

IFA-Proficiency Testing Scheme for Water Analysis

Round M167
Metals

Sample Dispatch: 22 May 2023

In accordance with the procedure: AVKPS.02

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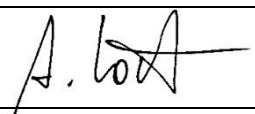
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round: M167	Date / Signature:	04.07.2023 

Report: 1st edition, created on 4 July 2023 by Ing. Uta Kachelmeier
 153 pages

This report summarises the results of round M167 (trace metals) within the IFA-Proficiency Testing Scheme for Water Analysis. The samples M167A and M167B were distributed to 39 participants on Monday, 22 May 2023. Each participant received two samples of 250 mL filled into LDPE bottles.

Closing date for reporting results to the IFA-Tulln was Friday, 23 June 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 45.9 mg/L Ca, 19.4 mg/L Mg, 9.0 mg/L Na, 1.32 mg/L K, 19.2 mg/L SO₄²⁻ and 15.7 mg/L Cl⁻ (sample M167B: 15.1 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, Ag, As, Be, Cd, Ce, Co, Cr, Cu, Fe, Gd, Hg, Li, Mn, Ni, Pb, Se, U, V 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 M167A and M167B 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 (M168).

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

Results

Data evaluation was based on target concentrations that were calculated from the weights of the standards used to produce the samples. Their uncertainty intervals correspond to the expanded uncertainty (coverage factor $k = 2$) as described in the EURACHEM/CITAC Guide "Quantifying Uncertainty in Analytical Measurement, 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 94.0 % (Hg in sample M167B) and 125.5 % (Gd in sample M167B).

The between laboratory CVs covered the ranged between 3.5 % (Co in sample M167A) and 13.5 % (Be in sample M167A).

All confidence intervals of the outlier-corrected laboratory mean values except that for Pb in sample M167A (95.4 % ± 2.9 %) and in sample M167B (95.2 % ± 2.8 %), Cu in sample M167A (94.4 % ± 2.2 %) and in sample M167B (95.1 % ± 2.8 %), As in sample M167B (104.4 % ± 3.0 %) and U in sample M167B (94.9 % ± 3.2 %), 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.

Gadolinium and beryllium have only been observed since 2022, in a total of two proficiency test rounds. For these parameters, the standard deviations of the outlier-adjusted results of the participants from these two rounds were used as the basis for estimating the performance criteria.

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.

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

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 %	7.5 µg/L
Arsenic	7.3 %	0.5 µg/L
Beryllium ¹⁾	12 %	0.1 µg/L
Cadmium	5.4 %	0.1 µg/L
Cerium	5.1 %	0.25 µg/L
Chromium	6.3 %	0.5 µg/L
Cobalt	6.3 %	0.25 µg/L
Copper	7.8 %	1.0 µg/L
Gadolinium ¹⁾	12 %	0.05 µg/L
Iron	6.7 %	10 µg/L
Lead	6.7 %	0.3 µg/L
Lithium	7.4 %	1.5 µg/L
Manganese	5.3 %	2.0 µg/L
Mercury	11 %	0.2 µg/L
Nickel	7.4 %	0.75 µg/L
Selenium	9.4 %	0.3 µg/L
Silver	14 %	0.05 µg/L
Uranium	5.5 %	0.35 µg/L
Vanadium	7.6 %	0.3 µg/L
Zinc	7.0 %	3 µg/L

¹⁾ Beryllium and gadolinium have been offered since 2022, but not in the accredited area. For these two parameters the standard deviations of the outlier-adjusted results of the participants from two rounds were used as the basis for estimating the performance criteria.

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, 4 July 2023

Sample M106A
Parameter Copper

Target value ± U (k=2) 4,79 µg/l ± 0,13 µg/l
 IFA result ± U (k=2) 4,79 µg/l ± 0,38 µg/l
 Stability test ± U (k=2) 4,69 µg/l ± 0,38 µg/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	±	Unit	Recovery	z-Score
A	5,16	0,4128	µg/l	108%	0,90
B	4,22	0,42	µg/l	88%	-1,38
C	4,45	0,13	µg/l	93%	-0,83
D			µg/l		
E			µg/l		
F	4,10	0,08	µg/l	86%	-1,68
G			µg/l		
H			µg/l		
I	4,75	0,74	µg/l	99%	-0,10
J	<5		µg/l	.	.
K	4,76		µg/l	99%	-0,07
L	<10		µg/l	.	.
M	4,8	0,5	µg/l	100%	0,02
N	3,7	0,4	µg/l	77%	-2,65
O	4,47	0,447	µg/l	93%	-0,78
P	6,0		µg/l	125%	2,94
Q	4,17	0,2	µg/l	87%	-1,51
R	4,6	0,8	µg/l	96%	-0,46
S	4,44	0,67	µg/l	93%	-0,85
T			µg/l		
U	4,675	0,935	µg/l	98%	-0,28
V	5,0	0,50	µg/l	104%	0,51
W	3,54	0,3	µg/l	74%	-3,03
X	7,108 *	0,749	µg/l	148%	5,63
Y	<10		µg/l	.	.
Z			µg/l		
AA	<3,0		µg/l	FN	
AB	3,775	0,107	µg/l	79%	-2,46
AC	<10,0		µg/l	.	.

Recovery of target value in percent

z-Score of the laboratory

An asterik indicates a result detected as outlier by Hampel test

Interval expected to encompass target value as stated by participant

	All results	Outliers excl.	Unit
Mean ± CI(99%)	4,65 ± 0,57	4,51 ± 0,42	µg/l
Recov. ± CI(99%)	97,1 ± 12,0	94,1 ± 8,8	%
SD between labs	0,84	0,59	µg/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

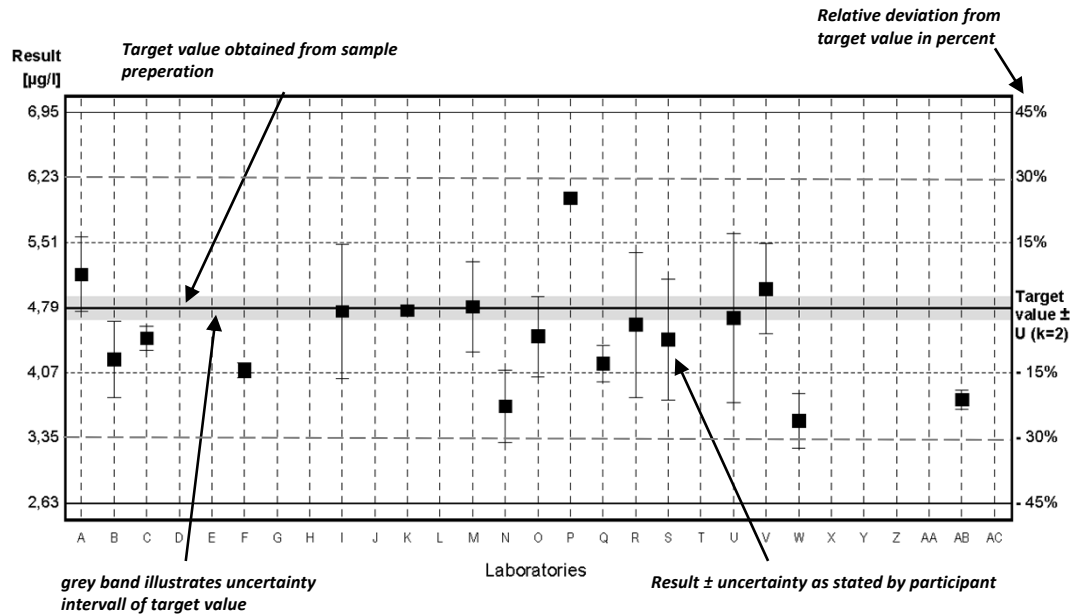


Diagram 1: Measurement results and their uncertainties

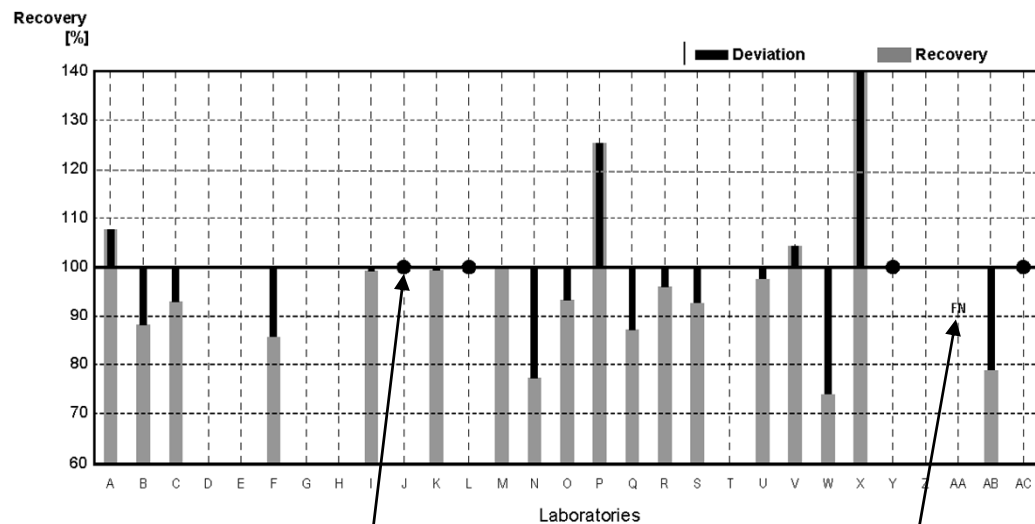


Diagram 2: Recoveries and deviations from target values

EXPLANATION

Illustration of Results Tables and Parameter Oriented Part

Round M167
Metals

Sample Dispatch: 22 May 2023

Results Sample M167A

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
Target value	7.59	3.54	0.1299	8.71	1.435	1.129	1.544	1.791	15.31	0.0818
IFA result	7.8	3.72	0.135	8.4	1.53	0.96	1.64	1.99	16.9	0.081
A	<20	3.50	<5	7.99	1.41	<2	1.47	1.76	13.6	<5
B	<15	3.28		9.37	1.48		<5		<30	
C	7.46	3.72	<1	8.58	1.55		1.56	1.90	14.3	
D	7.6	3.59	0.130	8.2	1.37	1.17	1.55	1.77	15.7	<1.0
E				6.823	1.354					
F	8.00	3.50		9.10	1.51		1.50		15.0	
G	7.8		0.120	8.61	1.47	1.12	<2		15.3	<0.2
H	7.44	4.06		8.79	1.58		1.78		15.32	
I	8.63	3.48	<0.2	8.15	1.13		<5	<5	<30	
J	7.102	3.509	0.1194	8.009	1.376	1.052	1.441	1.727	14.79	0.07947
K	6.9	3.51		8.37	1.44		1.48	1.77	14.0	
L	7.083	3.800	0.129	7.951	1.362	1.148	1.651	1.691	12.120	
M	7.92	3.43	0.109	8.33	1.38		1.47	1.73	15.05	
N	7.99	3.56		7.67	1.49		1.40	1.75	15.18	
O	8.1	3.72	0.125	8.24	1.47	1.32	1.59	1.81	16.6	0.096
P	8.2	3.49	0.118	8.6	1.39		1.47	1.76	16.3	
Q	6.00	3.54	0.120	7.42	1.33	1.08	1.29	1.50	9.87	
R	<10	3.97		8.92	1.47		1.62	1.93	17.5	
S	38.29	3.20		6.75	1.29		0.65	4.28		
T		3.64		7.40	1.39		1.58	1.77	9.85	
U	7.0	3.77	0.152	8.5	1.41		1.03	1.69	12.2	
V	9.50	3.22		7.74	1.34		1.50		15.9	
W	7.15	3.51	0.098	8.62	1.46	1.18	1.50	1.78	15.3	0.085
X	7.988	3.289	0.186	9.319	1.390	1.245	1.538	1.770	16.014	
Y	<10	3.65	<1	8.94	1.47	1.01	1.68	1.80	13.0	
Z									11.9	

All data in µg/L

Uncertainties Sample M167A

	Aluminium ±	Arsenic ±	Beryllium ±	Lead ±	Cadmium ±	Cerium ±	Chromium ±	Cobalt ±	Iron ±	Gadolinium ±
Target value	0.14	0.03	0.0018	0.05	0.012	0.011	0.017	0.014	0.17	0.0012
IFA result	0.4	0.39	0.016	0.2	0.09	0.06	0.07	0.09	1.4	0.014
A		0.532		1.10	0.214		0.210	0.175	1.76	
B		0.5		1.6	0.1					
C	1.49	0.74		1.72	0.31		0.31	0.38	2.9	
D	0.76	0.539	0.013	0.82	0.137	0.117	0.155	0.177	0.157	
E										
F	0.800	0.420		0.728	0.121		0.180		3.90	
G	0.6		0.018	0.86	0.15	0.11			1.1	
H	0.72	0.28		0.66	0.22		0.17		2.16	
I	0.863	0.348		0.815	0.113					
J	1.800	0.456	0.0167	1.842	0.124	0.137	0.202	0.380	1.33	0.02861
K	1.04	0.527		1.26	0.216		0.148	0.177	2.1	
L										
M	0.766	0.262	0.016	0.610	0.133		0.184	0.188	1.410	
N										
O	0.9	0.4	0.05	0.4	0.2	0.3	0.6	0.15	0.8	0.02
P										
Q	3	0.53	0.06	1.11	0.15	0.16	0.19	0.23	1.48	
R		0.60		1.3	0.22		0.24	0.29	2.6	
S	5.3	0.22		0.71	0.09		0.02	0.12		
T		0.73		1.48	0.28		0.32	0.35	1.97	
U										
V	1.90	0.64		1.94	0.20		0.45		4.8	
W	1.00	0.62	0.027	0.93	0.08	0.07	0.62	0.13	3.2	0.298
X	0.80	0.33	0.02	0.93	0.14	0.12	0.15	0.18	1.6	
Y		0.0534		0.155	0.0660	0.193	0.101	0.0721	0.459	
Z									1.2	

All data in µg/L

Results Sample M167A

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
Target value	7.59	3.54	0.1299	8.71	1.435	1.129	1.544	1.791	15.31	0.0818
IFA result	7.8	3.72	0.135	8.4	1.53	0.96	1.64	1.99	16.9	0.081
AA				6.78					10.72	
AB	9.25	3.74	0.128	8.51	1.48	1.10	1.53	1.77	15.4	
AC	7.6	3.82		8.24	1.446		1.61		14.8	
AD	7.68	3.73	0.160	8.14	1.42	1.21	1.54	1.80	15.1	<0.15
AE	7.47	3.59		8.32	1.46		1.59		15.8	
AF										
AG	7.9	3.62	0.154	8.7	1.52	1.19	1.45	1.80	15.4	0.094
AH	8.16	3.54	0.128	7.73	1.37	1.39	1.54	<5.00	13.0	0.108
AI	<10	2.98		8.43	1.30		1.35	1.58	14.5	
AJ	<10	3.55	<1	8.32	1.43	1.11	1.48	1.67	15.3	<0.1
AK	<10.0	3.85	<0.5	9.00	1.40	1.11	1.68	1.85	15.7	<0.5
AL	7.97	3.51	0.0674	7.86	1.37	1.29	1.40	1.83	13.99	
AM	10.1	3.67		8.03	1.43		1.39		14.5	

All data in µg/L

Uncertainties Sample M167A

	Aluminium ±	Arsenic ±	Beryllium ±	Lead ±	Cadmium ±	Cerium ±	Chromium ±	Cobalt ±	Iron ±	Gadolinium ±
Target value	0.14	0.03	0.0018	0.05	0.012	0.011	0.017	0.014	0.17	0.0012
IFA result	0.4	0.39	0.016	0.2	0.09	0.06	0.07	0.09	1.4	0.014
AA				1.34					1.46	
AB	0.303	0.059	0.006	0.248	0.072	0.021	0.029	0.010	0.379	
AC										
AD	0.77	0.37	0.050	0.81	0.14	0.24	0.15	0.18	1.5	
AE	1.9	1.1		2.1	0.37		0.48		4.8	
AF										
AG	2.53	1.16	0.111	2.62	0.334	0.238	0.29	0.54	5.24	0.018
AH	1.22	0.53	0.019	1.16	0.21	0.21	0.23		1.95	0.016
AI		0.60		1.7	0.26		0.27	0.32	2.9	
AJ		0.53		1.0	0.17	0.22	0.22	0.25	2.3	
AK		0.69		1.62	0.25	0.20	0.30	0.33	2.83	
AL	1.99	0.88	0.0169	1.97	0.34	0.32	0.35	0.46	3.50	
AM	0.749	0.564		1.54	0.248		0.106		1.14	

All data in µg/L

Results Sample M167A

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
Target value	7.66	6.95	58.3	0.81	1.153	2.50	0.186	1.102	1.153	18.8
IFA result	8.7	7.5	64	0.89	1.20	2.70	0.189	0.87	1.19	21.5
A	6.99	6.84	55.9	<1	1.07	2.35	<1	1.02	1.16	16.0
B	<10		57.8	<2		<5				20.0
C	7.25	<100	60.6	0.756	1.15	2.61	0.198	1.08	1.12	19.2
D	7.06	7.0	57.5	0.80	1.42	2.48	0.182	1.05	1.09	19.2
E	6.941									
F	7.40		59.0	<1.00	1.18	2.60		1.14		19.0
G	7.04	7.53	57.6	<5	1.12				1.07	18.7
H	7.95		60.16	0.89						21.31
I	7.34	7.66	58	<5	1.00	2.17	<2	1.00	<5	15.0
J	7.244	6.340	56.11	0.764	1.238	2.559	0.1627	1.000	1.107	17.67
K	7.26		56.1	0.75	1.07	2.57	0.180	1.07	1.13	17.7
L	6.252	6.590	53.09	1.439	0.534	3.755	0.169	0.847	1.987	16.438
M	7.02	6.56	57.73	0.69	1.35	2.53	0.190	1.08	1.15	17.6
N	7.22		60.64	0.77	1.11	2.66		0.99	1.19	20.79
O	7.18	7.56	59	0.79	1.14	2.55	0.200	0.93	1.18	17.1
P	7.8	6.45	59.7	0.700	0.94	2.51	0.151	1.04	1.14	18.9
Q	6.12	6.54	52.6	0.412	0.752	2.43	<0.50	1.06	1.06	16.7
R	5.67		60.6	<1	1.20	2.59		1.20	1.29	17.9
S	5.98		52.39	2.22		1.88				15.88
T	6.75	7.91	40.8	<1	0.694	1.31	0.174	1.07	1.23	18.0
U	7.0		54	0.372	1.06	2.60	0.231	0.96		16.3
V	6.95		55.7	0.749	0.545	2.42		1.00		17.1
W	7.63	6.82	56.2	<0.729	1.11	2.19	0.191	1.14	1.02	17.3
X	7.552	7.253	58.301	0.765	1.118	2.297	0.183	1.165	0.940	17.544
Y	7.44	7.14	58.5	<1	1.04	2.67	<1	1.17	1.16	18.8
Z			56							

All data in µg/L

Uncertainties Sample M167A

	Copper ±	Lithium ±	Manganese ±	Nickel ±	Mercury ±	Selenium ±	Silver ±	Uranium ±	Vanadium ±	Zinc ±
Target value	0.05	0.06	0.4	0.02	0.017	0.02	0.007	0.012	0.011	1.0
IFA result	0.4	1.0	4	0.10	0.23	0.32	0.013	0.10	0.09	2.6
A	0.704	1.051	13.35		0.161	0.272		0.125	0.112	1.50
B			5							3.0
C	1.45		12.1	0.151	0.23	0.52	0.040	0.22	0.22	3.8
D	0.706	0.7	5.75	0.080	0.142	0.372	0.0182	0.105	0.109	1.92
E										
F	0.592		5.90		0.176	0.390		0.057		1.90
G	0.70	0.75	5.8		0.08				0.16	1.9
H	1.23		6.34	0.06						2.12
I	0.734	0.766	2.9		0.15	0.217		0.1		1.5
J	1.521	1.141	8.98	0.138	0.235	0.384	0.0472	0.150	0.111	2.64
K	0.726		8.42	0.15	0.321	0.257	0.018	0.107	0.170	1.77
L										
M	1.250	0.654	4.272	0.110		0.447	0.029	0.104	0.117	1.410
N										
O	0.5	0.7	6	0.1	0.2	0.4	0.05	0.05	0.09	0.8
P										
Q	0.92	0.98	5.3	0.062	0.752	0.36		0.48	0.48	2.5
R	0.85		9.1		0.18	0.39		0.18	0.19	2.7
S	0.73		4.6	0.17		0.14				2.72
T	1.35	1.58	8.2		0.139	0.26	0.035	0.21	0.25	3.6
U										
V	1.74		16.7	0.112	0.164	0.97		0.30		2.6
W	1.47	0.44	6.7		0.14	0.58	0.029	0.18	0.11	0.7
X	0.76	0.73	5.83	0.08	0.11	0.23	0.02	0.12	0.09	1.75
Y	0.0605	0.0490	0.711		0.0103	0.101		0.0908	0.176	0.120
Z			5.6							

All data in µg/L

Results Sample M167A

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
Target value	7.66	6.95	58.3	0.81	1.153	2.50	0.186	1.102	1.153	18.8
IFA result	8.7	7.5	64	0.89	1.20	2.70	0.189	0.87	1.19	21.5
AA			53.13		1.057					16.63
AB	7.47	6.33	59.1	0.778	1.10	2.49	0.196	1.08	1.06	18.2
AC	6.91		55.7	0.76	1.03	2.61		1.12		17.8
AD	7.14	6.6	56.8	0.80		2.65	0.188	1.04	1.16	18.2
AE	7.60		58.9	0.791	1.22	2.48		0.994		17.8
AF					1.28					
AG	7.5	7.3	59.6	0.833	1.21	2.89	<2	1.12	1.00	19.8
AH	7.40	7.6	57.5	<5.00	0.885	2.50	<10.0	0.98	1.16	17.7
AI	6.70	7.80	51.0	<1	1.10	2.30	<1	<1	<1	16.0
AJ	7.14	7.02	58.8	<1	1.11	2.39	0.283	1.05	1.11	16.7
AK	7.84	6.72	57.2	<1.0	1.04	2.62	<1.0	1.15	1.20	19.1
AL	7.36	60.0	55.2	0.717	1.05	2.53	0.198	1.02	1.07	18.7
AM	7.10		55.9	0.789	1.01	2.87				18.0

All data in µg/L

Uncertainties Sample M167A

	Copper ±	Lithium ±	Manganese ±	Nickel ±	Mercury ±	Selenium ±	Silver ±	Uranium ±	Vanadium ±	Zinc ±
Target value	0.05	0.06	0.4	0.02	0.017	0.02	0.007	0.012	0.011	1.0
IFA result	0.4	1.0	4	0.10	0.23	0.32	0.013	0.10	0.09	2.6
AA			7.52		0.211					2.02
AB	0.046	0.222	0.379	0.034	0.032	0.049	0.002	0.035	0.025	0.153
AC										
AD	0.71	0.7	5.7	0.08		0.27	0.019	0.10	0.12	1.8
AE	1.9		18	0.2	0.37	1.0		0.3		4.5
AF					0.104					
AG	1.94	2.34	14.3	0.250	0.24	1.16	0.00	0.269	0.30	5.9
AH	1.11	1.14	8.62		0.13	0.38		0.15	0.18	2.65
AI	1.3	1.6	10		0.22	0.46				3.2
AJ	0.86	1.1	7.1		0.24	0.36	0.071	0.16	0.13	2.5
AK	1.41	1.21	10.3		0.19	0.47		0.21	0.22	3.44
AL	1.84	15.0	13.8	0.179	0.26	0.63	0.050	0.26	0.27	4.7
AM	0.457		4.54	0.0395	0.107	0.238				1.31

All data in µg/L

Results Sample M167B

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
Target	23.9	0.857	0.1706	3.53	2.89	2.013	4.95	0.461	37.9	0.0595
IFA result	24.7	0.89	0.190	3.30	3.05	1.69	5.31	0.51	42.1	0.058
A	23.5	<1	<5	3.21	2.84	<2	4.74	<1	34.2	<5
B	27.1	<2		3.24	3.02		5.14		38.5	
C	26.2	0.905	<1	3.45	2.82		4.90	<1	37.2	
D	23.4	0.84	0.170	3.26	2.74	2.17	4.87	<1.0	36.9	<1.0
E				2.363	2.761					
F	25.0	0.900		3.70	2.96		4.90		38.0	
G	23.1		0.162	3.45	2.99	2.06	4.90		36.5	<0.2
H	24.94	0.94		3.48	3.11		5.34		35.75	
I	24.9	<2	<0.2	3.11	2.55		5.24	<5	38.0	
J	22.72	0.8576	0.1565	3.264	2.753	1.876	4.647	0.4447	35.57	0.06549
K	23.1	0.86		3.42	2.86		4.84	0.490	36.0	
L	22.948	1.368	0.170	3.177	2.746	1.806	2.885	2.804	34.125	
M	22.7	0.92	0.175	3.38	2.78		4.81	0.434	36.6	
N	22.6	0.91		3.05	2.98		4.83	0.457	38.21	
O	24.4	0.93	0.190	3.33	2.93	2.38	5.01	0.470	39.0	0.078
P	23.8	0.743	1.71	3.43	2.84		4.90	0.424	39.4	
Q	21.7	0.89	0.162	3.00	2.75	1.93	4.30	0.367	31.0	
R	25.4	0.97		3.64	2.96		5.05	0.479	41.6	
S	24.71	2.85		2.39	3.07		5.47	1.65		
T		0.941		3.01	2.80		3.86	<1	25.5	
U	23.0	0.92	0.181	3.50	2.86		4.25	0.434	33.3	
V	25.3	0.824		3.10	2.70		4.92		37.3	
W	23.6	0.874	0.150	3.48	2.90	2.08	4.98	0.419	37.8	0.066
X	25.662	0.785	0.211	3.855	2.778	2.204	4.974	0.459	39.601	
Y	20.6	<1	<1	3.58	2.93	1.99	4.85	<1	36.8	
Z									36.5	

All data in µg/L

Measurement Uncertainties Sample M167B

	Aluminium ±	Arsenic ±	Beryllium ±	Lead ±	Cadmium ±	Cerium ±	Chromium ±	Cobalt ±	Iron ±	Gadolinium ±
Target value	0.4	0.012	0.0018	0.03	0.02	0.016	0.04	0.006	0.2	0.0011
IFA result	1.3	0.09	0.023	0.09	0.18	0.11	0.17	0.02	3.2	0.011
A	2.12			0.443	0.432		0.679		4.42	
B	4			0.6	0.2		0.4		4	
C	5.2	0.181		0.69	0.56		0.98		7.4	
D	2.34	0.126	0.017	0.326	0.274	0.217	0.487		3.69	
E										
F	2.50	0.108		0.296	0.237		0.588		9.88	
G	1.7		0.024	0.35	0.30	0.21	0.49		3.7	
H	2.41	0.06		0.26	0.42		0.52		5.04	
I	0.249			0.311	0.255		0.524		1.9	
J	3.64	0.1115	0.0219	0.751	0.248	0.244	0.651	0.0978	3.20	0.02358
K	3.47	0.129		0.513	0.429		0.484	0.049	5.4	
L										
M	2.195	0.070	0.026	0.247	0.267		0.601	0.047	3.429	
N										
O	1.8	0.3	0.05	0.2	0.3	0.5	0.8	0.05	4	0.02
P										
Q	4.4	0.44	0.08	0.45	0.28	0.29	0.65	0.367	3.1	
R	3.8	0.15		0.55	0.44		0.76	0.072	6.2	
S	3.2	0.45		0.15	0.18		0.41	0.08		
T		0.188		0.60	0.56		0.77		5.1	
U										
V	5.1	0.165		0.78	0.41		1.48		11.2	
W	3.3	0.264	0.042	0.42	0.16	0.12	0.69	0.132	8.0	0.009
X	2.57	0.08	0.02	0.39	0.28	0.22	0.5	0.05	3.96	
Y	0.414			0.144	0.0643	0.0773	0.0890		0.394	
Z									3.7	

All data in µg/L

Results Sample M167B

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
Target	23.9	0.857	0.1706	3.53	2.89	2.013	4.95	0.461	37.9	0.0595
IFA result	24.7	0.89	0.190	3.30	3.05	1.69	5.31	0.51	42.1	0.058
AA				<5.00					31.27	
AB	25.3	0.907	0.169	3.56	2.81	1.91	5.27	0.433	38.7	
AC	24.2	0.98		3.41	2.87		4.94		35.7	
AD	24.3	0.91	0.190	3.33	2.89	2.23	4.97	0.470	37.9	<0.15
AE	23.5	0.895		3.46	2.95		5.10		38.6	
AF										
AG	24.9	0.871	0.199	3.48	3.02	2.10	4.84	0.461	39.7	0.080
AH	25.1	<1.00	0.170	3.18	2.74	2.49	4.94	<5.00	36.1	0.084
AI	24.5	<1		3.20	2.60		4.35	<1	36.5	
AJ	28.6	0.870	<1	3.40	2.89	1.97	4.77	<1	38.5	<0.1
AK	24.6	<1.0	<0.5	3.66	2.86	2.02	5.15	<1.0	37.9	<0.5
AL	23.38	0.884	0.0675	2.30	2.74	2.27	4.53	0.474	34.4	
AM	28.1	0.898		3.10	2.71		4.64		35.0	

All data in µg/L

Measurement Uncertainties Sample M167B

	Aluminium ±	Arsenic ±	Beryllium ±	Lead ±	Cadmium ±	Cerium ±	Chromium ±	Cobalt ±	Iron ±	Gadolinium ±
Target value	0.4	0.012	0.0018	0.03	0.02	0.016	0.04	0.006	0.2	0.0011
IFA result	1.3	0.09	0.023	0.09	0.18	0.11	0.17	0.02	3.2	0.011
AA									4.26	
AB	0.231	0.036	0.010	0.015	0.042	0.025	0.156	0.016	0.321	
AC										
AD	2.4	0.09	0.060	0.33	0.29	0.45	0.50	0.047	3.8	
AE	5.9	0.27		0.87	0.6		1.5		12	
AF										
AG	8.0	0.279	0.143	1.04	0.66	0.21	0.97	0.138	13.5	0.016
AH	3.76		0.026	0.48	0.41	0.37	0.74		5.42	0.013
AI	4.9			0.64	0.52		0.87		7.3	
AJ	4.9	0.13		0.41	0.35	0.39	0.72		5.8	
AK	4.43			0.66	0.51	0.36	0.93		6.82	
AL	5.85	0.221	0.0169	0.80	0.69	0.57	1.13	0.119	8.6	
AM	2.09	0.138		0.594	0.472		0.363		2.74	

All data in µg/L

Results Sample M167B

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
Target value	6.09	2.11	6.90	3.53	0.702	1.206	0.075	3.53	0.660	106
IFA result	7.0	2.27	7.6	3.92	0.72	1.22	0.071	2.80	0.68	126
A	5.58	2.12	6.57	3.24	0.638	1.22	<1	3.26	0.672	101
B	<10		6.9	3.57		<5				108
C	6.03	<100	7.16	4.15	0.707	<2	0.078	3.40	0.710	106
D	5.6	2.08	6.9	3.32	0.82	<1.0	<0.1	3.30	0.54	110
E	5.612									
F	5.80		7.00	3.50	0.719	1.30		3.62		105
G	5.26	2.26	6.7	<5	0.69				<1	104
H	6.37		6.96	3.67						118.35
I	6.11	2.34	<10	<5	0.66	<2	<2	3.27	<5	96.9
J	5.763	1.919	6.612	3.372	0.657	1.252	0.0520	3.218	0.6446	101.4
K	5.78		6.6	3.36	0.640	1.22	0.080	3.49	0.64	101
L	4.915	1.865	6.007	3.378	0.260	3.454	<0.1	2.781	2.465	99.233
M	5.54	2.00	6.67	3.39	0.77	1.20	0.070	3.41	0.67	101.5
N	5.75		6.96	3.44	0.65	1.32		2.54	0.69	120.22
O	5.73	2.33	6.79	3.40	0.700	1.17	0.075	2.98	0.68	98.0
P	6.22	2.04	6.32	3.58	0.51	1.20	<0.1	3.46	5.95	108.0
Q	4.75	2.12	5.91	2.65	0.321	1.12	<0.50	3.32	0.60	95.0
R	4.09		7.13	3.56	0.73	1.25		3.79	0.72	106
S	4.63		2.26	4.55		0.67				91.27
T	5.65	2.47	7.60	3.61	0.546	1.06	<0.1	3.30	<1	95.9
U	5.6		6.4	2.90	0.670	1.27	0.107	3.12		99
V	5.60		6.89	3.34	0.934	1.20		3.19		96.7
W	6.10	2.10	6.73	3.05	0.641	1.06	0.071	3.69	0.627	101.5
X	6.017	2.317	6.945	3.549	0.665	1.110	<0.1	3.777	0.466	102.056
Y	5.94	2.36	<10	3.46	0.618	1.26	<1	3.37	<1	104
Z			6.4							

All data in µg/L

Measurement Uncertainties Sample M167B

	Copper ±	Lithium ±	Manganese ±	Nickel ±	Mercury ±	Selenium ±	Silver ±	Uranium ±	Vanadium ±	Zinc ±
Target value	0.04	0.02	0.05	0.03	0.016	0.019	0.009	0.03	0.008	3
IFA result	0.3	0.30	0.5	0.18	0.14	0.15	0.005	0.32	0.05	13
A	0.561	0.325	1.568	0.366	0.096	0.141		0.401	0.65	9.48
B			3	0.4						15
C	1.20		1.43	0.83	0.141		0.016	0.68	0.142	21
D	0.56	0.208	0.69	0.332	0.082			0.33	0.054	11.0
E										
F	0.464		0.700	0.350	0.108	0.195		0.181		10.5
G	0.53	0.23	0.7		0.05					10
H	0.99		0.73	0.26						11.75
I	0.611	0.234			0.099			0.327		9.69
J	1.210	0.345	1.058	0.607	0.125	0.188	0.0151	0.483	0.0645	12.2
K	0.578		0.99	0.672	0.192	0.122	0.008	0.349	0.096	10.1
L										
M	0.987	0.199	0.494	0.540		0.212	0.011	0.329	0.068	8.130
N										
O	0.5	0.4	0.4	0.3	0.1	0.3	0.1	0.2	0.08	5
P										
Q	0.71	0.64	0.89	0.40	0.321	0.56		0.50	0.30	9.5
R	0.61		1.1	0.53	0.11	0.19		0.57	0.11	16
S	0.28		0.08	0.33		0.03				4.12
T	1.13	0.49	1.52	0.72	0.109	0.21		0.66		19.2
U										
V	1.40		2.07	0.50	0.280	0.48		0.96		14.8
W	1.17	0.13	0.81	1.24	0.323	0.28	0.011	0.58	0.946	12.4
X	0.60	0.23	0.69	0.35	0.07	0.11		0.38	0.05	10.2
Y	0.0582	0.0520		0.144	0.0107	0.109		0.0992		4.27
Z			0.64							

All data in µg/L

Results Sample M167B

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
Target value	6.09	2.11	6.90	3.53	0.702	1.206	0.075	3.53	0.660	106
IFA result	7.0	2.27	7.6	3.92	0.72	1.22	0.071	2.80	0.68	126
AA			5.43		0.636					102.33
AB	6.35	1.94	7.43	3.66	0.706	1.21	<0.11	3.47	0.565	110
AC	5.43		6.7	3.32	0.59	1.30		3.33		104.7
AD	5.74	2.00	6.79	3.49		1.31	0.076	3.37	0.67	105
AE	6.05		7.00	3.47	0.739	1.22		3.24		102
AF					0.899					
AG	6.5	2.20	7.1	3.79	0.693	1.49	<2	3.53	0.513	117
AH	5.88	2.32	6.91	<5.00	0.520	1.30	<10.0	3.20	0.672	102
AI	5.33	<5	6.03	2.98	0.670	1.23	<1	3.15	<1	90.0
AJ	5.56	2.13	<10	3.32	0.741	1.17	<0.2	3.33	<1	99.3
AK	6.22	<5.0	6.71	3.66	0.623	1.36	<1.0	3.58	<1.0	106
AL	5.82	17.3	6.66	3.13	0.616	1.23	0.0751	3.23	0.617	109
AM	5.58		6.47	3.30	0.573	1.35				99.3

All data in µg/L

Measurement Uncertainties Sample M167B

	Copper ±	Lithium ±	Manganese ±	Nickel ±	Mercury ±	Selenium ±	Silver ±	Uranium ±	Vanadium ±	Zinc ±
Target value	0.04	0.02	0.05	0.03	0.016	0.019	0.009	0.03	0.008	3
IFA result	0.3	0.30	0.5	0.18	0.14	0.15	0.005	0.32	0.05	13
AA			0.77		0.127					12.41
AB	0.193	0.015	0.258	0.114	0.004	0.044		0.035	0.026	2.646
AC										
AD	0.57	0.2	0.68	0.35		0.13	0.011	0.34	0.07	11
AE	1.5		2.1	0.87	0.22	0.5		0.97		26
AF					0.061					
AG	1.70	0.70	1.71	1.14	0.139	0.596	0.00	0.847	0.154	35.1
AH	0.088	0.35	1.04		0.08	0.20		0.48	0.10	15.3
AI	1.1		1.2	0.60	0.13	0.25		0.63		18
AJ	0.67	0.32		0.37	0.16	0.18		0.50		15
AK	1.12		1.21	0.66	0.11	0.24		0.64		19
AL	1.46	4.3	1.67	0.78	0.154	0.31	0.0188	0.81	0.154	27
AM	0.359		0.525	0.165	0.0611	0.112				7.21

All data in µg/L

z-Scores Sample M167A

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
A		-0.15		-1.23	-0.32		-0.76	-0.27	-1.67	
B		-1.01		1.13	0.58					
C	-0.22	0.70		-0.22	1.48		0.16	0.97	-0.98	
D	0.02	0.19	0.01	-0.87	-0.84	0.71	0.06	-0.19	0.38	
E				-3.23	-1.05					
F	0.70	-0.15		0.67	0.97		-0.45		-0.30	
G	0.36		-0.64	-0.17	0.45	-0.16			-0.01	
H	-0.26	2.01		0.14	1.87		2.43		0.01	
I	1.78	-0.23		-0.96	-3.94					
J	-0.84	-0.12	-0.67	-1.20	-0.76	-1.34	-1.06	-0.57	-0.51	-0.24
K	-1.18	-0.12		-0.58	0.06		-0.66	-0.19	-1.28	
L	-0.87	1.01	-0.06	-1.30	-0.94	0.33	1.10	-0.89	-3.11	
M	0.56	-0.43	-1.34	-0.65	-0.71		-0.76	-0.54	-0.25	
N	0.68	0.08		-1.78	0.71		-1.48	-0.36	-0.13	
O	0.87	0.70	-0.31	-0.81	0.45	3.32	0.47	0.17	1.26	1.45
P	1.04	-0.19	-0.76	-0.19	-0.58		-0.76	-0.27	0.97	
Q	-2.72	0.00	-0.64	-2.21	-1.36	-0.85	-2.61	-2.58	-5.30	
R		1.66		0.36	0.45		0.78	1.23	2.13	
S	52.53	-1.32		-3.36	-1.87		-9.19	22.06		
T		0.39		-2.24	-0.58		0.37	-0.19	-5.32	
U	-1.01	0.89	1.42	-0.36	-0.32		-5.28	-0.90	-3.03	
V	3.27	-1.24		-1.66	-1.23		-0.45		0.58	
W	-0.75	-0.12	-2.05	-0.15	0.32	0.89	-0.45	-0.10	-0.01	0.33
X	0.68	-0.97	3.60	1.04	-0.58	2.01	-0.06	-0.19	0.69	
Y		0.43		0.39	0.45	-2.07	1.40	0.08	-2.25	
Z									-3.32	

z-Scores Sample M167A

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
A	-1.12	-0.21	-0.78		-0.65	-0.64		-1.35	0.08	-2.13
B			-0.16							0.91
C	-0.69		0.74	-0.90	-0.02	0.47	0.46	-0.36	-0.38	0.30
D	-1.00	0.10	-0.26	-0.17	2.11	-0.09	-0.15	-0.86	-0.72	0.30
E	-1.20									
F	-0.44		0.23		0.21	0.43		0.63		0.15
G	-1.04	1.13	-0.23		-0.26				-0.95	-0.08
H	0.49		0.60	1.33						1.91
I	-0.54	1.38	-0.10		-1.21	-1.40		-1.68		-2.89
J	-0.70	-1.19	-0.71	-0.77	0.67	0.25	-0.89	-1.68	-0.52	-0.86
K	-0.67		-0.71	-1.00	-0.65	0.30	-0.23	-0.53	-0.26	-0.84
L	-2.36	-0.70	-1.69	10.49	-4.88	5.34	-0.65	-4.21	9.52	-1.79
M	-1.07	-0.76	-0.18	-2.00	1.55	0.13	0.15	-0.36	-0.03	-0.91
N	-0.74		0.76	-0.67	-0.34	0.68		-1.85	0.42	1.51
O	-0.80	1.19	0.23	-0.33	-0.10	0.21	0.54	-2.84	0.31	-1.29
P	0.23	-0.97	0.45	-1.84	-1.68	0.04	-1.34	-1.02	-0.15	0.08
Q	-2.58	-0.80	-1.84	-6.64	-3.16	-0.30		-0.69	-1.06	-1.60
R	-3.33		0.74		0.37	0.38		1.62	1.56	-0.68
S	-2.81		-1.91	23.52		-2.64				-2.22
T	-1.52	1.87	-5.66		-3.62	-5.06	-0.46	-0.53	0.88	-0.61
U	-1.10		-1.39	-7.31	-0.73	0.43	1.73	-2.34		-1.90
V	-1.19		-0.84	-1.02	-4.79	-0.34		-1.68		-1.29
W	-0.05	-0.25	-0.68		-0.34	-1.32	0.19	0.63	-1.52	-1.14
X	-0.18	0.59	0.00	-0.75	-0.28	-0.86	-0.12	1.04	-2.43	-0.95
Y	-0.37	0.37	0.06		-0.89	0.72		1.12	0.08	0.00
Z			-0.74							

z-Scores Sample M167A

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
AA				-3.31					-4.47	
AB	2.84	0.77	-0.12	-0.34	0.58	-0.50	-0.14	-0.19	0.09	
AC	0.02	1.08		-0.81	0.14		0.68		-0.50	
AD	0.15	0.74	1.93	-0.98	-0.19	1.41	-0.04	0.08	-0.20	
AE	-0.21	0.19		-0.67	0.32		0.47		0.48	
AF										
AG	0.53	0.31	1.55	-0.02	1.10	1.06	-0.97	0.08	0.09	1.24
AH	0.98	0.00	-0.12	-1.68	-0.84	4.53	-0.04		-2.25	2.67
AI		-2.17		-0.48	-1.74		-1.99	-1.87	-0.79	
AJ		0.04		-0.67	-0.06	-0.33	-0.66	-1.07	-0.01	
AK		1.20		0.50	-0.45	-0.33	1.40	0.52	0.38	
AL	0.65	-0.12	-4.01	-1.46	-0.84	2.80	-1.48	0.35	-1.29	
AM	4.29	0.50		-1.17	-0.06		-1.58		-0.79	

z-Scores Sample M167A

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
AA			-1.67		-0.76					-1.65
AB	-0.32	-1.21	0.26		-0.42	-0.04	0.38	-0.36	-1.06	-0.46
AC	-1.26		-0.84	-0.53	-0.97	0.47		0.30		-0.76
AD	-0.87	-0.68	-0.49	-0.83		0.64	0.08	-1.02	0.08	-0.46
AE	-0.10		0.19	-0.17	0.53	-0.09		-1.78		-0.76
AF				-0.32	1.00					
AG	-0.27	0.68	0.42		0.45	1.66		0.30	-1.75	0.76
AH	-0.44	1.26	-0.26	0.38	-2.11	0.00		-2.01	0.08	-0.84
AI	-1.61	1.65	-2.36		-0.42	-0.85				-2.13
AJ	-0.87	0.14	0.16		-0.34	-0.47	3.73	-0.86	-0.49	-1.60
AK	0.30	-0.45	-0.36		-0.89	0.51		0.79	0.54	0.23
AL	-0.50	103.15	-1.00		-0.81	0.13	0.46	-1.35	-0.95	-0.08
AM	-0.94		-0.78	-1.55	-1.13	1.57				-0.61

z-Scores Sample M167B

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
A	-0.22			-1.35	-0.32		-0.67		-1.46	
B	1.74			-1.23	0.83		0.61		0.24	
C	1.25	0.77		-0.34	-0.45		-0.16		-0.28	
D	-0.27	-0.27	-0.03	-1.14	-0.96	1.53	-0.26		-0.39	
E				-4.93	-0.83					
F	0.60	0.69		0.72	0.45		-0.16		0.04	
G	-0.43		-0.42	-0.34	0.64	0.46	-0.16		-0.55	
H	0.57	1.33		-0.21	1.41		1.25		-0.85	
I	0.54			-1.78	-2.18		0.93		0.04	
J	-0.64	0.01	-0.69	-1.12	-0.88	-1.33	-0.97	-0.56	-0.92	0.84
K	-0.43	0.05		-0.47	-0.19		-0.35	1.00	-0.75	
L	-0.52	8.17	-0.03	-1.49	-0.92	-2.02	-6.62	80.67	-1.49	
M	-0.65	1.01	0.21	-0.63	-0.70		-0.45	-0.93	-0.51	
N	-0.71	0.85		-2.03	0.58		-0.38	-0.14	0.12	
O	0.27	1.17	0.95	-0.85	0.26	3.57	0.19	0.31	0.43	2.59
P	-0.05	-1.82	75.20	-0.42	-0.32		-0.16	-1.27	0.59	
Q	-1.20	0.53	-0.42	-2.24	-0.90	-0.81	-2.08	-3.24	-2.72	
R	0.82	1.81		0.47	0.45		0.32	0.62	1.46	
S	0.44	31.86		-4.82	1.15		1.67	40.94		
T		1.34		-2.20	-0.58		-3.50		-4.88	
U	-0.49	1.01	0.51	-0.13	-0.19		-2.24	-0.93	-1.81	
V	0.76	-0.53		-1.82	-1.22		-0.10		-0.24	
W	-0.16	0.27	-1.01	-0.21	0.06	0.65	0.10	-1.45	-0.04	0.91
X	0.96	-1.15	1.97	1.37	-0.72	1.86	0.08	-0.07	0.67	
Y	-1.79			0.21	0.26	-0.22	-0.32		-0.43	
Z									-0.55	

z-Scores Sample M167B

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
A	-1.07	0.06	-0.90	-1.11	-0.83	0.12		-1.39	0.24	-0.67
B			0.00	0.15						0.27
C	-0.13		0.71	2.37	0.06		0.29	-0.67	1.00	0.00
D	-1.03	-0.19	0.00	-0.80	1.53			-1.18	-2.39	0.54
E	-1.01									
F	-0.61		0.27	-0.11	0.22	0.83		0.46		-0.13
G	-1.75	0.96	-0.55		-0.16					-0.27
H	0.59		0.16	0.54						1.66
I	0.04	1.47			-0.54			-1.34		-1.23
J	-0.69	-1.22	-0.79	-0.60	-0.58	0.41	-2.19	-1.61	-0.31	-0.62
K	-0.65		-0.82	-0.65	-0.80	0.12	0.48	-0.21	-0.40	-0.67
L	-2.47	-1.57	-2.44	-0.58	-5.72	19.83		-3.86	35.98	-0.91
M	-1.16	-0.70	-0.63	-0.54	0.88	-0.05	-0.48	-0.62	0.20	-0.61
N	-0.72		0.16	-0.34	-0.67	1.01		-5.10	0.60	1.92
O	-0.76	1.41	-0.30	-0.50	-0.03	-0.32	0.00	-2.83	0.40	-1.08
P	0.27	-0.45	-1.59	0.19	-2.49	-0.05		-0.36	105.46	0.27
Q	-2.82	0.06	-2.71	-3.37	-4.93	-0.76		-1.08	-1.20	-1.48
R	-4.21		0.63	0.11	0.36	0.39		1.34	1.20	0.00
S	-3.07		-12.69	3.90		-4.73				-1.99
T	-0.93	2.31	1.91	0.31	-2.02	-1.29		-1.18		-1.36
U	-1.03		-1.37	-2.41	-0.41	0.56	3.05	-2.11		-0.94
V	-1.03		-0.03	-0.73	3.00	-0.05		-1.75		-1.25
W	0.02	-0.06	-0.46	-1.84	-0.79	-1.29	-0.38	0.82	-0.66	-0.61
X	-0.15	1.33	0.12	0.07	-0.48	-0.85		1.27	-3.87	-0.53
Y	-0.32	1.60		-0.27	-1.09	0.48		-0.82		-0.27
Z			-1.37							

z-Scores Sample M167B

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
AA									-2.61	
AB	0.76	0.80	-0.08	0.13	-0.51	-1.00	1.03	-0.96	0.32	
AC	0.16	1.97		-0.51	-0.13		-0.03		-0.87	
AD	0.22	0.85	0.95	-0.85	0.00	2.11	0.06	0.31	0.00	
AE	-0.22	0.61		-0.30	0.38		0.48		0.28	
AF										
AG	0.54	0.22	1.39	-0.21	0.83	0.85	-0.35	0.00	0.71	2.87
AH	0.65		-0.03	-1.48	-0.96	4.65	-0.03		-0.71	3.43
AI	0.33			-1.40	-1.86		-1.92		-0.55	
AJ	2.55	0.21		-0.55	0.00	-0.42	-0.58		0.24	
AK	0.38			0.55	-0.19	0.07	0.64		0.00	
AL	-0.28	0.43	-5.04	-5.20	-0.96	2.50	-1.35	0.45	-1.38	
AM	2.28	0.66		-1.82	-1.15		-0.99		-1.14	

z-Scores Sample M167B

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
AA			-4.02		-0.85					-0.49
AB	0.55	-1.09	1.45	0.50	0.05	0.04		-0.31	-1.89	0.54
AC	-1.39		-0.55	-0.80	-1.45	0.83		-1.03		-0.18
AD	-0.74	-0.70	-0.30	-0.15		0.92	0.10	-0.82	0.20	-0.13
AE	-0.08		0.27	-0.23	0.48	0.12		-1.49		-0.54
AF					2.55					
AG	0.86	0.58	0.55	1.00	-0.12	2.51		0.00	-2.93	1.48
AH	-0.44	1.34	0.03		-2.36	0.83		-1.70	0.24	-0.54
AI	-1.60		-2.38	-2.11	-0.41	0.21		-1.96		-2.16
AJ	-1.12	0.13		-0.80	0.51	-0.32		-1.03		-0.90
AK	0.27		-0.52	0.50	-1.02	1.36		0.26		0.00
AL	-0.57	97.28	-0.66	-1.53	-1.11	0.21	0.01	-1.55	-0.86	0.40
AM	-1.07		-1.18	-0.88	-1.67	1.27				-0.90

Sample M167A

Parameter Aluminium

Target value ± U (k=2) 7,59 µg/l ± 0,14 µg/l

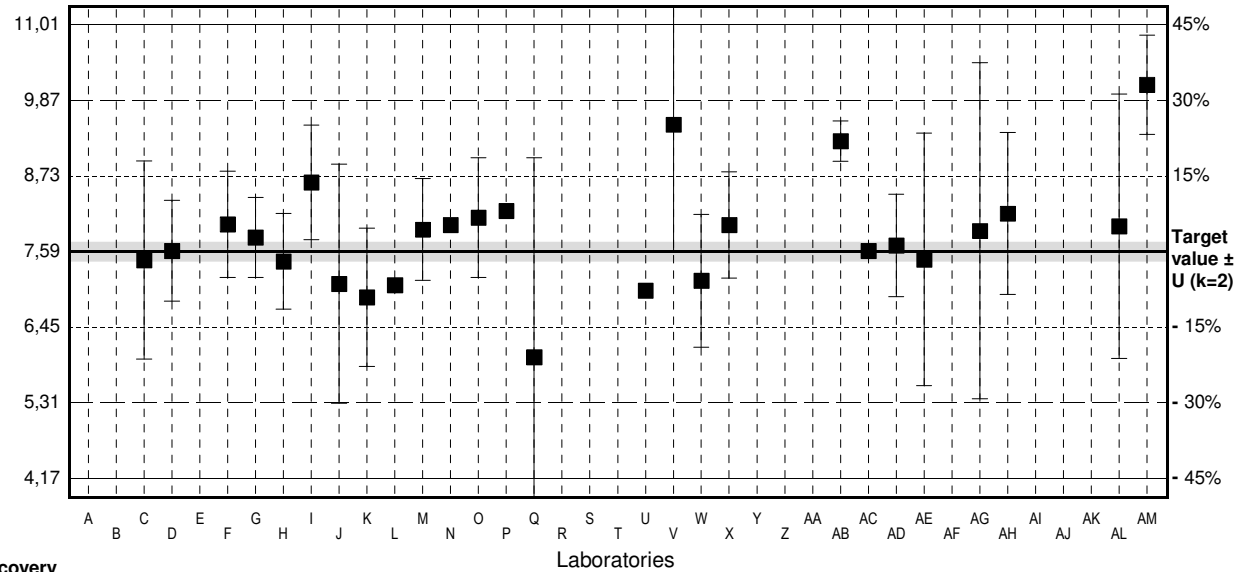
IFA result ± U (k=2) 7,8 µg/l ± 0,4 µg/l

Stability test µg/l

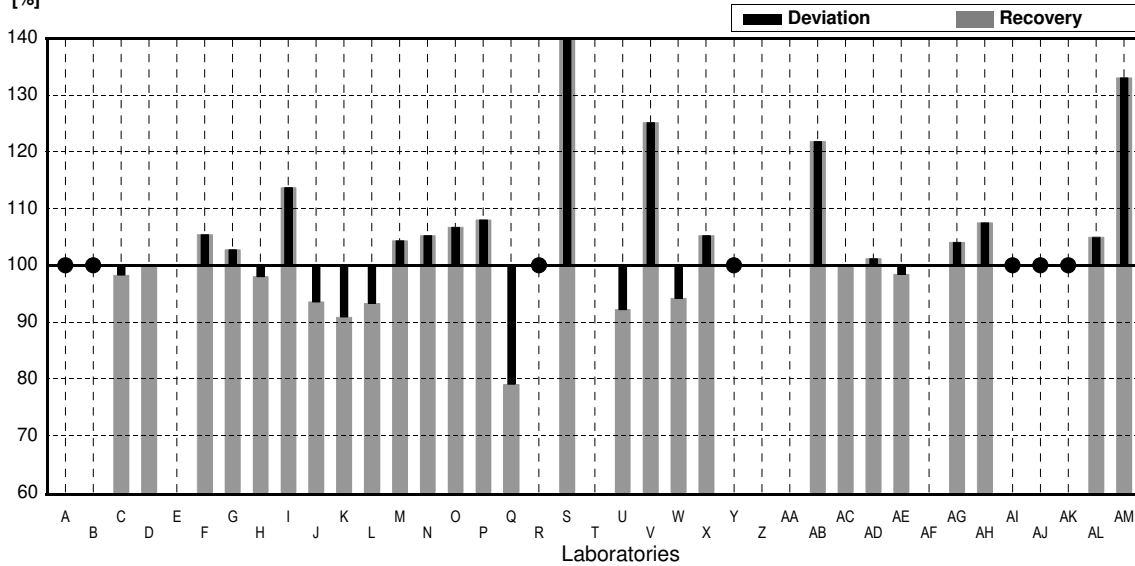
Lab Code	Result	±	Unit	Recovery	z-Score
A	<20		µg/l	*	
B	<15		µg/l	*	
C	7.46	1.49	µg/l	98%	-0.22
D	7.6	0.76	µg/l	100%	0.02
E			µg/l		
F	8,00	0,800	µg/l	105%	0,70
G	7,8	0,6	µg/l	103%	0,36
H	7,44	0,72	µg/l	98%	-0,26
I	8,63	0,863	µg/l	114%	1,78
J	7,102	1,800	µg/l	94%	-0,84
K	6,9	1,04	µg/l	91%	-1,18
L	7,083		µg/l	93%	-0,87
M	7,92	0,766	µg/l	104%	0,56
N	7,99		µg/l	105%	0,68
O	8,1	0,9	µg/l	107%	0,87
P	8,2		µg/l	108%	1,04
Q	6,00	3	µg/l	79%	-2,72
R	<10		µg/l	*	
S	38,29	5,3	µg/l	504%	52,53
T			µg/l		
U	7,0		µg/l	92%	-1,01
V	9,50	1,90	µg/l	125%	3,27
W	7,15	1,00	µg/l	94%	-0,75
X	7,988	0,80	µg/l	105%	0,68
Y	<10		µg/l	*	
Z			µg/l		
AA			µg/l		
AB	9,25	0,303	µg/l	122%	2,84
AC	7,6		µg/l	100%	0,02
AD	7,68	0,77	µg/l	101%	0,15
AE	7,47	1,9	µg/l	98%	-0,21
AF			µg/l		
AG	7,9	2,53	µg/l	104%	0,53
AH	8,16	1,22	µg/l	108%	0,98
AI	<10		µg/l	*	
AJ	<10		µg/l	*	
AK	<10,0		µg/l	*	
AL	7,97	1,99	µg/l	105%	0,65
AM	10,1	0,749	µg/l	133%	4,29

	All results	Outliers excl.	Unit
Mean ± CI(99%)	8,97 ± 3,17	7,76 ± 0,41	µg/l
Recov. ± CI(99%)	118,2 ± 41,7	102,2 ± 5,4	%
SD between labs	5,92	0,73	µg/l
RSD between labs	65,9	9,4	%
n for calculation	27	25	

Result [µg/l]



Recovery [%]



Sample M167B

Parameter Aluminium

Target value $\pm U$ (k=2) 23,9 $\mu\text{g/l}$ \pm 0,4 $\mu\text{g/l}$

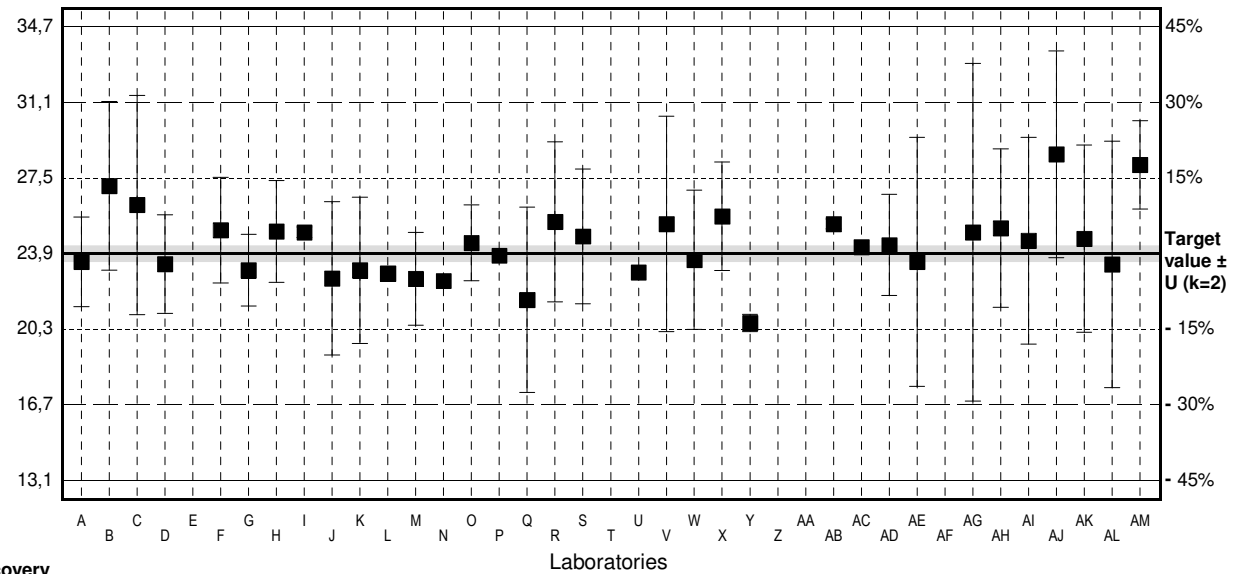
IFA result $\pm U$ (k=2) 24,7 $\mu\text{g/l}$ \pm 1,3 $\mu\text{g/l}$

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

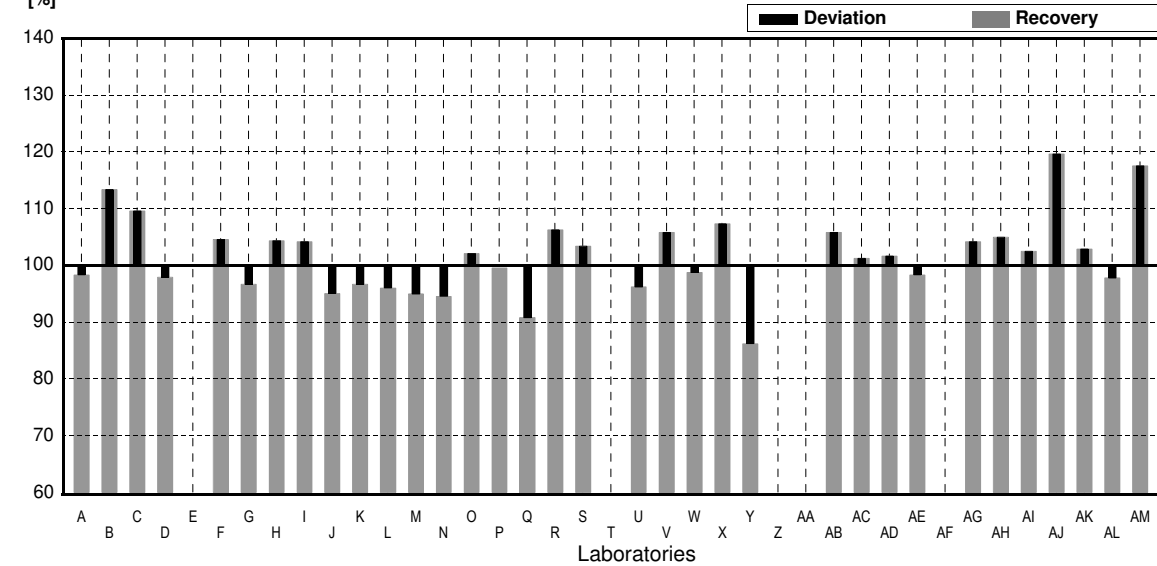
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	23.5	2.12	$\mu\text{g/l}$	98%	-0.22
B	27.1	4	$\mu\text{g/l}$	113%	1.74
C	26.2	5.2	$\mu\text{g/l}$	110%	1.25
D	23.4	2.34	$\mu\text{g/l}$	98%	-0.27
E			$\mu\text{g/l}$		
F	25.0	2.50	$\mu\text{g/l}$	105%	0.60
G	23.1	1.7	$\mu\text{g/l}$	97%	-0.43
H	24.94	2.41	$\mu\text{g/l}$	104%	0.57
I	24.9	0.249	$\mu\text{g/l}$	104%	0.54
J	22.72	3.64	$\mu\text{g/l}$	95%	-0.64
K	23.1	3.47	$\mu\text{g/l}$	97%	-0.43
L	22.948		$\mu\text{g/l}$	96%	-0.52
M	22.7	2.195	$\mu\text{g/l}$	95%	-0.65
N	22.6		$\mu\text{g/l}$	95%	-0.71
O	24.4	1.8	$\mu\text{g/l}$	102%	0.27
P	23.8		$\mu\text{g/l}$	100%	-0.05
Q	21.7	4.4	$\mu\text{g/l}$	91%	-1.20
R	25.4	3.8	$\mu\text{g/l}$	106%	0.82
S	24.71	3.2	$\mu\text{g/l}$	103%	0.44
T			$\mu\text{g/l}$		
U	23.0		$\mu\text{g/l}$	96%	-0.49
V	25.3	5.1	$\mu\text{g/l}$	106%	0.76
W	23.6	3.3	$\mu\text{g/l}$	99%	-0.16
X	25.662	2.57	$\mu\text{g/l}$	107%	0.96
Y	20.6	0.414	$\mu\text{g/l}$	86%	-1.79
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	25.3	0.231	$\mu\text{g/l}$	106%	0.76
AC	24.2		$\mu\text{g/l}$	101%	0.16
AD	24.3	2.4	$\mu\text{g/l}$	102%	0.22
AE	23.5	5.9	$\mu\text{g/l}$	98%	-0.22
AF			$\mu\text{g/l}$		
AG	24.9	8.0	$\mu\text{g/l}$	104%	0.54
AH	25.1	3.76	$\mu\text{g/l}$	105%	0.65
AI	24.5	4.9	$\mu\text{g/l}$	103%	0.33
AJ	28.6	4.9	$\mu\text{g/l}$	120%	2.55
AK	24.6	4.43	$\mu\text{g/l}$	103%	0.38
AL	23.38	5.85	$\mu\text{g/l}$	98%	-0.28
AM	28.1	2.09	$\mu\text{g/l}$	118%	2.28

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	24,3 \pm 0,8	24,3 \pm 0,8	$\mu\text{g/l}$
Recov. \pm CI(99%)	101,8 \pm 3,3	101,8 \pm 3,3	%
SD between labs	1,7	1,7	$\mu\text{g/l}$
RSD between labs	6,8	6,8	%
n for calculation	34	34	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167A

Parameter Arsenic

Target value $\pm U$ (k=2) 3,54 $\mu\text{g/l}$ \pm 0,03 $\mu\text{g/l}$

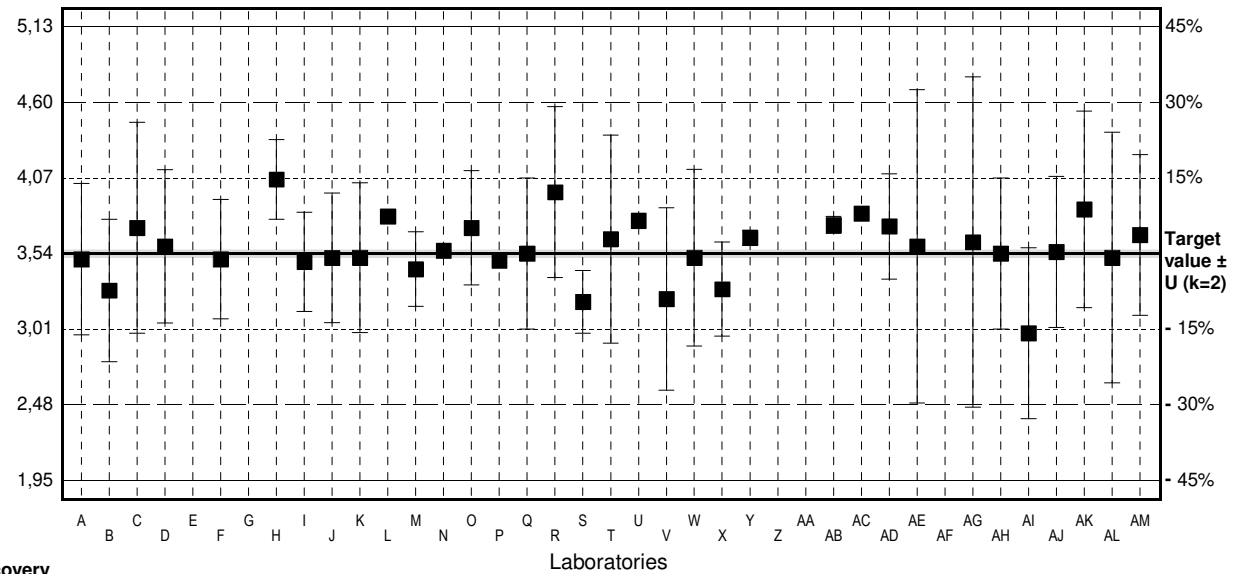
IFA result $\pm U$ (k=2) 3,72 $\mu\text{g/l}$ \pm 0,39 $\mu\text{g/l}$

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

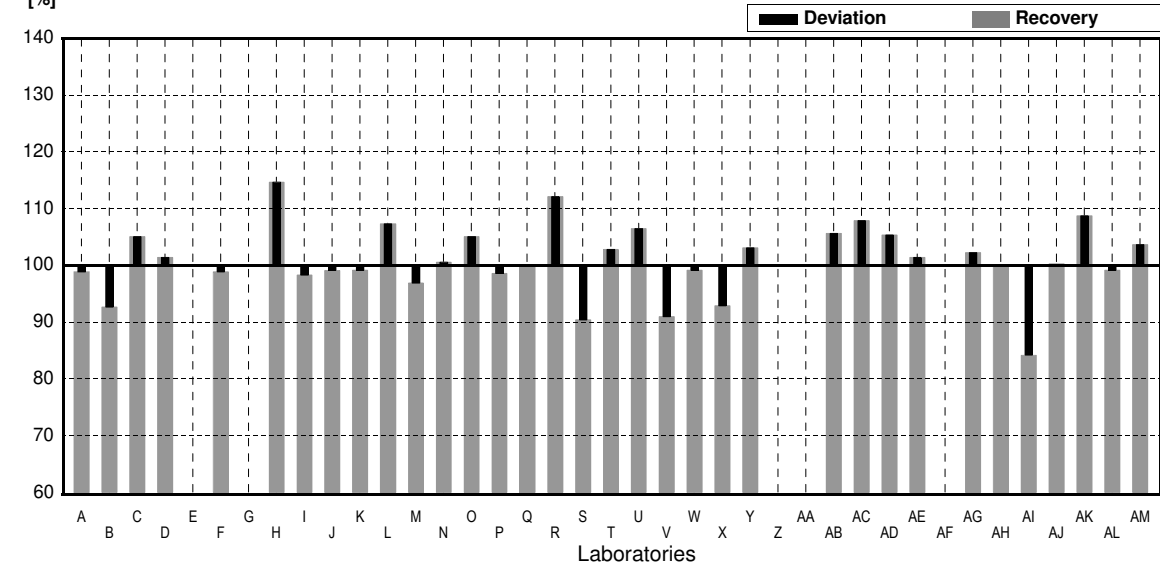
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	3.50	0.532	$\mu\text{g/l}$	99%	-0.15
B	3.28	0.5	$\mu\text{g/l}$	93%	-1.01
C	3.72	0.74	$\mu\text{g/l}$	105%	0.70
D	3.59	0.539	$\mu\text{g/l}$	101%	0.19
E			$\mu\text{g/l}$		
F	3.50	0.420	$\mu\text{g/l}$	99%	-0.15
G			$\mu\text{g/l}$		
H	4.06	0.28	$\mu\text{g/l}$	115%	2.01
I	3.48	0.348	$\mu\text{g/l}$	98%	-0.23
J	3.509	0.456	$\mu\text{g/l}$	99%	-0.12
K	3.51	0.527	$\mu\text{g/l}$	99%	-0.12
L	3.800		$\mu\text{g/l}$	107%	1.01
M	3.43	0.262	$\mu\text{g/l}$	97%	-0.43
N	3.56		$\mu\text{g/l}$	101%	0.08
O	3.72	0.4	$\mu\text{g/l}$	105%	0.70
P	3.49		$\mu\text{g/l}$	99%	-0.19
Q	3.54	0.53	$\mu\text{g/l}$	100%	0.00
R	3.97	0.60	$\mu\text{g/l}$	112%	1.66
S	3.20	0.22	$\mu\text{g/l}$	90%	-1.32
T	3.64	0.73	$\mu\text{g/l}$	103%	0.39
U	3.77		$\mu\text{g/l}$	106%	0.89
V	3.22	0.64	$\mu\text{g/l}$	91%	-1.24
W	3.51	0.62	$\mu\text{g/l}$	99%	-0.12
X	3.289	0.33	$\mu\text{g/l}$	93%	-0.97
Y	3.65	0.0534	$\mu\text{g/l}$	103%	0.43
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	3.74	0.059	$\mu\text{g/l}$	106%	0.77
AC	3.82		$\mu\text{g/l}$	108%	1.08
AD	3.73	0.37	$\mu\text{g/l}$	105%	0.74
AE	3.59	1.1	$\mu\text{g/l}$	101%	0.19
AF			$\mu\text{g/l}$		
AG	3.62	1.16	$\mu\text{g/l}$	102%	0.31
AH	3.54	0.53	$\mu\text{g/l}$	100%	0.00
AI	2.98	0.60	$\mu\text{g/l}$	84%	-2.17
AJ	3.55	0.53	$\mu\text{g/l}$	100%	0.04
AK	3.85	0.69	$\mu\text{g/l}$	109%	1.20
AL	3.51	0.88	$\mu\text{g/l}$	99%	-0.12
AM	3.67	0.564	$\mu\text{g/l}$	104%	0.50

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	3,57 \pm 0,10	3,58 \pm 0,09	$\mu\text{g/l}$
Recov. \pm CI(99%)	101,0 \pm 2,9	101,1 \pm 2,5	%
SD between labs	0,22	0,18	$\mu\text{g/l}$
RSD between labs	6,1	5,0	%
n for calculation	34	32	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167B

Parameter Arsenic

Target value $\pm U$ (k=2) 0,857 $\mu\text{g/l}$ \pm 0,012 $\mu\text{g/l}$

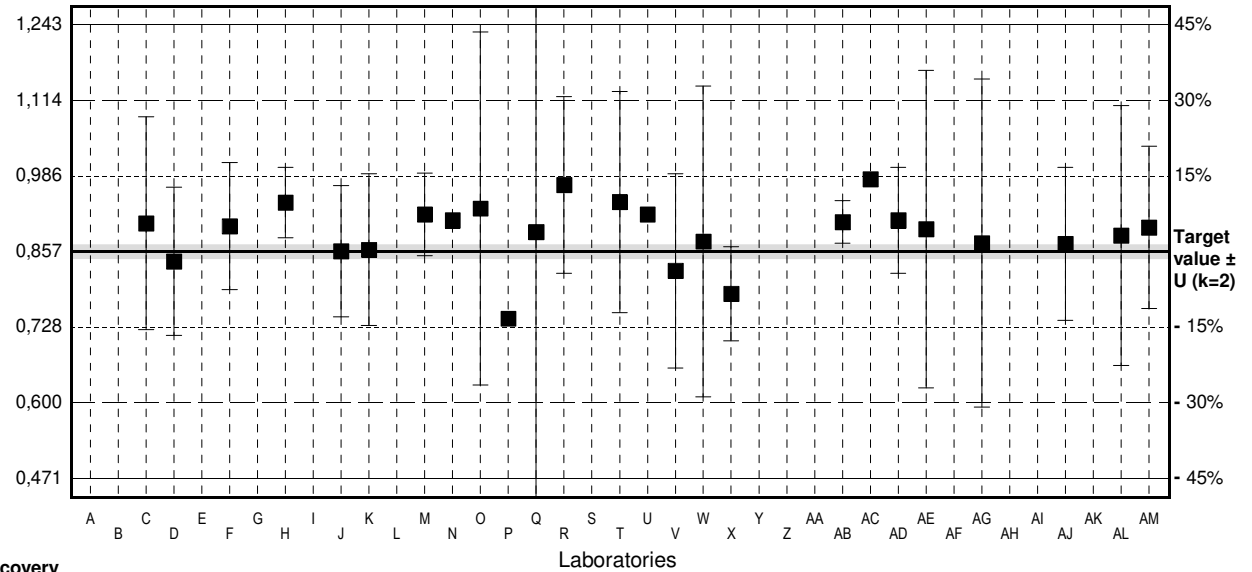
IFA result $\pm U$ (k=2) 0,89 $\mu\text{g/l}$ \pm 0,09 $\mu\text{g/l}$

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

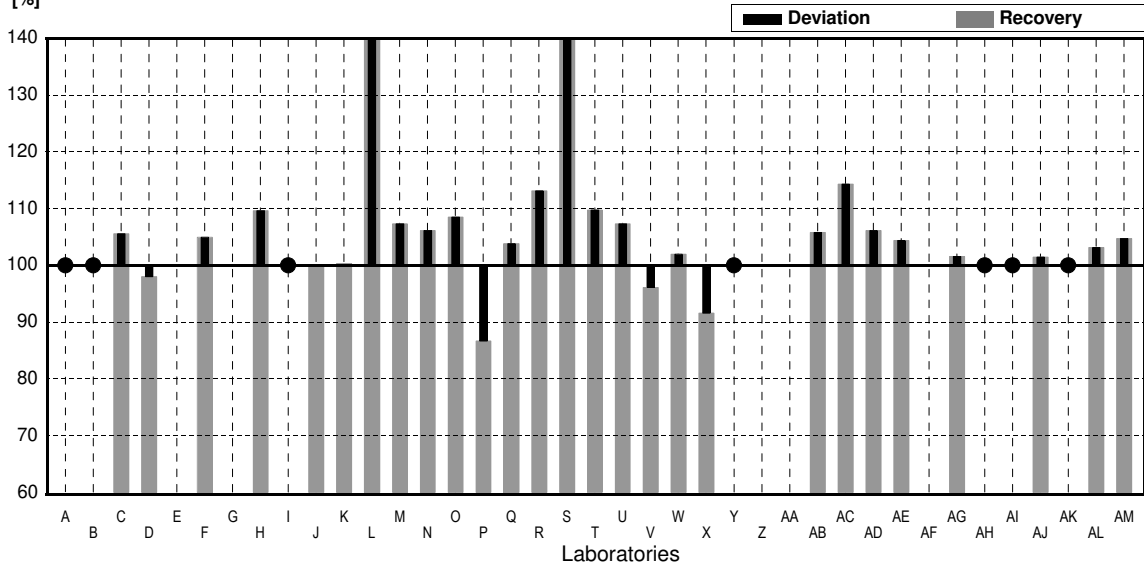
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	<1		$\mu\text{g/l}$	•	
B	<2		$\mu\text{g/l}$	•	
C	0.905	0.181	$\mu\text{g/l}$	106%	0.77
D	0.84	0.126	$\mu\text{g/l}$	98%	-0.27
E			$\mu\text{g/l}$		
F	0.900	0.108	$\mu\text{g/l}$	105%	0.69
G			$\mu\text{g/l}$		
H	0.94	0.06	$\mu\text{g/l}$	110%	1.33
I	<2		$\mu\text{g/l}$	•	
J	0.8576	0.1115	$\mu\text{g/l}$	100%	0.01
K	0.86	0.129	$\mu\text{g/l}$	100%	0.05
L	1.368 *		$\mu\text{g/l}$	160%	8.17
M	0.92	0.070	$\mu\text{g/l}$	107%	1.01
N	0.91		$\mu\text{g/l}$	106%	0.85
O	0.93	0.3	$\mu\text{g/l}$	109%	1.17
P	0.743 *		$\mu\text{g/l}$	87%	-1.82
Q	0.89	0.44	$\mu\text{g/l}$	104%	0.53
R	0.97	0.15	$\mu\text{g/l}$	113%	1.81
S	2.85 *	0.45	$\mu\text{g/l}$	333%	31.86
T	0.941	0.188	$\mu\text{g/l}$	110%	1.34
U	0.92		$\mu\text{g/l}$	107%	1.01
V	0.824	0.165	$\mu\text{g/l}$	96%	-0.53
W	0.874	0.264	$\mu\text{g/l}$	102%	0.27
X	0.785	0.08	$\mu\text{g/l}$	92%	-1.15
Y	<1		$\mu\text{g/l}$	•	
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	0.907	0.036	$\mu\text{g/l}$	106%	0.80
AC	0.98		$\mu\text{g/l}$	114%	1.97
AD	0.91	0.09	$\mu\text{g/l}$	106%	0.85
AE	0.895	0.27	$\mu\text{g/l}$	104%	0.61
AF			$\mu\text{g/l}$		
AG	0.871	0.279	$\mu\text{g/l}$	102%	0.22
AH	<1.00		$\mu\text{g/l}$	•	
AI	<1		$\mu\text{g/l}$	•	
AJ	0.870	0.13	$\mu\text{g/l}$	102%	0.21
AK	<1.0		$\mu\text{g/l}$	•	
AL	0.884	0.221	$\mu\text{g/l}$	103%	0.43
AM	0.898	0.138	$\mu\text{g/l}$	105%	0.66

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,979 \pm 0,208	0,895 \pm 0,025	$\mu\text{g/l}$
Recov. \pm CI(99%)	114,3 \pm 24,2	104,4 \pm 3,0	%
SD between labs	0,388	0,044	$\mu\text{g/l}$
RSD between labs	39,7	4,9	%
n for calculation	27	24	

Result
[$\mu\text{g/l}$]



Recovery
[%]



