

# **Proficiency Testing Scheme für die Wasseranalytik - Realproben M165 Metalle und Spurenelemente**

**Proficiency Testing Scheme for Water  
Analysis - natural water samples  
M165 Metals and trace elements**

## **BERICHT / REPORT**

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## D1. Beschreibung des Ringversuchs

### D1.1. Ausgestaltung und Durchführung

- Anzahl der Anmeldungen: 24
- Anzahl der übermittelten Datensätze: 24
- Probenversand: 07.02.2023
- Einsendeschluss der Daten: 07.03.2023

Die Ergebnisabgabe erfolgte auf elektronischem Weg mittels passwortgeschützter Online-Dateneingabe. Beim Abschluss der Dateneingabe bestätigten die Teilnehmenden die vollständige und korrekte Eingabe aller Daten und die Freigabe der Ergebnisse zur Auswertung.

Zur Anonymisierung der Ergebnisse wurde jedem Labor willkürlich ein Laborcode zugeteilt.

### D1.2. Beschreibung der Prüfgegenstände

Die Probenahme von Grundwasser und Oberflächenwasser erfolgte am 02.02.2023.

Das Probenmaterial umfasste:

- 1 Probe Grundwasser (M165 A)
- 1 Probe Oberflächenwasser (M165 B)

Alle Proben wurden über 0,45 µm Membranfilter filtriert und anschließend bis zur weiteren Verarbeitung gekühlt gelagert (4 +/- 3°C). Die o.a. Proben wurden zusätzlich mit einzelnen Substanzen dotiert.

Das Abfüllen der Proben erfolgte unter ständigem Rühren (Rührkessel). Die Proben wurden mit 1 % HNO<sub>3</sub> bzw. 1 % HCl (nur Abfüllung für Parameter Hg) stabilisiert.

Die homogenen Prüfgegenstände wurden am 07.02.2023 verschickt.

Jedes Teilnehmerlabor erhielt:

- 2 Proben zu je ca. 350 ml, abgefüllt in je 1 x 250 ml LDPE-Flasche und 1 x 100 ml LDPE-Flasche (für Hg).

### D1.3. Anweisungen für die Teilnehmenden

Aus Stabilitätsgründen wurde empfohlen bis spätestens 15.02.2023 mit den Analysen zu beginnen.

Den Teilnehmenden stand die Wahl der Analysenmethode bzw. der verwendeten Norm frei, welche mit ihrem Routineverfahren übereinstimmen sollte. Eine Übersicht der angewendeten Methoden findet sich unter E9.

### D1.4. Kontrollanalytik zur Bewertung der Homogenität

Im Zuge der Abfüllung wurden zu willkürlichen Zeitpunkten mehrere Aliquote pro Probe zur Kontrollanalytik entnommen.

Es wurden für die A- bzw. B-Probe jeweils  $n=5$  Kontrollproben sowie  $n=1$  undotierte Realprobe dem Labor zur Analyse übergeben.

Alle Parameter wurden in der Prüfstelle am Umweltbundesamt (Prüfstelle für Umwelt-, GVO- & Treibstoffanalytik) zeitnah zum Probenversand analysiert.

Im Zuge der Auswertung wurde die relative Standardabweichung zwischen den Kontrollprobenabfüllungen bewertet und mit der Vergleichsstandardabweichung beim aktuellen Ringversuch verglichen.

Die Ergebnisse der Kontrollanalytik sind in der parameterorientierten Auswertung (E7) in Form von Mittelwerten  $\pm$  Messunsicherheit als Kontrollwert (control test value)  $\pm U$  gelistet (jeweils angegeben als erweiterte Messunsicherheit,  $k=2$ ).

### D1.5. Trendtest zur Bewertung der Stabilität

Die Bewertung der Stabilität der Prüfgegenstände (Realproben) erfolgte auf Basis der Datenstatistik aus den vergangenen Runden für Realproben im Zeitraum 2013 bis 2021.

Um die ausreichende Stabilität der Prüfgegenstände der aktuellen Eignungsprüfungsrounde bis zum Abgabetermin zu überprüfen, wurde die Darstellung der Ergebnisse der Teilnehmenden nach Analysendatum ausgewertet und auf systematische Trends geprüft (unauffällig). Durch Darstellung der Ergebnisse der Teilnehmenden nach Abfüllreihenfolge wurde auf das Vorliegen möglicher systematischer Trends der Ergebnisse geprüft (unauffällig).

Aufgrund der bisherigen Erfahrungen und aufgrund der Bewertungsgrundlagen der aktuellen Eignungsprüfungsrounde gilt die Stabilität der Prüfgegenstände im empfohlenen Zeitraum für die Analyse bis zum Abgabeschluss als gewährleistet.

#### **D1.6. Ermittlung des zugewiesenen Wertes**

Die Ergebnisse der Analysen mussten spätestens bis zum 07.03.2023 beim Veranstalter vorliegen. Später eingehende Werte wurden nicht berücksichtigt.

Im Zuge der Plausibilitätsprüfung der Daten (z.B. Check korrekte Einheiten, Messunsicherheitsangabe, ...) wurden die Teilnehmenden mit auffälligen Ergebnissen zum erneuten Datencheck der Eingabe und um Rückmeldung binnen 24 h aufgefordert.

Nach Abschluss der Plausibilitätsprüfung, wurde der Ausreißertest nach Hampel durchgeführt und die Ausreißer ermittelt. Die von diesem Test auffällig eingestuften Werte wurden in der Auswertung gekennzeichnet („H“). In begründeten Fällen, z.B. wenn der Ausreißertest nach Hampel nicht anwendbar ist (z.B. Ergebnisse liegen sehr eng beieinander oder überwiegend selber Zahlenwert bzw. bei wenig abgegebenen Daten mit sehr hoher Streuung), kann eine Ausreißereliminierung nach weiteren Kriterien erfolgen (z.B. Dean- und Dixon Test bzw. manuelle Ausreißerdefinition aufgrund Expertenbefund). Diese Vorgangsweise wird nach Anwendung unter Punkt D4 des Berichts dokumentiert.

Die weitere Auswertung erfolgte gemäß ISO 5725-2. Eine statistische Auswertung der Ringversuchsdaten erfolgte erst ab zumindest 6 gültigen, numerischen Ergebnissen pro Parameter. Ergebnisse kleiner Bestimmungs- oder Nachweisgrenze wurden bei den Berechnungen nicht berücksichtigt.

Der zugewiesene Wert wird im Normalfall jeweils als der ausreißerbereinigte Mittelwert über alle übermittelten Ergebnisse gebildet.

Bei sehr hohen Streuungen der Ergebnisse der Teilnehmenden von über 50 % oder bei mangelhafter Rückführbarkeit der statistischen Kenndaten aus den ausreißerbereinigten Ergebnissen der Teilnehmenden auf den Mittelwert des Kontrolllabores bzw. einer zu geringen Anzahl an ausreißerbereinigten Ergebnissen über die Gruppe der akkreditierten Labore, kann die Situation auftreten, dass kein zugewiesener Wert für den aktuellen Ringversuch festgelegt werden kann und daher keine Bewertung der Ergebnisse der Teilnehmenden für diesen Parameter möglich ist. Ein entsprechender Hinweis wird im Bericht unter E7 bei der informativen Auswertung angebracht. Im Rahmen der internen Qualitätssicherung der Teilnehmenden kann ein Vergleich mit den Ergebnissen des Kontrolllabors durchgeführt werden. Diese

Vorgehensweise wird bei Anwendung jeweils parameter- und probenbezogen unter Punkt D4 des Berichts dokumentiert.

## D2. Kriterien der Leistungsbewertung

### D2.1. Leistungskriterium z-Score

Als Basis zur Berechnung der Wiederfindungsraten sowie der z-Scores wurde der ausreißerbereinigte Mittelwert über alle übermittelten Ergebnisse herangezogen.

Die Ermittlung der z-Scores erfolgte gemäß nachfolgender Formel:

$$z\text{-score} = \frac{x_i - \bar{X}}{\text{Kriterium}}$$

Dabei ist:

$x_i$	Messergebnis des teilnehmenden Labors
$\bar{X}$	zugewiesener Wert Sollwert für die Leistungsbewertung der Teilnehmenden (angegeben auf 3 signifikante Stellen); im Regelfall: ausreißerbereinigter Mittelwert der Ergebnisse der Teilnehmenden. Eine davon abweichende Vorgehensweise wird unter Punkt D4 des Berichts beschrieben.
Kriterium	Vergleichsstandardabweichung berechnet aus den Statistiken für reale Wasserproben der vorangegangenen Runden im Zeitraum 2013 bis 2021 (RSDpooled) bzw. aus den ausreißerbereinigten Ergebnissen der Teilnehmenden (sR) des aktuellen Ringversuchs (falls noch weniger als 6 vorangegangene Runden für A und B-Proben vorlagen). In begründeten Fällen (z.B. Ergebnisse Realproben nahe an Mindestbestimmungsgrenze oder regulatorischer Vorgaben) erfolgt die Festlegung nach Expertenbefund und die Vorgangsweise wird unter Punkt D4 des Berichts beschrieben.

### D2.2. Leistungskriterium E<sub>n</sub>-Score

Für die realen Wasserproben erfolgen seit 2019 zusätzliche Bewertungen unter Einbeziehung der erweiterten Messunsicherheiten der Teilnehmenden und der erweiterten Messunsicherheit des zugewiesenen Wertes, gemäß E<sub>n</sub>-Score. Diese Auswertungen werden für die Teilnehmenden im Bericht unter Punkt E8, jeweils im Anschluss an die z-Score Auswertung dargestellt.

Die Ermittlung der E<sub>n</sub>-Scores erfolgte gemäß nachfolgender Formel:

$$E_n - score = \frac{x_i - \bar{X}}{\sqrt{U(x_i)^2 + U(\bar{X})^2}}$$

Dabei ist:

$x_i$	Messergebnis des teilnehmenden Labors
$\bar{X}$	zugewiesener Wert Sollwert für die Leistungsbewertung der Teilnehmenden (angegeben auf 3 signifikante Stellen); im Regelfall: ausreißerbereinigter Mittelwert der Ergebnisse der Teilnehmenden. Eine davon abweichende Vorgehensweise wird unter Punkt D4 des Berichts beschrieben.
$U(x_i)$	erweiterte Messunsicherheit des Messergebnisses (Ergebnisse der Teilnehmenden), k=2
$U(\bar{X})$	erweiterte Messunsicherheit des zugewiesenen Wertes, k=2

### D2.3. Leistungsbewertung z-Score und $E_n$ -Score

#### Interpretation der z-Scores:

- $|z\text{-Score}| \leq 2.0$  Ergebnis gut
- $2.0 < |z\text{-Score}| < 3.0$  Ergebnis fragwürdig
- $|z\text{-Score}| \geq 3.0$  Ergebnis nicht zufriedenstellend

Hinweis: Bei der Bewertung mittels z-Score wird die Messunsicherheit der Teilnehmenden nicht berücksichtigt. Der Vergleich der Abweichung zum zugewiesenen Wert erfolgt über das Kriterium.

#### Interpretation der $E_n$ -Scores:

- $|E_n\text{-Score}| \leq 1.0$  zufriedenstellende Leistung
- $|E_n\text{-Score}| > 1.0$  nicht zufriedenstellende Leistung

Hinweis: Bei der Bewertung mittels  $E_n$ -Score erfolgt die Berücksichtigung der erweiterten Messunsicherheiten der Teilnehmenden und des zugewiesenen Wertes.  $|E_n\text{-Score}| > 1.0$  können darauf hinweisen, dass die Unsicherheitsschätzungen überprüft oder ein Messproblem korrigiert werden muss.

## D3. Darstellung und Interpretation der Messergebnisse

In der parameterorientierten Auswertung ist eine tabellarische Übersicht mit den Messergebnissen inklusive der Unsicherheit ( $\pm U$ ), der Wiederfindung zum zugewiesenen Wert und dem berechneten z-Score dargestellt. Weiterhin werden unter

Anmerkungen die Ausreißer gekennzeichnet. Die in der Tabelle angeführten Ergebnisse werden auch grafisch dargestellt.

In der labororientierten Auswertung werden pro Labor in anonymisierter Form die Ergebnisse der einzelnen Labore als Messergebnis  $\pm$  U sowie die Wiederfindungen und die ermittelten z-Scores bezugnehmend auf das Kriterium dargestellt. Weiters werden die E<sub>n</sub>-Scores unter Berücksichtigung der erweiterten Unsicherheiten in unabhängigen Tabellen ausgegeben. Die labororientierten Auswertungen enthalten jeweils die Bewertungsgrundlagen wie zugewiesener Wert samt erweiterter Messunsicherheit sowie das Kriterium.

Eine Erläuterung zu den Tabellen und Grafiken kann Punkt D5 entnommen werden.

#### **D4. Anmerkungen zur Auswertung**

Wie unter Punkt D2 ersichtlich, können die z-Scores auch unter Einbeziehung der Vergleichsstandardabweichung der ausreißerbereinigten Ergebnisse der Teilnehmenden des aktuellen Ringversuchs berechnet werden. Das kann zur Folge haben, dass es bei Parametern mit hoher Ergebnistreuung dazu kommen kann, dass der Bereich z-Score - 2 bis z-Score + 2 einen ungewöhnlich hohen Wiederfindungsbereich abdeckt. Umgekehrt führt eine sehr geringe Streuung der Ergebnisse der Teilnehmenden dazu, dass z-Score - 2 bis z-Score + 2 einen ungewöhnlich kleinen Wiederfindungsbereich abdeckt.

Die Wiederfindungsrate wird unabhängig von der Streuung der Ergebnisse, als prozentuelle Abweichung vom zugewiesenen Wert berechnet und sollte bei der Bewertung von Ergebnissen im Rahmen des internen Qualitätsmanagementsystems der teilnehmenden Labore berücksichtigt werden.

Als Ergebnis einer Langzeitauswertung über aktuell 9 Eignungsprüfungsrounden (2013–2021) in Realproben wurden Kriterien (RSDpool) zur Ergebnisbewertung berechnet. Diese wurden im Zuge der Auswertung den relativen Vergleichsstandardabweichungen (vR) des aktuellen Ringversuchs gegenübergestellt.

Parameter Arsen, Quecksilber, Selen und Zink bei Probe M165 A und Parameter Aluminium, Arsen, Quecksilber, Selen und Zink bei Probe M165 B: Bei diesen Parametern erfolgt die Berechnung der Scores nach D2.

Parameter Aluminium, Cadmium, Chrom, Kupfer, Eisen, Mangan, Nickel, Blei und Uran bei Probe M165 A und Parameter Cadmium, Chrom, Kupfer, Eisen, Mangan, Nickel und Blei bei Probe M165 B:

Die auf Basis der Ergebnisse der Teilnehmenden berechneten Sollwerte lagen außerhalb der Messunsicherheit des Kontrollwertes und es ist über das Kontrolllabor

keine Rückführbarkeit möglich. Der zugewiesene Wert wurde daher über die ausreißerbereinigten Mittelwerte aus der Gruppe der akkreditierten Teilnehmenden berechnet.

Parameter Uran bei Probe M165 A und Parameter Mangan und Uran bei Probe M165 B:

Für diese Parameter wurden relative Vergleichsstandardabweichungen (vR) der Gruppe der akkreditierten Teilnehmenden von 15 % für Uran Probe M165 A, 8 % für Mangan Probe M165 A und 10.5 % für Uran Probe M165 B für die Bewertung gewählt.

## D5. Erläuterung zu Tabellen und Grafiken

### D5.1. Angaben und Abkürzungen in Tabellen

Parameter	Allgemeine Bezeichnung des Analysenparameters
Probe	Bezeichnung der übermittelten Probe
Einheit	Vorgegebene Einheit für Messwert und Ergebnisunsicherheit (z.B. µg/l)
Zugewiesener Wert	Sollwert für die Leistungsbewertung der Teilnehmenden (angegeben auf 3 signifikante Stellen)
U (k=2)	erweiterte Unsicherheit (k=2) des zugewiesenen Wertes, (angegeben auf 3 signifikante Stellen)
Kriterium	Vorgabewert zur Ermittlung des z-Scores in der angegebenen Einheit (angegeben auf 3 signifikante Stellen)
Kriterium [%]	Vorgabewert zur Ermittlung des z-Scores in % des zugewiesenen Wertes (angegeben auf 2 signifikante Stellen)
Mittelwert	Ausreißerbereinigter Mittelwert über die Ergebnisse der Teilnehmenden (angegeben auf 3 signifikante Stellen)
VB (99%)	99 % Vertrauensbereich (angegeben auf 3 signifikante Stellen)
Minimum	Minimales abgegebenes Messergebnis, ausreißerbereinigt (angegeben auf 3 signifikante Stellen)
Maximum	Maximales abgegebenes Messergebnis, ausreißerbereinigt (angegeben auf 3 signifikante Stellen)
sR	Vergleichsstandardabweichung, berechnet aus den ausreißerbereinigten Ergebnissen der Teilnehmenden des aktuellen Ringversuchs (angegeben auf 3 signifikante Stellen)
vR	relative Vergleichsstandardabweichung in %, berechnet aus den ausreißerbereinigten Ergebnissen der

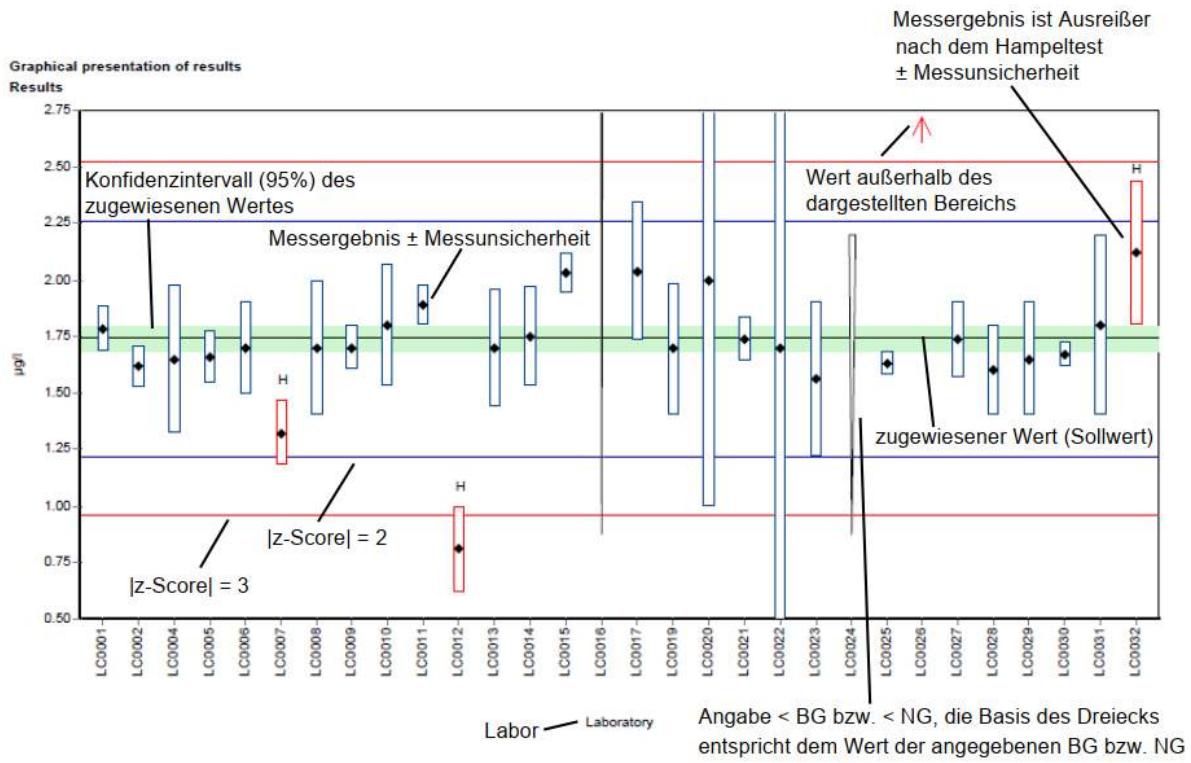
Kontrollwert ± U (k=2)	Teilnehmenden des aktuellen Ringversuchs bezogen auf den Mittelwert (angegeben auf 2 signifikante Stellen) Mittelwert der Kontrollmessungen des Veranstalters ± erweiterte Ergebnisunsicherheit des Kontrollwertes (jeweils angegeben auf 3 signifikante Stellen)
Laborcode	anonymisierte, eindeutige Kennung des teilnehmenden Labors im jeweiligen Ringversuch
Messwert	einzelne(r) Messwert(e) lt. Angabe der Teilnehmenden (maximal 5 Nachkommastellen dargestellt)
Messergebnis	Für die Bewertung herangezogenes Ergebnis lt. Angabe der Teilnehmenden (maximal 5 Nachkommastellen dargestellt). Bei Eignungsprüfungsrunden mit Vorgabe von unabhängigen Mehrfachbestimmungen, entspricht dies dem berechneten Mittelwert aus den einzelnen Messwerten der Teilnehmenden.
± U	kombinierte Messunsicherheit ohne Erweiterungsfaktor (k=1) lt. Angabe der Teilnehmenden (maximal 5 Nachkommastellen dargestellt)
BG	Bestimmungsgrenze
NG	Nachweisgrenze
WF	Wiederfindungsrate in %, bezogen auf den zugewiesenen Wert (angegeben auf 3 signifikante Stellen, dargestellt maximal 1 Nachkommastelle)
MW	Mittelwert
z-Score	Abweichung des Messergebnisses zum zugewiesenen Wert, ausgedrückt als Vielfaches des Kriteriums (angegeben auf 3 signifikante Stellen, dargestellt maximal 2 Nachkommastellen)
E <sub>n</sub> -Score	Abweichung des Messergebnisses zum zugewiesenen Wert, ausgedrückt als Vielfaches der kombinierten Messunsicherheiten, bestehend aus erweiterter Unsicherheit des zugewiesenen Wertes und der erweiterten Unsicherheit der Messergebnisse der Teilnehmenden (angegeben auf 3 signifikante Stellen, dargestellt maximal 2 Nachkommastellen). Beim E <sub>n</sub> -Score erfolgt die Berücksichtigung der Messunsicherheit der Teilnehmenden.
-	Keine Daten übermittelt bzw. keine Berechnung möglich
Anmerkungen	Anmerkungen zum jeweiligen Messergebnis (z.B. H, FN, FP)
H	Ausreißer nach dem Hampel-Test

