

IFA-Proficiency Testing Scheme for Water Analysis

Round M166
Metals

Sample Dispatch: 6 March 2023

In accordance with the procedure: AVKPS.02



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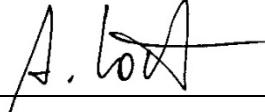
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This report summarises the results of round M166 (trace metals) within the IFA-Proficiency Testing Scheme for Water Analysis. The samples M166A and M166B were distributed to 25 participants on Monday, 6 March 2023. Each participant received two samples of 250 mL filled into LDPE bottles.

Closing date for reporting results to the IFA-Tulln was Friday, 31 March 2023. All participants submitted results. To make the participants anonymous, each laboratory obtained a letter code by random.

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. The following ultrapure salts were used: CaCO₃, Mg(NO₃)₂, NaCl, KCl, besides ultrapure H₂SO₄ and HCl. By this, the matrix of the samples consisted of about 46.1 mg/l Ca, 19.5 mg/l Mg, 9.0 mg/l Na, 1.32 mg/l K, 19.3 mg/l SO₄²⁻ and 15.3 mg/l Cl⁻. 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.

Traces of Al, As, Cd, Cr, Cu, Fe, Pb, Mn, Hg, Ni, Se, U and Zn were added, using certified 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 mass of standard added to the samples.

Homogeneity, accuracy and stability tests at the IFA-Tulln

Some samples of the round M166A and M166B 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").

Stability tests will be carried out together with the accuracy tests of the following round (M167). According to our experience, the concentrations of Al, As, Cd, Cr, Cu, Fe, Pb, Mn, Ni, Se, U and Zn in the samples remain stable up to 18 months when stored at 4-6 °C in the dark. For Hg 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, 3rd Edition (2012)".

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%).

The recoveries of the target concentrations, calculated from outlier-corrected data mean values ranged between 90.7 % (Hg in sample M166A) and 102.6 % (Se in sample M166B).

The between laboratory CVs covered the ranged between 1.8 % (U in sample M166A) and 12.9 % (Hg in sample M166A).

All confidence intervals of the outlier-corrected laboratory mean values except that for Pb in sample M166A ($96.0\% \pm 2.9\%$), Fe in sample M166B ($97.0\% \pm 2.4\%$), Cu in sample M166A ($95.7\% \pm 2.8\%$), and M166B ($94.3\% \pm 2.5\%$) and Ni in sample M166A ($95.3\% \pm 3.5\%$) and M166B ($95.4\% \pm 3.6\%$) encompass the corresponding target values with their uncertainties. For all other parameters, no difference could be detected between target concentrations and outlier corrected laboratory mean values statistically.

z-scores

The most common approach to calculate a z-score is given by

$$z = \frac{x_i - X}{\sigma_{pt}}$$

z z-score

x_i result of laboratory

X target value or mean value („consensus value“)

σ_{pt} standard deviation for proficiency assessment

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 have been organised by the IFA-Tulln from 2012 to 2022. They represent average performance data of all former participating laboratories.

This approach was chosen, because standard deviations of the outlier-corrected measurements substantially vary between individual proficiency test rounds. Averaging standard deviations from proficiency testing rounds of several years can provide standard deviations for proficiency assessment on a broad data basis. It is therefore more suitable than a standard deviation taken directly from the interlaboratory comparison (EN ISO/IEC 17043:2010, B.3.1.3). Another advantage of previously determined standard deviations is that the participants can foresee which z-scores can be expected by their routine analysis methods before participation.

Calculation example:

A laboratory found 73.7 µg/L for the parameter Aluminium (recovery of 102 %). The target value for Aluminium was 72.3 µg/L (100 %). The relative standard deviation for proficiency assessment is given in the table below (as well as in the annual program www.ifatest.eu) by 7.7 %, which is 5.6 µg/L Al, when based on the target value.

$$z = \frac{x_i - X}{\sigma_{pt}} = \frac{73.7 \text{ µg/L} - 72.3 \text{ µg/L}}{5.6 \text{ µg/L}} \approx 0.25 \quad \text{or} \quad \frac{102 \% - 100 \%}{7.7 \%} \approx 0.25$$

z z-score

x_i 73.7 µg/L equivalent to 102 % (result of the laboratory)

X 72.3 µg/L equivalent to 100 % (target value)

σ_{pt} 5.6 µg/L equivalent to 7.7 % (standard deviation for proficiency assessment see table below)

In the case of recalculation, deviations in the last digits may occur due to the fact that rounded values are given in the report for clarity.

The following table lists the standard deviations for proficiency assessment and their limits of applicability. Z-scores were only calculated, if the target values were higher than these limits.

Parameter	standard deviation for proficiency assessment	Lower limit
Aluminium	7.7 %	8 µg/L
Arsenic	7.3 %	0.5 µg/L
Cadmium	5.4 %	0.1 µg/L
Chromium	6.3 %	0.5 µg/L
Copper	7.8 %	1.0 µg/L
Iron	6.7 %	10 µg/L
Lead	6.7 %	0.3 µg/L
Manganese	5.3 %	2.0 µg/L
Mercury	11 %	0.2 µg/L
Nickel	7.4 %	0.9 µg/L
Selenium	9.4 %	0.3 µg/L
Uranium	5.5 %	0.35 µg/L
Zinc	7.0 %	3 µg/L

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

z-Score	Classification
≤2	satisfactory
2< z <3	questionable
≥3	unsatisfactory

The z-scores are listed in the parameter-oriented evaluation in the tables next to the recoveries. Additionally, each laboratory receives a sheet on which the obtained z-scores are summarized and graphically presented. The standard deviations for proficiency assessment are given in concentration units there.

An overview table of all z-scores can be found after the result tables in the parameter-oriented part.

Illustration of results

An explanation to the illustration of the results is given on the following page.

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.

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 values. The uncertainty intervals correspond to the expanded uncertainty (coverage factor $k = 2$) as described in the EURACHEM / CITAC Guide "Quantifying Uncertainty in Analytical Measurement" 3rd Edition (2012) ". The uncertainty interval of the reference concentration is illustrated in the graphs as a grey band around the 100 % recovery line.

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, or the measured value was given as "0" when the substance was added.
- "FP": False positive results can only be obtained for compounds that were evaluated on the basis of a " $<$ target value". A result is termed FP if it does not include (strike) the " $<$ target" with its measurement uncertainty.
- "•": All other results for which no recoveries can be calculated are illustrated by this symbol

Tulln, 12 April 2023

EXPLANATION

Sample M106A

Parameter Copper

Target value $\pm U$ ($k=2$) $4,79 \mu\text{g/l} \pm 0,13 \mu\text{g/l}$

IFA result $\pm U$ ($k=2$) $4,79 \mu\text{g/l} \pm 0,38 \mu\text{g/l}$

Stability test $\pm U$ ($k=2$) $4,69 \mu\text{g/l} \pm 0,38 \mu\text{g/l}$

Obtained from sample preparation, U =uncertainty

Determined at IFA prior to shipment of samples

Determined at IFA 3 weeks after sample dispatch

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	5.16	0.4128	$\mu\text{g/l}$	108%	0.90
B	4.22	0.42	$\mu\text{g/l}$	88%	-1.38
C	4.45	0.13	$\mu\text{g/l}$	93%	-0.83
D			$\mu\text{g/l}$		
E			$\mu\text{g/l}$		
F	4.10	0.08	$\mu\text{g/l}$	86%	-1.68
G			$\mu\text{g/l}$		
H			$\mu\text{g/l}$		
I	4.75	0.74	$\mu\text{g/l}$	99%	-0.10
J	<5		$\mu\text{g/l}$	*	
K	4.76		$\mu\text{g/l}$	99%	-0.07
L	<10		$\mu\text{g/l}$	*	
M	4.8	0.5	$\mu\text{g/l}$	100%	0.02
N	3.7	0.4	$\mu\text{g/l}$	77%	-2.65
O	4.47	0.447	$\mu\text{g/l}$	93%	-0.78
P	6.0		$\mu\text{g/l}$	125%	2.94
Q	4.17	0.2	$\mu\text{g/l}$	87%	-1.51
R	4.6	0.8	$\mu\text{g/l}$	96%	-0.46
S	4.44	0.67	$\mu\text{g/l}$	93%	-0.85
T			$\mu\text{g/l}$		
U	4.675	0.935	$\mu\text{g/l}$	98%	-0.28
V	5.0	0.50	$\mu\text{g/l}$	104%	0.51
W	3.54	0.3	$\mu\text{g/l}$	74%	-3.03
X	7.108	*	$\mu\text{g/l}$	148%	5.63
Y	<10		$\mu\text{g/l}$	*	
Z			$\mu\text{g/l}$		
AA	<3.0		$\mu\text{g/l}$	FN	
AB	3.775	0.107	$\mu\text{g/l}$	79%	-2.46
AC	<10.0		$\mu\text{g/l}$	*	

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 $\pm CI(99\%)$	$4,65 \pm 0,57$	$4,51 \pm 0,42$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	$97,1 \pm 12,0$	$94,1 \pm 8,8$	%
SD between labs	0.84	0.59	$\mu\text{g/l}$
RSD between labs	18.1	13.2	%
n for calculation	18	17	

Between laboratory standard deviation

Laboratory mean and recovery of target value with corresponding confidence intervals ($p=99\%$)

Number of results used for calculation of statistic parameters



Diagram 1: Measurement results and their uncertainties

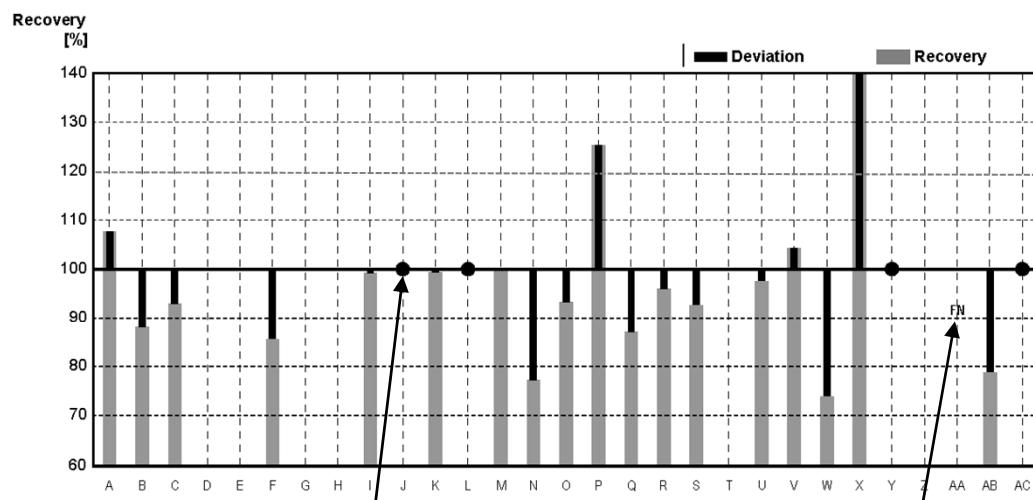


Diagram 2: Recoveries and deviations from target values

Illustration of Results Tables and Parameter Oriented Part

**Round M166
Metals**

Sample Dispatch: 6 March 2023

Results Sample M166A

	Aluminium	Arsenic	Lead	Cadmium	Chromium	Iron	Copper
Target value	42.9	2.302	4.63	0.805	6.40	83.9	5.48
IFA result	42.8	2.26	4.47	0.78	6.40	86	5.6
A	39.5	2.30	4.58	0.84	6.27	83.1	5.86
B	44.7	2.53	4.36	0.83	6.9	92	5.42
C	43.3	2.41	4.29	0.759	6.30	80.7	5.05
D	42.4	2.42	4.58	0.803	6.38	84.5	5.23
E							
F	43.3	2.08	4.89	0.873	6.34	83.1	5.60
G	45.0	2.30	4.60	0.810	6.60	84.0	5.30
H	40.0	2.37	4.60	0.827	6.17	78.1	5.17
I	42.1	2.38	4.47	0.778	6.38	82.9	5.50
J	46.7					78	<10
K	41.7	1.77	4.73	0.820	6.11	86.2	5.30
L						86	
M	41.3	2.34	4.03	0.80	6.2	88	4.92
N	37.5	2.25	4.40	0.785	6.01	79.2	5.06
O	41.2	2.45	4.32	0.803	6.07	80.7	5.02
P			3.085	0.558	6.533		4.078
Q	52.0	2.23	4.49	0.79	6.26	82.0	5.13
R	41.0		<6	0.84	6.3	81	<150
S	42.0	2.32	4.54	0.77	6.18	78.5	4.96
T	44.4	2.30	4.21	<0.9	6.20	84.1	5.30
U						83.70	5.34
V	40.7	2.26	4.21	0.80	6.3	84.0	5.0
W	42.0	2.37	4.43	0.80	6.7	78	5.4
X	43.4	2.55	4.35	0.797	6.33	80.8	4.97
Y	43.2	2.31	4.38	0.795	6.33	82.5	5.35

All data in µg/L

Measurement Uncertainties Sample M166A

	Aluminium ±	Arsenic ±	Lead ±	Cadmium ±	Chromium ±	Iron ±	Copper ±
Target value	0.3	0.018	0.03	0.004	0.05	0.3	0.05
IFA result	2.3	0.24	0.12	0.05	0.19	6	0.3
A	5.3	0.37	0.55	0.11	0.96	8.4	0.73
B	6	0.3	0.3	0.15	0.7	12	0.52
C	4.2	0.17	0.47	0.13	0.35	8.55	0.32
D	0.971	0.044	0.006	0.016	0.026	0.781	0.040
E							
F	4.48	0.26	0.71	0.118	0.63	8.89	0.71
G	4.50	0.276	0.368	0.0648	0.792	21.84	0.424
H	0.910	0.0754	0.0718	0.00876	0.131	0.437	0.0567
I	3.0	0.17	0.32	0.054	0.45	5.8	0.39
J	7.9					14	
K	6.3	0.27	0.71	0.12	0.92	13	0.80
L						7	
M	5.4	0.62	1.08	0.09	0.7	18	0.88
N	7.5	0.34	0.53	0.094	0.90	11.9	0.61
O	7.42	0.39	0.65	0.096	0.85	11.3	0.85
P			0.617	0.112	1.307		0.816
Q	3.64	0.22	0.45	0.08	0.56	11.5	0.46
R	4			0.09	0.4	13	
S	8.4	0.46	0.91	0.15	1.24	15.7	0.99
T	5	0.2	0.4		0.6	8	0.5
U							
V	4.07	0.34	0.421	0.080	0.63	8.4	0.50
W	2.77	0.159	0.232	0.059	0.438	3.69	0.280
X	5.0	0.2	0.6	0.01	0.8	5.7	
Y	5.2	0.39	0.53	0.095	1.20	14.9	0.59

All data in µg/L

Results Sample M166A

	Manganese	Nickel	Mercury	Selenium	Uranium	Zinc
Target value	23.55	4.87	0.359	4.56	5.06	27.6
IFA result	24.3	4.83	0.395	4.77	5.2	34.9
A	23.6	4.91	0.308	4.90	4.99	28.5
B	24.4	4.95	0.311	4.82	4.47	26.9
C	22.6	4.73		4.55	4.36	25.3
D	24.3	4.34	0.338	4.88	4.65	26.9
E	21.04		0.329			
F	23.3	4.96	0.351	4.13	4.97	27.6
G	24.0	4.80	0.367	4.50	4.95	27.0
H	23.0	4.65	0.292	4.53	4.68	26.2
I	23.1	4.69			5.14	27.2
J	21.7					
K	24.4	5.08	0.380	5.23	5.46	24.4
L	<50					
M	23.3	4.15	0.294	4.69		24.90
N	23.5	4.57	0.357	4.20	4.96	26.1
O	22.8	4.46	0.330	5.53	5.79	27.1
P	25.061	4.255	0.333			4.566
Q	23.9	4.58		4.56	5.01	27.0
R	23.3	<5				<500
S	23.5	4.42	0.325	4.87	4.75	25.4
T	23.5	4.15	0.295	4.03		28.3
U		4.98	0.247			
V	23.3	4.71	0.421	3.84	5.0	25.8
W	23.2	4.85	0.248	4.66	4.92	28.5
X	22.8	4.61	0.340	4.71	4.96	26.6
Y	23.2	4.62	0.320	4.80	4.93	26.4

All data in µg/L

Measurement Uncertainties Sample M166A

	Manganese ±	Nickel ±	Mercury ±	Selenium ±	Uranium ±	Zinc ±
Target value	0.17	0.04	0.015	0.04	0.04	1.0
IFA result	1.6	0.20	0.074	0.55	0.6	4.0
A	2.5	0.78	0.043	0.59	0.50	3.6
B	3	0.5	0.05	0.7	0.25	3.5
C	1.19	0.39		0.39	0.59	
D	0.153	0.026	0.007	0.079	0.067	0.208
E						
F	1.52	0.62	0.064	0.56	0.57	3.50
G	2.40	0.480	0.055	0.675	0.248	2.70
H	0.565	0.0508	0.0142	0.0488	0.171	0.385
I	1.7	0.33			0.36	1.9
J	3.9					
K	3.7	0.77	0.06	0.78	0.82	3.7
L						
M	3.1	0.34	0.056	0.66		4.48
N	2.8	0.50	0.079	0.63	0.74	3.9
O	2.51	0.71	0.073	2.2	0.69	4.34
P	5.012	0.851	0.067			0.913
Q	1.91	0.46		0.37	0.40	2.16
R	3.3					
S	4.7	0.88	0.065	0.97	0.95	5.1
T	3	0.4	0.05	0.4		3
U						
V	2.33	0.471	0.0421	0.58	0.50	2.58
W	1.10	0.389	0.026	0.319	0.366	1.35
X	1.6	0.5	0.05	0.7	0.4	7.0
Y	3.5	1.06	0.058	1.63	0.49	4.2

All data in µg/L

Results Sample M166B

	Aluminium	Arsenic	Lead	Cadmium	Chromium	Iron	Copper
Target value	64.8	4.54	1.189	1.671	3.76	44.0	24.81
IFA result	65	4.48	1.16	1.63	3.77	43.9	24.6
A	60.5	4.56	1.21	1.75	3.81	44.2	24.0
B	70.6	4.95	1.16	1.69	4.19	51.4	24.4
C	65.0	4.77	1.08	1.56	3.68	41.7	22.9
D	65.7	4.92	1.16	1.61	3.69	44.7	23.3
E							
F	63.7	4.19	1.27	1.76	3.73	43.2	25.3
G	67.0	4.50	1.20	1.70	3.80	44.0	24.6
H	60.7	4.62	1.13	1.70	3.64	40.9	23.3
I	64.4	4.48	1.12	1.62	3.74	43.2	23.1
J	71					39.9	23.3
K	63.5	4.16	1.20	1.73	3.92	45.2	24.5
L						<50	
M	61	4.65	0.96	1.64	3.63	46.4	22.1
N	56.8	4.43	1.13	1.63	3.57	42.1	23.0
O	62.8	4.79	1.10	1.68	3.68	43.1	23.1
P			0.655	1.233	3.354		18.442
Q	73.5	4.51	1.14	1.64	3.64	42.7	23.3
R	65		<6	1.68	<5	41.0	<150
S	62.7	4.61	1.13	1.68	3.66	40.4	22.3
T	65.5	4.45	<2	1.55	3.65	42.99	24.8
U						41.73	21.73
V	61.6	4.60	1.10	1.64	3.74	43.8	22.4
W	63	4.76	1.14	1.67	3.90	41.0	24.7
X	67.6	4.82	1.16	1.644	<5	41.6	22.8
Y	62.9	4.47	1.12	1.63	3.68	42.3	22.6

All data in µg/L

Measurement Uncertainties Sample M166B

	Aluminium ±	Arsenic ±	Lead ±	Cadmium ±	Chromium ±	Iron ±	Copper ±
Target value	0.4	0.03	0.015	0.013	0.03	0.2	0.13
IFA result	3	0.47	0.03	0.10	0.13	3.3	0.9
A	7.7	0.64	0.15	0.23	0.61	4.6	2.7
B	8	0.5	0.12	0.3	0.6	8	3
C	6.37	0.32	0.11	0.27	0.20	4.4	1.46
D	1.4	0.104	0.038	0.032	0.045	0.351	0.058
E							
F	6.59	0.53	0.18	0.237	0.37	4.62	3.19
G	6.70	0.540	0.096	0.136	0.456	11.44	1.968
H	0.901	0.0697	0.0844	0.0425	0.133	0.414	0.622
I	4.6	0.31	0.08	0.12	0.27	3.1	1.7
J	12					7.2	4.2
K	9.5	0.62	0.18	0.26	0.59	6.8	3.7
L							
M	8	1.24	0.24	0.19	0.41	9.3	3.9
N	11.4	0.66	0.14	0.20	0.54	6.3	2.8
O	11.3	0.77	0.17	0.20	0.52	6.03	3.93
P			0.131	0.247	0.671		3.688
Q	5.16	0.45	0.11	0.16	0.33	5.97	2.10
R	7			0.18		7	
S	12.5	0.92	0.23	0.34	0.73	8.1	4.5
T	6	0.4		0.15	0.4	4	2
U							
V	6.16	0.69	0.11	0.164	0.374	4.38	2.24
W	4.16	0.319	0.060	0.123	0.255	1.94	1.279
X	10.7	0.4	0.14	0.11		2.8	2.65
Y	7.5	0.76	0.13	0.20	0.70	7.6	2.5

All data in µg/L

Results Sample M166B

	Manganese	Nickel	Mercury	Selenium	Uranium	Zinc
Target value	46.0	5.59	1.75	3.27	1.308	9.6
IFA result	46.6	5.5	1.87	3.23	1.31	10.3
A	46.5	5.61	1.72	3.25	1.33	10.7
B	48.5	5.7	1.63	3.44	1.17	10.1
C	43.8	5.43		3.26	1.09	8.71
D	46.4	5.17	1.56	3.39	1.23	9.01
E	46.96		1.701			
F	45.3	5.68	1.65	3.04	1.29	9.76
G	47.0	5.70	1.799	3.40	1.33	10.0
H	45.3	5.42	1.61	3.22	1.16	9.20
I	44.9	5.44			1.26	9.24
J	43.0					
K	46.5	5.63	1.99	3.60	1.38	6.34
L	<50					
M	44.0	5.0	1.34	3.38		8.59
N	46.2	5.28	1.77	3.16	1.29	9.77
O	45.0	5.18	1.58	3.84	1.48	9.60
P	53.335	4.380	1.454			1.828
Q	46.9	5.31		3.44	1.30	9.30
R	47.3	<5				<500
S	45.6	5.18	1.67	3.43	1.27	8.61
T	46.1	4.85	1.50	3.02		9.00
U		5.64	1.10			
V	45.1	5.4	1.87	2.42	1.32	8.9
W	45.4	5.6	1.48	3.51	1.29	8.8
X	44.0	5.16	1.550	3.27	1.33	<10
Y	45.0	5.22	1.71	3.37	1.26	9.27

All data in µg/L

Measurement Uncertainties Sample M166B

	Manganese ±	Nickel ±	Mercury ±	Selenium ±	Uranium ±	Zinc ±
Target value	0.3	0.04	0.02	0.04	0.013	1.0
IFA result	3.1	0.2	0.35	0.37	0.15	1.5
A	4.6	0.86	0.24	0.43	0.13	1.6
B	4	0.5	0.12	0.6	0.15	2.1
C	2.32	0.29		0.28	0.15	
D	0.265	0.083	0.040	0.104	0.031	0.232
E						
F	2.95	0.71	0.30	0.41	0.15	1.24
G	4.70	0.570	0.2699	0.510	0.067	1.00
H	0.509	0.0505	0.0132	0.0482	0.0872	0.391
I	3.2	0.38			0.09	0.65
J	7.7					
K	6.7	0.85	0.30	0.54	0.21	0.95
L						
M	5.8	0.4	0.25	0.47		1.54
N	5.5	0.58	0.39	0.47	0.19	1.47
O	4.95	0.83	0.35	1.54	0.18	1.54
P	10.667	0.876	0.291			0.366
Q	3.75	0.53		0.28	0.10	0.74
R	4.7					
S	9.12	1.04	0.33	0.69	0.25	1.72
T	5	0.5	0.15	0.3		0.9
U						
V	4.51	0.54	0.187	0.36	0.132	0.89
W	2.15	0.449	0.156	0.200	0.096	0.416
X	2.79	0.79	0.26	0.52		
Y	5.0	1.20	0.31	1.15	0.13	1.48

All data in µg/L

z-Scores Sample M166A

	Aluminium	Arsenic	Lead	Cadmium	Chromium	Iron	Copper
A	-1.03	-0.01	-0.16	0.81	-0.32	-0.14	0.89
B	0.54	1.36	-0.87	0.58	1.24	1.44	-0.14
C	0.12	0.64	-1.10	-1.06	-0.25	-0.57	-1.01
D	-0.15	0.70	-0.16	-0.05	-0.05	0.11	-0.58
E							
F	0.12	-1.32	0.84	1.56	-0.15	-0.14	0.28
G	0.64	-0.01	-0.10	0.12	0.50	0.02	-0.42
H	-0.88	0.40	-0.10	0.51	-0.57	-1.03	-0.73
I	-0.24	0.46	-0.52	-0.62	-0.05	-0.18	0.05
J	1.15					-1.05	
K	-0.36	-3.17	0.32	0.35	-0.72	0.41	-0.42
L						0.37	
M	-0.48	0.23	-1.93	-0.12	-0.50	0.73	-1.31
N	-1.63	-0.31	-0.74	-0.46	-0.97	-0.84	-0.98
O	-0.51	0.88	-1.00	-0.05	-0.82	-0.57	-1.08
P			-4.98	-5.68	0.33		-3.28
Q	2.75	-0.43	-0.45	-0.35	-0.35	-0.34	-0.82
R	-0.58			0.81	-0.25	-0.52	
S	-0.27	0.11	-0.29	-0.81	-0.55	-0.96	-1.22
T	0.45	-0.01	-1.35		-0.50	0.04	-0.42
U						-0.04	-0.33
V	-0.67	-0.25	-1.35	-0.12	-0.25	0.02	-1.12
W	-0.27	0.40	-0.64	-0.12	0.74	-1.05	-0.19
X	0.15	1.48	-0.90	-0.18	-0.17	-0.55	-1.19
Y	0.09	0.05	-0.81	-0.23	-0.17	-0.25	-0.30

z-Scores Sample M166A

	Manganese	Nickel	Mercury	Selenium	Uranium	Zinc
A	0.04	0.11	-1.29	0.79	-0.25	0.47
B	0.68	0.22	-1.22	0.61	-2.12	-0.36
C	-0.76	-0.39		-0.02	-2.52	-1.19
D	0.60	-1.47	-0.53	0.75	-1.47	-0.36
E	-2.01		-0.76			
F	-0.20	0.25	-0.20	-1.00	-0.32	0.00
G	0.36	-0.19	0.20	-0.14	-0.40	-0.31
H	-0.44	-0.61	-1.70	-0.07	-1.37	-0.72
I	-0.36	-0.50			0.29	-0.21
J	-1.48					
K	0.68	0.58	0.53	1.56	1.44	-1.66
L						
M	-0.20	-2.00	-1.65	0.30		-1.40
N	-0.04	-0.83	-0.05	-0.84	-0.36	-0.78
O	-0.60	-1.14	-0.73	2.26	2.62	-0.26
P	1.21	-1.71	-0.66			-11.92
Q	0.28	-0.80		0.00	-0.18	-0.31
R	-0.20					
S	-0.04	-1.25	-0.86	0.72	-1.11	-1.14
T	-0.04	-2.00	-1.62	-1.24		0.36
U		0.31	-2.84			
V	-0.20	-0.44	1.57	-1.68	-0.22	-0.93
W	-0.28	-0.06	-2.81	0.23	-0.50	0.47
X	-0.60	-0.72	-0.48	0.35	-0.36	-0.52
Y	-0.28	-0.69	-0.99	0.56	-0.47	-0.62

z-Scores Sample M166B

	Aluminium	Arsenic	Lead	Cadmium	Chromium	Iron	Copper
A	-0.86	0.06	0.26	0.88	0.21	0.07	-0.42
B	1.16	1.24	-0.36	0.21	1.82	2.51	-0.21
C	0.04	0.69	-1.37	-1.23	-0.34	-0.78	-0.99
D	0.18	1.15	-0.36	-0.68	-0.30	0.24	-0.78
E							
F	-0.22	-1.06	1.02	0.99	-0.13	-0.27	0.25
G	0.44	-0.12	0.14	0.32	0.17	0.00	-0.11
H	-0.82	0.24	-0.74	0.32	-0.51	-1.05	-0.78
I	-0.08	-0.18	-0.87	-0.57	-0.08	-0.27	-0.88
J	1.24					-1.39	-0.78
K	-0.26	-1.15	0.14	0.65	0.68	0.41	-0.16
L							
M	-0.76	0.33	-2.87	-0.34	-0.55	0.81	-1.40
N	-1.60	-0.33	-0.74	-0.45	-0.80	-0.64	-0.94
O	-0.40	0.75	-1.12	0.10	-0.34	-0.31	-0.88
P			-6.70	-4.85	-1.71		-3.29
Q	1.74	-0.09	-0.62	-0.34	-0.51	-0.44	-0.78
R	0.04			0.10		-1.02	
S	-0.42	0.21	-0.74	0.10	-0.42	-1.22	-1.30
T	0.14	-0.27		-1.34	-0.46	-0.34	-0.01
U						-0.77	-1.59
V	-0.64	0.18	-1.12	-0.34	-0.08	-0.07	-1.25
W	-0.36	0.66	-0.62	-0.01	0.59	-1.02	-0.06
X	0.56	0.84	-0.36	-0.30		-0.81	-1.04
Y	-0.38	-0.21	-0.87	-0.45	-0.34	-0.58	-1.14

z-Scores Sample M166B

	Manganese	Nickel	Mercury	Selenium	Uranium	Zinc
A	0.21	0.05	-0.16	-0.07	0.31	1.64
B	1.03	0.27	-0.62	0.55	-1.92	0.74
C	-0.90	-0.39		-0.03	-3.03	-1.32
D	0.16	-1.02	-0.99	0.39	-1.08	-0.88
E	0.39		-0.25			
F	-0.29	0.22	-0.52	-0.75	-0.25	0.24
G	0.41	0.27	0.25	0.42	0.31	0.60
H	-0.29	-0.41	-0.73	-0.16	-2.06	-0.60
I	-0.45	-0.36			-0.67	-0.54
J	-1.23					
K	0.21	0.10	1.25	1.07	1.00	-4.85
L						
M	-0.82	-1.43	-2.13	0.36		-1.50
N	0.08	-0.75	0.10	-0.36	-0.25	0.25
O	-0.41	-0.99	-0.88	1.85	2.39	0.00
P	3.01	-2.93	-1.54			-11.57
Q	0.37	-0.68		0.55	-0.11	-0.45
R	0.53					
S	-0.16	-0.99	-0.42	0.52	-0.53	-1.47
T	0.04	-1.79	-1.30	-0.81		-0.89
U		0.12	-3.38			
V	-0.37	-0.46	0.62	-2.77	0.17	-1.04
W	-0.25	0.02	-1.40	0.78	-0.25	-1.19
X	-0.82	-1.04	-1.04	0.00	0.31	
Y	-0.41	-0.89	-0.21	0.33	-0.67	-0.49

Sample M166A

Parameter Aluminium

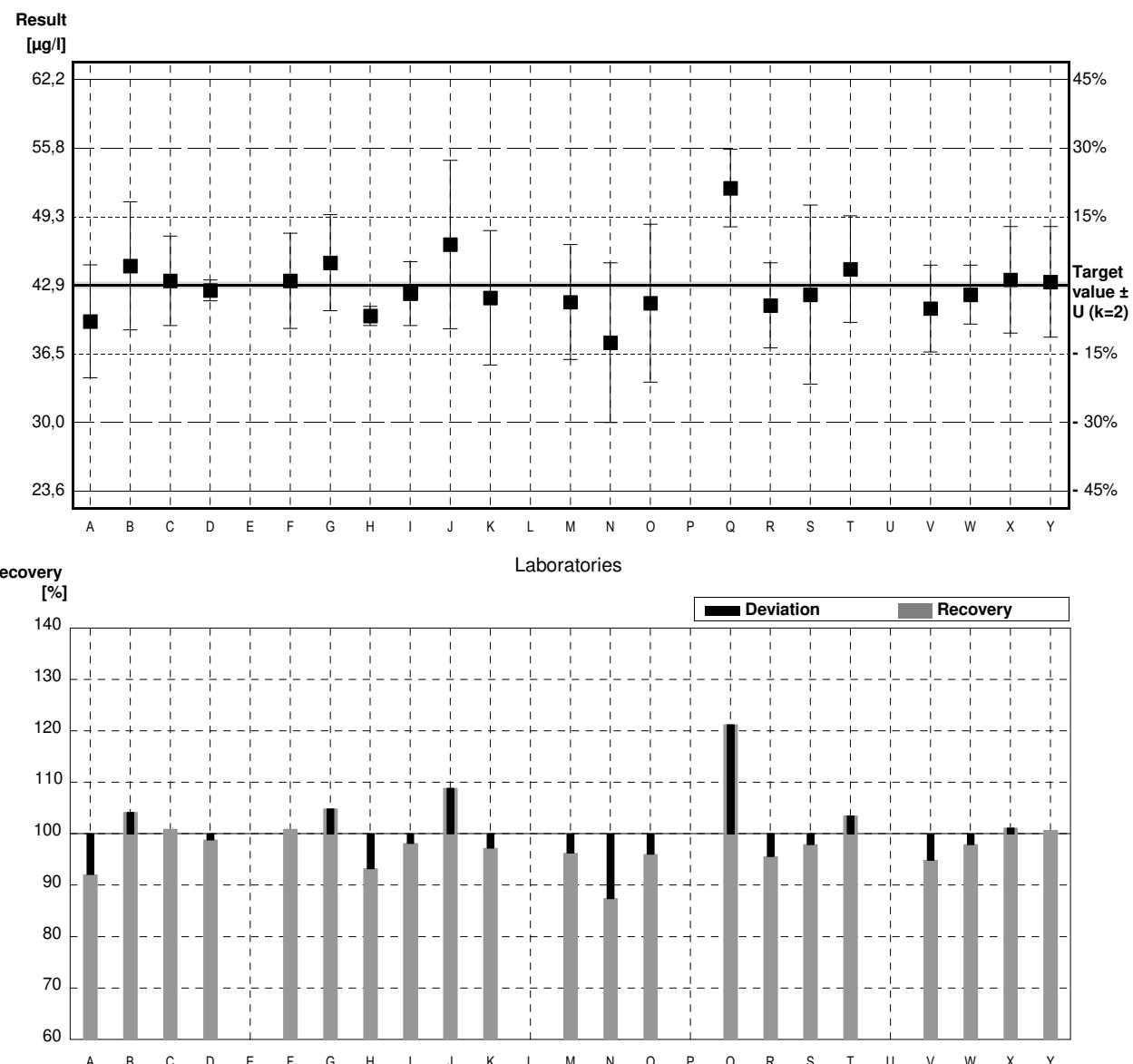
Target value $\pm U$ ($k=2$) 42,9 $\mu\text{g/l}$ \pm 0,3 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 42,8 $\mu\text{g/l}$ \pm 2,3 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	39,5	5,3	$\mu\text{g/l}$	92%	-1,03
B	44,7	6	$\mu\text{g/l}$	104%	0,54
C	43,3	4,2	$\mu\text{g/l}$	101%	0,12
D	42,4	0,971	$\mu\text{g/l}$	99%	-0,15
E			$\mu\text{g/l}$		
F	43,3	4,48	$\mu\text{g/l}$	101%	0,12
G	45,0	4,50	$\mu\text{g/l}$	105%	0,64
H	40,0	0,910	$\mu\text{g/l}$	93%	-0,88
I	42,1	3,0	$\mu\text{g/l}$	98%	-0,24
J	46,7	7,9	$\mu\text{g/l}$	109%	1,15
K	41,7	6,3	$\mu\text{g/l}$	97%	-0,36
L			$\mu\text{g/l}$		
M	41,3	5,4	$\mu\text{g/l}$	96%	-0,48
N	37,5	7,5	$\mu\text{g/l}$	87%	-1,63
O	41,2	7,42	$\mu\text{g/l}$	96%	-0,51
P			$\mu\text{g/l}$		
Q	52,0 *	3,64	$\mu\text{g/l}$	121%	2,75
R	41,0	4	$\mu\text{g/l}$	96%	-0,58
S	42,0	8,4	$\mu\text{g/l}$	98%	-0,27
T	44,4	5	$\mu\text{g/l}$	103%	0,45
U			$\mu\text{g/l}$		
V	40,7	4,07	$\mu\text{g/l}$	95%	-0,67
W	42,0	2,77	$\mu\text{g/l}$	98%	-0,27
X	43,4	5,0	$\mu\text{g/l}$	101%	0,15
Y	43,2	5,2	$\mu\text{g/l}$	101%	0,09

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	42,7 $\pm 1,8$	42,3 $\pm 1,3$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	99,6 $\pm 4,3$	98,5 $\pm 3,1$	%
SD between labs	3,0	2,1	$\mu\text{g/l}$
RSD between labs	6,9	5,0	%
n for calculation	21	20	



Sample M166B

Parameter Aluminium

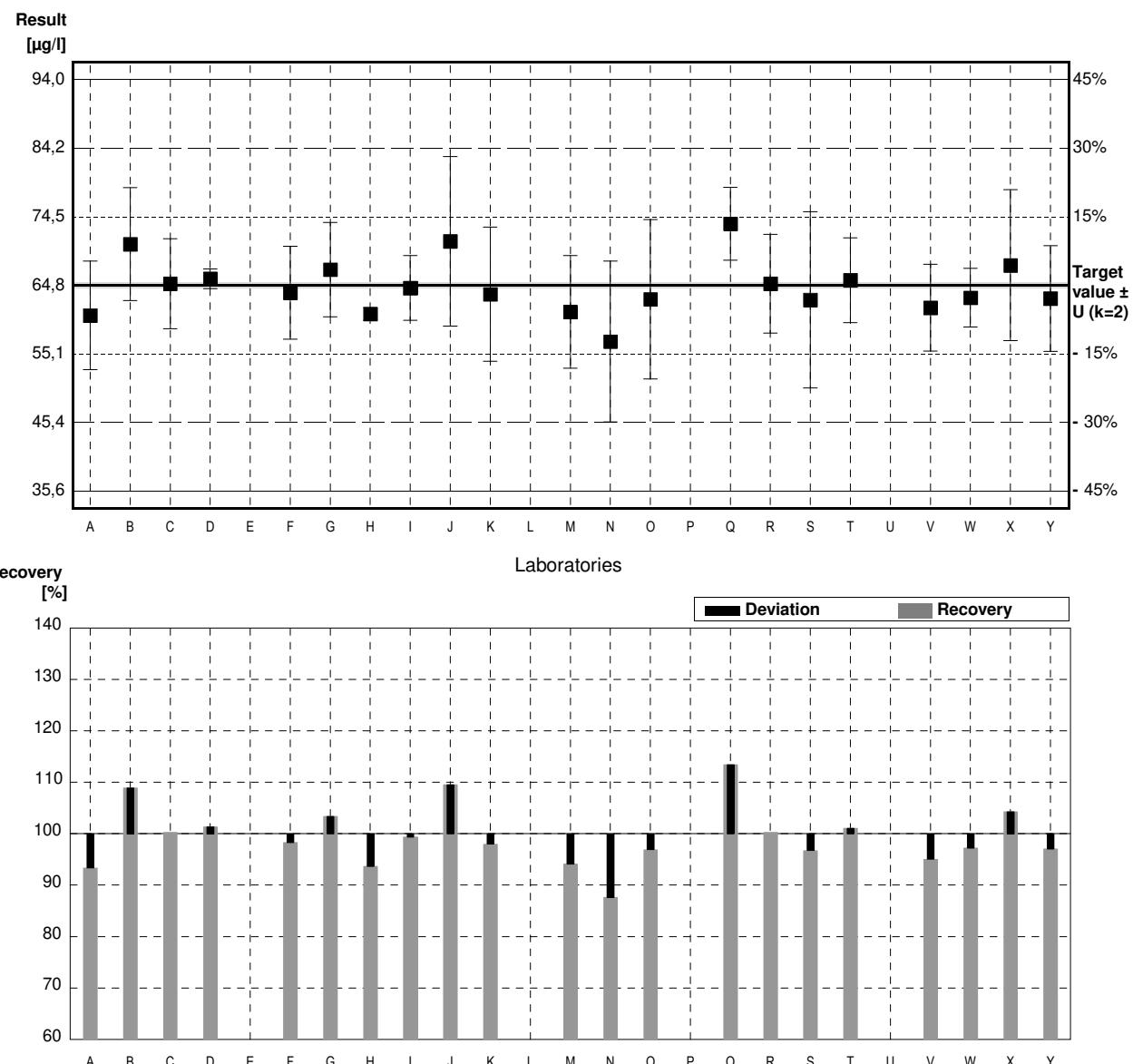
Target value $\pm U$ ($k=2$) 64,8 $\mu\text{g/l}$ \pm 0,4 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 65 $\mu\text{g/l}$ \pm 3 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	60,5	7,7	$\mu\text{g/l}$	93%	-0,86
B	70,6	8	$\mu\text{g/l}$	109%	1,16
C	65,0	6,37	$\mu\text{g/l}$	100%	0,04
D	65,7	1,4	$\mu\text{g/l}$	101%	0,18
E			$\mu\text{g/l}$		
F	63,7	6,59	$\mu\text{g/l}$	98%	-0,22
G	67,0	6,70	$\mu\text{g/l}$	103%	0,44
H	60,7	0,901	$\mu\text{g/l}$	94%	-0,82
I	64,4	4,6	$\mu\text{g/l}$	99%	-0,08
J	71	12	$\mu\text{g/l}$	110%	1,24
K	63,5	9,5	$\mu\text{g/l}$	98%	-0,26
L			$\mu\text{g/l}$		
M	61	8	$\mu\text{g/l}$	94%	-0,76
N	56,8	11,4	$\mu\text{g/l}$	88%	-1,60
O	62,8	11,3	$\mu\text{g/l}$	97%	-0,40
P			$\mu\text{g/l}$		
Q	73,5 *	5,16	$\mu\text{g/l}$	113%	1,74
R	65	7	$\mu\text{g/l}$	100%	0,04
S	62,7	12,5	$\mu\text{g/l}$	97%	-0,42
T	65,5	6	$\mu\text{g/l}$	101%	0,14
U			$\mu\text{g/l}$		
V	61,6	6,16	$\mu\text{g/l}$	95%	-0,64
W	63	4,16	$\mu\text{g/l}$	97%	-0,36
X	67,6	10,7	$\mu\text{g/l}$	104%	0,56
Y	62,9	7,5	$\mu\text{g/l}$	97%	-0,38

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	$64,5 \pm 2,4$	$64,1 \pm 2,2$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	$99,5 \pm 3,7$	$98,8 \pm 3,3$	%
SD between labs	3,9	3,4	$\mu\text{g/l}$
RSD between labs	6,0	5,3	%
n for calculation	21	20	



Sample M166A

Parameter Arsenic

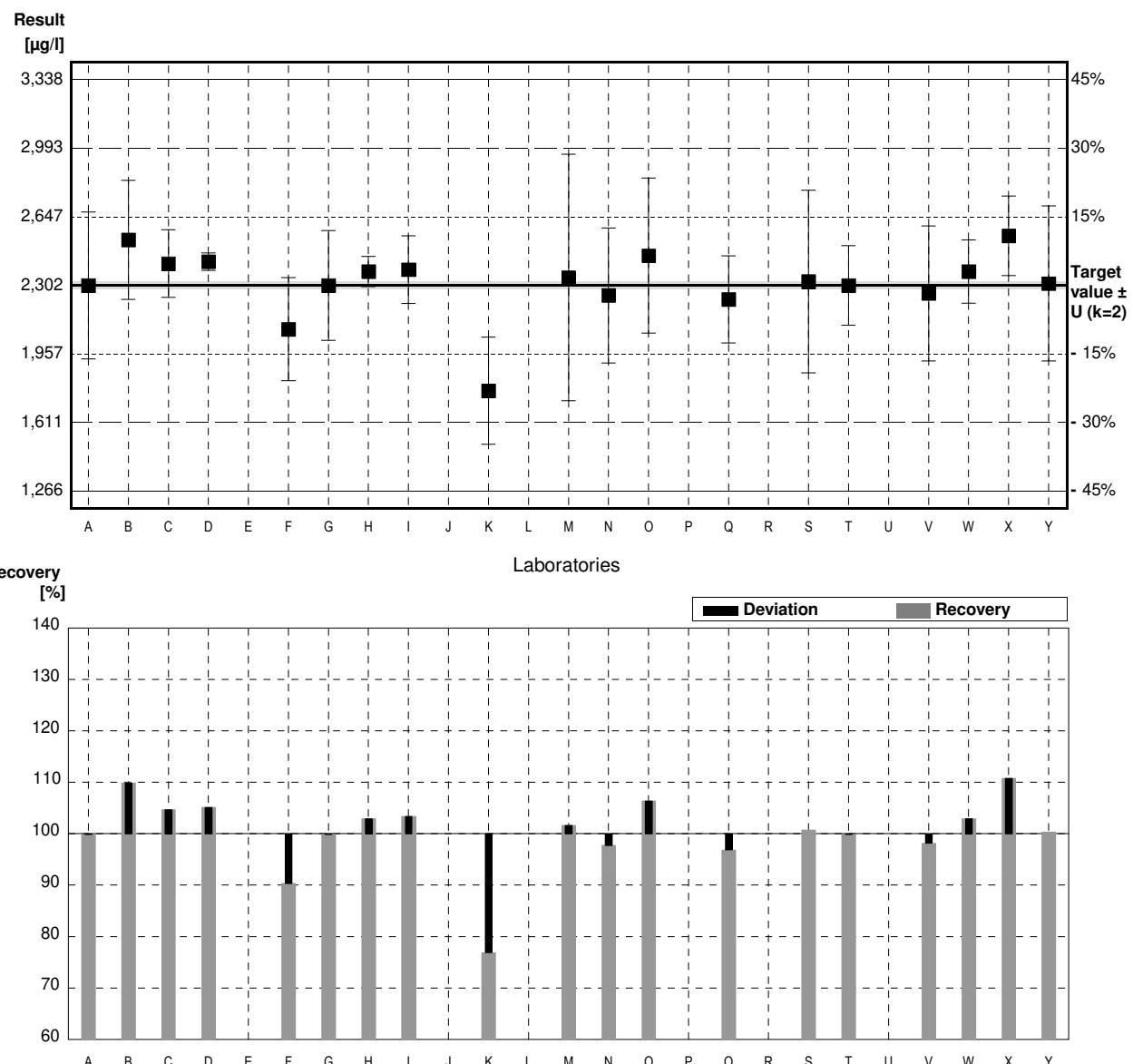
Target value $\pm U$ ($k=2$) 2,302 $\mu\text{g/l}$ \pm 0,018 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 2,26 $\mu\text{g/l}$ \pm 0,24 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	2,30	0,37	$\mu\text{g/l}$	100%	-0,01
B	2,53	0,3	$\mu\text{g/l}$	110%	1,36
C	2,41	0,17	$\mu\text{g/l}$	105%	0,64
D	2,42	0,044	$\mu\text{g/l}$	105%	0,70
E			$\mu\text{g/l}$		
F	2,08	0,26	$\mu\text{g/l}$	90%	-1,32
G	2,30	0,276	$\mu\text{g/l}$	100%	-0,01
H	2,37	0,0754	$\mu\text{g/l}$	103%	0,40
I	2,38	0,17	$\mu\text{g/l}$	103%	0,46
J			$\mu\text{g/l}$		
K	1,77 *	0,27	$\mu\text{g/l}$	77%	-3,17
L			$\mu\text{g/l}$		
M	2,34	0,62	$\mu\text{g/l}$	102%	0,23
N	2,25	0,34	$\mu\text{g/l}$	98%	-0,31
O	2,45	0,39	$\mu\text{g/l}$	106%	0,88
P			$\mu\text{g/l}$		
Q	2,23	0,22	$\mu\text{g/l}$	97%	-0,43
R			$\mu\text{g/l}$		
S	2,32	0,46	$\mu\text{g/l}$	101%	0,11
T	2,30	0,2	$\mu\text{g/l}$	100%	-0,01
U			$\mu\text{g/l}$		
V	2,26	0,34	$\mu\text{g/l}$	98%	-0,25
W	2,37	0,159	$\mu\text{g/l}$	103%	0,40
X	2,55	0,2	$\mu\text{g/l}$	111%	1,48
Y	2,31	0,39	$\mu\text{g/l}$	100%	0,05

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	2,313 $\pm 0,112$	2,343 $\pm 0,075$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	100,5 $\pm 4,9$	101,8 $\pm 3,3$	%
SD between labs	0,170	0,110	$\mu\text{g/l}$
RSD between labs	7,3	4,7	%
n for calculation	19	18	