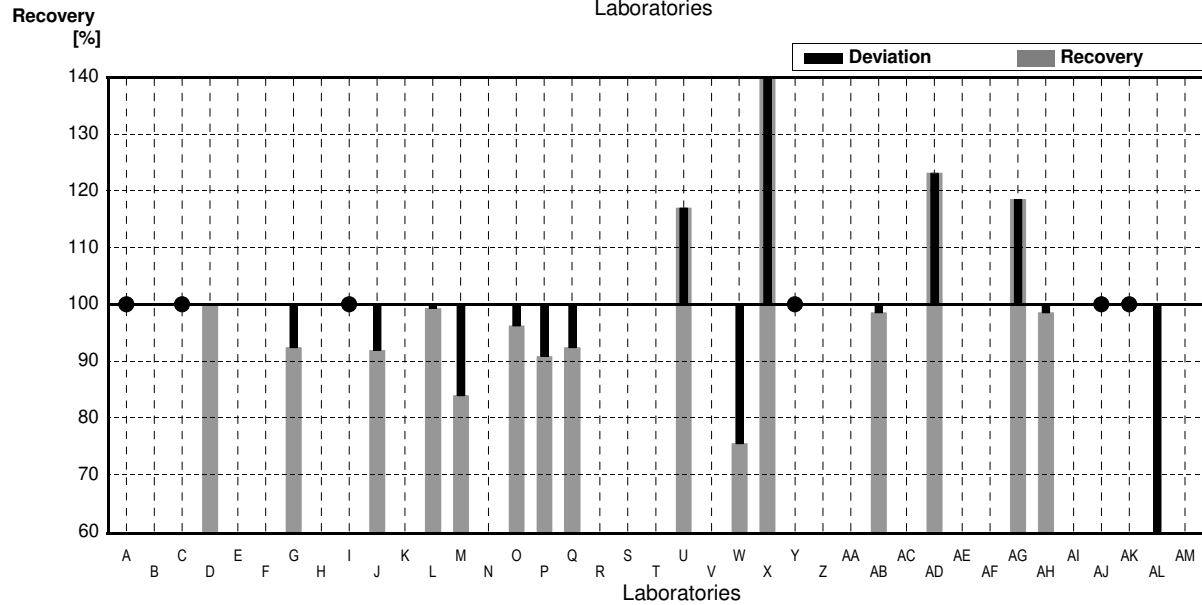
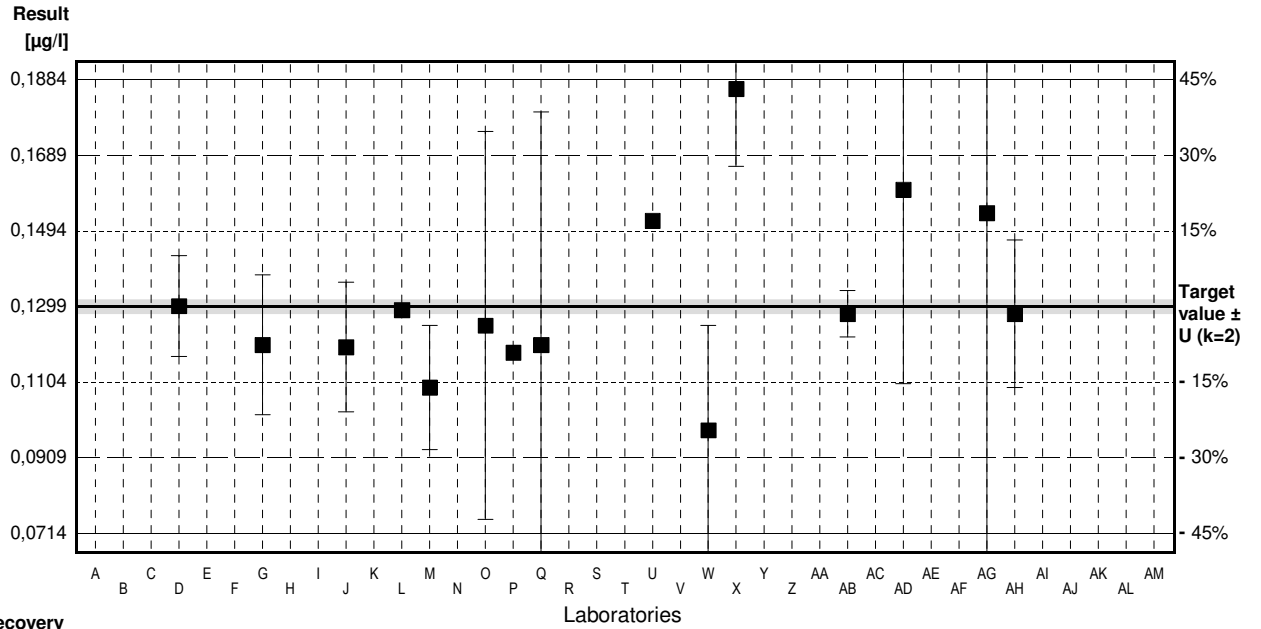
Sample M167A

Parameter Beryllium

Target value $\pm U$ (k=2) 0,1299 $\mu\text{g/l}$ \pm 0,0018 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 0,135 $\mu\text{g/l}$ \pm 0,016 $\mu\text{g/l}$
 Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	<5		$\mu\text{g/l}$	•	
B			$\mu\text{g/l}$		
C	<1		$\mu\text{g/l}$	•	
D	0.130	0.013	$\mu\text{g/l}$	100%	0.01
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G	0.120	0.018	$\mu\text{g/l}$	92%	-0.64
H			$\mu\text{g/l}$		
I	<0.2		$\mu\text{g/l}$	•	
J	0.1194	0.0167	$\mu\text{g/l}$	92%	-0.67
K			$\mu\text{g/l}$		
L	0.129		$\mu\text{g/l}$	99%	-0.06
M	0.109	0.016	$\mu\text{g/l}$	84%	-1.34
N			$\mu\text{g/l}$		
O	0.125	0.05	$\mu\text{g/l}$	96%	-0.31
P	0.118		$\mu\text{g/l}$	91%	-0.76
Q	0.120	0.06	$\mu\text{g/l}$	92%	-0.64
R			$\mu\text{g/l}$		
S			$\mu\text{g/l}$		
T			$\mu\text{g/l}$		
U	0.152		$\mu\text{g/l}$	117%	1.42
V			$\mu\text{g/l}$		
W	0.098	0.027	$\mu\text{g/l}$	75%	-2.05
X	0.186 *	0.02	$\mu\text{g/l}$	143%	3.60
Y	<1		$\mu\text{g/l}$	•	
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	0.128	0.006	$\mu\text{g/l}$	99%	-0.12
AC			$\mu\text{g/l}$		
AD	0.160	0.050	$\mu\text{g/l}$	123%	1.93
AE			$\mu\text{g/l}$		
AF			$\mu\text{g/l}$		
AG	0.154	0.111	$\mu\text{g/l}$	119%	1.55
AH	0.128	0.019	$\mu\text{g/l}$	99%	-0.12
AI			$\mu\text{g/l}$		
AJ	<1		$\mu\text{g/l}$	•	
AK	<0.5		$\mu\text{g/l}$	•	
AL	0.0674 *	0.0169	$\mu\text{g/l}$	52%	-4.01
AM			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,1277 \pm 0,019	0,1279 \pm 0,013	$\mu\text{g/l}$
Recov. \pm CI(99%)	98,3 \pm 15,3	98,4 \pm 10,7	%
SD between labs	0,0269	0,0172	$\mu\text{g/l}$
RSD between labs	21,1	13,5	%
n for calculation	16	14	



Sample M167B

Parameter Beryllium

Target value $\pm U$ (k=2) 0,1706 $\mu\text{g/l}$ \pm 0,0018 $\mu\text{g/l}$

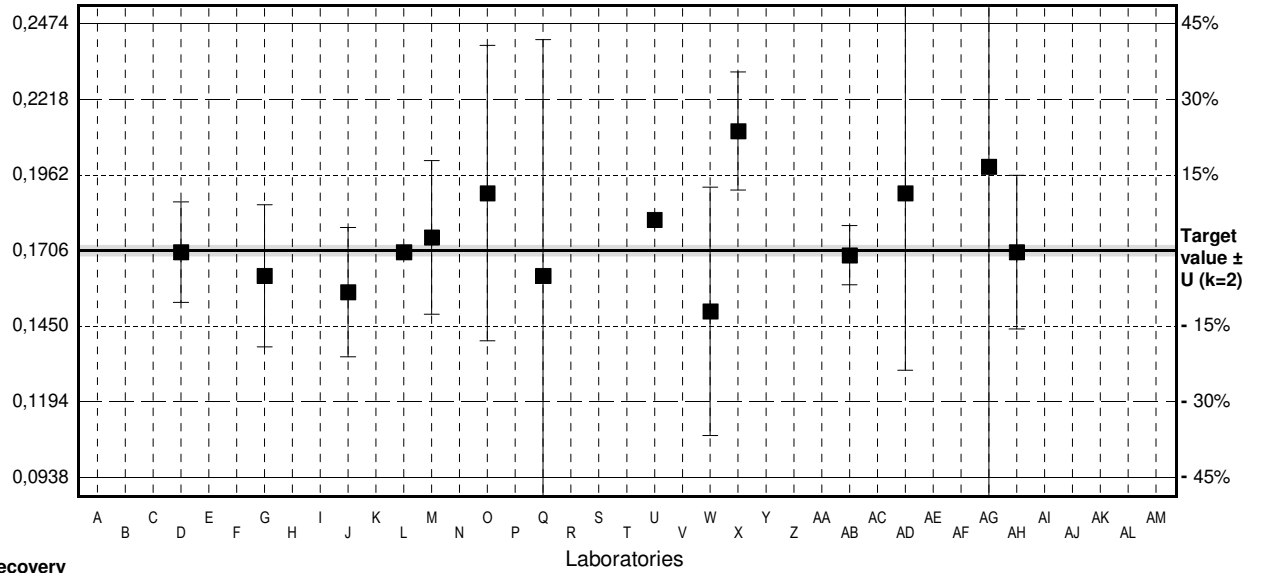
IFA result $\pm U$ (k=2) 0,190 $\mu\text{g/l}$ \pm 0,023 $\mu\text{g/l}$

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

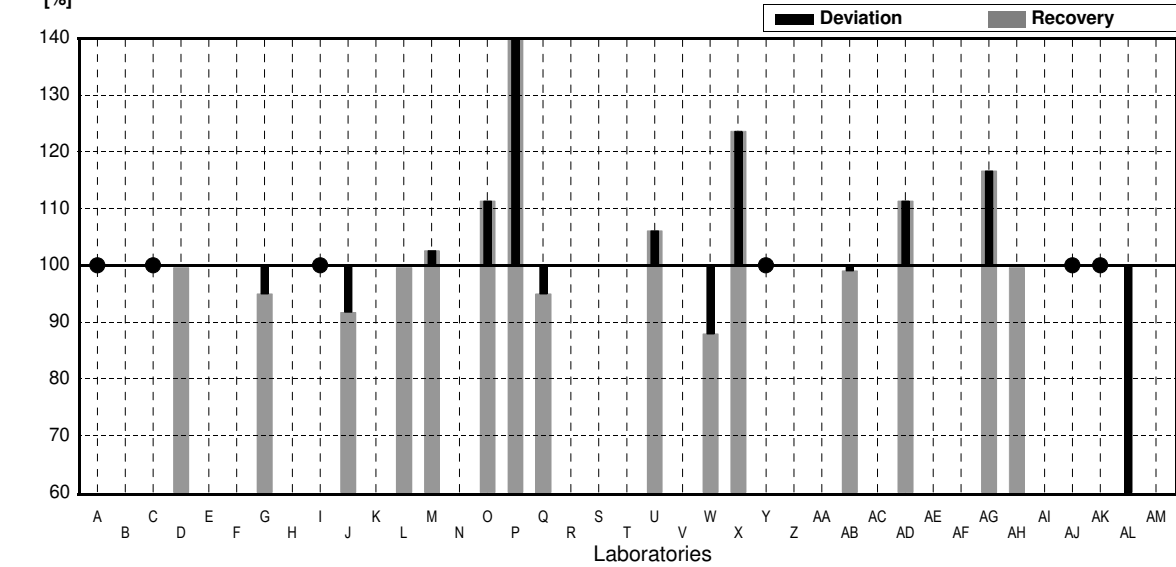
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	<5		$\mu\text{g/l}$	•	
B			$\mu\text{g/l}$		
C	<1		$\mu\text{g/l}$	•	
D	0.170	0.017	$\mu\text{g/l}$	100%	-0.03
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G	0.162	0.024	$\mu\text{g/l}$	95%	-0.42
H			$\mu\text{g/l}$		
I	<0.2		$\mu\text{g/l}$	•	
J	0.1565	0.0219	$\mu\text{g/l}$	92%	-0.69
K			$\mu\text{g/l}$		
L	0.170		$\mu\text{g/l}$	100%	-0.03
M	0.175	0.026	$\mu\text{g/l}$	103%	0.21
N			$\mu\text{g/l}$		
O	0.190	0.05	$\mu\text{g/l}$	111%	0.95
P	1.71 *		$\mu\text{g/l}$	1002%	75.20
Q	0.162	0.08	$\mu\text{g/l}$	95%	-0.42
R			$\mu\text{g/l}$		
S			$\mu\text{g/l}$		
T			$\mu\text{g/l}$		
U	0.181		$\mu\text{g/l}$	106%	0.51
V			$\mu\text{g/l}$		
W	0.150	0.042	$\mu\text{g/l}$	88%	-1.01
X	0.211	0.02	$\mu\text{g/l}$	124%	1.97
Y	<1		$\mu\text{g/l}$	•	
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	0.169	0.010	$\mu\text{g/l}$	99%	-0.08
AC			$\mu\text{g/l}$		
AD	0.190	0.060	$\mu\text{g/l}$	111%	0.95
AE			$\mu\text{g/l}$		
AF			$\mu\text{g/l}$		
AG	0.199	0.143	$\mu\text{g/l}$	117%	1.39
AH	0.170	0.026	$\mu\text{g/l}$	100%	-0.03
AI			$\mu\text{g/l}$		
AJ	<1		$\mu\text{g/l}$	•	
AK	<0.5		$\mu\text{g/l}$	•	
AL	0.0675 *	0.0169	$\mu\text{g/l}$	40%	-5.04
AM			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,2646 \pm 0,285	0,1754 \pm 0,013	$\mu\text{g/l}$
Recov. \pm CI(99%)	155,1 \pm 167,2	102,8 \pm 8,0	%
SD between labs	0,3867	0,0170	$\mu\text{g/l}$
RSD between labs	146,2	9,7	%
n for calculation	16	14	

Result [$\mu\text{g/l}$]



Recovery [%]



Sample M167A

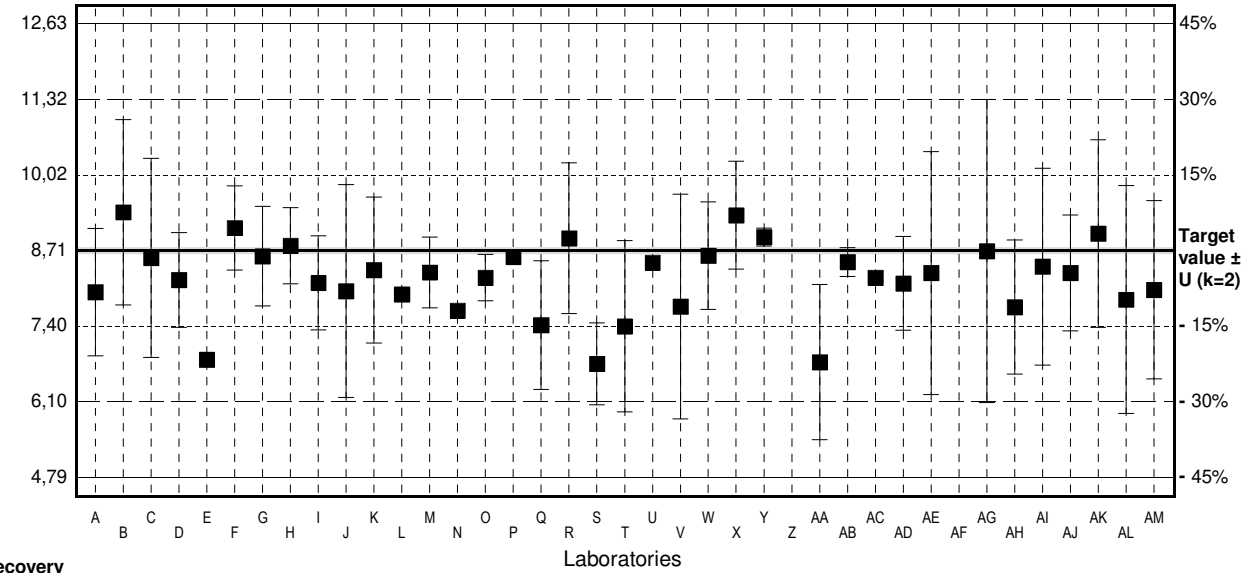
Parameter Lead

Target value $\pm U$ (k=2) 8,71 $\mu\text{g/l}$ \pm 0,05 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 8,4 $\mu\text{g/l}$ \pm 0,2 $\mu\text{g/l}$
 Stability test $\mu\text{g/l}$

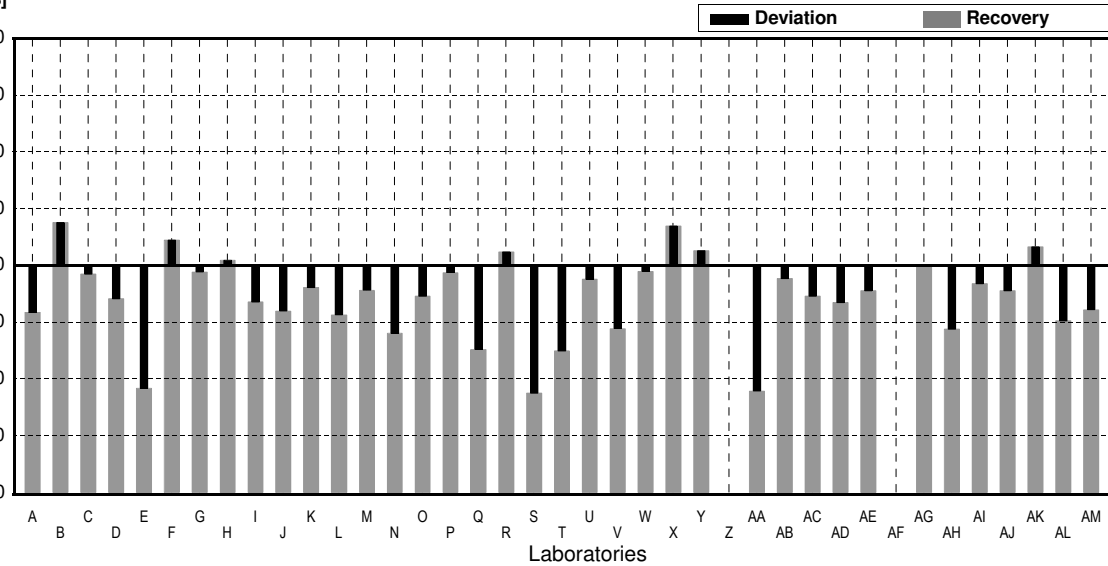
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	7.99	1.10	$\mu\text{g/l}$	92%	-1.23
B	9.37	1.6	$\mu\text{g/l}$	108%	1.13
C	8.58	1.72	$\mu\text{g/l}$	99%	-0.22
D	8.2	0.82	$\mu\text{g/l}$	94%	-0.87
E	6.823		$\mu\text{g/l}$	78%	-3.23
F	9.10	0.728	$\mu\text{g/l}$	104%	0.67
G	8.61	0.86	$\mu\text{g/l}$	99%	-0.17
H	8.79	0.66	$\mu\text{g/l}$	101%	0.14
I	8.15	0.815	$\mu\text{g/l}$	94%	-0.96
J	8.009	1.842	$\mu\text{g/l}$	92%	-1.20
K	8.37	1.26	$\mu\text{g/l}$	96%	-0.58
L	7.951		$\mu\text{g/l}$	91%	-1.30
M	8.33	0.610	$\mu\text{g/l}$	96%	-0.65
N	7.67		$\mu\text{g/l}$	88%	-1.78
O	8.24	0.4	$\mu\text{g/l}$	95%	-0.81
P	8.6		$\mu\text{g/l}$	99%	-0.19
Q	7.42	1.11	$\mu\text{g/l}$	85%	-2.21
R	8.92	1.3	$\mu\text{g/l}$	102%	0.36
S	6.75	0.71	$\mu\text{g/l}$	77%	-3.36
T	7.40	1.48	$\mu\text{g/l}$	85%	-2.24
U	8.5		$\mu\text{g/l}$	98%	-0.36
V	7.74	1.94	$\mu\text{g/l}$	89%	-1.66
W	8.62	0.93	$\mu\text{g/l}$	99%	-0.15
X	9.319	0.93	$\mu\text{g/l}$	107%	1.04
Y	8.94	0.155	$\mu\text{g/l}$	103%	0.39
Z			$\mu\text{g/l}$		
AA	6.78	1.34	$\mu\text{g/l}$	78%	-3.31
AB	8.51	0.248	$\mu\text{g/l}$	98%	-0.34
AC	8.24		$\mu\text{g/l}$	95%	-0.81
AD	8.14	0.81	$\mu\text{g/l}$	93%	-0.98
AE	8.32	2.1	$\mu\text{g/l}$	96%	-0.67
AF			$\mu\text{g/l}$		
AG	8.7	2.62	$\mu\text{g/l}$	100%	-0.02
AH	7.73	1.16	$\mu\text{g/l}$	89%	-1.68
AI	8.43	1.7	$\mu\text{g/l}$	97%	-0.48
AJ	8.32	1.0	$\mu\text{g/l}$	96%	-0.67
AK	9.00	1.62	$\mu\text{g/l}$	103%	0.50
AL	7.86	1.97	$\mu\text{g/l}$	90%	-1.46
AM	8.03	1.54	$\mu\text{g/l}$	92%	-1.17

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	8,23 \pm 0,29	8,31 \pm 0,26	$\mu\text{g/l}$
Recov. \pm CI(99%)	94,5 \pm 3,3	95,4 \pm 2,9	%
SD between labs	0,64	0,55	$\mu\text{g/l}$
RSD between labs	7,8	6,7	%
n for calculation	37	35	

Result
[$\mu\text{g/l}$]



Recovery
[%]



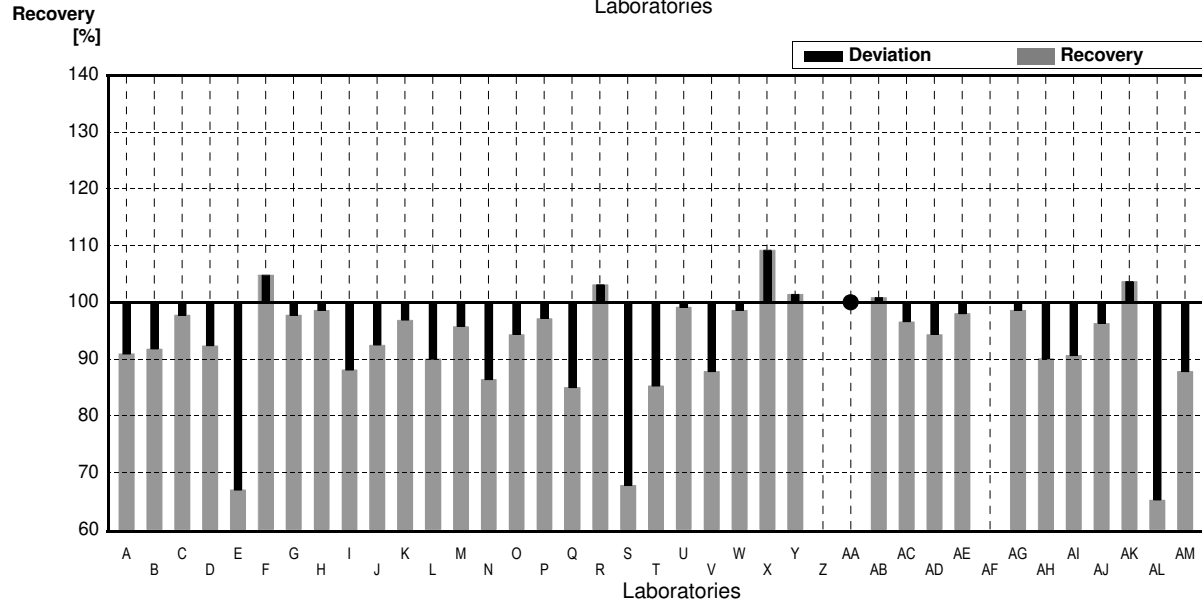
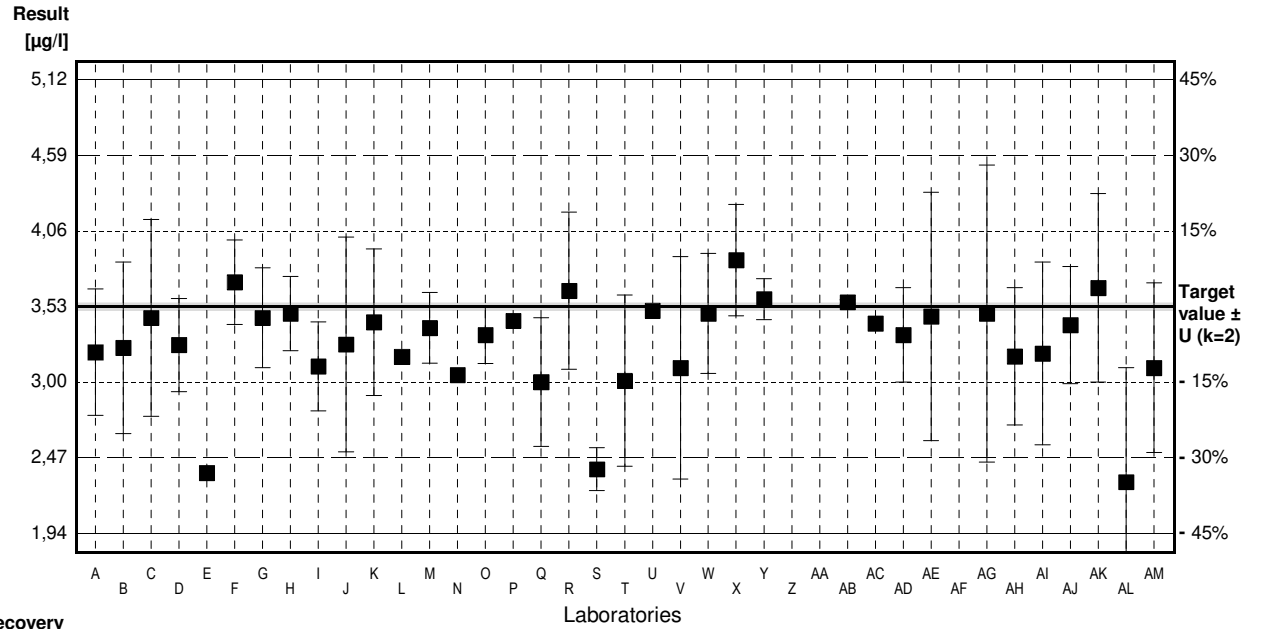
Sample M167B

Parameter Lead

Target value $\pm U$ (k=2) 3,53 $\mu\text{g/l}$ \pm 0,03 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 3,30 $\mu\text{g/l}$ \pm 0,09 $\mu\text{g/l}$
 Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	3,21	0,443	$\mu\text{g/l}$	91%	-1,35
B	3,24	0,6	$\mu\text{g/l}$	92%	-1,23
C	3,45	0,69	$\mu\text{g/l}$	98%	-0,34
D	3,26	0,326	$\mu\text{g/l}$	92%	-1,14
E	2,363 *		$\mu\text{g/l}$	67%	-4,93
F	3,70	0,296	$\mu\text{g/l}$	105%	0,72
G	3,45	0,35	$\mu\text{g/l}$	98%	-0,34
H	3,48	0,26	$\mu\text{g/l}$	99%	-0,21
I	3,11	0,311	$\mu\text{g/l}$	88%	-1,78
J	3,264	0,751	$\mu\text{g/l}$	92%	-1,12
K	3,42	0,513	$\mu\text{g/l}$	97%	-0,47
L	3,177		$\mu\text{g/l}$	90%	-1,49
M	3,38	0,247	$\mu\text{g/l}$	96%	-0,63
N	3,05		$\mu\text{g/l}$	86%	-2,03
O	3,33	0,2	$\mu\text{g/l}$	94%	-0,85
P	3,43		$\mu\text{g/l}$	97%	-0,42
Q	3,00	0,45	$\mu\text{g/l}$	85%	-2,24
R	3,64	0,55	$\mu\text{g/l}$	103%	0,47
S	2,39 *	0,15	$\mu\text{g/l}$	68%	-4,82
T	3,01	0,60	$\mu\text{g/l}$	85%	-2,20
U	3,50		$\mu\text{g/l}$	99%	-0,13
V	3,10	0,78	$\mu\text{g/l}$	88%	-1,82
W	3,48	0,42	$\mu\text{g/l}$	99%	-0,21
X	3,855	0,39	$\mu\text{g/l}$	109%	1,37
Y	3,58	0,144	$\mu\text{g/l}$	101%	0,21
Z			$\mu\text{g/l}$		
AA	$\leq 5,00$		$\mu\text{g/l}$	*	
AB	3,56	0,015	$\mu\text{g/l}$	101%	0,13
AC	3,41		$\mu\text{g/l}$	97%	-0,51
AD	3,33	0,33	$\mu\text{g/l}$	94%	-0,85
AE	3,46	0,87	$\mu\text{g/l}$	98%	-0,30
AF			$\mu\text{g/l}$		
AG	3,48	1,04	$\mu\text{g/l}$	99%	-0,21
AH	3,18	0,48	$\mu\text{g/l}$	90%	-1,48
AI	3,20	0,64	$\mu\text{g/l}$	91%	-1,40
AJ	3,40	0,41	$\mu\text{g/l}$	96%	-0,55
AK	3,66	0,66	$\mu\text{g/l}$	104%	0,55
AL	2,30 *	0,80	$\mu\text{g/l}$	65%	-5,20
AM	3,10	0,594	$\mu\text{g/l}$	88%	-1,82

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	3,28 \pm 0,16	3,36 \pm 0,10	$\mu\text{g/l}$
Recov. \pm CI(99%)	92,8 \pm 4,5	95,2 \pm 2,8	%
SD between labs	0,35	0,21	$\mu\text{g/l}$
RSD between labs	10,6	6,3	%
n for calculation	36	33	



Sample M167A

Parameter Cadmium

Target value $\pm U$ (k=2) 1,435 $\mu\text{g/l}$ \pm 0,012 $\mu\text{g/l}$

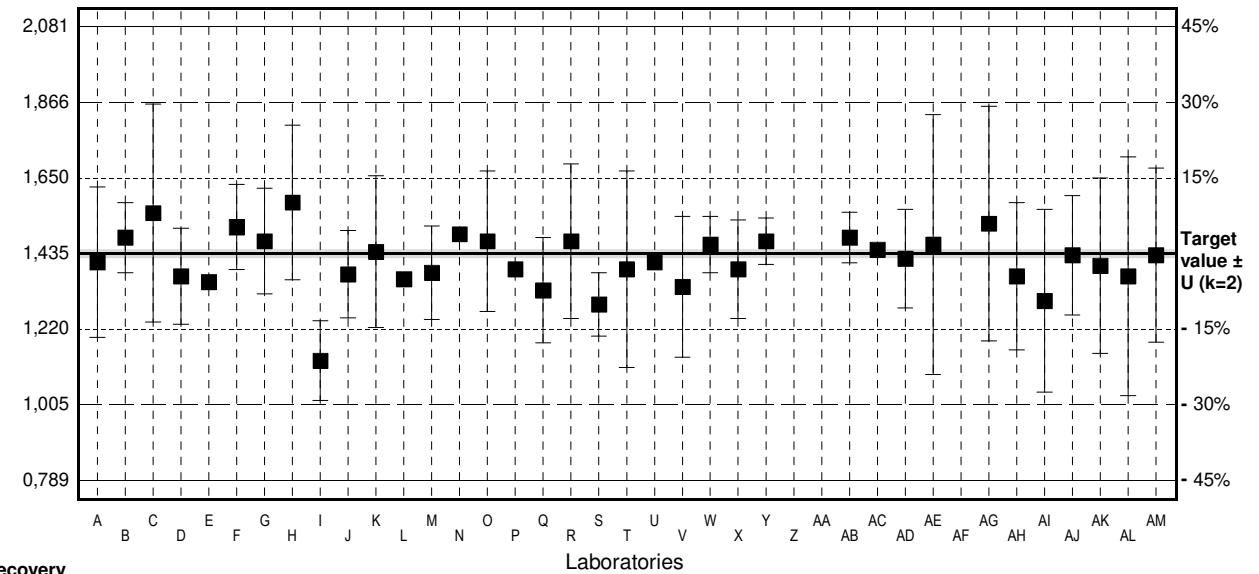
IFA result $\pm U$ (k=2) 1,53 $\mu\text{g/l}$ \pm 0,09 $\mu\text{g/l}$

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

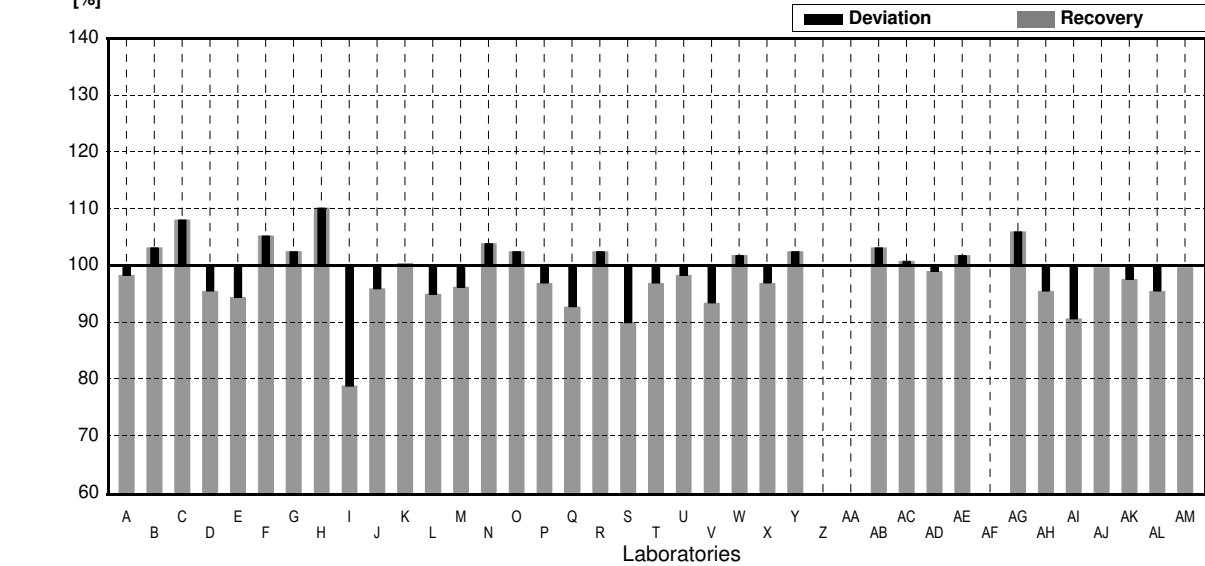
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	1.41	0.214	$\mu\text{g/l}$	98%	-0.32
B	1.48	0.1	$\mu\text{g/l}$	103%	0.58
C	1.55	0.31	$\mu\text{g/l}$	108%	1.48
D	1.37	0.137	$\mu\text{g/l}$	95%	-0.84
E	1.354		$\mu\text{g/l}$	94%	-1.05
F	1.51	0.121	$\mu\text{g/l}$	105%	0.97
G	1.47	0.15	$\mu\text{g/l}$	102%	0.45
H	1.58	0.22	$\mu\text{g/l}$	110%	1.87
I	1.13	0.113	$\mu\text{g/l}$	79%	-3.94
J	1.376	0.124	$\mu\text{g/l}$	96%	-0.76
K	1.44	0.216	$\mu\text{g/l}$	100%	0.06
L	1.362		$\mu\text{g/l}$	95%	-0.94
M	1.38	0.133	$\mu\text{g/l}$	96%	-0.71
N	1.49		$\mu\text{g/l}$	104%	0.71
O	1.47	0.2	$\mu\text{g/l}$	102%	0.45
P	1.39		$\mu\text{g/l}$	97%	-0.58
Q	1.33	0.15	$\mu\text{g/l}$	93%	-1.36
R	1.47	0.22	$\mu\text{g/l}$	102%	0.45
S	1.29	0.09	$\mu\text{g/l}$	90%	-1.87
T	1.39	0.28	$\mu\text{g/l}$	97%	-0.58
U	1.41		$\mu\text{g/l}$	98%	-0.32
V	1.34	0.20	$\mu\text{g/l}$	93%	-1.23
W	1.46	0.08	$\mu\text{g/l}$	102%	0.32
X	1.390	0.14	$\mu\text{g/l}$	97%	-0.58
Y	1.47	0.0660	$\mu\text{g/l}$	102%	0.45
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	1.48	0.072	$\mu\text{g/l}$	103%	0.58
AC	1.446		$\mu\text{g/l}$	101%	0.14
AD	1.42	0.14	$\mu\text{g/l}$	99%	-0.19
AE	1.46	0.37	$\mu\text{g/l}$	102%	0.32
AF			$\mu\text{g/l}$		
AG	1.52	0.334	$\mu\text{g/l}$	106%	1.10
AH	1.37	0.21	$\mu\text{g/l}$	95%	-0.84
AI	1.30	0.26	$\mu\text{g/l}$	91%	-1.74
AJ	1.43	0.17	$\mu\text{g/l}$	100%	-0.06
AK	1.40	0.25	$\mu\text{g/l}$	98%	-0.45
AL	1.37	0.34	$\mu\text{g/l}$	95%	-0.84
AM	1.43	0.248	$\mu\text{g/l}$	100%	-0.06

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	1,415 \pm 0,038	1,423 \pm 0,031	$\mu\text{g/l}$
Recov. \pm CI(99%)	98,6 \pm 2,6	99,2 \pm 2,2	%
SD between labs	0,082	0,067	$\mu\text{g/l}$
RSD between labs	5,8	4,7	%
n for calculation	36	35	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167B

Parameter Cadmium

Target value ± U (k=2) 2,89 µg/l ± 0,02 µg/l

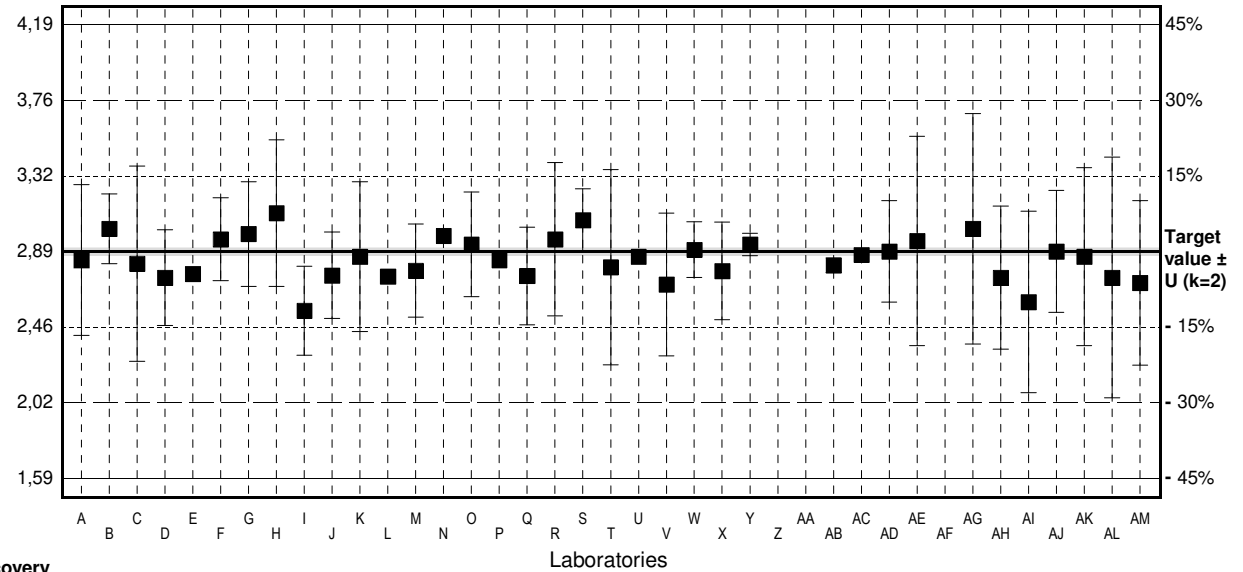
IFA result ± U (k=2) 3,05 µg/l ± 0,18 µg/l

Stability test µg/l

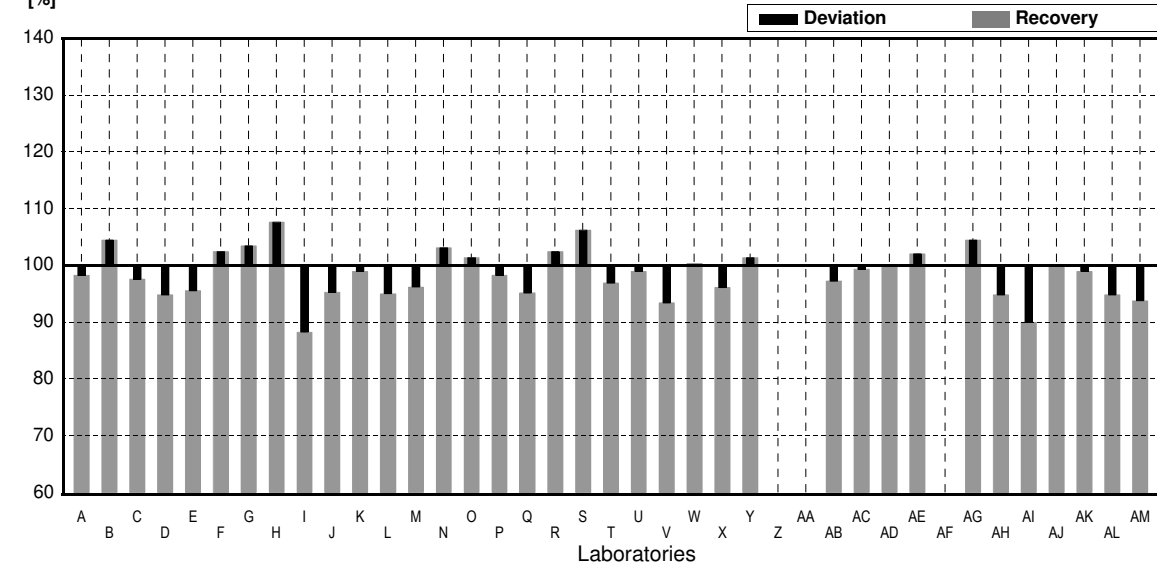
Lab Code	Result	±	Unit	Recovery	z-Score
A	2.84	0.432	µg/l	98%	-0.32
B	3.02	0.2	µg/l	104%	0.83
C	2.82	0.56	µg/l	98%	-0.45
D	2.74	0.274	µg/l	95%	-0.96
E	2.761		µg/l	96%	-0.83
F	2.96	0.237	µg/l	102%	0.45
G	2.99	0.30	µg/l	103%	0.64
H	3.11	0.42	µg/l	108%	1.41
I	2.55	0.255	µg/l	88%	-2.18
J	2.753	0.248	µg/l	95%	-0.88
K	2.86	0.429	µg/l	99%	-0.19
L	2.746		µg/l	95%	-0.92
M	2.78	0.267	µg/l	96%	-0.70
N	2.98		µg/l	103%	0.58
O	2.93	0.3	µg/l	101%	0.26
P	2.84		µg/l	98%	-0.32
Q	2.75	0.28	µg/l	95%	-0.90
R	2.96	0.44	µg/l	102%	0.45
S	3.07	0.18	µg/l	106%	1.15
T	2.80	0.56	µg/l	97%	-0.58
U	2.86		µg/l	99%	-0.19
V	2.70	0.41	µg/l	93%	-1.22
W	2.90	0.16	µg/l	100%	0.06
X	2.778	0.28	µg/l	96%	-0.72
Y	2.93	0.0643	µg/l	101%	0.26
Z			µg/l		
AA			µg/l		
AB	2.81	0.042	µg/l	97%	-0.51
AC	2.87		µg/l	99%	-0.13
AD	2.89	0.29	µg/l	100%	0.00
AE	2.95	0.6	µg/l	102%	0.38
AF			µg/l		
AG	3.02	0.66	µg/l	104%	0.83
AH	2.74	0.41	µg/l	95%	-0.96
AI	2.60	0.52	µg/l	90%	-1.86
AJ	2.89	0.35	µg/l	100%	0.00
AK	2.86	0.51	µg/l	99%	-0.19
AL	2.74	0.69	µg/l	95%	-0.96
AM	2.71	0.472	µg/l	94%	-1.15

	All results	Outliers excl.	Unit
Mean ± CI(99%)	2,85 ± 0,06	2,85 ± 0,06	µg/l
Recov. ± CI(99%)	98,5 ± 2,0	98,5 ± 2,0	%
SD between labs	0,13	0,13	µg/l
RSD between labs	4,4	4,4	%
n for calculation	36	36	

Result [µg/l]



Recovery [%]



Sample M167A

Parameter Cerium

Target value $\pm U$ (k=2) 1,129 $\mu\text{g/l}$ \pm 0,011 $\mu\text{g/l}$

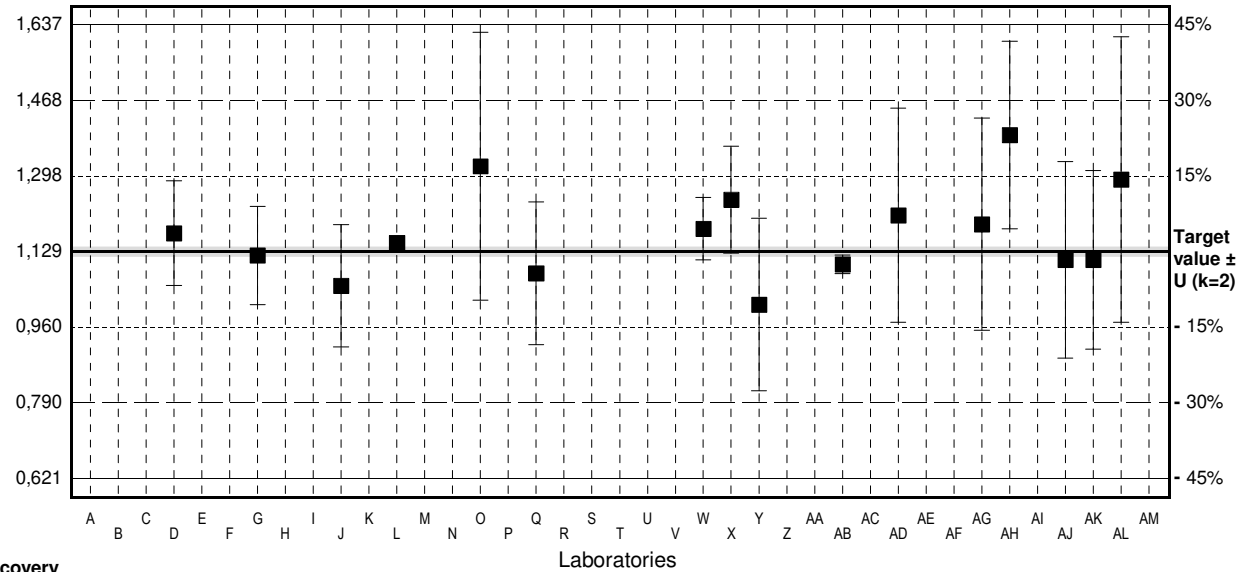
IFA result $\pm U$ (k=2) 0,96 $\mu\text{g/l}$ \pm 0,06 $\mu\text{g/l}$

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

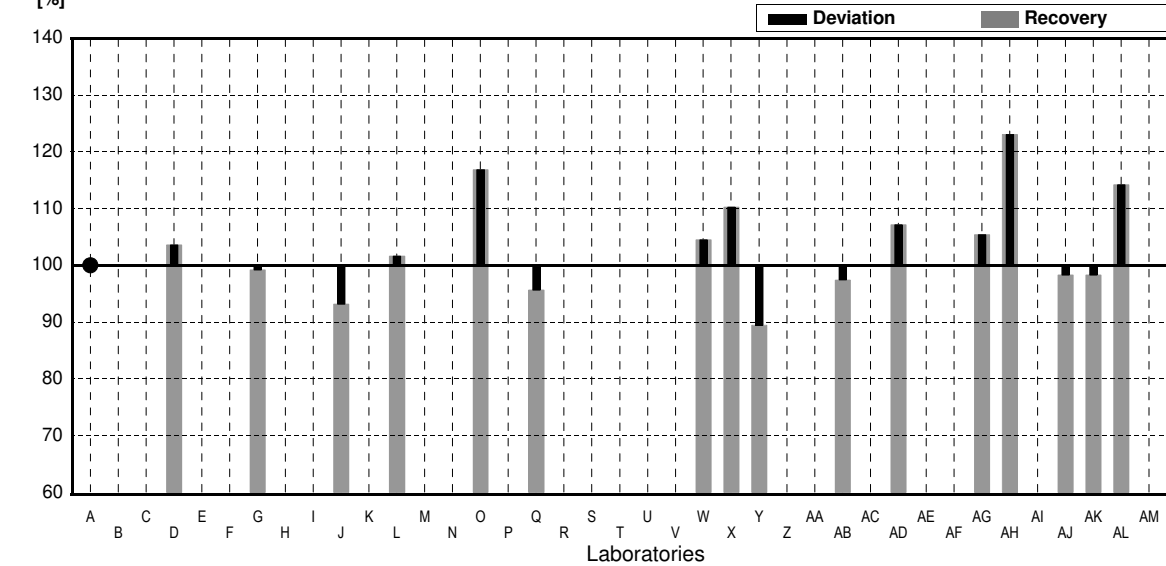
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	<2		$\mu\text{g/l}$.	
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	1,17	0,117	$\mu\text{g/l}$	104%	0,71
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G	1,12	0,11	$\mu\text{g/l}$	99%	-0,16
H			$\mu\text{g/l}$		
I			$\mu\text{g/l}$		
J	1,052	0,137	$\mu\text{g/l}$	93%	-1,34
K			$\mu\text{g/l}$		
L	1,148		$\mu\text{g/l}$	102%	0,33
M			$\mu\text{g/l}$		
N			$\mu\text{g/l}$		
O	1,32	0,3	$\mu\text{g/l}$	117%	3,32
P			$\mu\text{g/l}$		
Q	1,08	0,16	$\mu\text{g/l}$	96%	-0,85
R			$\mu\text{g/l}$		
S			$\mu\text{g/l}$		
T			$\mu\text{g/l}$		
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	1,18	0,07	$\mu\text{g/l}$	105%	0,89
X	1,245	0,12	$\mu\text{g/l}$	110%	2,01
Y	1,01	0,193	$\mu\text{g/l}$	89%	-2,07
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	1,10	0,021	$\mu\text{g/l}$	97%	-0,50
AC			$\mu\text{g/l}$		
AD	1,21	0,24	$\mu\text{g/l}$	107%	1,41
AE			$\mu\text{g/l}$		
AF			$\mu\text{g/l}$		
AG	1,19	0,238	$\mu\text{g/l}$	105%	1,06
AH	1,39	0,21	$\mu\text{g/l}$	123%	4,53
AI			$\mu\text{g/l}$		
AJ	1,11	0,22	$\mu\text{g/l}$	98%	-0,33
AK	1,11	0,20	$\mu\text{g/l}$	98%	-0,33
AL	1,29	0,32	$\mu\text{g/l}$	114%	2,80
AM			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	1,170 \pm 0,075	1,170 \pm 0,075	$\mu\text{g/l}$
Recov. \pm CI(99%)	103,7 \pm 6,7	103,7 \pm 6,7	%
SD between labs	0,102	0,102	$\mu\text{g/l}$
RSD between labs	8,7	8,7	%
n for calculation	16	16	

Result [$\mu\text{g/l}$]



Recovery [%]



Sample M167B

Parameter Cerium

Target value $\pm U$ (k=2) 2,013 $\mu\text{g/l}$ \pm 0,016 $\mu\text{g/l}$

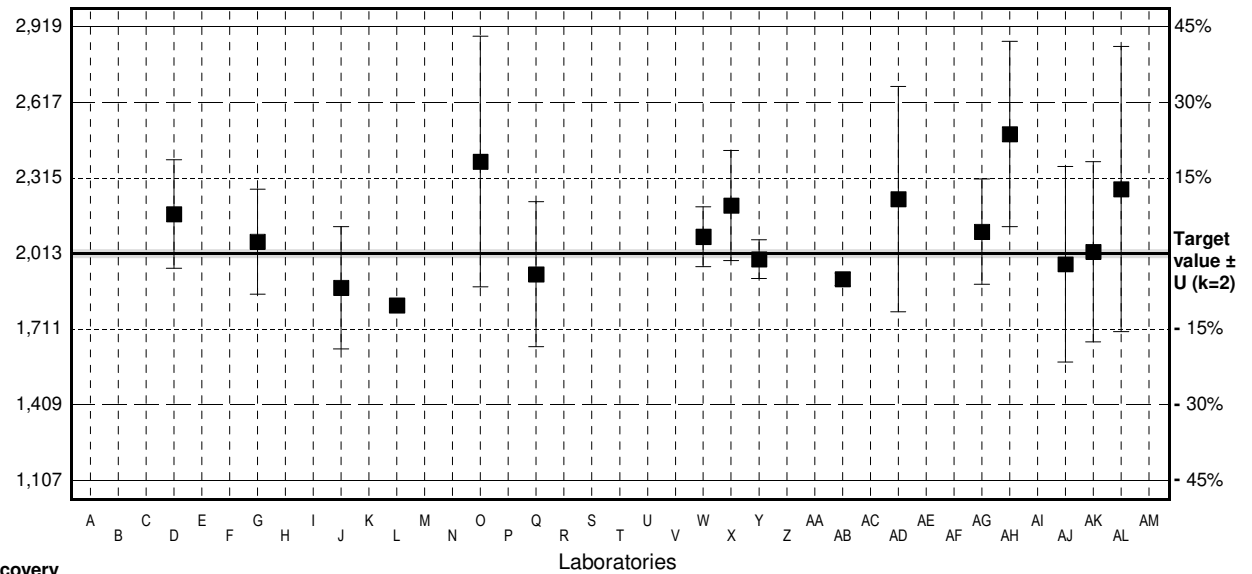
IFA result $\pm U$ (k=2) 1,69 $\mu\text{g/l}$ \pm 0,11 $\mu\text{g/l}$

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

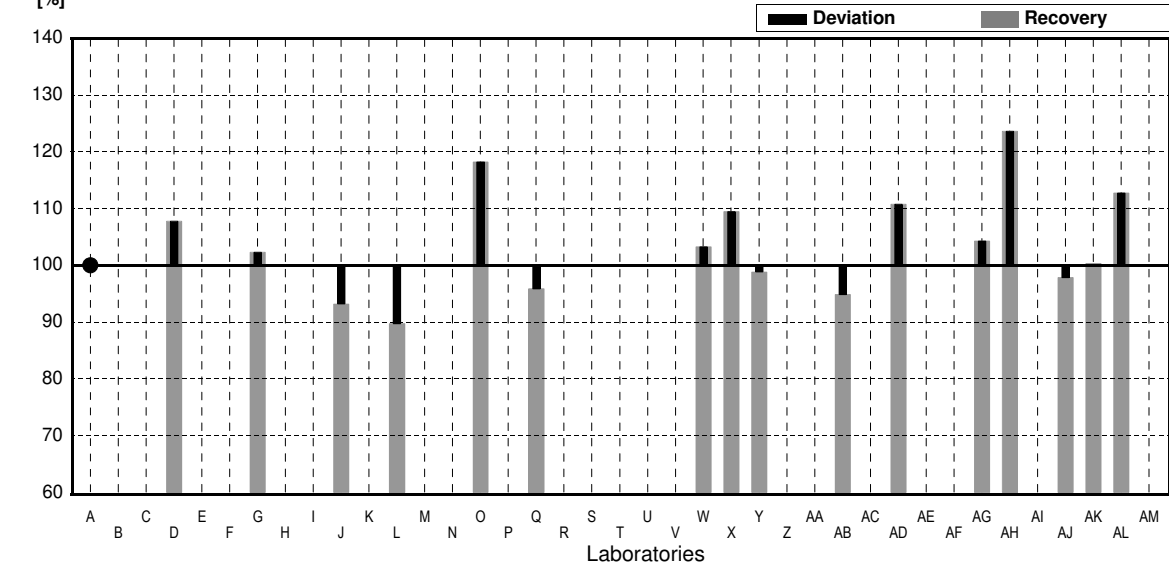
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	<2		$\mu\text{g/l}$.	
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	2.17	0.217	$\mu\text{g/l}$	108%	1.53
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G	2.06	0.21	$\mu\text{g/l}$	102%	0.46
H			$\mu\text{g/l}$		
I			$\mu\text{g/l}$		
J	1.876	0.244	$\mu\text{g/l}$	93%	-1.33
K			$\mu\text{g/l}$		
L	1.806		$\mu\text{g/l}$	90%	-2.02
M			$\mu\text{g/l}$		
N			$\mu\text{g/l}$		
O	2.38	0.5	$\mu\text{g/l}$	118%	3.57
P			$\mu\text{g/l}$		
Q	1.93	0.29	$\mu\text{g/l}$	96%	-0.81
R			$\mu\text{g/l}$		
S			$\mu\text{g/l}$		
T			$\mu\text{g/l}$		
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	2.08	0.12	$\mu\text{g/l}$	103%	0.65
X	2.204	0.22	$\mu\text{g/l}$	109%	1.86
Y	1.99	0.0773	$\mu\text{g/l}$	99%	-0.22
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	1.91	0.025	$\mu\text{g/l}$	95%	-1.00
AC			$\mu\text{g/l}$		
AD	2.23	0.45	$\mu\text{g/l}$	111%	2.11
AE			$\mu\text{g/l}$		
AF			$\mu\text{g/l}$		
AG	2.10	0.21	$\mu\text{g/l}$	104%	0.85
AH	2.49	0.37	$\mu\text{g/l}$	124%	4.65
AI			$\mu\text{g/l}$		
AJ	1.97	0.39	$\mu\text{g/l}$	98%	-0.42
AK	2.02	0.36	$\mu\text{g/l}$	100%	0.07
AL	2.27	0.57	$\mu\text{g/l}$	113%	2.50
AM			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	2,093 \pm 0,139	2,093 \pm 0,139	$\mu\text{g/l}$
Recov. \pm CI(99%)	104,0 \pm 6,9	104,0 \pm 6,9	%
SD between labs	0,188	0,188	$\mu\text{g/l}$
RSD between labs	9,0	9,0	%
n for calculation	16	16	

Result [$\mu\text{g/l}$]



Recovery [%]



Sample M167A

Parameter Chromium

Target value $\pm U$ (k=2) 1,544 $\mu\text{g/l}$ \pm 0,017 $\mu\text{g/l}$

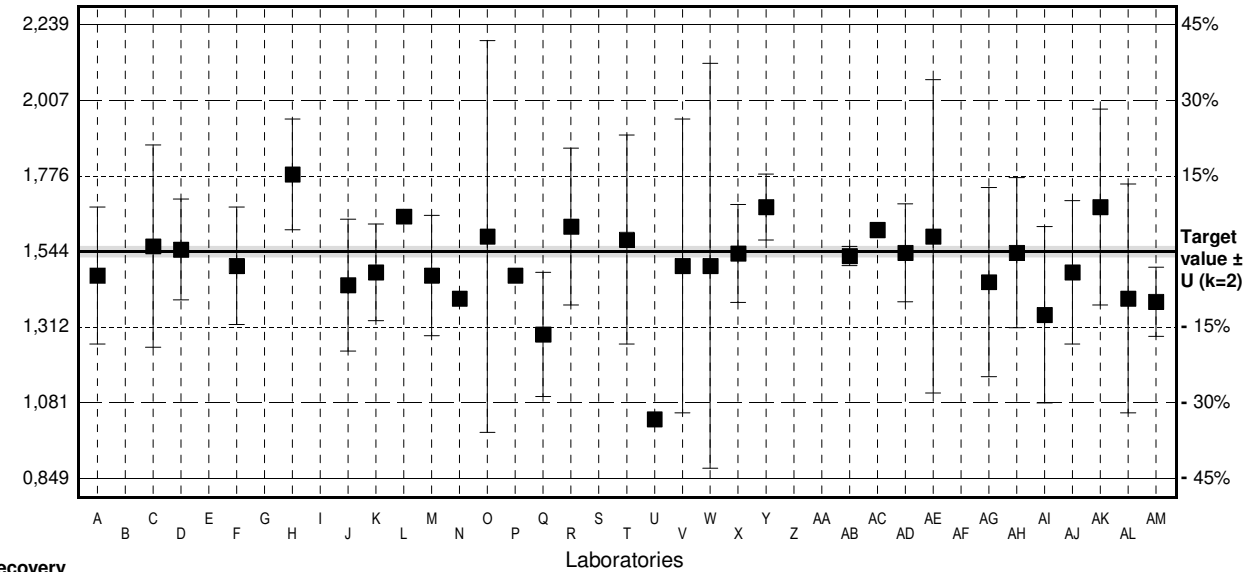
IFA result $\pm U$ (k=2) 1,64 $\mu\text{g/l}$ \pm 0,07 $\mu\text{g/l}$

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

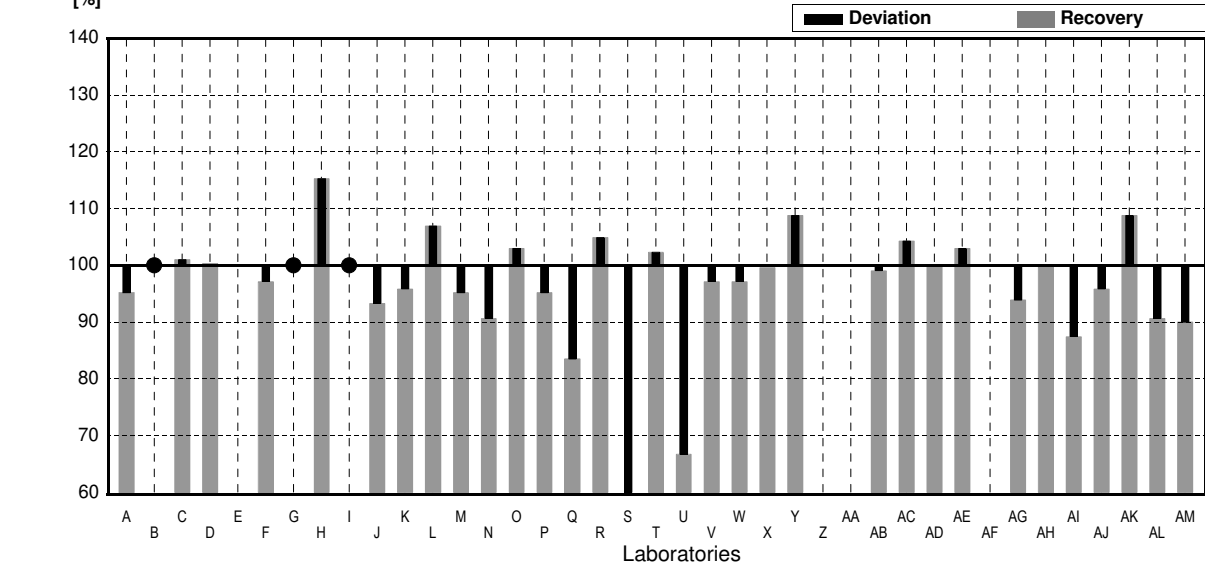
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	1.47	0.210	$\mu\text{g/l}$	95%	-0.76
B	<5		$\mu\text{g/l}$	*	
C	1.56	0.31	$\mu\text{g/l}$	101%	0.16
D	1.55	0.155	$\mu\text{g/l}$	100%	0.06
E			$\mu\text{g/l}$		
F	1.50	0.180	$\mu\text{g/l}$	97%	-0.45
G	<2		$\mu\text{g/l}$	*	
H	1.78	0.17	$\mu\text{g/l}$	115%	2.43
I	<5		$\mu\text{g/l}$	*	
J	1.441	0.202	$\mu\text{g/l}$	93%	-1.06
K	1.48	0.148	$\mu\text{g/l}$	96%	-0.66
L	1.651		$\mu\text{g/l}$	107%	1.10
M	1.47	0.184	$\mu\text{g/l}$	95%	-0.76
N	1.40		$\mu\text{g/l}$	91%	-1.48
O	1.59	0.6	$\mu\text{g/l}$	103%	0.47
P	1.47		$\mu\text{g/l}$	95%	-0.76
Q	1.29	0.19	$\mu\text{g/l}$	84%	-2.61
R	1.62	0.24	$\mu\text{g/l}$	105%	0.78
S	0.65	0.02	$\mu\text{g/l}$	42%	-9.19
T	1.58	0.32	$\mu\text{g/l}$	102%	0.37
U	1.03	*	$\mu\text{g/l}$	67%	-5.28
V	1.50	0.45	$\mu\text{g/l}$	97%	-0.45
W	1.50	0.62	$\mu\text{g/l}$	97%	-0.45
X	1.538	0.15	$\mu\text{g/l}$	100%	-0.06
Y	1.68	0.101	$\mu\text{g/l}$	109%	1.40
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	1.53	0.029	$\mu\text{g/l}$	99%	-0.14
AC	1.61		$\mu\text{g/l}$	104%	0.68
AD	1.54	0.15	$\mu\text{g/l}$	100%	-0.04
AE	1.59	0.48	$\mu\text{g/l}$	103%	0.47
AF			$\mu\text{g/l}$		
AG	1.45	0.29	$\mu\text{g/l}$	94%	-0.97
AH	1.54	0.23	$\mu\text{g/l}$	100%	-0.04
AI	1.35	0.27	$\mu\text{g/l}$	87%	-1.99
AJ	1.48	0.22	$\mu\text{g/l}$	96%	-0.66
AK	1.68	0.30	$\mu\text{g/l}$	109%	1.40
AL	1.40	0.35	$\mu\text{g/l}$	91%	-1.48
AM	1.39	0.106	$\mu\text{g/l}$	90%	-1.58

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	1,478 \pm 0,098	1,521 \pm 0,053	$\mu\text{g/l}$
Recov. \pm CI(99%)	95,8 \pm 6,4	98,5 \pm 3,4	%
SD between labs	0,202	0,105	$\mu\text{g/l}$
RSD between labs	13,7	6,9	%
n for calculation	32	30	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167B

Parameter Chromium

Target value $\pm U$ (k=2) 4,95 $\mu\text{g/l}$ \pm 0,04 $\mu\text{g/l}$

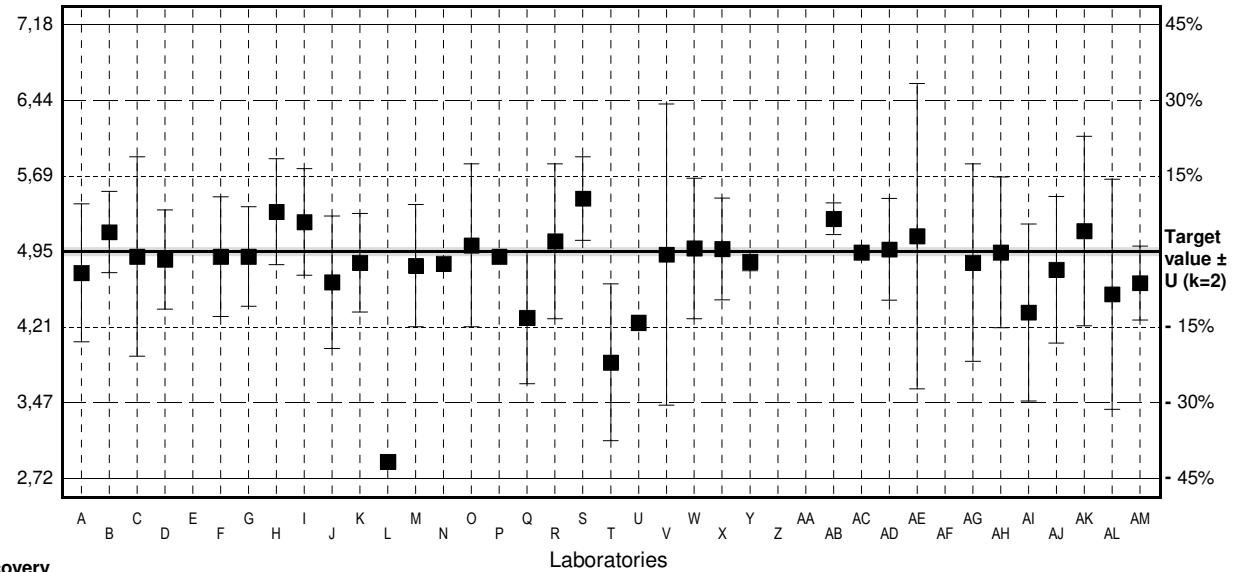
IFA result $\pm U$ (k=2) 5,31 $\mu\text{g/l}$ \pm 0,17 $\mu\text{g/l}$

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

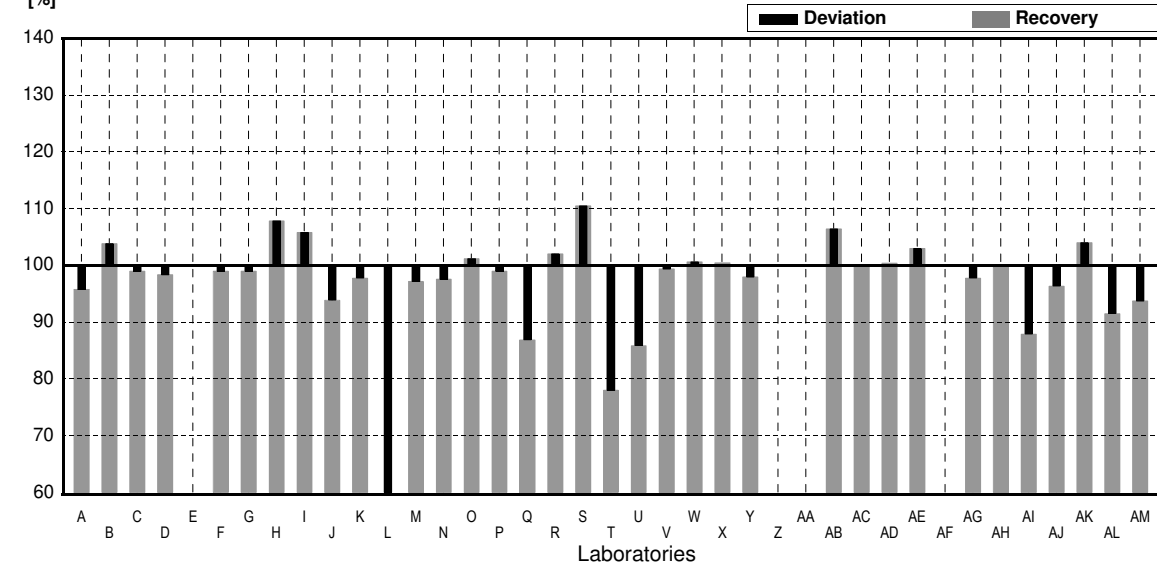
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	4.74	0.679	$\mu\text{g/l}$	96%	-0.67
B	5.14	0.4	$\mu\text{g/l}$	104%	0.61
C	4.90	0.98	$\mu\text{g/l}$	99%	-0.16
D	4.87	0.487	$\mu\text{g/l}$	98%	-0.26
E			$\mu\text{g/l}$		
F	4.90	0.588	$\mu\text{g/l}$	99%	-0.16
G	4.90	0.49	$\mu\text{g/l}$	99%	-0.16
H	5.34	0.52	$\mu\text{g/l}$	108%	1.25
I	5.24	0.524	$\mu\text{g/l}$	106%	0.93
J	4.647	0.651	$\mu\text{g/l}$	94%	-0.97
K	4.84	0.484	$\mu\text{g/l}$	98%	-0.35
L	2.885 *		$\mu\text{g/l}$	58%	-6.62
M	4.81	0.601	$\mu\text{g/l}$	97%	-0.45
N	4.83		$\mu\text{g/l}$	98%	-0.38
O	5.01	0.8	$\mu\text{g/l}$	101%	0.19
P	4.90		$\mu\text{g/l}$	99%	-0.16
Q	4.30 *	0.65	$\mu\text{g/l}$	87%	-2.08
R	5.05	0.76	$\mu\text{g/l}$	102%	0.32
S	5.47	0.41	$\mu\text{g/l}$	111%	1.67
T	3.86 *	0.77	$\mu\text{g/l}$	78%	-3.50
U	4.25 *		$\mu\text{g/l}$	86%	-2.24
V	4.92	1.48	$\mu\text{g/l}$	99%	-0.10
W	4.98	0.69	$\mu\text{g/l}$	101%	0.10
X	4.974	0.5	$\mu\text{g/l}$	100%	0.08
Y	4.85	0.0890	$\mu\text{g/l}$	98%	-0.32
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	5.27	0.156	$\mu\text{g/l}$	106%	1.03
AC	4.94		$\mu\text{g/l}$	100%	-0.03
AD	4.97	0.50	$\mu\text{g/l}$	100%	0.06
AE	5.10	1.5	$\mu\text{g/l}$	103%	0.48
AF			$\mu\text{g/l}$		
AG	4.84	0.97	$\mu\text{g/l}$	98%	-0.35
AH	4.94	0.74	$\mu\text{g/l}$	100%	-0.03
AI	4.35	0.87	$\mu\text{g/l}$	88%	-1.92
AJ	4.77	0.72	$\mu\text{g/l}$	96%	-0.58
AK	5.15	0.93	$\mu\text{g/l}$	104%	0.64
AL	4.53	1.13	$\mu\text{g/l}$	92%	-1.35
AM	4.64	0.363	$\mu\text{g/l}$	94%	-0.99

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	4,80 \pm 0,21	4,93 \pm 0,11	$\mu\text{g/l}$
Recov. \pm CI(99%)	97,0 \pm 4,3	99,6 \pm 2,3	%
SD between labs	0,46	0,23	$\mu\text{g/l}$
RSD between labs	9,6	4,7	%
n for calculation	35	31	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167A

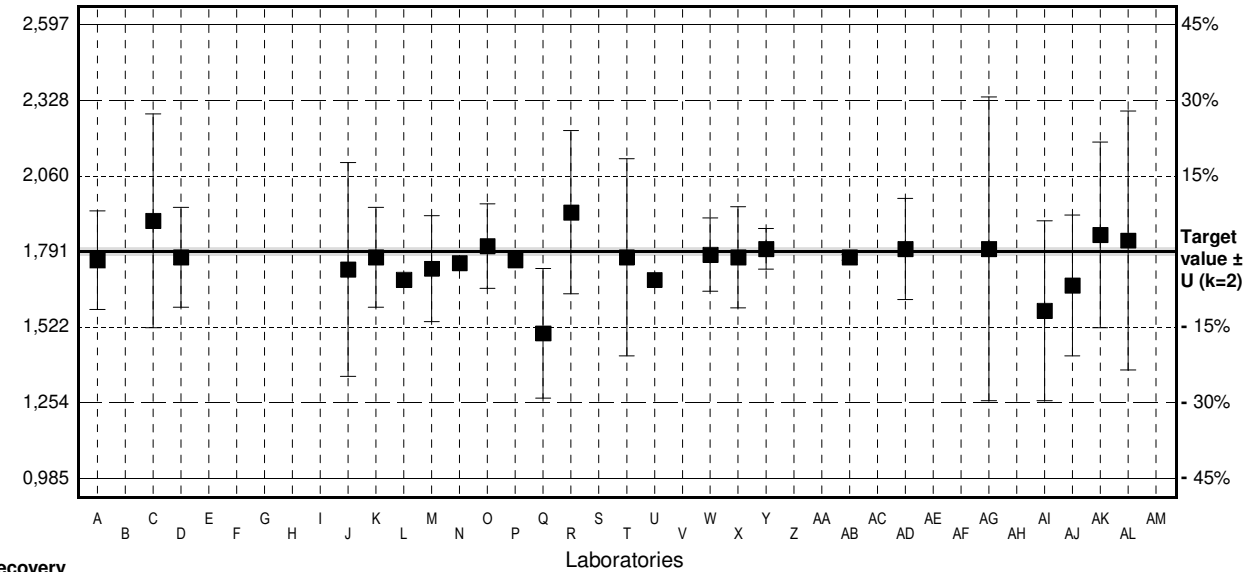
Parameter Cobalt

Target value $\pm U$ (k=2) 1,791 $\mu\text{g/l}$ \pm 0,014 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 1,99 $\mu\text{g/l}$ \pm 0,09 $\mu\text{g/l}$
 Stability test $\mu\text{g/l}$

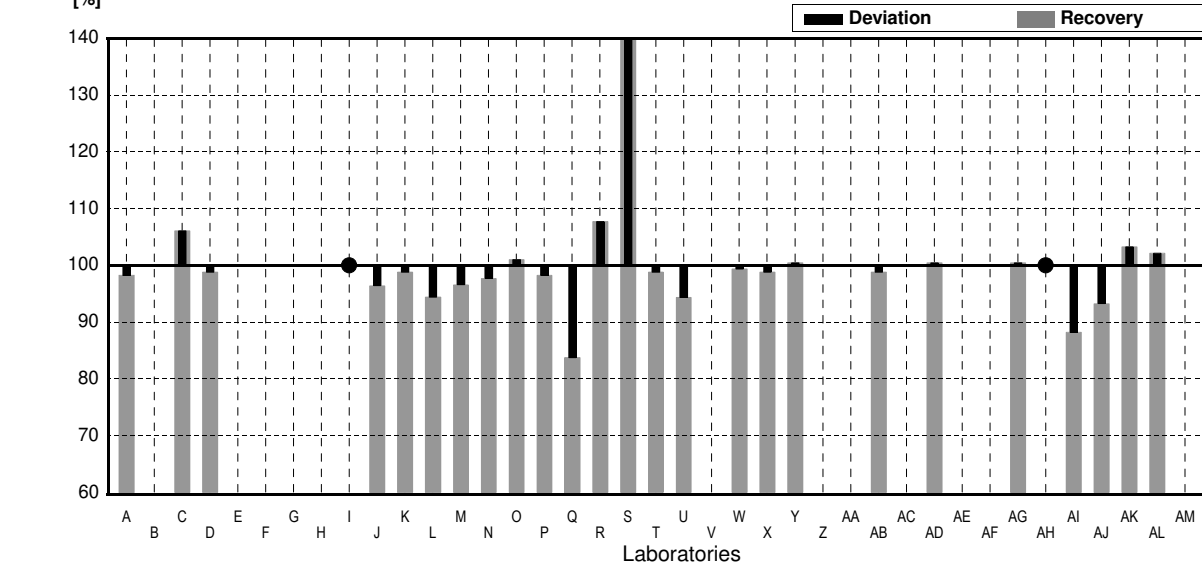
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	1.76	0.175	$\mu\text{g/l}$	98%	-0.27
B			$\mu\text{g/l}$		
C	1.90	0.38	$\mu\text{g/l}$	106%	0.97
D	1.77	0.177	$\mu\text{g/l}$	99%	-0.19
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G			$\mu\text{g/l}$		
H			$\mu\text{g/l}$		
I	<5		$\mu\text{g/l}$	*	
J	1.727	0.380	$\mu\text{g/l}$	96%	-0.57
K	1.77	0.177	$\mu\text{g/l}$	99%	-0.19
L	1.691		$\mu\text{g/l}$	94%	-0.89
M	1.73	0.188	$\mu\text{g/l}$	97%	-0.54
N	1.75		$\mu\text{g/l}$	98%	-0.36
O	1.81	0.15	$\mu\text{g/l}$	101%	0.17
P	1.76		$\mu\text{g/l}$	98%	-0.27
Q	1.50	0.23	$\mu\text{g/l}$	84%	-2.58
R	1.93	0.29	$\mu\text{g/l}$	108%	1.23
S	4.28	0.12	$\mu\text{g/l}$	239%	22.06
T	1.77	0.35	$\mu\text{g/l}$	99%	-0.19
U	1.69		$\mu\text{g/l}$	94%	-0.90
V			$\mu\text{g/l}$		
W	1.78	0.13	$\mu\text{g/l}$	99%	-0.10
X	1.770	0.18	$\mu\text{g/l}$	99%	-0.19
Y	1.80	0.0721	$\mu\text{g/l}$	101%	0.08
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	1.77	0.010	$\mu\text{g/l}$	99%	-0.19
AC			$\mu\text{g/l}$		
AD	1.80	0.18	$\mu\text{g/l}$	101%	0.08
AE			$\mu\text{g/l}$		
AF			$\mu\text{g/l}$		
AG	1.80	0.54	$\mu\text{g/l}$	101%	0.08
AH	<5.00		$\mu\text{g/l}$	*	
AI	1.58	0.32	$\mu\text{g/l}$	88%	-1.87
AJ	1.67	0.25	$\mu\text{g/l}$	93%	-1.07
AK	1.85	0.33	$\mu\text{g/l}$	103%	0.52
AL	1.83	0.46	$\mu\text{g/l}$	102%	0.35
AM			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	1,860 \pm 0,287	1,779 \pm 0,038	$\mu\text{g/l}$
Recov. \pm CI(99%)	103,8 \pm 16,0	99,3 \pm 2,1	%
SD between labs	0,512	0,062	$\mu\text{g/l}$
RSD between labs	27,5	3,5	%
n for calculation	25	22	

Result [$\mu\text{g/l}$]



Recovery [%]



Sample M167B

Parameter Cobalt

Target value ± U (k=2) 0,461 µg/l ± 0,006 µg/l

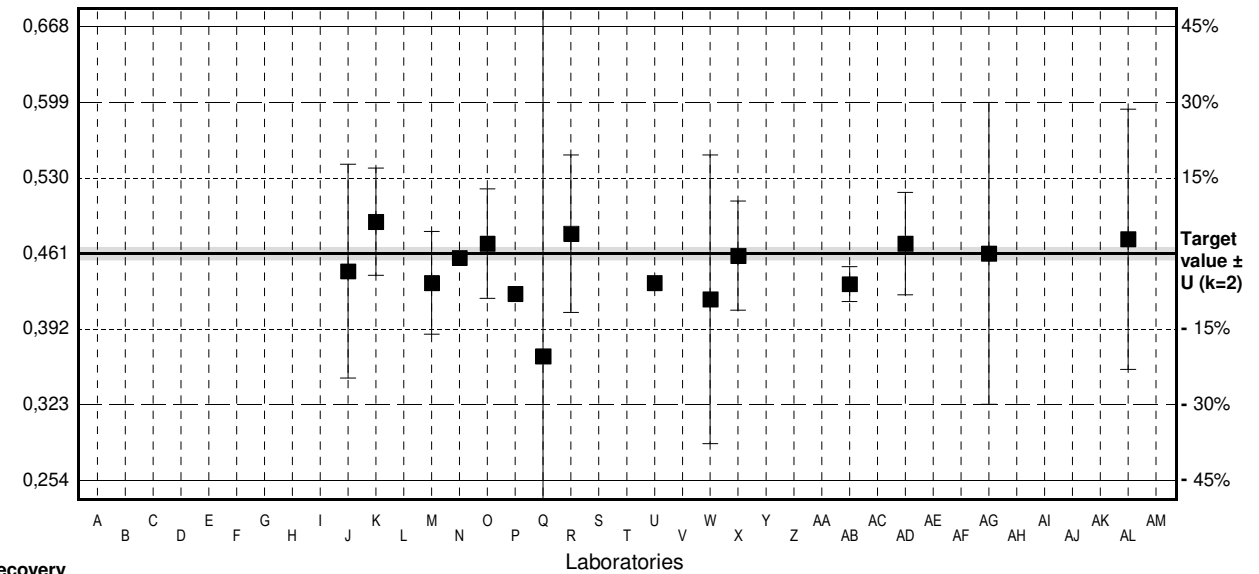
IFA result ± U (k=2) 0,51 µg/l ± 0,02 µg/l

