

Proficiency Testing Scheme for Water Analysis

Round M112
Metals

Sample Dispatch: 2 July 2012





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This report summarises the results of round M112 (trace metals) within the IFA-Test Proficiency Testing Scheme for water analysis. The samples M112A and M112B were distributed to the participants on Monday, 2 July 2012. Closing date for reporting results to the IFA-Tulln was Friday, 27 July 2012.

28 laboratories participated in this interlaboratory comparison. All participants submitted results.

Samples

The samples consisted of artificial ground water spiked with pure standards. For sample preparation, ultrapure water was spiked with concentrated solutions of salts in order to simulate the ionic composition of natural Austrian ground water. Ultrapure HNO₃ (0.5 % v/v) was added to stabilise the sample at a pH below 2, which meets the standard sampling procedure in the Austrian monitoring program. The following ultrapure salts were added to the samples: CaCO₃, Mg(NO₃)₂, NaCl, KCl, besides ultrapure H₂SO₄ for sulphate. By this, the matrix of the samples consisted of about 38.7 mg/L Ca²⁺; 16.6 mg/L Mg²⁺; 11.9 mg/L Na⁺; 5.38 mg/L K⁺; 27.8 mg/L SO₄²⁻ and 23.2 mg/L Cl⁻ in 0.5 % HNO₃.

Traces of Ag, Al, As, Pb, Cd, Cr, Fe, Cu, Mn, Ni, Hg, U, Se and Zn were added, using certified atomic spectroscopy standards. For most of the compounds added to the samples, the target concentrations were higher than the minimum quantifiable values of the Austrian ground and river water monitoring program. The calculation of the target concentrations of the compounds was based on the weights of standards used for sample preparation.

Homogeneity, accuracy and stability tests at the IFA-Tulln

Three bottles of round M112A and M112B were analysed for all investigated parameters prior to shipment to the participants. The results are listed in the results tables and the parameter oriented part of the report ("IFA result").

After four weeks all parameters were determined in two samples of the round M112A and M112B. The results of the measurements are listed in the result tables and the parameter oriented part of the report ("Stability test").

According to our experience the samples remain stable up to 18 months for the parameters Al, As, Pb, Cd, Cr, Cu, Fe, Mn, Ni, U, Se and Zn when stored at 4-6 °C in the dark. For the parameters Hg and Ag a concentration decrease of 2 % to 4 % per month can be expected.

Results

Data evaluation was based on target concentrations that were calculated from the weights of the standards used to produce the samples. Their uncertainty intervals correspond to the expanded uncertainty (coverage factor $k = 2$) as described in the EURACHEM/CITAC Guide "Quantifying Uncertainty in Analytical Measurement" (Second Edition).

Recoveries for individual laboratory results and overall mean values are related to the assigned concentrations. The results were tested for outliers by application of the Hampel outlier test (level of significance 99 %). A minimum number of four results was required for the outlier test. Thus, the results for Ag in sample M112B were not checked for outliers.

Standard deviations and coefficients of variation (CVs) were only calculated when at least three results were available. The recoveries of the target concentrations, calculated from outlier-corrected data mean values ranged between 91.8 % (Cu in sample M112A) and 106.2 % (Se in sample M112A).

The between laboratory CVs covered the range between 3.4 % (Al in sample M112A) and 21.8 % (Ag in sample M112A).

All confidence intervals of the outlier-corrected laboratory mean values except Ni (93.3 % ± 4.3 %) in sample M112A encompass the corresponding target values with their uncertainties. For all other parameters, statistically, no difference could be detected between theoretical target concentrations and outlier corrected laboratory means.

z-scores

The most common approach is to form the z-score given by

$$z = \frac{x_i - \bar{x}}{\sigma}$$

z	z-score
x_i	result of laboratory
\bar{x}	target value or mean value („consensus value“)
σ	standard deviation

Thus, the z-score is the ratio of the estimated bias (difference between result and target value) and a standard deviation. The z-score criteria were determined from relative standard deviations from all interlaboratory comparisons that were organised by the IFA-Tulln in the period from 2001 to 2011. They represent long-term performance data of all former participating laboratories. The z-scores are listed together with the recoveries in the tables of the parameter oriented part.

Additionally, each laboratory obtained for every sample a single sheet that summarises the z-scores of the laboratory in graphical and tabular form.

The following table lists the z-score criteria as relative standard deviation and their limits of applicability. Z-scores were only calculated, if the target values were higher than these limits.

Parameter	z-Score-criteria (%)	Lower limit [$\mu\text{g/L}$]
Aluminium	12	10
Arsenic	11	0.5
Cadmium	8.0	0.15
Chromium	7.7	0.5
Copper	8.5	1.5
Iron	9.5	20
Lead	8.4	1
Manganese	7.3	5
Mercury	11	0.2
Nickel	8.6	1.5
Selenium	14	0.5
Silver	17	0.05
Uranium	6.3	1
Zinc	10	3

Normally, a classification based on z-scores is made this way:

z-Score	Classification
<2	satisfactory
2< z <3	questionable
>3	unsatisfactory

Please note that this evaluation is made on the background of the average performance of all participants of the IFA-Test-Systems proficiency testing scheme during the period from 2001 to 2011.

Illustration of results

An explanation to the illustration of the results is given on the following page. Graphical and tabular illustration of results can be divided into a parameter oriented and a laboratory oriented part.

In the **parameter oriented part** the reported results and corresponding uncertainties are illustrated together with recoveries of the target values and the z-scores for each parameter and all laboratories. This information is presented in graphical and tabular form. Results, which were identified as outliers by the Hampel test are marked with an asterisk in the column "out". These values were not considered for the calculation of statistical parameters (mean values, standard deviations and confidence intervals). Moreover, the parameter oriented part contains the uncertainties of the target value. The uncertainty intervals correspond to the expanded uncertainty (coverage factor $k=2$) as described in the EURACHEM / CITAC Guide "Quantifying Uncertainty in Analytical Measurement" (Second Edition). The uncertainty interval of the reference concentration is illustrated in the graphs as a grey band around the 100 % recovery line.

The **laboratory oriented part** contains the measurement results and reported uncertainties of each individual laboratory for all parameters together with the achieved recoveries in graphical and tabular form. This part of the report also lists tables with the results originally reported by the laboratories.

Results, for which no recoveries could be calculated, are illustrated by one of the following symbols: **FN** (false negative), **FP** (false positive) or • - symbol.

- "FN": a result is considered false negative when the "< result" reported is lower than the corresponding target value
- "FP": False positive results can be obtained for compounds not added to the samples: a result is termed FP if it is higher than the corresponding limit of quantification of the analytical procedure employed at the IFA-Tulln.
- "•": All other results for which no recoveries can be calculated are illustrated by this symbol

Tulln, 2 August 2012

Sample C10B
Parameter Dichloromethane

Target value ± U (k=2) 10,4 µg/l ± 0,5 µg/l **Obtained from mass weighed out, U = uncertainty**

IFA result ± U (k=2) 10,2 µg/l ± 1,0 µg/l **Determined at IFA prior to shipment of samples**

Stability test ± U (k=2) 10,2 µg/l ± 1,0 µg/l **Determined at IFA 5 weeks after sample dispatch**

Lab code	Result	Out	+/-	Unit	Recovery	z-Score
A	11,0		1,28	µg/l	106 %	0,30
B	9,0		1,8	µg/l	87 %	-0,71
C	10		2	µg/l	96 %	-0,20
D				µg/l		
E	13,7		0,40	µg/l	132 %	1,67
F	6,8		0,7	µg/l	65 %	-1,82
G	< 20			µg/l		
H				µg/l		
I	11,0			µg/l	106%	0,30
J	24,1	*	1,51	µg/l	232 %	6,93
K	10,09		1,22	µg/l	97 %	-0,16
L	2,76	*		µg/l	27 %	-3,87
M	6,38		1,87	µg/l	61 %	-2,03
N	< 5		0,5	µg/l	FN	
O	15,6	*	4	µg/l	150 %	2,63
P	10,3		1,0	µg/l	99 %	-0,05
Q	10		1,14	µg/l	96 %	-0,20
R	8,88		0,46	µg/l	85 %	-0,77
S				µg/l		
T	9,03		0,08	µg/l	87 %	-0,69
U	22,5	*	0,5	µg/l	216 %	6,12
V	10,33		0,25	µg/l	99 %	-0,04

Recovery of target value in percent

z-Score of the laboratory

An asterisk indicates a result detected as outlier by Hampel test

Interval expected to encompass target value as stated by participant

	All results	Outliers excl.	Unit
Mean +/- CI (99%)	11,3 ± 3,8	9,7 ± 1,6	µg/l
Recov. +/- CI (99%)	108,3 ± 36,3	93,6 ± 15,1	%
SD between labs	5,3	1,9	µg/l
RSD between labs	47,3	19,1	%
n for calculation	17	13	

Between laboratory standard deviation

Overall laboratory mean and recovery with corresponding confidence intervals (p=99%)

Number of data used for calculation of statistic parameters

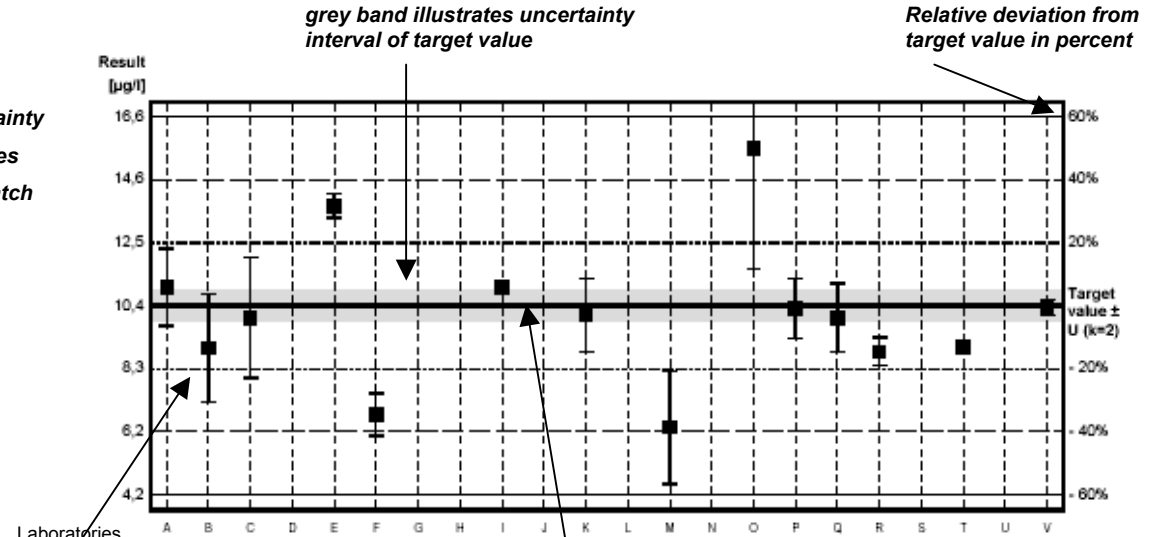
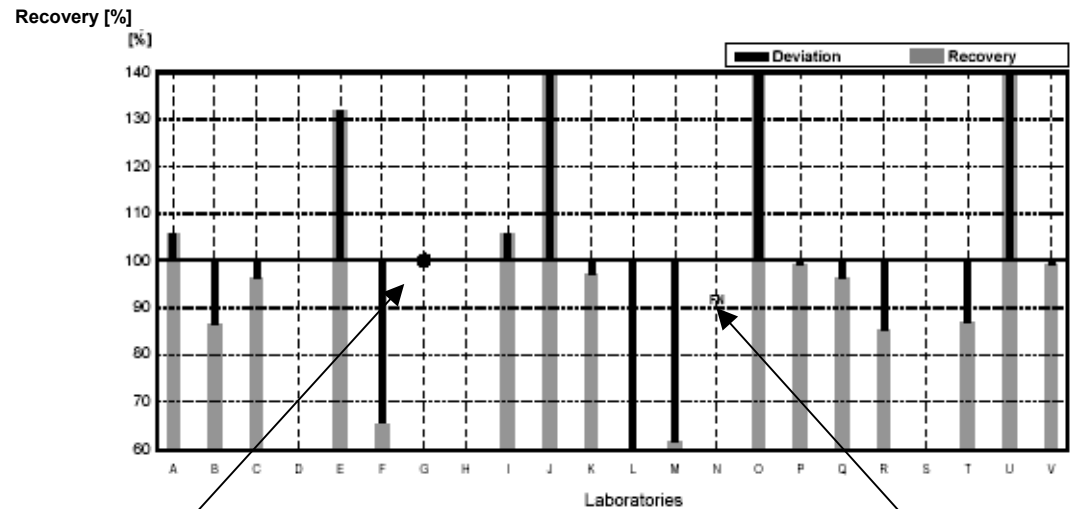


Diagram 1. Measurement results and corresponding uncertainty intervals

Result ± uncertainty as stated by participant

target value obtained from mass weight



Result neither false positive, false negative nor possible to calculate recovery

False negative: reported "<-result" is lower than target value

Diagram 2. Recoveries and deviations from target values

EXPLANATION

Illustration of Results Tables and Parameter Oriented Part

Round M112
Metals

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Results Sample M112A

	Aluminium	Arsenic	Lead	Cadmium	Chromium	Iron	Copper
Target value	57.1	2.86	7.40	0.72	5.42	33.7	4.85
IFA result	57.3	2.96	7.32	0.73	5.24	34.6	4.63
Stability test	59.4	3.09	7.51	0.74	5.38	35.1	4.84
A							
B							
C		<5.0		0.81			
D	57.85	2.90	7.01	0.714	5.455	33.41	4.810
E						38	
F	49.9	3.2	7.3	<1	5.2	27.0	5.0
G	56.7	2.97	7.26	0.679	4.97	34.5	4.57
H	65.3	3.3	7.6	0.6	5.1	33.2	3.8
I							
J	60.79	3.13	7.55	0.76	5.1	31.66	5.23
K	56.2	3.1	7.0	0.70	5.1	32	4.5
L	55.45	3.12	7.22	0.715	5.81	32.55	4.69
M	48.209	3.37	6.547	0.624	5.176	30.794	2.000
N	50					31	
O	57.9	3.09	7.16	0.748	5.31	33.5	4.86
P	56.8	2.96	7.1	0.64	5.3	33.2	4.6
Q	45	2.5	6.2	0.77	5.0	25	4.0
R	56.83	2.95	6.89	0.71	5.38	31.40	3.18
S	55.91	2.62	8.52	0.68	5.36	34.9	5.00
T	56	3.0	7.2	0.66	5.6	34	4.6
U						37	
V		2.7556					
W	57.4	2.61	6.92	0.82	5.44	30.3	3.22
X	46	3	7	0.7	5	85	5
Y						34	
Z	61.5	2.90	7	0.752	5.36	33.95	<5
AA						0.031	
AB	60.2					32.8	4.2

All data in µg/L

Uncertainties Sample M112A

	Aluminium ±	Arsenic ±	Lead ±	Cadmium ±	Chromium ±	Iron ±	Copper ±
Target value	0.5	0.05	0.12	0.01	0.09	0.3	0.13
IFA result	5.7	0.36	0.66	0.05	0.79	2.8	0.37
Stability test	5.9	0.37	0.68	0.05	0.81	2.8	0.39
A							
B							
C		0.5		0.08			
D	8.68	0.58	1.40	0.107	0.818	5.01	0.722
E						5	
F							
G	1.05	0.20	0.13	0.040	0.15	1.06	0.16
H	13.1	0.3	0.8	0.1	0.5	6.6	0.4
I							
J	6.079	0.3756	0.604	0.0608	0.612	8.2316	0.4184
K	3.0	0.3	0.5	0.05	0.2	2	0.5
L	8.32	0.47	1.08	0.107	0.87	4.88	0.70
M	2.0	0.5	0.8	0.5	0.7	1.0	0.4
N	15					13	
O	1.0	0.05	0.3	0.02	0.05	0.5	0.1
P	5.7	0.3	0.71	0.064	0.53	3.32	0.5
Q	0.5	0.2	0.6	0.08	0.5	2	0.4
R							
S	1.68	0.16	0.26	0.10	0.16	1.05	0.15
T	5	0.3	0.7	0.12	0.6	4	0.4
U						3	
V							
W	5.8	0.26	0.70	0.10	0.55	3.0	0.30
X	5	0.4	1	0.1	1	30	2
Y						0.5	
Z	0.65	0.25		0.025	0.72	0.56	
AA						0.003	
AB	6.0					6.6	

All data in µg/L

Results Sample M112A

	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Zinc
Target value	45.1	3.95	1.19	4.17	0.148	5.58	21.6
IFA result	44.6	3.77	1.20	4.27	0.144	5.84	22.3
Stability test	45.4	4.27	1.19	4.48	0.149	5.86	20.9
A						5.42	
B						5.0	
C			<0.1				
D	44.75	4.096	1.15				21.86
E	49						
F	46.6	4.0	1.1	5.1			19.9
G	44.7	3.57	1.07				20.4
H	55.1	3.0	1.00	4.9	<1	5.6	19.5
I			1.206				
J	48.43	3.54	1.2		<0.5		23.77
K	40.6	3.7	1.20	4.46	0.137	5.34	21.4
L	44.53	3.77	1.25				19.94
M	39.499	3.878	0.968	4.103	0.117	5.063	20.992
N	43						
O	46.2	3.88	1.08	4.72	0.151	5.55	21.6
P	43.8	4.1	1.12	4.23	<5		20.6
Q	40	3.6	1.0	4.4	0.20	54	18
R	45.52	4.20	4.08	4.20			20.31
S	44.7	4.19	1.34		<1.0	5.12	23.15
T	44	3.8	1.1	4.2	0.13	5.7	23
U	<50						
V		2.8196					
W	45.6	3.57	1.05	3.99	<2	5.33	21.7
X	55	4	1.1				<20
Y	58						
Z	45.82	3.63	1.02			5.2	21.6
AA	0.045						
AB	41.5						

All data in µg/L

Uncertainties Sample M112A

	Manganese ±	Nickel ±	Mercury ±	Selenium ±	Silver ±	Uranium ±	Zinc ±
Target value	0.4	0.09	0.02	0.04	0.002	0.10	0.2
IFA result	3.6	0.45	0.07	0.43	0.014	0.58	4.5
Stability test	3.6	0.51	0.07	0.45	0.015	0.59	4.2
A							
B						0.456	
C			0.01				
D	6.71	0.614	0.23				3.28
E	10						
F							
G	0.49	0.15	0.02				1.30
H	5.5	0.3	0.1	0.5		0.6	3.9
I							
J	4.843	0.354	0.144				2.377
K	2.0	0.2	0.00	0.50	0.030	0.30	1.0
L	6.68	0.57	0.187				2.99
M	0.6	0.5	0.3	0.5	0.02	0.4	0.4
N	7						
O	0.5	0.1	0.1	0.2	0.005	0.05	0.5
P	4.4	0.41	0.17	0.64	0.5		2.1
Q	4	0.4	0.1	0.4	0.02	5	2
R							
S	1.34	0.25	0.20			0.77	0.70
T	4	0.4	0.2	0.4	0.06	0.6	3
U							
V							
W	4.4	0.37	0.12	0.50		0.55	2.1
X	15	0.8	0.1				
Y	1						
Z	0.4	0.29	0.023				1.26
AA	0.004						
AB	4.2						

All data in µg/L

Results Sample M112B

	Aluminium	Arsenic	Lead	Cadmium	Chromium	Iron	Copper
Target value	18.5	4.77	2.97	1.52	1.85	48.3	3.94
IFA result	19.3	4.81	3.04	1.55	1.82	49.2	3.81
Stability test	20.2	5.17	3.18	1.61	1.91	49.9	3.93
A							
B							
C		5.5		1.70			
D	19.87	4.71	3.93	1.532	1.825	46.80	4.035
E						51	
F	15.3	4.9	3.2	1.5	1.8	40.6	4.1
G	20.2	5.02	2.91	1.50	1.61	47.6	3.84
H	23.9	5.4	3.0	1.4	1.4	51.6	3.1
I							
J	20.51	5.17	3.13	1.63	1.55	46.15	4.4
K	18.7	4.8	2.8	1.47	1.8	45.7	3.7
L	17.97	5.09	2.87	1.50	2.16	45.63	3.86
M	17.794	5.25	2.599	1.286	2.337	43.770	0.953
N	<20					47	
O	18.7	5.16	2.92	1.59	1.84	47.9	3.97
P	<25	5.09	2.86	1.48	1.83	47.2	3.8
Q	16	4.1	2.6	1.5	2.1	36	3.3
R	19.05	4.83	2.54	1.51	1.85	46.01	3.34
S	19.27	4.21	3.60	1.51	1.85	48.2	4.26
T	18	4.7	2.9	1.4	1.9	48	3.9
U						51	
V		5.0386					
W	18.3	4.85	2.79	1.64	1.89	44.6	2.56
X	17	5	3	1.5	2	95	4
Y						50	
Z	19.5	5.34	3	1.543	<5	48.29	<5
AA						0.044	
AB	18.1					46.4	3.2

All data in µg/L

Uncertainties Sample M112B

	Aluminium ±	Arsenic ±	Lead ±	Cadmium ±	Chromium ±	Iron ±	Copper ±
Target value	0.2	0.09	0.03	0.01	0.02	0.4	0.08
IFA result	1.9	0.58	0.27	0.11	0.27	3.9	0.30
Stability test	2	0.62	0.29	0.11	0.29	4	0.31
A							
B							
C		0.5		0.08			
D	2.98	0.94	0.79	0.230	0.274	7.02	0.605
E						7	
F							
G	1.18	0.19	0.14	0.040	0.17	1.02	0.17
H	4.8	0.5	0.3	0.1	0.1	10.3	0.3
I							
J	2.051	0.6204	0.2504	0.1304	0.186	11.999	0.352
K	2.0	0.5	0.2	0.20	0.1	4.0	0.3
L	2.70	0.76	0.43	0.23	0.32	6.84	0.58
M	2.0	0.5	0.8	0.5	0.7	1.0	0.4
N	6					19	
O	0.6	0.05	0.1	0.05	0.02	0.5	0.1
P	2.5	0.51	0.29	0.15	0.18	4.7	0.38
Q	2	0.4	0.3	0.1	0.2	4	0.3
R							
S	0.58	0.25	0.11	0.23	0.06	1.45	0.13
T	2	0.5	0.3	0.2	0.5	5	0.4
U						4	
V							
W	1.8	0.47	0.30	0.16	0.19	4.5	0.27
X	3	0.5	0.5	0.2	0.7	30	2
Y						1.5	
Z	0.76	0.24		0.029		0.54	
AA						0.004	
AB	3.6					4.6	

All data in µg/L

Results Sample M112B

	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Zinc
Target value	18.5	6.19	1.79	1.36	0.074	2.10	14.5
IFA result	18.2	5.94	1.80	1.39	0.077	2.18	15.4
Stability test	18.6	6.52	1.77	1.33	0.075	2.21	14.2
A						2.08	
B						1.5	
C			<0.1				
D	18.54	6.399	1.72				14.53
E	23						
F	18.6	6.0	1.6	2.1			13.4
G	18.4	5.82	1.57				13.3
H	23.8	5.1	1.52	<1	<1	2.1	12.3
I			1.848				
J	19.86	5.77	1.8		<0.5		15.89
K	16.8	5.7	1.74	1.49	0.068	2.02	14.4
L	17.54	5.93	1.85				<20
M	16.463	5.703	1.513	1.361	0.055	1.81	13.825
N	20						
O	18.9	6.08	1.66	1.55	0.0760	2.11	14.3
P	18.2	6.3	1.68	1.46	<5		14
Q	15	5.5	1.6	<2	<0.2	21	12
R	18.40	6.42	6.22	1.35			13.40
S	18.8	5.98	2.13		<1.0	2.13	13.98
T	18	5.8	1.7	<2.0	<0.10	2.2	15
U	<50						
V		5.0520					
W	18.6	5.69	1.47	<1	<2	2.08	13.9
X	<20	6	1.7				<20
Y	25						
Z	18.62	5.41	1.22			1.9	14.5
AA	0.018						
AB	16.3						

All data in µg/L

Uncertainties Sample M112B

	Manganese ±	Nickel ±	Mercury ±	Selenium ±	Silver ±	Uranium ±	Zinc ±
Target value	0.1	0.10	0.03	0.01	0.001	0.02	0.1
IFA result	1.5	0.71	0.11	0.14	0.008	0.22	3.1
Stability test	1.5	0.78	0.11	0.13	0.008	0.22	2.8
A							
B						0.297	
C			0.01				
D	2.78	0.960	0.34				2.18
E	5						
F							
G	0.46	0.15	0.02				1.35
H	2.4	0.5	0.15			0.2	2.5
I							
J	1.986	0.577	0.216				1.589
K	1.0	0.2	0.01	0.50	0.020	0.20	1.0
L	2.63	0.89	0.27				
M	0.6	0.5	0.3	0.7	0.02	0.5	0.4
N	3						
O	0.2	0.2	0.1	0.2	0.005	0.05	0.5
P	1.8	0.63	0.25	0.22	0.5		1.4
Q	2	0.6	0.2			2	1
R							
S	0.56	0.36	0.32			0.32	0.42
T	2	0.6	0.3			0.2	3
U							
V							
W	1.9	0.60	0.16			0.23	1.3
X		0.8	0.15				
Y	1						
Z	0.3	0.28	0.023				1.33
AA	0.002						
AB	3.3						

All data in µg/L

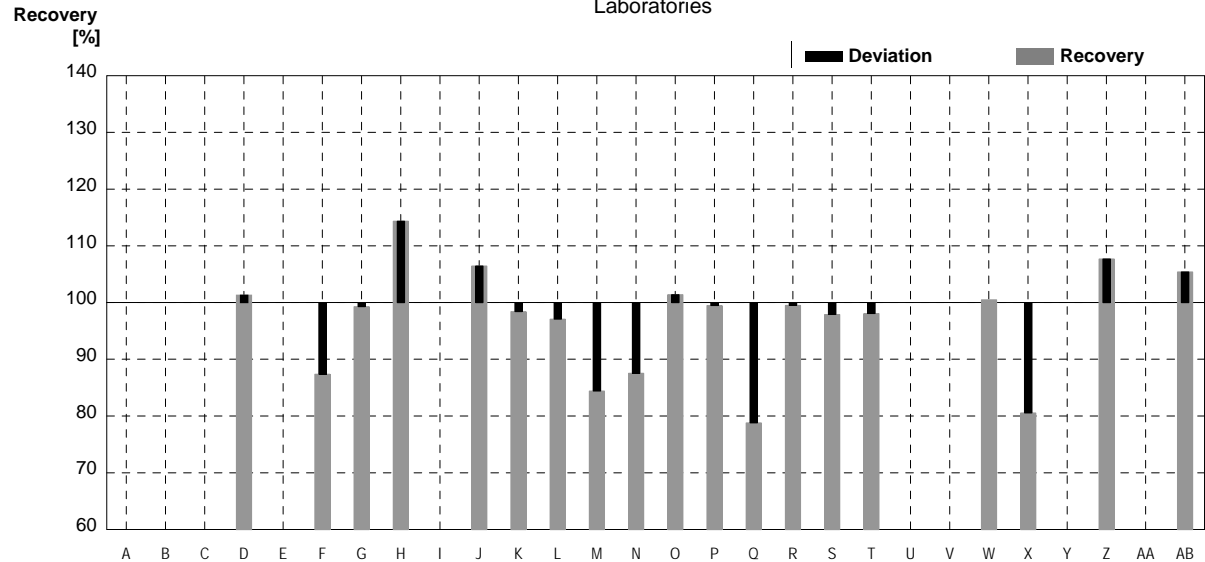
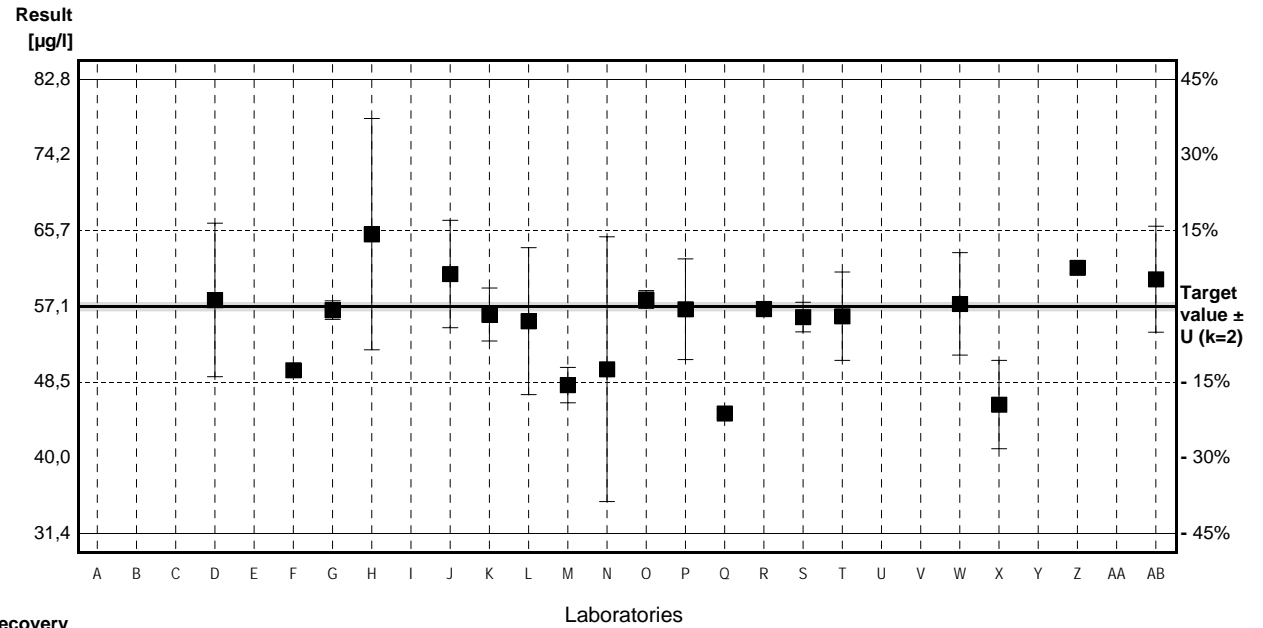
Sample M112A

Parameter Aluminium

Target value $\pm U$ (k=2) 57,1 $\mu\text{g/l}$ \pm 0,5 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 57,3 $\mu\text{g/l}$ \pm 5,7 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 59,4 $\mu\text{g/l}$ \pm 5,9 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	57,85	8,68	$\mu\text{g/l}$	101%	0,11
E			$\mu\text{g/l}$		
F	49,9 *		$\mu\text{g/l}$	87%	-1,05
G	56,7	1,05	$\mu\text{g/l}$	99%	-0,06
H	65,3 *	13,1	$\mu\text{g/l}$	114%	1,20
I			$\mu\text{g/l}$		
J	60,79	6,079	$\mu\text{g/l}$	106%	0,54
K	56,2	3,0	$\mu\text{g/l}$	98%	-0,13
L	55,45	8,32	$\mu\text{g/l}$	97%	-0,24
M	48,209 *	2,0	$\mu\text{g/l}$	84%	-1,30
N	50 *	15	$\mu\text{g/l}$	88%	-1,04
O	57,9	1,0	$\mu\text{g/l}$	101%	0,12
P	56,8	5,7	$\mu\text{g/l}$	99%	-0,04
Q	45 *	0,5	$\mu\text{g/l}$	79%	-1,77
R	56,83		$\mu\text{g/l}$	100%	-0,04
S	55,91	1,68	$\mu\text{g/l}$	98%	-0,17
T	56	5	$\mu\text{g/l}$	98%	-0,16
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	57,4	5,8	$\mu\text{g/l}$	101%	0,04
X	46 *	5	$\mu\text{g/l}$	81%	-1,62
Y			$\mu\text{g/l}$		
Z	61,5	0,65	$\mu\text{g/l}$	108%	0,64
AA			$\mu\text{g/l}$		
AB	60,2	6,0	$\mu\text{g/l}$	105%	0,45

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	55,5 \pm 3,5	57,7 \pm 1,7	$\mu\text{g/l}$
Recov. \pm CI(99%)	97,1 \pm 6,2	101,0 \pm 2,9	%
SD between labs	5,4	2,0	$\mu\text{g/l}$
RSD between labs	9,7	3,4	%
n for calculation	19	13	



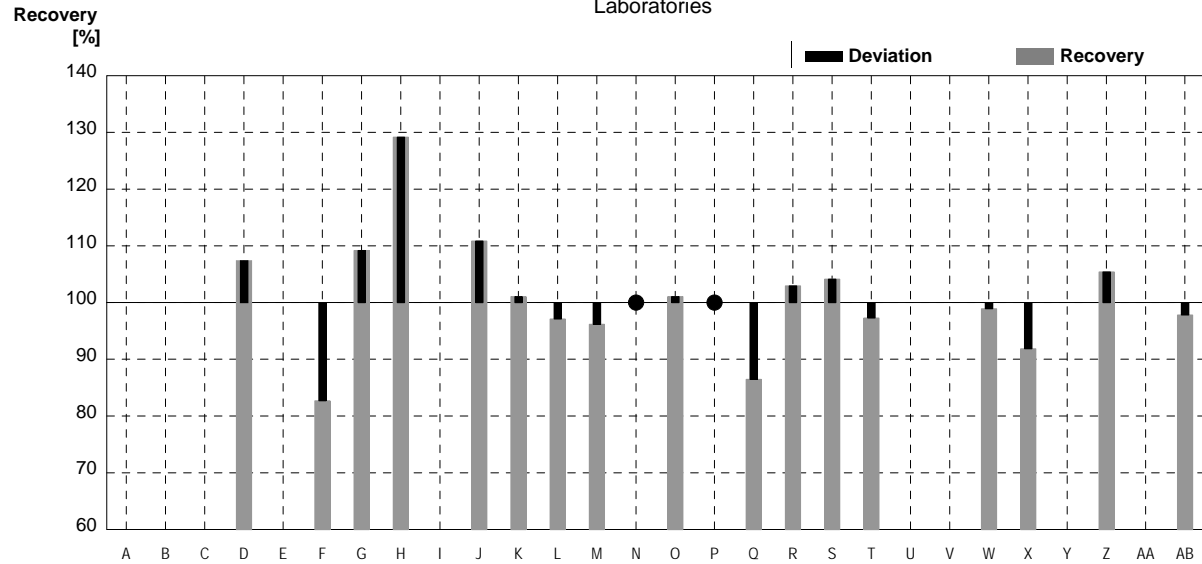
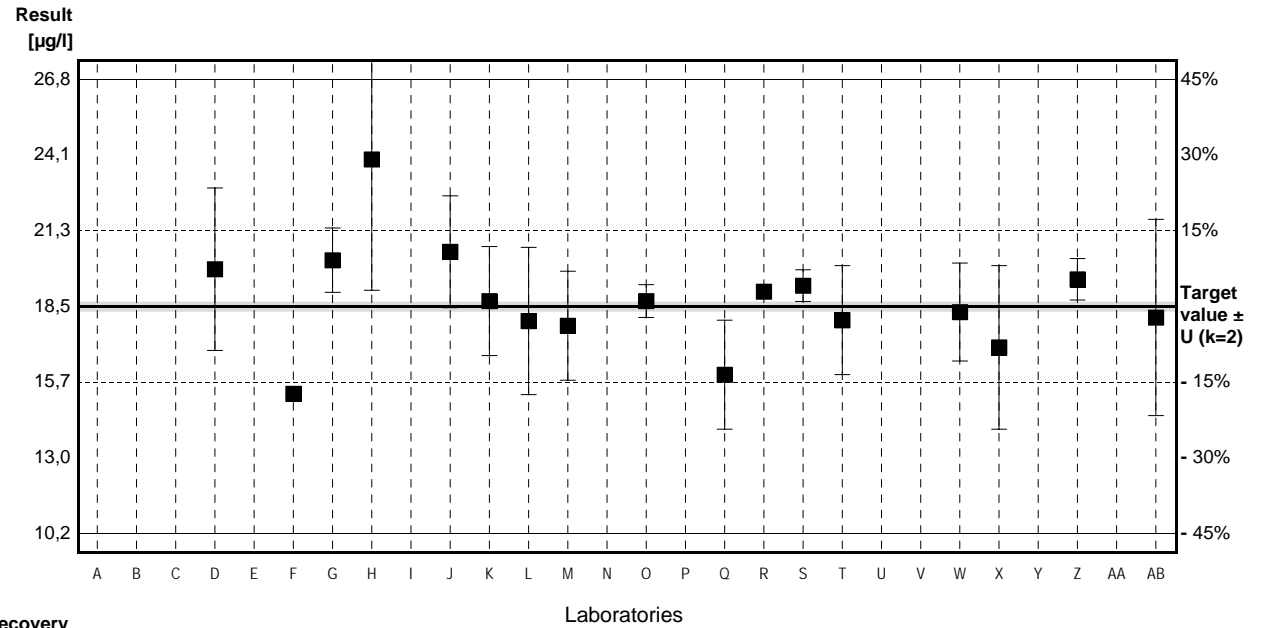
Sample M112B

Parameter Aluminium

Target value ± U (k=2) 18,5 µg/l ± 0,2 µg/l
 IFA result ± U (k=2) 19,3 µg/l ± 1,9 µg/l
 Stability test ± U (k=2) 20,2 µg/l ± 2,0 µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			µg/l		
B			µg/l		
C			µg/l		
D	19,87	2,98	µg/l	107%	0,62
E			µg/l		
F	15,3		µg/l	83%	-1,44
G	20,2	1,18	µg/l	109%	0,77
H	23,9 *	4,8	µg/l	129%	2,43
I			µg/l		
J	20,51	2,051	µg/l	111%	0,91
K	18,7	2,0	µg/l	101%	0,09
L	17,97	2,70	µg/l	97%	-0,24
M	17,794	2,0	µg/l	96%	-0,32
N	<20	6	µg/l	•	
O	18,7	0,6	µg/l	101%	0,09
P	<25	2,5	µg/l	•	
Q	16	2	µg/l	86%	-1,13
R	19,05		µg/l	103%	0,25
S	19,27	0,58	µg/l	104%	0,35
T	18	2	µg/l	97%	-0,23
U			µg/l		
V			µg/l		
W	18,3	1,8	µg/l	99%	-0,09
X	17	3	µg/l	92%	-0,68
Y			µg/l		
Z	19,5	0,76	µg/l	105%	0,45
AA			µg/l		
AB	18,1	3,6	µg/l	98%	-0,18

	All results	Outliers excl.	Unit
Mean ± CI(99%)	18,7 ± 1,4	18,4 ± 1,1	µg/l
Recov. ± CI(99%)	101,2 ± 7,4	99,4 ± 5,7	%
SD between labs	1,9	1,4	µg/l
RSD between labs	10,3	7,8	%
n for calculation	17	16	

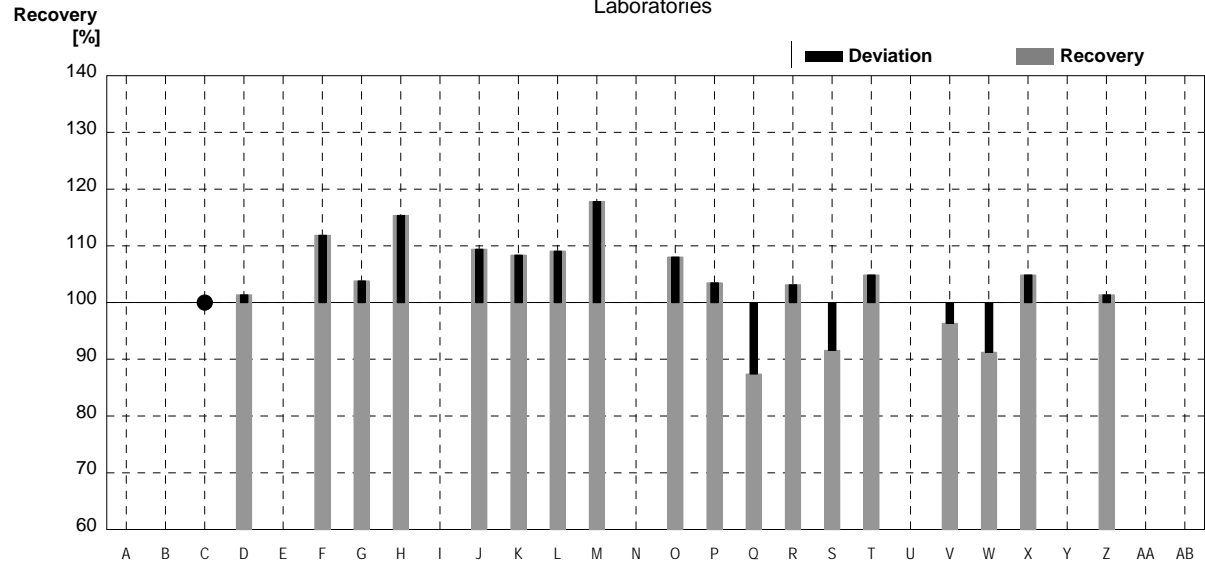
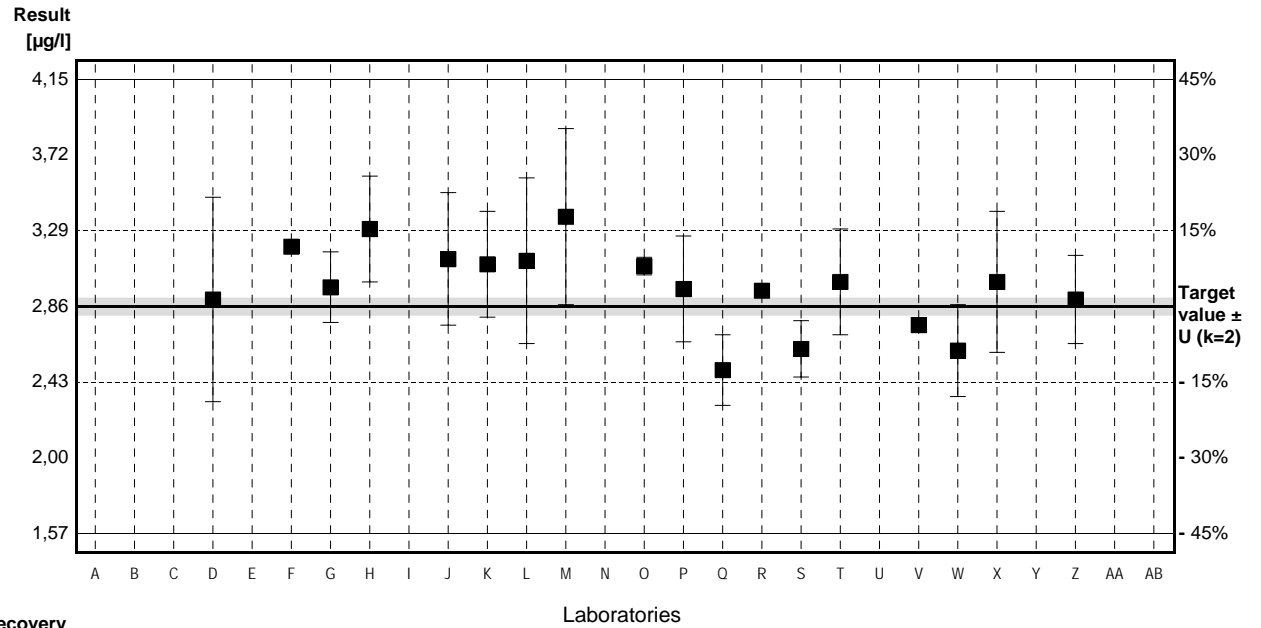


Sample M112A
Parameter Arsenic

Target value $\pm U$ (k=2) 2,86 $\mu\text{g/l}$ \pm 0,05 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 2,96 $\mu\text{g/l}$ \pm 0,36 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 3,09 $\mu\text{g/l}$ \pm 0,37 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C	<5,0	0,5	$\mu\text{g/l}$	•	
D	2,90	0,58	$\mu\text{g/l}$	101%	0,13
E			$\mu\text{g/l}$		
F	3,2		$\mu\text{g/l}$	112%	1,08
G	2,97	0,20	$\mu\text{g/l}$	104%	0,35
H	3,3	0,3	$\mu\text{g/l}$	115%	1,40
I			$\mu\text{g/l}$		
J	3,13	0,3756	$\mu\text{g/l}$	109%	0,86
K	3,1	0,3	$\mu\text{g/l}$	108%	0,76
L	3,12	0,47	$\mu\text{g/l}$	109%	0,83
M	3,37	0,5	$\mu\text{g/l}$	118%	1,62
N			$\mu\text{g/l}$		
O	3,09	0,05	$\mu\text{g/l}$	108%	0,73
P	2,96	0,3	$\mu\text{g/l}$	103%	0,32
Q	2,5	0,2	$\mu\text{g/l}$	87%	-1,14
R	2,95		$\mu\text{g/l}$	103%	0,29
S	2,62	0,16	$\mu\text{g/l}$	92%	-0,76
T	3,0	0,3	$\mu\text{g/l}$	105%	0,45
U			$\mu\text{g/l}$		
V	2,7556		$\mu\text{g/l}$	96%	-0,33
W	2,61	0,26	$\mu\text{g/l}$	91%	-0,79
X	3	0,4	$\mu\text{g/l}$	105%	0,45
Y			$\mu\text{g/l}$		
Z	2,90	0,25	$\mu\text{g/l}$	101%	0,13
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	2,97 \pm 0,16	2,97 \pm 0,16	$\mu\text{g/l}$
Recov. \pm CI(99%)	103,9 \pm 5,6	103,9 \pm 5,6	%
SD between labs	0,23	0,23	$\mu\text{g/l}$
RSD between labs	7,9	7,9	%
n for calculation	18	18	

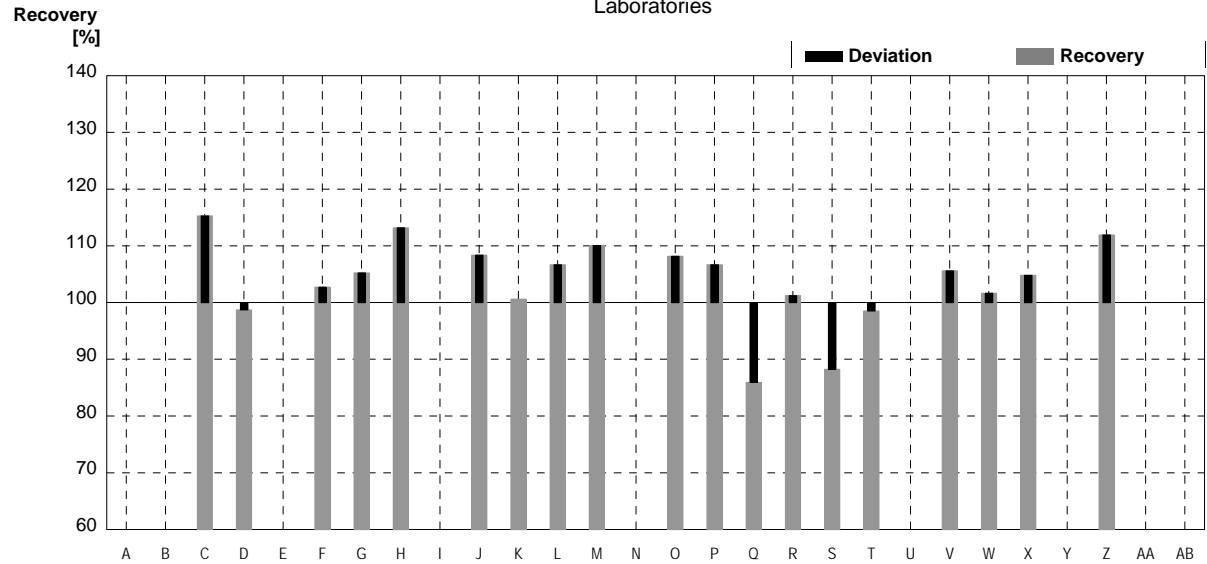
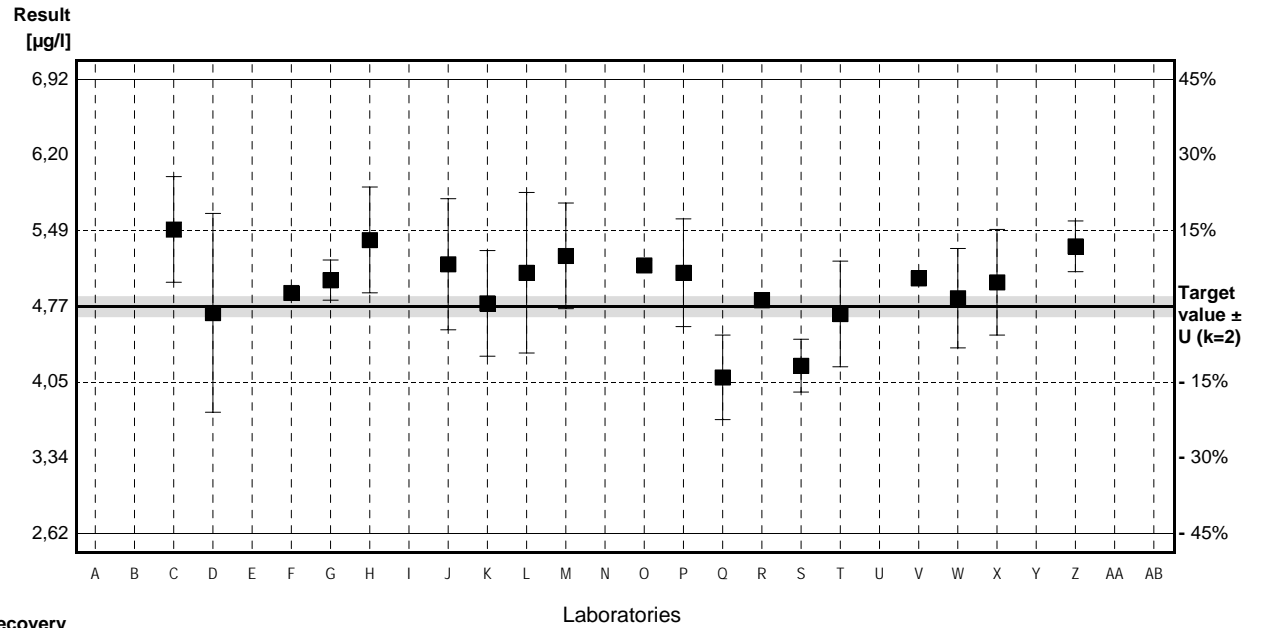


Sample M112B
Parameter Arsenic

Target value $\pm U$ (k=2) 4,77 $\mu\text{g/l}$ \pm 0,09 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 4,81 $\mu\text{g/l}$ \pm 0,58 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 5,17 $\mu\text{g/l}$ \pm 0,62 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C	5,5	0,5	$\mu\text{g/l}$	115%	1,39
D	4,71	0,94	$\mu\text{g/l}$	99%	-0,11
E			$\mu\text{g/l}$		
F	4,9		$\mu\text{g/l}$	103%	0,25
G	5,02	0,19	$\mu\text{g/l}$	105%	0,48
H	5,4	0,5	$\mu\text{g/l}$	113%	1,20
I			$\mu\text{g/l}$		
J	5,17	0,6204	$\mu\text{g/l}$	108%	0,76
K	4,8	0,5	$\mu\text{g/l}$	101%	0,06
L	5,09	0,76	$\mu\text{g/l}$	107%	0,61
M	5,25	0,5	$\mu\text{g/l}$	110%	0,91
N			$\mu\text{g/l}$		
O	5,16	0,05	$\mu\text{g/l}$	108%	0,74
P	5,09	0,51	$\mu\text{g/l}$	107%	0,61
Q	4,1 *	0,4	$\mu\text{g/l}$	86%	-1,28
R	4,83		$\mu\text{g/l}$	101%	0,11
S	4,21	0,25	$\mu\text{g/l}$	88%	-1,07
T	4,7	0,5	$\mu\text{g/l}$	99%	-0,13
U			$\mu\text{g/l}$		
V	5,0386		$\mu\text{g/l}$	106%	0,51
W	4,85	0,47	$\mu\text{g/l}$	102%	0,15
X	5	0,5	$\mu\text{g/l}$	105%	0,44
Y			$\mu\text{g/l}$		
Z	5,34	0,24	$\mu\text{g/l}$	112%	1,09
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	4,96 \pm 0,24	5,00 \pm 0,21	$\mu\text{g/l}$
Recov. \pm CI(99%)	103,9 \pm 5,0	104,9 \pm 4,3	%
SD between labs	0,36	0,30	$\mu\text{g/l}$
RSD between labs	7,3	6,1	%
n for calculation	19	18	



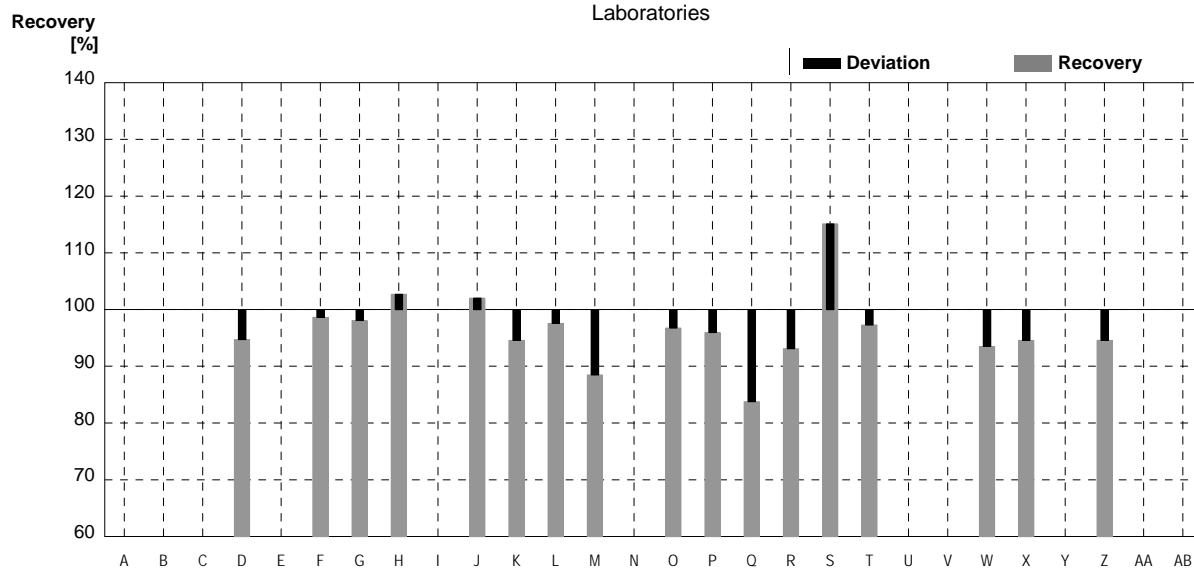
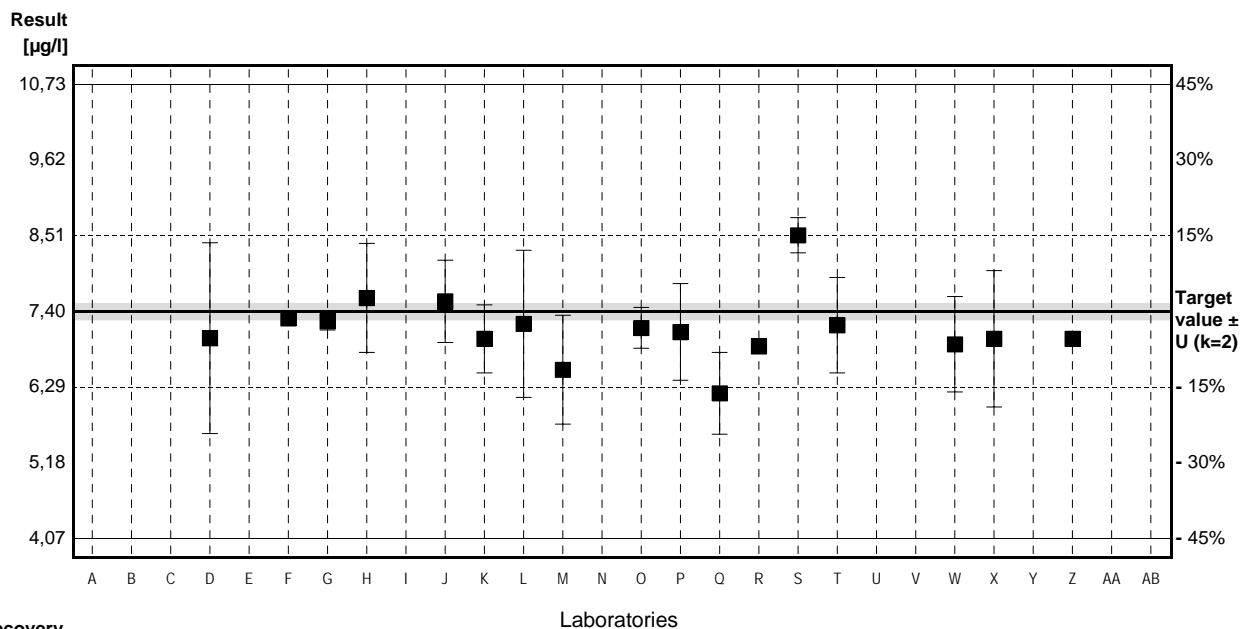
Sample M112A

