



# **IFA-Proficiency Testing Scheme zur Wasseranalytik / for Water Analysis**

**Endbericht / Final Report**  
Eignungsprüfungsrunde / Proficiency testing round  
**M177**

**Metalle / Metals**

Probenversand / Sample dispatch: 12. 05. 2025

Durchführung gemäß Verfahren / In accordance with the procedure: AVKPS.02 idgF



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## Allgemeine Informationen

Diese Zusammenfassung beschreibt die 177. Runde der regelmäßigen Eignungsprüfungen zur Parametergruppe „Metalle“. Die Prüfgegenstände M177A und M177B wurden am 12. Mai 2025 an 41 Teilnehmer versendet. Jedes Labor erhielt zwei Prüfgegenstände zu je 250 ml, abgefüllt in LDPE-Flaschen.

Einsendeschluss für die Ergebnisse war am 6. Juni 2025. Von 40 Teilnehmern wurden Ergebnisse übermittelt.

Zur Anonymisierung wurde jedem Labor per Zufallsgenerator ein Buchstabencode zugeteilt.

## Zusammensetzung des Prüfgegenstands

Die Prüfgegenstände M177A und M177B enthielten Al, Ag, As, Be, Cd, Ce, Co, Cr, Cu, Fe, Gd, Hg, Li, Mn, Ni, Pb, Se, U, V und Zn in einer den natürlichen Bedingungen angepassten Matrix, welche durch Zugabe von hochreinen Salzen ( $\text{CaCO}_3$ ,  $\text{Mg}(\text{NO}_3)_2$ , NaCl und KCl),  $\text{H}_2\text{SO}_4$ , HCl und eines Sr-Standards eingestellt wurde: 45,9 mg/l Ca, 19,4 mg/l Mg, 9,0 mg/l Na, 1,15 mg/l K, 19,1 mg/l  $\text{SO}_4^{2-}$ , 15,6 mg/l  $\text{Cl}^-$  und 206 (275)  $\mu\text{g/l}$  Sr M177A (M177B). Die Prüfgegenstände wurden mit hochreiner  $\text{HNO}_3$  (0,5 % v/v) bei  $\text{pH} < 2$  stabilisiert.

## Homogenitäts-, Richtigkeits- und Stabilitätsuntersuchung

Die Prüfgegenstände wurden vor dem Versand am IFA auf Homogenität und Richtigkeit untersucht. Die Ergebnisse der Kontrollanalytik finden sich auf den Rohdatenblättern sowie auf den Auswertungen zu jedem Parameter.

Die Stabilitätsuntersuchungen zu allen Parametern werden zusammen mit der Kontrollanalytik zur folgenden Runde (M178) durchgeführt.

Nach unseren Erfahrungen bleiben die Konzentrationen aller Parameter, mit Ausnahme von Ag und Hg, bei Lagerung bei 4-6 °C im Dunkeln bis 18 Monate stabil. Bei den Ag und Hg ist eine Konzentrationsabnahme von 2 % bis 4 % pro Monat zu erwarten.

## Zugewiesene Werte

Die zugewiesenen Werte ergaben sich aus den Wägewerten der zur Herstellung der Prüfgegenstände verwendeten Standards. Sie lagen bei Al, As, Cd, Cr, Fe, Hg, Cu, Mn, Ni, Pb, Se und Zn in mindestens einem Prüfgegenstand über den Mindestbestimmungsgrenzen der österreichischen Gewässerzustandsüberwachungsverordnung (GZÜV - BGBl. II. 479/2006).

Die Unsicherheiten der zugewiesenen Werte (erweiterte Unsicherheiten,  $k = 2$ ,  $\alpha = 0,05$ ) wurden nach den Vorgaben des EURACHEM / CITAC Guides „Quantifying Uncertainty in Analytical Measurement, 3<sup>rd</sup> Edition (2012)“ ermittelt.

## Auswertung

Mit den bei uns eingegangenen Messwerten wurde ein Ausreißertest nach Hampel durchgeführt. Die von diesem Test als auffällig eingestufteten Werte sind in den Tabellen der parameterorientierten Auswertung mit einem Stern gekennzeichnet.

Die aus den ausreißerbereinigten Daten berechneten, auf die zugewiesenen Werte bezogenen mittleren Wiederfindungen lagen zwischen 93,8 % (Ag in M177A) und 115,1 % (Gd in M177B). Die aus den ausreißerbereinigten Daten berechneten Standardabweichungen bewegten sich im Bereich von 3,8 % (Cd in M177B) bis 18,2 % (V in M177B).

Zu den Mittelwerten und mittleren Wiederfindungen wurden auch die Vertrauensbereiche (P = 99 %) angegeben. Diese Vertrauensbereiche der Labormittelwerte enthielten in allen Fällen mit Ausnahme von Pb in M177A (94,8 % ± 2,6 %), Pb in M177B (94,7 % ± 2,4 %) und Cu in M177A (94,4 % ± 3,0 %) die entsprechenden zugewiesenen Werte mit ihren Unsicherheiten.

Die Standardunsicherheiten aller zugewiesenen Werte wurden nach dem Kriterium  $u(x_{pp}) < 0,3\sigma_{pp}$  oder  $u(x_{pp}) < 0,1\delta E$  (DIN ISO 13528, Punkt 9.2) überprüft und entsprach in allen Fällen der Vorgabe.

Für Pb in M177A und M177B und Cu in M177A wurde zusätzlich der Vergleich der absoluten Differenz zwischen zugewiesenem Wert ( $x_{pt}$ ) und Labormittelwert ( $\bar{X}$ ) unter Berücksichtigung der Messunsicherheiten  $u(x_{pt})$  und  $u(\bar{X})$  durchgeführt. Cu entsprach der Vorgabe:

$$|x_{pt} - \bar{X}| < 2 * \sqrt{u(x_{pt})^2 + u(\bar{X})^2} \quad (\text{DIN ISO 13528, Punkt 7 und E7})$$

Daher wurde für Cu der ermittelte zugewiesene Wert mit seinen Standardunsicherheiten übernommen. Pb entsprach dieser Vorgabe nicht und wurde über den Konsenswert aus den Labormittelwerten ausgewertet.

### **z-Score-Auswertung**

Ein z-Score ist die auf eine Standardabweichung bezogene Abweichung eines Messwertes vom zugewiesenen Wert. Er wird mittels folgender Formel berechnet:

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

$z$	z-Score
$x_i$	Messwert eines Labors
$X$	zugewiesener Wert oder ausreißerbereinigter Mittelwert („Konsenswert“)
$\sigma_{pt}$	Standardabweichung für die Eignungsbewertung

Es handelt sich also um das Verhältnis der Abweichung des Messwertes eines Labors vom zugewiesenen Wert zu einer vorgegebenen Standardabweichung.

Die Standardabweichungen für die Eignungsbewertung wurden, mit Ausnahme von Be und Gd aus den Ergebnissen der im Zeitraum 2014 - 2024 vom IFA-Tulln veranstalteten Eignungsprüfung berechnet.

Diese Vorgehensweise wurde deshalb gewählt, weil, unserer Erfahrung nach, die Standardabweichungen der ausreißerbereinigten Messwerte zwischen den einzelnen Eignungsprüfungen variieren. Die Ermittlung der Standardabweichung über die Eignungsprüfungsrunden aus mehreren Jahren bietet jedoch eine gut abgesicherte Basis auf einer breiten Datengrundlage und ist somit meistens besser geeignet, als das bei der direkt aus der Eignungsprüfung berechneten Standardabweichung der Fall wäre. (siehe EN ISO/IEC 17043:2023, B.4.1.3)

Der Vorteil, der sich für alle Teilnehmer daraus ergibt, ist, dass dadurch bei unseren Eignungsprüfungen schon vor der Teilnahme vorhersehbar ist, welche z-Scores man mit den eigenen, aus Routineverfahren bekannten, Messabweichungen erwarten kann.

Beryllium und Gadolinium wurden 2022 erstmalig angeboten Zur Abschätzung der Standardabweichung für die Eignungsbewertung (bezogen auf den zugewiesenen Wert) wurden Eignungsprüfungen der Jahre 2022-2025 herangezogen.

### Rechenbeispiel:

Ein Labor bestimmte für den Parameter Aluminium einen Messwert von 73,7 µg/l (Wiederfindung von 101,94 %). Der zugewiesene Wert für Aluminium lag bei 72,3 µg/l (100 %).

In der nachfolgenden Tabelle (und in der Tabelle des Jahresprogrammes [www.ifatest.at](http://www.ifatest.at)) ist die relative Standardabweichung für die Eignungsbewertung beim Parameter Aluminium mit 7,5 % angegeben. Bezogen auf den zugewiesenen Wert 72,3 µg/l Al entsprechen 7,5 % 5,4 µg/l.

$$z = \frac{x_i - X}{\sigma_{pt}} = \frac{73,7 \mu\text{g/l} - 72,3 \mu\text{g/l}}{5,4 \mu\text{g/l}} \approx 0,26 \quad \text{oder} \quad \frac{101,94 \% - 100 \%}{7,5 \%} \approx 0,26$$

$z$	z-Score	
$x_i$	73,7 µg/l	entsprechen 101,94 % (Messwert des Labors)
$X$	72,3 µg/l	entsprechen 100 % (zugewiesener Wert)
$\sigma_{pt}$	5,4 µg/l	entsprechen 7,5 % (Standardabweichung für die Eignungsbewertung, siehe Tabelle unten)

Abweichungen in den Nachkommastellen können sich bei Nachberechnung dadurch ergeben, dass im Bericht bei den Wiederfindungen zwecks Übersichtlichkeit gerundete Werte angegeben sind.

Die folgende Tabelle enthält die Standardabweichung für die Eignungsbewertung bezogen auf den zugewiesenen Wert mit ihren Anwendungsbereichen. Die Berechnung von z-Scores erfolgt nur dann, wenn der zugehörige zugewiesene Wert über der in der Tabelle angegebenen Konzentration liegt.

Parameter	Standardabweichung für die Eignungsbewertung bezogen auf den zugewiesenen Wert	untere Grenze
Aluminium	7,5 %	7,5 µg/l
Arsen	6,6 %	0,5 µg/l
Beryllium <sup>1)</sup>	9,1 %	0,1 µg/l
Blei	6,5 %	0,3 µg/l
Cadmium	5,0 %	0,1 µg/l
Cer	5,7 %	0,25 µg/l
Chrom	5,9 %	0,5 µg/l
Cobalt	6,0 %	0,25 µg/l
Eisen	6,4 %	10 µg/l
Gadolinium <sup>1)</sup>	10,5 %	0,05 µg/l
Kupfer	7,3 %	1,0 µg/l
Lithium	7,4 %	1,5 µg/l
Mangan	5,1 %	2,0 µg/l
Nickel	6,4 %	0,75 µg/l
Quecksilber	11 %	0,2 µg/l
Selen	8,5 %	0,45 µg/l
Silber	8,6 %	0,05 µg/l
Uran	5,4 %	0,35 µg/l
Vanadium	7,4 %	0,3 µg/l
Zink	6,5 %	3 µg/l

<sup>1)</sup> Beryllium und Gadolinium wurden 2022 erstmalig angeboten Zur Abschätzung der Standardabweichung für die Eignungsbewertung (bezogen auf den zugewiesenen Wert) wurden Eignungsprüfungen der Jahre 2022-2025 herangezogen.

Zur Interpretation von z-Scores wird meist folgende Klassifikation vorgeschlagen:

z-Score	Klassifikation
$\leq 2$	zufriedenstellend
$2 <  z  < 3$	fraglich
$\geq 3$	nicht zufriedenstellend

Die z-Scores sind in der parameterorientierten Auswertung in den Tabellen neben den Wiederfindungen angegeben. Jedes Labor erhält zusätzlich zu dieser Auswertung ein Blatt, auf dem die erzielten z-Scores zusammengefasst und grafisch dargestellt sind. Die Standardabweichungen für die Eignungsbewertung sind dort in Konzentrationseinheiten angegeben.

Eine Übersichtstabelle aller z-Scores ist im Anschluss an die Rohdatentabellen im parameterorientierten Teil zu finden.

### Zur Darstellung der Ergebnisse in der Auswertung:

Eine Legende zur Darstellung der Ergebnisse finden Sie auf der nächsten Seite. In den Tabellen der Auswertung sind jeweils zugewiesener Wert, Messwert, Unsicherheit und die Wiederfindung dargestellt. In der parameterorientierten Auswertung befindet sich der Sollwert direkt unter der Parameterbezeichnung. Die Unsicherheit des Sollwertes ist immer als erweiterte Unsicherheit ( $k = 2$ ;  $\alpha = 0,05$ ) angegeben. Sie wurde nach den Vorgaben des EURACHEM / CITAC Guides „Quantifying Uncertainty in Analytical Measurement, 3<sup>rd</sup> Edition (2012)“ ermittelt. Die grafische Darstellung der Ergebnisse enthält die Unsicherheit des zugewiesenen Wertes als grau unterlegtes Band.

In der Spalte „A“ bei der parameterorientierten Auswertung wurden die Messwerte, die nach dem Test nach Hampel als Ausreißer gewertet wurden, mit einem Stern (\*) gekennzeichnet. Die Grafik der Messwerte wurde für alle Parameter auf  $100 \% \pm 45 \%$  des zugewiesenen Wertes skaliert. Die kleine Tabelle unten links enthält statistische Parameter, darunter den 99 % - Vertrauensbereich der Labormittelwerte vor und nach Ausreißereliminierung.

Ergebnisse, für die keine Wiederfindung bzw. Abweichung vom zugewiesenen Wert berechnet werden kann (d.h. „Kleiner als“ Ergebnisse oder Zahlenwerte bei nicht zugegebenen Substanzen) werden in den Tabellen und Grafiken entweder als **FN** (falsch negativ), **FP** (falsch positiv) oder als • - Symbol dargestellt.

- Als falsch negativ gelten „< Ergebnisse“ mit einem Betrag des Zahlenwertes unterhalb des zugewiesenen Wertes bzw. Messwert „0“ bei zugegebenen Substanzen.
- Falsch positive Ergebnisse sind für Substanzen möglich, die über „< zugewiesener Wert“ ausgewertet wurden. Mit FP werden alle Messwerte gekennzeichnet, die mit ihren Unsicherheiten das Kriterium „< zugewiesener Wert“ nicht einschließen (tangieren).
- Mit einem • - Symbol werden alle weiteren Ergebnisse illustriert, für die keine Wiederfindung berechnet werden kann

### Prüfmethoden

Den Teilnehmenden stand die Wahl der Analysenmethode frei. Die Parameter sollten mit den im jeweiligen Teilnehmerlabor eingesetzten Routineverfahren bestimmt werden. Eine Übersicht der angewendeten Methoden befindet sich am Ende des Berichts.

„< Werte“ bzw. „> Werte“ sowie stark abweichende Messwerte, welche zu einer unübersichtlichen Skalierung führen würden, sind in den Graphiken nicht berücksichtigt.

Tulln, 23. Juni 2025

**Probe M106A**

**Parameter Kupfer**

\*Sollwert ± U (k=2) 4,79 µg/l ± 0,13 µg/l  
 IFA-Kontrolle ± U (k=2) 4,79 µg/l ± 0,38 µg/l  
 IFA-Stabilität ± U (k=2) 4,69 µg/l ± 0,38 µg/l

\*Sollwert = "zugewiesener Wert"  
**Sollwert ± Unsicherheit aus Einwaage**  
**Kontrollmessung IFA vor Versand**  
**Messung IFA 3 Wochen nach Versand**

Labor-Kennung	Messwert	±	Einheit	Wiederfindung	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	95%	-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	*	

Wiederfindung des zugewiesenen Wertes in Prozent

z-Score des Labors

Ein Stern markiert einen Ausreißer nach dem Hampel-Test

Ergebnisunsicherheit laut Teilnehmer

	alle Ergebnisse	ohne Ausreißer	Einheit
MW ± VB(99%)	4,65 ± 0,57	4,51 ± 0,42	µg/l
WF ± VB(99%)	97,1 ± 12,0	94,1 ± 8,8	%
Standardabw.	0,84	0,59	µg/l
rel. Standardabw.	18,1	13,2	%
n für Berechnung	18	17	

Standardabweichung zwischen den Labors

Mittelwert der Messwerte und Wiederfindung des zugewiesenen Wertes mit zugehörigen Vertrauensbereichen (p=99%)

Anzahl der Messungen zur Berechnung der statistischen Kenngrößen

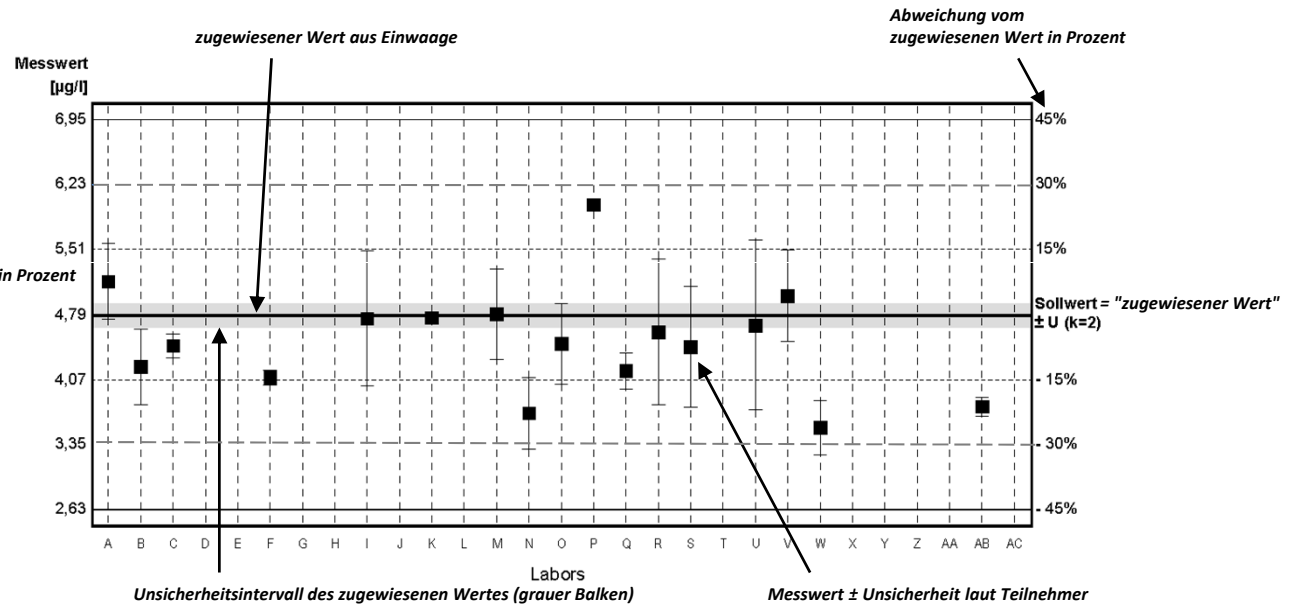
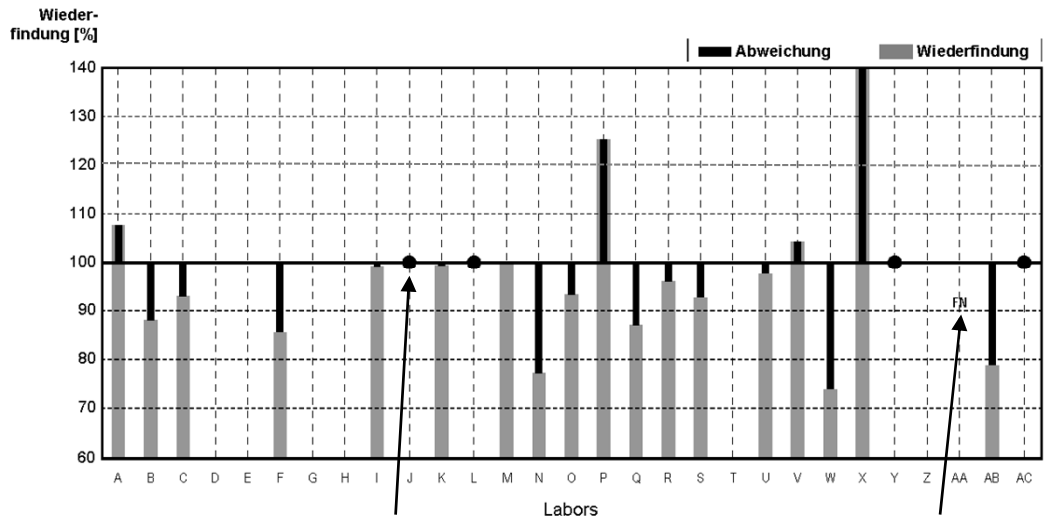


Diagramm 1: Messwerte mit zugehörigen Unsicherheitsintervallen



Ergebnis abgegeben, Berechnung der Wiederfindung oder Zuordnung FN, FP nicht möglich

Falsch negativ „< Ergebnis“ kleiner als der theoretische Sollwert

Diagramm 2: Wiederfindung und Abweichung vom zugewiesenen Wert

LEGENDE

## Information

This report summarises the results of the round M177 (trace metals) within the IFA-Proficiency Testing Scheme for Water Analysis. The proficiency testing items M177A and M177B were distributed to 41 participants on Monday, 12 May 2025. Each participant received two proficiency testing items of 250 mL filled into LDPE bottles.

Closing date for reporting results to the IFA-Tulln was Friday, 6 June 2025. 40 participants submitted results. To make the participants anonymous, each laboratory obtained a letter code by random.

### Proficiency testing items

The proficiency testing items consisted of artificial ground water spiked with pure standards. For the preparation, ultrapure water was spiked with concentrated solutions of salts to simulate the ionic composition of natural Austrian ground water. The ultrapure salts  $\text{CaCO}_3$ ,  $\text{Mg}(\text{NO}_3)_2$ ,  $\text{NaCl}$ ,  $\text{KCl}$  were used and the ultrapure acids  $\text{H}_2\text{SO}_4$  and  $\text{HCl}$  as well as an additional Sr standard were added. By this, the matrix of the proficiency testing items consisted of about 45.9 mg/L Ca, 19.4 mg/L Mg, 9.0 mg/L Na, 1.15 mg/L K, 19.1 mg/L  $\text{SO}_4^{2-}$ , 15.6 mg/L  $\text{Cl}^-$  and 206 (275)  $\mu\text{g/L}$  Sr M177A (M177B). Ultrapure  $\text{HNO}_3$  (0.5 % v/v) was added to stabilise the proficiency testing item at a pH below 2, which meets the standard sampling procedure in the Austrian monitoring program.

Traces of Ag, Al, As, Be, Cd, Ce, Co, Cr, Cu, Fe, Gd, Hg, Li, Mn, Ni, Pb, Se, U, V and Zn were added, using certified standards. For most of the compounds added to the proficiency testing items, the assigned concentrations were higher than the minimum quantifiable values of the Austrian ground and river water monitoring program. The calculation of the assigned concentrations of the compounds was based on the mass of standard added to the proficiency testing items.

### Homogeneity, accuracy and stability tests

Some proficiency testing items of M177A and M177B 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 (M178).

According to our experience, the concentrations of all parameters except Ag and Hg in the proficiency testing items remain stable up to 18 months when stored at 4-6 °C in the dark. For the parameters Ag and Hg concentration decreases of 2 % to 4 % per month can be expected.

## Results

Data evaluation was based on assigned concentrations that were calculated from the weights of the standards used to produce the proficiency testing items. Their uncertainty intervals correspond to the expanded uncertainty (coverage factor  $k = 2$ ) as described in the EURACHEM/CITAC Guide "Quantifying Uncertainty in Analytical Measurement, 3<sup>rd</sup> 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 assigned concentrations, calculated from outlier-corrected data mean values ranged between 93.8 % (Ag in M177A) and 115.1 % (Gd in M177B).

The between laboratory CVs covered the ranged between 3.8 % (Cd in M177B) and 18.2 % (V in M177B).

All confidence intervals of the outlier-corrected laboratory mean values except that for Pb in M177A (94.8 %  $\pm$  2.6 %), Pb in M177B (94.7 %  $\pm$  2.4 %) and Cu in M177A (94.4 %  $\pm$  3.0 %). For all other parameters, no difference could be detected between assigned concentrations and outlier corrected laboratory mean values statistically.

The standard uncertainties of all assigned values were checked according to the criterion  $u(x_{pp}) < 0,3\sigma_{pp}$  or  $u(x_{pp}) < 0,1\delta E$ , (DIN ISO 13528, Section 9.2)

and met the requirement in all cases.

For Pb in M177A and M177B and Cu in M177A, the comparison of the absolute difference between the assigned value ( $x_{pt}$ ) and the laboratory mean value ( $\bar{X}$ ), considering the measurement uncertainties  $u(x_{pt})$  and  $u(\bar{X})$ , was additionally carried out. Cu met the requirement:

$$|x_{pt} - \bar{X}| < 2 * \sqrt{u(x_{pt})^2 + u(\bar{X})^2} \quad (\text{DIN ISO 13528, Section 7 and E7})$$

Therefore, the assigned value determined for Cu was adopted with its standard uncertainties. Pb did not meet this requirement and was analysed using the consensus value from the laboratory mean values.

### **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
$X$	assigned value or mean value („consensus value“)
$\sigma_{pt}$	standard deviation for proficiency assessment

Thus, the z-score is the ratio of the estimated bias (difference between result and assigned value) and a standard deviation. The z-score criteria were, except Be and Gd, determined from relative standard deviations from all interlaboratory comparisons that have been organised by the IFA-Tulln from 2014 to 2024. 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 17043:2023, B.4.1.3). 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.

Be and Gd were offered for the first time in 2022, but not in the accredited area as part of the official proficiency tests. The test rounds from 2022-2025 were used to estimate the standard deviation for the proficiency assessment (based on the assigned value).

### Calculation example:

A laboratory found 73.7 µg/L for the parameter Aluminium (recovery of 101.94 %). The assigned 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](http://www.ifatest.eu)) by 7.5 %, which is 5.4 µg/L Al, when based on the assigned value.

$$z = \frac{x_i - X}{\sigma_{pt}} = \frac{73.7 \mu\text{g/L} - 72.3 \mu\text{g/L}}{5.4 \mu\text{g/L}} \approx 0.26 \quad \text{or} \quad \frac{101.94 \% - 100 \%}{7.5 \%} \approx 0.26$$

$z$	z-score	
$x_i$	73.7 µg/L	equivalent to 101.94 % (result of the laboratory)
$X$	72.3 µg/L	equivalent to 100 % (assigned value)
$\sigma_{pt}$	5.4 µg/L	equivalent to 7.5 % (standard deviation for proficiency assessment see table below)

In the case of recalculation, deviations in the last digits may occur since 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 assigned values were higher than these limits.

Parameter	standard deviation for proficiency assessment based on the assigned value	Lower limit
Aluminium	7.5 %	7.5 µg/L
Arsenic	6.6 %	0.5 µg/L
Beryllium <sup>1)</sup>	9.1 %	0.1 µg/L
Cadmium	5.0 %	0.1 µg/L
Cerium	5.7 %	0.25 µg/L
Chromium	5.9 %	0.5 µg/L
Cobalt	6.0 %	0.25 µg/L
Copper	7.3 %	1.0 µg/L
Gadolinium <sup>1)</sup>	10.5 %	0.05 µg/L
Iron	6.4 %	10 µg/L
Lead	6.5 %	0.3 µg/L
Lithium	7.4 %	1.5 µg/L
Manganese	5.1 %	2.0 µg/L
Mercury	11 %	0.2 µg/L
Nickel	6.4 %	0.75 µg/L
Selenium	8.5 %	0.45 µg/L
Silver	8.6 %	0.05 µg/L
Uranium	5.4 %	0.35 µg/L
Vanadium	7.4 %	0.3 µg/L
Zinc	6.5 %	3 µg/L

<sup>1)</sup> Beryllium und gadolinium are offered for the first time in 2022. The standard deviations for the suitability assessment (z-score criteria in %) and limits for these parameters were estimated from the data from the proficiency test rounds carried out in 2022 - 2025.

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 assigned 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 assigned 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" 3<sup>rd</sup> 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 assigned 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 based on "< assigned value". A result is termed FP if it does not include (strike) the "< assigned value" with its measurement uncertainty.
- "•": All other results for which no recoveries can be calculated are illustrated by this symbol

### Overview of measurement methods

The participants were free to choose the analytical method. The test methods should be consistent with the methods applied in routine. An overview of the methods used can be found at the end of the report.

"< values" or "> values" as well as significantly different measured values, which would lead to confusing scaling, are not included in the graphics.

Tulln, 23 June 2025

**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

\*Target value = "assigned value"

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 assigned value in percent

z-Score of the laboratory

An asterik indicates a result detected as outlier by Hampel test

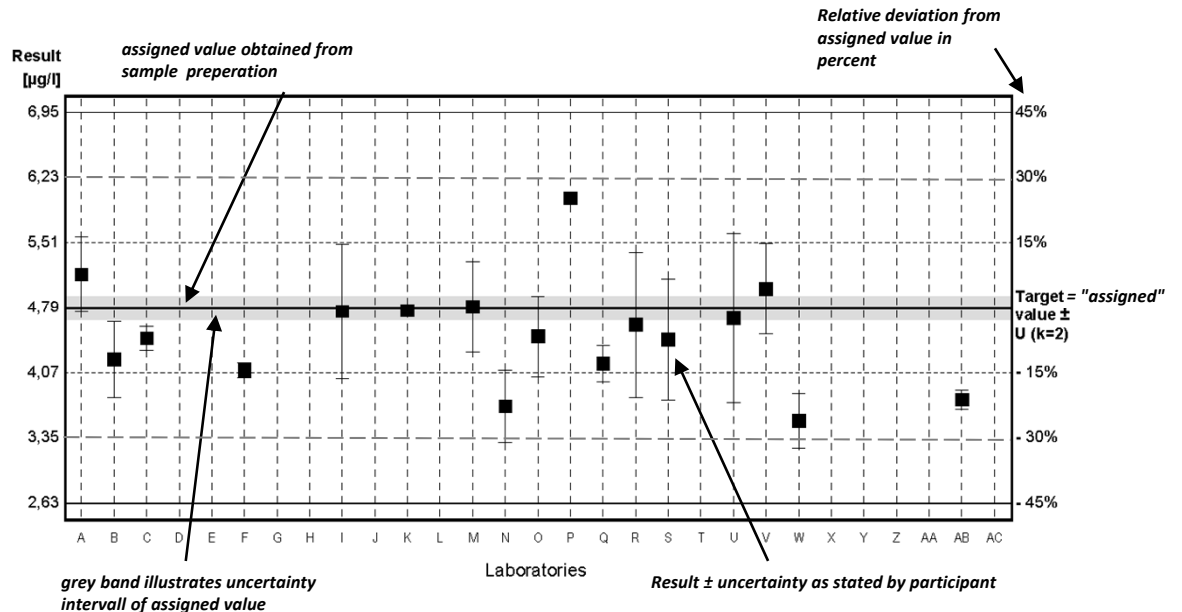
Interval expected to encompass target value as stated by participant

	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	

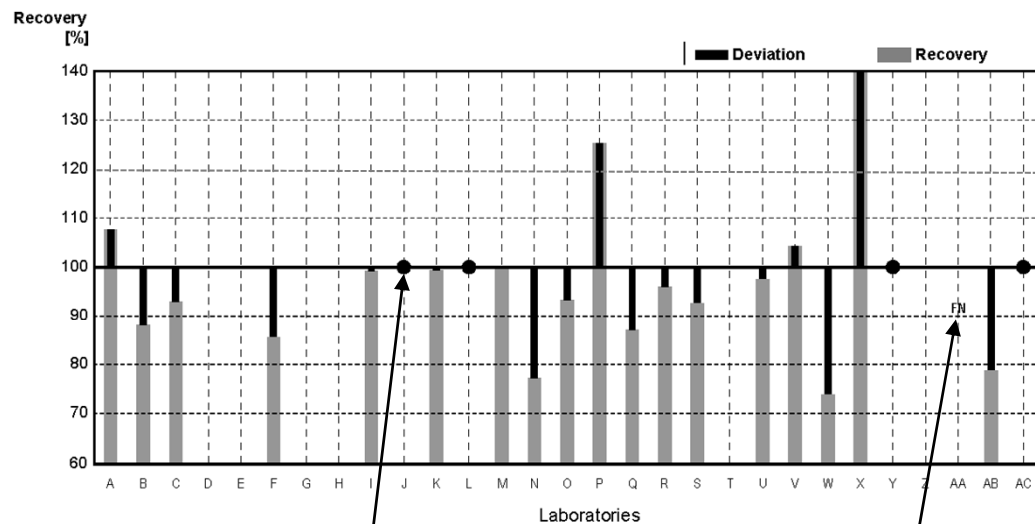
Between laboratory standard deviation

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

Number of results used for calculation of statistic parameters



**Diagram 1: Measurement results and their uncertainties**



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

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

**Diagram 2: Recoveries and deviations from assigned values**

**EXPLANATION**



**Rohdatenblätter und  
Parameterorientierte Auswertung  
Tables and Parameter Oriented Part**

Eignungsprüfungsrunde / Proficiency testing round  
M177

Metalle / Metals

Versand / Dispatch: 12. 05. 2025

## Results M177A

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
assigned value	25.5	2.589	0.200	2.41	0.598	1.863	5.45	0.820	40.4	0.1043
IFA result	25.5	2.67	0.204	2.67	0.59	1.82	5.40	0.87	42.0	0.106
A	26.3	2.54		2.53	0.553		5.52	<1	40.3	
B	24.3	2.508	0.188	2.343	0.574		5.150	0.760	37.6	
C							5.19		37.0	
D	29.6						5.52			
E				1.41	0.150		6.91			
F	25.9	2.72		2.53	0.59		5.52	0.83	41.4	
G	26.51	2.310	0.200	2.552	0.577	1.821	5.216	0.803	40.17	
H	23.4	2.74	<1.0	2.05	0.580		4.99	<1.0	32.0	
I	23.7	2.82	<1	2.51	0.594	1.79	5.49	<1.00	37.9	
J	24.1	2.65		2.38	0.578		5.39		40.4	
K		2.52		2.40	0.58		5.65			
L	25.6	3.01		2.23	0.594		6.02		43.5	
M	42.6	6.60		2.20	0.400		4.70		35.50	
N	25.3	2.62	0.196	2.50	0.61		5.3	0.79	40.0	
O	25.0	2.57	<1.00	2.46	0.587	1.86	5.32	<1.00	39.1	0.102
P				2.664				0.914	46.787	
Q	25.3	2.48		2.19	0.593		5.20	0.790	39.2	0.104
R	23.5								44.0	
S	25.5		0.218	2.33	0.57	1.93	5.1	0.96	37.8	0.129
T	26.7	3.14		2.30	0.58		5.1	0.70	36.3	
U	27.0	2.70	<0.400	2.40	0.60		5.50	0.80	40.0	
V	24.9	2.62		2.39	0.605		6.12		43.8	
W	41.3	1.58	0.111	1.55	4.25	1.12	2.03	1.76	61.8	
X	25.19	2.539	0.1872	2.336	0.5711	1.722	4.979	0.7462	38.99	0.09966
Y	25.32	3.05		2.49	0.63		5.26		49.85	
Z	29.4	2.62	0.219	2.48	0.610	1.85	6.00	0.867	46.5	0.106

All data in µg/L

## Uncertainties M177A

	Aluminium ±	Arsenic ±	Beryllium ±	Lead ±	Cadmium ±	Cerium ±	Chromium ±	Cobalt ±	Iron ±	Gadolinium ±
assigned value	0.2	0.019	0.002	0.05	0.007	0.015	0.03	0.007	0.2	0.0016
IFA result	0.9	0.25	0.025	0.14	0.04	0.24	0.16	0.09	3.2	0.022
A	3.94	0.38		0.38	0.083		0.83		6.04	
B	2.35	0.192	0.028	0.171	0.055		0.643	0.083	3.52	
C							0.719		4.17	
D	9.45						1.27			
E				0.28	0.03		1.38			
F	5.18	0.54		0.51	0.12		1.10	0.17	8.28	
G	2.7	0.23	0.02	0.25	0.057	0.18	0.52	0.08	4	
H	4.7	0.55	0.50	0.41	0.120		1.00	0.5	6.4	
I	0.969	0.0662		0.0481	0.00635	0.0565	0.162		0.908	
J	6.1	0.80		0.60	0.15		1.6		12.1	
K		0.26		0.26	0.075		1.2			
L										
M		2.77		0.57			0.423		2.13	
N	3.6	0.39	0.020	0.25	0.09		0.4	0.10	3.7	
O	5.0	0.39		0.30	0.070	0.37	0.80		5.9	0.020
P				0.150					13.760	
Q	2.53	0.248		0.437	0.0593		1.04	0.119	7.85	0.0104
R	0.50								0.3	
S	1.9		0.033	0.23	0.06	0.19	0.5	0.10	2.8	0.010
T	3.05	0.3		0.14	0.04		0.38	0.04	2.41	
U	2.70	0.324		0.192	0.048		0.660	0.12	10.40	
V	5.0	0.52		0.60	0.091		1.84		13.1	
W	0.57	0.092	0.004	0.006	0.12	0.010	0.051	0.025	0.85	
X	4.03	0.330	0.0262	0.537	0.0514	0.224	0.697	0.1642	3.51	0.03588
Y	2.52	0.31		0.25	0.06		0.53		4.99	
Z										

All data in µg/L

## Results M177A

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
assigned value	25.5	2.589	0.200	2.41	0.598	1.863	5.45	0.820	40.4	0.1043
IFA result	25.5	2.67	0.204	2.67	0.59	1.82	5.40	0.87	42.0	0.106
AA	24.2	2.49	<1.0	2.37	0.56		5.00	<1.0	40.2	
AB	26.2	2.66		2.36	0.56		5.15	<5	37.7	
AC	<20	2.67	0.212	2.38	0.639		5.59	0.818	41.3	
AD										
AE	26.1850	2.6008	0.2050	2.4984	0.6341	1.8313	5.4165	0.8173	38.7795	0.1137
AF	24.7	2.55	0.188	2.38	0.58	2.25	5.22	<1.00	45.8	0.140
AG	22.70						6.180			
AH	17.190	2.744	0.213	2.476	0.589		5.209	0.885	10.156	
AI	28.0	2.53		2.73	0.600		5.73	<2	41.3	
AJ		3.20								
AK	23.7	2.67		2.33	0.60		5.37		39.1	101.7
AL	22.7	2.38	0.205	2.46	0.57	1.92	5.11	0.92	40.1	0.142
AM										
AN	26.1	2.86	0.190	2.34	0.64	1.97	5.10	0.81	36.7	0.100
AO	24.214	2.529	0.193	2.453	0.567	1.718	5.209	0.802	40.585	0.106

All data in µg/L

### Uncertainties M177A

	Aluminium ±	Arsenic ±	Beryllium ±	Lead ±	Cadmium ±	Cerium ±	Chromium ±	Cobalt ±	Iron ±	Gadolinium ±
assigned value	0.2	0.019	0.002	0.05	0.007	0.015	0.03	0.007	0.2	0.0016
IFA result	0.9	0.25	0.025	0.14	0.04	0.24	0.16	0.09	3.2	0.022
AA	4.84	0.50		0.59	0.08		0.75		8.04	
AB	4.15	0.20		0.28			0.84		2.53	
AC	4	0.5	0.04	0.48	0.12		1	0.16	8	
AD										
AE	2.6290	0.3727	0.0301	0.2331	0.0606	0.1930	0.5525	0.0660	3.3777	0.0120
AF	3.7	0.38	0.03	0.36	0.09	0.34	0.78		6.9	0.02
AG										
AH	0.369	0.0352	0.00797	0.0540	0.004		0.109	0.0141	1.250	
AI	5.6	0.51		0.55	0.12		1.1		8.3	
AJ		0.32								
AK	4.3	0.24		0.53	0.12		0.54		5.59	20.33
AL										
AM										
AN	2.61	0.44	0.019	0.234	0.064	0.197	0.51	0.081	3.67	0.010
AO	1.007	0.138	0.015	0.125	0.028	0.087	0.253	0.054	1.968	0.005

All data in µg/L

## Results M177A

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
assigned value	6.06	3.08	46.0	2.57	1.401	3.76	0.202	1.121	1.721	15.3
IFA result	6.2	3.21	48.6	2.58	1.45	3.62	0.189	1.13	1.80	15.1
A	5.82	<10	44.9	2.49	1.549	3.67	<1	1.18	<5	14.8
B	5.468	2.840	42.9	2.330	1.300	3.573	0.179	1.070	1.688	14.3
C	5.04									
D			45.8							
E	4.90		37.90	2.65						3.79
F	5.92	3.07	46.9	2.67	1.43	3.88		1.16		14.9
G	5.824	3.136	44.82	2.334	1.343	3.430	0.191	1.077	1.544	14.8
H	5.26	2.94	42.1	2.32	0.857	4.16	0.171	9.85	1.75	16.5
I	5.81	3.39	43.2	2.61	1.30	4.01	<1.00	1.16	1.80	14.4
J	5.97		45.8	2.22	1.47	3.68		1.00		15.0
K	5.25			2.23		3.81		1.61		
L	6.20		49.7	2.66	1.39	4.02		1.07		16.3
M	6.00		43.90	3.90		9.80			9.10	34.7
N	5.85	2.93	44.9	1.92	1.47	4.08	0.195	1.10	1.77	15.1
O	5.29	3.16	45.4	2.48	1.38	3.66	<1.00	1.26	1.71	14.6
P	6.514			2.735	1.3493					16.933
Q	6.07		44.4	2.32	1.24	3.76	0.199	0.928	1.52	14.8
R	35.0		46.0							18.0
S	5.61	3.20	46.6	2.74	1.38	3.27	0.184	1.14	1.70	15.4
T	5.2		43.5	2.32			0.300			14.5
U	5.90		47.0	2.60	1.434	3.70	<0.50	1.09	1.80	15.0
V	6.30		53.2	2.72	1.34	4.27		1.06		16.9
W	2.23	5.51	18.2	4.55	0.422	2.44	0.804	2.53	<1.10	24.8
X	5.170	2.820	43.21	2.280	1.493	3.734	0.1892	1.039	1.647	15.04
Y	5.30		44.57	2.46	1.382	4.43		1.13		15.83
Z	6.22	3.48	53.5	2.73	1.35	2.88	0.154	0.650	1.94	16.1

All data in µg/L

## Uncertainties M177A

	Copper ±	Lithium ±	Manganese ±	Nickel ±	Mercury ±	Selenium ±	Silver ±	Uranium ±	Vanadium ±	Zinc ±
assigned value	0.04	0.03	0.2	0.04	0.016	0.03	0.011	0.012	0.015	0.6
IFA result	0.4	0.35	3.1	0.13	0.24	0.48	0.009	0.11	0.14	2.6
A	0.87		6.74	0.37	0.23	0.55		0.18		2.23
B	0.974	0.283	3.18	0.371		0.631	0.034	0.103	0.246	1.15
C	0.662									
D			5.95							
E	0.98		7.58	0.53						0.76
F	1.18	0.61	9.38	0.53	0.29	0.78		0.23		2.98
G	0.58	0.31	4.4	0.23	0.13	0.34	0.019	0.11	0.15	1.4
H	1.05	0.59	8.4	0.46	0.171	0.83	0.034	1.97	0.35	3.3
I	0.0954	0.062	0.731	0.0492	0.0115	0.0750		0.0639	0.0675	0.329
J	1.5		14	0.56	0.45	1.5		0.3		3.8
K	0.37			0.18		0.38		0.29		
L										
M			5.7	0.468					3.55	4.86
N	0.59	0.50	2.1	0.35	0.25	0.68	0.057	0.20	0.37	2.0
O	0.63	0.47	5.4	0.27	0.30	0.55		0.19	0.21	2.2
P	0.382			0.213						2.217
Q	1.52		4.44	0.348	0.185	0.753	0.0199	0.139	0.228	4.89
R	0.4		0.2							0.7
S	0.56	0.32	4.7	0.27	0.10	0.49	0.018	0.11	0.25	1.5
T	0.52		3.79	0.18			0.03			1.35
U	0.472		4.70	0.260	0.215	0.56		0.055	0.27	1.50
V	1.58		16.0	0.41	0.40	1.71		0.32		2.5
W	0.071	0.050	0.058	0.32	0.008	0.14	0.012	0.027		0.55
X	1.086	0.508	6.91	0.410	0.284	0.560	0.0549	0.156	0.165	1.81
Y	0.53		4.46	0.25	0.14	0.44		0.11		1.58
Z										

All data in µg/L

## Results M177A

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
assigned value	6.06	3.08	46.0	2.57	1.401	3.76	0.202	1.121	1.721	15.3
IFA result	6.2	3.21	48.6	2.58	1.45	3.62	0.189	1.13	1.80	15.1
AA	5.50	3.05	45.2	2.39	1.32	3.69	<1.0	<1.0	1.58	14.8
AB	5.63		44.0	2.46	1.39	3.91	<5	1.06		14.4
AC	5.55	<5	45.0	2.53	1.34			1.11		17.7
AD										
AE	5.9809	3.1649	46.6494	2.5742		3.5466	0.2273	1.1116	1.7034	15.4132
AF	5.83	3.57	44.3	2.39	1.29	3.82	<1.00	1.07	1.67	14.7
AG										
AH	5.887	2.993	40.373	3.575		4.249		1.146	1.751	15.726
AI	6.33		47.3	2.70	1.48	3.70	<2	<2	<2	<20
AJ						3.54				
AK	5.50	3.00	44.7	2.47		3.93		1.10	1.70	15.5
AL	5.89	2.81	46.1	2.49	1.31	3.48		1.14	1.63	14.4
AM						3.43				
AN	5.66	3.01	43.5	2.42	1.79	3.97	0.200	1.10	1.64	15.9
AO	5.828	3.093	45.831	2.508		3.463	0.194	1.032	1.632	13.762

All data in µg/L

### Uncertainties M177A

	Copper ±	Lithium ±	Manganese ±	Nickel ±	Mercury ±	Selenium ±	Silver ±	Uranium ±	Vanadium ±	Zinc ±
assigned value	0.04	0.03	0.2	0.04	0.016	0.03	0.011	0.012	0.015	0.6
IFA result	0.4	0.35	3.1	0.13	0.24	0.48	0.009	0.11	0.14	2.6
AA	1.10	0.92	6.78	0.36	0.20	0.55			0.47	4.44
AB	0.6		2.79	0.23	0.26	0.52				2.18
AC	1	1	9	0.5	0.26			0.2		3.4
AD										
AE	0.6776	0.3712	3.7366	0.2615		0.3146	0.0300	0.0894	0.2509	1.3271
AF	0.9	0.5	6.6	0.36	0.13	0.57		0.16	0.25	2.2
AG										
AH	0.104	0.0445	0.526	0.0698		0.0737		0.0192	0.0232	0.245
AI	1.27		9.5	0.54	0.30	0.74				
AJ						0.35				
AK	0.43	0.42	2.9	0.26		0.46		0.20	0.24	1.90
AL										
AM						0.69				
AN	0.566	0.301	4.35	0.242	0.179	0.596	0.02	0.11	0.164	1.59
AO	0.281	0.152	1.815	0.133		0.198	0.012	0.053	0.075	0.674

All data in µg/L

## Results M177B

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
assigned	40.8	1.517	0.1197	1.46	4.25	1.144	1.939	1.827	60.3	0.0607
IFA result	40.4	1.66	0.130	1.61	4.19	1.10	1.89	1.92	63	0.057
A	42.4	1.57		1.54	4.01		2.00	1.85	61.8	
B	38.9	1.503	0.113	1.418	4.070		1.838	1.678	55.9	
C							1.85		55.1	
D	44.7						2.01			
E				0.88	1.26		2.40			
F	42.0	1.55		1.54	4.20		1.95	1.83	61.9	
G	42.22	1.416	0.116	1.520	4.065	1.128	1.831	1.787	60.1	
H	39.1	1.67	<1.0	1.26	4.24		2.08	1.77	50.5	
I	37.9	1.66	<1	1.53	4.20	1.10	2.14	1.93	57.4	
J	40.1	1.55		1.44	4.27		1.92		60.2	
K		1.49		1.48	4.15		1.90			
L	44.1	1.90		1.42	4.39		2.30		70.8	
M	111.8	5.70		2.50	3.90		1.60		54.20	
N	40.8	1.54	0.116	1.49	4.31		1.95	1.76	61.6	
O	39.5	1.50	<1.00	1.51	4.15	1.13	1.90	1.70	57.0	<0.10
P				1.502				1.895	64.034	
Q	40.1	1.45		1.31	4.15		1.83	1.74	57.8	0.0602
R	38.5								61.0	
S	40.0		0.136	1.40	4.05	1.19	2.09	1.97	55.8	0.077
T	41.7	2.30		1.40	4.00		1.80	1.60	53.9	
U	44.0	1.60	<0.400	1.50	4.24		2.00	1.80	60.0	
V	40.7	1.54		1.46	4.29		2.23		66.6	
W	26.0	2.66	0.193	2.53	0.579	1.83	5.30	0.760	41.6	
X	39.77	1.480	0.1236	1.405	3.997	1.064	1.801	1.721	56.33	0.05753
Y	40.20	1.66		1.57	4.42		1.87		69.19	
Z	48.5	1.58	0.134	1.53	4.29	1.16	2.19	1.96	70.5	0.063

All data in µg/L

## Uncertainties M177B

	Aluminium ±	Arsenic ±	Beryllium ±	Lead ±	Cadmium ±	Cerium ±	Chromium ±	Cobalt ±	Iron ±	Gadolinium ±
assigned value	0.3	0.014	0.0014	0.03	0.03	0.010	0.016	0.013	0.3	0.0012
IFA result	1.4	0.15	0.016	0.08	0.26	0.14	0.08	0.20	5	0.012
A	6.35	0.24		0.23	0.60		0.30	0.28	9.27	
B	3.76	0.115	0.017	0.104	0.391		0.230	0.183	5.23	
C							0.256		6.21	
D	14.3						0.46			
E				0.18	0.25		0.48			
F	8.4	0.31		0.31	0.84		0.39	0.37	12.4	
G	4.2	0.14	0.016	0.15	0.406	0.11	0.18	0.17	6	
H	7.8	0.33	0.50	0.25	0.85		0.42	0.35	10.1	
I	0.911	0.0705		0.0508	0.0645	0.0600	0.183	0.0393	0.883	
J	10.1	0.47		0.36	1.1		0.58		18.1	
K		0.15		0.16	0.12		0.42			
L										
M		2.39		0.65			0.144		3.25	
N	5.3	0.33	0.012	0.16	0.38		0.33	0.15	5.4	
O	7.9	0.23		0.18	0.50	0.23	0.29	0.26	8.6	
P				0.0846					18.832	
Q	4.01	0.218		0.261	0.291		0.365	0.261	11.6	0.00602
R	0.50								0.3	
S	3.0		0.020	0.14	0.40	0.12	0.21	0.20	5.6	0.006
T	4.76	0.22		0.08	0.26		0.13	0.1	3.6	
U	4.40	0.192		0.12	0.339		0.24	0.27	15.6	
V	8.1	0.31		0.36	0.64		0.67		20.0	
W	0.27	0.065	0.005	0.015	0.032	0.012	0.060	0.015	0.15	
X	6.36	0.192	0.0173	0.323	0.360	0.138	0.252	0.379	5.07	0.02071
Y	4.02	0.17		0.16	0.44		0.19		6.92	
Z										

All data in µg/L

## Results M177B

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
assigned	40.8	1.517	0.1197	1.46	4.25	1.144	1.939	1.827	60.3	0.0607
IFA result	40.4	1.66	0.130	1.61	4.19	1.10	1.89	1.92	63	0.057
AA	40.6	1.52	<1.0	1.46	4.02		1.82	1.68	59.0	
AB	40.3	1.59		1.44	4.15		1.65	<5	57.1	
AC	34.7	1.59	0.130	1.43	4.19		1.97	1.81	63.3	
AD										
AE	42.9870	1.5395	0.1205	1.5166	4.2780	1.1138	1.9414	1.8317	58.2769	0.0694
AF	39.5	1.50	0.111	1.46	4.04	1.45	1.88	1.71	64.9	0.087
AG	37.94						2.049			
AH	30.913	1.738	0.164	1.331	4.0533		2.245	1.973	29.325	
AI	44.5	<2		<2	4.08		<2	<2	60.0	
AJ		1.69								
AK	38.0	1.60		1.40	4.47		1.93		58.6	59.2
AL	40.9	1.45	0.121	1.51	4.12	1.12	1.93	1.82	62.1	0.082
AM										
AN	40.3	1.68	0.120	1.44	4.59	1.25	1.80	1.77	56.4	<0.10
AO	41.579	1.491	0.1140	1.499	3.984	1.045	1.819	1.786	60.347	0.063

All data in µg/L

### Measurement Uncertainties M177B

	Aluminium ±	Arsenic ±	Beryllium ±	Lead ±	Cadmium ±	Cerium ±	Chromium ±	Cobalt ±	Iron ±	Gadolinium ±
assigned value	0.3	0.014	0.0014	0.03	0.03	0.010	0.016	0.013	0.3	0.0012
IFA result	1.4	0.15	0.016	0.08	0.26	0.14	0.08	0.20	5	0.012
AA	8.12	0.30		0.37	0.60		0.27	0.25	11.8	
AB	4.66	0.1		0.14	0.44				4.06	
AC	7	0.32	0.026	0.28	0.8		0.39	0.36	13	
AD										
AE	4.3159	0.2206	0.0177	0.1415	0.4086	0.1174	0.1980	0.1478	5.0759	0.0073
AF	5.9	0.23	0.02	0.22	0.61	0.22	0.28	0.26	9.7	0.01
AG										
AH	1.103	0.0240	0.0121	0.0179	0.026		0.0745	0.0445	2.492	
AI	8.9				0.82				12	
AJ		0.17								
AK	6.8	0.15		0.320	0.90		0.19		8.38	11.8
AL										
AM										
AN	4.03	0.28	0.012	0.144	0.459	0.125	0.18	0.177	5.64	
AO	1.730	0.081	0.009	0.076	0.196	0.053	0.088	0.119	2.927	0.003

All data in µg/L

## Results M177B

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
assigned value	2.32	6.03	18.25	4.65	0.440	2.44	0.807	2.63	0.603	25.2
IFA result	2.40	6.1	19.2	4.73	0.380	2.39	0.79	2.63	0.62	24.3
A	2.30	<10	18.4	4.60	0.527	2.43	<1	2.81	<5	24.4
B	2.105	5.530	17.0	4.328	0.415	2.310	0.729	2.495	0.586	23.3
C	2.00									
D			18.5							
E	1.93		14.10	3.97						6.55
F	2.21	5.95	18.4	4.63	0.468	2.35		2.76		24.7
G	2.214	6.076	17.8	4.435	0.432	2.228	0.762	2.514	0.51	24.4
H	2.24	5.85	18.3	4.43	0.238	2.86	0.706	23.4	<1.0	40.6
I	2.35	6.24	16.7	4.69	0.398	2.56	<1.00	2.58	<1.00	23.9
J	2.33		18.1	4.25	0.465	2.46		2.36		24.9
K	1.65			4.18		2.65		3.25		
L	2.61		21.1	5.09	0.340	2.79		2.55		28.7
M	2.30		17.60	5.40		8.30			7.8	28.9
N	2.21	5.7	17.9	4.29	0.50	2.66	0.79	2.54	<1	24.4
O	2.01	6.13	17.8	4.39	0.431	2.55	<1.00	2.87	<1.00	23.7
P	2.344			4.748	0.415					26.293
Q	2.27		17.5	4.18	0.393	2.44	0.800	2.14	0.461	24.2
R	4.50		18.0							27.5
S	2.26	6.21	18.5	4.94	0.434	2.25	0.77	2.67	<1	24.9
T	1.80		17.0	4.20			0.900			24.0
U	2.30		19.0	4.70	0.449	2.40	0.70	2.53	0.70	25.0
V	2.43		21.6	5.04	0.375	2.76		2.52		27.9
W	5.65	2.85	45.7	2.41	1.33	3.81	0.209	1.07	1.57	14.4
X	2.046	6.028	17.10	4.360	0.4739	2.361	0.7433	2.444	0.5710	25.17
Y	2.01		17.55	4.41	0.4361	2.69		2.72		25.42
Z	2.39	6.56	20.6	4.98	0.391	1.91	0.631	1.48	0.695	25.9

All data in µg/L

### Measurement Uncertainties M177B

	Copper ±	Lithium ±	Manganese ±	Nickel ±	Mercury ±	Selenium ±	Silver ±	Uranium ±	Vanadium ±	Zinc ±
assigned value	0.03	0.05	0.12	0.05	0.013	0.02	0.013	0.02	0.006	0.6
IFA result	0.17	0.5	1.2	0.21	0.062	0.31	0.03	0.26	0.05	3.5
A	0.34		2.77	0.69	0.079	0.36		0.42		3.66
B	0.375	0.551	1.26	0.689		0.408	0.138	0.241	0.086	1.87
C	0.263									
D			2.40							
E	0.39		2.82	0.79						1.31
F	0.22	1.19	3.68	0.93	0.09	0.47		0.55		4.94
G	0.22	0.6	1.7	0.44	0.04	0.22	0.07	0.25	0.05	2.4
H	0.45	1.17	3.7	0.89	0.048	0.57	0.141	4.7	0.5	8.1
I	0.104	0.060	0.821	0.0458	0.0128	0.0795		0.0589		0.332
J	0.59		5.5	1.1	0.14	0.99		0.65		6.3
K	0.17			0.33		0.26		0.59		
L										
M			2.29	0.65					3.00	4.05
N	0.37	0.8	1.2	0.47	0.09	0.51	0.11	0.22		3.1
O	0.24	0.92	2.1	0.48	0.095	0.38		0.43		3.6
P	0.138			0.369						3.442
Q	0.567		2.63	0.627	0.0590	0.488	0.0800	0.321	0.0692	8.00
R	0.4		0.2							0.7
S	0.23	0.62	1.8	0.49	0.033	0.34	0.08	0.27		2.5
T	0.18		1.5	0.33			0.10			2.2
U	0.184		1.90	0.47	0.0673	0.36	0.11	0.127	0.11	2.50
V	0.61		6.5	0.76	0.113	1.10		0.76		4.2
W	0.12	0.025	0.67	0.071	0.024	0.14	0.003	0.012	0.051	0.15
X	0.430	1.085	2.74	0.785	0.0900	0.354	0.2156	0.367	0.0571	3.02
Y	0.20		1.76	0.44	0.044	0.27		0.27		2.54
Z										

All data in µg/L

## Results M177B

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
assigned value	2.32	6.03	18.25	4.65	0.440	2.44	0.807	2.63	0.603	25.2
IFA result	2.40	6.1	19.2	4.73	0.380	2.39	0.79	2.63	0.62	24.3
AA	2.16	6.00	18.2	4.33	0.50	2.32	<1.0	1.95	<1.0	25.5
AB	2.08		17.6	4.52	0.431	2.52	<5	2.54		24.5
AC	2.06	5.78	15.7	4.52	0.380			2.42		28.7
AD										
AE	2.3378	6.1648	18.6691	4.6622		2.2474	0.8899	2.5930	0.6030	25.4198
AF	2.25	7.25	17.7	4.45	0.382	2.40	<1.00	2.51	<1.00	24.5
AG										
AH	2.563	6.0939	18.586	6.0217		2.882		2.437	0.752	27.827
AI	2.33		18.5	4.75	0.435	2.33	<2	2.73	<2	25.8
AJ						2.21				
AK	2.00	5.83	17.8	4.47		2.60		2.50	0.60	25.6
AL	2.45	5.74	18.2	4.41	0.387	2.29	0.81	2.48	<1	24.5
AM						1.87				
AN	2.16	5.93	17.4	4.40	0.56	2.47	0.80	2.65	0.390	25.8
AO	2.238	5.907	16.876	4.599		2.256	0.775	2.432	0.571	22.525

All data in µg/L

### Measurement Uncertainties M177B

	Copper ±	Lithium ±	Manganese ±	Nickel ±	Mercury ±	Selenium ±	Silver ±	Uranium ±	Vanadium ±	Zinc ±
assigned value	0.03	0.05	0.12	0.05	0.013	0.02	0.013	0.02	0.006	0.6
IFA result	0.17	0.5	1.2	0.21	0.062	0.31	0.03	0.26	0.05	3.5
AA	0.43	1.80	2.73	0.65	0.08	0.35		0.29		7.65
AB			1.21	0.46	0.02			0.18		6.42
AC	0.4	1.1	3	0.9	0.078			0.48		5.6
AD										
AE	0.2649	0.7231	1.4954	0.4737		0.1993	0.1174	0.2085	0.0888	2.1886
AF	0.34	1.09	2.7	0.67	0.04	0.36		0.38		3.7
AG										
AH	0.0589	0.133	0.406	0.177		0.0350		0.0116	0.0235	0.503
AI	0.47		3.7	0.95	0.087	0.47		0.55		5.2
AJ						0.22				
AK	0.16	0.82	1.16	0.47		0.31		0.46	0.08	3.12
AL										
AM						0.37				
AN	0.216	0.593	1.74	0.440	0.056	0.371	0.08	0.265	0.039	2.58
AO	0.108	0.290	0.668	0.244		0.129	0.048	0.125	0.026	1.104

All data in µg/L

**z-Scores M177A**

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
A	0.42	-0.29		0.77	-1.51		0.22		-0.04	
B	-0.63	-0.47	-0.66	-0.43	-0.80		-0.93	-1.22	-1.08	
C							-0.81		-1.31	
D	2.14						0.22			
E				-6.38	-14.98		4.54			
F	0.21	0.77		0.77	-0.27		0.22	0.20	0.39	
G	0.53	-1.63	0.00	0.91	-0.70	-0.40	-0.73	-0.35	-0.09	
H	-1.10	0.88		-2.30	-0.60		-1.43		-3.25	
I	-0.94	1.35		0.64	-0.13	-0.69	0.12		-0.97	
J	-0.73	0.36		-0.19	-0.67		-0.19		0.00	
K		-0.40		-0.06	-0.60		0.62			
L	0.05	2.46		-1.15	-0.13		1.77		1.20	
M	8.94	23.47		-1.34	-6.62		-2.33		-1.90	
N	-0.10	0.18	-0.22	0.57	0.40		-0.47	-0.61	-0.15	
O	-0.26	-0.11		0.32	-0.37	-0.03	-0.40		-0.50	-0.21
P				1.62				1.91	2.47	
Q	-0.10	-0.64		-1.40	-0.17		-0.78	-0.61	-0.46	-0.03
R	-1.05								1.39	
S	0.00		0.99	-0.51	-0.94	0.63	-1.09	2.85	-1.01	2.26
T	0.63	3.22		-0.70	-0.60		-1.09	-2.44	-1.59	
U	0.78	0.65		-0.06	0.07		0.16	-0.41	-0.15	
V	-0.31	0.18		-0.13	0.23		2.08		1.31	
W	8.26	-5.90	-4.89	-5.49	122.14	-7.00	-10.64	19.11	8.28	
X	-0.16	-0.29	-0.70	-0.47	-0.90	-1.33	-1.46	-1.50	-0.55	-0.42
Y	-0.09	2.70		0.51	1.07		-0.59		3.65	
Z	2.04	0.18	1.04	0.45	0.40	-0.12	1.71	0.96	2.36	0.16

All data in µg/L

**z-Scores M177A**

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
AA	-0.68	-0.58		-0.26	-1.27		-1.40		-0.08	
AB	0.37	0.42		-0.32	-1.27		-0.93		-1.04	
AC		0.47	0.66	-0.19	1.37		0.44	-0.04	0.35	
AD										
AE	0.36	0.07	0.27	0.56	1.21	-0.30	-0.10	-0.05	-0.63	0.86
AF	-0.42	-0.23	-0.66	-0.19	-0.60	3.64	-0.72		2.09	3.26
AG	-1.46						2.27			
AH	-4.35	0.91	0.71	0.42	-0.30		-0.75	1.32	-11.7	
AI	1.31	-0.35		2.04	0.07		0.87		0.35	
AJ		3.58								
AK	-0.94	0.47		-0.51	0.07		-0.25		-0.50	9276.88
AL	-1.46	-1.22	0.27	0.32	-0.94	0.54	-1.06	2.03	-0.12	3.44
AM										
AN	0.31	1.59	-0.55	-0.45	1.40	1.01	-1.09	-0.20	-1.43	-0.39
AO	-0.67	-0.35	-0.38	0.27	-1.04	-1.37	-0.75	-0.37	0.07	0.16

All data in µg/L

**z-Scores M177A**

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
A	-0.54		-0.47	-0.49	0.96	-0.28		0.97		-0.50
B	-1.34	-1.05	-1.32	-1.46	-0.66	-0.59	-1.32	-0.84	-0.26	-1.01
C	-2.31									
D			-0.09							
E	-2.62		-3.45	0.49						-11.57
F	-0.32	-0.04	0.38	0.61	0.19	0.38		0.64		-0.40
G	-0.53	0.25	-0.50	-1.43	-0.38	-1.03	-0.63	-0.73	-1.39	-0.50
H	-1.81	-0.61	-1.66	-1.52	-3.53	1.25	-1.78	144.20	0.23	1.21
I	-0.57	1.36	-1.19	0.24	-0.66	0.78		0.64	0.62	-0.90
J	-0.20		-0.09	-2.13	0.45	-0.25		-2.00		-0.30
K	-1.83			-2.07		0.16		8.08		
L	0.32		1.58	0.55	-0.07	0.81		-0.84		1.01
M	-0.14		-0.90	8.09		18.90			57.94	19.51
N	-0.47	-0.66	-0.47	-3.95	0.45	1.00	-0.40	-0.35	0.38	-0.20
O	-1.74	0.35	-0.26	-0.55	-0.14	-0.31		2.30	-0.09	-0.70
P	1.03			1.00	-0.34					1.64
Q	0.02		-0.68	-1.52	-1.04	0.00	-0.17	-3.19	-1.58	-0.50
R	65.42		0.00							2.71
S	-1.02	0.53	0.26	1.03	-0.14	-1.53	-1.04	0.31	-0.16	0.10
T	-1.94		-1.07	-1.52			5.64			-0.80
U	-0.36		0.43	0.18	0.21	-0.19		-0.51	0.62	-0.30
V	0.54		3.07	0.91	-0.40	1.60		-1.01		1.61
W	-8.66	10.66	-11.85	12.04	-6.35	-4.13	34.65	23.28		9.55
X	-2.01	-1.14	-1.19	-1.76	0.60	-0.08	-0.74	-1.35	-0.58	-0.26
Y	-1.72		-0.61	-0.67	-0.12	2.10		0.15		0.53
Z	0.36	1.76	3.20	0.97	-0.33	-2.75	-2.76	-7.78	1.72	0.80

All data in µg/L

**z-Scores M177A**

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
AA	-1.27	-0.13	-0.34	-1.09	-0.53	-0.22			-1.11	-0.50
AB	-0.97		-0.85	-0.67	-0.07	0.47		-1.01		-0.90
AC	-1.15		-0.43	-0.24	-0.40			-0.18		2.41
AD										
AE	-0.18	0.37	0.28	0.03		-0.67	1.46	-0.16	-0.14	0.11
AF	-0.52	2.15	-0.72	-1.09	-0.72	0.19		-0.84	-0.40	-0.60
AG										
AH	-0.39	-0.38	-2.40	6.11		1.53		0.41	0.24	0.43
AI	0.61		0.55	0.79	0.51	-0.19				
AJ						-0.69				
AK	-1.27	-0.35	-0.55	-0.61		0.53		-0.35	-0.16	0.20
AL	-0.38	-1.18	0.04	-0.49	-0.59	-0.88		0.31	-0.71	-0.90
AM						-1.03				
AN	-0.90	-0.31	-1.07	-0.91	2.52	0.66	-0.12	-0.35	-0.64	0.60
AO	-0.52	0.06	-0.07	-0.38		-0.93	-0.46	-1.47	-0.70	-1.55

All data in µg/L

**z-Scores M177B**

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
A	0.52	0.53		0.84	-1.13		0.53	0.21	0.39	
B	-0.62	-0.14	-0.62	-0.44	-0.85		-0.88	-1.36	-1.14	
C							-0.78		-1.35	
D	1.27						0.62			
E				-6.11	-14.07		4.03			
F	0.39	0.33		0.84	-0.24		0.10	0.03	0.41	
G	0.46	-1.01	-0.34	0.63	-0.87	-0.25	-0.94	-0.36	-0.05	
H	-0.56	1.53		-2.11	-0.05		1.23	-0.52	-2.54	
I	-0.95	1.43		0.74	-0.24	-0.67	1.76	0.94	-0.75	
J	-0.23	0.33		-0.21	0.09		-0.17		-0.03	
K		-0.27		0.21	-0.47		-0.34			
L	1.08	3.83		-0.42	0.66		3.16		2.72	
M	23.20	41.78		10.96	-1.65		-2.96		-1.58	
N	0.00	0.23	-0.34	0.32	0.28		0.10	-0.61	0.34	
O	-0.42	-0.17		0.53	-0.47	-0.21	-0.34	-1.16	-0.86	
P				0.44				0.62	0.97	
Q	-0.23	-0.67		-1.58	-0.47		-0.95	-0.79	-0.65	-0.08
R	-0.75								0.18	
S	-0.26		1.50	-0.63	-0.94	0.71	1.32	1.30	-1.17	2.56
T	0.29	7.82		-0.63	-1.18		-1.22	-2.07	-1.66	
U	1.05	0.83		0.42	-0.05		0.53	-0.25	-0.08	
V	-0.03	0.23		0.00	0.19		2.54		1.63	
W	-4.84	11.42	6.73	11.28	-17.28	10.52	29.38	-9.73	-4.85	
X	-0.34	-0.37	0.36	-0.58	-1.19	-1.23	-1.21	-0.97	-1.03	-0.50
Y	-0.20	1.43		1.16	0.80		-0.60		2.30	
Z	2.52	0.63	1.31	0.74	0.19	0.25	2.19	1.21	2.64	0.36

All data in µg/L

**z-Scores M177B**

	Aluminium	Arsenic	Beryllium	Lead	Cadmium	Cerium	Chromium	Cobalt	Iron	Gadolinium
AA	-0.07	0.03		0.00	-1.08		-1.04	-1.34	-0.34	
AB	-0.16	0.73		-0.21	-0.47		-2.53		-0.83	
AC	-1.99	0.73	0.95	-0.32	-0.28		0.27	-0.16	0.78	
AD										
AE	0.71	0.22	0.07	0.60	0.13	-0.46	0.02	0.04	-0.52	1.37
AF	-0.42	-0.17	-0.80	0.00	-0.99	4.69	-0.52	-1.07	1.19	4.13
AG	-0.93						0.96			
AH	-3.23	2.21	4.07	-1.36	-0.93		2.67	1.33	-8.03	
AI	1.21				-0.80				-0.08	
AJ		1.73								
AK	-0.92	0.83		-0.63	1.04		-0.08		-0.44	9278.94
AL	0.03	-0.67	0.12	0.53	-0.61	-0.37	-0.08	-0.06	0.47	3.34
AM										
AN	-0.16	1.63	0.03	-0.21	1.60	1.63	-1.22	-0.52	-1.01	
AO	0.25	-0.26	-0.52	0.41	-1.25	-1.52	-1.05	-0.37	0.01	0.36

All data in µg/L

**z-Scores M177B**

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
A	-0.12		0.16	-0.17	1.80	-0.05		1.27		-0.49
B	-1.27	-1.12	-1.34	-1.08	-0.52	-0.63	-1.12	-0.95	-0.38	-1.16
C	-1.89									
D			0.27							
E	-2.30		-4.46	-2.28						-11.39
F	-0.65	-0.18	0.16	-0.07	0.58	-0.43		0.92		-0.31
G	-0.63	0.10	-0.48	-0.72	-0.17	-1.02	-0.65	-0.82	-2.08	-0.49
H	-0.47	-0.40	0.05	-0.74	-4.17	2.03	-1.46	146.25		9.40
I	0.18	0.47	-1.67	0.13	-0.87	0.58		-0.35		-0.79
J	0.06		-0.16	-1.34	0.52	0.10		-1.90		-0.18
K	-3.96			-1.58		1.01		4.37		
L	1.71		3.06	1.48	-2.07	1.69		-0.56		2.14
M	-0.12		-0.70	2.52		28.25			161.29	2.26
N	-0.65	-0.74	-0.38	-1.21	1.24	1.06	-0.24	-0.63		-0.49
O	-1.83	0.22	-0.48	-0.87	-0.19	0.53		1.69		-0.92
P	0.14			0.33	-0.52					0.67
Q	-0.30		-0.81	-1.58	-0.97	0.00	-0.10	-3.45	-3.18	-0.61
R	12.87		-0.27							1.40
S	-0.35	0.40	0.27	0.97	-0.12	-0.92	-0.53	0.28		-0.18
T	-3.07		-1.34	-1.51			1.34			-0.73
U	-0.12		0.81	0.17	0.19	-0.19	-1.54	-0.70	2.17	-0.12
V	0.65		3.60	1.31	-1.34	1.54		-0.77		1.65
W	19.66	-7.13	29.49	-7.53	18.39	6.61	-8.62	-10.98	21.67	-6.59
X	-1.62	0.00	-1.24	-0.97	0.70	-0.38	-0.92	-1.31	-0.72	-0.02
Y	-1.83		-0.75	-0.81	-0.08	1.21		0.63		0.13
Z	0.41	1.19	2.52	1.11	-1.01	-2.56	-2.54	-8.10	2.06	0.43

All data in µg/L

**z-Scores M177B**

	Copper	Lithium	Manganese	Nickel	Mercury	Selenium	Silver	Uranium	Vanadium	Zinc
AA	-0.94	-0.07	-0.05	-1.08	1.24	-0.58		-4.79		0.18
AB	-1.42		-0.70	-0.44	-0.19	0.39		-0.63		-0.43
AC	-1.54	-0.56	-2.74	-0.44	-1.24			-1.48		2.14
AD										
AE	0.11	0.30	0.45	0.04		-0.93	1.19	-0.26	0.00	0.13
AF	-0.41	2.73	-0.59	-0.67	-1.20	-0.19		-0.84		-0.43
AG										
AH	1.43	0.14	0.36	4.61		2.13		-1.36	3.34	1.60
AI	0.06		0.27	0.34	-0.10	-0.53		0.70		0.37
AJ						-1.11				
AK	-1.89	-0.45	-0.48	-0.60		0.77		-0.92	-0.07	0.24
AL	0.77	-0.65	-0.05	-0.81	-1.10	-0.72	0.04	-1.06		-0.43
AM						-2.75				
AN	-0.94	-0.22	-0.91	-0.84	2.48	0.14	-0.10	0.14	-4.77	0.37
AO	-0.48	-0.28	-1.48	-0.17		-0.89	-0.46	-1.39	-0.72	-1.63

All data in µg/L

# Sample M177A

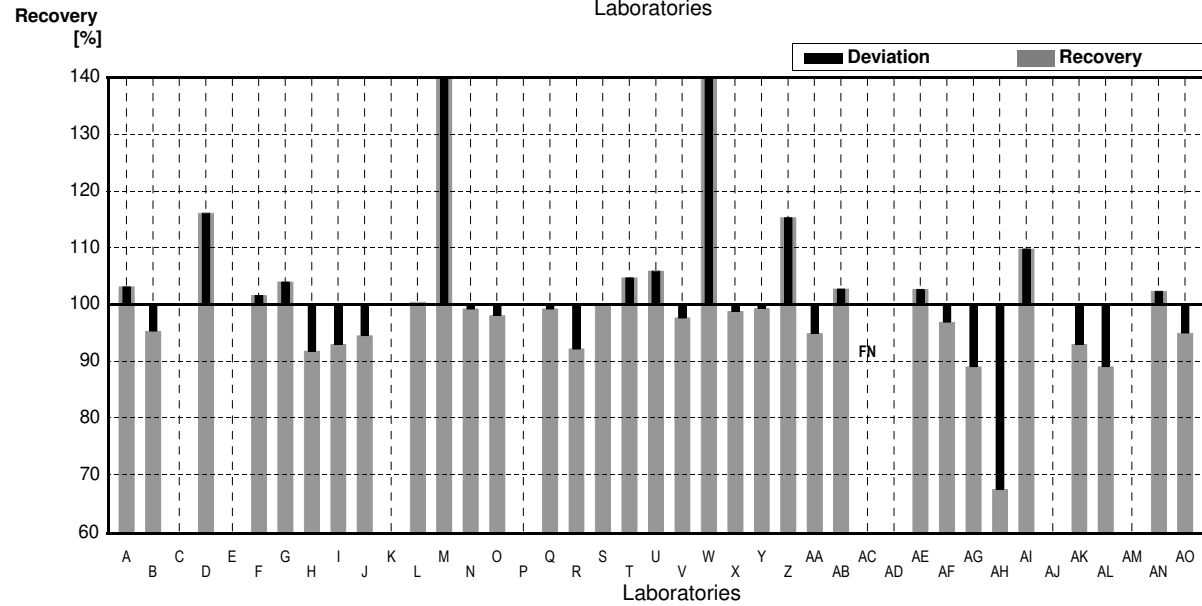
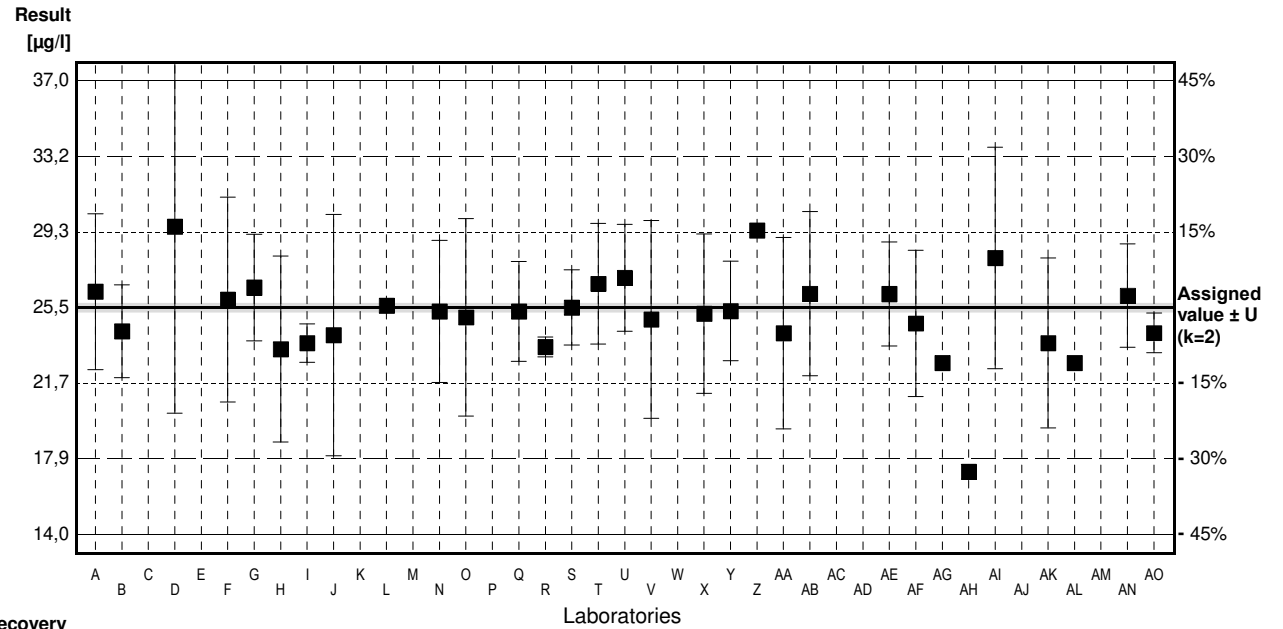
## Parameter Aluminium

Assigned value ± U (k=2) 25,5 µg/l ± 0,2 µg/l

IFA result ± U (k=2) 25,5 µg/l ± 0,9 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	26.3	3.94	µg/l	103%	0.42
B	24.3	2.35	µg/l	95%	-0.63
C			µg/l		
D	29.6	9.45	µg/l	116%	2.14
E			µg/l		
F	25.9	5.18	µg/l	102%	0.21
G	26.51	2.7	µg/l	104%	0.53
H	23.4	4.7	µg/l	92%	-1.10
I	23.7	0.969	µg/l	93%	-0.94
J	24.1	6.1	µg/l	95%	-0.73
K			µg/l		
L	25.6		µg/l	100%	0.05
M	42.6	*	µg/l	167%	8.94
N	25.3	3.6	µg/l	99%	-0.10
O	25.0	5.0	µg/l	98%	-0.26
P			µg/l		
Q	25.3	2.53	µg/l	99%	-0.10
R	23.5	0.50	µg/l	92%	-1.05
S	25.5	1.9	µg/l	100%	0.00
T	26.7	3.05	µg/l	105%	0.63
U	27.0	2.70	µg/l	106%	0.78
V	24.9	5.0	µg/l	98%	-0.31
W	41.3	*	µg/l	162%	8.26
X	25.19	4.03	µg/l	99%	-0.16
Y	25.32	2.52	µg/l	99%	-0.09
Z	29.4		µg/l	115%	2.04
AA	24.2	4.84	µg/l	95%	-0.68
AB	26.2	4.15	µg/l	103%	0.37
AC	<20	4	µg/l	FN	
AD			µg/l		
AE	26.1850	2.6290	µg/l	103%	0.36
AF	24.7	3.7	µg/l	97%	-0.42
AG	22.70		µg/l	89%	-1.46
AH	17.190	*	µg/l	67%	-4.35
AI	28.0	5.6	µg/l	110%	1.31
AJ			µg/l		
AK	23.7	4.3	µg/l	93%	-0.94
AL	22.7		µg/l	89%	-1.46
AM			µg/l		
AN	26.1	2.61	µg/l	102%	0.31
AO	24.214	1.007	µg/l	95%	-0.67



	All results	Outliers excl.	Unit
Mean ± CI(99%)	26,1 ± 2,2	25,4 ± 0,9	µg/l
Recov. ± CI(99%)	102,5 ± 8,6	99,5 ± 3,4	%
SD between labs	4,6	1,7	µg/l
RSD between labs	17,7	6,7	%
n for calculation	33	30	

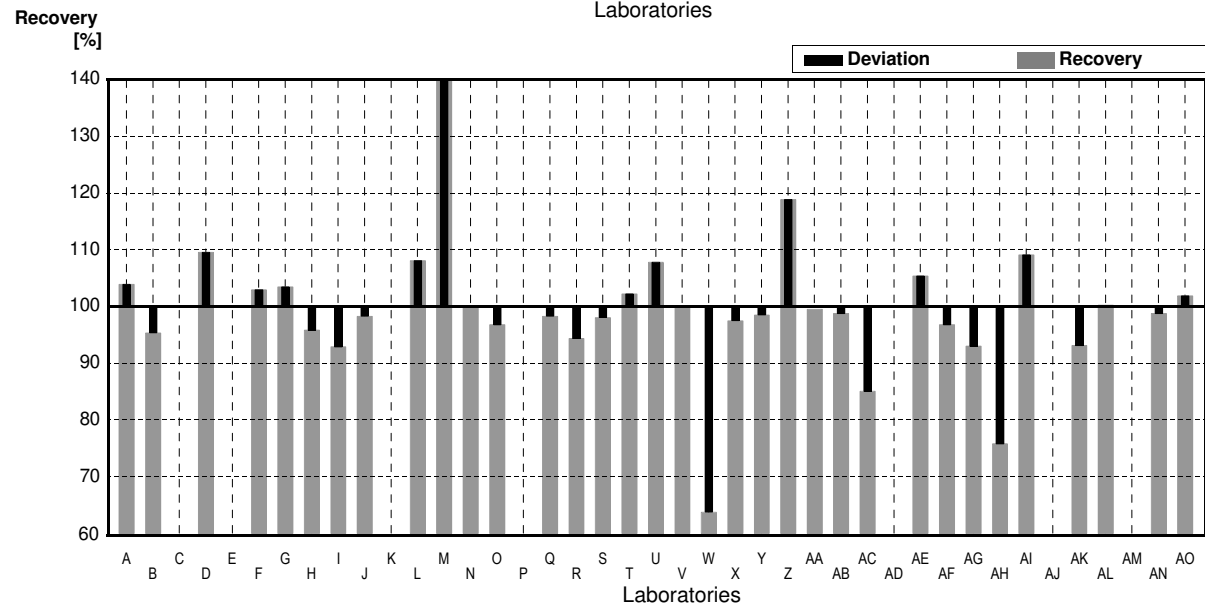
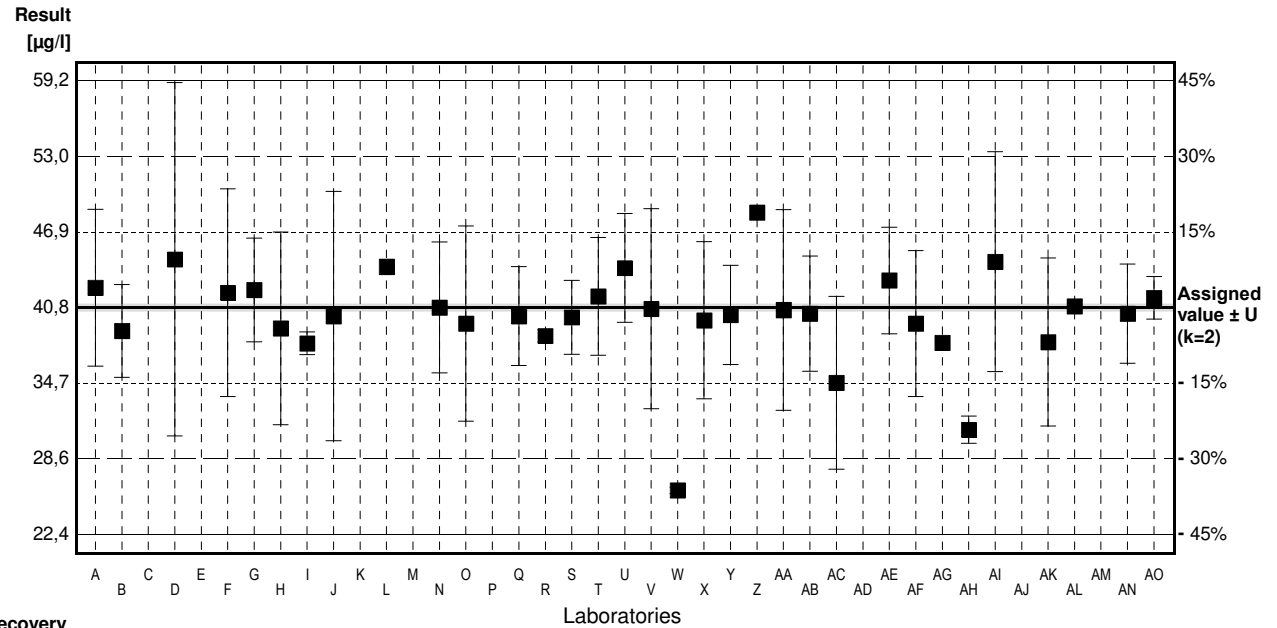
## Sample M177B

### Parameter Aluminium

Assigned value  $\pm U$  (k=2) 40,8  $\mu\text{g/l}$   $\pm$  0,3  $\mu\text{g/l}$   
 IFA result  $\pm U$  (k=2) 40,4  $\mu\text{g/l}$   $\pm$  1,4  $\mu\text{g/l}$

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

Lab Code	Result	$\pm$	Unit	Recovery	z-Score
A	42.4	6.35	$\mu\text{g/l}$	104%	0.52
B	38.9	3.76	$\mu\text{g/l}$	95%	-0.62
C			$\mu\text{g/l}$		
D	44.7	14.3	$\mu\text{g/l}$	110%	1.27
E			$\mu\text{g/l}$		
F	42.0	8.4	$\mu\text{g/l}$	103%	0.39
G	42.22	4.2	$\mu\text{g/l}$	103%	0.46
H	39.1	7.8	$\mu\text{g/l}$	96%	-0.56
I	37.9	0.911	$\mu\text{g/l}$	93%	-0.95
J	40.1	10.1	$\mu\text{g/l}$	98%	-0.23
K			$\mu\text{g/l}$		
L	44.1		$\mu\text{g/l}$	108%	1.08
M	111.8 *		$\mu\text{g/l}$	274%	23.20
N	40.8	5.3	$\mu\text{g/l}$	100%	0.00
O	39.5	7.9	$\mu\text{g/l}$	97%	-0.42
P			$\mu\text{g/l}$		
Q	40.1	4.01	$\mu\text{g/l}$	98%	-0.23
R	38.5	0.50	$\mu\text{g/l}$	94%	-0.75
S	40.0	3.0	$\mu\text{g/l}$	98%	-0.26
T	41.7	4.76	$\mu\text{g/l}$	102%	0.29
U	44.0	4.40	$\mu\text{g/l}$	108%	1.05
V	40.7	8.1	$\mu\text{g/l}$	100%	-0.03
W	26.0 *	0.27	$\mu\text{g/l}$	64%	-4.84
X	39.77	6.36	$\mu\text{g/l}$	97%	-0.34
Y	40.20	4.02	$\mu\text{g/l}$	99%	-0.20
Z	48.5 *		$\mu\text{g/l}$	119%	2.52
AA	40.6	8.12	$\mu\text{g/l}$	100%	-0.07
AB	40.3	4.66	$\mu\text{g/l}$	99%	-0.16
AC	34.7	7	$\mu\text{g/l}$	85%	-1.99
AD			$\mu\text{g/l}$		
AE	42.9870	4.3159	$\mu\text{g/l}$	105%	0.71
AF	39.5	5.9	$\mu\text{g/l}$	97%	-0.42
AG	37.94		$\mu\text{g/l}$	93%	-0.93
AH	30.913 *	1.103	$\mu\text{g/l}$	76%	-3.23
AI	44.5	8.9	$\mu\text{g/l}$	109%	1.21
AJ			$\mu\text{g/l}$		
AK	38.0	6.8	$\mu\text{g/l}$	93%	-0.92
AL	40.9		$\mu\text{g/l}$	100%	0.03
AM			$\mu\text{g/l}$		
AN	40.3	4.03	$\mu\text{g/l}$	99%	-0.16
AO	41.579	1.730	$\mu\text{g/l}$	102%	0.25



	All results	Outliers excl.	Unit
Mean $\pm$ CI(99%)	42,2 $\pm$ 6,1	40,6 $\pm$ 1,1	$\mu\text{g/l}$
Recov. $\pm$ CI(99%)	103,5 $\pm$ 14,9	99,5 $\pm$ 2,7	%
SD between labs	12,9	2,2	$\mu\text{g/l}$
RSD between labs	30,6	5,4	%
n for calculation	34	30	

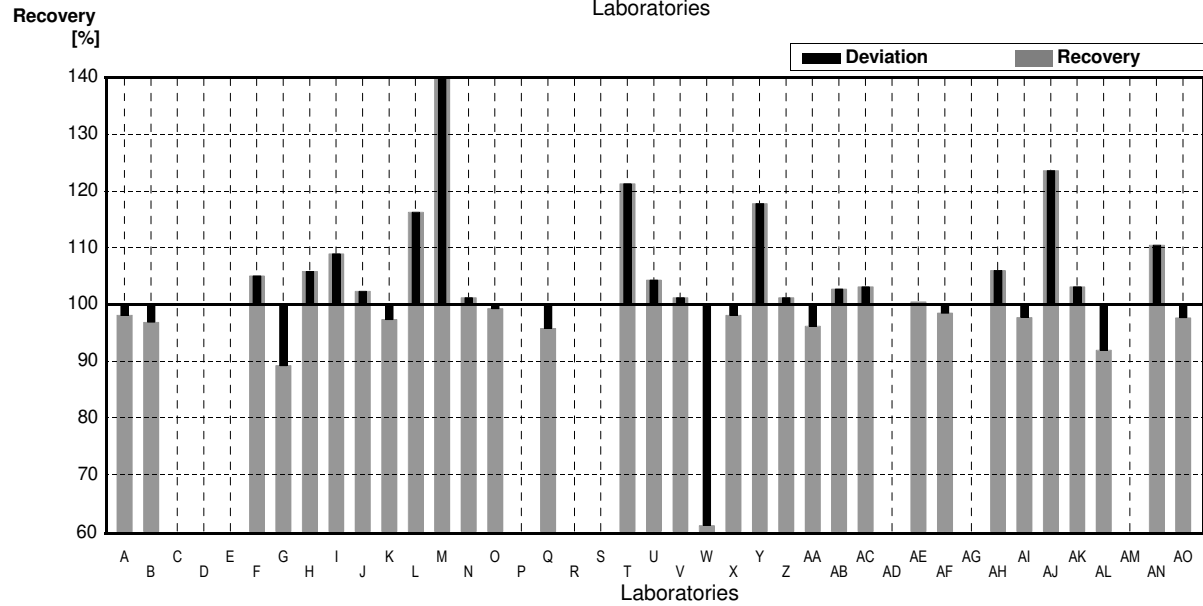
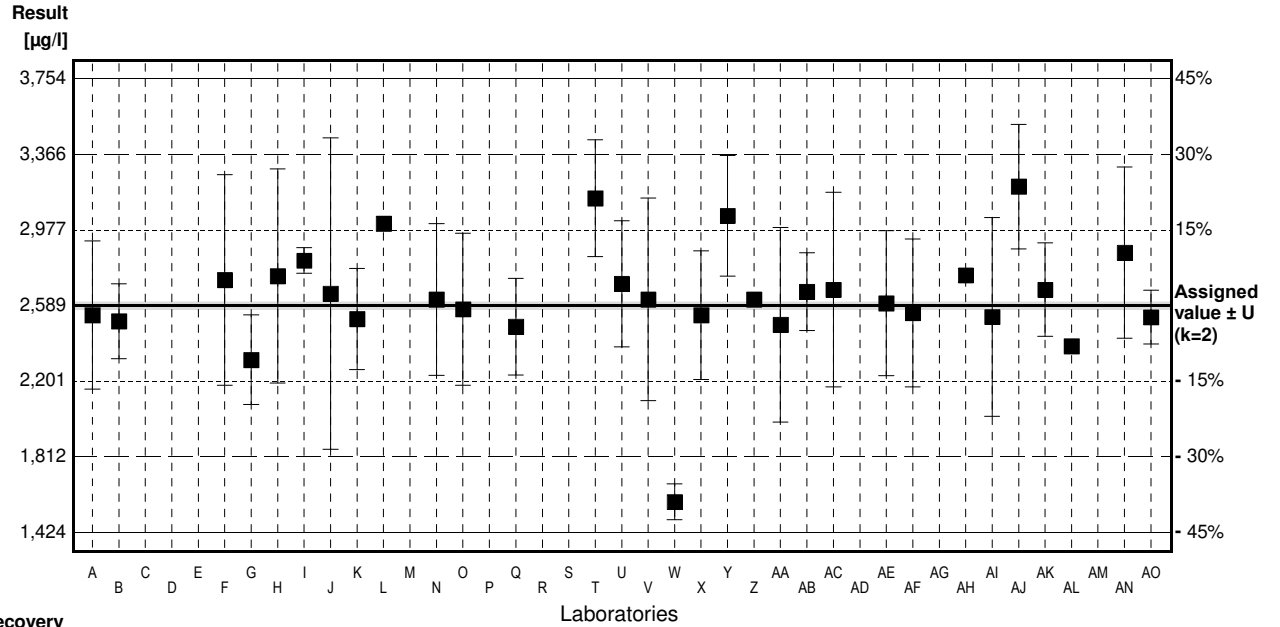
**Sample M177A**  
**Parameter Arsenic**

Assigned value ± U (k=2) 2,589 µg/l ± 0,019 µg/l

IFA result ± U (k=2) 2,67 µg/l ± 0,25 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	2.54	0.38	µg/l	98%	-0.29
B	2.508	0.192	µg/l	97%	-0.47
C			µg/l		
D			µg/l		
E			µg/l		
F	2.72	0.54	µg/l	105%	0.77
G	2.310	0.23	µg/l	89%	-1.63
H	2.74	0.55	µg/l	106%	0.88
I	2.82	0.0662	µg/l	109%	1.35
J	2.65	0.80	µg/l	102%	0.36
K	2.52	0.26	µg/l	97%	-0.40
L	3.01		µg/l	116%	2.46
M	6.60 *	2.77	µg/l	255%	23.47
N	2.62	0.39	µg/l	101%	0.18
O	2.57	0.39	µg/l	99%	-0.11
P			µg/l		
Q	2.48	0.248	µg/l	96%	-0.64
R			µg/l		
S			µg/l		
T	3.14 *	0.3	µg/l	121%	3.22
U	2.70	0.324	µg/l	104%	0.65
V	2.62	0.52	µg/l	101%	0.18
W	1.58 *	0.092	µg/l	61%	-5.90
X	2.539	0.330	µg/l	98%	-0.29
Y	3.05	0.31	µg/l	118%	2.70
Z	2.62		µg/l	101%	0.18
AA	2.49	0.50	µg/l	96%	-0.58
AB	2.66	0.20	µg/l	103%	0.42
AC	2.67	0.5	µg/l	103%	0.47
AD			µg/l		
AE	2.6008	0.3727	µg/l	100%	0.07
AF	2.55	0.38	µg/l	98%	-0.23
AG			µg/l		
AH	2.744	0.0352	µg/l	106%	0.91
AI	2.53	0.51	µg/l	98%	-0.35
AJ	3.20 *	0.32	µg/l	124%	3.58
AK	2.67	0.24	µg/l	103%	0.47
AL	2.38		µg/l	92%	-1.22
AM			µg/l		
AN	2.86	0.44	µg/l	110%	1.59
AO	2.529	0.138	µg/l	98%	-0.35



	All results	Outliers excl.	Unit
Mean ± CI(99%)	2,757 ± 0,367	2,632 ± 0,086	µg/l
Recov. ± CI(99%)	106,5 ± 14,2	101,7 ± 3,3	%
SD between labs	0,755	0,165	µg/l
RSD between labs	27,4	6,3	%
n for calculation	32	28	

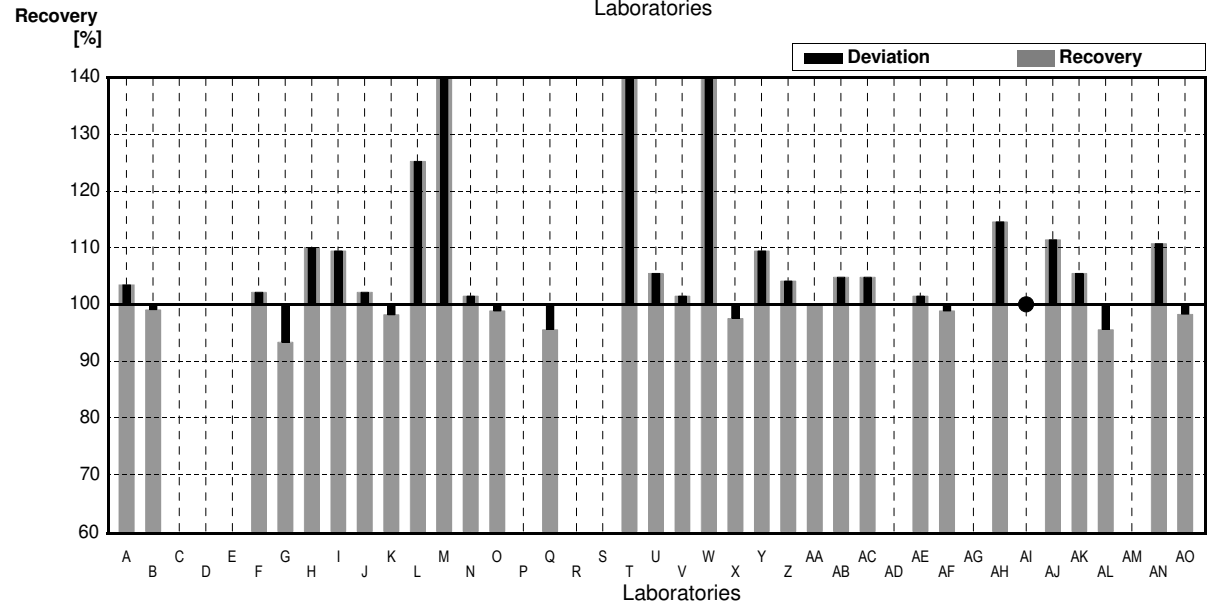
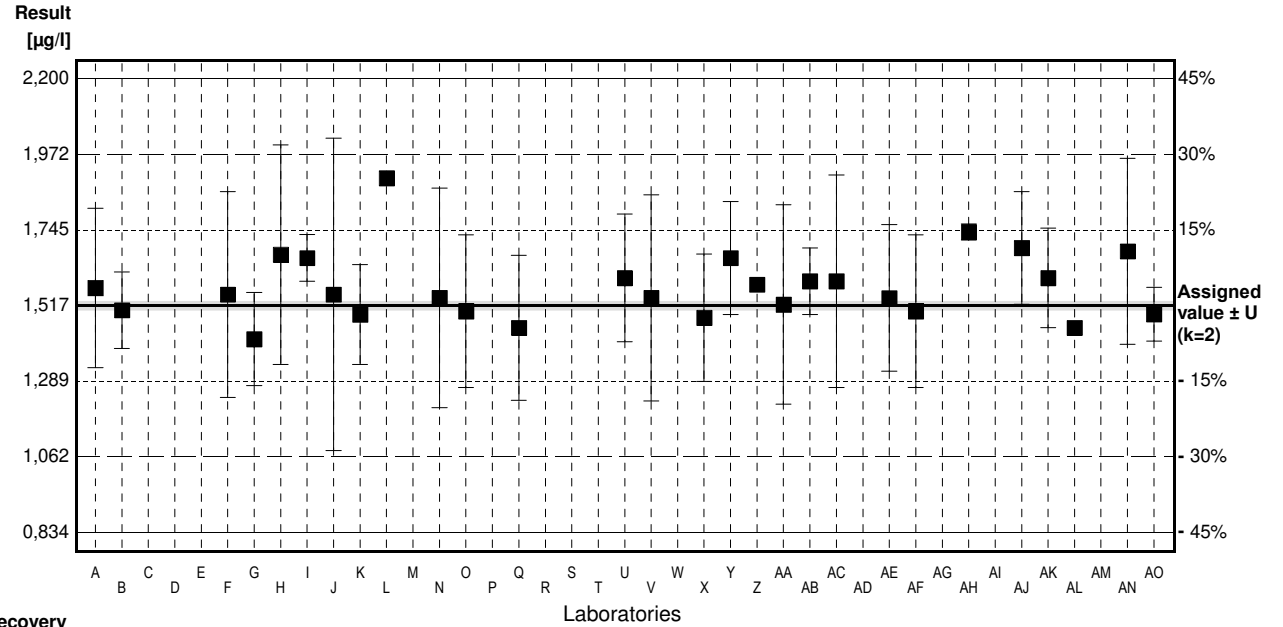
**Sample M177B**  
**Parameter Arsenic**