FN	Falsch negativ – Messergebnis kleiner Bestimmungs- bzw. Nachweisgrenze dessen Betrag die Bedingungen eines Ausreißers nach dem Hampeltest erfüllt.
FP	Falsch positiv – Falls aufgrund des geringen Analytgehalts kein zugewiesener Wert ermittelt werden kann ( $n < 6$ ), wird der Median der Beträge der übermittelten Nachweis- bzw. Bestimmungsgrenzen ermittelt. Als falsch positiv wird ein Messergebnis bewertet, welches diesen Median um mehr als 100 % übersteigt.
Standardabweichung	Vergleichsstandardabweichung berechnet aus den Ergebnissen der Teilnehmenden des aktuellen Ringversuchs (angegeben auf 3 signifikante Stellen)
rel. Standardabweichung	relative Vergleichsstandardabweichung in %, berechnet aus den Ergebnissen der Teilnehmenden des aktuellen Ringversuchs bezogen auf den Mittelwert (angegeben auf 3 signifikante Stellen)
n	Anzahl der Messergebnisse
*	Kennzeichnung für Hinweise zur Erläuterung

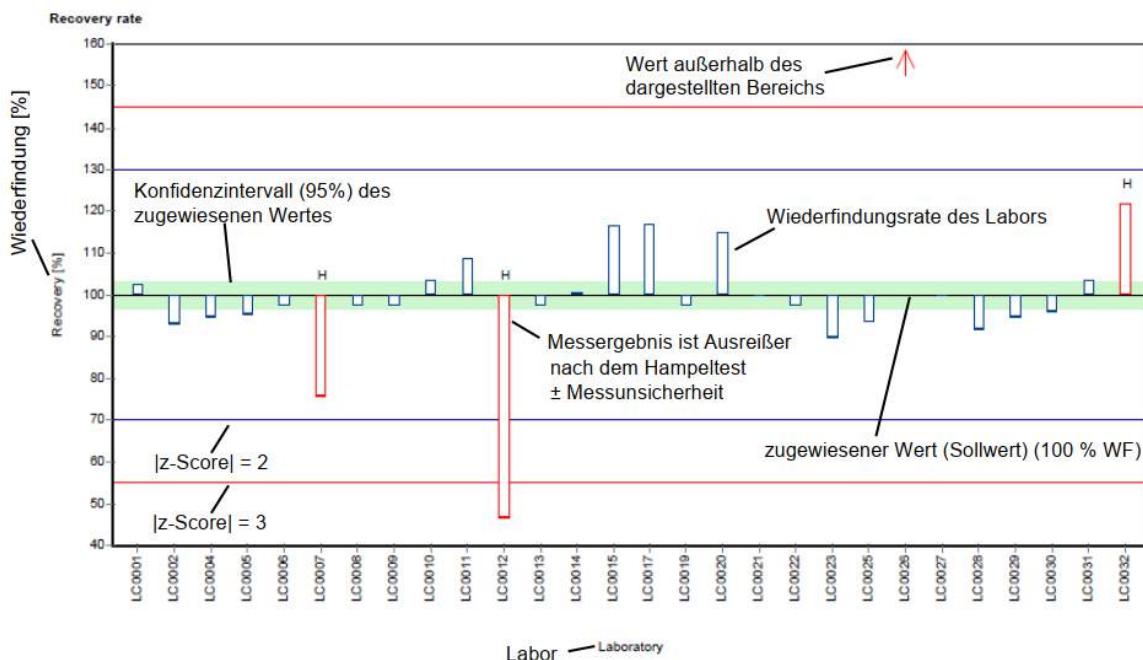
## D5.2. Graphische Darstellung der Ergebnisse

Nachfolgend wird die graphische Darstellung anhand von kommentierten Beispieldiagrammen erläutert.

### Beispieldiagramm: Messwerte

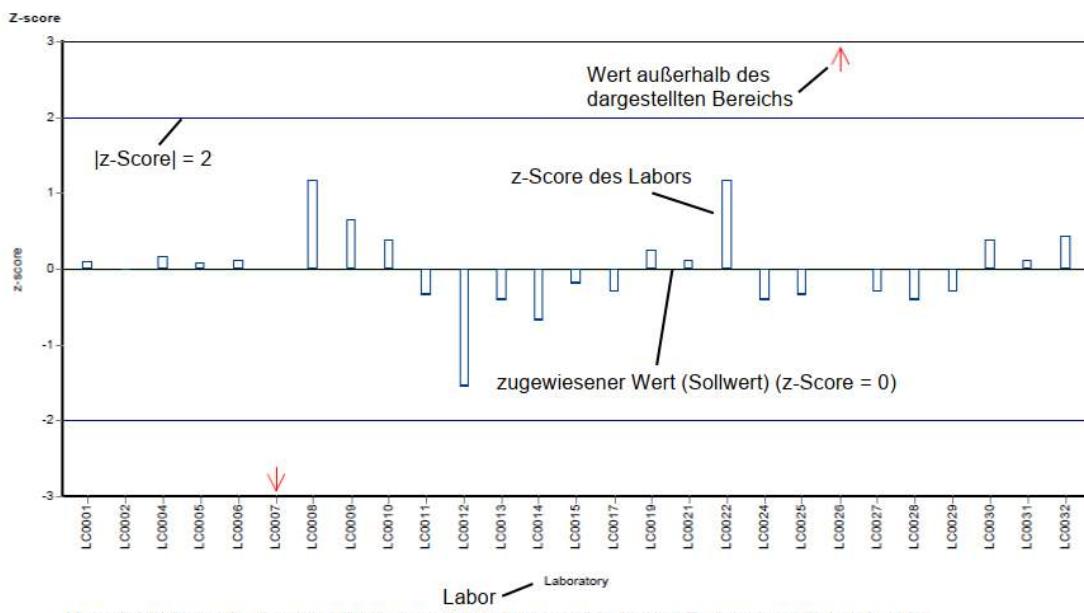


### Beispieldiagramm: Wiederfindung zum zugewiesenen Wert



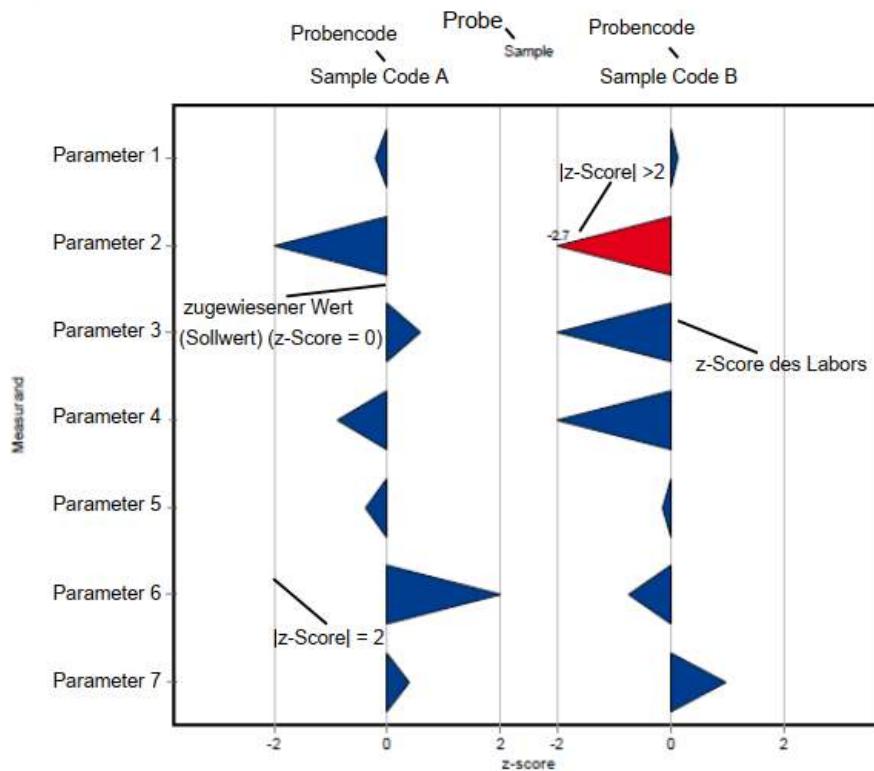
Unterschiedliche Analysenmethoden werden mit unterschiedlichen Farben kenntlich gemacht.

### Beispieldiagramm: z-Score

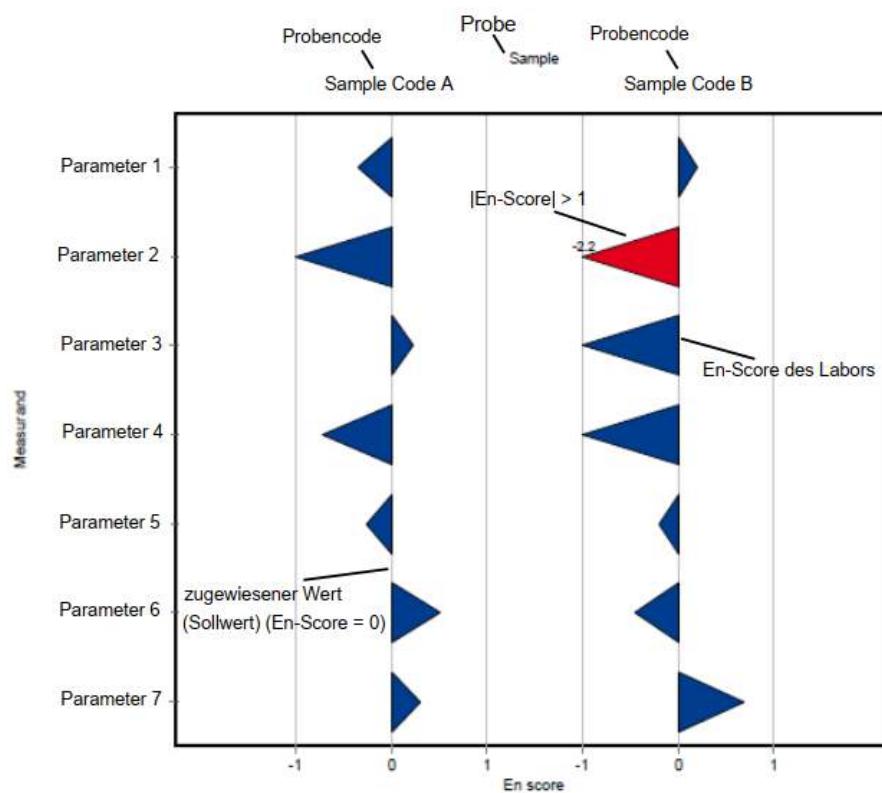


Unterschiedliche Analysenmethoden werden mit unterschiedlichen Farben kenntlich gemacht.

### Beispieldiagramm: z-Score (labororientierte Auswertung)



### Beispieldiagramm: En-Score (labororientierte Auswertung)



## D6. Zusammenfassung

### D6.1. Tabelle der zugewiesenen Werte

Parameter	Probe	Einheit	zugewiesener ±	U (k=2)	Kriterium	Kriterium [%]
Aluminium	M165 A	µg/l	318 ±	9	47.7	15
	M165 B	µg/l	53.6 ±	2.35	8.04	15
Arsen	M165 A	µg/l	5.86 ±	0.245	0.761	13
	M165 B	µg/l	29.8 ±	1.13	3.88	13
Cadmium	M165 A	µg/l	1.64 ±	0.0718	0.164	10
	M165 B	µg/l	12.9 ±	0.534	1.29	10
Chrom	M165 A	µg/l	13.2 ±	0.432	1.12	8.5
	M165 B	µg/l	59.1 ±	1.42	5.03	8.5
Kupfer	M165 A	µg/l	12.5 ±	0.473	1.13	9
	M165 B	µg/l	10.7 ±	0.28	0.963	9
Eisen	M165 A	µg/l	118 ±	3.21	13	11
	M165 B	µg/l	30.3 ±	1.28	3.33	11
Blei	M165 A	µg/l	2.14 ±	0.0665	0.32	15
	M165 B	µg/l	6.45 ±	0.323	0.968	15
Mangan	M165 A	µg/l	33.8 ±	1.02	2.43	7.2
	M165 B	µg/l	7.91 ±	0.339	0.632	8
Quecksilber	M165 A Hg	µg/l	3.73 ±	0.197	0.522	14
	M165 B Hg	µg/l	1.64 ±	0.0704	0.23	14
Nickel	M165 A	µg/l	4.42 ±	0.275	0.53	12
	M165 B	µg/l	26.1 ±	0.637	3.13	12
Selen	M165 A	µg/l	13.9 ±	0.565	1.67	12
	M165 B	µg/l	4.79 ±	0.282	0.575	12
Uran	M165 A	µg/l	3.6 ±	0.318	0.54	15
	M165 B	µg/l	2.35 ±	0.139	0.246	10.5
Zink	M165 A	µg/l	168 ±	4.7	15.1	9
	M165 B	µg/l	235 ±	7.06	21.1	9

## D6.2. Zusammenfassung der ausreißerbereinigten Ringversuchsergebnisse

Parameter	Probe	Anzahl Labors für Berechnung	Anzahl Ausreißer Labors	Einheit	Mittelwert	± VB (99%)	Minimum	Maximum	sR	vR [%]
Aluminium	M165 A	22	1	µg/l	317	± 12.2	282	353	19	6
	M165 B	19	2	µg/l	53.6	± 3.53	43.3	66	5.13	9.6
Arsen	M165 A	16	4	µg/l	5.86	± 0.368	4.8	6.89	0.491	8.4
	M165 B	18	2	µg/l	29.8	± 1.69	25.5	33.5	2.39	8
Cadmium	M165 A	16	2	µg/l	1.65	± 0.0998	1.38	1.87	0.133	8.1
	M165 B	18	1	µg/l	12.9	± 0.903	9.64	14.2	1.28	9.9
Chrom	M165 A	19	1	µg/l	13.4	± 0.64	11.5	15.1	0.93	6.9
	M165 B	17	2	µg/l	58.9	± 2.44	50.6	63	3.35	5.7
Kupfer	M165 A	20	1	µg/l	12.5	± 0.72	10.7	15	1.07	8.6
	M165 B	17	3	µg/l	10.8	± 0.454	9.67	12.1	0.625	5.8
Eisen	M165 A	20	2	µg/l	117	± 4.87	104	127	7.27	6.2
	M165 B	17	4	µg/l	29.8	± 2.7	18.8	35	3.71	12
Blei	M165 A	14	4	µg/l	2.13	± 0.0857	1.95	2.31	0.107	5
	M165 B	16	3	µg/l	6.47	± 0.455	5.28	8	0.606	9.4
Mangan	M165 A	20	2	µg/l	33.9	± 1.34	29.9	38	1.99	5.9
	M165 B	16	1	µg/l	8.01	± 0.52	6.66	9.55	0.693	8.7
Quecksilber	M165 A Hg	16	1	µg/l	3.73	± 0.296	3.08	4.44	0.394	11
	M165 B Hg	13	3	µg/l	1.64	± 0.106	1.51	1.96	0.127	7.7
Nickel	M165 A	17	1	µg/l	4.47	± 0.442	3.27	5.76	0.607	14
	M165 B	17	1	µg/l	25.9	± 0.931	23.7	28	1.28	4.9
Selen	M165 A	12	3	µg/l	13.9	± 0.848	12.3	16.1	0.979	7
	M165 B	12	2	µg/l	4.79	± 0.424	3.98	5.65	0.489	10
Uran	M165 A	14	0	µg/l	3.58	± 0.388	2.49	4.39	0.484	14
	M165 B	12	1	µg/l	2.35	± 0.208	2.07	2.75	0.24	10
Zink	M165 A	19	1	µg/l	168	± 7.05	155	192	10.2	6.1
	M165 B	19	1	µg/l	235	± 10.6	210	266	15.4	6.6

## **E1. Description of the proficiency test**

### **E1.1. Design and implementation**

- Number of registrations: 24
- Number of submitted data records: 24
  - Dispatch of samples: February 07<sup>th</sup>, 2023
- Closing date for submission of data: March 07<sup>th</sup>, 2023

The results were submitted electronically by a password-protected online data entry. Upon completion of the data entry, the participant confirmed the complete and correct entry of all data and the authorization of the results for evaluation.

To anonymize results, each laboratory was given a laboratory code on a random basis.

### **E1.2. Description of the proficiency test items**

The sampling of ground water and surface water were both carried out on 02<sup>nd</sup> of February 2023.

The following samples were made available

- 1 sample ground water (M165 A)
- 1 sample surface water (M165 B)

Both samples were filtered using 0.45 µm membrane disc filters and stored at 4 +/- 3 °C until further processing. The samples were partly spiked with specific substances.

The samples were filled into bottles under continuous stirring (stirring vessel) and stabilized by addition of 1 % HNO<sub>3</sub> and 1 % HCl (for Hg only), respectively.

The homogeneous proficiency test items were dispatched on February 07<sup>th</sup>, 2023.

Each participant received:

- 2 samples each 350 ml, filled in 1 x 250 ml LDPE bottle and 1 x 100 ml LDPE bottle (for Hg) respectively.

### **E1.3. Instructions for the participants**

For reasons of stability, it was recommended to start the analysis by the 15<sup>th</sup> of February 2023 at the latest.

The participants are expected to use the test method or measurement method of their choice, which should be consistent with their routine procedures. In E9 you will find the overview of applied methods in course of the proficiency testing.

#### **E1.4. Control testing for homogeneity evaluation**

During filling of the bottles, aliquots of each sample were collected randomly for control testing. From each of the samples A and B, n=5 control test samples and n=1 unspiked real water sample were transferred to the laboratory for control testing.

All parameters were tested in the testing laboratory at the Environment Agency Austria (Prüfstelle für Umwelt-, GVO- & Treibstoffanalytik) close to the time of sample dispatch.

During evaluation the relative standard deviation between the individual results of the control test samples was assessed for each parameter by comparison with the reproducibility standard deviation of the actual proficiency test.

In the parameter-oriented evaluation (E7), the results of the control testing are given in the form of arithmetic means of the detected concentrations  $\pm$  expanded measurement uncertainty as control test value  $\pm U$  (expanded uncertainty, k=2).

#### **E1.5. Trend test for stability evaluation**

The evaluation of stability of the proficiency test items was performed using the data statistics of the results of previous proficiency testing rounds for real water samples of the period from 2013 to 2021.

The assessment of the stability of the proficiency test items of the current round was carried out by evaluation of all participant results sorted by analysis date (until submission deadline): No systematic trends were identified.

Using all participants results, it was furthermore tested if systematic trends could be detected depending on the order in which the bottles were filled for the proficiency test: No systematic trends could be identified.

According to data obtained from previous rounds for real water samples and based on the trend test evaluation of the current round, the stability of the test items for proficiency testing of real water samples can be confirmed for the recommended analysis period until deadline for submission of data.

## E1.6. Determination of the assigned values

The analytical results had to be made available to the organiser not later than 07<sup>th</sup> of March 2023. Any values received at a later date were not considered.

In the course of the plausibility assessment of all received data (e.g. check for correct units, indication of measurement uncertainty, ...) the participants with noticeable results were asked to perform a subsequent data check and to give a prompt feedback within 24 h.

After plausibility assessment an outlier test according to Hampel was performed to identify outliers. Values identified as conspicuous are marked specifically in the parameter-oriented evaluation ('H').

In justified cases, for instance, when the outlier test according to Hampel is not applicable (e.g. many similar or identical results of the participants or in case of a very limited number of highly scattering results) a different outlier identification method can be applied (e.g. Dean and Dixon outlier test or manual outlier elimination by expert judgement). In such a case, this procedure is documented in section E4 of the report.

Further data evaluation was performed in accordance with ISO 5725-2. A statistical evaluation of proficiency testing data was only carried out if at least 6 valid results per parameter were available. Results < LOQ or < LOD are not included in the calculation for the assigned value.

The assigned values are normally calculated as the mean over all submitted results, after removal of outliers.

For real water samples in some exceptional cases it might occur, that no assigned value based on participants' results can be calculated and no evaluation of the participants results can be made. E.g due to large variations in the participant results ( $\sqrt{R} > 50\%$ ) and/or insufficient traceability of the calculated mean of all participants after outlier-clearing to the mean of control testing or if the number of results (without outliers) of the group of accredited testing laboratories is too low.

In this case, a clear statement in section E7 of the report is made and all provided statistical data are for information only. In section E4 further information is given, when applicable, for each parameter and proficiency test item. In course of the internal quality measures, the participants can compare their results with the control test values.