Parameter Lead

Target value $\pm U$ (k=2) 7,40 $\mu\text{g/l}$ \pm 0,12 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 7,32 $\mu\text{g/l}$ \pm 0,66 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 7,51 $\mu\text{g/l}$ \pm 0,68 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	7,01	1,40	$\mu\text{g/l}$	95%	-0,63
E			$\mu\text{g/l}$		
F	7,3		$\mu\text{g/l}$	99%	-0,16
G	7,26	0,13	$\mu\text{g/l}$	98%	-0,23
H	7,6	0,8	$\mu\text{g/l}$	103%	0,32
I			$\mu\text{g/l}$		
J	7,55	0,604	$\mu\text{g/l}$	102%	0,24
K	7,0	0,5	$\mu\text{g/l}$	95%	-0,64
L	7,22	1,08	$\mu\text{g/l}$	98%	-0,29
M	6,547	0,8	$\mu\text{g/l}$	88%	-1,37
N			$\mu\text{g/l}$		
O	7,16	0,3	$\mu\text{g/l}$	97%	-0,39
P	7,1	0,71	$\mu\text{g/l}$	96%	-0,48
Q	6,2 *	0,6	$\mu\text{g/l}$	84%	-1,93
R	6,89		$\mu\text{g/l}$	93%	-0,82
S	8,52 *	0,26	$\mu\text{g/l}$	115%	1,80
T	7,2	0,7	$\mu\text{g/l}$	97%	-0,32
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	6,92	0,70	$\mu\text{g/l}$	94%	-0,77
X	7	1	$\mu\text{g/l}$	95%	-0,64
Y			$\mu\text{g/l}$		
Z	7		$\mu\text{g/l}$	95%	-0,64
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	7,15 \pm 0,34	7,12 \pm 0,20	$\mu\text{g/l}$
Recov. \pm CI(99%)	96,6 \pm 4,6	96,2 \pm 2,7	%
SD between labs	0,48	0,26	$\mu\text{g/l}$
RSD between labs	6,8	3,7	%
n for calculation	17	15	



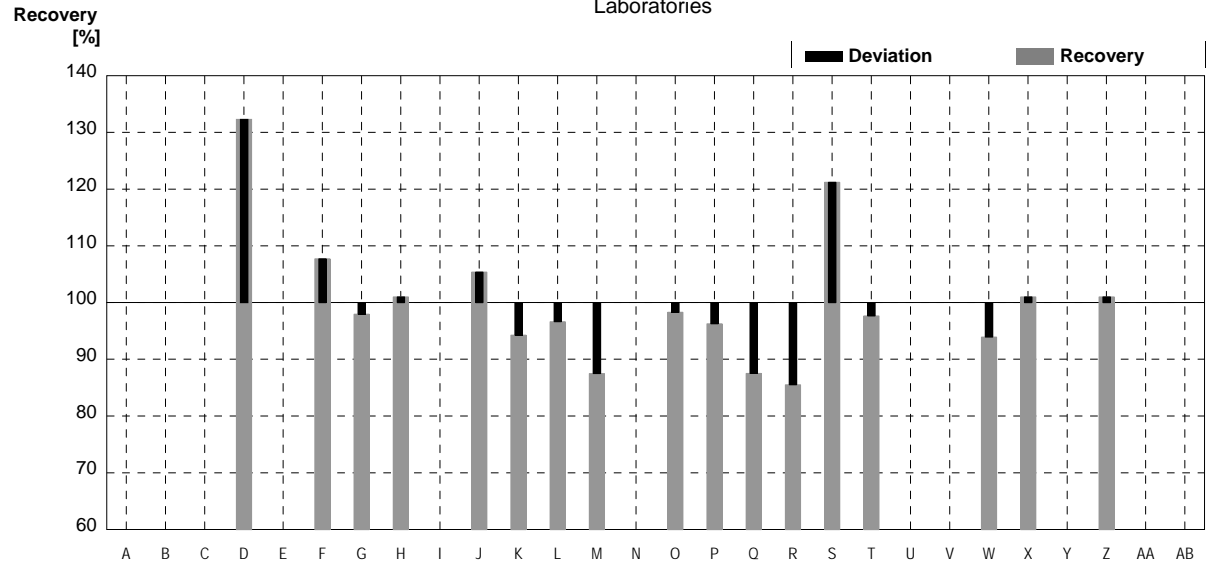
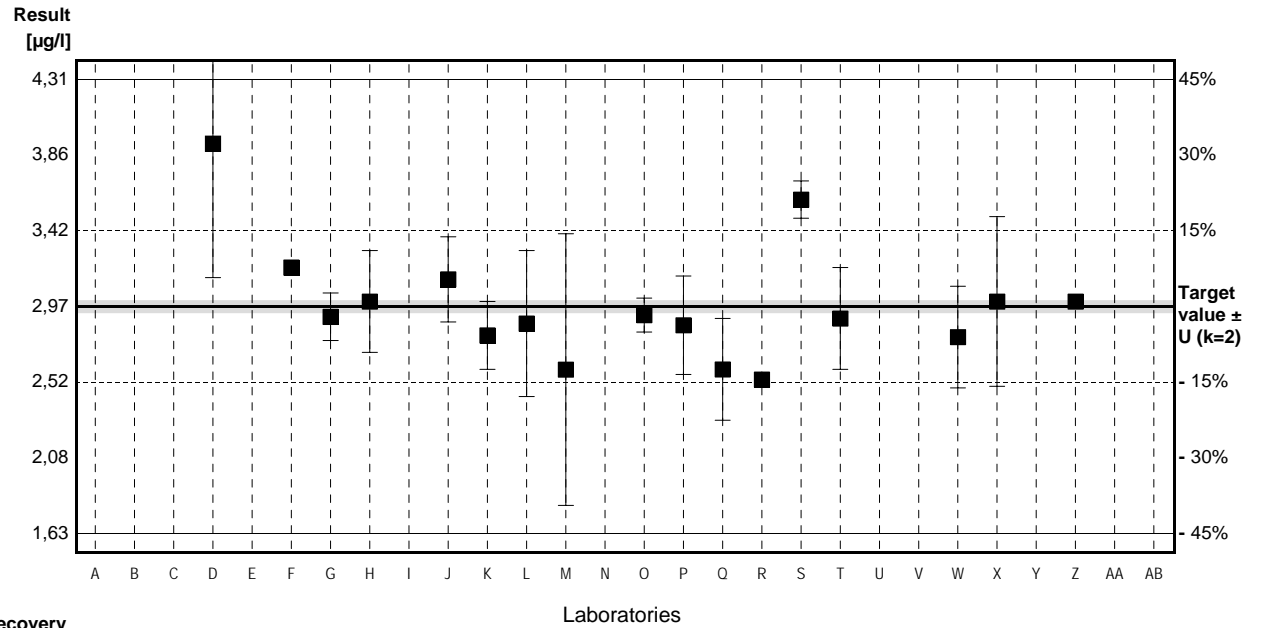
Sample M112B

Parameter Lead

Target value $\pm U$ (k=2) 2,97 $\mu\text{g/l}$ \pm 0,03 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 3,04 $\mu\text{g/l}$ \pm 0,27 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 3,18 $\mu\text{g/l}$ \pm 0,29 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	3,93 *	0,79	$\mu\text{g/l}$	132%	3,85
E			$\mu\text{g/l}$		
F	3,2		$\mu\text{g/l}$	108%	0,92
G	2,91	0,14	$\mu\text{g/l}$	98%	-0,24
H	3,0	0,3	$\mu\text{g/l}$	101%	0,12
I			$\mu\text{g/l}$		
J	3,13	0,2504	$\mu\text{g/l}$	105%	0,64
K	2,8	0,2	$\mu\text{g/l}$	94%	-0,68
L	2,87	0,43	$\mu\text{g/l}$	97%	-0,40
M	2,599	0,8	$\mu\text{g/l}$	88%	-1,49
N			$\mu\text{g/l}$		
O	2,92	0,1	$\mu\text{g/l}$	98%	-0,20
P	2,86	0,29	$\mu\text{g/l}$	96%	-0,44
Q	2,6	0,3	$\mu\text{g/l}$	88%	-1,48
R	2,54		$\mu\text{g/l}$	86%	-1,72
S	3,60 *	0,11	$\mu\text{g/l}$	121%	2,53
T	2,9	0,3	$\mu\text{g/l}$	98%	-0,28
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	2,79	0,30	$\mu\text{g/l}$	94%	-0,72
X	3	0,5	$\mu\text{g/l}$	101%	0,12
Y			$\mu\text{g/l}$		
Z	3		$\mu\text{g/l}$	101%	0,12
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	2,98 \pm 0,25	2,87 \pm 0,15	$\mu\text{g/l}$
Recov. \pm CI(99%)	100,3 \pm 8,3	96,8 \pm 4,9	%
SD between labs	0,35	0,19	$\mu\text{g/l}$
RSD between labs	11,7	6,6	%
n for calculation	17	15	

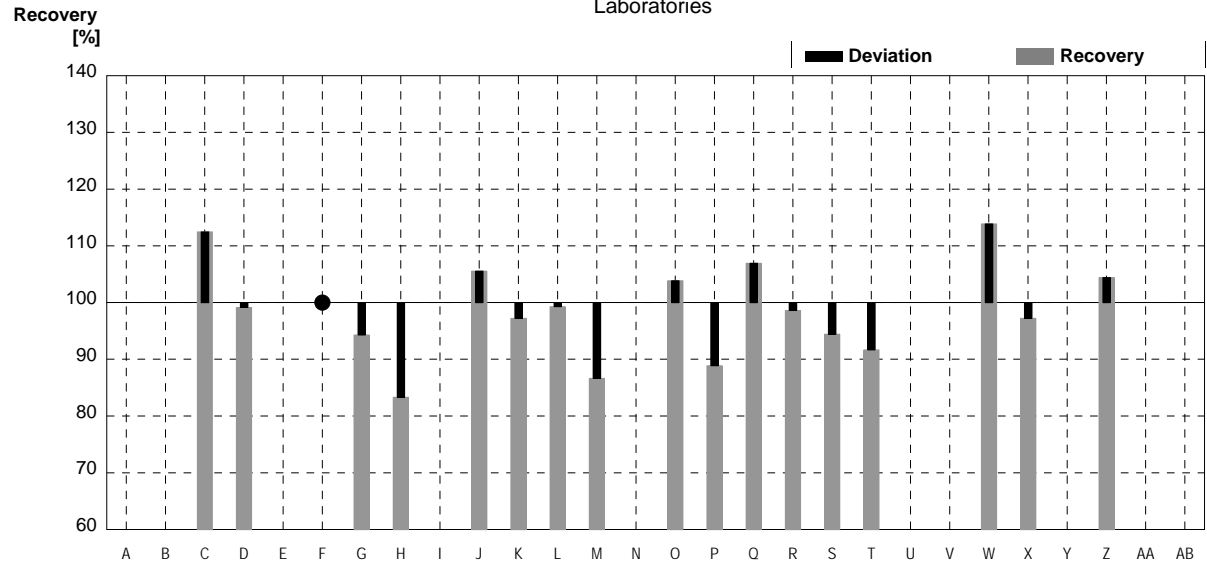
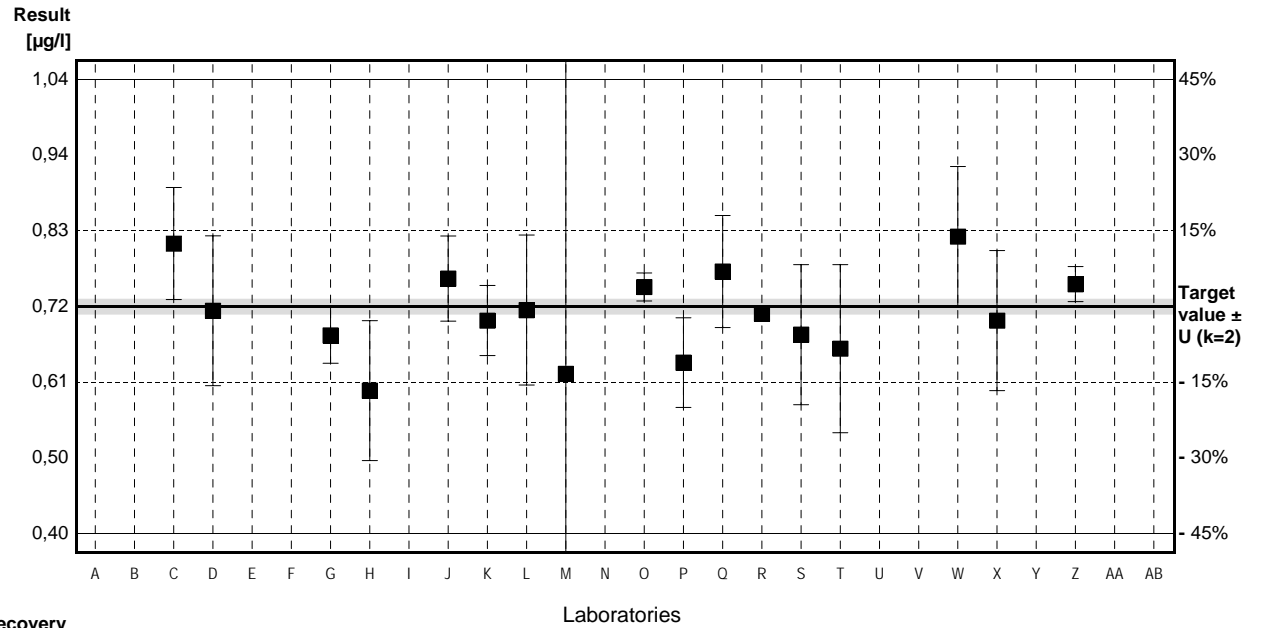


Sample M112A
Parameter Cadmium

Target value $\pm U$ (k=2) 0,72 $\mu\text{g/l}$ \pm 0,01 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 0,73 $\mu\text{g/l}$ \pm 0,05 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 0,74 $\mu\text{g/l}$ \pm 0,05 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C	0,81	0,08	$\mu\text{g/l}$	113%	1,56
D	0,714	0,107	$\mu\text{g/l}$	99%	-0,10
E			$\mu\text{g/l}$		
F	<1		$\mu\text{g/l}$	•	
G	0,679	0,040	$\mu\text{g/l}$	94%	-0,71
H	0,6	0,1	$\mu\text{g/l}$	83%	-2,08
I			$\mu\text{g/l}$		
J	0,76	0,0608	$\mu\text{g/l}$	106%	0,69
K	0,70	0,05	$\mu\text{g/l}$	97%	-0,35
L	0,715	0,107	$\mu\text{g/l}$	99%	-0,09
M	0,624	0,5	$\mu\text{g/l}$	87%	-1,67
N			$\mu\text{g/l}$		
O	0,748	0,02	$\mu\text{g/l}$	104%	0,49
P	0,64	0,064	$\mu\text{g/l}$	89%	-1,39
Q	0,77	0,08	$\mu\text{g/l}$	107%	0,87
R	0,71		$\mu\text{g/l}$	99%	-0,17
S	0,68	0,10	$\mu\text{g/l}$	94%	-0,69
T	0,66	0,12	$\mu\text{g/l}$	92%	-1,04
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	0,82	0,10	$\mu\text{g/l}$	114%	1,74
X	0,7	0,1	$\mu\text{g/l}$	97%	-0,35
Y			$\mu\text{g/l}$		
Z	0,752	0,025	$\mu\text{g/l}$	104%	0,56
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,71 \pm 0,04	0,71 \pm 0,04	$\mu\text{g/l}$
Recov. \pm CI(99%)	98,7 \pm 6,0	98,7 \pm 6,0	%
SD between labs	0,06	0,06	$\mu\text{g/l}$
RSD between labs	8,6	8,6	%
n for calculation	17	17	

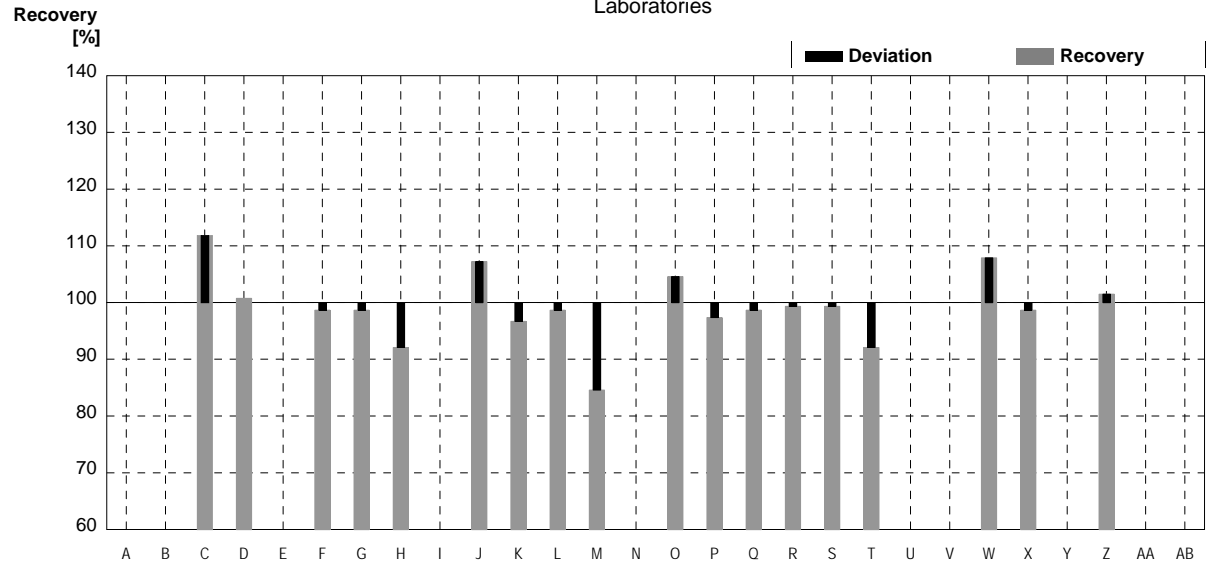
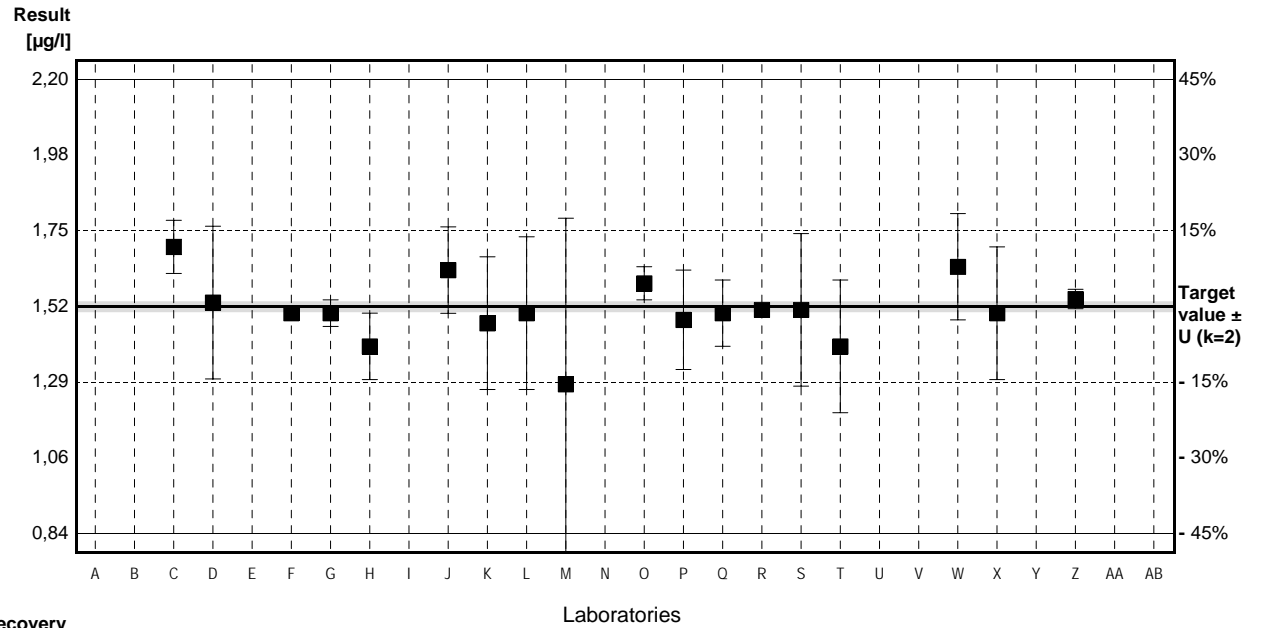


Sample M112B
Parameter Cadmium

Target value $\pm U$ (k=2) 1,52 $\mu\text{g/l}$ \pm 0,01 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 1,55 $\mu\text{g/l}$ \pm 0,11 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 1,61 $\mu\text{g/l}$ \pm 0,11 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C	1,70 *	0,08	$\mu\text{g/l}$	112%	1,48
D	1,532	0,230	$\mu\text{g/l}$	101%	0,10
E			$\mu\text{g/l}$		
F	1,5		$\mu\text{g/l}$	99%	-0,16
G	1,50	0,040	$\mu\text{g/l}$	99%	-0,16
H	1,4	0,1	$\mu\text{g/l}$	92%	-0,99
I			$\mu\text{g/l}$		
J	1,63	0,1304	$\mu\text{g/l}$	107%	0,90
K	1,47	0,20	$\mu\text{g/l}$	97%	-0,41
L	1,50	0,23	$\mu\text{g/l}$	99%	-0,16
M	1,286 *	0,5	$\mu\text{g/l}$	85%	-1,92
N			$\mu\text{g/l}$		
O	1,59	0,05	$\mu\text{g/l}$	105%	0,58
P	1,48	0,15	$\mu\text{g/l}$	97%	-0,33
Q	1,5	0,1	$\mu\text{g/l}$	99%	-0,16
R	1,51		$\mu\text{g/l}$	99%	-0,08
S	1,51	0,23	$\mu\text{g/l}$	99%	-0,08
T	1,4	0,2	$\mu\text{g/l}$	92%	-0,99
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	1,64	0,16	$\mu\text{g/l}$	108%	0,99
X	1,5	0,2	$\mu\text{g/l}$	99%	-0,16
Y			$\mu\text{g/l}$		
Z	1,543	0,029	$\mu\text{g/l}$	102%	0,19
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	1,51 \pm 0,06	1,51 \pm 0,05	$\mu\text{g/l}$
Recov. \pm CI(99%)	99,4 \pm 4,3	99,5 \pm 3,2	%
SD between labs	0,09	0,07	$\mu\text{g/l}$
RSD between labs	6,3	4,4	%
n for calculation	18	16	

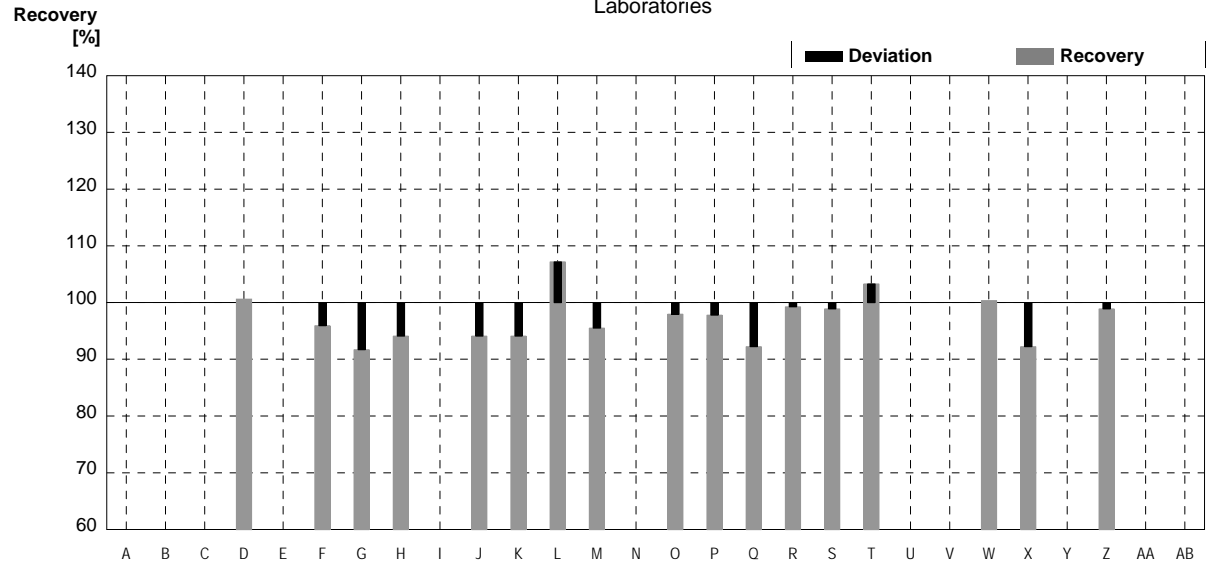
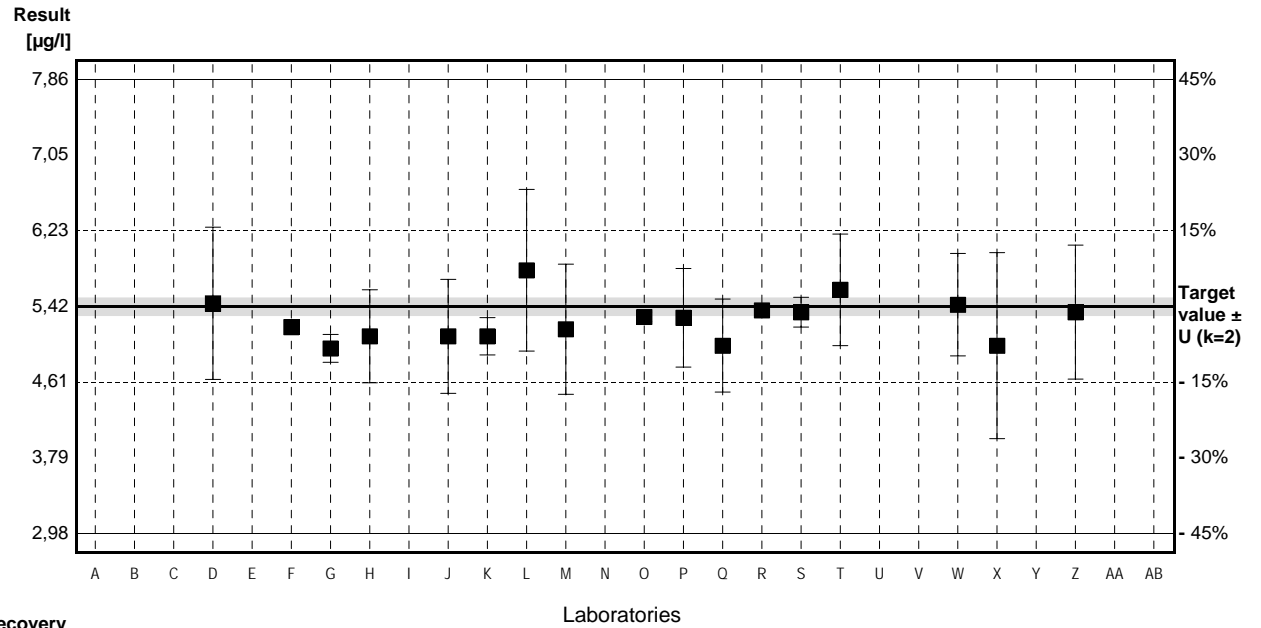


Sample M112A
Parameter Chromium

Target value $\pm U$ (k=2) 5,42 $\mu\text{g/l}$ \pm 0,09 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 5,24 $\mu\text{g/l}$ \pm 0,79 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 5,38 $\mu\text{g/l}$ \pm 0,81 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	5,455	0,818	$\mu\text{g/l}$	101%	0,08
E			$\mu\text{g/l}$		
F	5,2		$\mu\text{g/l}$	96%	-0,53
G	4,97	0,15	$\mu\text{g/l}$	92%	-1,08
H	5,1	0,5	$\mu\text{g/l}$	94%	-0,77
I			$\mu\text{g/l}$		
J	5,1	0,612	$\mu\text{g/l}$	94%	-0,77
K	5,1	0,2	$\mu\text{g/l}$	94%	-0,77
L	5,81	0,87	$\mu\text{g/l}$	107%	0,93
M	5,176	0,7	$\mu\text{g/l}$	95%	-0,58
N			$\mu\text{g/l}$		
O	5,31	0,05	$\mu\text{g/l}$	98%	-0,26
P	5,3	0,53	$\mu\text{g/l}$	98%	-0,29
Q	5,0	0,5	$\mu\text{g/l}$	92%	-1,01
R	5,38		$\mu\text{g/l}$	99%	-0,10
S	5,36	0,16	$\mu\text{g/l}$	99%	-0,14
T	5,6	0,6	$\mu\text{g/l}$	103%	0,43
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	5,44	0,55	$\mu\text{g/l}$	100%	0,05
X	5	1	$\mu\text{g/l}$	92%	-1,01
Y			$\mu\text{g/l}$		
Z	5,36	0,72	$\mu\text{g/l}$	99%	-0,14
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	5,27 \pm 0,16	5,27 \pm 0,16	$\mu\text{g/l}$
Recov. \pm CI(99%)	97,3 \pm 3,0	97,3 \pm 3,0	%
SD between labs	0,23	0,23	$\mu\text{g/l}$
RSD between labs	4,3	4,3	%
n for calculation	17	17	



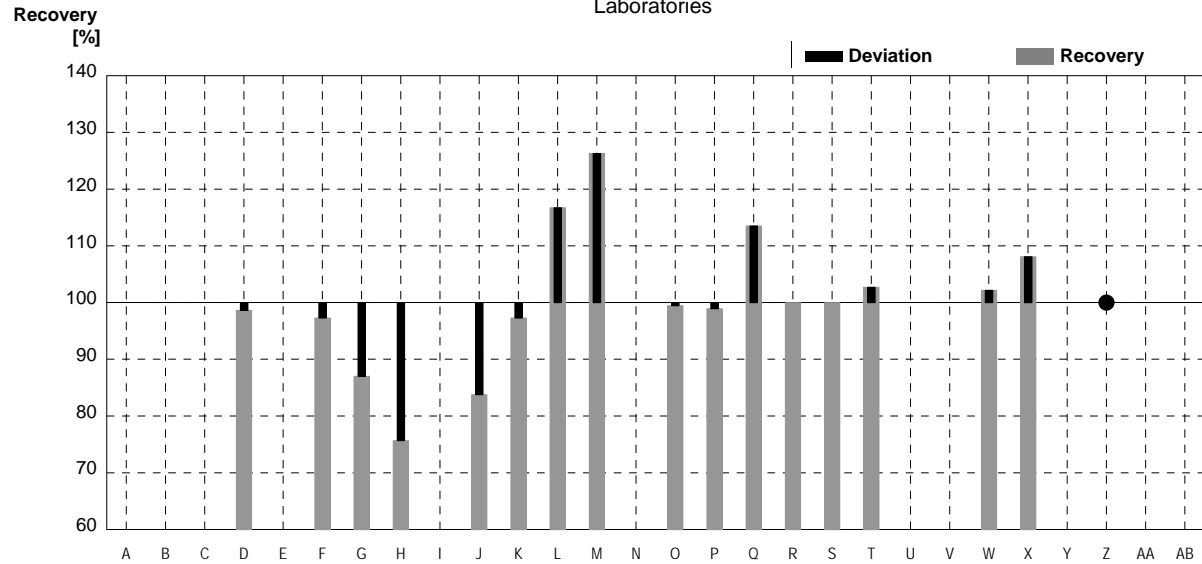
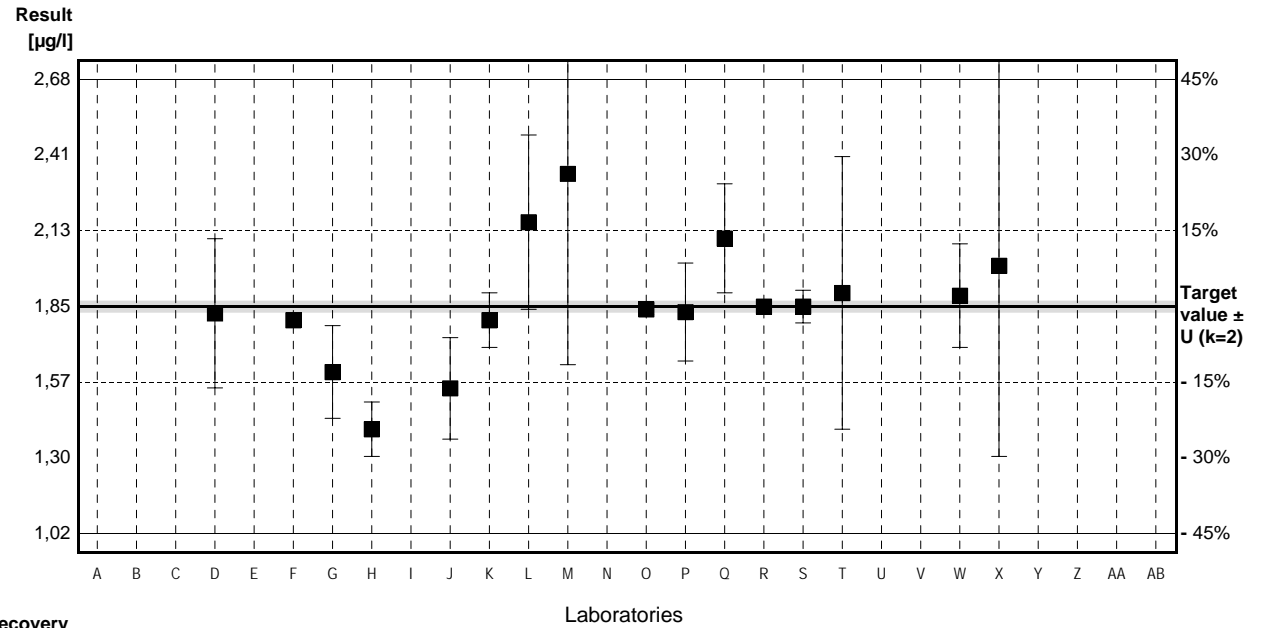
Sample M112B

Parameter Chromium

Target value $\pm U$ (k=2) 1,85 $\mu\text{g/l}$ \pm 0,02 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 1,82 $\mu\text{g/l}$ \pm 0,27 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 1,91 $\mu\text{g/l}$ \pm 0,29 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	1,825	0,274	$\mu\text{g/l}$	99%	-0,18
E			$\mu\text{g/l}$		
F	1,8		$\mu\text{g/l}$	97%	-0,35
G	1,61	0,17	$\mu\text{g/l}$	87%	-1,68
H	1,4 *	0,1	$\mu\text{g/l}$	76%	-3,16
I			$\mu\text{g/l}$		
J	1,55 *	0,186	$\mu\text{g/l}$	84%	-2,11
K	1,8	0,1	$\mu\text{g/l}$	97%	-0,35
L	2,16 *	0,32	$\mu\text{g/l}$	117%	2,18
M	2,337 *	0,7	$\mu\text{g/l}$	126%	3,42
N			$\mu\text{g/l}$		
O	1,84	0,02	$\mu\text{g/l}$	99%	-0,07
P	1,83	0,18	$\mu\text{g/l}$	99%	-0,14
Q	2,1 *	0,2	$\mu\text{g/l}$	114%	1,76
R	1,85		$\mu\text{g/l}$	100%	0,00
S	1,85	0,06	$\mu\text{g/l}$	100%	0,00
T	1,9	0,5	$\mu\text{g/l}$	103%	0,35
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	1,89	0,19	$\mu\text{g/l}$	102%	0,28
X	2	0,7	$\mu\text{g/l}$	108%	1,05
Y			$\mu\text{g/l}$		
Z	<5		$\mu\text{g/l}$	*	
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	1,86 \pm 0,17	1,84 \pm 0,09	$\mu\text{g/l}$
Recov. \pm CI(99%)	100,5 \pm 9,1	99,2 \pm 4,9	%
SD between labs	0,23	0,09	$\mu\text{g/l}$
RSD between labs	12,2	5,1	%
n for calculation	16	11	



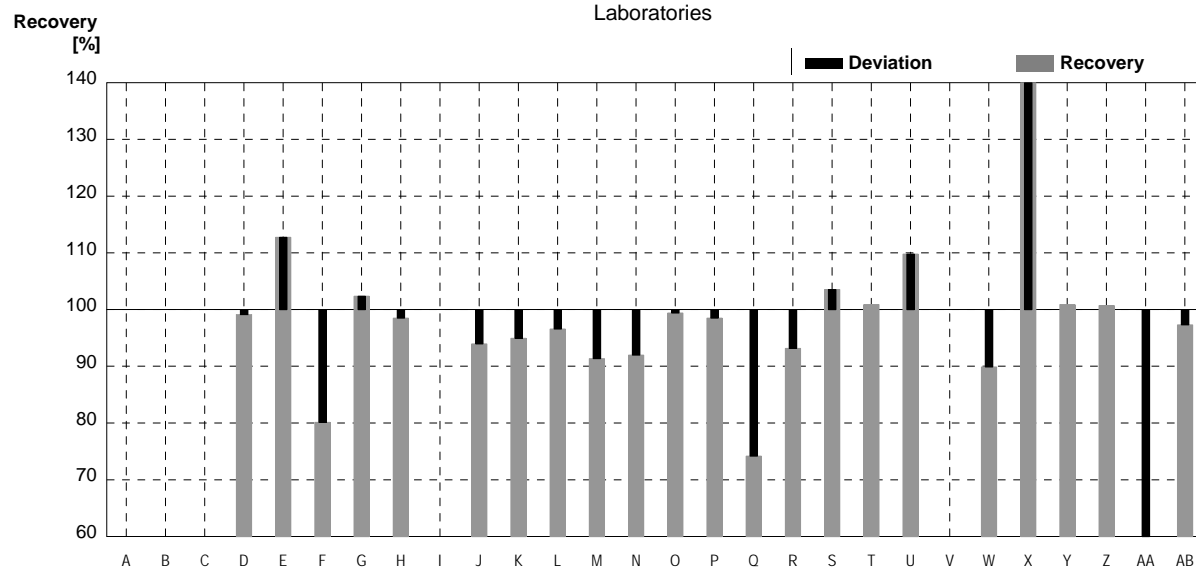
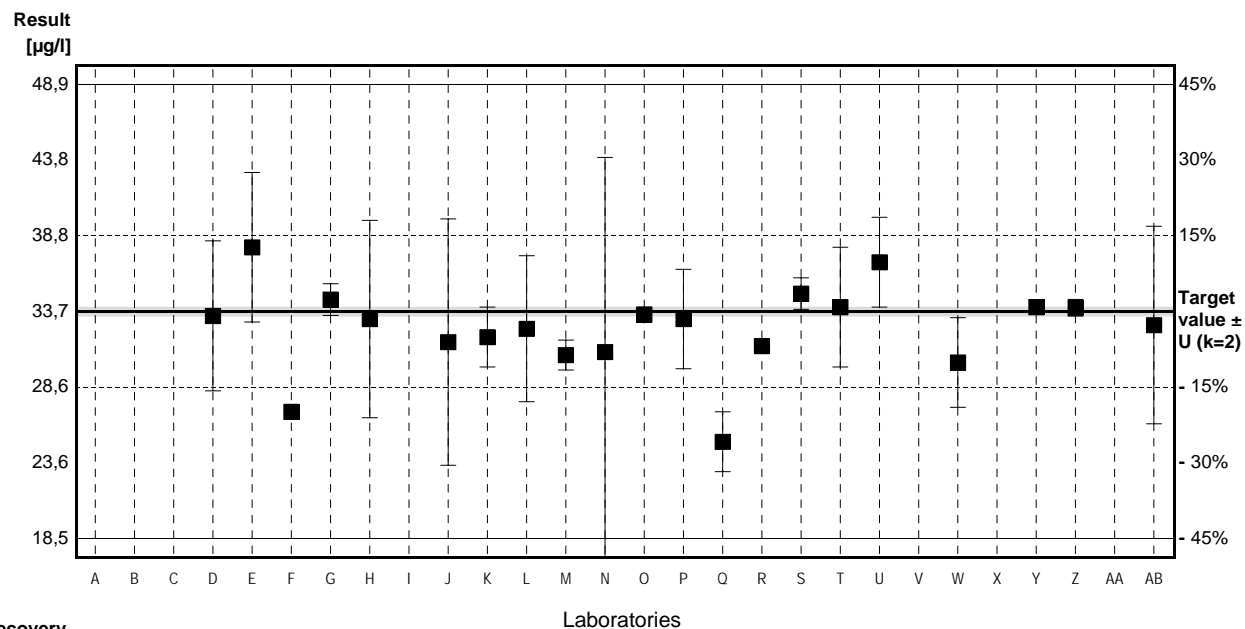
Sample M112A

Parameter Iron

Target value $\pm U$ (k=2) 33,7 $\mu\text{g/l}$ \pm 0,3 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 34,6 $\mu\text{g/l}$ \pm 2,8 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 35,1 $\mu\text{g/l}$ \pm 2,8 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	33,41	5,01	$\mu\text{g/l}$	99%	-0,09
E	38	5	$\mu\text{g/l}$	113%	1,34
F	27,0		$\mu\text{g/l}$	80%	-2,09
G	34,5	1,06	$\mu\text{g/l}$	102%	0,25
H	33,2	6,6	$\mu\text{g/l}$	99%	-0,16
I			$\mu\text{g/l}$		
J	31,66	8,2316	$\mu\text{g/l}$	94%	-0,64
K	32	2	$\mu\text{g/l}$	95%	-0,53
L	32,55	4,88	$\mu\text{g/l}$	97%	-0,36
M	30,794	1,0	$\mu\text{g/l}$	91%	-0,91
N	31	13	$\mu\text{g/l}$	92%	-0,84
O	33,5	0,5	$\mu\text{g/l}$	99%	-0,06
P	33,2	3,32	$\mu\text{g/l}$	99%	-0,16
Q	25 *	2	$\mu\text{g/l}$	74%	-2,72
R	31,40		$\mu\text{g/l}$	93%	-0,72
S	34,9	1,05	$\mu\text{g/l}$	104%	0,37
T	34	4	$\mu\text{g/l}$	101%	0,09
U	37	3	$\mu\text{g/l}$	110%	1,03
V			$\mu\text{g/l}$		
W	30,3	3,0	$\mu\text{g/l}$	90%	-1,06
X	85 *	30	$\mu\text{g/l}$	252%	16,02
Y	34	0,5	$\mu\text{g/l}$	101%	0,09
Z	33,95	0,56	$\mu\text{g/l}$	101%	0,08
AA	0,031 *	0,003	$\mu\text{g/l}$	0%	-10,52
AB	32,8	6,6	$\mu\text{g/l}$	97%	-0,28

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	33,4 \pm 7,9	33,0 \pm 1,5	$\mu\text{g/l}$
Recov. \pm CI(99%)	99,2 \pm 23,4	97,8 \pm 4,5	%
SD between labs	13,4	2,4	$\mu\text{g/l}$
RSD between labs	40,1	7,2	%
n for calculation	23	20	



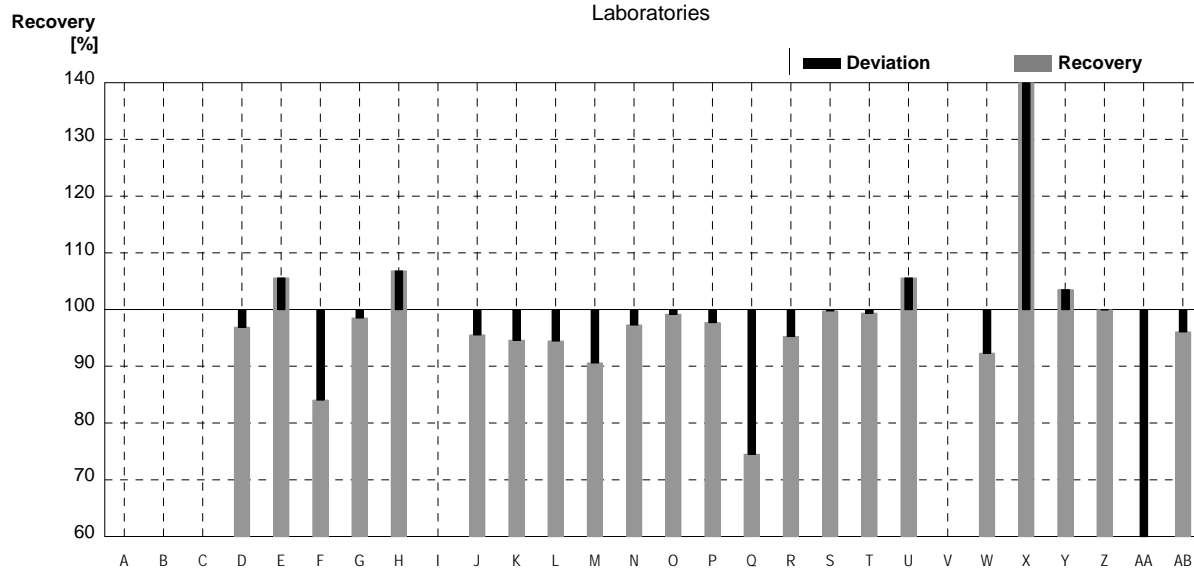
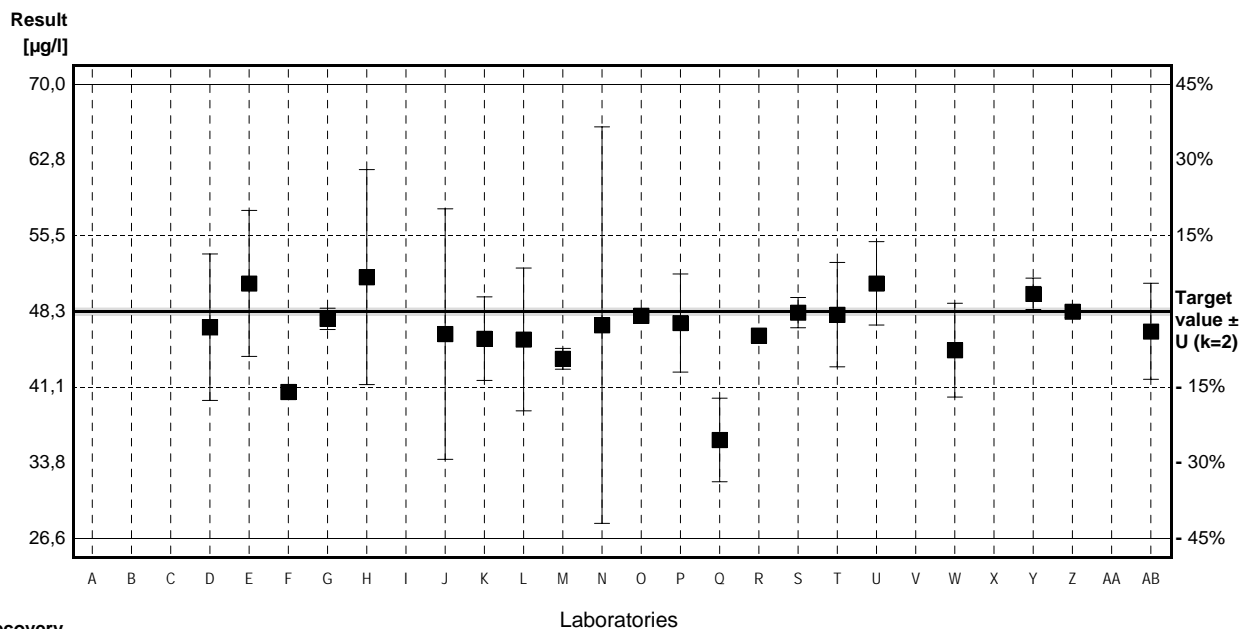
Sample M112B

Parameter Iron

Target value $\pm U$ (k=2) 48,3 $\mu\text{g/l}$ \pm 0,4 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 49,2 $\mu\text{g/l}$ \pm 3,9 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 49,9 $\mu\text{g/l}$ \pm 4,0 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	46,80	7,02	$\mu\text{g/l}$	97%	-0,33
E	51	7	$\mu\text{g/l}$	106%	0,59
F	40,6 *		$\mu\text{g/l}$	84%	-1,68
G	47,6	1,02	$\mu\text{g/l}$	99%	-0,15
H	51,6	10,3	$\mu\text{g/l}$	107%	0,72
I			$\mu\text{g/l}$		
J	46,15	11,999	$\mu\text{g/l}$	96%	-0,47
K	45,7	4,0	$\mu\text{g/l}$	95%	-0,57
L	45,63	6,84	$\mu\text{g/l}$	94%	-0,58
M	43,770	1,0	$\mu\text{g/l}$	91%	-0,99
N	47	19	$\mu\text{g/l}$	97%	-0,28
O	47,9	0,5	$\mu\text{g/l}$	99%	-0,09
P	47,2	4,7	$\mu\text{g/l}$	98%	-0,24
Q	36 *	4	$\mu\text{g/l}$	75%	-2,68
R	46,01		$\mu\text{g/l}$	95%	-0,50
S	48,2	1,45	$\mu\text{g/l}$	100%	-0,02
T	48	5	$\mu\text{g/l}$	99%	-0,07
U	51	4	$\mu\text{g/l}$	106%	0,59
V			$\mu\text{g/l}$		
W	44,6	4,5	$\mu\text{g/l}$	92%	-0,81
X	95 *	30	$\mu\text{g/l}$	197%	10,18
Y	50	1,5	$\mu\text{g/l}$	104%	0,37
Z	48,29	0,54	$\mu\text{g/l}$	100%	0,00
AA	0,044 *	0,004	$\mu\text{g/l}$	0%	-10,52
AB	46,4	4,6	$\mu\text{g/l}$	96%	-0,41

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	46,7 \pm 8,6	47,5 \pm 1,4	$\mu\text{g/l}$
Recov. \pm CI(99%)	96,7 \pm 17,9	98,4 \pm 3,0	%
SD between labs	14,7	2,2	$\mu\text{g/l}$
RSD between labs	31,5	4,6	%
n for calculation	23	19	

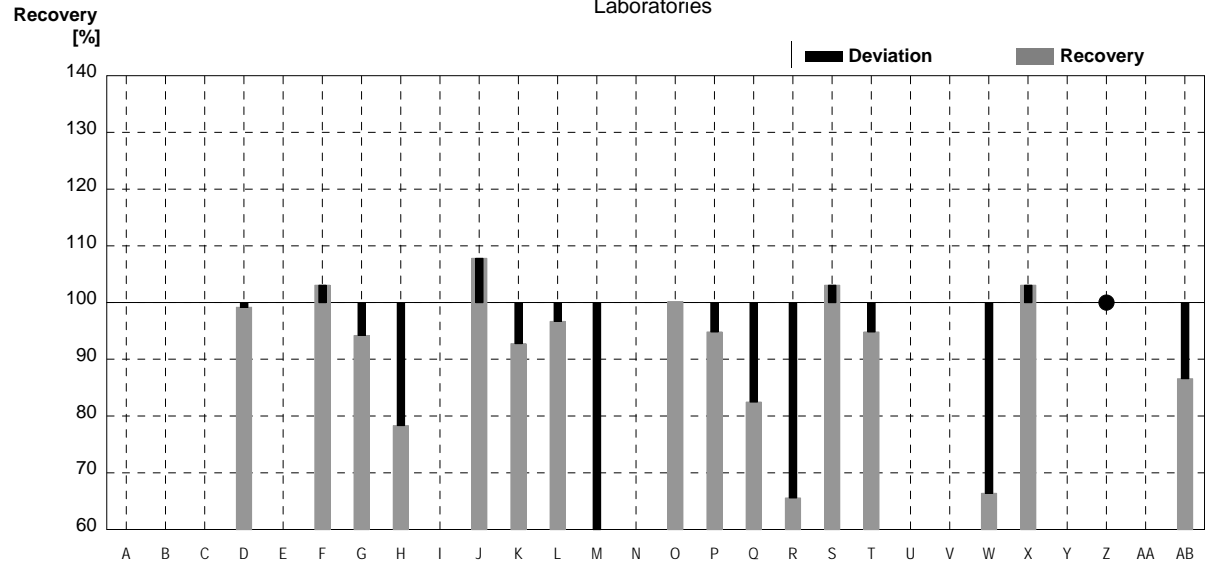
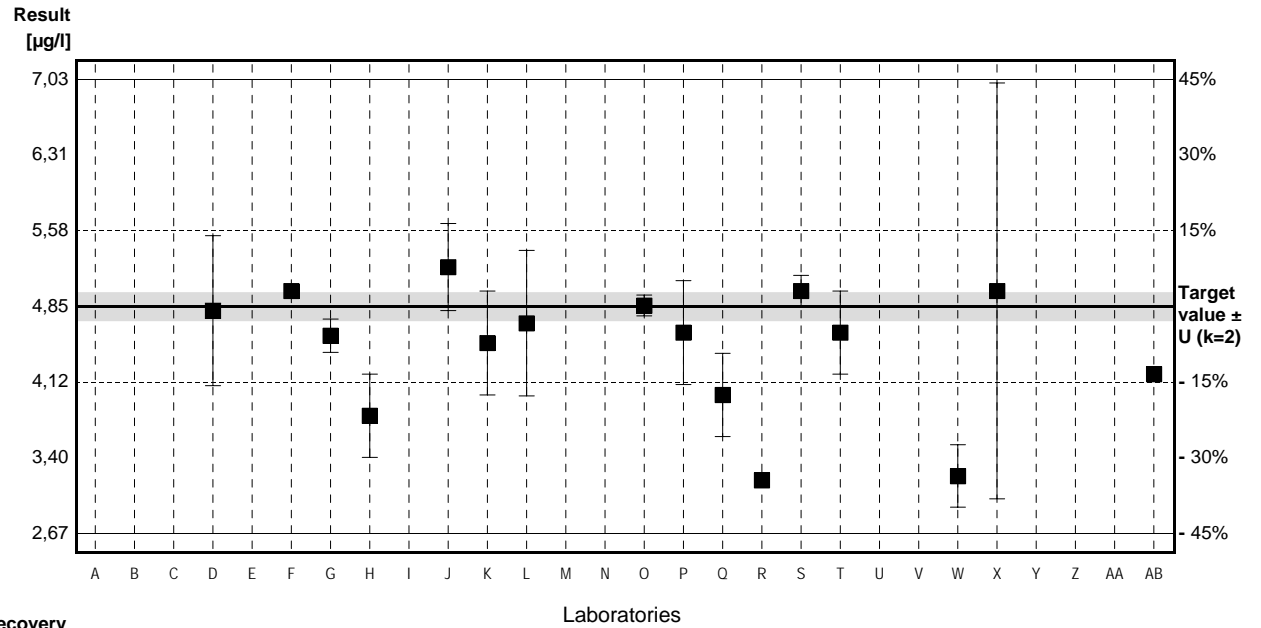