Assigned value ± U (k=2) 1,517 µg/l ± 0,014 µg/l

IFA result ± U (k=2) 1,66 µg/l ± 0,15 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	1.57	0.24	µg/l	103%	0.53
B	1.503	0.115	µg/l	99%	-0.14
C			µg/l		
D			µg/l		
E			µg/l		
F	1.55	0.31	µg/l	102%	0.33
G	1.416	0.14	µg/l	93%	-1.01
H	1.67	0.33	µg/l	110%	1.53
I	1.66	0.0705	µg/l	109%	1.43
J	1.55	0.47	µg/l	102%	0.33
K	1.49	0.15	µg/l	98%	-0.27
L	1.90		µg/l	125%	3.83
M	5.70 *	2.39	µg/l	376%	41.78
N	1.54	0.33	µg/l	102%	0.23
O	1.50	0.23	µg/l	99%	-0.17
P			µg/l		
Q	1.45	0.218	µg/l	96%	-0.67
R			µg/l		
S			µg/l		
T	2.30 *	0.22	µg/l	152%	7.82
U	1.60	0.192	µg/l	105%	0.83
V	1.54	0.31	µg/l	102%	0.23
W	2.66 *	0.065	µg/l	175%	11.42
X	1.480	0.192	µg/l	98%	-0.37
Y	1.66	0.17	µg/l	109%	1.43
Z	1.58		µg/l	104%	0.63
AA	1.52	0.30	µg/l	100%	0.03
AB	1.59	0.1	µg/l	105%	0.73
AC	1.59	0.32	µg/l	105%	0.73
AD			µg/l		
AE	1.5395	0.2206	µg/l	101%	0.22
AF	1.50	0.23	µg/l	99%	-0.17
AG			µg/l		
AH	1.738	0.0240	µg/l	115%	2.21
AI	<2		µg/l	*	
AJ	1.69	0.17	µg/l	111%	1.73
AK	1.60	0.15	µg/l	105%	0.83
AL	1.45		µg/l	96%	-0.67
AM			µg/l		
AN	1.68	0.28	µg/l	111%	1.63
AO	1.491	0.081	µg/l	98%	-0.26



	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,765 ± 0,381	1,573 ± 0,054	µg/l
Recov. ± CI(99%)	116,3 ± 25,1	103,7 ± 3,6	%
SD between labs	0,772	0,103	µg/l
RSD between labs	43,8	6,5	%
n for calculation	31	28	

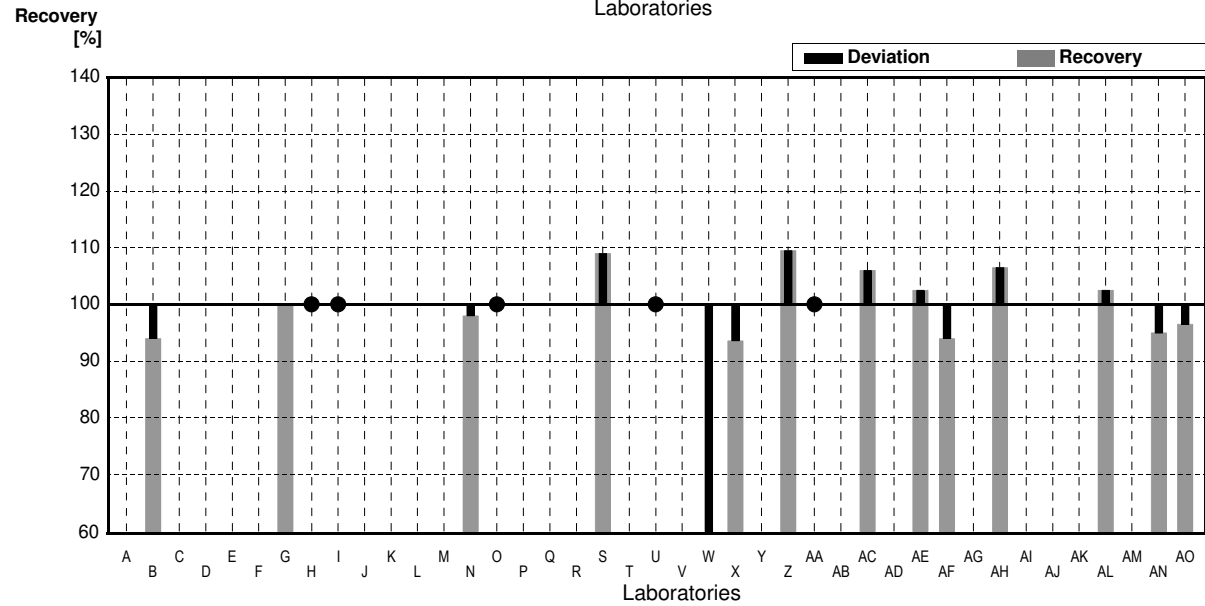
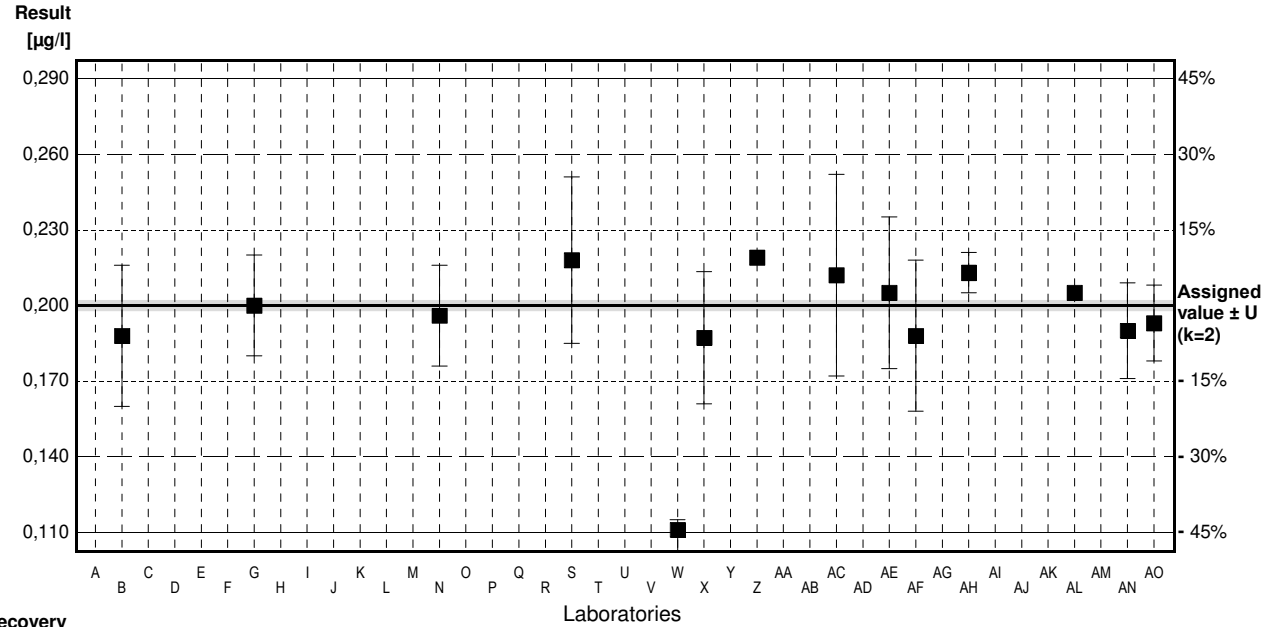
**Sample M177A**  
**Parameter Beryllium**

Assigned value ± U (k=2) 0,200 µg/l ± 0,002 µg/l

IFA result ± U (k=2) 0,204 µg/l ± 0,025 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			µg/l		
B	0.188	0.028	µg/l	94%	-0.66
C			µg/l		
D			µg/l		
E			µg/l		
F			µg/l		
G	0.200	0.02	µg/l	100%	0.00
H	<1.0	0.50	µg/l	•	
I	<1		µg/l	•	
J			µg/l		
K			µg/l		
L			µg/l		
M			µg/l		
N	0.196	0.020	µg/l	98%	-0.22
O	<1.00		µg/l	•	
P			µg/l		
Q			µg/l		
R			µg/l		
S	0.218	0.033	µg/l	109%	0.99
T			µg/l		
U	<0.400		µg/l	•	
V			µg/l		
W	0.111 *	0.004	µg/l	56%	-4.89
X	0.1872	0.0262	µg/l	94%	-0.70
Y			µg/l		
Z	0.219		µg/l	110%	1.04
AA	<1.0		µg/l	•	
AB			µg/l		
AC	0.212	0.04	µg/l	106%	0.66
AD			µg/l		
AE	0.2050	0.0301	µg/l	103%	0.27
AF	0.188	0.03	µg/l	94%	-0.66
AG			µg/l		
AH	0.213	0.00797	µg/l	107%	0.71
AI			µg/l		
AJ			µg/l		
AK			µg/l		
AL	0.205		µg/l	103%	0.27
AM			µg/l		
AN	0.190	0.019	µg/l	95%	-0.55
AO	0.193	0.015	µg/l	97%	-0.38



	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,195 ± 0,021	0,201 ± 0,010	µg/l
Recov. ± CI(99%)	97,3 ± 10,7	100,5 ± 5,0	%
SD between labs	0,027	0,012	µg/l
RSD between labs	13,7	5,8	%
n for calculation	14	13	

# Sample M177B

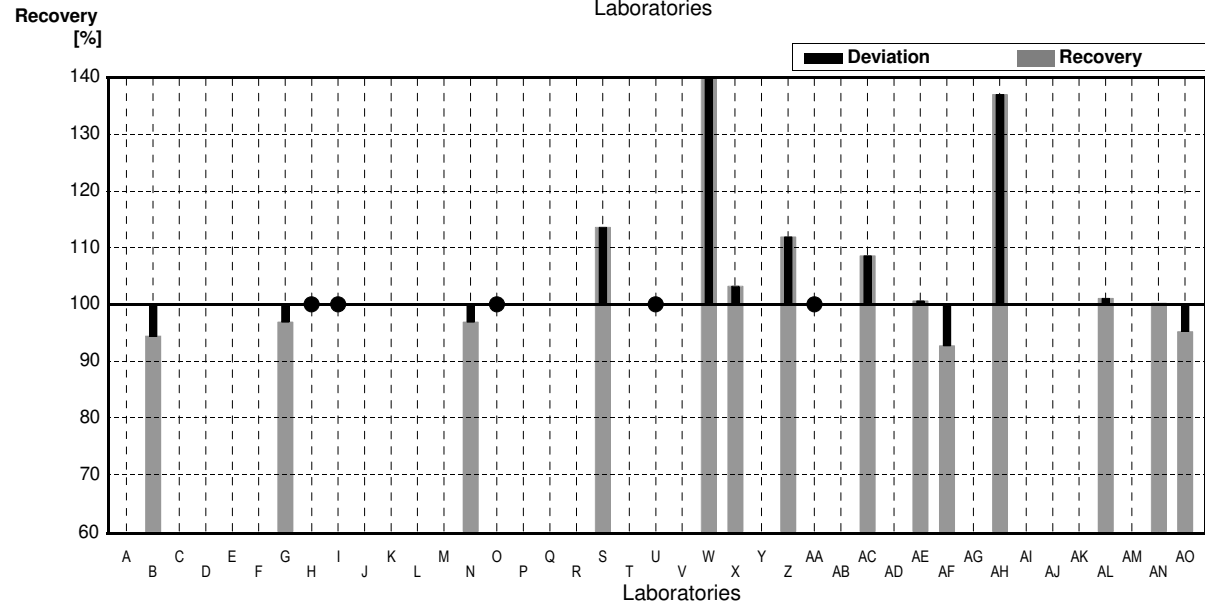
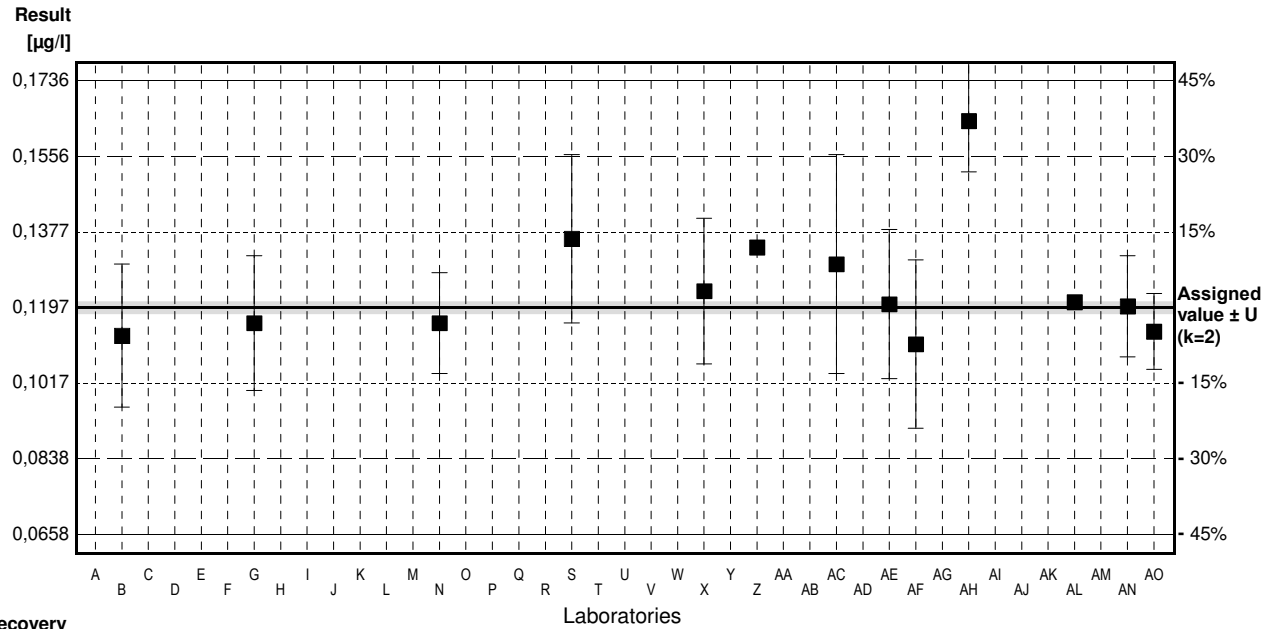
## Parameter Beryllium

Assigned value ± U (k=2) 0,1197 µg/l ± 0,0014 µg/l

IFA result ± U (k=2) 0,130 µg/l ± 0,016 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			µg/l		
B	0.113	0.017	µg/l	94%	-0.62
C			µg/l		
D			µg/l		
E			µg/l		
F			µg/l		
G	0.116	0.016	µg/l	97%	-0.34
H	<1.0	0.50	µg/l	•	
I	<1		µg/l	•	
J			µg/l		
K			µg/l		
L			µg/l		
M			µg/l		
N	0.116	0.012	µg/l	97%	-0.34
O	<1.00		µg/l	•	
P			µg/l		
Q			µg/l		
R			µg/l		
S	0.136	0.020	µg/l	114%	1.50
T			µg/l		
U	<0.400		µg/l	•	
V			µg/l		
W	0.193 *	0.005	µg/l	161%	6.73
X	0.1236	0.0173	µg/l	103%	0.36
Y			µg/l		
Z	0.134		µg/l	112%	1.31
AA	<1.0		µg/l	•	
AB			µg/l		
AC	0.130	0.026	µg/l	109%	0.95
AD			µg/l		
AE	0.1205	0.0177	µg/l	101%	0.07
AF	0.111	0.02	µg/l	93%	-0.80
AG			µg/l		
AH	0.164 *	0.0121	µg/l	137%	4.07
AI			µg/l		
AJ			µg/l		
AK			µg/l		
AL	0.121		µg/l	101%	0.12
AM			µg/l		
AN	0.120	0.012	µg/l	100%	0.03
AO	0.1140	0.009	µg/l	95%	-0.52



	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,1294 ± 0,0184	0,1213 ± 0,0074	µg/l
Recov. ± CI(99%)	108,1 ± 15,4	101,3 ± 6,2	%
SD between labs	0,0228	0,0082	µg/l
RSD between labs	17,6	6,8	%
n for calculation	14	12	

# Sample M177A

## Parameter Lead

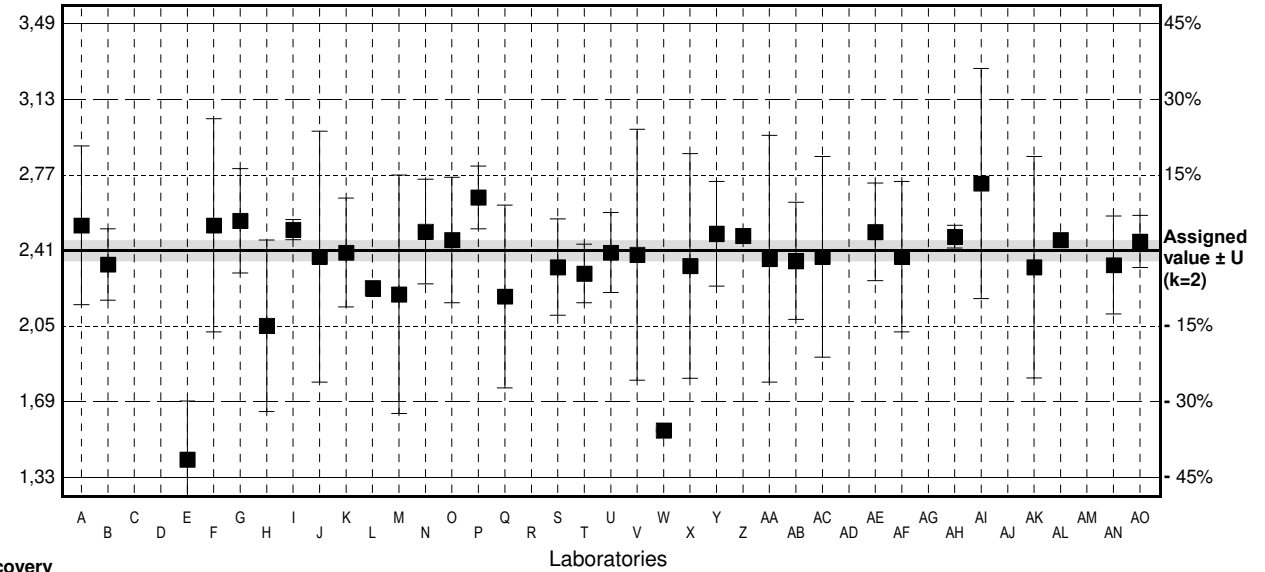
Assigned value ± U (k=2) 2,41 µg/l ± 0,05 µg/l

IFA result ± U (k=2) 2,67 µg/l ± 0,14 µg/l

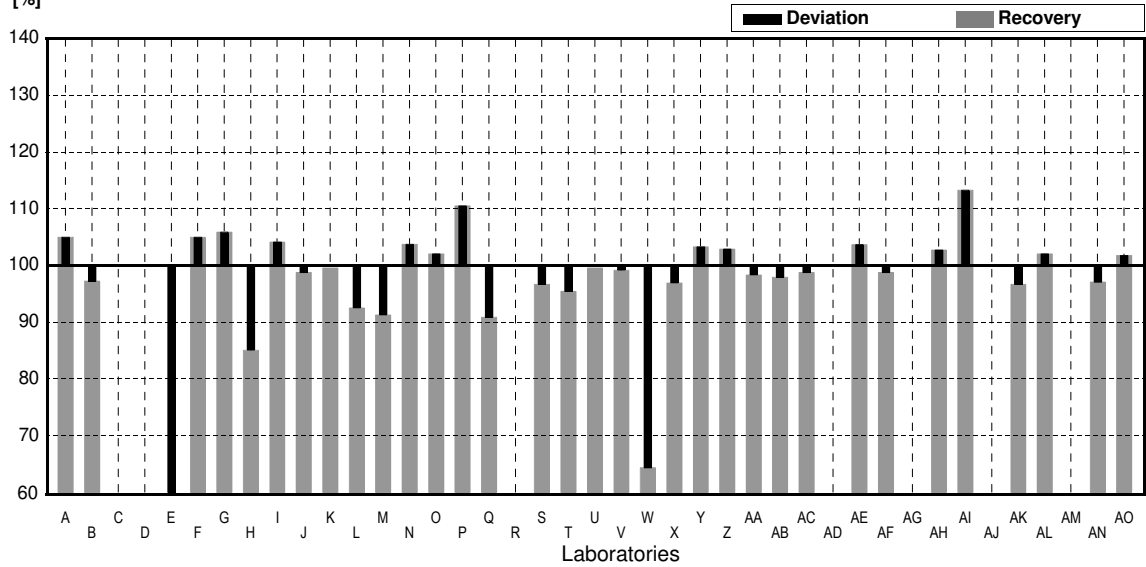
Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	2.53	0.38	µg/l	105%	0.77
B	2.343	0.171	µg/l	97%	-0.43
C			µg/l		
D			µg/l		
E	1.41 *	0.28	µg/l	59%	-6.38
F	2.53	0.51	µg/l	105%	0.77
G	2.552	0.25	µg/l	106%	0.91
H	2.05	0.41	µg/l	85%	-2.30
I	2.51	0.0481	µg/l	104%	0.64
J	2.38	0.60	µg/l	99%	-0.19
K	2.40	0.26	µg/l	100%	-0.06
L	2.23		µg/l	93%	-1.15
M	2.20	0.57	µg/l	91%	-1.34
N	2.50	0.25	µg/l	104%	0.57
O	2.46	0.30	µg/l	102%	0.32
P	2.664	0.150	µg/l	111%	1.62
Q	2.19	0.437	µg/l	91%	-1.40
R			µg/l		
S	2.33	0.23	µg/l	97%	-0.51
T	2.30	0.14	µg/l	95%	-0.70
U	2.40	0.192	µg/l	100%	-0.06
V	2.39	0.60	µg/l	99%	-0.13
W	1.55 *	0.006	µg/l	64%	-5.49
X	2.336	0.537	µg/l	97%	-0.47
Y	2.49	0.25	µg/l	103%	0.51
Z	2.48		µg/l	103%	0.45
AA	2.37	0.59	µg/l	98%	-0.26
AB	2.36	0.28	µg/l	98%	-0.32
AC	2.38	0.48	µg/l	99%	-0.19
AD			µg/l		
AE	2.4984	0.2331	µg/l	104%	0.56
AF	2.38	0.36	µg/l	99%	-0.19
AG			µg/l		
AH	2.476	0.0540	µg/l	103%	0.42
AI	2.73	0.55	µg/l	113%	2.04
AJ			µg/l		
AK	2.33	0.53	µg/l	97%	-0.51
AL	2.46		µg/l	102%	0.32
AM			µg/l		
AN	2.34	0.234	µg/l	97%	-0.45
AO	2.453	0.125	µg/l	102%	0.27

Result [µg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	2,35 ± 0,12	2,41 ± 0,07	µg/l
Recov. ± CI(99%)	97,6 ± 5,0	99,9 ± 2,7	%
SD between labs	0,26	0,14	µg/l
RSD between labs	11,0	5,6	%
n for calculation	34	32	

# Sample M177B

## Parameter Lead

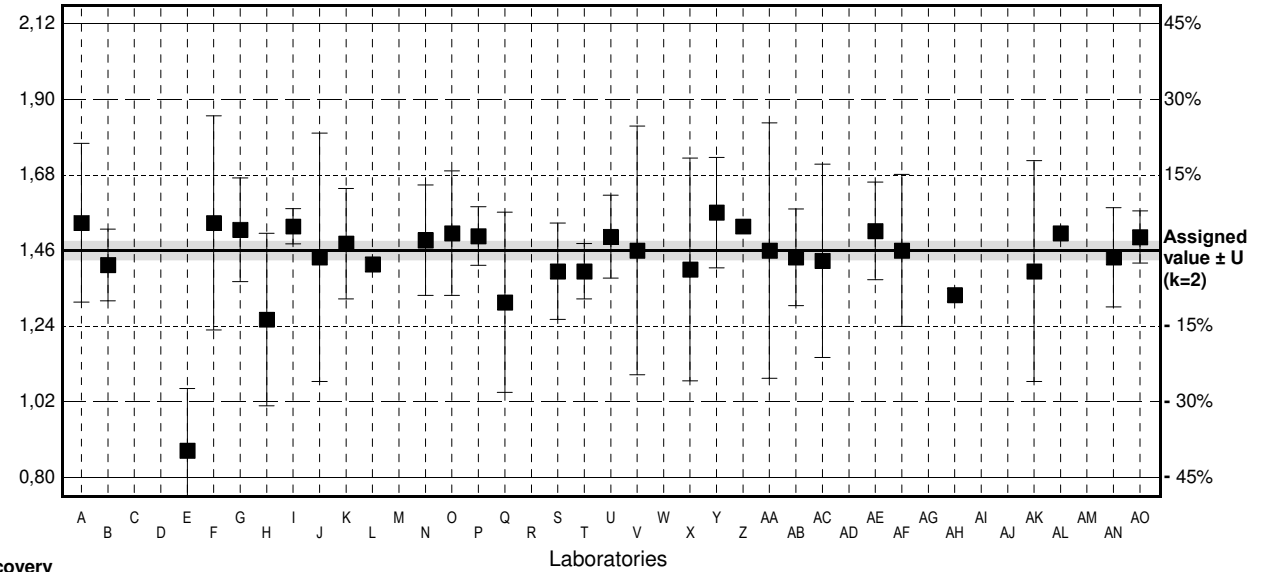
Assigned value ± U (k=2) 1,46 µg/l ± 0,03 µg/l

IFA result ± U (k=2) 1,61 µg/l ± 0,08 µg/l

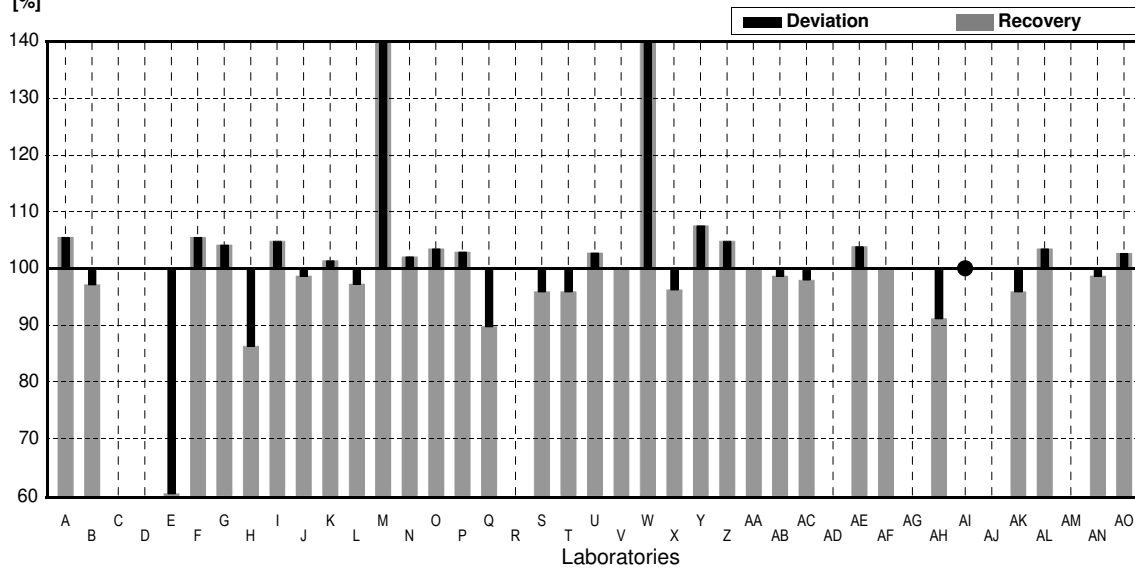
Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	1.54	0.23	µg/l	105%	0.84
B	1.418	0.104	µg/l	97%	-0.44
C			µg/l		
D			µg/l		
E	0.88 *	0.18	µg/l	60%	-6.11
F	1.54	0.31	µg/l	105%	0.84
G	1.520	0.15	µg/l	104%	0.63
H	1.26	0.25	µg/l	86%	-2.11
I	1.53	0.0508	µg/l	105%	0.74
J	1.44	0.36	µg/l	99%	-0.21
K	1.48	0.16	µg/l	101%	0.21
L	1.42		µg/l	97%	-0.42
M	2.50 *	0.65	µg/l	171%	10.96
N	1.49	0.16	µg/l	102%	0.32
O	1.51	0.18	µg/l	103%	0.53
P	1.502	0.0846	µg/l	103%	0.44
Q	1.31	0.261	µg/l	90%	-1.58
R			µg/l		
S	1.40	0.14	µg/l	96%	-0.63
T	1.40	0.08	µg/l	96%	-0.63
U	1.50	0.12	µg/l	103%	0.42
V	1.46	0.36	µg/l	100%	0.00
W	2.53 *	0.015	µg/l	173%	11.28
X	1.405	0.323	µg/l	96%	-0.58
Y	1.57	0.16	µg/l	108%	1.16
Z	1.53		µg/l	105%	0.74
AA	1.46	0.37	µg/l	100%	0.00
AB	1.44	0.14	µg/l	99%	-0.21
AC	1.43	0.28	µg/l	98%	-0.32
AD			µg/l		
AE	1.5166	0.1415	µg/l	104%	0.60
AF	1.46	0.22	µg/l	100%	0.00
AG			µg/l		
AH	1.331	0.0179	µg/l	91%	-1.36
AI	<2		µg/l	*	
AJ			µg/l		
AK	1.40	0.320	µg/l	96%	-0.63
AL	1.51		µg/l	103%	0.53
AM			µg/l		
AN	1.44	0.144	µg/l	99%	-0.21
AO	1.499	0.076	µg/l	103%	0.41

Result [µg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,50 ± 0,14	1,46 ± 0,04	µg/l
Recov. ± CI(99%)	103,0 ± 9,4	99,8 ± 2,5	%
SD between labs	0,29	0,07	µg/l
RSD between labs	19,1	5,0	%
n for calculation	33	30	

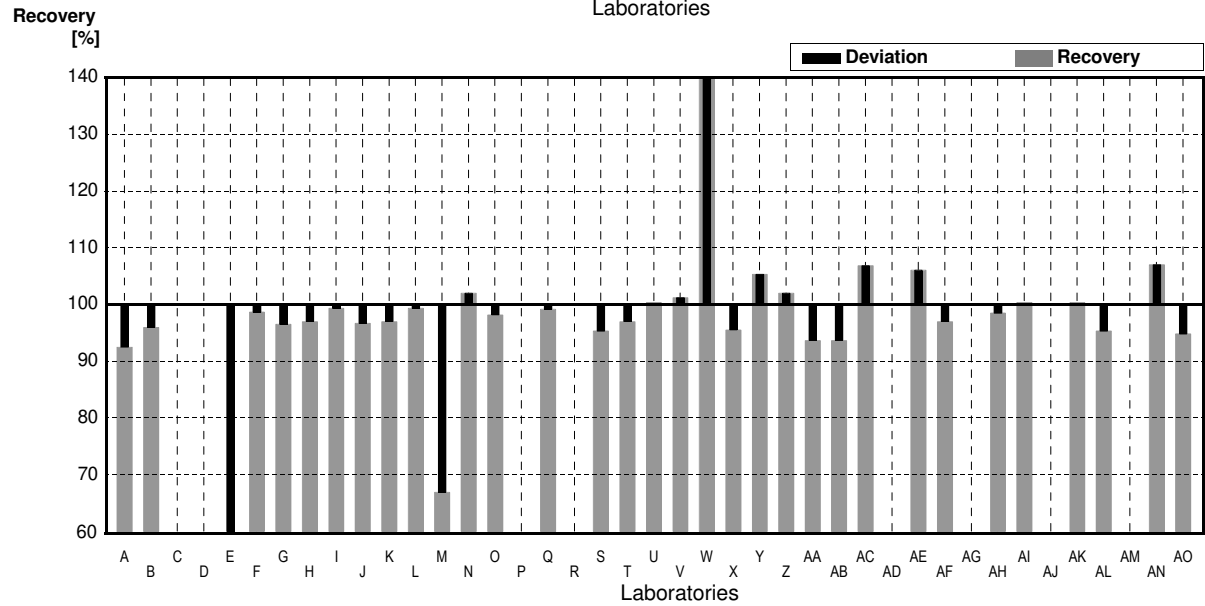
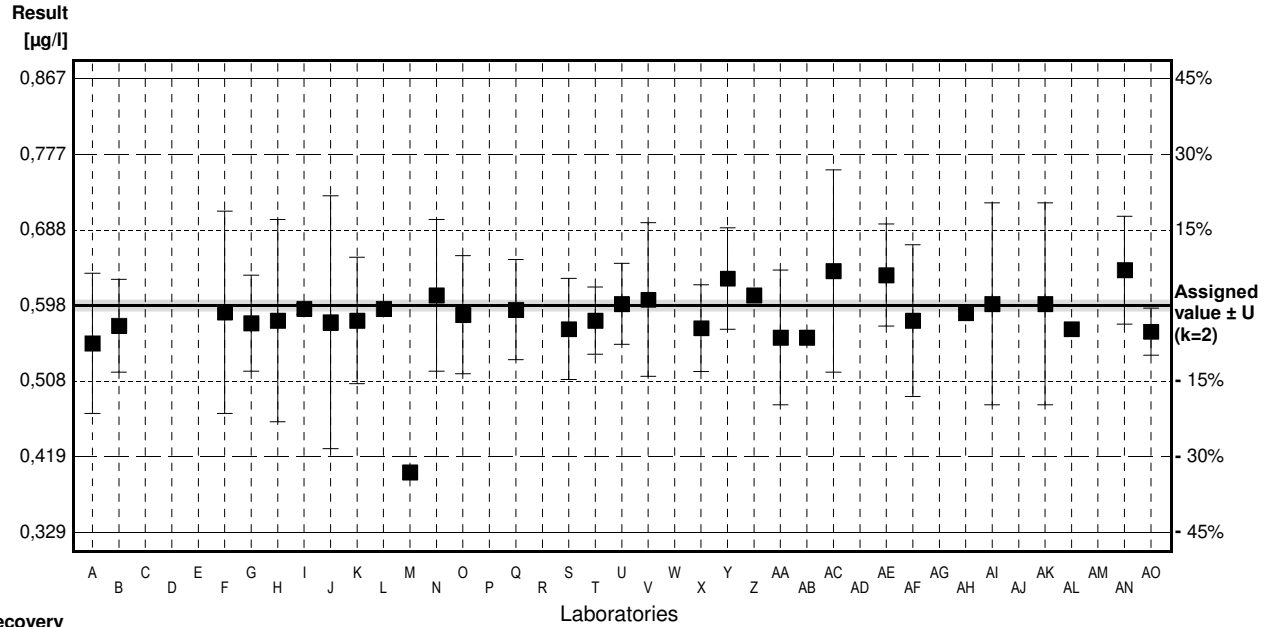
**Sample M177A**  
**Parameter Cadmium**

Assigned value ± U (k=2) 0,598 µg/l ± 0,007 µg/l

IFA result ± U (k=2) 0,59 µg/l ± 0,04 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	0.553	0.083	µg/l	92%	-1.51
B	0.574	0.055	µg/l	96%	-0.80
C			µg/l		
D			µg/l		
E	0.150 *	0.03	µg/l	25%	-14.98
F	0.59	0.12	µg/l	99%	-0.27
G	0.577	0.057	µg/l	96%	-0.70
H	0.580	0.120	µg/l	97%	-0.60
I	0.594	0.00635	µg/l	99%	-0.13
J	0.578	0.15	µg/l	97%	-0.67
K	0.58	0.075	µg/l	97%	-0.60
L	0.594		µg/l	99%	-0.13
M	0.400 *		µg/l	67%	-6.62
N	0.61	0.09	µg/l	102%	0.40
O	0.587	0.070	µg/l	98%	-0.37
P			µg/l		
Q	0.593	0.0593	µg/l	99%	-0.17
R			µg/l		
S	0.57	0.06	µg/l	95%	-0.94
T	0.58	0.04	µg/l	97%	-0.60
U	0.60	0.048	µg/l	100%	0.07
V	0.605	0.091	µg/l	101%	0.23
W	4.25 *	0.12	µg/l	711%	122.14
X	0.5711	0.0514	µg/l	96%	-0.90
Y	0.63	0.06	µg/l	105%	1.07
Z	0.610		µg/l	102%	0.40
AA	0.56	0.08	µg/l	94%	-1.27
AB	0.56		µg/l	94%	-1.27
AC	0.639	0.12	µg/l	107%	1.37
AD			µg/l		
AE	0.6341	0.0606	µg/l	106%	1.21
AF	0.58	0.09	µg/l	97%	-0.60
AG			µg/l		
AH	0.589	0.004	µg/l	98%	-0.30
AI	0.600	0.12	µg/l	100%	0.07
AJ			µg/l		
AK	0.60	0.12	µg/l	100%	0.07
AL	0.57		µg/l	95%	-0.94
AM			µg/l		
AN	0.64	0.064	µg/l	107%	1.40
AO	0.567	0.028	µg/l	95%	-1.04



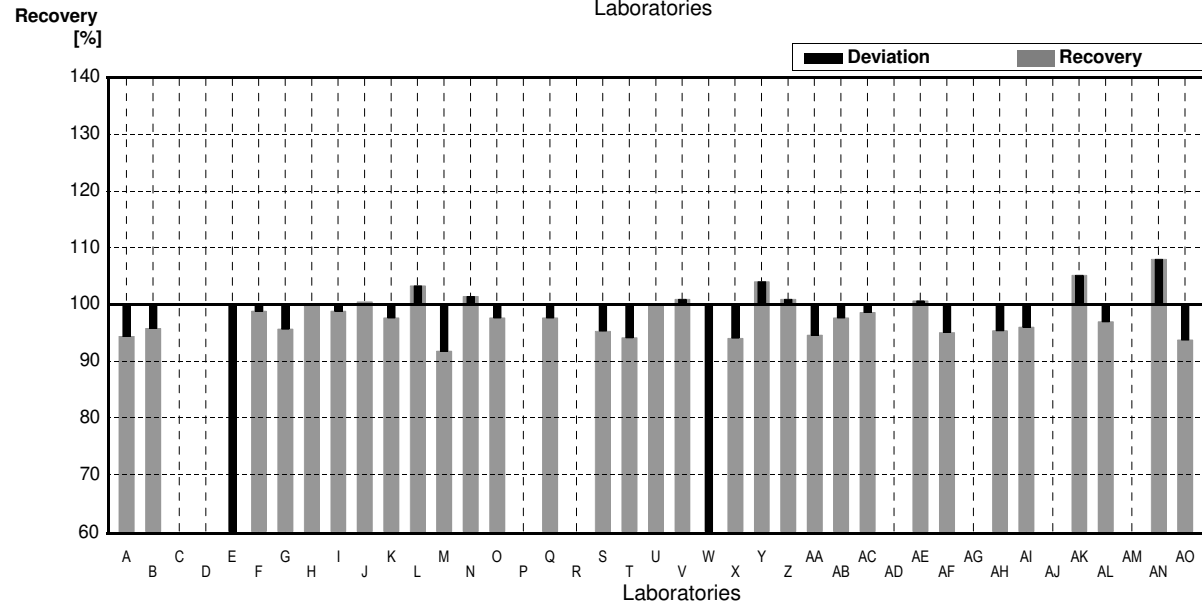
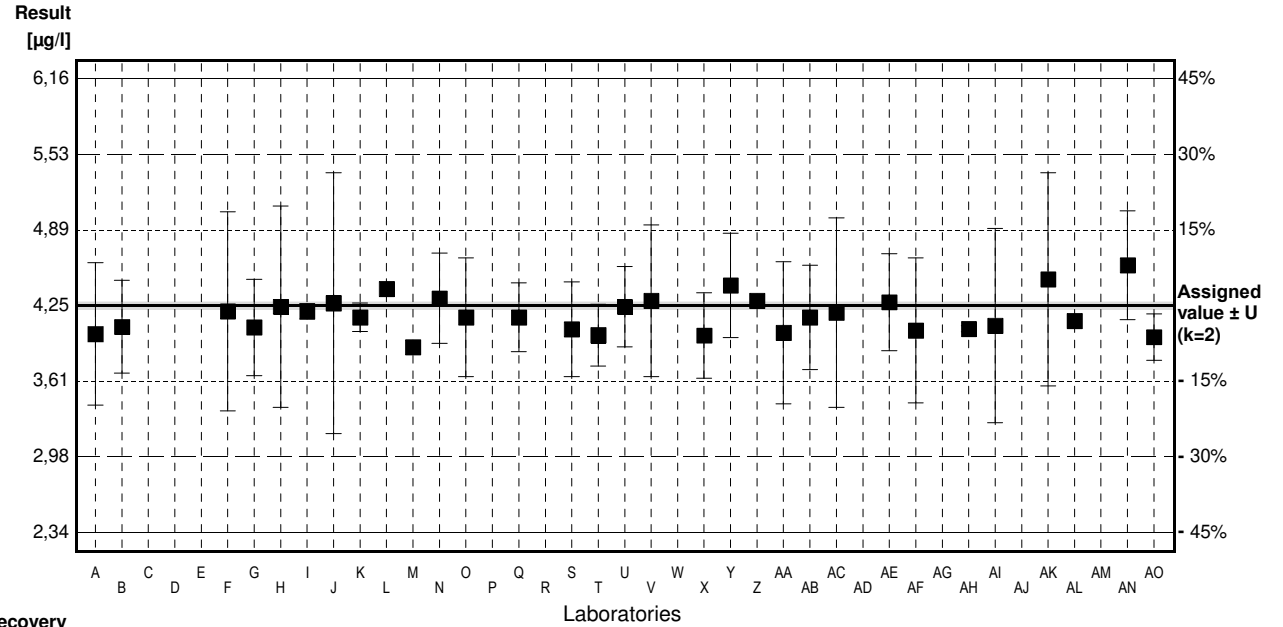
	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,682 ± 0,308	0,591 ± 0,012	µg/l
Recov. ± CI(99%)	114,1 ± 51,5	98,7 ± 2,0	%
SD between labs	0,646	0,023	µg/l
RSD between labs	94,7	3,9	%
n for calculation	33	30	

**Sample M177B**  
**Parameter Cadmium**

Assigned value ± U (k=2) 4,25 µg/l ± 0,03 µg/l  
IFA result ± U (k=2) 4,19 µg/l ± 0,26 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	4,01	0,60	µg/l	94%	-1,13
B	4,070	0,391	µg/l	96%	-0,85
C			µg/l		
D			µg/l		
E	1,26 *	0,25	µg/l	30%	-14,07
F	4,20	0,84	µg/l	99%	-0,24
G	4,065	0,406	µg/l	96%	-0,87
H	4,24	0,85	µg/l	100%	-0,05
I	4,20	0,0645	µg/l	99%	-0,24
J	4,27	1,1	µg/l	100%	0,09
K	4,15	0,12	µg/l	98%	-0,47
L	4,39		µg/l	103%	0,66
M	3,90		µg/l	92%	-1,65
N	4,31	0,38	µg/l	101%	0,28
O	4,15	0,50	µg/l	98%	-0,47
P			µg/l		
Q	4,15	0,291	µg/l	98%	-0,47
R			µg/l		
S	4,05	0,40	µg/l	95%	-0,94
T	4,00	0,26	µg/l	94%	-1,18
U	4,24	0,339	µg/l	100%	-0,05
V	4,29	0,64	µg/l	101%	0,19
W	0,579 *	0,032	µg/l	14%	-17,28
X	3,997	0,360	µg/l	94%	-1,19
Y	4,42	0,44	µg/l	104%	0,80
Z	4,29		µg/l	101%	0,19
AA	4,02	0,60	µg/l	95%	-1,08
AB	4,15	0,44	µg/l	98%	-0,47
AC	4,19	0,8	µg/l	99%	-0,28
AD			µg/l		
AE	4,2780	0,4086	µg/l	101%	0,13
AF	4,04	0,61	µg/l	95%	-0,99
AG			µg/l		
AH	4,0533	0,026	µg/l	95%	-0,93
AI	4,08	0,82	µg/l	96%	-0,80
AJ			µg/l		
AK	4,47	0,90	µg/l	105%	1,04
AL	4,12		µg/l	97%	-0,61
AM			µg/l		
AN	4,59	0,459	µg/l	108%	1,60
AO	3,984	0,196	µg/l	94%	-1,25



	All results	Outliers excl.	Unit
Mean ± CI(99%)	3,98 ± 0,39	4,17 ± 0,08	µg/l
Recov. ± CI(99%)	93,6 ± 9,1	98,2 ± 1,8	%
SD between labs	0,81	0,16	µg/l
RSD between labs	20,3	3,8	%
n for calculation	33	31	

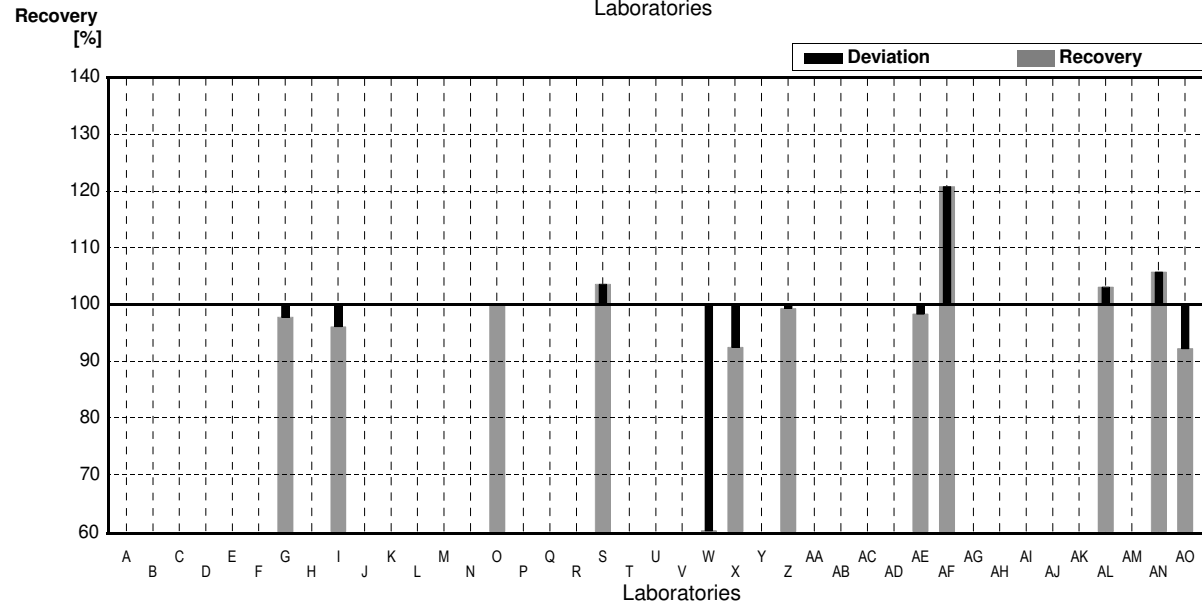
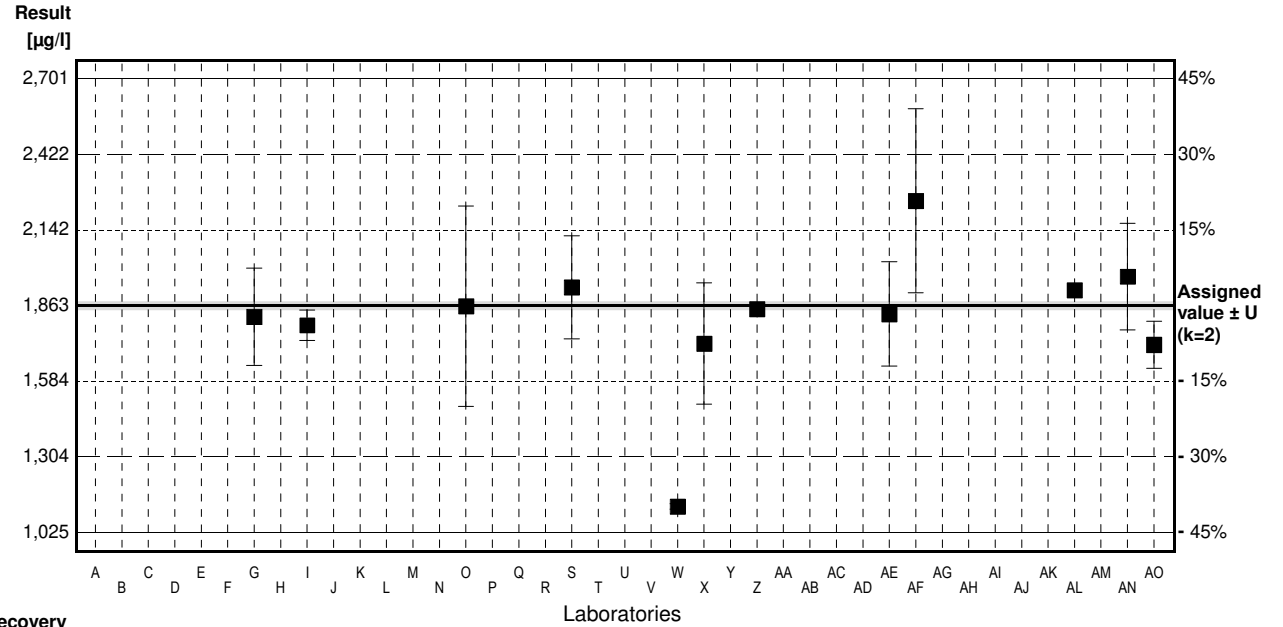
**Sample M177A**  
**Parameter Cerium**

Assigned value ± U (k=2) 1,863 µg/l ± 0,015 µg/l

IFA result ± U (k=2) 1,82 µg/l ± 0,24 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			µg/l		
B			µg/l		
C			µg/l		
D			µg/l		
E			µg/l		
F			µg/l		
G	1,821	0,18	µg/l	98%	-0,40
H			µg/l		
I	1,79	0,0565	µg/l	96%	-0,69
J			µg/l		
K			µg/l		
L			µg/l		
M			µg/l		
N			µg/l		
O	1,86	0,37	µg/l	100%	-0,03
P			µg/l		
Q			µg/l		
R			µg/l		
S	1,93	0,19	µg/l	104%	0,63
T			µg/l		
U			µg/l		
V			µg/l		
W	1,12 *	0,010	µg/l	60%	-7,00
X	1,722	0,224	µg/l	92%	-1,33
Y			µg/l		
Z	1,85		µg/l	99%	-0,12
AA			µg/l		
AB			µg/l		
AC			µg/l		
AD			µg/l		
AE	1,8313	0,1930	µg/l	98%	-0,30
AF	2,25	0,34	µg/l	121%	3,64
AG			µg/l		
AH			µg/l		
AI			µg/l		
AJ			µg/l		
AK			µg/l		
AL	1,92		µg/l	103%	0,54
AM			µg/l		
AN	1,97	0,197	µg/l	106%	1,01
AO	1,718	0,087	µg/l	92%	-1,37



	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,815 ± 0,233	1,878 ± 0,140	µg/l
Recov. ± CI(99%)	97,4 ± 12,5	100,8 ± 7,5	%
SD between labs	0,260	0,147	µg/l
RSD between labs	14,3	7,8	%
n for calculation	12	11	

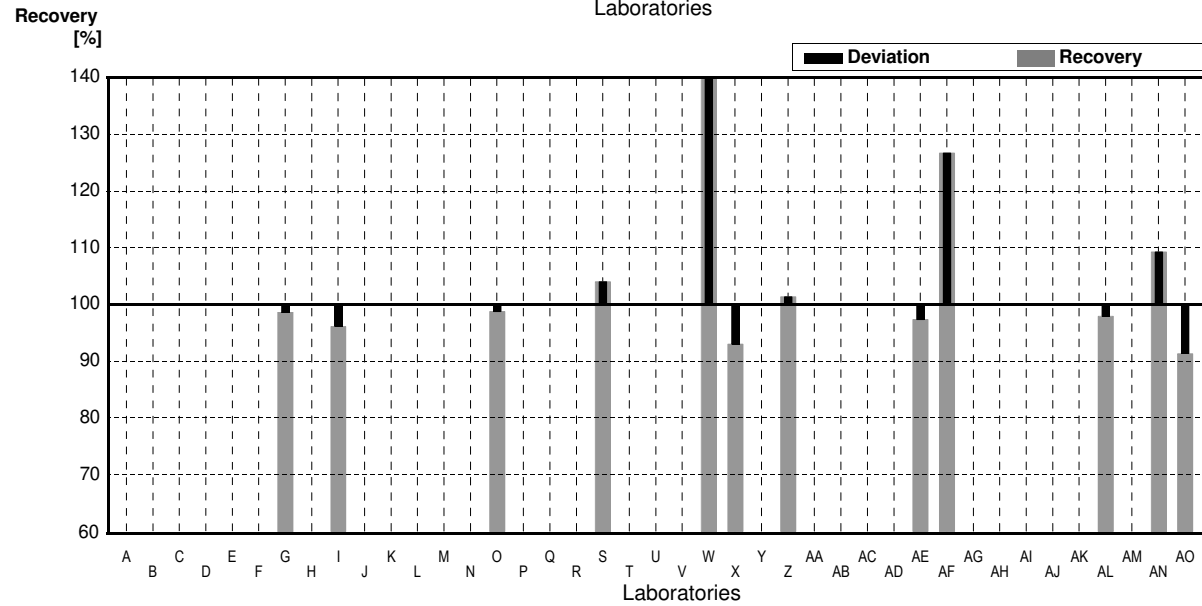
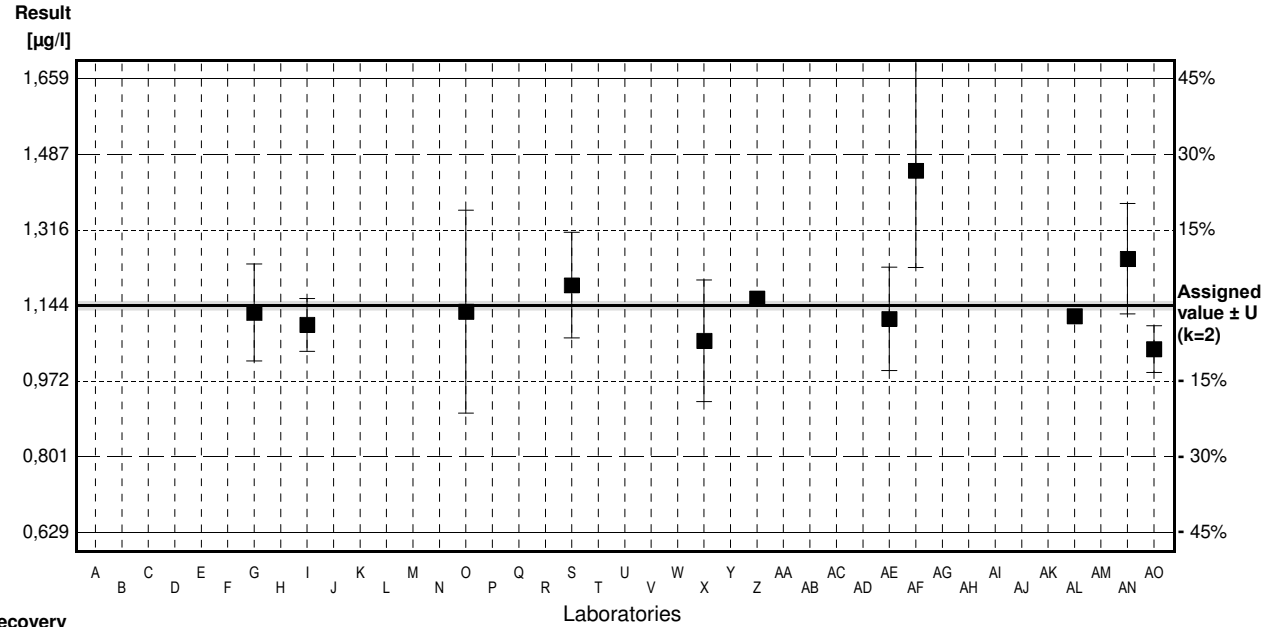
**Sample M177B**  
**Parameter Cerium**

Assigned value ± U (k=2) 1,144 µg/l ± 0,010 µg/l

IFA result ± U (k=2) 1,10 µg/l ± 0,14 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			µg/l		
B			µg/l		
C			µg/l		
D			µg/l		
E			µg/l		
F			µg/l		
G	1.128	0.11	µg/l	99%	-0.25
H			µg/l		
I	1.10	0.0600	µg/l	96%	-0.67
J			µg/l		
K			µg/l		
L			µg/l		
M			µg/l		
N			µg/l		
O	1.13	0.23	µg/l	99%	-0.21
P			µg/l		
Q			µg/l		
R			µg/l		
S	1.19	0.12	µg/l	104%	0.71
T			µg/l		
U			µg/l		
V			µg/l		
W	1.83 *	0.012	µg/l	160%	10.52
X	1.064	0.138	µg/l	93%	-1.23
Y			µg/l		
Z	1.16		µg/l	101%	0.25
AA			µg/l		
AB			µg/l		
AC			µg/l		
AD			µg/l		
AE	1.1138	0.1174	µg/l	97%	-0.46
AF	1.45 *	0.22	µg/l	127%	4.69
AG			µg/l		
AH			µg/l		
AI			µg/l		
AJ			µg/l		
AK			µg/l		
AL	1.12		µg/l	98%	-0.37
AM			µg/l		
AN	1.25	0.125	µg/l	109%	1.63
AO	1.045	0.053	µg/l	91%	-1.52



	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,215 ± 0,198	1,130 ± 0,062	µg/l
Recov. ± CI(99%)	106,2 ± 17,3	98,8 ± 5,4	%
SD between labs	0,221	0,059	µg/l
RSD between labs	18,2	5,3	%
n for calculation	12	10	

# Sample M177A

## Parameter Chromium

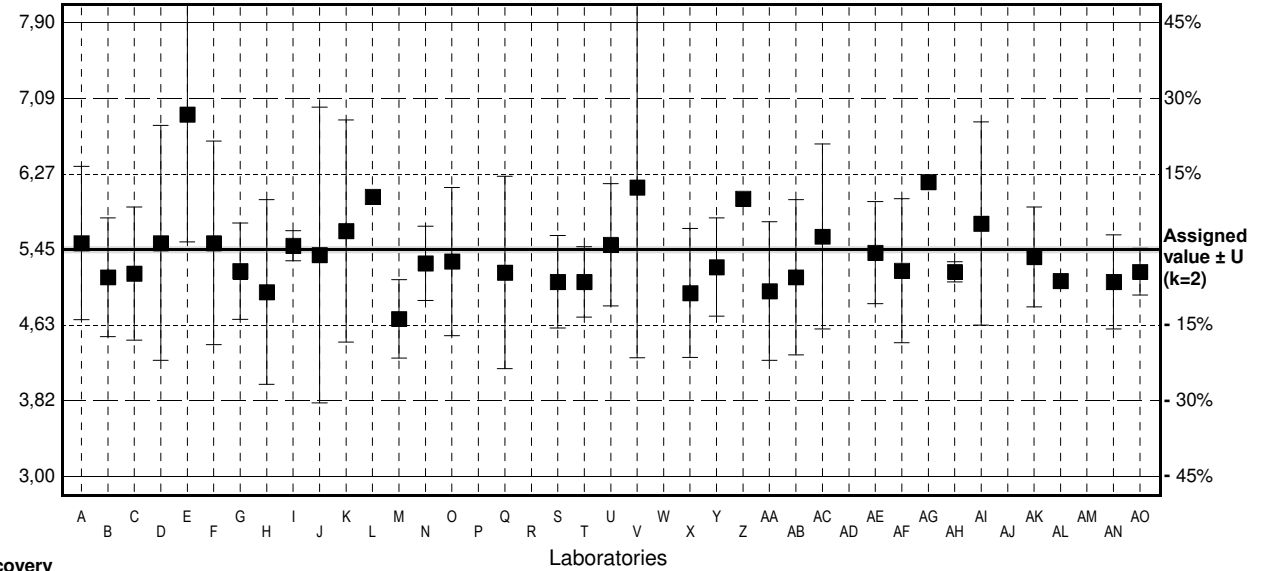
Assigned value ± U (k=2) 5,45 µg/l ± 0,03 µg/l

IFA result ± U (k=2) 5,40 µg/l ± 0,16 µg/l

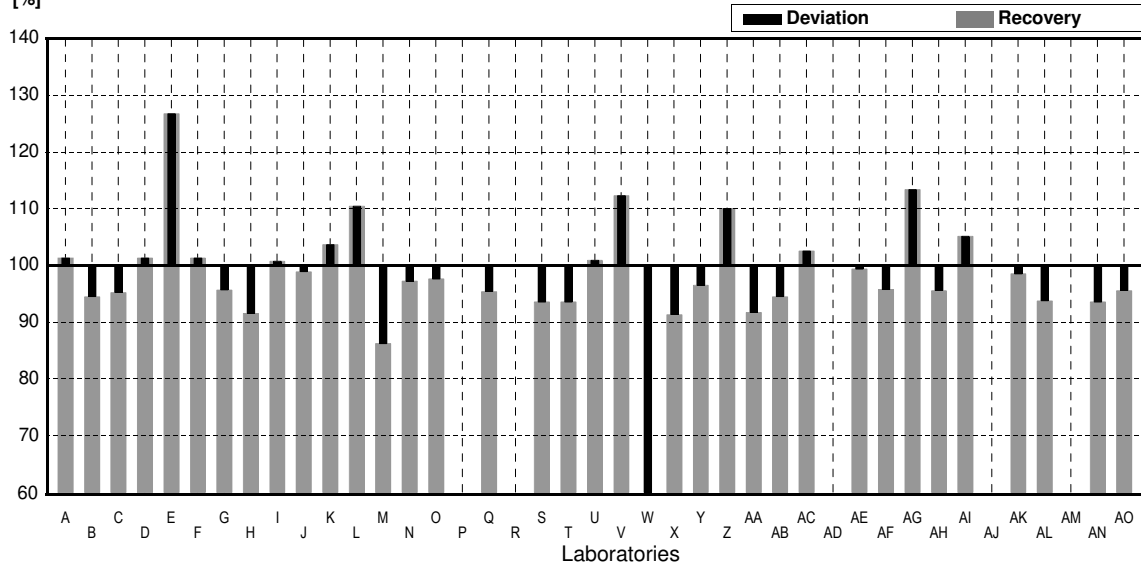
Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	5,52	0,83	µg/l	101%	0,22
B	5,150	0,643	µg/l	94%	-0,93
C	5,19	0,719	µg/l	95%	-0,81
D	5,52	1,27	µg/l	101%	0,22
E	6,91 *	1,38	µg/l	127%	4,54
F	5,52	1,10	µg/l	101%	0,22
G	5,216	0,52	µg/l	96%	-0,73
H	4,99	1,00	µg/l	92%	-1,43
I	5,49	0,162	µg/l	101%	0,12
J	5,39	1,6	µg/l	99%	-0,19
K	5,65	1,2	µg/l	104%	0,62
L	6,02		µg/l	110%	1,77
M	4,70	0,423	µg/l	86%	-2,33
N	5,3	0,4	µg/l	97%	-0,47
O	5,32	0,80	µg/l	98%	-0,40
P			µg/l		
Q	5,20	1,04	µg/l	95%	-0,78
R			µg/l		
S	5,1	0,5	µg/l	94%	-1,09
T	5,1	0,38	µg/l	94%	-1,09
U	5,50	0,660	µg/l	101%	0,16
V	6,12	1,84	µg/l	112%	2,08
W	2,03 *	0,051	µg/l	37%	-10,64
X	4,979	0,697	µg/l	91%	-1,46
Y	5,26	0,53	µg/l	97%	-0,59
Z	6,00		µg/l	110%	1,71
AA	5,00	0,75	µg/l	92%	-1,40
AB	5,15	0,84	µg/l	94%	-0,93
AC	5,59	1	µg/l	103%	0,44
AD			µg/l		
AE	5,4165	0,5525	µg/l	99%	-0,10
AF	5,22	0,78	µg/l	96%	-0,72
AG	6,180 *		µg/l	113%	2,27
AH	5,209	0,109	µg/l	96%	-0,75
AI	5,73	1,1	µg/l	105%	0,87
AJ			µg/l		
AK	5,37	0,54	µg/l	99%	-0,25
AL	5,11		µg/l	94%	-1,06
AM			µg/l		
AN	5,10	0,51	µg/l	94%	-1,09
AO	5,209	0,253	µg/l	96%	-0,75

Result  
[µg/l]



Recovery  
[%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	5,32 ± 0,32	5,34 ± 0,15	µg/l
Recov. ± CI(99%)	97,6 ± 5,9	98,0 ± 2,8	%
SD between labs	0,70	0,31	µg/l
RSD between labs	13,2	5,9	%
n for calculation	36	33	

# Sample M177B

## Parameter Chromium

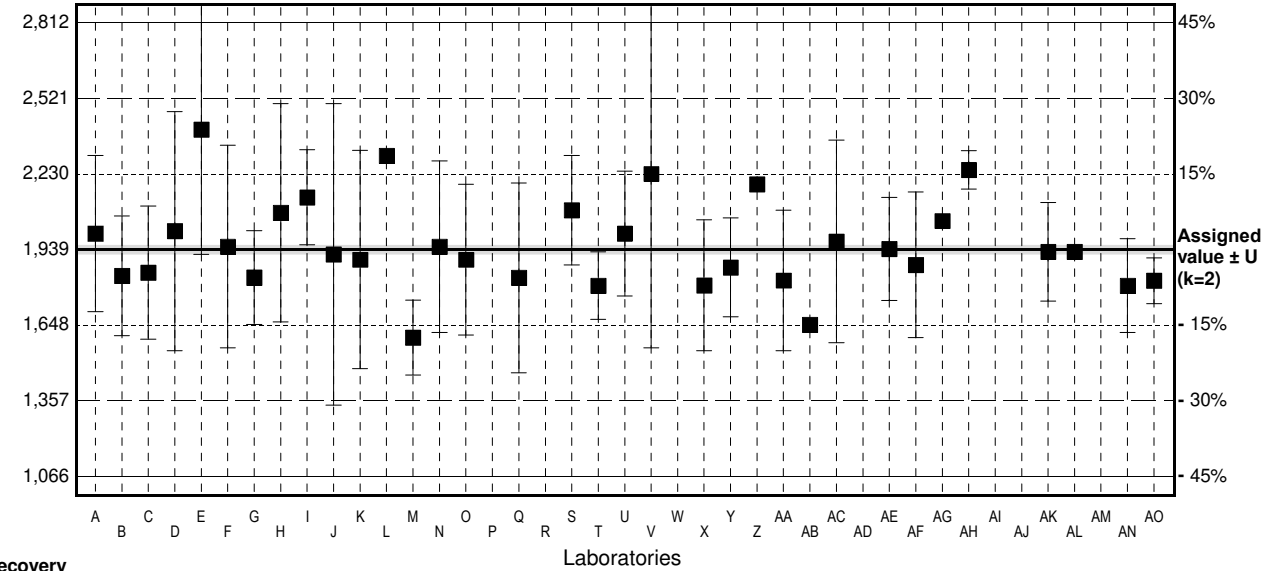
Assigned value ± U (k=2) 1,939 µg/l ± 0,016 µg/l

IFA result ± U (k=2) 1,89 µg/l ± 0,08 µg/l

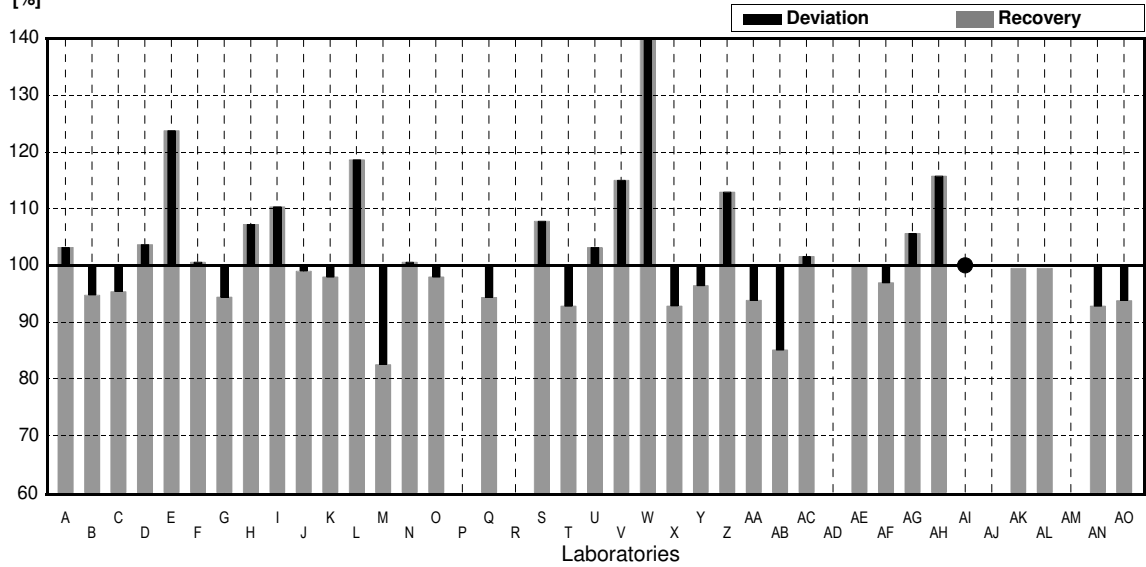
Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	2,00	0,30	µg/l	103%	0,53
B	1,838	0,230	µg/l	95%	-0,88
C	1,85	0,256	µg/l	95%	-0,78
D	2,01	0,46	µg/l	104%	0,62
E	2,40 *	0,48	µg/l	124%	4,03
F	1,95	0,39	µg/l	101%	0,10
G	1,831	0,18	µg/l	94%	-0,94
H	2,08	0,42	µg/l	107%	1,23
I	2,14	0,183	µg/l	110%	1,76
J	1,92	0,58	µg/l	99%	-0,17
K	1,90	0,42	µg/l	98%	-0,34
L	2,30		µg/l		3,16
M	1,60	0,144	µg/l	83%	-2,96
N	1,95	0,33	µg/l	101%	0,10
O	1,90	0,29	µg/l	98%	-0,34
P			µg/l		
Q	1,83	0,365	µg/l	94%	-0,95
R			µg/l		
S	2,09	0,21	µg/l	108%	1,32
T	1,80	0,13	µg/l	93%	-1,22
U	2,00	0,24	µg/l	103%	0,53
V	2,23	0,67	µg/l	115%	2,54
W	5,30 *	0,060	µg/l	273%	29,38
X	1,801	0,252	µg/l	93%	-1,21
Y	1,87	0,19	µg/l	96%	-0,60
Z	2,19		µg/l	113%	2,19
AA	1,82	0,27	µg/l	94%	-1,04
AB	1,65		µg/l	85%	-2,53
AC	1,97	0,39	µg/l	102%	0,27
AD			µg/l		
AE	1,9414	0,1980	µg/l	100%	0,02
AF	1,88	0,28	µg/l	97%	-0,52
AG	2,049		µg/l	106%	0,96
AH	2,245	0,0745	µg/l	116%	2,67
AI	<2		µg/l	*	
AJ			µg/l		
AK	1,93	0,19	µg/l	100%	-0,08
AL	1,93		µg/l	100%	-0,08
AM			µg/l		
AN	1,80	0,18	µg/l	93%	-1,22
AO	1,819	0,088	µg/l	94%	-1,05

Result [µg/l]



Recovery [%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	2,052 ± 0,273	1,943 ± 0,076	µg/l
Recov. ± CI(99%)	105,8 ± 14,1	100,2 ± 3,9	%
SD between labs	0,591	0,160	µg/l
RSD between labs	28,8	8,2	%
n for calculation	35	33	

**Sample M177A**  
**Parameter Cobalt**

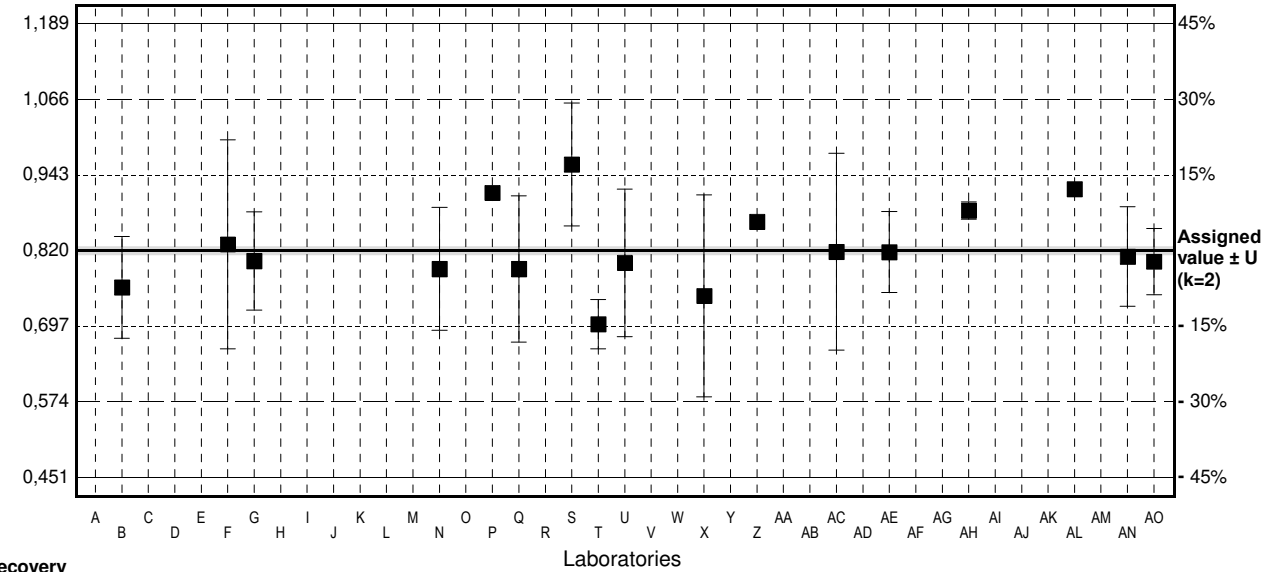
Assigned value ± U (k=2) 0,820 µg/l ± 0,007 µg/l

IFA result ± U (k=2) 0,87 µg/l ± 0,09 µg/l

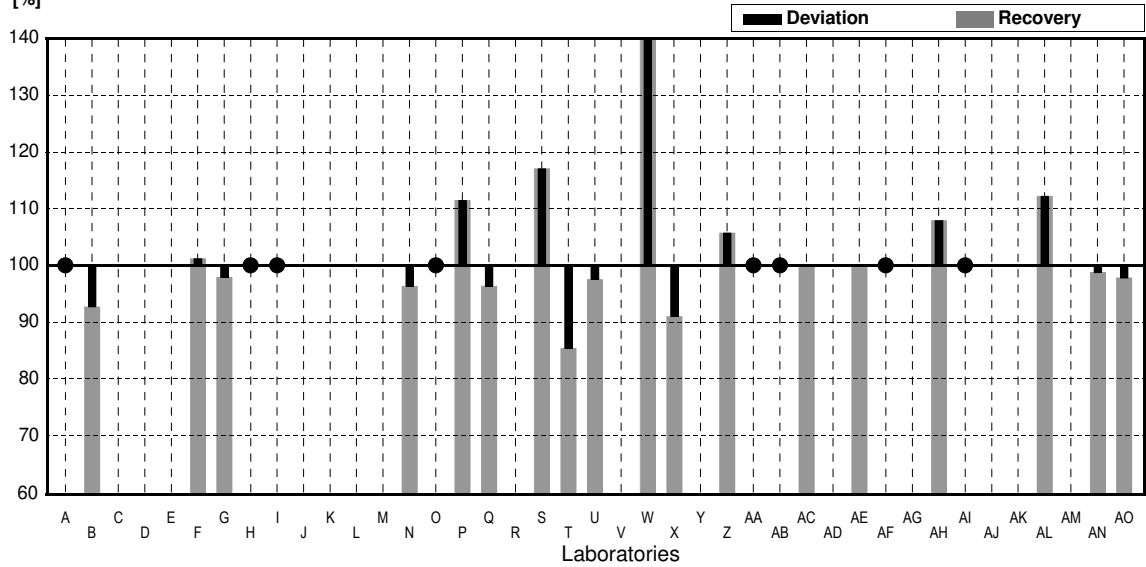
Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	<1		µg/l	•	
B	0.760	0.083	µg/l	93%	-1.22
C			µg/l		
D			µg/l		
E			µg/l		
F	0.83	0.17	µg/l	101%	0.20
G	0.803	0.08	µg/l	98%	-0.35
H	<1.0	0.5	µg/l	•	
I	<1.00		µg/l	•	
J			µg/l		
K			µg/l		
L			µg/l		
M			µg/l		
N	0.79	0.10	µg/l	96%	-0.61
O	<1.00		µg/l	•	
P	0.914		µg/l	111%	1.91
Q	0.790	0.119	µg/l	96%	-0.61
R			µg/l		
S	0.96	0.10	µg/l	117%	2.85
T	0.70	0.04	µg/l	85%	-2.44
U	0.80	0.12	µg/l	98%	-0.41
V			µg/l		
W	1.76 *	0.025	µg/l	215%	19.11
X	0.7462	0.1642	µg/l	91%	-1.50
Y			µg/l		
Z	0.867		µg/l	106%	0.96
AA	<1.0		µg/l	•	
AB	<5		µg/l	•	
AC	0.818	0.16	µg/l	100%	-0.04
AD			µg/l		
AE	0.8173	0.0660	µg/l	100%	-0.05
AF	<1.00		µg/l	•	
AG			µg/l		
AH	0.885	0.0141	µg/l	108%	1.32
AI	<2		µg/l	•	
AJ			µg/l		
AK			µg/l		
AL	0.92		µg/l	112%	2.03
AM			µg/l		
AN	0.81	0.081	µg/l	99%	-0.20
AO	0.802	0.054	µg/l	98%	-0.37

Result  
[µg/l]



Recovery  
[%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,876 ± 0,157	0,824 ± 0,047	µg/l
Recov. ± CI(99%)	106,9 ± 19,2	100,5 ± 5,8	%
SD between labs	0,230	0,067	µg/l
RSD between labs	26,2	8,1	%
n for calculation	18	17	

**Sample M177B**  
**Parameter Cobalt**

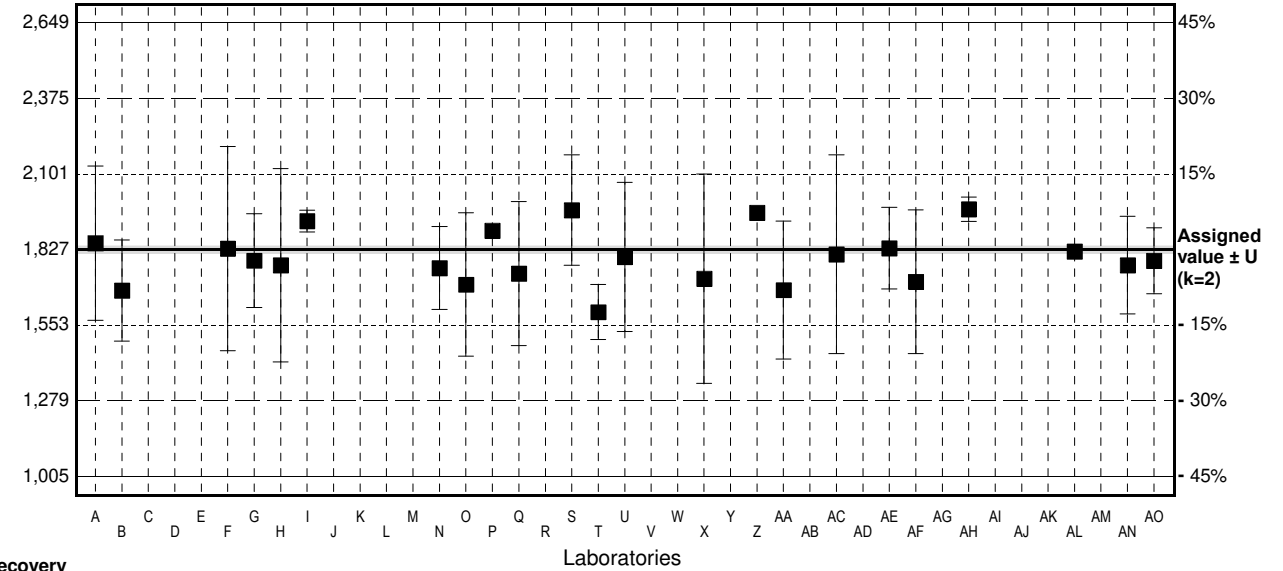
Assigned value ± U (k=2) 1,827 µg/l ± 0,013 µg/l

IFA result ± U (k=2) 1,92 µg/l ± 0,20 µg/l

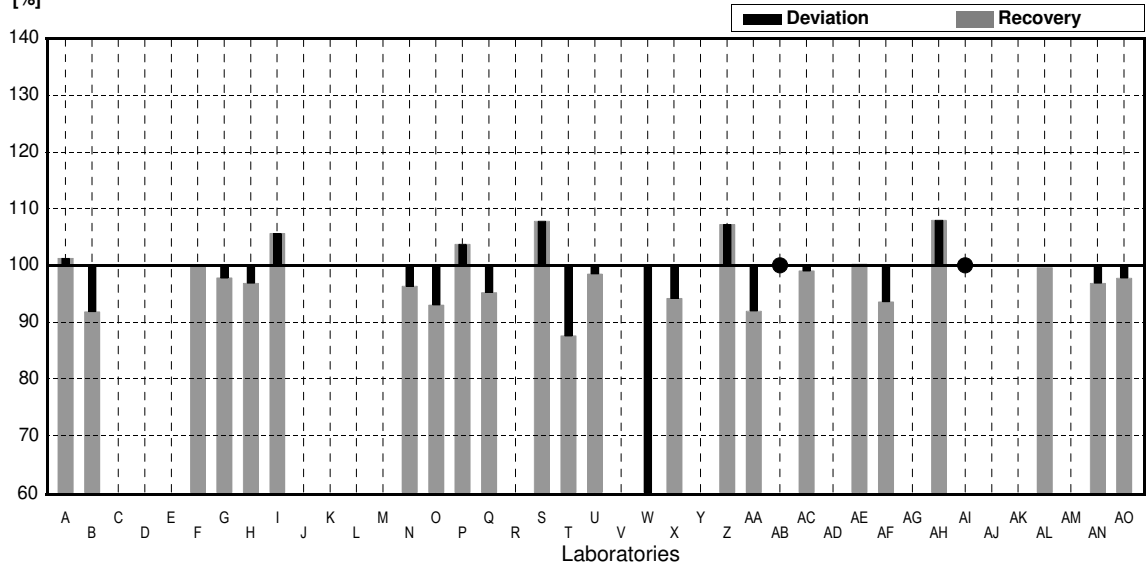
Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	1.85	0.28	µg/l	101%	0.21
B	1.678	0.183	µg/l	92%	-1.36
C			µg/l		
D			µg/l		
E			µg/l		
F	1.83	0.37	µg/l	100%	0.03
G	1.787	0.17	µg/l	98%	-0.36
H	1.77	0.35	µg/l	97%	-0.52
I	1.93	0.0393	µg/l	106%	0.94
J			µg/l		
K			µg/l		
L			µg/l		
M			µg/l		
N	1.76	0.15	µg/l	96%	-0.61
O	1.70	0.26	µg/l	93%	-1.16
P	1.895		µg/l	104%	0.62
Q	1.74	0.261	µg/l	95%	-0.79
R			µg/l		
S	1.97	0.20	µg/l	108%	1.30
T	1.60	0.1	µg/l	88%	-2.07
U	1.80	0.27	µg/l	99%	-0.25
V			µg/l		
W	0.760 *	0.015	µg/l	42%	-9.73
X	1.721	0.379	µg/l	94%	-0.97
Y			µg/l		
Z	1.96		µg/l	107%	1.21
AA	1.68	0.25	µg/l	92%	-1.34
AB	<5		µg/l		
AC	1.81	0.36	µg/l	99%	-0.16
AD			µg/l		
AE	1.8317	0.1478	µg/l	100%	0.04
AF	1.71	0.26	µg/l	94%	-1.07
AG			µg/l		
AH	1.973	0.0445	µg/l	108%	1.33
AI	<2		µg/l		
AJ			µg/l		
AK			µg/l		
AL	1.82		µg/l	100%	-0.06
AM			µg/l		
AN	1.77	0.177	µg/l	97%	-0.52
AO	1.786	0.119	µg/l	98%	-0.37

**Result**  
[µg/l]



**Recovery**  
[%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,755 ± 0,134	1,799 ± 0,058	µg/l
Recov. ± CI(99%)	96,1 ± 7,3	98,5 ± 3,2	%
SD between labs	0,233	0,099	µg/l
RSD between labs	13,3	5,5	%
n for calculation	24	23	

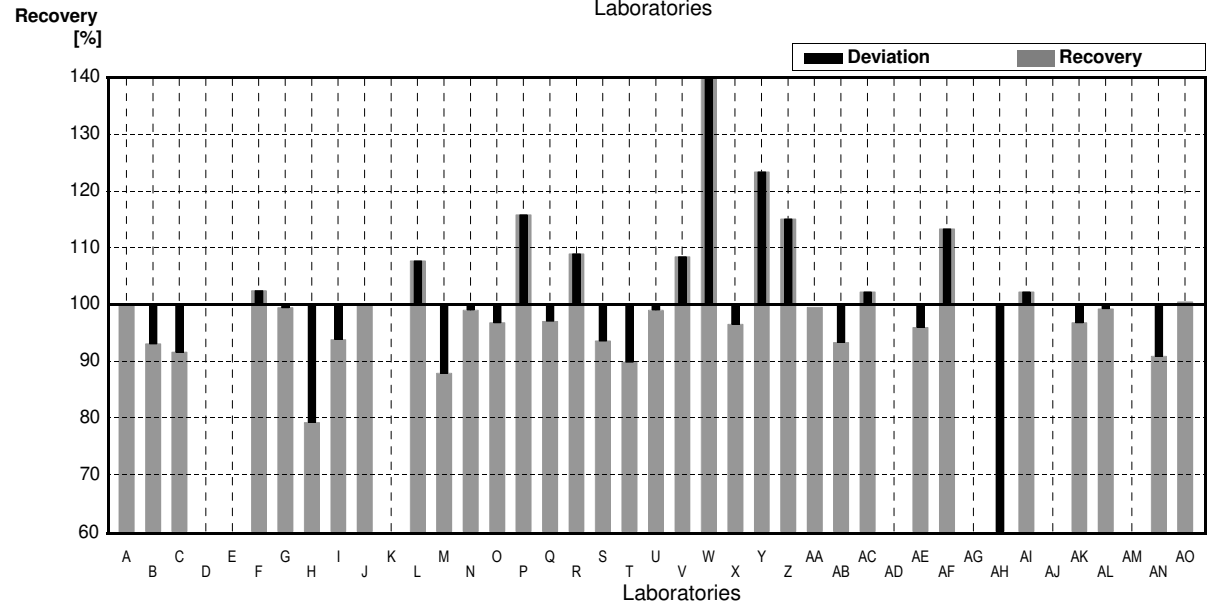
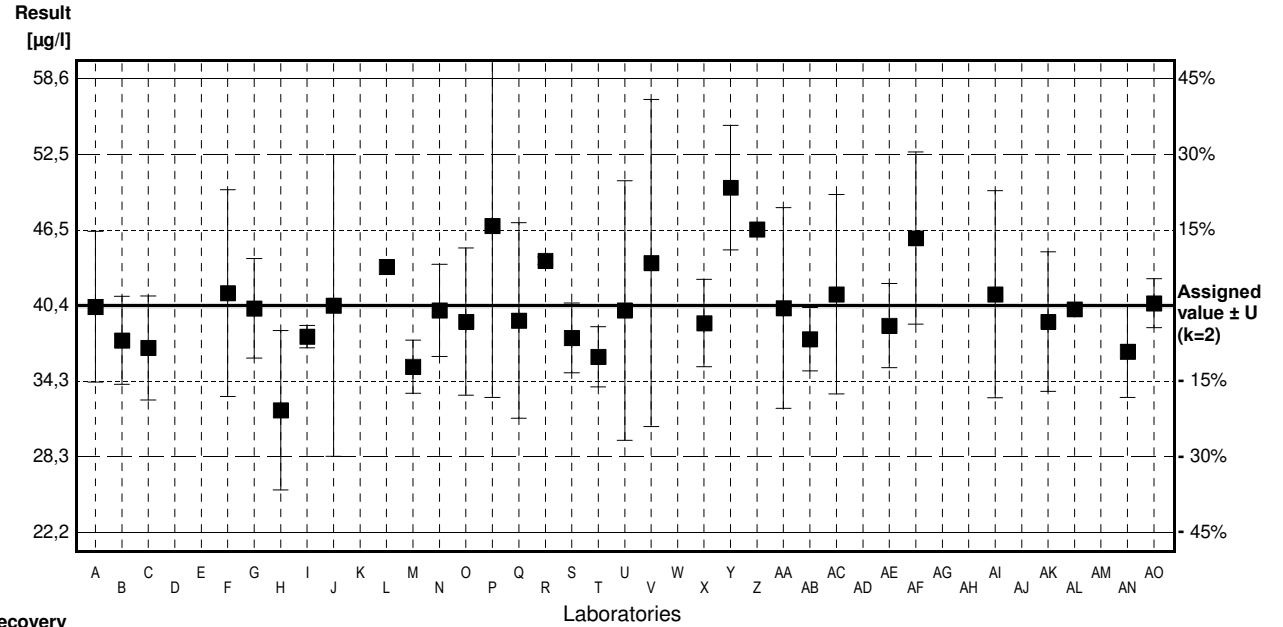
# Sample M177A

## Parameter Iron

Assigned value ± U (k=2) 40,4 µg/l ± 0,2 µg/l  
 IFA result ± U (k=2) 42,0 µg/l ± 3,2 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	40,3	6,04	µg/l	100%	-0,04
B	37,6	3,52	µg/l	93%	-1,08
C	37,0	4,17	µg/l	92%	-1,31
D			µg/l		
E			µg/l		
F	41,4	8,28	µg/l	102%	0,39
G	40,17	4	µg/l	99%	-0,09
H	32,0	6,4	µg/l	79%	-3,25
I	37,9	0,908	µg/l	94%	-0,97
J	40,4	12,1	µg/l	100%	0,00
K			µg/l		
L	43,5		µg/l	108%	1,20
M	35,50	2,13	µg/l	88%	-1,90
N	40,0	3,7	µg/l	99%	-0,15
O	39,1	5,9	µg/l	97%	-0,50
P	46,787	13,760	µg/l	116%	2,47
Q	39,2	7,85	µg/l	97%	-0,46
R	44,0	0,3	µg/l	109%	1,39
S	37,8	2,8	µg/l	94%	-1,01
T	36,3	2,41	µg/l	90%	-1,59
U	40,0	10,40	µg/l	99%	-0,15
V	43,8	13,1	µg/l	108%	1,31
W	61,8 *	0,85	µg/l	153%	8,28
X	38,99	3,51	µg/l	97%	-0,55
Y	49,85	4,99	µg/l	123%	3,65
Z	46,5		µg/l	115%	2,36
AA	40,2	8,04	µg/l	100%	-0,08
AB	37,7	2,53	µg/l	93%	-1,04
AC	41,3	8	µg/l	102%	0,35
AD			µg/l		
AE	38,7795	3,3777	µg/l	96%	-0,63
AF	45,8	6,9	µg/l	113%	2,09
AG			µg/l		
AH	10,156 *	1,250	µg/l	25%	-11,70
AI	41,3	8,3	µg/l	102%	0,35
AJ			µg/l		
AK	39,1	5,59	µg/l	97%	-0,50
AL	40,1		µg/l	99%	-0,12
AM			µg/l		
AN	36,7	3,67	µg/l	91%	-1,43
AO	40,585	1,968	µg/l	100%	0,07



	All results	Outliers excl.	Unit
Mean ± CI(99%)	40,0 ± 3,4	40,3 ± 1,8	µg/l
Recov. ± CI(99%)	99,1 ± 8,5	99,8 ± 4,4	%
SD between labs	7,3	3,6	µg/l
RSD between labs	18,3	9,0	%
n for calculation	34	32	

# Sample M177B

## Parameter Iron

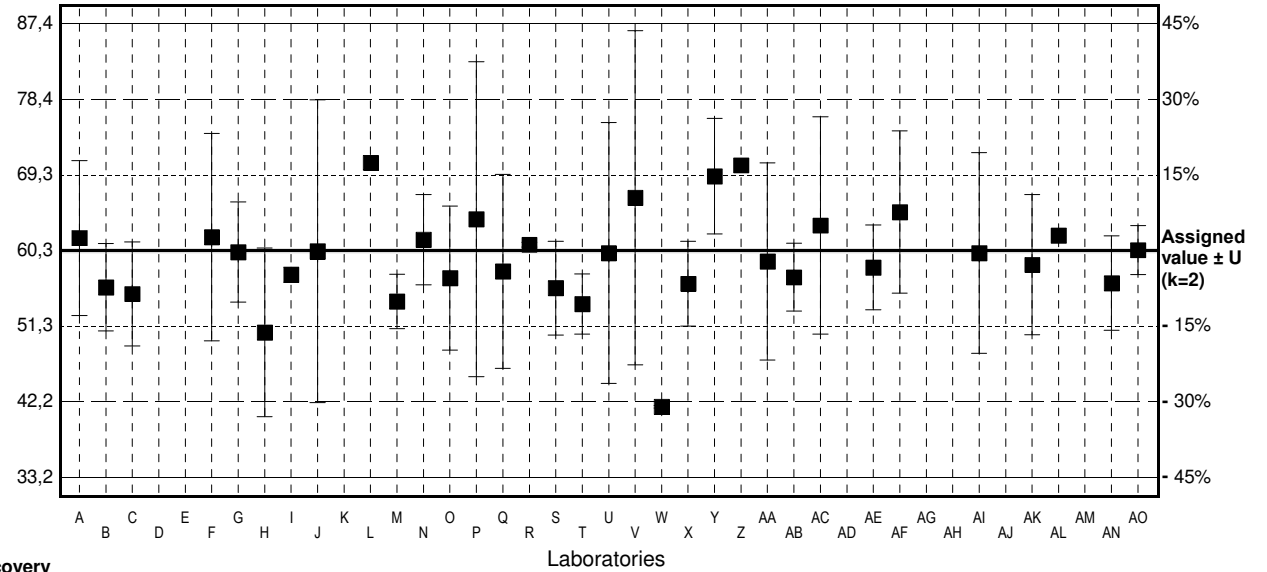
Assigned value ± U (k=2) 60,3 µg/l ± 0,3 µg/l

IFA result ± U (k=2) 63 µg/l ± 5 µg/l

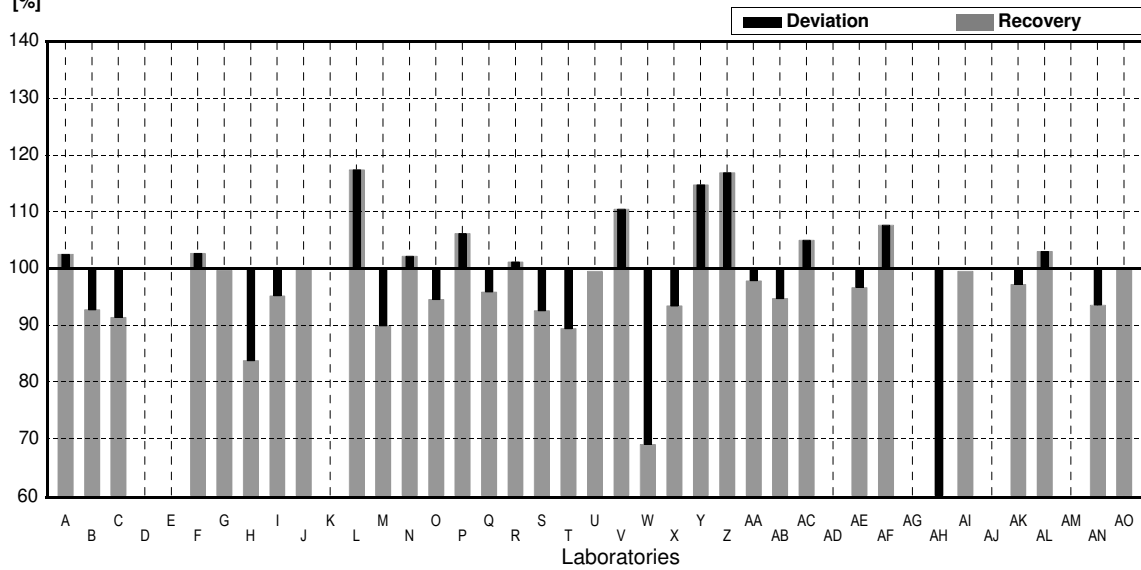
Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	61.8	9,27	µg/l	102%	0,39
B	55.9	5,23	µg/l	93%	-1,14
C	55.1	6,21	µg/l	91%	-1,35
D			µg/l		
E			µg/l		
F	61.9	12,4	µg/l	103%	0,41
G	60.1	6	µg/l	100%	-0,05
H	50.5	10,1	µg/l	84%	-2,54
I	57.4	0,883	µg/l	95%	-0,75
J	60.2	18,1	µg/l	100%	-0,03
K			µg/l		
L	70.8		µg/l	117%	2,72
M	54.20	3,25	µg/l	90%	-1,58
N	61.6	5,4	µg/l	102%	0,34
O	57.0	8,6	µg/l	95%	-0,86
P	64,034	18,832	µg/l	106%	0,97
Q	57.8	11,6	µg/l	96%	-0,65
R	61.0	0,3	µg/l	101%	0,18
S	55.8	5,6	µg/l	93%	-1,17
T	53.9	3,6	µg/l	89%	-1,66
U	60.0	15,6	µg/l	100%	-0,08
V	66.6	20,0	µg/l	110%	1,63
W	41.6 *	0,15	µg/l	69%	-4,85
X	56.33	5,07	µg/l	93%	-1,03
Y	69.19	6,92	µg/l	115%	2,30
Z	70.5		µg/l	117%	2,64
AA	59.0	11,8	µg/l	98%	-0,34
AB	57.1	4,06	µg/l	95%	-0,83
AC	63.3	13	µg/l	105%	0,78
AD			µg/l		
AE	58,2769	5,0759	µg/l	97%	-0,52
AF	64.9	9,7	µg/l	108%	1,19
AG			µg/l		
AH	29,325 *	2,492	µg/l	49%	-8,03
AI	60.0	12	µg/l	100%	-0,08
AJ			µg/l		
AK	58.6	8,38	µg/l	97%	-0,44
AL	62.1		µg/l	103%	0,47
AM			µg/l		
AN	56.4	5,64	µg/l	94%	-1,01
AO	60,347	2,927	µg/l	100%	0,01