## E2. Criteria of performance evaluation

### E2.1. Performance criterion z-Score

The adjusted average value (after removal of outliers) for all submitted results was used as a basis for the calculation of recovery rates and z-scores.

z-Scores were calculated on the basis of the following formula:

$$z\text{-score} = \frac{x_i - \bar{X}}{\text{Criteria}}$$

In this context,

$x_i$	is the measurement value (result) of the participating laboratory;
$\bar{X}$	assigned value
	the target value for the assessment of the performance of the participants (3 significant digits), normally the average value of the participants' results after removal of outliers; if this approach is not applicable, the target value is assigned according to the procedure given in section E4
Criteria	is the reproducibility standard deviation calculated from previous rounds for proficiency testing for real water samples from 2013 to 2021 (as RSD pooled) or from the participants' results after removal of outliers (sR) in the current round (if less than 6 previous rounds for the parameters of real water samples A and B are available). Where justified (e.g. results for real water samples are close to minimum quantification limit or in case of regulatory requirements) the criteria is defined by expert judgement and the procedure is clearly described in section E4 of the report.

### E2.2. Performance criterion E<sub>n</sub>-Score

Since 2019 additional assessment of the participants' results using E<sub>n</sub>-Scores for proficiency testing of real water samples is performed. This additional assessment takes into account the expanded measurement uncertainties of the participants results and the expanded uncertainty of the assigned value and is provided in the laboratory oriented part of the report (see E8 after the z-scores evaluation).

E<sub>n</sub>-Scores were calculated on the basis of the following formula:

$$E_n\text{-score} = \frac{x_i - \bar{X}}{\sqrt{U(x_i)^2 + U(\bar{X})^2}}$$

In this context,

$x_i$	is the measurement value (result) of the participating laboratory
$\bar{X}$	assigned value the target value for the assessment of the performance of the participants (3 significant digits), normally the average value of the participants' results after removal of outliers; if this approach is not applicable, the target value is assigned according to the procedure given in section E4
$U(x_i)$	expanded measurement uncertainty for the result of the participating laboratory, $k=2$
$U(\bar{X})$	expanded measurement uncertainty for the assigned value, $k=2$

### E2.3. Performance evaluation z-Score and $E_n$ -Score

#### Interpretation of z-Scores:

- $|z\text{-Score}| \leq 2.0$  good result
- $2.0 < |z\text{-Score}| < 3.0$  questionable result
- $|z\text{-Score}| \geq 3.0$  unsatisfactory result

Note: In case of assessment of the participants' performance by z-scores the measurement uncertainty of the participants' results is not taken into account. The difference between result of participants and the assigned value is evaluated by the criteria.

#### Interpretation of $E_n$ -Scores:

- $|E_n\text{-Score}| \leq 1.0$  satisfactory performance
- $|E_n\text{-Score}| > 1.0$  unsatisfactory performance

Note: In case of assessment of the participants' performance by  $E_n$ -Scores the expanded measurement uncertainties for the results and for the assigned values are taken into account.  $|E_n\text{-Score}| > 1.0$  might indicate to check the measurement uncertainty estimation or might point out to correct a measurement problem.

## E3. Representation and interpretation of measurement results

The parameter-oriented report provides the measurement values (results) including uncertainty ( $\pm U$ ), recovery rate, calculated z-Score and the outliers in tabular form. The results listed in the table are also represented graphically.

The laboratory oriented report shows the results of the individual laboratories (anonymous), including the measurement uncertainty ( $\pm U$ ), recovery rates, z-Scores and additionally evaluation of  $E_n$ -Scores on separate pages.

The tables also contain the basis for the data assessment as the assigned values and expanded measurement uncertainties and the criteria.

An annotation of the tables and graphics is given in section E5.

## **E4. Explanatory notes**

As explained in section E2, the z-Score can also be calculated using the reproducibility standard deviation, calculated from the participants' results (after removal of outliers) in the relevant test round. It might occur that the z-Score between -2 and 2 covers a large range of measurement values when the variance of the results is high. On the other hand, the range of good results can be very narrow, when the variation of the participants' results is small.

The recovery rate is calculated for the individual result based on the assigned value and is thus independent of the reproducibility standard deviation. In the case of a high variance of the results, participants should also consider recovery rates as additional criteria to decide on the necessity of internal quality assurance measures.

As a result of a long-term evaluation of 9 proficiency testing rounds (2013–2021 in real samples, evaluation criteria (RSDpool) were calculated.

These criteria were compared with the relative reproducibility standard deviation (vR) of the current proficiency testing.

Parameters Arsenic, Mercury, Selenium and Zinc sample M165 A and parameters Aluminium, Arsenic, Mercury, Selenium and Zinc sample M165 B: Scores for all listed parameters were calculated according to E2.

Parameters Aluminium, Cadmium, Chromium, Copper, Iron, Manganese, Nickel, Lead and Uranium sample M165 A and parameters Cadmium, Chromium, Copper, Iron, Manganese, Nickel and Lead sample M165 B:

The assigned values calculated based on the participant results were outside of the measurement uncertainty of the control test value and thus traceability could not be proven by this procedure. Therefore, new assigned values were defined by the group of accredited participating laboratories after outlier-assessment.

Parameter Uranium sample M165 A and parameters Manganese and Uranium sample M165 B: For these parameters a reproducibility standard deviation (vR) from the accredited participating laboratories of 15 % for Uranium sample M165 A, 8 % for

Manganese sample M165 B and 10.5 % for Uranium sample M165 B was chosen for assessment.

## E5. Annotations on tables and charts

### E5.1. Information and abbreviations in tables

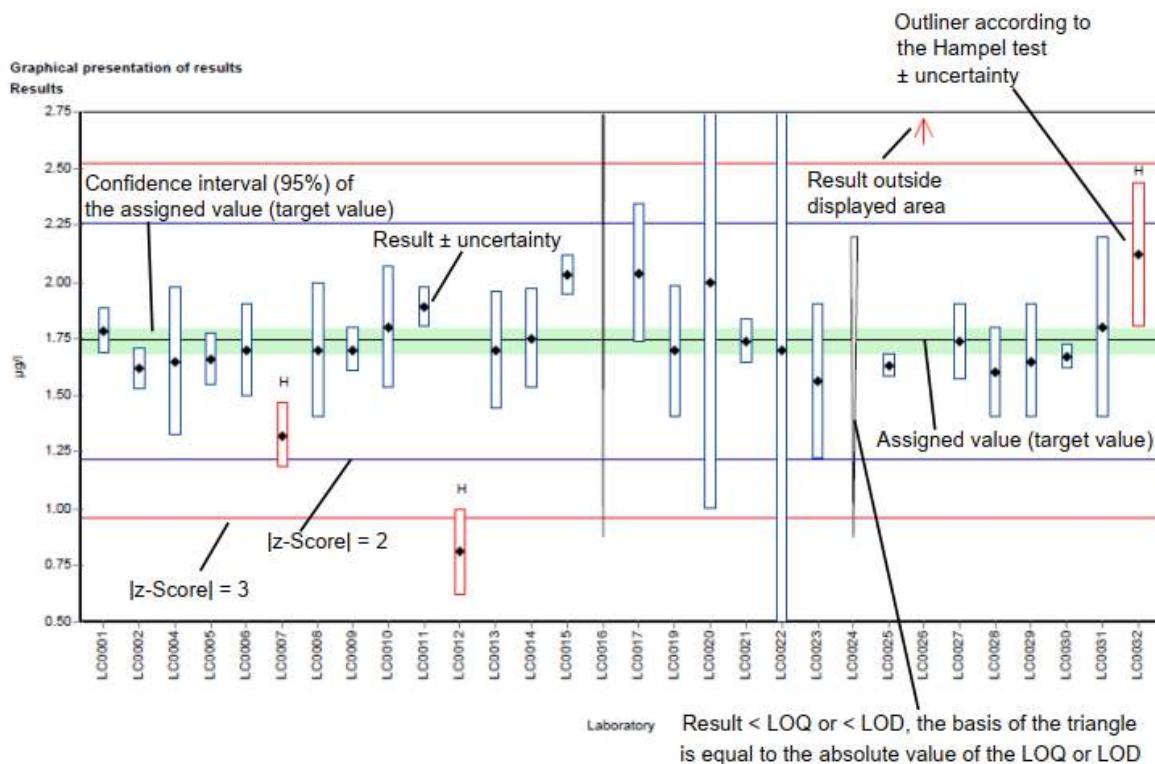
Parameter	Analyte identifier
Sample	Sample identifier
Unit	Given unit for result and uncertainty (e.g. µg/l)
Assigned value	Target value for proficiency assessment of the participants (3 significant digits)
U (k=2)	Expanded uncertainty (k=2) of the assigned value (3 significant digits)
Criteria	Specified value for the determination of the z-score in the given unit (3 significant digits)
Criteria [%]	Specified value for the determination of the z-score in % of the assigned value (2 significant digits)
Mean	Mean of the participants results, without outliers (3 significant digits)
CI (99 %)	99 % confidence interval (3 significant digits)
Minimum	Minimum of all submitted results, after removal of outliers (3 significant digits)
Maximum	Maximum of all submitted results, after removal of outliers (3 significant digits)
SD	Reproducibility standard deviation, calculated from the participants results, after removal of outliers (3 significant digits)
RSD %	Reproducibility standard deviation, calculated from the participants results relative to the target value, given in %, after removal of outliers (2 significant digits)
Control test value ± U (k=2)	Mean of control test value ± expanded measurement uncertainty (3 significant digits)
Labcode	Laboratory identifier (anonymized)
Result	Result as indicated by participant (max. 5 decimal places)
± U	combined measurement uncertainty without expansion factor (k=1), as indicated by participant (max. 5 decimal places)
LOQ	Limit of quantification
LOD	Limit of detection

Recovery	Recovery rate in % based on assigned value (target value) (3 significant digits, max. one decimal place given)
z-Score	Deviation of result based on the assigned value (target value) given as a multiple of the criteria (3 significant digits, max. 2 decimal places given)
$E_n$ -Score	Deviation of result based on the assigned value (target value) given as a multiple of the combined expanded measurement uncertainty of the participant's results and expanded measurement uncertainty for the assigned value (3 significant digits, max. 2 decimal places given). Note: $E_n$ -Score assessment takes into account the measurement uncertainty of the participants.
-	No data available or no calculation possible
Comments	Comment on the respective result (e.g. H, FN, FP)
H	Outlier according to Hampel-Test
FN	False negative – for a result < LOQ or result < LOD: The absolute value of the LOQ or LOD fulfils the condition of an outlier according to the Hampel test.
FP	False positive – for parameters where no target value is available because of a too low analyte content ( $n < 6$ ): Result that exceeds the median of the absolute values of the transmitted LOQs or LODs by more than 100 %.
Standard deviation	Reproducibility standard deviation, calculated from the participants results (3 significant digits)
Rel. standard deviation	Reproducibility standard deviation, calculated from the participants results relative to the target value, given in %, (3 significant digits)
n	Number of results
*	mark for additional comments

## E5.2. Graphical presentation of results

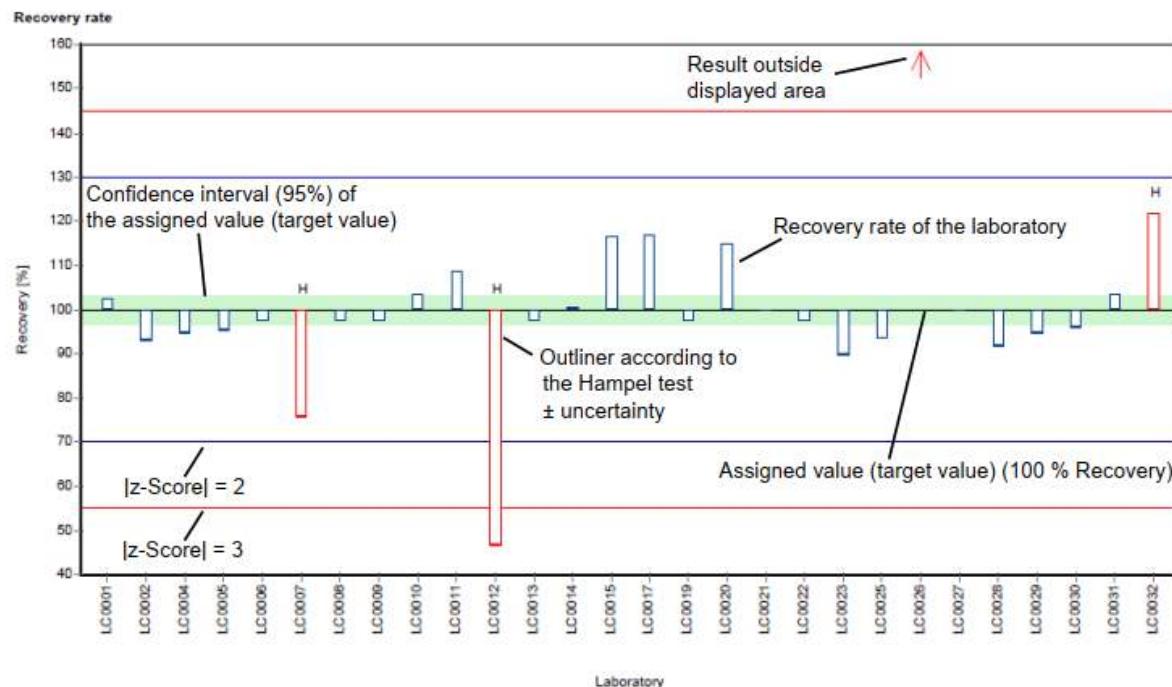
The graphic representation in the report is explained below by means of commented example diagrams:

### Example chart: Results



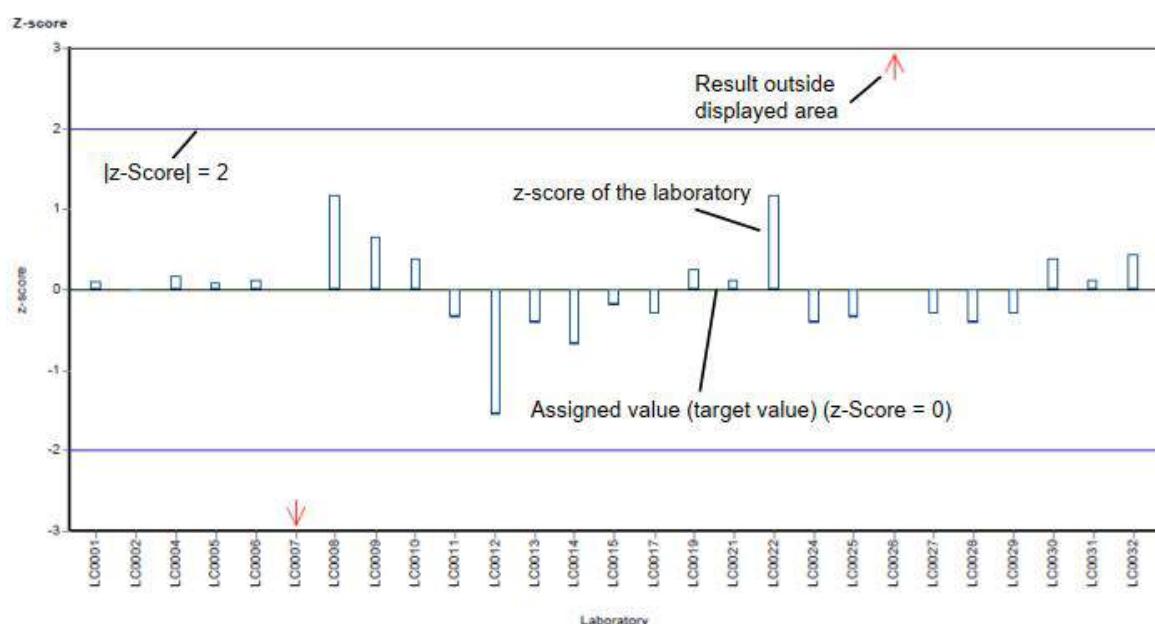
Different analysis methods are represented with different colors.

### Example chart: Recovery



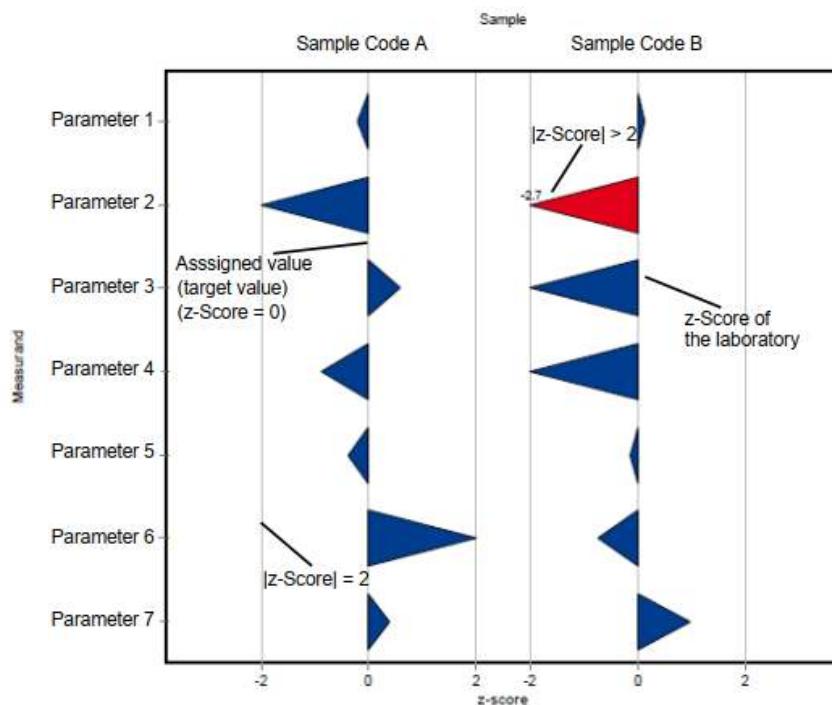
Different analysis methods are represented with different colors.

### Example chart: z-Score

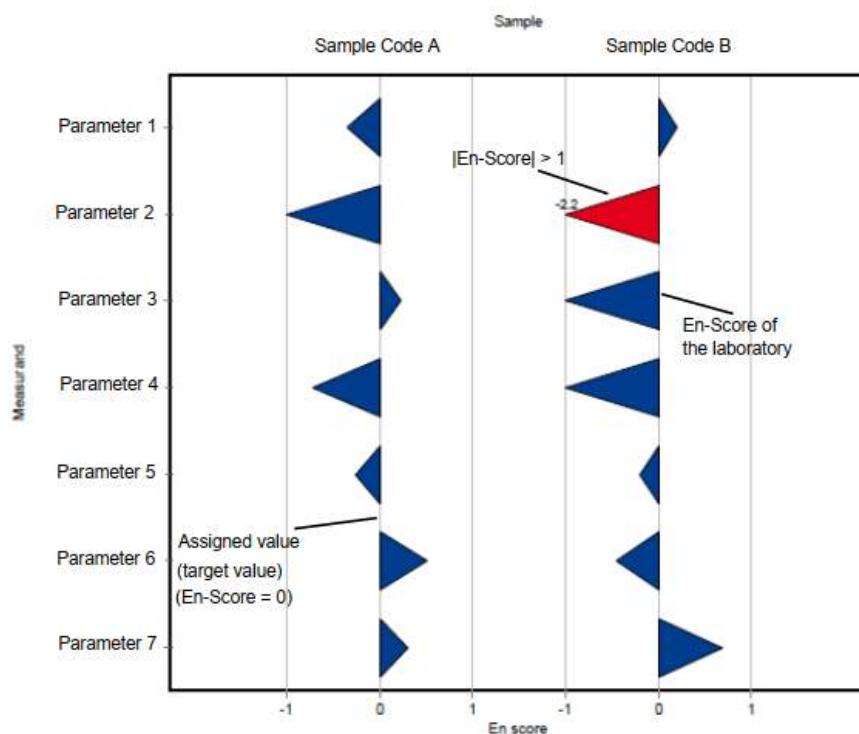


Different analysis methods are represented with different colors.