Sample M112A
Parameter Copper

Target value ± U (k=2) 4,85 µg/l ± 0,13 µg/l
 IFA result ± U (k=2) 4,63 µg/l ± 0,37 µg/l
 Stability test ± U (k=2) 4,84 µg/l ± 0,39 µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			µg/l		
B			µg/l		
C			µg/l		
D	4,810	0,722	µg/l	99%	-0,10
E			µg/l		
F	5,0		µg/l	103%	0,36
G	4,57	0,16	µg/l	94%	-0,68
H	3,8	0,4	µg/l	78%	-2,55
I			µg/l		
J	5,23	0,4184	µg/l	108%	0,92
K	4,5	0,5	µg/l	93%	-0,85
L	4,69	0,70	µg/l	97%	-0,39
M	2,000 *	0,4	µg/l	41%	-6,91
N			µg/l		
O	4,86	0,1	µg/l	100%	0,02
P	4,6	0,5	µg/l	95%	-0,61
Q	4,0	0,4	µg/l	82%	-2,06
R	3,18		µg/l	66%	-4,05
S	5,00	0,15	µg/l	103%	0,36
T	4,6	0,4	µg/l	95%	-0,61
U			µg/l		
V			µg/l		
W	3,22	0,30	µg/l	66%	-3,95
X	5	2	µg/l	103%	0,36
Y			µg/l		
Z	<5		µg/l	•	
AA			µg/l		
AB	4,2		µg/l	87%	-1,58

	All results	Outliers excl.	Unit
Mean ± CI(99%)	4,31 ± 0,60	4,45 ± 0,46	µg/l
Recov. ± CI(99%)	88,9 ± 12,3	91,8 ± 9,4	%
SD between labs	0,84	0,62	µg/l
RSD between labs	19,6	13,9	%
n for calculation	17	16	

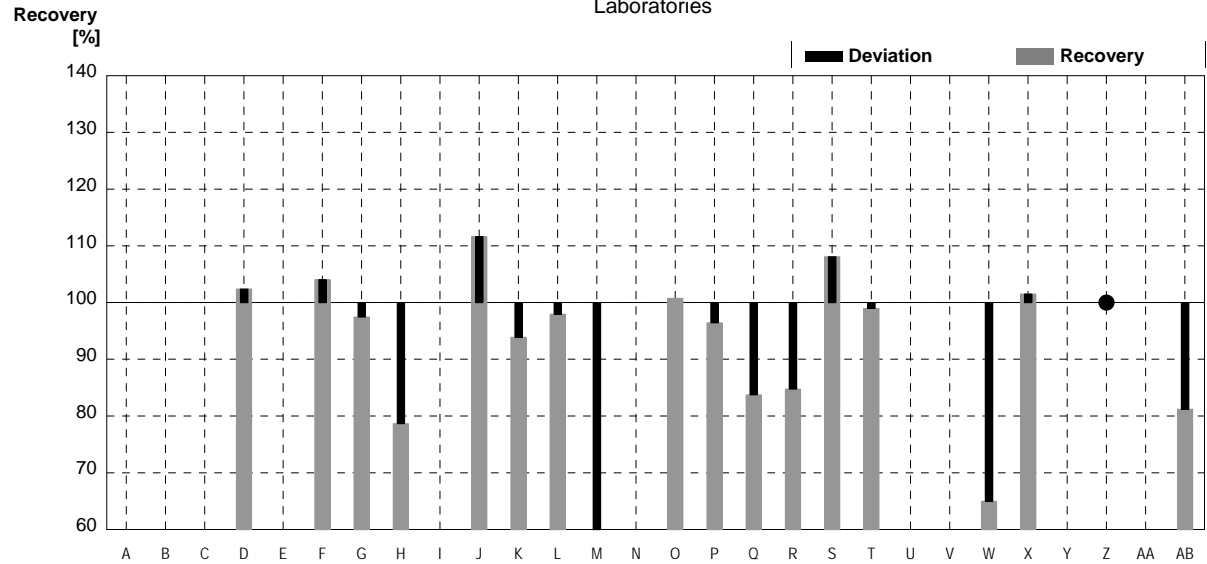
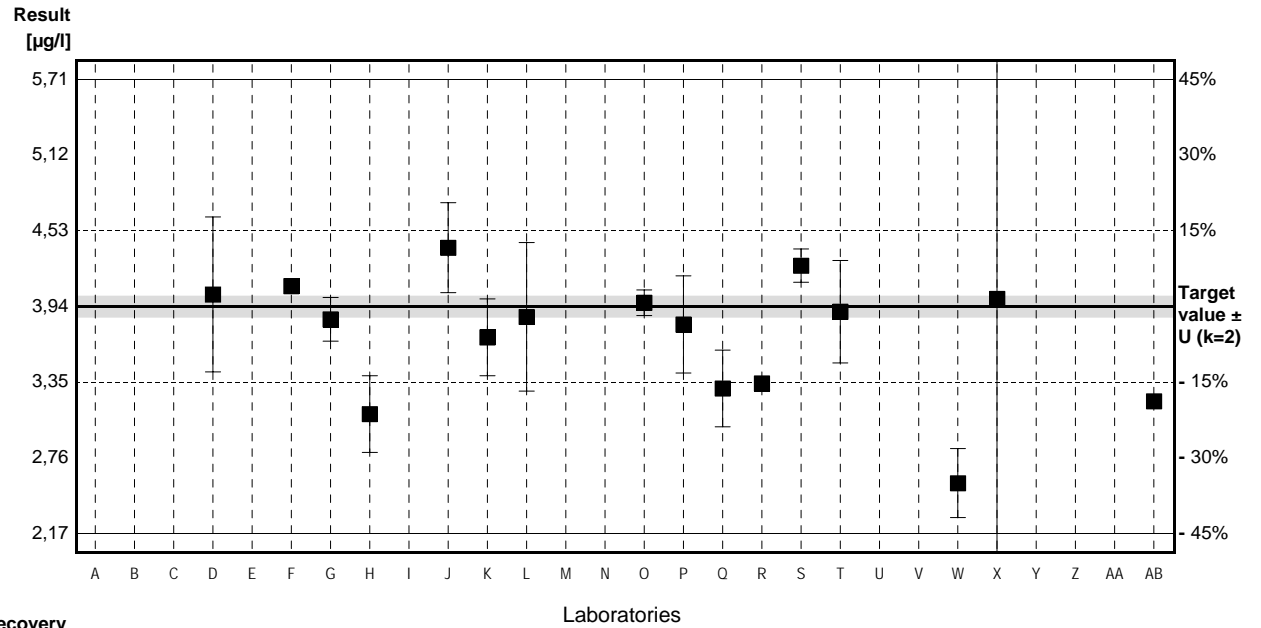


Sample M112B
Parameter Copper

Target value ± U (k=2) 3,94 µg/l ± 0,08 µg/l
 IFA result ± U (k=2) 3,81 µg/l ± 0,30 µg/l
 Stability test ± U (k=2) 3,93 µg/l ± 0,31 µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			µg/l		
B			µg/l		
C			µg/l		
D	4,035	0,605	µg/l	102%	0,28
E			µg/l		
F	4,1		µg/l	104%	0,48
G	3,84	0,17	µg/l	97%	-0,30
H	3,1	0,3	µg/l	79%	-2,51
I			µg/l		
J	4,4	0,352	µg/l	112%	1,37
K	3,7	0,3	µg/l	94%	-0,72
L	3,86	0,58	µg/l	98%	-0,24
M	0,953 *	0,4	µg/l	24%	-8,92
N			µg/l		
O	3,97	0,1	µg/l	101%	0,09
P	3,8	0,38	µg/l	96%	-0,42
Q	3,3	0,3	µg/l	84%	-1,91
R	3,34		µg/l	85%	-1,79
S	4,26	0,13	µg/l	108%	0,96
T	3,9	0,4	µg/l	99%	-0,12
U			µg/l		
V			µg/l		
W	2,56 *	0,27	µg/l	65%	-4,12
X	4	2	µg/l	102%	0,18
Y			µg/l		
Z	<5		µg/l	*	
AA			µg/l		
AB	3,2		µg/l	81%	-2,21

	All results	Outliers excl.	Unit
Mean ± CI(99%)	3,55 ± 0,58	3,79 ± 0,30	µg/l
Recov. ± CI(99%)	90,1 ± 14,7	96,1 ± 7,6	%
SD between labs	0,82	0,39	µg/l
RSD between labs	23,0	10,3	%
n for calculation	17	15	



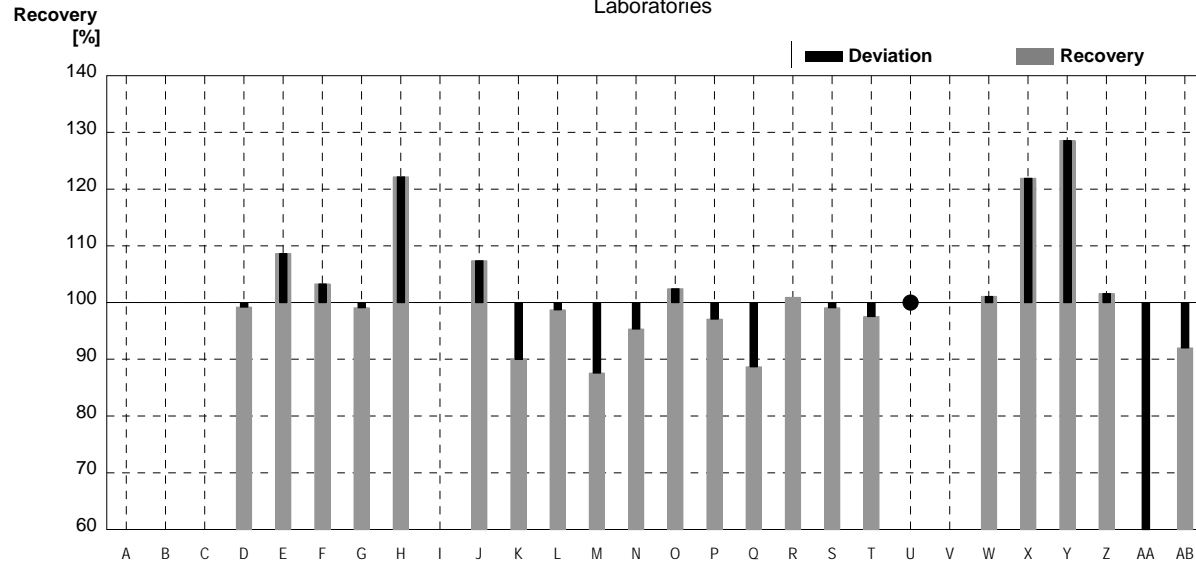
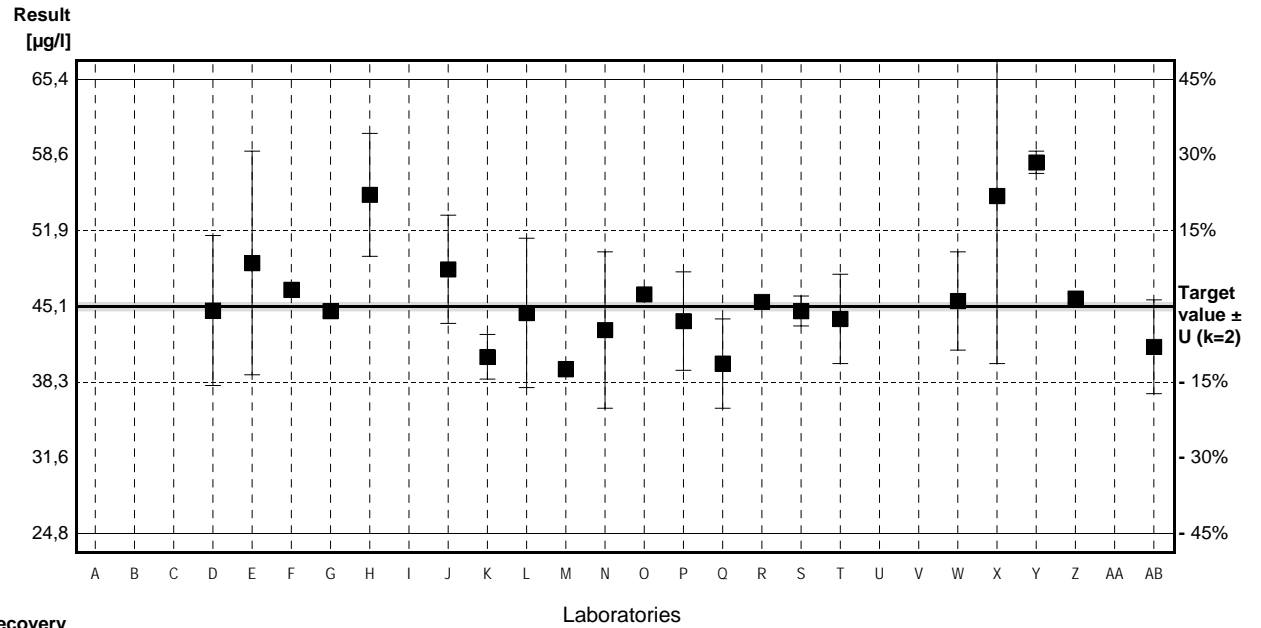
Sample M112A

Parameter Manganese

Target value $\pm U$ (k=2) 45,1 $\mu\text{g/l}$ \pm 0,4 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 44,6 $\mu\text{g/l}$ \pm 3,6 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 45,4 $\mu\text{g/l}$ \pm 3,6 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	44,75	6,71	$\mu\text{g/l}$	99%	-0,11
E	49	10	$\mu\text{g/l}$	109%	1,18
F	46,6		$\mu\text{g/l}$	103%	0,46
G	44,7	0,49	$\mu\text{g/l}$	99%	-0,12
H	55,1 *	5,5	$\mu\text{g/l}$	122%	3,04
I			$\mu\text{g/l}$		
J	48,43	4,843	$\mu\text{g/l}$	107%	1,01
K	40,6	2,0	$\mu\text{g/l}$	90%	-1,37
L	44,53	6,68	$\mu\text{g/l}$	99%	-0,17
M	39,499	0,6	$\mu\text{g/l}$	88%	-1,70
N	43	7	$\mu\text{g/l}$	95%	-0,64
O	46,2	0,5	$\mu\text{g/l}$	102%	0,33
P	43,8	4,4	$\mu\text{g/l}$	97%	-0,39
Q	40	4	$\mu\text{g/l}$	89%	-1,55
R	45,52		$\mu\text{g/l}$	101%	0,13
S	44,7	1,34	$\mu\text{g/l}$	99%	-0,12
T	44	4	$\mu\text{g/l}$	98%	-0,33
U	<50		$\mu\text{g/l}$	•	
V			$\mu\text{g/l}$		
W	45,6	4,4	$\mu\text{g/l}$	101%	0,15
X	55 *	15	$\mu\text{g/l}$	122%	3,01
Y	58 *	1	$\mu\text{g/l}$	129%	3,92
Z	45,82	0,4	$\mu\text{g/l}$	102%	0,22
AA	0,045 *	0,004	$\mu\text{g/l}$	0%	-13,68
AB	41,5	4,2	$\mu\text{g/l}$	92%	-1,09

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	43,9 \pm 6,6	44,3 \pm 1,8	$\mu\text{g/l}$
Recov. \pm CI(99%)	97,4 \pm 14,6	98,3 \pm 4,0	%
SD between labs	10,9	2,6	$\mu\text{g/l}$
RSD between labs	24,8	6,0	%
n for calculation	22	18	



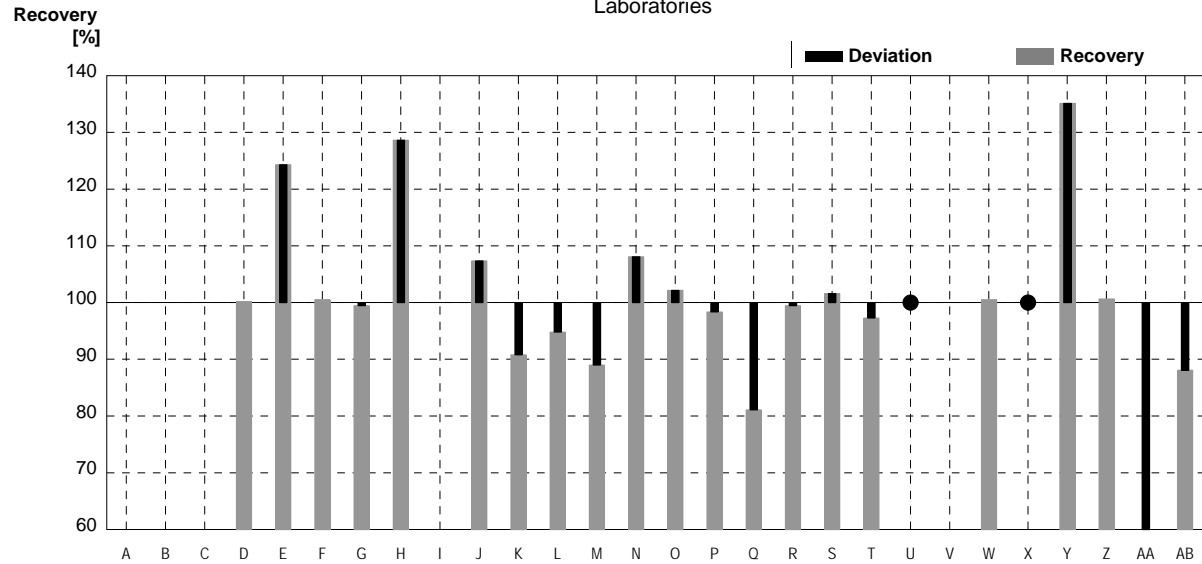
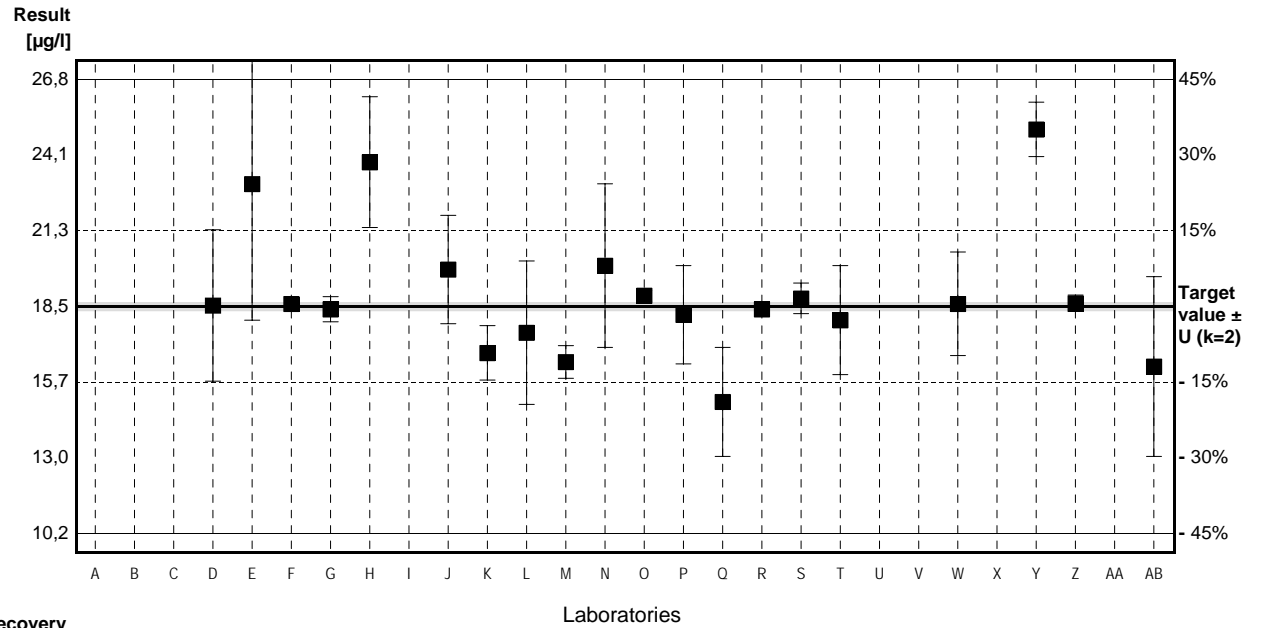
Sample M112B

Parameter Manganese

Target value $\pm U$ (k=2) 18,5 $\mu\text{g/l}$ \pm 0,1 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 18,2 $\mu\text{g/l}$ \pm 1,5 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 18,6 $\mu\text{g/l}$ \pm 1,5 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	18,54	2,78	$\mu\text{g/l}$	100%	0,03
E	23	5	$\mu\text{g/l}$	124%	3,33
F	18,6		$\mu\text{g/l}$	101%	0,07
G	18,4	0,46	$\mu\text{g/l}$	99%	-0,07
H	23,8 *	2,4	$\mu\text{g/l}$	129%	3,92
I			$\mu\text{g/l}$		
J	19,86	1,986	$\mu\text{g/l}$	107%	1,01
K	16,8	1,0	$\mu\text{g/l}$	91%	-1,26
L	17,54	2,63	$\mu\text{g/l}$	95%	-0,71
M	16,463	0,6	$\mu\text{g/l}$	89%	-1,51
N	20	3	$\mu\text{g/l}$	108%	1,11
O	18,9	0,2	$\mu\text{g/l}$	102%	0,30
P	18,2	1,8	$\mu\text{g/l}$	98%	-0,22
Q	15	2	$\mu\text{g/l}$	81%	-2,59
R	18,40		$\mu\text{g/l}$	99%	-0,07
S	18,8	0,56	$\mu\text{g/l}$	102%	0,22
T	18	2	$\mu\text{g/l}$	97%	-0,37
U	<50		$\mu\text{g/l}$	•	
V			$\mu\text{g/l}$		
W	18,6	1,9	$\mu\text{g/l}$	101%	0,07
X	<20		$\mu\text{g/l}$	•	
Y	25 *	1	$\mu\text{g/l}$	135%	4,81
Z	18,62	0,3	$\mu\text{g/l}$	101%	0,09
AA	0,018 *	0,002	$\mu\text{g/l}$	0%	-13,69
AB	16,3	3,3	$\mu\text{g/l}$	88%	-1,63

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	18,0 \pm 3,0	18,3 \pm 1,2	$\mu\text{g/l}$
Recov. \pm CI(99%)	97,5 \pm 16,1	99,1 \pm 6,3	%
SD between labs	4,8	1,7	$\mu\text{g/l}$
RSD between labs	26,5	9,3	%
n for calculation	21	18	



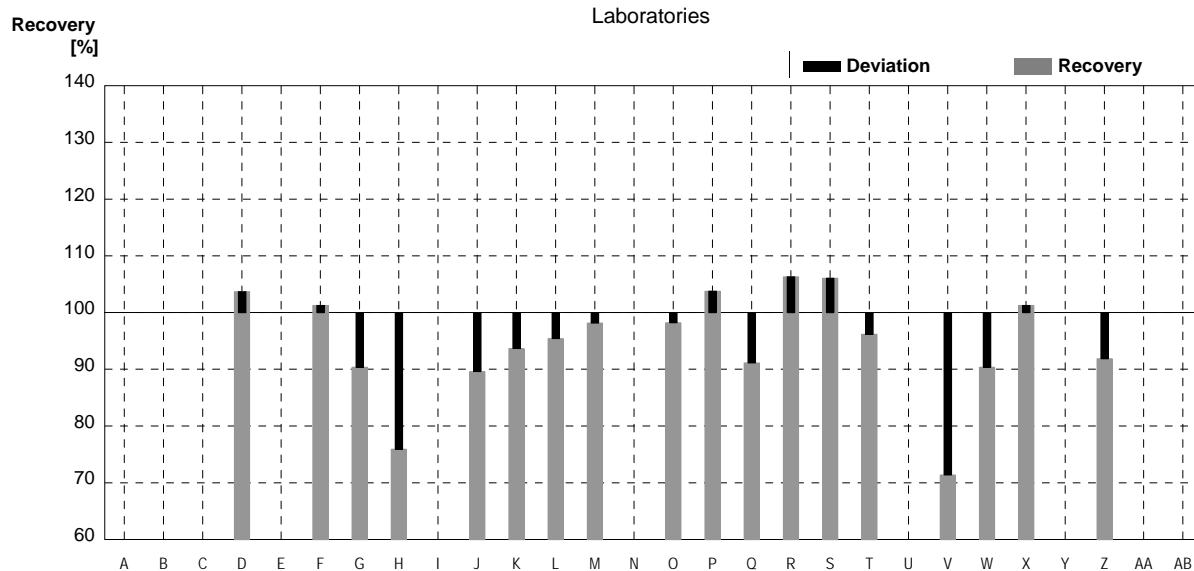
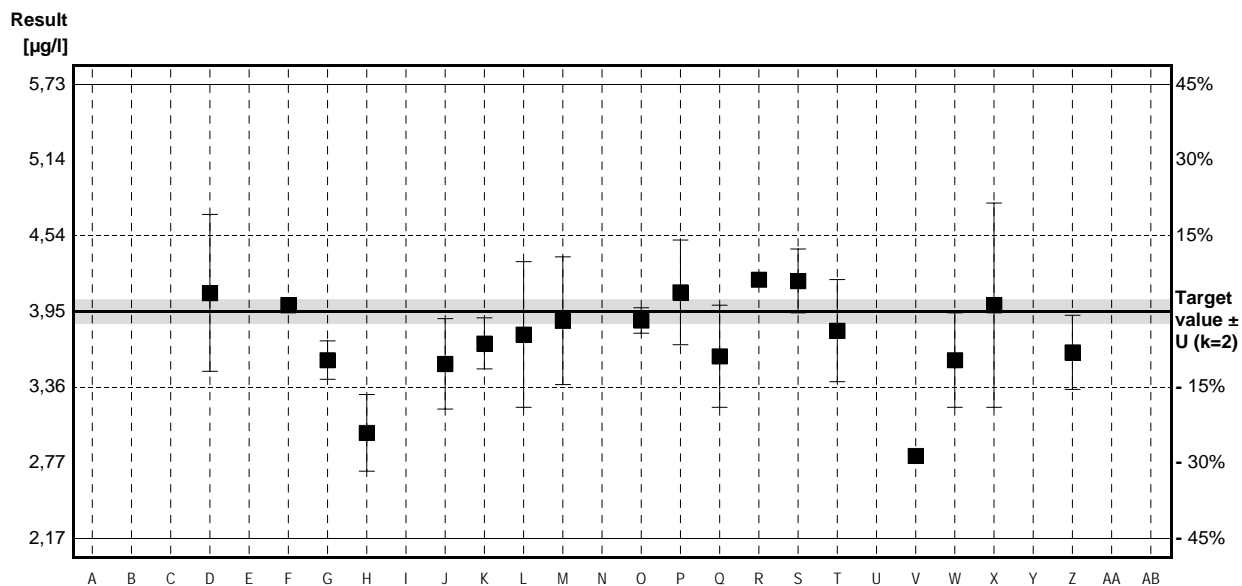
Sample M112A

Parameter Nickel

Target value $\pm U$ (k=2) 3,95 $\mu\text{g/l}$ \pm 0,09 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 3,77 $\mu\text{g/l}$ \pm 0,45 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 4,27 $\mu\text{g/l}$ \pm 0,51 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	4,096	0,614	$\mu\text{g/l}$	104%	0,43
E			$\mu\text{g/l}$		
F	4,0		$\mu\text{g/l}$	101%	0,15
G	3,57	0,15	$\mu\text{g/l}$	90%	-1,12
H	3,0	0,3	$\mu\text{g/l}$	76%	-2,80
I			$\mu\text{g/l}$		
J	3,54	0,354	$\mu\text{g/l}$	90%	-1,21
K	3,7	0,2	$\mu\text{g/l}$	94%	-0,74
L	3,77	0,57	$\mu\text{g/l}$	95%	-0,53
M	3,878	0,5	$\mu\text{g/l}$	98%	-0,21
N			$\mu\text{g/l}$		
O	3,88	0,1	$\mu\text{g/l}$	98%	-0,21
P	4,1	0,41	$\mu\text{g/l}$	104%	0,44
Q	3,6	0,4	$\mu\text{g/l}$	91%	-1,03
R	4,20		$\mu\text{g/l}$	106%	0,74
S	4,19	0,25	$\mu\text{g/l}$	106%	0,71
T	3,8	0,4	$\mu\text{g/l}$	96%	-0,44
U			$\mu\text{g/l}$		
V	2,8196		$\mu\text{g/l}$	71%	-3,33
W	3,57	0,37	$\mu\text{g/l}$	90%	-1,12
X	4	0,8	$\mu\text{g/l}$	101%	0,15
Y			$\mu\text{g/l}$		
Z	3,63	0,29	$\mu\text{g/l}$	92%	-0,94
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	3,74 \pm 0,26	3,74 \pm 0,26	$\mu\text{g/l}$
Recov. \pm CI(99%)	94,7 \pm 6,5	94,7 \pm 6,5	%
SD between labs	0,37	0,37	$\mu\text{g/l}$
RSD between labs	10,0	10,0	%
n for calculation	18	18	



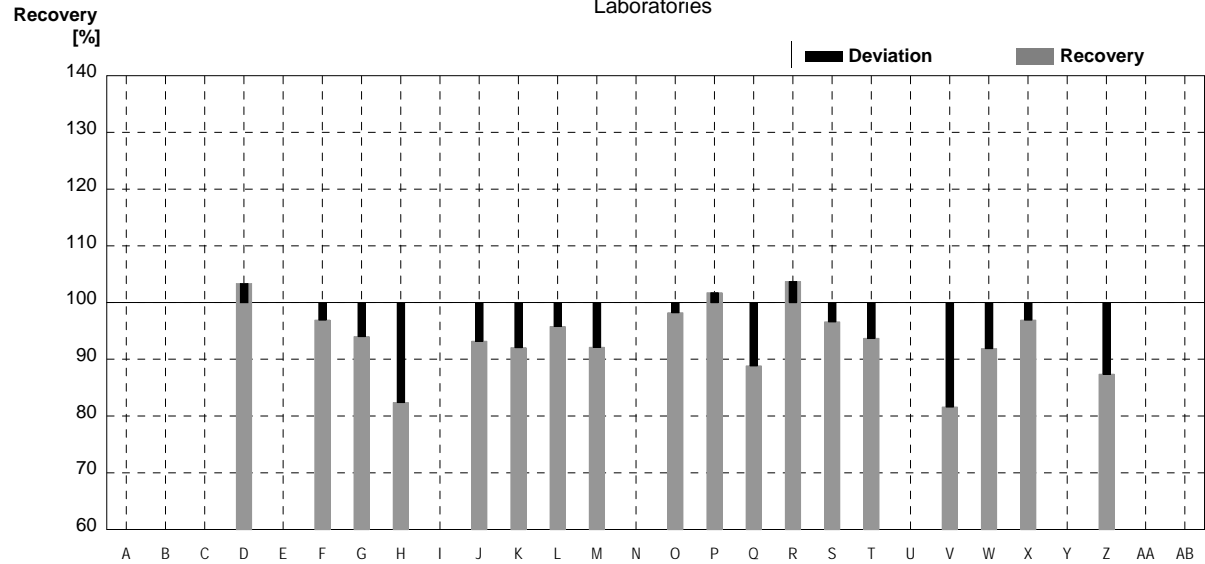
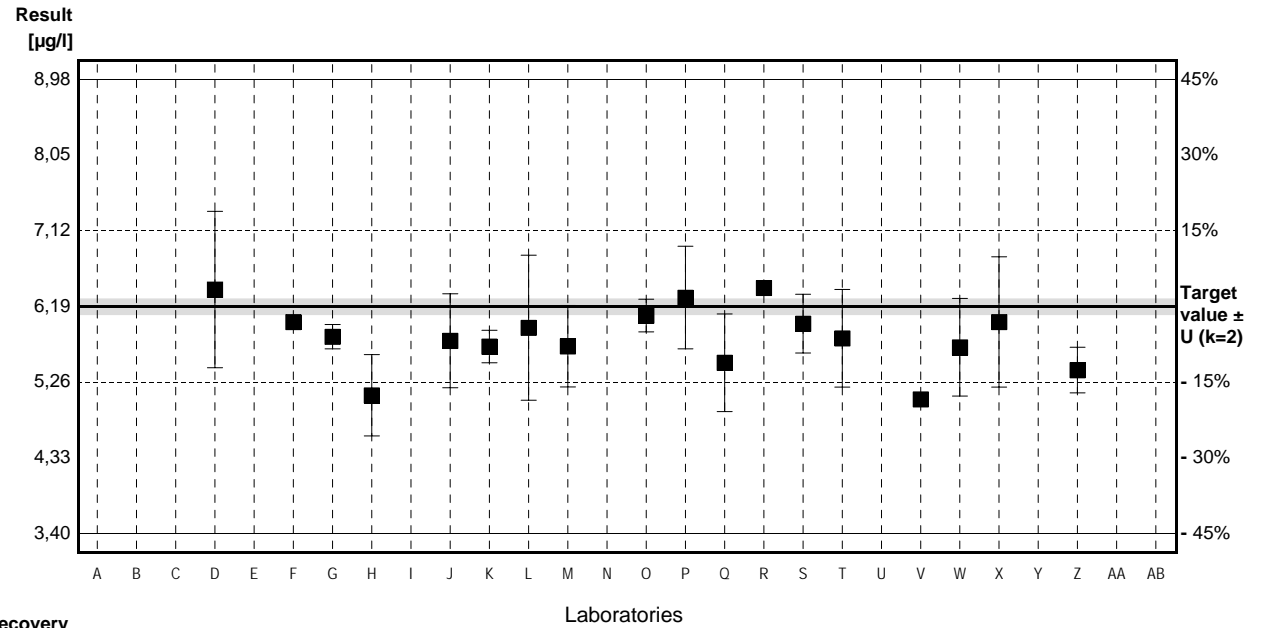
Sample M112B

Parameter Nickel

Target value $\pm U$ (k=2) 6,19 $\mu\text{g/l}$ \pm 0,10 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 5,94 $\mu\text{g/l}$ \pm 0,71 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 6,52 $\mu\text{g/l}$ \pm 0,78 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	6,399	0,960	$\mu\text{g/l}$	103%	0,39
E			$\mu\text{g/l}$		
F	6,0		$\mu\text{g/l}$	97%	-0,36
G	5,82	0,15	$\mu\text{g/l}$	94%	-0,70
H	5,1	0,5	$\mu\text{g/l}$	82%	-2,05
I			$\mu\text{g/l}$		
J	5,77	0,577	$\mu\text{g/l}$	93%	-0,79
K	5,7	0,2	$\mu\text{g/l}$	92%	-0,92
L	5,93	0,89	$\mu\text{g/l}$	96%	-0,49
M	5,703	0,5	$\mu\text{g/l}$	92%	-0,91
N			$\mu\text{g/l}$		
O	6,08	0,2	$\mu\text{g/l}$	98%	-0,21
P	6,3	0,63	$\mu\text{g/l}$	102%	0,21
Q	5,5	0,6	$\mu\text{g/l}$	89%	-1,30
R	6,42		$\mu\text{g/l}$	104%	0,43
S	5,98	0,36	$\mu\text{g/l}$	97%	-0,39
T	5,8	0,6	$\mu\text{g/l}$	94%	-0,73
U			$\mu\text{g/l}$		
V	5,0520		$\mu\text{g/l}$	82%	-2,14
W	5,69	0,60	$\mu\text{g/l}$	92%	-0,94
X	6	0,8	$\mu\text{g/l}$	97%	-0,36
Y			$\mu\text{g/l}$		
Z	5,41	0,28	$\mu\text{g/l}$	87%	-1,47
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	5,81 \pm 0,26	5,81 \pm 0,26	$\mu\text{g/l}$
Recov. \pm CI(99%)	93,9 \pm 4,3	93,9 \pm 4,3	%
SD between labs	0,39	0,39	$\mu\text{g/l}$
RSD between labs	6,6	6,6	%
n for calculation	18	18	

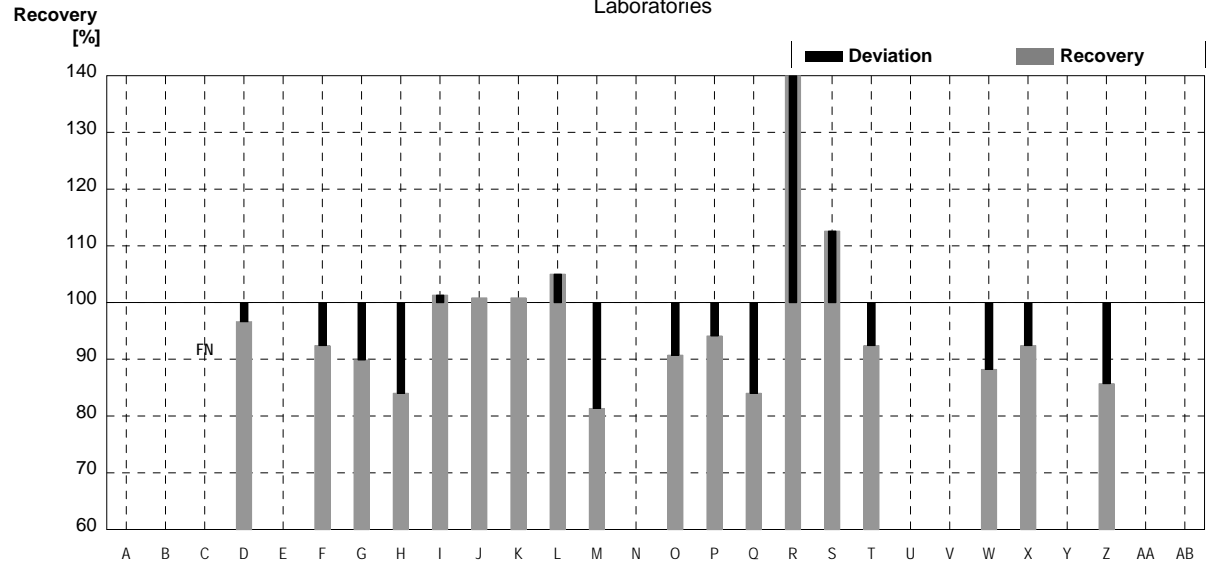
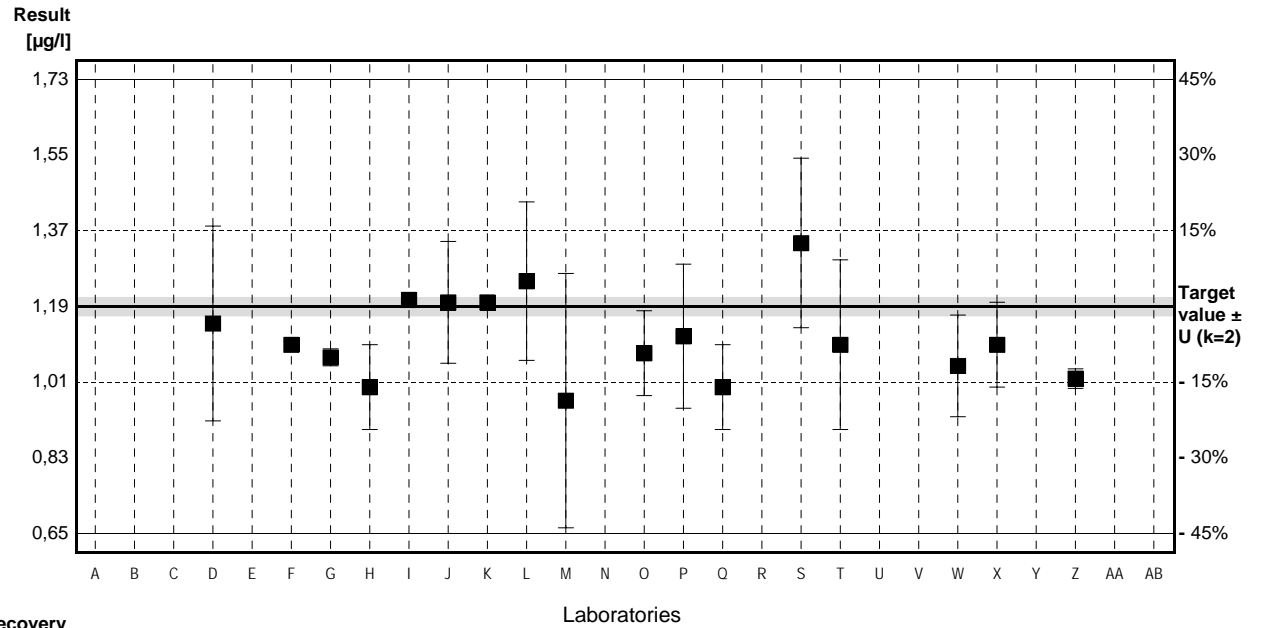


Sample M112A
Parameter Mercury

Target value ± U (k=2) 1,19 µg/l ± 0,02 µg/l
 IFA result ± U (k=2) 1,20 µg/l ± 0,07 µg/l
 Stability test ± U (k=2) 1,19 µg/l ± 0,07 µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			µg/l		
B			µg/l		
C	<0,1	0,01	µg/l	FN	
D	1,15	0,23	µg/l	97%	-0,31
E			µg/l		
F	1,1		µg/l	92%	-0,69
G	1,07	0,02	µg/l	90%	-0,92
H	1,00	0,1	µg/l	84%	-1,45
I	1,206		µg/l	101%	0,12
J	1,2	0,144	µg/l	101%	0,08
K	1,20	0,00	µg/l	101%	0,08
L	1,25	0,187	µg/l	105%	0,46
M	0,968	0,3	µg/l	81%	-1,70
N			µg/l		
O	1,08	0,1	µg/l	91%	-0,84
P	1,12	0,17	µg/l	94%	-0,53
Q	1,0	0,1	µg/l	84%	-1,45
R	4,08 *		µg/l	343%	22,08
S	1,34	0,20	µg/l	113%	1,15
T	1,1	0,2	µg/l	92%	-0,69
U			µg/l		
V			µg/l		
W	1,05	0,12	µg/l	88%	-1,07
X	1,1	0,1	µg/l	92%	-0,69
Y			µg/l		
Z	1,02	0,023	µg/l	86%	-1,30
AA			µg/l		
AB			µg/l		

	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,28 ± 0,48	1,11 ± 0,07	µg/l
Recov. ± CI(99%)	107,5 ± 40,5	93,7 ± 5,9	%
SD between labs	0,71	0,10	µg/l
RSD between labs	55,1	8,9	%
n for calculation	18	17	

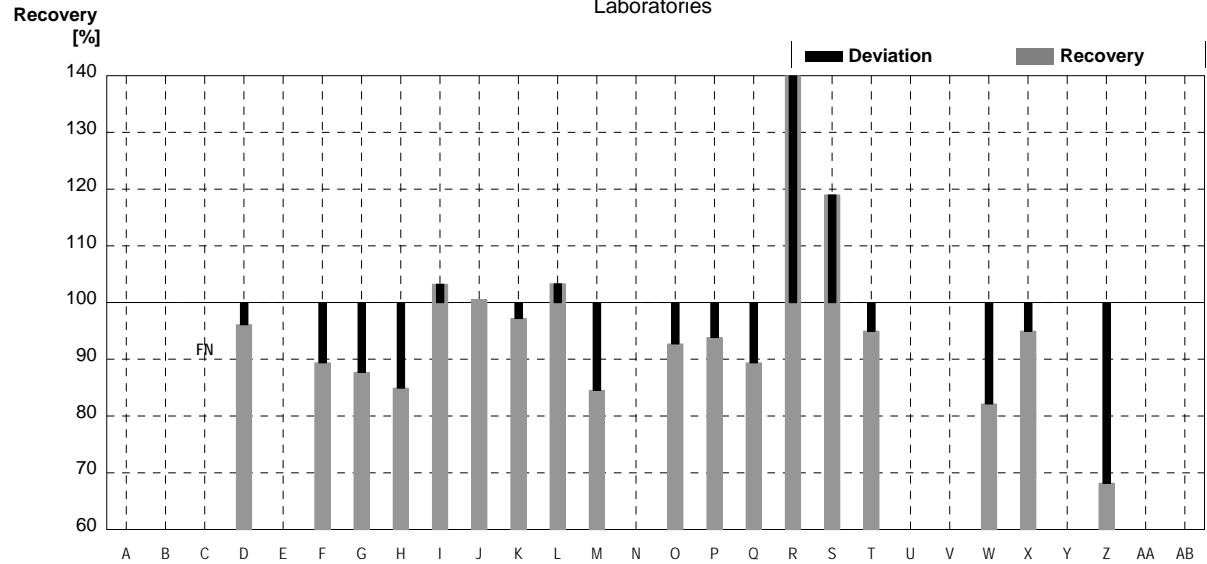
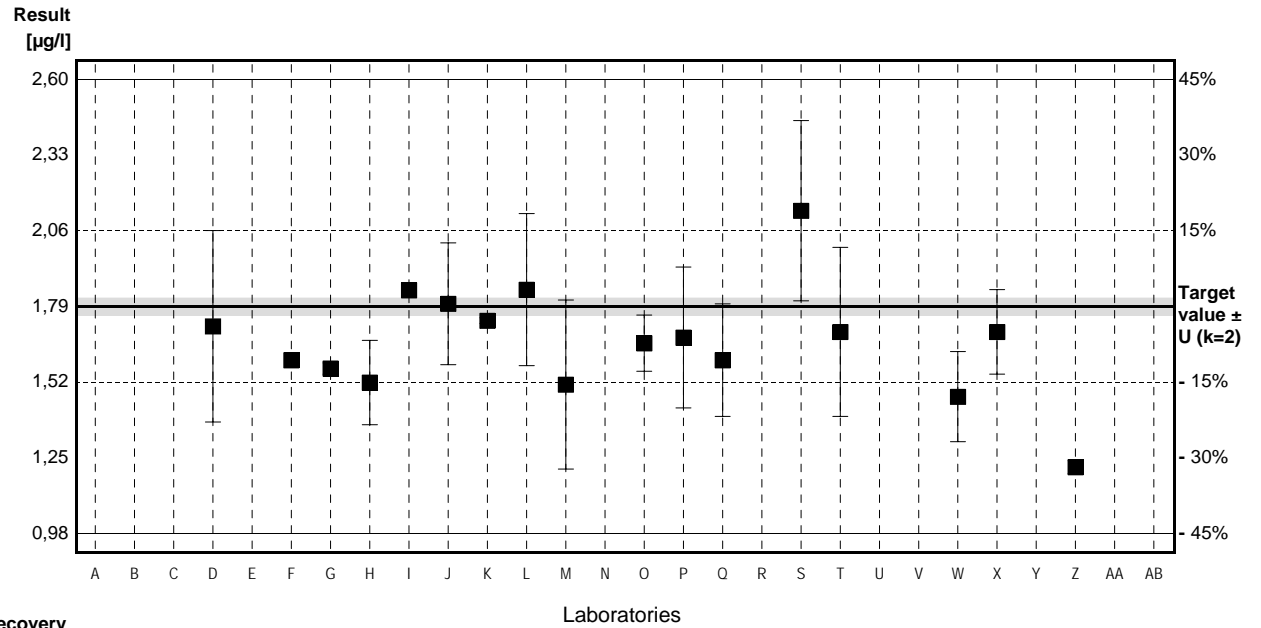


Sample M112B
Parameter Mercury

Target value $\pm U$ (k=2) 1,79 $\mu\text{g/l}$ \pm 0,03 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 1,80 $\mu\text{g/l}$ \pm 0,11 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 1,77 $\mu\text{g/l}$ \pm 0,11 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C	<0,1	0,01	$\mu\text{g/l}$	FN	
D	1,72	0,34	$\mu\text{g/l}$	96%	-0,36
E			$\mu\text{g/l}$		
F	1,6		$\mu\text{g/l}$	89%	-0,96
G	1,57	0,02	$\mu\text{g/l}$	88%	-1,12
H	1,52	0,15	$\mu\text{g/l}$	85%	-1,37
I	1,848		$\mu\text{g/l}$	103%	0,29
J	1,8	0,216	$\mu\text{g/l}$	101%	0,05
K	1,74	0,01	$\mu\text{g/l}$	97%	-0,25
L	1,85	0,27	$\mu\text{g/l}$	103%	0,30
M	1,513	0,3	$\mu\text{g/l}$	85%	-1,41
N			$\mu\text{g/l}$		
O	1,66	0,1	$\mu\text{g/l}$	93%	-0,66
P	1,68	0,25	$\mu\text{g/l}$	94%	-0,56
Q	1,6	0,2	$\mu\text{g/l}$	89%	-0,96
R	6,22 *		$\mu\text{g/l}$	347%	22,50
S	2,13	0,32	$\mu\text{g/l}$	119%	1,73
T	1,7	0,3	$\mu\text{g/l}$	95%	-0,46
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	1,47	0,16	$\mu\text{g/l}$	82%	-1,63
X	1,7	0,15	$\mu\text{g/l}$	95%	-0,46
Y			$\mu\text{g/l}$		
Z	1,22	0,023	$\mu\text{g/l}$	68%	-2,89
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	1,92 \pm 0,75	1,67 \pm 0,14	$\mu\text{g/l}$
Recov. \pm CI(99%)	107,2 \pm 41,6	93,1 \pm 7,7	%
SD between labs	1,09	0,20	$\mu\text{g/l}$
RSD between labs	56,8	11,7	%
n for calculation	18	17	

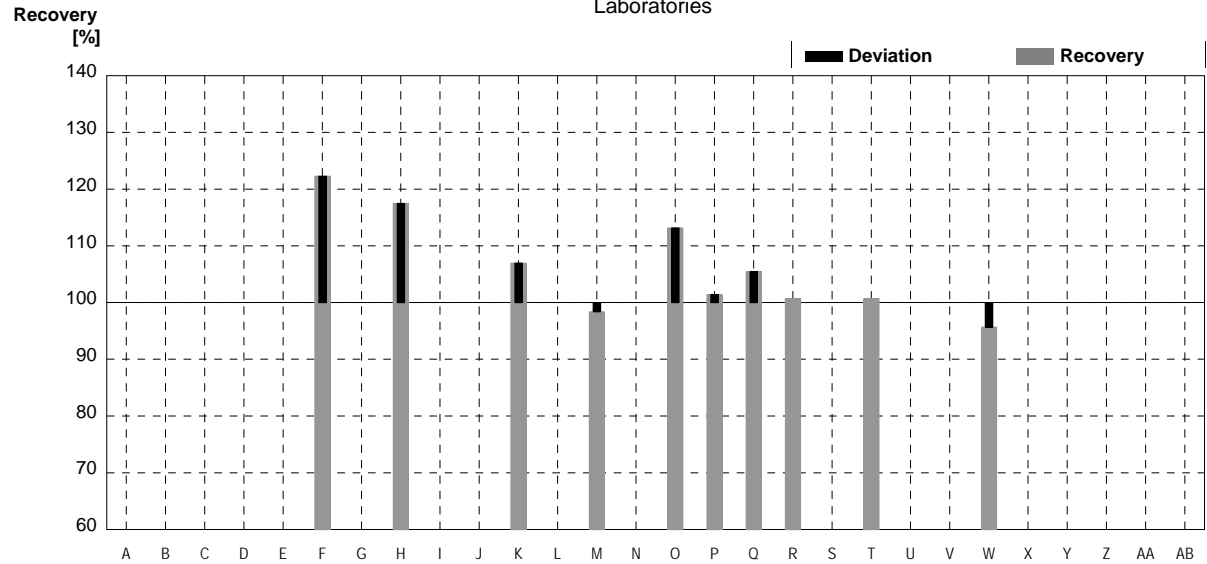
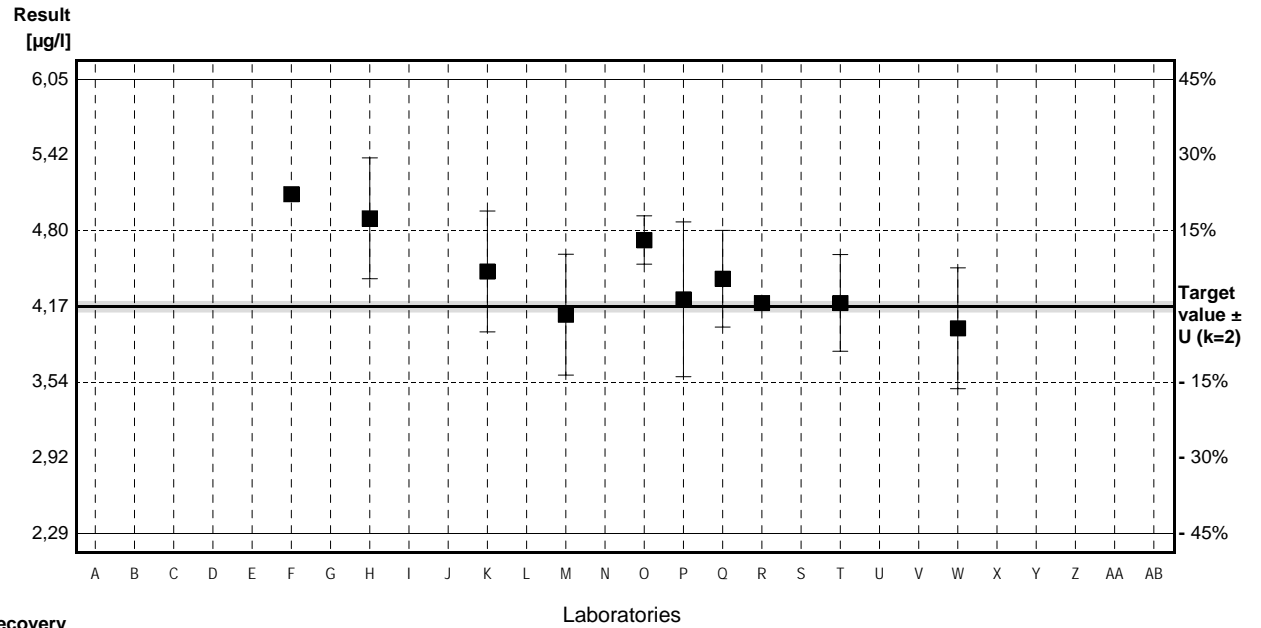


