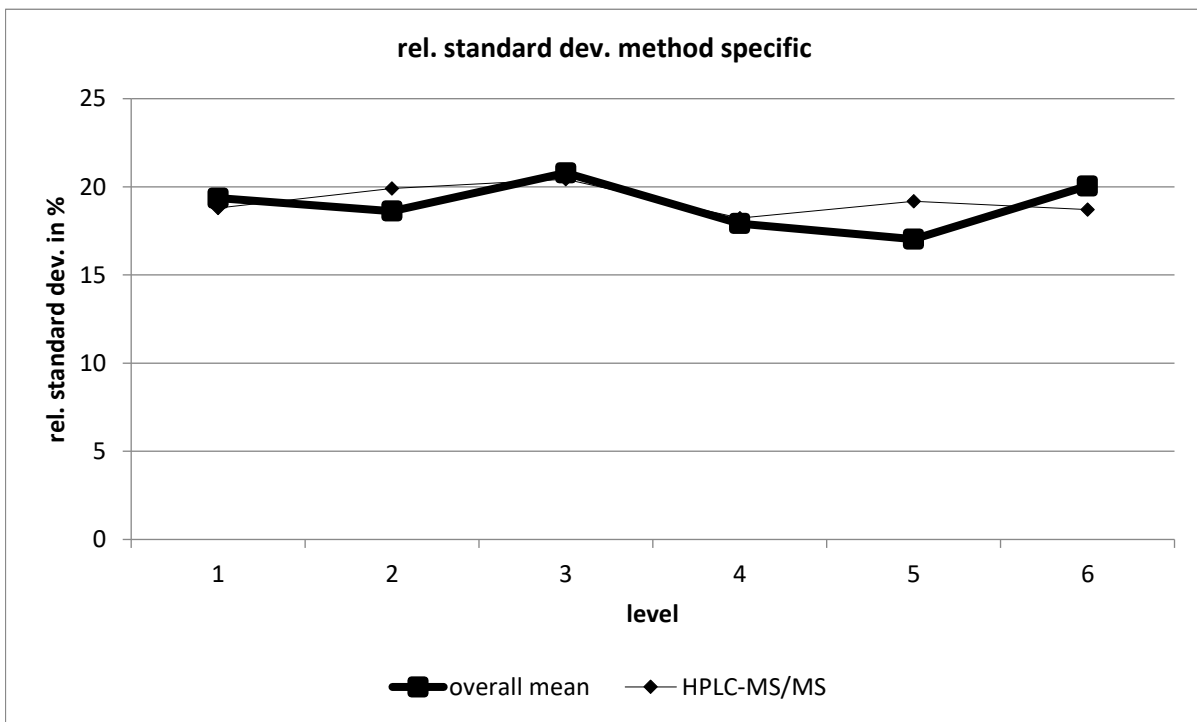
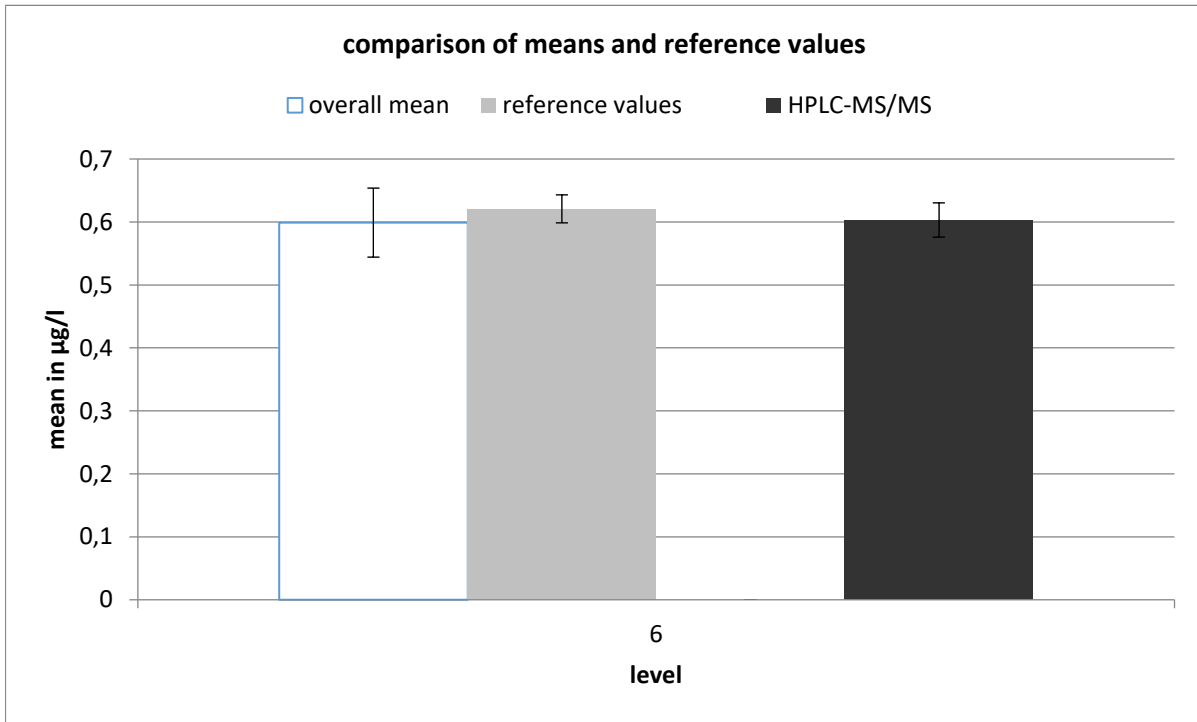
**Comparison of means and reference values**

level	Experimental Data			Reference Data		
	mean [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]	reference value [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]
1	0,1326	0,0115	8,7	0,1364	0,0071	5,2
2	0,2251	0,0185	8,2	0,2156	0,0092	4,3
3	0,2913	0,0268	9,2	0,2788	0,0110	4,0
4	0,3609	0,0286	7,9	0,3499	0,0132	3,8
5	0,5224	0,0406	7,8	0,5281	0,0191	3,6
6	0,5990	0,0548	9,1	0,6208	0,0222	3,6









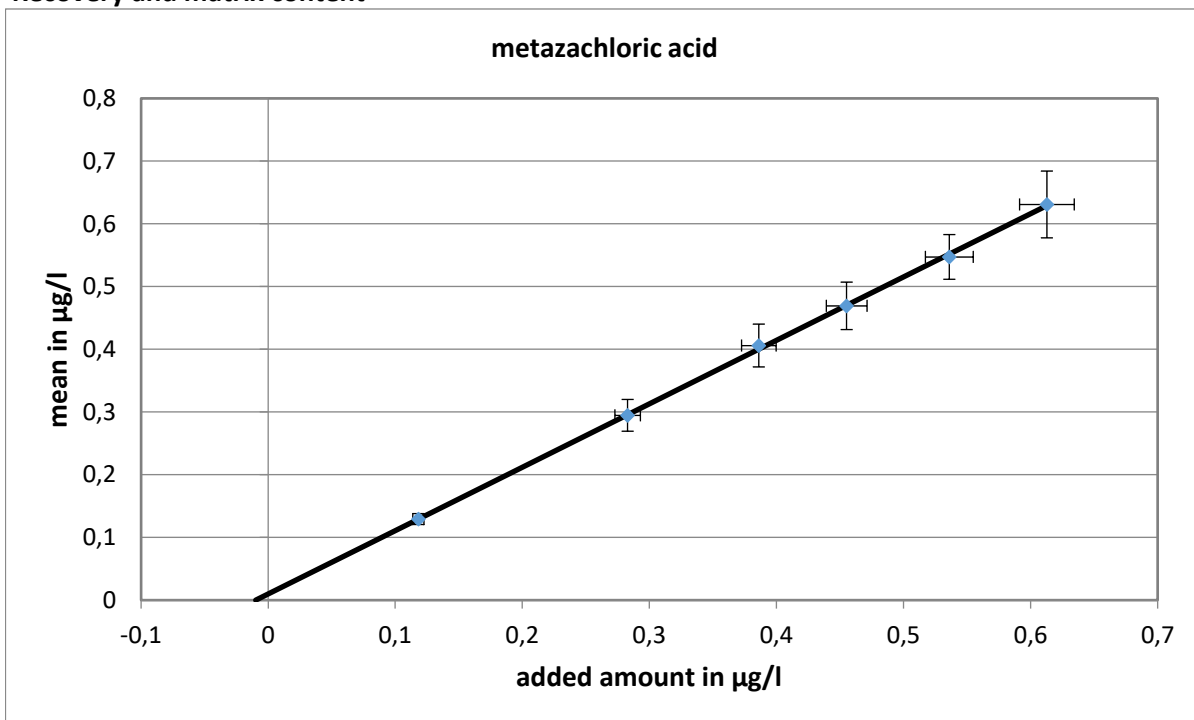
HPLC-MS/MS									
level	robust mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [%]	robust standard deviation [ $\mu\text{g/l}$ ]	robust standard deviation [%]	number of results	out below	out above	out [%]
1	0,133	0,006	4,61	0,025	18,81	26	1	3	15,4
2	0,226	0,01	4,62	0,045	19,9	29	0	2	6,9
3	0,293	0,014	4,915	0,06	20,43	27	1	1	7,41
4	0,364	0,016	4,306	0,066	18,23	28	1	2	10,7
5	0,524	0,024	4,531	0,1	19,18	28	3	2	17,9
6	0,603	0,027	4,501	0,113	18,71	27	1	1	7,41



# metazachloric acid

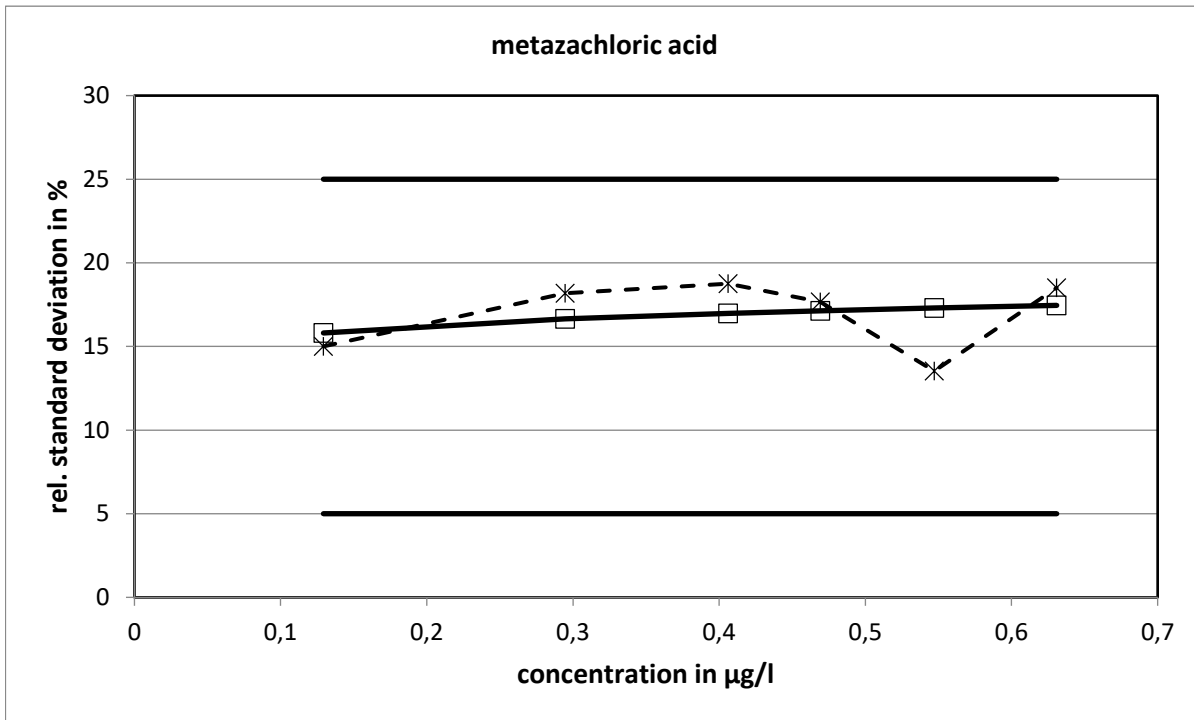
level	assigned value [µg/l]	expanded uncertainty of the assigned value [%]	standard deviation, calculated using robust statistics [µg/l]	standard deviation from variance function [µg/l]	standard deviation for proficiency assessment [µg/l]	standard deviation for proficiency assessment [%]	upper tolerance limit [µg/l]	lower tolerance limit [µg/l]	upper tolerance limit [%]	lower tolerance limit [%]	number of results	out below	out above	out [%]
1	0,1293	6,74	0,0194	0,0204	0,0204	15,81	0,1740	0,0912	34,53	-29,49	31	1	2	9,7
2	0,2947	8,59	0,0536	0,0491	0,0491	16,64	0,4024	0,2035	36,55	-30,96	28	1	1	7,1
3	0,4060	8,42	0,0761	0,0689	0,0689	16,98	0,5577	0,2779	37,37	-31,55	31	1	1	6,5
4	0,4693	8,07	0,0829	0,0804	0,0804	17,14	0,6464	0,3200	37,74	-31,82	30	1	2	10,0
5	0,5473	6,51	0,0741	0,0947	0,0947	17,30	0,7560	0,3716	38,15	-32,11	27	1	1	7,4
6	0,6309	8,45	0,1168	0,1101	0,1101	17,46	0,8740	0,4267	38,53	-32,37	30	1	2	10,0
sum											177	6	9	8,5

### Recovery and matrix content

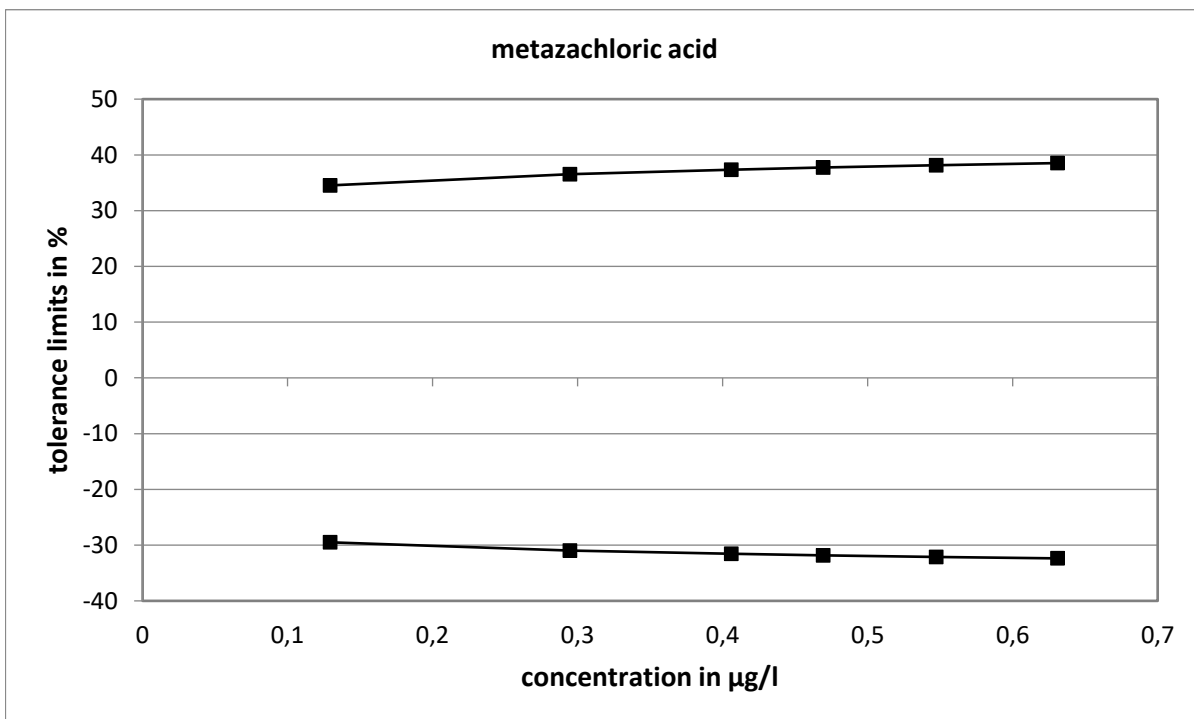


slope of the regression: 1,01; recovery rate: 101%  
 neg. x-axis intercept = matrix content: 0,0098 µg/l  
 expanded uncertainty of the matrix content: 0,0098 µg/l = 100%

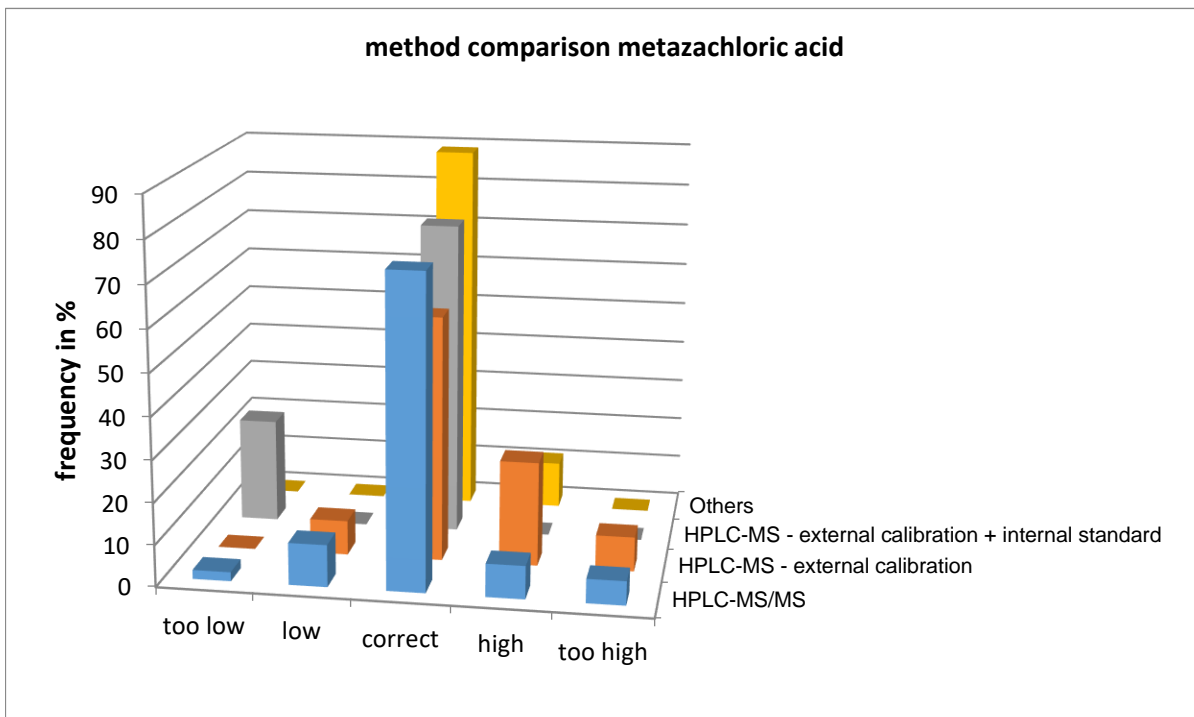
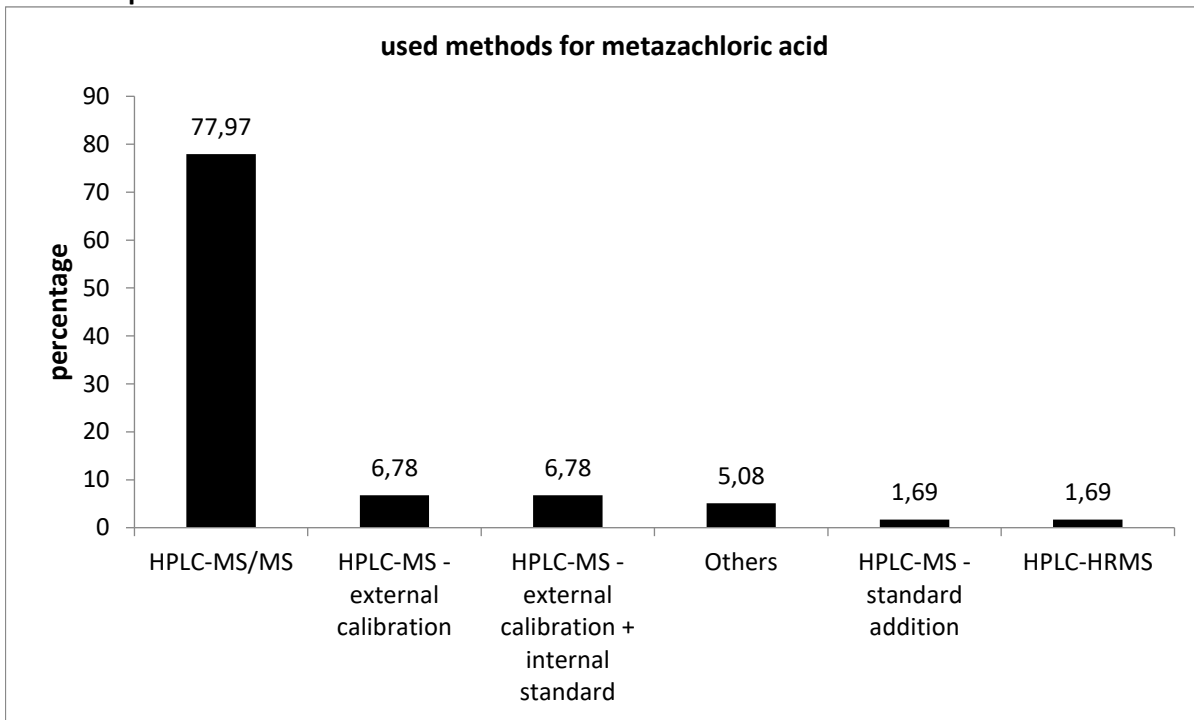
**Relative standard deviation and tolerance limits**



The relative standard deviations calculated from the variance function did not reach the limits.



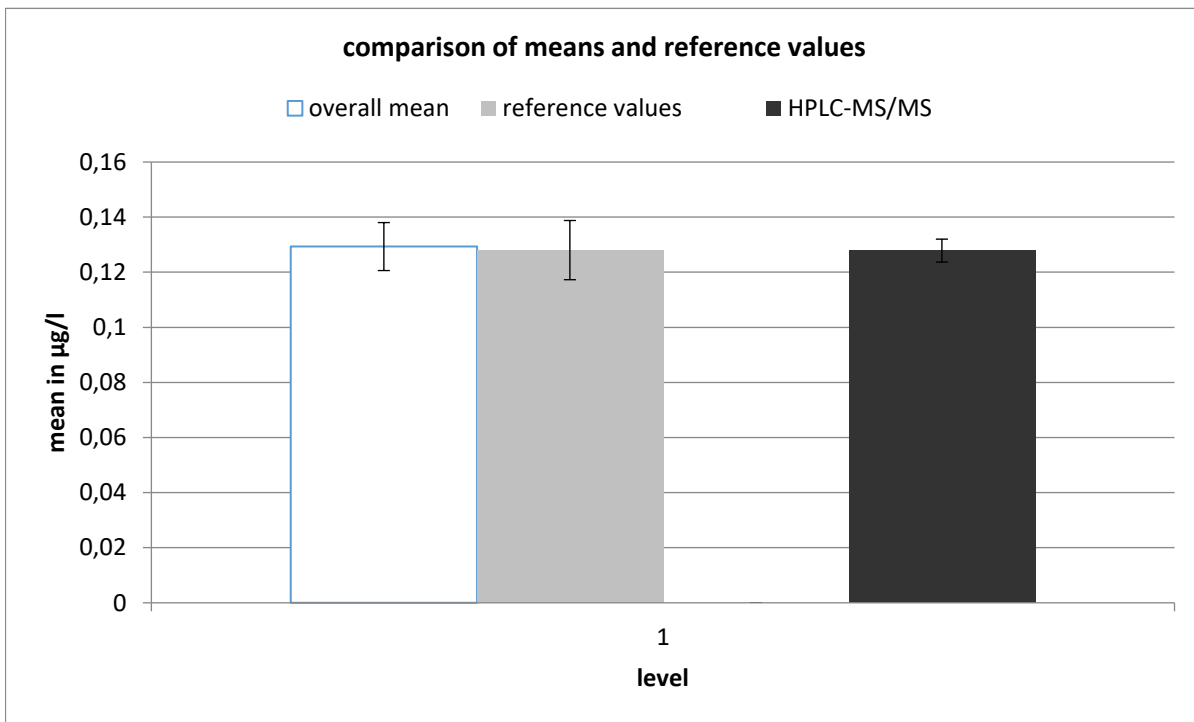
**Method specific evaluation**

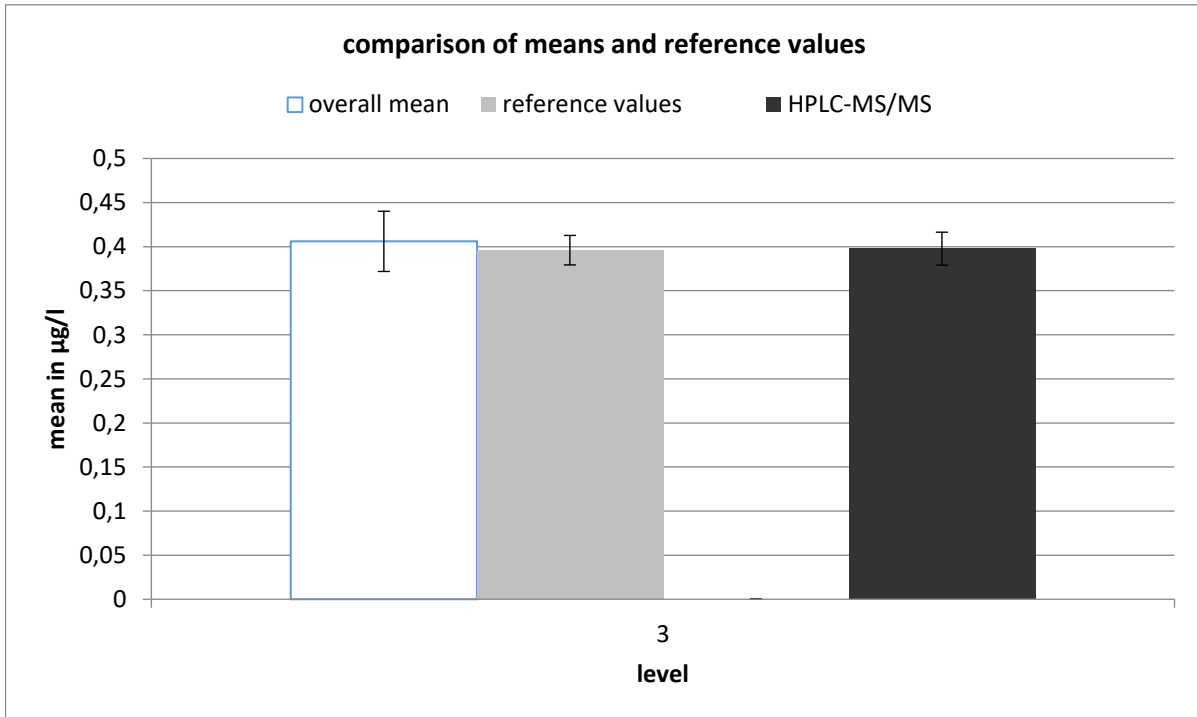
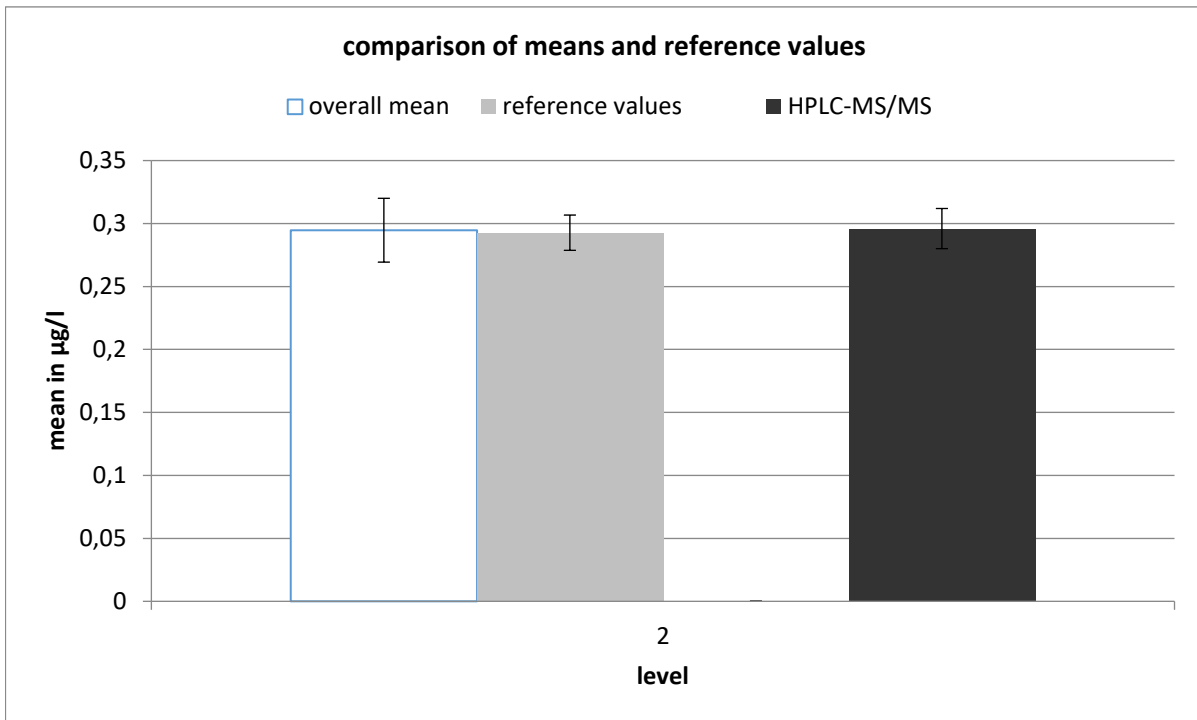


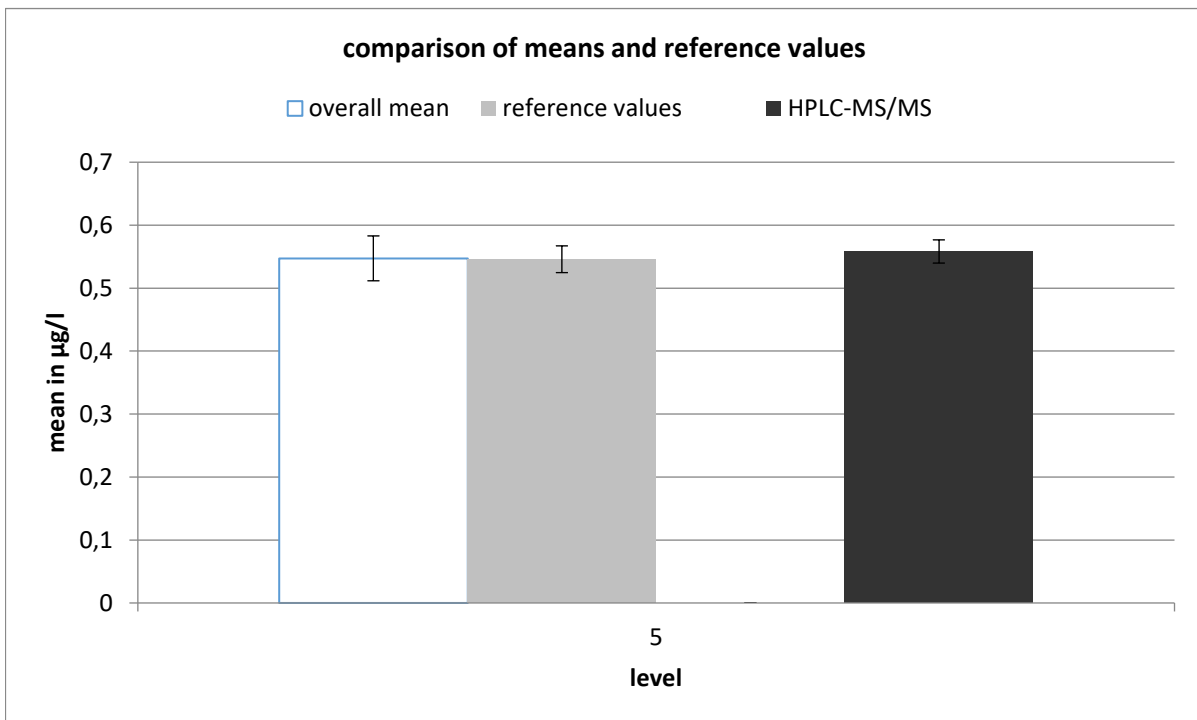
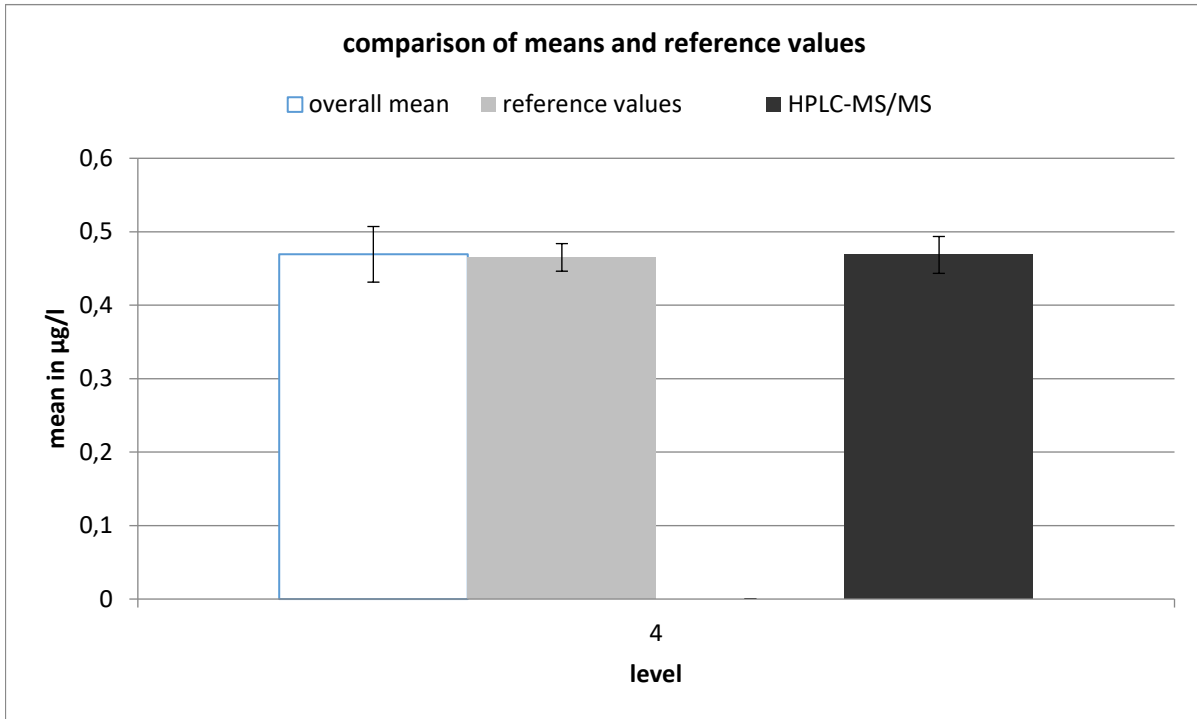
The values determined with HPLC-MS/MS showed the closest statistical distribution.

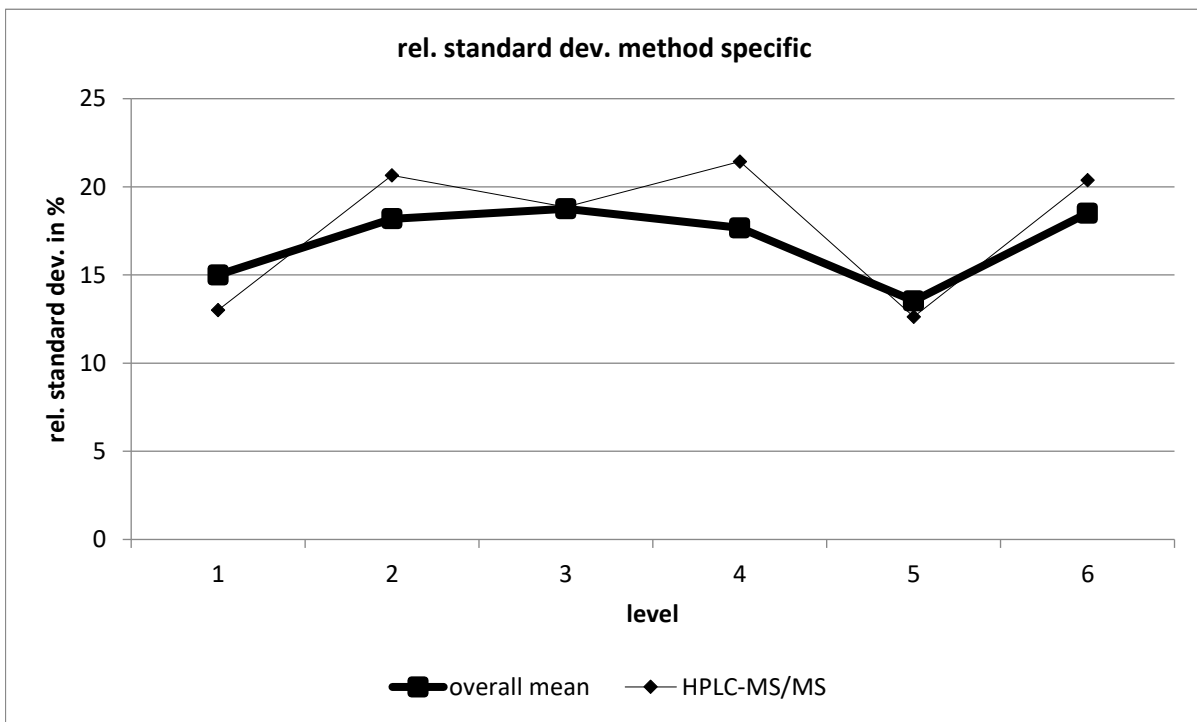
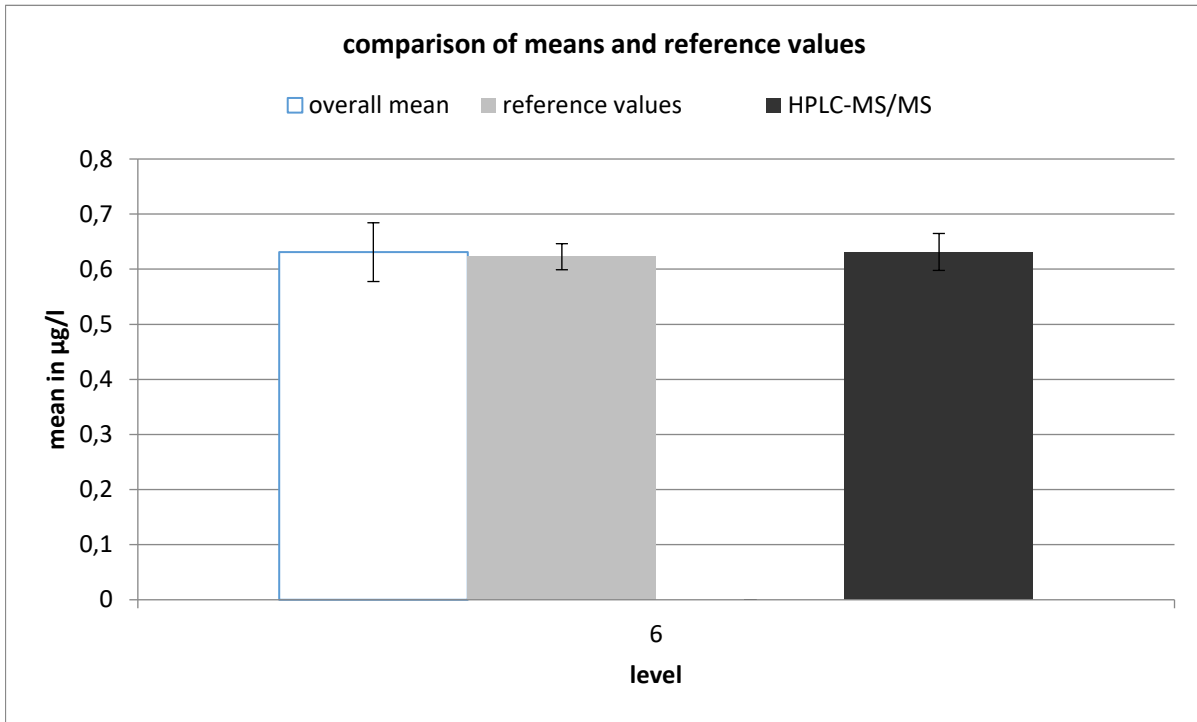
**Comparison of means and reference values**

level	Experimental Data			Reference Data		
	mean [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]	reference value [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]
1	0,1293	0,0087	6,7	0,1280	0,0107	8,4
2	0,2947	0,0253	8,6	0,2927	0,0140	4,8
3	0,4060	0,0342	8,4	0,3959	0,0168	4,2
4	0,4693	0,0379	8,1	0,4651	0,0188	4,0
5	0,5473	0,0356	6,5	0,5459	0,0212	3,9
6	0,6309	0,0533	8,4	0,6227	0,0236	3,8









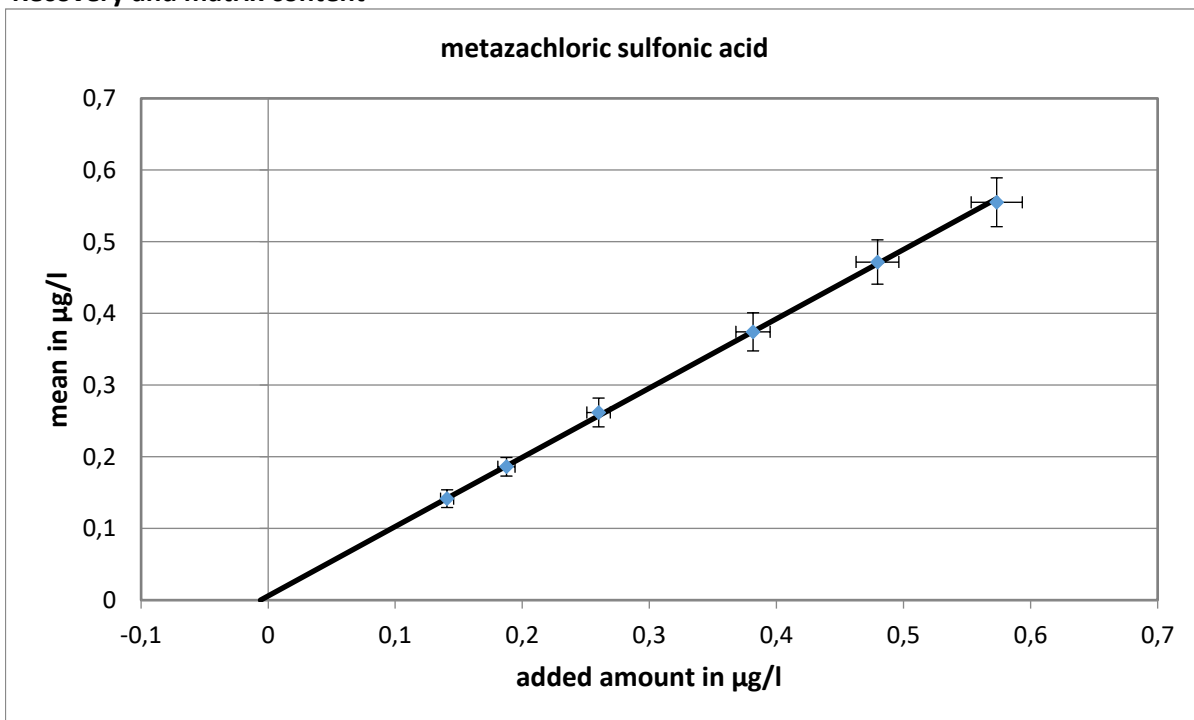
HPLC-MS/MS									
level	robust mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [%]	robust standard deviation [ $\mu\text{g/l}$ ]	robust standard deviation [%]	number of results	out below	out above	out [%]
1	0,128	0,004	3,251	0,017	13	25	0	2	8
2	0,296	0,016	5,384	0,061	20,66	23	2	1	13
3	0,398	0,019	4,714	0,075	18,86	25	0	1	4
4	0,468	0,025	5,359	0,1	21,44	25	1	2	12
5	0,558	0,018	3,292	0,071	12,63	23	1	1	8,7
6	0,631	0,034	5,311	0,129	20,38	23	0	2	8,7



# metazachloric sulfonic acid

level	assigned value [µg/l]	expanded uncertainty of the assigned value [%]	standard deviation, calculated using robust statistics [µg/l]	standard deviation from variance function [µg/l]	standard deviation for proficiency assessment [µg/l]	standard deviation for proficiency assessment [%]	upper tolerance limit [µg/l]	lower tolerance limit [µg/l]	upper tolerance limit [%]	lower tolerance limit [%]	number of results	out below	out above	out [%]
1	0,1416	8,71	0,0266	0,0255	0,0255	18,01	0,1980	0,0944	39,88	-33,33	29	1	2	10,3
2	0,1861	6,95	0,0288	0,0318	0,0318	17,06	0,2560	0,1271	37,56	-31,69	31	1	0	3,2
3	0,2619	7,69	0,0434	0,0418	0,0418	15,95	0,3532	0,1840	34,88	-29,75	29	2	2	13,3
4	0,3743	7,11	0,0602	0,0556	0,0556	14,87	0,4951	0,2701	32,29	-27,84	32	1	1	6,3
5	0,4718	6,55	0,0642	0,0670	0,0670	14,20	0,6167	0,3460	30,73	-26,67	27	3	0	11,1
6	0,5551	6,13	0,0746	0,0764	0,0764	13,76	0,7198	0,4115	29,68	-25,87	30	2	1	10,0
sum											178	10	6	9,0

## Recovery and matrix content

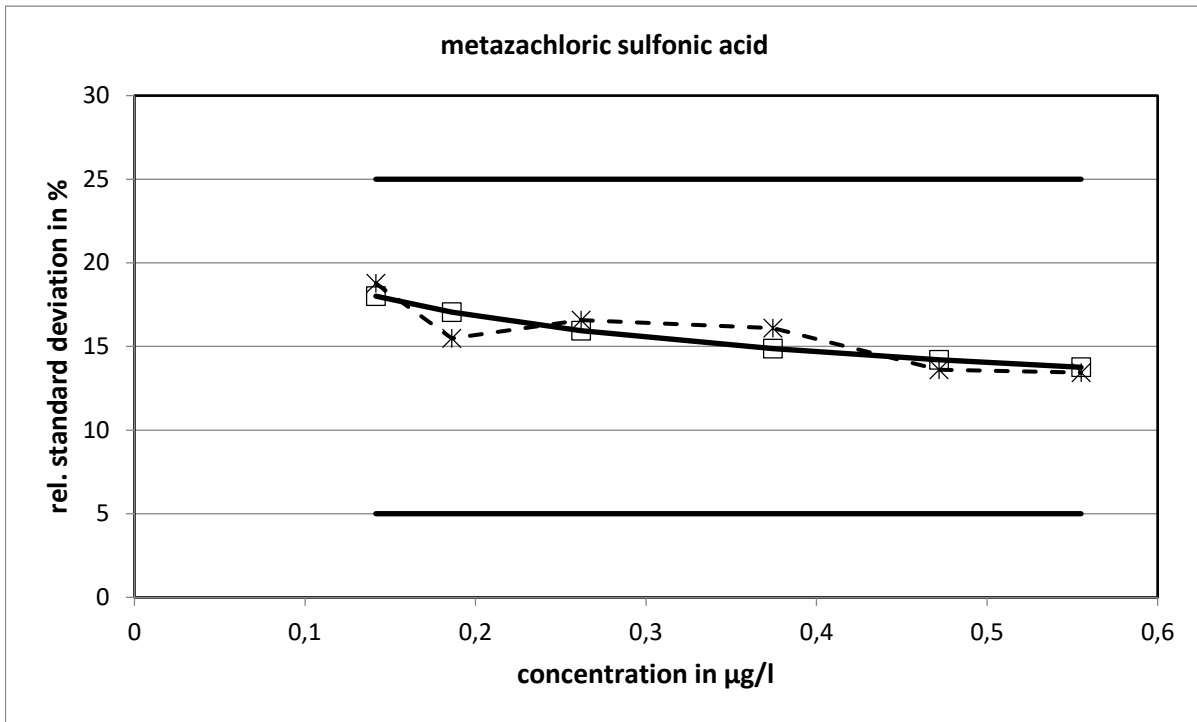


slope of the regression: 0,967; recovery rate: 96,7%

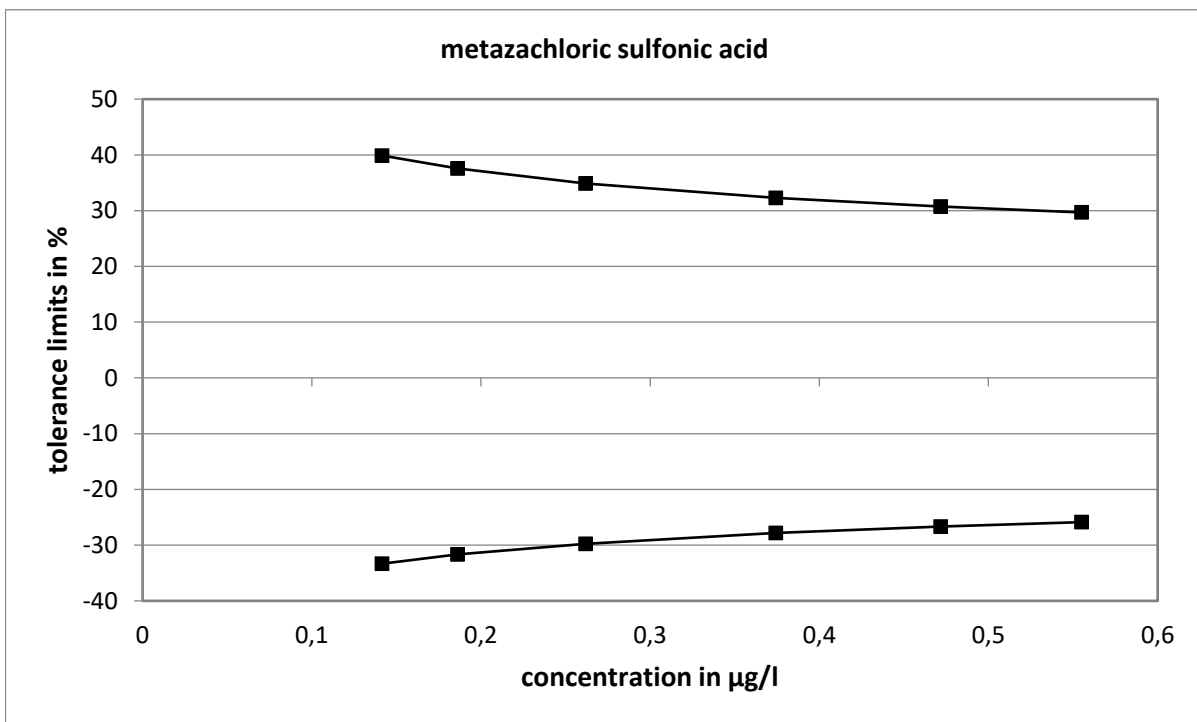
neg. x-axis intercept = matrix content: 0,0061 µg/l

expanded uncertainty of the matrix content: 0,0061 µg/l = 100%

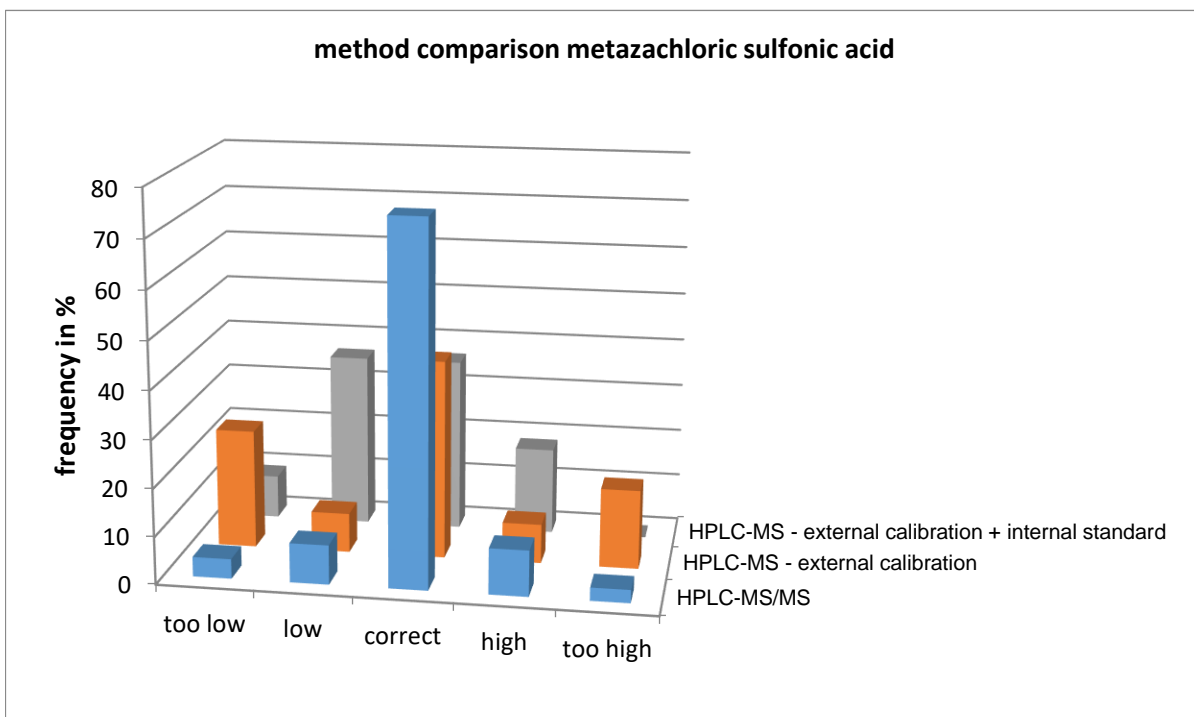
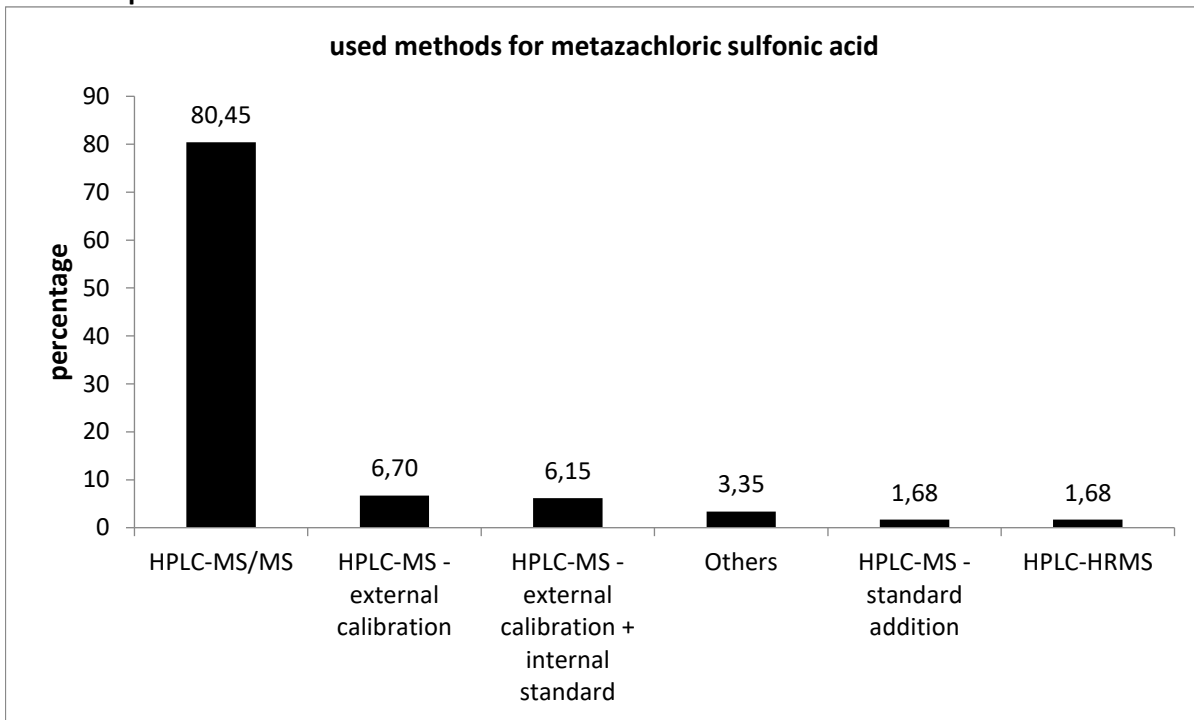
**Relative standard deviation and tolerance limits**



The relative standard deviations calculated from the variance function did not reach the limits.



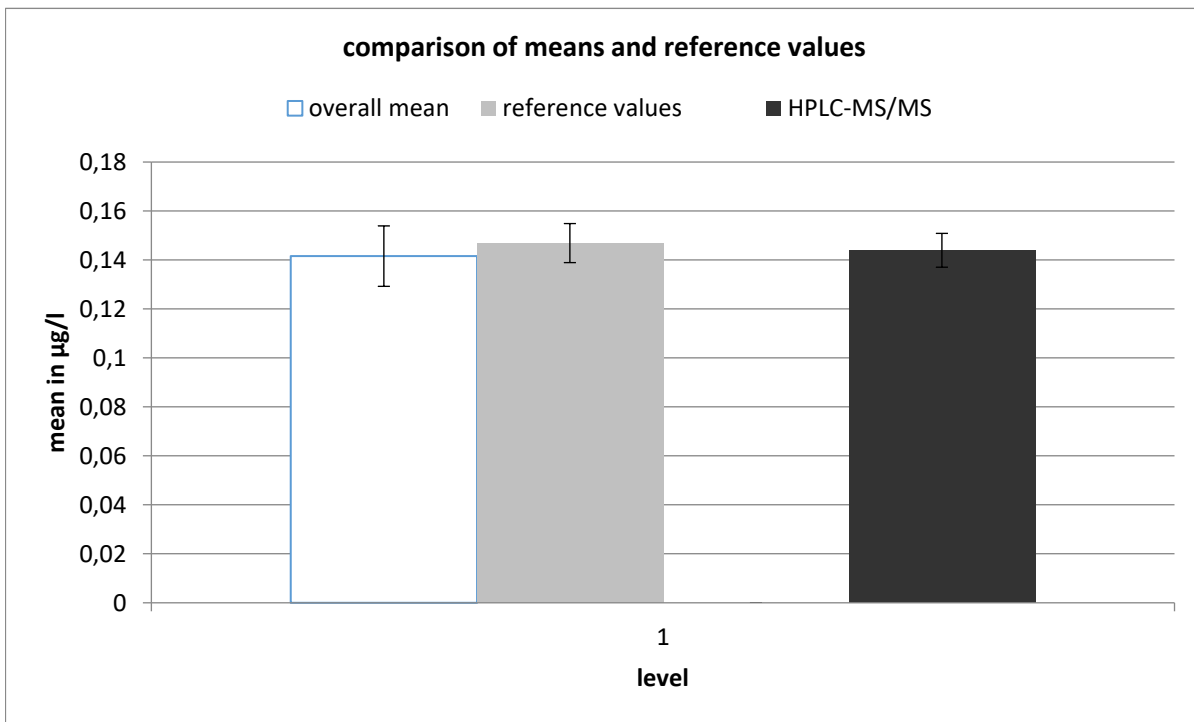
**Method specific evaluation**

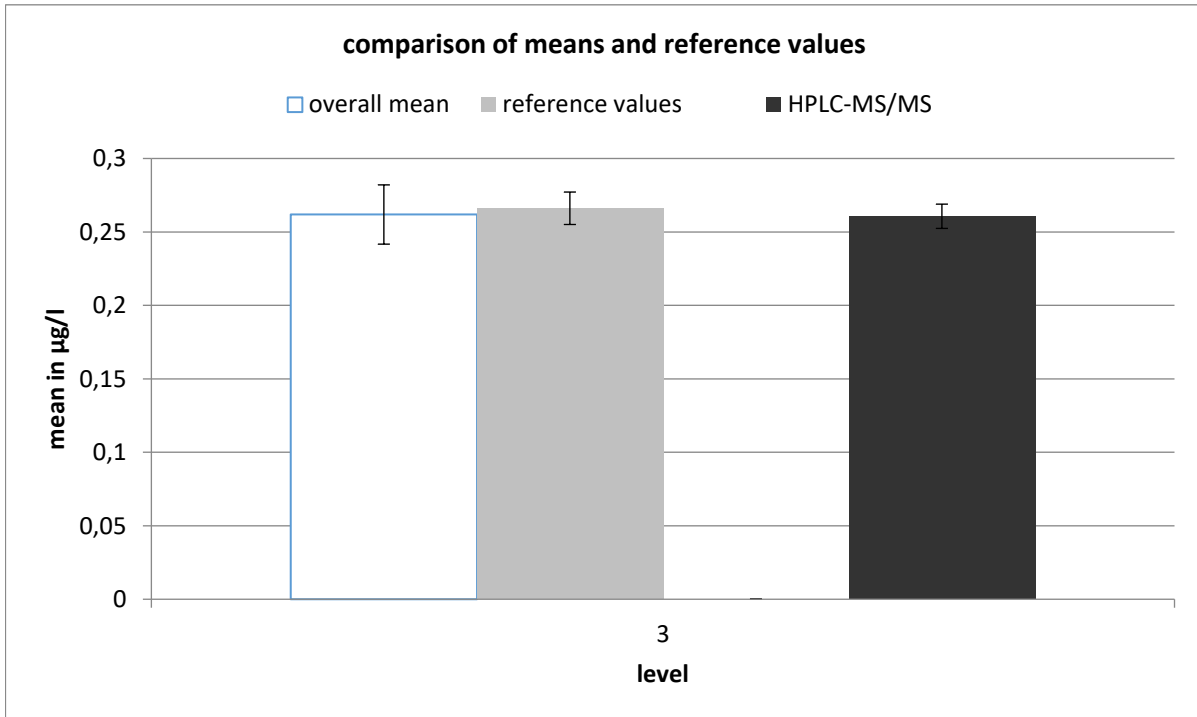
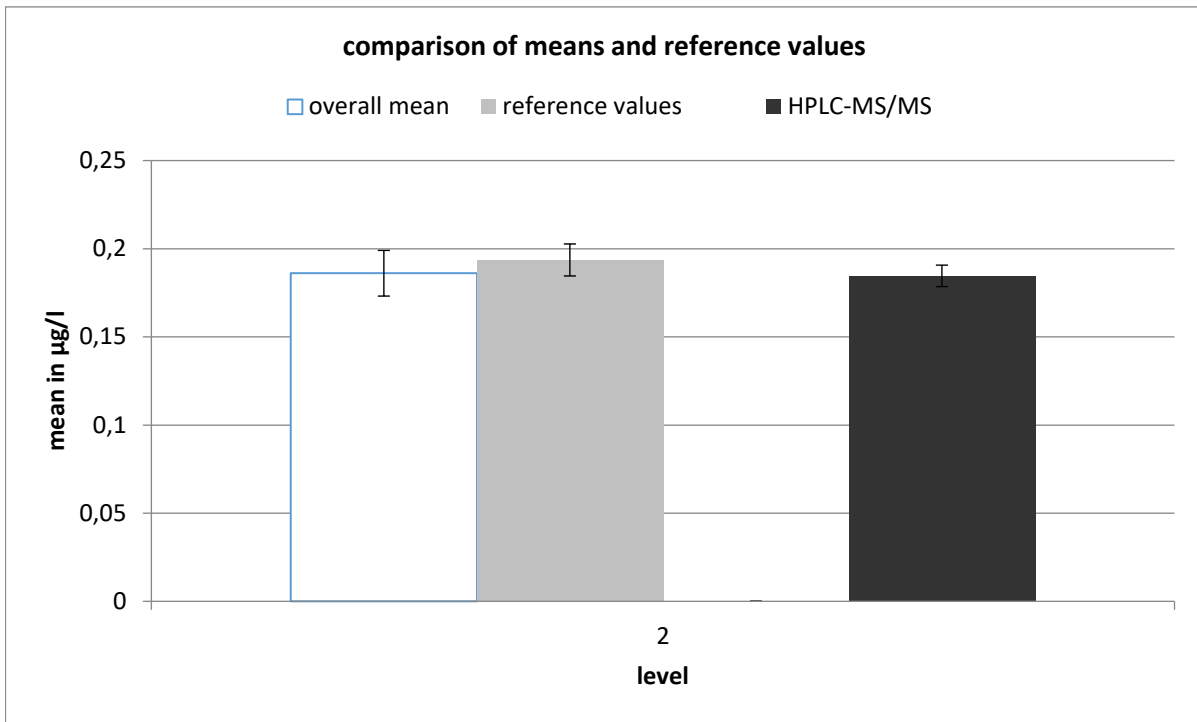


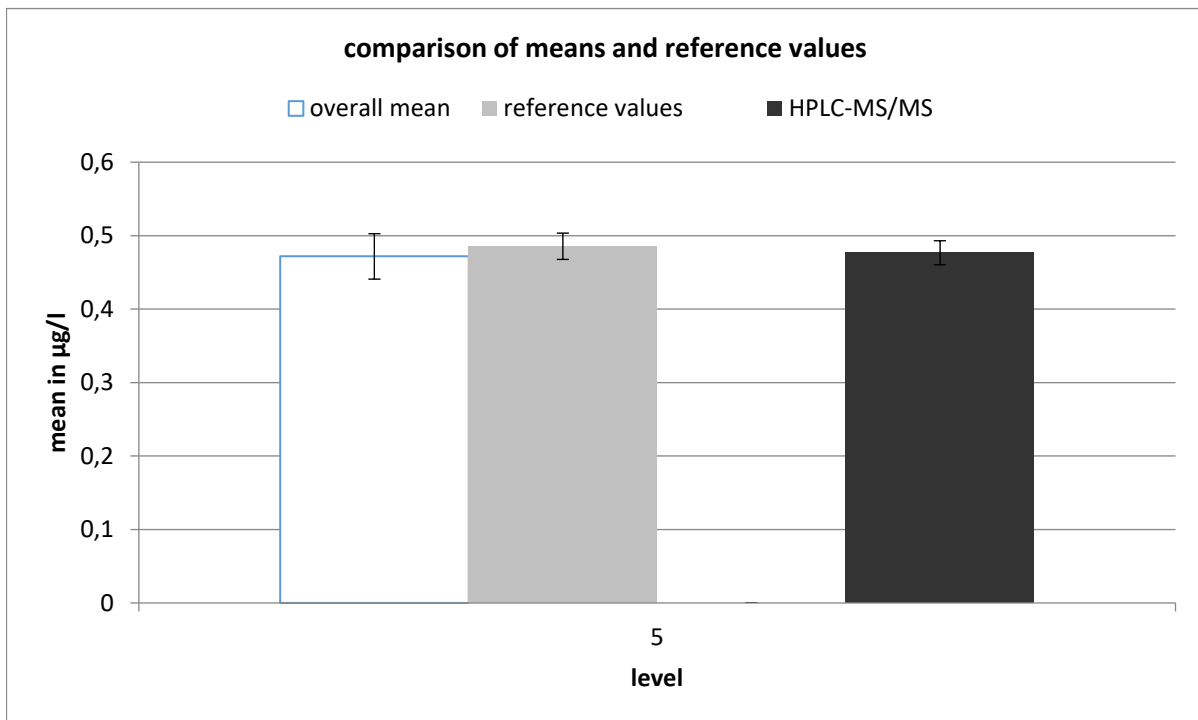
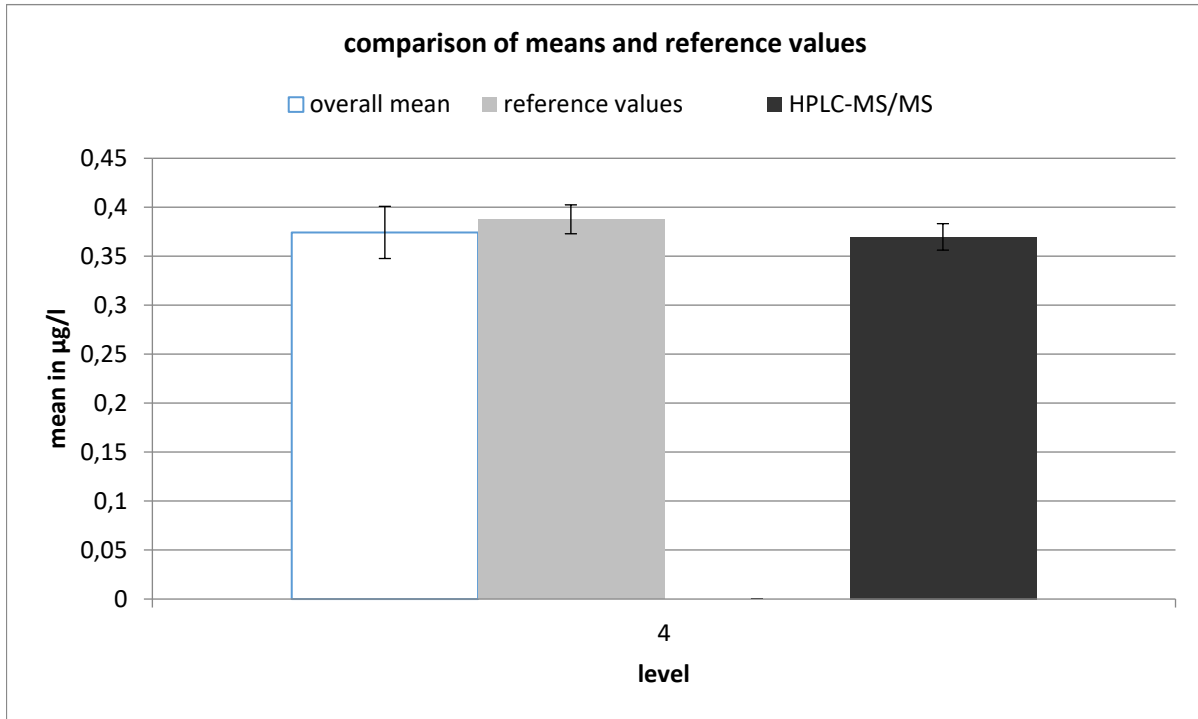
The values determined with HPLC-MS/MS showed the closest statistical distribution.

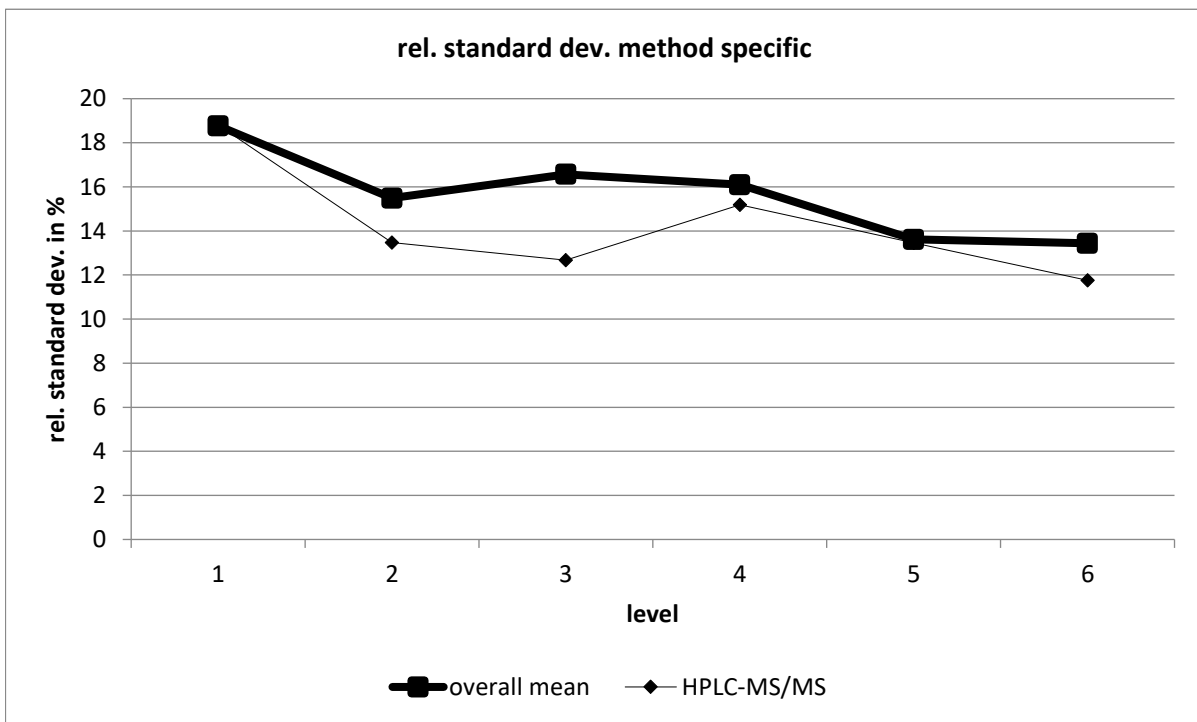
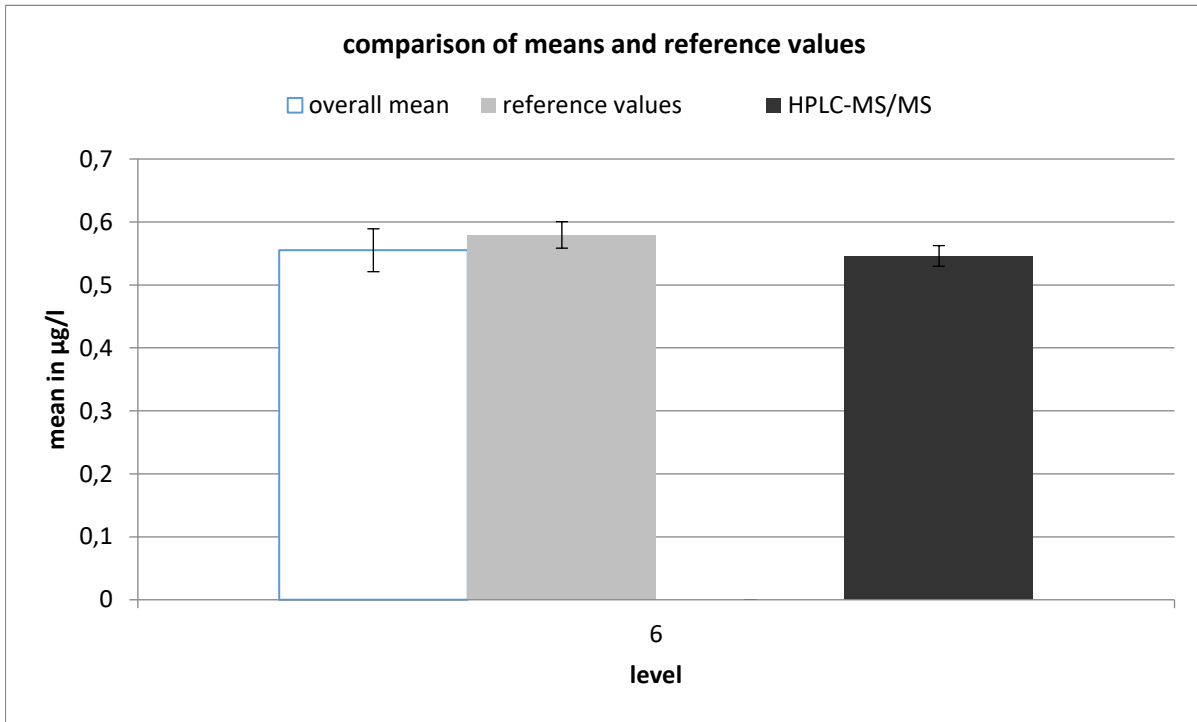
**Comparison of means and reference values**

level	Experimental Data			Reference Data		
	mean [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]	reference value [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]
1	0,1416	0,0123	8,7	0,1469	0,0080	5,4
2	0,1861	0,0129	7,0	0,1936	0,0091	4,7
3	0,2619	0,0201	7,7	0,2661	0,0111	4,2
4	0,3743	0,0266	7,1	0,3877	0,0148	3,8
5	0,4718	0,0309	6,6	0,4856	0,0179	3,7
6	0,5551	0,0341	6,1	0,5794	0,0210	3,6









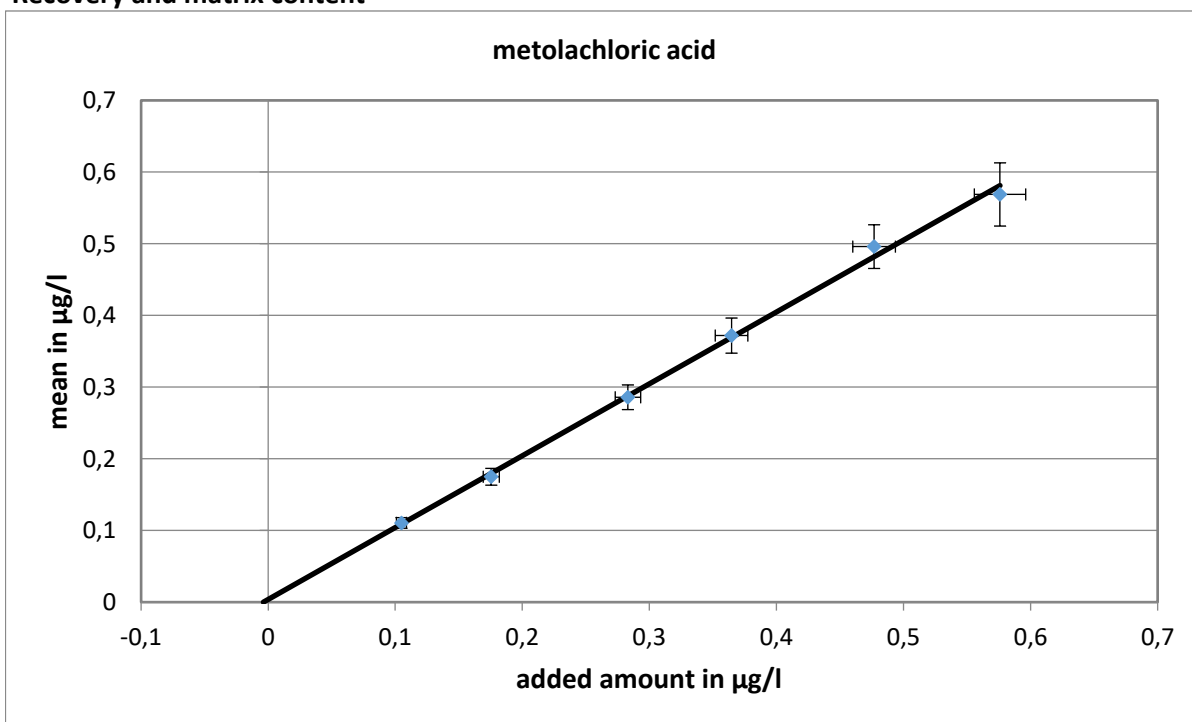
HPLC-MS/MS									
level	robust mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [%]	robust standard deviation [ $\mu\text{g/l}$ ]	robust standard deviation [%]	number of results	out below	out above	out [%]
1	0,144	0,007	4,799	0,027	18,81	24	1	3	16,7
2	0,185	0,006	3,304	0,025	13,48	26	1	1	7,69
3	0,261	0,008	3,17	0,033	12,68	25	2	1	12
4	0,37	0,014	3,655	0,056	15,19	27	0	0	0
5	0,477	0,016	3,432	0,064	13,45	24	2	0	8,33
6	0,546	0,016	3	0,064	11,76	24	2	2	16,7



# metolachloric acid

level	assigned value [µg/l]	expanded uncertainty of the assigned value [%]	standard deviation, calculated using robust statistics [µg/l]	standard deviation from variance function [µg/l]	standard deviation for proficiency assessment [µg/l]	standard deviation for proficiency assessment [%]	upper tolerance limit [µg/l]	lower tolerance limit [µg/l]	upper tolerance limit [%]	lower tolerance limit [%]	number of results	out below	out above	out [%]
1	0,1105	6,69	0,0159	0,0155	0,0155	14,05	0,1441	0,0814	30,36	-26,39	29	1	4	17,2
2	0,1749	6,69	0,0256	0,0249	0,0249	14,23	0,2287	0,1282	30,78	-26,71	30	1	1	6,7
3	0,2858	6,02	0,0370	0,0412	0,0412	14,42	0,3751	0,2085	31,24	-27,05	29	1	1	6,9
4	0,3719	6,59	0,0555	0,0540	0,0540	14,53	0,4890	0,2706	31,49	-27,24	32	2	1	9,4
5	0,4960	6,15	0,0634	0,0726	0,0726	14,64	0,6535	0,3599	31,76	-27,44	27	1	0	3,7
6	0,5688	7,74	0,0965	0,0836	0,0836	14,70	0,7502	0,4121	31,89	-27,54	30	3	3	20,0
sum											177	9	10	10,7

## Recovery and matrix content

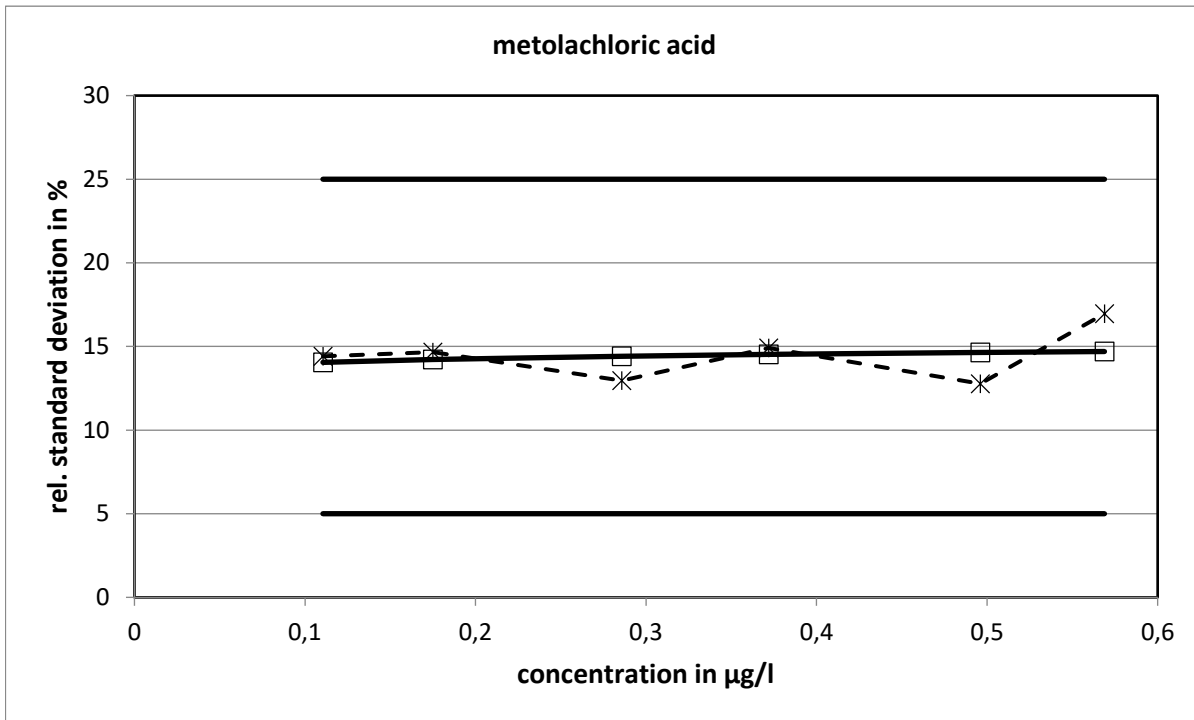


slope of the regression: 1,003; recovery rate: 100,3%

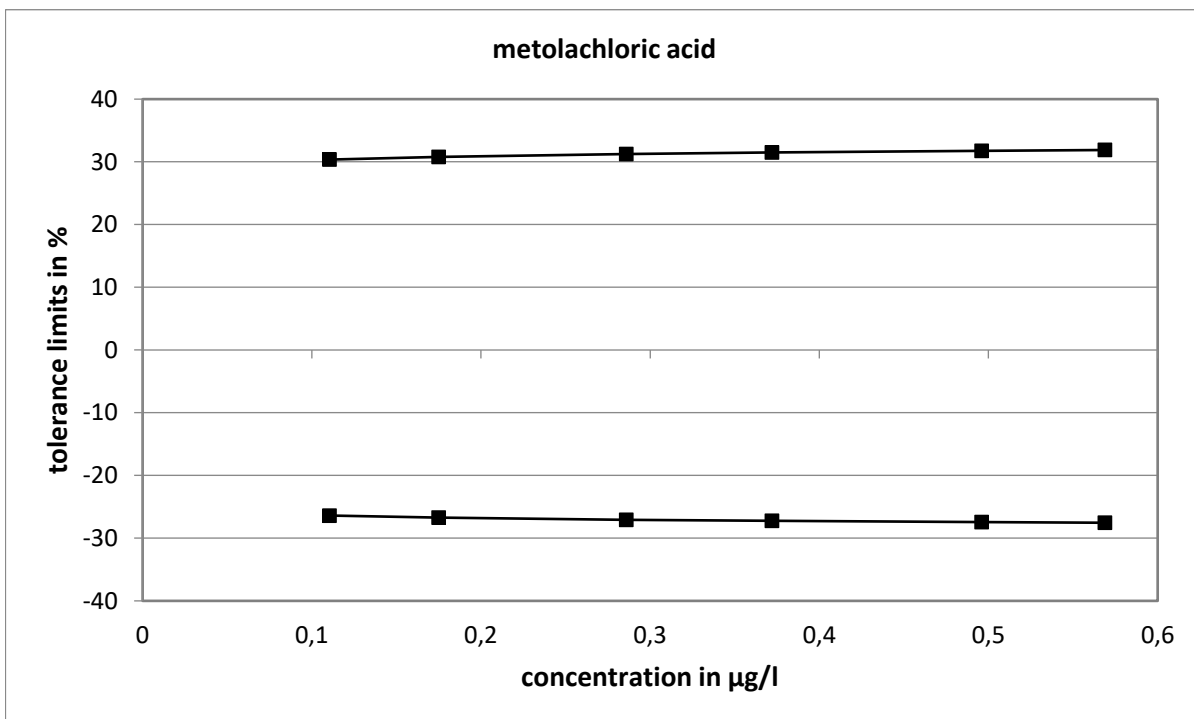
neg. x-axis intercept = matrix content: 0,0038 µg/l

expanded uncertainty of the matrix content: 0,0038 µg/l = 100%

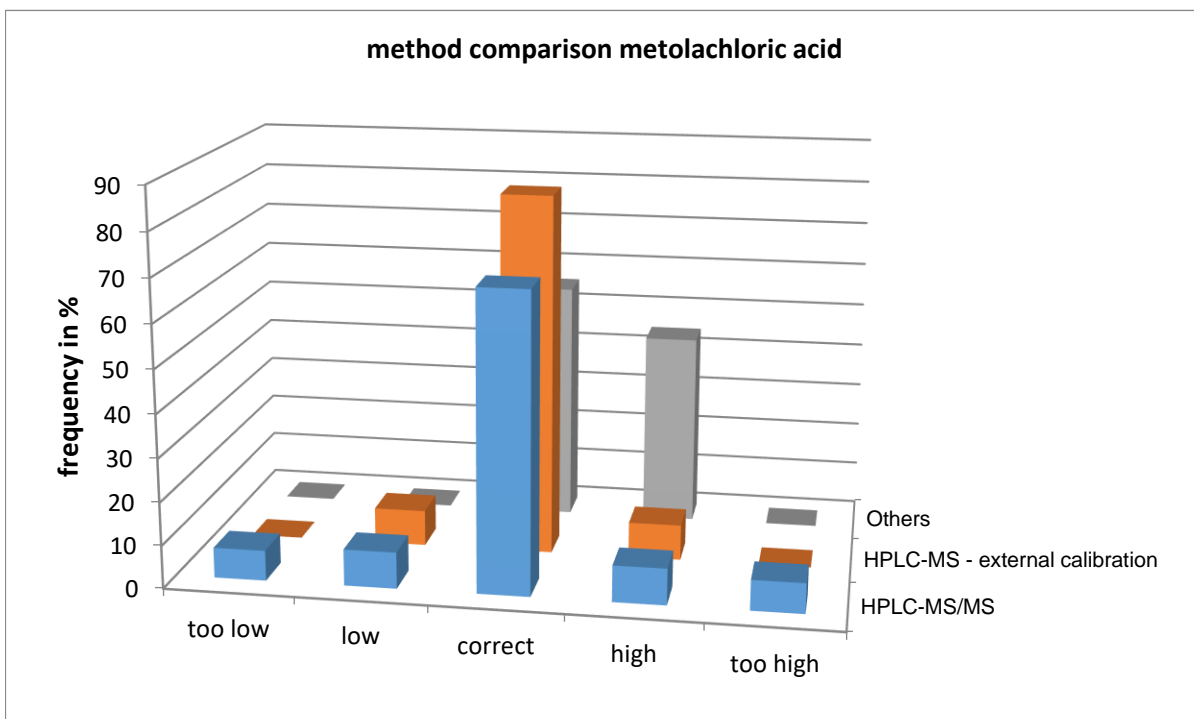
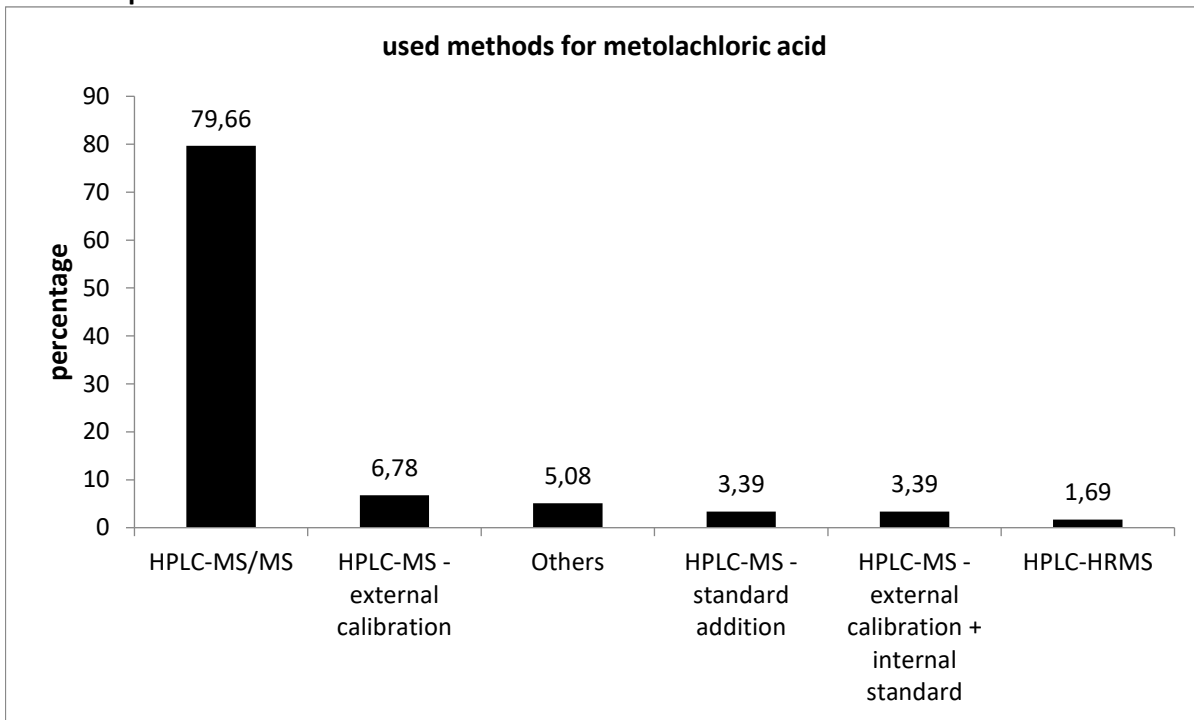
**Relative standard deviation and tolerance limits**



The relative standard deviations calculated from the variance function did not reach the limits.



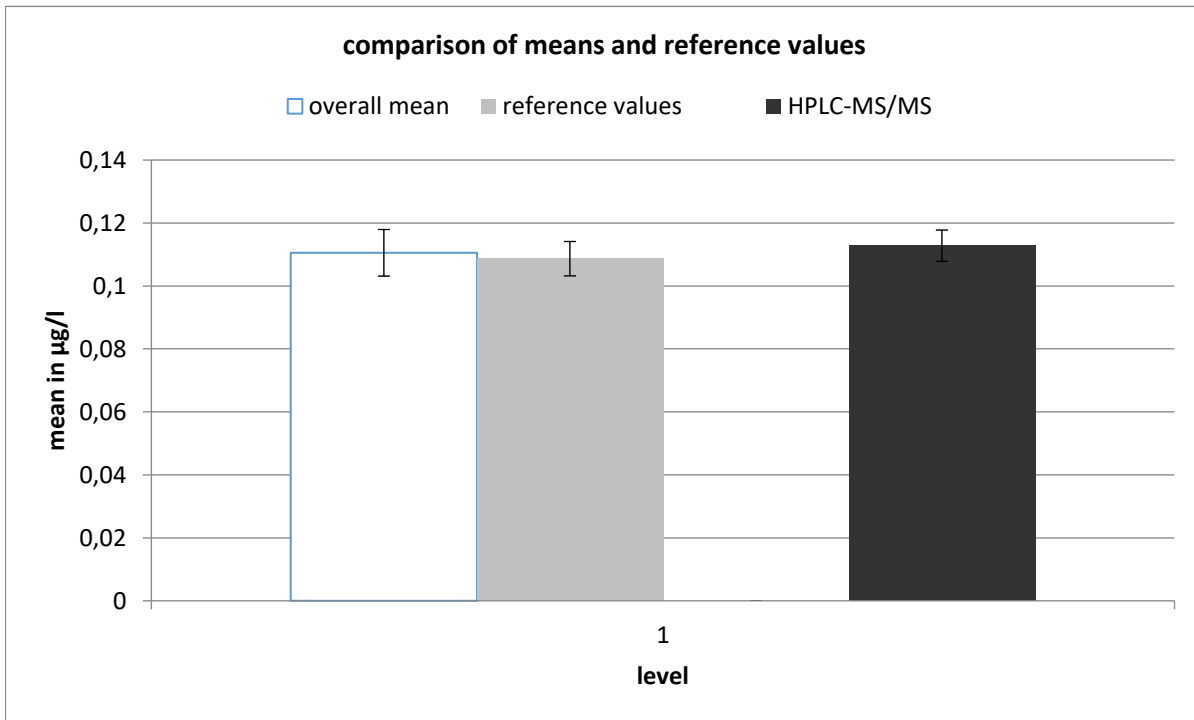
Method specific evaluation

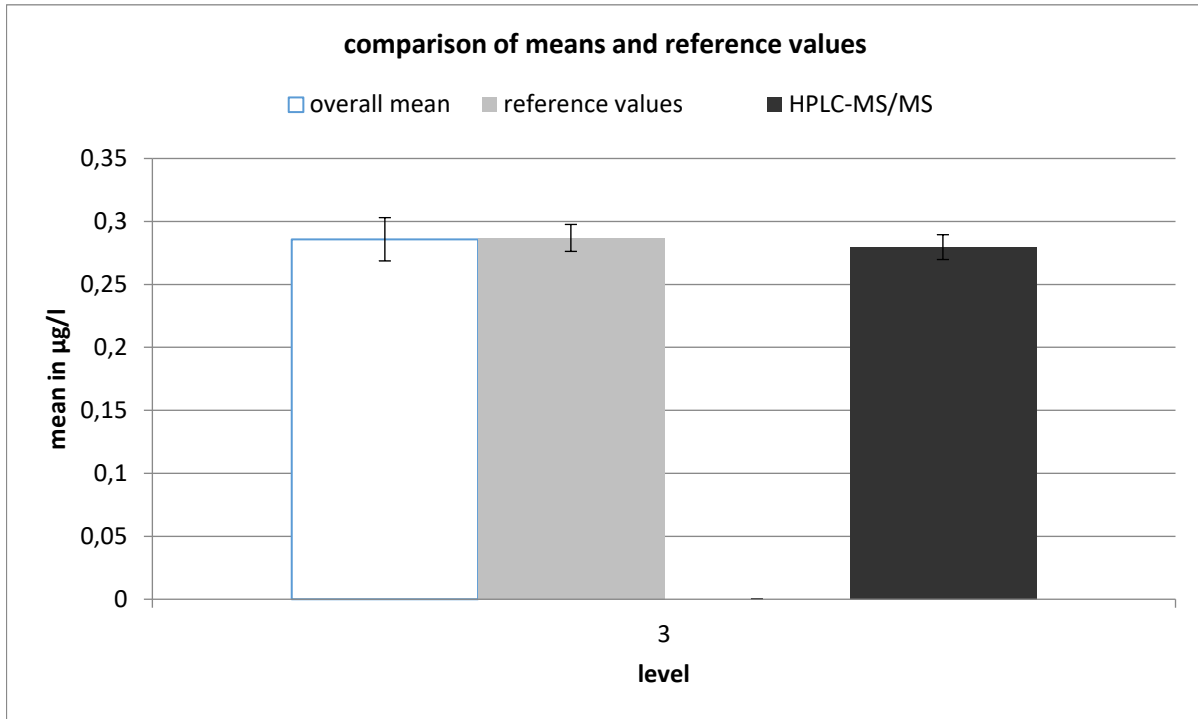
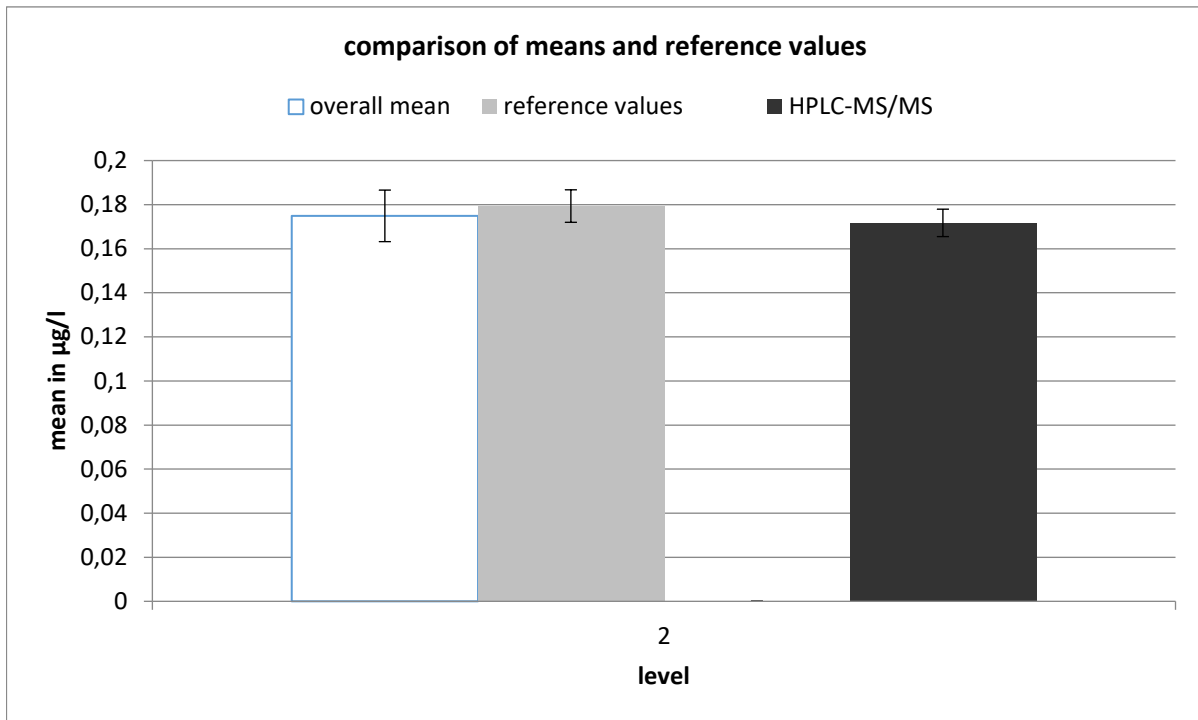


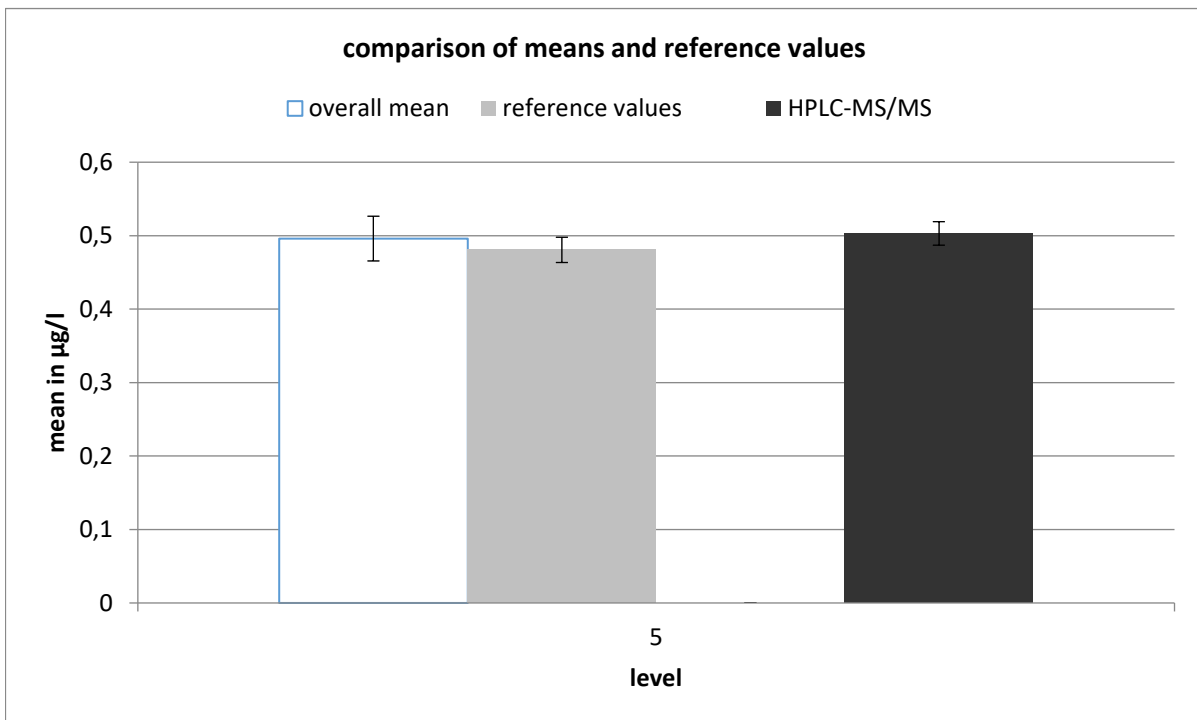
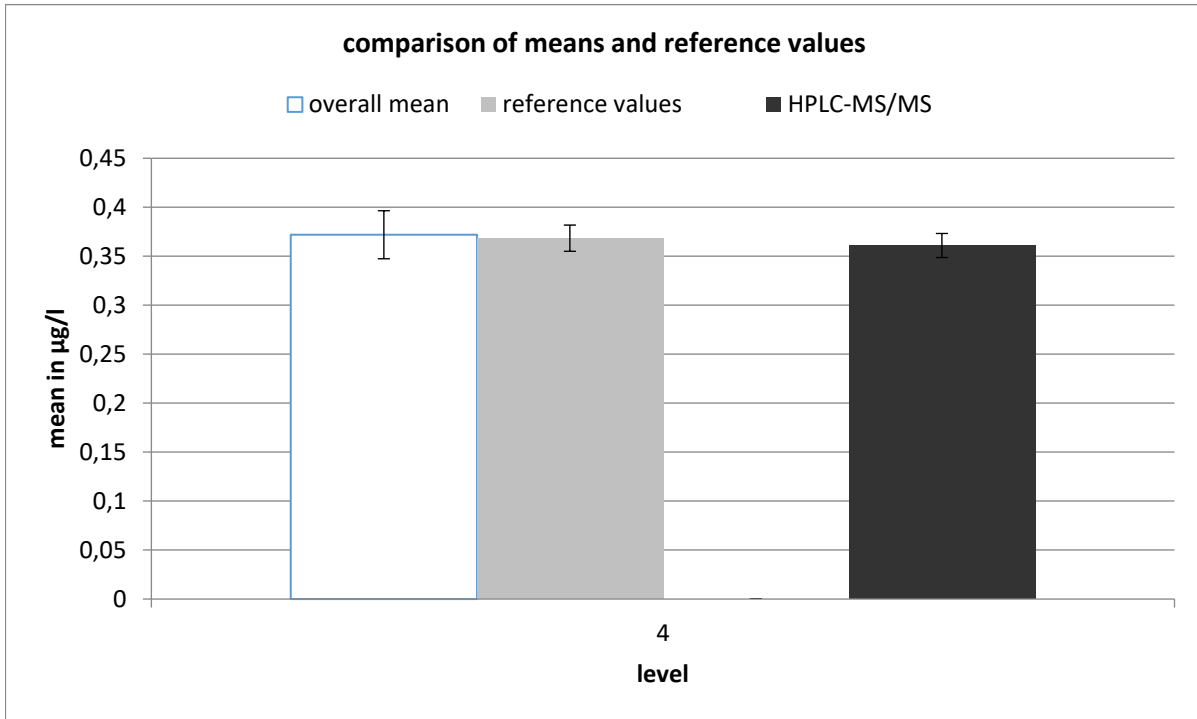
The differences between the results determined with LC-MS/MS and LC-MS were not significant.