Sample M166B

Parameter Arsenic

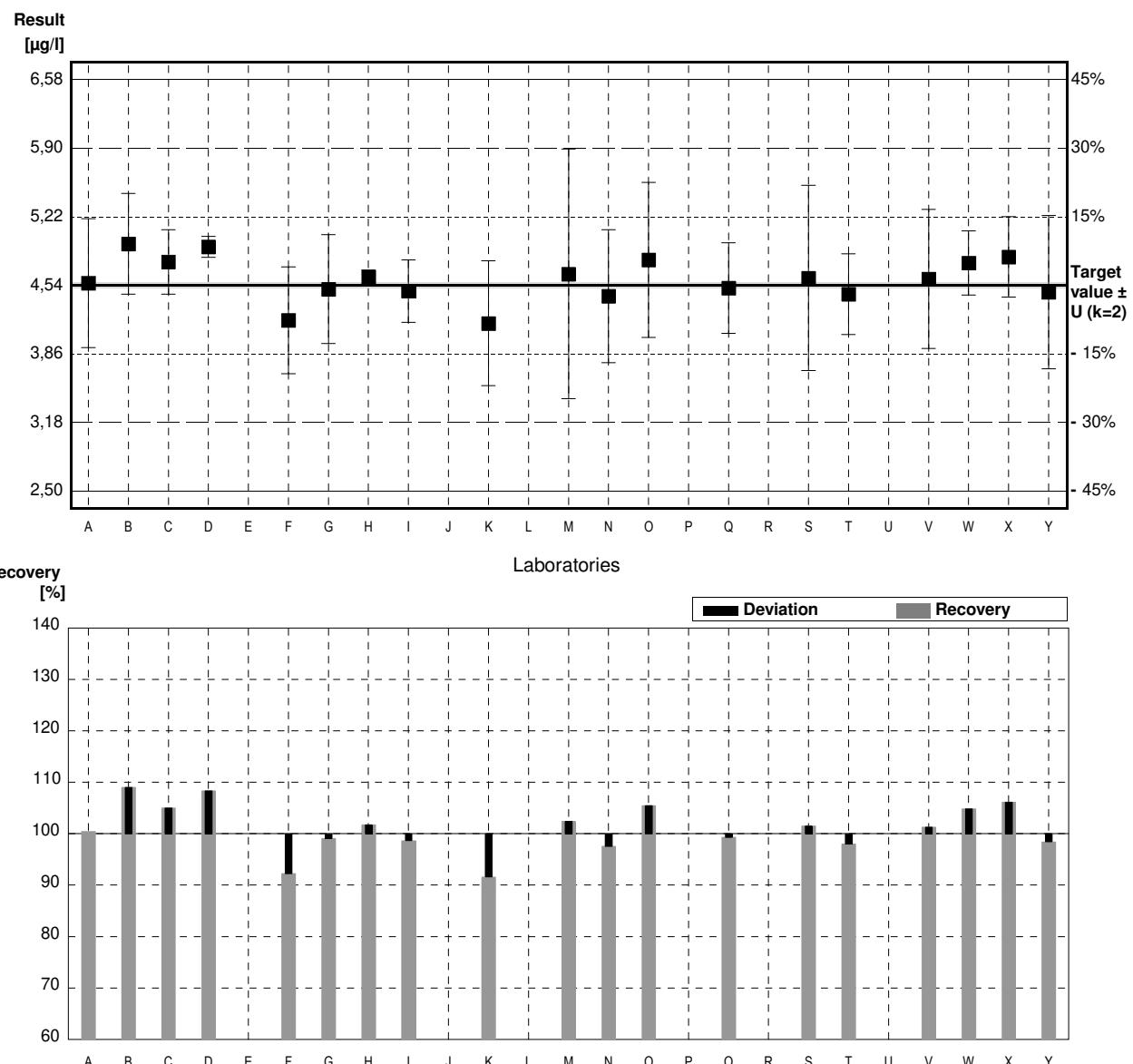
Target value $\pm U$ ($k=2$) 4,54 $\mu\text{g/l}$ \pm 0,03 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 4,48 $\mu\text{g/l}$ \pm 0,47 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	4,56	0,64	$\mu\text{g/l}$	100%	0,06
B	4,95	0,5	$\mu\text{g/l}$	109%	1,24
C	4,77	0,32	$\mu\text{g/l}$	105%	0,69
D	4,92	0,104	$\mu\text{g/l}$	108%	1,15
E			$\mu\text{g/l}$		
F	4,19	0,53	$\mu\text{g/l}$	92%	-1,06
G	4,50	0,540	$\mu\text{g/l}$	99%	-0,12
H	4,62	0,0697	$\mu\text{g/l}$	102%	0,24
I	4,48	0,31	$\mu\text{g/l}$	99%	-0,18
J			$\mu\text{g/l}$		
K	4,16	0,62	$\mu\text{g/l}$	92%	-1,15
L			$\mu\text{g/l}$		
M	4,65	1,24	$\mu\text{g/l}$	102%	0,33
N	4,43	0,66	$\mu\text{g/l}$	98%	-0,33
O	4,79	0,77	$\mu\text{g/l}$	106%	0,75
P			$\mu\text{g/l}$		
Q	4,51	0,45	$\mu\text{g/l}$	99%	-0,09
R			$\mu\text{g/l}$		
S	4,61	0,92	$\mu\text{g/l}$	102%	0,21
T	4,45	0,4	$\mu\text{g/l}$	98%	-0,27
U			$\mu\text{g/l}$		
V	4,60	0,69	$\mu\text{g/l}$	101%	0,18
W	4,76	0,319	$\mu\text{g/l}$	105%	0,66
X	4,82	0,4	$\mu\text{g/l}$	106%	0,84
Y	4,47	0,76	$\mu\text{g/l}$	98%	-0,21

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	4,59 $\pm 0,14$	4,59 $\pm 0,14$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	101,1 $\pm 3,1$	101,1 $\pm 3,1$	%
SD between labs	0,21	0,21	$\mu\text{g/l}$
RSD between labs	4,7	4,7	%
n for calculation	19	19	



Sample M166A

Parameter Lead

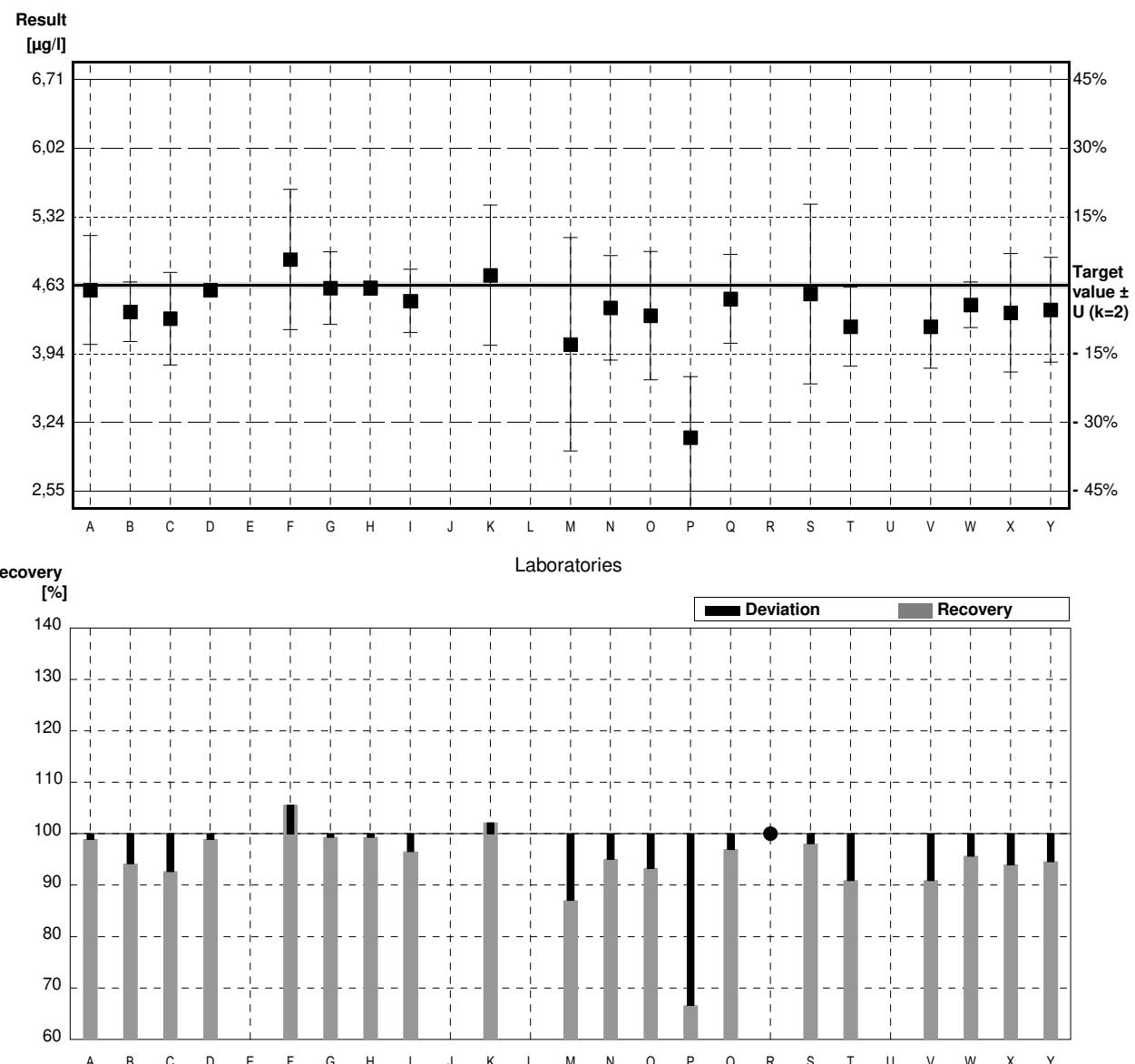
Target value $\pm U$ ($k=2$) 4,63 $\mu\text{g/l}$ \pm 0,03 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 4,47 $\mu\text{g/l}$ \pm 0,12 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	4,58	0,55	$\mu\text{g/l}$	99%	-0,16
B	4,36	0,3	$\mu\text{g/l}$	94%	-0,87
C	4,29	0,47	$\mu\text{g/l}$	93%	-1,10
D	4,58	0,006	$\mu\text{g/l}$	99%	-0,16
E			$\mu\text{g/l}$		
F	4,89	0,71	$\mu\text{g/l}$	106%	0,84
G	4,60	0,368	$\mu\text{g/l}$	99%	-0,10
H	4,60	0,0718	$\mu\text{g/l}$	99%	-0,10
I	4,47	0,32	$\mu\text{g/l}$	97%	-0,52
J			$\mu\text{g/l}$		
K	4,73	0,71	$\mu\text{g/l}$	102%	0,32
L			$\mu\text{g/l}$		
M	4,03	1,08	$\mu\text{g/l}$	87%	-1,93
N	4,40	0,53	$\mu\text{g/l}$	95%	-0,74
O	4,32	0,65	$\mu\text{g/l}$	93%	-1,00
P	3,085 *	0,617	$\mu\text{g/l}$	67%	-4,98
Q	4,49	0,45	$\mu\text{g/l}$	97%	-0,45
R	<6		$\mu\text{g/l}$	*	
S	4,54	0,91	$\mu\text{g/l}$	98%	-0,29
T	4,21	0,4	$\mu\text{g/l}$	91%	-1,35
U			$\mu\text{g/l}$		
V	4,21	0,421	$\mu\text{g/l}$	91%	-1,35
W	4,43	0,232	$\mu\text{g/l}$	96%	-0,64
X	4,35	0,6	$\mu\text{g/l}$	94%	-0,90
Y	4,38	0,53	$\mu\text{g/l}$	95%	-0,81

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	4,38 $\pm 0,23$	4,45 $\pm 0,13$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	94,5 $\pm 5,0$	96,0 $\pm 2,9$	%
SD between labs	0,36	0,20	$\mu\text{g/l}$
RSD between labs	8,3	4,5	%
n for calculation	20	19	



Sample M166B

Parameter Lead

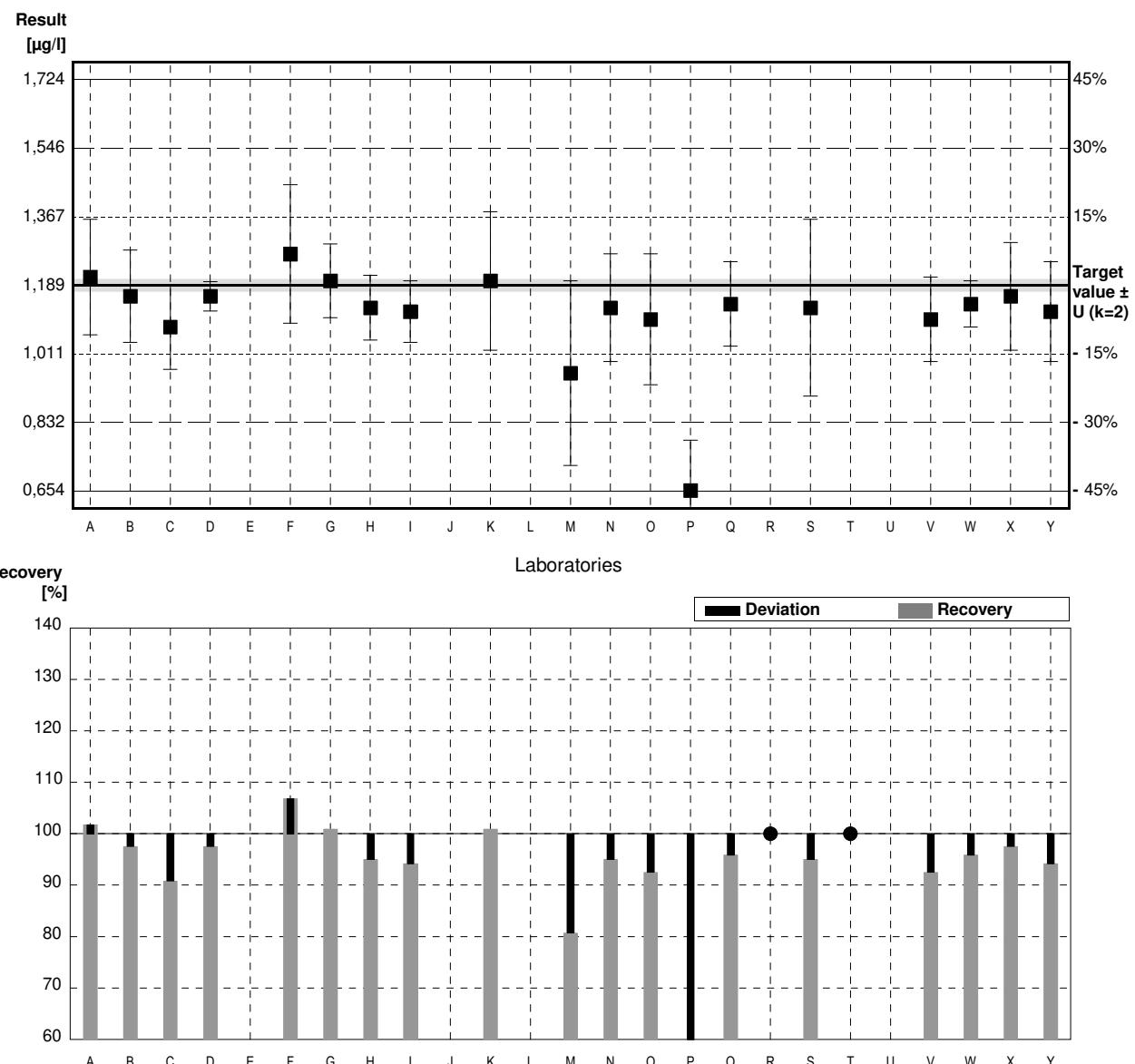
Target value $\pm U$ ($k=2$) 1,189 $\mu\text{g/l}$ \pm 0,015 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 1,16 $\mu\text{g/l}$ \pm 0,03 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	1,21	0,15	$\mu\text{g/l}$	102%	0,26
B	1,16	0,12	$\mu\text{g/l}$	98%	-0,36
C	1,08	0,11	$\mu\text{g/l}$	91%	-1,37
D	1,16	0,038	$\mu\text{g/l}$	98%	-0,36
E			$\mu\text{g/l}$		
F	1,27	0,18	$\mu\text{g/l}$	107%	1,02
G	1,20	0,096	$\mu\text{g/l}$	101%	0,14
H	1,13	0,0844	$\mu\text{g/l}$	95%	-0,74
I	1,12	0,08	$\mu\text{g/l}$	94%	-0,87
J			$\mu\text{g/l}$		
K	1,20	0,18	$\mu\text{g/l}$	101%	0,14
L			$\mu\text{g/l}$		
M	0,96 *	0,24	$\mu\text{g/l}$	81%	-2,87
N	1,13	0,14	$\mu\text{g/l}$	95%	-0,74
O	1,10	0,17	$\mu\text{g/l}$	93%	-1,12
P	0,655 *	0,131	$\mu\text{g/l}$	55%	-6,70
Q	1,14	0,11	$\mu\text{g/l}$	96%	-0,62
R	<6		$\mu\text{g/l}$	*	
S	1,13	0,23	$\mu\text{g/l}$	95%	-0,74
T	<2		$\mu\text{g/l}$	*	
U			$\mu\text{g/l}$		
V	1,10	0,11	$\mu\text{g/l}$	93%	-1,12
W	1,14	0,060	$\mu\text{g/l}$	96%	-0,62
X	1,16	0,14	$\mu\text{g/l}$	98%	-0,36
Y	1,12	0,13	$\mu\text{g/l}$	94%	-0,87

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	1,114 \pm 0,084	1,150 \pm 0,034	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	93,7 \pm 7,1	96,7 \pm 2,8	%
SD between labs	0,128	0,048	$\mu\text{g/l}$
RSD between labs	11,5	4,1	%
n for calculation	19	17	



Sample M166A

Parameter Cadmium

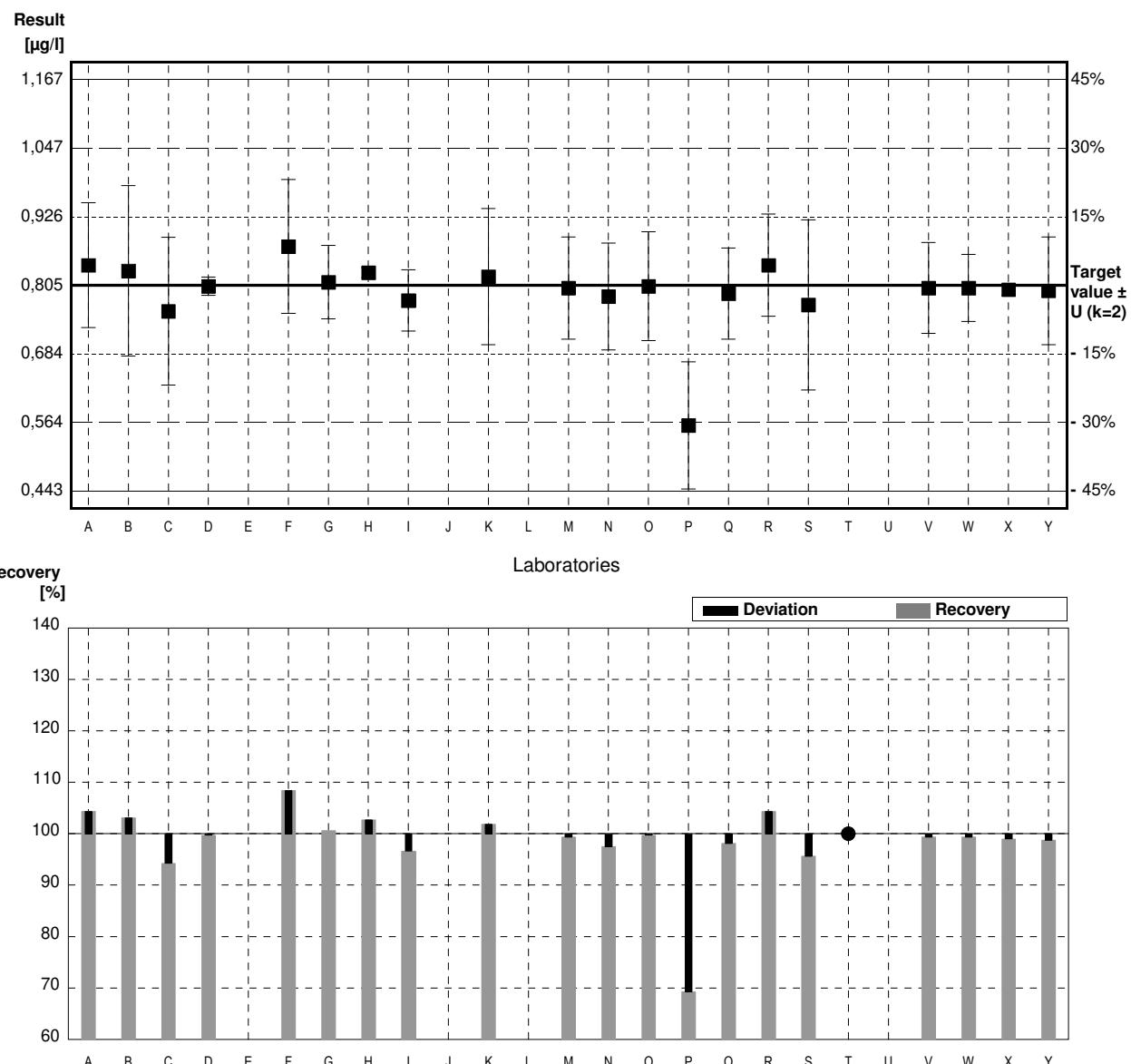
Target value $\pm U$ ($k=2$) 0,805 µg/l \pm 0,004 µg/l

IFA result $\pm U$ ($k=2$) 0,78 µg/l \pm 0,05 µg/l

Stability test µg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0,84	0,11	µg/l	104%	0,81
B	0,83	0,15	µg/l	103%	0,58
C	0,759	0,13	µg/l	94%	-1,06
D	0,803	0,016	µg/l	100%	-0,05
E			µg/l		
F	0,873	0,118	µg/l	108%	1,56
G	0,810	0,0648	µg/l	101%	0,12
H	0,827	0,00876	µg/l	103%	0,51
I	0,778	0,054	µg/l	97%	-0,62
J			µg/l		
K	0,820	0,12	µg/l	102%	0,35
L			µg/l		
M	0,80	0,09	µg/l	99%	-0,12
N	0,785	0,094	µg/l	98%	-0,46
O	0,803	0,096	µg/l	100%	-0,05
P	0,558 *	0,112	µg/l	69%	-5,68
Q	0,79	0,08	µg/l	98%	-0,35
R	0,84	0,09	µg/l	104%	0,81
S	0,77	0,15	µg/l	96%	-0,81
T	<0,9		µg/l	*	
U			µg/l		
V	0,80	0,080	µg/l	99%	-0,12
W	0,80	0,059	µg/l	99%	-0,12
X	0,797	0,01	µg/l	99%	-0,18
Y	0,795	0,095	µg/l	99%	-0,23

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,794 \pm 0,039	0,806 \pm 0,018	µg/l
Recov. \pm CI(99%)	98,6 \pm 4,9	100,2 \pm 2,2	%
SD between labs	0,062	0,027	µg/l
RSD between labs	7,7	3,4	%
n for calculation	20	19	



Sample M166B

Parameter Cadmium

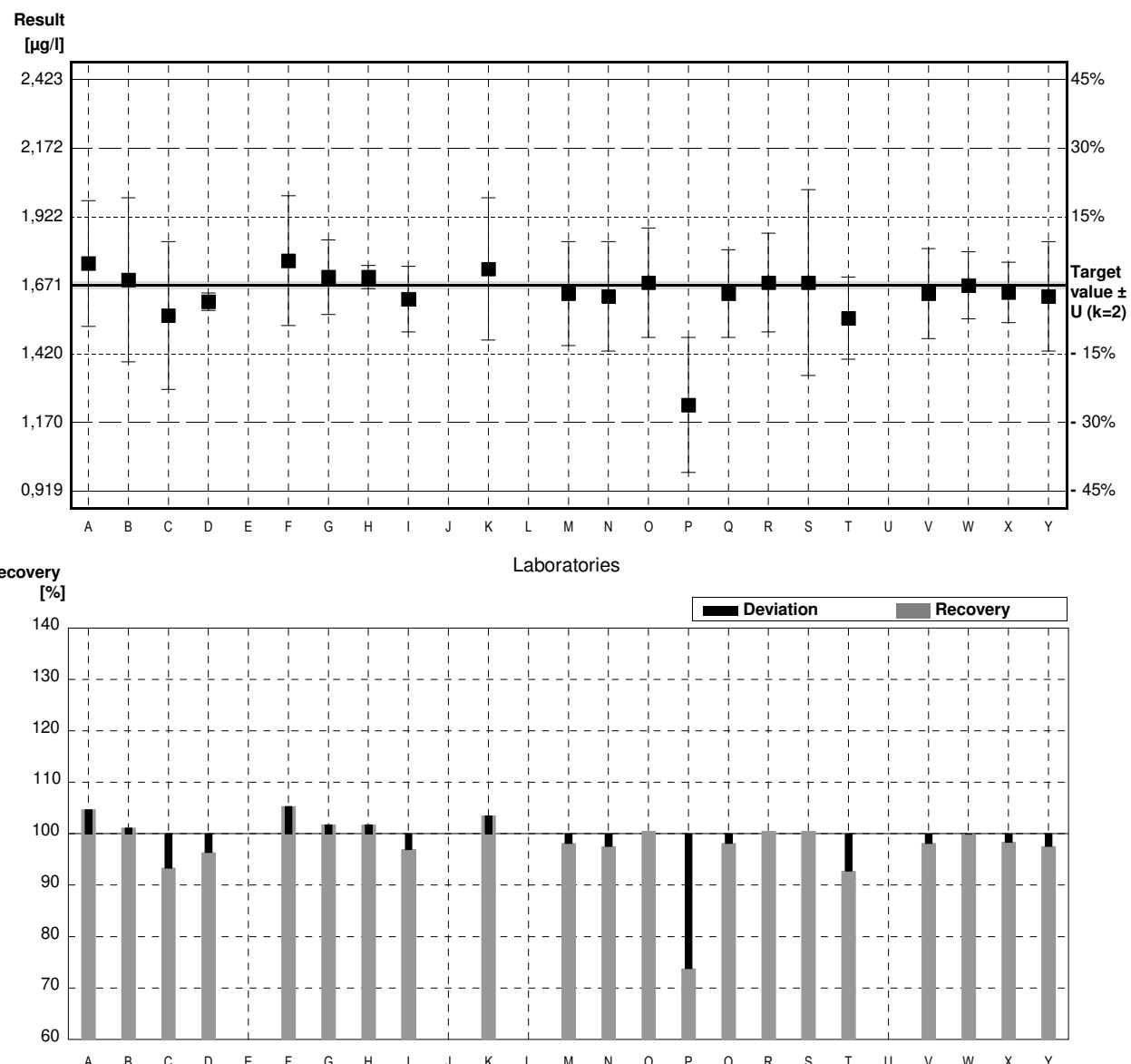
Target value $\pm U$ ($k=2$) 1,671 µg/l \pm 0,013 µg/l

IFA result $\pm U$ ($k=2$) 1,63 µg/l \pm 0,10 µg/l

Stability test µg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	1,75	0,23	µg/l	105%	0,88
B	1,69	0,3	µg/l	101%	0,21
C	1,56	0,27	µg/l	93%	-1,23
D	1,61	0,032	µg/l	96%	-0,68
E			µg/l		
F	1,76	0,237	µg/l	105%	0,99
G	1,70	0,136	µg/l	102%	0,32
H	1,70	0,0425	µg/l	102%	0,32
I	1,62	0,12	µg/l	97%	-0,57
J			µg/l		
K	1,73	0,26	µg/l	104%	0,65
L			µg/l		
M	1,64	0,19	µg/l	98%	-0,34
N	1,63	0,20	µg/l	98%	-0,45
O	1,68	0,20	µg/l	101%	0,10
P	1,233 *	0,247	µg/l	74%	-4,85
Q	1,64	0,16	µg/l	98%	-0,34
R	1,68	0,18	µg/l	101%	0,10
S	1,68	0,34	µg/l	101%	0,10
T	1,55	0,15	µg/l	93%	-1,34
U			µg/l		
V	1,64	0,164	µg/l	98%	-0,34
W	1,67	0,123	µg/l	100%	-0,01
X	1,644	0,11	µg/l	98%	-0,30
Y	1,63	0,20	µg/l	98%	-0,45

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	1,640 \pm 0,067	1,660 \pm 0,035	µg/l
Recov. \pm CI(99%)	98,1 \pm 4,0	99,4 \pm 2,1	%
SD between labs	0,108	0,055	µg/l
RSD between labs	6,6	3,3	%
n for calculation	21	20	



Sample M166A

Parameter Chromium

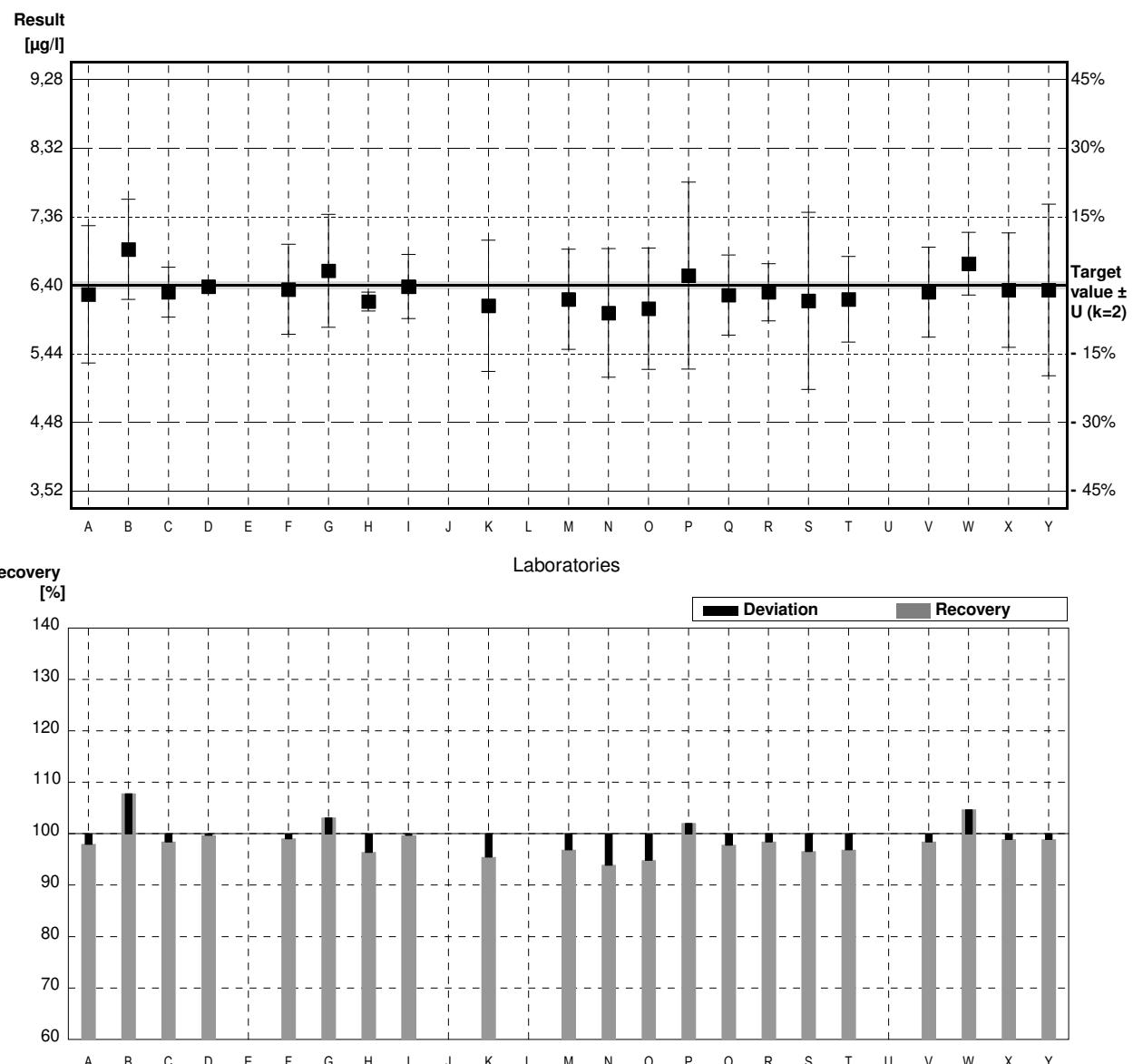
Target value $\pm U$ ($k=2$) 6,40 $\mu\text{g/l}$ \pm 0,05 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 6,40 $\mu\text{g/l}$ \pm 0,19 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	6,27	0,96	$\mu\text{g/l}$	98%	-0,32
B	6,9 *	0,7	$\mu\text{g/l}$	108%	1,24
C	6,30	0,35	$\mu\text{g/l}$	98%	-0,25
D	6,38	0,026	$\mu\text{g/l}$	100%	-0,05
E			$\mu\text{g/l}$		
F	6,34	0,63	$\mu\text{g/l}$	99%	-0,15
G	6,60	0,792	$\mu\text{g/l}$	103%	0,50
H	6,17	0,131	$\mu\text{g/l}$	96%	-0,57
I	6,38	0,45	$\mu\text{g/l}$	100%	-0,05
J			$\mu\text{g/l}$		
K	6,11	0,92	$\mu\text{g/l}$	95%	-0,72
L			$\mu\text{g/l}$		
M	6,2	0,7	$\mu\text{g/l}$	97%	-0,50
N	6,01	0,90	$\mu\text{g/l}$	94%	-0,97
O	6,07	0,85	$\mu\text{g/l}$	95%	-0,82
P	6,533	1,307	$\mu\text{g/l}$	102%	0,33
Q	6,26	0,56	$\mu\text{g/l}$	98%	-0,35
R	6,3	0,4	$\mu\text{g/l}$	98%	-0,25
S	6,18	1,24	$\mu\text{g/l}$	97%	-0,55
T	6,20	0,6	$\mu\text{g/l}$	97%	-0,50
U			$\mu\text{g/l}$		
V	6,3	0,63	$\mu\text{g/l}$	98%	-0,25
W	6,7	0,438	$\mu\text{g/l}$	105%	0,74
X	6,33	0,8	$\mu\text{g/l}$	99%	-0,17
Y	6,33	1,20	$\mu\text{g/l}$	99%	-0,17

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	6,33 $\pm 0,13$	6,30 $\pm 0,11$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	98,9 $\pm 2,1$	98,4 $\pm 1,7$	%
SD between labs	0,21	0,17	$\mu\text{g/l}$
RSD between labs	3,3	2,7	%
n for calculation	21	20	



Sample M166B

Parameter Chromium

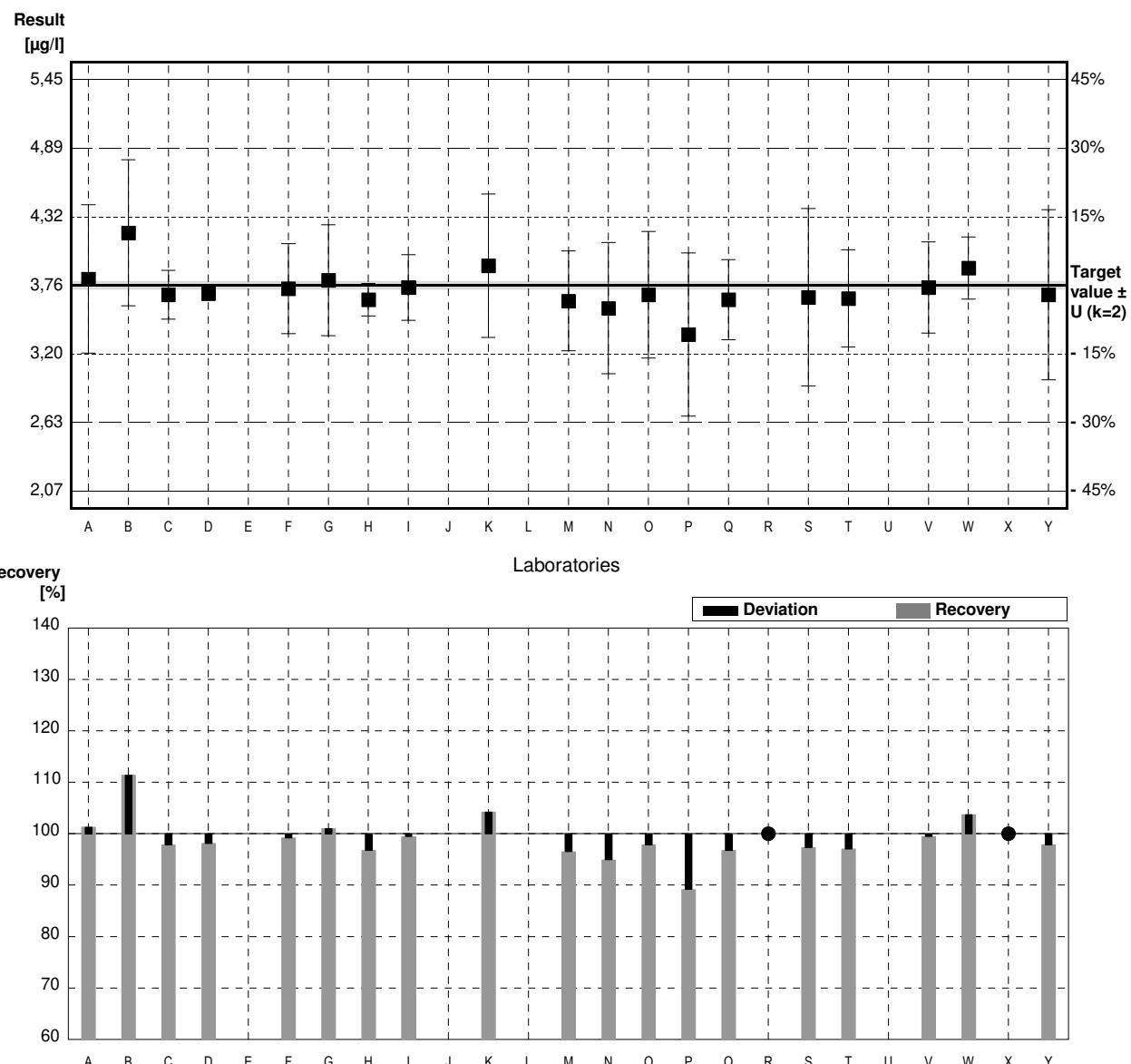
Target value $\pm U$ ($k=2$) 3,76 $\mu\text{g/l}$ \pm 0,03 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 3,77 $\mu\text{g/l}$ \pm 0,13 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	3,81	0,61	$\mu\text{g/l}$	101%	0,21
B	4,19 *	0,6	$\mu\text{g/l}$	111%	1,82
C	3,68	0,20	$\mu\text{g/l}$	98%	-0,34
D	3,69	0,045	$\mu\text{g/l}$	98%	-0,30
E			$\mu\text{g/l}$		
F	3,73	0,37	$\mu\text{g/l}$	99%	-0,13
G	3,80	0,456	$\mu\text{g/l}$	101%	0,17
H	3,64	0,133	$\mu\text{g/l}$	97%	-0,51
I	3,74	0,27	$\mu\text{g/l}$	99%	-0,08
J			$\mu\text{g/l}$		
K	3,92 *	0,59	$\mu\text{g/l}$	104%	0,68
L			$\mu\text{g/l}$		
M	3,63	0,41	$\mu\text{g/l}$	97%	-0,55
N	3,57	0,54	$\mu\text{g/l}$	95%	-0,80
O	3,68	0,52	$\mu\text{g/l}$	98%	-0,34
P	3,354 *	0,671	$\mu\text{g/l}$	89%	-1,71
Q	3,64	0,33	$\mu\text{g/l}$	97%	-0,51
R	<5		$\mu\text{g/l}$	*	
S	3,66	0,73	$\mu\text{g/l}$	97%	-0,42
T	3,65	0,4	$\mu\text{g/l}$	97%	-0,46
U			$\mu\text{g/l}$		
V	3,74	0,374	$\mu\text{g/l}$	99%	-0,08
W	3,90	0,255	$\mu\text{g/l}$	104%	0,59
X	<5		$\mu\text{g/l}$	*	
Y	3,68	0,70	$\mu\text{g/l}$	98%	-0,34

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	$3,72 \pm 0,11$	$3,70 \pm 0,06$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	$99,0 \pm 2,9$	$98,5 \pm 1,6$	%
SD between labs	0,17	0,08	$\mu\text{g/l}$
RSD between labs	4,5	2,2	%
n for calculation	19	16	



Sample M166A

Parameter Iron

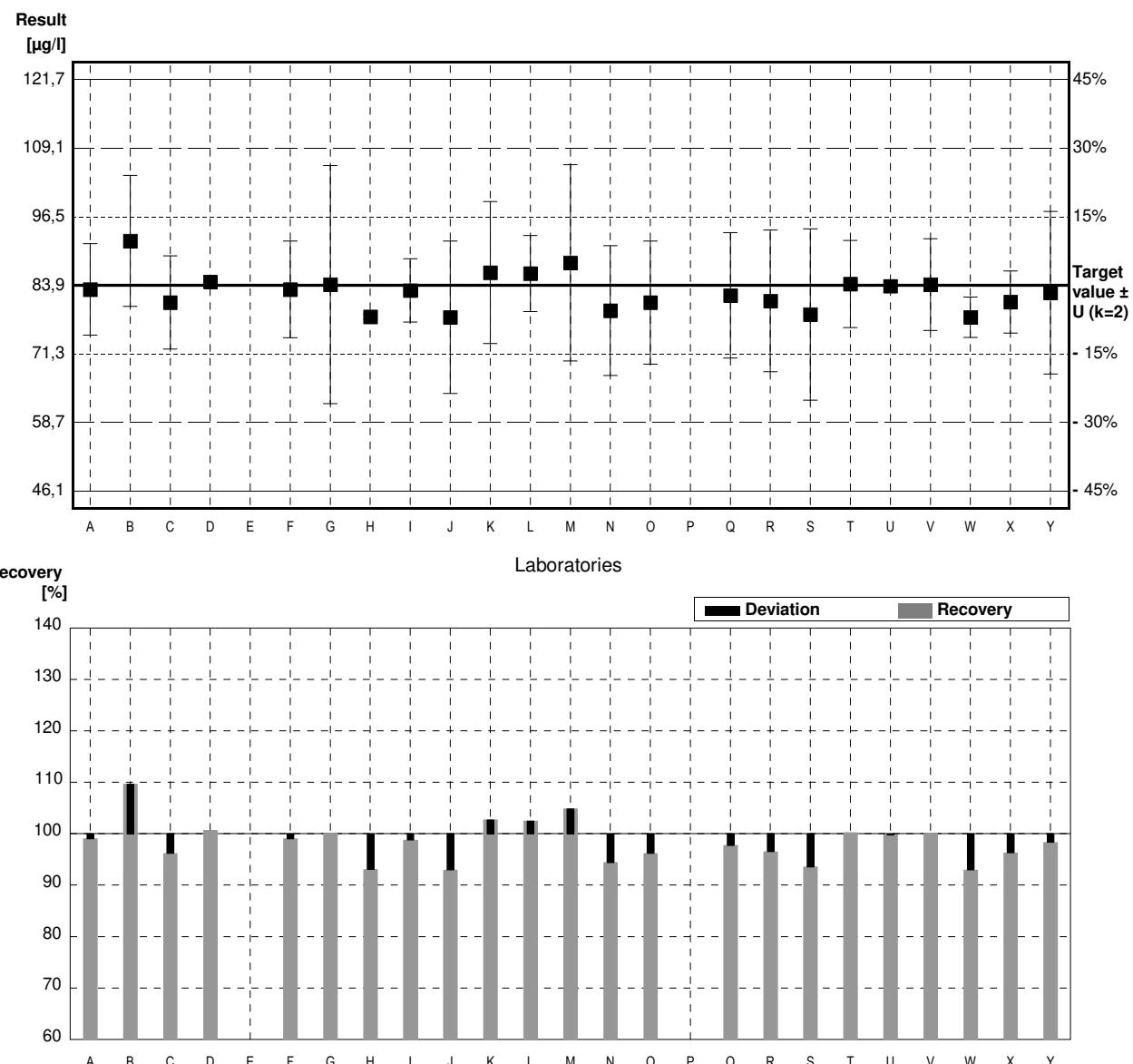
Target value $\pm U$ ($k=2$) 83,9 $\mu\text{g/l}$ \pm 0,3 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 86 $\mu\text{g/l}$ \pm 6 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	83,1	8,4	$\mu\text{g/l}$	99%	-0,14
B	92	12	$\mu\text{g/l}$	110%	1,44
C	80,7	8,55	$\mu\text{g/l}$	96%	-0,57
D	84,5	0,781	$\mu\text{g/l}$	101%	0,11
E			$\mu\text{g/l}$		
F	83,1	8,89	$\mu\text{g/l}$	99%	-0,14
G	84,0	21,84	$\mu\text{g/l}$	100%	0,02
H	78,1	0,437	$\mu\text{g/l}$	93%	-1,03
I	82,9	5,8	$\mu\text{g/l}$	99%	-0,18
J	78	14	$\mu\text{g/l}$	93%	-1,05
K	86,2	13	$\mu\text{g/l}$	103%	0,41
L	86	7	$\mu\text{g/l}$	103%	0,37
M	88	18	$\mu\text{g/l}$	105%	0,73
N	79,2	11,9	$\mu\text{g/l}$	94%	-0,84
O	80,7	11,3	$\mu\text{g/l}$	96%	-0,57
P			$\mu\text{g/l}$		
Q	82,0	11,5	$\mu\text{g/l}$	98%	-0,34
R	81	13	$\mu\text{g/l}$	97%	-0,52
S	78,5	15,7	$\mu\text{g/l}$	94%	-0,96
T	84,1	8	$\mu\text{g/l}$	100%	0,04
U	83,70		$\mu\text{g/l}$	100%	-0,04
V	84,0	8,4	$\mu\text{g/l}$	100%	0,02
W	78	3,69	$\mu\text{g/l}$	93%	-1,05
X	80,8	5,7	$\mu\text{g/l}$	96%	-0,55
Y	82,5	14,9	$\mu\text{g/l}$	98%	-0,25

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	82,7 $\pm 2,0$	82,7 $\pm 2,0$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	98,5 $\pm 2,4$	98,5 $\pm 2,4$	%
SD between labs	3,4	3,4	$\mu\text{g/l}$
RSD between labs	4,1	4,1	%
n for calculation	23	23	



Sample M166B

Parameter Iron

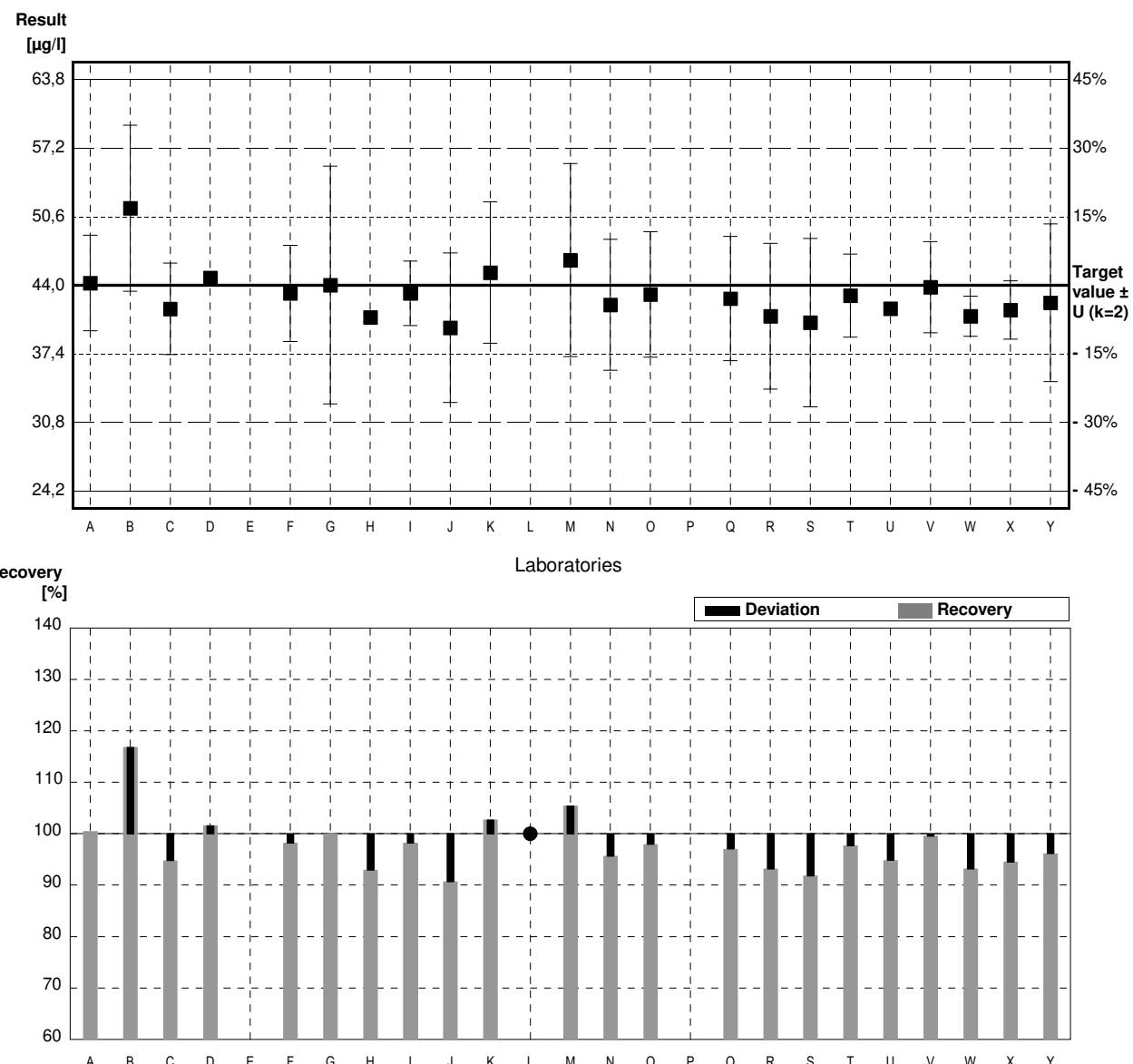
Target value $\pm U$ ($k=2$) 44,0 $\mu\text{g/l}$ \pm 0,2 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 43,9 $\mu\text{g/l}$ \pm 3,3 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	44,2	4,6	$\mu\text{g/l}$	100%	0,07
B	51,4 *	8	$\mu\text{g/l}$	117%	2,51
C	41,7	4,4	$\mu\text{g/l}$	95%	-0,78
D	44,7	0,351	$\mu\text{g/l}$	102%	0,24
E			$\mu\text{g/l}$		
F	43,2	4,62	$\mu\text{g/l}$	98%	-0,27
G	44,0	11,44	$\mu\text{g/l}$	100%	0,00
H	40,9	0,414	$\mu\text{g/l}$	93%	-1,05
I	43,2	3,1	$\mu\text{g/l}$	98%	-0,27
J	39,9	7,2	$\mu\text{g/l}$	91%	-1,39
K	45,2	6,8	$\mu\text{g/l}$	103%	0,41
L	<50		$\mu\text{g/l}$	*	
M	46,4	9,3	$\mu\text{g/l}$	105%	0,81
N	42,1	6,3	$\mu\text{g/l}$	96%	-0,64
O	43,1	6,03	$\mu\text{g/l}$	98%	-0,31
P			$\mu\text{g/l}$		
Q	42,7	5,97	$\mu\text{g/l}$	97%	-0,44
R	41,0	7	$\mu\text{g/l}$	93%	-1,02
S	40,4	8,1	$\mu\text{g/l}$	92%	-1,22
T	42,99	4	$\mu\text{g/l}$	98%	-0,34
U	41,73		$\mu\text{g/l}$	95%	-0,77
V	43,8	4,38	$\mu\text{g/l}$	100%	-0,07
W	41,0	1,94	$\mu\text{g/l}$	93%	-1,02
X	41,6	2,8	$\mu\text{g/l}$	95%	-0,81
Y	42,3	7,6	$\mu\text{g/l}$	96%	-0,58