Sample M112A
Parameter Selenium

Target value ± U (k=2) 4,17 µg/l ± 0,04 µg/l
 IFA result ± U (k=2) 4,27 µg/l ± 0,43 µg/l
 Stability test ± U (k=2) 4,48 µg/l ± 0,45 µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			µg/l		
B			µg/l		
C			µg/l		
D			µg/l		
E			µg/l		
F	5,1		µg/l	122%	1,59
G			µg/l		
H	4,9	0,5	µg/l	118%	1,25
I			µg/l		
J			µg/l		
K	4,46	0,50	µg/l	107%	0,50
L			µg/l		
M	4,103	0,5	µg/l	98%	-0,11
N			µg/l		
O	4,72	0,2	µg/l	113%	0,94
P	4,23	0,64	µg/l	101%	0,10
Q	4,4	0,4	µg/l	106%	0,39
R	4,20		µg/l	101%	0,05
S			µg/l		
T	4,2	0,4	µg/l	101%	0,05
U			µg/l		
V			µg/l		
W	3,99	0,50	µg/l	96%	-0,31
X			µg/l		
Y			µg/l		
Z			µg/l		
AA			µg/l		
AB			µg/l		

	All results	Outliers excl.	Unit
Mean ± CI(99%)	4,43 ± 0,38	4,43 ± 0,38	µg/l
Recov. ± CI(99%)	106,2 ± 9,1	106,2 ± 9,1	%
SD between labs	0,37	0,37	µg/l
RSD between labs	8,2	8,2	%
n for calculation	10	10	

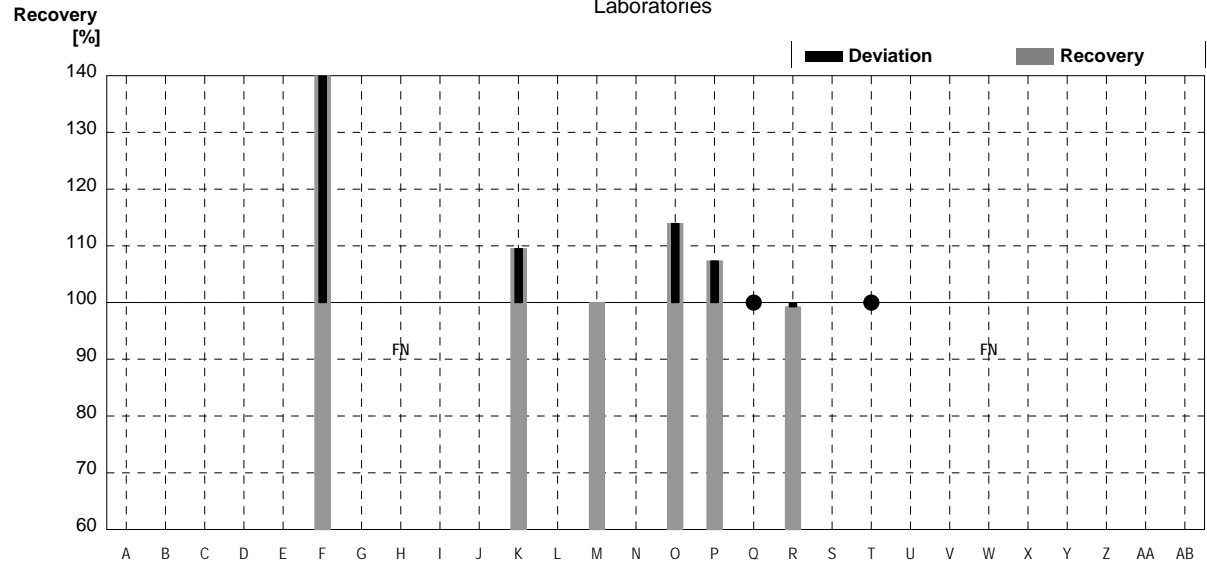
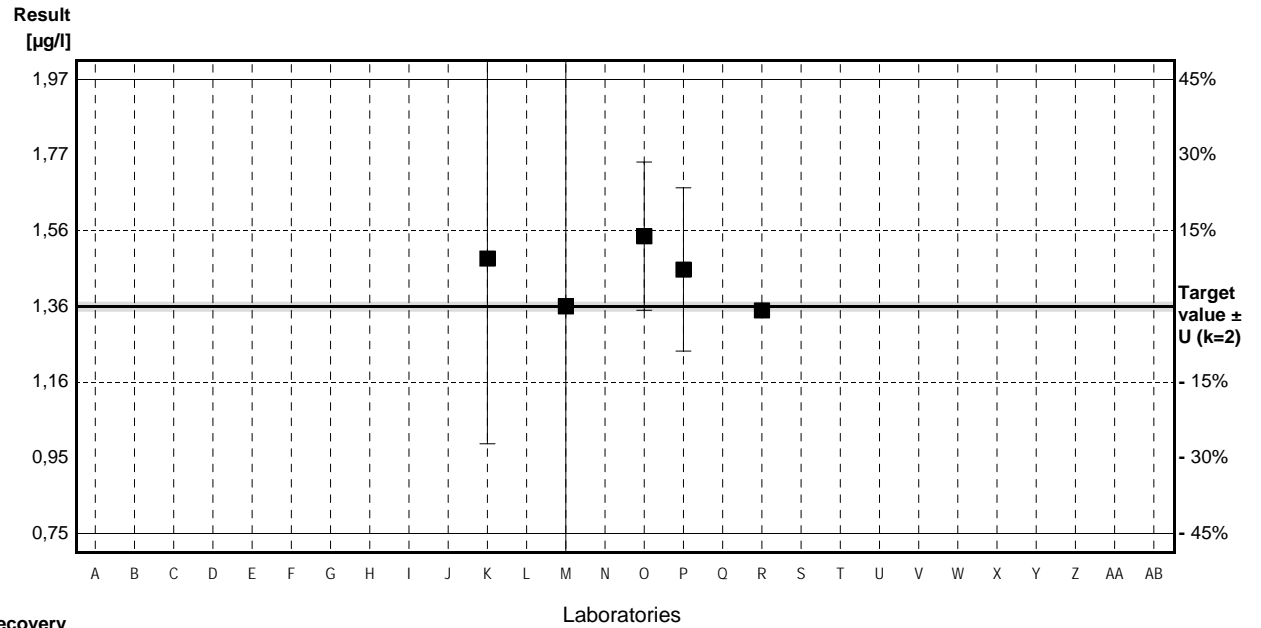


Sample M112B
Parameter Selenium

Target value $\pm U$ (k=2) 1,36 $\mu\text{g/l}$ \pm 0,01 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 1,39 $\mu\text{g/l}$ \pm 0,14 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 1,33 $\mu\text{g/l}$ \pm 0,13 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D			$\mu\text{g/l}$		
E			$\mu\text{g/l}$		
F	2,1	*	$\mu\text{g/l}$	154%	3,89
G			$\mu\text{g/l}$		
H	<1		$\mu\text{g/l}$	FN	
I			$\mu\text{g/l}$		
J			$\mu\text{g/l}$		
K	1,49	0,50	$\mu\text{g/l}$	110%	0,68
L			$\mu\text{g/l}$		
M	1,361	0,7	$\mu\text{g/l}$	100%	0,01
N			$\mu\text{g/l}$		
O	1,55	0,2	$\mu\text{g/l}$	114%	1,00
P	1,46	0,22	$\mu\text{g/l}$	107%	0,53
Q	<2		$\mu\text{g/l}$	•	
R	1,35		$\mu\text{g/l}$	99%	-0,05
S			$\mu\text{g/l}$		
T	<2,0		$\mu\text{g/l}$	•	
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	<1		$\mu\text{g/l}$	FN	
X			$\mu\text{g/l}$		
Y			$\mu\text{g/l}$		
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	1,55 \pm 0,46	1,44 \pm 0,18	$\mu\text{g/l}$
Recov. \pm CI(99%)	114,1 \pm 33,8	106,0 \pm 12,9	%
SD between labs	0,28	0,09	$\mu\text{g/l}$
RSD between labs	18,0	5,9	%
n for calculation	6	5	



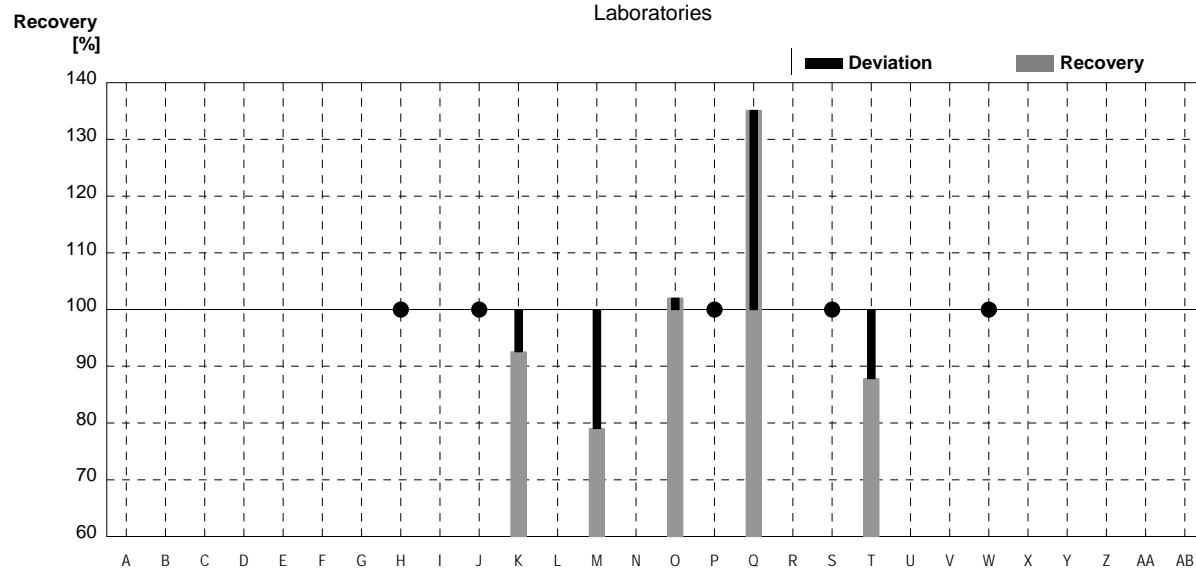
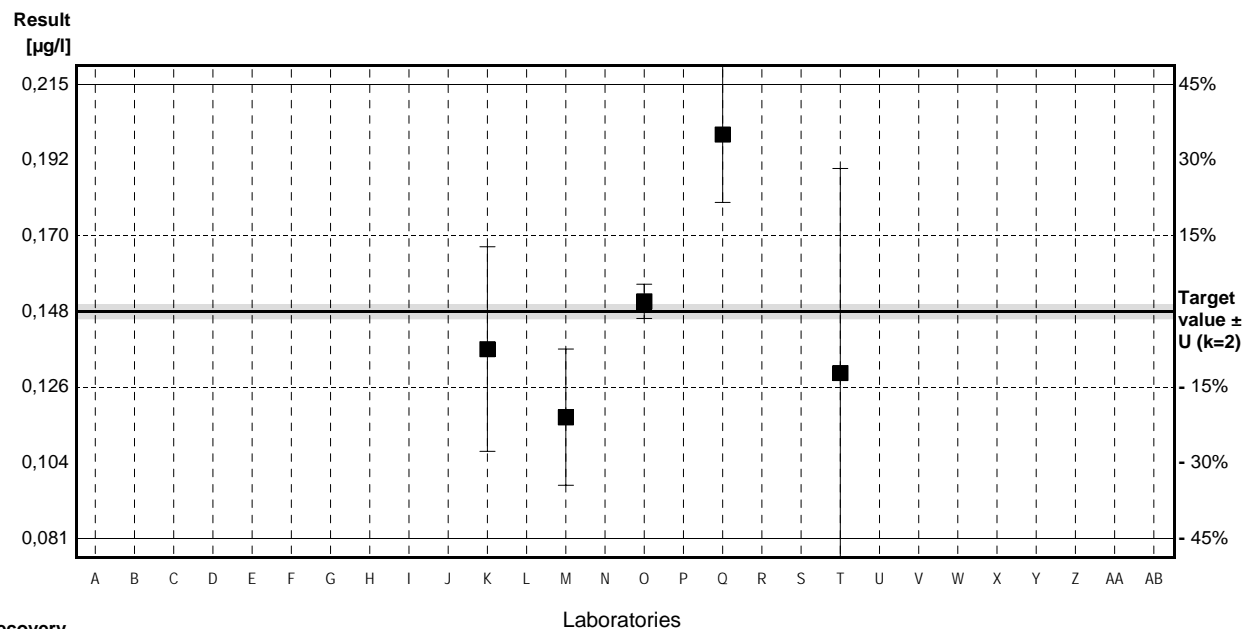
Sample M112A

Parameter Silver

Target value $\pm U$ (k=2) 0,148 $\mu\text{g/l}$ \pm 0,002 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 0,144 $\mu\text{g/l}$ \pm 0,014 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 0,149 $\mu\text{g/l}$ \pm 0,015 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D			$\mu\text{g/l}$		
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G			$\mu\text{g/l}$		
H	<1		$\mu\text{g/l}$	•	
I			$\mu\text{g/l}$		
J	<0,5		$\mu\text{g/l}$	•	
K	0,137	0,030	$\mu\text{g/l}$	93%	-0,44
L			$\mu\text{g/l}$		
M	0,117	0,02	$\mu\text{g/l}$	79%	-1,23
N			$\mu\text{g/l}$		
O	0,151	0,005	$\mu\text{g/l}$	102%	0,12
P	<5	0,5	$\mu\text{g/l}$	•	
Q	0,20	0,02	$\mu\text{g/l}$	135%	2,07
R			$\mu\text{g/l}$		
S	<1,0		$\mu\text{g/l}$	•	
T	0,13	0,06	$\mu\text{g/l}$	88%	-0,72
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	<2		$\mu\text{g/l}$	•	
X			$\mu\text{g/l}$		
Y			$\mu\text{g/l}$		
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,147 \pm 0,066	0,147 \pm 0,066	$\mu\text{g/l}$
Recov. \pm CI(99%)	99,3 \pm 44,6	99,3 \pm 44,6	%
SD between labs	0,032	0,032	$\mu\text{g/l}$
RSD between labs	21,8	21,8	%
n for calculation	5	5	



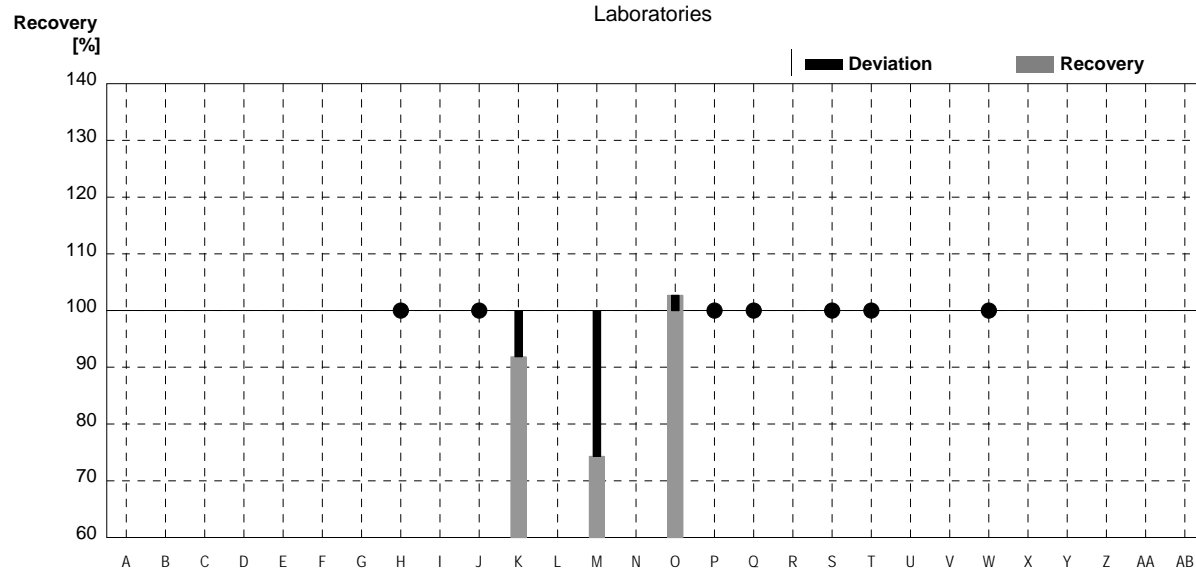
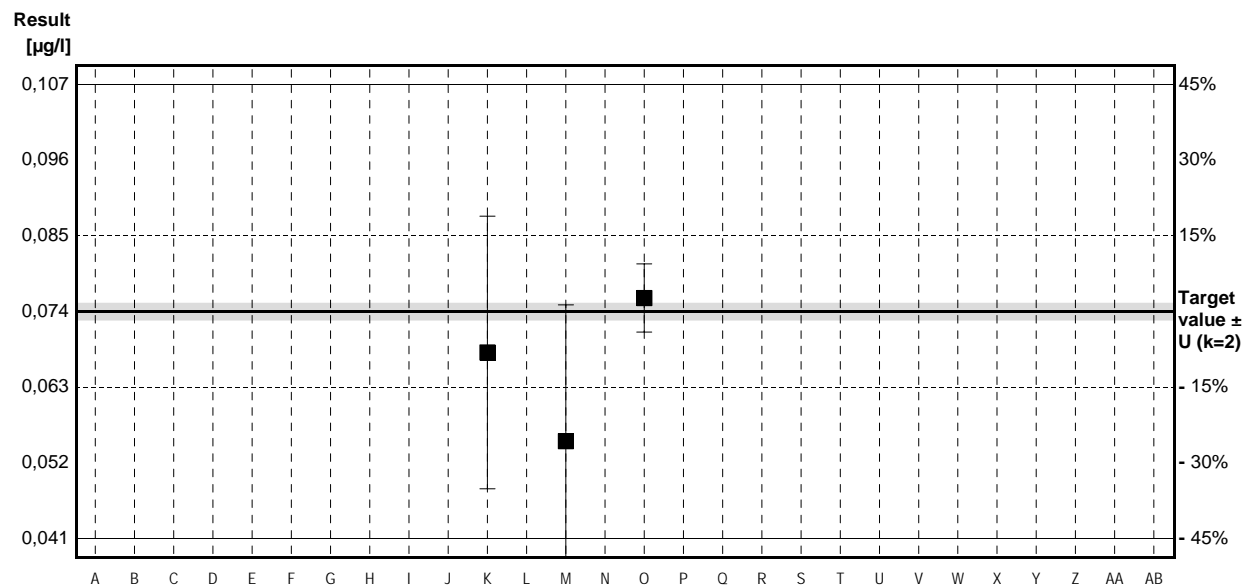
Sample M112B

Parameter Silver

Target value $\pm U$ (k=2) 0,074 $\mu\text{g/l}$ \pm 0,001 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 0,077 $\mu\text{g/l}$ \pm 0,008 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 0,075 $\mu\text{g/l}$ \pm 0,008 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D			$\mu\text{g/l}$		
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G			$\mu\text{g/l}$		
H	<1		$\mu\text{g/l}$	•	
I			$\mu\text{g/l}$		
J	<0,5		$\mu\text{g/l}$	•	
K	0,068	0,020	$\mu\text{g/l}$	92%	-0,48
L			$\mu\text{g/l}$		
M	0,055	0,02	$\mu\text{g/l}$	74%	-1,51
N			$\mu\text{g/l}$		
O	0,0760	0,005	$\mu\text{g/l}$	103%	0,16
P	<5	0,5	$\mu\text{g/l}$	•	
Q	<0,2		$\mu\text{g/l}$	•	
R			$\mu\text{g/l}$		
S	<1,0		$\mu\text{g/l}$	•	
T	<0,10		$\mu\text{g/l}$	•	
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	<2		$\mu\text{g/l}$	•	
X			$\mu\text{g/l}$		
Y			$\mu\text{g/l}$		
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,066 \pm 0,061		$\mu\text{g/l}$
Recov. \pm CI(99%)	89,6 \pm 82,0		%
SD between labs	0,011		$\mu\text{g/l}$
RSD between labs	16,0		%
n for calculation	3		

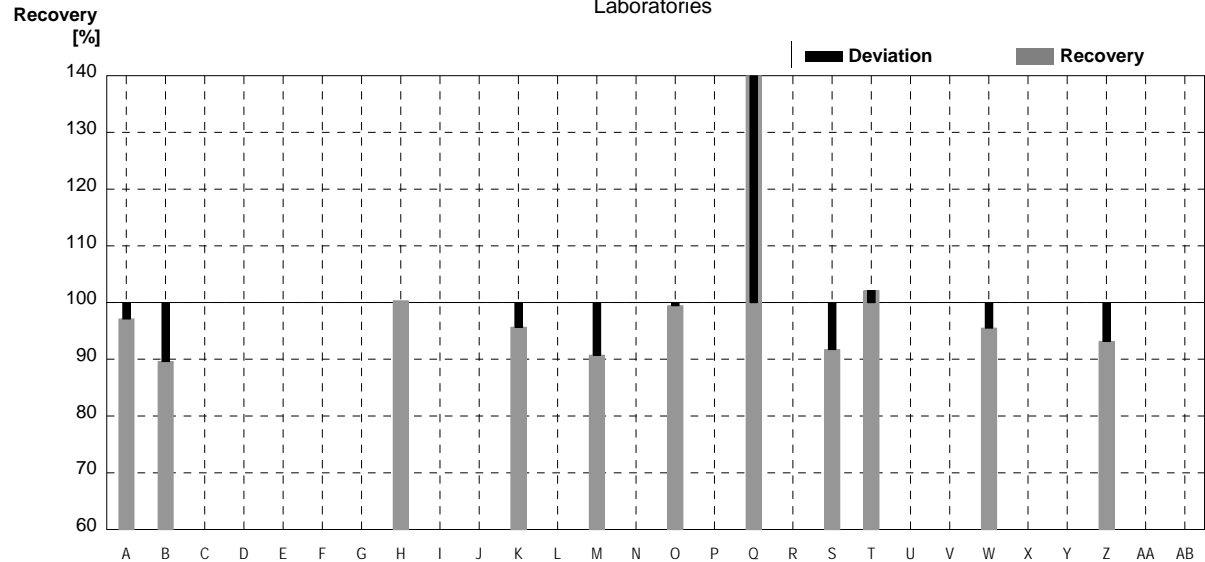
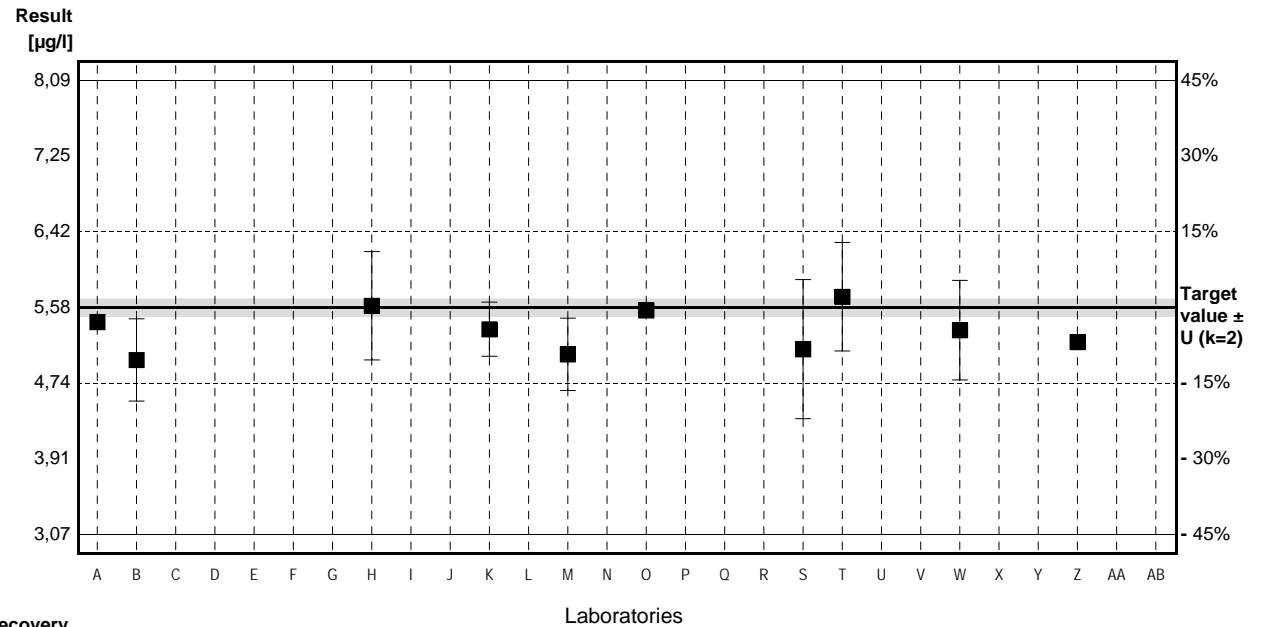


Sample M112A
Parameter Uranium

Target value $\pm U$ (k=2) 5,58 $\mu\text{g/l}$ \pm 0,10 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 5,84 $\mu\text{g/l}$ \pm 0,58 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 5,86 $\mu\text{g/l}$ \pm 0,59 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	5,42		$\mu\text{g/l}$	97%	-0,46
B	5,0	0,456	$\mu\text{g/l}$	90%	-1,65
C			$\mu\text{g/l}$		
D			$\mu\text{g/l}$		
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G			$\mu\text{g/l}$		
H	5,6	0,6	$\mu\text{g/l}$	100%	0,06
I			$\mu\text{g/l}$		
J			$\mu\text{g/l}$		
K	5,34	0,30	$\mu\text{g/l}$	96%	-0,68
L			$\mu\text{g/l}$		
M	5,063	0,4	$\mu\text{g/l}$	91%	-1,47
N			$\mu\text{g/l}$		
O	5,55	0,05	$\mu\text{g/l}$	99%	-0,09
P			$\mu\text{g/l}$		
Q	54 *	5	$\mu\text{g/l}$	968%	137,74
R			$\mu\text{g/l}$		
S	5,12	0,77	$\mu\text{g/l}$	92%	-1,31
T	5,7	0,6	$\mu\text{g/l}$	102%	0,34
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	5,33	0,55	$\mu\text{g/l}$	96%	-0,71
X			$\mu\text{g/l}$		
Y			$\mu\text{g/l}$		
Z	5,2		$\mu\text{g/l}$	93%	-1,08
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	9,76 \pm 14,03	5,33 \pm 0,25	$\mu\text{g/l}$
Recov. \pm CI(99%)	174,9 \pm 251,4	95,6 \pm 4,4	%
SD between labs	14,68	0,24	$\mu\text{g/l}$
RSD between labs	150,4	4,5	%
n for calculation	11	10	

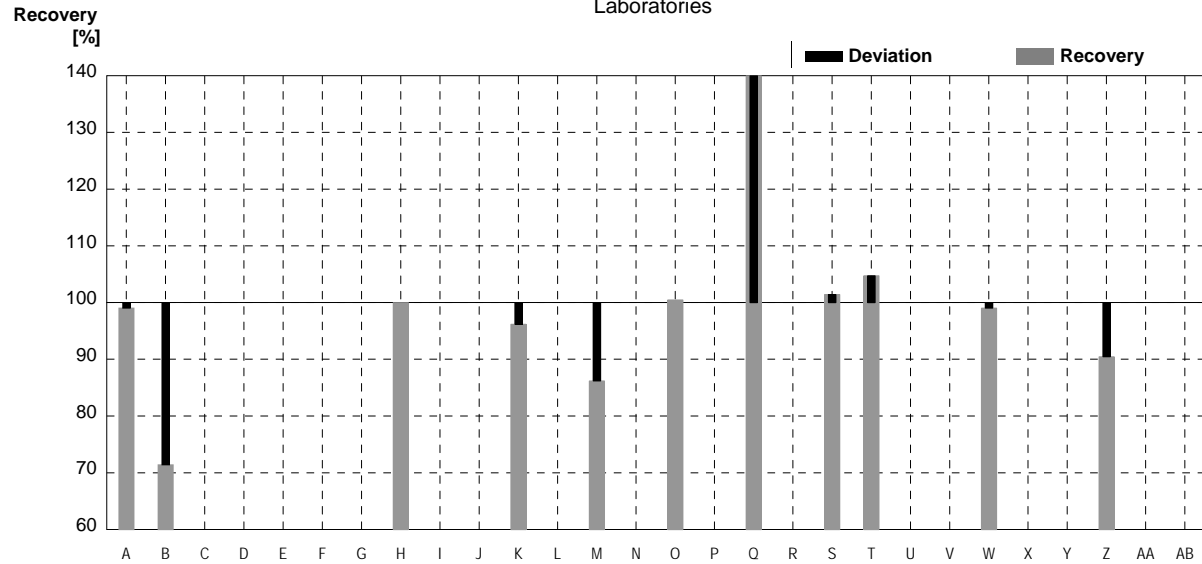
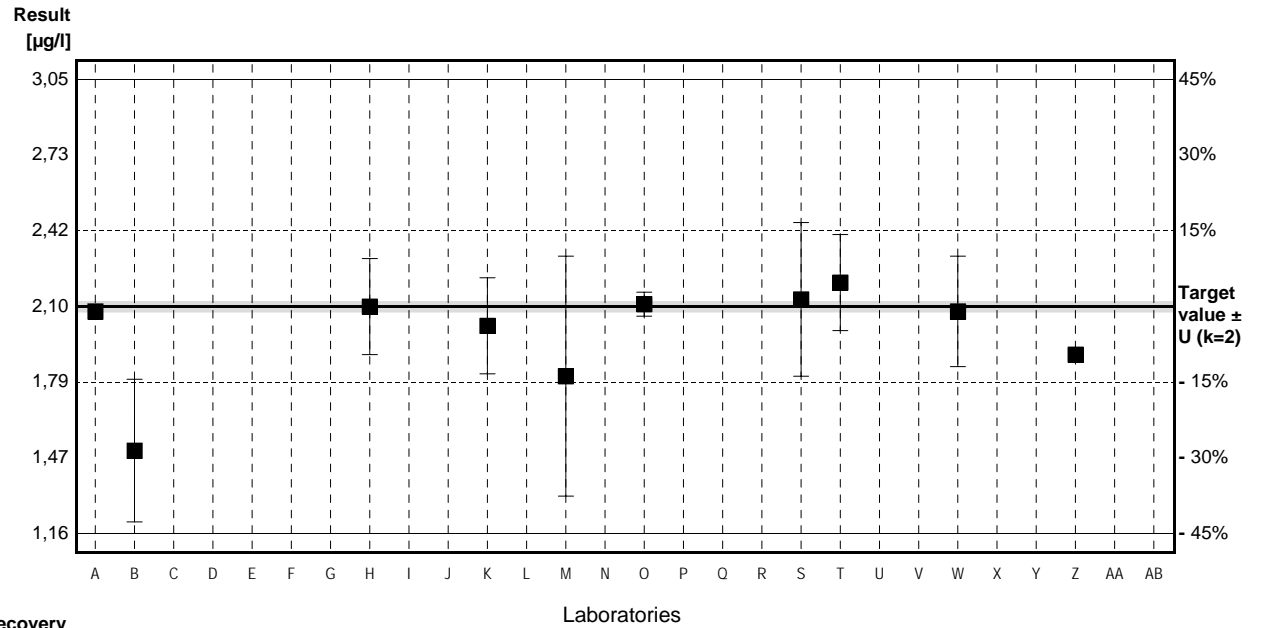


Sample M112B
Parameter Uranium

Target value ± U (k=2) 2,10 µg/l ± 0,02 µg/l
 IFA result ± U (k=2) 2,18 µg/l ± 0,22 µg/l
 Stability test ± U (k=2) 2,21 µg/l ± 0,22 µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	2,08		µg/l	99%	-0,15
B	1,5 *	0,297	µg/l	71%	-4,54
C			µg/l		
D			µg/l		
E			µg/l		
F			µg/l		
G			µg/l		
H	2,1	0,2	µg/l	100%	0,00
I			µg/l		
J			µg/l		
K	2,02	0,20	µg/l	96%	-0,60
L			µg/l		
M	1,81	0,5	µg/l	86%	-2,19
N			µg/l		
O	2,11	0,05	µg/l	100%	0,08
P			µg/l		
Q	21 *	2	µg/l	1000%	142,86
R			µg/l		
S	2,13	0,32	µg/l	101%	0,23
T	2,2	0,2	µg/l	105%	0,76
U			µg/l		
V			µg/l		
W	2,08	0,23	µg/l	99%	-0,15
X			µg/l		
Y			µg/l		
Z	1,9		µg/l	90%	-1,51
AA			µg/l		
AB			µg/l		

	All results	Outliers excl.	Unit
Mean ± CI(99%)	3,72 ± 5,48	2,05 ± 0,14	µg/l
Recov. ± CI(99%)	177,2 ± 261,0	97,5 ± 6,5	%
SD between labs	5,73	0,12	µg/l
RSD between labs	154,1	5,9	%
n for calculation	11	9	



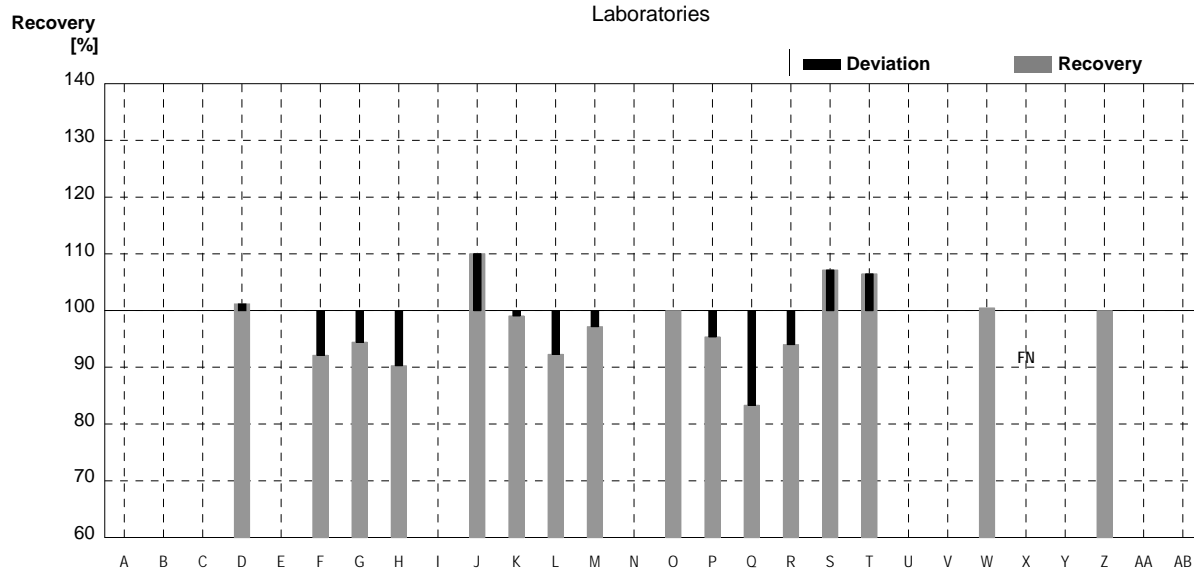
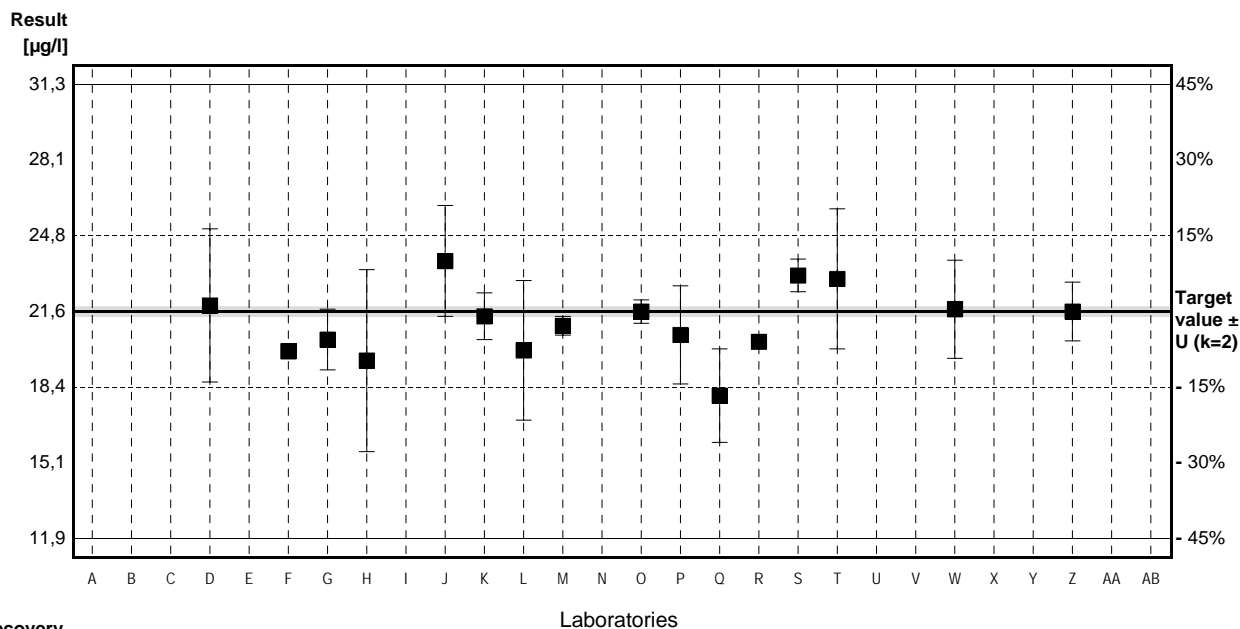
Sample M112A

Parameter Zinc

Target value $\pm U$ (k=2) 21,6 $\mu\text{g/l}$ \pm 0,2 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 22,3 $\mu\text{g/l}$ \pm 4,5 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 20,9 $\mu\text{g/l}$ \pm 4,2 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	21,86	3,28	$\mu\text{g/l}$	101%	0,12
E			$\mu\text{g/l}$		
F	19,9		$\mu\text{g/l}$	92%	-0,79
G	20,4	1,30	$\mu\text{g/l}$	94%	-0,56
H	19,5	3,9	$\mu\text{g/l}$	90%	-0,97
I			$\mu\text{g/l}$		
J	23,77	2,377	$\mu\text{g/l}$	110%	1,00
K	21,4	1,0	$\mu\text{g/l}$	99%	-0,09
L	19,94	2,99	$\mu\text{g/l}$	92%	-0,77
M	20,992	0,4	$\mu\text{g/l}$	97%	-0,28
N			$\mu\text{g/l}$		
O	21,6	0,5	$\mu\text{g/l}$	100%	0,00
P	20,6	2,1	$\mu\text{g/l}$	95%	-0,46
Q	18	2	$\mu\text{g/l}$	83%	-1,67
R	20,31		$\mu\text{g/l}$	94%	-0,60
S	23,15	0,70	$\mu\text{g/l}$	107%	0,72
T	23	3	$\mu\text{g/l}$	106%	0,65
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	21,7	2,1	$\mu\text{g/l}$	100%	0,05
X	<20		$\mu\text{g/l}$	FN	
Y			$\mu\text{g/l}$		
Z	21,6	1,26	$\mu\text{g/l}$	100%	0,00
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	21,1 \pm 1,1	21,1 \pm 1,1	$\mu\text{g/l}$
Recov. \pm CI(99%)	97,7 \pm 5,0	97,7 \pm 5,0	%
SD between labs	1,5	1,5	$\mu\text{g/l}$
RSD between labs	7,0	7,0	%
n for calculation	16	16	



Sample M112B

Parameter Zinc

Target value $\pm U$ (k=2) 14,5 $\mu\text{g/l}$ \pm 0,1 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 15,4 $\mu\text{g/l}$ \pm 3,1 $\mu\text{g/l}$
 Stability test $\pm U$ (k=2) 14,2 $\mu\text{g/l}$ \pm 2,8 $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A			$\mu\text{g/l}$		
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	14,53	2,18	$\mu\text{g/l}$	100%	0,02
E			$\mu\text{g/l}$		
F	13,4		$\mu\text{g/l}$	92%	-0,76
G	13,3	1,35	$\mu\text{g/l}$	92%	-0,83
H	12,3	2,5	$\mu\text{g/l}$	85%	-1,52
I			$\mu\text{g/l}$		
J	15,89	1,589	$\mu\text{g/l}$	110%	0,96
K	14,4	1,0	$\mu\text{g/l}$	99%	-0,07
L	<20		$\mu\text{g/l}$	•	
M	13,825	0,4	$\mu\text{g/l}$	95%	-0,47
N			$\mu\text{g/l}$		
O	14,3	0,5	$\mu\text{g/l}$	99%	-0,14
P	14	1,4	$\mu\text{g/l}$	97%	-0,34
Q	12	1	$\mu\text{g/l}$	83%	-1,72
R	13,40		$\mu\text{g/l}$	92%	-0,76
S	13,98	0,42	$\mu\text{g/l}$	96%	-0,36
T	15	3	$\mu\text{g/l}$	103%	0,34
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	13,9	1,3	$\mu\text{g/l}$	96%	-0,41
X	<20		$\mu\text{g/l}$	•	
Y			$\mu\text{g/l}$		
Z	14,5	1,33	$\mu\text{g/l}$	100%	0,00
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	13,9 \pm 0,8	13,9 \pm 0,8	$\mu\text{g/l}$
Recov. \pm CI(99%)	96,0 \pm 5,2	96,0 \pm 5,2	%
SD between labs	1,0	1,0	$\mu\text{g/l}$
RSD between labs	7,0	7,0	%
n for calculation	15	15	

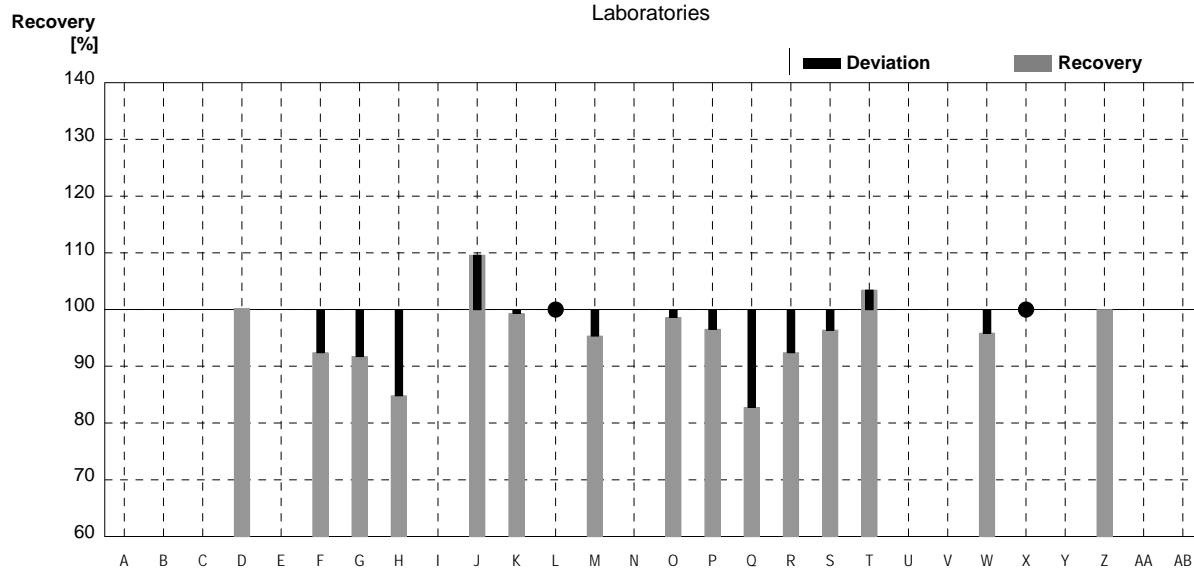
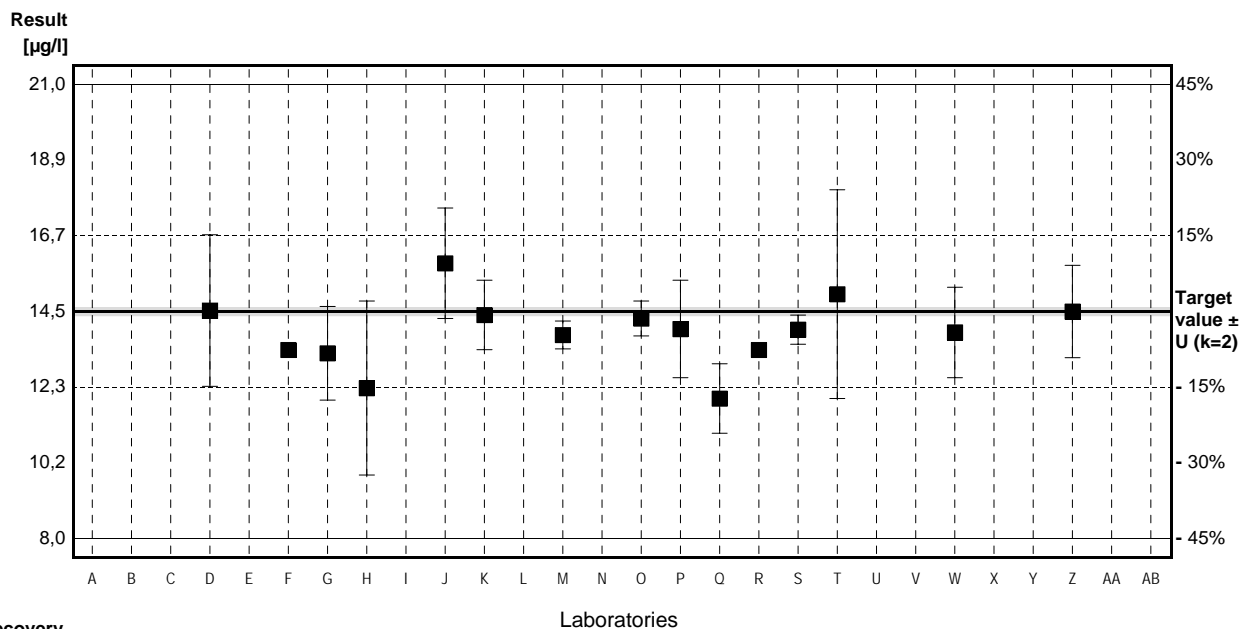


Illustration of Results Laboratory Oriented Part

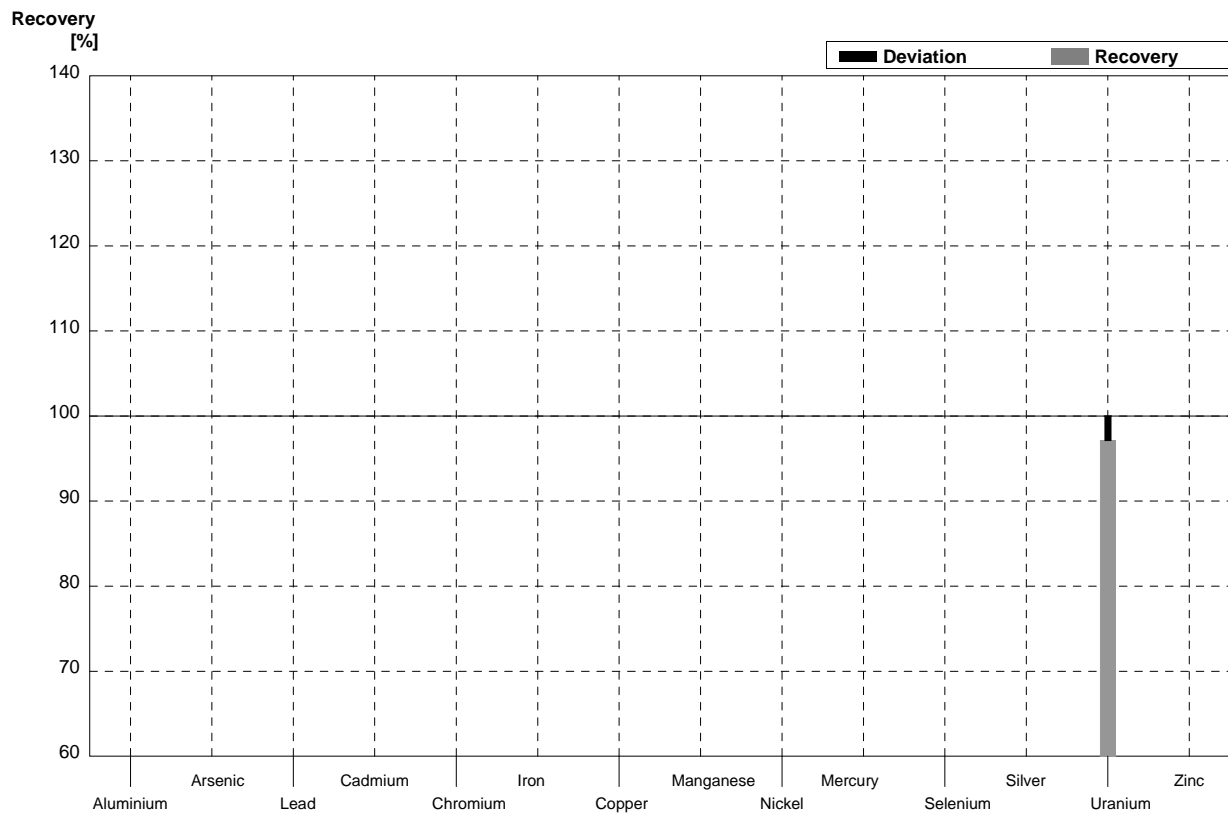
Round M112
Metals

Sample Dispatch: 2 July 2012



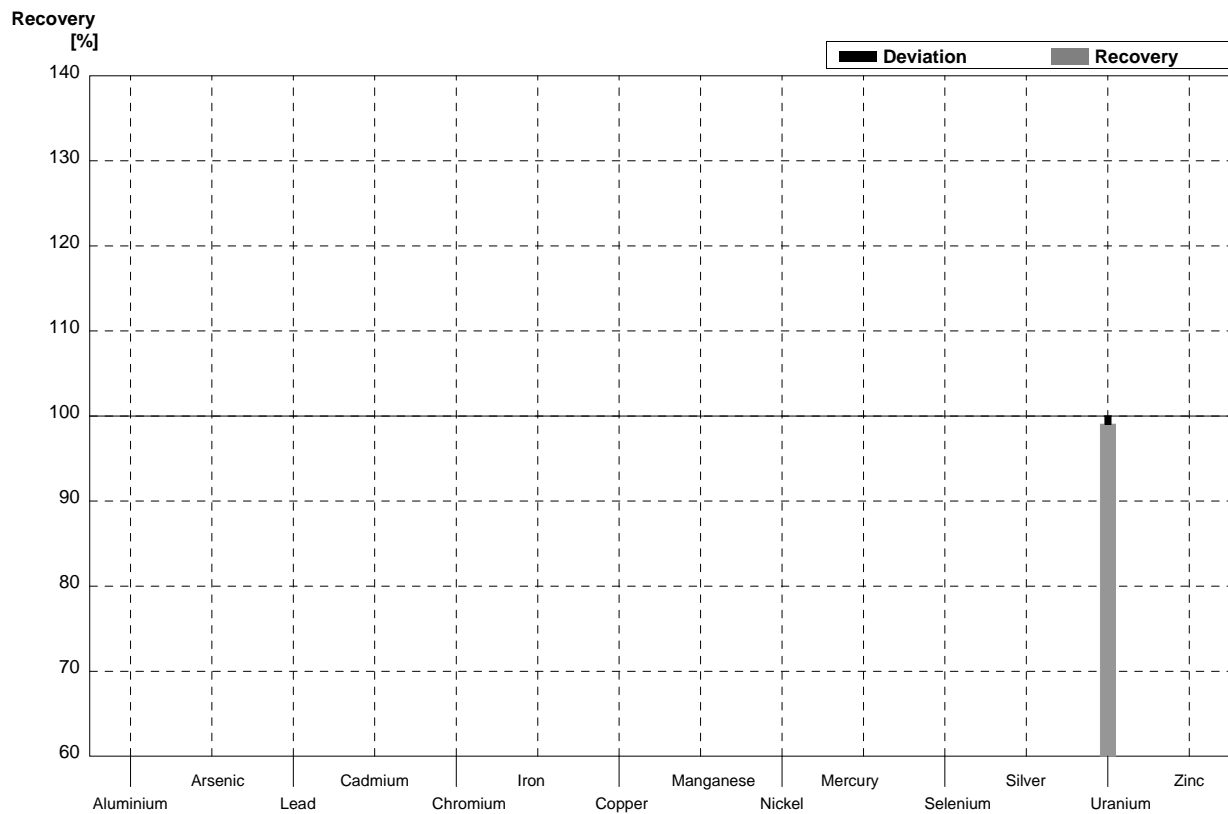
Sample M112A
Laboratory A

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5			$\mu\text{g/l}$	
Arsenic	2,86	0,05			$\mu\text{g/l}$	
Lead	7,40	0,12			$\mu\text{g/l}$	
Cadmium	0,72	0,01			$\mu\text{g/l}$	
Chromium	5,42	0,09			$\mu\text{g/l}$	
Iron	33,7	0,3			$\mu\text{g/l}$	
Copper	4,85	0,13			$\mu\text{g/l}$	
Manganese	45,1	0,4			$\mu\text{g/l}$	
Nickel	3,95	0,09			$\mu\text{g/l}$	
Mercury	1,19	0,02			$\mu\text{g/l}$	
Selenium	4,17	0,04			$\mu\text{g/l}$	
Silver	0,148	0,002			$\mu\text{g/l}$	
Uranium	5,58	0,10	5,42		$\mu\text{g/l}$	97%
Zinc	21,6	0,2			$\mu\text{g/l}$	