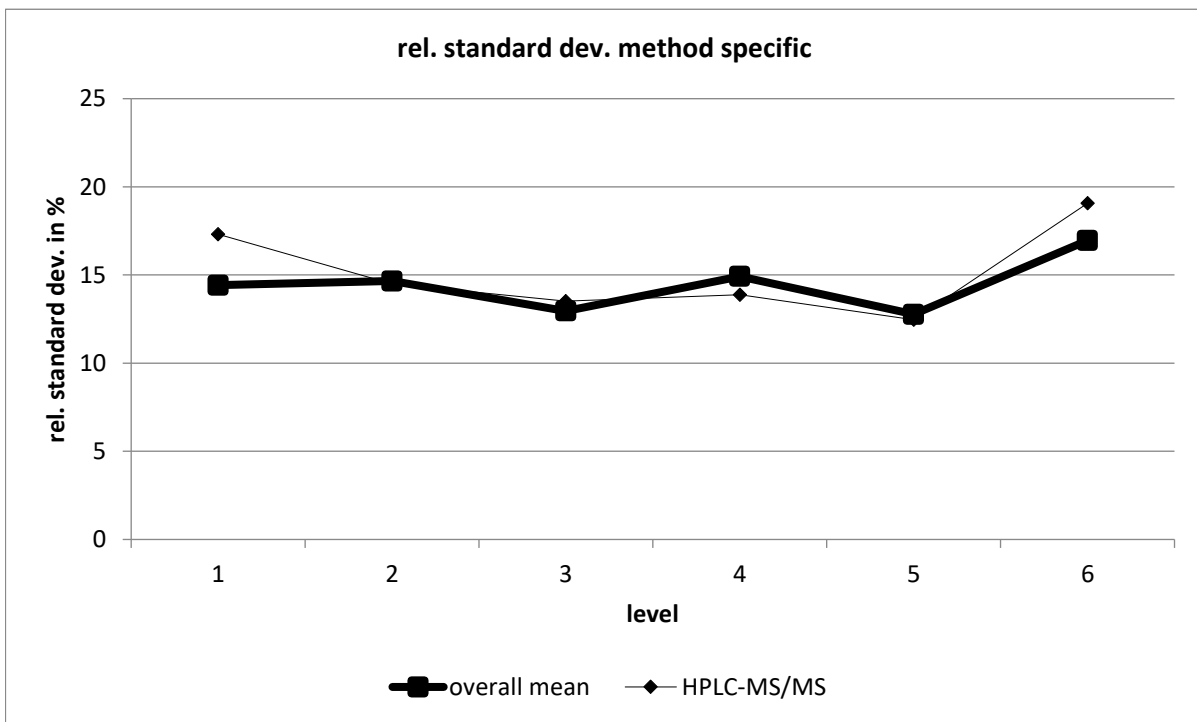
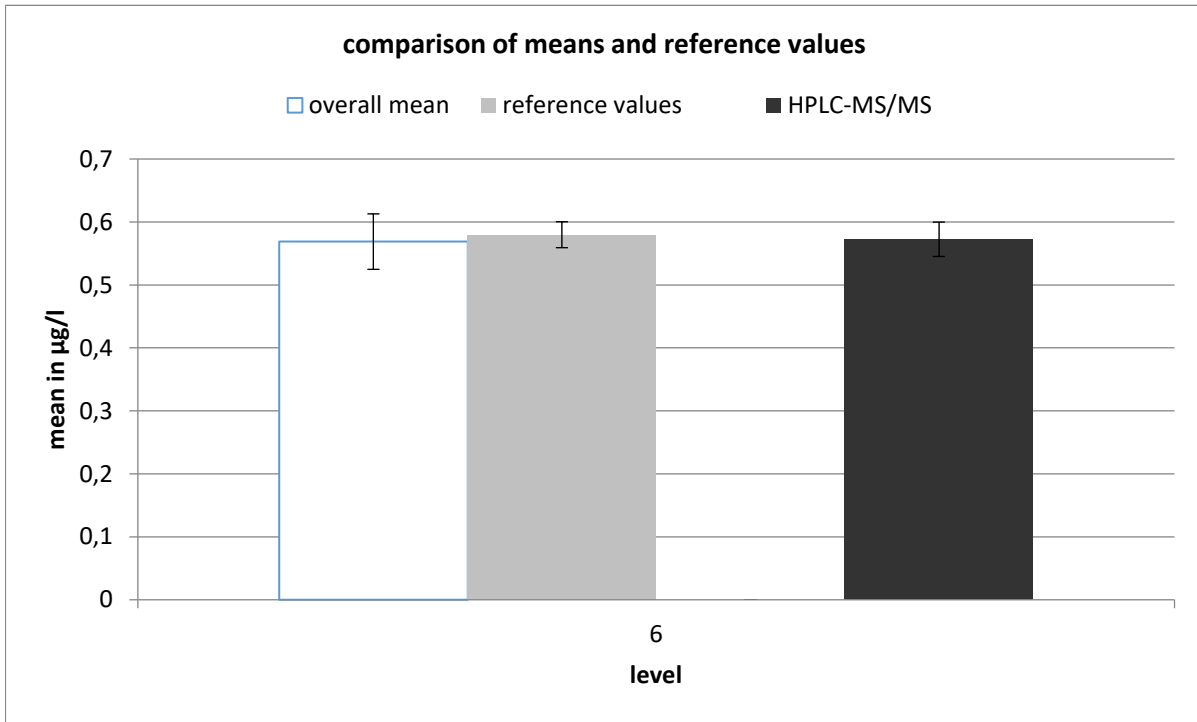
**Comparison of means and reference values**

level	Experimental Data			Reference Data		
	mean [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]	reference value [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]
1	0,1105	0,0074	6,7	0,1087	0,0055	5,0
2	0,1749	0,0117	6,7	0,1793	0,0074	4,1
3	0,2858	0,0172	6,0	0,2869	0,0107	3,7
4	0,3719	0,0245	6,6	0,3684	0,0134	3,6
5	0,4960	0,0305	6,1	0,4806	0,0172	3,6
6	0,5688	0,0440	7,7	0,5797	0,0206	3,5









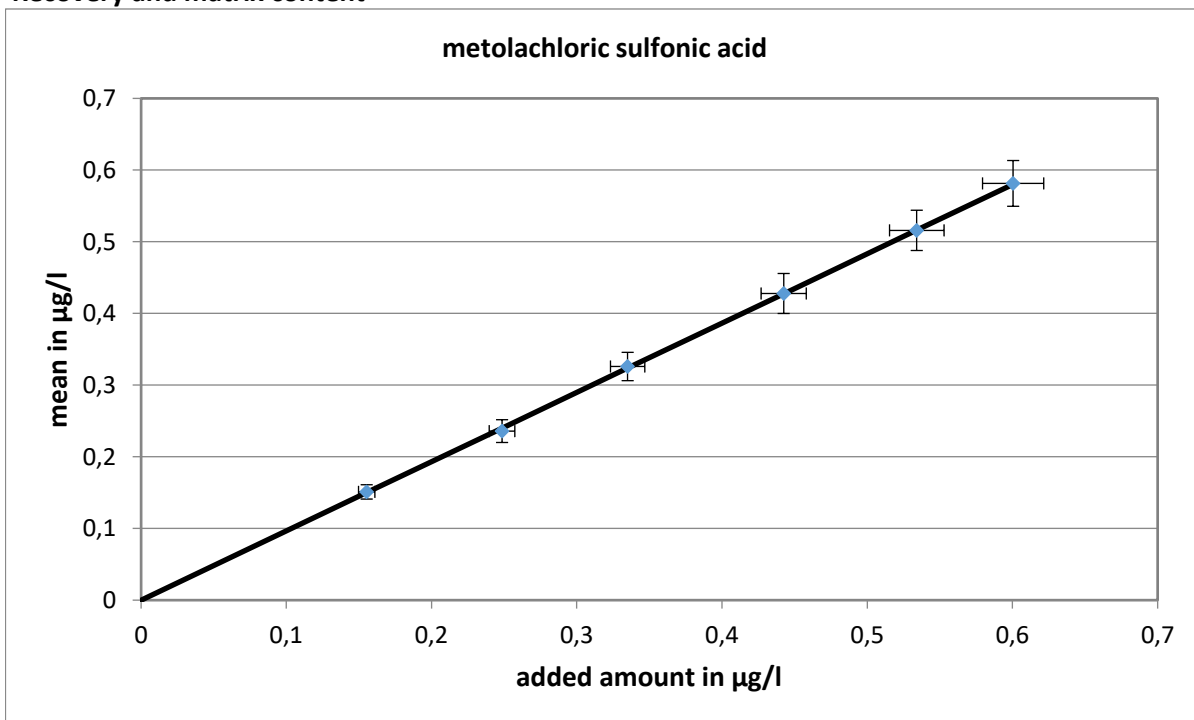
HPLC-MS/MS									
level	robust mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [%]	robust standard deviation [ $\mu\text{g/l}$ ]	robust standard deviation [%]	number of results	out below	out above	out [%]
1	0,113	0,005	4,418	0,02	17,32	24	1	4	20,8
2	0,172	0,006	3,625	0,025	14,5	25	1	2	12
3	0,28	0,01	3,525	0,038	13,53	23	2	1	13
4	0,361	0,012	3,402	0,05	13,88	26	2	1	11,5
5	0,503	0,016	3,18	0,063	12,46	24	1	0	4,17
6	0,573	0,027	4,767	0,109	19,07	25	3	2	20



# metolachloric sulfonic acid

level	assigned value [µg/l]	expanded uncertainty of the assigned value [%]	standard deviation, calculated using robust statistics [µg/l]	standard deviation from variance function [µg/l]	standard deviation for proficiency assessment [µg/l]	standard deviation for proficiency assessment [%]	upper tolerance limit [µg/l]	lower tolerance limit [µg/l]	upper tolerance limit [%]	lower tolerance limit [%]	number of results	out below	out above	out [%]
1	0,1510	6,60	0,0215	0,0222	0,0222	14,71	0,1992	0,1094	31,91	-27,55	29	2	1	10,3
2	0,2358	6,74	0,0348	0,0328	0,0328	13,92	0,3067	0,1742	30,05	-26,16	30	0	1	3,3
3	0,3260	6,06	0,0411	0,0436	0,0436	13,37	0,4197	0,2439	28,77	-25,18	27	3	0	11,1
4	0,4278	6,52	0,0611	0,0553	0,0553	12,93	0,5466	0,3235	27,75	-24,39	30	2	2	13,3
5	0,5159	5,45	0,0605	0,0652	0,0652	12,63	0,6555	0,3928	27,07	-23,86	29	2	2	13,8
6	0,5814	5,49	0,0722	0,0724	0,0724	12,45	0,7363	0,4446	26,64	-23,53	32	1	0	3,1
sum											177	10	6	9,0

### Recovery and matrix content

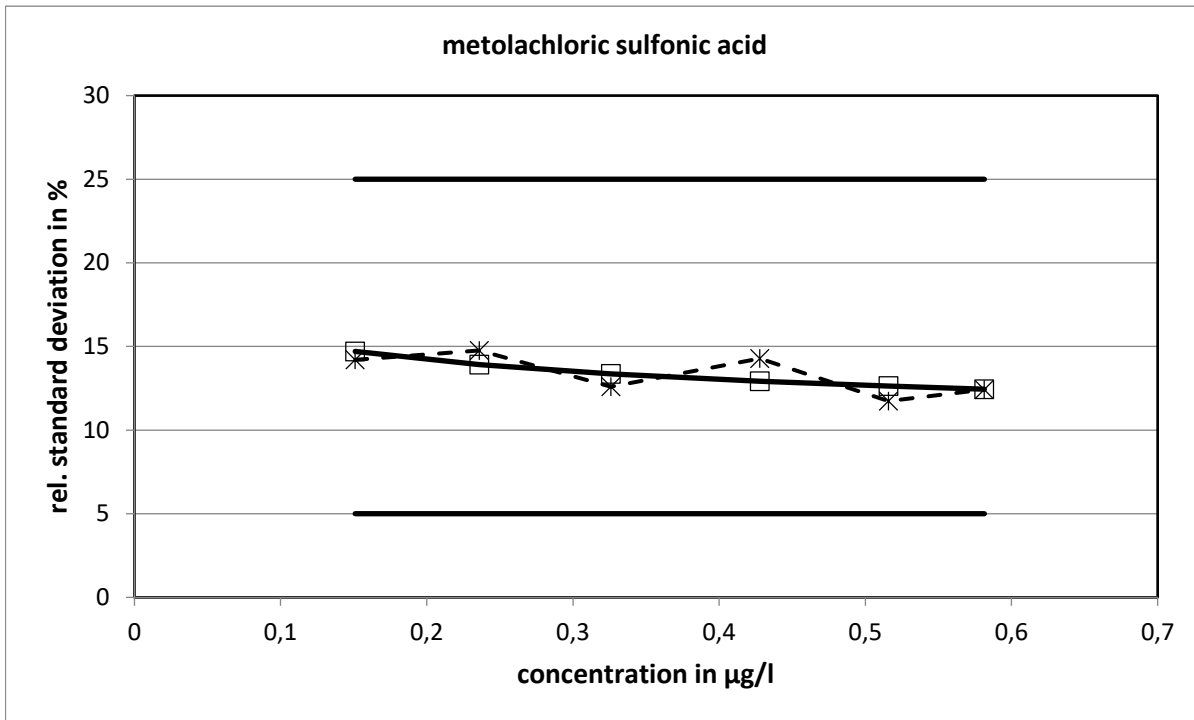


slope of the regression: 0,966; recovery rate: 96,6%

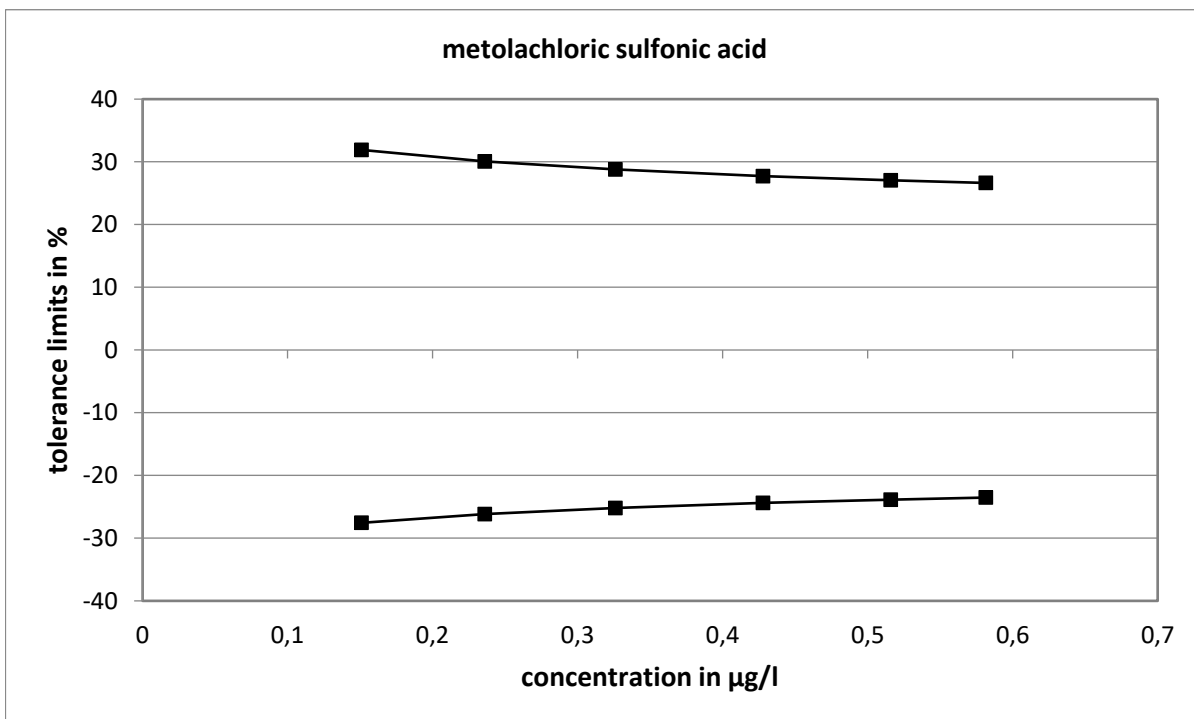
neg. x-axis intercept = matrix content: 0 µg/l

expanded uncertainty of the matrix content: 0,00009 µg/l = 0%

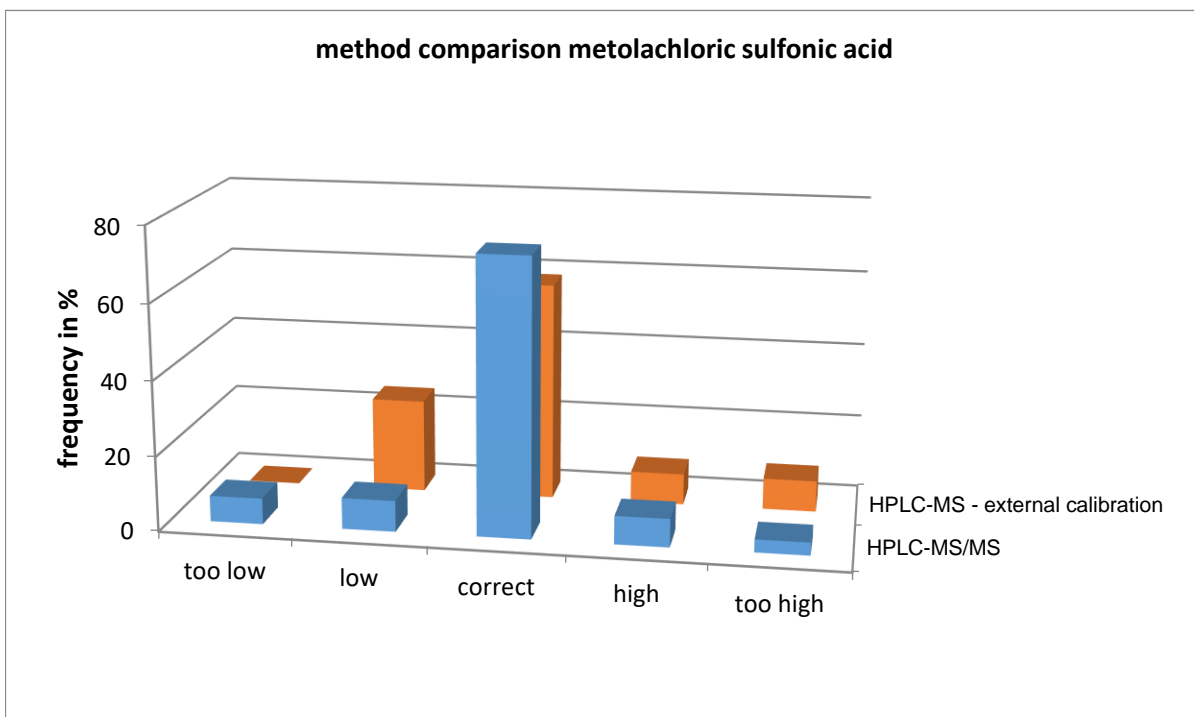
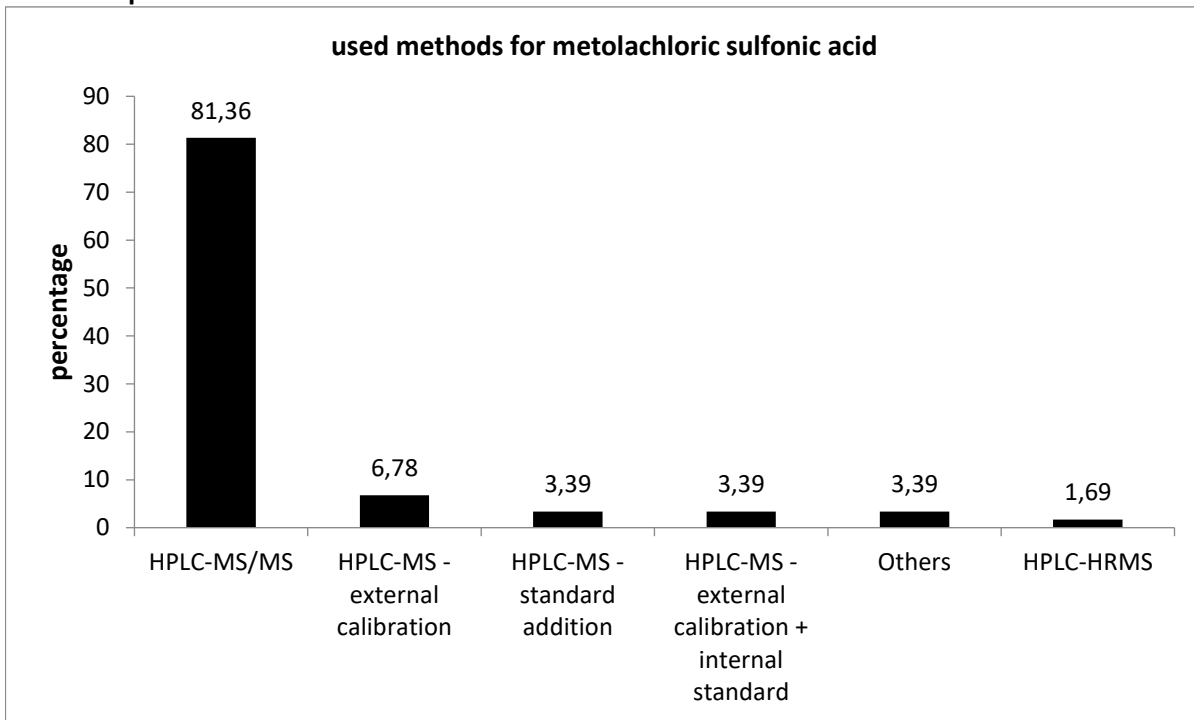
**Relative standard deviation and tolerance limits**



The relative standard deviations calculated from the variance function did not reach the limits.



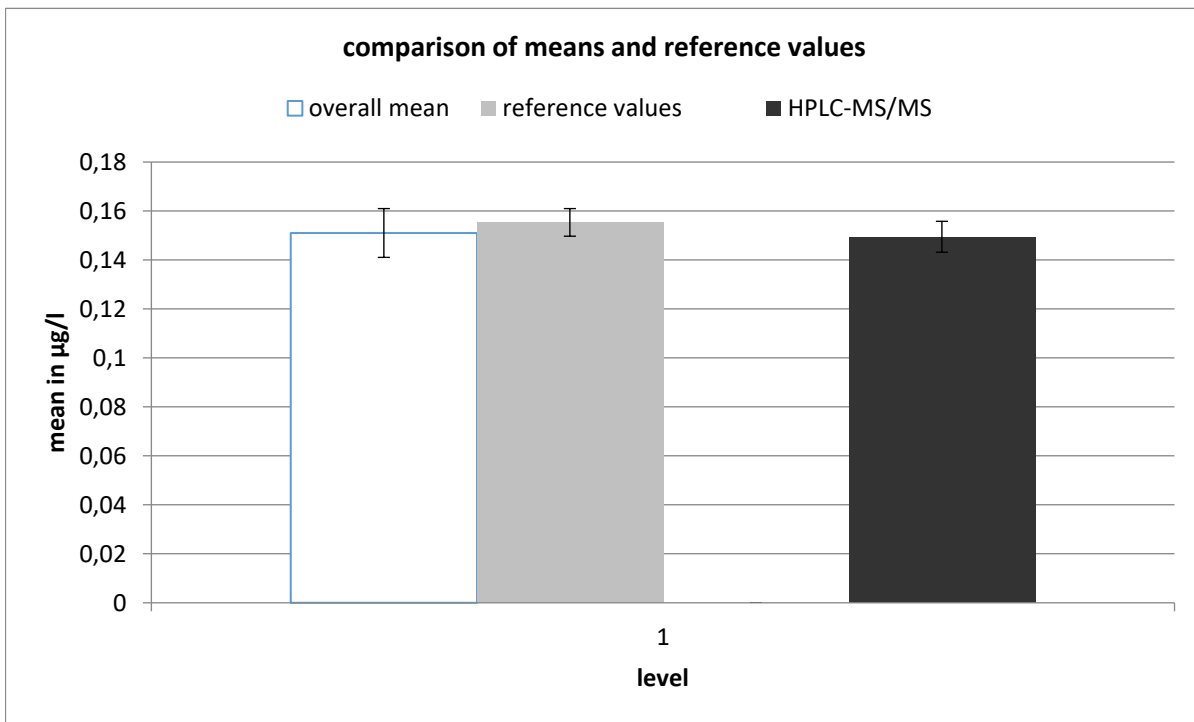
**Method specific evaluation**

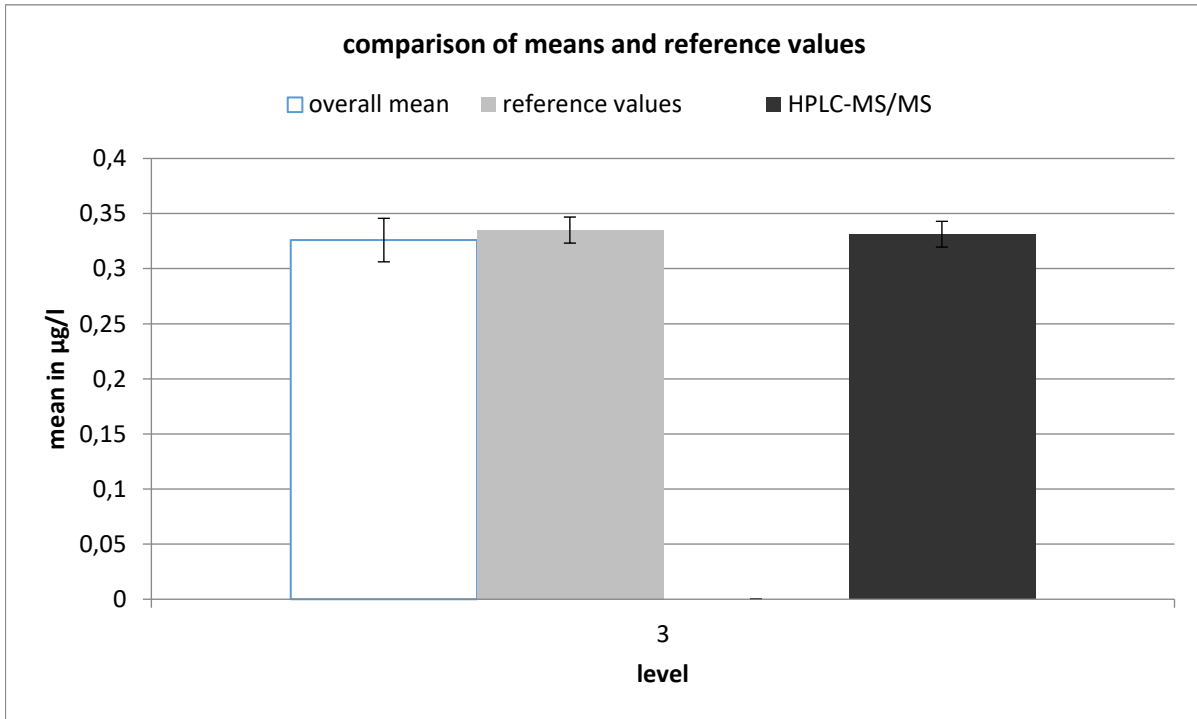
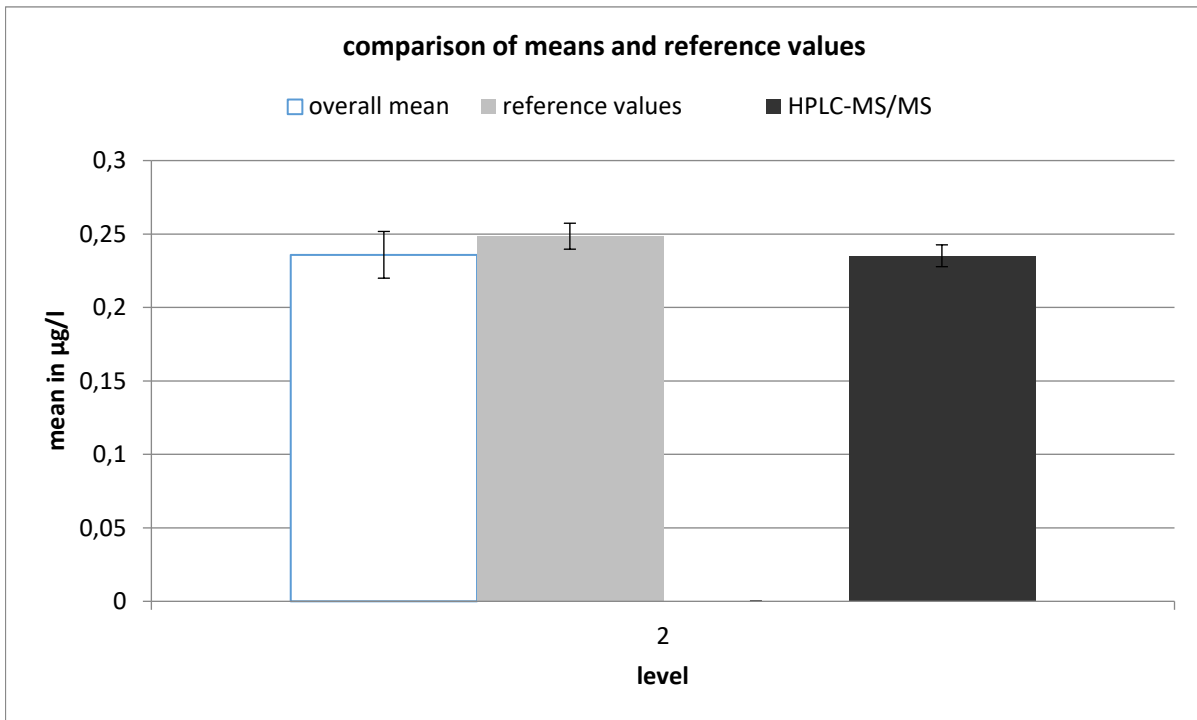


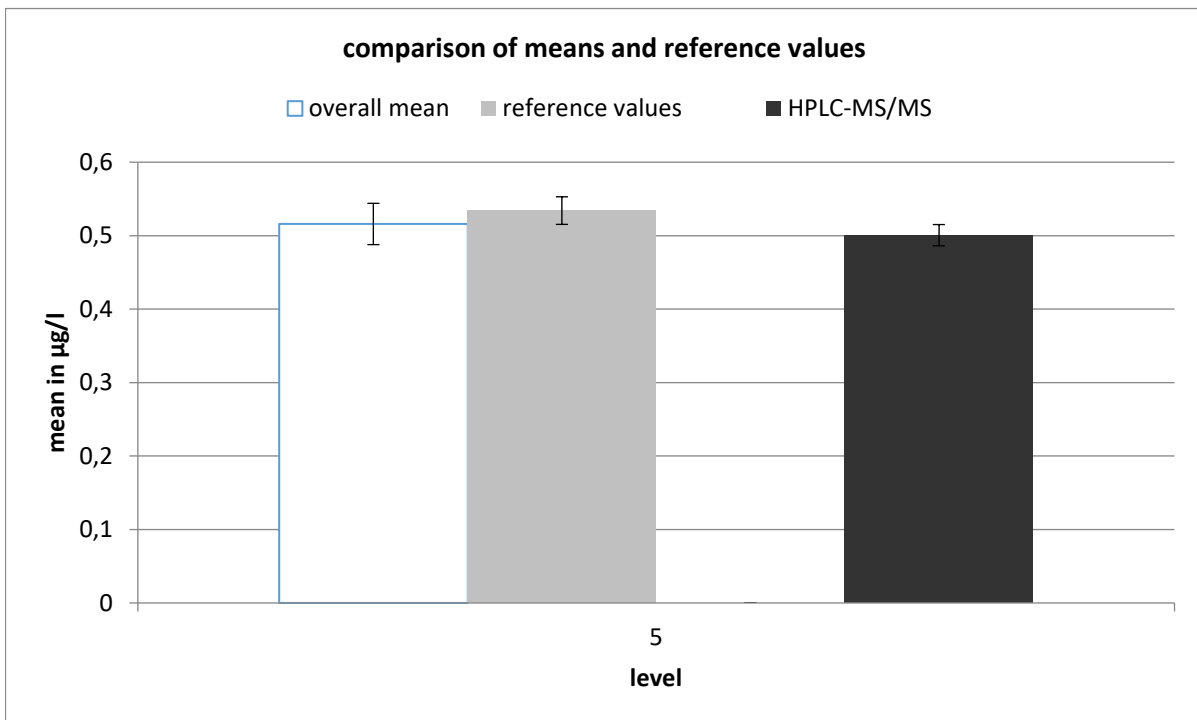
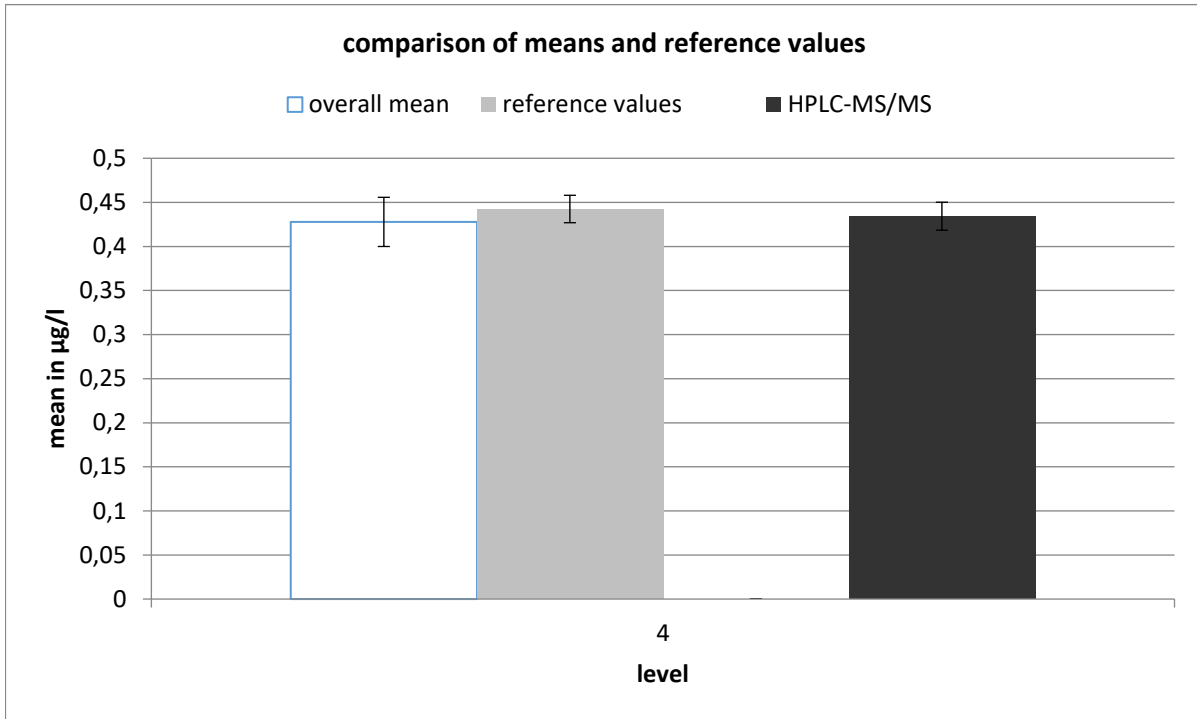
The values determined with HPLC-MS/MS showed the closest statistical distribution.

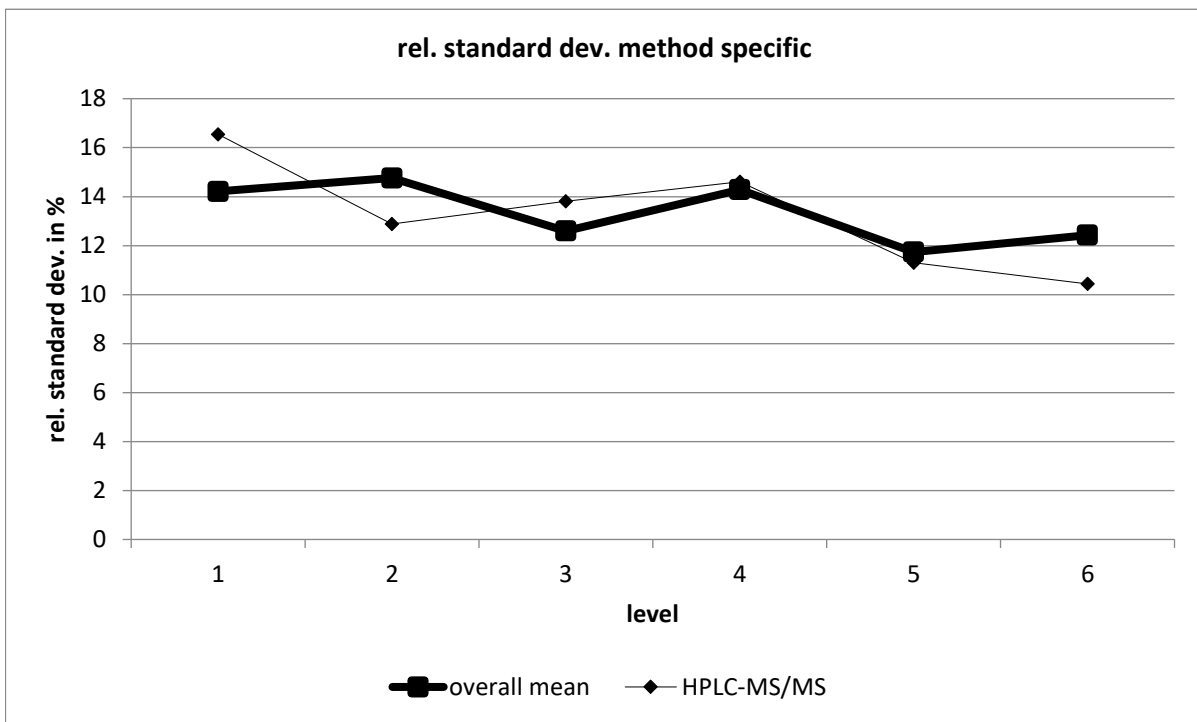
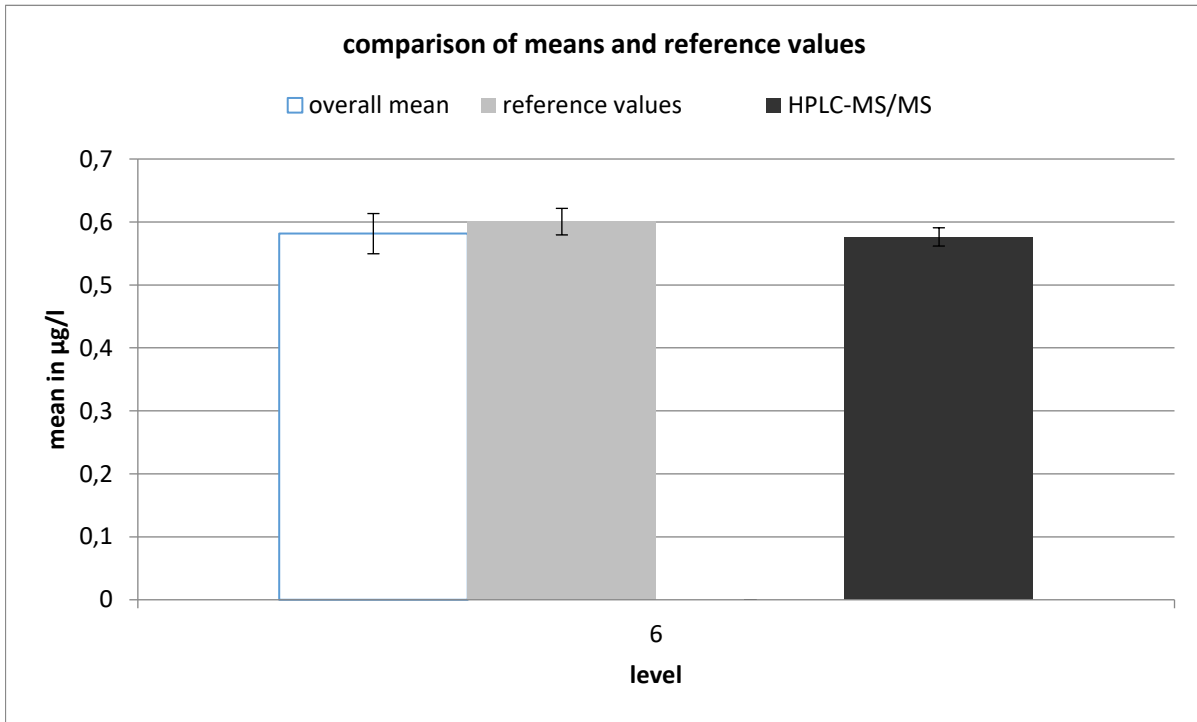
**Comparison of means and reference values**

level	Experimental Data			Reference Data		
	mean [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]	reference value [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]
1	0,1510	0,0100	6,6	0,1554	0,0056	3,6
2	0,2358	0,0159	6,7	0,2485	0,0088	3,6
3	0,3260	0,0198	6,1	0,3350	0,0118	3,5
4	0,4278	0,0279	6,5	0,4425	0,0156	3,5
5	0,5159	0,0281	5,4	0,5341	0,0188	3,5
6	0,5814	0,0319	5,5	0,6005	0,0211	3,5









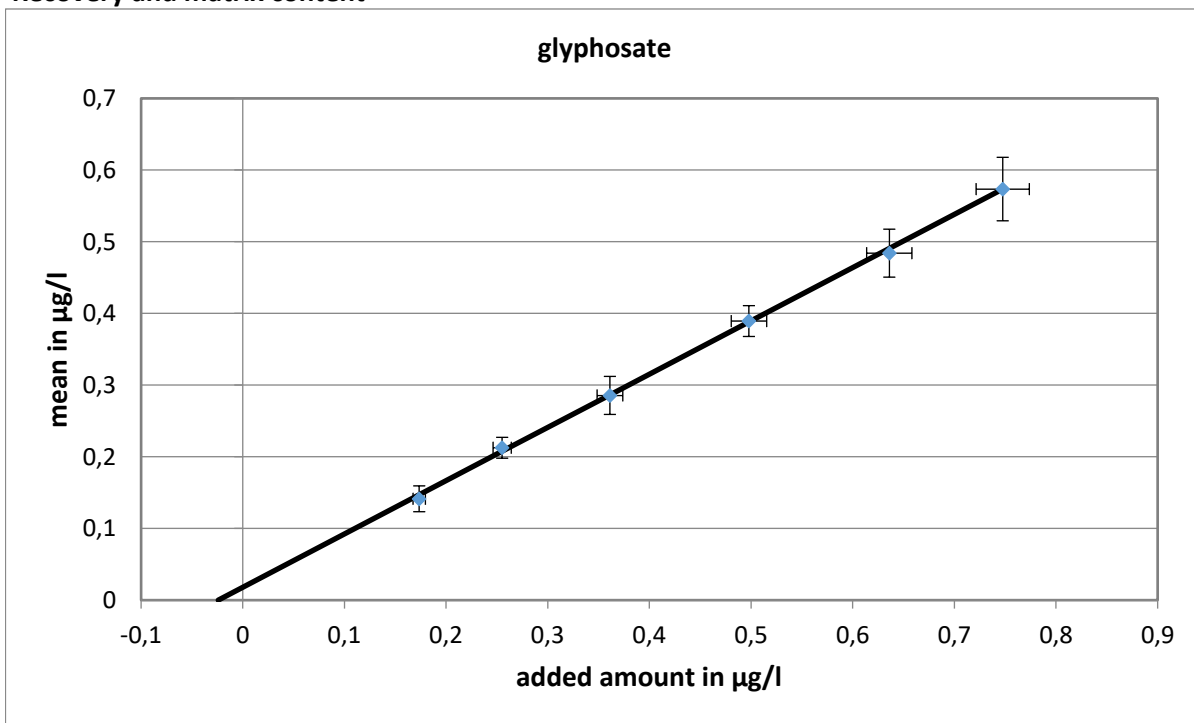
HPLC-MS/MS									
level	robust mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [%]	robust standard deviation [ $\mu\text{g/l}$ ]	robust standard deviation [%]	number of results	out below	out above	out [%]
1	0,149	0,006	4,221	0,025	16,54	24	2	2	16,7
2	0,235	0,007	3,157	0,03	12,88	26	0	1	3,85
3	0,331	0,012	3,524	0,046	13,81	24	4	0	16,7
4	0,434	0,016	3,654	0,063	14,61	25	3	2	20
5	0,501	0,014	2,884	0,057	11,3	24	2	2	16,7
6	0,576	0,014	2,51	0,06	10,44	27	2	0	7,41



# glyphosate

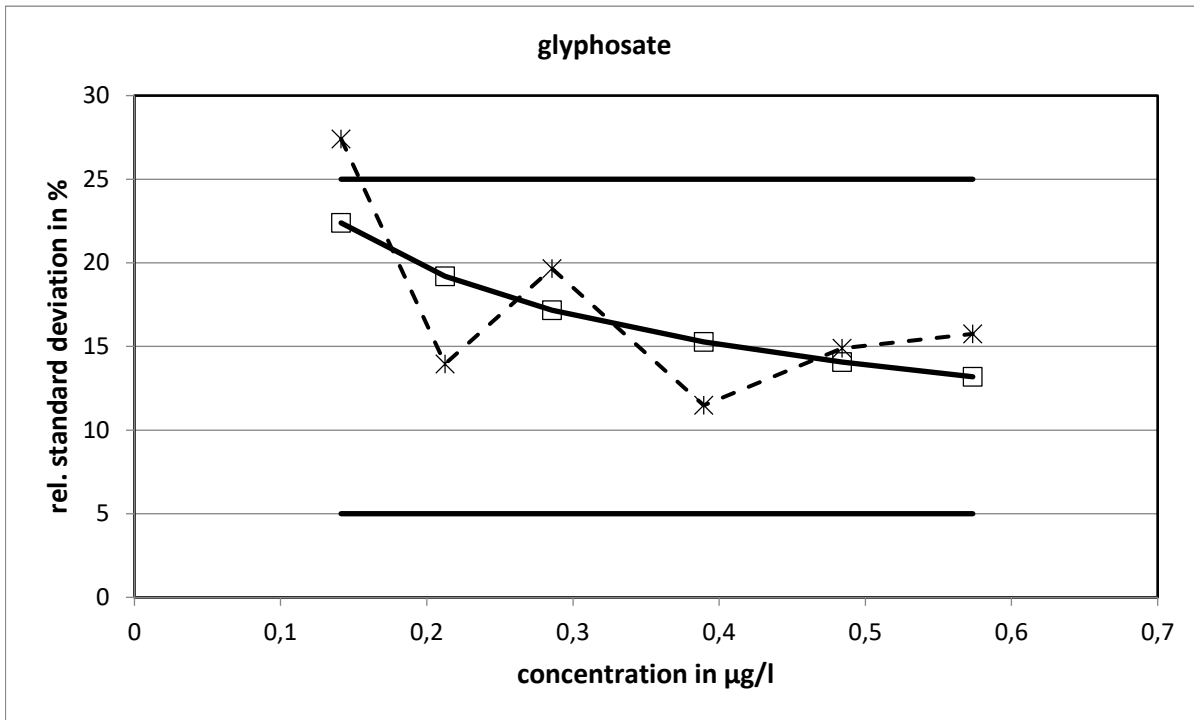
level	assigned value [µg/l]	expanded uncertainty of the assigned value [%]	standard deviation, calculated using robust statistics [µg/l]	standard deviation from variance function [µg/l]	standard deviation for proficiency assessment [µg/l]	standard deviation for proficiency assessment [%]	upper tolerance limit [µg/l]	lower tolerance limit [µg/l]	upper tolerance limit [%]	lower tolerance limit [%]	number of results	out below	out above	out [%]
1	0,1414	12,73	0,0388	0,0317	0,0317	22,39	0,2135	0,0837	51,01	-40,81	29	2	3	17,2
2	0,2126	6,84	0,0297	0,0408	0,0408	19,19	0,3036	0,1374	42,82	-35,36	26	3	1	15,4
3	0,2856	9,29	0,0561	0,0490	0,0490	17,16	0,3936	0,1946	37,81	-31,86	28	5	2	25,0
4	0,3894	5,52	0,0447	0,0594	0,0594	15,27	0,5188	0,2782	33,24	-28,54	27	2	0	7,4
5	0,4841	6,91	0,0721	0,0681	0,0681	14,06	0,6313	0,3563	30,39	-26,41	29	4	0	13,8
6	0,5735	7,72	0,0903	0,0756	0,0756	13,19	0,7361	0,4310	28,35	-24,86	26	3	1	15,4
sum											165	19	7	15,8

## Recovery and matrix content

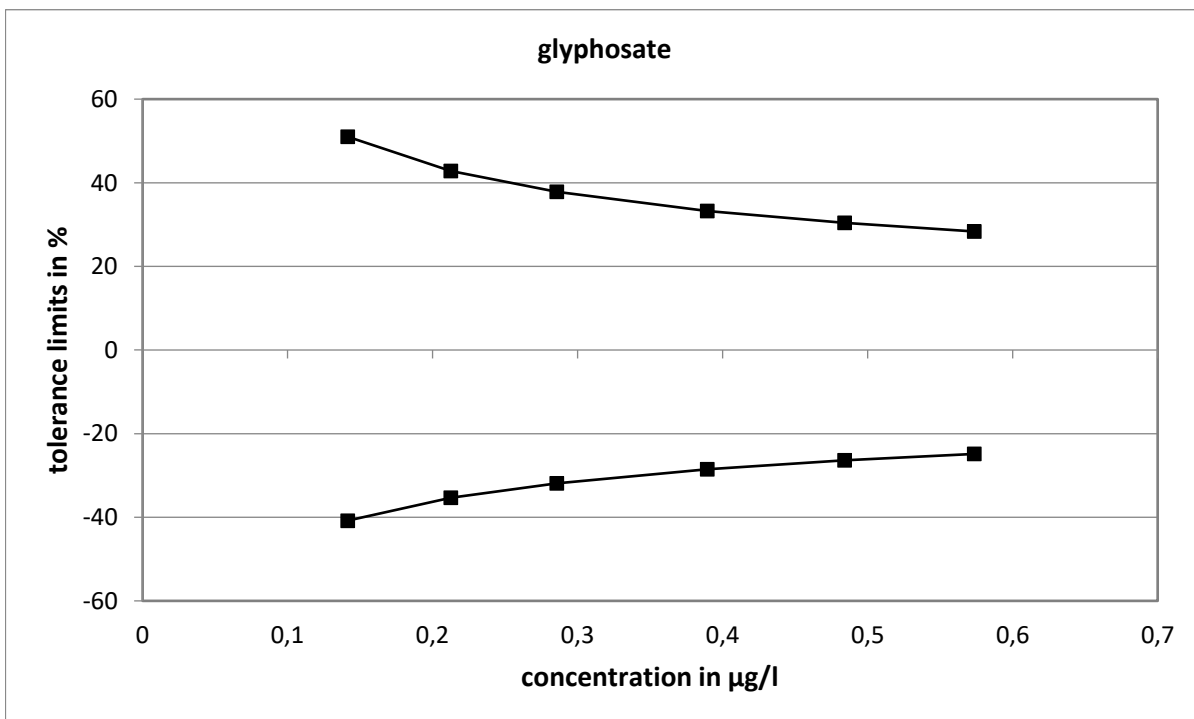


slope of the regression: 0,743; recovery rate: 74,3%  
 neg. x-axis intercept = matrix content: 0,024 µg/l  
 expanded uncertainty of the matrix content: 0,024 µg/l = 100%

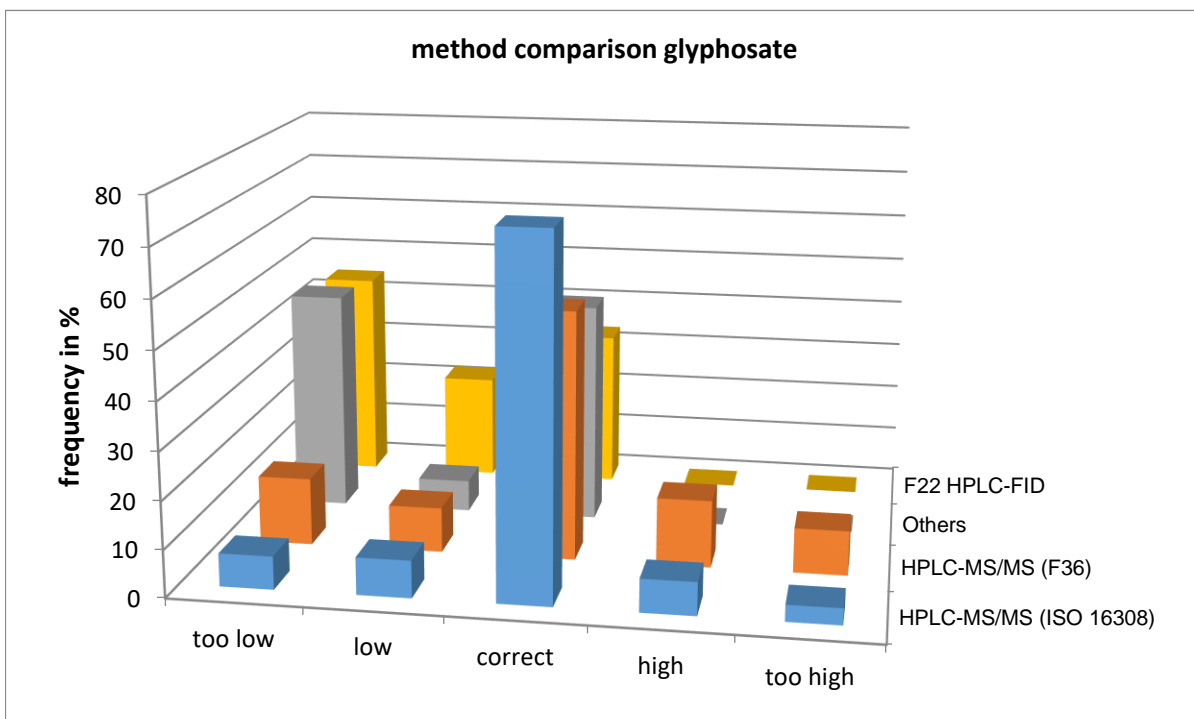
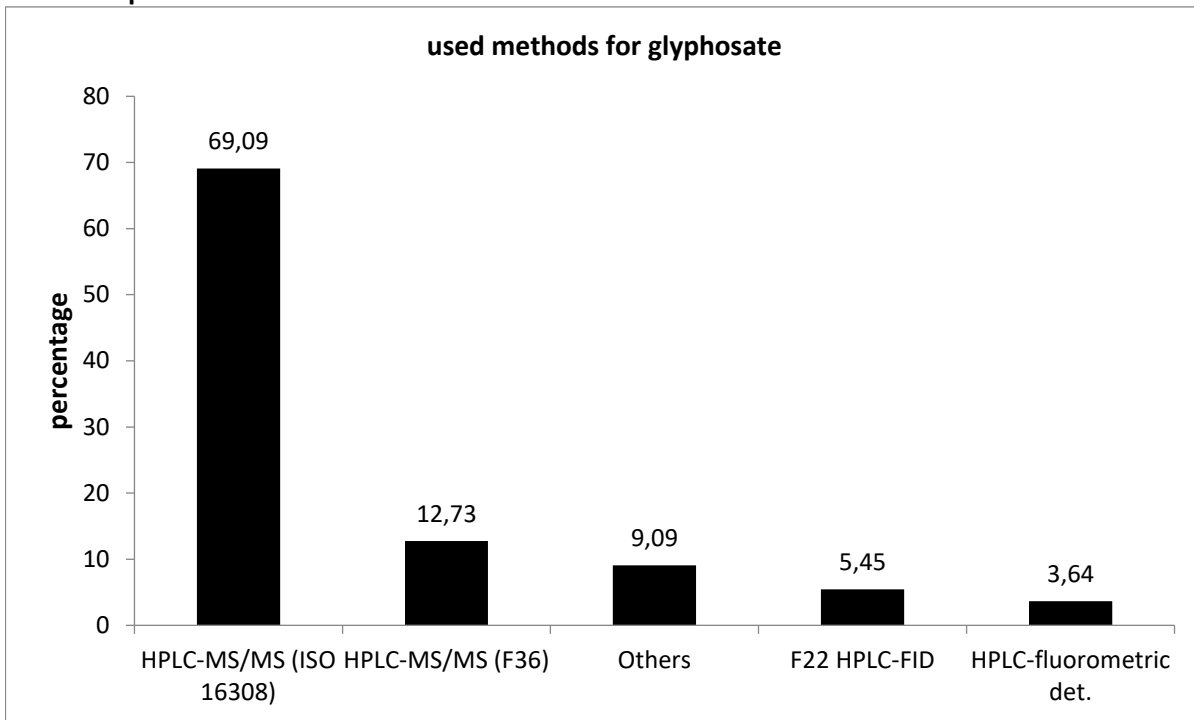
Relative standard deviation and tolerance limits



The relative standard deviations calculated from the variance function did not reach the limits.



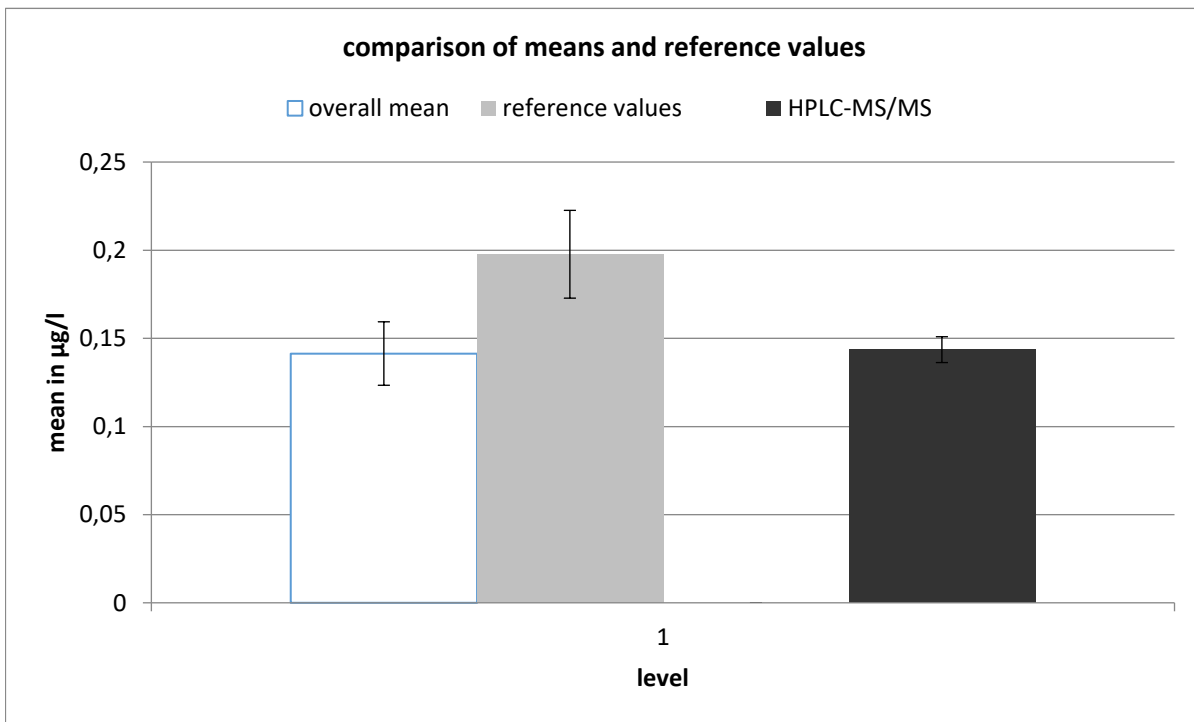
Method specific evaluation

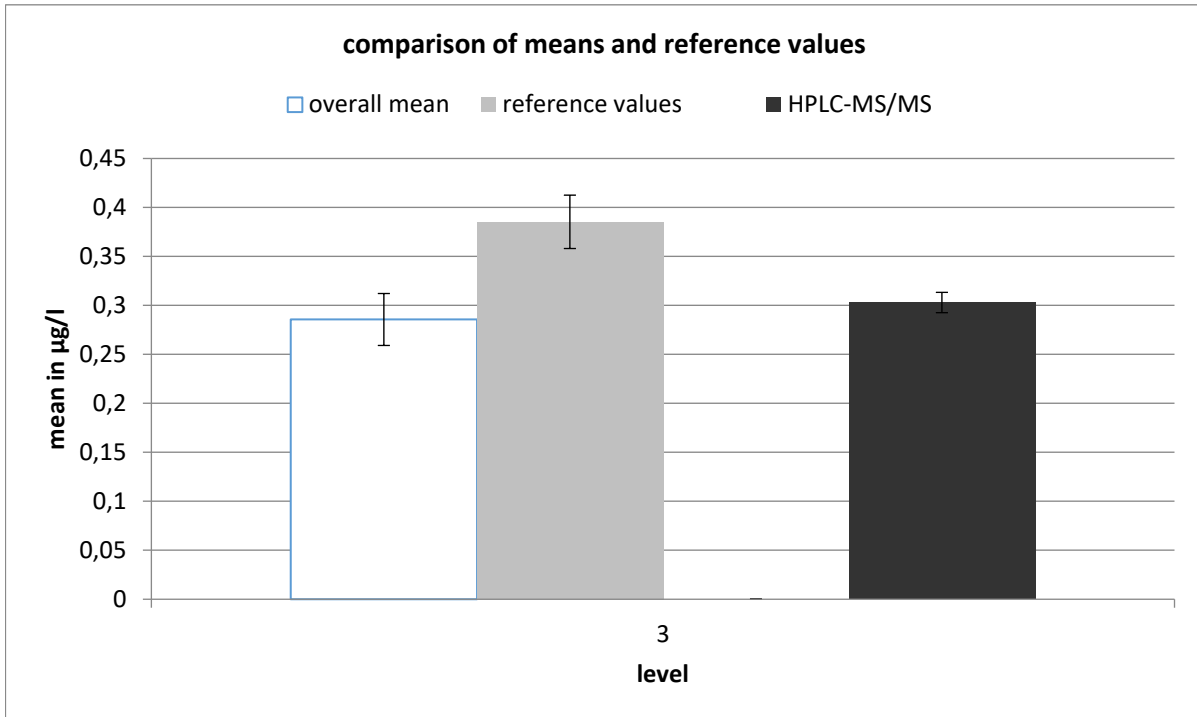
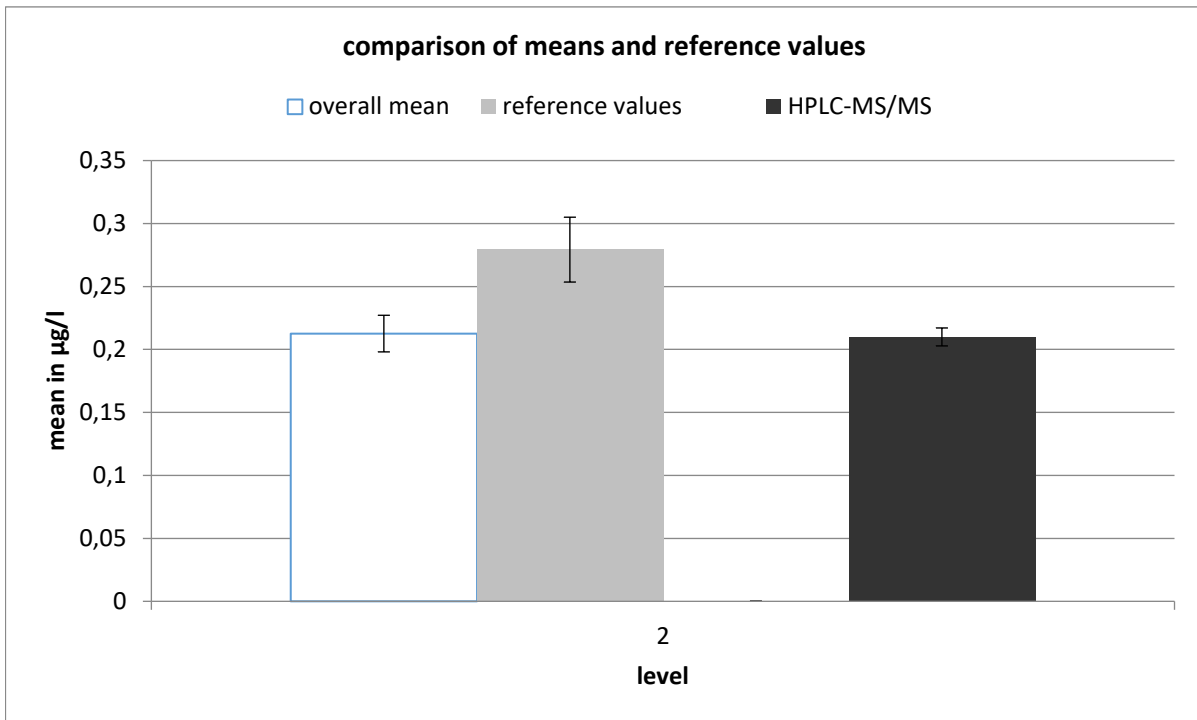


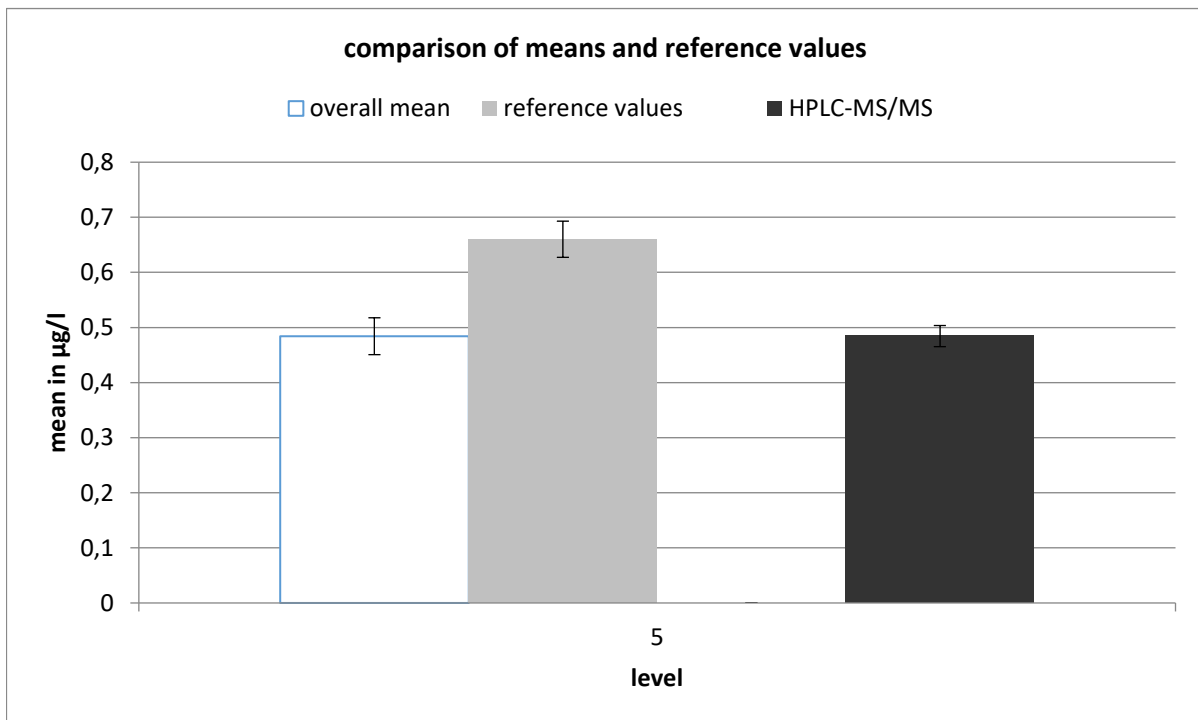
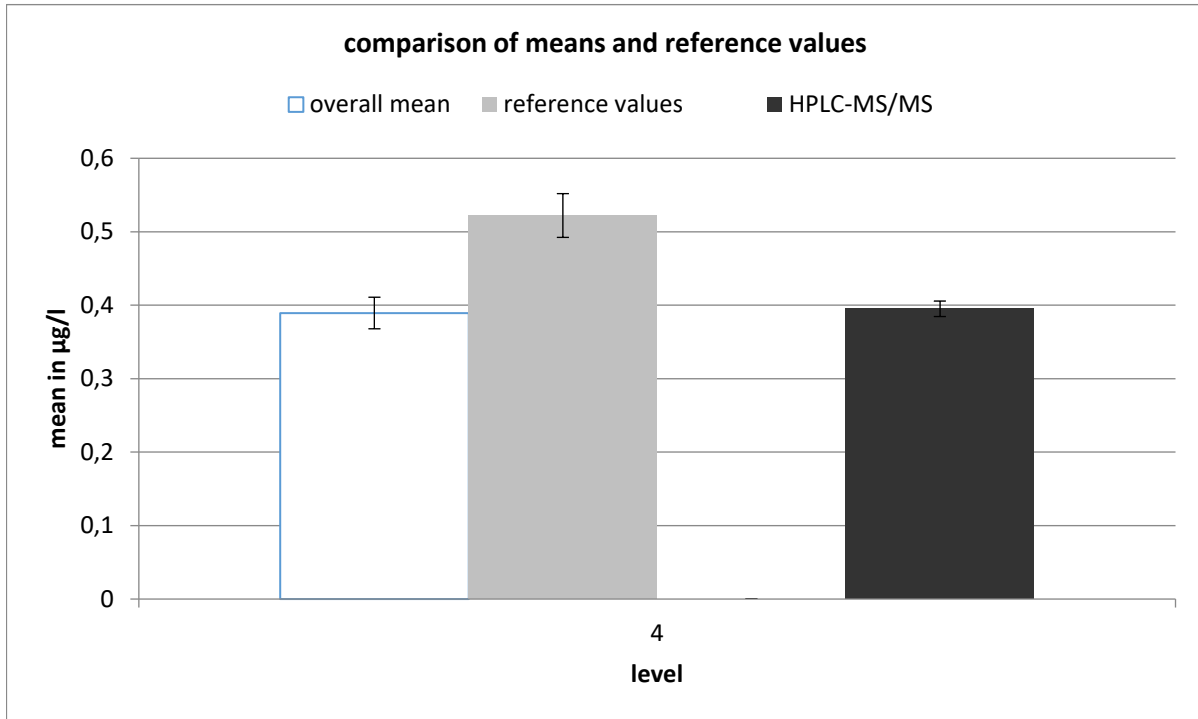
The values determined with ISO 16308 showed the closest statistical distribution.

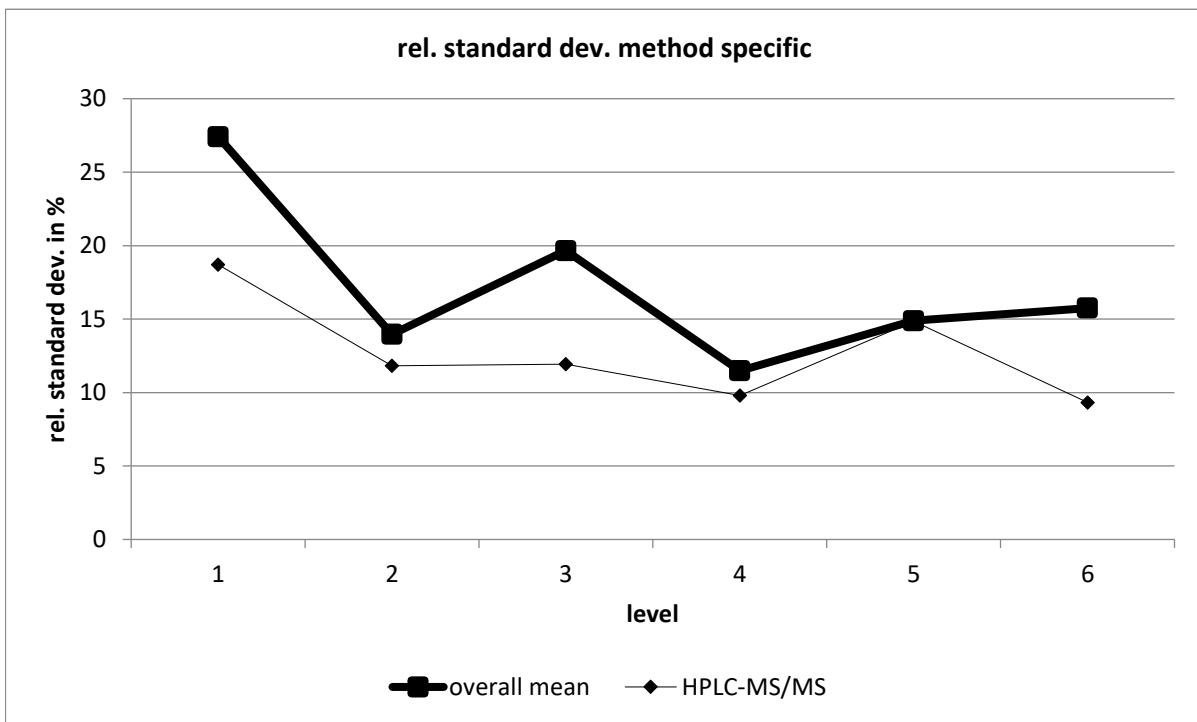
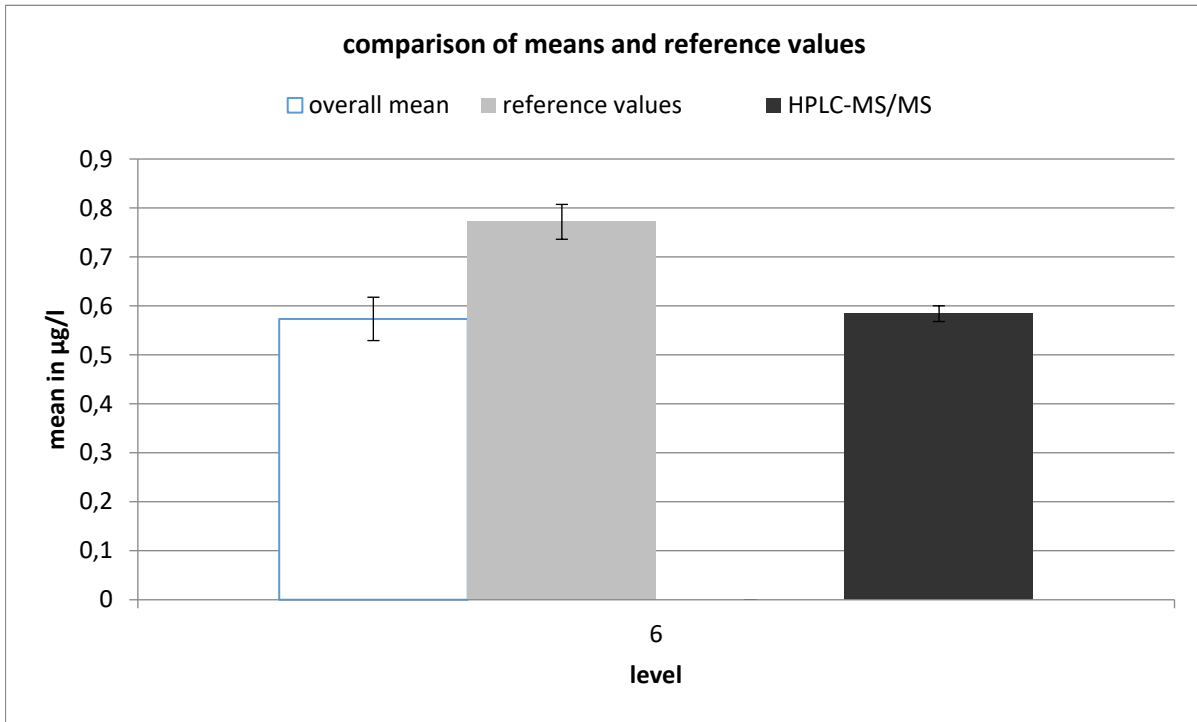
**Comparison of means and reference values**

level	mean			reference value		
	mean [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]	reference value [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]
1	0,1414	0,0180	12,7	0,1977	0,0249	12,6
2	0,2126	0,0145	6,8	0,2793	0,0257	9,2
3	0,2856	0,0265	9,3	0,3853	0,0272	7,1
4	0,3894	0,0215	5,5	0,5221	0,0298	5,7
5	0,4841	0,0335	6,9	0,6601	0,0328	5,0
6	0,5735	0,0443	7,7	0,7717	0,0356	4,6









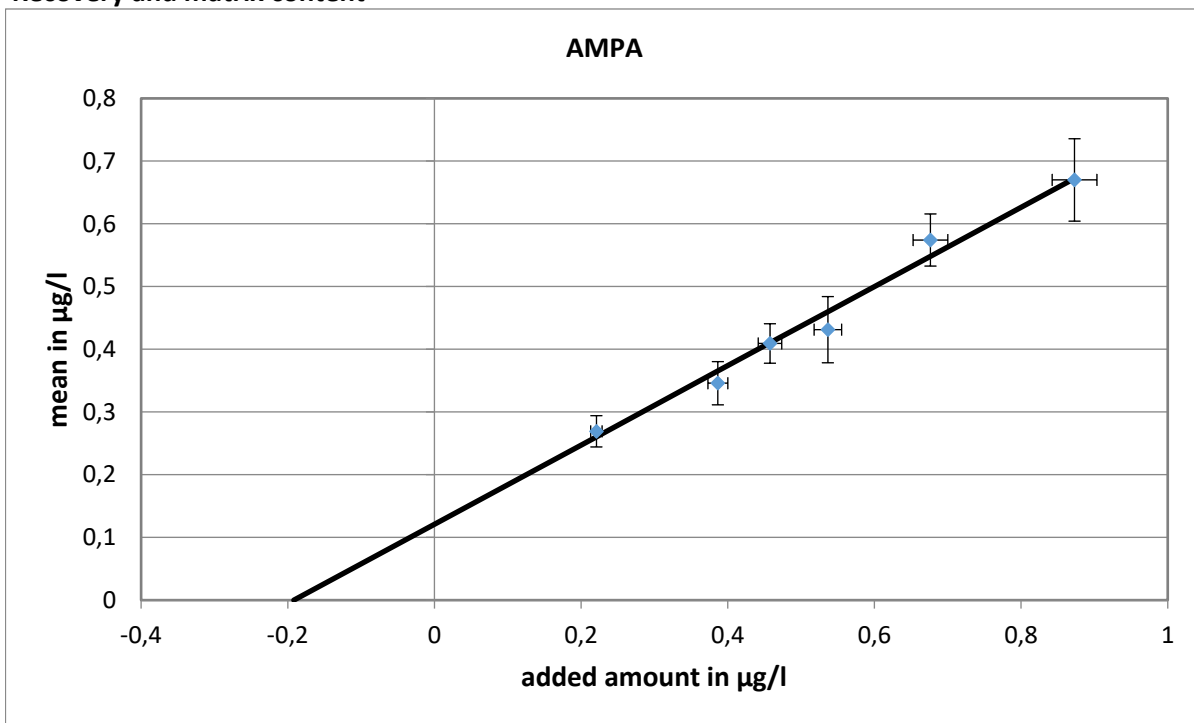
HPLC-MS/MS									
level	robust mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [%]	robust standard deviation [ $\mu\text{g/l}$ ]	robust standard deviation [%]	number of results	out below	out above	out [%]
1	0,144	0,007	5,103	0,027	18,71	21	1	4	23,8
2	0,21	0,007	3,392	0,025	11,83	19	4	1	26,3
3	0,303	0,01	3,424	0,036	11,94	19	4	0	21,1
4	0,395	0,011	2,67	0,039	9,789	21	1	1	9,52
5	0,484	0,019	3,959	0,072	14,86	22	2	0	9,09
6	0,584	0,016	2,748	0,054	9,328	18	2	1	16,7



# AMPA

level	assigned value [µg/l]	expanded uncertainty of the assigned value [%]	standard deviation, calculated using robust statistics [µg/l]	standard deviation from variance function [µg/l]	standard deviation for proficiency assessment [µg/l]	standard deviation for proficiency assessment [%]	upper tolerance limit [µg/l]	lower tolerance limit [µg/l]	upper tolerance limit [%]	lower tolerance limit [%]	number of results	out below	out above	out [%]
1	0,2692	9,28	0,0509	0,0537	0,0537	19,96	0,3896	0,1704	44,75	-36,68	26	4	1	19,2
2	0,3459	9,97	0,0743	0,0678	0,0678	19,60	0,4975	0,2211	43,86	-36,08	29	2	1	10,3
3	0,4093	7,68	0,0654	0,0793	0,0793	19,37	0,5864	0,2633	43,27	-35,68	27	3	0	11,1
4	0,4312	12,25	0,1077	0,0832	0,0832	19,30	0,6171	0,2779	43,09	-35,55	26	3	0	11,5
5	0,5742	7,23	0,0894	0,1086	0,1086	18,91	0,8161	0,3739	42,12	-34,88	29	2	0	6,9
6	0,6700	9,80	0,1390	0,1253	0,1253	18,70	0,9487	0,4387	41,60	-34,53	28	3	1	14,3
sum											165	17	3	12,1

## Recovery and matrix content

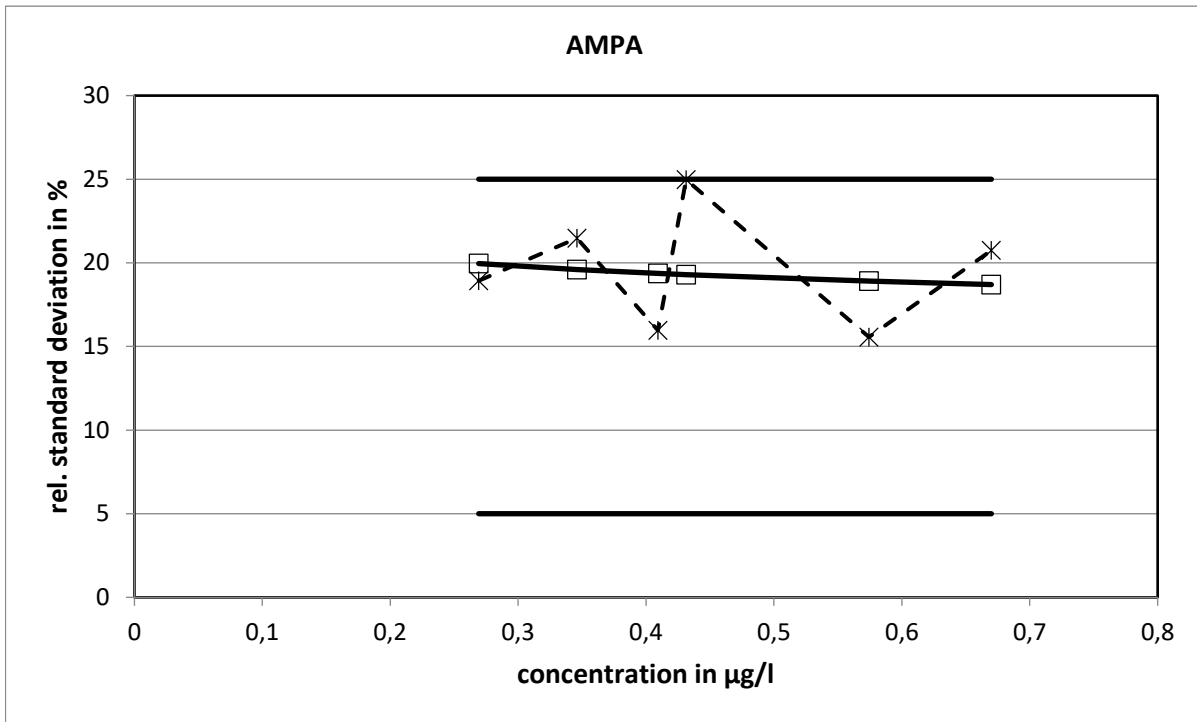


slope of the regression: 0,632; recovery rate: 63,2%

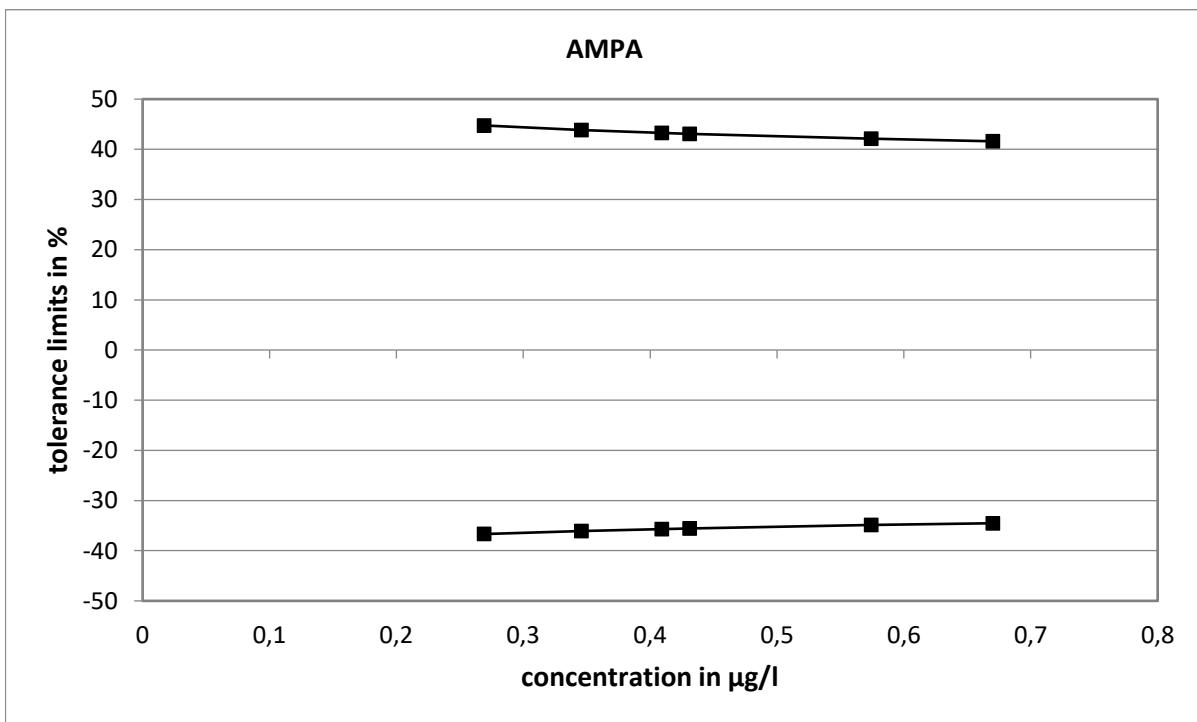
neg. x-axis intercept = matrix content: 0,192 µg/l

expanded uncertainty of the matrix content: 0,082 µg/l = 42,7%

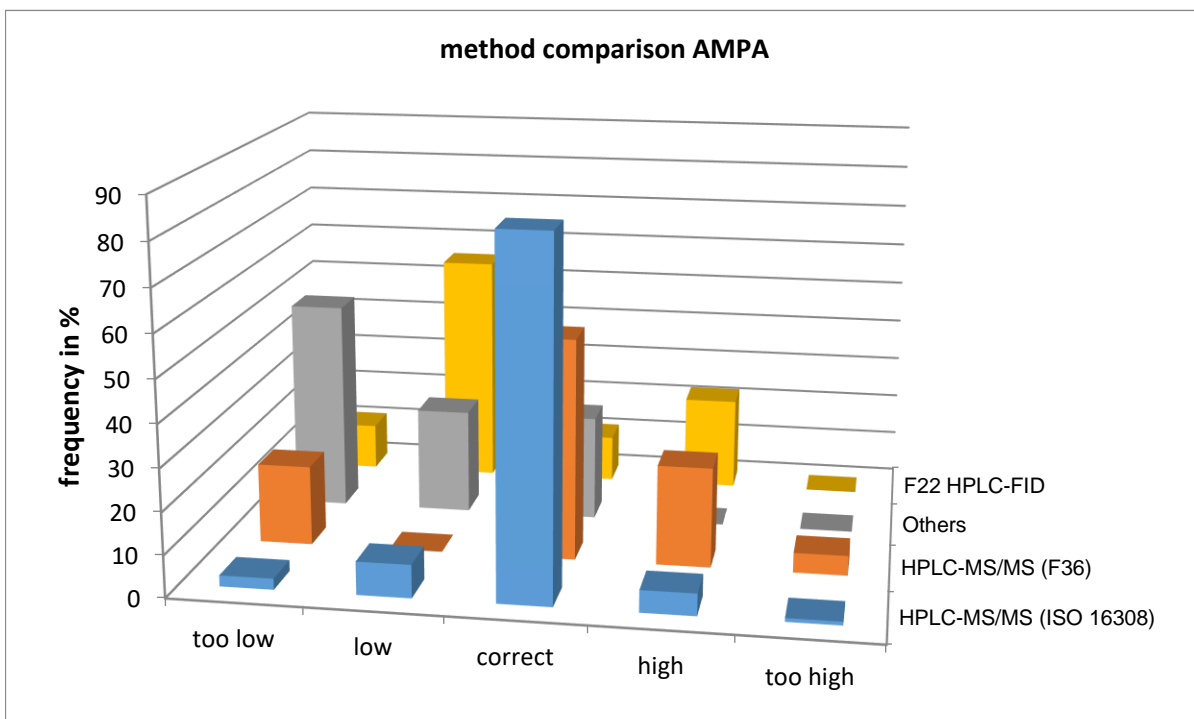
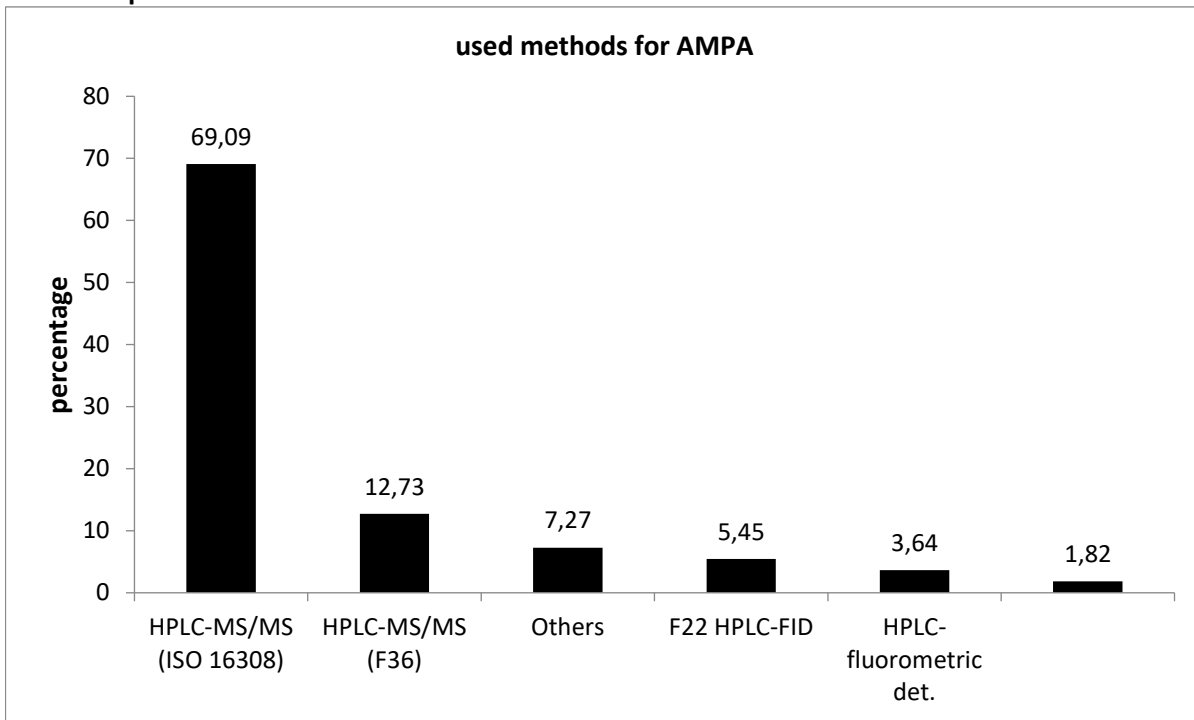
**Relative standard deviation and tolerance limits**



The relative standard deviations calculated from the variance function did not reach the limits.



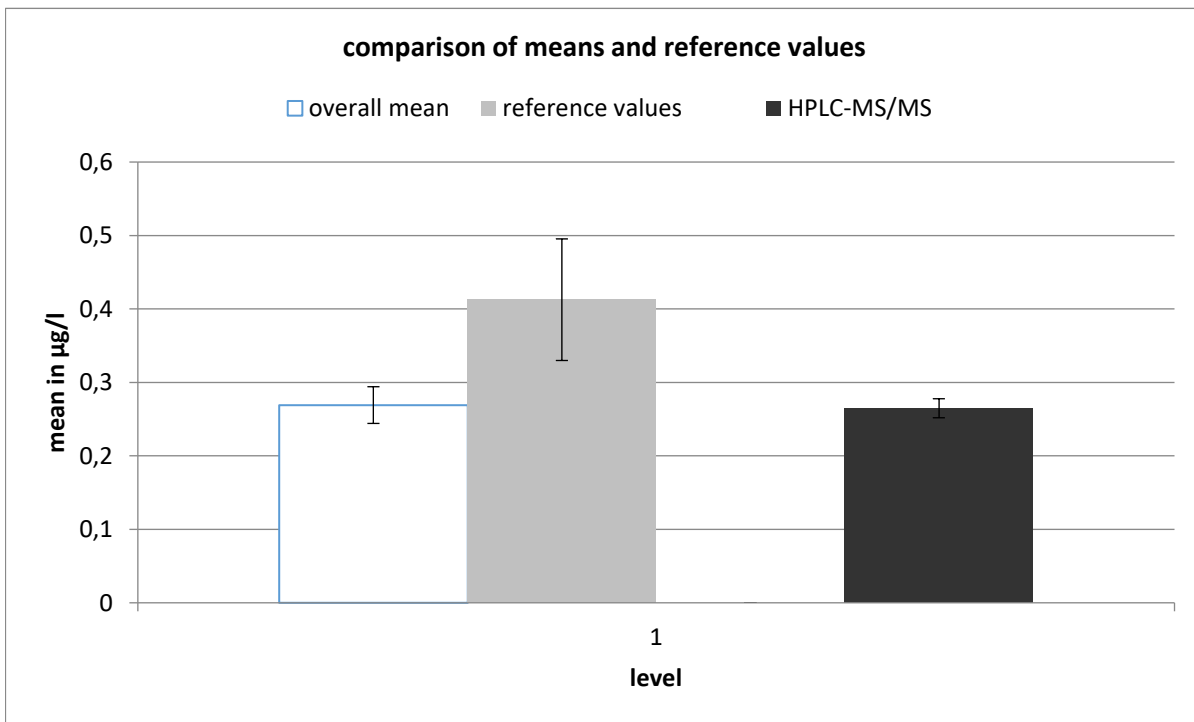
Method specific evaluation

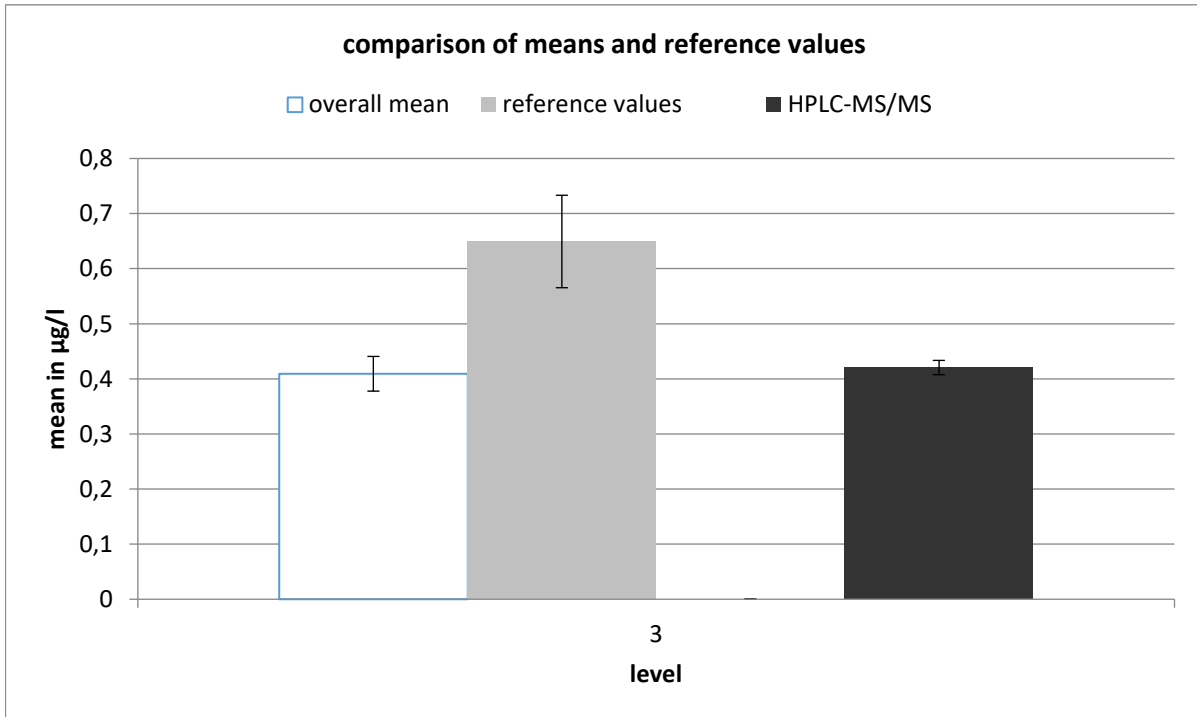
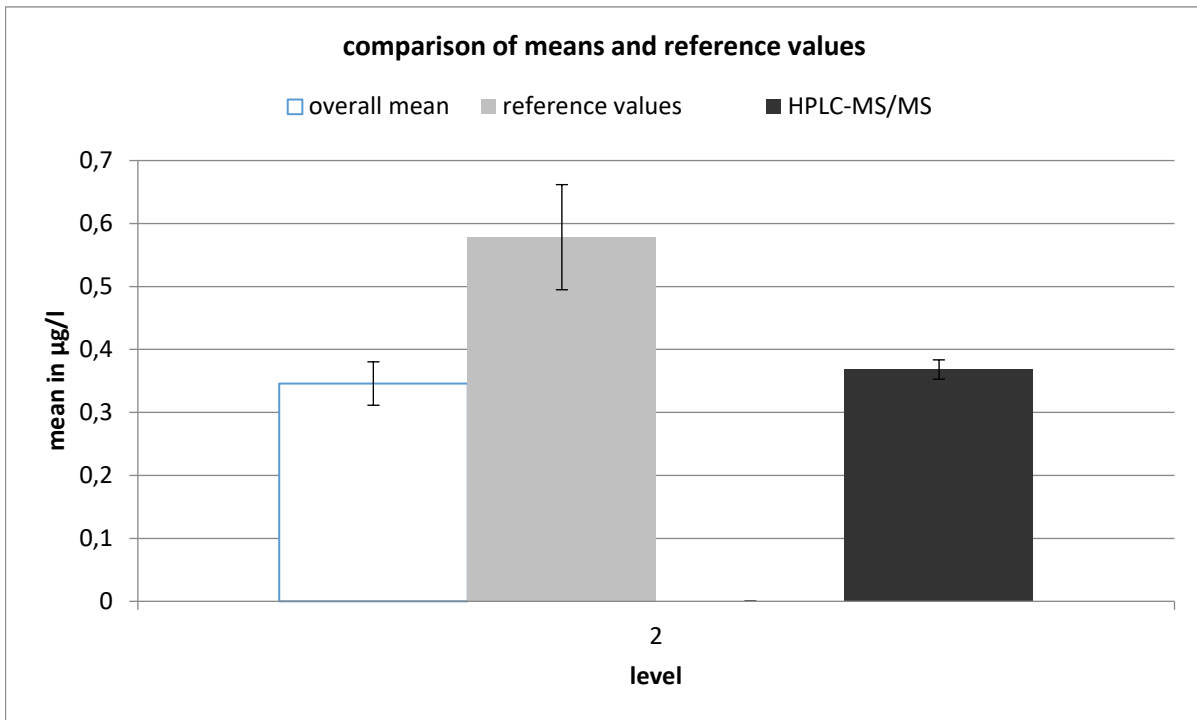


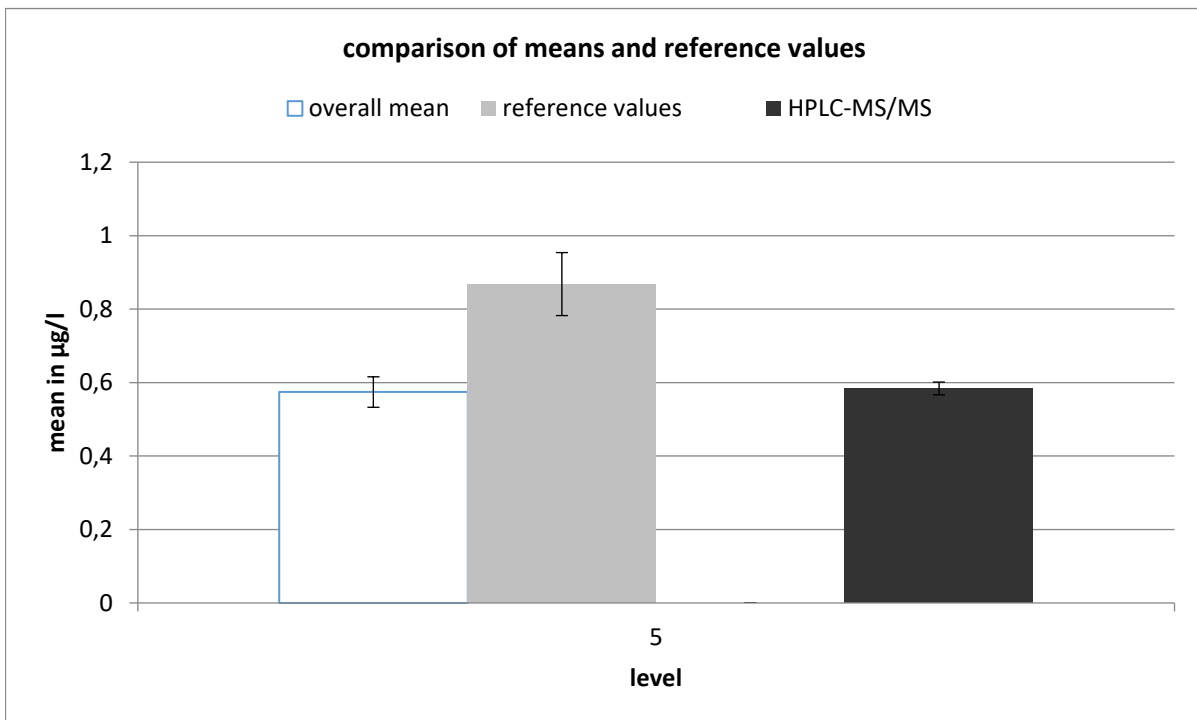
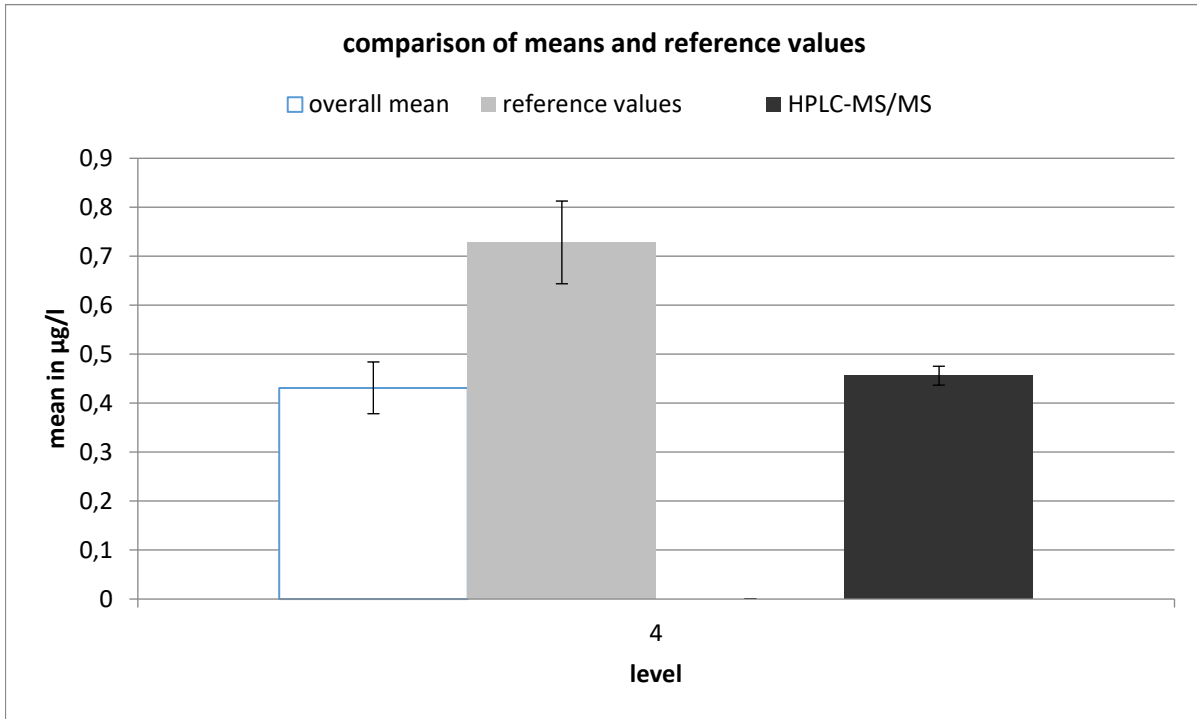
The values determined with ISO 16308 showed the closest statistical distribution.