Result  
[µg/l]



Recovery  
[%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	58,6 ± 3,6	60,1 ± 2,3	µg/l
Recov. ± CI(99%)	97,2 ± 5,9	99,6 ± 3,8	%
SD between labs	7,6	4,8	µg/l
RSD between labs	13,0	7,9	%
n for calculation	34	32	

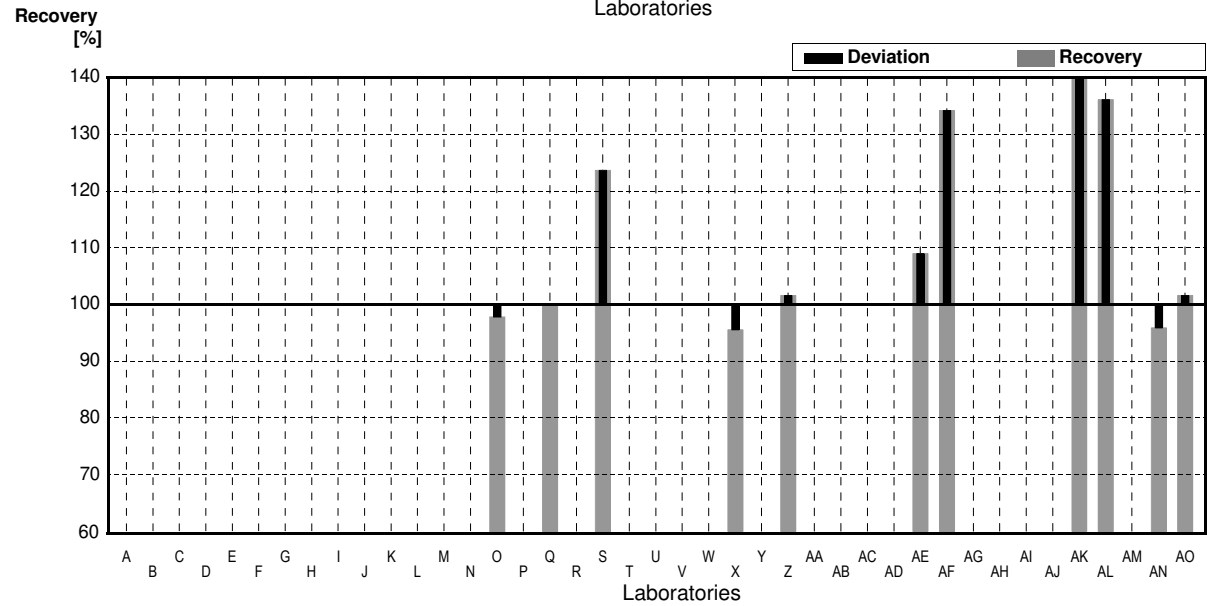
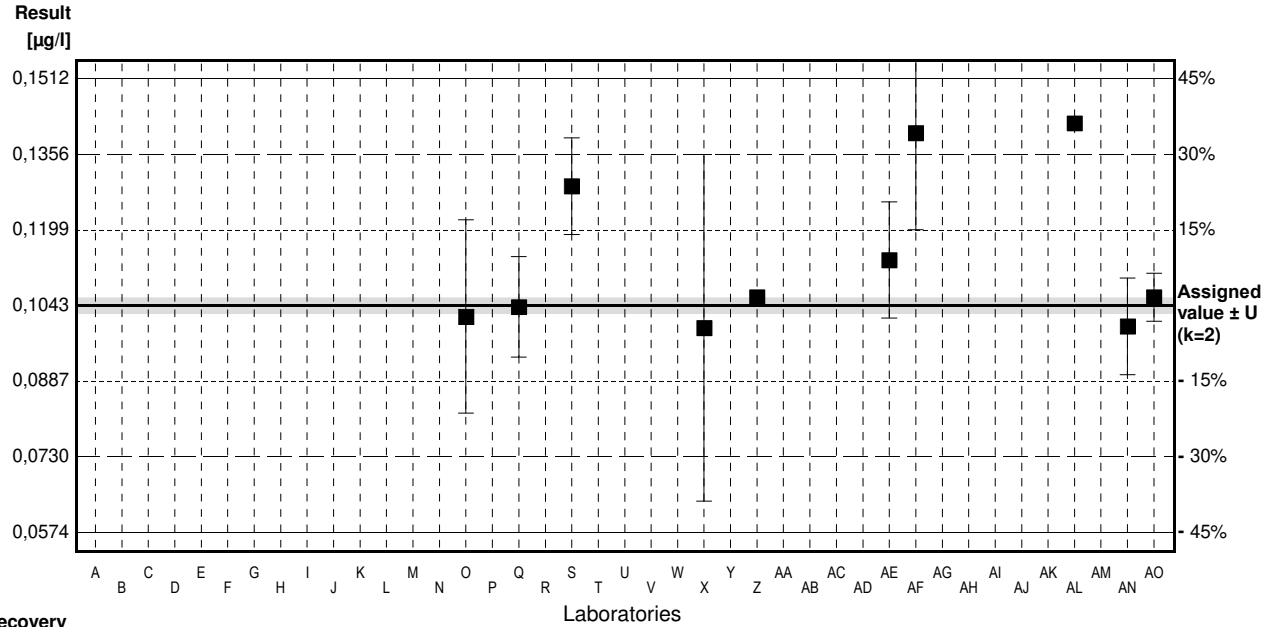
**Sample M177A**  
**Parameter Gadolinium**

Assigned value ± U (k=2) 0,1043 µg/l ± 0,0016 µg/l

IFA result ± U (k=2) 0,106 µg/l ± 0,022 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			µg/l		
B			µg/l		
C			µg/l		
D			µg/l		
E			µg/l		
F			µg/l		
G			µg/l		
H			µg/l		
I			µg/l		
J			µg/l		
K			µg/l		
L			µg/l		
M			µg/l		
N			µg/l		
O	0,102	0,020	µg/l	98%	-0,21
P			µg/l		
Q	0,104	0,0104	µg/l	100%	-0,03
R			µg/l		
S	0,129	0,010	µg/l	124%	2,26
T			µg/l		
U			µg/l		
V			µg/l		
W			µg/l		
X	0,09966	0,03588	µg/l	96%	-0,42
Y			µg/l		
Z	0,106		µg/l	102%	0,16
AA			µg/l		
AB			µg/l		
AC			µg/l		
AD			µg/l		
AE	0,1137	0,0120	µg/l	109%	0,86
AF	0,140 *	0,02	µg/l	134%	3,26
AG			µg/l		
AH			µg/l		
AI			µg/l		
AJ			µg/l		
AK	101,7 *	20,33	µg/l	97507%	9276,88
AL	0,142 *		µg/l	136%	3,44
AM			µg/l		
AN	0,100	0,010	µg/l	96%	-0,39
AO	0,106	0,005	µg/l	102%	0,16



	All results	Outliers excl.	Unit
Mean ± CI(99%)	9,3493 ± 29,275	0,1075 ± 0,0121	µg/l
Recov. ± CI(99%)	8963,9 ± 28068,	103,1 ± 11,6	%
SD between labs	30,6293	0,0097	µg/l
RSD between labs	327,6	9,1	%
n for calculation	11	8	

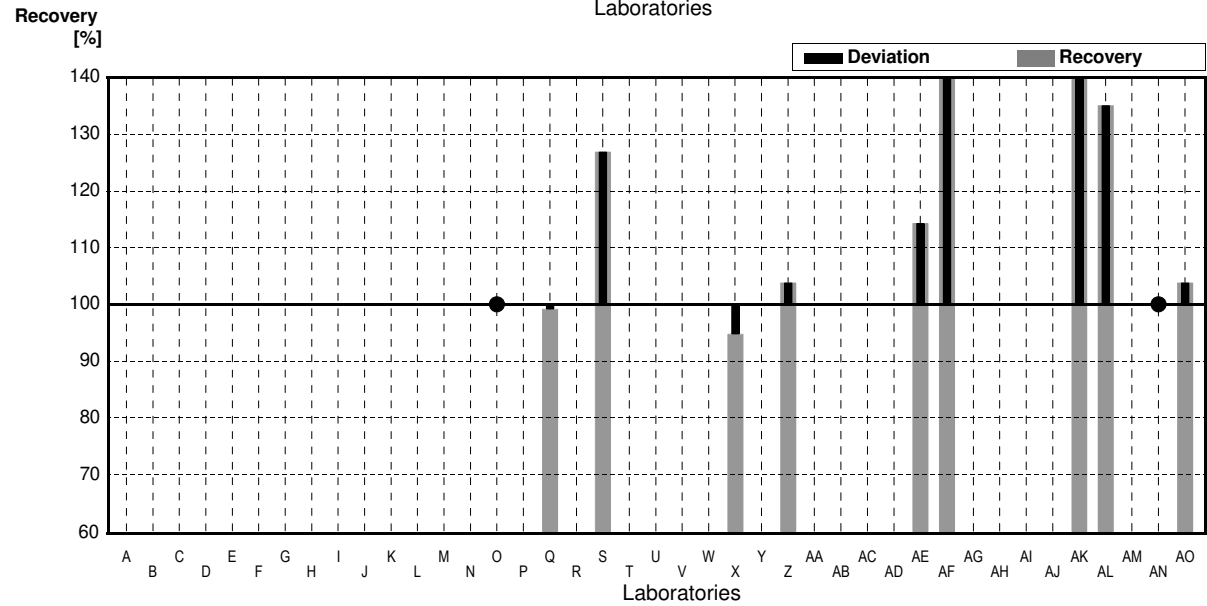
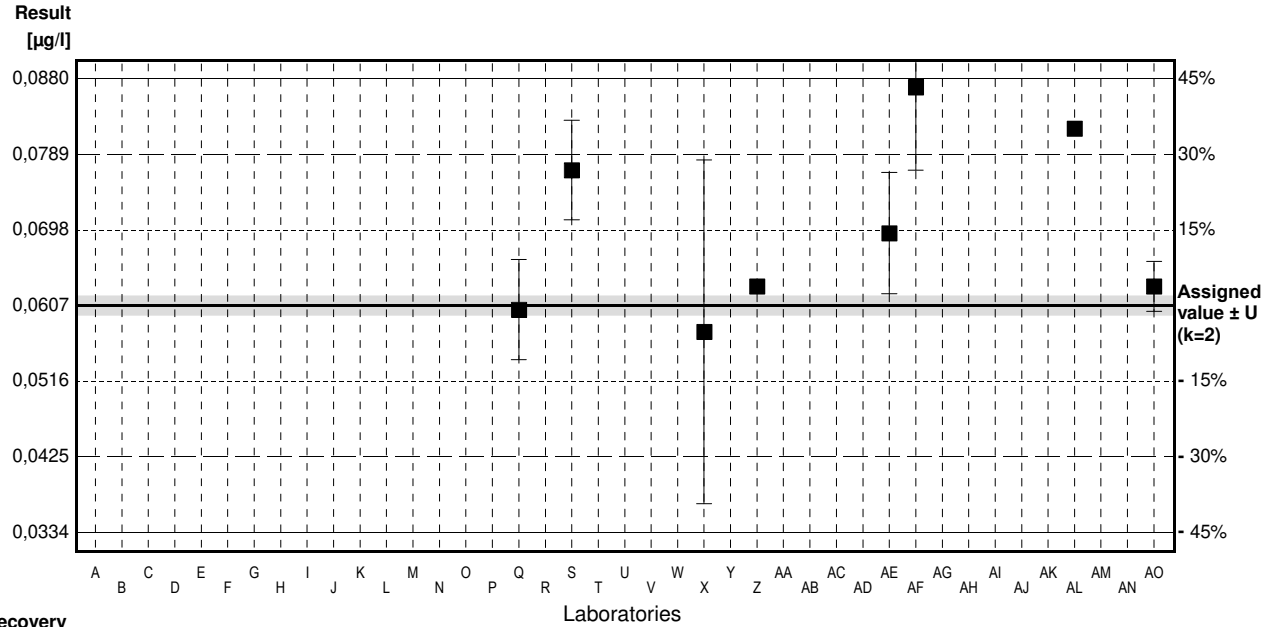
**Sample M177B**  
**Parameter Gadolinium**

Assigned value ± U (k=2) 0,0607 µg/l ± 0,0012 µg/l

IFA result ± U (k=2) 0,057 µg/l ± 0,012 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A			µg/l		
B			µg/l		
C			µg/l		
D			µg/l		
E			µg/l		
F			µg/l		
G			µg/l		
H			µg/l		
I			µg/l		
J			µg/l		
K			µg/l		
L			µg/l		
M			µg/l		
N			µg/l		
O	<0.10		µg/l	*	
P			µg/l		
Q	0.0602	0.00602	µg/l	99%	-0.08
R			µg/l		
S	0.077	0.006	µg/l	127%	2.56
T			µg/l		
U			µg/l		
V			µg/l		
W			µg/l		
X	0.05753	0.02071	µg/l	95%	-0.50
Y			µg/l		
Z	0.063		µg/l	104%	0.36
AA			µg/l		
AB			µg/l		
AC			µg/l		
AD			µg/l		
AE	0.0694	0.0073	µg/l	114%	1.37
AF	0.087	0.01	µg/l	143%	4.13
AG			µg/l		
AH			µg/l		
AI			µg/l		
AJ			µg/l		
AK	59.2	*	11.8	97529%	9278.94
AL	0.082		µg/l	135%	3.34
AM			µg/l		
AN	<0.10		µg/l	*	
AO	0.063	0.003	µg/l	104%	0.36



	All results	Outliers excl.	Unit
Mean ± CI(99%)	6,6399 ± 22,075	0,0699 ± 0,0135	µg/l
Recov. ± CI(99%)	10938,9 ± 36367,	115,1 ± 22,2	%
SD between labs	19,7100	0,0109	µg/l
RSD between labs	296,8	15,6	%
n for calculation	9	8	

# Sample M177A

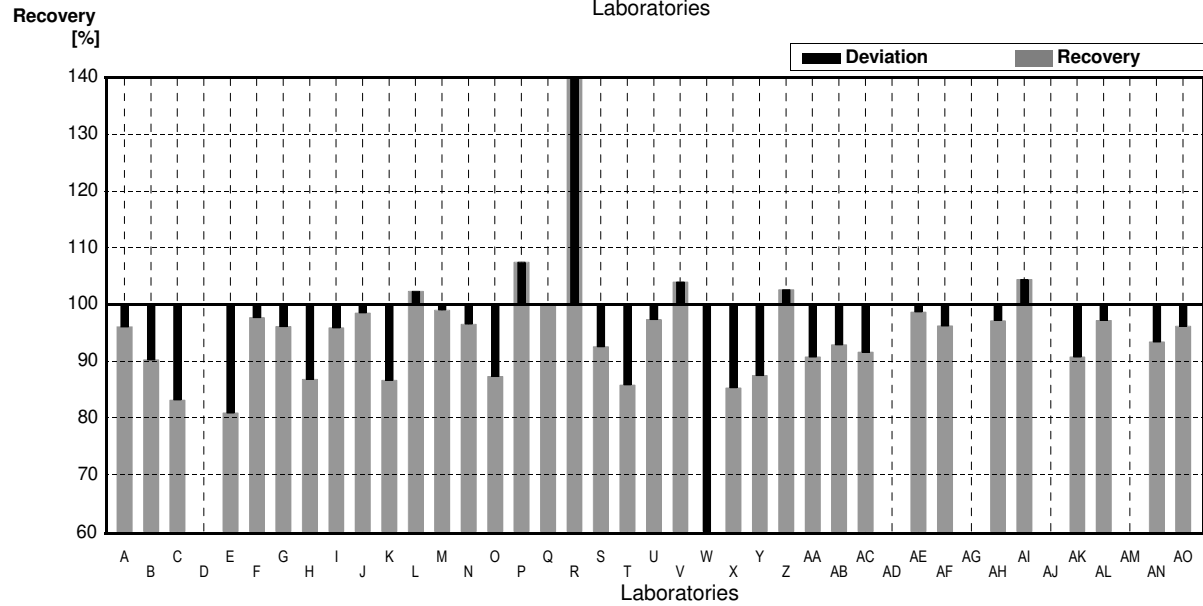
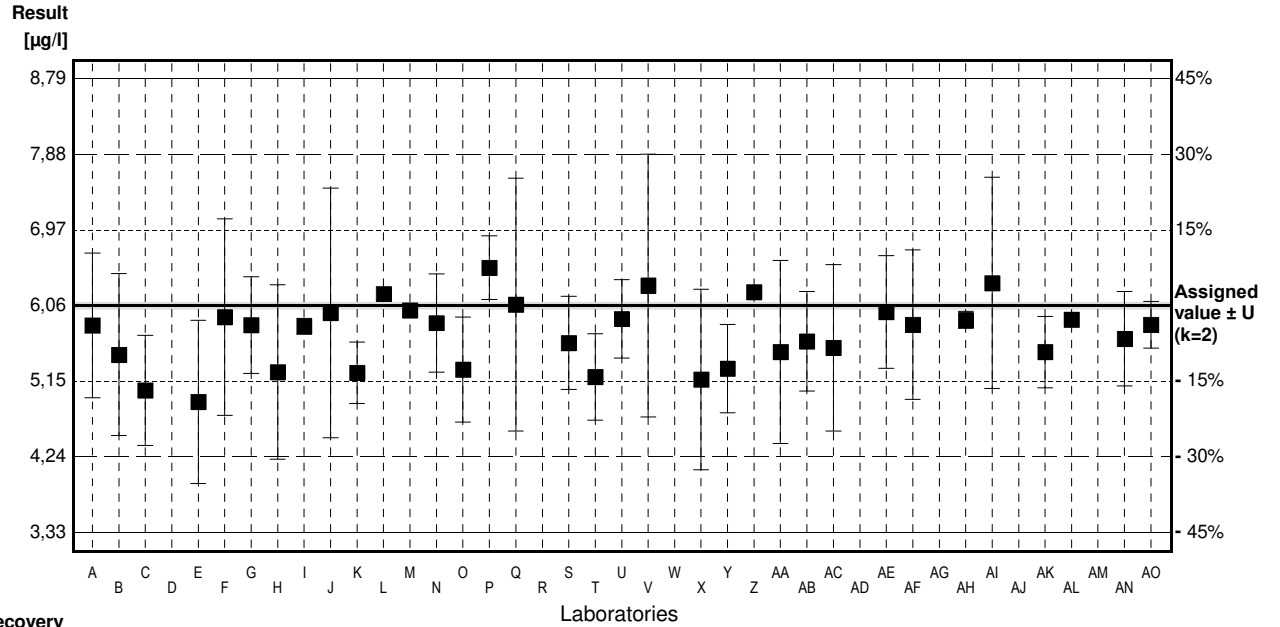
## Parameter Copper

Assigned value ± U (k=2) 6,06 µg/l ± 0,04 µg/l

IFA result ± U (k=2) 6,2 µg/l ± 0,4 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	5.82	0.87	µg/l	96%	-0.54
B	5.468	0.974	µg/l	90%	-1.34
C	5.04	0.662	µg/l	83%	-2.31
D			µg/l		
E	4.90	0.98	µg/l	81%	-2.62
F	5.92	1.18	µg/l	98%	-0.32
G	5.824	0.58	µg/l	96%	-0.53
H	5.26	1.05	µg/l	87%	-1.81
I	5.81	0.0954	µg/l	96%	-0.57
J	5.97	1.5	µg/l	99%	-0.20
K	5.25	0.37	µg/l	87%	-1.83
L	6.20		µg/l	102%	0.32
M	6.00		µg/l	99%	-0.14
N	5.85	0.59	µg/l	97%	-0.47
O	5.29	0.63	µg/l	87%	-1.74
P	6.514	0.382	µg/l	107%	1.03
Q	6.07	1.52	µg/l	100%	0.02
R	35.0 *	0.4	µg/l	578%	65.42
S	5.61	0.56	µg/l	93%	-1.02
T	5.2	0.52	µg/l	86%	-1.94
U	5.90	0.472	µg/l	97%	-0.36
V	6.30	1.58	µg/l	104%	0.54
W	2.23 *	0.071	µg/l	37%	-8.66
X	5.170	1.086	µg/l	85%	-2.01
Y	5.30	0.53	µg/l	87%	-1.72
Z	6.22		µg/l	103%	0.36
AA	5.50	1.10	µg/l	91%	-1.27
AB	5.63	0.6	µg/l	93%	-0.97
AC	5.55	1	µg/l	92%	-1.15
AD			µg/l		
AE	5.9809	0.6776	µg/l	99%	-0.18
AF	5.83	0.9	µg/l	96%	-0.52
AG			µg/l		
AH	5.887	0.104	µg/l	97%	-0.39
AI	6.33	1.27	µg/l	104%	0.61
AJ			µg/l		
AK	5.50	0.43	µg/l	91%	-1.27
AL	5.89		µg/l	97%	-0.38
AM			µg/l		
AN	5.66	0.566	µg/l	93%	-0.90
AO	5.828	0.281	µg/l	96%	-0.52



	All results	Outliers excl.	Unit
Mean ± CI(99%)	6,44 ± 2,25	5,72 ± 0,18	µg/l
Recov. ± CI(99%)	106,2 ± 37,1	94,4 ± 3,0	%
SD between labs	4,95	0,39	µg/l
RSD between labs	76,8	6,8	%
n for calculation	36	34	

# Sample M177B

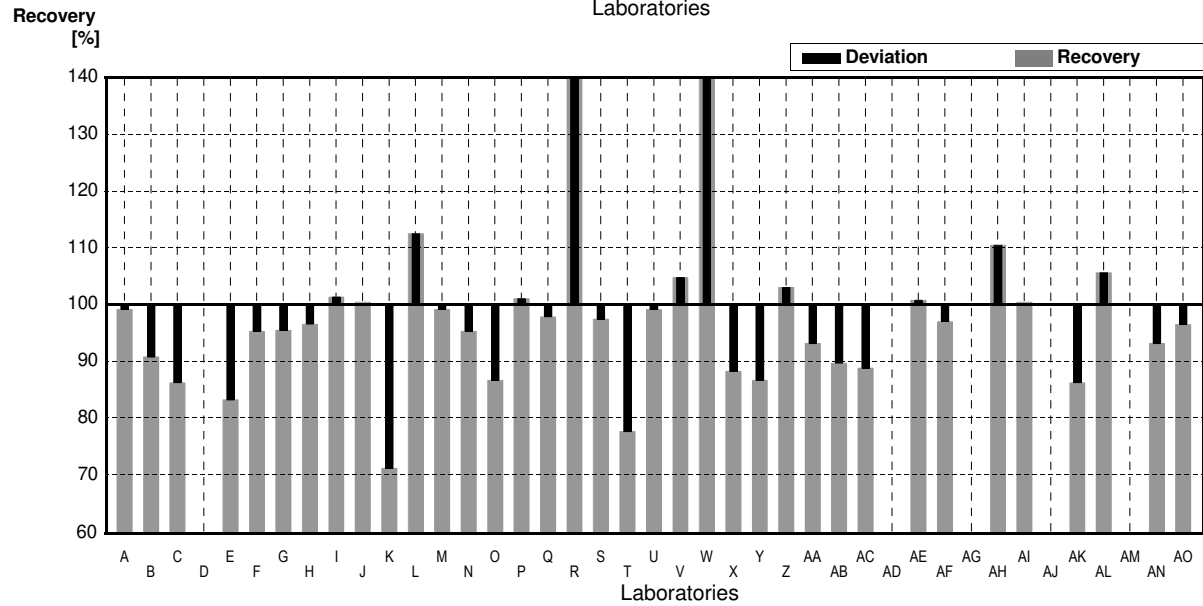
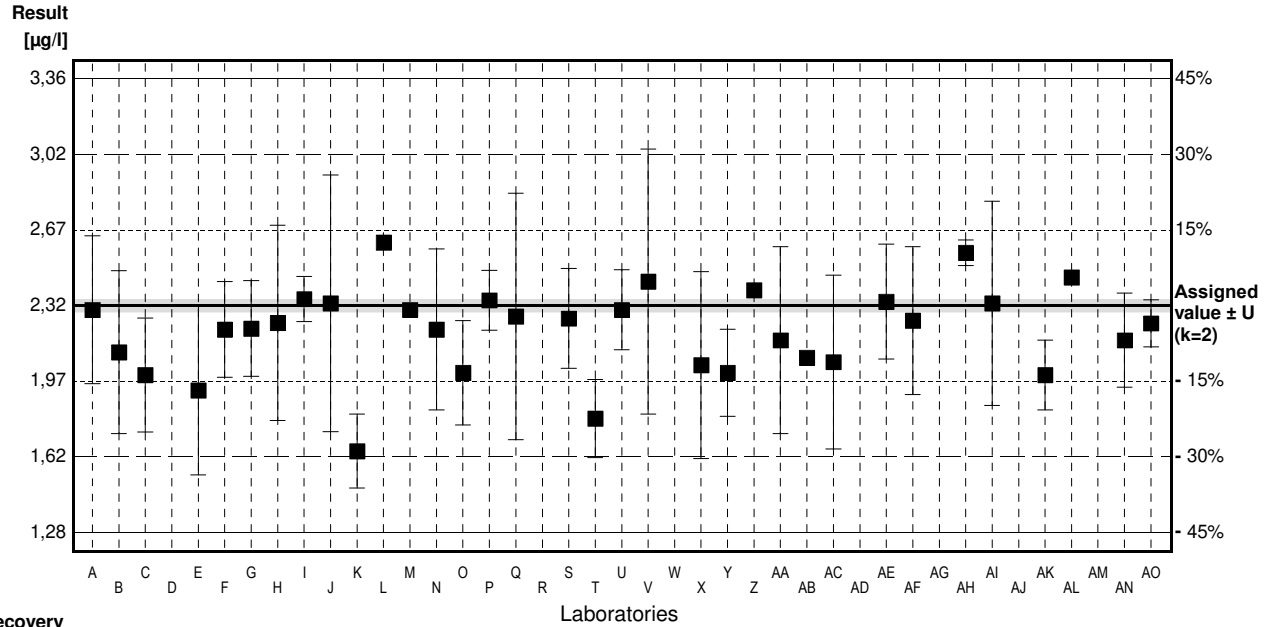
## Parameter Copper

Assigned value ± U (k=2) 2,32 µg/l ± 0,03 µg/l

IFA result ± U (k=2) 2,40 µg/l ± 0,17 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	2,30	0,34	µg/l	99%	-0,12
B	2,105	0,375	µg/l	91%	-1,27
C	2,00	0,263	µg/l	86%	-1,89
D			µg/l		
E	1,93	0,39	µg/l	83%	-2,30
F	2,21	0,22	µg/l	95%	-0,65
G	2,214	0,22	µg/l	95%	-0,63
H	2,24	0,45	µg/l	97%	-0,47
I	2,35	0,104	µg/l	101%	0,18
J	2,33	0,59	µg/l	100%	0,06
K	1,65 *	0,17	µg/l	71%	-3,96
L	2,61		µg/l	113%	1,71
M	2,30		µg/l	99%	-0,12
N	2,21	0,37	µg/l	95%	-0,65
O	2,01	0,24	µg/l	87%	-1,83
P	2,344	0,138	µg/l	101%	0,14
Q	2,27	0,567	µg/l	98%	-0,30
R	4,50 *	0,4	µg/l	194%	12,87
S	2,26	0,23	µg/l	97%	-0,35
T	1,80	0,18	µg/l	78%	-3,07
U	2,30	0,184	µg/l	99%	-0,12
V	2,43	0,61	µg/l	105%	0,65
W	5,65 *	0,12	µg/l	244%	19,66
X	2,046	0,430	µg/l	88%	-1,62
Y	2,01	0,20	µg/l	87%	-1,83
Z	2,39		µg/l	103%	0,41
AA	2,16	0,43	µg/l	93%	-0,94
AB	2,08		µg/l	90%	-1,42
AC	2,06	0,4	µg/l	89%	-1,54
AD			µg/l		
AE	2,3378	0,2649	µg/l	101%	0,11
AF	2,25	0,34	µg/l	97%	-0,41
AG			µg/l		
AH	2,563	0,0589	µg/l	110%	1,43
AI	2,33	0,47	µg/l	100%	0,06
AJ			µg/l		
AK	2,00	0,16	µg/l	86%	-1,89
AL	2,45		µg/l	106%	0,77
AM			µg/l		
AN	2,16	0,216	µg/l	93%	-0,94
AO	2,238	0,108	µg/l	96%	-0,48



	All results	Outliers excl.	Unit
Mean ± CI(99%)	2,36 ± 0,32	2,22 ± 0,09	µg/l
Recov. ± CI(99%)	101,9 ± 13,9	95,7 ± 3,7	%
SD between labs	0,71	0,18	µg/l
RSD between labs	30,0	8,1	%
n for calculation	36	33	

# Sample M177A

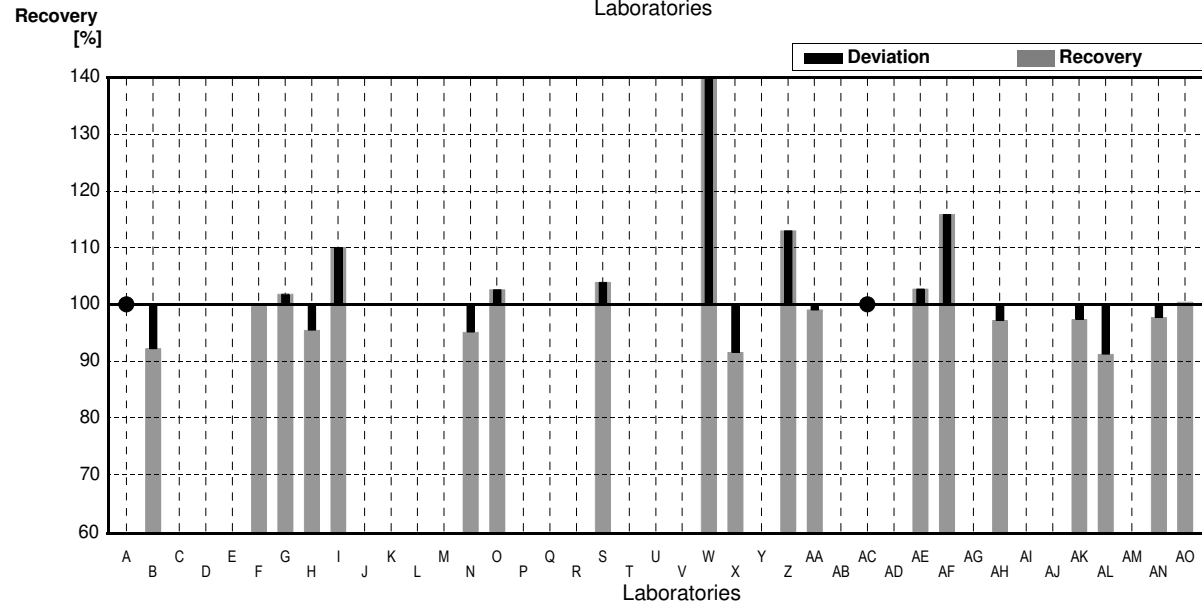
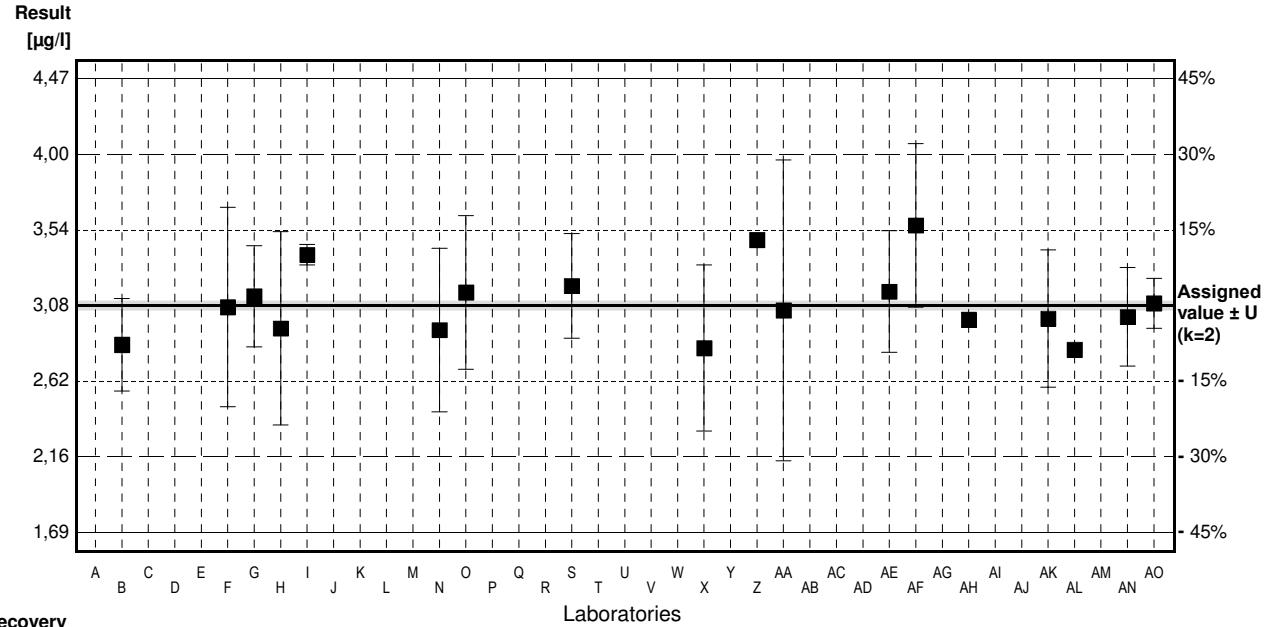
## Parameter Lithium

Assigned value ± U (k=2) 3,08 µg/l ± 0,03 µg/l

IFA result ± U (k=2) 3,21 µg/l ± 0,35 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	<10		µg/l	*	
B	2.840	0.283	µg/l	92%	-1.05
C			µg/l		
D			µg/l		
E			µg/l		
F	3.07	0.61	µg/l	100%	-0.04
G	3.136	0.31	µg/l	102%	0.25
H	2.94	0.59	µg/l	95%	-0.61
I	3.39	0.062	µg/l	110%	1.36
J			µg/l		
K			µg/l		
L			µg/l		
M			µg/l		
N	2.93	0.50	µg/l	95%	-0.66
O	3.16	0.47	µg/l	103%	0.35
P			µg/l		
Q			µg/l		
R			µg/l		
S	3.20	0.32	µg/l	104%	0.53
T			µg/l		
U			µg/l		
V			µg/l		
W	5.51 *	0.050	µg/l	179%	10.66
X	2.820	0.508	µg/l	92%	-1.14
Y			µg/l		
Z	3.48		µg/l	113%	1.76
AA	3.05	0.92	µg/l	99%	-0.13
AB			µg/l		
AC	<5	1	µg/l	*	
AD			µg/l		
AE	3.1649	0.3712	µg/l	103%	0.37
AF	3.57	0.5	µg/l	116%	2.15
AG			µg/l		
AH	2.993	0.0445	µg/l	97%	-0.38
AI			µg/l		
AJ			µg/l		
AK	3.00	0.42	µg/l	97%	-0.35
AL	2.81		µg/l	91%	-1.18
AM			µg/l		
AN	3.01	0.301	µg/l	98%	-0.31
AO	3.093	0.152	µg/l	100%	0.06



	All results	Outliers excl.	Unit
Mean ± CI(99%)	3,22 ± 0,39	3,09 ± 0,15	µg/l
Recov. ± CI(99%)	104,5 ± 12,7	100,4 ± 4,8	%
SD between labs	0,59	0,21	µg/l
RSD between labs	18,4	6,9	%
n for calculation	19	18	

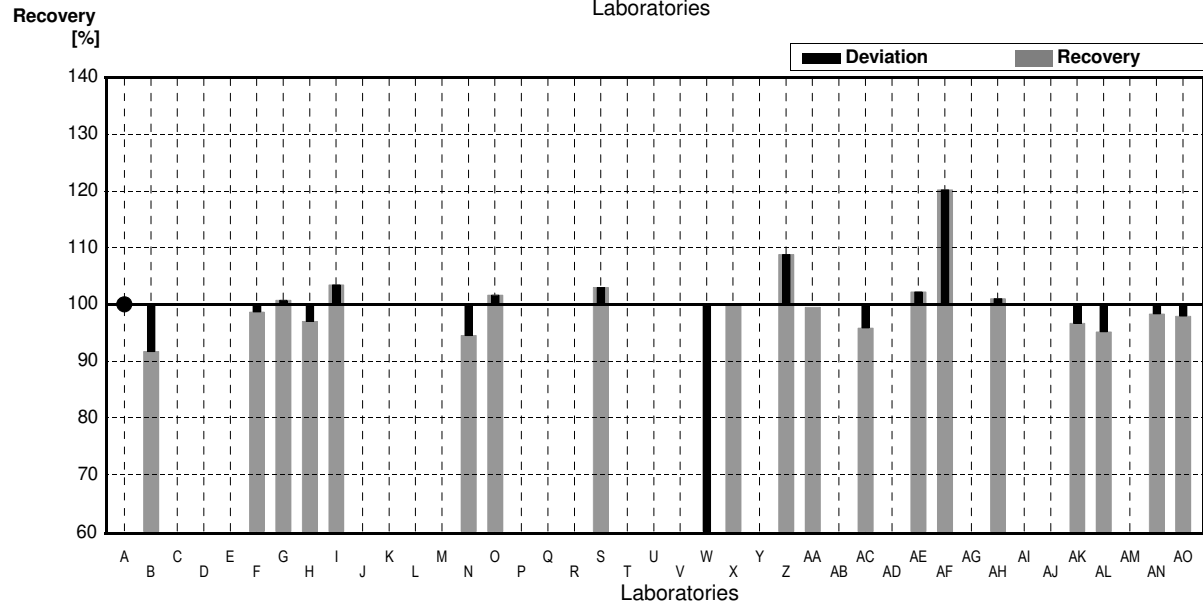
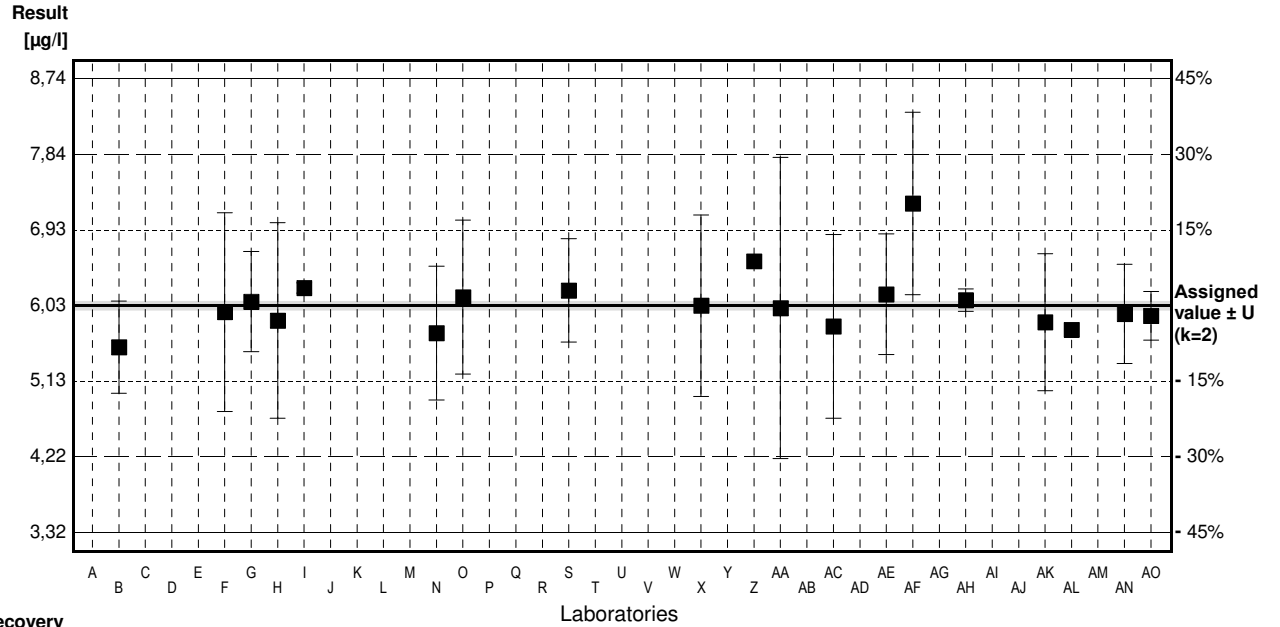
**Sample M177B**  
**Parameter Lithium**

Assigned value ± U (k=2) 6,03 µg/l ± 0,05 µg/l

IFA result ± U (k=2) 6,1 µg/l ± 0,5 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	<10		µg/l	•	
B	5.530	0.551	µg/l	92%	-1.12
C			µg/l		
D			µg/l		
E			µg/l		
F	5.95	1.19	µg/l	99%	-0.18
G	6.076	0.6	µg/l	101%	0.10
H	5.85	1.17	µg/l	97%	-0.40
I	6.24	0.060	µg/l	103%	0.47
J			µg/l		
K			µg/l		
L			µg/l		
M			µg/l		
N	5.7	0.8	µg/l	95%	-0.74
O	6.13	0.92	µg/l	102%	0.22
P			µg/l		
Q			µg/l		
R			µg/l		
S	6.21	0.62	µg/l	103%	0.40
T			µg/l		
U			µg/l		
V			µg/l		
W	2.85 *	0.025	µg/l	47%	-7.13
X	6.028	1.085	µg/l	100%	0.00
Y			µg/l		
Z	6.56		µg/l	109%	1.19
AA	6.00	1.80	µg/l	100%	-0.07
AB			µg/l		
AC	5.78	1.1	µg/l	96%	-0.56
AD			µg/l		
AE	6.1648	0.7231	µg/l	102%	0.30
AF	7.25 *	1.09	µg/l	120%	2.73
AG			µg/l		
AH	6.0939	0.133	µg/l	101%	0.14
AI			µg/l		
AJ			µg/l		
AK	5.83	0.82	µg/l	97%	-0.45
AL	5.74		µg/l	95%	-0.65
AM			µg/l		
AN	5.93	0.593	µg/l	98%	-0.22
AO	5.907	0.290	µg/l	98%	-0.28



	All results	Outliers excl.	Unit
Mean ± CI(99%)	5,89 ± 0,51	5,98 ± 0,16	µg/l
Recov. ± CI(99%)	97,7 ± 8,5	99,2 ± 2,7	%
SD between labs	0,80	0,24	µg/l
RSD between labs	13,6	4,0	%
n for calculation	20	18	

# Sample M177A

## Parameter Manganese

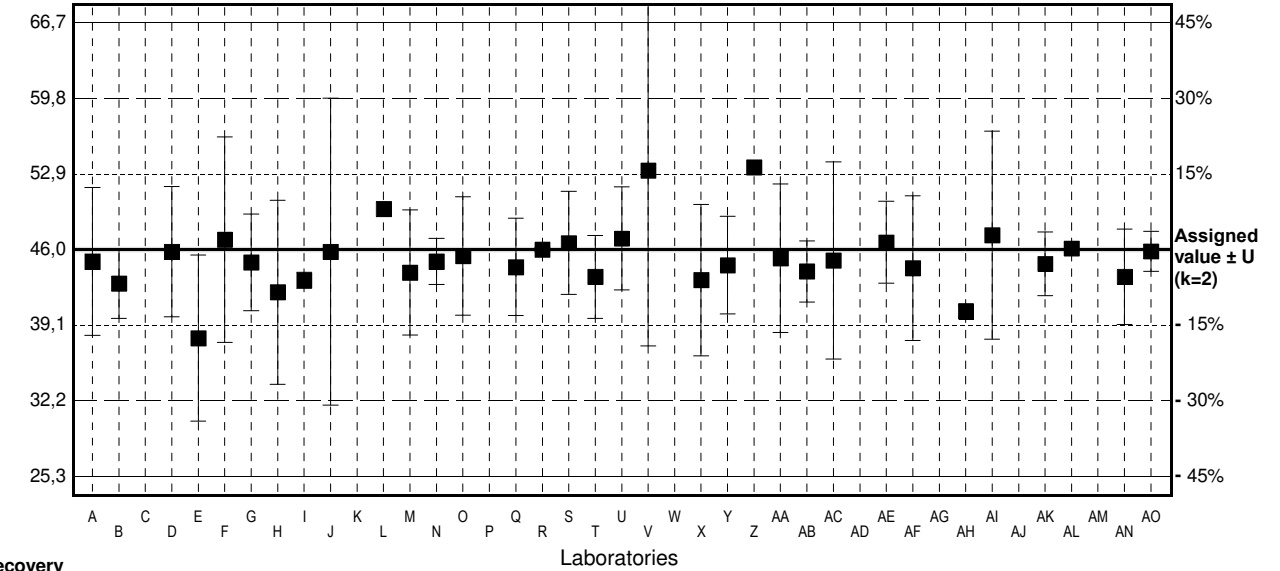
Assigned value ± U (k=2) 46,0 µg/l ± 0,2 µg/l

IFA result ± U (k=2) 48,6 µg/l ± 3,1 µg/l

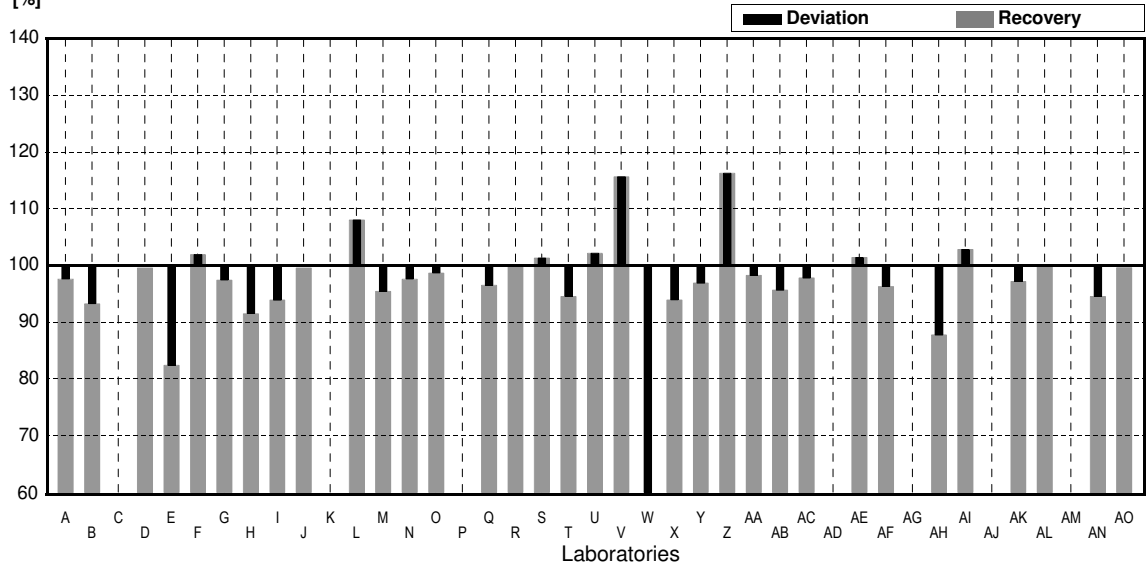
Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	44.9	6.74	µg/l	98%	-0.47
B	42.9	3.18	µg/l	93%	-1.32
C			µg/l		
D	45.8	5.95	µg/l	100%	-0.09
E	37.90 *	7.58	µg/l	82%	-3.45
F	46.9	9.38	µg/l	102%	0.38
G	44.82	4.4	µg/l	97%	-0.50
H	42.1	8.4	µg/l	92%	-1.66
I	43.2	0.731	µg/l	94%	-1.19
J	45.8	14	µg/l	100%	-0.09
K			µg/l		
L	49.7		µg/l	108%	1.58
M	43.90	5.7	µg/l	95%	-0.90
N	44.9	2.1	µg/l	98%	-0.47
O	45.4	5.4	µg/l	99%	-0.26
P			µg/l		
Q	44.4	4.44	µg/l	97%	-0.68
R	46.0	0.2	µg/l	100%	0.00
S	46.6	4.7	µg/l	101%	0.26
T	43.5	3.79	µg/l	95%	-1.07
U	47.0	4.70	µg/l	102%	0.43
V	53.2 *	16.0	µg/l	116%	3.07
W	18.2 *	0.058	µg/l	40%	-11.85
X	43.21	6.91	µg/l	94%	-1.19
Y	44.57	4.46	µg/l	97%	-0.61
Z	53.5 *		µg/l	116%	3.20
AA	45.2	6.78	µg/l	98%	-0.34
AB	44.0	2.79	µg/l	96%	-0.85
AC	45.0	9	µg/l	98%	-0.43
AD			µg/l		
AE	46.6494	3.7366	µg/l	101%	0.28
AF	44.3	6.6	µg/l	96%	-0.72
AG			µg/l		
AH	40.373	0.526	µg/l	88%	-2.40
AI	47.3	9.5	µg/l	103%	0.55
AJ			µg/l		
AK	44.7	2.9	µg/l	97%	-0.55
AL	46.1		µg/l	100%	0.04
AM			µg/l		
AN	43.5	4.35	µg/l	95%	-1.07
AO	45.831	1.815	µg/l	100%	-0.07

Result  
[µg/l]



Recovery  
[%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	44,5 ± 2,6	45,0 ± 0,9	µg/l
Recov. ± CI(99%)	96,6 ± 5,6	97,7 ± 2,0	%
SD between labs	5,5	1,8	µg/l
RSD between labs	12,3	4,0	%
n for calculation	34	30	

# Sample M177B

## Parameter Manganese

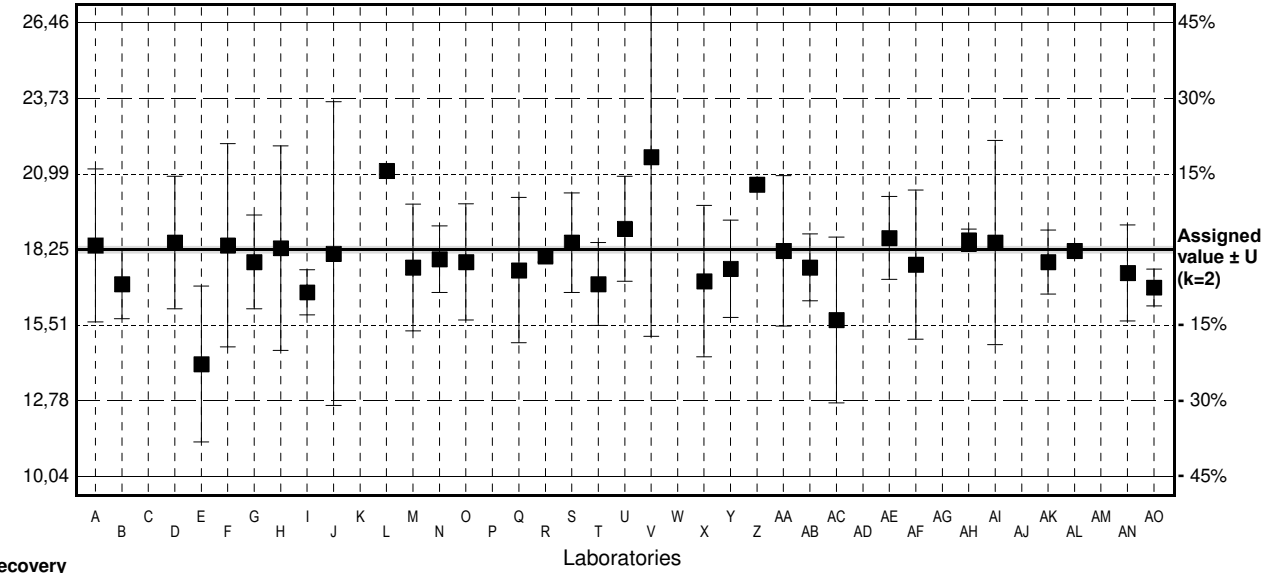
Assigned value ± U (k=2) 18,25 µg/l ± 0,12 µg/l

IFA result ± U (k=2) 19,2 µg/l ± 1,2 µg/l

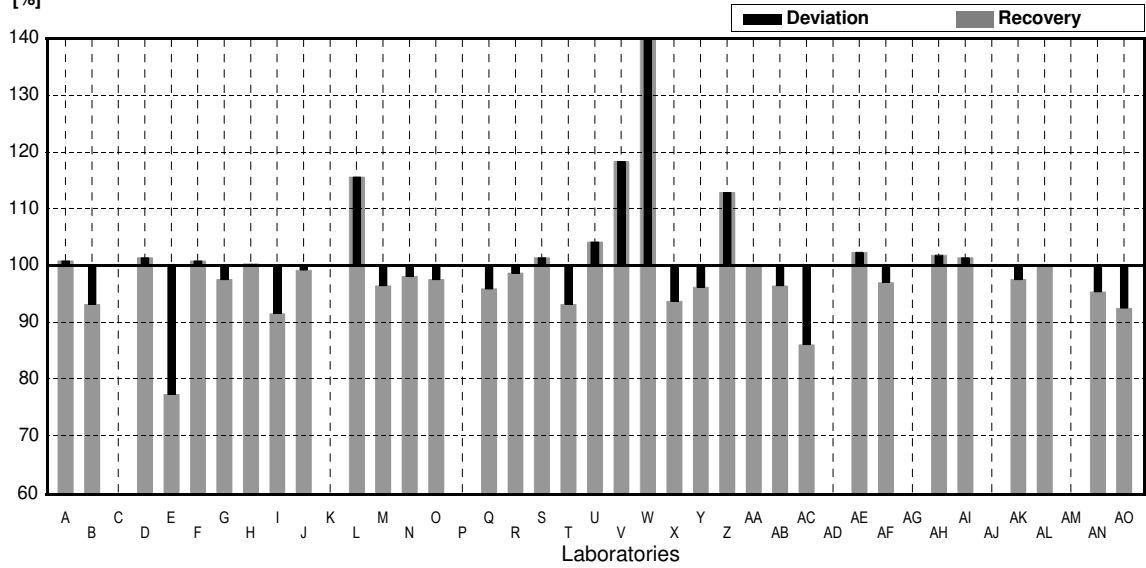
Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	18.4	2,77	µg/l	101%	0.16
B	17.0	1,26	µg/l	93%	-1.34
C			µg/l		
D	18.5	2,40	µg/l	101%	0.27
E	14.10 *	2,82	µg/l	77%	-4.46
F	18.4	3,68	µg/l	101%	0.16
G	17.8	1,7	µg/l	98%	-0.48
H	18.3	3,7	µg/l	100%	0.05
I	16.7	0,821	µg/l	92%	-1.67
J	18.1	5,5	µg/l	99%	-0.16
K			µg/l		
L			µg/l		
M	21.1 *		µg/l	116%	3.06
N	17.60	2,29	µg/l	96%	-0.70
O	17.9	1,2	µg/l	98%	-0.38
P	17.8	2,1	µg/l	98%	-0.48
Q			µg/l		
R	17.5	2,63	µg/l	96%	-0.81
S	18.0	0,2	µg/l	99%	-0.27
T	18.5	1,8	µg/l	101%	0.27
U	17.0	1,5	µg/l	93%	-1.34
V	19.0	1,90	µg/l	104%	0.81
W	21.6 *	6,5	µg/l	118%	3.60
X	45.7 *	0,67	µg/l	250%	29.49
Y	17.10	2,74	µg/l	94%	-1.24
Z	17.55	1,76	µg/l	96%	-0.75
AA	20.6 *		µg/l	113%	2.52
AB	18.2	2,73	µg/l	100%	-0.05
AC	17.6	1,21	µg/l	96%	-0.70
AD	15.7	3	µg/l	86%	-2.74
AE			µg/l		
AF	18.6691	1.4954	µg/l	102%	0.45
AG	17.7	2,7	µg/l	97%	-0.59
AH			µg/l		
AI	18.586	0,406	µg/l	102%	0.36
AJ	18.5	3,7	µg/l	101%	0.27
AK			µg/l		
AL	17.8	1,16	µg/l	98%	-0.48
AM	18.2		µg/l	100%	-0.05
AN			µg/l		
AO	17.4	1,74	µg/l	95%	-0.91
	16.876	0,668	µg/l	92%	-1.48

Result [µg/l]



Recovery [%]



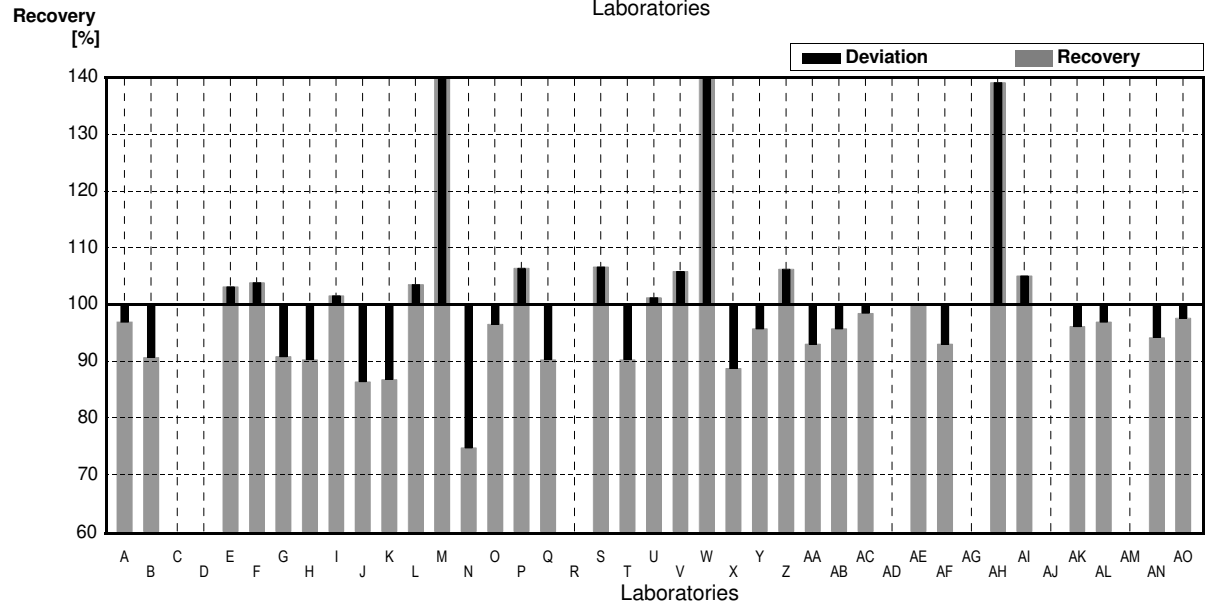
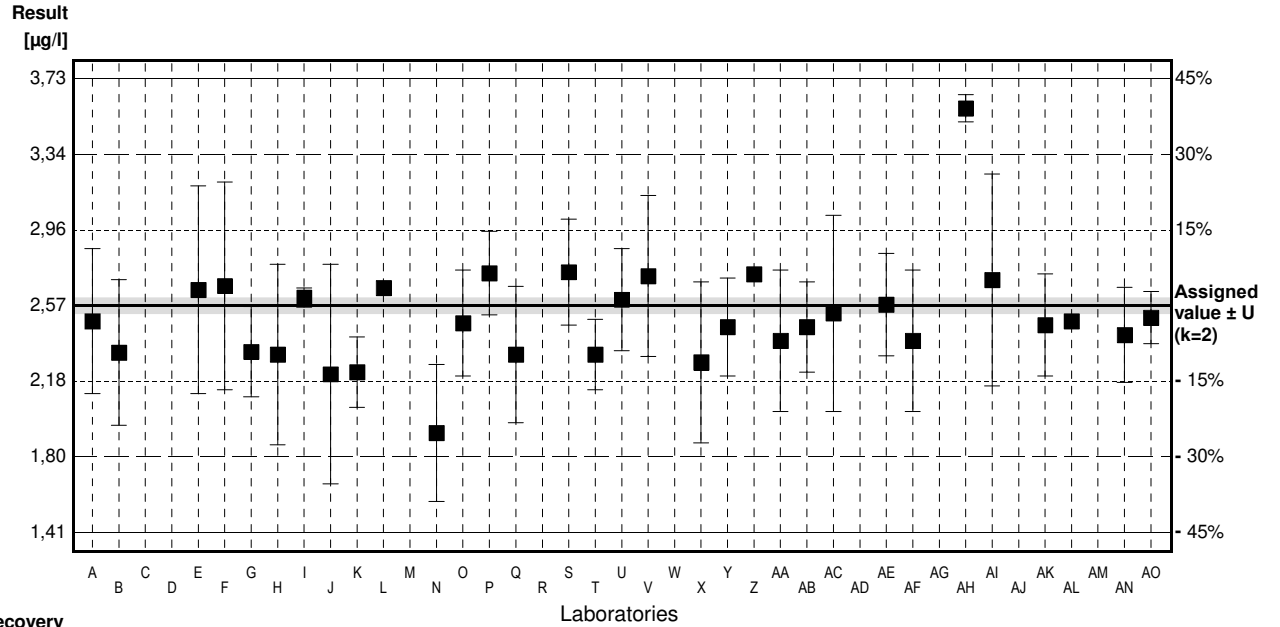
	All results	Outliers excl.	Unit
Mean ± CI(99%)	18,81 ± 2,32	17,81 ± 0,37	µg/l
Recov. ± CI(99%)	103,1 ± 12,7	97,6 ± 2,0	%
SD between labs	4,94	0,72	µg/l
RSD between labs	26,3	4,0	%
n for calculation	34	29	

**Sample M177A**  
**Parameter Nickel**

Assigned value ± U (k=2) 2,57 µg/l ± 0,04 µg/l  
 IFA result ± U (k=2) 2,58 µg/l ± 0,13 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	2.49	0.37	µg/l	97%	-0.49
B	2.330	0.371	µg/l	91%	-1.46
C			µg/l		
D			µg/l		
E	2.65	0.53	µg/l	103%	0.49
F	2.67	0.53	µg/l	104%	0.61
G	2.334	0.23	µg/l	91%	-1.43
H	2.32	0.46	µg/l	90%	-1.52
I	2.61	0.0492	µg/l	102%	0.24
J	2.22	0.56	µg/l	86%	-2.13
K	2.23	0.18	µg/l	87%	-2.07
L	2.66		µg/l	104%	0.55
M	3.90 *	0.468	µg/l	152%	8.09
N	1.92	0.35	µg/l	75%	-3.95
O	2.48	0.27	µg/l	96%	-0.55
P	2.735	0.213	µg/l	106%	1.00
Q	2.32	0.348	µg/l	90%	-1.52
R			µg/l		
S	2.74	0.27	µg/l	107%	1.03
T	2.32	0.18	µg/l	90%	-1.52
U	2.60	0.260	µg/l	101%	0.18
V	2.72	0.41	µg/l	106%	0.91
W	4.55 *	0.32	µg/l	177%	12.04
X	2.280	0.410	µg/l	89%	-1.76
Y	2.46	0.25	µg/l	96%	-0.67
Z	2.73		µg/l	106%	0.97
AA	2.39	0.36	µg/l	93%	-1.09
AB	2.46	0.23	µg/l	96%	-0.67
AC	2.53	0.5	µg/l	98%	-0.24
AD			µg/l		
AE	2.5742	0.2615	µg/l	100%	0.03
AF	2.39	0.36	µg/l	93%	-1.09
AG			µg/l		
AH	3.575 *	0.0698	µg/l	139%	6.11
AI	2.70	0.54	µg/l	105%	0.79
AJ			µg/l		
AK	2.47	0.26	µg/l	96%	-0.61
AL	2.49		µg/l	97%	-0.49
AM			µg/l		
AN	2.42	0.242	µg/l	94%	-0.91
AO	2.508	0.133	µg/l	98%	-0.38



	All results	Outliers excl.	Unit
Mean ± CI(99%)	2,61 ± 0,23	2,48 ± 0,09	µg/l
Recov. ± CI(99%)	101,6 ± 9,0	96,3 ± 3,6	%
SD between labs	0,49	0,19	µg/l
RSD between labs	18,8	7,6	%
n for calculation	34	31	

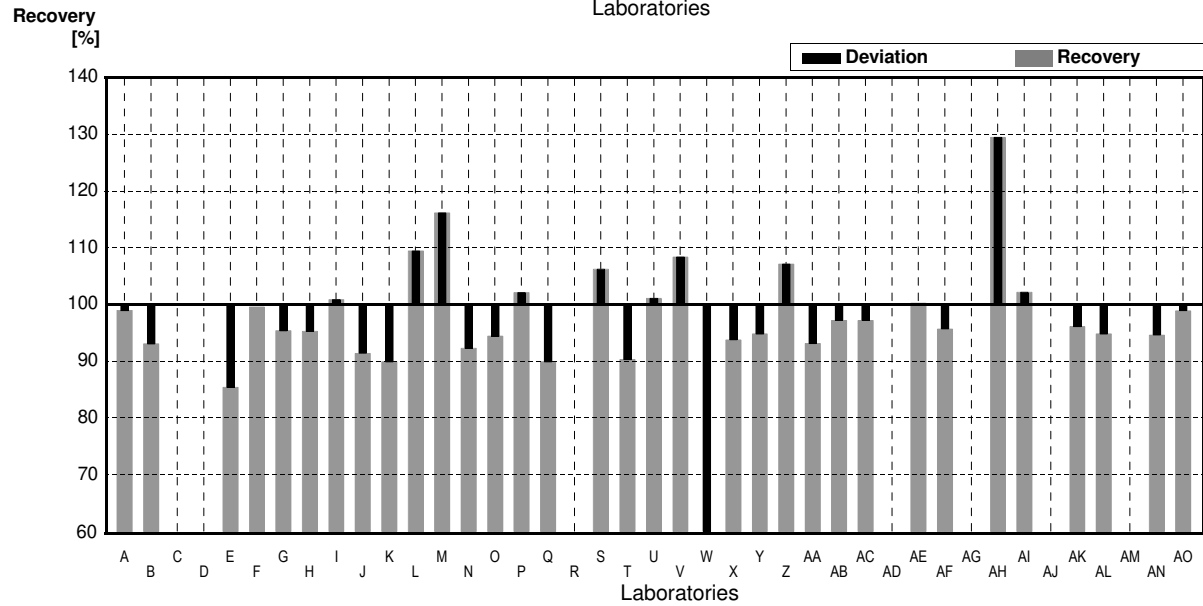
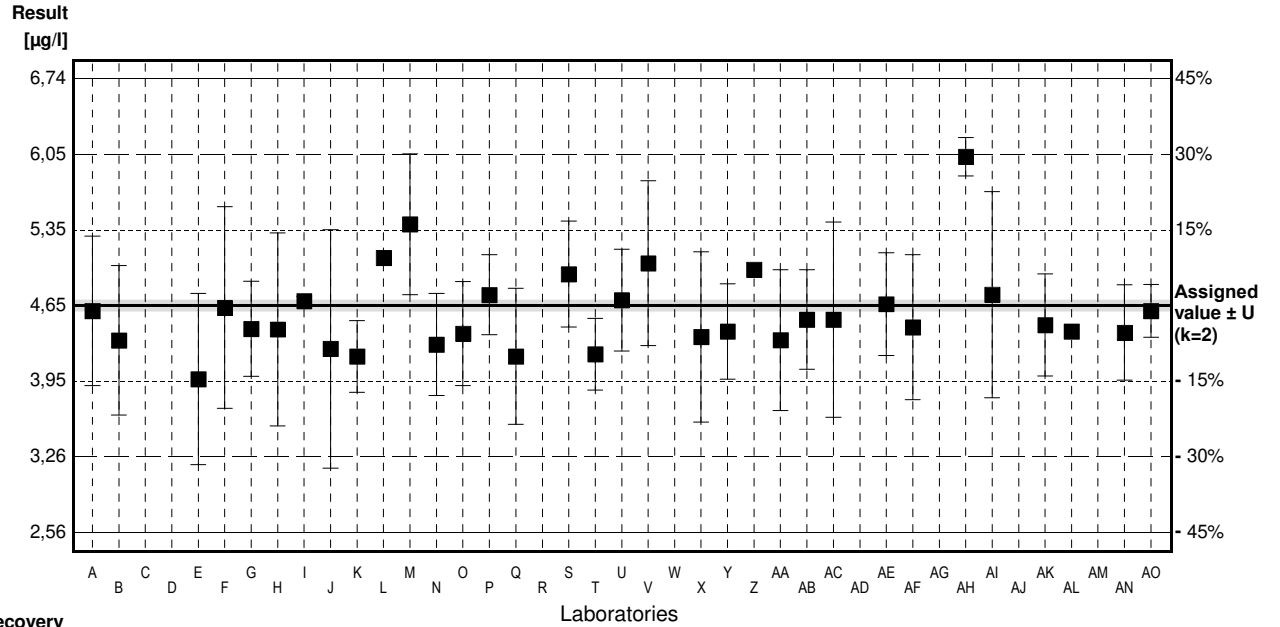
**Sample M177B**  
**Parameter Nickel**

Assigned value ± U (k=2) 4,65 µg/l ± 0,05 µg/l

IFA result ± U (k=2) 4,73 µg/l ± 0,21 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	4.60	0.69	µg/l	99%	-0.17
B	4.328	0.689	µg/l	93%	-1.08
C			µg/l		
D			µg/l		
E	3.97	0.79	µg/l	85%	-2.28
F	4.63	0.93	µg/l	100%	-0.07
G	4.435	0.44	µg/l	95%	-0.72
H	4.43	0.89	µg/l	95%	-0.74
I	4.69	0.0458	µg/l	101%	0.13
J	4.25	1.1	µg/l	91%	-1.34
K	4.18	0.33	µg/l	90%	-1.58
L	5.09		µg/l	109%	1.48
M	5.40	*	0.65	116%	2.52
N	4.29	0.47	µg/l	92%	-1.21
O	4.39	0.48	µg/l	94%	-0.87
P	4.748	0.369	µg/l	102%	0.33
Q	4.18	0.627	µg/l	90%	-1.58
R			µg/l		
S	4.94	0.49	µg/l	106%	0.97
T	4.20	0.33	µg/l	90%	-1.51
U	4.70	0.47	µg/l	101%	0.17
V	5.04	0.76	µg/l	108%	1.31
W	2.41	*	0.071	52%	-7.53
X	4.360	0.785	µg/l	94%	-0.97
Y	4.41	0.44	µg/l	95%	-0.81
Z	4.98		µg/l	107%	1.11
AA	4.33	0.65	µg/l	93%	-1.08
AB	4.52	0.46	µg/l	97%	-0.44
AC	4.52	0.9	µg/l	97%	-0.44
AD			µg/l		
AE	4.6622	0.4737	µg/l	100%	0.04
AF	4.45	0.67	µg/l	96%	-0.67
AG			µg/l		
AH	6.0217	*	0.177	129%	4.61
AI	4.75	0.95	µg/l	102%	0.34
AJ			µg/l		
AK	4.47	0.47	µg/l	96%	-0.60
AL	4.41		µg/l	95%	-0.81
AM			µg/l		
AN	4.40	0.440	µg/l	95%	-0.84
AO	4.599	0.244	µg/l	99%	-0.17



	All results	Outliers excl.	Unit
Mean ± CI(99%)	4,52 ± 0,25	4,51 ± 0,13	µg/l
Recov. ± CI(99%)	97,3 ± 5,5	97,1 ± 2,8	%
SD between labs	0,54	0,27	µg/l
RSD between labs	11,9	5,9	%
n for calculation	34	31	

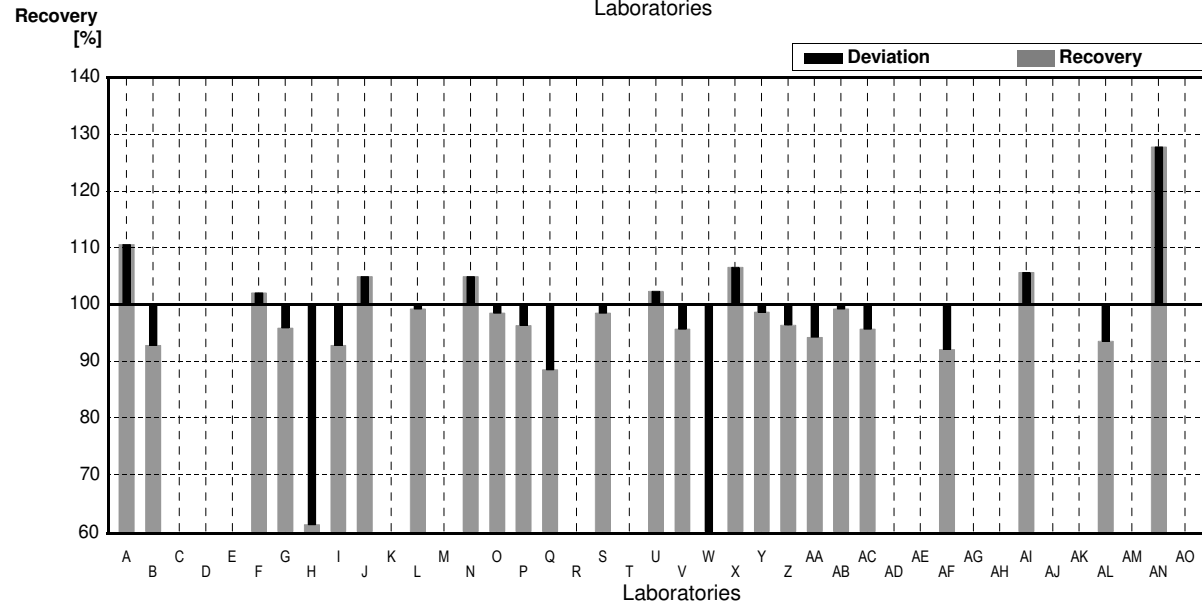
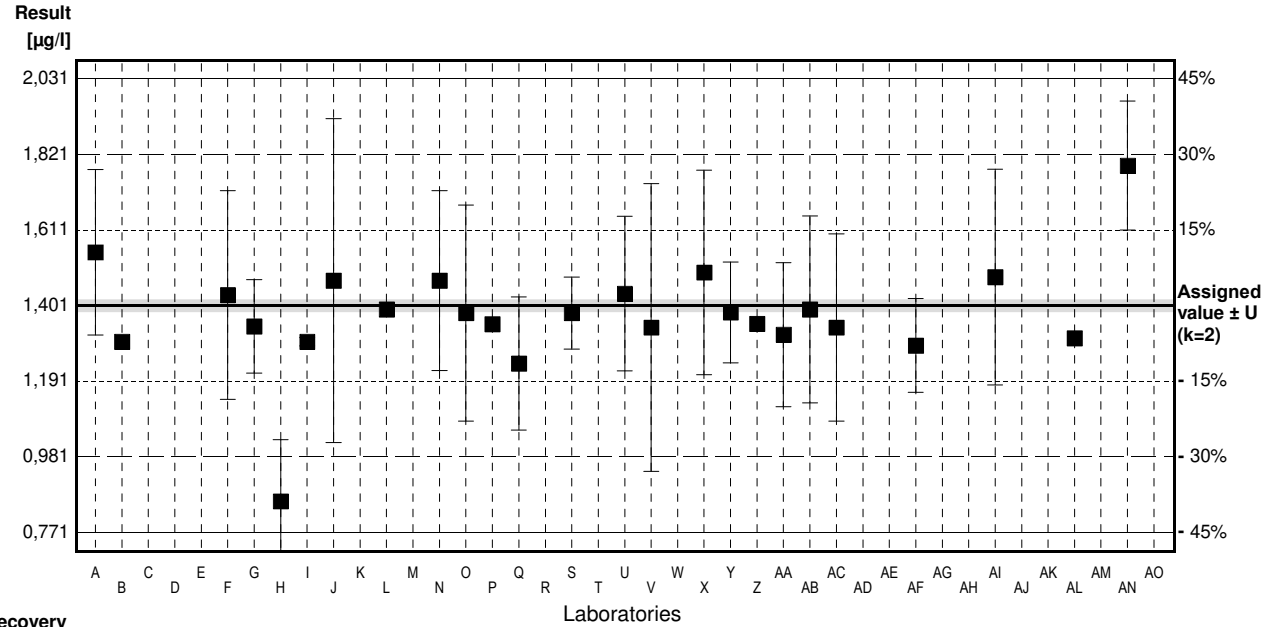
**Sample M177A**  
**Parameter Mercury**

Assigned value ± U (k=2) 1,401 µg/l ± 0,016 µg/l

IFA result ± U (k=2) 1,45 µg/l ± 0,24 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	1,549	0,23	µg/l	111%	0,96
B	1,300		µg/l	93%	-0,66
C			µg/l		
D			µg/l		
E			µg/l		
F	1,43	0,29	µg/l	102%	0,19
G	1,343	0,13	µg/l	96%	-0,38
H	0,857 *	0,171	µg/l	61%	-3,53
I	1,30	0,0115	µg/l	93%	-0,66
J	1,47	0,45	µg/l	105%	0,45
K			µg/l		
L	1,39		µg/l	99%	-0,07
M			µg/l		
N	1,47	0,25	µg/l	105%	0,45
O	1,38	0,30	µg/l	99%	-0,14
P	1,3493		µg/l	96%	-0,34
Q	1,24	0,185	µg/l	89%	-1,04
R			µg/l		
S	1,38	0,10	µg/l	99%	-0,14
T			µg/l		
U	1,434	0,215	µg/l	102%	0,21
V	1,34	0,40	µg/l	96%	-0,40
W	0,422 *	0,008	µg/l	30%	-6,35
X	1,493	0,284	µg/l	107%	0,60
Y	1,382	0,14	µg/l	99%	-0,12
Z	1,35		µg/l	96%	-0,33
AA	1,32	0,20	µg/l	94%	-0,53
AB	1,39	0,26	µg/l	99%	-0,07
AC	1,34	0,26	µg/l	96%	-0,40
AD			µg/l		
AE			µg/l		
AF	1,29	0,13	µg/l	92%	-0,72
AG			µg/l		
AH			µg/l		
AI	1,48	0,30	µg/l	106%	0,51
AJ			µg/l		
AK			µg/l		
AL	1,31		µg/l	94%	-0,59
AM			µg/l		
AN	1,79 *	0,179	µg/l	128%	2,52
AO			µg/l		



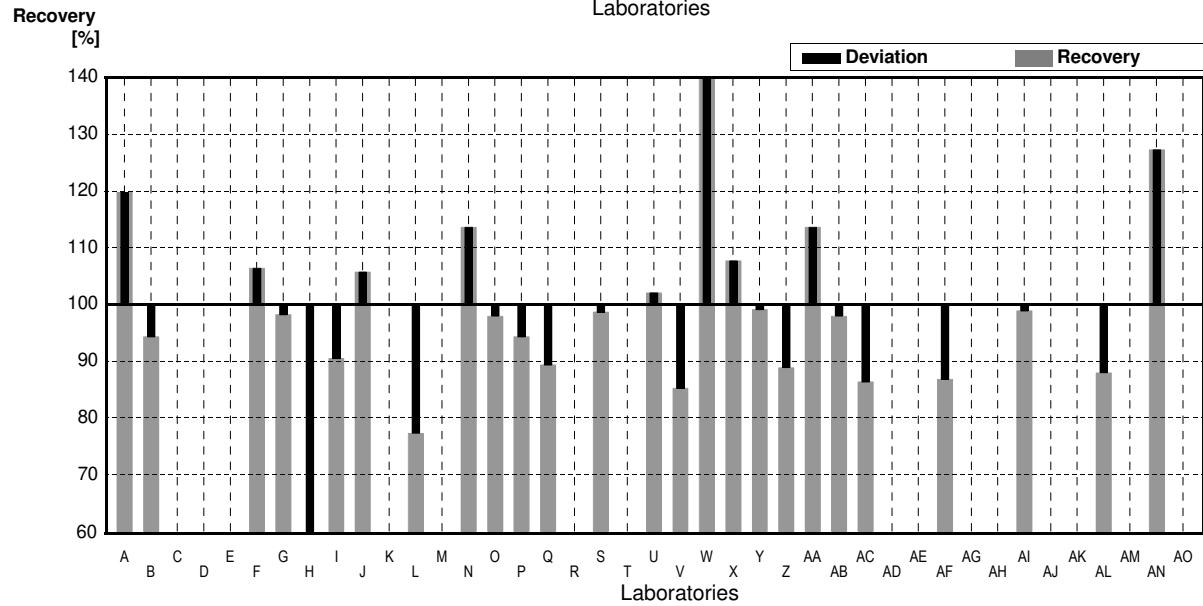
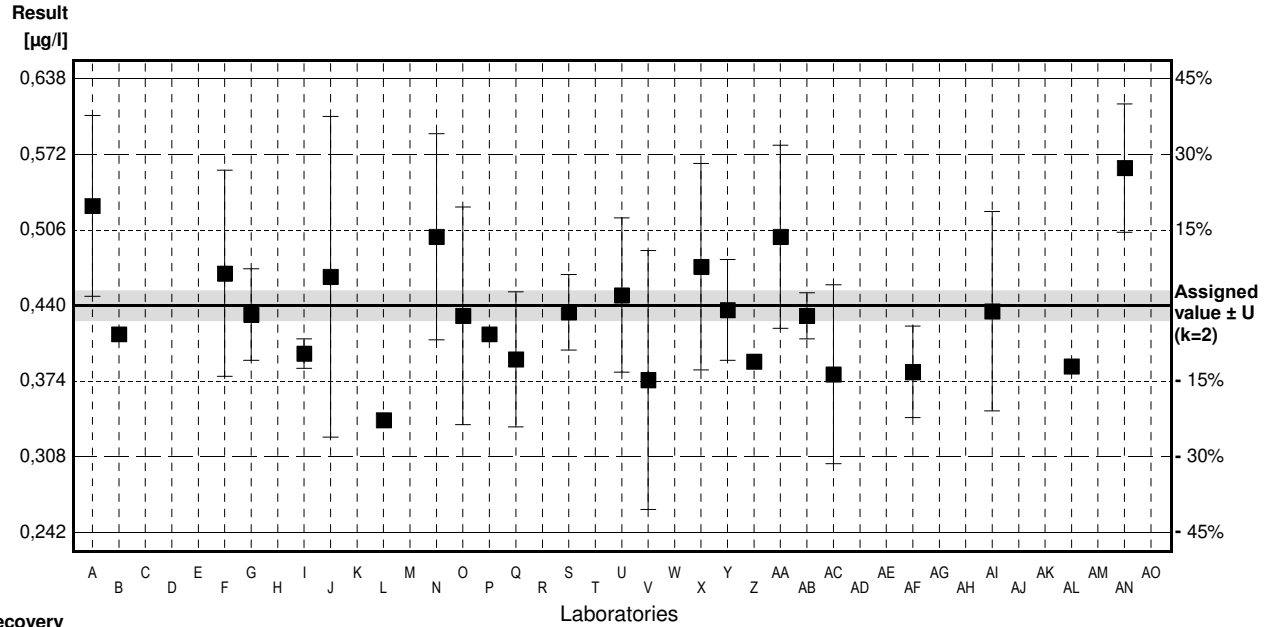
	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,338 ± 0,131	1,380 ± 0,045	µg/l
Recov. ± CI(99%)	95,5 ± 9,4	98,5 ± 3,2	%
SD between labs	0,240	0,076	µg/l
RSD between labs	18,0	5,5	%
n for calculation	26	23	

**Sample M177B**  
**Parameter Mercury**

Assigned value ± U (k=2) 0,440 µg/l ± 0,013 µg/l  
IFA result ± U (k=2) 0,380 µg/l ± 0,062 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	0.527	0.079	µg/l	120%	1.80
B	0.415		µg/l	94%	-0.52
C			µg/l		
D			µg/l		
E			µg/l		
F	0.468	0.09	µg/l	106%	0.58
G	0.432	0.04	µg/l	98%	-0.17
H	0.238 *	0.048	µg/l	54%	-4.17
I	0.398	0.0128	µg/l	90%	-0.87
J	0.465	0.14	µg/l	106%	0.52
K			µg/l		
L	0.340		µg/l	77%	-2.07
M			µg/l		
N	0.50	0.09	µg/l	114%	1.24
O	0.431	0.095	µg/l	98%	-0.19
P	0.415		µg/l	94%	-0.52
Q	0.393	0.0590	µg/l	89%	-0.97
R			µg/l		
S	0.434	0.033	µg/l	99%	-0.12
T			µg/l		
U	0.449	0.0673	µg/l	102%	0.19
V	0.375	0.113	µg/l	85%	-1.34
W	1.33 *	0.024	µg/l	302%	18.39
X	0.4739	0.0900	µg/l	108%	0.70
Y	0.4361	0.044	µg/l	99%	-0.08
Z	0.391		µg/l	89%	-1.01
AA	0.50	0.08	µg/l	114%	1.24
AB	0.431	0.02	µg/l	98%	-0.19
AC	0.380	0.078	µg/l	86%	-1.24
AD			µg/l		
AE			µg/l		
AF	0.382	0.04	µg/l	87%	-1.20
AG			µg/l		
AH			µg/l		
AI	0.435	0.087	µg/l	99%	-0.10
AJ			µg/l		
AK			µg/l		
AL	0.387		µg/l	88%	-1.10
AM			µg/l		
AN	0.56	0.056	µg/l	127%	2.48
AO			µg/l		



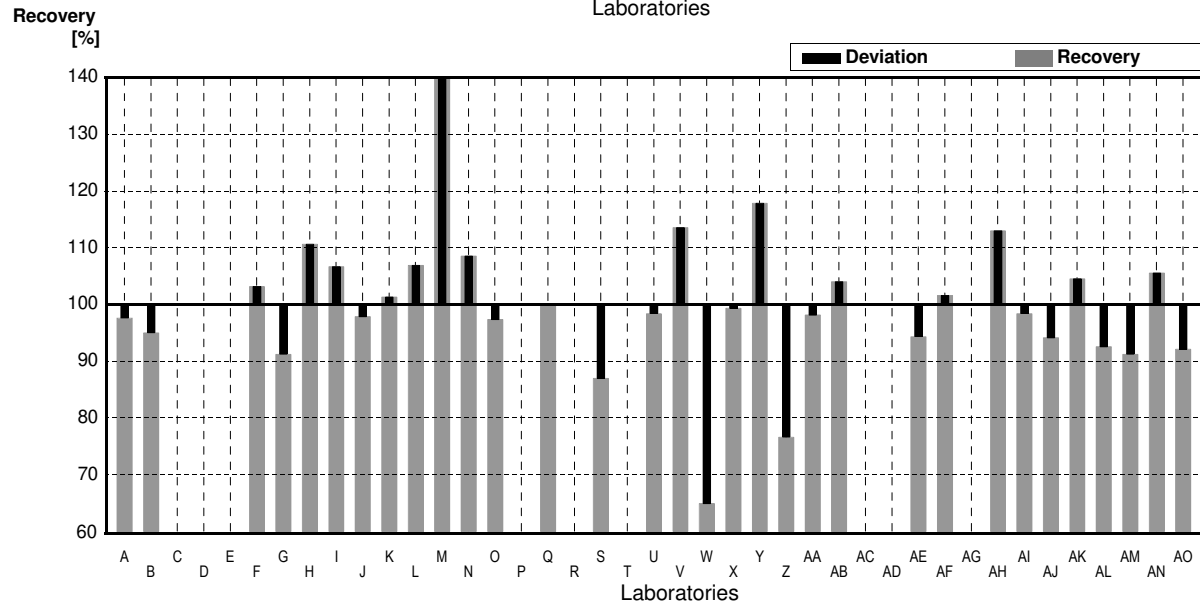
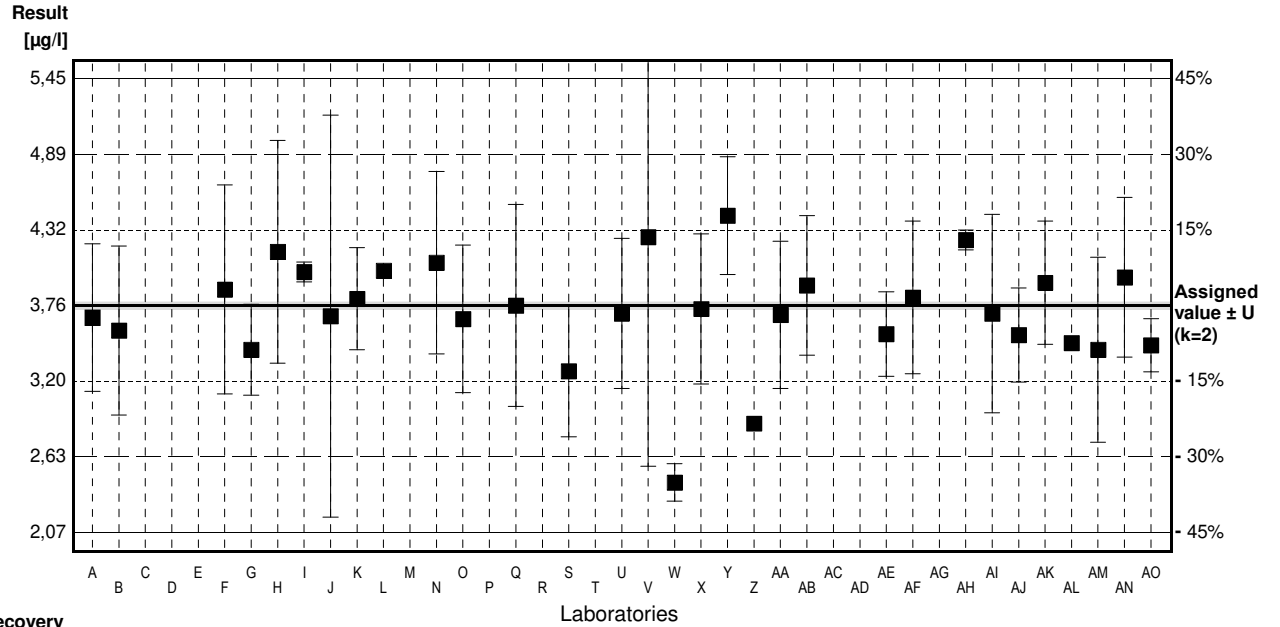
	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,461 ± 0,103	0,434 ± 0,030	µg/l
Recov. ± CI(99%)	104,8 ± 23,4	98,7 ± 6,8	%
SD between labs	0,188	0,052	µg/l
RSD between labs	40,8	12,0	%
n for calculation	26	24	

**Sample M177A**  
**Parameter Selenium**

Assigned value ± U (k=2) 3,76 µg/l ± 0,03 µg/l  
IFA result ± U (k=2) 3,62 µg/l ± 0,48 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	3,67	0,55	µg/l	98%	-0,28
B	3,573	0,631	µg/l	95%	-0,59
C			µg/l		
D			µg/l		
E			µg/l		
F	3,88	0,78	µg/l	103%	0,38
G	3,430	0,34	µg/l	91%	-1,03
H	4,16	0,83	µg/l	111%	1,25
I	4,01	0,0750	µg/l	107%	0,78
J	3,68	1,5	µg/l	98%	-0,25
K	3,81	0,38	µg/l	101%	0,16
L	4,02		µg/l	107%	0,81
M	9,80 *		µg/l	261%	18,90
N	4,08	0,68	µg/l	109%	1,00
O	3,66	0,55	µg/l	97%	-0,31
P			µg/l		
Q	3,76	0,753	µg/l	100%	0,00
R			µg/l		
S	3,27	0,49	µg/l	87%	-1,53
T			µg/l		
U	3,70	0,56	µg/l	98%	-0,19
V	4,27	1,71	µg/l	114%	1,60
W	2,44 *	0,14	µg/l	65%	-4,13
X	3,734	0,560	µg/l	99%	-0,08
Y	4,43	0,44	µg/l	118%	2,10
Z	2,88		µg/l	77%	-2,75
AA	3,69	0,55	µg/l	98%	-0,22
AB	3,91	0,52	µg/l	104%	0,47
AC			µg/l		
AD			µg/l		
AE	3,5466	0,3146	µg/l	94%	-0,67
AF	3,82	0,57	µg/l	102%	0,19
AG			µg/l		
AH	4,249	0,0737	µg/l	113%	1,53
AI	3,70	0,74	µg/l	98%	-0,19
AJ	3,54	0,35	µg/l	94%	-0,69
AK	3,93	0,46	µg/l	105%	0,53
AL	3,48		µg/l	93%	-0,88
AM	3,43	0,69	µg/l	91%	-1,03
AN	3,97	0,596	µg/l	106%	0,66
AO	3,463	0,198	µg/l	92%	-0,93



	All results	Outliers excl.	Unit
Mean ± CI(99%)	3,91 ± 0,56	3,76 ± 0,16	µg/l
Recov. ± CI(99%)	103,9 ± 14,8	100,0 ± 4,3	%
SD between labs	1,14	0,32	µg/l
RSD between labs	29,3	8,6	%
n for calculation	32	30	

**Sample M177B**  
**Parameter Selenium**

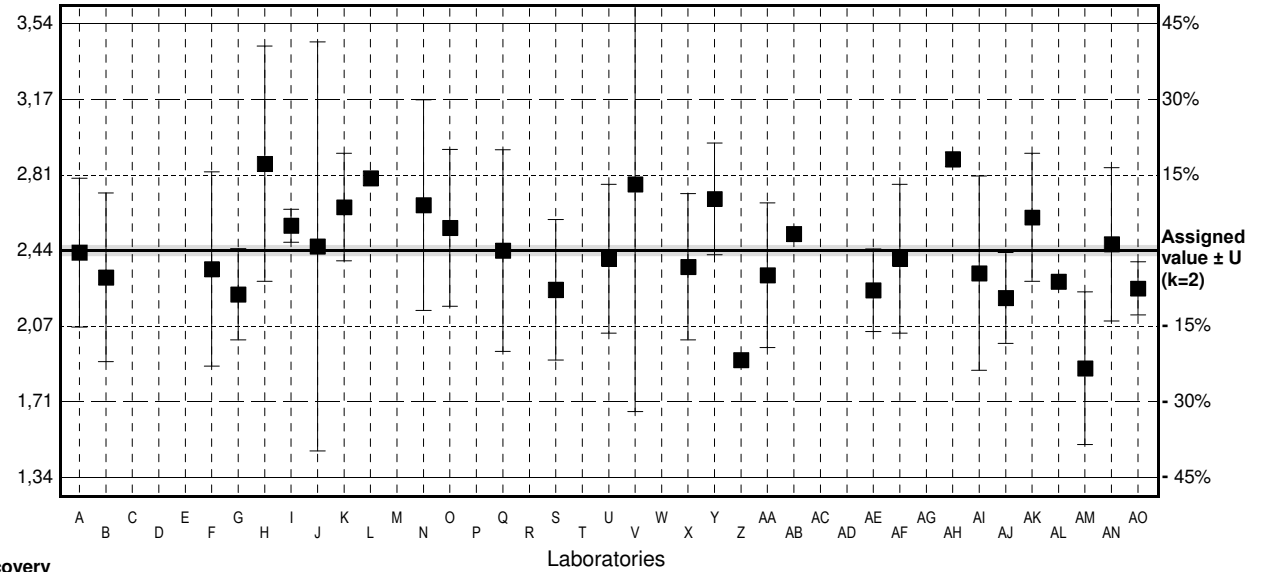
Assigned value ± U (k=2) 2,44 µg/l ± 0,02 µg/l  
IFA result ± U (k=2) 2,39 µg/l ± 0,31 µg/l

Stability test µg/l

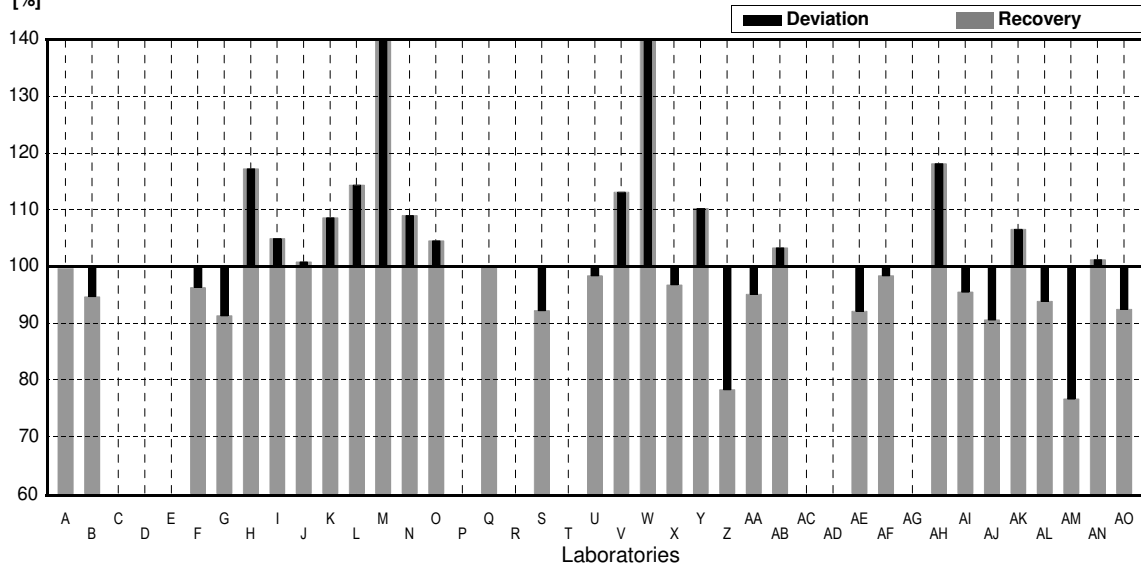
Lab Code	Result	±	Unit	Recovery	z-Score
A	2.43	0.36	µg/l	100%	-0.05
B	2.310	0.408	µg/l	95%	-0.63
C			µg/l		
D			µg/l		
E			µg/l		
F	2.35	0.47	µg/l	96%	-0.43
G	2.228	0.22	µg/l	91%	-1.02
H	2.86	0.57	µg/l	117%	2.03
I	2.56	0.0795	µg/l	105%	0.58
J	2.46	0.99	µg/l	101%	0.10
K	2.65	0.26	µg/l	109%	1.01
L	2.79		µg/l	114%	1.69
M	8.30 *		µg/l	340%	28.25
N	2.66	0.51	µg/l	109%	1.06
O	2.55	0.38	µg/l	105%	0.53
P			µg/l		
Q	2.44	0.488	µg/l	100%	0.00
R			µg/l		
S	2.25	0.34	µg/l	92%	-0.92
T			µg/l		
U	2.40	0.36	µg/l	98%	-0.19
V	2.76	1.10	µg/l	113%	1.54
W	3.81 *	0.14	µg/l	156%	6.61
X	2.361	0.354	µg/l	97%	-0.38
Y	2.69	0.27	µg/l	110%	1.21
Z	1.91		µg/l	78%	-2.56
AA	2.32	0.35	µg/l	95%	-0.58
AB	2.52		µg/l	103%	0.39
AC			µg/l		
AD			µg/l		
AE	2.2474	0.1993	µg/l	92%	-0.93
AF	2.40	0.36	µg/l	98%	-0.19
AG			µg/l		
AH	2.882	0.0350	µg/l	118%	2.13
AI	2.33	0.47	µg/l	95%	-0.53
AJ	2.21	0.22	µg/l	91%	-1.11
AK	2.60	0.31	µg/l	107%	0.77
AL	2.29		µg/l	94%	-0.72
AM	1.87	0.37	µg/l	77%	-2.75
AN	2.47	0.371	µg/l	101%	0.14
AO	2.256	0.129	µg/l	92%	-0.89

	All results	Outliers excl.	Unit
Mean ± CI(99%)	2,66 ± 0,53	2,44 ± 0,12	µg/l
Recov. ± CI(99%)	109,1 ± 21,6	99,8 ± 5,0	%
SD between labs	1,08	0,24	µg/l
RSD between labs	40,7	10,0	%
n for calculation	32	30	

Result  
[µg/l]



Recovery  
[%]