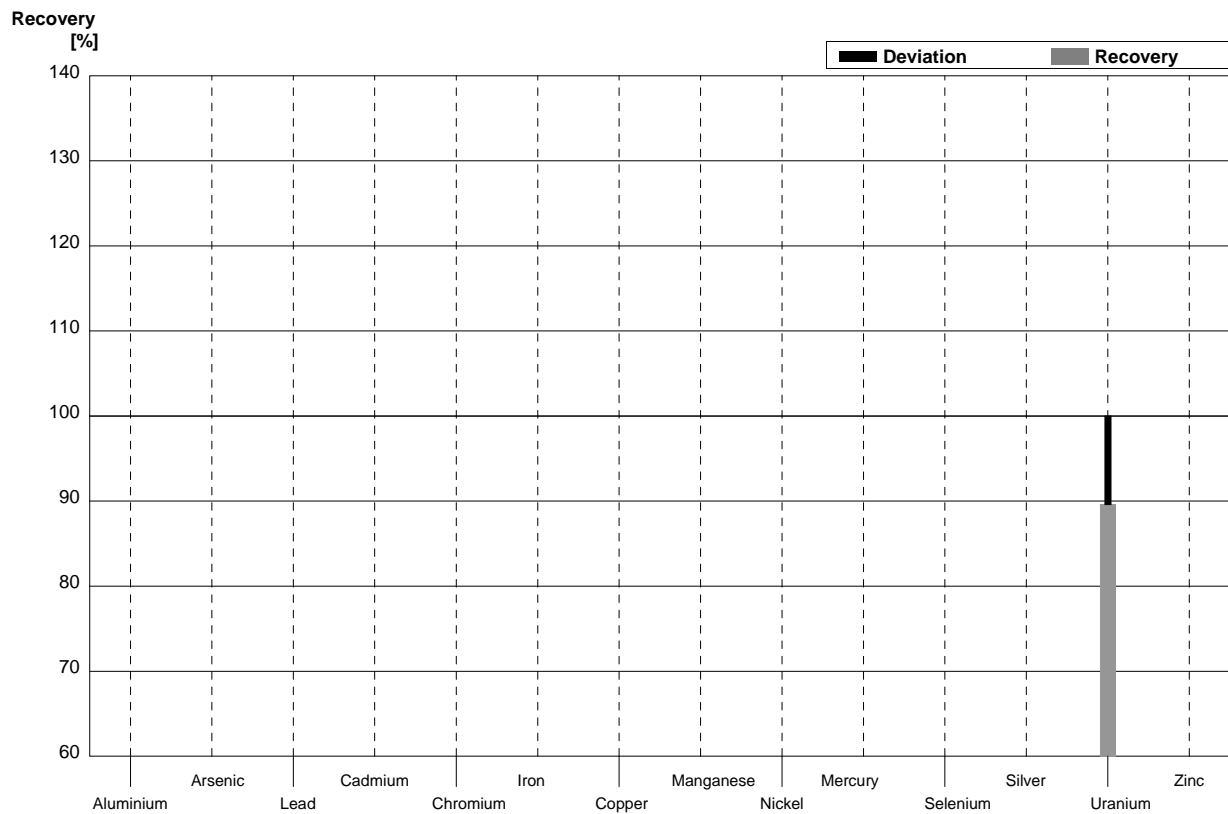
Sample M112B
Laboratory A

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2			$\mu\text{g/l}$	
Arsenic	4,77	0,09			$\mu\text{g/l}$	
Lead	2,97	0,03			$\mu\text{g/l}$	
Cadmium	1,52	0,01			$\mu\text{g/l}$	
Chromium	1,85	0,02			$\mu\text{g/l}$	
Iron	48,3	0,4			$\mu\text{g/l}$	
Copper	3,94	0,08			$\mu\text{g/l}$	
Manganese	18,5	0,1			$\mu\text{g/l}$	
Nickel	6,19	0,10			$\mu\text{g/l}$	
Mercury	1,79	0,03			$\mu\text{g/l}$	
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02	2,08		$\mu\text{g/l}$	99%
Zinc	14,5	0,1			$\mu\text{g/l}$	



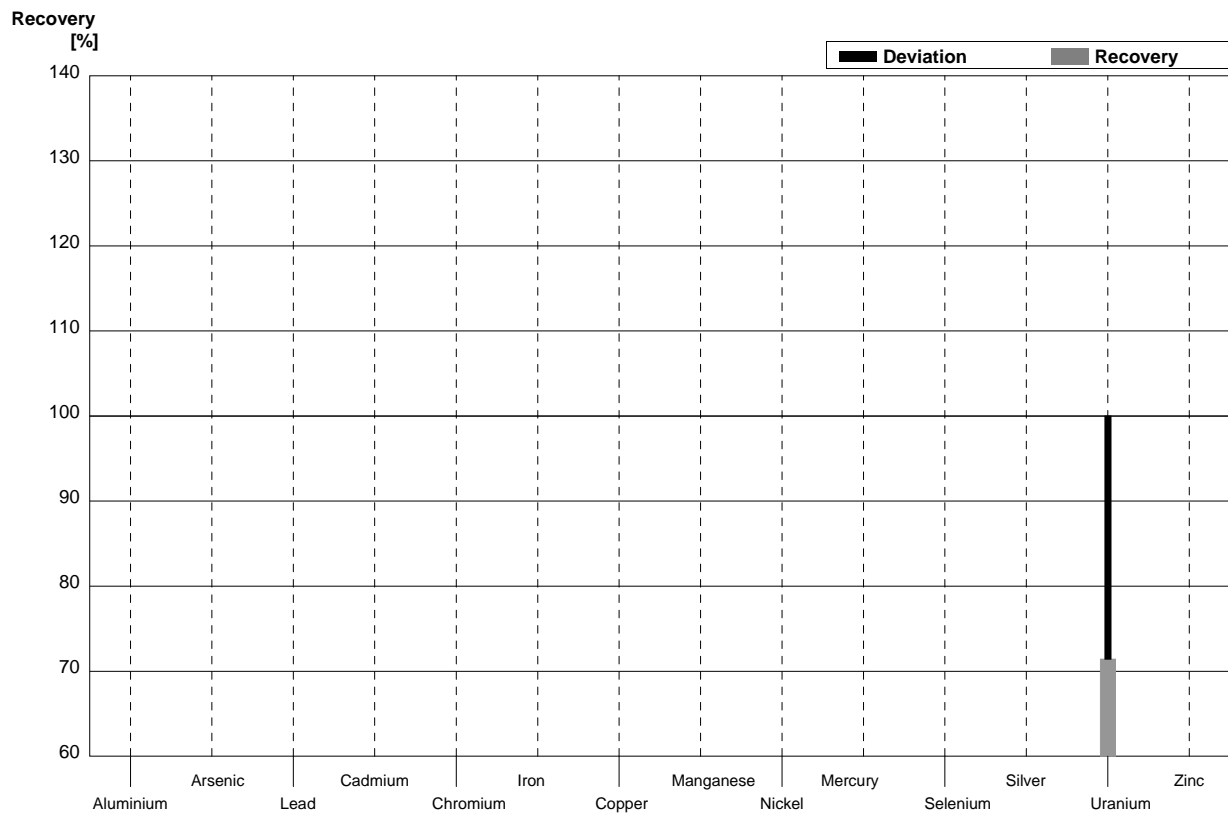
Sample M112A
Laboratory B

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5			$\mu\text{g/l}$	
Arsenic	2,86	0,05			$\mu\text{g/l}$	
Lead	7,40	0,12			$\mu\text{g/l}$	
Cadmium	0,72	0,01			$\mu\text{g/l}$	
Chromium	5,42	0,09			$\mu\text{g/l}$	
Iron	33,7	0,3			$\mu\text{g/l}$	
Copper	4,85	0,13			$\mu\text{g/l}$	
Manganese	45,1	0,4			$\mu\text{g/l}$	
Nickel	3,95	0,09			$\mu\text{g/l}$	
Mercury	1,19	0,02			$\mu\text{g/l}$	
Selenium	4,17	0,04			$\mu\text{g/l}$	
Silver	0,148	0,002			$\mu\text{g/l}$	
Uranium	5,58	0,10	5,0	0,456	$\mu\text{g/l}$	90%
Zinc	21,6	0,2			$\mu\text{g/l}$	



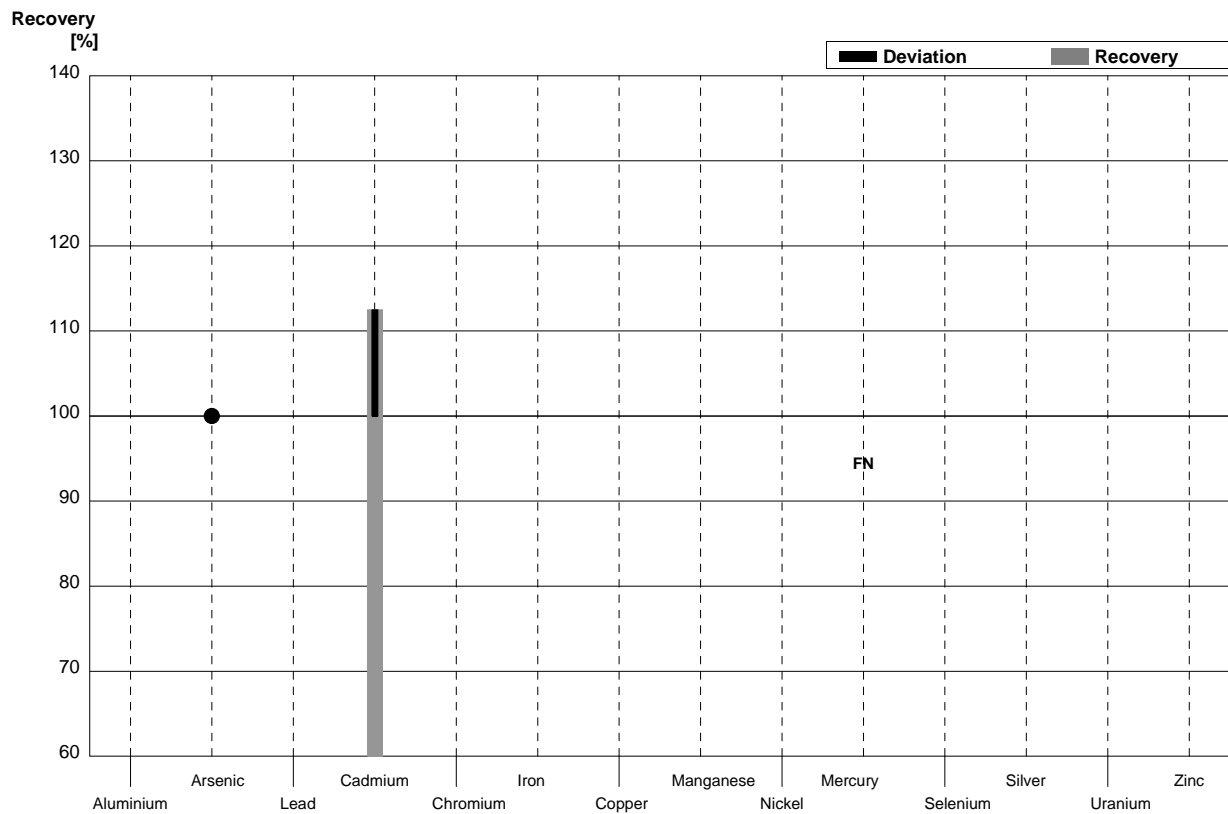
Sample M112B
Laboratory B

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2			$\mu\text{g/l}$	
Arsenic	4,77	0,09			$\mu\text{g/l}$	
Lead	2,97	0,03			$\mu\text{g/l}$	
Cadmium	1,52	0,01			$\mu\text{g/l}$	
Chromium	1,85	0,02			$\mu\text{g/l}$	
Iron	48,3	0,4			$\mu\text{g/l}$	
Copper	3,94	0,08			$\mu\text{g/l}$	
Manganese	18,5	0,1			$\mu\text{g/l}$	
Nickel	6,19	0,10			$\mu\text{g/l}$	
Mercury	1,79	0,03			$\mu\text{g/l}$	
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02	1,5	0,297	$\mu\text{g/l}$	71%
Zinc	14,5	0,1			$\mu\text{g/l}$	



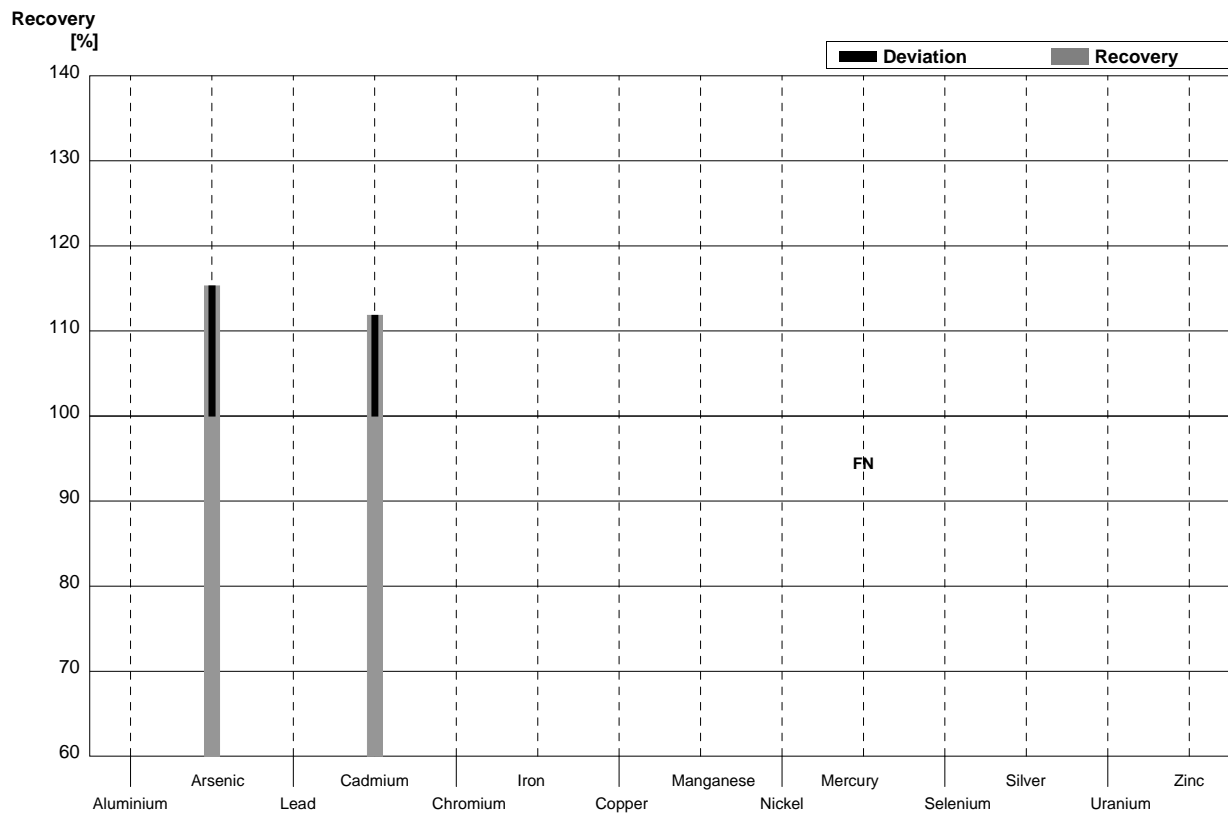
Sample M112A
Laboratory C

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	57,1	0,5			µg/l	
Arsenic	2,86	0,05	<5,0	0,5	µg/l	•
Lead	7,40	0,12			µg/l	
Cadmium	0,72	0,01	0,81	0,08	µg/l	113%
Chromium	5,42	0,09			µg/l	
Iron	33,7	0,3			µg/l	
Copper	4,85	0,13			µg/l	
Manganese	45,1	0,4			µg/l	
Nickel	3,95	0,09			µg/l	
Mercury	1,19	0,02	<0,1	0,01	µg/l	FN
Selenium	4,17	0,04			µg/l	
Silver	0,148	0,002			µg/l	
Uranium	5,58	0,10			µg/l	
Zinc	21,6	0,2			µg/l	



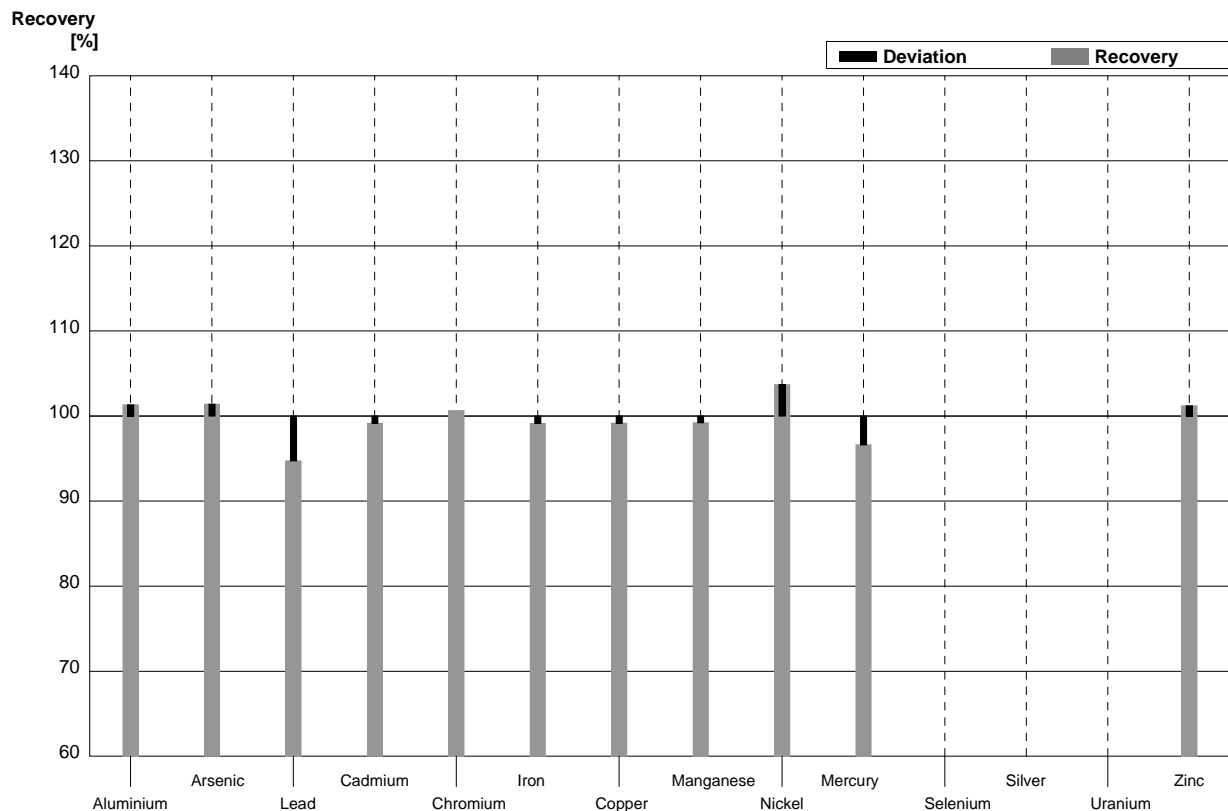
Sample M112B
Laboratory C

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2			$\mu\text{g/l}$	
Arsenic	4,77	0,09	5,5	0,5	$\mu\text{g/l}$	115%
Lead	2,97	0,03			$\mu\text{g/l}$	
Cadmium	1,52	0,01	1,70	0,08	$\mu\text{g/l}$	112%
Chromium	1,85	0,02			$\mu\text{g/l}$	
Iron	48,3	0,4			$\mu\text{g/l}$	
Copper	3,94	0,08			$\mu\text{g/l}$	
Manganese	18,5	0,1			$\mu\text{g/l}$	
Nickel	6,19	0,10			$\mu\text{g/l}$	
Mercury	1,79	0,03	<0,1	0,01	$\mu\text{g/l}$	FN
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02			$\mu\text{g/l}$	
Zinc	14,5	0,1			$\mu\text{g/l}$	



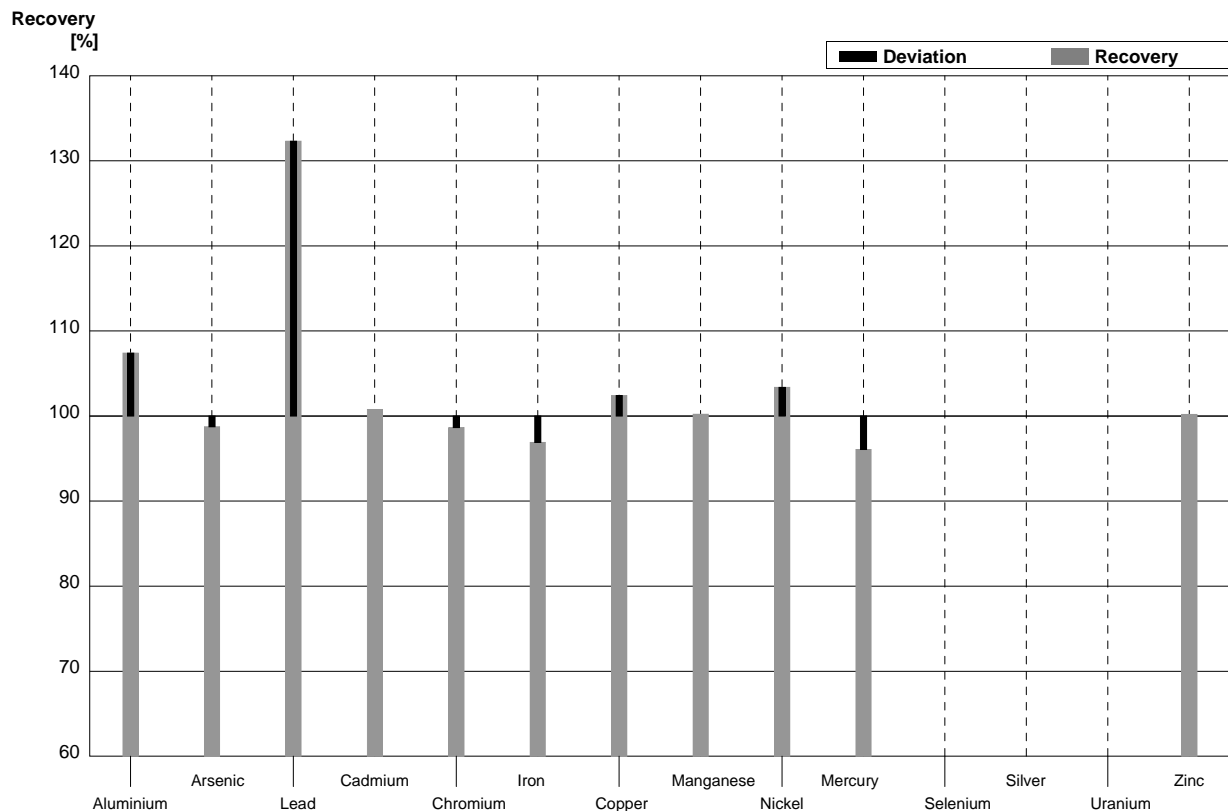
Sample M112A
Laboratory D

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	57,85	8,68	$\mu\text{g/l}$	101%
Arsenic	2,86	0,05	2,90	0,58	$\mu\text{g/l}$	101%
Lead	7,40	0,12	7,01	1,40	$\mu\text{g/l}$	95%
Cadmium	0,72	0,01	0,714	0,107	$\mu\text{g/l}$	99%
Chromium	5,42	0,09	5,455	0,818	$\mu\text{g/l}$	101%
Iron	33,7	0,3	33,41	5,01	$\mu\text{g/l}$	99%
Copper	4,85	0,13	4,810	0,722	$\mu\text{g/l}$	99%
Manganese	45,1	0,4	44,75	6,71	$\mu\text{g/l}$	99%
Nickel	3,95	0,09	4,096	0,614	$\mu\text{g/l}$	104%
Mercury	1,19	0,02	1,15	0,23	$\mu\text{g/l}$	97%
Selenium	4,17	0,04			$\mu\text{g/l}$	
Silver	0,148	0,002			$\mu\text{g/l}$	
Uranium	5,58	0,10			$\mu\text{g/l}$	
Zinc	21,6	0,2	21,86	3,28	$\mu\text{g/l}$	101%



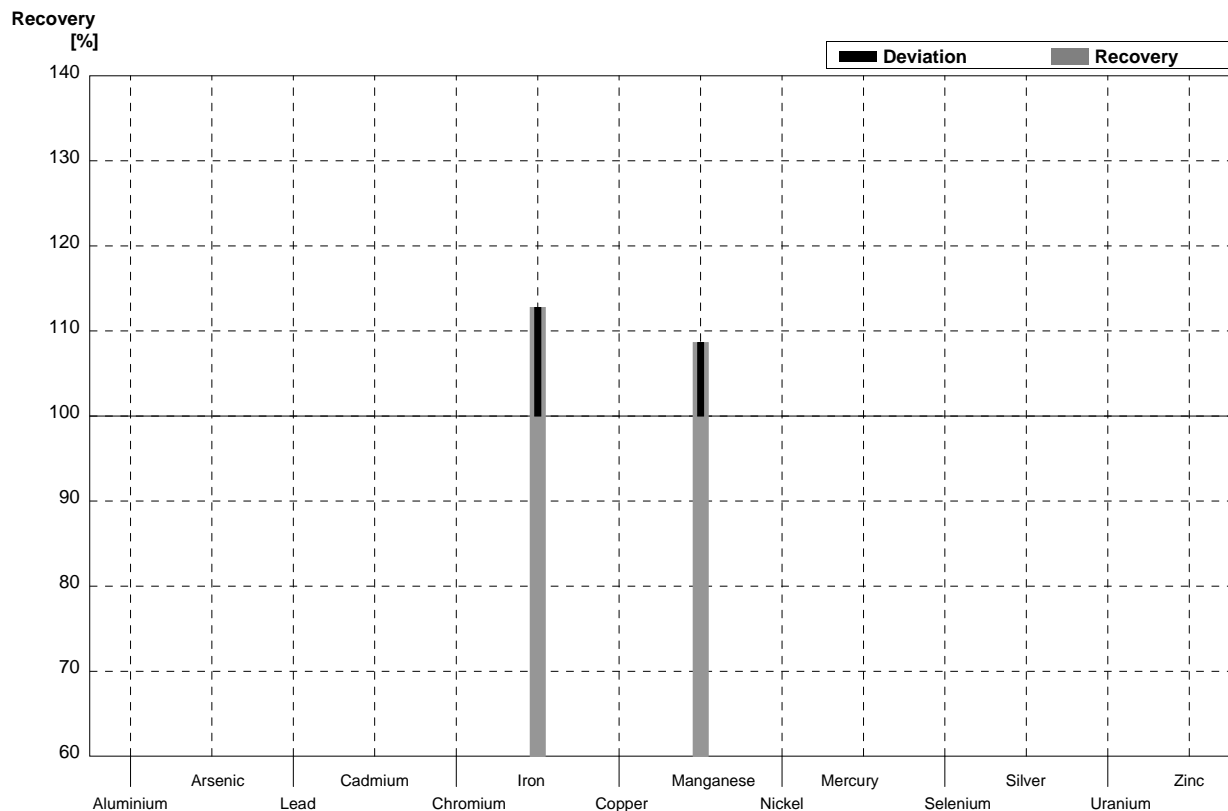
Sample M112B
Laboratory D

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	18,5	0,2	19,87	2,98	µg/l	107%
Arsenic	4,77	0,09	4,71	0,94	µg/l	99%
Lead	2,97	0,03	3,93	0,79	µg/l	132%
Cadmium	1,52	0,01	1,532	0,230	µg/l	101%
Chromium	1,85	0,02	1,825	0,274	µg/l	99%
Iron	48,3	0,4	46,80	7,02	µg/l	97%
Copper	3,94	0,08	4,035	0,605	µg/l	102%
Manganese	18,5	0,1	18,54	2,78	µg/l	100%
Nickel	6,19	0,10	6,399	0,960	µg/l	103%
Mercury	1,79	0,03	1,72	0,34	µg/l	96%
Selenium	1,36	0,01			µg/l	
Silver	0,074	0,001			µg/l	
Uranium	2,10	0,02			µg/l	
Zinc	14,5	0,1	14,53	2,18	µg/l	100%



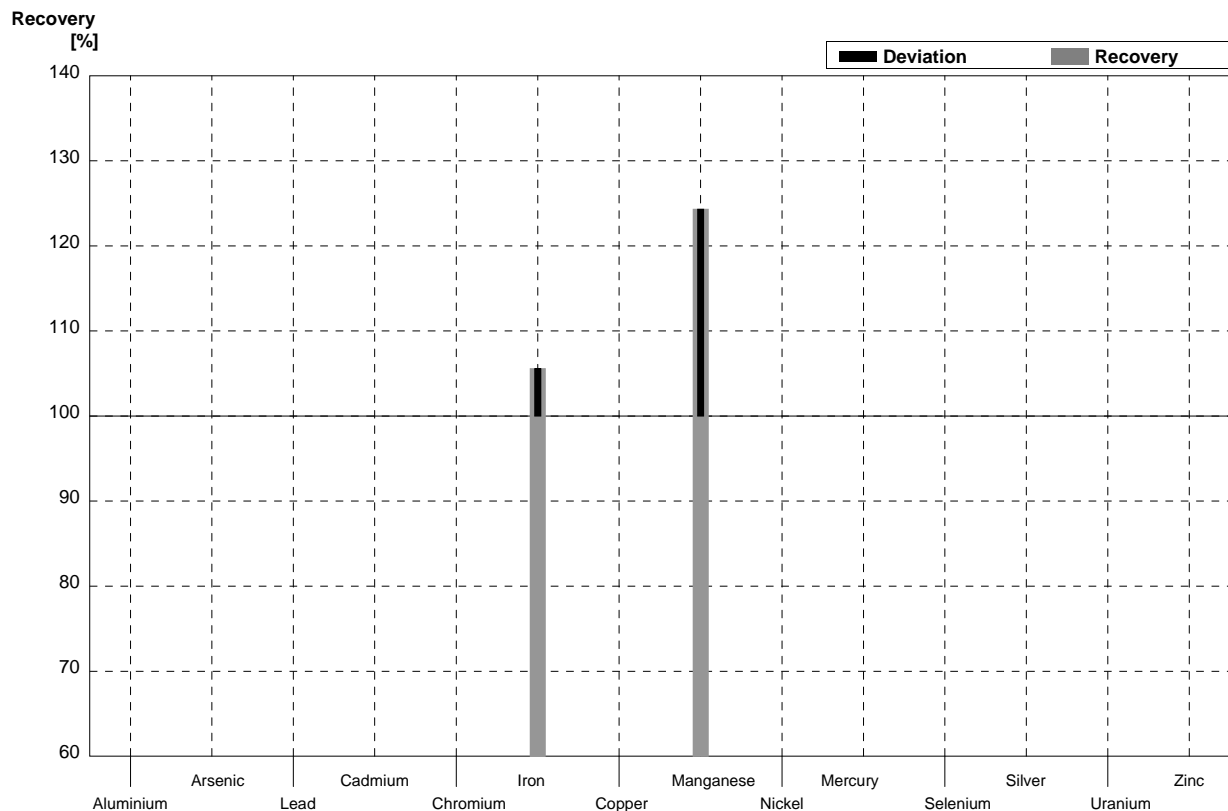
Sample M112A
Laboratory E

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5			$\mu\text{g/l}$	
Arsenic	2,86	0,05			$\mu\text{g/l}$	
Lead	7,40	0,12			$\mu\text{g/l}$	
Cadmium	0,72	0,01			$\mu\text{g/l}$	
Chromium	5,42	0,09			$\mu\text{g/l}$	
Iron	33,7	0,3	38	5	$\mu\text{g/l}$	113%
Copper	4,85	0,13			$\mu\text{g/l}$	
Manganese	45,1	0,4	49	10	$\mu\text{g/l}$	109%
Nickel	3,95	0,09			$\mu\text{g/l}$	
Mercury	1,19	0,02			$\mu\text{g/l}$	
Selenium	4,17	0,04			$\mu\text{g/l}$	
Silver	0,148	0,002			$\mu\text{g/l}$	
Uranium	5,58	0,10			$\mu\text{g/l}$	
Zinc	21,6	0,2			$\mu\text{g/l}$	



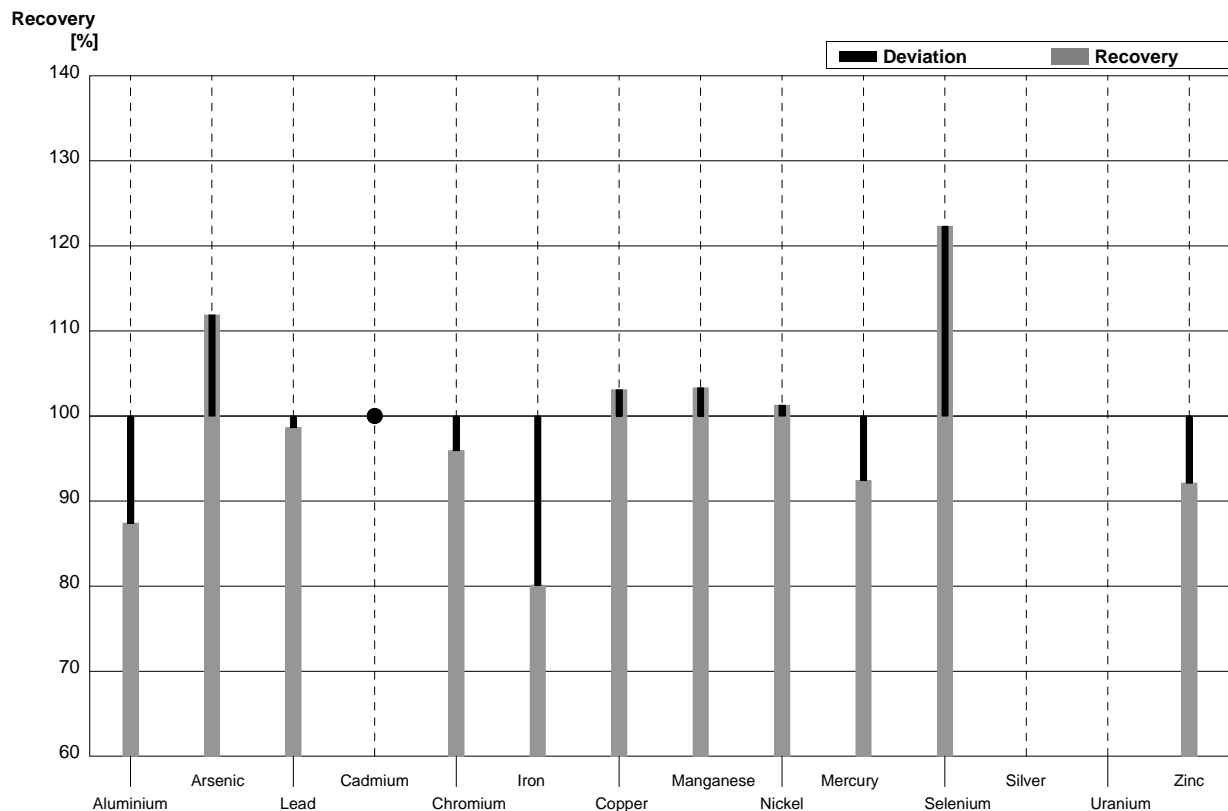
Sample M112B
Laboratory E

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2			$\mu\text{g/l}$	
Arsenic	4,77	0,09			$\mu\text{g/l}$	
Lead	2,97	0,03			$\mu\text{g/l}$	
Cadmium	1,52	0,01			$\mu\text{g/l}$	
Chromium	1,85	0,02			$\mu\text{g/l}$	
Iron	48,3	0,4	51	7	$\mu\text{g/l}$	106%
Copper	3,94	0,08			$\mu\text{g/l}$	
Manganese	18,5	0,1	23	5	$\mu\text{g/l}$	124%
Nickel	6,19	0,10			$\mu\text{g/l}$	
Mercury	1,79	0,03			$\mu\text{g/l}$	
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02			$\mu\text{g/l}$	
Zinc	14,5	0,1			$\mu\text{g/l}$	



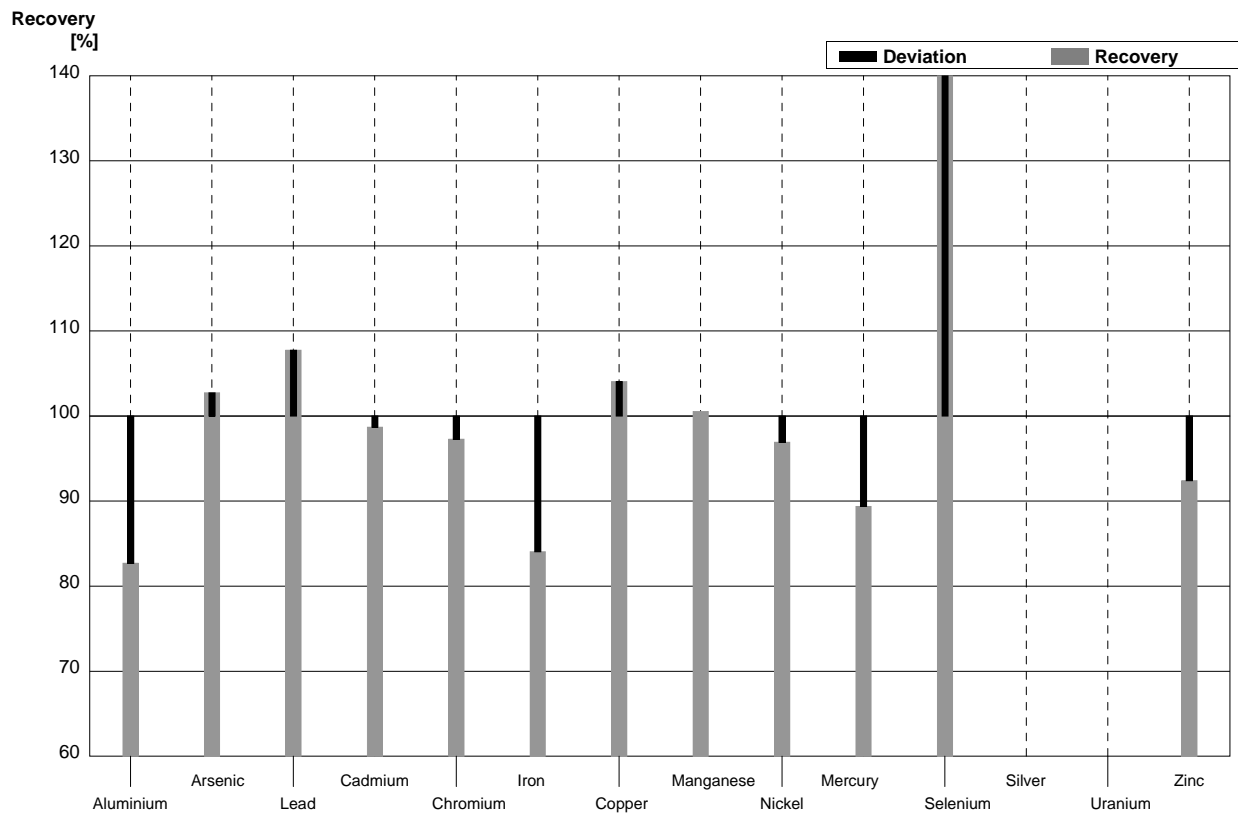
Sample M112A
Laboratory F

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	49,9		$\mu\text{g/l}$	87%
Arsenic	2,86	0,05	3,2		$\mu\text{g/l}$	112%
Lead	7,40	0,12	7,3		$\mu\text{g/l}$	99%
Cadmium	0,72	0,01	<1		$\mu\text{g/l}$	•
Chromium	5,42	0,09	5,2		$\mu\text{g/l}$	96%
Iron	33,7	0,3	27,0		$\mu\text{g/l}$	80%
Copper	4,85	0,13	5,0		$\mu\text{g/l}$	103%
Manganese	45,1	0,4	46,6		$\mu\text{g/l}$	103%
Nickel	3,95	0,09	4,0		$\mu\text{g/l}$	101%
Mercury	1,19	0,02	1,1		$\mu\text{g/l}$	92%
Selenium	4,17	0,04	5,1		$\mu\text{g/l}$	122%
Silver	0,148	0,002			$\mu\text{g/l}$	
Uranium	5,58	0,10			$\mu\text{g/l}$	
Zinc	21,6	0,2	19,9		$\mu\text{g/l}$	92%



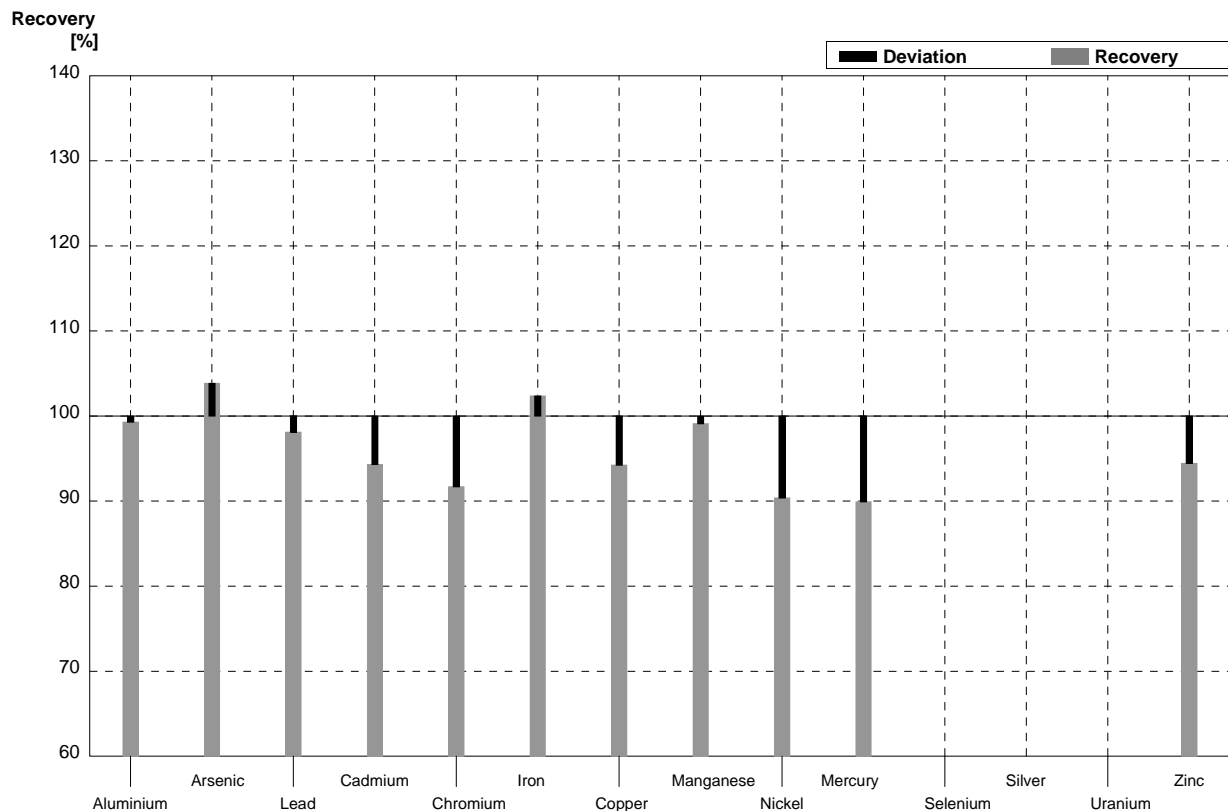
Sample M112B
Laboratory F

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	18,5	0,2	15,3		µg/l	83%
Arsenic	4,77	0,09	4,9		µg/l	103%
Lead	2,97	0,03	3,2		µg/l	108%
Cadmium	1,52	0,01	1,5		µg/l	99%
Chromium	1,85	0,02	1,8		µg/l	97%
Iron	48,3	0,4	40,6		µg/l	84%
Copper	3,94	0,08	4,1		µg/l	104%
Manganese	18,5	0,1	18,6		µg/l	101%
Nickel	6,19	0,10	6,0		µg/l	97%
Mercury	1,79	0,03	1,6		µg/l	89%
Selenium	1,36	0,01	2,1		µg/l	154%
Silver	0,074	0,001			µg/l	
Uranium	2,10	0,02			µg/l	
Zinc	14,5	0,1	13,4		µg/l	92%



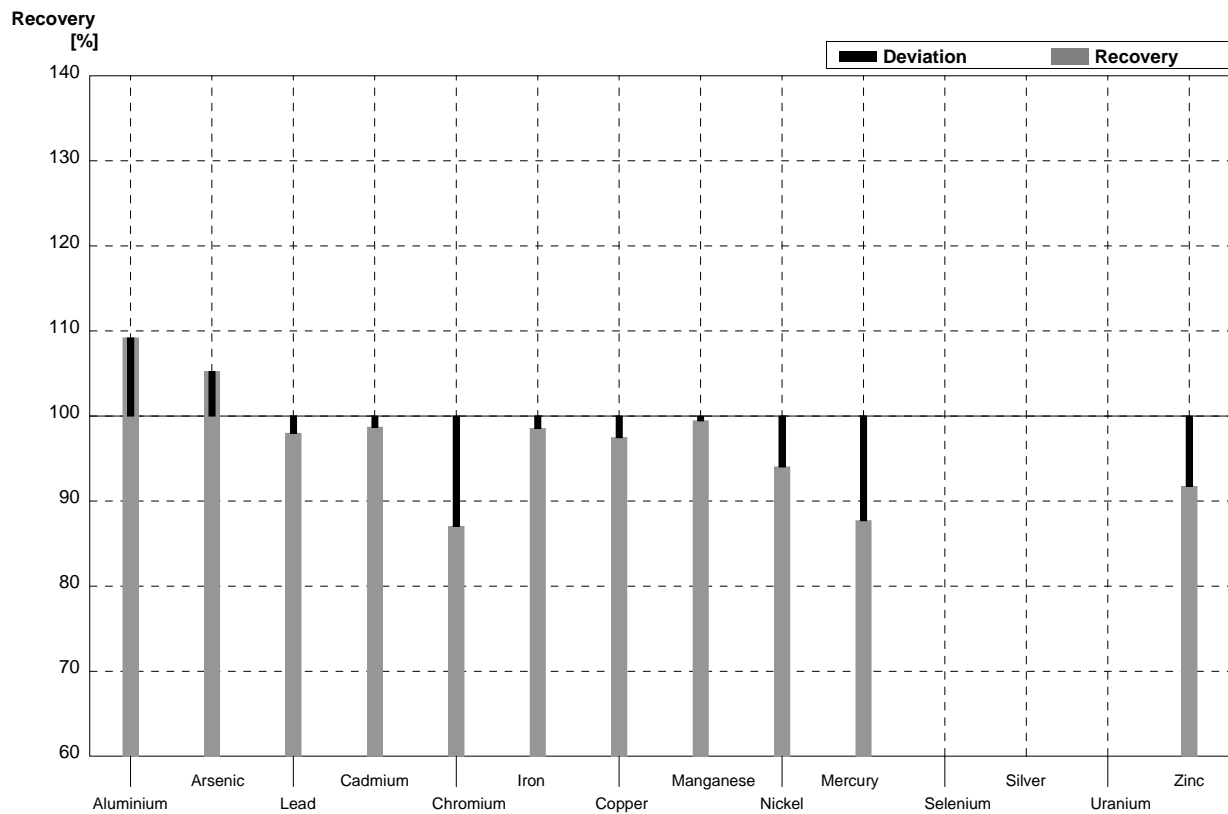
Sample M112A
Laboratory G

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	57,1	0,5	56,7	1,05	µg/l	99%
Arsenic	2,86	0,05	2,97	0,20	µg/l	104%
Lead	7,40	0,12	7,26	0,13	µg/l	98%
Cadmium	0,72	0,01	0,679	0,040	µg/l	94%
Chromium	5,42	0,09	4,97	0,15	µg/l	92%
Iron	33,7	0,3	34,5	1,06	µg/l	102%
Copper	4,85	0,13	4,57	0,16	µg/l	94%
Manganese	45,1	0,4	44,7	0,49	µg/l	99%
Nickel	3,95	0,09	3,57	0,15	µg/l	90%
Mercury	1,19	0,02	1,07	0,02	µg/l	90%
Selenium	4,17	0,04			µg/l	
Silver	0,148	0,002			µg/l	
Uranium	5,58	0,10			µg/l	
Zinc	21,6	0,2	20,4	1,30	µg/l	94%



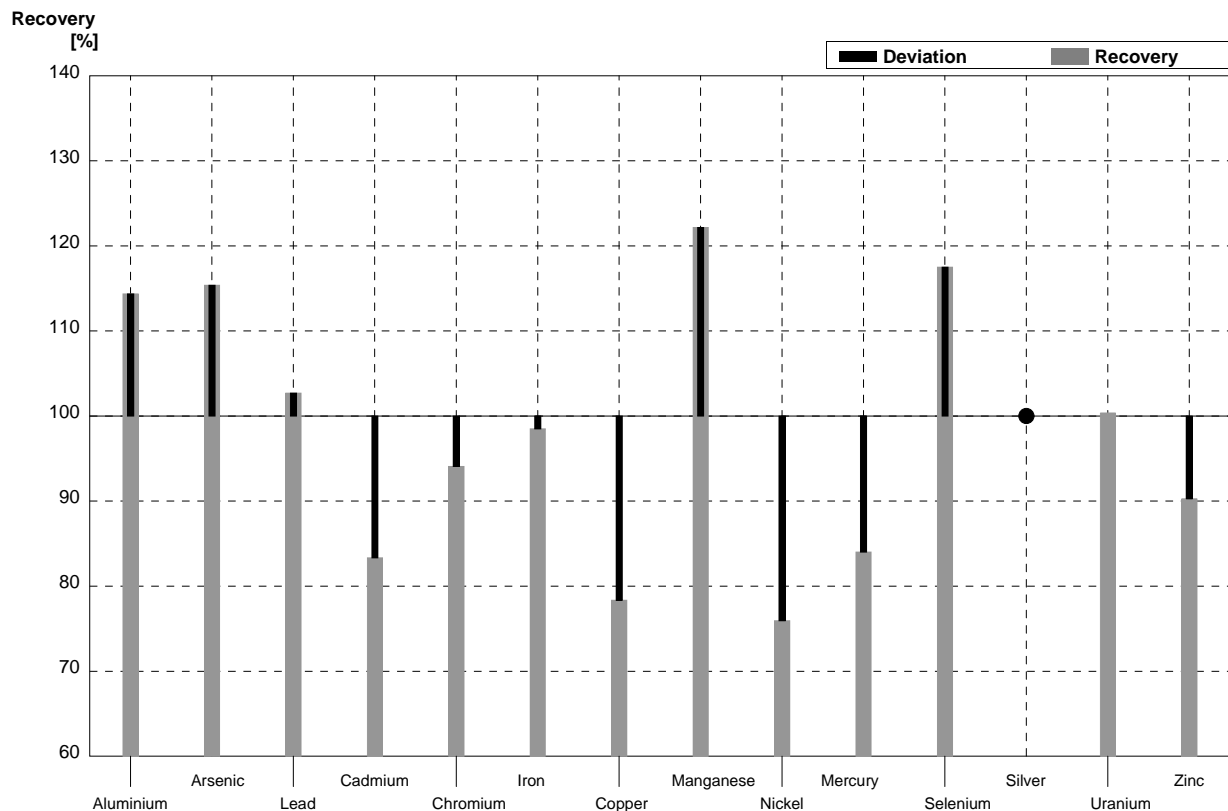
Sample M112B
Laboratory G

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2	20,2	1,18	$\mu\text{g/l}$	109%
Arsenic	4,77	0,09	5,02	0,19	$\mu\text{g/l}$	105%
Lead	2,97	0,03	2,91	0,14	$\mu\text{g/l}$	98%
Cadmium	1,52	0,01	1,50	0,040	$\mu\text{g/l}$	99%
Chromium	1,85	0,02	1,61	0,17	$\mu\text{g/l}$	87%
Iron	48,3	0,4	47,6	1,02	$\mu\text{g/l}$	99%
Copper	3,94	0,08	3,84	0,17	$\mu\text{g/l}$	97%
Manganese	18,5	0,1	18,4	0,46	$\mu\text{g/l}$	99%
Nickel	6,19	0,10	5,82	0,15	$\mu\text{g/l}$	94%
Mercury	1,79	0,03	1,57	0,02	$\mu\text{g/l}$	88%
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02			$\mu\text{g/l}$	
Zinc	14,5	0,1	13,3	1,35	$\mu\text{g/l}$	92%



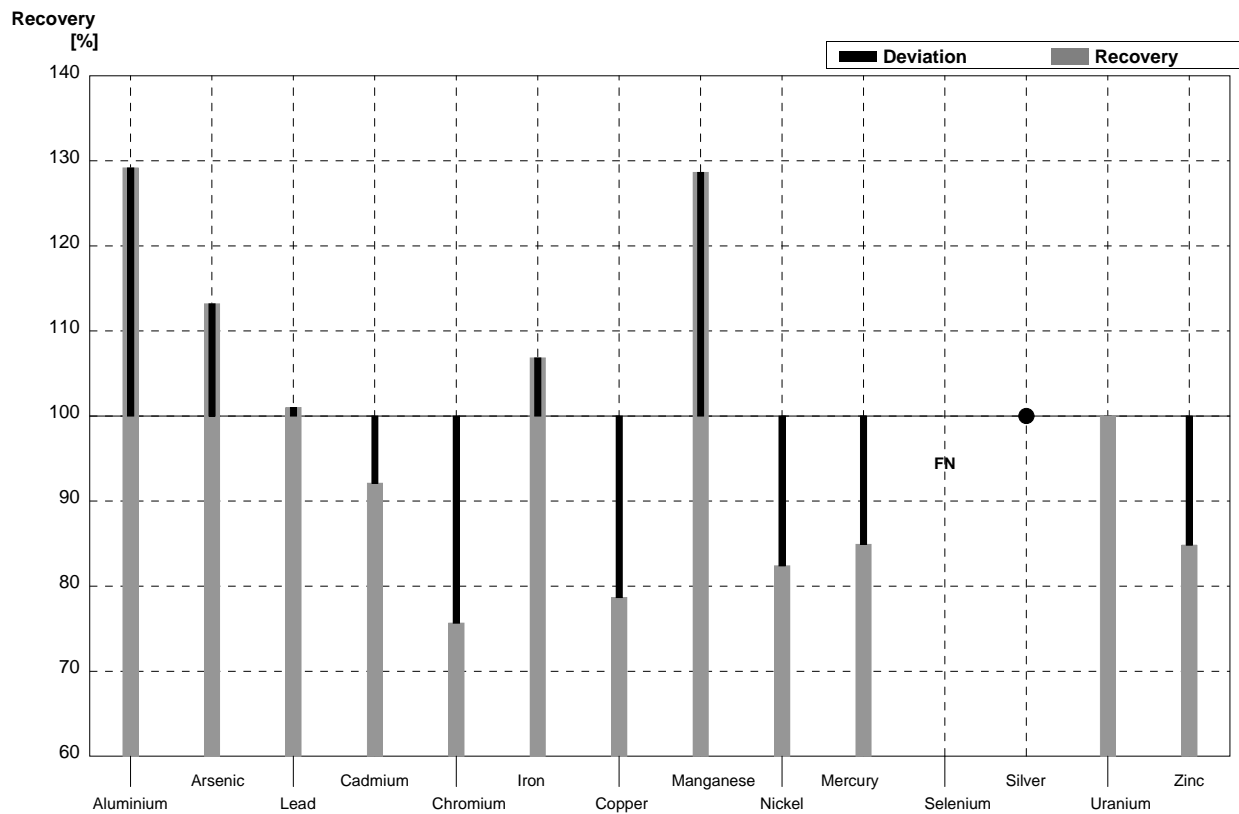
Sample M112A
Laboratory H

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	65,3	13,1	$\mu\text{g/l}$	114%
Arsenic	2,86	0,05	3,3	0,3	$\mu\text{g/l}$	115%
Lead	7,40	0,12	7,6	0,8	$\mu\text{g/l}$	103%
Cadmium	0,72	0,01	0,6	0,1	$\mu\text{g/l}$	83%
Chromium	5,42	0,09	5,1	0,5	$\mu\text{g/l}$	94%
Iron	33,7	0,3	33,2	6,6	$\mu\text{g/l}$	99%
Copper	4,85	0,13	3,8	0,4	$\mu\text{g/l}$	78%
Manganese	45,1	0,4	55,1	5,5	$\mu\text{g/l}$	122%
Nickel	3,95	0,09	3,0	0,3	$\mu\text{g/l}$	76%
Mercury	1,19	0,02	1,00	0,1	$\mu\text{g/l}$	84%
Selenium	4,17	0,04	4,9	0,5	$\mu\text{g/l}$	118%
Silver	0,148	0,002	<1		$\mu\text{g/l}$	•
Uranium	5,58	0,10	5,6	0,6	$\mu\text{g/l}$	100%
Zinc	21,6	0,2	19,5	3,9	$\mu\text{g/l}$	90%