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	43,1 \pm 1,5	42,7 \pm 1,0	$\mu\text{g/l}$
Recov. \pm CI(99%)	97,9 \pm 3,4	97,0 \pm 2,4	%
SD between labs	2,5	1,7	$\mu\text{g/l}$
RSD between labs	5,7	3,9	%
n for calculation	22	21	



Sample M166A

Parameter Copper

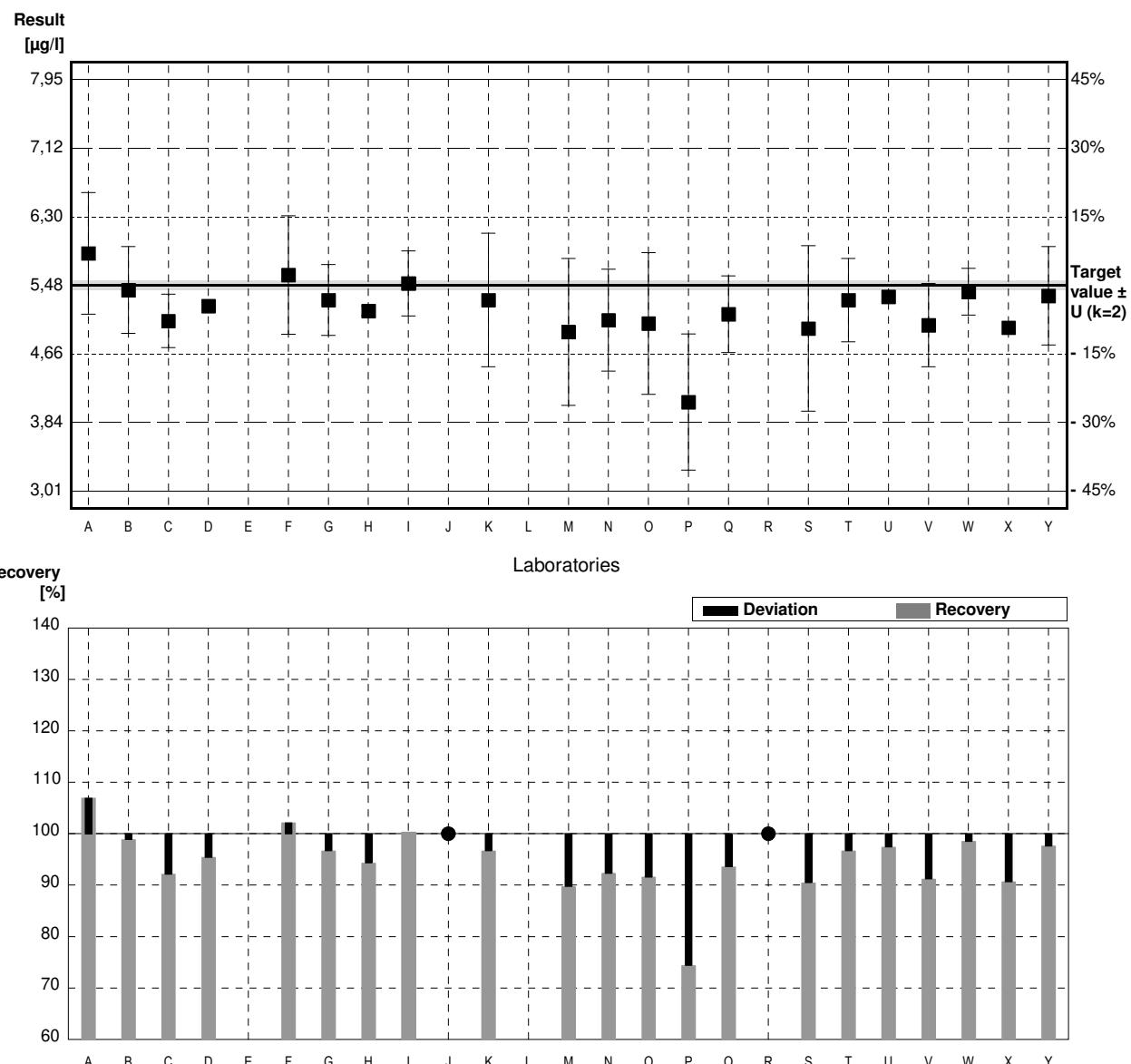
Target value $\pm U$ ($k=2$) 5,48 µg/l \pm 0,05 µg/l

IFA result $\pm U$ ($k=2$) 5,6 µg/l \pm 0,3 µg/l

Stability test µg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	5,86	0,73	µg/l	107%	0,89
B	5,42	0,52	µg/l	99%	-0,14
C	5,05	0,32	µg/l	92%	-1,01
D	5,23	0,040	µg/l	95%	-0,58
E			µg/l		
F	5,60	0,71	µg/l	102%	0,28
G	5,30	0,424	µg/l	97%	-0,42
H	5,17	0,0567	µg/l	94%	-0,73
I	5,50	0,39	µg/l	100%	0,05
J	<10		µg/l	*	
K	5,30	0,80	µg/l	97%	-0,42
L			µg/l		
M	4,92	0,88	µg/l	90%	-1,31
N	5,06	0,61	µg/l	92%	-0,98
O	5,02	0,85	µg/l	92%	-1,08
P	4,078 *	0,816	µg/l	74%	-3,28
Q	5,13	0,46	µg/l	94%	-0,82
R	<150		µg/l	*	
S	4,96	0,99	µg/l	91%	-1,22
T	5,30	0,5	µg/l	97%	-0,42
U	5,34		µg/l	97%	-0,33
V	5,0	0,50	µg/l	91%	-1,12
W	5,4	0,280	µg/l	99%	-0,19
X	4,97		µg/l	91%	-1,19
Y	5,35	0,59	µg/l	98%	-0,30

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	5,19 \pm 0,22	5,24 \pm 0,16	µg/l
Recov. \pm CI(99%)	94,7 \pm 3,9	95,7 \pm 2,8	%
SD between labs	0,35	0,24	µg/l
RSD between labs	6,7	4,6	%
n for calculation	21	20	



Sample M166B

Parameter Copper

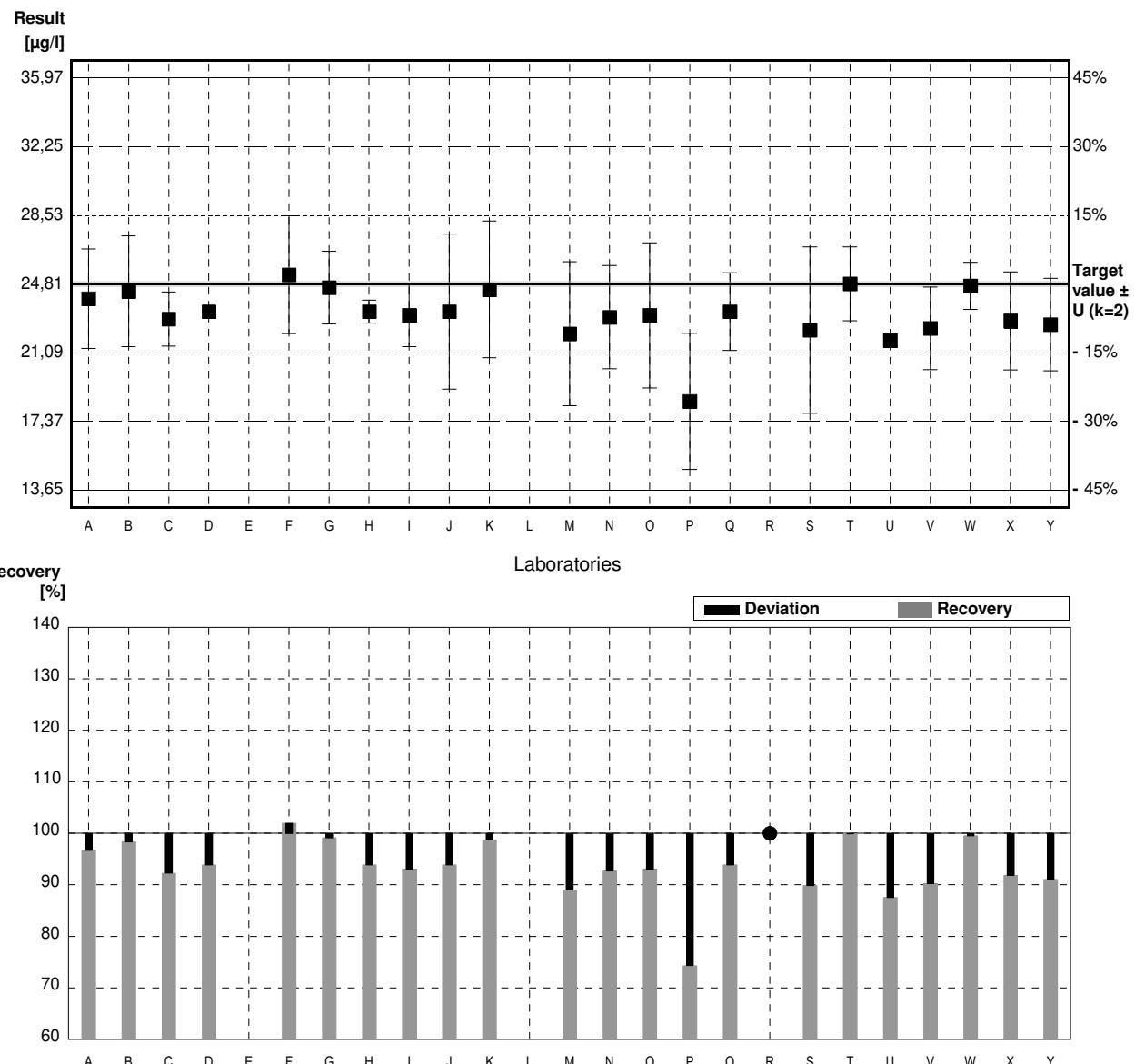
Target value $\pm U$ ($k=2$) 24,81 $\mu\text{g/l}$ \pm 0,13 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 24,6 $\mu\text{g/l}$ \pm 0,9 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	24,0	2,7	$\mu\text{g/l}$	97%	-0,42
B	24,4	3	$\mu\text{g/l}$	98%	-0,21
C	22,9	1,46	$\mu\text{g/l}$	92%	-0,99
D	23,3	0,058	$\mu\text{g/l}$	94%	-0,78
E			$\mu\text{g/l}$		
F	25,3	3,19	$\mu\text{g/l}$	102%	0,25
G	24,6	1,968	$\mu\text{g/l}$	99%	-0,11
H	23,3	0,622	$\mu\text{g/l}$	94%	-0,78
I	23,1	1,7	$\mu\text{g/l}$	93%	-0,88
J	23,3	4,2	$\mu\text{g/l}$	94%	-0,78
K	24,5	3,7	$\mu\text{g/l}$	99%	-0,16
L			$\mu\text{g/l}$		
M	22,1	3,9	$\mu\text{g/l}$	89%	-1,40
N	23,0	2,8	$\mu\text{g/l}$	93%	-0,94
O	23,1	3,93	$\mu\text{g/l}$	93%	-0,88
P	18,442 *	3,688	$\mu\text{g/l}$	74%	-3,29
Q	23,3	2,10	$\mu\text{g/l}$	94%	-0,78
R	<150		$\mu\text{g/l}$	•	
S	22,3	4,5	$\mu\text{g/l}$	90%	-1,30
T	24,8	2	$\mu\text{g/l}$	100%	-0,01
U	21,73		$\mu\text{g/l}$	88%	-1,59
V	22,4	2,24	$\mu\text{g/l}$	90%	-1,25
W	24,7	1,279	$\mu\text{g/l}$	100%	-0,06
X	22,8	2,65	$\mu\text{g/l}$	92%	-1,04
Y	22,6	2,5	$\mu\text{g/l}$	91%	-1,14

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	23,18 \pm 0,86	23,41 \pm 0,62	$\mu\text{g/l}$
Recov. \pm CI(99%)	93,4 \pm 3,5	94,3 \pm 2,5	%
SD between labs	1,43	0,99	$\mu\text{g/l}$
RSD between labs	6,2	4,2	%
n for calculation	22	21	



Sample M166A

Parameter Manganese

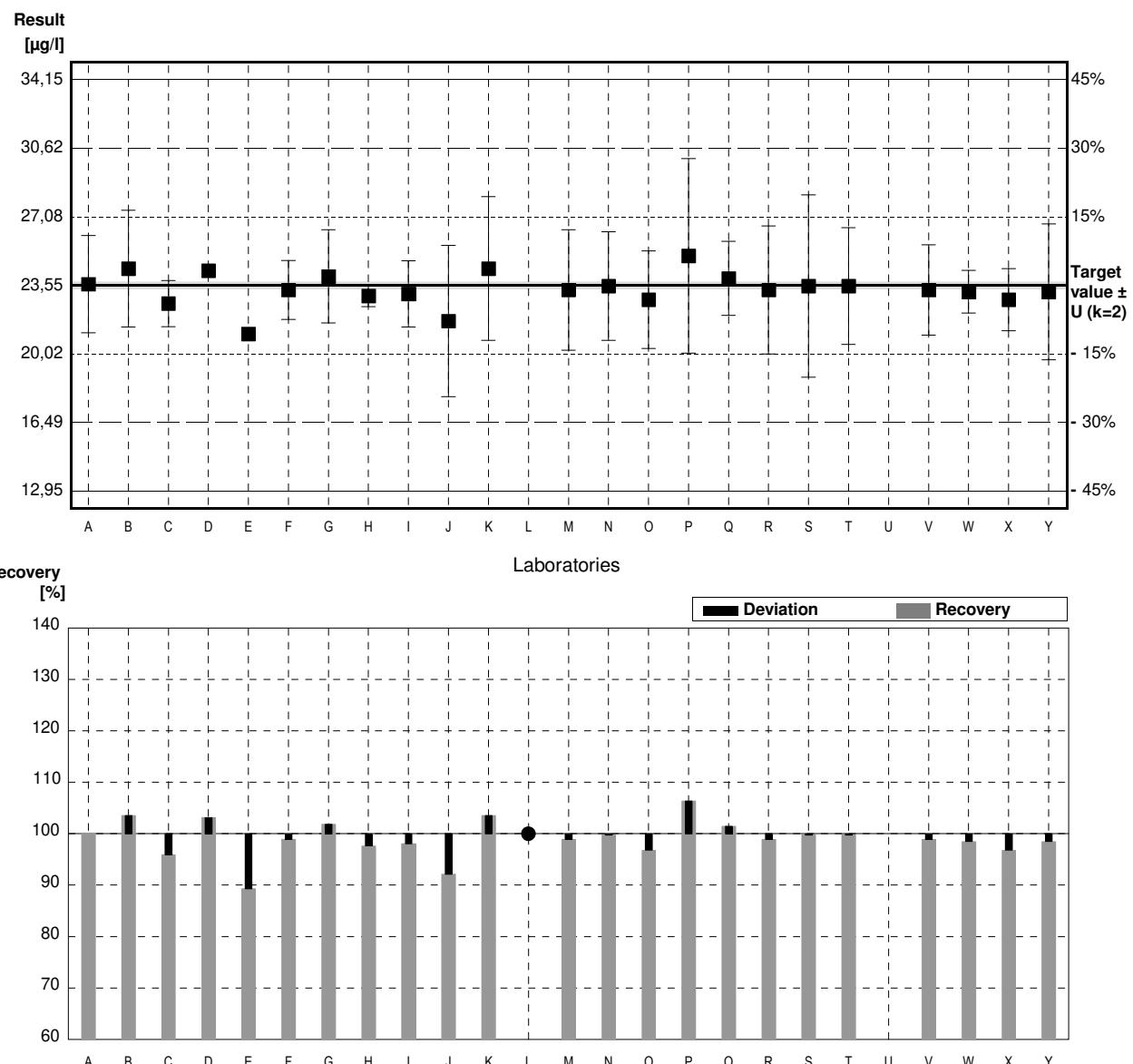
Target value $\pm U$ ($k=2$) 23,55 $\mu\text{g/l}$ \pm 0,17 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 24,3 $\mu\text{g/l}$ \pm 1,6 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	23,6	2,5	$\mu\text{g/l}$	100%	0,04
B	24,4	3	$\mu\text{g/l}$	104%	0,68
C	22,6	1,19	$\mu\text{g/l}$	96%	-0,76
D	24,3	0,153	$\mu\text{g/l}$	103%	0,60
E	21,04 *		$\mu\text{g/l}$	89%	-2,01
F	23,3	1,52	$\mu\text{g/l}$	99%	-0,20
G	24,0	2,40	$\mu\text{g/l}$	102%	0,36
H	23,0	0,565	$\mu\text{g/l}$	98%	-0,44
I	23,1	1,7	$\mu\text{g/l}$	98%	-0,36
J	21,7 *	3,9	$\mu\text{g/l}$	92%	-1,48
K	24,4	3,7	$\mu\text{g/l}$	104%	0,68
L	<50		$\mu\text{g/l}$	*	
M	23,3	3,1	$\mu\text{g/l}$	99%	-0,20
N	23,5	2,8	$\mu\text{g/l}$	100%	-0,04
O	22,8	2,51	$\mu\text{g/l}$	97%	-0,60
P	25,061 *	5,012	$\mu\text{g/l}$	106%	1,21
Q	23,9	1,91	$\mu\text{g/l}$	101%	0,28
R	23,3	3,3	$\mu\text{g/l}$	99%	-0,20
S	23,5	4,7	$\mu\text{g/l}$	100%	-0,04
T	23,5	3	$\mu\text{g/l}$	100%	-0,04
U			$\mu\text{g/l}$		
V	23,3	2,33	$\mu\text{g/l}$	99%	-0,20
W	23,2	1,10	$\mu\text{g/l}$	99%	-0,28
X	22,8	1,6	$\mu\text{g/l}$	97%	-0,60
Y	23,2	3,5	$\mu\text{g/l}$	99%	-0,28

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	23,34 \pm 0,51	23,45 \pm 0,33	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	99,1 \pm 2,2	99,6 \pm 1,4	%
SD between labs	0,86	0,52	$\mu\text{g/l}$
RSD between labs	3,7	2,2	%
n for calculation	23	20	



Sample M166B

Parameter Manganese

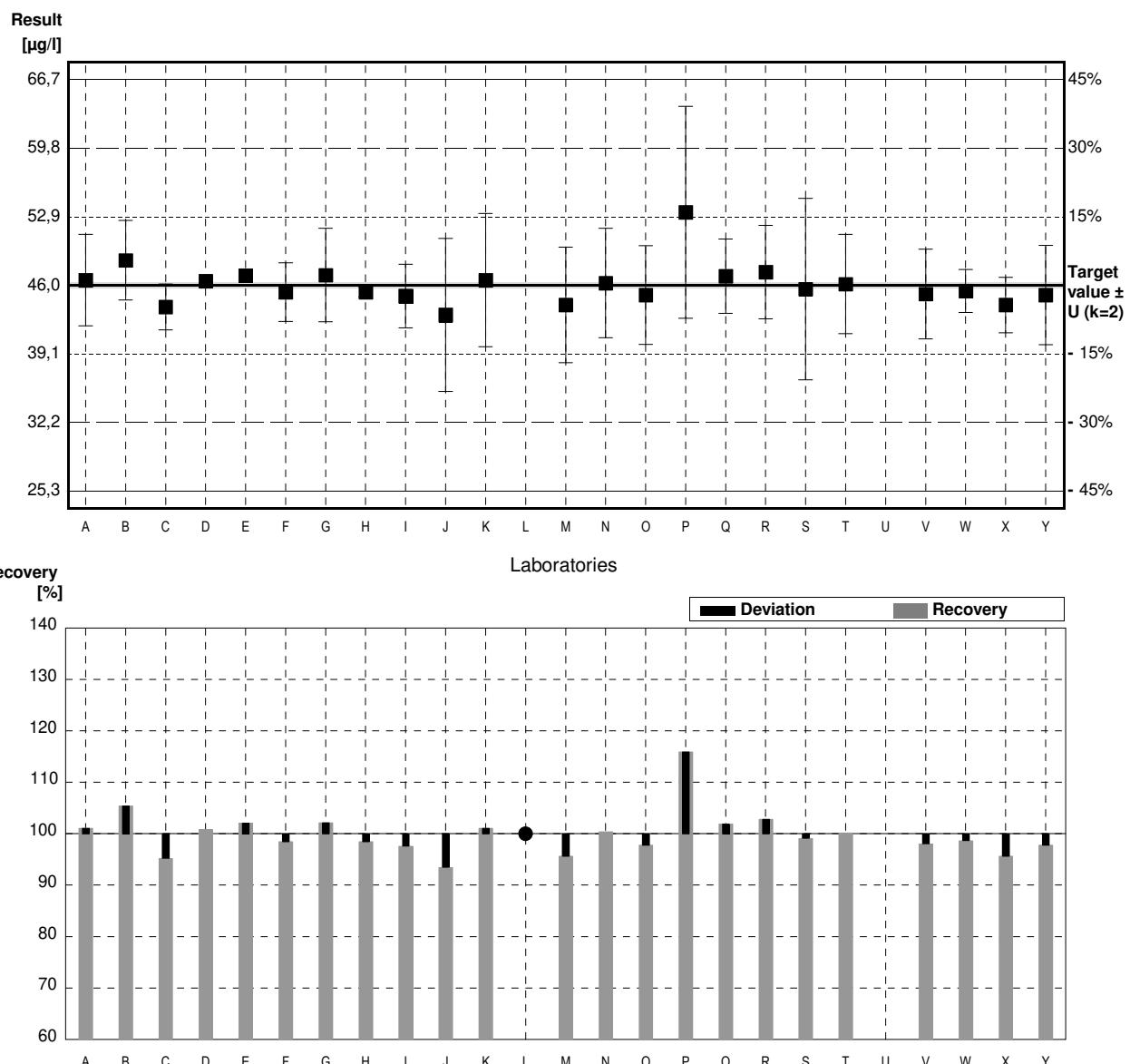
Target value $\pm U$ ($k=2$) 46,0 $\mu\text{g/l}$ \pm 0,3 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 46,6 $\mu\text{g/l}$ \pm 3,1 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	46,5	4,6	$\mu\text{g/l}$	101%	0,21
B	48,5	4	$\mu\text{g/l}$	105%	1,03
C	43,8	2,32	$\mu\text{g/l}$	95%	-0,90
D	46,4	0,265	$\mu\text{g/l}$	101%	0,16
E	46,96		$\mu\text{g/l}$	102%	0,39
F	45,3	2,95	$\mu\text{g/l}$	98%	-0,29
G	47,0	4,70	$\mu\text{g/l}$	102%	0,41
H	45,3	0,509	$\mu\text{g/l}$	98%	-0,29
I	44,9	3,2	$\mu\text{g/l}$	98%	-0,45
J	43,0	7,7	$\mu\text{g/l}$	93%	-1,23
K	46,5	6,7	$\mu\text{g/l}$	101%	0,21
L	<50		$\mu\text{g/l}$	*	
M	44,0	5,8	$\mu\text{g/l}$	96%	-0,82
N	46,2	5,5	$\mu\text{g/l}$	100%	0,08
O	45,0	4,95	$\mu\text{g/l}$	98%	-0,41
P	53,335 *	10,667	$\mu\text{g/l}$	116%	3,01
Q	46,9	3,75	$\mu\text{g/l}$	102%	0,37
R	47,3	4,7	$\mu\text{g/l}$	103%	0,53
S	45,6	9,12	$\mu\text{g/l}$	99%	-0,16
T	46,1	5	$\mu\text{g/l}$	100%	0,04
U			$\mu\text{g/l}$		
V	45,1	4,51	$\mu\text{g/l}$	98%	-0,37
W	45,4	2,15	$\mu\text{g/l}$	99%	-0,25
X	44,0	2,79	$\mu\text{g/l}$	96%	-0,82
Y	45,0	5,0	$\mu\text{g/l}$	98%	-0,41

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	46,0 $\pm 1,2$	45,7 $\pm 0,8$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	100,0 $\pm 2,6$	99,3 $\pm 1,7$	%
SD between labs	2,1	1,3	$\mu\text{g/l}$
RSD between labs	4,5	2,9	%
n for calculation	23	22	



Sample M166A

Parameter Nickel

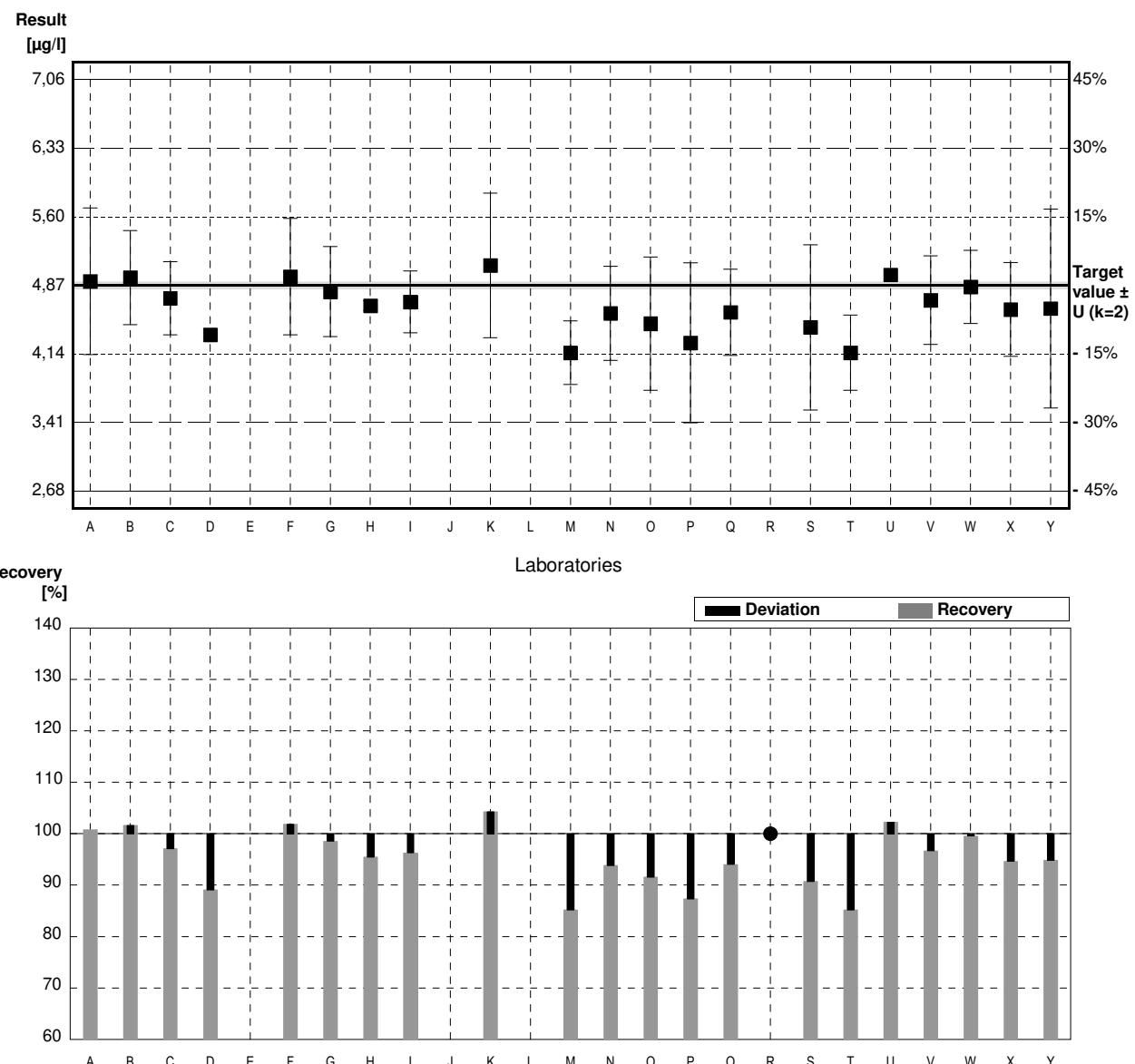
Target value $\pm U$ ($k=2$) 4,87 $\mu\text{g/l}$ \pm 0,04 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 4,83 $\mu\text{g/l}$ \pm 0,20 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	4,91	0,78	$\mu\text{g/l}$	101%	0,11
B	4,95	0,5	$\mu\text{g/l}$	102%	0,22
C	4,73	0,39	$\mu\text{g/l}$	97%	-0,39
D	4,34	0,026	$\mu\text{g/l}$	89%	-1,47
E			$\mu\text{g/l}$		
F	4,96	0,62	$\mu\text{g/l}$	102%	0,25
G	4,80	0,480	$\mu\text{g/l}$	99%	-0,19
H	4,65	0,0508	$\mu\text{g/l}$	95%	-0,61
I	4,69	0,33	$\mu\text{g/l}$	96%	-0,50
J			$\mu\text{g/l}$		
K	5,08	0,77	$\mu\text{g/l}$	104%	0,58
L			$\mu\text{g/l}$		
M	4,15	0,34	$\mu\text{g/l}$	85%	-2,00
N	4,57	0,50	$\mu\text{g/l}$	94%	-0,83
O	4,46	0,71	$\mu\text{g/l}$	92%	-1,14
P	4,255	0,851	$\mu\text{g/l}$	87%	-1,71
Q	4,58	0,46	$\mu\text{g/l}$	94%	-0,80
R	<5		$\mu\text{g/l}$	•	
S	4,42	0,88	$\mu\text{g/l}$	91%	-1,25
T	4,15	0,4	$\mu\text{g/l}$	85%	-2,00
U	4,98		$\mu\text{g/l}$	102%	0,31
V	4,71	0,471	$\mu\text{g/l}$	97%	-0,44
W	4,85	0,389	$\mu\text{g/l}$	100%	-0,06
X	4,61	0,5	$\mu\text{g/l}$	95%	-0,72
Y	4,62	1,06	$\mu\text{g/l}$	95%	-0,69

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	4,64 $\pm 0,17$	4,64 $\pm 0,17$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	95,3 $\pm 3,5$	95,3 $\pm 3,5$	%
SD between labs	0,27	0,27	$\mu\text{g/l}$
RSD between labs	5,9	5,9	%
n for calculation	21	21	



Sample M166B

Parameter Nickel

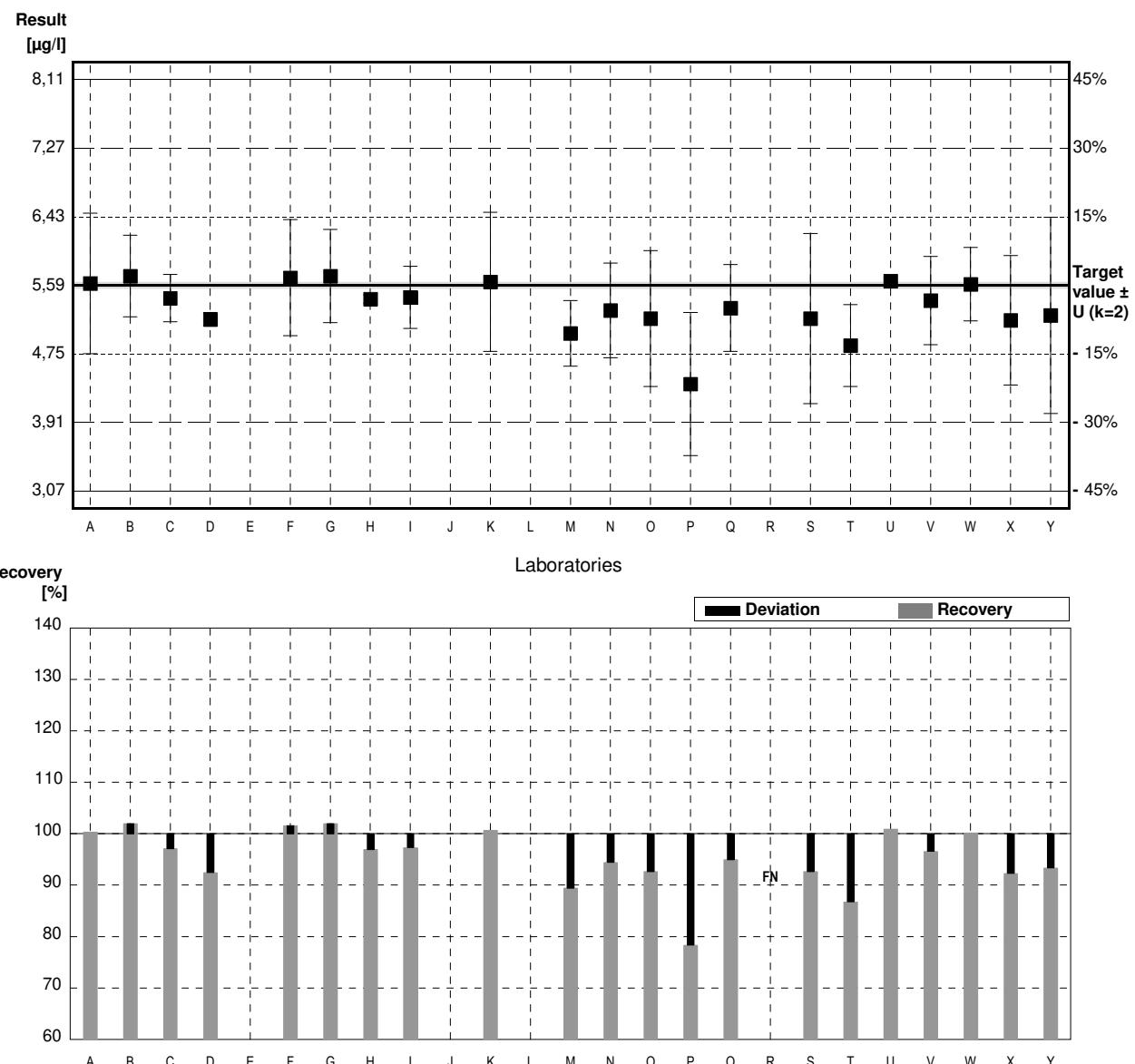
Target value $\pm U$ ($k=2$) 5,59 $\mu\text{g/l}$ \pm 0,04 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 5,5 $\mu\text{g/l}$ \pm 0,2 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	5,61	0,86	$\mu\text{g/l}$	100%	0,05
B	5,7	0,5	$\mu\text{g/l}$	102%	0,27
C	5,43	0,29	$\mu\text{g/l}$	97%	-0,39
D	5,17	0,083	$\mu\text{g/l}$	92%	-1,02
E			$\mu\text{g/l}$		
F	5,68	0,71	$\mu\text{g/l}$	102%	0,22
G	5,70	0,570	$\mu\text{g/l}$	102%	0,27
H	5,42	0,0505	$\mu\text{g/l}$	97%	-0,41
I	5,44	0,38	$\mu\text{g/l}$	97%	-0,36
J			$\mu\text{g/l}$		
K	5,63	0,85	$\mu\text{g/l}$	101%	0,10
L			$\mu\text{g/l}$		
M	5,0	0,4	$\mu\text{g/l}$	89%	-1,43
N	5,28	0,58	$\mu\text{g/l}$	94%	-0,75
O	5,18	0,83	$\mu\text{g/l}$	93%	-0,99
P	4,380	0,876	$\mu\text{g/l}$	78%	-2,93
Q	5,31	0,53	$\mu\text{g/l}$	95%	-0,68
R	<5		$\mu\text{g/l}$	FN	
S	5,18	1,04	$\mu\text{g/l}$	93%	-0,99
T	4,85	0,5	$\mu\text{g/l}$	87%	-1,79
U	5,64		$\mu\text{g/l}$	101%	0,12
V	5,4	0,54	$\mu\text{g/l}$	97%	-0,46
W	5,6	0,449	$\mu\text{g/l}$	100%	0,02
X	5,16	0,79	$\mu\text{g/l}$	92%	-1,04
Y	5,22	1,20	$\mu\text{g/l}$	93%	-0,89

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	5,33 $\pm 0,20$	5,33 $\pm 0,20$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	95,4 $\pm 3,6$	95,4 $\pm 3,6$	%
SD between labs	0,33	0,33	$\mu\text{g/l}$
RSD between labs	6,1	6,1	%
n for calculation	21	21	



Sample M166A
Parameter Mercury

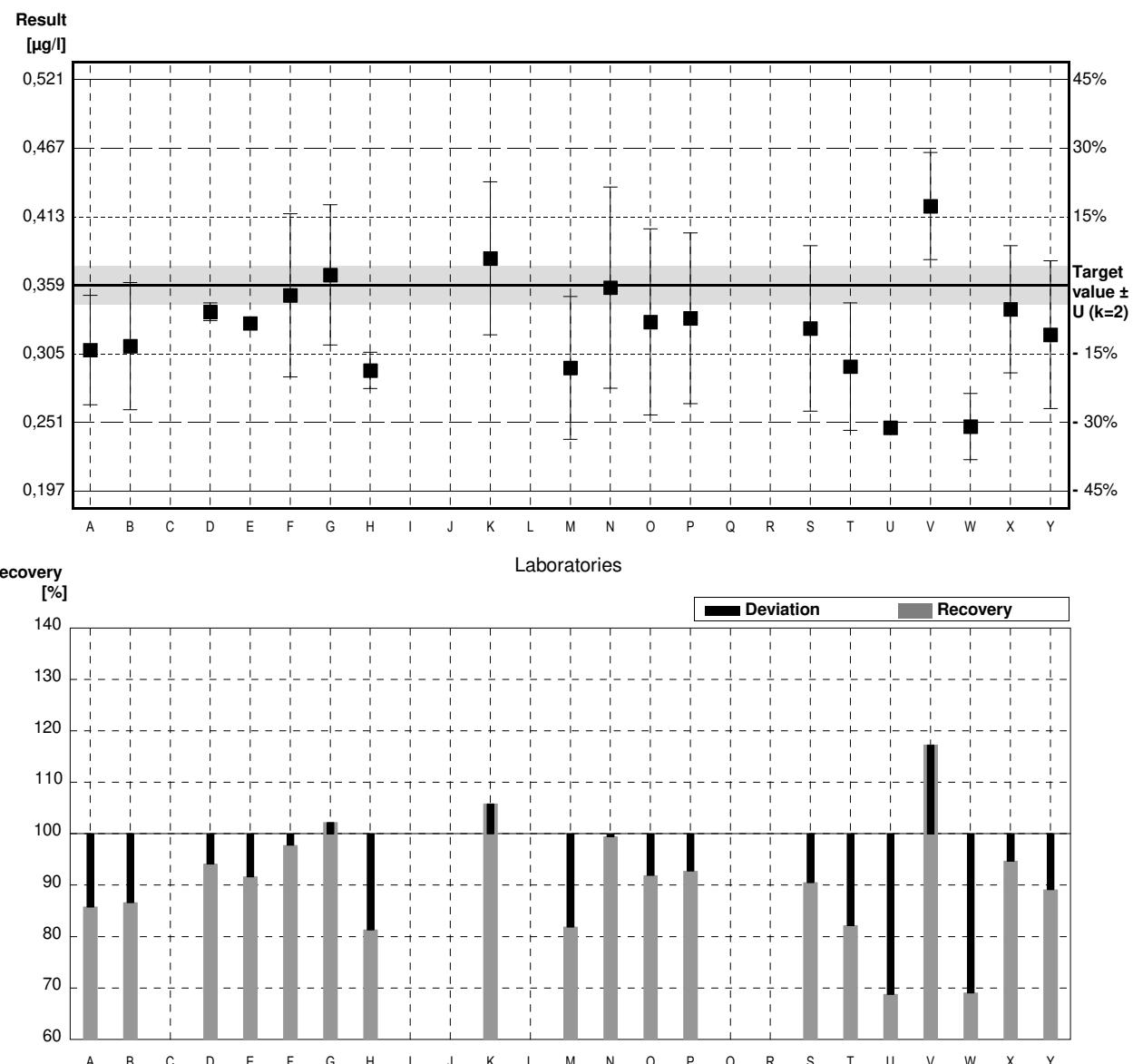
Target value $\pm U$ ($k=2$) 0,359 µg/l \pm 0,015 µg/l

IFA result $\pm U$ ($k=2$) 0,395 µg/l \pm 0,074 µg/l

Stability test µg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0,308	0,043	µg/l	86%	-1,29
B	0,311	0,05	µg/l	87%	-1,22
C			µg/l		
D	0,338	0,007	µg/l	94%	-0,53
E	0,329		µg/l	92%	-0,76
F	0,351	0,064	µg/l	98%	-0,20
G	0,367	0,055	µg/l	102%	0,20
H	0,292	0,0142	µg/l	81%	-1,70
I			µg/l		
J			µg/l		
K	0,380	0,06	µg/l	106%	0,53
L			µg/l		
M	0,294	0,056	µg/l	82%	-1,65
N	0,357	0,079	µg/l	99%	-0,05
O	0,330	0,073	µg/l	92%	-0,73
P	0,333	0,067	µg/l	93%	-0,66
Q			µg/l		
R			µg/l		
S	0,325	0,065	µg/l	91%	-0,86
T	0,295	0,05	µg/l	82%	-1,62
U	0,247		µg/l	69%	-2,84
V	0,421	0,0421	µg/l	117%	1,57
W	0,248	0,026	µg/l	69%	-2,81
X	0,340	0,05	µg/l	95%	-0,48
Y	0,320	0,058	µg/l	89%	-0,99

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,326 \pm 0,028	0,326 \pm 0,028	µg/l
Recov. \pm CI(99%)	90,7 \pm 7,7	90,7 \pm 7,7	%
SD between labs	0,042	0,042	µg/l
RSD between labs	12,9	12,9	%
n for calculation	19	19	



Sample M166B
Parameter Mercury

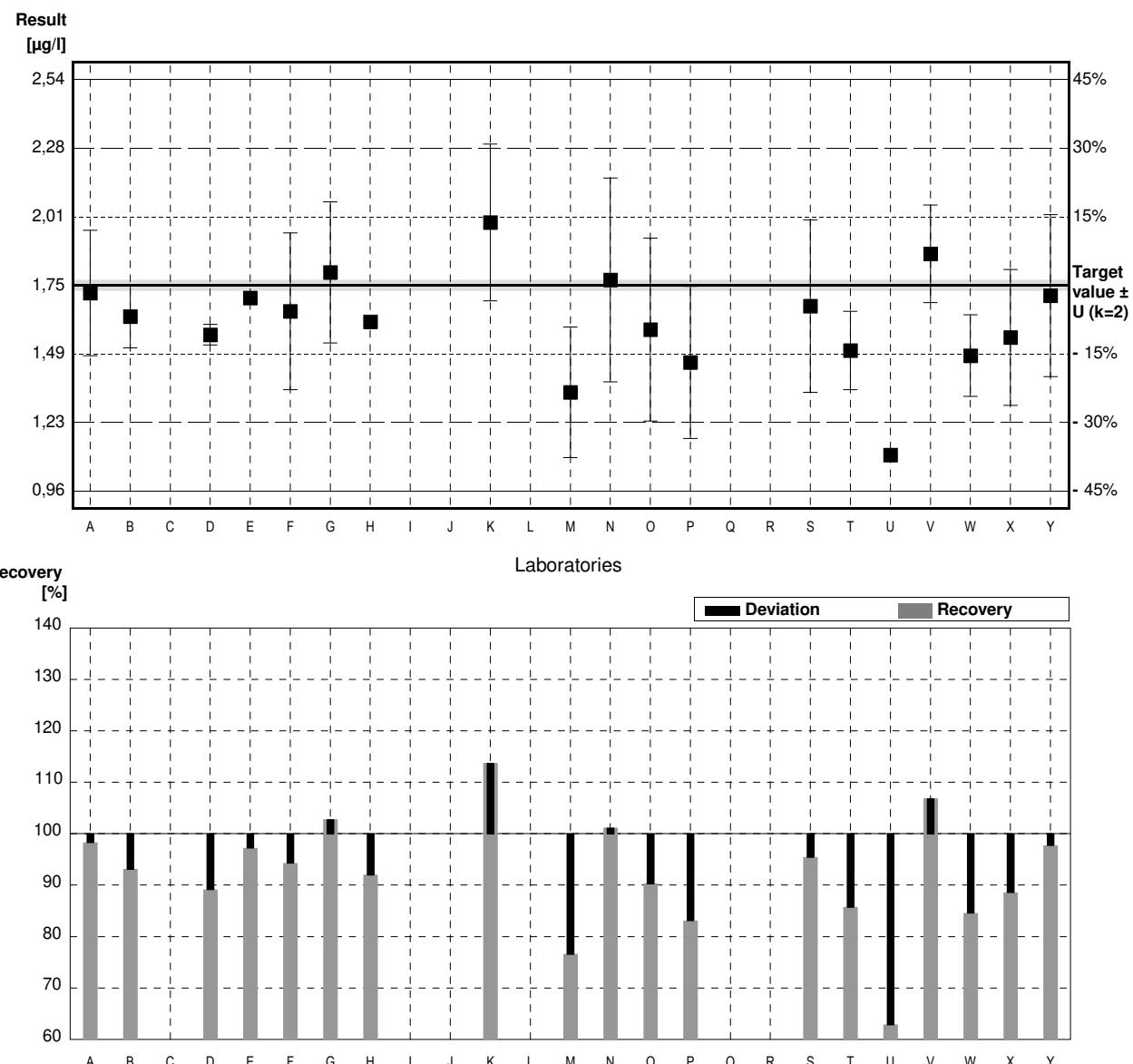
Target value $\pm U$ ($k=2$) 1,75 $\mu\text{g/l}$ \pm 0,02 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 1,87 $\mu\text{g/l}$ \pm 0,35 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	1,72	0,24	$\mu\text{g/l}$	98%	-0,16
B	1,63	0,12	$\mu\text{g/l}$	93%	-0,62
C			$\mu\text{g/l}$		
D	1,56	0,040	$\mu\text{g/l}$	89%	-0,99
E	1,701		$\mu\text{g/l}$	97%	-0,25
F	1,65	0,30	$\mu\text{g/l}$	94%	-0,52
G	1,799	0,2699	$\mu\text{g/l}$	103%	0,25
H	1,61	0,0132	$\mu\text{g/l}$	92%	-0,73
I			$\mu\text{g/l}$		
J			$\mu\text{g/l}$		
K	1,99	0,30	$\mu\text{g/l}$	114%	1,25
L			$\mu\text{g/l}$		
M	1,34	0,25	$\mu\text{g/l}$	77%	-2,13
N	1,77	0,39	$\mu\text{g/l}$	101%	0,10
O	1,58	0,35	$\mu\text{g/l}$	90%	-0,88
P	1,454	0,291	$\mu\text{g/l}$	83%	-1,54
Q			$\mu\text{g/l}$		
R			$\mu\text{g/l}$		
S	1,67	0,33	$\mu\text{g/l}$	95%	-0,42
T	1,50	0,15	$\mu\text{g/l}$	86%	-1,30
U	1,10 *		$\mu\text{g/l}$	63%	-3,38
V	1,87	0,187	$\mu\text{g/l}$	107%	0,62
W	1,48	0,156	$\mu\text{g/l}$	85%	-1,40
X	1,550	0,26	$\mu\text{g/l}$	89%	-1,04
Y	1,71	0,31	$\mu\text{g/l}$	98%	-0,21

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	1,61 \pm 0,13	1,64 \pm 0,11	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	92,3 \pm 7,5	93,9 \pm 6,2	%
SD between labs	0,20	0,16	$\mu\text{g/l}$
RSD between labs	12,2	9,6	%
n for calculation	19	18	