**Example chart: z-Score (laboratory oriented report)**



**Example chart: En-Score (laboratory oriented report)**



## E6. Summary

### E6.1. Table of assigned values

Parameter	Sample	Unit	Assigned value	$\pm$	U (k=2)	Criterion	Criterion [%]
Aluminium	M165 A	$\mu\text{g/l}$	318	$\pm$	9	47.7	15
	M165 B	$\mu\text{g/l}$	53.6	$\pm$	2.35	8.04	15
Arsenic	M165 A	$\mu\text{g/l}$	5.86	$\pm$	0.245	0.761	13
	M165 B	$\mu\text{g/l}$	29.8	$\pm$	1.13	3.88	13
Cadmium	M165 A	$\mu\text{g/l}$	1.64	$\pm$	0.0718	0.164	10
	M165 B	$\mu\text{g/l}$	12.9	$\pm$	0.534	1.29	10
Chromium	M165 A	$\mu\text{g/l}$	13.2	$\pm$	0.432	1.12	8.5
	M165 B	$\mu\text{g/l}$	59.1	$\pm$	1.42	5.03	8.5
Copper	M165 A	$\mu\text{g/l}$	12.5	$\pm$	0.473	1.13	9
	M165 B	$\mu\text{g/l}$	10.7	$\pm$	0.28	0.963	9
Iron	M165 A	$\mu\text{g/l}$	118	$\pm$	3.21	13	11
	M165 B	$\mu\text{g/l}$	30.3	$\pm$	1.28	3.33	11
Lead	M165 A	$\mu\text{g/l}$	2.14	$\pm$	0.0665	0.32	15
	M165 B	$\mu\text{g/l}$	6.45	$\pm$	0.323	0.968	15
Manganese	M165 A	$\mu\text{g/l}$	33.8	$\pm$	1.02	2.43	7.2
	M165 B	$\mu\text{g/l}$	7.91	$\pm$	0.339	0.632	8
Mercury	M165 A Hg	$\mu\text{g/l}$	3.73	$\pm$	0.197	0.522	14
	M165 B Hg	$\mu\text{g/l}$	1.64	$\pm$	0.0704	0.23	14
Nickel	M165 A	$\mu\text{g/l}$	4.42	$\pm$	0.275	0.53	12
	M165 B	$\mu\text{g/l}$	26.1	$\pm$	0.637	3.13	12
Selenium	M165 A	$\mu\text{g/l}$	13.9	$\pm$	0.565	1.67	12
	M165 B	$\mu\text{g/l}$	4.79	$\pm$	0.282	0.575	12
Uranium	M165 A	$\mu\text{g/l}$	3.6	$\pm$	0.318	0.54	15
	M165 B	$\mu\text{g/l}$	2.35	$\pm$	0.139	0.246	10.5
Zinc	M165 A	$\mu\text{g/l}$	168	$\pm$	4.7	15.1	9
	M165 B	$\mu\text{g/l}$	235	$\pm$	7.06	21.1	9

## E6.2. Summary of results, after removal of outliers

Parameter	Sample	Number of results for calculation	Number of outliers	Unit	Mean	± CI (99%)	Minimum	Maximum	sR	vR [%]
Aluminium	M165 A	22	1	µg/l	317	± 12.2	282	353	19	6
	M165 B	19	2	µg/l	53.6	± 3.53	43.3	66	5.13	9.6
Arsenic	M165 A	16	4	µg/l	5.86	± 0.368	4.8	6.89	0.491	8.4
	M165 B	18	2	µg/l	29.8	± 1.69	25.5	33.5	2.39	8
Cadmium	M165 A	16	2	µg/l	1.65	± 0.0998	1.38	1.87	0.133	8.1
	M165 B	18	1	µg/l	12.9	± 0.903	9.64	14.2	1.28	9.9
Chromium	M165 A	19	1	µg/l	13.4	± 0.64	11.5	15.1	0.93	6.9
	M165 B	17	2	µg/l	58.9	± 2.44	50.6	63	3.35	5.7
Copper	M165 A	20	1	µg/l	12.5	± 0.72	10.7	15	1.07	8.6
	M165 B	17	3	µg/l	10.8	± 0.454	9.67	12.1	0.625	5.8
Iron	M165 A	20	2	µg/l	117	± 4.87	104	127	7.27	6.2
	M165 B	17	4	µg/l	29.8	± 2.7	18.8	35	3.71	12
Lead	M165 A	14	4	µg/l	2.13	± 0.0857	1.95	2.31	0.107	5
	M165 B	16	3	µg/l	6.47	± 0.455	5.28	8	0.606	9.4
Manganese	M165 A	20	2	µg/l	33.9	± 1.34	29.9	38	1.99	5.9
	M165 B	16	1	µg/l	8.01	± 0.52	6.66	9.55	0.693	8.7
Mercury	M165 A Hg	16	1	µg/l	3.73	± 0.296	3.08	4.44	0.394	11
	M165 B Hg	13	3	µg/l	1.64	± 0.106	1.51	1.96	0.127	7.7
Nickel	M165 A	17	1	µg/l	4.47	± 0.442	3.27	5.76	0.607	14
	M165 B	17	1	µg/l	25.9	± 0.931	23.7	28	1.28	4.9
Selenium	M165 A	12	3	µg/l	13.9	± 0.848	12.3	16.1	0.979	7
	M165 B	12	2	µg/l	4.79	± 0.424	3.98	5.65	0.489	10
Uranium	M165 A	14	0	µg/l	3.58	± 0.388	2.49	4.39	0.484	14
	M165 B	12	1	µg/l	2.35	± 0.208	2.07	2.75	0.24	10
Zinc	M165 A	19	1	µg/l	168	± 7.05	155	192	10.2	6.1
	M165 B	19	1	µg/l	235	± 10.6	210	266	15.4	6.6

## E7. Parameterorientierte Auswertung / Parameter oriented report

Aluminium .....	33
Arsenic .....	41
Cadmium.....	49
Chromium.....	57
Copper .....	65
Iron.....	73
Lead.....	81
Manganese .....	89
Mercury .....	97
Nickel .....	105
Selenium .....	113
Uranium.....	121
Zinc .....	129

Parameter oriented report Metals and trace elements  
M165

Sample: M165A, Parameter: Aluminium

## Parameter oriented report

### M165 A

#### Aluminium

Unit	µg/l
Assigned value ± U (k=2)	318 ± 9
Criterion	47.7 (15 %)
Minimum - Maximum	282 - 353
Control test value ± U (k=2)	262.0 ± 23.6

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	293.13	28.3	92.1	-0.52	
LC0002	306	26	96.2	-0.25	
LC0003	316	47.4	99.3	-0.04	
LC0004	326	16.3	102	0.17	
LC0005	-	-	-	-	
LC0006	326	29	102	0.17	
LC0007	339	50.9	107	0.44	
LC0008	335	3.29	105	0.35	
LC0009	297	59.4	93.4	-0.44	
LC0010	282	40	88.6	-0.76	
LC0011	301.44	54.2592	94.8	-0.35	
LC0012	337	8.185	106	0.4	
LC0013	335	33.5	105	0.35	
LC0014	346	69	109	0.58	
LC0015	298.81	11.71	93.9	-0.4	
LC0016	56	5.6	17.6	-5.49	H
LC0017	322	18	101	0.08	
LC0018	353	25	111	0.73	
LC0019	320.5	4	101	0.05	
LC0020	319.5	36.2	100	0.03	
LC0021	321	48	101	0.06	
LC0022	307	61.4	96.5	-0.23	
LC0023	300	60	94.3	-0.38	
LC0024	296	29	93.1	-0.46	

#### Characteristics of parameter

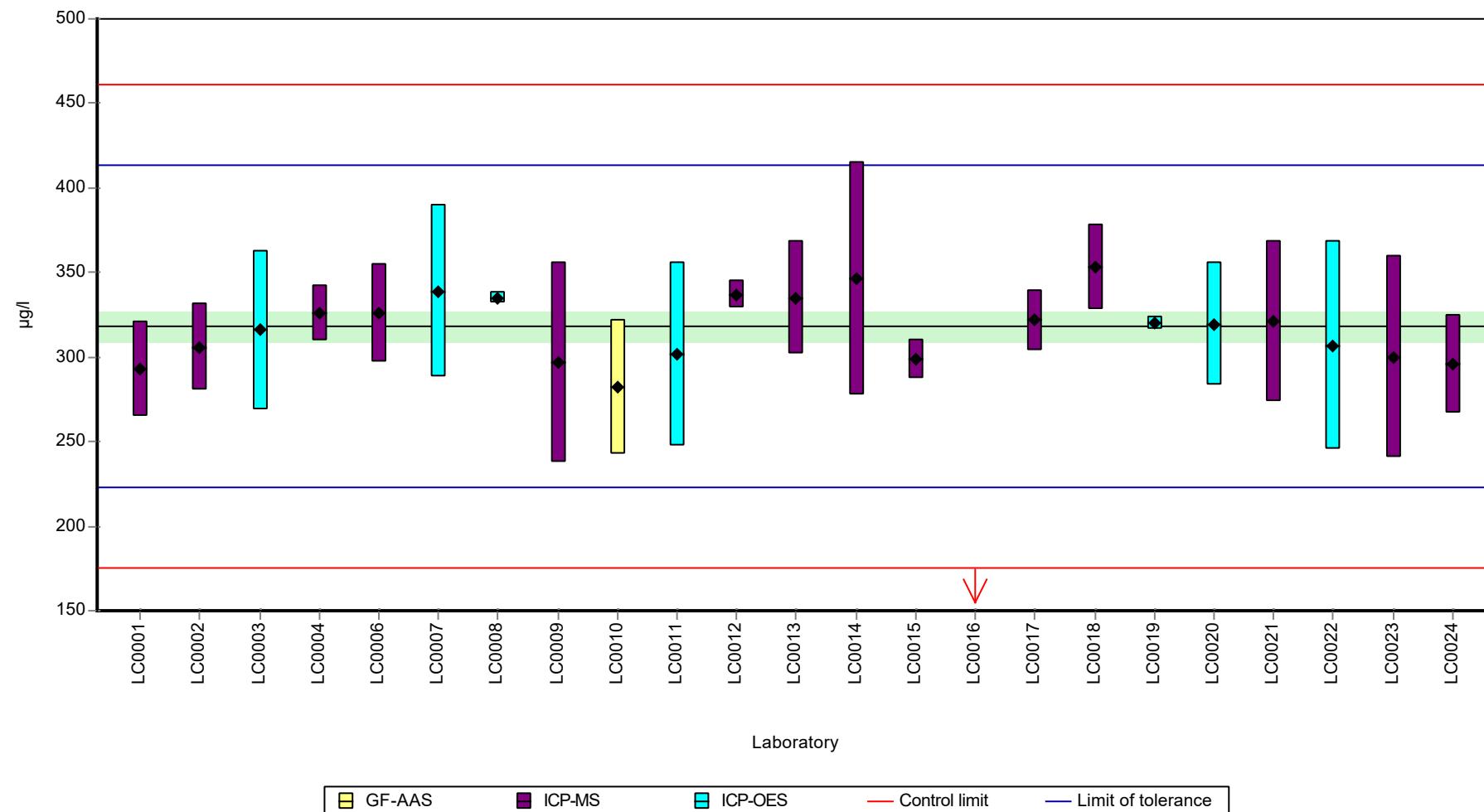
	all results	without outliers	Unit
Mean ± CI (99%)	306 ± 36	317 ± 12.2	µg/l
Minimum	56	282	µg/l
Maximum	353	353	µg/l
Standard deviation	57.5	19	µg/l
rel. standard deviation	18.8	6	%
n	23	22	-

Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Aluminium

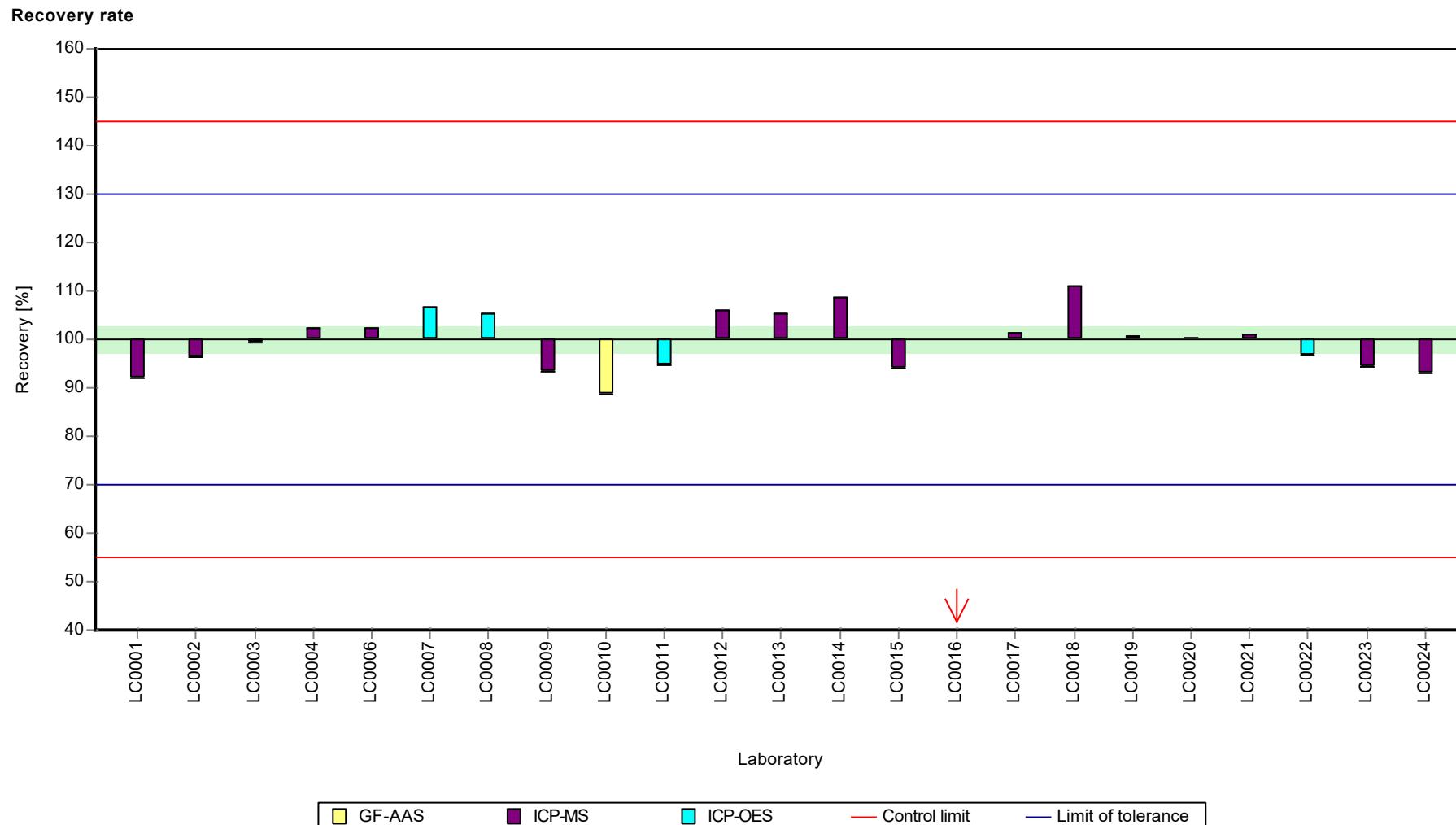
#### Graphical presentation of results

##### Results



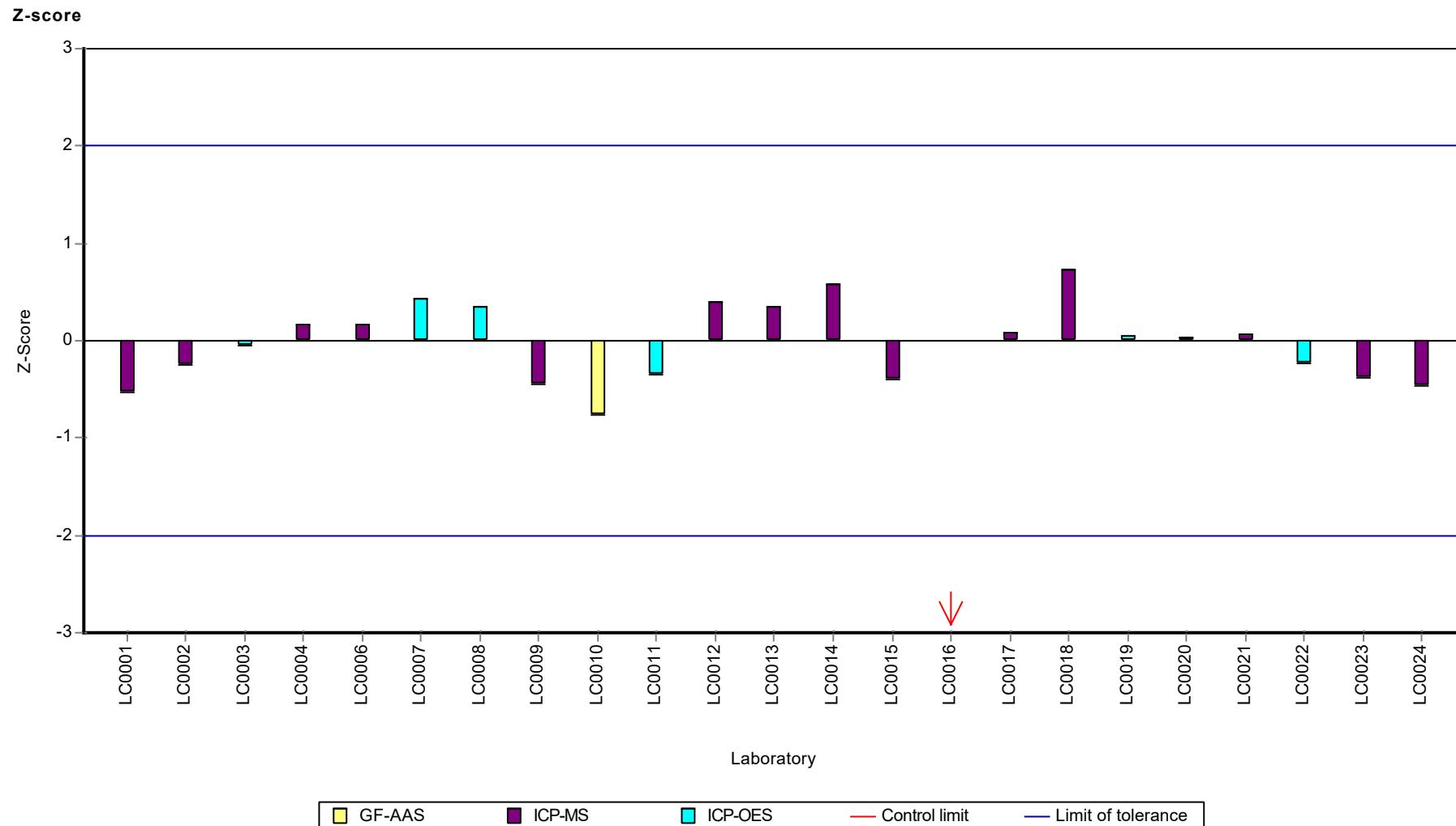
Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Aluminium



Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Aluminium



Parameter oriented report Metals and trace elements  
M165

Sample: M165B, Parameter: Aluminium

## Parameter oriented report

### M165 B

#### Aluminium

Unit	µg/l
Assigned value ± U (k=2)	53.6 ± 2.35
Criterion	8.04 (15 %)
Minimum - Maximum	43.3 - 66
Control test value ± U (k=2)	48.8 ± 4.39

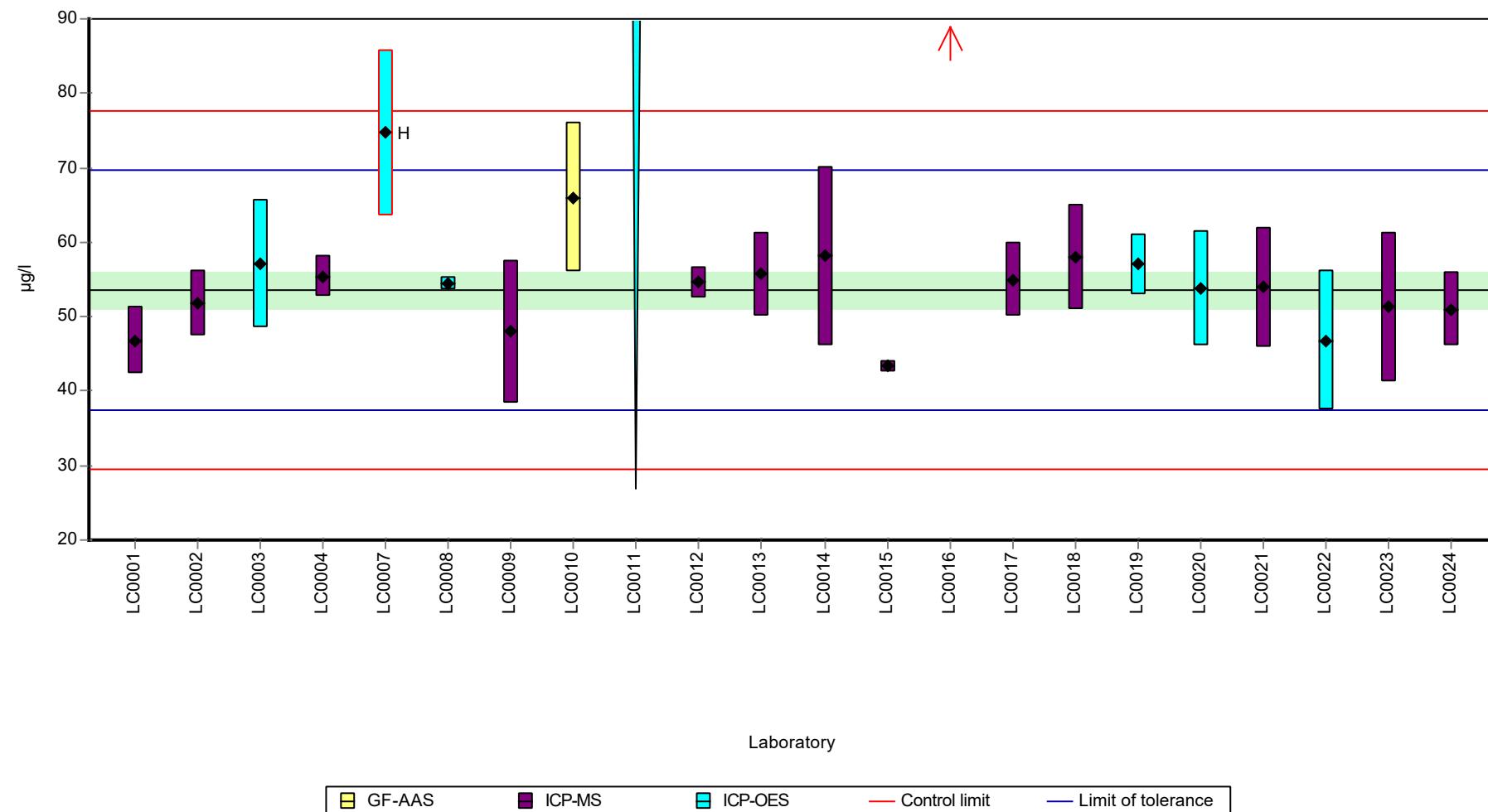
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	46.8	4.52	87.3	-0.84	
LC0002	51.9	4.41	96.8	-0.21	
LC0003	57.1	8.6	107	0.44	
LC0004	55.4	2.77	103	0.23	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	74.7	11.2	139	2.63	H
LC0008	54.5	0.846	102	0.11	
LC0009	48	9.6	89.6	-0.7	
LC0010	66	10	123	1.54	
LC0011	< 100 (LOQ)	-	-	-	
LC0012	54.6	2.042	102	0.13	
LC0013	55.7	5.57	104	0.26	
LC0014	58.1	12	108	0.56	
LC0015	43.31	0.704	80.8	-1.28	
LC0016	331	33.1	618	34.51	H
LC0017	55	5	103	0.18	
LC0018	58	7	108	0.55	
LC0019	57	4	106	0.42	
LC0020	53.8	7.8	100	0.03	
LC0021	53.9	8.08	101	0.04	
LC0022	46.8	9.36	87.3	-0.84	
LC0023	51.3	10	95.7	-0.28	
LC0024	51	4.9	95.2	-0.32	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	67.8 ± 39.7	53.6 ± 3.53	µg/l
Minimum	43.3	43.3	µg/l
Maximum	331	66	µg/l
Standard deviation	60.7	5.13	µg/l
rel. standard deviation	89.5	9.57	%
n	21	19	-