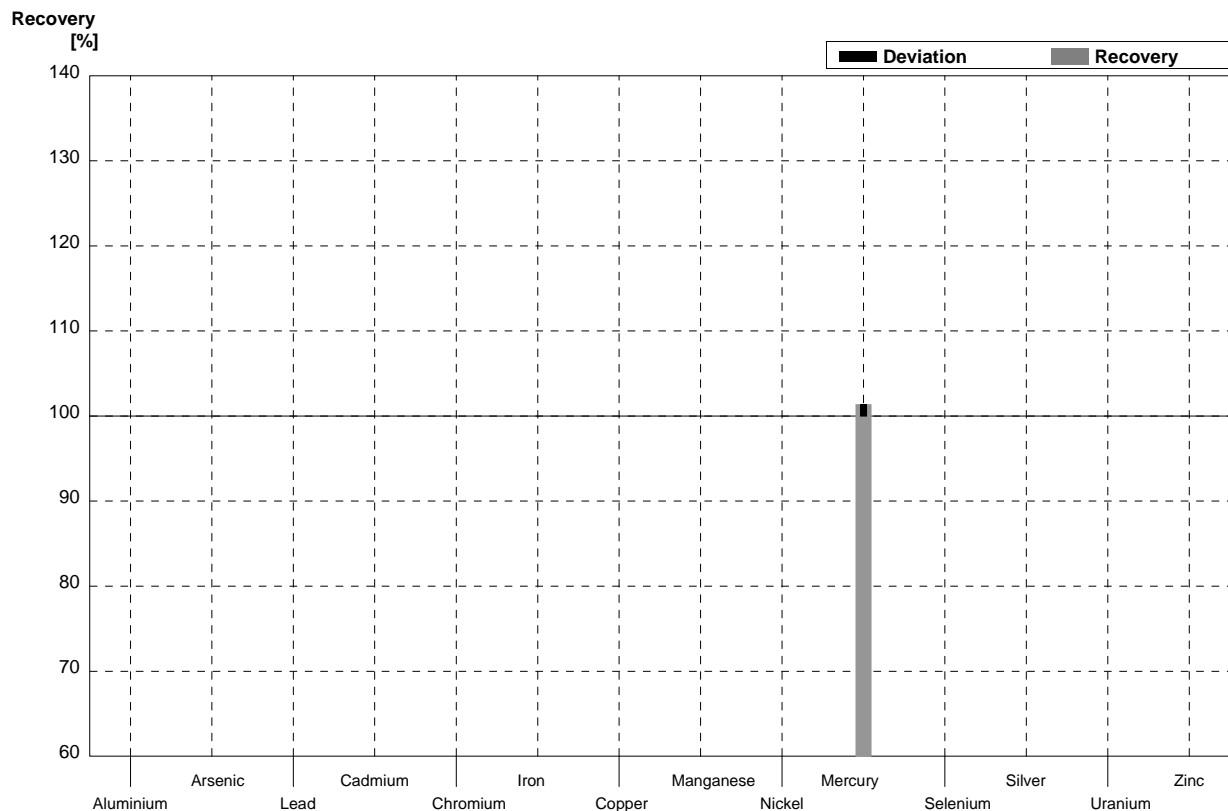
Sample M112B
Laboratory H

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	18,5	0,2	23,9	4,8	µg/l	129%
Arsenic	4,77	0,09	5,4	0,5	µg/l	113%
Lead	2,97	0,03	3,0	0,3	µg/l	101%
Cadmium	1,52	0,01	1,4	0,1	µg/l	92%
Chromium	1,85	0,02	1,4	0,1	µg/l	76%
Iron	48,3	0,4	51,6	10,3	µg/l	107%
Copper	3,94	0,08	3,1	0,3	µg/l	79%
Manganese	18,5	0,1	23,8	2,4	µg/l	129%
Nickel	6,19	0,10	5,1	0,5	µg/l	82%
Mercury	1,79	0,03	1,52	0,15	µg/l	85%
Selenium	1,36	0,01	<1		µg/l	FN
Silver	0,074	0,001	<1		µg/l	•
Uranium	2,10	0,02	2,1	0,2	µg/l	100%
Zinc	14,5	0,1	12,3	2,5	µg/l	85%



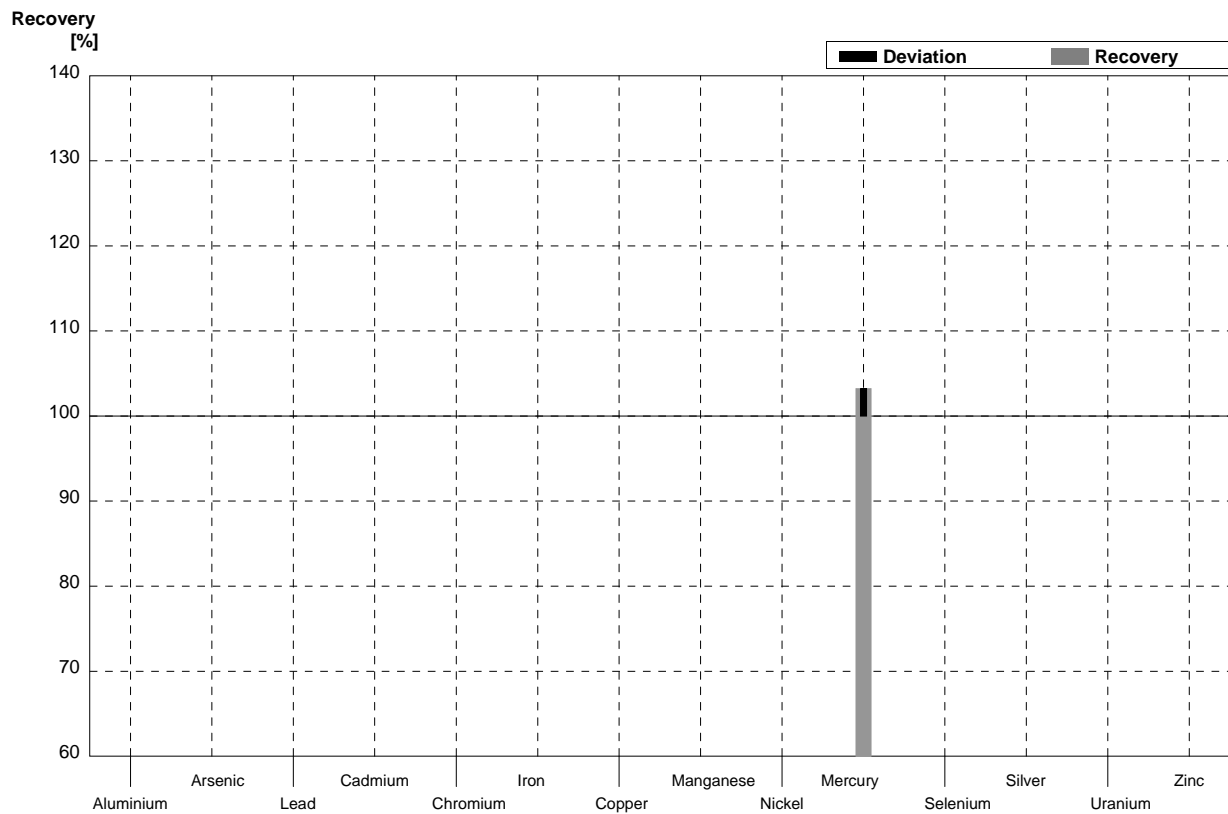
Sample M112A
Laboratory I

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5			$\mu\text{g/l}$	
Arsenic	2,86	0,05			$\mu\text{g/l}$	
Lead	7,40	0,12			$\mu\text{g/l}$	
Cadmium	0,72	0,01			$\mu\text{g/l}$	
Chromium	5,42	0,09			$\mu\text{g/l}$	
Iron	33,7	0,3			$\mu\text{g/l}$	
Copper	4,85	0,13			$\mu\text{g/l}$	
Manganese	45,1	0,4			$\mu\text{g/l}$	
Nickel	3,95	0,09			$\mu\text{g/l}$	
Mercury	1,19	0,02	1,206		$\mu\text{g/l}$	101%
Selenium	4,17	0,04			$\mu\text{g/l}$	
Silver	0,148	0,002			$\mu\text{g/l}$	
Uranium	5,58	0,10			$\mu\text{g/l}$	
Zinc	21,6	0,2			$\mu\text{g/l}$	



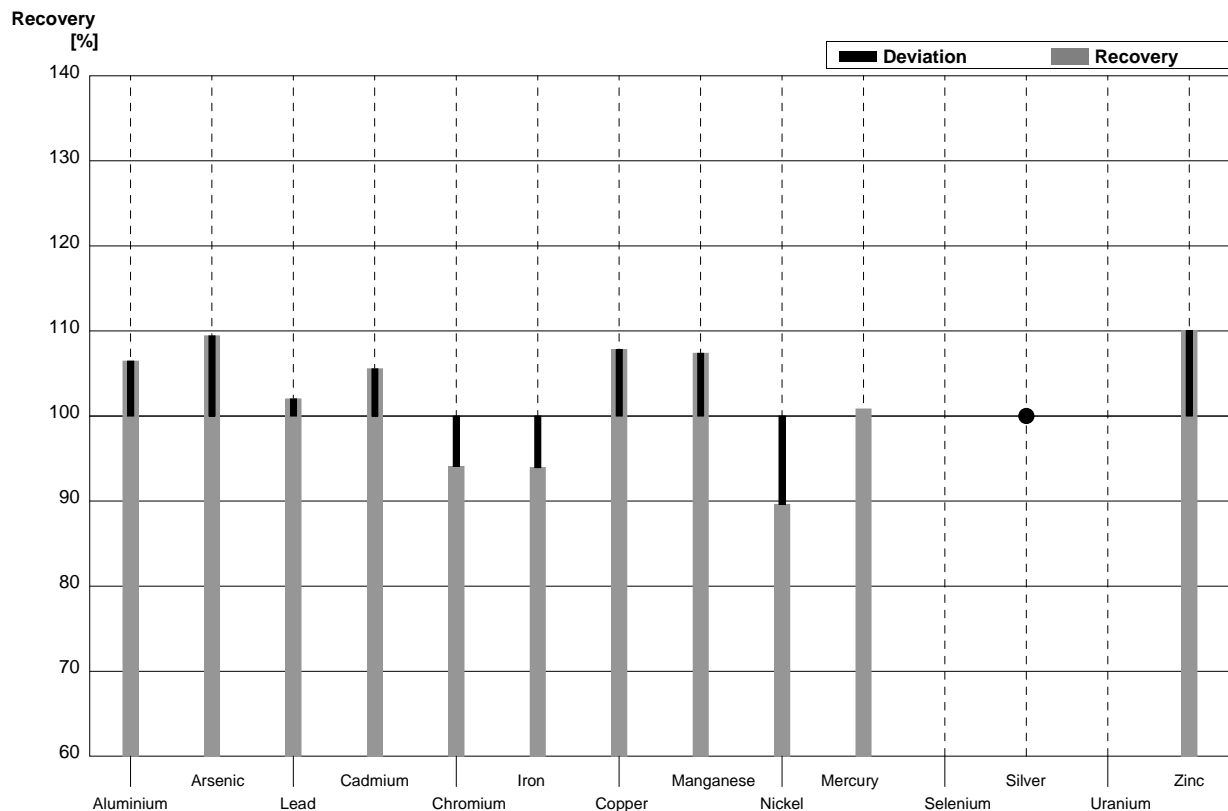
Sample M112B
Laboratory I

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2			$\mu\text{g/l}$	
Arsenic	4,77	0,09			$\mu\text{g/l}$	
Lead	2,97	0,03			$\mu\text{g/l}$	
Cadmium	1,52	0,01			$\mu\text{g/l}$	
Chromium	1,85	0,02			$\mu\text{g/l}$	
Iron	48,3	0,4			$\mu\text{g/l}$	
Copper	3,94	0,08			$\mu\text{g/l}$	
Manganese	18,5	0,1			$\mu\text{g/l}$	
Nickel	6,19	0,10			$\mu\text{g/l}$	
Mercury	1,79	0,03	1,848		$\mu\text{g/l}$	103%
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02			$\mu\text{g/l}$	
Zinc	14,5	0,1			$\mu\text{g/l}$	



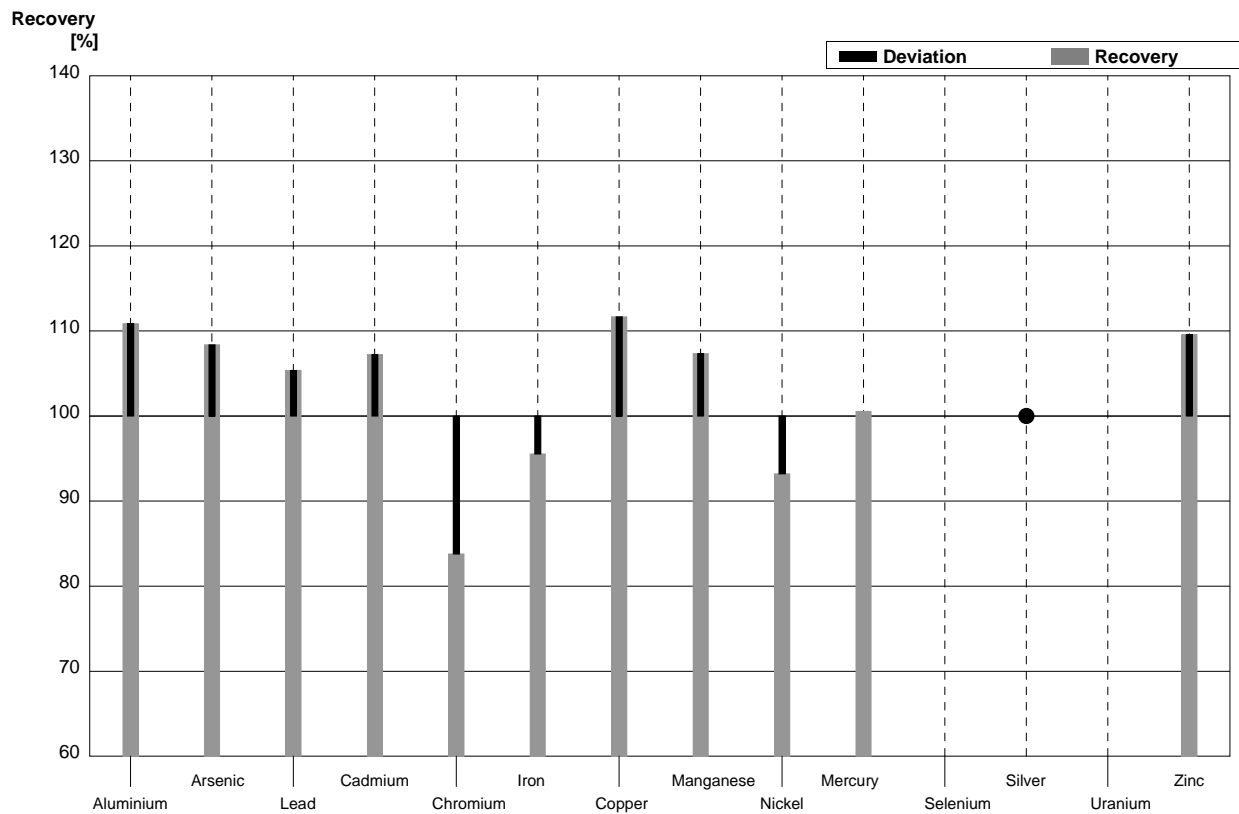
Sample M112A
Laboratory J

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	60,79	6,079	$\mu\text{g/l}$	106%
Arsenic	2,86	0,05	3,13	0,3756	$\mu\text{g/l}$	109%
Lead	7,40	0,12	7,55	0,604	$\mu\text{g/l}$	102%
Cadmium	0,72	0,01	0,76	0,0608	$\mu\text{g/l}$	106%
Chromium	5,42	0,09	5,1	0,612	$\mu\text{g/l}$	94%
Iron	33,7	0,3	31,66	8,2316	$\mu\text{g/l}$	94%
Copper	4,85	0,13	5,23	0,4184	$\mu\text{g/l}$	108%
Manganese	45,1	0,4	48,43	4,843	$\mu\text{g/l}$	107%
Nickel	3,95	0,09	3,54	0,354	$\mu\text{g/l}$	90%
Mercury	1,19	0,02	1,2	0,144	$\mu\text{g/l}$	101%
Selenium	4,17	0,04			$\mu\text{g/l}$	
Silver	0,148	0,002	<0,5		$\mu\text{g/l}$	•
Uranium	5,58	0,10			$\mu\text{g/l}$	
Zinc	21,6	0,2	23,77	2,377	$\mu\text{g/l}$	110%



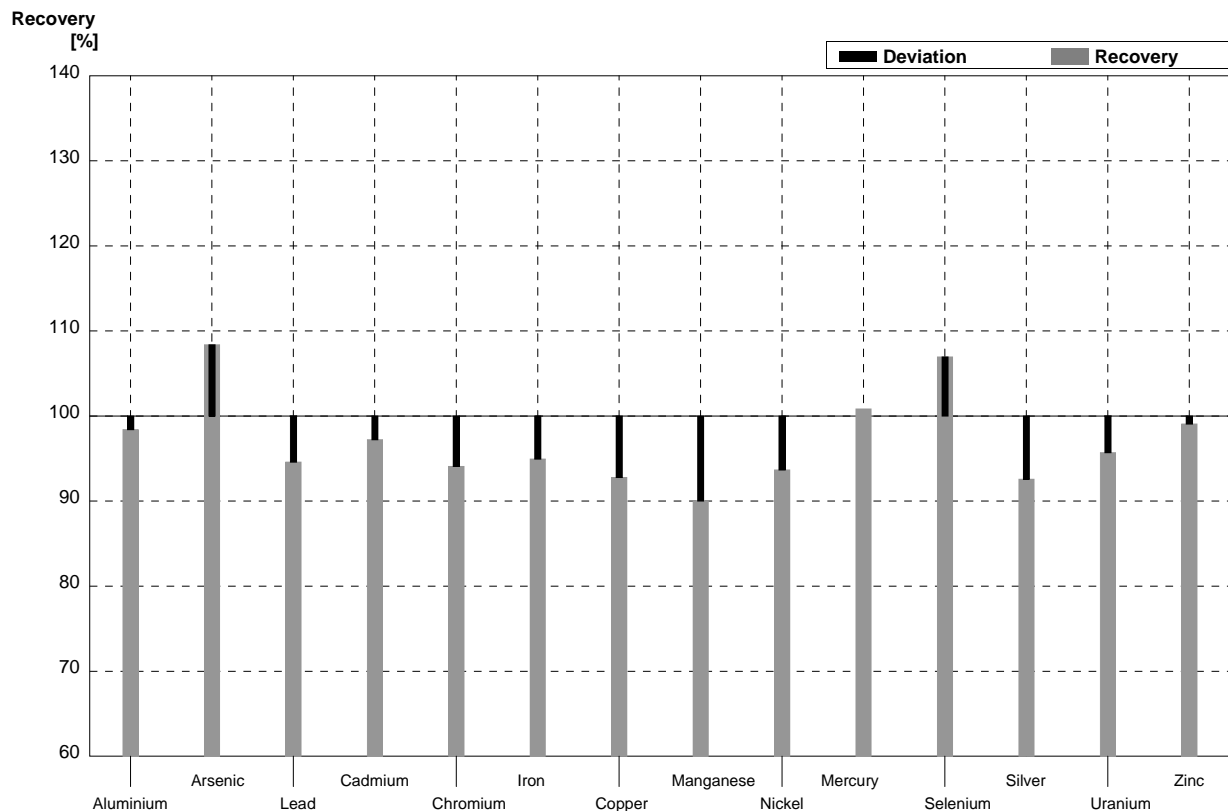
Sample M112B
Laboratory J

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2	20,51	2,051	$\mu\text{g/l}$	111%
Arsenic	4,77	0,09	5,17	0,6204	$\mu\text{g/l}$	108%
Lead	2,97	0,03	3,13	0,2504	$\mu\text{g/l}$	105%
Cadmium	1,52	0,01	1,63	0,1304	$\mu\text{g/l}$	107%
Chromium	1,85	0,02	1,55	0,186	$\mu\text{g/l}$	84%
Iron	48,3	0,4	46,15	11,999	$\mu\text{g/l}$	96%
Copper	3,94	0,08	4,4	0,352	$\mu\text{g/l}$	112%
Manganese	18,5	0,1	19,86	1,986	$\mu\text{g/l}$	107%
Nickel	6,19	0,10	5,77	0,577	$\mu\text{g/l}$	93%
Mercury	1,79	0,03	1,8	0,216	$\mu\text{g/l}$	101%
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001	<0,5		$\mu\text{g/l}$	•
Uranium	2,10	0,02			$\mu\text{g/l}$	
Zinc	14,5	0,1	15,89	1,589	$\mu\text{g/l}$	110%



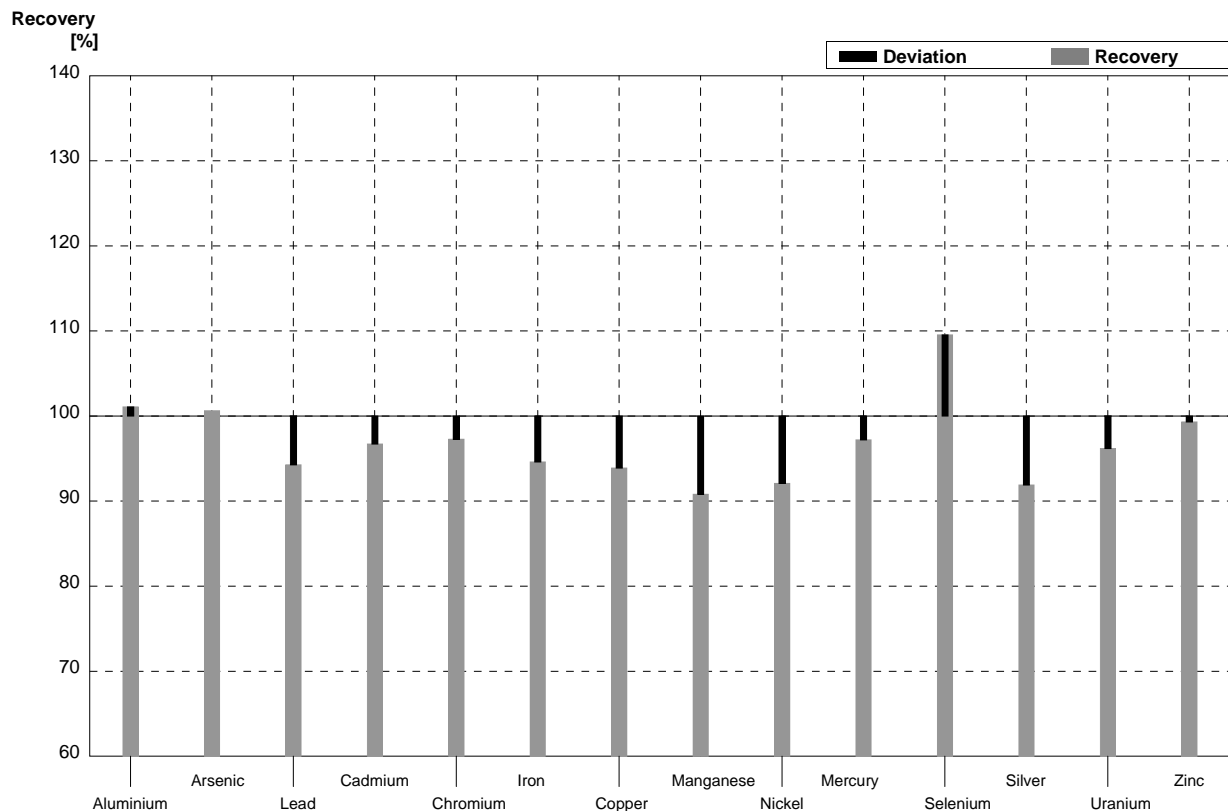
Sample M112A
Laboratory K

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	56,2	3,0	$\mu\text{g/l}$	98%
Arsenic	2,86	0,05	3,1	0,3	$\mu\text{g/l}$	108%
Lead	7,40	0,12	7,0	0,5	$\mu\text{g/l}$	95%
Cadmium	0,72	0,01	0,70	0,05	$\mu\text{g/l}$	97%
Chromium	5,42	0,09	5,1	0,2	$\mu\text{g/l}$	94%
Iron	33,7	0,3	32	2	$\mu\text{g/l}$	95%
Copper	4,85	0,13	4,5	0,5	$\mu\text{g/l}$	93%
Manganese	45,1	0,4	40,6	2,0	$\mu\text{g/l}$	90%
Nickel	3,95	0,09	3,7	0,2	$\mu\text{g/l}$	94%
Mercury	1,19	0,02	1,20	0,00	$\mu\text{g/l}$	101%
Selenium	4,17	0,04	4,46	0,50	$\mu\text{g/l}$	107%
Silver	0,148	0,002	0,137	0,030	$\mu\text{g/l}$	93%
Uranium	5,58	0,10	5,34	0,30	$\mu\text{g/l}$	96%
Zinc	21,6	0,2	21,4	1,0	$\mu\text{g/l}$	99%



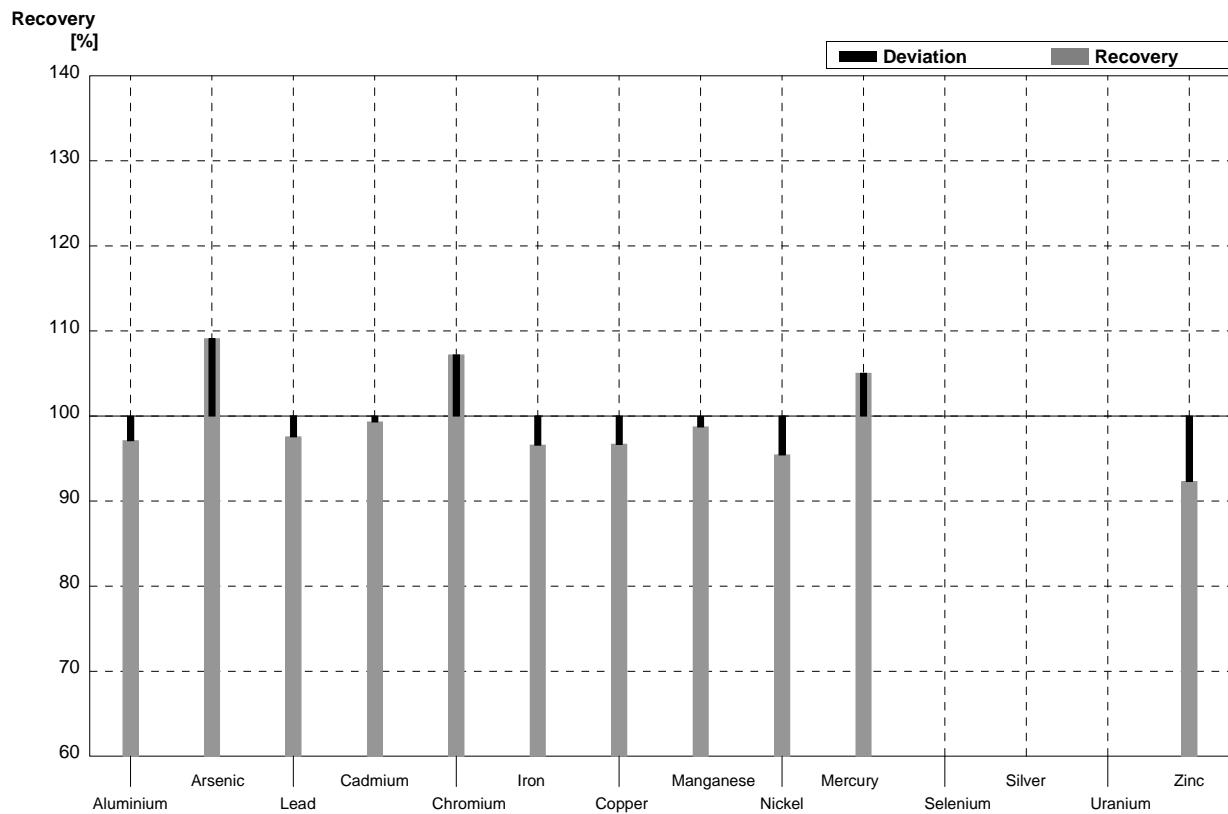
Sample M112B
Laboratory K

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2	18,7	2,0	$\mu\text{g/l}$	101%
Arsenic	4,77	0,09	4,8	0,5	$\mu\text{g/l}$	101%
Lead	2,97	0,03	2,8	0,2	$\mu\text{g/l}$	94%
Cadmium	1,52	0,01	1,47	0,20	$\mu\text{g/l}$	97%
Chromium	1,85	0,02	1,8	0,1	$\mu\text{g/l}$	97%
Iron	48,3	0,4	45,7	4,0	$\mu\text{g/l}$	95%
Copper	3,94	0,08	3,7	0,3	$\mu\text{g/l}$	94%
Manganese	18,5	0,1	16,8	1,0	$\mu\text{g/l}$	91%
Nickel	6,19	0,10	5,7	0,2	$\mu\text{g/l}$	92%
Mercury	1,79	0,03	1,74	0,01	$\mu\text{g/l}$	97%
Selenium	1,36	0,01	1,49	0,50	$\mu\text{g/l}$	110%
Silver	0,074	0,001	0,068	0,020	$\mu\text{g/l}$	92%
Uranium	2,10	0,02	2,02	0,20	$\mu\text{g/l}$	96%
Zinc	14,5	0,1	14,4	1,0	$\mu\text{g/l}$	99%



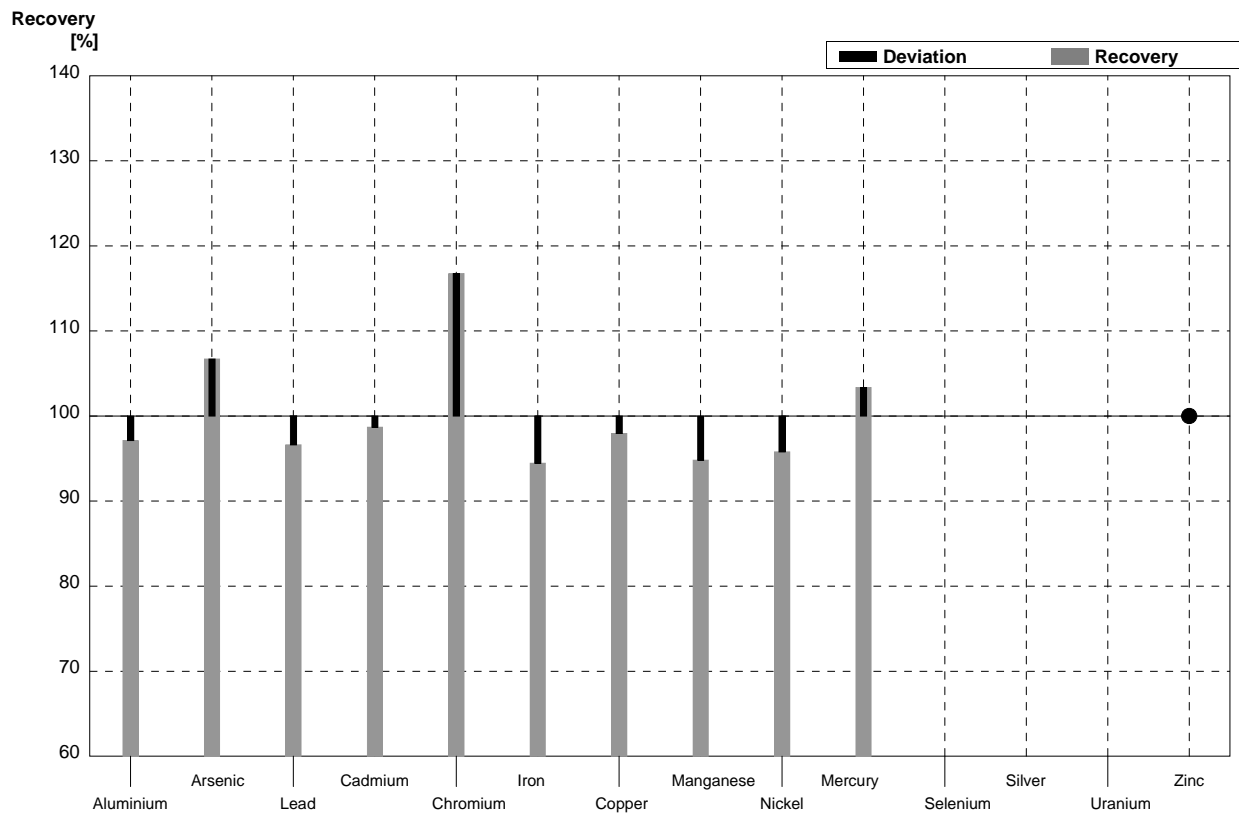
Sample M112A
Laboratory L

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	55,45	8,32	$\mu\text{g/l}$	97%
Arsenic	2,86	0,05	3,12	0,47	$\mu\text{g/l}$	109%
Lead	7,40	0,12	7,22	1,08	$\mu\text{g/l}$	98%
Cadmium	0,72	0,01	0,715	0,107	$\mu\text{g/l}$	99%
Chromium	5,42	0,09	5,81	0,87	$\mu\text{g/l}$	107%
Iron	33,7	0,3	32,55	4,88	$\mu\text{g/l}$	97%
Copper	4,85	0,13	4,69	0,70	$\mu\text{g/l}$	97%
Manganese	45,1	0,4	44,53	6,68	$\mu\text{g/l}$	99%
Nickel	3,95	0,09	3,77	0,57	$\mu\text{g/l}$	95%
Mercury	1,19	0,02	1,25	0,187	$\mu\text{g/l}$	105%
Selenium	4,17	0,04			$\mu\text{g/l}$	
Silver	0,148	0,002			$\mu\text{g/l}$	
Uranium	5,58	0,10			$\mu\text{g/l}$	
Zinc	21,6	0,2	19,94	2,99	$\mu\text{g/l}$	92%



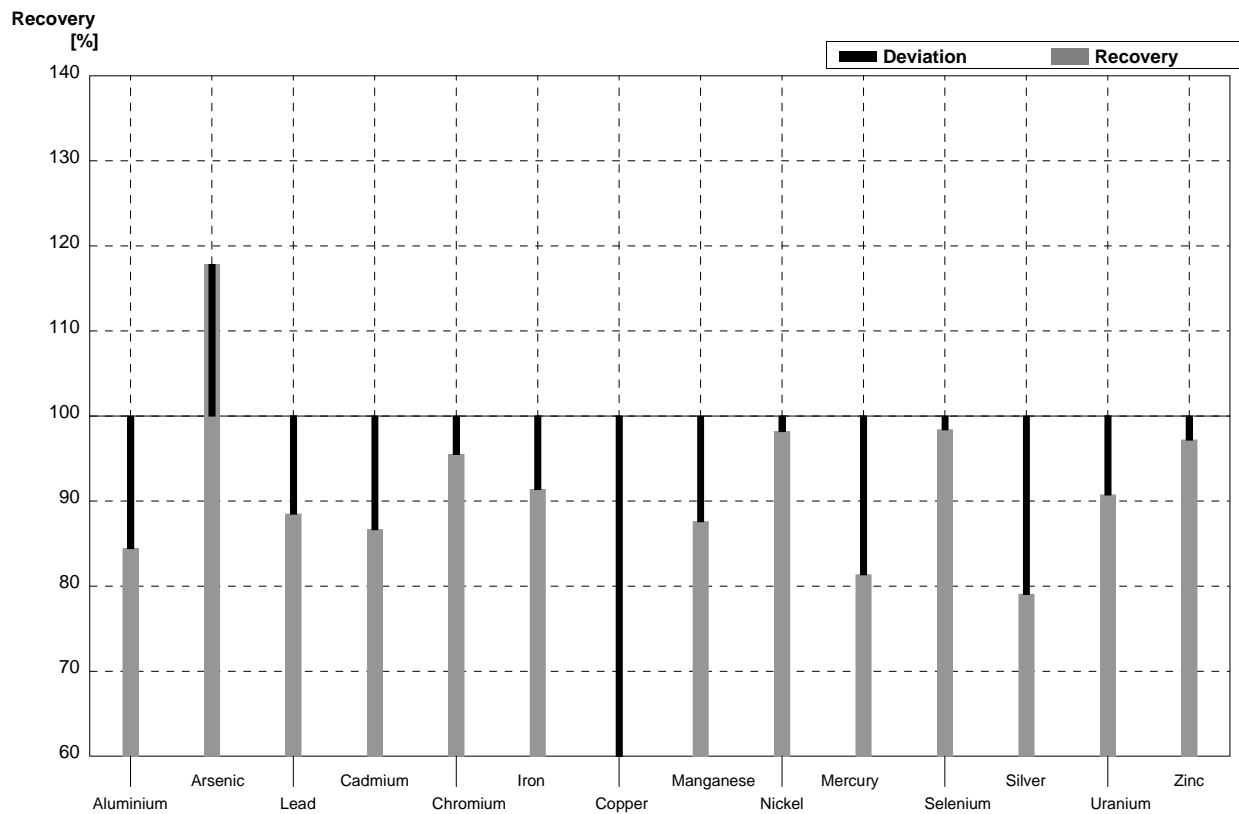
Sample M112B
Laboratory L

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2	17,97	2,70	$\mu\text{g/l}$	97%
Arsenic	4,77	0,09	5,09	0,76	$\mu\text{g/l}$	107%
Lead	2,97	0,03	2,87	0,43	$\mu\text{g/l}$	97%
Cadmium	1,52	0,01	1,50	0,23	$\mu\text{g/l}$	99%
Chromium	1,85	0,02	2,16	0,32	$\mu\text{g/l}$	117%
Iron	48,3	0,4	45,63	6,84	$\mu\text{g/l}$	94%
Copper	3,94	0,08	3,86	0,58	$\mu\text{g/l}$	98%
Manganese	18,5	0,1	17,54	2,63	$\mu\text{g/l}$	95%
Nickel	6,19	0,10	5,93	0,89	$\mu\text{g/l}$	96%
Mercury	1,79	0,03	1,85	0,27	$\mu\text{g/l}$	103%
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02			$\mu\text{g/l}$	
Zinc	14,5	0,1	<20		$\mu\text{g/l}$	•



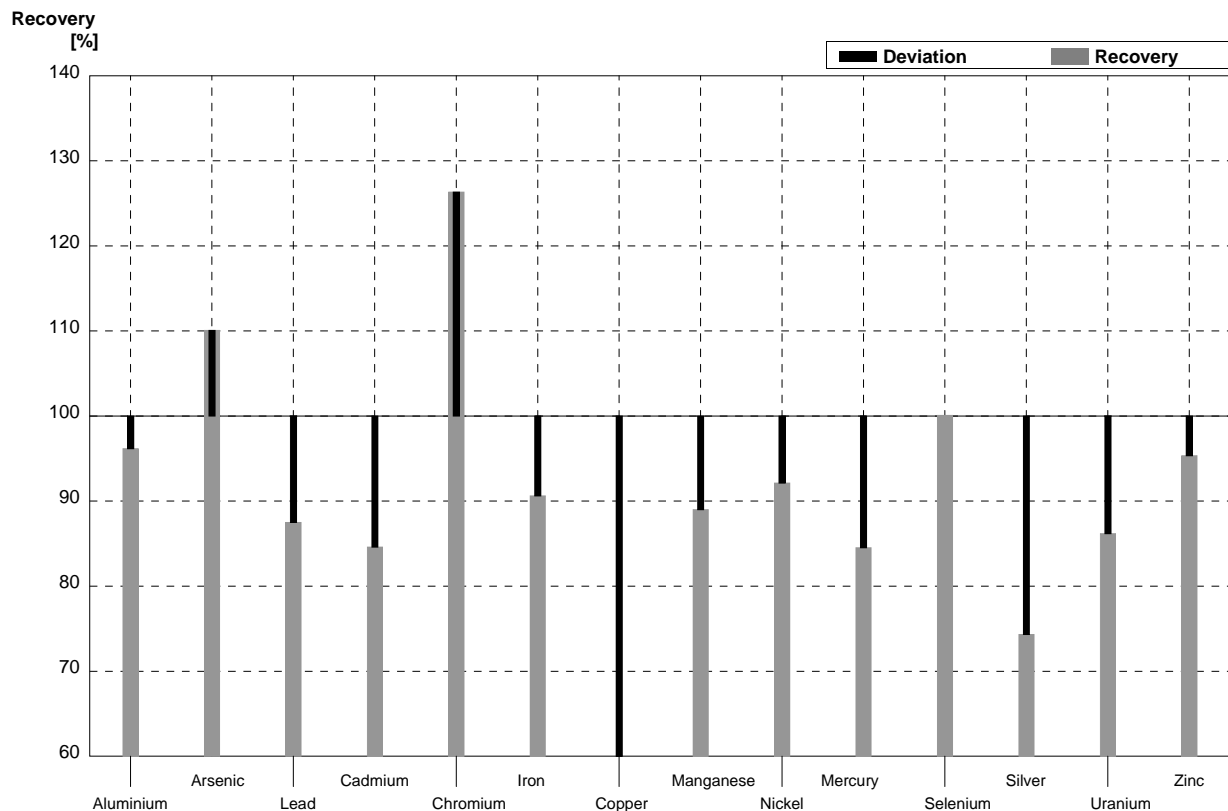
Sample M112A
Laboratory M

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	48,209	2,0	$\mu\text{g/l}$	84%
Arsenic	2,86	0,05	3,37	0,5	$\mu\text{g/l}$	118%
Lead	7,40	0,12	6,547	0,8	$\mu\text{g/l}$	88%
Cadmium	0,72	0,01	0,624	0,5	$\mu\text{g/l}$	87%
Chromium	5,42	0,09	5,176	0,7	$\mu\text{g/l}$	95%
Iron	33,7	0,3	30,794	1,0	$\mu\text{g/l}$	91%
Copper	4,85	0,13	2,000	0,4	$\mu\text{g/l}$	41%
Manganese	45,1	0,4	39,499	0,6	$\mu\text{g/l}$	88%
Nickel	3,95	0,09	3,878	0,5	$\mu\text{g/l}$	98%
Mercury	1,19	0,02	0,968	0,3	$\mu\text{g/l}$	81%
Selenium	4,17	0,04	4,103	0,5	$\mu\text{g/l}$	98%
Silver	0,148	0,002	0,117	0,02	$\mu\text{g/l}$	79%
Uranium	5,58	0,10	5,063	0,4	$\mu\text{g/l}$	91%
Zinc	21,6	0,2	20,992	0,4	$\mu\text{g/l}$	97%



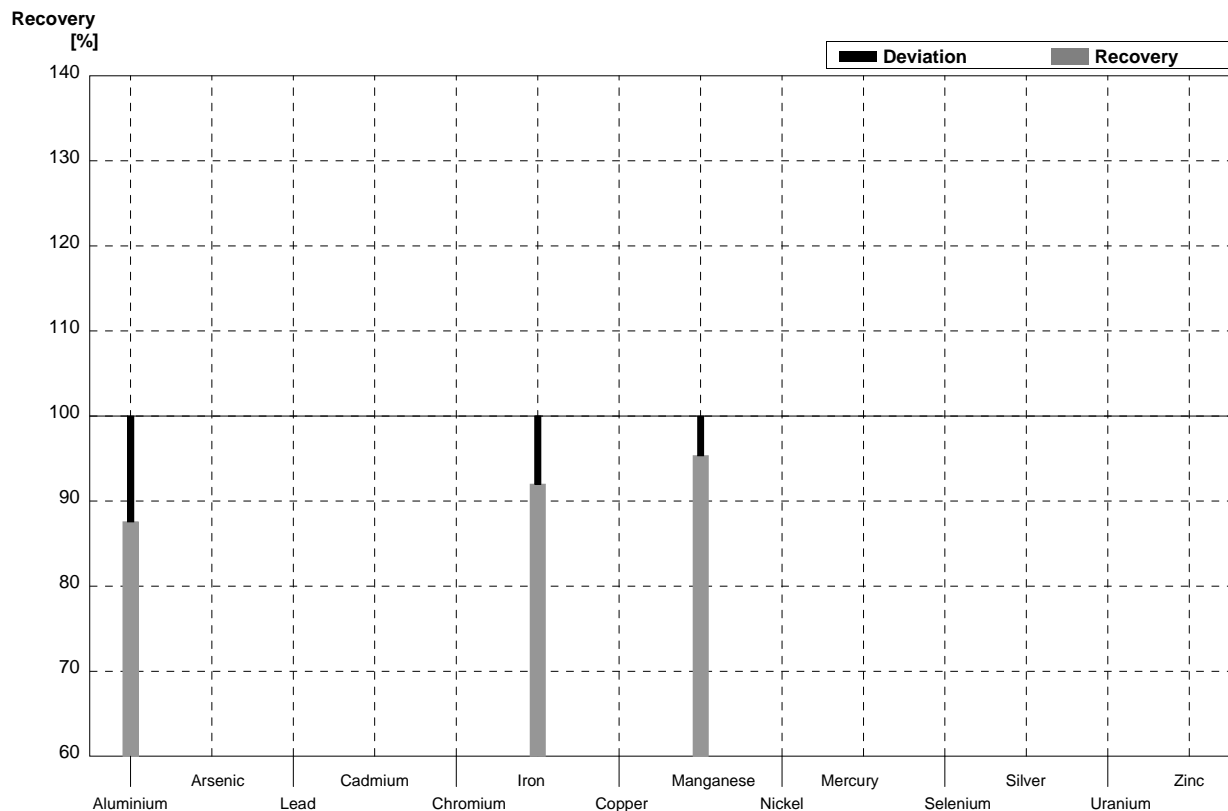
Sample M112B
Laboratory M

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2	17,794	2,0	$\mu\text{g/l}$	96%
Arsenic	4,77	0,09	5,25	0,5	$\mu\text{g/l}$	110%
Lead	2,97	0,03	2,599	0,8	$\mu\text{g/l}$	88%
Cadmium	1,52	0,01	1,286	0,5	$\mu\text{g/l}$	85%
Chromium	1,85	0,02	2,337	0,7	$\mu\text{g/l}$	126%
Iron	48,3	0,4	43,770	1,0	$\mu\text{g/l}$	91%
Copper	3,94	0,08	0,953	0,4	$\mu\text{g/l}$	24%
Manganese	18,5	0,1	16,463	0,6	$\mu\text{g/l}$	89%
Nickel	6,19	0,10	5,703	0,5	$\mu\text{g/l}$	92%
Mercury	1,79	0,03	1,513	0,3	$\mu\text{g/l}$	85%
Selenium	1,36	0,01	1,361	0,7	$\mu\text{g/l}$	100%
Silver	0,074	0,001	0,055	0,02	$\mu\text{g/l}$	74%
Uranium	2,10	0,02	1,81	0,5	$\mu\text{g/l}$	86%
Zinc	14,5	0,1	13,825	0,4	$\mu\text{g/l}$	95%



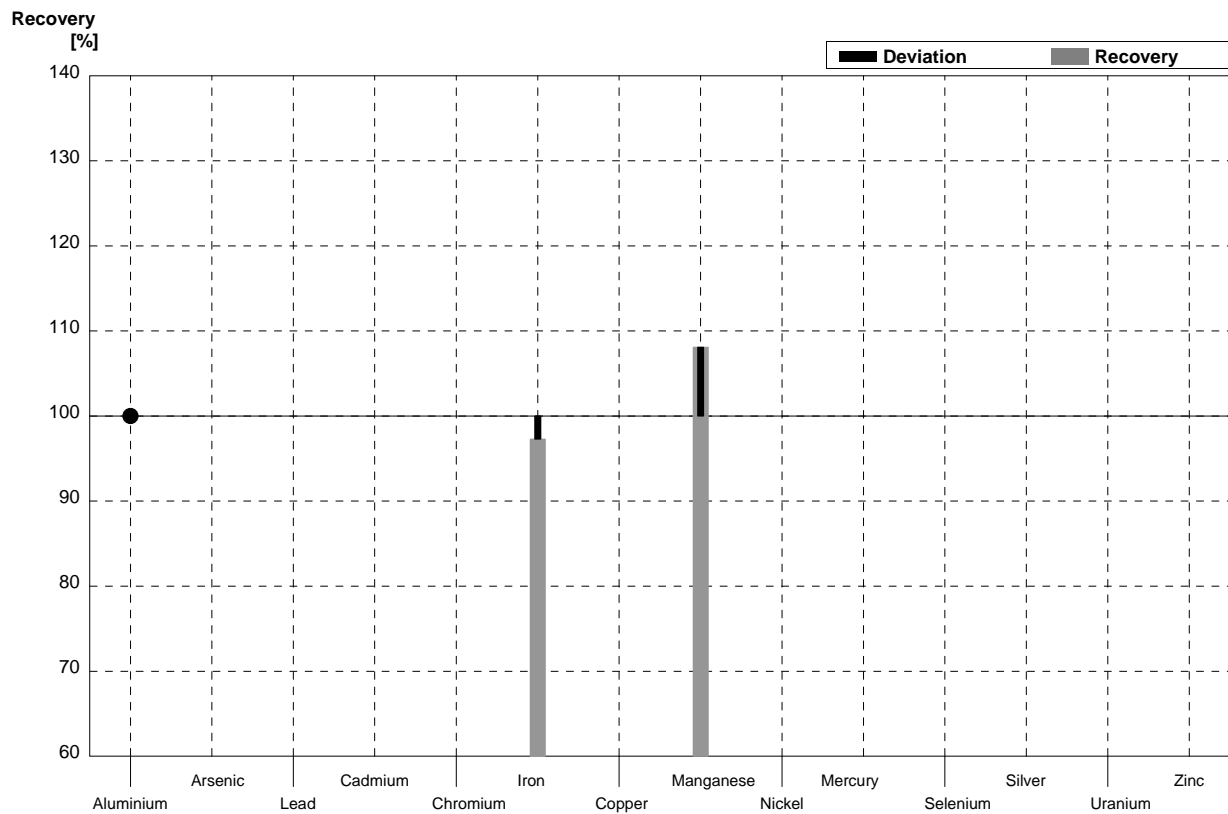
Sample M112A
Laboratory N

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	50	15	$\mu\text{g/l}$	88%
Arsenic	2,86	0,05			$\mu\text{g/l}$	
Lead	7,40	0,12			$\mu\text{g/l}$	
Cadmium	0,72	0,01			$\mu\text{g/l}$	
Chromium	5,42	0,09			$\mu\text{g/l}$	
Iron	33,7	0,3	31	13	$\mu\text{g/l}$	92%
Copper	4,85	0,13			$\mu\text{g/l}$	
Manganese	45,1	0,4	43	7	$\mu\text{g/l}$	95%
Nickel	3,95	0,09			$\mu\text{g/l}$	
Mercury	1,19	0,02			$\mu\text{g/l}$	
Selenium	4,17	0,04			$\mu\text{g/l}$	
Silver	0,148	0,002			$\mu\text{g/l}$	
Uranium	5,58	0,10			$\mu\text{g/l}$	
Zinc	21,6	0,2			$\mu\text{g/l}$	



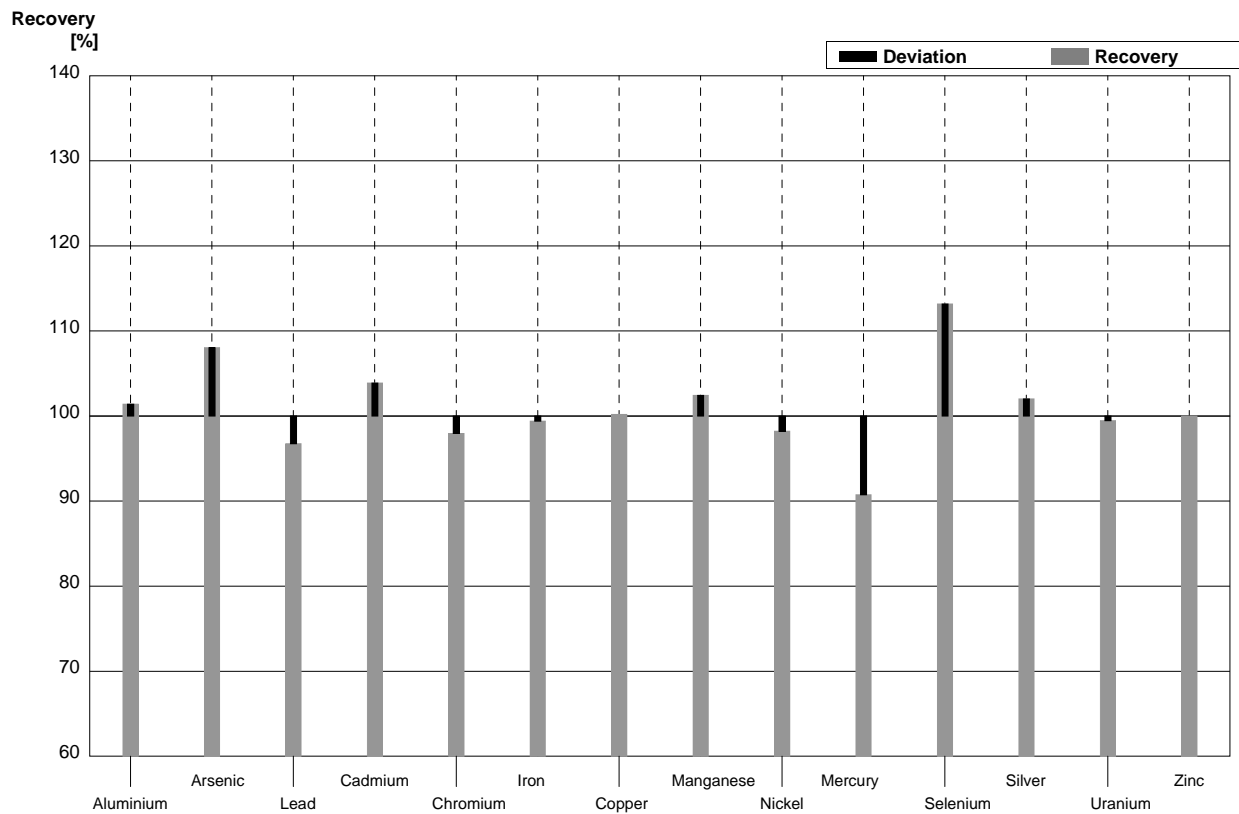
Sample M112B
Laboratory N

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2	<20	6	$\mu\text{g/l}$	•
Arsenic	4,77	0,09			$\mu\text{g/l}$	
Lead	2,97	0,03			$\mu\text{g/l}$	
Cadmium	1,52	0,01			$\mu\text{g/l}$	
Chromium	1,85	0,02			$\mu\text{g/l}$	
Iron	48,3	0,4	47	19	$\mu\text{g/l}$	97%
Copper	3,94	0,08			$\mu\text{g/l}$	
Manganese	18,5	0,1	20	3	$\mu\text{g/l}$	108%
Nickel	6,19	0,10			$\mu\text{g/l}$	
Mercury	1,79	0,03			$\mu\text{g/l}$	
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02			$\mu\text{g/l}$	
Zinc	14,5	0,1			$\mu\text{g/l}$	