Stability test µg/l

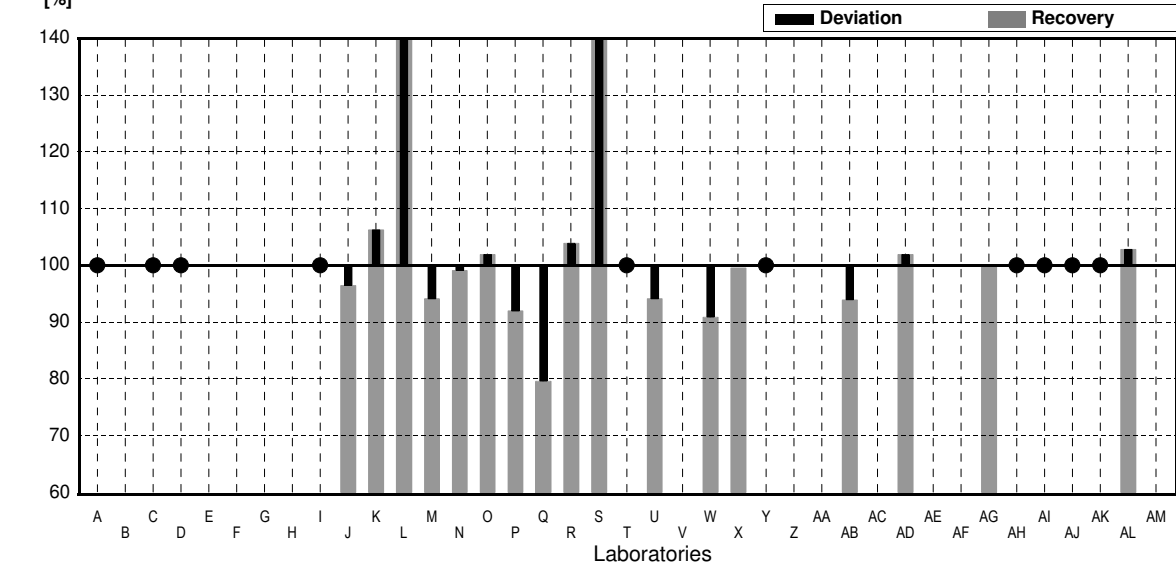
Lab Code	Result	±	Unit	Recovery	z-Score
A	<1		µg/l	•	
B			µg/l		
C	<1		µg/l	•	
D	<1.0		µg/l	•	
E			µg/l		
F			µg/l		
G			µg/l		
H			µg/l		
I	<5		µg/l	•	
J	0.4447	0.0978	µg/l	96%	-0.56
K	0.490	0.049	µg/l	106%	1.00
L	2.804 *		µg/l	608%	80.67
M	0.434	0.047	µg/l	94%	-0.93
N	0.457		µg/l	99%	-0.14
O	0.470	0.05	µg/l	102%	0.31
P	0.424		µg/l	92%	-1.27
Q	0.367	0.367	µg/l	80%	-3.24
R	0.479	0.072	µg/l	104%	0.62
S	1.65 *	0.08	µg/l	358%	40.94
T	<1		µg/l	•	
U	0.434		µg/l	94%	-0.93
V			µg/l		
W	0.419	0.132	µg/l	91%	-1.45
X	0.459	0.05	µg/l	100%	-0.07
Y	<1		µg/l	•	
Z			µg/l		
AA			µg/l		
AB	0.433	0.016	µg/l	94%	-0.96
AC			µg/l		
AD	0.470	0.047	µg/l	102%	0.31
AE			µg/l		
AF			µg/l		
AG	0.461	0.138	µg/l	100%	0.00
AH	<5.00		µg/l	•	
AI	<1		µg/l	•	
AJ	<1		µg/l	•	
AK	<1.0		µg/l	•	
AL	0.474	0.119	µg/l	103%	0.45
AM			µg/l		

	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,657 ± 0,443	0,448 ± 0,024	µg/l
Recov. ± CI(99%)	142,5 ± 96,1	97,1 ± 5,2	%
SD between labs	0,626	0,031	µg/l
RSD between labs	95,2	6,9	%
n for calculation	17	15	

Result [µg/l]



Recovery [%]



Sample M167A

Parameter Iron

Target value $\pm U$ (k=2) 15,31 $\mu\text{g/l}$ \pm 0,17 $\mu\text{g/l}$

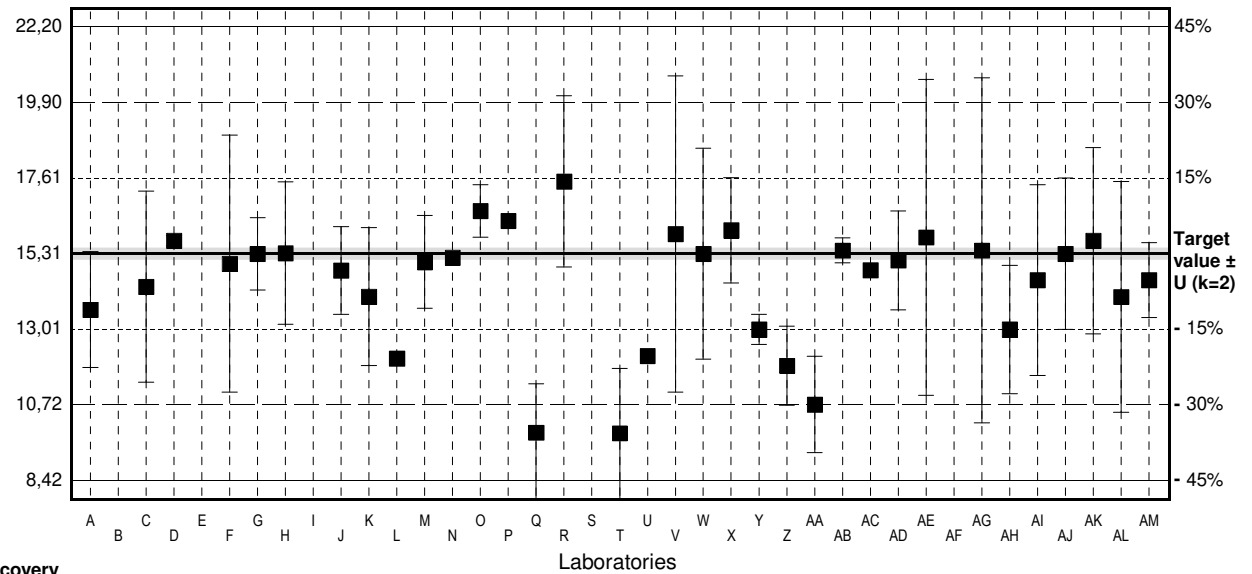
IFA result $\pm U$ (k=2) 16,9 $\mu\text{g/l}$ \pm 1,4 $\mu\text{g/l}$

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

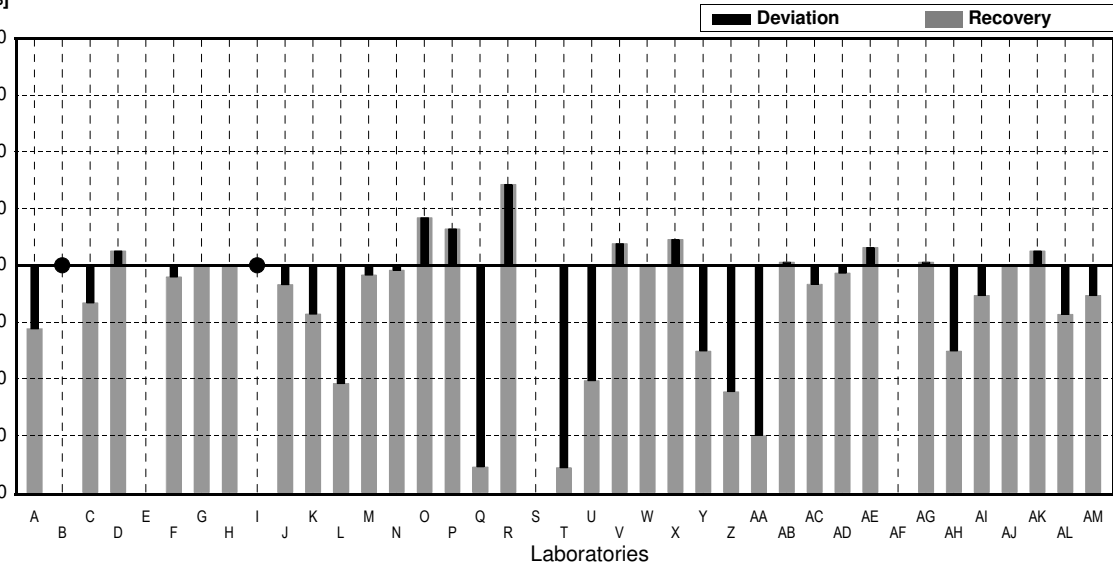
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	13,6	1,76	$\mu\text{g/l}$	89%	-1,67
B	<30		$\mu\text{g/l}$		
C	14,3	2,9	$\mu\text{g/l}$	93%	-0,98
D	15,7	0,157	$\mu\text{g/l}$	103%	0,38
E			$\mu\text{g/l}$		
F	15,0	3,90	$\mu\text{g/l}$	98%	-0,30
G	15,3	1,1	$\mu\text{g/l}$	100%	-0,01
H	15,32	2,16	$\mu\text{g/l}$	100%	0,01
I	<30		$\mu\text{g/l}$		
J	14,79	1,33	$\mu\text{g/l}$	97%	-0,51
K	14,0	2,1	$\mu\text{g/l}$	91%	-1,28
L	12,120		$\mu\text{g/l}$	79%	-3,11
M	15,05	1,410	$\mu\text{g/l}$	98%	-0,25
N	15,18		$\mu\text{g/l}$	99%	-0,13
O	16,6	0,8	$\mu\text{g/l}$	108%	1,26
P	16,3		$\mu\text{g/l}$	106%	0,97
Q	9,87 *	1,48	$\mu\text{g/l}$	64%	-5,30
R	17,5	2,6	$\mu\text{g/l}$	114%	2,13
S			$\mu\text{g/l}$		
T	9,85 *	1,97	$\mu\text{g/l}$	64%	-5,32
U	12,2		$\mu\text{g/l}$	80%	-3,03
V	15,9	4,8	$\mu\text{g/l}$	104%	0,58
W	15,3	3,2	$\mu\text{g/l}$	100%	-0,01
X	16,014	1,6	$\mu\text{g/l}$	105%	0,69
Y	13,0	0,459	$\mu\text{g/l}$	85%	-2,25
Z	11,9	1,2	$\mu\text{g/l}$	78%	-3,32
AA	10,72 *	1,46	$\mu\text{g/l}$	70%	-4,47
AB	15,4	0,379	$\mu\text{g/l}$	101%	0,09
AC	14,8		$\mu\text{g/l}$	97%	-0,50
AD	15,1	1,5	$\mu\text{g/l}$	99%	-0,20
AE	15,8	4,8	$\mu\text{g/l}$	103%	0,48
AF			$\mu\text{g/l}$		
AG	15,4	5,24	$\mu\text{g/l}$	101%	0,09
AH	13,0	1,95	$\mu\text{g/l}$	85%	-2,25
AI	14,5	2,9	$\mu\text{g/l}$	95%	-0,79
AJ	15,3	2,3	$\mu\text{g/l}$	100%	-0,01
AK	15,7	2,83	$\mu\text{g/l}$	103%	0,38
AL	13,99	3,50	$\mu\text{g/l}$	91%	-1,29
AM	14,5	1,14	$\mu\text{g/l}$	95%	-0,79

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	14,38 \pm 0,86	14,79 \pm 0,65	$\mu\text{g/l}$
Recov. \pm CI(99%)	93,9 \pm 5,6	96,6 \pm 4,3	%
SD between labs	1,84	1,32	$\mu\text{g/l}$
RSD between labs	12,8	8,9	%
n for calculation	34	31	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167B

Parameter Iron

Target value $\pm U$ (k=2) 37,9 $\mu\text{g/l}$ \pm 0,2 $\mu\text{g/l}$

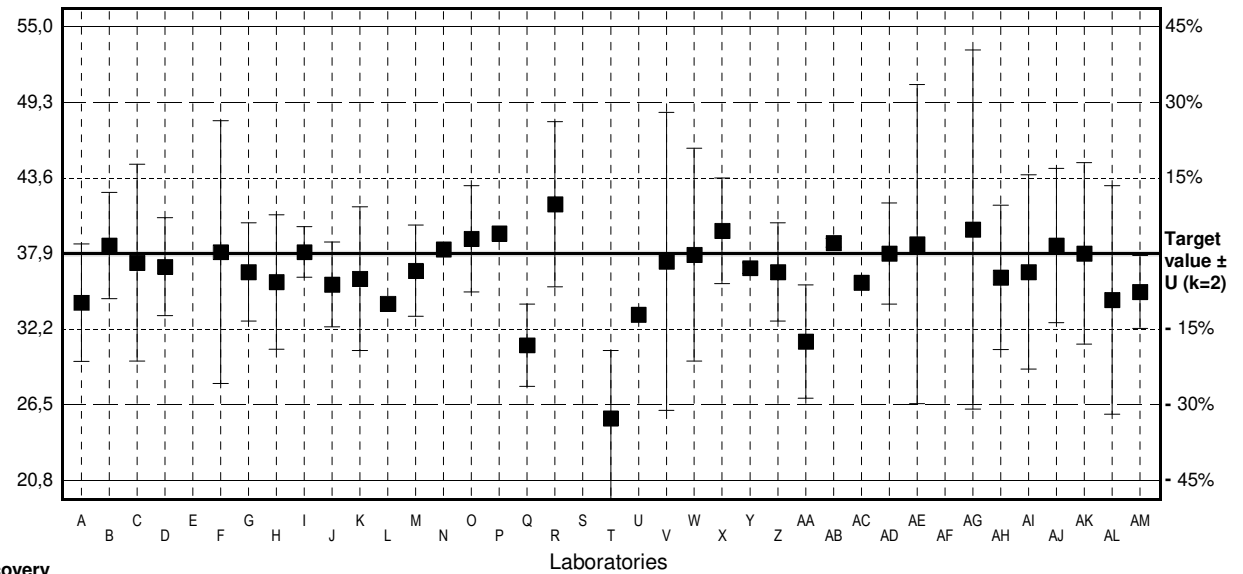
IFA result $\pm U$ (k=2) 42,1 $\mu\text{g/l}$ \pm 3,2 $\mu\text{g/l}$

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

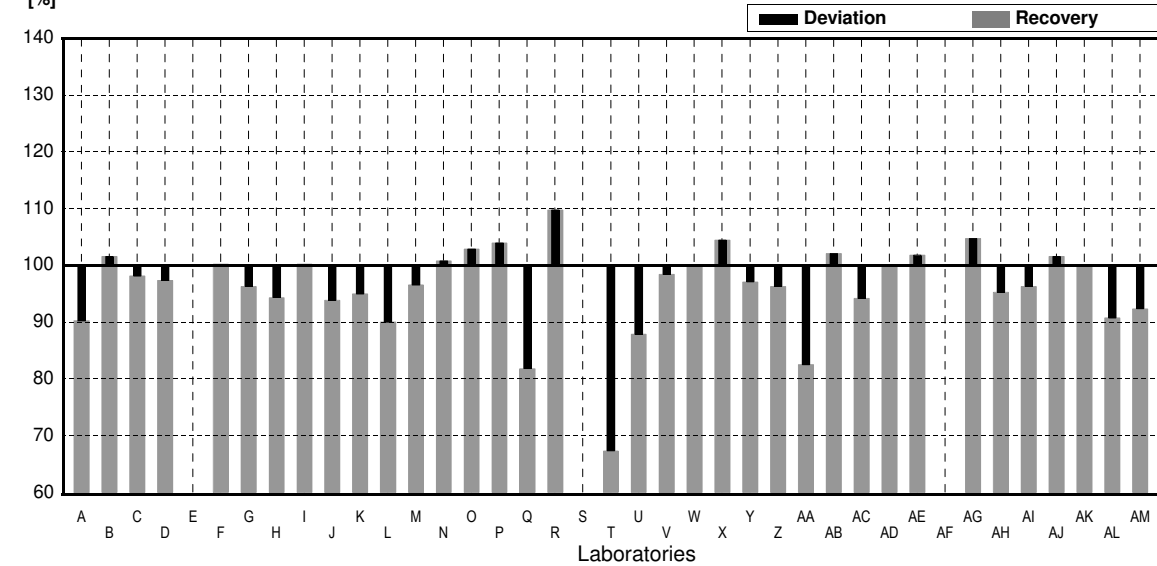
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	34.2	4.42	$\mu\text{g/l}$	90%	-1.46
B	38.5	4	$\mu\text{g/l}$	102%	0.24
C	37.2	7.4	$\mu\text{g/l}$	98%	-0.28
D	36.9	3.69	$\mu\text{g/l}$	97%	-0.39
E			$\mu\text{g/l}$		
F	38.0	9.88	$\mu\text{g/l}$	100%	0.04
G	36.5	3.7	$\mu\text{g/l}$	96%	-0.55
H	35.75	5.04	$\mu\text{g/l}$	94%	-0.85
I	38.0	1.9	$\mu\text{g/l}$	100%	0.04
J	35.57	3.20	$\mu\text{g/l}$	94%	-0.92
K	36.0	5.4	$\mu\text{g/l}$	95%	-0.75
L	34.125		$\mu\text{g/l}$	90%	-1.49
M	36.6	3.429	$\mu\text{g/l}$	97%	-0.51
N	38.21		$\mu\text{g/l}$	101%	0.12
O	39.0	4	$\mu\text{g/l}$	103%	0.43
P	39.4		$\mu\text{g/l}$	104%	0.59
Q	31.0	3.1	$\mu\text{g/l}$	82%	-2.72
R	41.6	6.2	$\mu\text{g/l}$	110%	1.46
S			$\mu\text{g/l}$		
T	25.5 *	5.1	$\mu\text{g/l}$	67%	-4.88
U	33.3		$\mu\text{g/l}$	88%	-1.81
V	37.3	11.2	$\mu\text{g/l}$	98%	-0.24
W	37.8	8.0	$\mu\text{g/l}$	100%	-0.04
X	39.601	3.96	$\mu\text{g/l}$	104%	0.67
Y	36.8	0.394	$\mu\text{g/l}$	97%	-0.43
Z	36.5	3.7	$\mu\text{g/l}$	96%	-0.55
AA	31.27	4.26	$\mu\text{g/l}$	83%	-2.61
AB	38.7	0.321	$\mu\text{g/l}$	102%	0.32
AC	35.7		$\mu\text{g/l}$	94%	-0.87
AD	37.9	3.8	$\mu\text{g/l}$	100%	0.00
AE	38.6	12	$\mu\text{g/l}$	102%	0.28
AF			$\mu\text{g/l}$		
AG	39.7	13.5	$\mu\text{g/l}$	105%	0.71
AH	36.1	5.42	$\mu\text{g/l}$	95%	-0.71
AI	36.5	7.3	$\mu\text{g/l}$	96%	-0.55
AJ	38.5	5.8	$\mu\text{g/l}$	102%	0.24
AK	37.9	6.82	$\mu\text{g/l}$	100%	0.00
AL	34.4	8.6	$\mu\text{g/l}$	91%	-1.38
AM	35.0	2.74	$\mu\text{g/l}$	92%	-1.14

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	36,5 \pm 1,3	36,8 \pm 1,1	$\mu\text{g/l}$
Recov. \pm CI(99%)	96,3 \pm 3,5	97,1 \pm 2,8	%
SD between labs	2,9	2,3	$\mu\text{g/l}$
RSD between labs	8,0	6,2	%
n for calculation	36	35	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167A

Parameter Gadolinium

Target value $\pm U$ (k=2) 0,0818 $\mu\text{g/l}$ \pm 0,0012 $\mu\text{g/l}$

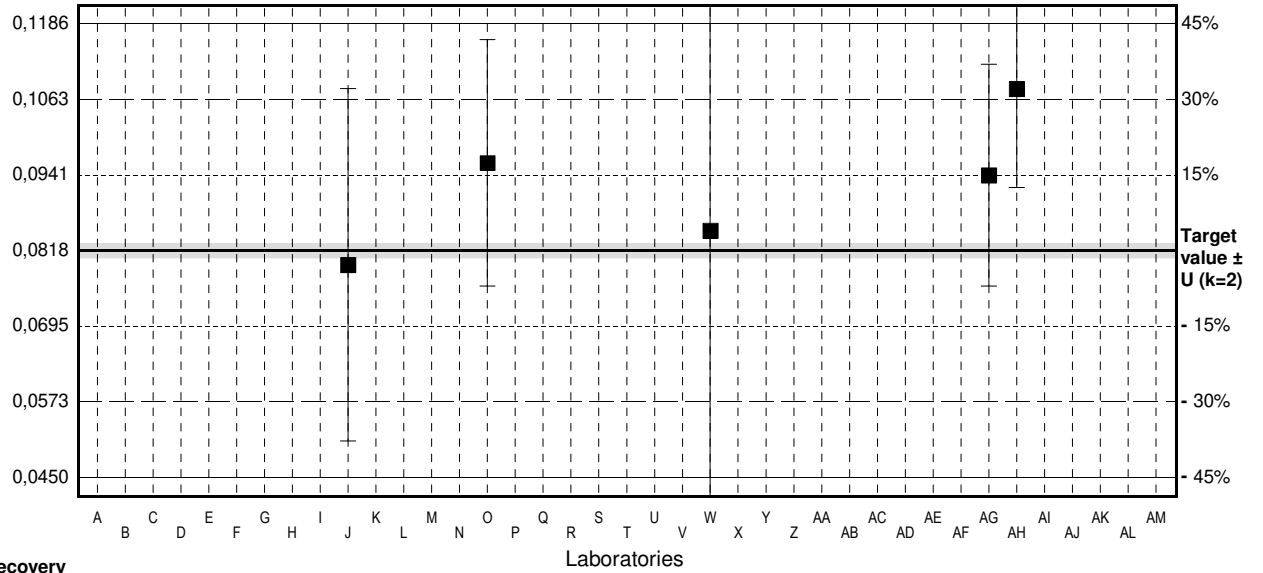
IFA result $\pm U$ (k=2) 0,081 $\mu\text{g/l}$ \pm 0,014 $\mu\text{g/l}$

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

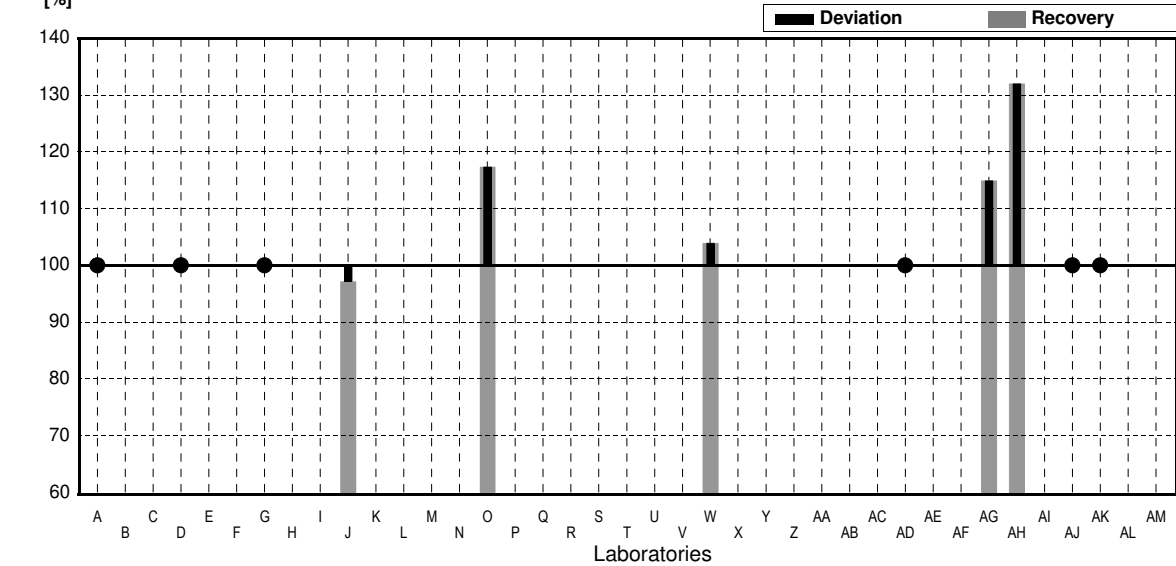
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	<5		$\mu\text{g/l}$	•	
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	<1.0		$\mu\text{g/l}$	•	
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G	<0.2		$\mu\text{g/l}$	•	
H			$\mu\text{g/l}$		
I			$\mu\text{g/l}$		
J	0,07947	0,02861	$\mu\text{g/l}$	97%	-0.24
K			$\mu\text{g/l}$		
L			$\mu\text{g/l}$		
M			$\mu\text{g/l}$		
N			$\mu\text{g/l}$		
O	0,096	0,02	$\mu\text{g/l}$	117%	1.45
P			$\mu\text{g/l}$		
Q			$\mu\text{g/l}$		
R			$\mu\text{g/l}$		
S			$\mu\text{g/l}$		
T			$\mu\text{g/l}$		
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	0,085	0,298	$\mu\text{g/l}$	104%	0.33
X			$\mu\text{g/l}$		
Y			$\mu\text{g/l}$		
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		
AC			$\mu\text{g/l}$		
AD	<0.15		$\mu\text{g/l}$	•	
AE			$\mu\text{g/l}$		
AF			$\mu\text{g/l}$		
AG	0,094	0,018	$\mu\text{g/l}$	115%	1.24
AH	0,108	0,016	$\mu\text{g/l}$	132%	2.67
AI			$\mu\text{g/l}$		
AJ	<0.1		$\mu\text{g/l}$	•	
AK	<0.5		$\mu\text{g/l}$	•	
AL			$\mu\text{g/l}$		
AM			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,0925 \pm 0,022	0,0925 \pm 0,022	$\mu\text{g/l}$
Recov. \pm CI(99%)	113,1 \pm 27,6	113,1 \pm 27,6	%
SD between labs	0,0110	0,0110	$\mu\text{g/l}$
RSD between labs	11,9	11,9	%
n for calculation	5	5	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167B

Parameter Gadolinium

Target value $\pm U$ (k=2) 0,0595 $\mu\text{g/l}$ \pm 0,0011 $\mu\text{g/l}$

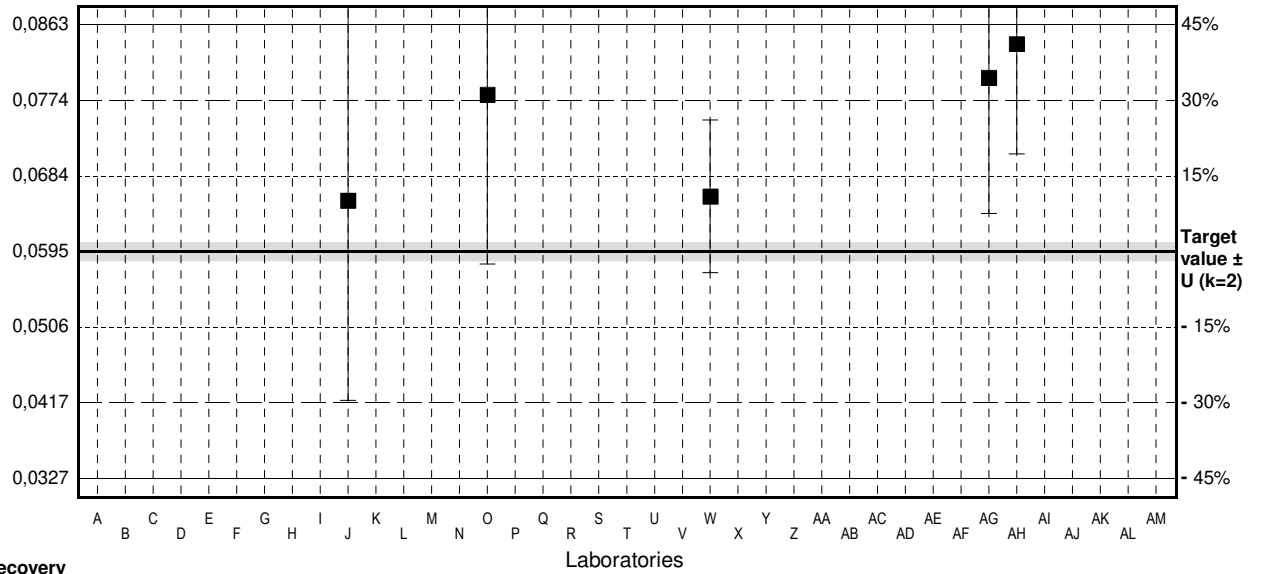
IFA result $\pm U$ (k=2) 0,058 $\mu\text{g/l}$ \pm 0,011 $\mu\text{g/l}$

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

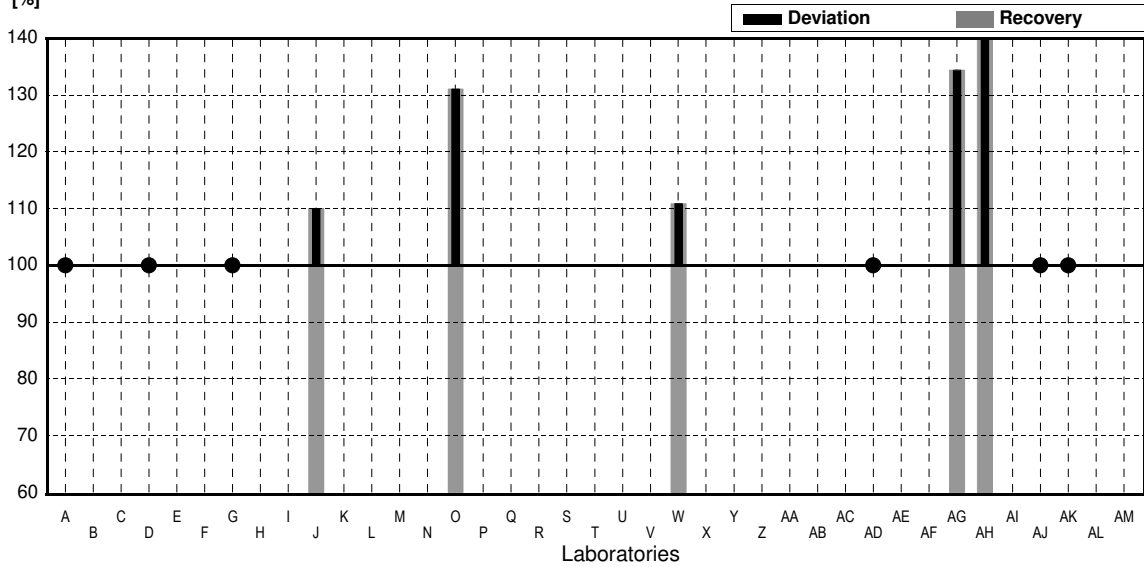
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	<5		$\mu\text{g/l}$	•	
B			$\mu\text{g/l}$		
C			$\mu\text{g/l}$		
D	<1.0		$\mu\text{g/l}$	•	
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G	<0.2		$\mu\text{g/l}$	•	
H			$\mu\text{g/l}$		
I			$\mu\text{g/l}$		
J	0,06549	0,02358	$\mu\text{g/l}$	110%	0,84
K			$\mu\text{g/l}$		
L			$\mu\text{g/l}$		
M			$\mu\text{g/l}$		
N			$\mu\text{g/l}$		
O	0,078	0,02	$\mu\text{g/l}$	131%	2,59
P			$\mu\text{g/l}$		
Q			$\mu\text{g/l}$		
R			$\mu\text{g/l}$		
S			$\mu\text{g/l}$		
T			$\mu\text{g/l}$		
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	0,066	0,009	$\mu\text{g/l}$	111%	0,91
X			$\mu\text{g/l}$		
Y			$\mu\text{g/l}$		
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB			$\mu\text{g/l}$		
AC			$\mu\text{g/l}$		
AD	<0.15		$\mu\text{g/l}$	•	
AE			$\mu\text{g/l}$		
AF			$\mu\text{g/l}$		
AG	0,080	0,016	$\mu\text{g/l}$	134%	2,87
AH	0,084	0,013	$\mu\text{g/l}$	141%	3,43
AI			$\mu\text{g/l}$		
AJ	<0.1		$\mu\text{g/l}$	•	
AK	<0.5		$\mu\text{g/l}$	•	
AL			$\mu\text{g/l}$		
AM			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,0747 \pm 0,017	0,0747 \pm 0,017	$\mu\text{g/l}$
Recov. \pm CI(99%)	125,5 \pm 29,2	125,5 \pm 29,2	%
SD between labs	0,0085	0,0085	$\mu\text{g/l}$
RSD between labs	11,3	11,3	%
n for calculation	5	5	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167A

Parameter Copper

Target value $\pm U$ (k=2) 7,66 $\mu\text{g/l}$ \pm 0,05 $\mu\text{g/l}$

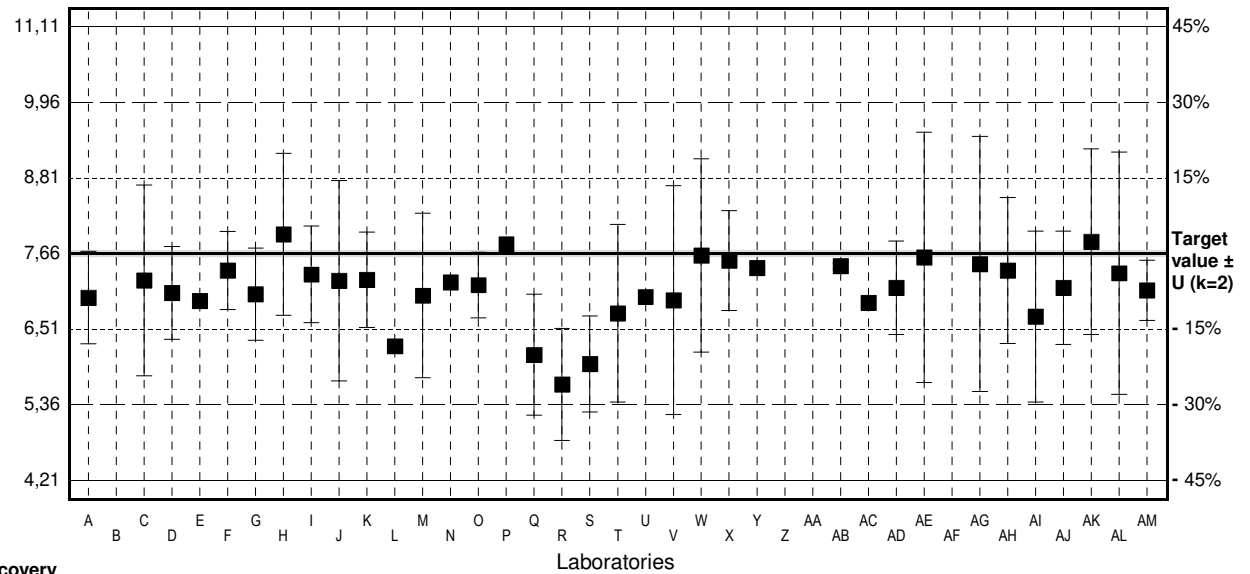
IFA result $\pm U$ (k=2) 8,7 $\mu\text{g/l}$ \pm 0,4 $\mu\text{g/l}$

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

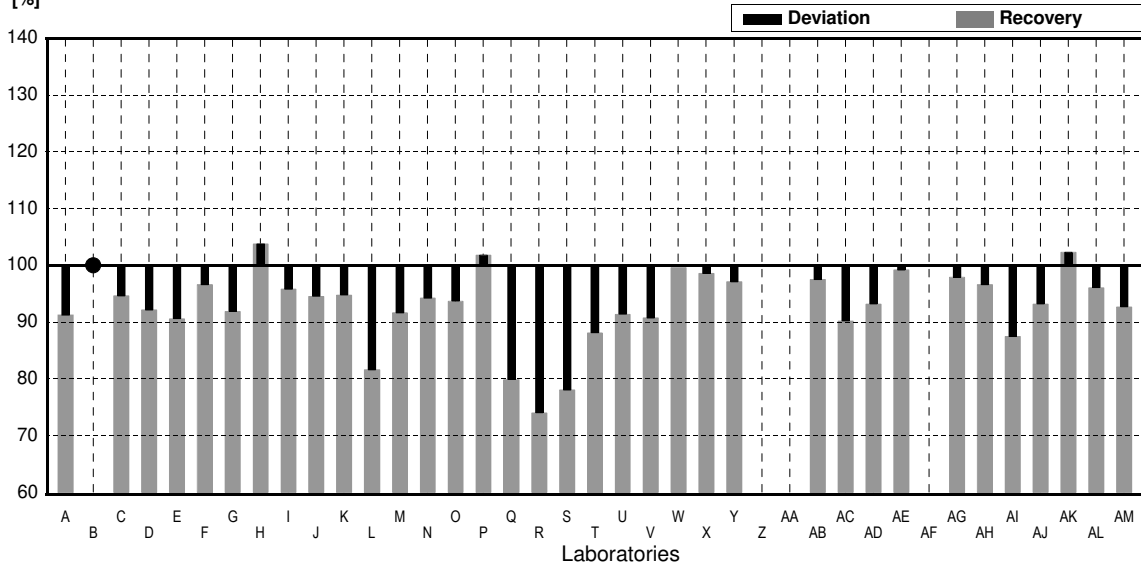
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	6.99	0.704	$\mu\text{g/l}$	91%	-1.12
B	<10		$\mu\text{g/l}$		
C	7.25	1.45	$\mu\text{g/l}$	95%	-0.69
D	7.06	0.706	$\mu\text{g/l}$	92%	-1.00
E	6.941		$\mu\text{g/l}$	91%	-1.20
F	7.40	0.592	$\mu\text{g/l}$	97%	-0.44
G	7.04	0.70	$\mu\text{g/l}$	92%	-1.04
H	7.95	1.23	$\mu\text{g/l}$	104%	0.49
I	7.34	0.734	$\mu\text{g/l}$	96%	-0.54
J	7.244	1.521	$\mu\text{g/l}$	95%	-0.70
K	7.26	0.726	$\mu\text{g/l}$	95%	-0.67
L	6.252		$\mu\text{g/l}$	82%	-2.36
M	7.02	1.250	$\mu\text{g/l}$	92%	-1.07
N	7.22		$\mu\text{g/l}$	94%	-0.74
O	7.18	0.5	$\mu\text{g/l}$	94%	-0.80
P	7.8		$\mu\text{g/l}$	102%	0.23
Q	6.12	0.92	$\mu\text{g/l}$	80%	-2.58
R	5.67	0.85	$\mu\text{g/l}$	74%	-3.33
S	5.98	0.73	$\mu\text{g/l}$	78%	-2.81
T	6.75	1.35	$\mu\text{g/l}$	88%	-1.52
U	7.0		$\mu\text{g/l}$	91%	-1.10
V	6.95	1.74	$\mu\text{g/l}$	91%	-1.19
W	7.63	1.47	$\mu\text{g/l}$	100%	-0.05
X	7.552	0.76	$\mu\text{g/l}$	99%	-0.18
Y	7.44	0.0605	$\mu\text{g/l}$	97%	-0.37
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	7.47	0.046	$\mu\text{g/l}$	98%	-0.32
AC	6.91		$\mu\text{g/l}$	90%	-1.26
AD	7.14	0.71	$\mu\text{g/l}$	93%	-0.87
AE	7.60	1.9	$\mu\text{g/l}$	99%	-0.10
AF			$\mu\text{g/l}$		
AG	7.5	1.94	$\mu\text{g/l}$	98%	-0.27
AH	7.40	1.11	$\mu\text{g/l}$	97%	-0.44
AI	6.70	1.3	$\mu\text{g/l}$	87%	-1.61
AJ	7.14	0.86	$\mu\text{g/l}$	93%	-0.87
AK	7.84	1.41	$\mu\text{g/l}$	102%	0.30
AL	7.36	1.84	$\mu\text{g/l}$	96%	-0.50
AM	7.10	0.457	$\mu\text{g/l}$	93%	-0.94

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	7,12 \pm 0,23	7,23 \pm 0,17	$\mu\text{g/l}$
Recov. \pm CI(99%)	93,0 \pm 3,0	94,4 \pm 2,2	%
SD between labs	0,50	0,35	$\mu\text{g/l}$
RSD between labs	7,1	4,9	%
n for calculation	35	32	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167B

Parameter Copper

Target value $\pm U$ (k=2) 6,09 $\mu\text{g/l}$ \pm 0,04 $\mu\text{g/l}$

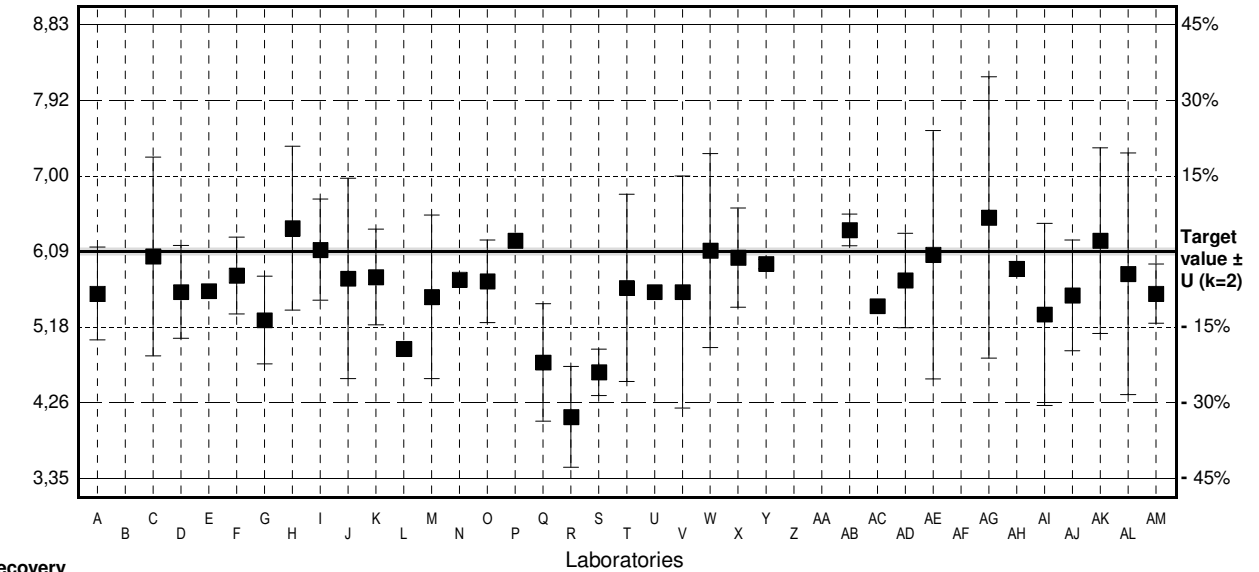
IFA result $\pm U$ (k=2) 7,0 $\mu\text{g/l}$ \pm 0,3 $\mu\text{g/l}$

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

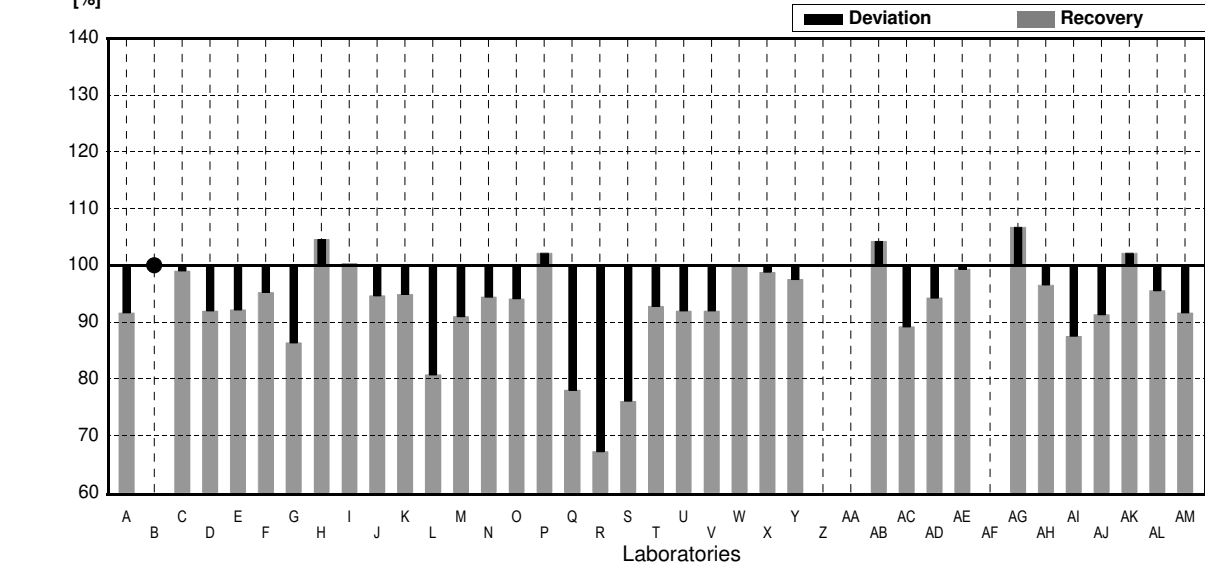
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	5.58	0.561	$\mu\text{g/l}$	92%	-1.07
B	<10		$\mu\text{g/l}$	-	
C	6.03	1.20	$\mu\text{g/l}$	99%	-0.13
D	5.6	0.56	$\mu\text{g/l}$	92%	-1.03
E	5.612		$\mu\text{g/l}$	92%	-1.01
F	5.80	0.464	$\mu\text{g/l}$	95%	-0.61
G	5.26	0.53	$\mu\text{g/l}$	86%	-1.75
H	6.37	0.99	$\mu\text{g/l}$	105%	0.59
I	6.11	0.611	$\mu\text{g/l}$	100%	0.04
J	5.763	1.210	$\mu\text{g/l}$	95%	-0.69
K	5.78	0.578	$\mu\text{g/l}$	95%	-0.65
L	4.915		$\mu\text{g/l}$	81%	-2.47
M	5.54	0.987	$\mu\text{g/l}$	91%	-1.16
N	5.75		$\mu\text{g/l}$	94%	-0.72
O	5.73	0.5	$\mu\text{g/l}$	94%	-0.76
P	6.22		$\mu\text{g/l}$	102%	0.27
Q	4.75	*	$\mu\text{g/l}$	78%	-2.82
R	4.09	*	$\mu\text{g/l}$	67%	-4.21
S	4.63	*	$\mu\text{g/l}$	76%	-3.07
T	5.65	1.13	$\mu\text{g/l}$	93%	-0.93
U	5.6		$\mu\text{g/l}$	92%	-1.03
V	5.60	1.40	$\mu\text{g/l}$	92%	-1.03
W	6.10	1.17	$\mu\text{g/l}$	100%	0.02
X	6.017	0.60	$\mu\text{g/l}$	99%	-0.15
Y	5.94	0.0582	$\mu\text{g/l}$	98%	-0.32
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	6.35	0.193	$\mu\text{g/l}$	104%	0.55
AC	5.43		$\mu\text{g/l}$	89%	-1.39
AD	5.74	0.57	$\mu\text{g/l}$	94%	-0.74
AE	6.05	1.5	$\mu\text{g/l}$	99%	-0.08
AF			$\mu\text{g/l}$		
AG	6.5	1.70	$\mu\text{g/l}$	107%	0.86
AH	5.88	0.088	$\mu\text{g/l}$	97%	-0.44
AI	5.33	1.1	$\mu\text{g/l}$	88%	-1.60
AJ	5.56	0.67	$\mu\text{g/l}$	91%	-1.12
AK	6.22	1.12	$\mu\text{g/l}$	102%	0.27
AL	5.82	1.46	$\mu\text{g/l}$	96%	-0.57
AM	5.58	0.359	$\mu\text{g/l}$	92%	-1.07

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	5,68 \pm 0,23	5,79 \pm 0,17	$\mu\text{g/l}$
Recov. \pm CI(99%)	93,3 \pm 3,8	95,1 \pm 2,8	%
SD between labs	0,50	0,34	$\mu\text{g/l}$
RSD between labs	8,9	6,0	%
n for calculation	35	32	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167A

Parameter Lithium

Target value ± U (k=2) 6,95 µg/l ± 0,06 µg/l

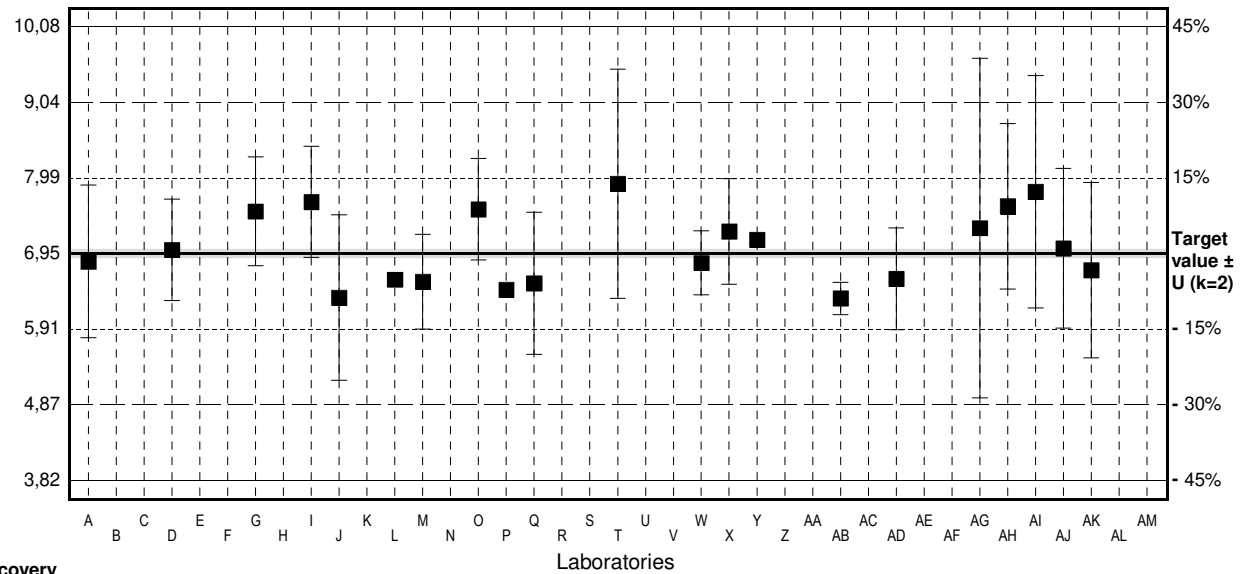
IFA result ± U (k=2) 7,5 µg/l ± 1,0 µg/l

Stability test µg/l

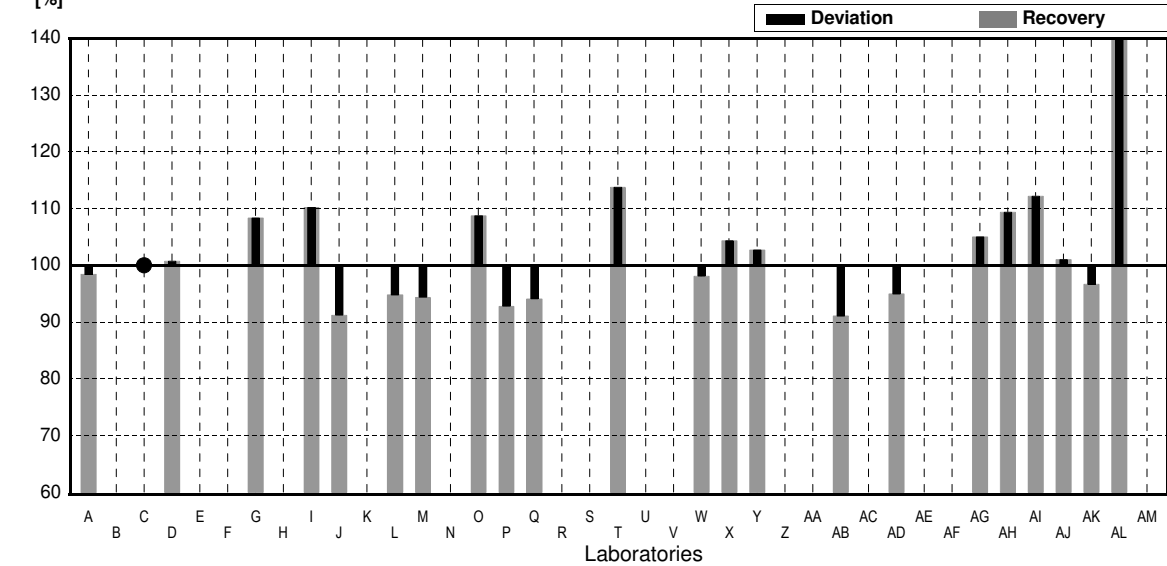
Lab Code	Result	±	Unit	Recovery	z-Score
A	6.84	1.051	µg/l	98%	-0.21
B			µg/l		
C	<100		µg/l	*	
D	7.0	0.7	µg/l	101%	0.10
E			µg/l		
F			µg/l		
G	7.53	0.75	µg/l	108%	1.13
H			µg/l		
I	7.66	0.766	µg/l	110%	1.38
J	6.340	1.141	µg/l	91%	-1.19
K			µg/l		
L	6.590		µg/l	95%	-0.70
M	6.56	0.654	µg/l	94%	-0.76
N			µg/l		
O	7.56	0.7	µg/l	109%	1.19
P	6.45		µg/l	93%	-0.97
Q	6.54	0.98	µg/l	94%	-0.80
R			µg/l		
S			µg/l		
T	7.91	1.58	µg/l	114%	1.87
U			µg/l		
V			µg/l		
W	6.82	0.44	µg/l	98%	-0.25
X	7.253	0.73	µg/l	104%	0.59
Y	7.14	0.0490	µg/l	103%	0.37
Z			µg/l		
AA			µg/l		
AB	6.33	0.222	µg/l	91%	-1.21
AC			µg/l		
AD	6.6	0.7	µg/l	95%	-0.68
AE			µg/l		
AF			µg/l		
AG	7.3	2.34	µg/l	105%	0.68
AH	7.6	1.14	µg/l	109%	1.26
AI	7.80	1.6	µg/l	112%	1.65
AJ	7.02	1.1	µg/l	101%	0.14
AK	6.72	1.21	µg/l	97%	-0.45
AL	60.0	15.0	µg/l	863%	103.15
AM			µg/l		

	All results	Outliers excl.	Unit
Mean ± CI(99%)	9,43 ± 6,82	7,03 ± 0,31	µg/l
Recov. ± CI(99%)	135,8 ± 98,1	101,1 ± 4,5	%
SD between labs	11,30	0,50	µg/l
RSD between labs	119,8	7,2	%
n for calculation	22	21	

Result [µg/l]



Recovery [%]



Sample M167B

Parameter Lithium

Target value $\pm U$ (k=2) 2,11 $\mu\text{g/l}$ \pm 0,02 $\mu\text{g/l}$

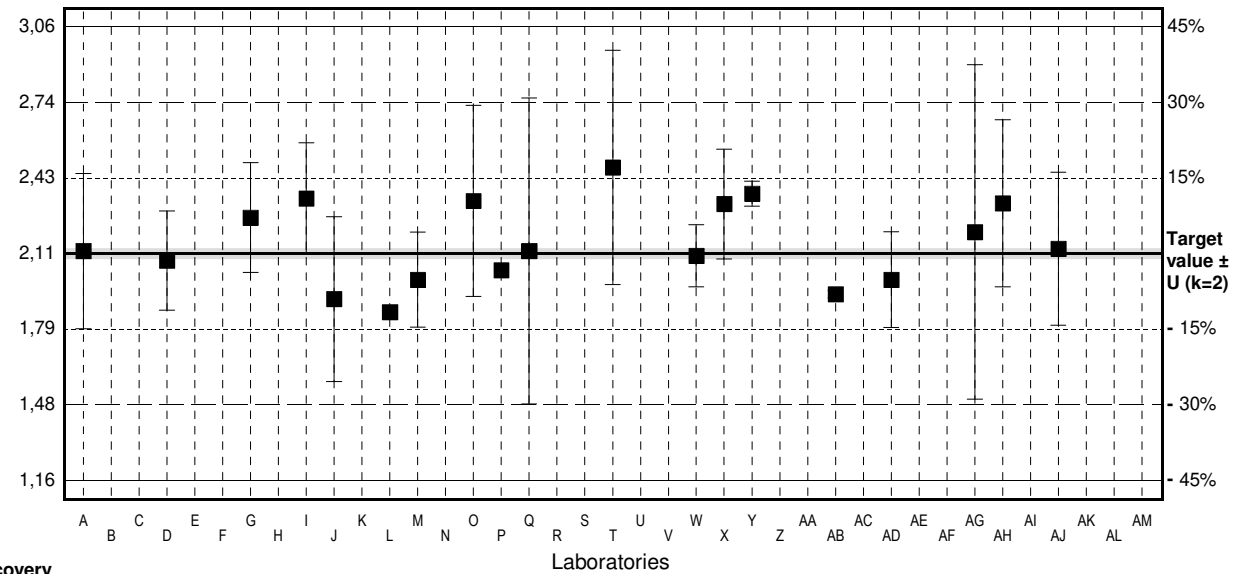
IFA result $\pm U$ (k=2) 2,27 $\mu\text{g/l}$ \pm 0,30 $\mu\text{g/l}$

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

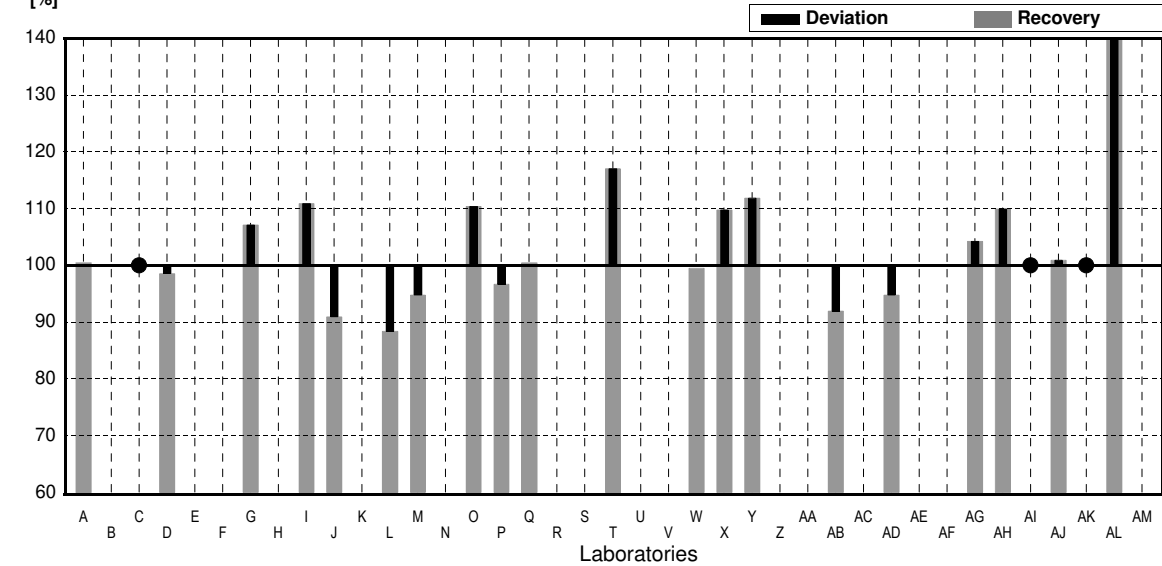
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	2,12	0,325	$\mu\text{g/l}$	100%	0,06
B			$\mu\text{g/l}$		
C	<100		$\mu\text{g/l}$	*	
D	2,08	0,208	$\mu\text{g/l}$	99%	-0,19
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G	2,26	0,23	$\mu\text{g/l}$	107%	0,96
H			$\mu\text{g/l}$		
I	2,34	0,234	$\mu\text{g/l}$	111%	1,47
J	1,919	0,345	$\mu\text{g/l}$	91%	-1,22
K			$\mu\text{g/l}$		
L	1,865		$\mu\text{g/l}$	88%	-1,57
M	2,00	0,199	$\mu\text{g/l}$	95%	-0,70
N			$\mu\text{g/l}$		
O	2,33	0,4	$\mu\text{g/l}$	110%	1,41
P	2,04		$\mu\text{g/l}$	97%	-0,45
Q	2,12	0,64	$\mu\text{g/l}$	100%	0,06
R			$\mu\text{g/l}$		
S			$\mu\text{g/l}$		
T	2,47	0,49	$\mu\text{g/l}$	117%	2,31
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	2,10	0,13	$\mu\text{g/l}$	100%	-0,06
X	2,317	0,23	$\mu\text{g/l}$	110%	1,33
Y	2,36	0,0520	$\mu\text{g/l}$	112%	1,60
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	1,94	0,015	$\mu\text{g/l}$	92%	-1,09
AC			$\mu\text{g/l}$		
AD	2,00	0,2	$\mu\text{g/l}$	95%	-0,70
AE			$\mu\text{g/l}$		
AF			$\mu\text{g/l}$		
AG	2,20	0,70	$\mu\text{g/l}$	104%	0,58
AH	2,32	0,35	$\mu\text{g/l}$	110%	1,34
AI	<5		$\mu\text{g/l}$	*	
AJ	2,13	0,32	$\mu\text{g/l}$	101%	0,13
AK	<5,0		$\mu\text{g/l}$	*	
AL	17,3	4,3	$\mu\text{g/l}$	820%	97,28
AM			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	2,91 \pm 2,17	2,15 \pm 0,11	$\mu\text{g/l}$
Recov. \pm CI(99%)	137,9 \pm 102,8	102,0 \pm 5,4	%
SD between labs	3,39	0,17	$\mu\text{g/l}$
RSD between labs	116,5	8,0	%
n for calculation	20	19	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167A

Parameter Manganese

Target value $\pm U$ (k=2) 58,3 $\mu\text{g/l}$ \pm 0,4 $\mu\text{g/l}$

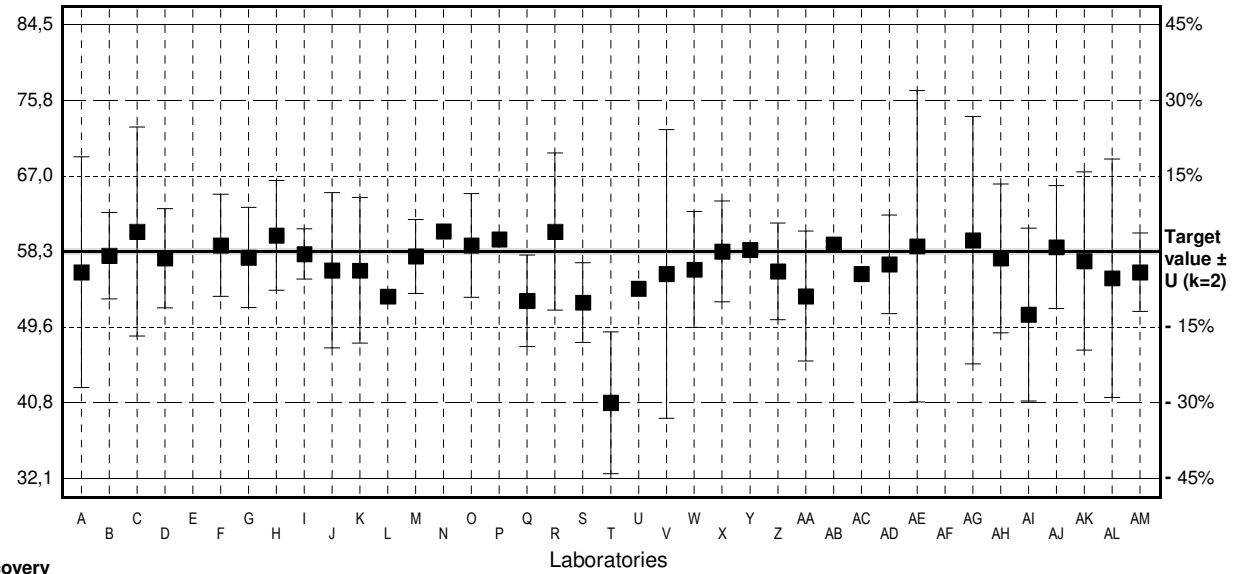
IFA result $\pm U$ (k=2) 64 $\mu\text{g/l}$ \pm 4 $\mu\text{g/l}$

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

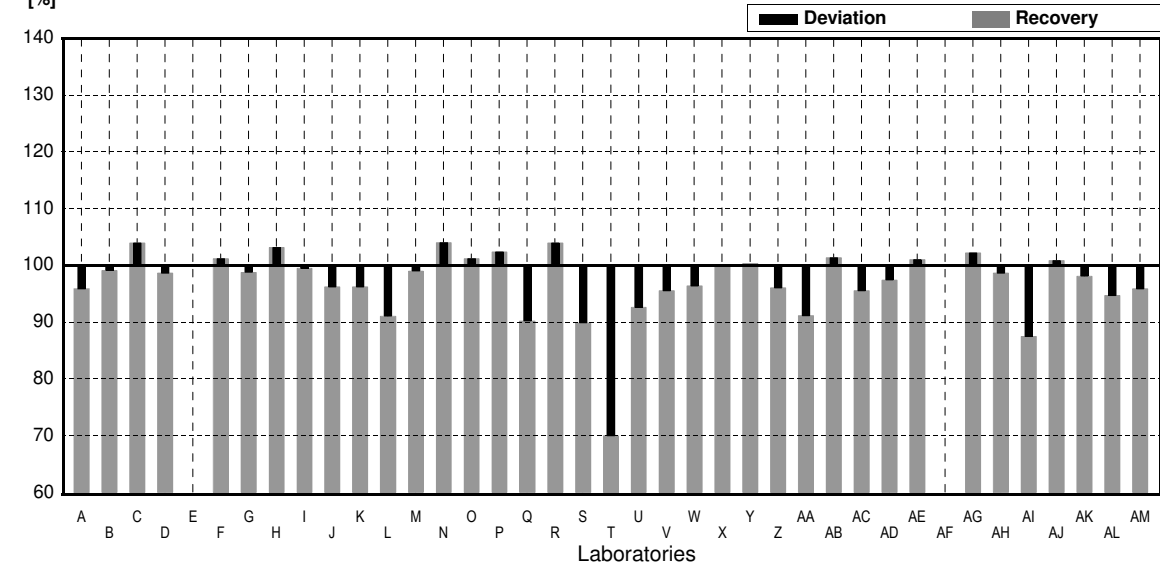
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	55.9	13.35	$\mu\text{g/l}$	96%	-0.78
B	57.8	5	$\mu\text{g/l}$	99%	-0.16
C	60.6	12.1	$\mu\text{g/l}$	104%	0.74
D	57.5	5.75	$\mu\text{g/l}$	99%	-0.26
E			$\mu\text{g/l}$		
F	59.0	5.90	$\mu\text{g/l}$	101%	0.23
G	57.6	5.8	$\mu\text{g/l}$	99%	-0.23
H	60.16	6.34	$\mu\text{g/l}$	103%	0.60
I	58	2.9	$\mu\text{g/l}$	99%	-0.10
J	56.11	8.98	$\mu\text{g/l}$	96%	-0.71
K	56.1	8.42	$\mu\text{g/l}$	96%	-0.71
L	53.09		$\mu\text{g/l}$	91%	-1.69
M	57.73	4.272	$\mu\text{g/l}$	99%	-0.18
N	60.64		$\mu\text{g/l}$	104%	0.76
O	59	6	$\mu\text{g/l}$	101%	0.23
P	59.7		$\mu\text{g/l}$	102%	0.45
Q	52.6	5.3	$\mu\text{g/l}$	90%	-1.84
R	60.6	9.1	$\mu\text{g/l}$	104%	0.74
S	52.39	4.6	$\mu\text{g/l}$	90%	-1.91
T	40.8	8.2	$\mu\text{g/l}$	70%	-5.66
U	54		$\mu\text{g/l}$	93%	-1.39
V	55.7	16.7	$\mu\text{g/l}$	96%	-0.84
W	56.2	6.7	$\mu\text{g/l}$	96%	-0.68
X	58.301	5.83	$\mu\text{g/l}$	100%	0.00
Y	58.5	0.711	$\mu\text{g/l}$	100%	0.06
Z	56	5.6	$\mu\text{g/l}$	96%	-0.74
AA	53.13	7.52	$\mu\text{g/l}$	91%	-1.67
AB	59.1	0.379	$\mu\text{g/l}$	101%	0.26
AC	55.7		$\mu\text{g/l}$	96%	-0.84
AD	56.8	5.7	$\mu\text{g/l}$	97%	-0.49
AE	58.9	18	$\mu\text{g/l}$	101%	0.19
AF			$\mu\text{g/l}$		
AG	59.6	14.3	$\mu\text{g/l}$	102%	0.42
AH	57.5	8.62	$\mu\text{g/l}$	99%	-0.26
AI	51.0	10	$\mu\text{g/l}$	87%	-2.36
AJ	58.8	7.1	$\mu\text{g/l}$	101%	0.16
AK	57.2	10.3	$\mu\text{g/l}$	98%	-0.36
AL	55.2	13.8	$\mu\text{g/l}$	95%	-1.00
AM	55.9	4.54	$\mu\text{g/l}$	96%	-0.78

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	56,6 \pm 1,6	57,0 \pm 1,1	$\mu\text{g/l}$
Recov. \pm CI(99%)	97,0 \pm 2,8	97,8 \pm 1,9	%
SD between labs	3,6	2,5	$\mu\text{g/l}$
RSD between labs	6,4	4,4	%
n for calculation	37	36	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167B

Parameter Manganese

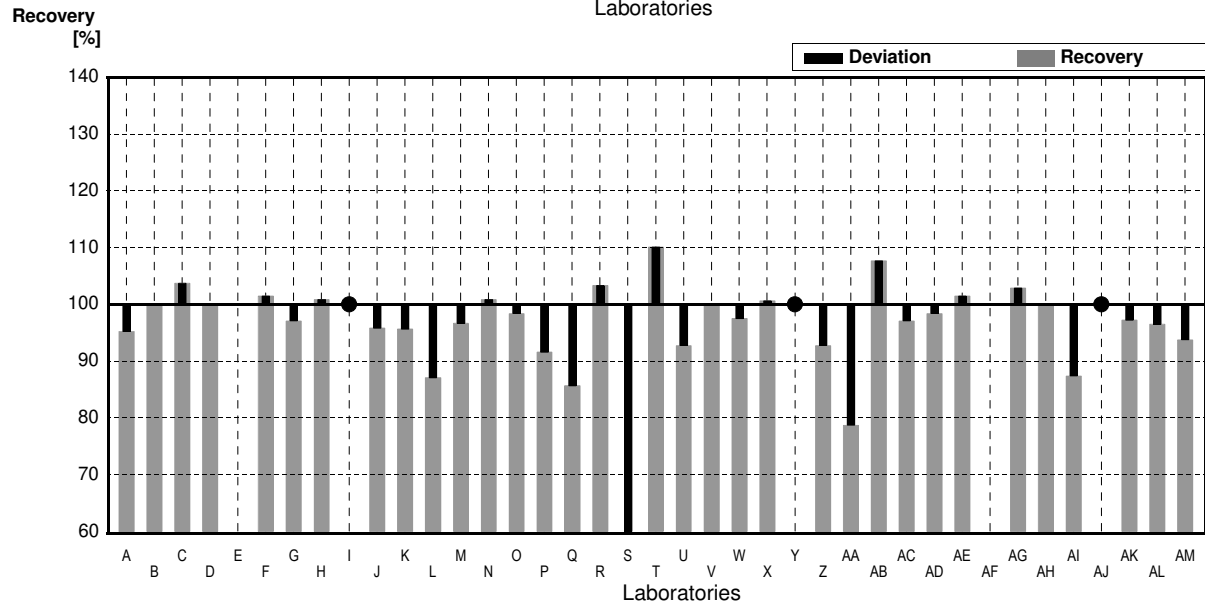
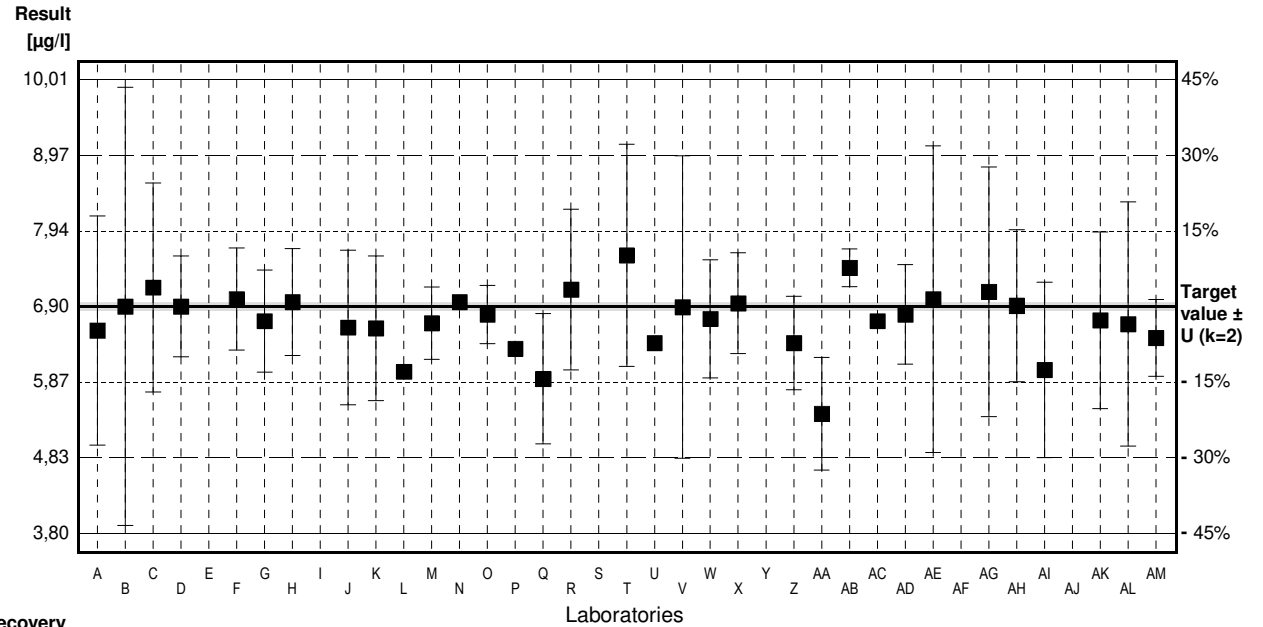
Target value $\pm U$ (k=2) 6,90 $\mu\text{g/l}$ \pm 0,05 $\mu\text{g/l}$

IFA result $\pm U$ (k=2) 7,6 $\mu\text{g/l}$ \pm 0,5 $\mu\text{g/l}$

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

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	6.57	1.568	$\mu\text{g/l}$	95%	-0.90
B	6.9	3	$\mu\text{g/l}$	100%	0.00
C	7.16	1.43	$\mu\text{g/l}$	104%	0.71
D	6.9	0.69	$\mu\text{g/l}$	100%	0.00
E			$\mu\text{g/l}$		
F	7.00	0.700	$\mu\text{g/l}$	101%	0.27
G	6.7	0.7	$\mu\text{g/l}$	97%	-0.55
H	6.96	0.73	$\mu\text{g/l}$	101%	0.16
I	<10		$\mu\text{g/l}$	*	
J	6.612	1.058	$\mu\text{g/l}$	96%	-0.79
K	6.6	0.99	$\mu\text{g/l}$	96%	-0.82
L	6.007		$\mu\text{g/l}$	87%	-2.44
M	6.67	0.494	$\mu\text{g/l}$	97%	-0.63
N	6.96		$\mu\text{g/l}$	101%	0.16
O	6.79	0.4	$\mu\text{g/l}$	98%	-0.30
P	6.32		$\mu\text{g/l}$	92%	-1.59
Q	5.91	0.89	$\mu\text{g/l}$	86%	-2.71
R	7.13	1.1	$\mu\text{g/l}$	103%	0.63
S	2.26	0.08	$\mu\text{g/l}$	33%	-12.69
T	7.60	1.52	$\mu\text{g/l}$	110%	1.91
U	6.4		$\mu\text{g/l}$	93%	-1.37
V	6.89	2.07	$\mu\text{g/l}$	100%	-0.03
W	6.73	0.81	$\mu\text{g/l}$	98%	-0.46
X	6.945	0.69	$\mu\text{g/l}$	101%	0.12
Y	<10		$\mu\text{g/l}$	*	
Z	6.4	0.64	$\mu\text{g/l}$	93%	-1.37
AA	5.43	0.77	$\mu\text{g/l}$	79%	-4.02
AB	7.43	0.258	$\mu\text{g/l}$	108%	1.45
AC	6.7		$\mu\text{g/l}$	97%	-0.55
AD	6.79	0.68	$\mu\text{g/l}$	98%	-0.30
AE	7.00	2.1	$\mu\text{g/l}$	101%	0.27
AF			$\mu\text{g/l}$		
AG	7.1	1.71	$\mu\text{g/l}$	103%	0.55
AH	6.91	1.04	$\mu\text{g/l}$	100%	0.03
AI	6.03	1.2	$\mu\text{g/l}$	87%	-2.38
AJ	<10		$\mu\text{g/l}$	*	
AK	6.71	1.21	$\mu\text{g/l}$	97%	-0.52
AL	6.66	1.67	$\mu\text{g/l}$	97%	-0.66
AM	6.47	0.525	$\mu\text{g/l}$	94%	-1.18

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	6,58 \pm 0,41	6,75 \pm 0,18	$\mu\text{g/l}$
Recov. \pm CI(99%)	95,3 \pm 6,0	97,8 \pm 2,6	%
SD between labs	0,87	0,37	$\mu\text{g/l}$
RSD between labs	13,3	5,5	%
n for calculation	34	32	



Sample M167A

Parameter Nickel

Target value $\pm U$ (k=2) 0,81 $\mu\text{g/l}$ \pm 0,02 $\mu\text{g/l}$

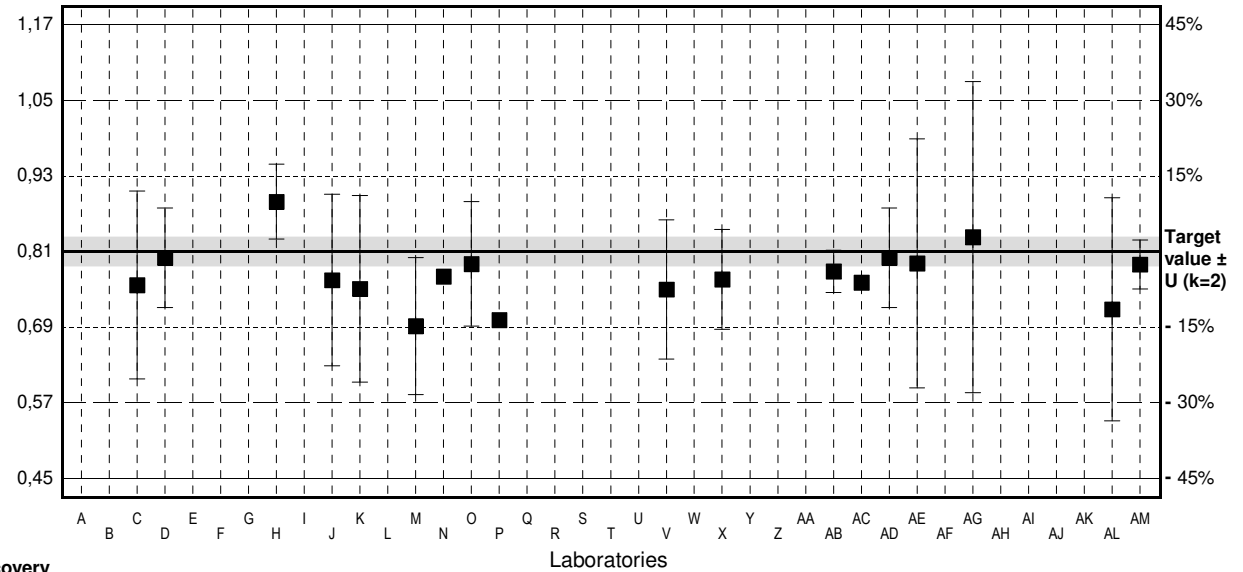
IFA result $\pm U$ (k=2) 0,89 $\mu\text{g/l}$ \pm 0,10 $\mu\text{g/l}$

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

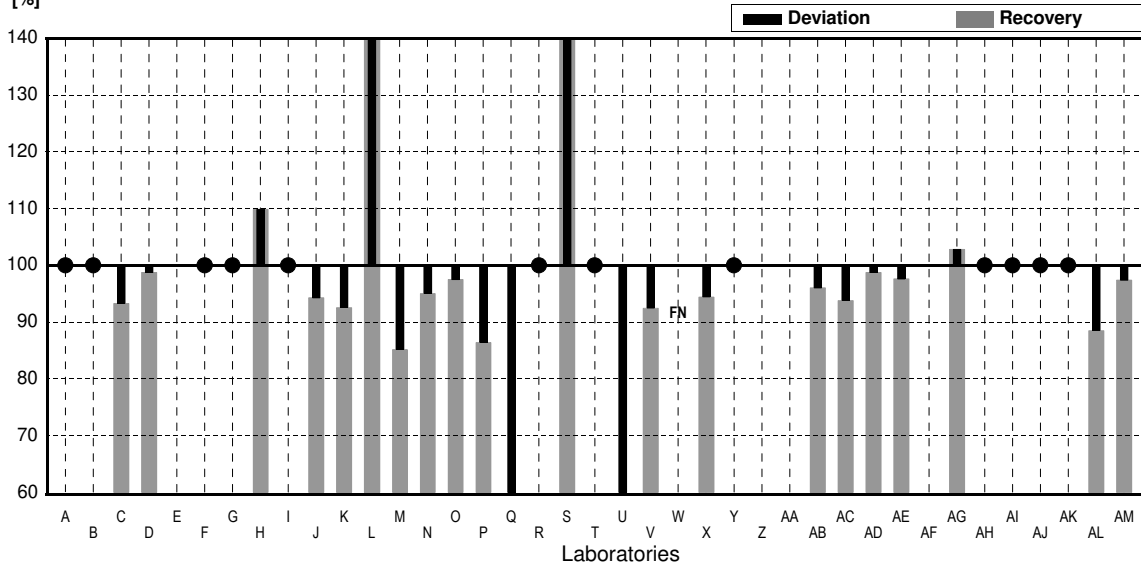
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	<1		$\mu\text{g/l}$	•	
B	<2		$\mu\text{g/l}$	•	
C	0,756	0,151	$\mu\text{g/l}$	93%	-0,90
D	0,80	0,080	$\mu\text{g/l}$	99%	-0,17
E			$\mu\text{g/l}$		
F	<1,00		$\mu\text{g/l}$	•	
G	<5		$\mu\text{g/l}$	•	
H	0,89	0,06	$\mu\text{g/l}$	110%	1,33
I	<5		$\mu\text{g/l}$	•	
J	0,764	0,138	$\mu\text{g/l}$	94%	-0,77
K	0,75	0,15	$\mu\text{g/l}$	93%	-1,00
L	1,439 *		$\mu\text{g/l}$	178%	10,49
M	0,69	0,110	$\mu\text{g/l}$	85%	-2,00
N	0,77		$\mu\text{g/l}$	95%	-0,67
O	0,79	0,1	$\mu\text{g/l}$	98%	-0,33
P	0,700		$\mu\text{g/l}$	86%	-1,84
Q	0,412 *	0,062	$\mu\text{g/l}$	51%	-6,64
R	<1		$\mu\text{g/l}$	•	
S	2,22 *	0,17	$\mu\text{g/l}$	274%	23,52
T	<1		$\mu\text{g/l}$	•	
U	0,372 *		$\mu\text{g/l}$	46%	-7,31
V	0,749	0,112	$\mu\text{g/l}$	92%	-1,02
W	<0,729		$\mu\text{g/l}$	FN	
X	0,765	0,08	$\mu\text{g/l}$	94%	-0,75
Y	<1		$\mu\text{g/l}$	•	
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	0,778	0,034	$\mu\text{g/l}$	96%	-0,53
AC	0,76		$\mu\text{g/l}$	94%	-0,83
AD	0,80	0,08	$\mu\text{g/l}$	99%	-0,17
AE	0,791	0,2	$\mu\text{g/l}$	98%	-0,32
AF			$\mu\text{g/l}$		
AG	0,833	0,250	$\mu\text{g/l}$	103%	0,38
AH	<5,00		$\mu\text{g/l}$	•	
AI	<1		$\mu\text{g/l}$	•	
AJ	<1		$\mu\text{g/l}$	•	
AK	<1,0		$\mu\text{g/l}$	•	
AL	0,717	0,179	$\mu\text{g/l}$	89%	-1,55
AM	0,789	0,0395	$\mu\text{g/l}$	97%	-0,35