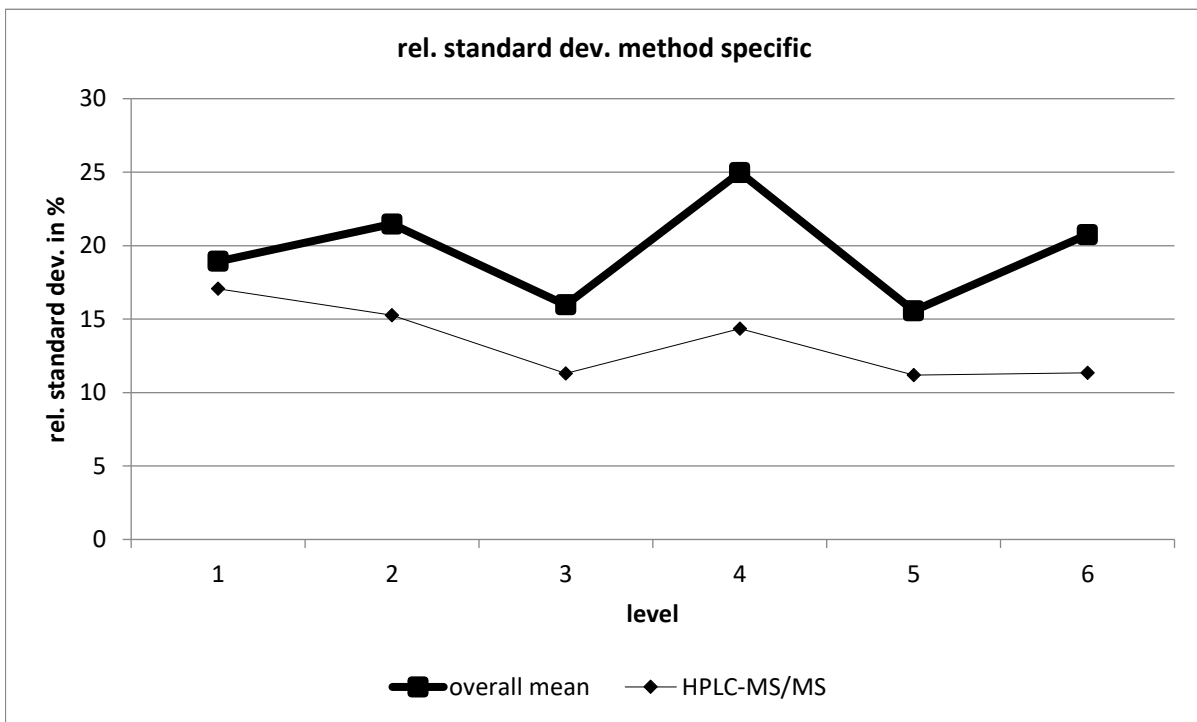
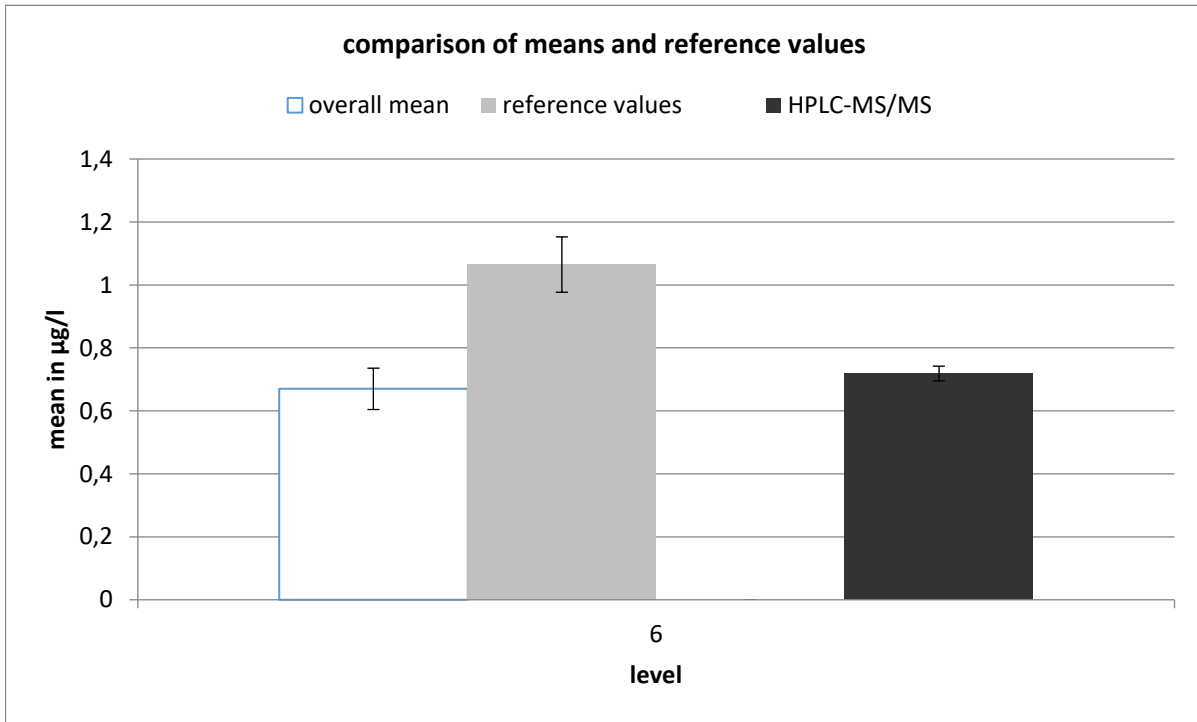
**Comparison of means and reference values**

level	Experimental Data			Reference Data		
	mean [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]	reference value [µg/l]	exp. uncertainty [µg/l]	exp. uncertainty [%]
1	0,2692	0,0250	9,3	0,4126	0,0827	20,1
2	0,3459	0,0345	10,0	0,5783	0,0835	14,4
3	0,4093	0,0314	7,7	0,6493	0,0839	12,9
4	0,4312	0,0528	12,2	0,7283	0,0845	11,6
5	0,5742	0,0415	7,2	0,8682	0,0857	9,9
6	0,6700	0,0657	9,8	1,0647	0,0879	8,3



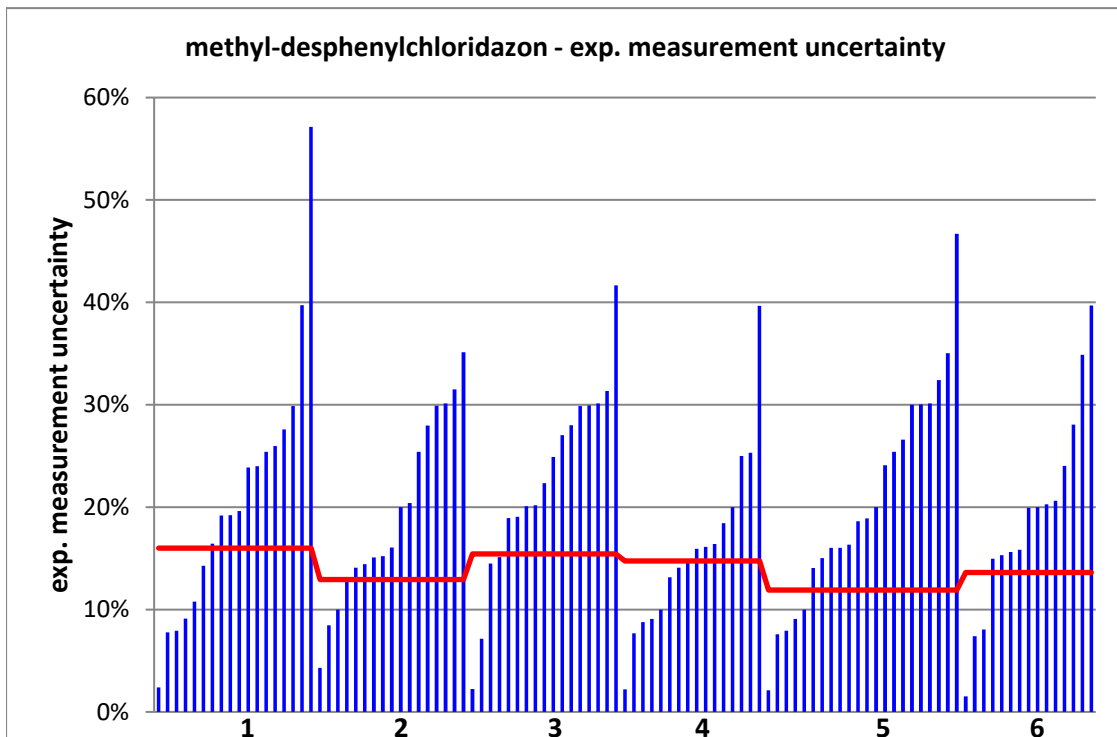
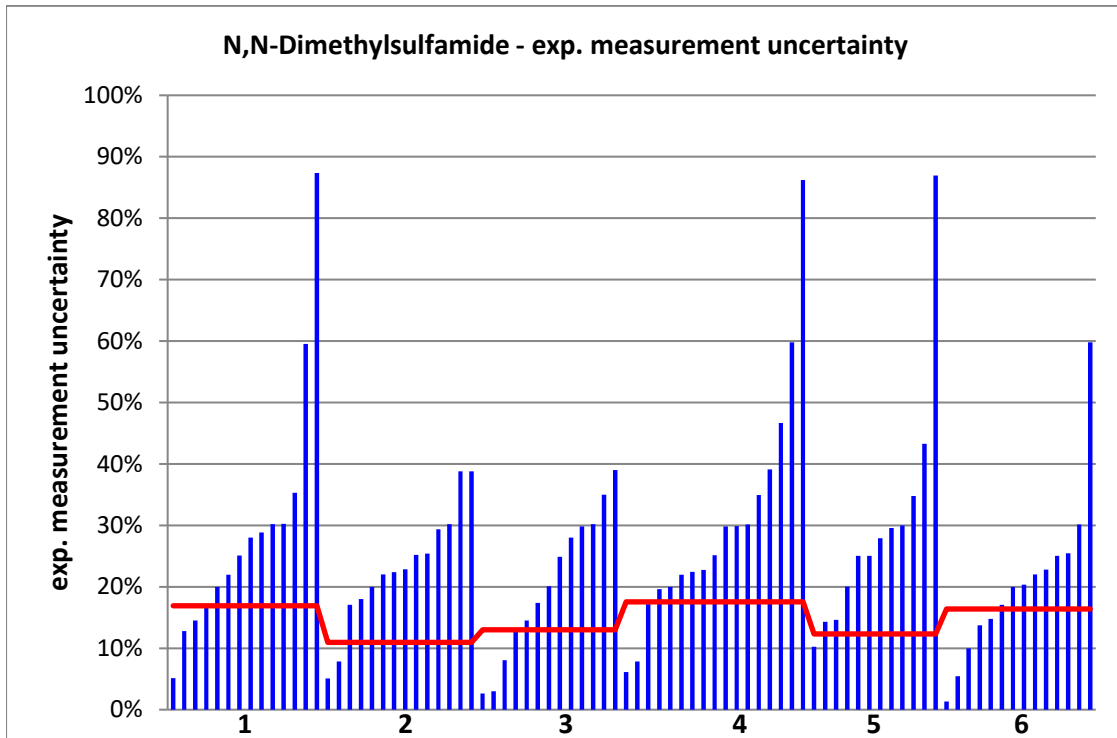


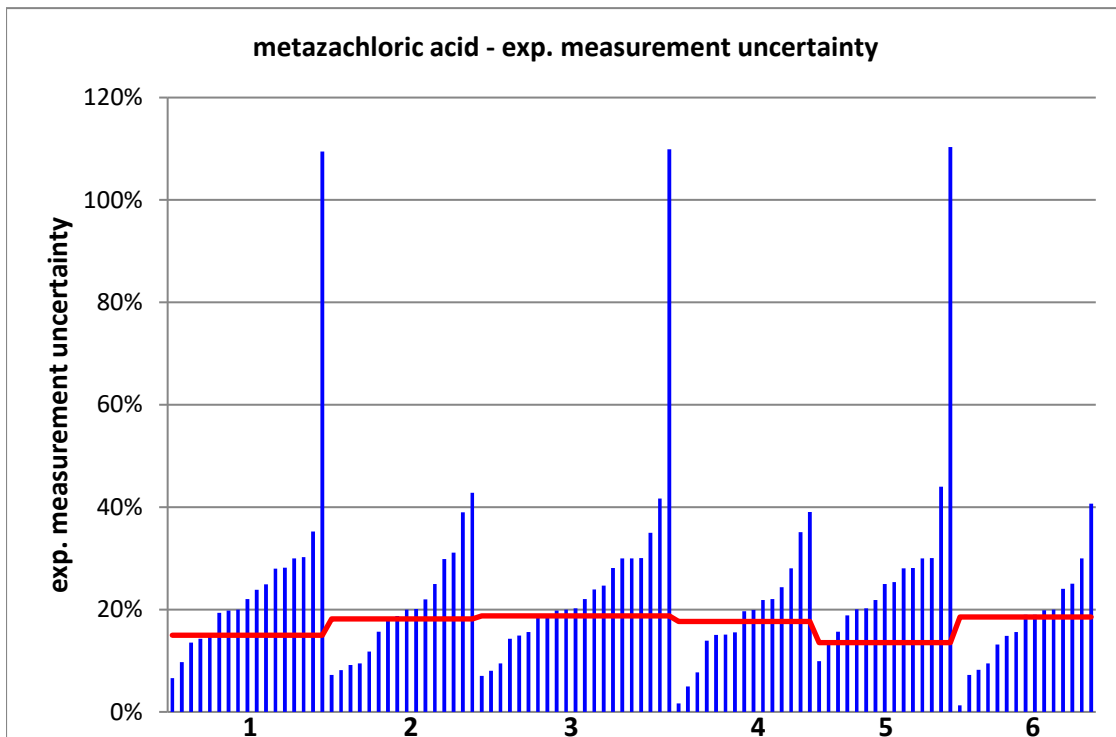
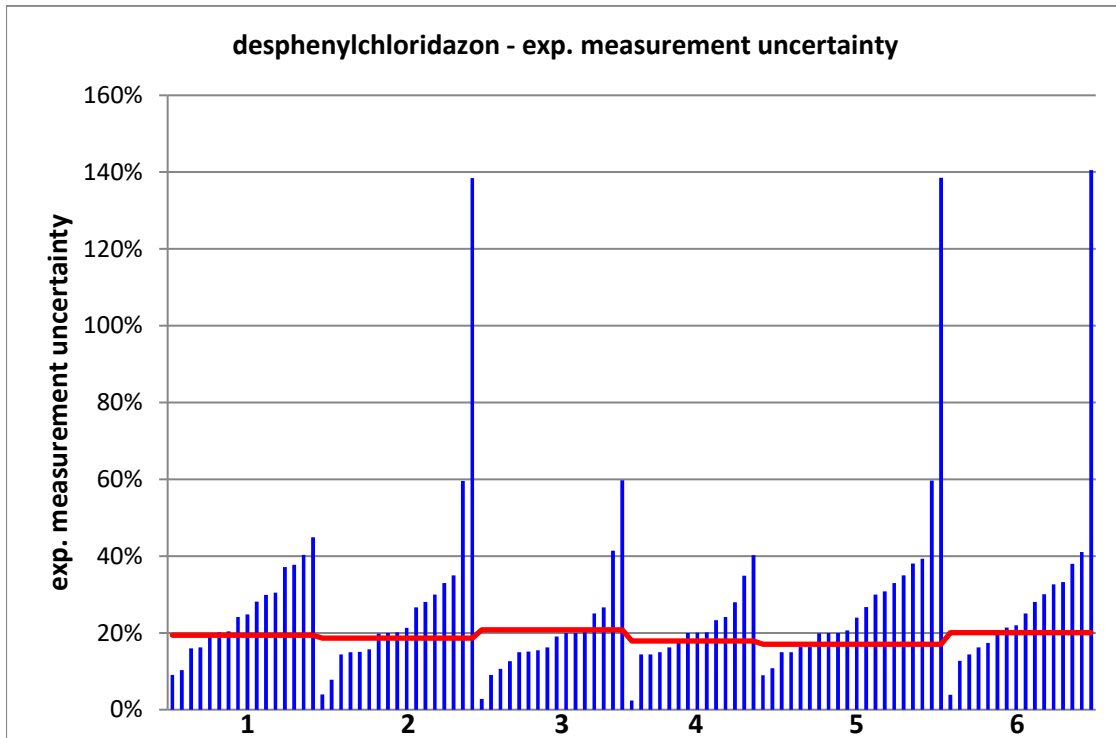


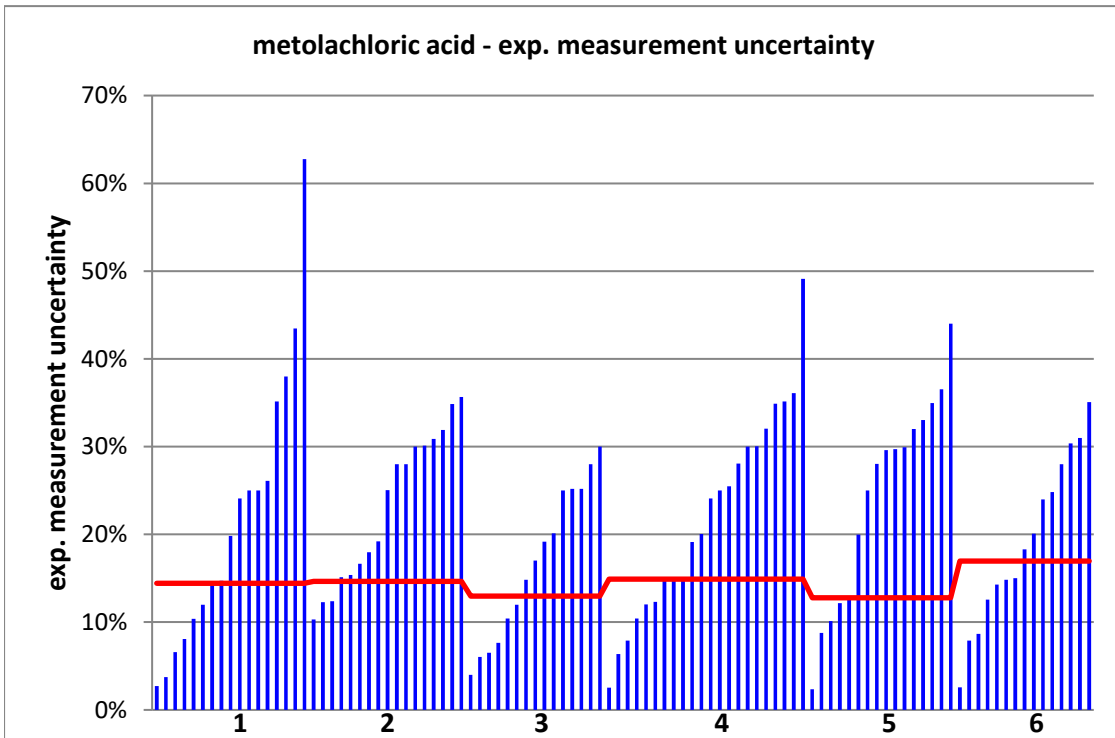
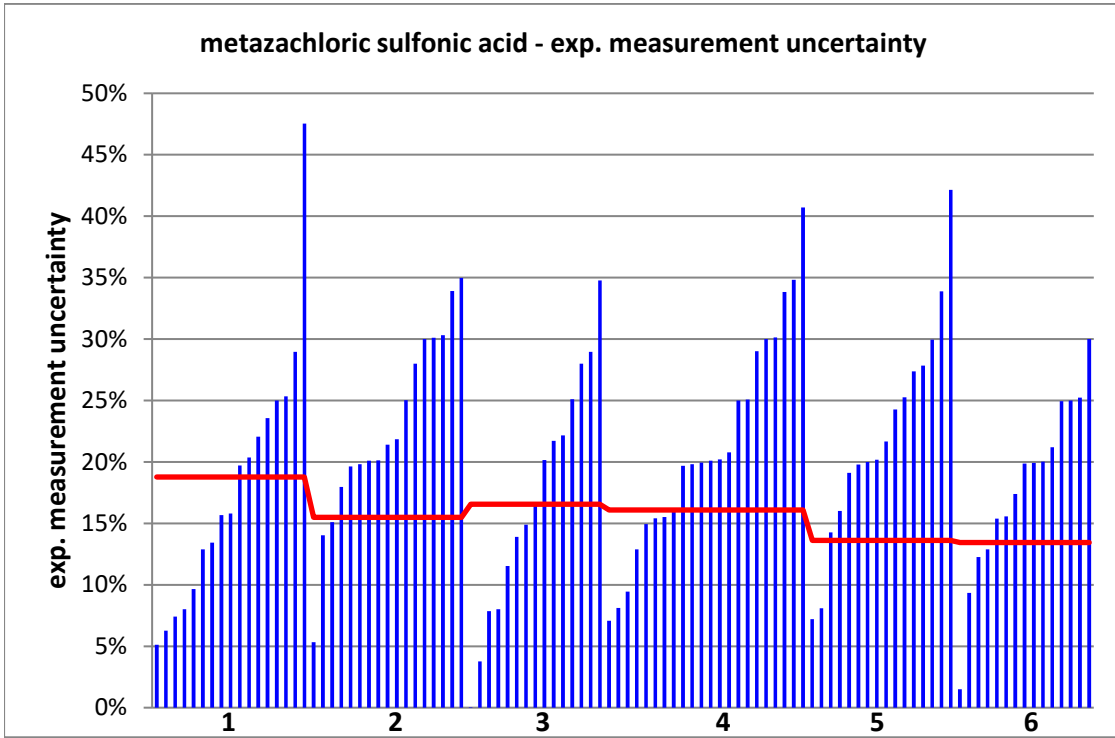


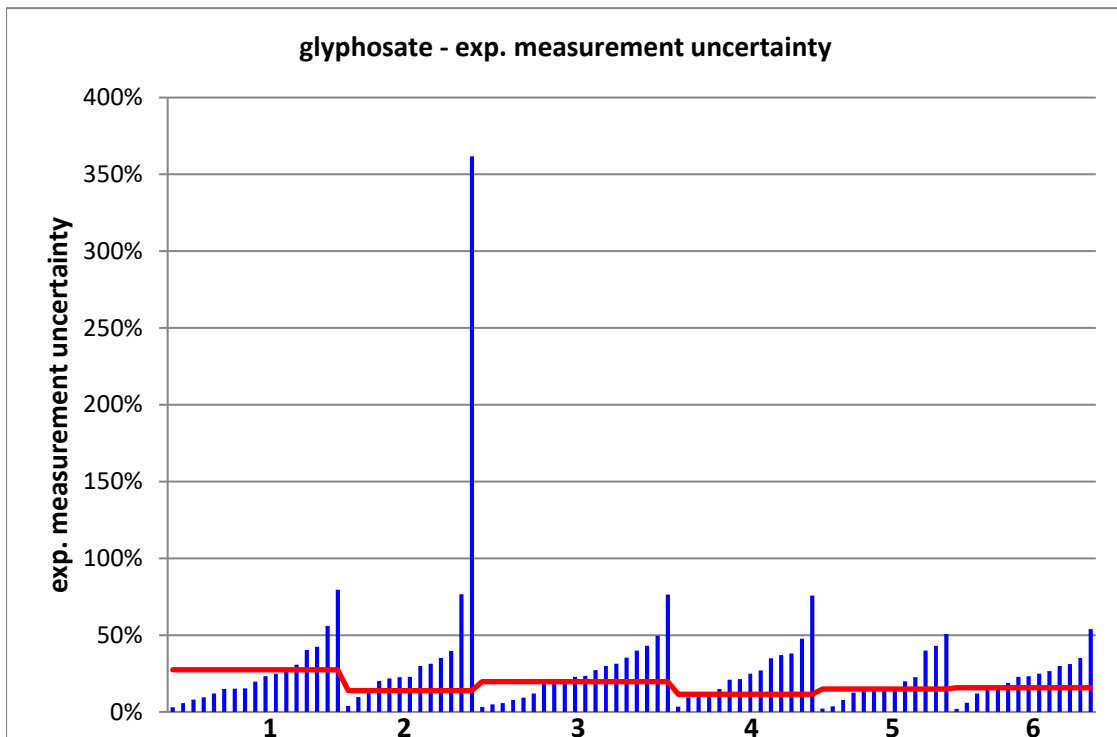
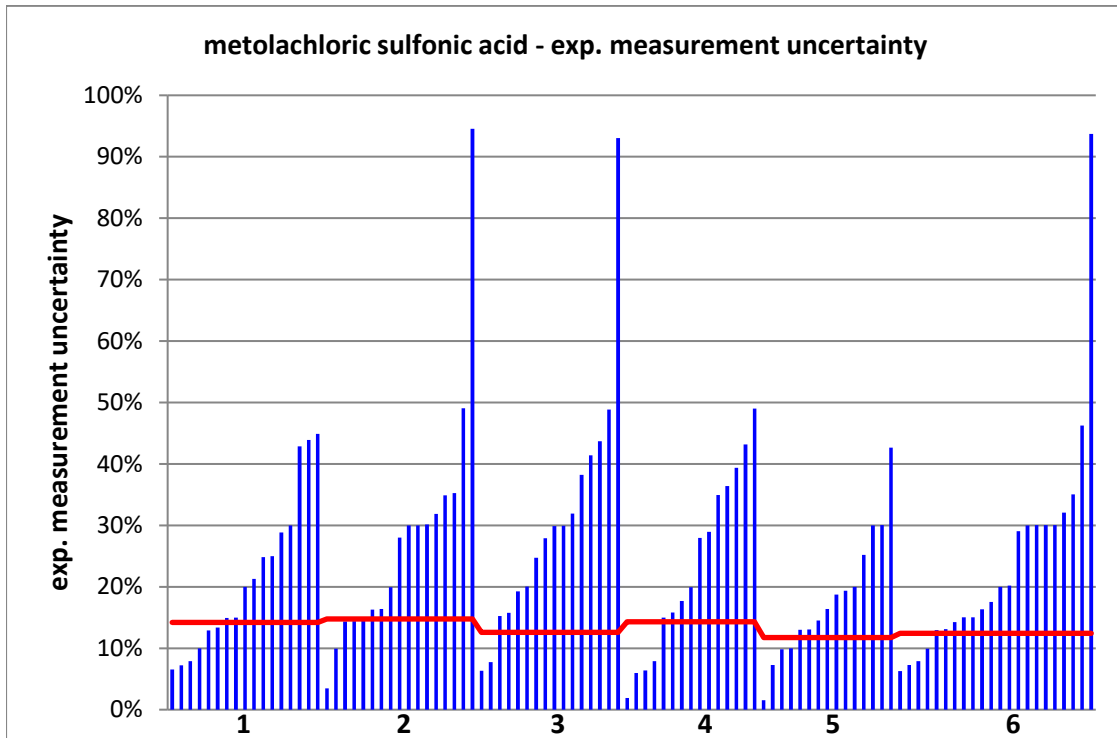
HPLC-MS/MS									
level	robust mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [ $\mu\text{g/l}$ ]	exp. unc. of the mean [%]	robust standard deviation [ $\mu\text{g/l}$ ]	robust standard deviation [%]	number of results	out below	out above	out [%]
1	0,265	0,013	4,893	0,045	17,06	19	2	1	15,8
2	0,368	0,015	4,166	0,056	15,27	21	0	2	9,52
3	0,421	0,013	3,08	0,047	11,29	21	2	0	9,52
4	0,456	0,019	4,229	0,065	14,35	18	1	0	5,56
5	0,584	0,017	2,981	0,065	11,19	22	3	0	13,6
6	0,719	0,023	3,254	0,082	11,35	19	3	0	15,8

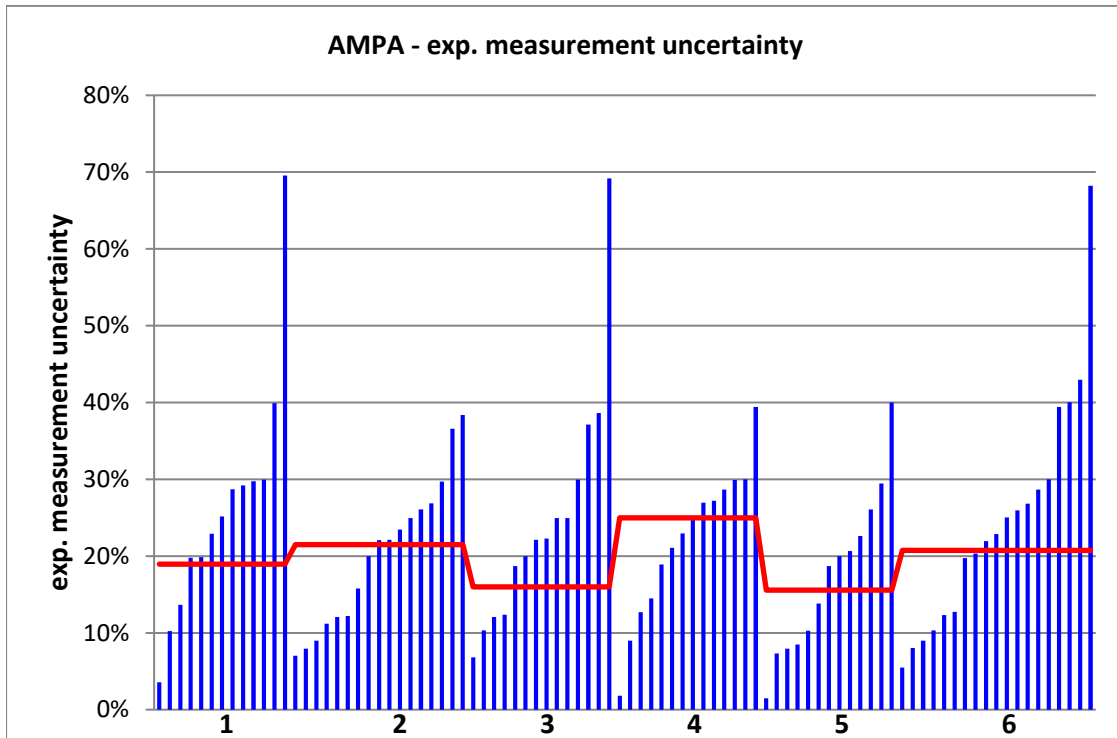








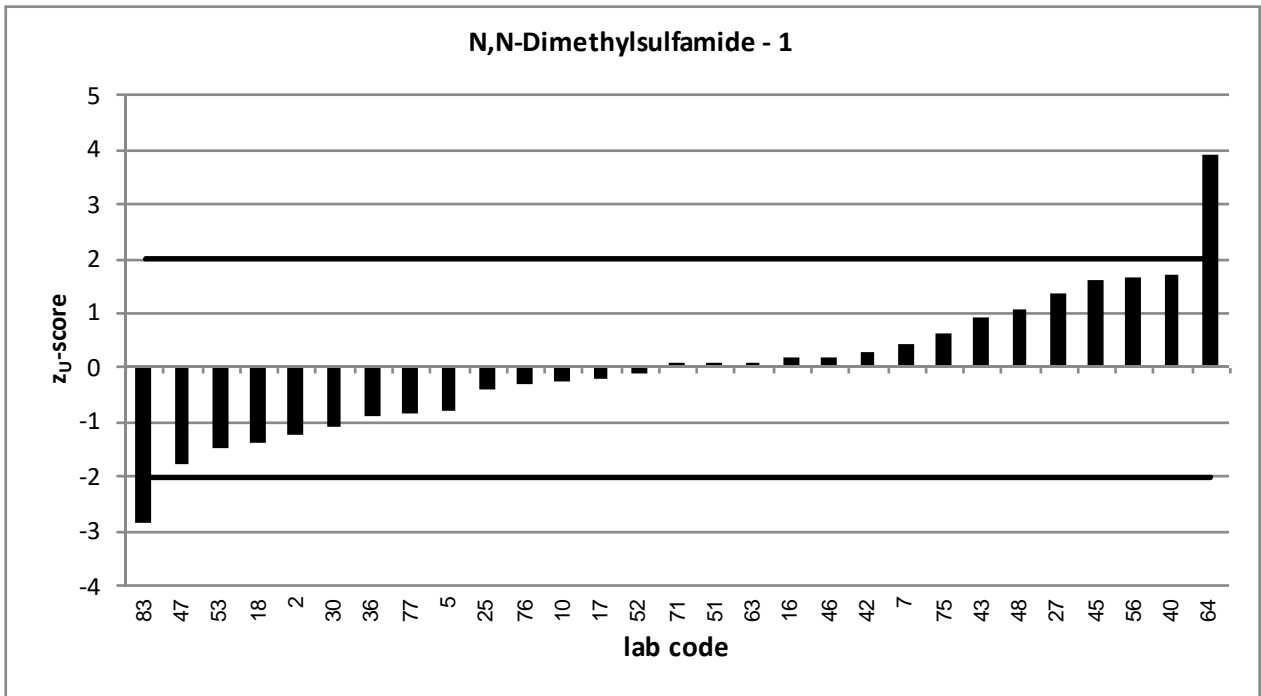
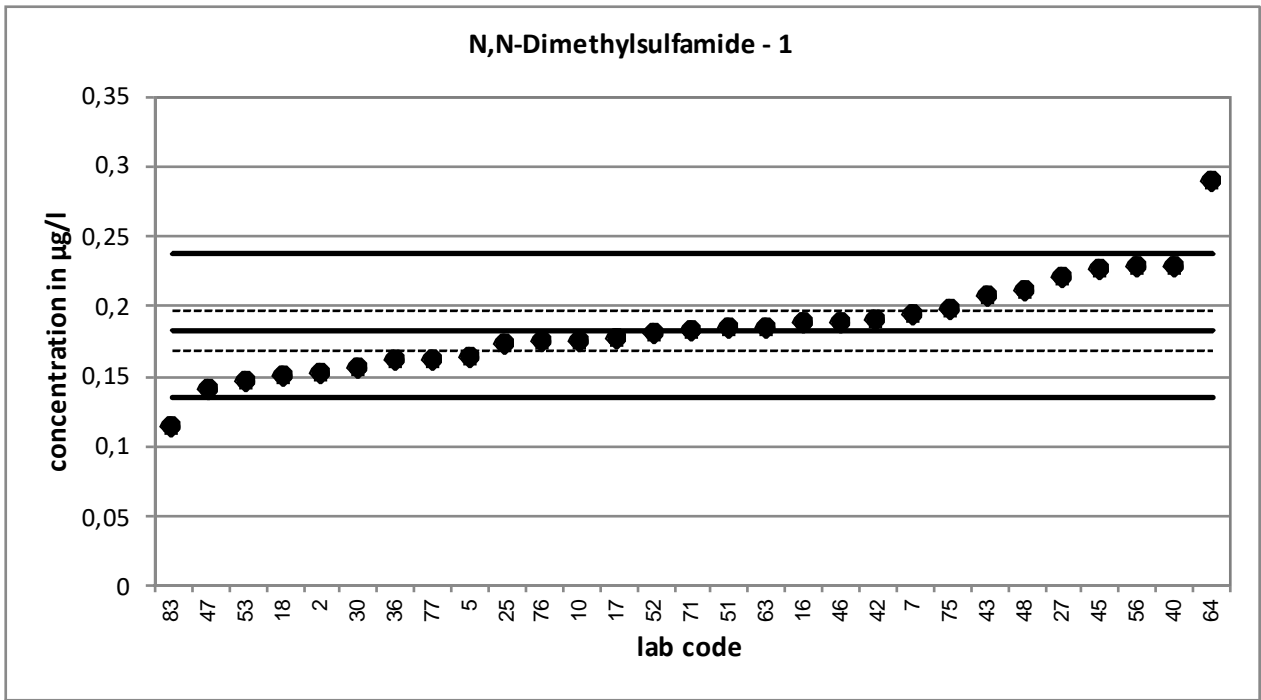


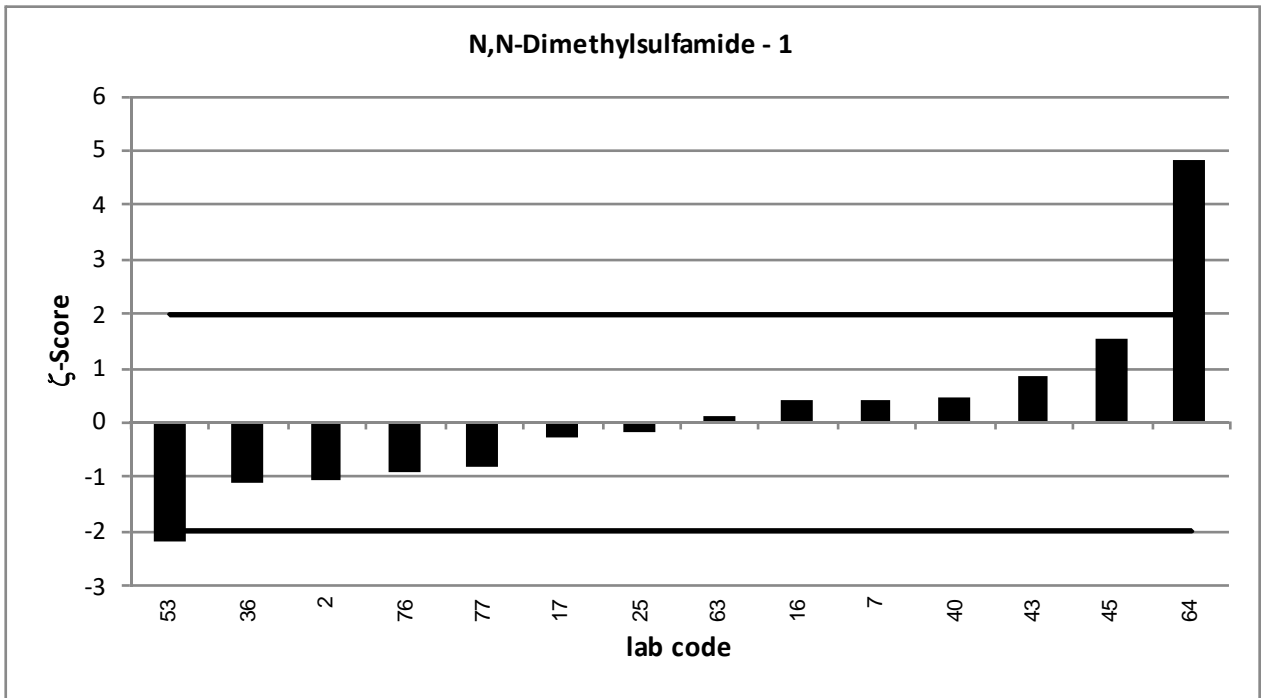
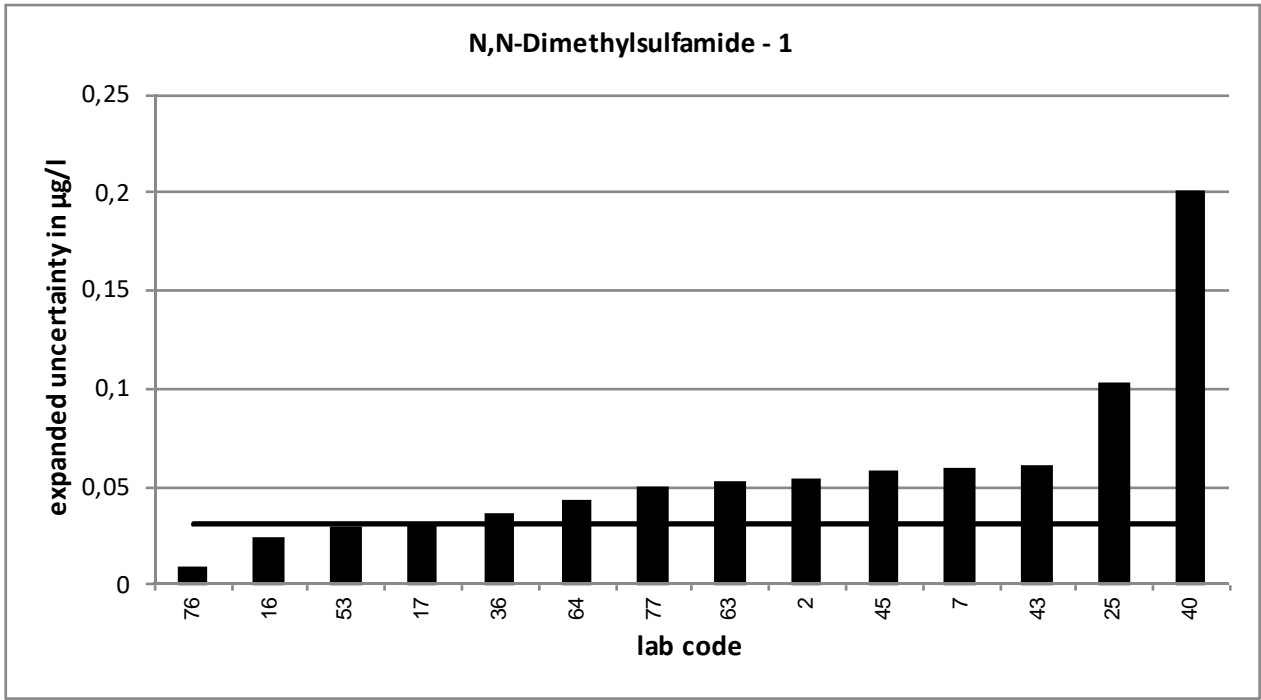


PT 4/20 - TW O5		N,N-Dimethylsulfamide - 1			
assigned value [ $\mu\text{g/l}$ ]*		0,1829		$\pm 0,0143$	
upper tolerance limit [ $\mu\text{g/l}$ ]		0,2376			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,1352			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,153	0,05	-1,1	-1,3	s
5	0,164			-0,8	s
7	0,194	0,06	0,4	0,4	s
10	0,176			-0,3	s
16	0,188	0,02	0,4	0,2	s
17	0,178	0,03	-0,3	-0,2	s
18	0,15			-1,4	s
25	0,173	0,1	-0,2	-0,4	s
27	0,22			1,4	s
30	0,157			-1,1	s
36	0,161	0,04	-1,1	-0,9	s
40	0,229	0,2	0,5	1,7	s
42	0,19			0,3	s
43	0,208	0,06	0,8	0,9	s
45	0,227	0,06	1,5	1,6	s
46	0,188			0,2	s
47	0,14			-1,8	s
48	0,211			1,0	s
51	0,185			0,1	s
52	0,18			-0,1	s
53	0,147	0,03	-2,2	-1,5	s
56	0,228			1,6	s
63	0,185	0,05	0,1	0,1	s
64	0,289	0,04	4,8	3,9	u
71	0,183			0,0	s
75	0,199			0,6	s
76	0,175	0,01	-0,9	-0,3	s
77	0,162	0,05	-0,8	-0,9	s
83	0,1142			-2,9	q

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



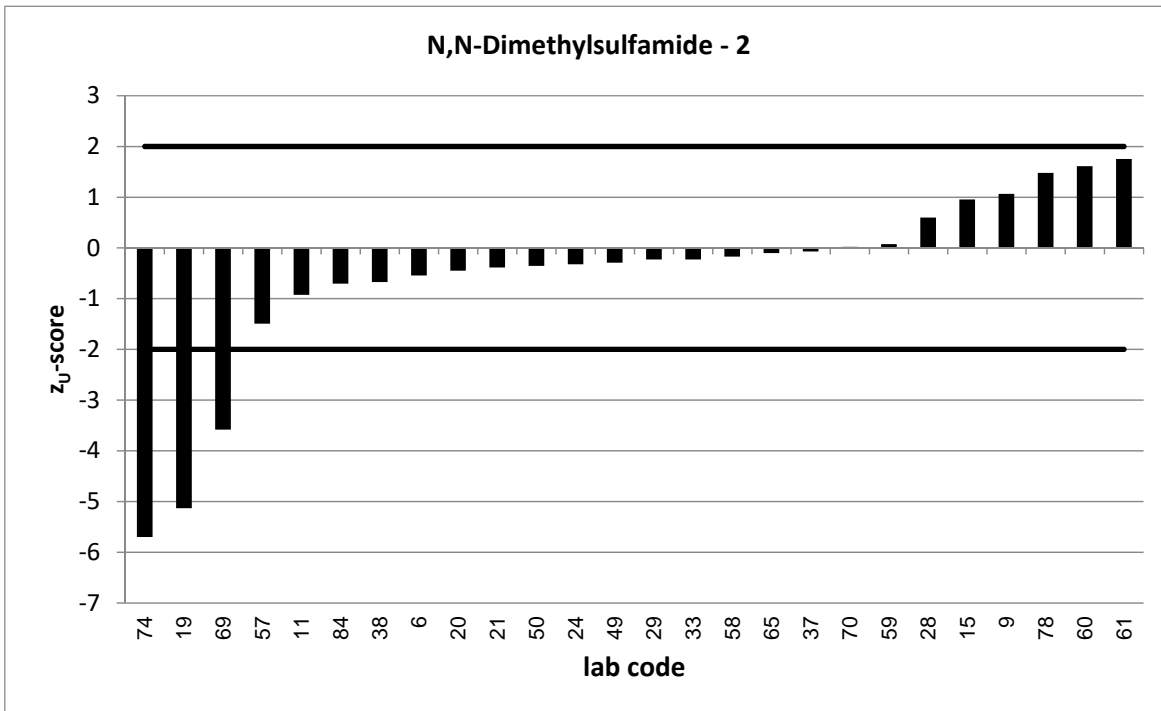
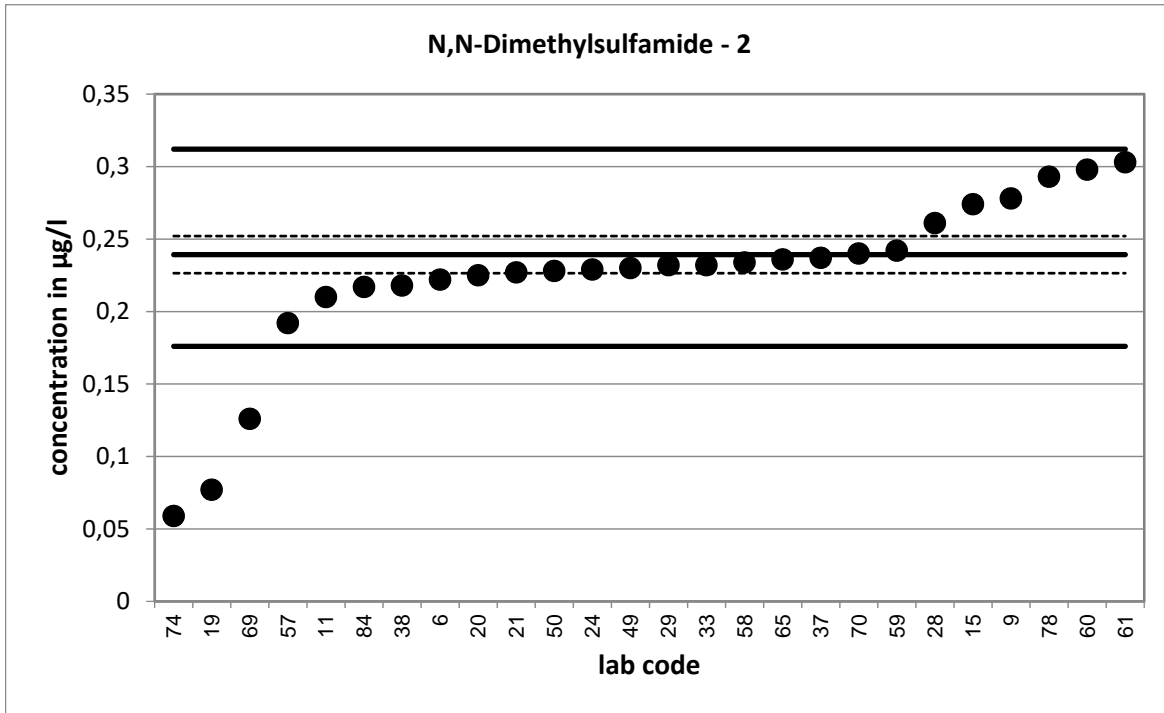


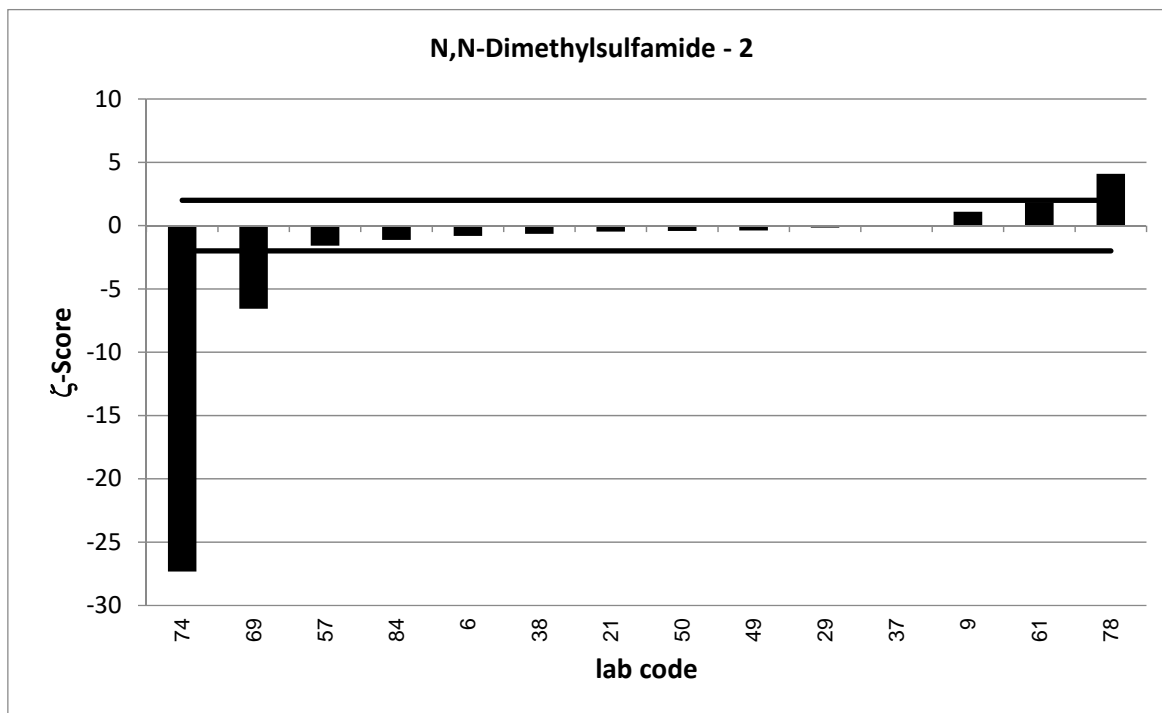
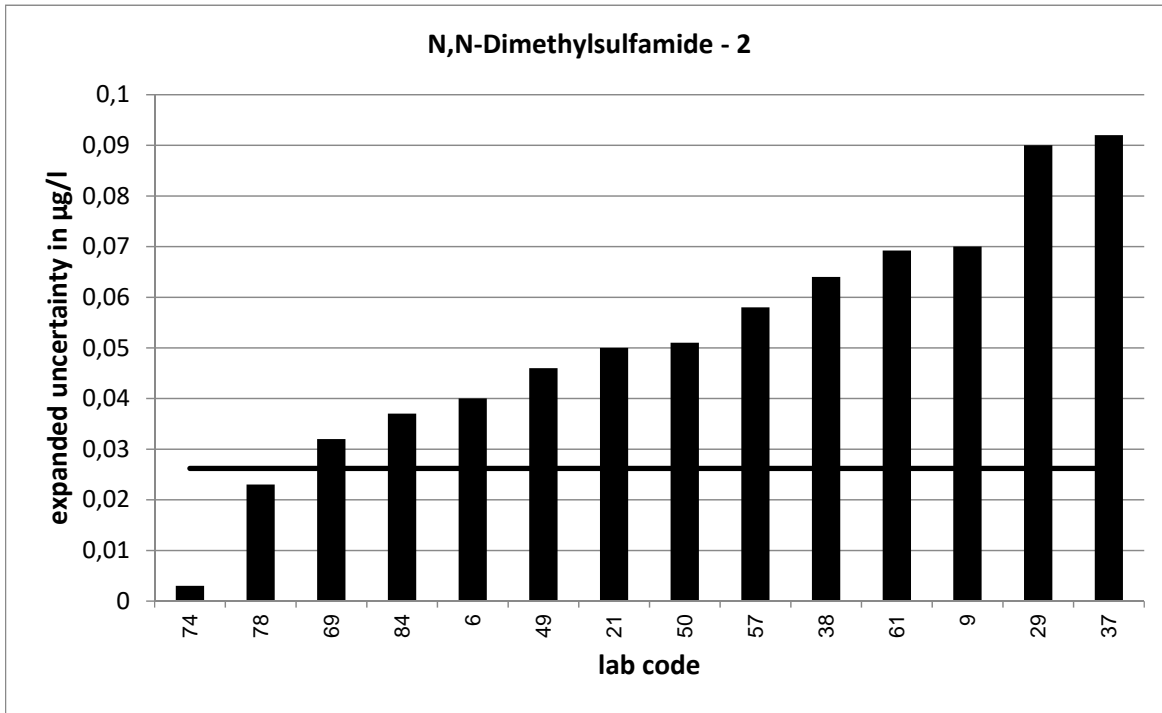


PT 4/20 - TW O5		N,N-Dimethylsulfamide - 2			
assigned value [ $\mu\text{g/l}$ ]*		0,2393 $\pm$ 0,0128			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,312			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,176			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
6	0,222	0,04	-0,8	-0,5	s
9	0,278	0,07	1,1	1,1	s
11	0,21			-0,9	s
15	0,274			1,0	s
19	0,077			-5,1	u
20	0,225			-0,5	s
21	0,227	0,05	-0,5	-0,4	s
24	0,229			-0,3	s
28	0,261			0,6	s
29	0,232	0,09	-0,2	-0,2	s
33	0,232			-0,2	s
37	0,237	0,092	0,0	-0,1	s
38	0,218	0,064	-0,7	-0,7	s
49	0,23	0,046	-0,4	-0,3	s
50	0,228	0,051	-0,4	-0,4	s
57	0,192	0,058	-1,6	-1,5	s
58	0,23386			-0,2	s
59	0,242			0,1	s
60	0,2979			1,6	s
61	0,303	0,069	1,8	1,8	s
65	0,236			-0,1	s
69	0,126	0,032	-6,6	-3,6	u
70	0,24			0,0	s
74	0,059	0,003	-27,3	-5,7	u
78	0,293	0,023	4,1	1,5	s
84	0,217	0,037	-1,1	-0,7	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

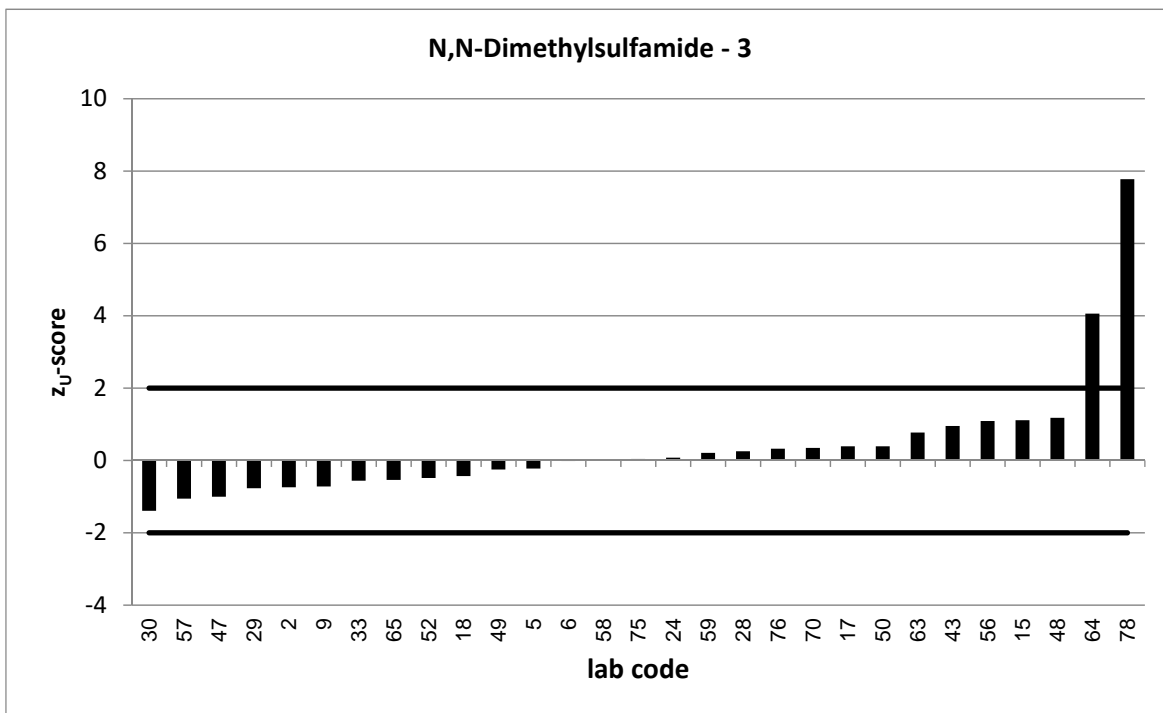
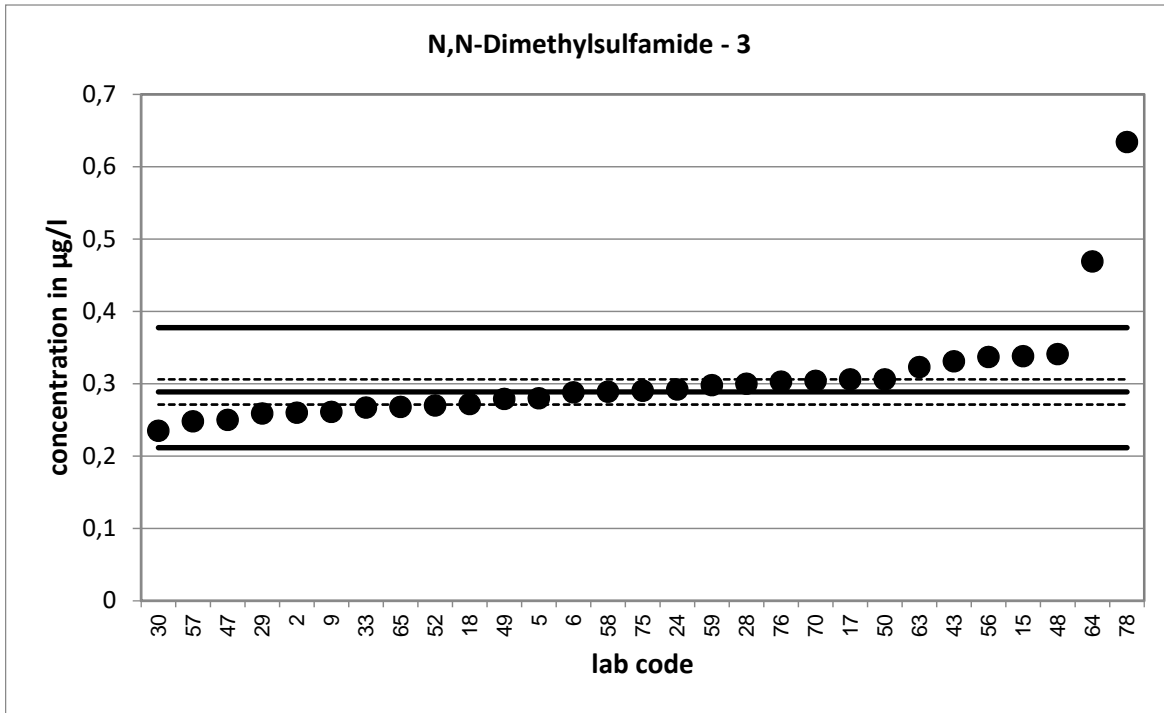


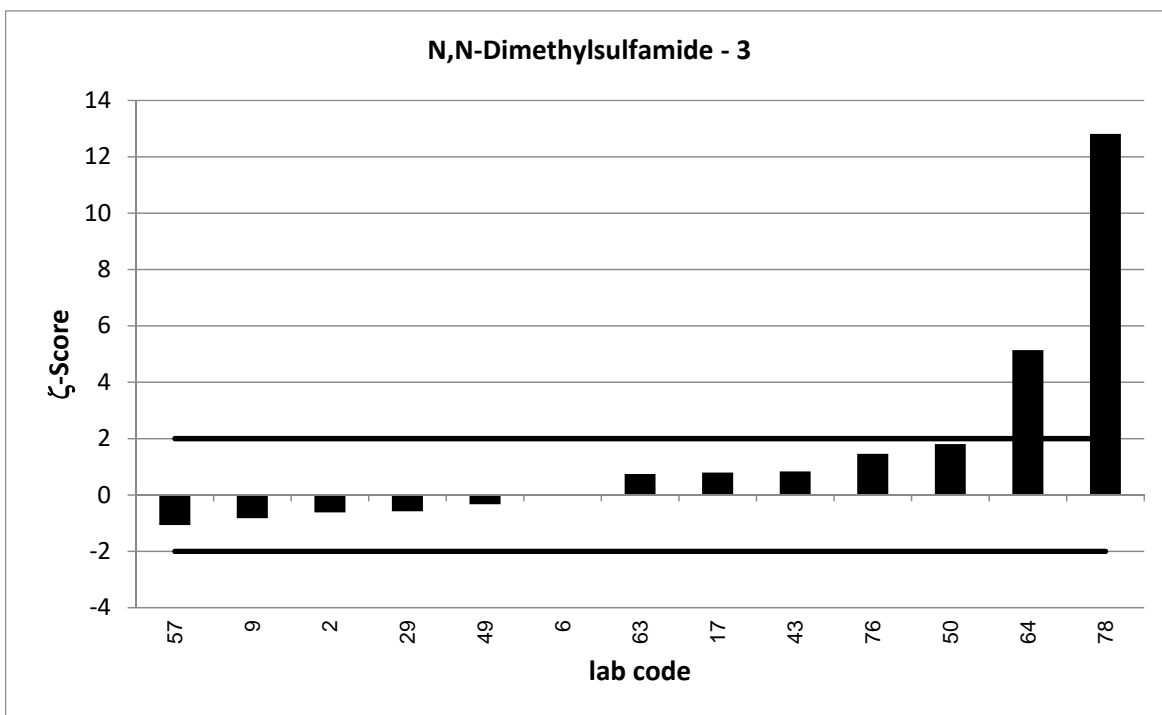
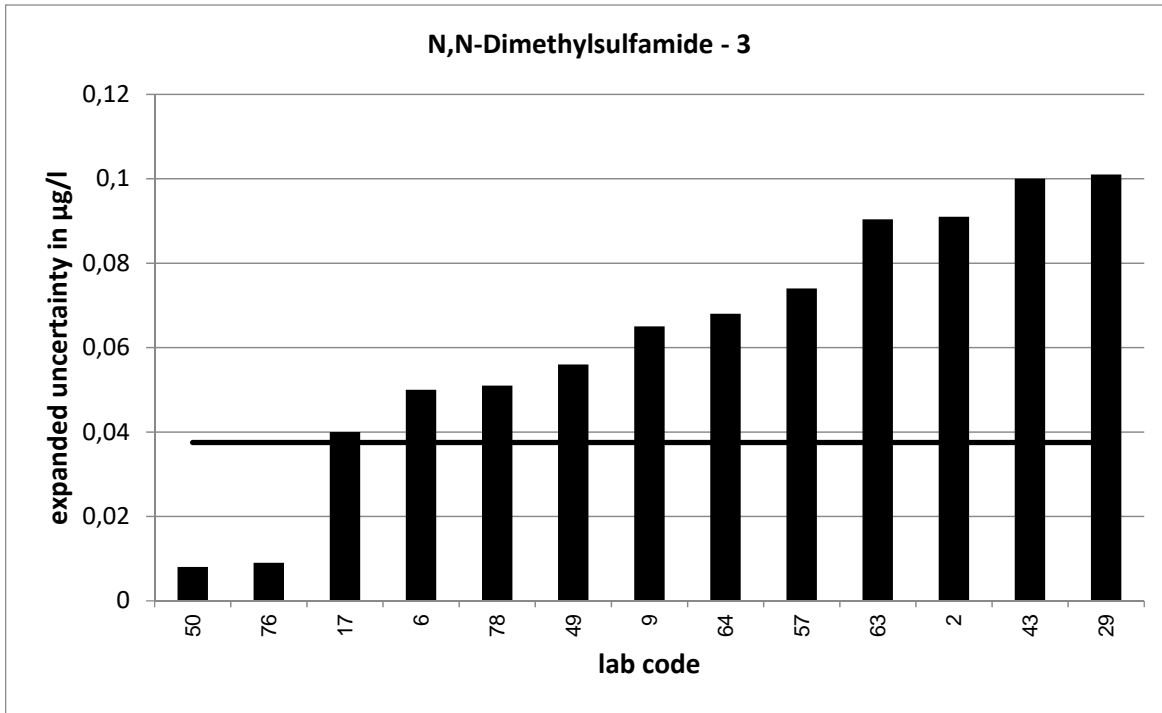


PT 4/20 - TW O5		N,N-Dimethylsulfamide - 3			
assigned value [ $\mu\text{g/l}$ ]*		0,2887 $\pm$ 0,0174			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,3775			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2116			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,26	0,091	-0,6	-0,7	s
5	0,28			-0,2	s
6	0,288	0,05	0,0	0,0	s
9	0,261	0,065	-0,8	-0,7	s
15	0,338			1,1	s
17	0,306	0,04	0,8	0,4	s
18	0,272			-0,4	s
24	0,292			0,1	s
28	0,3			0,3	s
29	0,259	0,101	-0,6	-0,8	s
30	0,235			-1,4	s
33	0,267			-0,6	s
43	0,331	0,1	0,8	1,0	s
47	0,25			-1,0	s
48	0,341			1,2	s
49	0,279	0,056	-0,3	-0,3	s
50	0,306	0,008	1,8	0,4	s
52	0,27			-0,5	s
56	0,337			1,1	s
57	0,248	0,074	-1,1	-1,1	s
58	0,28909			0,0	s
59	0,298			0,2	s
63	0,323	0,09	0,7	0,8	s
64	0,469	0,068	5,1	4,1	u
65	0,268			-0,5	s
70	0,304			0,3	s
75	0,2904			0,0	s
76	0,303	0,009	1,5	0,3	s
78	0,634	0,051	12,8	7,8	u

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

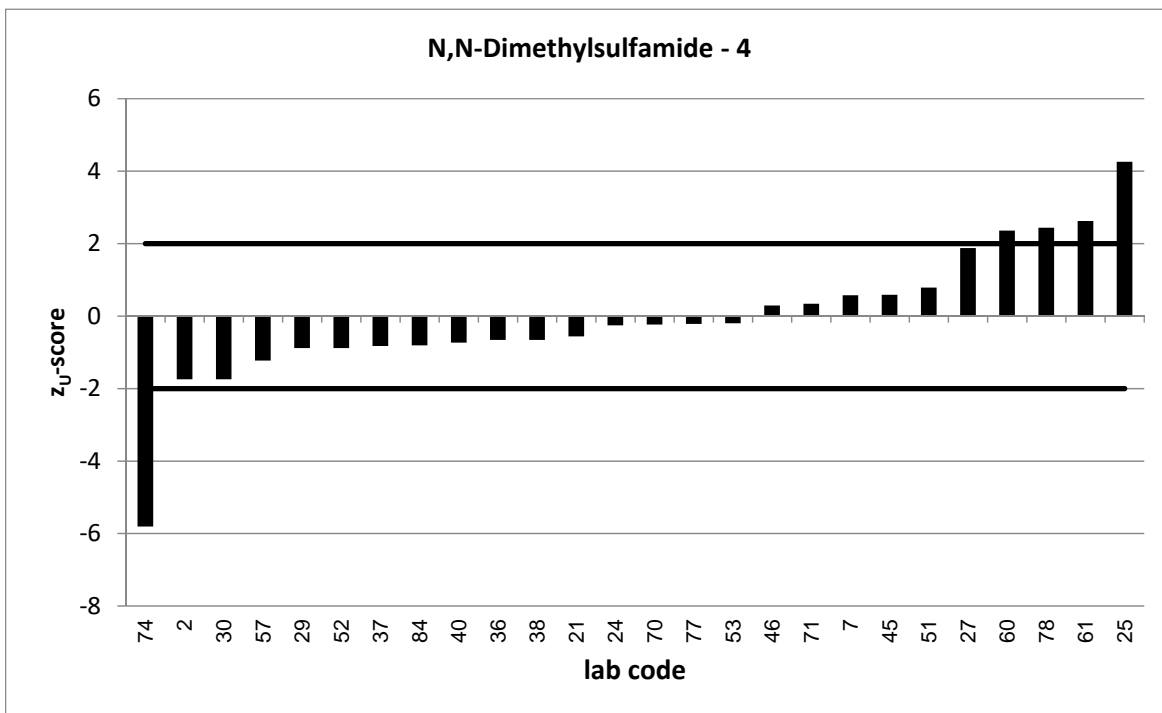
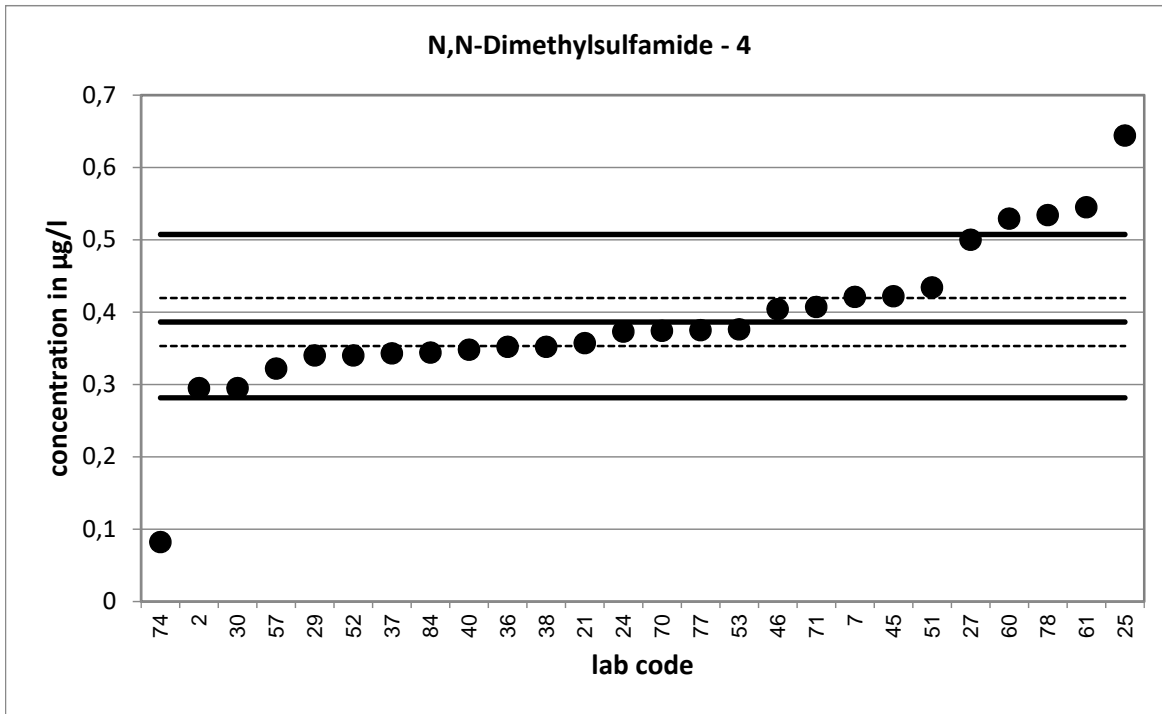




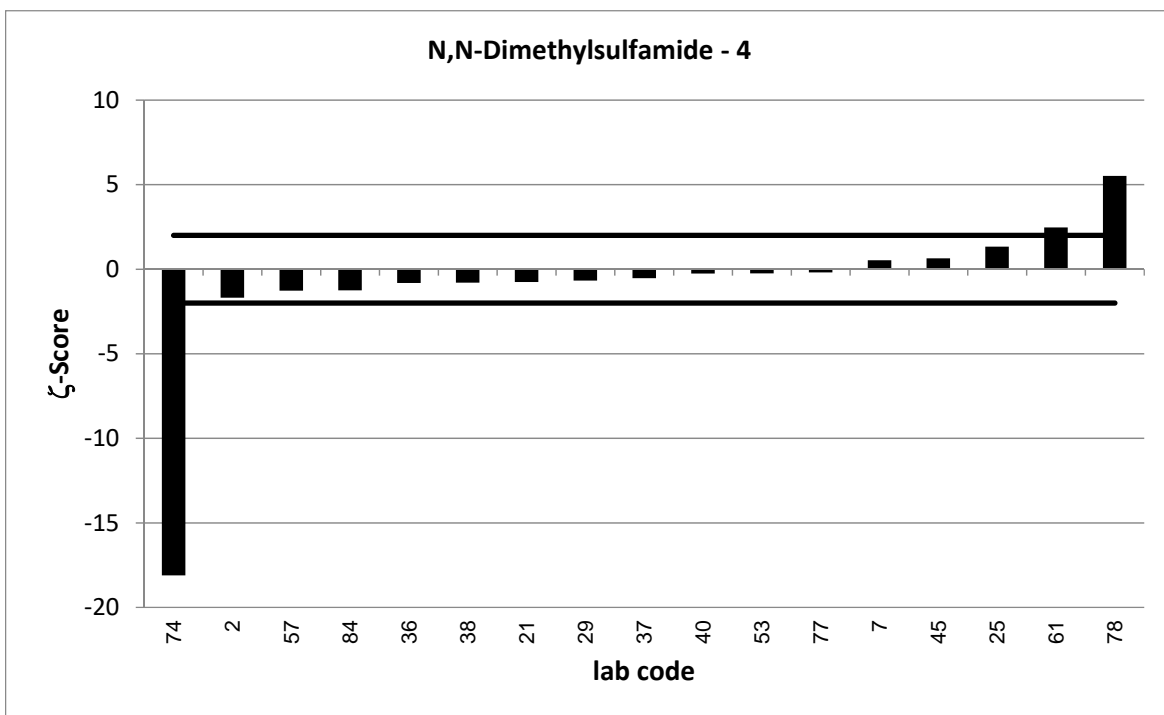
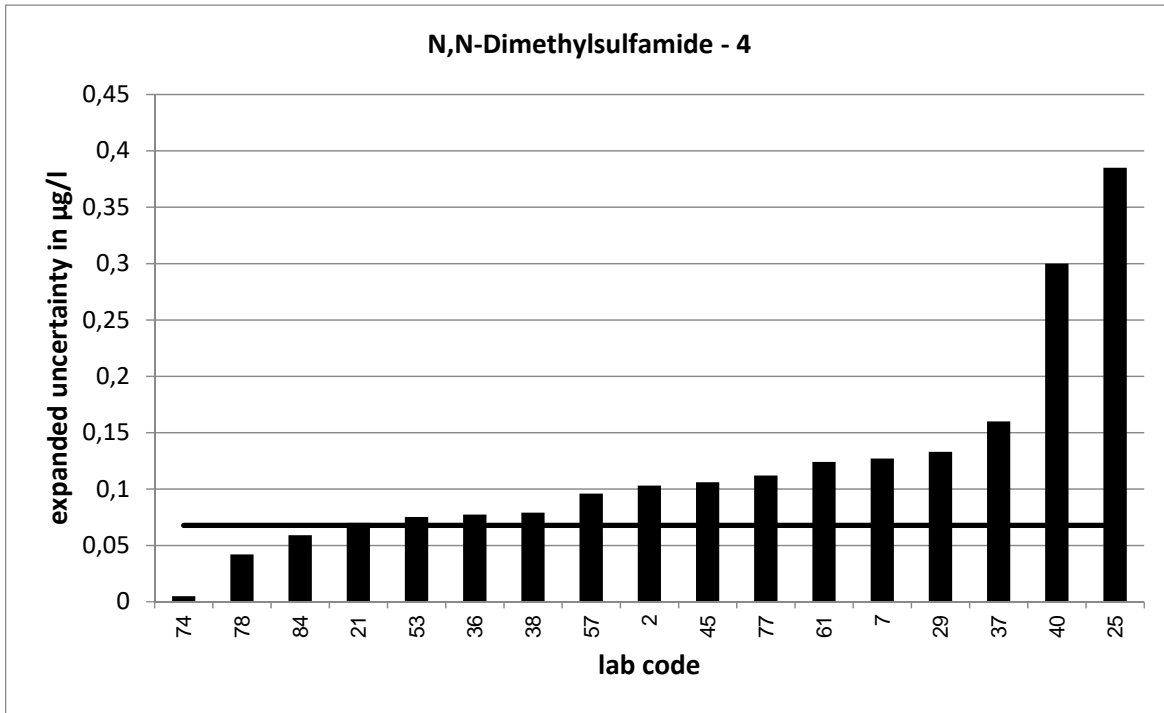
PT 4/20 - TW O5		N,N-Dimethylsulfamide - 4			
assigned value [ $\mu\text{g/l}$ ]*		0,3864 $\pm$ 0,0332			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,5074			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2816			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,295	0,103	-1,7	-1,7	s
7	0,421	0,127	0,5	0,6	s
21	0,357	0,07	-0,8	-0,6	s
24	0,373			-0,3	s
25	0,644	0,385	1,3	4,3	u
27	0,5			1,9	s
29	0,34	0,133	-0,7	-0,9	s
30	0,295			-1,7	s
36	0,352	0,077	-0,8	-0,7	s
37	0,343	0,16	-0,5	-0,8	s
38	0,352	0,079	-0,8	-0,7	s
40	0,348	0,3	-0,3	-0,7	s
45	0,422	0,106	0,6	0,6	s
46	0,404			0,3	s
51	0,434			0,8	s
52	0,34			-0,9	s
53	0,376	0,075	-0,3	-0,2	s
57	0,322	0,096	-1,3	-1,2	s
60	0,5292			2,4	q
61	0,545	0,124	2,5	2,6	q
70	0,374			-0,2	s
71	0,407			0,3	s
74	0,082	0,005	-18,1	-5,8	u
77	0,375	0,112	-0,2	-0,2	s
78	0,534	0,042	5,5	2,4	q
84	0,344	0,059	-1,3	-0,8	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



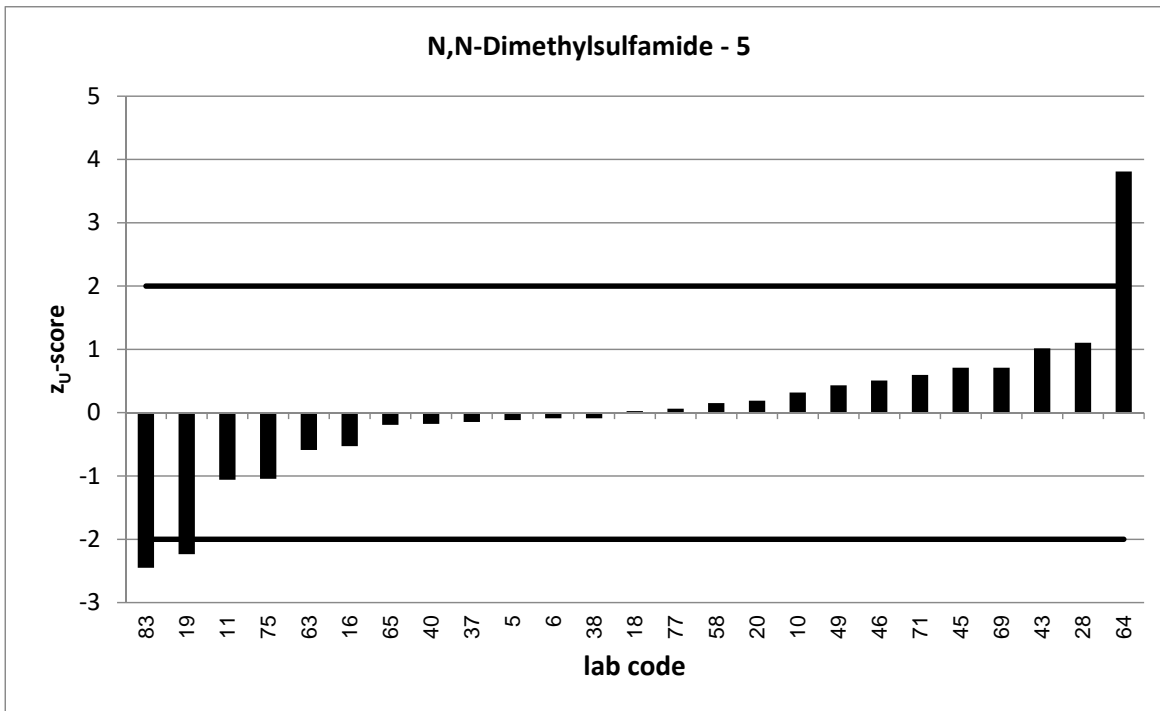
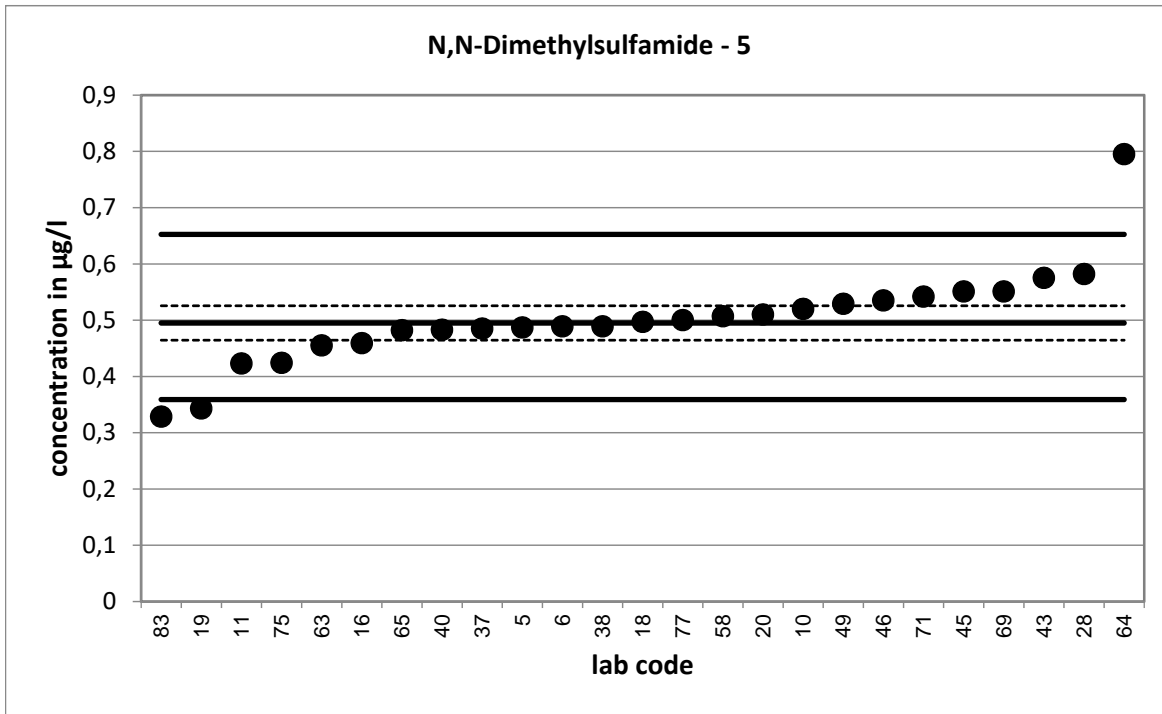


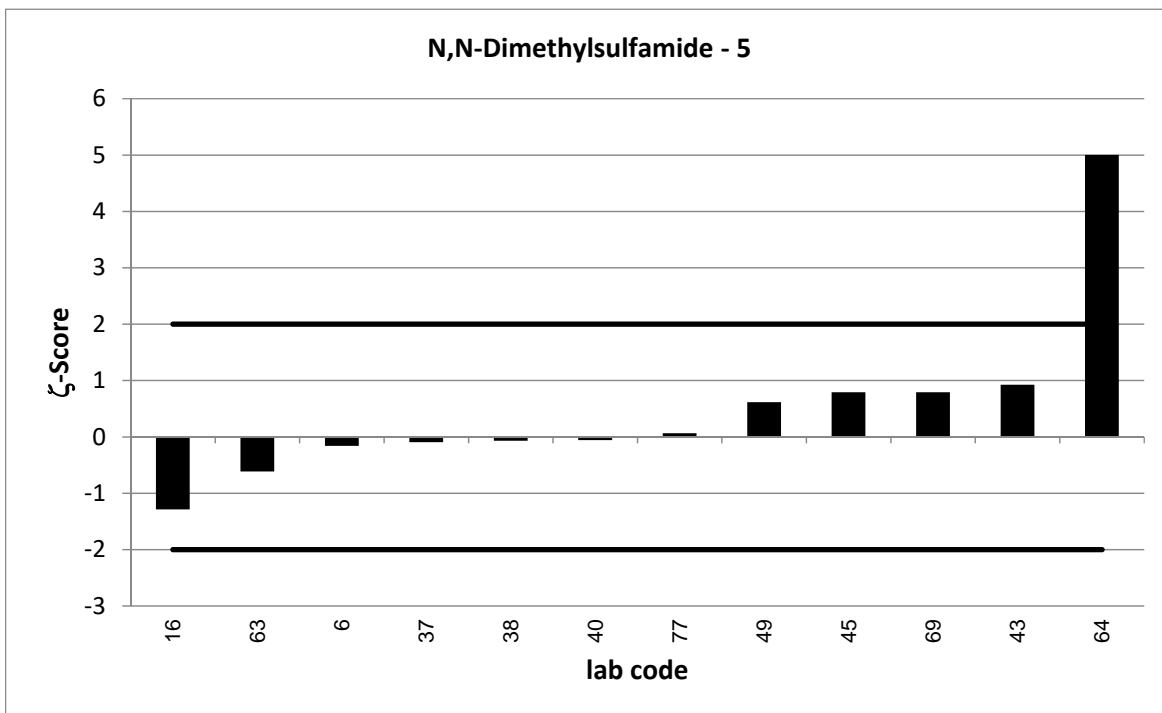
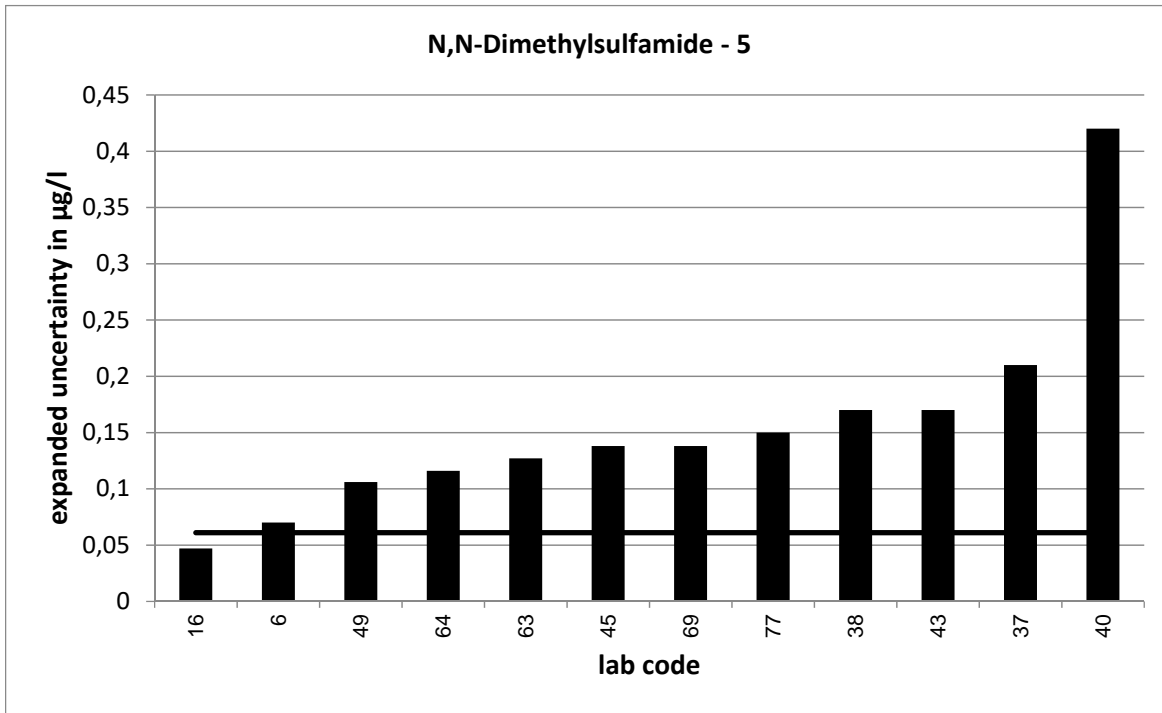


PT 4/20 - TW O5		N,N-Dimethylsulfamide - 5			
assigned value [ $\mu\text{g/l}$ ]*		0,4951 $\pm$ 0,0305			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,6525			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,3591			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
5	0,487			-0,1	s
6	0,489	0,07	-0,2	-0,1	s
10	0,52			0,3	s
11	0,423			-1,1	s
16	0,459	0,047	-1,3	-0,5	s
18	0,497			0,0	s
19	0,343			-2,2	q
20	0,51			0,2	s
28	0,582			1,1	s
37	0,485	0,21	-0,1	-0,1	s
38	0,489	0,17	-0,1	-0,1	s
40	0,483	0,42	-0,1	-0,2	s
43	0,575	0,17	0,9	1,0	s
45	0,551	0,138	0,8	0,7	s
46	0,535			0,5	s
49	0,529	0,106	0,6	0,4	s
58	0,50686			0,1	s
63	0,455	0,127	-0,6	-0,6	s
64	0,795	0,116	5,0	3,8	u
65	0,482			-0,2	s
69	0,551	0,138	0,8	0,7	s
71	0,542			0,6	s
75	0,424			-1,0	s
77	0,5	0,15	0,1	0,1	s
83	0,3284			-2,5	q

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

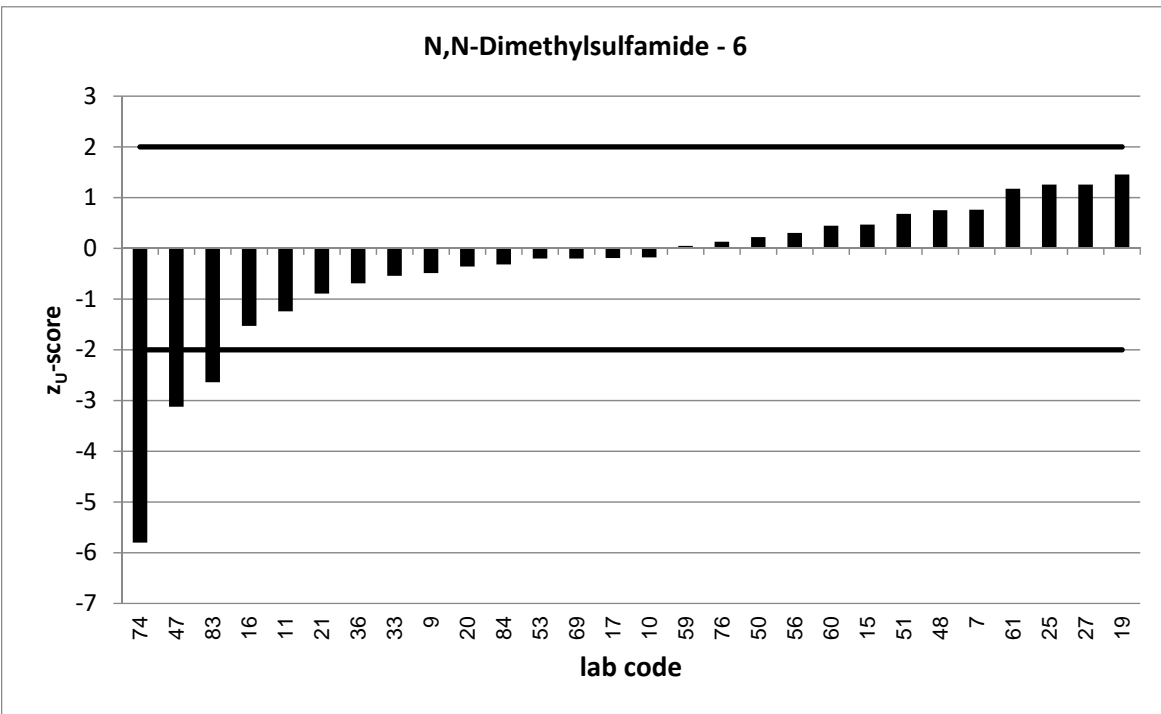
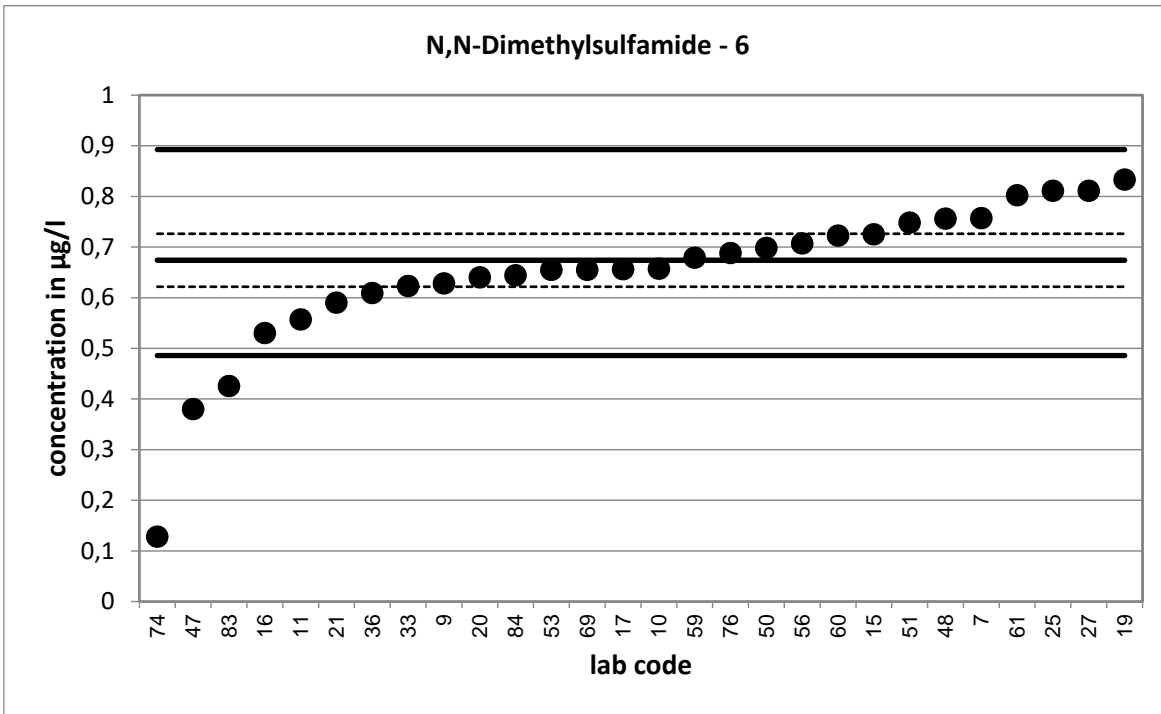


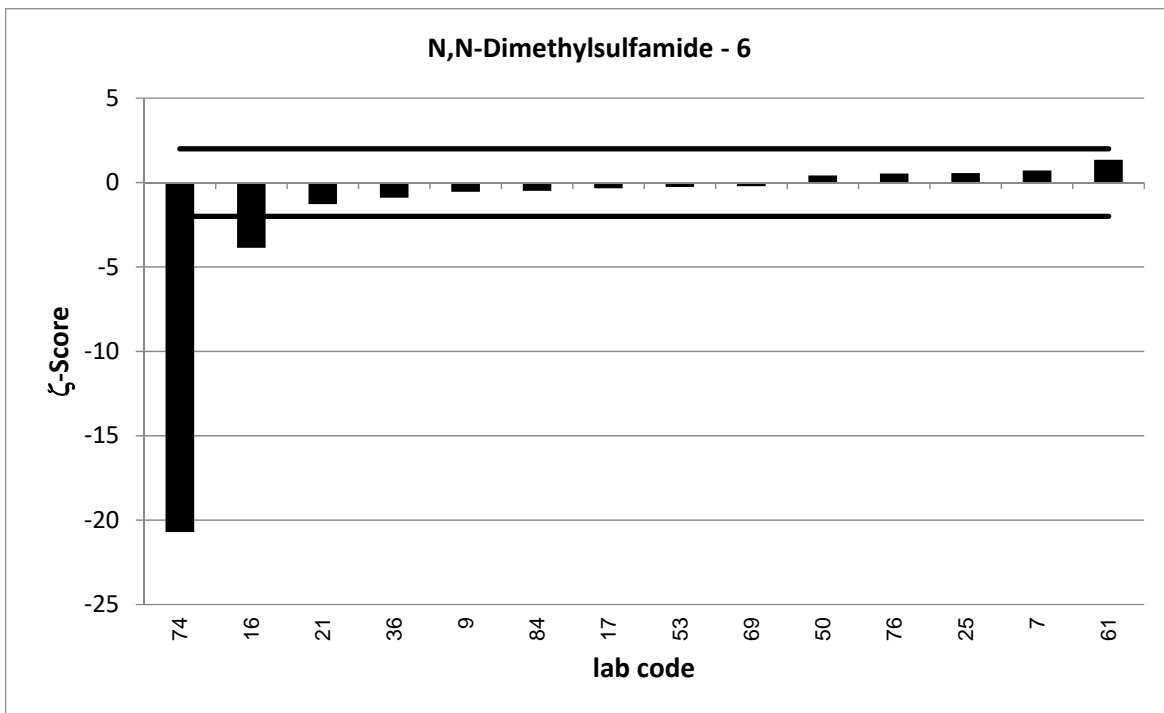
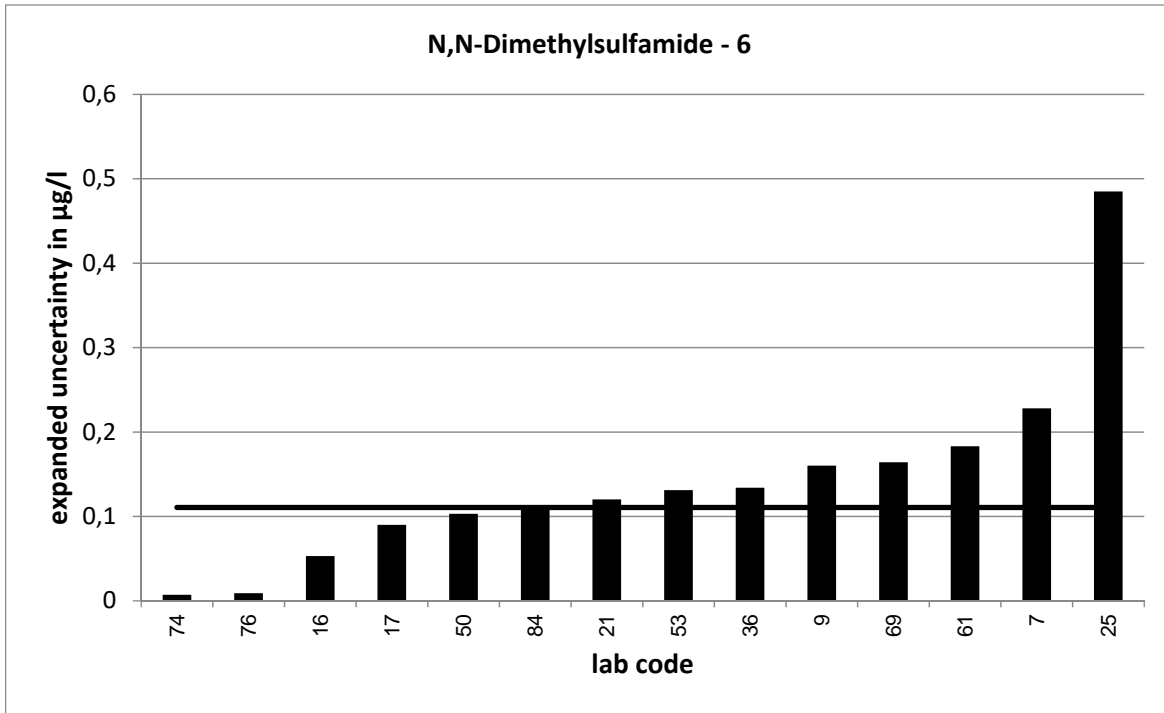


PT 4/20 - TW O5		N,N-Dimethylsulfamide - 6			
assigned value [ $\mu\text{g/l}$ ]*		0,674 $\pm$ 0,0523			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,8924			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,4857			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
7	0,757	0,228	0,7	0,8	s
9	0,628	0,16	-0,5	-0,5	s
10	0,657			-0,2	s
11	0,557			-1,2	s
15	0,725			0,5	s
16	0,53	0,053	-3,9	-1,5	s
17	0,656	0,09	-0,3	-0,2	s
19	0,833			1,5	s
20	0,64			-0,4	s
21	0,59	0,12	-1,3	-0,9	s
25	0,811	0,485	0,6	1,3	s
27	0,811			1,3	s
33	0,623			-0,5	s
36	0,609	0,134	-0,9	-0,7	s
47	0,38			-3,1	u
48	0,756			0,8	s
50	0,698	0,103	0,4	0,2	s
51	0,748			0,7	s
53	0,655	0,131	-0,3	-0,2	s
56	0,707			0,3	s
59	0,679			0,0	s
60	0,7224			0,4	s
61	0,802	0,183	1,3	1,2	s
69	0,655	0,164	-0,2	-0,2	s
74	0,128	0,007	-20,7	-5,8	u
76	0,688	0,009	0,5	0,1	s
83	0,4255			-2,6	q
84	0,644	0,11	-0,5	-0,3	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



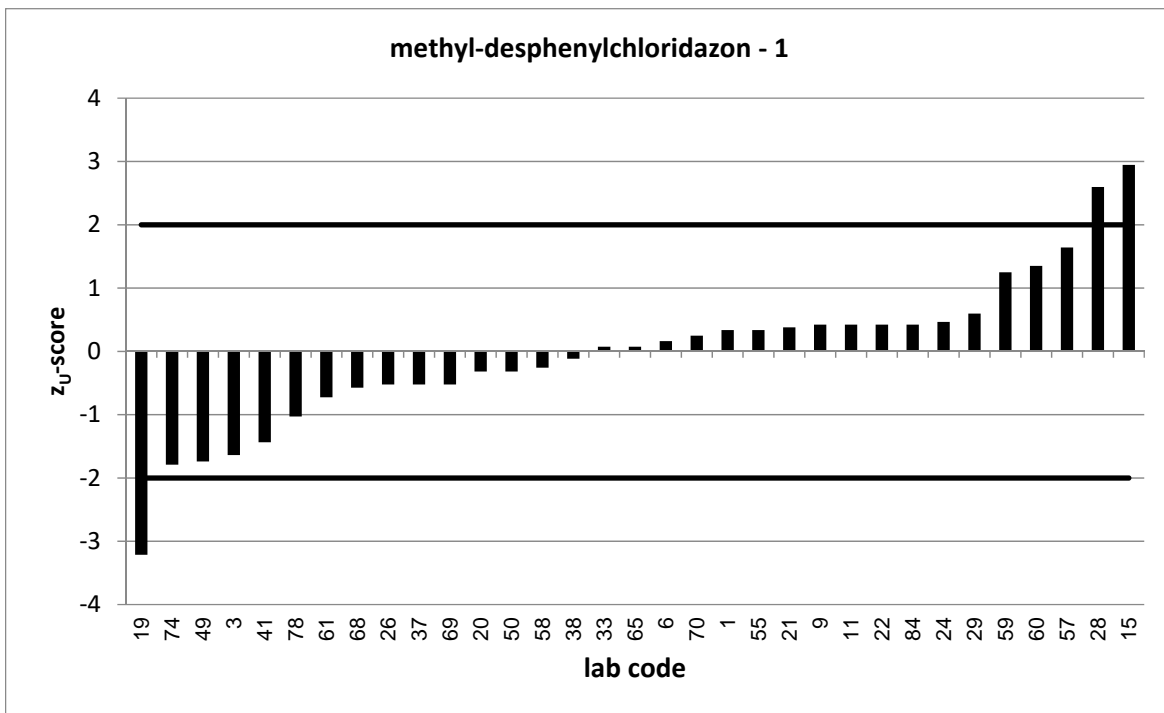
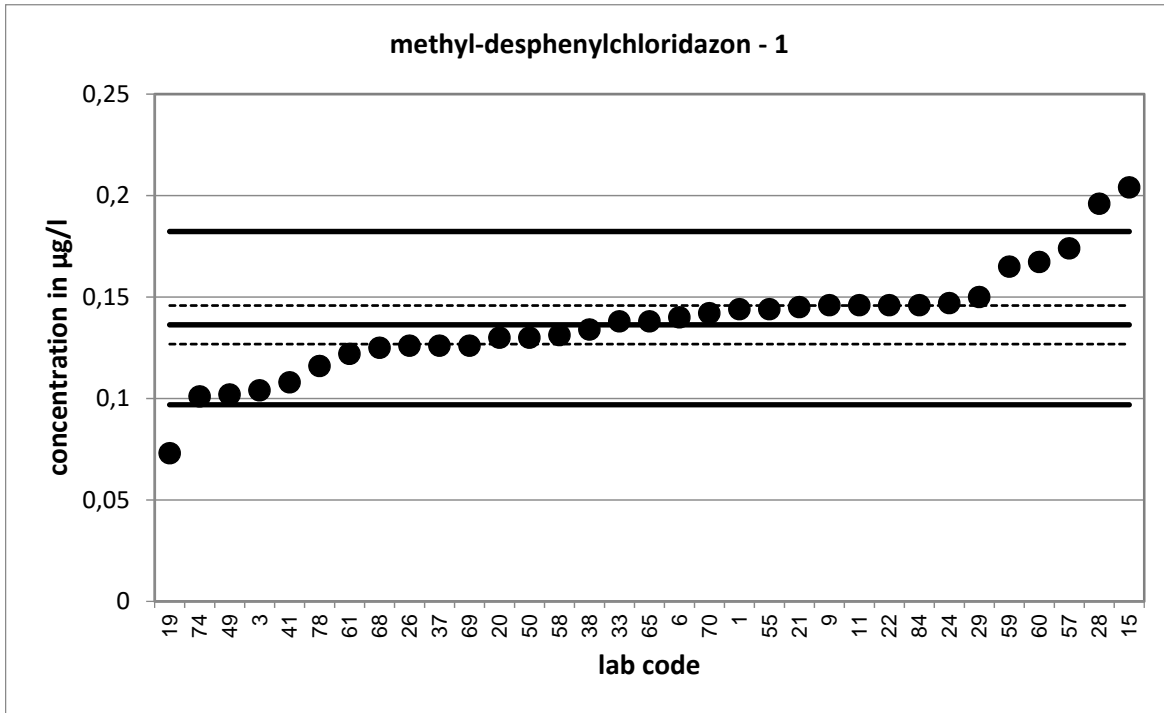


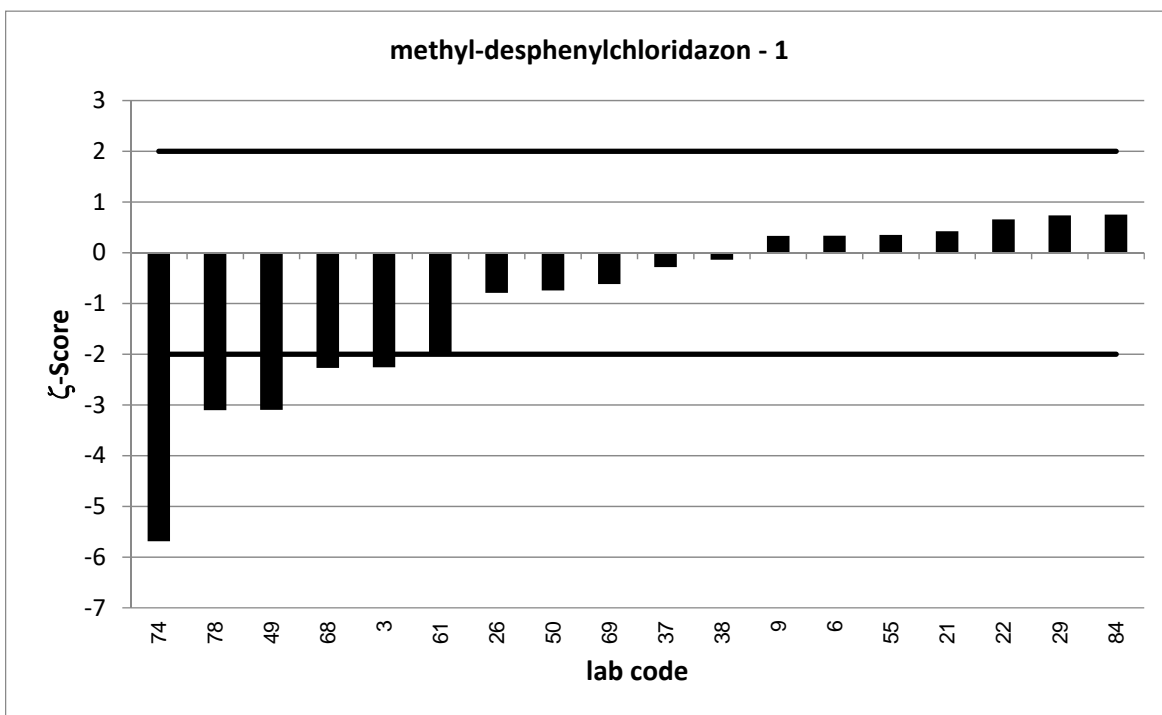
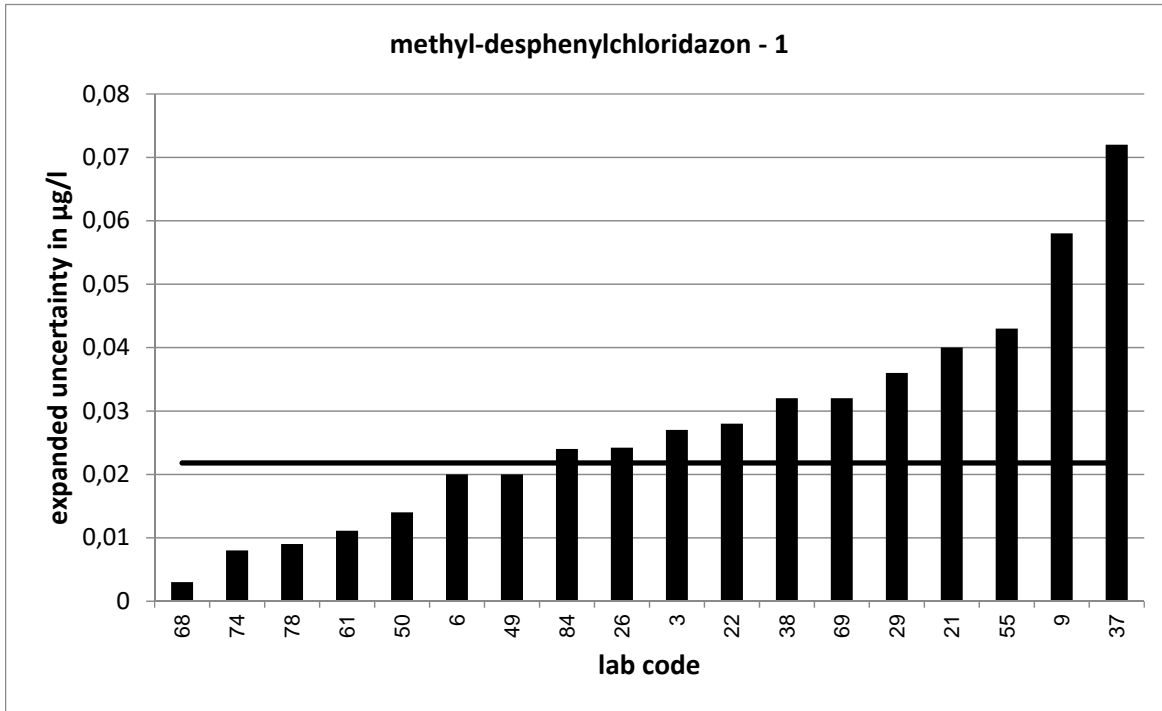
PT 4/20 - TW O5		methyl-desphenylchloridazon - 1			
assigned value [ $\mu\text{g/l}$ ]*		0,1363 $\pm$ 0,0095			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,1823			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,0969			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
1	0,144			0,3	s
3	0,104	0,027	-2,3	-1,6	s
6	0,14	0,02	0,3	0,2	s
9	0,146	0,058	0,3	0,4	s
11	0,146			0,4	s
15	0,204			2,9	q
19	0,073			-3,2	u
20	0,13			-0,3	s
21	0,145	0,04	0,4	0,4	s
22	0,146	0,028	0,7	0,4	s
24	0,147			0,5	s
26	0,126	0,024	-0,8	-0,5	s
28	0,196			2,6	q
29	0,15	0,036	0,7	0,6	s
33	0,138			0,1	s
37	0,126	0,072	-0,3	-0,5	s
38	0,134	0,032	-0,1	-0,1	s
41	0,108			-1,4	s
49	0,102	0,02	-3,1	-1,7	s
50	0,13	0,014	-0,7	-0,3	s
55	0,144	0,043	0,3	0,3	s
57	0,174			1,6	s
58	0,13122			-0,3	s
59	0,165			1,2	s
60	0,1673			1,3	s
61	0,122	0,011	-2,0	-0,7	s
65	0,138			0,1	s
68	0,125	0,003	-2,3	-0,6	s
69	0,126	0,032	-0,6	-0,5	s
70	0,142			0,2	s
74	0,101	0,008	-5,7	-1,8	s
78	0,116	0,009	-3,1	-1,0	s
84	0,146	0,024	0,8	0,4	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