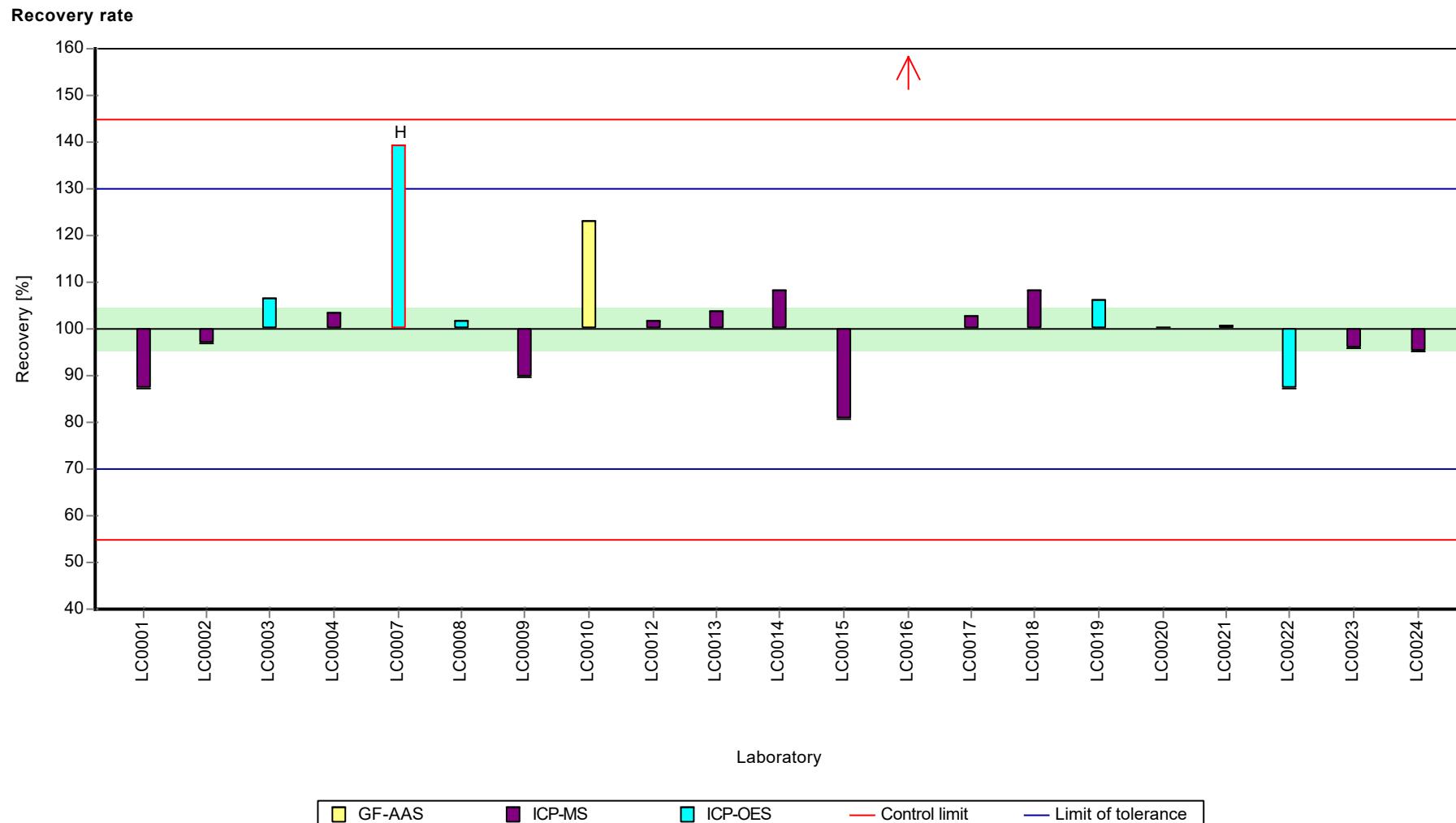
**Graphical presentation of results**

**Results**



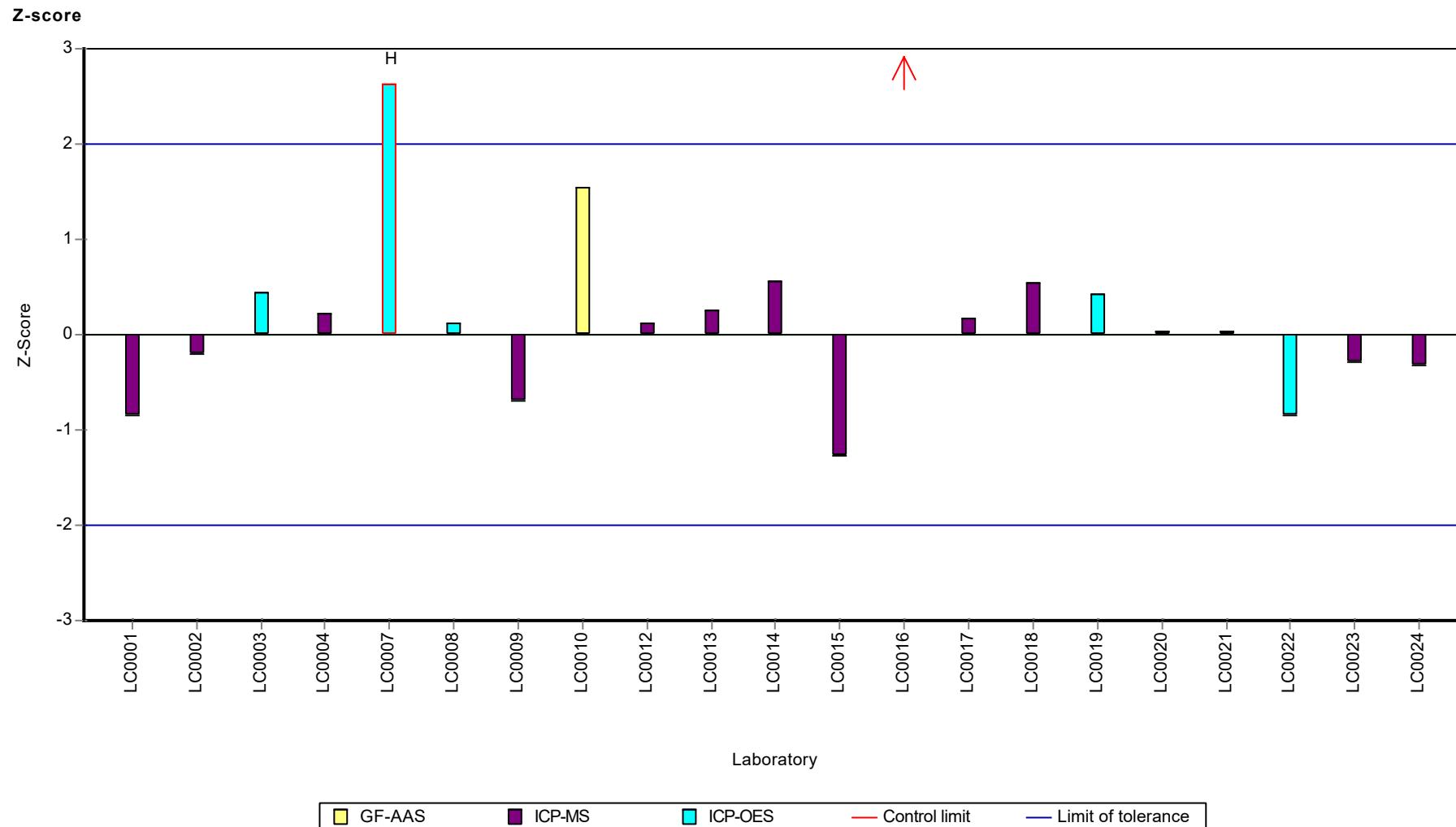
Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Aluminium



Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Aluminium



Parameter oriented report Metals and trace elements  
M165

Sample: M165A, Parameter: Arsenic

## Parameter oriented report

### M165 A

#### Arsenic

Unit	µg/l
Assigned value ± U (k=2)	5.86 ± 0.245
Criterion	0.761 (13 %)
Minimum - Maximum	4.8 - 6.89
Control test value ± U (k=2)	5.72 ± 0.63

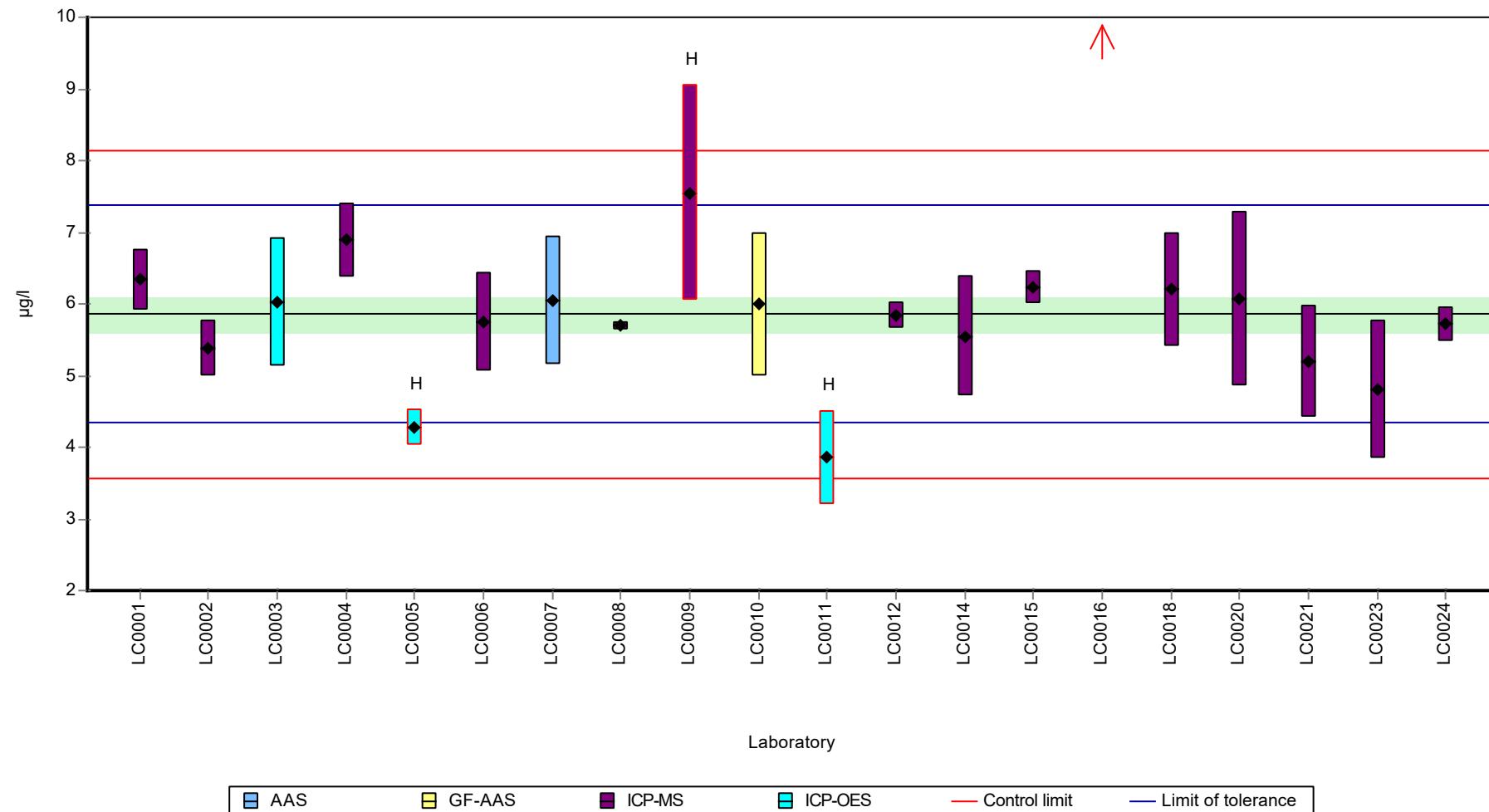
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	6.34	0.43	108	0.64	
LC0002	5.38	0.38	91.9	-0.63	
LC0003	6.02	0.9	103	0.22	
LC0004	6.89	0.52	118	1.36	
LC0005	4.27	0.25	72.9	-2.08	H
LC0006	5.74	0.69	98	-0.15	
LC0007	6.04	0.9	103	0.24	
LC0008	5.69	0.0617	97.2	-0.22	
LC0009	7.55	1.51	129	2.22	H
LC0010	6	1	102	0.19	
LC0011	3.86	0.6562	65.9	-2.62	H
LC0012	5.84	0.174	99.7	-0.02	
LC0013	-	-	-	-	
LC0014	5.55	0.83	94.8	-0.4	
LC0015	6.23	0.219	106	0.49	
LC0016	29	3.48	495	30.4	H
LC0017	-	-	-	-	
LC0018	6.2	0.8	106	0.45	
LC0019	-	-	-	-	
LC0020	6.06	1.22	103	0.27	
LC0021	5.2	0.78	88.8	-0.86	
LC0022	-	-	-	-	
LC0023	4.8	0.96	82	-1.39	
LC0024	5.72	0.24	97.7	-0.18	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	6.92 ± 3.53	5.86 ± 0.368	µg/l
Minimum	3.86	4.8	µg/l
Maximum	29	6.89	µg/l
Standard deviation	5.26	0.491	µg/l
rel. standard deviation	76	8.38	%
n	20	16	-

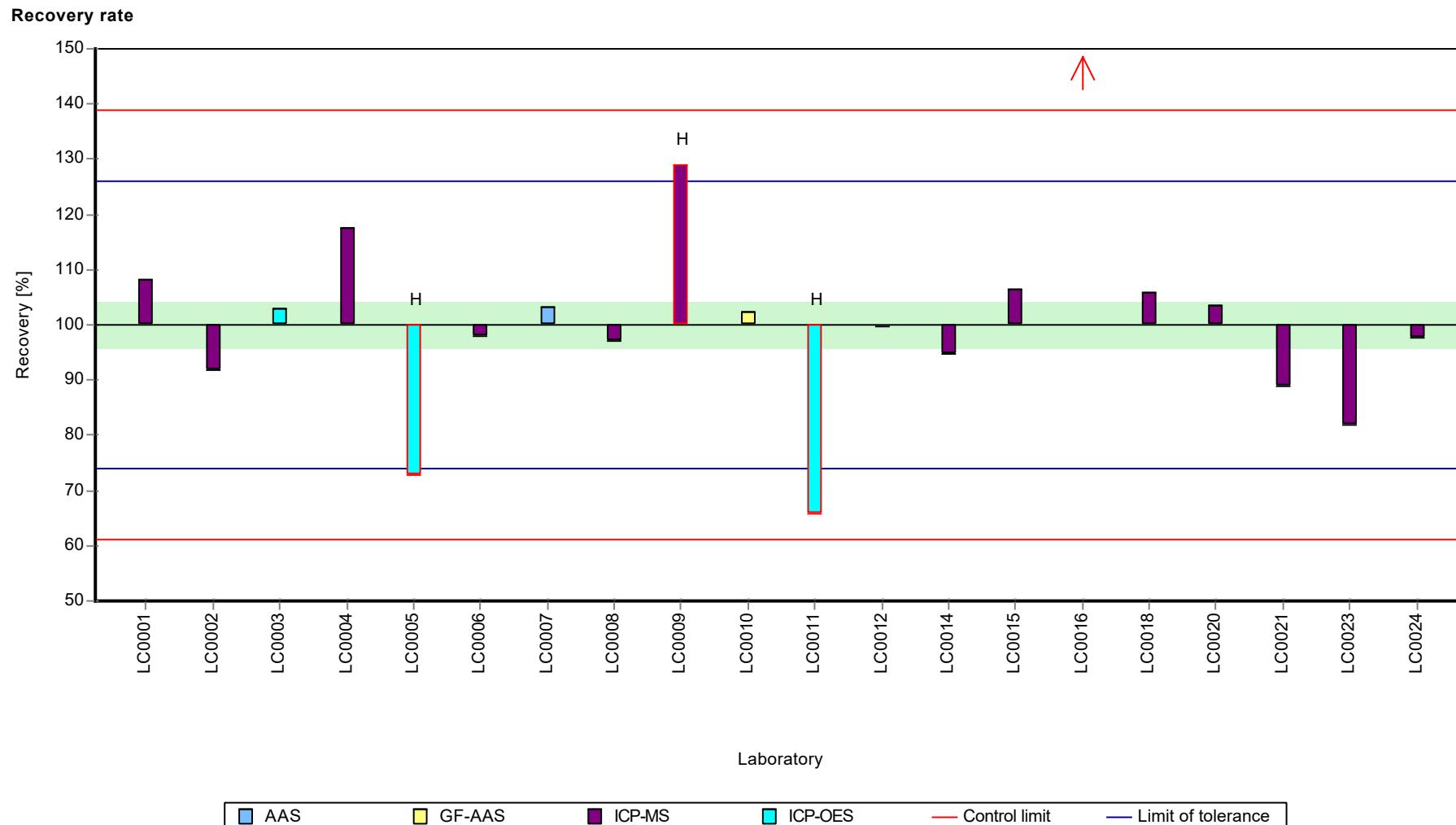
**Graphical presentation of results**

**Results**



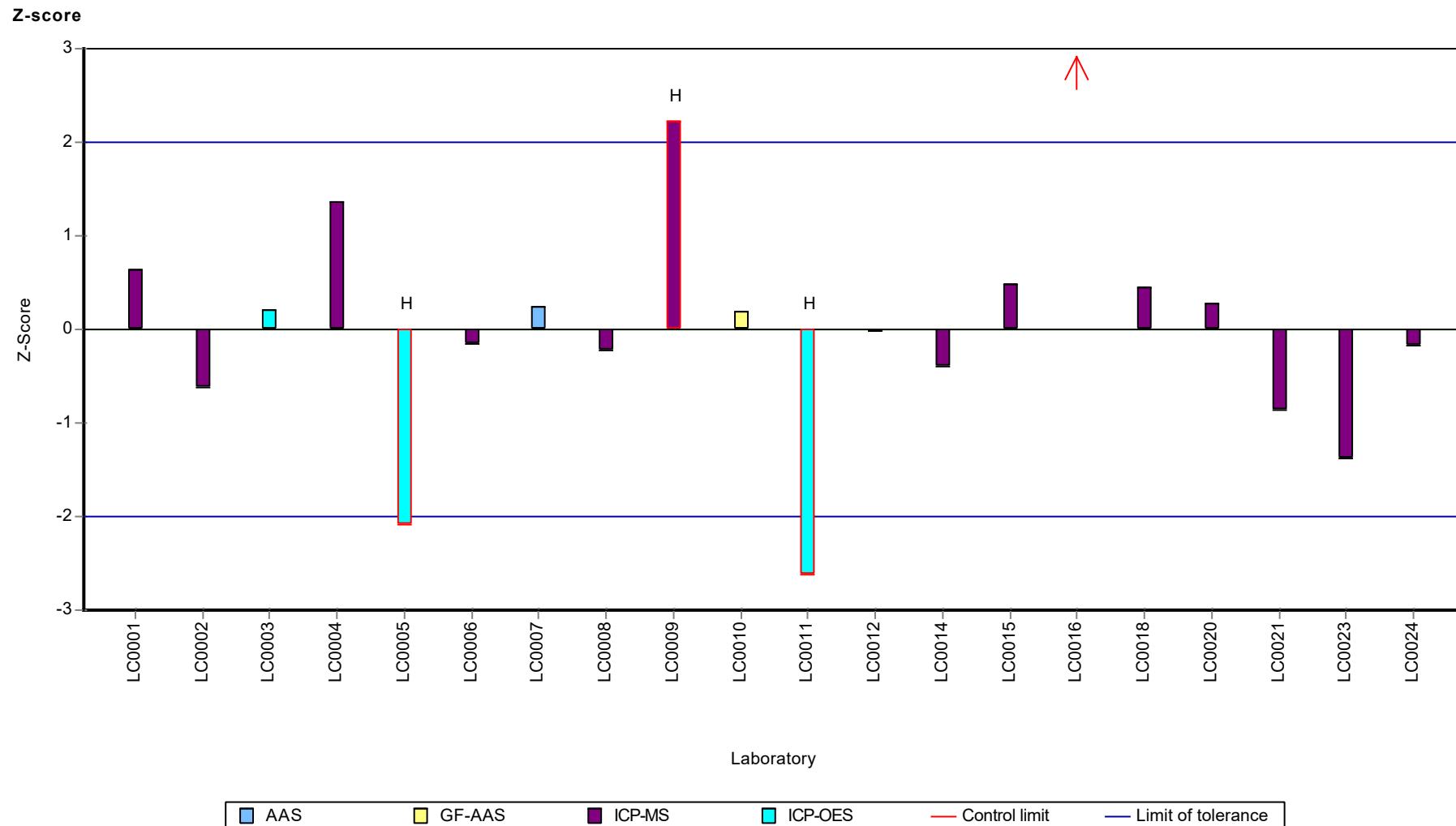
Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Arsenic



Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Arsenic



Parameter oriented report Metals and trace elements  
M165

Sample: M165B, Parameter: Arsenic

## Parameter oriented report

### M165 B

#### Arsenic

Unit	µg/l
Assigned value ± U (k=2)	29.8 ± 1.13
Criterion	3.88 (13 %)
Minimum - Maximum	25.5 - 33.5
Control test value ± U (k=2)	30.6 ± 3.37

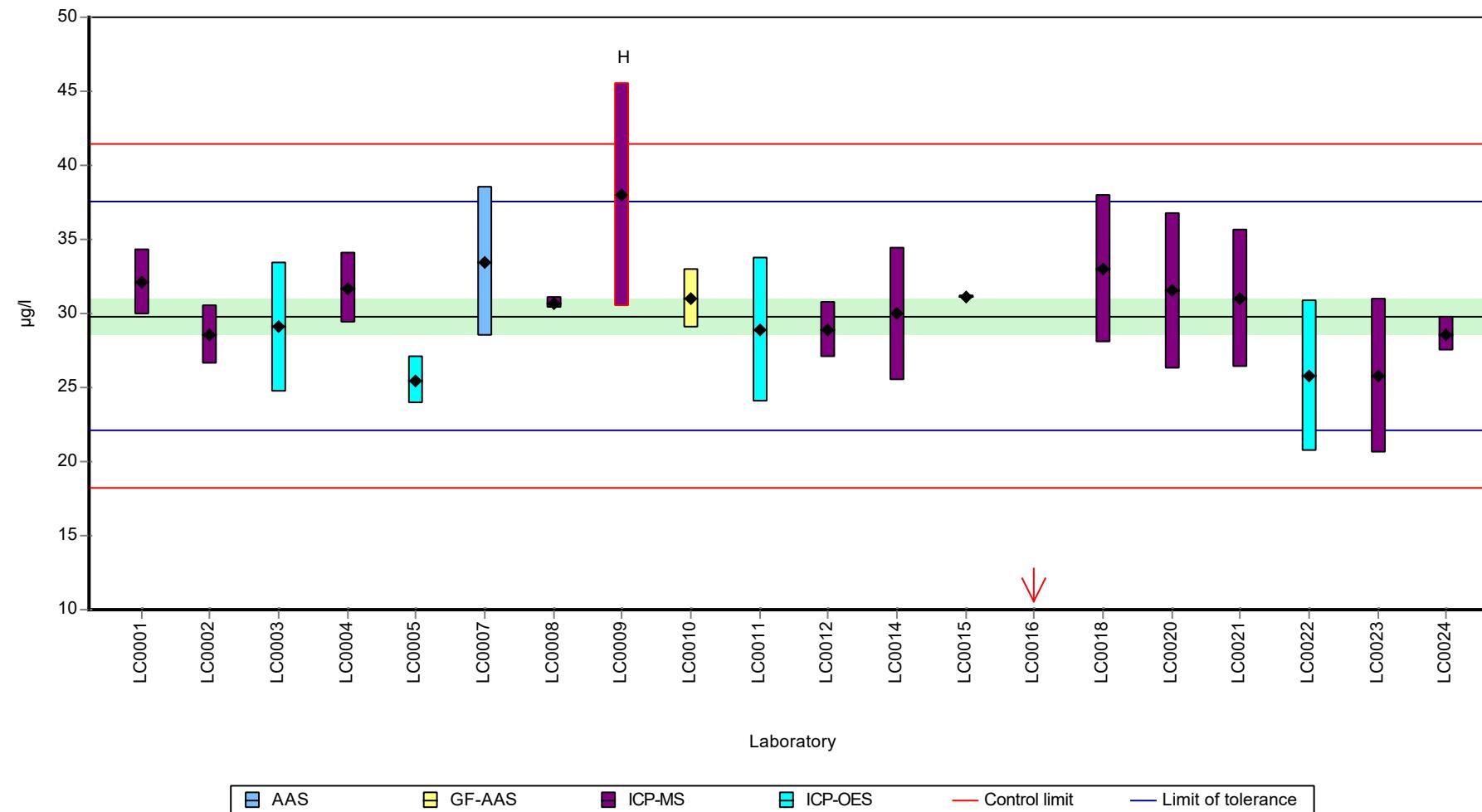
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	32.11	2.18	108	0.59	
LC0002	28.57	2	95.8	-0.32	
LC0003	29.1	4.4	97.6	-0.19	
LC0004	31.7	2.4	106	0.49	
LC0005	25.5	1.6	85.5	-1.11	
LC0006	-	-	-	-	
LC0007	33.5	5.1	112	0.95	
LC0008	30.7	0.412	103	0.23	
LC0009	38	7.6	127	2.11	H
LC0010	31	2	104	0.3	
LC0011	28.87	4.9079	96.8	-0.24	
LC0012	28.9	1.861	96.9	-0.24	
LC0013	-	-	-	-	
LC0014	30	4.5	101	0.05	
LC0015	31.07	0.107	104	0.32	
LC0016	5.6	0.672	18.8	-6.25	H
LC0017	-	-	-	-	
LC0018	33	5	111	0.82	
LC0019	-	-	-	-	
LC0020	31.55	5.28	106	0.45	
LC0021	31	4.65	104	0.3	
LC0022	25.783	5.157	86.5	-1.04	
LC0023	25.8	5.2	86.5	-1.04	
LC0024	28.6	1.2	95.9	-0.31	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	29 ± 4.18	29.8 ± 1.69	µg/l
Minimum	5.6	25.5	µg/l
Maximum	38	33.5	µg/l
Standard deviation	6.23	2.39	µg/l
rel. standard deviation	21.5	8.01	%
n	20	18	-

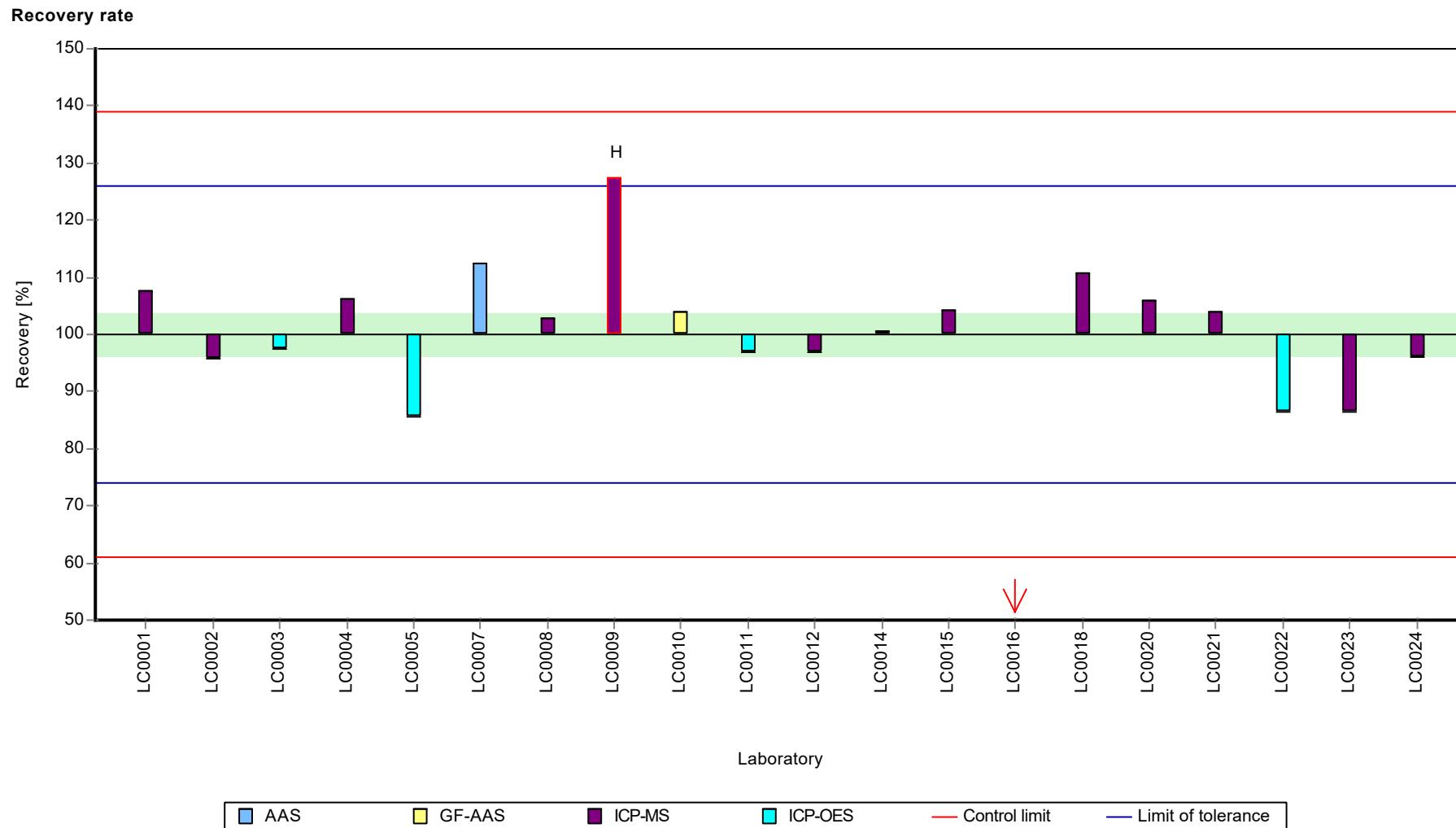
**Graphical presentation of results**

**Results**



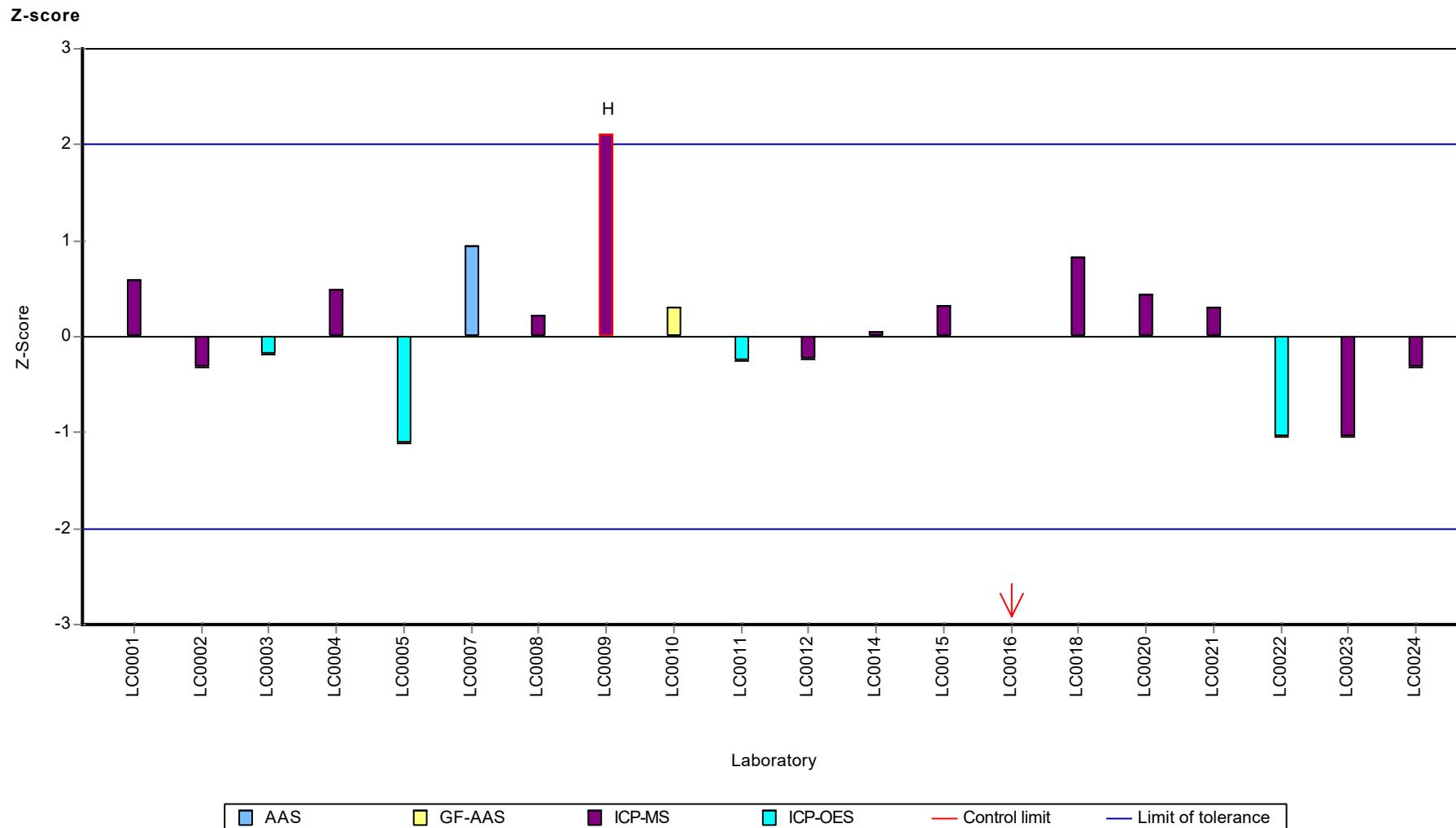
Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Arsenic



Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Arsenic



Parameter oriented report Metals and trace elements  
M165

Sample: M165A, Parameter: Cadmium

## Parameter oriented report

### M165 A

#### Cadmium

Unit	µg/l
Assigned value ± U (k=2)	1.64 ± 0.0718
Criterion	0.164 (10 %)
Minimum - Maximum	1.38 - 1.87
Control test value ± U (k=2)	1.27 ± 0.14

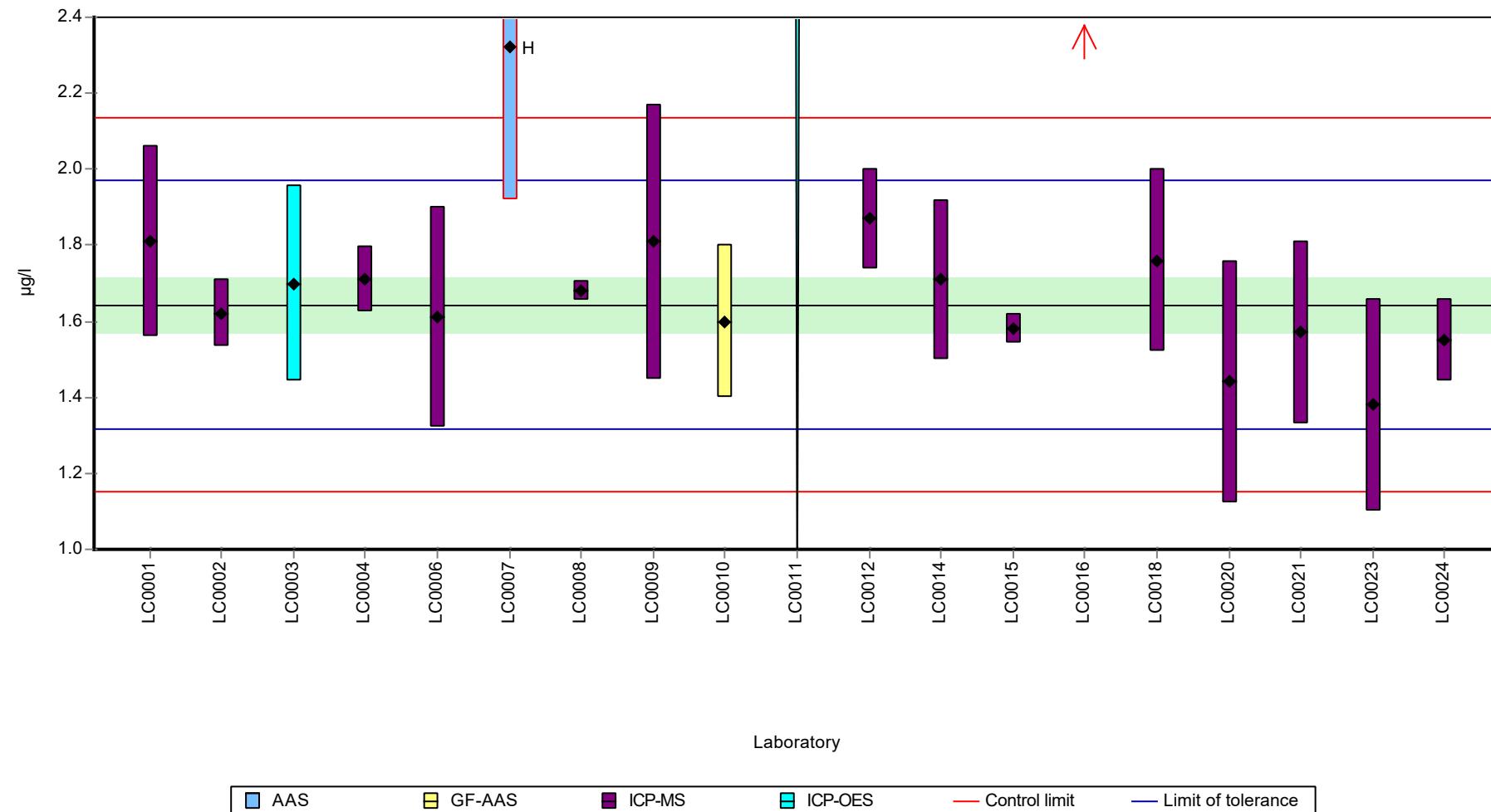
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	1.81	0.25	110	1.01	
LC0002	1.62	0.089	98.6	-0.14	
LC0003	1.7	0.26	103	0.34	
LC0004	1.71	0.086	104	0.4	
LC0005	-	-	-	-	
LC0006	1.61	0.29	98	-0.2	
LC0007	2.32	0.4	141	4.12	H
LC0008	1.68	0.026	102	0.22	
LC0009	1.81	0.362	110	1.01	
LC0010	1.6	0.2	97.3	-0.27	
LC0011	< 5 (LOQ)	-	-	-	
LC0012	1.87	0.132	114	1.38	
LC0013	-	-	-	-	
LC0014	1.71	0.21	104	0.4	
LC0015	1.58	0.0389	96.1	-0.39	
LC0016	13.5	1.08	821	72.14	H
LC0017	-	-	-	-	
LC0018	1.76	0.24	107	0.71	
LC0019	-	-	-	-	
LC0020	1.44	0.32	87.6	-1.24	
LC0021	1.57	0.24	95.5	-0.45	
LC0022	-	-	-	-	
LC0023	1.38	0.28	84	-1.6	
LC0024	1.55	0.11	94.3	-0.57	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	2.35 ± 1.97	1.65 ± 0.0998	µg/l
Minimum	1.38	1.38	µg/l
Maximum	13.5	1.87	µg/l
Standard deviation	2.79	0.133	µg/l
rel. standard deviation	119	8.06	%
n	18	16	-