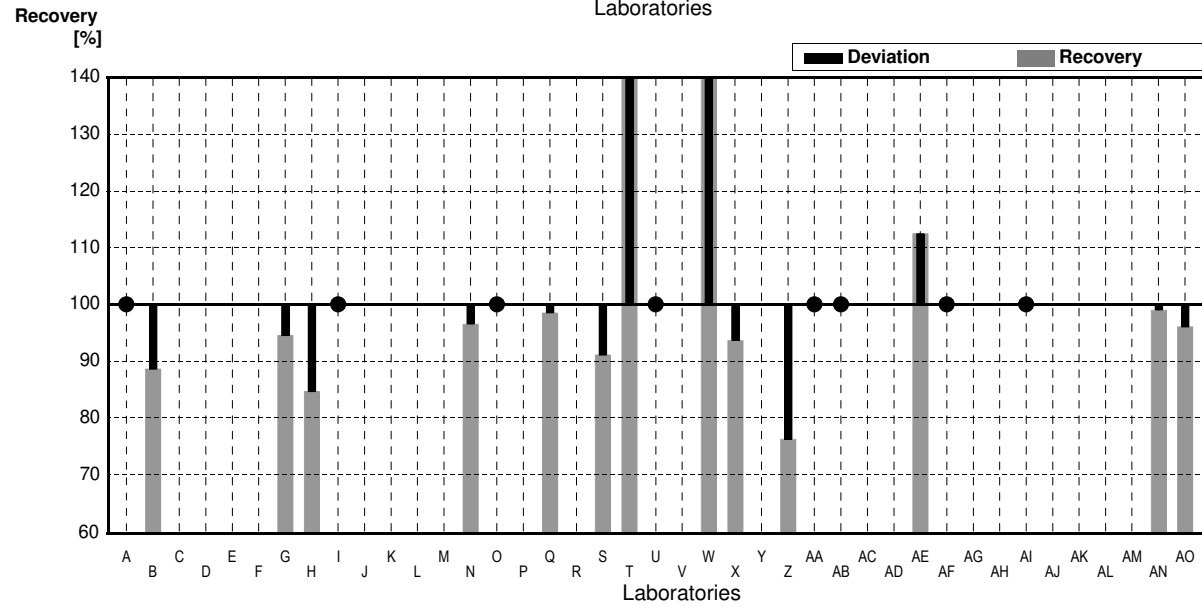
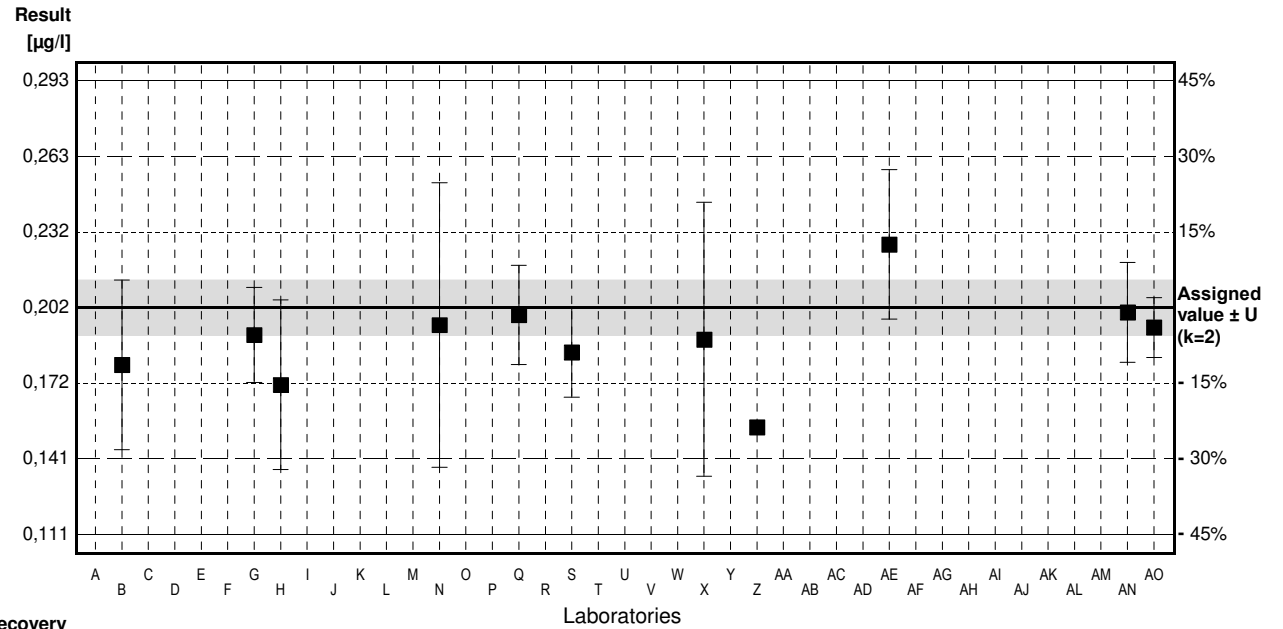
# Sample M177A

## Parameter Silver

Assigned value ± U (k=2) 0,202 µg/l ± 0,011 µg/l  
 IFA result ± U (k=2) 0,189 µg/l ± 0,009 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	<1		µg/l	•	
B	0.179	0.034	µg/l	89%	-1.32
C			µg/l		
D			µg/l		
E			µg/l		
F			µg/l		
G	0.191	0.019	µg/l	95%	-0.63
H	0.171	0.034	µg/l	85%	-1.78
I	<1.00		µg/l	•	
J			µg/l		
K			µg/l		
L			µg/l		
M			µg/l		
N	0.195	0.057	µg/l	97%	-0.40
O	<1.00		µg/l	•	
P			µg/l		
Q	0.199	0.0199	µg/l	99%	-0.17
R			µg/l		
S	0.184	0.018	µg/l	91%	-1.04
T	0.300 *	0.03	µg/l	149%	5.64
U	<0.50		µg/l	•	
V			µg/l		
W	0.804 *	0.012	µg/l	398%	34.65
X	0.1892	0.0549	µg/l	94%	-0.74
Y			µg/l		
Z	0.154		µg/l	76%	-2.76
AA	<1.0		µg/l	•	
AB	<5		µg/l	•	
AC			µg/l		
AD			µg/l		
AE	0.2273	0.0300	µg/l	113%	1.46
AF	<1.00		µg/l	•	
AG			µg/l		
AH			µg/l		
AI	<2		µg/l	•	
AJ			µg/l		
AK			µg/l		
AL			µg/l		
AM			µg/l		
AN	0.200	0.02	µg/l	99%	-0.12
AO	0.194	0.012	µg/l	96%	-0.46



	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,245 ± 0,145	0,189 ± 0,018	µg/l
Recov. ± CI(99%)	121,4 ± 71,8	93,8 ± 8,8	%
SD between labs	0,171	0,019	µg/l
RSD between labs	69,9	9,8	%
n for calculation	13	11	

# Sample M177B

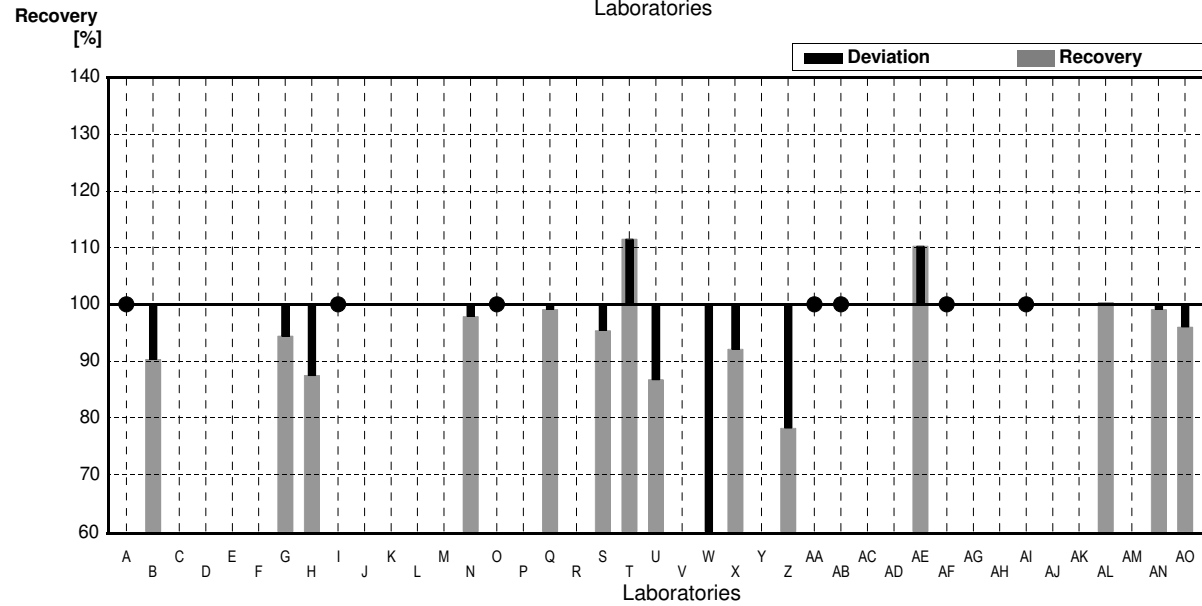
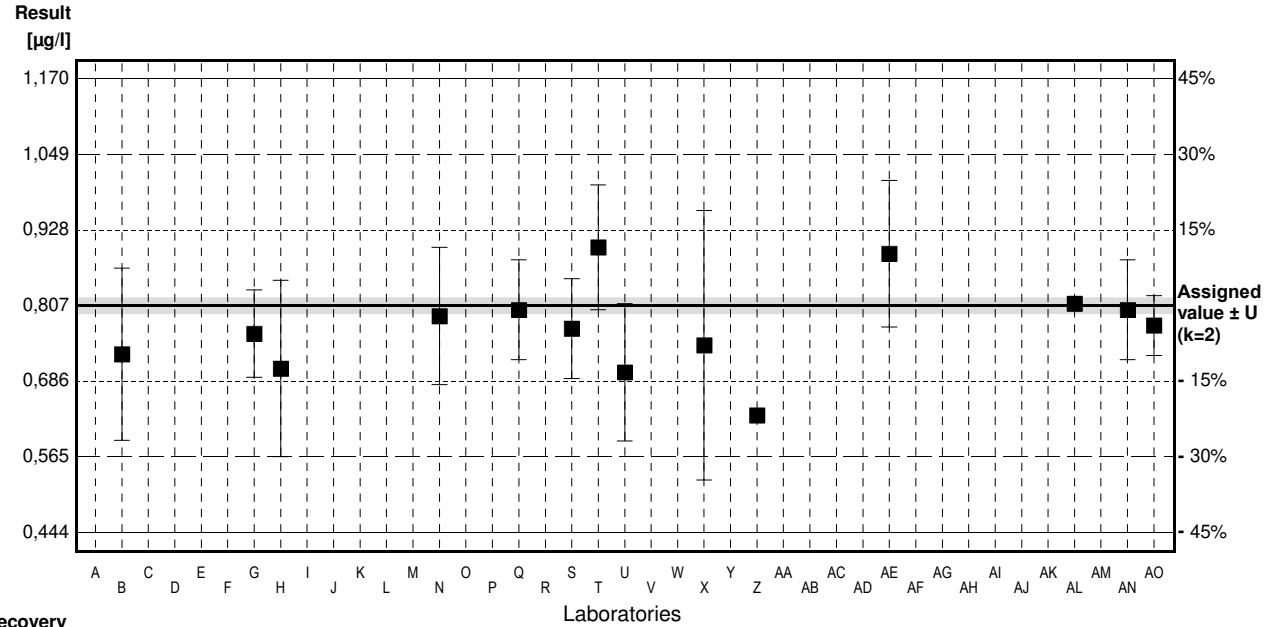
## Parameter Silver

Assigned value ± U (k=2) 0,807 µg/l ± 0,013 µg/l

IFA result ± U (k=2) 0,79 µg/l ± 0,03 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	<1		µg/l	•	
B	0.729	0.138	µg/l	90%	-1.12
C			µg/l		
D			µg/l		
E			µg/l		
F			µg/l		
G	0.762	0.07	µg/l	94%	-0.65
H	0.706	0.141	µg/l	87%	-1.46
I	<1.00		µg/l	•	
J			µg/l		
K			µg/l		
L			µg/l		
M			µg/l		
N	0.79	0.11	µg/l	98%	-0.24
O	<1.00		µg/l	•	
P			µg/l		
Q	0.800	0.0800	µg/l	99%	-0.10
R			µg/l		
S	0.77	0.08	µg/l	95%	-0.53
T	0.900	0.10	µg/l	112%	1.34
U	0.70	0.11	µg/l	87%	-1.54
V			µg/l		
W	0.209 *	0.003	µg/l	26%	-8.62
X	0.7433	0.2156	µg/l	92%	-0.92
Y			µg/l		
Z	0.631		µg/l	78%	-2.54
AA	<1.0		µg/l	•	
AB	<5		µg/l	•	
AC			µg/l		
AD			µg/l		
AE	0.8899	0.1174	µg/l	110%	1.19
AF	<1.00		µg/l	•	
AG			µg/l		
AH			µg/l		
AI	<2		µg/l	•	
AJ			µg/l		
AK			µg/l		
AL	0.81		µg/l	100%	0.04
AM			µg/l		
AN	0.80	0.08	µg/l	99%	-0.10
AO	0.775	0.048	µg/l	96%	-0.46



	All results	Outliers excl.	Unit
Mean ± CI(99%)	0,734 ± 0,124	0,772 ± 0,057	µg/l
Recov. ± CI(99%)	91,0 ± 15,3	95,6 ± 7,1	%
SD between labs	0,161	0,071	µg/l
RSD between labs	21,9	9,2	%
n for calculation	15	14	

# Sample M177A

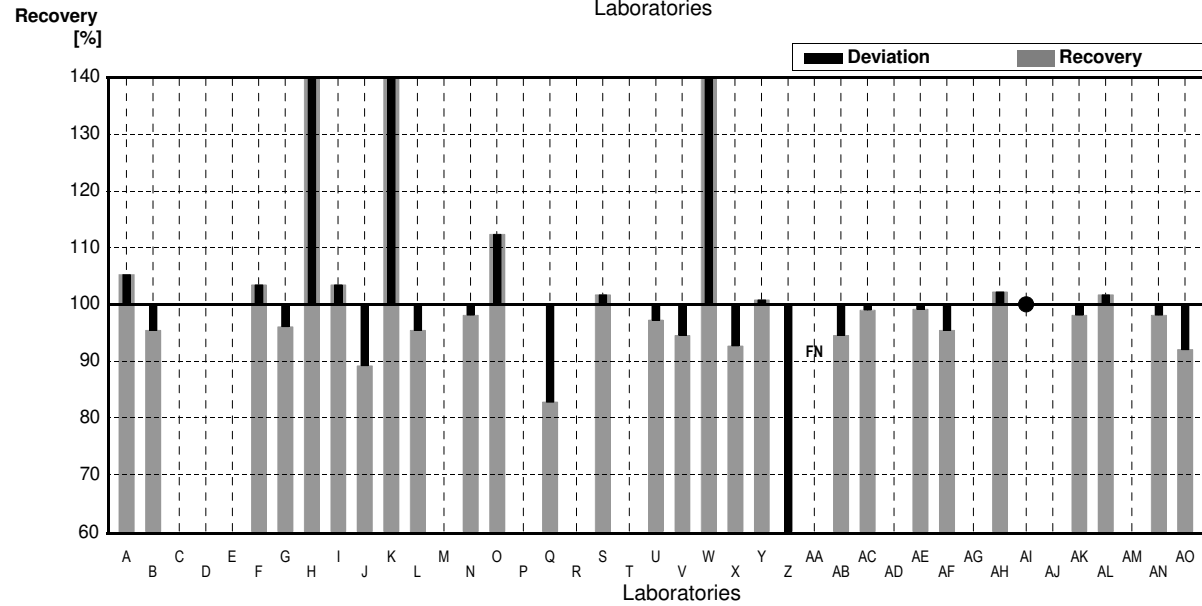
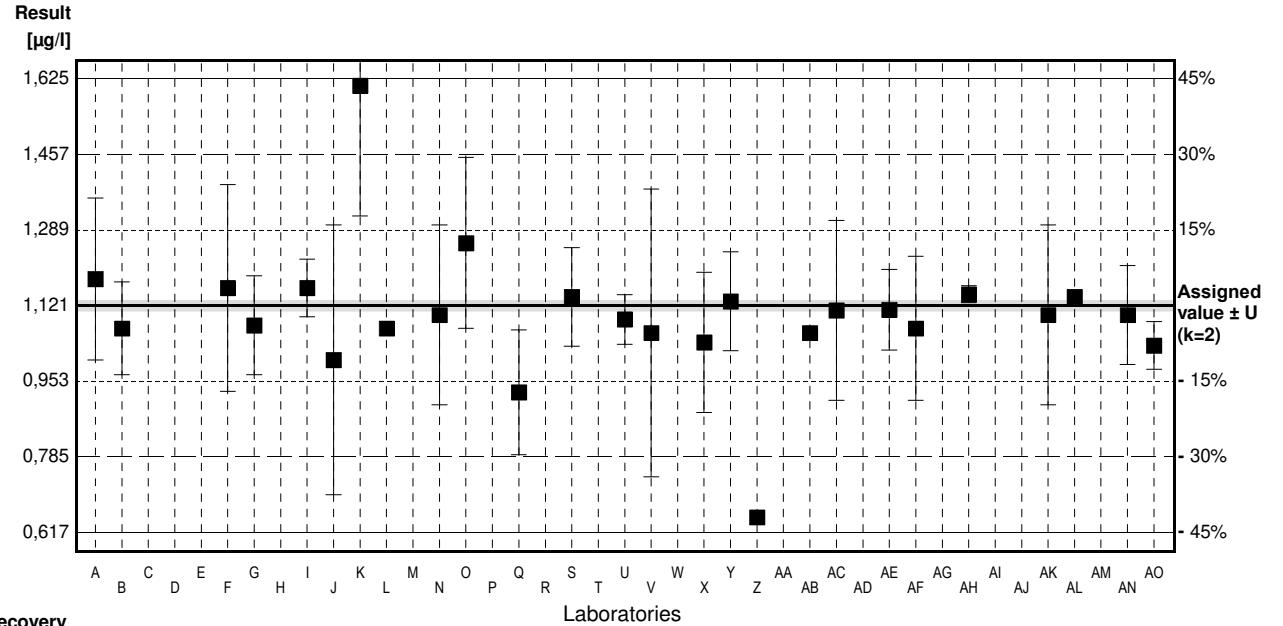
## Parameter Uranium

Assigned value ± U (k=2) 1,121 µg/l ± 0,012 µg/l

IFA result ± U (k=2) 1,13 µg/l ± 0,11 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	1,18	0,18	µg/l	105%	0,97
B	1,070	0,103	µg/l	95%	-0,84
C			µg/l		
D			µg/l		
E			µg/l		
F	1,16	0,23	µg/l	103%	0,64
G	1,077	0,11	µg/l	96%	-0,73
H	9,85 *	1,97	µg/l	879%	144,20
I	1,16	0,0639	µg/l	103%	0,64
J	1,00	0,3	µg/l	89%	-2,00
K	1,61 *	0,29	µg/l	144%	8,08
L	1,07		µg/l	95%	-0,84
M			µg/l		
N	1,10	0,20	µg/l	98%	-0,35
O	1,26	0,19	µg/l	112%	2,30
P			µg/l		
Q	0,928	0,139	µg/l	83%	-3,19
R			µg/l		
S	1,14	0,11	µg/l	102%	0,31
T			µg/l		
U	1,09	0,055	µg/l	97%	-0,51
V	1,06	0,32	µg/l	95%	-1,01
W	2,53 *	0,027	µg/l	226%	23,28
X	1,039	0,156	µg/l	93%	-1,35
Y	1,13	0,11	µg/l	101%	0,15
Z	0,650 *		µg/l	58%	-7,78
AA	<1,0		µg/l	FN	
AB	1,06		µg/l	95%	-1,01
AC	1,11	0,2	µg/l	99%	-0,18
AD			µg/l		
AE	1,1116	0,0894	µg/l	99%	-0,16
AF	1,07	0,16	µg/l	95%	-0,84
AG			µg/l		
AH	1,146	0,0192	µg/l	102%	0,41
AI	<2		µg/l	*	
AJ			µg/l		
AK	1,10	0,20	µg/l	98%	-0,35
AL	1,14		µg/l	102%	0,31
AM			µg/l		
AN	1,10	0,11	µg/l	98%	-0,35
AO	1,032	0,053	µg/l	92%	-1,47



	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,463 ± 0,875	1,097 ± 0,038	µg/l
Recov. ± CI(99%)	130,5 ± 78,1	97,9 ± 3,4	%
SD between labs	1,672	0,066	µg/l
RSD between labs	114,3	6,0	%
n for calculation	28	24	

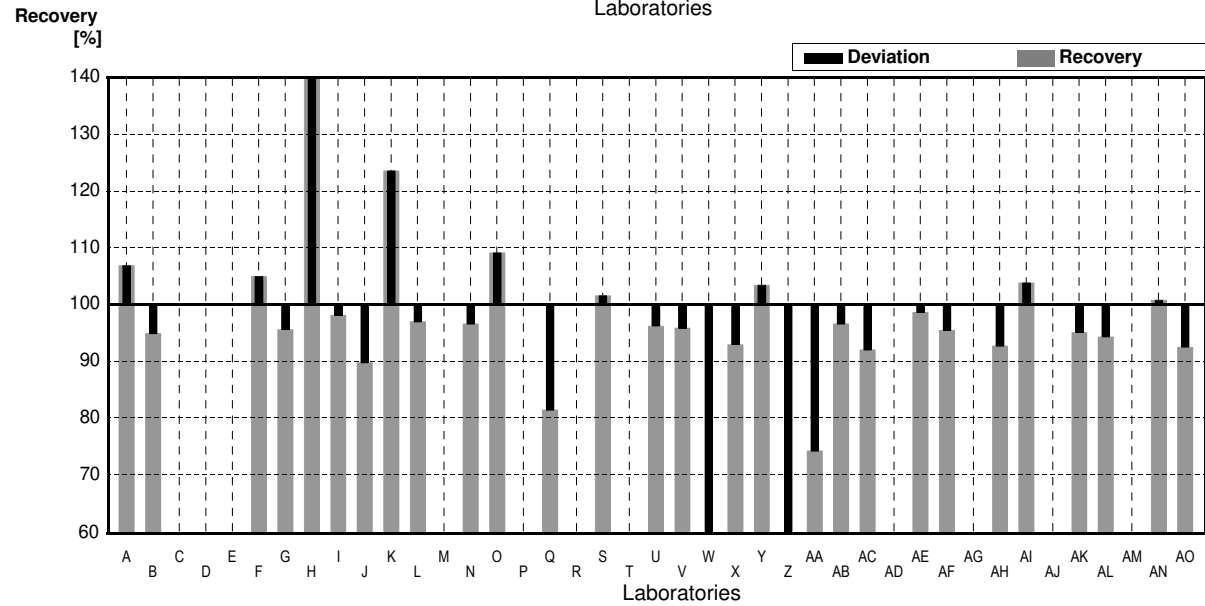
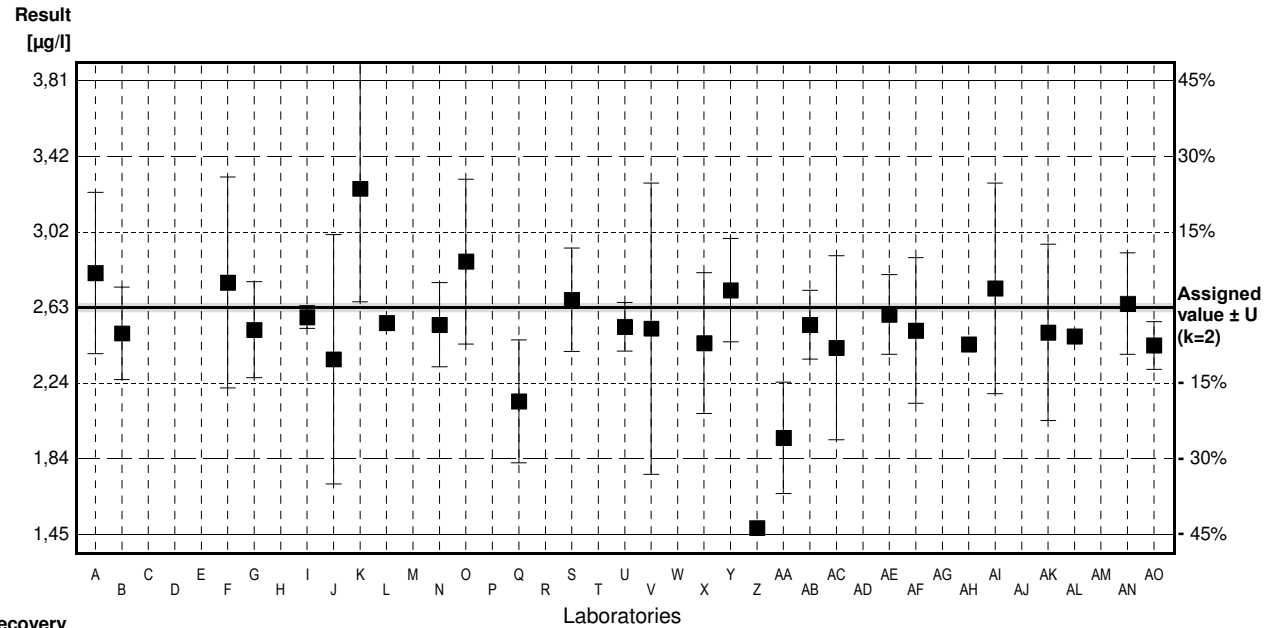
**Sample M177B**  
**Parameter Uranium**

Assigned value ± U (k=2) 2,63 µg/l ± 0,02 µg/l

IFA result ± U (k=2) 2,63 µg/l ± 0,26 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	2.81	0.42	µg/l	107%	1.27
B	2.495	0.241	µg/l	95%	-0.95
C			µg/l		
D			µg/l		
E			µg/l		
F	2.76	0.55	µg/l	105%	0.92
G	2.514	0.25	µg/l	96%	-0.82
H	23.4 *	4.7	µg/l	890%	146.25
I	2.58	0.0589	µg/l	98%	-0.35
J	2.36	0.65	µg/l	90%	-1.90
K	3.25 *	0.59	µg/l	124%	4.37
L	2.55		µg/l	97%	-0.56
M			µg/l		
N	2.54	0.22	µg/l	97%	-0.63
O	2.87	0.43	µg/l	109%	1.69
P			µg/l		
Q	2.14	0.321	µg/l	81%	-3.45
R			µg/l		
S	2.67	0.27	µg/l	102%	0.28
T			µg/l		
U	2.53	0.127	µg/l	96%	-0.70
V	2.52	0.76	µg/l	96%	-0.77
W	1.07 *	0.012	µg/l	41%	-10.98
X	2.444	0.367	µg/l	93%	-1.31
Y	2.72	0.27	µg/l	103%	0.63
Z	1.48 *		µg/l	56%	-8.10
AA	1.95 *	0.29	µg/l	74%	-4.79
AB	2.54	0.18	µg/l	97%	-0.63
AC	2.42	0.48	µg/l	92%	-1.48
AD			µg/l		
AE	2.5930	0.2085	µg/l	99%	-0.26
AF	2.51	0.38	µg/l	95%	-0.84
AG			µg/l		
AH	2.437	0.0116	µg/l	93%	-1.36
AI	2.73	0.55	µg/l	104%	0.70
AJ			µg/l		
AK	2.50	0.46	µg/l	95%	-0.92
AL	2.48		µg/l	94%	-1.06
AM			µg/l		
AN	2.65	0.265	µg/l	101%	0.14
AO	2.432	0.125	µg/l	92%	-1.39



	All results	Outliers excl.	Unit
Mean ± CI(99%)	3,16 ± 1,94	2,55 ± 0,09	µg/l
Recov. ± CI(99%)	120,3 ± 73,6	97,0 ± 3,3	%
SD between labs	3,84	0,15	µg/l
RSD between labs	121,4	6,1	%
n for calculation	30	25	

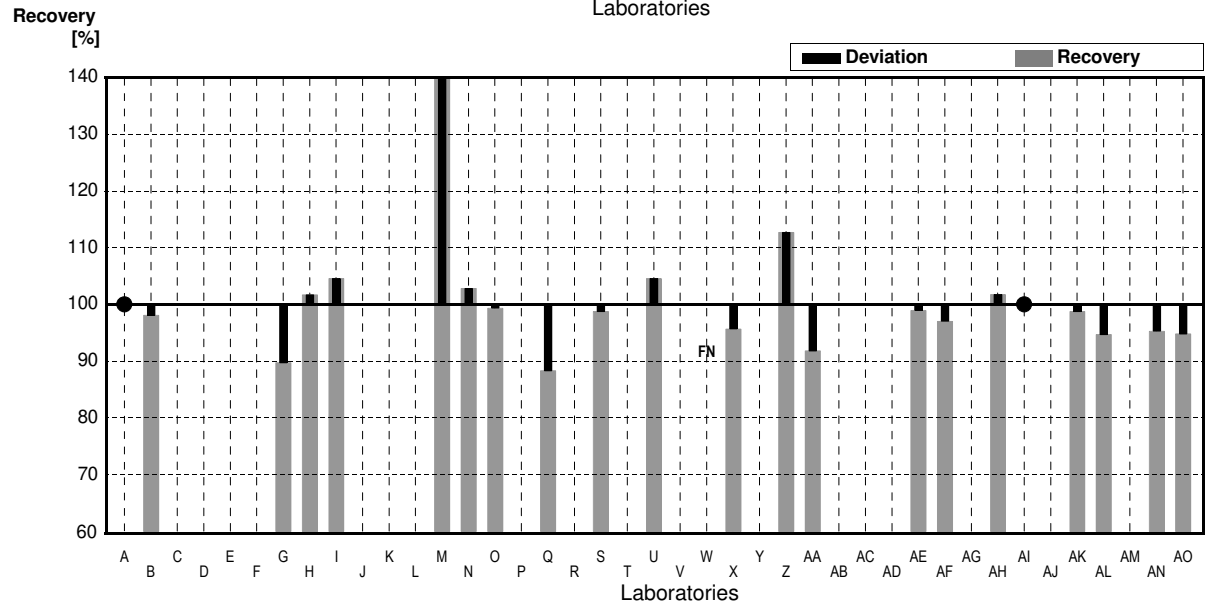
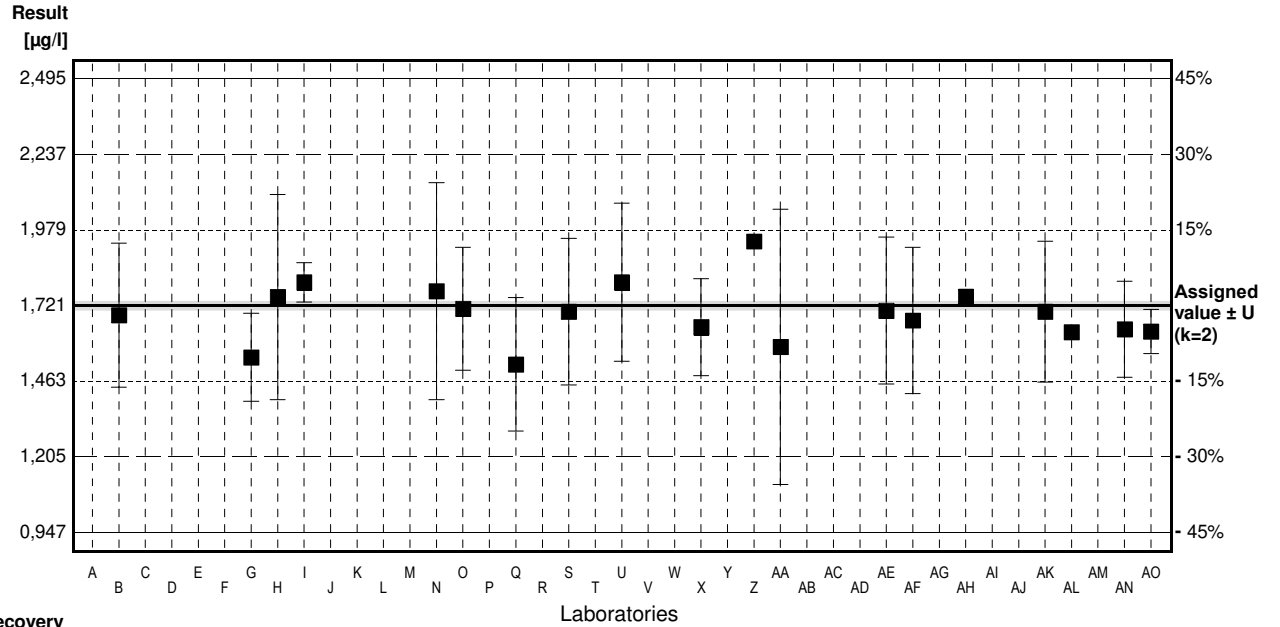
**Sample M177A**  
**Parameter Vanadium**

Assigned value ± U (k=2) 1,721 µg/l ± 0,015 µg/l

IFA result ± U (k=2) 1,80 µg/l ± 0,14 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	<5		µg/l	•	
B	1.688	0.246	µg/l	98%	-0.26
C			µg/l		
D			µg/l		
E			µg/l		
F			µg/l		
G	1.544	0.15	µg/l	90%	-1.39
H	1.75	0.35	µg/l	102%	0.23
I	1.80	0.0675	µg/l	105%	0.62
J			µg/l		
K			µg/l		
L			µg/l		
M	9.10 *	3.55	µg/l	529%	57.94
N	1.77	0.37	µg/l	103%	0.38
O	1.71	0.21	µg/l	99%	-0.09
P			µg/l		
Q	1.52	0.228	µg/l	88%	-1.58
R			µg/l		
S	1.70	0.25	µg/l	99%	-0.16
T			µg/l		
U	1.80	0.27	µg/l	105%	0.62
V			µg/l		
W	<1.10		µg/l	FN	
X	1.647	0.165	µg/l	96%	-0.58
Y			µg/l		
Z	1.94		µg/l	113%	1.72
AA	1.58	0.47	µg/l	92%	-1.11
AB			µg/l		
AC			µg/l		
AD			µg/l		
AE	1.7034	0.2509	µg/l	99%	-0.14
AF	1.67	0.25	µg/l	97%	-0.40
AG			µg/l		
AH	1.751	0.0232	µg/l	102%	0.24
AI	<2		µg/l	•	
AJ			µg/l		
AK	1.70	0.24	µg/l	99%	-0.16
AL	1.63		µg/l	95%	-0.71
AM			µg/l		
AN	1.64	0.164	µg/l	95%	-0.64
AO	1.632	0.075	µg/l	95%	-0.70



	All results	Outliers excl.	Unit
Mean ± CI(99%)	2,064 ± 1,061	1,693 ± 0,065	µg/l
Recov. ± CI(99%)	119,9 ± 61,6	98,4 ± 3,8	%
SD between labs	1,659	0,099	µg/l
RSD between labs	80,4	5,8	%
n for calculation	20	19	

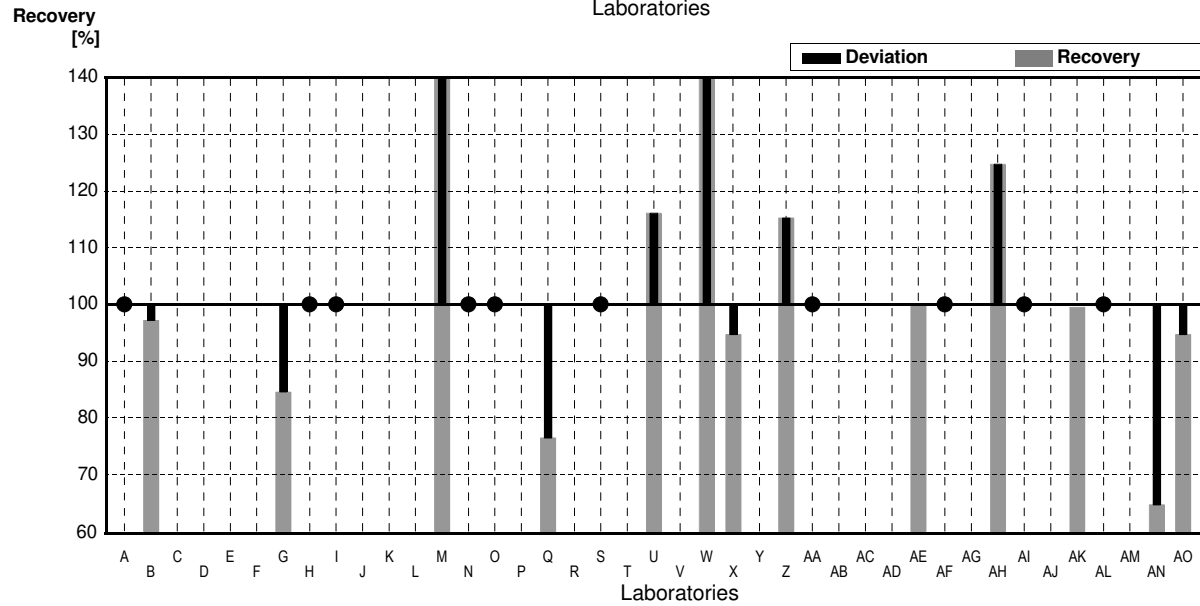
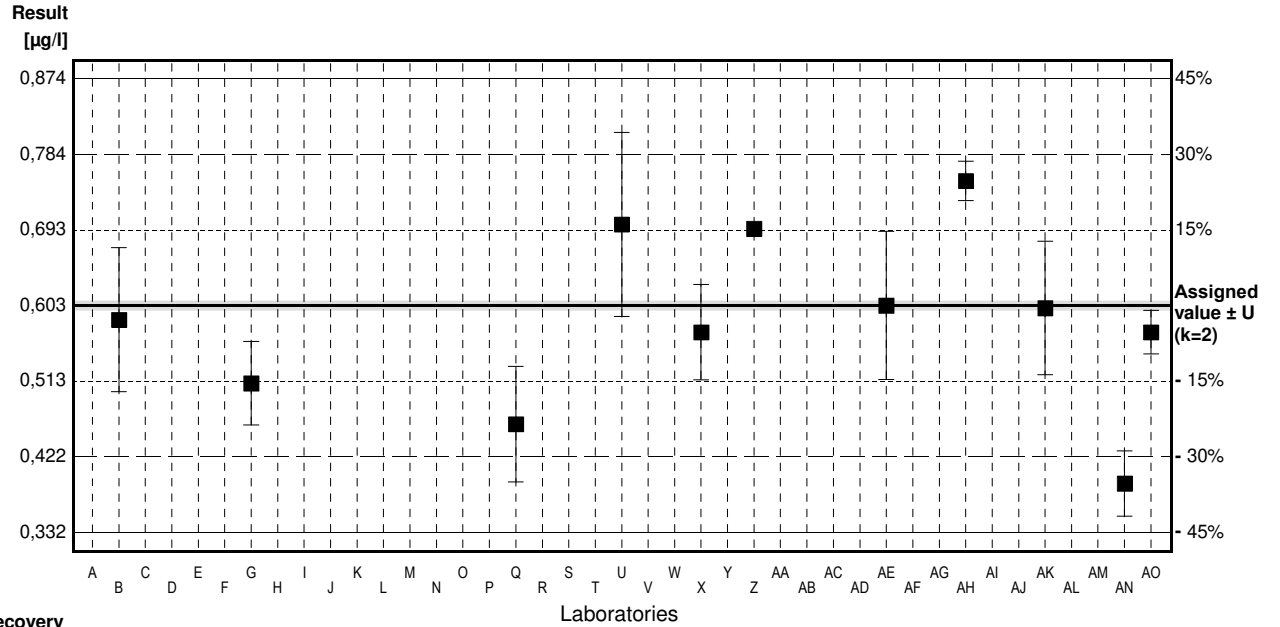
**Sample M177B**  
**Parameter Vanadium**

Assigned value ± U (k=2) 0,603 µg/l ± 0,006 µg/l

IFA result ± U (k=2) 0,62 µg/l ± 0,05 µg/l

Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	<5		µg/l	•	
B	0.586	0.086	µg/l	97%	-0.38
C			µg/l		
D			µg/l		
E			µg/l		
F			µg/l		
G	0.51	0.05	µg/l	85%	-2.08
H	<1.0	0.5	µg/l	•	
I	<1.00		µg/l	•	
J			µg/l		
K			µg/l		
L			µg/l		
M	7.8 *	3.00	µg/l	1294%	161.29
N	<1		µg/l	•	
O	<1.00		µg/l	•	
P			µg/l		
Q	0.461	0.0692	µg/l	76%	-3.18
R			µg/l		
S	<1		µg/l	•	
T			µg/l		
U	0.70	0.11	µg/l	116%	2.17
V			µg/l		
W	1.57 *	0.051	µg/l	260%	21.67
X	0.5710	0.0571	µg/l	95%	-0.72
Y			µg/l		
Z	0.695		µg/l	115%	2.06
AA	<1.0		µg/l	•	
AB			µg/l		
AC			µg/l		
AD			µg/l		
AE	0.6030	0.0888	µg/l	100%	0.00
AF	<1.00		µg/l	•	
AG			µg/l		
AH	0.752	0.0235	µg/l	125%	3.34
AI	<2		µg/l	•	
AJ			µg/l		
AK	0.60	0.08	µg/l	100%	-0.07
AL	<1		µg/l	•	
AM			µg/l		
AN	0.390	0.039	µg/l	65%	-4.77
AO	0.571	0.026	µg/l	95%	-0.72



	All results	Outliers excl.	Unit
Mean ± CI(99%)	1,216 ± 1,691	0,585 ± 0,102	µg/l
Recov. ± CI(99%)	201,7 ± 280,5	97,1 ± 16,9	%
SD between labs	1,999	0,106	µg/l
RSD between labs	164,4	18,2	%
n for calculation	13	11	

# Sample M177A

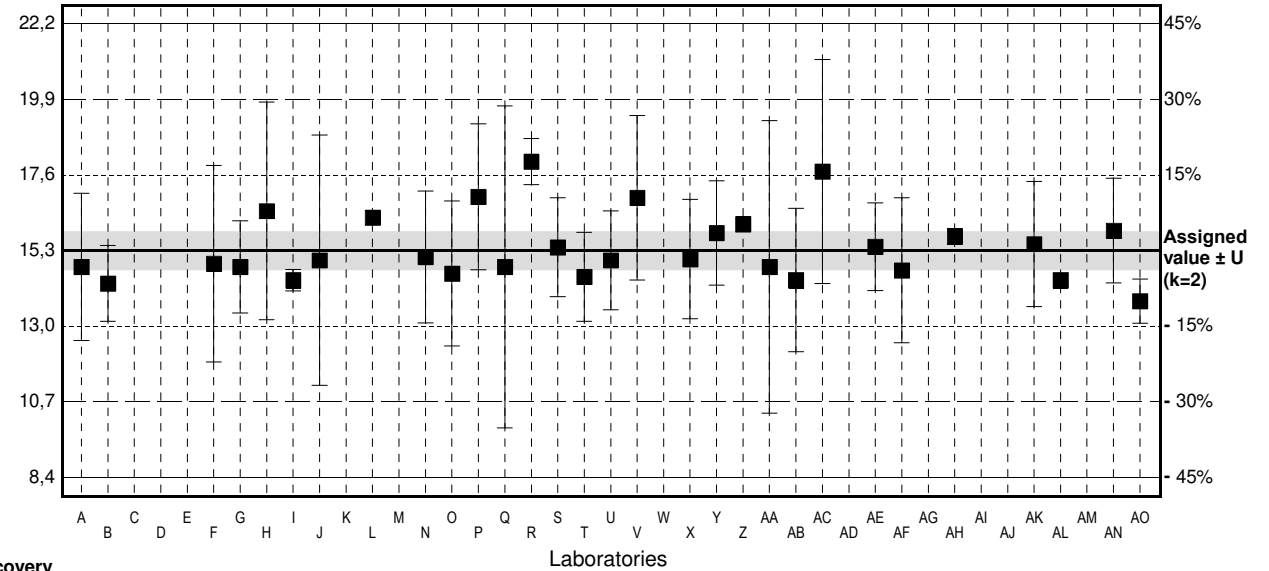
## Parameter Zinc

Assigned value ± U (k=2) 15,3 µg/l ± 0,6 µg/l  
 IFA result ± U (k=2) 15,1 µg/l ± 2,6 µg/l

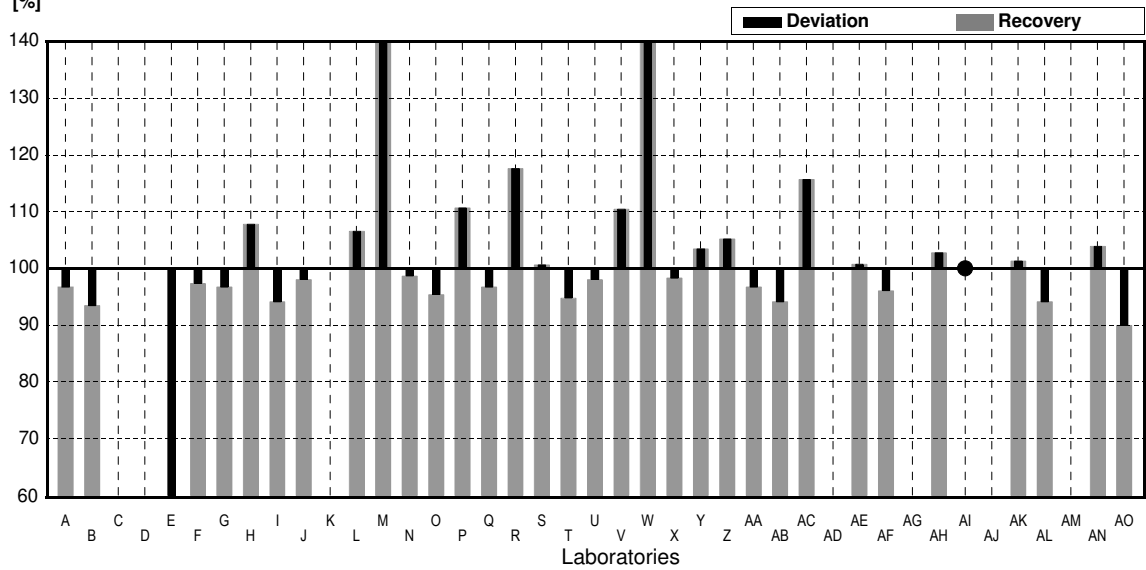
Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	14.8	2,23	µg/l	97%	-0.50
B	14.3	1,15	µg/l	93%	-1.01
C			µg/l		
D			µg/l		
E	3,79 *	0,76	µg/l	25%	-11,57
F	14,9	2,98	µg/l	97%	-0,40
G	14,8	1,4	µg/l	97%	-0,50
H	16,5	3,3	µg/l	108%	1,21
I	14,4	0,329	µg/l	94%	-0,90
J	15,0	3,8	µg/l	98%	-0,30
K			µg/l		
L	16,3		µg/l	107%	1,01
M	34,7 *	4,86	µg/l	227%	19,51
N	15,1	2,0	µg/l	99%	-0,20
O	14,6	2,2	µg/l	95%	-0,70
P	16,933	2,217	µg/l	111%	1,64
Q	14,8	4,89	µg/l	97%	-0,50
R	18,0 *	0,7	µg/l	118%	2,71
S	15,4	1,5	µg/l	101%	0,10
T	14,5	1,35	µg/l	95%	-0,80
U	15,0	1,50	µg/l	98%	-0,30
V	16,9	2,5	µg/l	110%	1,61
W	24,8 *	0,55	µg/l	162%	9,55
X	15,04	1,81	µg/l	98%	-0,26
Y	15,83	1,58	µg/l	103%	0,53
Z	16,1		µg/l	105%	0,80
AA	14,8	4,44	µg/l	97%	-0,50
AB	14,4	2,18	µg/l	94%	-0,90
AC	17,7	3,4	µg/l	116%	2,41
AD			µg/l		
AE	15,4132	1,3271	µg/l	101%	0,11
AF	14,7	2,2	µg/l	96%	-0,60
AG			µg/l		
AH	15,726	0,245	µg/l	103%	0,43
AI	<20		µg/l	*	
AJ			µg/l		
AK	15,5	1,90	µg/l	101%	0,20
AL	14,4		µg/l	94%	-0,90
AM			µg/l		
AN	15,9	1,59	µg/l	104%	0,60
AO	13,762	0,674	µg/l	90%	-1,55

Result  
[µg/l]



Recovery  
[%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	15,9 ± 2,1	15,3 ± 0,5	µg/l
Recov. ± CI(99%)	103,9 ± 13,7	100,0 ± 3,1	%
SD between labs	4,4	0,9	µg/l
RSD between labs	27,6	6,0	%
n for calculation	33	29	

# Sample M177B

## Parameter Zinc

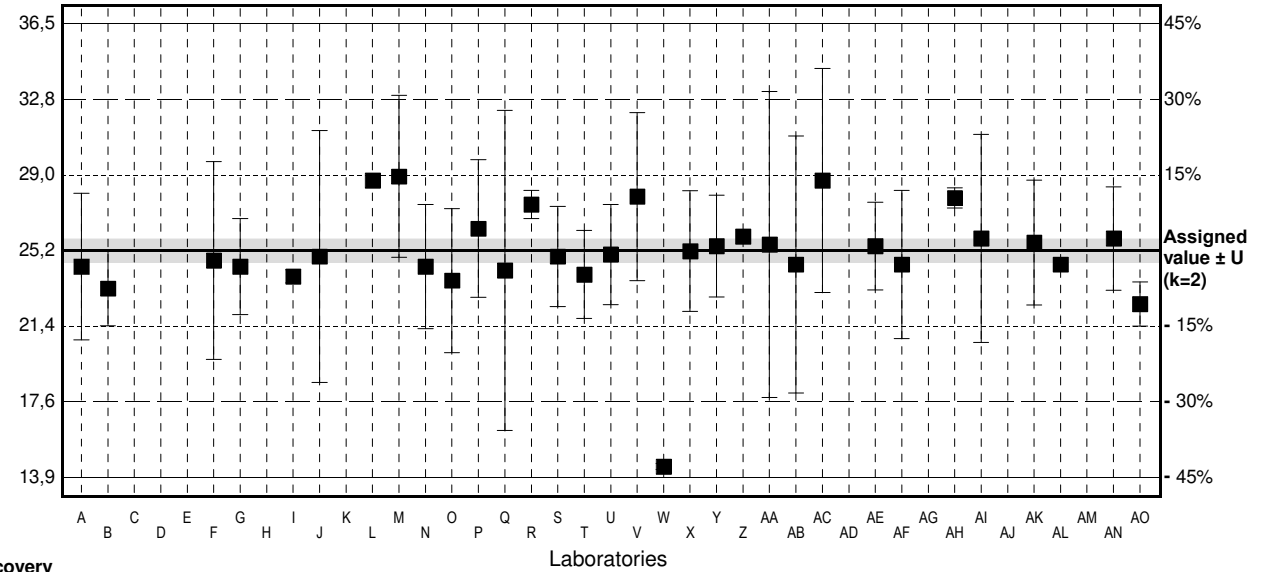
Assigned value ± U (k=2) 25,2 µg/l ± 0,6 µg/l

IFA result ± U (k=2) 24,3 µg/l ± 3,5 µg/l

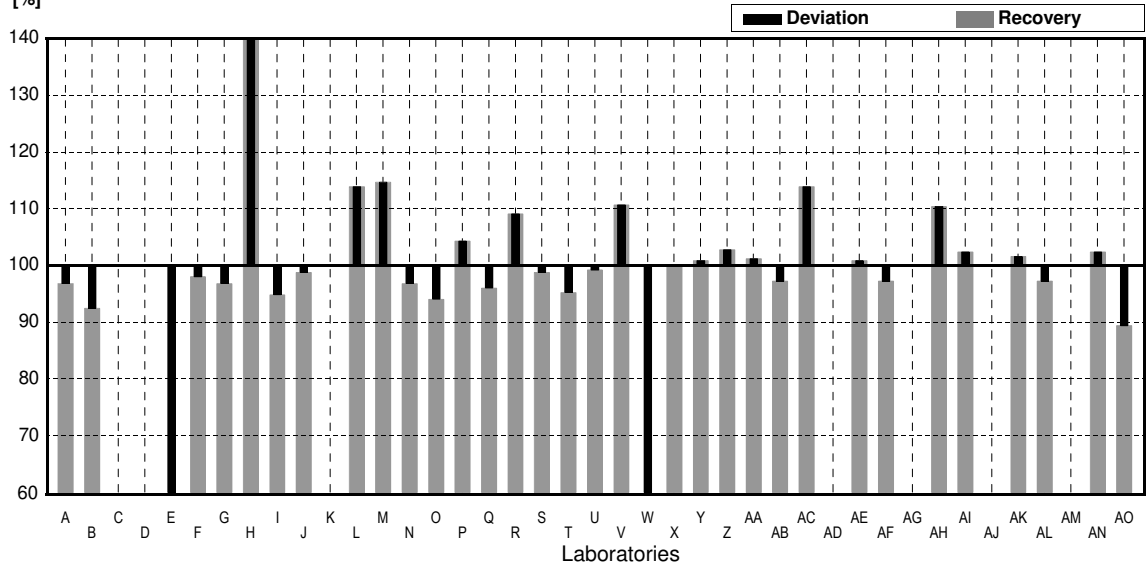
Stability test µg/l

Lab Code	Result	±	Unit	Recovery	z-Score
A	24.4	3.66	µg/l	97%	-0.49
B	23.3	1.87	µg/l	92%	-1.16
C			µg/l		
D			µg/l		
E	6.55 *	1.31	µg/l	26%	-11.39
F	24.7	4.94	µg/l	98%	-0.31
G	24.4	2.4	µg/l	97%	-0.49
H	40.6 *	8.1	µg/l	161%	9.40
I	23.9	0.332	µg/l	95%	-0.79
J	24.9	6.3	µg/l	99%	-0.18
K			µg/l		
L	28.7		µg/l	114%	2.14
M	28.9 *	4.05	µg/l	115%	2.26
N	24.4	3.1	µg/l	97%	-0.49
O	23.7	3.6	µg/l	94%	-0.92
P	26,293	3,442	µg/l	104%	0.67
Q	24.2	8.00	µg/l	96%	-0.61
R	27.5	0.7	µg/l	109%	1.40
S	24.9	2.5	µg/l	99%	-0.18
T	24.0	2.2	µg/l	95%	-0.73
U	25.0	2.50	µg/l	99%	-0.12
V	27.9	4.2	µg/l	111%	1.65
W	14.4 *	0.15	µg/l	57%	-6.59
X	25.17	3.02	µg/l	100%	-0.02
Y	25.42	2.54	µg/l	101%	0.13
Z	25.9		µg/l	103%	0.43
AA	25.5	7.65	µg/l	101%	0.18
AB	24.5	6.42	µg/l	97%	-0.43
AC	28.7	5.6	µg/l	114%	2.14
AD			µg/l		
AE	25.4198	2.1886	µg/l	101%	0.13
AF	24.5	3.7	µg/l	97%	-0.43
AG			µg/l		
AH	27.827	0.503	µg/l	110%	1.60
AI	25.8	5.2	µg/l	102%	0.37
AJ			µg/l		
AK	25.6	3.12	µg/l	102%	0.24
AL	24.5		µg/l	97%	-0.43
AM			µg/l		
AN	25.8	2.58	µg/l	102%	0.37
AO	22.525	1.104	µg/l	89%	-1.63

Result  
[µg/l]



Recovery  
[%]



	All results	Outliers excl.	Unit
Mean ± CI(99%)	25,0 ± 2,3	25,3 ± 0,8	µg/l
Recov. ± CI(99%)	99,2 ± 9,1	100,4 ± 3,0	%
SD between labs	4,9	1,5	µg/l
RSD between labs	19,5	6,0	%
n for calculation	34	30	





**Labororientierte Auswertung**  
**Laboratory Oriented Part**

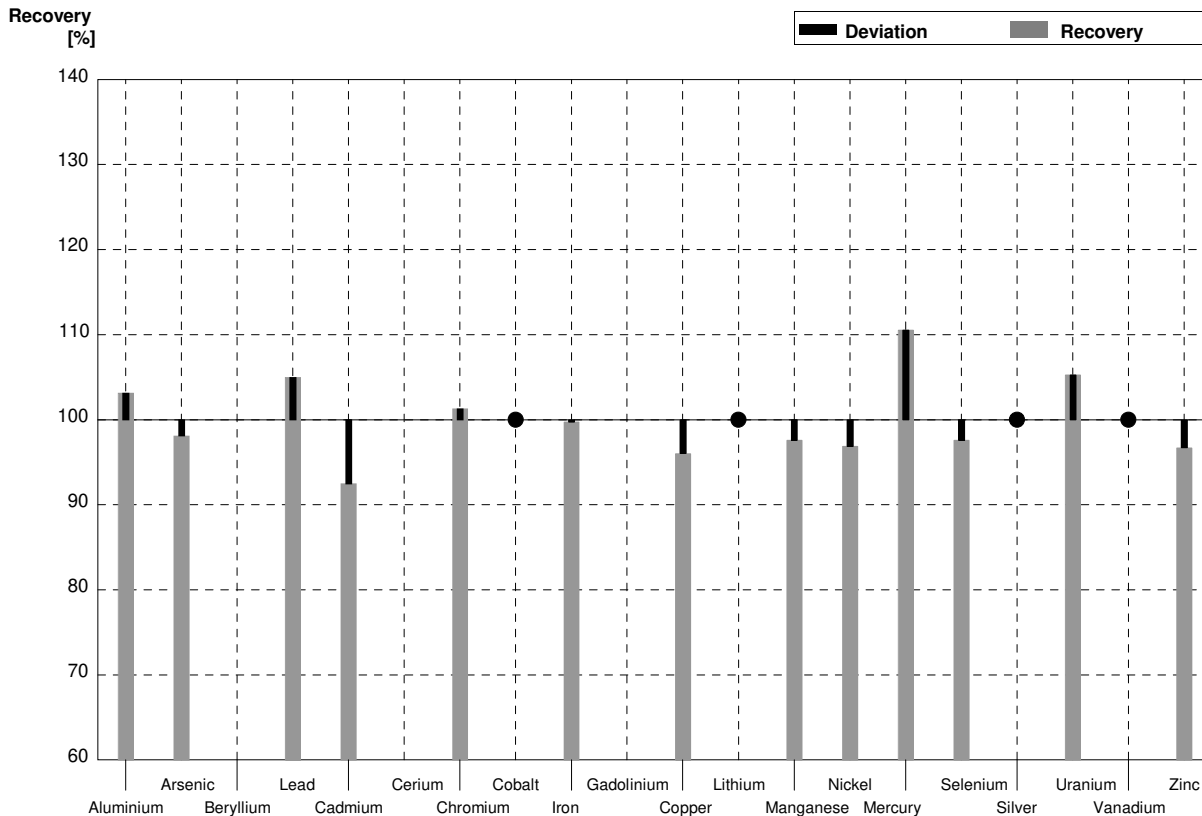
Eignungsprüfungsrunde / Proficiency testing round  
M177

Metalle / Metals

Versand / Dispatch: 12. 05. 2025

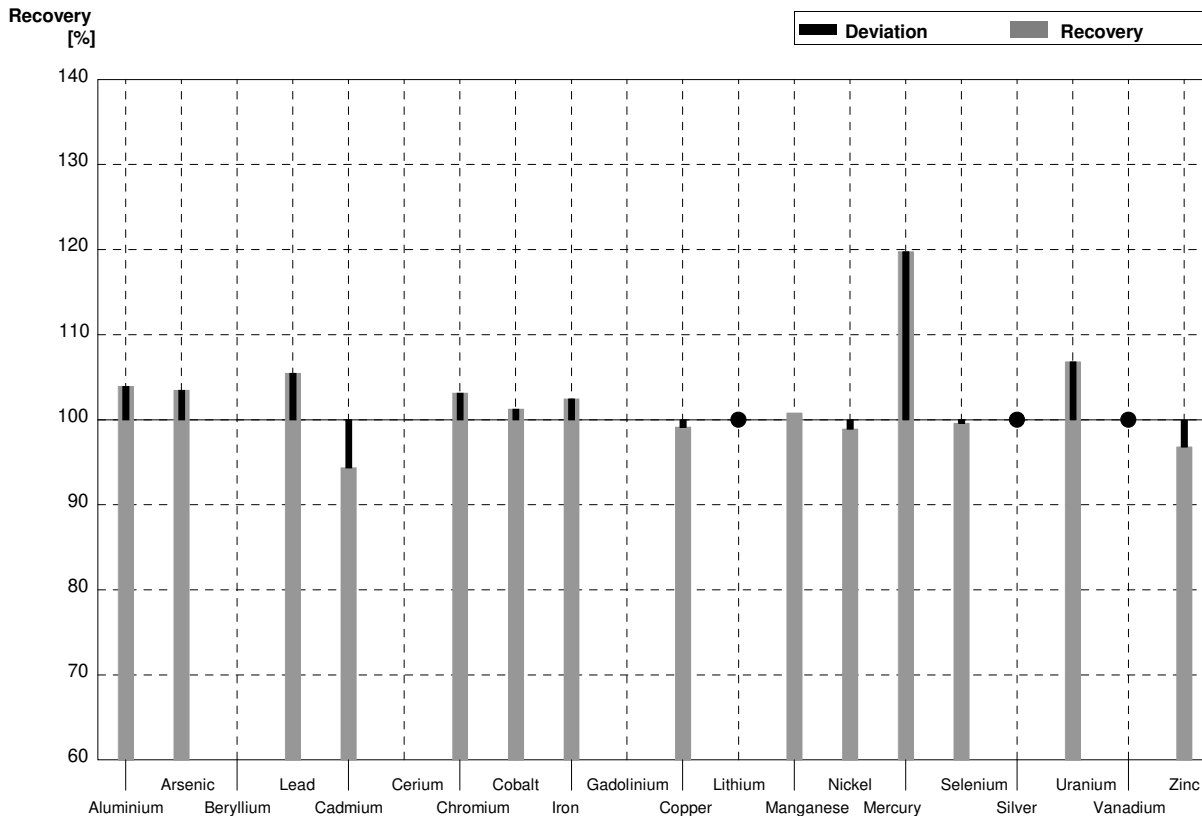
**Sample M177A**  
**Laboratory A**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	26,3	3,94	µg/l	103%
Arsenic	2,589	0,019	2,54	0,38	µg/l	98%
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05	2,53	0,38	µg/l	105%
Cadmium	0,598	0,007	0,553	0,083	µg/l	92%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,52	0,83	µg/l	101%
Cobalt	0,820	0,007	<1		µg/l	•
Iron	40,4	0,2	40,3	6,04	µg/l	100%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,82	0,87	µg/l	96%
Lithium	3,08	0,03	<10		µg/l	•
Manganese	46,0	0,2	44,9	6,74	µg/l	98%
Nickel	2,57	0,04	2,49	0,37	µg/l	97%
Mercury	1,401	0,016	1,549	0,23	µg/l	111%
Selenium	3,76	0,03	3,67	0,55	µg/l	98%
Silver	0,202	0,011	<1		µg/l	•
Uranium	1,121	0,012	1,18	0,18	µg/l	105%
Vanadium	1,721	0,015	<5		µg/l	•
Zinc	15,3	0,6	14,8	2,23	µg/l	97%



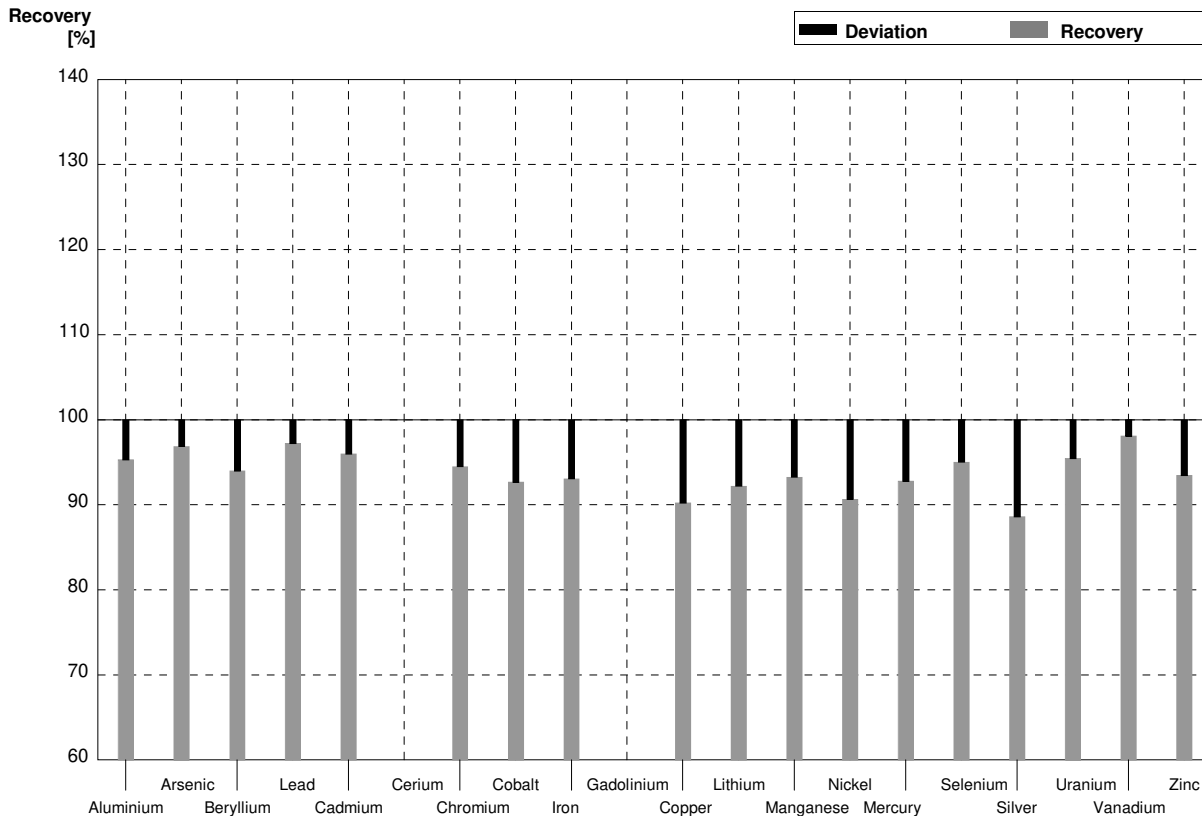
**Sample M177B**  
**Laboratory A**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	42,4	6,35	µg/l	104%
Arsenic	1,517	0,014	1,57	0,24	µg/l	103%
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03	1,54	0,23	µg/l	105%
Cadmium	4,25	0,03	4,01	0,60	µg/l	94%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	2,00	0,30	µg/l	103%
Cobalt	1,827	0,013	1,85	0,28	µg/l	101%
Iron	60,3	0,3	61,8	9,27	µg/l	102%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,30	0,34	µg/l	99%
Lithium	6,03	0,05	<10		µg/l	•
Manganese	18,25	0,12	18,4	2,77	µg/l	101%
Nickel	4,65	0,05	4,60	0,69	µg/l	99%
Mercury	0,440	0,013	0,527	0,079	µg/l	120%
Selenium	2,44	0,02	2,43	0,36	µg/l	100%
Silver	0,807	0,013	<1		µg/l	•
Uranium	2,63	0,02	2,81	0,42	µg/l	107%
Vanadium	0,603	0,006	<5		µg/l	•
Zinc	25,2	0,6	24,4	3,66	µg/l	97%



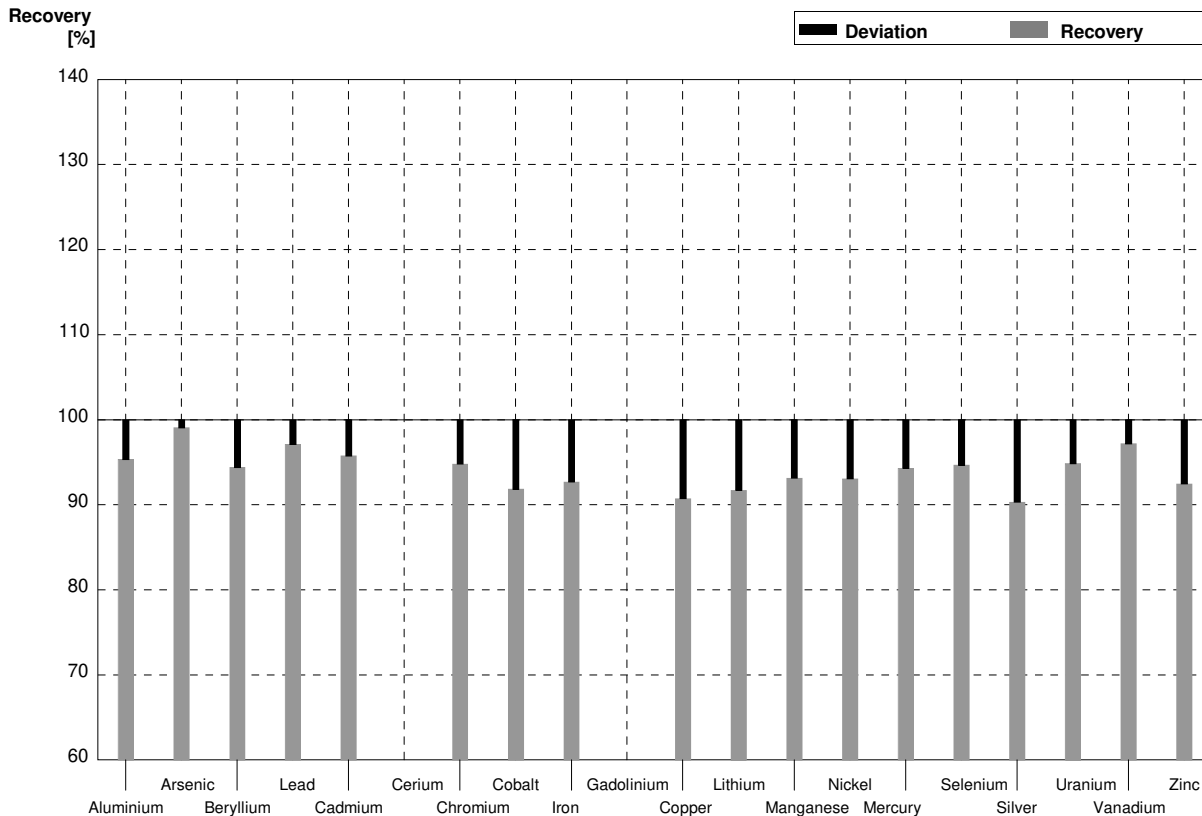
**Sample M177A**  
**Laboratory B**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	24,3	2,35	µg/l	95%
Arsenic	2,589	0,019	2,508	0,192	µg/l	97%
Beryllium	0,200	0,002	0,188	0,028	µg/l	94%
Lead	2,41	0,05	2,343	0,171	µg/l	97%
Cadmium	0,598	0,007	0,574	0,055	µg/l	96%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,150	0,643	µg/l	94%
Cobalt	0,820	0,007	0,760	0,083	µg/l	93%
Iron	40,4	0,2	37,6	3,52	µg/l	93%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,468	0,974	µg/l	90%
Lithium	3,08	0,03	2,840	0,283	µg/l	92%
Manganese	46,0	0,2	42,9	3,18	µg/l	93%
Nickel	2,57	0,04	2,330	0,371	µg/l	91%
Mercury	1,401	0,016	1,300		µg/l	93%
Selenium	3,76	0,03	3,573	0,631	µg/l	95%
Silver	0,202	0,011	0,179	0,034	µg/l	89%
Uranium	1,121	0,012	1,070	0,103	µg/l	95%
Vanadium	1,721	0,015	1,688	0,246	µg/l	98%
Zinc	15,3	0,6	14,3	1,15	µg/l	93%



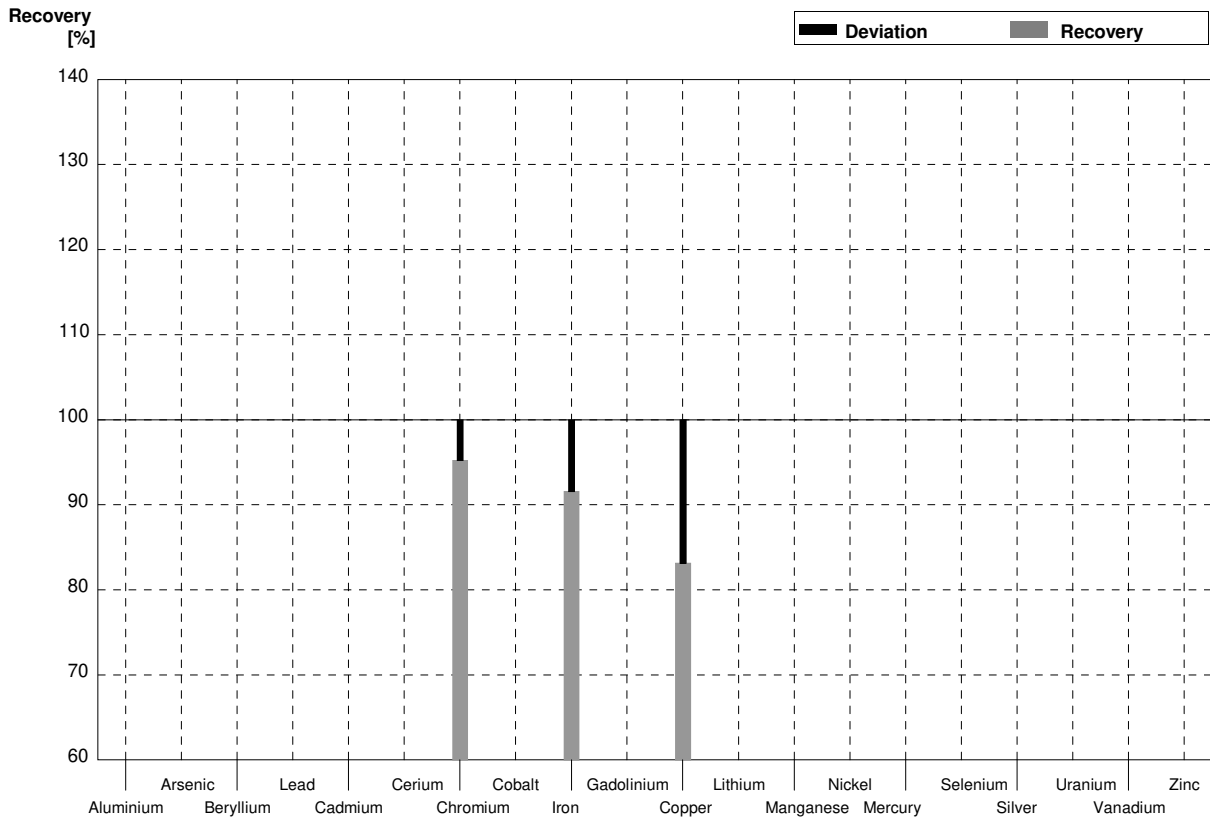
**Sample M177B**  
**Laboratory B**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	38,9	3,76	µg/l	95%
Arsenic	1,517	0,014	1,503	0,115	µg/l	99%
Beryllium	0,1197	0,0014	0,113	0,017	µg/l	94%
Lead	1,46	0,03	1,418	0,104	µg/l	97%
Cadmium	4,25	0,03	4,070	0,391	µg/l	96%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	1,838	0,230	µg/l	95%
Cobalt	1,827	0,013	1,678	0,183	µg/l	92%
Iron	60,3	0,3	55,9	5,23	µg/l	93%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,105	0,375	µg/l	91%
Lithium	6,03	0,05	5,530	0,551	µg/l	92%
Manganese	18,25	0,12	17,0	1,26	µg/l	93%
Nickel	4,65	0,05	4,328	0,689	µg/l	93%
Mercury	0,440	0,013	0,415		µg/l	94%
Selenium	2,44	0,02	2,310	0,408	µg/l	95%
Silver	0,807	0,013	0,729	0,138	µg/l	90%
Uranium	2,63	0,02	2,495	0,241	µg/l	95%
Vanadium	0,603	0,006	0,586	0,086	µg/l	97%
Zinc	25,2	0,6	23,3	1,87	µg/l	92%



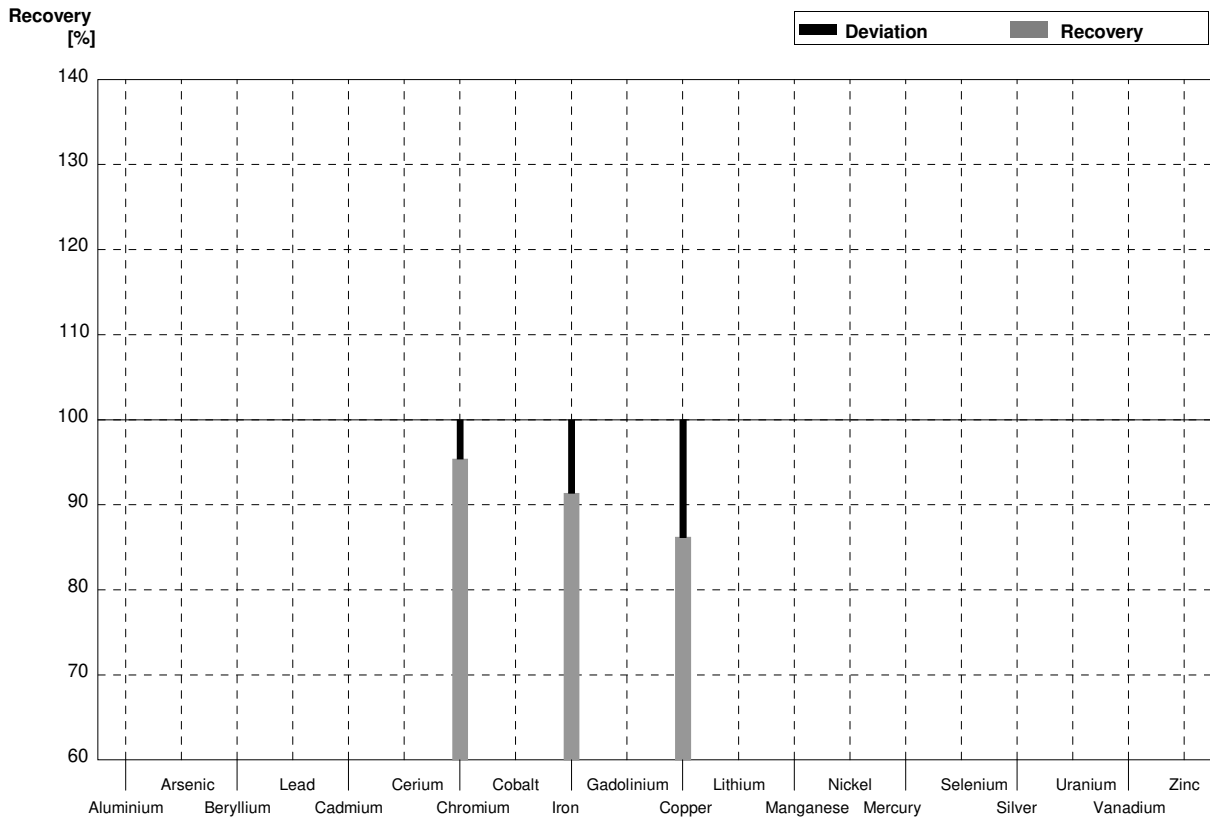
**Sample M177A**  
**Laboratory C**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2			µg/l	
Arsenic	2,589	0,019			µg/l	
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05			µg/l	
Cadmium	0,598	0,007			µg/l	
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,19	0,719	µg/l	95%
Cobalt	0,820	0,007			µg/l	
Iron	40,4	0,2	37,0	4,17	µg/l	92%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,04	0,662	µg/l	83%
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2			µg/l	
Nickel	2,57	0,04			µg/l	
Mercury	1,401	0,016			µg/l	
Selenium	3,76	0,03			µg/l	
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012			µg/l	
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6			µg/l	



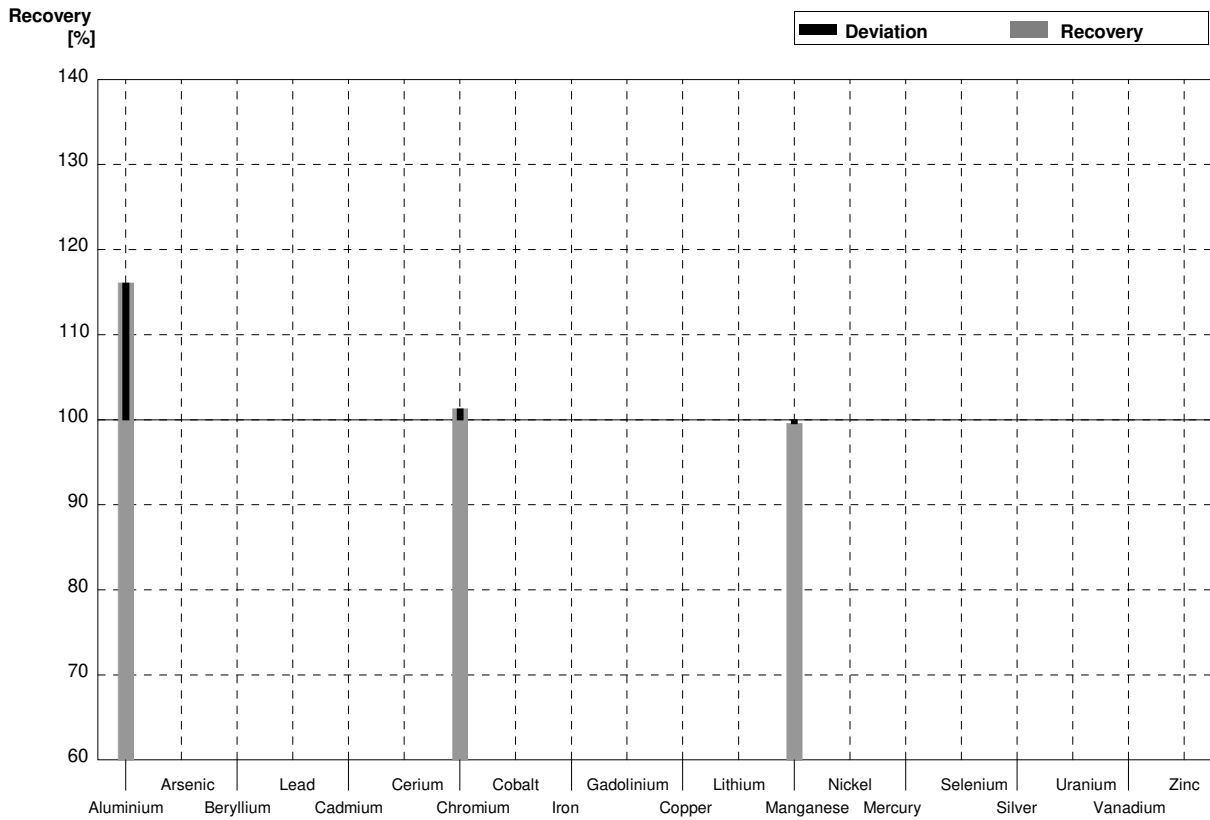
**Sample M177B**  
**Laboratory C**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3			µg/l	
Arsenic	1,517	0,014			µg/l	
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03			µg/l	
Cadmium	4,25	0,03			µg/l	
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	1,85	0,256	µg/l	95%
Cobalt	1,827	0,013			µg/l	
Iron	60,3	0,3	55,1	6,21	µg/l	91%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,00	0,263	µg/l	86%
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12			µg/l	
Nickel	4,65	0,05			µg/l	
Mercury	0,440	0,013			µg/l	
Selenium	2,44	0,02			µg/l	
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02			µg/l	
Vanadium	0,603	0,006			µg/l	
Zinc	25,2	0,6			µg/l	



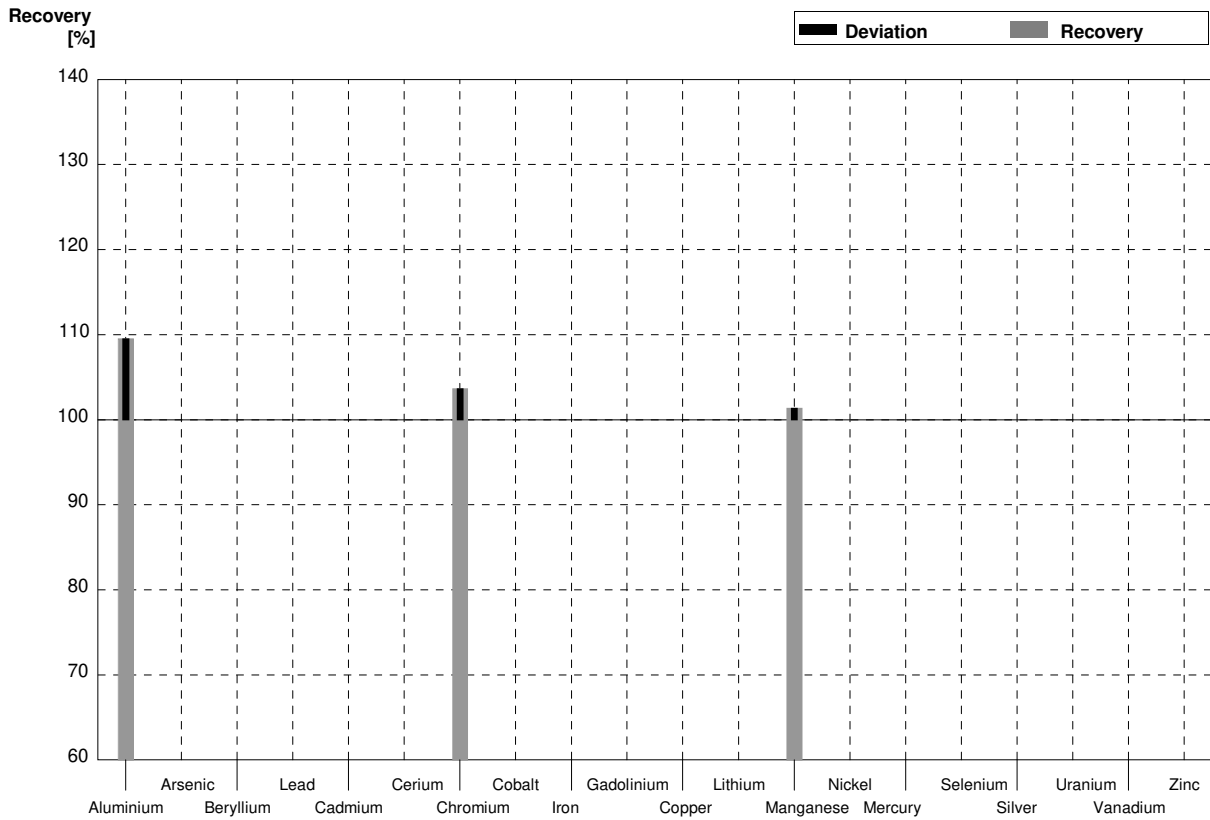
**Sample M177A**  
**Laboratory D**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	29,6	9,45	µg/l	116%
Arsenic	2,589	0,019			µg/l	
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05			µg/l	
Cadmium	0,598	0,007			µg/l	
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,52	1,27	µg/l	101%
Cobalt	0,820	0,007			µg/l	
Iron	40,4	0,2			µg/l	
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04			µg/l	
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2	45,8	5,95	µg/l	100%
Nickel	2,57	0,04			µg/l	
Mercury	1,401	0,016			µg/l	
Selenium	3,76	0,03			µg/l	
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012			µg/l	
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6			µg/l	



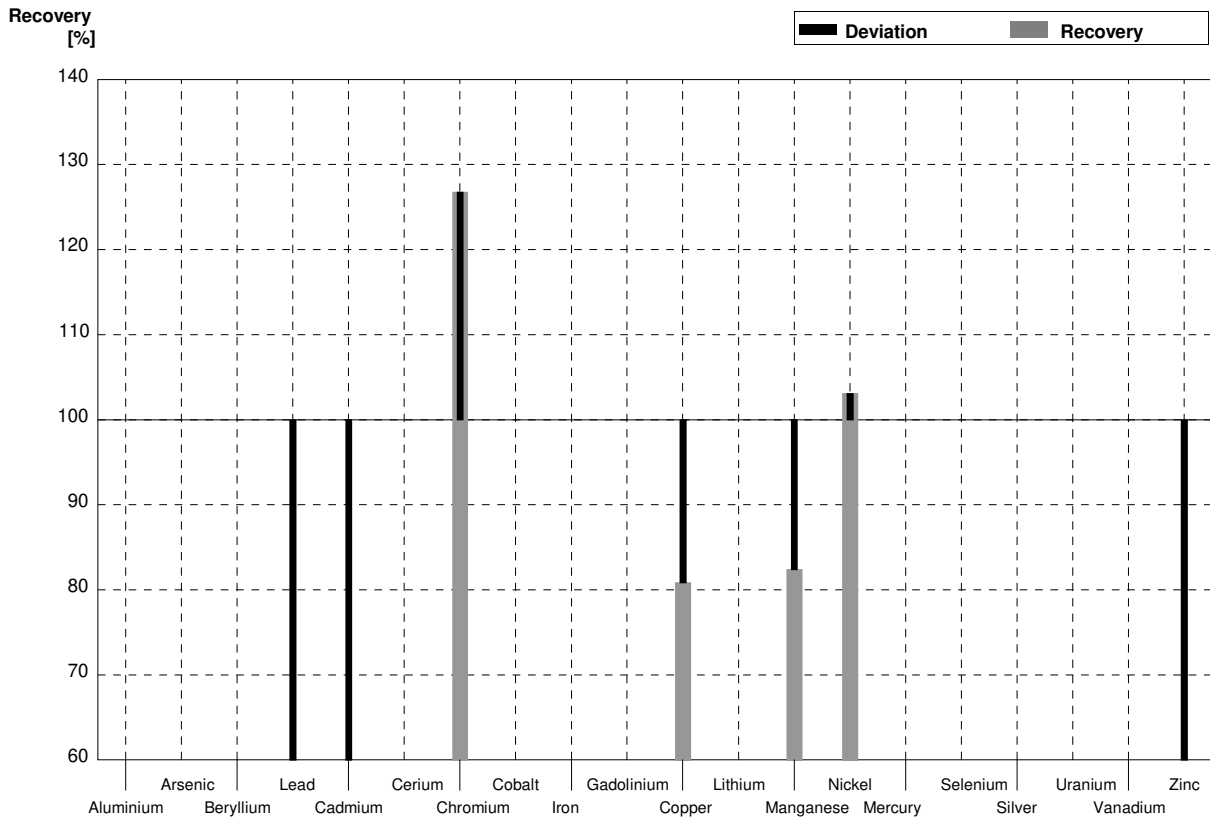
**Sample M177B**  
**Laboratory D**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	44,7	14,3	µg/l	110%
Arsenic	1,517	0,014			µg/l	
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03			µg/l	
Cadmium	4,25	0,03			µg/l	
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	2,01	0,46	µg/l	104%
Cobalt	1,827	0,013			µg/l	
Iron	60,3	0,3			µg/l	
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03			µg/l	
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12	18,5	2,40	µg/l	101%
Nickel	4,65	0,05			µg/l	
Mercury	0,440	0,013			µg/l	
Selenium	2,44	0,02			µg/l	
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02			µg/l	
Vanadium	0,603	0,006			µg/l	
Zinc	25,2	0,6			µg/l	



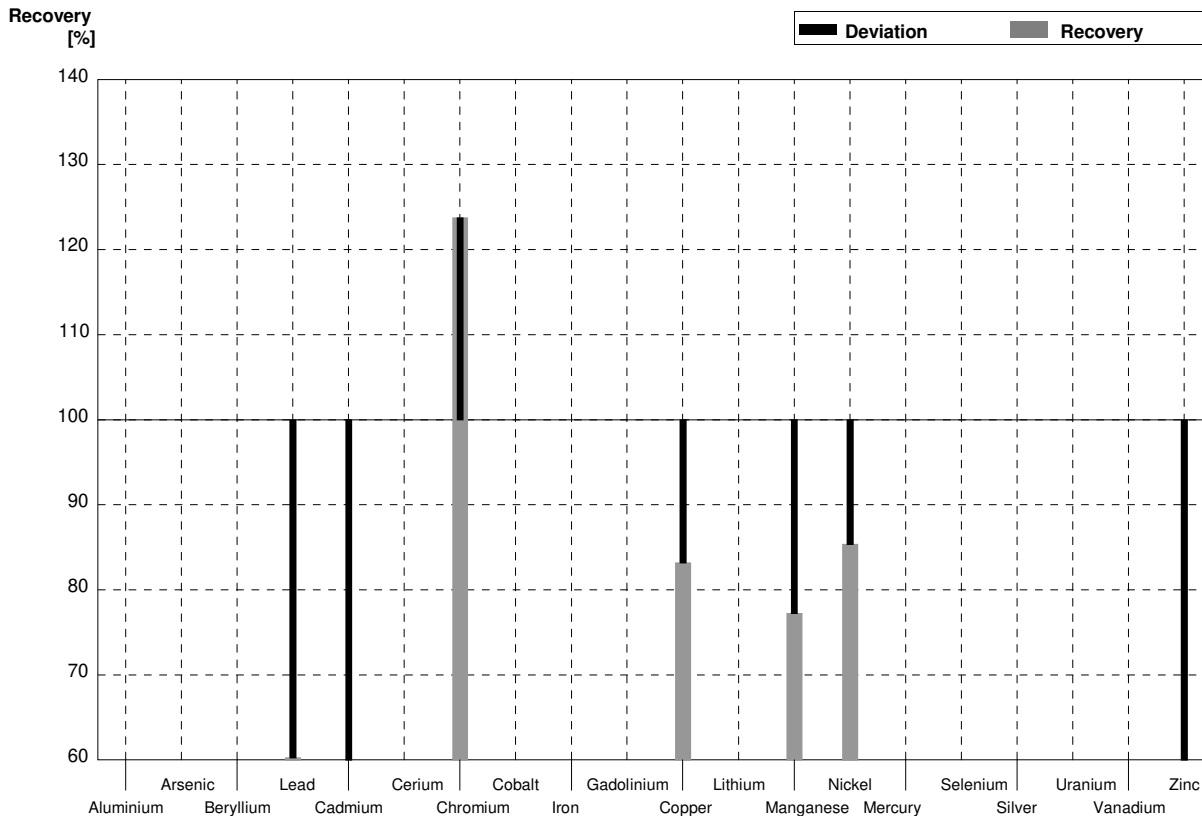
**Sample M177A**  
**Laboratory E**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2			µg/l	
Arsenic	2,589	0,019			µg/l	
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05	1,41	0,28	µg/l	59%
Cadmium	0,598	0,007	0,150	0,03	µg/l	25%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	6,91	1,38	µg/l	127%
Cobalt	0,820	0,007			µg/l	
Iron	40,4	0,2			µg/l	
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	4,90	0,98	µg/l	81%
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2	37,90	7,58	µg/l	82%
Nickel	2,57	0,04	2,65	0,53	µg/l	103%
Mercury	1,401	0,016			µg/l	
Selenium	3,76	0,03			µg/l	
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012			µg/l	
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6	3,79	0,76	µg/l	25%



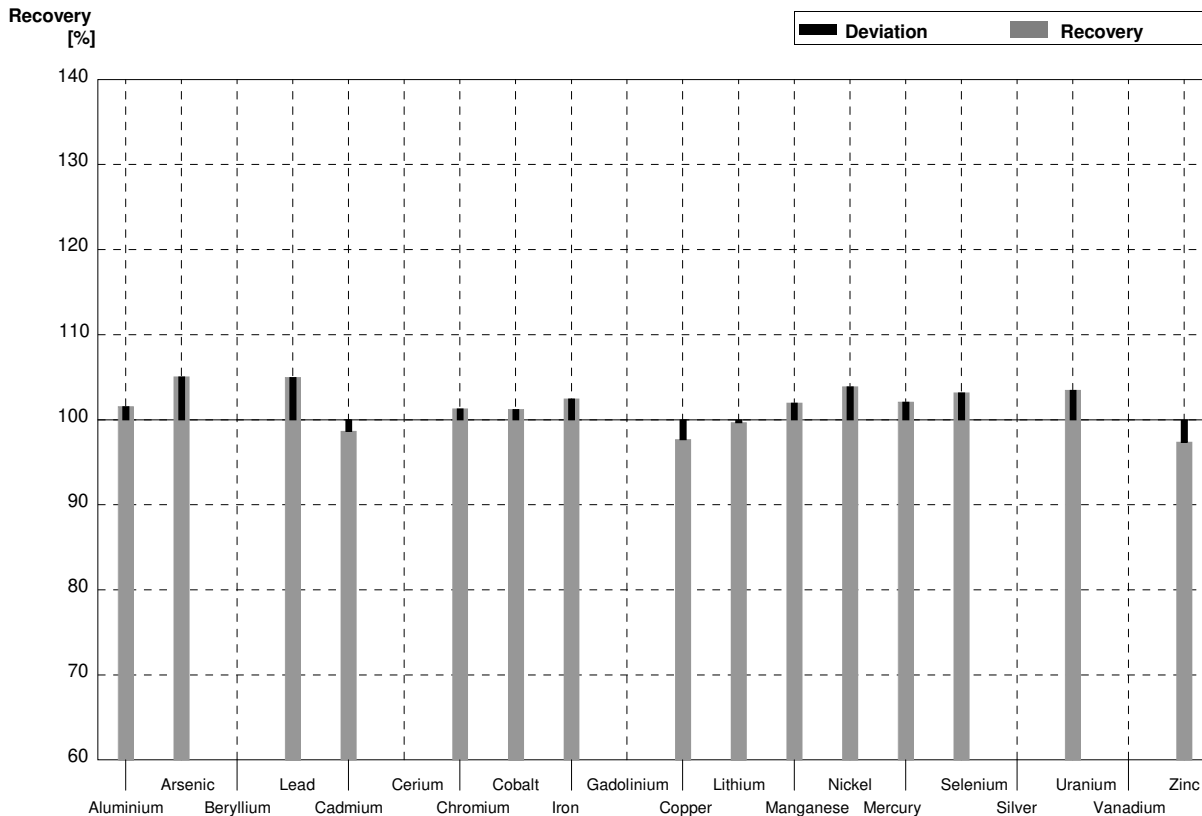
**Sample M177B**  
**Laboratory E**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	40,8	0,3			$\mu\text{g/l}$	
Arsenic	1,517	0,014			$\mu\text{g/l}$	
Beryllium	0,1197	0,0014			$\mu\text{g/l}$	
Lead	1,46	0,03	0,88	0,18	$\mu\text{g/l}$	60%
Cadmium	4,25	0,03	1,26	0,25	$\mu\text{g/l}$	30%
Cerium	1,144	0,010			$\mu\text{g/l}$	
Chromium	1,939	0,016	2,40	0,48	$\mu\text{g/l}$	124%
Cobalt	1,827	0,013			$\mu\text{g/l}$	
Iron	60,3	0,3			$\mu\text{g/l}$	
Gadolinium	0,0607	0,0012			$\mu\text{g/l}$	
Copper	2,32	0,03	1,93	0,39	$\mu\text{g/l}$	83%
Lithium	6,03	0,05			$\mu\text{g/l}$	
Manganese	18,25	0,12	14,10	2,82	$\mu\text{g/l}$	77%
Nickel	4,65	0,05	3,97	0,79	$\mu\text{g/l}$	85%
Mercury	0,440	0,013			$\mu\text{g/l}$	
Selenium	2,44	0,02			$\mu\text{g/l}$	
Silver	0,807	0,013			$\mu\text{g/l}$	
Uranium	2,63	0,02			$\mu\text{g/l}$	
Vanadium	0,603	0,006			$\mu\text{g/l}$	
Zinc	25,2	0,6	6,55	1,31	$\mu\text{g/l}$	26%