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,83 \pm 0,22	0,77 \pm 0,03	$\mu\text{g/l}$
Recov. \pm CI(99%)	102,9 \pm 27,1	95,3 \pm 3,9	%
SD between labs	0,36	0,05	$\mu\text{g/l}$
RSD between labs	43,7	6,0	%
n for calculation	22	18	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167B

Parameter Nickel

Target value ± U (k=2) 3,53 µg/l ± 0,03 µg/l

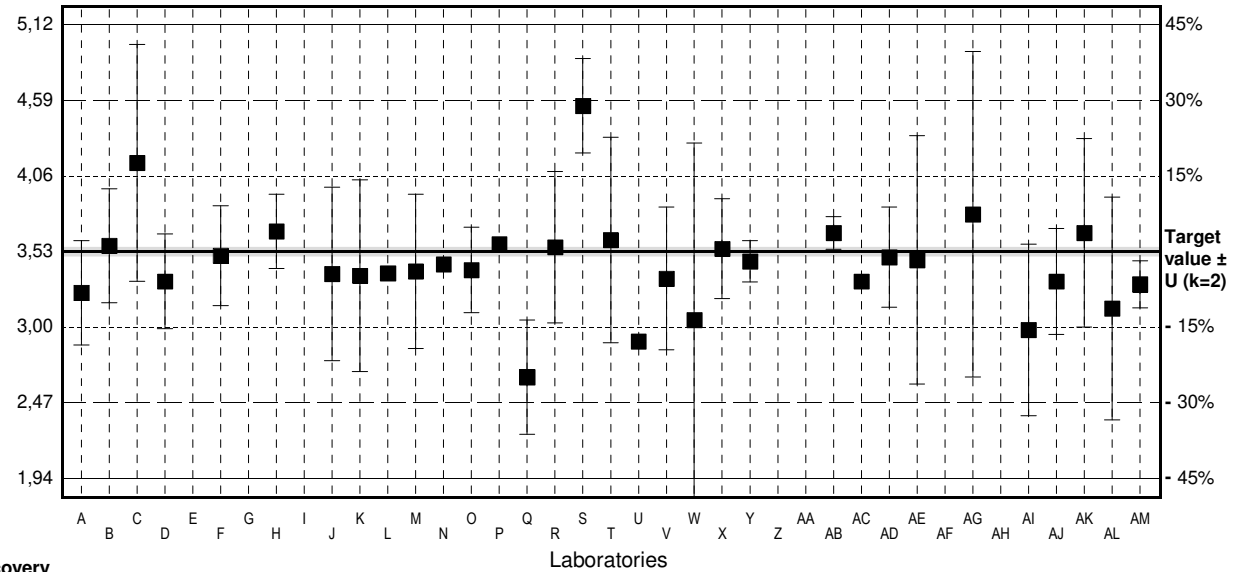
IFA result ± U (k=2) 3,92 µg/l ± 0,18 µg/l

Stability test µg/l

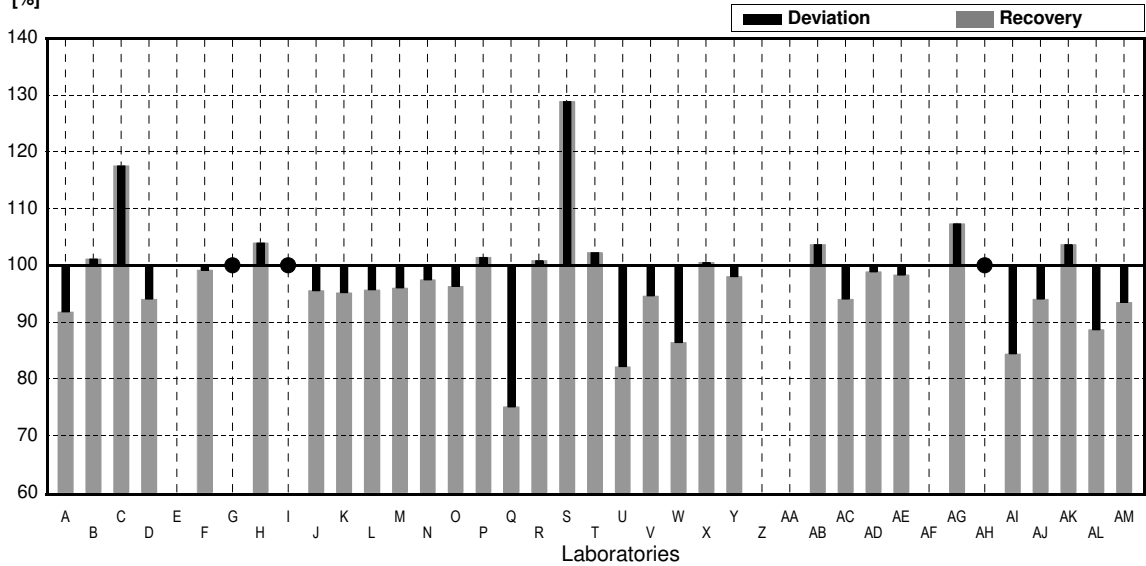
Lab Code	Result	±	Unit	Recovery	z-Score
A	3,24	0,366	µg/l	92%	-1,11
B	3,57	0,4	µg/l	101%	0,15
C	4,15 *	0,83	µg/l	118%	2,37
D	3,32	0,332	µg/l	94%	-0,80
E			µg/l		
F	3,50	0,350	µg/l	99%	-0,11
G	<5		µg/l	*	
H	3,67	0,26	µg/l	104%	0,54
I	<5		µg/l	*	
J	3,372	0,607	µg/l	96%	-0,60
K	3,36	0,672	µg/l	95%	-0,65
L	3,378		µg/l	96%	-0,58
M	3,39	0,540	µg/l	96%	-0,54
N	3,44		µg/l	97%	-0,34
O	3,40	0,3	µg/l	96%	-0,50
P	3,58		µg/l	101%	0,19
Q	2,65 *	0,40	µg/l	75%	-3,37
R	3,56	0,53	µg/l	101%	0,11
S	4,55 *	0,33	µg/l	129%	3,90
T	3,61	0,72	µg/l	102%	0,31
U	2,90		µg/l	82%	-2,41
V	3,34	0,50	µg/l	95%	-0,73
W	3,05	1,24	µg/l	86%	-1,84
X	3,549	0,35	µg/l	101%	0,07
Y	3,46	0,144	µg/l	98%	-0,27
Z			µg/l		
AA			µg/l		
AB	3,66	0,114	µg/l	104%	0,50
AC	3,32		µg/l	94%	-0,80
AD	3,49	0,35	µg/l	99%	-0,15
AE	3,47	0,87	µg/l	98%	-0,23
AF			µg/l		
AG	3,79	1,14	µg/l	107%	1,00
AH	<5,00		µg/l	*	
AI	2,98	0,60	µg/l	84%	-2,11
AJ	3,32	0,37	µg/l	94%	-0,80
AK	3,66	0,66	µg/l	104%	0,50
AL	3,13	0,78	µg/l	89%	-1,53
AM	3,30	0,165	µg/l	93%	-0,88

	All results	Outliers excl.	Unit
Mean ± CI(99%)	3,44 ± 0,17	3,41 ± 0,11	µg/l
Recov. ± CI(99%)	97,5 ± 4,7	96,5 ± 3,0	%
SD between labs	0,34	0,21	µg/l
RSD between labs	9,9	6,1	%
n for calculation	32	29	

Result [µg/l]



Recovery [%]



Sample M167A

Parameter Mercury

Target value $\pm U$ (k=2) 1,153 $\mu\text{g/l}$ \pm 0,017 $\mu\text{g/l}$

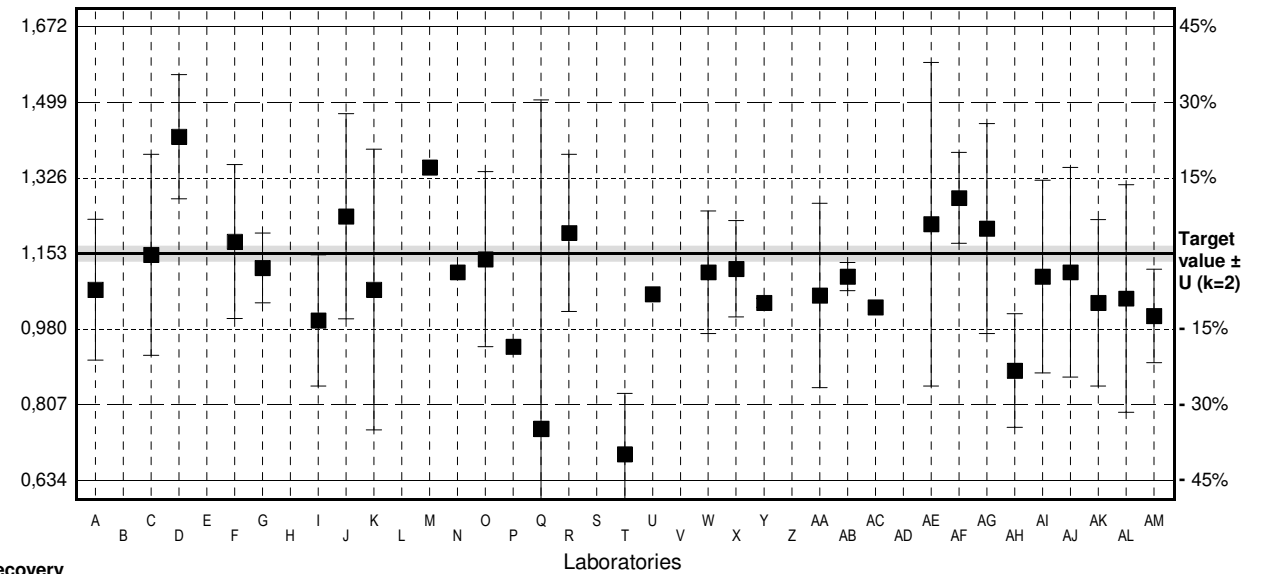
IFA result $\pm U$ (k=2) 1,20 $\mu\text{g/l}$ \pm 0,23 $\mu\text{g/l}$

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

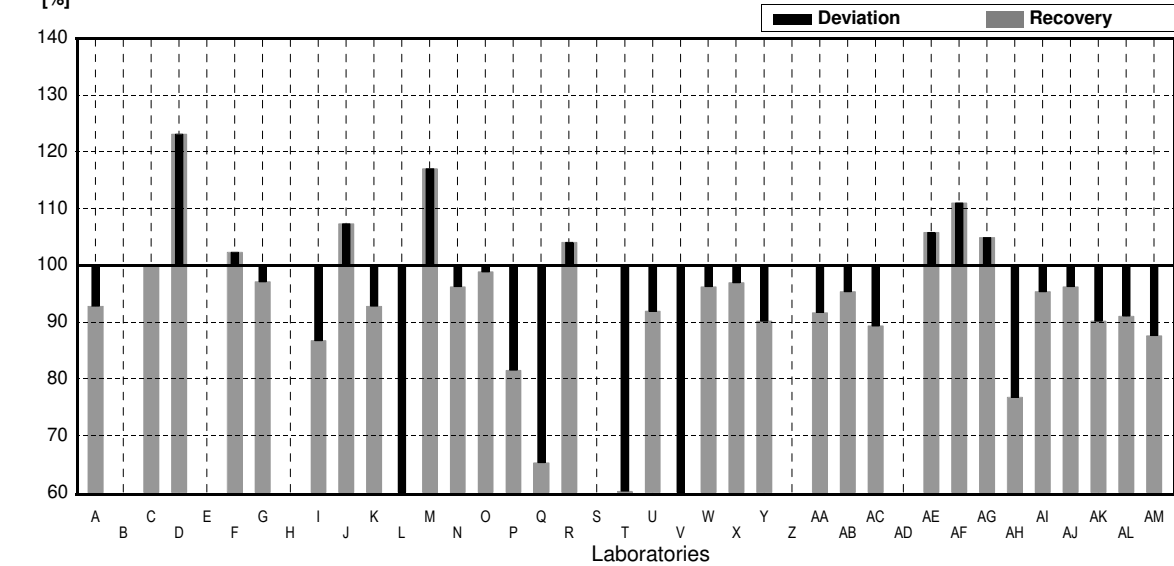
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	1.07	0.161	$\mu\text{g/l}$	93%	-0.65
B			$\mu\text{g/l}$		
C	1.15	0.23	$\mu\text{g/l}$	100%	-0.02
D	1.42	0.142	$\mu\text{g/l}$	123%	2.11
E			$\mu\text{g/l}$		
F	1.18	0.176	$\mu\text{g/l}$	102%	0.21
G	1.12	0.08	$\mu\text{g/l}$	97%	-0.26
H			$\mu\text{g/l}$		
I	1.00	0.15	$\mu\text{g/l}$	87%	-1.21
J	1.238	0.235	$\mu\text{g/l}$	107%	0.67
K	1.07	0.321	$\mu\text{g/l}$	93%	-0.65
L	0.534 *		$\mu\text{g/l}$	46%	-4.88
M	1.35		$\mu\text{g/l}$	117%	1.55
N	1.11		$\mu\text{g/l}$	96%	-0.34
O	1.14	0.2	$\mu\text{g/l}$	99%	-0.10
P	0.94		$\mu\text{g/l}$	82%	-1.68
Q	0.752 *	0.752	$\mu\text{g/l}$	65%	-3.16
R	1.20	0.18	$\mu\text{g/l}$	104%	0.37
S			$\mu\text{g/l}$		
T	0.694 *	0.139	$\mu\text{g/l}$	60%	-3.62
U	1.06		$\mu\text{g/l}$	92%	-0.73
V	0.545 *	0.164	$\mu\text{g/l}$	47%	-4.79
W	1.11	0.14	$\mu\text{g/l}$	96%	-0.34
X	1.118	0.11	$\mu\text{g/l}$	97%	-0.28
Y	1.04	0.0103	$\mu\text{g/l}$	90%	-0.89
Z			$\mu\text{g/l}$		
AA	1.057	0.211	$\mu\text{g/l}$	92%	-0.76
AB	1.10	0.032	$\mu\text{g/l}$	95%	-0.42
AC	1.03		$\mu\text{g/l}$	89%	-0.97
AD			$\mu\text{g/l}$		
AE	1.22	0.37	$\mu\text{g/l}$	106%	0.53
AF	1.28	0.104	$\mu\text{g/l}$	111%	1.00
AG	1.21	0.24	$\mu\text{g/l}$	105%	0.45
AH	0.885	0.13	$\mu\text{g/l}$	77%	-2.11
AI	1.10	0.22	$\mu\text{g/l}$	95%	-0.42
AJ	1.11	0.24	$\mu\text{g/l}$	96%	-0.34
AK	1.04	0.19	$\mu\text{g/l}$	90%	-0.89
AL	1.05	0.26	$\mu\text{g/l}$	91%	-0.81
AM	1.01	0.107	$\mu\text{g/l}$	88%	-1.13

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	1,059 \pm 0,094	1,118 \pm 0,059	$\mu\text{g/l}$
Recov. \pm CI(99%)	91,8 \pm 8,1	96,9 \pm 5,1	%
SD between labs	0,196	0,114	$\mu\text{g/l}$
RSD between labs	18,5	10,2	%
n for calculation	33	29	

Result [$\mu\text{g/l}$]



Recovery [%]



Sample M167B

Parameter Mercury

Target value $\pm U$ (k=2) 0,702 $\mu\text{g/l}$ \pm 0,016 $\mu\text{g/l}$

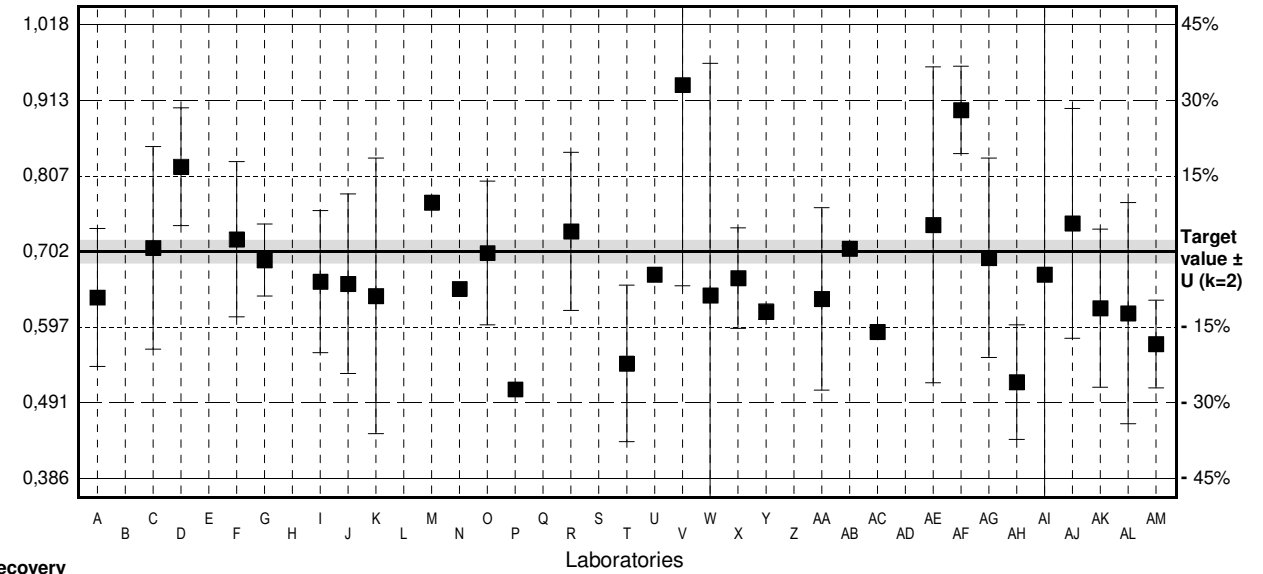
IFA result $\pm U$ (k=2) 0,72 $\mu\text{g/l}$ \pm 0,14 $\mu\text{g/l}$

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

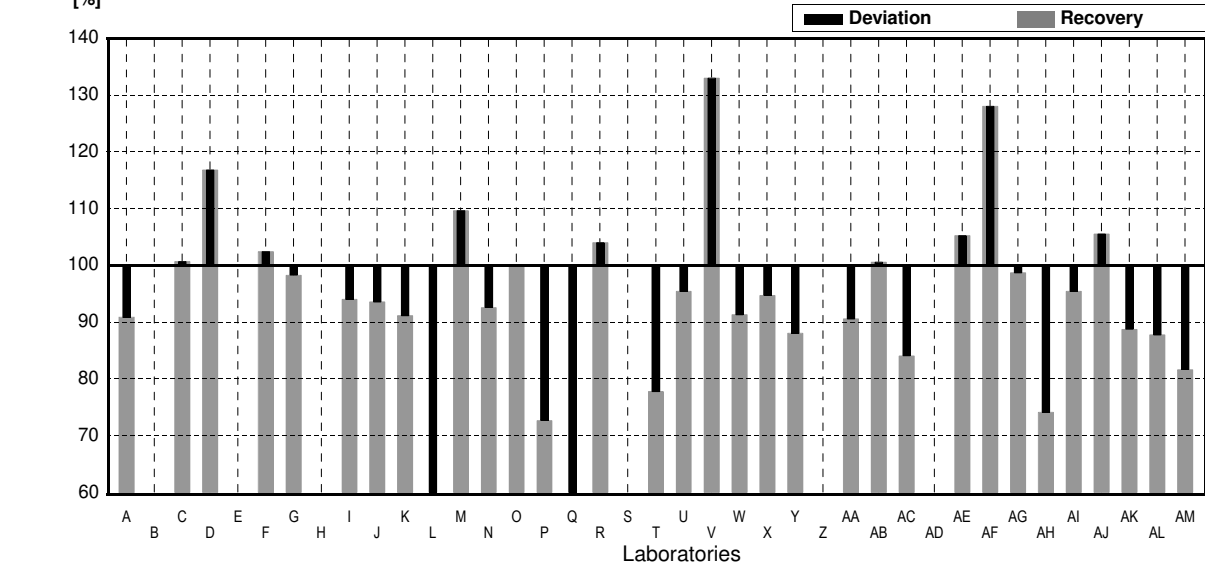
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0.638	0.096	$\mu\text{g/l}$	91%	-0.83
B			$\mu\text{g/l}$		
C	0.707	0.141	$\mu\text{g/l}$	101%	0.06
D	0.82	0.082	$\mu\text{g/l}$	117%	1.53
E			$\mu\text{g/l}$		
F	0.719	0.108	$\mu\text{g/l}$	102%	0.22
G	0.69	0.05	$\mu\text{g/l}$	98%	-0.16
H			$\mu\text{g/l}$		
I	0.66	0.099	$\mu\text{g/l}$	94%	-0.54
J	0.657	0.125	$\mu\text{g/l}$	94%	-0.58
K	0.640	0.192	$\mu\text{g/l}$	91%	-0.80
L	0.260 *		$\mu\text{g/l}$	37%	-5.72
M	0.77		$\mu\text{g/l}$	110%	0.88
N	0.65		$\mu\text{g/l}$	93%	-0.67
O	0.700	0.1	$\mu\text{g/l}$	100%	-0.03
P	0.51		$\mu\text{g/l}$	73%	-2.49
Q	0.321 *	0.321	$\mu\text{g/l}$	46%	-4.93
R	0.73	0.11	$\mu\text{g/l}$	104%	0.36
S			$\mu\text{g/l}$		
T	0.546	0.109	$\mu\text{g/l}$	78%	-2.02
U	0.670		$\mu\text{g/l}$	95%	-0.41
V	0.934 *	0.280	$\mu\text{g/l}$	133%	3.00
W	0.641	0.323	$\mu\text{g/l}$	91%	-0.79
X	0.665	0.07	$\mu\text{g/l}$	95%	-0.48
Y	0.618	0.0107	$\mu\text{g/l}$	88%	-1.09
Z			$\mu\text{g/l}$		
AA	0.636	0.127	$\mu\text{g/l}$	91%	-0.85
AB	0.706	0.004	$\mu\text{g/l}$	101%	0.05
AC	0.59		$\mu\text{g/l}$	84%	-1.45
AD			$\mu\text{g/l}$		
AE	0.739	0.22	$\mu\text{g/l}$	105%	0.48
AF	0.899 *	0.061	$\mu\text{g/l}$	128%	2.55
AG	0.693	0.139	$\mu\text{g/l}$	99%	-0.12
AH	0.520	0.08	$\mu\text{g/l}$	74%	-2.36
AI	0.670	0.13	$\mu\text{g/l}$	95%	-0.41
AJ	0.741	0.16	$\mu\text{g/l}$	106%	0.51
AK	0.623	0.11	$\mu\text{g/l}$	89%	-1.02
AL	0.616	0.154	$\mu\text{g/l}$	88%	-1.11
AM	0.573	0.0611	$\mu\text{g/l}$	82%	-1.67

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,653 \pm 0,062	0,660 \pm 0,036	$\mu\text{g/l}$
Recov. \pm CI(99%)	93,0 \pm 8,9	94,0 \pm 5,2	%
SD between labs	0,131	0,071	$\mu\text{g/l}$
RSD between labs	20,0	10,8	%
n for calculation	33	29	

Result
[$\mu\text{g/l}$]



Recovery
[%]



Sample M167A

Parameter Selenium

Target value ± U (k=2) 2,50 µg/l ± 0,02 µg/l

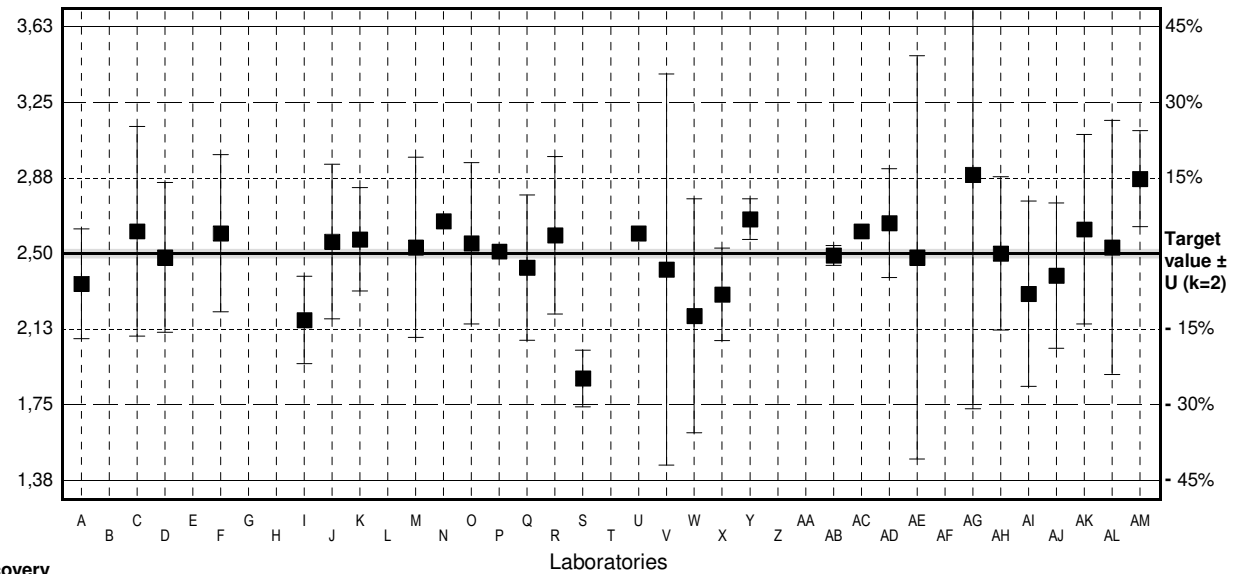
IFA result ± U (k=2) 2,70 µg/l ± 0,32 µg/l

Stability test µg/l

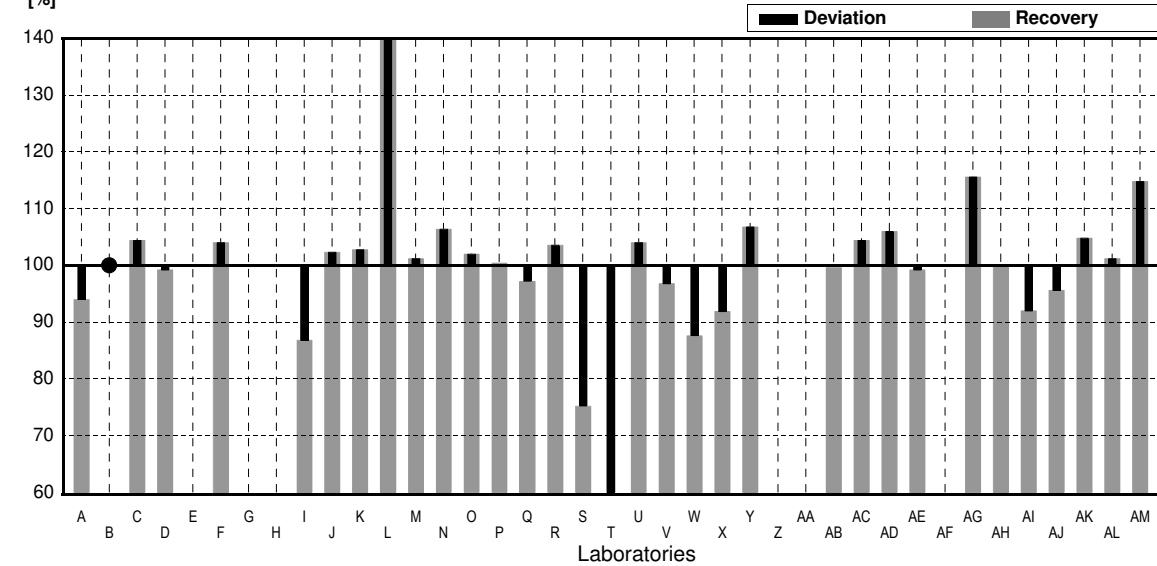
Lab Code	Result	±	Unit	Recovery	z-Score
A	2,35	0,272	µg/l	94%	-0,64
B	<5		µg/l	*	
C	2,61	0,52	µg/l	104%	0,47
D	2,48	0,372	µg/l	99%	-0,09
E			µg/l		
F	2,60	0,390	µg/l	104%	0,43
G			µg/l		
H			µg/l		
I	2,17	0,217	µg/l	87%	-1,40
J	2,559	0,384	µg/l	102%	0,25
K	2,57	0,257	µg/l	103%	0,30
L	3,755 *		µg/l	150%	5,34
M	2,53	0,447	µg/l	101%	0,13
N	2,66		µg/l	106%	0,68
O	2,55	0,4	µg/l	102%	0,21
P	2,51		µg/l	100%	0,04
Q	2,43	0,36	µg/l	97%	-0,30
R	2,59	0,39	µg/l	104%	0,38
S	1,88 *	0,14	µg/l	75%	-2,64
T	1,31 *	0,26	µg/l	52%	-5,06
U	2,60		µg/l	104%	0,43
V	2,42	0,97	µg/l	97%	-0,34
W	2,19	0,58	µg/l	88%	-1,32
X	2,297	0,23	µg/l	92%	-0,86
Y	2,67	0,101	µg/l	107%	0,72
Z			µg/l		
AA			µg/l		
AB	2,49	0,049	µg/l	100%	-0,04
AC	2,61		µg/l	104%	0,47
AD	2,65	0,27	µg/l	106%	0,64
AE	2,48	1,0	µg/l	99%	-0,09
AF			µg/l		
AG	2,89	1,16	µg/l	116%	1,66
AH	2,50	0,38	µg/l	100%	0,00
AI	2,30	0,46	µg/l	92%	-0,85
AJ	2,39	0,36	µg/l	96%	-0,47
AK	2,62	0,47	µg/l	105%	0,51
AL	2,53	0,63	µg/l	101%	0,13
AM	2,87	0,238	µg/l	115%	1,57

	All results	Outliers excl.	Unit
Mean ± CI(99%)	2,50 ± 0,18	2,52 ± 0,08	µg/l
Recov. ± CI(99%)	100,1 ± 7,1	100,8 ± 3,4	%
SD between labs	0,37	0,17	µg/l
RSD between labs	14,6	6,6	%
n for calculation	32	29	

Result [µg/l]



Recovery [%]



Sample M167B

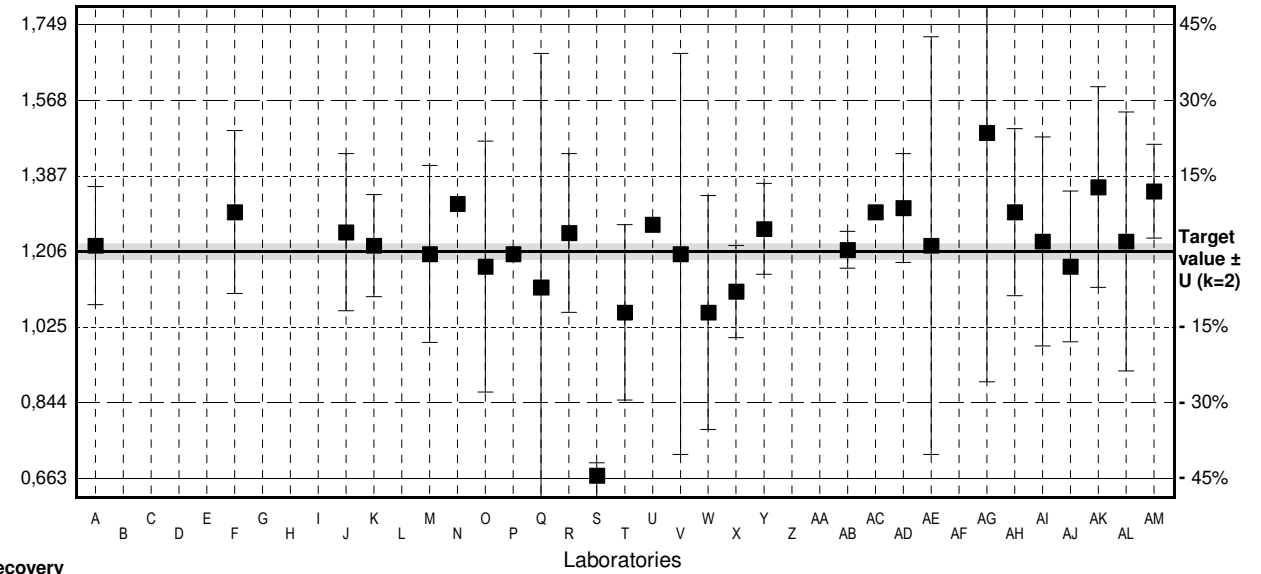
Parameter Selenium

Target value $\pm U$ (k=2) 1,206 $\mu\text{g/l}$ \pm 0,019 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 1,22 $\mu\text{g/l}$ \pm 0,15 $\mu\text{g/l}$
 Stability test $\mu\text{g/l}$

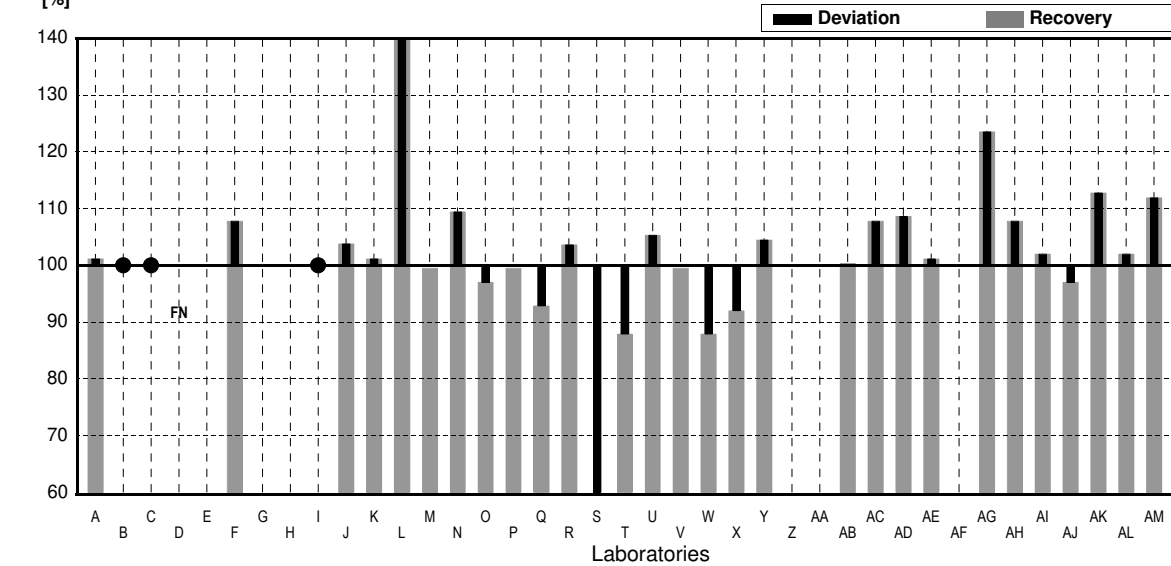
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	1,22	0,141	$\mu\text{g/l}$	101%	0,12
B	<5		$\mu\text{g/l}$	*	
C	<2		$\mu\text{g/l}$	*	
D	<1,0		$\mu\text{g/l}$	FN	
E			$\mu\text{g/l}$		
F	1,30	0,195	$\mu\text{g/l}$	108%	0,83
G			$\mu\text{g/l}$		
H			$\mu\text{g/l}$		
I	<2		$\mu\text{g/l}$	*	
J	1,252	0,188	$\mu\text{g/l}$	104%	0,41
K	1,22	0,122	$\mu\text{g/l}$	101%	0,12
L	3,454	*	$\mu\text{g/l}$	286%	19,83
M	1,20	0,212	$\mu\text{g/l}$	100%	-0,05
N	1,32		$\mu\text{g/l}$	109%	1,01
O	1,17	0,3	$\mu\text{g/l}$	97%	-0,32
P	1,20		$\mu\text{g/l}$	100%	-0,05
Q	1,12	0,56	$\mu\text{g/l}$	93%	-0,76
R	1,25	0,19	$\mu\text{g/l}$	104%	0,39
S	0,67	* 0,03	$\mu\text{g/l}$	56%	-4,73
T	1,06	0,21	$\mu\text{g/l}$	88%	-1,29
U	1,27		$\mu\text{g/l}$	105%	0,56
V	1,20	0,48	$\mu\text{g/l}$	100%	-0,05
W	1,06	0,28	$\mu\text{g/l}$	88%	-1,29
X	1,110	0,11	$\mu\text{g/l}$	92%	-0,85
Y	1,26	0,109	$\mu\text{g/l}$	104%	0,48
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	1,21	0,044	$\mu\text{g/l}$	100%	0,04
AC	1,30		$\mu\text{g/l}$	108%	0,83
AD	1,31	0,13	$\mu\text{g/l}$	109%	0,92
AE	1,22	0,5	$\mu\text{g/l}$	101%	0,12
AF			$\mu\text{g/l}$		
AG	1,49	0,596	$\mu\text{g/l}$	124%	2,51
AH	1,30	0,20	$\mu\text{g/l}$	108%	0,83
AI	1,23	0,25	$\mu\text{g/l}$	102%	0,21
AJ	1,17	0,18	$\mu\text{g/l}$	97%	-0,32
AK	1,36	0,24	$\mu\text{g/l}$	113%	1,36
AL	1,23	0,31	$\mu\text{g/l}$	102%	0,21
AM	1,35	0,112	$\mu\text{g/l}$	112%	1,27

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	1,293 \pm 0,224	1,236 \pm 0,050	$\mu\text{g/l}$
Recov. \pm CI(99%)	107,2 \pm 18,6	102,5 \pm 4,1	%
SD between labs	0,438	0,093	$\mu\text{g/l}$
RSD between labs	33,9	7,5	%
n for calculation	29	27	

Result [$\mu\text{g/l}$]



Recovery [%]



Sample M167A

Parameter Silver

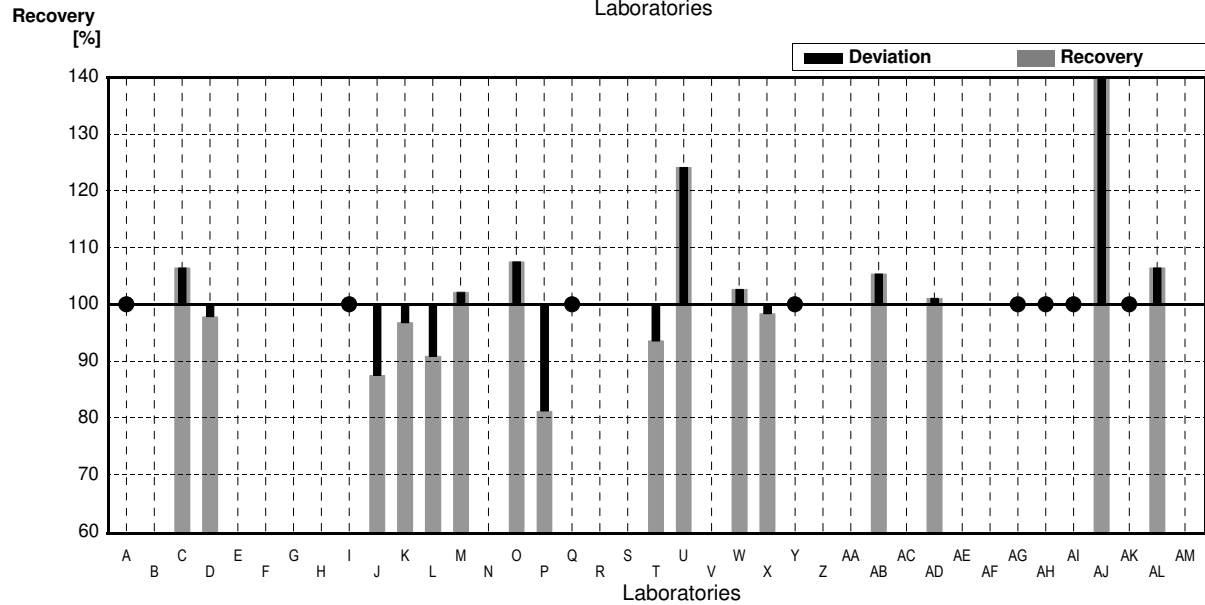
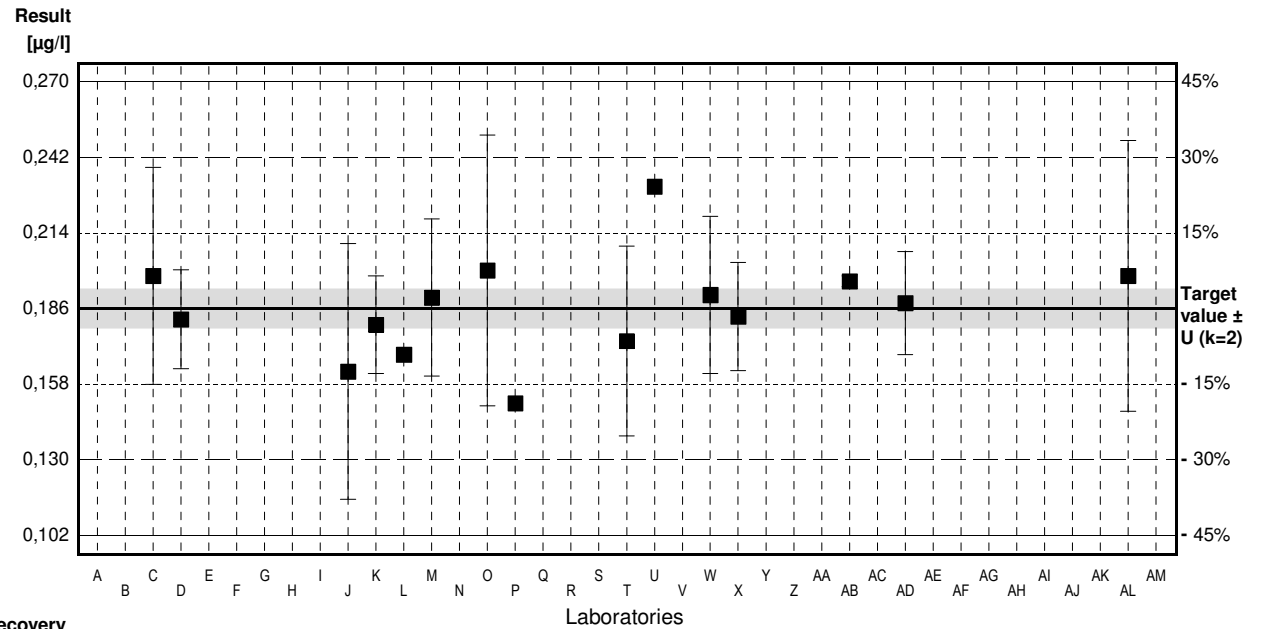
Target value $\pm U$ (k=2) 0,186 $\mu\text{g/l}$ \pm 0,007 $\mu\text{g/l}$

IFA result $\pm U$ (k=2) 0,189 $\mu\text{g/l}$ \pm 0,013 $\mu\text{g/l}$

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

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	<1		$\mu\text{g/l}$	•	
B			$\mu\text{g/l}$		
C	0.198	0.040	$\mu\text{g/l}$	106%	0.46
D	0.182	0.0182	$\mu\text{g/l}$	98%	-0.15
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G			$\mu\text{g/l}$		
H			$\mu\text{g/l}$		
I	<2		$\mu\text{g/l}$	•	
J	0.1627	0.0472	$\mu\text{g/l}$	87%	-0.89
K	0.180	0.018	$\mu\text{g/l}$	97%	-0.23
L	0.169		$\mu\text{g/l}$	91%	-0.65
M	0.190	0.029	$\mu\text{g/l}$	102%	0.15
N			$\mu\text{g/l}$		
O	0.200	0.05	$\mu\text{g/l}$	108%	0.54
P	0.151		$\mu\text{g/l}$	81%	-1.34
Q	<0.50		$\mu\text{g/l}$	•	
R			$\mu\text{g/l}$		
S			$\mu\text{g/l}$		
T	0.174	0.035	$\mu\text{g/l}$	94%	-0.46
U	0.231		$\mu\text{g/l}$	124%	1.73
V			$\mu\text{g/l}$		
W	0.191	0.029	$\mu\text{g/l}$	103%	0.19
X	0.183	0.02	$\mu\text{g/l}$	98%	-0.12
Y	<1		$\mu\text{g/l}$	•	
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	0.196	0.002	$\mu\text{g/l}$	105%	0.38
AC			$\mu\text{g/l}$		
AD	0.188	0.019	$\mu\text{g/l}$	101%	0.08
AE			$\mu\text{g/l}$		
AF			$\mu\text{g/l}$		
AG	<2	0.00	$\mu\text{g/l}$	•	
AH	<10.0		$\mu\text{g/l}$	•	
AI	<1		$\mu\text{g/l}$	•	
AJ	0.283	0.071	$\mu\text{g/l}$	152%	3.73
AK	<1.0		$\mu\text{g/l}$	•	
AL	0.198	0.050	$\mu\text{g/l}$	106%	0.46
AM			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,192 \pm 0,022	0,186 \pm 0,014	$\mu\text{g/l}$
Recov. \pm CI(99%)	103,4 \pm 12,0	100,1 \pm 7,8	%
SD between labs	0,030	0,019	$\mu\text{g/l}$
RSD between labs	15,7	10,1	%
n for calculation	16	15	



Sample M167B

Parameter Silver

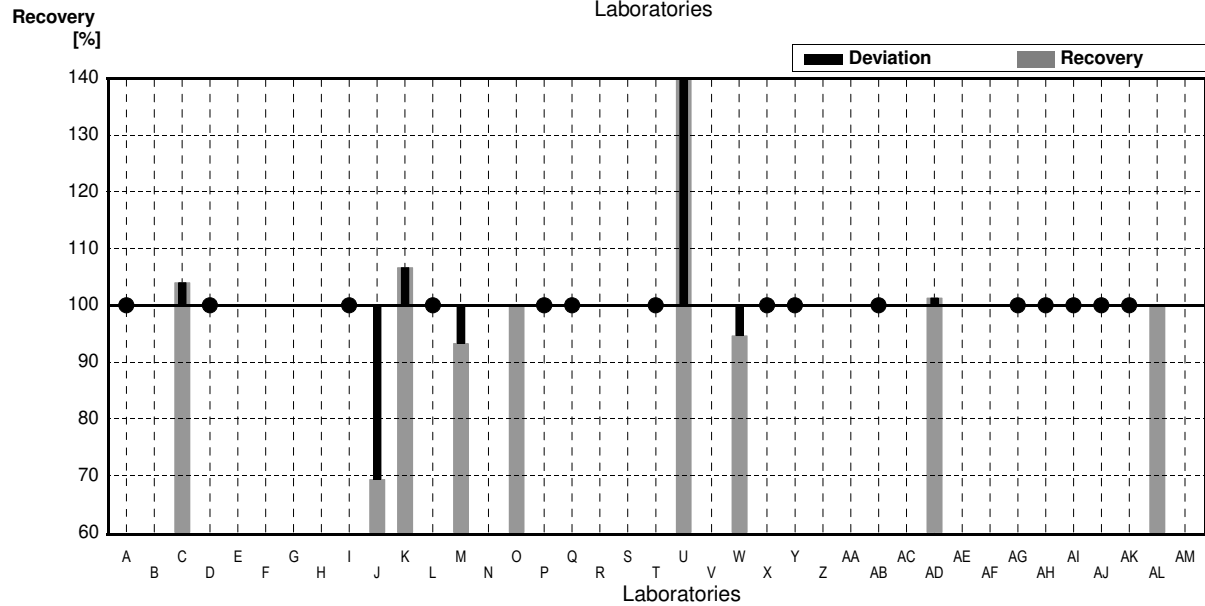
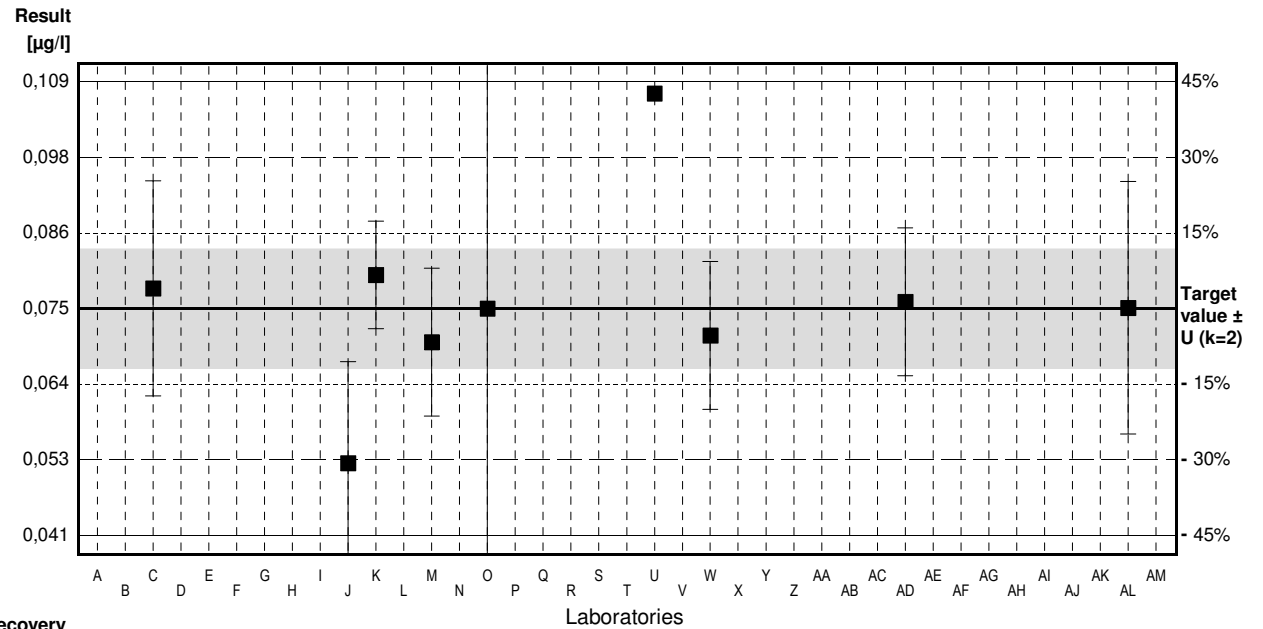
Target value $\pm U$ (k=2) 0,075 $\mu\text{g/l}$ \pm 0,009 $\mu\text{g/l}$

IFA result $\pm U$ (k=2) 0,071 $\mu\text{g/l}$ \pm 0,005 $\mu\text{g/l}$

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

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	<1		$\mu\text{g/l}$	•	
B			$\mu\text{g/l}$		
C	0,078	0,016	$\mu\text{g/l}$	104%	0,29
D	<0,1		$\mu\text{g/l}$	•	
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G			$\mu\text{g/l}$		
H			$\mu\text{g/l}$		
I	<2		$\mu\text{g/l}$	•	
J	0,0520 *	0,0151	$\mu\text{g/l}$	69%	-2,19
K	0,080	0,008	$\mu\text{g/l}$	107%	0,48
L	<0,1		$\mu\text{g/l}$	•	
M	0,070	0,011	$\mu\text{g/l}$	93%	-0,48
N			$\mu\text{g/l}$		
O	0,075	0,1	$\mu\text{g/l}$	100%	0,00
P	<0,1		$\mu\text{g/l}$	•	
Q	<0,50		$\mu\text{g/l}$	•	
R			$\mu\text{g/l}$		
S			$\mu\text{g/l}$		
T	<0,1		$\mu\text{g/l}$	•	
U	0,107 *		$\mu\text{g/l}$	143%	3,05
V			$\mu\text{g/l}$		
W	0,071	0,011	$\mu\text{g/l}$	95%	-0,38
X	<0,1		$\mu\text{g/l}$	•	
Y	<1		$\mu\text{g/l}$	•	
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	<0,11		$\mu\text{g/l}$	•	
AC			$\mu\text{g/l}$		
AD	0,076	0,011	$\mu\text{g/l}$	101%	0,10
AE			$\mu\text{g/l}$		
AF			$\mu\text{g/l}$		
AG	<2	0,00	$\mu\text{g/l}$	•	
AH	<10,0		$\mu\text{g/l}$	•	
AI	<1		$\mu\text{g/l}$	•	
AJ	<0,2		$\mu\text{g/l}$	•	
AK	<1,0		$\mu\text{g/l}$	•	
AL	0,0751	0,0188	$\mu\text{g/l}$	100%	0,01
AM			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	0,076 \pm 0,016	0,075 \pm 0,005	$\mu\text{g/l}$
Recov. \pm CI(99%)	101,3 \pm 21,2	100,0 \pm 6,7	%
SD between labs	0,014	0,004	$\mu\text{g/l}$
RSD between labs	18,7	4,7	%
n for calculation	9	7	



Sample M167A

Parameter Uranium

Target value ± U (k=2) 1,102 µg/l ± 0,012 µg/l

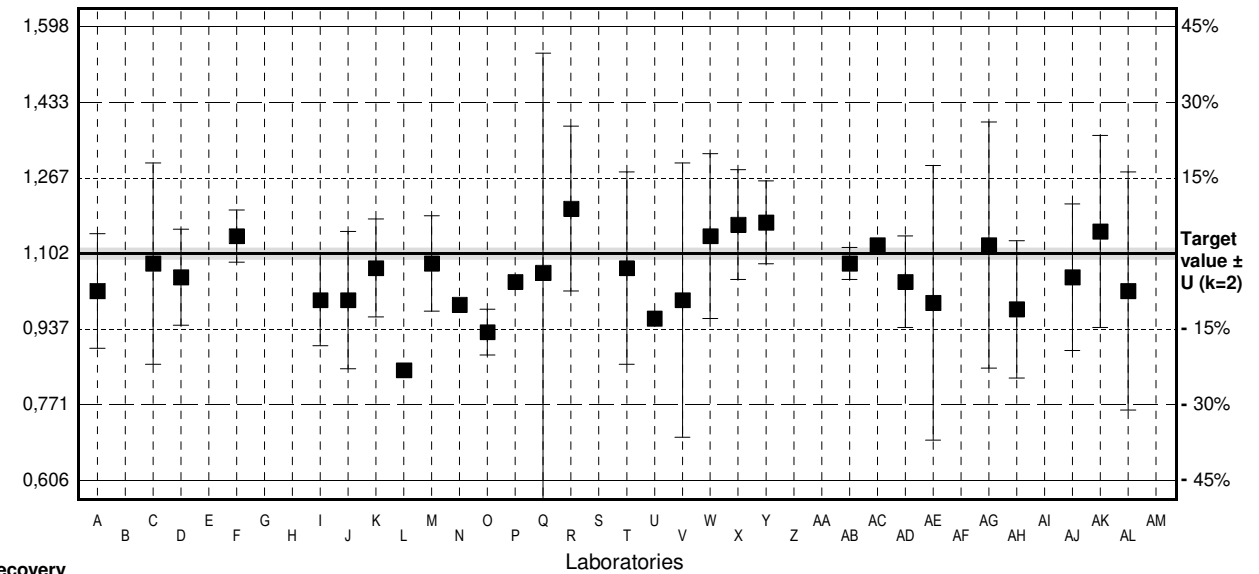
IFA result ± U (k=2) 0,87 µg/l ± 0,10 µg/l

Stability test µg/l

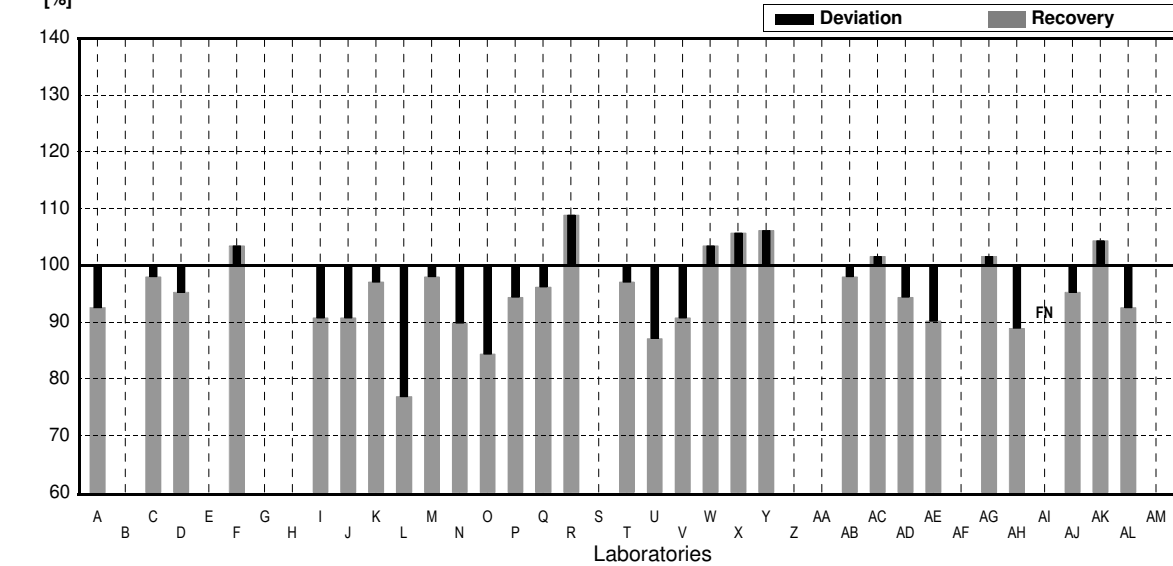
Lab Code	Result	±	Unit	Recovery	z-Score
A	1.02	0.125	µg/l	93%	-1.35
B			µg/l		
C	1.08	0.22	µg/l	98%	-0.36
D	1.05	0.105	µg/l	95%	-0.86
E			µg/l		
F	1.14	0.057	µg/l	103%	0.63
G			µg/l		
H			µg/l		
I	1.00	0.1	µg/l	91%	-1.68
J	1.000	0.150	µg/l	91%	-1.68
K	1.07	0.107	µg/l	97%	-0.53
L	0.847		µg/l	77%	-4.21
M	1.08	0.104	µg/l	98%	-0.36
N	0.99		µg/l	90%	-1.85
O	0.93	0.05	µg/l	84%	-2.84
P	1.04		µg/l	94%	-1.02
Q	1.06	0.48	µg/l	96%	-0.69
R	1.20	0.18	µg/l	109%	1.62
S			µg/l		
T	1.07	0.21	µg/l	97%	-0.53
U	0.96		µg/l	87%	-2.34
V	1.00	0.30	µg/l	91%	-1.68
W	1.14	0.18	µg/l	103%	0.63
X	1.165	0.12	µg/l	106%	1.04
Y	1.17	0.0908	µg/l	106%	1.12
Z			µg/l		
AA			µg/l		
AB	1.08	0.035	µg/l	98%	-0.36
AC	1.12		µg/l	102%	0.30
AD	1.04	0.10	µg/l	94%	-1.02
AE	0.994	0.3	µg/l	90%	-1.78
AF			µg/l		
AG	1.12	0.269	µg/l	102%	0.30
AH	0.98	0.15	µg/l	89%	-2.01
AI	<1		µg/l	FN	
AJ	1.05	0.16	µg/l	95%	-0.86
AK	1.15	0.21	µg/l	104%	0.79
AL	1.02	0.26	µg/l	93%	-1.35
AM			µg/l		

	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,054 ± 0,040	1,054 ± 0,040	µg/l
Recov. ± CI(99%)	95,6 ± 3,7	95,6 ± 3,7	%
SD between labs	0,079	0,079	µg/l
RSD between labs	7,5	7,5	%
n for calculation	29	29	

Result [µg/l]



Recovery [%]



Sample M167B

Parameter Uranium

Target value ± U (k=2) 3,53 µg/l ± 0,03 µg/l

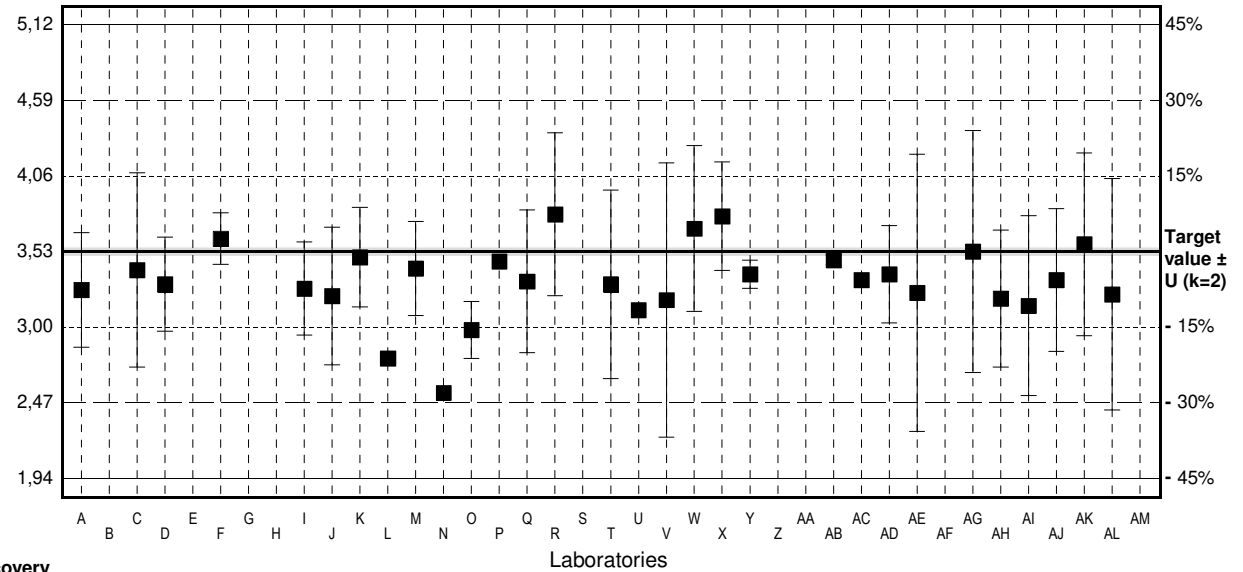
IFA result ± U (k=2) 2,80 µg/l ± 0,32 µg/l

Stability test µg/l

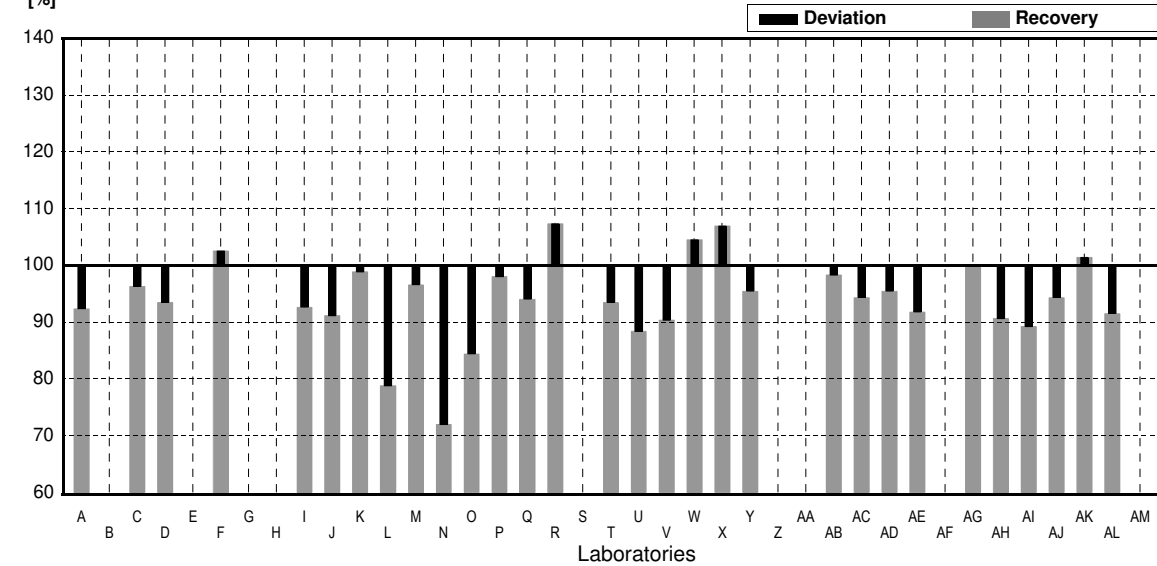
Lab Code	Result	±	Unit	Recovery	z-Score
A	3,26	0,401	µg/l	92%	-1,39
B			µg/l		
C	3,40	0,68	µg/l	96%	-0,67
D	3,30	0,33	µg/l	93%	-1,18
E			µg/l		
F	3,62	0,181	µg/l	103%	0,46
G			µg/l		
H			µg/l		
I	3,27	0,327	µg/l	93%	-1,34
J	3,218	0,483	µg/l	91%	-1,61
K	3,49	0,349	µg/l	99%	-0,21
L	2,781		µg/l	79%	-3,86
M	3,41	0,329	µg/l	97%	-0,62
N	2,54	*	µg/l	72%	-5,10
O	2,98	0,2	µg/l	84%	-2,83
P	3,46		µg/l	98%	-0,36
Q	3,32	0,50	µg/l	94%	-1,08
R	3,79	0,57	µg/l	107%	1,34
S			µg/l		
T	3,30	0,66	µg/l	93%	-1,18
U	3,12		µg/l	88%	-2,11
V	3,19	0,96	µg/l	90%	-1,75
W	3,69	0,58	µg/l	105%	0,82
X	3,777	0,38	µg/l	107%	1,27
Y	3,37	0,0992	µg/l	95%	-0,82
Z			µg/l		
AA			µg/l		
AB	3,47	0,035	µg/l	98%	-0,31
AC	3,33		µg/l	94%	-1,03
AD	3,37	0,34	µg/l	95%	-0,82
AE	3,24	0,97	µg/l	92%	-1,49
AF			µg/l		
AG	3,53	0,847	µg/l	100%	0,00
AH	3,20	0,48	µg/l	91%	-1,70
AI	3,15	0,63	µg/l	89%	-1,96
AJ	3,33	0,50	µg/l	94%	-1,03
AK	3,58	0,64	µg/l	101%	0,26
AL	3,23	0,81	µg/l	92%	-1,55
AM			µg/l		

	All results	Outliers excl.	Unit
Mean ± CI(99%)	3,32 ± 0,13	3,35 ± 0,11	µg/l
Recov. ± CI(99%)	94,2 ± 3,8	94,9 ± 3,2	%
SD between labs	0,26	0,22	µg/l
RSD between labs	7,9	6,6	%
n for calculation	30	29	

Result [µg/l]



Recovery [%]



Sample M167A

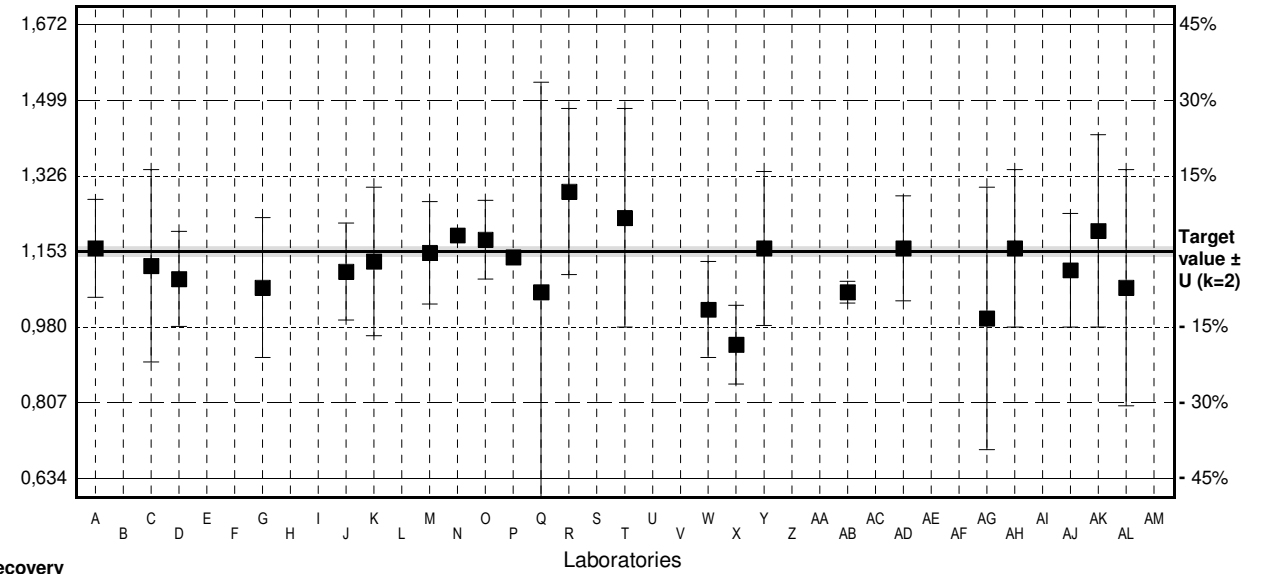
Parameter Vanadium

Target value $\pm U (k=2)$ 1,153 $\mu\text{g/l}$ \pm 0,011 $\mu\text{g/l}$
 IFA result $\pm U (k=2)$ 1,19 $\mu\text{g/l}$ \pm 0,09 $\mu\text{g/l}$
 Stability test $\mu\text{g/l}$

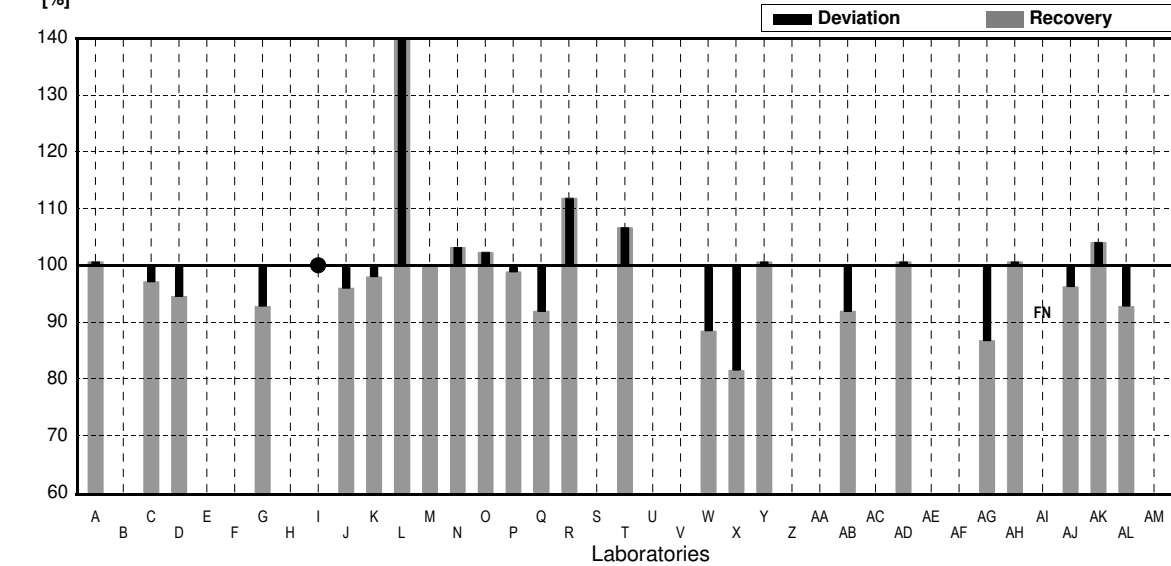
Lab Code	Result	\pm	Unit	Recovery	z-Score
A	1.16	0.112	$\mu\text{g/l}$	101%	0.08
B			$\mu\text{g/l}$		
C	1.12	0.22	$\mu\text{g/l}$	97%	-0.38
D	1.09	0.109	$\mu\text{g/l}$	95%	-0.72
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G	1.07	0.16	$\mu\text{g/l}$	93%	-0.95
H			$\mu\text{g/l}$		
I	<5		$\mu\text{g/l}$	*	
J	1.107	0.111	$\mu\text{g/l}$	96%	-0.52
K	1.13	0.170	$\mu\text{g/l}$	98%	-0.26
L	1.987	*	$\mu\text{g/l}$	172%	9.52
M	1.15	0.117	$\mu\text{g/l}$	100%	-0.03
N	1.19		$\mu\text{g/l}$	103%	0.42
O	1.18	0.09	$\mu\text{g/l}$	102%	0.31
P	1.14		$\mu\text{g/l}$	99%	-0.15
Q	1.06	0.48	$\mu\text{g/l}$	92%	-1.06
R	1.29	0.19	$\mu\text{g/l}$	112%	1.56
S			$\mu\text{g/l}$		
T	1.23	0.25	$\mu\text{g/l}$	107%	0.88
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	1.02	0.11	$\mu\text{g/l}$	88%	-1.52
X	0.940	0.09	$\mu\text{g/l}$	82%	-2.43
Y	1.16	0.176	$\mu\text{g/l}$	101%	0.08
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	1.06	0.025	$\mu\text{g/l}$	92%	-1.06
AC			$\mu\text{g/l}$		
AD	1.16	0.12	$\mu\text{g/l}$	101%	0.08
AE			$\mu\text{g/l}$		
AF			$\mu\text{g/l}$		
AG	1.00	0.30	$\mu\text{g/l}$	87%	-1.75
AH	1.16	0.18	$\mu\text{g/l}$	101%	0.08
AI	<1		$\mu\text{g/l}$	FN	
AJ	1.11	0.13	$\mu\text{g/l}$	96%	-0.49
AK	1.20	0.22	$\mu\text{g/l}$	104%	0.54
AL	1.07	0.27	$\mu\text{g/l}$	93%	-0.95
AM			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	1,158 \pm 0,110	1,122 \pm 0,046	$\mu\text{g/l}$
Recov. \pm CI(99%)	100,4 \pm 9,6	97,3 \pm 4,0	%
SD between labs	0,192	0,078	$\mu\text{g/l}$
RSD between labs	16,6	7,0	%
n for calculation	24	23	

Result [$\mu\text{g/l}$]



Recovery [%]



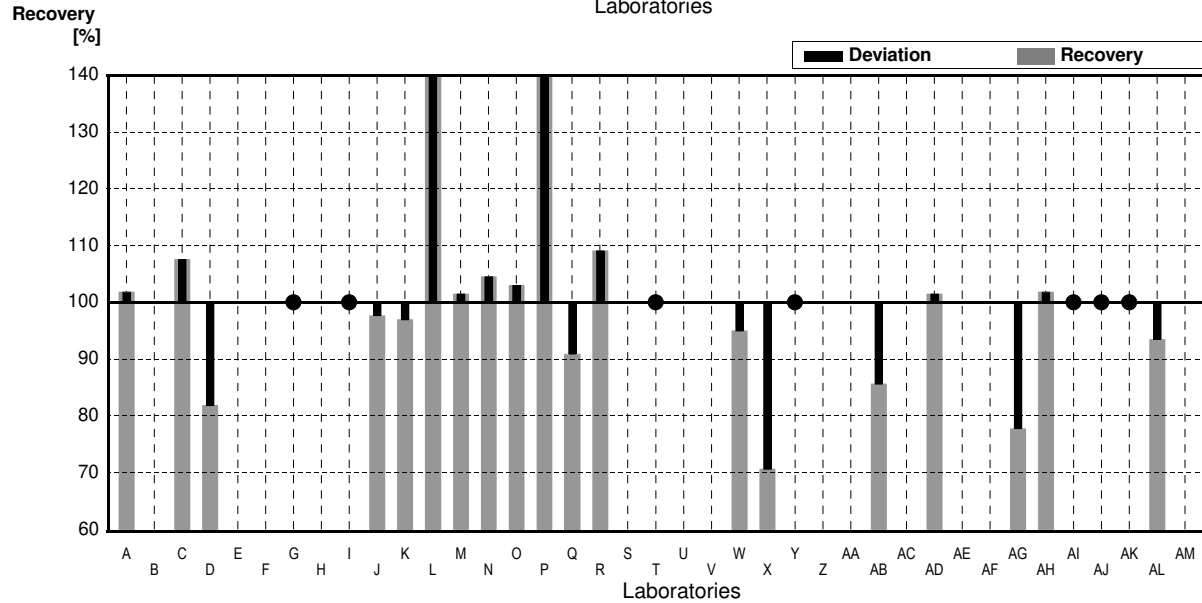
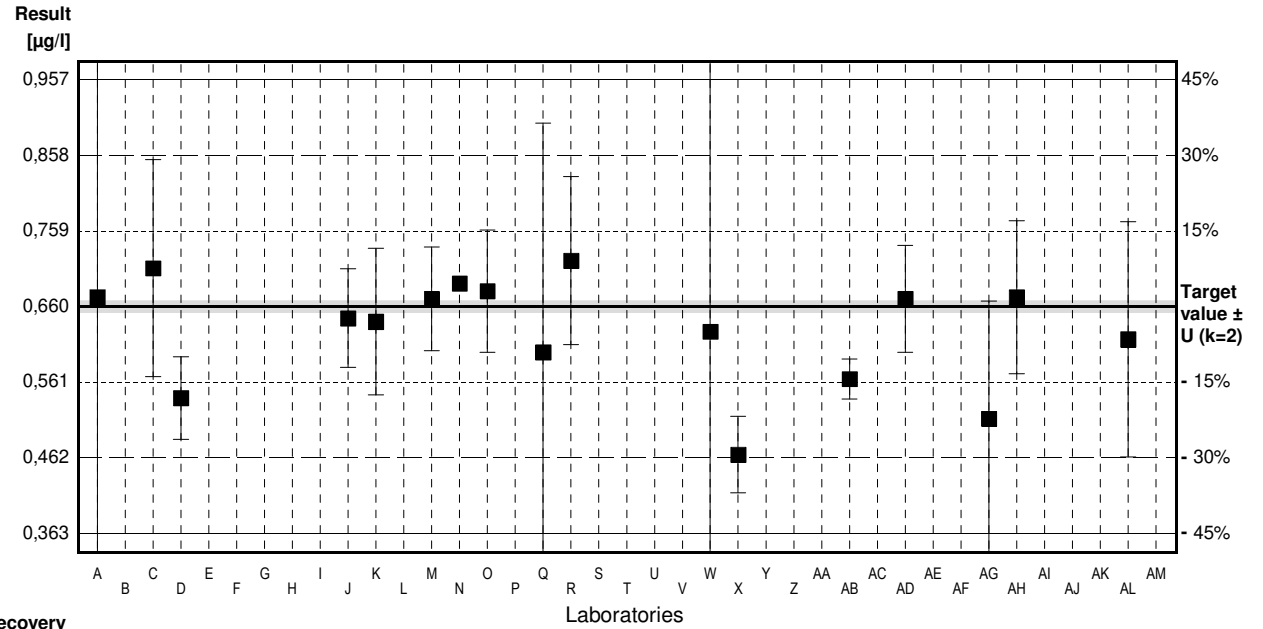
Sample M167B

Parameter Vanadium

Target value $\pm U$ (k=2) 0,660 $\mu\text{g/l}$ \pm 0,008 $\mu\text{g/l}$
 IFA result $\pm U$ (k=2) 0,68 $\mu\text{g/l}$ \pm 0,05 $\mu\text{g/l}$
 Stability test $\mu\text{g/l}$

Lab Code	Result	\pm	Unit	Recovery	z-Score
A	0.672	0.65	$\mu\text{g/l}$	102%	0.24
B			$\mu\text{g/l}$		
C	0.710	0.142	$\mu\text{g/l}$	108%	1.00
D	0.54	0.054	$\mu\text{g/l}$	82%	-2.39
E			$\mu\text{g/l}$		
F			$\mu\text{g/l}$		
G	<1		$\mu\text{g/l}$	*	
H			$\mu\text{g/l}$		
I	<5		$\mu\text{g/l}$	*	
J	0.6446	0.0645	$\mu\text{g/l}$	98%	-0.31
K	0.64	0.096	$\mu\text{g/l}$	97%	-0.40
L	2.465 *		$\mu\text{g/l}$	373%	35.98
M	0.67	0.068	$\mu\text{g/l}$	102%	0.20
N	0.69		$\mu\text{g/l}$	105%	0.60
O	0.68	0.08	$\mu\text{g/l}$	103%	0.40
P	5.95 *		$\mu\text{g/l}$	902%	105.46
Q	0.60	0.30	$\mu\text{g/l}$	91%	-1.20
R	0.72	0.11	$\mu\text{g/l}$	109%	1.20
S			$\mu\text{g/l}$		
T	<1		$\mu\text{g/l}$	*	
U			$\mu\text{g/l}$		
V			$\mu\text{g/l}$		
W	0.627	0.946	$\mu\text{g/l}$	95%	-0.66
X	0.466 *	0.05	$\mu\text{g/l}$	71%	-3.87
Y	<1		$\mu\text{g/l}$	*	
Z			$\mu\text{g/l}$		
AA			$\mu\text{g/l}$		
AB	0.565	0.026	$\mu\text{g/l}$	86%	-1.89
AC			$\mu\text{g/l}$		
AD	0.67	0.07	$\mu\text{g/l}$	102%	0.20
AE			$\mu\text{g/l}$		
AF			$\mu\text{g/l}$		
AG	0.513	0.154	$\mu\text{g/l}$	78%	-2.93
AH	0.672	0.10	$\mu\text{g/l}$	102%	0.24
AI	<1		$\mu\text{g/l}$	*	
AJ	<1		$\mu\text{g/l}$	*	
AK	<1.0		$\mu\text{g/l}$	*	
AL	0.617	0.154	$\mu\text{g/l}$	93%	-0.86
AM			$\mu\text{g/l}$		

	All results	Outliers excl.	Unit
Mean \pm CI(99%)	1,006 \pm 0,840	0,639 \pm 0,044	$\mu\text{g/l}$
Recov. \pm CI(99%)	152,4 \pm 127,2	96,9 \pm 6,7	%
SD between labs	1,271	0,060	$\mu\text{g/l}$
RSD between labs	126,3	9,3	%
n for calculation	19	16	