Sample M166A

Parameter Selenium

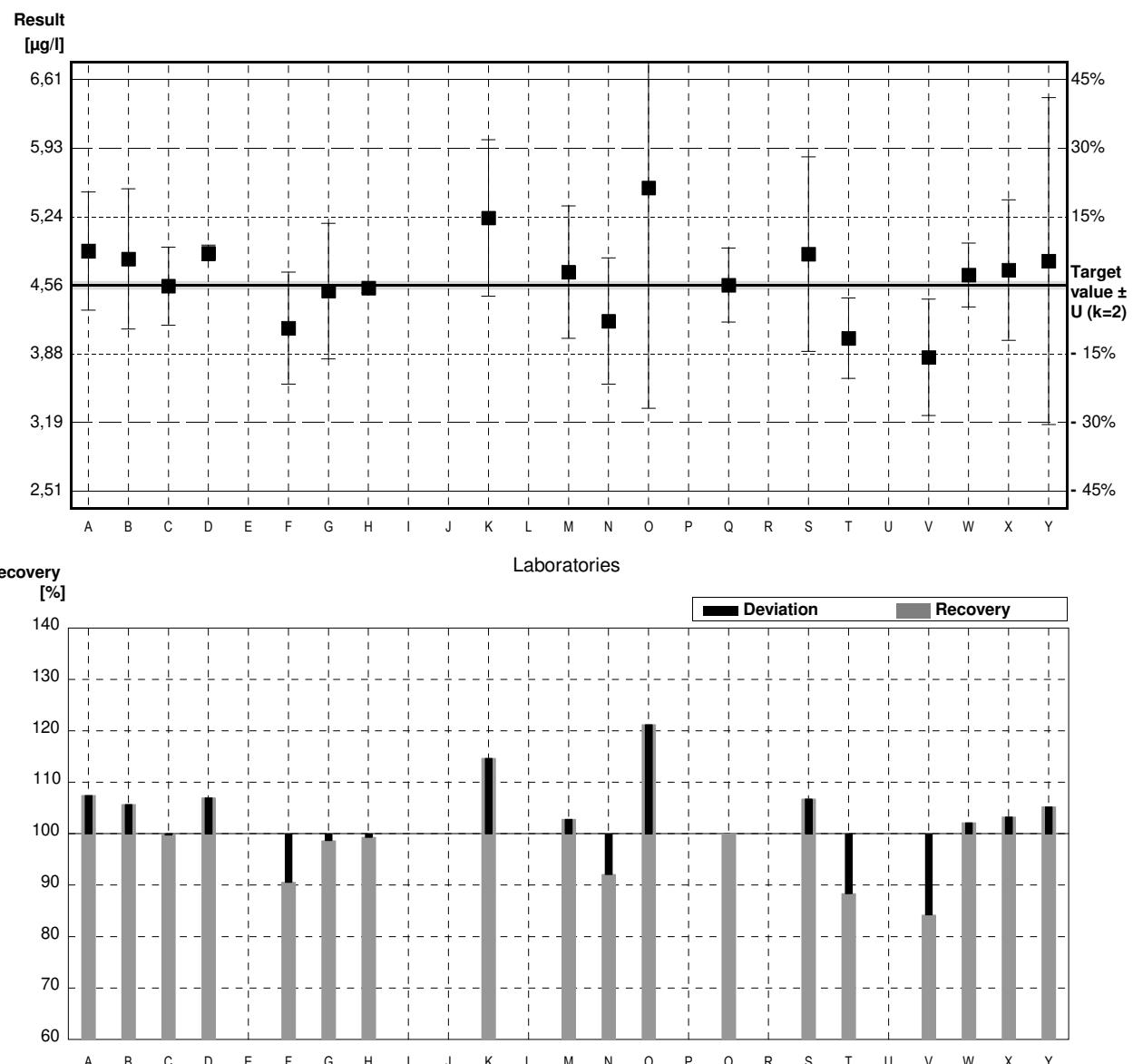
Target value $\pm U$ ($k=2$) 4,56 $\mu\text{g/l}$ \pm 0,04 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 4,77 $\mu\text{g/l}$ \pm 0,55 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	4,90	0,59	$\mu\text{g/l}$	107%	0,79
B	4,82	0,7	$\mu\text{g/l}$	106%	0,61
C	4,55	0,39	$\mu\text{g/l}$	100%	-0,02
D	4,88	0,079	$\mu\text{g/l}$	107%	0,75
E			$\mu\text{g/l}$		
F	4,13	0,56	$\mu\text{g/l}$	91%	-1,00
G	4,50	0,675	$\mu\text{g/l}$	99%	-0,14
H	4,53	0,0488	$\mu\text{g/l}$	99%	-0,07
I			$\mu\text{g/l}$		
J			$\mu\text{g/l}$		
K	5,23	0,78	$\mu\text{g/l}$	115%	1,56
L			$\mu\text{g/l}$		
M	4,69	0,66	$\mu\text{g/l}$	103%	0,30
N	4,20	0,63	$\mu\text{g/l}$	92%	-0,84
O	5,53	2,2	$\mu\text{g/l}$	121%	2,26
P			$\mu\text{g/l}$		
Q	4,56	0,37	$\mu\text{g/l}$	100%	0,00
R			$\mu\text{g/l}$		
S	4,87	0,97	$\mu\text{g/l}$	107%	0,72
T	4,03	0,4	$\mu\text{g/l}$	88%	-1,24
U			$\mu\text{g/l}$		
V	3,84	0,58	$\mu\text{g/l}$	84%	-1,68
W	4,66	0,319	$\mu\text{g/l}$	102%	0,23
X	4,71	0,7	$\mu\text{g/l}$	103%	0,35
Y	4,80	1,63	$\mu\text{g/l}$	105%	0,56

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	4,64 $\pm 0,28$	4,64 $\pm 0,28$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	101,6 $\pm 6,2$	101,6 $\pm 6,2$	%
SD between labs	0,41	0,41	$\mu\text{g/l}$
RSD between labs	8,9	8,9	%
n for calculation	18	18	



Sample M166B

Parameter Selenium

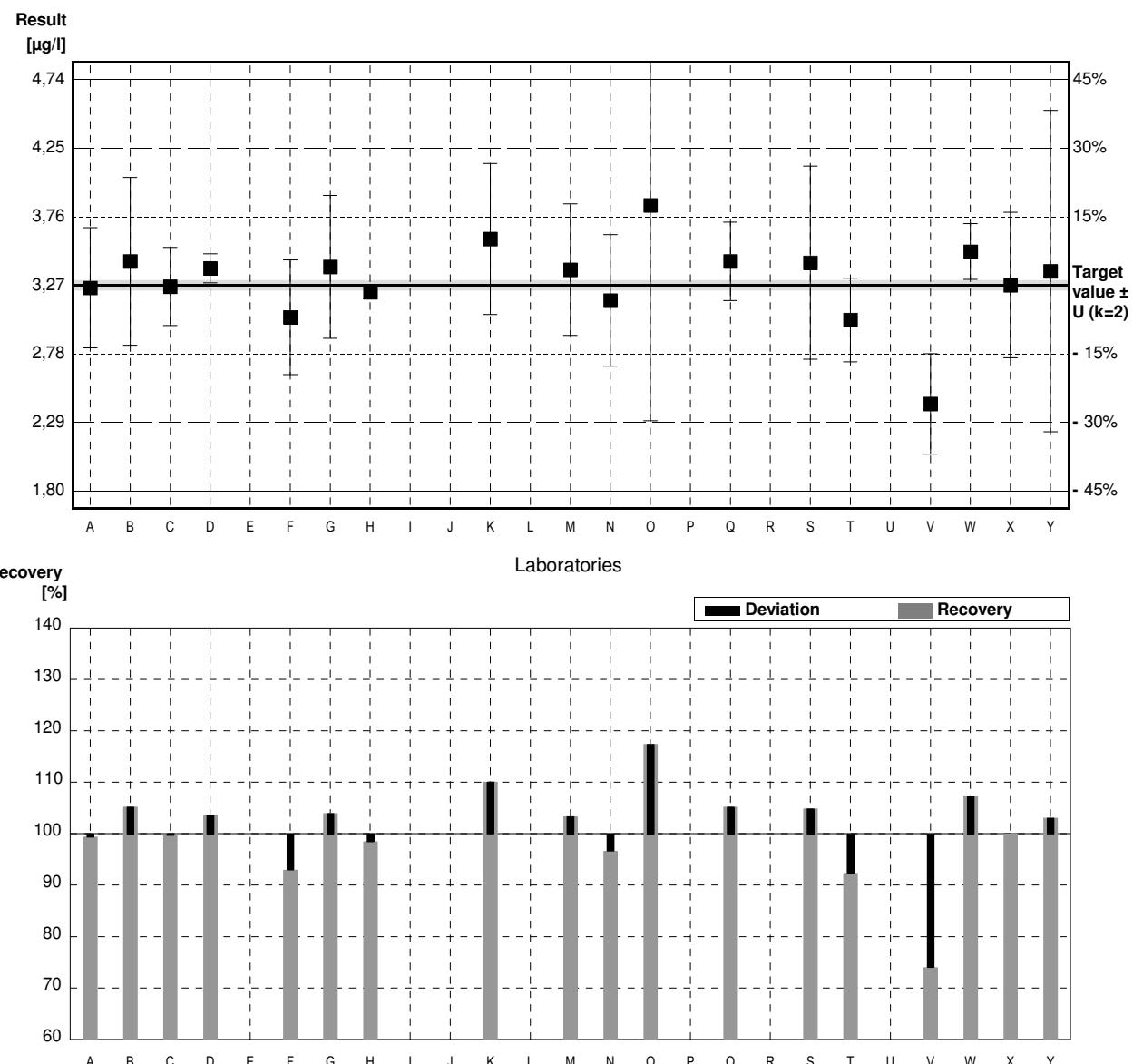
Target value $\pm U$ ($k=2$) 3,27 $\mu\text{g/l}$ \pm 0,04 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 3,23 $\mu\text{g/l}$ \pm 0,37 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	3,25	0,43	$\mu\text{g/l}$	99%	-0,07
B	3,44	0,6	$\mu\text{g/l}$	105%	0,55
C	3,26	0,28	$\mu\text{g/l}$	100%	-0,03
D	3,39	0,104	$\mu\text{g/l}$	104%	0,39
E			$\mu\text{g/l}$		
F	3,04	0,41	$\mu\text{g/l}$	93%	-0,75
G	3,40	0,510	$\mu\text{g/l}$	104%	0,42
H	3,22	0,0482	$\mu\text{g/l}$	98%	-0,16
I			$\mu\text{g/l}$		
J			$\mu\text{g/l}$		
K	3,60	0,54	$\mu\text{g/l}$	110%	1,07
L			$\mu\text{g/l}$		
M	3,38	0,47	$\mu\text{g/l}$	103%	0,36
N	3,16	0,47	$\mu\text{g/l}$	97%	-0,36
O	3,84	1,54	$\mu\text{g/l}$	117%	1,85
P			$\mu\text{g/l}$		
Q	3,44	0,28	$\mu\text{g/l}$	105%	0,55
R			$\mu\text{g/l}$		
S	3,43	0,69	$\mu\text{g/l}$	105%	0,52
T	3,02	0,3	$\mu\text{g/l}$	92%	-0,81
U			$\mu\text{g/l}$		
V	2,42 *	0,36	$\mu\text{g/l}$	74%	-2,77
W	3,51	0,200	$\mu\text{g/l}$	107%	0,78
X	3,27	0,52	$\mu\text{g/l}$	100%	0,00
Y	3,37	1,15	$\mu\text{g/l}$	103%	0,33

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	3,30 $\pm 0,20$	3,35 $\pm 0,14$	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	101,0 $\pm 6,1$	102,6 $\pm 4,3$	%
SD between labs	0,29	0,20	$\mu\text{g/l}$
RSD between labs	8,9	6,0	%
n for calculation	18	17	



Sample M166A

Parameter Uranium

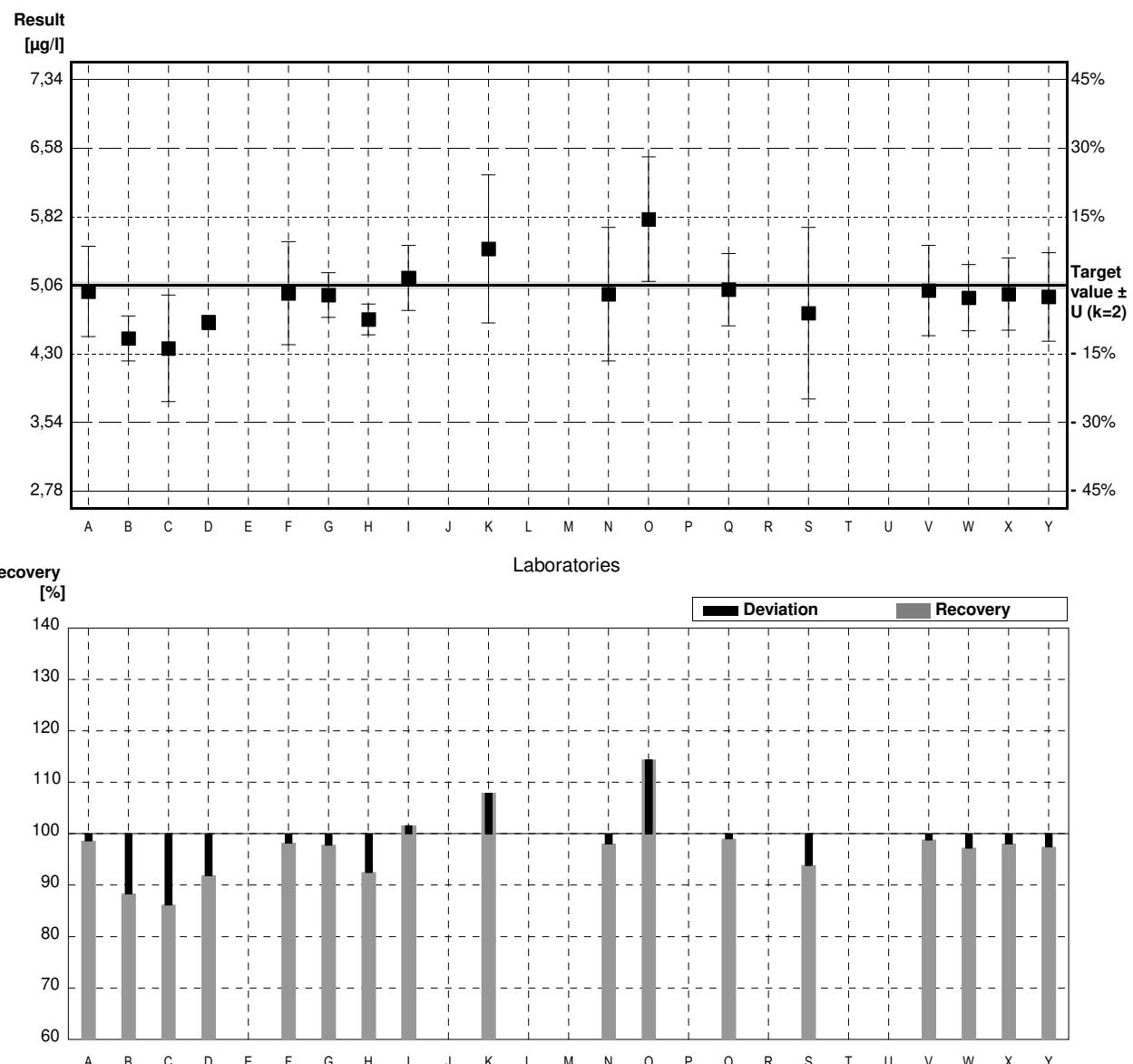
Target value \pm U (k=2) 5,06 µg/l \pm 0,04 µg/l

IFA result \pm U (k=2) 5,2 µg/l \pm 0,6 µg/l

Stability test µg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	4,99	0,50	µg/l	99%	-0,25
B	4,47 *	0,25	µg/l	88%	-2,12
C	4,36 *	0,59	µg/l	86%	-2,52
D	4,65 *	0,067	µg/l	92%	-1,47
E			µg/l		
F	4,97	0,57	µg/l	98%	-0,32
G	4,95	0,248	µg/l	98%	-0,40
H	4,68 *	0,171	µg/l	92%	-1,37
I	5,14	0,36	µg/l	102%	0,29
J			µg/l		
K	5,46 *	0,82	µg/l	108%	1,44
L			µg/l		
M			µg/l		
N	4,96	0,74	µg/l	98%	-0,36
O	5,79 *	0,69	µg/l	114%	2,62
P			µg/l		
Q	5,01	0,40	µg/l	99%	-0,18
R			µg/l		
S	4,75	0,95	µg/l	94%	-1,11
T			µg/l		
U			µg/l		
V	5,0	0,50	µg/l	99%	-0,22
W	4,92	0,366	µg/l	97%	-0,50
X	4,96	0,4	µg/l	98%	-0,36
Y	4,93	0,49	µg/l	97%	-0,47

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	4,94 \pm 0,24	4,96 \pm 0,09	µg/l
Recov. \pm CI(99%)	97,6 \pm 4,7	98,1 \pm 1,7	%
SD between labs	0,33	0,09	µg/l
RSD between labs	6,8	1,8	%
n for calculation	17	11	



Sample M166B

Parameter Uranium

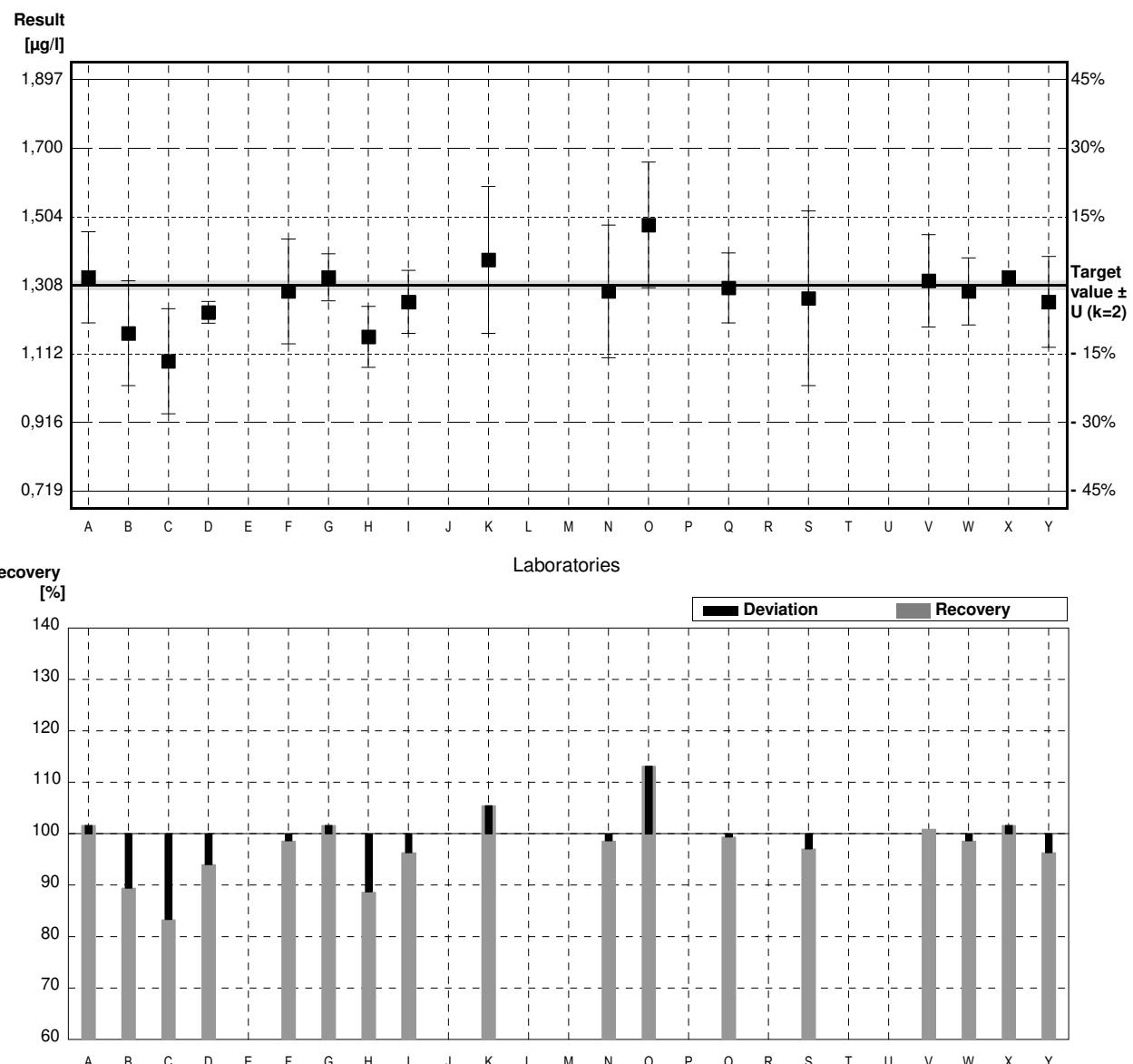
Target value \pm U (k=2) 1,308 µg/l \pm 0,013 µg/l

IFA result \pm U (k=2) 1,31 µg/l \pm 0,15 µg/l

Stability test µg/l

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	1,33	0,13	µg/l	102%	0,31
B	1,17	0,15	µg/l	89%	-1,92
C	1,09 *	0,15	µg/l	83%	-3,03
D	1,23	0,031	µg/l	94%	-1,08
E			µg/l		
F	1,29	0,15	µg/l	99%	-0,25
G	1,33	0,067	µg/l	102%	0,31
H	1,16	0,0872	µg/l	89%	-2,06
I	1,26	0,09	µg/l	96%	-0,67
J			µg/l		
K	1,38	0,21	µg/l	106%	1,00
L			µg/l		
M			µg/l		
N	1,29	0,19	µg/l	99%	-0,25
O	1,48 *	0,18	µg/l	113%	2,39
P			µg/l		
Q	1,30	0,10	µg/l	99%	-0,11
R			µg/l		
S	1,27	0,25	µg/l	97%	-0,53
T			µg/l		
U			µg/l		
V	1,32	0,132	µg/l	101%	0,17
W	1,29	0,096	µg/l	99%	-0,25
X	1,33		µg/l	102%	0,31
Y	1,26	0,13	µg/l	96%	-0,67

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	1,281 \pm 0,063	1,281 \pm 0,046	µg/l
Recov. \pm CI(99%)	97,9 \pm 4,8	97,9 \pm 3,5	%
SD between labs	0,089	0,060	µg/l
RSD between labs	6,9	4,7	%
n for calculation	17	15	



Sample M166A

Parameter Zinc

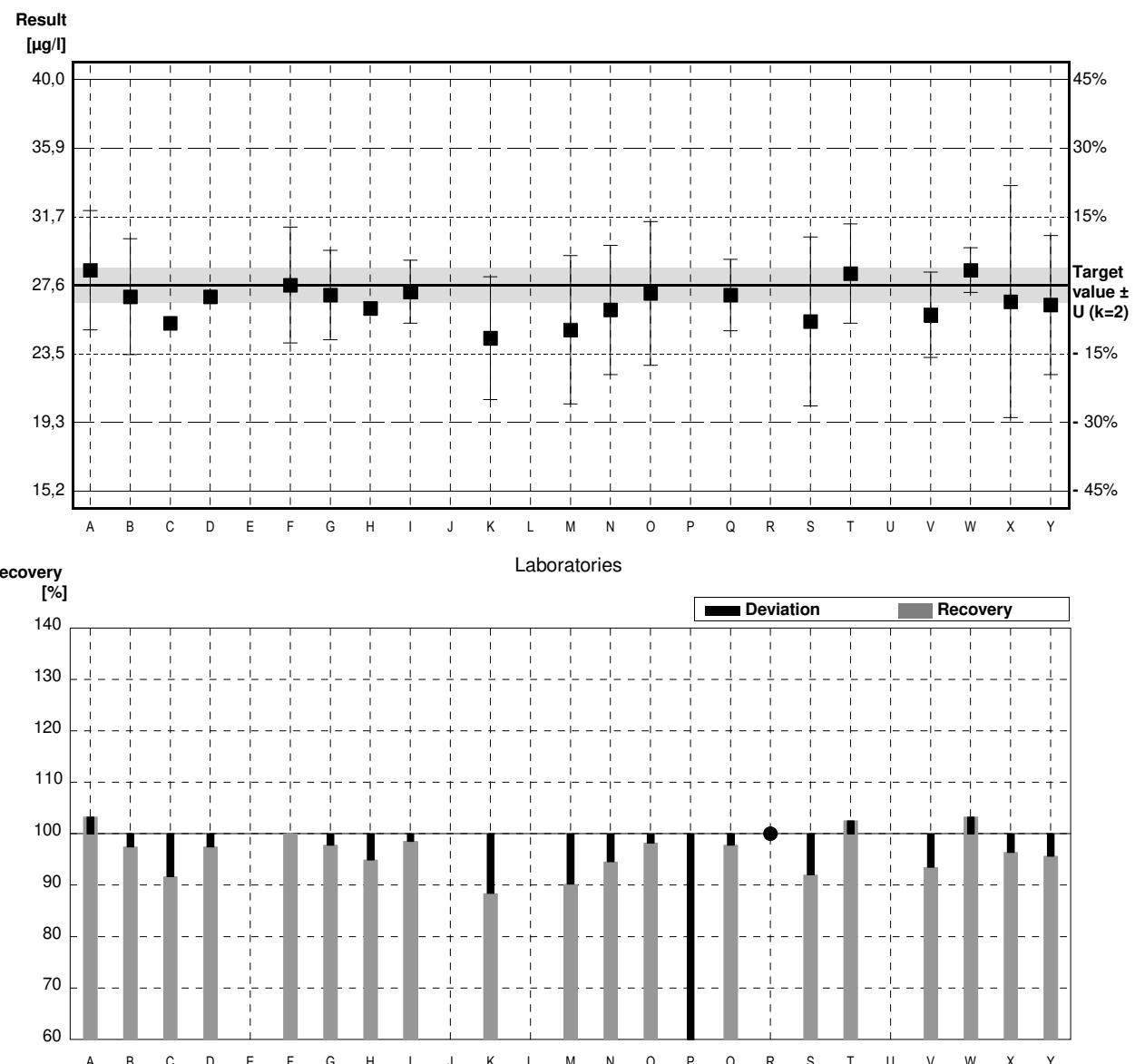
Target value $\pm U$ ($k=2$) 27,6 $\mu\text{g/l}$ \pm 1,0 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 34,9 $\mu\text{g/l}$ \pm 4,0 $\mu\text{g/l}$

Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	28,5	3,6	$\mu\text{g/l}$	103%	0,47
B	26,9	3,5	$\mu\text{g/l}$	97%	-0,36
C	25,3		$\mu\text{g/l}$	92%	-1,19
D	26,9	0,208	$\mu\text{g/l}$	97%	-0,36
E			$\mu\text{g/l}$		
F	27,6	3,50	$\mu\text{g/l}$	100%	0,00
G	27,0	2,70	$\mu\text{g/l}$	98%	-0,31
H	26,2	0,385	$\mu\text{g/l}$	95%	-0,72
I	27,2	1,9	$\mu\text{g/l}$	99%	-0,21
J			$\mu\text{g/l}$		
K	24,4	3,7	$\mu\text{g/l}$	88%	-1,66
L			$\mu\text{g/l}$		
M	24,90	4,48	$\mu\text{g/l}$	90%	-1,40
N	26,1	3,9	$\mu\text{g/l}$	95%	-0,78
O	27,1	4,34	$\mu\text{g/l}$	98%	-0,26
P	4,566 *	0,913	$\mu\text{g/l}$	17%	-11,92
Q	27,0	2,16	$\mu\text{g/l}$	98%	-0,31
R	<500		$\mu\text{g/l}$	*	
S	25,4	5,1	$\mu\text{g/l}$	92%	-1,14
T	28,3	3	$\mu\text{g/l}$	103%	0,36
U			$\mu\text{g/l}$		
V	25,8	2,58	$\mu\text{g/l}$	93%	-0,93
W	28,5	1,35	$\mu\text{g/l}$	103%	0,47
X	26,6	7,0	$\mu\text{g/l}$	96%	-0,52
Y	26,4	4,2	$\mu\text{g/l}$	96%	-0,62

	All results	Outliers excl.	Unit
Mean $\pm CI(99\%)$	25,5 \pm 3,2	26,6 \pm 0,8	$\mu\text{g/l}$
Recov. $\pm CI(99\%)$	92,5 \pm 11,7	96,5 \pm 2,8	%
SD between labs	5,1	1,2	$\mu\text{g/l}$
RSD between labs	19,8	4,3	%
n for calculation	20	19	



Sample M166B

Parameter Zinc

Target value $\pm U$ ($k=2$) 9,6 $\mu\text{g/l}$ \pm 1,0 $\mu\text{g/l}$

IFA result $\pm U$ ($k=2$) 10,3 $\mu\text{g/l}$ \pm 1,5 $\mu\text{g/l}$

Stability test

$\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	10,7	1,6	$\mu\text{g/l}$	111%	1,64
B	10,1	2,1	$\mu\text{g/l}$	105%	0,74
C	8,71		$\mu\text{g/l}$	91%	-1,32
D	9,01	0,232	$\mu\text{g/l}$	94%	-0,88
E			$\mu\text{g/l}$		
F	9,76	1,24	$\mu\text{g/l}$	102%	0,24
G	10,0	1,00	$\mu\text{g/l}$	104%	0,60
H	9,20	0,391	$\mu\text{g/l}$	96%	-0,60
I	9,24	0,65	$\mu\text{g/l}$	96%	-0,54
J			$\mu\text{g/l}$		
K	6,34 *	0,95	$\mu\text{g/l}$	66%	-4,85
L			$\mu\text{g/l}$		
M	8,59	1,54	$\mu\text{g/l}$	89%	-1,50
N	9,77	1,47	$\mu\text{g/l}$	102%	0,25
O	9,60	1,54	$\mu\text{g/l}$	100%	0,00
P	1,828 *	0,366	$\mu\text{g/l}$	19%	-11,57
Q	9,30	0,74	$\mu\text{g/l}$	97%	-0,45
R	<500		$\mu\text{g/l}$	*	
S	8,61	1,72	$\mu\text{g/l}$	90%	-1,47
T	9,00	0,9	$\mu\text{g/l}$	94%	-0,89
U			$\mu\text{g/l}$		
V	8,9	0,89	$\mu\text{g/l}$	93%	-1,04
W	8,8	0,416	$\mu\text{g/l}$	92%	-1,19
X	<10		$\mu\text{g/l}$	*	
Y	9,27	1,48	$\mu\text{g/l}$	97%	-0,49

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	8,8 \pm 1,3	9,3 \pm 0,4	$\mu\text{g/l}$
Recov. \pm CI(99%)	91,4 \pm 13,1	97,2 \pm 4,3	%
SD between labs	1,9	0,6	$\mu\text{g/l}$
RSD between labs	21,6	6,3	%
n for calculation	19	17	

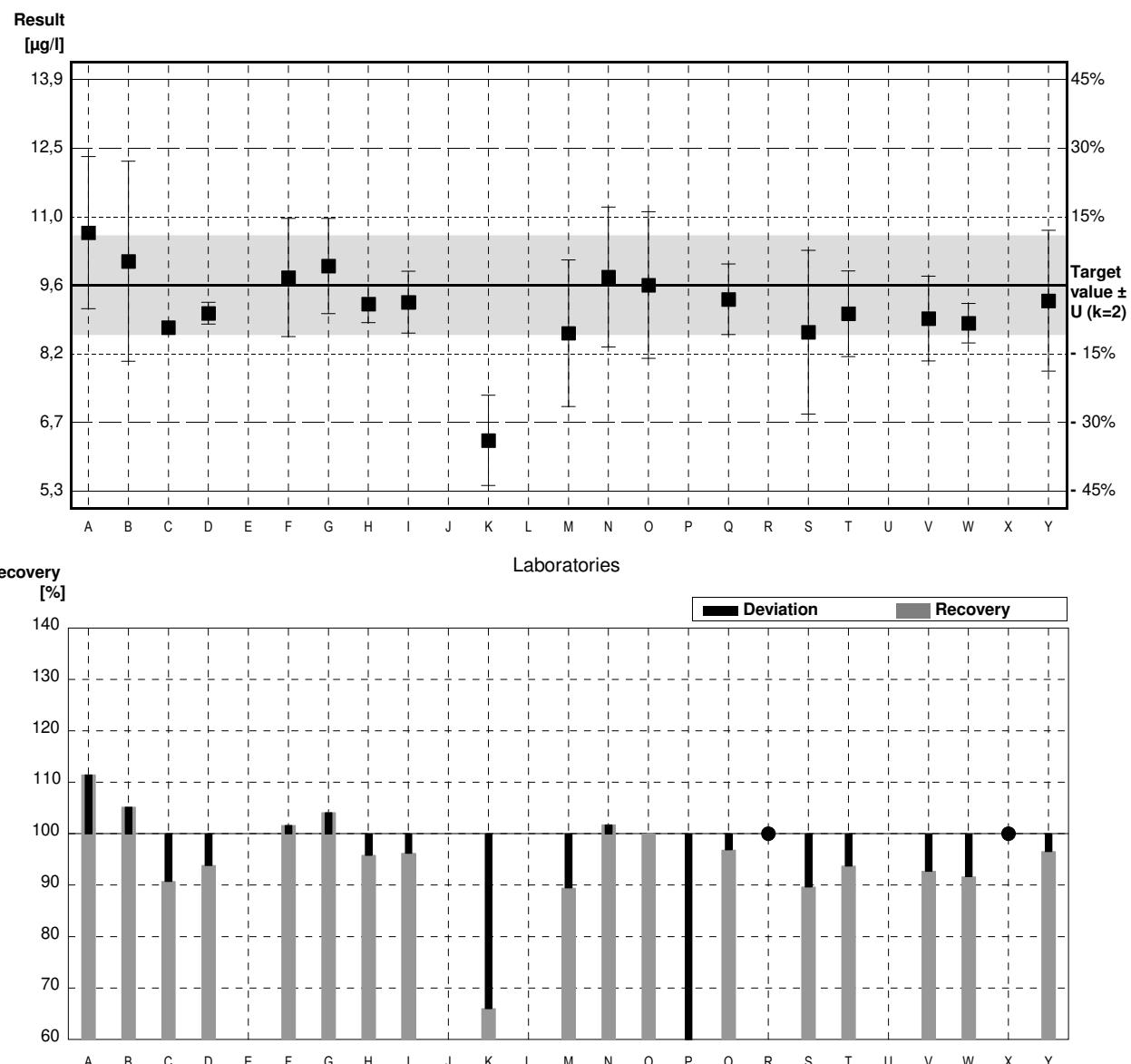


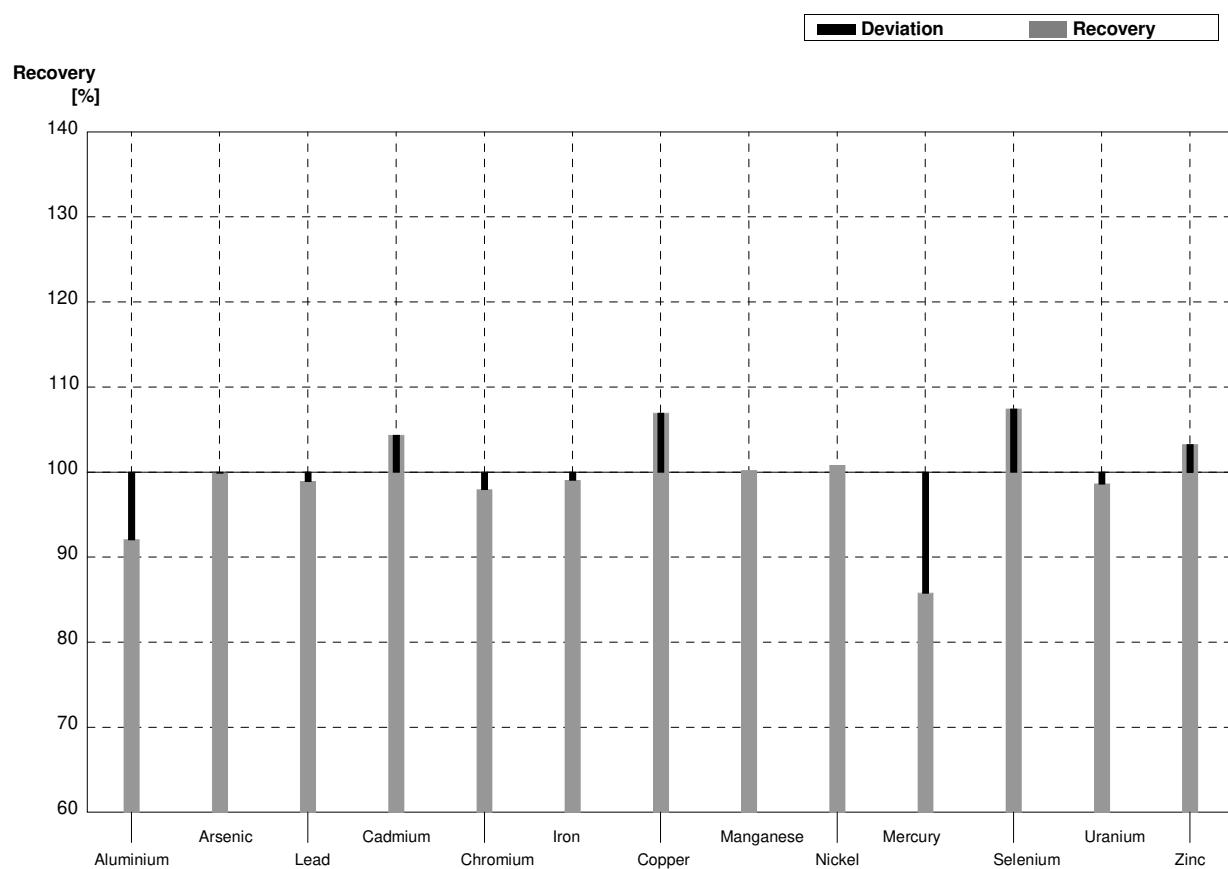
Illustration of Results Laboratory Oriented Part

**Round M166
Metals**

Sample Dispatch: 6 March 2023

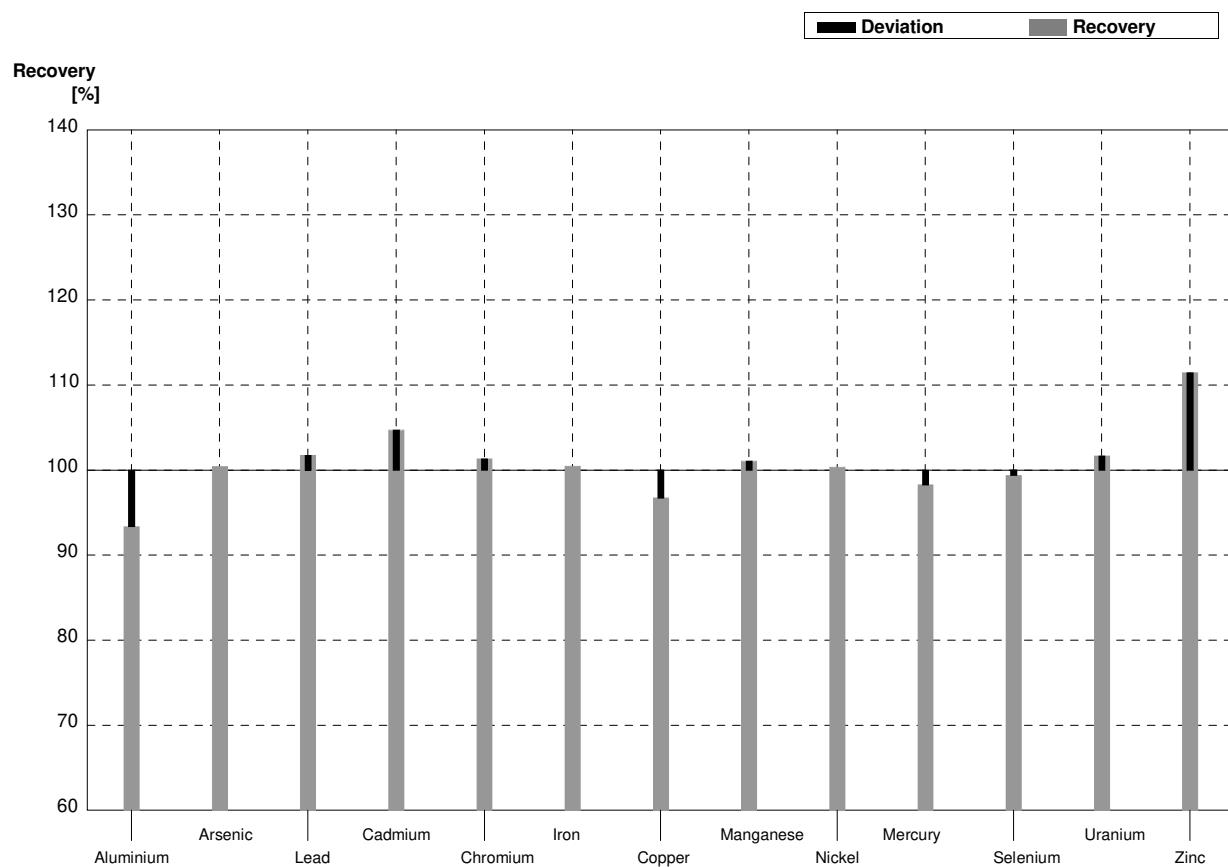
Sample M166A**Laboratory A**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	39,5	5,3	$\mu\text{g/l}$	92%
Arsenic	2,302	0,018	2,30	0,37	$\mu\text{g/l}$	100%
Lead	4,63	0,03	4,58	0,55	$\mu\text{g/l}$	99%
Cadmium	0,805	0,004	0,84	0,11	$\mu\text{g/l}$	104%
Chromium	6,40	0,05	6,27	0,96	$\mu\text{g/l}$	98%
Iron	83,9	0,3	83,1	8,4	$\mu\text{g/l}$	99%
Copper	5,48	0,05	5,86	0,73	$\mu\text{g/l}$	107%
Manganese	23,55	0,17	23,6	2,5	$\mu\text{g/l}$	100%
Nickel	4,87	0,04	4,91	0,78	$\mu\text{g/l}$	101%
Mercury	0,359	0,015	0,308	0,043	$\mu\text{g/l}$	86%
Selenium	4,56	0,04	4,90	0,59	$\mu\text{g/l}$	107%
Uranium	5,06	0,04	4,99	0,50	$\mu\text{g/l}$	99%
Zinc	27,6	1,0	28,5	3,6	$\mu\text{g/l}$	103%



Sample M166B**Laboratory A**

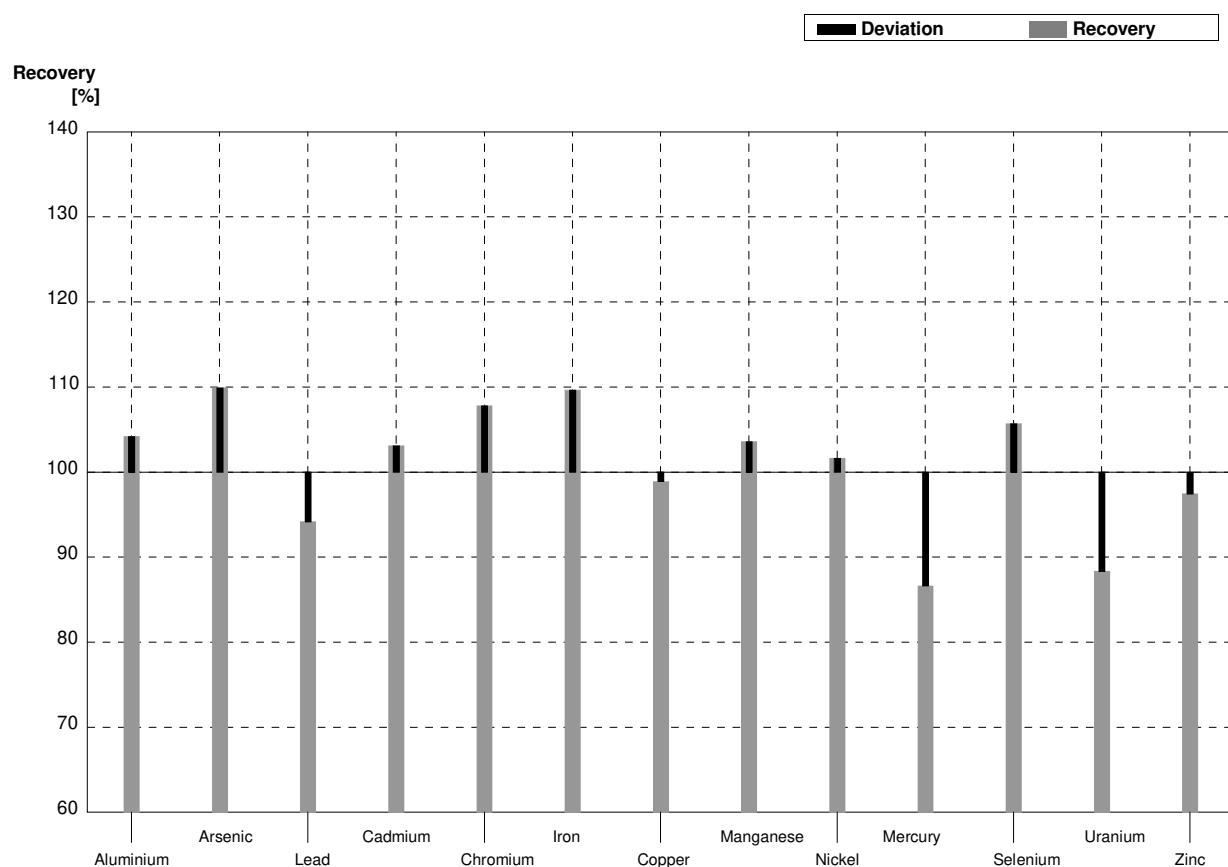
Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	60,5	7,7	$\mu\text{g/l}$	93%
Arsenic	4,54	0,03	4,56	0,64	$\mu\text{g/l}$	100%
Lead	1,189	0,015	1,21	0,15	$\mu\text{g/l}$	102%
Cadmium	1,671	0,013	1,75	0,23	$\mu\text{g/l}$	105%
Chromium	3,76	0,03	3,81	0,61	$\mu\text{g/l}$	101%
Iron	44,0	0,2	44,2	4,6	$\mu\text{g/l}$	100%
Copper	24,81	0,13	24,0	2,7	$\mu\text{g/l}$	97%
Manganese	46,0	0,3	46,5	4,6	$\mu\text{g/l}$	101%
Nickel	5,59	0,04	5,61	0,86	$\mu\text{g/l}$	100%
Mercury	1,75	0,02	1,72	0,24	$\mu\text{g/l}$	98%
Selenium	3,27	0,04	3,25	0,43	$\mu\text{g/l}$	99%
Uranium	1,308	0,013	1,33	0,13	$\mu\text{g/l}$	102%
Zinc	9,6	1,0	10,7	1,6	$\mu\text{g/l}$	111%



Sample M166A

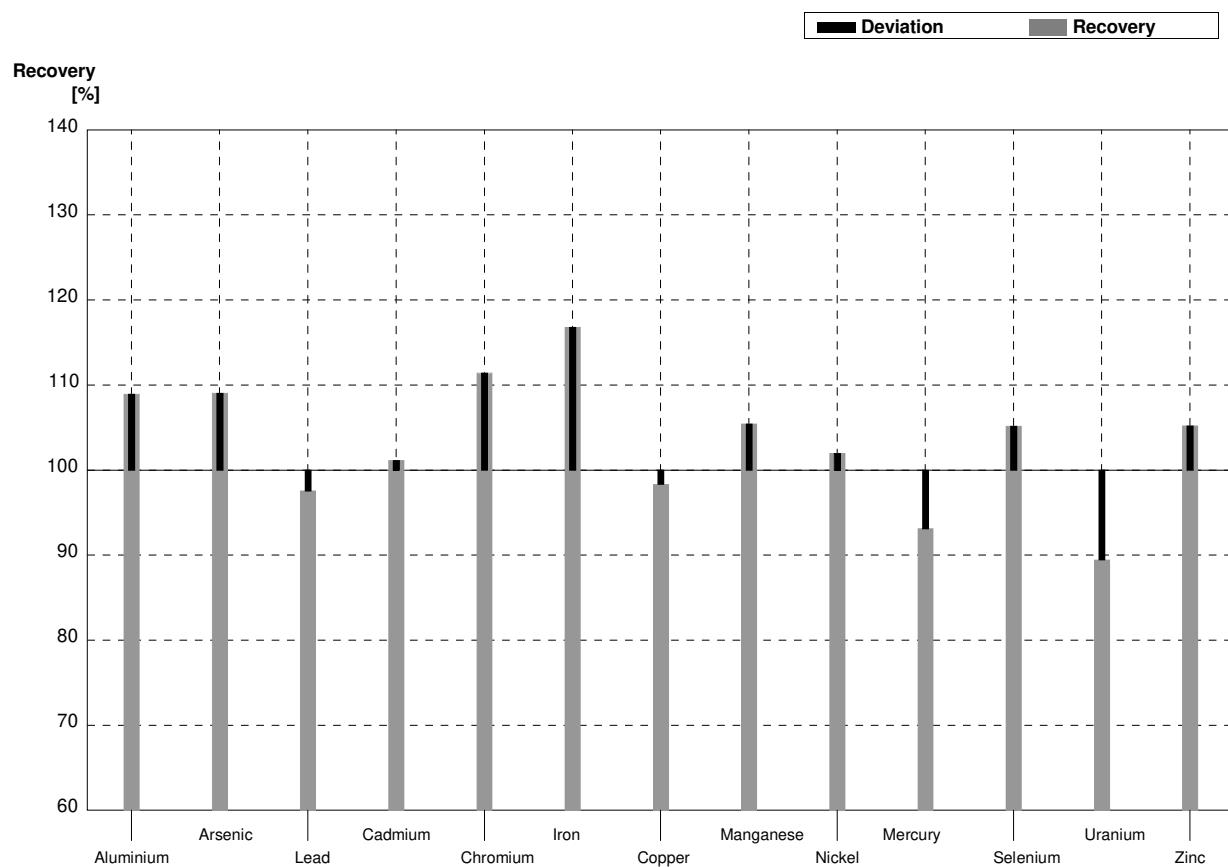
Laboratory B

Parameter	Target value	$\pm U$ (k=2)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	44,7	6	$\mu\text{g/l}$	104%
Arsenic	2,302	0,018	2,53	0,3	$\mu\text{g/l}$	110%
Lead	4,63	0,03	4,36	0,3	$\mu\text{g/l}$	94%
Cadmium	0,805	0,004	0,83	0,15	$\mu\text{g/l}$	103%
Chromium	6,40	0,05	6,9	0,7	$\mu\text{g/l}$	108%
Iron	83,9	0,3	92	12	$\mu\text{g/l}$	110%
Copper	5,48	0,05	5,42	0,52	$\mu\text{g/l}$	99%
Manganese	23,55	0,17	24,4	3	$\mu\text{g/l}$	104%
Nickel	4,87	0,04	4,95	0,5	$\mu\text{g/l}$	102%
Mercury	0,359	0,015	0,311	0,05	$\mu\text{g/l}$	87%
Selenium	4,56	0,04	4,82	0,7	$\mu\text{g/l}$	106%
Uranium	5,06	0,04	4,47	0,25	$\mu\text{g/l}$	88%
Zinc	27,6	1,0	26,9	3,5	$\mu\text{g/l}$	97%