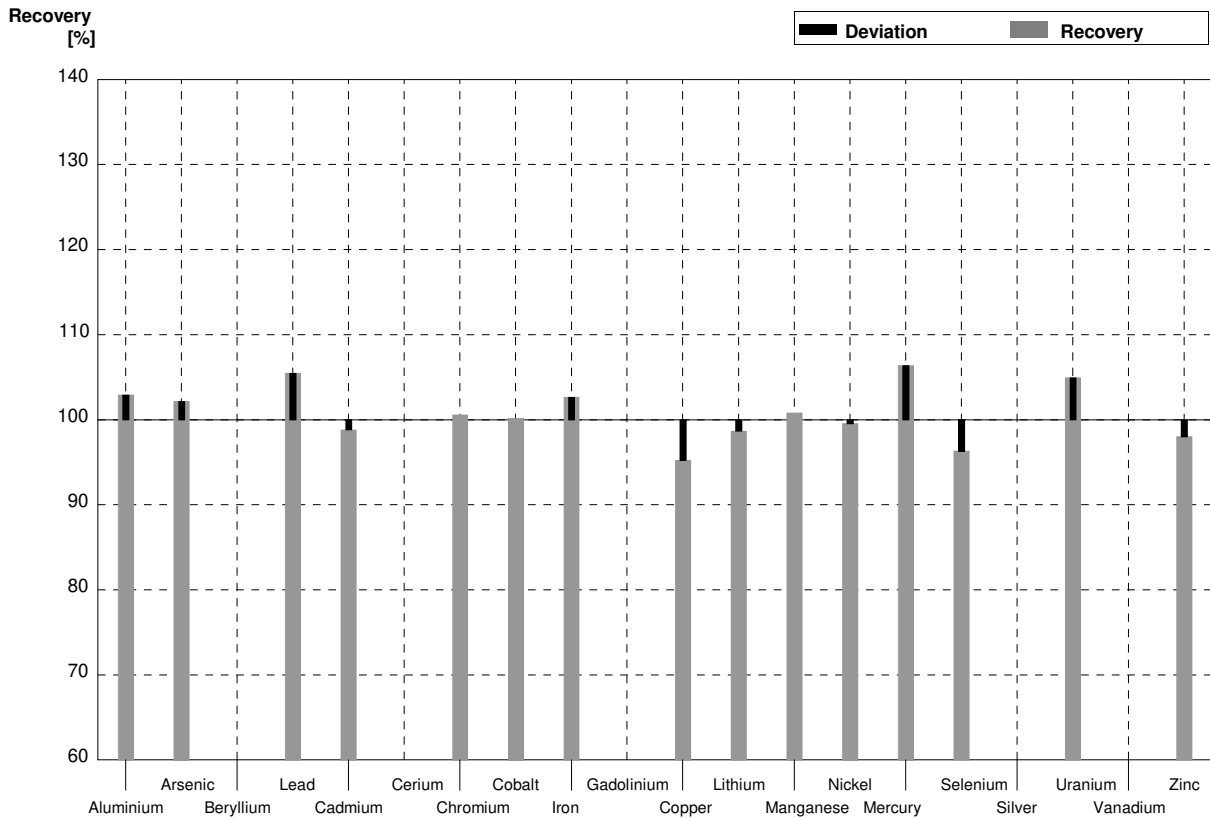
**Sample M177A**  
**Laboratory F**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	25,9	5,18	µg/l	102%
Arsenic	2,589	0,019	2,72	0,54	µg/l	105%
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05	2,53	0,51	µg/l	105%
Cadmium	0,598	0,007	0,59	0,12	µg/l	99%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,52	1,10	µg/l	101%
Cobalt	0,820	0,007	0,83	0,17	µg/l	101%
Iron	40,4	0,2	41,4	8,28	µg/l	102%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,92	1,18	µg/l	98%
Lithium	3,08	0,03	3,07	0,61	µg/l	100%
Manganese	46,0	0,2	46,9	9,38	µg/l	102%
Nickel	2,57	0,04	2,67	0,53	µg/l	104%
Mercury	1,401	0,016	1,43	0,29	µg/l	102%
Selenium	3,76	0,03	3,88	0,78	µg/l	103%
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012	1,16	0,23	µg/l	103%
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6	14,9	2,98	µg/l	97%



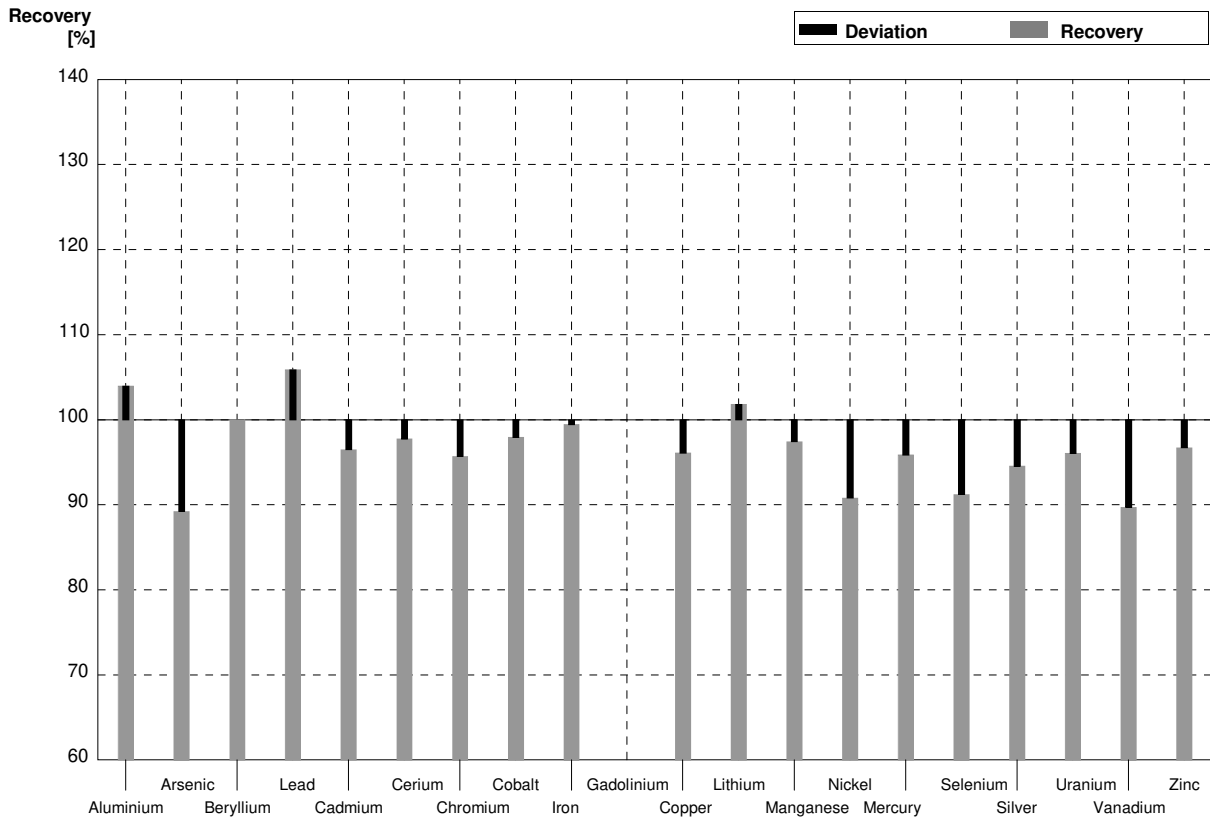
**Sample M177B**  
**Laboratory F**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	42,0	8,4	µg/l	103%
Arsenic	1,517	0,014	1,55	0,31	µg/l	102%
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03	1,54	0,31	µg/l	105%
Cadmium	4,25	0,03	4,20	0,84	µg/l	99%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	1,95	0,39	µg/l	101%
Cobalt	1,827	0,013	1,83	0,37	µg/l	100%
Iron	60,3	0,3	61,9	12,4	µg/l	103%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,21	0,22	µg/l	95%
Lithium	6,03	0,05	5,95	1,19	µg/l	99%
Manganese	18,25	0,12	18,4	3,68	µg/l	101%
Nickel	4,65	0,05	4,63	0,93	µg/l	100%
Mercury	0,440	0,013	0,468	0,09	µg/l	106%
Selenium	2,44	0,02	2,35	0,47	µg/l	96%
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02	2,76	0,55	µg/l	105%
Vanadium	0,603	0,006			µg/l	
Zinc	25,2	0,6	24,7	4,94	µg/l	98%



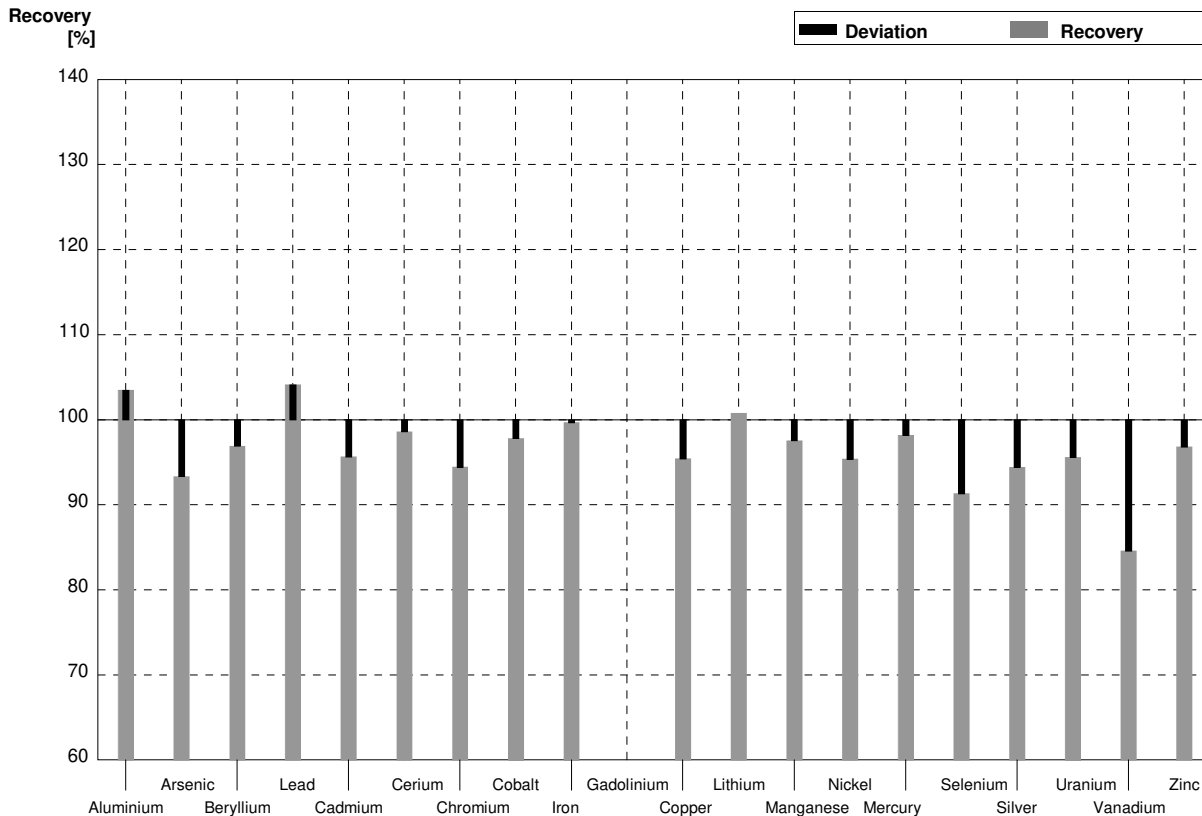
**Sample M177A**  
**Laboratory G**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	26,51	2,7	µg/l	104%
Arsenic	2,589	0,019	2,310	0,23	µg/l	89%
Beryllium	0,200	0,002	0,200	0,02	µg/l	100%
Lead	2,41	0,05	2,552	0,25	µg/l	106%
Cadmium	0,598	0,007	0,577	0,057	µg/l	96%
Cerium	1,863	0,015	1,821	0,18	µg/l	98%
Chromium	5,45	0,03	5,216	0,52	µg/l	96%
Cobalt	0,820	0,007	0,803	0,08	µg/l	98%
Iron	40,4	0,2	40,17	4	µg/l	99%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,824	0,58	µg/l	96%
Lithium	3,08	0,03	3,136	0,31	µg/l	102%
Manganese	46,0	0,2	44,82	4,4	µg/l	97%
Nickel	2,57	0,04	2,334	0,23	µg/l	91%
Mercury	1,401	0,016	1,343	0,13	µg/l	96%
Selenium	3,76	0,03	3,430	0,34	µg/l	91%
Silver	0,202	0,011	0,191	0,019	µg/l	95%
Uranium	1,121	0,012	1,077	0,11	µg/l	96%
Vanadium	1,721	0,015	1,544	0,15	µg/l	90%
Zinc	15,3	0,6	14,8	1,4	µg/l	97%



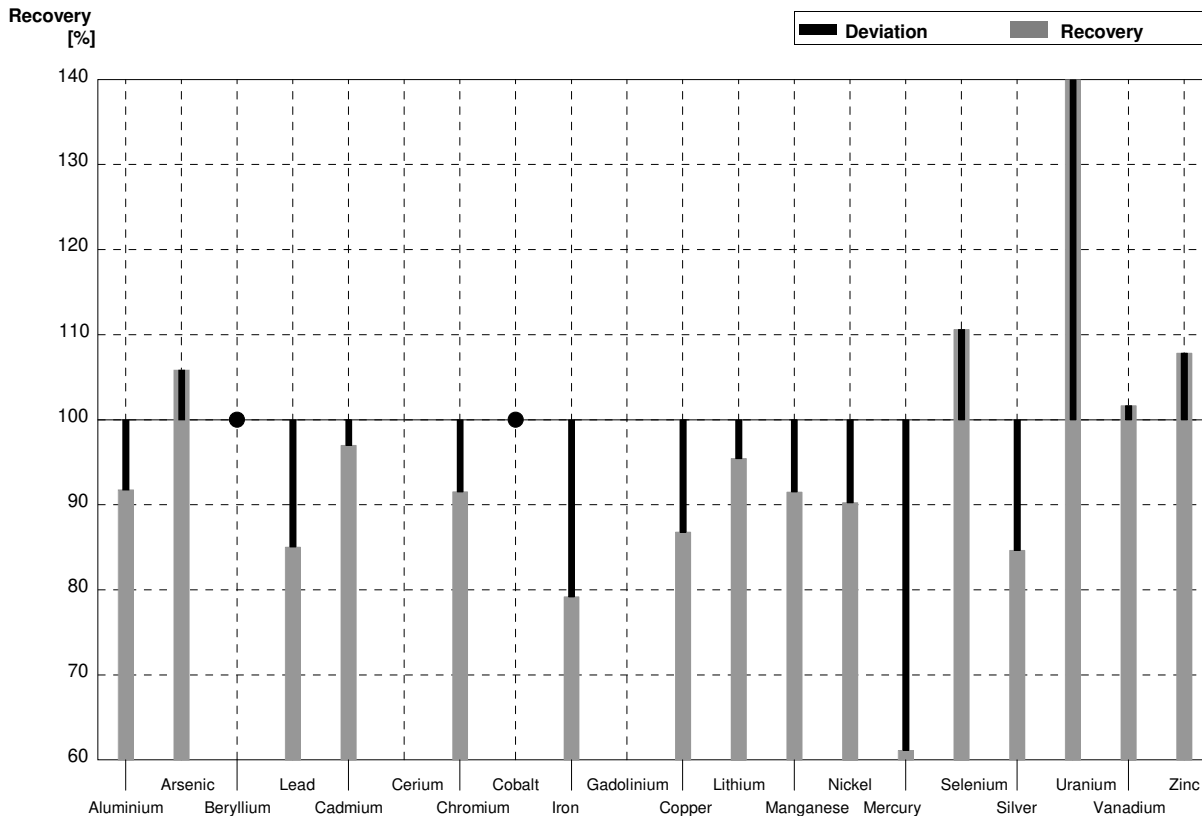
**Sample M177B**  
**Laboratory G**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	40,8	0,3	42,22	4,2	$\mu\text{g/l}$	103%
Arsenic	1,517	0,014	1,416	0,14	$\mu\text{g/l}$	93%
Beryllium	0,1197	0,0014	0,116	0,016	$\mu\text{g/l}$	97%
Lead	1,46	0,03	1,520	0,15	$\mu\text{g/l}$	104%
Cadmium	4,25	0,03	4,065	0,406	$\mu\text{g/l}$	96%
Cerium	1,144	0,010	1,128	0,11	$\mu\text{g/l}$	99%
Chromium	1,939	0,016	1,831	0,18	$\mu\text{g/l}$	94%
Cobalt	1,827	0,013	1,787	0,17	$\mu\text{g/l}$	98%
Iron	60,3	0,3	60,1	6	$\mu\text{g/l}$	100%
Gadolinium	0,0607	0,0012			$\mu\text{g/l}$	
Copper	2,32	0,03	2,214	0,22	$\mu\text{g/l}$	95%
Lithium	6,03	0,05	6,076	0,6	$\mu\text{g/l}$	101%
Manganese	18,25	0,12	17,8	1,7	$\mu\text{g/l}$	98%
Nickel	4,65	0,05	4,435	0,44	$\mu\text{g/l}$	95%
Mercury	0,440	0,013	0,432	0,04	$\mu\text{g/l}$	98%
Selenium	2,44	0,02	2,228	0,22	$\mu\text{g/l}$	91%
Silver	0,807	0,013	0,762	0,07	$\mu\text{g/l}$	94%
Uranium	2,63	0,02	2,514	0,25	$\mu\text{g/l}$	96%
Vanadium	0,603	0,006	0,51	0,05	$\mu\text{g/l}$	85%
Zinc	25,2	0,6	24,4	2,4	$\mu\text{g/l}$	97%



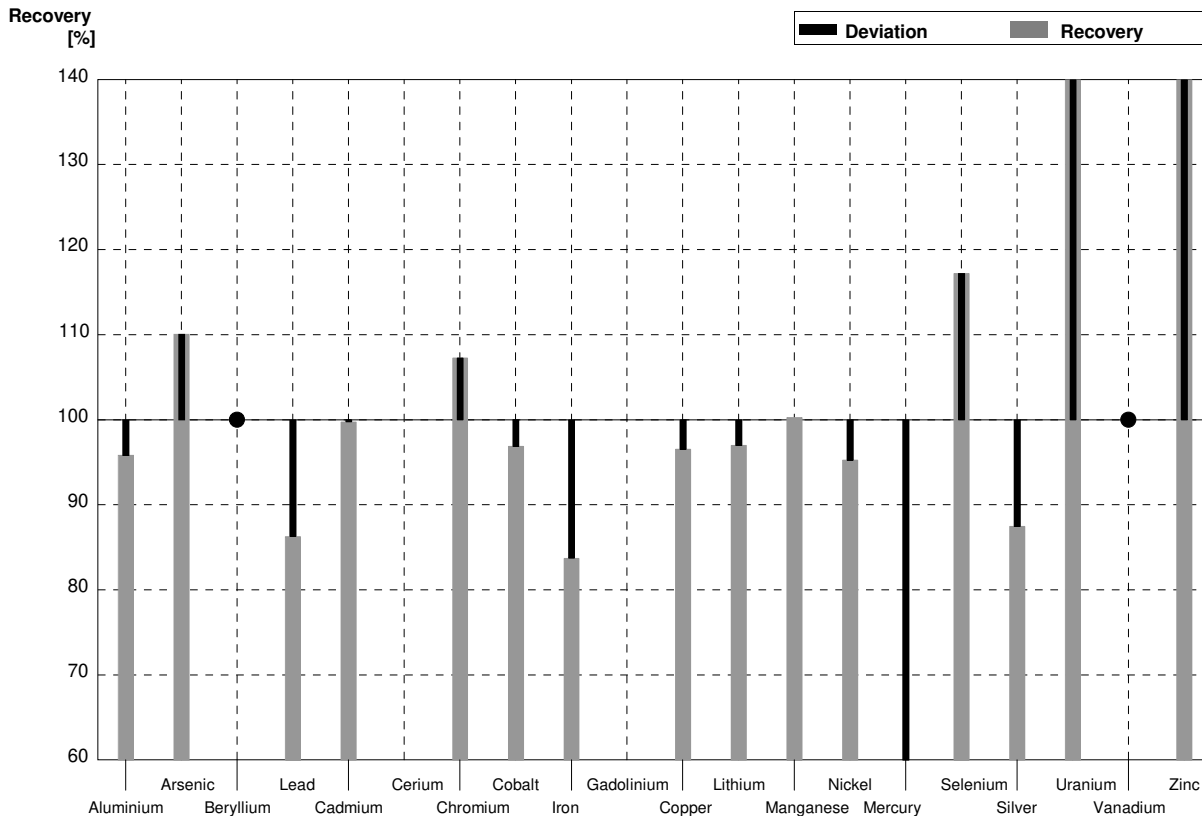
**Sample M177A**  
**Laboratory H**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	23,4	4,7	µg/l	92%
Arsenic	2,589	0,019	2,74	0,55	µg/l	106%
Beryllium	0,200	0,002	<1,0	0,50	µg/l	•
Lead	2,41	0,05	2,05	0,41	µg/l	85%
Cadmium	0,598	0,007	0,580	0,120	µg/l	97%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	4,99	1,00	µg/l	92%
Cobalt	0,820	0,007	<1,0	0,5	µg/l	•
Iron	40,4	0,2	32,0	6,4	µg/l	79%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,26	1,05	µg/l	87%
Lithium	3,08	0,03	2,94	0,59	µg/l	95%
Manganese	46,0	0,2	42,1	8,4	µg/l	92%
Nickel	2,57	0,04	2,32	0,46	µg/l	90%
Mercury	1,401	0,016	0,857	0,171	µg/l	61%
Selenium	3,76	0,03	4,16	0,83	µg/l	111%
Silver	0,202	0,011	0,171	0,034	µg/l	85%
Uranium	1,121	0,012	9,85	1,97	µg/l	879%
Vanadium	1,721	0,015	1,75	0,35	µg/l	102%
Zinc	15,3	0,6	16,5	3,3	µg/l	108%



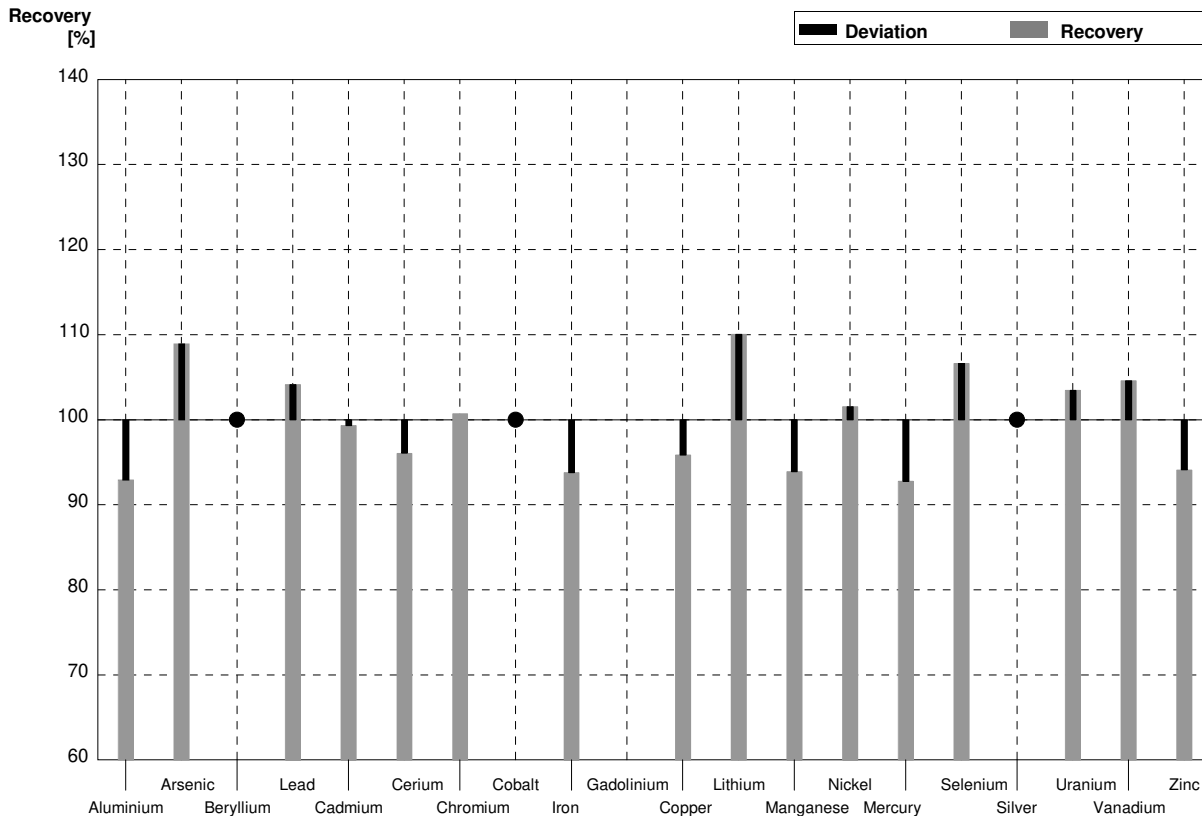
**Sample M177B**  
**Laboratory H**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	39,1	7,8	µg/l	96%
Arsenic	1,517	0,014	1,67	0,33	µg/l	110%
Beryllium	0,1197	0,0014	<1,0	0,50	µg/l	•
Lead	1,46	0,03	1,26	0,25	µg/l	86%
Cadmium	4,25	0,03	4,24	0,85	µg/l	100%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	2,08	0,42	µg/l	107%
Cobalt	1,827	0,013	1,77	0,35	µg/l	97%
Iron	60,3	0,3	50,5	10,1	µg/l	84%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,24	0,45	µg/l	97%
Lithium	6,03	0,05	5,85	1,17	µg/l	97%
Manganese	18,25	0,12	18,3	3,7	µg/l	100%
Nickel	4,65	0,05	4,43	0,89	µg/l	95%
Mercury	0,440	0,013	0,238	0,048	µg/l	54%
Selenium	2,44	0,02	2,86	0,57	µg/l	117%
Silver	0,807	0,013	0,706	0,141	µg/l	87%
Uranium	2,63	0,02	23,4	4,7	µg/l	890%
Vanadium	0,603	0,006	<1,0	0,5	µg/l	•
Zinc	25,2	0,6	40,6	8,1	µg/l	161%



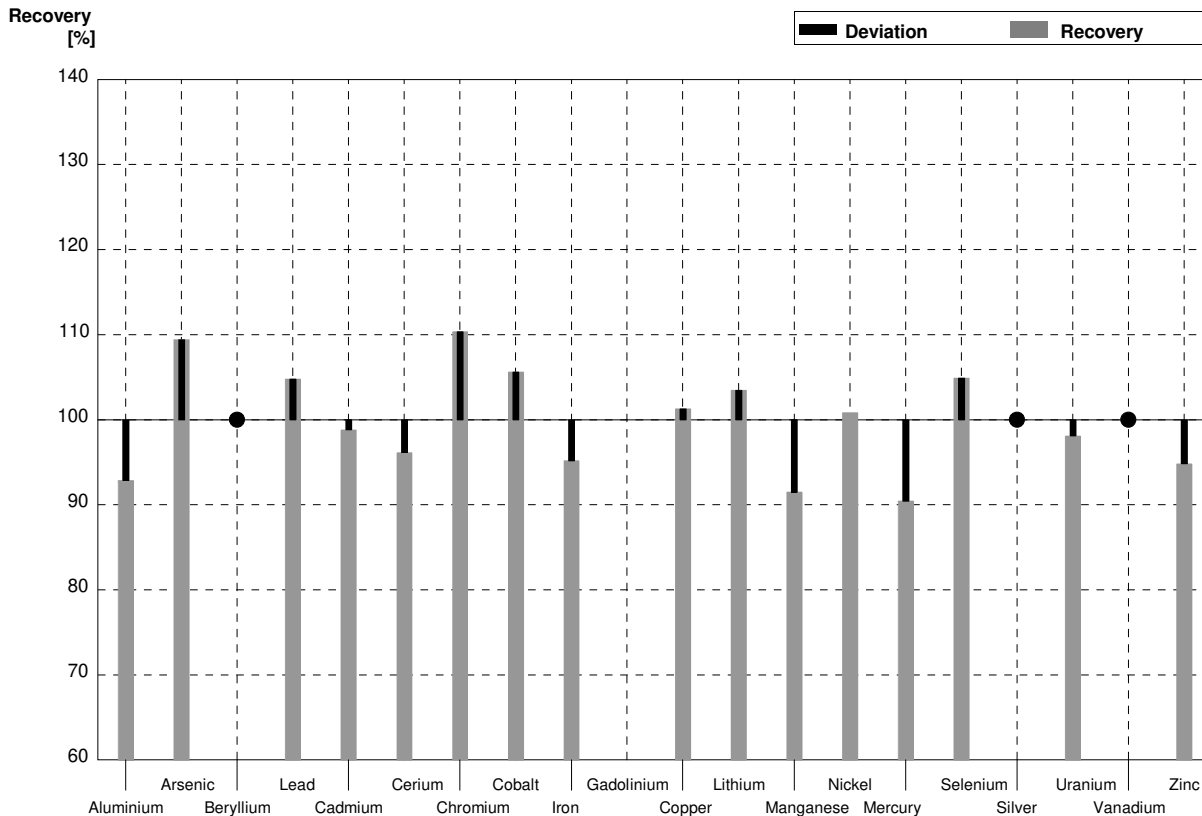
**Sample M177A**  
**Laboratory I**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	23,7	0,969	µg/l	93%
Arsenic	2,589	0,019	2,82	0,0662	µg/l	109%
Beryllium	0,200	0,002	<1		µg/l	•
Lead	2,41	0,05	2,51	0,0481	µg/l	104%
Cadmium	0,598	0,007	0,594	0,00635	µg/l	99%
Cerium	1,863	0,015	1,79	0,0565	µg/l	96%
Chromium	5,45	0,03	5,49	0,162	µg/l	101%
Cobalt	0,820	0,007	<1,00		µg/l	•
Iron	40,4	0,2	37,9	0,908	µg/l	94%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,81	0,0954	µg/l	96%
Lithium	3,08	0,03	3,39	0,062	µg/l	110%
Manganese	46,0	0,2	43,2	0,731	µg/l	94%
Nickel	2,57	0,04	2,61	0,0492	µg/l	102%
Mercury	1,401	0,016	1,30	0,0115	µg/l	93%
Selenium	3,76	0,03	4,01	0,0750	µg/l	107%
Silver	0,202	0,011	<1,00		µg/l	•
Uranium	1,121	0,012	1,16	0,0639	µg/l	103%
Vanadium	1,721	0,015	1,80	0,0675	µg/l	105%
Zinc	15,3	0,6	14,4	0,329	µg/l	94%



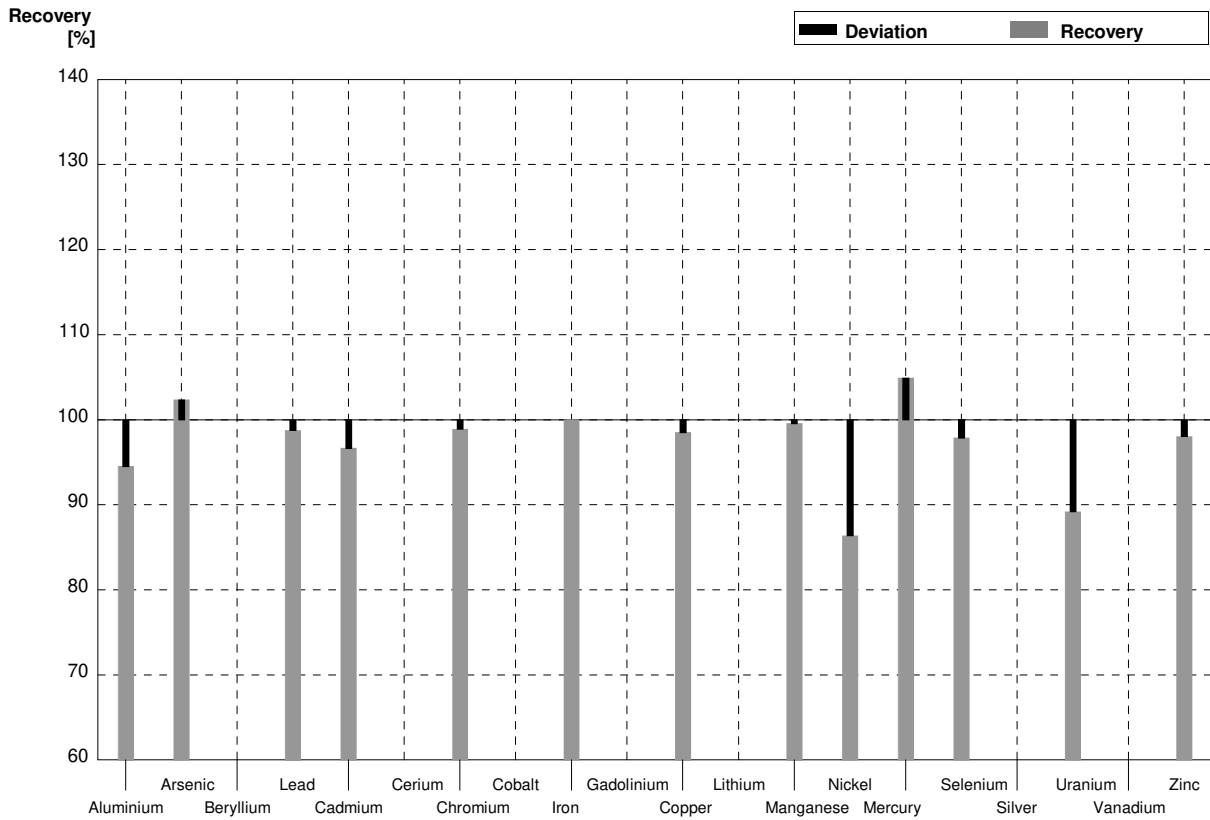
**Sample M177B**  
**Laboratory I**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	37,9	0,911	µg/l	93%
Arsenic	1,517	0,014	1,66	0,0705	µg/l	109%
Beryllium	0,1197	0,0014	<1		µg/l	•
Lead	1,46	0,03	1,53	0,0508	µg/l	105%
Cadmium	4,25	0,03	4,20	0,0645	µg/l	99%
Cerium	1,144	0,010	1,10	0,0600	µg/l	96%
Chromium	1,939	0,016	2,14	0,183	µg/l	110%
Cobalt	1,827	0,013	1,93	0,0393	µg/l	106%
Iron	60,3	0,3	57,4	0,883	µg/l	95%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,35	0,104	µg/l	101%
Lithium	6,03	0,05	6,24	0,060	µg/l	103%
Manganese	18,25	0,12	16,7	0,821	µg/l	92%
Nickel	4,65	0,05	4,69	0,0458	µg/l	101%
Mercury	0,440	0,013	0,398	0,0128	µg/l	90%
Selenium	2,44	0,02	2,56	0,0795	µg/l	105%
Silver	0,807	0,013	<1,00		µg/l	•
Uranium	2,63	0,02	2,58	0,0589	µg/l	98%
Vanadium	0,603	0,006	<1,00		µg/l	•
Zinc	25,2	0,6	23,9	0,332	µg/l	95%



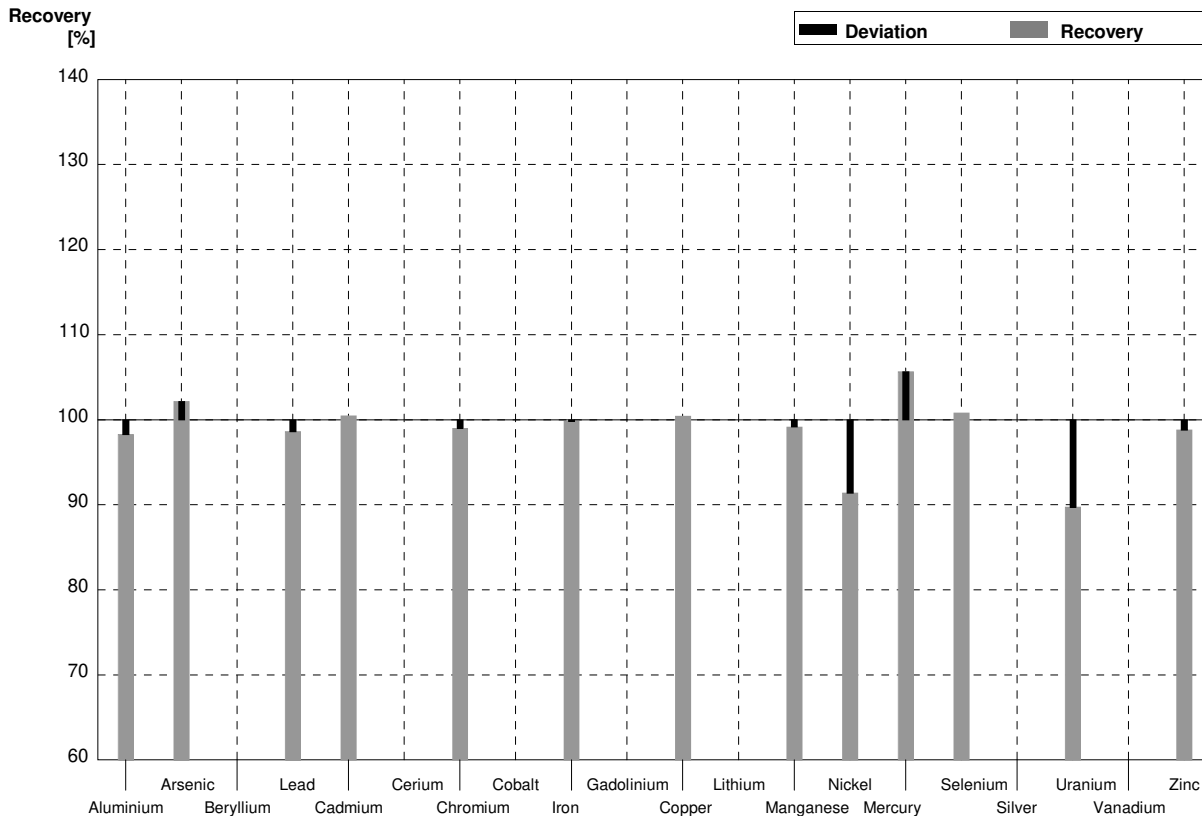
**Sample M177A**  
**Laboratory J**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	24,1	6,1	µg/l	95%
Arsenic	2,589	0,019	2,65	0,80	µg/l	102%
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05	2,38	0,60	µg/l	99%
Cadmium	0,598	0,007	0,578	0,15	µg/l	97%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,39	1,6	µg/l	99%
Cobalt	0,820	0,007			µg/l	
Iron	40,4	0,2	40,4	12,1	µg/l	100%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,97	1,5	µg/l	99%
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2	45,8	14	µg/l	100%
Nickel	2,57	0,04	2,22	0,56	µg/l	86%
Mercury	1,401	0,016	1,47	0,45	µg/l	105%
Selenium	3,76	0,03	3,68	1,5	µg/l	98%
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012	1,00	0,3	µg/l	89%
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6	15,0	3,8	µg/l	98%



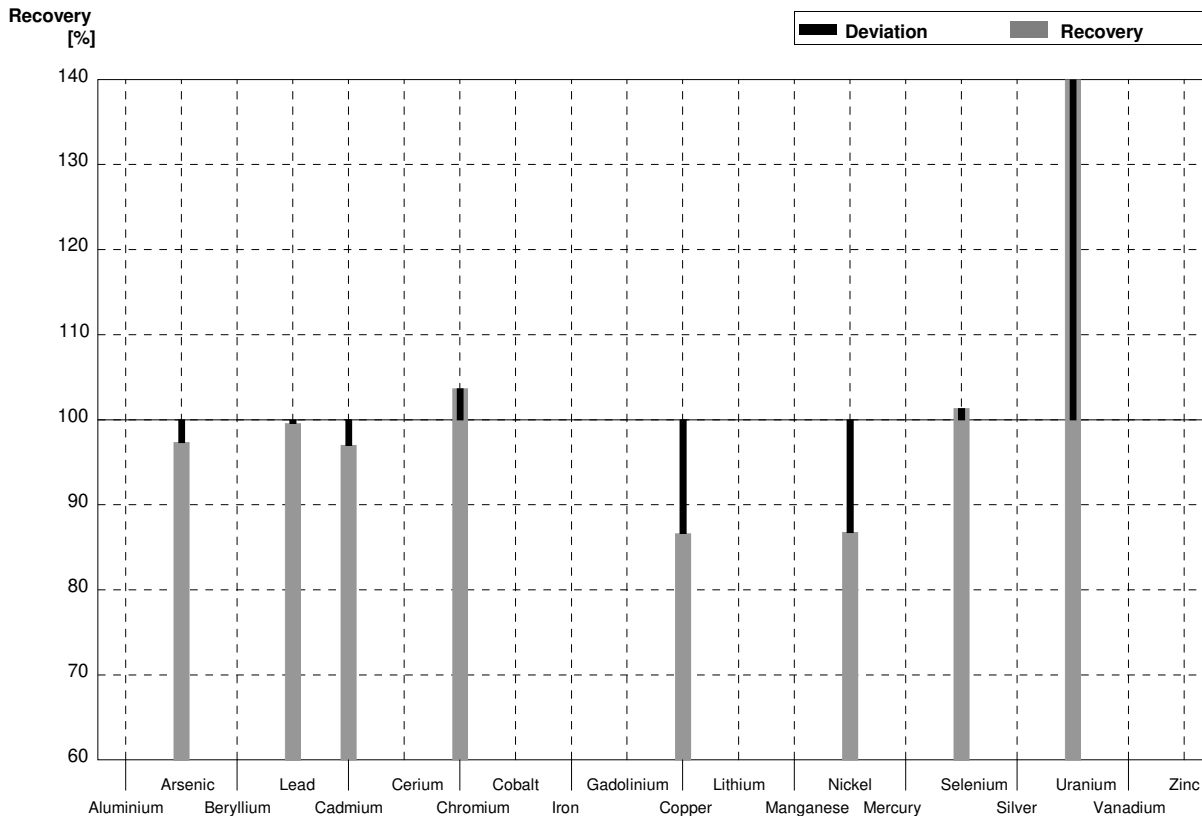
**Sample M177B**  
**Laboratory J**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	40,1	10,1	µg/l	98%
Arsenic	1,517	0,014	1,55	0,47	µg/l	102%
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03	1,44	0,36	µg/l	99%
Cadmium	4,25	0,03	4,27	1,1	µg/l	100%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	1,92	0,58	µg/l	99%
Cobalt	1,827	0,013			µg/l	
Iron	60,3	0,3	60,2	18,1	µg/l	100%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,33	0,59	µg/l	100%
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12	18,1	5,5	µg/l	99%
Nickel	4,65	0,05	4,25	1,1	µg/l	91%
Mercury	0,440	0,013	0,465	0,14	µg/l	106%
Selenium	2,44	0,02	2,46	0,99	µg/l	101%
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02	2,36	0,65	µg/l	90%
Vanadium	0,603	0,006			µg/l	
Zinc	25,2	0,6	24,9	6,3	µg/l	99%



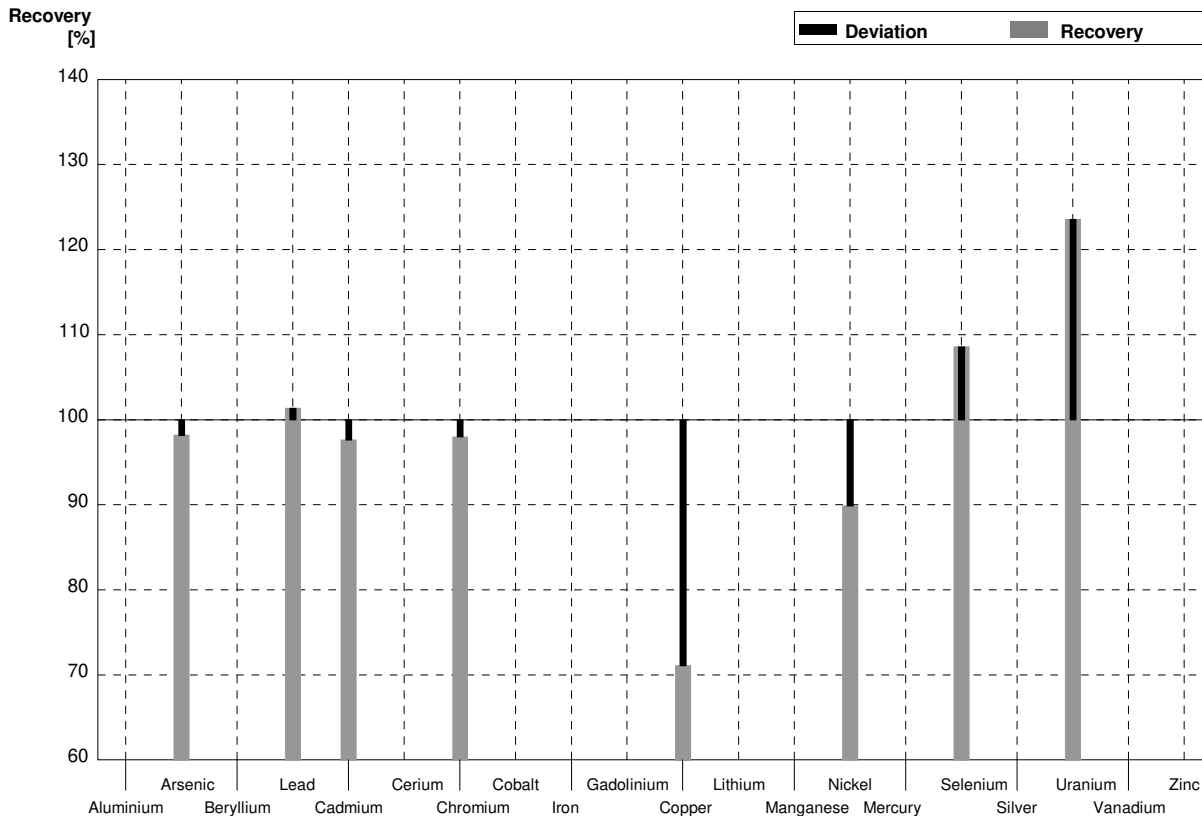
**Sample M177A**  
**Laboratory K**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2			µg/l	
Arsenic	2,589	0,019	2,52	0,26	µg/l	97%
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05	2,40	0,26	µg/l	100%
Cadmium	0,598	0,007	0,58	0,075	µg/l	97%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,65	1,2	µg/l	104%
Cobalt	0,820	0,007			µg/l	
Iron	40,4	0,2			µg/l	
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,25	0,37	µg/l	87%
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2			µg/l	
Nickel	2,57	0,04	2,23	0,18	µg/l	87%
Mercury	1,401	0,016			µg/l	
Selenium	3,76	0,03	3,81	0,38	µg/l	101%
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012	1,61	0,29	µg/l	144%
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6			µg/l	



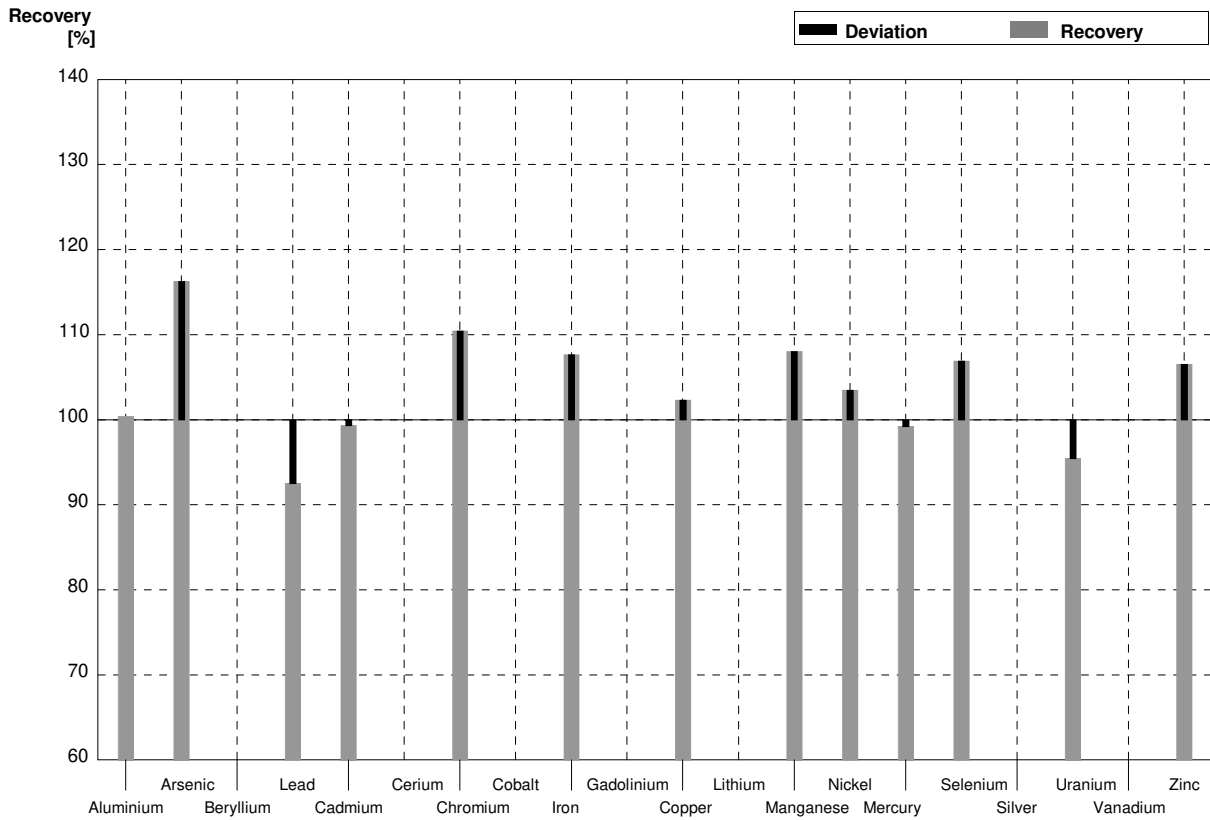
**Sample M177B**  
**Laboratory K**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3			µg/l	
Arsenic	1,517	0,014	1,49	0,15	µg/l	98%
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03	1,48	0,16	µg/l	101%
Cadmium	4,25	0,03	4,15	0,12	µg/l	98%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	1,90	0,42	µg/l	98%
Cobalt	1,827	0,013			µg/l	
Iron	60,3	0,3			µg/l	
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	1,65	0,17	µg/l	71%
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12			µg/l	
Nickel	4,65	0,05	4,18	0,33	µg/l	90%
Mercury	0,440	0,013			µg/l	
Selenium	2,44	0,02	2,65	0,26	µg/l	109%
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02	3,25	0,59	µg/l	124%
Vanadium	0,603	0,006			µg/l	
Zinc	25,2	0,6			µg/l	



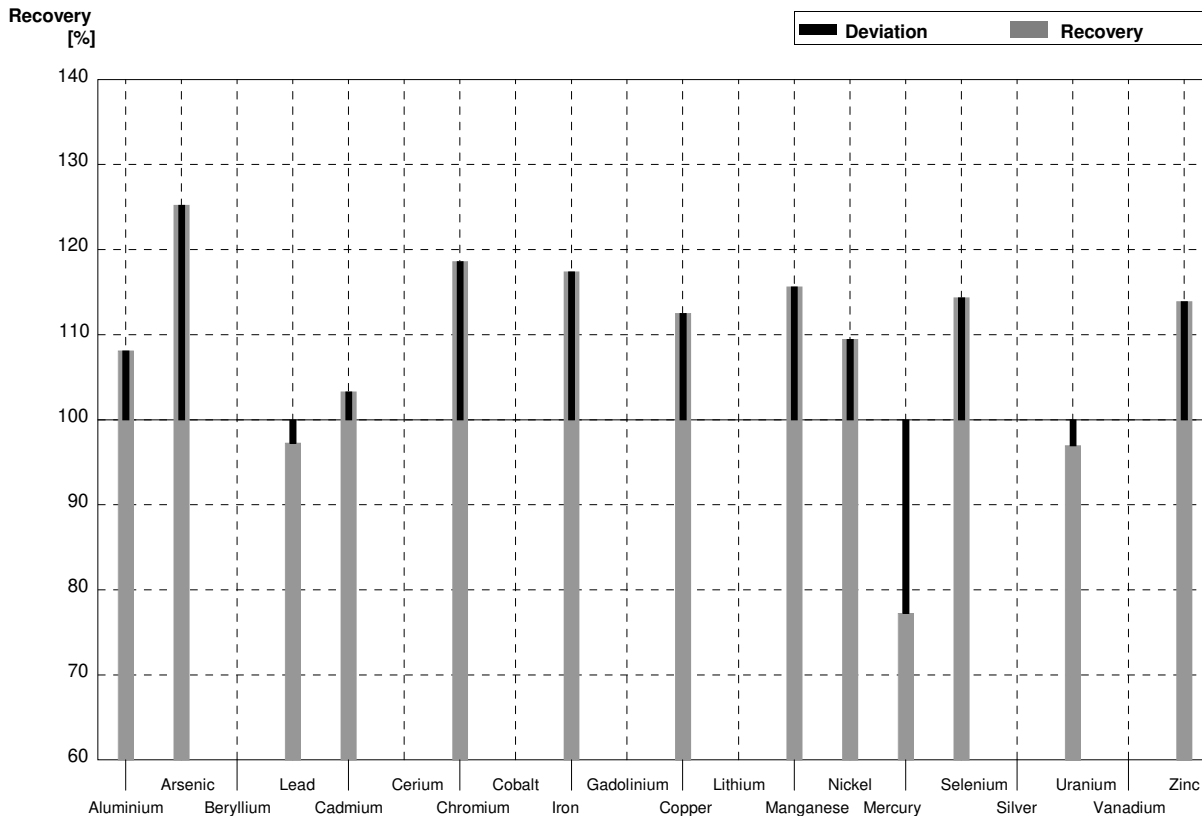
**Sample M177A**  
**Laboratory L**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	25,6		µg/l	100%
Arsenic	2,589	0,019	3,01		µg/l	116%
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05	2,23		µg/l	93%
Cadmium	0,598	0,007	0,594		µg/l	99%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	6,02		µg/l	110%
Cobalt	0,820	0,007			µg/l	
Iron	40,4	0,2	43,5		µg/l	108%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	6,20		µg/l	102%
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2	49,7		µg/l	108%
Nickel	2,57	0,04	2,66		µg/l	104%
Mercury	1,401	0,016	1,39		µg/l	99%
Selenium	3,76	0,03	4,02		µg/l	107%
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012	1,07		µg/l	95%
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6	16,3		µg/l	107%



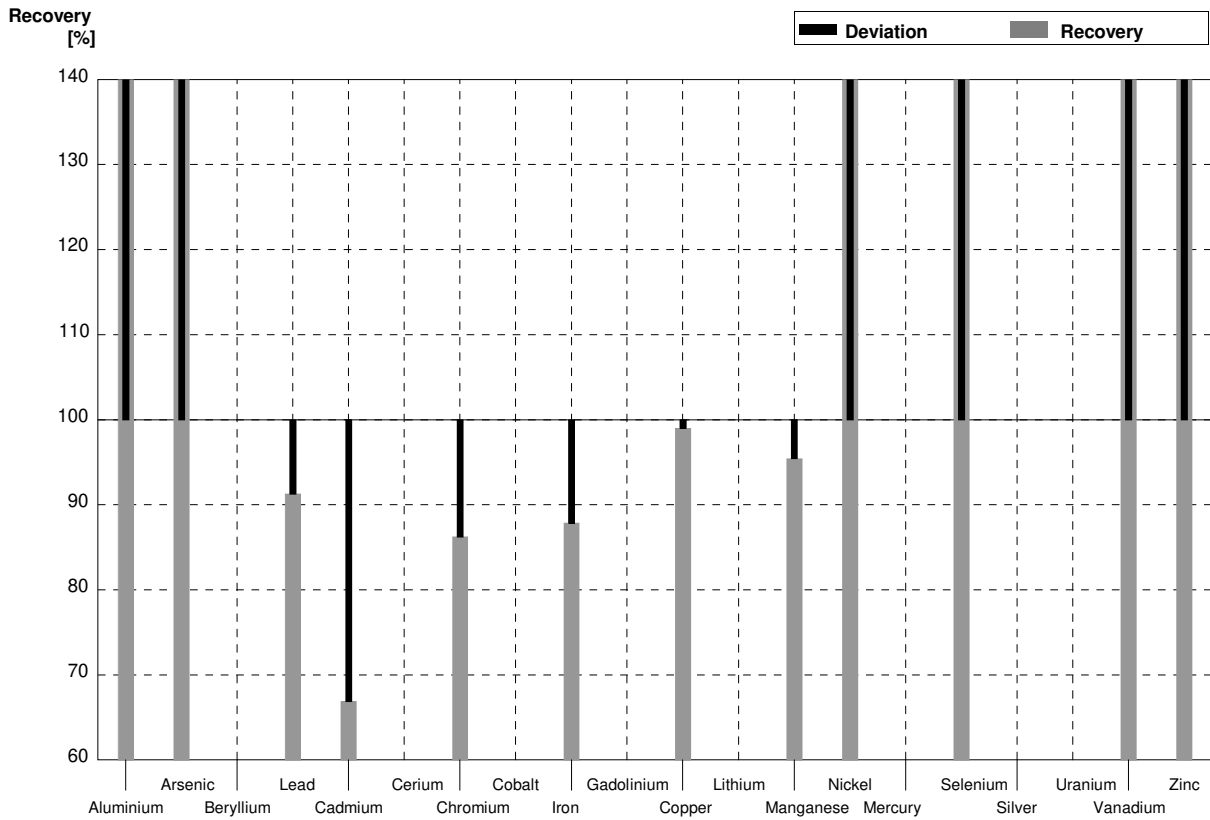
**Sample M177B**  
**Laboratory L**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	44,1		µg/l	108%
Arsenic	1,517	0,014	1,90		µg/l	125%
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03	1,42		µg/l	97%
Cadmium	4,25	0,03	4,39		µg/l	103%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	2,30		µg/l	119%
Cobalt	1,827	0,013			µg/l	
Iron	60,3	0,3	70,8		µg/l	117%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,61		µg/l	113%
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12	21,1		µg/l	116%
Nickel	4,65	0,05	5,09		µg/l	109%
Mercury	0,440	0,013	0,340		µg/l	77%
Selenium	2,44	0,02	2,79		µg/l	114%
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02	2,55		µg/l	97%
Vanadium	0,603	0,006			µg/l	
Zinc	25,2	0,6	28,7		µg/l	114%



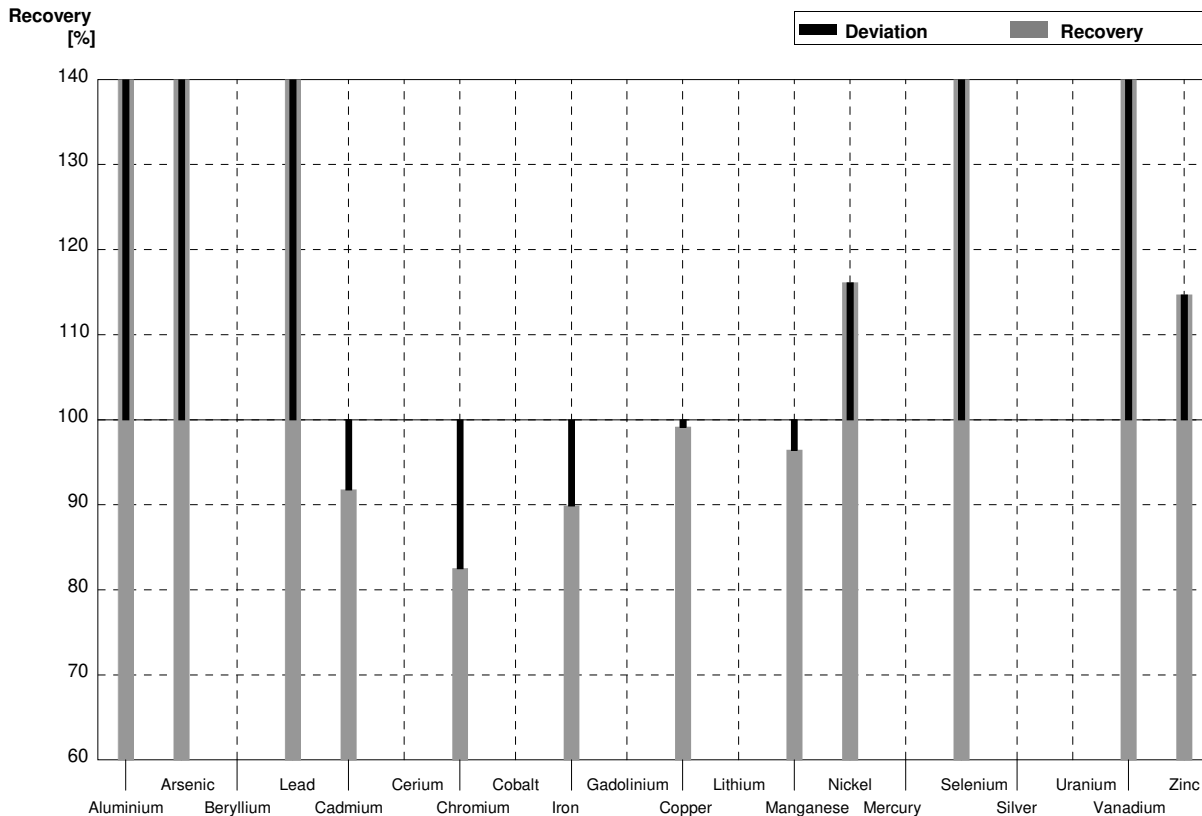
**Sample M177A**  
**Laboratory M**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	42,6		µg/l	167%
Arsenic	2,589	0,019	6,60	2,77	µg/l	255%
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05	2,20	0,57	µg/l	91%
Cadmium	0,598	0,007	0,400		µg/l	67%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	4,70	0,423	µg/l	86%
Cobalt	0,820	0,007			µg/l	
Iron	40,4	0,2	35,50	2,13	µg/l	88%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	6,00		µg/l	99%
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2	43,90	5,7	µg/l	95%
Nickel	2,57	0,04	3,90	0,468	µg/l	152%
Mercury	1,401	0,016			µg/l	
Selenium	3,76	0,03	9,80		µg/l	261%
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012			µg/l	
Vanadium	1,721	0,015	9,10	3,55	µg/l	529%
Zinc	15,3	0,6	34,7	4,86	µg/l	227%



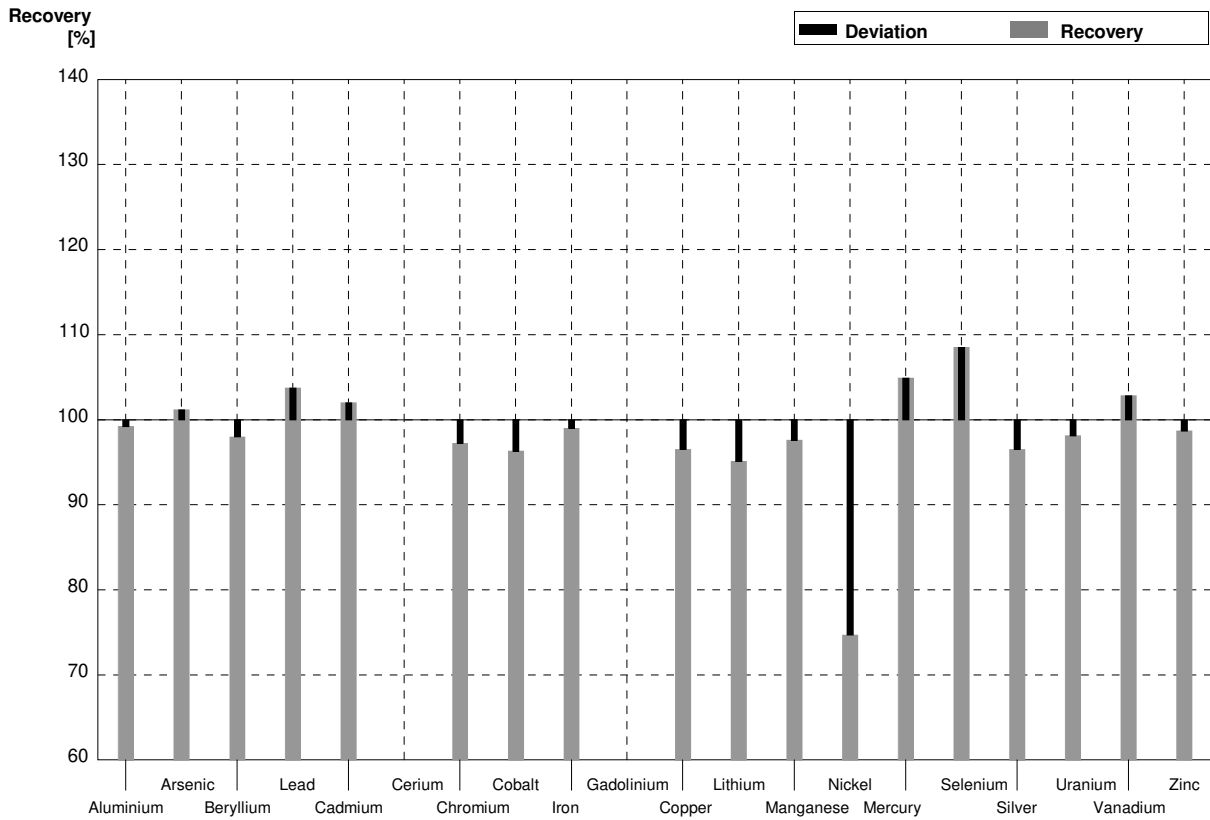
**Sample M177B**  
**Laboratory M**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	111,8		µg/l	274%
Arsenic	1,517	0,014	5,70	2,39	µg/l	376%
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03	2,50	0,65	µg/l	171%
Cadmium	4,25	0,03	3,90		µg/l	92%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	1,60	0,144	µg/l	83%
Cobalt	1,827	0,013			µg/l	
Iron	60,3	0,3	54,20	3,25	µg/l	90%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,30		µg/l	99%
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12	17,60	2,29	µg/l	96%
Nickel	4,65	0,05	5,40	0,65	µg/l	116%
Mercury	0,440	0,013			µg/l	
Selenium	2,44	0,02	8,30		µg/l	340%
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02			µg/l	
Vanadium	0,603	0,006	7,8	3,00	µg/l	1294%
Zinc	25,2	0,6	28,9	4,05	µg/l	115%



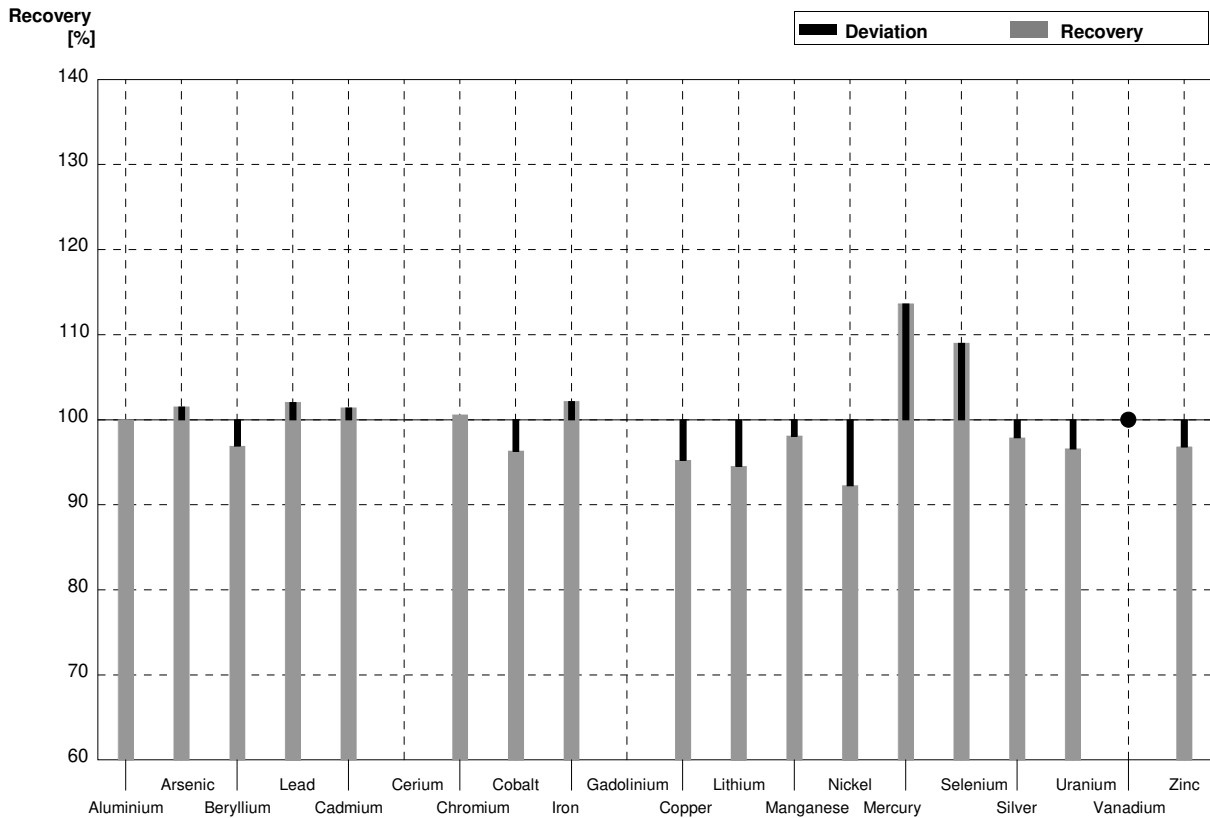
**Sample M177A**  
**Laboratory N**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	25,3	3,6	µg/l	99%
Arsenic	2,589	0,019	2,62	0,39	µg/l	101%
Beryllium	0,200	0,002	0,196	0,020	µg/l	98%
Lead	2,41	0,05	2,50	0,25	µg/l	104%
Cadmium	0,598	0,007	0,61	0,09	µg/l	102%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,3	0,4	µg/l	97%
Cobalt	0,820	0,007	0,79	0,10	µg/l	96%
Iron	40,4	0,2	40,0	3,7	µg/l	99%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,85	0,59	µg/l	97%
Lithium	3,08	0,03	2,93	0,50	µg/l	95%
Manganese	46,0	0,2	44,9	2,1	µg/l	98%
Nickel	2,57	0,04	1,92	0,35	µg/l	75%
Mercury	1,401	0,016	1,47	0,25	µg/l	105%
Selenium	3,76	0,03	4,08	0,68	µg/l	109%
Silver	0,202	0,011	0,195	0,057	µg/l	97%
Uranium	1,121	0,012	1,10	0,20	µg/l	98%
Vanadium	1,721	0,015	1,77	0,37	µg/l	103%
Zinc	15,3	0,6	15,1	2,0	µg/l	99%



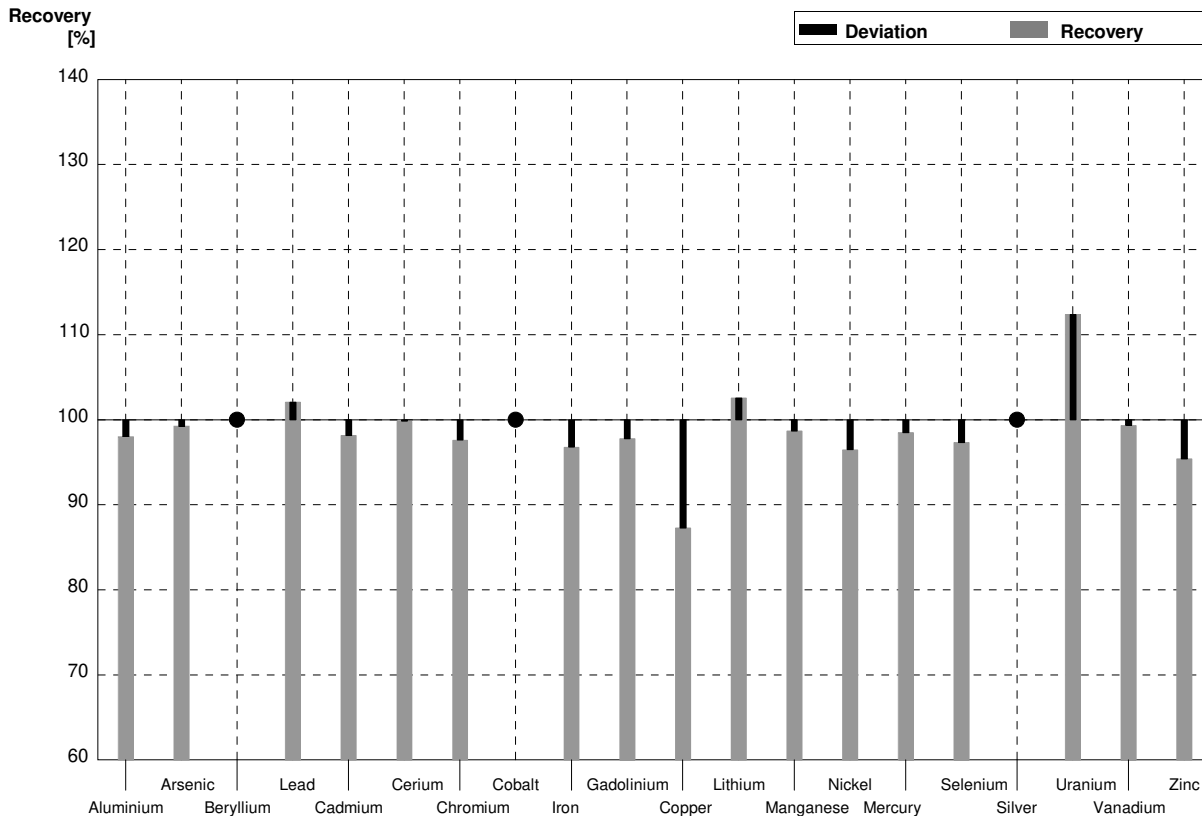
**Sample M177B**  
**Laboratory N**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	40,8	5,3	µg/l	100%
Arsenic	1,517	0,014	1,54	0,33	µg/l	102%
Beryllium	0,1197	0,0014	0,116	0,012	µg/l	97%
Lead	1,46	0,03	1,49	0,16	µg/l	102%
Cadmium	4,25	0,03	4,31	0,38	µg/l	101%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	1,95	0,33	µg/l	101%
Cobalt	1,827	0,013	1,76	0,15	µg/l	96%
Iron	60,3	0,3	61,6	5,4	µg/l	102%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,21	0,37	µg/l	95%
Lithium	6,03	0,05	5,7	0,8	µg/l	95%
Manganese	18,25	0,12	17,9	1,2	µg/l	98%
Nickel	4,65	0,05	4,29	0,47	µg/l	92%
Mercury	0,440	0,013	0,50	0,09	µg/l	114%
Selenium	2,44	0,02	2,66	0,51	µg/l	109%
Silver	0,807	0,013	0,79	0,11	µg/l	98%
Uranium	2,63	0,02	2,54	0,22	µg/l	97%
Vanadium	0,603	0,006	<1		µg/l	•
Zinc	25,2	0,6	24,4	3,1	µg/l	97%



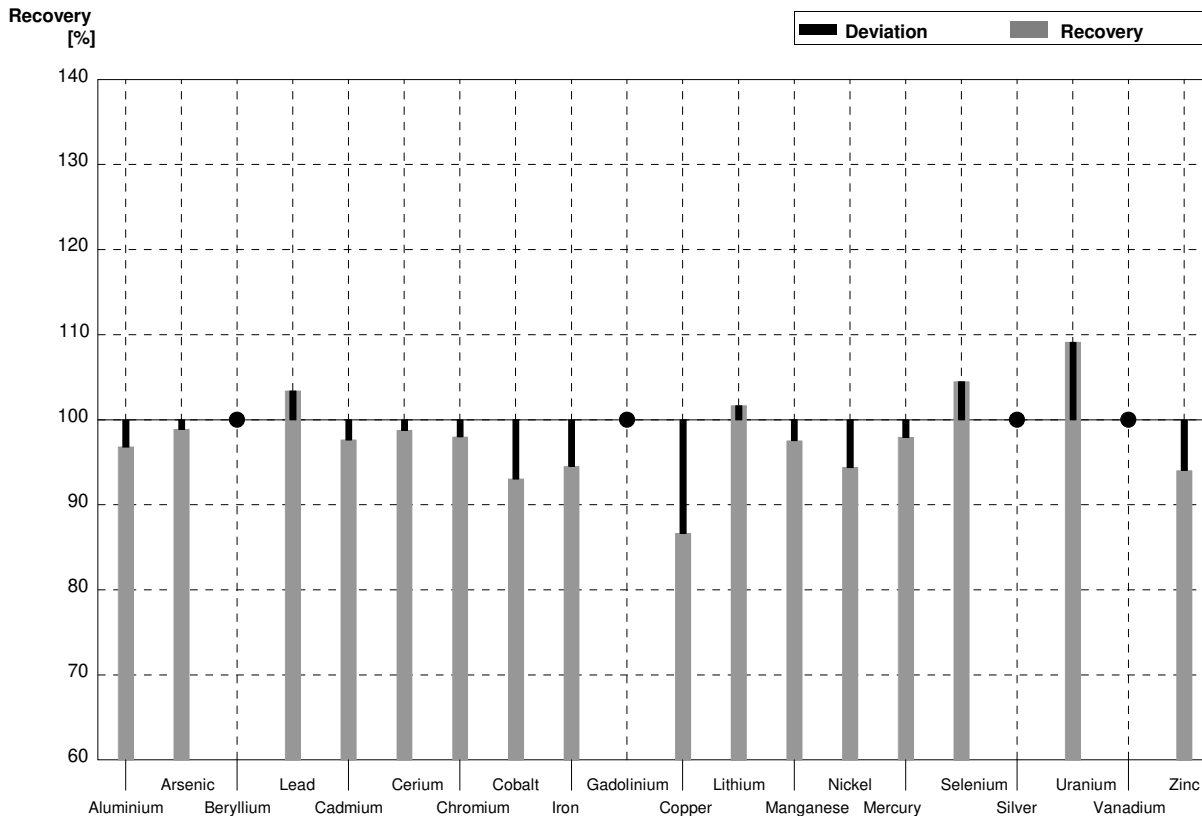
**Sample M177A**  
**Laboratory O**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	25,0	5,0	µg/l	98%
Arsenic	2,589	0,019	2,57	0,39	µg/l	99%
Beryllium	0,200	0,002	<1,00		µg/l	•
Lead	2,41	0,05	2,46	0,30	µg/l	102%
Cadmium	0,598	0,007	0,587	0,070	µg/l	98%
Cerium	1,863	0,015	1,86	0,37	µg/l	100%
Chromium	5,45	0,03	5,32	0,80	µg/l	98%
Cobalt	0,820	0,007	<1,00		µg/l	•
Iron	40,4	0,2	39,1	5,9	µg/l	97%
Gadolinium	0,1043	0,0016	0,102	0,020	µg/l	98%
Copper	6,06	0,04	5,29	0,63	µg/l	87%
Lithium	3,08	0,03	3,16	0,47	µg/l	103%
Manganese	46,0	0,2	45,4	5,4	µg/l	99%
Nickel	2,57	0,04	2,48	0,27	µg/l	96%
Mercury	1,401	0,016	1,38	0,30	µg/l	99%
Selenium	3,76	0,03	3,66	0,55	µg/l	97%
Silver	0,202	0,011	<1,00		µg/l	•
Uranium	1,121	0,012	1,26	0,19	µg/l	112%
Vanadium	1,721	0,015	1,71	0,21	µg/l	99%
Zinc	15,3	0,6	14,6	2,2	µg/l	95%



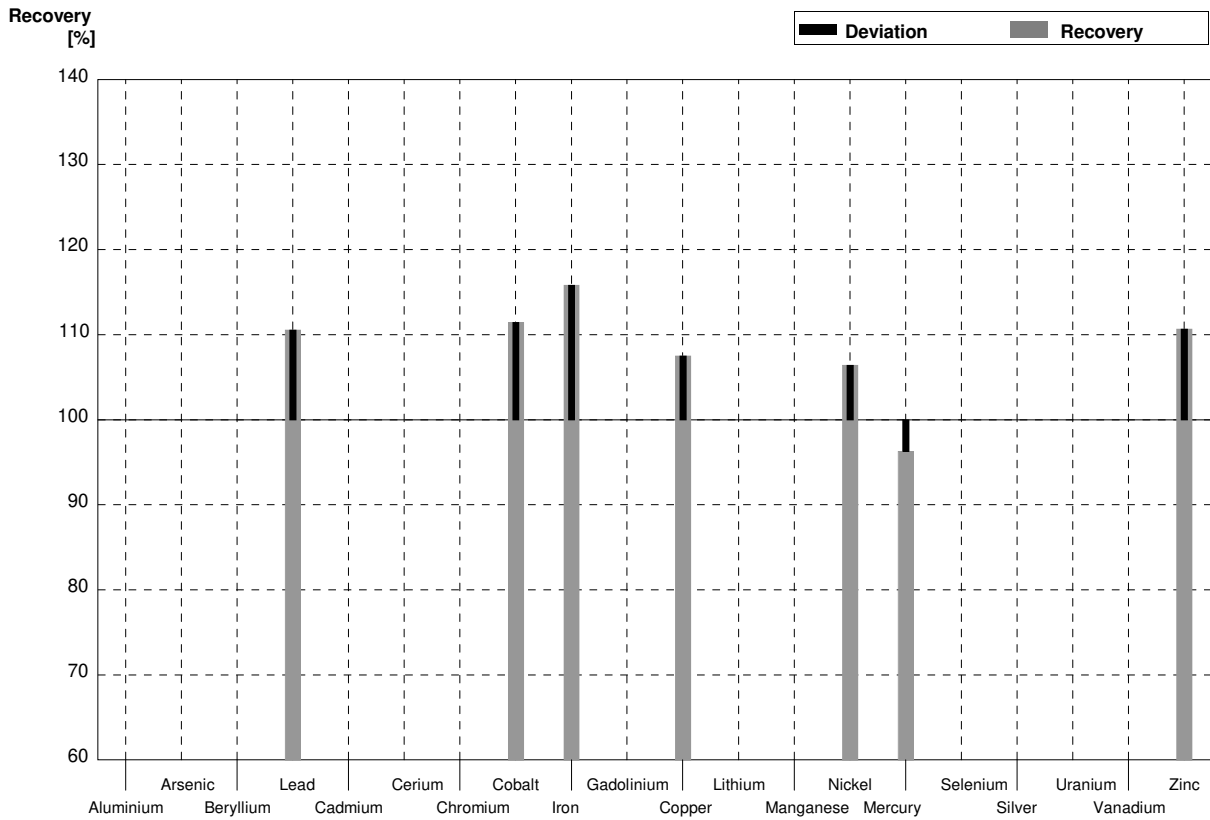
**Sample M177B**  
**Laboratory O**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	39,5	7,9	µg/l	97%
Arsenic	1,517	0,014	1,50	0,23	µg/l	99%
Beryllium	0,1197	0,0014	<1,00		µg/l	•
Lead	1,46	0,03	1,51	0,18	µg/l	103%
Cadmium	4,25	0,03	4,15	0,50	µg/l	98%
Cerium	1,144	0,010	1,13	0,23	µg/l	99%
Chromium	1,939	0,016	1,90	0,29	µg/l	98%
Cobalt	1,827	0,013	1,70	0,26	µg/l	93%
Iron	60,3	0,3	57,0	8,6	µg/l	95%
Gadolinium	0,0607	0,0012	<0,10		µg/l	•
Copper	2,32	0,03	2,01	0,24	µg/l	87%
Lithium	6,03	0,05	6,13	0,92	µg/l	102%
Manganese	18,25	0,12	17,8	2,1	µg/l	98%
Nickel	4,65	0,05	4,39	0,48	µg/l	94%
Mercury	0,440	0,013	0,431	0,095	µg/l	98%
Selenium	2,44	0,02	2,55	0,38	µg/l	105%
Silver	0,807	0,013	<1,00		µg/l	•
Uranium	2,63	0,02	2,87	0,43	µg/l	109%
Vanadium	0,603	0,006	<1,00		µg/l	•
Zinc	25,2	0,6	23,7	3,6	µg/l	94%



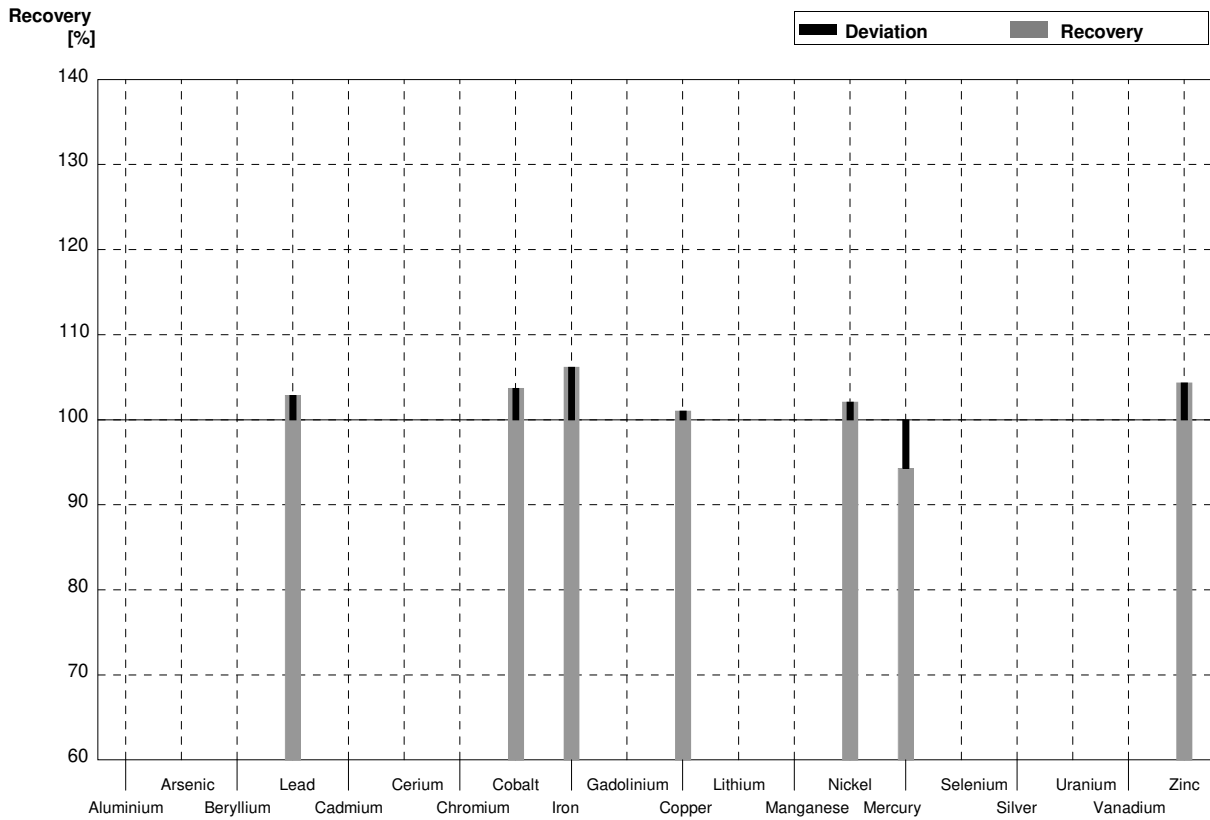
**Sample M177A**  
**Laboratory P**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2			µg/l	
Arsenic	2,589	0,019			µg/l	
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05	2,664	0,150	µg/l	111%
Cadmium	0,598	0,007			µg/l	
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03			µg/l	
Cobalt	0,820	0,007	0,914		µg/l	111%
Iron	40,4	0,2	46,787	13,760	µg/l	116%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	6,514	0,382	µg/l	107%
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2			µg/l	
Nickel	2,57	0,04	2,735	0,213	µg/l	106%
Mercury	1,401	0,016	1,3493		µg/l	96%
Selenium	3,76	0,03			µg/l	
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012			µg/l	
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6	16,933	2,217	µg/l	111%



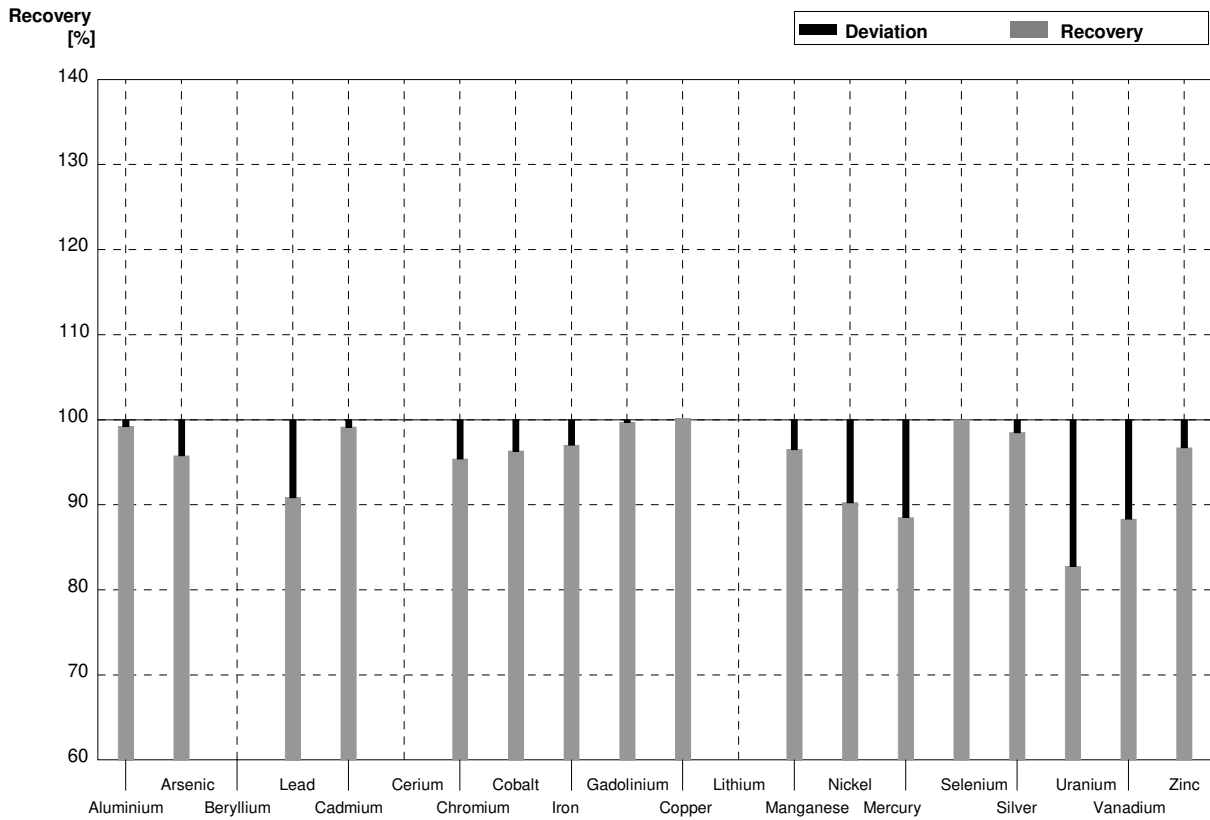
**Sample M177B**  
**Laboratory P**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3			µg/l	
Arsenic	1,517	0,014			µg/l	
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03	1,502	0,0846	µg/l	103%
Cadmium	4,25	0,03			µg/l	
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016			µg/l	
Cobalt	1,827	0,013	1,895		µg/l	104%
Iron	60,3	0,3	64,034	18,832	µg/l	106%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,344	0,138	µg/l	101%
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12			µg/l	
Nickel	4,65	0,05	4,748	0,369	µg/l	102%
Mercury	0,440	0,013	0,415		µg/l	94%
Selenium	2,44	0,02			µg/l	
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02			µg/l	
Vanadium	0,603	0,006			µg/l	
Zinc	25,2	0,6	26,293	3,442	µg/l	104%



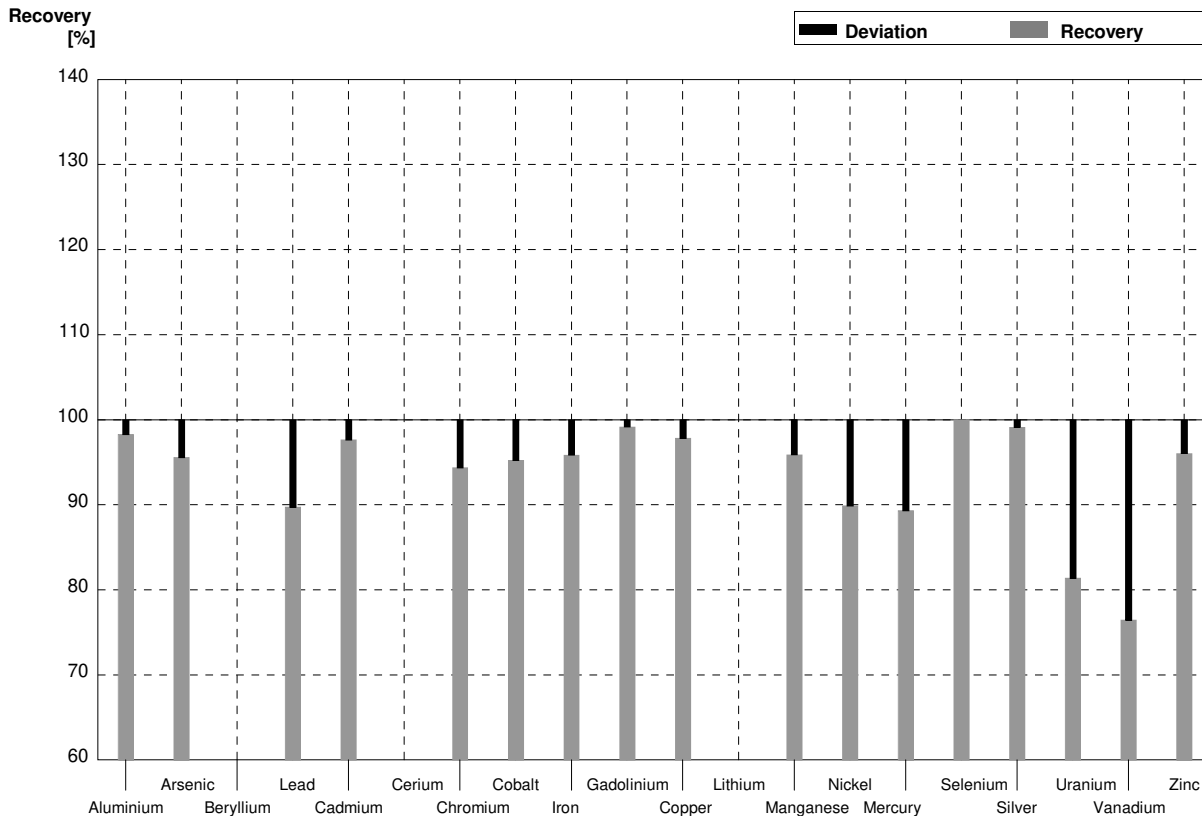
**Sample M177A**  
**Laboratory Q**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	25,3	2,53	µg/l	99%
Arsenic	2,589	0,019	2,48	0,248	µg/l	96%
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05	2,19	0,437	µg/l	91%
Cadmium	0,598	0,007	0,593	0,0593	µg/l	99%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,20	1,04	µg/l	95%
Cobalt	0,820	0,007	0,790	0,119	µg/l	96%
Iron	40,4	0,2	39,2	7,85	µg/l	97%
Gadolinium	0,1043	0,0016	0,104	0,0104	µg/l	100%
Copper	6,06	0,04	6,07	1,52	µg/l	100%
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2	44,4	4,44	µg/l	97%
Nickel	2,57	0,04	2,32	0,348	µg/l	90%
Mercury	1,401	0,016	1,24	0,185	µg/l	89%
Selenium	3,76	0,03	3,76	0,753	µg/l	100%
Silver	0,202	0,011	0,199	0,0199	µg/l	99%
Uranium	1,121	0,012	0,928	0,139	µg/l	83%
Vanadium	1,721	0,015	1,52	0,228	µg/l	88%
Zinc	15,3	0,6	14,8	4,89	µg/l	97%



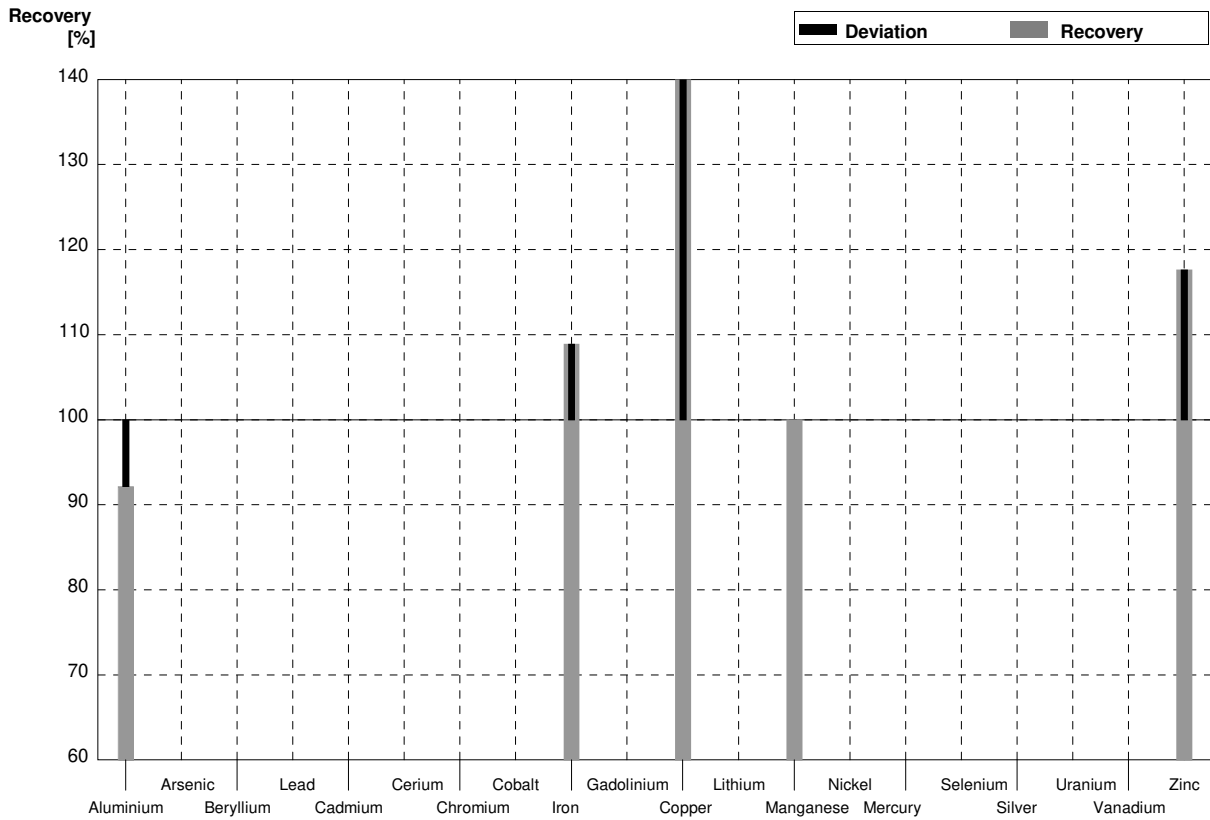
**Sample M177B**  
**Laboratory Q**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	40,1	4,01	µg/l	98%
Arsenic	1,517	0,014	1,45	0,218	µg/l	96%
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03	1,31	0,261	µg/l	90%
Cadmium	4,25	0,03	4,15	0,291	µg/l	98%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	1,83	0,365	µg/l	94%
Cobalt	1,827	0,013	1,74	0,261	µg/l	95%
Iron	60,3	0,3	57,8	11,6	µg/l	96%
Gadolinium	0,0607	0,0012	0,0602	0,00602	µg/l	99%
Copper	2,32	0,03	2,27	0,567	µg/l	98%
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12	17,5	2,63	µg/l	96%
Nickel	4,65	0,05	4,18	0,627	µg/l	90%
Mercury	0,440	0,013	0,393	0,0590	µg/l	89%
Selenium	2,44	0,02	2,44	0,488	µg/l	100%
Silver	0,807	0,013	0,800	0,0800	µg/l	99%
Uranium	2,63	0,02	2,14	0,321	µg/l	81%
Vanadium	0,603	0,006	0,461	0,0692	µg/l	76%
Zinc	25,2	0,6	24,2	8,00	µg/l	96%