Sample M167A

Parameter Zinc

Target value ± U (k=2) 18,8 µg/l ± 1,0 µg/l

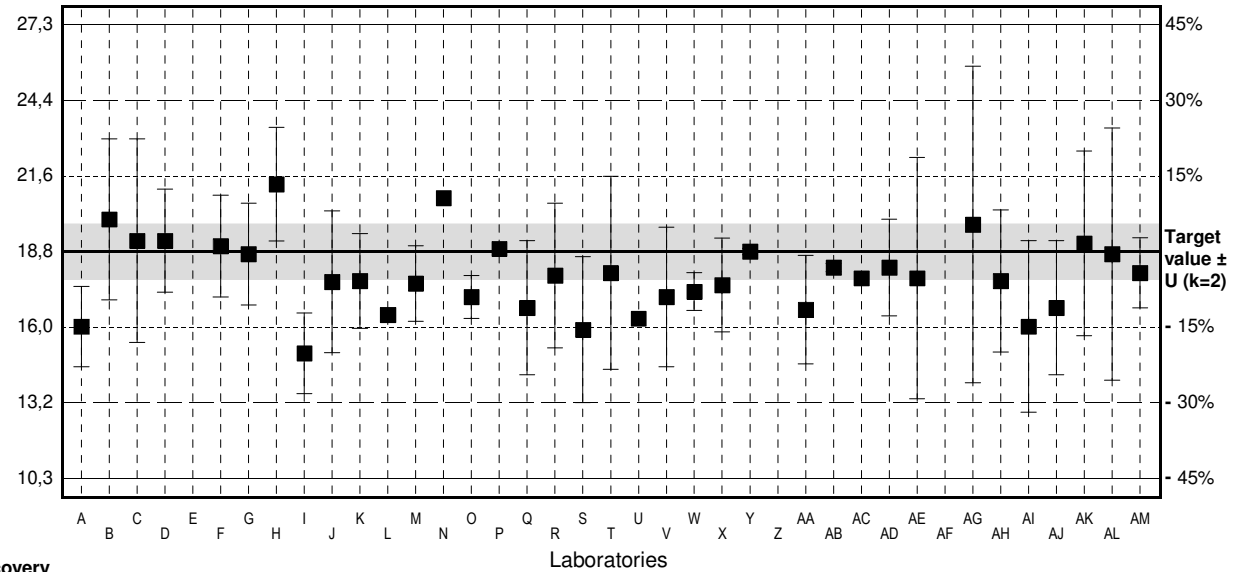
IFA result ± U (k=2) 21,5 µg/l ± 2,6 µg/l

Stability test µg/l

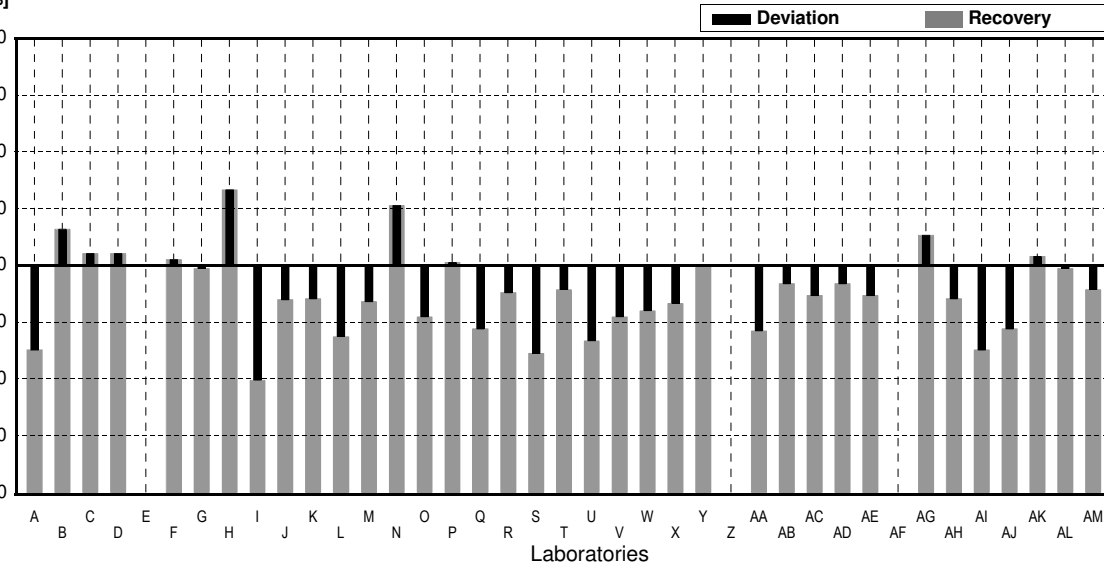
Lab Code	Result	±	Unit	Recovery	z-Score
A	16.0	1.50	µg/l	85%	-2.13
B	20.0	3.0	µg/l	106%	0.91
C	19.2	3.8	µg/l	102%	0.30
D	19.2	1.92	µg/l	102%	0.30
E			µg/l		
F	19.0	1.90	µg/l	101%	0.15
G	18.7	1.9	µg/l	99%	-0.08
H	21.31	2.12	µg/l	113%	1.91
I	15.0	1.5	µg/l	80%	-2.89
J	17.67	2.64	µg/l	94%	-0.86
K	17.7	1.77	µg/l	94%	-0.84
L	16.438		µg/l	87%	-1.79
M	17.6	1.410	µg/l	94%	-0.91
N	20.79		µg/l	111%	1.51
O	17.1	0.8	µg/l	91%	-1.29
P	18.9		µg/l	101%	0.08
Q	16.7	2.5	µg/l	89%	-1.60
R	17.9	2.7	µg/l	95%	-0.68
S	15.88	2.72	µg/l	84%	-2.22
T	18.0	3.6	µg/l	96%	-0.61
U	16.3		µg/l	87%	-1.90
V	17.1	2.6	µg/l	91%	-1.29
W	17.3	0.7	µg/l	92%	-1.14
X	17.544	1.75	µg/l	93%	-0.95
Y	18.8	0.120	µg/l	100%	0.00
Z			µg/l		
AA	16.63	2.02	µg/l	88%	-1.65
AB	18.2	0.153	µg/l	97%	-0.46
AC	17.8		µg/l	95%	-0.76
AD	18.2	1.8	µg/l	97%	-0.46
AE	17.8	4.5	µg/l	95%	-0.76
AF			µg/l		
AG	19.8	5.9	µg/l	105%	0.76
AH	17.7	2.65	µg/l	94%	-0.84
AI	16.0	3.2	µg/l	85%	-2.13
AJ	16.7	2.5	µg/l	89%	-1.60
AK	19.1	3.44	µg/l	102%	0.23
AL	18.7	4.7	µg/l	99%	-0.08
AM	18.0	1.31	µg/l	96%	-0.61

	All results	Outliers excl.	Unit
Mean ± CI(99%)	17,9 ± 0,6	17,9 ± 0,6	µg/l
Recov. ± CI(99%)	95,3 ± 3,4	95,3 ± 3,4	%
SD between labs	1,4	1,4	µg/l
RSD between labs	7,8	7,8	%
n for calculation	36	36	

Result [µg/l]



Recovery [%]



Sample M167B

Parameter Zinc

Target value ± U (k=2) 106 µg/l ± 3 µg/l

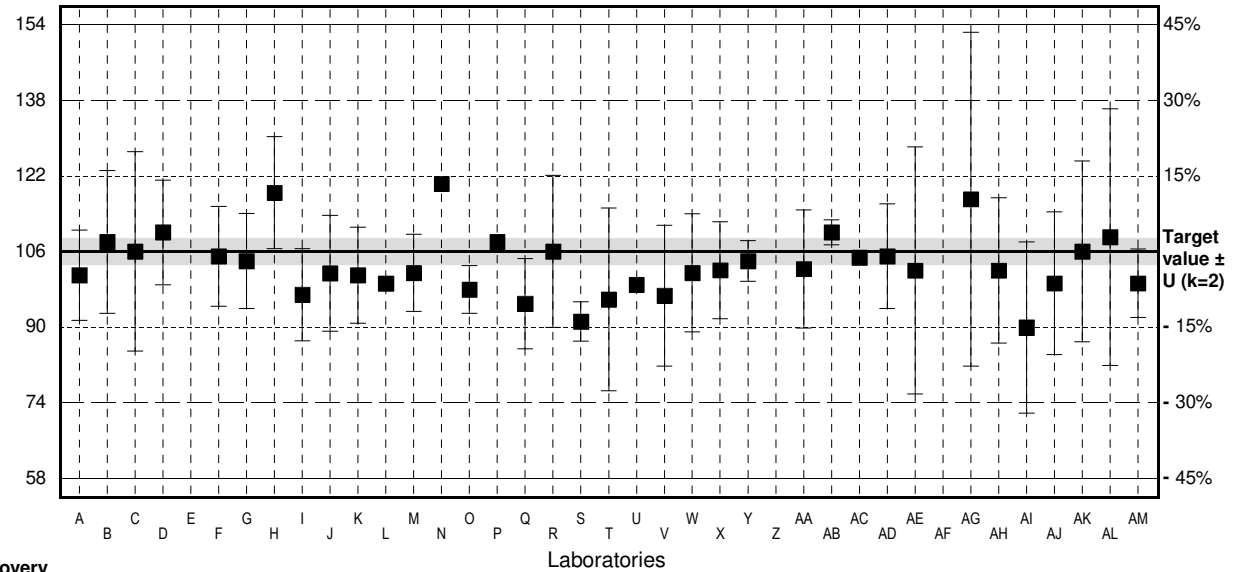
IFA result ± U (k=2) 126 µg/l ± 13 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	101	9.48	µg/l	95%	-0.67
B	108	15	µg/l	102%	0.27
C	106	21	µg/l	100%	0.00
D	110	11.0	µg/l	104%	0.54
E			µg/l		
F	105	10.5	µg/l	99%	-0.13
G	104	10	µg/l	98%	-0.27
H	118.35 *	11.75	µg/l	112%	1.66
I	96.9	9.69	µg/l	91%	-1.23
J	101.4	12.2	µg/l	96%	-0.62
K	101	10.1	µg/l	95%	-0.67
L	99.233		µg/l	94%	-0.91
M	101.5	8.130	µg/l	96%	-0.61
N	120.22 *		µg/l	113%	1.92
O	98.0	5	µg/l	92%	-1.08
P	108.0		µg/l	102%	0.27
Q	95.0	9.5	µg/l	90%	-1.48
R	106	16	µg/l	100%	0.00
S	91.27	4.12	µg/l	86%	-1.99
T	95.9	19.2	µg/l	90%	-1.36
U	99		µg/l	93%	-0.94
V	96.7	14.8	µg/l	91%	-1.25
W	101.5	12.4	µg/l	96%	-0.61
X	102.056	10.2	µg/l	96%	-0.53
Y	104	4.27	µg/l	98%	-0.27
Z			µg/l		
AA	102.33	12.41	µg/l	97%	-0.49
AB	110	2.646	µg/l	104%	0.54
AC	104.7		µg/l	99%	-0.18
AD	105	11	µg/l	99%	-0.13
AE	102	26	µg/l	96%	-0.54
AF			µg/l		
AG	117	35.1	µg/l	110%	1.48
AH	102	15.3	µg/l	96%	-0.54
AI	90.0	18	µg/l	85%	-2.16
AJ	99.3	15	µg/l	94%	-0.90
AK	106	19	µg/l	100%	0.00
AL	109	27	µg/l	103%	0.40
AM	99.3	7.21	µg/l	94%	-0.90

	All results	Outliers excl.	Unit
Mean ± CI(99%)	103 ± 3	102 ± 3	µg/l
Recov. ± CI(99%)	97,4 ± 2,9	96,5 ± 2,4	%
SD between labs	7	6	µg/l
RSD between labs	6,4	5,4	%
n for calculation	36	34	

Result [µg/l]



Recovery [%]

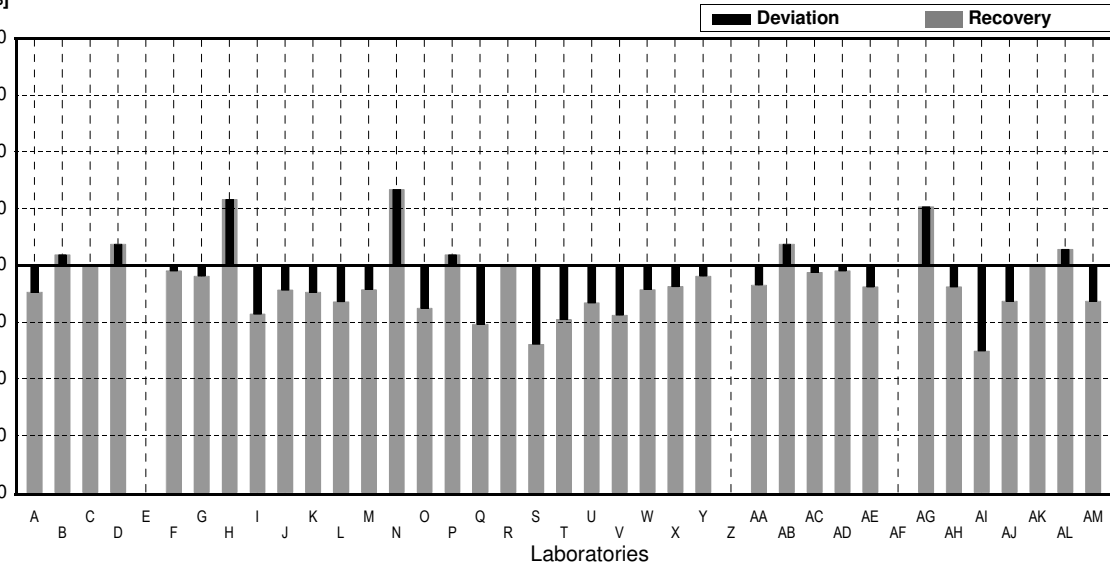


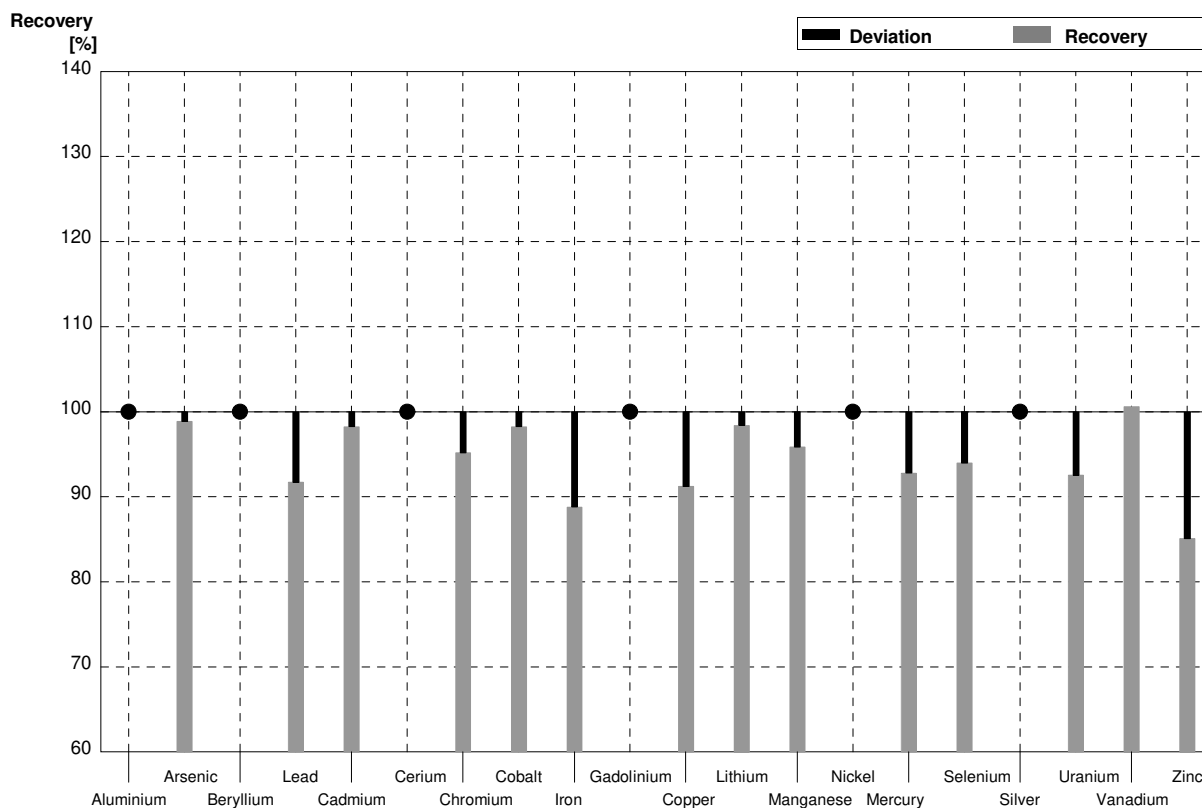
Illustration of Results Laboratory Oriented Part

Round M167
Metals

Sample Dispatch: 22 May 2023

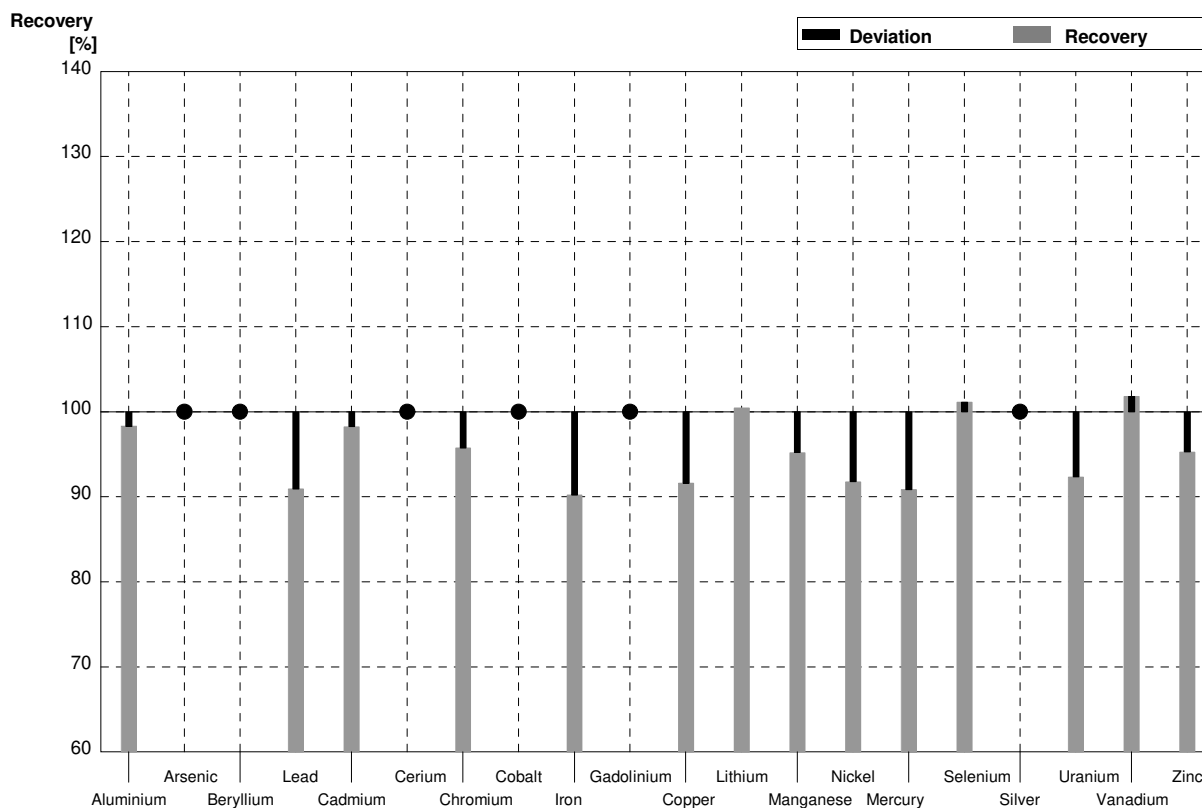
Sample M167A
Laboratory A

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	<20		µg/l	•
Arsenic	3,54	0,03	3,50	0,532	µg/l	99%
Beryllium	0,1299	0,0018	<5		µg/l	•
Lead	8,71	0,05	7,99	1,10	µg/l	92%
Cadmium	1,435	0,012	1,41	0,214	µg/l	98%
Cerium	1,129	0,011	<2		µg/l	•
Chromium	1,544	0,017	1,47	0,210	µg/l	95%
Cobalt	1,791	0,014	1,76	0,175	µg/l	98%
Iron	15,31	0,17	13,6	1,76	µg/l	89%
Gadolinium	0,0818	0,0012	<5		µg/l	•
Copper	7,66	0,05	6,99	0,704	µg/l	91%
Lithium	6,95	0,06	6,84	1,051	µg/l	98%
Manganese	58,3	0,4	55,9	13,35	µg/l	96%
Nickel	0,81	0,02	<1		µg/l	•
Mercury	1,153	0,017	1,07	0,161	µg/l	93%
Selenium	2,50	0,02	2,35	0,272	µg/l	94%
Silver	0,186	0,007	<1		µg/l	•
Uranium	1,102	0,012	1,02	0,125	µg/l	93%
Vanadium	1,153	0,011	1,16	0,112	µg/l	101%
Zinc	18,8	1,0	16,0	1,50	µg/l	85%



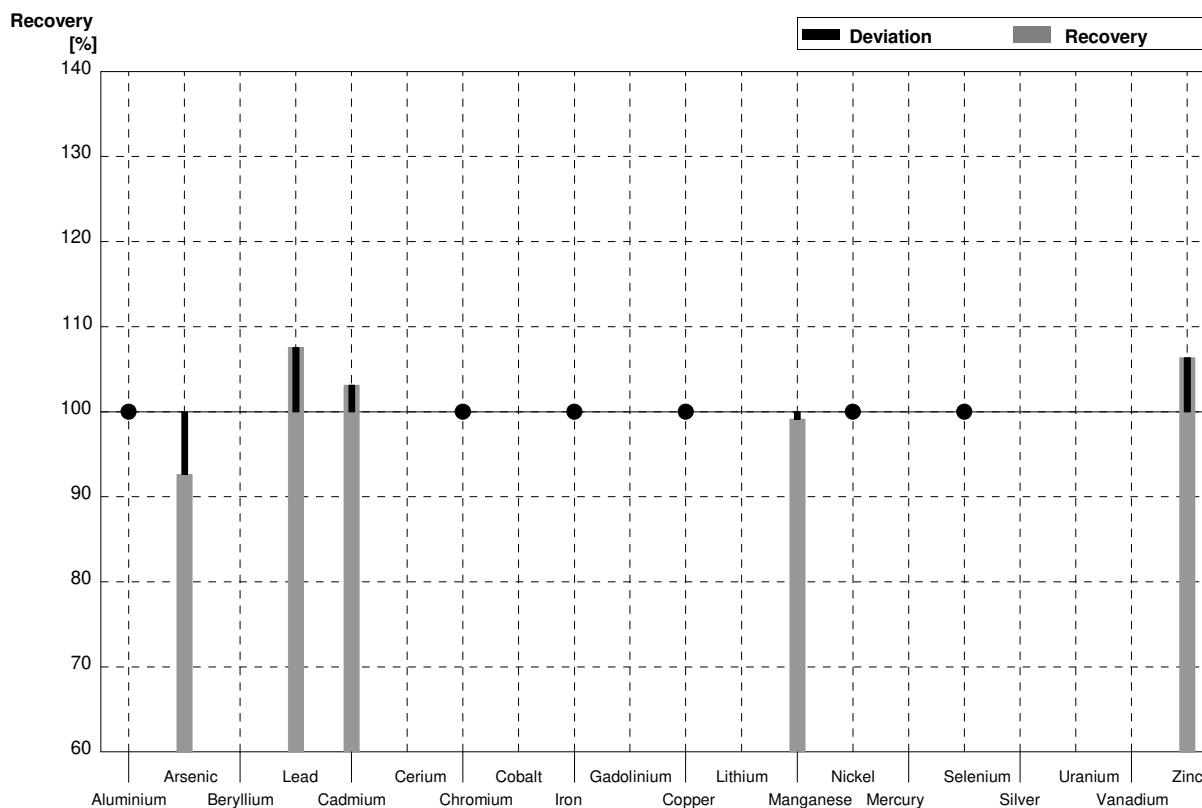
Sample M167B
Laboratory A

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	23,5	2,12	µg/l	98%
Arsenic	0,857	0,012	<1		µg/l	•
Beryllium	0,1706	0,0018	<5		µg/l	•
Lead	3,53	0,03	3,21	0,443	µg/l	91%
Cadmium	2,89	0,02	2,84	0,432	µg/l	98%
Cerium	2,013	0,016	<2		µg/l	•
Chromium	4,95	0,04	4,74	0,679	µg/l	96%
Cobalt	0,461	0,006	<1		µg/l	•
Iron	37,9	0,2	34,2	4,42	µg/l	90%
Gadolinium	0,0595	0,0011	<5		µg/l	•
Copper	6,09	0,04	5,58	0,561	µg/l	92%
Lithium	2,11	0,02	2,12	0,325	µg/l	100%
Manganese	6,90	0,05	6,57	1,568	µg/l	95%
Nickel	3,53	0,03	3,24	0,366	µg/l	92%
Mercury	0,702	0,016	0,638	0,096	µg/l	91%
Selenium	1,206	0,019	1,22	0,141	µg/l	101%
Silver	0,075	0,009	<1		µg/l	•
Uranium	3,53	0,03	3,26	0,401	µg/l	92%
Vanadium	0,660	0,008	0,672	0,65	µg/l	102%
Zinc	106	3	101	9,48	µg/l	95%



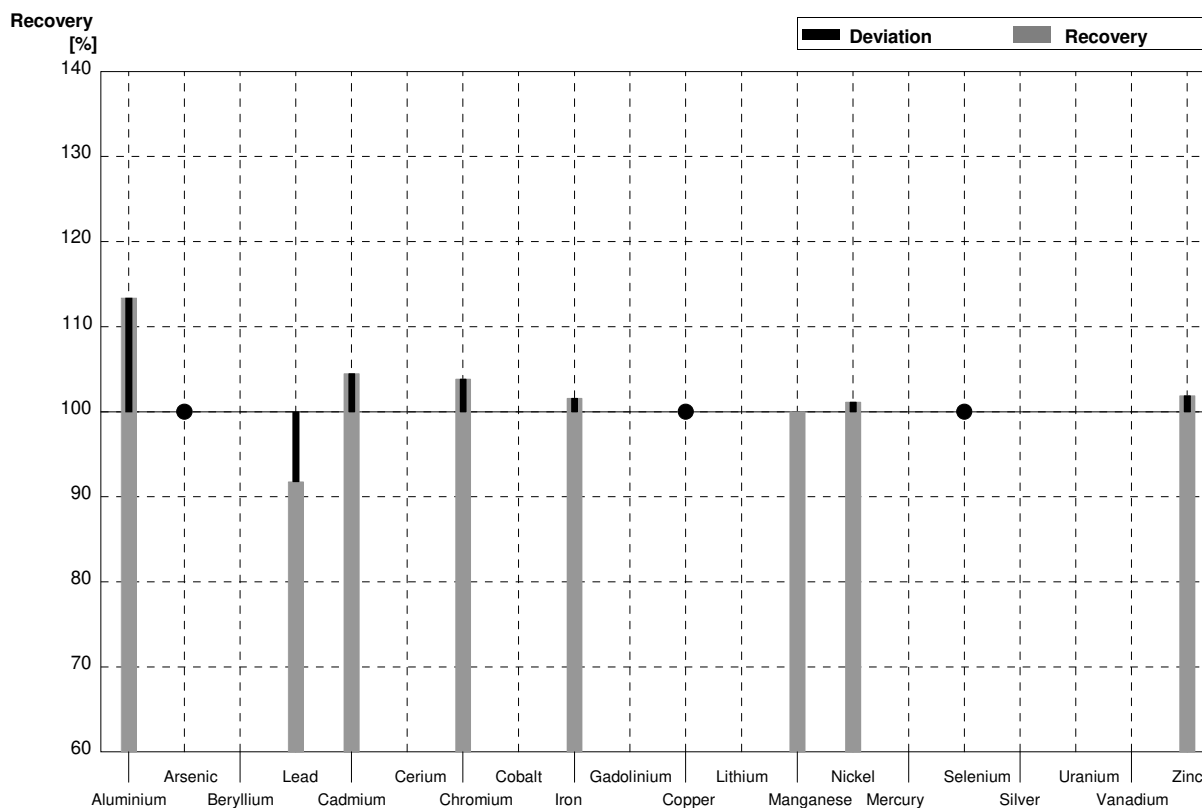
Sample M167A
Laboratory B

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	<15		µg/l	•
Arsenic	3,54	0,03	3,28	0,5	µg/l	93%
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	9,37	1,6	µg/l	108%
Cadmium	1,435	0,012	1,48	0,1	µg/l	103%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	<5		µg/l	•
Cobalt	1,791	0,014			µg/l	
Iron	15,31	0,17	<30		µg/l	•
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	<10		µg/l	•
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4	57,8	5	µg/l	99%
Nickel	0,81	0,02	<2		µg/l	•
Mercury	1,153	0,017			µg/l	
Selenium	2,50	0,02	<5		µg/l	•
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012			µg/l	
Vanadium	1,153	0,011			µg/l	
Zinc	18,8	1,0	20,0	3,0	µg/l	106%



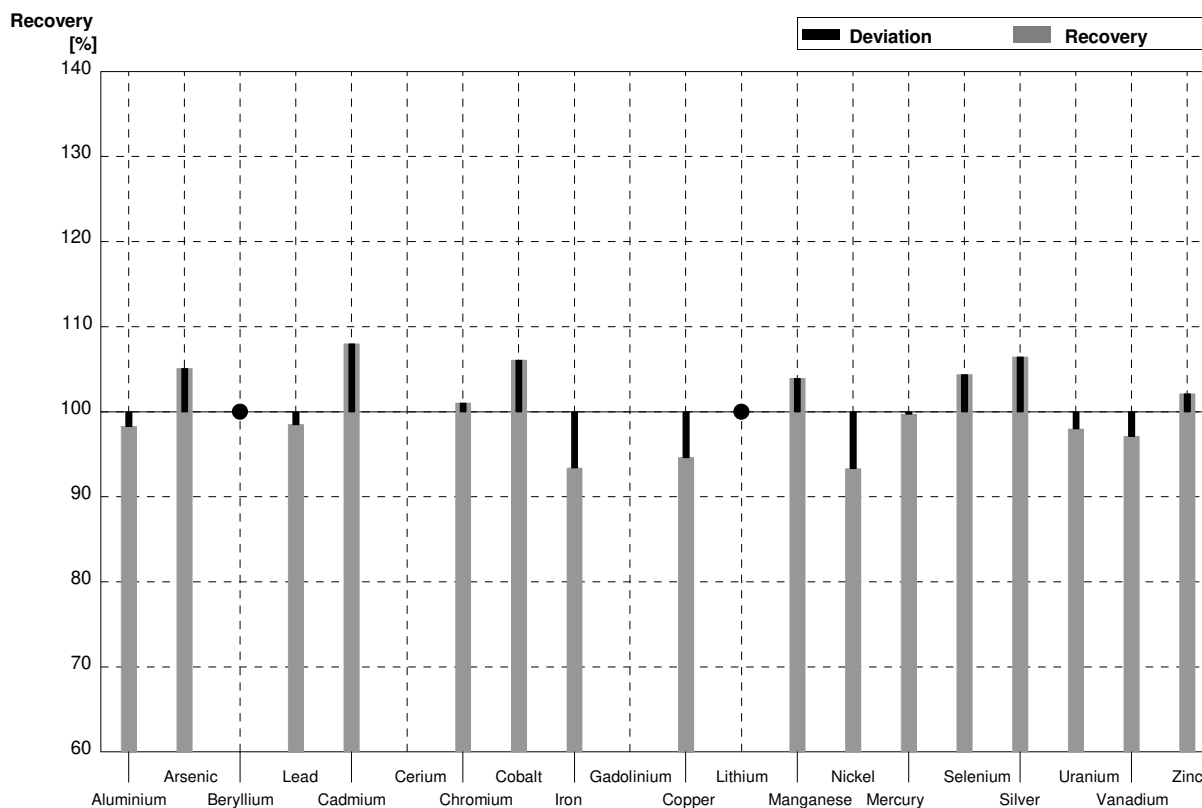
Sample M167B
Laboratory B

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	27,1	4	µg/l	113%
Arsenic	0,857	0,012	<2		µg/l	•
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	3,24	0,6	µg/l	92%
Cadmium	2,89	0,02	3,02	0,2	µg/l	104%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	5,14	0,4	µg/l	104%
Cobalt	0,461	0,006			µg/l	
Iron	37,9	0,2	38,5	4	µg/l	102%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	<10		µg/l	•
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05	6,9	3	µg/l	100%
Nickel	3,53	0,03	3,57	0,4	µg/l	101%
Mercury	0,702	0,016			µg/l	
Selenium	1,206	0,019	<5		µg/l	•
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03			µg/l	
Vanadium	0,660	0,008			µg/l	
Zinc	106	3	108	15	µg/l	102%



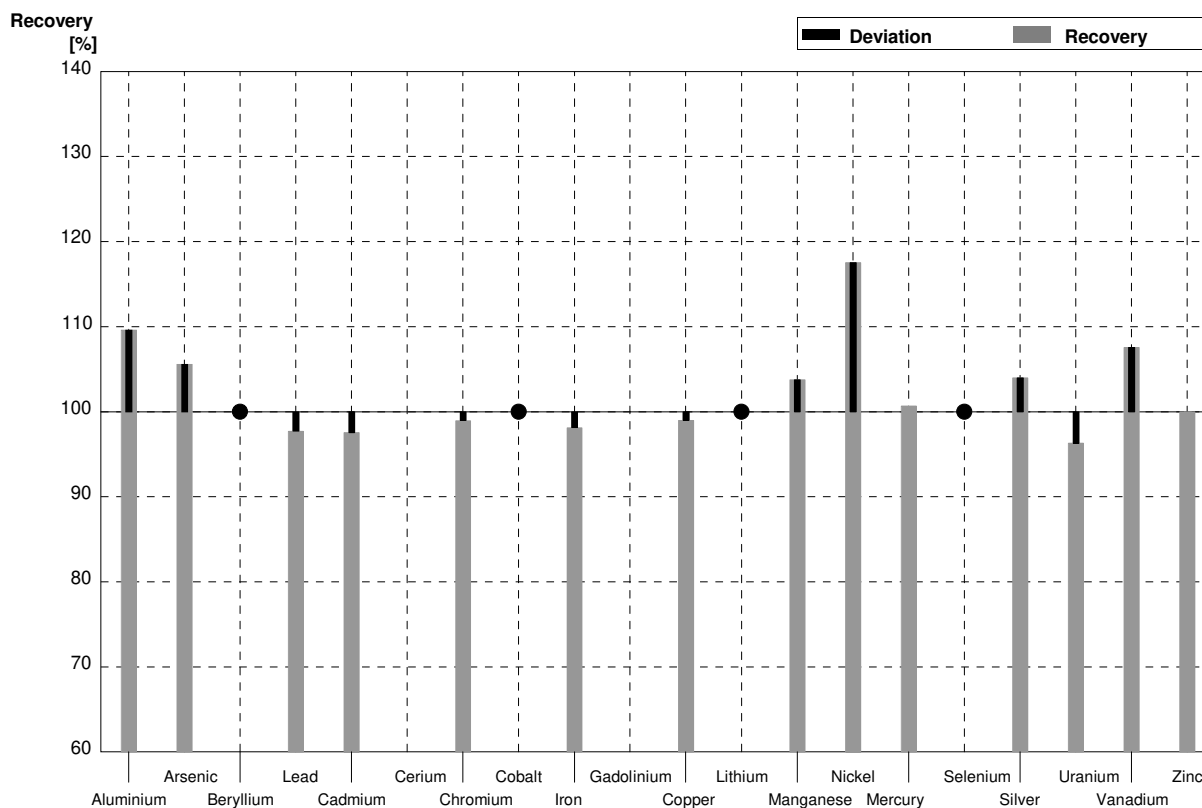
Sample M167A
Laboratory C

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,46	1,49	µg/l	98%
Arsenic	3,54	0,03	3,72	0,74	µg/l	105%
Beryllium	0,1299	0,0018	<1		µg/l	•
Lead	8,71	0,05	8,58	1,72	µg/l	99%
Cadmium	1,435	0,012	1,55	0,31	µg/l	108%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,56	0,31	µg/l	101%
Cobalt	1,791	0,014	1,90	0,38	µg/l	106%
Iron	15,31	0,17	14,3	2,9	µg/l	93%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	7,25	1,45	µg/l	95%
Lithium	6,95	0,06	<100		µg/l	•
Manganese	58,3	0,4	60,6	12,1	µg/l	104%
Nickel	0,81	0,02	0,756	0,151	µg/l	93%
Mercury	1,153	0,017	1,15	0,23	µg/l	100%
Selenium	2,50	0,02	2,61	0,52	µg/l	104%
Silver	0,186	0,007	0,198	0,040	µg/l	106%
Uranium	1,102	0,012	1,08	0,22	µg/l	98%
Vanadium	1,153	0,011	1,12	0,22	µg/l	97%
Zinc	18,8	1,0	19,2	3,8	µg/l	102%



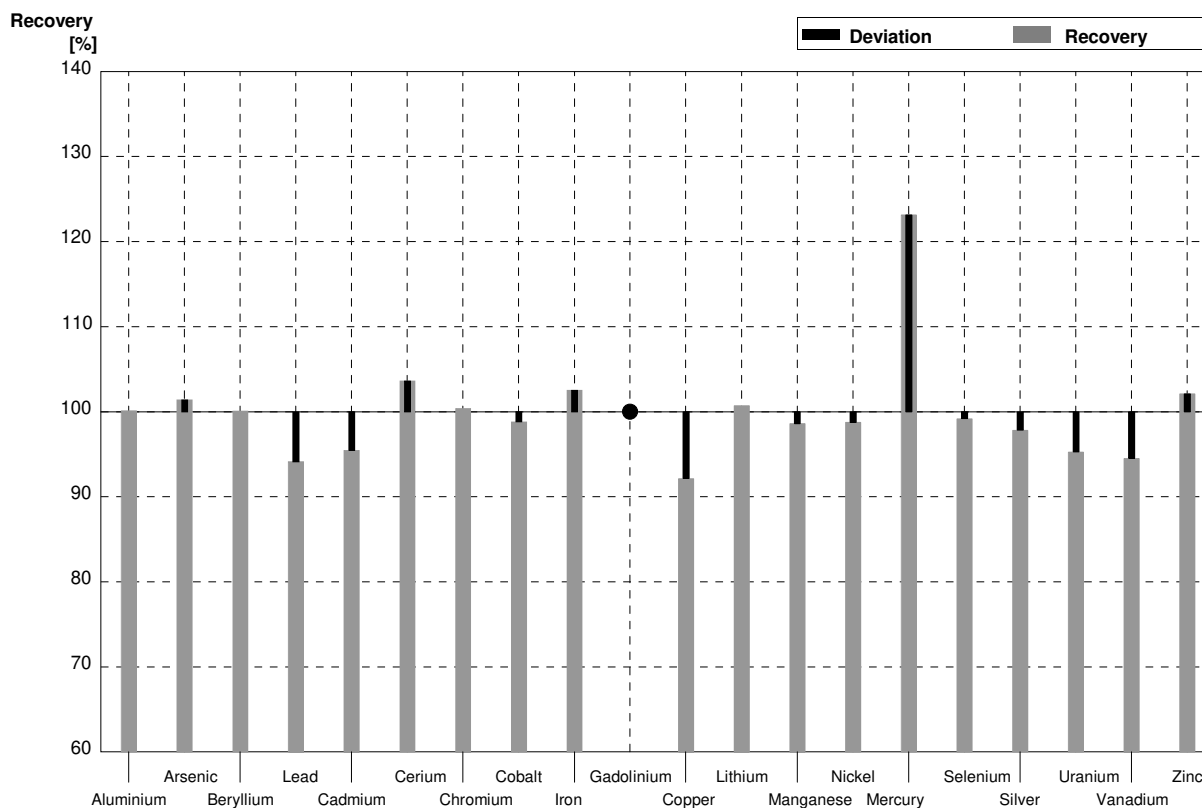
Sample M167B
Laboratory C

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	26,2	5,2	µg/l	110%
Arsenic	0,857	0,012	0,905	0,181	µg/l	106%
Beryllium	0,1706	0,0018	<1		µg/l	•
Lead	3,53	0,03	3,45	0,69	µg/l	98%
Cadmium	2,89	0,02	2,82	0,56	µg/l	98%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	4,90	0,98	µg/l	99%
Cobalt	0,461	0,006	<1		µg/l	•
Iron	37,9	0,2	37,2	7,4	µg/l	98%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	6,03	1,20	µg/l	99%
Lithium	2,11	0,02	<100		µg/l	•
Manganese	6,90	0,05	7,16	1,43	µg/l	104%
Nickel	3,53	0,03	4,15	0,83	µg/l	118%
Mercury	0,702	0,016	0,707	0,141	µg/l	101%
Selenium	1,206	0,019	<2		µg/l	•
Silver	0,075	0,009	0,078	0,016	µg/l	104%
Uranium	3,53	0,03	3,40	0,68	µg/l	96%
Vanadium	0,660	0,008	0,710	0,142	µg/l	108%
Zinc	106	3	106	21	µg/l	100%



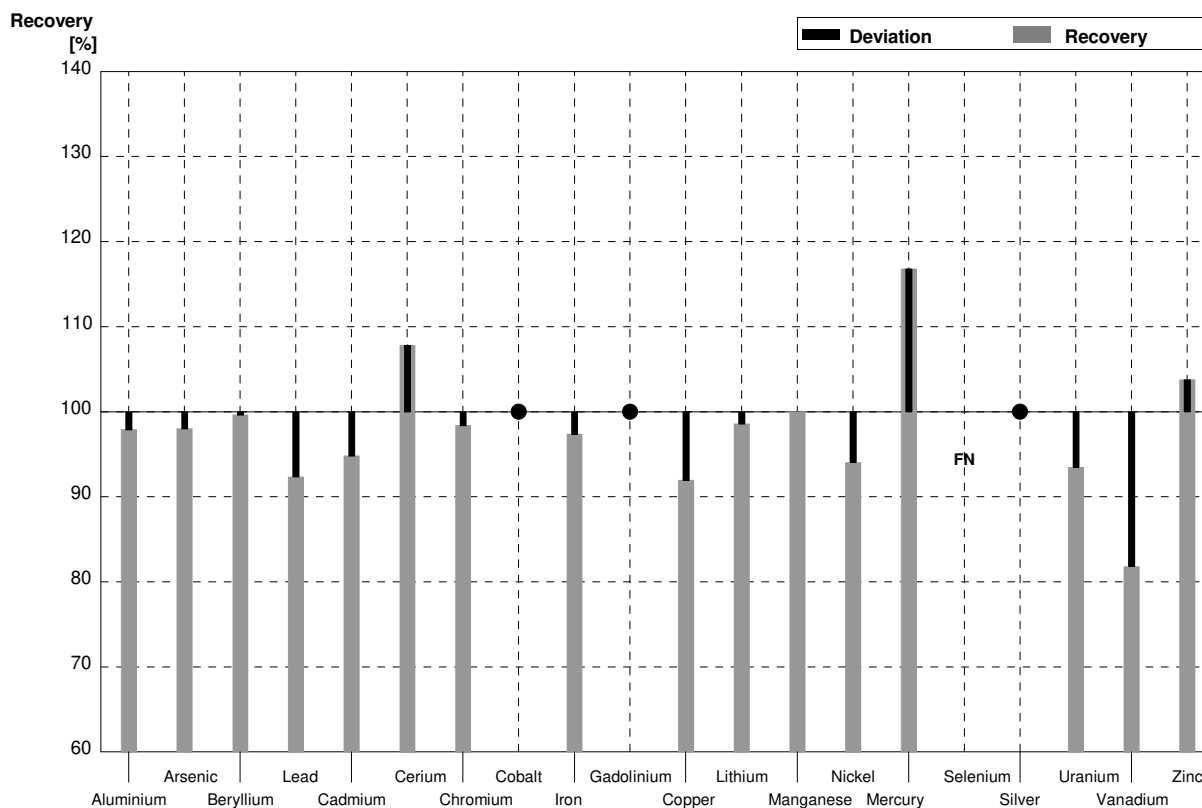
Sample M167A
Laboratory D

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,6	0,76	µg/l	100%
Arsenic	3,54	0,03	3,59	0,539	µg/l	101%
Beryllium	0,1299	0,0018	0,130	0,013	µg/l	100%
Lead	8,71	0,05	8,2	0,82	µg/l	94%
Cadmium	1,435	0,012	1,37	0,137	µg/l	95%
Cerium	1,129	0,011	1,17	0,117	µg/l	104%
Chromium	1,544	0,017	1,55	0,155	µg/l	100%
Cobalt	1,791	0,014	1,77	0,177	µg/l	99%
Iron	15,31	0,17	15,7	0,157	µg/l	103%
Gadolinium	0,0818	0,0012	<1,0		µg/l	•
Copper	7,66	0,05	7,06	0,706	µg/l	92%
Lithium	6,95	0,06	7,0	0,7	µg/l	101%
Manganese	58,3	0,4	57,5	5,75	µg/l	99%
Nickel	0,81	0,02	0,80	0,080	µg/l	99%
Mercury	1,153	0,017	1,42	0,142	µg/l	123%
Selenium	2,50	0,02	2,48	0,372	µg/l	99%
Silver	0,186	0,007	0,182	0,0182	µg/l	98%
Uranium	1,102	0,012	1,05	0,105	µg/l	95%
Vanadium	1,153	0,011	1,09	0,109	µg/l	95%
Zinc	18,8	1,0	19,2	1,92	µg/l	102%



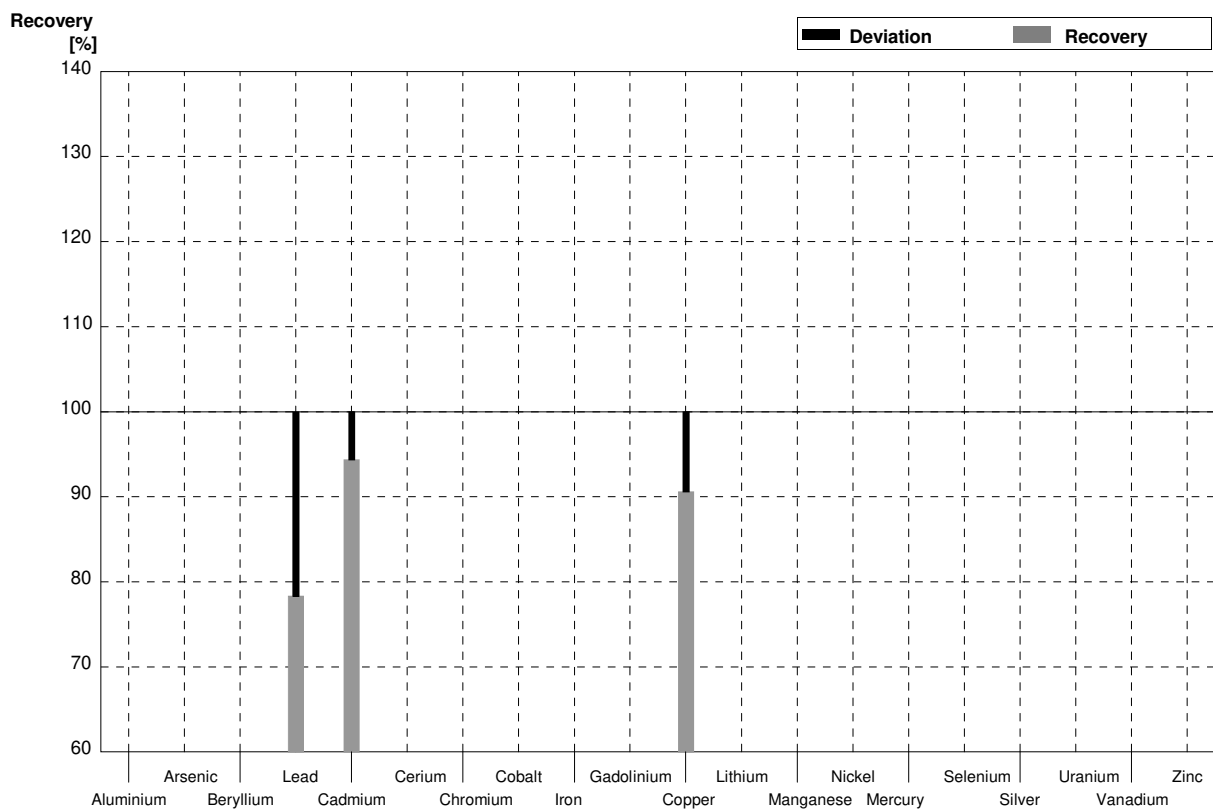
Sample M167B
Laboratory D

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	23,4	2,34	µg/l	98%
Arsenic	0,857	0,012	0,84	0,126	µg/l	98%
Beryllium	0,1706	0,0018	0,170	0,017	µg/l	100%
Lead	3,53	0,03	3,26	0,326	µg/l	92%
Cadmium	2,89	0,02	2,74	0,274	µg/l	95%
Cerium	2,013	0,016	2,17	0,217	µg/l	108%
Chromium	4,95	0,04	4,87	0,487	µg/l	98%
Cobalt	0,461	0,006	<1,0		µg/l	•
Iron	37,9	0,2	36,9	3,69	µg/l	97%
Gadolinium	0,0595	0,0011	<1,0		µg/l	•
Copper	6,09	0,04	5,6	0,56	µg/l	92%
Lithium	2,11	0,02	2,08	0,208	µg/l	99%
Manganese	6,90	0,05	6,9	0,69	µg/l	100%
Nickel	3,53	0,03	3,32	0,332	µg/l	94%
Mercury	0,702	0,016	0,82	0,082	µg/l	117%
Selenium	1,206	0,019	<1,0		µg/l	FN
Silver	0,075	0,009	<0,1		µg/l	•
Uranium	3,53	0,03	3,30	0,33	µg/l	93%
Vanadium	0,660	0,008	0,54	0,054	µg/l	82%
Zinc	106	3	110	11,0	µg/l	104%



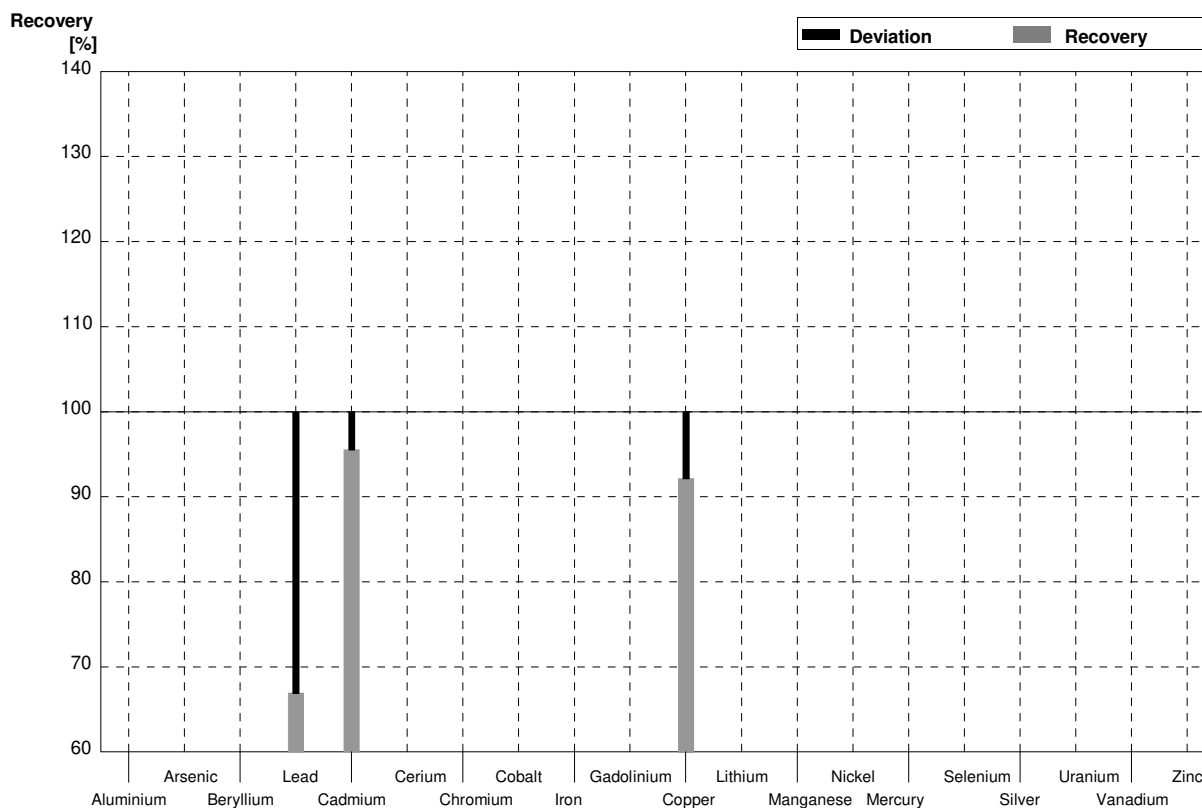
Sample M167A
Laboratory E

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14			µg/l	
Arsenic	3,54	0,03			µg/l	
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	6,823		µg/l	78%
Cadmium	1,435	0,012	1,354		µg/l	94%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017			µg/l	
Cobalt	1,791	0,014			µg/l	
Iron	15,31	0,17			µg/l	
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	6,941		µg/l	91%
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4			µg/l	
Nickel	0,81	0,02			µg/l	
Mercury	1,153	0,017			µg/l	
Selenium	2,50	0,02			µg/l	
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012			µg/l	
Vanadium	1,153	0,011			µg/l	
Zinc	18,8	1,0			µg/l	



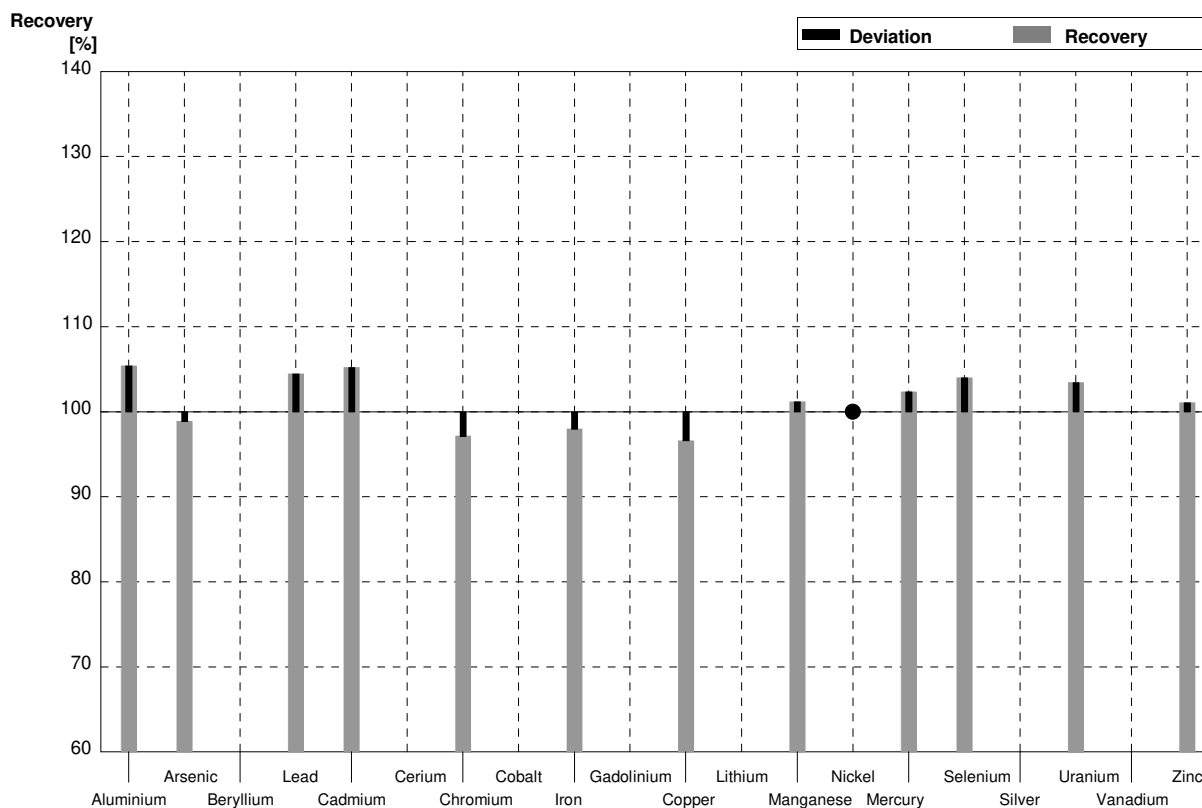
Sample M167B
Laboratory E

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4			µg/l	
Arsenic	0,857	0,012			µg/l	
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	2,363		µg/l	67%
Cadmium	2,89	0,02	2,761		µg/l	96%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04			µg/l	
Cobalt	0,461	0,006			µg/l	
Iron	37,9	0,2			µg/l	
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	5,612		µg/l	92%
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05			µg/l	
Nickel	3,53	0,03			µg/l	
Mercury	0,702	0,016			µg/l	
Selenium	1,206	0,019			µg/l	
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03			µg/l	
Vanadium	0,660	0,008			µg/l	
Zinc	106	3			µg/l	



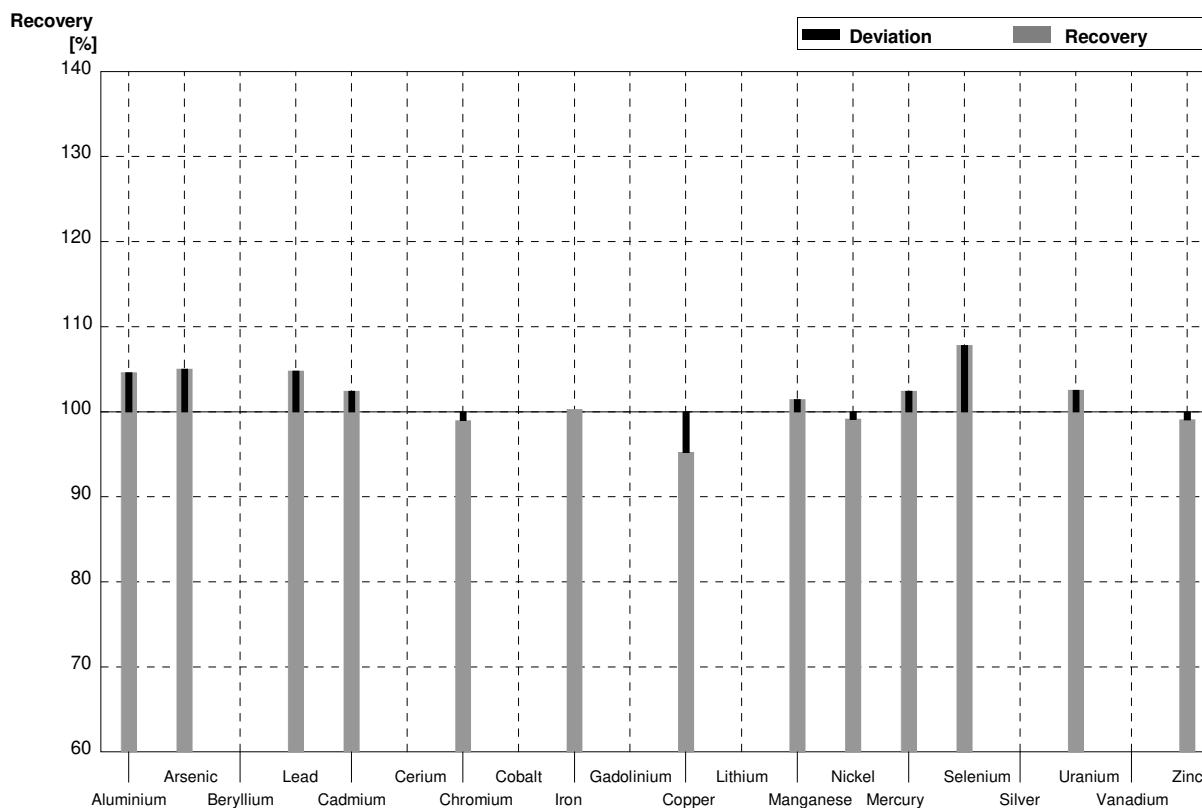
Sample M167A
Laboratory F

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	8,00	0,800	µg/l	105%
Arsenic	3,54	0,03	3,50	0,420	µg/l	99%
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	9,10	0,728	µg/l	104%
Cadmium	1,435	0,012	1,51	0,121	µg/l	105%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,50	0,180	µg/l	97%
Cobalt	1,791	0,014			µg/l	
Iron	15,31	0,17	15,0	3,90	µg/l	98%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	7,40	0,592	µg/l	97%
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4	59,0	5,90	µg/l	101%
Nickel	0,81	0,02	<1,00		µg/l	•
Mercury	1,153	0,017	1,18	0,176	µg/l	102%
Selenium	2,50	0,02	2,60	0,390	µg/l	104%
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012	1,14	0,057	µg/l	103%
Vanadium	1,153	0,011			µg/l	
Zinc	18,8	1,0	19,0	1,90	µg/l	101%



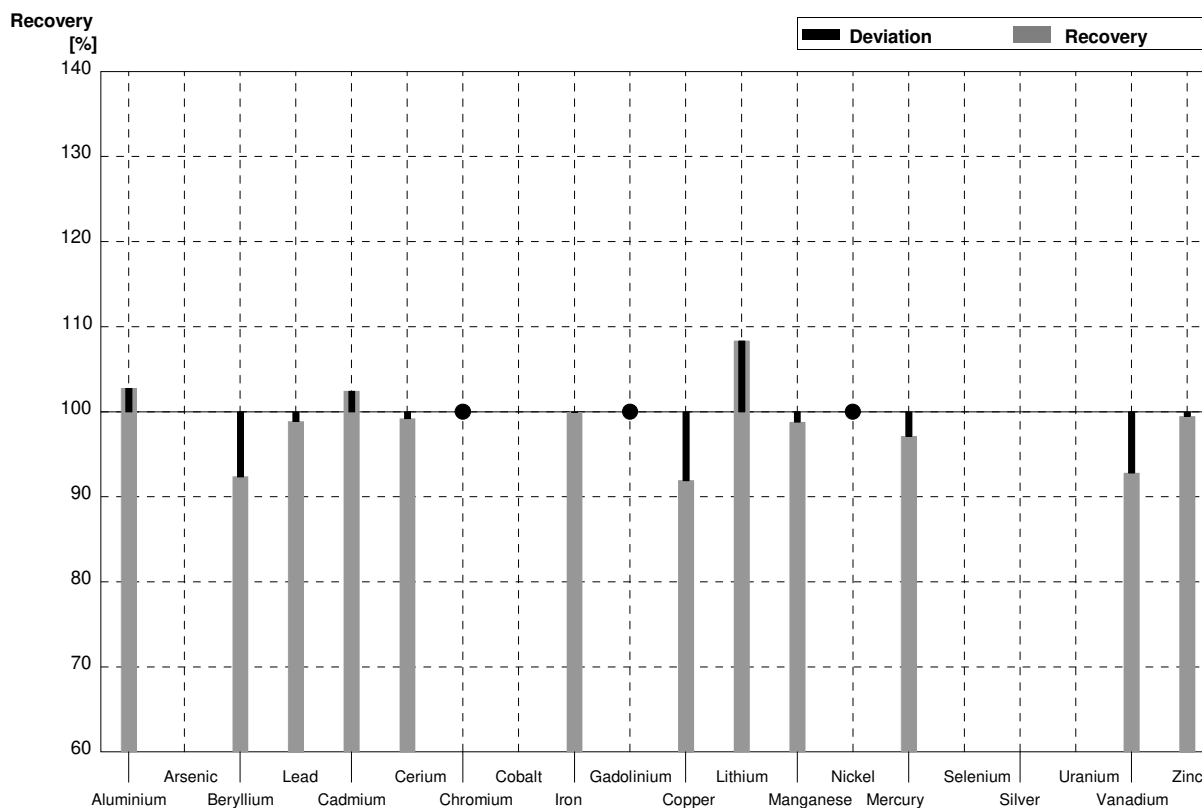
Sample M167B
Laboratory F

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	25,0	2,50	µg/l	105%
Arsenic	0,857	0,012	0,900	0,108	µg/l	105%
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	3,70	0,296	µg/l	105%
Cadmium	2,89	0,02	2,96	0,237	µg/l	102%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	4,90	0,588	µg/l	99%
Cobalt	0,461	0,006			µg/l	
Iron	37,9	0,2	38,0	9,88	µg/l	100%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	5,80	0,464	µg/l	95%
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05	7,00	0,700	µg/l	101%
Nickel	3,53	0,03	3,50	0,350	µg/l	99%
Mercury	0,702	0,016	0,719	0,108	µg/l	102%
Selenium	1,206	0,019	1,30	0,195	µg/l	108%
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03	3,62	0,181	µg/l	103%
Vanadium	0,660	0,008			µg/l	
Zinc	106	3	105	10,5	µg/l	99%



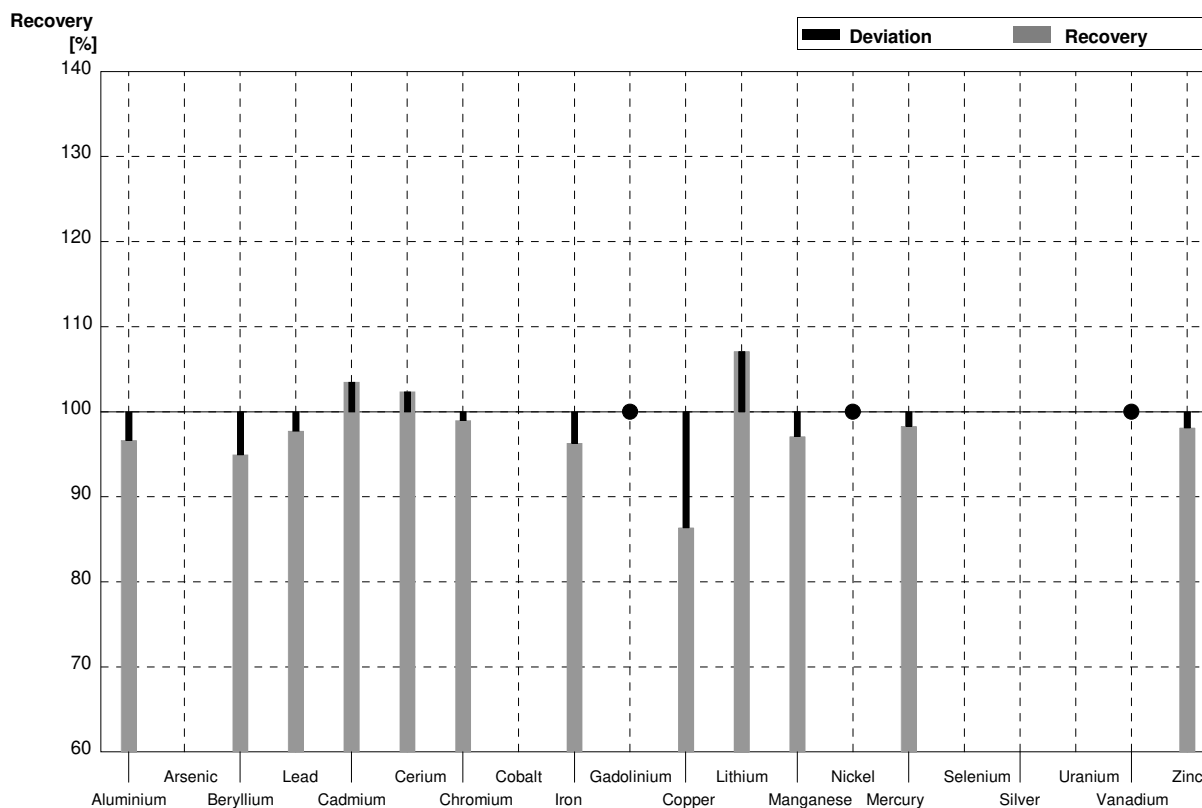
Sample M167A
Laboratory G

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,8	0,6	µg/l	103%
Arsenic	3,54	0,03			µg/l	
Beryllium	0,1299	0,0018	0,120	0,018	µg/l	92%
Lead	8,71	0,05	8,61	0,86	µg/l	99%
Cadmium	1,435	0,012	1,47	0,15	µg/l	102%
Cerium	1,129	0,011	1,12	0,11	µg/l	99%
Chromium	1,544	0,017	<2		µg/l	•
Cobalt	1,791	0,014			µg/l	
Iron	15,31	0,17	15,3	1,1	µg/l	100%
Gadolinium	0,0818	0,0012	<0,2		µg/l	•
Copper	7,66	0,05	7,04	0,70	µg/l	92%
Lithium	6,95	0,06	7,53	0,75	µg/l	108%
Manganese	58,3	0,4	57,6	5,8	µg/l	99%
Nickel	0,81	0,02	<5		µg/l	•
Mercury	1,153	0,017	1,12	0,08	µg/l	97%
Selenium	2,50	0,02			µg/l	
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012			µg/l	
Vanadium	1,153	0,011	1,07	0,16	µg/l	93%
Zinc	18,8	1,0	18,7	1,9	µg/l	99%



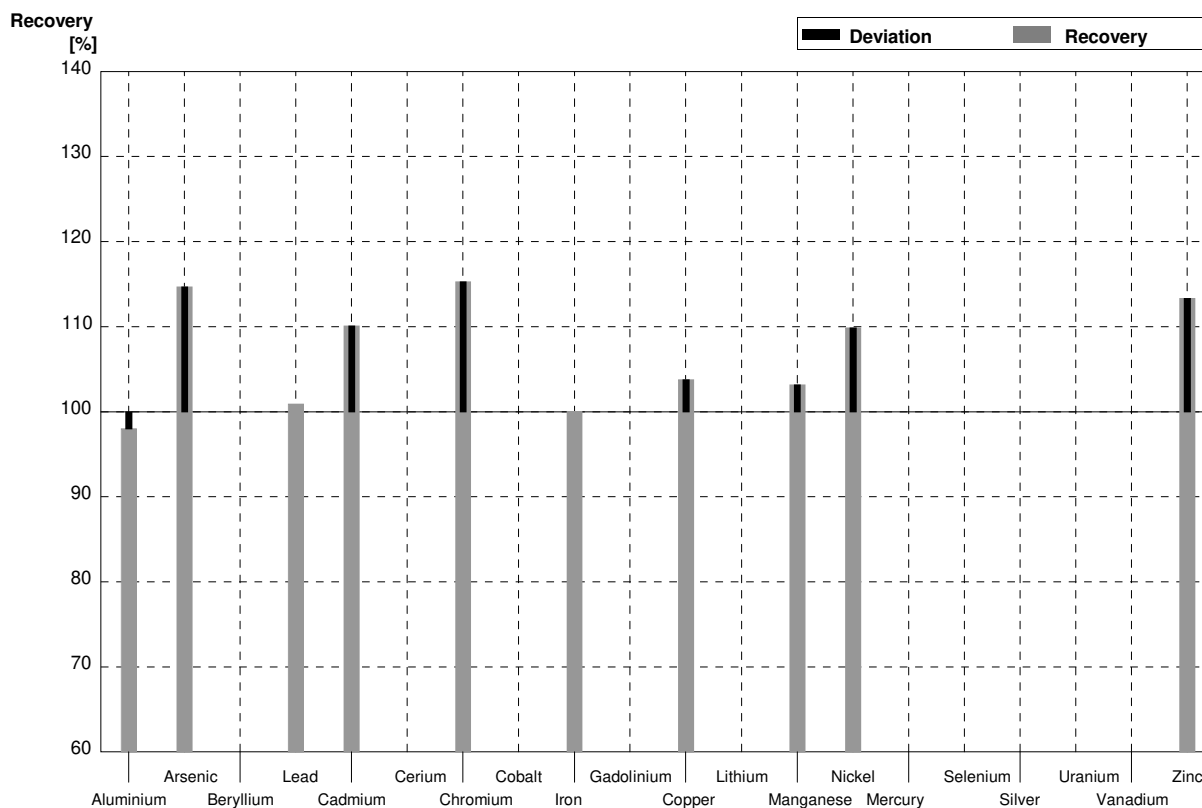
Sample M167B
Laboratory G

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	23,1	1,7	µg/l	97%
Arsenic	0,857	0,012			µg/l	
Beryllium	0,1706	0,0018	0,162	0,024	µg/l	95%
Lead	3,53	0,03	3,45	0,35	µg/l	98%
Cadmium	2,89	0,02	2,99	0,30	µg/l	103%
Cerium	2,013	0,016	2,06	0,21	µg/l	102%
Chromium	4,95	0,04	4,90	0,49	µg/l	99%
Cobalt	0,461	0,006			µg/l	
Iron	37,9	0,2	36,5	3,7	µg/l	96%
Gadolinium	0,0595	0,0011	<0,2		µg/l	•
Copper	6,09	0,04	5,26	0,53	µg/l	86%
Lithium	2,11	0,02	2,26	0,23	µg/l	107%
Manganese	6,90	0,05	6,7	0,7	µg/l	97%
Nickel	3,53	0,03	<5		µg/l	•
Mercury	0,702	0,016	0,69	0,05	µg/l	98%
Selenium	1,206	0,019			µg/l	
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03			µg/l	
Vanadium	0,660	0,008	<1		µg/l	•
Zinc	106	3	104	10	µg/l	98%



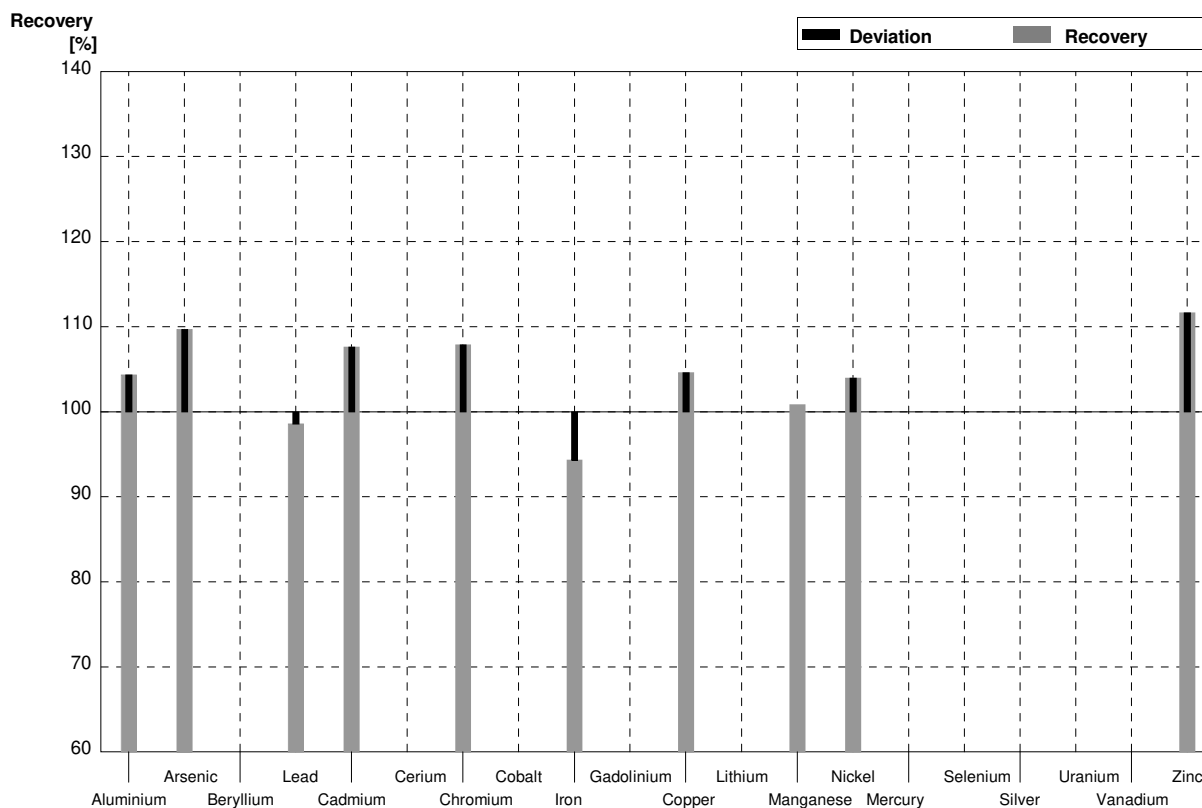
Sample M167A
Laboratory H

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,44	0,72	µg/l	98%
Arsenic	3,54	0,03	4,06	0,28	µg/l	115%
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	8,79	0,66	µg/l	101%
Cadmium	1,435	0,012	1,58	0,22	µg/l	110%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,78	0,17	µg/l	115%
Cobalt	1,791	0,014			µg/l	
Iron	15,31	0,17	15,32	2,16	µg/l	100%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	7,95	1,23	µg/l	104%
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4	60,16	6,34	µg/l	103%
Nickel	0,81	0,02	0,89	0,06	µg/l	110%
Mercury	1,153	0,017			µg/l	
Selenium	2,50	0,02			µg/l	
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012			µg/l	
Vanadium	1,153	0,011			µg/l	
Zinc	18,8	1,0	21,31	2,12	µg/l	113%



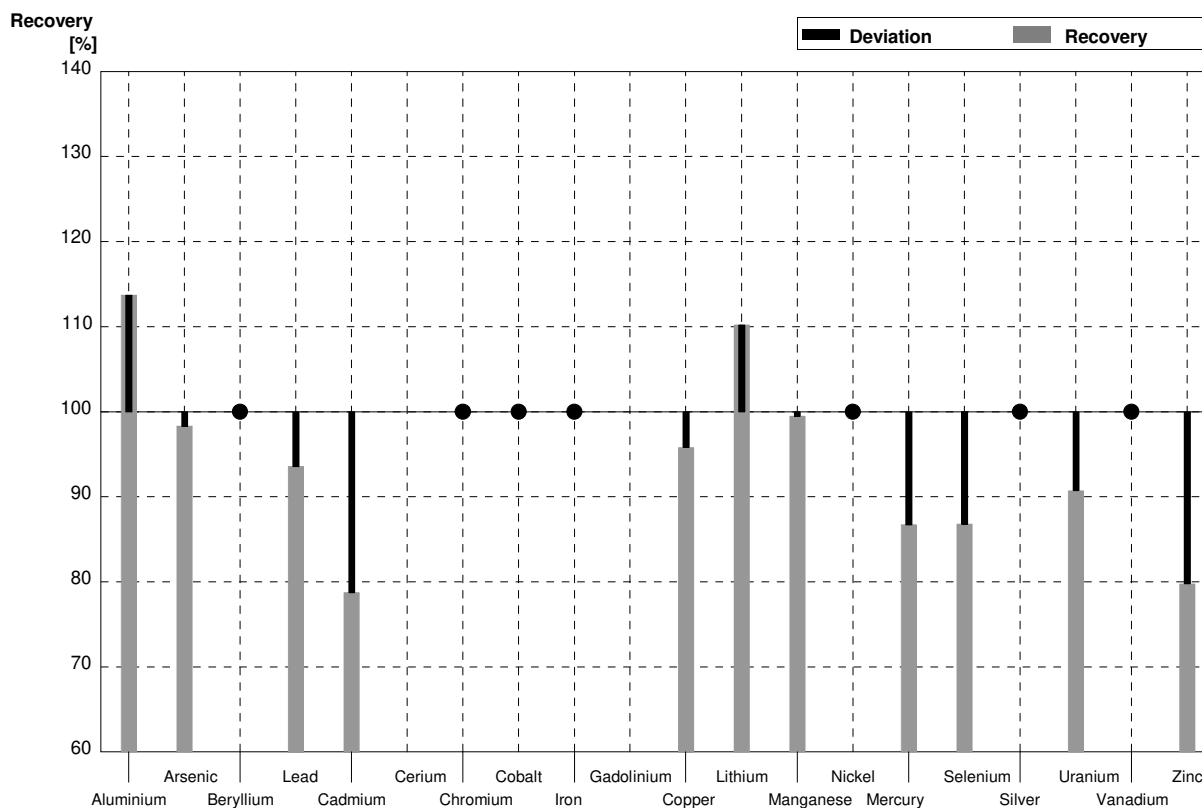
Sample M167B
Laboratory H

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	24,94	2,41	µg/l	104%
Arsenic	0,857	0,012	0,94	0,06	µg/l	110%
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	3,48	0,26	µg/l	99%
Cadmium	2,89	0,02	3,11	0,42	µg/l	108%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	5,34	0,52	µg/l	108%
Cobalt	0,461	0,006			µg/l	
Iron	37,9	0,2	35,75	5,04	µg/l	94%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	6,37	0,99	µg/l	105%
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05	6,96	0,73	µg/l	101%
Nickel	3,53	0,03	3,67	0,26	µg/l	104%
Mercury	0,702	0,016			µg/l	
Selenium	1,206	0,019			µg/l	
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03			µg/l	
Vanadium	0,660	0,008			µg/l	
Zinc	106	3	118,35	11,75	µg/l	112%