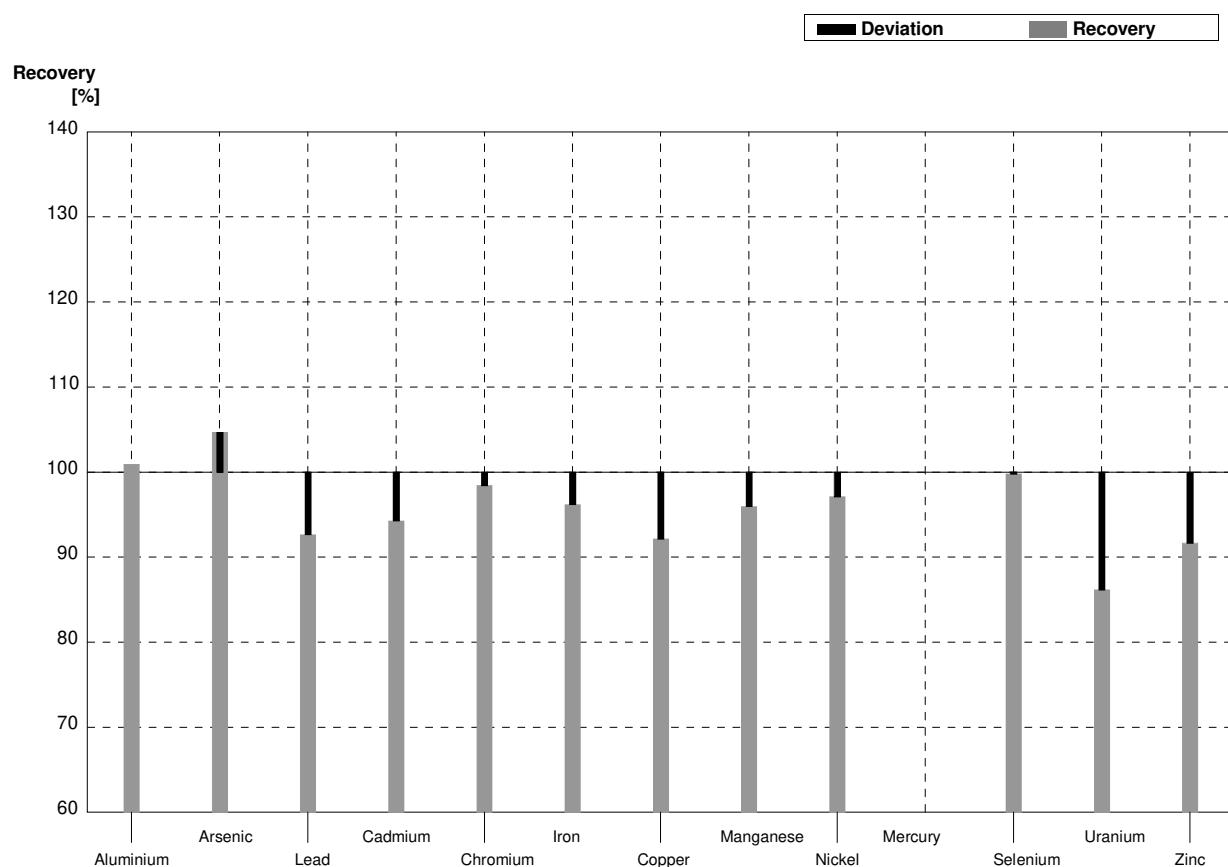
Sample M166B**Laboratory B**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	70,6	8	$\mu\text{g/l}$	109%
Arsenic	4,54	0,03	4,95	0,5	$\mu\text{g/l}$	109%
Lead	1,189	0,015	1,16	0,12	$\mu\text{g/l}$	98%
Cadmium	1,671	0,013	1,69	0,3	$\mu\text{g/l}$	101%
Chromium	3,76	0,03	4,19	0,6	$\mu\text{g/l}$	111%
Iron	44,0	0,2	51,4	8	$\mu\text{g/l}$	117%
Copper	24,81	0,13	24,4	3	$\mu\text{g/l}$	98%
Manganese	46,0	0,3	48,5	4	$\mu\text{g/l}$	105%
Nickel	5,59	0,04	5,7	0,5	$\mu\text{g/l}$	102%
Mercury	1,75	0,02	1,63	0,12	$\mu\text{g/l}$	93%
Selenium	3,27	0,04	3,44	0,6	$\mu\text{g/l}$	105%
Uranium	1,308	0,013	1,17	0,15	$\mu\text{g/l}$	89%
Zinc	9,6	1,0	10,1	2,1	$\mu\text{g/l}$	105%



Sample M166A**Laboratory C**

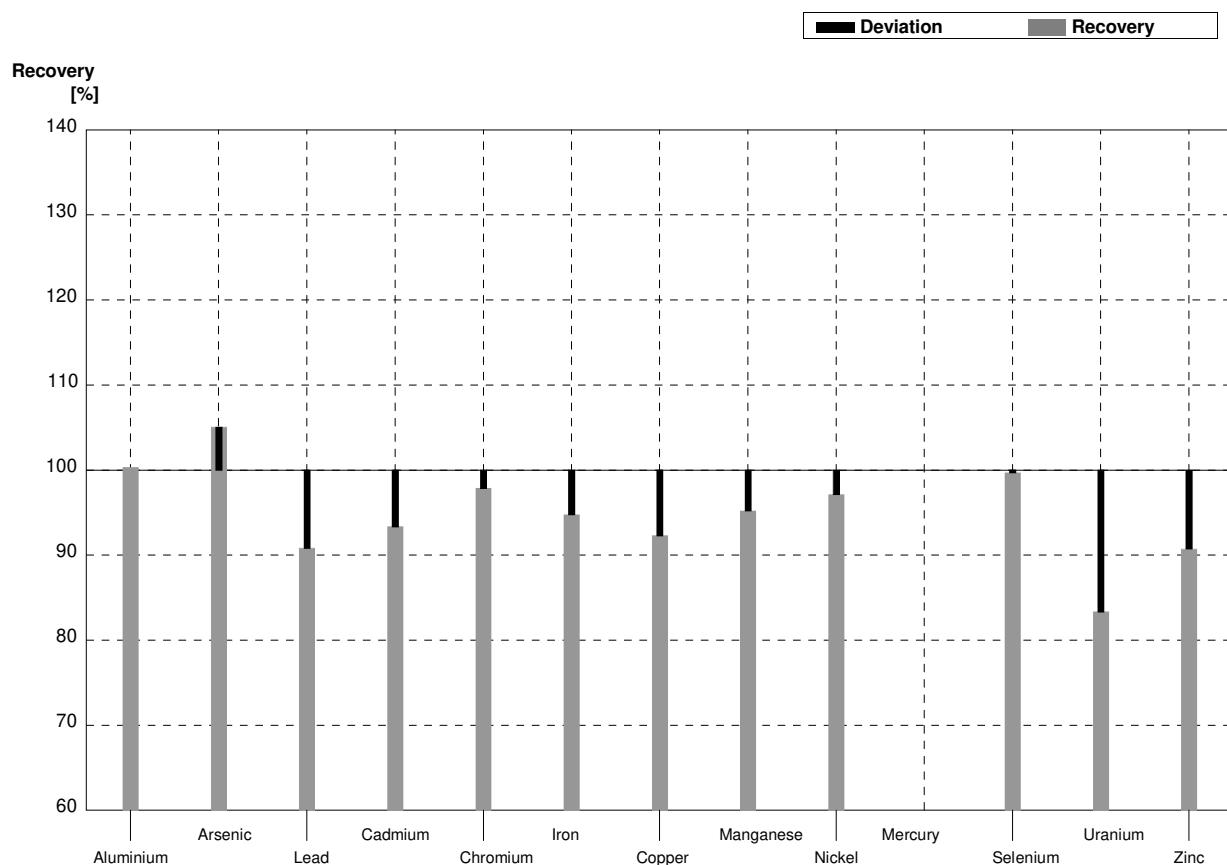
Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	43,3	4,2	$\mu\text{g/l}$	101%
Arsenic	2,302	0,018	2,41	0,17	$\mu\text{g/l}$	105%
Lead	4,63	0,03	4,29	0,47	$\mu\text{g/l}$	93%
Cadmium	0,805	0,004	0,759	0,13	$\mu\text{g/l}$	94%
Chromium	6,40	0,05	6,30	0,35	$\mu\text{g/l}$	98%
Iron	83,9	0,3	80,7	8,55	$\mu\text{g/l}$	96%
Copper	5,48	0,05	5,05	0,32	$\mu\text{g/l}$	92%
Manganese	23,55	0,17	22,6	1,19	$\mu\text{g/l}$	96%
Nickel	4,87	0,04	4,73	0,39	$\mu\text{g/l}$	97%
Mercury	0,359	0,015			$\mu\text{g/l}$	
Selenium	4,56	0,04	4,55	0,39	$\mu\text{g/l}$	100%
Uranium	5,06	0,04	4,36	0,59	$\mu\text{g/l}$	86%
Zinc	27,6	1,0	25,3		$\mu\text{g/l}$	92%



Sample M166B

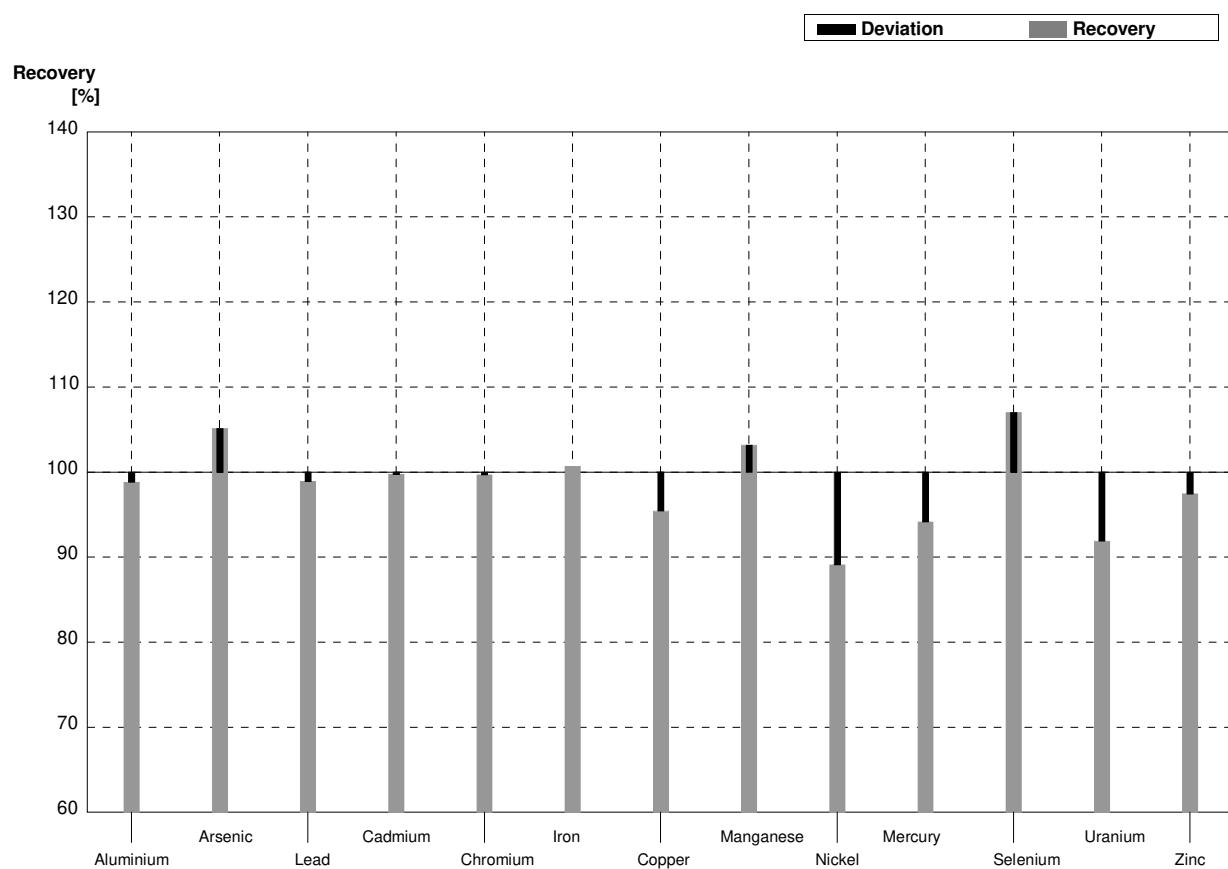
Laboratory C

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	65,0	6,37	$\mu\text{g/l}$	100%
Arsenic	4,54	0,03	4,77	0,32	$\mu\text{g/l}$	105%
Lead	1,189	0,015	1,08	0,11	$\mu\text{g/l}$	91%
Cadmium	1,671	0,013	1,56	0,27	$\mu\text{g/l}$	93%
Chromium	3,76	0,03	3,68	0,20	$\mu\text{g/l}$	98%
Iron	44,0	0,2	41,7	4,4	$\mu\text{g/l}$	95%
Copper	24,81	0,13	22,9	1,46	$\mu\text{g/l}$	92%
Manganese	46,0	0,3	43,8	2,32	$\mu\text{g/l}$	95%
Nickel	5,59	0,04	5,43	0,29	$\mu\text{g/l}$	97%
Mercury	1,75	0,02			$\mu\text{g/l}$	
Selenium	3,27	0,04	3,26	0,28	$\mu\text{g/l}$	100%
Uranium	1,308	0,013	1,09	0,15	$\mu\text{g/l}$	83%
Zinc	9,6	1,0	8,71		$\mu\text{g/l}$	91%



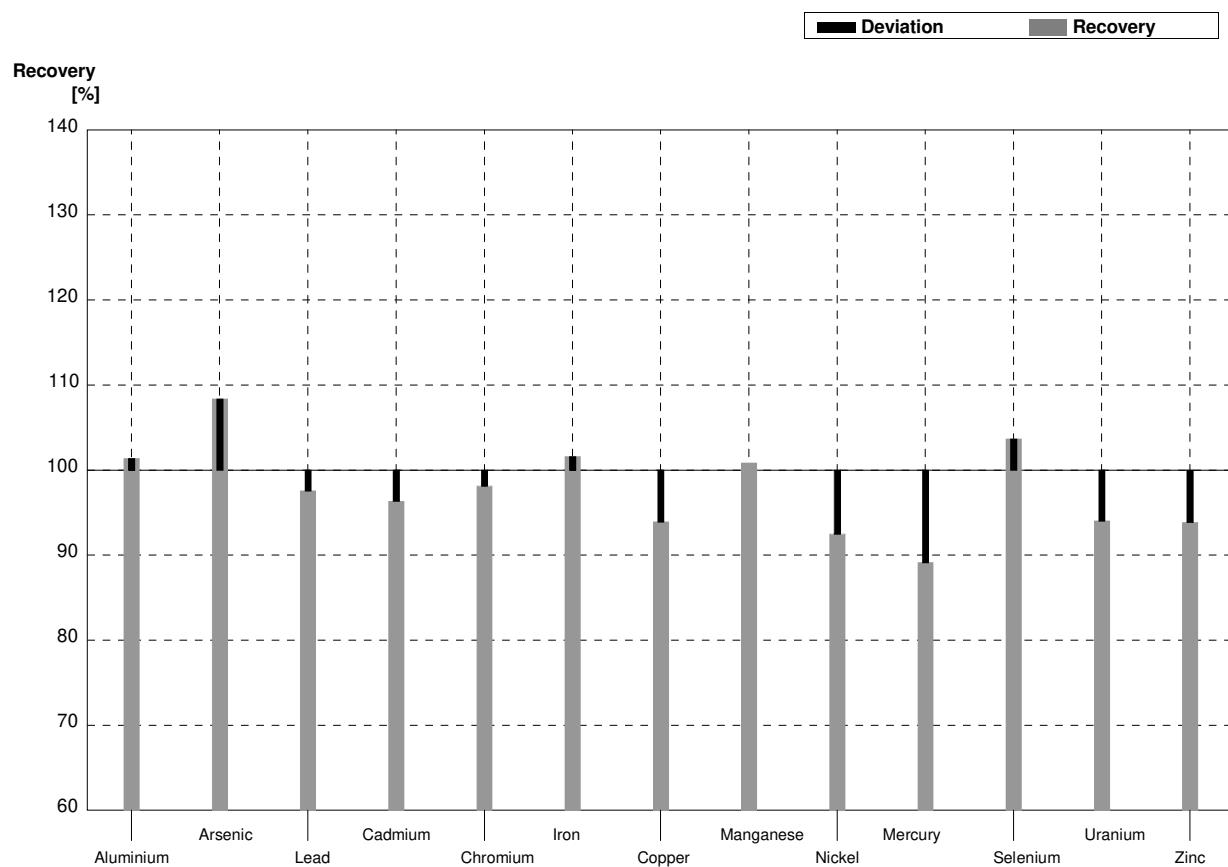
Sample M166A**Laboratory D**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	42,4	0,971	$\mu\text{g/l}$	99%
Arsenic	2,302	0,018	2,42	0,044	$\mu\text{g/l}$	105%
Lead	4,63	0,03	4,58	0,006	$\mu\text{g/l}$	99%
Cadmium	0,805	0,004	0,803	0,016	$\mu\text{g/l}$	100%
Chromium	6,40	0,05	6,38	0,026	$\mu\text{g/l}$	100%
Iron	83,9	0,3	84,5	0,781	$\mu\text{g/l}$	101%
Copper	5,48	0,05	5,23	0,040	$\mu\text{g/l}$	95%
Manganese	23,55	0,17	24,3	0,153	$\mu\text{g/l}$	103%
Nickel	4,87	0,04	4,34	0,026	$\mu\text{g/l}$	89%
Mercury	0,359	0,015	0,338	0,007	$\mu\text{g/l}$	94%
Selenium	4,56	0,04	4,88	0,079	$\mu\text{g/l}$	107%
Uranium	5,06	0,04	4,65	0,067	$\mu\text{g/l}$	92%
Zinc	27,6	1,0	26,9	0,208	$\mu\text{g/l}$	97%



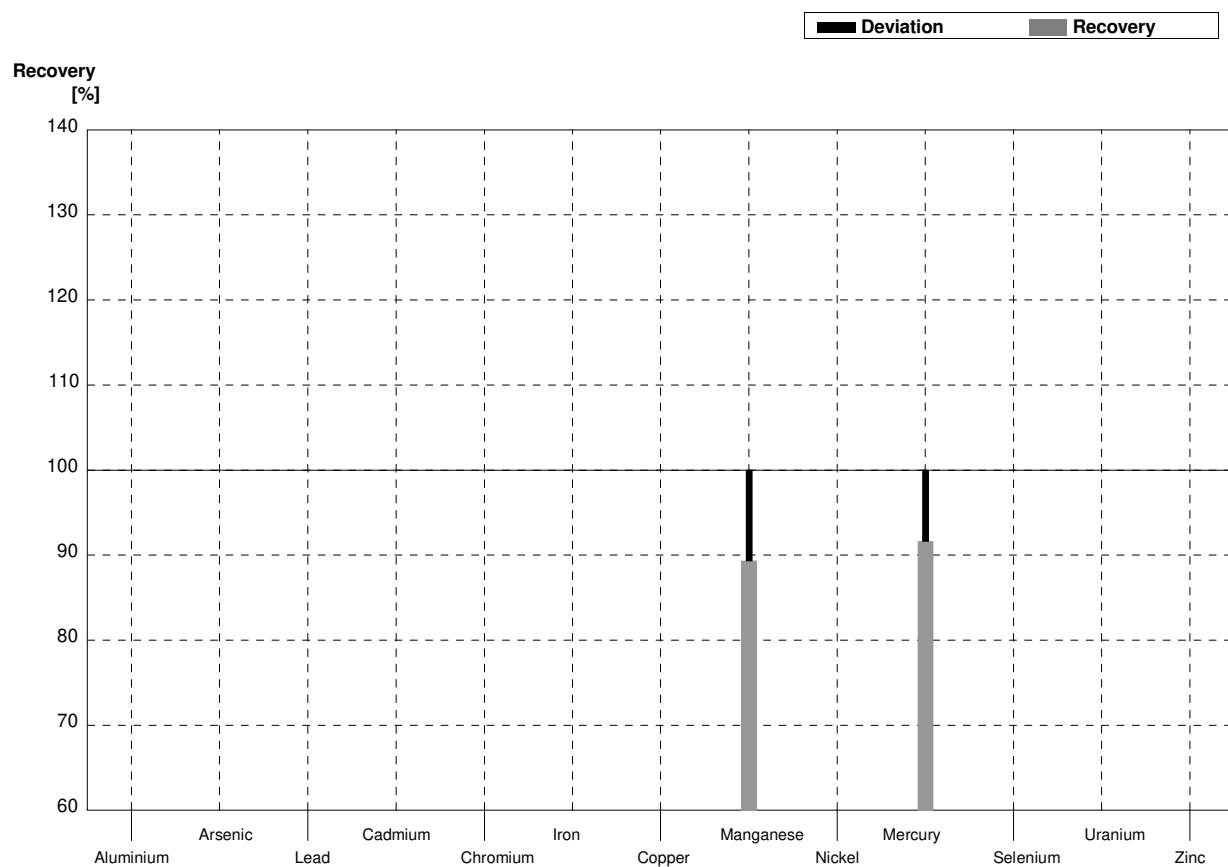
Sample M166B**Laboratory D**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	65,7	1,4	$\mu\text{g/l}$	101%
Arsenic	4,54	0,03	4,92	0,104	$\mu\text{g/l}$	108%
Lead	1,189	0,015	1,16	0,038	$\mu\text{g/l}$	98%
Cadmium	1,671	0,013	1,61	0,032	$\mu\text{g/l}$	96%
Chromium	3,76	0,03	3,69	0,045	$\mu\text{g/l}$	98%
Iron	44,0	0,2	44,7	0,351	$\mu\text{g/l}$	102%
Copper	24,81	0,13	23,3	0,058	$\mu\text{g/l}$	94%
Manganese	46,0	0,3	46,4	0,265	$\mu\text{g/l}$	101%
Nickel	5,59	0,04	5,17	0,083	$\mu\text{g/l}$	92%
Mercury	1,75	0,02	1,56	0,040	$\mu\text{g/l}$	89%
Selenium	3,27	0,04	3,39	0,104	$\mu\text{g/l}$	104%
Uranium	1,308	0,013	1,23	0,031	$\mu\text{g/l}$	94%
Zinc	9,6	1,0	9,01	0,232	$\mu\text{g/l}$	94%



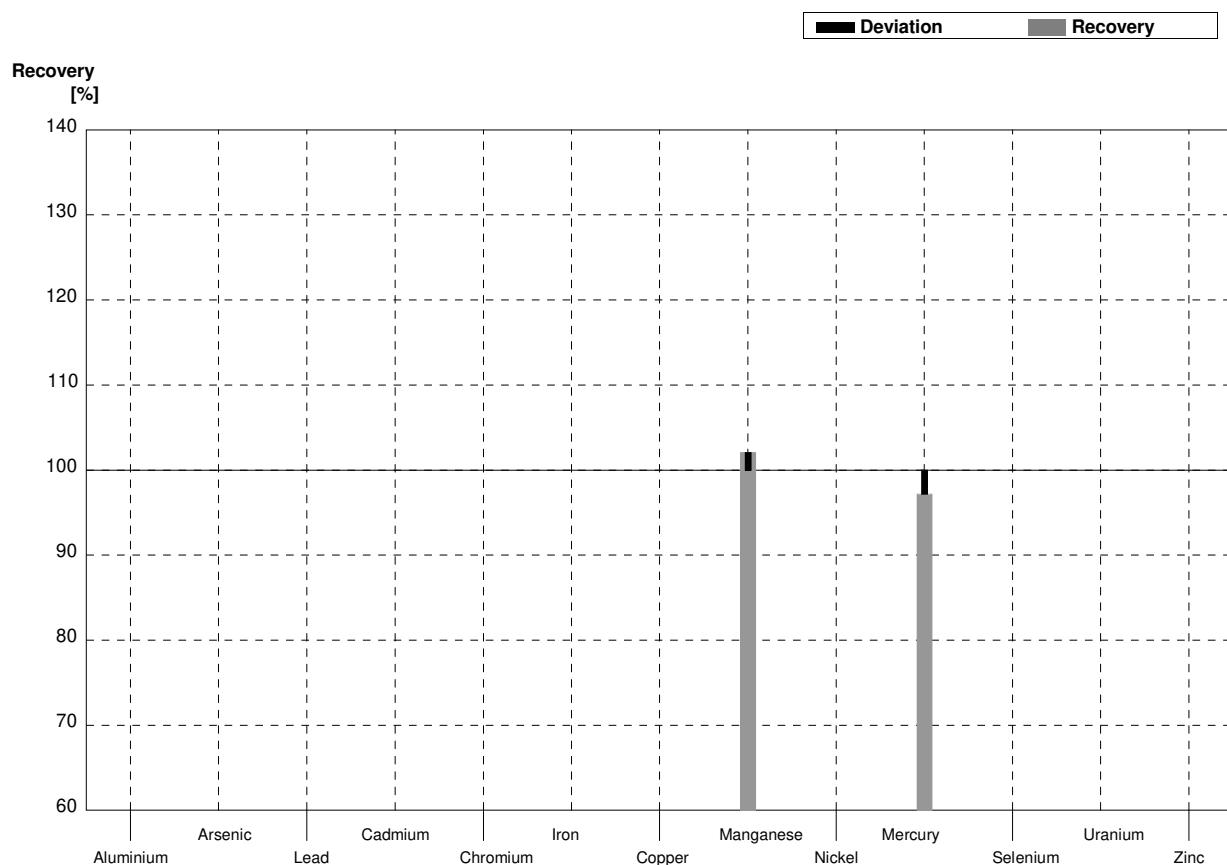
Sample M166A**Laboratory E**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3			$\mu\text{g/l}$	
Arsenic	2,302	0,018			$\mu\text{g/l}$	
Lead	4,63	0,03			$\mu\text{g/l}$	
Cadmium	0,805	0,004			$\mu\text{g/l}$	
Chromium	6,40	0,05			$\mu\text{g/l}$	
Iron	83,9	0,3			$\mu\text{g/l}$	
Copper	5,48	0,05			$\mu\text{g/l}$	
Manganese	23,55	0,17	21,04		$\mu\text{g/l}$	89%
Nickel	4,87	0,04			$\mu\text{g/l}$	
Mercury	0,359	0,015	0,329		$\mu\text{g/l}$	92%
Selenium	4,56	0,04			$\mu\text{g/l}$	
Uranium	5,06	0,04			$\mu\text{g/l}$	
Zinc	27,6	1,0			$\mu\text{g/l}$	



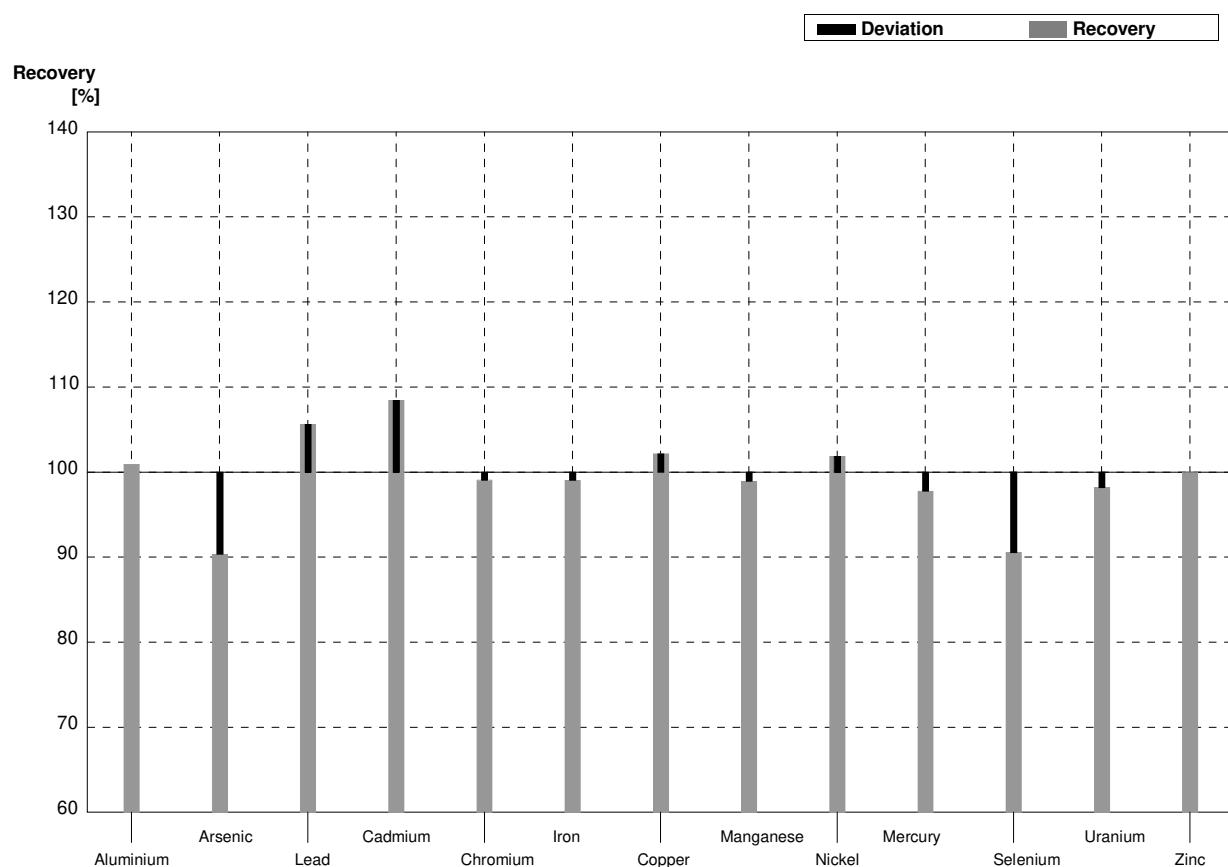
Sample M166B**Laboratory E**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4			$\mu\text{g/l}$	
Arsenic	4,54	0,03			$\mu\text{g/l}$	
Lead	1,189	0,015			$\mu\text{g/l}$	
Cadmium	1,671	0,013			$\mu\text{g/l}$	
Chromium	3,76	0,03			$\mu\text{g/l}$	
Iron	44,0	0,2			$\mu\text{g/l}$	
Copper	24,81	0,13			$\mu\text{g/l}$	
Manganese	46,0	0,3	46,96		$\mu\text{g/l}$	102%
Nickel	5,59	0,04			$\mu\text{g/l}$	
Mercury	1,75	0,02	1,701		$\mu\text{g/l}$	97%
Selenium	3,27	0,04			$\mu\text{g/l}$	
Uranium	1,308	0,013			$\mu\text{g/l}$	
Zinc	9,6	1,0			$\mu\text{g/l}$	



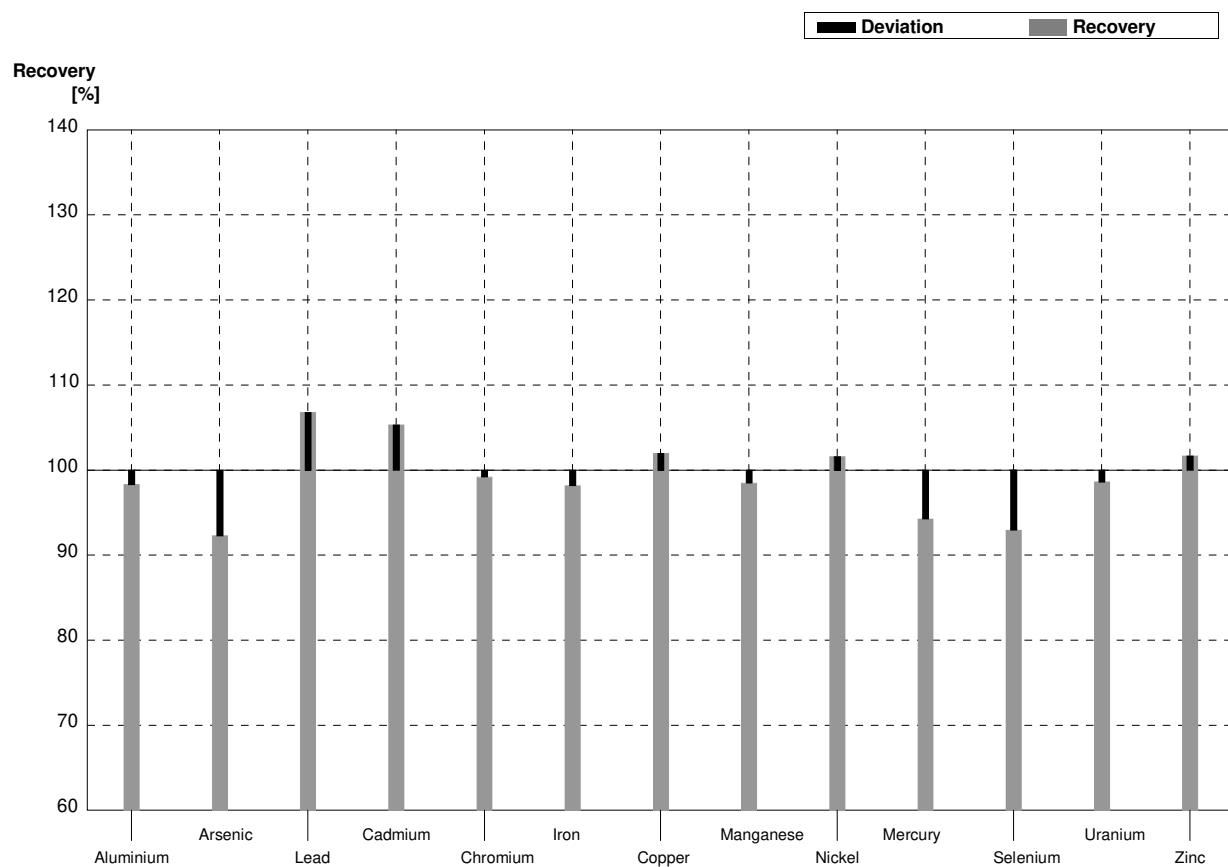
Sample M166A**Laboratory F**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	43,3	4,48	$\mu\text{g/l}$	101%
Arsenic	2,302	0,018	2,08	0,26	$\mu\text{g/l}$	90%
Lead	4,63	0,03	4,89	0,71	$\mu\text{g/l}$	106%
Cadmium	0,805	0,004	0,873	0,118	$\mu\text{g/l}$	108%
Chromium	6,40	0,05	6,34	0,63	$\mu\text{g/l}$	99%
Iron	83,9	0,3	83,1	8,89	$\mu\text{g/l}$	99%
Copper	5,48	0,05	5,60	0,71	$\mu\text{g/l}$	102%
Manganese	23,55	0,17	23,3	1,52	$\mu\text{g/l}$	99%
Nickel	4,87	0,04	4,96	0,62	$\mu\text{g/l}$	102%
Mercury	0,359	0,015	0,351	0,064	$\mu\text{g/l}$	98%
Selenium	4,56	0,04	4,13	0,56	$\mu\text{g/l}$	91%
Uranium	5,06	0,04	4,97	0,57	$\mu\text{g/l}$	98%
Zinc	27,6	1,0	27,6	3,50	$\mu\text{g/l}$	100%



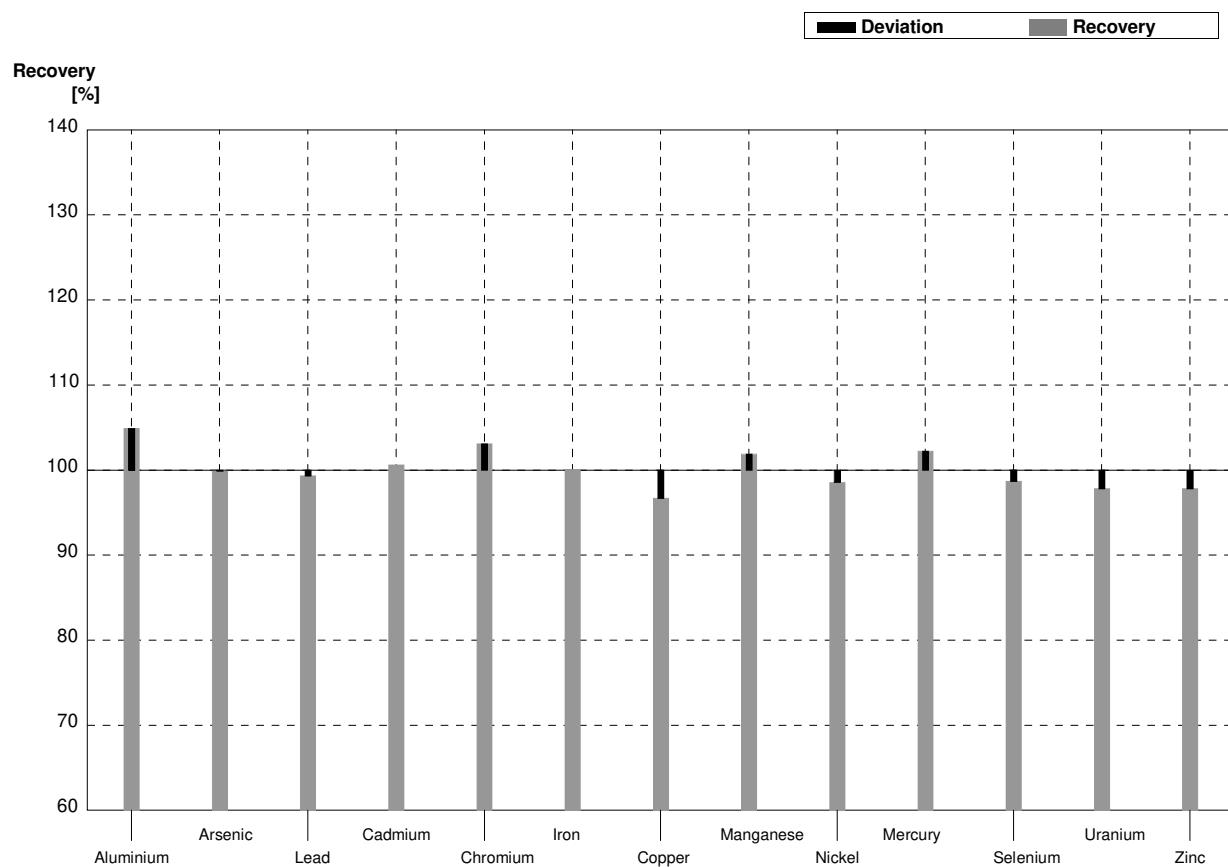
Sample M166B**Laboratory F**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	63,7	6,59	$\mu\text{g/l}$	98%
Arsenic	4,54	0,03	4,19	0,53	$\mu\text{g/l}$	92%
Lead	1,189	0,015	1,27	0,18	$\mu\text{g/l}$	107%
Cadmium	1,671	0,013	1,76	0,237	$\mu\text{g/l}$	105%
Chromium	3,76	0,03	3,73	0,37	$\mu\text{g/l}$	99%
Iron	44,0	0,2	43,2	4,62	$\mu\text{g/l}$	98%
Copper	24,81	0,13	25,3	3,19	$\mu\text{g/l}$	102%
Manganese	46,0	0,3	45,3	2,95	$\mu\text{g/l}$	98%
Nickel	5,59	0,04	5,68	0,71	$\mu\text{g/l}$	102%
Mercury	1,75	0,02	1,65	0,30	$\mu\text{g/l}$	94%
Selenium	3,27	0,04	3,04	0,41	$\mu\text{g/l}$	93%
Uranium	1,308	0,013	1,29	0,15	$\mu\text{g/l}$	99%
Zinc	9,6	1,0	9,76	1,24	$\mu\text{g/l}$	102%



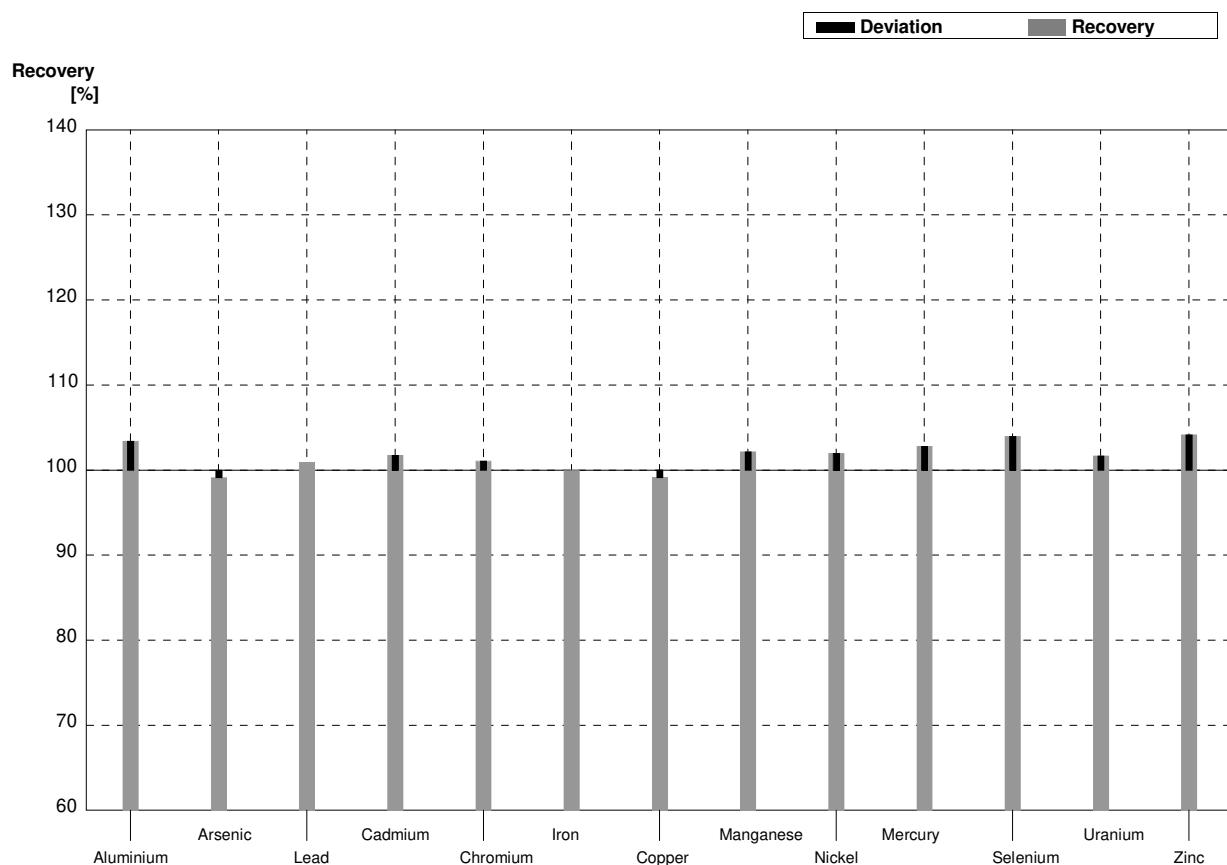
Sample M166A**Laboratory G**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	45,0	4,50	$\mu\text{g/l}$	105%
Arsenic	2,302	0,018	2,30	0,276	$\mu\text{g/l}$	100%
Lead	4,63	0,03	4,60	0,368	$\mu\text{g/l}$	99%
Cadmium	0,805	0,004	0,810	0,0648	$\mu\text{g/l}$	101%
Chromium	6,40	0,05	6,60	0,792	$\mu\text{g/l}$	103%
Iron	83,9	0,3	84,0	21,84	$\mu\text{g/l}$	100%
Copper	5,48	0,05	5,30	0,424	$\mu\text{g/l}$	97%
Manganese	23,55	0,17	24,0	2,40	$\mu\text{g/l}$	102%
Nickel	4,87	0,04	4,80	0,480	$\mu\text{g/l}$	99%
Mercury	0,359	0,015	0,367	0,055	$\mu\text{g/l}$	102%
Selenium	4,56	0,04	4,50	0,675	$\mu\text{g/l}$	99%
Uranium	5,06	0,04	4,95	0,248	$\mu\text{g/l}$	98%
Zinc	27,6	1,0	27,0	2,70	$\mu\text{g/l}$	98%



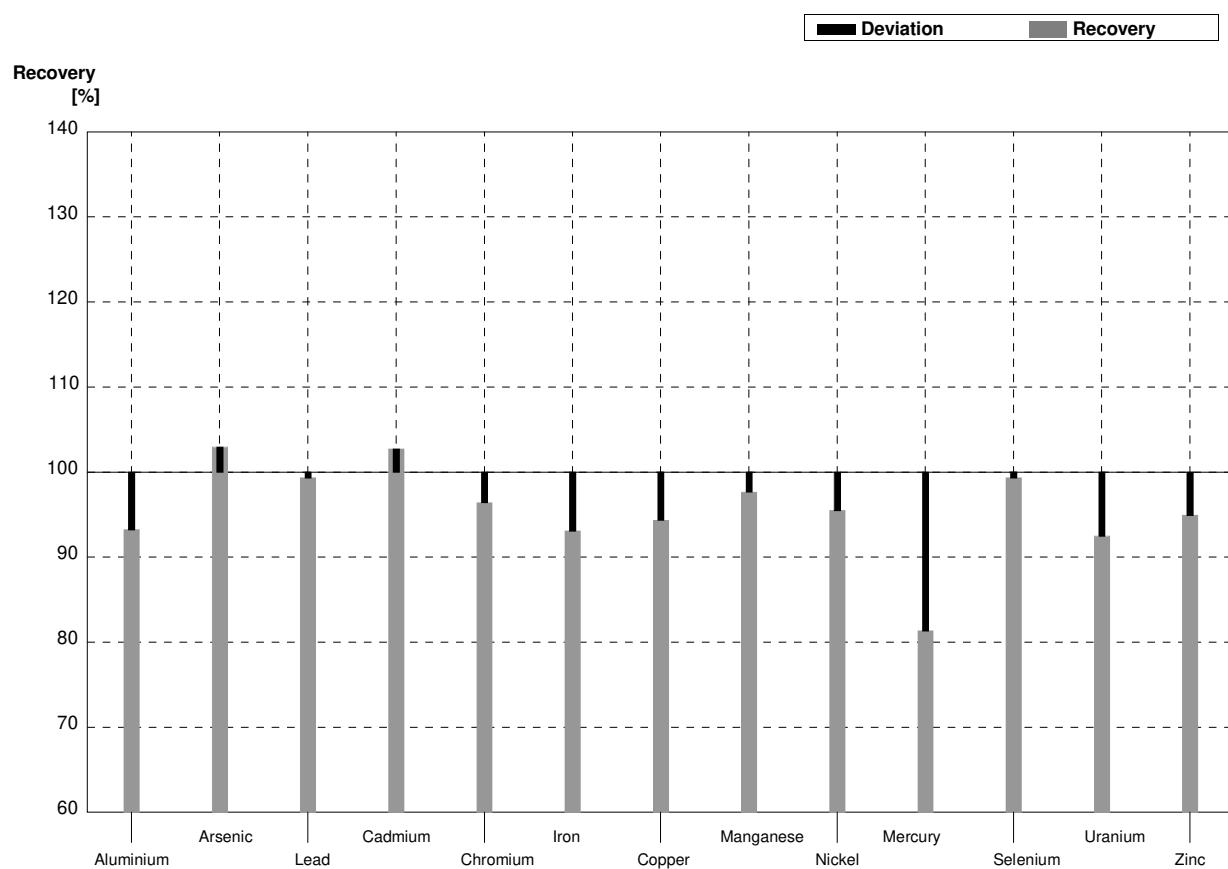
Sample M166B**Laboratory G**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	67,0	6,70	$\mu\text{g/l}$	103%
Arsenic	4,54	0,03	4,50	0,540	$\mu\text{g/l}$	99%
Lead	1,189	0,015	1,20	0,096	$\mu\text{g/l}$	101%
Cadmium	1,671	0,013	1,70	0,136	$\mu\text{g/l}$	102%
Chromium	3,76	0,03	3,80	0,456	$\mu\text{g/l}$	101%
Iron	44,0	0,2	44,0	11,44	$\mu\text{g/l}$	100%
Copper	24,81	0,13	24,6	1,968	$\mu\text{g/l}$	99%
Manganese	46,0	0,3	47,0	4,70	$\mu\text{g/l}$	102%
Nickel	5,59	0,04	5,70	0,570	$\mu\text{g/l}$	102%
Mercury	1,75	0,02	1,799	0,2699	$\mu\text{g/l}$	103%
Selenium	3,27	0,04	3,40	0,510	$\mu\text{g/l}$	104%
Uranium	1,308	0,013	1,33	0,067	$\mu\text{g/l}$	102%
Zinc	9,6	1,0	10,0	1,00	$\mu\text{g/l}$	104%