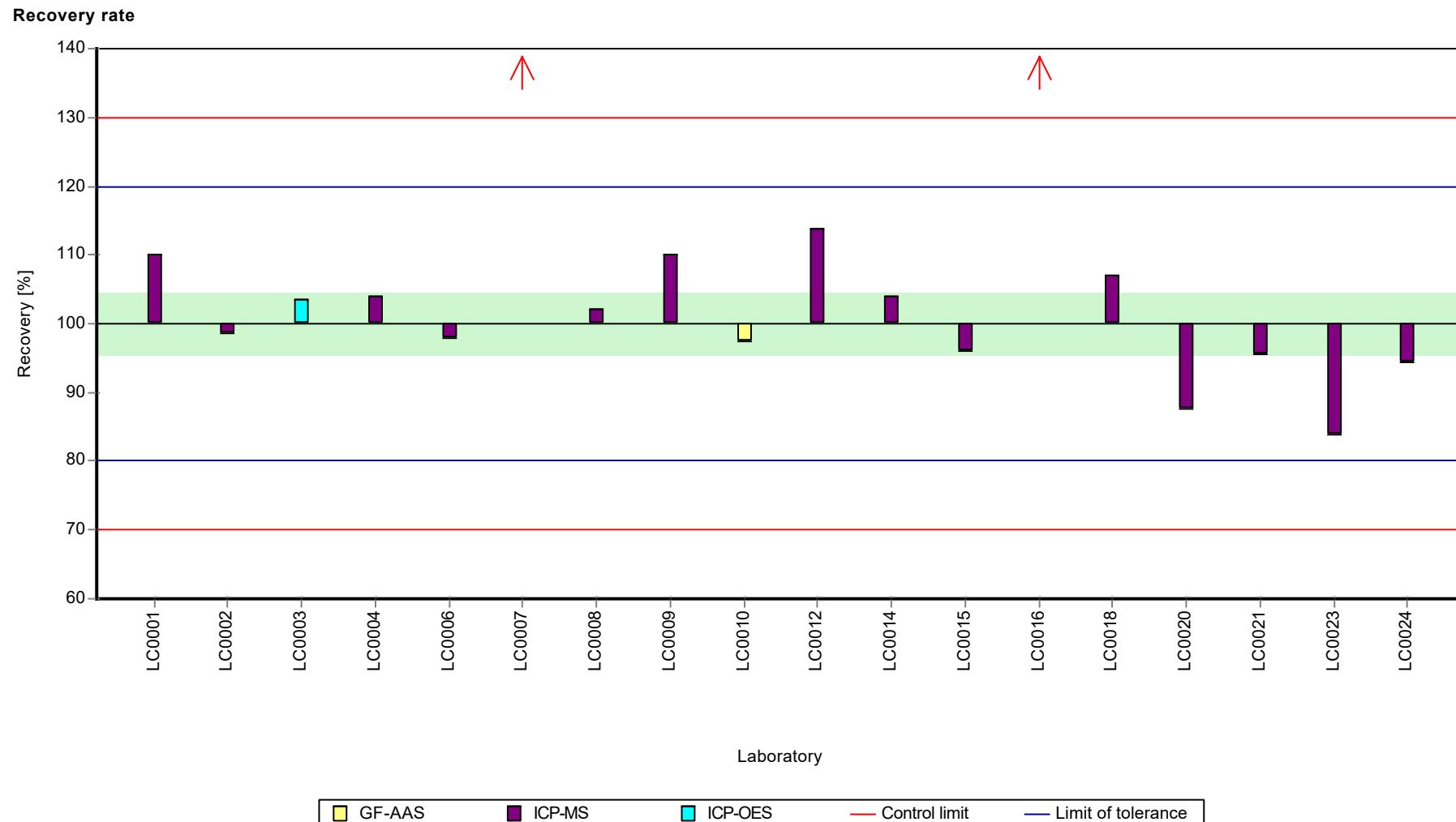
**Graphical presentation of results**

**Results**



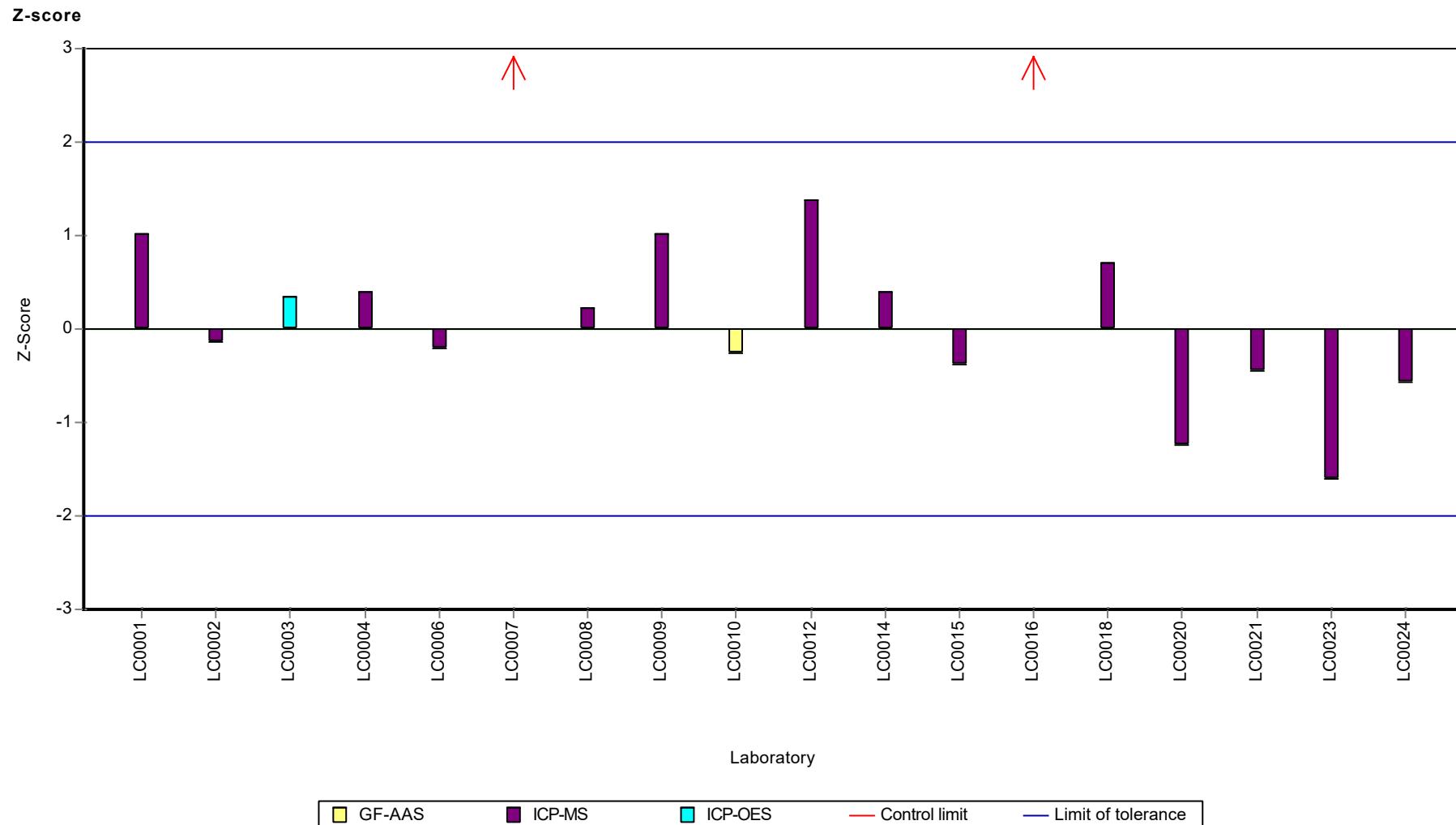
Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Cadmium



Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Cadmium



Parameter oriented report Metals and trace elements  
M165

Sample: M165B, Parameter: Cadmium

## Parameter oriented report

### M165 B

#### Cadmium

Unit	µg/l
Assigned value ± U (k=2)	12.9 ± 0.534
Criterion	1.29 (10 %)
Minimum - Maximum	9.64 - 14.2
Control test value ± U (k=2)	11.0 ± 1.21

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	13.98	1.91	108	0.8	
LC0002	13.17	0.72	102	0.17	
LC0003	13.5	2	104	0.43	
LC0004	13.8	0.69	107	0.66	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	9.64	1.5	74.5	-2.55	
LC0008	13.7	0.251	106	0.58	
LC0009	14.2	2.84	110	0.97	
LC0010	12	0.3	92.7	-0.73	
LC0011	12.34	1.6042	95.3	-0.47	
LC0012	13.1	0.8	101	0.12	
LC0013	-	-	-	-	
LC0014	13.7	1.6	106	0.58	
LC0015	13.87	0.142	107	0.71	
LC0016	1.67	0.134	12.9	-8.71	H
LC0017	-	-	-	-	
LC0018	14	2.5	108	0.81	
LC0019	-	-	-	-	
LC0020	10.55	1.7	81.5	-1.85	
LC0021	12.7	1.91	98.1	-0.19	
LC0022	13.634	1.636	105	0.53	
LC0023	11.5	2.3	88.8	-1.12	
LC0024	12.3	0.84	95	-0.5	

#### Characteristics of parameter

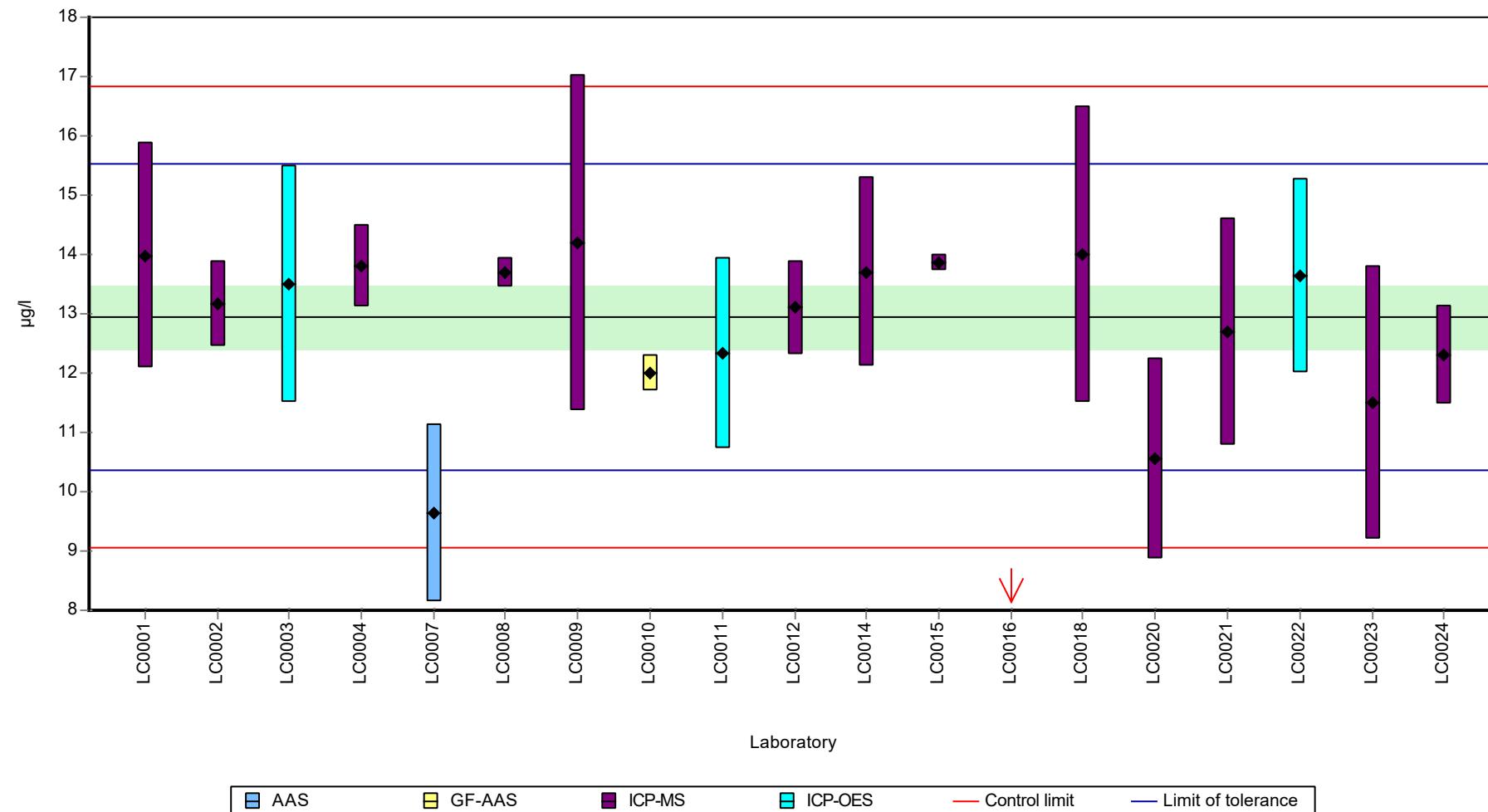
	all results	without outliers	Unit
Mean ± CI (99%)	12.3 ± 1.96	12.9 ± 0.903	µg/l
Minimum	1.67	9.64	µg/l
Maximum	14.2	14.2	µg/l
Standard deviation	2.85	1.28	µg/l
rel. standard deviation	23.2	9.92	%
n	19	18	-

Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Cadmium

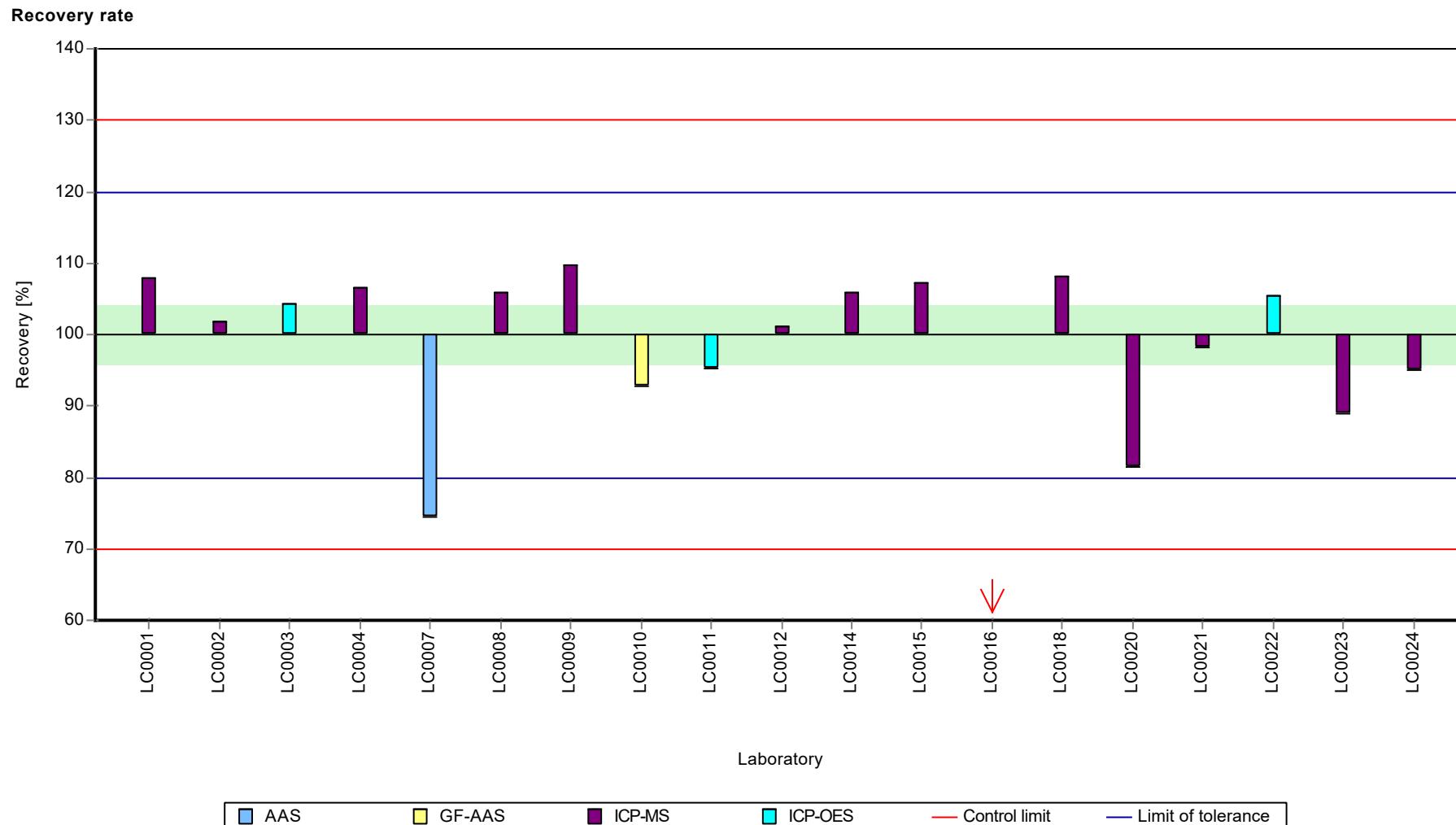
### Graphical presentation of results

#### Results



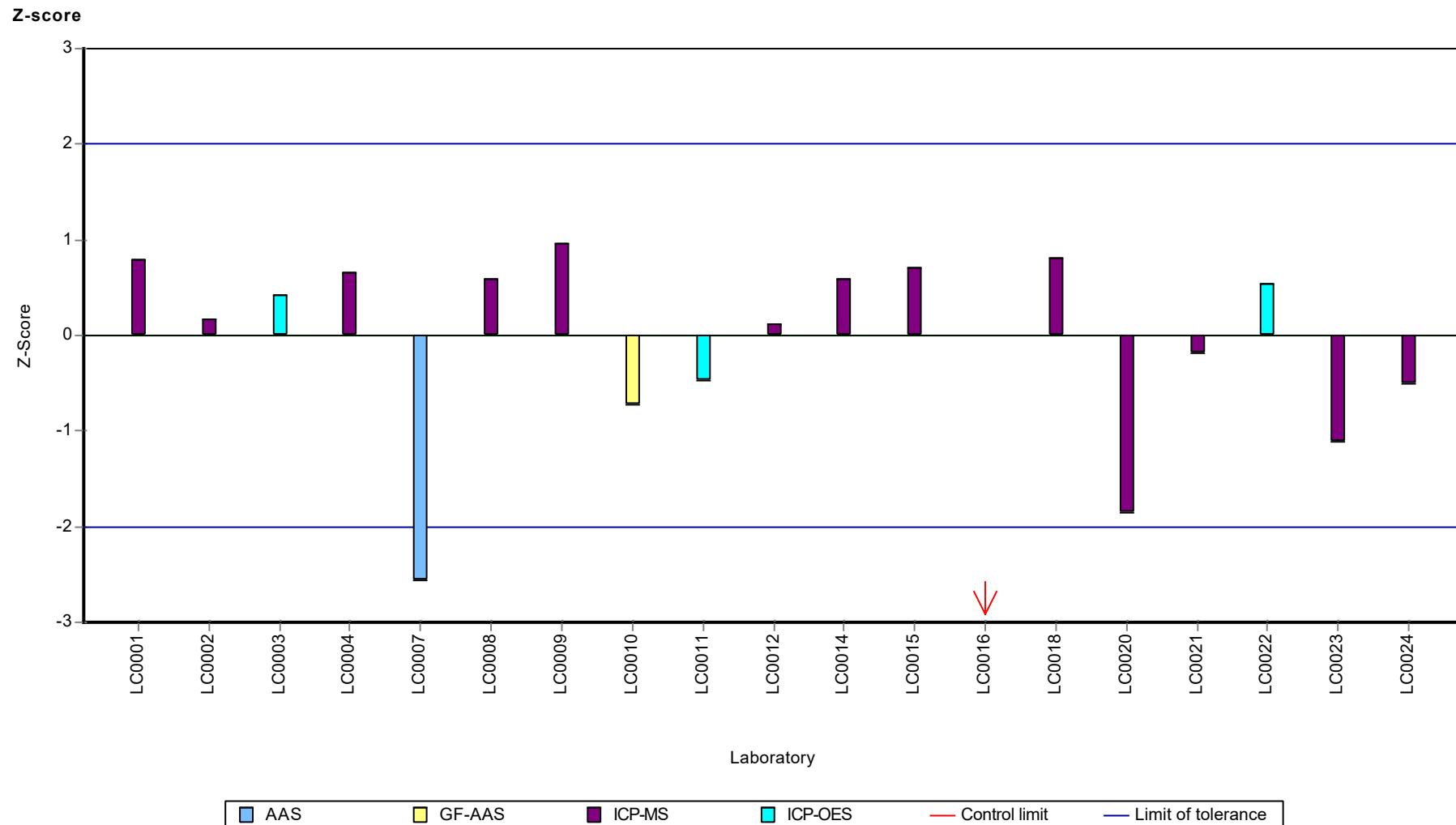
Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Cadmium



Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Cadmium



Parameter oriented report Metals and trace elements  
M165

Sample: M165A, Parameter: Chromium

## Parameter oriented report

### M165 A

#### Chromium

Unit	µg/l
Assigned value ± U (k=2)	13.2 ± 0.432
Criterion	1.12 (8.5 %)
Minimum - Maximum	11.5 - 15.1
Control test value ± U (k=2)	10.3 ± 1.14