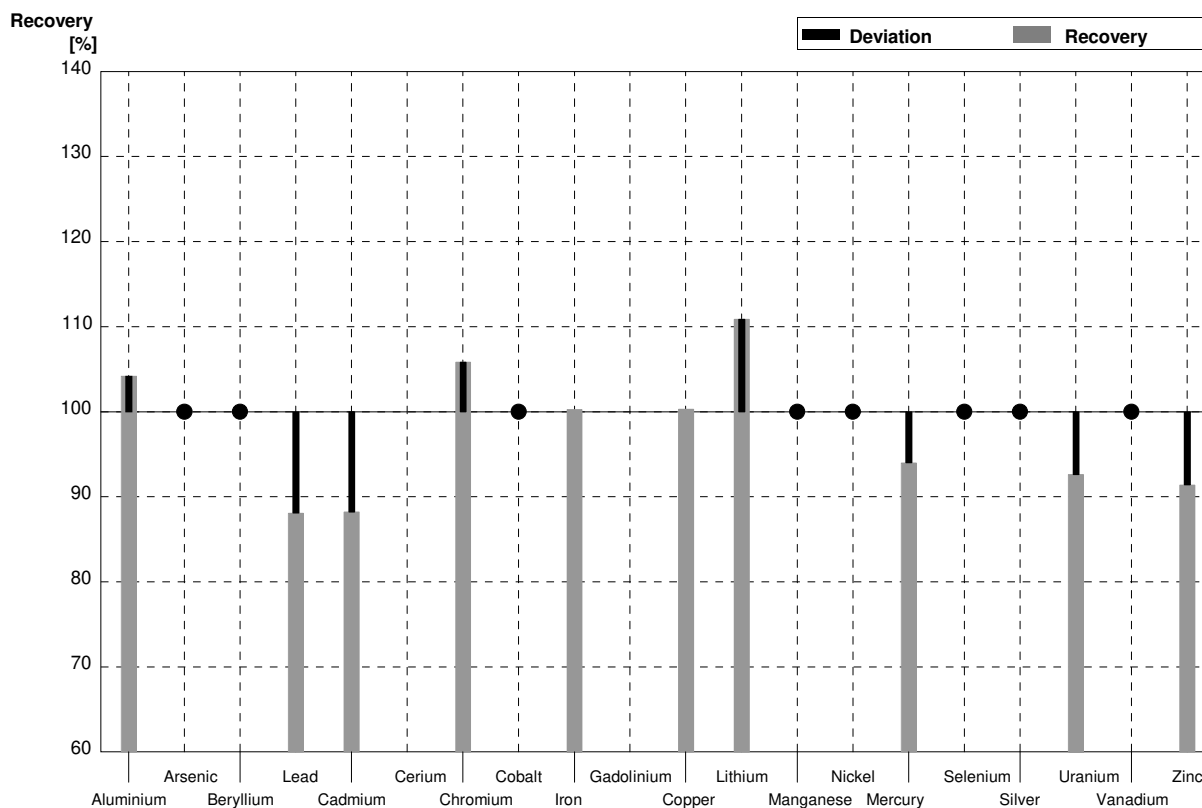
Sample M167A
Laboratory I

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	8,63	0,863	µg/l	114%
Arsenic	3,54	0,03	3,48	0,348	µg/l	98%
Beryllium	0,1299	0,0018	<0,2		µg/l	•
Lead	8,71	0,05	8,15	0,815	µg/l	94%
Cadmium	1,435	0,012	1,13	0,113	µg/l	79%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	<5		µg/l	•
Cobalt	1,791	0,014	<5		µg/l	•
Iron	15,31	0,17	<30		µg/l	•
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	7,34	0,734	µg/l	96%
Lithium	6,95	0,06	7,66	0,766	µg/l	110%
Manganese	58,3	0,4	58	2,9	µg/l	99%
Nickel	0,81	0,02	<5		µg/l	•
Mercury	1,153	0,017	1,00	0,15	µg/l	87%
Selenium	2,50	0,02	2,17	0,217	µg/l	87%
Silver	0,186	0,007	<2		µg/l	•
Uranium	1,102	0,012	1,00	0,1	µg/l	91%
Vanadium	1,153	0,011	<5		µg/l	•
Zinc	18,8	1,0	15,0	1,5	µg/l	80%



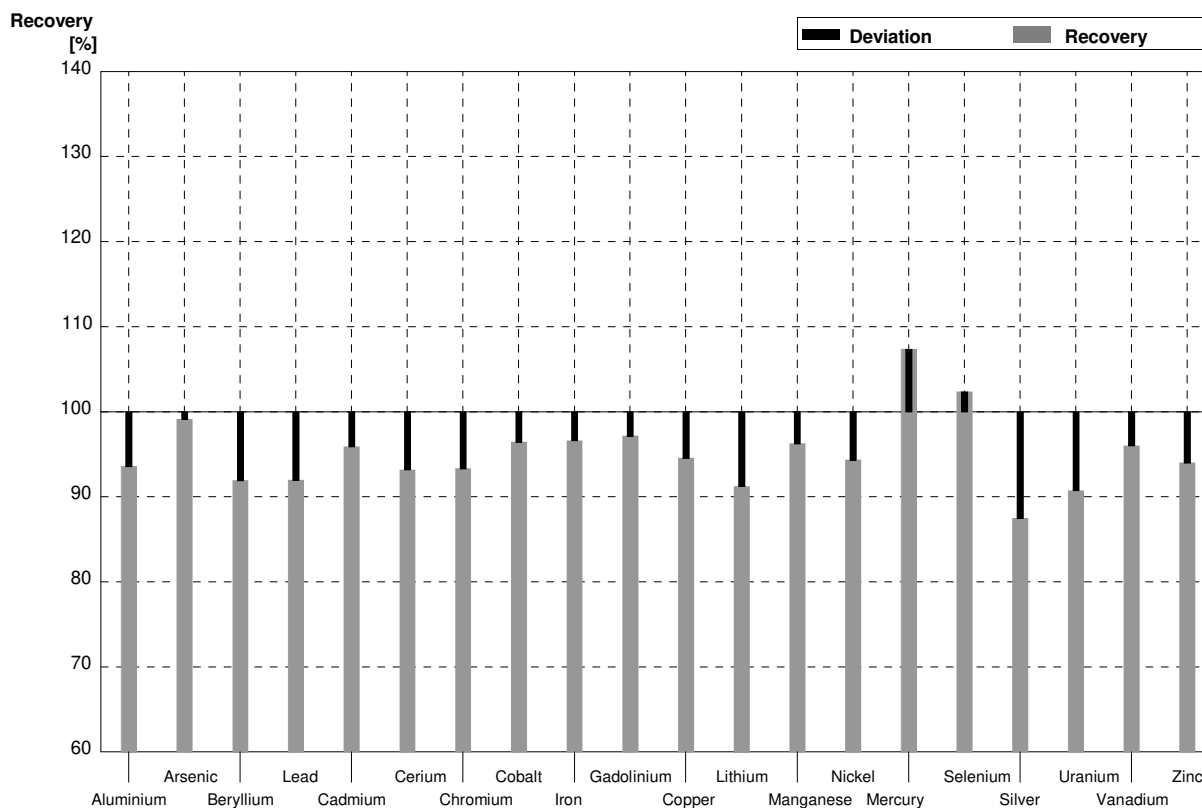
Sample M167B
Laboratory I

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	24,9	0,249	µg/l	104%
Arsenic	0,857	0,012	<2		µg/l	•
Beryllium	0,1706	0,0018	<0,2		µg/l	•
Lead	3,53	0,03	3,11	0,311	µg/l	88%
Cadmium	2,89	0,02	2,55	0,255	µg/l	88%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	5,24	0,524	µg/l	106%
Cobalt	0,461	0,006	<5		µg/l	•
Iron	37,9	0,2	38,0	1,9	µg/l	100%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	6,11	0,611	µg/l	100%
Lithium	2,11	0,02	2,34	0,234	µg/l	111%
Manganese	6,90	0,05	<10		µg/l	•
Nickel	3,53	0,03	<5		µg/l	•
Mercury	0,702	0,016	0,66	0,099	µg/l	94%
Selenium	1,206	0,019	<2		µg/l	•
Silver	0,075	0,009	<2		µg/l	•
Uranium	3,53	0,03	3,27	0,327	µg/l	93%
Vanadium	0,660	0,008	<5		µg/l	•
Zinc	106	3	96,9	9,69	µg/l	91%



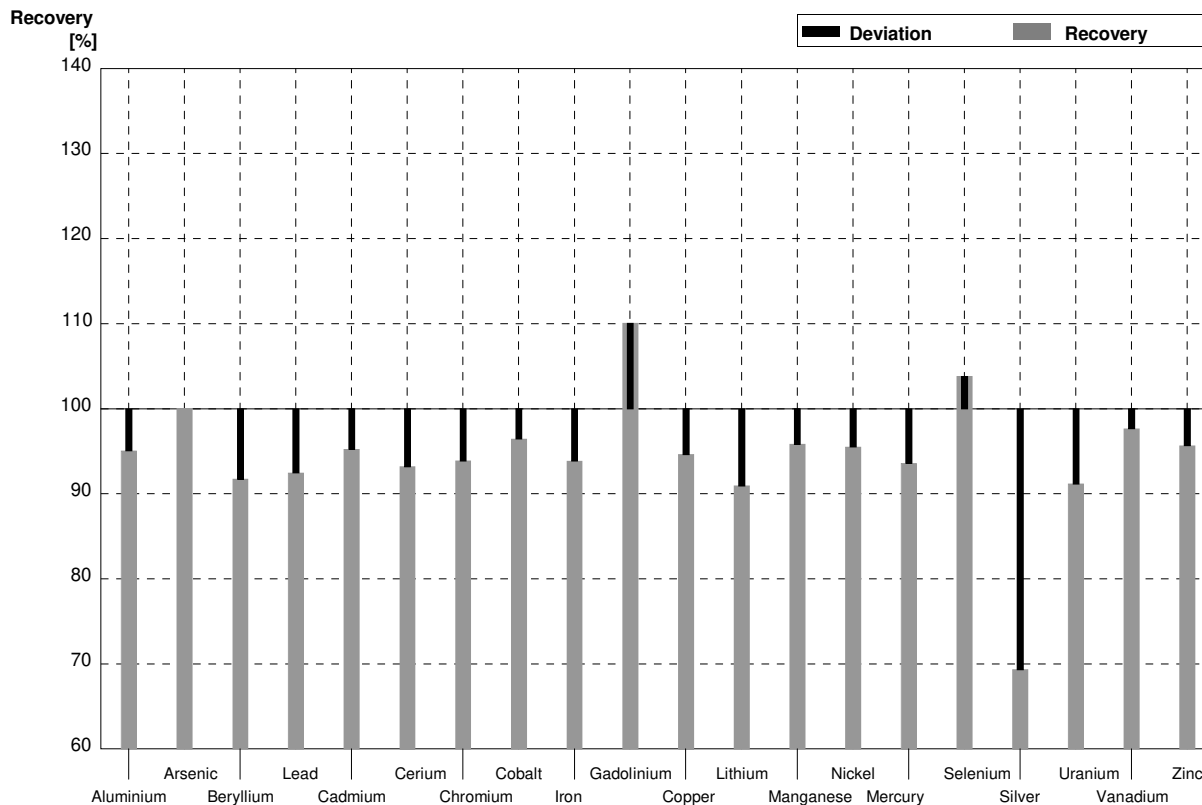
Sample M167A
Laboratory J

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,102	1,800	µg/l	94%
Arsenic	3,54	0,03	3,509	0,456	µg/l	99%
Beryllium	0,1299	0,0018	0,1194	0,0167	µg/l	92%
Lead	8,71	0,05	8,009	1,842	µg/l	92%
Cadmium	1,435	0,012	1,376	0,124	µg/l	96%
Cerium	1,129	0,011	1,052	0,137	µg/l	93%
Chromium	1,544	0,017	1,441	0,202	µg/l	93%
Cobalt	1,791	0,014	1,727	0,380	µg/l	96%
Iron	15,31	0,17	14,79	1,33	µg/l	97%
Gadolinium	0,0818	0,0012	0,07947	0,02861	µg/l	97%
Copper	7,66	0,05	7,244	1,521	µg/l	95%
Lithium	6,95	0,06	6,340	1,141	µg/l	91%
Manganese	58,3	0,4	56,11	8,98	µg/l	96%
Nickel	0,81	0,02	0,764	0,138	µg/l	94%
Mercury	1,153	0,017	1,238	0,235	µg/l	107%
Selenium	2,50	0,02	2,559	0,384	µg/l	102%
Silver	0,186	0,007	0,1627	0,0472	µg/l	87%
Uranium	1,102	0,012	1,000	0,150	µg/l	91%
Vanadium	1,153	0,011	1,107	0,111	µg/l	96%
Zinc	18,8	1,0	17,67	2,64	µg/l	94%



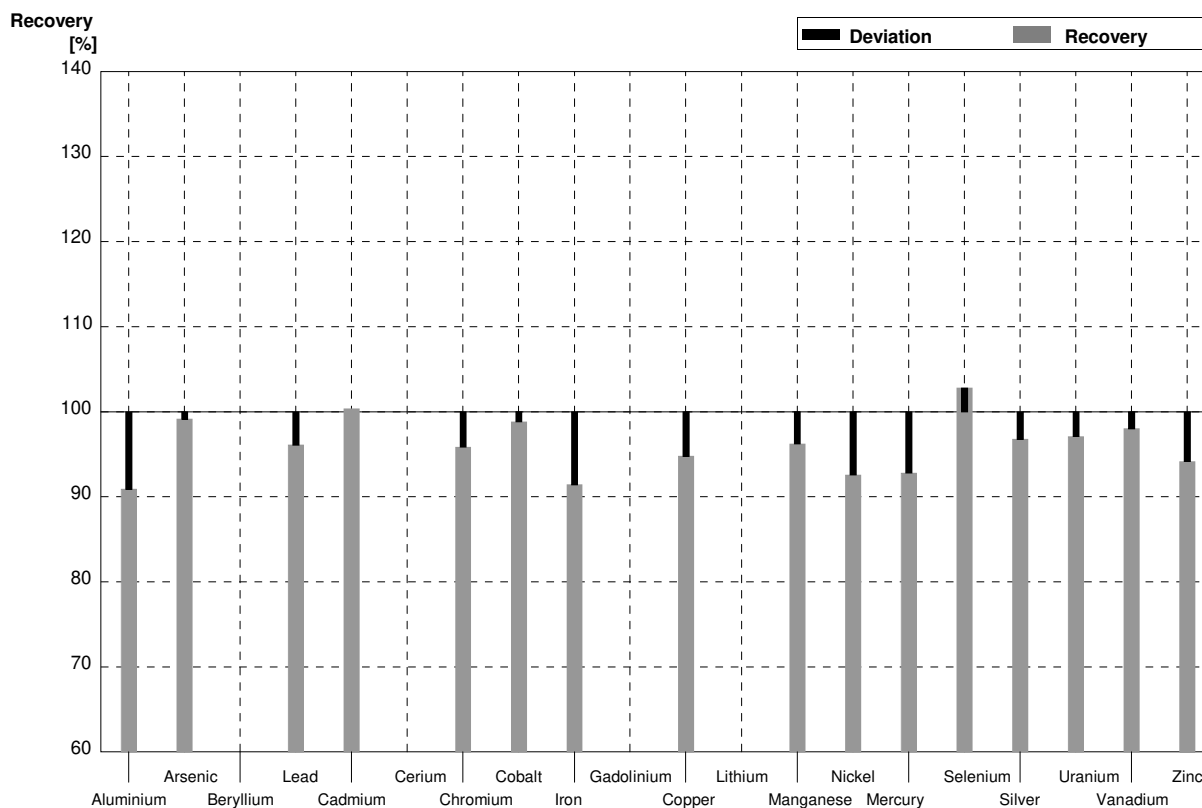
Sample M167B
Laboratory J

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	22,72	3,64	µg/l	95%
Arsenic	0,857	0,012	0,8576	0,1115	µg/l	100%
Beryllium	0,1706	0,0018	0,1565	0,0219	µg/l	92%
Lead	3,53	0,03	3,264	0,751	µg/l	92%
Cadmium	2,89	0,02	2,753	0,248	µg/l	95%
Cerium	2,013	0,016	1,876	0,244	µg/l	93%
Chromium	4,95	0,04	4,647	0,651	µg/l	94%
Cobalt	0,461	0,006	0,4447	0,0978	µg/l	96%
Iron	37,9	0,2	35,57	3,20	µg/l	94%
Gadolinium	0,0595	0,0011	0,06549	0,02358	µg/l	110%
Copper	6,09	0,04	5,763	1,210	µg/l	95%
Lithium	2,11	0,02	1,919	0,345	µg/l	91%
Manganese	6,90	0,05	6,612	1,058	µg/l	96%
Nickel	3,53	0,03	3,372	0,607	µg/l	96%
Mercury	0,702	0,016	0,657	0,125	µg/l	94%
Selenium	1,206	0,019	1,252	0,188	µg/l	104%
Silver	0,075	0,009	0,0520	0,0151	µg/l	69%
Uranium	3,53	0,03	3,218	0,483	µg/l	91%
Vanadium	0,660	0,008	0,6446	0,0645	µg/l	98%
Zinc	106	3	101,4	12,2	µg/l	96%



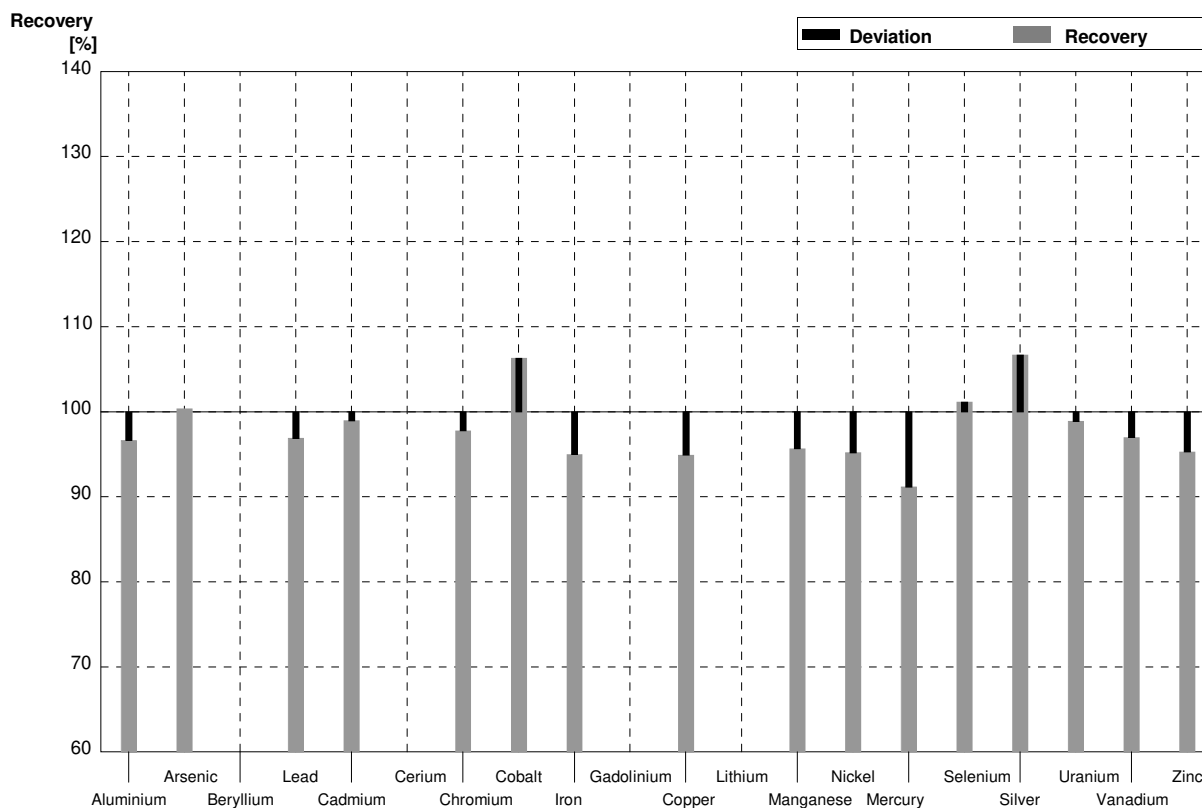
Sample M167A
Laboratory K

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	6,9	1,04	µg/l	91%
Arsenic	3,54	0,03	3,51	0,527	µg/l	99%
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	8,37	1,26	µg/l	96%
Cadmium	1,435	0,012	1,44	0,216	µg/l	100%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,48	0,148	µg/l	96%
Cobalt	1,791	0,014	1,77	0,177	µg/l	99%
Iron	15,31	0,17	14,0	2,1	µg/l	91%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	7,26	0,726	µg/l	95%
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4	56,1	8,42	µg/l	96%
Nickel	0,81	0,02	0,75	0,15	µg/l	93%
Mercury	1,153	0,017	1,07	0,321	µg/l	93%
Selenium	2,50	0,02	2,57	0,257	µg/l	103%
Silver	0,186	0,007	0,180	0,018	µg/l	97%
Uranium	1,102	0,012	1,07	0,107	µg/l	97%
Vanadium	1,153	0,011	1,13	0,170	µg/l	98%
Zinc	18,8	1,0	17,7	1,77	µg/l	94%



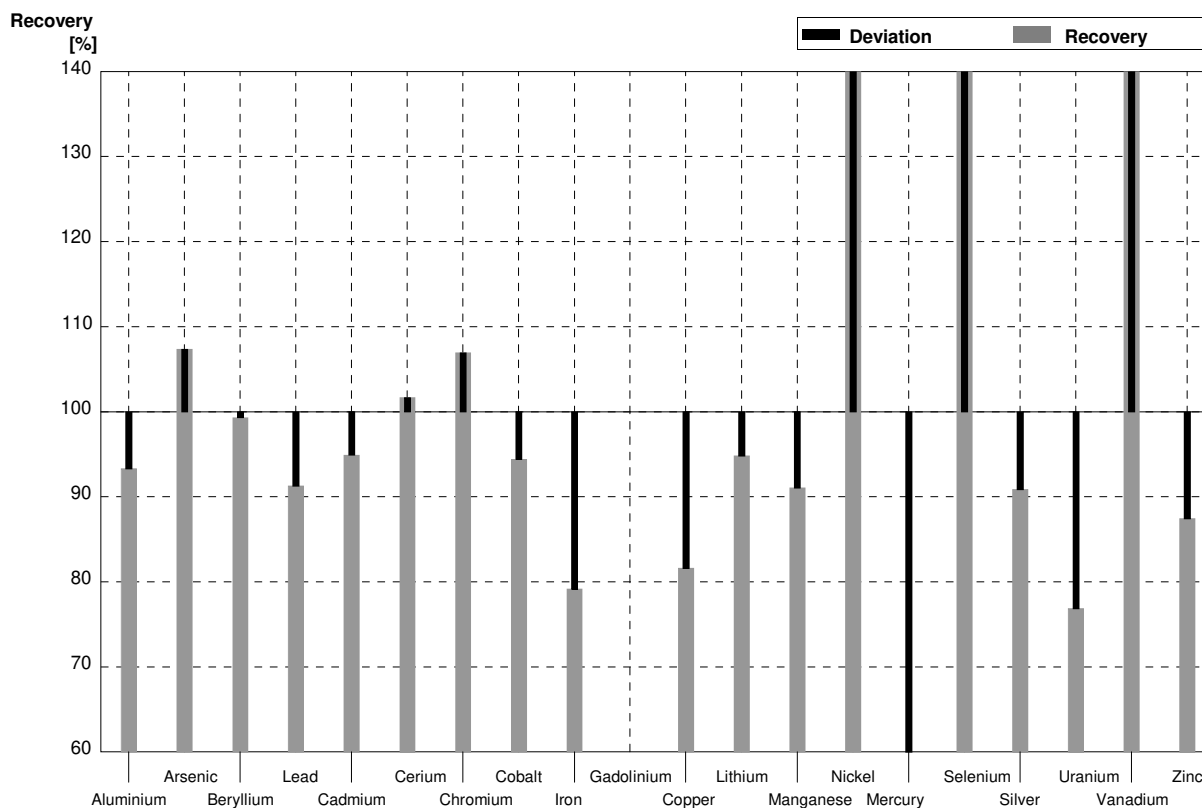
Sample M167B
Laboratory K

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	23,1	3,47	µg/l	97%
Arsenic	0,857	0,012	0,86	0,129	µg/l	100%
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	3,42	0,513	µg/l	97%
Cadmium	2,89	0,02	2,86	0,429	µg/l	99%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	4,84	0,484	µg/l	98%
Cobalt	0,461	0,006	0,490	0,049	µg/l	106%
Iron	37,9	0,2	36,0	5,4	µg/l	95%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	5,78	0,578	µg/l	95%
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05	6,6	0,99	µg/l	96%
Nickel	3,53	0,03	3,36	0,672	µg/l	95%
Mercury	0,702	0,016	0,640	0,192	µg/l	91%
Selenium	1,206	0,019	1,22	0,122	µg/l	101%
Silver	0,075	0,009	0,080	0,008	µg/l	107%
Uranium	3,53	0,03	3,49	0,349	µg/l	99%
Vanadium	0,660	0,008	0,64	0,096	µg/l	97%
Zinc	106	3	101	10,1	µg/l	95%



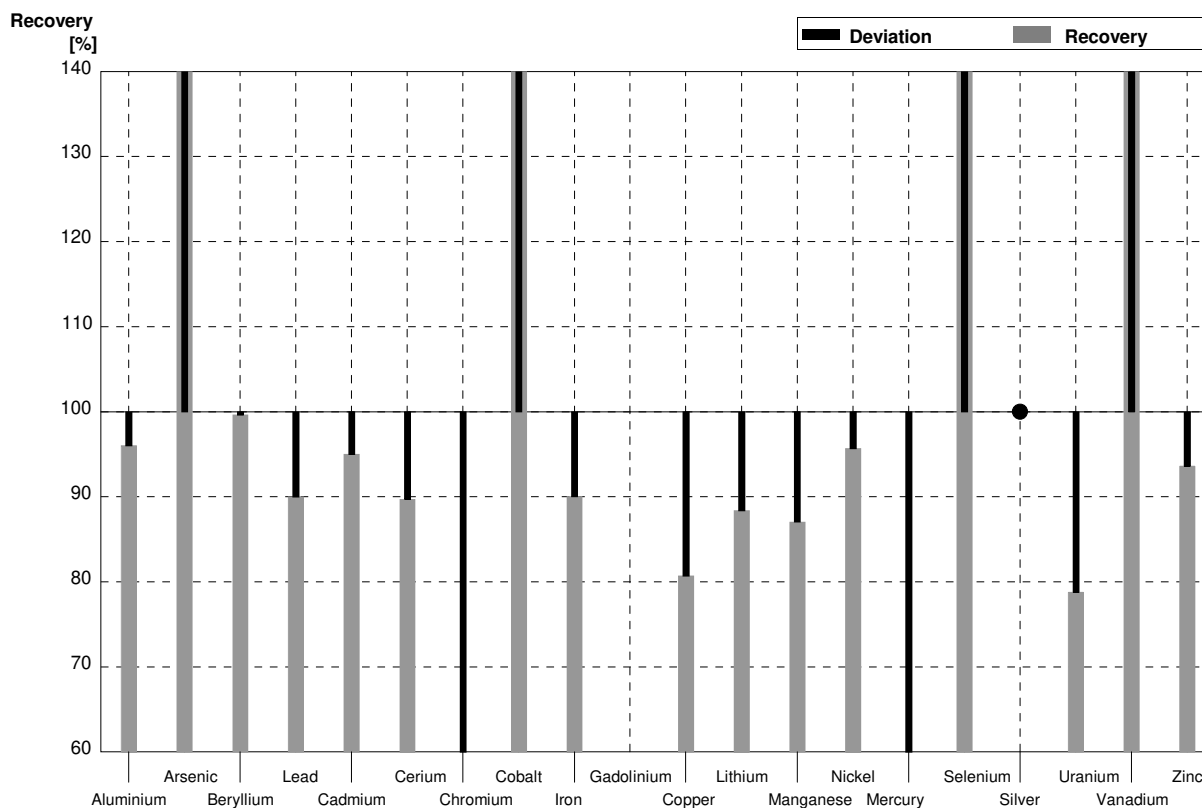
Sample M167A
Laboratory L

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,083		µg/l	93%
Arsenic	3,54	0,03	3,800		µg/l	107%
Beryllium	0,1299	0,0018	0,129		µg/l	99%
Lead	8,71	0,05	7,951		µg/l	91%
Cadmium	1,435	0,012	1,362		µg/l	95%
Cerium	1,129	0,011	1,148		µg/l	102%
Chromium	1,544	0,017	1,651		µg/l	107%
Cobalt	1,791	0,014	1,691		µg/l	94%
Iron	15,31	0,17	12,120		µg/l	79%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	6,252		µg/l	82%
Lithium	6,95	0,06	6,590		µg/l	95%
Manganese	58,3	0,4	53,09		µg/l	91%
Nickel	0,81	0,02	1,439		µg/l	178%
Mercury	1,153	0,017	0,534		µg/l	46%
Selenium	2,50	0,02	3,755		µg/l	150%
Silver	0,186	0,007	0,169		µg/l	91%
Uranium	1,102	0,012	0,847		µg/l	77%
Vanadium	1,153	0,011	1,987		µg/l	172%
Zinc	18,8	1,0	16,438		µg/l	87%



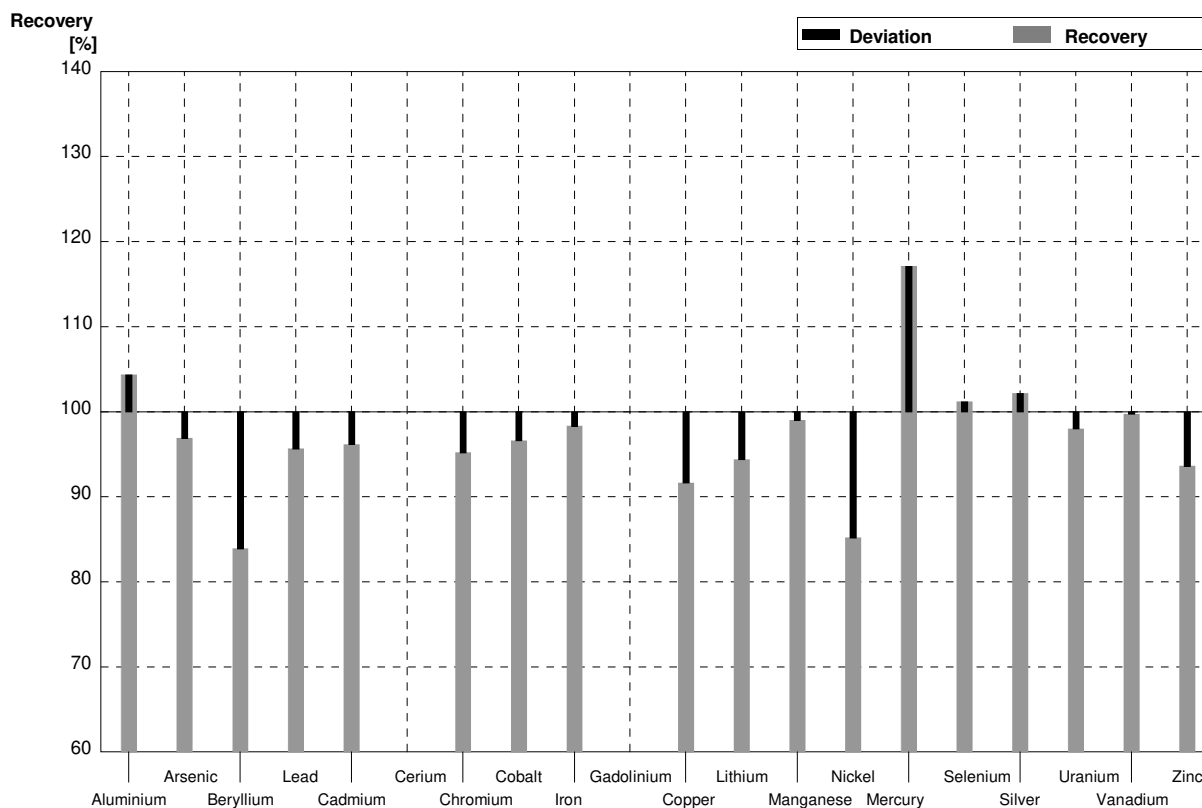
Sample M167B
Laboratory L

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	22,948		µg/l	96%
Arsenic	0,857	0,012	1,368		µg/l	160%
Beryllium	0,1706	0,0018	0,170		µg/l	100%
Lead	3,53	0,03	3,177		µg/l	90%
Cadmium	2,89	0,02	2,746		µg/l	95%
Cerium	2,013	0,016	1,806		µg/l	90%
Chromium	4,95	0,04	2,885		µg/l	58%
Cobalt	0,461	0,006	2,804		µg/l	608%
Iron	37,9	0,2	34,125		µg/l	90%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	4,915		µg/l	81%
Lithium	2,11	0,02	1,865		µg/l	88%
Manganese	6,90	0,05	6,007		µg/l	87%
Nickel	3,53	0,03	3,378		µg/l	96%
Mercury	0,702	0,016	0,260		µg/l	37%
Selenium	1,206	0,019	3,454		µg/l	286%
Silver	0,075	0,009	<0,1		µg/l	•
Uranium	3,53	0,03	2,781		µg/l	79%
Vanadium	0,660	0,008	2,465		µg/l	373%
Zinc	106	3	99,233		µg/l	94%



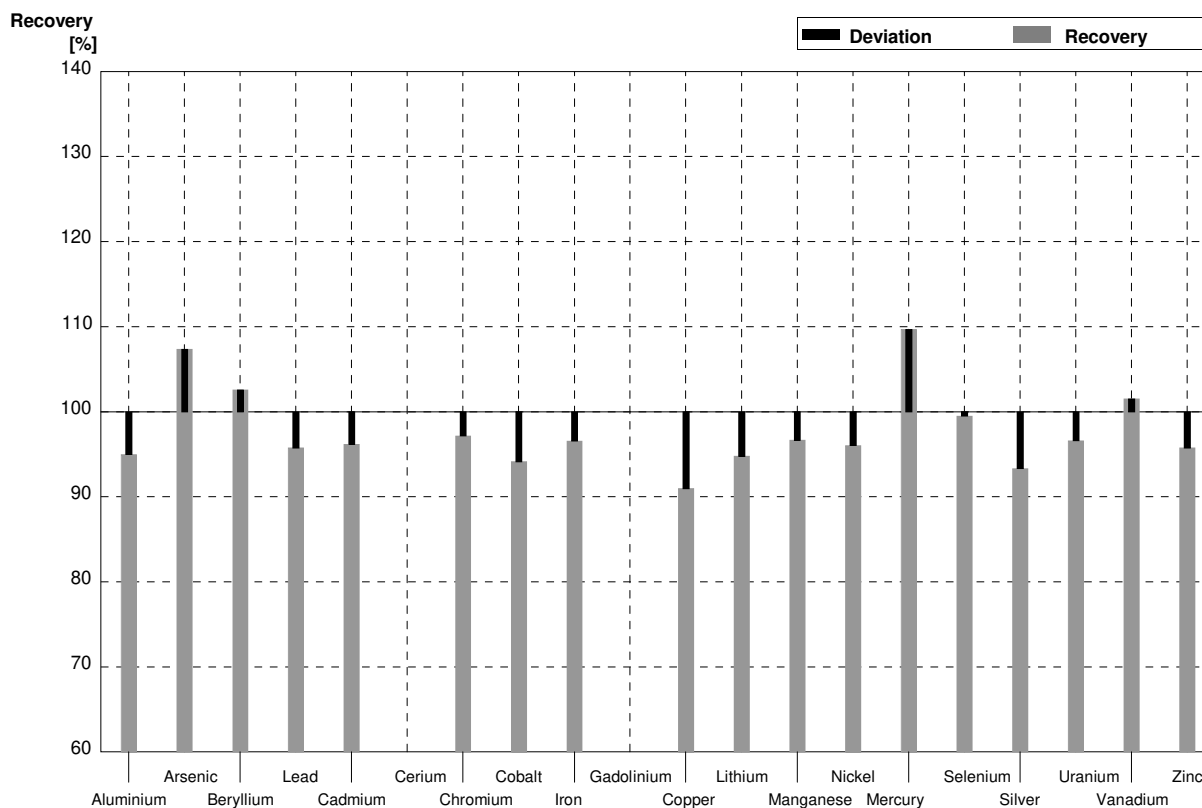
Sample M167A
Laboratory M

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,92	0,766	µg/l	104%
Arsenic	3,54	0,03	3,43	0,262	µg/l	97%
Beryllium	0,1299	0,0018	0,109	0,016	µg/l	84%
Lead	8,71	0,05	8,33	0,610	µg/l	96%
Cadmium	1,435	0,012	1,38	0,133	µg/l	96%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,47	0,184	µg/l	95%
Cobalt	1,791	0,014	1,73	0,188	µg/l	97%
Iron	15,31	0,17	15,05	1,410	µg/l	98%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	7,02	1,250	µg/l	92%
Lithium	6,95	0,06	6,56	0,654	µg/l	94%
Manganese	58,3	0,4	57,73	4,272	µg/l	99%
Nickel	0,81	0,02	0,69	0,110	µg/l	85%
Mercury	1,153	0,017	1,35		µg/l	117%
Selenium	2,50	0,02	2,53	0,447	µg/l	101%
Silver	0,186	0,007	0,190	0,029	µg/l	102%
Uranium	1,102	0,012	1,08	0,104	µg/l	98%
Vanadium	1,153	0,011	1,15	0,117	µg/l	100%
Zinc	18,8	1,0	17,6	1,410	µg/l	94%



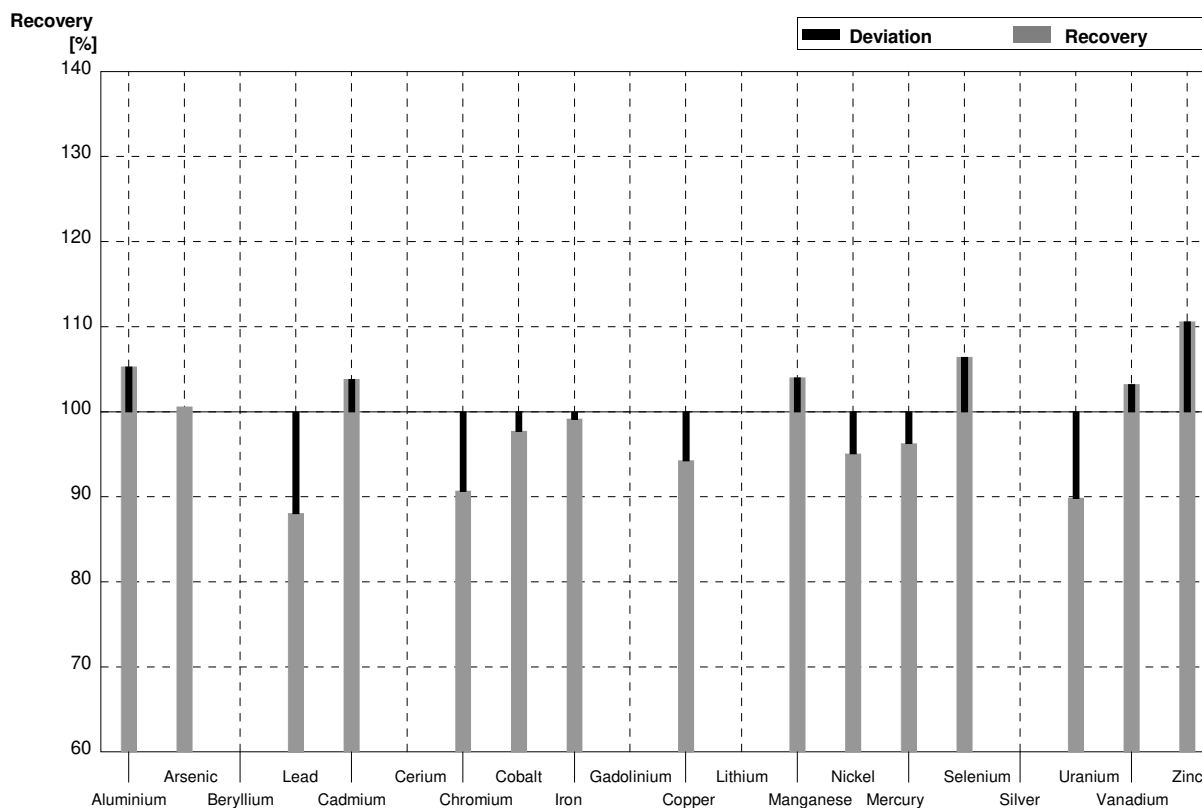
Sample M167B
Laboratory M

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	22,7	2,195	µg/l	95%
Arsenic	0,857	0,012	0,92	0,070	µg/l	107%
Beryllium	0,1706	0,0018	0,175	0,026	µg/l	103%
Lead	3,53	0,03	3,38	0,247	µg/l	96%
Cadmium	2,89	0,02	2,78	0,267	µg/l	96%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	4,81	0,601	µg/l	97%
Cobalt	0,461	0,006	0,434	0,047	µg/l	94%
Iron	37,9	0,2	36,6	3,429	µg/l	97%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	5,54	0,987	µg/l	91%
Lithium	2,11	0,02	2,00	0,199	µg/l	95%
Manganese	6,90	0,05	6,67	0,494	µg/l	97%
Nickel	3,53	0,03	3,39	0,540	µg/l	96%
Mercury	0,702	0,016	0,77		µg/l	110%
Selenium	1,206	0,019	1,20	0,212	µg/l	100%
Silver	0,075	0,009	0,070	0,011	µg/l	93%
Uranium	3,53	0,03	3,41	0,329	µg/l	97%
Vanadium	0,660	0,008	0,67	0,068	µg/l	102%
Zinc	106	3	101,5	8,130	µg/l	96%



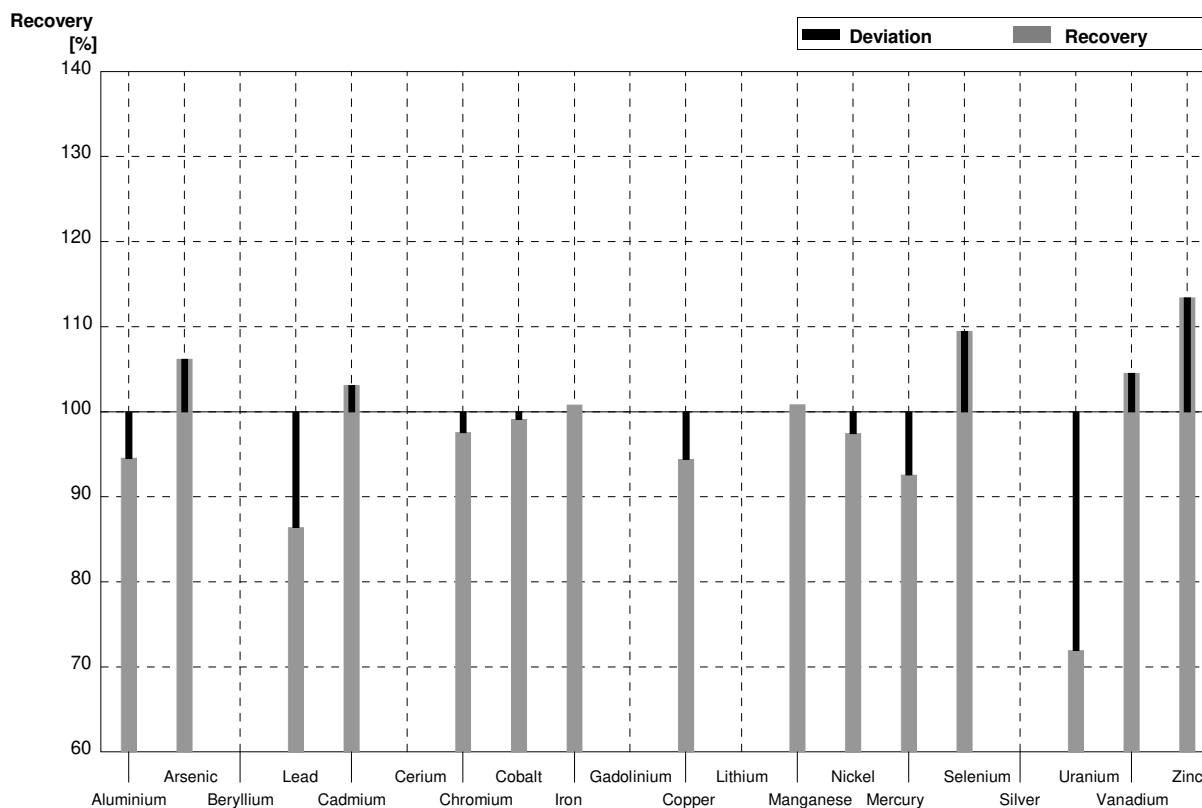
Sample M167A
Laboratory N

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,99		µg/l	105%
Arsenic	3,54	0,03	3,56		µg/l	101%
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	7,67		µg/l	88%
Cadmium	1,435	0,012	1,49		µg/l	104%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,40		µg/l	91%
Cobalt	1,791	0,014	1,75		µg/l	98%
Iron	15,31	0,17	15,18		µg/l	99%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	7,22		µg/l	94%
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4	60,64		µg/l	104%
Nickel	0,81	0,02	0,77		µg/l	95%
Mercury	1,153	0,017	1,11		µg/l	96%
Selenium	2,50	0,02	2,66		µg/l	106%
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012	0,99		µg/l	90%
Vanadium	1,153	0,011	1,19		µg/l	103%
Zinc	18,8	1,0	20,79		µg/l	111%



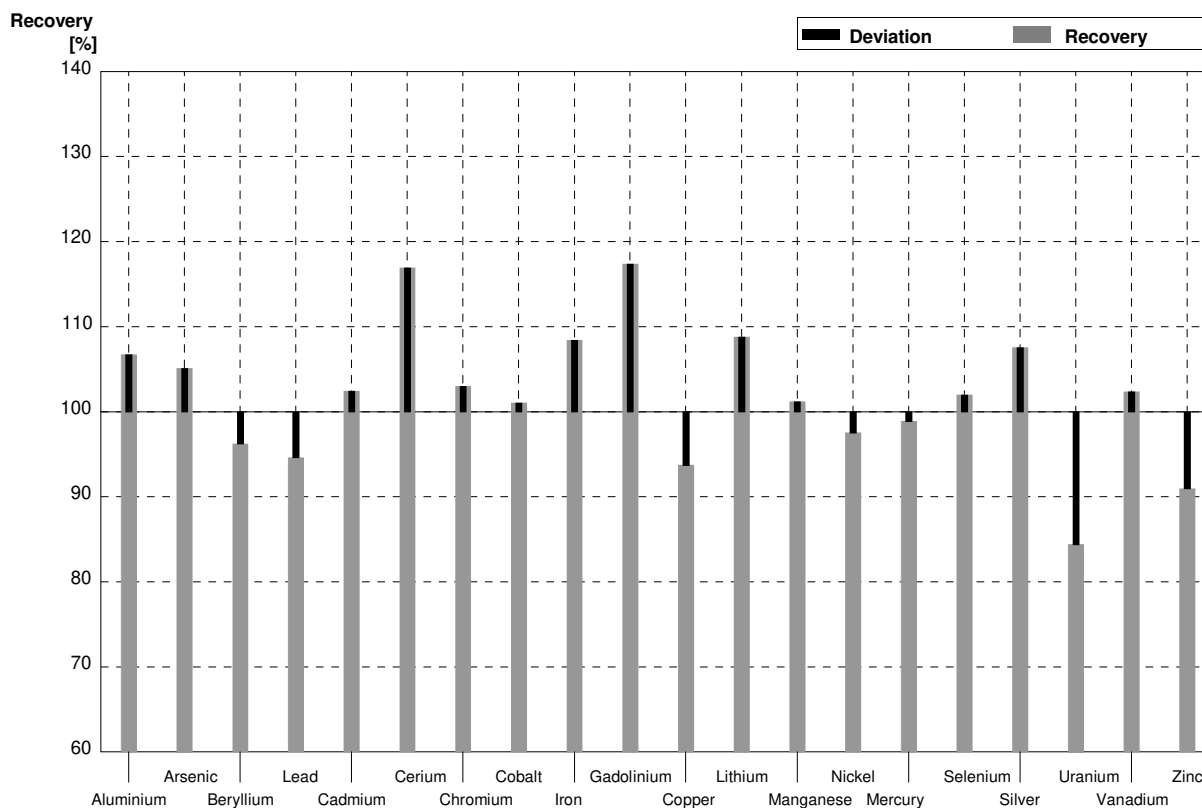
Sample M167B
Laboratory N

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	22,6		µg/l	95%
Arsenic	0,857	0,012	0,91		µg/l	106%
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	3,05		µg/l	86%
Cadmium	2,89	0,02	2,98		µg/l	103%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	4,83		µg/l	98%
Cobalt	0,461	0,006	0,457		µg/l	99%
Iron	37,9	0,2	38,21		µg/l	101%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	5,75		µg/l	94%
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05	6,96		µg/l	101%
Nickel	3,53	0,03	3,44		µg/l	97%
Mercury	0,702	0,016	0,65		µg/l	93%
Selenium	1,206	0,019	1,32		µg/l	109%
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03	2,54		µg/l	72%
Vanadium	0,660	0,008	0,69		µg/l	105%
Zinc	106	3	120,22		µg/l	113%



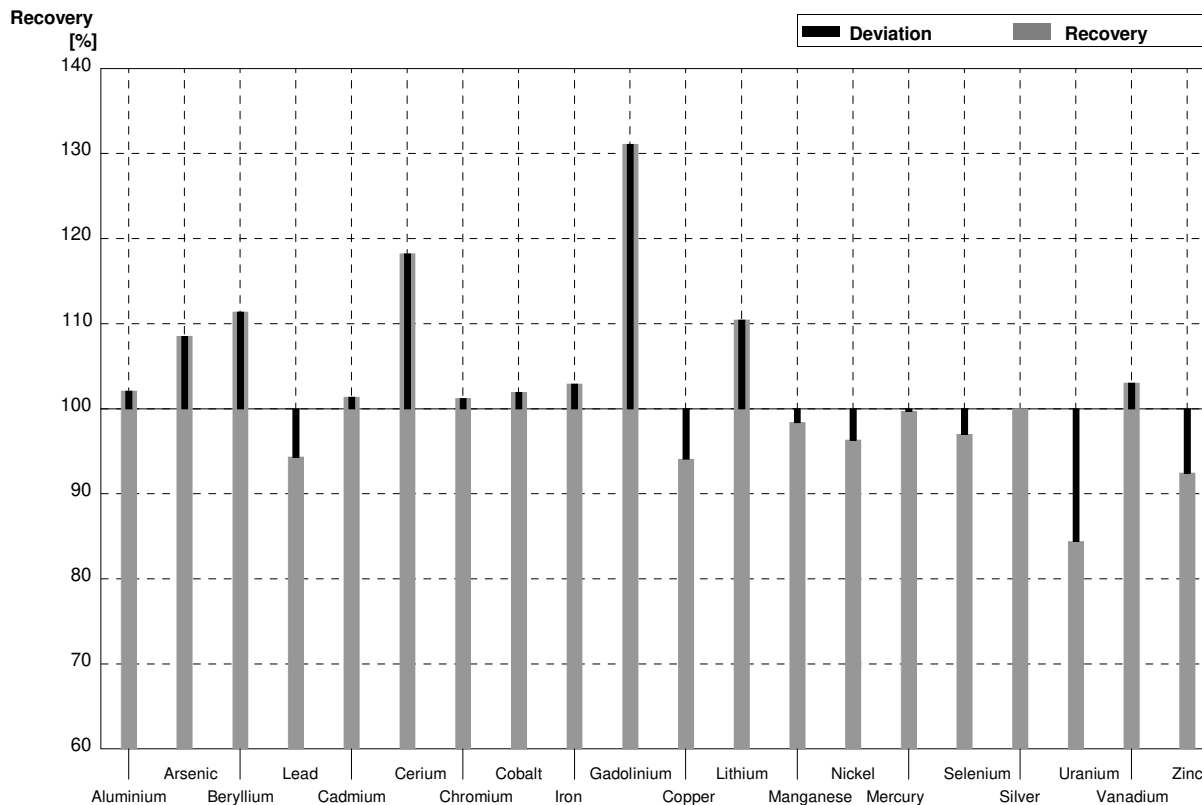
Sample M167A
Laboratory O

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	8,1	0,9	µg/l	107%
Arsenic	3,54	0,03	3,72	0,4	µg/l	105%
Beryllium	0,1299	0,0018	0,125	0,05	µg/l	96%
Lead	8,71	0,05	8,24	0,4	µg/l	95%
Cadmium	1,435	0,012	1,47	0,2	µg/l	102%
Cerium	1,129	0,011	1,32	0,3	µg/l	117%
Chromium	1,544	0,017	1,59	0,6	µg/l	103%
Cobalt	1,791	0,014	1,81	0,15	µg/l	101%
Iron	15,31	0,17	16,6	0,8	µg/l	108%
Gadolinium	0,0818	0,0012	0,096	0,02	µg/l	117%
Copper	7,66	0,05	7,18	0,5	µg/l	94%
Lithium	6,95	0,06	7,56	0,7	µg/l	109%
Manganese	58,3	0,4	59	6	µg/l	101%
Nickel	0,81	0,02	0,79	0,1	µg/l	98%
Mercury	1,153	0,017	1,14	0,2	µg/l	99%
Selenium	2,50	0,02	2,55	0,4	µg/l	102%
Silver	0,186	0,007	0,200	0,05	µg/l	108%
Uranium	1,102	0,012	0,93	0,05	µg/l	84%
Vanadium	1,153	0,011	1,18	0,09	µg/l	102%
Zinc	18,8	1,0	17,1	0,8	µg/l	91%



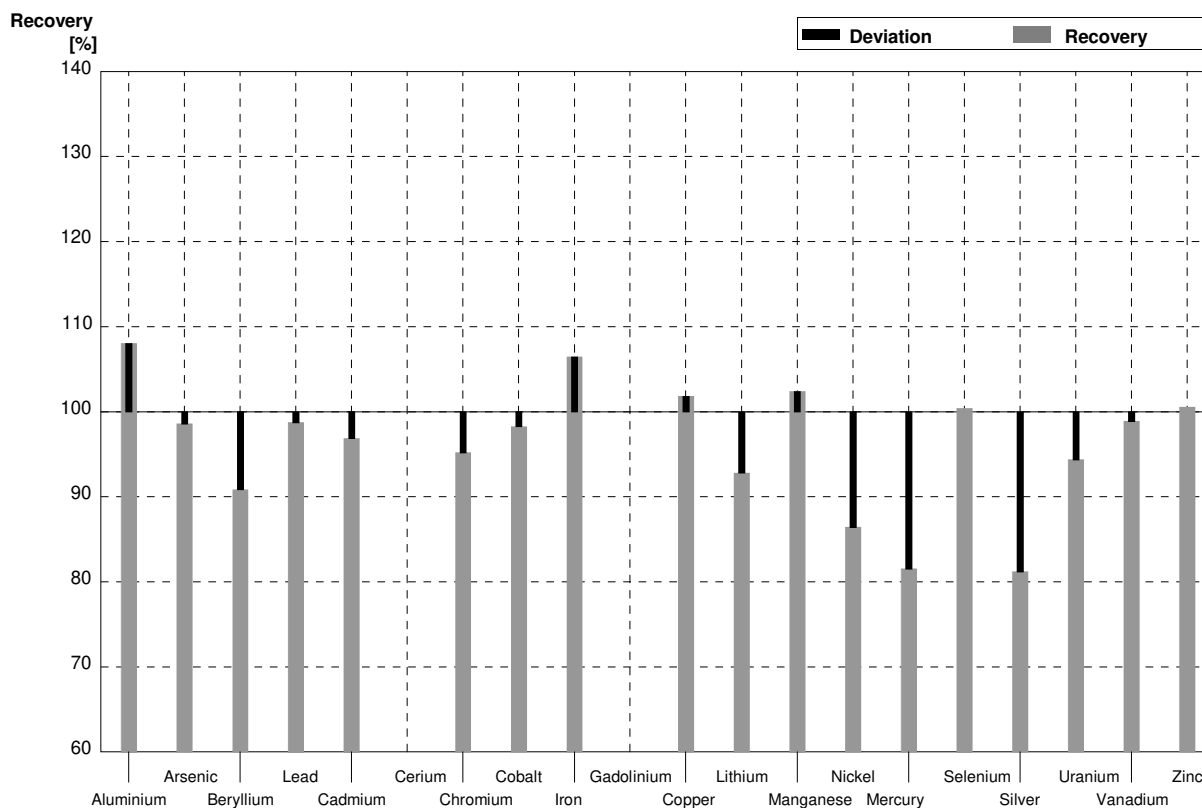
Sample M167B
Laboratory O

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	24,4	1,8	µg/l	102%
Arsenic	0,857	0,012	0,93	0,3	µg/l	109%
Beryllium	0,1706	0,0018	0,190	0,05	µg/l	111%
Lead	3,53	0,03	3,33	0,2	µg/l	94%
Cadmium	2,89	0,02	2,93	0,3	µg/l	101%
Cerium	2,013	0,016	2,38	0,5	µg/l	118%
Chromium	4,95	0,04	5,01	0,8	µg/l	101%
Cobalt	0,461	0,006	0,470	0,05	µg/l	102%
Iron	37,9	0,2	39,0	4	µg/l	103%
Gadolinium	0,0595	0,0011	0,078	0,02	µg/l	131%
Copper	6,09	0,04	5,73	0,5	µg/l	94%
Lithium	2,11	0,02	2,33	0,4	µg/l	110%
Manganese	6,90	0,05	6,79	0,4	µg/l	98%
Nickel	3,53	0,03	3,40	0,3	µg/l	96%
Mercury	0,702	0,016	0,700	0,1	µg/l	100%
Selenium	1,206	0,019	1,17	0,3	µg/l	97%
Silver	0,075	0,009	0,075	0,1	µg/l	100%
Uranium	3,53	0,03	2,98	0,2	µg/l	84%
Vanadium	0,660	0,008	0,68	0,08	µg/l	103%
Zinc	106	3	98,0	5	µg/l	92%



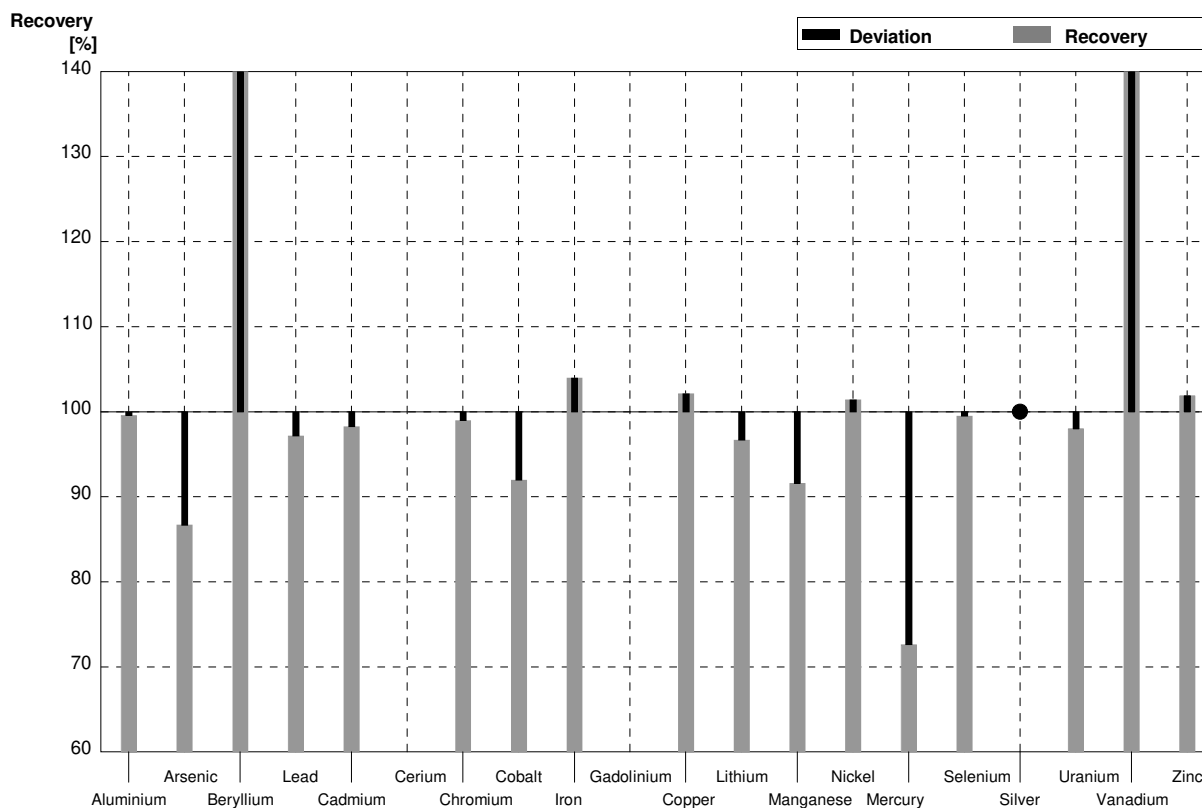
Sample M167A
Laboratory P

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	8,2		µg/l	108%
Arsenic	3,54	0,03	3,49		µg/l	99%
Beryllium	0,1299	0,0018	0,118		µg/l	91%
Lead	8,71	0,05	8,6		µg/l	99%
Cadmium	1,435	0,012	1,39		µg/l	97%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,47		µg/l	95%
Cobalt	1,791	0,014	1,76		µg/l	98%
Iron	15,31	0,17	16,3		µg/l	106%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	7,8		µg/l	102%
Lithium	6,95	0,06	6,45		µg/l	93%
Manganese	58,3	0,4	59,7		µg/l	102%
Nickel	0,81	0,02	0,700		µg/l	86%
Mercury	1,153	0,017	0,94		µg/l	82%
Selenium	2,50	0,02	2,51		µg/l	100%
Silver	0,186	0,007	0,151		µg/l	81%
Uranium	1,102	0,012	1,04		µg/l	94%
Vanadium	1,153	0,011	1,14		µg/l	99%
Zinc	18,8	1,0	18,9		µg/l	101%



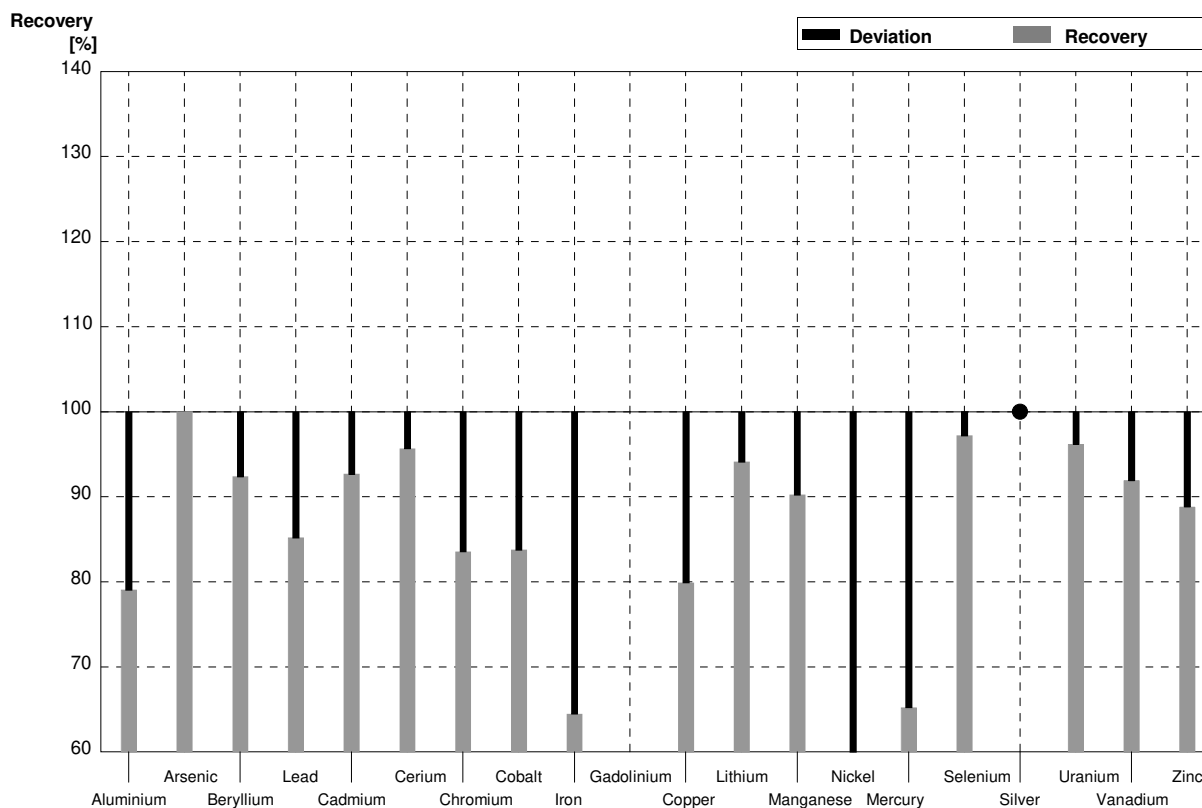
Sample M167B
Laboratory P

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	23,8		µg/l	100%
Arsenic	0,857	0,012	0,743		µg/l	87%
Beryllium	0,1706	0,0018	1,71		µg/l	1002%
Lead	3,53	0,03	3,43		µg/l	97%
Cadmium	2,89	0,02	2,84		µg/l	98%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	4,90		µg/l	99%
Cobalt	0,461	0,006	0,424		µg/l	92%
Iron	37,9	0,2	39,4		µg/l	104%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	6,22		µg/l	102%
Lithium	2,11	0,02	2,04		µg/l	97%
Manganese	6,90	0,05	6,32		µg/l	92%
Nickel	3,53	0,03	3,58		µg/l	101%
Mercury	0,702	0,016	0,51		µg/l	73%
Selenium	1,206	0,019	1,20		µg/l	100%
Silver	0,075	0,009	<0,1		µg/l	•
Uranium	3,53	0,03	3,46		µg/l	98%
Vanadium	0,660	0,008	5,95		µg/l	902%
Zinc	106	3	108,0		µg/l	102%



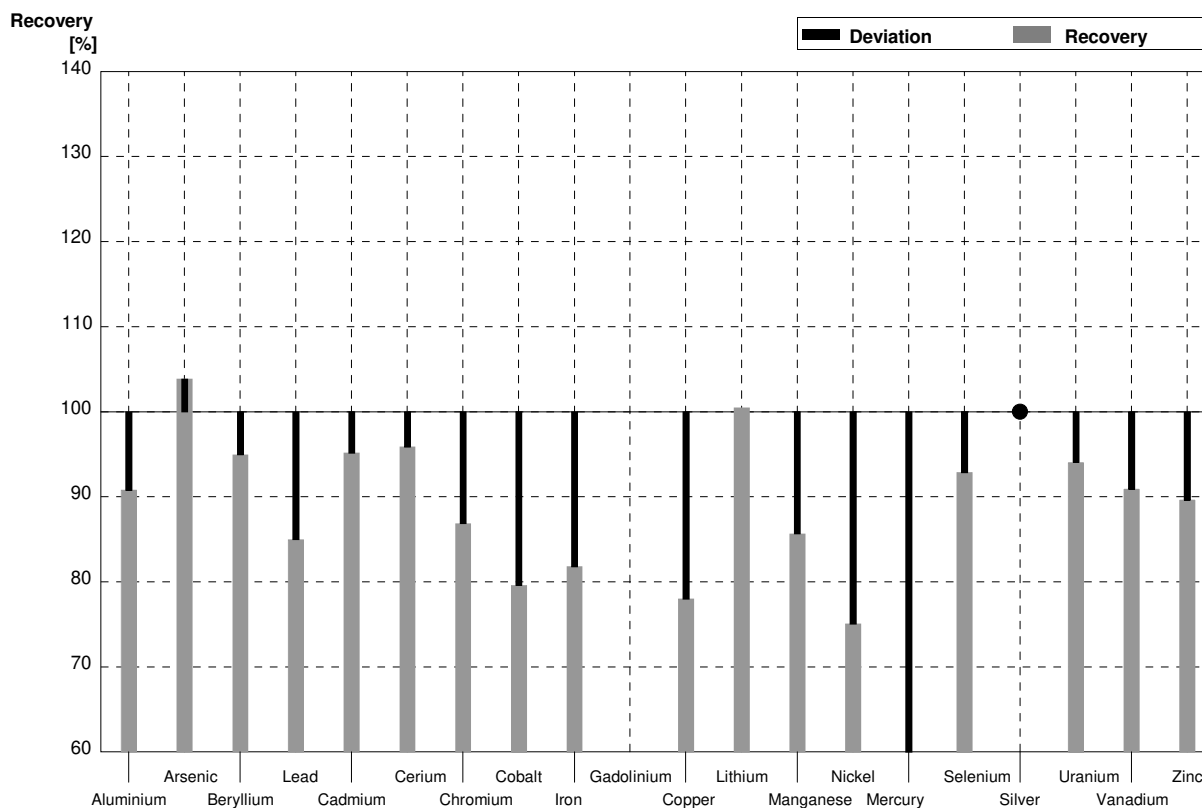
Sample M167A
Laboratory Q

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	6,00	3	µg/l	79%
Arsenic	3,54	0,03	3,54	0,53	µg/l	100%
Beryllium	0,1299	0,0018	0,120	0,06	µg/l	92%
Lead	8,71	0,05	7,42	1,11	µg/l	85%
Cadmium	1,435	0,012	1,33	0,15	µg/l	93%
Cerium	1,129	0,011	1,08	0,16	µg/l	96%
Chromium	1,544	0,017	1,29	0,19	µg/l	84%
Cobalt	1,791	0,014	1,50	0,23	µg/l	84%
Iron	15,31	0,17	9,87	1,48	µg/l	64%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	6,12	0,92	µg/l	80%
Lithium	6,95	0,06	6,54	0,98	µg/l	94%
Manganese	58,3	0,4	52,6	5,3	µg/l	90%
Nickel	0,81	0,02	0,412	0,062	µg/l	51%
Mercury	1,153	0,017	0,752	0,752	µg/l	65%
Selenium	2,50	0,02	2,43	0,36	µg/l	97%
Silver	0,186	0,007	<0,50		µg/l	•
Uranium	1,102	0,012	1,06	0,48	µg/l	96%
Vanadium	1,153	0,011	1,06	0,48	µg/l	92%
Zinc	18,8	1,0	16,7	2,5	µg/l	89%



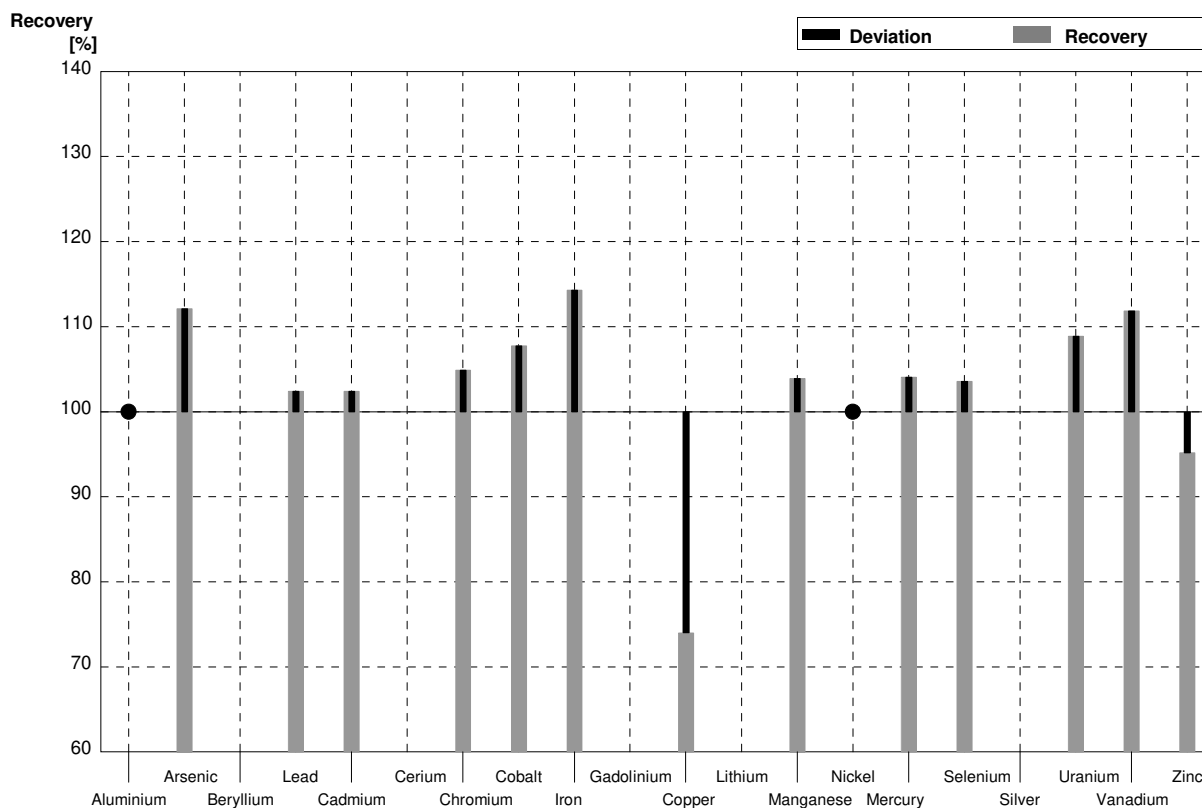
Sample M167B
Laboratory Q

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	21,7	4,4	µg/l	91%
Arsenic	0,857	0,012	0,89	0,44	µg/l	104%
Beryllium	0,1706	0,0018	0,162	0,08	µg/l	95%
Lead	3,53	0,03	3,00	0,45	µg/l	85%
Cadmium	2,89	0,02	2,75	0,28	µg/l	95%
Cerium	2,013	0,016	1,93	0,29	µg/l	96%
Chromium	4,95	0,04	4,30	0,65	µg/l	87%
Cobalt	0,461	0,006	0,367	0,367	µg/l	80%
Iron	37,9	0,2	31,0	3,1	µg/l	82%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	4,75	0,71	µg/l	78%
Lithium	2,11	0,02	2,12	0,64	µg/l	100%
Manganese	6,90	0,05	5,91	0,89	µg/l	86%
Nickel	3,53	0,03	2,65	0,40	µg/l	75%
Mercury	0,702	0,016	0,321	0,321	µg/l	46%
Selenium	1,206	0,019	1,12	0,56	µg/l	93%
Silver	0,075	0,009	<0,50		µg/l	•
Uranium	3,53	0,03	3,32	0,50	µg/l	94%
Vanadium	0,660	0,008	0,60	0,30	µg/l	91%
Zinc	106	3	95,0	9,5	µg/l	90%



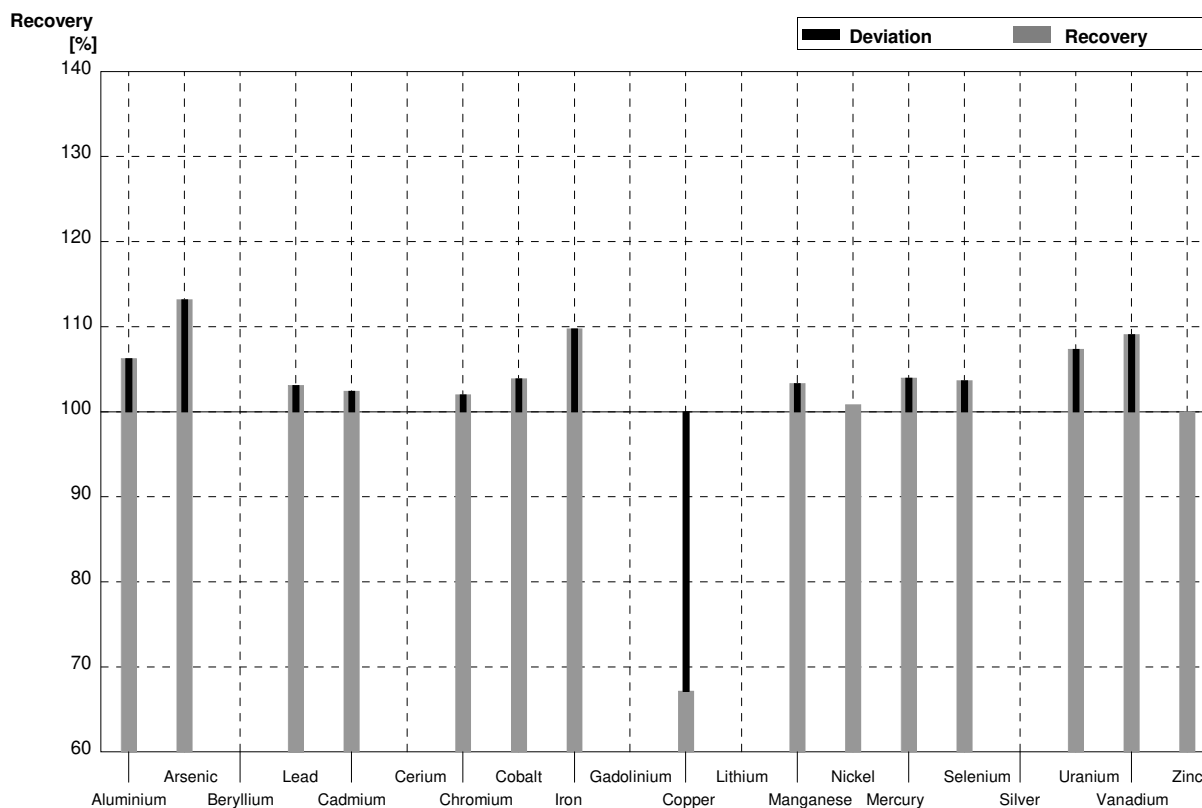
Sample M167A
Laboratory R

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	<10		µg/l	•
Arsenic	3,54	0,03	3,97	0,60	µg/l	112%
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	8,92	1,3	µg/l	102%
Cadmium	1,435	0,012	1,47	0,22	µg/l	102%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,62	0,24	µg/l	105%
Cobalt	1,791	0,014	1,93	0,29	µg/l	108%
Iron	15,31	0,17	17,5	2,6	µg/l	114%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	5,67	0,85	µg/l	74%
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4	60,6	9,1	µg/l	104%
Nickel	0,81	0,02	<1		µg/l	•
Mercury	1,153	0,017	1,20	0,18	µg/l	104%
Selenium	2,50	0,02	2,59	0,39	µg/l	104%
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012	1,20	0,18	µg/l	109%
Vanadium	1,153	0,011	1,29	0,19	µg/l	112%
Zinc	18,8	1,0	17,9	2,7	µg/l	95%



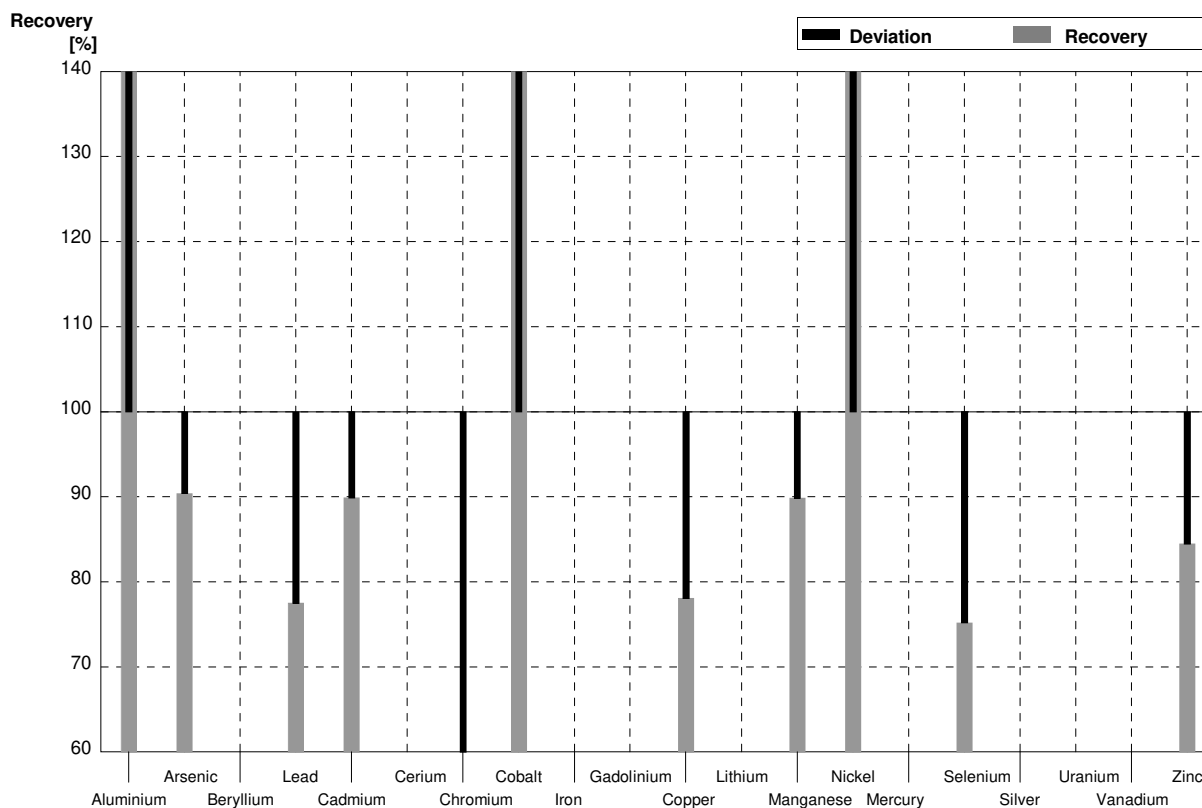
Sample M167B
Laboratory R

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	25,4	3,8	µg/l	106%
Arsenic	0,857	0,012	0,97	0,15	µg/l	113%
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	3,64	0,55	µg/l	103%
Cadmium	2,89	0,02	2,96	0,44	µg/l	102%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	5,05	0,76	µg/l	102%
Cobalt	0,461	0,006	0,479	0,072	µg/l	104%
Iron	37,9	0,2	41,6	6,2	µg/l	110%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	4,09	0,61	µg/l	67%
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05	7,13	1,1	µg/l	103%
Nickel	3,53	0,03	3,56	0,53	µg/l	101%
Mercury	0,702	0,016	0,73	0,11	µg/l	104%
Selenium	1,206	0,019	1,25	0,19	µg/l	104%
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03	3,79	0,57	µg/l	107%
Vanadium	0,660	0,008	0,72	0,11	µg/l	109%
Zinc	106	3	106	16	µg/l	100%