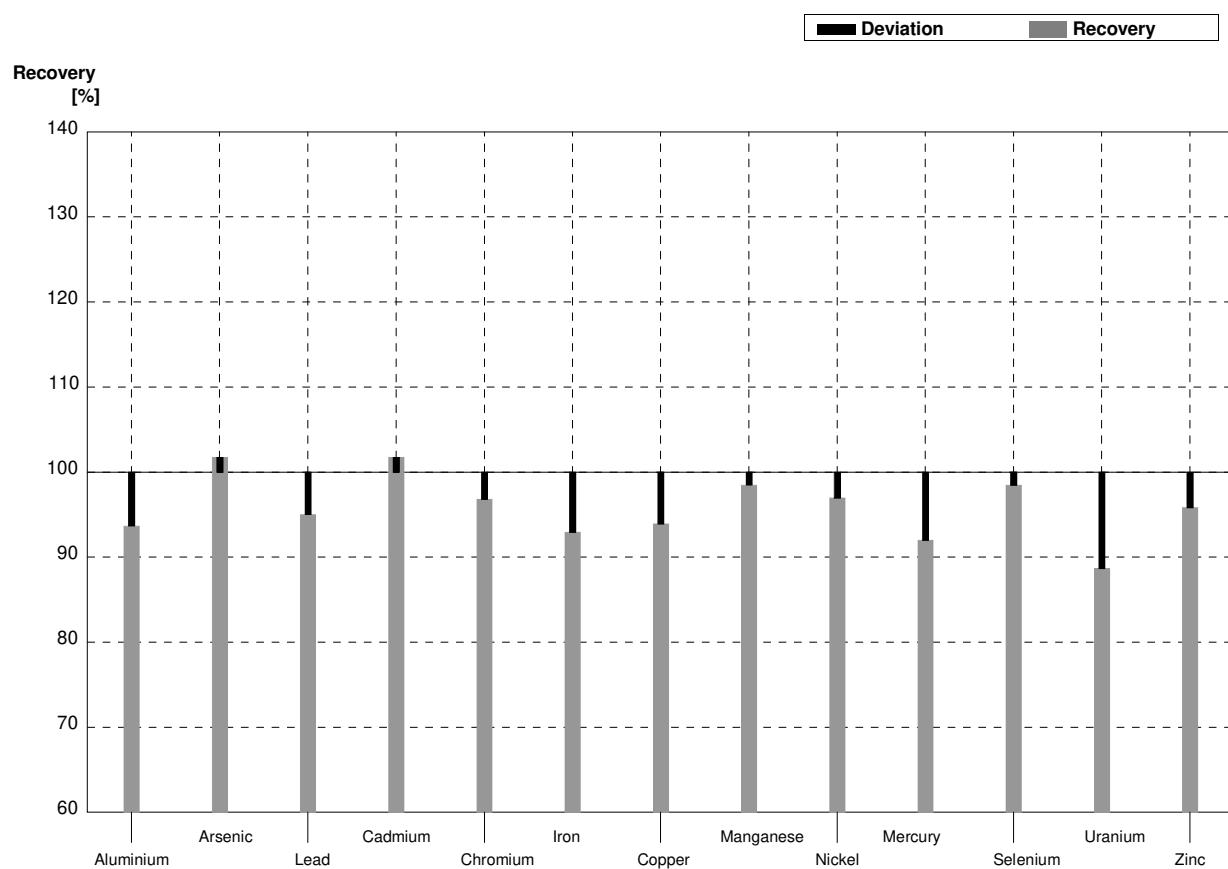
Sample M166A**Laboratory H**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	40,0	0,910	$\mu\text{g/l}$	93%
Arsenic	2,302	0,018	2,37	0,0754	$\mu\text{g/l}$	103%
Lead	4,63	0,03	4,60	0,0718	$\mu\text{g/l}$	99%
Cadmium	0,805	0,004	0,827	0,00876	$\mu\text{g/l}$	103%
Chromium	6,40	0,05	6,17	0,131	$\mu\text{g/l}$	96%
Iron	83,9	0,3	78,1	0,437	$\mu\text{g/l}$	93%
Copper	5,48	0,05	5,17	0,0567	$\mu\text{g/l}$	94%
Manganese	23,55	0,17	23,0	0,565	$\mu\text{g/l}$	98%
Nickel	4,87	0,04	4,65	0,0508	$\mu\text{g/l}$	95%
Mercury	0,359	0,015	0,292	0,0142	$\mu\text{g/l}$	81%
Selenium	4,56	0,04	4,53	0,0488	$\mu\text{g/l}$	99%
Uranium	5,06	0,04	4,68	0,171	$\mu\text{g/l}$	92%
Zinc	27,6	1,0	26,2	0,385	$\mu\text{g/l}$	95%



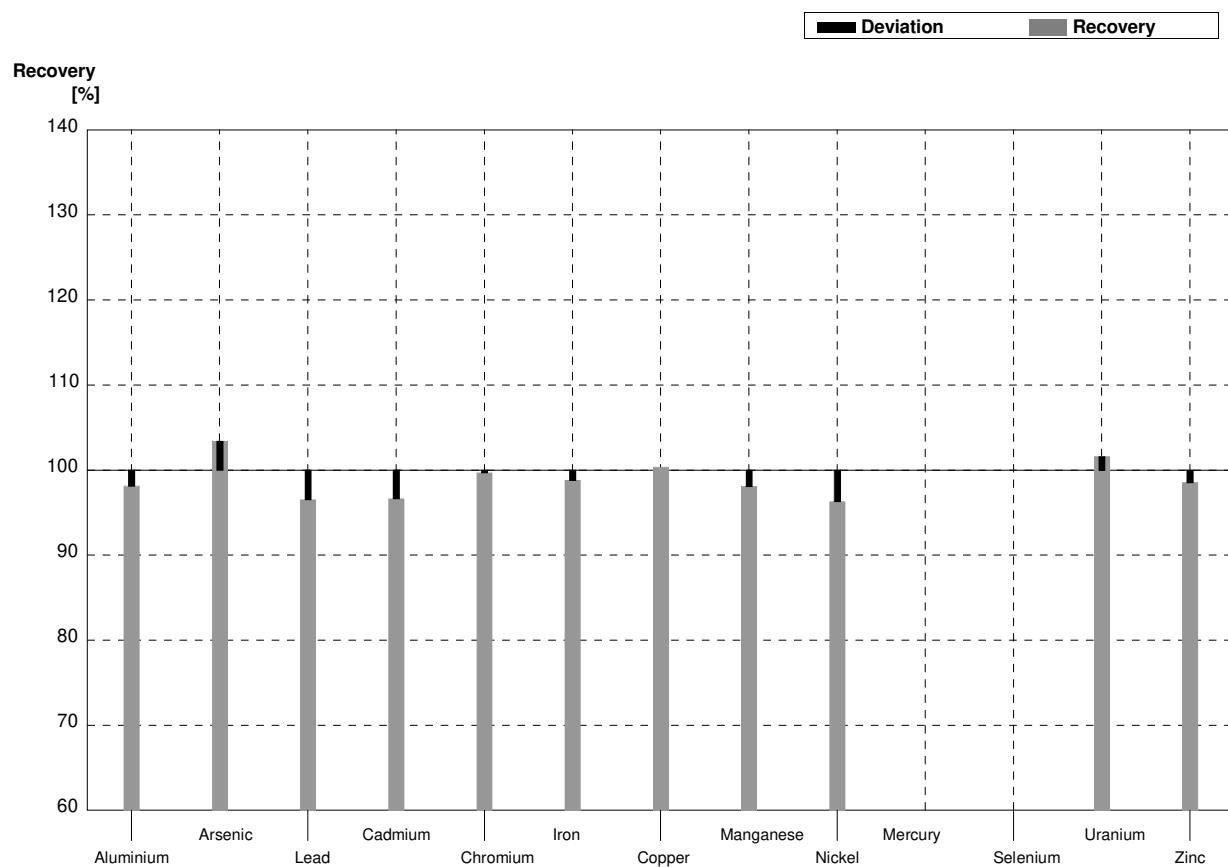
Sample M166B**Laboratory H**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	60,7	0,901	$\mu\text{g/l}$	94%
Arsenic	4,54	0,03	4,62	0,0697	$\mu\text{g/l}$	102%
Lead	1,189	0,015	1,13	0,0844	$\mu\text{g/l}$	95%
Cadmium	1,671	0,013	1,70	0,0425	$\mu\text{g/l}$	102%
Chromium	3,76	0,03	3,64	0,133	$\mu\text{g/l}$	97%
Iron	44,0	0,2	40,9	0,414	$\mu\text{g/l}$	93%
Copper	24,81	0,13	23,3	0,622	$\mu\text{g/l}$	94%
Manganese	46,0	0,3	45,3	0,509	$\mu\text{g/l}$	98%
Nickel	5,59	0,04	5,42	0,0505	$\mu\text{g/l}$	97%
Mercury	1,75	0,02	1,61	0,0132	$\mu\text{g/l}$	92%
Selenium	3,27	0,04	3,22	0,0482	$\mu\text{g/l}$	98%
Uranium	1,308	0,013	1,16	0,0872	$\mu\text{g/l}$	89%
Zinc	9,6	1,0	9,20	0,391	$\mu\text{g/l}$	96%



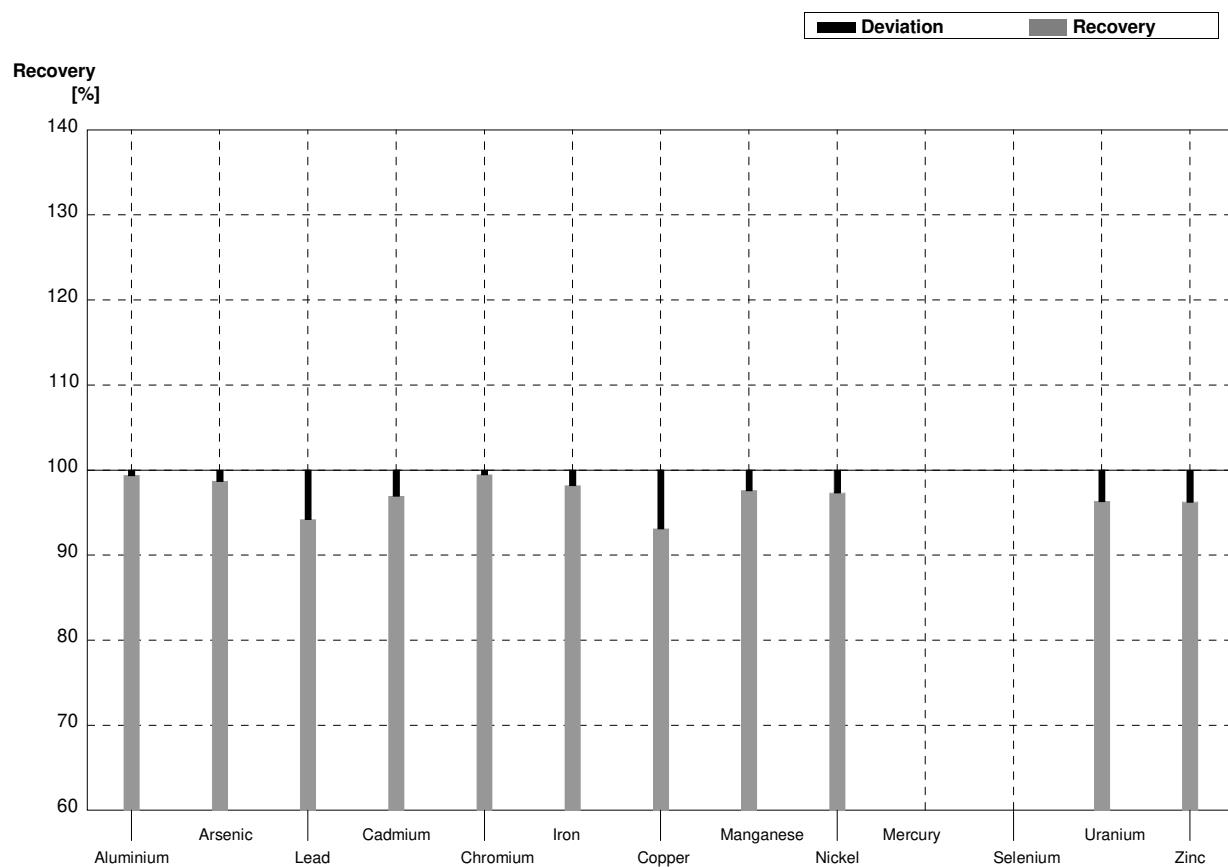
Sample M166A**Laboratory I**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	42,1	3,0	$\mu\text{g/l}$	98%
Arsenic	2,302	0,018	2,38	0,17	$\mu\text{g/l}$	103%
Lead	4,63	0,03	4,47	0,32	$\mu\text{g/l}$	97%
Cadmium	0,805	0,004	0,778	0,054	$\mu\text{g/l}$	97%
Chromium	6,40	0,05	6,38	0,45	$\mu\text{g/l}$	100%
Iron	83,9	0,3	82,9	5,8	$\mu\text{g/l}$	99%
Copper	5,48	0,05	5,50	0,39	$\mu\text{g/l}$	100%
Manganese	23,55	0,17	23,1	1,7	$\mu\text{g/l}$	98%
Nickel	4,87	0,04	4,69	0,33	$\mu\text{g/l}$	96%
Mercury	0,359	0,015			$\mu\text{g/l}$	
Selenium	4,56	0,04			$\mu\text{g/l}$	
Uranium	5,06	0,04	5,14	0,36	$\mu\text{g/l}$	102%
Zinc	27,6	1,0	27,2	1,9	$\mu\text{g/l}$	99%



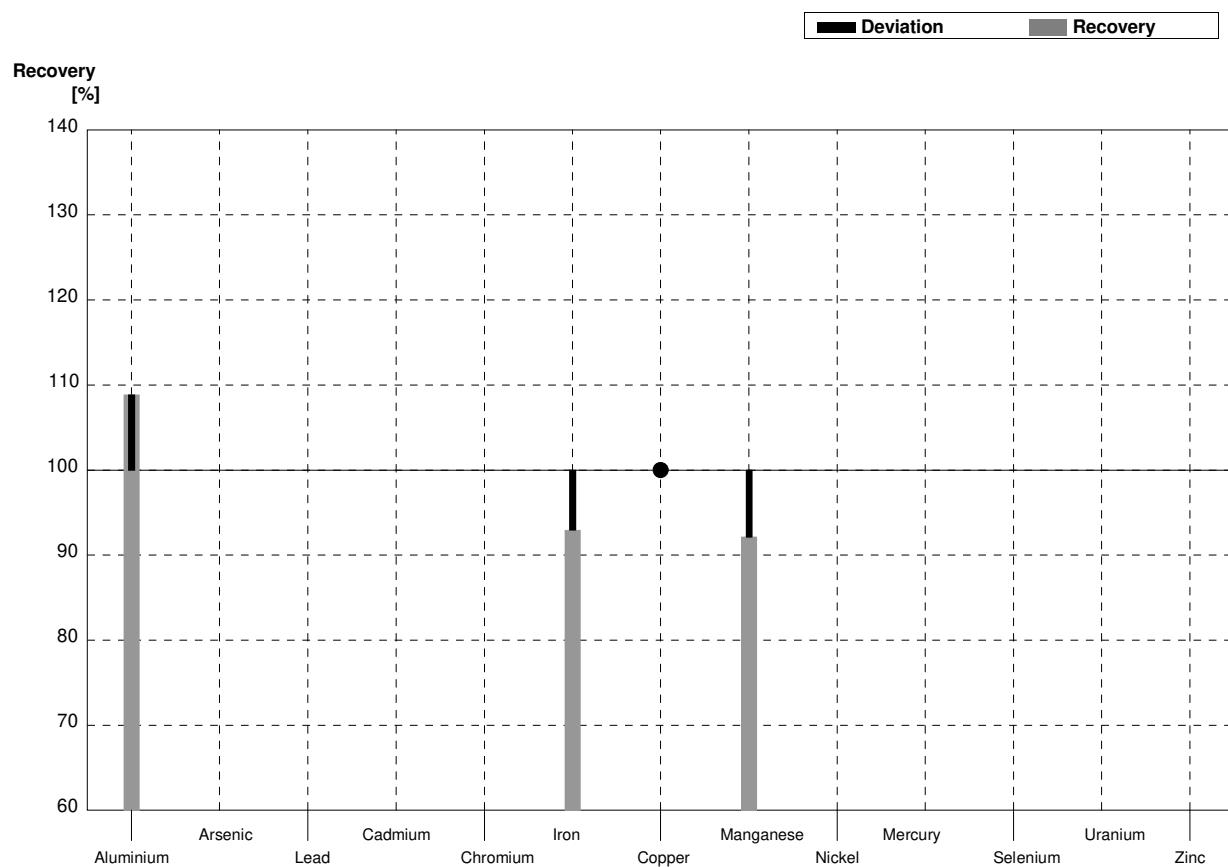
Sample M166B**Laboratory I**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	64,4	4,6	$\mu\text{g/l}$	99%
Arsenic	4,54	0,03	4,48	0,31	$\mu\text{g/l}$	99%
Lead	1,189	0,015	1,12	0,08	$\mu\text{g/l}$	94%
Cadmium	1,671	0,013	1,62	0,12	$\mu\text{g/l}$	97%
Chromium	3,76	0,03	3,74	0,27	$\mu\text{g/l}$	99%
Iron	44,0	0,2	43,2	3,1	$\mu\text{g/l}$	98%
Copper	24,81	0,13	23,1	1,7	$\mu\text{g/l}$	93%
Manganese	46,0	0,3	44,9	3,2	$\mu\text{g/l}$	98%
Nickel	5,59	0,04	5,44	0,38	$\mu\text{g/l}$	97%
Mercury	1,75	0,02			$\mu\text{g/l}$	
Selenium	3,27	0,04			$\mu\text{g/l}$	
Uranium	1,308	0,013	1,26	0,09	$\mu\text{g/l}$	96%
Zinc	9,6	1,0	9,24	0,65	$\mu\text{g/l}$	96%



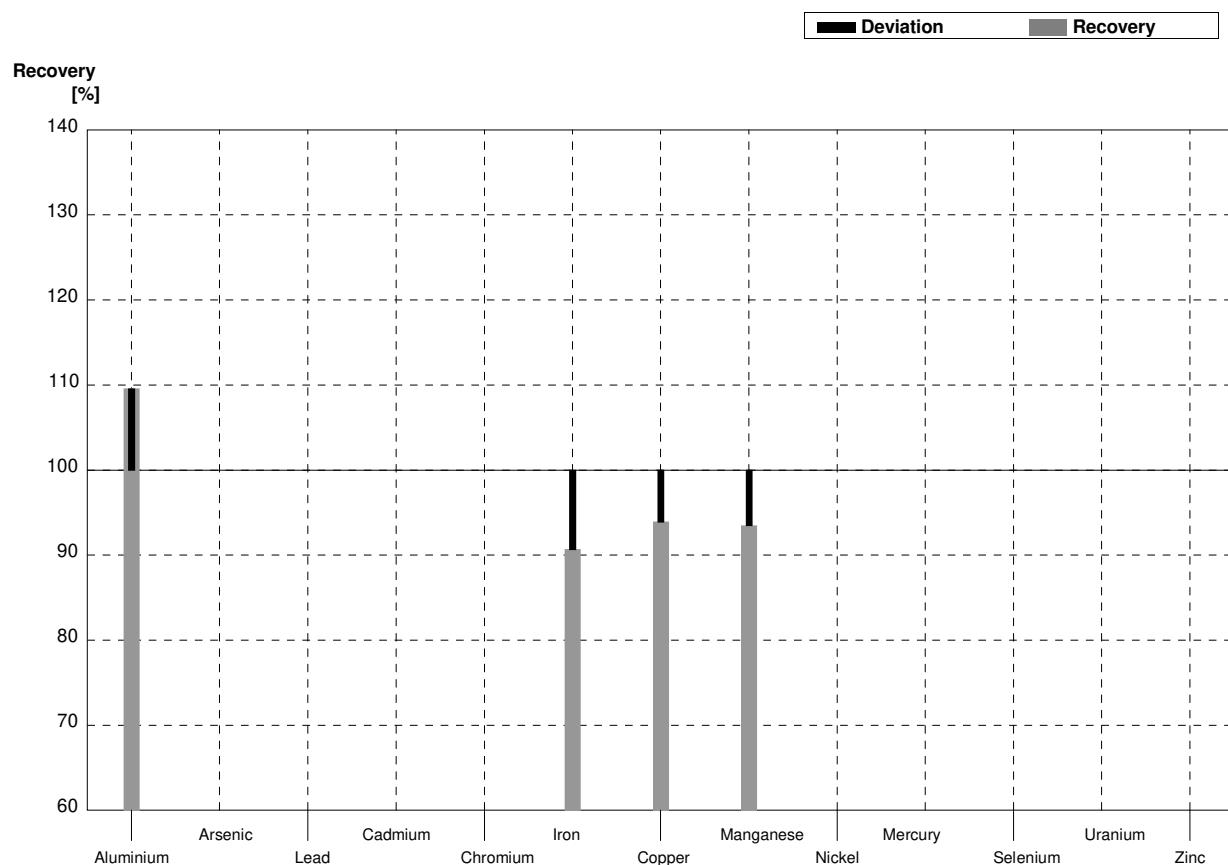
Sample M166A**Laboratory J**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	46,7	7,9	$\mu\text{g/l}$	109%
Arsenic	2,302	0,018			$\mu\text{g/l}$	
Lead	4,63	0,03			$\mu\text{g/l}$	
Cadmium	0,805	0,004			$\mu\text{g/l}$	
Chromium	6,40	0,05			$\mu\text{g/l}$	
Iron	83,9	0,3	78	14	$\mu\text{g/l}$	93%
Copper	5,48	0,05	<10		$\mu\text{g/l}$	•
Manganese	23,55	0,17	21,7	3,9	$\mu\text{g/l}$	92%
Nickel	4,87	0,04			$\mu\text{g/l}$	
Mercury	0,359	0,015			$\mu\text{g/l}$	
Selenium	4,56	0,04			$\mu\text{g/l}$	
Uranium	5,06	0,04			$\mu\text{g/l}$	
Zinc	27,6	1,0			$\mu\text{g/l}$	



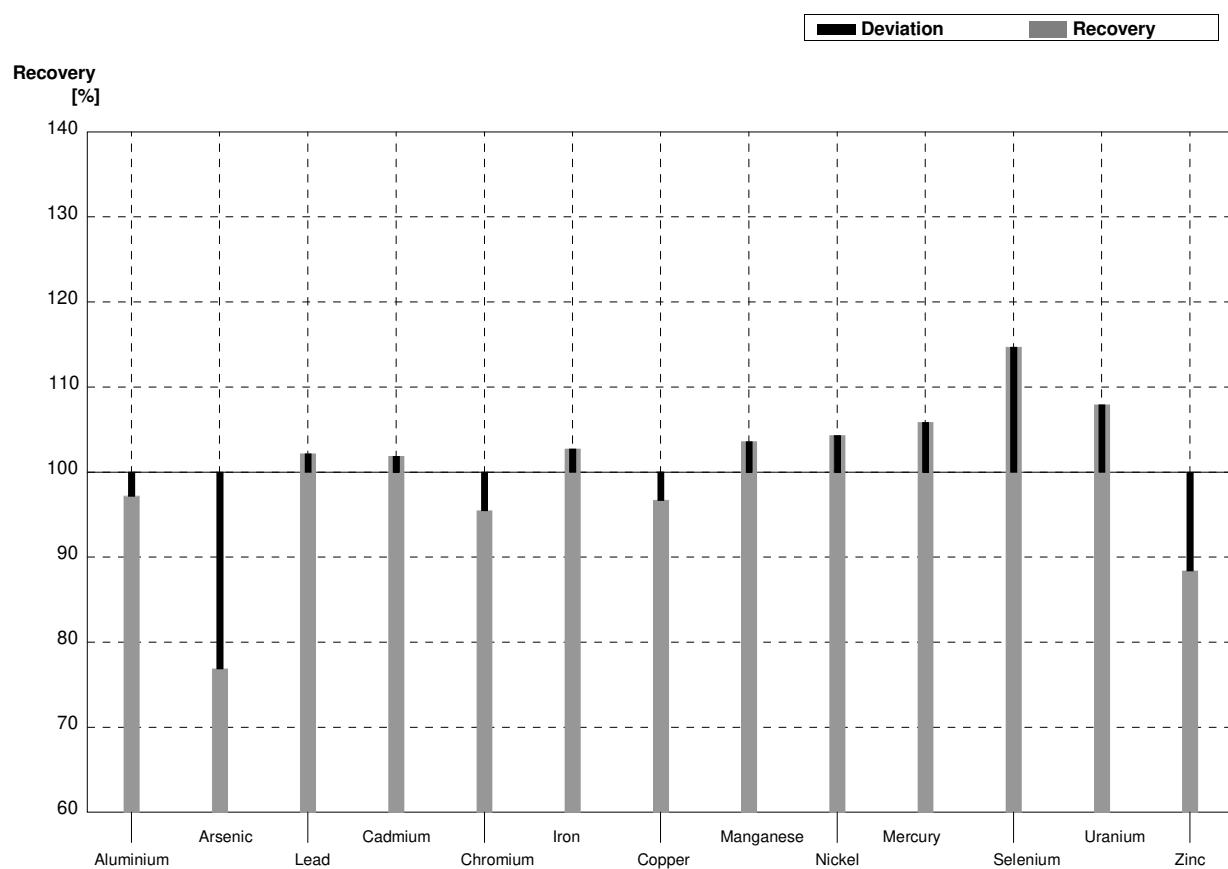
Sample M166B**Laboratory J**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	71	12	$\mu\text{g/l}$	110%
Arsenic	4,54	0,03			$\mu\text{g/l}$	
Lead	1,189	0,015			$\mu\text{g/l}$	
Cadmium	1,671	0,013			$\mu\text{g/l}$	
Chromium	3,76	0,03			$\mu\text{g/l}$	
Iron	44,0	0,2	39,9	7,2	$\mu\text{g/l}$	91%
Copper	24,81	0,13	23,3	4,2	$\mu\text{g/l}$	94%
Manganese	46,0	0,3	43,0	7,7	$\mu\text{g/l}$	93%
Nickel	5,59	0,04			$\mu\text{g/l}$	
Mercury	1,75	0,02			$\mu\text{g/l}$	
Selenium	3,27	0,04			$\mu\text{g/l}$	
Uranium	1,308	0,013			$\mu\text{g/l}$	
Zinc	9,6	1,0			$\mu\text{g/l}$	



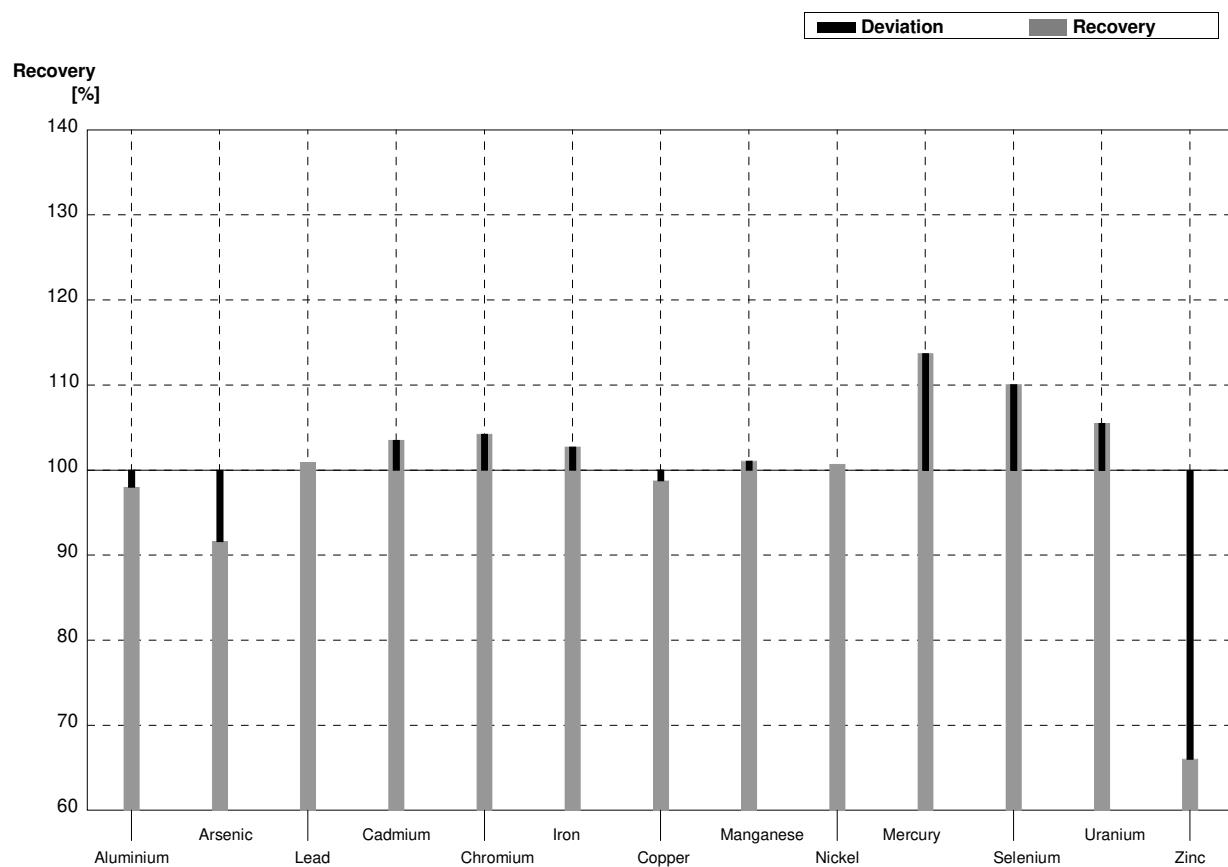
Sample M166A**Laboratory K**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	41,7	6,3	$\mu\text{g/l}$	97%
Arsenic	2,302	0,018	1,77	0,27	$\mu\text{g/l}$	77%
Lead	4,63	0,03	4,73	0,71	$\mu\text{g/l}$	102%
Cadmium	0,805	0,004	0,820	0,12	$\mu\text{g/l}$	102%
Chromium	6,40	0,05	6,11	0,92	$\mu\text{g/l}$	95%
Iron	83,9	0,3	86,2	13	$\mu\text{g/l}$	103%
Copper	5,48	0,05	5,30	0,80	$\mu\text{g/l}$	97%
Manganese	23,55	0,17	24,4	3,7	$\mu\text{g/l}$	104%
Nickel	4,87	0,04	5,08	0,77	$\mu\text{g/l}$	104%
Mercury	0,359	0,015	0,380	0,06	$\mu\text{g/l}$	106%
Selenium	4,56	0,04	5,23	0,78	$\mu\text{g/l}$	115%
Uranium	5,06	0,04	5,46	0,82	$\mu\text{g/l}$	108%
Zinc	27,6	1,0	24,4	3,7	$\mu\text{g/l}$	88%



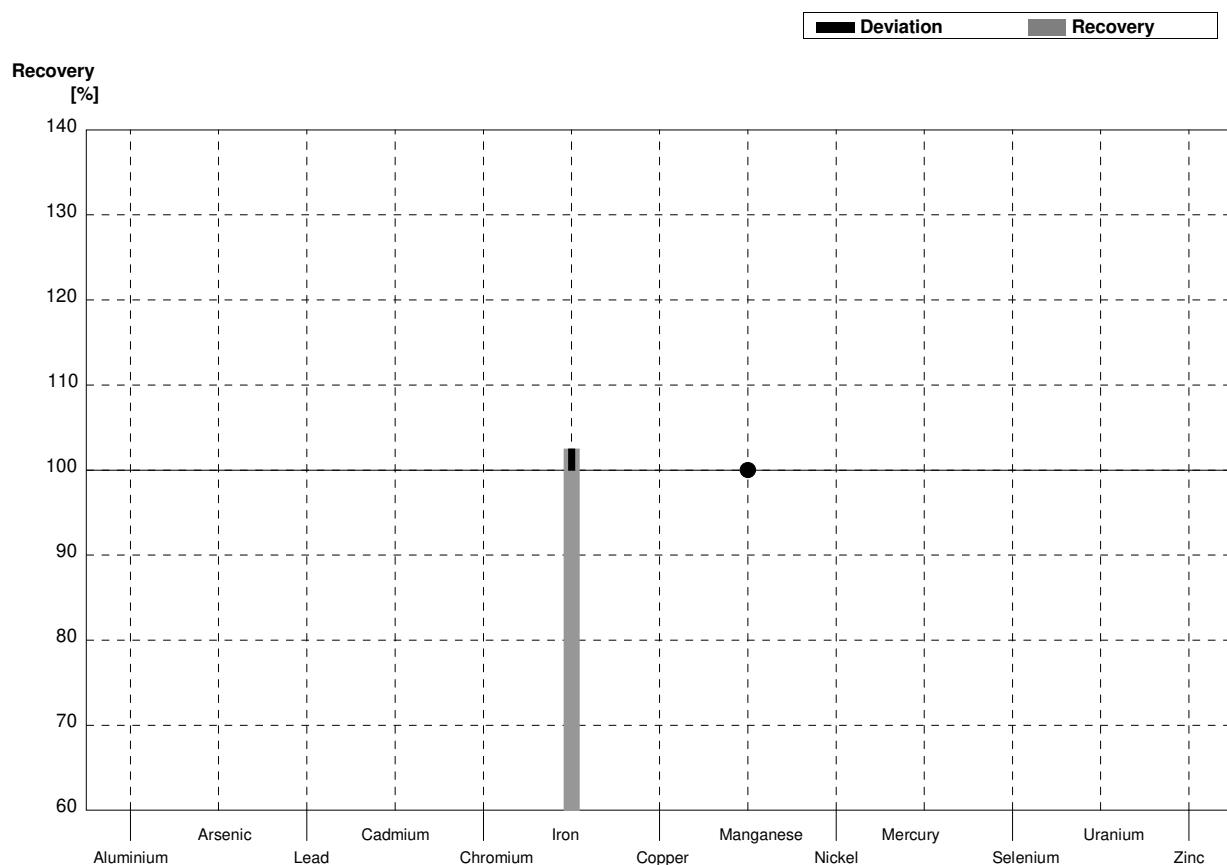
Sample M166B**Laboratory K**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	63,5	9,5	$\mu\text{g/l}$	98%
Arsenic	4,54	0,03	4,16	0,62	$\mu\text{g/l}$	92%
Lead	1,189	0,015	1,20	0,18	$\mu\text{g/l}$	101%
Cadmium	1,671	0,013	1,73	0,26	$\mu\text{g/l}$	104%
Chromium	3,76	0,03	3,92	0,59	$\mu\text{g/l}$	104%
Iron	44,0	0,2	45,2	6,8	$\mu\text{g/l}$	103%
Copper	24,81	0,13	24,5	3,7	$\mu\text{g/l}$	99%
Manganese	46,0	0,3	46,5	6,7	$\mu\text{g/l}$	101%
Nickel	5,59	0,04	5,63	0,85	$\mu\text{g/l}$	101%
Mercury	1,75	0,02	1,99	0,30	$\mu\text{g/l}$	114%
Selenium	3,27	0,04	3,60	0,54	$\mu\text{g/l}$	110%
Uranium	1,308	0,013	1,38	0,21	$\mu\text{g/l}$	106%
Zinc	9,6	1,0	6,34	0,95	$\mu\text{g/l}$	66%



Sample M166A**Laboratory L**

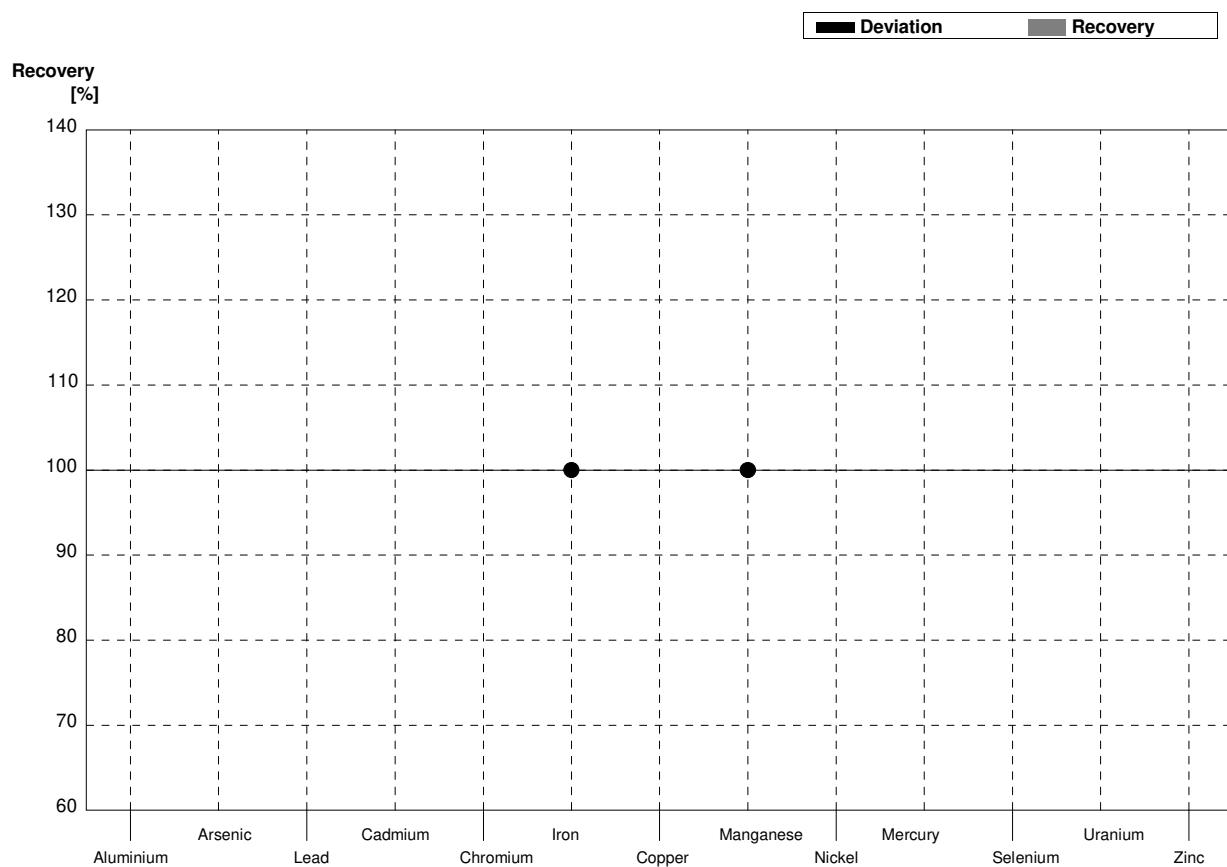
Parameter	Target value	\pm U ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3			$\mu\text{g/l}$	
Arsenic	2,302	0,018			$\mu\text{g/l}$	
Lead	4,63	0,03			$\mu\text{g/l}$	
Cadmium	0,805	0,004			$\mu\text{g/l}$	
Chromium	6,40	0,05			$\mu\text{g/l}$	
Iron	83,9	0,3	86	7	$\mu\text{g/l}$	103%
Copper	5,48	0,05			$\mu\text{g/l}$	
Manganese	23,55	0,17	<50		$\mu\text{g/l}$	•
Nickel	4,87	0,04			$\mu\text{g/l}$	
Mercury	0,359	0,015			$\mu\text{g/l}$	
Selenium	4,56	0,04			$\mu\text{g/l}$	
Uranium	5,06	0,04			$\mu\text{g/l}$	
Zinc	27,6	1,0			$\mu\text{g/l}$	



Sample M166B

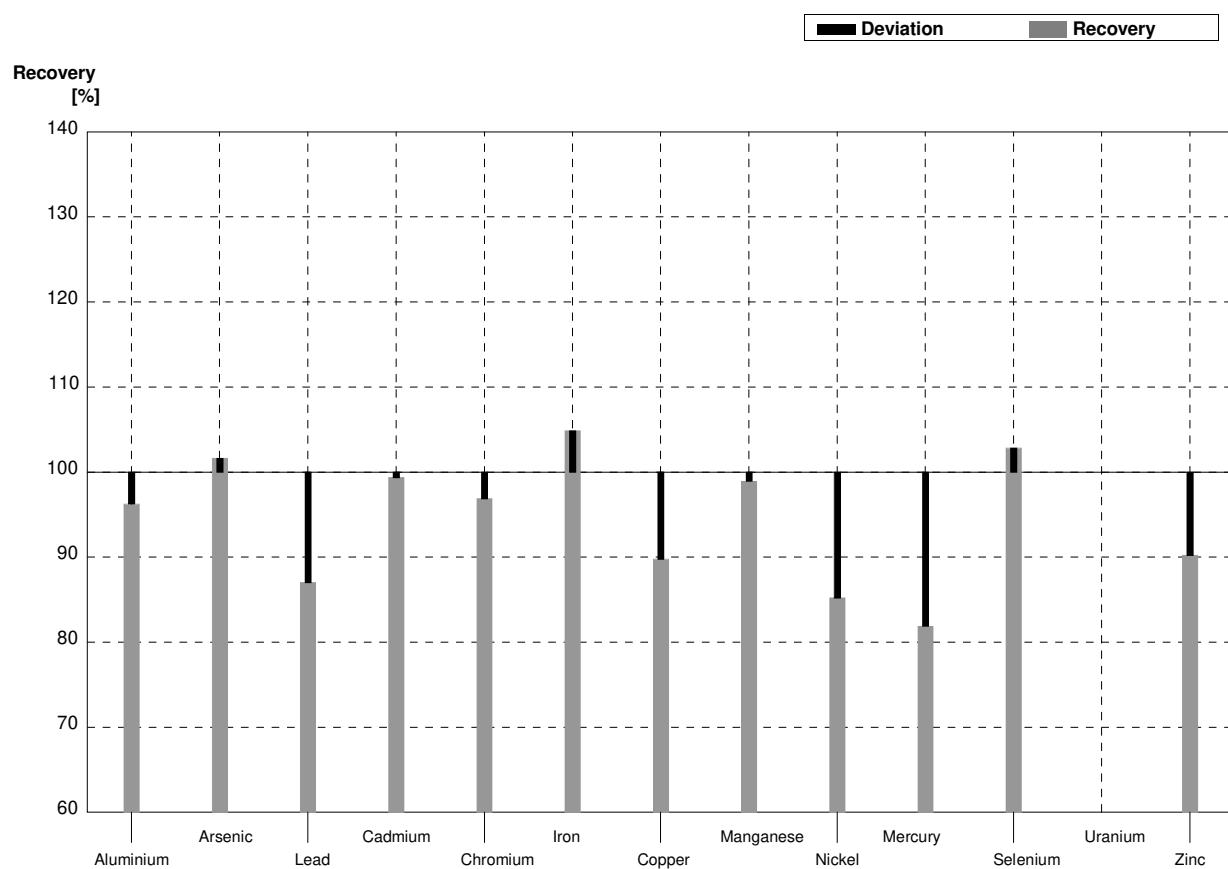
Laboratory L

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4			$\mu\text{g/l}$	
Arsenic	4,54	0,03			$\mu\text{g/l}$	
Lead	1,189	0,015			$\mu\text{g/l}$	
Cadmium	1,671	0,013			$\mu\text{g/l}$	
Chromium	3,76	0,03			$\mu\text{g/l}$	
Iron	44,0	0,2	<50		$\mu\text{g/l}$	•
Copper	24,81	0,13			$\mu\text{g/l}$	
Manganese	46,0	0,3	<50		$\mu\text{g/l}$	•
Nickel	5,59	0,04			$\mu\text{g/l}$	
Mercury	1,75	0,02			$\mu\text{g/l}$	
Selenium	3,27	0,04			$\mu\text{g/l}$	
Uranium	1,308	0,013			$\mu\text{g/l}$	
Zinc	9,6	1,0			$\mu\text{g/l}$	



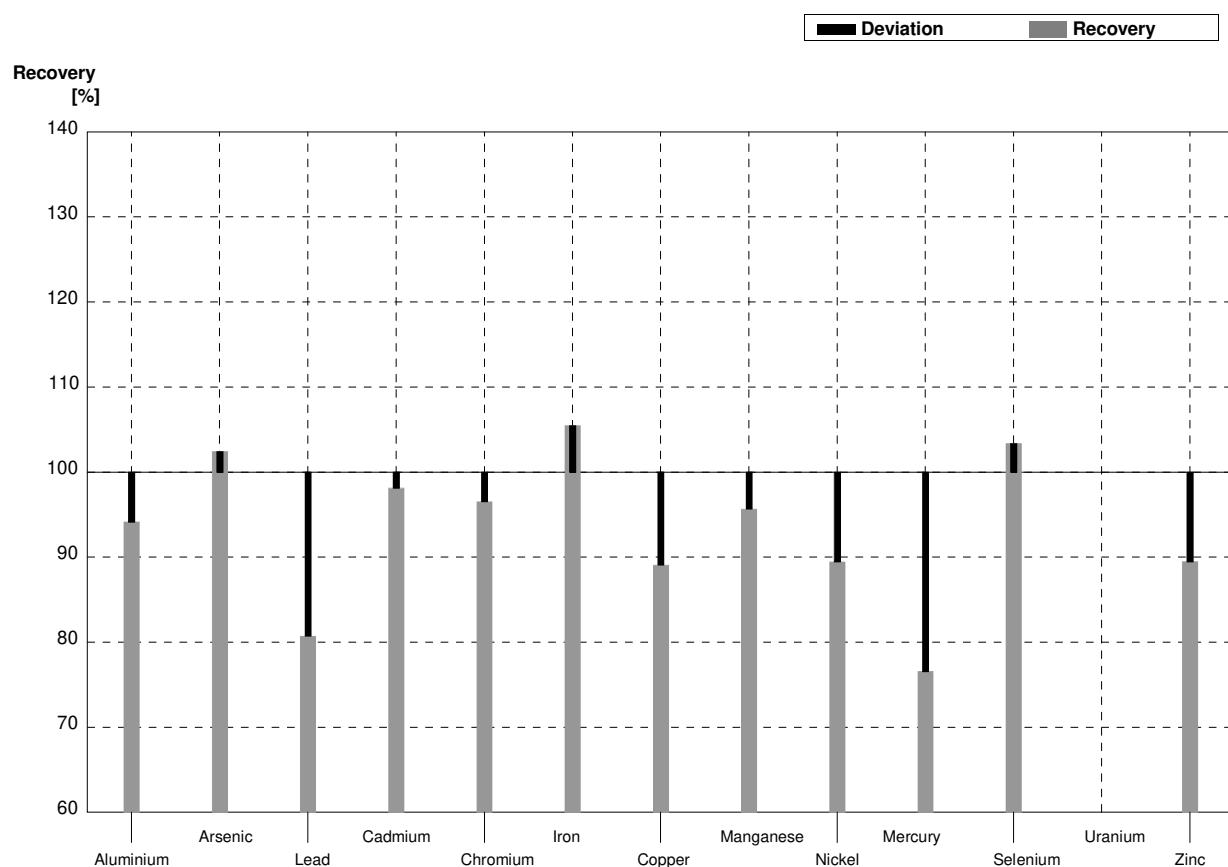
Sample M166A**Laboratory M**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	41,3	5,4	$\mu\text{g/l}$	96%
Arsenic	2,302	0,018	2,34	0,62	$\mu\text{g/l}$	102%
Lead	4,63	0,03	4,03	1,08	$\mu\text{g/l}$	87%
Cadmium	0,805	0,004	0,80	0,09	$\mu\text{g/l}$	99%
Chromium	6,40	0,05	6,2	0,7	$\mu\text{g/l}$	97%
Iron	83,9	0,3	88	18	$\mu\text{g/l}$	105%
Copper	5,48	0,05	4,92	0,88	$\mu\text{g/l}$	90%
Manganese	23,55	0,17	23,3	3,1	$\mu\text{g/l}$	99%
Nickel	4,87	0,04	4,15	0,34	$\mu\text{g/l}$	85%
Mercury	0,359	0,015	0,294	0,056	$\mu\text{g/l}$	82%
Selenium	4,56	0,04	4,69	0,66	$\mu\text{g/l}$	103%
Uranium	5,06	0,04			$\mu\text{g/l}$	
Zinc	27,6	1,0	24,90	4,48	$\mu\text{g/l}$	90%



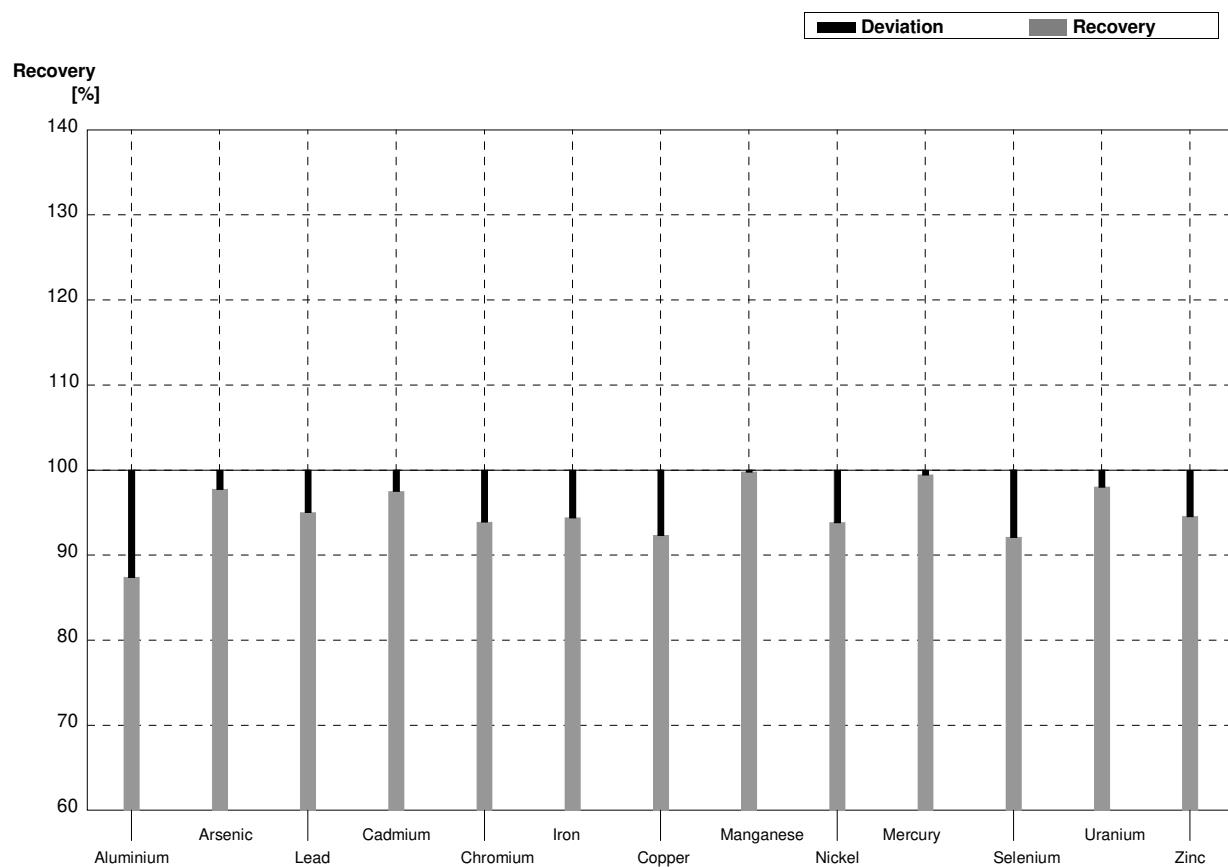
Sample M166B**Laboratory M**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	61	8	$\mu\text{g/l}$	94%
Arsenic	4,54	0,03	4,65	1,24	$\mu\text{g/l}$	102%
Lead	1,189	0,015	0,96	0,24	$\mu\text{g/l}$	81%
Cadmium	1,671	0,013	1,64	0,19	$\mu\text{g/l}$	98%
Chromium	3,76	0,03	3,63	0,41	$\mu\text{g/l}$	97%
Iron	44,0	0,2	46,4	9,3	$\mu\text{g/l}$	105%
Copper	24,81	0,13	22,1	3,9	$\mu\text{g/l}$	89%
Manganese	46,0	0,3	44,0	5,8	$\mu\text{g/l}$	96%
Nickel	5,59	0,04	5,0	0,4	$\mu\text{g/l}$	89%
Mercury	1,75	0,02	1,34	0,25	$\mu\text{g/l}$	77%
Selenium	3,27	0,04	3,38	0,47	$\mu\text{g/l}$	103%
Uranium	1,308	0,013			$\mu\text{g/l}$	
Zinc	9,6	1,0	8,59	1,54	$\mu\text{g/l}$	89%