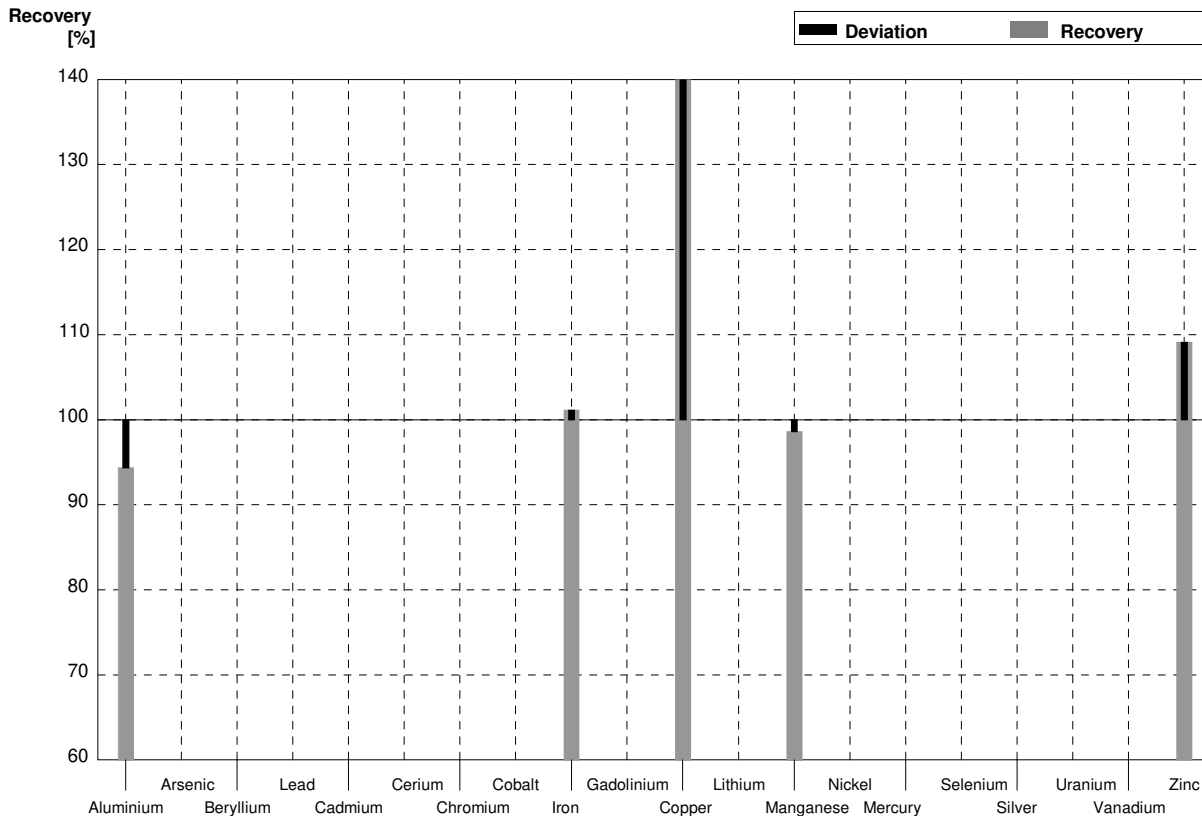
**Sample M177A**  
**Laboratory R**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	23,5	0,50	µg/l	92%
Arsenic	2,589	0,019			µg/l	
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05			µg/l	
Cadmium	0,598	0,007			µg/l	
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03			µg/l	
Cobalt	0,820	0,007			µg/l	
Iron	40,4	0,2	44,0	0,3	µg/l	109%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	35,0	0,4	µg/l	578%
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2	46,0	0,2	µg/l	100%
Nickel	2,57	0,04			µg/l	
Mercury	1,401	0,016			µg/l	
Selenium	3,76	0,03			µg/l	
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012			µg/l	
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6	18,0	0,7	µg/l	118%



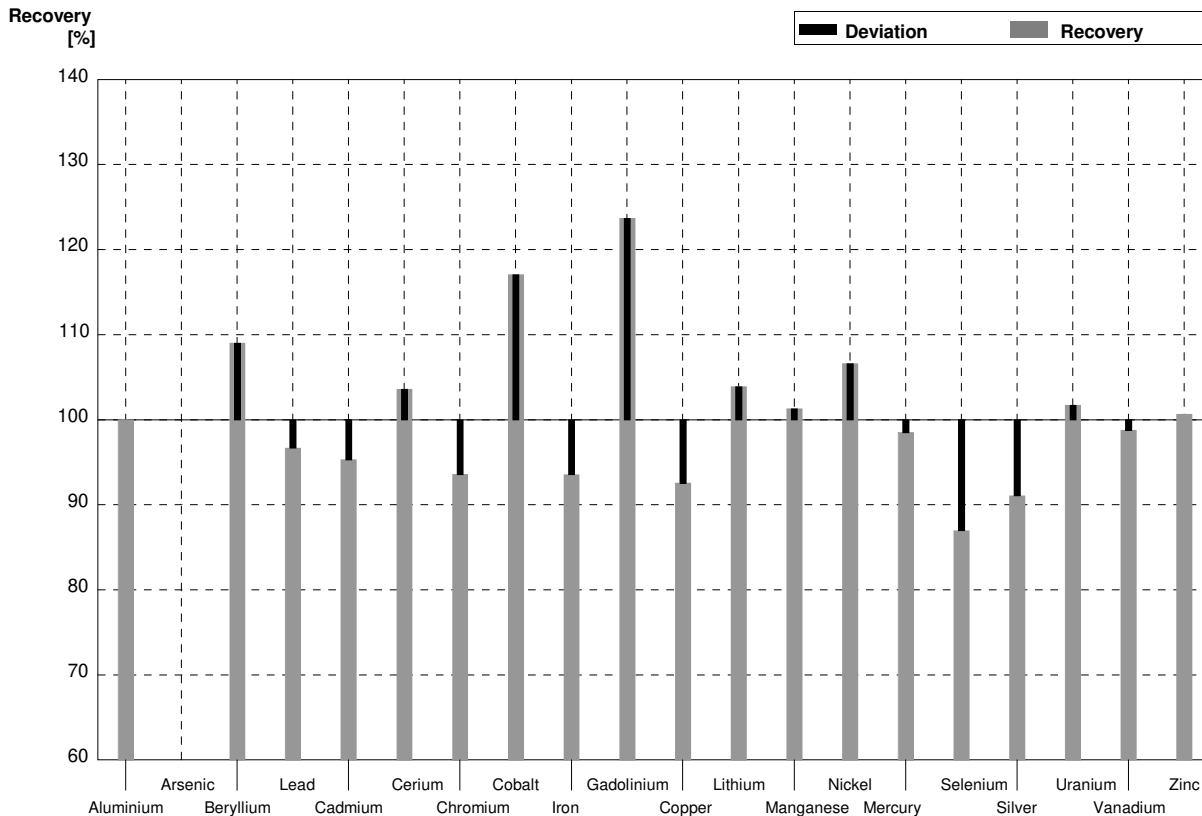
**Sample M177B**  
**Laboratory R**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	38,5	0,50	µg/l	94%
Arsenic	1,517	0,014			µg/l	
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03			µg/l	
Cadmium	4,25	0,03			µg/l	
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016			µg/l	
Cobalt	1,827	0,013			µg/l	
Iron	60,3	0,3	61,0	0,3	µg/l	101%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	4,50	0,4	µg/l	194%
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12	18,0	0,2	µg/l	99%
Nickel	4,65	0,05			µg/l	
Mercury	0,440	0,013			µg/l	
Selenium	2,44	0,02			µg/l	
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02			µg/l	
Vanadium	0,603	0,006			µg/l	
Zinc	25,2	0,6	27,5	0,7	µg/l	109%



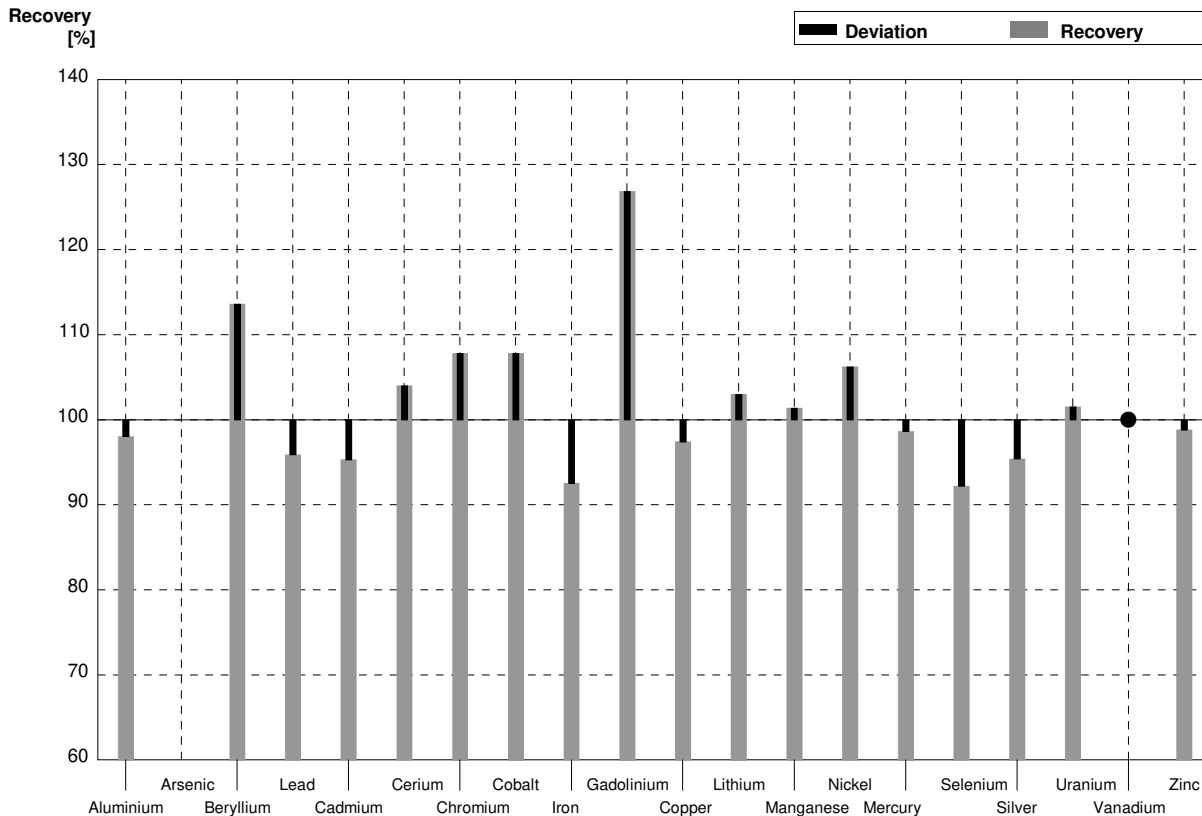
**Sample M177A**  
**Laboratory S**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	25,5	0,2	25,5	1,9	$\mu\text{g/l}$	100%
Arsenic	2,589	0,019			$\mu\text{g/l}$	
Beryllium	0,200	0,002	0,218	0,033	$\mu\text{g/l}$	109%
Lead	2,41	0,05	2,33	0,23	$\mu\text{g/l}$	97%
Cadmium	0,598	0,007	0,57	0,06	$\mu\text{g/l}$	95%
Cerium	1,863	0,015	1,93	0,19	$\mu\text{g/l}$	104%
Chromium	5,45	0,03	5,1	0,5	$\mu\text{g/l}$	94%
Cobalt	0,820	0,007	0,96	0,10	$\mu\text{g/l}$	117%
Iron	40,4	0,2	37,8	2,8	$\mu\text{g/l}$	94%
Gadolinium	0,1043	0,0016	0,129	0,010	$\mu\text{g/l}$	124%
Copper	6,06	0,04	5,61	0,56	$\mu\text{g/l}$	93%
Lithium	3,08	0,03	3,20	0,32	$\mu\text{g/l}$	104%
Manganese	46,0	0,2	46,6	4,7	$\mu\text{g/l}$	101%
Nickel	2,57	0,04	2,74	0,27	$\mu\text{g/l}$	107%
Mercury	1,401	0,016	1,38	0,10	$\mu\text{g/l}$	99%
Selenium	3,76	0,03	3,27	0,49	$\mu\text{g/l}$	87%
Silver	0,202	0,011	0,184	0,018	$\mu\text{g/l}$	91%
Uranium	1,121	0,012	1,14	0,11	$\mu\text{g/l}$	102%
Vanadium	1,721	0,015	1,70	0,25	$\mu\text{g/l}$	99%
Zinc	15,3	0,6	15,4	1,5	$\mu\text{g/l}$	101%



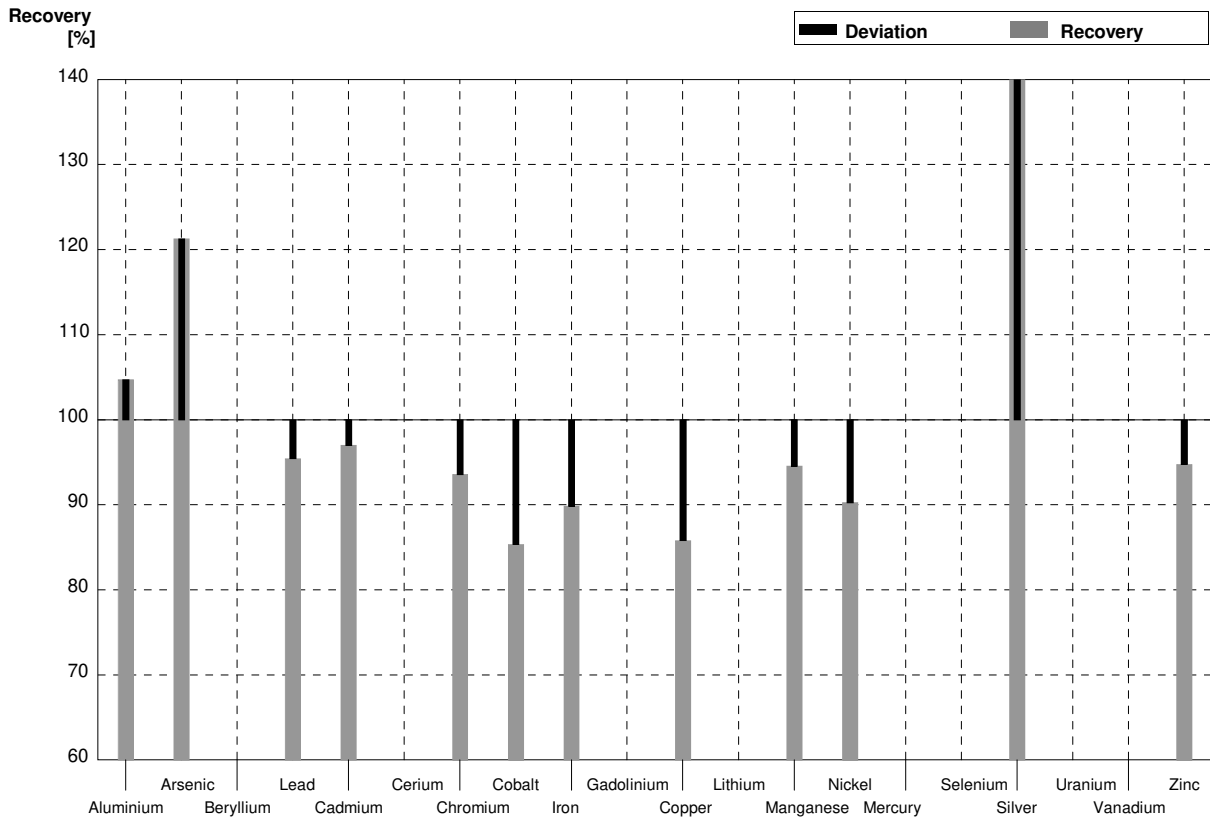
**Sample M177B**  
**Laboratory S**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	40,0	3,0	µg/l	98%
Arsenic	1,517	0,014			µg/l	
Beryllium	0,1197	0,0014	0,136	0,020	µg/l	114%
Lead	1,46	0,03	1,40	0,14	µg/l	96%
Cadmium	4,25	0,03	4,05	0,40	µg/l	95%
Cerium	1,144	0,010	1,19	0,12	µg/l	104%
Chromium	1,939	0,016	2,09	0,21	µg/l	108%
Cobalt	1,827	0,013	1,97	0,20	µg/l	108%
Iron	60,3	0,3	55,8	5,6	µg/l	93%
Gadolinium	0,0607	0,0012	0,077	0,006	µg/l	127%
Copper	2,32	0,03	2,26	0,23	µg/l	97%
Lithium	6,03	0,05	6,21	0,62	µg/l	103%
Manganese	18,25	0,12	18,5	1,8	µg/l	101%
Nickel	4,65	0,05	4,94	0,49	µg/l	106%
Mercury	0,440	0,013	0,434	0,033	µg/l	99%
Selenium	2,44	0,02	2,25	0,34	µg/l	92%
Silver	0,807	0,013	0,77	0,08	µg/l	95%
Uranium	2,63	0,02	2,67	0,27	µg/l	102%
Vanadium	0,603	0,006	<1		µg/l	•
Zinc	25,2	0,6	24,9	2,5	µg/l	99%



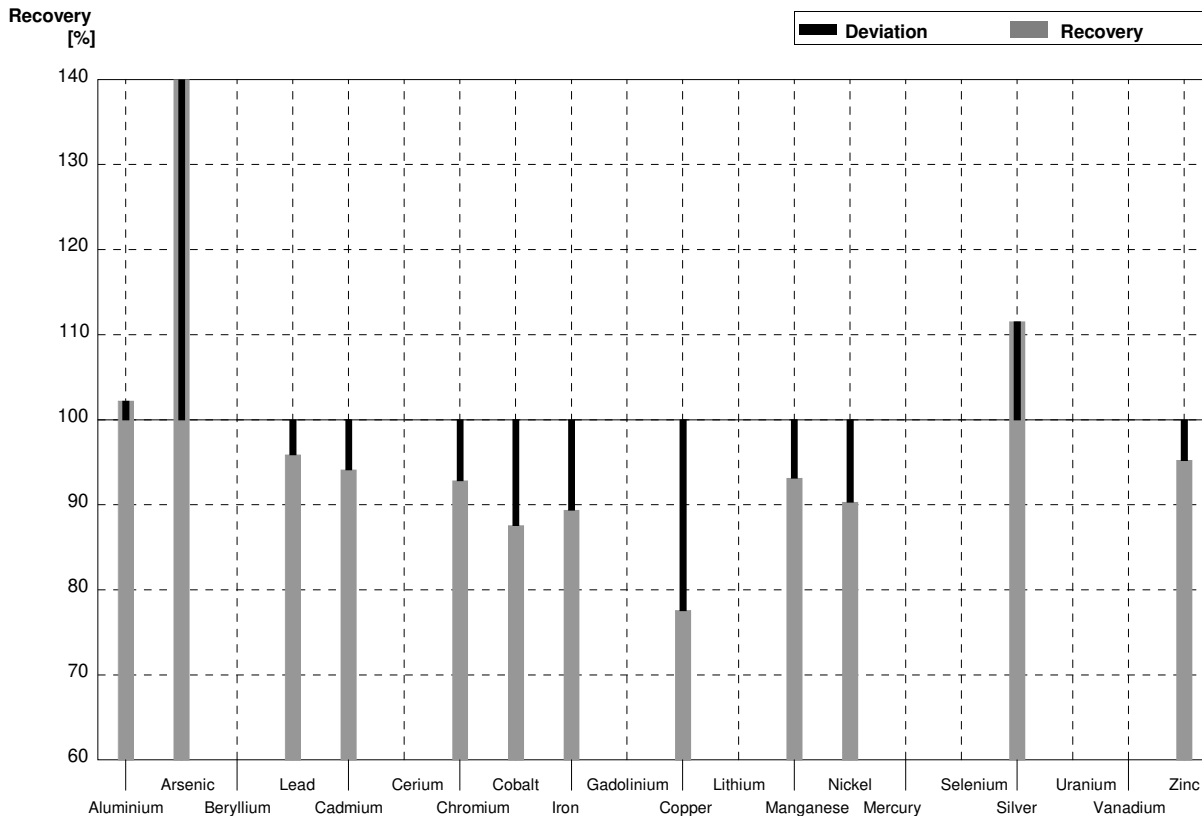
**Sample M177A**  
**Laboratory T**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	25,5	0,2	26,7	3,05	$\mu\text{g/l}$	105%
Arsenic	2,589	0,019	3,14	0,3	$\mu\text{g/l}$	121%
Beryllium	0,200	0,002			$\mu\text{g/l}$	
Lead	2,41	0,05	2,30	0,14	$\mu\text{g/l}$	95%
Cadmium	0,598	0,007	0,58	0,04	$\mu\text{g/l}$	97%
Cerium	1,863	0,015			$\mu\text{g/l}$	
Chromium	5,45	0,03	5,1	0,38	$\mu\text{g/l}$	94%
Cobalt	0,820	0,007	0,70	0,04	$\mu\text{g/l}$	85%
Iron	40,4	0,2	36,3	2,41	$\mu\text{g/l}$	90%
Gadolinium	0,1043	0,0016			$\mu\text{g/l}$	
Copper	6,06	0,04	5,2	0,52	$\mu\text{g/l}$	86%
Lithium	3,08	0,03			$\mu\text{g/l}$	
Manganese	46,0	0,2	43,5	3,79	$\mu\text{g/l}$	95%
Nickel	2,57	0,04	2,32	0,18	$\mu\text{g/l}$	90%
Mercury	1,401	0,016			$\mu\text{g/l}$	
Selenium	3,76	0,03			$\mu\text{g/l}$	
Silver	0,202	0,011	0,300	0,03	$\mu\text{g/l}$	149%
Uranium	1,121	0,012			$\mu\text{g/l}$	
Vanadium	1,721	0,015			$\mu\text{g/l}$	
Zinc	15,3	0,6	14,5	1,35	$\mu\text{g/l}$	95%



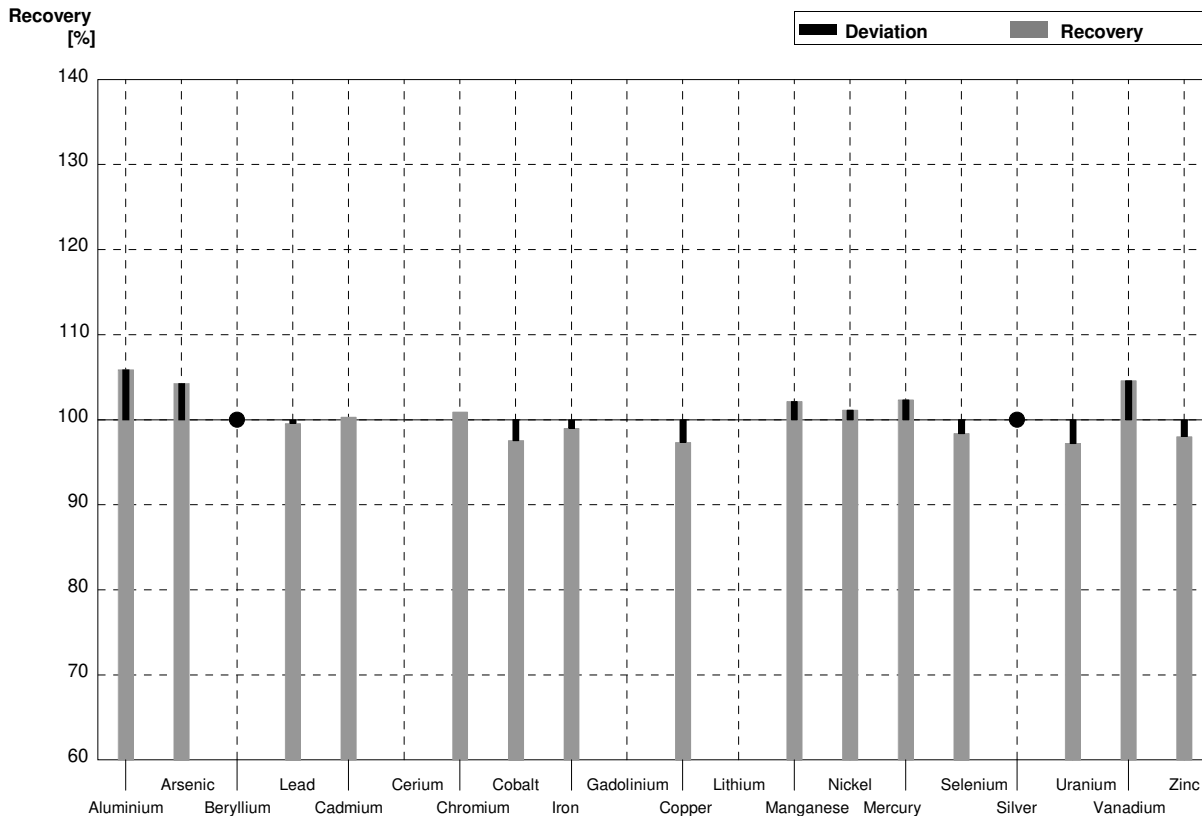
**Sample M177B**  
**Laboratory T**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	40,8	0,3	41,7	4,76	$\mu\text{g/l}$	102%
Arsenic	1,517	0,014	2,30	0,22	$\mu\text{g/l}$	152%
Beryllium	0,1197	0,0014			$\mu\text{g/l}$	
Lead	1,46	0,03	1,40	0,08	$\mu\text{g/l}$	96%
Cadmium	4,25	0,03	4,00	0,26	$\mu\text{g/l}$	94%
Cerium	1,144	0,010			$\mu\text{g/l}$	
Chromium	1,939	0,016	1,80	0,13	$\mu\text{g/l}$	93%
Cobalt	1,827	0,013	1,60	0,1	$\mu\text{g/l}$	88%
Iron	60,3	0,3	53,9	3,6	$\mu\text{g/l}$	89%
Gadolinium	0,0607	0,0012			$\mu\text{g/l}$	
Copper	2,32	0,03	1,80	0,18	$\mu\text{g/l}$	78%
Lithium	6,03	0,05			$\mu\text{g/l}$	
Manganese	18,25	0,12	17,0	1,5	$\mu\text{g/l}$	93%
Nickel	4,65	0,05	4,20	0,33	$\mu\text{g/l}$	90%
Mercury	0,440	0,013			$\mu\text{g/l}$	
Selenium	2,44	0,02			$\mu\text{g/l}$	
Silver	0,807	0,013	0,900	0,10	$\mu\text{g/l}$	112%
Uranium	2,63	0,02			$\mu\text{g/l}$	
Vanadium	0,603	0,006			$\mu\text{g/l}$	
Zinc	25,2	0,6	24,0	2,2	$\mu\text{g/l}$	95%



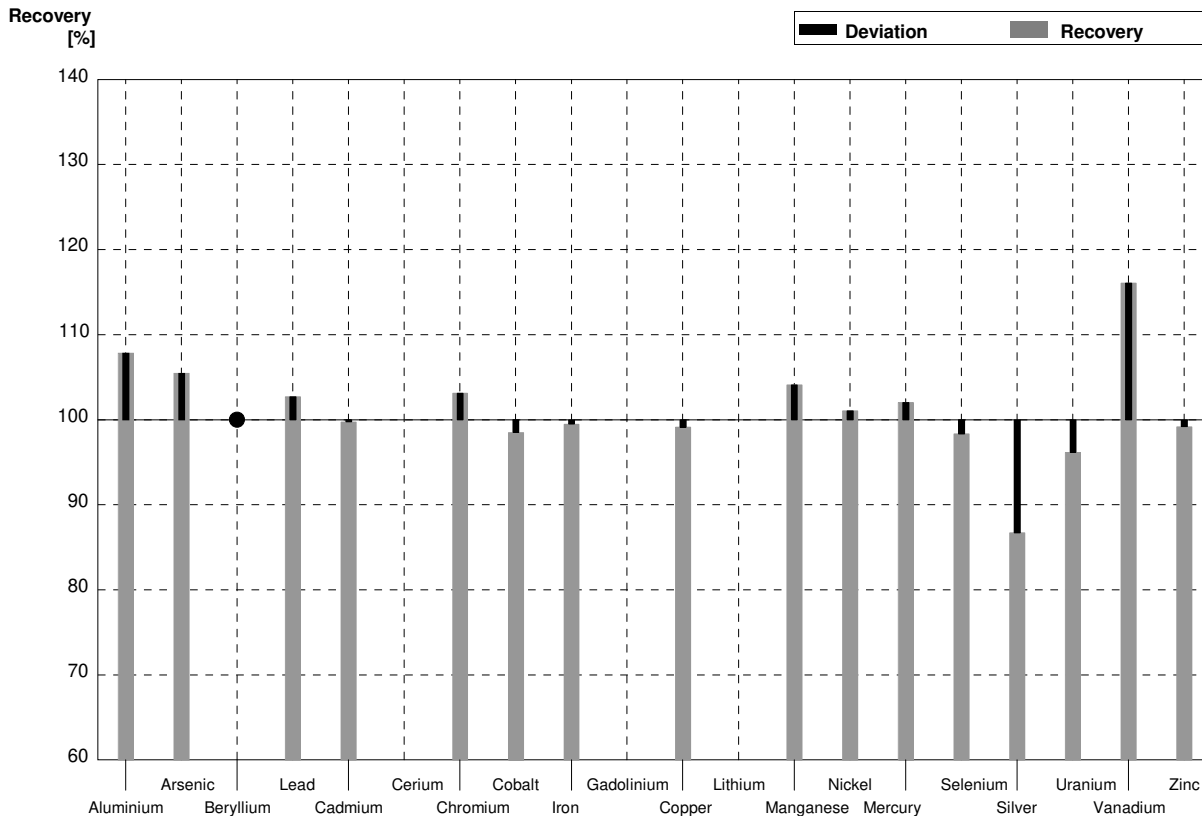
**Sample M177A**  
**Laboratory U**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	27,0	2,70	µg/l	106%
Arsenic	2,589	0,019	2,70	0,324	µg/l	104%
Beryllium	0,200	0,002	<0,400		µg/l	•
Lead	2,41	0,05	2,40	0,192	µg/l	100%
Cadmium	0,598	0,007	0,60	0,048	µg/l	100%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,50	0,660	µg/l	101%
Cobalt	0,820	0,007	0,80	0,12	µg/l	98%
Iron	40,4	0,2	40,0	10,40	µg/l	99%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,90	0,472	µg/l	97%
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2	47,0	4,70	µg/l	102%
Nickel	2,57	0,04	2,60	0,260	µg/l	101%
Mercury	1,401	0,016	1,434	0,215	µg/l	102%
Selenium	3,76	0,03	3,70	0,56	µg/l	98%
Silver	0,202	0,011	<0,50		µg/l	•
Uranium	1,121	0,012	1,09	0,055	µg/l	97%
Vanadium	1,721	0,015	1,80	0,27	µg/l	105%
Zinc	15,3	0,6	15,0	1,50	µg/l	98%



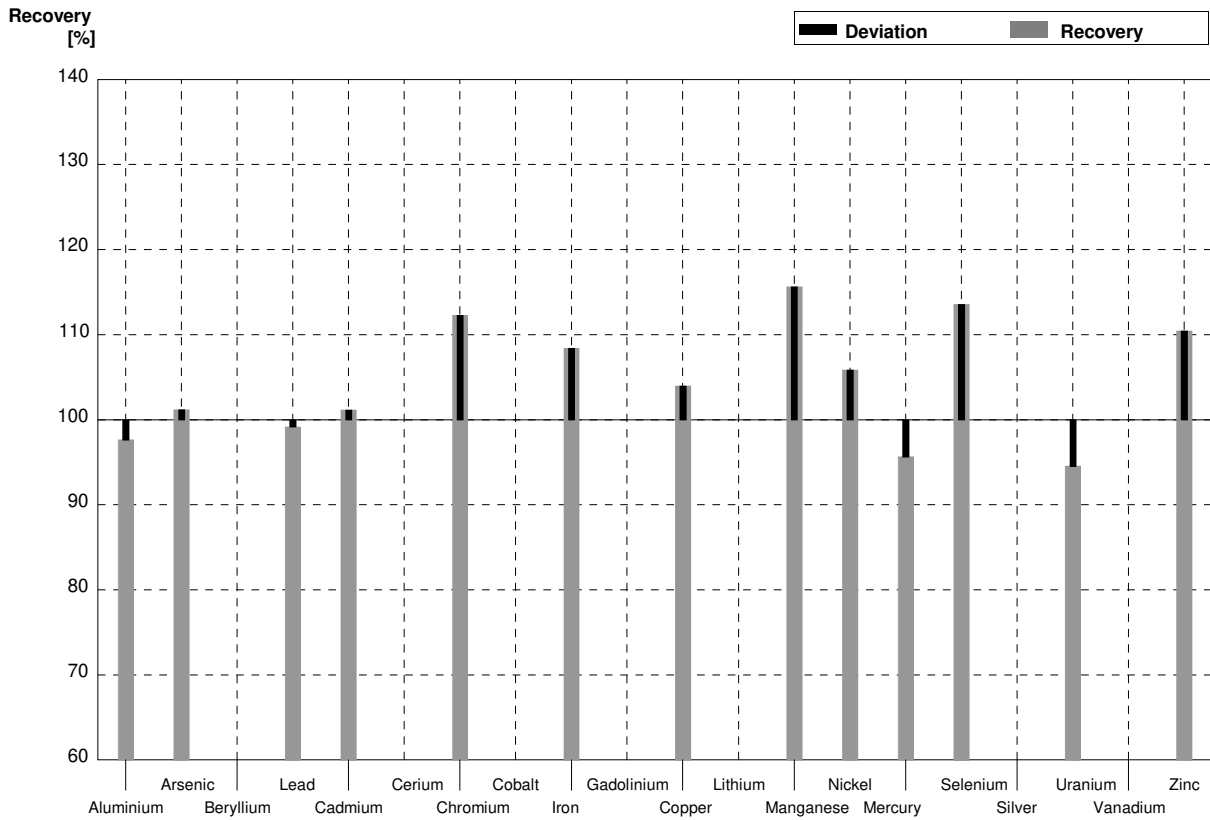
**Sample M177B**  
**Laboratory U**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	40,8	0,3	44,0	4,40	$\mu\text{g/l}$	108%
Arsenic	1,517	0,014	1,60	0,192	$\mu\text{g/l}$	105%
Beryllium	0,1197	0,0014	<0,400		$\mu\text{g/l}$	•
Lead	1,46	0,03	1,50	0,12	$\mu\text{g/l}$	103%
Cadmium	4,25	0,03	4,24	0,339	$\mu\text{g/l}$	100%
Cerium	1,144	0,010			$\mu\text{g/l}$	
Chromium	1,939	0,016	2,00	0,24	$\mu\text{g/l}$	103%
Cobalt	1,827	0,013	1,80	0,27	$\mu\text{g/l}$	99%
Iron	60,3	0,3	60,0	15,6	$\mu\text{g/l}$	100%
Gadolinium	0,0607	0,0012			$\mu\text{g/l}$	
Copper	2,32	0,03	2,30	0,184	$\mu\text{g/l}$	99%
Lithium	6,03	0,05			$\mu\text{g/l}$	
Manganese	18,25	0,12	19,0	1,90	$\mu\text{g/l}$	104%
Nickel	4,65	0,05	4,70	0,47	$\mu\text{g/l}$	101%
Mercury	0,440	0,013	0,449	0,0673	$\mu\text{g/l}$	102%
Selenium	2,44	0,02	2,40	0,36	$\mu\text{g/l}$	98%
Silver	0,807	0,013	0,70	0,11	$\mu\text{g/l}$	87%
Uranium	2,63	0,02	2,53	0,127	$\mu\text{g/l}$	96%
Vanadium	0,603	0,006	0,70	0,11	$\mu\text{g/l}$	116%
Zinc	25,2	0,6	25,0	2,50	$\mu\text{g/l}$	99%



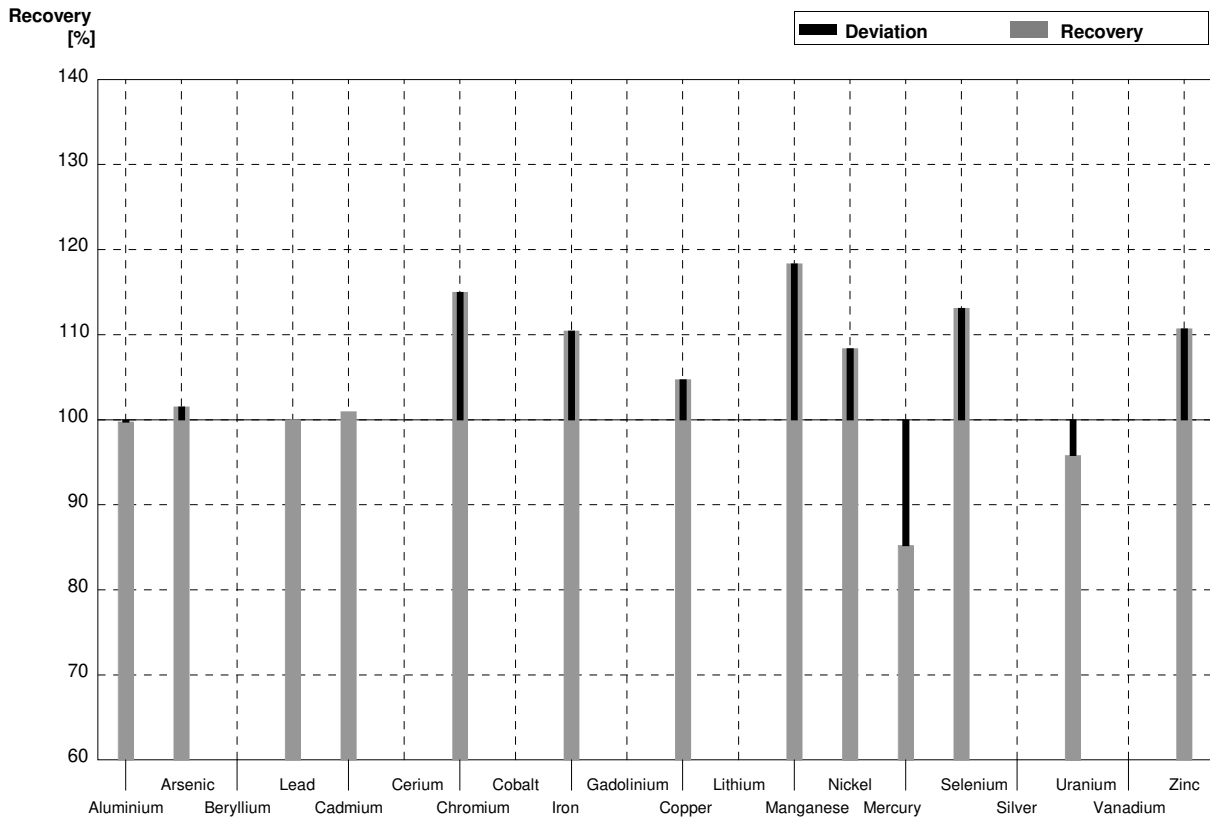
**Sample M177A**  
**Laboratory V**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	24,9	5,0	µg/l	98%
Arsenic	2,589	0,019	2,62	0,52	µg/l	101%
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05	2,39	0,60	µg/l	99%
Cadmium	0,598	0,007	0,605	0,091	µg/l	101%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	6,12	1,84	µg/l	112%
Cobalt	0,820	0,007			µg/l	
Iron	40,4	0,2	43,8	13,1	µg/l	108%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	6,30	1,58	µg/l	104%
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2	53,2	16,0	µg/l	116%
Nickel	2,57	0,04	2,72	0,41	µg/l	106%
Mercury	1,401	0,016	1,34	0,40	µg/l	96%
Selenium	3,76	0,03	4,27	1,71	µg/l	114%
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012	1,06	0,32	µg/l	95%
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6	16,9	2,5	µg/l	110%



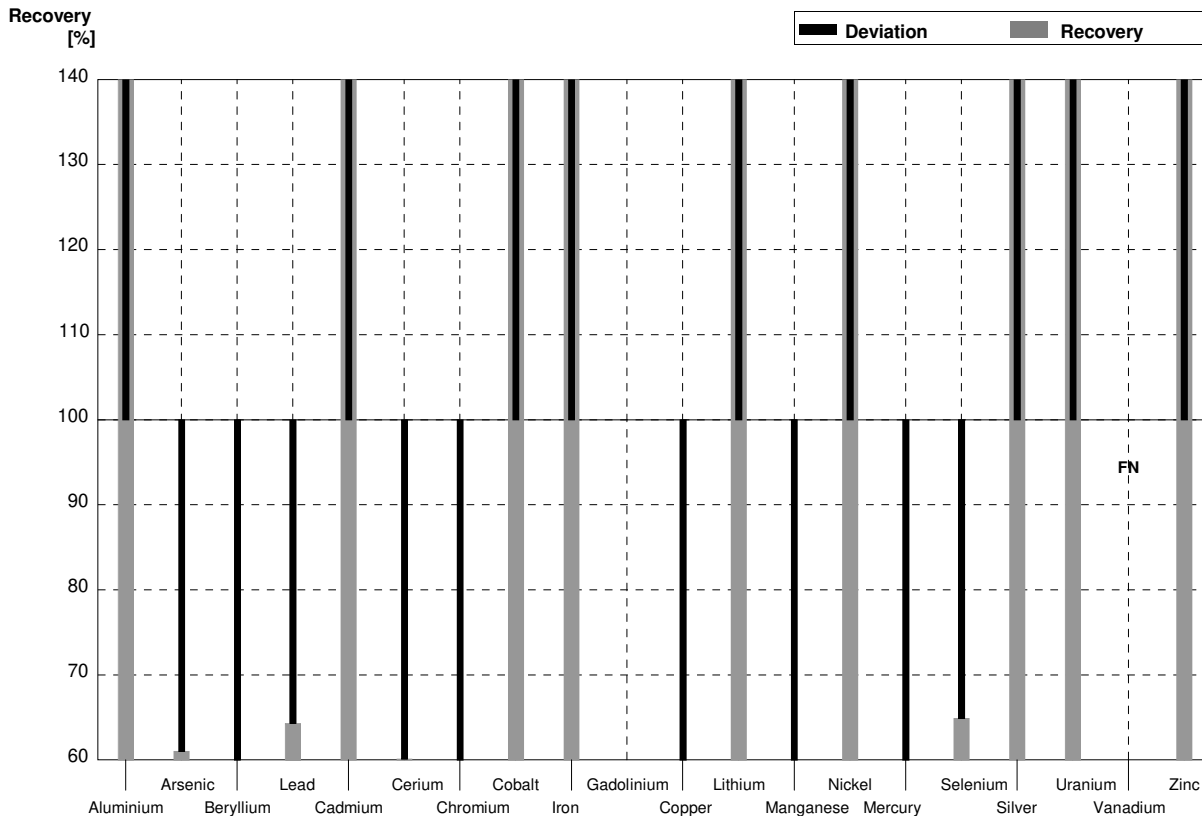
**Sample M177B**  
**Laboratory V**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	40,7	8,1	µg/l	100%
Arsenic	1,517	0,014	1,54	0,31	µg/l	102%
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03	1,46	0,36	µg/l	100%
Cadmium	4,25	0,03	4,29	0,64	µg/l	101%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	2,23	0,67	µg/l	115%
Cobalt	1,827	0,013			µg/l	
Iron	60,3	0,3	66,6	20,0	µg/l	110%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,43	0,61	µg/l	105%
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12	21,6	6,5	µg/l	118%
Nickel	4,65	0,05	5,04	0,76	µg/l	108%
Mercury	0,440	0,013	0,375	0,113	µg/l	85%
Selenium	2,44	0,02	2,76	1,10	µg/l	113%
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02	2,52	0,76	µg/l	96%
Vanadium	0,603	0,006			µg/l	
Zinc	25,2	0,6	27,9	4,2	µg/l	111%



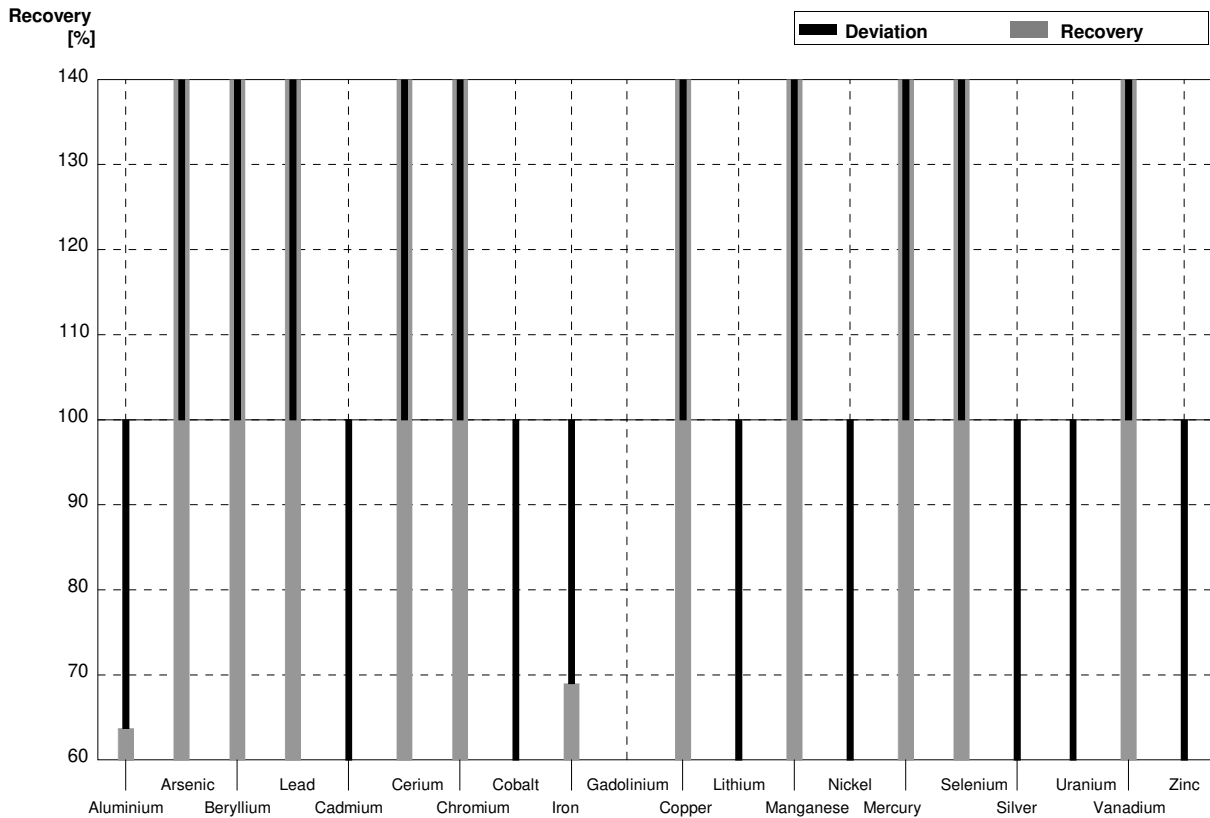
**Sample M177A**  
**Laboratory W**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	41,3	0,57	µg/l	162%
Arsenic	2,589	0,019	1,58	0,092	µg/l	61%
Beryllium	0,200	0,002	0,111	0,004	µg/l	56%
Lead	2,41	0,05	1,55	0,006	µg/l	64%
Cadmium	0,598	0,007	4,25	0,12	µg/l	711%
Cerium	1,863	0,015	1,12	0,010	µg/l	60%
Chromium	5,45	0,03	2,03	0,051	µg/l	37%
Cobalt	0,820	0,007	1,76	0,025	µg/l	215%
Iron	40,4	0,2	61,8	0,85	µg/l	153%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	2,23	0,071	µg/l	37%
Lithium	3,08	0,03	5,51	0,050	µg/l	179%
Manganese	46,0	0,2	18,2	0,058	µg/l	40%
Nickel	2,57	0,04	4,55	0,32	µg/l	177%
Mercury	1,401	0,016	0,422	0,008	µg/l	30%
Selenium	3,76	0,03	2,44	0,14	µg/l	65%
Silver	0,202	0,011	0,804	0,012	µg/l	398%
Uranium	1,121	0,012	2,53	0,027	µg/l	226%
Vanadium	1,721	0,015	<1,10		µg/l	FN
Zinc	15,3	0,6	24,8	0,55	µg/l	162%



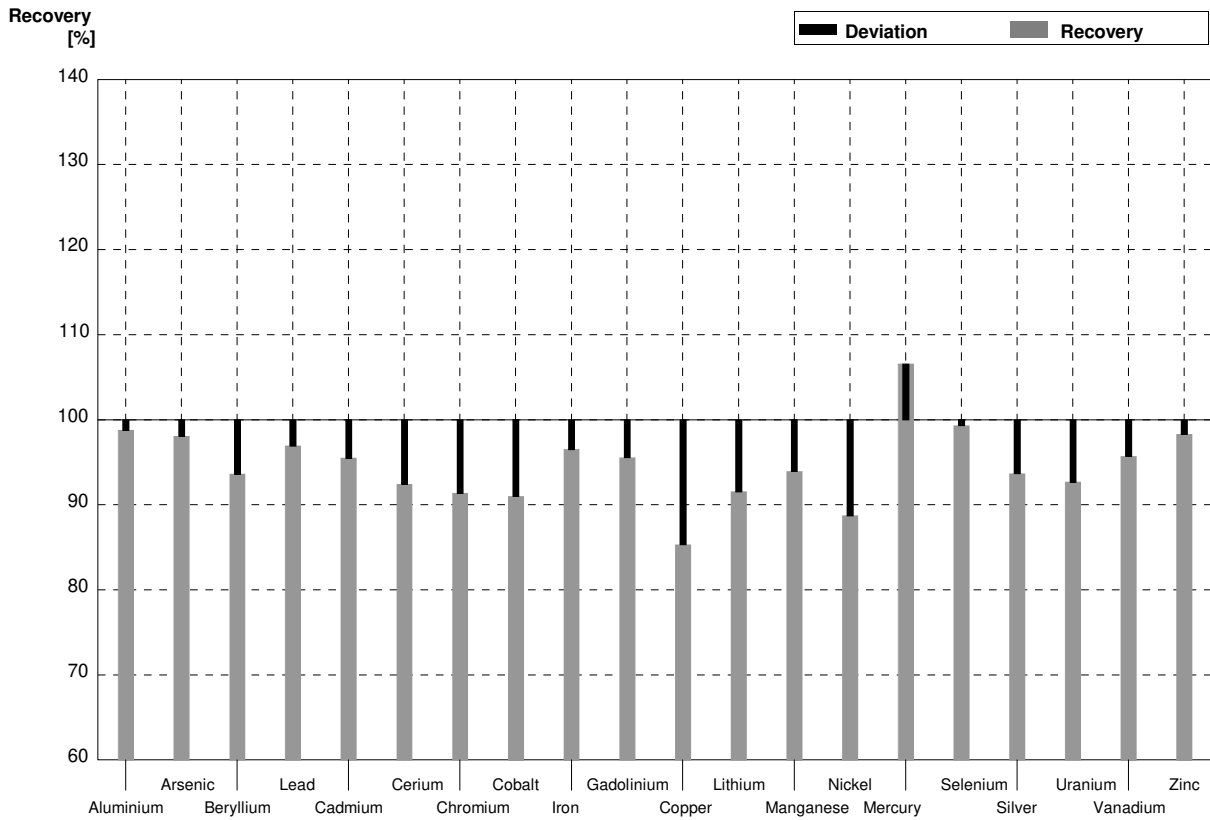
**Sample M177B**  
**Laboratory W**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	26,0	0,27	µg/l	64%
Arsenic	1,517	0,014	2,66	0,065	µg/l	175%
Beryllium	0,1197	0,0014	0,193	0,005	µg/l	161%
Lead	1,46	0,03	2,53	0,015	µg/l	173%
Cadmium	4,25	0,03	0,579	0,032	µg/l	14%
Cerium	1,144	0,010	1,83	0,012	µg/l	160%
Chromium	1,939	0,016	5,30	0,060	µg/l	273%
Cobalt	1,827	0,013	0,760	0,015	µg/l	42%
Iron	60,3	0,3	41,6	0,15	µg/l	69%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	5,65	0,12	µg/l	244%
Lithium	6,03	0,05	2,85	0,025	µg/l	47%
Manganese	18,25	0,12	45,7	0,67	µg/l	250%
Nickel	4,65	0,05	2,41	0,071	µg/l	52%
Mercury	0,440	0,013	1,33	0,024	µg/l	302%
Selenium	2,44	0,02	3,81	0,14	µg/l	156%
Silver	0,807	0,013	0,209	0,003	µg/l	26%
Uranium	2,63	0,02	1,07	0,012	µg/l	41%
Vanadium	0,603	0,006	1,57	0,051	µg/l	260%
Zinc	25,2	0,6	14,4	0,15	µg/l	57%



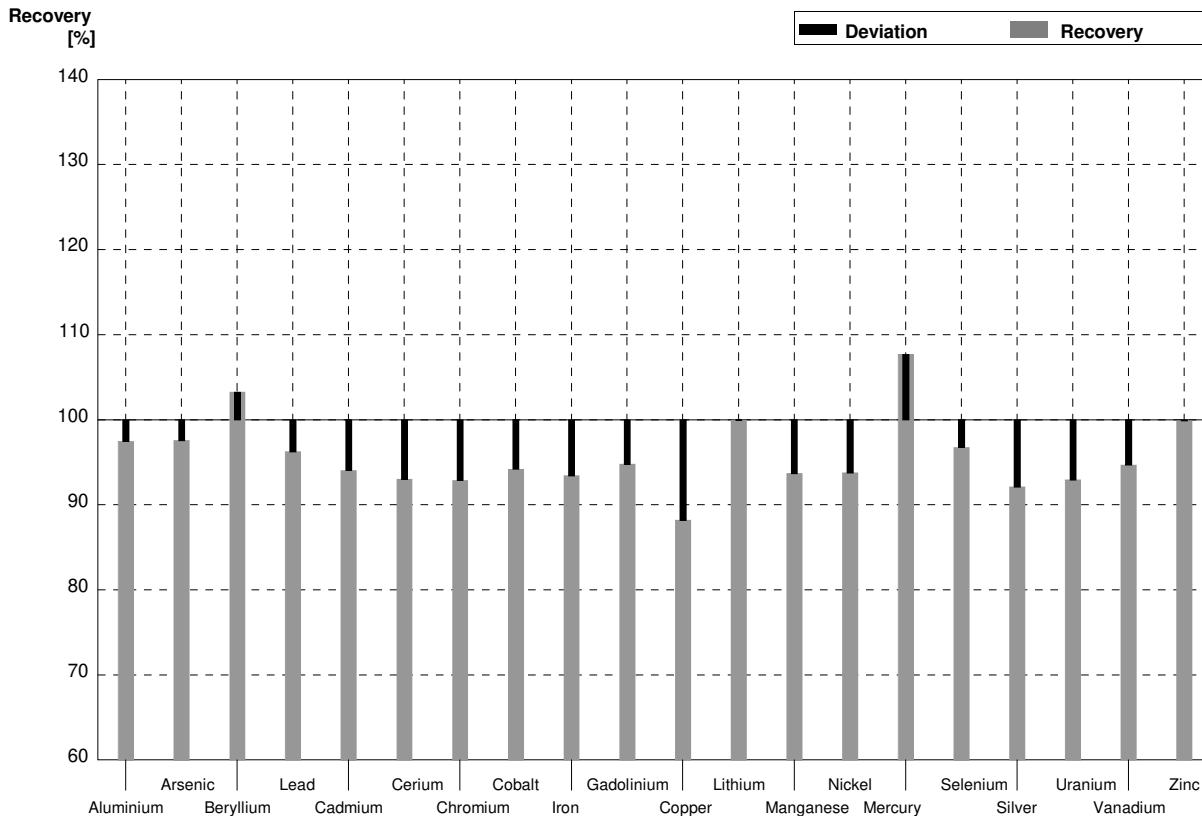
**Sample M177A**  
**Laboratory X**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	25,19	4,03	µg/l	99%
Arsenic	2,589	0,019	2,539	0,330	µg/l	98%
Beryllium	0,200	0,002	0,1872	0,0262	µg/l	94%
Lead	2,41	0,05	2,336	0,537	µg/l	97%
Cadmium	0,598	0,007	0,5711	0,0514	µg/l	96%
Cerium	1,863	0,015	1,722	0,224	µg/l	92%
Chromium	5,45	0,03	4,979	0,697	µg/l	91%
Cobalt	0,820	0,007	0,7462	0,1642	µg/l	91%
Iron	40,4	0,2	38,99	3,51	µg/l	97%
Gadolinium	0,1043	0,0016	0,09966	0,03588	µg/l	96%
Copper	6,06	0,04	5,170	1,086	µg/l	85%
Lithium	3,08	0,03	2,820	0,508	µg/l	92%
Manganese	46,0	0,2	43,21	6,91	µg/l	94%
Nickel	2,57	0,04	2,280	0,410	µg/l	89%
Mercury	1,401	0,016	1,493	0,284	µg/l	107%
Selenium	3,76	0,03	3,734	0,560	µg/l	99%
Silver	0,202	0,011	0,1892	0,0549	µg/l	94%
Uranium	1,121	0,012	1,039	0,156	µg/l	93%
Vanadium	1,721	0,015	1,647	0,165	µg/l	96%
Zinc	15,3	0,6	15,04	1,81	µg/l	98%



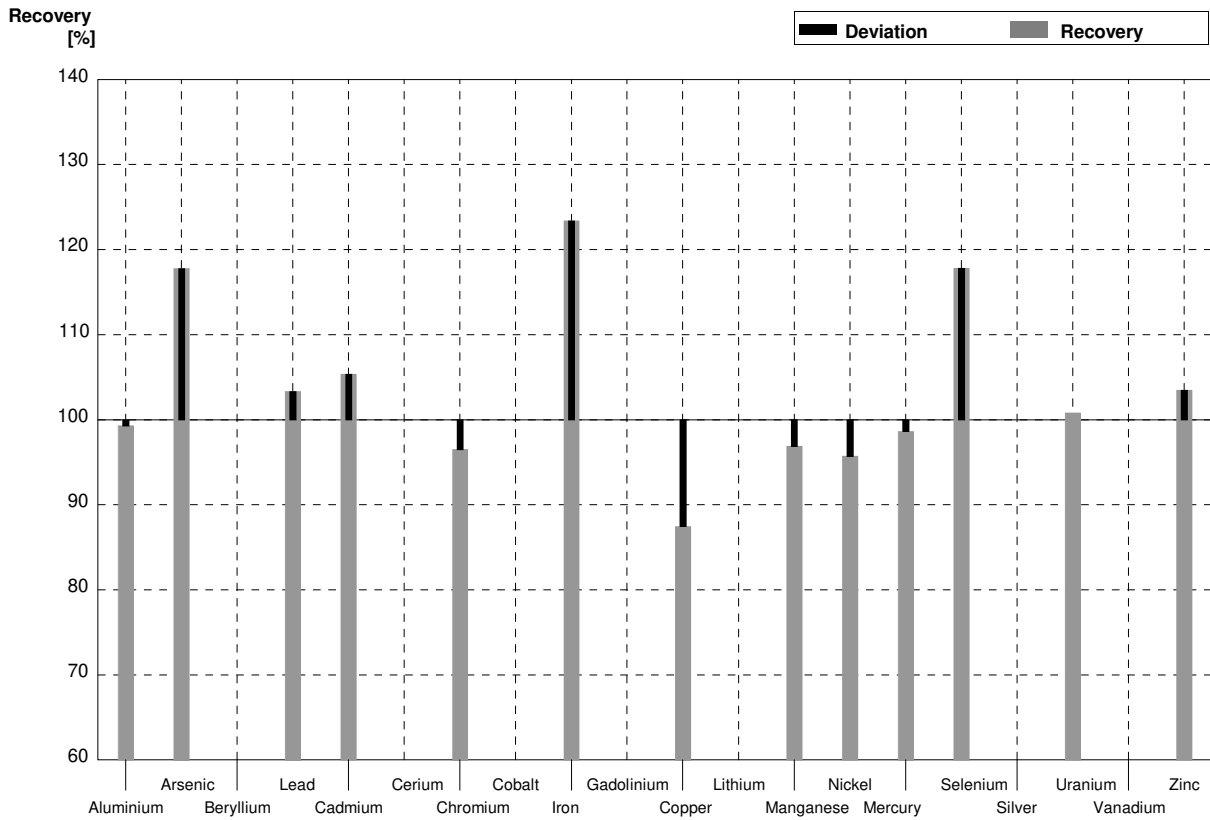
**Sample M177B**  
**Laboratory X**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	40,8	0,3	39,77	6,36	$\mu\text{g/l}$	97%
Arsenic	1,517	0,014	1,480	0,192	$\mu\text{g/l}$	98%
Beryllium	0,1197	0,0014	0,1236	0,0173	$\mu\text{g/l}$	103%
Lead	1,46	0,03	1,405	0,323	$\mu\text{g/l}$	96%
Cadmium	4,25	0,03	3,997	0,360	$\mu\text{g/l}$	94%
Cerium	1,144	0,010	1,064	0,138	$\mu\text{g/l}$	93%
Chromium	1,939	0,016	1,801	0,252	$\mu\text{g/l}$	93%
Cobalt	1,827	0,013	1,721	0,379	$\mu\text{g/l}$	94%
Iron	60,3	0,3	56,33	5,07	$\mu\text{g/l}$	93%
Gadolinium	0,0607	0,0012	0,05753	0,02071	$\mu\text{g/l}$	95%
Copper	2,32	0,03	2,046	0,430	$\mu\text{g/l}$	88%
Lithium	6,03	0,05	6,028	1,085	$\mu\text{g/l}$	100%
Manganese	18,25	0,12	17,10	2,74	$\mu\text{g/l}$	94%
Nickel	4,65	0,05	4,360	0,785	$\mu\text{g/l}$	94%
Mercury	0,440	0,013	0,4739	0,0900	$\mu\text{g/l}$	108%
Selenium	2,44	0,02	2,361	0,354	$\mu\text{g/l}$	97%
Silver	0,807	0,013	0,7433	0,2156	$\mu\text{g/l}$	92%
Uranium	2,63	0,02	2,444	0,367	$\mu\text{g/l}$	93%
Vanadium	0,603	0,006	0,5710	0,0571	$\mu\text{g/l}$	95%
Zinc	25,2	0,6	25,17	3,02	$\mu\text{g/l}$	100%



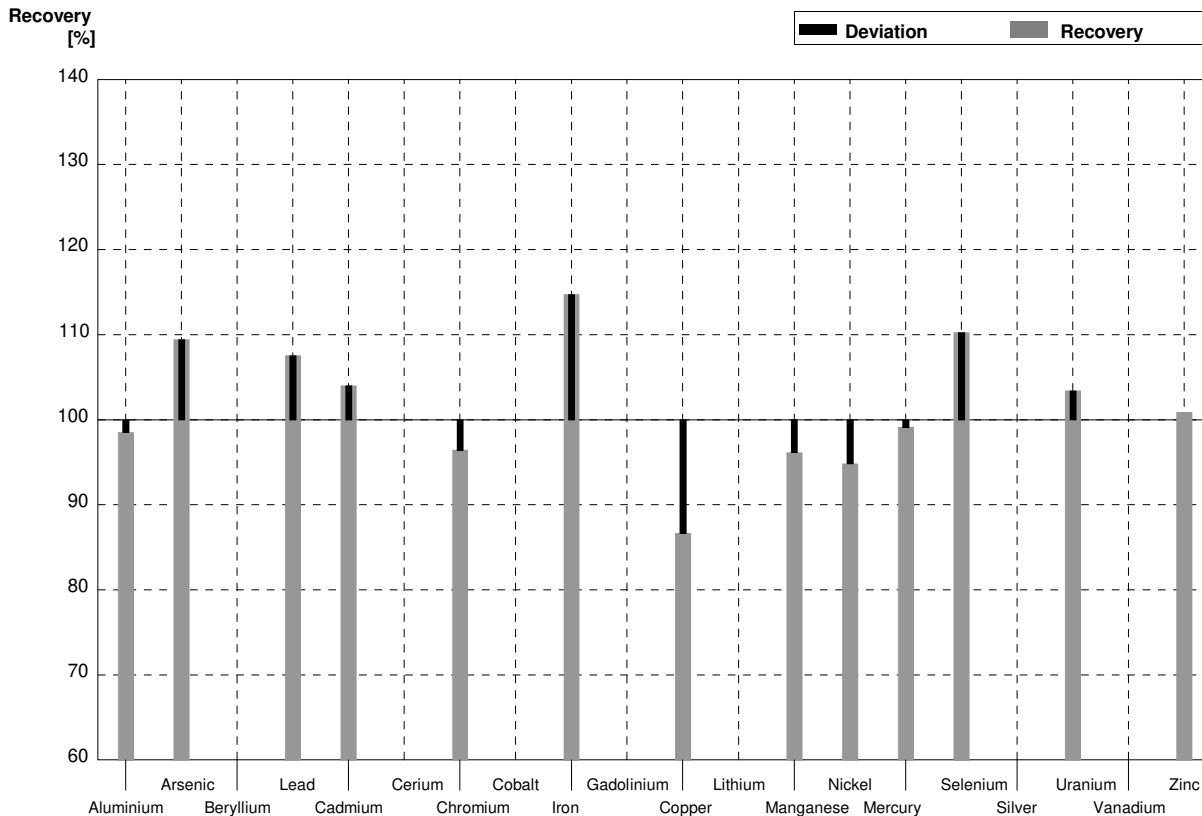
**Sample M177A**  
**Laboratory Y**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	25,32	2,52	µg/l	99%
Arsenic	2,589	0,019	3,05	0,31	µg/l	118%
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05	2,49	0,25	µg/l	103%
Cadmium	0,598	0,007	0,63	0,06	µg/l	105%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,26	0,53	µg/l	97%
Cobalt	0,820	0,007			µg/l	
Iron	40,4	0,2	49,85	4,99	µg/l	123%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,30	0,53	µg/l	87%
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2	44,57	4,46	µg/l	97%
Nickel	2,57	0,04	2,46	0,25	µg/l	96%
Mercury	1,401	0,016	1,382	0,14	µg/l	99%
Selenium	3,76	0,03	4,43	0,44	µg/l	118%
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012	1,13	0,11	µg/l	101%
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6	15,83	1,58	µg/l	103%



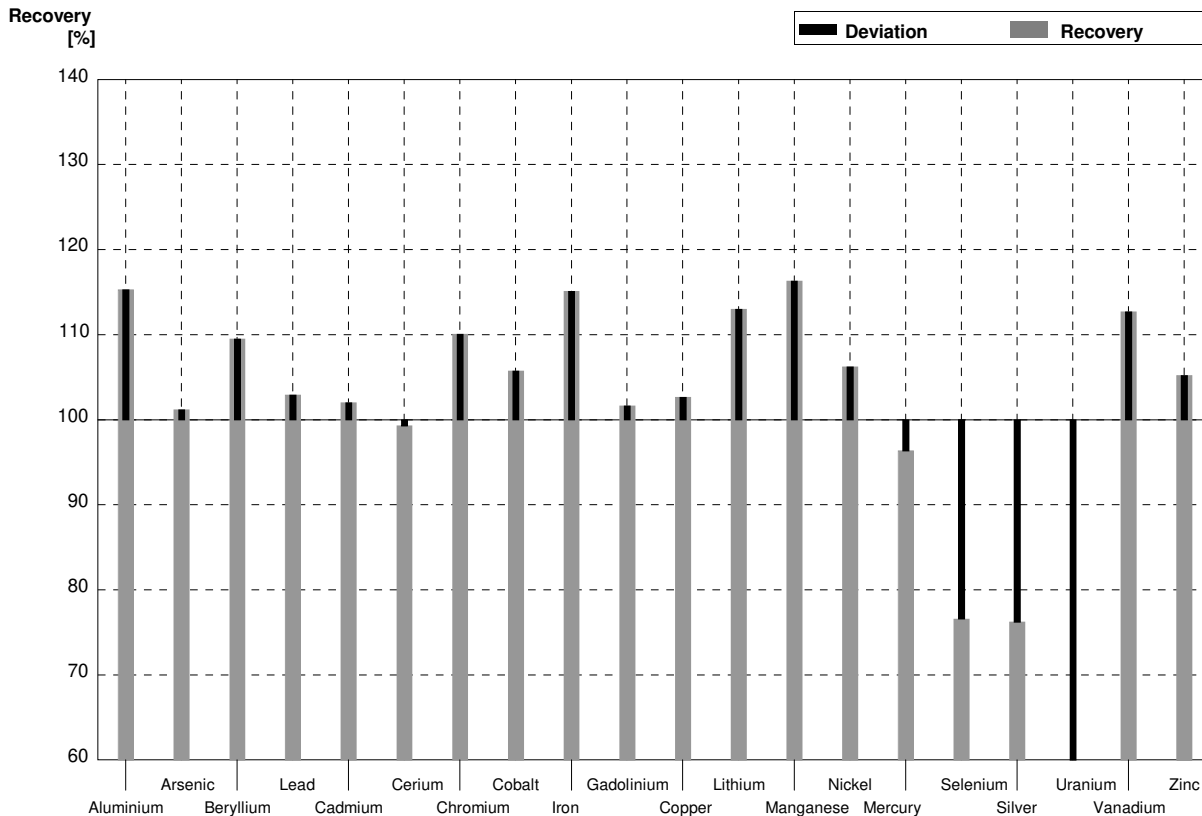
**Sample M177B**  
**Laboratory Y**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	40,20	4,02	µg/l	99%
Arsenic	1,517	0,014	1,66	0,17	µg/l	109%
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03	1,57	0,16	µg/l	108%
Cadmium	4,25	0,03	4,42	0,44	µg/l	104%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	1,87	0,19	µg/l	96%
Cobalt	1,827	0,013			µg/l	
Iron	60,3	0,3	69,19	6,92	µg/l	115%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,01	0,20	µg/l	87%
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12	17,55	1,76	µg/l	96%
Nickel	4,65	0,05	4,41	0,44	µg/l	95%
Mercury	0,440	0,013	0,4361	0,044	µg/l	99%
Selenium	2,44	0,02	2,69	0,27	µg/l	110%
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02	2,72	0,27	µg/l	103%
Vanadium	0,603	0,006			µg/l	
Zinc	25,2	0,6	25,42	2,54	µg/l	101%



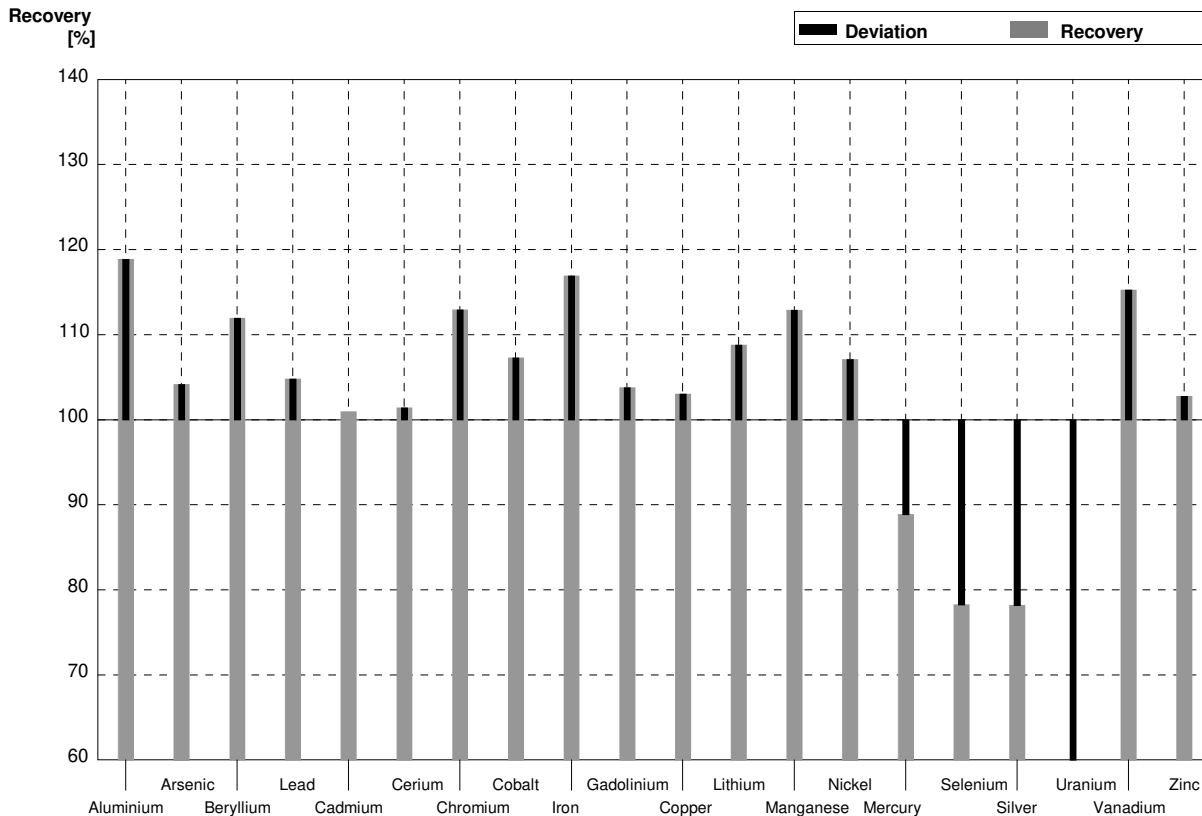
**Sample M177A**  
**Laboratory Z**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	29,4		µg/l	115%
Arsenic	2,589	0,019	2,62		µg/l	101%
Beryllium	0,200	0,002	0,219		µg/l	110%
Lead	2,41	0,05	2,48		µg/l	103%
Cadmium	0,598	0,007	0,610		µg/l	102%
Cerium	1,863	0,015	1,85		µg/l	99%
Chromium	5,45	0,03	6,00		µg/l	110%
Cobalt	0,820	0,007	0,867		µg/l	106%
Iron	40,4	0,2	46,5		µg/l	115%
Gadolinium	0,1043	0,0016	0,106		µg/l	102%
Copper	6,06	0,04	6,22		µg/l	103%
Lithium	3,08	0,03	3,48		µg/l	113%
Manganese	46,0	0,2	53,5		µg/l	116%
Nickel	2,57	0,04	2,73		µg/l	106%
Mercury	1,401	0,016	1,35		µg/l	96%
Selenium	3,76	0,03	2,88		µg/l	77%
Silver	0,202	0,011	0,154		µg/l	76%
Uranium	1,121	0,012	0,650		µg/l	58%
Vanadium	1,721	0,015	1,94		µg/l	113%
Zinc	15,3	0,6	16,1		µg/l	105%



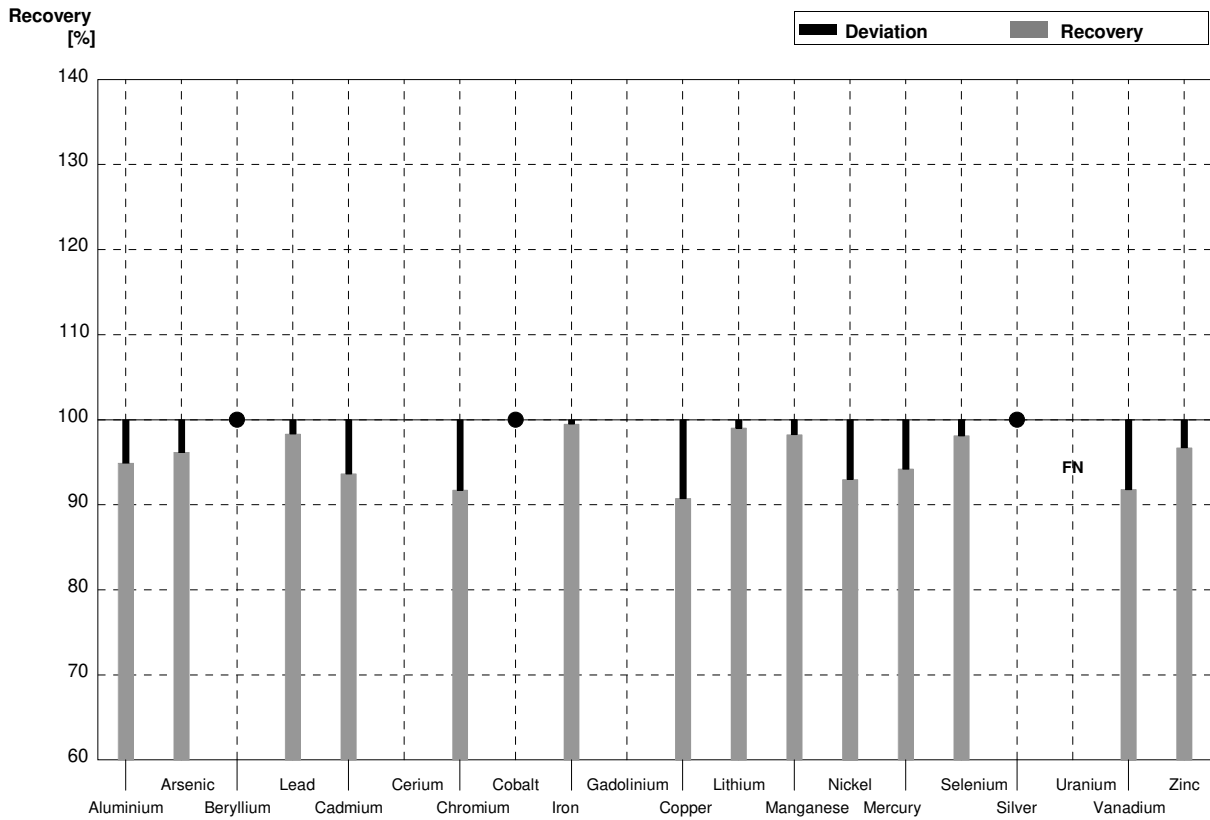
**Sample M177B**  
**Laboratory Z**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	48,5		µg/l	119%
Arsenic	1,517	0,014	1,58		µg/l	104%
Beryllium	0,1197	0,0014	0,134		µg/l	112%
Lead	1,46	0,03	1,53		µg/l	105%
Cadmium	4,25	0,03	4,29		µg/l	101%
Cerium	1,144	0,010	1,16		µg/l	101%
Chromium	1,939	0,016	2,19		µg/l	113%
Cobalt	1,827	0,013	1,96		µg/l	107%
Iron	60,3	0,3	70,5		µg/l	117%
Gadolinium	0,0607	0,0012	0,063		µg/l	104%
Copper	2,32	0,03	2,39		µg/l	103%
Lithium	6,03	0,05	6,56		µg/l	109%
Manganese	18,25	0,12	20,6		µg/l	113%
Nickel	4,65	0,05	4,98		µg/l	107%
Mercury	0,440	0,013	0,391		µg/l	89%
Selenium	2,44	0,02	1,91		µg/l	78%
Silver	0,807	0,013	0,631		µg/l	78%
Uranium	2,63	0,02	1,48		µg/l	56%
Vanadium	0,603	0,006	0,695		µg/l	115%
Zinc	25,2	0,6	25,9		µg/l	103%



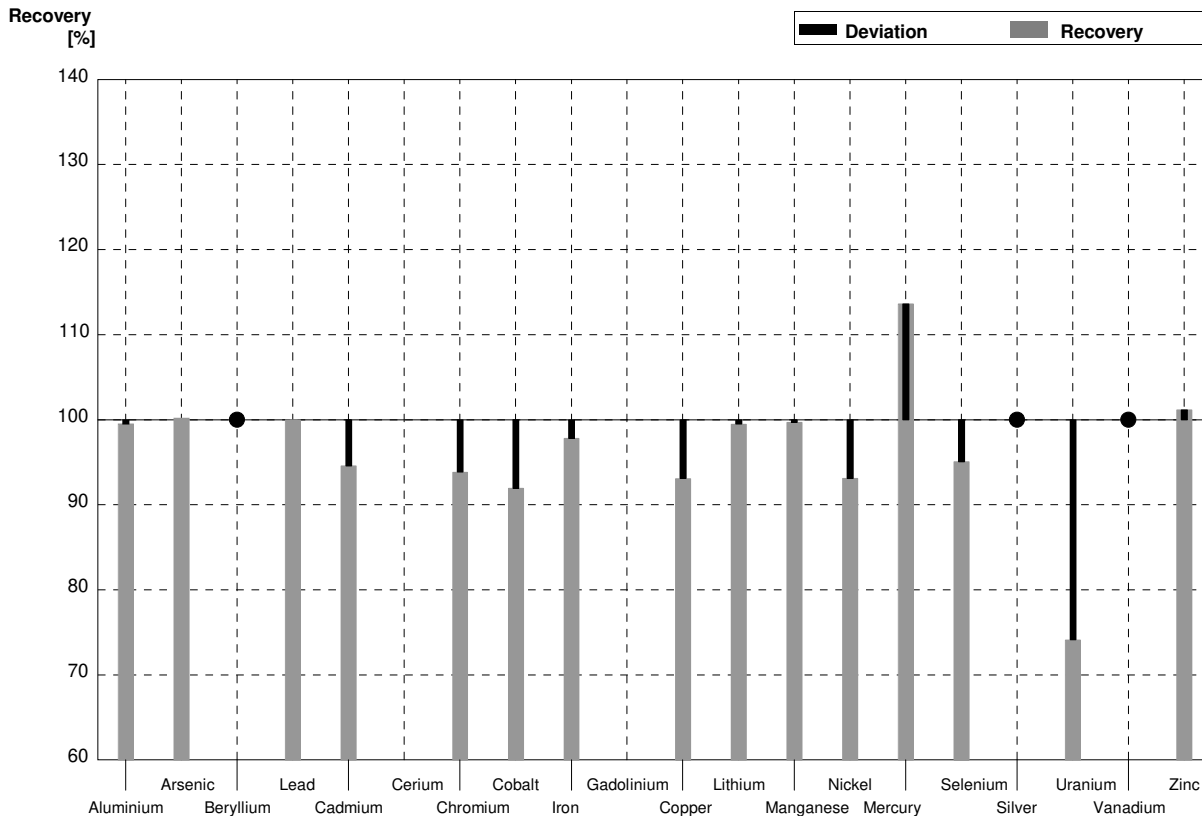
**Sample M177A**  
**Laboratory AA**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	24,2	4,84	µg/l	95%
Arsenic	2,589	0,019	2,49	0,50	µg/l	96%
Beryllium	0,200	0,002	<1,0		µg/l	•
Lead	2,41	0,05	2,37	0,59	µg/l	98%
Cadmium	0,598	0,007	0,56	0,08	µg/l	94%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,00	0,75	µg/l	92%
Cobalt	0,820	0,007	<1,0		µg/l	•
Iron	40,4	0,2	40,2	8,04	µg/l	100%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,50	1,10	µg/l	91%
Lithium	3,08	0,03	3,05	0,92	µg/l	99%
Manganese	46,0	0,2	45,2	6,78	µg/l	98%
Nickel	2,57	0,04	2,39	0,36	µg/l	93%
Mercury	1,401	0,016	1,32	0,20	µg/l	94%
Selenium	3,76	0,03	3,69	0,55	µg/l	98%
Silver	0,202	0,011	<1,0		µg/l	•
Uranium	1,121	0,012	<1,0		µg/l	FN
Vanadium	1,721	0,015	1,58	0,47	µg/l	92%
Zinc	15,3	0,6	14,8	4,44	µg/l	97%



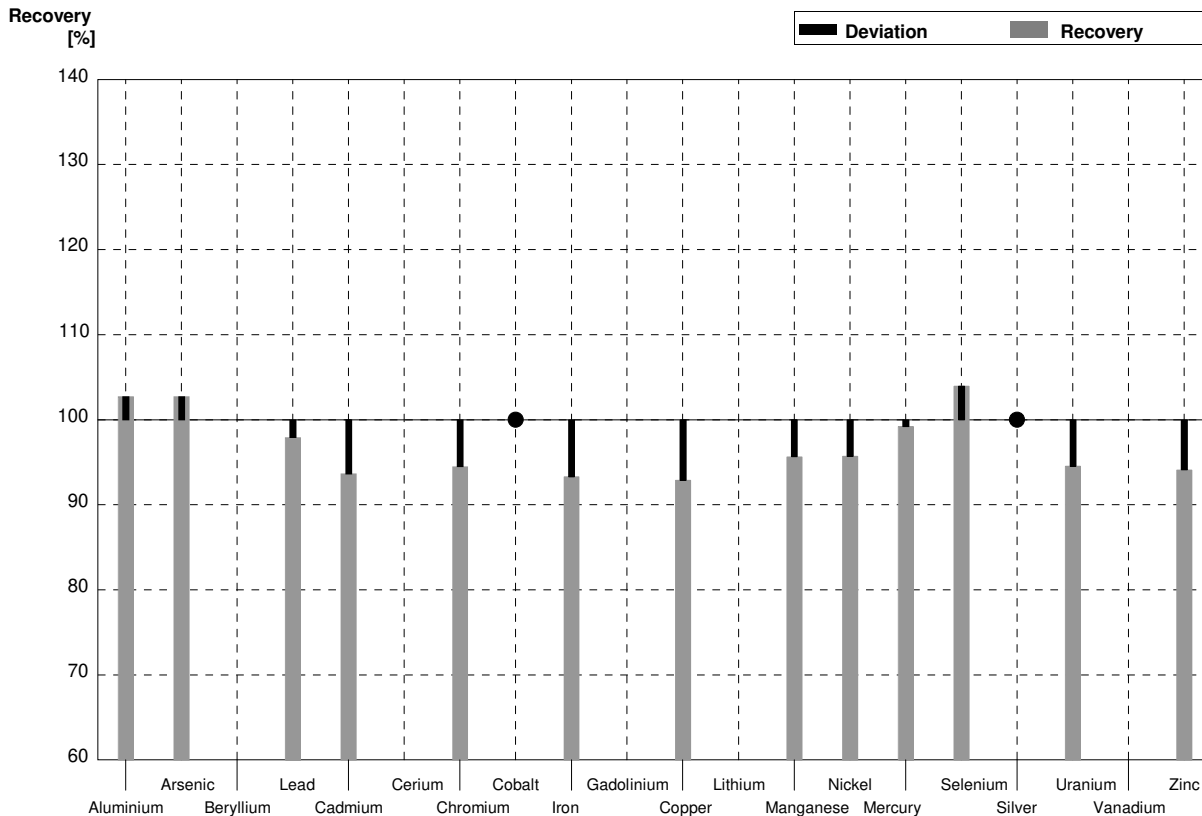
**Sample M177B**  
**Laboratory AA**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	40,6	8,12	µg/l	100%
Arsenic	1,517	0,014	1,52	0,30	µg/l	100%
Beryllium	0,1197	0,0014	<1,0		µg/l	•
Lead	1,46	0,03	1,46	0,37	µg/l	100%
Cadmium	4,25	0,03	4,02	0,60	µg/l	95%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	1,82	0,27	µg/l	94%
Cobalt	1,827	0,013	1,68	0,25	µg/l	92%
Iron	60,3	0,3	59,0	11,8	µg/l	98%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,16	0,43	µg/l	93%
Lithium	6,03	0,05	6,00	1,80	µg/l	100%
Manganese	18,25	0,12	18,2	2,73	µg/l	100%
Nickel	4,65	0,05	4,33	0,65	µg/l	93%
Mercury	0,440	0,013	0,50	0,08	µg/l	114%
Selenium	2,44	0,02	2,32	0,35	µg/l	95%
Silver	0,807	0,013	<1,0		µg/l	•
Uranium	2,63	0,02	1,95	0,29	µg/l	74%
Vanadium	0,603	0,006	<1,0		µg/l	•
Zinc	25,2	0,6	25,5	7,65	µg/l	101%



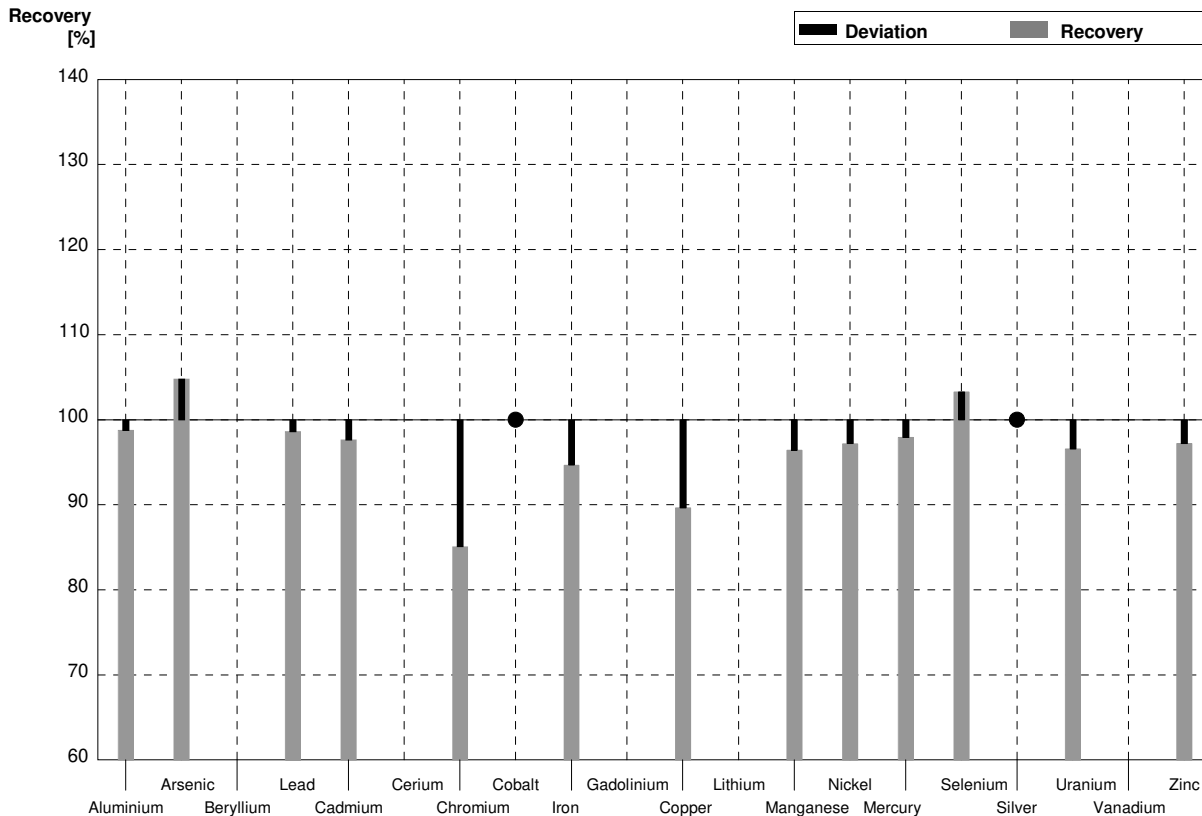
Sample **M177A**  
 Laboratory **AB**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	26,2	4,15	µg/l	103%
Arsenic	2,589	0,019	2,66	0,20	µg/l	103%
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05	2,36	0,28	µg/l	98%
Cadmium	0,598	0,007	0,56		µg/l	94%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,15	0,84	µg/l	94%
Cobalt	0,820	0,007	<5		µg/l	•
Iron	40,4	0,2	37,7	2,53	µg/l	93%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,63	0,6	µg/l	93%
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2	44,0	2,79	µg/l	96%
Nickel	2,57	0,04	2,46	0,23	µg/l	96%
Mercury	1,401	0,016	1,39	0,26	µg/l	99%
Selenium	3,76	0,03	3,91	0,52	µg/l	104%
Silver	0,202	0,011	<5		µg/l	•
Uranium	1,121	0,012	1,06		µg/l	95%
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6	14,4	2,18	µg/l	94%



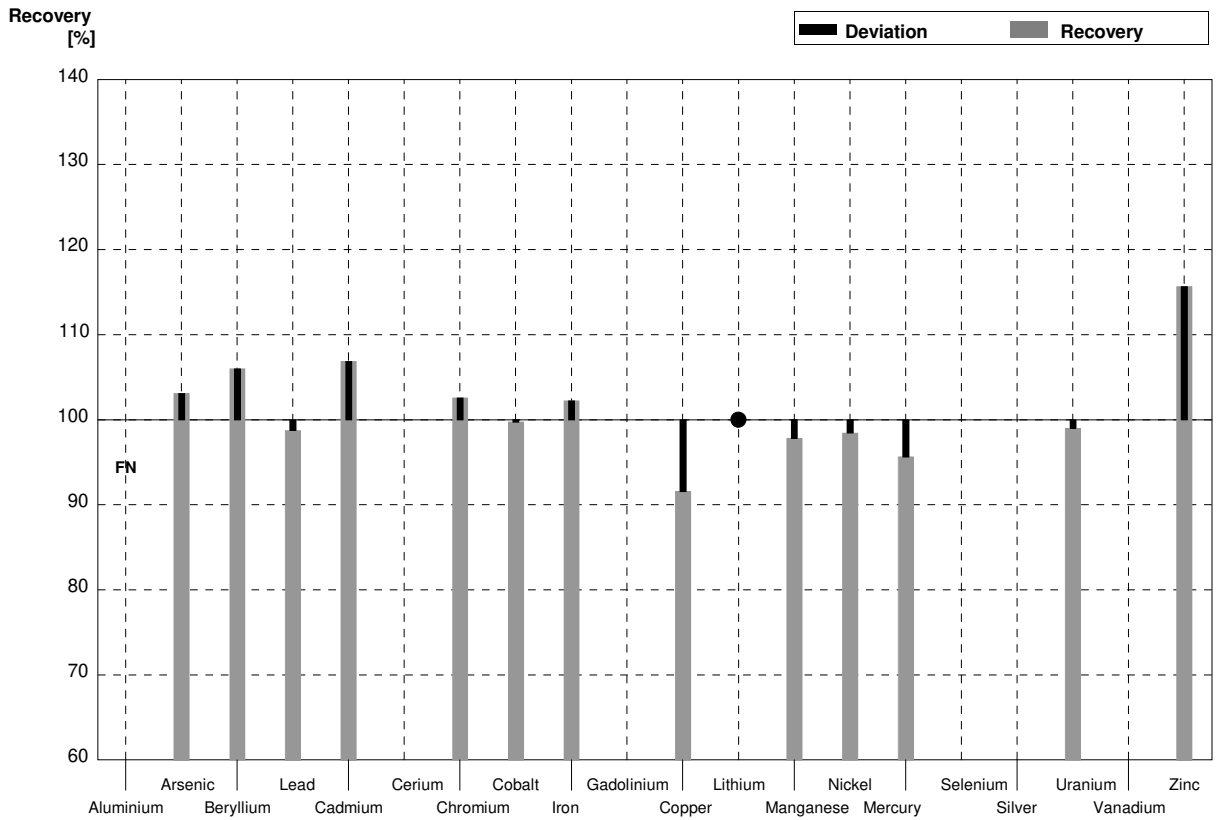
**Sample M177B**  
**Laboratory AB**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	40,3	4,66	µg/l	99%
Arsenic	1,517	0,014	1,59	0,1	µg/l	105%
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03	1,44	0,14	µg/l	99%
Cadmium	4,25	0,03	4,15	0,44	µg/l	98%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	1,65		µg/l	85%
Cobalt	1,827	0,013	<5		µg/l	•
Iron	60,3	0,3	57,1	4,06	µg/l	95%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,08		µg/l	90%
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12	17,6	1,21	µg/l	96%
Nickel	4,65	0,05	4,52	0,46	µg/l	97%
Mercury	0,440	0,013	0,431	0,02	µg/l	98%
Selenium	2,44	0,02	2,52		µg/l	103%
Silver	0,807	0,013	<5		µg/l	•
Uranium	2,63	0,02	2,54	0,18	µg/l	97%
Vanadium	0,603	0,006			µg/l	
Zinc	25,2	0,6	24,5	6,42	µg/l	97%



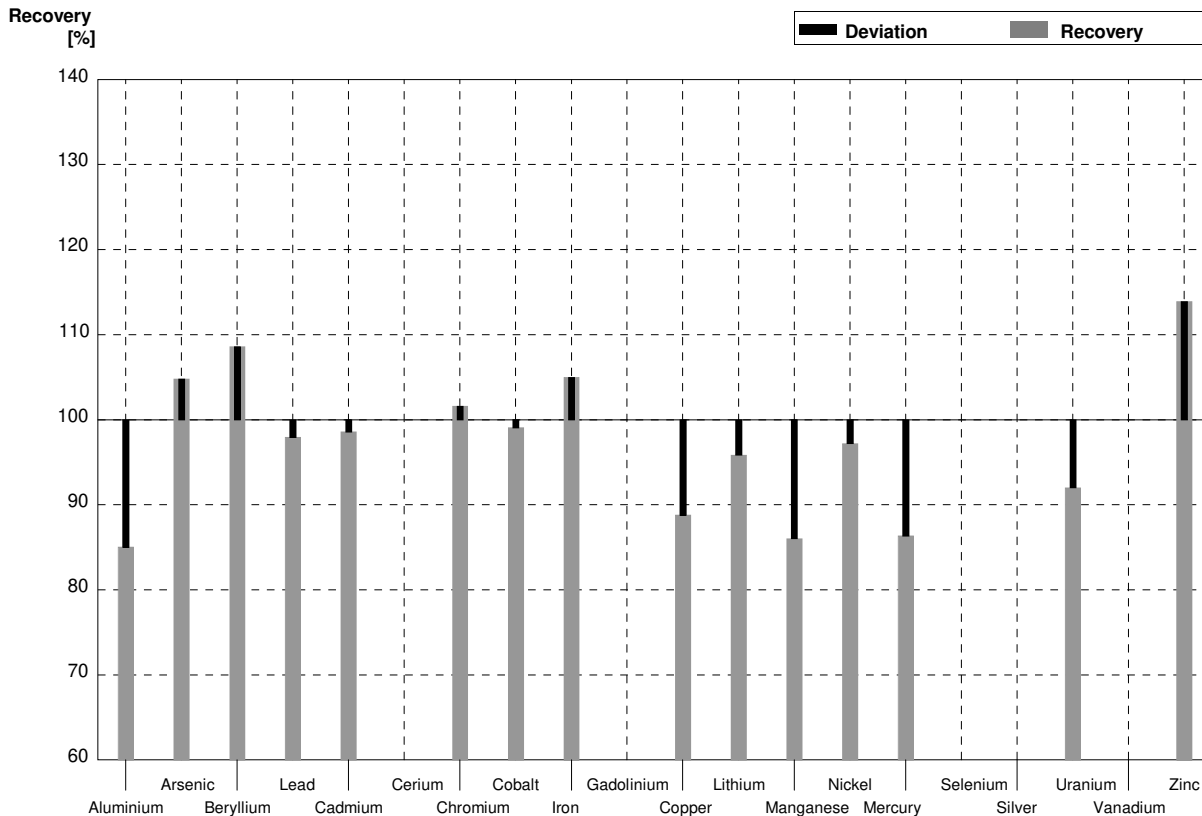
**Sample M177A**  
**Laboratory AC**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	<20	4	µg/l	FN
Arsenic	2,589	0,019	2,67	0,5	µg/l	103%
Beryllium	0,200	0,002	0,212	0,04	µg/l	106%
Lead	2,41	0,05	2,38	0,48	µg/l	99%
Cadmium	0,598	0,007	0,639	0,12	µg/l	107%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,59	1	µg/l	103%
Cobalt	0,820	0,007	0,818	0,16	µg/l	100%
Iron	40,4	0,2	41,3	8	µg/l	102%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,55	1	µg/l	92%
Lithium	3,08	0,03	<5	1	µg/l	•
Manganese	46,0	0,2	45,0	9	µg/l	98%
Nickel	2,57	0,04	2,53	0,5	µg/l	98%
Mercury	1,401	0,016	1,34	0,26	µg/l	96%
Selenium	3,76	0,03			µg/l	
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012	1,11	0,2	µg/l	99%
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6	17,7	3,4	µg/l	116%



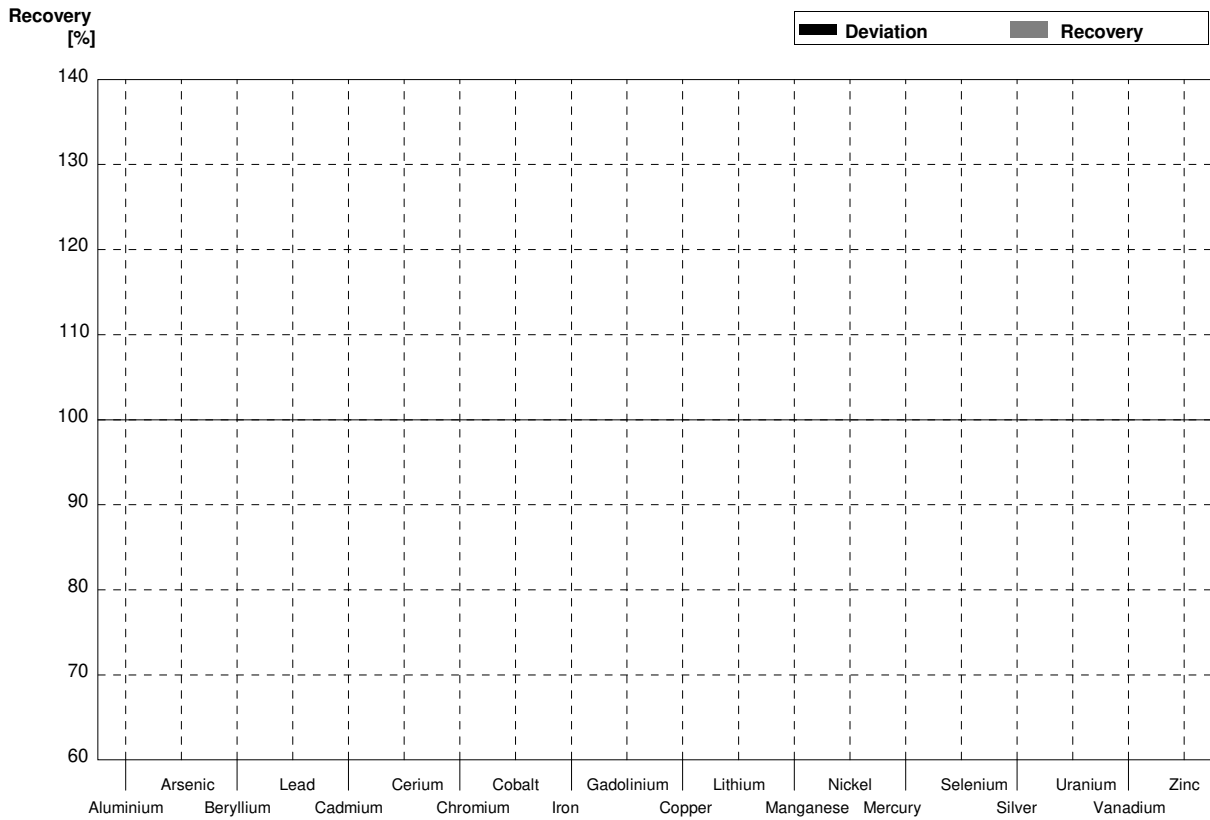
**Sample M177B**  
**Laboratory AC**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	34,7	7	µg/l	85%
Arsenic	1,517	0,014	1,59	0,32	µg/l	105%
Beryllium	0,1197	0,0014	0,130	0,026	µg/l	109%
Lead	1,46	0,03	1,43	0,28	µg/l	98%
Cadmium	4,25	0,03	4,19	0,8	µg/l	99%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	1,97	0,39	µg/l	102%
Cobalt	1,827	0,013	1,81	0,36	µg/l	99%
Iron	60,3	0,3	63,3	13	µg/l	105%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,06	0,4	µg/l	89%
Lithium	6,03	0,05	5,78	1,1	µg/l	96%
Manganese	18,25	0,12	15,7	3	µg/l	86%
Nickel	4,65	0,05	4,52	0,9	µg/l	97%
Mercury	0,440	0,013	0,380	0,078	µg/l	86%
Selenium	2,44	0,02			µg/l	
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02	2,42	0,48	µg/l	92%
Vanadium	0,603	0,006			µg/l	
Zinc	25,2	0,6	28,7	5,6	µg/l	114%