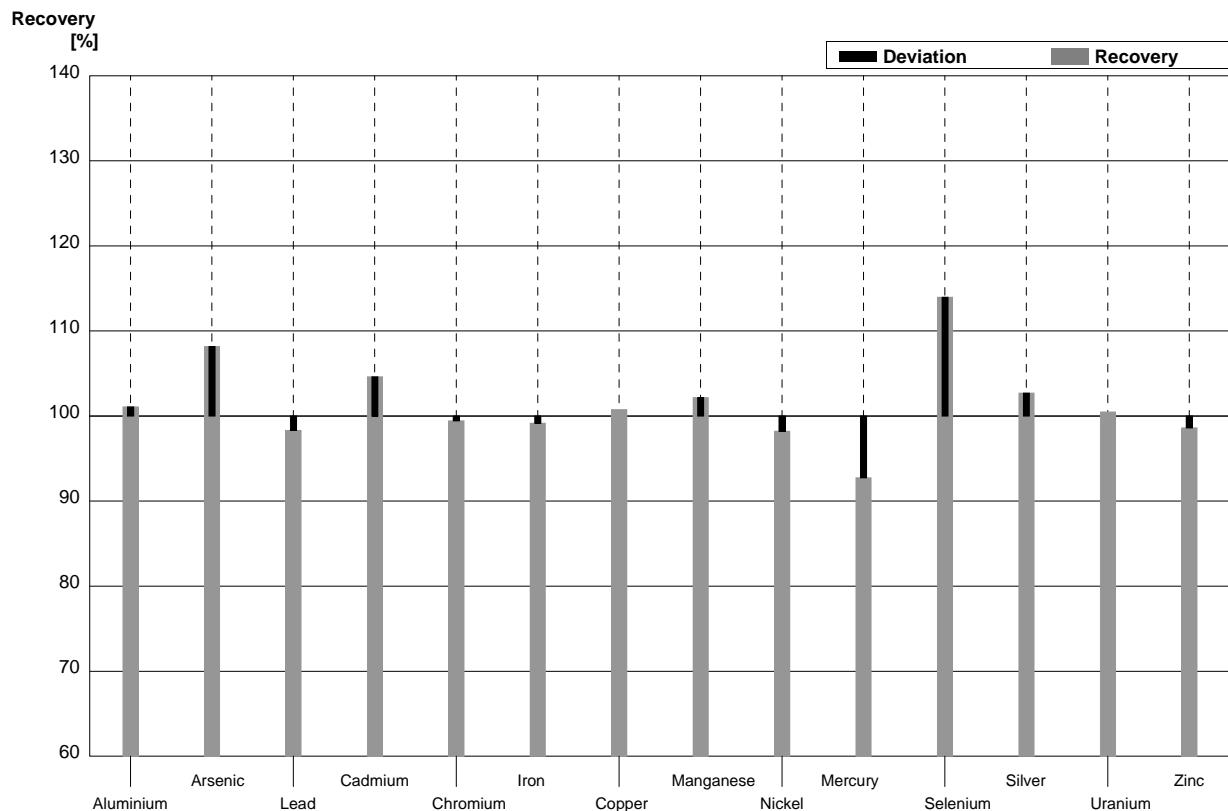
Sample M112A
Laboratory O

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	57,9	1,0	$\mu\text{g/l}$	101%
Arsenic	2,86	0,05	3,09	0,05	$\mu\text{g/l}$	108%
Lead	7,40	0,12	7,16	0,3	$\mu\text{g/l}$	97%
Cadmium	0,72	0,01	0,748	0,02	$\mu\text{g/l}$	104%
Chromium	5,42	0,09	5,31	0,05	$\mu\text{g/l}$	98%
Iron	33,7	0,3	33,5	0,5	$\mu\text{g/l}$	99%
Copper	4,85	0,13	4,86	0,1	$\mu\text{g/l}$	100%
Manganese	45,1	0,4	46,2	0,5	$\mu\text{g/l}$	102%
Nickel	3,95	0,09	3,88	0,1	$\mu\text{g/l}$	98%
Mercury	1,19	0,02	1,08	0,1	$\mu\text{g/l}$	91%
Selenium	4,17	0,04	4,72	0,2	$\mu\text{g/l}$	113%
Silver	0,148	0,002	0,151	0,005	$\mu\text{g/l}$	102%
Uranium	5,58	0,10	5,55	0,05	$\mu\text{g/l}$	99%
Zinc	21,6	0,2	21,6	0,5	$\mu\text{g/l}$	100%



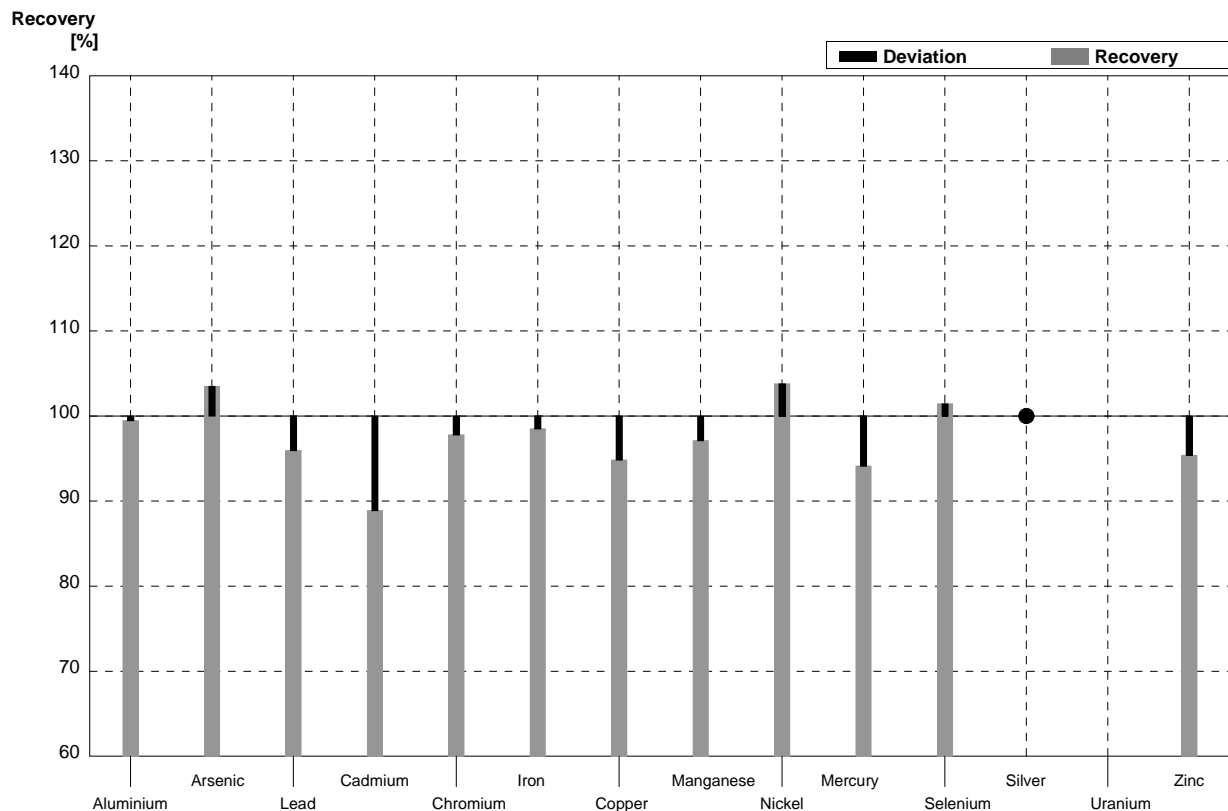
Sample M112B
Laboratory O

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2	18,7	0,6	$\mu\text{g/l}$	101%
Arsenic	4,77	0,09	5,16	0,05	$\mu\text{g/l}$	108%
Lead	2,97	0,03	2,92	0,1	$\mu\text{g/l}$	98%
Cadmium	1,52	0,01	1,59	0,05	$\mu\text{g/l}$	105%
Chromium	1,85	0,02	1,84	0,02	$\mu\text{g/l}$	99%
Iron	48,3	0,4	47,9	0,5	$\mu\text{g/l}$	99%
Copper	3,94	0,08	3,97	0,1	$\mu\text{g/l}$	101%
Manganese	18,5	0,1	18,9	0,2	$\mu\text{g/l}$	102%
Nickel	6,19	0,10	6,08	0,2	$\mu\text{g/l}$	98%
Mercury	1,79	0,03	1,66	0,1	$\mu\text{g/l}$	93%
Selenium	1,36	0,01	1,55	0,2	$\mu\text{g/l}$	114%
Silver	0,074	0,001	0,0760	0,005	$\mu\text{g/l}$	103%
Uranium	2,10	0,02	2,11	0,05	$\mu\text{g/l}$	100%
Zinc	14,5	0,1	14,3	0,5	$\mu\text{g/l}$	99%



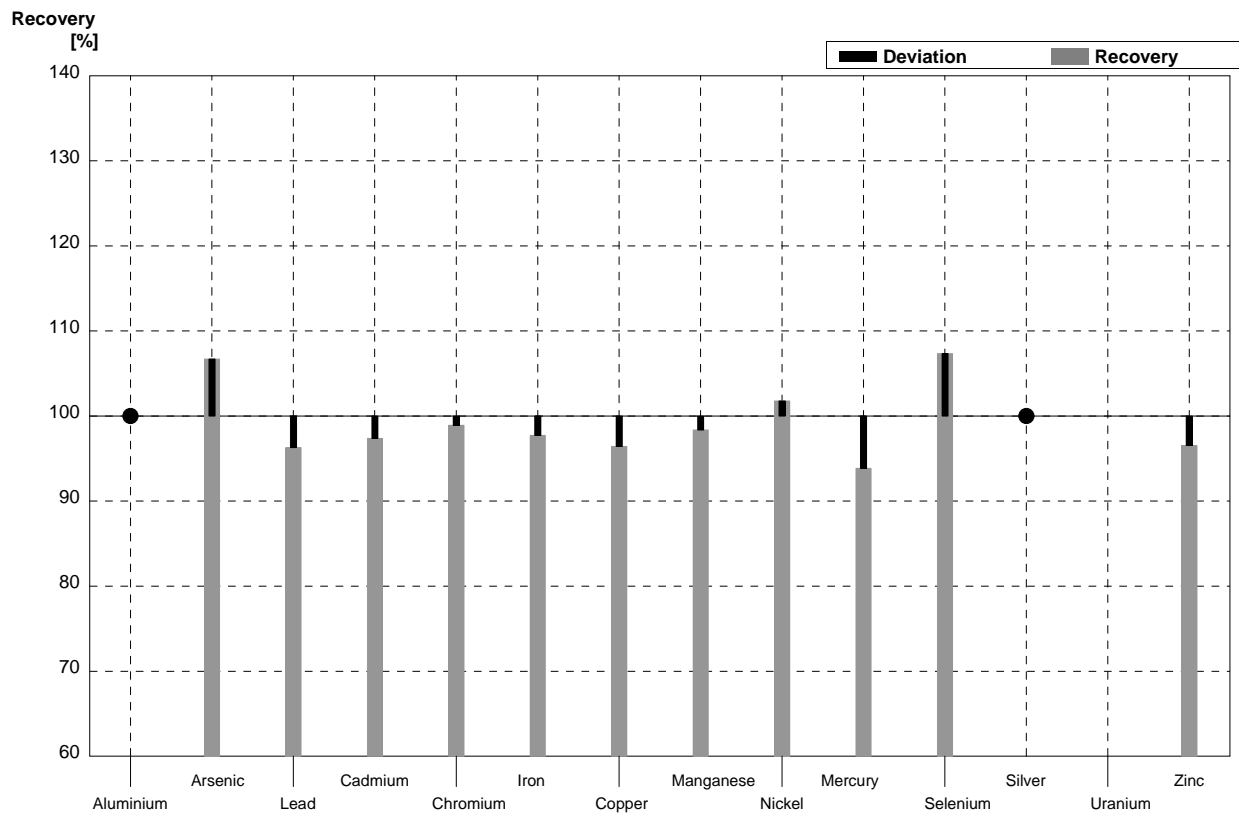
Sample M112A
Laboratory P

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	57,1	0,5	56,8	5,7	µg/l	99%
Arsenic	2,86	0,05	2,96	0,3	µg/l	103%
Lead	7,40	0,12	7,1	0,71	µg/l	96%
Cadmium	0,72	0,01	0,64	0,064	µg/l	89%
Chromium	5,42	0,09	5,3	0,53	µg/l	98%
Iron	33,7	0,3	33,2	3,32	µg/l	99%
Copper	4,85	0,13	4,6	0,5	µg/l	95%
Manganese	45,1	0,4	43,8	4,4	µg/l	97%
Nickel	3,95	0,09	4,1	0,41	µg/l	104%
Mercury	1,19	0,02	1,12	0,17	µg/l	94%
Selenium	4,17	0,04	4,23	0,64	µg/l	101%
Silver	0,148	0,002	<5	0,5	µg/l	•
Uranium	5,58	0,10			µg/l	
Zinc	21,6	0,2	20,6	2,1	µg/l	95%



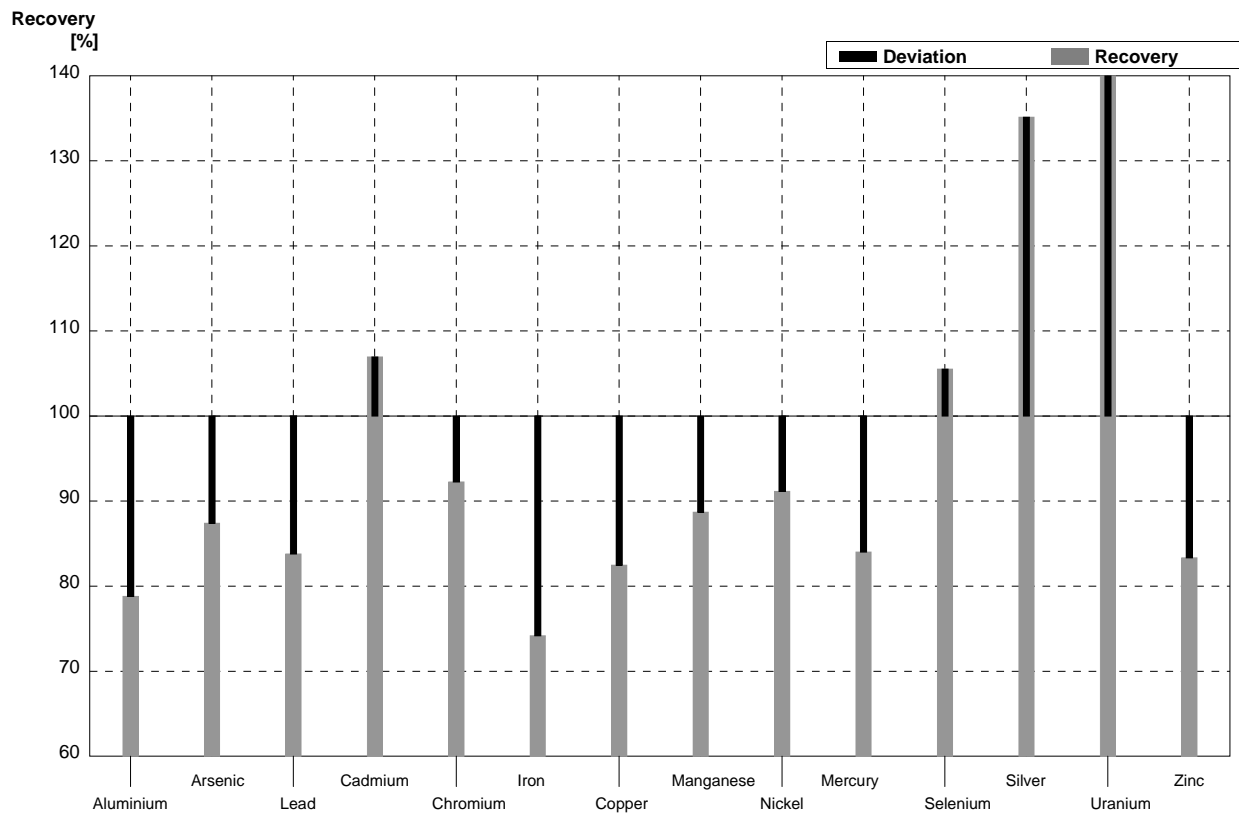
Sample M112B
Laboratory P

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	18,5	0,2	<25	2,5	µg/l	•
Arsenic	4,77	0,09	5,09	0,51	µg/l	107%
Lead	2,97	0,03	2,86	0,29	µg/l	96%
Cadmium	1,52	0,01	1,48	0,15	µg/l	97%
Chromium	1,85	0,02	1,83	0,18	µg/l	99%
Iron	48,3	0,4	47,2	4,7	µg/l	98%
Copper	3,94	0,08	3,8	0,38	µg/l	96%
Manganese	18,5	0,1	18,2	1,8	µg/l	98%
Nickel	6,19	0,10	6,3	0,63	µg/l	102%
Mercury	1,79	0,03	1,68	0,25	µg/l	94%
Selenium	1,36	0,01	1,46	0,22	µg/l	107%
Silver	0,074	0,001	<5	0,5	µg/l	•
Uranium	2,10	0,02			µg/l	
Zinc	14,5	0,1	14	1,4	µg/l	97%



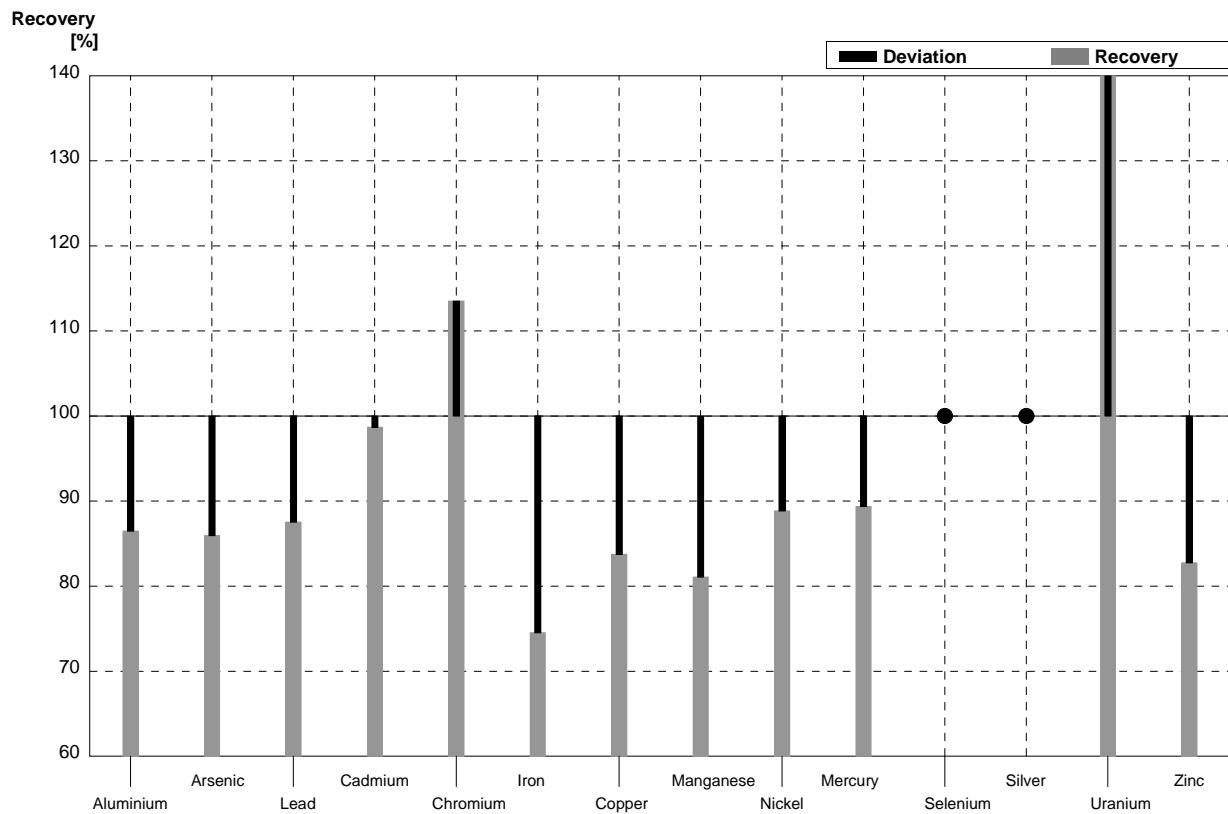
Sample M112A
Laboratory Q

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	45	0,5	$\mu\text{g/l}$	79%
Arsenic	2,86	0,05	2,5	0,2	$\mu\text{g/l}$	87%
Lead	7,40	0,12	6,2	0,6	$\mu\text{g/l}$	84%
Cadmium	0,72	0,01	0,77	0,08	$\mu\text{g/l}$	107%
Chromium	5,42	0,09	5,0	0,5	$\mu\text{g/l}$	92%
Iron	33,7	0,3	25	2	$\mu\text{g/l}$	74%
Copper	4,85	0,13	4,0	0,4	$\mu\text{g/l}$	82%
Manganese	45,1	0,4	40	4	$\mu\text{g/l}$	89%
Nickel	3,95	0,09	3,6	0,4	$\mu\text{g/l}$	91%
Mercury	1,19	0,02	1,0	0,1	$\mu\text{g/l}$	84%
Selenium	4,17	0,04	4,4	0,4	$\mu\text{g/l}$	106%
Silver	0,148	0,002	0,20	0,02	$\mu\text{g/l}$	135%
Uranium	5,58	0,10	54	5	$\mu\text{g/l}$	968%
Zinc	21,6	0,2	18	2	$\mu\text{g/l}$	83%



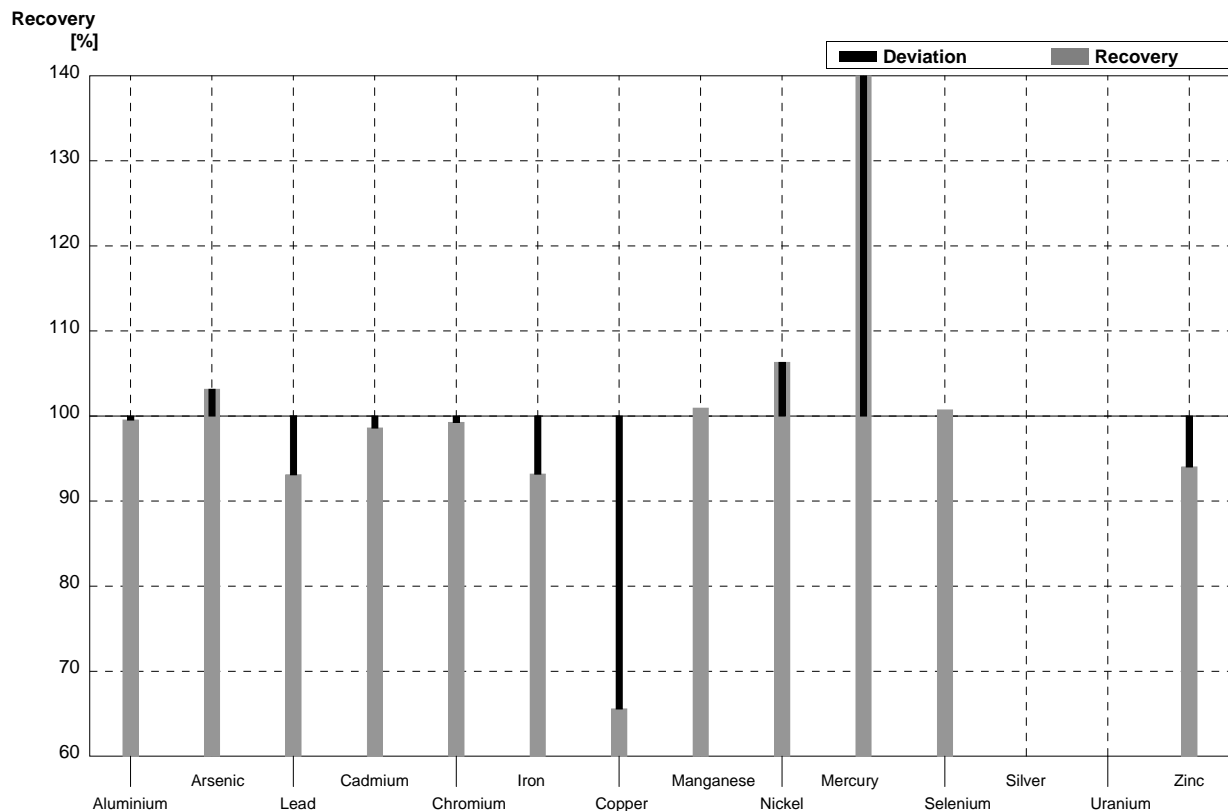
Sample M112B
Laboratory Q

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	18,5	0,2	16	2	µg/l	86%
Arsenic	4,77	0,09	4,1	0,4	µg/l	86%
Lead	2,97	0,03	2,6	0,3	µg/l	88%
Cadmium	1,52	0,01	1,5	0,1	µg/l	99%
Chromium	1,85	0,02	2,1	0,2	µg/l	114%
Iron	48,3	0,4	36	4	µg/l	75%
Copper	3,94	0,08	3,3	0,3	µg/l	84%
Manganese	18,5	0,1	15	2	µg/l	81%
Nickel	6,19	0,10	5,5	0,6	µg/l	89%
Mercury	1,79	0,03	1,6	0,2	µg/l	89%
Selenium	1,36	0,01	<2		µg/l	•
Silver	0,074	0,001	<0,2		µg/l	•
Uranium	2,10	0,02	21	2	µg/l	1000%
Zinc	14,5	0,1	12	1	µg/l	83%



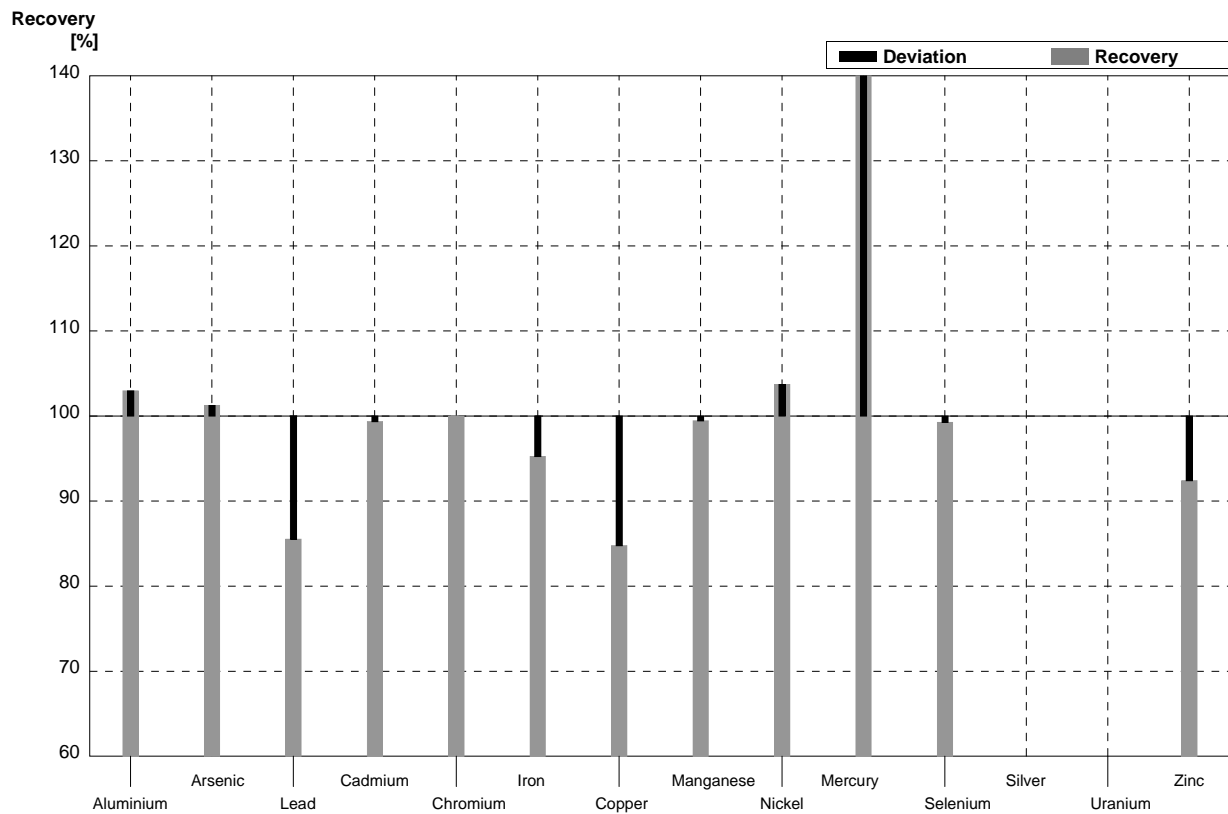
Sample M112A
Laboratory R

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	57,1	0,5	56,83		µg/l	100%
Arsenic	2,86	0,05	2,95		µg/l	103%
Lead	7,40	0,12	6,89		µg/l	93%
Cadmium	0,72	0,01	0,71		µg/l	99%
Chromium	5,42	0,09	5,38		µg/l	99%
Iron	33,7	0,3	31,40		µg/l	93%
Copper	4,85	0,13	3,18		µg/l	66%
Manganese	45,1	0,4	45,52		µg/l	101%
Nickel	3,95	0,09	4,20		µg/l	106%
Mercury	1,19	0,02	4,08		µg/l	343%
Selenium	4,17	0,04	4,20		µg/l	101%
Silver	0,148	0,002			µg/l	
Uranium	5,58	0,10			µg/l	
Zinc	21,6	0,2	20,31		µg/l	94%



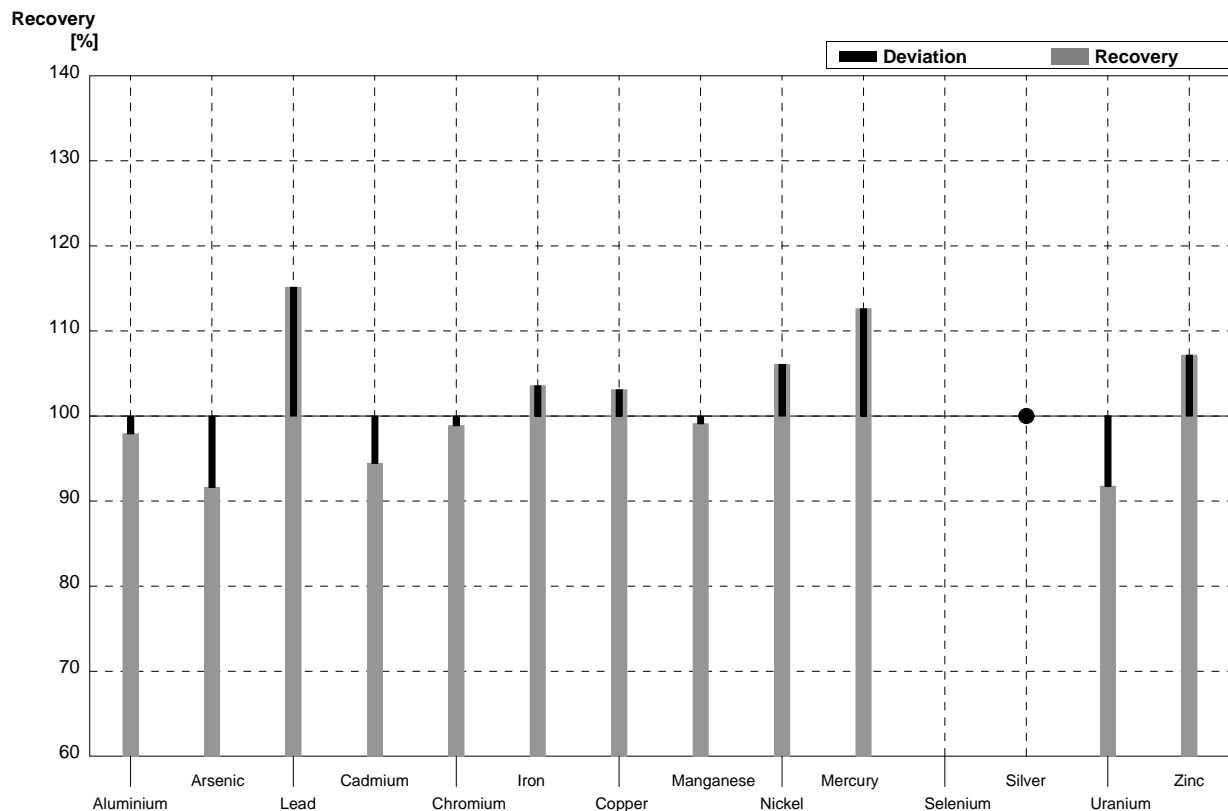
Sample M112B
Laboratory R

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2	19,05		$\mu\text{g/l}$	103%
Arsenic	4,77	0,09	4,83		$\mu\text{g/l}$	101%
Lead	2,97	0,03	2,54		$\mu\text{g/l}$	86%
Cadmium	1,52	0,01	1,51		$\mu\text{g/l}$	99%
Chromium	1,85	0,02	1,85		$\mu\text{g/l}$	100%
Iron	48,3	0,4	46,01		$\mu\text{g/l}$	95%
Copper	3,94	0,08	3,34		$\mu\text{g/l}$	85%
Manganese	18,5	0,1	18,40		$\mu\text{g/l}$	99%
Nickel	6,19	0,10	6,42		$\mu\text{g/l}$	104%
Mercury	1,79	0,03	6,22		$\mu\text{g/l}$	347%
Selenium	1,36	0,01	1,35		$\mu\text{g/l}$	99%
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02			$\mu\text{g/l}$	
Zinc	14,5	0,1	13,40		$\mu\text{g/l}$	92%



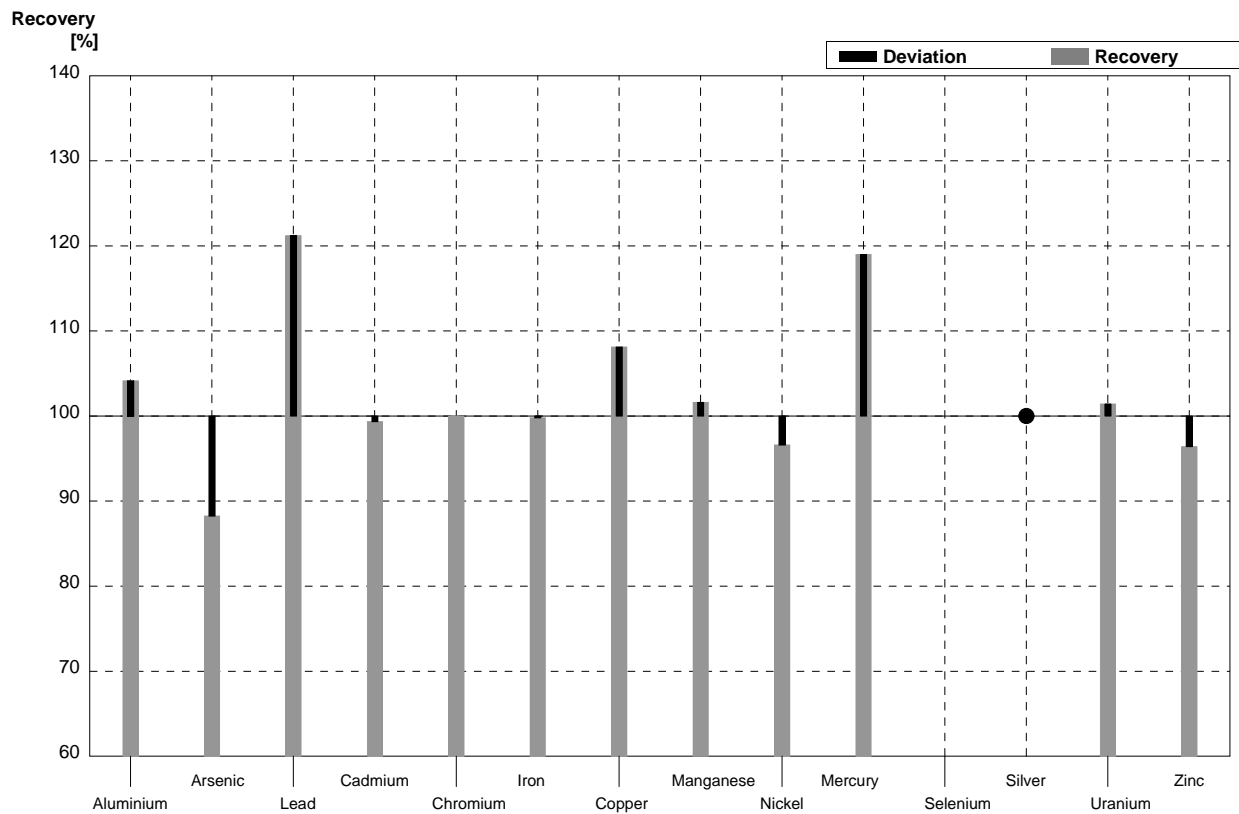
Sample M112A
Laboratory S

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	57,1	0,5	55,91	1,68	µg/l	98%
Arsenic	2,86	0,05	2,62	0,16	µg/l	92%
Lead	7,40	0,12	8,52	0,26	µg/l	115%
Cadmium	0,72	0,01	0,68	0,10	µg/l	94%
Chromium	5,42	0,09	5,36	0,16	µg/l	99%
Iron	33,7	0,3	34,9	1,05	µg/l	104%
Copper	4,85	0,13	5,00	0,15	µg/l	103%
Manganese	45,1	0,4	44,7	1,34	µg/l	99%
Nickel	3,95	0,09	4,19	0,25	µg/l	106%
Mercury	1,19	0,02	1,34	0,20	µg/l	113%
Selenium	4,17	0,04			µg/l	
Silver	0,148	0,002	<1,0		µg/l	•
Uranium	5,58	0,10	5,12	0,77	µg/l	92%
Zinc	21,6	0,2	23,15	0,70	µg/l	107%



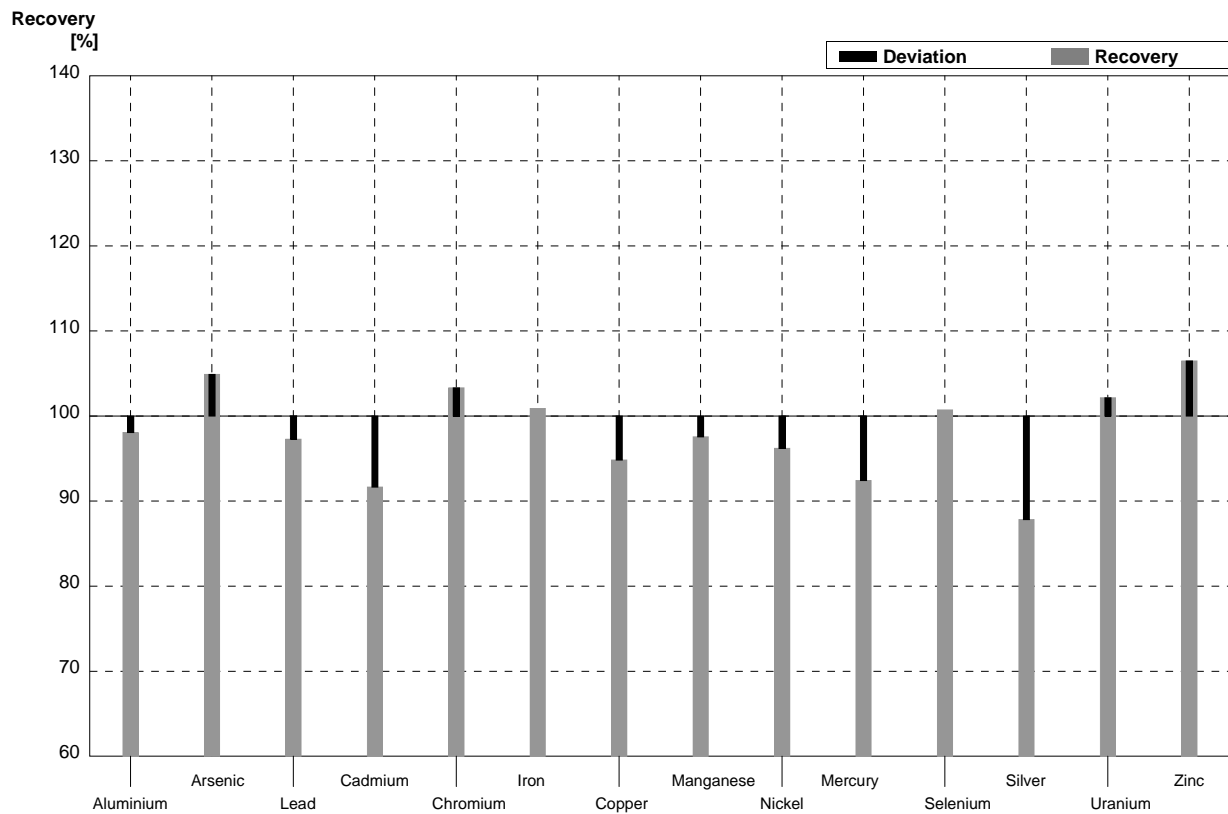
Sample M112B
Laboratory S

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2	19,27	0,58	$\mu\text{g/l}$	104%
Arsenic	4,77	0,09	4,21	0,25	$\mu\text{g/l}$	88%
Lead	2,97	0,03	3,60	0,11	$\mu\text{g/l}$	121%
Cadmium	1,52	0,01	1,51	0,23	$\mu\text{g/l}$	99%
Chromium	1,85	0,02	1,85	0,06	$\mu\text{g/l}$	100%
Iron	48,3	0,4	48,2	1,45	$\mu\text{g/l}$	100%
Copper	3,94	0,08	4,26	0,13	$\mu\text{g/l}$	108%
Manganese	18,5	0,1	18,8	0,56	$\mu\text{g/l}$	102%
Nickel	6,19	0,10	5,98	0,36	$\mu\text{g/l}$	97%
Mercury	1,79	0,03	2,13	0,32	$\mu\text{g/l}$	119%
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001	<1,0		$\mu\text{g/l}$	•
Uranium	2,10	0,02	2,13	0,32	$\mu\text{g/l}$	101%
Zinc	14,5	0,1	13,98	0,42	$\mu\text{g/l}$	96%



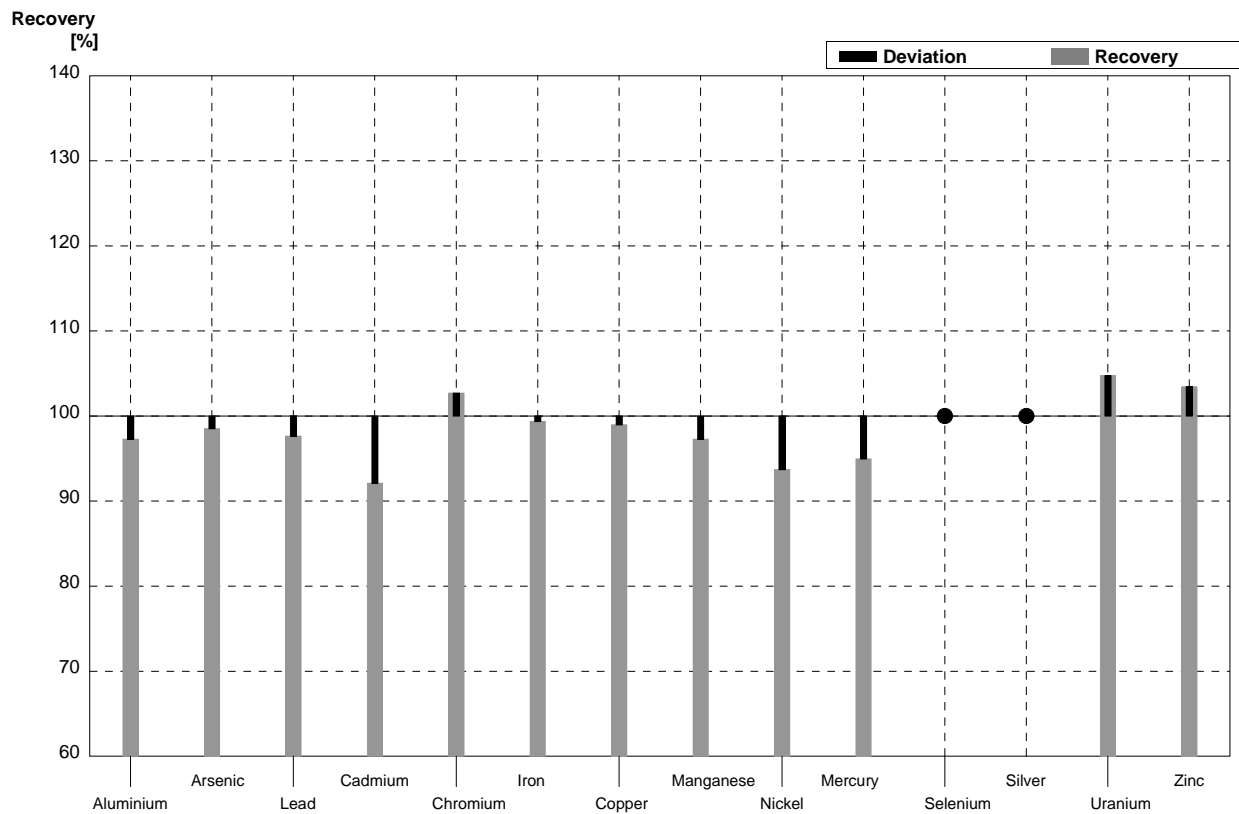
Sample M112A
Laboratory T

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	56	5	$\mu\text{g/l}$	98%
Arsenic	2,86	0,05	3,0	0,3	$\mu\text{g/l}$	105%
Lead	7,40	0,12	7,2	0,7	$\mu\text{g/l}$	97%
Cadmium	0,72	0,01	0,66	0,12	$\mu\text{g/l}$	92%
Chromium	5,42	0,09	5,6	0,6	$\mu\text{g/l}$	103%
Iron	33,7	0,3	34	4	$\mu\text{g/l}$	101%
Copper	4,85	0,13	4,6	0,4	$\mu\text{g/l}$	95%
Manganese	45,1	0,4	44	4	$\mu\text{g/l}$	98%
Nickel	3,95	0,09	3,8	0,4	$\mu\text{g/l}$	96%
Mercury	1,19	0,02	1,1	0,2	$\mu\text{g/l}$	92%
Selenium	4,17	0,04	4,2	0,4	$\mu\text{g/l}$	101%
Silver	0,148	0,002	0,13	0,06	$\mu\text{g/l}$	88%
Uranium	5,58	0,10	5,7	0,6	$\mu\text{g/l}$	102%
Zinc	21,6	0,2	23	3	$\mu\text{g/l}$	106%



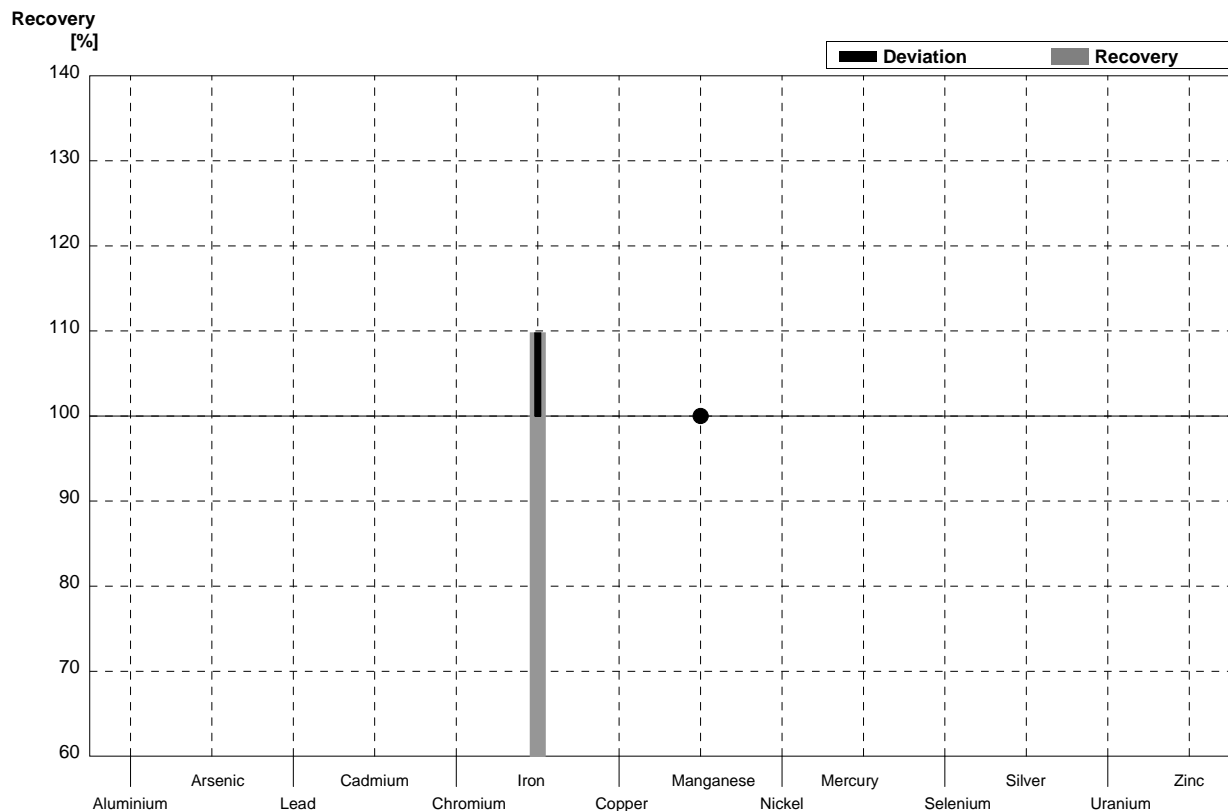
Sample M112B
Laboratory T

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2	18	2	$\mu\text{g/l}$	97%
Arsenic	4,77	0,09	4,7	0,5	$\mu\text{g/l}$	99%
Lead	2,97	0,03	2,9	0,3	$\mu\text{g/l}$	98%
Cadmium	1,52	0,01	1,4	0,2	$\mu\text{g/l}$	92%
Chromium	1,85	0,02	1,9	0,5	$\mu\text{g/l}$	103%
Iron	48,3	0,4	48	5	$\mu\text{g/l}$	99%
Copper	3,94	0,08	3,9	0,4	$\mu\text{g/l}$	99%
Manganese	18,5	0,1	18	2	$\mu\text{g/l}$	97%
Nickel	6,19	0,10	5,8	0,6	$\mu\text{g/l}$	94%
Mercury	1,79	0,03	1,7	0,3	$\mu\text{g/l}$	95%
Selenium	1,36	0,01	<2,0		$\mu\text{g/l}$	•
Silver	0,074	0,001	<0,10		$\mu\text{g/l}$	•
Uranium	2,10	0,02	2,2	0,2	$\mu\text{g/l}$	105%
Zinc	14,5	0,1	15	3	$\mu\text{g/l}$	103%



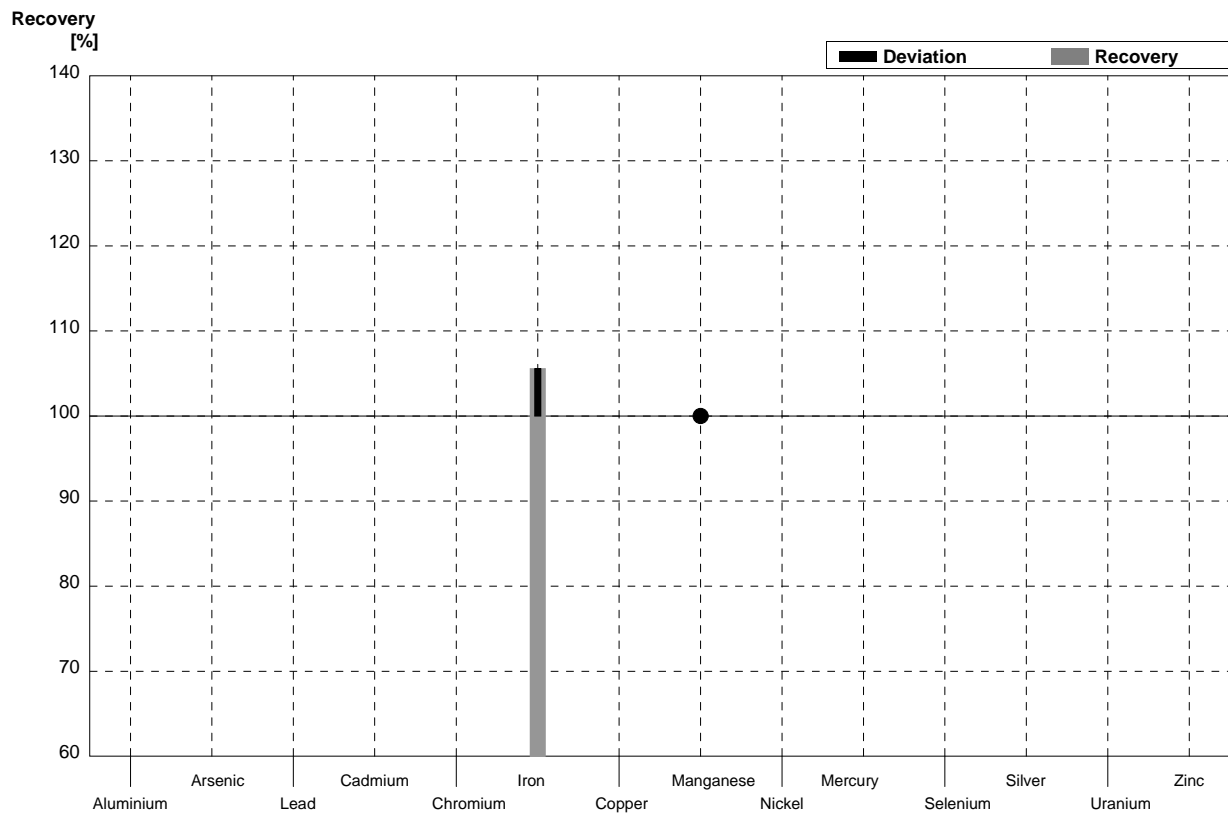
Sample M112A
Laboratory U

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	57,1	0,5			µg/l	
Arsenic	2,86	0,05			µg/l	
Lead	7,40	0,12			µg/l	
Cadmium	0,72	0,01			µg/l	
Chromium	5,42	0,09			µg/l	
Iron	33,7	0,3	37	3	µg/l	110%
Copper	4,85	0,13			µg/l	
Manganese	45,1	0,4	<50		µg/l	•
Nickel	3,95	0,09			µg/l	
Mercury	1,19	0,02			µg/l	
Selenium	4,17	0,04			µg/l	
Silver	0,148	0,002			µg/l	
Uranium	5,58	0,10			µg/l	
Zinc	21,6	0,2			µg/l	