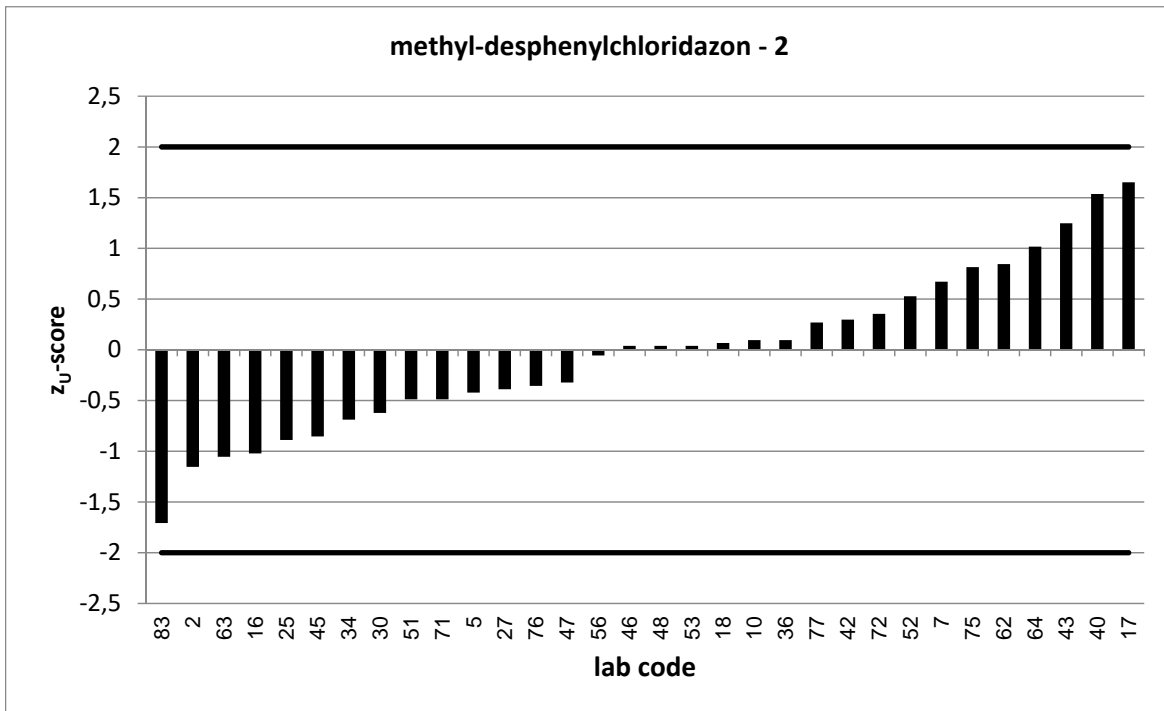
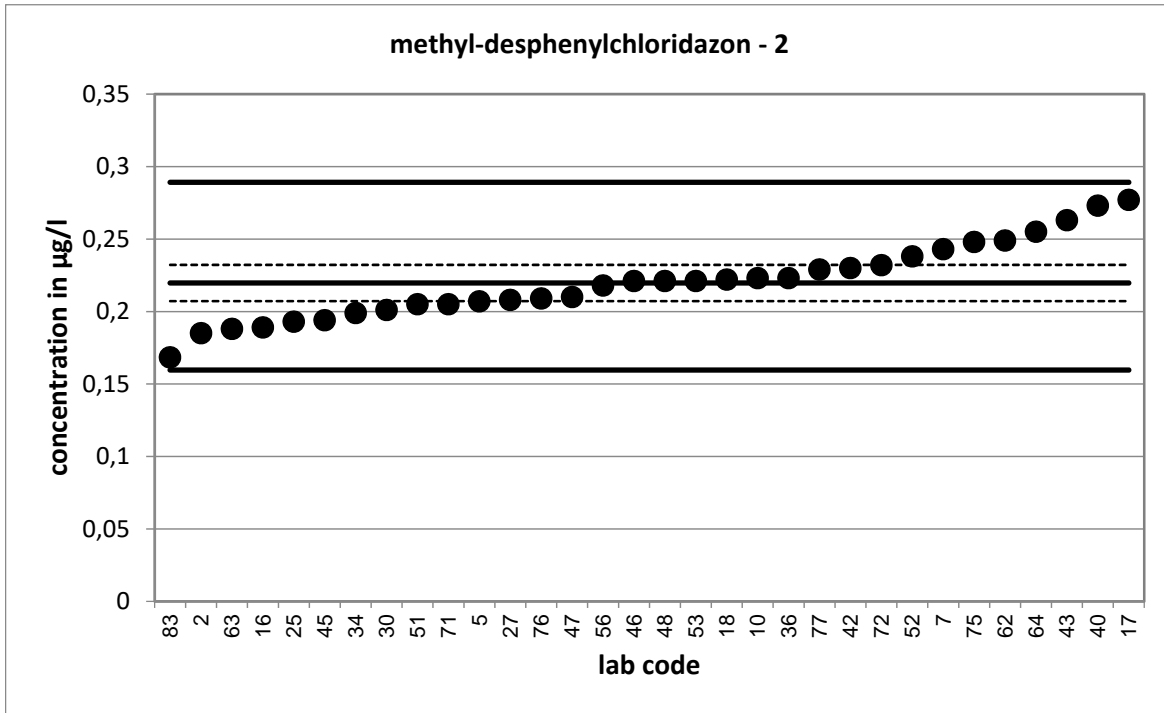


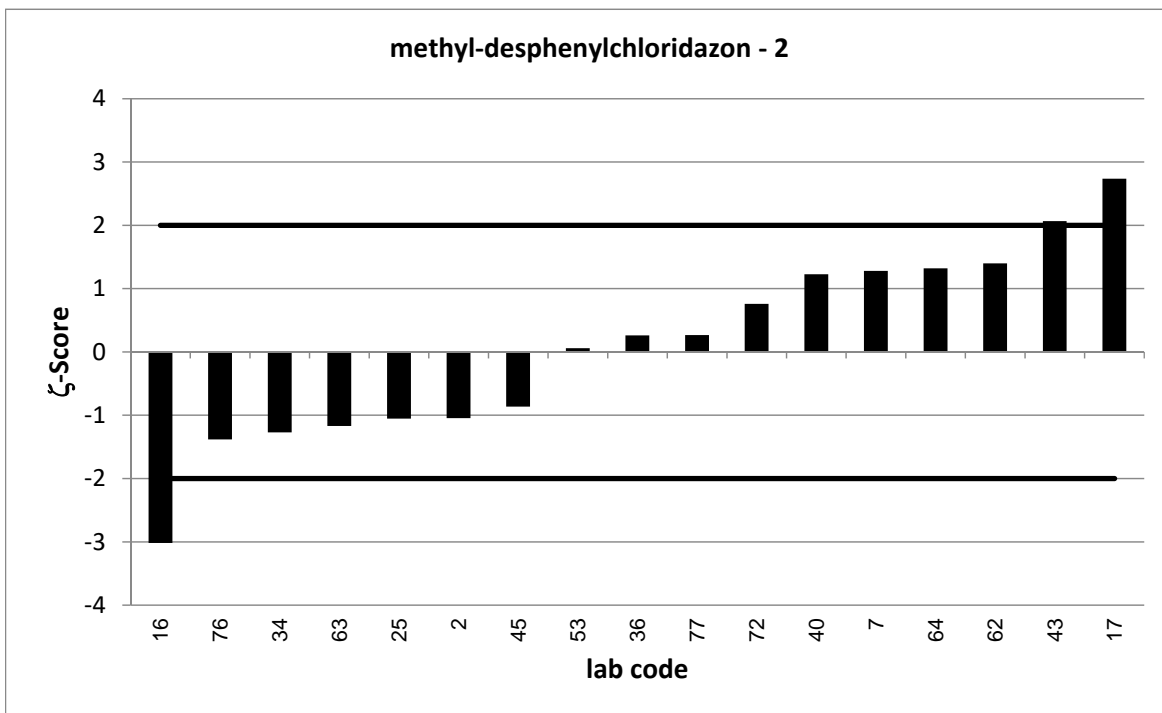
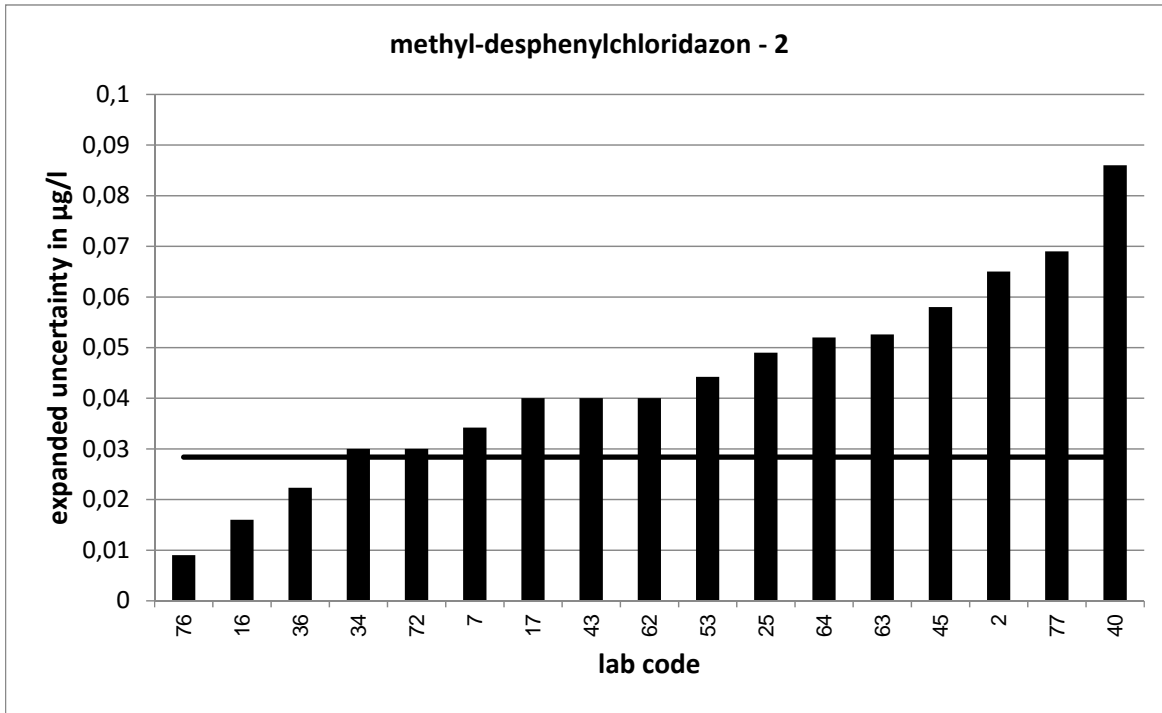


PT 4/20 - TW O5		methyl-desphenylchloridazon - 2			
assigned value [ $\mu\text{g/l}$ ]*		0,2197 $\pm$ 0,0125			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,2891			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,1596			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,185	0,065	-1,0	-1,2	s
5	0,207			-0,4	s
7	0,243	0,034	1,3	0,7	s
10	0,223			0,1	s
16	0,189	0,016	-3,0	-1,0	s
17	0,277	0,04	2,7	1,7	s
18	0,222			0,1	s
25	0,193	0,049	-1,1	-0,9	s
27	0,208			-0,4	s
30	0,201			-0,6	s
34	0,199	0,03	-1,3	-0,7	s
36	0,223	0,022	0,3	0,1	s
40	0,273	0,086	1,2	1,5	s
42	0,23			0,3	s
43	0,263	0,04	2,1	1,2	s
45	0,194	0,058	-0,9	-0,9	s
46	0,221			0,0	s
47	0,21			-0,3	s
48	0,221			0,0	s
51	0,205			-0,5	s
52	0,238			0,5	s
53	0,221	0,044	0,1	0,0	s
56	0,218			-0,1	s
62	0,249	0,04	1,4	0,8	s
63	0,188	0,053	-1,2	-1,1	s
64	0,255	0,052	1,3	1,0	s
71	0,205			-0,5	s
72	0,232	0,03	0,8	0,4	s
75	0,248			0,8	s
76	0,209	0,009	-1,4	-0,4	s
77	0,229	0,069	0,3	0,3	s
83	0,1684			-1,7	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

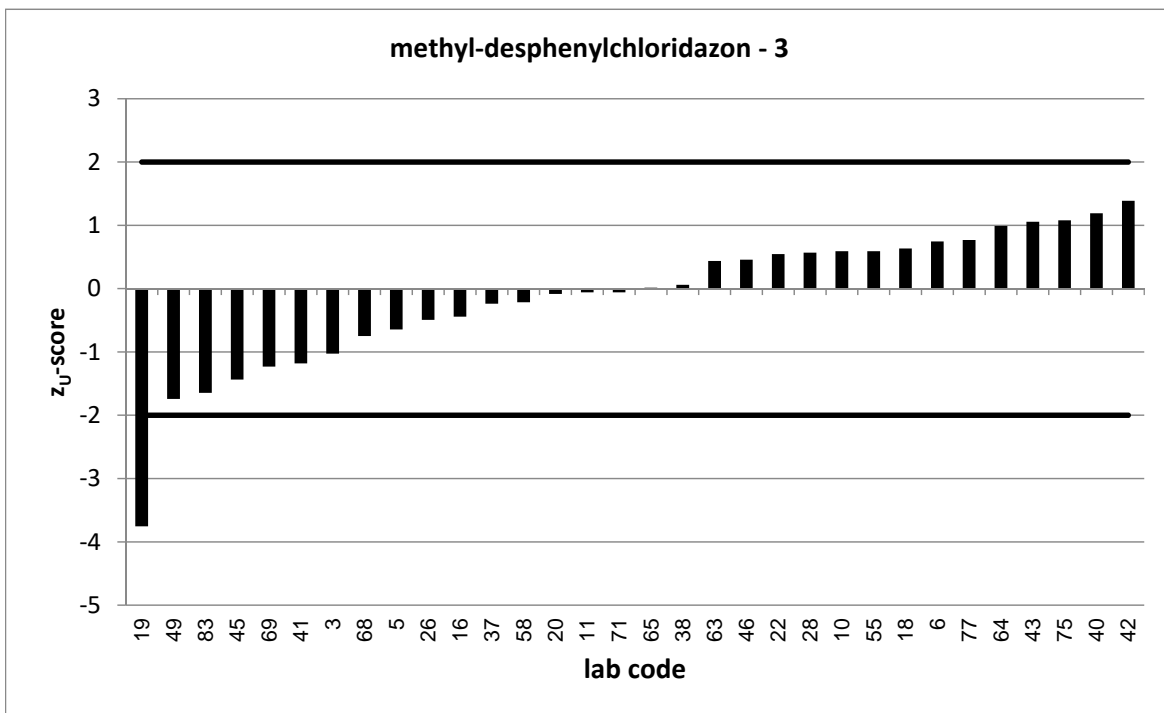
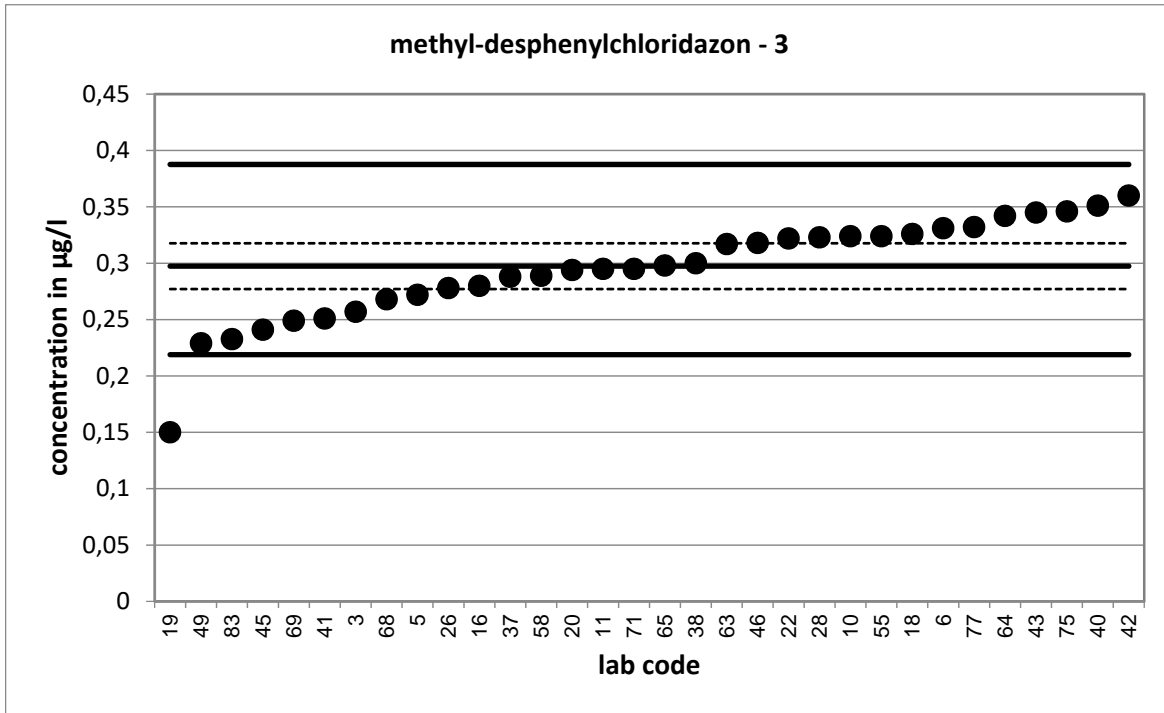


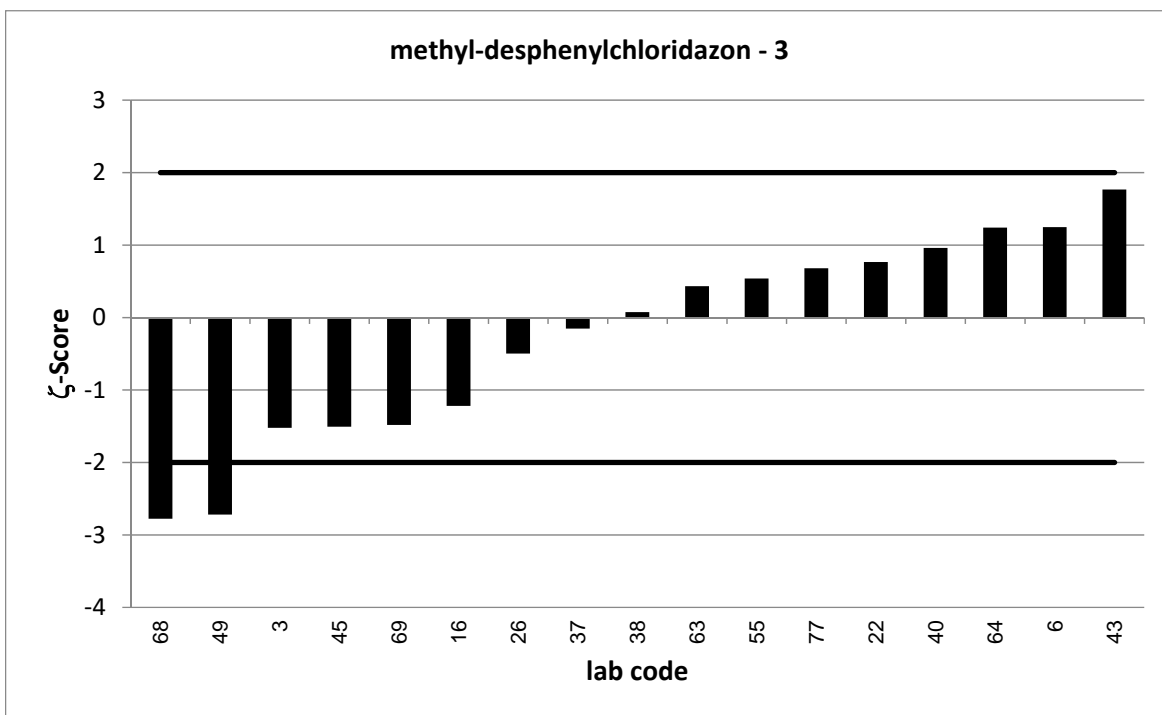
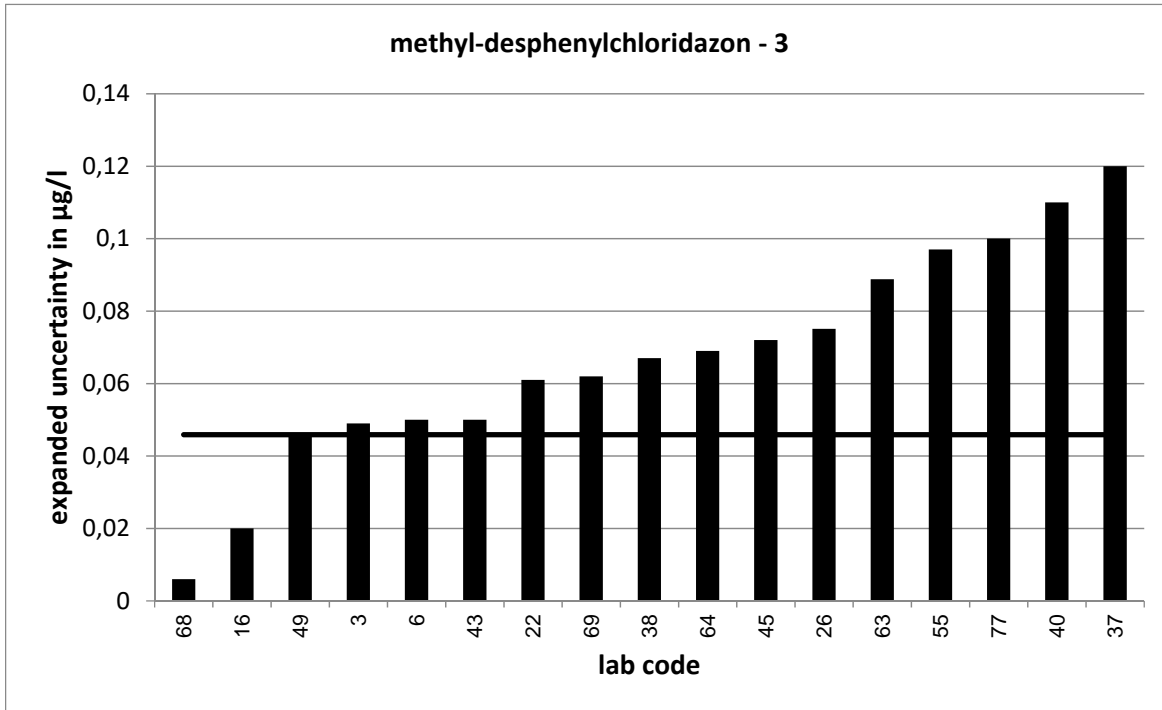


PT 4/20 - TW O5		methyl-desphenylchloridazon - 3			
assigned value [ $\mu\text{g/l}$ ]*		0,2974 $\pm$ 0,0203			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,3876			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2189			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
3	0,257	0,049	-1,5	-1,0	s
5	0,272			-0,6	s
6	0,331	0,05	1,2	0,7	s
10	0,324			0,6	s
11	0,295			-0,1	s
16	0,28	0,02	-1,2	-0,4	s
18	0,326			0,6	s
19	0,15			-3,8	u
20	0,294			-0,1	s
22	0,322	0,061	0,8	0,5	s
26	0,278	0,075	-0,5	-0,5	s
28	0,323			0,6	s
37	0,288	0,12	-0,2	-0,2	s
38	0,3	0,067	0,1	0,1	s
40	0,351	0,11	1,0	1,2	s
41	0,251			-1,2	s
42	0,36			1,4	s
43	0,345	0,05	1,8	1,1	s
45	0,241	0,072	-1,5	-1,4	s
46	0,318			0,5	s
49	0,229	0,046	-2,7	-1,7	s
55	0,324	0,097	0,5	0,6	s
58	0,28891			-0,2	s
63	0,317	0,089	0,4	0,4	s
64	0,342	0,069	1,2	1,0	s
65	0,298			0,0	s
68	0,268	0,006	-2,8	-0,7	s
69	0,249	0,062	-1,5	-1,2	s
71	0,295			-0,1	s
75	0,346			1,1	s
77	0,332	0,1	0,7	0,8	s
83	0,2327			-1,6	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



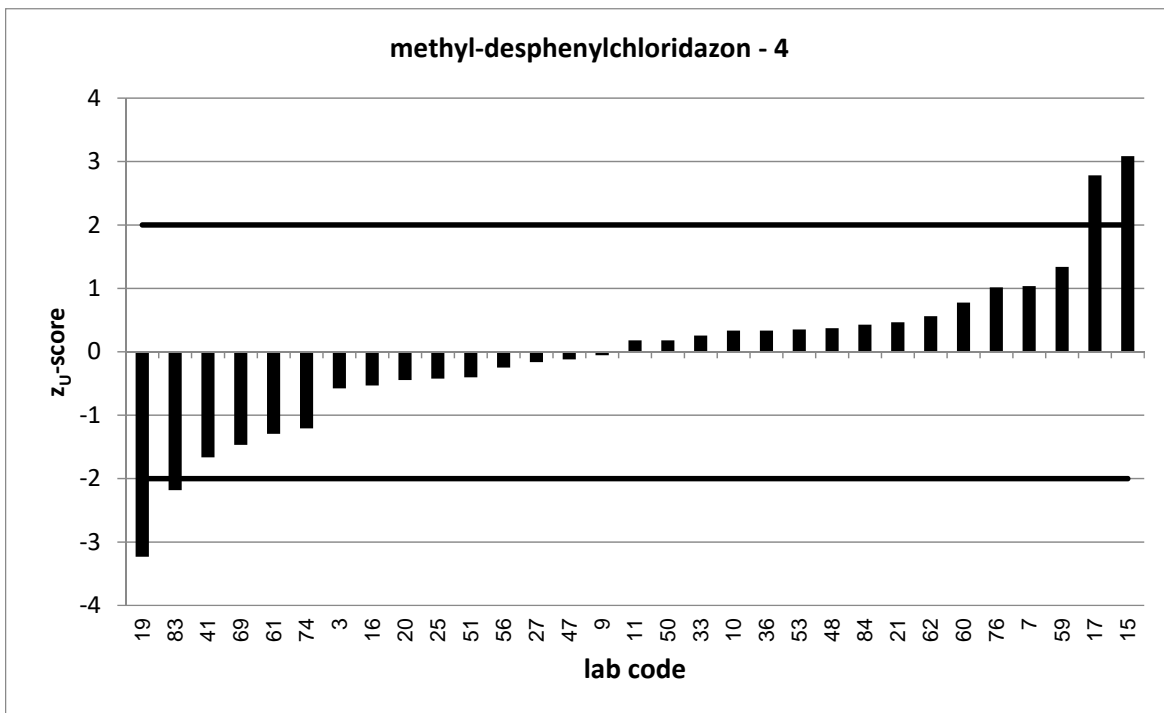
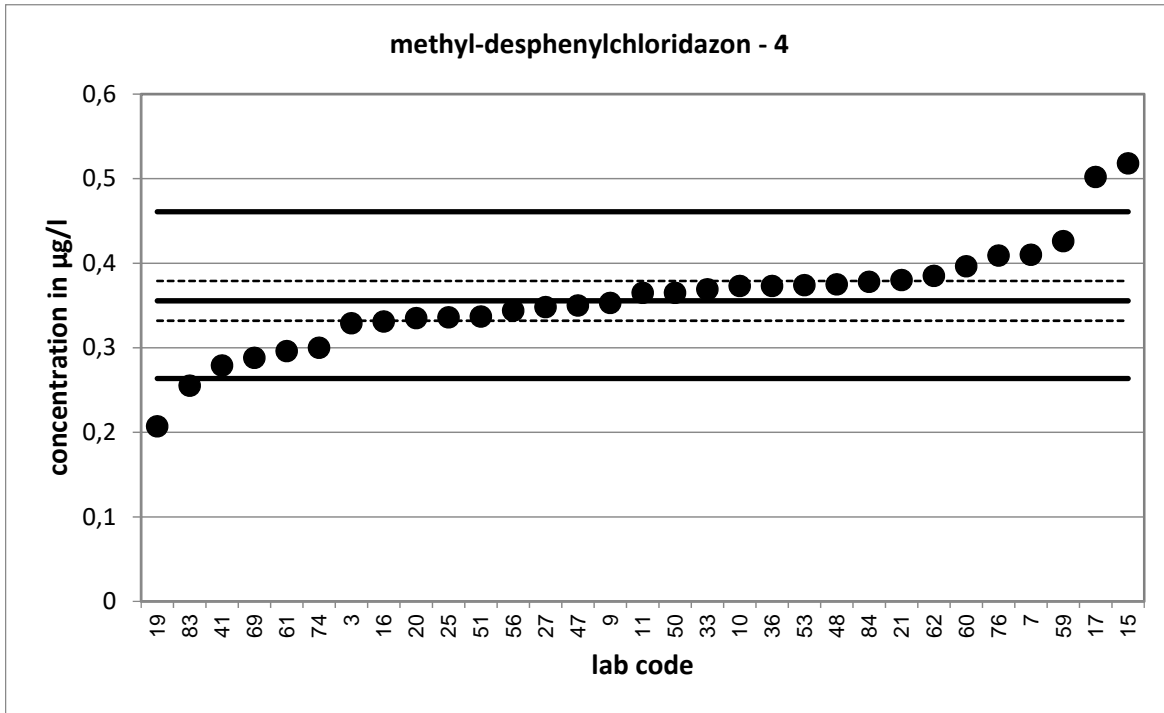


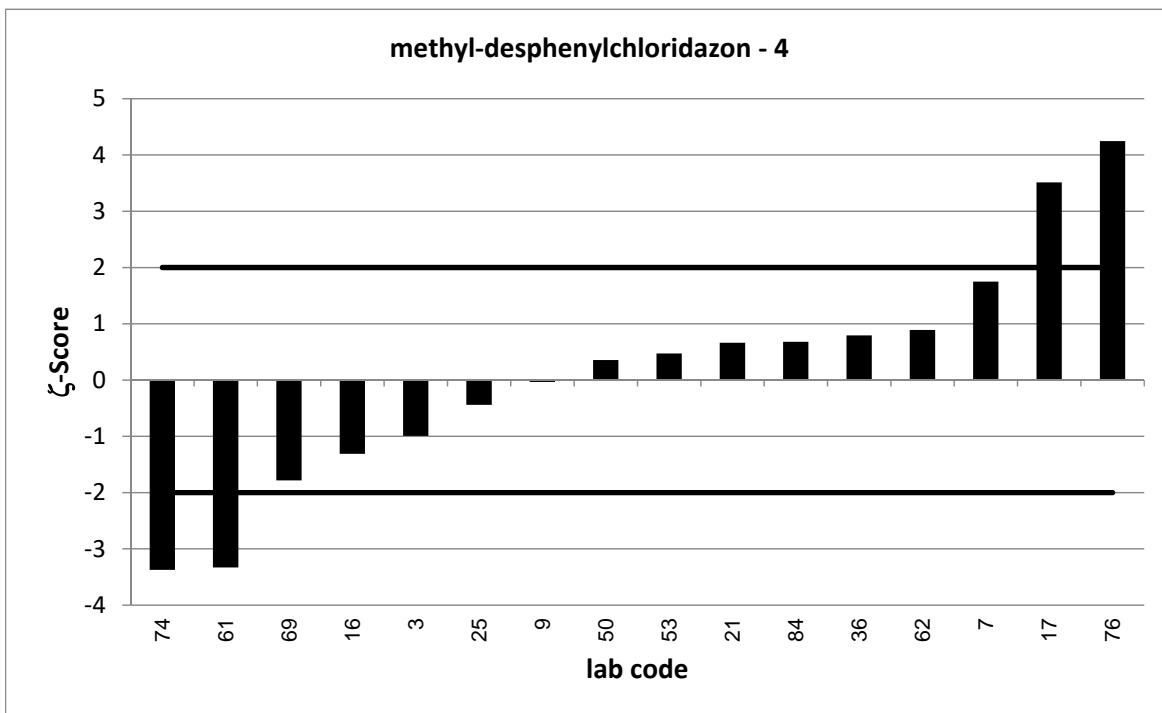
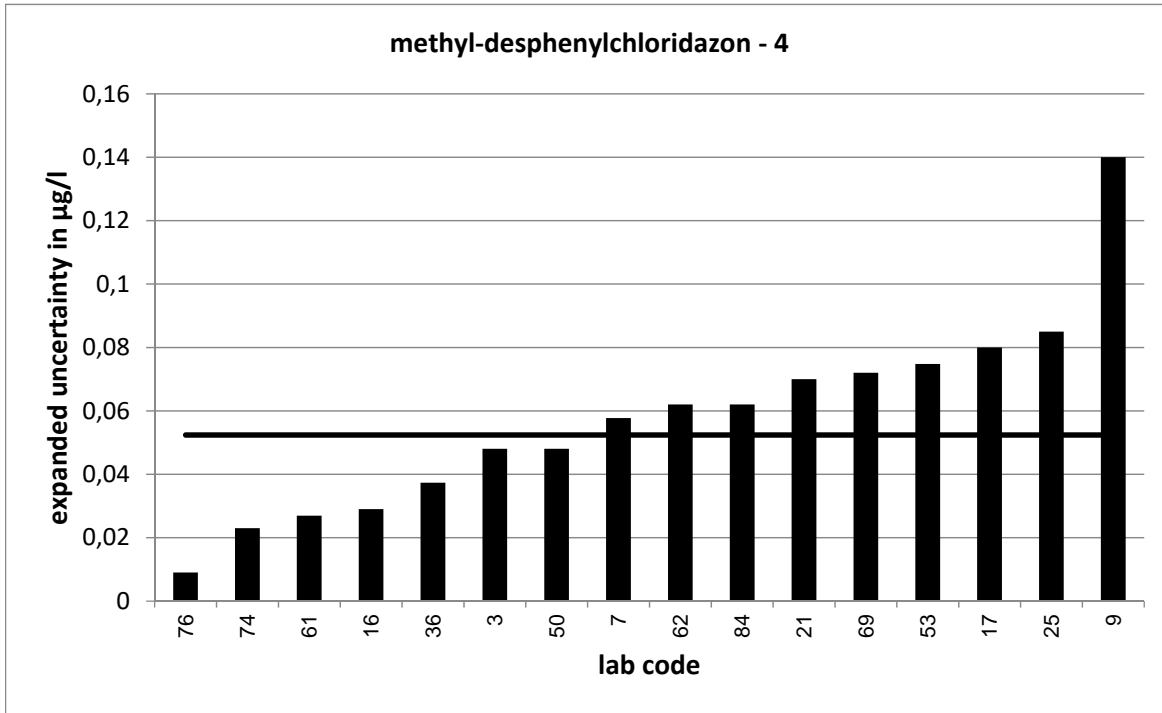


PT 4/20 - TW O5		methyl-desphenylchloridazon - 4			
assigned value [ $\mu\text{g/l}$ ]*		0,3555 $\pm$ 0,0235			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,4609			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2637			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
3	0,329	0,048	-1,0	-0,6	s
7	0,41	0,058	1,7	1,0	s
9	0,353	0,14	0,0	-0,1	s
10	0,373			0,3	s
11	0,365			0,2	s
15	0,518			3,1	u
16	0,331	0,029	-1,3	-0,5	s
17	0,502	0,08	3,5	2,8	q
19	0,207			-3,2	u
20	0,335			-0,4	s
21	0,38	0,07	0,7	0,5	s
25	0,336	0,085	-0,4	-0,4	s
27	0,348			-0,2	s
33	0,369			0,3	s
36	0,373	0,037	0,8	0,3	s
41	0,279			-1,7	s
47	0,35			-0,1	s
48	0,375			0,4	s
50	0,365	0,048	0,4	0,2	s
51	0,337			-0,4	s
53	0,374	0,075	0,5	0,4	s
56	0,344			-0,3	s
59	0,426			1,3	s
60	0,3963			0,8	s
61	0,296	0,027	-3,3	-1,3	s
62	0,385	0,062	0,9	0,6	s
69	0,288	0,072	-1,8	-1,5	s
74	0,3	0,023	-3,4	-1,2	s
76	0,409	0,009	4,2	1,0	s
83	0,2552			-2,2	q
84	0,378	0,062	0,7	0,4	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

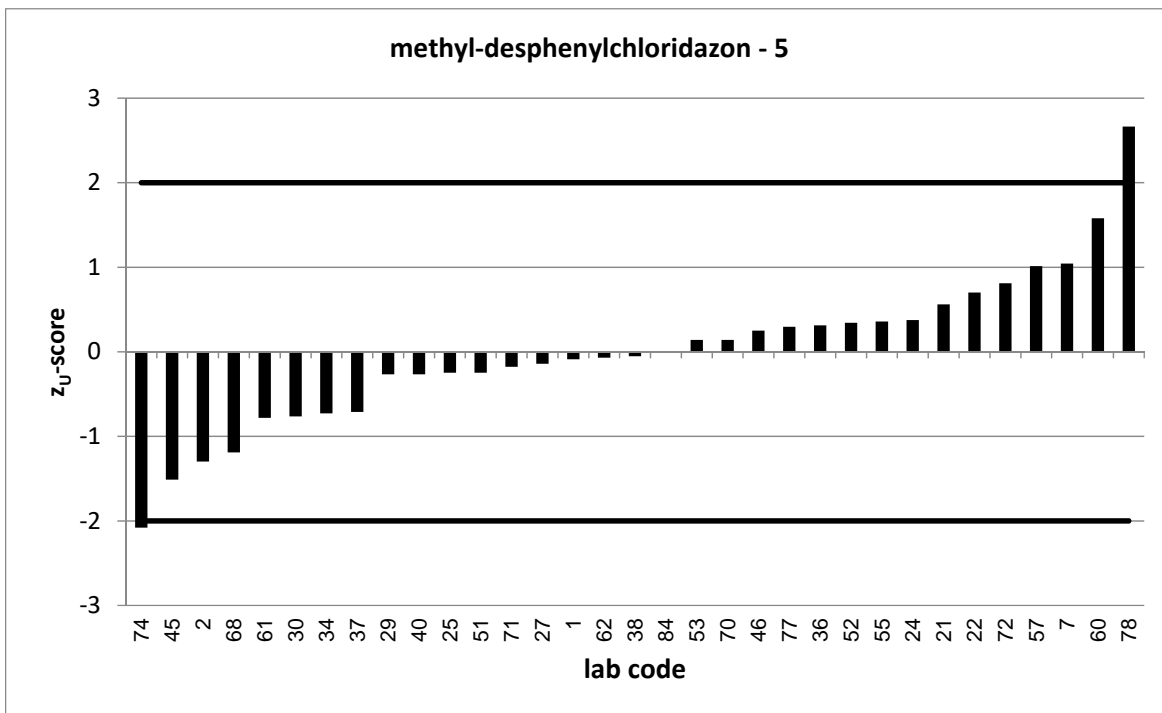
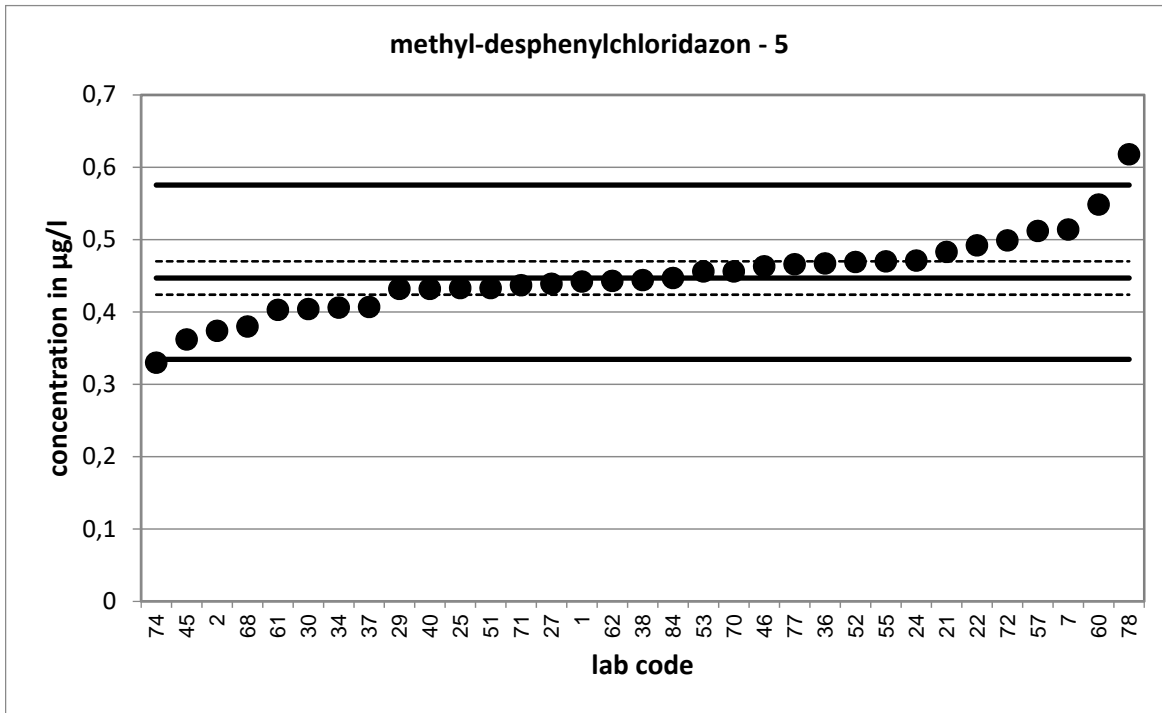


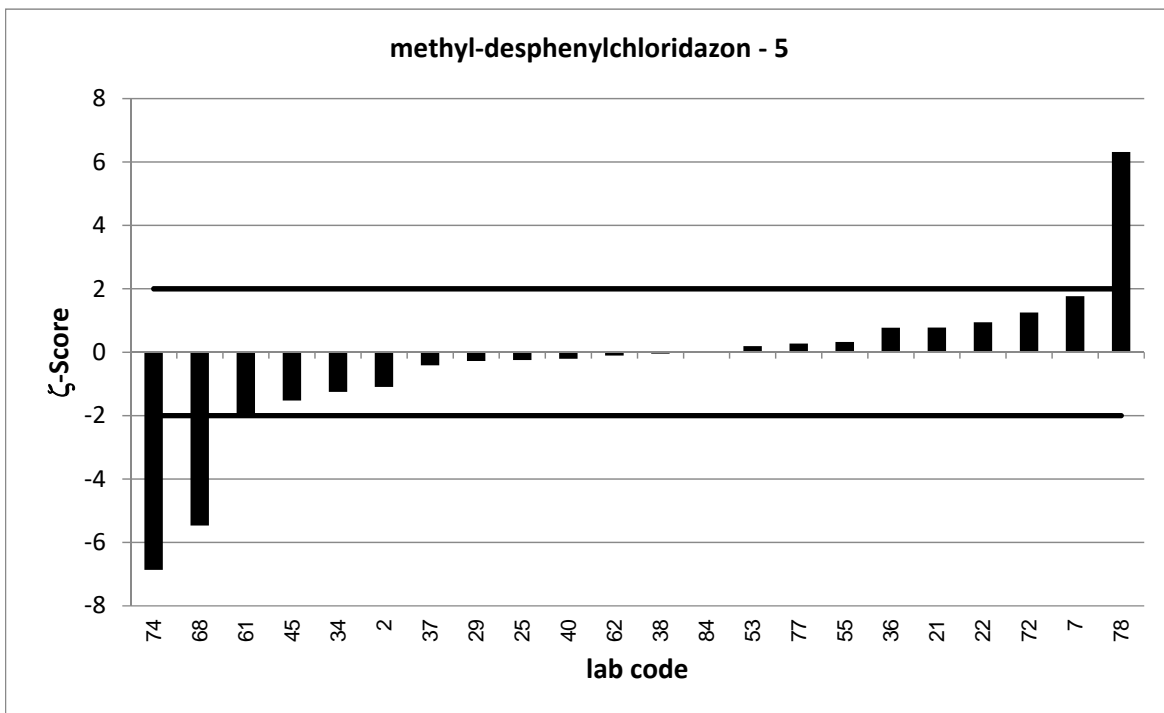
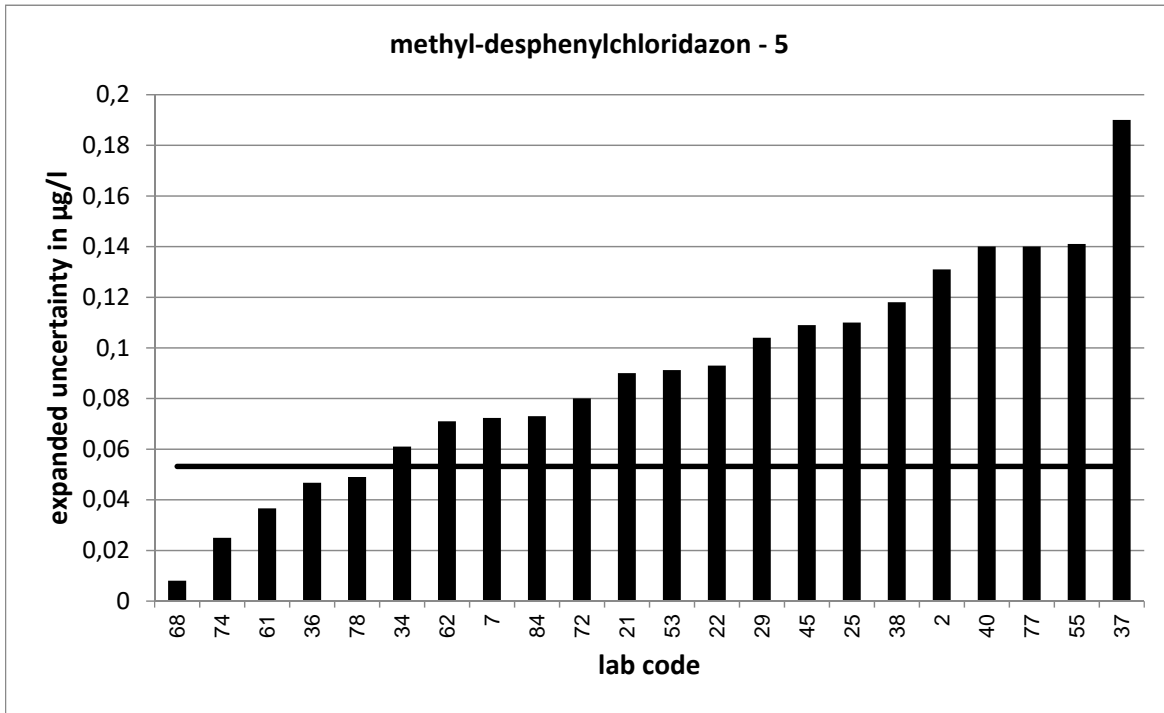


PT 4/20 - TW O5		methyl-desphenylchloridazon - 5			
assigned value [ $\mu\text{g/l}$ ]*		0,447 $\pm$ 0,0231			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,5754			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,3346			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
1	0,442			-0,1	s
2	0,374	0,131	-1,1	-1,3	s
7	0,514	0,072	1,8	1,0	s
21	0,483	0,09	0,8	0,6	s
22	0,492	0,093	0,9	0,7	s
24	0,471			0,4	s
25	0,433	0,11	-0,2	-0,2	s
27	0,439			-0,1	s
29	0,432	0,104	-0,3	-0,3	s
30	0,404			-0,8	s
34	0,406	0,061	-1,3	-0,7	s
36	0,467	0,047	0,8	0,3	s
37	0,407	0,19	-0,4	-0,7	s
38	0,444	0,118	0,0	-0,1	s
40	0,432	0,14	-0,2	-0,3	s
45	0,362	0,109	-1,5	-1,5	s
46	0,463			0,2	s
51	0,433			-0,2	s
52	0,469			0,3	s
53	0,456	0,091	0,2	0,1	s
55	0,47	0,141	0,3	0,4	s
57	0,512			1,0	s
60	0,5484			1,6	s
61	0,403	0,037	-2,0	-0,8	s
62	0,443	0,071	-0,1	-0,1	s
68	0,38	0,008	-5,5	-1,2	s
70	0,456			0,1	s
71	0,437			-0,2	s
72	0,499	0,08	1,2	0,8	s
74	0,33	0,025	-6,9	-2,1	q
77	0,466	0,14	0,3	0,3	s
78	0,618	0,049	6,3	2,7	q
84	0,447	0,073	0,0	0,0	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

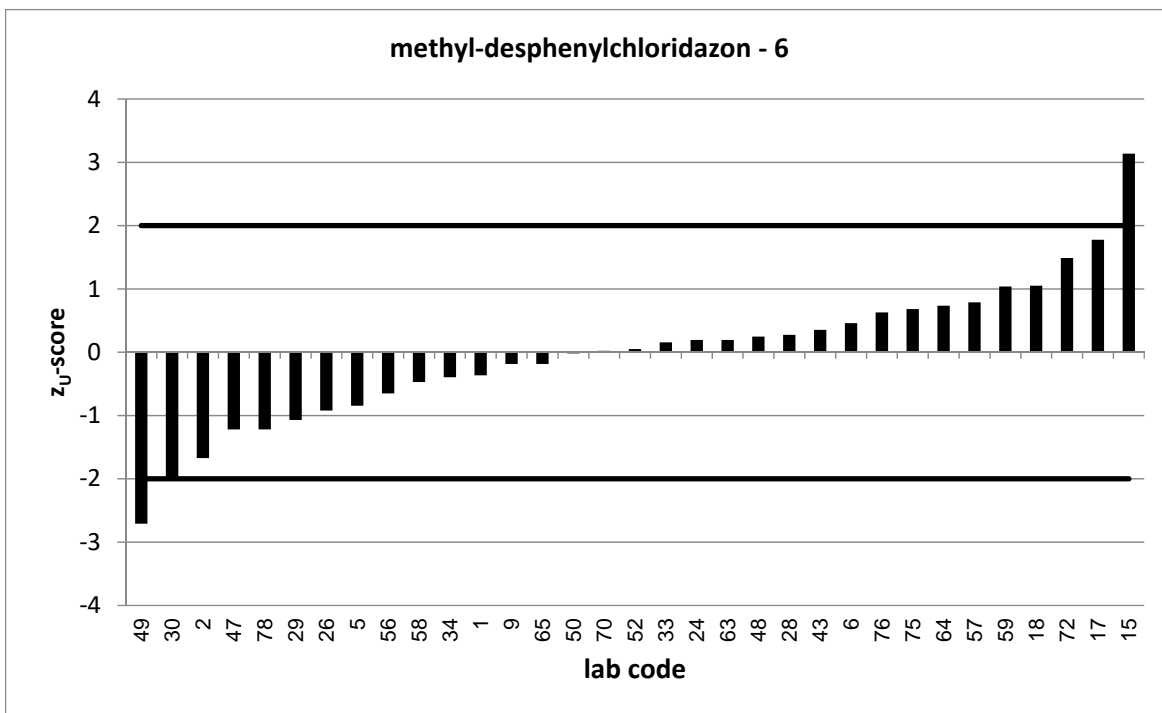
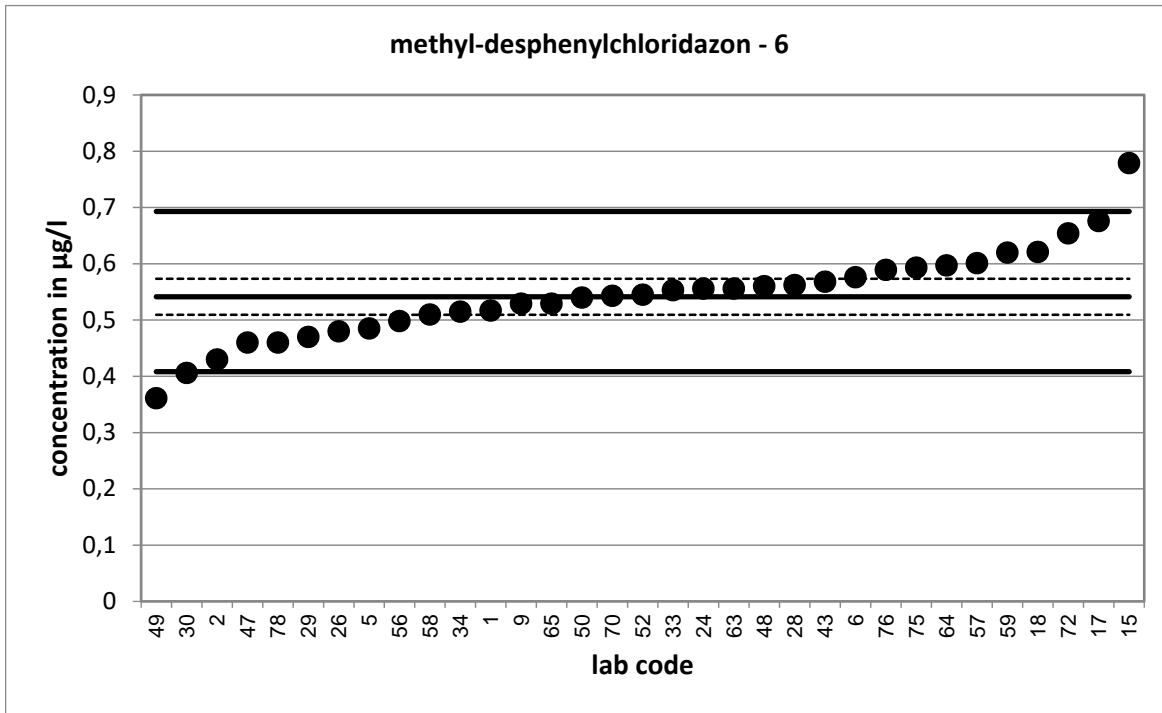




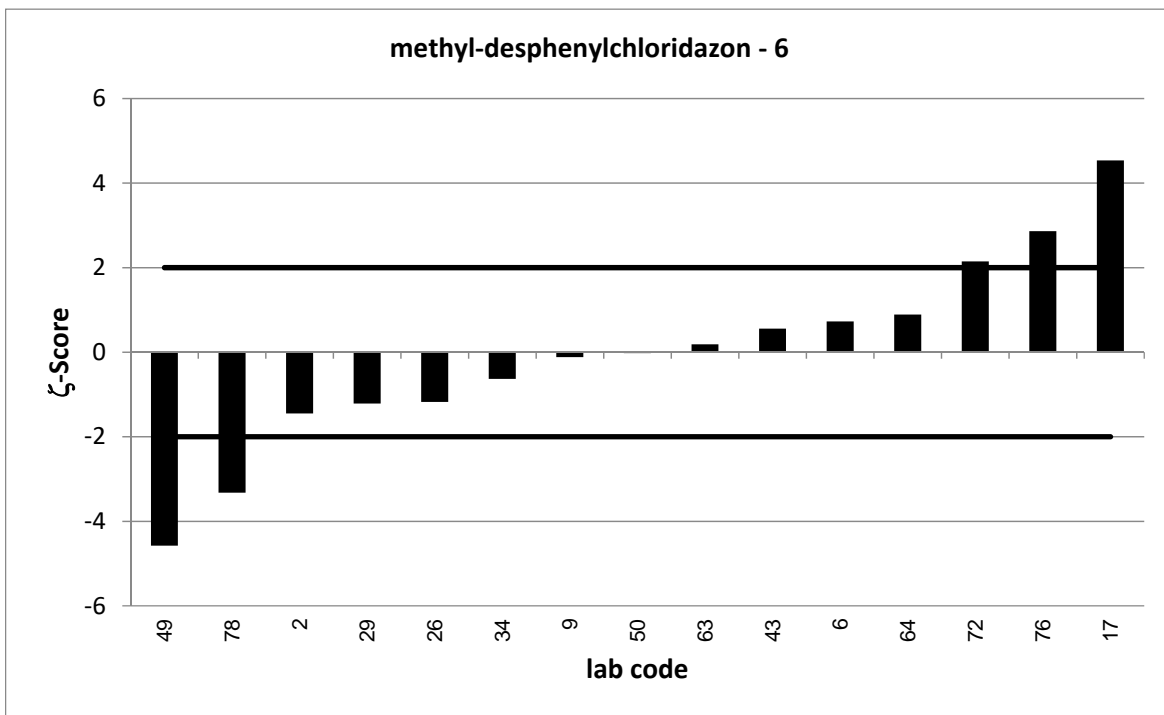
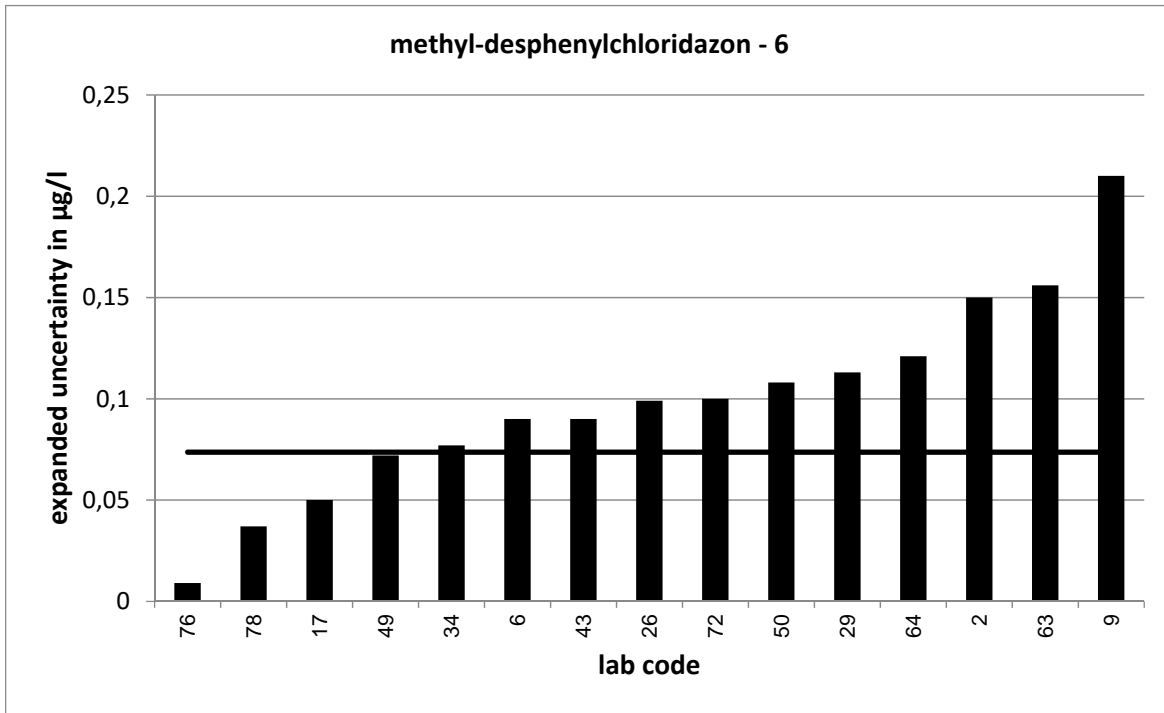
PT 4/20 - TW O5		methyl-desphenylchloridazon - 6			
assigned value [ $\mu\text{g/l}$ ]*		0,5413 $\pm$ 0,032			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,693			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,4082			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
1	0,517			-0,4	s
2	0,43	0,15	-1,5	-1,7	s
5	0,485			-0,8	s
6	0,576	0,09	0,7	0,5	s
9	0,529	0,21	-0,1	-0,2	s
15	0,779			3,1	u
17	0,676	0,05	4,5	1,8	s
18	0,621			1,1	s
24	0,556			0,2	s
26	0,48	0,099	-1,2	-0,9	s
28	0,562			0,3	s
29	0,47	0,113	-1,2	-1,1	s
30	0,406			-2,0	s
33	0,553			0,2	s
34	0,515	0,077	-0,6	-0,4	s
43	0,568	0,09	0,6	0,4	s
47	0,46			-1,2	s
48	0,56			0,2	s
49	0,361	0,072	-4,6	-2,7	q
50	0,54	0,108	0,0	0,0	s
52	0,545			0,0	s
56	0,498			-0,7	s
57	0,601			0,8	s
58	0,50992			-0,5	s
59	0,62			1,0	s
63	0,556	0,156	0,2	0,2	s
64	0,597	0,121	0,9	0,7	s
65	0,529			-0,2	s
70	0,543			0,0	s
72	0,654	0,1	2,1	1,5	s
75	0,593			0,7	s
76	0,589	0,009	2,9	0,6	s
78	0,46	0,037	-3,3	-1,2	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



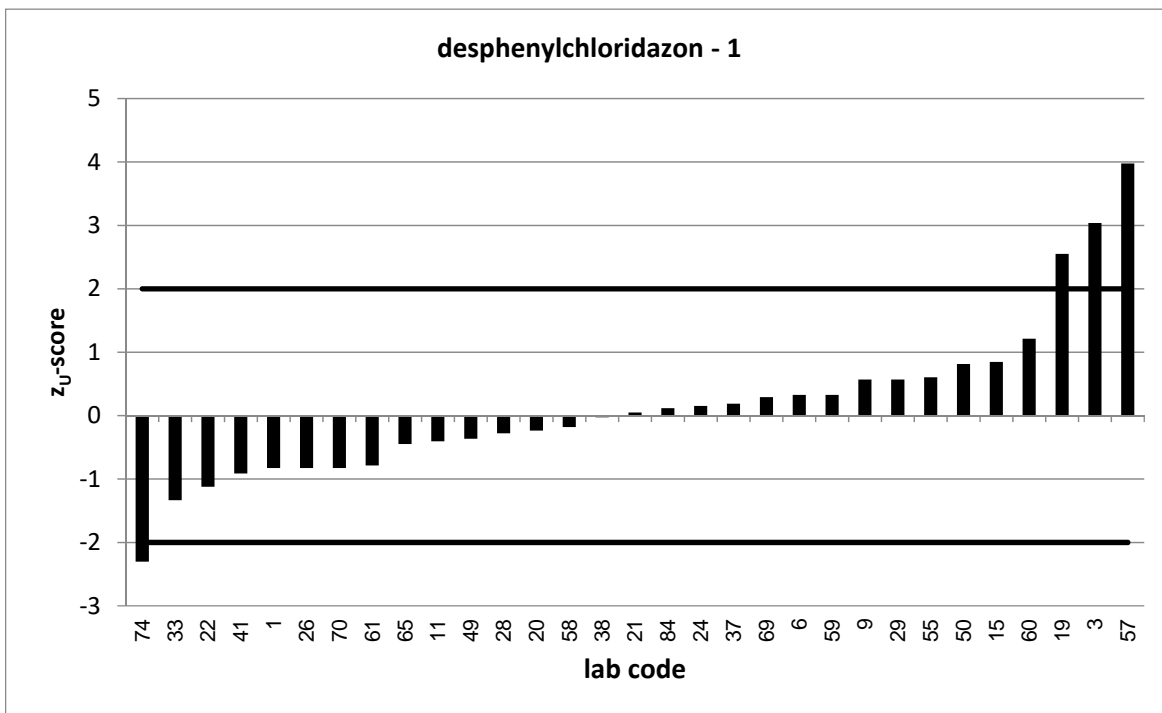
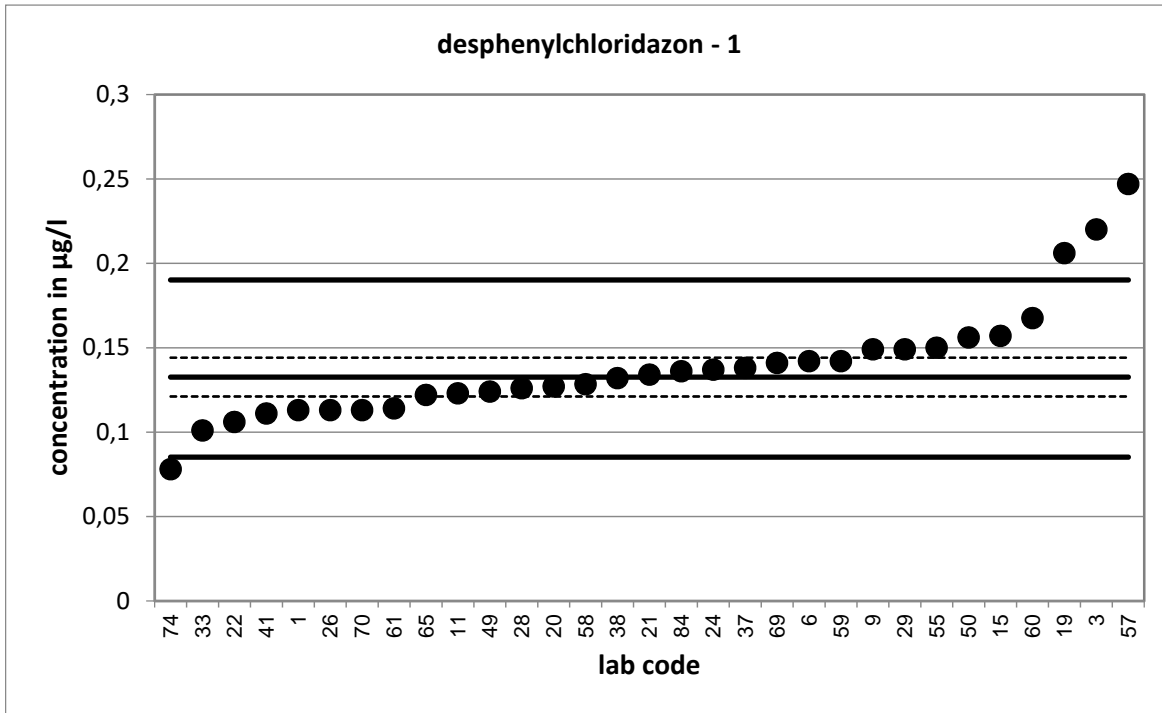


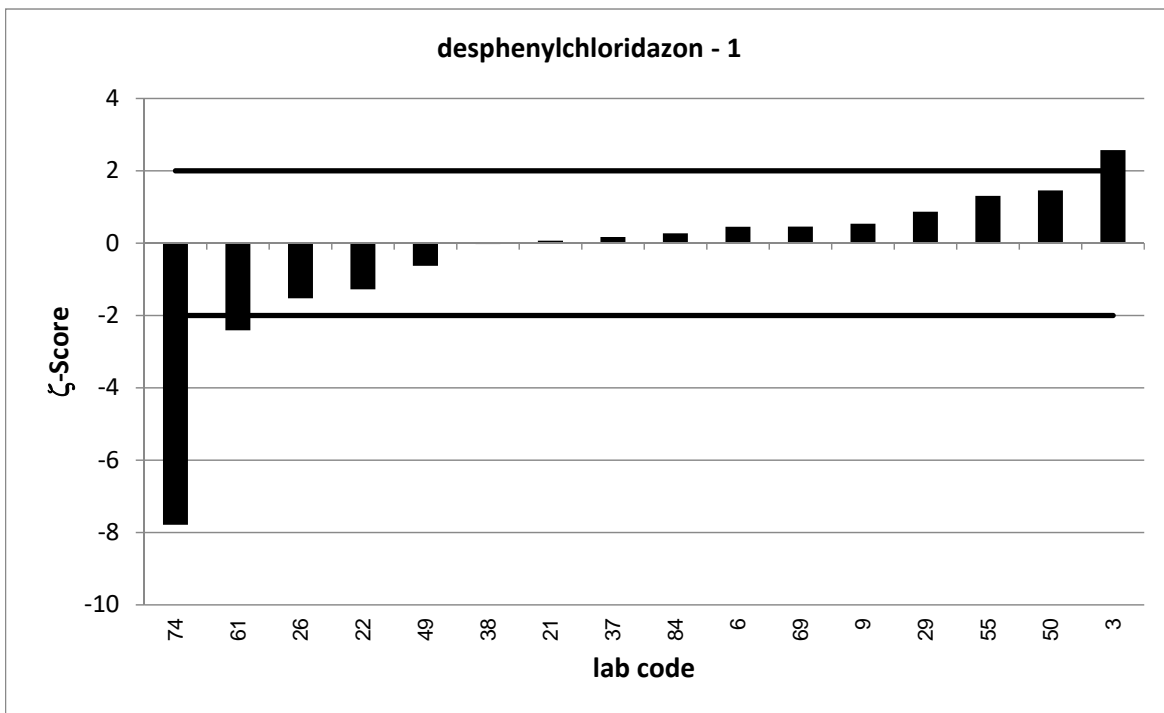
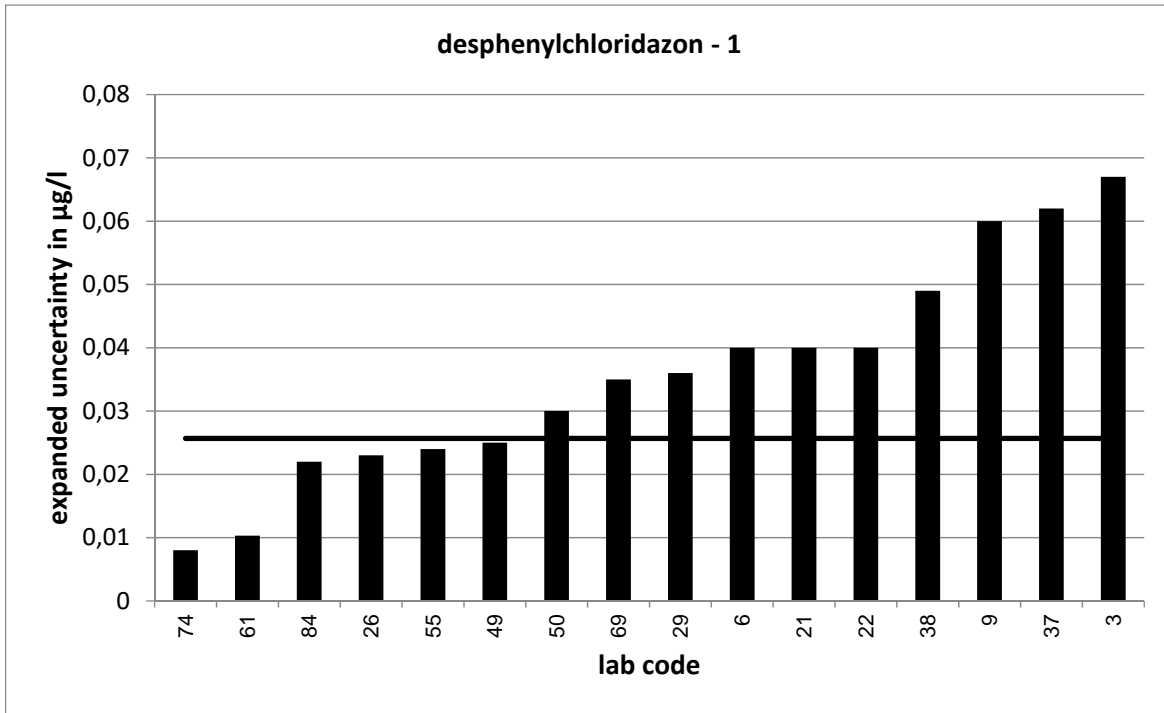


PT 4/20 - TW O5		desphenylchloridazon - 1			
assigned value [ $\mu\text{g/l}$ ]*		0,1326 $\pm$ 0,0115			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,1902			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,08523			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
1	0,113			-0,8	s
3	0,22	0,067	2,6	3,0	u
6	0,142	0,04	0,4	0,3	s
9	0,149	0,06	0,5	0,6	s
11	0,123			-0,4	s
15	0,157			0,8	s
19	0,206			2,6	q
20	0,127			-0,2	s
21	0,134	0,04	0,1	0,0	s
22	0,106	0,04	-1,3	-1,1	s
24	0,137			0,2	s
26	0,113	0,023	-1,5	-0,8	s
28	0,126			-0,3	s
29	0,149	0,036	0,9	0,6	s
33	0,101			-1,3	s
37	0,138	0,062	0,2	0,2	s
38	0,132	0,049	0,0	0,0	s
41	0,111			-0,9	s
49	0,124	0,025	-0,6	-0,4	s
50	0,156	0,03	1,5	0,8	s
55	0,15	0,024	1,3	0,6	s
57	0,247			4,0	u
58	0,12837			-0,2	s
59	0,142			0,3	s
60	0,1675			1,2	s
61	0,114	0,01	-2,4	-0,8	s
65	0,122			-0,4	s
69	0,141	0,035	0,5	0,3	s
70	0,113			-0,8	s
74	0,078	0,008	-7,8	-2,3	q
84	0,136	0,022	0,3	0,1	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

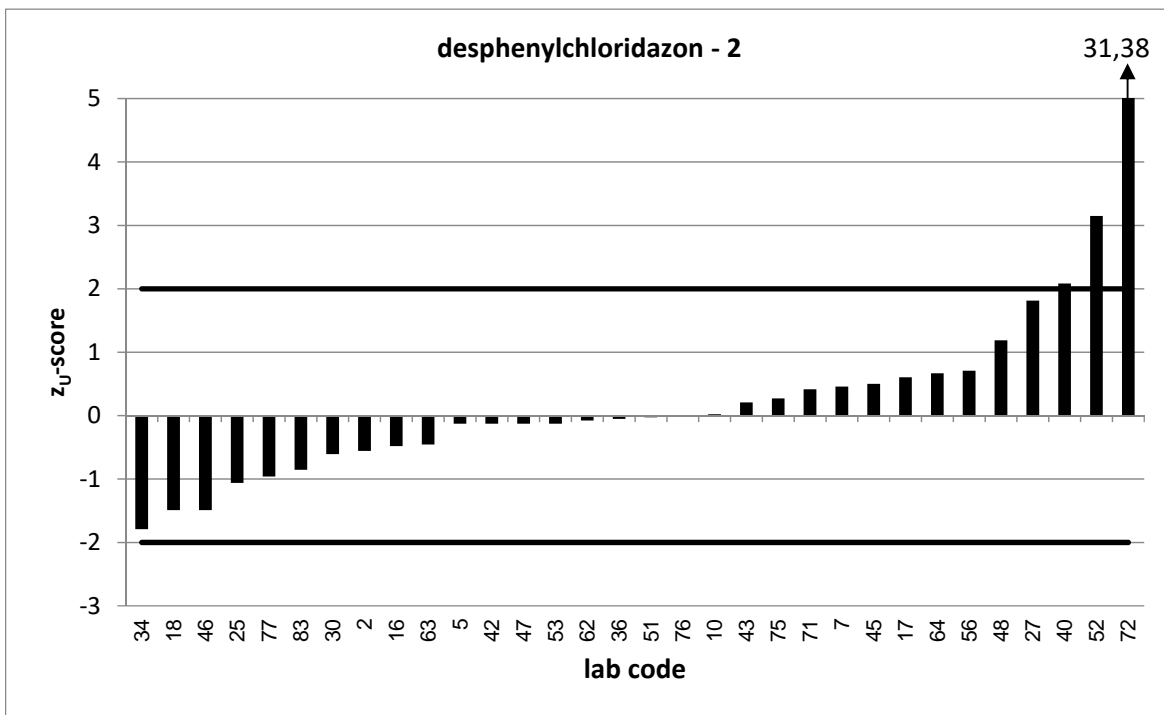
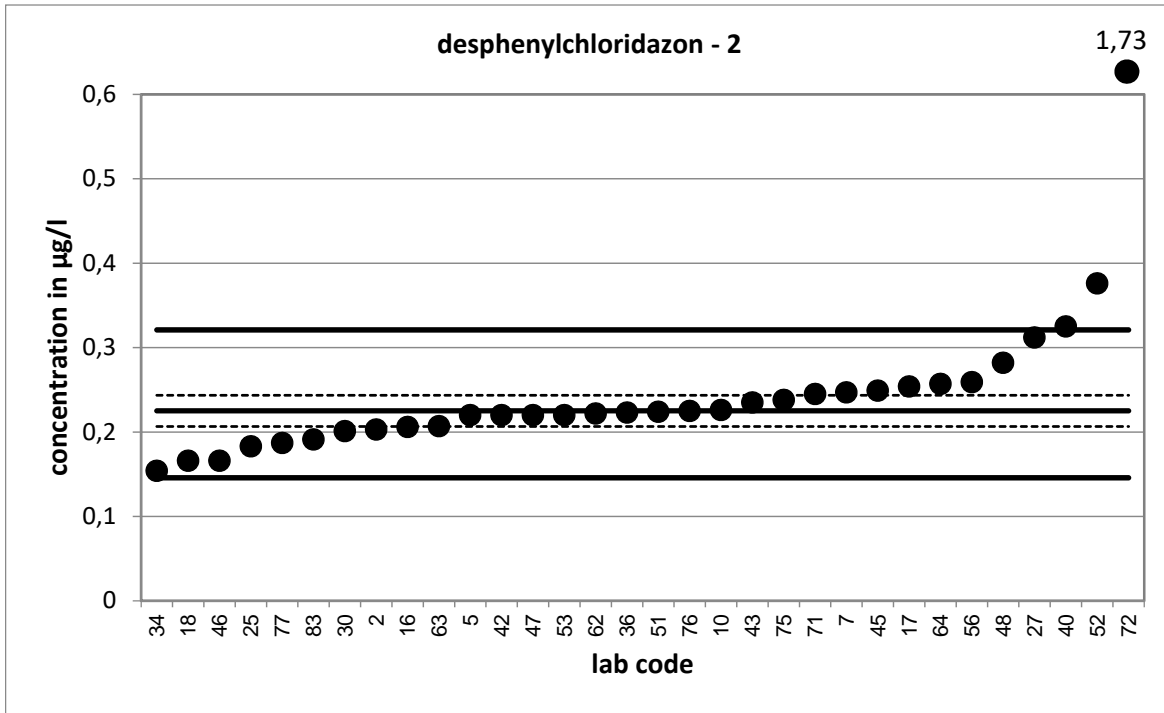


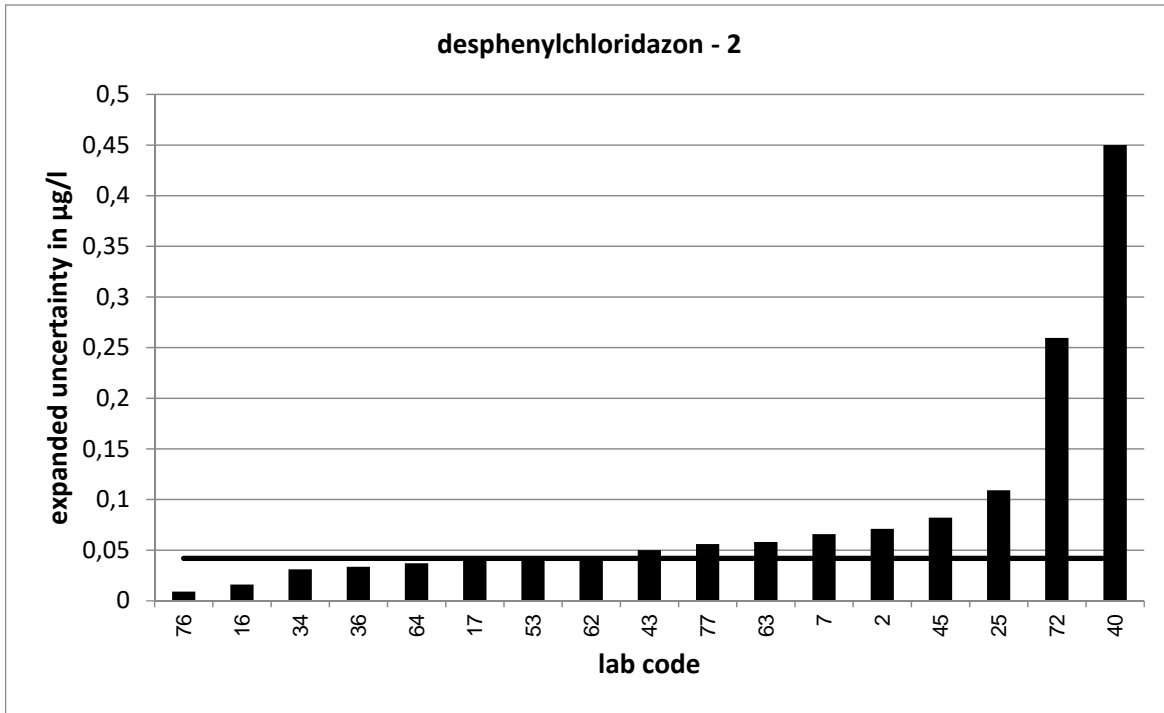


PT 4/20 - TW O5		desphenylchloridazon - 2			
assigned value [ $\mu\text{g/l}$ ]*		0,2251 $\pm$ 0,0185			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,321			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,1458			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,203	0,071	-0,6	-0,6	s
5	0,22			-0,1	s
7	0,247	0,066	0,6	0,5	s
10	0,226			0,0	s
16	0,206	0,016	-1,6	-0,5	s
17	0,254	0,04	1,3	0,6	s
18	0,166			-1,5	s
25	0,183	0,109	-0,8	-1,1	s
27	0,312			1,8	s
30	0,201			-0,6	s
34	0,154	0,031	-3,9	-1,8	s
36	0,223	0,034	-0,1	-0,1	s
40	0,325	0,45	0,4	2,1	q
42	0,22			-0,1	s
43	0,235	0,05	0,4	0,2	s
45	0,249	0,082	0,6	0,5	s
46	0,166			-1,5	s
47	0,22			-0,1	s
48	0,282			1,2	s
51	0,224			0,0	s
52	0,376			3,1	u
53	0,22	0,044	-0,2	-0,1	s
56	0,259			0,7	s
62	0,222	0,044	-0,1	-0,1	s
63	0,207	0,058	-0,6	-0,5	s
64	0,257	0,037	1,5	0,7	s
71	0,245			0,4	s
72	1,73	0,26	11,6	31,4	u
75	0,238			0,3	s
76	0,225	0,009	0,0	0,0	s
77	0,187	0,056	-1,3	-1,0	s
83	0,1912			-0,9	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



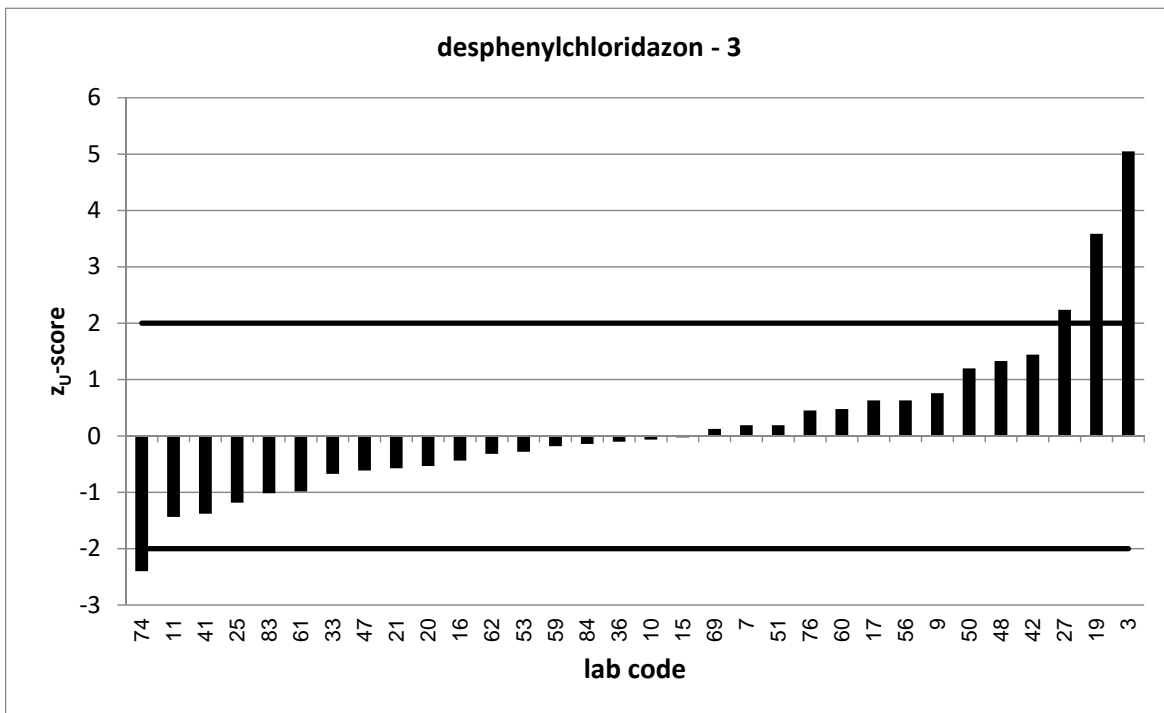
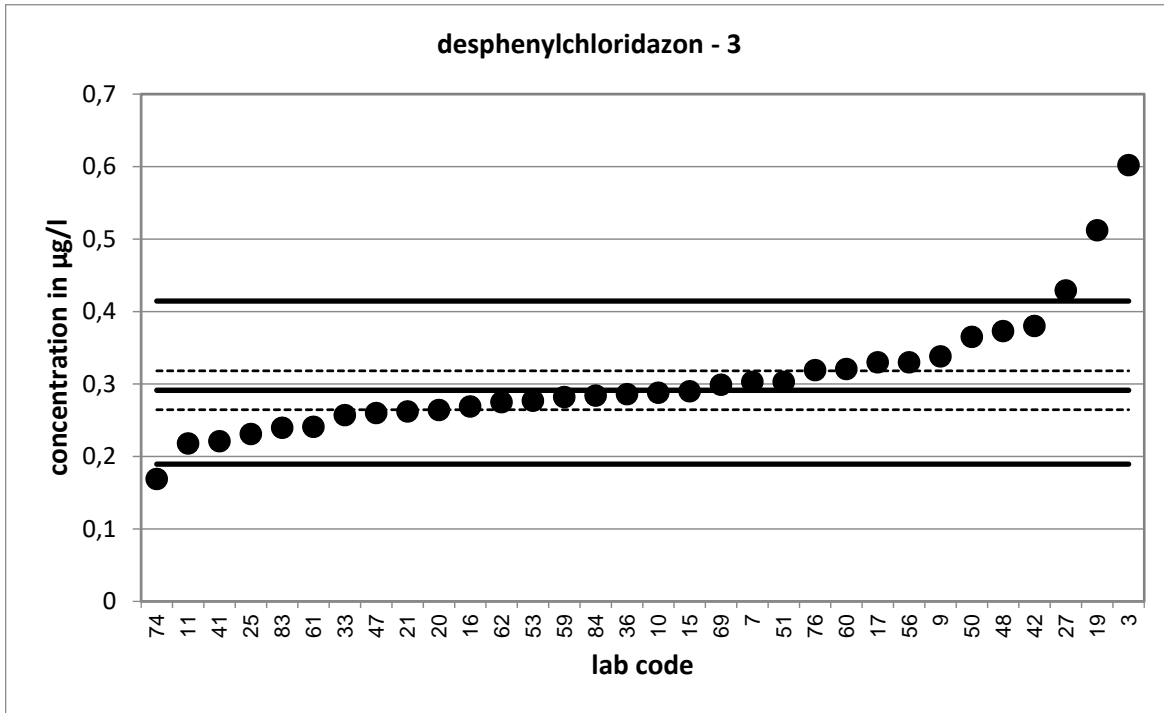


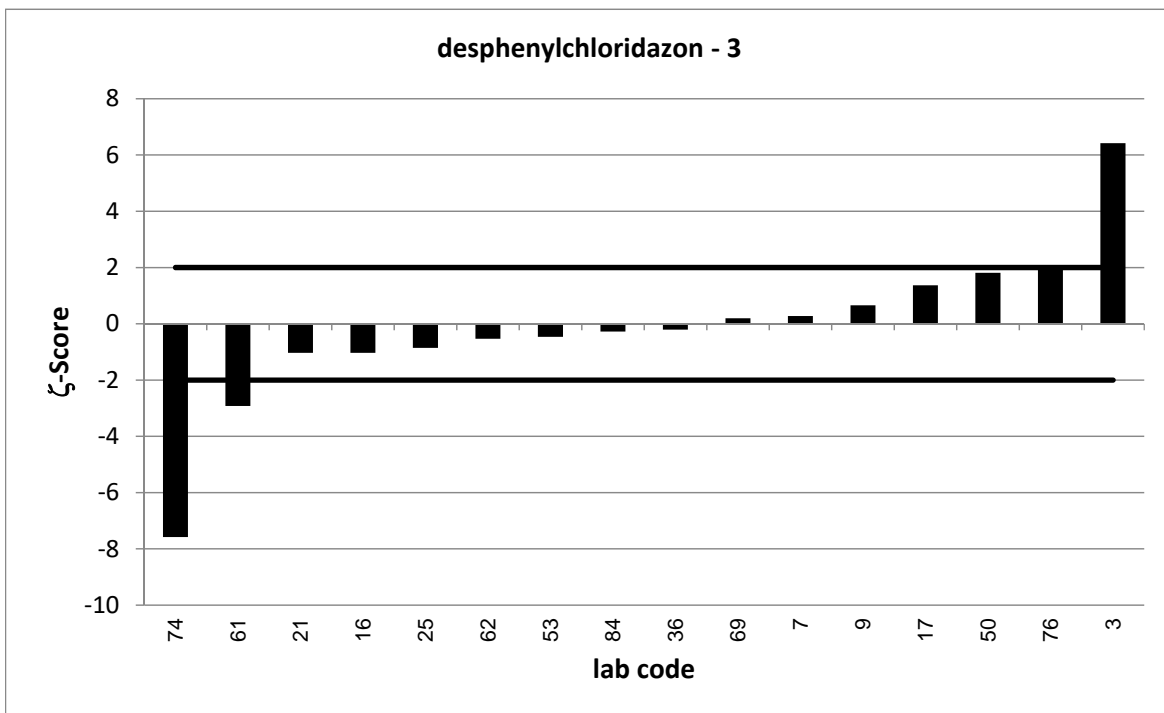
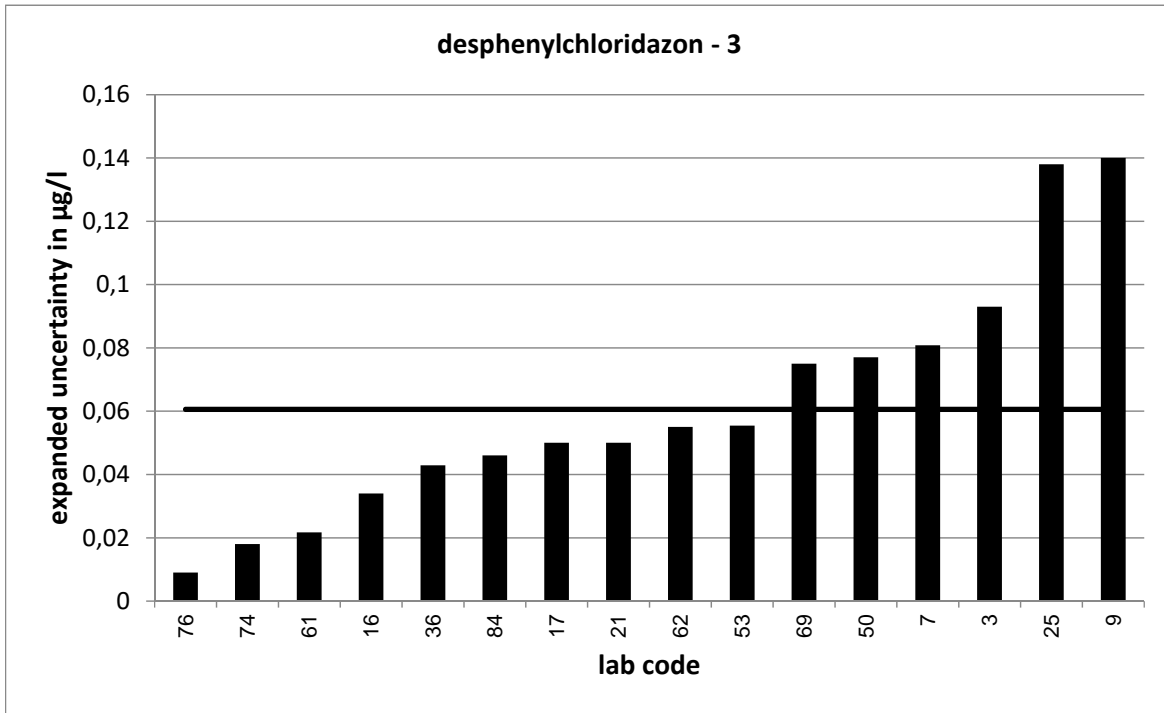
PT 4/20 - TW O5		desphenylchloridazon - 3			
assigned value [ $\mu\text{g/l}$ ]*		0,2913 $\pm$ 0,0268			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,4144			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,1894			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
3	0,602	0,093	6,4	5,0	u
7	0,303	0,081	0,3	0,2	s
9	0,338	0,14	0,7	0,8	s
10	0,288			-0,1	s
11	0,218			-1,4	s
15	0,29			0,0	s
16	0,269	0,034	-1,0	-0,4	s
17	0,33	0,05	1,4	0,6	s
19	0,512			3,6	u
20	0,264			-0,5	s
21	0,262	0,05	-1,0	-0,6	s
25	0,231	0,138	-0,9	-1,2	s
27	0,429			2,2	q
33	0,257			-0,7	s
36	0,286	0,043	-0,2	-0,1	s
41	0,221			-1,4	s
42	0,38			1,4	s
47	0,26			-0,6	s
48	0,373			1,3	s
50	0,365	0,077	1,8	1,2	s
51	0,303			0,2	s
53	0,277	0,055	-0,5	-0,3	s
56	0,33			0,6	s
59	0,282			-0,2	s
60	0,3207			0,5	s
61	0,241	0,022	-2,9	-1,0	s
62	0,275	0,055	-0,5	-0,3	s
69	0,299	0,075	0,2	0,1	s
74	0,169	0,018	-7,6	-2,4	q
76	0,319	0,009	2,0	0,4	s
83	0,2395			-1,0	s
84	0,284	0,046	-0,3	-0,1	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



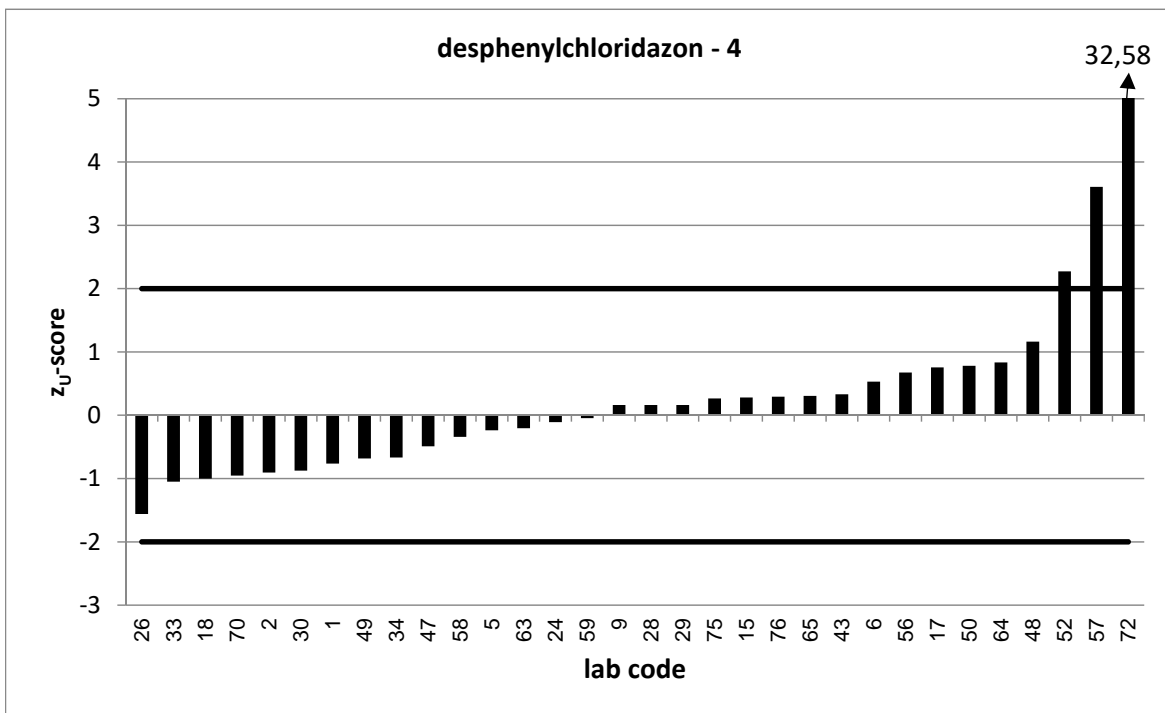
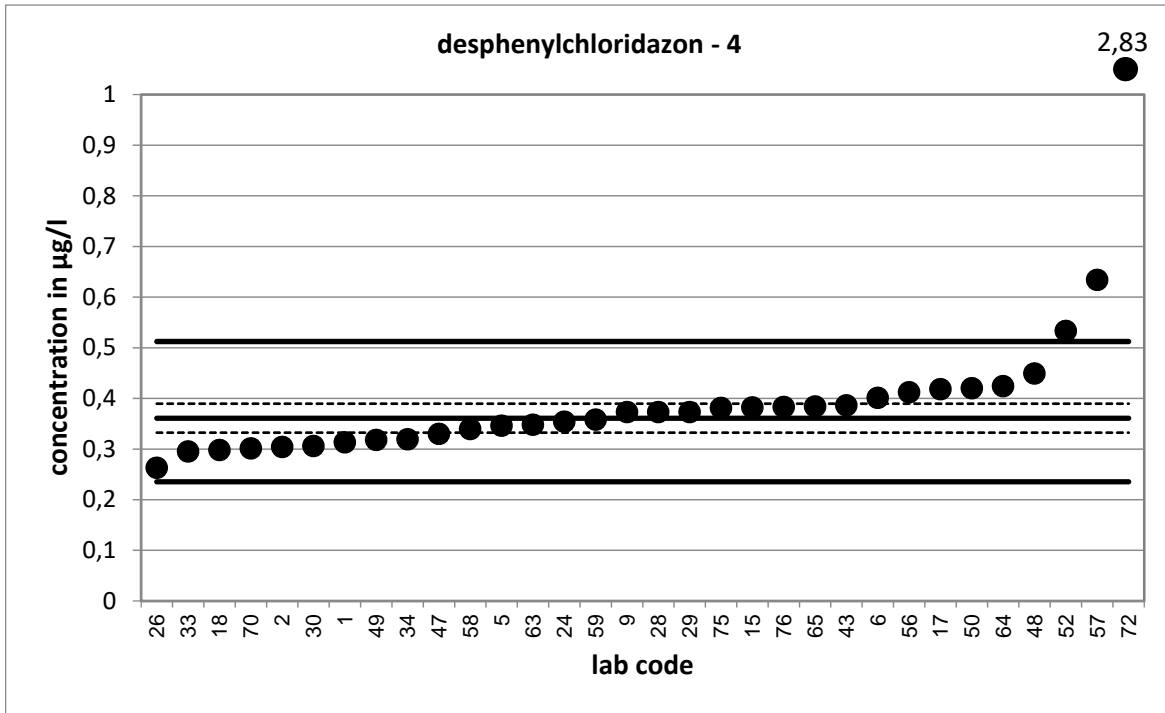


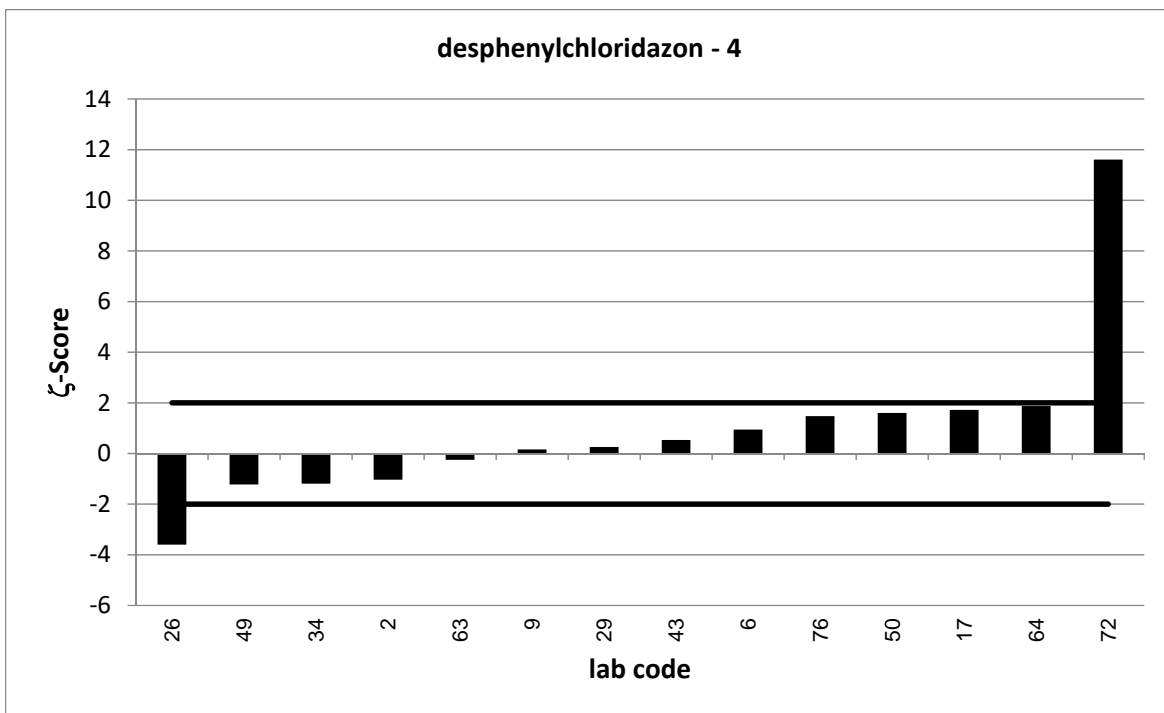
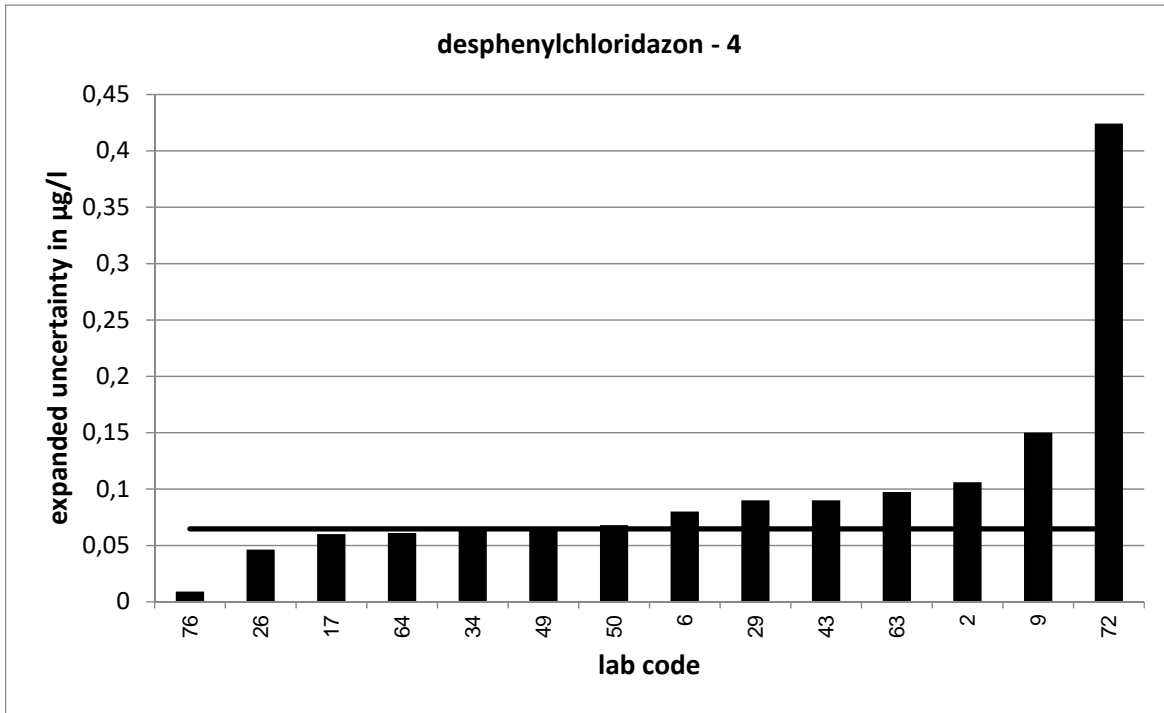


PT 4/20 - TW O5		desphenylchloridazon - 4			
assigned value [ $\mu\text{g/l}$ ]*		0,3609 $\pm$ 0,0286			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,5124			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2354			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
1	0,313			-0,8	s
2	0,304	0,106	-1,0	-0,9	s
5	0,346			-0,2	s
6	0,401	0,08	0,9	0,5	s
9	0,373	0,15	0,2	0,2	s
15	0,382			0,3	s
17	0,418	0,06	1,7	0,8	s
18	0,298			-1,0	s
24	0,354			-0,1	s
26	0,263	0,046	-3,6	-1,6	s
28	0,373			0,2	s
29	0,373	0,09	0,3	0,2	s
30	0,306			-0,9	s
33	0,295			-1,1	s
34	0,319	0,064	-1,2	-0,7	s
43	0,386	0,09	0,5	0,3	s
47	0,33			-0,5	s
48	0,449			1,2	s
49	0,318	0,064	-1,2	-0,7	s
50	0,42	0,068	1,6	0,8	s
52	0,533			2,3	q
56	0,412			0,7	s
57	0,634			3,6	u
58	0,33937			-0,3	s
59	0,358			0,0	s
63	0,348	0,097	-0,3	-0,2	s
64	0,424	0,061	1,9	0,8	s
65	0,384			0,3	s
70	0,301			-1,0	s
72	2,828	0,424	11,6	32,6	u
75	0,381			0,3	s
76	0,383	0,009	1,5	0,3	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

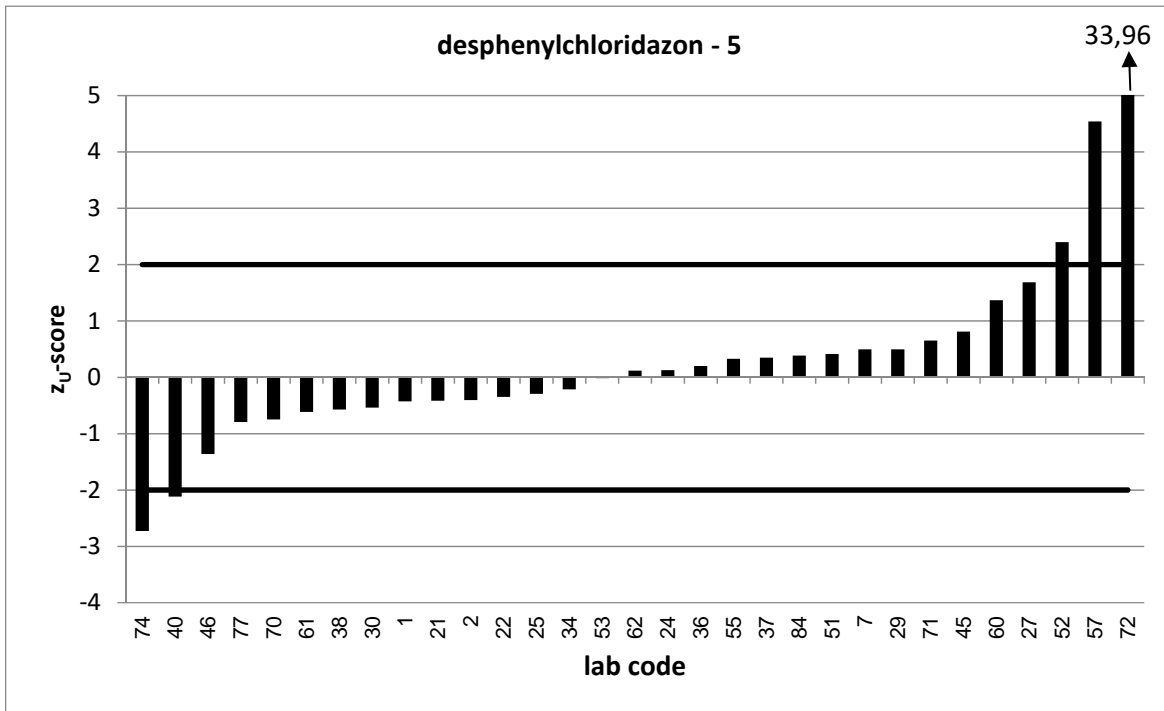
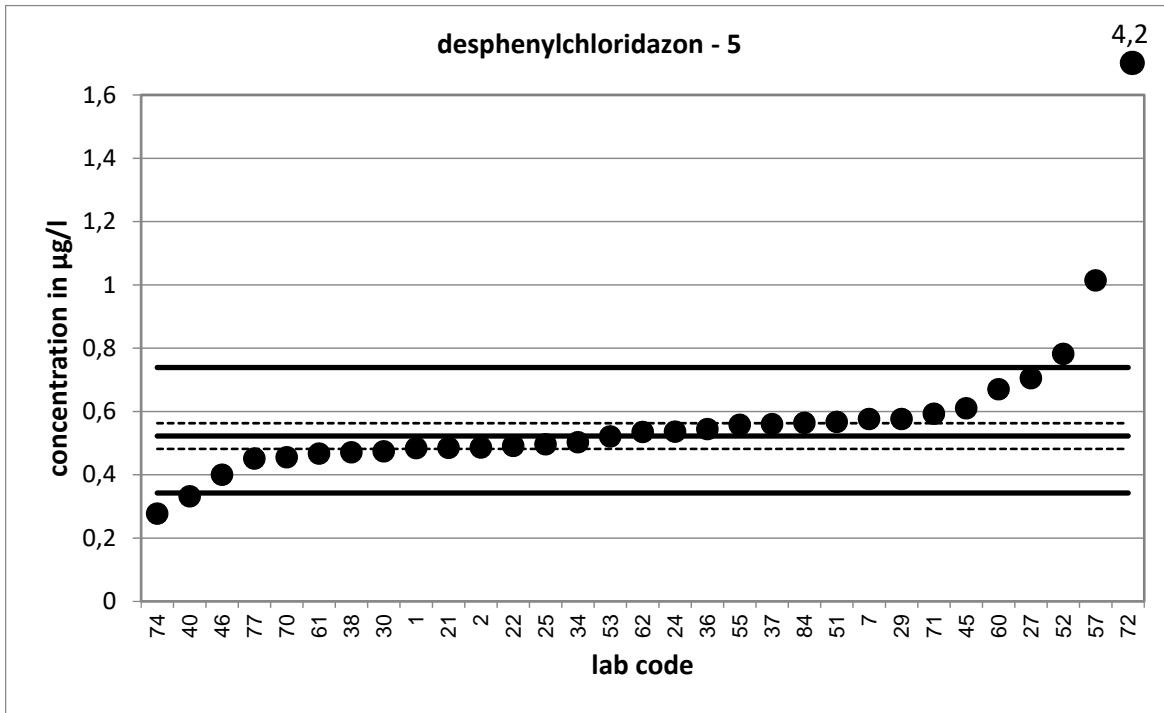