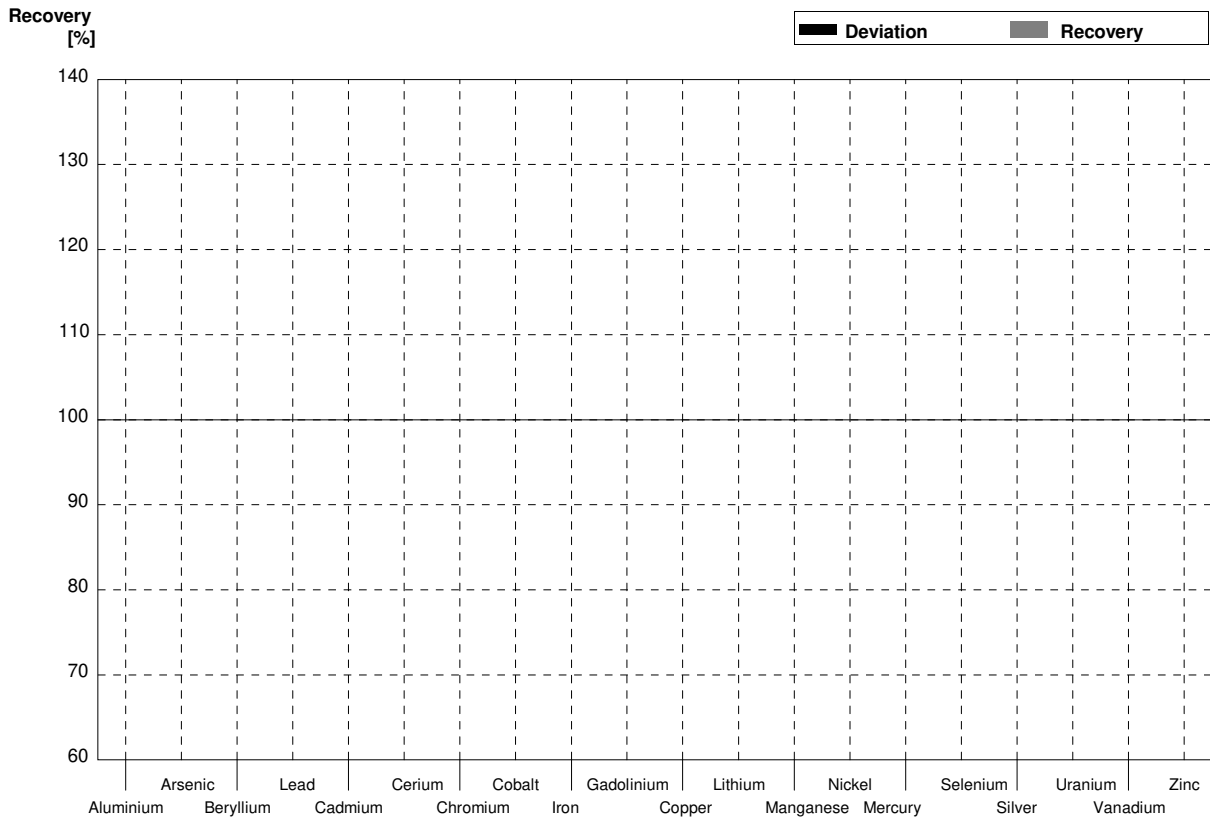
**Sample M177A**  
**Laboratory AD**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	25,5	0,2			$\mu\text{g/l}$	
Arsenic	2,589	0,019			$\mu\text{g/l}$	
Beryllium	0,200	0,002			$\mu\text{g/l}$	
Lead	2,41	0,05			$\mu\text{g/l}$	
Cadmium	0,598	0,007			$\mu\text{g/l}$	
Cerium	1,863	0,015			$\mu\text{g/l}$	
Chromium	5,45	0,03			$\mu\text{g/l}$	
Cobalt	0,820	0,007			$\mu\text{g/l}$	
Iron	40,4	0,2			$\mu\text{g/l}$	
Gadolinium	0,1043	0,0016			$\mu\text{g/l}$	
Copper	6,06	0,04			$\mu\text{g/l}$	
Lithium	3,08	0,03			$\mu\text{g/l}$	
Manganese	46,0	0,2			$\mu\text{g/l}$	
Nickel	2,57	0,04			$\mu\text{g/l}$	
Mercury	1,401	0,016			$\mu\text{g/l}$	
Selenium	3,76	0,03			$\mu\text{g/l}$	
Silver	0,202	0,011			$\mu\text{g/l}$	
Uranium	1,121	0,012			$\mu\text{g/l}$	
Vanadium	1,721	0,015			$\mu\text{g/l}$	
Zinc	15,3	0,6			$\mu\text{g/l}$	



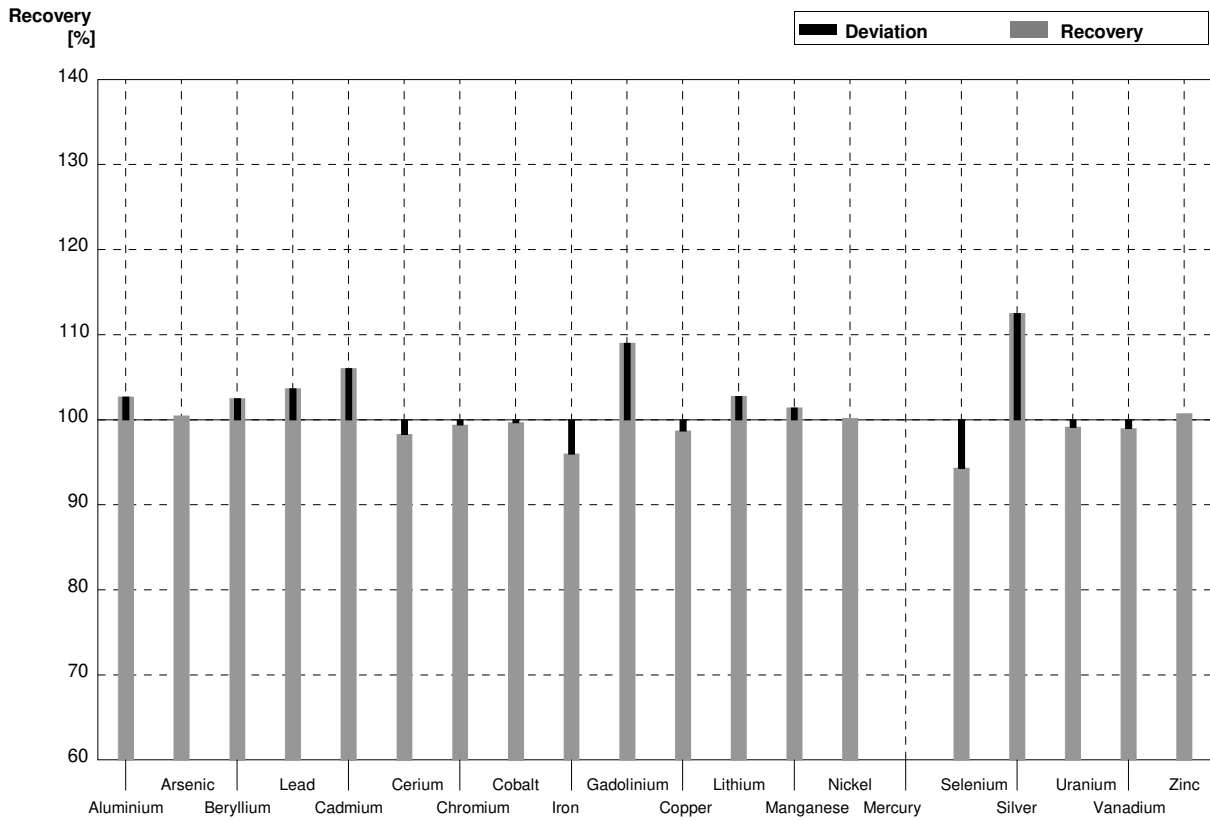
**Sample M177B**  
**Laboratory AD**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	40,8	0,3			$\mu\text{g/l}$	
Arsenic	1,517	0,014			$\mu\text{g/l}$	
Beryllium	0,1197	0,0014			$\mu\text{g/l}$	
Lead	1,46	0,03			$\mu\text{g/l}$	
Cadmium	4,25	0,03			$\mu\text{g/l}$	
Cerium	1,144	0,010			$\mu\text{g/l}$	
Chromium	1,939	0,016			$\mu\text{g/l}$	
Cobalt	1,827	0,013			$\mu\text{g/l}$	
Iron	60,3	0,3			$\mu\text{g/l}$	
Gadolinium	0,0607	0,0012			$\mu\text{g/l}$	
Copper	2,32	0,03			$\mu\text{g/l}$	
Lithium	6,03	0,05			$\mu\text{g/l}$	
Manganese	18,25	0,12			$\mu\text{g/l}$	
Nickel	4,65	0,05			$\mu\text{g/l}$	
Mercury	0,440	0,013			$\mu\text{g/l}$	
Selenium	2,44	0,02			$\mu\text{g/l}$	
Silver	0,807	0,013			$\mu\text{g/l}$	
Uranium	2,63	0,02			$\mu\text{g/l}$	
Vanadium	0,603	0,006			$\mu\text{g/l}$	
Zinc	25,2	0,6			$\mu\text{g/l}$	



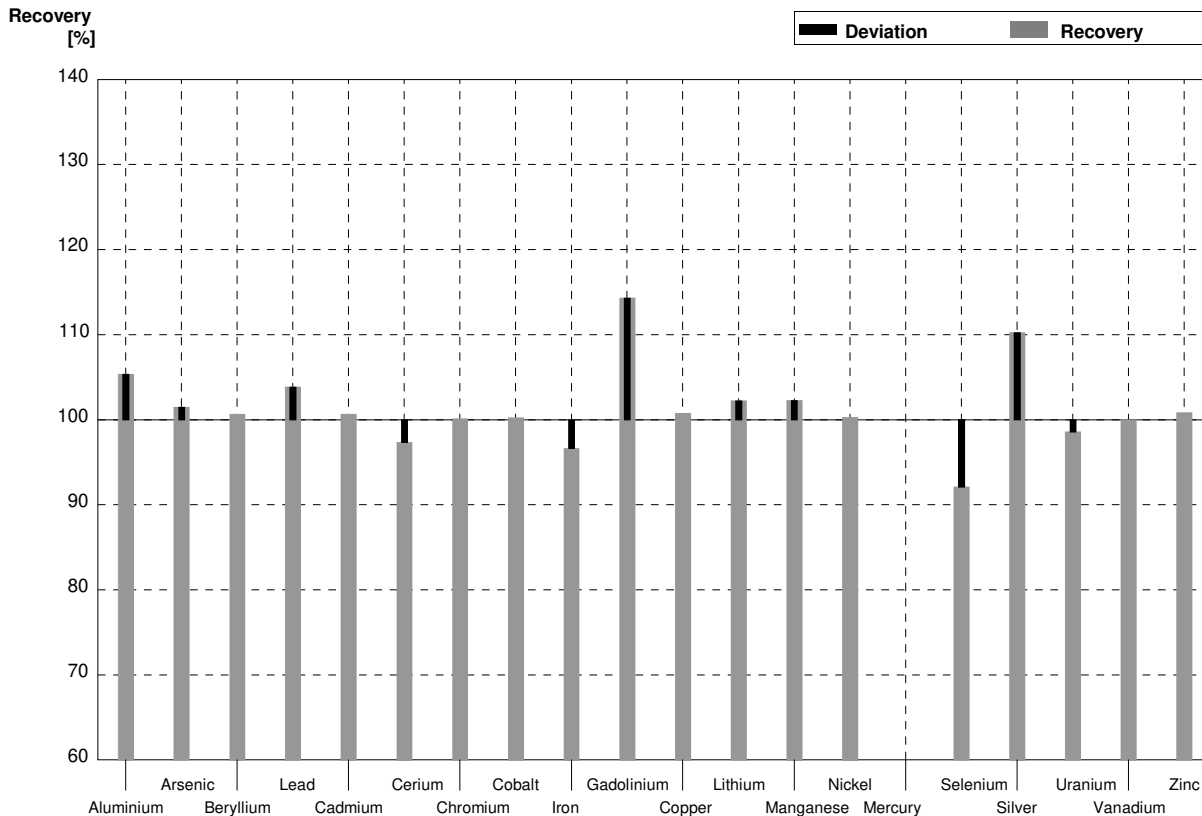
**Sample M177A**  
**Laboratory AE**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	26,1850	2,6290	µg/l	103%
Arsenic	2,589	0,019	2,6008	0,3727	µg/l	100%
Beryllium	0,200	0,002	0,2050	0,0301	µg/l	103%
Lead	2,41	0,05	2,4984	0,2331	µg/l	104%
Cadmium	0,598	0,007	0,6341	0,0606	µg/l	106%
Cerium	1,863	0,015	1,8313	0,1930	µg/l	98%
Chromium	5,45	0,03	5,4165	0,5525	µg/l	99%
Cobalt	0,820	0,007	0,8173	0,0660	µg/l	100%
Iron	40,4	0,2	38,7795	3,3777	µg/l	96%
Gadolinium	0,1043	0,0016	0,1137	0,0120	µg/l	109%
Copper	6,06	0,04	5,9809	0,6776	µg/l	99%
Lithium	3,08	0,03	3,1649	0,3712	µg/l	103%
Manganese	46,0	0,2	46,6494	3,7366	µg/l	101%
Nickel	2,57	0,04	2,5742	0,2615	µg/l	100%
Mercury	1,401	0,016			µg/l	
Selenium	3,76	0,03	3,5466	0,3146	µg/l	94%
Silver	0,202	0,011	0,2273	0,0300	µg/l	113%
Uranium	1,121	0,012	1,1116	0,0894	µg/l	99%
Vanadium	1,721	0,015	1,7034	0,2509	µg/l	99%
Zinc	15,3	0,6	15,4132	1,3271	µg/l	101%



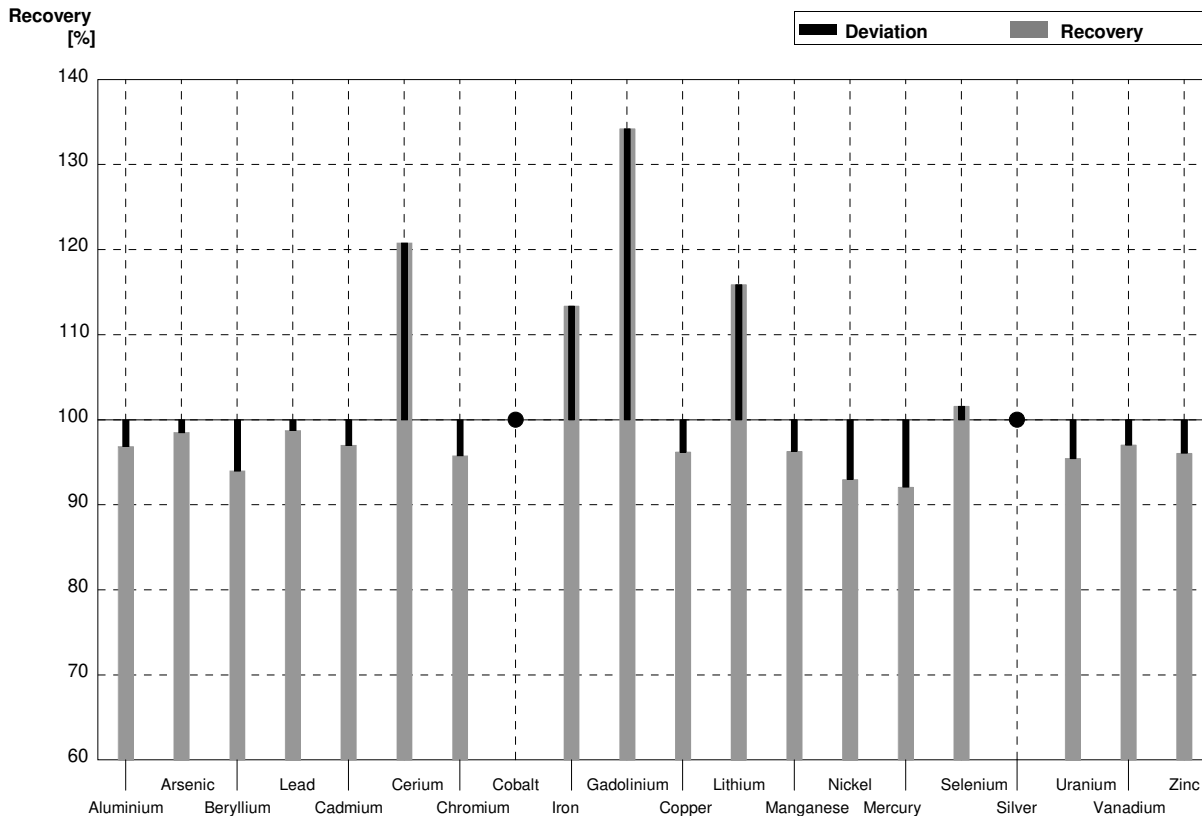
**Sample M177B**  
**Laboratory AE**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	40,8	0,3	42,9870	4,3159	$\mu\text{g/l}$	105%
Arsenic	1,517	0,014	1,5395	0,2206	$\mu\text{g/l}$	101%
Beryllium	0,1197	0,0014	0,1205	0,0177	$\mu\text{g/l}$	101%
Lead	1,46	0,03	1,5166	0,1415	$\mu\text{g/l}$	104%
Cadmium	4,25	0,03	4,2780	0,4086	$\mu\text{g/l}$	101%
Cerium	1,144	0,010	1,1138	0,1174	$\mu\text{g/l}$	97%
Chromium	1,939	0,016	1,9414	0,1980	$\mu\text{g/l}$	100%
Cobalt	1,827	0,013	1,8317	0,1478	$\mu\text{g/l}$	100%
Iron	60,3	0,3	58,2769	5,0759	$\mu\text{g/l}$	97%
Gadolinium	0,0607	0,0012	0,0694	0,0073	$\mu\text{g/l}$	114%
Copper	2,32	0,03	2,3378	0,2649	$\mu\text{g/l}$	101%
Lithium	6,03	0,05	6,1648	0,7231	$\mu\text{g/l}$	102%
Manganese	18,25	0,12	18,6691	1,4954	$\mu\text{g/l}$	102%
Nickel	4,65	0,05	4,6622	0,4737	$\mu\text{g/l}$	100%
Mercury	0,440	0,013			$\mu\text{g/l}$	
Selenium	2,44	0,02	2,2474	0,1993	$\mu\text{g/l}$	92%
Silver	0,807	0,013	0,8899	0,1174	$\mu\text{g/l}$	110%
Uranium	2,63	0,02	2,5930	0,2085	$\mu\text{g/l}$	99%
Vanadium	0,603	0,006	0,6030	0,0888	$\mu\text{g/l}$	100%
Zinc	25,2	0,6	25,4198	2,1886	$\mu\text{g/l}$	101%



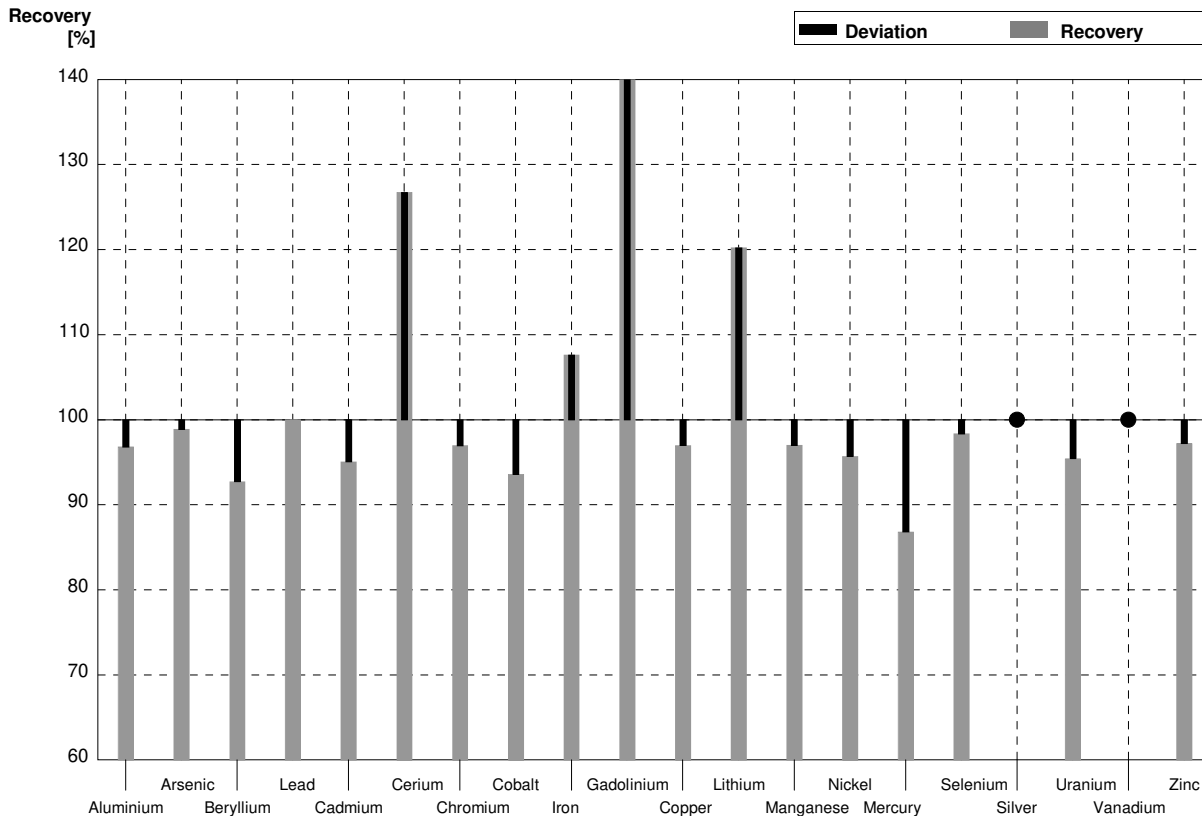
**Sample M177A**  
**Laboratory AF**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	24,7	3,7	µg/l	97%
Arsenic	2,589	0,019	2,55	0,38	µg/l	98%
Beryllium	0,200	0,002	0,188	0,03	µg/l	94%
Lead	2,41	0,05	2,38	0,36	µg/l	99%
Cadmium	0,598	0,007	0,58	0,09	µg/l	97%
Cerium	1,863	0,015	2,25	0,34	µg/l	121%
Chromium	5,45	0,03	5,22	0,78	µg/l	96%
Cobalt	0,820	0,007	<1,00		µg/l	•
Iron	40,4	0,2	45,8	6,9	µg/l	113%
Gadolinium	0,1043	0,0016	0,140	0,02	µg/l	134%
Copper	6,06	0,04	5,83	0,9	µg/l	96%
Lithium	3,08	0,03	3,57	0,5	µg/l	116%
Manganese	46,0	0,2	44,3	6,6	µg/l	96%
Nickel	2,57	0,04	2,39	0,36	µg/l	93%
Mercury	1,401	0,016	1,29	0,13	µg/l	92%
Selenium	3,76	0,03	3,82	0,57	µg/l	102%
Silver	0,202	0,011	<1,00		µg/l	•
Uranium	1,121	0,012	1,07	0,16	µg/l	95%
Vanadium	1,721	0,015	1,67	0,25	µg/l	97%
Zinc	15,3	0,6	14,7	2,2	µg/l	96%



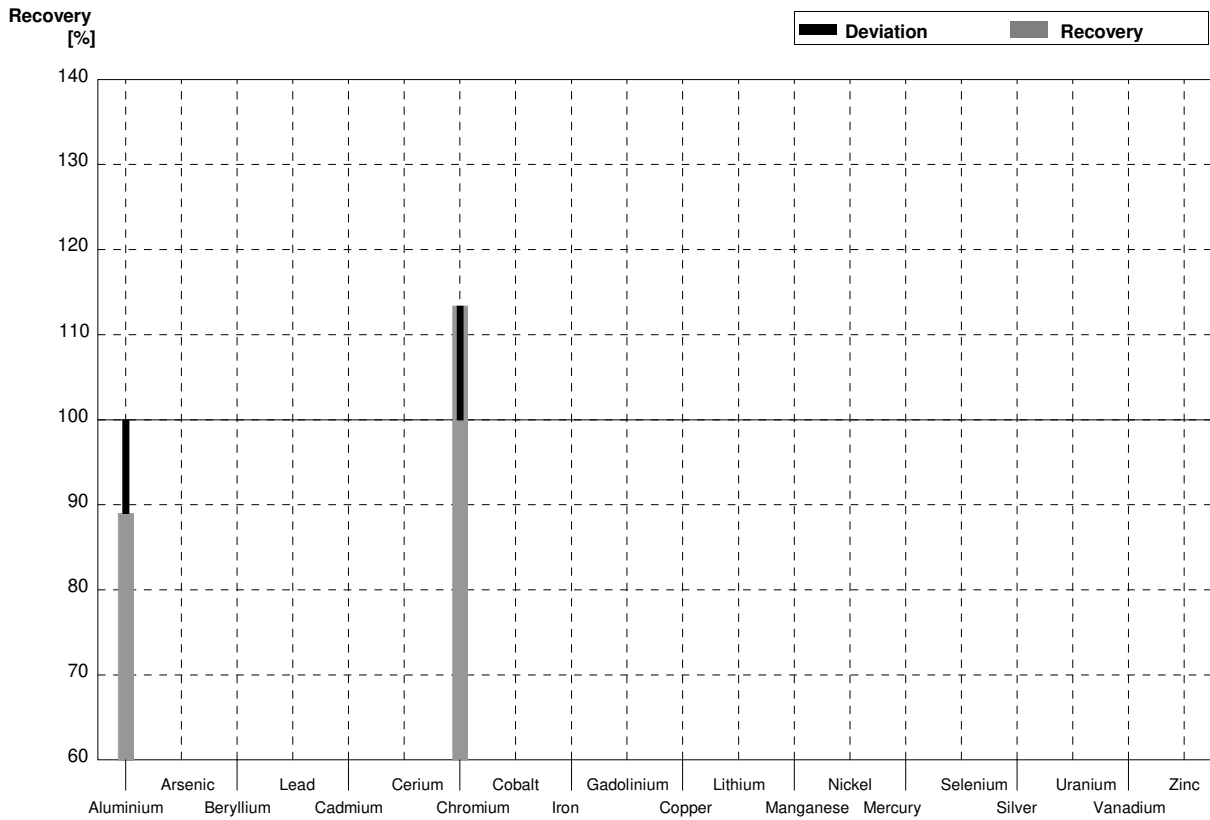
**Sample M177B**  
**Laboratory AF**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	40,8	0,3	39,5	5,9	$\mu\text{g/l}$	97%
Arsenic	1,517	0,014	1,50	0,23	$\mu\text{g/l}$	99%
Beryllium	0,1197	0,0014	0,111	0,02	$\mu\text{g/l}$	93%
Lead	1,46	0,03	1,46	0,22	$\mu\text{g/l}$	100%
Cadmium	4,25	0,03	4,04	0,61	$\mu\text{g/l}$	95%
Cerium	1,144	0,010	1,45	0,22	$\mu\text{g/l}$	127%
Chromium	1,939	0,016	1,88	0,28	$\mu\text{g/l}$	97%
Cobalt	1,827	0,013	1,71	0,26	$\mu\text{g/l}$	94%
Iron	60,3	0,3	64,9	9,7	$\mu\text{g/l}$	108%
Gadolinium	0,0607	0,0012	0,087	0,01	$\mu\text{g/l}$	143%
Copper	2,32	0,03	2,25	0,34	$\mu\text{g/l}$	97%
Lithium	6,03	0,05	7,25	1,09	$\mu\text{g/l}$	120%
Manganese	18,25	0,12	17,7	2,7	$\mu\text{g/l}$	97%
Nickel	4,65	0,05	4,45	0,67	$\mu\text{g/l}$	96%
Mercury	0,440	0,013	0,382	0,04	$\mu\text{g/l}$	87%
Selenium	2,44	0,02	2,40	0,36	$\mu\text{g/l}$	98%
Silver	0,807	0,013	<1,00		$\mu\text{g/l}$	•
Uranium	2,63	0,02	2,51	0,38	$\mu\text{g/l}$	95%
Vanadium	0,603	0,006	<1,00		$\mu\text{g/l}$	•
Zinc	25,2	0,6	24,5	3,7	$\mu\text{g/l}$	97%



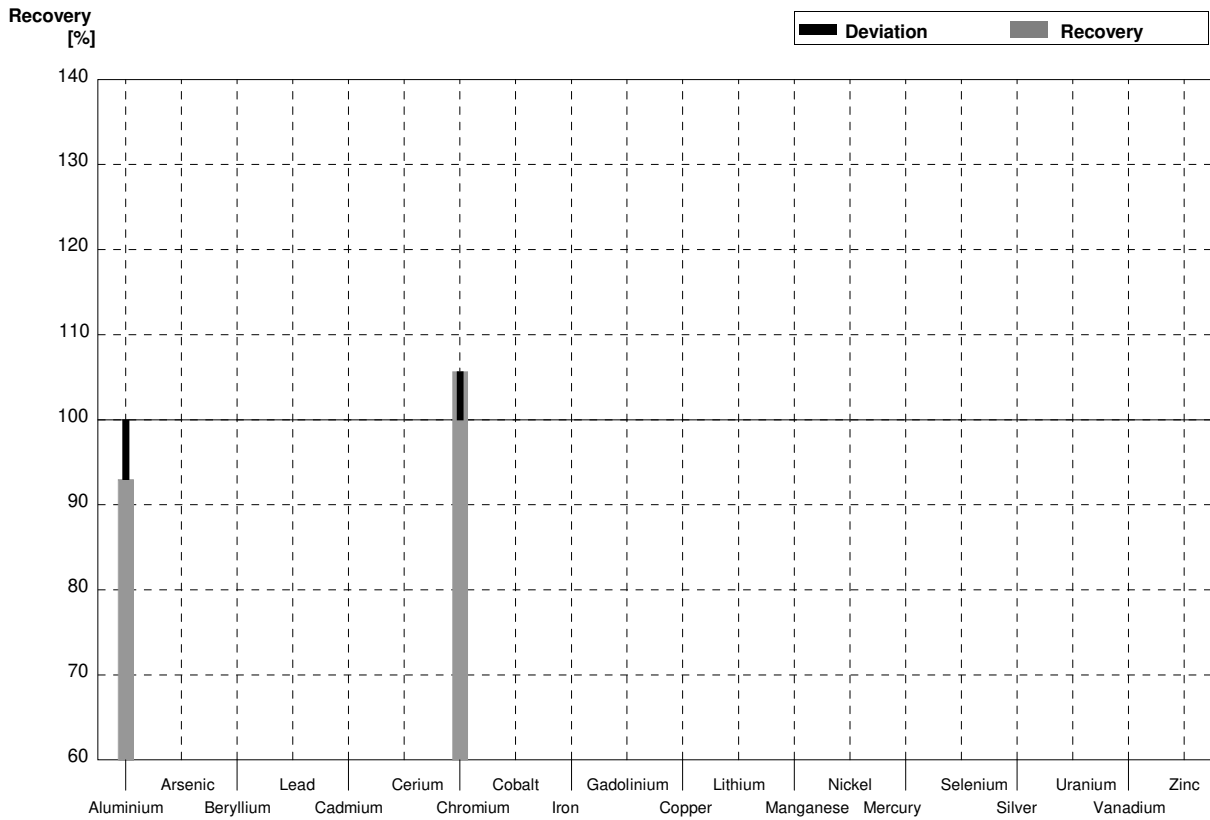
**Sample M177A**  
**Laboratory AG**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	25,5	0,2	22,70		$\mu\text{g/l}$	89%
Arsenic	2,589	0,019			$\mu\text{g/l}$	
Beryllium	0,200	0,002			$\mu\text{g/l}$	
Lead	2,41	0,05			$\mu\text{g/l}$	
Cadmium	0,598	0,007			$\mu\text{g/l}$	
Cerium	1,863	0,015			$\mu\text{g/l}$	
Chromium	5,45	0,03	6,180		$\mu\text{g/l}$	113%
Cobalt	0,820	0,007			$\mu\text{g/l}$	
Iron	40,4	0,2			$\mu\text{g/l}$	
Gadolinium	0,1043	0,0016			$\mu\text{g/l}$	
Copper	6,06	0,04			$\mu\text{g/l}$	
Lithium	3,08	0,03			$\mu\text{g/l}$	
Manganese	46,0	0,2			$\mu\text{g/l}$	
Nickel	2,57	0,04			$\mu\text{g/l}$	
Mercury	1,401	0,016			$\mu\text{g/l}$	
Selenium	3,76	0,03			$\mu\text{g/l}$	
Silver	0,202	0,011			$\mu\text{g/l}$	
Uranium	1,121	0,012			$\mu\text{g/l}$	
Vanadium	1,721	0,015			$\mu\text{g/l}$	
Zinc	15,3	0,6			$\mu\text{g/l}$	



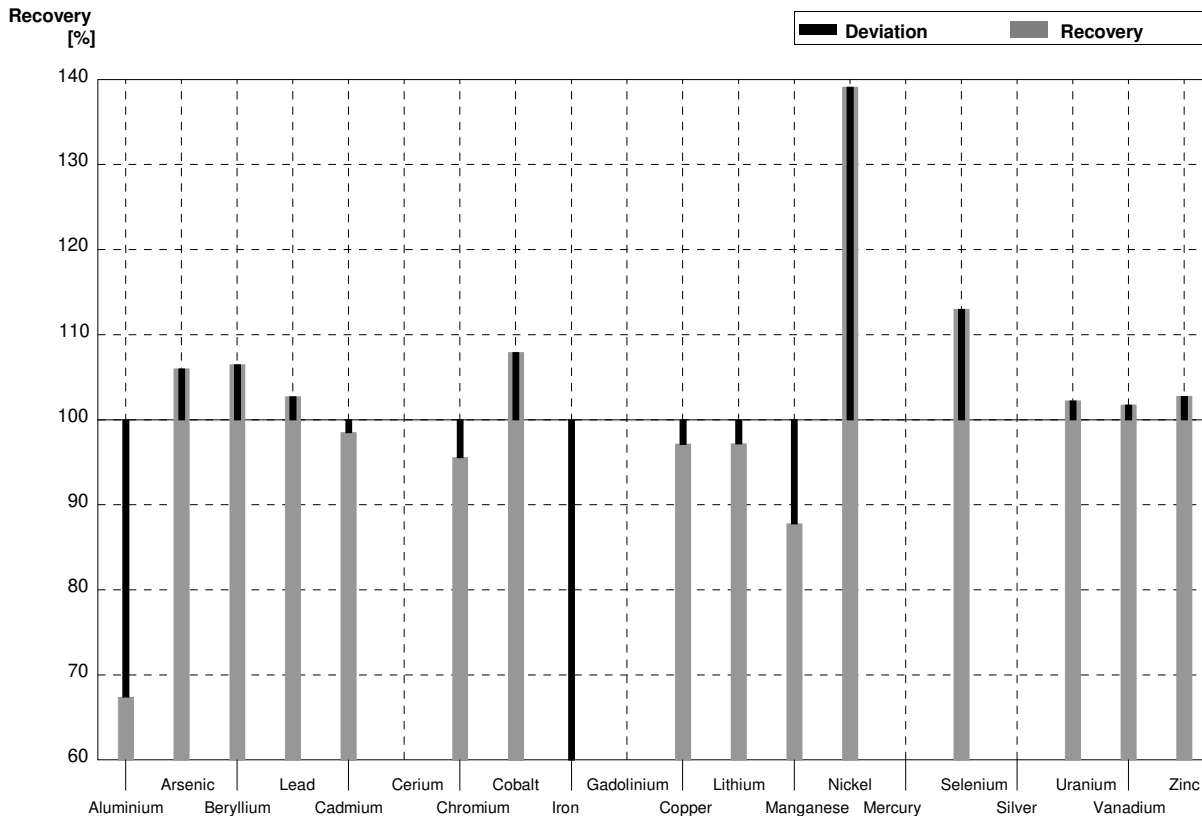
**Sample M177B**  
**Laboratory AG**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	40,8	0,3	37,94		$\mu\text{g/l}$	93%
Arsenic	1,517	0,014			$\mu\text{g/l}$	
Beryllium	0,1197	0,0014			$\mu\text{g/l}$	
Lead	1,46	0,03			$\mu\text{g/l}$	
Cadmium	4,25	0,03			$\mu\text{g/l}$	
Cerium	1,144	0,010			$\mu\text{g/l}$	
Chromium	1,939	0,016	2,049		$\mu\text{g/l}$	106%
Cobalt	1,827	0,013			$\mu\text{g/l}$	
Iron	60,3	0,3			$\mu\text{g/l}$	
Gadolinium	0,0607	0,0012			$\mu\text{g/l}$	
Copper	2,32	0,03			$\mu\text{g/l}$	
Lithium	6,03	0,05			$\mu\text{g/l}$	
Manganese	18,25	0,12			$\mu\text{g/l}$	
Nickel	4,65	0,05			$\mu\text{g/l}$	
Mercury	0,440	0,013			$\mu\text{g/l}$	
Selenium	2,44	0,02			$\mu\text{g/l}$	
Silver	0,807	0,013			$\mu\text{g/l}$	
Uranium	2,63	0,02			$\mu\text{g/l}$	
Vanadium	0,603	0,006			$\mu\text{g/l}$	
Zinc	25,2	0,6			$\mu\text{g/l}$	



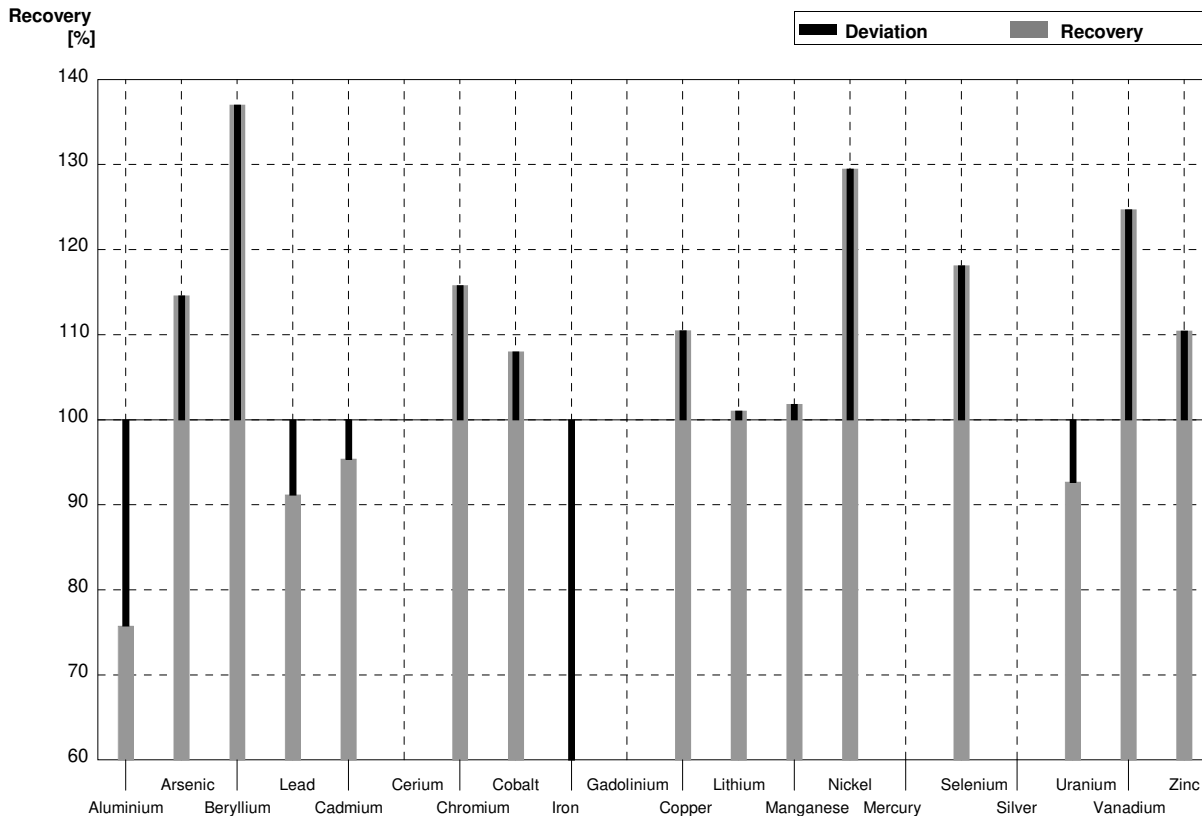
**Sample M177A**  
**Laboratory AH**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	17,190	0,369	µg/l	67%
Arsenic	2,589	0,019	2,744	0,0352	µg/l	106%
Beryllium	0,200	0,002	0,213	0,00797	µg/l	107%
Lead	2,41	0,05	2,476	0,0540	µg/l	103%
Cadmium	0,598	0,007	0,589	0,004	µg/l	98%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,209	0,109	µg/l	96%
Cobalt	0,820	0,007	0,885	0,0141	µg/l	108%
Iron	40,4	0,2	10,156	1,250	µg/l	25%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	5,887	0,104	µg/l	97%
Lithium	3,08	0,03	2,993	0,0445	µg/l	97%
Manganese	46,0	0,2	40,373	0,526	µg/l	88%
Nickel	2,57	0,04	3,575	0,0698	µg/l	139%
Mercury	1,401	0,016			µg/l	
Selenium	3,76	0,03	4,249	0,0737	µg/l	113%
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012	1,146	0,0192	µg/l	102%
Vanadium	1,721	0,015	1,751	0,0232	µg/l	102%
Zinc	15,3	0,6	15,726	0,245	µg/l	103%



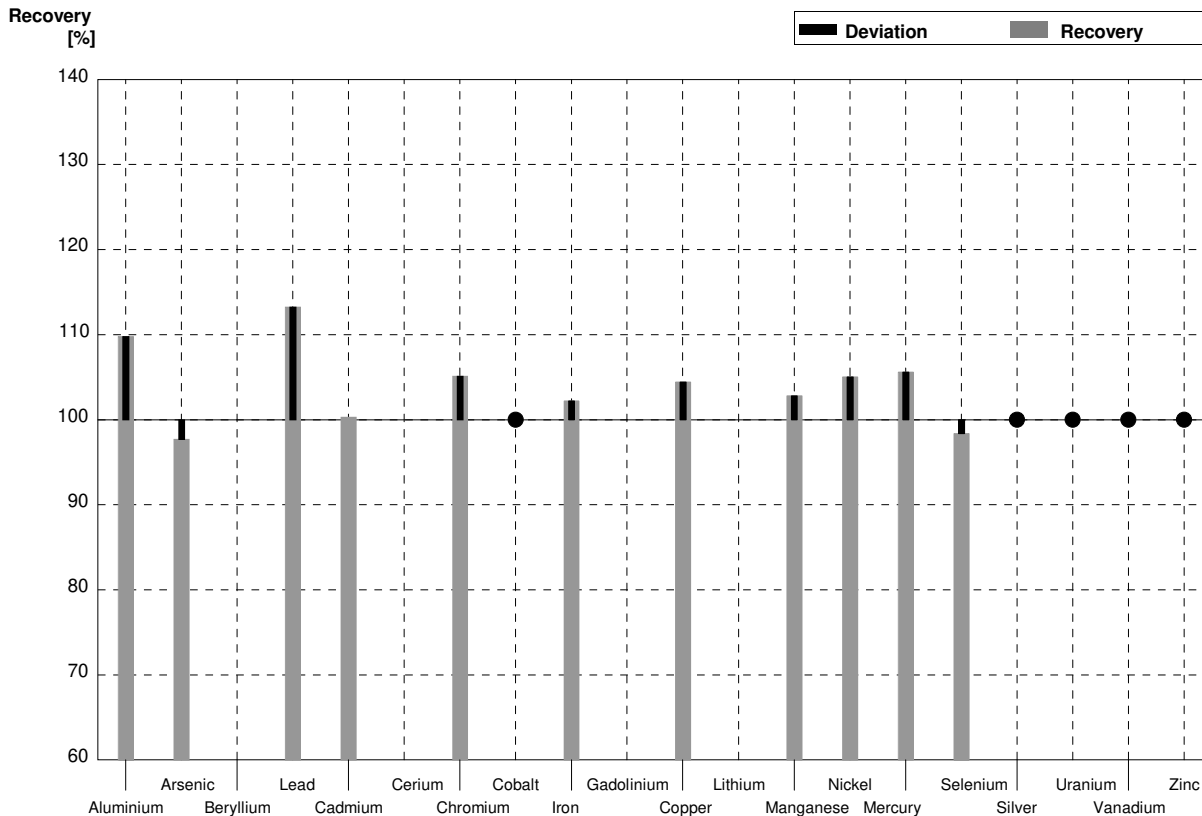
**Sample M177B**  
**Laboratory AH**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	30,913	1,103	µg/l	76%
Arsenic	1,517	0,014	1,738	0,0240	µg/l	115%
Beryllium	0,1197	0,0014	0,164	0,0121	µg/l	137%
Lead	1,46	0,03	1,331	0,0179	µg/l	91%
Cadmium	4,25	0,03	4,0533	0,026	µg/l	95%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	2,245	0,0745	µg/l	116%
Cobalt	1,827	0,013	1,973	0,0445	µg/l	108%
Iron	60,3	0,3	29,325	2,492	µg/l	49%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,563	0,0589	µg/l	110%
Lithium	6,03	0,05	6,0939	0,133	µg/l	101%
Manganese	18,25	0,12	18,586	0,406	µg/l	102%
Nickel	4,65	0,05	6,0217	0,177	µg/l	129%
Mercury	0,440	0,013			µg/l	
Selenium	2,44	0,02	2,882	0,0350	µg/l	118%
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02	2,437	0,0116	µg/l	93%
Vanadium	0,603	0,006	0,752	0,0235	µg/l	125%
Zinc	25,2	0,6	27,827	0,503	µg/l	110%



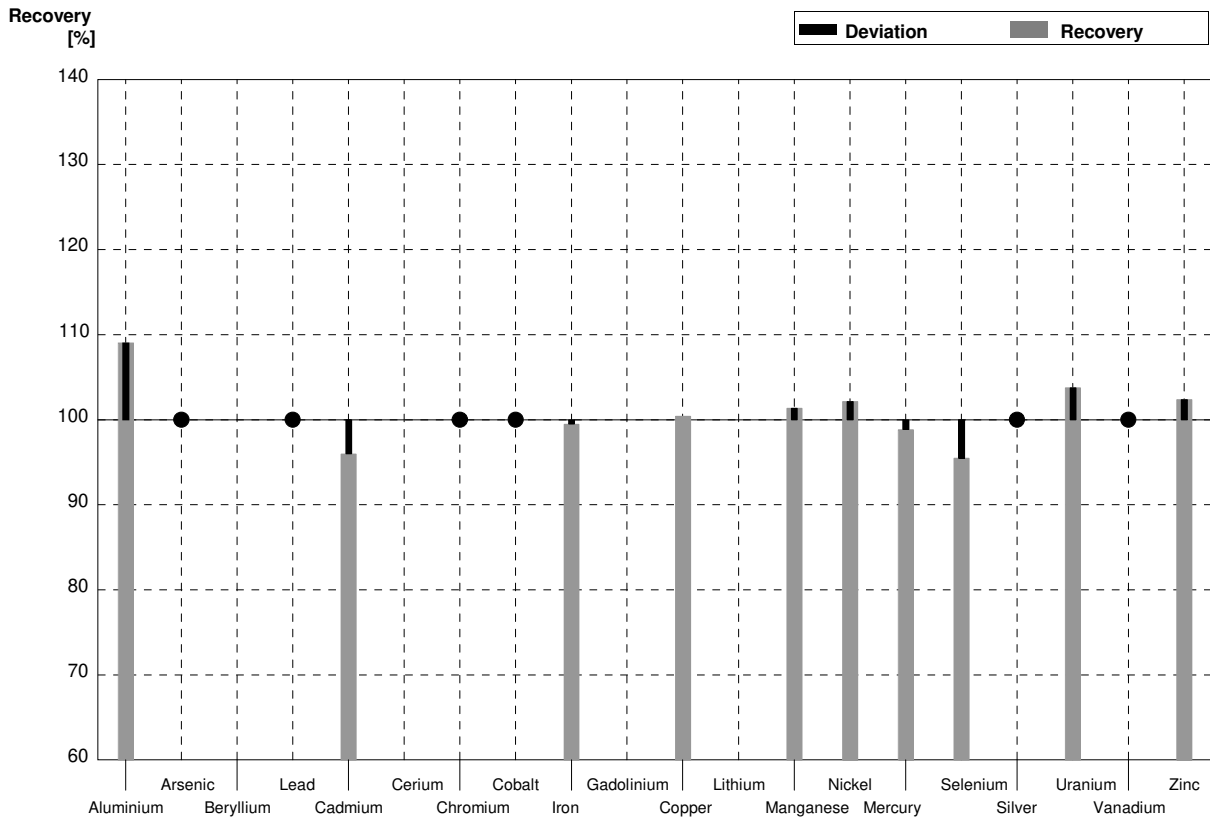
**Sample M177A**  
**Laboratory AI**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	28,0	5,6	µg/l	110%
Arsenic	2,589	0,019	2,53	0,51	µg/l	98%
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05	2,73	0,55	µg/l	113%
Cadmium	0,598	0,007	0,600	0,12	µg/l	100%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,73	1,1	µg/l	105%
Cobalt	0,820	0,007	<2		µg/l	•
Iron	40,4	0,2	41,3	8,3	µg/l	102%
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04	6,33	1,27	µg/l	104%
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2	47,3	9,5	µg/l	103%
Nickel	2,57	0,04	2,70	0,54	µg/l	105%
Mercury	1,401	0,016	1,48	0,30	µg/l	106%
Selenium	3,76	0,03	3,70	0,74	µg/l	98%
Silver	0,202	0,011	<2		µg/l	•
Uranium	1,121	0,012	<2		µg/l	•
Vanadium	1,721	0,015	<2		µg/l	•
Zinc	15,3	0,6	<20		µg/l	•



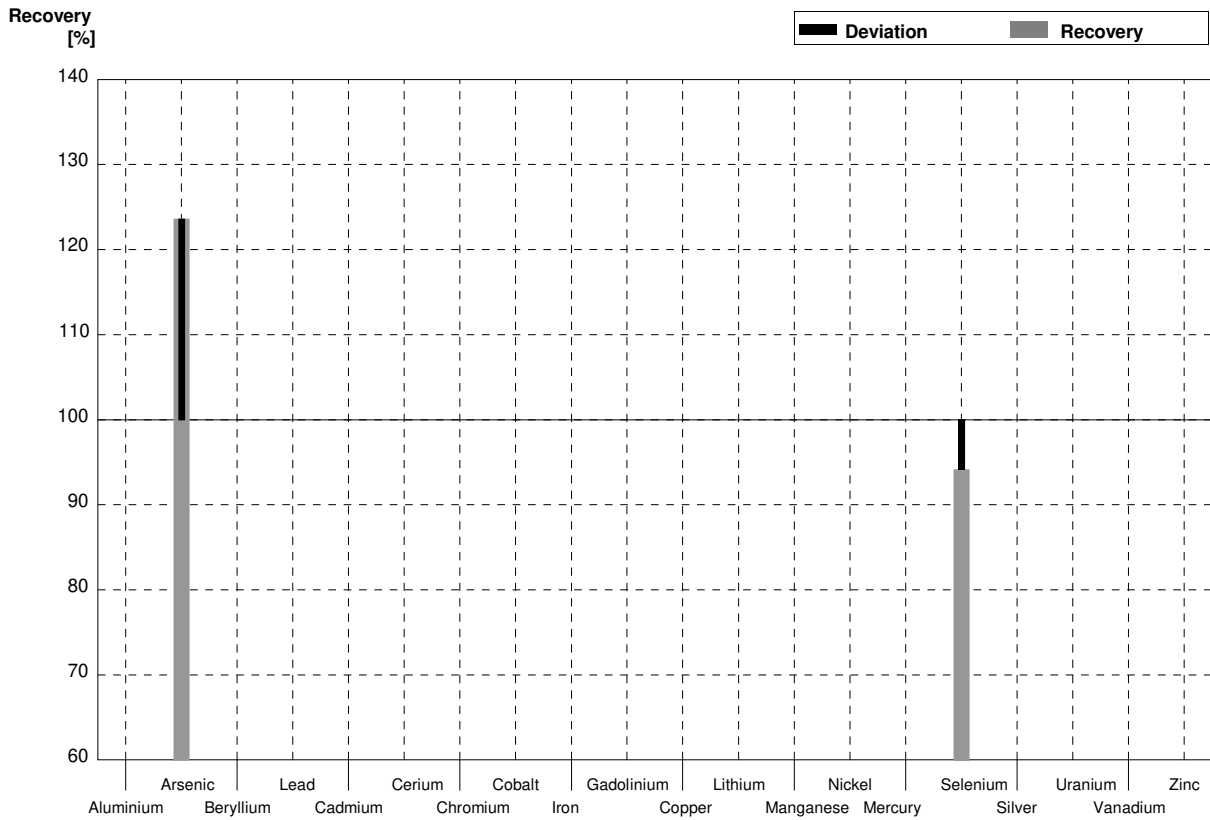
**Sample M177B**  
**Laboratory AI**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	44,5	8,9	µg/l	109%
Arsenic	1,517	0,014	<2		µg/l	•
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03	<2		µg/l	•
Cadmium	4,25	0,03	4,08	0,82	µg/l	96%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	<2		µg/l	•
Cobalt	1,827	0,013	<2		µg/l	•
Iron	60,3	0,3	60,0	12	µg/l	100%
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03	2,33	0,47	µg/l	100%
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12	18,5	3,7	µg/l	101%
Nickel	4,65	0,05	4,75	0,95	µg/l	102%
Mercury	0,440	0,013	0,435	0,087	µg/l	99%
Selenium	2,44	0,02	2,33	0,47	µg/l	95%
Silver	0,807	0,013	<2		µg/l	•
Uranium	2,63	0,02	2,73	0,55	µg/l	104%
Vanadium	0,603	0,006	<2		µg/l	•
Zinc	25,2	0,6	25,8	5,2	µg/l	102%



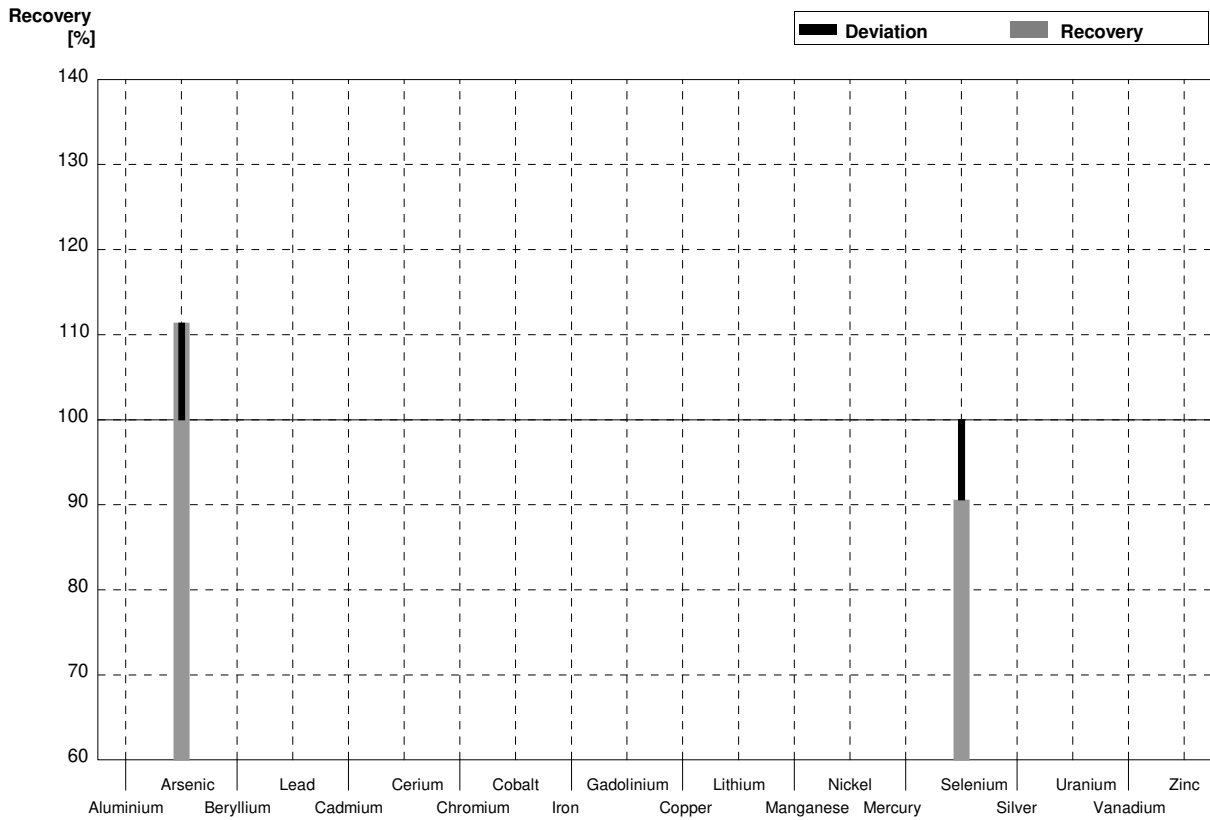
**Sample M177A**  
**Laboratory AJ**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2			µg/l	
Arsenic	2,589	0,019	3,20	0,32	µg/l	124%
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05			µg/l	
Cadmium	0,598	0,007			µg/l	
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03			µg/l	
Cobalt	0,820	0,007			µg/l	
Iron	40,4	0,2			µg/l	
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04			µg/l	
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2			µg/l	
Nickel	2,57	0,04			µg/l	
Mercury	1,401	0,016			µg/l	
Selenium	3,76	0,03	3,54	0,35	µg/l	94%
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012			µg/l	
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6			µg/l	



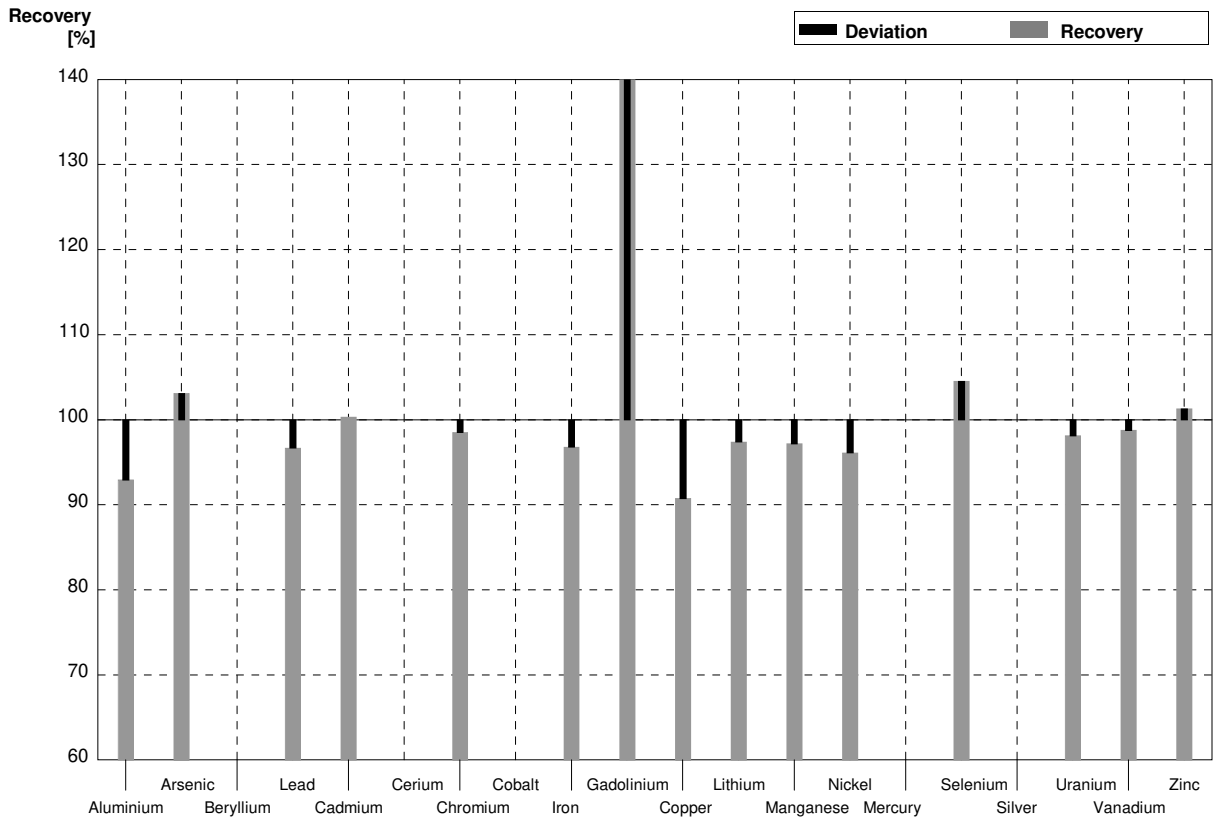
**Sample M177B**  
**Laboratory AJ**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3			µg/l	
Arsenic	1,517	0,014	1,69	0,17	µg/l	111%
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03			µg/l	
Cadmium	4,25	0,03			µg/l	
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016			µg/l	
Cobalt	1,827	0,013			µg/l	
Iron	60,3	0,3			µg/l	
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03			µg/l	
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12			µg/l	
Nickel	4,65	0,05			µg/l	
Mercury	0,440	0,013			µg/l	
Selenium	2,44	0,02	2,21	0,22	µg/l	91%
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02			µg/l	
Vanadium	0,603	0,006			µg/l	
Zinc	25,2	0,6			µg/l	



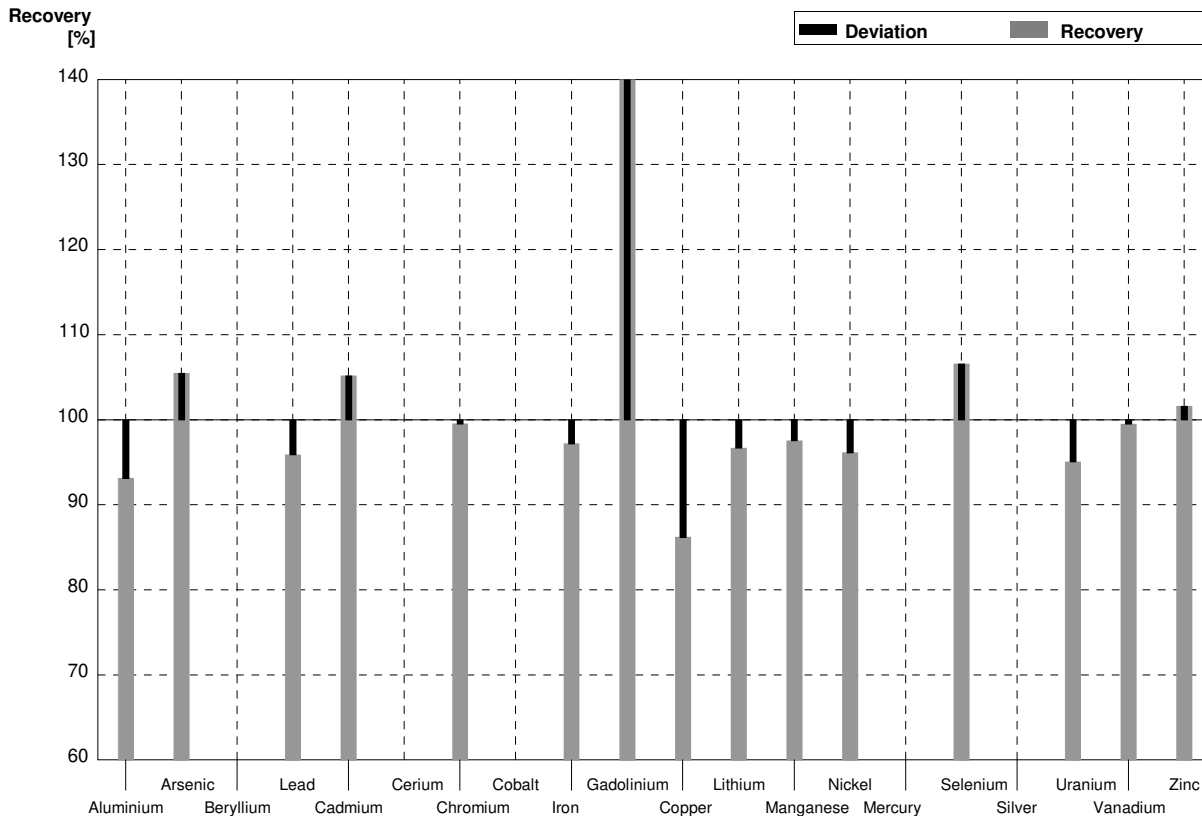
**Sample M177A**  
**Laboratory AK**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2	23,7	4,3	µg/l	93%
Arsenic	2,589	0,019	2,67	0,24	µg/l	103%
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05	2,33	0,53	µg/l	97%
Cadmium	0,598	0,007	0,60	0,12	µg/l	100%
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03	5,37	0,54	µg/l	99%
Cobalt	0,820	0,007			µg/l	
Iron	40,4	0,2	39,1	5,59	µg/l	97%
Gadolinium	0,1043	0,0016	101,7	20,33	µg/l	97507%
Copper	6,06	0,04	5,50	0,43	µg/l	91%
Lithium	3,08	0,03	3,00	0,42	µg/l	97%
Manganese	46,0	0,2	44,7	2,9	µg/l	97%
Nickel	2,57	0,04	2,47	0,26	µg/l	96%
Mercury	1,401	0,016			µg/l	
Selenium	3,76	0,03	3,93	0,46	µg/l	105%
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012	1,10	0,20	µg/l	98%
Vanadium	1,721	0,015	1,70	0,24	µg/l	99%
Zinc	15,3	0,6	15,5	1,90	µg/l	101%



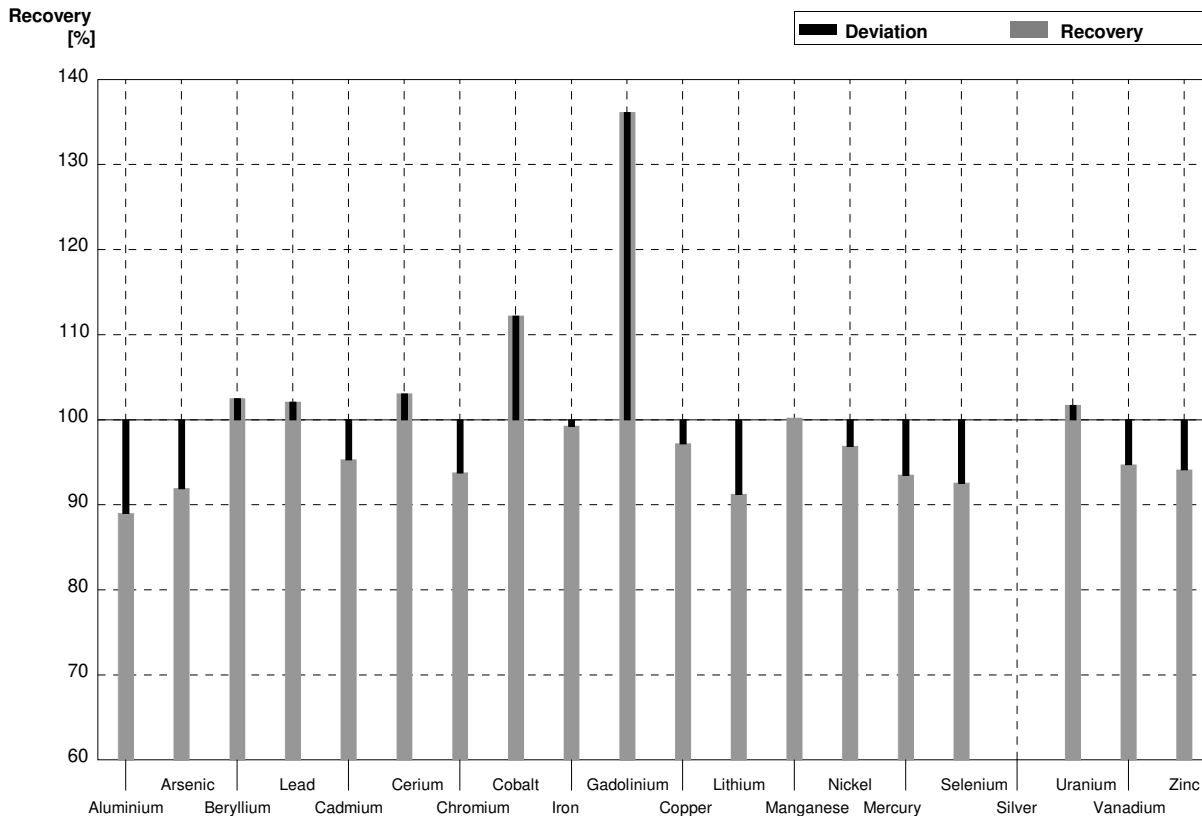
**Sample M177B**  
**Laboratory AK**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	38,0	6,8	µg/l	93%
Arsenic	1,517	0,014	1,60	0,15	µg/l	105%
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03	1,40	0,320	µg/l	96%
Cadmium	4,25	0,03	4,47	0,90	µg/l	105%
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016	1,93	0,19	µg/l	100%
Cobalt	1,827	0,013			µg/l	
Iron	60,3	0,3	58,6	8,38	µg/l	97%
Gadolinium	0,0607	0,0012	59,2	11,8	µg/l	97529%
Copper	2,32	0,03	2,00	0,16	µg/l	86%
Lithium	6,03	0,05	5,83	0,82	µg/l	97%
Manganese	18,25	0,12	17,8	1,16	µg/l	98%
Nickel	4,65	0,05	4,47	0,47	µg/l	96%
Mercury	0,440	0,013			µg/l	
Selenium	2,44	0,02	2,60	0,31	µg/l	107%
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02	2,50	0,46	µg/l	95%
Vanadium	0,603	0,006	0,60	0,08	µg/l	100%
Zinc	25,2	0,6	25,6	3,12	µg/l	102%



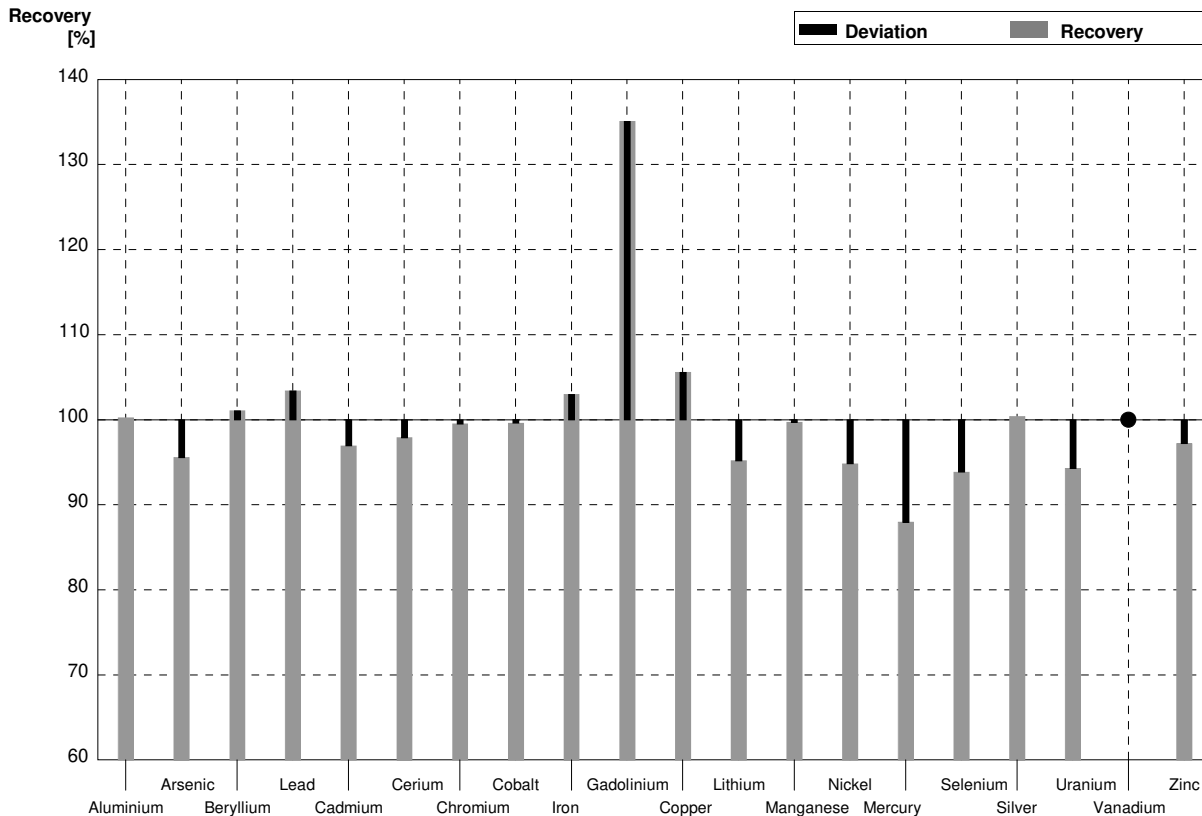
**Sample M177A**  
**Laboratory AL**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	25,5	0,2	22,7		$\mu\text{g/l}$	89%
Arsenic	2,589	0,019	2,38		$\mu\text{g/l}$	92%
Beryllium	0,200	0,002	0,205		$\mu\text{g/l}$	103%
Lead	2,41	0,05	2,46		$\mu\text{g/l}$	102%
Cadmium	0,598	0,007	0,57		$\mu\text{g/l}$	95%
Cerium	1,863	0,015	1,92		$\mu\text{g/l}$	103%
Chromium	5,45	0,03	5,11		$\mu\text{g/l}$	94%
Cobalt	0,820	0,007	0,92		$\mu\text{g/l}$	112%
Iron	40,4	0,2	40,1		$\mu\text{g/l}$	99%
Gadolinium	0,1043	0,0016	0,142		$\mu\text{g/l}$	136%
Copper	6,06	0,04	5,89		$\mu\text{g/l}$	97%
Lithium	3,08	0,03	2,81		$\mu\text{g/l}$	91%
Manganese	46,0	0,2	46,1		$\mu\text{g/l}$	100%
Nickel	2,57	0,04	2,49		$\mu\text{g/l}$	97%
Mercury	1,401	0,016	1,31		$\mu\text{g/l}$	94%
Selenium	3,76	0,03	3,48		$\mu\text{g/l}$	93%
Silver	0,202	0,011			$\mu\text{g/l}$	
Uranium	1,121	0,012	1,14		$\mu\text{g/l}$	102%
Vanadium	1,721	0,015	1,63		$\mu\text{g/l}$	95%
Zinc	15,3	0,6	14,4		$\mu\text{g/l}$	94%



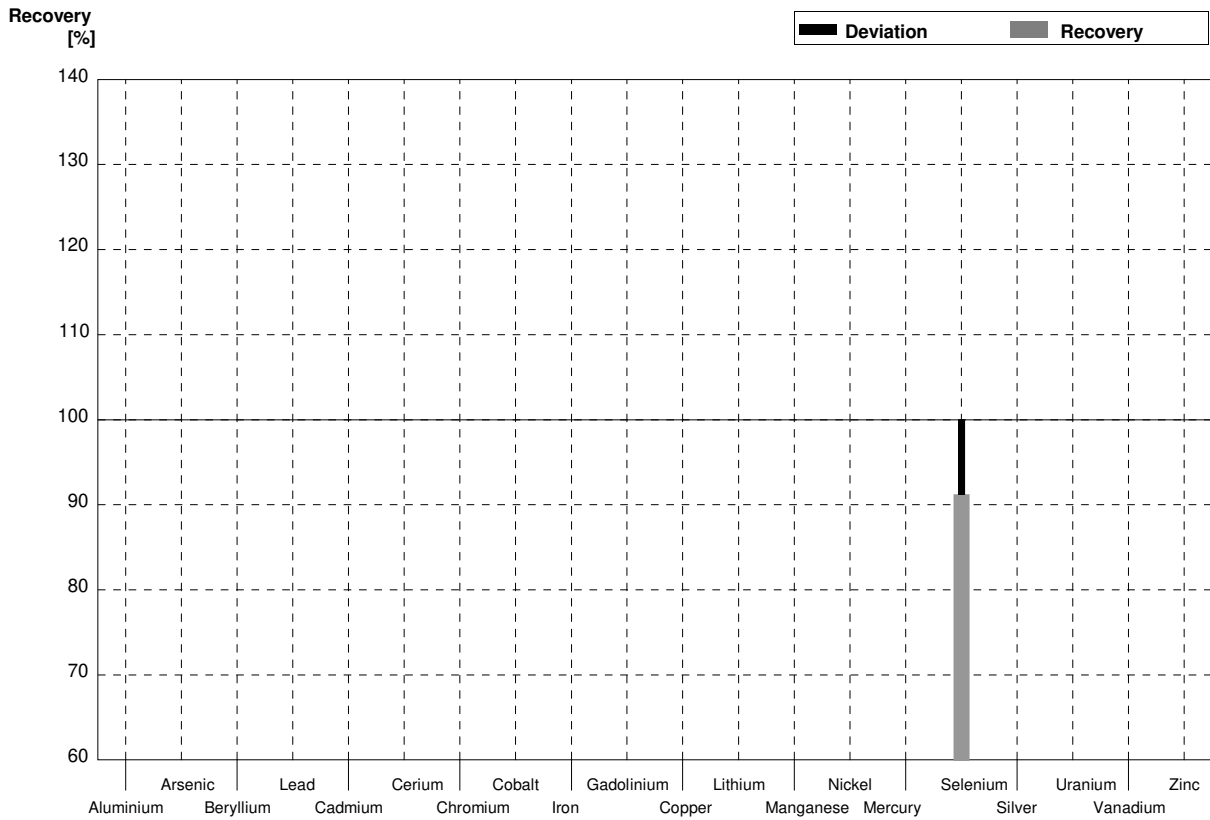
**Sample M177B**  
**Laboratory AL**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	40,8	0,3	40,9		$\mu\text{g/l}$	100%
Arsenic	1,517	0,014	1,45		$\mu\text{g/l}$	96%
Beryllium	0,1197	0,0014	0,121		$\mu\text{g/l}$	101%
Lead	1,46	0,03	1,51		$\mu\text{g/l}$	103%
Cadmium	4,25	0,03	4,12		$\mu\text{g/l}$	97%
Cerium	1,144	0,010	1,12		$\mu\text{g/l}$	98%
Chromium	1,939	0,016	1,93		$\mu\text{g/l}$	100%
Cobalt	1,827	0,013	1,82		$\mu\text{g/l}$	100%
Iron	60,3	0,3	62,1		$\mu\text{g/l}$	103%
Gadolinium	0,0607	0,0012	0,082		$\mu\text{g/l}$	135%
Copper	2,32	0,03	2,45		$\mu\text{g/l}$	106%
Lithium	6,03	0,05	5,74		$\mu\text{g/l}$	95%
Manganese	18,25	0,12	18,2		$\mu\text{g/l}$	100%
Nickel	4,65	0,05	4,41		$\mu\text{g/l}$	95%
Mercury	0,440	0,013	0,387		$\mu\text{g/l}$	88%
Selenium	2,44	0,02	2,29		$\mu\text{g/l}$	94%
Silver	0,807	0,013	0,81		$\mu\text{g/l}$	100%
Uranium	2,63	0,02	2,48		$\mu\text{g/l}$	94%
Vanadium	0,603	0,006	<1		$\mu\text{g/l}$	•
Zinc	25,2	0,6	24,5		$\mu\text{g/l}$	97%



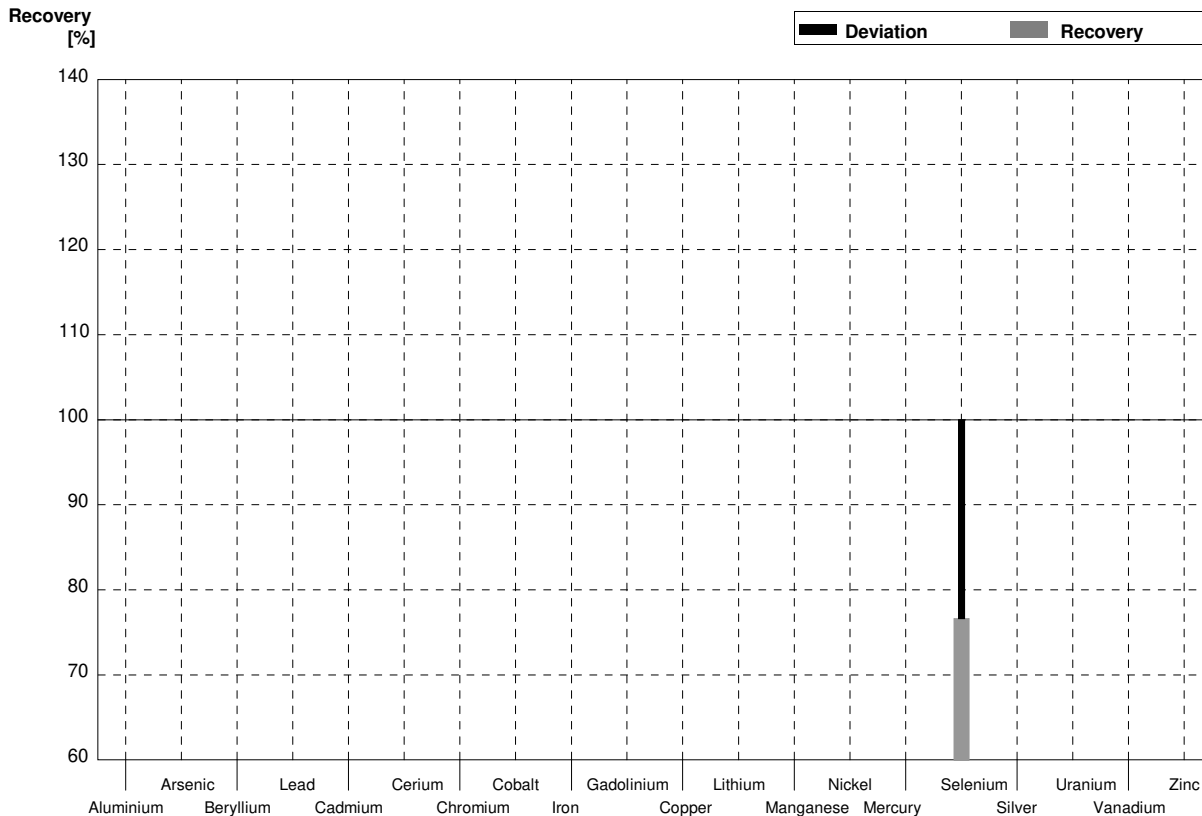
**Sample M177A**  
**Laboratory AM**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	25,5	0,2			µg/l	
Arsenic	2,589	0,019			µg/l	
Beryllium	0,200	0,002			µg/l	
Lead	2,41	0,05			µg/l	
Cadmium	0,598	0,007			µg/l	
Cerium	1,863	0,015			µg/l	
Chromium	5,45	0,03			µg/l	
Cobalt	0,820	0,007			µg/l	
Iron	40,4	0,2			µg/l	
Gadolinium	0,1043	0,0016			µg/l	
Copper	6,06	0,04			µg/l	
Lithium	3,08	0,03			µg/l	
Manganese	46,0	0,2			µg/l	
Nickel	2,57	0,04			µg/l	
Mercury	1,401	0,016			µg/l	
Selenium	3,76	0,03	3,43	0,69	µg/l	91%
Silver	0,202	0,011			µg/l	
Uranium	1,121	0,012			µg/l	
Vanadium	1,721	0,015			µg/l	
Zinc	15,3	0,6			µg/l	



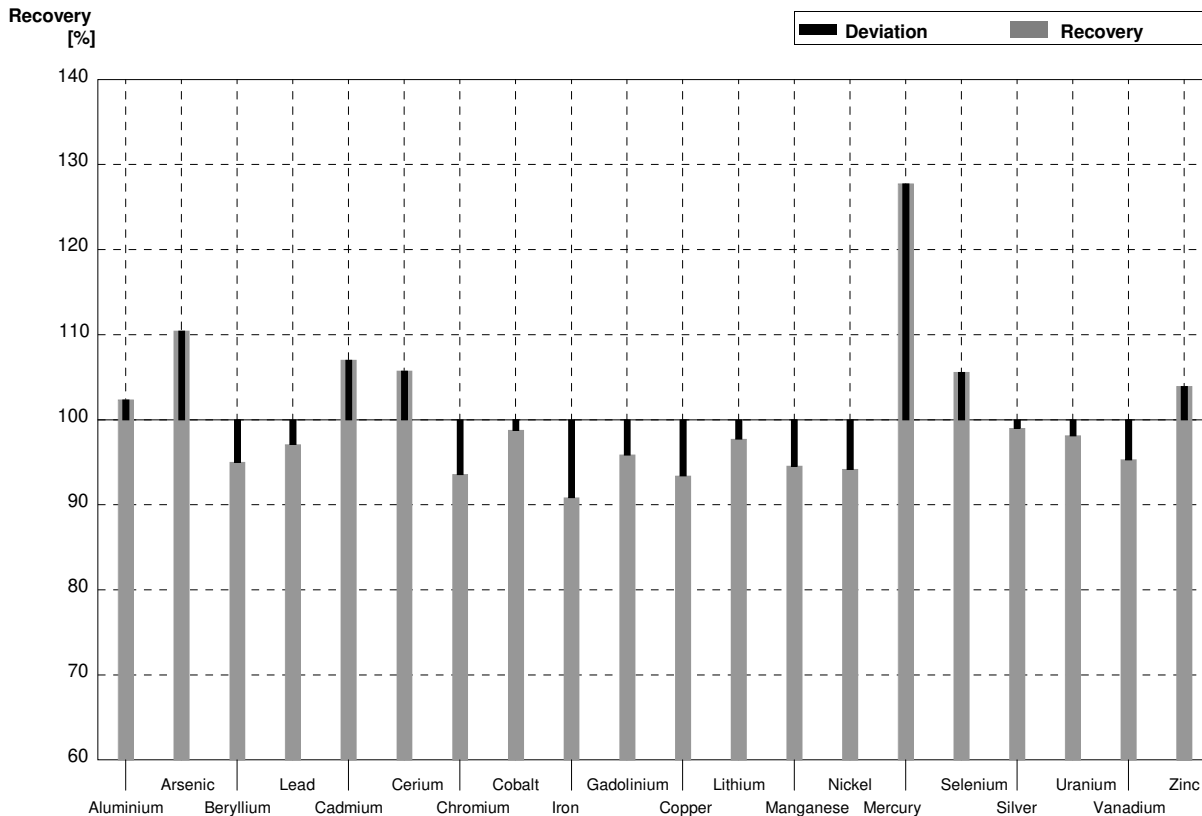
**Sample M177B**  
**Laboratory AM**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3			µg/l	
Arsenic	1,517	0,014			µg/l	
Beryllium	0,1197	0,0014			µg/l	
Lead	1,46	0,03			µg/l	
Cadmium	4,25	0,03			µg/l	
Cerium	1,144	0,010			µg/l	
Chromium	1,939	0,016			µg/l	
Cobalt	1,827	0,013			µg/l	
Iron	60,3	0,3			µg/l	
Gadolinium	0,0607	0,0012			µg/l	
Copper	2,32	0,03			µg/l	
Lithium	6,03	0,05			µg/l	
Manganese	18,25	0,12			µg/l	
Nickel	4,65	0,05			µg/l	
Mercury	0,440	0,013			µg/l	
Selenium	2,44	0,02	1,87	0,37	µg/l	77%
Silver	0,807	0,013			µg/l	
Uranium	2,63	0,02			µg/l	
Vanadium	0,603	0,006			µg/l	
Zinc	25,2	0,6			µg/l	



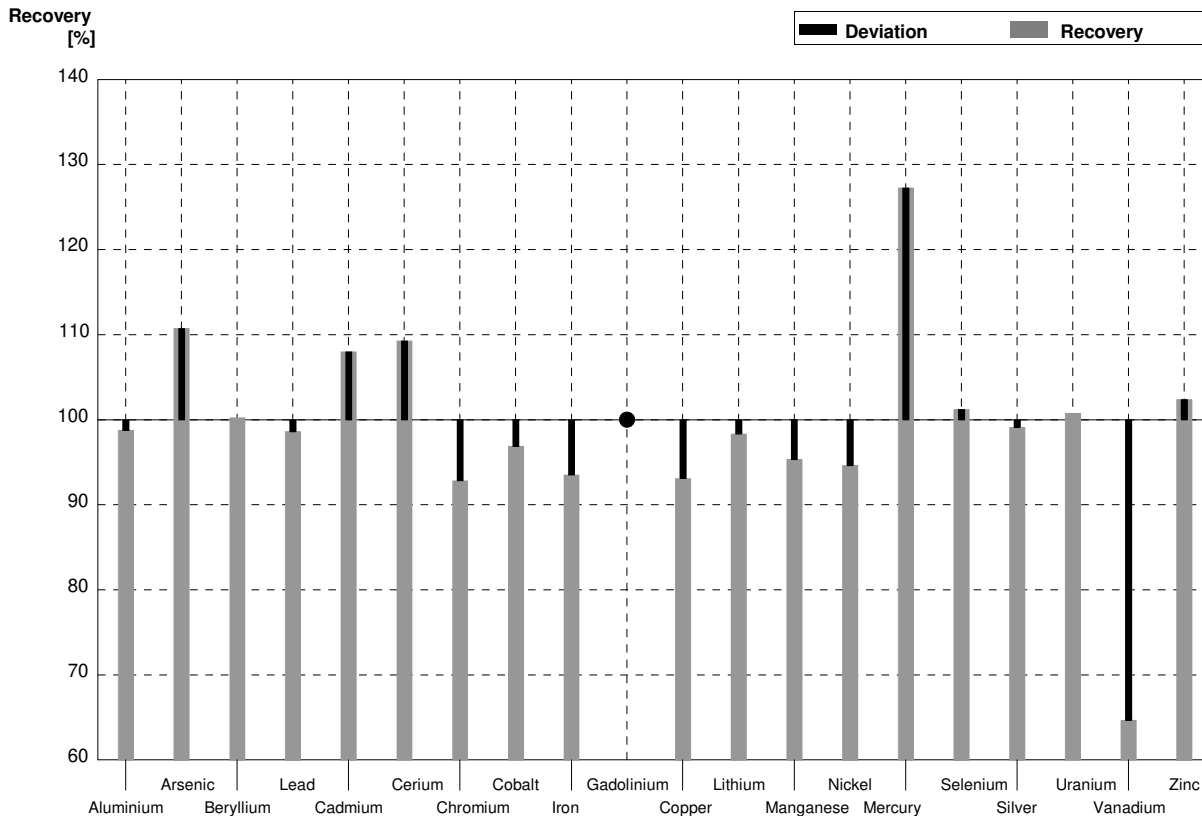
**Sample M177A**  
**Laboratory AN**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	25,5	0,2	26,1	2,61	$\mu\text{g/l}$	102%
Arsenic	2,589	0,019	2,86	0,44	$\mu\text{g/l}$	110%
Beryllium	0,200	0,002	0,190	0,019	$\mu\text{g/l}$	95%
Lead	2,41	0,05	2,34	0,234	$\mu\text{g/l}$	97%
Cadmium	0,598	0,007	0,64	0,064	$\mu\text{g/l}$	107%
Cerium	1,863	0,015	1,97	0,197	$\mu\text{g/l}$	106%
Chromium	5,45	0,03	5,10	0,51	$\mu\text{g/l}$	94%
Cobalt	0,820	0,007	0,81	0,081	$\mu\text{g/l}$	99%
Iron	40,4	0,2	36,7	3,67	$\mu\text{g/l}$	91%
Gadolinium	0,1043	0,0016	0,100	0,010	$\mu\text{g/l}$	96%
Copper	6,06	0,04	5,66	0,566	$\mu\text{g/l}$	93%
Lithium	3,08	0,03	3,01	0,301	$\mu\text{g/l}$	98%
Manganese	46,0	0,2	43,5	4,35	$\mu\text{g/l}$	95%
Nickel	2,57	0,04	2,42	0,242	$\mu\text{g/l}$	94%
Mercury	1,401	0,016	1,79	0,179	$\mu\text{g/l}$	128%
Selenium	3,76	0,03	3,97	0,596	$\mu\text{g/l}$	106%
Silver	0,202	0,011	0,200	0,02	$\mu\text{g/l}$	99%
Uranium	1,121	0,012	1,10	0,11	$\mu\text{g/l}$	98%
Vanadium	1,721	0,015	1,64	0,164	$\mu\text{g/l}$	95%
Zinc	15,3	0,6	15,9	1,59	$\mu\text{g/l}$	104%



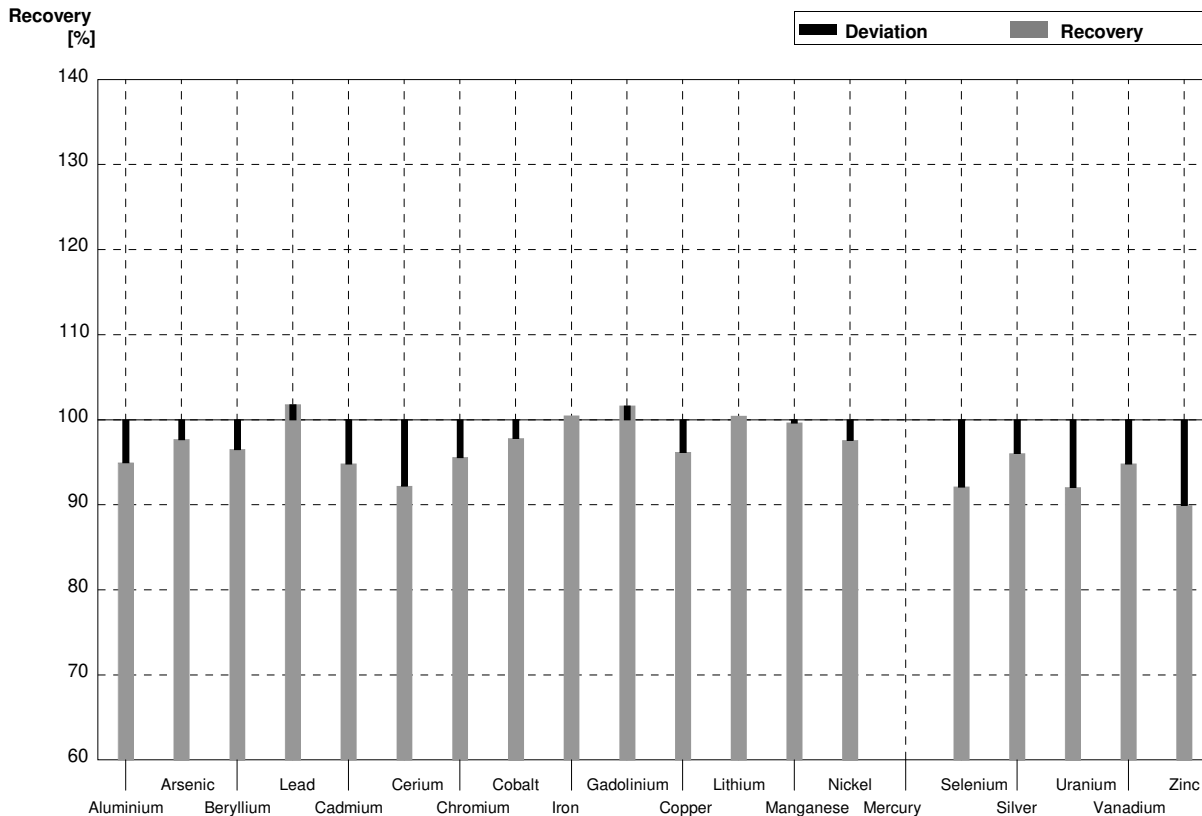
**Sample M177B**  
**Laboratory AN**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	40,8	0,3	40,3	4,03	$\mu\text{g/l}$	99%
Arsenic	1,517	0,014	1,68	0,28	$\mu\text{g/l}$	111%
Beryllium	0,1197	0,0014	0,120	0,012	$\mu\text{g/l}$	100%
Lead	1,46	0,03	1,44	0,144	$\mu\text{g/l}$	99%
Cadmium	4,25	0,03	4,59	0,459	$\mu\text{g/l}$	108%
Cerium	1,144	0,010	1,25	0,125	$\mu\text{g/l}$	109%
Chromium	1,939	0,016	1,80	0,18	$\mu\text{g/l}$	93%
Cobalt	1,827	0,013	1,77	0,177	$\mu\text{g/l}$	97%
Iron	60,3	0,3	56,4	5,64	$\mu\text{g/l}$	94%
Gadolinium	0,0607	0,0012	<0,10		$\mu\text{g/l}$	•
Copper	2,32	0,03	2,16	0,216	$\mu\text{g/l}$	93%
Lithium	6,03	0,05	5,93	0,593	$\mu\text{g/l}$	98%
Manganese	18,25	0,12	17,4	1,74	$\mu\text{g/l}$	95%
Nickel	4,65	0,05	4,40	0,440	$\mu\text{g/l}$	95%
Mercury	0,440	0,013	0,56	0,056	$\mu\text{g/l}$	127%
Selenium	2,44	0,02	2,47	0,371	$\mu\text{g/l}$	101%
Silver	0,807	0,013	0,80	0,08	$\mu\text{g/l}$	99%
Uranium	2,63	0,02	2,65	0,265	$\mu\text{g/l}$	101%
Vanadium	0,603	0,006	0,390	0,039	$\mu\text{g/l}$	65%
Zinc	25,2	0,6	25,8	2,58	$\mu\text{g/l}$	102%