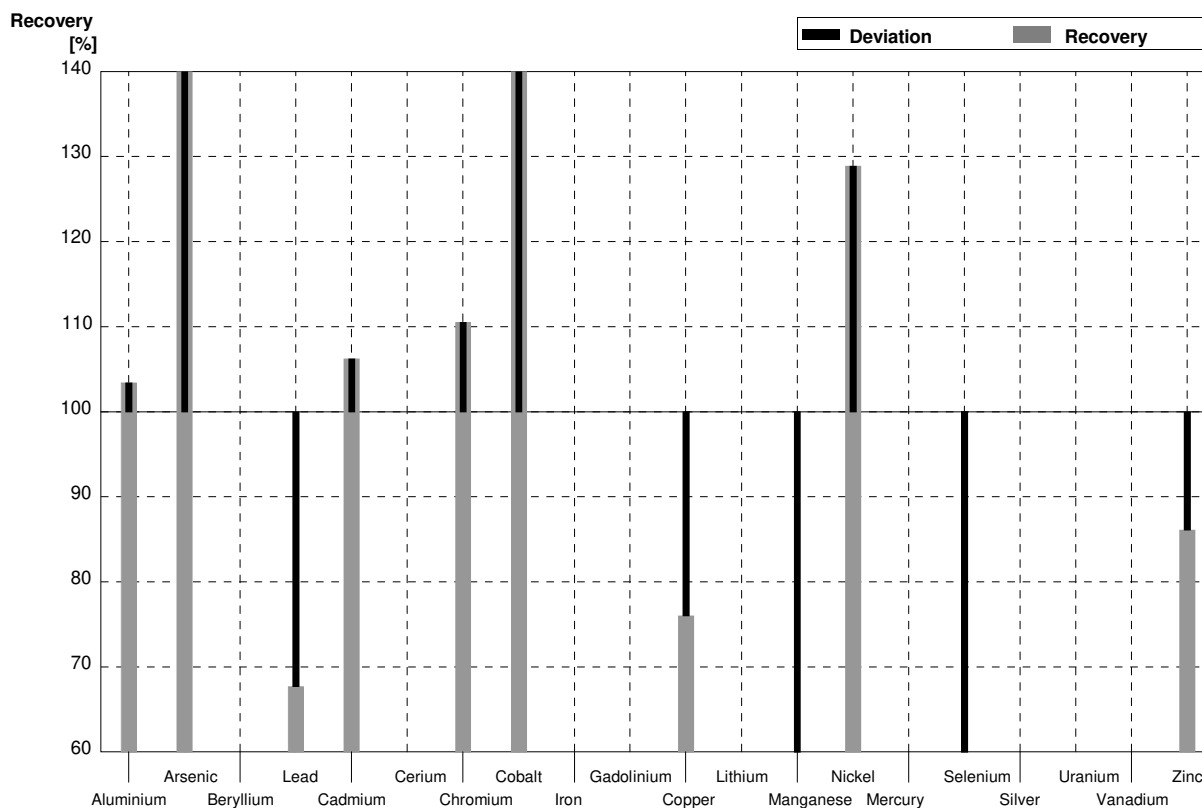
Sample M167A
Laboratory S

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	38,29	5,3	µg/l	504%
Arsenic	3,54	0,03	3,20	0,22	µg/l	90%
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	6,75	0,71	µg/l	77%
Cadmium	1,435	0,012	1,29	0,09	µg/l	90%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	0,65	0,02	µg/l	42%
Cobalt	1,791	0,014	4,28	0,12	µg/l	239%
Iron	15,31	0,17			µg/l	
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	5,98	0,73	µg/l	78%
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4	52,39	4,6	µg/l	90%
Nickel	0,81	0,02	2,22	0,17	µg/l	274%
Mercury	1,153	0,017			µg/l	
Selenium	2,50	0,02	1,88	0,14	µg/l	75%
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012			µg/l	
Vanadium	1,153	0,011			µg/l	
Zinc	18,8	1,0	15,88	2,72	µg/l	84%



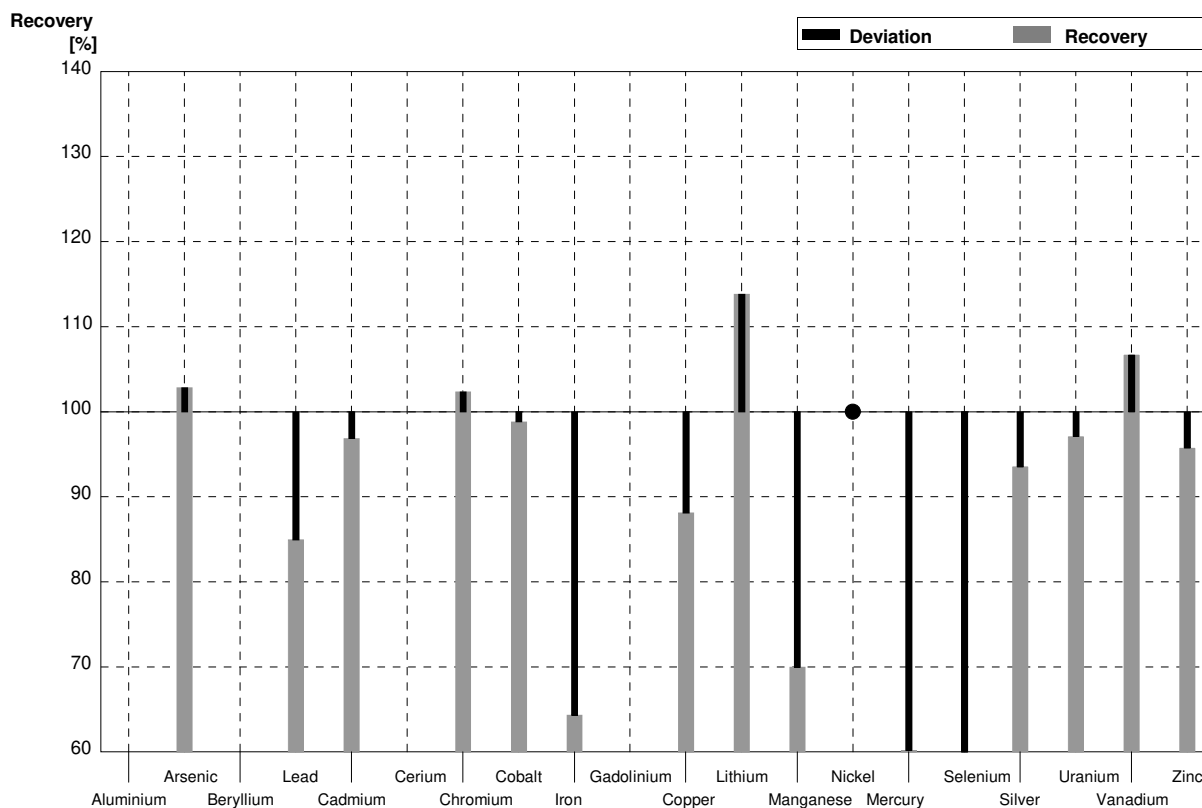
Sample M167B
Laboratory S

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	24,71	3,2	µg/l	103%
Arsenic	0,857	0,012	2,85	0,45	µg/l	333%
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	2,39	0,15	µg/l	68%
Cadmium	2,89	0,02	3,07	0,18	µg/l	106%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	5,47	0,41	µg/l	111%
Cobalt	0,461	0,006	1,65	0,08	µg/l	358%
Iron	37,9	0,2			µg/l	
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	4,63	0,28	µg/l	76%
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05	2,26	0,08	µg/l	33%
Nickel	3,53	0,03	4,55	0,33	µg/l	129%
Mercury	0,702	0,016			µg/l	
Selenium	1,206	0,019	0,67	0,03	µg/l	56%
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03			µg/l	
Vanadium	0,660	0,008			µg/l	
Zinc	106	3	91,27	4,12	µg/l	86%



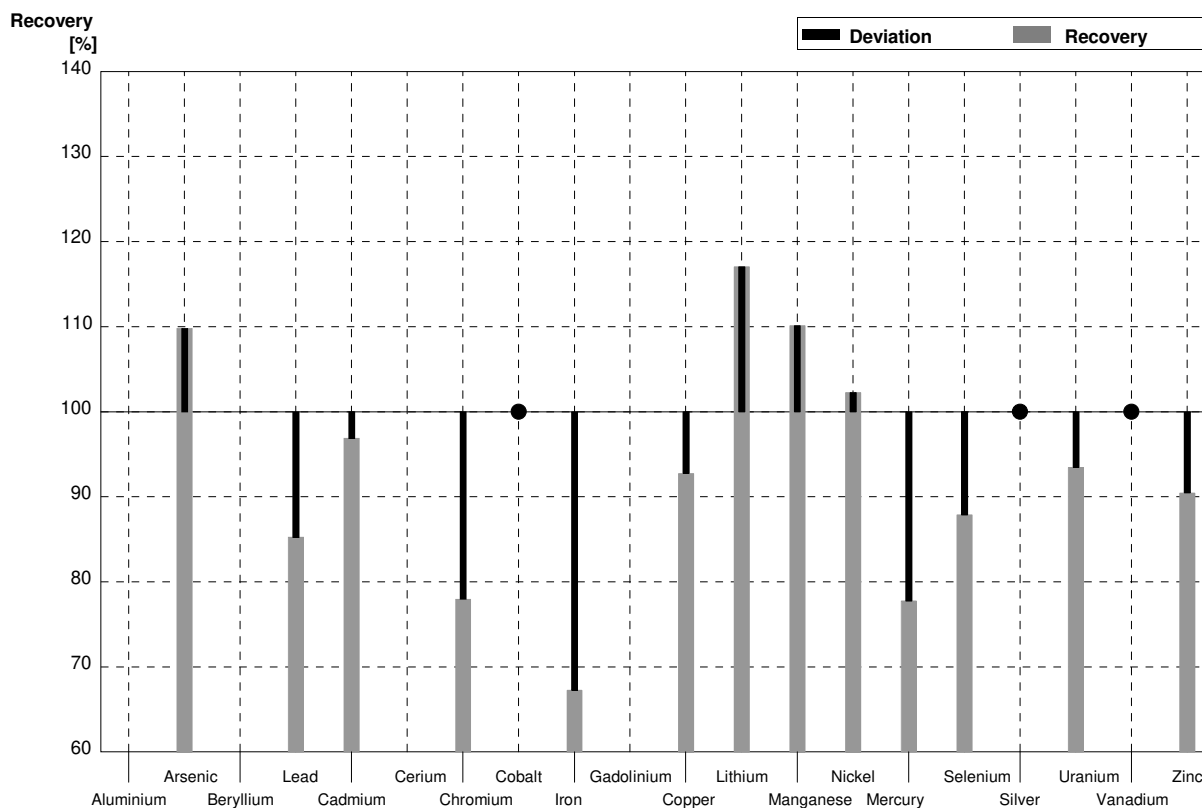
Sample M167A
Laboratory T

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14			µg/l	
Arsenic	3,54	0,03	3,64	0,73	µg/l	103%
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	7,40	1,48	µg/l	85%
Cadmium	1,435	0,012	1,39	0,28	µg/l	97%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,58	0,32	µg/l	102%
Cobalt	1,791	0,014	1,77	0,35	µg/l	99%
Iron	15,31	0,17	9,85	1,97	µg/l	64%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	6,75	1,35	µg/l	88%
Lithium	6,95	0,06	7,91	1,58	µg/l	114%
Manganese	58,3	0,4	40,8	8,2	µg/l	70%
Nickel	0,81	0,02	<1		µg/l	•
Mercury	1,153	0,017	0,694	0,139	µg/l	60%
Selenium	2,50	0,02	1,31	0,26	µg/l	52%
Silver	0,186	0,007	0,174	0,035	µg/l	94%
Uranium	1,102	0,012	1,07	0,21	µg/l	97%
Vanadium	1,153	0,011	1,23	0,25	µg/l	107%
Zinc	18,8	1,0	18,0	3,6	µg/l	96%



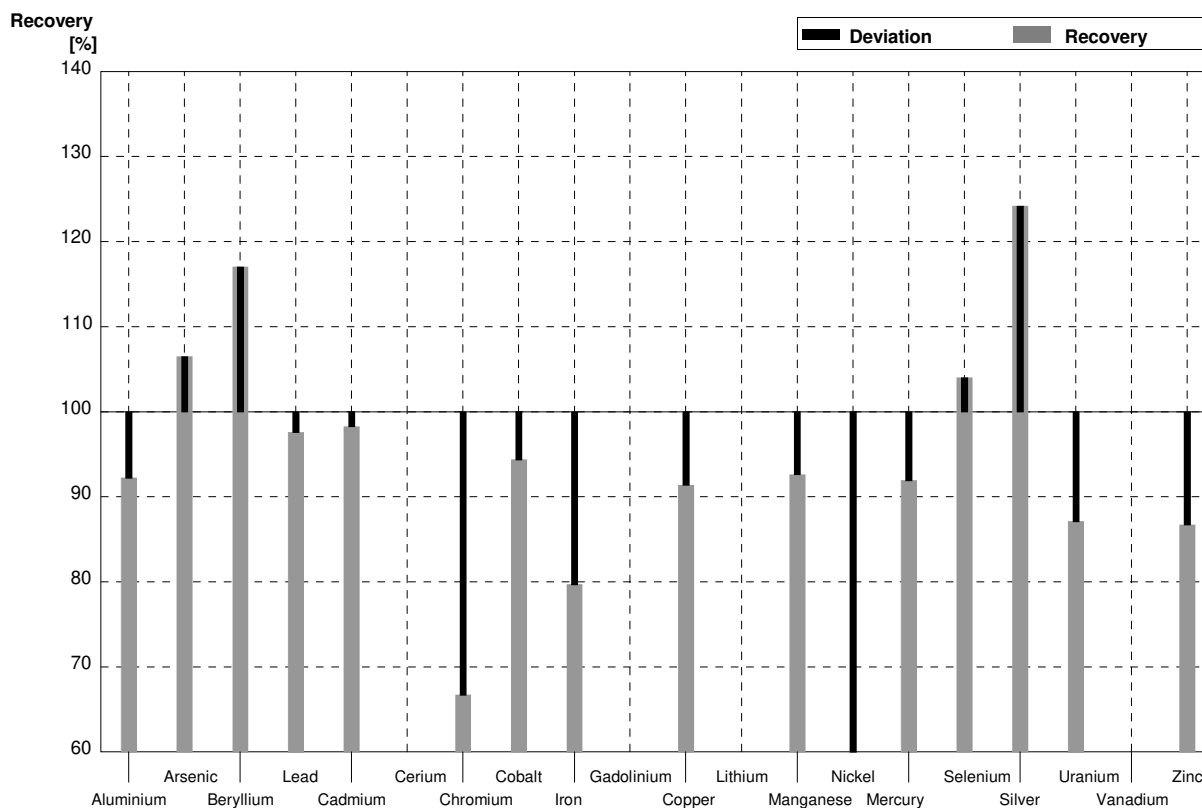
Sample M167B
Laboratory T

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4			µg/l	
Arsenic	0,857	0,012	0,941	0,188	µg/l	110%
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	3,01	0,60	µg/l	85%
Cadmium	2,89	0,02	2,80	0,56	µg/l	97%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	3,86	0,77	µg/l	78%
Cobalt	0,461	0,006	<1		µg/l	•
Iron	37,9	0,2	25,5	5,1	µg/l	67%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	5,65	1,13	µg/l	93%
Lithium	2,11	0,02	2,47	0,49	µg/l	117%
Manganese	6,90	0,05	7,60	1,52	µg/l	110%
Nickel	3,53	0,03	3,61	0,72	µg/l	102%
Mercury	0,702	0,016	0,546	0,109	µg/l	78%
Selenium	1,206	0,019	1,06	0,21	µg/l	88%
Silver	0,075	0,009	<0,1		µg/l	•
Uranium	3,53	0,03	3,30	0,66	µg/l	93%
Vanadium	0,660	0,008	<1		µg/l	•
Zinc	106	3	95,9	19,2	µg/l	90%



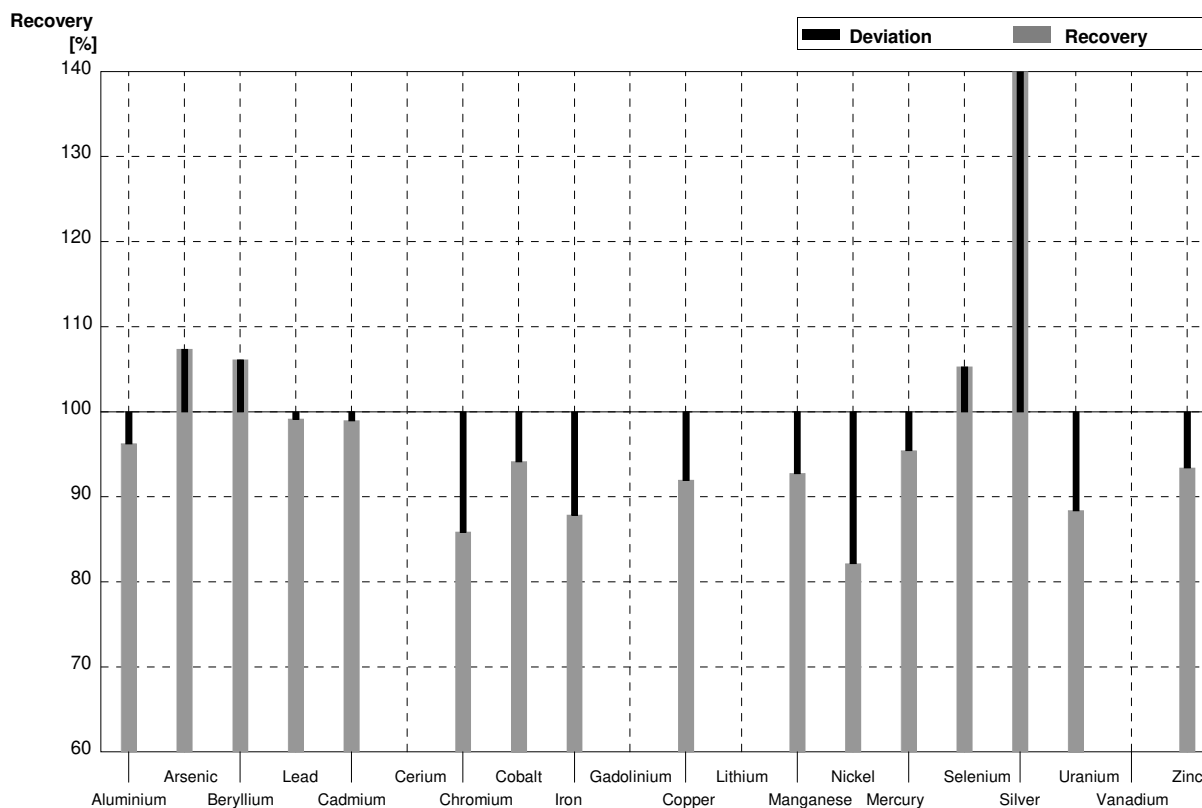
Sample M167A
Laboratory U

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,0		µg/l	92%
Arsenic	3,54	0,03	3,77		µg/l	106%
Beryllium	0,1299	0,0018	0,152		µg/l	117%
Lead	8,71	0,05	8,5		µg/l	98%
Cadmium	1,435	0,012	1,41		µg/l	98%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,03		µg/l	67%
Cobalt	1,791	0,014	1,69		µg/l	94%
Iron	15,31	0,17	12,2		µg/l	80%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	7,0		µg/l	91%
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4	54		µg/l	93%
Nickel	0,81	0,02	0,372		µg/l	46%
Mercury	1,153	0,017	1,06		µg/l	92%
Selenium	2,50	0,02	2,60		µg/l	104%
Silver	0,186	0,007	0,231		µg/l	124%
Uranium	1,102	0,012	0,96		µg/l	87%
Vanadium	1,153	0,011			µg/l	
Zinc	18,8	1,0	16,3		µg/l	87%



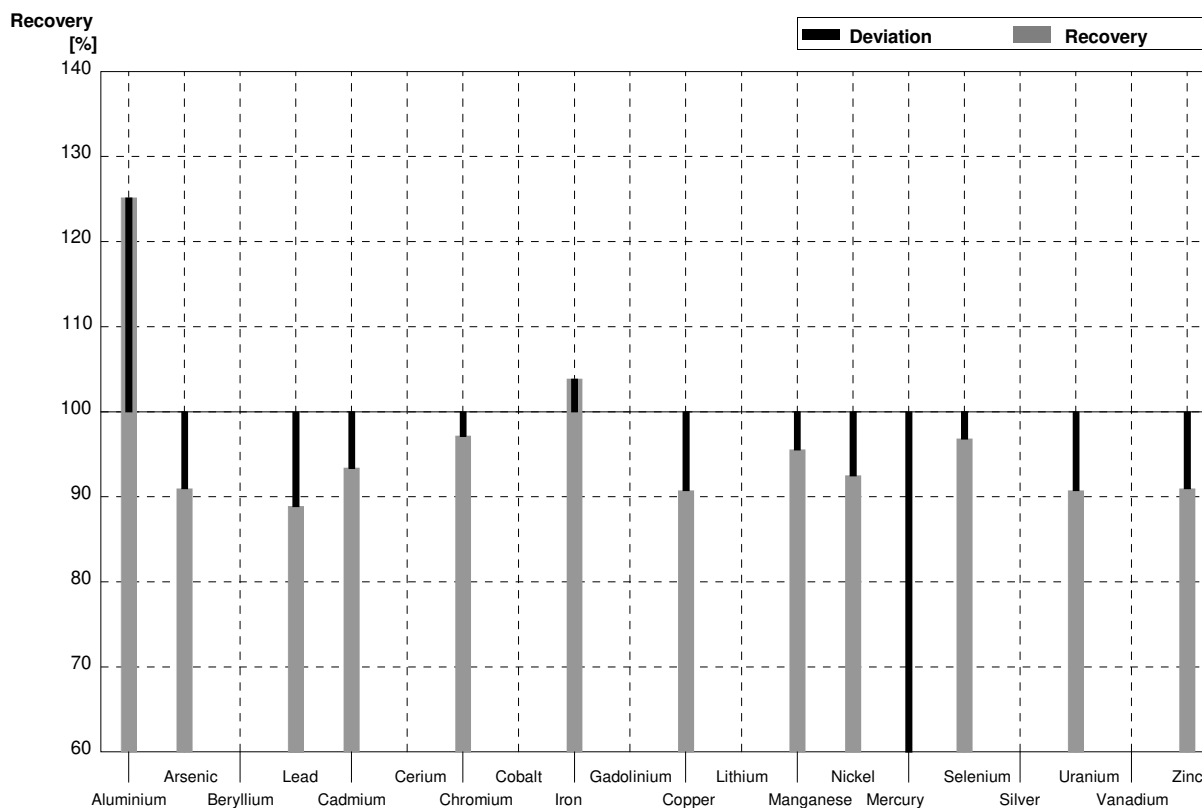
Sample M167B
Laboratory U

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	23,0		µg/l	96%
Arsenic	0,857	0,012	0,92		µg/l	107%
Beryllium	0,1706	0,0018	0,181		µg/l	106%
Lead	3,53	0,03	3,50		µg/l	99%
Cadmium	2,89	0,02	2,86		µg/l	99%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	4,25		µg/l	86%
Cobalt	0,461	0,006	0,434		µg/l	94%
Iron	37,9	0,2	33,3		µg/l	88%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	5,6		µg/l	92%
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05	6,4		µg/l	93%
Nickel	3,53	0,03	2,90		µg/l	82%
Mercury	0,702	0,016	0,670		µg/l	95%
Selenium	1,206	0,019	1,27		µg/l	105%
Silver	0,075	0,009	0,107		µg/l	143%
Uranium	3,53	0,03	3,12		µg/l	88%
Vanadium	0,660	0,008			µg/l	
Zinc	106	3	99		µg/l	93%



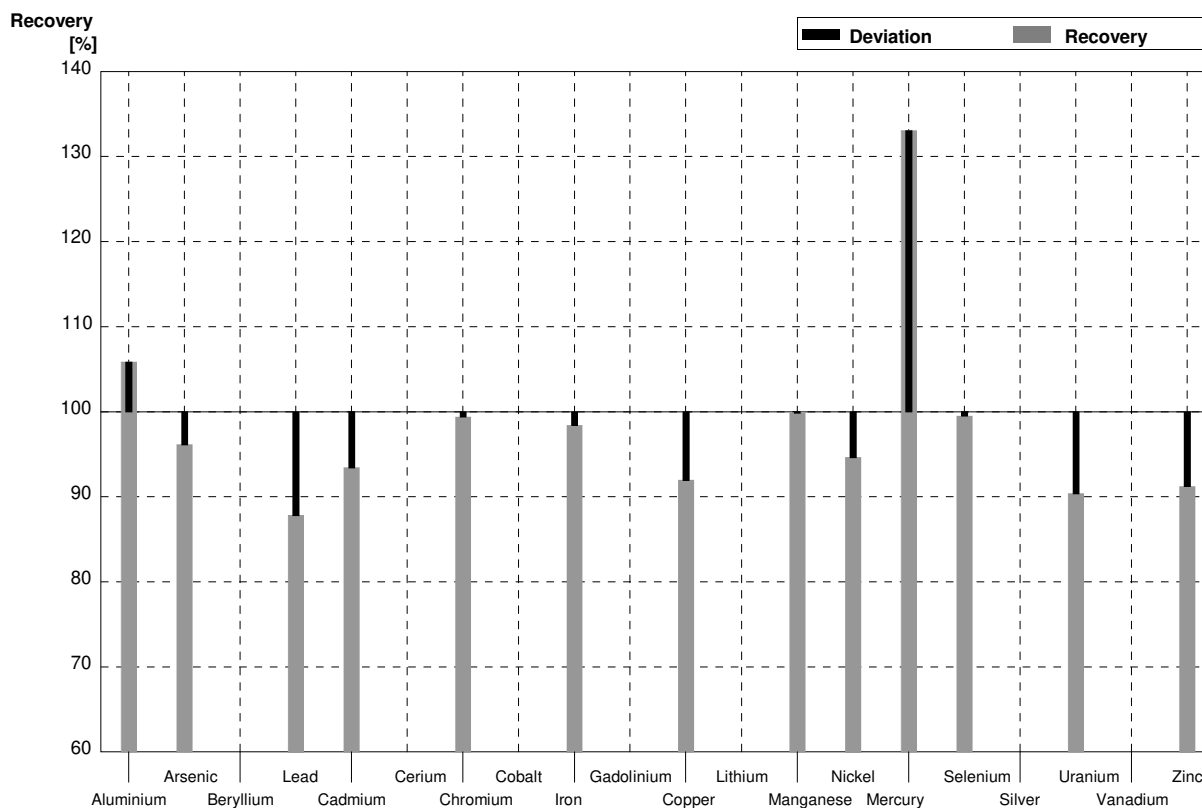
Sample M167A
Laboratory V

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	9,50	1,90	µg/l	125%
Arsenic	3,54	0,03	3,22	0,64	µg/l	91%
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	7,74	1,94	µg/l	89%
Cadmium	1,435	0,012	1,34	0,20	µg/l	93%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,50	0,45	µg/l	97%
Cobalt	1,791	0,014			µg/l	
Iron	15,31	0,17	15,9	4,8	µg/l	104%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	6,95	1,74	µg/l	91%
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4	55,7	16,7	µg/l	96%
Nickel	0,81	0,02	0,749	0,112	µg/l	92%
Mercury	1,153	0,017	0,545	0,164	µg/l	47%
Selenium	2,50	0,02	2,42	0,97	µg/l	97%
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012	1,00	0,30	µg/l	91%
Vanadium	1,153	0,011			µg/l	
Zinc	18,8	1,0	17,1	2,6	µg/l	91%



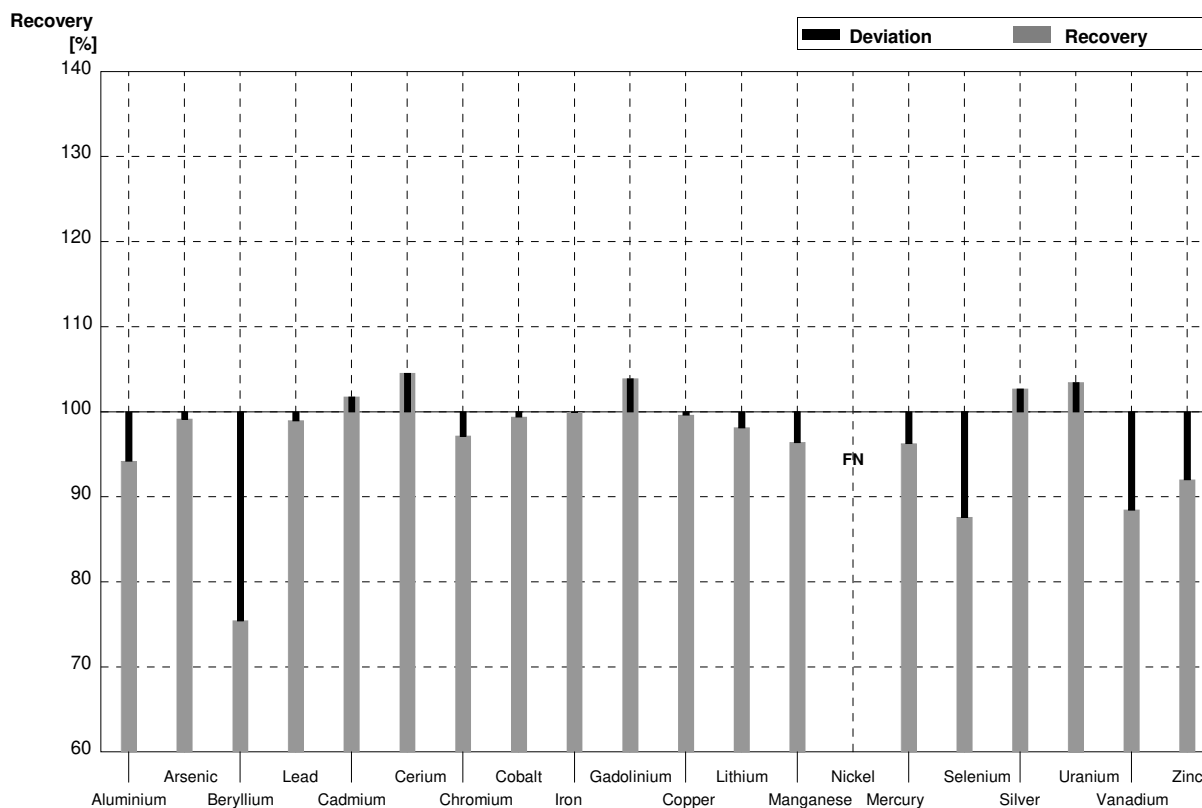
Sample M167B
Laboratory V

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	25,3	5,1	µg/l	106%
Arsenic	0,857	0,012	0,824	0,165	µg/l	96%
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	3,10	0,78	µg/l	88%
Cadmium	2,89	0,02	2,70	0,41	µg/l	93%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	4,92	1,48	µg/l	99%
Cobalt	0,461	0,006			µg/l	
Iron	37,9	0,2	37,3	11,2	µg/l	98%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	5,60	1,40	µg/l	92%
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05	6,89	2,07	µg/l	100%
Nickel	3,53	0,03	3,34	0,50	µg/l	95%
Mercury	0,702	0,016	0,934	0,280	µg/l	133%
Selenium	1,206	0,019	1,20	0,48	µg/l	100%
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03	3,19	0,96	µg/l	90%
Vanadium	0,660	0,008			µg/l	
Zinc	106	3	96,7	14,8	µg/l	91%



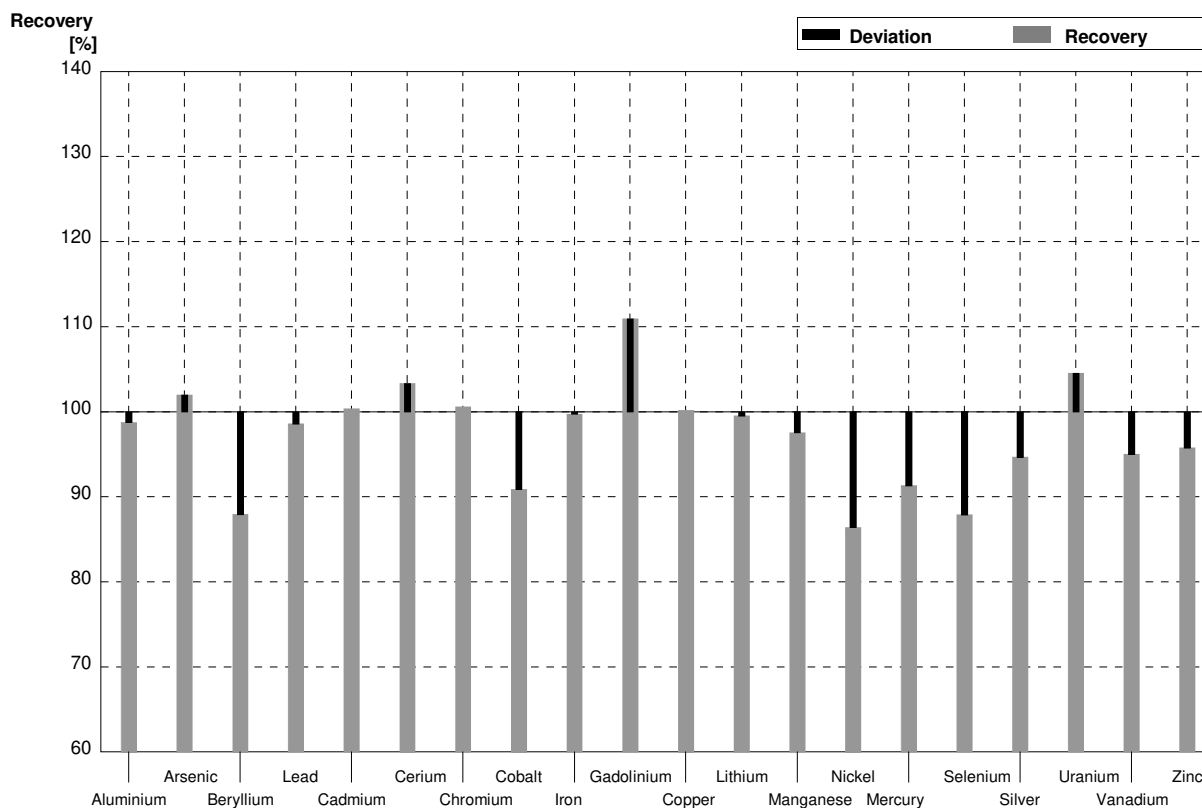
Sample M167A
Laboratory W

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,15	1,00	µg/l	94%
Arsenic	3,54	0,03	3,51	0,62	µg/l	99%
Beryllium	0,1299	0,0018	0,098	0,027	µg/l	75%
Lead	8,71	0,05	8,62	0,93	µg/l	99%
Cadmium	1,435	0,012	1,46	0,08	µg/l	102%
Cerium	1,129	0,011	1,18	0,07	µg/l	105%
Chromium	1,544	0,017	1,50	0,62	µg/l	97%
Cobalt	1,791	0,014	1,78	0,13	µg/l	99%
Iron	15,31	0,17	15,3	3,2	µg/l	100%
Gadolinium	0,0818	0,0012	0,085	0,298	µg/l	104%
Copper	7,66	0,05	7,63	1,47	µg/l	100%
Lithium	6,95	0,06	6,82	0,44	µg/l	98%
Manganese	58,3	0,4	56,2	6,7	µg/l	96%
Nickel	0,81	0,02	<0,729		µg/l	FN
Mercury	1,153	0,017	1,11	0,14	µg/l	96%
Selenium	2,50	0,02	2,19	0,58	µg/l	88%
Silver	0,186	0,007	0,191	0,029	µg/l	103%
Uranium	1,102	0,012	1,14	0,18	µg/l	103%
Vanadium	1,153	0,011	1,02	0,11	µg/l	88%
Zinc	18,8	1,0	17,3	0,7	µg/l	92%



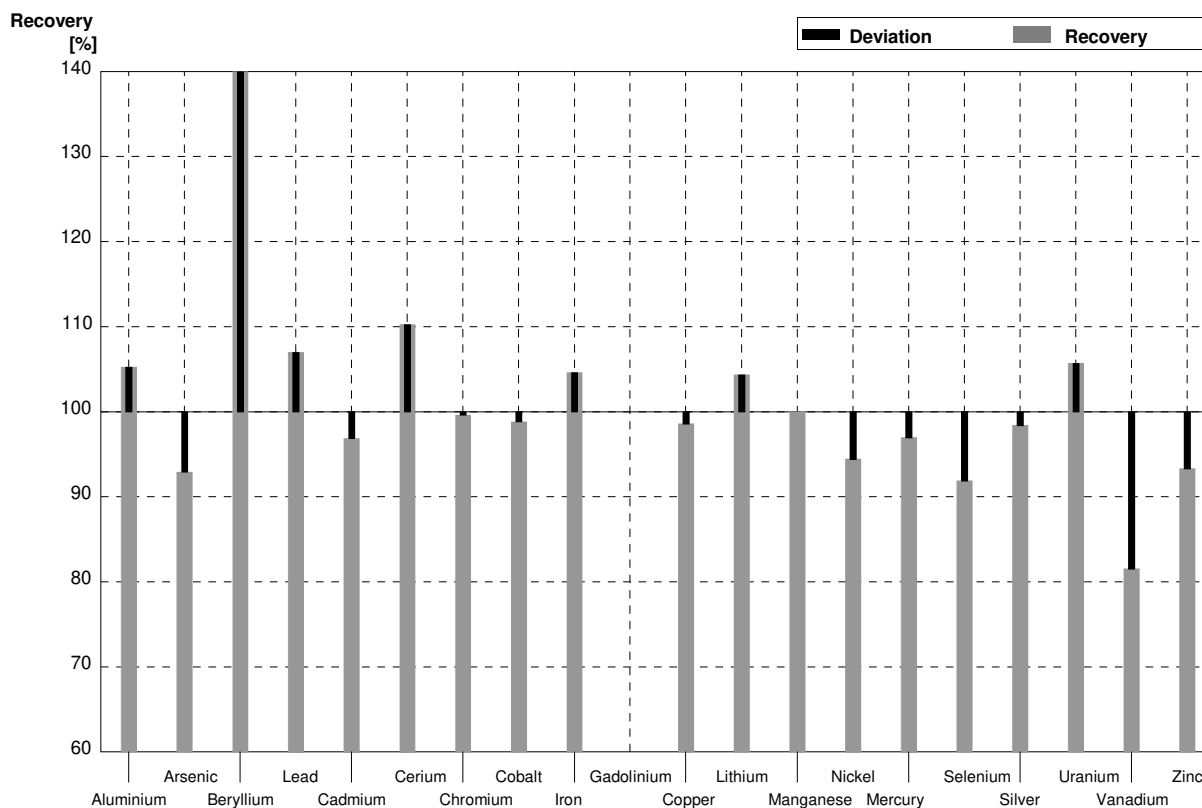
Sample M167B
Laboratory W

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	23,6	3,3	µg/l	99%
Arsenic	0,857	0,012	0,874	0,264	µg/l	102%
Beryllium	0,1706	0,0018	0,150	0,042	µg/l	88%
Lead	3,53	0,03	3,48	0,42	µg/l	99%
Cadmium	2,89	0,02	2,90	0,16	µg/l	100%
Cerium	2,013	0,016	2,08	0,12	µg/l	103%
Chromium	4,95	0,04	4,98	0,69	µg/l	101%
Cobalt	0,461	0,006	0,419	0,132	µg/l	91%
Iron	37,9	0,2	37,8	8,0	µg/l	100%
Gadolinium	0,0595	0,0011	0,066	0,009	µg/l	111%
Copper	6,09	0,04	6,10	1,17	µg/l	100%
Lithium	2,11	0,02	2,10	0,13	µg/l	100%
Manganese	6,90	0,05	6,73	0,81	µg/l	98%
Nickel	3,53	0,03	3,05	1,24	µg/l	86%
Mercury	0,702	0,016	0,641	0,323	µg/l	91%
Selenium	1,206	0,019	1,06	0,28	µg/l	88%
Silver	0,075	0,009	0,071	0,011	µg/l	95%
Uranium	3,53	0,03	3,69	0,58	µg/l	105%
Vanadium	0,660	0,008	0,627	0,946	µg/l	95%
Zinc	106	3	101,5	12,4	µg/l	96%



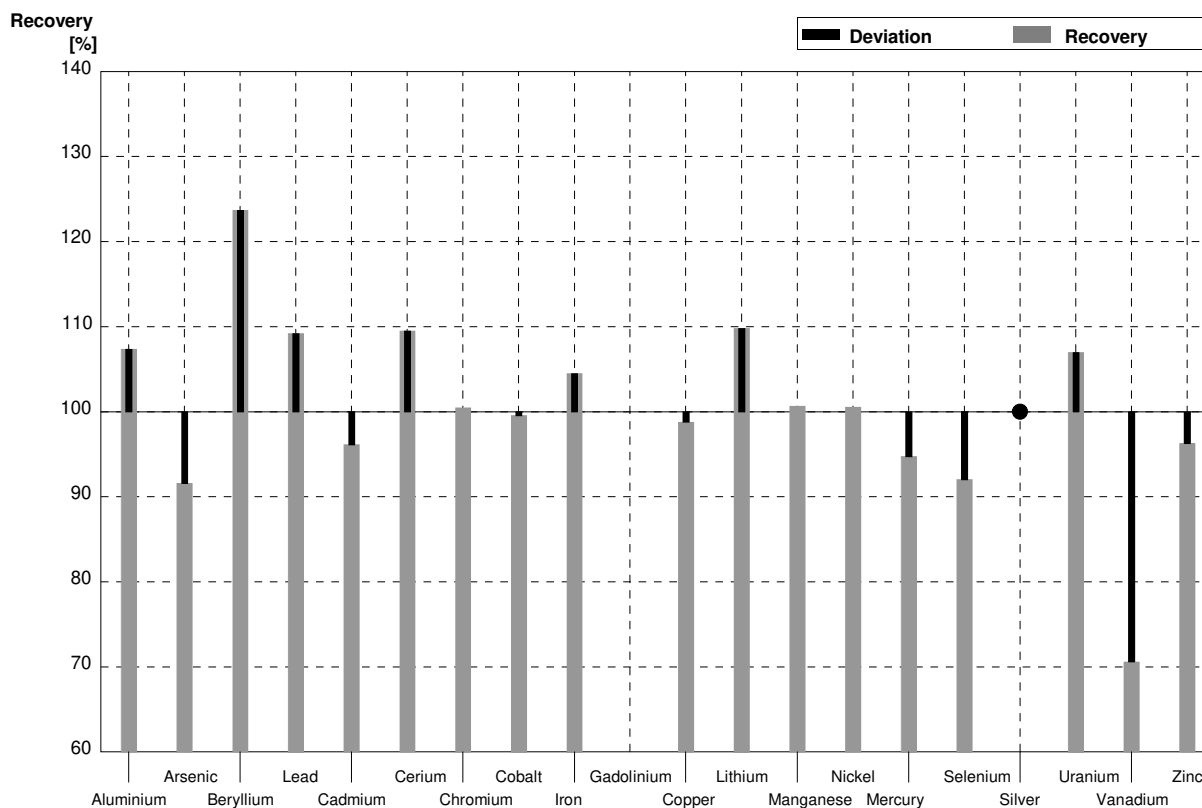
Sample M167A
Laboratory X

Parameter	Target value	$\pm U (k=2)$	Result	\pm	Unit	Recovery
Aluminium	7,59	0,14	7,988	0,80	$\mu\text{g/l}$	105%
Arsenic	3,54	0,03	3,289	0,33	$\mu\text{g/l}$	93%
Beryllium	0,1299	0,0018	0,186	0,02	$\mu\text{g/l}$	143%
Lead	8,71	0,05	9,319	0,93	$\mu\text{g/l}$	107%
Cadmium	1,435	0,012	1,390	0,14	$\mu\text{g/l}$	97%
Cerium	1,129	0,011	1,245	0,12	$\mu\text{g/l}$	110%
Chromium	1,544	0,017	1,538	0,15	$\mu\text{g/l}$	100%
Cobalt	1,791	0,014	1,770	0,18	$\mu\text{g/l}$	99%
Iron	15,31	0,17	16,014	1,6	$\mu\text{g/l}$	105%
Gadolinium	0,0818	0,0012			$\mu\text{g/l}$	
Copper	7,66	0,05	7,552	0,76	$\mu\text{g/l}$	99%
Lithium	6,95	0,06	7,253	0,73	$\mu\text{g/l}$	104%
Manganese	58,3	0,4	58,301	5,83	$\mu\text{g/l}$	100%
Nickel	0,81	0,02	0,765	0,08	$\mu\text{g/l}$	94%
Mercury	1,153	0,017	1,118	0,11	$\mu\text{g/l}$	97%
Selenium	2,50	0,02	2,297	0,23	$\mu\text{g/l}$	92%
Silver	0,186	0,007	0,183	0,02	$\mu\text{g/l}$	98%
Uranium	1,102	0,012	1,165	0,12	$\mu\text{g/l}$	106%
Vanadium	1,153	0,011	0,940	0,09	$\mu\text{g/l}$	82%
Zinc	18,8	1,0	17,544	1,75	$\mu\text{g/l}$	93%



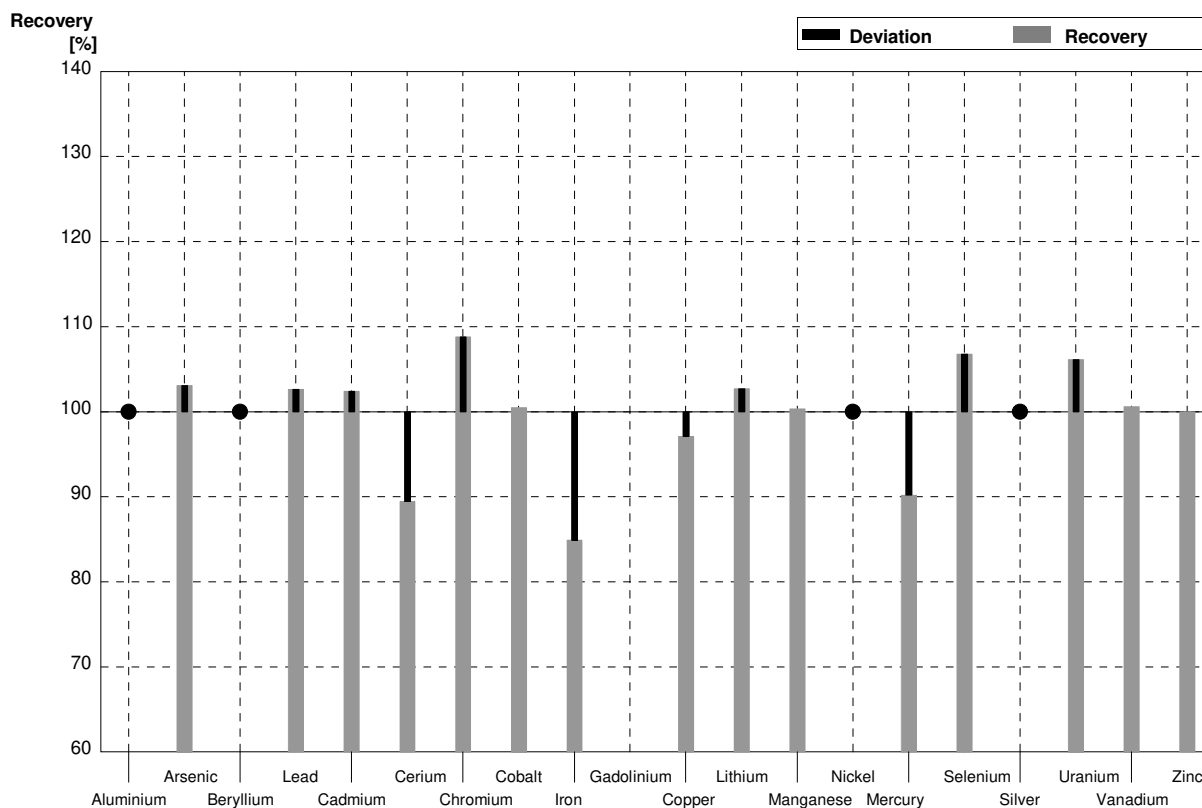
Sample M167B
Laboratory X

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	25,662	2,57	µg/l	107%
Arsenic	0,857	0,012	0,785	0,08	µg/l	92%
Beryllium	0,1706	0,0018	0,211	0,02	µg/l	124%
Lead	3,53	0,03	3,855	0,39	µg/l	109%
Cadmium	2,89	0,02	2,778	0,28	µg/l	96%
Cerium	2,013	0,016	2,204	0,22	µg/l	109%
Chromium	4,95	0,04	4,974	0,5	µg/l	100%
Cobalt	0,461	0,006	0,459	0,05	µg/l	100%
Iron	37,9	0,2	39,601	3,96	µg/l	104%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	6,017	0,60	µg/l	99%
Lithium	2,11	0,02	2,317	0,23	µg/l	110%
Manganese	6,90	0,05	6,945	0,69	µg/l	101%
Nickel	3,53	0,03	3,549	0,35	µg/l	101%
Mercury	0,702	0,016	0,665	0,07	µg/l	95%
Selenium	1,206	0,019	1,110	0,11	µg/l	92%
Silver	0,075	0,009	<0,1		µg/l	•
Uranium	3,53	0,03	3,777	0,38	µg/l	107%
Vanadium	0,660	0,008	0,466	0,05	µg/l	71%
Zinc	106	3	102,056	10,2	µg/l	96%



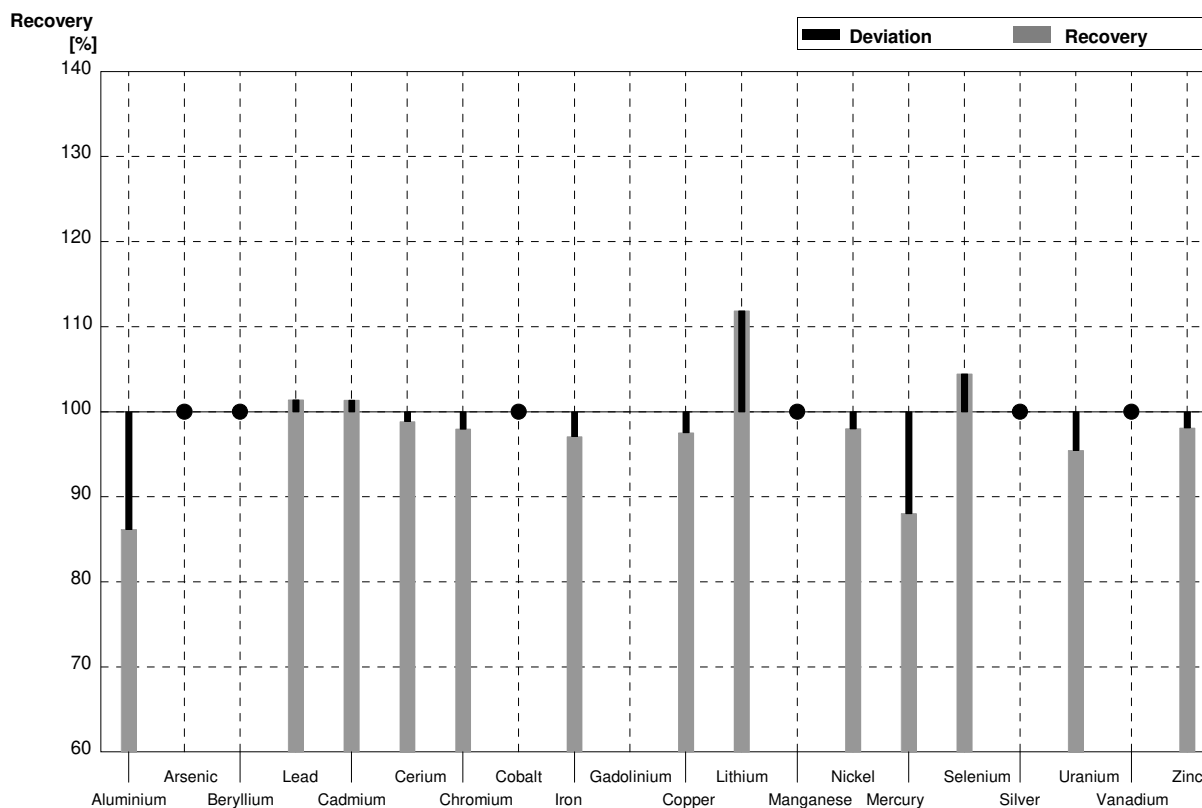
Sample M167A
Laboratory Y

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	<10		µg/l	•
Arsenic	3,54	0,03	3,65	0,0534	µg/l	103%
Beryllium	0,1299	0,0018	<1		µg/l	•
Lead	8,71	0,05	8,94	0,155	µg/l	103%
Cadmium	1,435	0,012	1,47	0,0660	µg/l	102%
Cerium	1,129	0,011	1,01	0,193	µg/l	89%
Chromium	1,544	0,017	1,68	0,101	µg/l	109%
Cobalt	1,791	0,014	1,80	0,0721	µg/l	101%
Iron	15,31	0,17	13,0	0,459	µg/l	85%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	7,44	0,0605	µg/l	97%
Lithium	6,95	0,06	7,14	0,0490	µg/l	103%
Manganese	58,3	0,4	58,5	0,711	µg/l	100%
Nickel	0,81	0,02	<1		µg/l	•
Mercury	1,153	0,017	1,04	0,0103	µg/l	90%
Selenium	2,50	0,02	2,67	0,101	µg/l	107%
Silver	0,186	0,007	<1		µg/l	•
Uranium	1,102	0,012	1,17	0,0908	µg/l	106%
Vanadium	1,153	0,011	1,16	0,176	µg/l	101%
Zinc	18,8	1,0	18,8	0,120	µg/l	100%



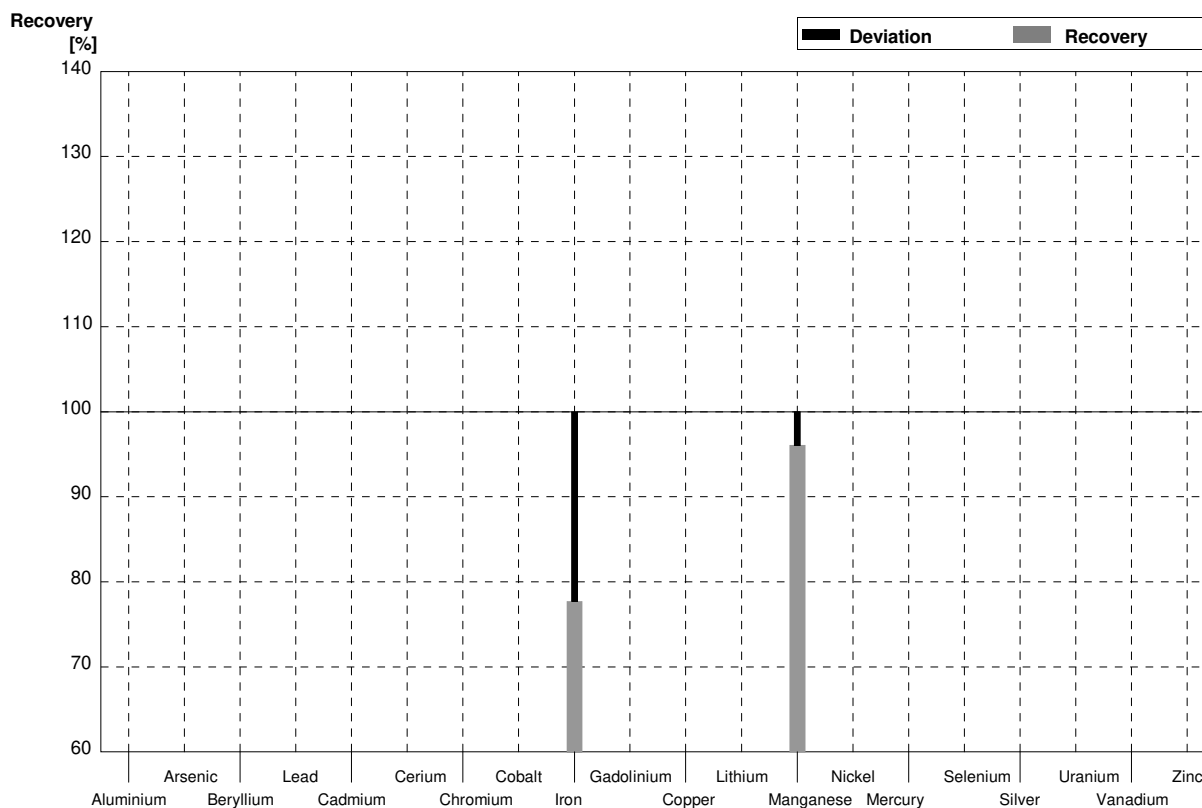
Sample M167B
Laboratory Y

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	20,6	0,414	µg/l	86%
Arsenic	0,857	0,012	<1		µg/l	•
Beryllium	0,1706	0,0018	<1		µg/l	•
Lead	3,53	0,03	3,58	0,144	µg/l	101%
Cadmium	2,89	0,02	2,93	0,0643	µg/l	101%
Cerium	2,013	0,016	1,99	0,0773	µg/l	99%
Chromium	4,95	0,04	4,85	0,0890	µg/l	98%
Cobalt	0,461	0,006	<1		µg/l	•
Iron	37,9	0,2	36,8	0,394	µg/l	97%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	5,94	0,0582	µg/l	98%
Lithium	2,11	0,02	2,36	0,0520	µg/l	112%
Manganese	6,90	0,05	<10		µg/l	•
Nickel	3,53	0,03	3,46	0,144	µg/l	98%
Mercury	0,702	0,016	0,618	0,0107	µg/l	88%
Selenium	1,206	0,019	1,26	0,109	µg/l	104%
Silver	0,075	0,009	<1		µg/l	•
Uranium	3,53	0,03	3,37	0,0992	µg/l	95%
Vanadium	0,660	0,008	<1		µg/l	•
Zinc	106	3	104	4,27	µg/l	98%



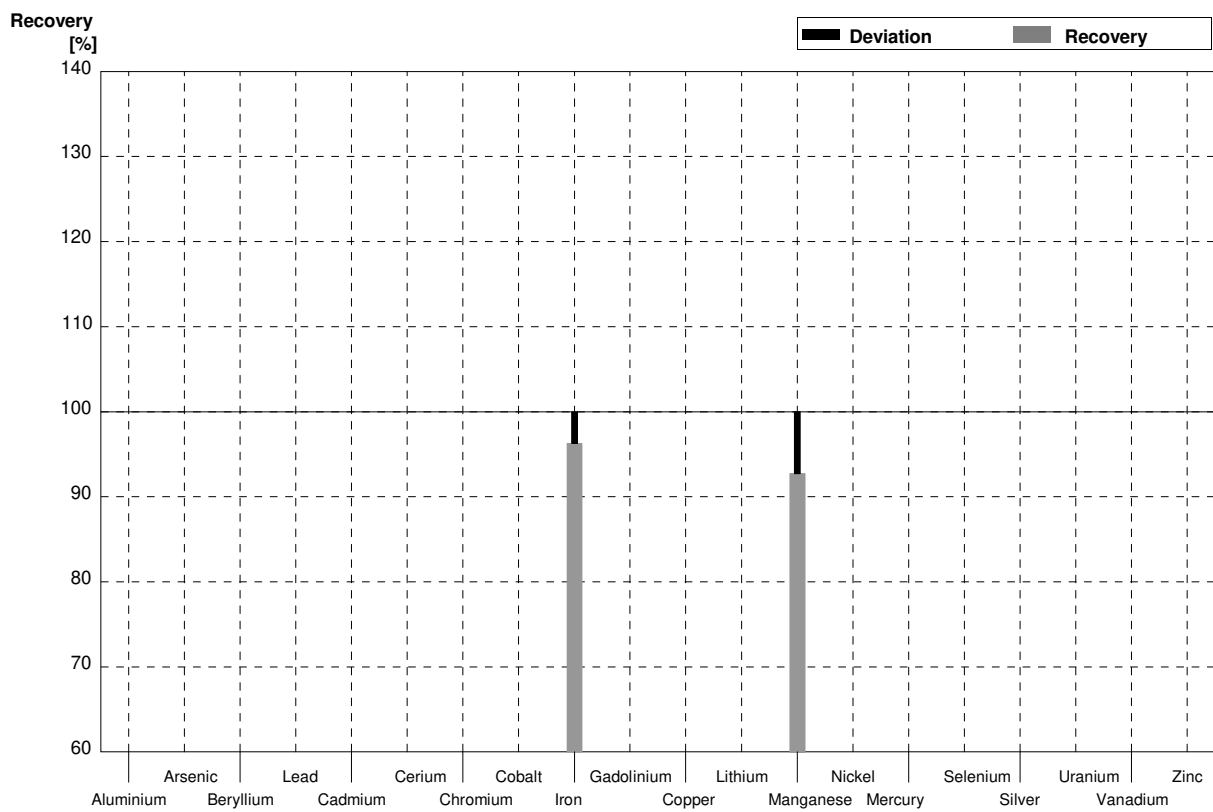
Sample M167A
Laboratory Z

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14			µg/l	
Arsenic	3,54	0,03			µg/l	
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05			µg/l	
Cadmium	1,435	0,012			µg/l	
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017			µg/l	
Cobalt	1,791	0,014			µg/l	
Iron	15,31	0,17	11,9	1,2	µg/l	78%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05			µg/l	
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4	56	5,6	µg/l	96%
Nickel	0,81	0,02			µg/l	
Mercury	1,153	0,017			µg/l	
Selenium	2,50	0,02			µg/l	
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012			µg/l	
Vanadium	1,153	0,011			µg/l	
Zinc	18,8	1,0			µg/l	



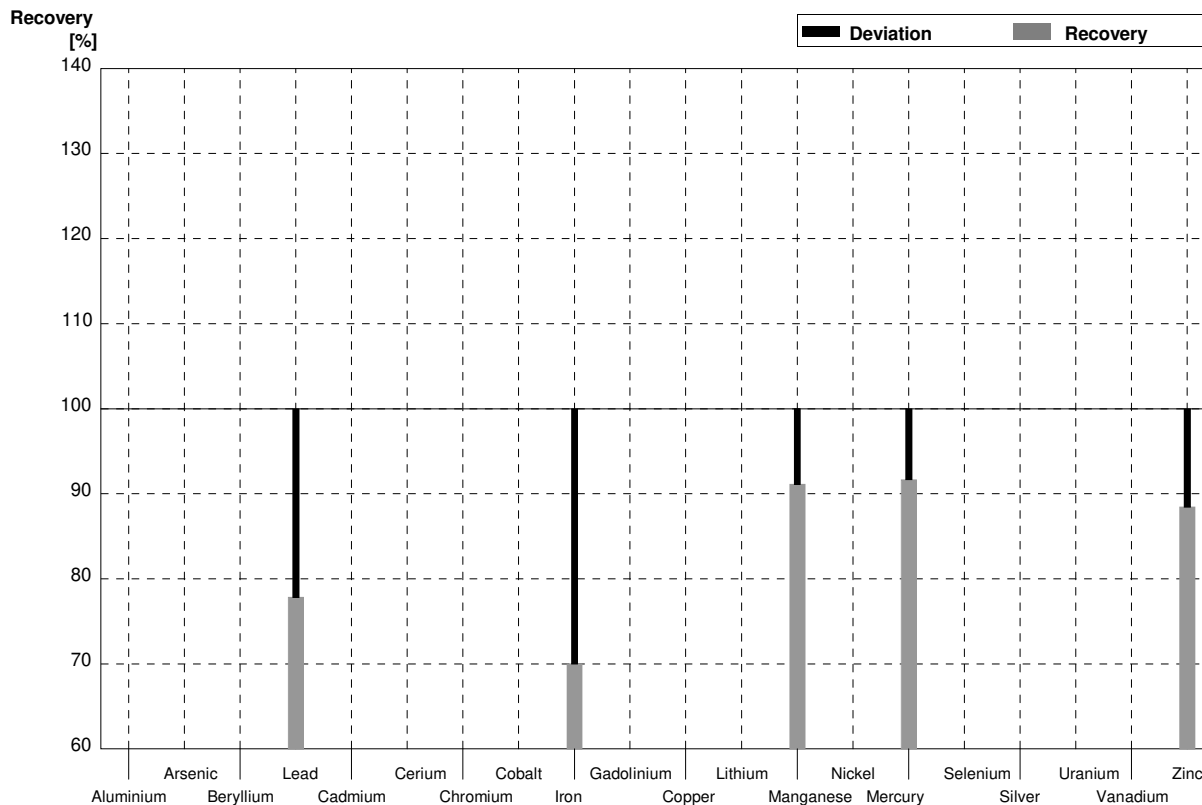
Sample M167B
Laboratory Z

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4			µg/l	
Arsenic	0,857	0,012			µg/l	
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03			µg/l	
Cadmium	2,89	0,02			µg/l	
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04			µg/l	
Cobalt	0,461	0,006			µg/l	
Iron	37,9	0,2	36,5	3,7	µg/l	96%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04			µg/l	
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05	6,4	0,64	µg/l	93%
Nickel	3,53	0,03			µg/l	
Mercury	0,702	0,016			µg/l	
Selenium	1,206	0,019			µg/l	
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03			µg/l	
Vanadium	0,660	0,008			µg/l	
Zinc	106	3			µg/l	



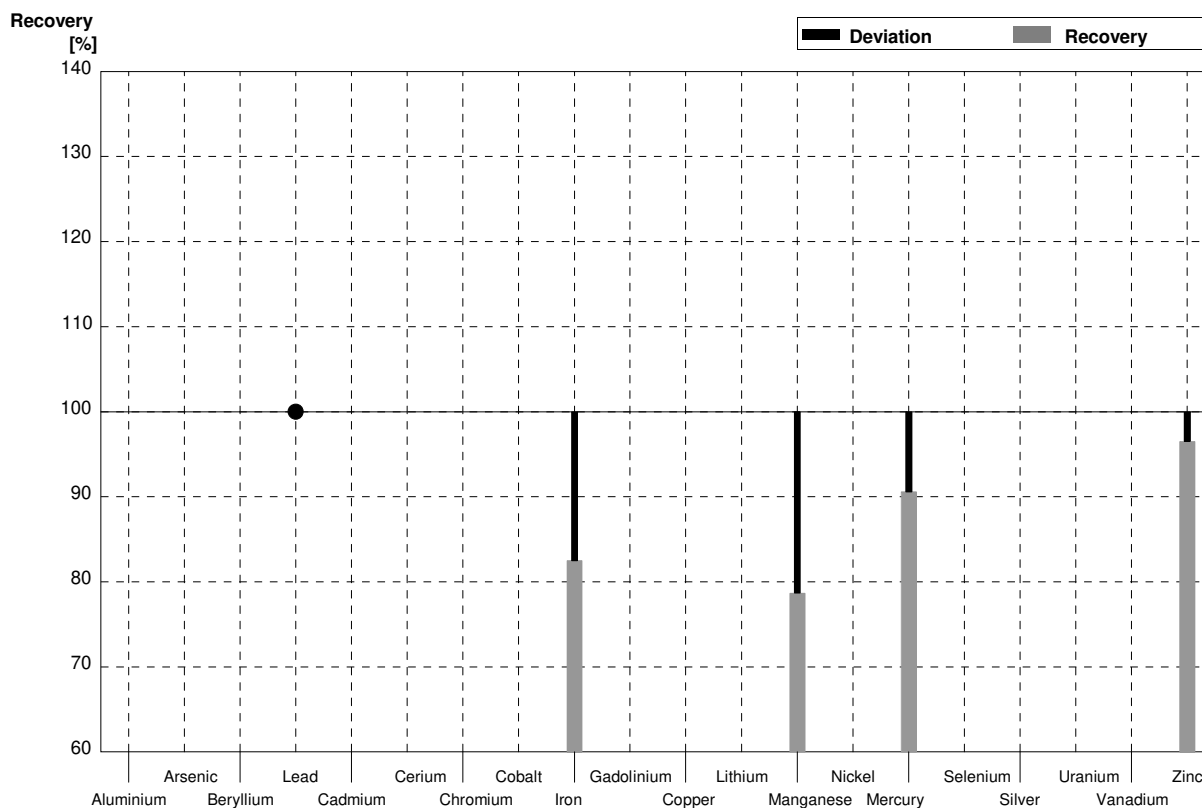
Sample M167A
Laboratory AA

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14			µg/l	
Arsenic	3,54	0,03			µg/l	
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	6,78	1,34	µg/l	78%
Cadmium	1,435	0,012			µg/l	
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017			µg/l	
Cobalt	1,791	0,014			µg/l	
Iron	15,31	0,17	10,72	1,46	µg/l	70%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05			µg/l	
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4	53,13	7,52	µg/l	91%
Nickel	0,81	0,02			µg/l	
Mercury	1,153	0,017	1,057	0,211	µg/l	92%
Selenium	2,50	0,02			µg/l	
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012			µg/l	
Vanadium	1,153	0,011			µg/l	
Zinc	18,8	1,0	16,63	2,02	µg/l	88%



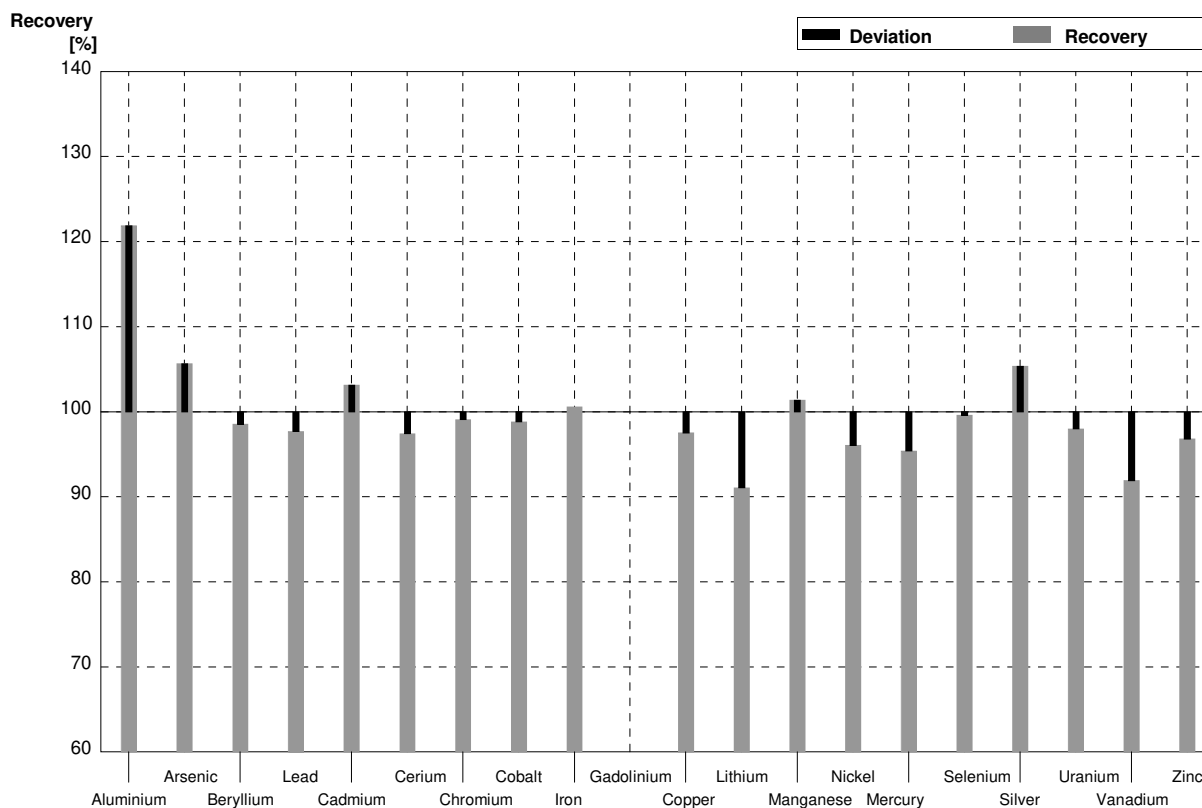
Sample M167B
Laboratory AA

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4			µg/l	
Arsenic	0,857	0,012			µg/l	
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	<5,00		µg/l	•
Cadmium	2,89	0,02			µg/l	
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04			µg/l	
Cobalt	0,461	0,006			µg/l	
Iron	37,9	0,2	31,27	4,26	µg/l	83%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04			µg/l	
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05	5,43	0,77	µg/l	79%
Nickel	3,53	0,03			µg/l	
Mercury	0,702	0,016	0,636	0,127	µg/l	91%
Selenium	1,206	0,019			µg/l	
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03			µg/l	
Vanadium	0,660	0,008			µg/l	
Zinc	106	3	102,33	12,41	µg/l	97%



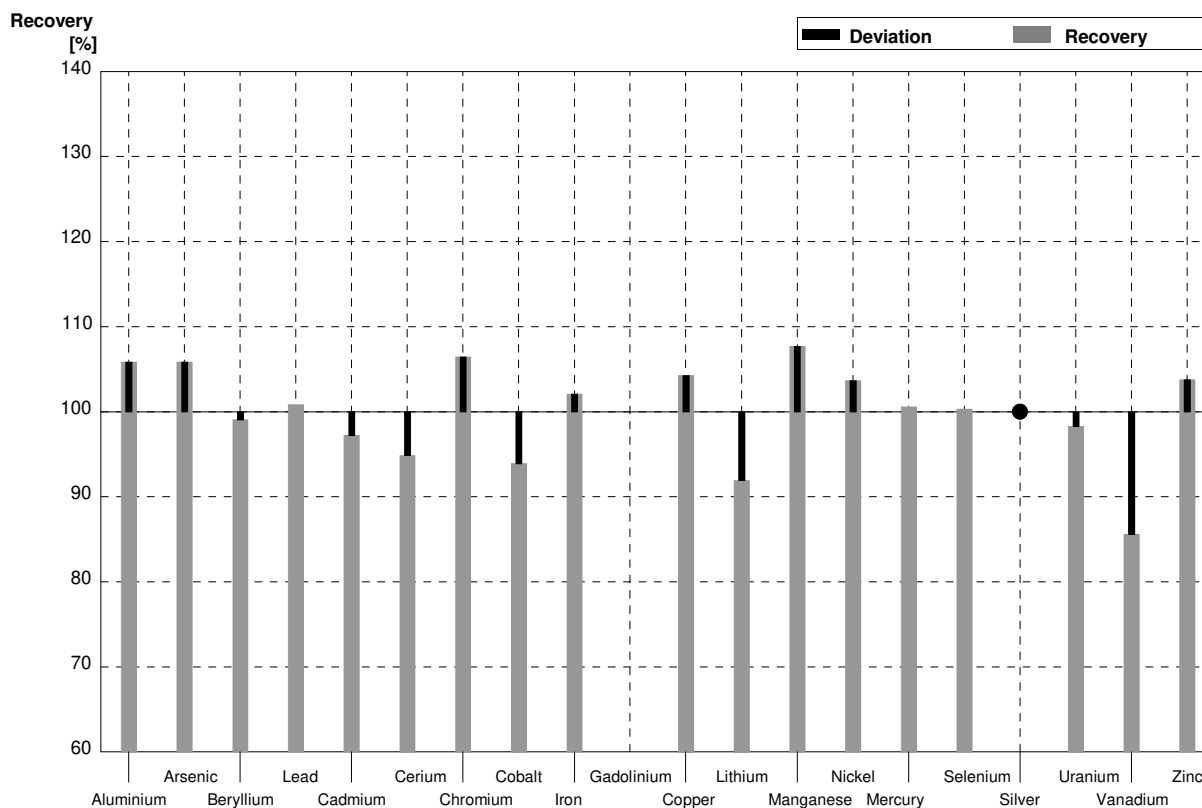
Sample M167A
Laboratory AB

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	9,25	0,303	µg/l	122%
Arsenic	3,54	0,03	3,74	0,059	µg/l	106%
Beryllium	0,1299	0,0018	0,128	0,006	µg/l	99%
Lead	8,71	0,05	8,51	0,248	µg/l	98%
Cadmium	1,435	0,012	1,48	0,072	µg/l	103%
Cerium	1,129	0,011	1,10	0,021	µg/l	97%
Chromium	1,544	0,017	1,53	0,029	µg/l	99%
Cobalt	1,791	0,014	1,77	0,010	µg/l	99%
Iron	15,31	0,17	15,4	0,379	µg/l	101%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	7,47	0,046	µg/l	98%
Lithium	6,95	0,06	6,33	0,222	µg/l	91%
Manganese	58,3	0,4	59,1	0,379	µg/l	101%
Nickel	0,81	0,02	0,778	0,034	µg/l	96%
Mercury	1,153	0,017	1,10	0,032	µg/l	95%
Selenium	2,50	0,02	2,49	0,049	µg/l	100%
Silver	0,186	0,007	0,196	0,002	µg/l	105%
Uranium	1,102	0,012	1,08	0,035	µg/l	98%
Vanadium	1,153	0,011	1,06	0,025	µg/l	92%
Zinc	18,8	1,0	18,2	0,153	µg/l	97%



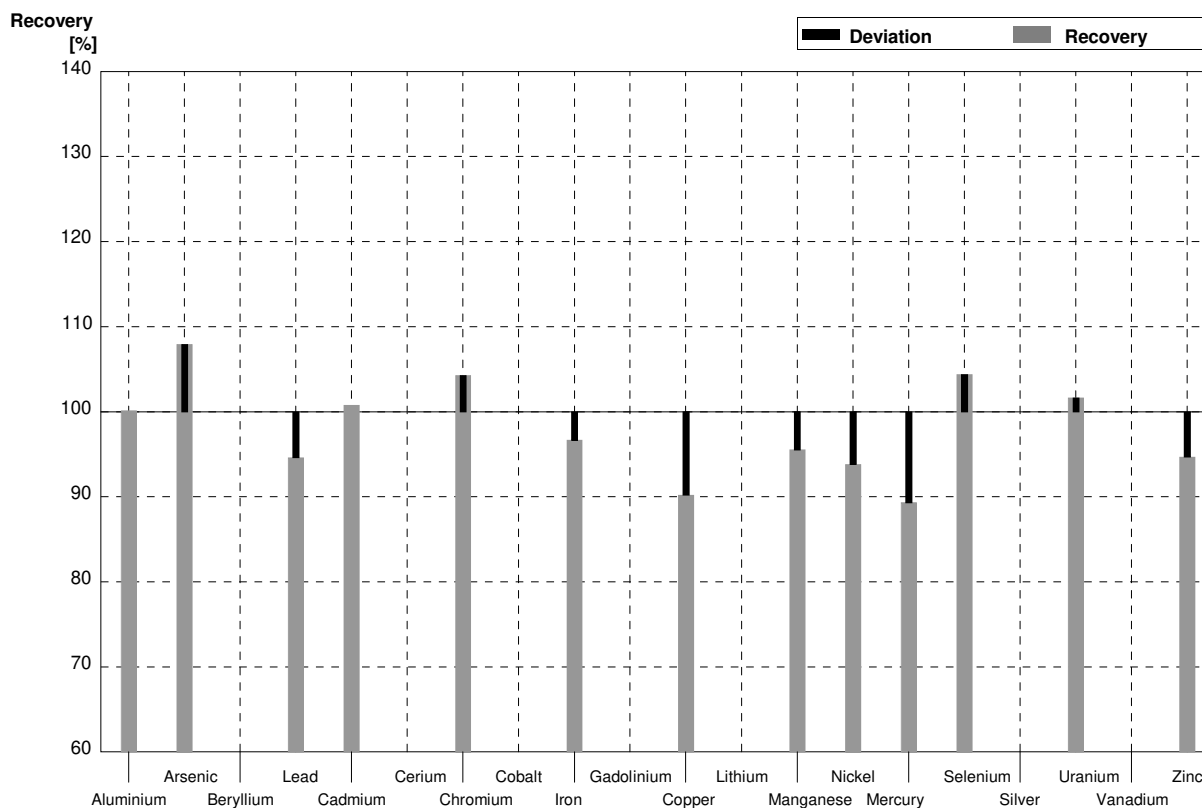
Sample M167B
Laboratory AB

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	25,3	0,231	µg/l	106%
Arsenic	0,857	0,012	0,907	0,036	µg/l	106%
Beryllium	0,1706	0,0018	0,169	0,010	µg/l	99%
Lead	3,53	0,03	3,56	0,015	µg/l	101%
Cadmium	2,89	0,02	2,81	0,042	µg/l	97%
Cerium	2,013	0,016	1,91	0,025	µg/l	95%
Chromium	4,95	0,04	5,27	0,156	µg/l	106%
Cobalt	0,461	0,006	0,433	0,016	µg/l	94%
Iron	37,9	0,2	38,7	0,321	µg/l	102%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	6,35	0,193	µg/l	104%
Lithium	2,11	0,02	1,94	0,015	µg/l	92%
Manganese	6,90	0,05	7,43	0,258	µg/l	108%
Nickel	3,53	0,03	3,66	0,114	µg/l	104%
Mercury	0,702	0,016	0,706	0,004	µg/l	101%
Selenium	1,206	0,019	1,21	0,044	µg/l	100%
Silver	0,075	0,009	<0,11		µg/l	•
Uranium	3,53	0,03	3,47	0,035	µg/l	98%
Vanadium	0,660	0,008	0,565	0,026	µg/l	86%
Zinc	106	3	110	2,646	µg/l	104%



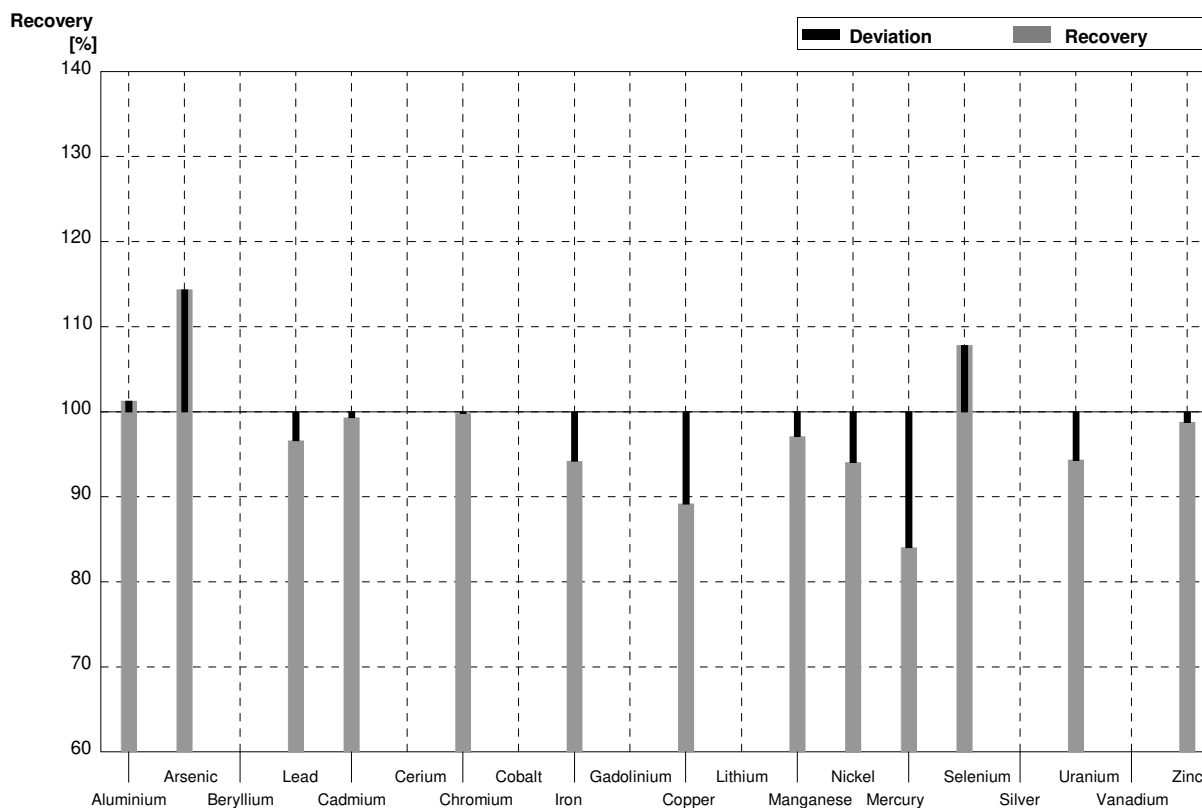
Sample M167A
Laboratory AC

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,6		µg/l	100%
Arsenic	3,54	0,03	3,82		µg/l	108%
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	8,24		µg/l	95%
Cadmium	1,435	0,012	1,446		µg/l	101%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,61		µg/l	104%
Cobalt	1,791	0,014			µg/l	
Iron	15,31	0,17	14,8		µg/l	97%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	6,91		µg/l	90%
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4	55,7		µg/l	96%
Nickel	0,81	0,02	0,76		µg/l	94%
Mercury	1,153	0,017	1,03		µg/l	89%
Selenium	2,50	0,02	2,61		µg/l	104%
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012	1,12		µg/l	102%
Vanadium	1,153	0,011			µg/l	
Zinc	18,8	1,0	17,8		µg/l	95%