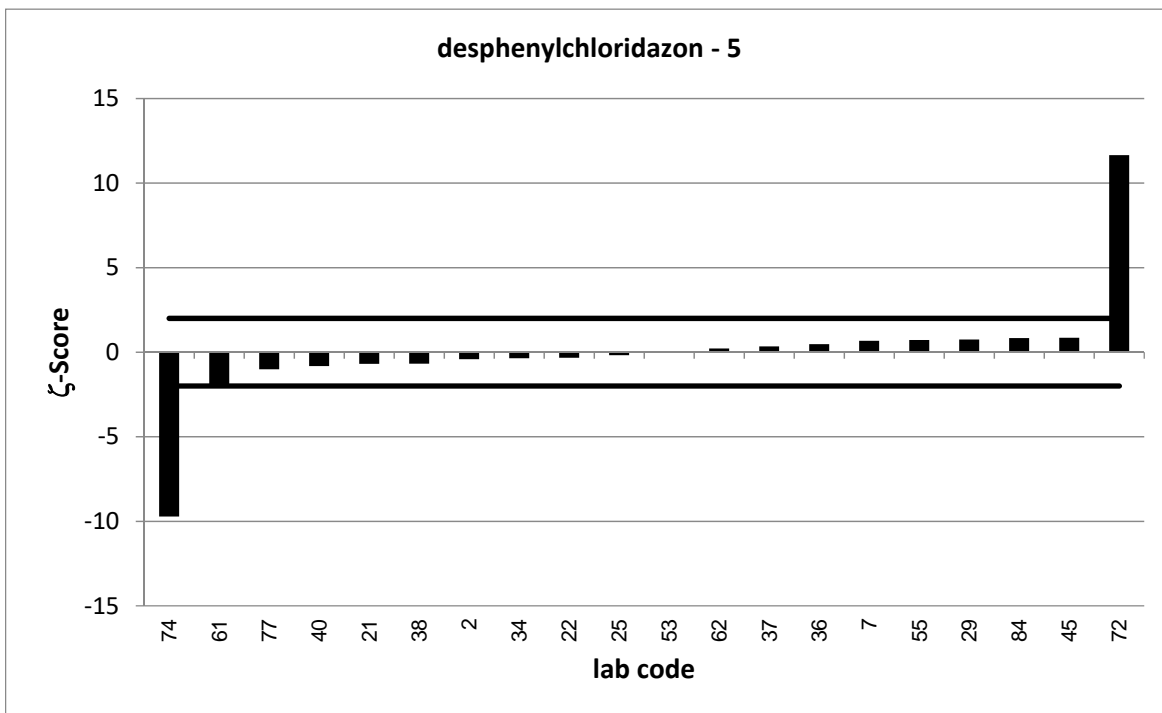
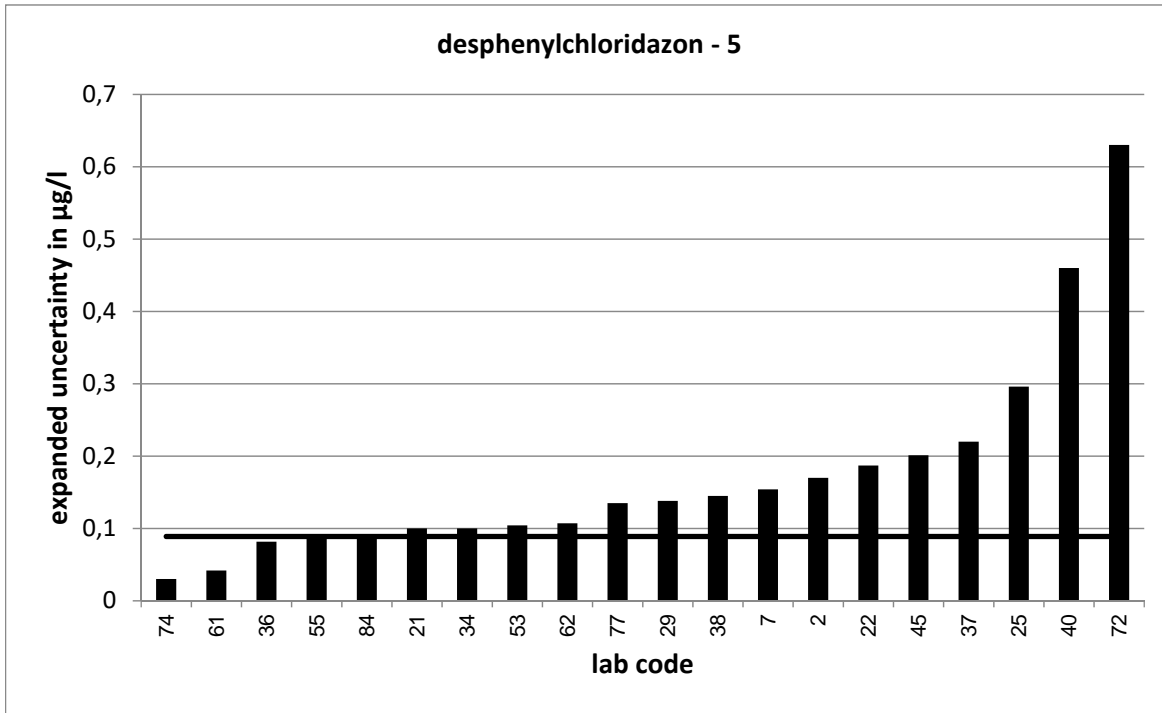


PT 4/20 - TW O5		desphenylchloridazon - 5			
assigned value [ $\mu\text{g/l}$ ]*		0,5224 $\pm$ 0,0406			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,7389			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,3425			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
1	0,484			-0,4	s
2	0,486	0,17	-0,4	-0,4	s
7	0,576	0,154	0,7	0,5	s
21	0,485	0,1	-0,7	-0,4	s
22	0,491	0,187	-0,3	-0,3	s
24	0,536			0,1	s
25	0,496	0,296	-0,2	-0,3	s
27	0,705			1,7	s
29	0,576	0,138	0,7	0,5	s
30	0,474			-0,5	s
34	0,503	0,1	-0,4	-0,2	s
36	0,544	0,082	0,5	0,2	s
37	0,56	0,22	0,3	0,3	s
38	0,471	0,145	-0,7	-0,6	s
40	0,332	0,46	-0,8	-2,1	q
45	0,61	0,201	0,9	0,8	s
46	0,4			-1,4	s
51	0,567			0,4	s
52	0,782			2,4	q
53	0,521	0,104	0,0	0,0	s
55	0,558	0,091	0,7	0,3	s
57	1,014			4,5	u
60	0,6703			1,4	s
61	0,467	0,042	-1,9	-0,6	s
62	0,535	0,107	0,2	0,1	s
70	0,455			-0,7	s
71	0,593			0,7	s
72	4,199	0,63	11,6	34,0	u
74	0,277	0,03	-9,7	-2,7	q
77	0,451	0,135	-1,0	-0,8	s
84	0,564	0,092	0,8	0,4	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



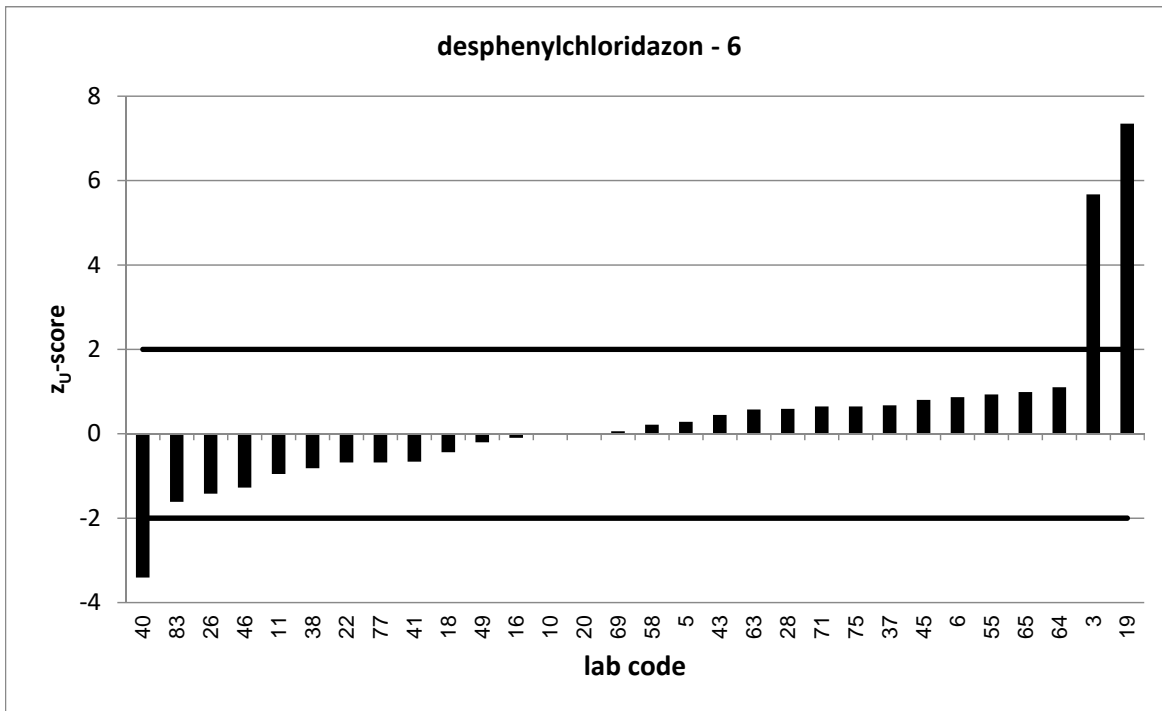
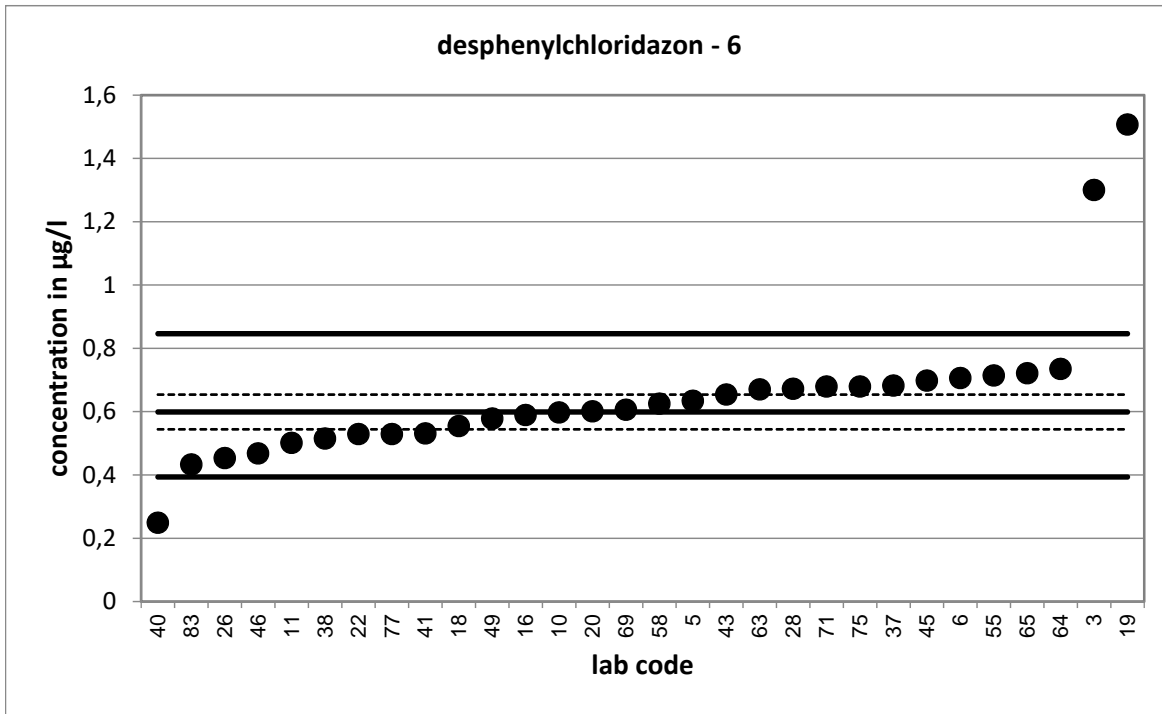


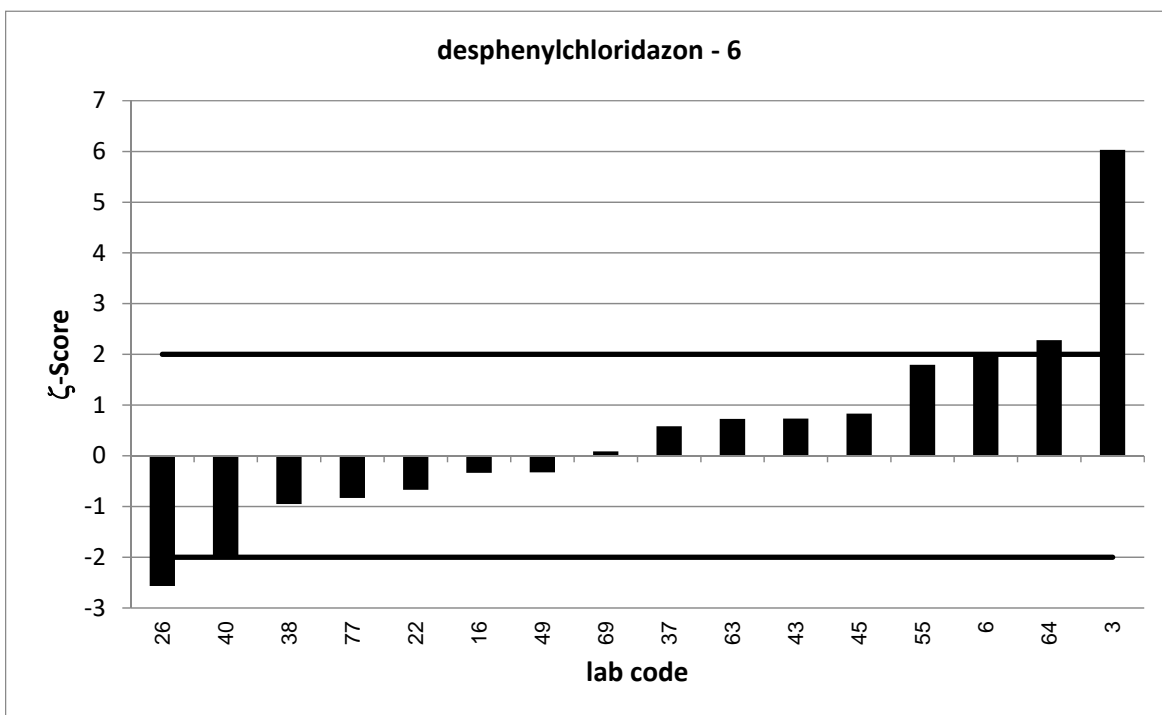
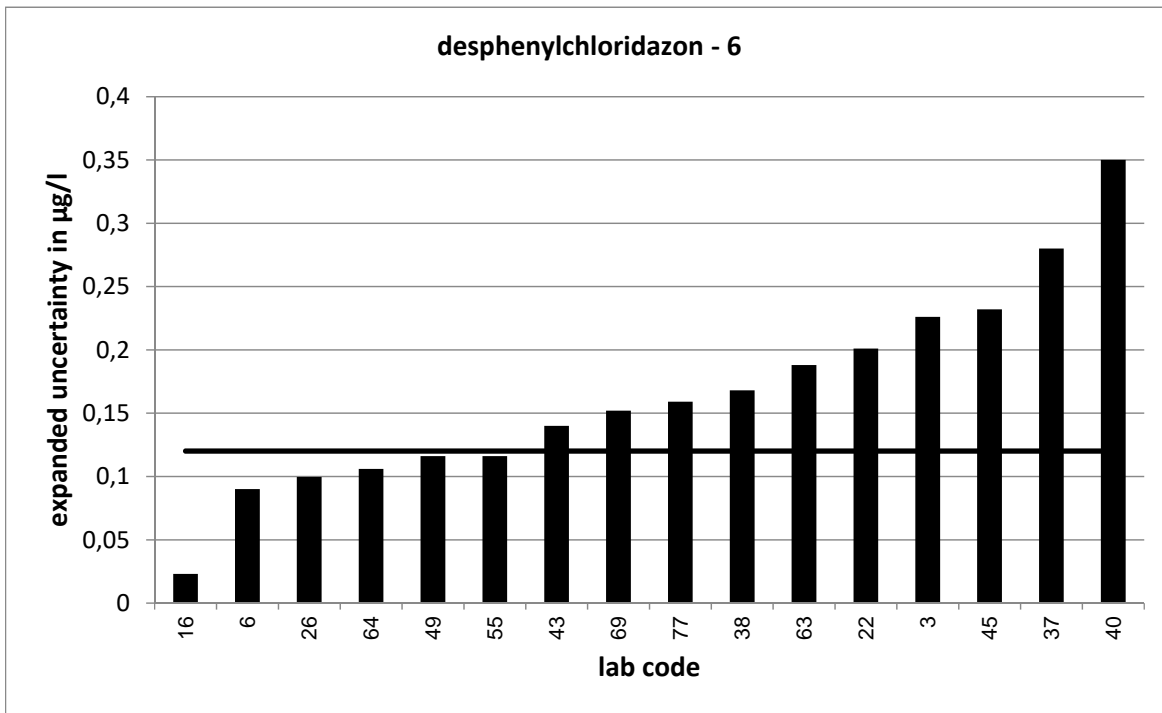


PT 4/20 - TW O5		desphenylchloridazon - 6			
assigned value [ $\mu\text{g/l}$ ]*		0,599 $\pm$ 0,0548			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,8462			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,3936			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
3	1,3	0,226	6,0	5,7	u
5	0,634			0,3	s
6	0,706	0,09	2,0	0,9	s
10	0,597			0,0	s
11	0,501			-1,0	s
16	0,589	0,023	-0,3	-0,1	s
18	0,554			-0,4	s
19	1,507			7,3	u
20	0,601			0,0	s
22	0,529	0,201	-0,7	-0,7	s
26	0,453	0,1	-2,6	-1,4	s
28	0,672			0,6	s
37	0,682	0,28	0,6	0,7	s
38	0,515	0,168	-1,0	-0,8	s
40	0,249	0,35	-2,0	-3,4	u
41	0,531			-0,7	s
43	0,654	0,14	0,7	0,4	s
45	0,698	0,232	0,8	0,8	s
46	0,468			-1,3	s
49	0,578	0,116	-0,3	-0,2	s
55	0,714	0,116	1,8	0,9	s
58	0,62524			0,2	s
63	0,67	0,188	0,7	0,6	s
64	0,735	0,106	2,3	1,1	s
65	0,721			1,0	s
69	0,606	0,152	0,1	0,1	s
71	0,679			0,6	s
75	0,679			0,6	s
77	0,529	0,159	-0,8	-0,7	s
83	0,433			-1,6	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

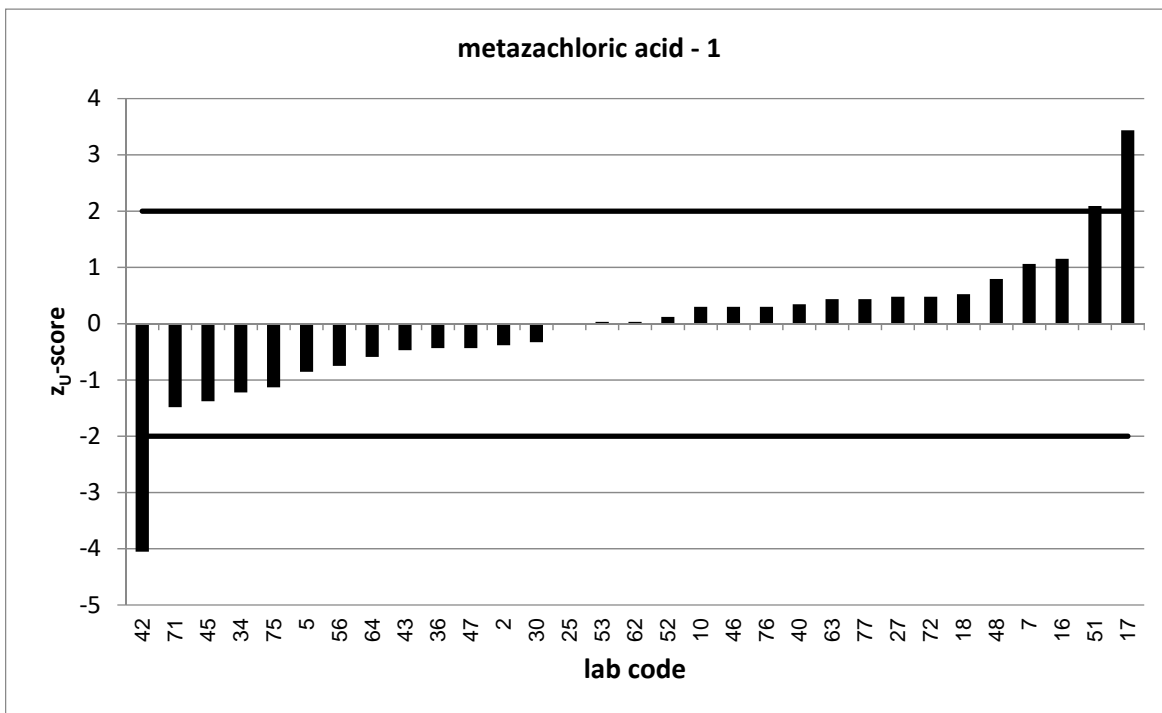
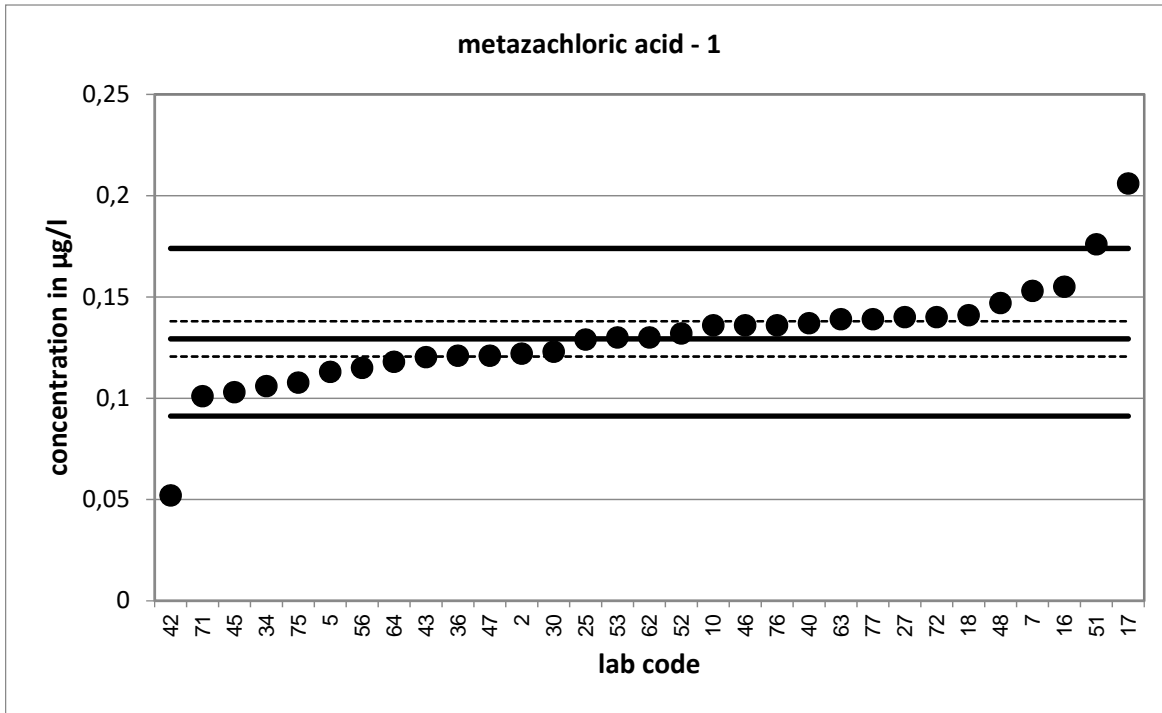


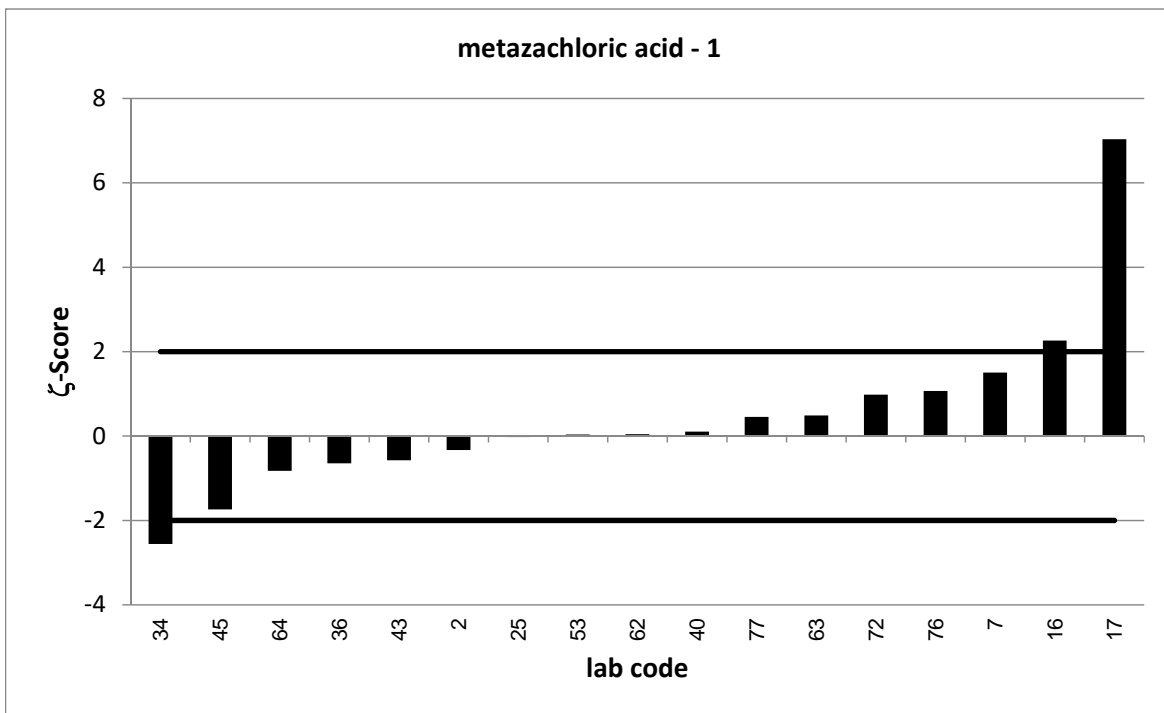
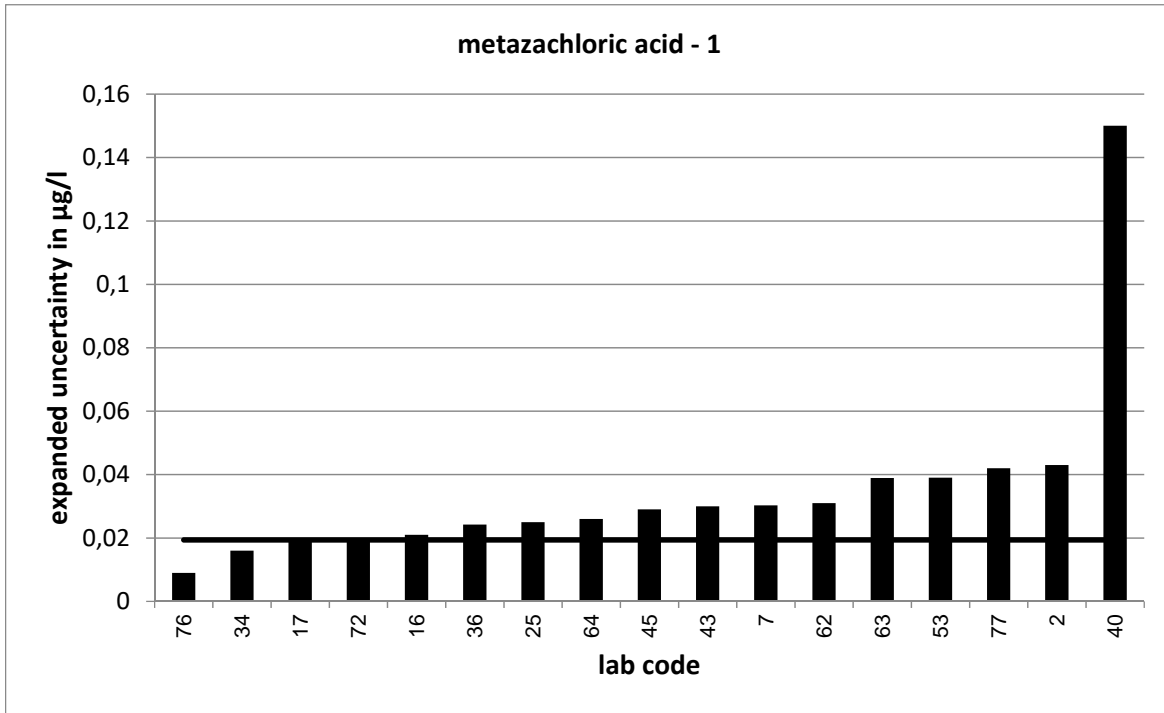


PT 4/20 - TW O5		metazachloric acid - 1			
assigned value [ $\mu\text{g/l}$ ]*		0,1293 $\pm$ 0,0087			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,174			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,09117			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,122	0,043	-0,3	-0,4	s
5	0,113			-0,9	s
7	0,153	0,03	1,5	1,1	s
10	0,136			0,3	s
16	0,155	0,021	2,3	1,2	s
17	0,206	0,02	7,0	3,4	u
18	0,141			0,5	s
25	0,129	0,025	0,0	0,0	s
27	0,14			0,5	s
30	0,123			-0,3	s
34	0,106	0,016	-2,6	-1,2	s
36	0,121	0,024	-0,6	-0,4	s
40	0,137	0,15	0,1	0,3	s
42	0,052			-4,1	u
43	0,1203	0,03	-0,6	-0,5	s
45	0,103	0,029	-1,7	-1,4	s
46	0,136			0,3	s
47	0,121			-0,4	s
48	0,147			0,8	s
51	0,176			2,1	q
52	0,132			0,1	s
53	0,13	0,039	0,0	0,0	s
56	0,115			-0,8	s
62	0,13	0,031	0,0	0,0	s
63	0,139	0,039	0,5	0,4	s
64	0,118	0,026	-0,8	-0,6	s
71	0,101			-1,5	s
72	0,14	0,02	1,0	0,5	s
75	0,1077			-1,1	s
76	0,136	0,009	1,1	0,3	s
77	0,139	0,042	0,5	0,4	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

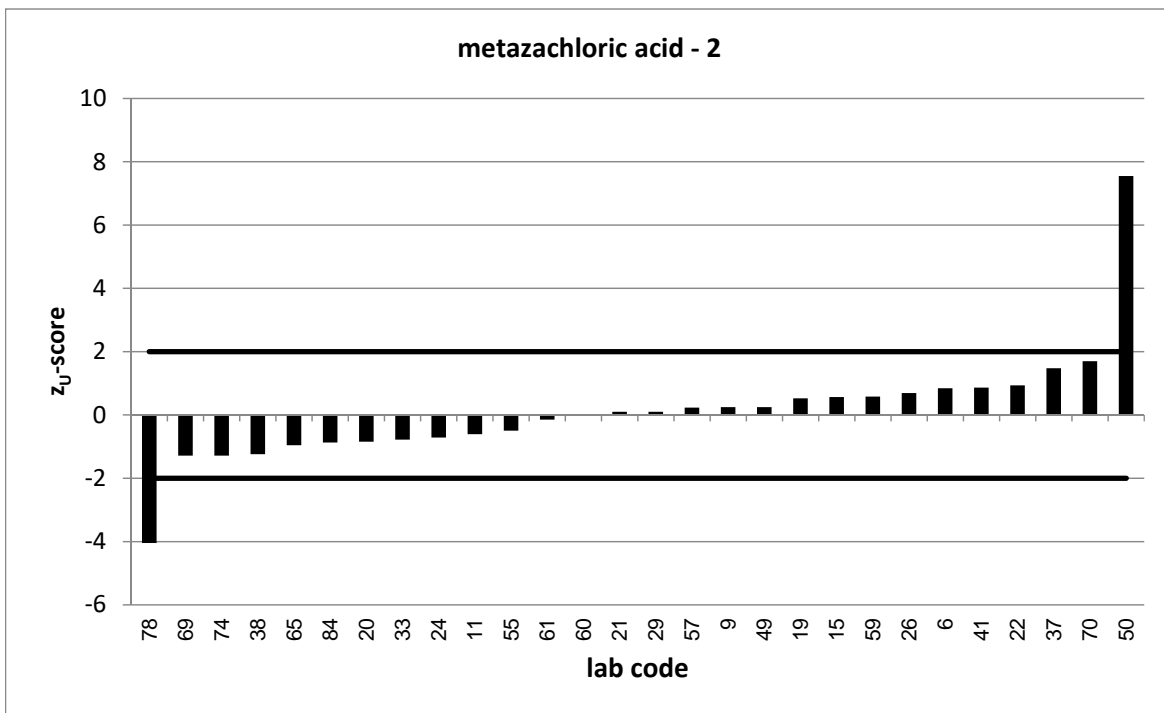
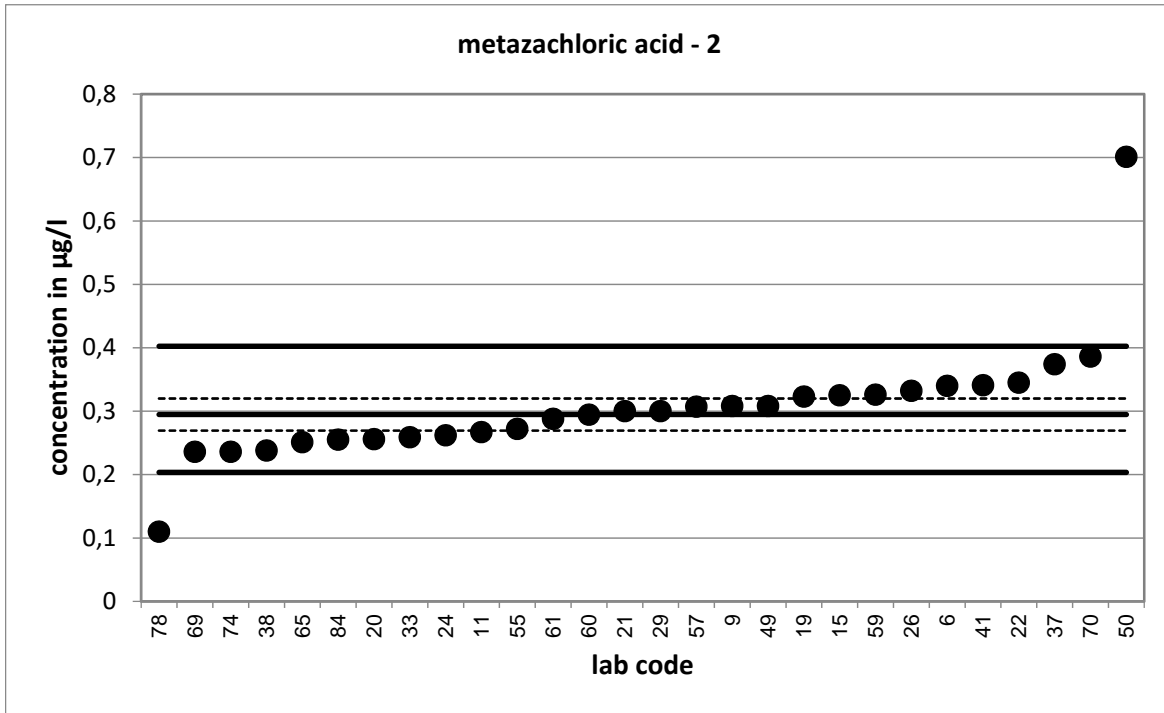




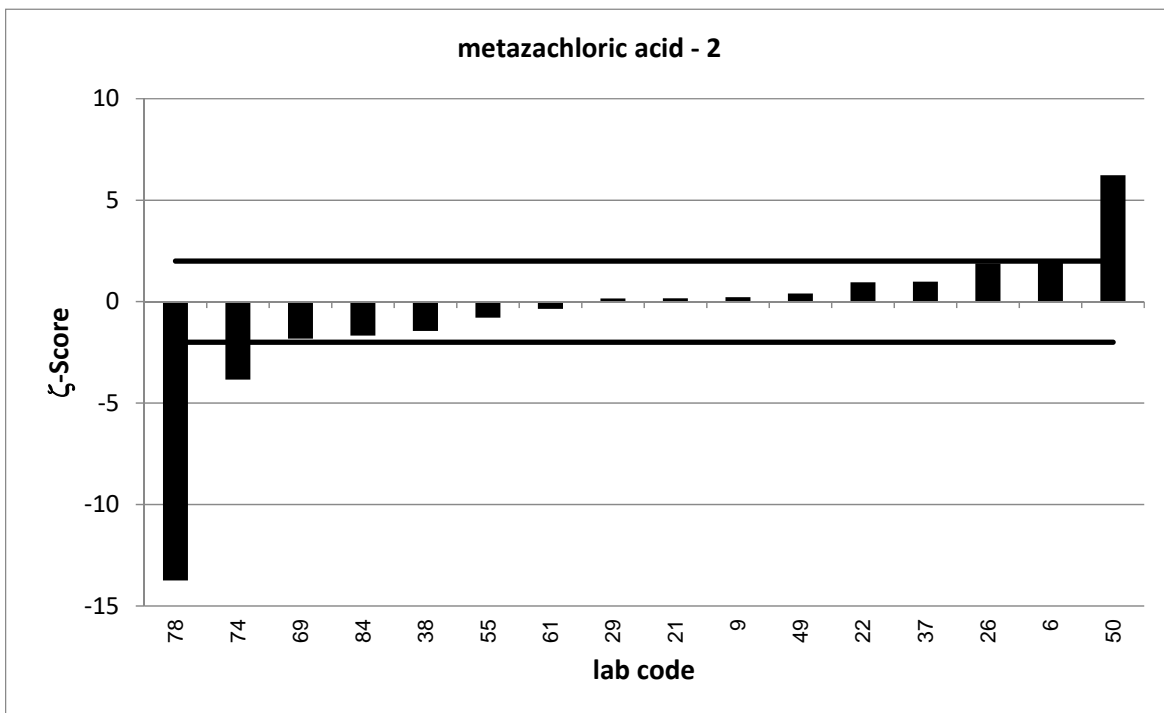
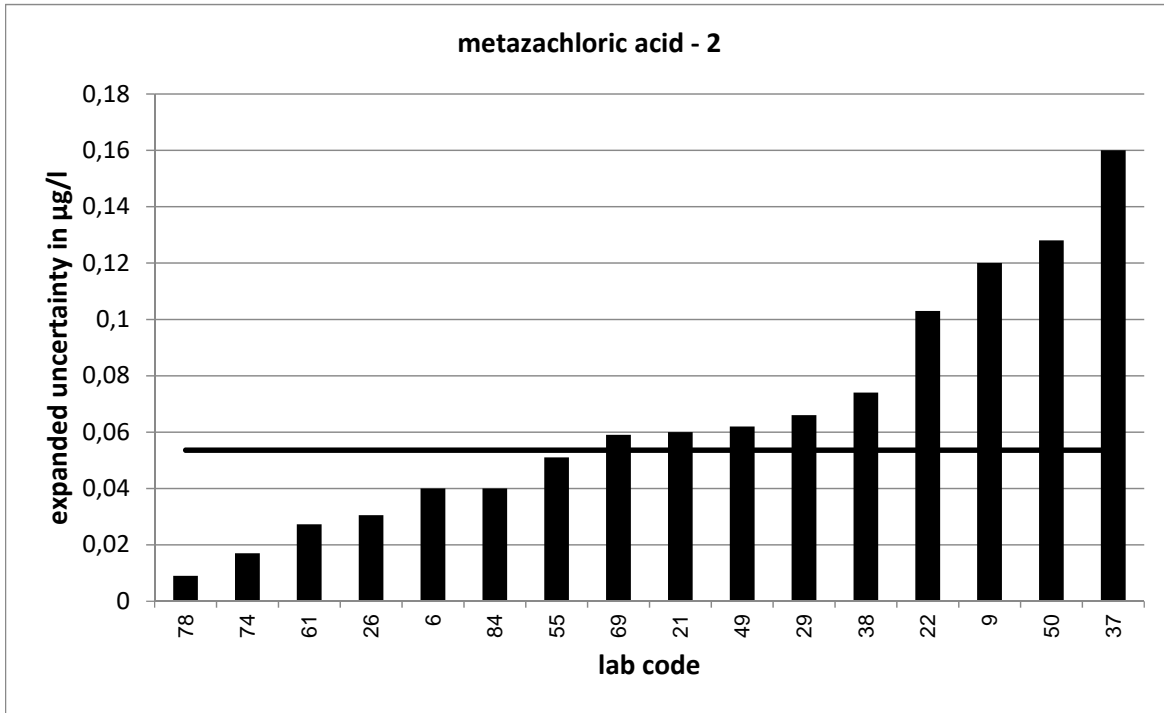
PT 4/20 - TW O5		metazachloric acid - 2			
assigned value [ $\mu\text{g/l}$ ]*		0,2947 $\pm$ 0,0253			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,4024			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2035			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
6	0,34	0,04	1,9	0,8	s
9	0,308	0,12	0,2	0,2	s
11	0,267			-0,6	s
15	0,325			0,6	s
19	0,323			0,5	s
20	0,256			-0,8	s
21	0,3	0,06	0,2	0,1	s
22	0,345	0,103	0,9	0,9	s
24	0,262			-0,7	s
26	0,332	0,031	1,9	0,7	s
29	0,3	0,066	0,1	0,1	s
33	0,259			-0,8	s
37	0,374	0,16	1,0	1,5	s
38	0,238	0,074	-1,4	-1,2	s
41	0,341			0,9	s
49	0,308	0,062	0,4	0,2	s
50	0,701	0,128	6,2	7,5	u
55	0,272	0,051	-0,8	-0,5	s
57	0,307			0,2	s
59	0,326			0,6	s
60	0,2946			0,0	s
61	0,288	0,027	-0,4	-0,1	s
65	0,251			-1,0	s
69	0,236	0,059	-1,8	-1,3	s
70	0,386			1,7	s
74	0,236	0,017	-3,8	-1,3	s
78	0,11	0,009	-13,7	-4,0	u
84	0,255	0,04	-1,7	-0,9	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



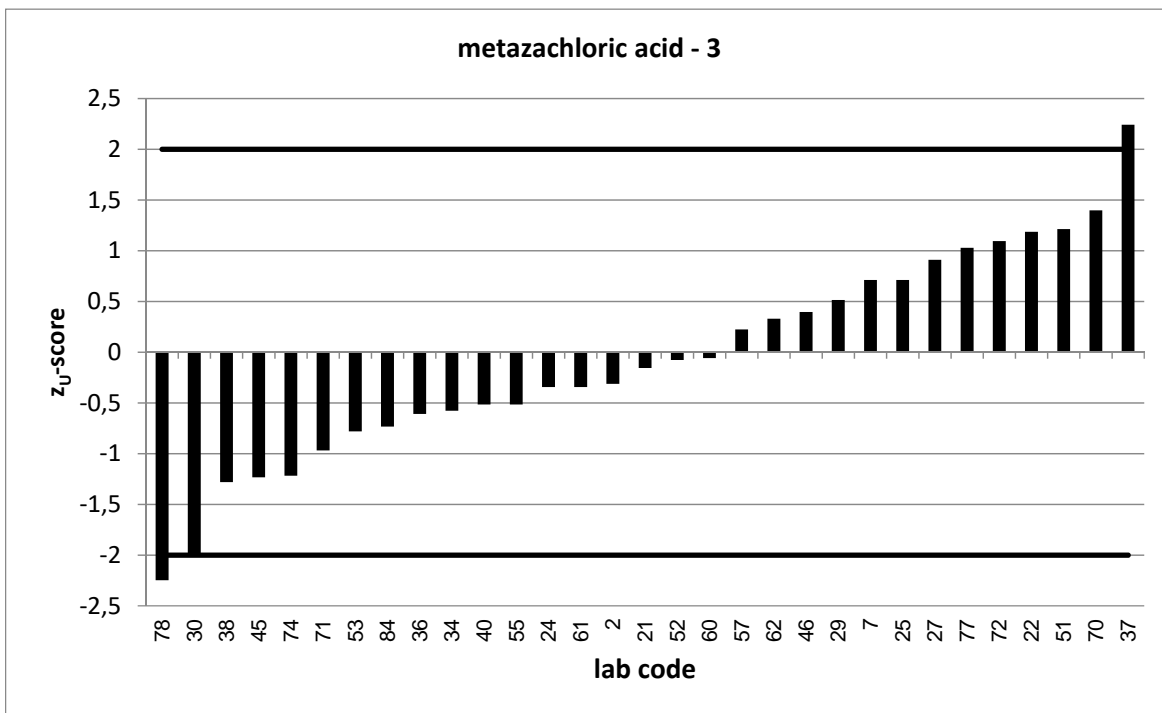
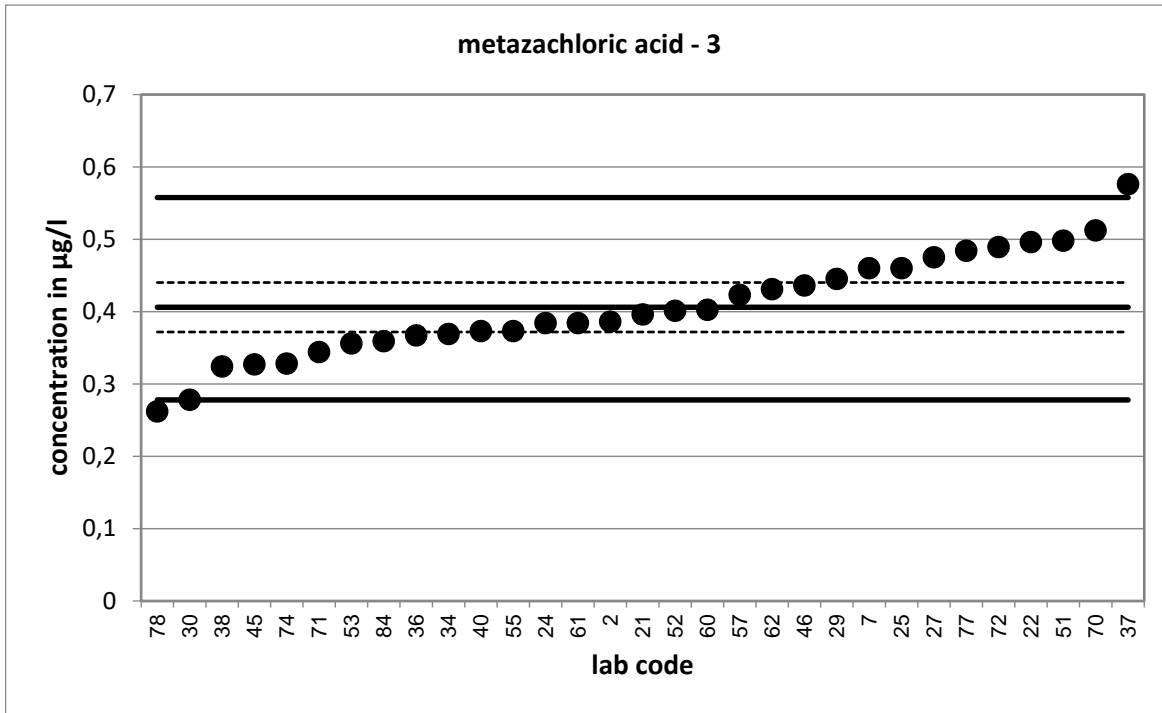


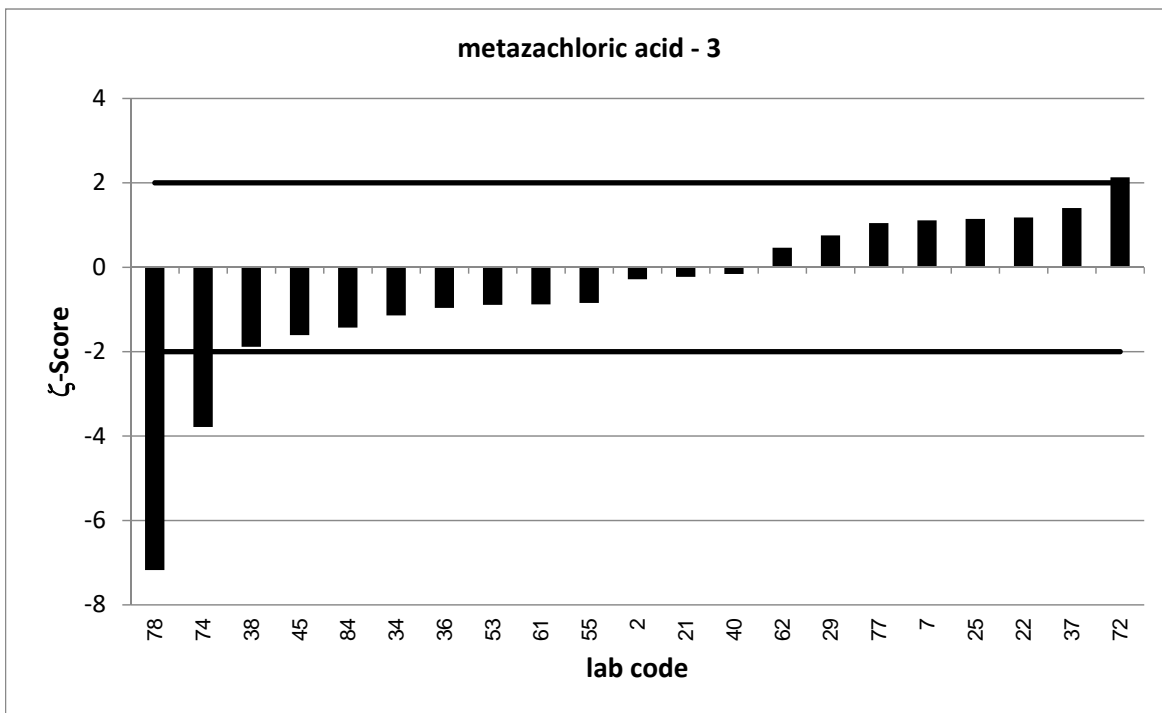
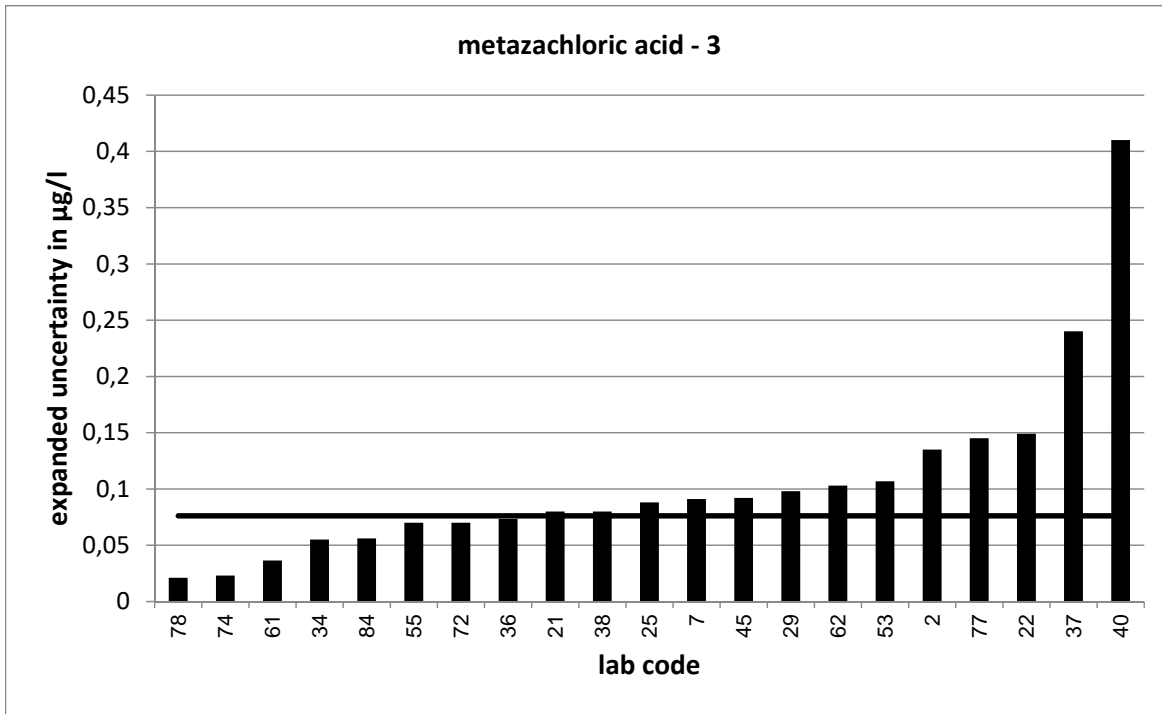


PT 4/20 - TW O5		metazachloric acid - 3			
assigned value [ $\mu\text{g/l}$ ]*		0,406 $\pm$ 0,0342			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,5577			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2779			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,386	0,135	-0,3	-0,3	s
7	0,46	0,091	1,1	0,7	s
21	0,396	0,08	-0,2	-0,2	s
22	0,496	0,149	1,2	1,2	s
24	0,384			-0,3	s
25	0,46	0,088	1,1	0,7	s
27	0,475			0,9	s
29	0,445	0,098	0,8	0,5	s
30	0,278			-2,0	s
34	0,369	0,055	-1,1	-0,6	s
36	0,367	0,073	-1,0	-0,6	s
37	0,576	0,24	1,4	2,2	q
38	0,324	0,08	-1,9	-1,3	s
40	0,373	0,41	-0,2	-0,5	s
45	0,327	0,092	-1,6	-1,2	s
46	0,436			0,4	s
51	0,498			1,2	s
52	0,401			-0,1	s
53	0,356	0,107	-0,9	-0,8	s
55	0,373	0,07	-0,8	-0,5	s
57	0,423			0,2	s
60	0,4023			-0,1	s
61	0,384	0,036	-0,9	-0,3	s
62	0,431	0,103	0,5	0,3	s
70	0,512			1,4	s
71	0,344			-1,0	s
72	0,489	0,07	2,1	1,1	s
74	0,328	0,023	-3,8	-1,2	s
77	0,484	0,145	1,0	1,0	s
78	0,262	0,021	-7,2	-2,2	q
84	0,359	0,056	-1,4	-0,7	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

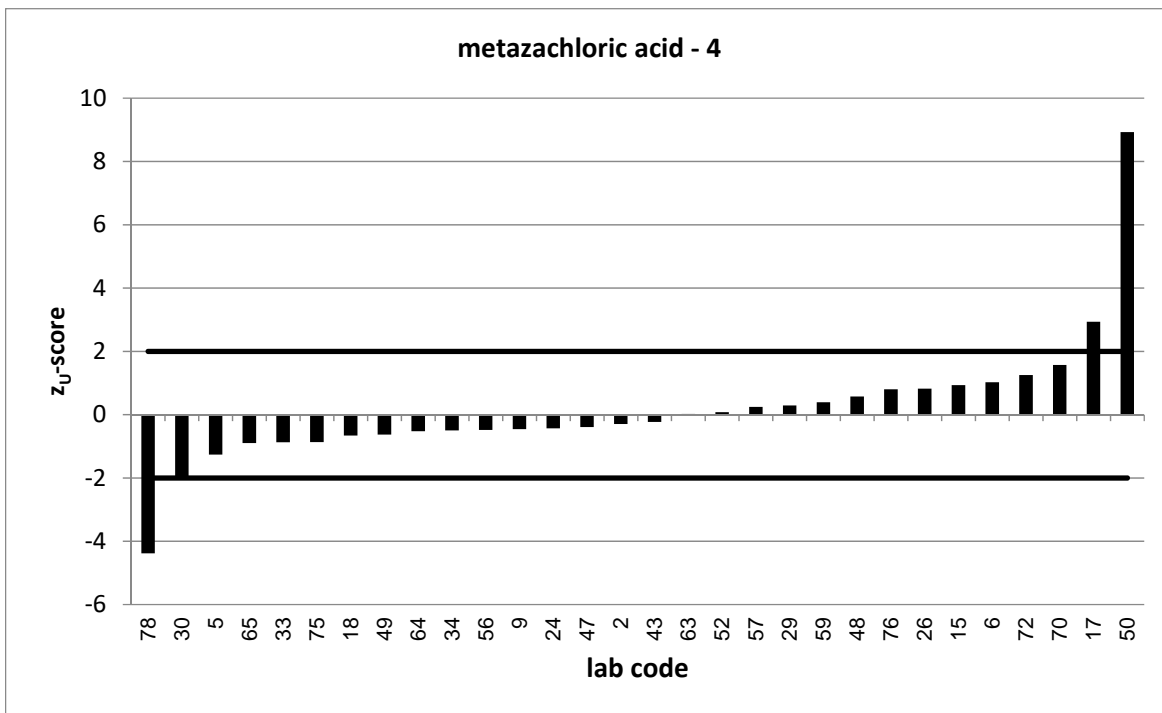
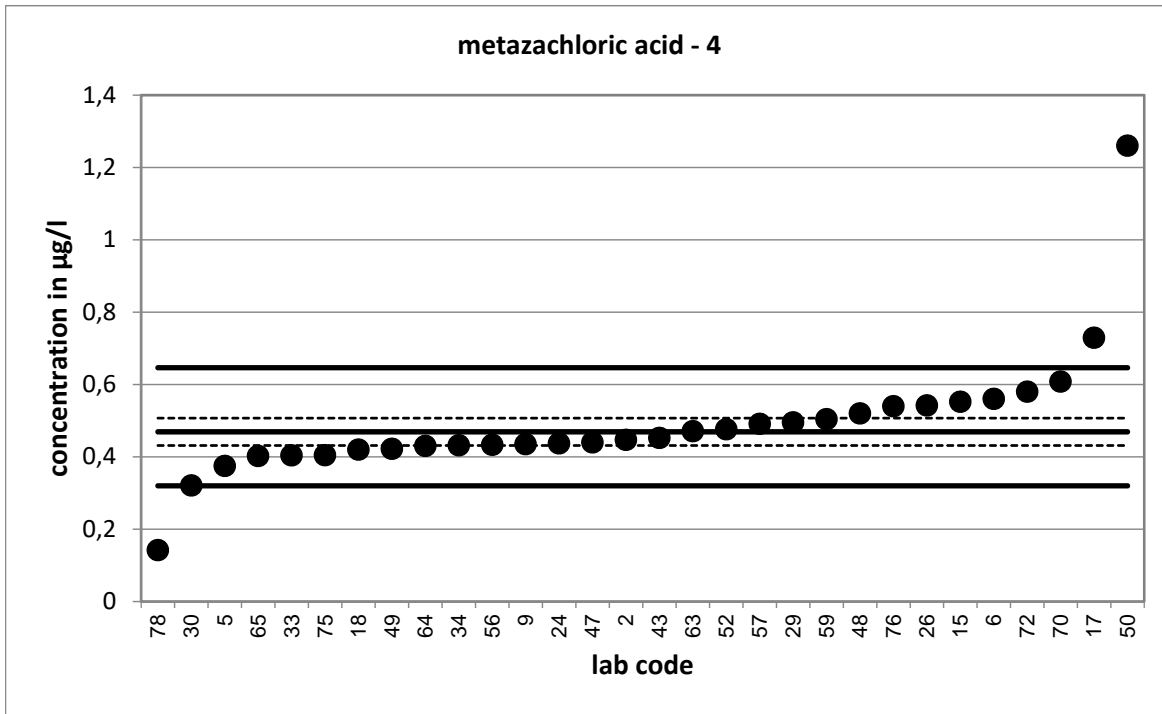


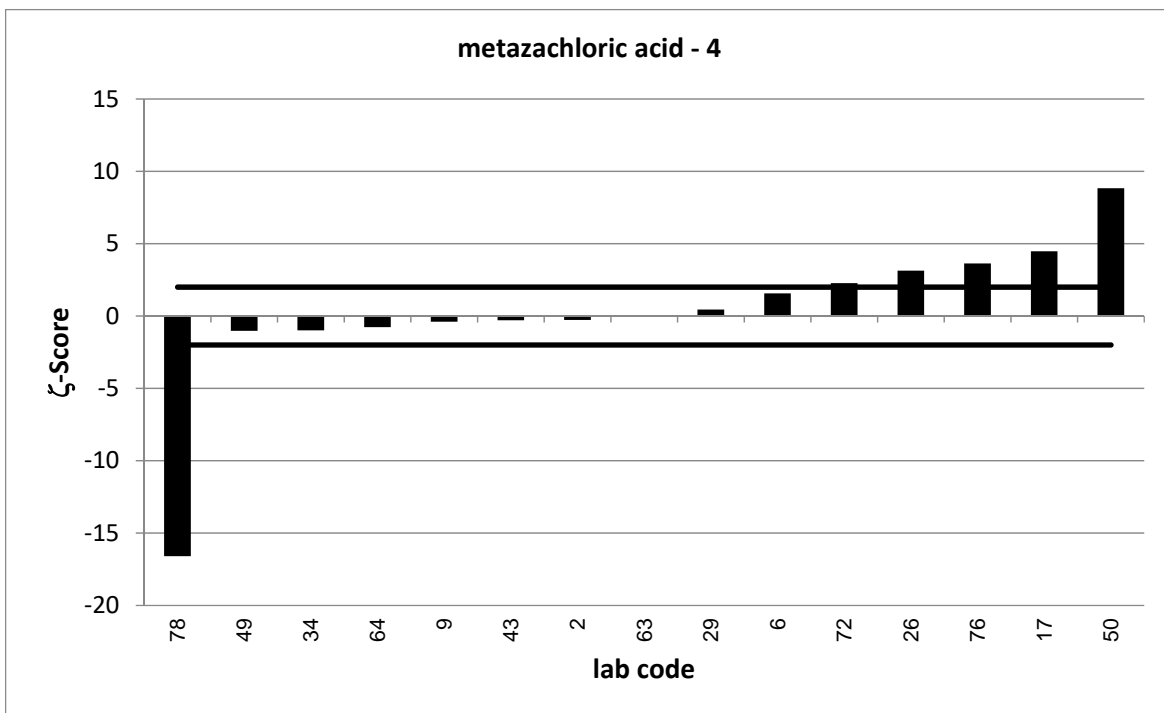
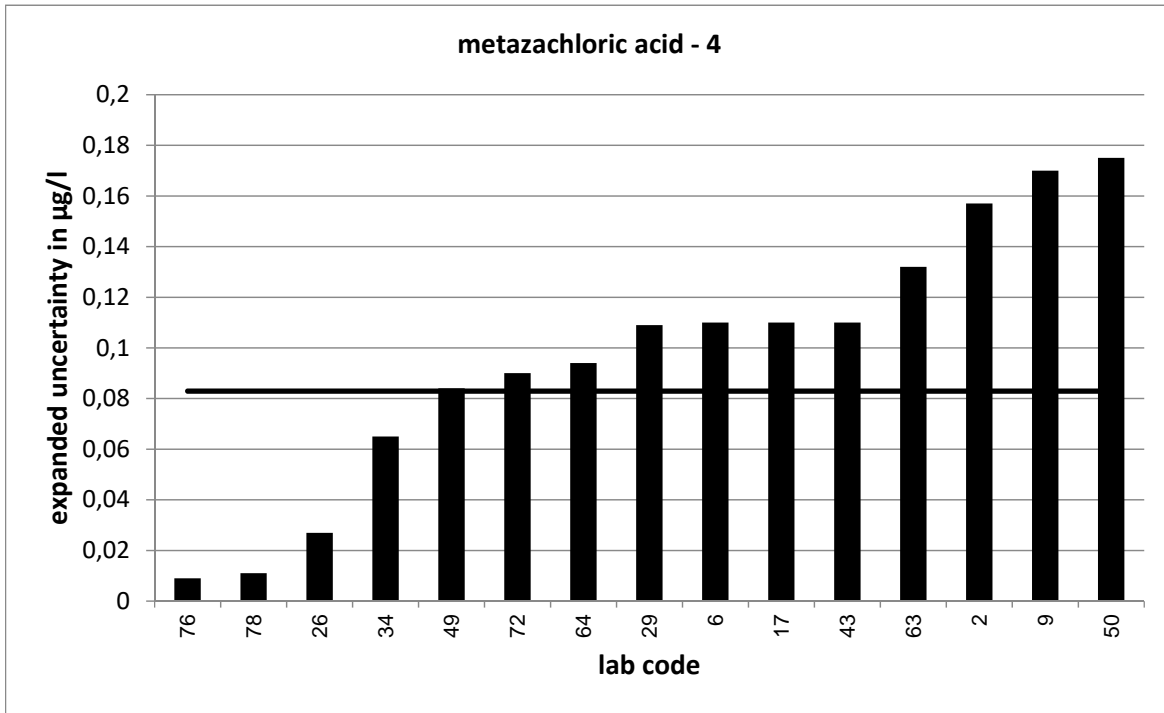


PT 4/20 - TW O5		metazachloric acid - 4			
assigned value [ $\mu\text{g/l}$ ]*		0,4693 $\pm$ 0,0379			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,6464			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,32			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,447	0,157	-0,3	-0,3	s
5	0,375			-1,3	s
6	0,56	0,11	1,6	1,0	s
9	0,435	0,17	-0,4	-0,5	s
15	0,552			0,9	s
17	0,729	0,11	4,5	2,9	q
18	0,42			-0,7	s
24	0,437			-0,4	s
26	0,542	0,027	3,1	0,8	s
29	0,495	0,109	0,4	0,3	s
30	0,321			-2,0	s
33	0,404			-0,9	s
34	0,432	0,065	-1,0	-0,5	s
43	0,452	0,11	-0,3	-0,2	s
47	0,44			-0,4	s
48	0,52			0,6	s
49	0,422	0,084	-1,0	-0,6	s
50	1,26	0,175	8,8	8,9	u
52	0,476			0,1	s
56	0,433			-0,5	s
57	0,491			0,2	s
59	0,504			0,4	s
63	0,471	0,132	0,0	0,0	s
64	0,43	0,094	-0,8	-0,5	s
65	0,402			-0,9	s
70	0,608			1,6	s
72	0,58	0,09	2,3	1,3	s
75	0,4043			-0,9	s
76	0,54	0,009	3,6	0,8	s
78	0,142	0,011	-16,6	-4,4	u

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



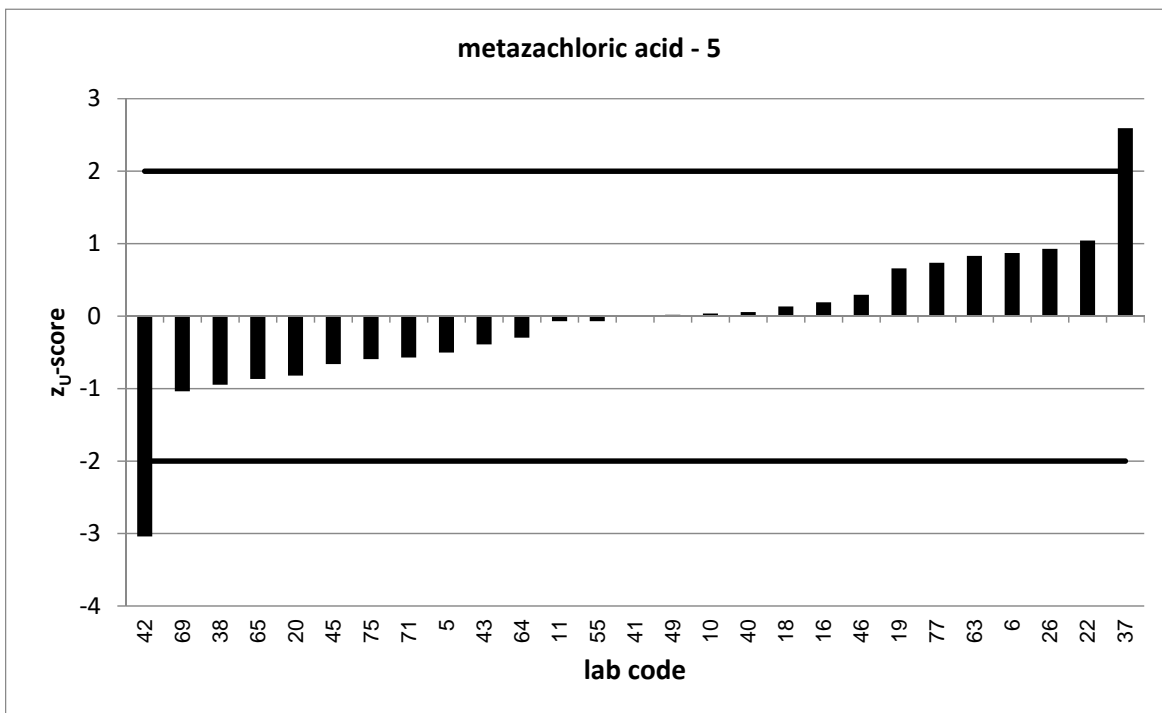
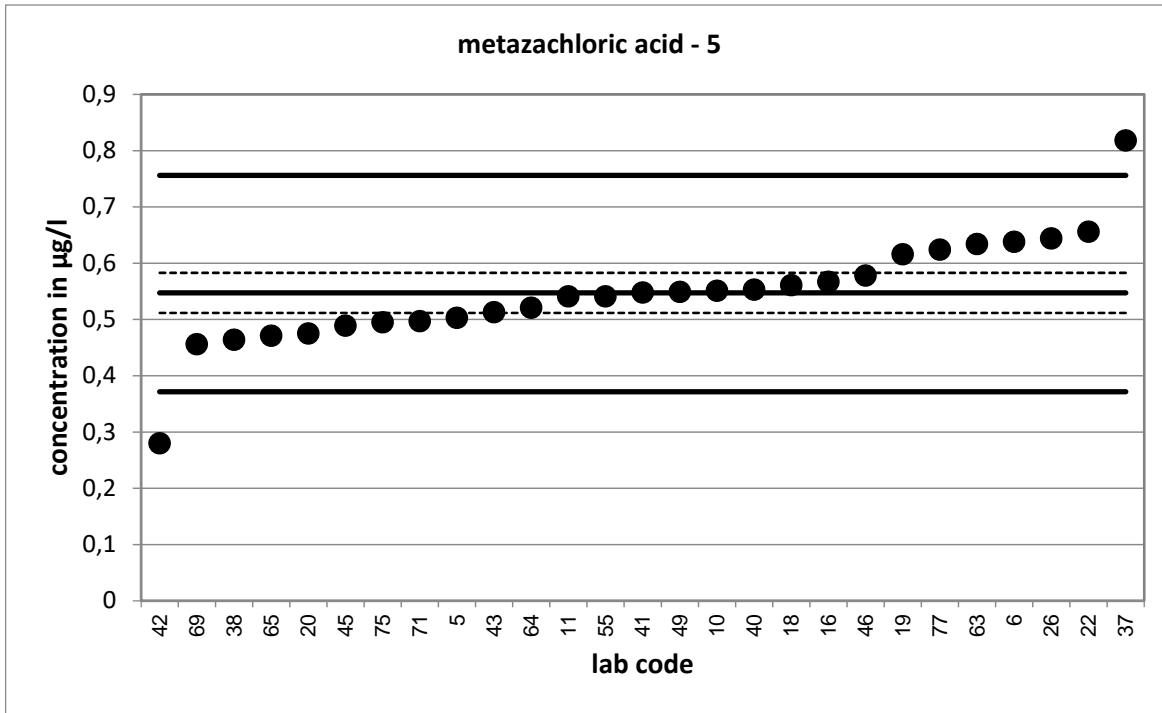


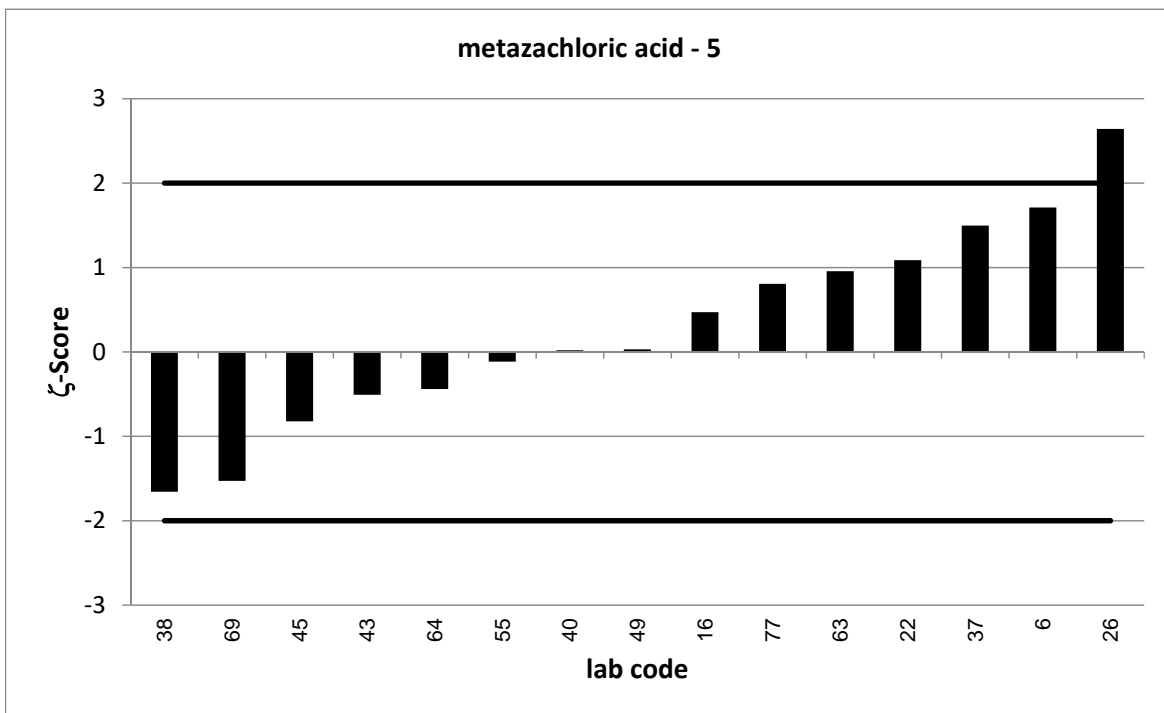
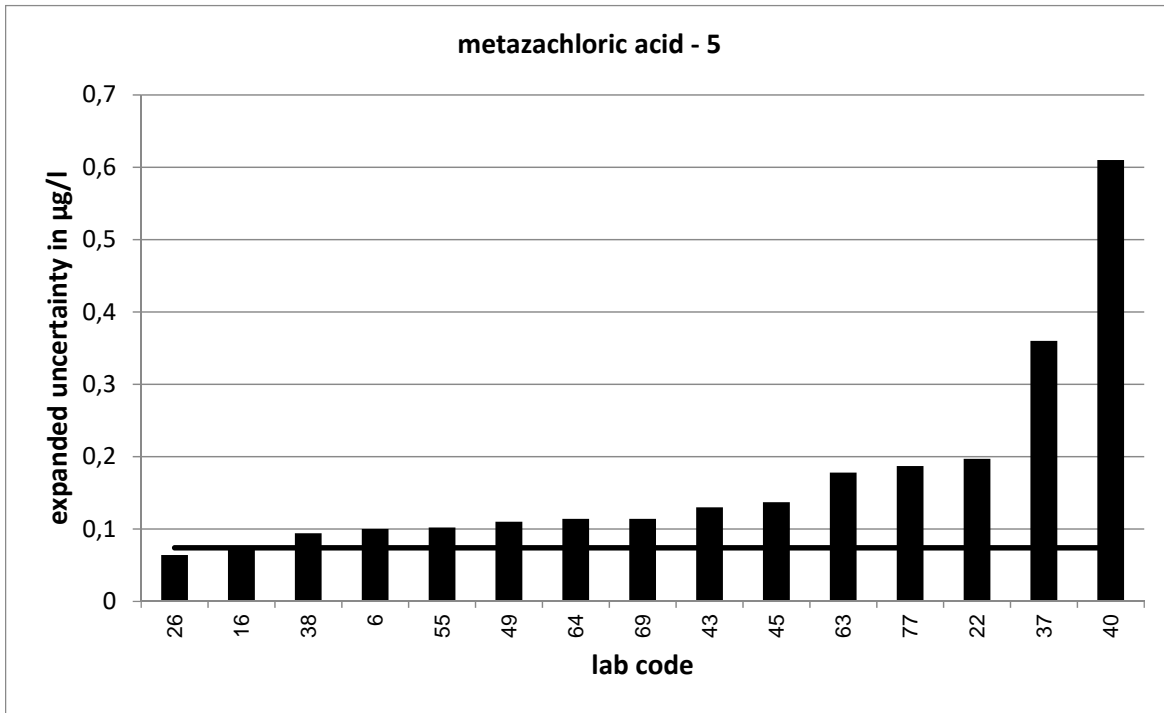
PT 4/20 - TW O5		metazachloric acid - 5			
assigned value [ $\mu\text{g/l}$ ]*		0,5473 $\pm$ 0,0356			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,756			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,3716			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
5	0,503			-0,5	s
6	0,638	0,1	1,7	0,9	s
10	0,551			0,0	s
11	0,541			-0,1	s
16	0,567	0,076	0,5	0,2	s
18	0,561			0,1	s
19	0,616			0,7	s
20	0,475			-0,8	s
22	0,656	0,197	1,1	1,0	s
26	0,644	0,064	2,6	0,9	s
37	0,818	0,36	1,5	2,6	q
38	0,464	0,094	-1,7	-0,9	s
40	0,553	0,61	0,0	0,1	s
41	0,548			0,0	s
42	0,28			-3,0	u
43	0,513	0,13	-0,5	-0,4	s
45	0,489	0,137	-0,8	-0,7	s
46	0,578			0,3	s
49	0,549	0,11	0,0	0,0	s
55	0,541	0,102	-0,1	-0,1	s
63	0,634	0,178	1,0	0,8	s
64	0,521	0,114	-0,4	-0,3	s
65	0,471			-0,9	s
69	0,456	0,114	-1,5	-1,0	s
71	0,497			-0,6	s
75	0,495			-0,6	s
77	0,624	0,187	0,8	0,7	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



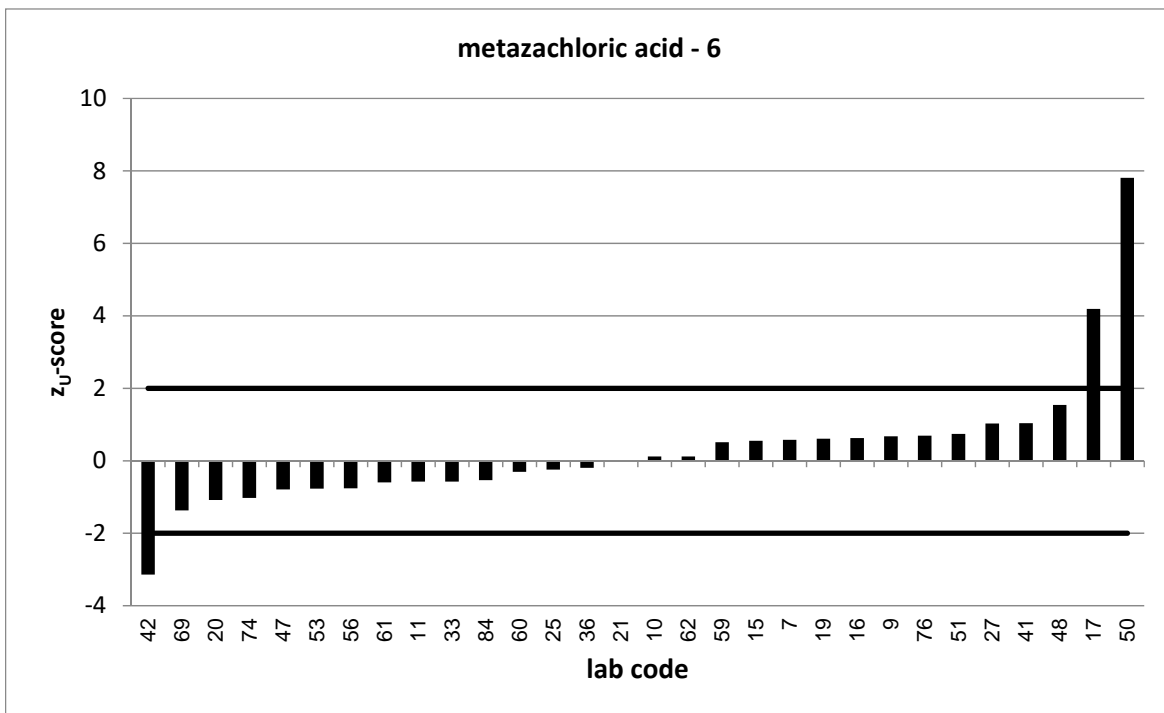
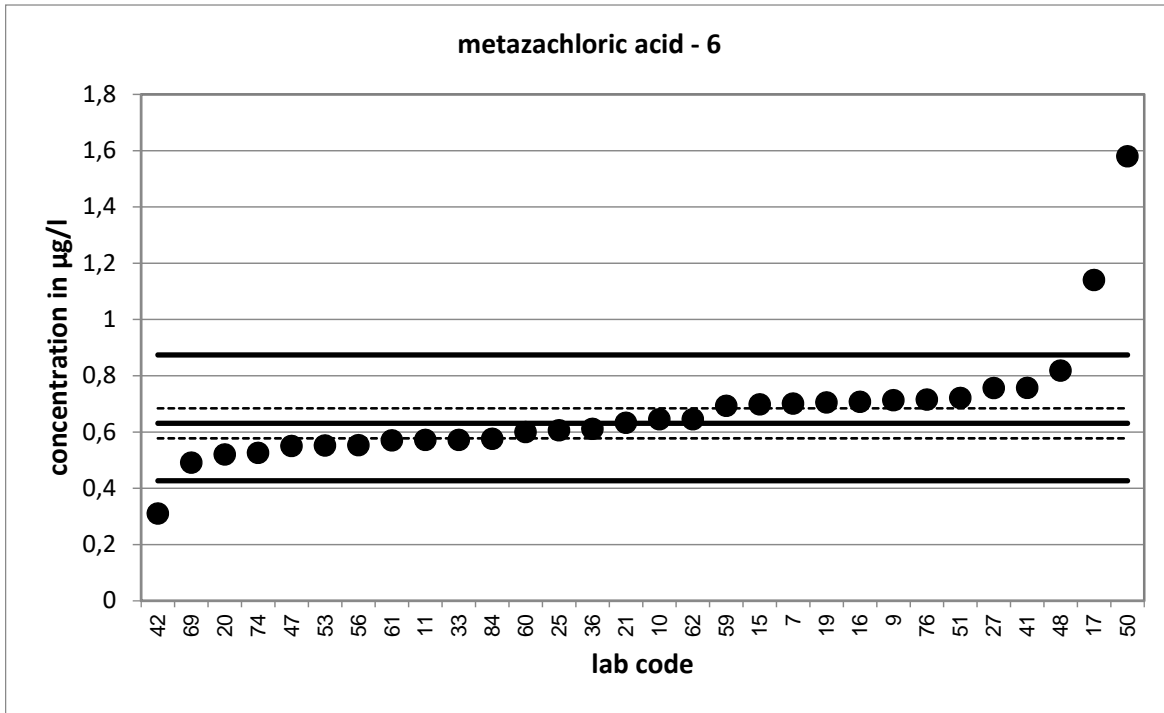


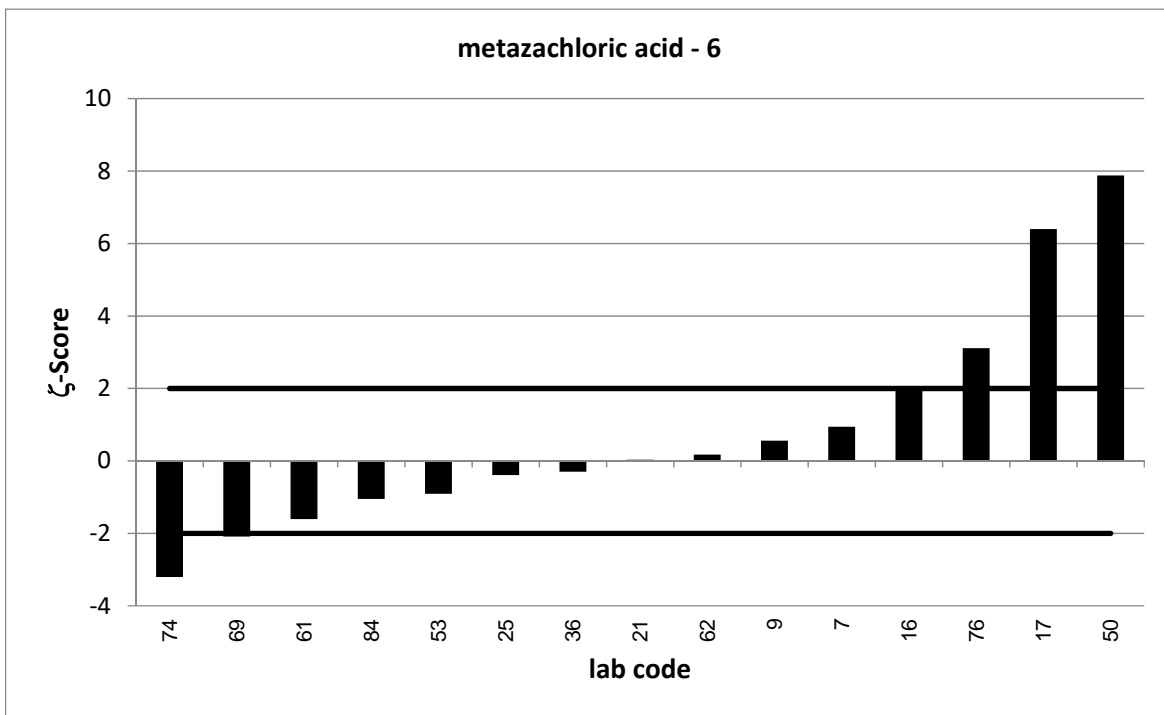
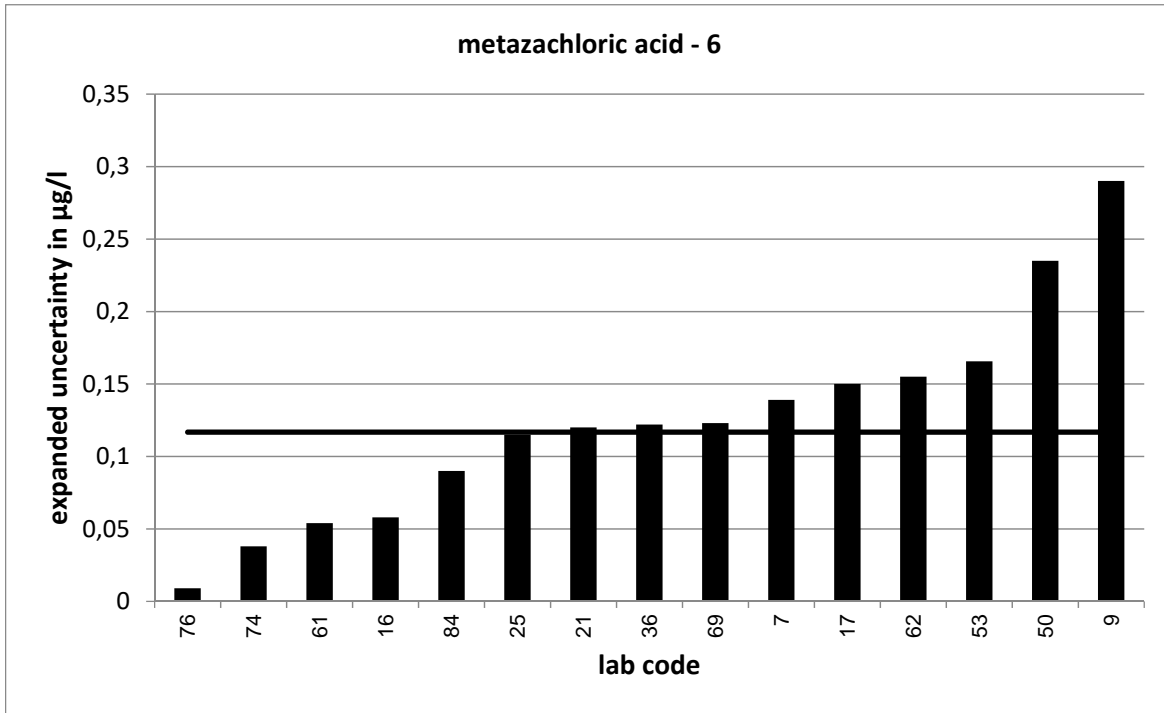


PT 4/20 - TW O5		metazachloric acid - 6			
assigned value [ $\mu\text{g/l}$ ]*		0,6309 $\pm$ 0,0533			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,874			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,4267			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
7	0,701	0,139	0,9	0,6	s
9	0,713	0,29	0,6	0,7	s
10	0,645			0,1	s
11	0,572			-0,6	s
15	0,698			0,6	s
16	0,707	0,058	1,9	0,6	s
17	1,14	0,15	6,4	4,2	u
19	0,705			0,6	s
20	0,52			-1,1	s
21	0,633	0,12	0,0	0,0	s
25	0,606	0,115	-0,4	-0,2	s
27	0,756			1,0	s
33	0,572			-0,6	s
36	0,611	0,122	-0,3	-0,2	s
41	0,757			1,0	s
42	0,31			-3,1	u
47	0,55			-0,8	s
48	0,818			1,5	s
50	1,58	0,235	7,9	7,8	u
51	0,721			0,7	s
53	0,552	0,166	-0,9	-0,8	s
56	0,553			-0,8	s
59	0,693			0,5	s
60	0,5996			-0,3	s
61	0,57	0,054	-1,6	-0,6	s
62	0,645	0,155	0,2	0,1	s
69	0,491	0,123	-2,1	-1,4	s
74	0,526	0,038	-3,2	-1,0	s
76	0,715	0,009	3,1	0,7	s
84	0,576	0,09	-1,1	-0,5	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

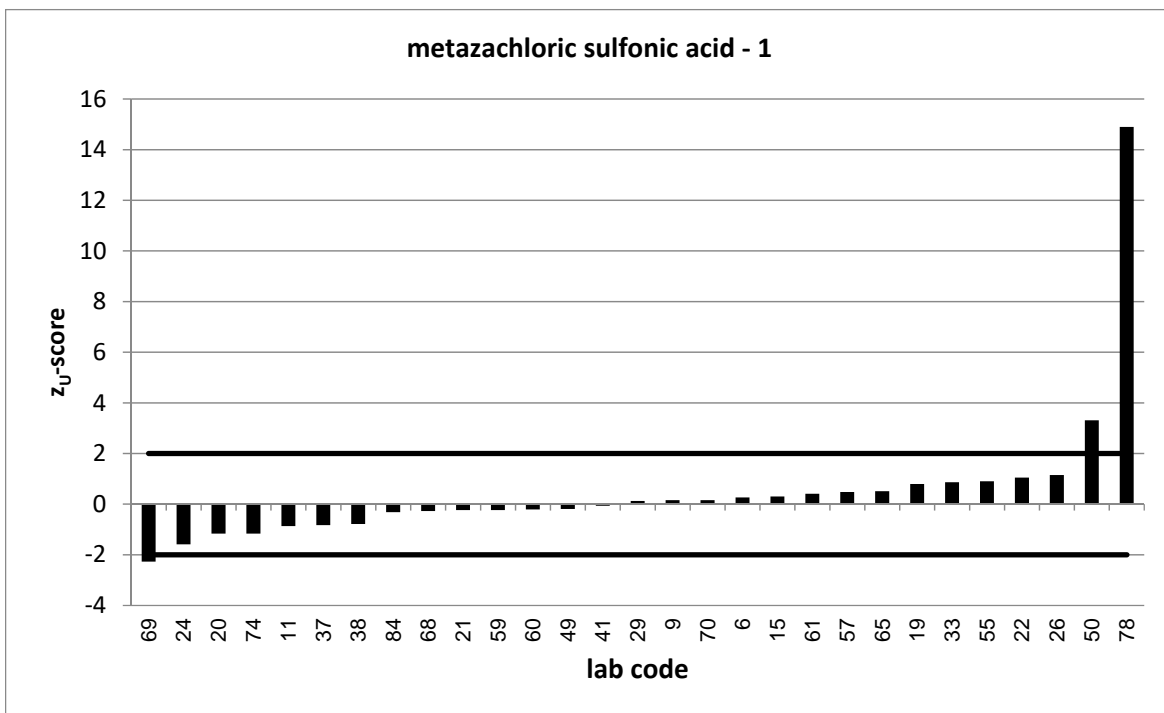
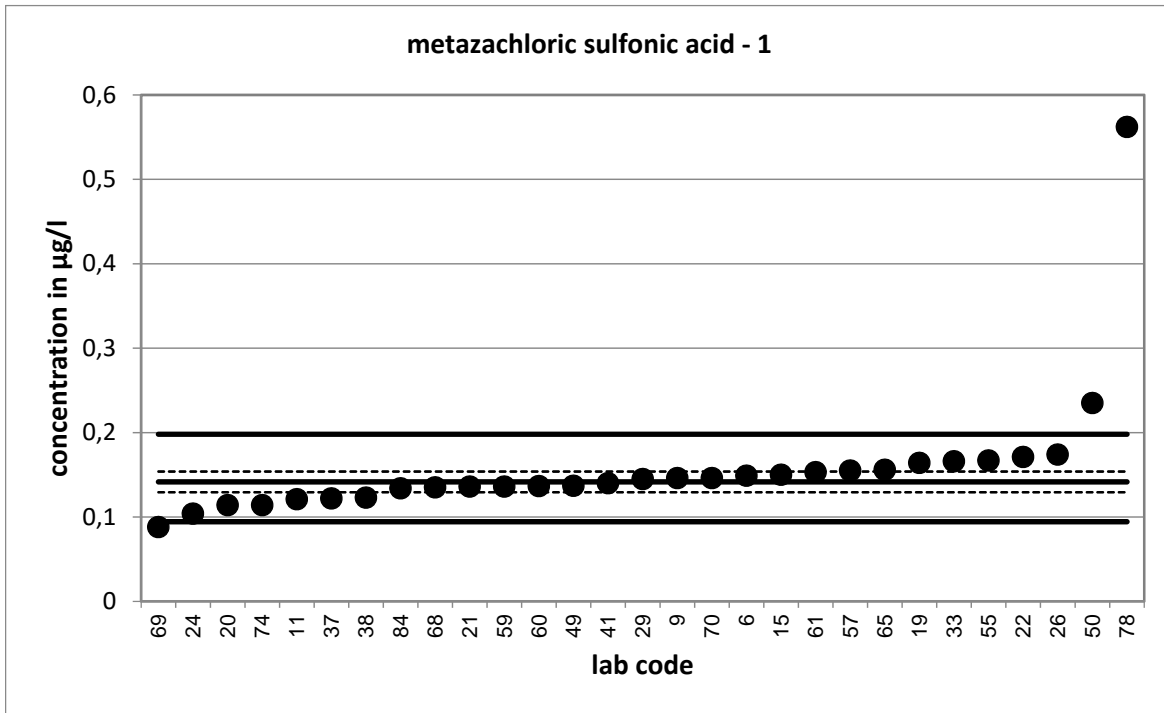


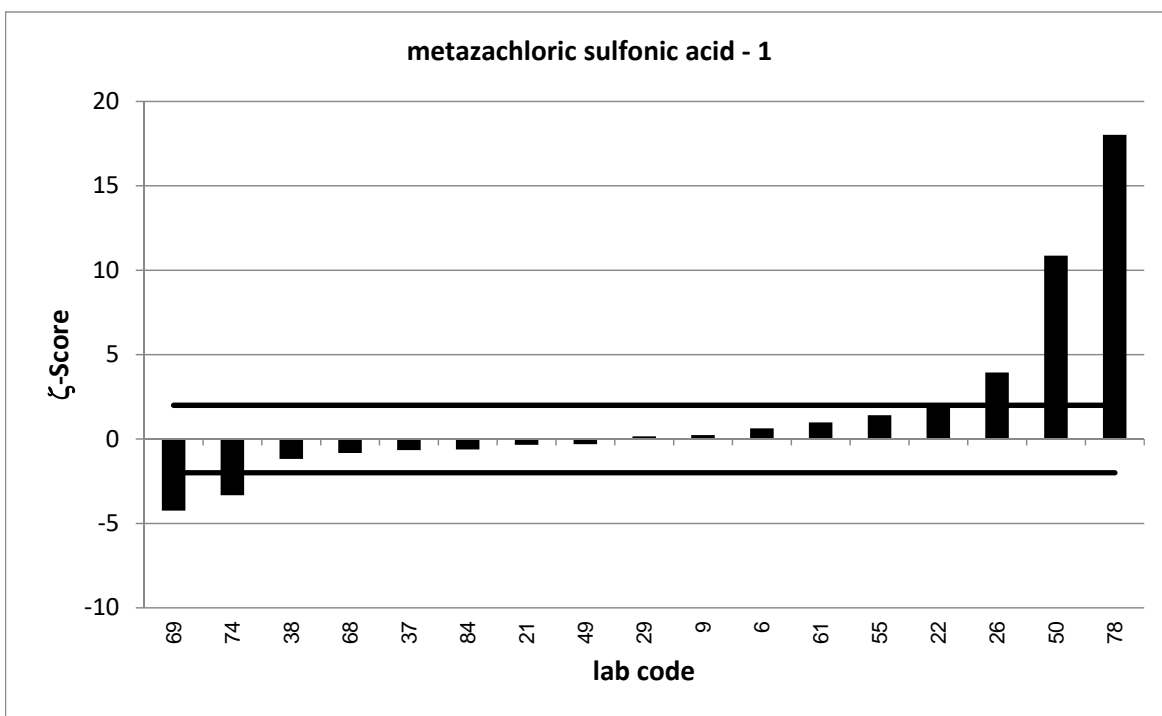
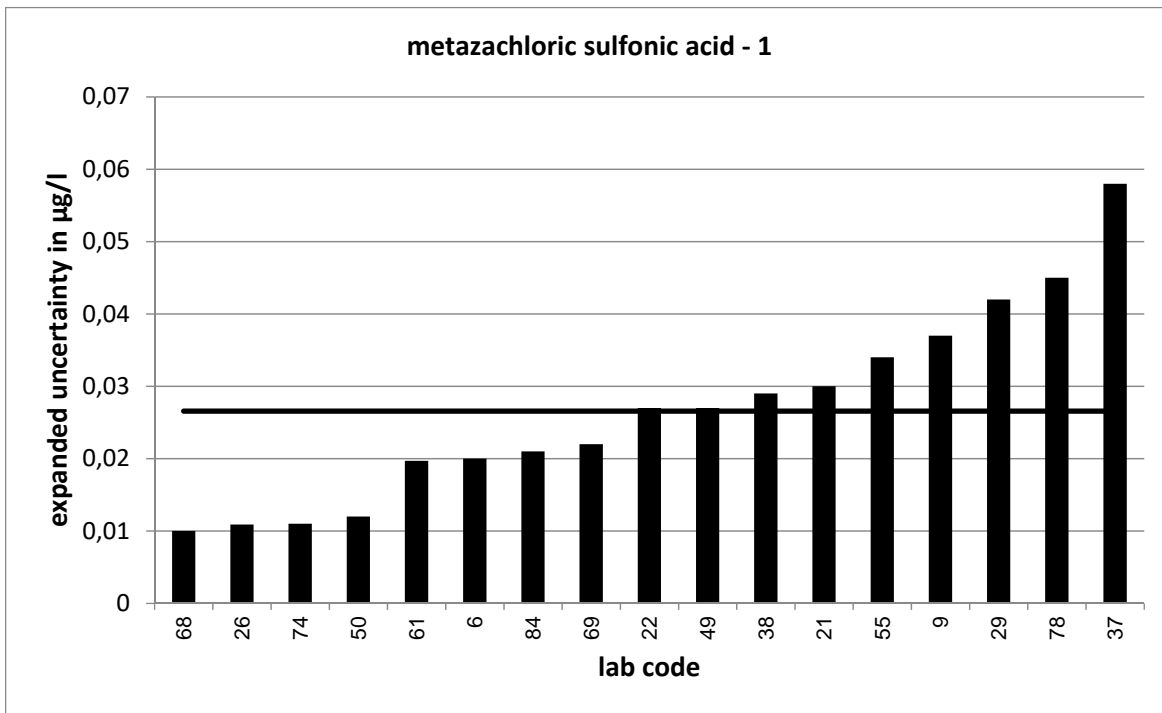


PT 4/20 - TW O5		metazachloric sulfonic acid - 1			
assigned value [ $\mu\text{g/l}$ ]*		0,1416 $\pm$ 0,0123			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,198			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,09439			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
6	0,149	0,02	0,6	0,3	s
9	0,146	0,037	0,2	0,2	s
11	0,121			-0,9	s
15	0,15			0,3	s
19	0,164			0,8	s
20	0,114			-1,2	s
21	0,136	0,03	-0,3	-0,2	s
22	0,171	0,027	2,0	1,0	s
24	0,104			-1,6	s
26	0,174	0,011	3,9	1,1	s
29	0,145	0,042	0,2	0,1	s
33	0,166			0,9	s
37	0,122	0,058	-0,7	-0,8	s
38	0,123	0,029	-1,2	-0,8	s
41	0,14			-0,1	s
49	0,137	0,027	-0,3	-0,2	s
50	0,235	0,012	10,9	3,3	u
55	0,167	0,034	1,4	0,9	s
57	0,155			0,5	s
59	0,136			-0,2	s
60	0,1365			-0,2	s
61	0,153	0,02	1,0	0,4	s
65	0,156			0,5	s
68	0,135	0,01	-0,8	-0,3	s
69	0,088	0,022	-4,2	-2,3	q
70	0,146			0,2	s
74	0,114	0,011	-3,3	-1,2	s
78	0,562	0,045	18,0	14,9	u
84	0,134	0,021	-0,6	-0,3	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



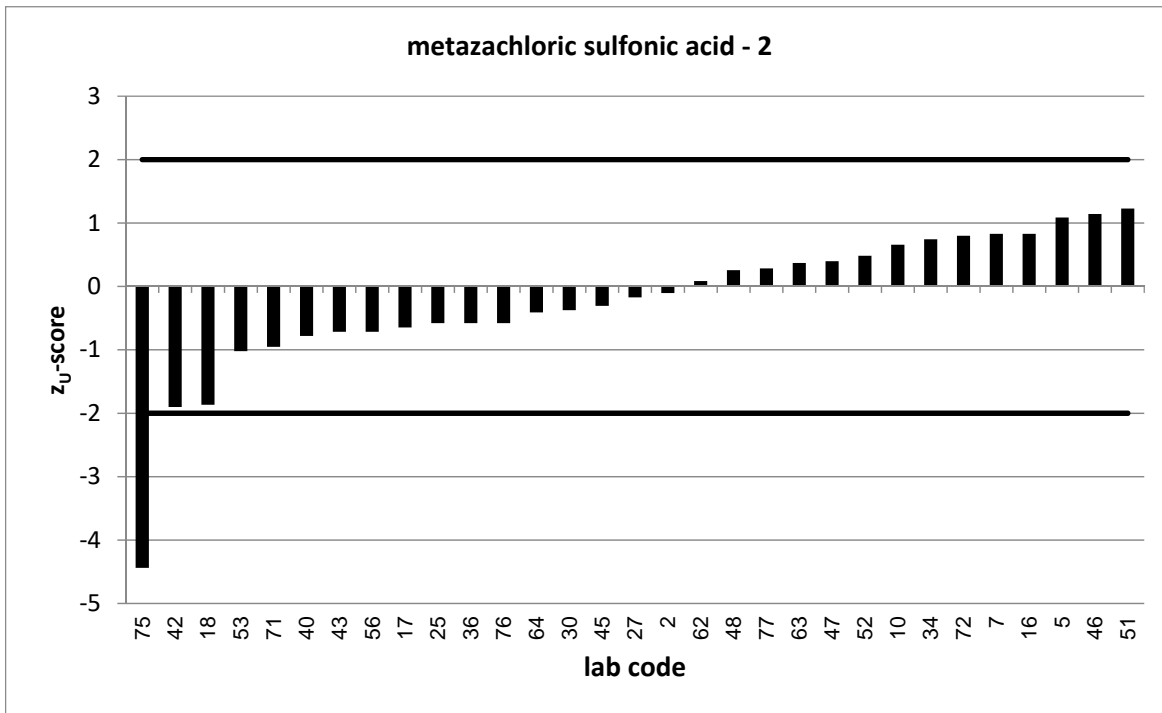
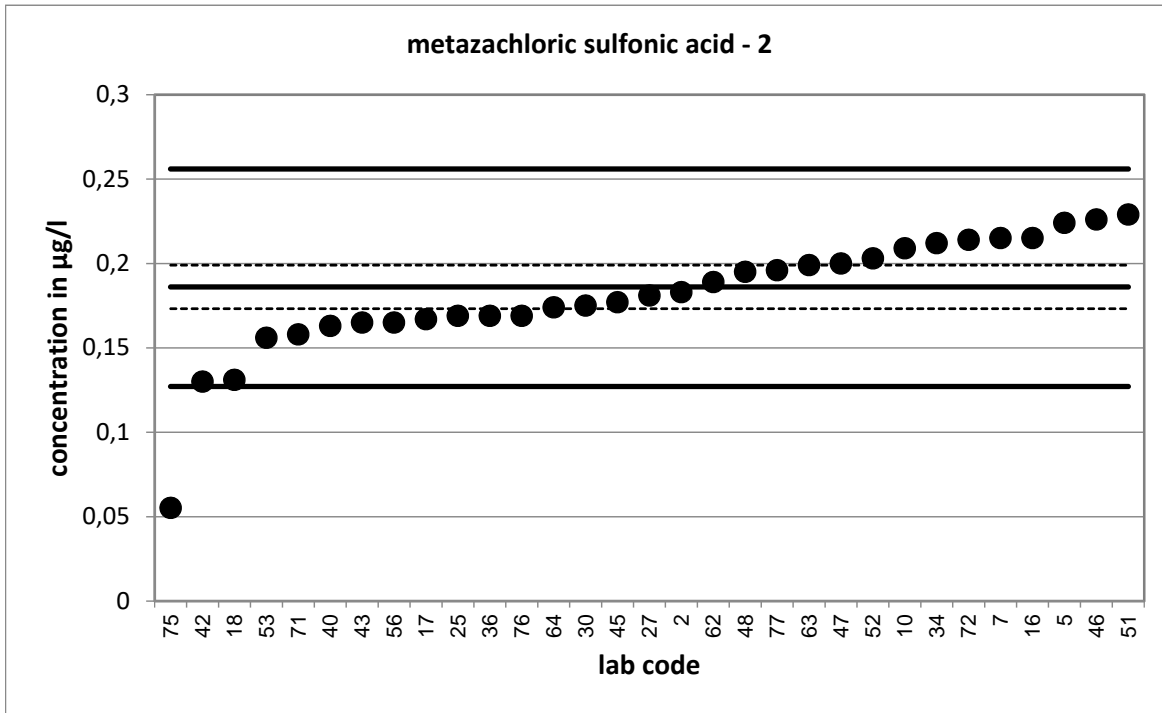