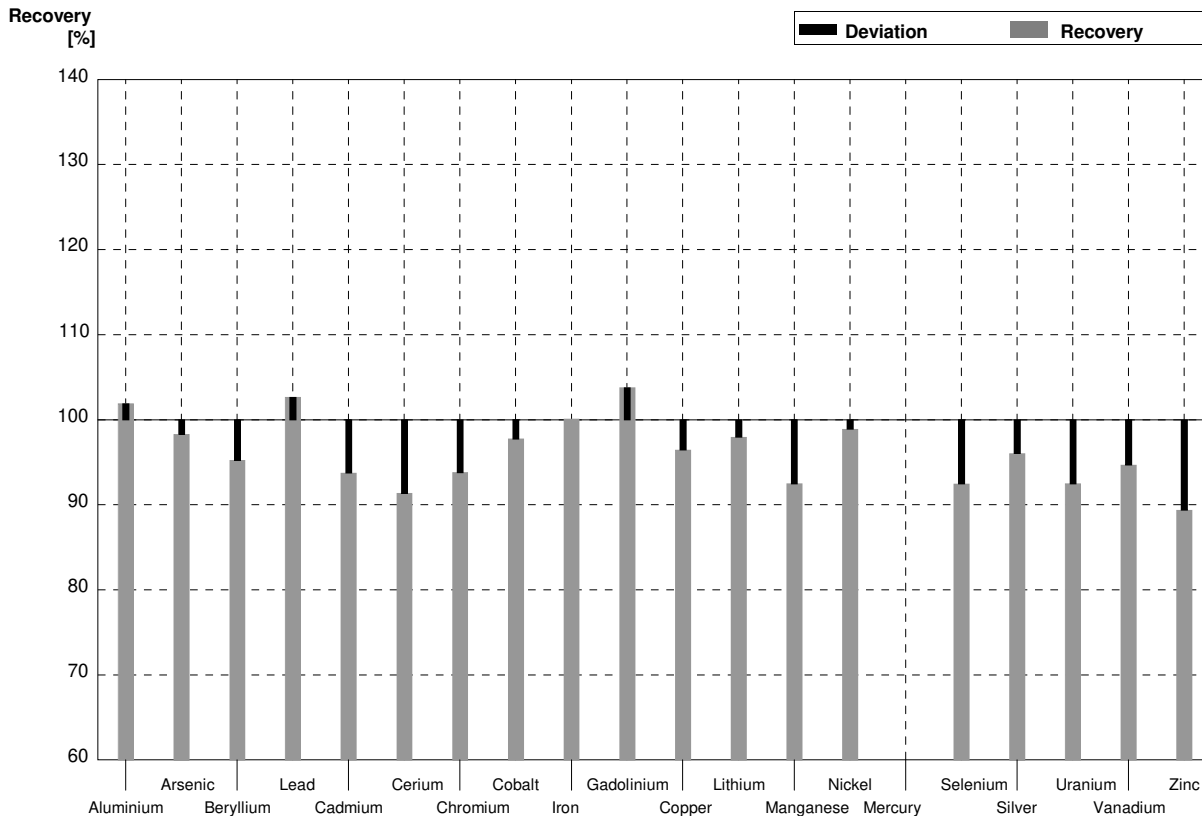
**Sample M177A**  
**Laboratory AO**

Parameter	Assigned value	$\pm U (k=2)$	Result	$\pm$	Unit	Recovery
Aluminium	25,5	0,2	24,214	1,007	$\mu\text{g/l}$	95%
Arsenic	2,589	0,019	2,529	0,138	$\mu\text{g/l}$	98%
Beryllium	0,200	0,002	0,193	0,015	$\mu\text{g/l}$	97%
Lead	2,41	0,05	2,453	0,125	$\mu\text{g/l}$	102%
Cadmium	0,598	0,007	0,567	0,028	$\mu\text{g/l}$	95%
Cerium	1,863	0,015	1,718	0,087	$\mu\text{g/l}$	92%
Chromium	5,45	0,03	5,209	0,253	$\mu\text{g/l}$	96%
Cobalt	0,820	0,007	0,802	0,054	$\mu\text{g/l}$	98%
Iron	40,4	0,2	40,585	1,968	$\mu\text{g/l}$	100%
Gadolinium	0,1043	0,0016	0,106	0,005	$\mu\text{g/l}$	102%
Copper	6,06	0,04	5,828	0,281	$\mu\text{g/l}$	96%
Lithium	3,08	0,03	3,093	0,152	$\mu\text{g/l}$	100%
Manganese	46,0	0,2	45,831	1,815	$\mu\text{g/l}$	100%
Nickel	2,57	0,04	2,508	0,133	$\mu\text{g/l}$	98%
Mercury	1,401	0,016			$\mu\text{g/l}$	
Selenium	3,76	0,03	3,463	0,198	$\mu\text{g/l}$	92%
Silver	0,202	0,011	0,194	0,012	$\mu\text{g/l}$	96%
Uranium	1,121	0,012	1,032	0,053	$\mu\text{g/l}$	92%
Vanadium	1,721	0,015	1,632	0,075	$\mu\text{g/l}$	95%
Zinc	15,3	0,6	13,762	0,674	$\mu\text{g/l}$	90%



**Sample M177B**  
**Laboratory AO**

Parameter	Assigned value	± U (k=2)	Result	±	Unit	Recovery
Aluminium	40,8	0,3	41,579	1,730	µg/l	102%
Arsenic	1,517	0,014	1,491	0,081	µg/l	98%
Beryllium	0,1197	0,0014	0,1140	0,009	µg/l	95%
Lead	1,46	0,03	1,499	0,076	µg/l	103%
Cadmium	4,25	0,03	3,984	0,196	µg/l	94%
Cerium	1,144	0,010	1,045	0,053	µg/l	91%
Chromium	1,939	0,016	1,819	0,088	µg/l	94%
Cobalt	1,827	0,013	1,786	0,119	µg/l	98%
Iron	60,3	0,3	60,347	2,927	µg/l	100%
Gadolinium	0,0607	0,0012	0,063	0,003	µg/l	104%
Copper	2,32	0,03	2,238	0,108	µg/l	96%
Lithium	6,03	0,05	5,907	0,290	µg/l	98%
Manganese	18,25	0,12	16,876	0,668	µg/l	92%
Nickel	4,65	0,05	4,599	0,244	µg/l	99%
Mercury	0,440	0,013			µg/l	
Selenium	2,44	0,02	2,256	0,129	µg/l	92%
Silver	0,807	0,013	0,775	0,048	µg/l	96%
Uranium	2,63	0,02	2,432	0,125	µg/l	92%
Vanadium	0,603	0,006	0,571	0,026	µg/l	95%
Zinc	25,2	0,6	22,525	1,104	µg/l	89%







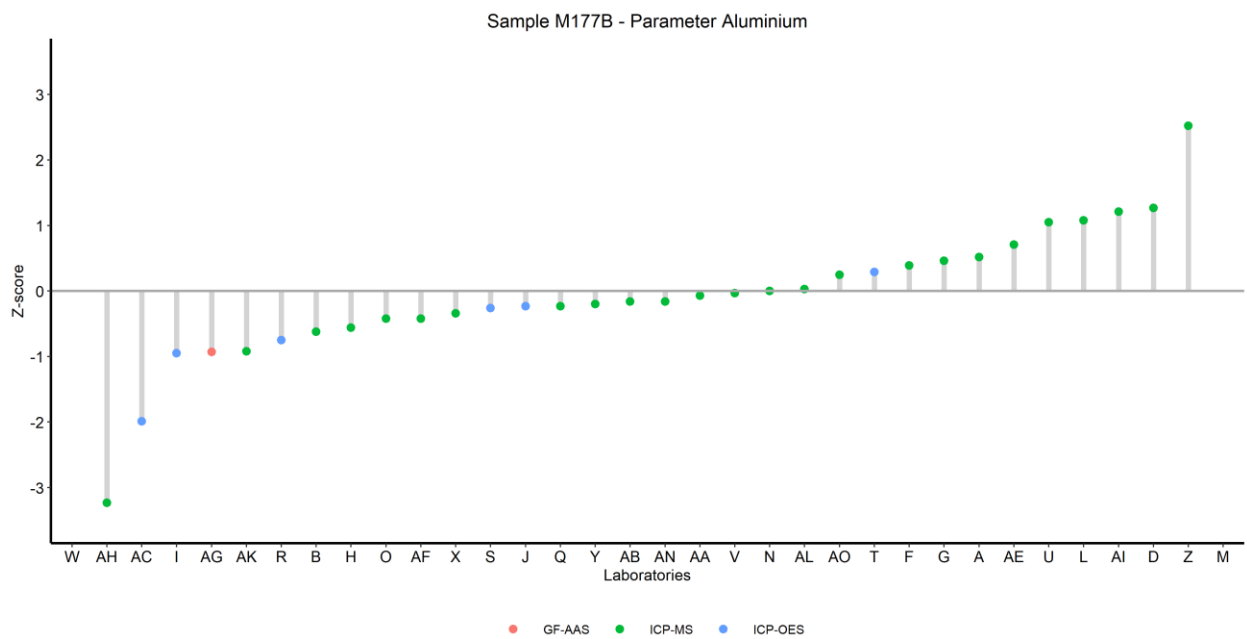
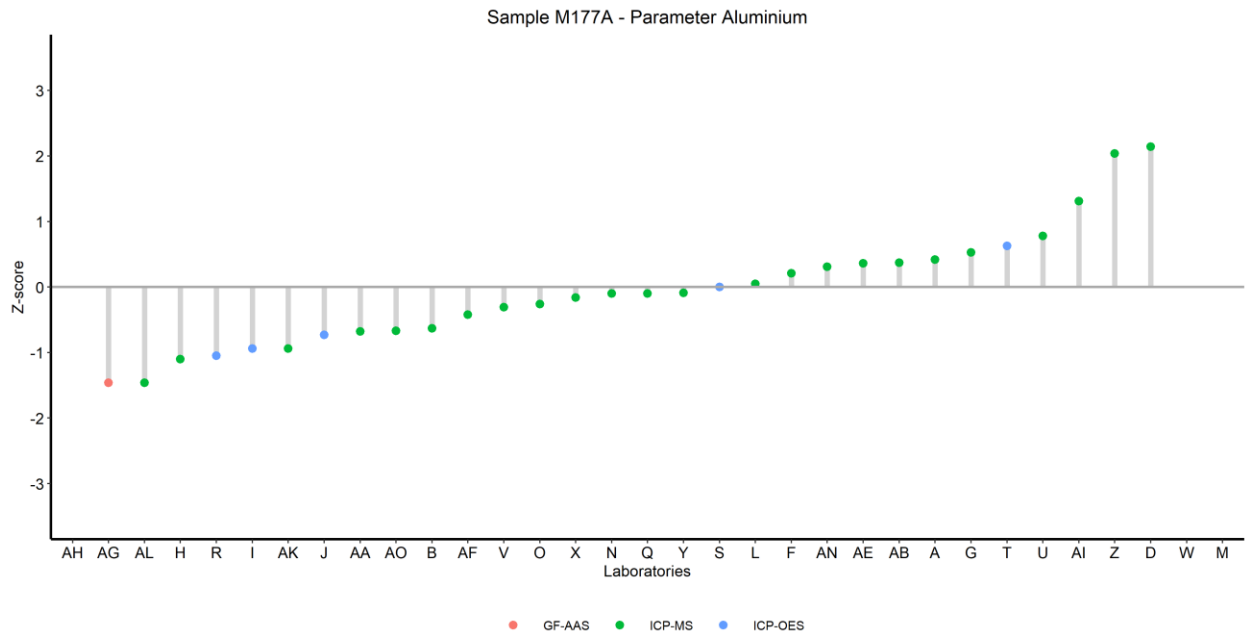
**Methodenvergleich**  
**Method comparison**

Eignungsprüfungsrunde / Proficiency testing round  
M177

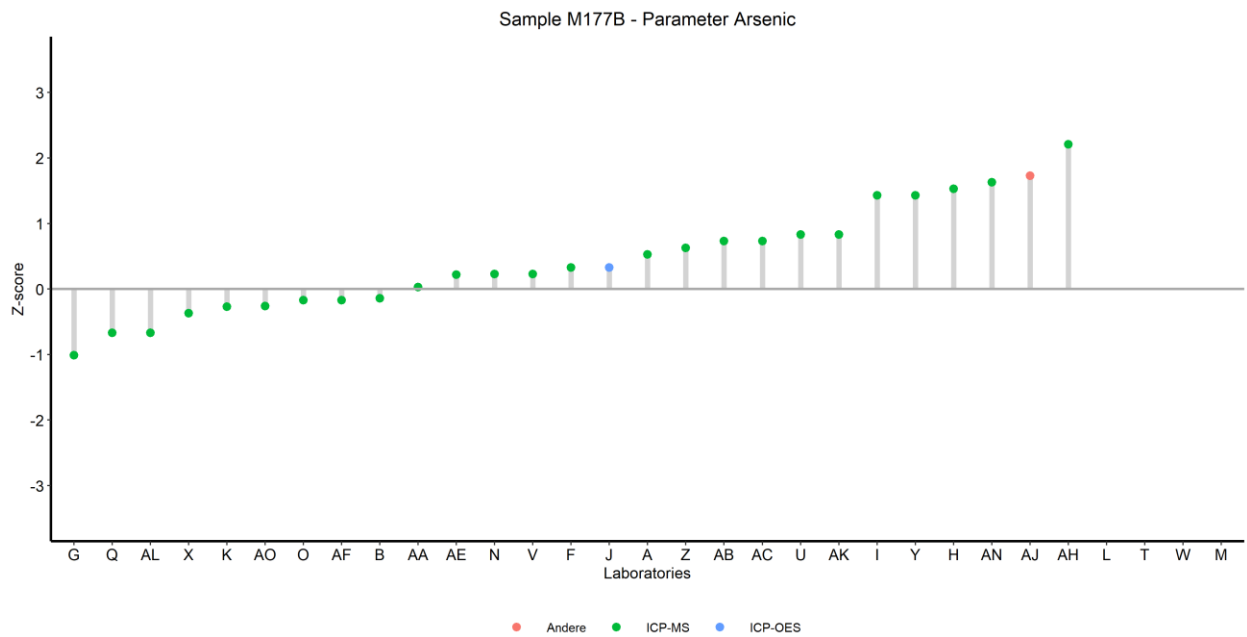
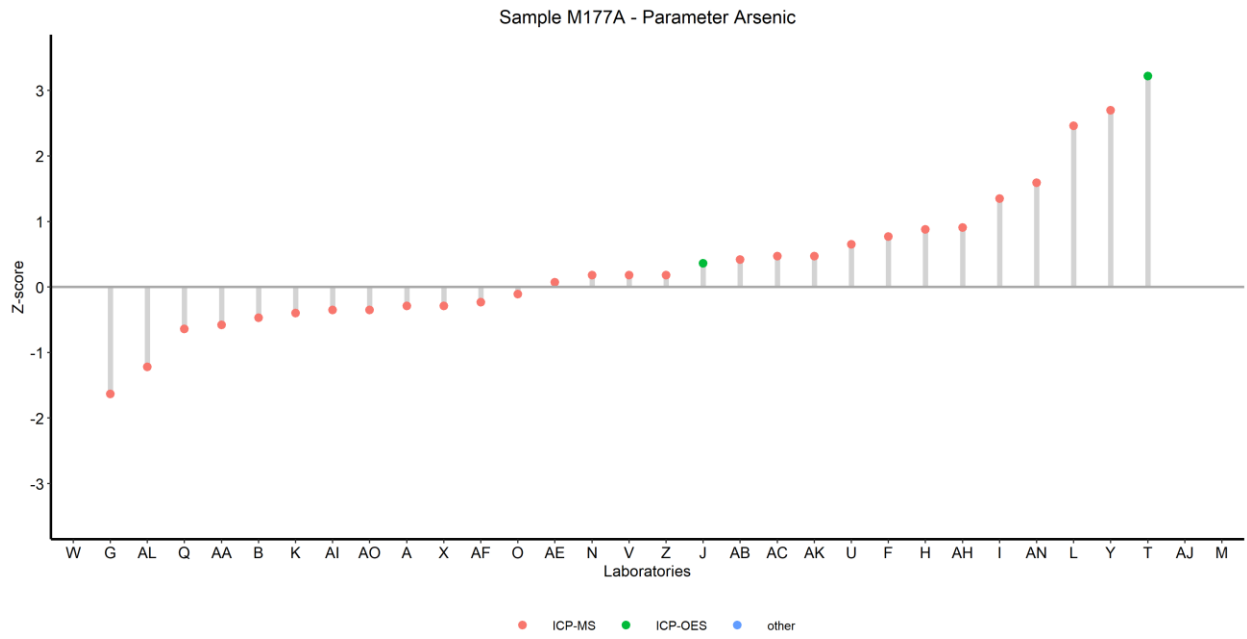
Metalle / Metals

Versand / Dispatch: 12. 05. 2025

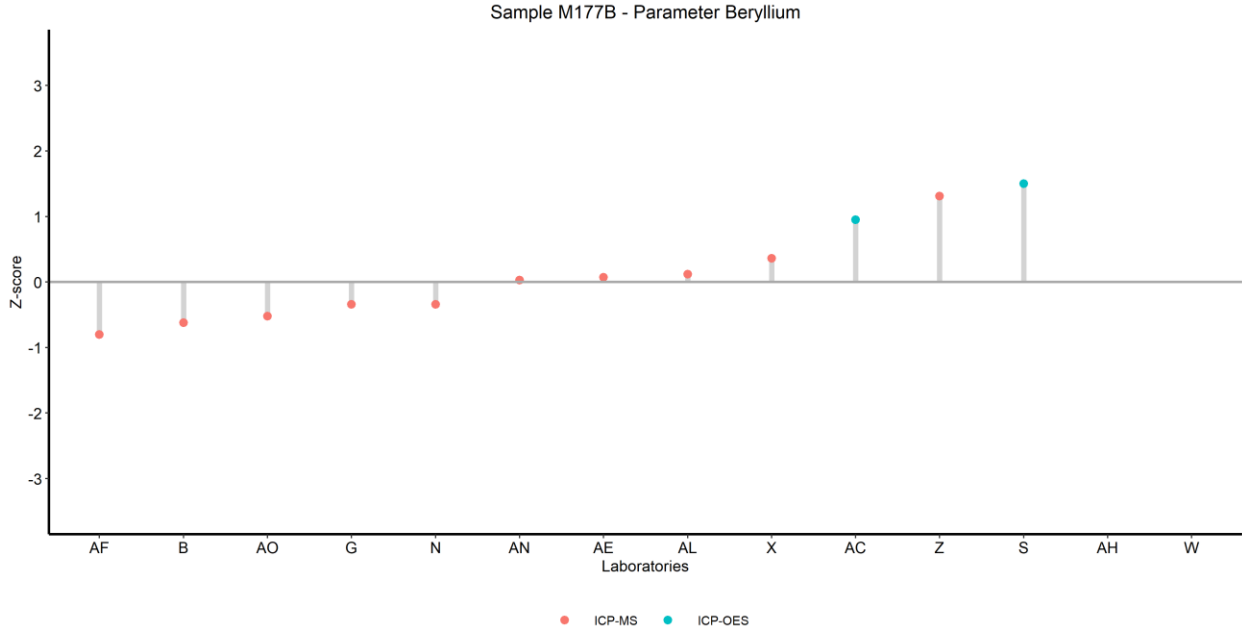
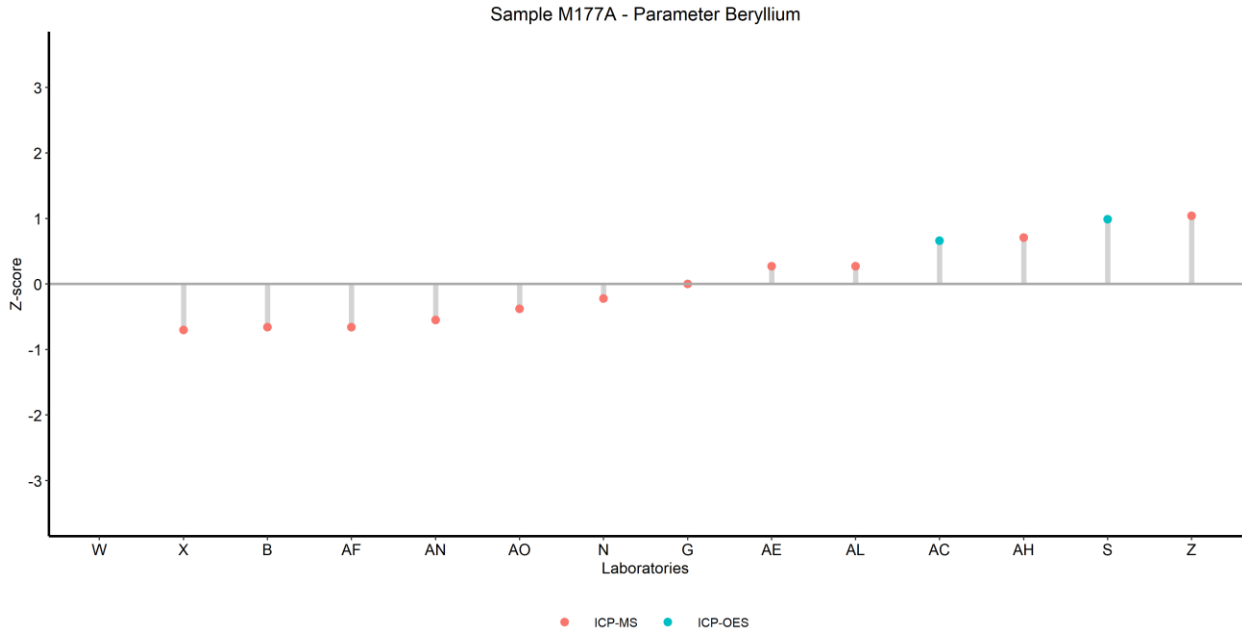
# Aluminium



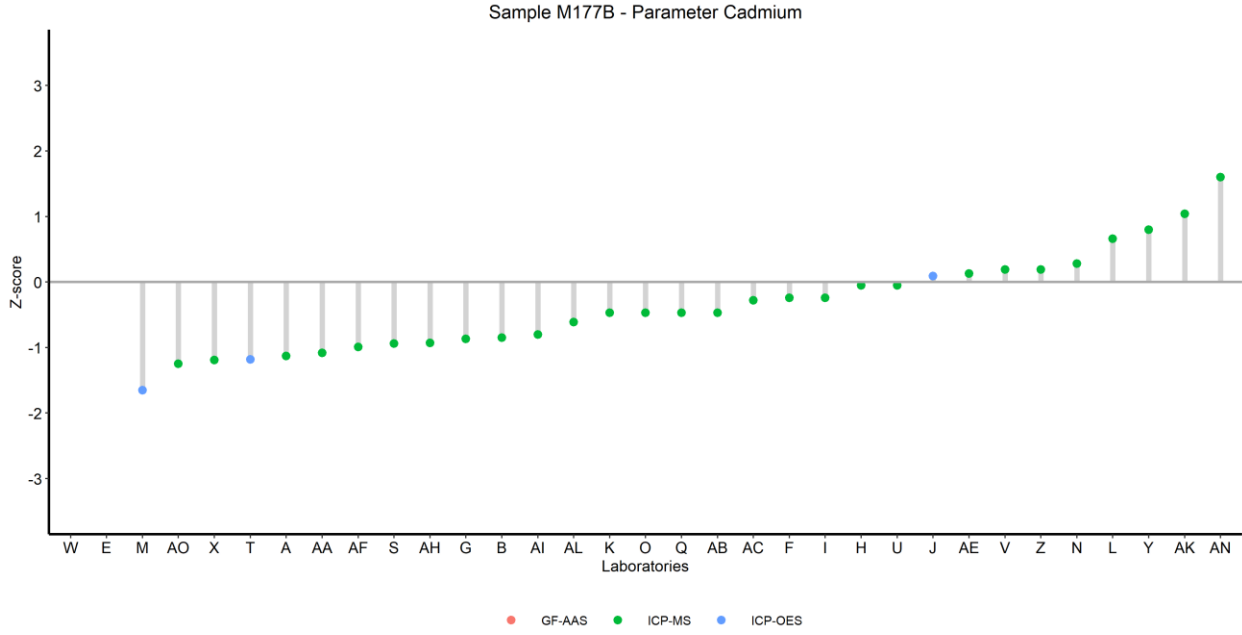
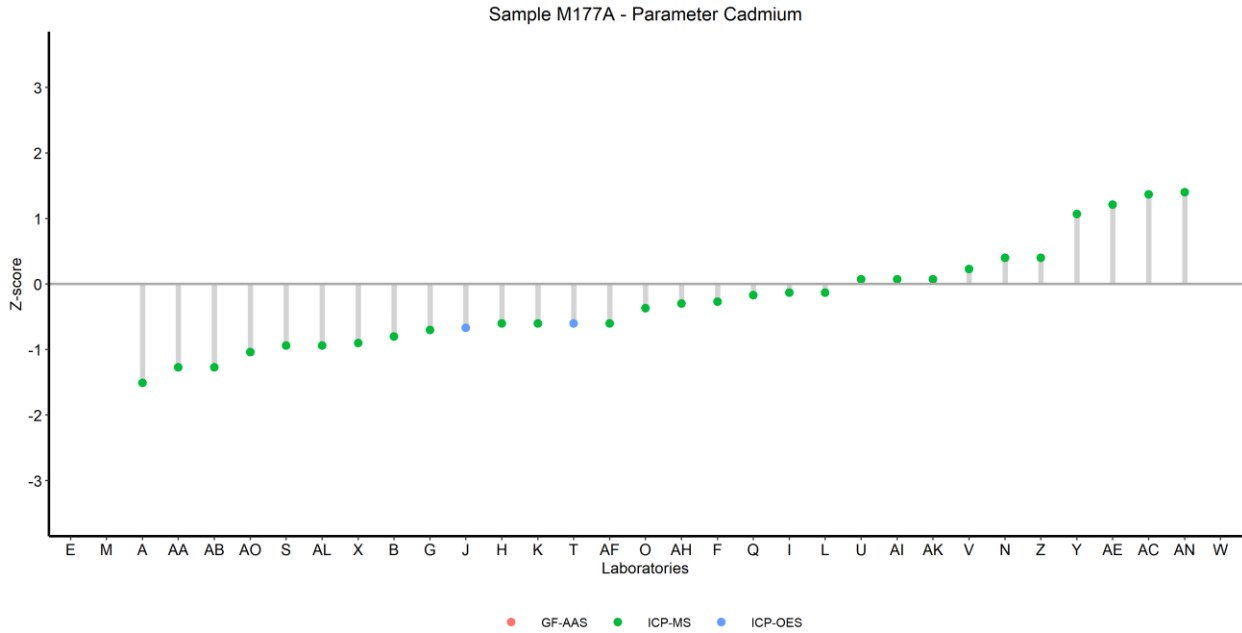
# Arsenic



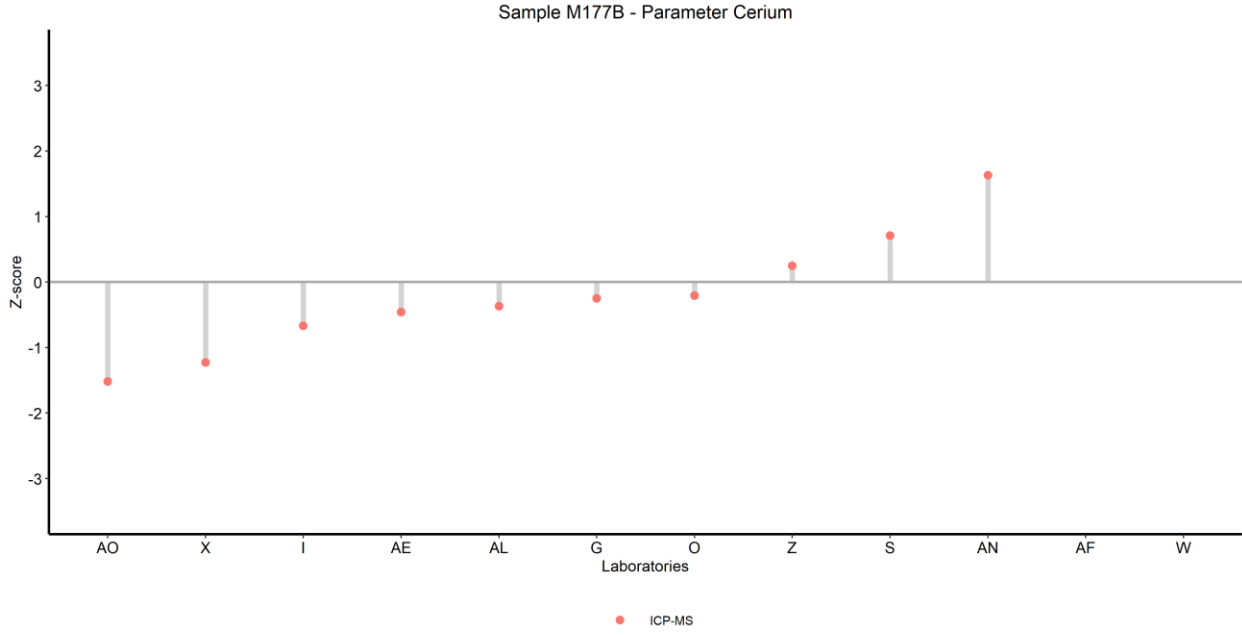
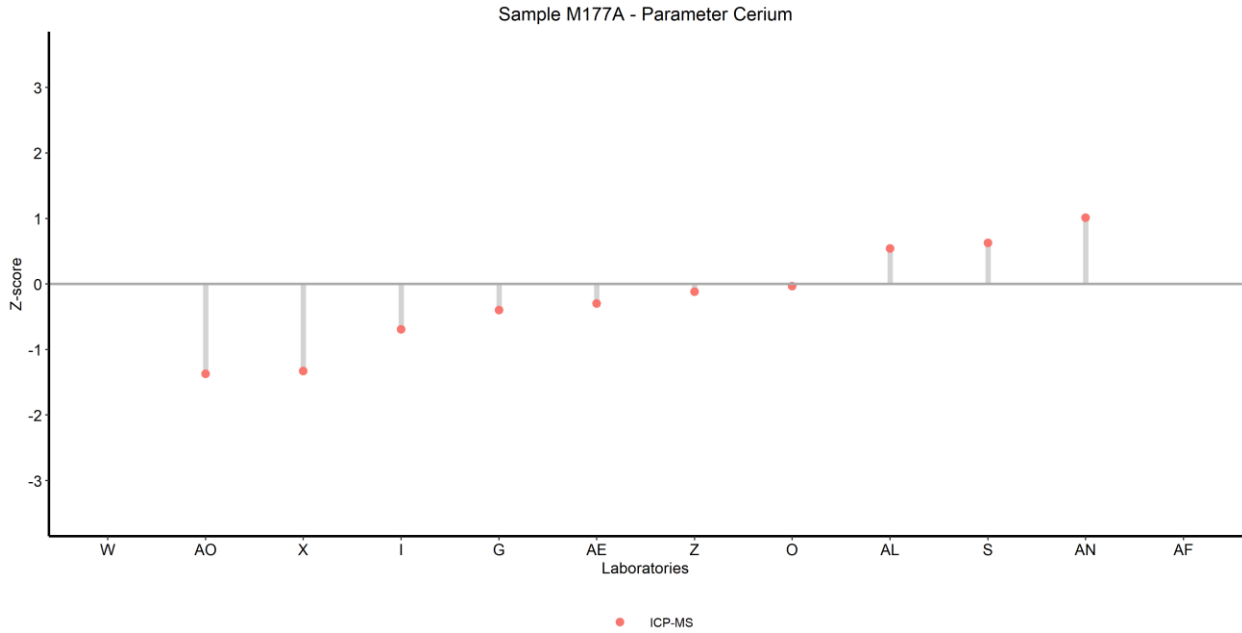
# Beryllium



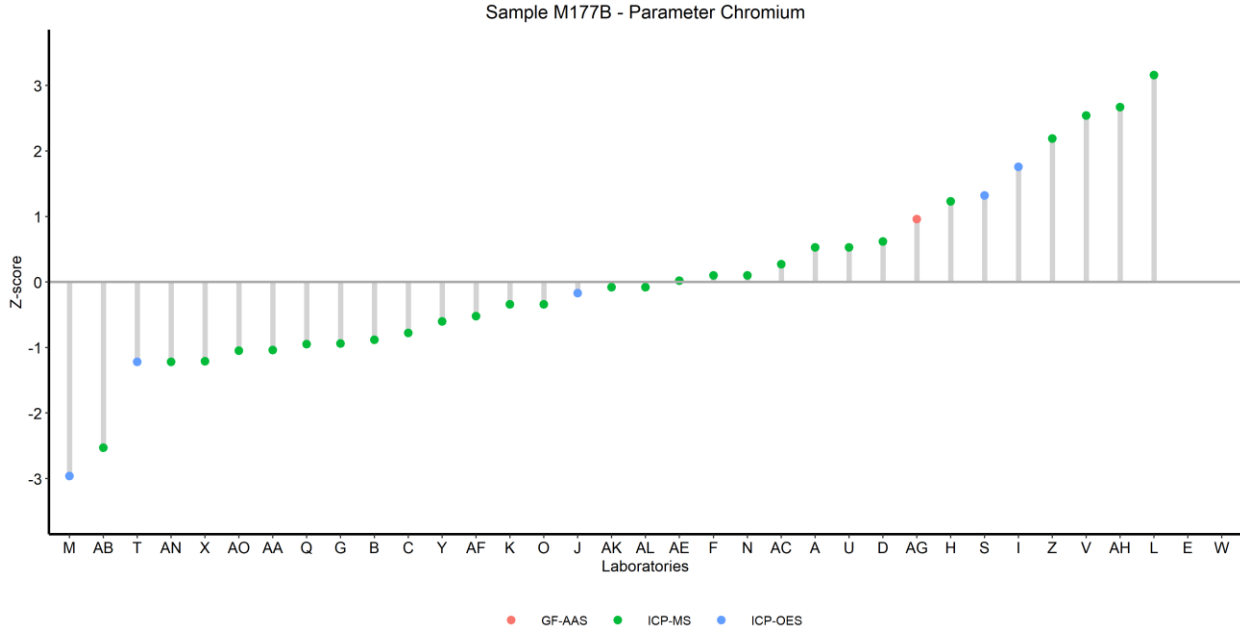
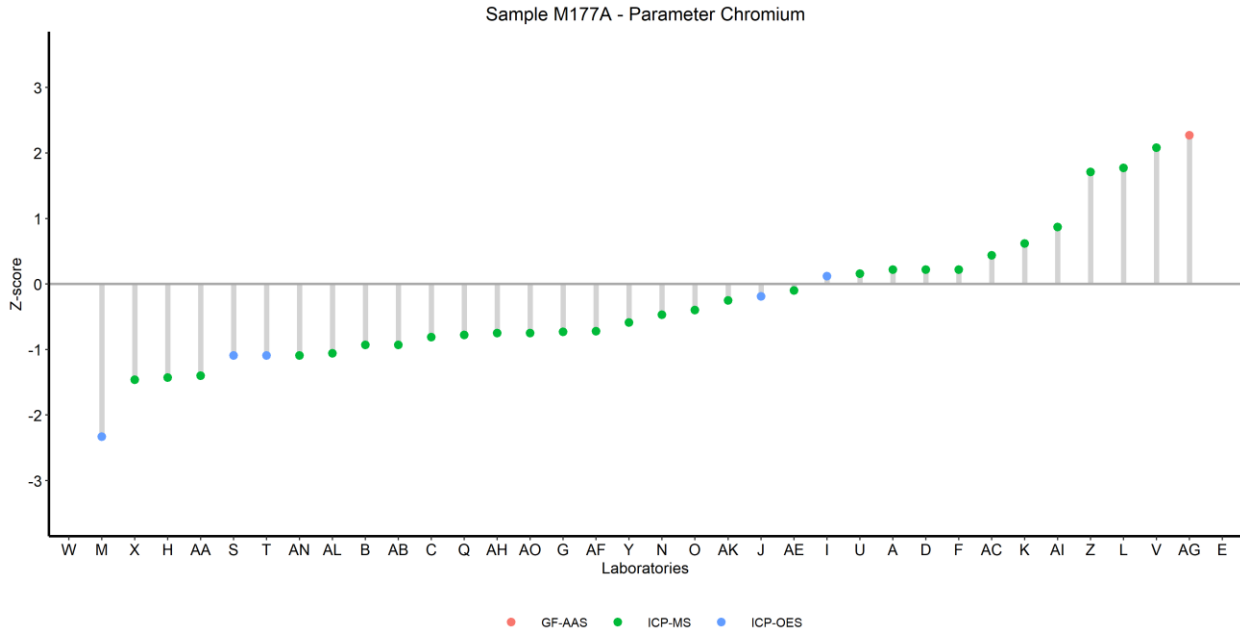
# Cadmium



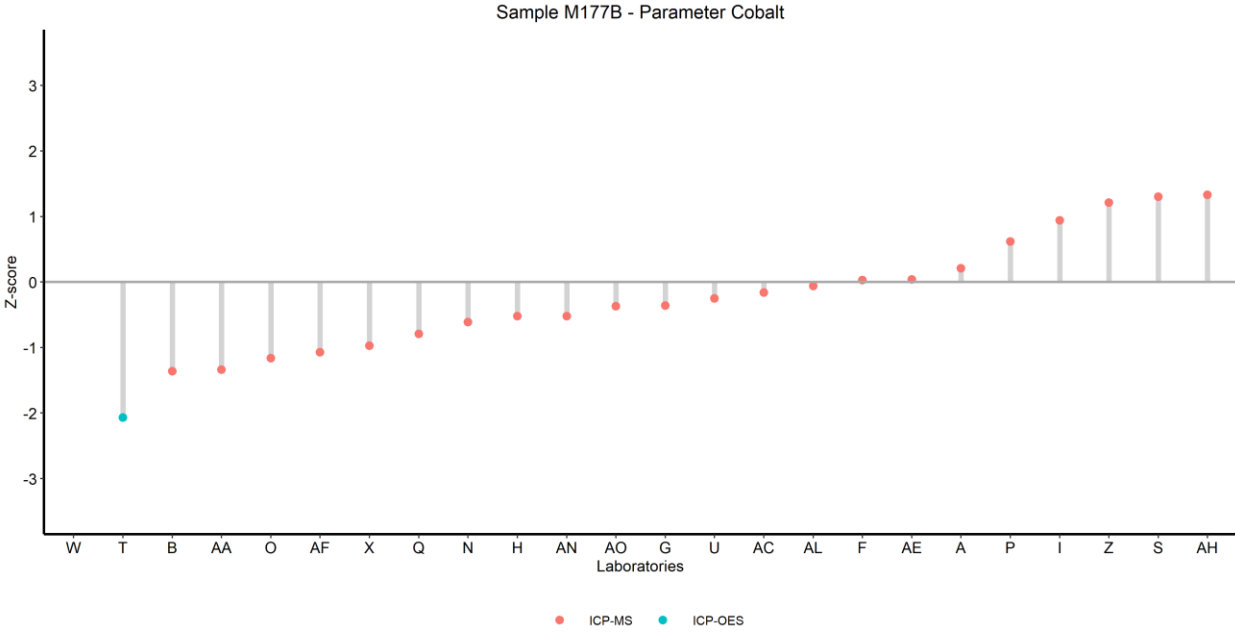
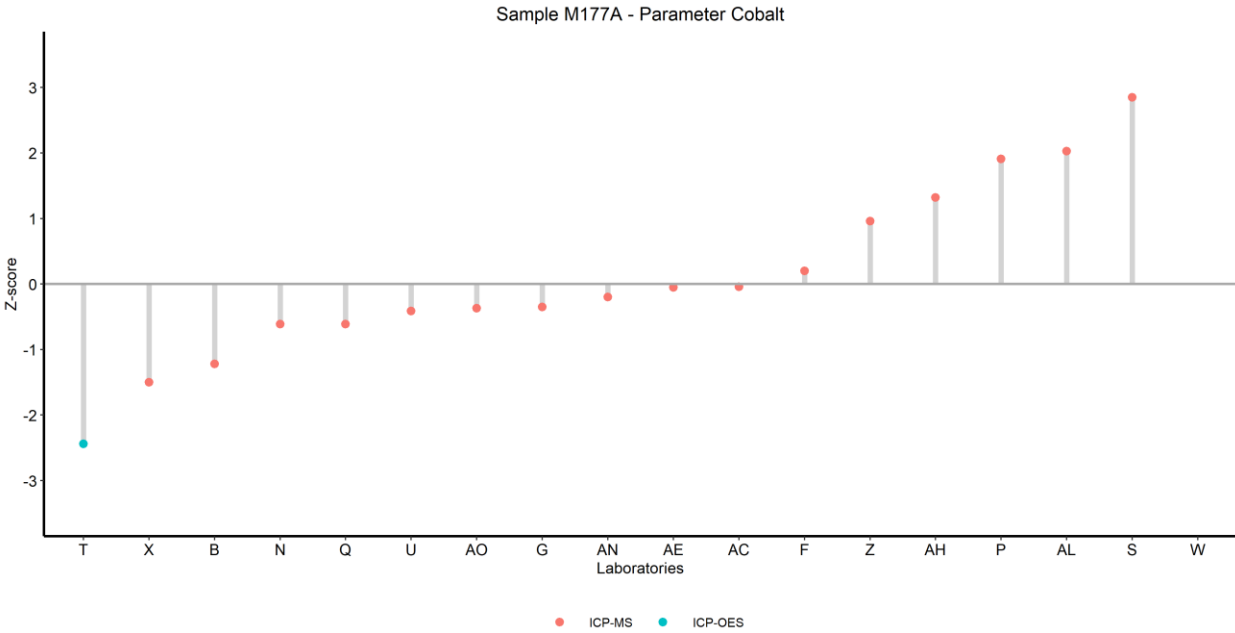
# Cerium



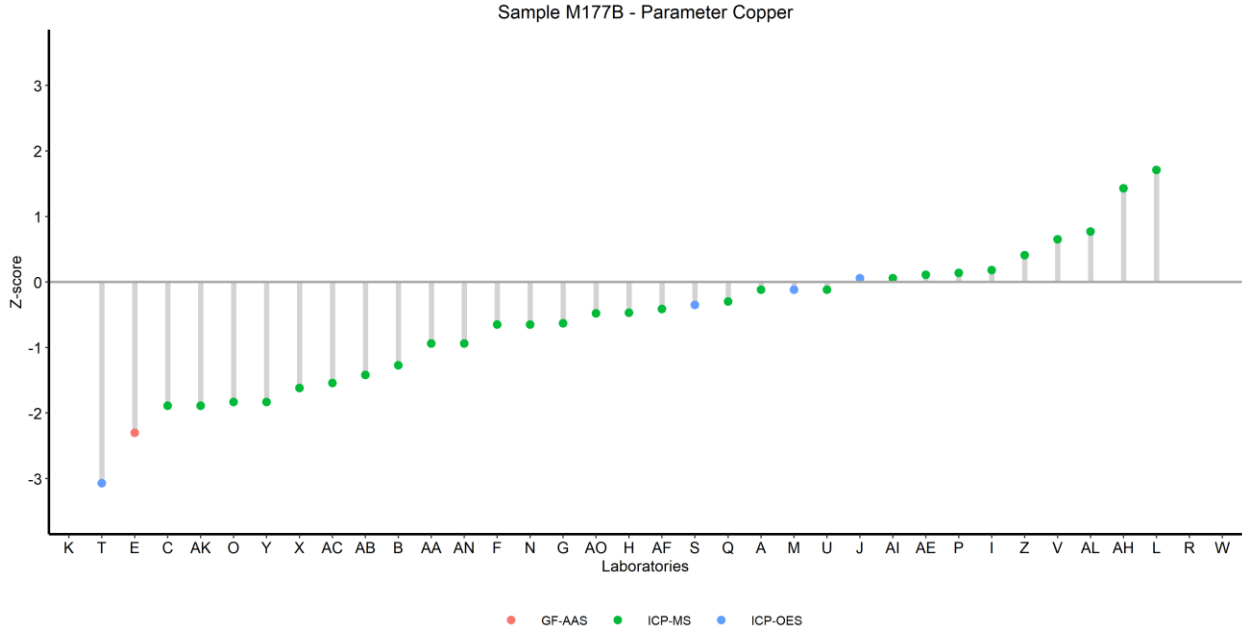
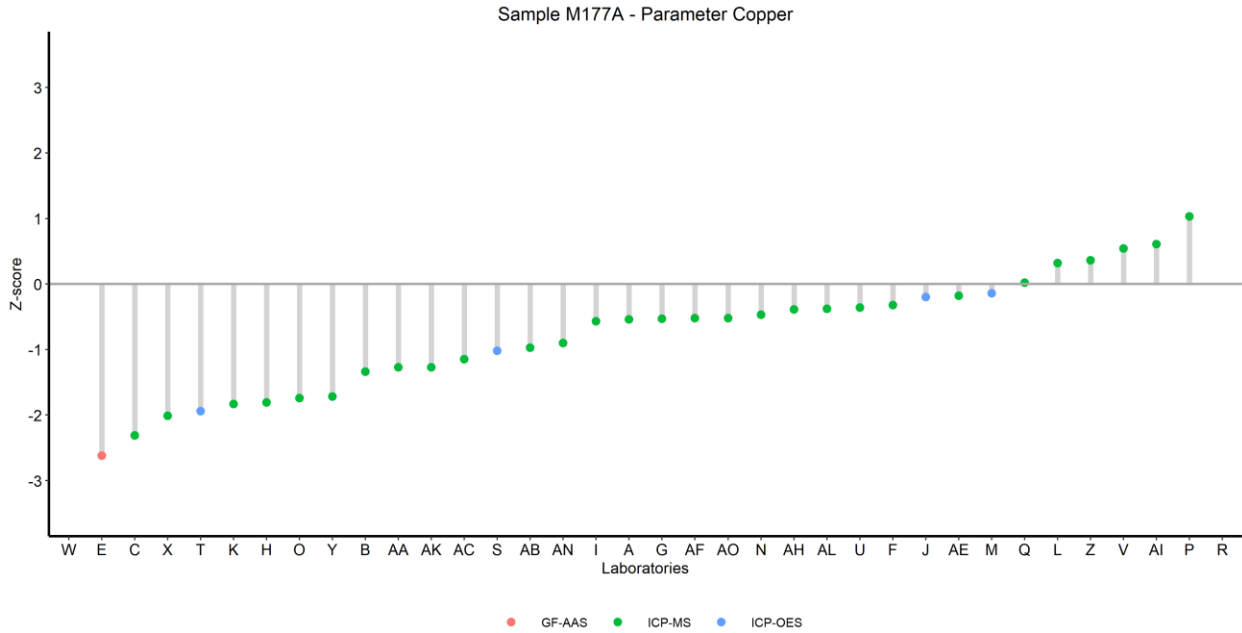
# Chromium



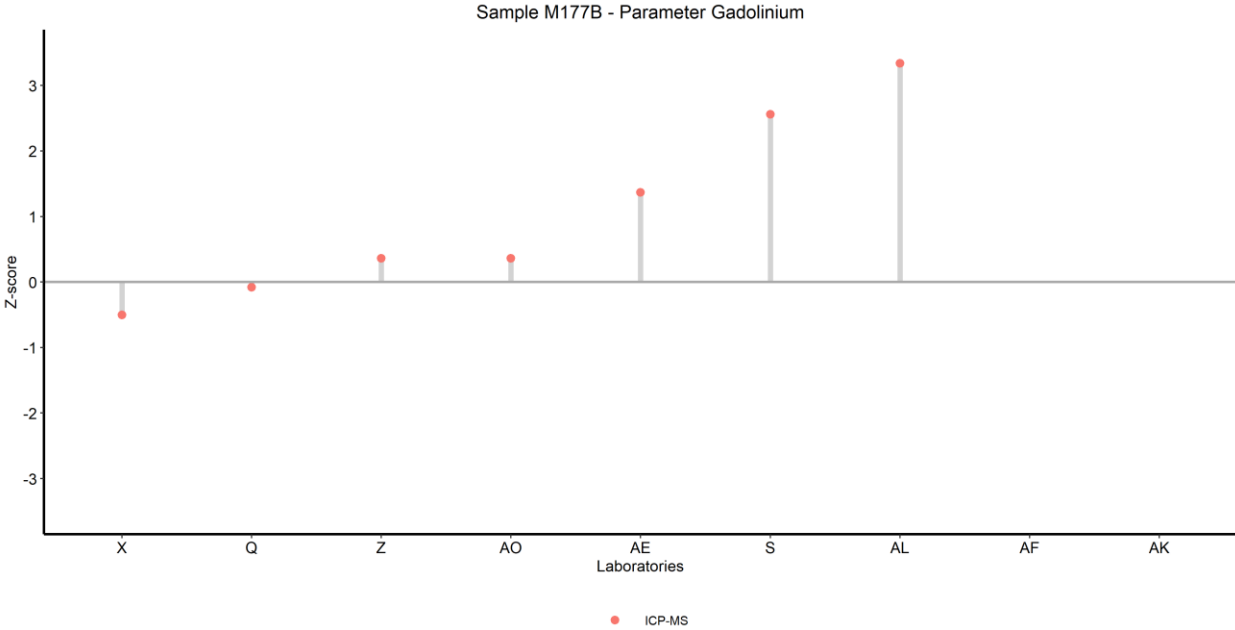
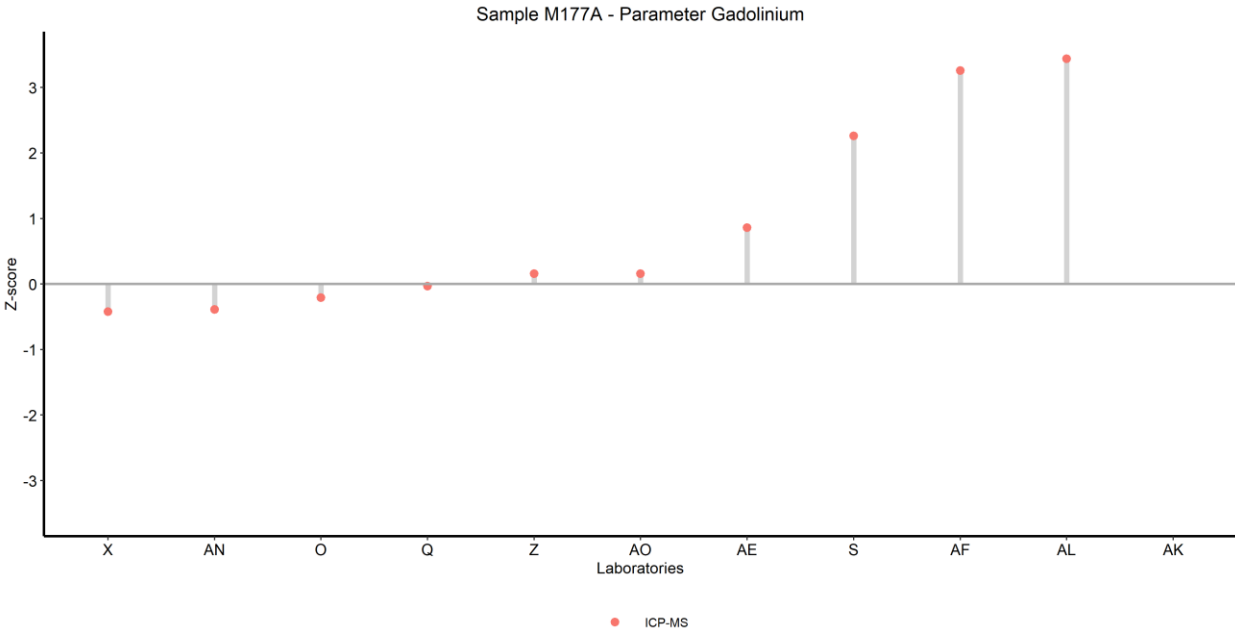
# Cobalt



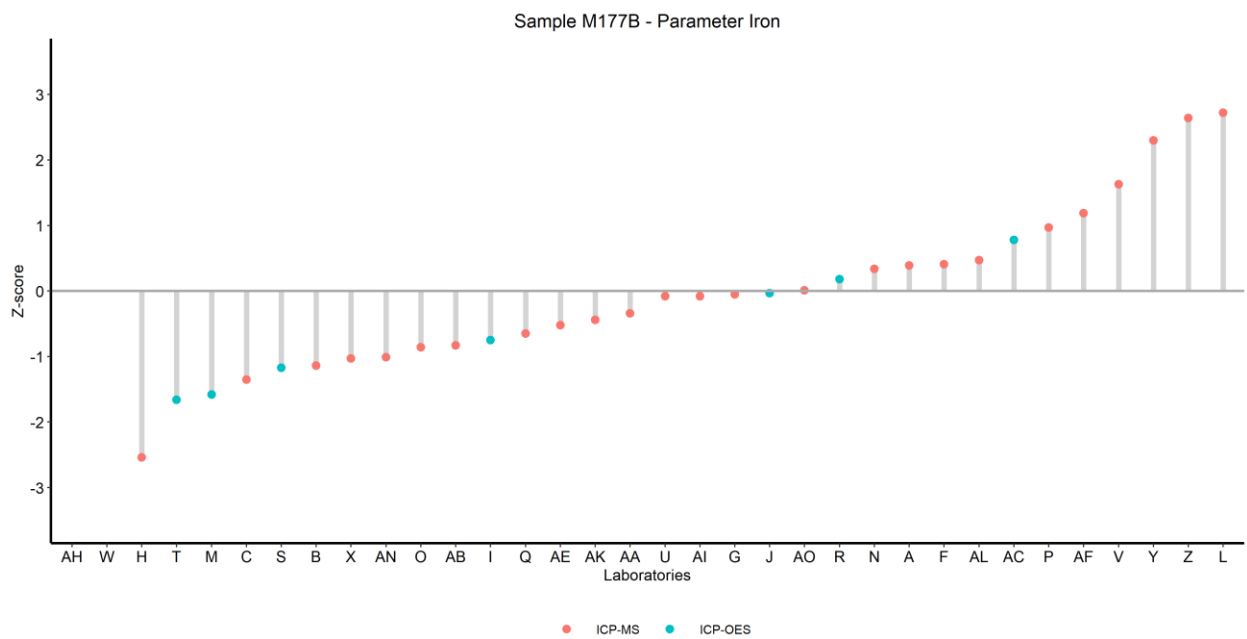
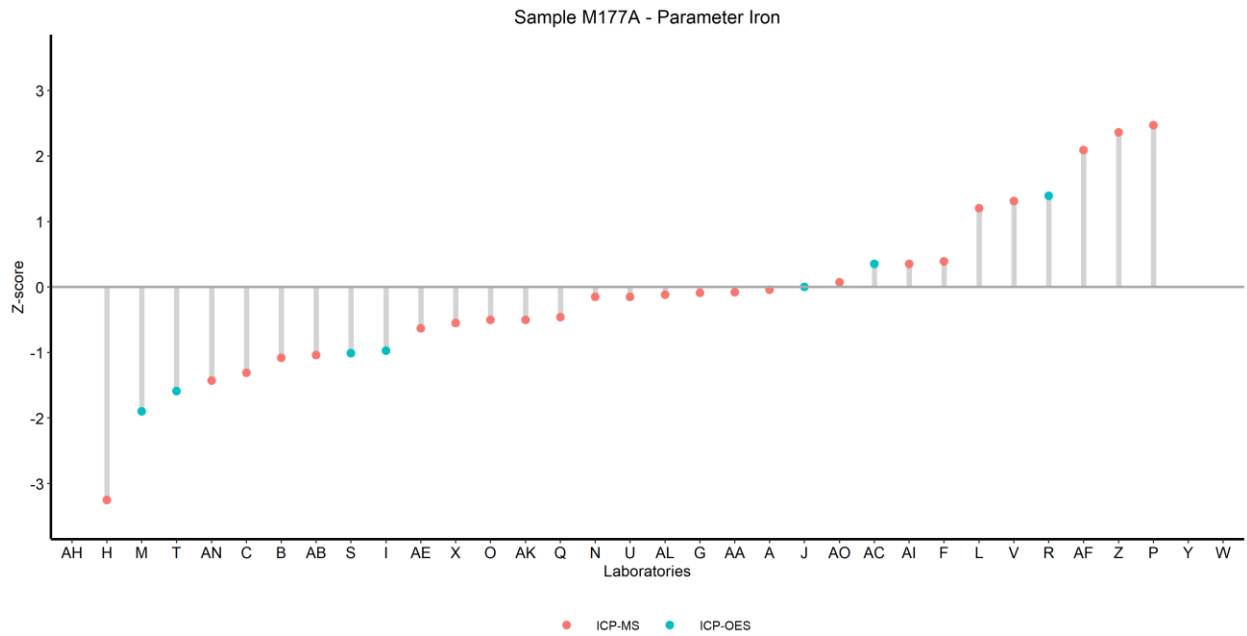
# Copper



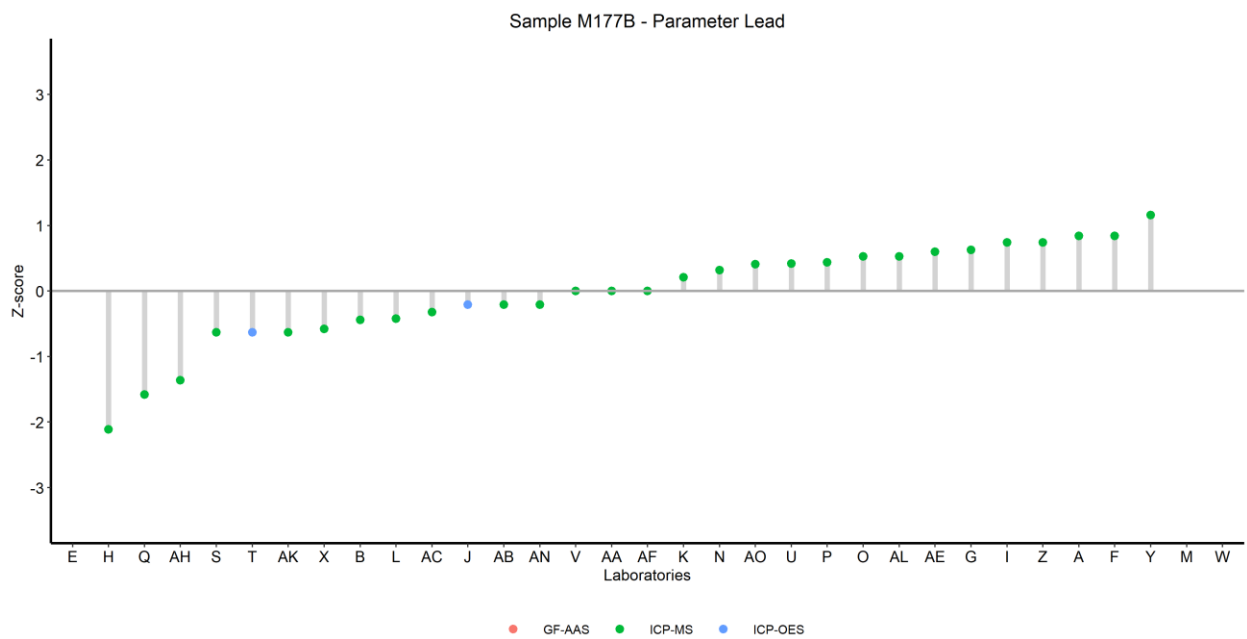
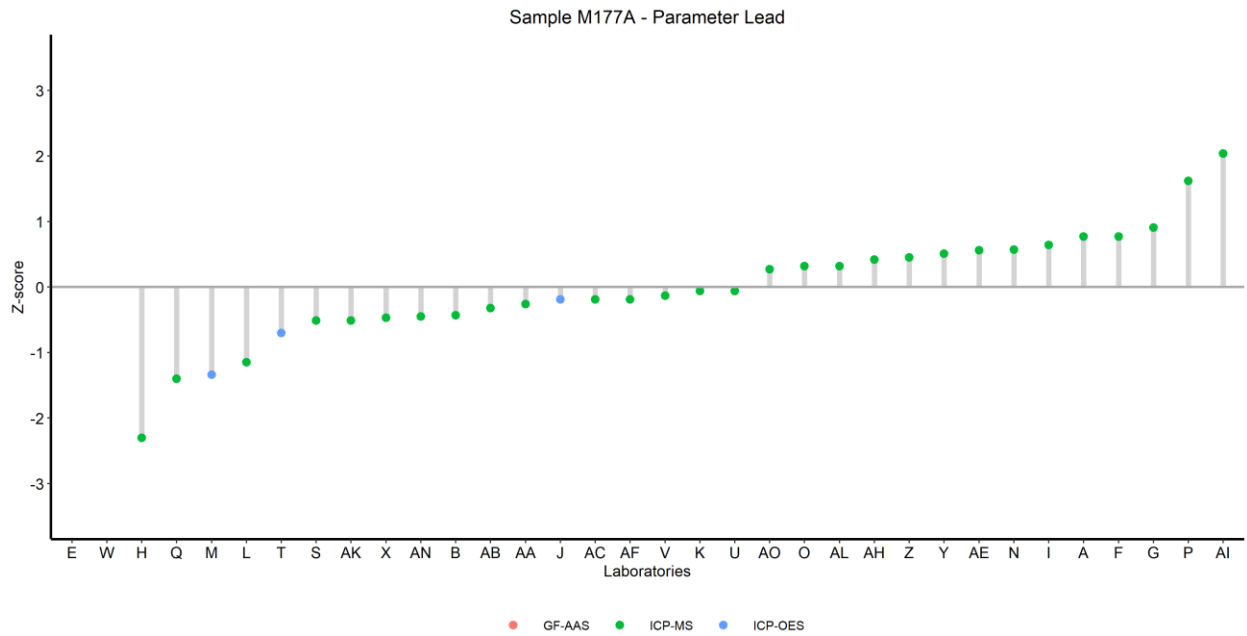
# Gadolinium



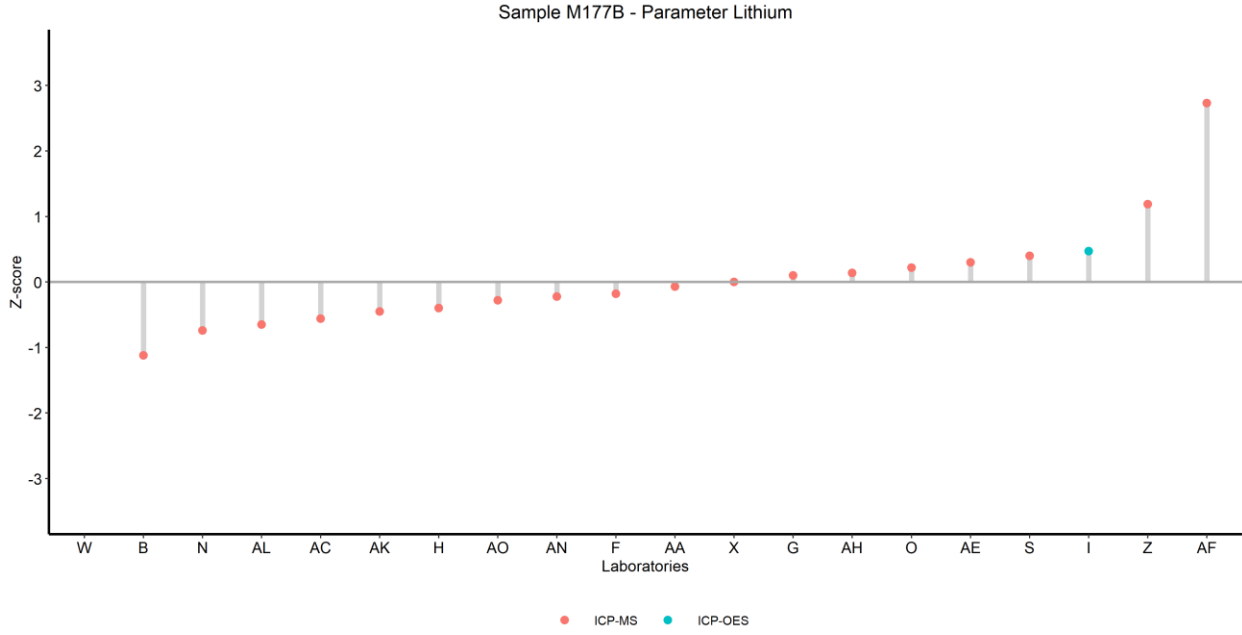
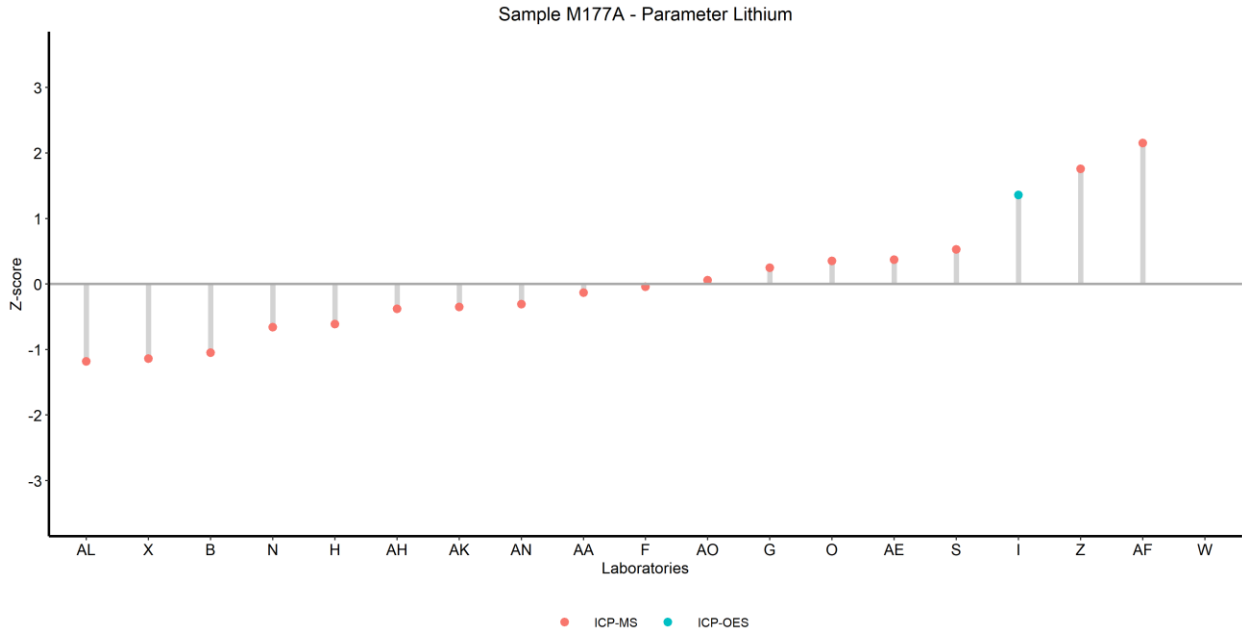
# Iron



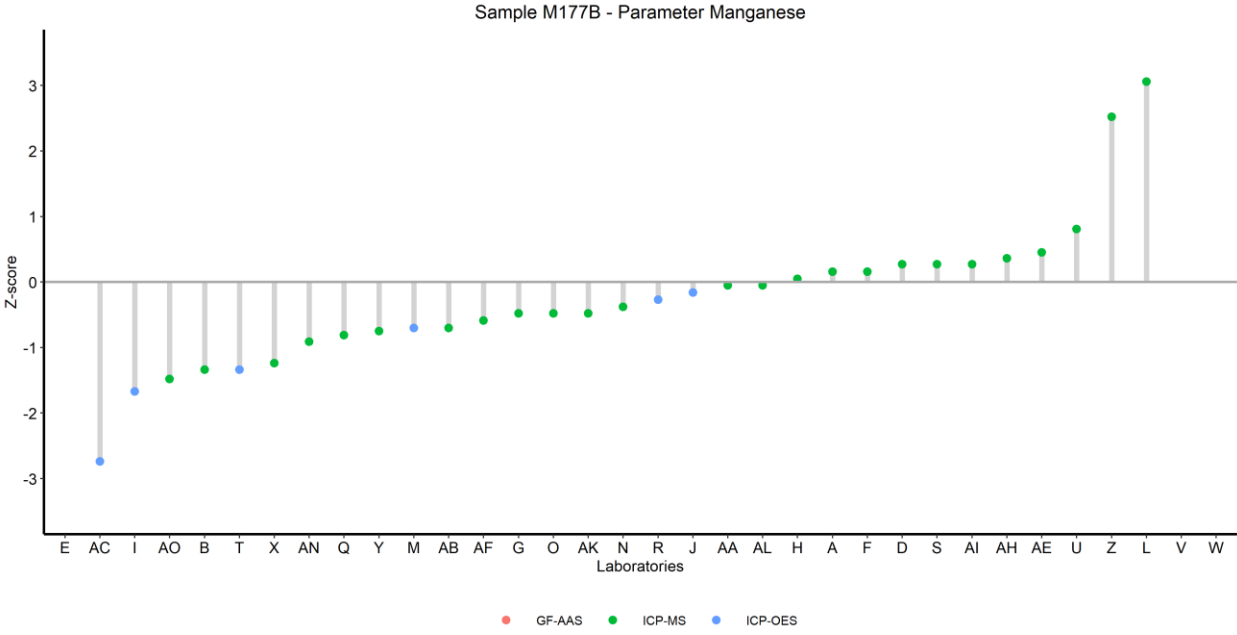
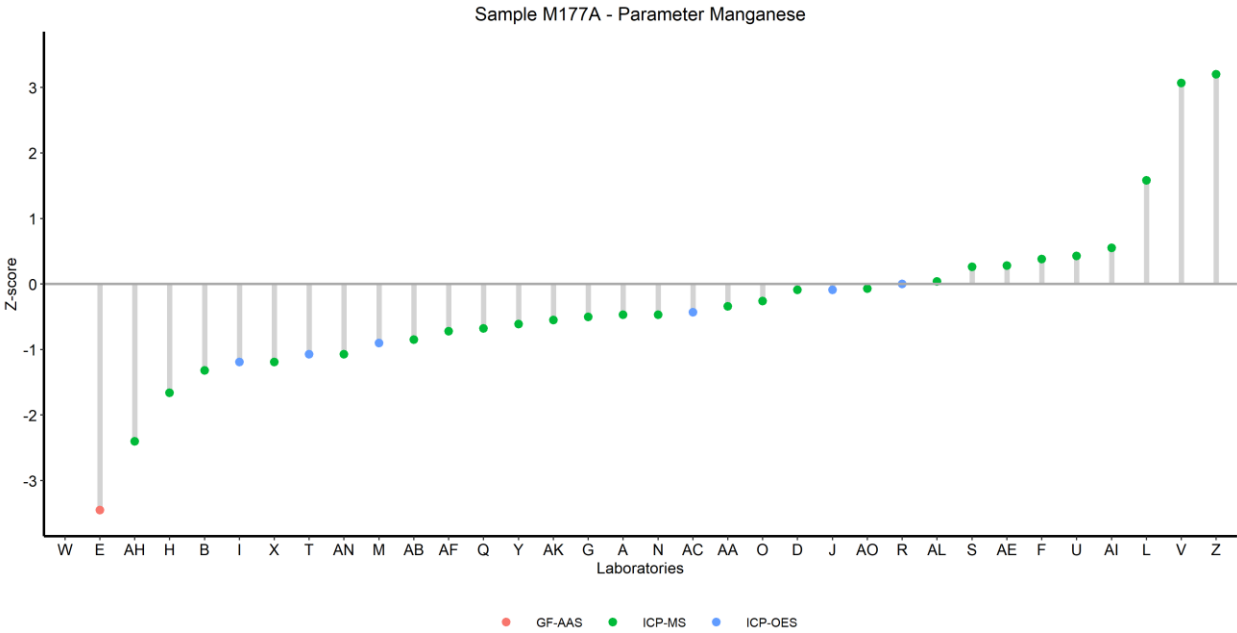
# Lead



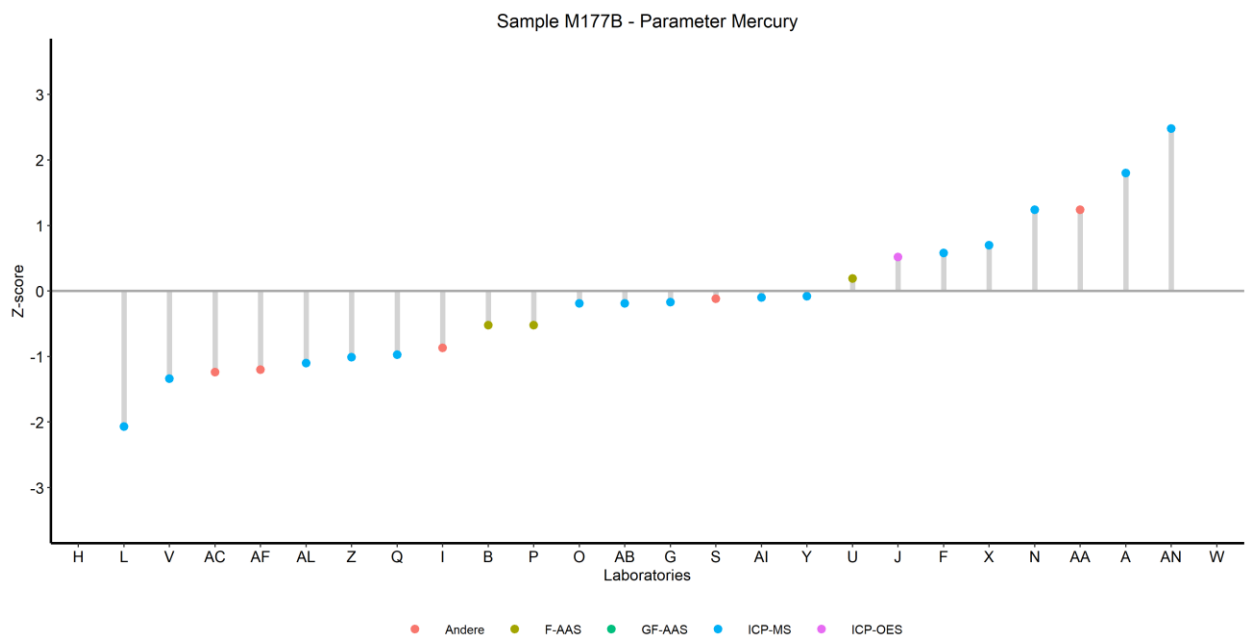
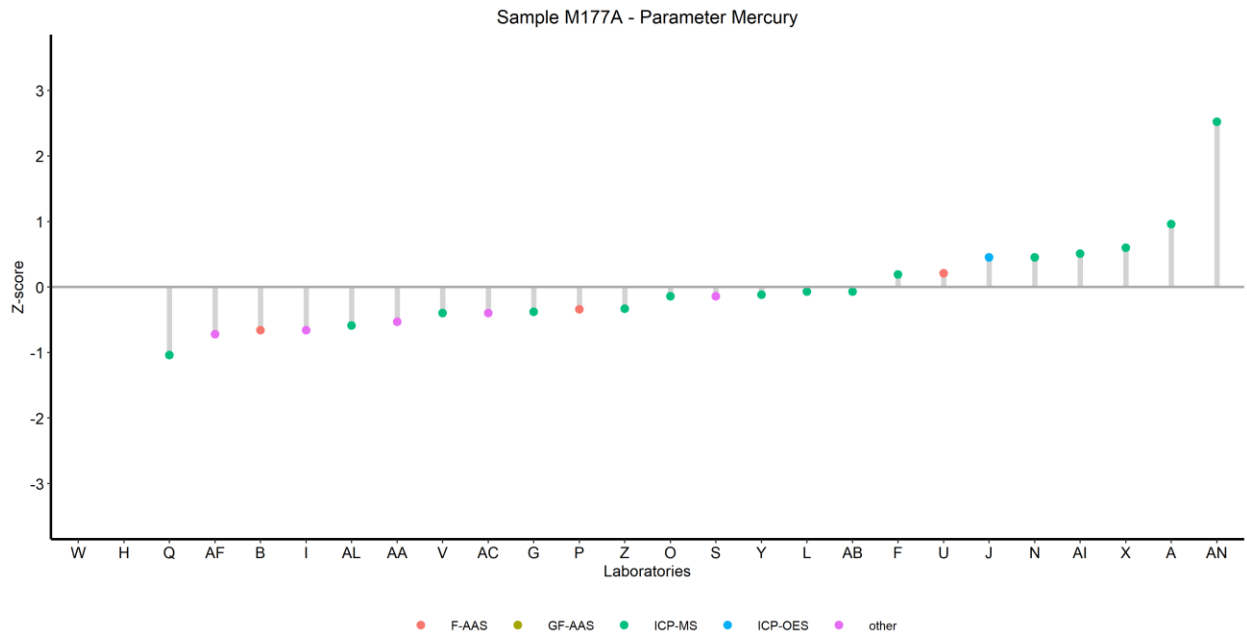
# Lithium



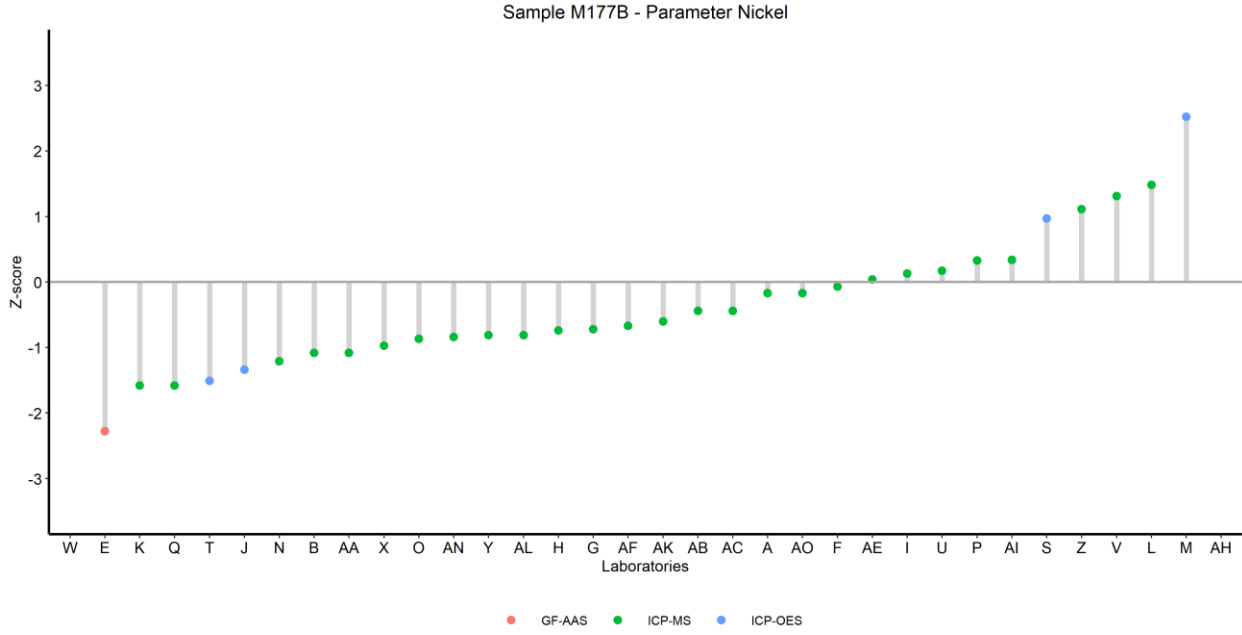
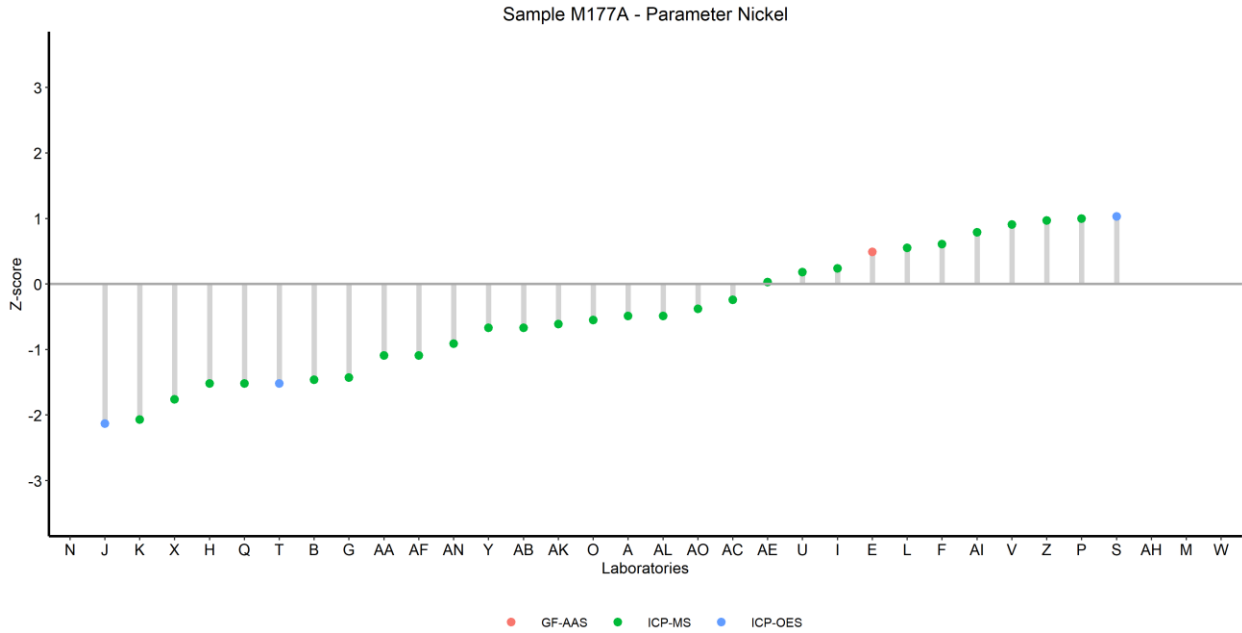
# Manganese



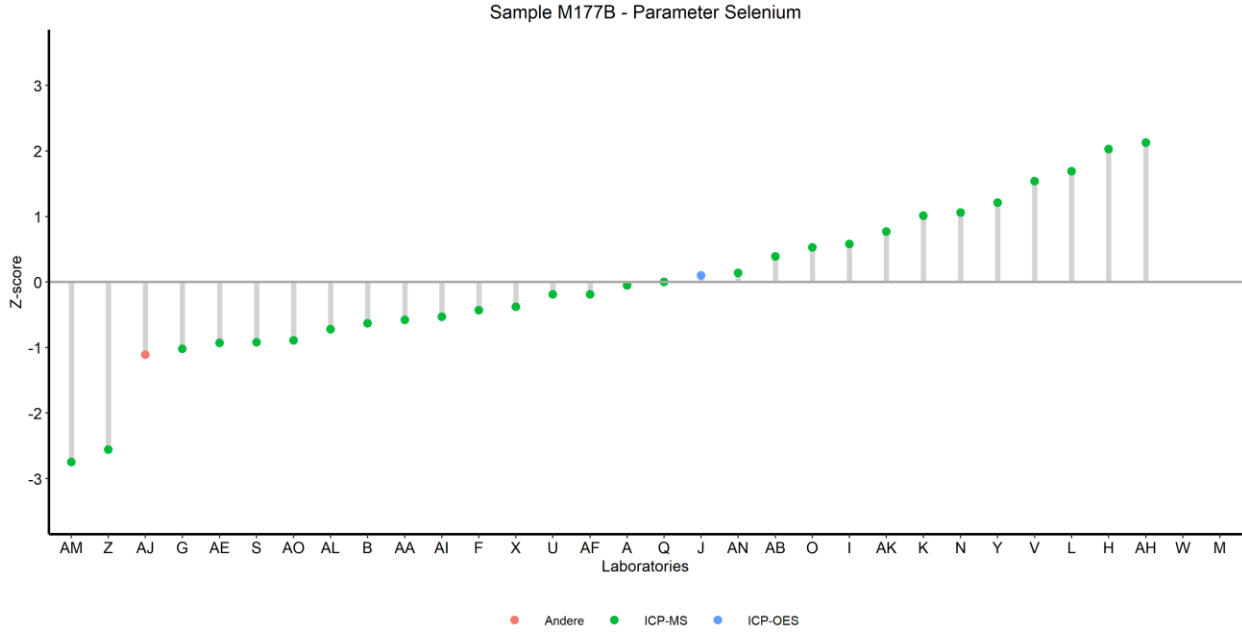
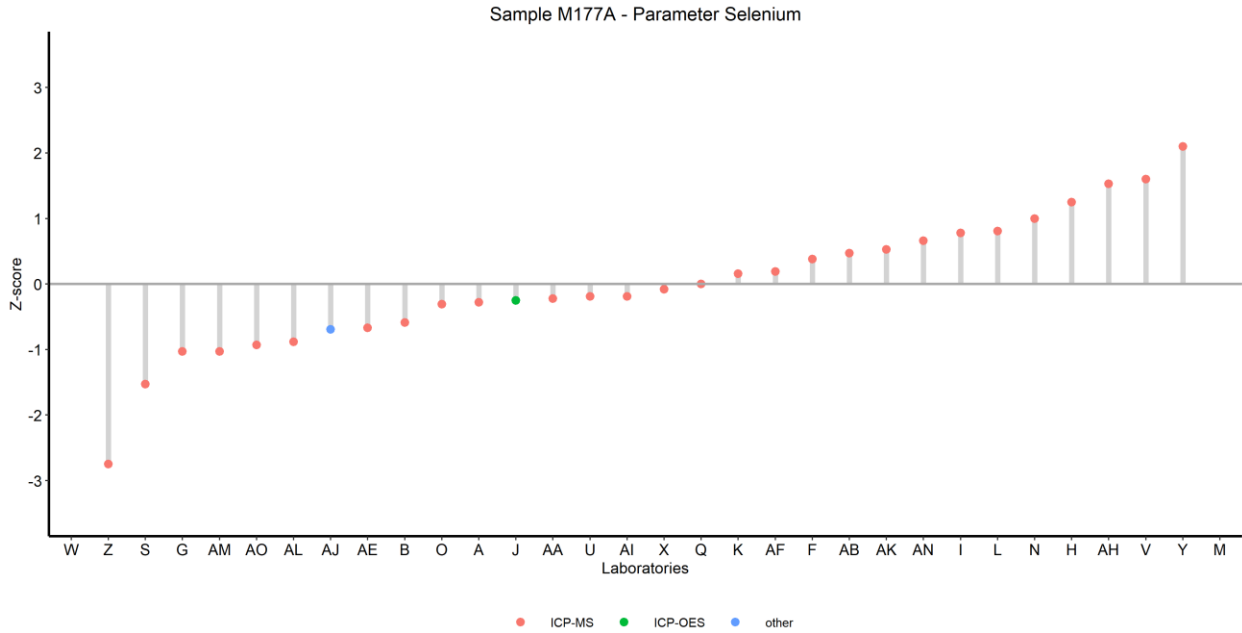
# Mercury



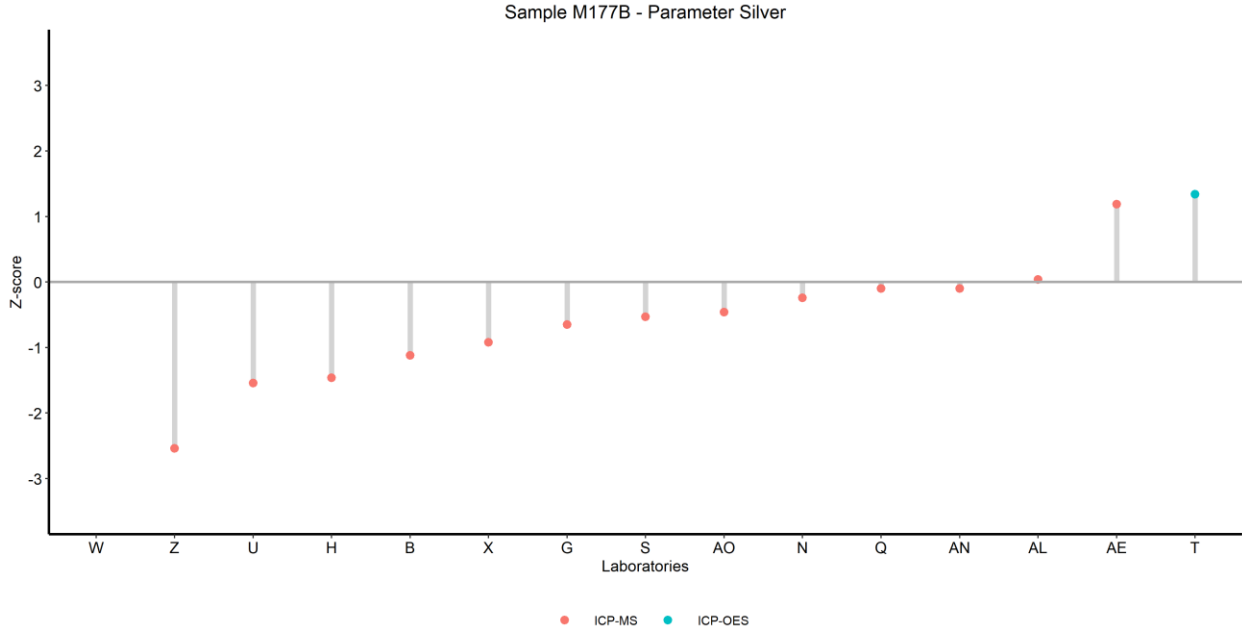
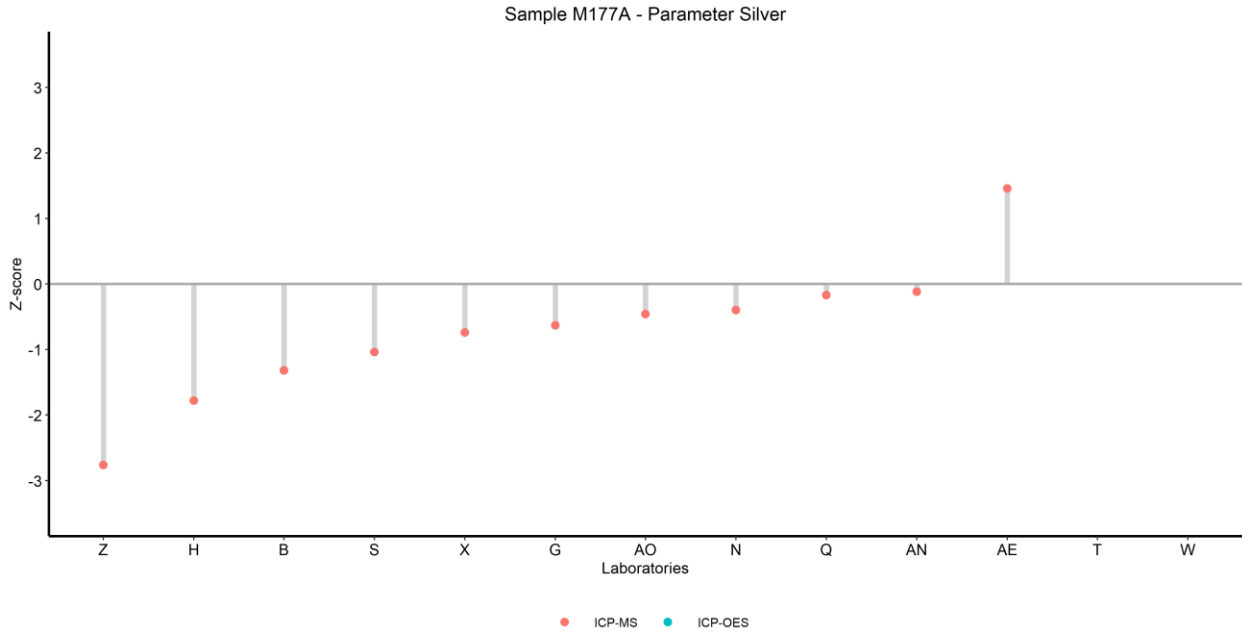
# Nickel



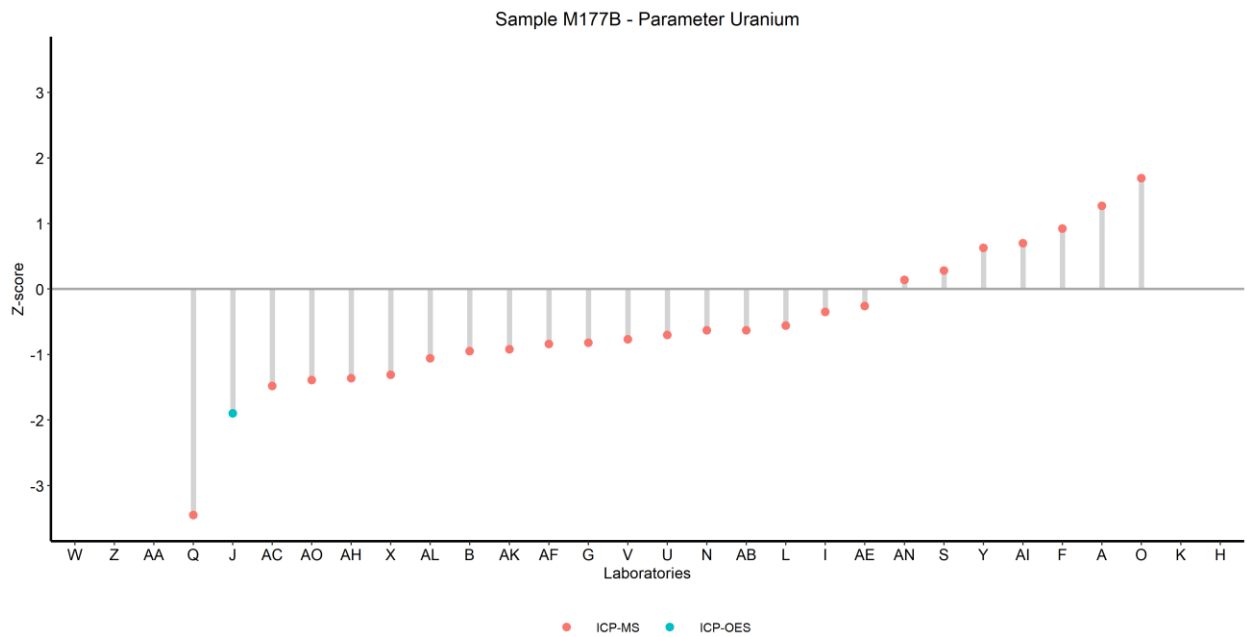
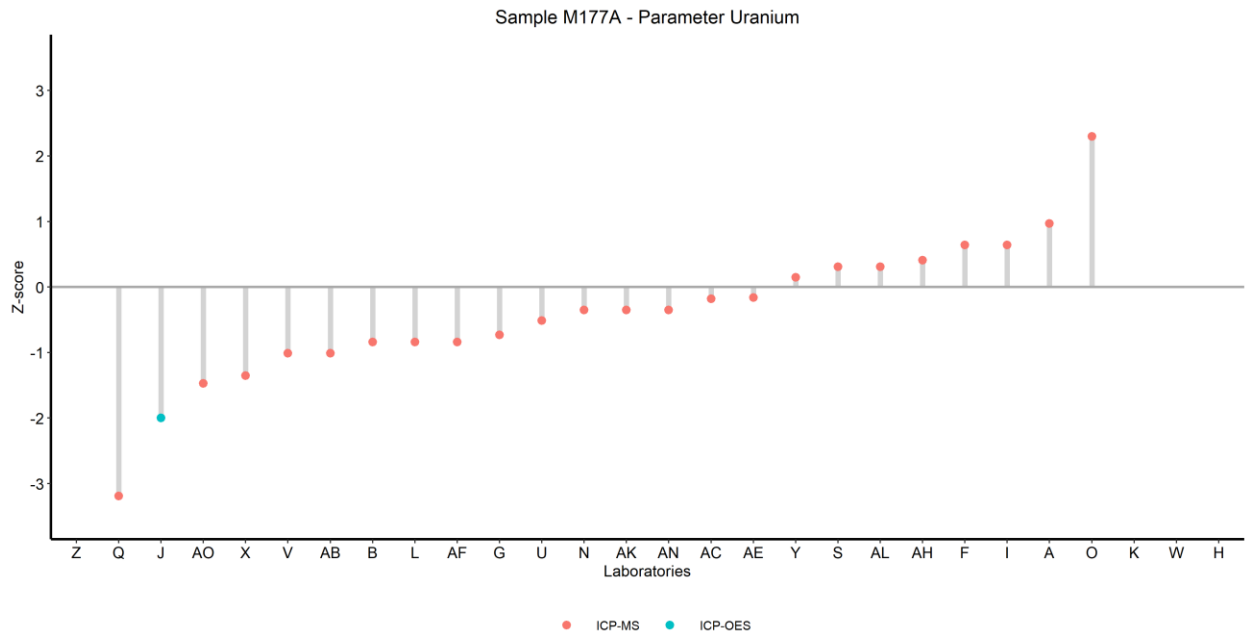
# Selenium



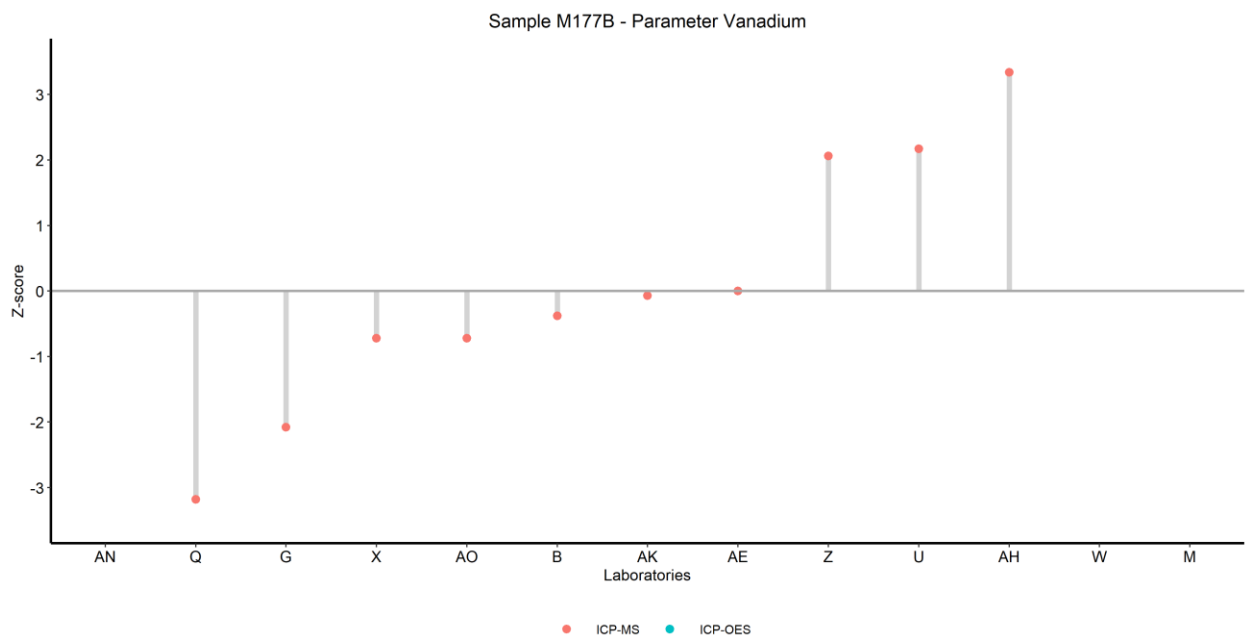
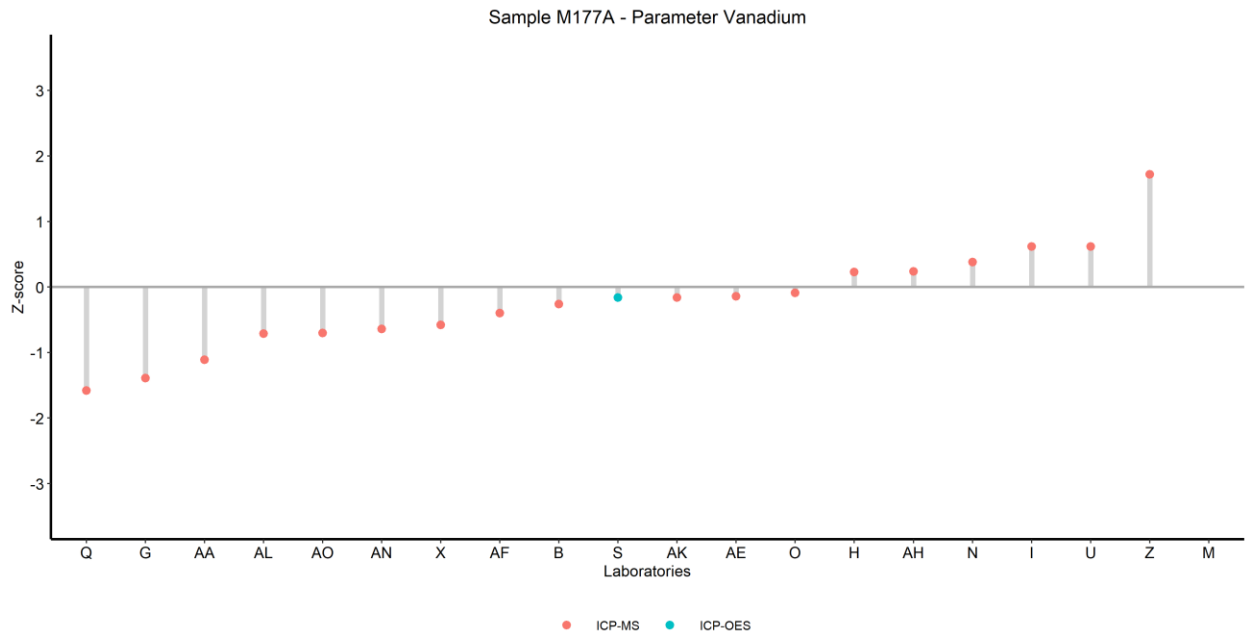
# Silver



# Uranium



# Vanadium



# Zinc