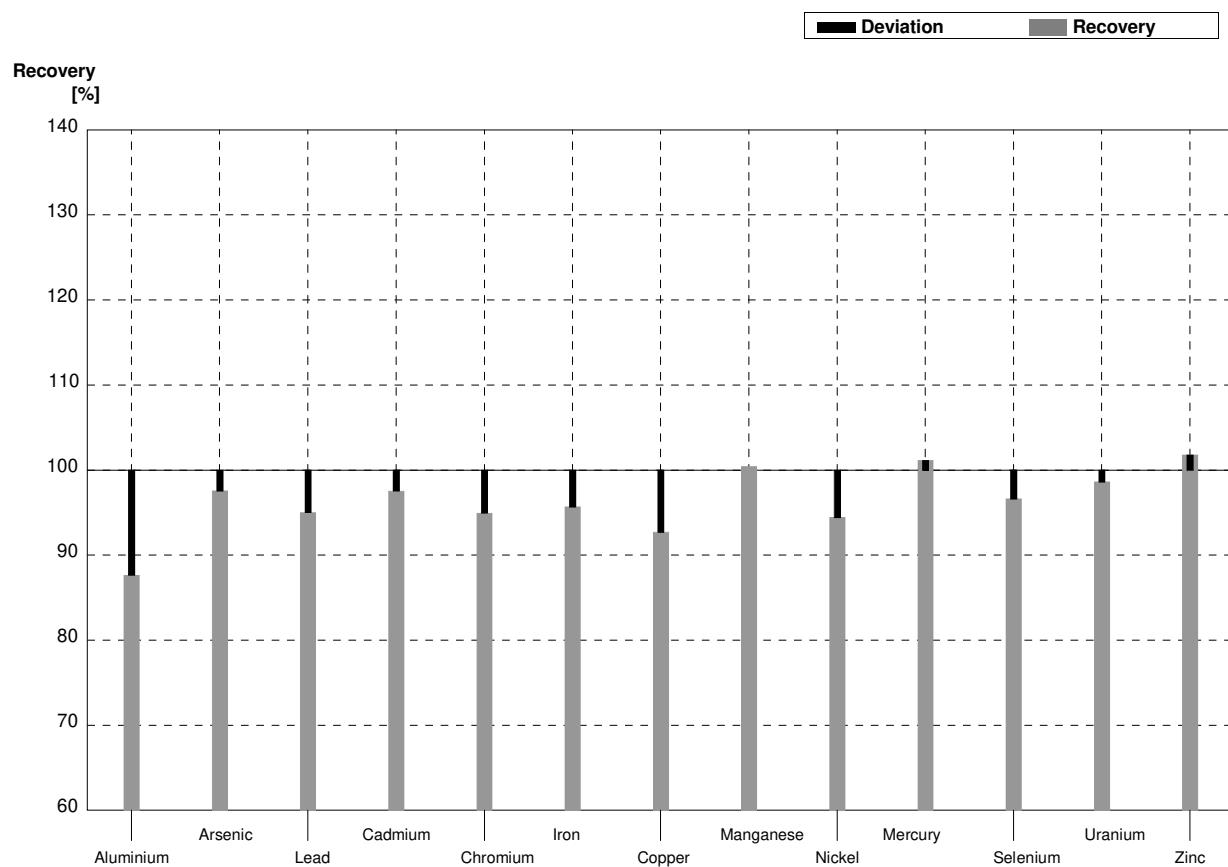
Sample M166A**Laboratory N**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	37,5	7,5	$\mu\text{g/l}$	87%
Arsenic	2,302	0,018	2,25	0,34	$\mu\text{g/l}$	98%
Lead	4,63	0,03	4,40	0,53	$\mu\text{g/l}$	95%
Cadmium	0,805	0,004	0,785	0,094	$\mu\text{g/l}$	98%
Chromium	6,40	0,05	6,01	0,90	$\mu\text{g/l}$	94%
Iron	83,9	0,3	79,2	11,9	$\mu\text{g/l}$	94%
Copper	5,48	0,05	5,06	0,61	$\mu\text{g/l}$	92%
Manganese	23,55	0,17	23,5	2,8	$\mu\text{g/l}$	100%
Nickel	4,87	0,04	4,57	0,50	$\mu\text{g/l}$	94%
Mercury	0,359	0,015	0,357	0,079	$\mu\text{g/l}$	99%
Selenium	4,56	0,04	4,20	0,63	$\mu\text{g/l}$	92%
Uranium	5,06	0,04	4,96	0,74	$\mu\text{g/l}$	98%
Zinc	27,6	1,0	26,1	3,9	$\mu\text{g/l}$	95%



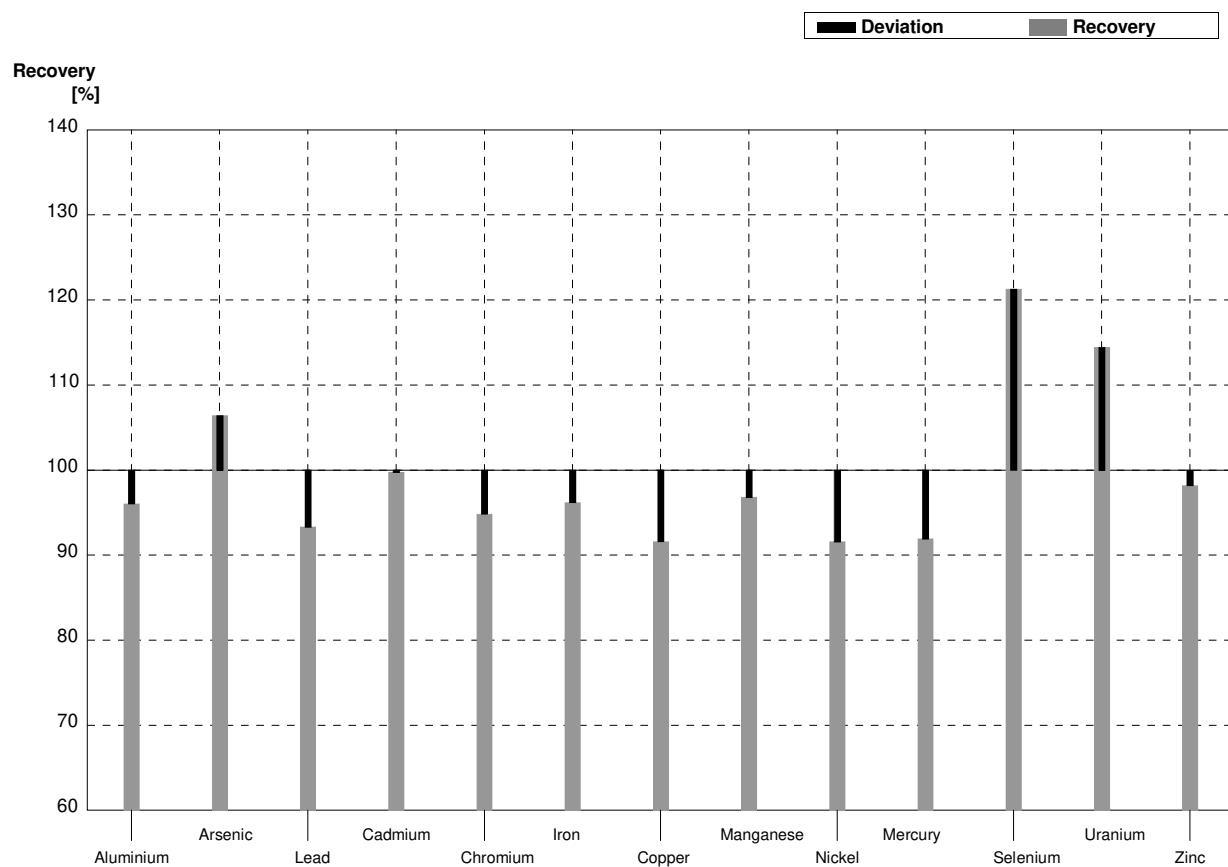
Sample M166B**Laboratory N**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	56,8	11,4	$\mu\text{g/l}$	88%
Arsenic	4,54	0,03	4,43	0,66	$\mu\text{g/l}$	98%
Lead	1,189	0,015	1,13	0,14	$\mu\text{g/l}$	95%
Cadmium	1,671	0,013	1,63	0,20	$\mu\text{g/l}$	98%
Chromium	3,76	0,03	3,57	0,54	$\mu\text{g/l}$	95%
Iron	44,0	0,2	42,1	6,3	$\mu\text{g/l}$	96%
Copper	24,81	0,13	23,0	2,8	$\mu\text{g/l}$	93%
Manganese	46,0	0,3	46,2	5,5	$\mu\text{g/l}$	100%
Nickel	5,59	0,04	5,28	0,58	$\mu\text{g/l}$	94%
Mercury	1,75	0,02	1,77	0,39	$\mu\text{g/l}$	101%
Selenium	3,27	0,04	3,16	0,47	$\mu\text{g/l}$	97%
Uranium	1,308	0,013	1,29	0,19	$\mu\text{g/l}$	99%
Zinc	9,6	1,0	9,77	1,47	$\mu\text{g/l}$	102%



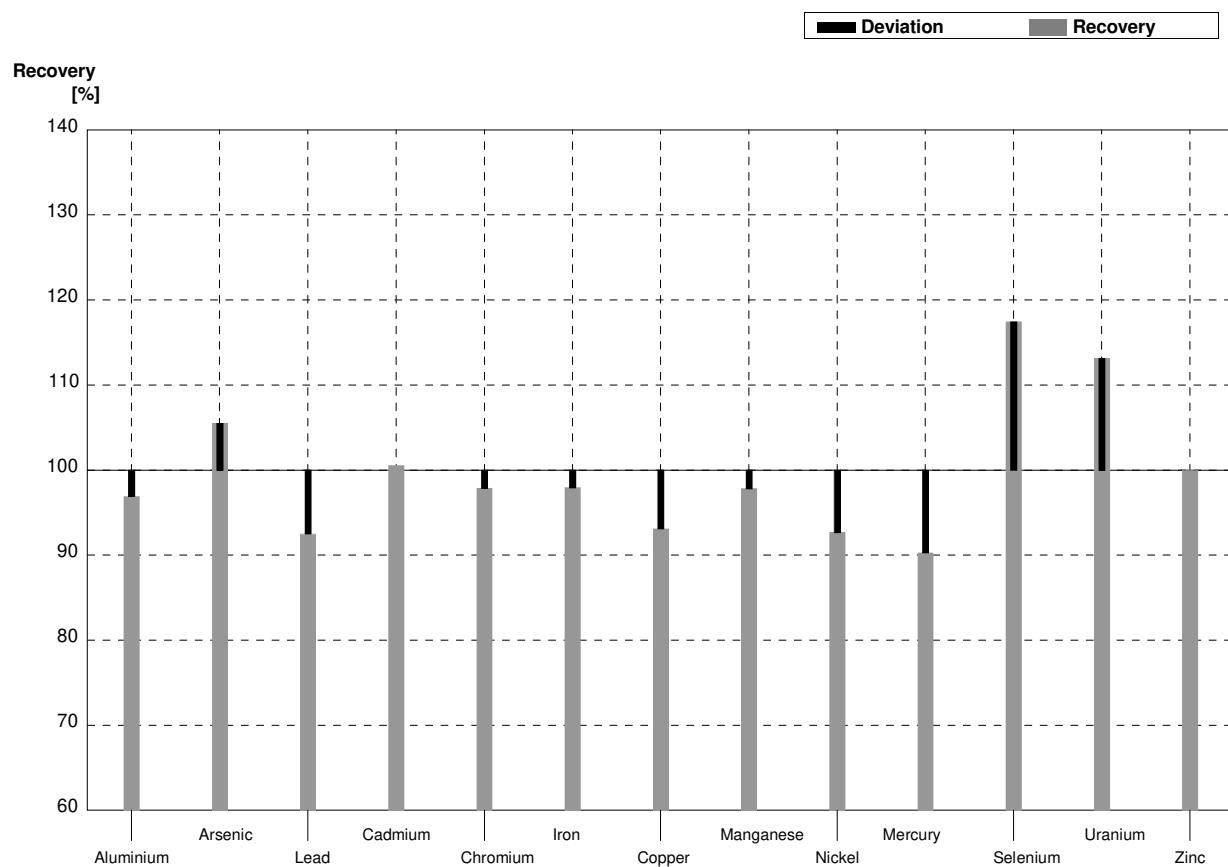
Sample M166A**Laboratory O**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	41,2	7,42	$\mu\text{g/l}$	96%
Arsenic	2,302	0,018	2,45	0,39	$\mu\text{g/l}$	106%
Lead	4,63	0,03	4,32	0,65	$\mu\text{g/l}$	93%
Cadmium	0,805	0,004	0,803	0,096	$\mu\text{g/l}$	100%
Chromium	6,40	0,05	6,07	0,85	$\mu\text{g/l}$	95%
Iron	83,9	0,3	80,7	11,3	$\mu\text{g/l}$	96%
Copper	5,48	0,05	5,02	0,85	$\mu\text{g/l}$	92%
Manganese	23,55	0,17	22,8	2,51	$\mu\text{g/l}$	97%
Nickel	4,87	0,04	4,46	0,71	$\mu\text{g/l}$	92%
Mercury	0,359	0,015	0,330	0,073	$\mu\text{g/l}$	92%
Selenium	4,56	0,04	5,53	2,2	$\mu\text{g/l}$	121%
Uranium	5,06	0,04	5,79	0,69	$\mu\text{g/l}$	114%
Zinc	27,6	1,0	27,1	4,34	$\mu\text{g/l}$	98%



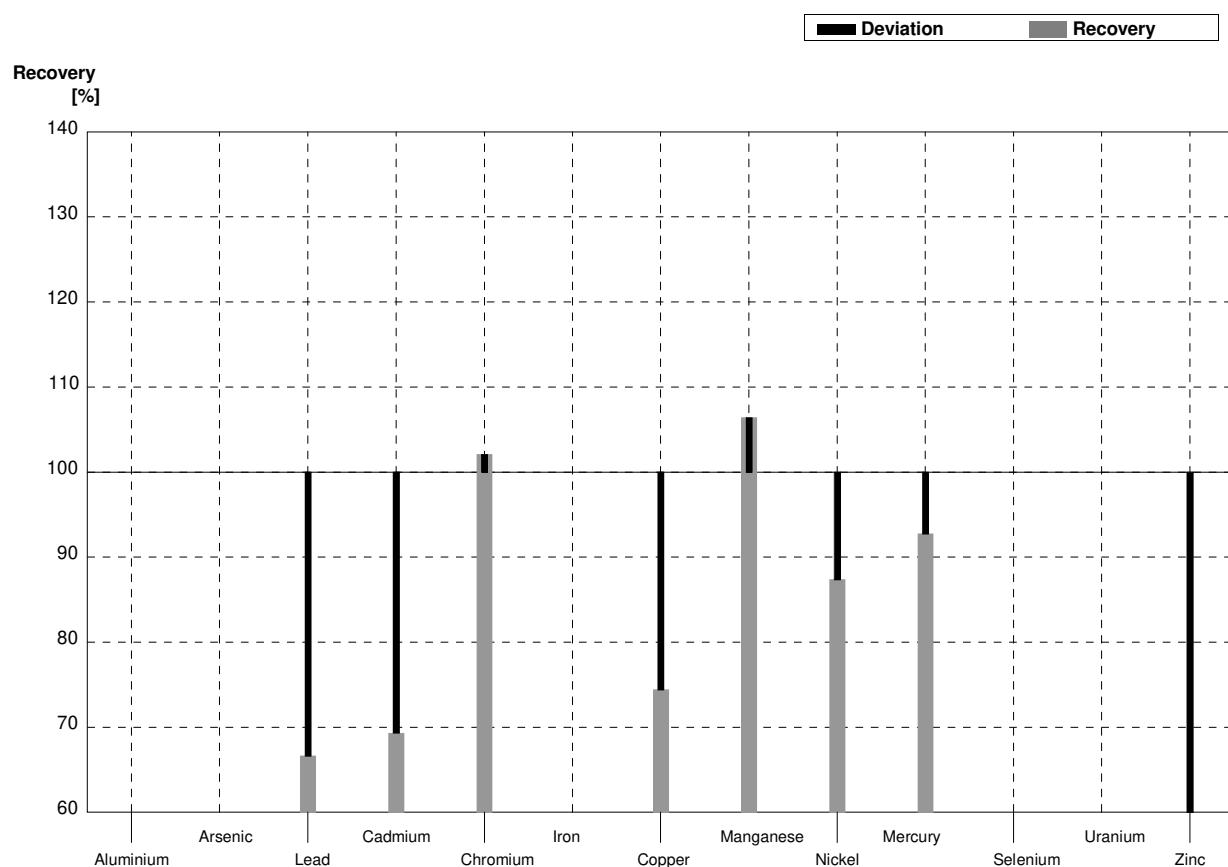
Sample M166B**Laboratory O**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	62,8	11,3	$\mu\text{g/l}$	97%
Arsenic	4,54	0,03	4,79	0,77	$\mu\text{g/l}$	106%
Lead	1,189	0,015	1,10	0,17	$\mu\text{g/l}$	93%
Cadmium	1,671	0,013	1,68	0,20	$\mu\text{g/l}$	101%
Chromium	3,76	0,03	3,68	0,52	$\mu\text{g/l}$	98%
Iron	44,0	0,2	43,1	6,03	$\mu\text{g/l}$	98%
Copper	24,81	0,13	23,1	3,93	$\mu\text{g/l}$	93%
Manganese	46,0	0,3	45,0	4,95	$\mu\text{g/l}$	98%
Nickel	5,59	0,04	5,18	0,83	$\mu\text{g/l}$	93%
Mercury	1,75	0,02	1,58	0,35	$\mu\text{g/l}$	90%
Selenium	3,27	0,04	3,84	1,54	$\mu\text{g/l}$	117%
Uranium	1,308	0,013	1,48	0,18	$\mu\text{g/l}$	113%
Zinc	9,6	1,0	9,60	1,54	$\mu\text{g/l}$	100%



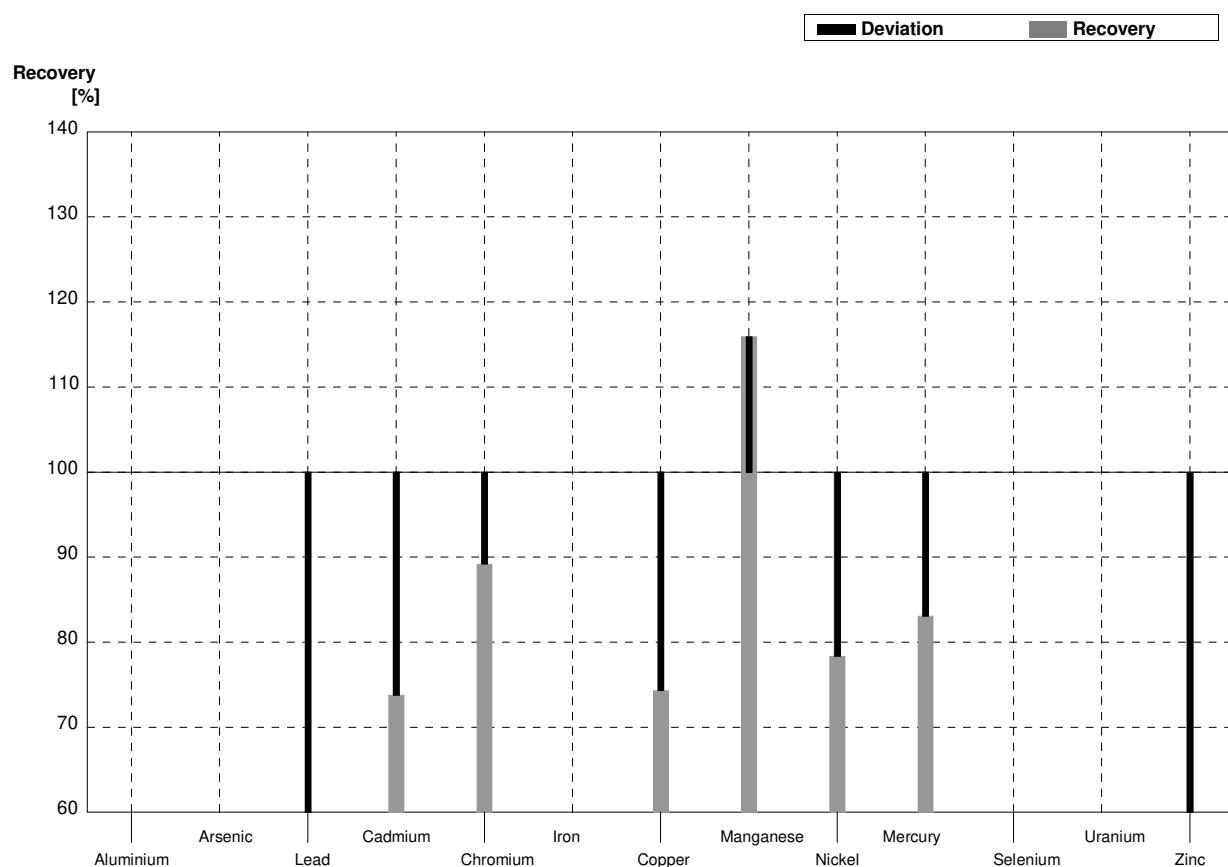
Sample M166A**Laboratory P**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3			$\mu\text{g/l}$	
Arsenic	2,302	0,018			$\mu\text{g/l}$	
Lead	4,63	0,03	3,085	0,617	$\mu\text{g/l}$	67%
Cadmium	0,805	0,004	0,558	0,112	$\mu\text{g/l}$	69%
Chromium	6,40	0,05	6,533	1,307	$\mu\text{g/l}$	102%
Iron	83,9	0,3			$\mu\text{g/l}$	
Copper	5,48	0,05	4,078	0,816	$\mu\text{g/l}$	74%
Manganese	23,55	0,17	25,061	5,012	$\mu\text{g/l}$	106%
Nickel	4,87	0,04	4,255	0,851	$\mu\text{g/l}$	87%
Mercury	0,359	0,015	0,333	0,067	$\mu\text{g/l}$	93%
Selenium	4,56	0,04			$\mu\text{g/l}$	
Uranium	5,06	0,04			$\mu\text{g/l}$	
Zinc	27,6	1,0	4,566	0,913	$\mu\text{g/l}$	17%



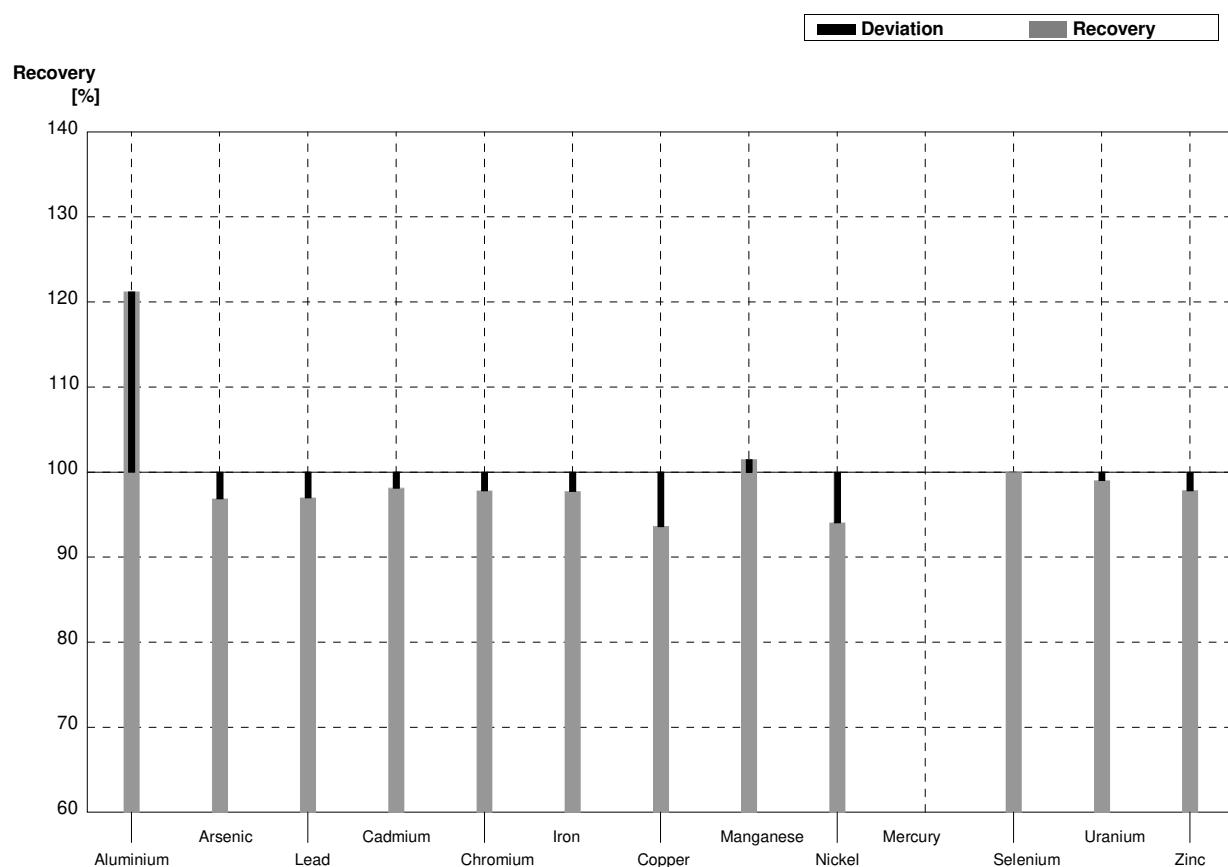
Sample M166B**Laboratory P**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4			$\mu\text{g/l}$	
Arsenic	4,54	0,03			$\mu\text{g/l}$	
Lead	1,189	0,015	0,655	0,131	$\mu\text{g/l}$	55%
Cadmium	1,671	0,013	1,233	0,247	$\mu\text{g/l}$	74%
Chromium	3,76	0,03	3,354	0,671	$\mu\text{g/l}$	89%
Iron	44,0	0,2			$\mu\text{g/l}$	
Copper	24,81	0,13	18,442	3,688	$\mu\text{g/l}$	74%
Manganese	46,0	0,3	53,335	10,667	$\mu\text{g/l}$	116%
Nickel	5,59	0,04	4,380	0,876	$\mu\text{g/l}$	78%
Mercury	1,75	0,02	1,454	0,291	$\mu\text{g/l}$	83%
Selenium	3,27	0,04			$\mu\text{g/l}$	
Uranium	1,308	0,013			$\mu\text{g/l}$	
Zinc	9,6	1,0	1,828	0,366	$\mu\text{g/l}$	19%



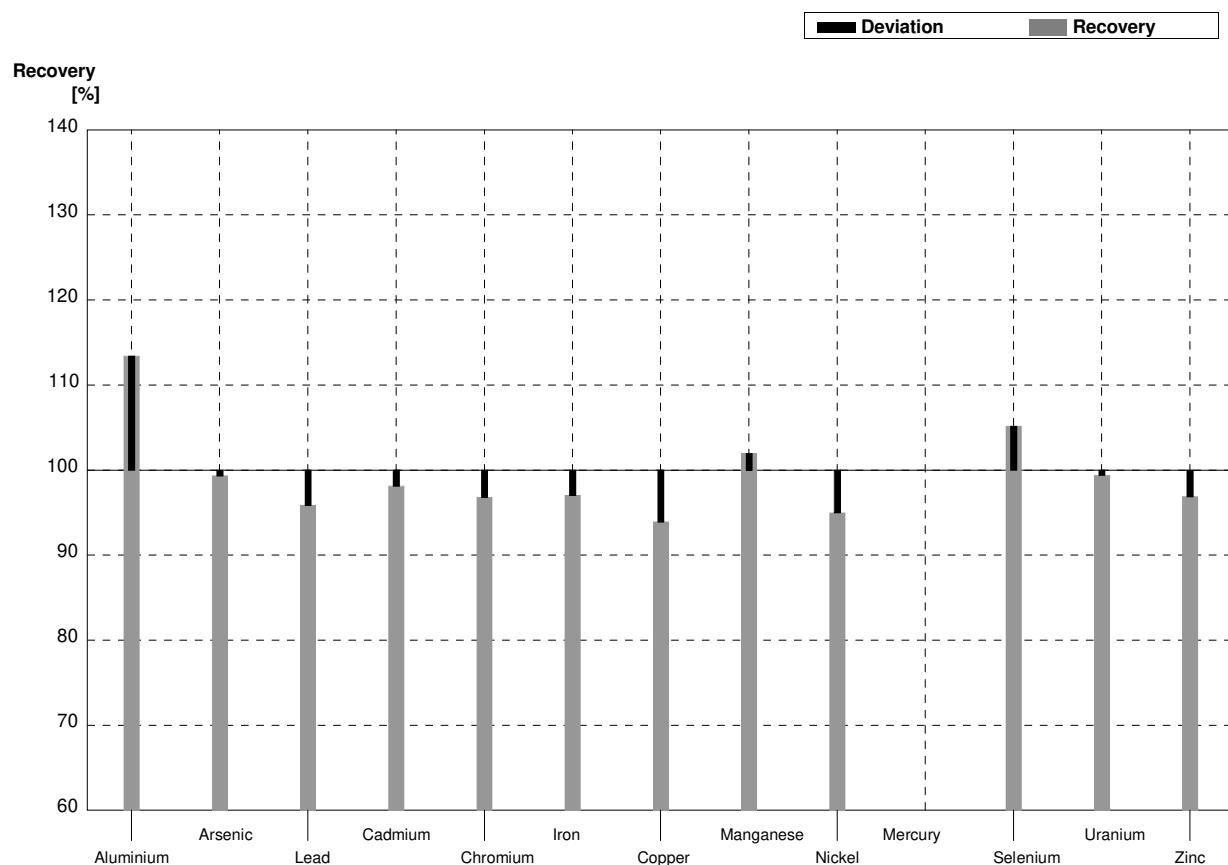
Sample M166A**Laboratory Q**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	52,0	3,64	$\mu\text{g/l}$	121%
Arsenic	2,302	0,018	2,23	0,22	$\mu\text{g/l}$	97%
Lead	4,63	0,03	4,49	0,45	$\mu\text{g/l}$	97%
Cadmium	0,805	0,004	0,79	0,08	$\mu\text{g/l}$	98%
Chromium	6,40	0,05	6,26	0,56	$\mu\text{g/l}$	98%
Iron	83,9	0,3	82,0	11,5	$\mu\text{g/l}$	98%
Copper	5,48	0,05	5,13	0,46	$\mu\text{g/l}$	94%
Manganese	23,55	0,17	23,9	1,91	$\mu\text{g/l}$	101%
Nickel	4,87	0,04	4,58	0,46	$\mu\text{g/l}$	94%
Mercury	0,359	0,015			$\mu\text{g/l}$	
Selenium	4,56	0,04	4,56	0,37	$\mu\text{g/l}$	100%
Uranium	5,06	0,04	5,01	0,40	$\mu\text{g/l}$	99%
Zinc	27,6	1,0	27,0	2,16	$\mu\text{g/l}$	98%



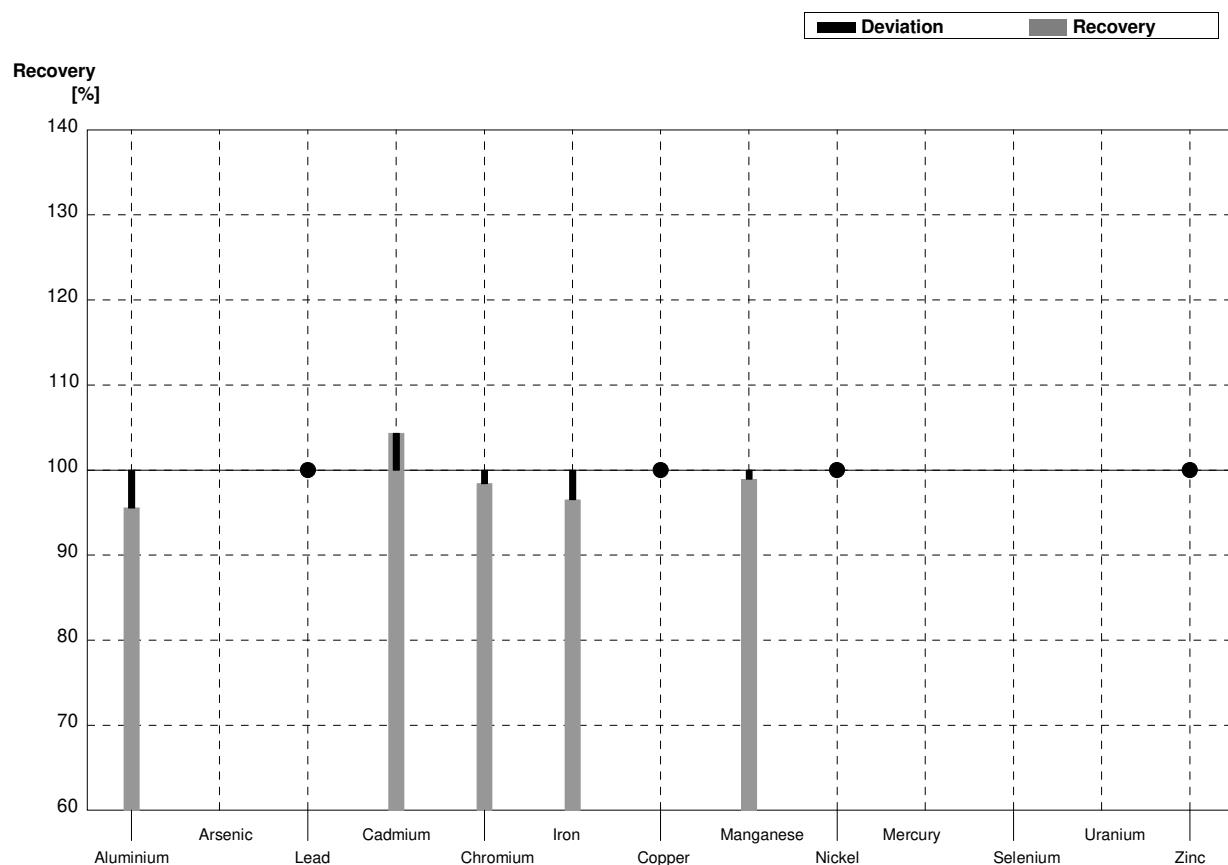
Sample M166B**Laboratory Q**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	73,5	5,16	$\mu\text{g/l}$	113%
Arsenic	4,54	0,03	4,51	0,45	$\mu\text{g/l}$	99%
Lead	1,189	0,015	1,14	0,11	$\mu\text{g/l}$	96%
Cadmium	1,671	0,013	1,64	0,16	$\mu\text{g/l}$	98%
Chromium	3,76	0,03	3,64	0,33	$\mu\text{g/l}$	97%
Iron	44,0	0,2	42,7	5,97	$\mu\text{g/l}$	97%
Copper	24,81	0,13	23,3	2,10	$\mu\text{g/l}$	94%
Manganese	46,0	0,3	46,9	3,75	$\mu\text{g/l}$	102%
Nickel	5,59	0,04	5,31	0,53	$\mu\text{g/l}$	95%
Mercury	1,75	0,02			$\mu\text{g/l}$	
Selenium	3,27	0,04	3,44	0,28	$\mu\text{g/l}$	105%
Uranium	1,308	0,013	1,30	0,10	$\mu\text{g/l}$	99%
Zinc	9,6	1,0	9,30	0,74	$\mu\text{g/l}$	97%



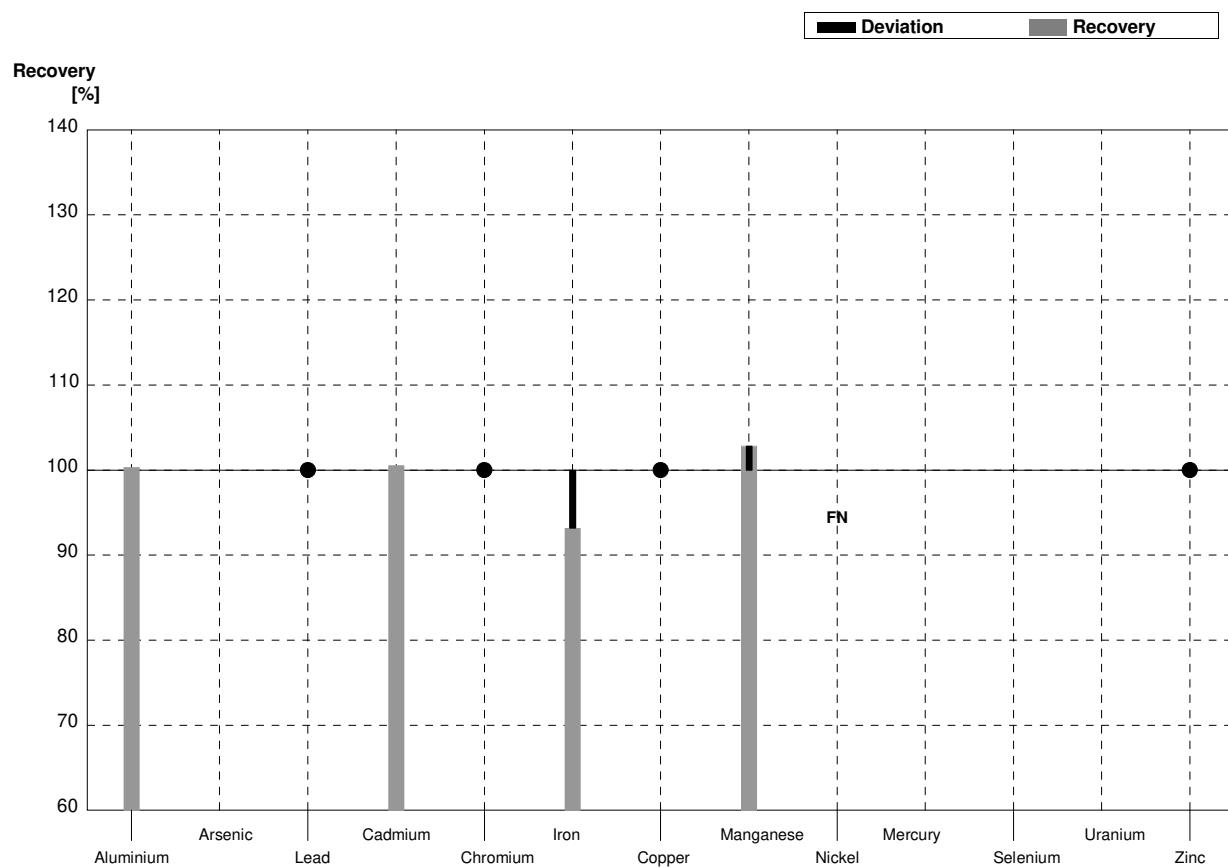
Sample M166A**Laboratory R**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	41,0	4	$\mu\text{g/l}$	96%
Arsenic	2,302	0,018			$\mu\text{g/l}$	
Lead	4,63	0,03	<6		$\mu\text{g/l}$	•
Cadmium	0,805	0,004	0,84	0,09	$\mu\text{g/l}$	104%
Chromium	6,40	0,05	6,3	0,4	$\mu\text{g/l}$	98%
Iron	83,9	0,3	81	13	$\mu\text{g/l}$	97%
Copper	5,48	0,05	<150		$\mu\text{g/l}$	•
Manganese	23,55	0,17	23,3	3,3	$\mu\text{g/l}$	99%
Nickel	4,87	0,04	<5		$\mu\text{g/l}$	•
Mercury	0,359	0,015			$\mu\text{g/l}$	
Selenium	4,56	0,04			$\mu\text{g/l}$	
Uranium	5,06	0,04			$\mu\text{g/l}$	
Zinc	27,6	1,0	<500		$\mu\text{g/l}$	•



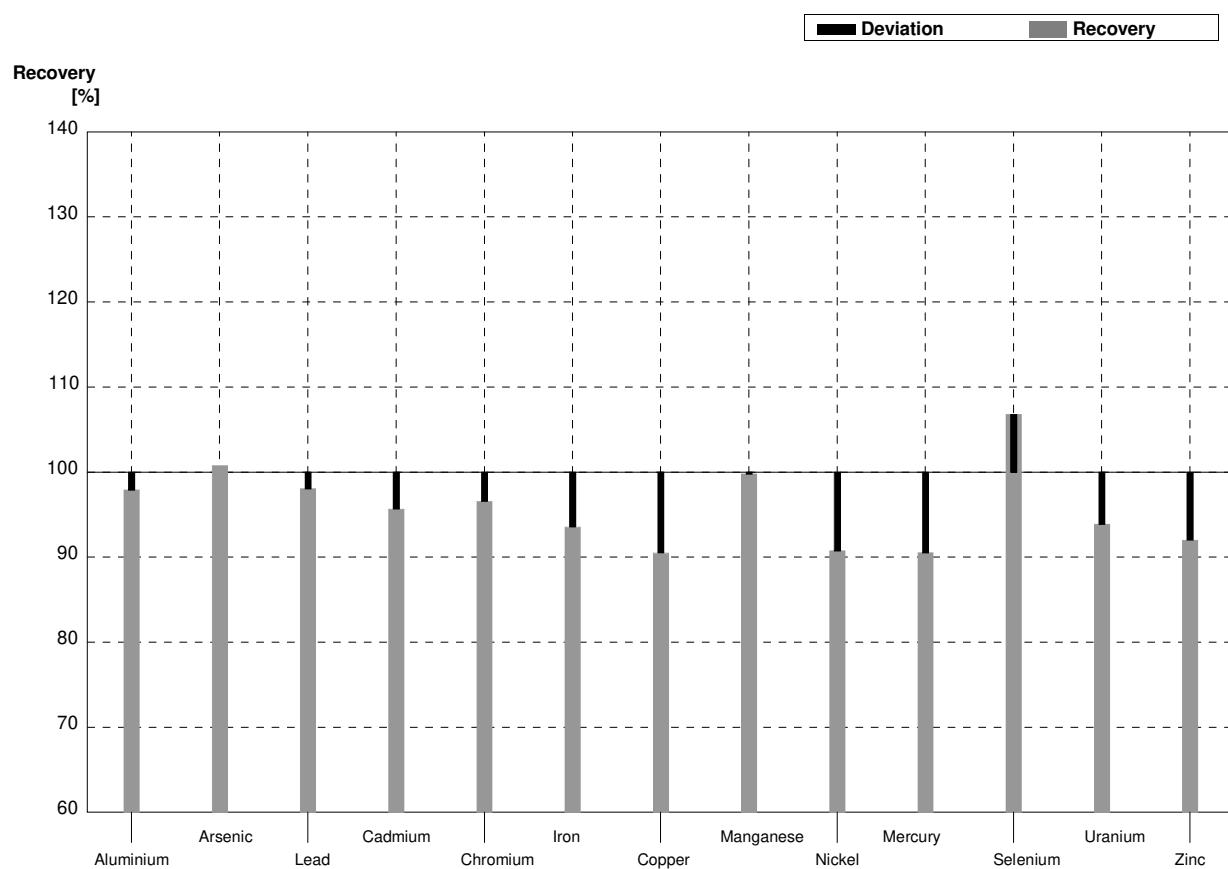
Sample M166B**Laboratory R**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	65	7	$\mu\text{g/l}$	100%
Arsenic	4,54	0,03			$\mu\text{g/l}$	
Lead	1,189	0,015	<6		$\mu\text{g/l}$	•
Cadmium	1,671	0,013	1,68	0,18	$\mu\text{g/l}$	101%
Chromium	3,76	0,03	<5		$\mu\text{g/l}$	•
Iron	44,0	0,2	41,0	7	$\mu\text{g/l}$	93%
Copper	24,81	0,13	<150		$\mu\text{g/l}$	•
Manganese	46,0	0,3	47,3	4,7	$\mu\text{g/l}$	103%
Nickel	5,59	0,04	<5		$\mu\text{g/l}$	FN
Mercury	1,75	0,02			$\mu\text{g/l}$	
Selenium	3,27	0,04			$\mu\text{g/l}$	
Uranium	1,308	0,013			$\mu\text{g/l}$	
Zinc	9,6	1,0	<500		$\mu\text{g/l}$	•



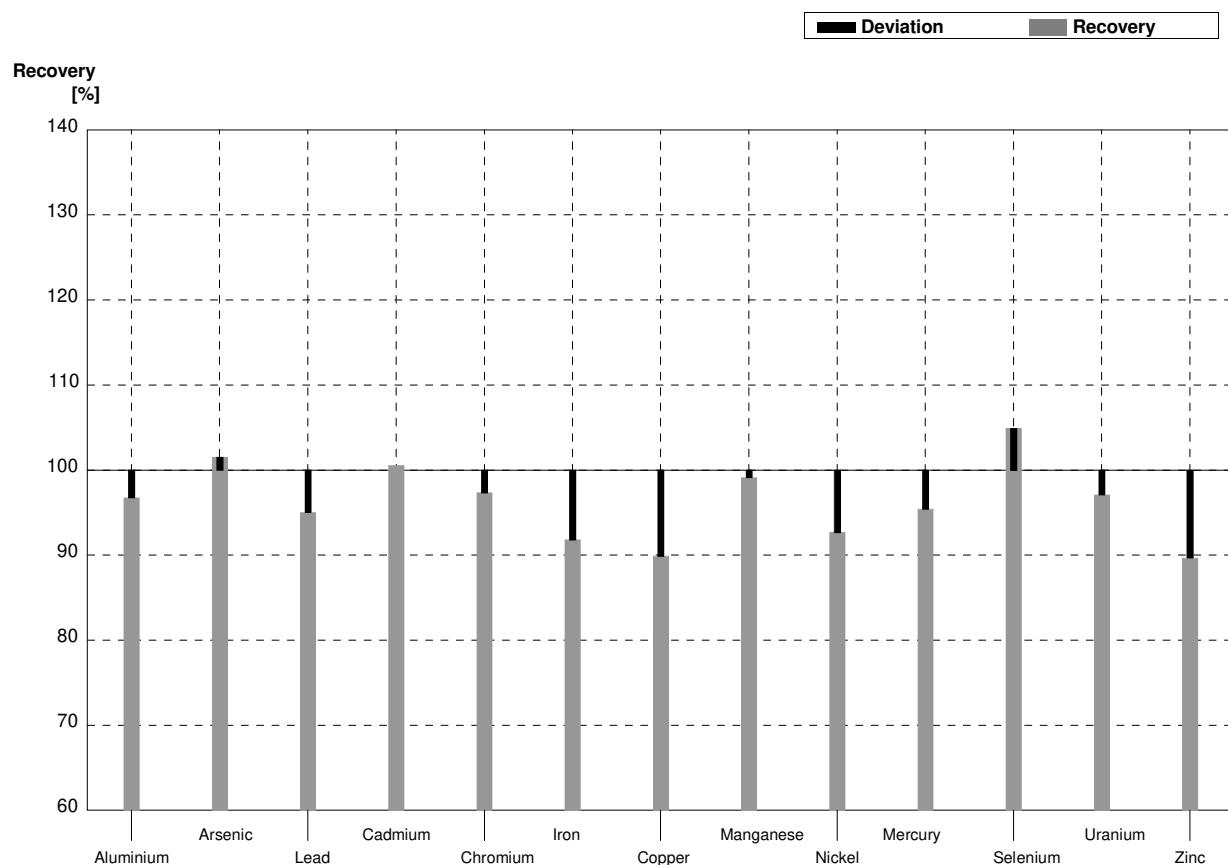
Sample M166A**Laboratory S**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	42,0	8,4	$\mu\text{g/l}$	98%
Arsenic	2,302	0,018	2,32	0,46	$\mu\text{g/l}$	101%
Lead	4,63	0,03	4,54	0,91	$\mu\text{g/l}$	98%
Cadmium	0,805	0,004	0,77	0,15	$\mu\text{g/l}$	96%
Chromium	6,40	0,05	6,18	1,24	$\mu\text{g/l}$	97%
Iron	83,9	0,3	78,5	15,7	$\mu\text{g/l}$	94%
Copper	5,48	0,05	4,96	0,99	$\mu\text{g/l}$	91%
Manganese	23,55	0,17	23,5	4,7	$\mu\text{g/l}$	100%
Nickel	4,87	0,04	4,42	0,88	$\mu\text{g/l}$	91%
Mercury	0,359	0,015	0,325	0,065	$\mu\text{g/l}$	91%
Selenium	4,56	0,04	4,87	0,97	$\mu\text{g/l}$	107%
Uranium	5,06	0,04	4,75	0,95	$\mu\text{g/l}$	94%
Zinc	27,6	1,0	25,4	5,1	$\mu\text{g/l}$	92%