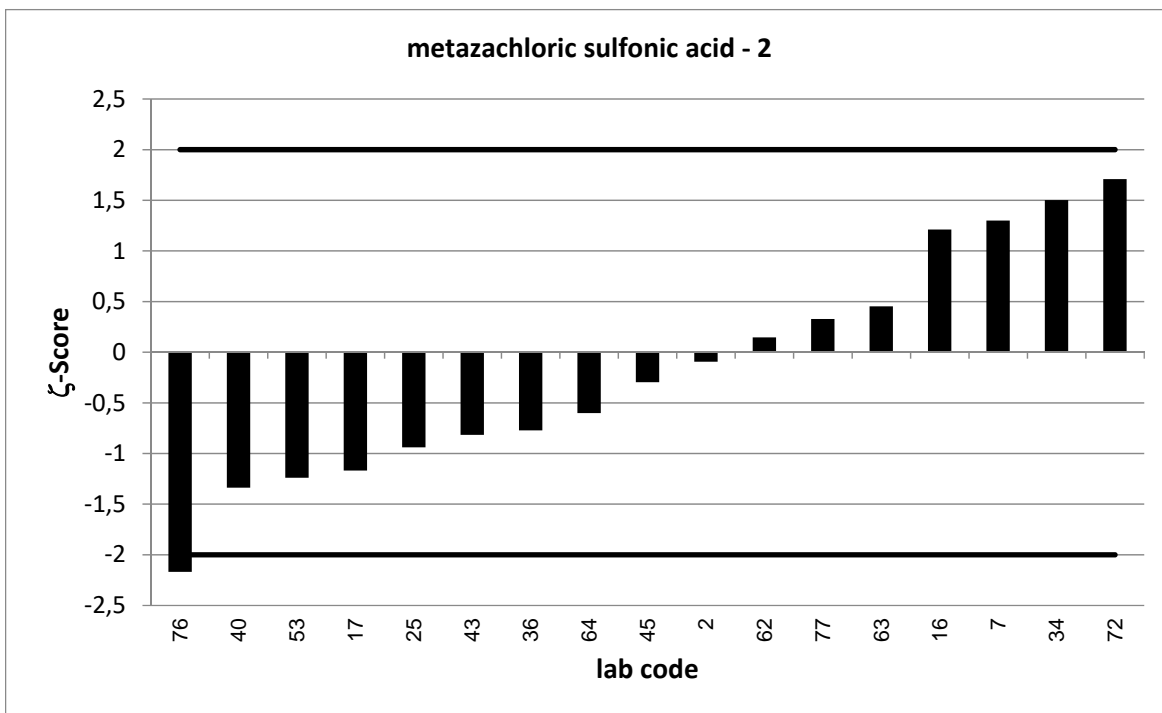
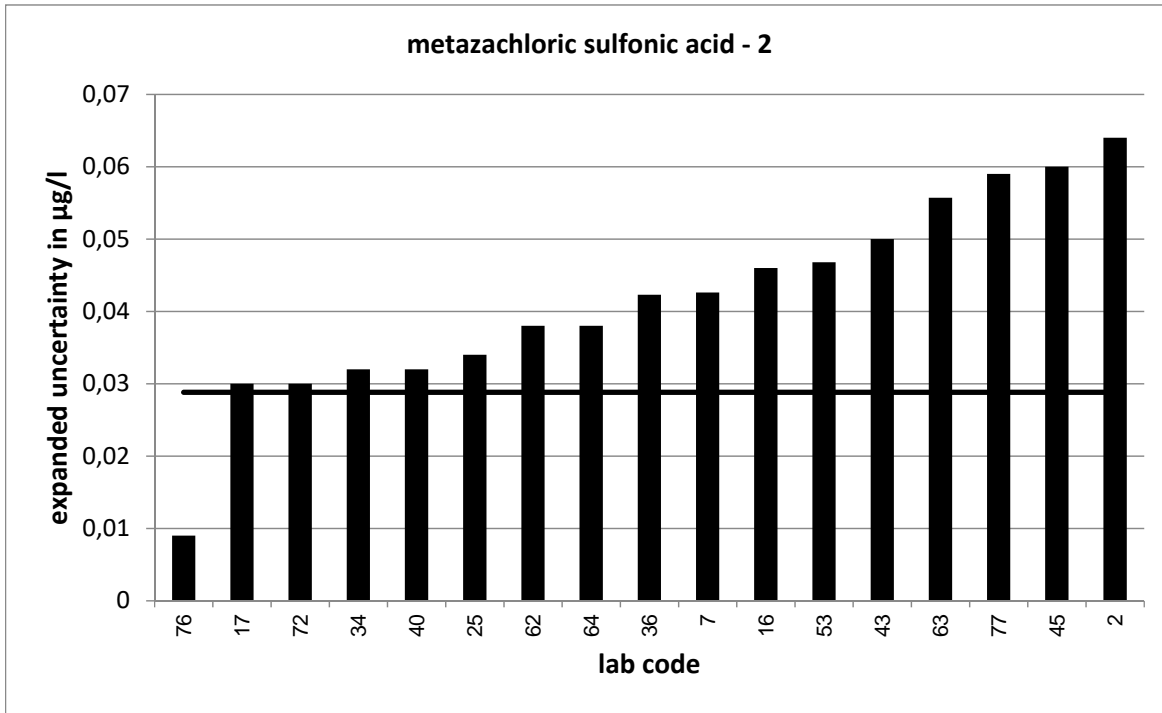


PT 4/20 - TW O5		metazachloric sulfonic acid - 2			
assigned value [ $\mu\text{g/l}$ ]*		0,1861 $\pm$ 0,0129			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,256			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,1271			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,183	0,064	-0,1	-0,1	s
5	0,224			1,1	s
7	0,215	0,043	1,3	0,8	s
10	0,209			0,7	s
16	0,215	0,046	1,2	0,8	s
17	0,167	0,03	-1,2	-0,6	s
18	0,131			-1,9	s
25	0,169	0,034	-0,9	-0,6	s
27	0,181			-0,2	s
30	0,175			-0,4	s
34	0,212	0,032	1,5	0,7	s
36	0,169	0,042	-0,8	-0,6	s
40	0,163	0,032	-1,3	-0,8	s
42	0,13			-1,9	s
43	0,165	0,05	-0,8	-0,7	s
45	0,177	0,06	-0,3	-0,3	s
46	0,226			1,1	s
47	0,2			0,4	s
48	0,195			0,3	s
51	0,229			1,2	s
52	0,203			0,5	s
53	0,156	0,047	-1,2	-1,0	s
56	0,165			-0,7	s
62	0,189	0,038	0,1	0,1	s
63	0,199	0,056	0,5	0,4	s
64	0,174	0,038	-0,6	-0,4	s
71	0,158			-1,0	s
72	0,214	0,03	1,7	0,8	s
75	0,0552			-4,4	u
76	0,169	0,009	-2,2	-0,6	s
77	0,196	0,059	0,3	0,3	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

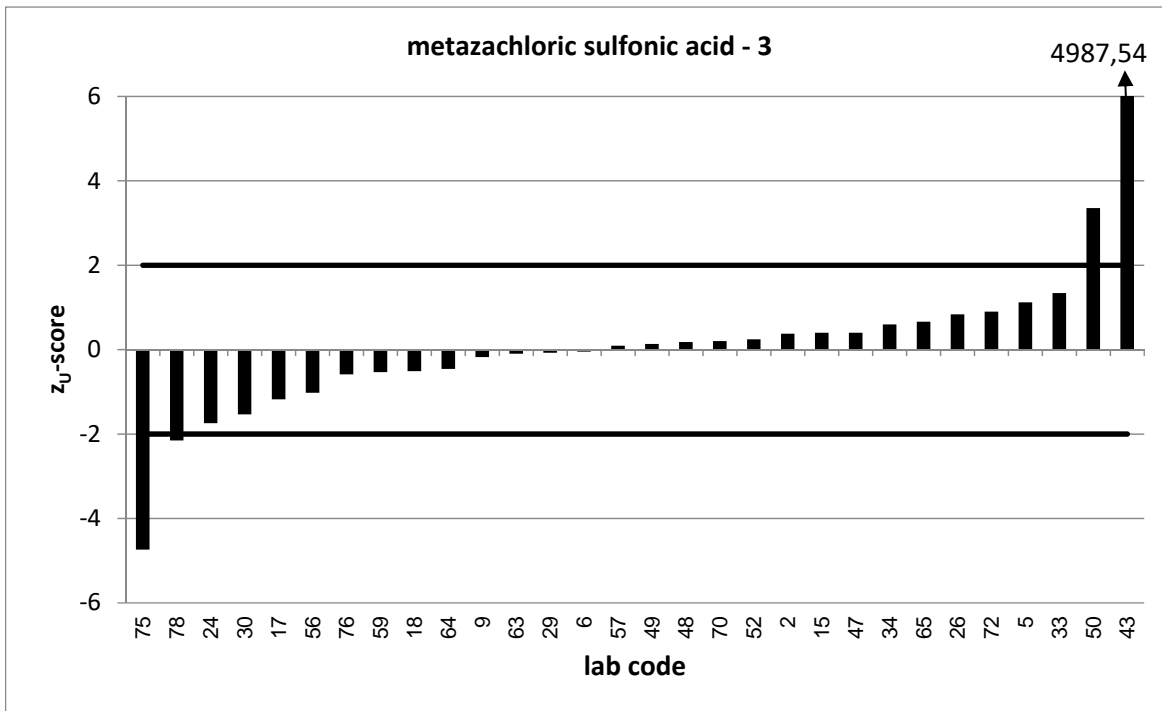
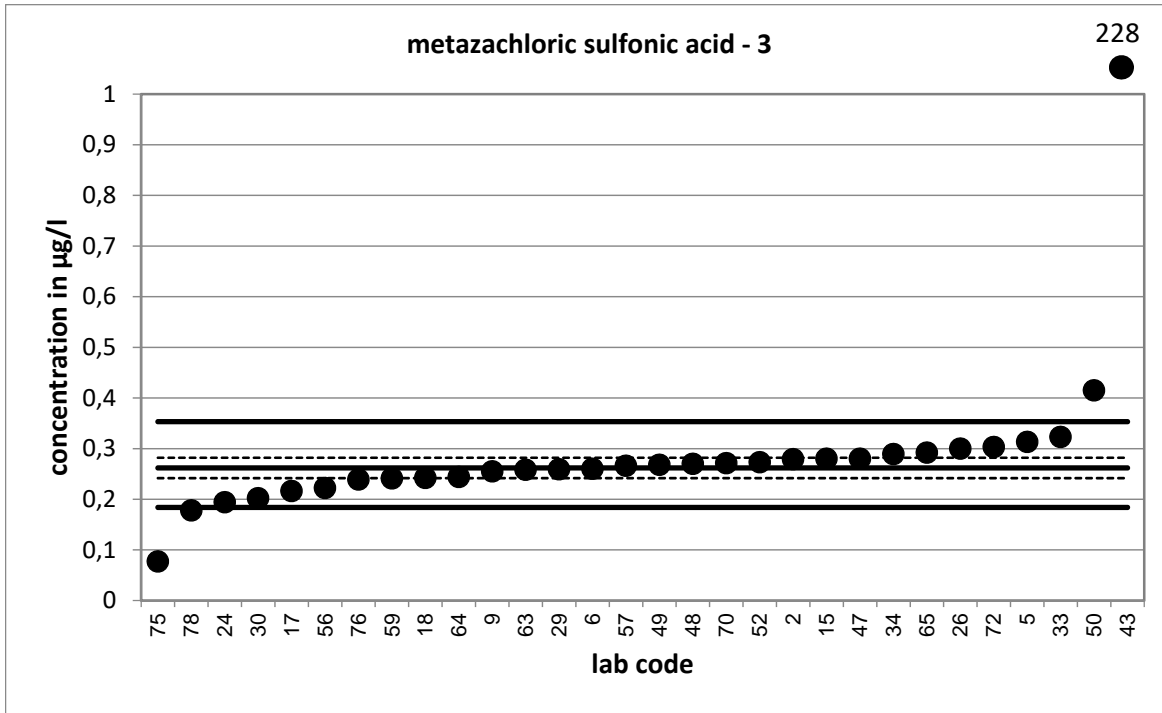


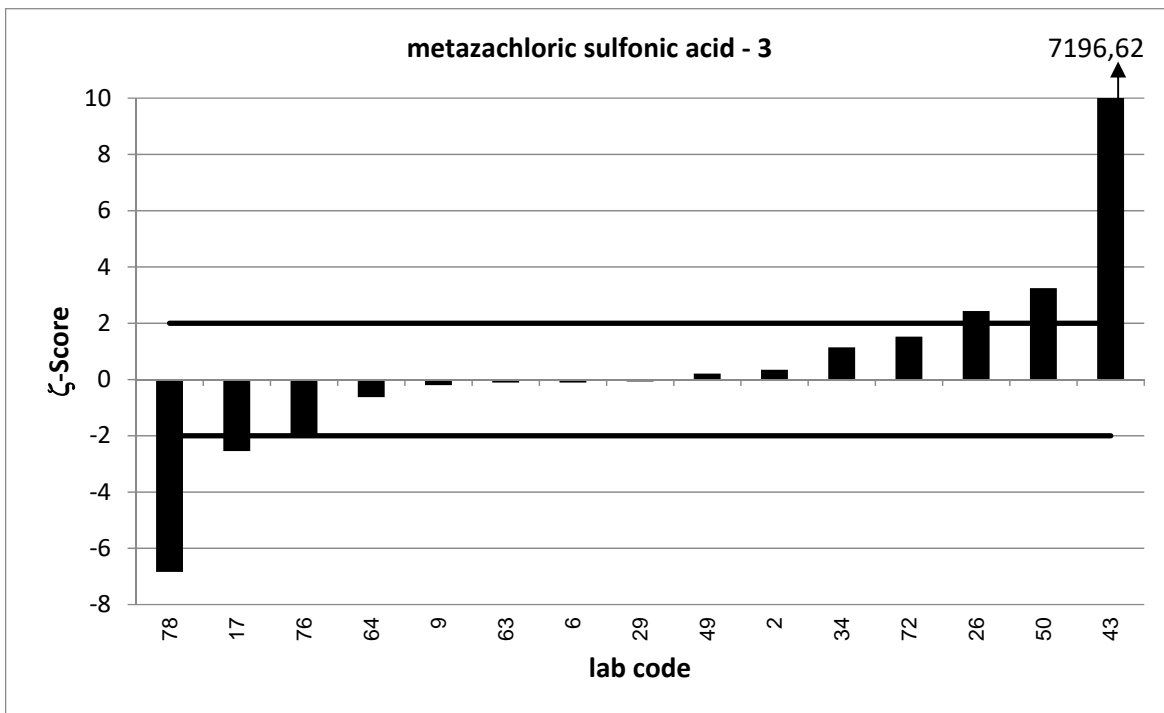
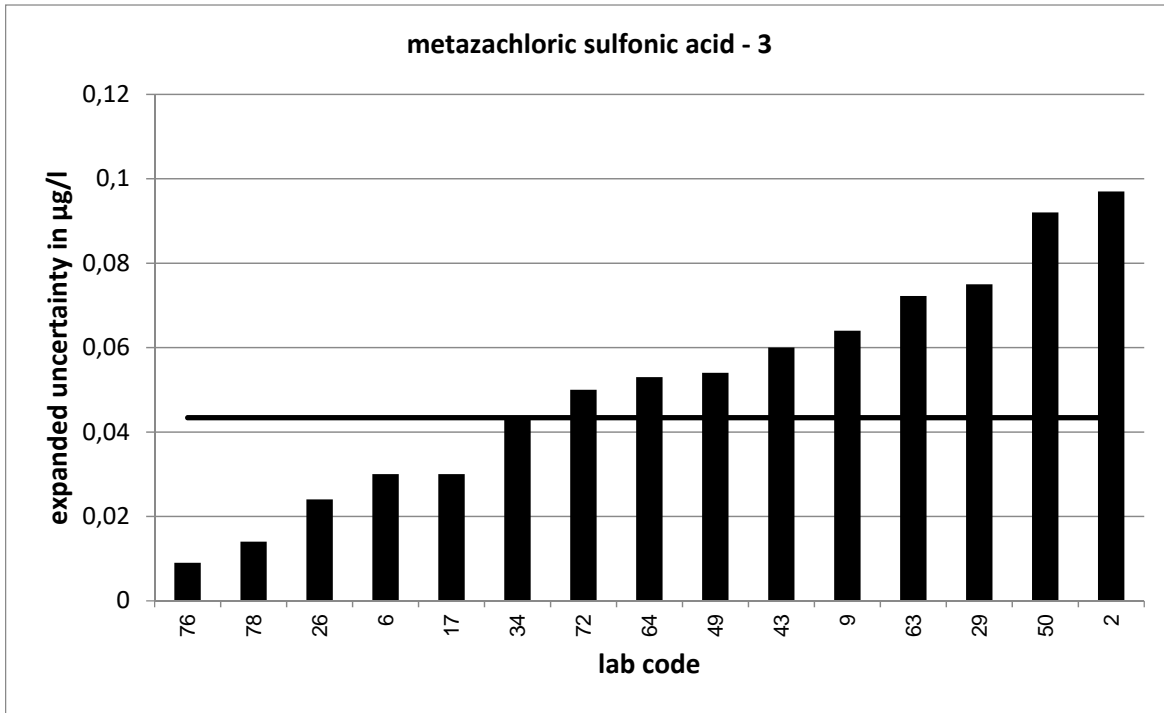


PT 4/20 - TW O5		metazachloric sulfonic acid - 3			
assigned value [ $\mu\text{g/l}$ ]*		0,2619 $\pm$ 0,0201			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,3532			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,184			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,279	0,097	0,3	0,4	s
5	0,313			1,1	s
6	0,26	0,03	-0,1	0,0	s
9	0,255	0,064	-0,2	-0,2	s
15	0,28			0,4	s
17	0,216	0,03	-2,5	-1,2	s
18	0,242			-0,5	s
24	0,194			-1,7	s
26	0,3	0,024	2,4	0,8	s
29	0,259	0,075	-0,1	-0,1	s
30	0,202			-1,5	s
33	0,323			1,3	s
34	0,289	0,043	1,1	0,6	s
43	228	0,06	7196,6	4987,5	u
47	0,28			0,4	s
48	0,27			0,2	s
49	0,268	0,054	0,2	0,1	s
50	0,415	0,092	3,3	3,4	u
52	0,273			0,2	s
56	0,222			-1,0	s
57	0,266			0,1	s
59	0,241			-0,5	s
63	0,258	0,072	-0,1	-0,1	s
64	0,244	0,053	-0,6	-0,5	s
65	0,292			0,7	s
70	0,271			0,2	s
72	0,303	0,05	1,5	0,9	s
75	0,0772			-4,7	u
76	0,239	0,009	-2,1	-0,6	s
78	0,178	0,014	-6,8	-2,2	q

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

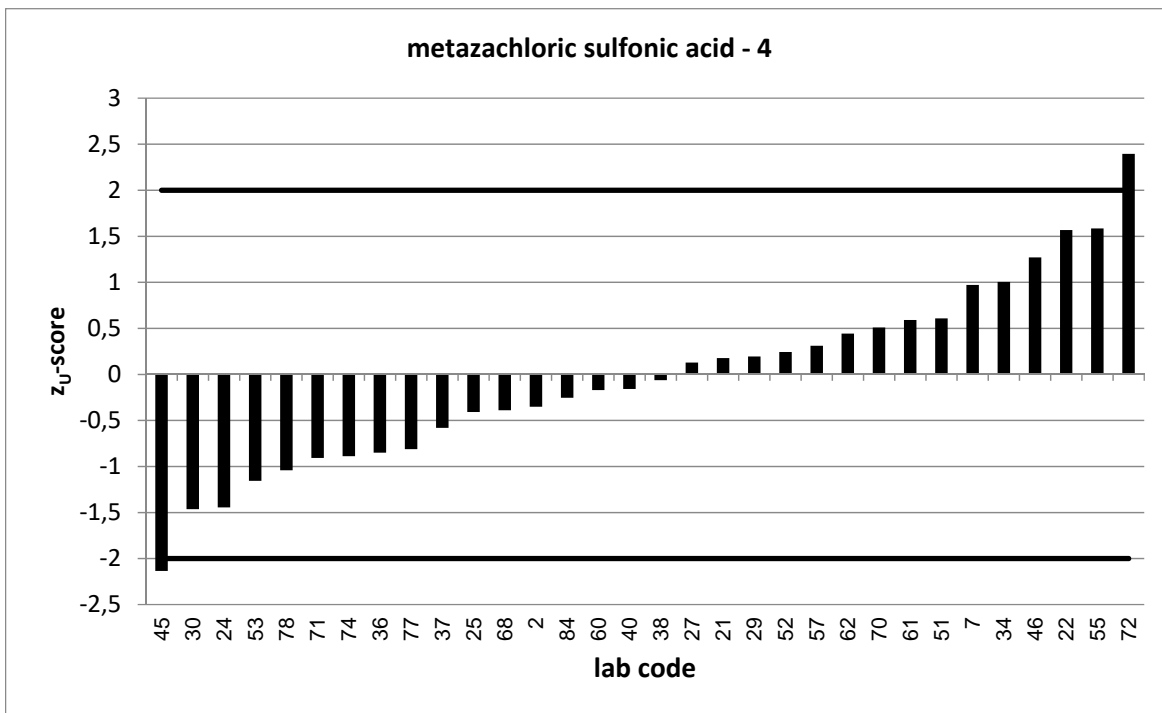
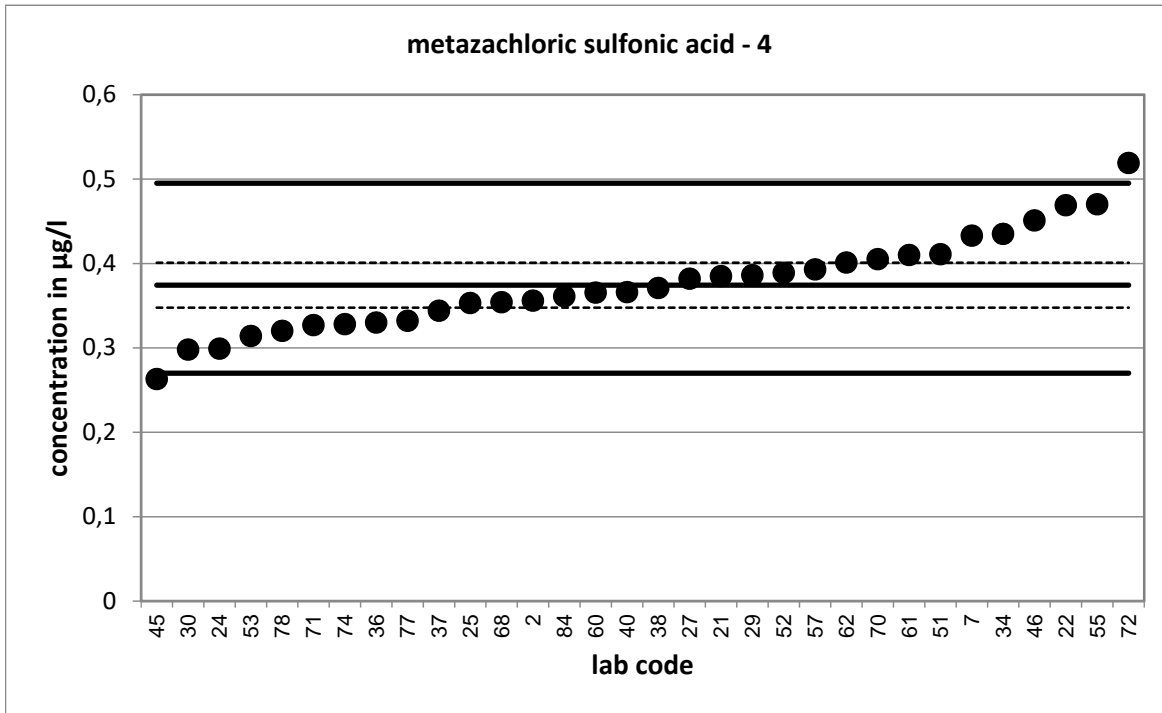




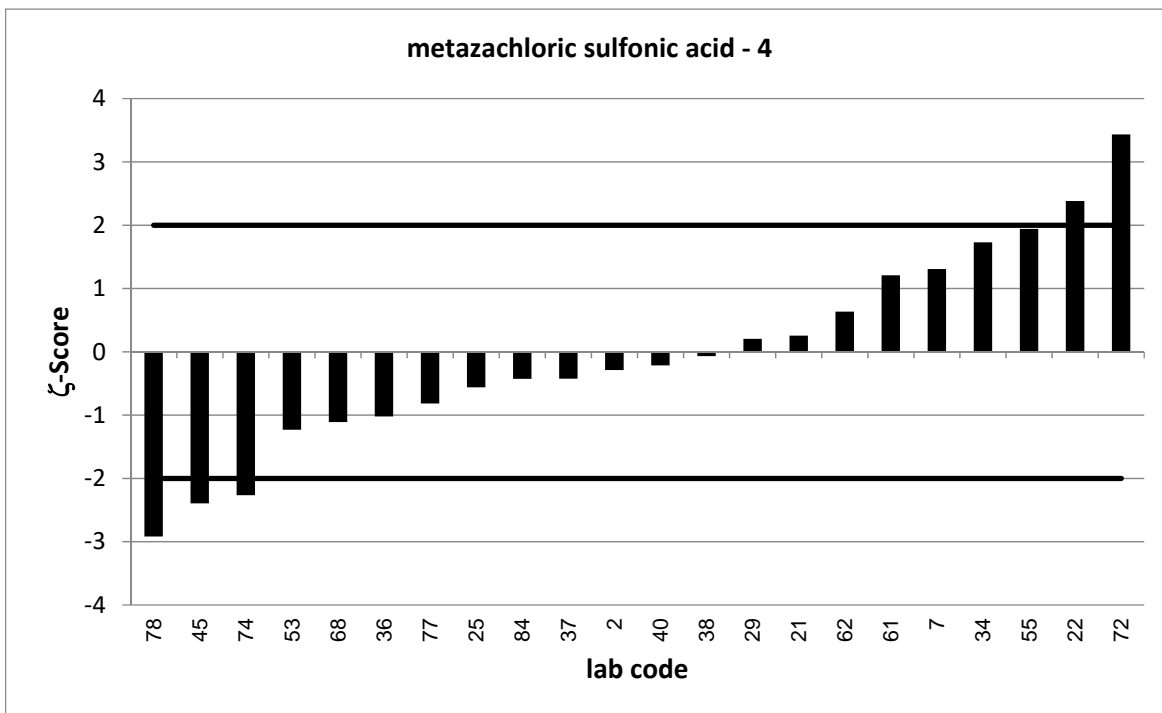
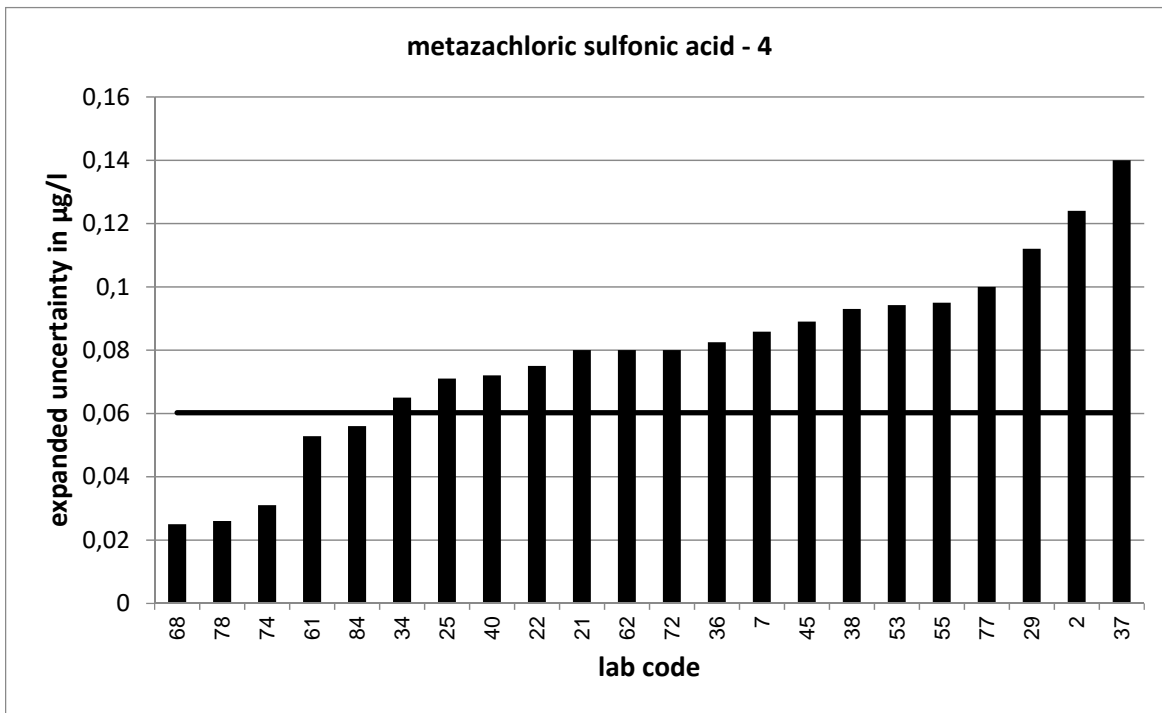
PT 4/20 - TW O5		metazachloric sulfonic acid - 4			
assigned value [ $\mu\text{g/l}$ ]*		0,3743 $\pm$ 0,0266			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,4951			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2701			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,356	0,124	-0,3	-0,4	s
7	0,433	0,086	1,3	1,0	s
21	0,385	0,08	0,3	0,2	s
22	0,469	0,075	2,4	1,6	s
24	0,299			-1,4	s
25	0,353	0,071	-0,6	-0,4	s
27	0,382			0,1	s
29	0,386	0,112	0,2	0,2	s
30	0,298			-1,5	s
34	0,435	0,065	1,7	1,0	s
36	0,33	0,083	-1,0	-0,9	s
37	0,344	0,14	-0,4	-0,6	s
38	0,371	0,093	-0,1	-0,1	s
40	0,366	0,072	-0,2	-0,2	s
45	0,263	0,089	-2,4	-2,1	q
46	0,451			1,3	s
51	0,411			0,6	s
52	0,389			0,2	s
53	0,314	0,094	-1,2	-1,2	s
55	0,47	0,095	1,9	1,6	s
57	0,393			0,3	s
60	0,3654			-0,2	s
61	0,41	0,053	1,2	0,6	s
62	0,401	0,08	0,6	0,4	s
68	0,354	0,025	-1,1	-0,4	s
70	0,405			0,5	s
71	0,327			-0,9	s
72	0,519	0,08	3,4	2,4	q
74	0,328	0,031	-2,3	-0,9	s
77	0,332	0,1	-0,8	-0,8	s
78	0,32	0,026	-2,9	-1,0	s
84	0,361	0,056	-0,4	-0,3	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



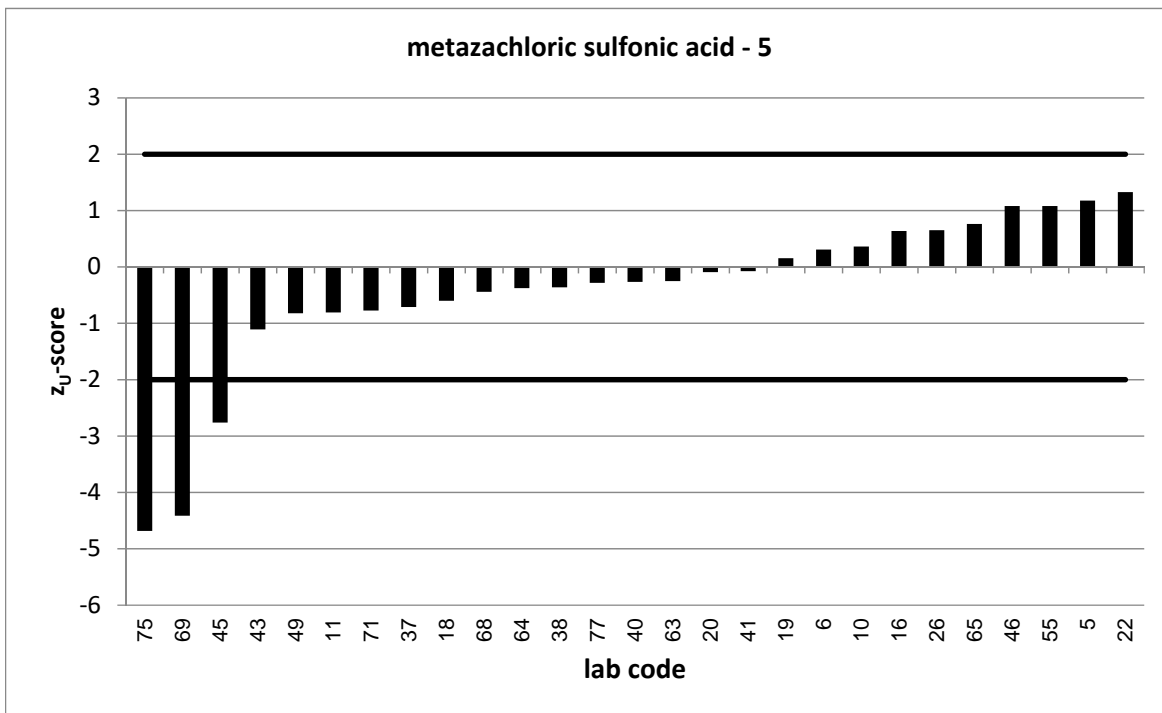
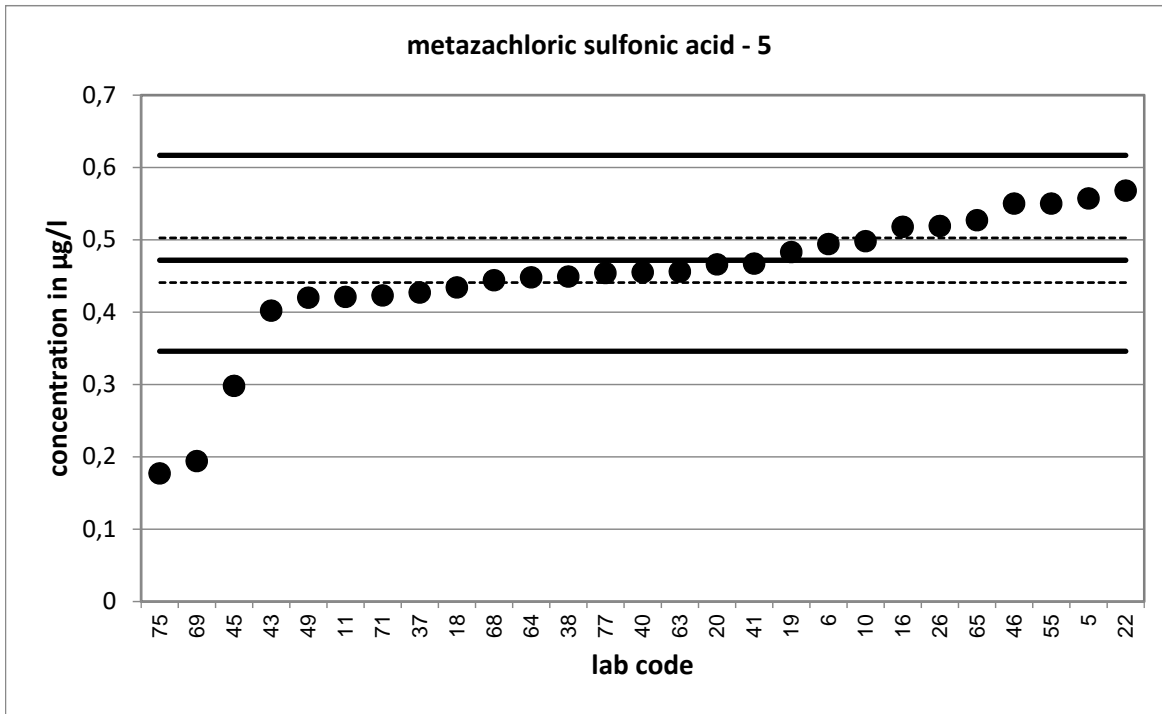


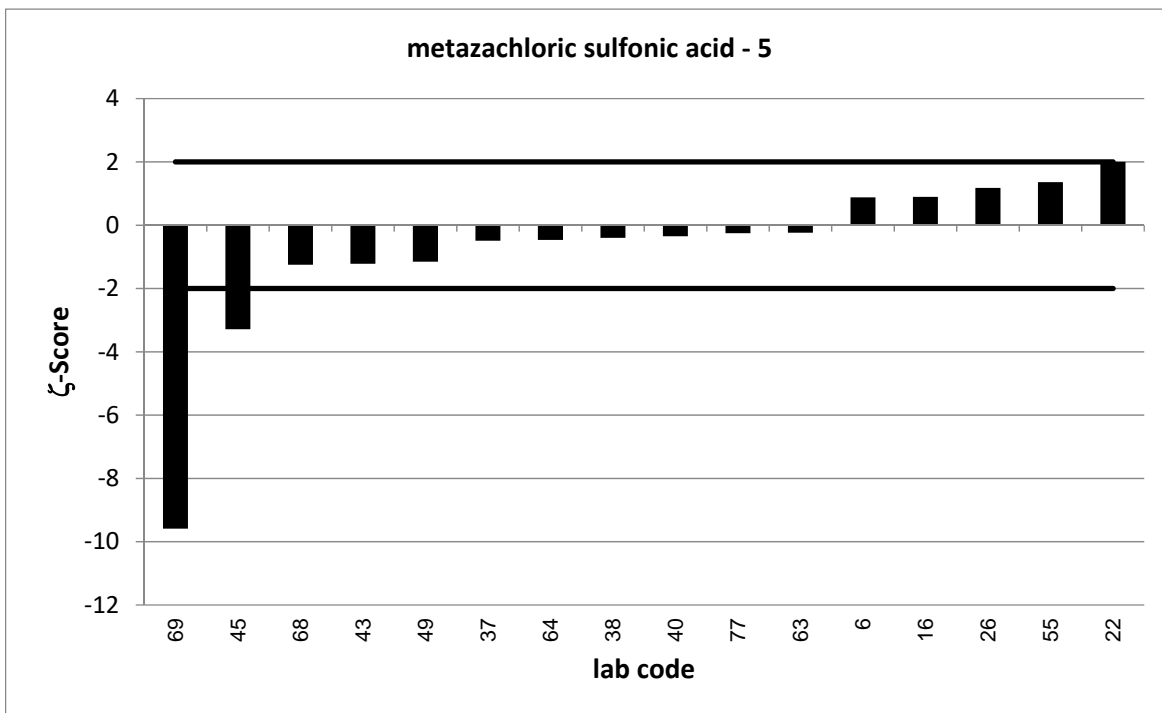
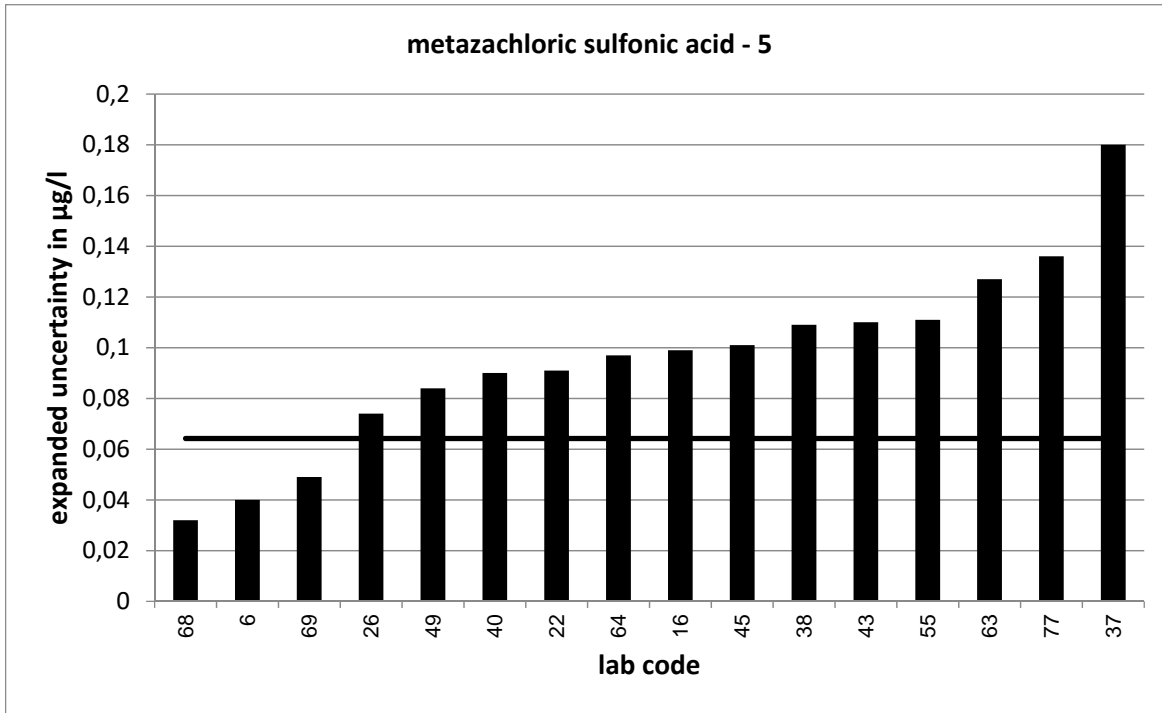


PT 4/20 - TW O5		metazachloric sulfonic acid - 5			
assigned value [ $\mu\text{g/l}$ ]*		0,4718 $\pm$ 0,0309			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,6167			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,346			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
5	0,557			1,2	s
6	0,494	0,04	0,9	0,3	s
10	0,498			0,4	s
11	0,421			-0,8	s
16	0,518	0,099	0,9	0,6	s
18	0,434			-0,6	s
19	0,483			0,2	s
20	0,466			-0,1	s
22	0,568	0,091	2,0	1,3	s
26	0,519	0,074	1,2	0,7	s
37	0,427	0,18	-0,5	-0,7	s
38	0,449	0,109	-0,4	-0,4	s
40	0,455	0,09	-0,4	-0,3	s
41	0,467			-0,1	s
43	0,402	0,11	-1,2	-1,1	s
45	0,298	0,101	-3,3	-2,8	q
46	0,55			1,1	s
49	0,42	0,084	-1,2	-0,8	s
55	0,55	0,111	1,4	1,1	s
63	0,456	0,127	-0,2	-0,3	s
64	0,448	0,097	-0,5	-0,4	s
65	0,527			0,8	s
68	0,444	0,032	-1,2	-0,4	s
69	0,194	0,049	-9,6	-4,4	u
71	0,423			-0,8	s
75	0,177			-4,7	u
77	0,454	0,136	-0,3	-0,3	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

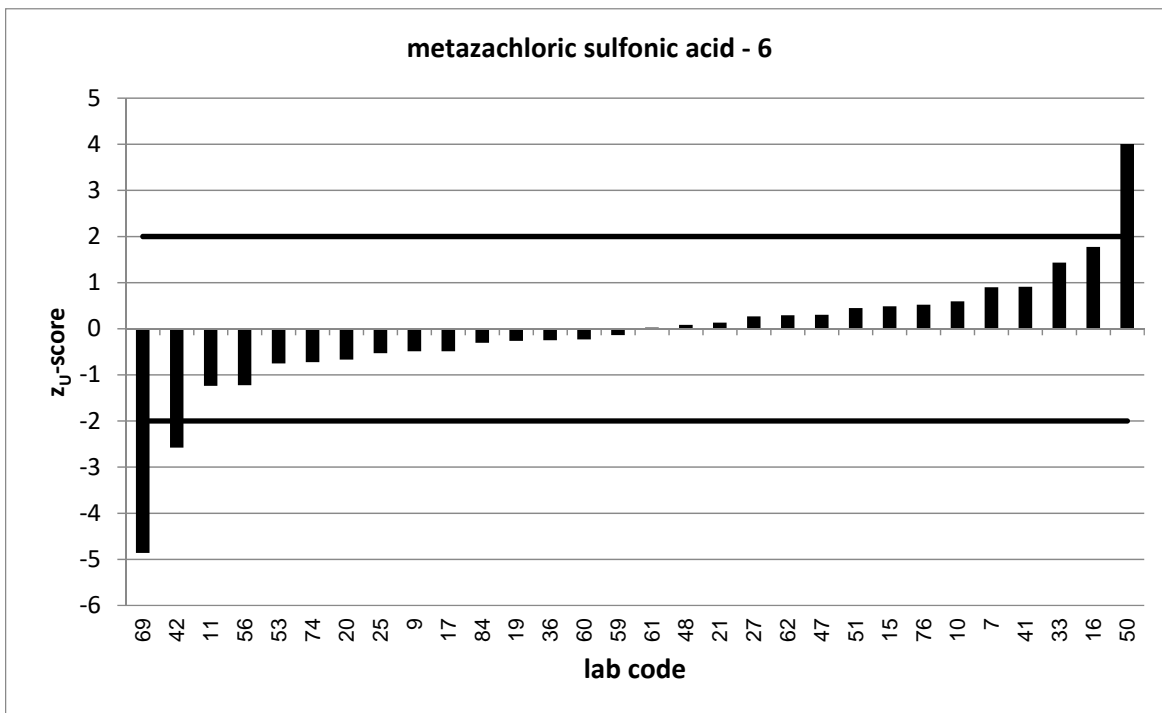
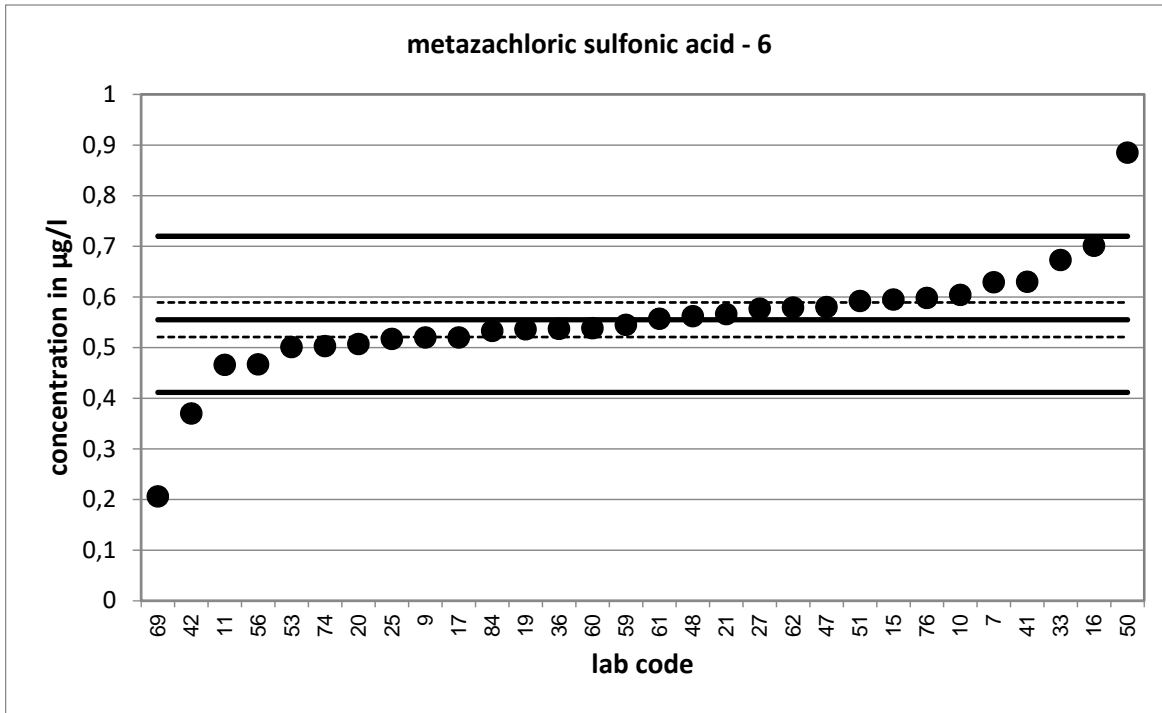


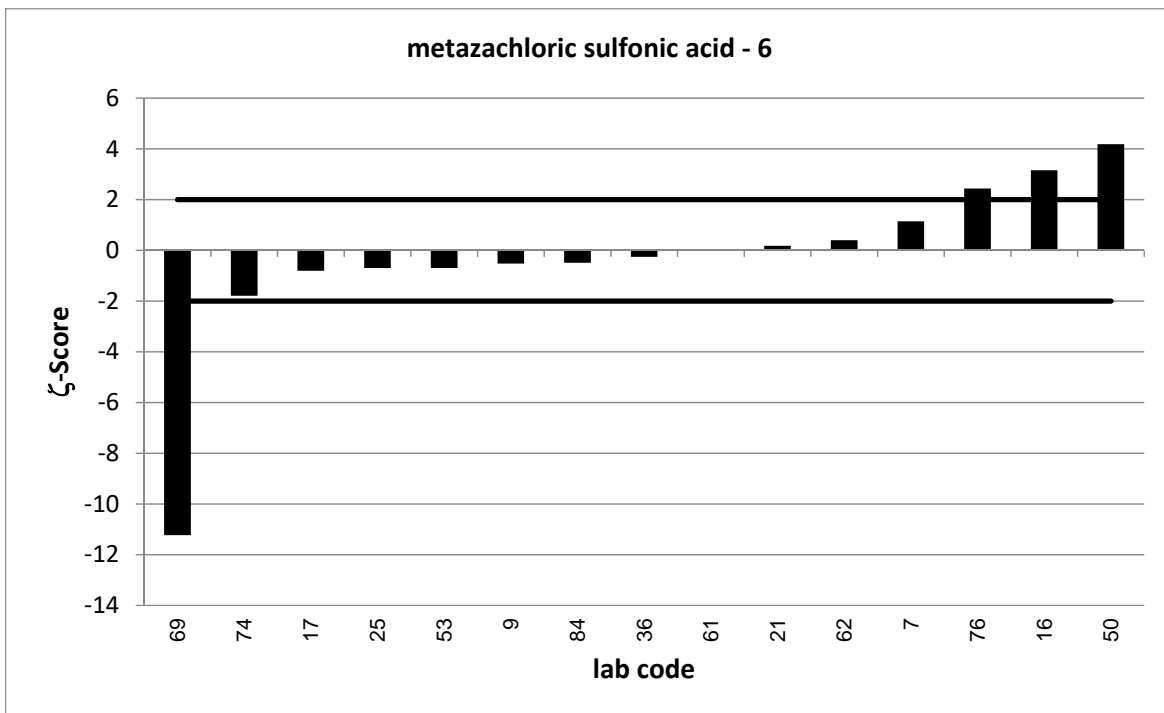
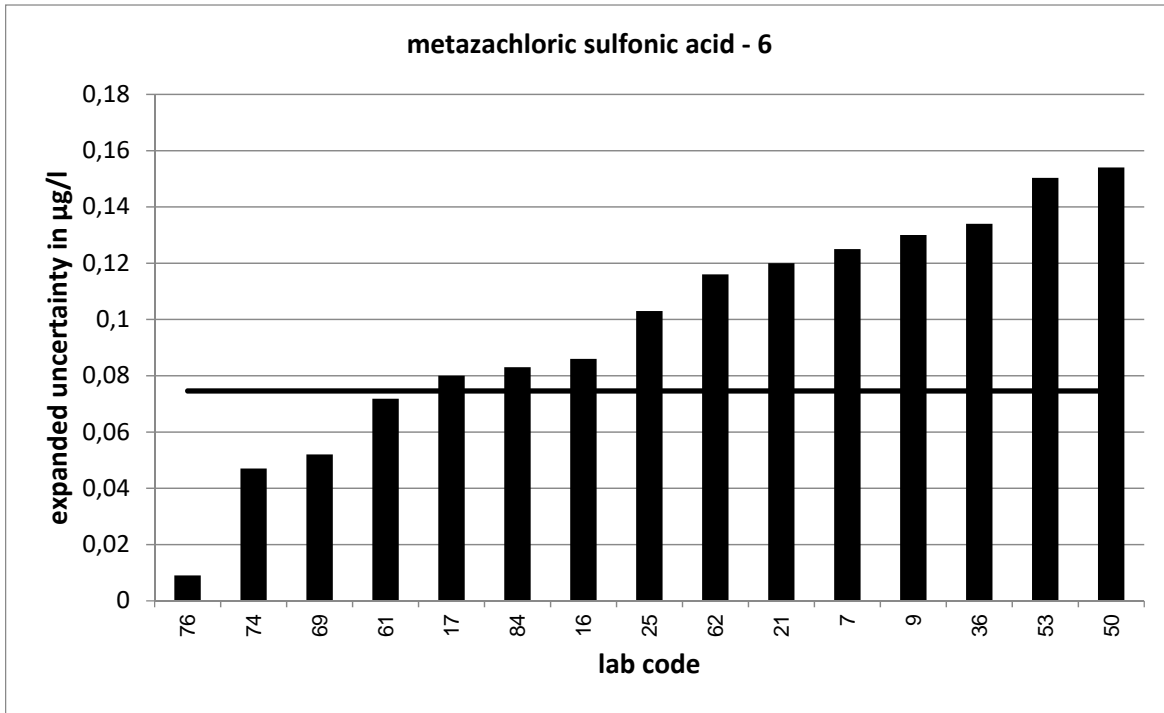


PT 4/20 - TW O5		metazachloric sulfonic acid - 6			
assigned value [ $\mu\text{g/l}$ ]*		0,5551 $\pm$ 0,0341			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,7198			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,4115			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
7	0,629	0,125	1,1	0,9	s
9	0,52	0,13	-0,5	-0,5	s
10	0,604			0,6	s
11	0,466			-1,2	s
15	0,595			0,5	s
16	0,701	0,086	3,2	1,8	s
17	0,52	0,08	-0,8	-0,5	s
19	0,536			-0,3	s
20	0,507			-0,7	s
21	0,566	0,12	0,2	0,1	s
25	0,517	0,103	-0,7	-0,5	s
27	0,577			0,3	s
33	0,673			1,4	s
36	0,537	0,134	-0,3	-0,3	s
41	0,63			0,9	s
42	0,37			-2,6	q
47	0,58			0,3	s
48	0,562			0,1	s
50	0,885	0,154	4,2	4,0	u
51	0,592			0,4	s
53	0,501	0,15	-0,7	-0,8	s
56	0,467			-1,2	s
59	0,545			-0,1	s
60	0,5383			-0,2	s
61	0,557	0,072	0,0	0,0	s
62	0,579	0,116	0,4	0,3	s
69	0,206	0,052	-11,2	-4,9	u
74	0,503	0,047	-1,8	-0,7	s
76	0,598	0,009	2,4	0,5	s
84	0,533	0,083	-0,5	-0,3	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



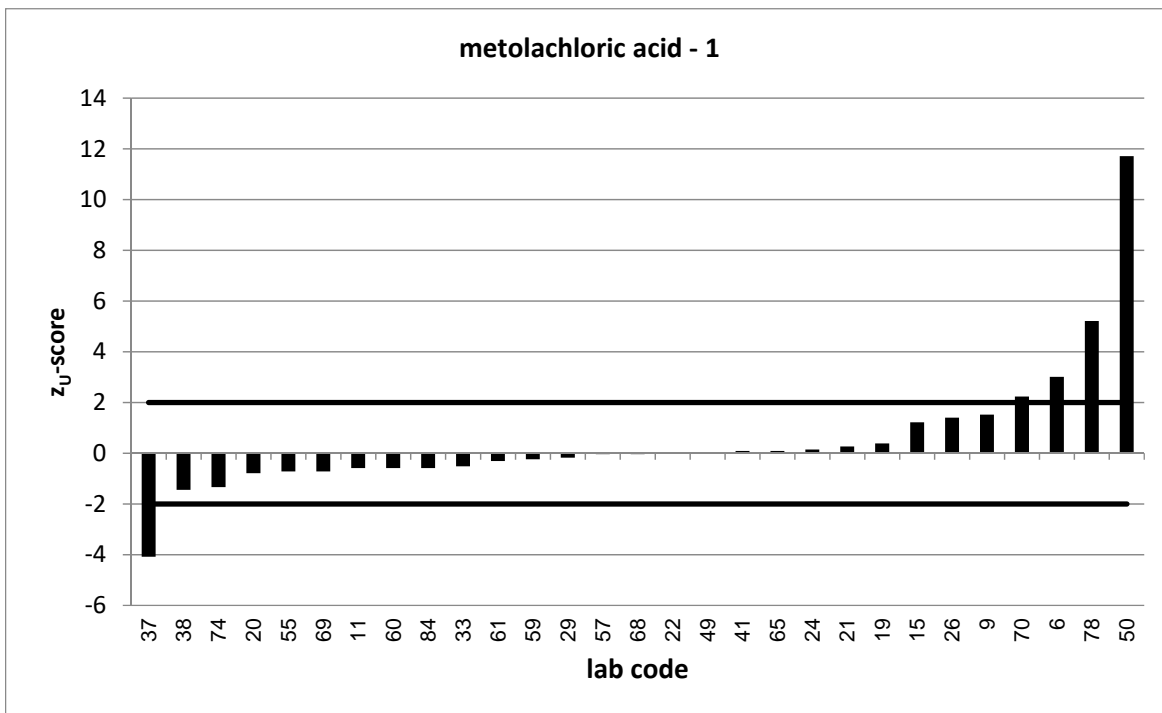
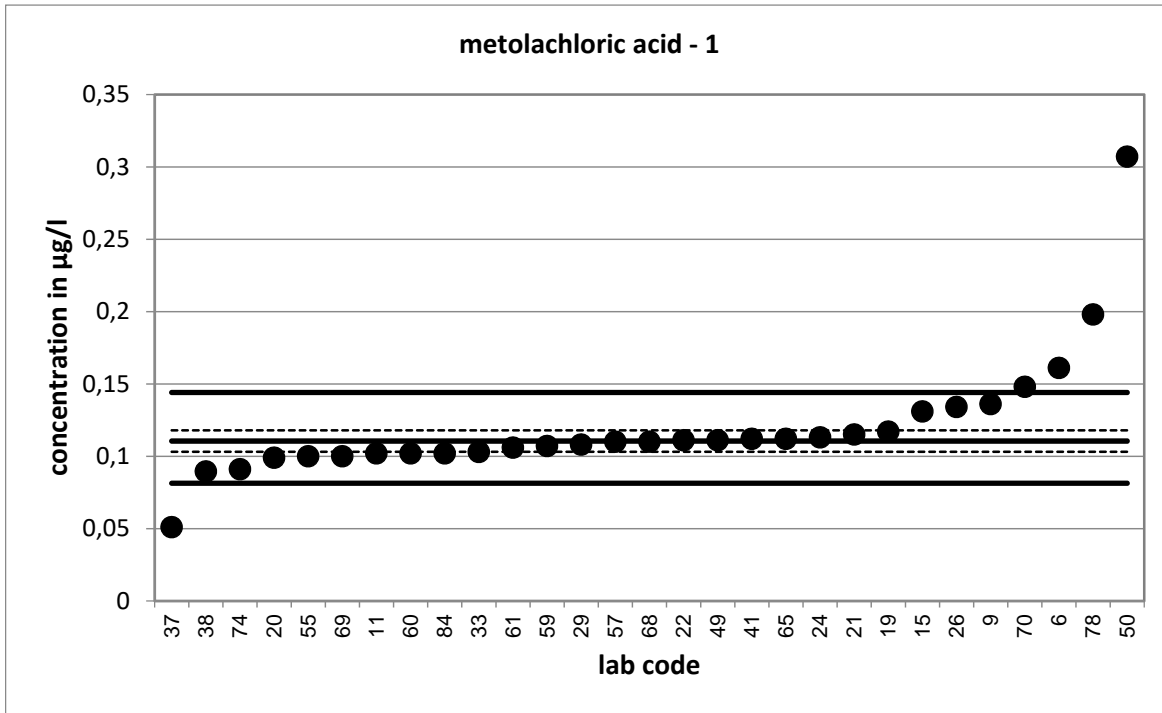


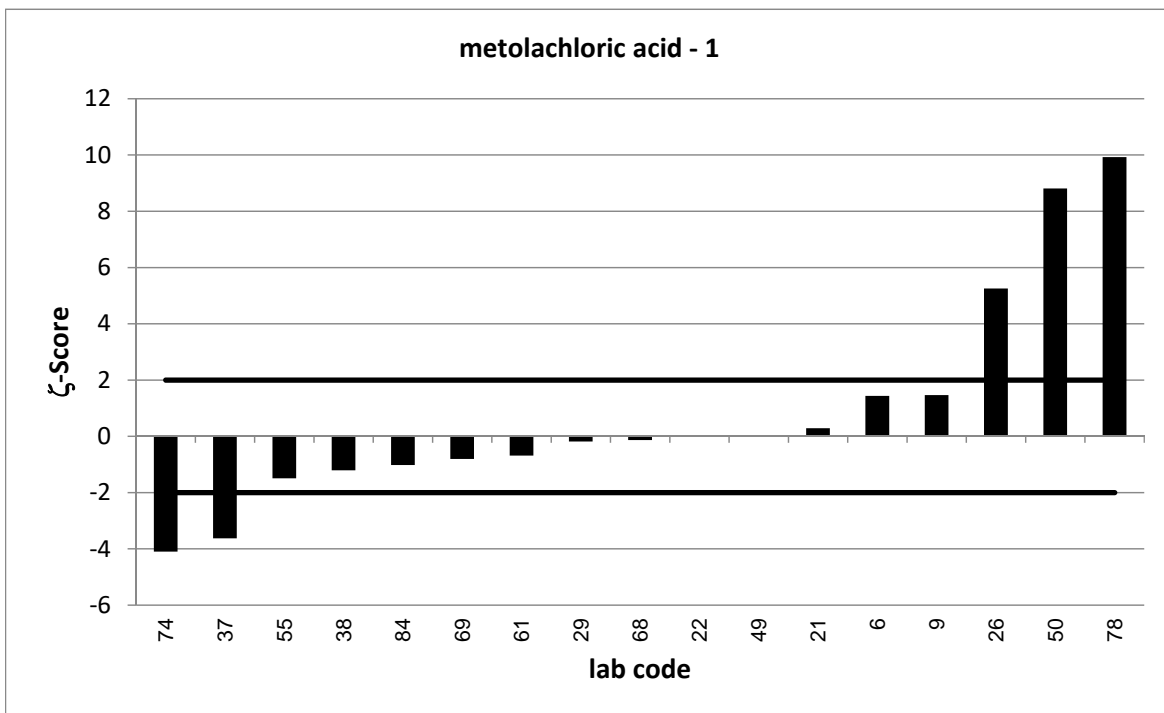
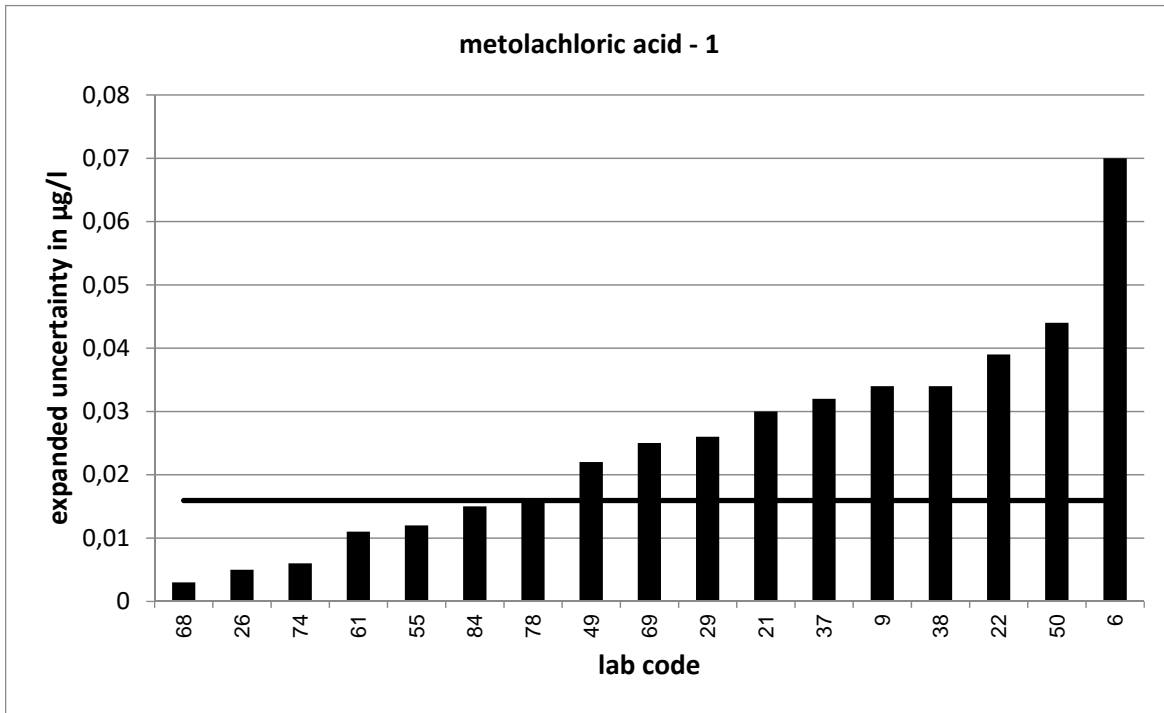
PT 4/20 - TW O5		metolachloric acid - 1			
assigned value [ $\mu\text{g/l}$ ]*		0,1105 $\pm$ 0,0074			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,1441			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,08137			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
6	0,161	0,07	1,4	3,0	u
9	0,136	0,034	1,5	1,5	s
11	0,102			-0,6	s
15	0,131			1,2	s
19	0,117			0,4	s
20	0,099			-0,8	s
21	0,115	0,03	0,3	0,3	s
22	0,111	0,039	0,0	0,0	s
24	0,113			0,1	s
26	0,134	0,005	5,3	1,4	s
29	0,108	0,026	-0,2	-0,2	s
33	0,103			-0,5	s
37	0,051	0,032	-3,6	-4,1	u
38	0,0895	0,034	-1,2	-1,4	s
41	0,112			0,1	s
49	0,111	0,022	0,0	0,0	s
50	0,307	0,044	8,8	11,7	u
55	0,1	0,012	-1,5	-0,7	s
57	0,11			0,0	s
59	0,107			-0,2	s
60	0,102			-0,6	s
61	0,106	0,011	-0,7	-0,3	s
65	0,112			0,1	s
68	0,11	0,003	-0,1	0,0	s
69	0,1	0,025	-0,8	-0,7	s
70	0,148			2,2	q
74	0,091	0,006	-4,1	-1,3	s
78	0,198	0,016	9,9	5,2	u
84	0,102	0,015	-1,0	-0,6	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



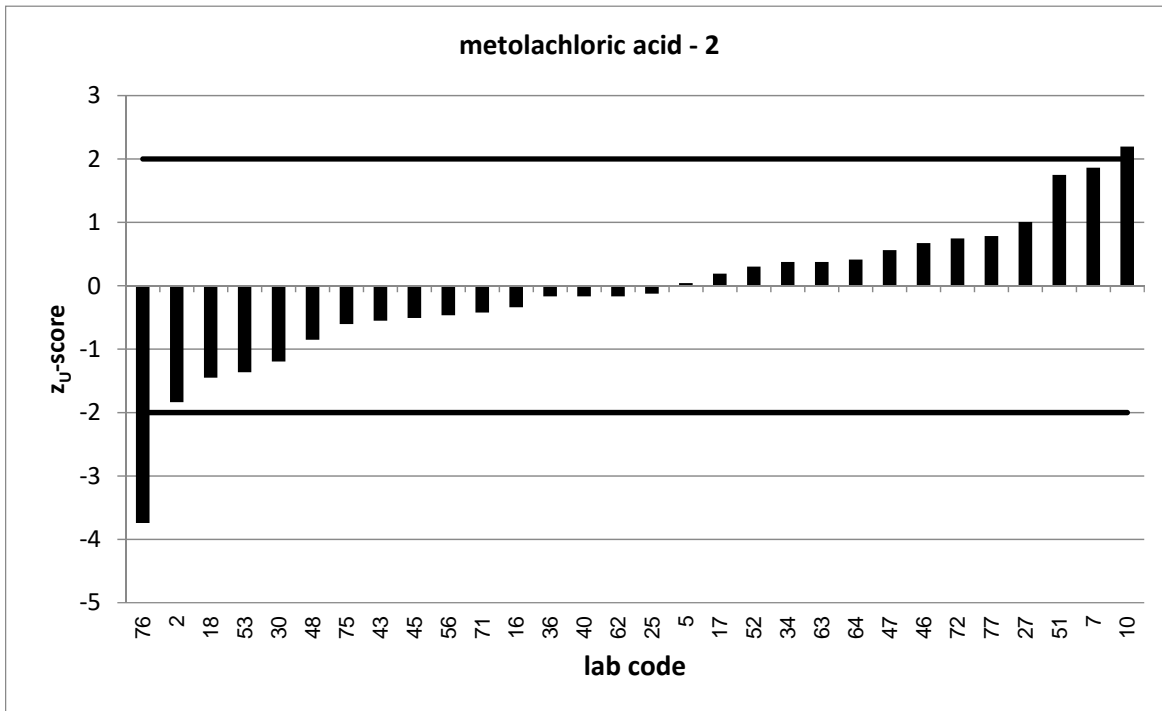
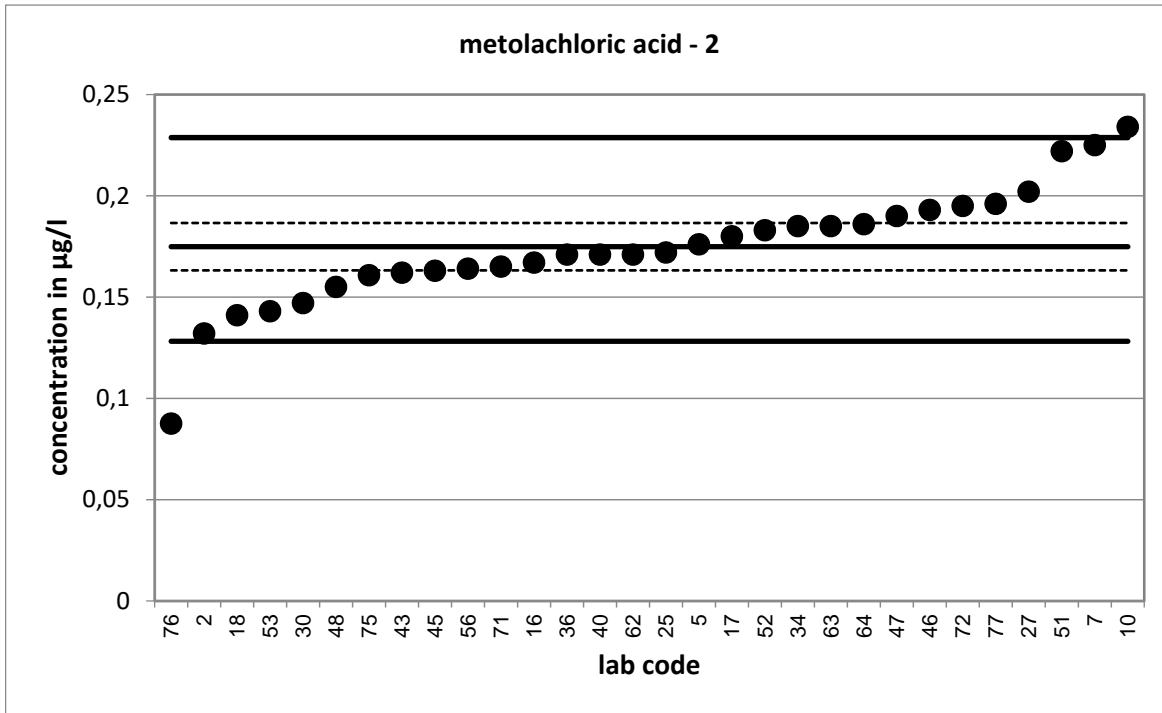


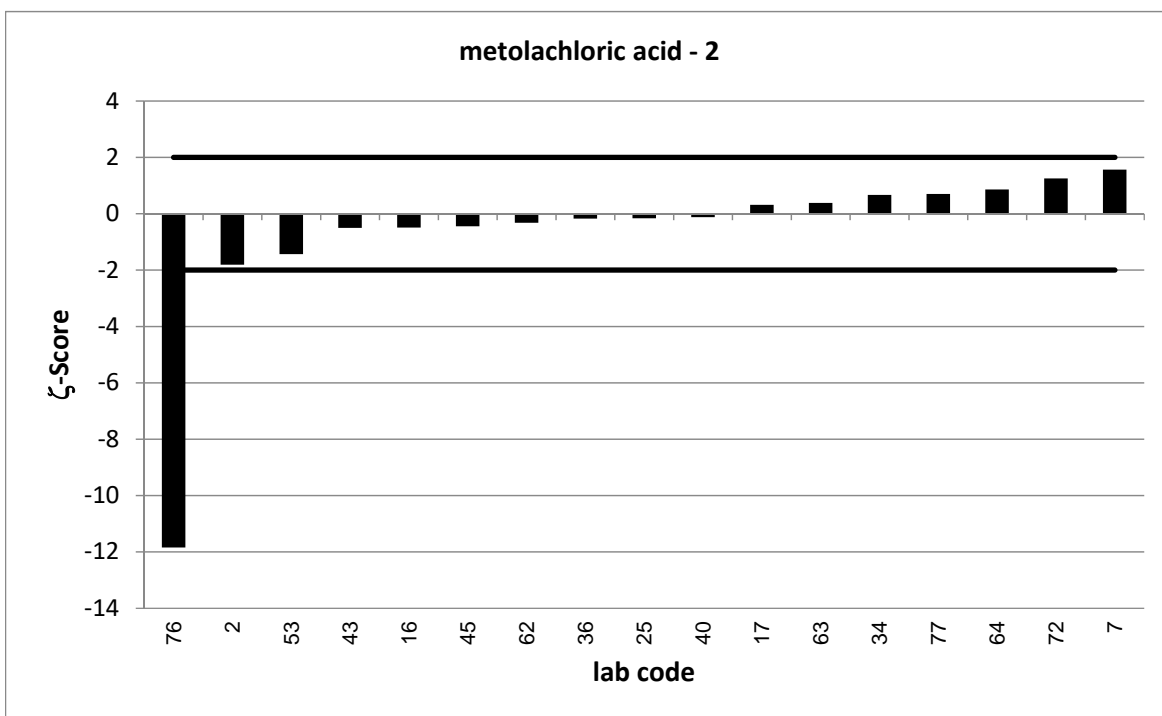
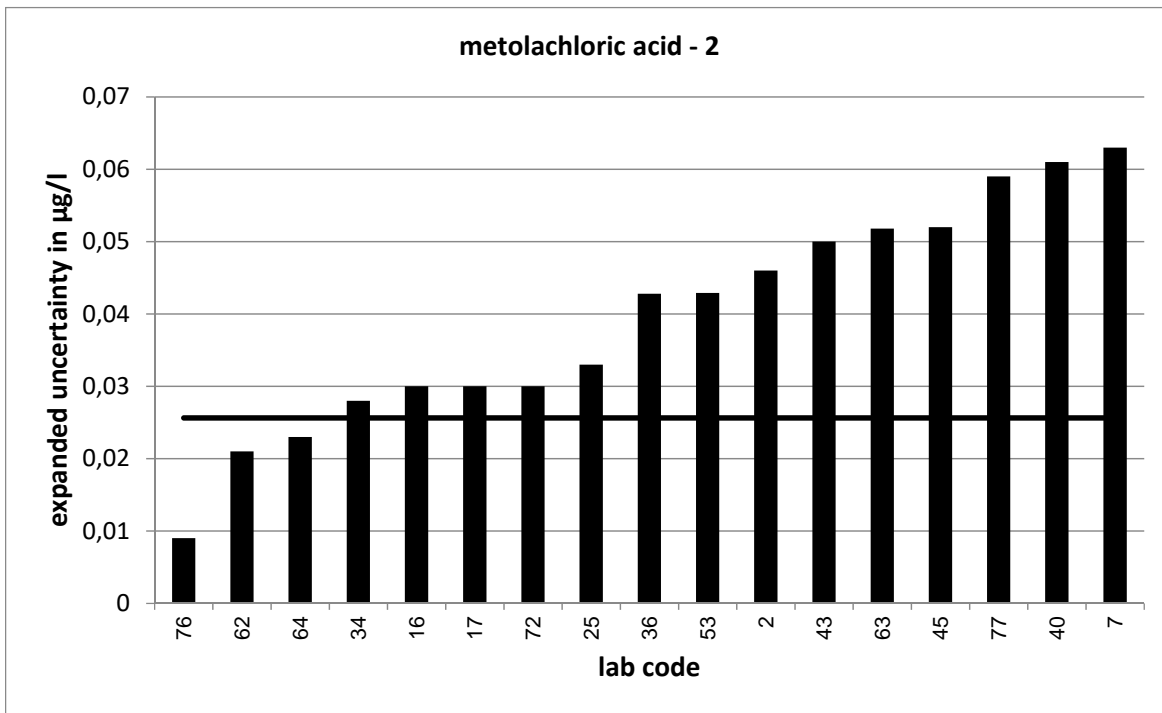


PT 4/20 - TW O5		metolachloric acid - 2			
assigned value [ $\mu\text{g/l}$ ]*		0,1749 $\pm$ 0,0117			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,2287			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,1282			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,132	0,046	-1,8	-1,8	s
5	0,176			0,0	s
7	0,225	0,063	1,6	1,9	s
10	0,234			2,2	q
16	0,167	0,03	-0,5	-0,3	s
17	0,18	0,03	0,3	0,2	s
18	0,141			-1,5	s
25	0,172	0,033	-0,2	-0,1	s
27	0,202			1,0	s
30	0,147			-1,2	s
34	0,185	0,028	0,7	0,4	s
36	0,171	0,043	-0,2	-0,2	s
40	0,171	0,061	-0,1	-0,2	s
43	0,162	0,05	-0,5	-0,6	s
45	0,163	0,052	-0,4	-0,5	s
46	0,193			0,7	s
47	0,19			0,6	s
48	0,155			-0,9	s
51	0,222			1,7	s
52	0,183			0,3	s
53	0,143	0,043	-1,4	-1,4	s
56	0,164			-0,5	s
62	0,171	0,021	-0,3	-0,2	s
63	0,185	0,052	0,4	0,4	s
64	0,186	0,023	0,9	0,4	s
71	0,165			-0,4	s
72	0,195	0,03	1,2	0,7	s
75	0,1608			-0,6	s
76	0,0875	0,009	-11,8	-3,7	u
77	0,196	0,059	0,7	0,8	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

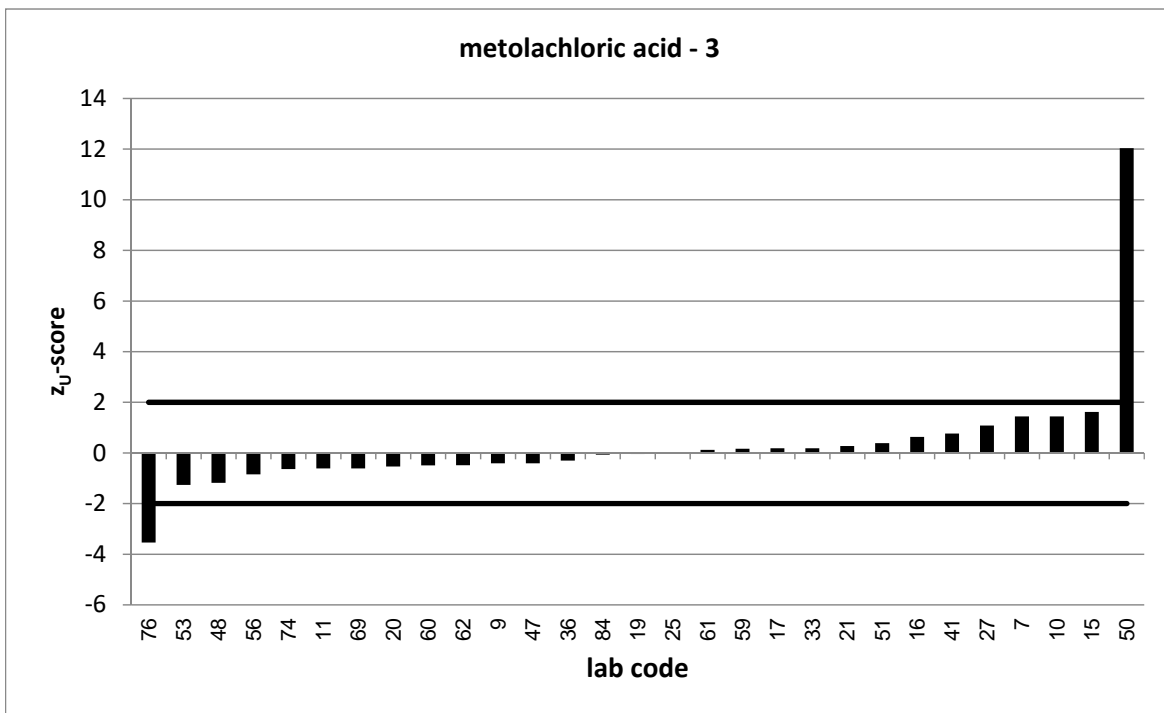
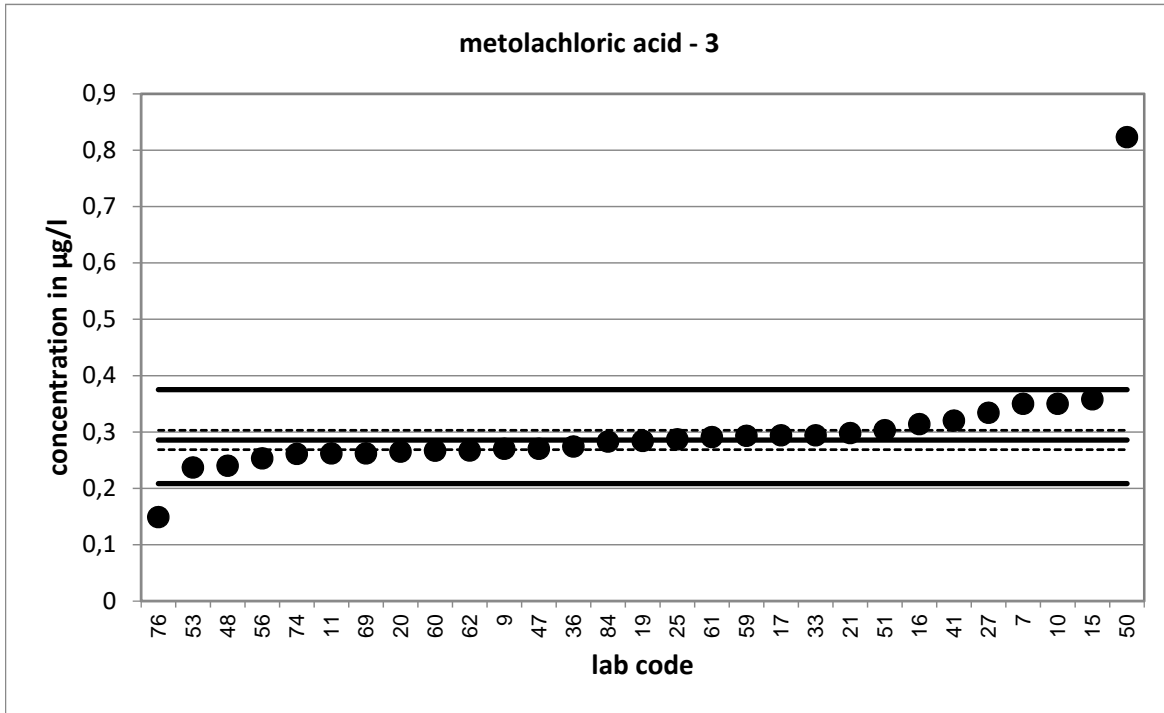


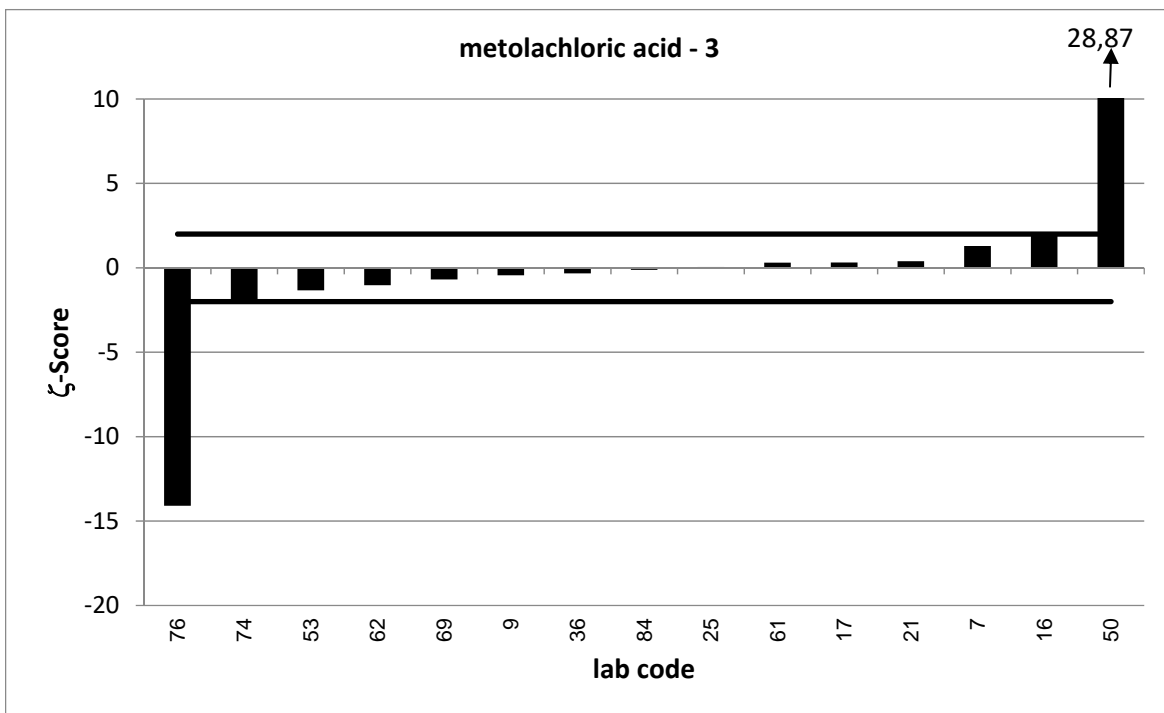
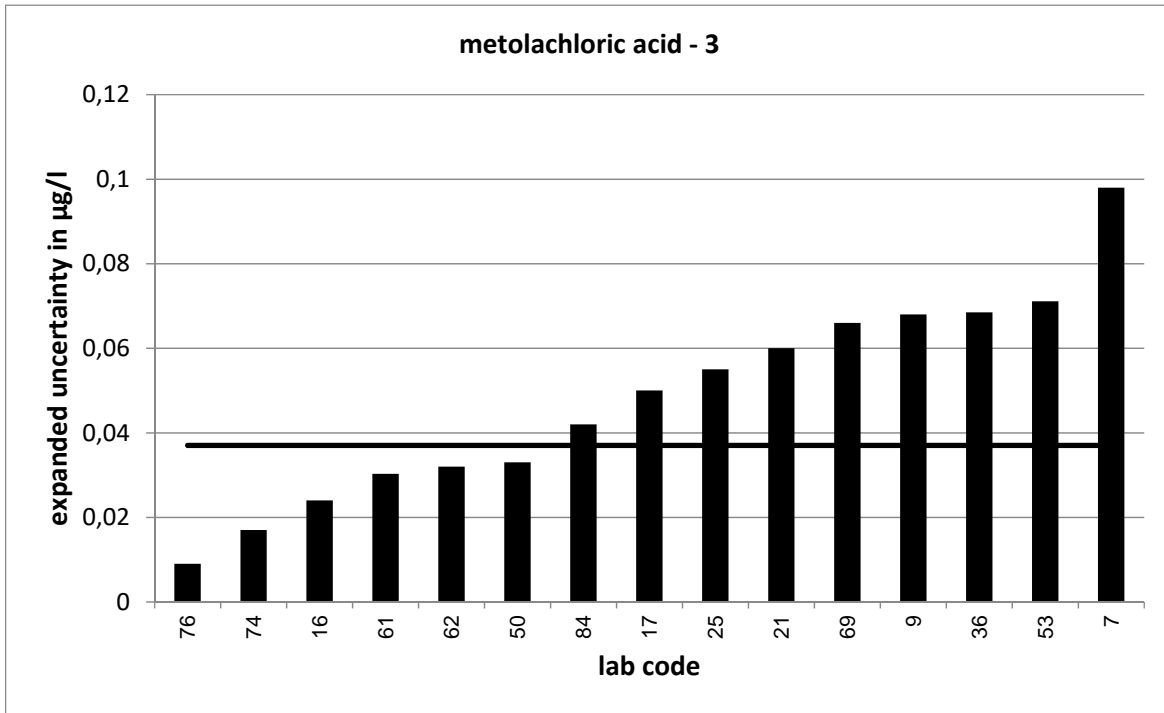


PT 4/20 - TW O5		metolachloric acid - 3			
assigned value [ $\mu\text{g/l}$ ]*		0,2858 $\pm$ 0,0172			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,3751			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2085			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
7	0,35	0,098	1,3	1,4	s
9	0,27	0,068	-0,5	-0,4	s
10	0,35			1,4	s
11	0,262			-0,6	s
15	0,358			1,6	s
16	0,314	0,024	1,9	0,6	s
17	0,294	0,05	0,3	0,2	s
19	0,284			0,0	s
20	0,265			-0,5	s
21	0,298	0,06	0,4	0,3	s
25	0,287	0,055	0,0	0,0	s
27	0,334			1,1	s
33	0,294			0,2	s
36	0,274	0,069	-0,3	-0,3	s
41	0,32			0,8	s
47	0,27			-0,4	s
48	0,24			-1,2	s
50	0,823	0,033	28,9	12,0	u
51	0,303			0,4	s
53	0,237	0,071	-1,3	-1,3	s
56	0,253			-0,8	s
59	0,293			0,2	s
60	0,2668			-0,5	s
61	0,291	0,03	0,3	0,1	s
62	0,267	0,032	-1,0	-0,5	s
69	0,262	0,066	-0,7	-0,6	s
74	0,261	0,017	-2,1	-0,6	s
76	0,149	0,009	-14,1	-3,5	u
84	0,283	0,042	-0,1	-0,1	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



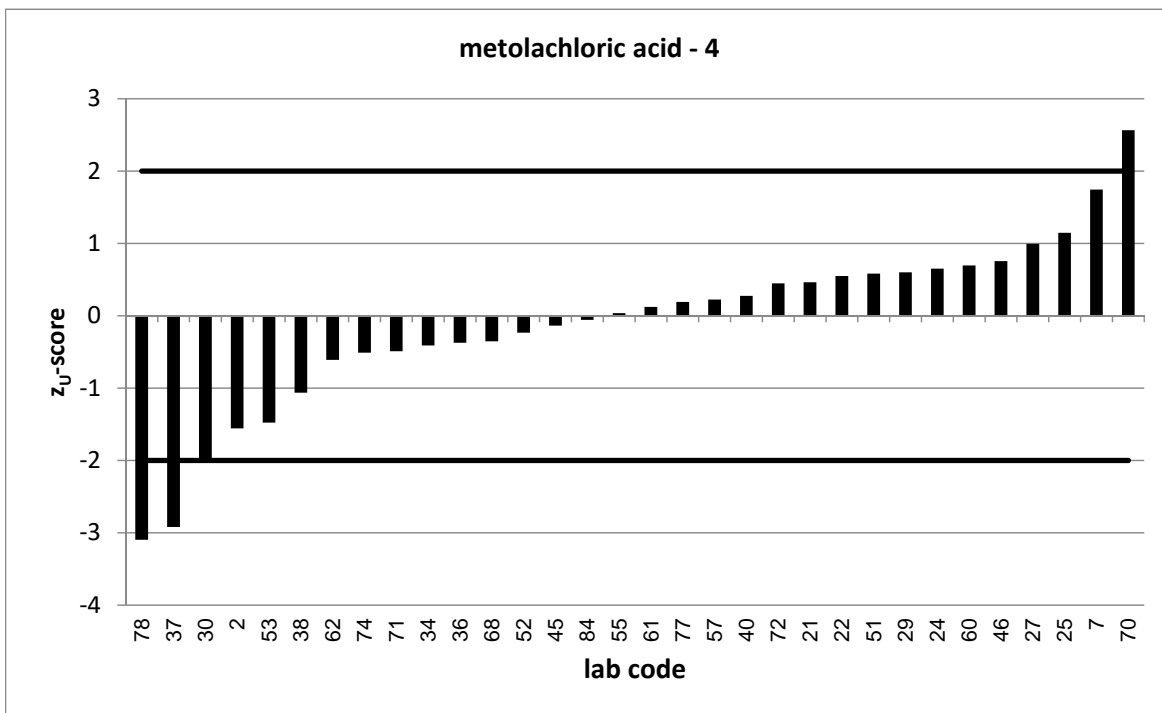
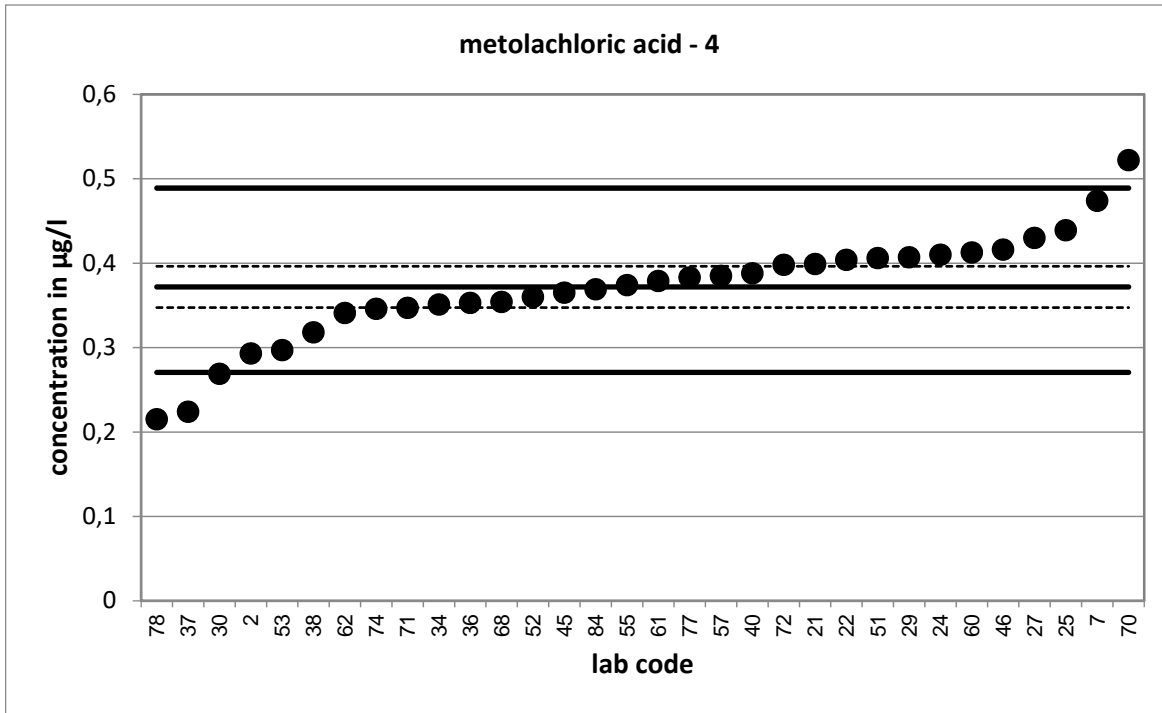


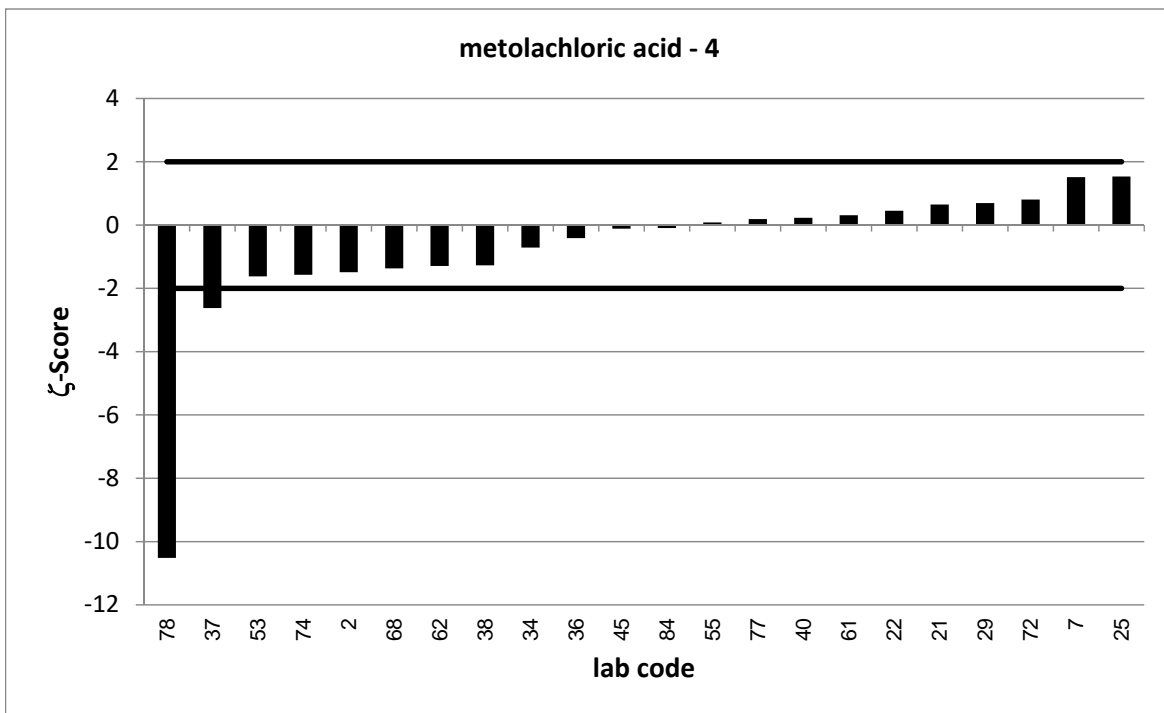
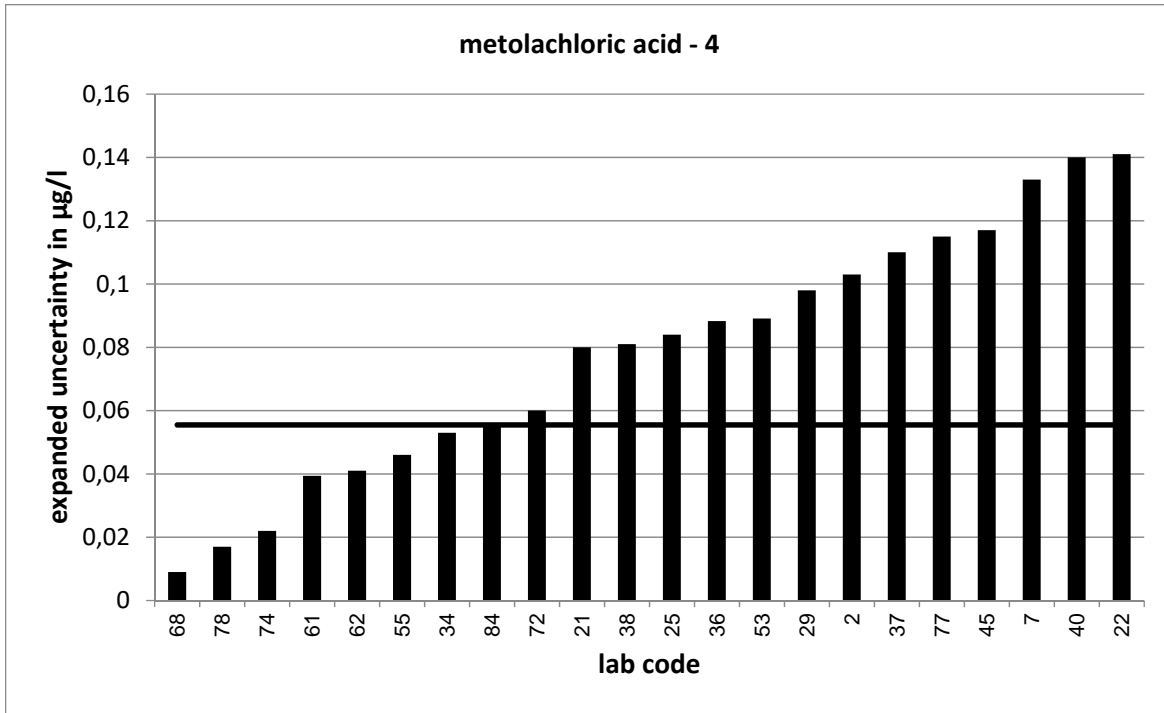


PT 4/20 - TW O5		metolachloric acid - 4			
assigned value [ $\mu\text{g/l}$ ]*		0,3719 $\pm$ 0,0245			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,489			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2706			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,293	0,103	-1,5	-1,6	s
7	0,474	0,133	1,5	1,7	s
21	0,399	0,08	0,6	0,5	s
22	0,404	0,141	0,4	0,5	s
24	0,41			0,7	s
25	0,439	0,084	1,5	1,1	s
27	0,43			1,0	s
29	0,407	0,098	0,7	0,6	s
30	0,269			-2,0	s
34	0,351	0,053	-0,7	-0,4	s
36	0,353	0,088	-0,4	-0,4	s
37	0,224	0,11	-2,6	-2,9	q
38	0,318	0,081	-1,3	-1,1	s
40	0,388	0,14	0,2	0,3	s
45	0,365	0,117	-0,1	-0,1	s
46	0,416			0,8	s
51	0,406			0,6	s
52	0,36			-0,2	s
53	0,297	0,089	-1,6	-1,5	s
55	0,374	0,046	0,1	0,0	s
57	0,385			0,2	s
60	0,4126			0,7	s
61	0,379	0,039	0,3	0,1	s
62	0,341	0,041	-1,3	-0,6	s
68	0,354	0,009	-1,4	-0,4	s
70	0,522			2,6	q
71	0,347			-0,5	s
72	0,398	0,06	0,8	0,4	s
74	0,346	0,022	-1,6	-0,5	s
77	0,383	0,115	0,2	0,2	s
78	0,215	0,017	-10,5	-3,1	u
84	0,369	0,055	-0,1	-0,1	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

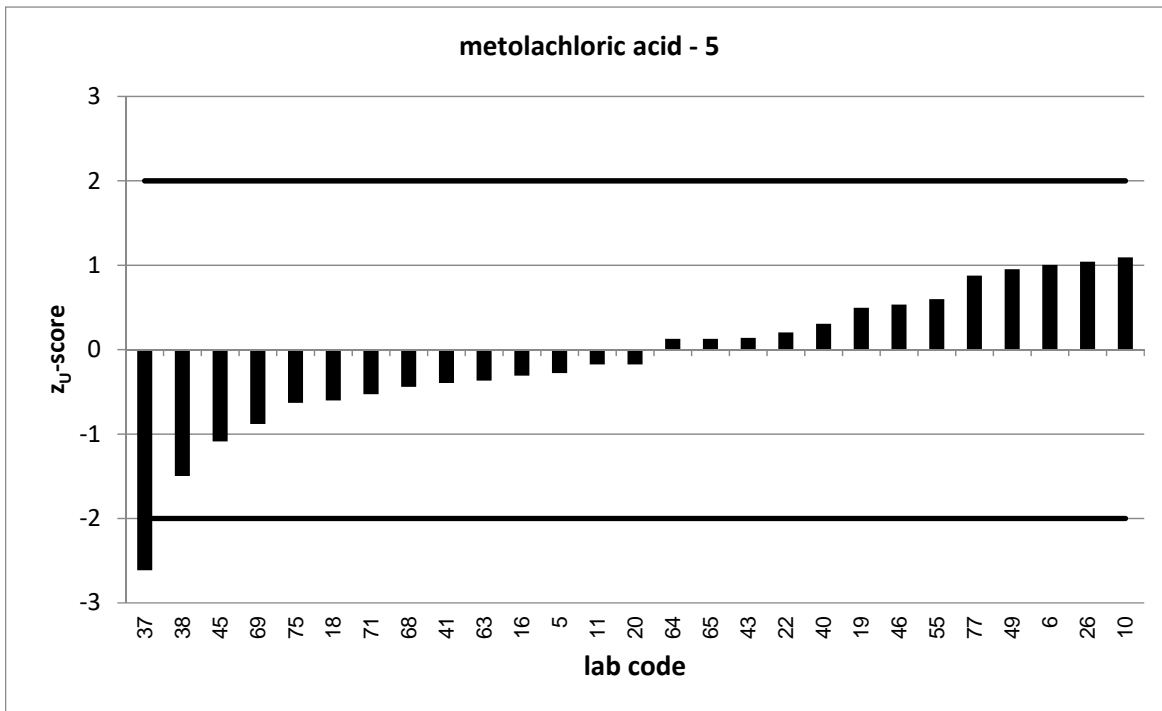
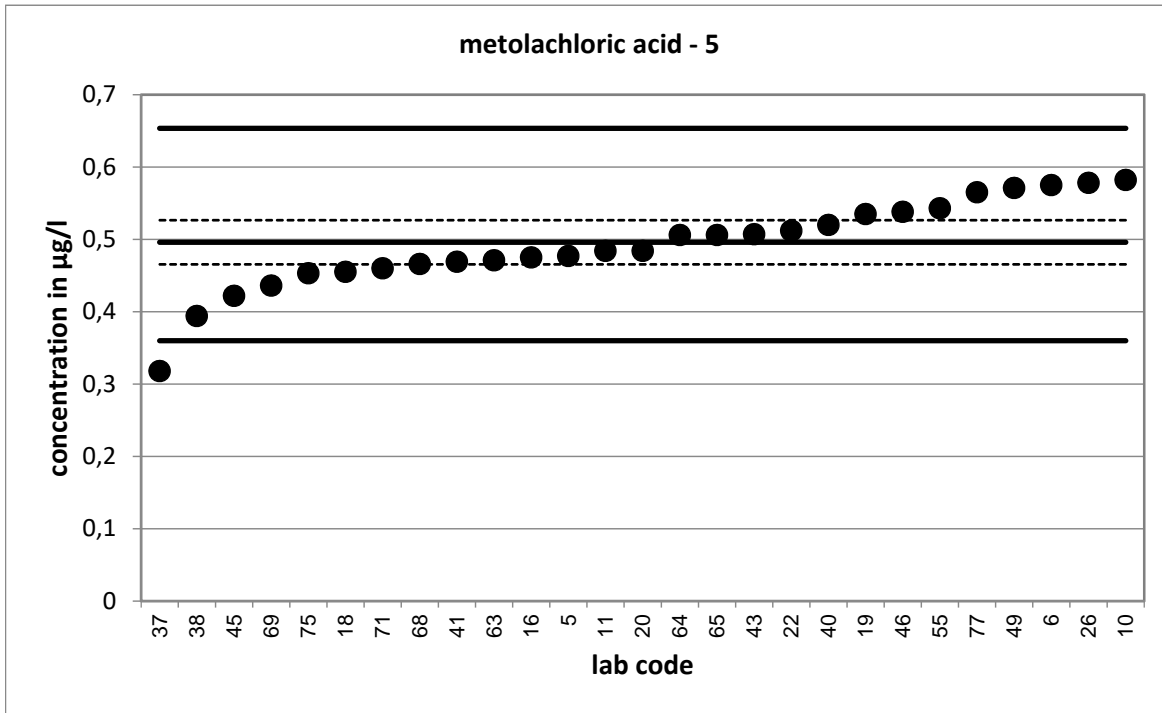


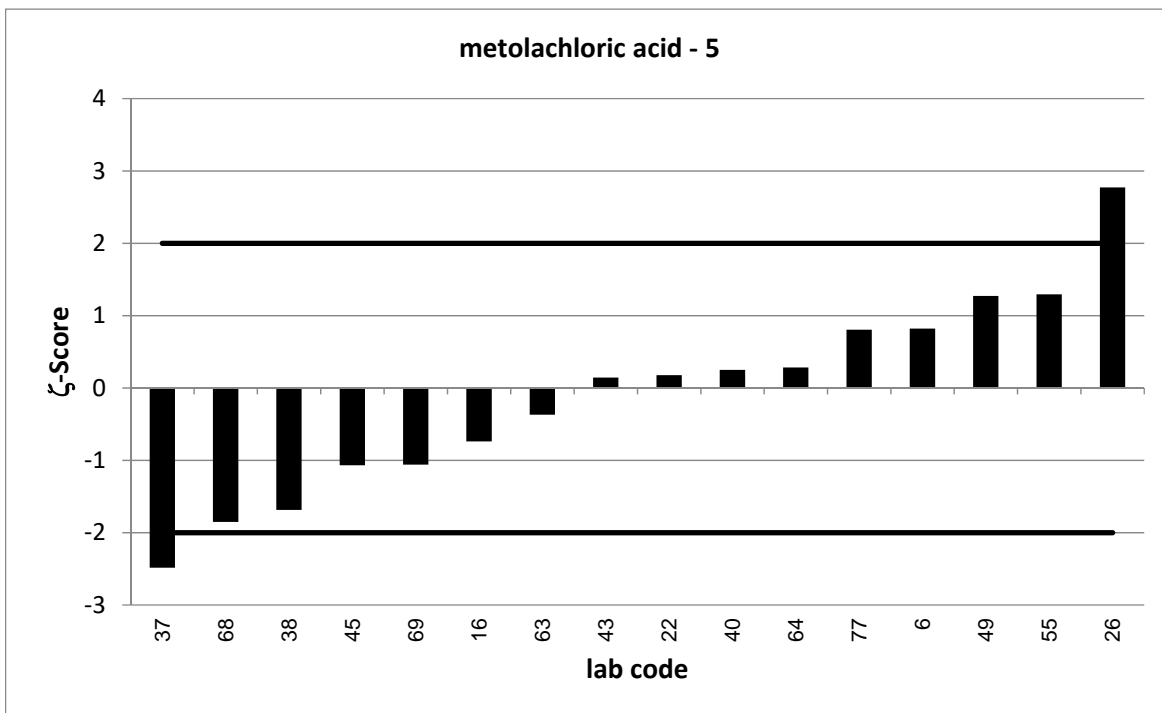
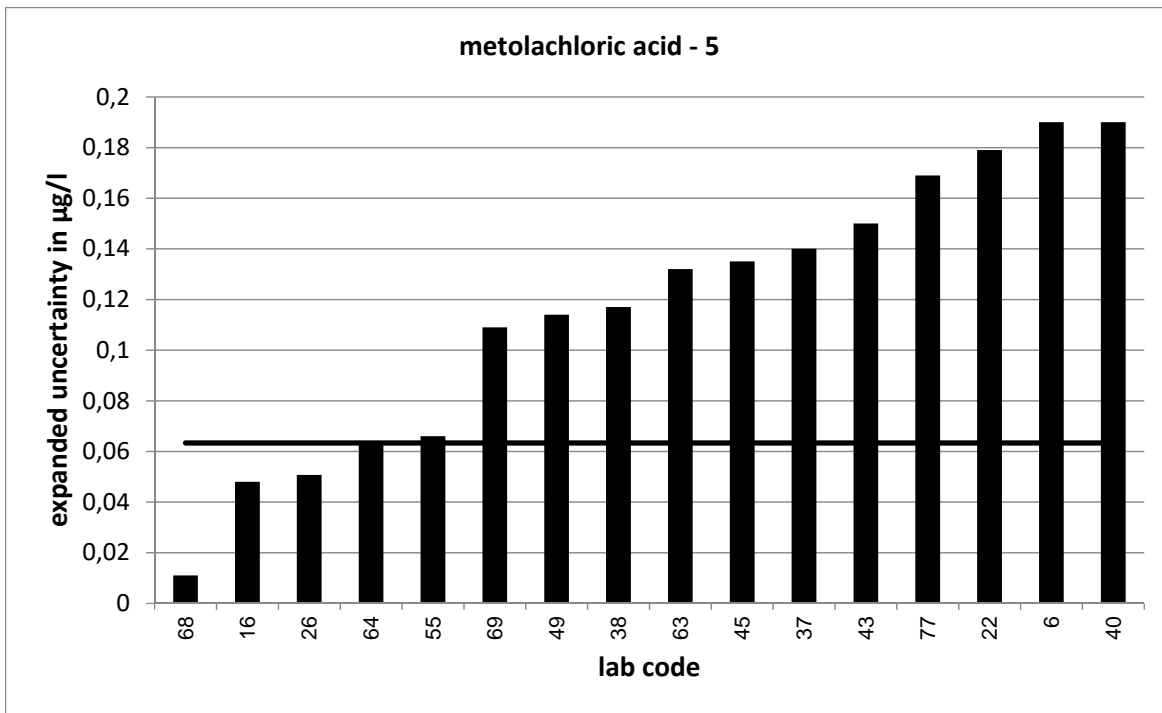