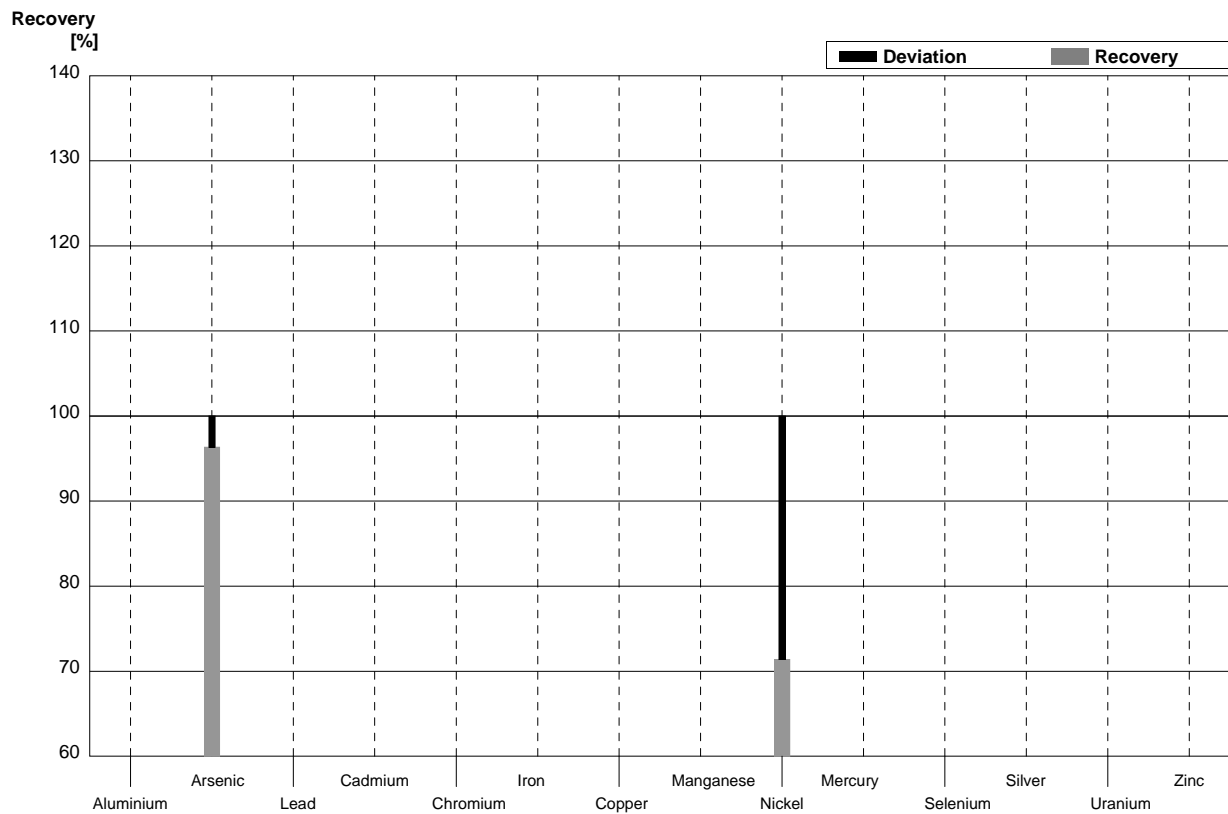
Sample M112B
Laboratory U

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2			$\mu\text{g/l}$	
Arsenic	4,77	0,09			$\mu\text{g/l}$	
Lead	2,97	0,03			$\mu\text{g/l}$	
Cadmium	1,52	0,01			$\mu\text{g/l}$	
Chromium	1,85	0,02			$\mu\text{g/l}$	
Iron	48,3	0,4	51	4	$\mu\text{g/l}$	106%
Copper	3,94	0,08			$\mu\text{g/l}$	
Manganese	18,5	0,1	<50		$\mu\text{g/l}$	•
Nickel	6,19	0,10			$\mu\text{g/l}$	
Mercury	1,79	0,03			$\mu\text{g/l}$	
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02			$\mu\text{g/l}$	
Zinc	14,5	0,1			$\mu\text{g/l}$	



Sample M112A
Laboratory V

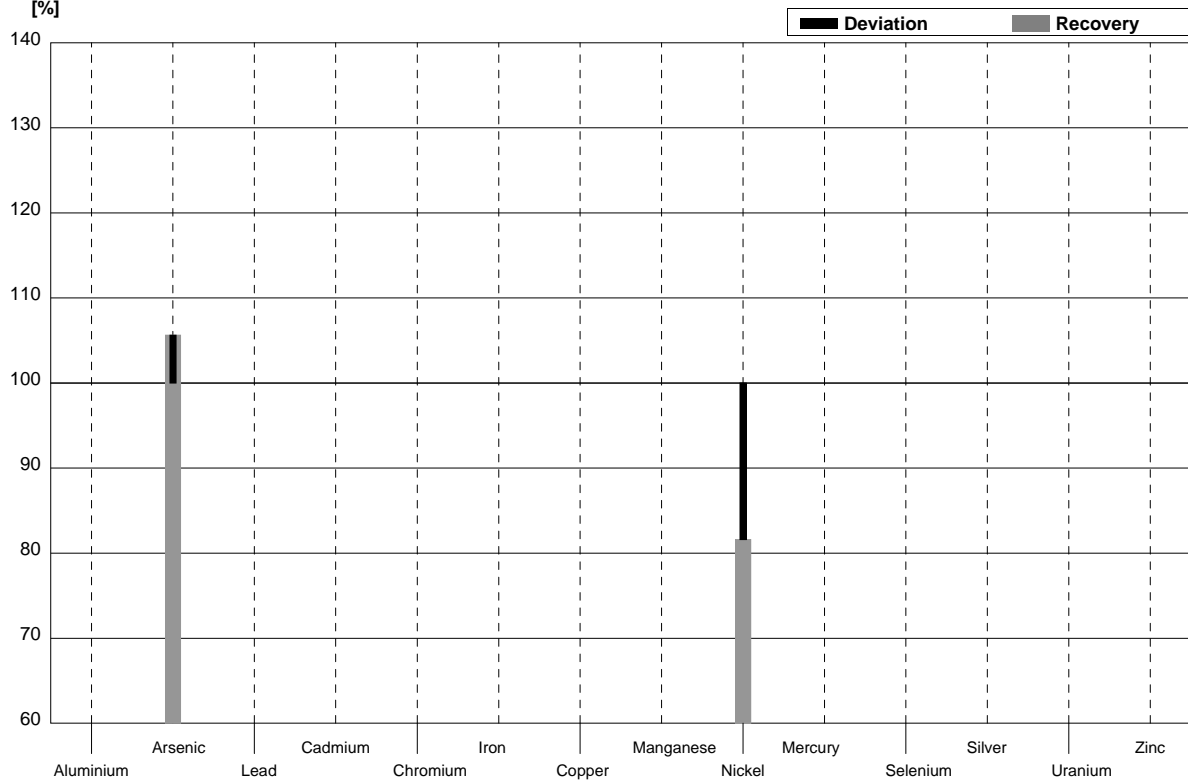
Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5			$\mu\text{g/l}$	
Arsenic	2,86	0,05	2,7556		$\mu\text{g/l}$	96%
Lead	7,40	0,12			$\mu\text{g/l}$	
Cadmium	0,72	0,01			$\mu\text{g/l}$	
Chromium	5,42	0,09			$\mu\text{g/l}$	
Iron	33,7	0,3			$\mu\text{g/l}$	
Copper	4,85	0,13			$\mu\text{g/l}$	
Manganese	45,1	0,4			$\mu\text{g/l}$	
Nickel	3,95	0,09	2,8196		$\mu\text{g/l}$	71%
Mercury	1,19	0,02			$\mu\text{g/l}$	
Selenium	4,17	0,04			$\mu\text{g/l}$	
Silver	0,148	0,002			$\mu\text{g/l}$	
Uranium	5,58	0,10			$\mu\text{g/l}$	
Zinc	21,6	0,2			$\mu\text{g/l}$	



Sample M112B
Laboratory V

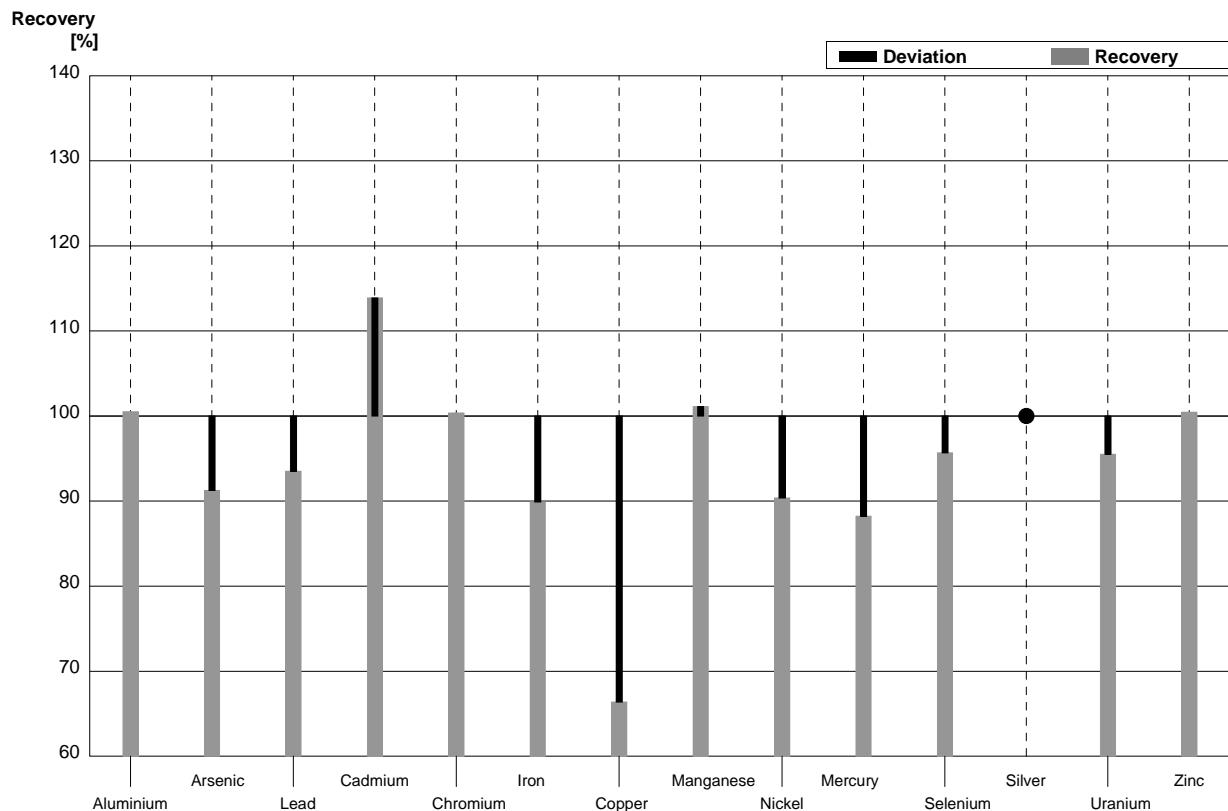
Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2			$\mu\text{g/l}$	
Arsenic	4,77	0,09	5,0386		$\mu\text{g/l}$	106%
Lead	2,97	0,03			$\mu\text{g/l}$	
Cadmium	1,52	0,01			$\mu\text{g/l}$	
Chromium	1,85	0,02			$\mu\text{g/l}$	
Iron	48,3	0,4			$\mu\text{g/l}$	
Copper	3,94	0,08			$\mu\text{g/l}$	
Manganese	18,5	0,1			$\mu\text{g/l}$	
Nickel	6,19	0,10	5,0520		$\mu\text{g/l}$	82%
Mercury	1,79	0,03			$\mu\text{g/l}$	
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02			$\mu\text{g/l}$	
Zinc	14,5	0,1			$\mu\text{g/l}$	

Recovery [%]



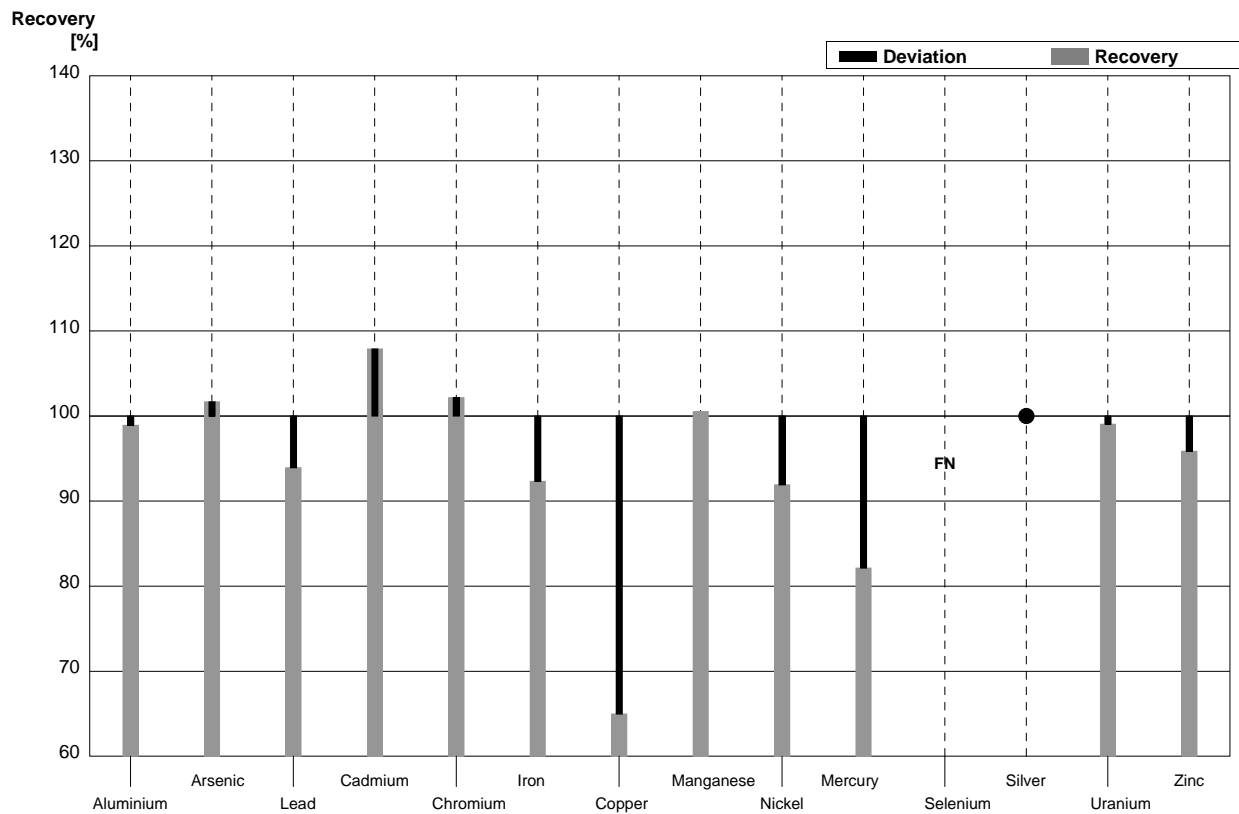
Sample M112A
Laboratory W

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	57,4	5,8	$\mu\text{g/l}$	101%
Arsenic	2,86	0,05	2,61	0,26	$\mu\text{g/l}$	91%
Lead	7,40	0,12	6,92	0,70	$\mu\text{g/l}$	94%
Cadmium	0,72	0,01	0,82	0,10	$\mu\text{g/l}$	114%
Chromium	5,42	0,09	5,44	0,55	$\mu\text{g/l}$	100%
Iron	33,7	0,3	30,3	3,0	$\mu\text{g/l}$	90%
Copper	4,85	0,13	3,22	0,30	$\mu\text{g/l}$	66%
Manganese	45,1	0,4	45,6	4,4	$\mu\text{g/l}$	101%
Nickel	3,95	0,09	3,57	0,37	$\mu\text{g/l}$	90%
Mercury	1,19	0,02	1,05	0,12	$\mu\text{g/l}$	88%
Selenium	4,17	0,04	3,99	0,50	$\mu\text{g/l}$	96%
Silver	0,148	0,002	<2		$\mu\text{g/l}$	•
Uranium	5,58	0,10	5,33	0,55	$\mu\text{g/l}$	96%
Zinc	21,6	0,2	21,7	2,1	$\mu\text{g/l}$	100%



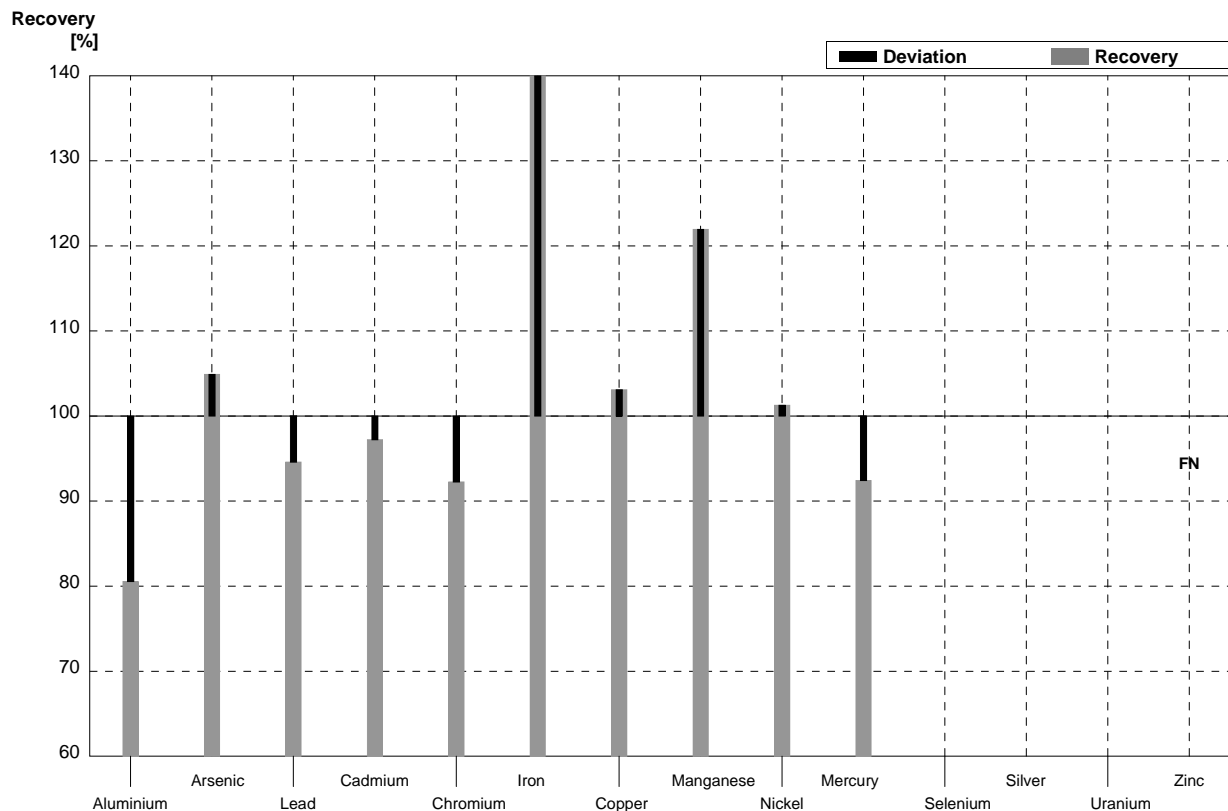
Sample M112B
Laboratory W

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2	18,3	1,8	$\mu\text{g/l}$	99%
Arsenic	4,77	0,09	4,85	0,47	$\mu\text{g/l}$	102%
Lead	2,97	0,03	2,79	0,30	$\mu\text{g/l}$	94%
Cadmium	1,52	0,01	1,64	0,16	$\mu\text{g/l}$	108%
Chromium	1,85	0,02	1,89	0,19	$\mu\text{g/l}$	102%
Iron	48,3	0,4	44,6	4,5	$\mu\text{g/l}$	92%
Copper	3,94	0,08	2,56	0,27	$\mu\text{g/l}$	65%
Manganese	18,5	0,1	18,6	1,9	$\mu\text{g/l}$	101%
Nickel	6,19	0,10	5,69	0,60	$\mu\text{g/l}$	92%
Mercury	1,79	0,03	1,47	0,16	$\mu\text{g/l}$	82%
Selenium	1,36	0,01	<1		$\mu\text{g/l}$	FN
Silver	0,074	0,001	<2		$\mu\text{g/l}$	•
Uranium	2,10	0,02	2,08	0,23	$\mu\text{g/l}$	99%
Zinc	14,5	0,1	13,9	1,3	$\mu\text{g/l}$	96%



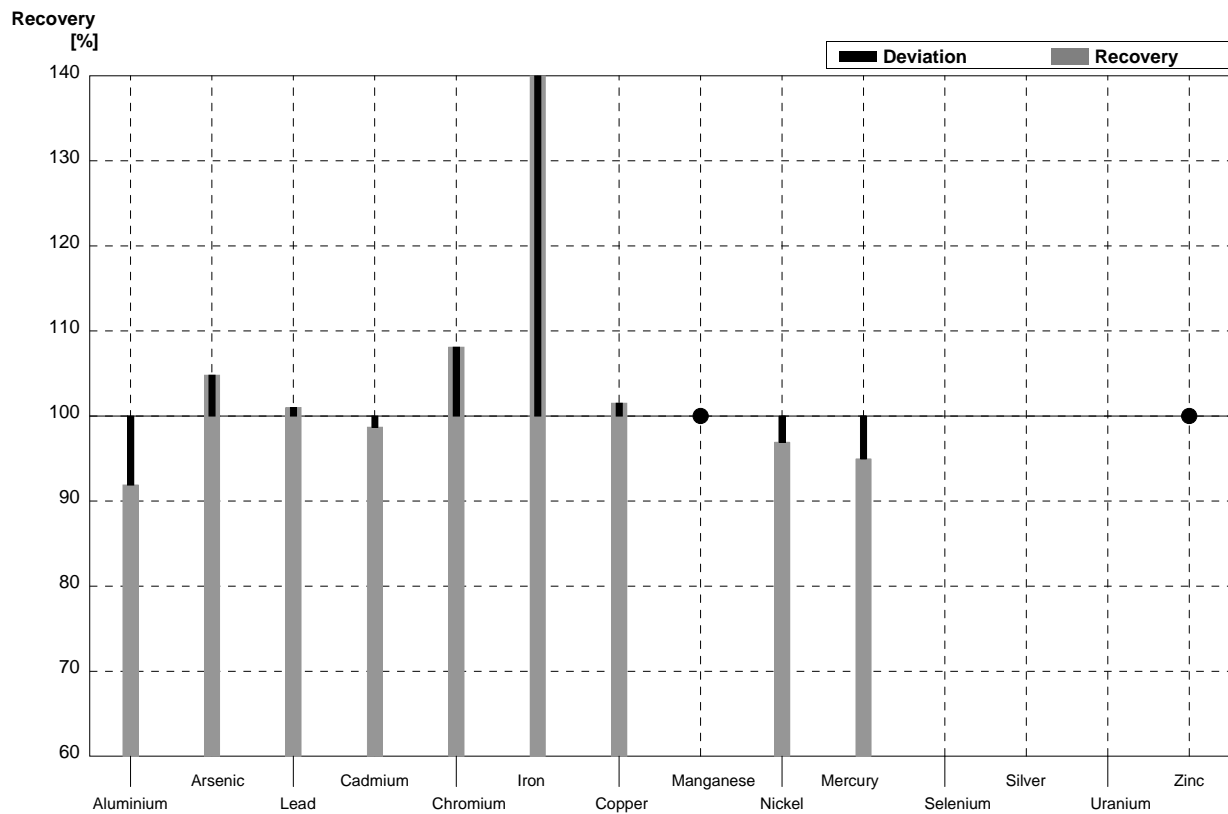
Sample M112A
Laboratory X

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	46	5	$\mu\text{g/l}$	81%
Arsenic	2,86	0,05	3	0,4	$\mu\text{g/l}$	105%
Lead	7,40	0,12	7	1	$\mu\text{g/l}$	95%
Cadmium	0,72	0,01	0,7	0,1	$\mu\text{g/l}$	97%
Chromium	5,42	0,09	5	1	$\mu\text{g/l}$	92%
Iron	33,7	0,3	85	30	$\mu\text{g/l}$	252%
Copper	4,85	0,13	5	2	$\mu\text{g/l}$	103%
Manganese	45,1	0,4	55	15	$\mu\text{g/l}$	122%
Nickel	3,95	0,09	4	0,8	$\mu\text{g/l}$	101%
Mercury	1,19	0,02	1,1	0,1	$\mu\text{g/l}$	92%
Selenium	4,17	0,04			$\mu\text{g/l}$	
Silver	0,148	0,002			$\mu\text{g/l}$	
Uranium	5,58	0,10			$\mu\text{g/l}$	
Zinc	21,6	0,2	<20		$\mu\text{g/l}$	FN



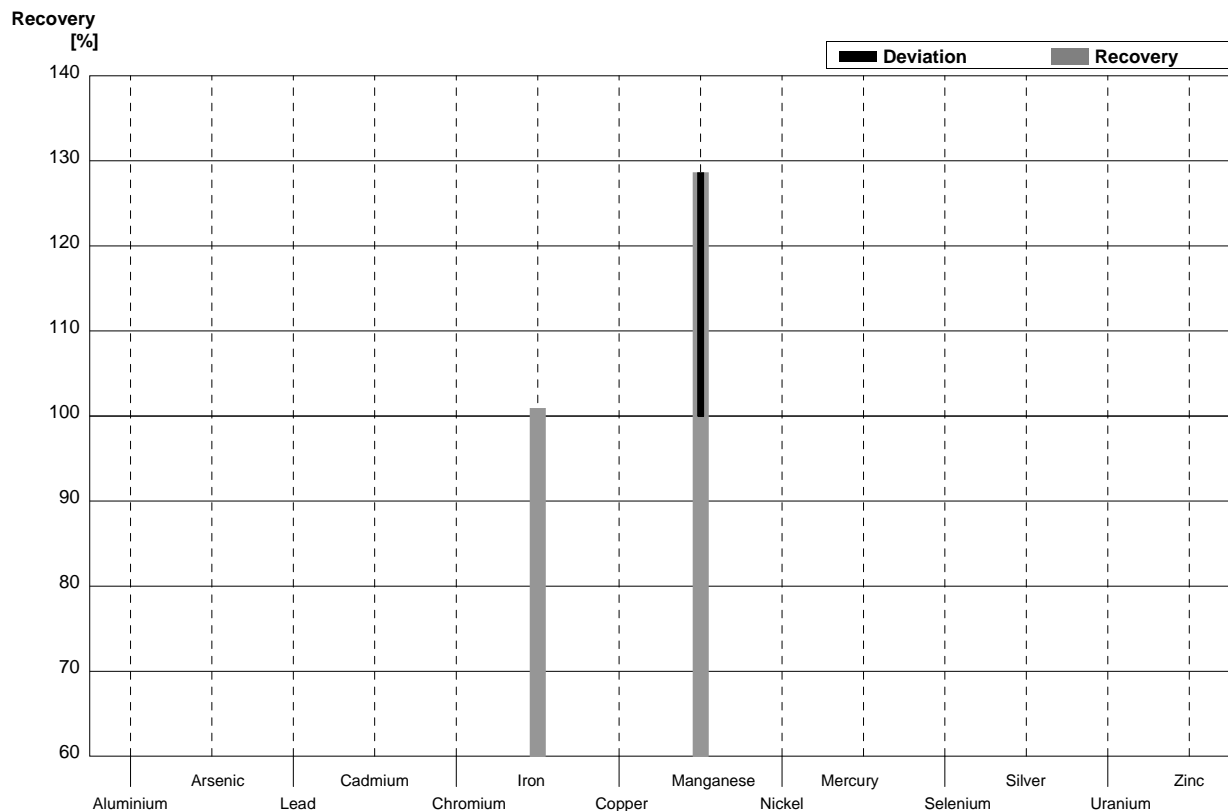
Sample M112B
Laboratory X

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2	17	3	$\mu\text{g/l}$	92%
Arsenic	4,77	0,09	5	0,5	$\mu\text{g/l}$	105%
Lead	2,97	0,03	3	0,5	$\mu\text{g/l}$	101%
Cadmium	1,52	0,01	1,5	0,2	$\mu\text{g/l}$	99%
Chromium	1,85	0,02	2	0,7	$\mu\text{g/l}$	108%
Iron	48,3	0,4	95	30	$\mu\text{g/l}$	197%
Copper	3,94	0,08	4	2	$\mu\text{g/l}$	102%
Manganese	18,5	0,1	<20		$\mu\text{g/l}$	•
Nickel	6,19	0,10	6	0,8	$\mu\text{g/l}$	97%
Mercury	1,79	0,03	1,7	0,15	$\mu\text{g/l}$	95%
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02			$\mu\text{g/l}$	
Zinc	14,5	0,1	<20		$\mu\text{g/l}$	•



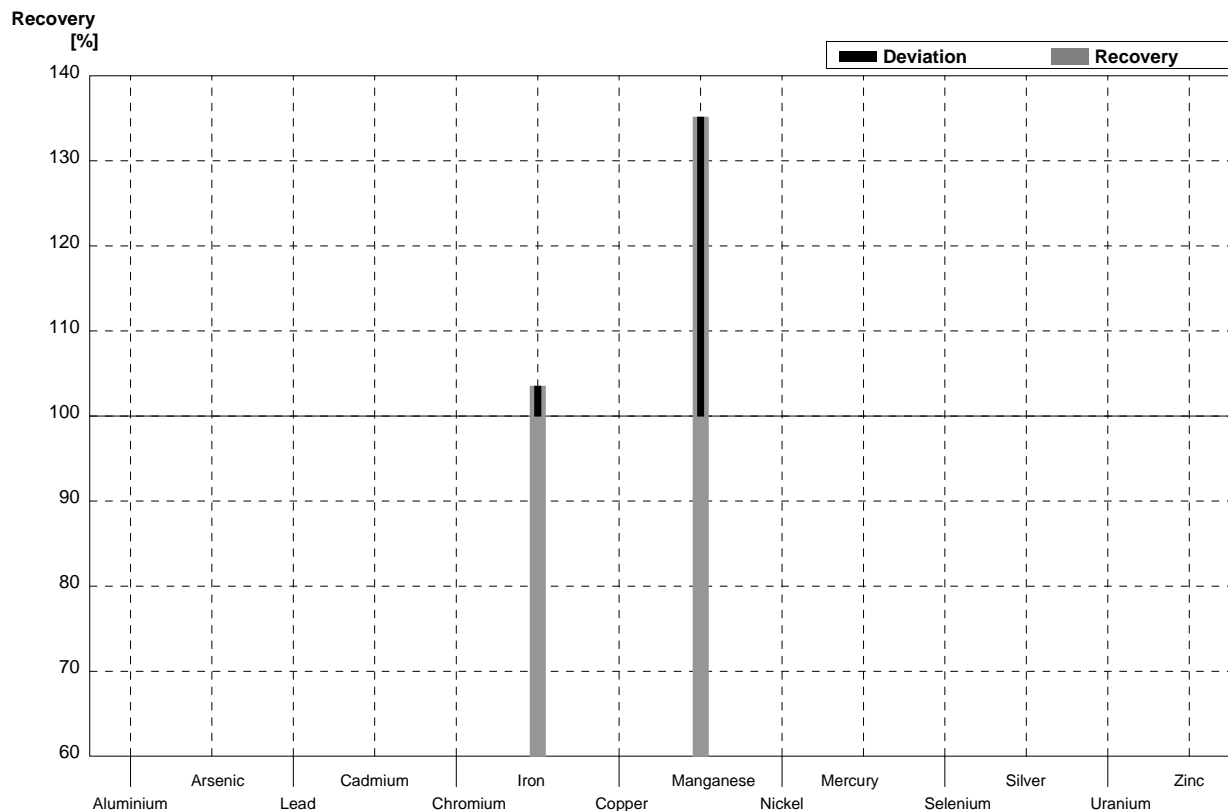
Sample M112A
Laboratory Y

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5			$\mu\text{g/l}$	
Arsenic	2,86	0,05			$\mu\text{g/l}$	
Lead	7,40	0,12			$\mu\text{g/l}$	
Cadmium	0,72	0,01			$\mu\text{g/l}$	
Chromium	5,42	0,09			$\mu\text{g/l}$	
Iron	33,7	0,3	34	0,5	$\mu\text{g/l}$	101%
Copper	4,85	0,13			$\mu\text{g/l}$	
Manganese	45,1	0,4	58	1	$\mu\text{g/l}$	129%
Nickel	3,95	0,09			$\mu\text{g/l}$	
Mercury	1,19	0,02			$\mu\text{g/l}$	
Selenium	4,17	0,04			$\mu\text{g/l}$	
Silver	0,148	0,002			$\mu\text{g/l}$	
Uranium	5,58	0,10			$\mu\text{g/l}$	
Zinc	21,6	0,2			$\mu\text{g/l}$	



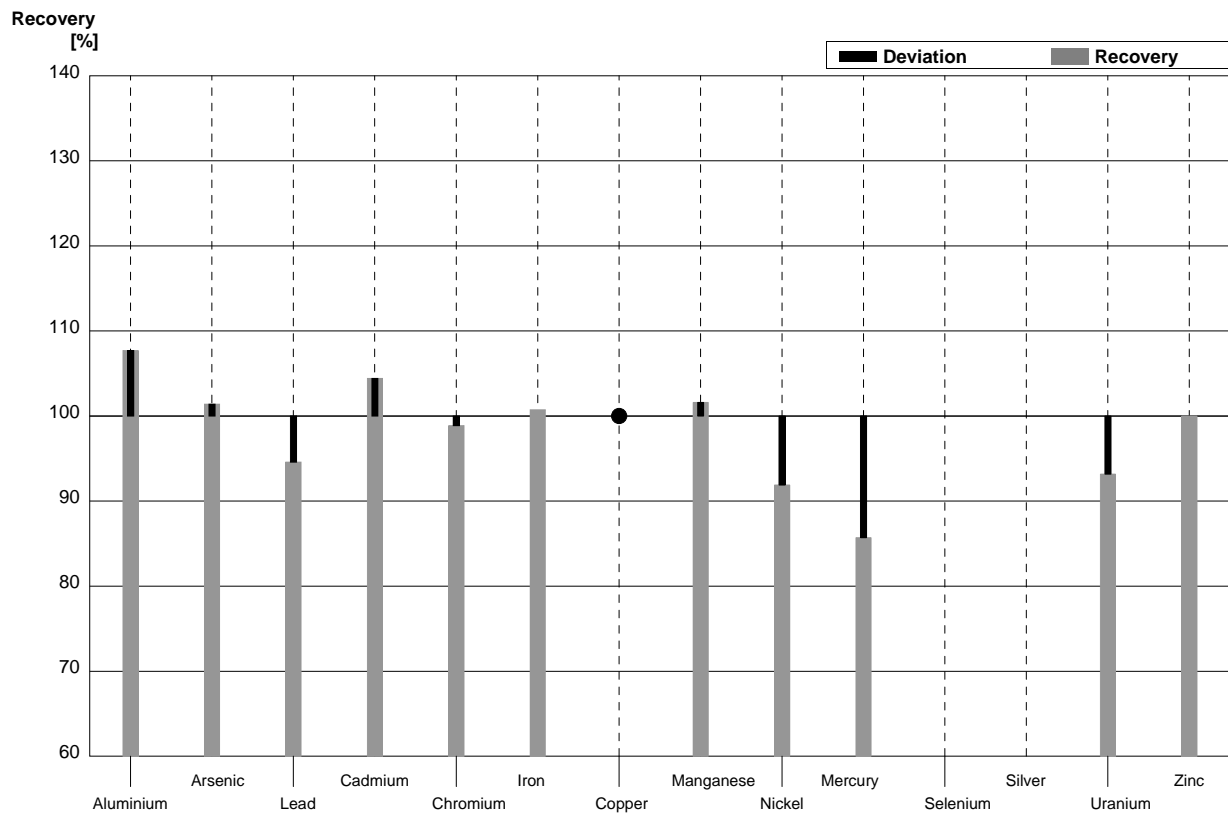
Sample M112B
Laboratory Y

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2			$\mu\text{g/l}$	
Arsenic	4,77	0,09			$\mu\text{g/l}$	
Lead	2,97	0,03			$\mu\text{g/l}$	
Cadmium	1,52	0,01			$\mu\text{g/l}$	
Chromium	1,85	0,02			$\mu\text{g/l}$	
Iron	48,3	0,4	50	1,5	$\mu\text{g/l}$	104%
Copper	3,94	0,08			$\mu\text{g/l}$	
Manganese	18,5	0,1	25	1	$\mu\text{g/l}$	135%
Nickel	6,19	0,10			$\mu\text{g/l}$	
Mercury	1,79	0,03			$\mu\text{g/l}$	
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02			$\mu\text{g/l}$	
Zinc	14,5	0,1			$\mu\text{g/l}$	



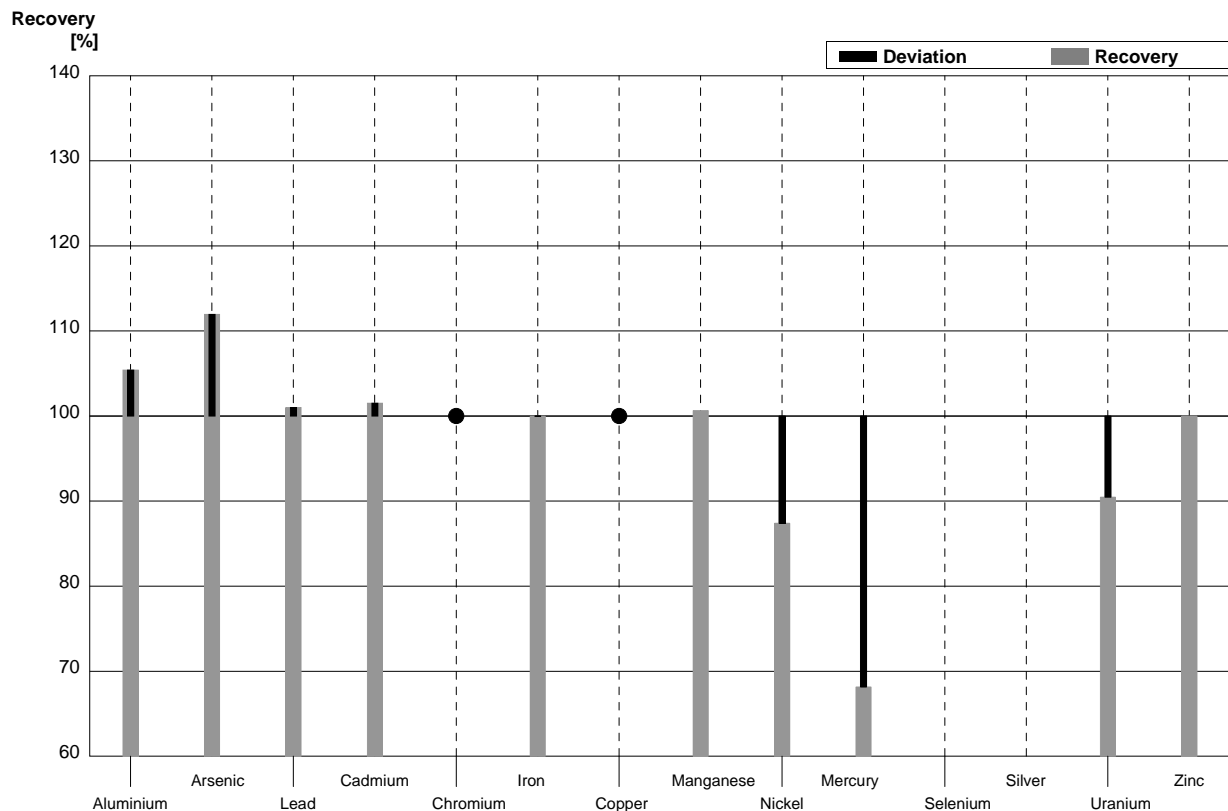
Sample M112A
Laboratory Z

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	61,5	0,65	$\mu\text{g/l}$	108%
Arsenic	2,86	0,05	2,90	0,25	$\mu\text{g/l}$	101%
Lead	7,40	0,12	7		$\mu\text{g/l}$	95%
Cadmium	0,72	0,01	0,752	0,025	$\mu\text{g/l}$	104%
Chromium	5,42	0,09	5,36	0,72	$\mu\text{g/l}$	99%
Iron	33,7	0,3	33,95	0,56	$\mu\text{g/l}$	101%
Copper	4,85	0,13	<5		$\mu\text{g/l}$	•
Manganese	45,1	0,4	45,82	0,4	$\mu\text{g/l}$	102%
Nickel	3,95	0,09	3,63	0,29	$\mu\text{g/l}$	92%
Mercury	1,19	0,02	1,02	0,023	$\mu\text{g/l}$	86%
Selenium	4,17	0,04			$\mu\text{g/l}$	
Silver	0,148	0,002			$\mu\text{g/l}$	
Uranium	5,58	0,10	5,2		$\mu\text{g/l}$	93%
Zinc	21,6	0,2	21,6	1,26	$\mu\text{g/l}$	100%



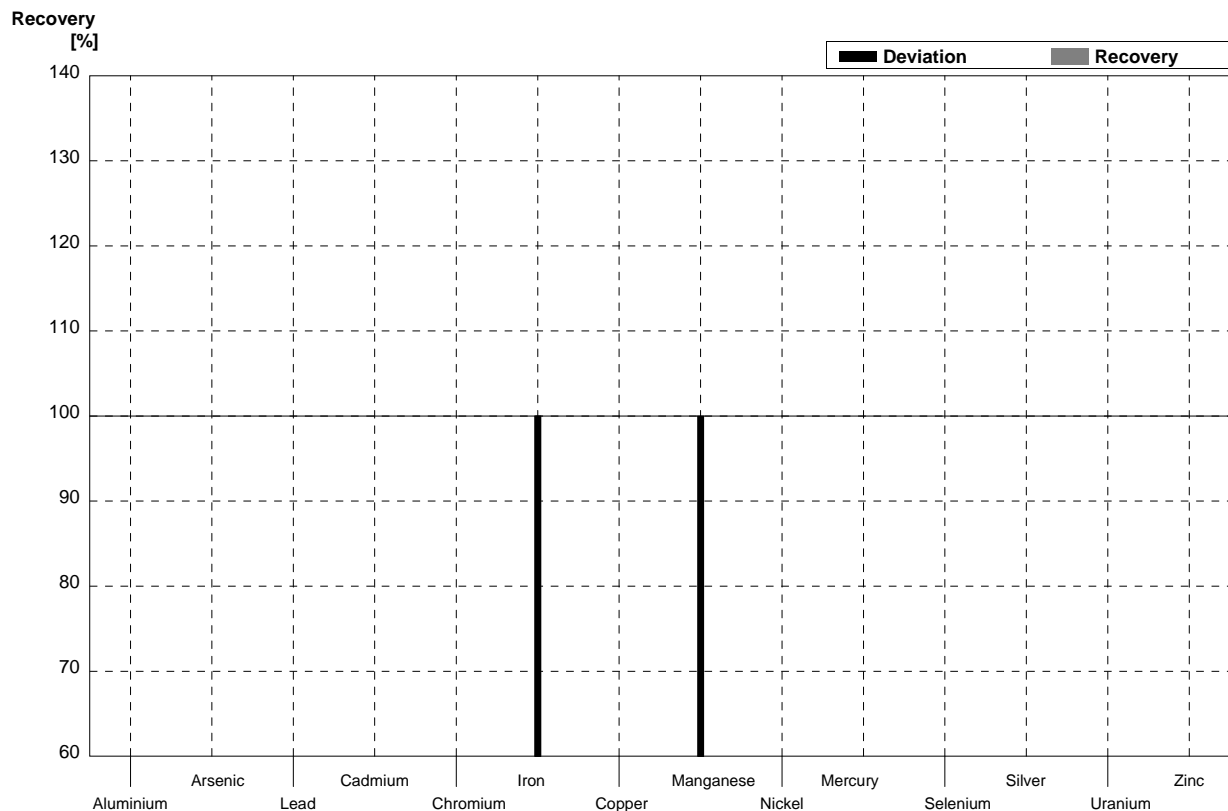
Sample M112B
Laboratory Z

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	18,5	0,2	19,5	0,76	µg/l	105%
Arsenic	4,77	0,09	5,34	0,24	µg/l	112%
Lead	2,97	0,03	3		µg/l	101%
Cadmium	1,52	0,01	1,543	0,029	µg/l	102%
Chromium	1,85	0,02	<5		µg/l	•
Iron	48,3	0,4	48,29	0,54	µg/l	100%
Copper	3,94	0,08	<5		µg/l	•
Manganese	18,5	0,1	18,62	0,3	µg/l	101%
Nickel	6,19	0,10	5,41	0,28	µg/l	87%
Mercury	1,79	0,03	1,22	0,023	µg/l	68%
Selenium	1,36	0,01			µg/l	
Silver	0,074	0,001			µg/l	
Uranium	2,10	0,02	1,9		µg/l	90%
Zinc	14,5	0,1	14,5	1,33	µg/l	100%



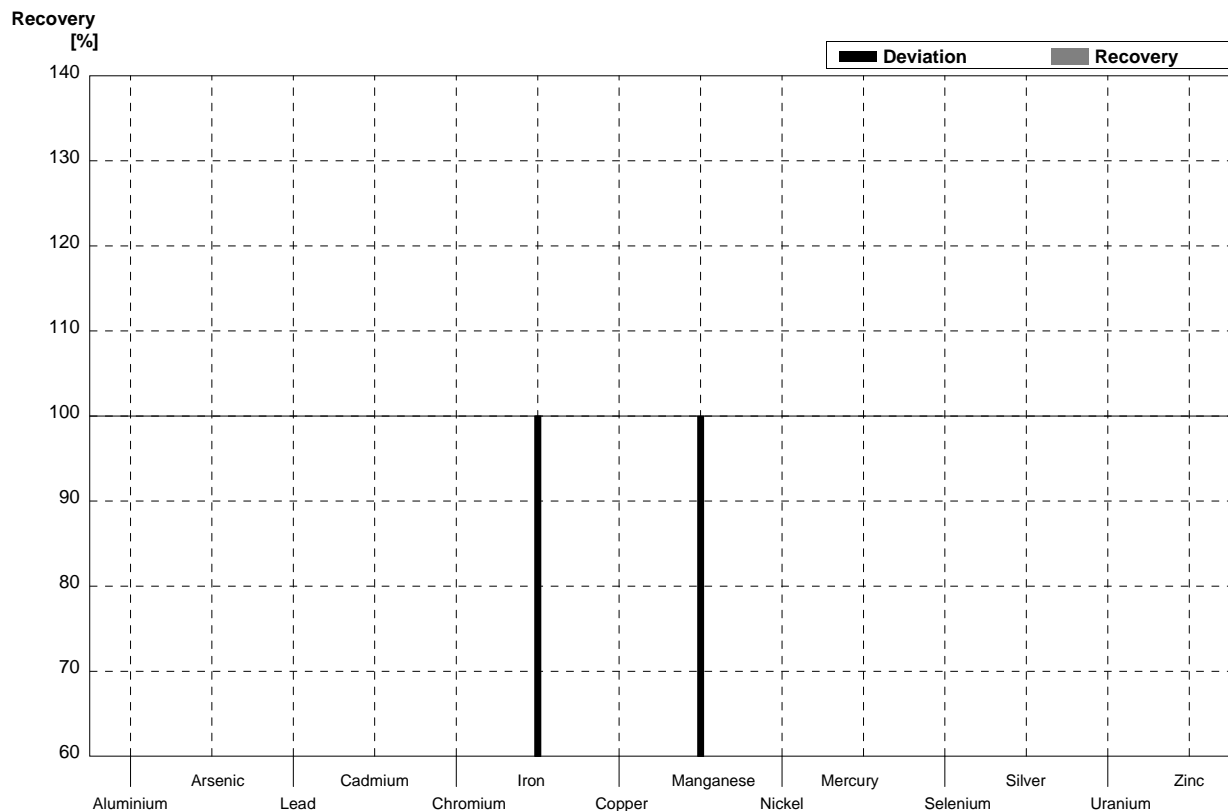
Sample M112A
Laboratory AA

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5			$\mu\text{g/l}$	
Arsenic	2,86	0,05			$\mu\text{g/l}$	
Lead	7,40	0,12			$\mu\text{g/l}$	
Cadmium	0,72	0,01			$\mu\text{g/l}$	
Chromium	5,42	0,09			$\mu\text{g/l}$	
Iron	33,7	0,3	0,031	0,003	$\mu\text{g/l}$	0%
Copper	4,85	0,13			$\mu\text{g/l}$	
Manganese	45,1	0,4	0,045	0,004	$\mu\text{g/l}$	0%
Nickel	3,95	0,09			$\mu\text{g/l}$	
Mercury	1,19	0,02			$\mu\text{g/l}$	
Selenium	4,17	0,04			$\mu\text{g/l}$	
Silver	0,148	0,002			$\mu\text{g/l}$	
Uranium	5,58	0,10			$\mu\text{g/l}$	
Zinc	21,6	0,2			$\mu\text{g/l}$	



Sample M112B
Laboratory AA

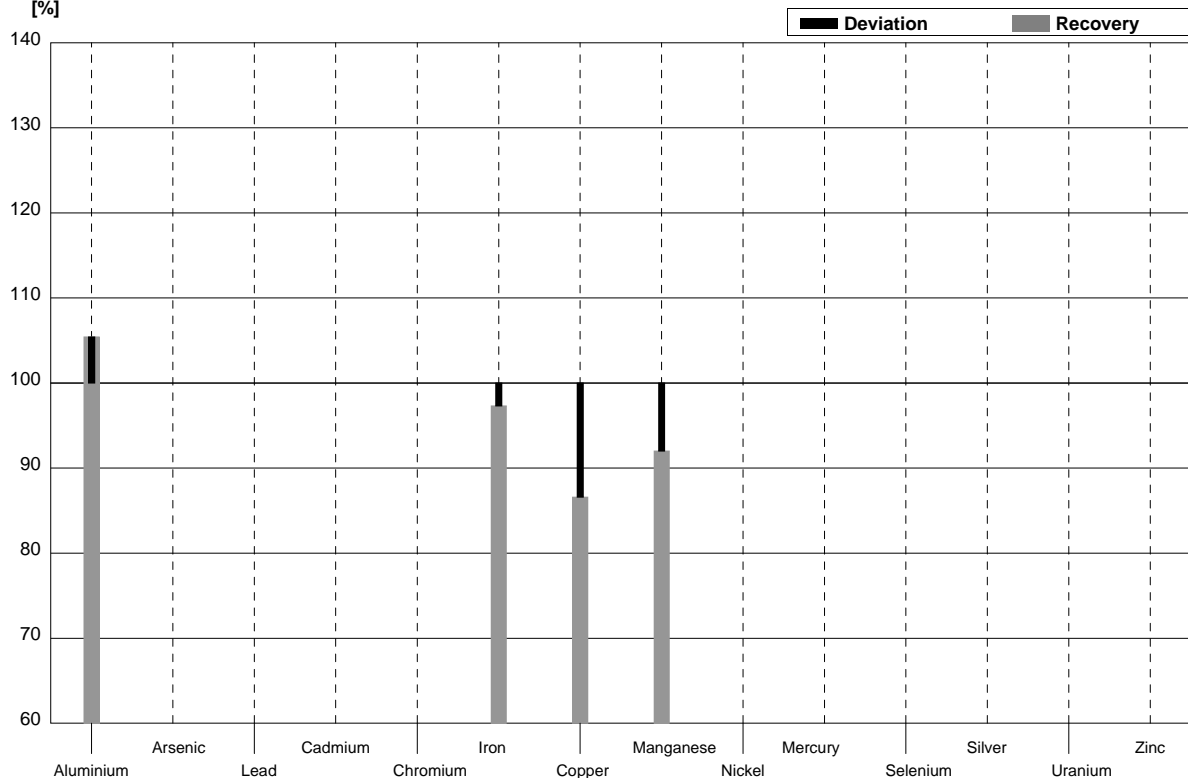
Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2			$\mu\text{g/l}$	
Arsenic	4,77	0,09			$\mu\text{g/l}$	
Lead	2,97	0,03			$\mu\text{g/l}$	
Cadmium	1,52	0,01			$\mu\text{g/l}$	
Chromium	1,85	0,02			$\mu\text{g/l}$	
Iron	48,3	0,4	0,044	0,004	$\mu\text{g/l}$	0%
Copper	3,94	0,08			$\mu\text{g/l}$	
Manganese	18,5	0,1	0,018	0,002	$\mu\text{g/l}$	0%
Nickel	6,19	0,10			$\mu\text{g/l}$	
Mercury	1,79	0,03			$\mu\text{g/l}$	
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02			$\mu\text{g/l}$	
Zinc	14,5	0,1			$\mu\text{g/l}$	



Sample M112A
Laboratory AB

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	57,1	0,5	60,2	6,0	$\mu\text{g/l}$	105%
Arsenic	2,86	0,05			$\mu\text{g/l}$	
Lead	7,40	0,12			$\mu\text{g/l}$	
Cadmium	0,72	0,01			$\mu\text{g/l}$	
Chromium	5,42	0,09			$\mu\text{g/l}$	
Iron	33,7	0,3	32,8	6,6	$\mu\text{g/l}$	97%
Copper	4,85	0,13	4,2		$\mu\text{g/l}$	87%
Manganese	45,1	0,4	41,5	4,2	$\mu\text{g/l}$	92%
Nickel	3,95	0,09			$\mu\text{g/l}$	
Mercury	1,19	0,02			$\mu\text{g/l}$	
Selenium	4,17	0,04			$\mu\text{g/l}$	
Silver	0,148	0,002			$\mu\text{g/l}$	
Uranium	5,58	0,10			$\mu\text{g/l}$	
Zinc	21,6	0,2			$\mu\text{g/l}$	

Recovery [%]



Sample M112B
Laboratory AB

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	18,5	0,2	18,1	3,6	$\mu\text{g/l}$	98%
Arsenic	4,77	0,09			$\mu\text{g/l}$	
Lead	2,97	0,03			$\mu\text{g/l}$	
Cadmium	1,52	0,01			$\mu\text{g/l}$	
Chromium	1,85	0,02			$\mu\text{g/l}$	
Iron	48,3	0,4	46,4	4,6	$\mu\text{g/l}$	96%
Copper	3,94	0,08	3,2		$\mu\text{g/l}$	81%
Manganese	18,5	0,1	16,3	3,3	$\mu\text{g/l}$	88%
Nickel	6,19	0,10			$\mu\text{g/l}$	
Mercury	1,79	0,03			$\mu\text{g/l}$	
Selenium	1,36	0,01			$\mu\text{g/l}$	
Silver	0,074	0,001			$\mu\text{g/l}$	
Uranium	2,10	0,02			$\mu\text{g/l}$	
Zinc	14,5	0,1			$\mu\text{g/l}$	

Recovery [%]