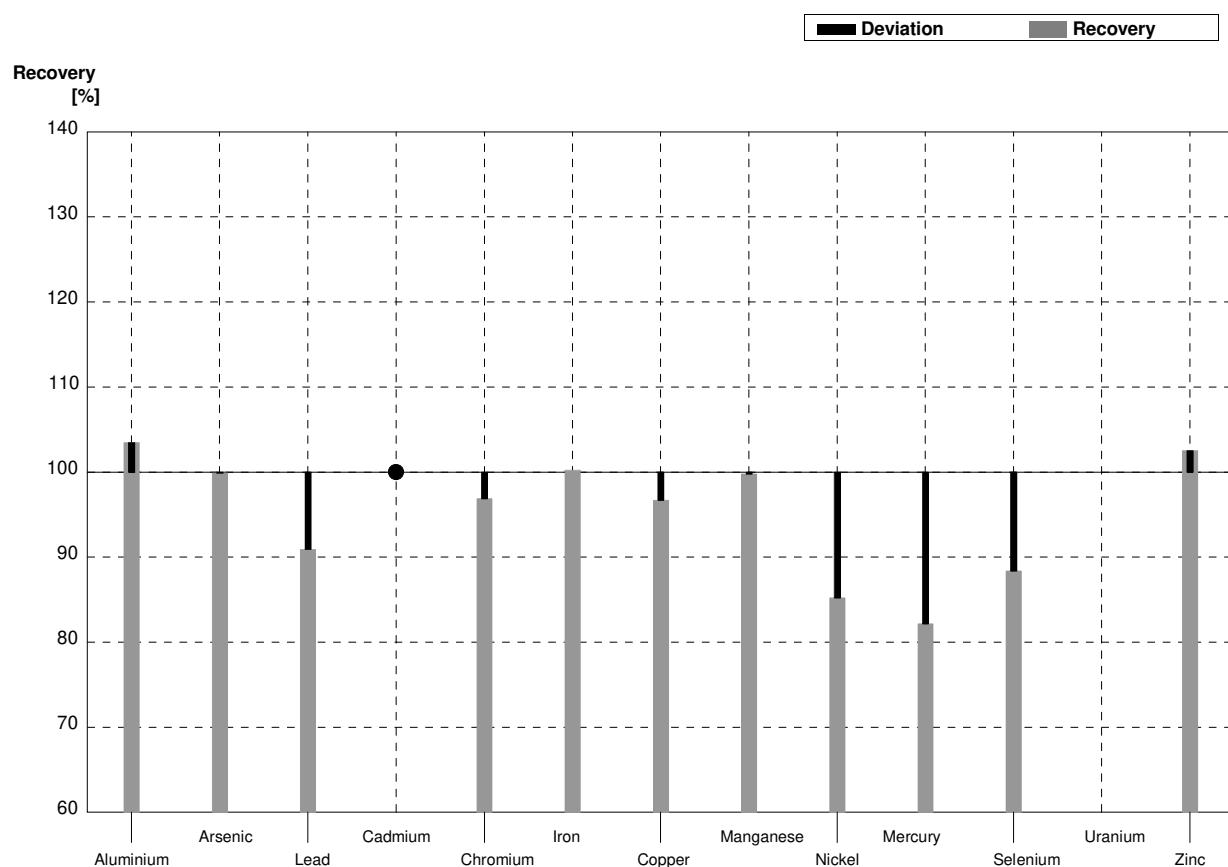
Sample M166B**Laboratory S**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	62,7	12,5	$\mu\text{g/l}$	97%
Arsenic	4,54	0,03	4,61	0,92	$\mu\text{g/l}$	102%
Lead	1,189	0,015	1,13	0,23	$\mu\text{g/l}$	95%
Cadmium	1,671	0,013	1,68	0,34	$\mu\text{g/l}$	101%
Chromium	3,76	0,03	3,66	0,73	$\mu\text{g/l}$	97%
Iron	44,0	0,2	40,4	8,1	$\mu\text{g/l}$	92%
Copper	24,81	0,13	22,3	4,5	$\mu\text{g/l}$	90%
Manganese	46,0	0,3	45,6	9,12	$\mu\text{g/l}$	99%
Nickel	5,59	0,04	5,18	1,04	$\mu\text{g/l}$	93%
Mercury	1,75	0,02	1,67	0,33	$\mu\text{g/l}$	95%
Selenium	3,27	0,04	3,43	0,69	$\mu\text{g/l}$	105%
Uranium	1,308	0,013	1,27	0,25	$\mu\text{g/l}$	97%
Zinc	9,6	1,0	8,61	1,72	$\mu\text{g/l}$	90%



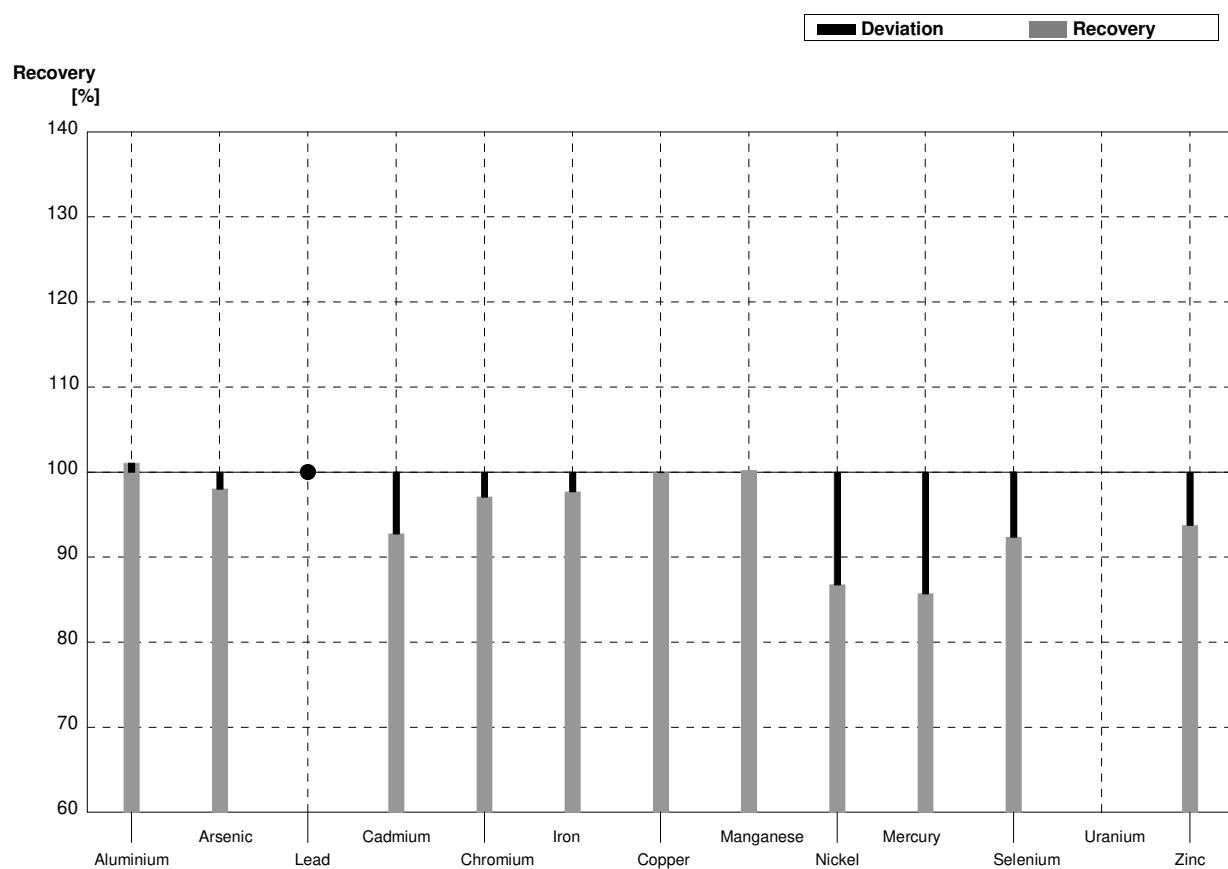
Sample M166A**Laboratory T**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	44,4	5	$\mu\text{g/l}$	103%
Arsenic	2,302	0,018	2,30	0,2	$\mu\text{g/l}$	100%
Lead	4,63	0,03	4,21	0,4	$\mu\text{g/l}$	91%
Cadmium	0,805	0,004	<0,9		$\mu\text{g/l}$	•
Chromium	6,40	0,05	6,20	0,6	$\mu\text{g/l}$	97%
Iron	83,9	0,3	84,1	8	$\mu\text{g/l}$	100%
Copper	5,48	0,05	5,30	0,5	$\mu\text{g/l}$	97%
Manganese	23,55	0,17	23,5	3	$\mu\text{g/l}$	100%
Nickel	4,87	0,04	4,15	0,4	$\mu\text{g/l}$	85%
Mercury	0,359	0,015	0,295	0,05	$\mu\text{g/l}$	82%
Selenium	4,56	0,04	4,03	0,4	$\mu\text{g/l}$	88%
Uranium	5,06	0,04			$\mu\text{g/l}$	
Zinc	27,6	1,0	28,3	3	$\mu\text{g/l}$	103%



Sample M166B**Laboratory T**

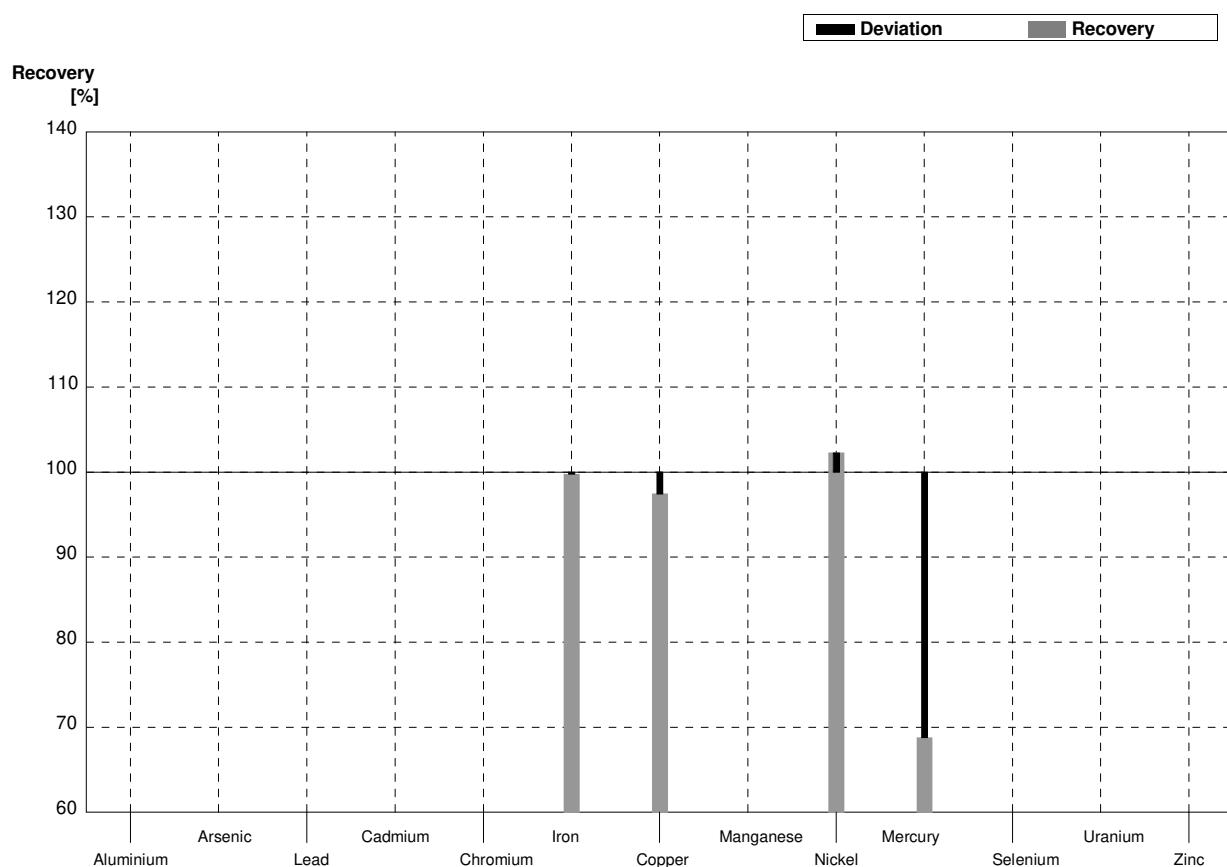
Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	65,5	6	$\mu\text{g/l}$	101%
Arsenic	4,54	0,03	4,45	0,4	$\mu\text{g/l}$	98%
Lead	1,189	0,015	<2		$\mu\text{g/l}$	•
Cadmium	1,671	0,013	1,55	0,15	$\mu\text{g/l}$	93%
Chromium	3,76	0,03	3,65	0,4	$\mu\text{g/l}$	97%
Iron	44,0	0,2	42,99	4	$\mu\text{g/l}$	98%
Copper	24,81	0,13	24,8	2	$\mu\text{g/l}$	100%
Manganese	46,0	0,3	46,1	5	$\mu\text{g/l}$	100%
Nickel	5,59	0,04	4,85	0,5	$\mu\text{g/l}$	87%
Mercury	1,75	0,02	1,50	0,15	$\mu\text{g/l}$	86%
Selenium	3,27	0,04	3,02	0,3	$\mu\text{g/l}$	92%
Uranium	1,308	0,013			$\mu\text{g/l}$	
Zinc	9,6	1,0	9,00	0,9	$\mu\text{g/l}$	94%



Sample M166A

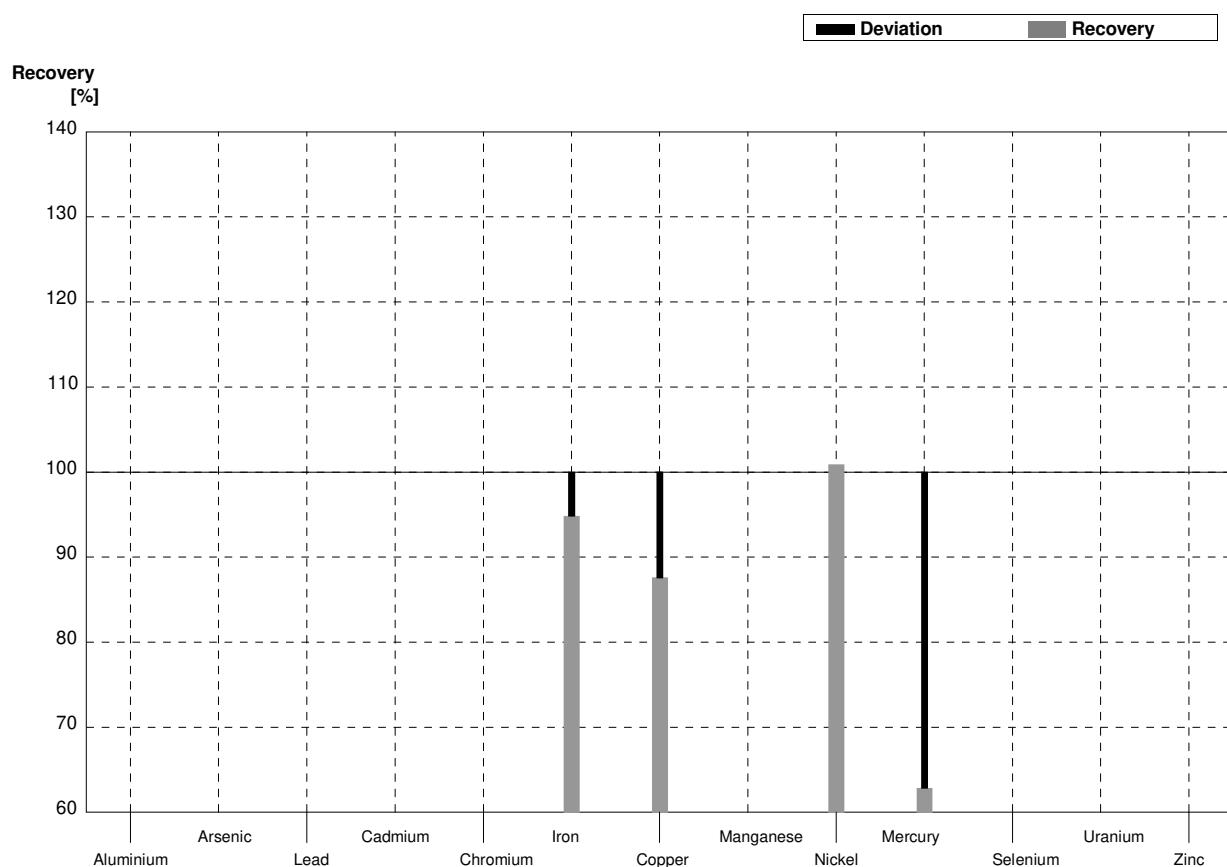
Laboratory U

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3			$\mu\text{g/l}$	
Arsenic	2,302	0,018			$\mu\text{g/l}$	
Lead	4,63	0,03			$\mu\text{g/l}$	
Cadmium	0,805	0,004			$\mu\text{g/l}$	
Chromium	6,40	0,05			$\mu\text{g/l}$	
Iron	83,9	0,3	83,70		$\mu\text{g/l}$	100%
Copper	5,48	0,05	5,34		$\mu\text{g/l}$	97%
Manganese	23,55	0,17			$\mu\text{g/l}$	
Nickel	4,87	0,04	4,98		$\mu\text{g/l}$	102%
Mercury	0,359	0,015	0,247		$\mu\text{g/l}$	69%
Selenium	4,56	0,04			$\mu\text{g/l}$	
Uranium	5,06	0,04			$\mu\text{g/l}$	
Zinc	27,6	1,0			$\mu\text{g/l}$	



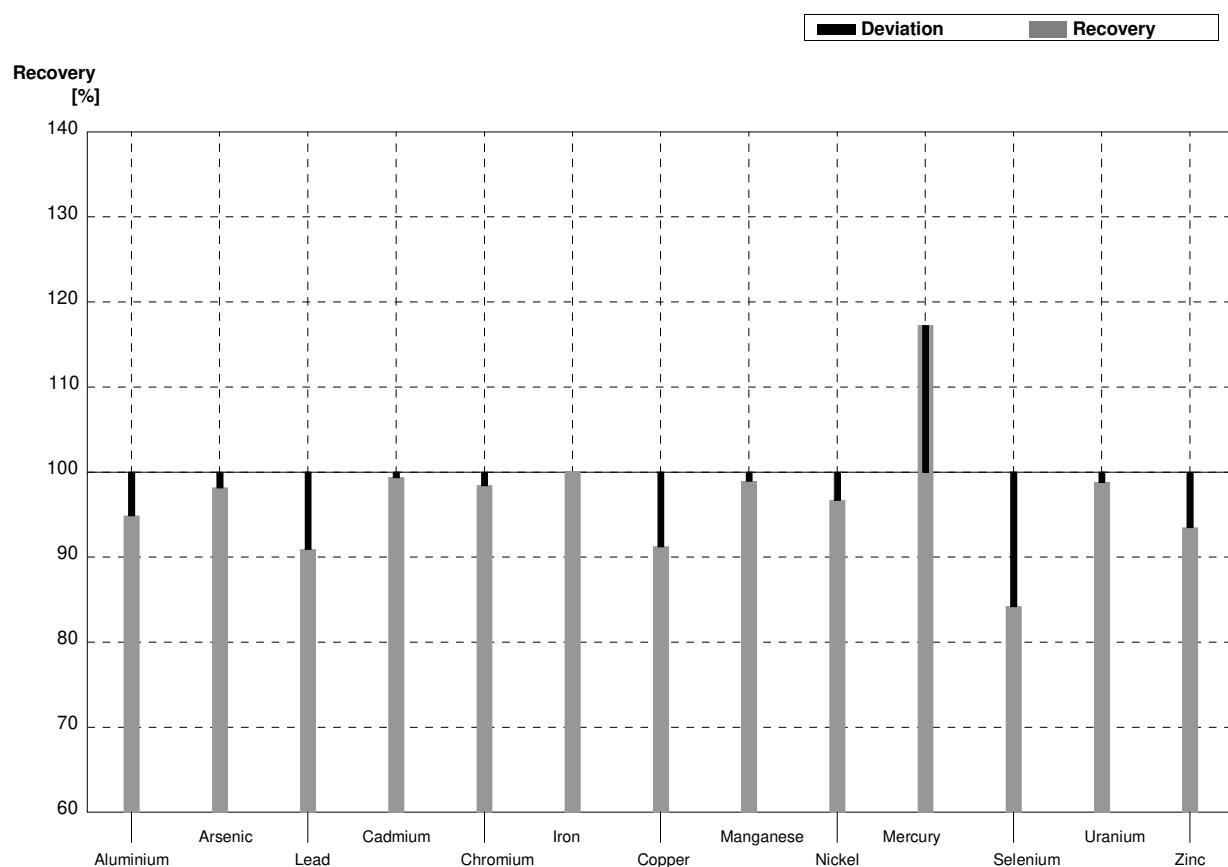
Sample M166B**Laboratory U**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4			$\mu\text{g/l}$	
Arsenic	4,54	0,03			$\mu\text{g/l}$	
Lead	1,189	0,015			$\mu\text{g/l}$	
Cadmium	1,671	0,013			$\mu\text{g/l}$	
Chromium	3,76	0,03			$\mu\text{g/l}$	
Iron	44,0	0,2	41,73		$\mu\text{g/l}$	95%
Copper	24,81	0,13	21,73		$\mu\text{g/l}$	88%
Manganese	46,0	0,3			$\mu\text{g/l}$	
Nickel	5,59	0,04	5,64		$\mu\text{g/l}$	101%
Mercury	1,75	0,02	1,10		$\mu\text{g/l}$	63%
Selenium	3,27	0,04			$\mu\text{g/l}$	
Uranium	1,308	0,013			$\mu\text{g/l}$	
Zinc	9,6	1,0			$\mu\text{g/l}$	



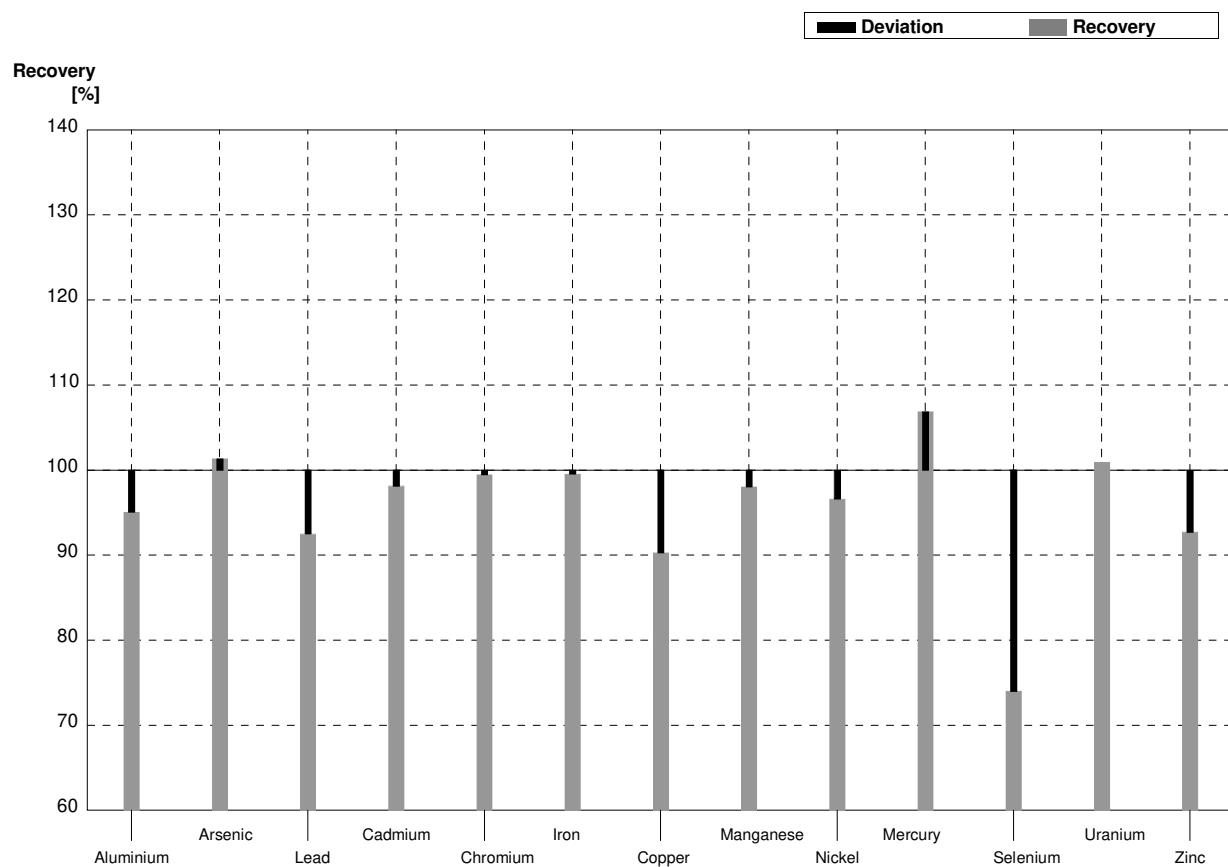
Sample M166A**Laboratory V**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	40,7	4,07	$\mu\text{g/l}$	95%
Arsenic	2,302	0,018	2,26	0,34	$\mu\text{g/l}$	98%
Lead	4,63	0,03	4,21	0,421	$\mu\text{g/l}$	91%
Cadmium	0,805	0,004	0,80	0,080	$\mu\text{g/l}$	99%
Chromium	6,40	0,05	6,3	0,63	$\mu\text{g/l}$	98%
Iron	83,9	0,3	84,0	8,4	$\mu\text{g/l}$	100%
Copper	5,48	0,05	5,0	0,50	$\mu\text{g/l}$	91%
Manganese	23,55	0,17	23,3	2,33	$\mu\text{g/l}$	99%
Nickel	4,87	0,04	4,71	0,471	$\mu\text{g/l}$	97%
Mercury	0,359	0,015	0,421	0,0421	$\mu\text{g/l}$	117%
Selenium	4,56	0,04	3,84	0,58	$\mu\text{g/l}$	84%
Uranium	5,06	0,04	5,0	0,50	$\mu\text{g/l}$	99%
Zinc	27,6	1,0	25,8	2,58	$\mu\text{g/l}$	93%



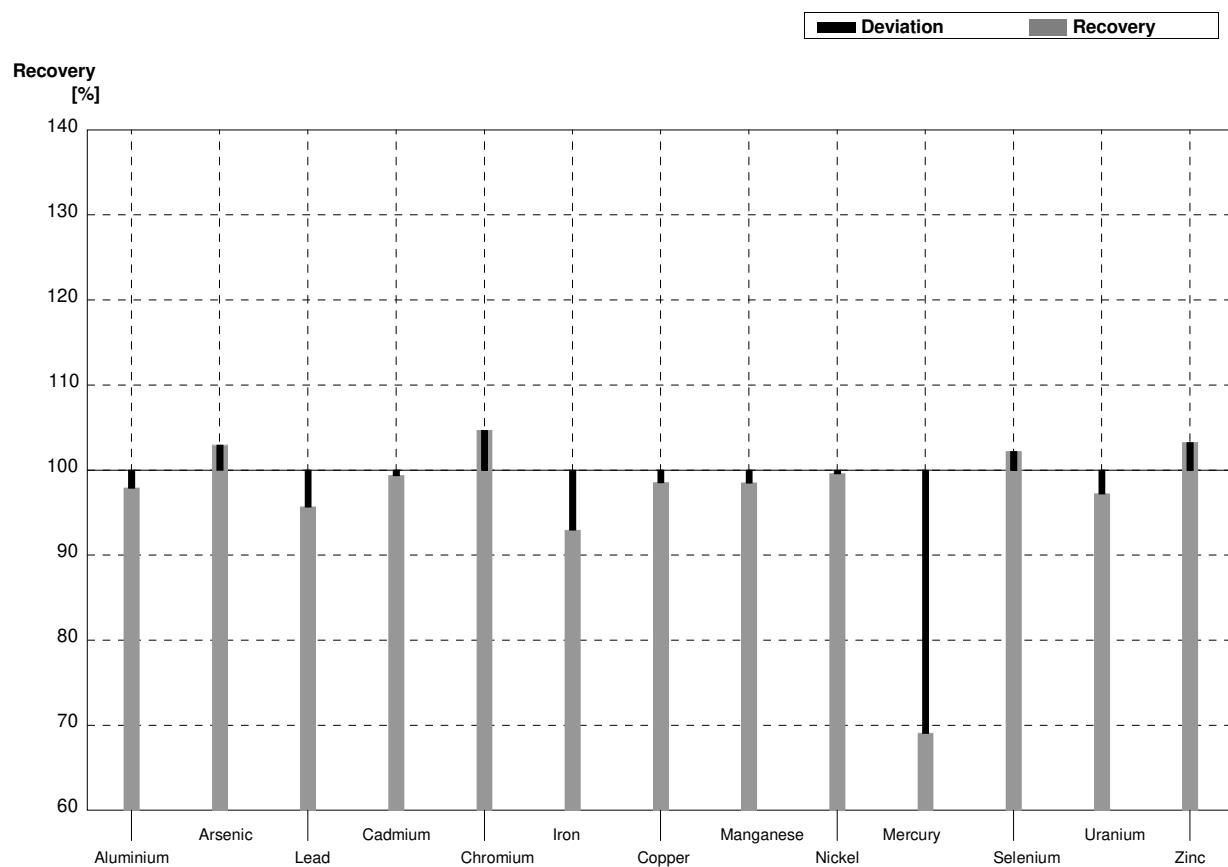
Sample M166B**Laboratory V**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	61,6	6,16	$\mu\text{g/l}$	95%
Arsenic	4,54	0,03	4,60	0,69	$\mu\text{g/l}$	101%
Lead	1,189	0,015	1,10	0,11	$\mu\text{g/l}$	93%
Cadmium	1,671	0,013	1,64	0,164	$\mu\text{g/l}$	98%
Chromium	3,76	0,03	3,74	0,374	$\mu\text{g/l}$	99%
Iron	44,0	0,2	43,8	4,38	$\mu\text{g/l}$	100%
Copper	24,81	0,13	22,4	2,24	$\mu\text{g/l}$	90%
Manganese	46,0	0,3	45,1	4,51	$\mu\text{g/l}$	98%
Nickel	5,59	0,04	5,4	0,54	$\mu\text{g/l}$	97%
Mercury	1,75	0,02	1,87	0,187	$\mu\text{g/l}$	107%
Selenium	3,27	0,04	2,42	0,36	$\mu\text{g/l}$	74%
Uranium	1,308	0,013	1,32	0,132	$\mu\text{g/l}$	101%
Zinc	9,6	1,0	8,9	0,89	$\mu\text{g/l}$	93%



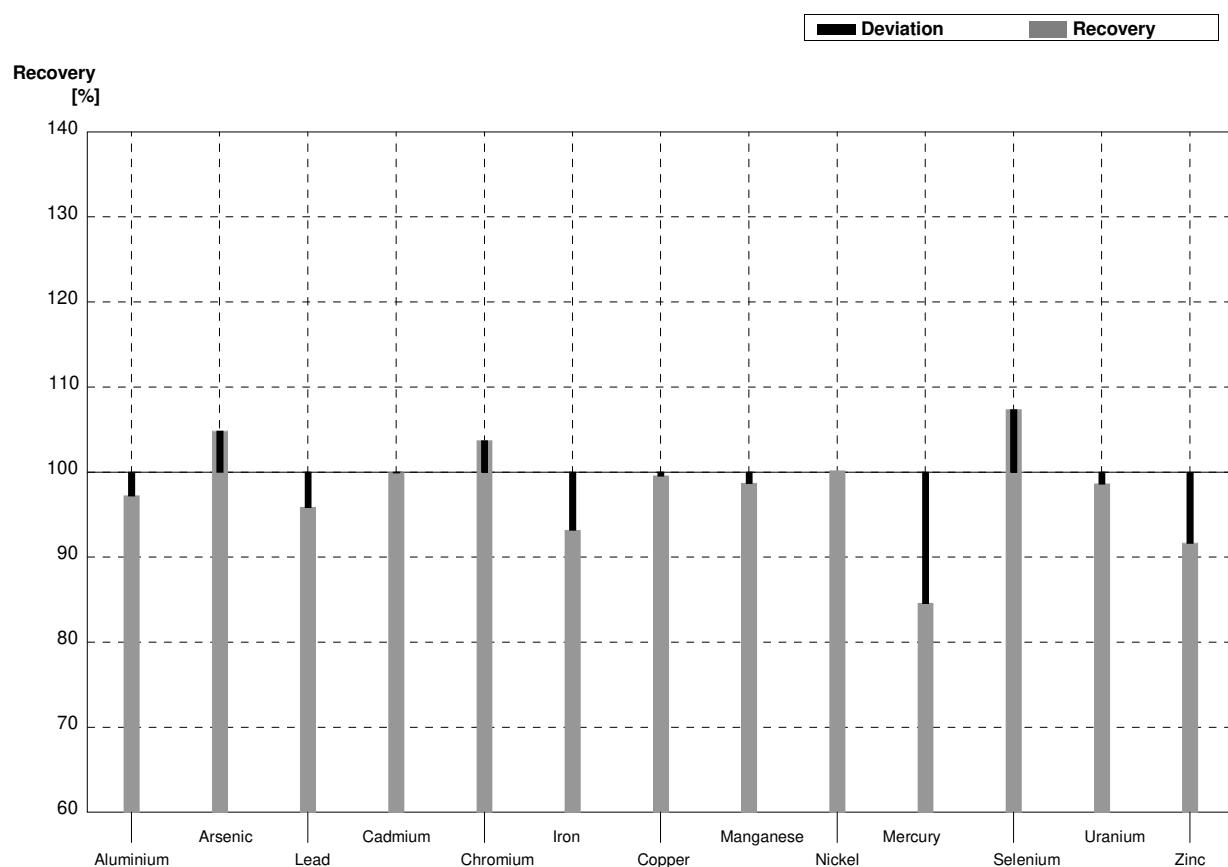
Sample M166A**Laboratory W**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	42,0	2,77	$\mu\text{g/l}$	98%
Arsenic	2,302	0,018	2,37	0,159	$\mu\text{g/l}$	103%
Lead	4,63	0,03	4,43	0,232	$\mu\text{g/l}$	96%
Cadmium	0,805	0,004	0,80	0,059	$\mu\text{g/l}$	99%
Chromium	6,40	0,05	6,7	0,438	$\mu\text{g/l}$	105%
Iron	83,9	0,3	78	3,69	$\mu\text{g/l}$	93%
Copper	5,48	0,05	5,4	0,280	$\mu\text{g/l}$	99%
Manganese	23,55	0,17	23,2	1,10	$\mu\text{g/l}$	99%
Nickel	4,87	0,04	4,85	0,389	$\mu\text{g/l}$	100%
Mercury	0,359	0,015	0,248	0,026	$\mu\text{g/l}$	69%
Selenium	4,56	0,04	4,66	0,319	$\mu\text{g/l}$	102%
Uranium	5,06	0,04	4,92	0,366	$\mu\text{g/l}$	97%
Zinc	27,6	1,0	28,5	1,35	$\mu\text{g/l}$	103%



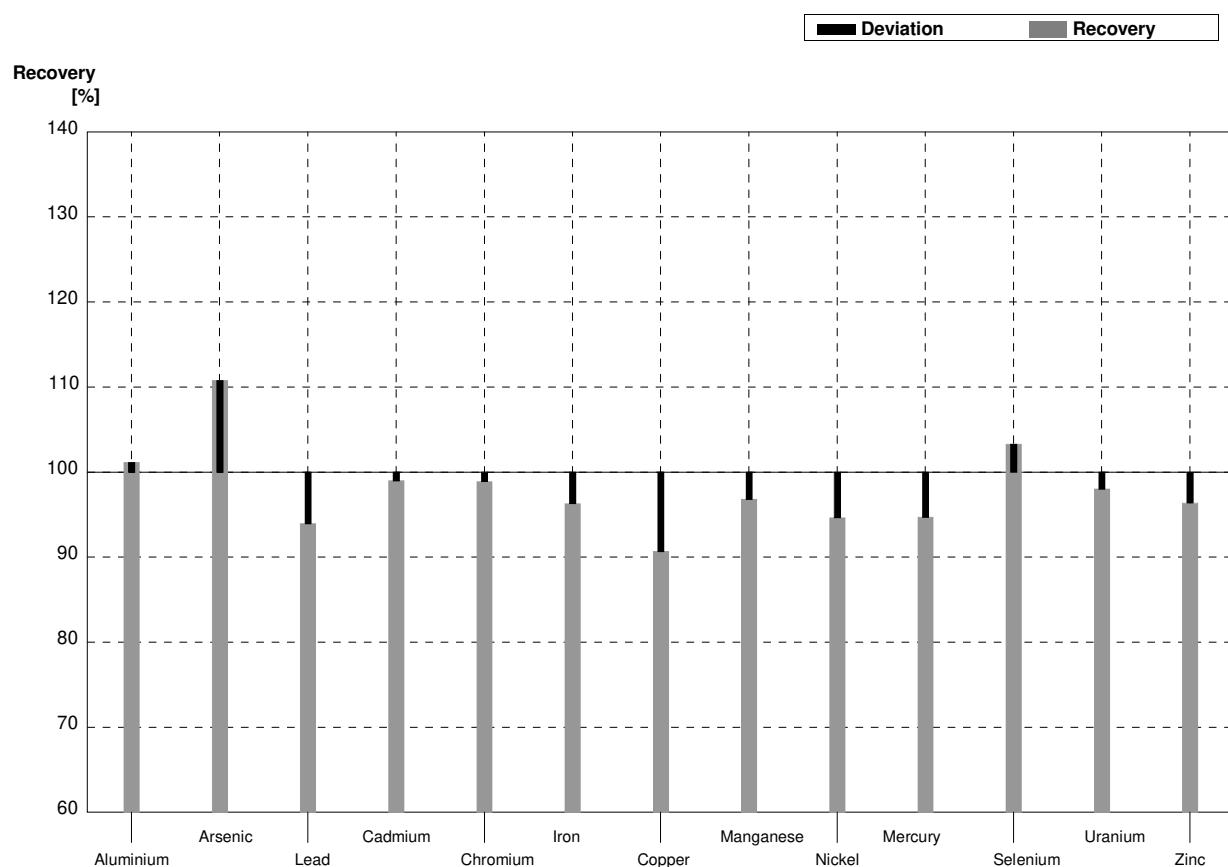
Sample M166B**Laboratory W**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	63	4,16	$\mu\text{g/l}$	97%
Arsenic	4,54	0,03	4,76	0,319	$\mu\text{g/l}$	105%
Lead	1,189	0,015	1,14	0,060	$\mu\text{g/l}$	96%
Cadmium	1,671	0,013	1,67	0,123	$\mu\text{g/l}$	100%
Chromium	3,76	0,03	3,90	0,255	$\mu\text{g/l}$	104%
Iron	44,0	0,2	41,0	1,94	$\mu\text{g/l}$	93%
Copper	24,81	0,13	24,7	1,279	$\mu\text{g/l}$	100%
Manganese	46,0	0,3	45,4	2,15	$\mu\text{g/l}$	99%
Nickel	5,59	0,04	5,6	0,449	$\mu\text{g/l}$	100%
Mercury	1,75	0,02	1,48	0,156	$\mu\text{g/l}$	85%
Selenium	3,27	0,04	3,51	0,200	$\mu\text{g/l}$	107%
Uranium	1,308	0,013	1,29	0,096	$\mu\text{g/l}$	99%
Zinc	9,6	1,0	8,8	0,416	$\mu\text{g/l}$	92%



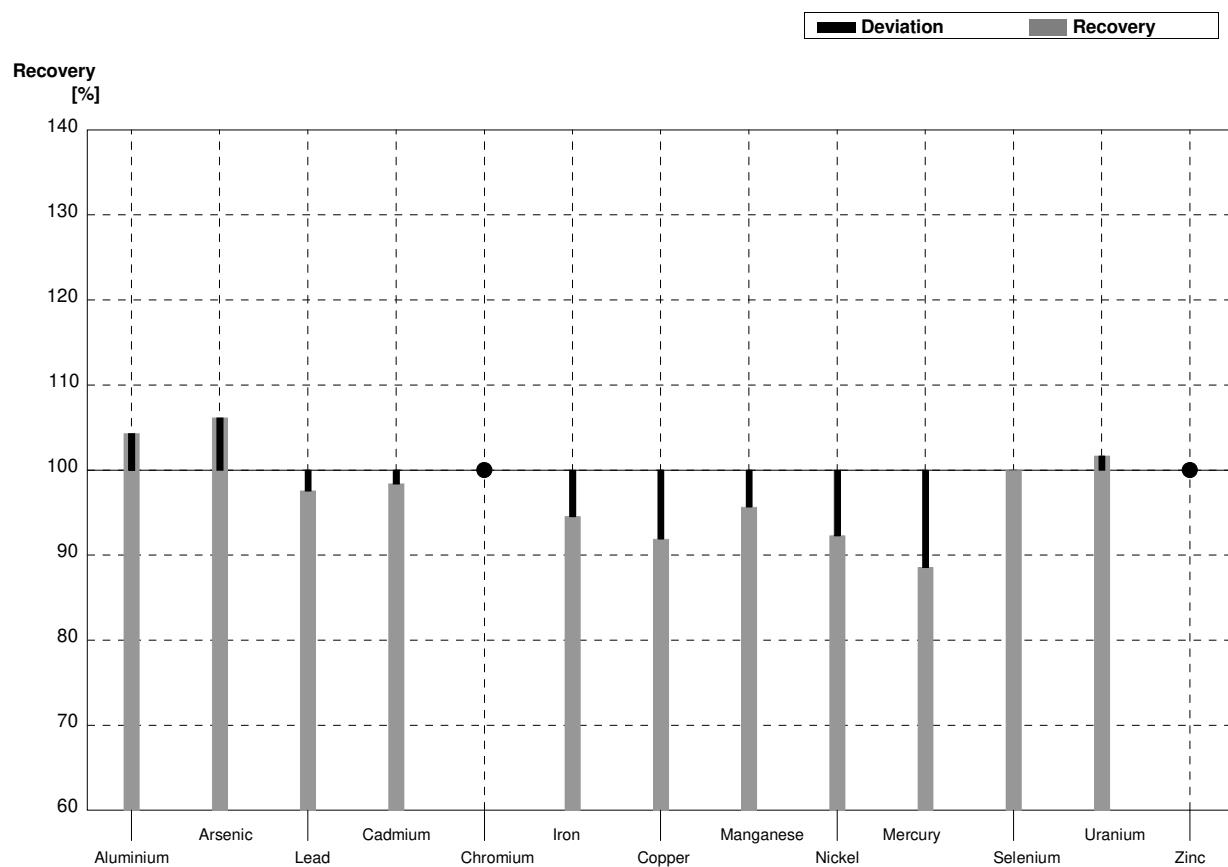
Sample M166A**Laboratory X**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	43,4	5,0	$\mu\text{g/l}$	101%
Arsenic	2,302	0,018	2,55	0,2	$\mu\text{g/l}$	111%
Lead	4,63	0,03	4,35	0,6	$\mu\text{g/l}$	94%
Cadmium	0,805	0,004	0,797	0,01	$\mu\text{g/l}$	99%
Chromium	6,40	0,05	6,33	0,8	$\mu\text{g/l}$	99%
Iron	83,9	0,3	80,8	5,7	$\mu\text{g/l}$	96%
Copper	5,48	0,05	4,97		$\mu\text{g/l}$	91%
Manganese	23,55	0,17	22,8	1,6	$\mu\text{g/l}$	97%
Nickel	4,87	0,04	4,61	0,5	$\mu\text{g/l}$	95%
Mercury	0,359	0,015	0,340	0,05	$\mu\text{g/l}$	95%
Selenium	4,56	0,04	4,71	0,7	$\mu\text{g/l}$	103%
Uranium	5,06	0,04	4,96	0,4	$\mu\text{g/l}$	98%
Zinc	27,6	1,0	26,6	7,0	$\mu\text{g/l}$	96%



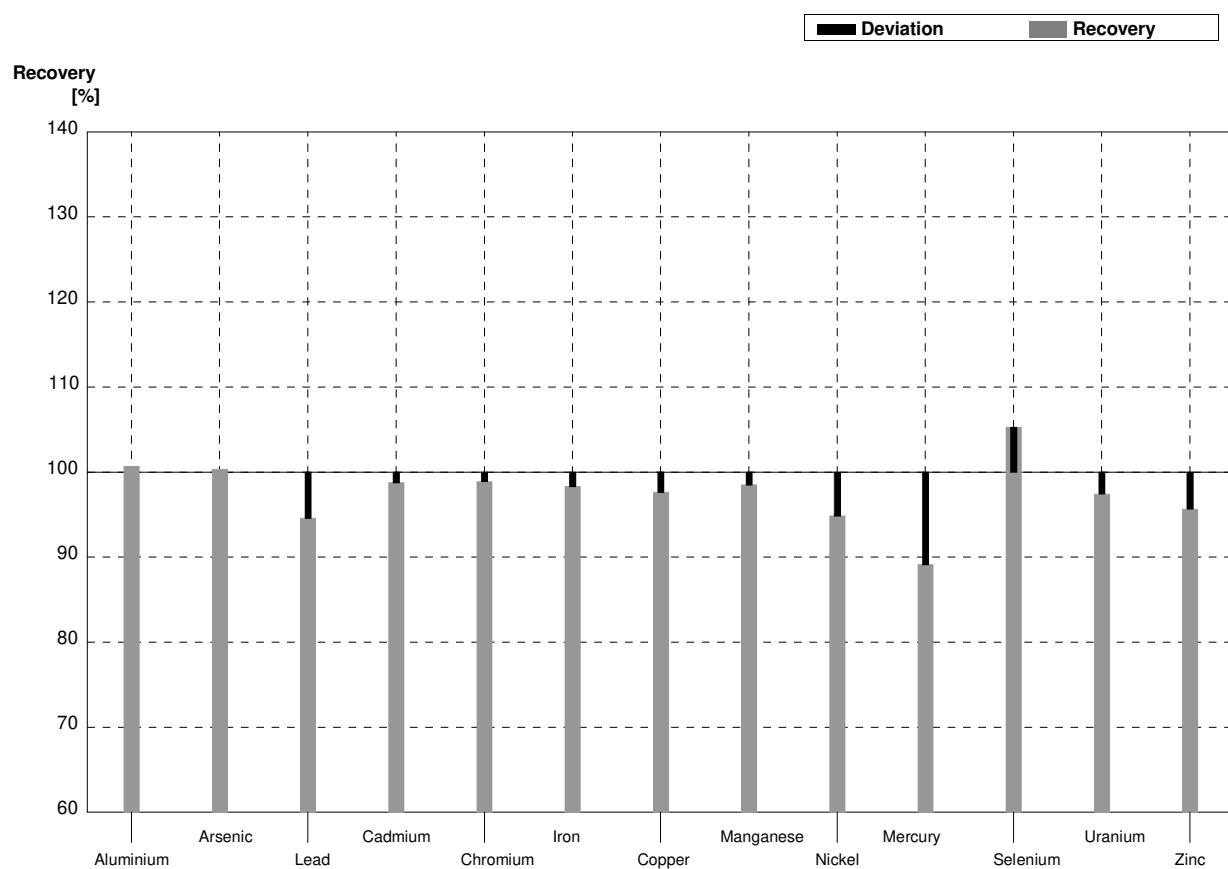
Sample M166B**Laboratory X**

Parameter	Target value	$\pm U$ ($k=2$)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	67,6	10,7	$\mu\text{g/l}$	104%
Arsenic	4,54	0,03	4,82	0,4	$\mu\text{g/l}$	106%
Lead	1,189	0,015	1,16	0,14	$\mu\text{g/l}$	98%
Cadmium	1,671	0,013	1,644	0,11	$\mu\text{g/l}$	98%
Chromium	3,76	0,03	<5		$\mu\text{g/l}$	•
Iron	44,0	0,2	41,6	2,8	$\mu\text{g/l}$	95%
Copper	24,81	0,13	22,8	2,65	$\mu\text{g/l}$	92%
Manganese	46,0	0,3	44,0	2,79	$\mu\text{g/l}$	96%
Nickel	5,59	0,04	5,16	0,79	$\mu\text{g/l}$	92%
Mercury	1,75	0,02	1,550	0,26	$\mu\text{g/l}$	89%
Selenium	3,27	0,04	3,27	0,52	$\mu\text{g/l}$	100%
Uranium	1,308	0,013	1,33		$\mu\text{g/l}$	102%
Zinc	9,6	1,0	<10		$\mu\text{g/l}$	•



Sample M166A**Laboratory Y**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	42,9	0,3	43,2	5,2	$\mu\text{g/l}$	101%
Arsenic	2,302	0,018	2,31	0,39	$\mu\text{g/l}$	100%
Lead	4,63	0,03	4,38	0,53	$\mu\text{g/l}$	95%
Cadmium	0,805	0,004	0,795	0,095	$\mu\text{g/l}$	99%
Chromium	6,40	0,05	6,33	1,20	$\mu\text{g/l}$	99%
Iron	83,9	0,3	82,5	14,9	$\mu\text{g/l}$	98%
Copper	5,48	0,05	5,35	0,59	$\mu\text{g/l}$	98%
Manganese	23,55	0,17	23,2	3,5	$\mu\text{g/l}$	99%
Nickel	4,87	0,04	4,62	1,06	$\mu\text{g/l}$	95%
Mercury	0,359	0,015	0,320	0,058	$\mu\text{g/l}$	89%
Selenium	4,56	0,04	4,80	1,63	$\mu\text{g/l}$	105%
Uranium	5,06	0,04	4,93	0,49	$\mu\text{g/l}$	97%
Zinc	27,6	1,0	26,4	4,2	$\mu\text{g/l}$	96%



Sample M166B**Laboratory Y**

Parameter	Target value	\pm U (k=2)	Result	\pm	Unit	Recovery
Aluminium	64,8	0,4	62,9	7,5	$\mu\text{g/l}$	97%
Arsenic	4,54	0,03	4,47	0,76	$\mu\text{g/l}$	98%
Lead	1,189	0,015	1,12	0,13	$\mu\text{g/l}$	94%
Cadmium	1,671	0,013	1,63	0,20	$\mu\text{g/l}$	98%
Chromium	3,76	0,03	3,68	0,70	$\mu\text{g/l}$	98%
Iron	44,0	0,2	42,3	7,6	$\mu\text{g/l}$	96%
Copper	24,81	0,13	22,6	2,5	$\mu\text{g/l}$	91%
Manganese	46,0	0,3	45,0	5,0	$\mu\text{g/l}$	98%
Nickel	5,59	0,04	5,22	1,20	$\mu\text{g/l}$	93%
Mercury	1,75	0,02	1,71	0,31	$\mu\text{g/l}$	98%
Selenium	3,27	0,04	3,37	1,15	$\mu\text{g/l}$	103%
Uranium	1,308	0,013	1,26	0,13	$\mu\text{g/l}$	96%
Zinc	9,6	1,0	9,27	1,48	$\mu\text{g/l}$	97%