PT 4/20 - TW O5		metolachloric acid - 5			
assigned value [ $\mu\text{g/l}$ ]*		0,496 $\pm$ 0,0305			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,6535			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,3599			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
5	0,477			-0,3	s
6	0,575	0,19	0,8	1,0	s
10	0,582			1,1	s
11	0,484			-0,2	s
16	0,475	0,048	-0,7	-0,3	s
18	0,455			-0,6	s
19	0,535			0,5	s
20	0,484			-0,2	s
22	0,512	0,179	0,2	0,2	s
26	0,578	0,051	2,8	1,0	s
37	0,318	0,14	-2,5	-2,6	q
38	0,394	0,117	-1,7	-1,5	s
40	0,52	0,19	0,2	0,3	s
41	0,469			-0,4	s
43	0,507	0,15	0,1	0,1	s
45	0,422	0,135	-1,1	-1,1	s
46	0,538			0,5	s
49	0,571	0,114	1,3	1,0	s
55	0,543	0,066	1,3	0,6	s
63	0,471	0,132	-0,4	-0,4	s
64	0,506	0,064	0,3	0,1	s
65	0,506			0,1	s
68	0,466	0,011	-1,9	-0,4	s
69	0,436	0,109	-1,1	-0,9	s
71	0,46			-0,5	s
75	0,453			-0,6	s
77	0,565	0,169	0,8	0,9	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

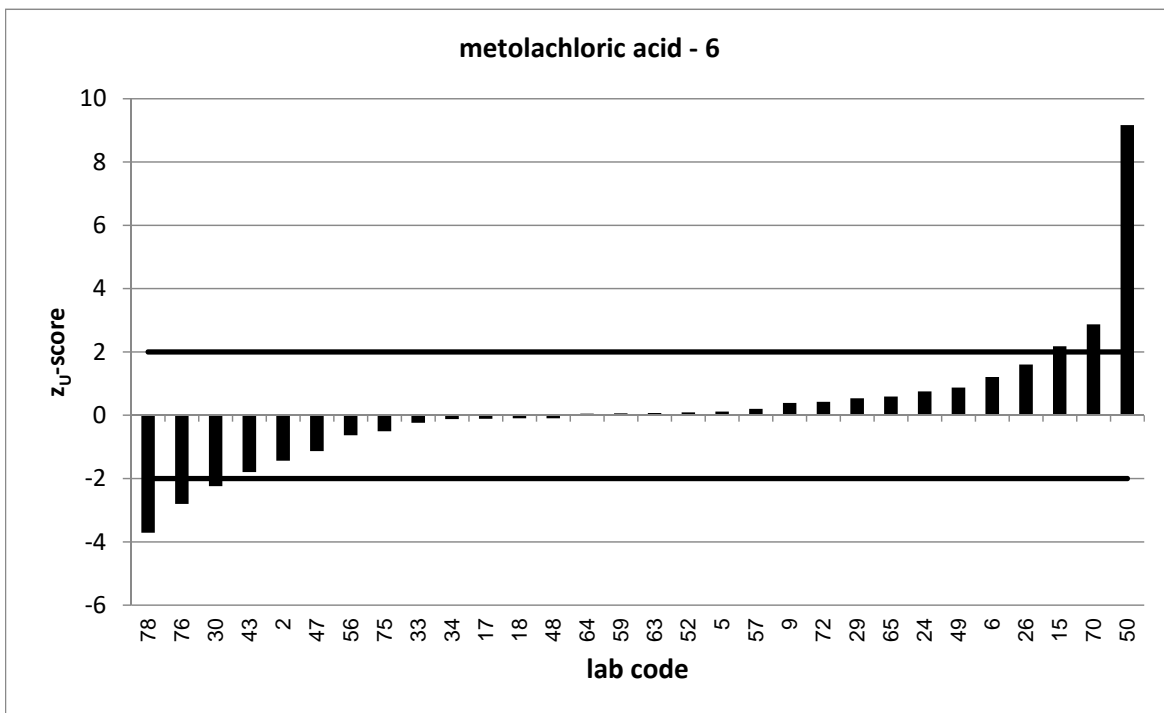
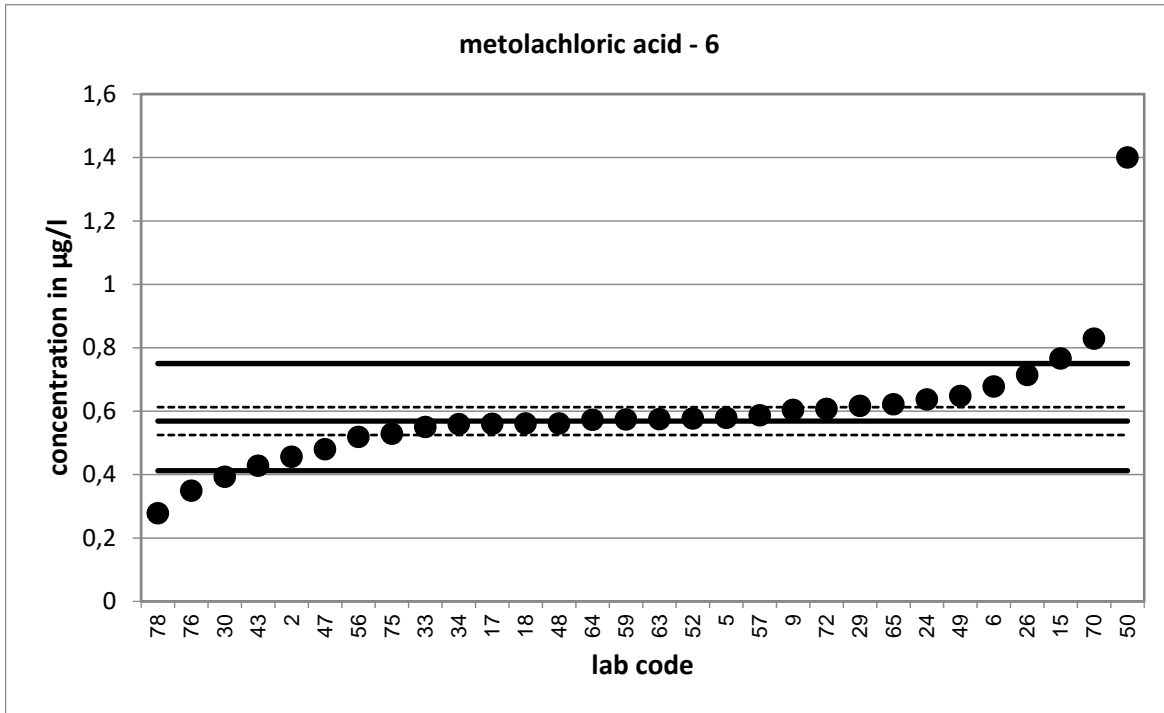




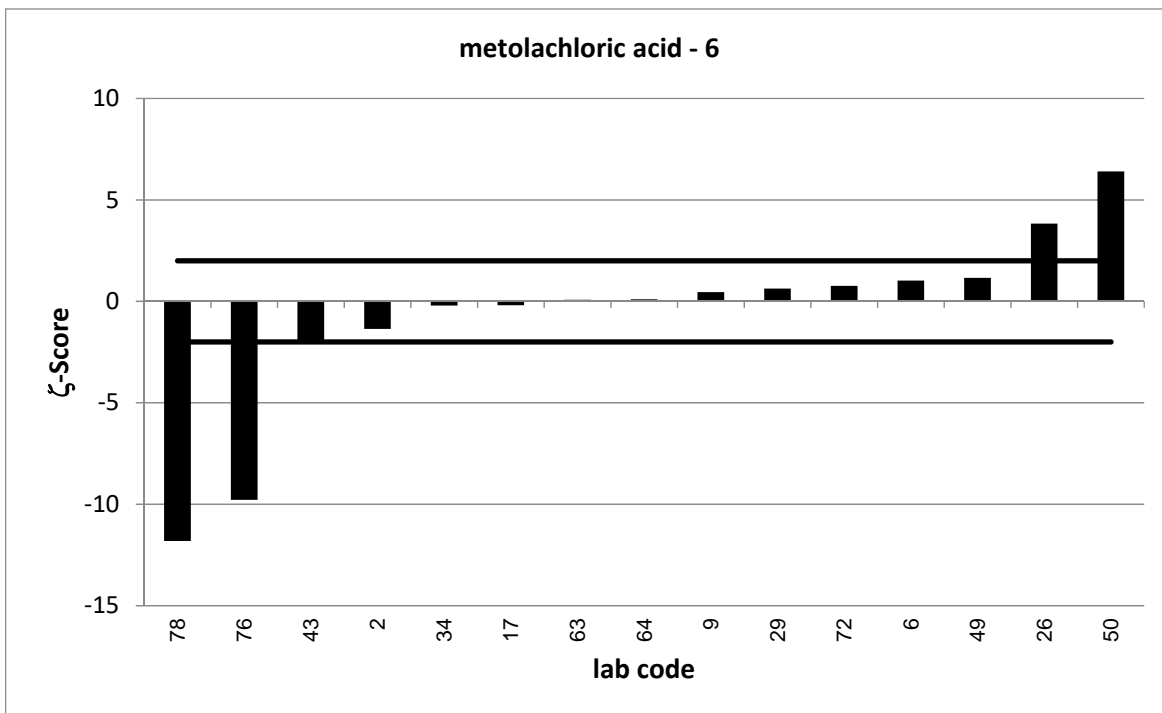
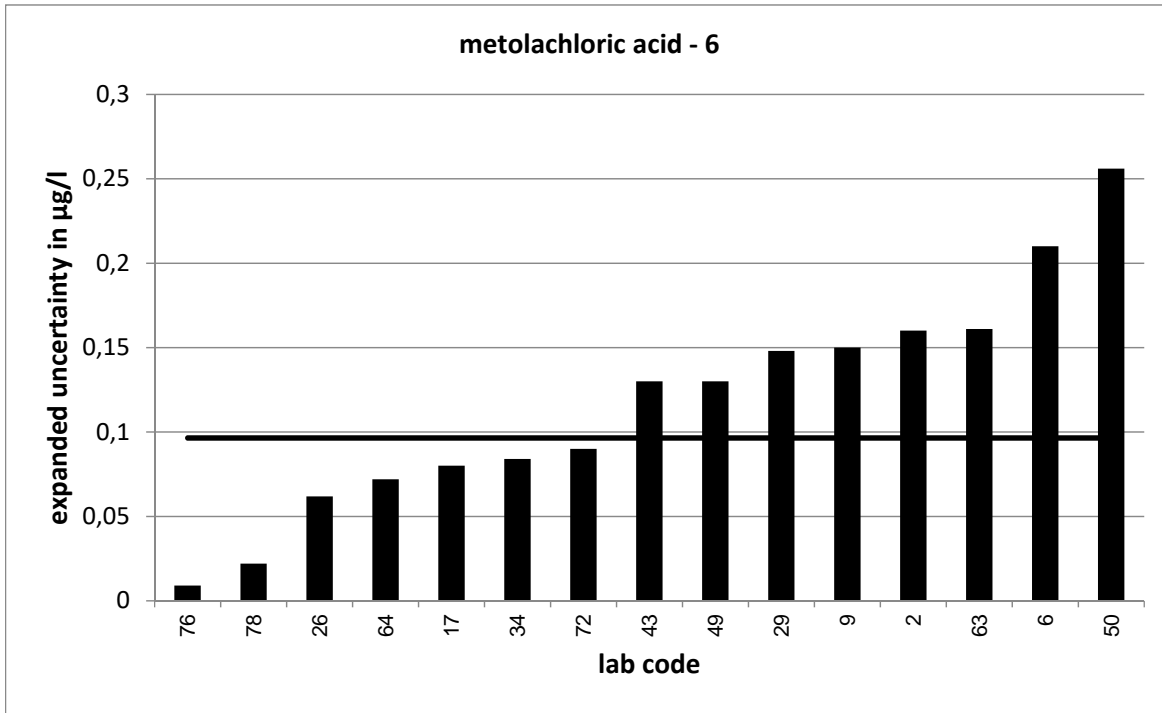
PT 4/20 - TW O5		metolachloric acid - 6			
assigned value [ $\mu\text{g/l}$ ]*		0,5688 $\pm$ 0,044			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,7502			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,4121			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,456	0,16	-1,4	-1,4	s
5	0,579			0,1	s
6	0,678	0,21	1,0	1,2	s
9	0,604	0,15	0,5	0,4	s
15	0,766			2,2	q
17	0,56	0,08	-0,2	-0,1	s
18	0,561			-0,1	s
24	0,637			0,8	s
26	0,714	0,062	3,8	1,6	s
29	0,617	0,148	0,6	0,5	s
30	0,393			-2,2	q
33	0,55			-0,2	s
34	0,559	0,084	-0,2	-0,1	s
43	0,428	0,13	-2,1	-1,8	s
47	0,48			-1,1	s
48	0,561			-0,1	s
49	0,648	0,13	1,2	0,9	s
50	1,4	0,256	6,4	9,2	u
52	0,577			0,1	s
56	0,519			-0,6	s
57	0,587			0,2	s
59	0,574			0,1	s
63	0,575	0,161	0,1	0,1	s
64	0,573	0,072	0,1	0,0	s
65	0,622			0,6	s
70	0,829			2,9	q
72	0,607	0,09	0,8	0,4	s
75	0,529			-0,5	s
76	0,349	0,009	-9,8	-2,8	q
78	0,278	0,022	-11,8	-3,7	u

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



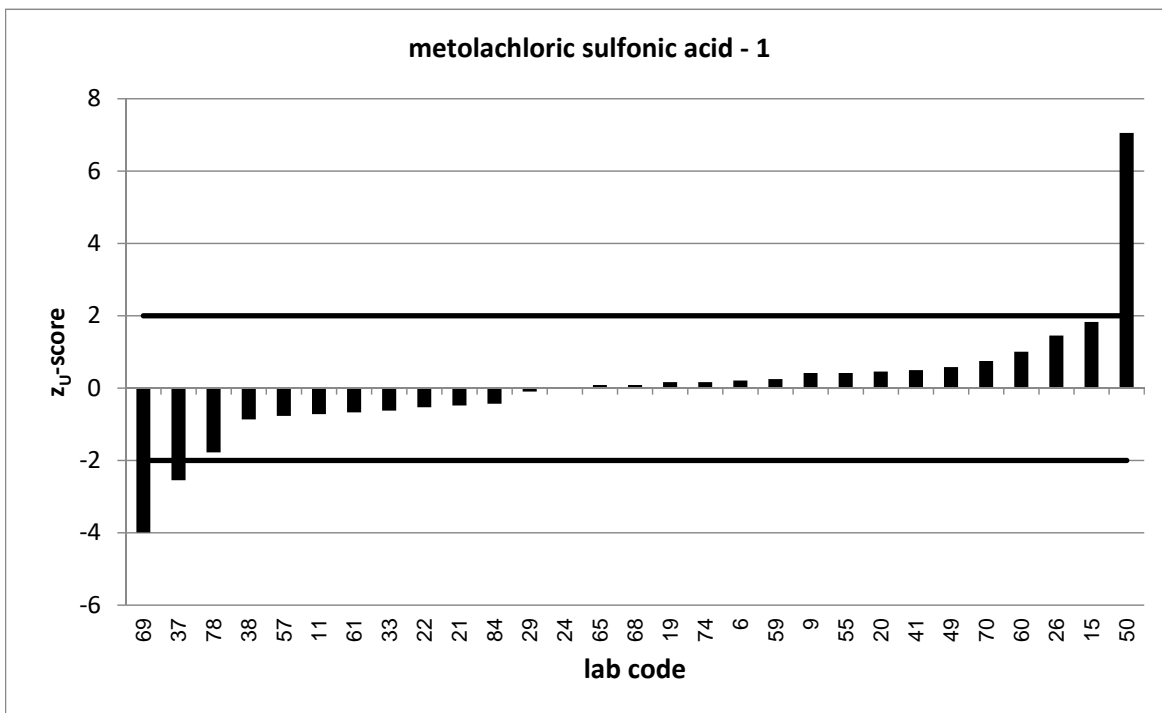
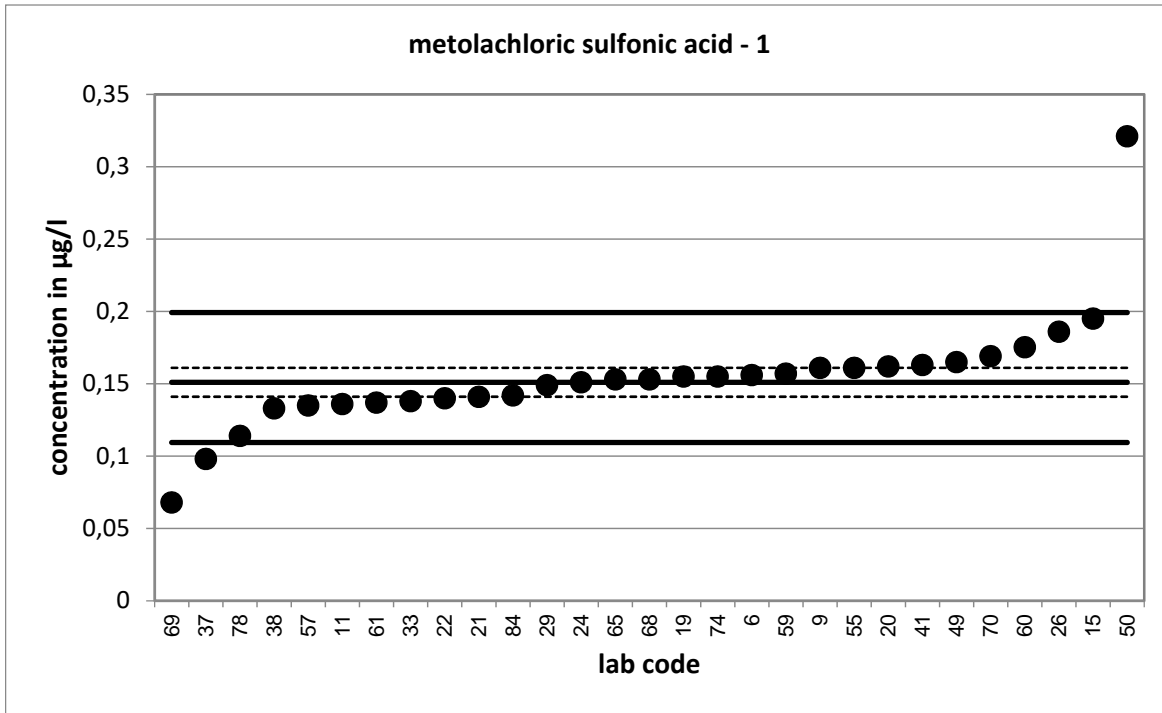


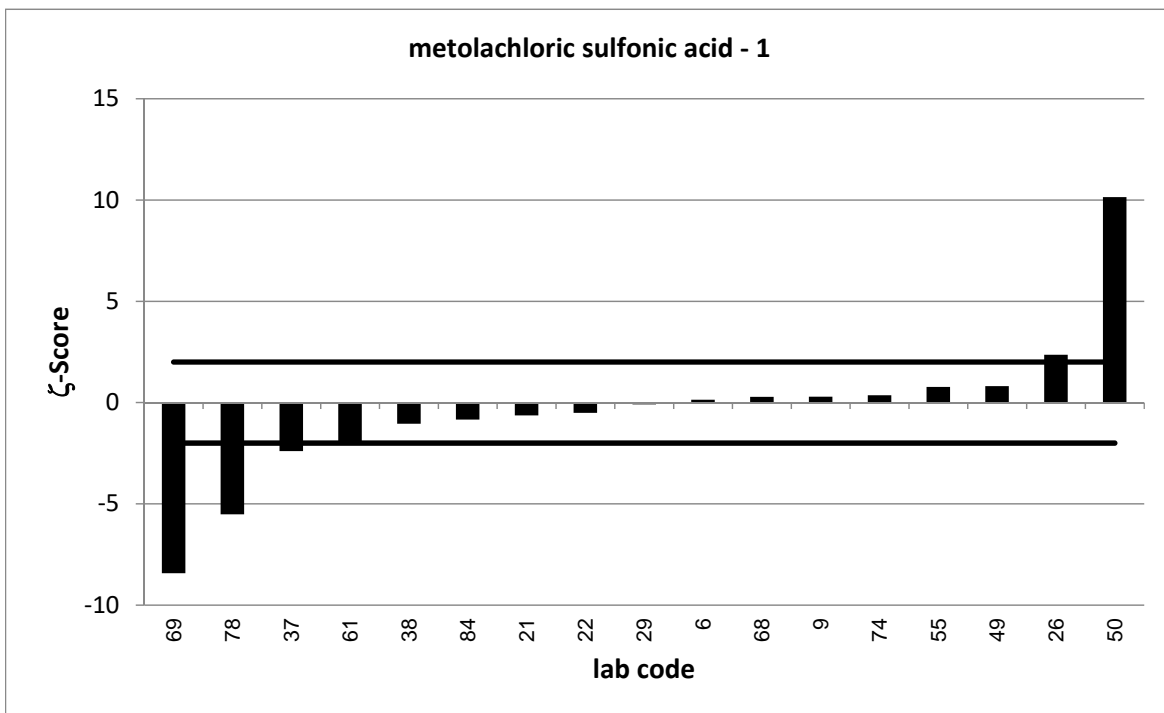
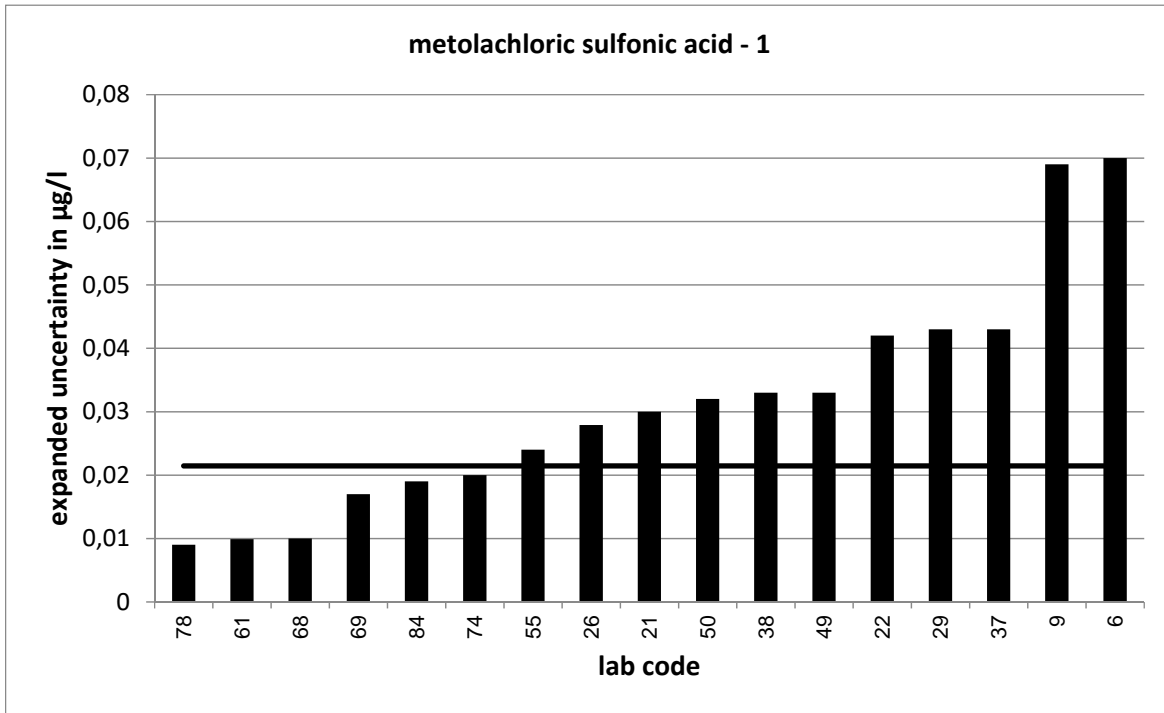


PT 4/20 - TW O5		metolachloric sulfonic acid - 1			
assigned value [ $\mu\text{g/l}$ ]*		0,151 $\pm$ 0,01			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,1992			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,1094			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
6	0,156	0,07	0,1	0,2	s
9	0,161	0,069	0,3	0,4	s
11	0,136			-0,7	s
15	0,195			1,8	s
19	0,155			0,2	s
20	0,162			0,5	s
21	0,141	0,03	-0,6	-0,5	s
22	0,14	0,042	-0,5	-0,5	s
24	0,151			0,0	s
26	0,186	0,028	2,4	1,5	s
29	0,149	0,043	-0,1	-0,1	s
33	0,138			-0,6	s
37	0,098	0,043	-2,4	-2,5	q
38	0,133	0,033	-1,0	-0,9	s
41	0,163			0,5	s
49	0,165	0,033	0,8	0,6	s
50	0,321	0,032	10,1	7,1	u
55	0,161	0,024	0,8	0,4	s
57	0,135			-0,8	s
59	0,157			0,2	s
60	0,1752			1,0	s
61	0,137	0,01	-2,0	-0,7	s
65	0,153			0,1	s
68	0,153	0,01	0,3	0,1	s
69	0,068	0,017	-8,4	-4,0	u
70	0,169			0,7	s
74	0,155	0,02	0,4	0,2	s
78	0,114	0,009	-5,5	-1,8	s
84	0,142	0,019	-0,8	-0,4	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

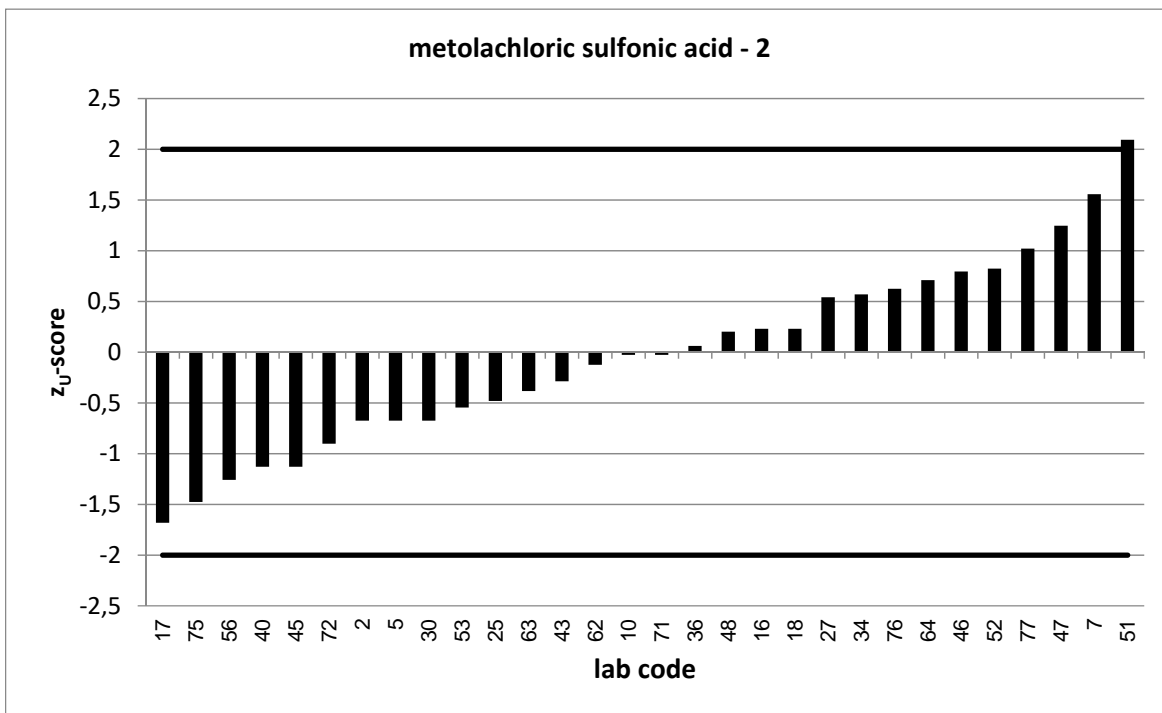
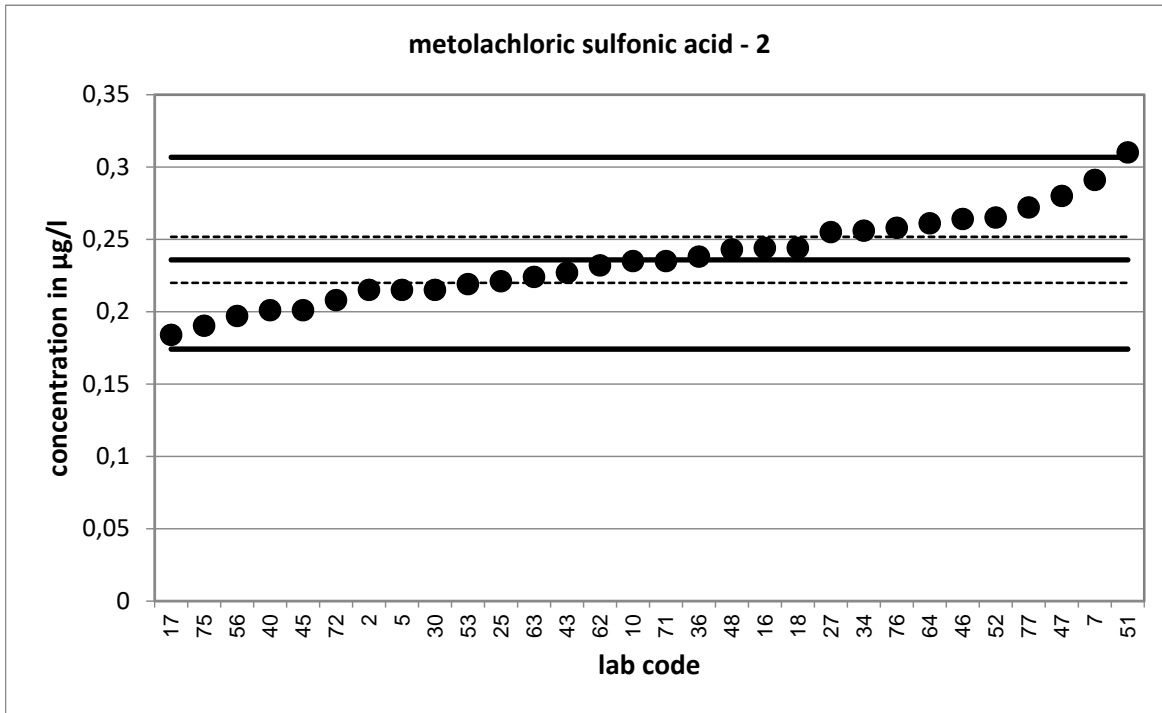


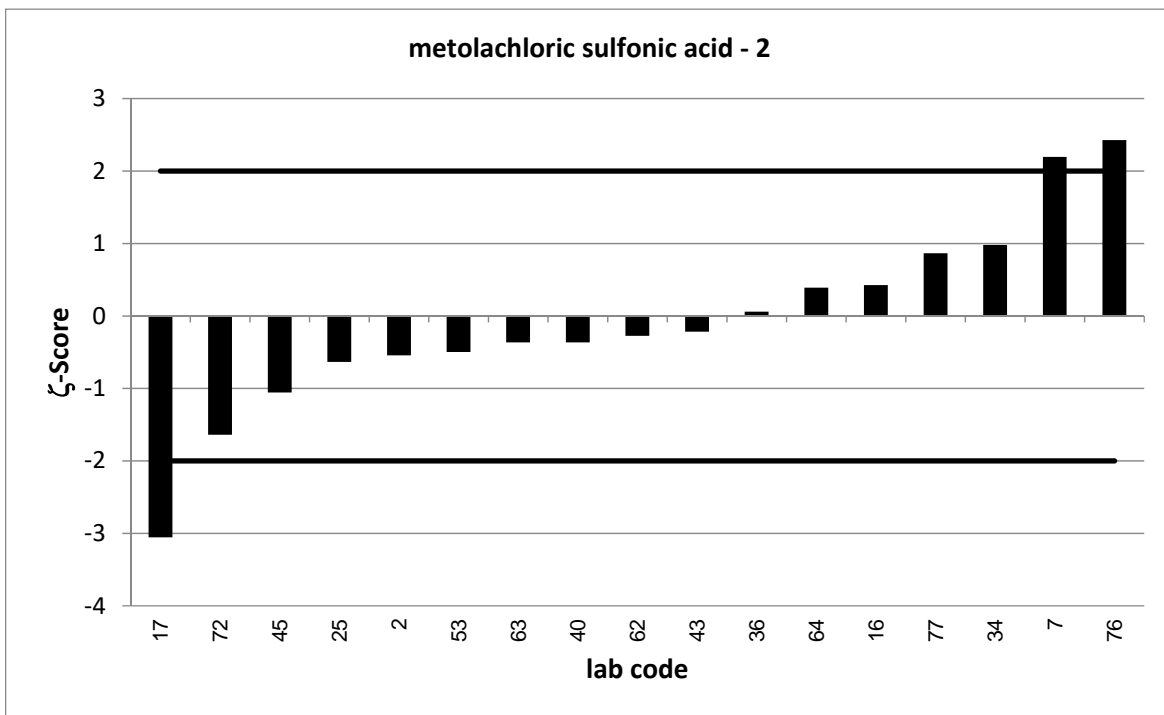
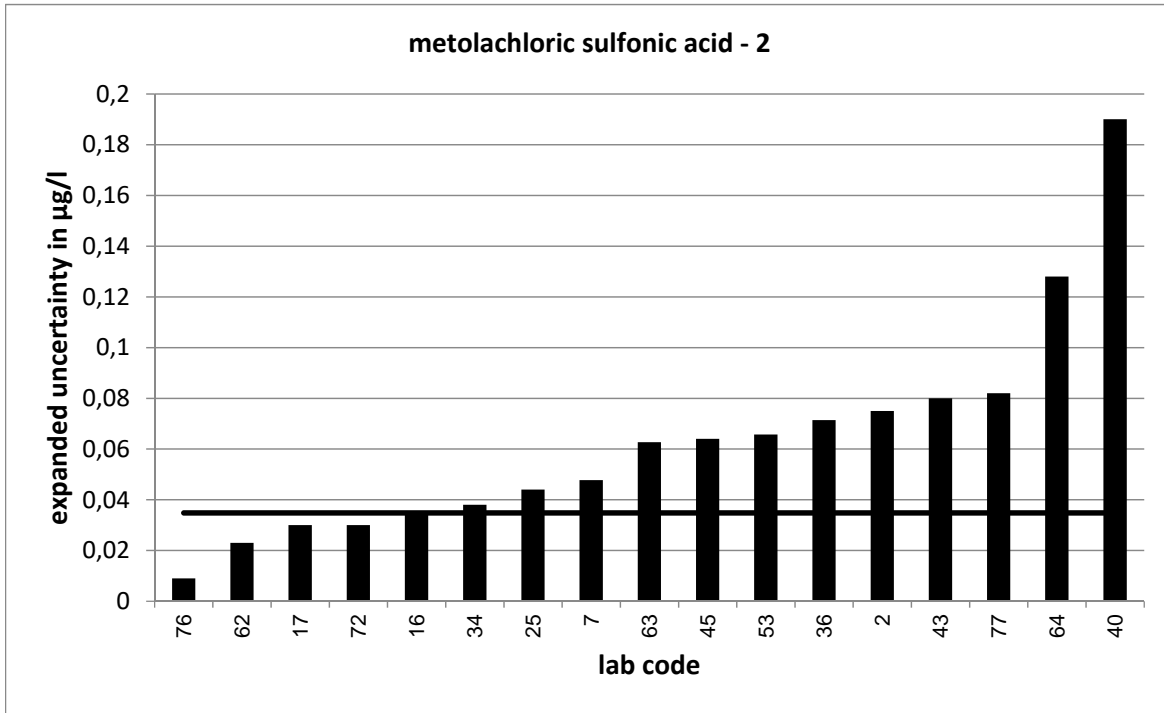


PT 4/20 - TW O5		metolachloric sulfonic acid - 2			
assigned value [ $\mu\text{g/l}$ ]*		0,2358 $\pm$ 0,0159			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,3067			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,1742			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,215	0,075	-0,5	-0,7	s
5	0,215			-0,7	s
7	0,291	0,048	2,2	1,6	s
10	0,235			0,0	s
16	0,244	0,035	0,4	0,2	s
17	0,184	0,03	-3,1	-1,7	s
18	0,244			0,2	s
25	0,221	0,044	-0,6	-0,5	s
27	0,255			0,5	s
30	0,215			-0,7	s
34	0,256	0,038	1,0	0,6	s
36	0,238	0,071	0,1	0,1	s
40	0,201	0,19	-0,4	-1,1	s
43	0,227	0,08	-0,2	-0,3	s
45	0,201	0,064	-1,1	-1,1	s
46	0,264			0,8	s
47	0,28			1,2	s
48	0,243			0,2	s
51	0,31			2,1	q
52	0,265			0,8	s
53	0,219	0,066	-0,5	-0,5	s
56	0,197			-1,3	s
62	0,232	0,023	-0,3	-0,1	s
63	0,224	0,063	-0,4	-0,4	s
64	0,261	0,128	0,4	0,7	s
71	0,235			0,0	s
72	0,208	0,03	-1,6	-0,9	s
75	0,1903			-1,5	s
76	0,258	0,009	2,4	0,6	s
77	0,272	0,082	0,9	1,0	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



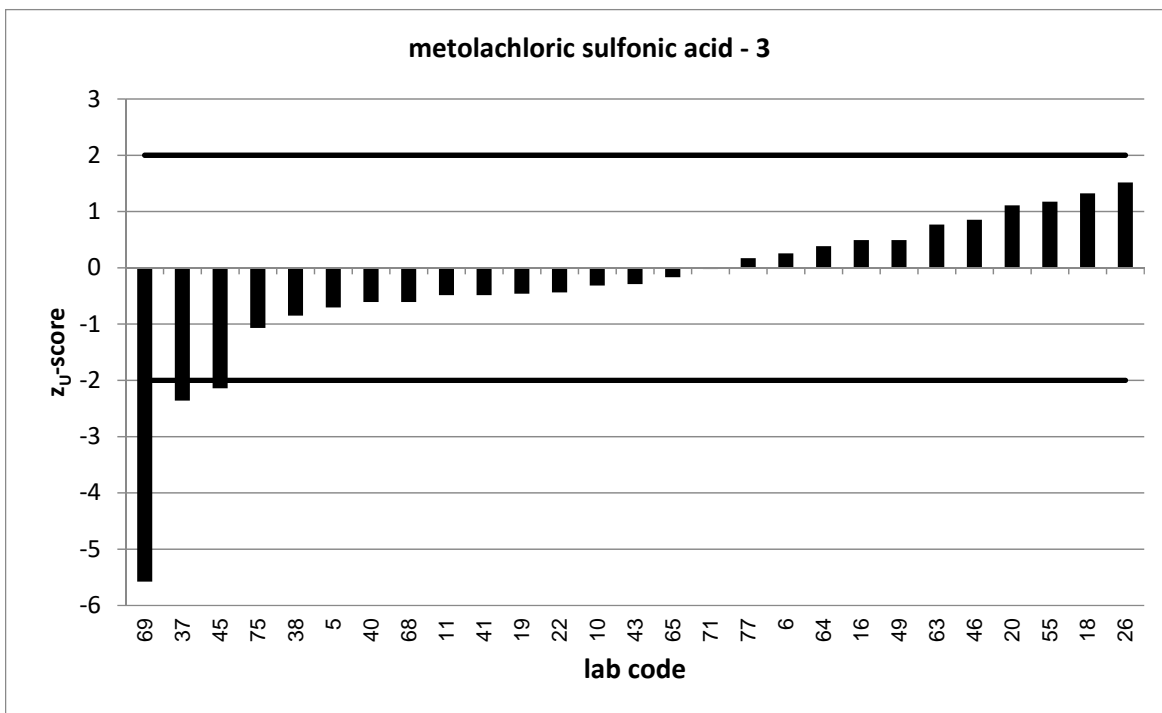
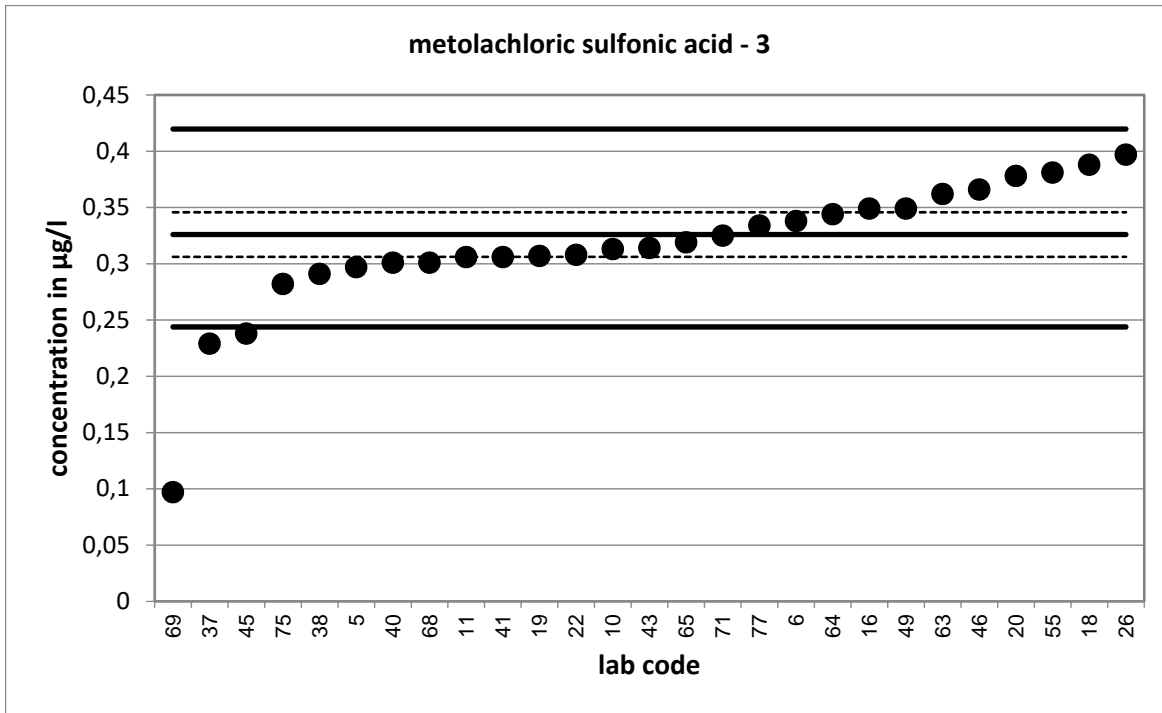


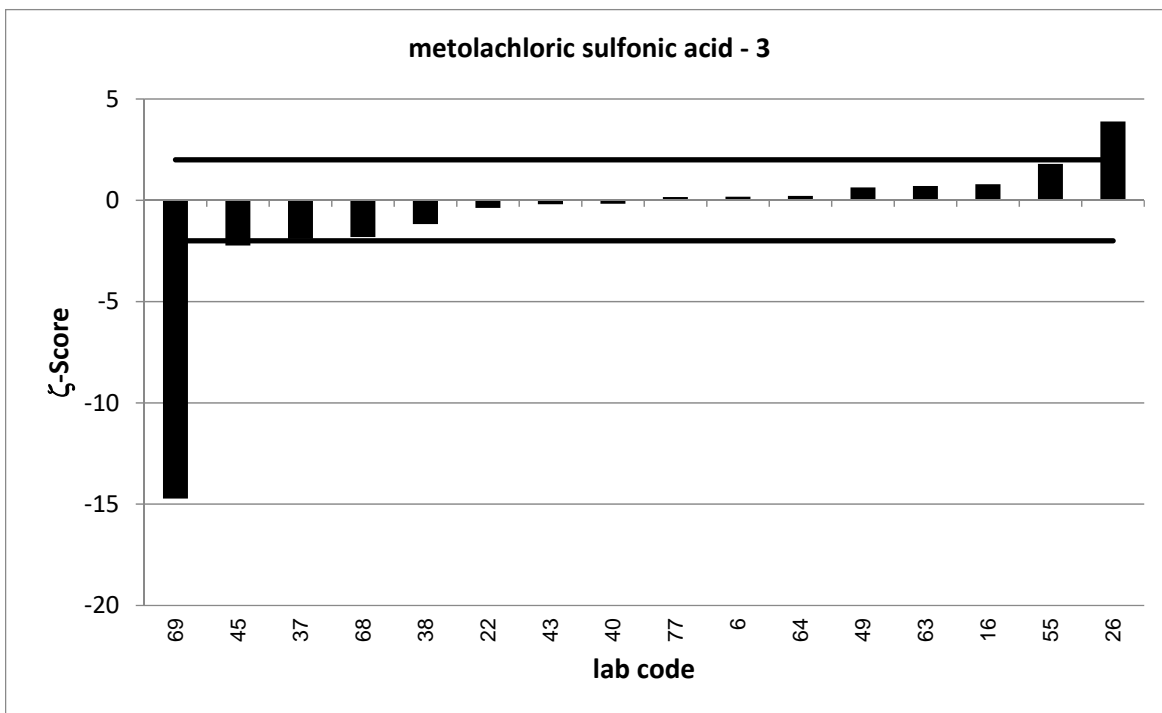
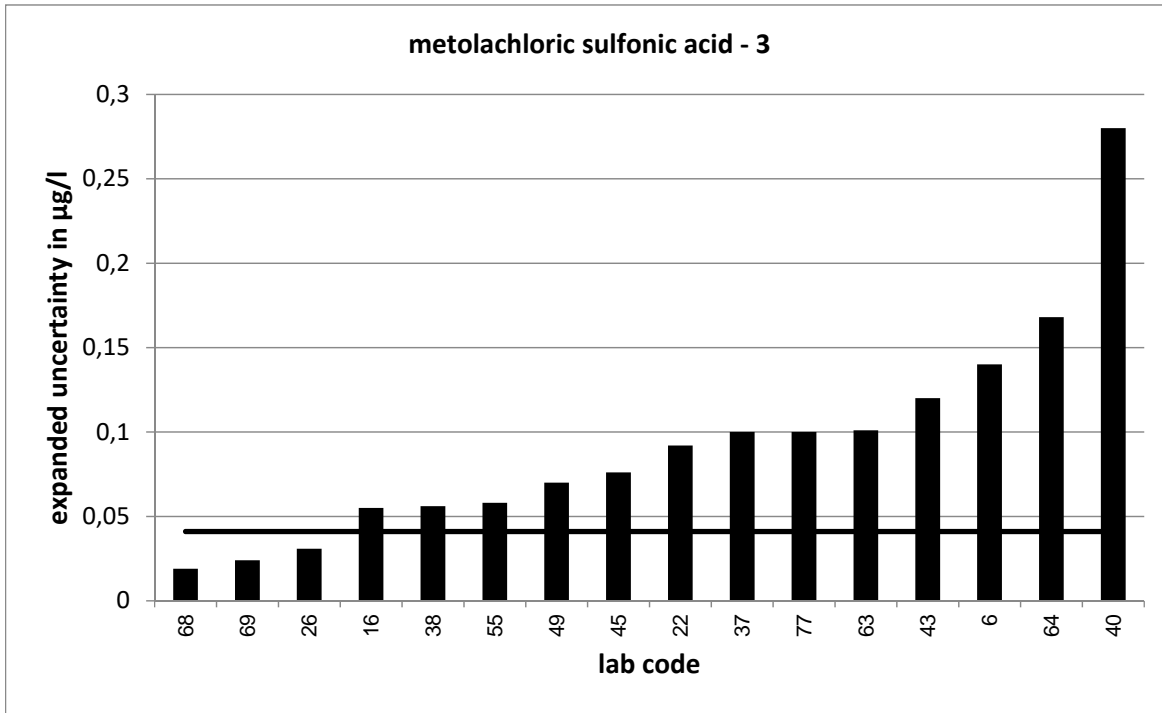
PT 4/20 - TW O5		metolachloric sulfonic acid - 3			
assigned value [ $\mu\text{g/l}$ ]*		0,326 $\pm$ 0,0198			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,4197			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2439			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
5	0,297			-0,7	s
6	0,338	0,14	0,2	0,3	s
10	0,313			-0,3	s
11	0,306			-0,5	s
16	0,349	0,055	0,8	0,5	s
18	0,388			1,3	s
19	0,307			-0,5	s
20	0,378			1,1	s
22	0,308	0,092	-0,4	-0,4	s
26	0,397	0,031	3,9	1,5	s
37	0,229	0,1	-1,9	-2,4	q
38	0,291	0,056	-1,2	-0,9	s
40	0,301	0,28	-0,2	-0,6	s
41	0,306			-0,5	s
43	0,314	0,12	-0,2	-0,3	s
45	0,238	0,076	-2,2	-2,1	q
46	0,366			0,9	s
49	0,349	0,07	0,6	0,5	s
55	0,381	0,058	1,8	1,2	s
63	0,362	0,101	0,7	0,8	s
64	0,344	0,168	0,2	0,4	s
65	0,319			-0,2	s
68	0,301	0,019	-1,8	-0,6	s
69	0,097	0,024	-14,7	-5,6	u
71	0,325			0,0	s
75	0,282			-1,1	s
77	0,334	0,1	0,2	0,2	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



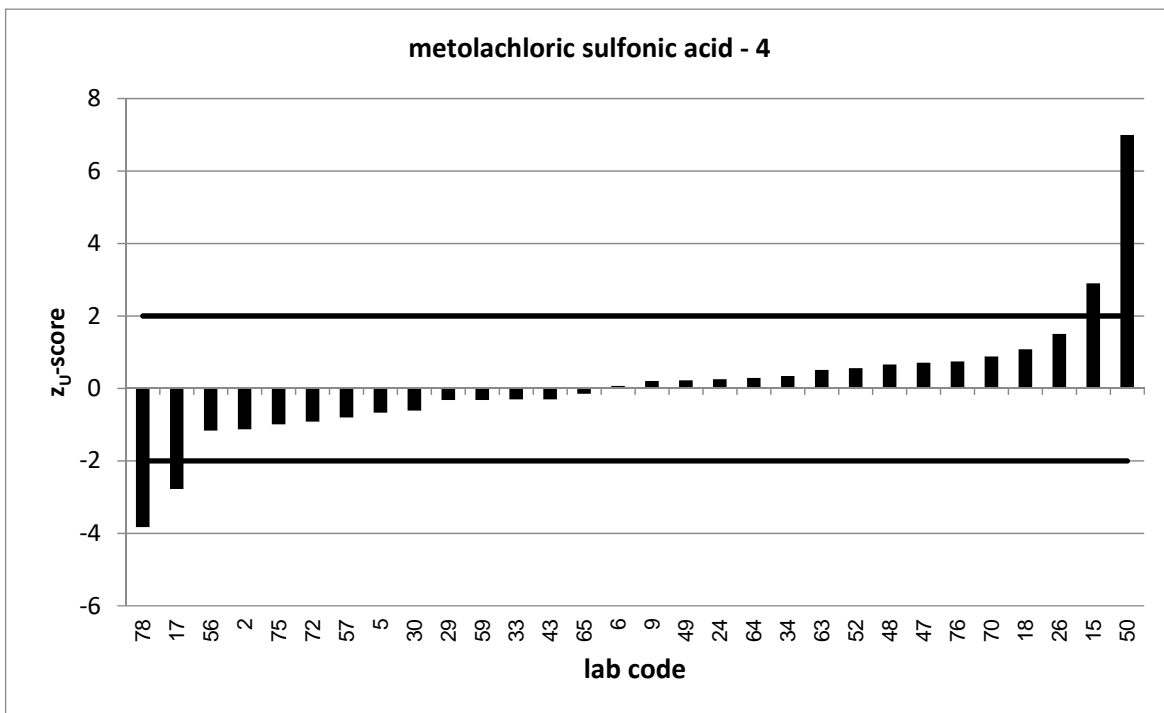
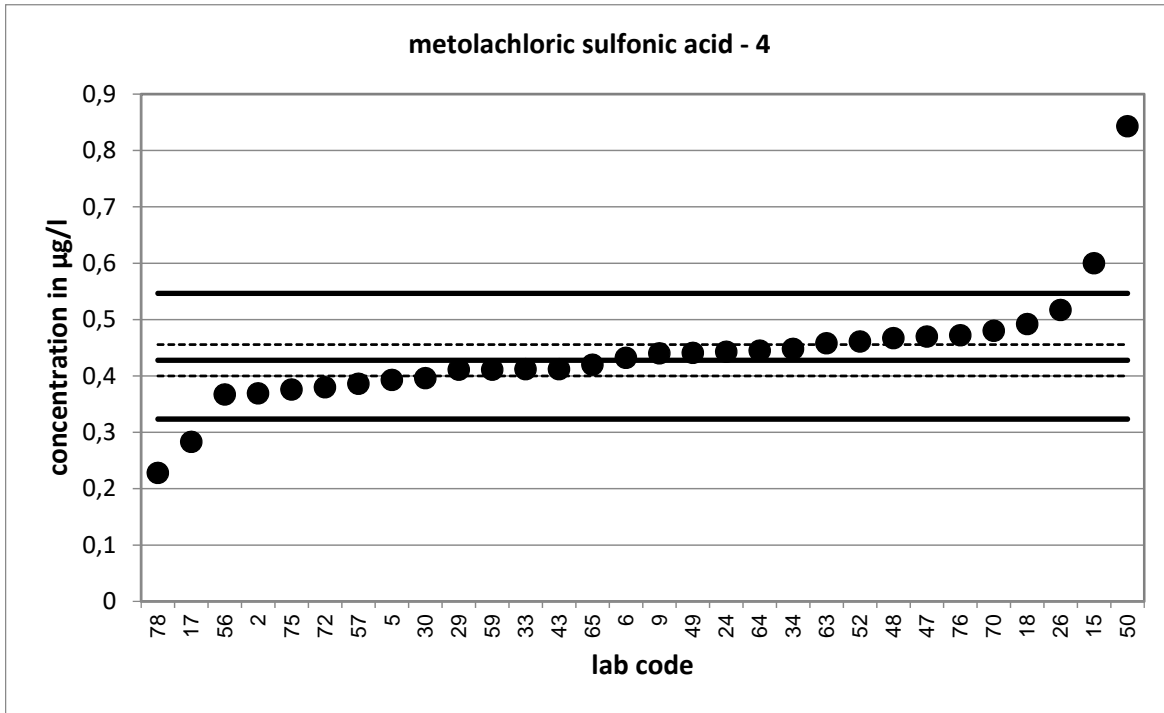


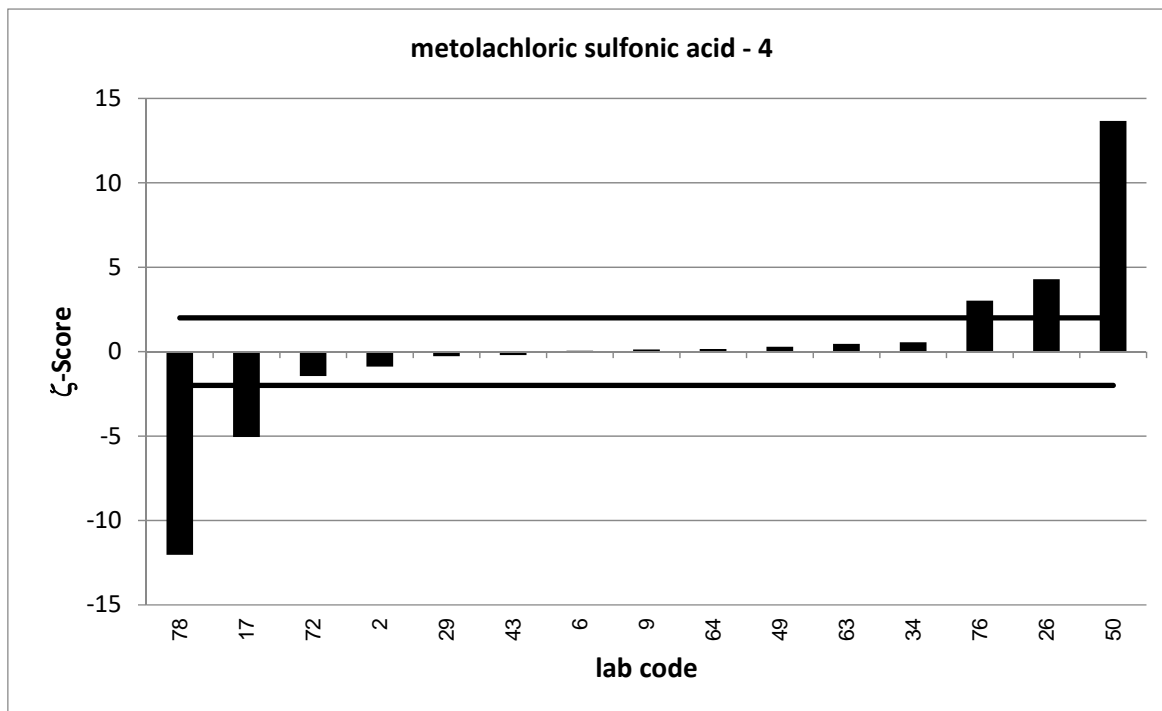
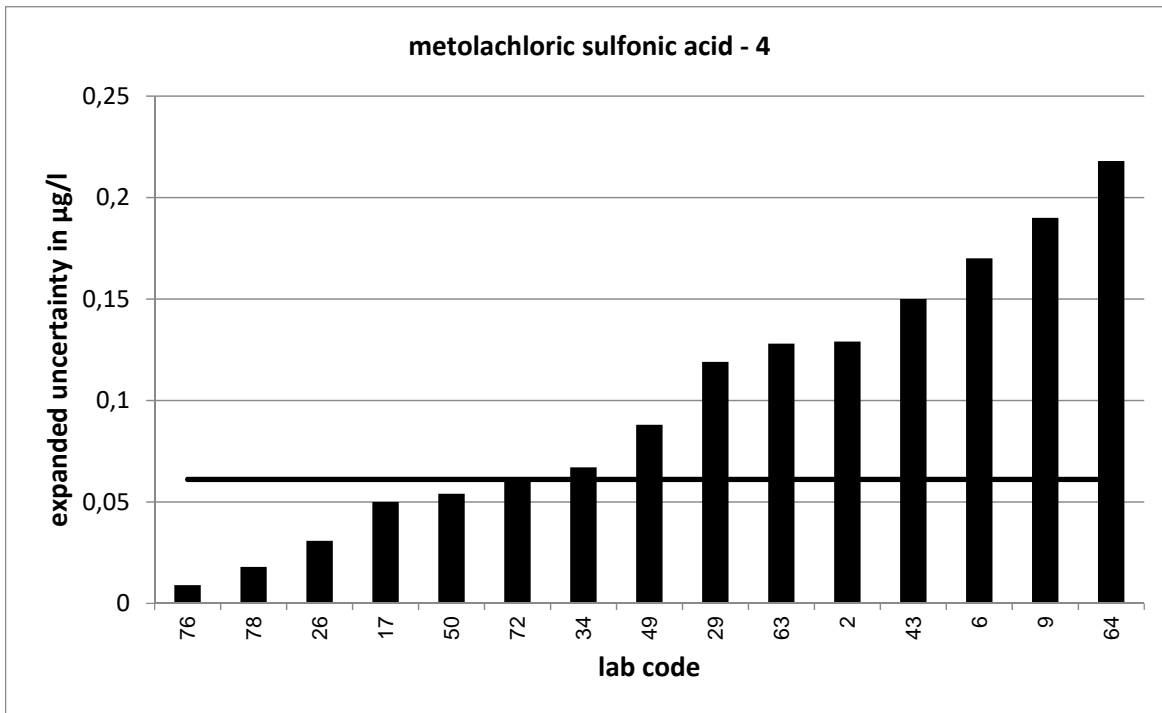


PT 4/20 - TW O5		metolachloric sulfonic acid - 4			
assigned value [ $\mu\text{g/l}$ ]*		0,4278 $\pm$ 0,0279			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,5466			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,3235			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,369	0,129	-0,9	-1,1	s
5	0,393			-0,7	s
6	0,432	0,17	0,0	0,1	s
9	0,44	0,19	0,1	0,2	s
15	0,6			2,9	q
17	0,283	0,05	-5,1	-2,8	q
18	0,492			1,1	s
24	0,443			0,3	s
26	0,517	0,031	4,3	1,5	s
29	0,411	0,119	-0,3	-0,3	s
30	0,396			-0,6	s
33	0,412			-0,3	s
34	0,448	0,067	0,6	0,3	s
43	0,412	0,15	-0,2	-0,3	s
47	0,47			0,7	s
48	0,467			0,7	s
49	0,441	0,088	0,3	0,2	s
50	0,843	0,054	13,7	7,0	u
52	0,461			0,6	s
56	0,367			-1,2	s
57	0,386			-0,8	s
59	0,411			-0,3	s
63	0,458	0,128	0,5	0,5	s
64	0,445	0,218	0,2	0,3	s
65	0,42			-0,2	s
70	0,48			0,9	s
72	0,38	0,06	-1,4	-0,9	s
75	0,376			-1,0	s
76	0,472	0,009	3,0	0,7	s
78	0,228	0,018	-12,0	-3,8	u

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

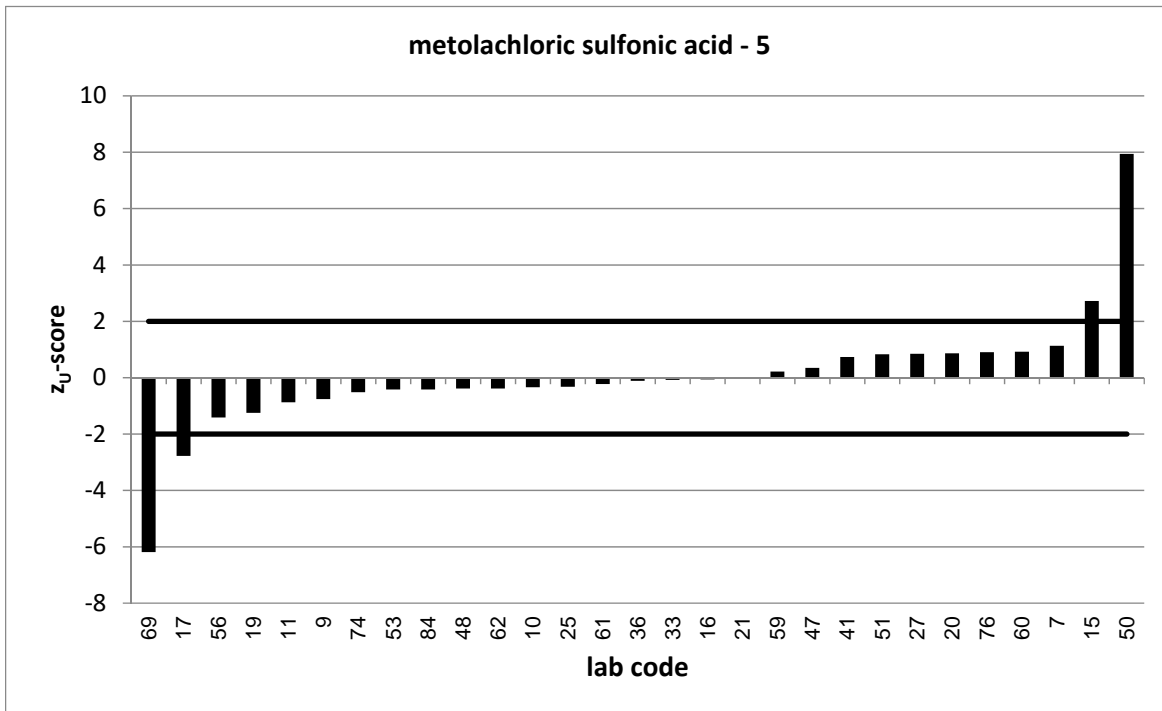
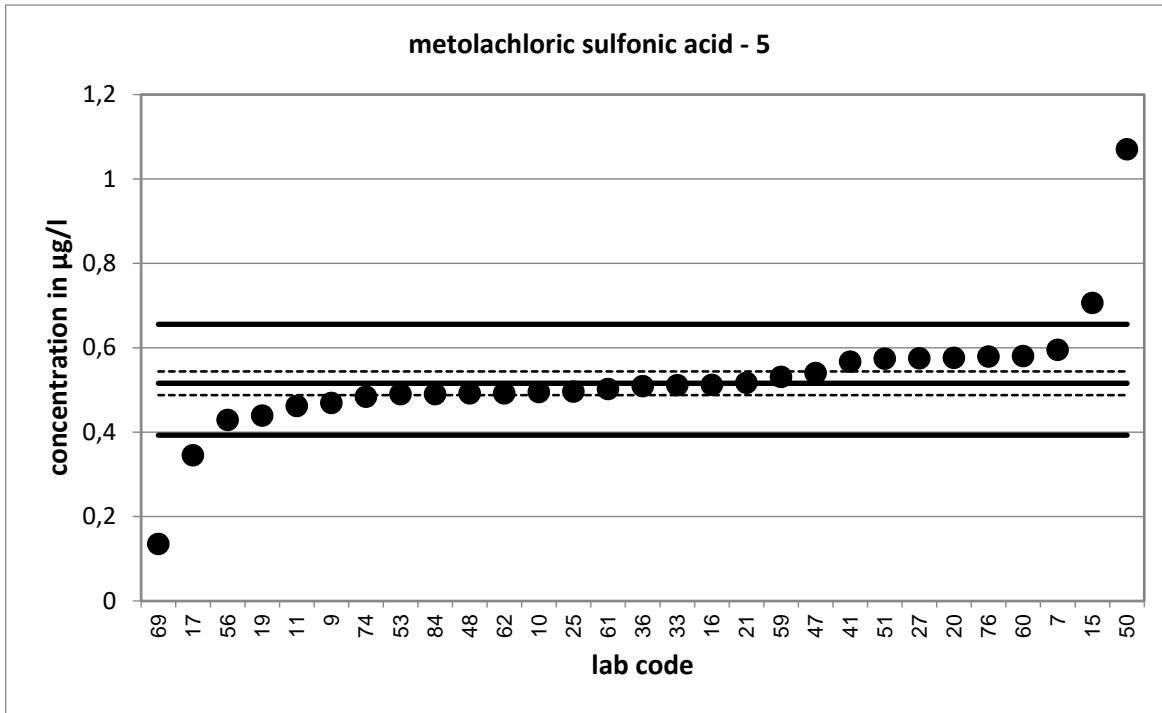


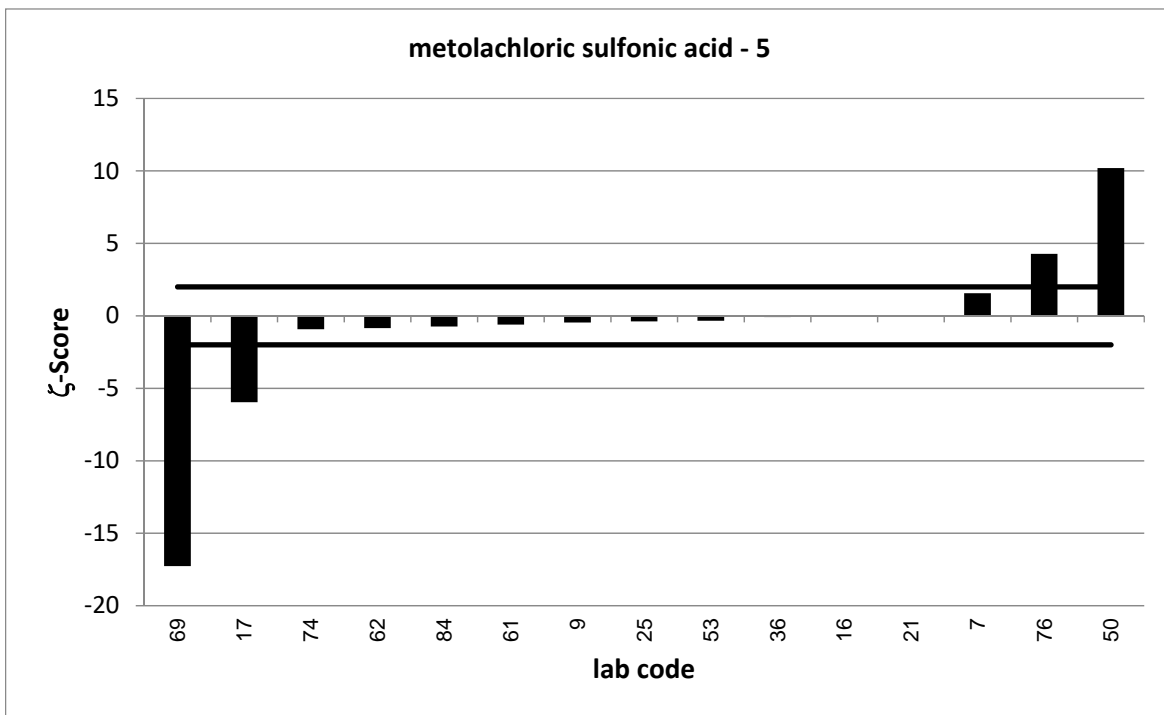
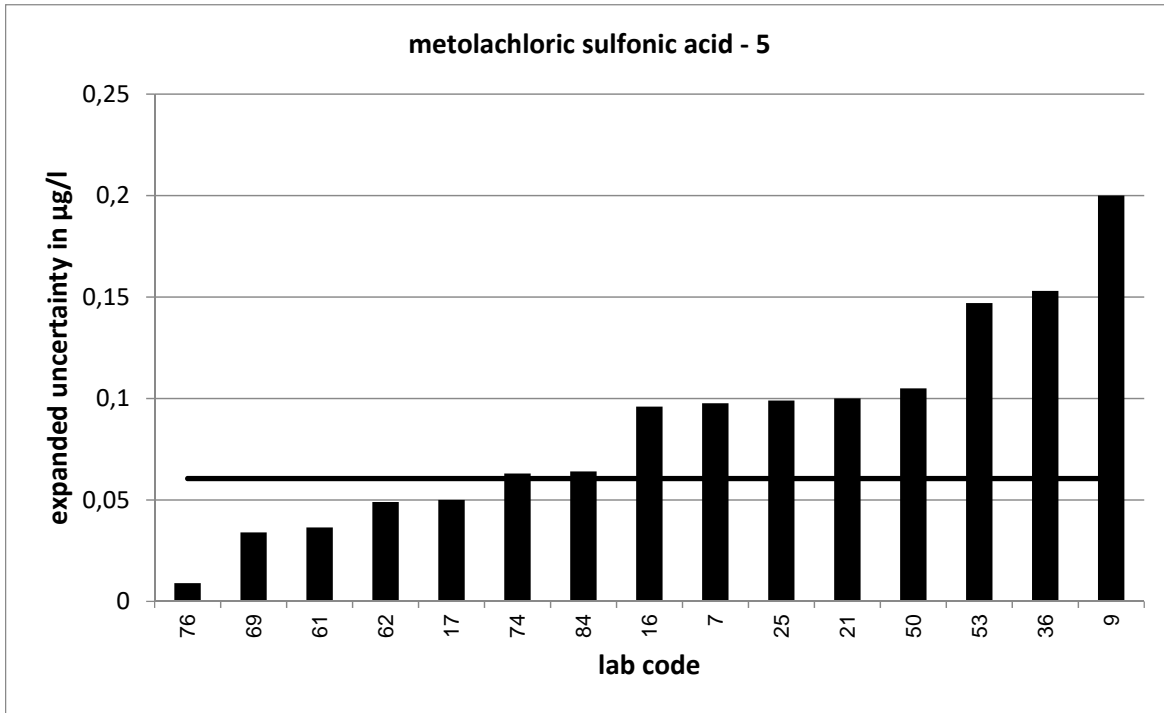


PT 4/20 - TW O5		metolachloric sulfonic acid - 5			
assigned value [ $\mu\text{g/l}$ ]*		0,5159 $\pm$ 0,0281			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,6555			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,3928			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
7	0,595	0,098	1,6	1,1	s
9	0,469	0,2	-0,5	-0,8	s
10	0,495			-0,3	s
11	0,462			-0,9	s
15	0,706			2,7	q
16	0,512	0,096	-0,1	-0,1	s
17	0,345	0,05	-6,0	-2,8	q
19	0,439			-1,2	s
20	0,576			0,9	s
21	0,517	0,1	0,0	0,0	s
25	0,496	0,099	-0,4	-0,3	s
27	0,575			0,8	s
33	0,511			-0,1	s
36	0,509	0,153	-0,1	-0,1	s
41	0,567			0,7	s
47	0,54			0,3	s
48	0,492			-0,4	s
50	1,07	0,105	10,2	7,9	u
51	0,574			0,8	s
53	0,49	0,147	-0,3	-0,4	s
56	0,429			-1,4	s
59	0,531			0,2	s
60	0,5801			0,9	s
61	0,502	0,036	-0,6	-0,2	s
62	0,492	0,049	-0,8	-0,4	s
69	0,135	0,034	-17,3	-6,2	u
74	0,484	0,063	-0,9	-0,5	s
76	0,579	0,009	4,3	0,9	s
84	0,49	0,064	-0,7	-0,4	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



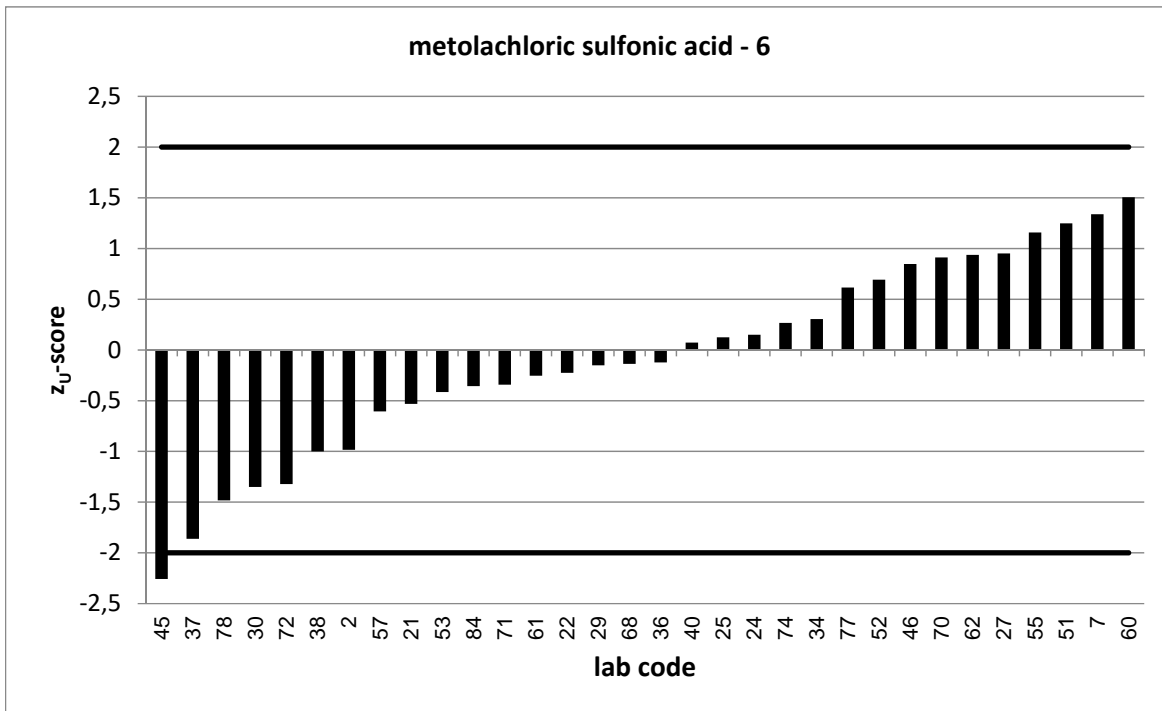
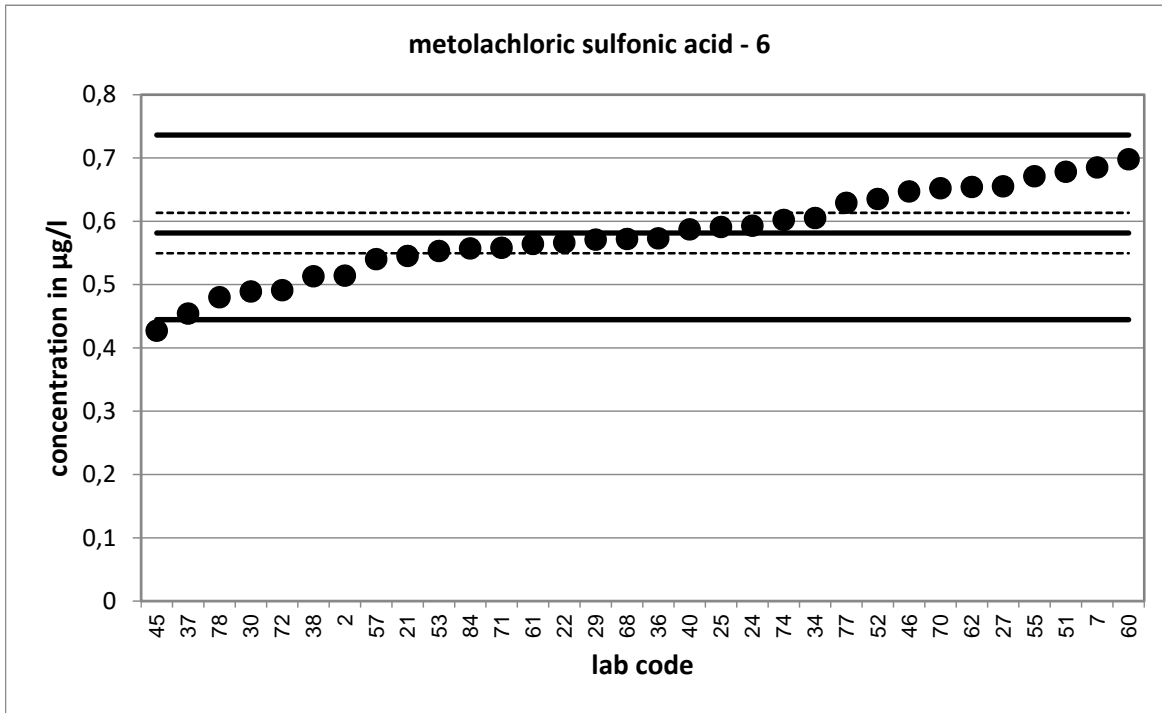


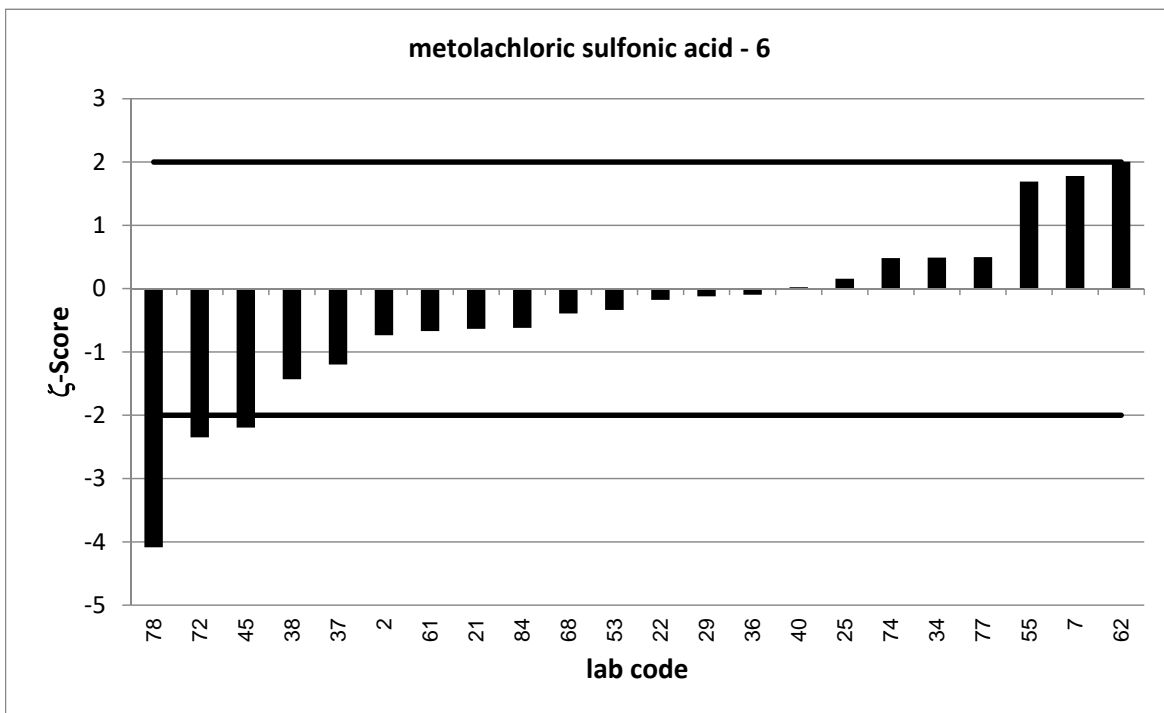
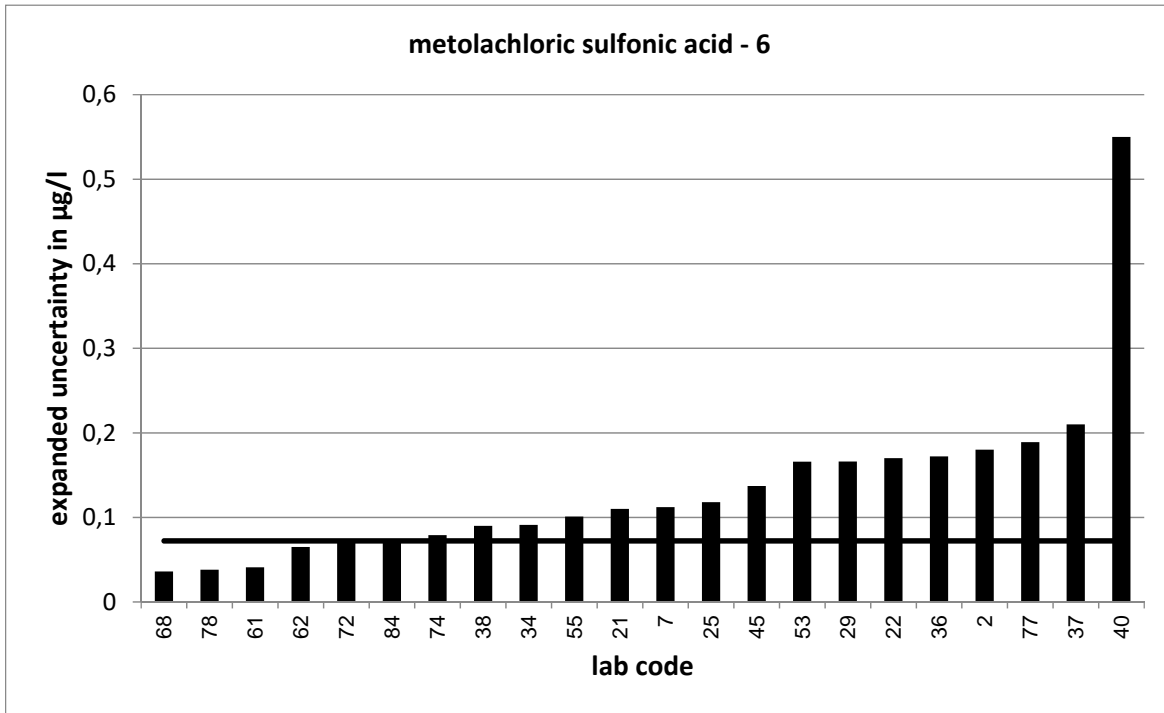


PT 4/20 - TW O5		metolachloric sulfonic acid - 6			
assigned value [ $\mu\text{g/l}$ ]*		0,5814 $\pm$ 0,0319			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,7363			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,4446			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,514	0,18	-0,7	-1,0	s
7	0,685	0,112	1,8	1,3	s
21	0,545	0,11	-0,6	-0,5	s
22	0,566	0,17	-0,2	-0,2	s
24	0,593			0,1	s
25	0,591	0,118	0,2	0,1	s
27	0,655			0,9	s
29	0,571	0,166	-0,1	-0,2	s
30	0,489			-1,4	s
34	0,605	0,091	0,5	0,3	s
36	0,573	0,172	-0,1	-0,1	s
37	0,454	0,21	-1,2	-1,9	s
38	0,513	0,09	-1,4	-1,0	s
40	0,587	0,55	0,0	0,1	s
45	0,427	0,137	-2,2	-2,3	q
46	0,647			0,8	s
51	0,678			1,2	s
52	0,635			0,7	s
53	0,553	0,166	-0,3	-0,4	s
55	0,671	0,101	1,7	1,2	s
57	0,54			-0,6	s
60	0,6979			1,5	s
61	0,564	0,041	-0,7	-0,3	s
62	0,654	0,065	2,0	0,9	s
68	0,572	0,036	-0,4	-0,1	s
70	0,652			0,9	s
71	0,558			-0,3	s
72	0,491	0,07	-2,4	-1,3	s
74	0,602	0,079	0,5	0,3	s
77	0,629	0,189	0,5	0,6	s
78	0,48	0,038	-4,1	-1,5	s
84	0,557	0,072	-0,6	-0,4	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

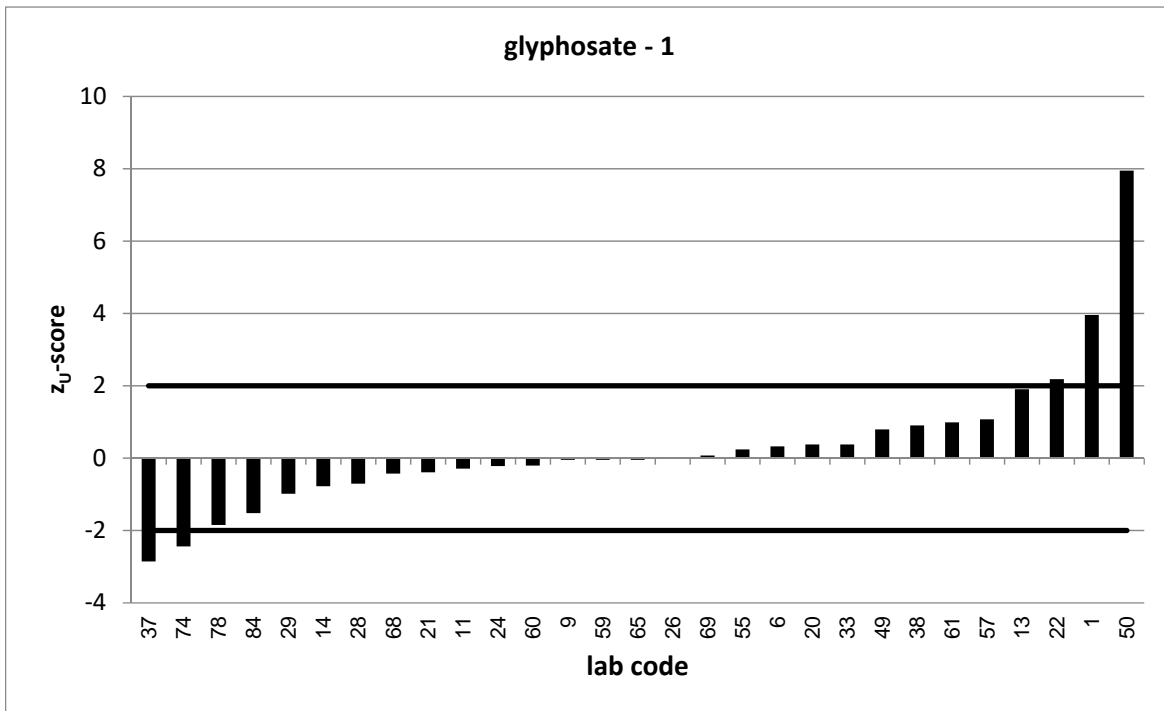
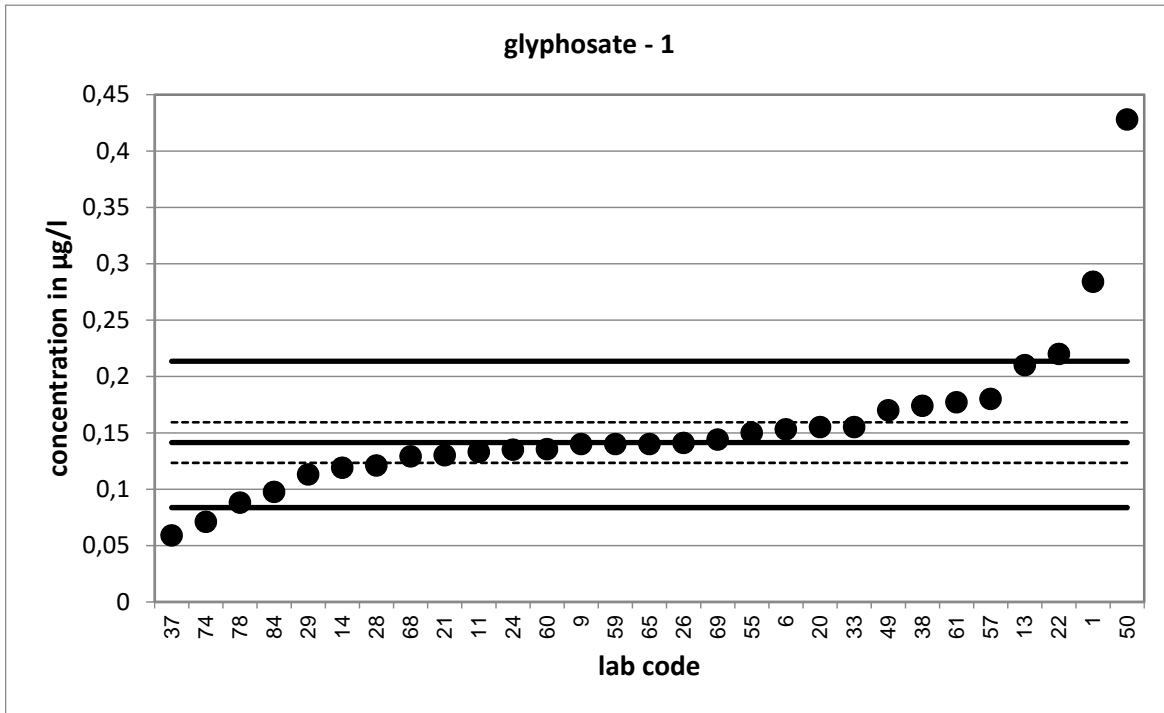


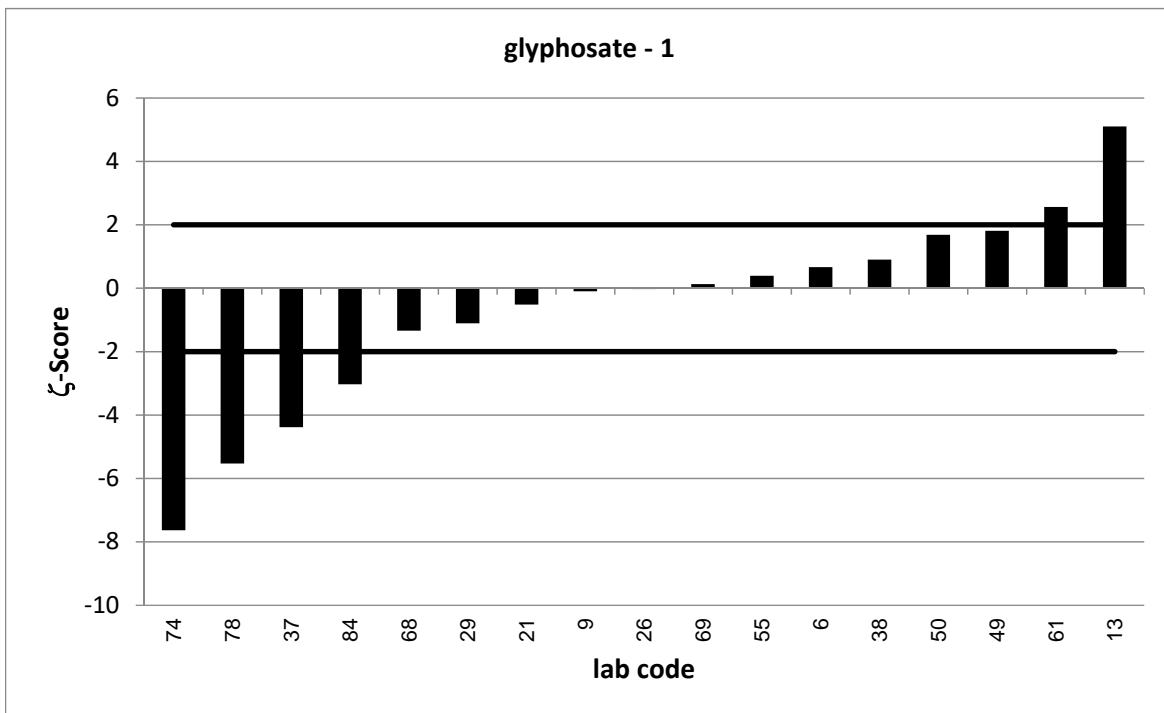
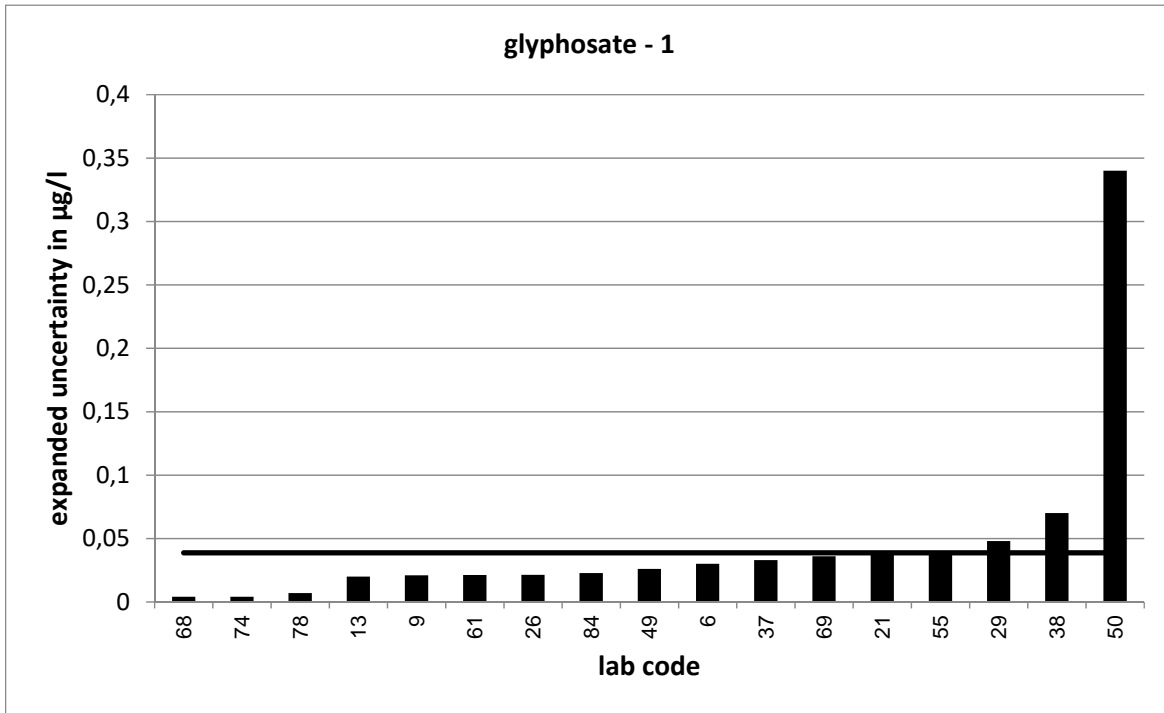


PT 4/20 - TW O5		glyphosate - 1			
assigned value [ $\mu\text{g/l}$ ]*		0,1414 $\pm$ 0,018			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,2135			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,08368			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
1	0,284			4,0	u
6	0,153	0,03	0,7	0,3	s
9	0,14	0,021	-0,1	0,0	s
11	0,133			-0,3	s
13	0,21	0,02	5,1	1,9	s
14	0,119			-0,8	s
20	0,155			0,4	s
21	0,13	0,04	-0,5	-0,4	s
22	0,22			2,2	q
24	0,135			-0,2	s
26	0,141	0,021	0,0	0,0	s
28	0,121			-0,7	s
29	0,113	0,048	-1,1	-1,0	s
33	0,155			0,4	s
37	0,059	0,033	-4,4	-2,9	q
38	0,174	0,07	0,9	0,9	s
49	0,17	0,026	1,8	0,8	s
50	0,428	0,34	1,7	7,9	u
55	0,15	0,04	0,4	0,2	s
57	0,18			1,1	s
59	0,14			0,0	s
60	0,1354			-0,2	s
61	0,177	0,021	2,6	1,0	s
65	0,14			0,0	s
68	0,129	0,004	-1,3	-0,4	s
69	0,144	0,036	0,1	0,1	s
74	0,071	0,004	-7,6	-2,4	q
78	0,088	0,007	-5,5	-1,9	s
84	0,0975	0,023	-3,0	-1,5	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

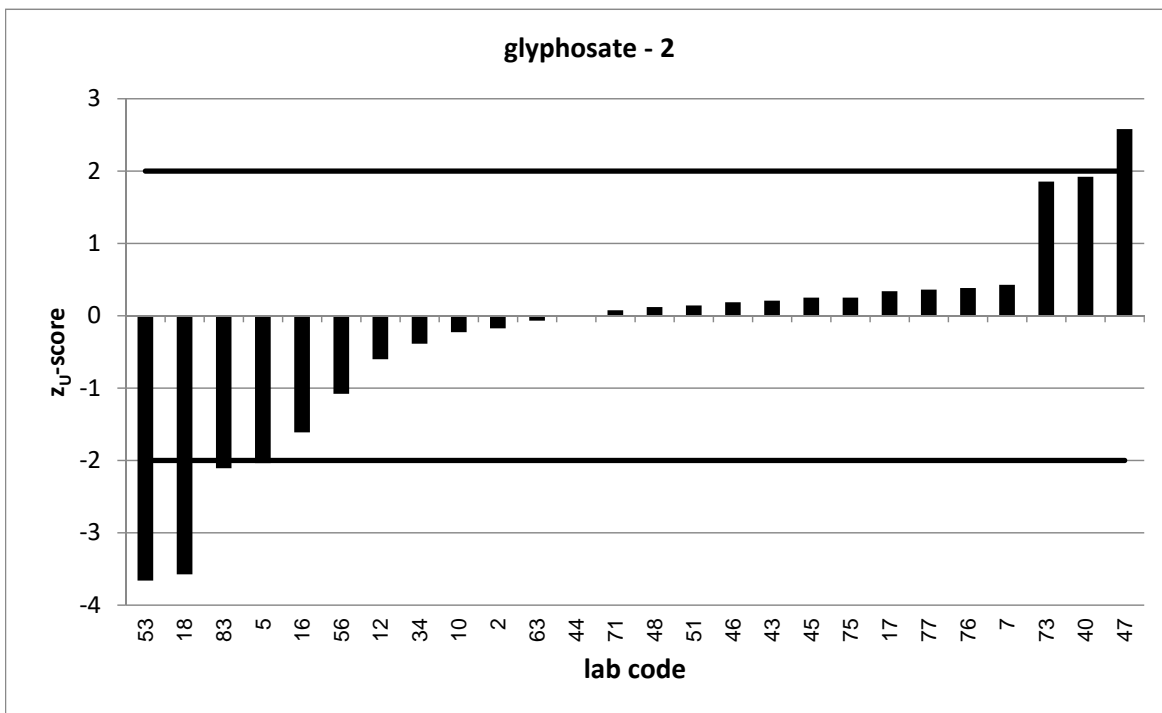
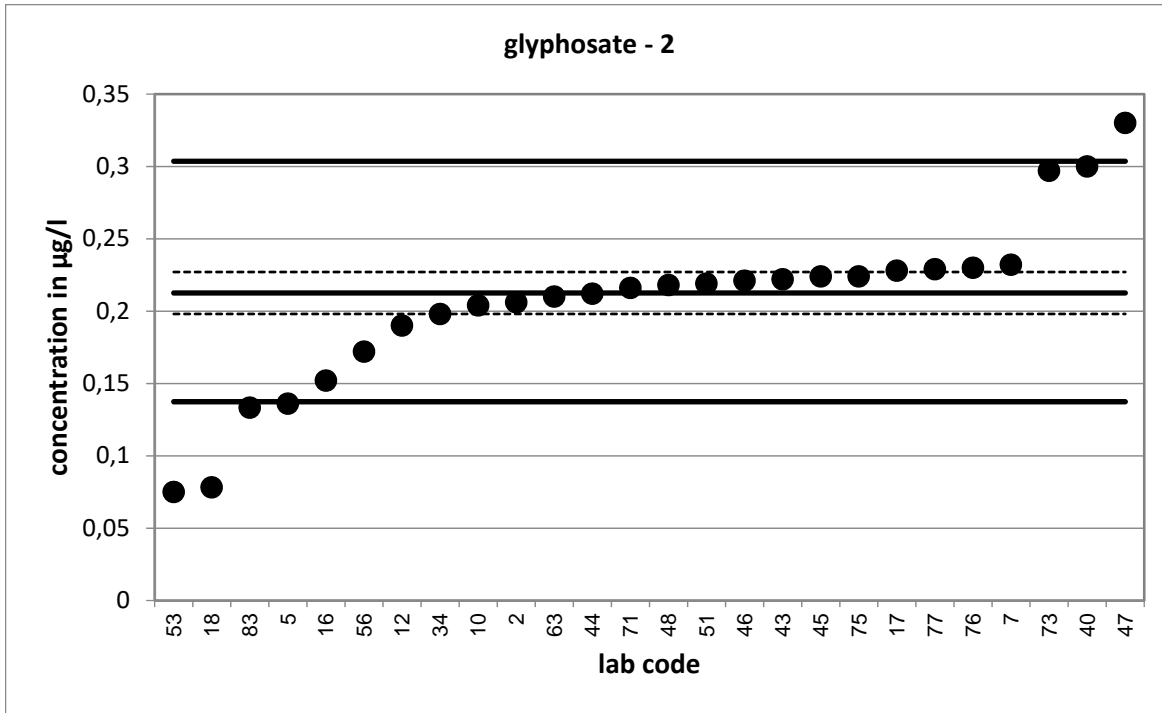




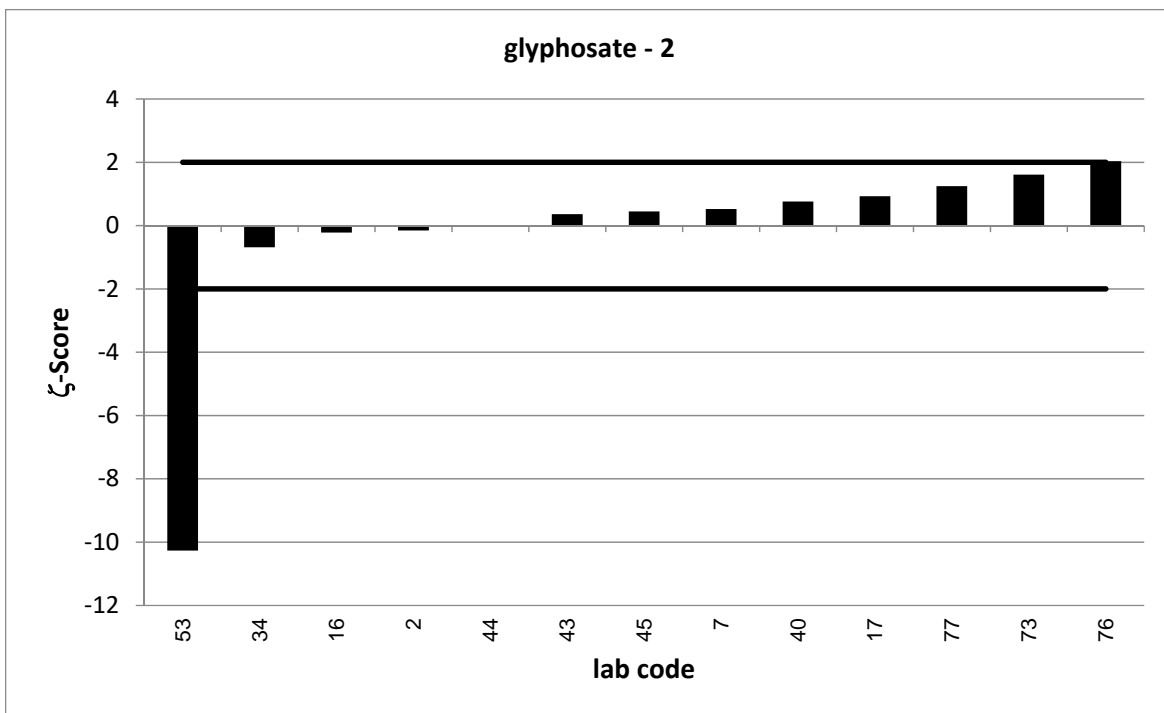
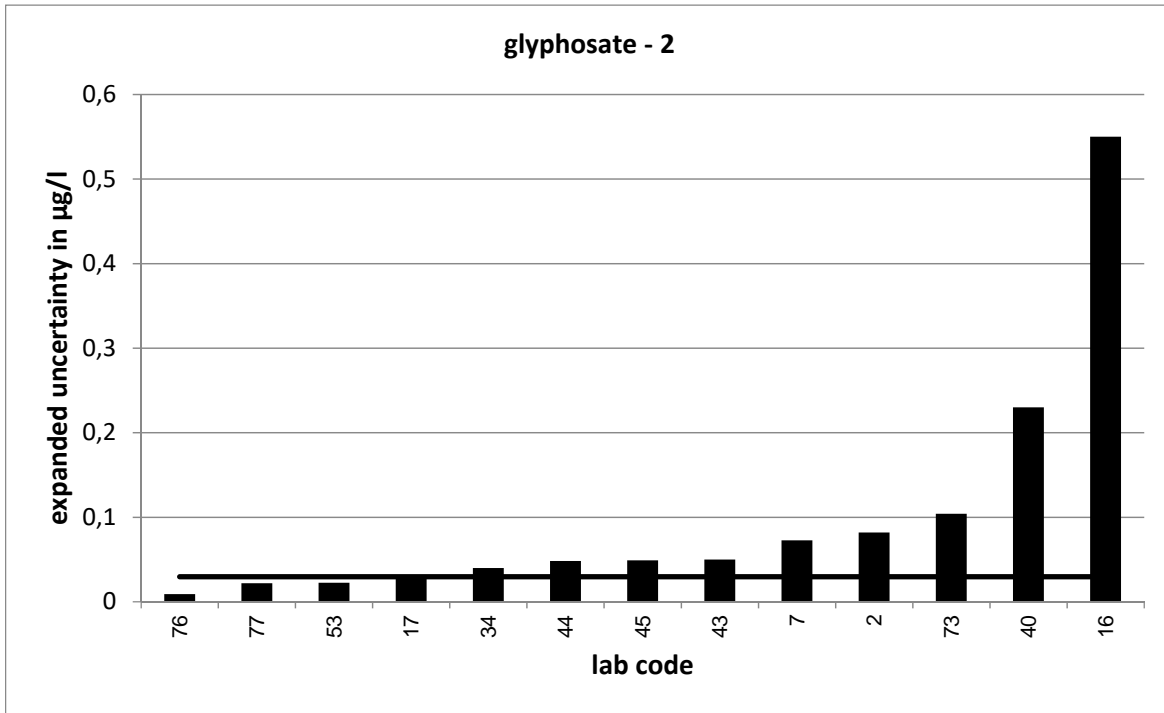
PT 4/20 - TW O5		glyphosate - 2			
assigned value [ $\mu\text{g/l}$ ]*		0,2126 $\pm$ 0,0145			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,3036			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,1374			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,206	0,082	-0,2	-0,2	s
5	0,136			-2,0	s
7	0,232	0,073	0,5	0,4	s
10	0,204			-0,2	s
12	0,19			-0,6	s
16	0,152	0,55	-0,2	-1,6	s
17	0,228	0,03	0,9	0,3	s
18	0,0782			-3,6	u
34	0,198	0,04	-0,7	-0,4	s
40	0,3	0,23	0,8	1,9	s
43	0,222	0,05	0,4	0,2	s
44	0,212	0,048	0,0	0,0	s
45	0,224	0,049	0,4	0,3	s
46	0,221			0,2	s
47	0,33			2,6	q
48	0,218			0,1	s
51	0,219			0,1	s
53	0,075	0,023	-10,3	-3,7	u
56	0,172			-1,1	s
63	0,21			-0,1	s
71	0,216			0,1	s
73	0,297	0,104	1,6	1,9	s
75	0,224			0,3	s
76	0,23	0,009	2,0	0,4	s
77	0,229	0,022	1,2	0,4	s
83	0,1333			-2,1	q