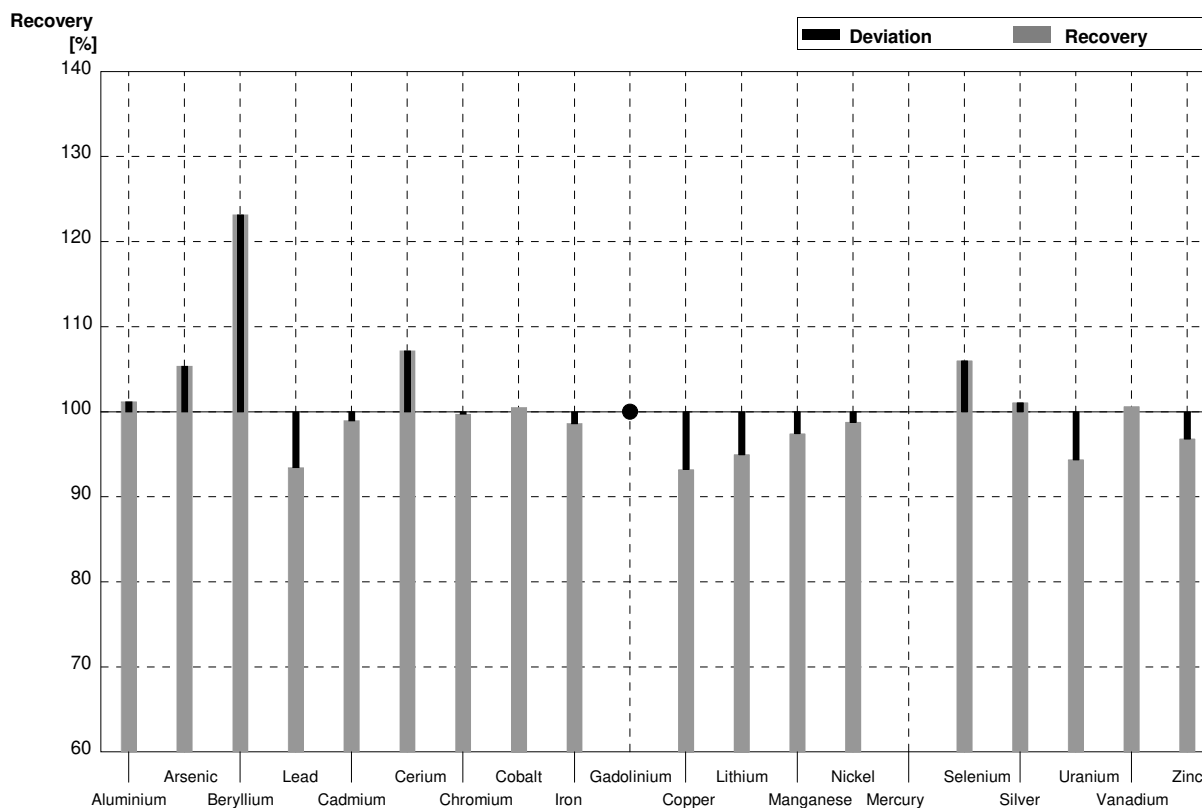
Sample M167B
Laboratory AC

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	24,2		µg/l	101%
Arsenic	0,857	0,012	0,98		µg/l	114%
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	3,41		µg/l	97%
Cadmium	2,89	0,02	2,87		µg/l	99%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	4,94		µg/l	100%
Cobalt	0,461	0,006			µg/l	
Iron	37,9	0,2	35,7		µg/l	94%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	5,43		µg/l	89%
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05	6,7		µg/l	97%
Nickel	3,53	0,03	3,32		µg/l	94%
Mercury	0,702	0,016	0,59		µg/l	84%
Selenium	1,206	0,019	1,30		µg/l	108%
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03	3,33		µg/l	94%
Vanadium	0,660	0,008			µg/l	
Zinc	106	3	104,7		µg/l	99%



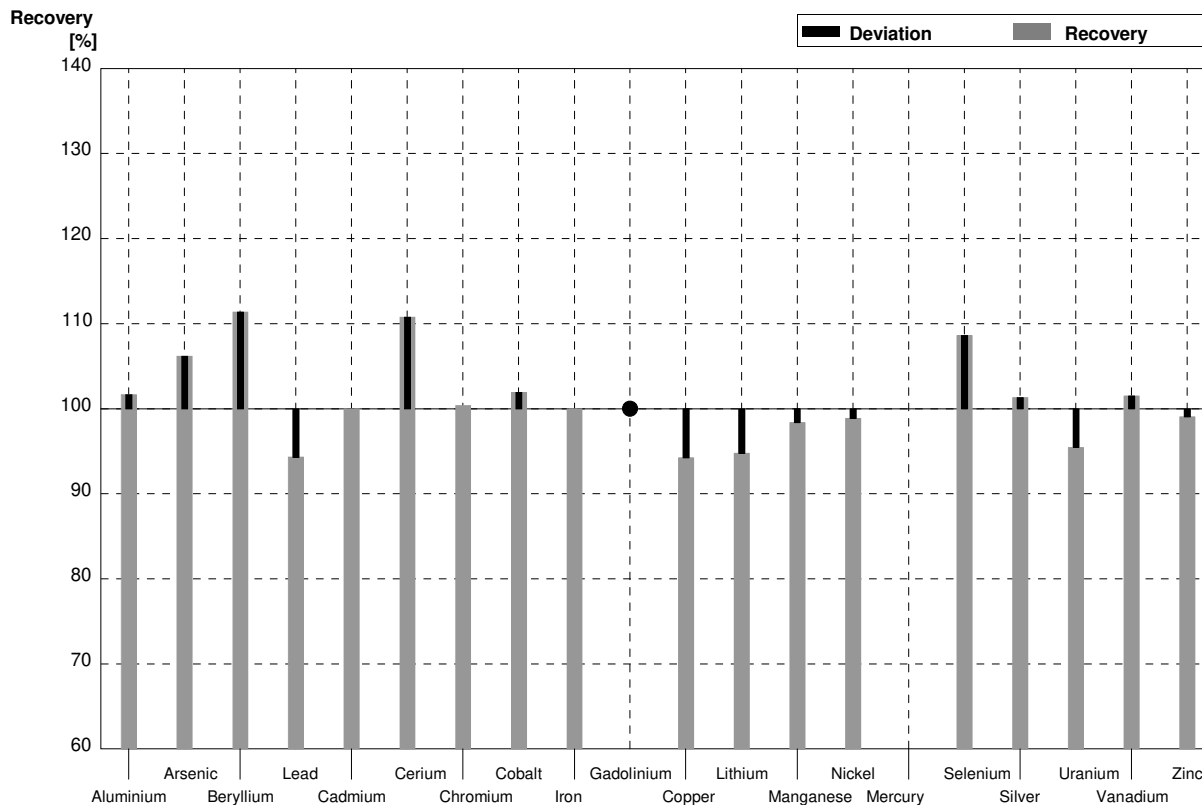
Sample M167A
Laboratory AD

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,68	0,77	µg/l	101%
Arsenic	3,54	0,03	3,73	0,37	µg/l	105%
Beryllium	0,1299	0,0018	0,160	0,050	µg/l	123%
Lead	8,71	0,05	8,14	0,81	µg/l	93%
Cadmium	1,435	0,012	1,42	0,14	µg/l	99%
Cerium	1,129	0,011	1,21	0,24	µg/l	107%
Chromium	1,544	0,017	1,54	0,15	µg/l	100%
Cobalt	1,791	0,014	1,80	0,18	µg/l	101%
Iron	15,31	0,17	15,1	1,5	µg/l	99%
Gadolinium	0,0818	0,0012	<0,15		µg/l	•
Copper	7,66	0,05	7,14	0,71	µg/l	93%
Lithium	6,95	0,06	6,6	0,7	µg/l	95%
Manganese	58,3	0,4	56,8	5,7	µg/l	97%
Nickel	0,81	0,02	0,80	0,08	µg/l	99%
Mercury	1,153	0,017			µg/l	
Selenium	2,50	0,02	2,65	0,27	µg/l	106%
Silver	0,186	0,007	0,188	0,019	µg/l	101%
Uranium	1,102	0,012	1,04	0,10	µg/l	94%
Vanadium	1,153	0,011	1,16	0,12	µg/l	101%
Zinc	18,8	1,0	18,2	1,8	µg/l	97%



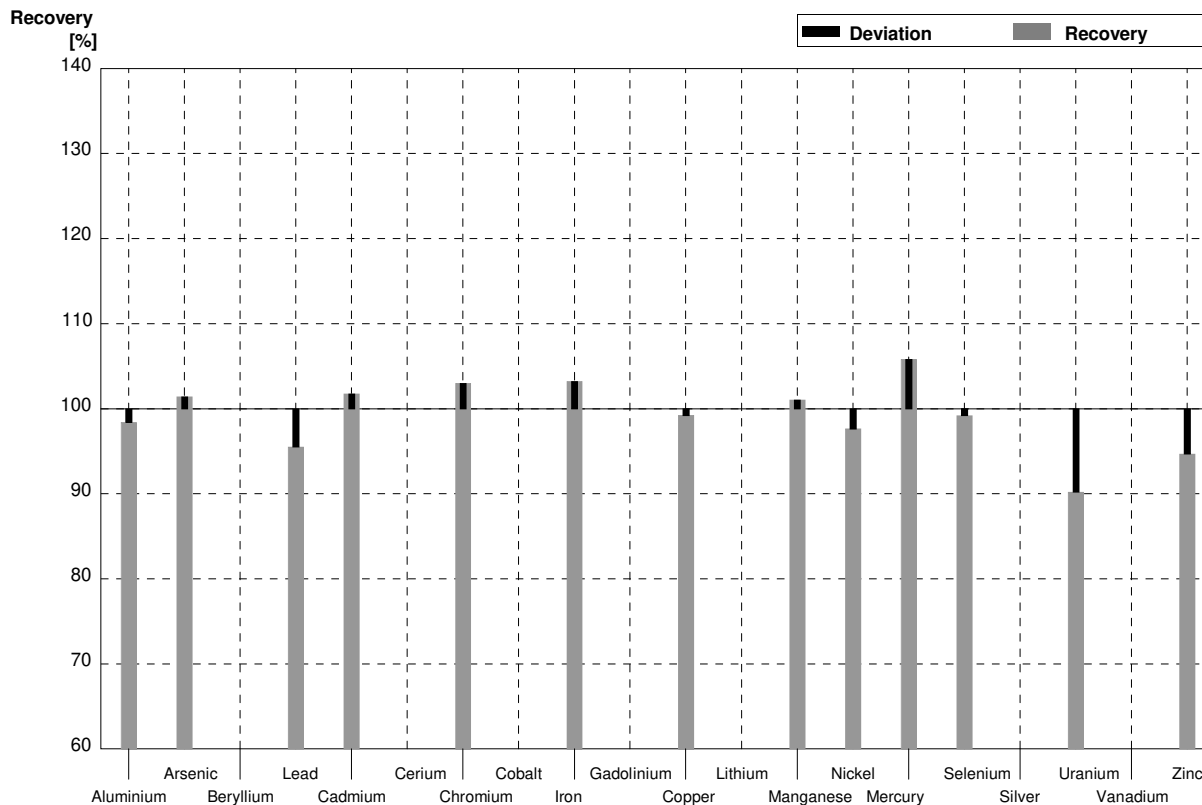
Sample M167B
Laboratory AD

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	24,3	2,4	µg/l	102%
Arsenic	0,857	0,012	0,91	0,09	µg/l	106%
Beryllium	0,1706	0,0018	0,190	0,060	µg/l	111%
Lead	3,53	0,03	3,33	0,33	µg/l	94%
Cadmium	2,89	0,02	2,89	0,29	µg/l	100%
Cerium	2,013	0,016	2,23	0,45	µg/l	111%
Chromium	4,95	0,04	4,97	0,50	µg/l	100%
Cobalt	0,461	0,006	0,470	0,047	µg/l	102%
Iron	37,9	0,2	37,9	3,8	µg/l	100%
Gadolinium	0,0595	0,0011	<0,15		µg/l	•
Copper	6,09	0,04	5,74	0,57	µg/l	94%
Lithium	2,11	0,02	2,00	0,2	µg/l	95%
Manganese	6,90	0,05	6,79	0,68	µg/l	98%
Nickel	3,53	0,03	3,49	0,35	µg/l	99%
Mercury	0,702	0,016			µg/l	
Selenium	1,206	0,019	1,31	0,13	µg/l	109%
Silver	0,075	0,009	0,076	0,011	µg/l	101%
Uranium	3,53	0,03	3,37	0,34	µg/l	95%
Vanadium	0,660	0,008	0,67	0,07	µg/l	102%
Zinc	106	3	105	11	µg/l	99%



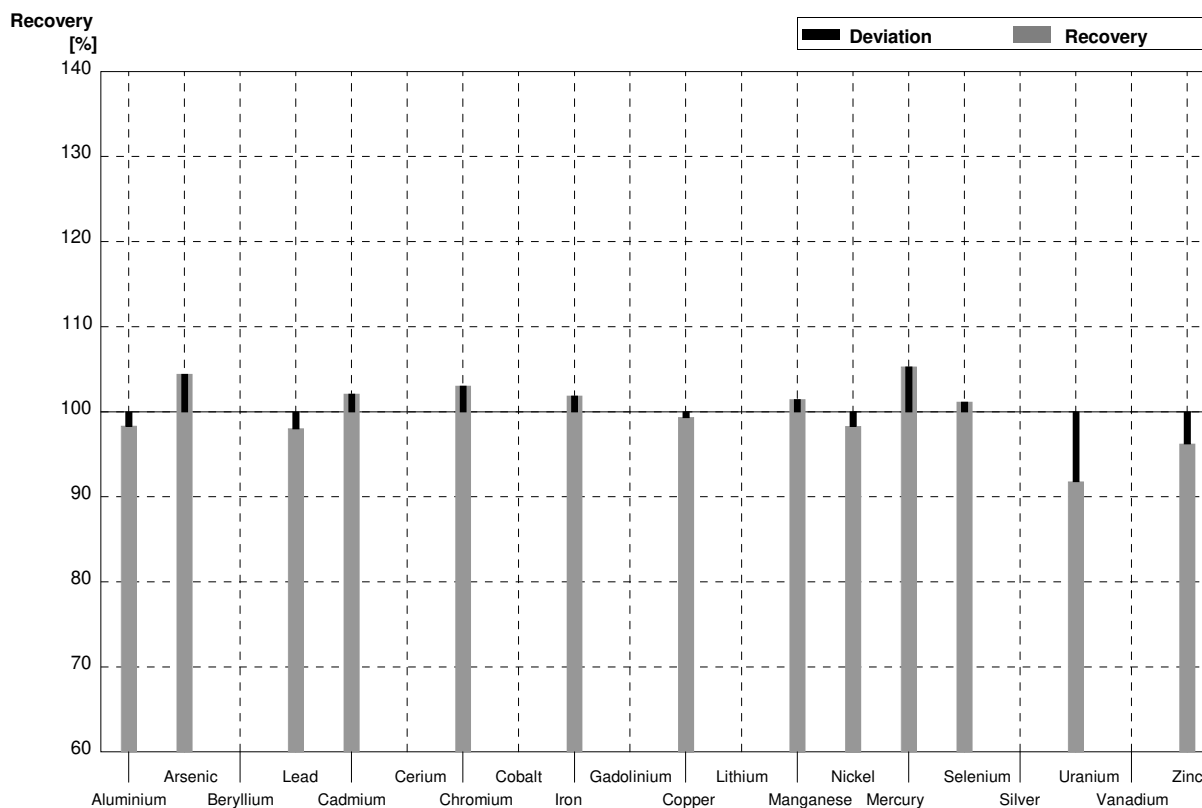
Sample M167A
Laboratory AE

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,47	1,9	µg/l	98%
Arsenic	3,54	0,03	3,59	1,1	µg/l	101%
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	8,32	2,1	µg/l	96%
Cadmium	1,435	0,012	1,46	0,37	µg/l	102%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,59	0,48	µg/l	103%
Cobalt	1,791	0,014			µg/l	
Iron	15,31	0,17	15,8	4,8	µg/l	103%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	7,60	1,9	µg/l	99%
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4	58,9	18	µg/l	101%
Nickel	0,81	0,02	0,791	0,2	µg/l	98%
Mercury	1,153	0,017	1,22	0,37	µg/l	106%
Selenium	2,50	0,02	2,48	1,0	µg/l	99%
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012	0,994	0,3	µg/l	90%
Vanadium	1,153	0,011			µg/l	
Zinc	18,8	1,0	17,8	4,5	µg/l	95%



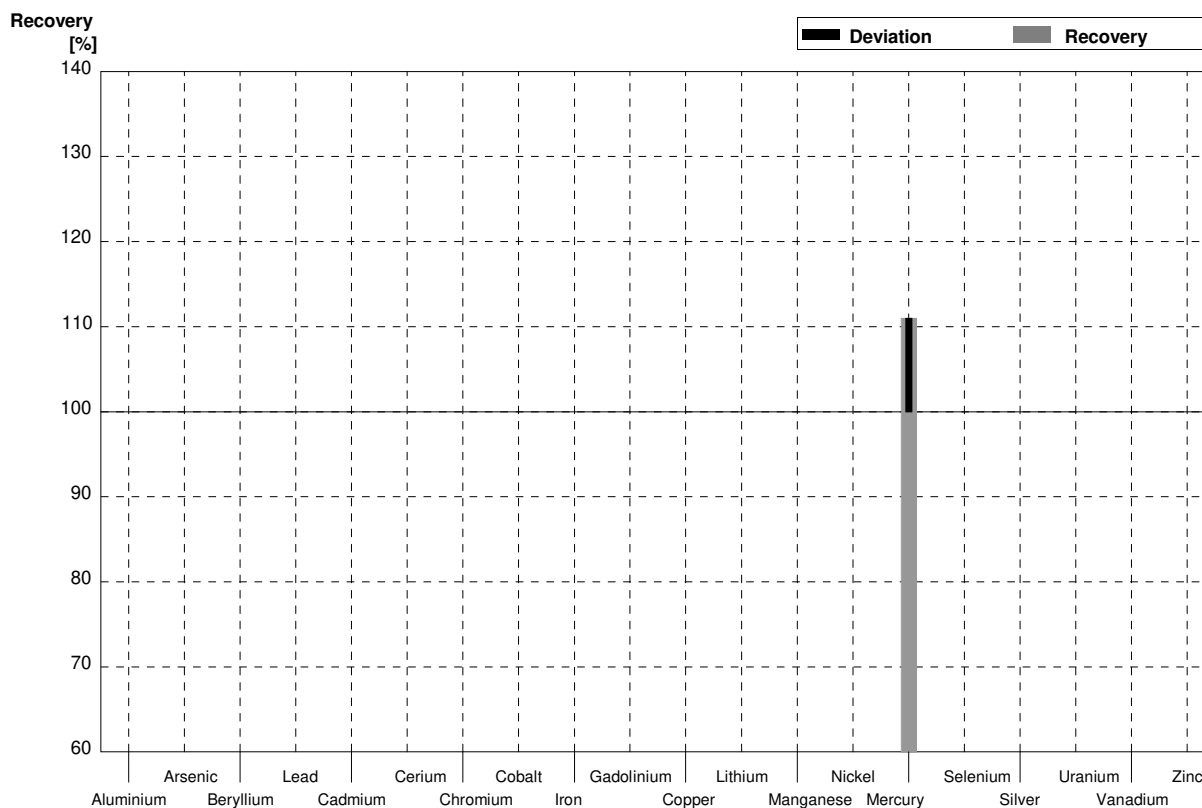
Sample M167B
Laboratory AE

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	23,5	5,9	µg/l	98%
Arsenic	0,857	0,012	0,895	0,27	µg/l	104%
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	3,46	0,87	µg/l	98%
Cadmium	2,89	0,02	2,95	0,6	µg/l	102%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	5,10	1,5	µg/l	103%
Cobalt	0,461	0,006			µg/l	
Iron	37,9	0,2	38,6	12	µg/l	102%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	6,05	1,5	µg/l	99%
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05	7,00	2,1	µg/l	101%
Nickel	3,53	0,03	3,47	0,87	µg/l	98%
Mercury	0,702	0,016	0,739	0,22	µg/l	105%
Selenium	1,206	0,019	1,22	0,5	µg/l	101%
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03	3,24	0,97	µg/l	92%
Vanadium	0,660	0,008			µg/l	
Zinc	106	3	102	26	µg/l	96%



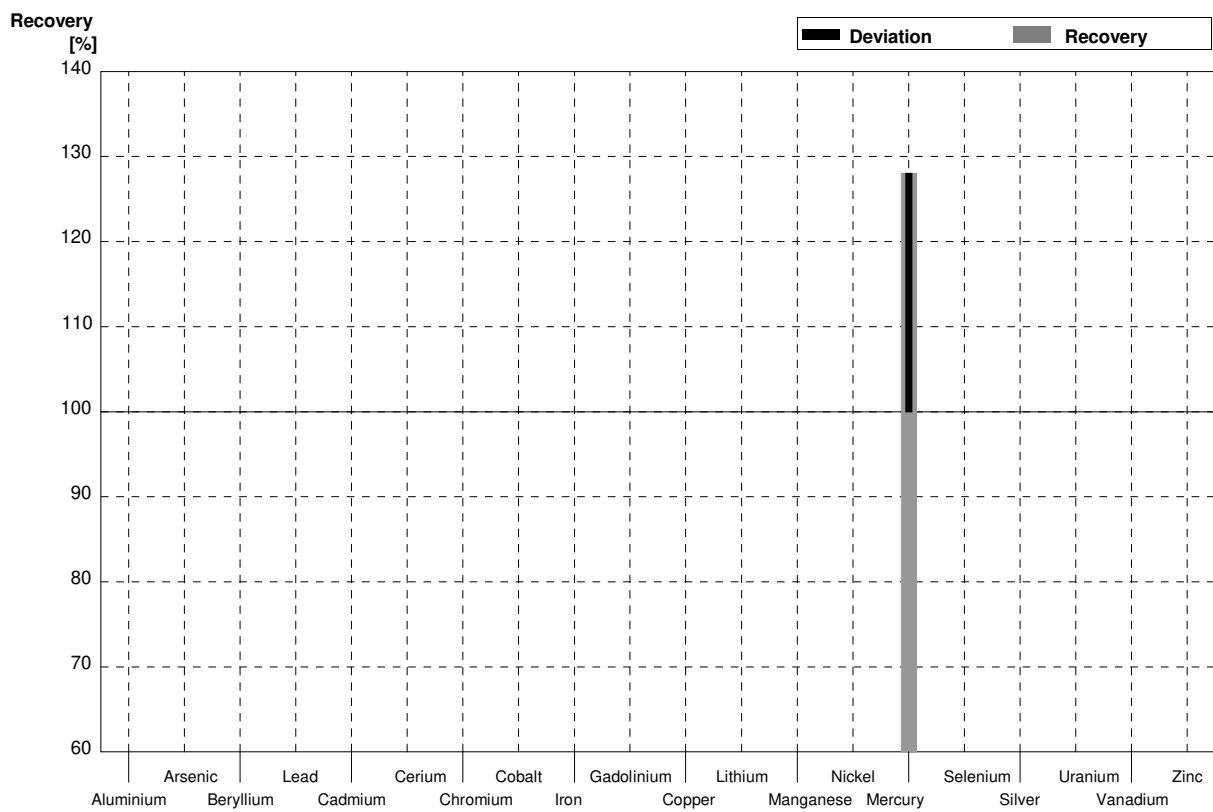
Sample M167A
Laboratory AF

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14			µg/l	
Arsenic	3,54	0,03			µg/l	
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05			µg/l	
Cadmium	1,435	0,012			µg/l	
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017			µg/l	
Cobalt	1,791	0,014			µg/l	
Iron	15,31	0,17			µg/l	
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05			µg/l	
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4			µg/l	
Nickel	0,81	0,02			µg/l	
Mercury	1,153	0,017	1,28	0,104	µg/l	111%
Selenium	2,50	0,02			µg/l	
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012			µg/l	
Vanadium	1,153	0,011			µg/l	
Zinc	18,8	1,0			µg/l	



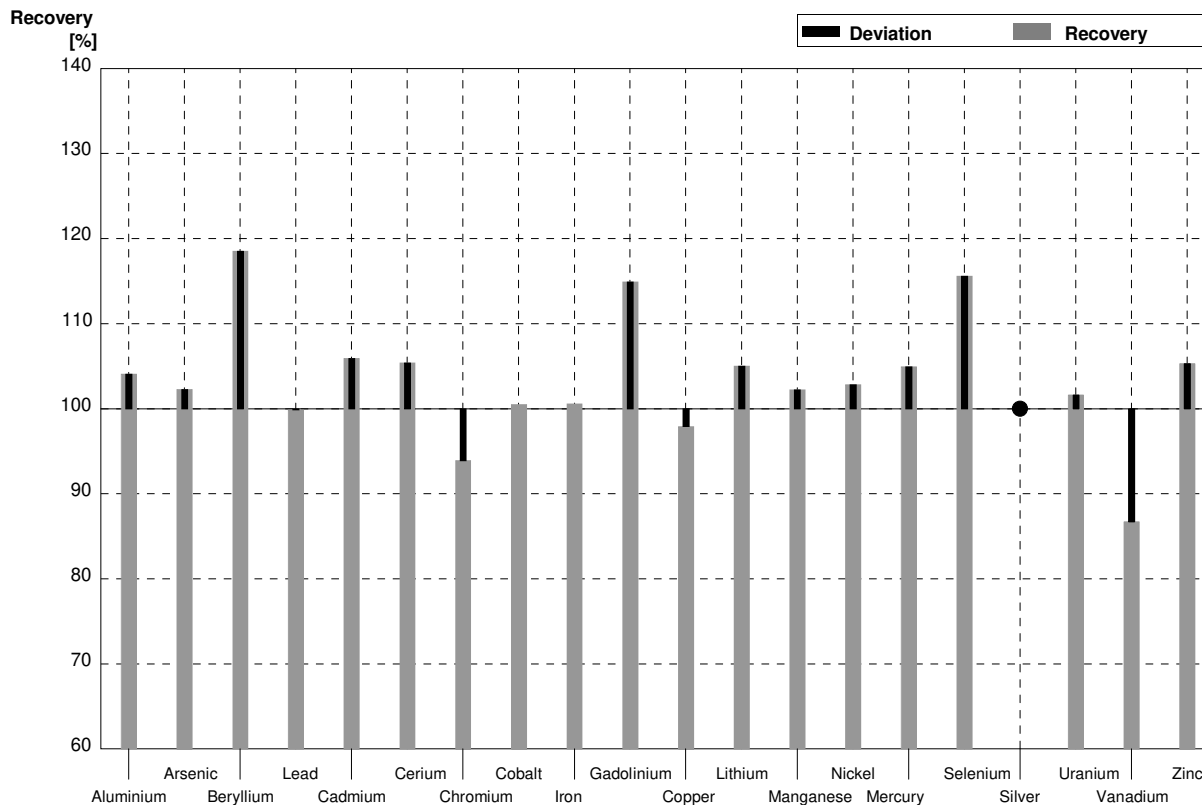
Sample M167B
Laboratory AF

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4			µg/l	
Arsenic	0,857	0,012			µg/l	
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03			µg/l	
Cadmium	2,89	0,02			µg/l	
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04			µg/l	
Cobalt	0,461	0,006			µg/l	
Iron	37,9	0,2			µg/l	
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04			µg/l	
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05			µg/l	
Nickel	3,53	0,03			µg/l	
Mercury	0,702	0,016	0,899	0,061	µg/l	128%
Selenium	1,206	0,019			µg/l	
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03			µg/l	
Vanadium	0,660	0,008			µg/l	
Zinc	106	3			µg/l	



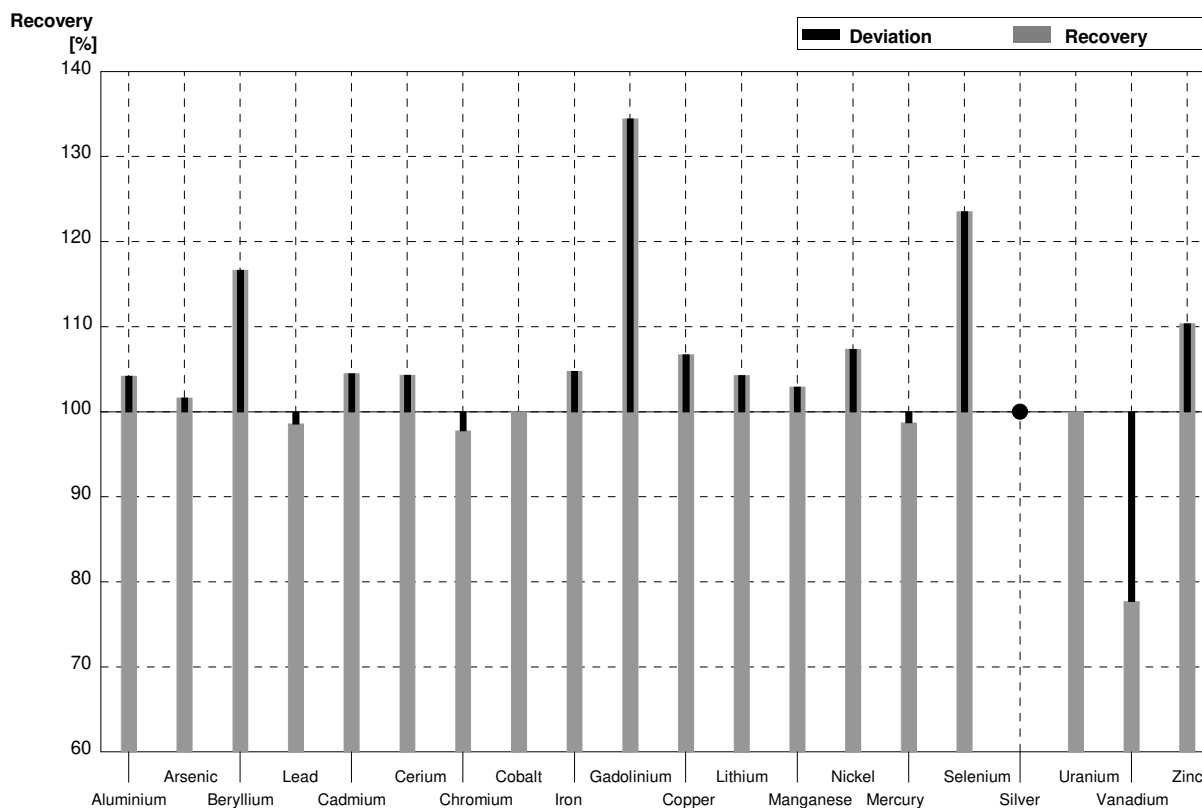
Sample M167A
Laboratory AG

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,9	2,53	µg/l	104%
Arsenic	3,54	0,03	3,62	1,16	µg/l	102%
Beryllium	0,1299	0,0018	0,154	0,111	µg/l	119%
Lead	8,71	0,05	8,7	2,62	µg/l	100%
Cadmium	1,435	0,012	1,52	0,334	µg/l	106%
Cerium	1,129	0,011	1,19	0,238	µg/l	105%
Chromium	1,544	0,017	1,45	0,29	µg/l	94%
Cobalt	1,791	0,014	1,80	0,54	µg/l	101%
Iron	15,31	0,17	15,4	5,24	µg/l	101%
Gadolinium	0,0818	0,0012	0,094	0,018	µg/l	115%
Copper	7,66	0,05	7,5	1,94	µg/l	98%
Lithium	6,95	0,06	7,3	2,34	µg/l	105%
Manganese	58,3	0,4	59,6	14,3	µg/l	102%
Nickel	0,81	0,02	0,833	0,250	µg/l	103%
Mercury	1,153	0,017	1,21	0,24	µg/l	105%
Selenium	2,50	0,02	2,89	1,16	µg/l	116%
Silver	0,186	0,007	<2	0,00	µg/l	•
Uranium	1,102	0,012	1,12	0,269	µg/l	102%
Vanadium	1,153	0,011	1,00	0,30	µg/l	87%
Zinc	18,8	1,0	19,8	5,9	µg/l	105%



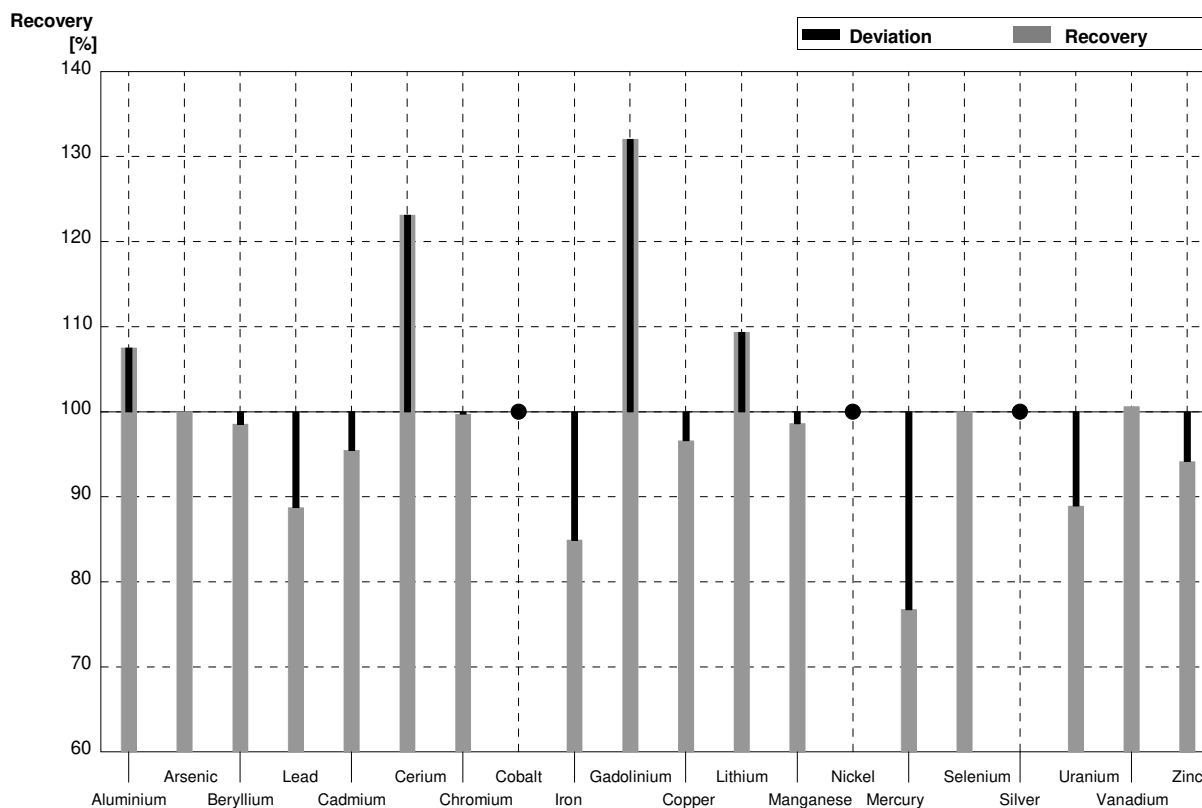
Sample M167B
Laboratory AG

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	24,9	8,0	µg/l	104%
Arsenic	0,857	0,012	0,871	0,279	µg/l	102%
Beryllium	0,1706	0,0018	0,199	0,143	µg/l	117%
Lead	3,53	0,03	3,48	1,04	µg/l	99%
Cadmium	2,89	0,02	3,02	0,66	µg/l	104%
Cerium	2,013	0,016	2,10	0,21	µg/l	104%
Chromium	4,95	0,04	4,84	0,97	µg/l	98%
Cobalt	0,461	0,006	0,461	0,138	µg/l	100%
Iron	37,9	0,2	39,7	13,5	µg/l	105%
Gadolinium	0,0595	0,0011	0,080	0,016	µg/l	134%
Copper	6,09	0,04	6,5	1,70	µg/l	107%
Lithium	2,11	0,02	2,20	0,70	µg/l	104%
Manganese	6,90	0,05	7,1	1,71	µg/l	103%
Nickel	3,53	0,03	3,79	1,14	µg/l	107%
Mercury	0,702	0,016	0,693	0,139	µg/l	99%
Selenium	1,206	0,019	1,49	0,596	µg/l	124%
Silver	0,075	0,009	<2	0,00	µg/l	•
Uranium	3,53	0,03	3,53	0,847	µg/l	100%
Vanadium	0,660	0,008	0,513	0,154	µg/l	78%
Zinc	106	3	117	35,1	µg/l	110%



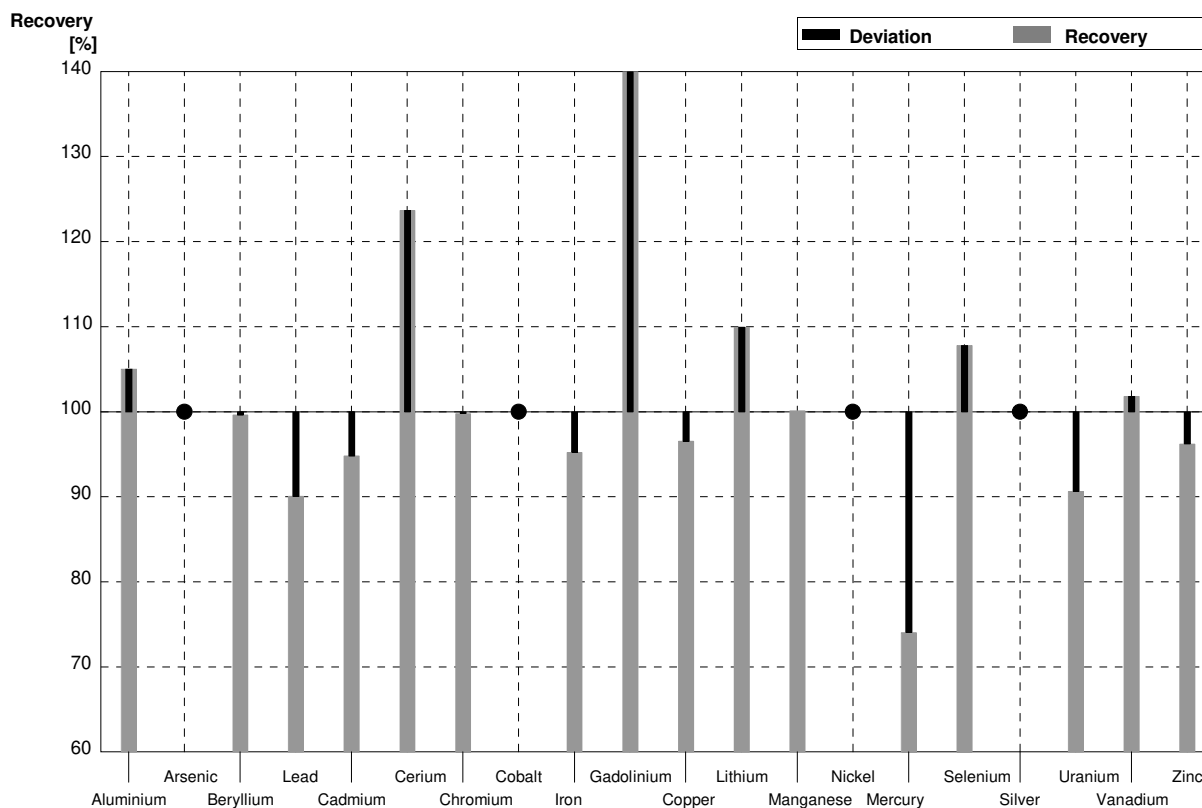
Sample M167A
Laboratory AH

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	8,16	1,22	µg/l	108%
Arsenic	3,54	0,03	3,54	0,53	µg/l	100%
Beryllium	0,1299	0,0018	0,128	0,019	µg/l	99%
Lead	8,71	0,05	7,73	1,16	µg/l	89%
Cadmium	1,435	0,012	1,37	0,21	µg/l	95%
Cerium	1,129	0,011	1,39	0,21	µg/l	123%
Chromium	1,544	0,017	1,54	0,23	µg/l	100%
Cobalt	1,791	0,014	<5,00		µg/l	•
Iron	15,31	0,17	13,0	1,95	µg/l	85%
Gadolinium	0,0818	0,0012	0,108	0,016	µg/l	132%
Copper	7,66	0,05	7,40	1,11	µg/l	97%
Lithium	6,95	0,06	7,6	1,14	µg/l	109%
Manganese	58,3	0,4	57,5	8,62	µg/l	99%
Nickel	0,81	0,02	<5,00		µg/l	•
Mercury	1,153	0,017	0,885	0,13	µg/l	77%
Selenium	2,50	0,02	2,50	0,38	µg/l	100%
Silver	0,186	0,007	<10,0		µg/l	•
Uranium	1,102	0,012	0,98	0,15	µg/l	89%
Vanadium	1,153	0,011	1,16	0,18	µg/l	101%
Zinc	18,8	1,0	17,7	2,65	µg/l	94%



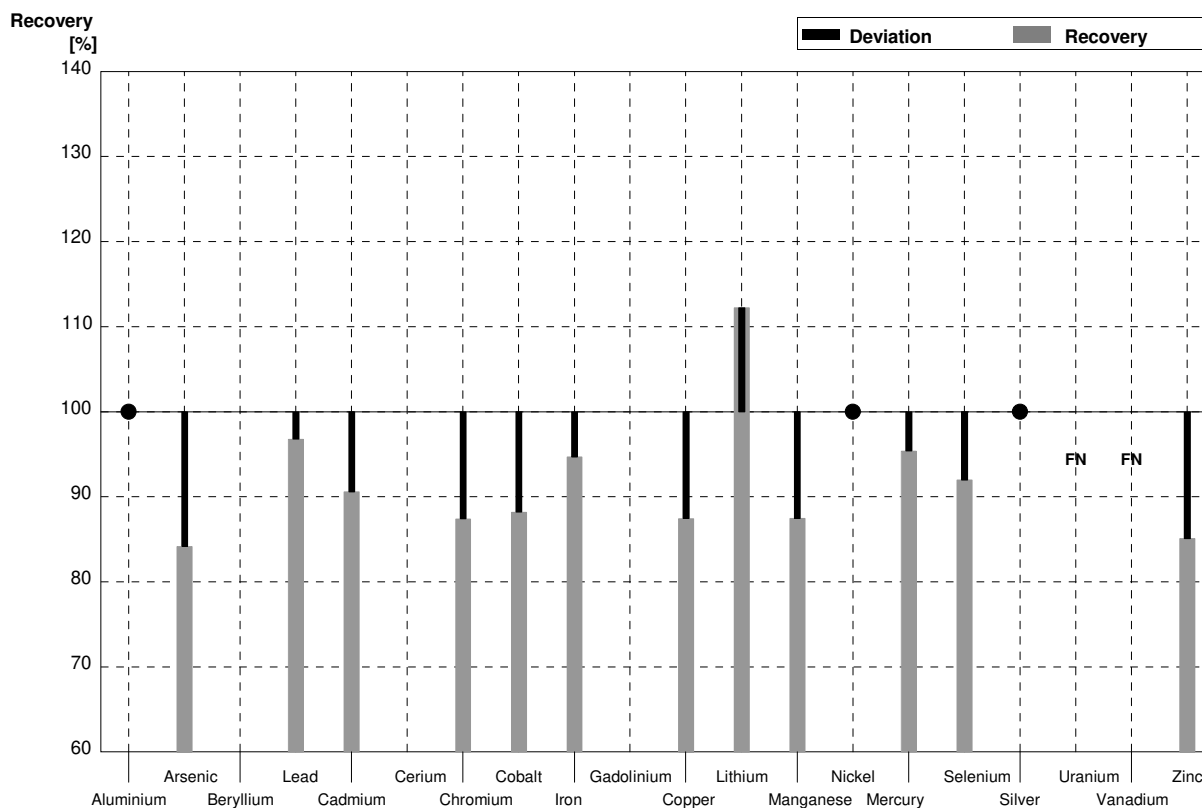
Sample M167B
Laboratory AH

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	25,1	3,76	µg/l	105%
Arsenic	0,857	0,012	<1,00		µg/l	•
Beryllium	0,1706	0,0018	0,170	0,026	µg/l	100%
Lead	3,53	0,03	3,18	0,48	µg/l	90%
Cadmium	2,89	0,02	2,74	0,41	µg/l	95%
Cerium	2,013	0,016	2,49	0,37	µg/l	124%
Chromium	4,95	0,04	4,94	0,74	µg/l	100%
Cobalt	0,461	0,006	<5,00		µg/l	•
Iron	37,9	0,2	36,1	5,42	µg/l	95%
Gadolinium	0,0595	0,0011	0,084	0,013	µg/l	141%
Copper	6,09	0,04	5,88	0,088	µg/l	97%
Lithium	2,11	0,02	2,32	0,35	µg/l	110%
Manganese	6,90	0,05	6,91	1,04	µg/l	100%
Nickel	3,53	0,03	<5,00		µg/l	•
Mercury	0,702	0,016	0,520	0,08	µg/l	74%
Selenium	1,206	0,019	1,30	0,20	µg/l	108%
Silver	0,075	0,009	<10,0		µg/l	•
Uranium	3,53	0,03	3,20	0,48	µg/l	91%
Vanadium	0,660	0,008	0,672	0,10	µg/l	102%
Zinc	106	3	102	15,3	µg/l	96%



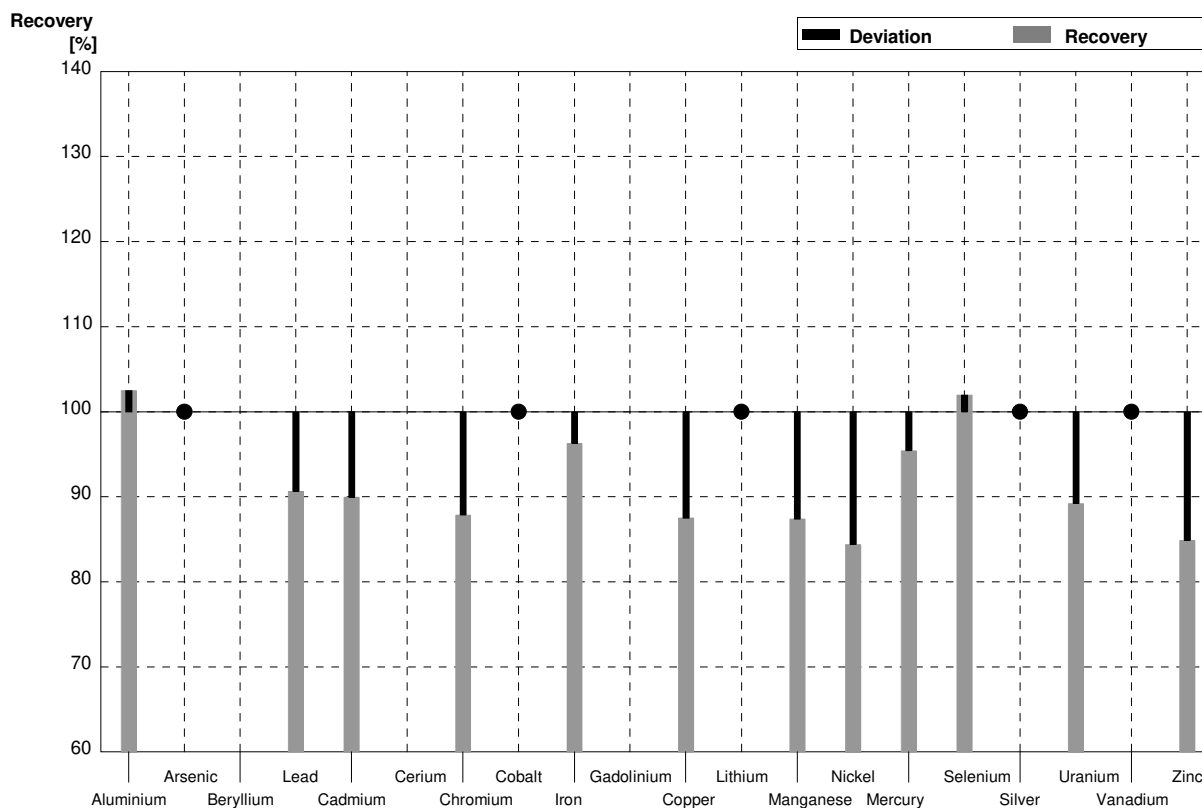
Sample M167A
Laboratory AI

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	<10		µg/l	•
Arsenic	3,54	0,03	2,98	0,60	µg/l	84%
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	8,43	1,7	µg/l	97%
Cadmium	1,435	0,012	1,30	0,26	µg/l	91%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,35	0,27	µg/l	87%
Cobalt	1,791	0,014	1,58	0,32	µg/l	88%
Iron	15,31	0,17	14,5	2,9	µg/l	95%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	6,70	1,3	µg/l	87%
Lithium	6,95	0,06	7,80	1,6	µg/l	112%
Manganese	58,3	0,4	51,0	10	µg/l	87%
Nickel	0,81	0,02	<1		µg/l	•
Mercury	1,153	0,017	1,10	0,22	µg/l	95%
Selenium	2,50	0,02	2,30	0,46	µg/l	92%
Silver	0,186	0,007	<1		µg/l	•
Uranium	1,102	0,012	<1		µg/l	FN
Vanadium	1,153	0,011	<1		µg/l	FN
Zinc	18,8	1,0	16,0	3,2	µg/l	85%



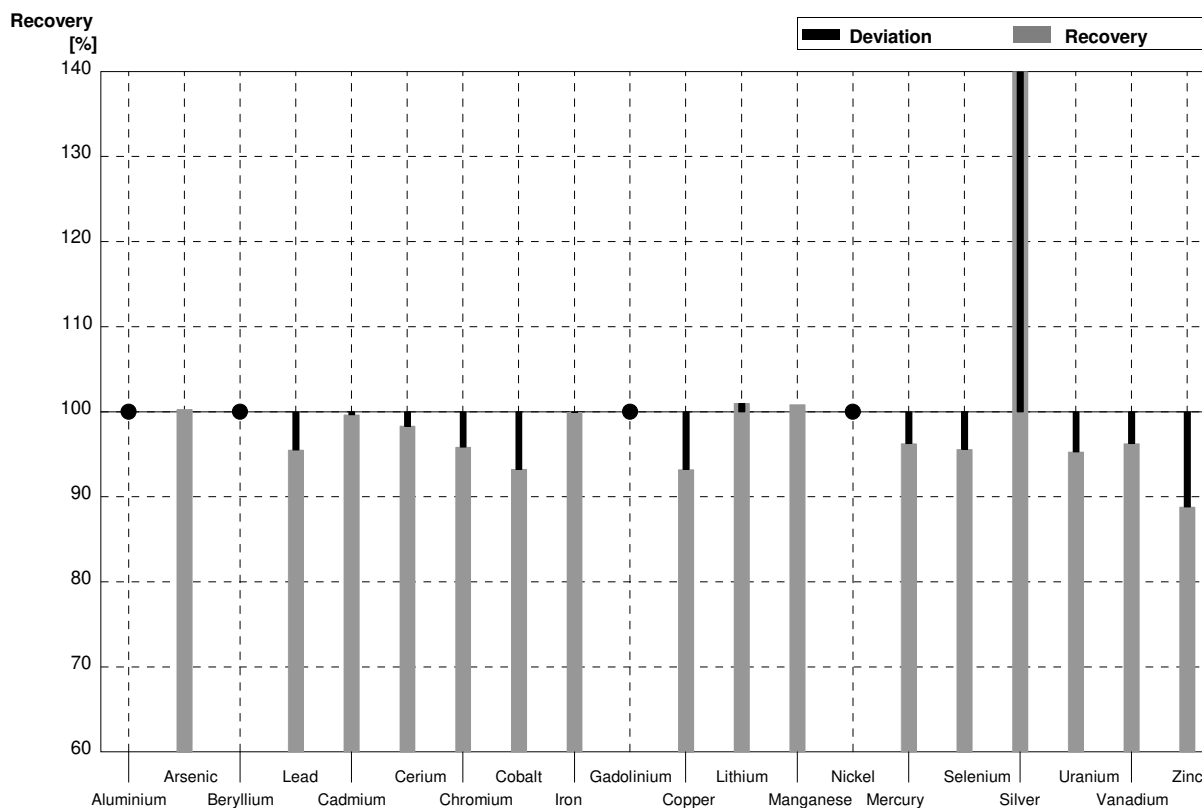
Sample M167B
Laboratory AI

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	24,5	4,9	µg/l	103%
Arsenic	0,857	0,012	<1		µg/l	•
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	3,20	0,64	µg/l	91%
Cadmium	2,89	0,02	2,60	0,52	µg/l	90%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	4,35	0,87	µg/l	88%
Cobalt	0,461	0,006	<1		µg/l	•
Iron	37,9	0,2	36,5	7,3	µg/l	96%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	5,33	1,1	µg/l	88%
Lithium	2,11	0,02	<5		µg/l	•
Manganese	6,90	0,05	6,03	1,2	µg/l	87%
Nickel	3,53	0,03	2,98	0,60	µg/l	84%
Mercury	0,702	0,016	0,670	013	µg/l	95%
Selenium	1,206	0,019	1,23	0,25	µg/l	102%
Silver	0,075	0,009	<1		µg/l	•
Uranium	3,53	0,03	3,15	0,63	µg/l	89%
Vanadium	0,660	0,008	<1		µg/l	•
Zinc	106	3	90,0	18	µg/l	85%



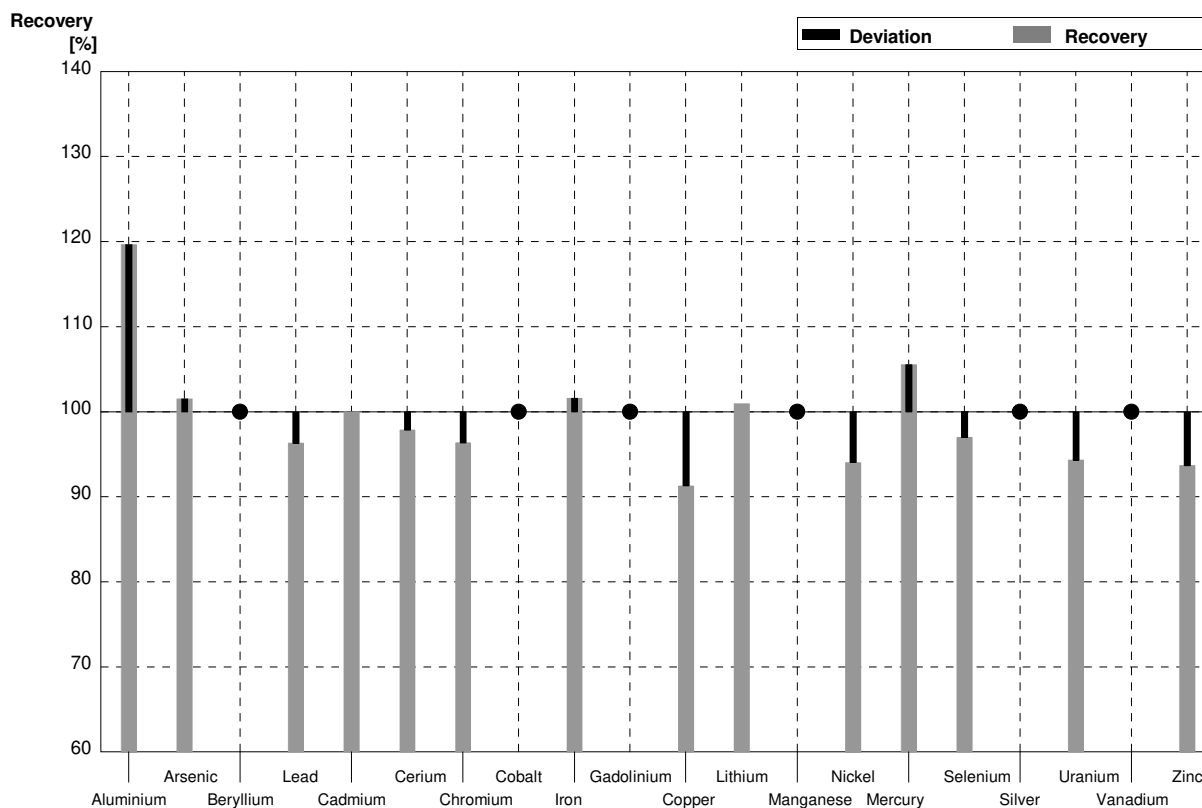
Sample M167A
Laboratory AJ

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	<10		µg/l	•
Arsenic	3,54	0,03	3,55	0,53	µg/l	100%
Beryllium	0,1299	0,0018	<1		µg/l	•
Lead	8,71	0,05	8,32	1,0	µg/l	96%
Cadmium	1,435	0,012	1,43	0,17	µg/l	100%
Cerium	1,129	0,011	1,11	0,22	µg/l	98%
Chromium	1,544	0,017	1,48	0,22	µg/l	96%
Cobalt	1,791	0,014	1,67	0,25	µg/l	93%
Iron	15,31	0,17	15,3	2,3	µg/l	100%
Gadolinium	0,0818	0,0012	<0,1		µg/l	•
Copper	7,66	0,05	7,14	0,86	µg/l	93%
Lithium	6,95	0,06	7,02	1,1	µg/l	101%
Manganese	58,3	0,4	58,8	7,1	µg/l	101%
Nickel	0,81	0,02	<1		µg/l	•
Mercury	1,153	0,017	1,11	0,24	µg/l	96%
Selenium	2,50	0,02	2,39	0,36	µg/l	96%
Silver	0,186	0,007	0,283	0,071	µg/l	152%
Uranium	1,102	0,012	1,05	0,16	µg/l	95%
Vanadium	1,153	0,011	1,11	0,13	µg/l	96%
Zinc	18,8	1,0	16,7	2,5	µg/l	89%



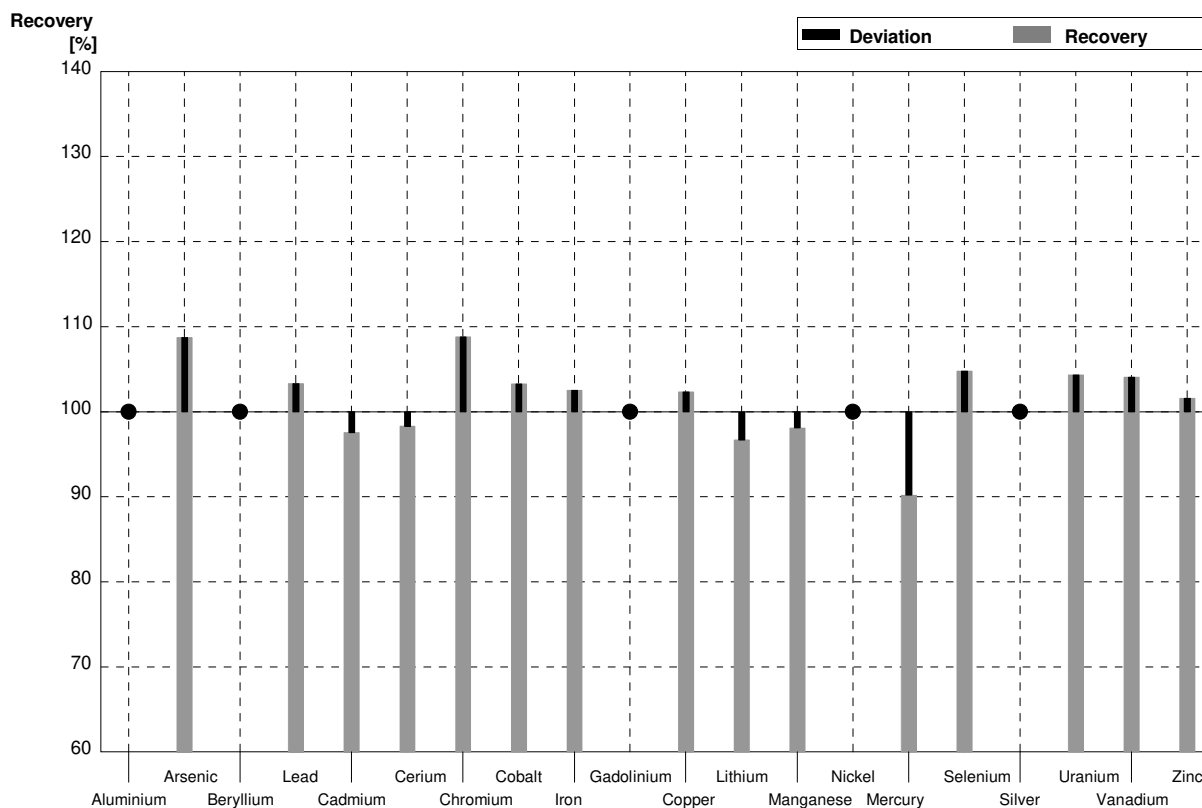
Sample M167B
Laboratory AJ

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	28,6	4,9	µg/l	120%
Arsenic	0,857	0,012	0,870	0,13	µg/l	102%
Beryllium	0,1706	0,0018	<1		µg/l	•
Lead	3,53	0,03	3,40	0,41	µg/l	96%
Cadmium	2,89	0,02	2,89	0,35	µg/l	100%
Cerium	2,013	0,016	1,97	0,39	µg/l	98%
Chromium	4,95	0,04	4,77	0,72	µg/l	96%
Cobalt	0,461	0,006	<1		µg/l	•
Iron	37,9	0,2	38,5	5,8	µg/l	102%
Gadolinium	0,0595	0,0011	<0,1		µg/l	•
Copper	6,09	0,04	5,56	0,67	µg/l	91%
Lithium	2,11	0,02	2,13	0,32	µg/l	101%
Manganese	6,90	0,05	<10		µg/l	•
Nickel	3,53	0,03	3,32	0,37	µg/l	94%
Mercury	0,702	0,016	0,741	0,16	µg/l	106%
Selenium	1,206	0,019	1,17	0,18	µg/l	97%
Silver	0,075	0,009	<0,2		µg/l	•
Uranium	3,53	0,03	3,33	0,50	µg/l	94%
Vanadium	0,660	0,008	<1		µg/l	•
Zinc	106	3	99,3	15	µg/l	94%



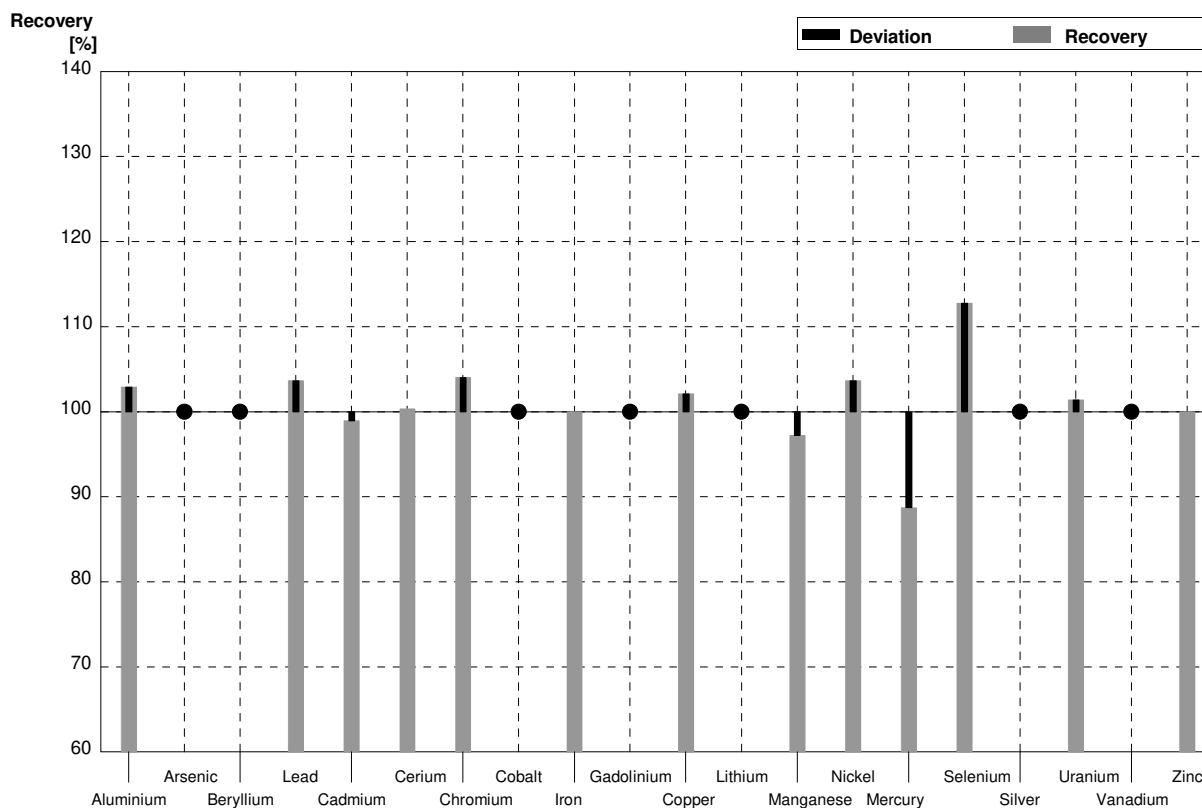
Sample M167A
Laboratory AK

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	<10,0		µg/l	•
Arsenic	3,54	0,03	3,85	0,69	µg/l	109%
Beryllium	0,1299	0,0018	<0,5		µg/l	•
Lead	8,71	0,05	9,00	1,62	µg/l	103%
Cadmium	1,435	0,012	1,40	0,25	µg/l	98%
Cerium	1,129	0,011	1,11	0,20	µg/l	98%
Chromium	1,544	0,017	1,68	0,30	µg/l	109%
Cobalt	1,791	0,014	1,85	0,33	µg/l	103%
Iron	15,31	0,17	15,7	2,83	µg/l	103%
Gadolinium	0,0818	0,0012	<0,5		µg/l	•
Copper	7,66	0,05	7,84	1,41	µg/l	102%
Lithium	6,95	0,06	6,72	1,21	µg/l	97%
Manganese	58,3	0,4	57,2	10,3	µg/l	98%
Nickel	0,81	0,02	<1,0		µg/l	•
Mercury	1,153	0,017	1,04	0,19	µg/l	90%
Selenium	2,50	0,02	2,62	0,47	µg/l	105%
Silver	0,186	0,007	<1,0		µg/l	•
Uranium	1,102	0,012	1,15	0,21	µg/l	104%
Vanadium	1,153	0,011	1,20	0,22	µg/l	104%
Zinc	18,8	1,0	19,1	3,44	µg/l	102%



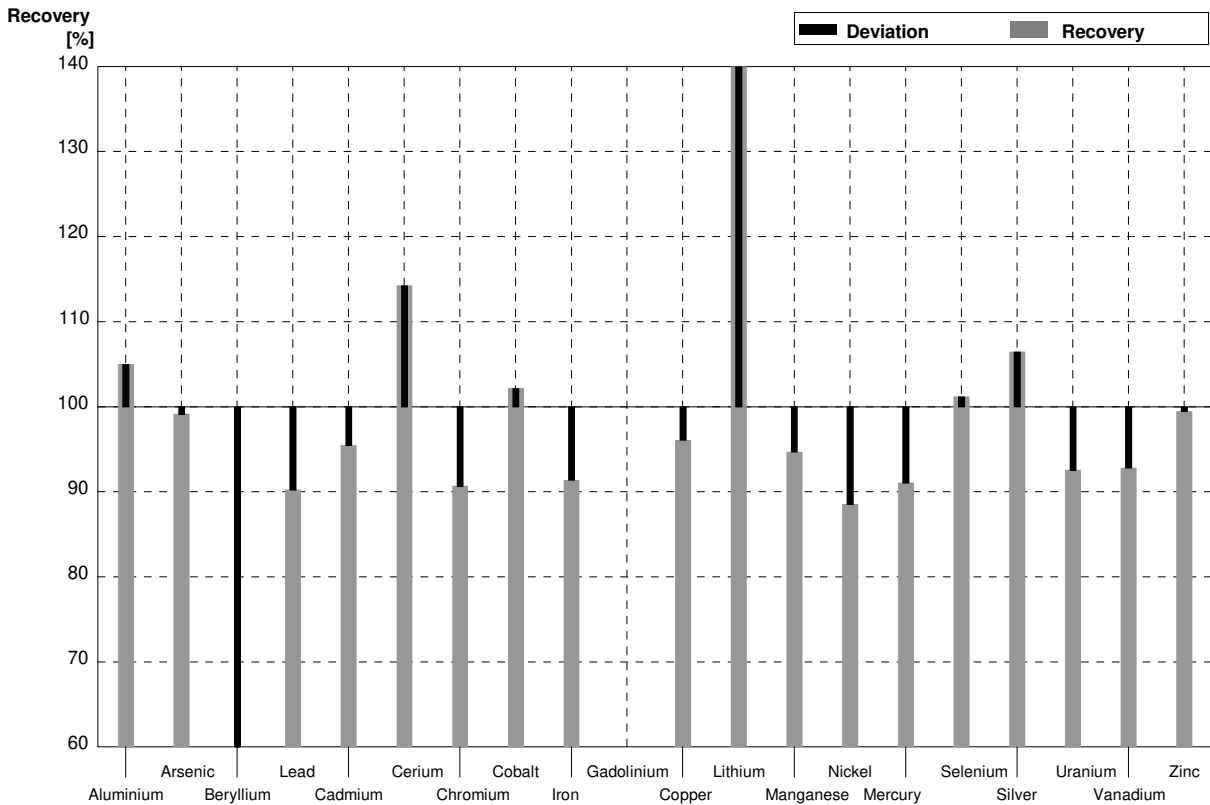
Sample M167B
Laboratory AK

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	24,6	4,43	µg/l	103%
Arsenic	0,857	0,012	<1,0		µg/l	•
Beryllium	0,1706	0,0018	<0,5		µg/l	•
Lead	3,53	0,03	3,66	0,66	µg/l	104%
Cadmium	2,89	0,02	2,86	0,51	µg/l	99%
Cerium	2,013	0,016	2,02	0,36	µg/l	100%
Chromium	4,95	0,04	5,15	0,93	µg/l	104%
Cobalt	0,461	0,006	<1,0		µg/l	•
Iron	37,9	0,2	37,9	6,82	µg/l	100%
Gadolinium	0,0595	0,0011	<0,5		µg/l	•
Copper	6,09	0,04	6,22	1,12	µg/l	102%
Lithium	2,11	0,02	<5,0		µg/l	•
Manganese	6,90	0,05	6,71	1,21	µg/l	97%
Nickel	3,53	0,03	3,66	0,66	µg/l	104%
Mercury	0,702	0,016	0,623	0,11	µg/l	89%
Selenium	1,206	0,019	1,36	0,24	µg/l	113%
Silver	0,075	0,009	<1,0		µg/l	•
Uranium	3,53	0,03	3,58	0,64	µg/l	101%
Vanadium	0,660	0,008	<1,0		µg/l	•
Zinc	106	3	106	19	µg/l	100%



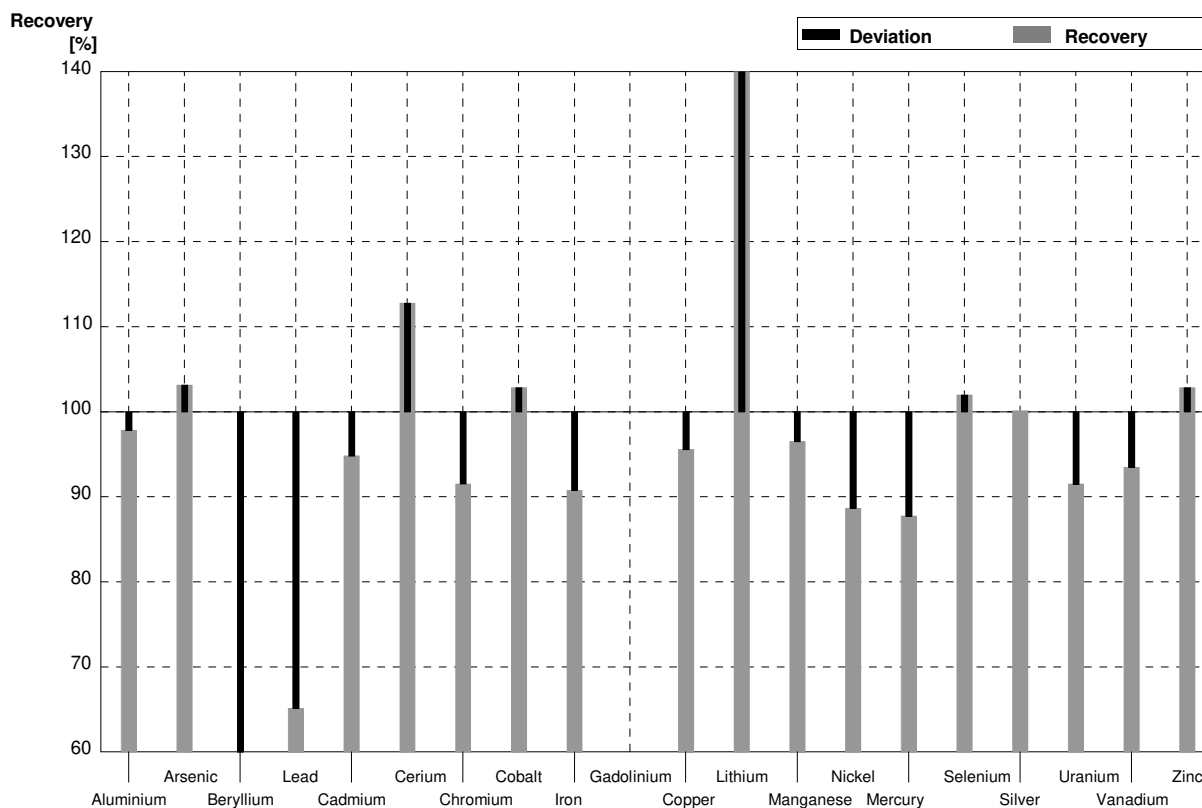
Sample M167A
Laboratory AL

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	7,97	1,99	µg/l	105%
Arsenic	3,54	0,03	3,51	0,88	µg/l	99%
Beryllium	0,1299	0,0018	0,0674	0,0169	µg/l	52%
Lead	8,71	0,05	7,86	1,97	µg/l	90%
Cadmium	1,435	0,012	1,37	0,34	µg/l	95%
Cerium	1,129	0,011	1,29	0,32	µg/l	114%
Chromium	1,544	0,017	1,40	0,35	µg/l	91%
Cobalt	1,791	0,014	1,83	0,46	µg/l	102%
Iron	15,31	0,17	13,99	3,50	µg/l	91%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	7,36	1,84	µg/l	96%
Lithium	6,95	0,06	60,0	15,0	µg/l	863%
Manganese	58,3	0,4	55,2	13,8	µg/l	95%
Nickel	0,81	0,02	0,717	0,179	µg/l	89%
Mercury	1,153	0,017	1,05	0,26	µg/l	91%
Selenium	2,50	0,02	2,53	0,63	µg/l	101%
Silver	0,186	0,007	0,198	0,050	µg/l	106%
Uranium	1,102	0,012	1,02	0,26	µg/l	93%
Vanadium	1,153	0,011	1,07	0,27	µg/l	93%
Zinc	18,8	1,0	18,7	4,7	µg/l	99%



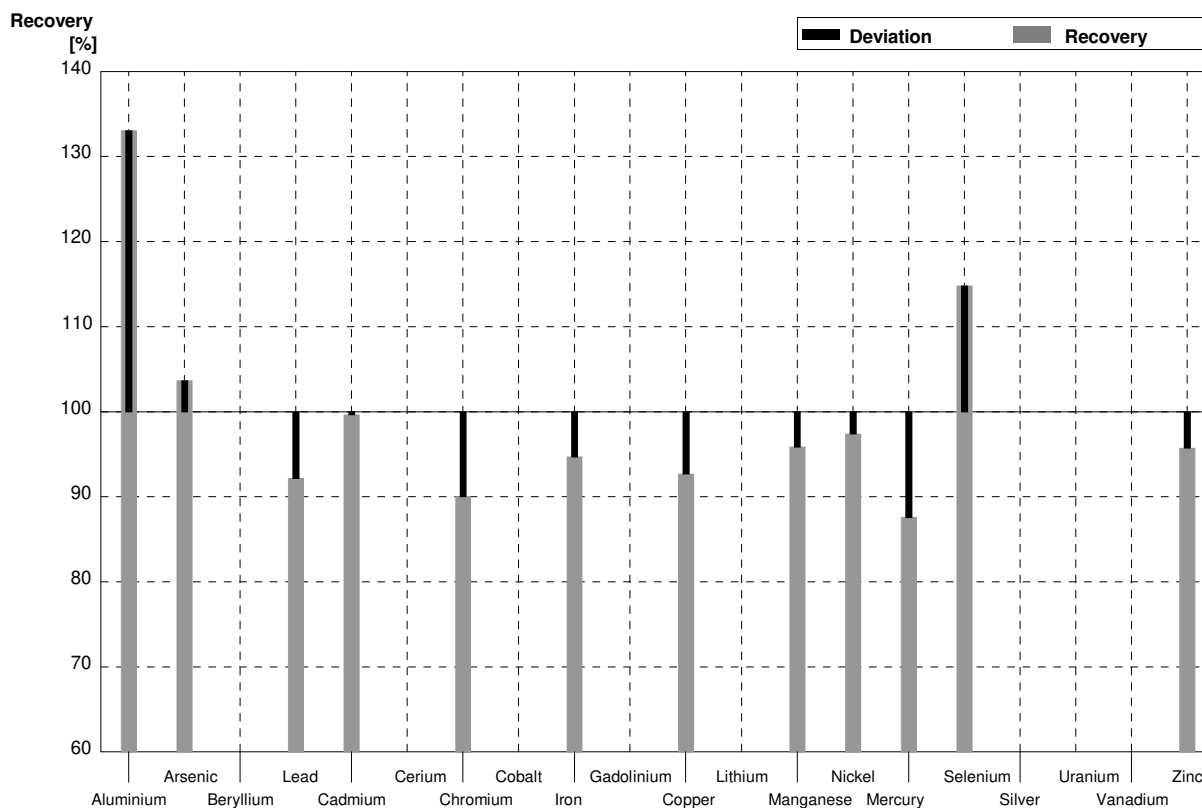
Sample M167B
Laboratory AL

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	23,38	5,85	µg/l	98%
Arsenic	0,857	0,012	0,884	0,221	µg/l	103%
Beryllium	0,1706	0,0018	0,0675	0,0169	µg/l	40%
Lead	3,53	0,03	2,30	0,80	µg/l	65%
Cadmium	2,89	0,02	2,74	0,69	µg/l	95%
Cerium	2,013	0,016	2,27	0,57	µg/l	113%
Chromium	4,95	0,04	4,53	1,13	µg/l	92%
Cobalt	0,461	0,006	0,474	0,119	µg/l	103%
Iron	37,9	0,2	34,4	8,6	µg/l	91%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	5,82	1,46	µg/l	96%
Lithium	2,11	0,02	17,3	4,3	µg/l	820%
Manganese	6,90	0,05	6,66	1,67	µg/l	97%
Nickel	3,53	0,03	3,13	0,78	µg/l	89%
Mercury	0,702	0,016	0,616	0,154	µg/l	88%
Selenium	1,206	0,019	1,23	0,31	µg/l	102%
Silver	0,075	0,009	0,0751	0,0188	µg/l	100%
Uranium	3,53	0,03	3,23	0,81	µg/l	92%
Vanadium	0,660	0,008	0,617	0,154	µg/l	93%
Zinc	106	3	109	27	µg/l	103%



Sample M167A
Laboratory AM

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	7,59	0,14	10,1	0,749	µg/l	133%
Arsenic	3,54	0,03	3,67	0,564	µg/l	104%
Beryllium	0,1299	0,0018			µg/l	
Lead	8,71	0,05	8,03	1,54	µg/l	92%
Cadmium	1,435	0,012	1,43	0,248	µg/l	100%
Cerium	1,129	0,011			µg/l	
Chromium	1,544	0,017	1,39	0,106	µg/l	90%
Cobalt	1,791	0,014			µg/l	
Iron	15,31	0,17	14,5	1,14	µg/l	95%
Gadolinium	0,0818	0,0012			µg/l	
Copper	7,66	0,05	7,10	0,457	µg/l	93%
Lithium	6,95	0,06			µg/l	
Manganese	58,3	0,4	55,9	4,54	µg/l	96%
Nickel	0,81	0,02	0,789	0,0395	µg/l	97%
Mercury	1,153	0,017	1,01	0,107	µg/l	88%
Selenium	2,50	0,02	2,87	0,238	µg/l	115%
Silver	0,186	0,007			µg/l	
Uranium	1,102	0,012			µg/l	
Vanadium	1,153	0,011			µg/l	
Zinc	18,8	1,0	18,0	1,31	µg/l	96%



Sample M167B
Laboratory AM

Parameter	Target value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	23,9	0,4	28,1	2,09	µg/l	118%
Arsenic	0,857	0,012	0,898	0,138	µg/l	105%
Beryllium	0,1706	0,0018			µg/l	
Lead	3,53	0,03	3,10	0,594	µg/l	88%
Cadmium	2,89	0,02	2,71	0,472	µg/l	94%
Cerium	2,013	0,016			µg/l	
Chromium	4,95	0,04	4,64	0,363	µg/l	94%
Cobalt	0,461	0,006			µg/l	
Iron	37,9	0,2	35,0	2,74	µg/l	92%
Gadolinium	0,0595	0,0011			µg/l	
Copper	6,09	0,04	5,58	0,359	µg/l	92%
Lithium	2,11	0,02			µg/l	
Manganese	6,90	0,05	6,47	0,525	µg/l	94%
Nickel	3,53	0,03	3,30	0,165	µg/l	93%
Mercury	0,702	0,016	0,573	0,0611	µg/l	82%
Selenium	1,206	0,019	1,35	0,112	µg/l	112%
Silver	0,075	0,009			µg/l	
Uranium	3,53	0,03			µg/l	
Vanadium	0,660	0,008			µg/l	
Zinc	106	3	99,3	7,21	µg/l	94%