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



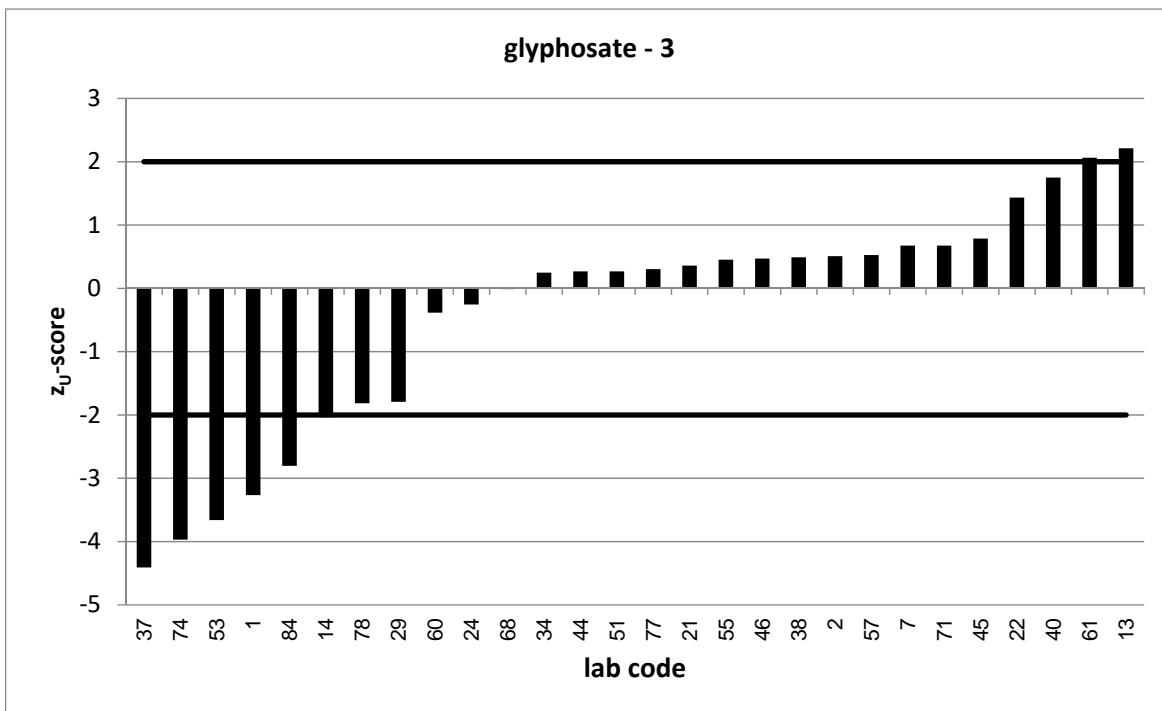
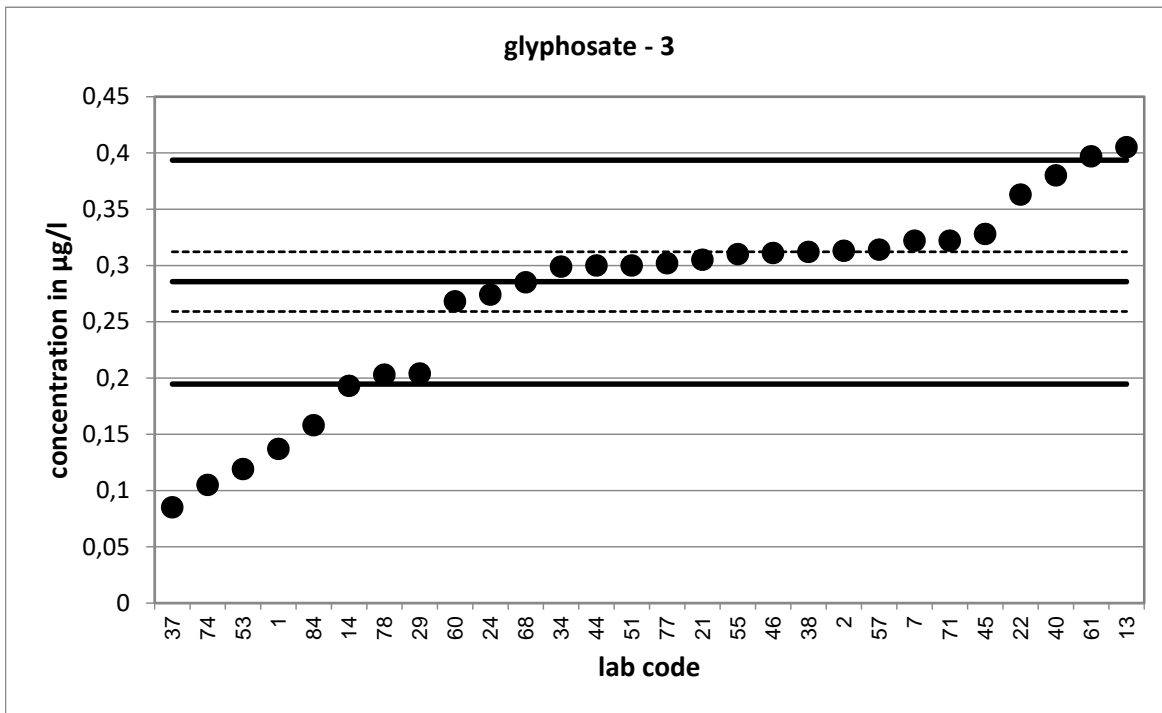


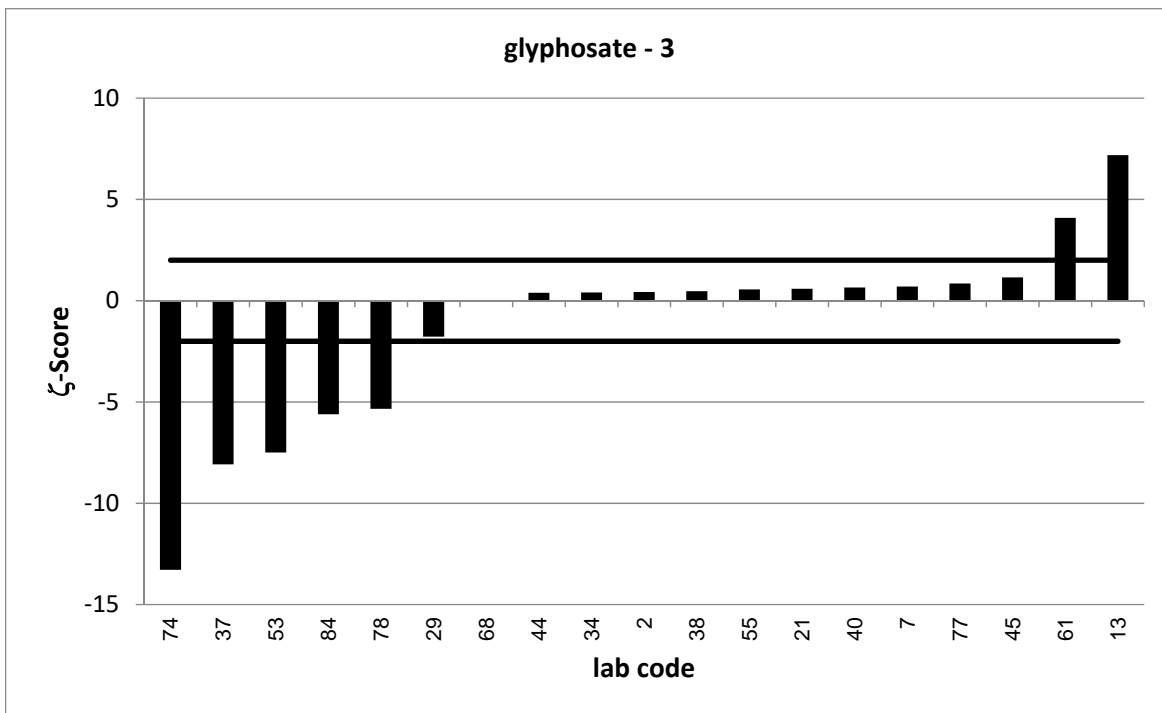
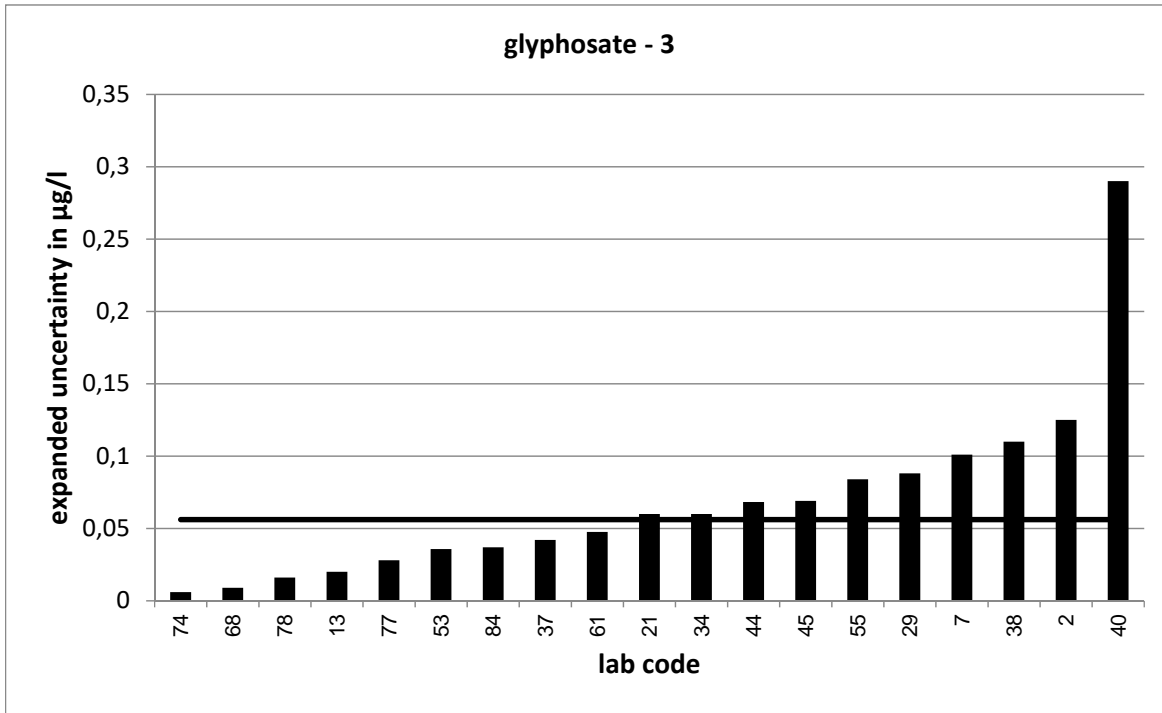


PT 4/20 - TW O5		glyphosate - 3			
assigned value [ $\mu\text{g/l}$ ]*		0,2856 $\pm$ 0,0265			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,3936			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,1946			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
1	0,137			-3,3	u
2	0,313	0,125	0,4	0,5	s
7	0,322	0,101	0,7	0,7	s
13	0,405	0,02	7,2	2,2	q
14	0,193			-2,0	s
21	0,305	0,06	0,6	0,4	s
22	0,363			1,4	s
24	0,274			-0,3	s
29	0,204	0,088	-1,8	-1,8	s
34	0,299	0,06	0,4	0,2	s
37	0,085	0,042	-8,1	-4,4	u
38	0,312	0,11	0,5	0,5	s
40	0,38	0,29	0,6	1,7	s
44	0,3	0,068	0,4	0,3	s
45	0,328	0,069	1,1	0,8	s
46	0,311			0,5	s
51	0,3			0,3	s
53	0,119	0,036	-7,5	-3,7	u
55	0,31	0,084	0,6	0,5	s
57	0,314			0,5	s
60	0,2681			-0,4	s
61	0,397	0,048	4,1	2,1	q
68	0,285	0,009	0,0	0,0	s
71	0,322			0,7	s
74	0,105	0,006	-13,3	-4,0	u
77	0,302	0,028	0,8	0,3	s
78	0,203	0,016	-5,3	-1,8	s
84	0,158	0,037	-5,6	-2,8	q

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

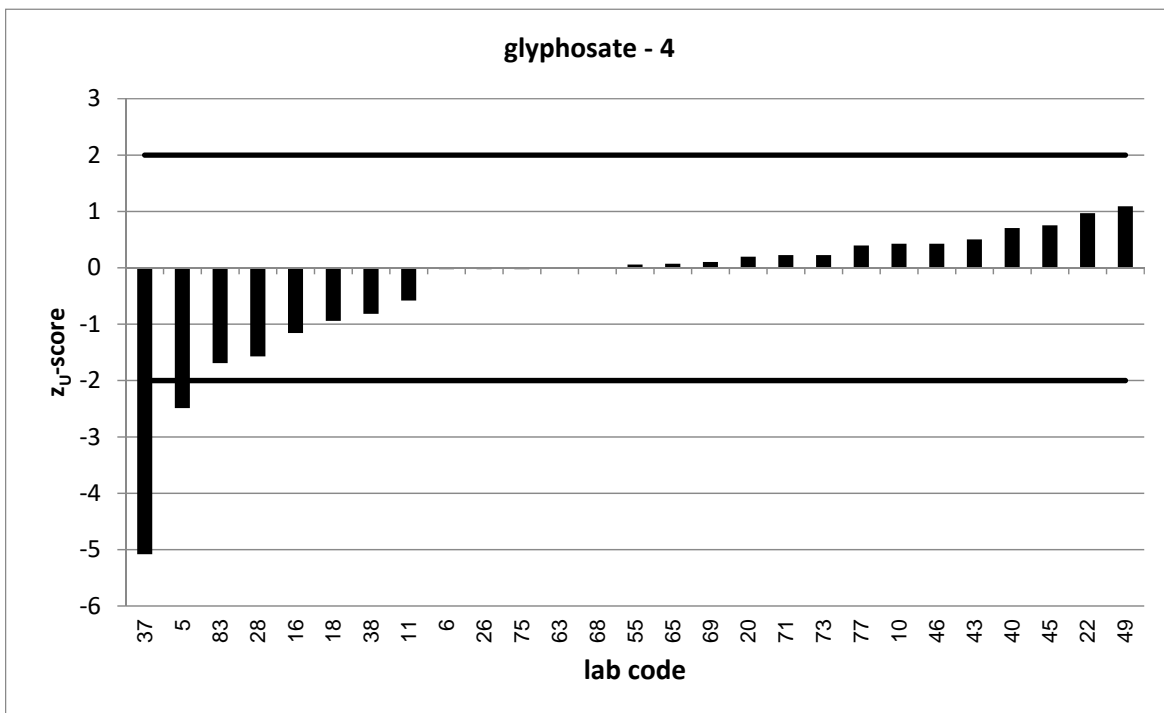
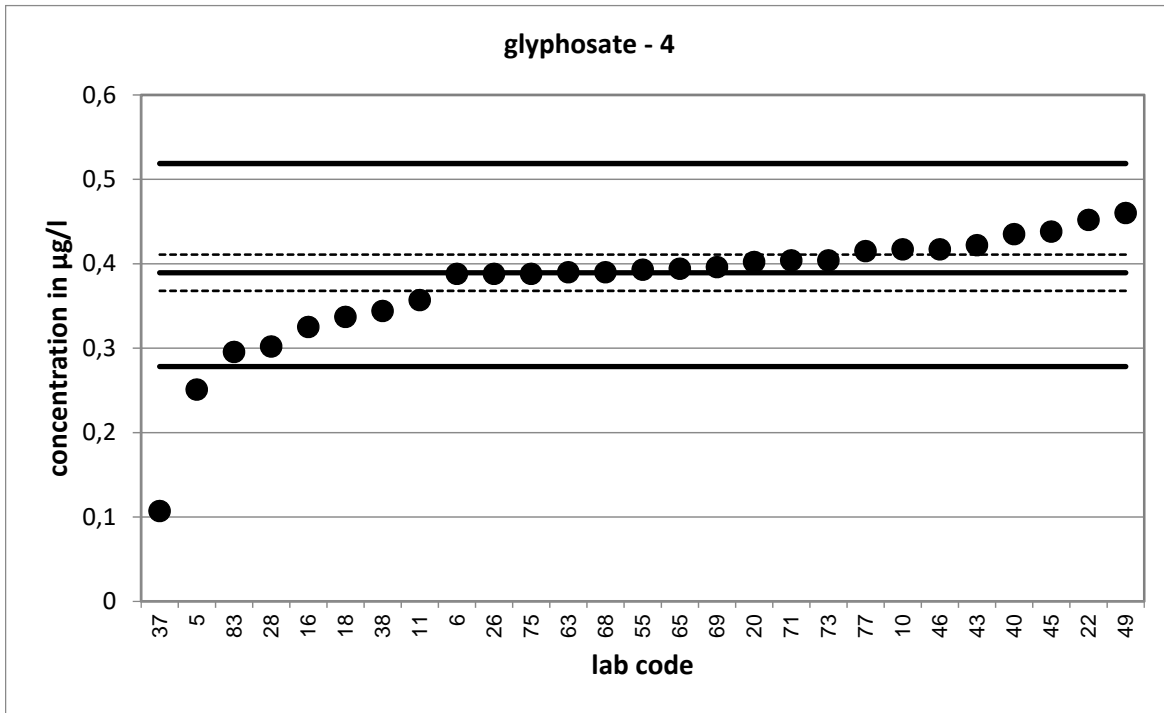


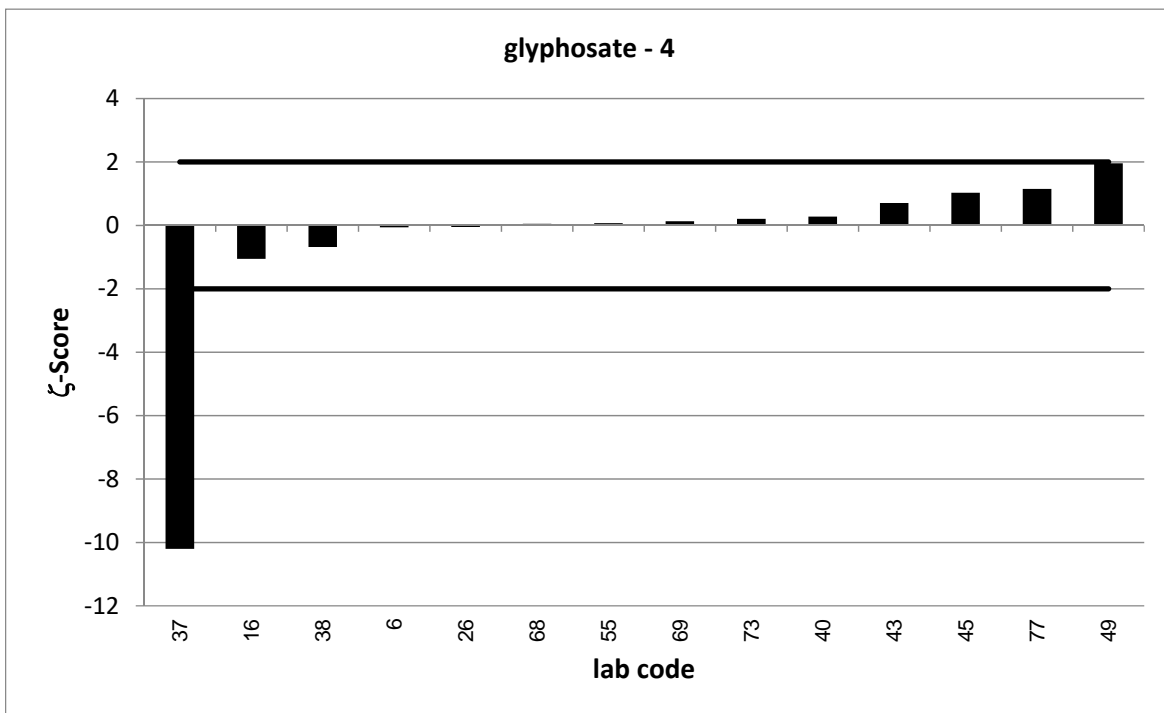
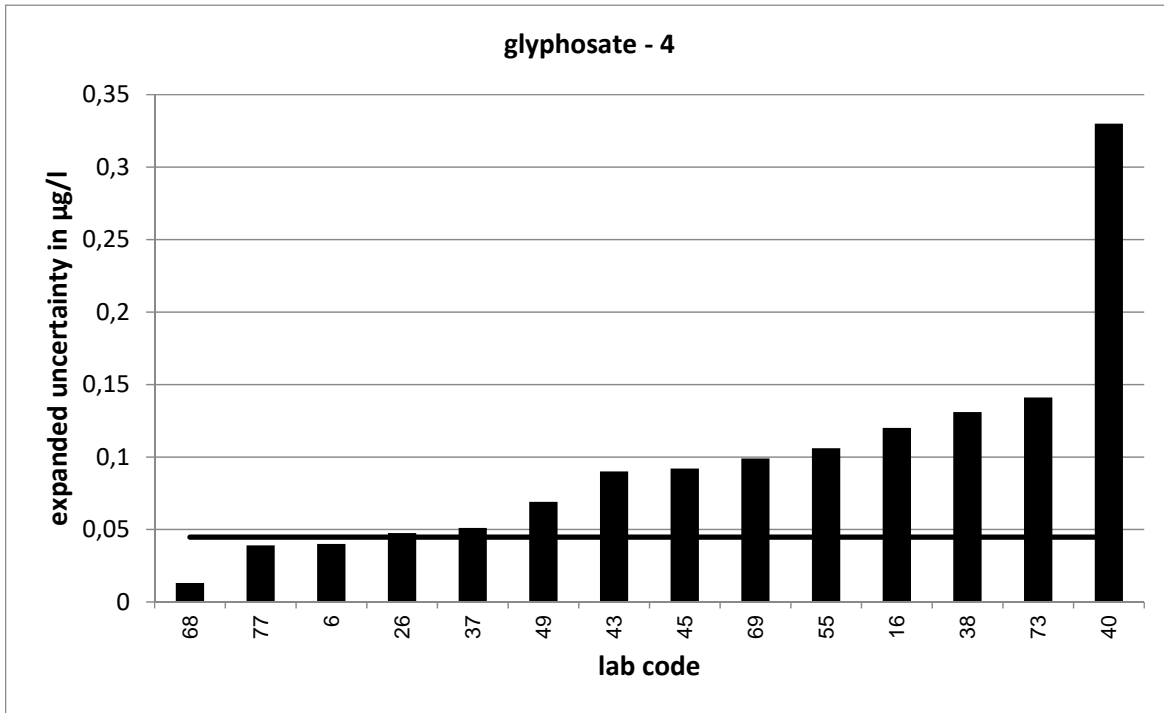


PT 4/20 - TW O5		glyphosate - 4			
assigned value [ $\mu\text{g/l}$ ]*		0,3894 $\pm$ 0,0215			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,5188			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2782			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
5	0,251			-2,5	q
6	0,388	0,04	-0,1	0,0	s
10	0,417			0,4	s
11	0,357			-0,6	s
16	0,325	0,12	-1,1	-1,2	s
18	0,337			-0,9	s
20	0,402			0,2	s
22	0,452			1,0	s
26	0,388	0,048	-0,1	0,0	s
28	0,302			-1,6	s
37	0,107	0,051	-10,2	-5,1	u
38	0,344	0,131	-0,7	-0,8	s
40	0,435	0,33	0,3	0,7	s
43	0,422	0,09	0,7	0,5	s
45	0,438	0,092	1,0	0,8	s
46	0,417			0,4	s
49	0,46	0,069	2,0	1,1	s
55	0,393	0,106	0,1	0,1	s
63	0,39			0,0	s
65	0,394			0,1	s
68	0,39	0,013	0,0	0,0	s
69	0,396	0,099	0,1	0,1	s
71	0,404			0,2	s
73	0,404	0,141	0,2	0,2	s
75	0,388			0,0	s
77	0,415	0,039	1,2	0,4	s
83	0,2954			-1,7	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



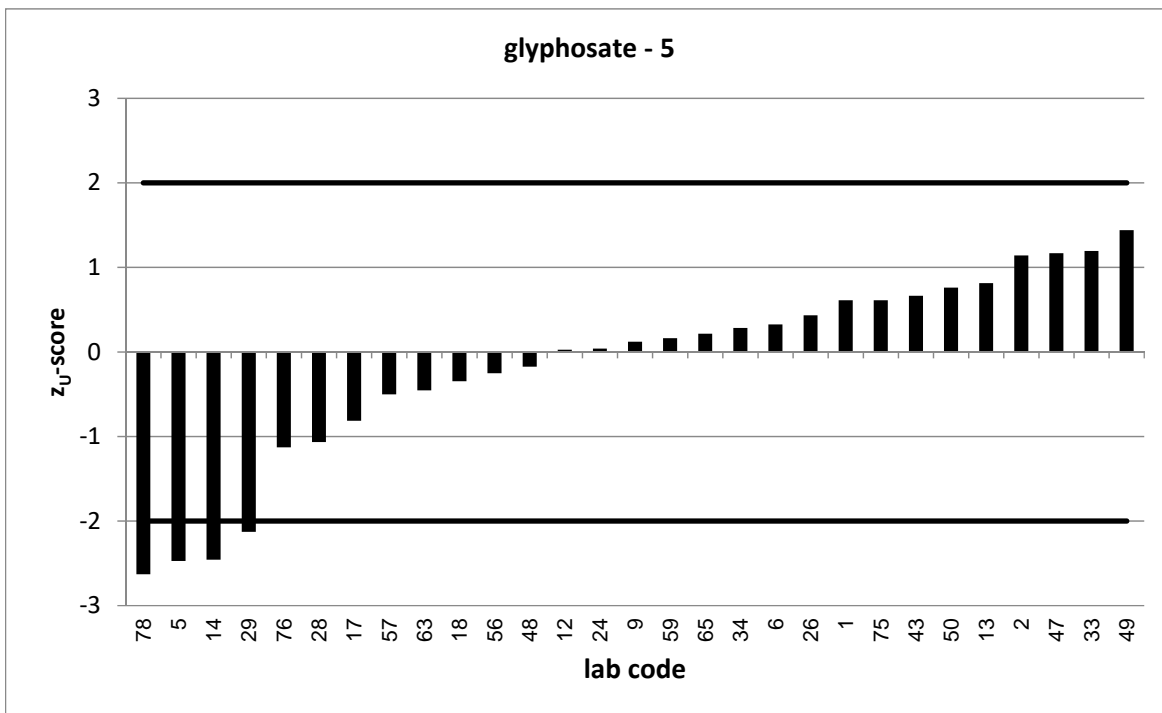
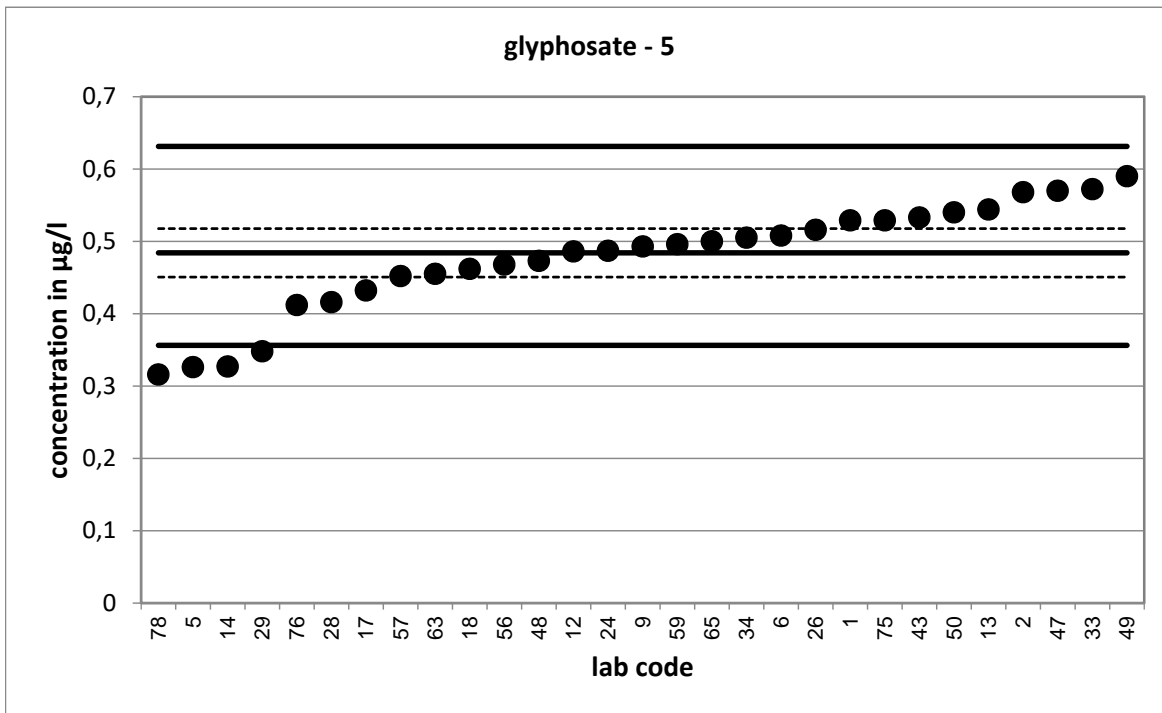


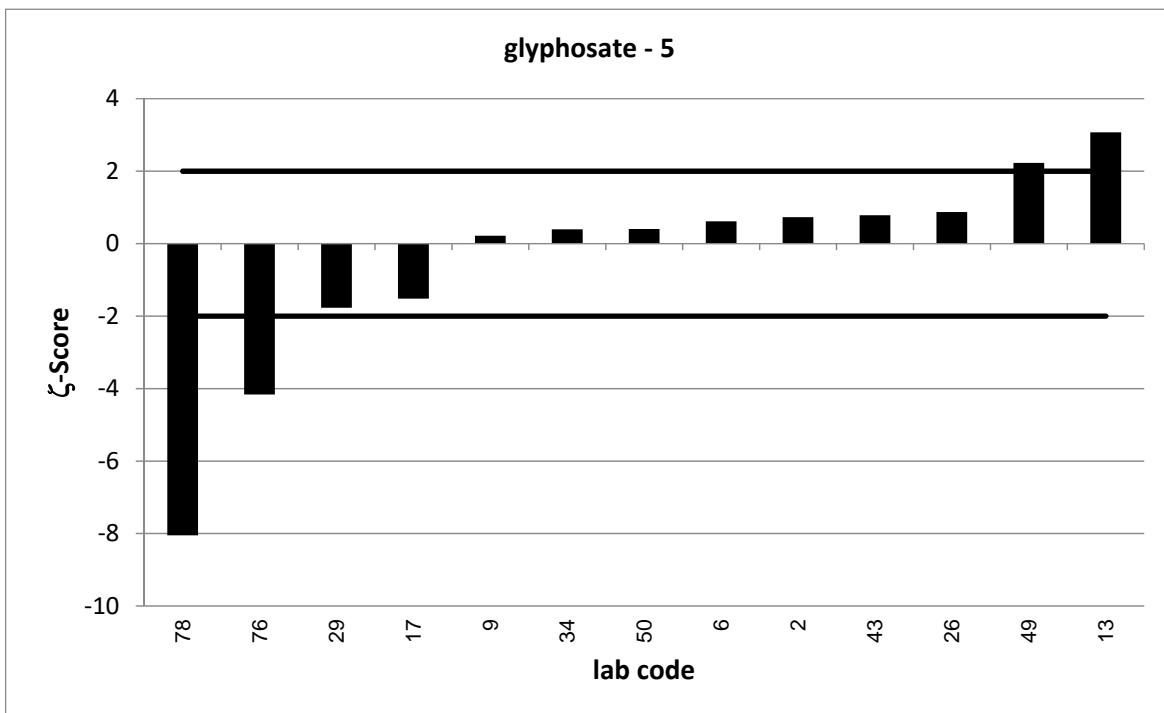
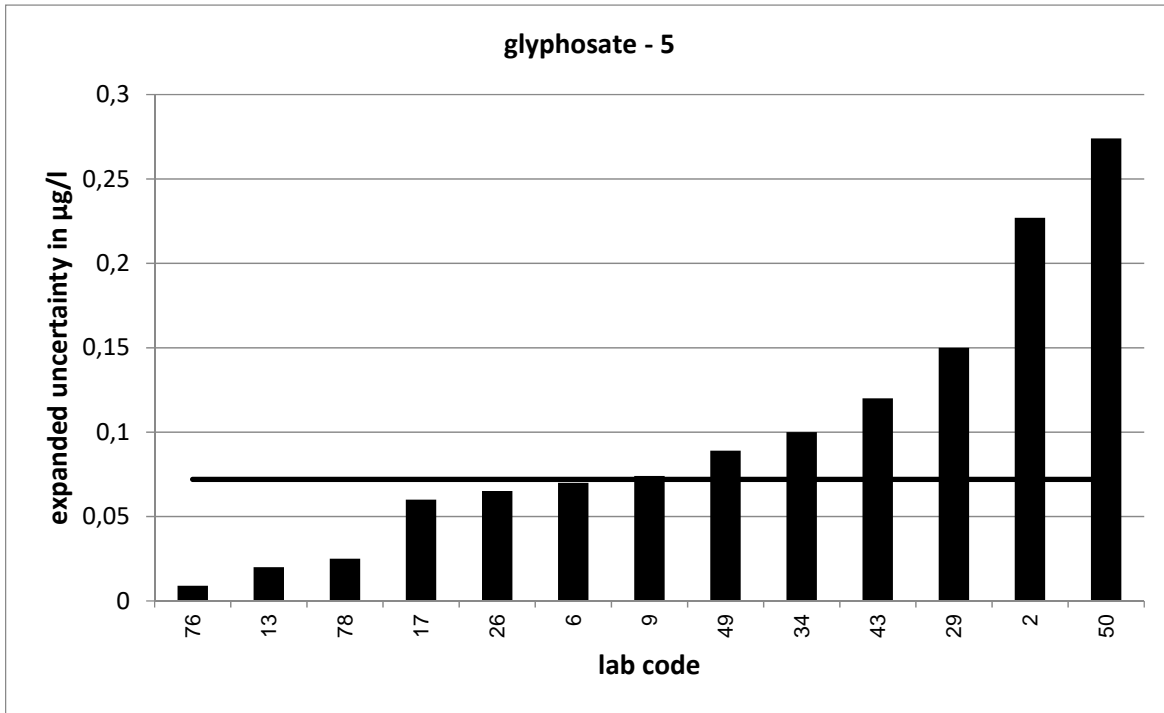
PT 4/20 - TW O5		glyphosate - 5			
assigned value [ $\mu\text{g/l}$ ]*		0,4841 $\pm$ 0,0335			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,6313			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,3563			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
1	0,529			0,6	s
2	0,568	0,227	0,7	1,1	s
5	0,326			-2,5	q
6	0,508	0,07	0,6	0,3	s
9	0,493	0,074	0,2	0,1	s
12	0,486			0,0	s
13	0,544	0,02	3,1	0,8	s
14	0,327			-2,5	q
17	0,432	0,06	-1,5	-0,8	s
18	0,462			-0,3	s
24	0,487			0,0	s
26	0,516	0,065	0,9	0,4	s
28	0,416			-1,1	s
29	0,348	0,15	-1,8	-2,1	q
33	0,572			1,2	s
34	0,505	0,1	0,4	0,3	s
43	0,533	0,12	0,8	0,7	s
47	0,57			1,2	s
48	0,473			-0,2	s
49	0,59	0,089	2,2	1,4	s
50	0,54	0,274	0,4	0,8	s
56	0,468			-0,3	s
57	0,452			-0,5	s
59	0,496			0,2	s
63	0,455			-0,5	s
65	0,5			0,2	s
75	0,529			0,6	s
76	0,412	0,009	-4,2	-1,1	s
78	0,316	0,025	-8,1	-2,6	q

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



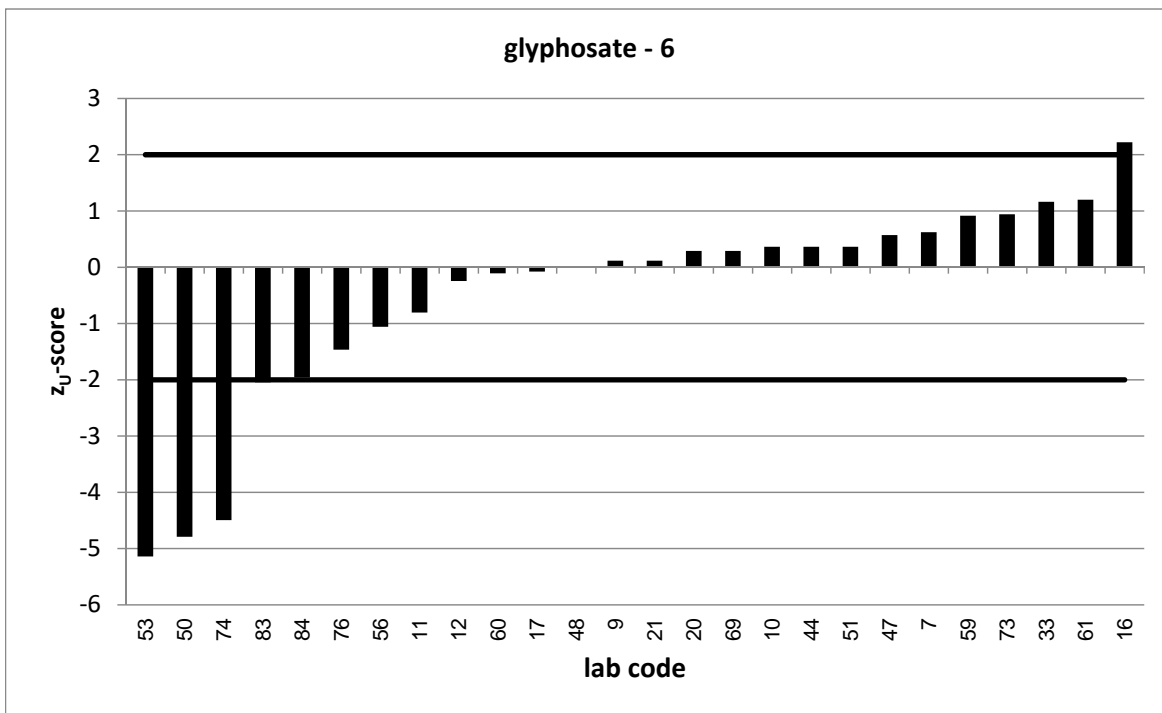
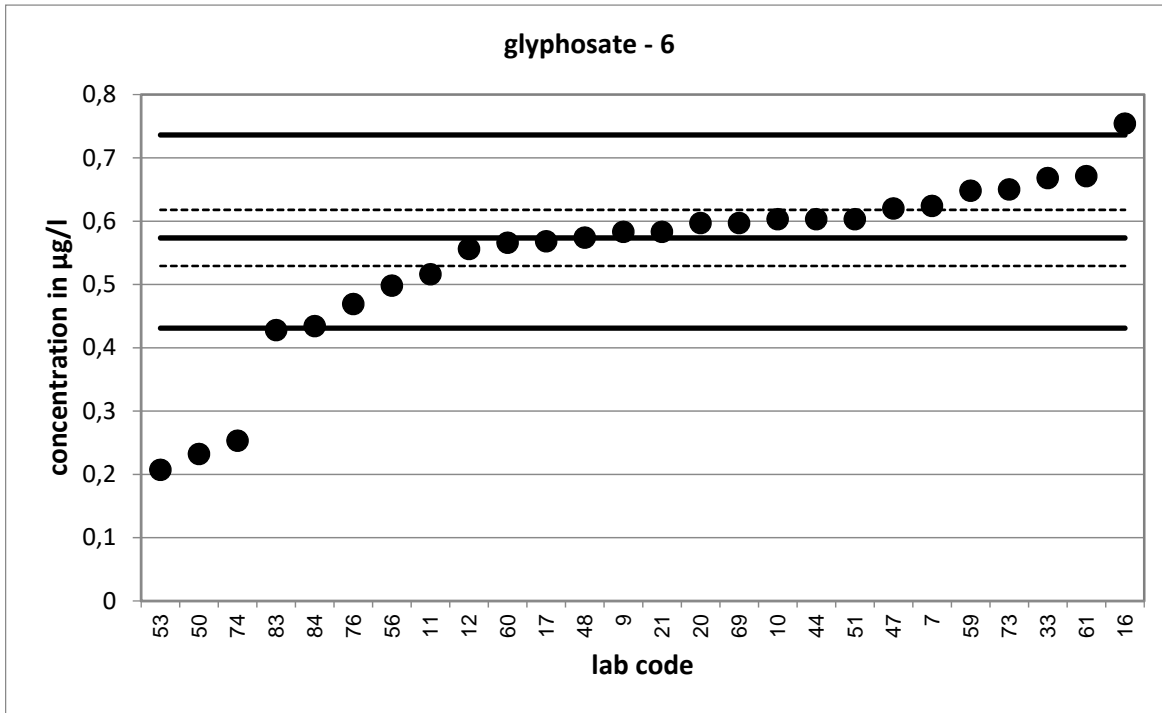


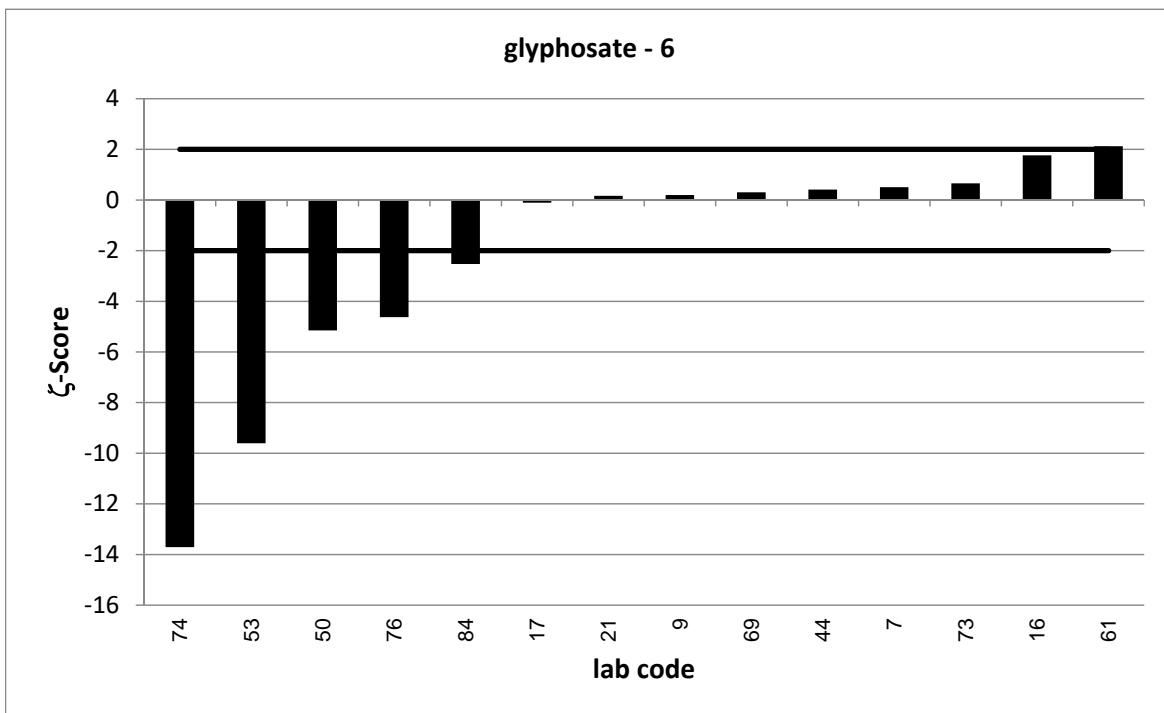
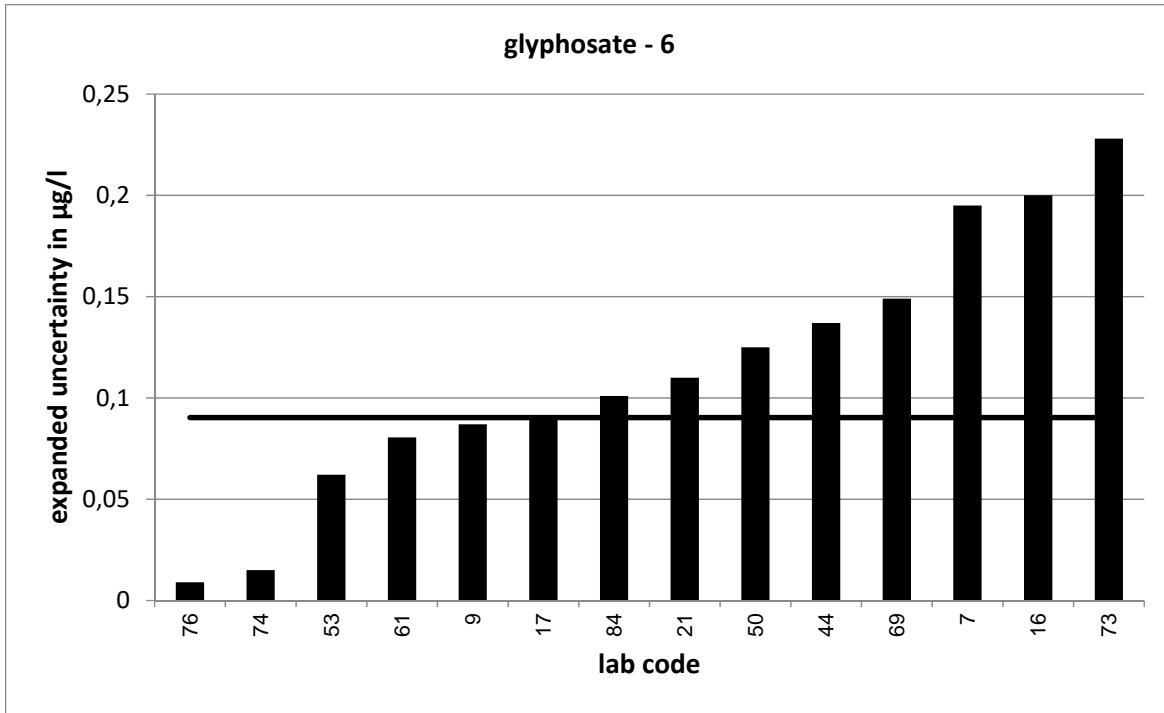


PT 4/20 - TW O5		glyphosate - 6			
assigned value [ $\mu\text{g/l}$ ]*		0,5735 $\pm$ 0,0443			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,7361			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,431			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
7	0,624	0,195	0,5	0,6	s
9	0,583	0,087	0,2	0,1	s
10	0,603			0,4	s
11	0,516			-0,8	s
12	0,556			-0,2	s
16	0,754	0,2	1,8	2,2	q
17	0,568	0,09	-0,1	-0,1	s
20	0,597			0,3	s
21	0,583	0,11	0,2	0,1	s
33	0,668			1,2	s
44	0,603	0,137	0,4	0,4	s
47	0,62			0,6	s
48	0,574			0,0	s
50	0,232	0,125	-5,2	-4,8	u
51	0,603			0,4	s
53	0,207	0,062	-9,6	-5,1	u
56	0,498			-1,1	s
59	0,648			0,9	s
60	0,5657			-0,1	s
61	0,671	0,081	2,1	1,2	s
69	0,597	0,149	0,3	0,3	s
73	0,65	0,228	0,7	0,9	s
74	0,253	0,015	-13,7	-4,5	u
76	0,469	0,009	-4,6	-1,5	s
83	0,4277			-2,0	s
84	0,434	0,101	-2,5	-2,0	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

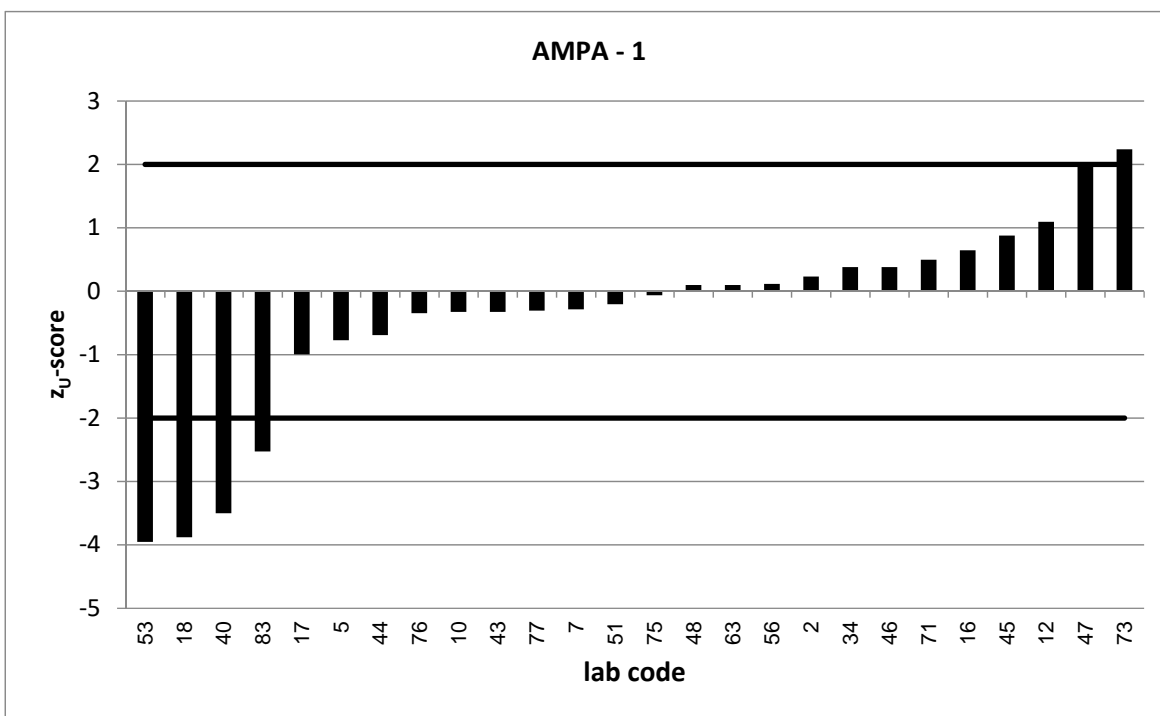
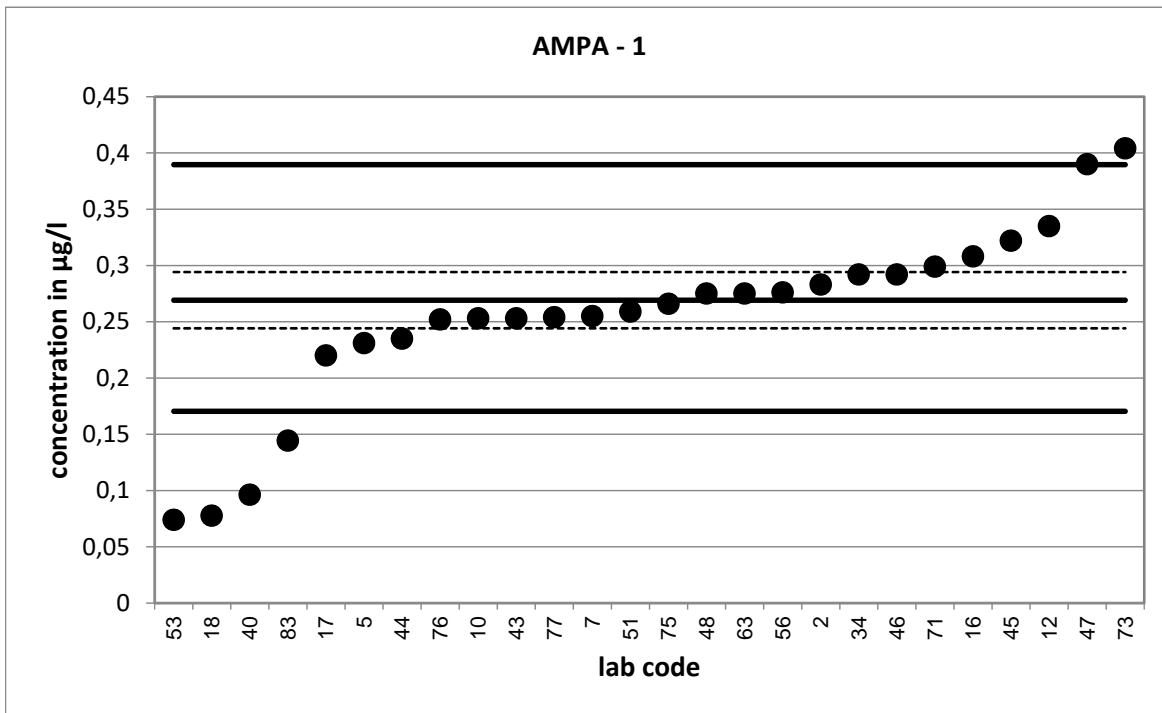


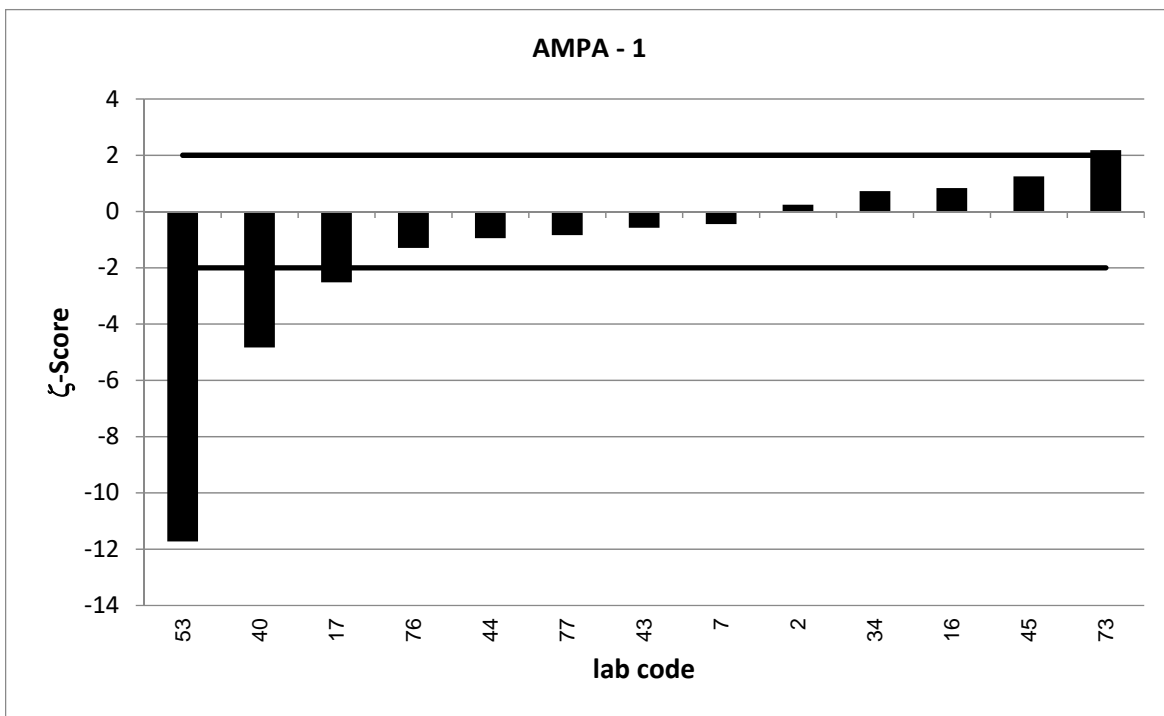
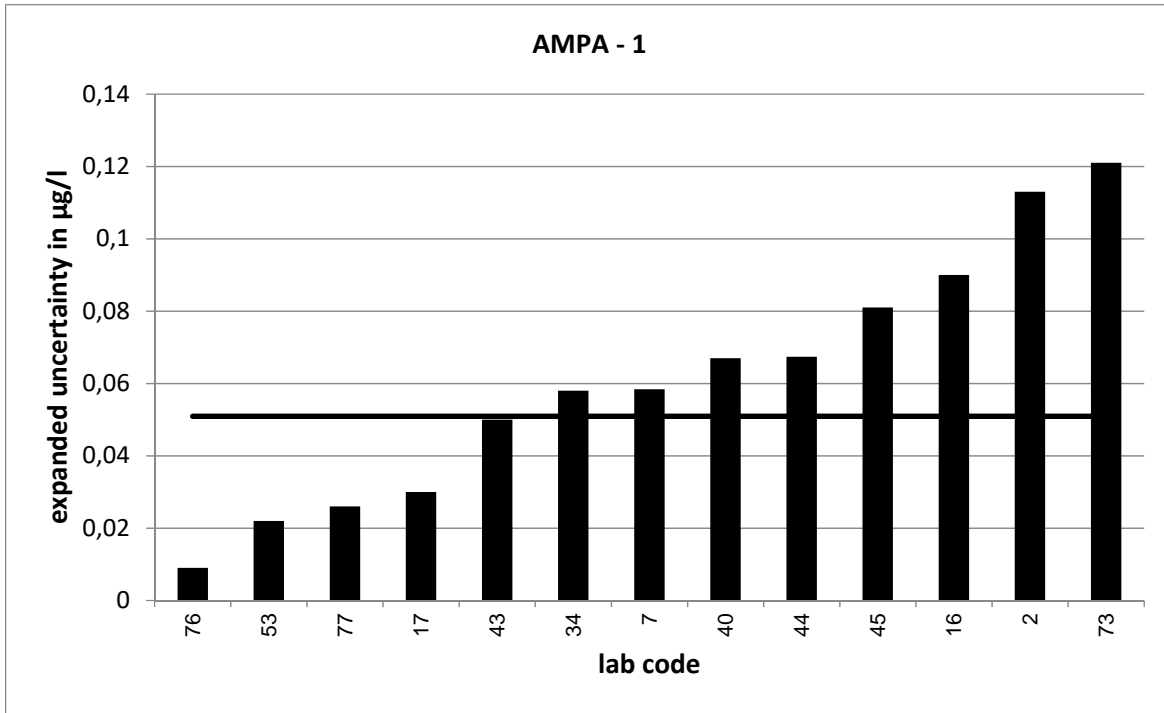


PT 4/20 - TW O5		AMPA - 1			
assigned value [ $\mu\text{g/l}$ ]*		0,2692 $\pm$ 0,025			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,3896			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,1704			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
2	0,283	0,113	0,2	0,2	s
5	0,231			-0,8	s
7	0,255	0,058	-0,4	-0,3	s
10	0,253			-0,3	s
12	0,335			1,1	s
16	0,308	0,09	0,8	0,6	s
17	0,22	0,03	-2,5	-1,0	s
18	0,0776			-3,9	u
34	0,292	0,058	0,7	0,4	s
40	0,0963	0,067	-4,8	-3,5	u
43	0,253	0,05	-0,6	-0,3	s
44	0,235	0,067	-1,0	-0,7	s
45	0,322	0,081	1,2	0,9	s
46	0,292			0,4	s
47	0,39			2,0	s
48	0,275			0,1	s
51	0,259			-0,2	s
53	0,074	0,022	-11,7	-4,0	u
56	0,276			0,1	s
63	0,275			0,1	s
71	0,299			0,5	s
73	0,404	0,121	2,2	2,2	q
75	0,266			-0,1	s
76	0,252	0,009	-1,3	-0,3	s
77	0,254	0,026	-0,8	-0,3	s
83	0,1443			-2,5	q

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



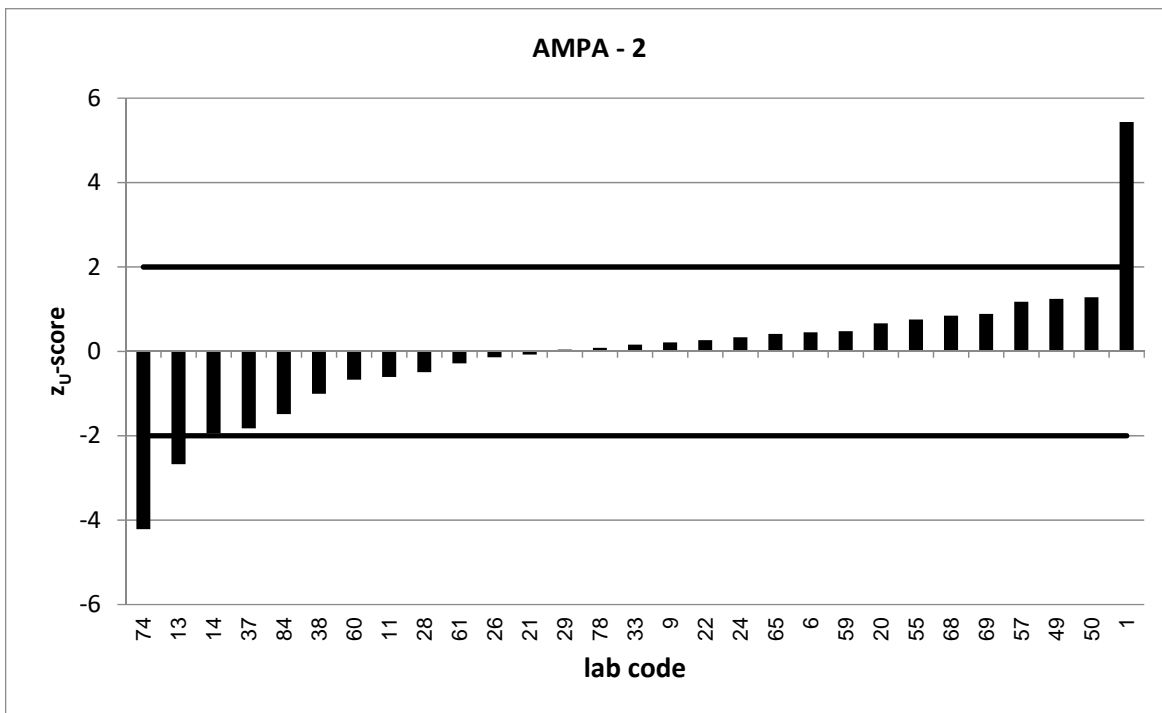
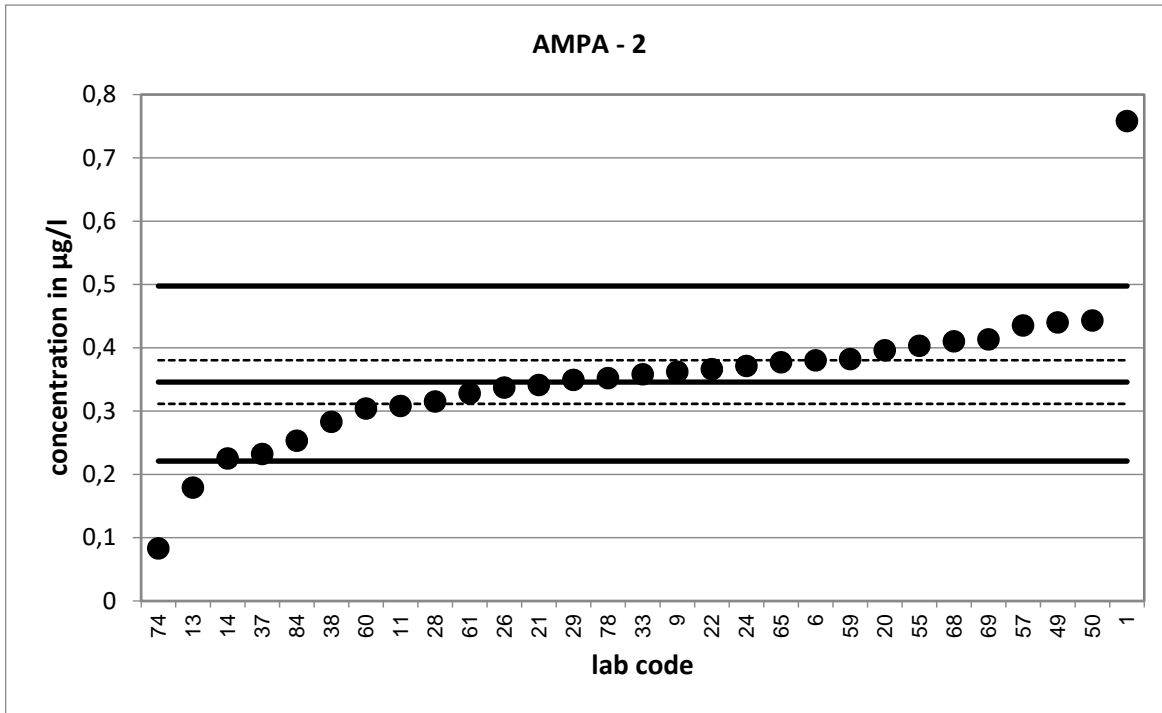


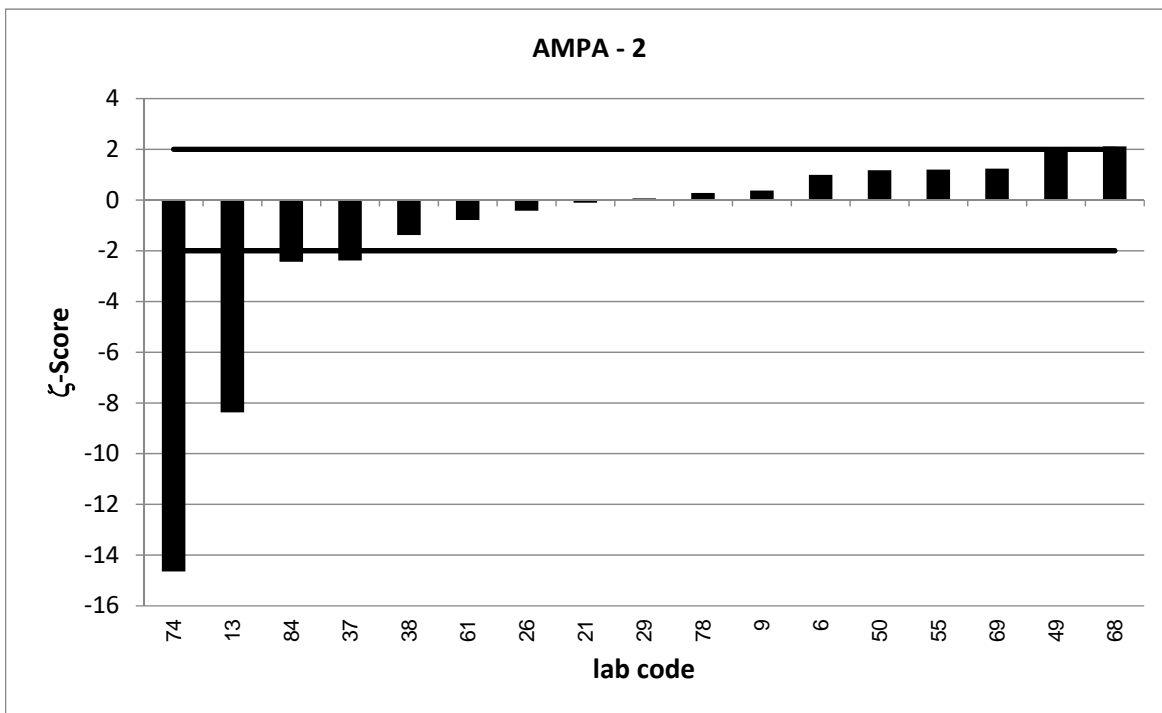
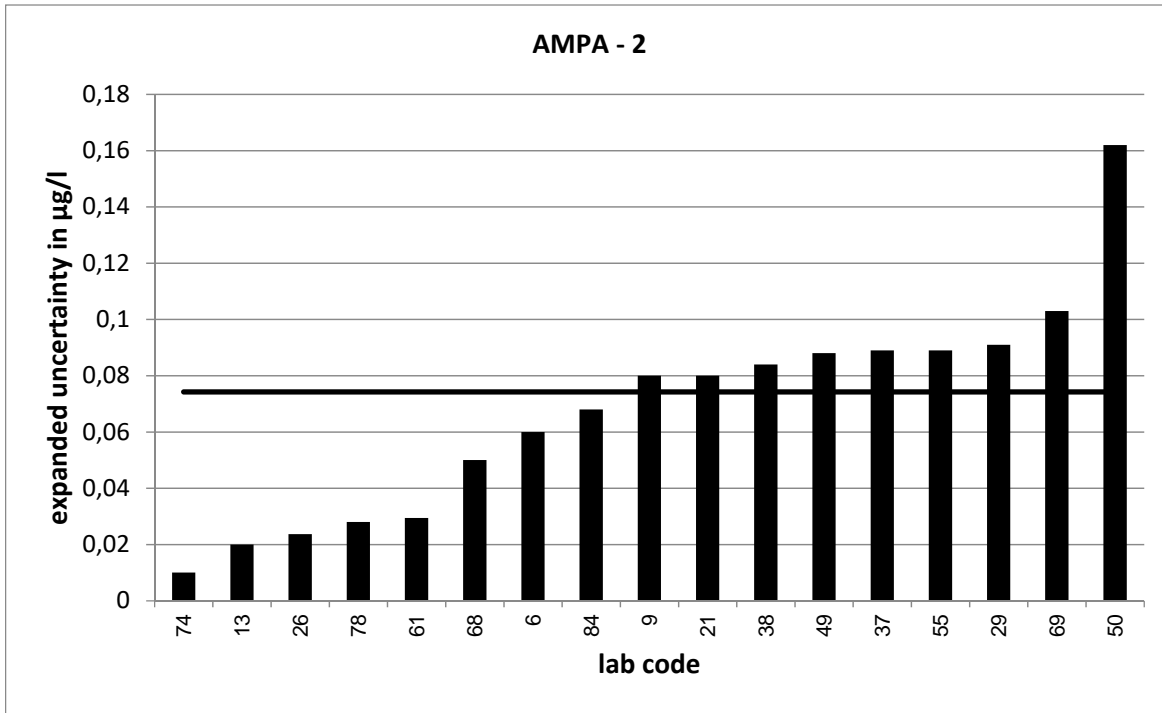


PT 4/20 - TW O5		AMPA - 2			
assigned value [ $\mu\text{g/l}$ ]*		0,3459 $\pm$ 0,0345			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,4975			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2211			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
1	0,758			5,4	u
6	0,38	0,06	1,0	0,5	s
9	0,362	0,08	0,4	0,2	s
11	0,308			-0,6	s
13	0,179	0,02	-8,4	-2,7	q
14	0,225			-1,9	s
20	0,396			0,7	s
21	0,341	0,08	-0,1	-0,1	s
22	0,366			0,3	s
24	0,371			0,3	s
26	0,337	0,024	-0,4	-0,1	s
28	0,315			-0,5	s
29	0,349	0,091	0,1	0,0	s
33	0,358			0,2	s
37	0,232	0,089	-2,4	-1,8	s
38	0,283	0,084	-1,4	-1,0	s
49	0,44	0,088	2,0	1,2	s
50	0,443	0,162	1,2	1,3	s
55	0,403	0,089	1,2	0,8	s
57	0,435			1,2	s
59	0,382			0,5	s
60	0,3039			-0,7	s
61	0,328	0,029	-0,8	-0,3	s
65	0,377			0,4	s
68	0,41	0,05	2,1	0,8	s
69	0,413	0,103	1,2	0,9	s
74	0,083	0,01	-14,6	-4,2	u
78	0,352	0,028	0,3	0,1	s
84	0,253	0,068	-2,4	-1,5	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

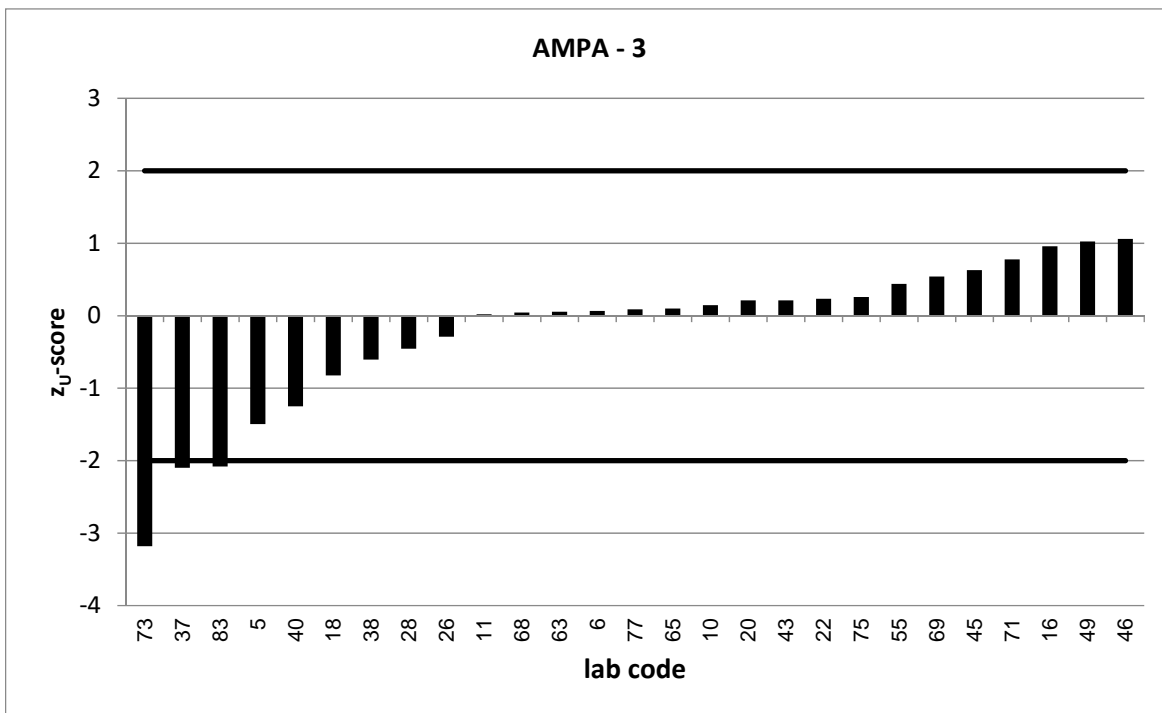
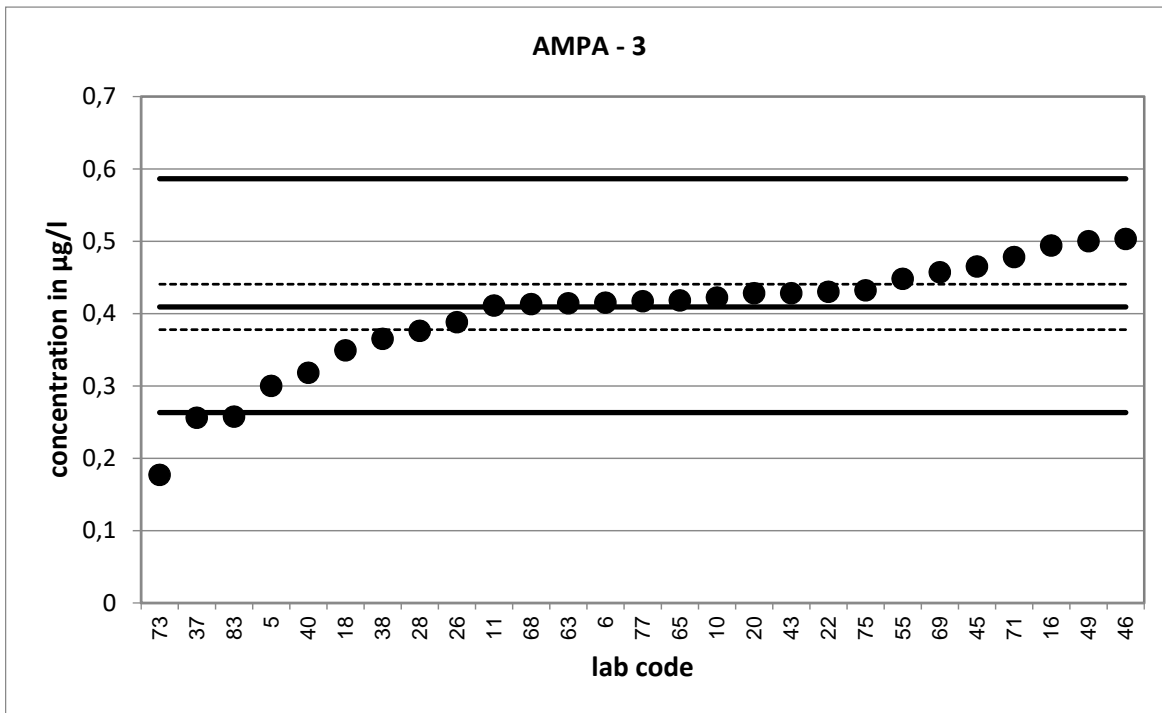


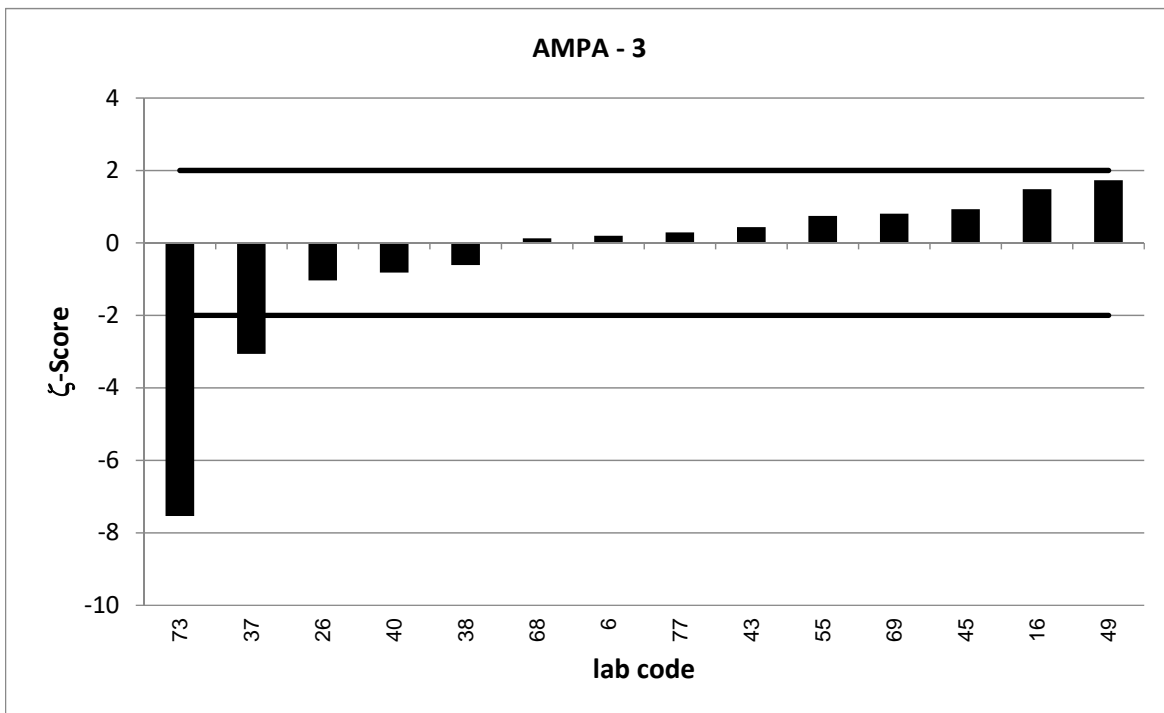
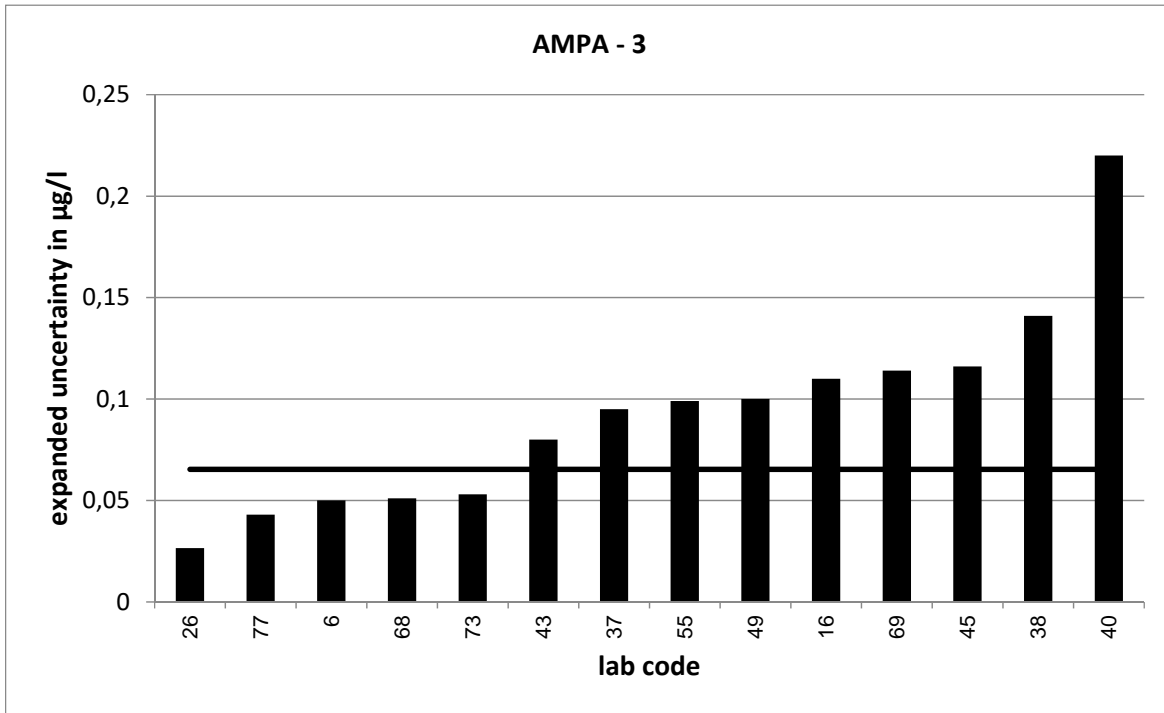


PT 4/20 - TW O5		AMPA - 3			
assigned value [ $\mu\text{g/l}$ ]*		0,4093 $\pm$ 0,0314			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,5864			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2633			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
5	0,3			-1,5	s
6	0,415	0,05	0,2	0,1	s
10	0,422			0,1	s
11	0,411			0,0	s
16	0,494	0,11	1,5	1,0	s
18	0,349			-0,8	s
20	0,428			0,2	s
22	0,43			0,2	s
26	0,388	0,027	-1,0	-0,3	s
28	0,376			-0,5	s
37	0,256	0,095	-3,1	-2,1	q
38	0,365	0,141	-0,6	-0,6	s
40	0,318	0,22	-0,8	-1,3	s
43	0,428	0,08	0,4	0,2	s
45	0,465	0,116	0,9	0,6	s
46	0,503			1,1	s
49	0,5	0,1	1,7	1,0	s
55	0,448	0,099	0,7	0,4	s
63	0,414			0,1	s
65	0,418			0,1	s
68	0,413	0,051	0,1	0,0	s
69	0,457	0,114	0,8	0,5	s
71	0,478			0,8	s
73	0,177	0,053	-7,5	-3,2	u
75	0,432			0,3	s
77	0,417	0,043	0,3	0,1	s
83	0,2574			-2,1	q

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

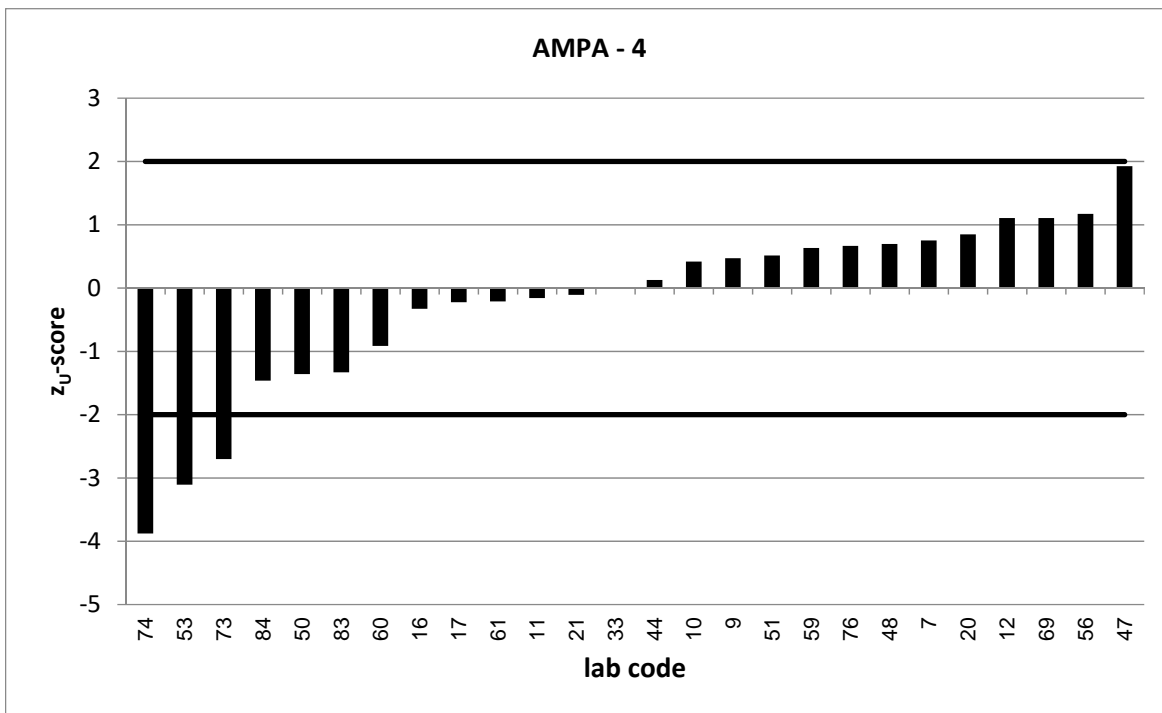
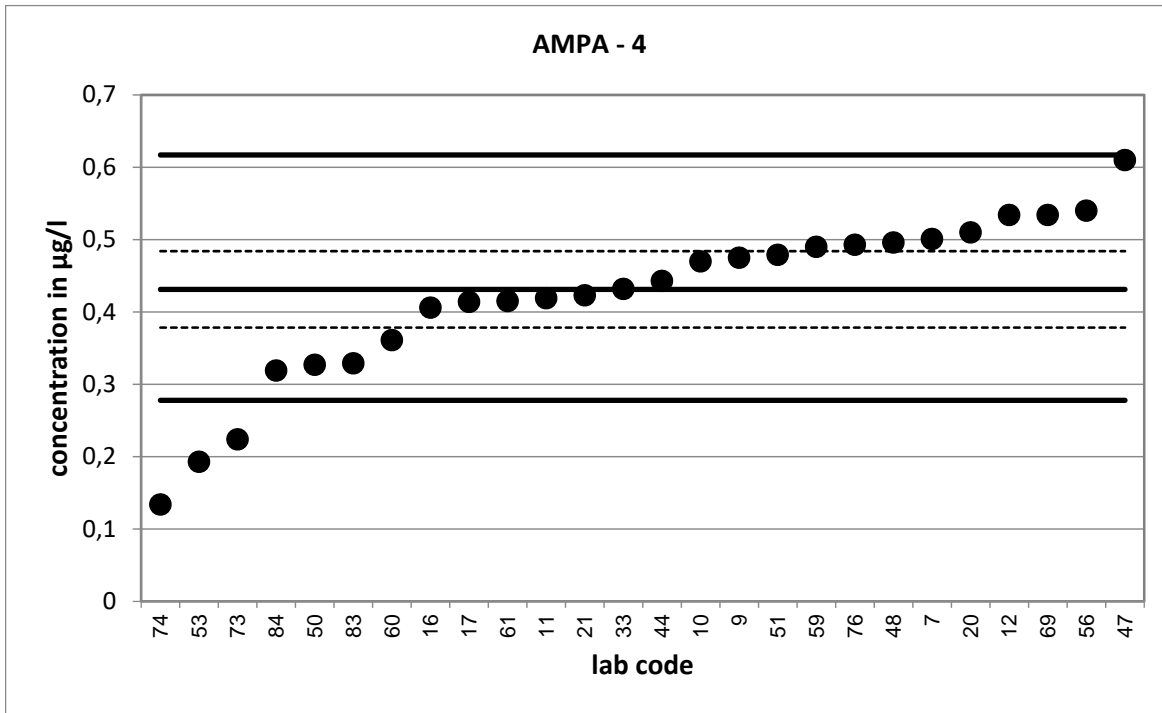




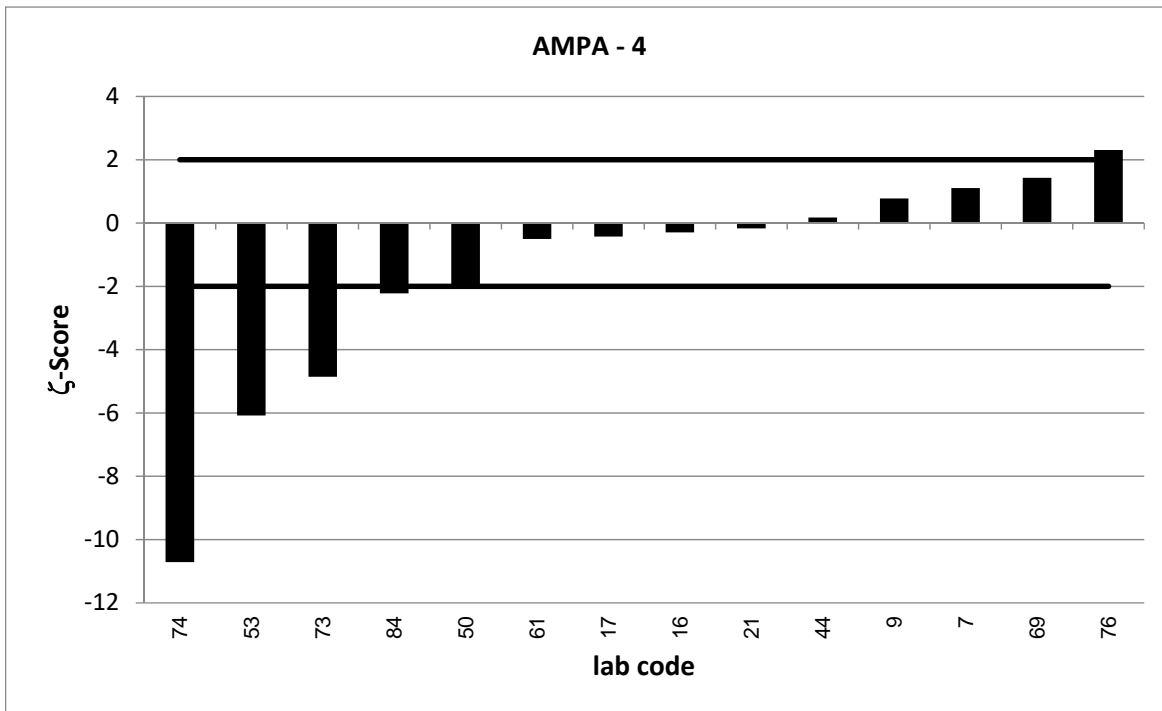
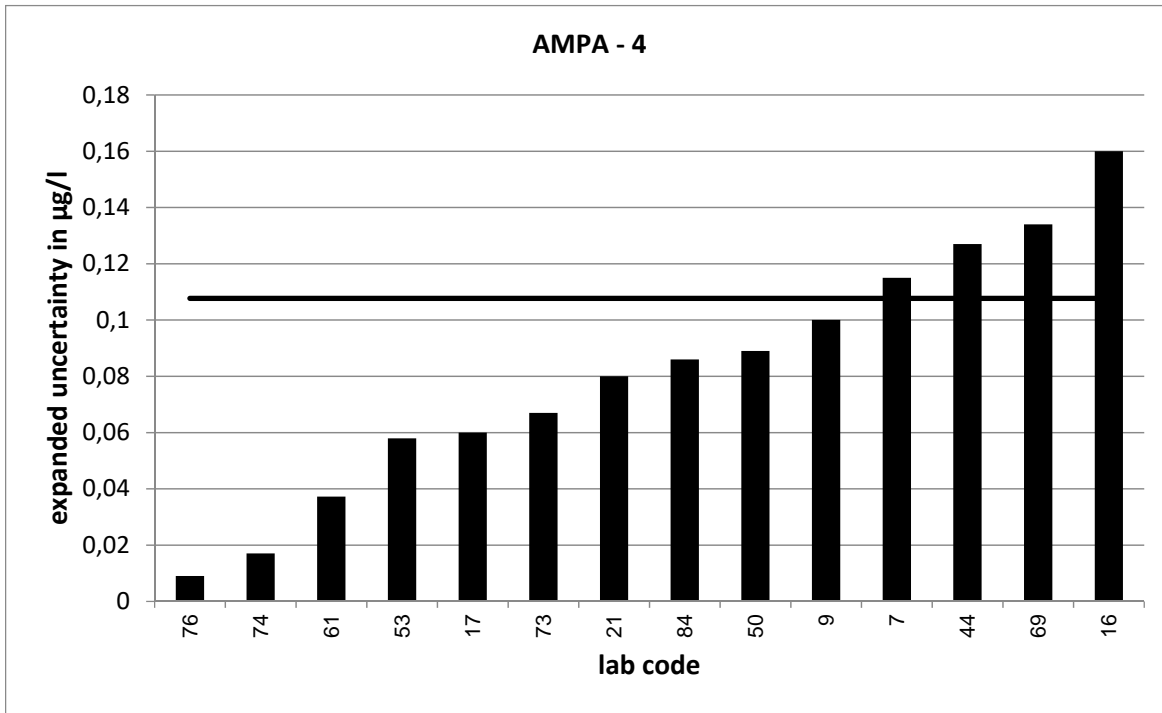
PT 4/20 - TW O5		AMPA - 4			
assigned value [ $\mu\text{g/l}$ ]*		0,4312 $\pm$ 0,0528			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,6171			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,2779			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
7	0,501	0,115	1,1	0,8	s
9	0,475	0,1	0,8	0,5	s
10	0,47			0,4	s
11	0,419			-0,2	s
12	0,534			1,1	s
16	0,406	0,16	-0,3	-0,3	s
17	0,414	0,06	-0,4	-0,2	s
20	0,51			0,8	s
21	0,423	0,08	-0,2	-0,1	s
33	0,432			0,0	s
44	0,443	0,127	0,2	0,1	s
47	0,61			1,9	s
48	0,496			0,7	s
50	0,327	0,089	-2,0	-1,4	s
51	0,479			0,5	s
53	0,193	0,058	-6,1	-3,1	u
56	0,54			1,2	s
59	0,49			0,6	s
60	0,3612			-0,9	s
61	0,415	0,037	-0,5	-0,2	s
69	0,534	0,134	1,4	1,1	s
73	0,224	0,067	-4,9	-2,7	q
74	0,134	0,017	-10,7	-3,9	u
76	0,493	0,009	2,3	0,7	s
83	0,3291			-1,3	s
84	0,319	0,086	-2,2	-1,5	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory



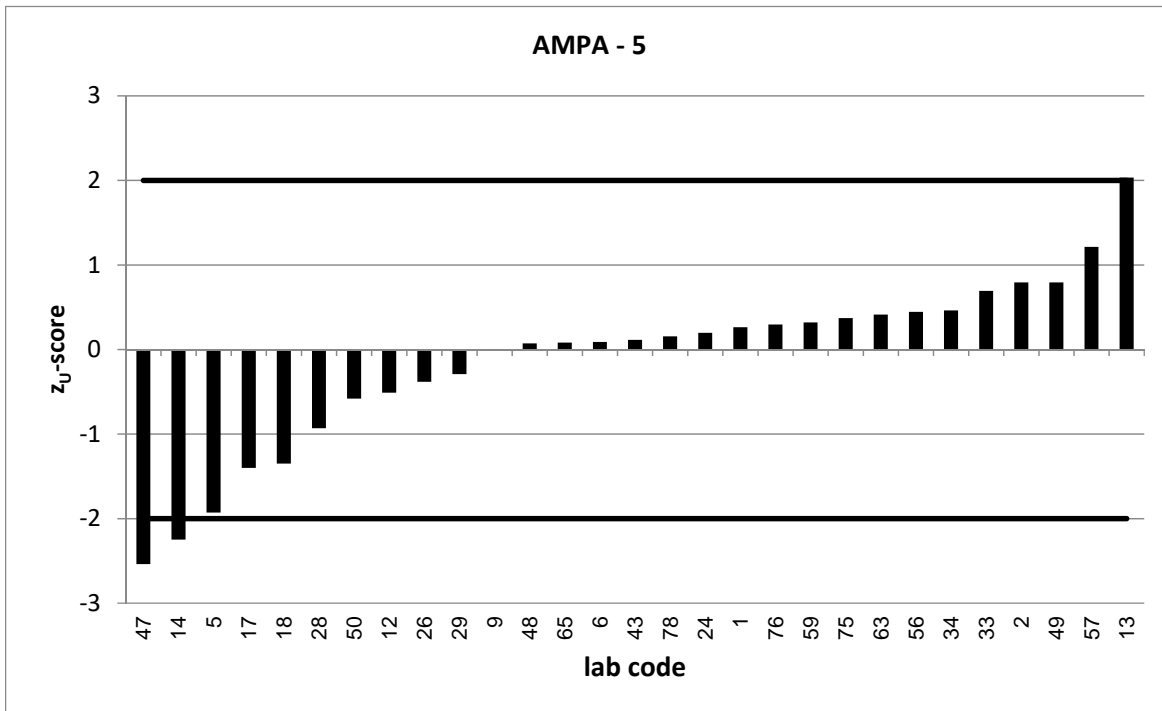
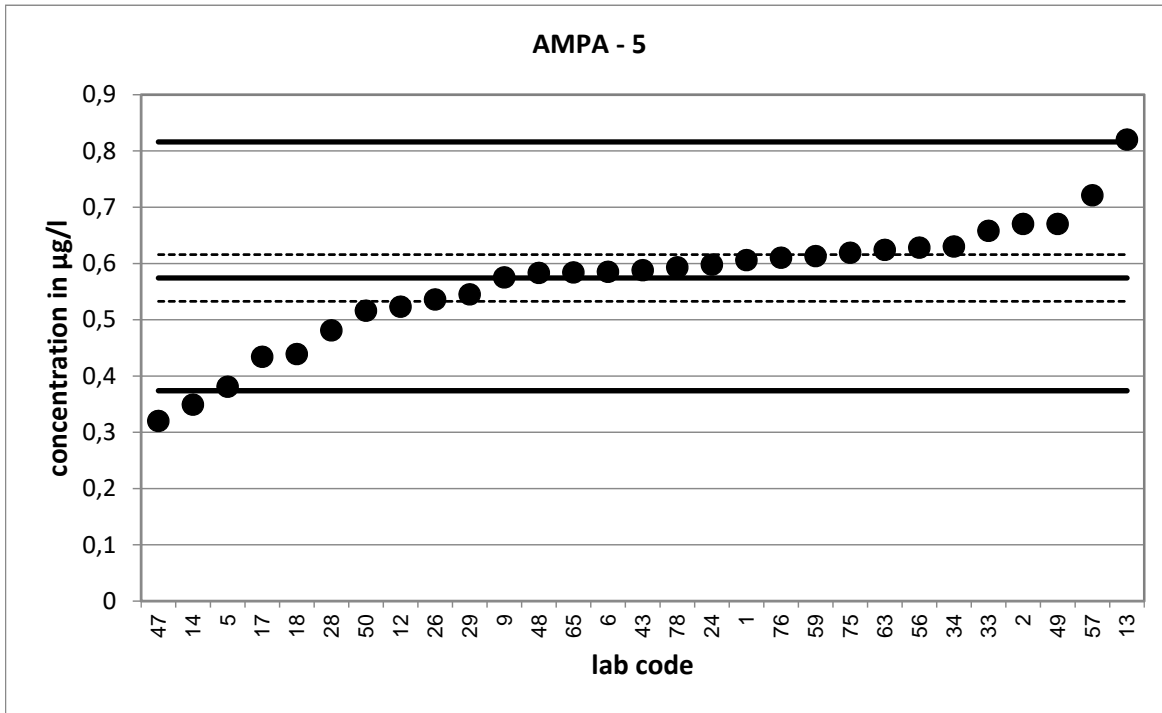


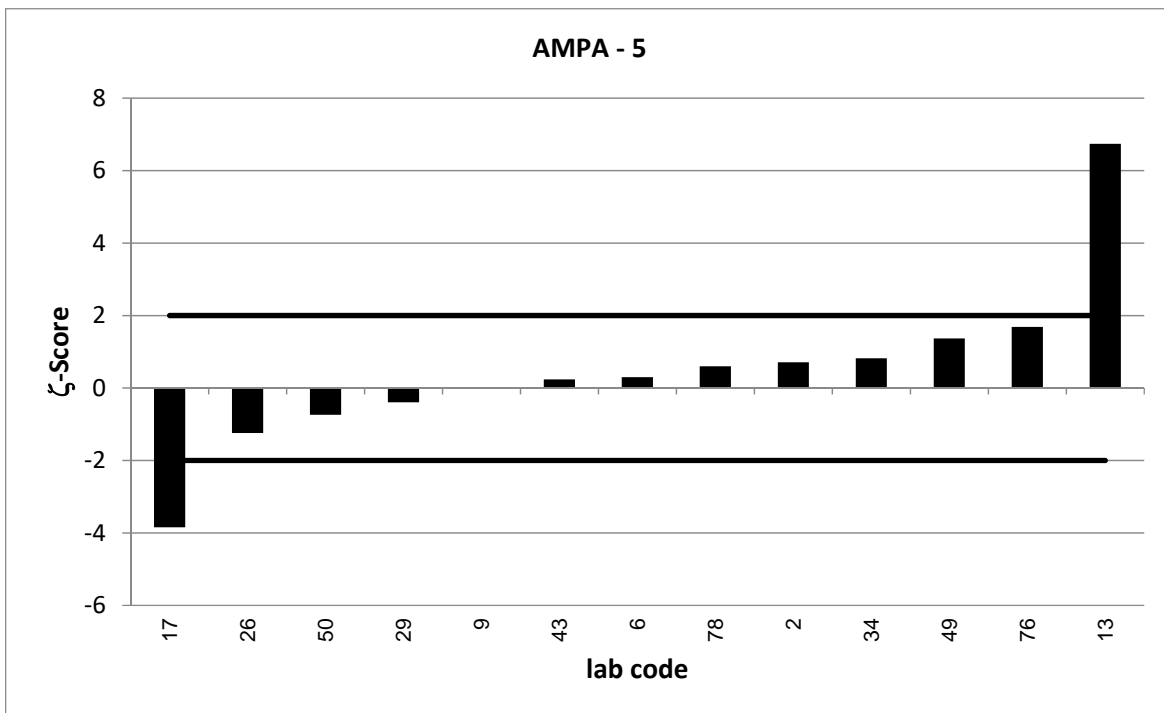
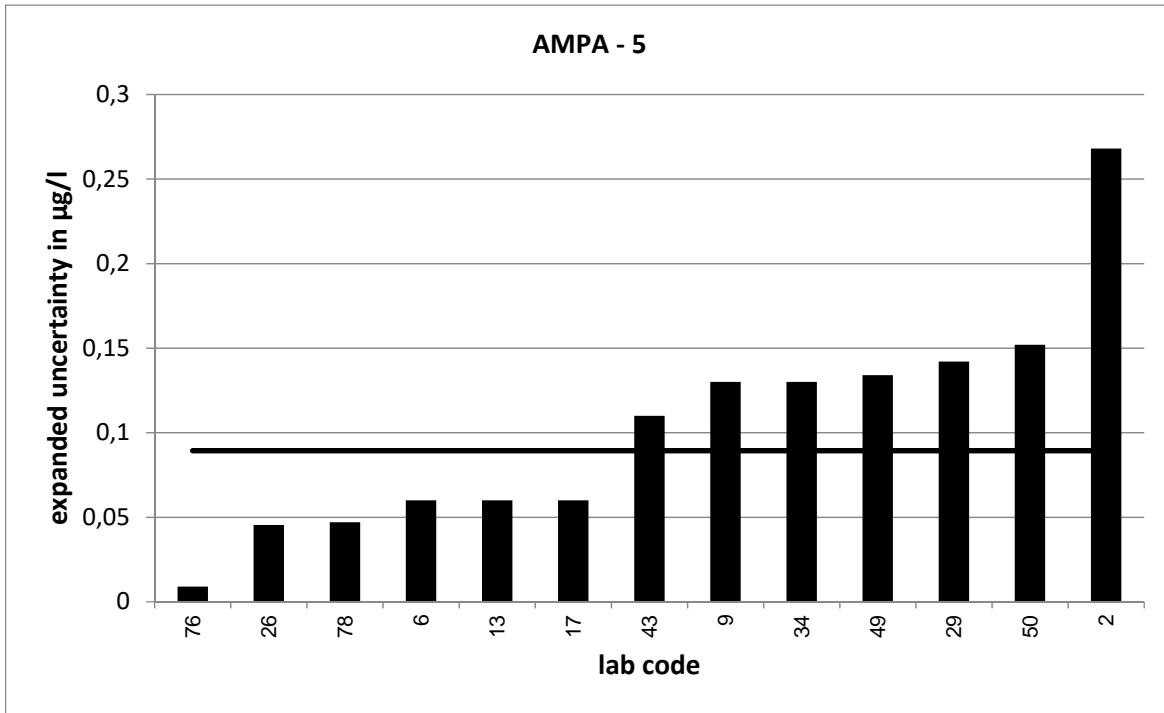


PT 4/20 - TW O5		AMPA - 5			
assigned value [ $\mu\text{g/l}$ ]*		0,5742 $\pm$ 0,0415			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,8161			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,3739			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
1	0,606			0,3	s
2	0,67	0,268	0,7	0,8	s
5	0,381			-1,9	s
6	0,585	0,06	0,3	0,1	s
9	0,575	0,13	0,0	0,0	s
12	0,523			-0,5	s
13	0,82	0,06	6,7	2,0	s
14	0,349			-2,2	q
17	0,434	0,06	-3,8	-1,4	s
18	0,439			-1,4	s
24	0,598			0,2	s
26	0,536	0,045	-1,2	-0,4	s
28	0,481			-0,9	s
29	0,545	0,142	-0,4	-0,3	s
33	0,658			0,7	s
34	0,63	0,13	0,8	0,5	s
43	0,588	0,11	0,2	0,1	s
47	0,32			-2,5	q
48	0,583			0,1	s
49	0,67	0,134	1,4	0,8	s
50	0,516	0,152	-0,7	-0,6	s
56	0,628			0,4	s
57	0,721			1,2	s
59	0,613			0,3	s
63	0,624			0,4	s
65	0,584			0,1	s
75	0,619			0,4	s
76	0,61	0,009	1,7	0,3	s
78	0,593	0,047	0,6	0,2	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory





PT 4/20 - TW O5		AMPA - 6			
assigned value [ $\mu\text{g/l}$ ]*		0,67 $\pm$ 0,0657			
upper tolerance limit [ $\mu\text{g/l}$ ]		0,9487			
lower tolerance limit [ $\mu\text{g/l}$ ]		0,4387			
lab code	result [ $\mu\text{g/l}$ ]	$\pm$	$\zeta$ -score	$z_U$ -score	assessm.**
1	0,356			-2,7	q
2	0,752	0,301	0,5	0,6	s
7	0,756	0,173	0,9	0,6	s
13	1,094	0,06	9,5	3,0	u
14	0,465			-1,8	s
21	0,76	0,15	1,1	0,6	s
22	0,75			0,6	s
24	0,749			0,6	s
29	0,59	0,153	-1,0	-0,7	s
34	0,788	0,16	1,4	0,8	s
37	0,489	0,21	-1,6	-1,6	s
38	0,525	0,207	-1,3	-1,3	s
40	0,469	0,32	-1,2	-1,7	s
44	0,726	0,208	0,5	0,4	s
45	0,795	0,199	1,2	0,9	s
46	0,809			1,0	s
51	0,694			0,2	s
53	0,395	0,119	-4,1	-2,4	q
55	0,756	0,166	1,0	0,6	s
57	0,918			1,8	s
60	0,6462			-0,2	s
61	0,575	0,052	-2,3	-0,8	s
68	0,836	0,103	2,7	1,2	s
71	0,697			0,2	s
74	0,165	0,021	-14,6	-4,4	u
77	0,726	0,075	1,1	0,4	s
78	0,723	0,058	1,2	0,4	s
84	0,44	0,118	-3,4	-2,0	s

\* The stated uncertainty of the assigned value is the expanded uncertainty with a coverage factor  $k=2$  corresponding to a confidence level of about 95%

\*\* s = satisfactory, q = questionable, u = unsatisfactory