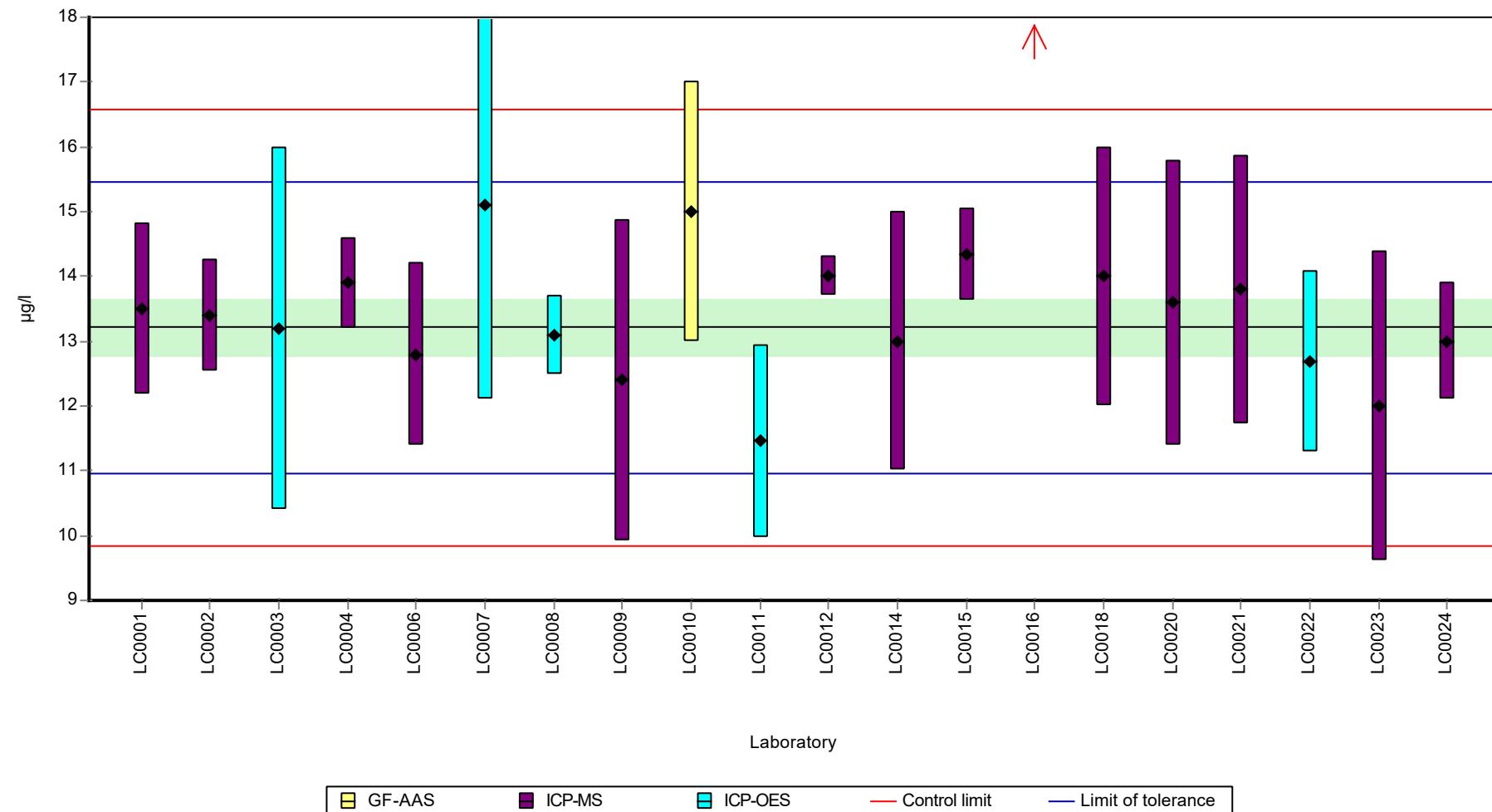
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	13.5	1.31	102	0.26	
LC0002	13.4	0.87	101	0.17	
LC0003	13.2	2.8	99.9	-0.01	
LC0004	13.9	0.7	105	0.62	
LC0005	-	-	-	-	
LC0006	12.8	1.4	96.9	-0.36	
LC0007	15.1	3	114	1.68	
LC0008	13.1	0.616	99.2	-0.1	
LC0009	12.4	2.48	93.9	-0.72	
LC0010	15	2	114	1.6	
LC0011	11.46	1.4898	86.8	-1.56	
LC0012	14	0.306	106	0.7	
LC0013	-	-	-	-	
LC0014	13	2	98.4	-0.19	
LC0015	14.34	0.708	109	1.01	
LC0016	59.1	7.09	447	40.87	H
LC0017	-	-	-	-	
LC0018	14	2	106	0.7	
LC0019	-	-	-	-	
LC0020	13.6	2.2	103	0.35	
LC0021	13.8	2.07	104	0.53	
LC0022	12.685	1.395	96	-0.47	
LC0023	12	2.4	90.8	-1.08	
LC0024	13	0.91	98.4	-0.19	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	15.7 ± 6.88	13.4 ± 0.64	µg/l
Minimum	11.5	11.5	µg/l
Maximum	59.1	15.1	µg/l
Standard deviation	10.3	0.93	µg/l
rel. standard deviation	65.5	6.95	%
n	20	19	-

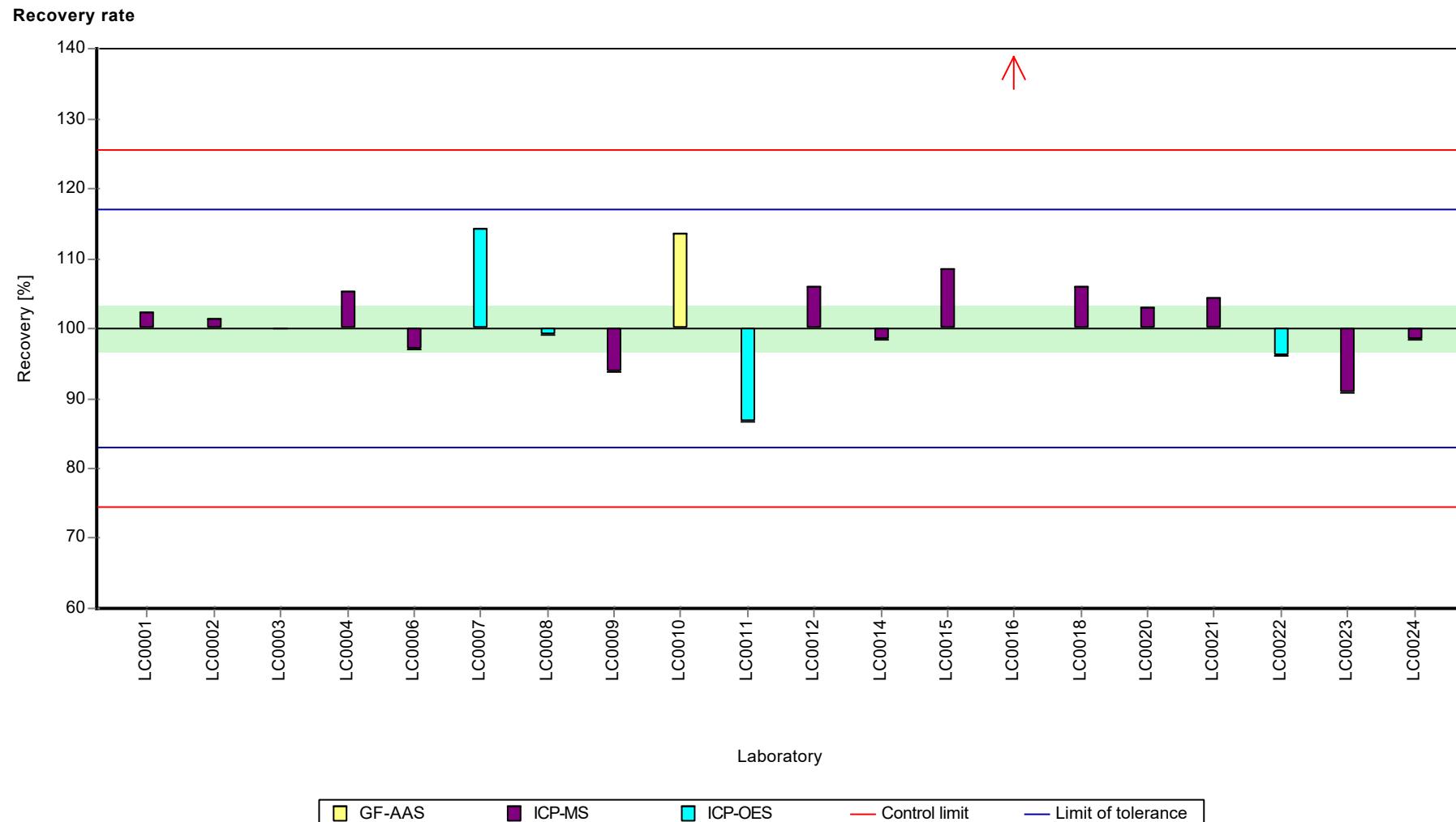
**Graphical presentation of results**

**Results**



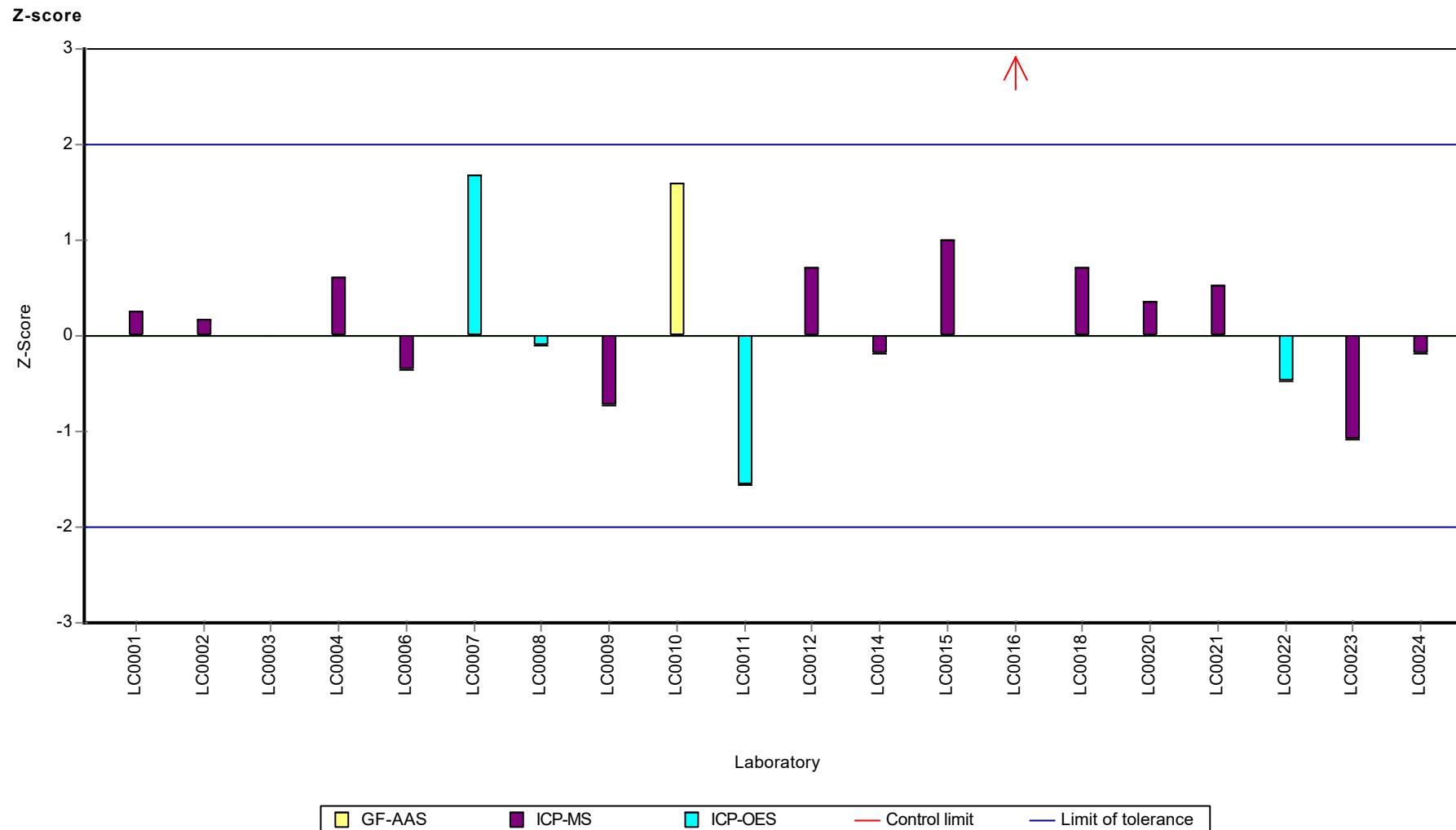
Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Chromium



Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Chromium



Parameter oriented report Metals and trace elements  
M165

Sample: M165B, Parameter: Chromium

## Parameter oriented report

### M165 B

#### Chromium

Unit	$\mu\text{g/l}$
Assigned value $\pm U$ ( $k=2$ )	$59.1 \pm 1.42$
Criterion	5.03 (8.5 %)
Minimum - Maximum	50.6 - 63
Control test value $\pm U$ ( $k=2$ )	$49.3 \pm 5.42$

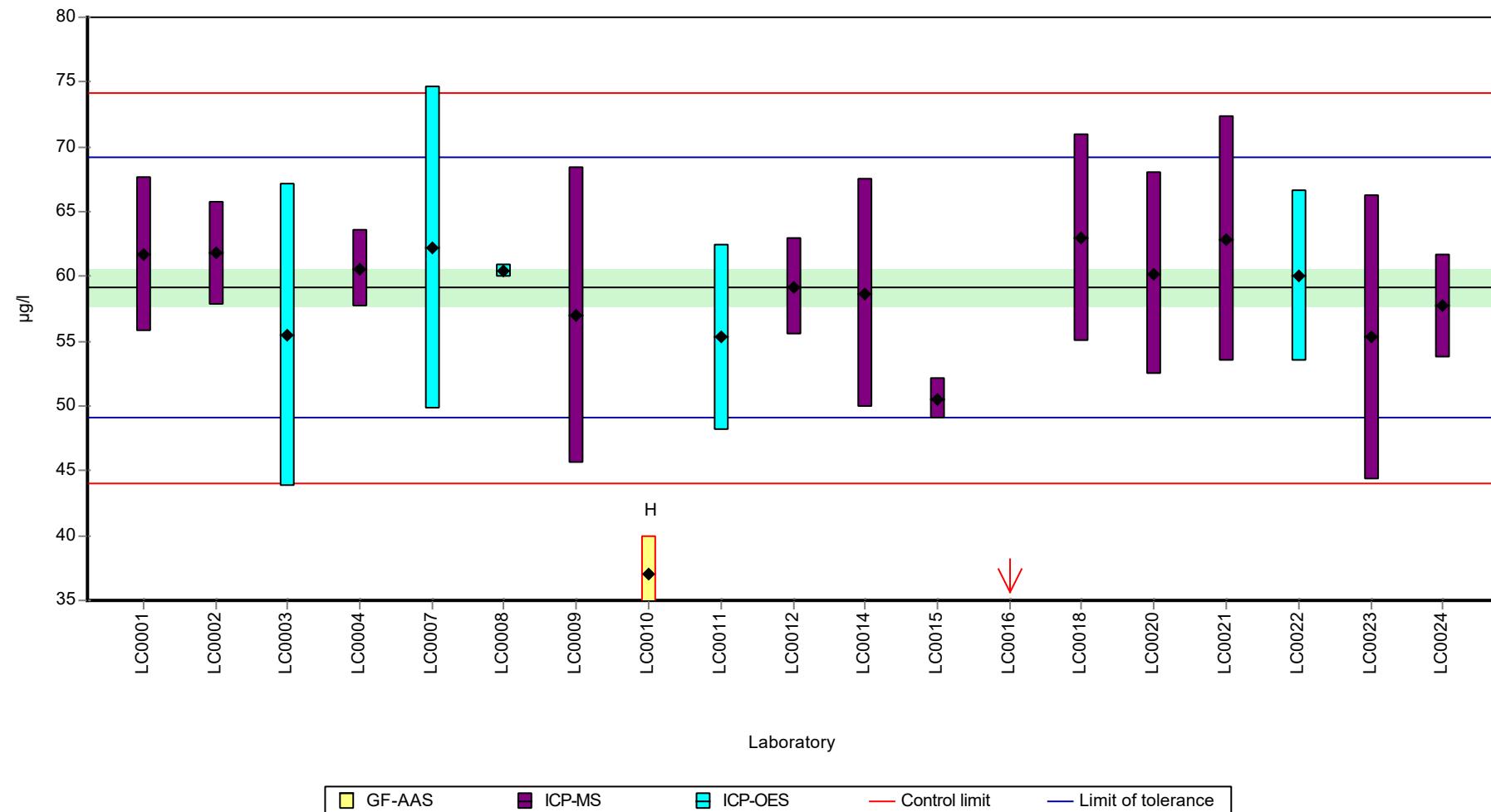
Labcode	Result	$\pm U$	Recovery [%]	z-score	Comments
LC0001	61.67	5.98	104	0.51	
LC0002	61.8	4.02	105	0.53	
LC0003	55.5	11.7	93.9	-0.72	
LC0004	60.6	3.03	103	0.29	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	62.2	12.4	105	0.61	
LC0008	60.4	0.537	102	0.25	
LC0009	57	11.4	96.4	-0.42	
LC0010	37	3	62.6	-4.4	H
LC0011	55.32	7.1916	93.6	-0.76	
LC0012	59.2	3.721	100	0.02	
LC0013	-	-	-	-	
LC0014	58.7	8.8	99.3	-0.08	
LC0015	50.57	1.641	85.5	-1.7	
LC0016	13.4	1.608	22.7	-9.1	H
LC0017	-	-	-	-	
LC0018	63	8	107	0.77	
LC0019	-	-	-	-	
LC0020	60.2	7.8	102	0.21	
LC0021	62.9	9.44	106	0.75	
LC0022	60.07	6.608	102	0.19	
LC0023	55.3	11	93.5	-0.76	
LC0024	57.7	4	97.6	-0.28	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean $\pm CI$ (99%)	$55.4 \pm 8.11$	$58.9 \pm 2.44$	$\mu\text{g/l}$
Minimum	13.4	50.6	$\mu\text{g/l}$
Maximum	63	63	$\mu\text{g/l}$
Standard deviation	11.8	3.35	$\mu\text{g/l}$
rel. standard deviation	21.3	5.69	%
n	19	17	-

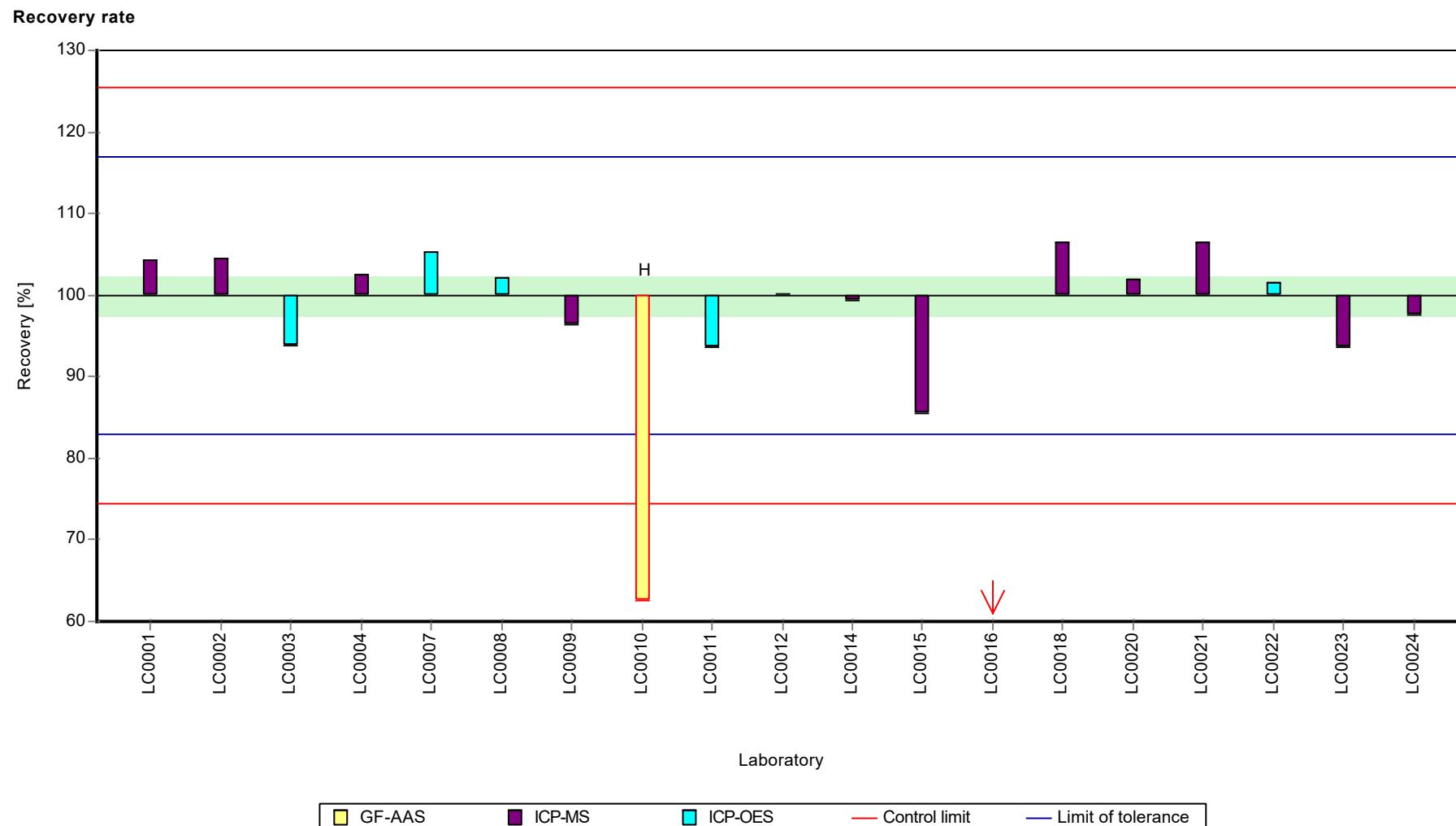
**Graphical presentation of results**

**Results**



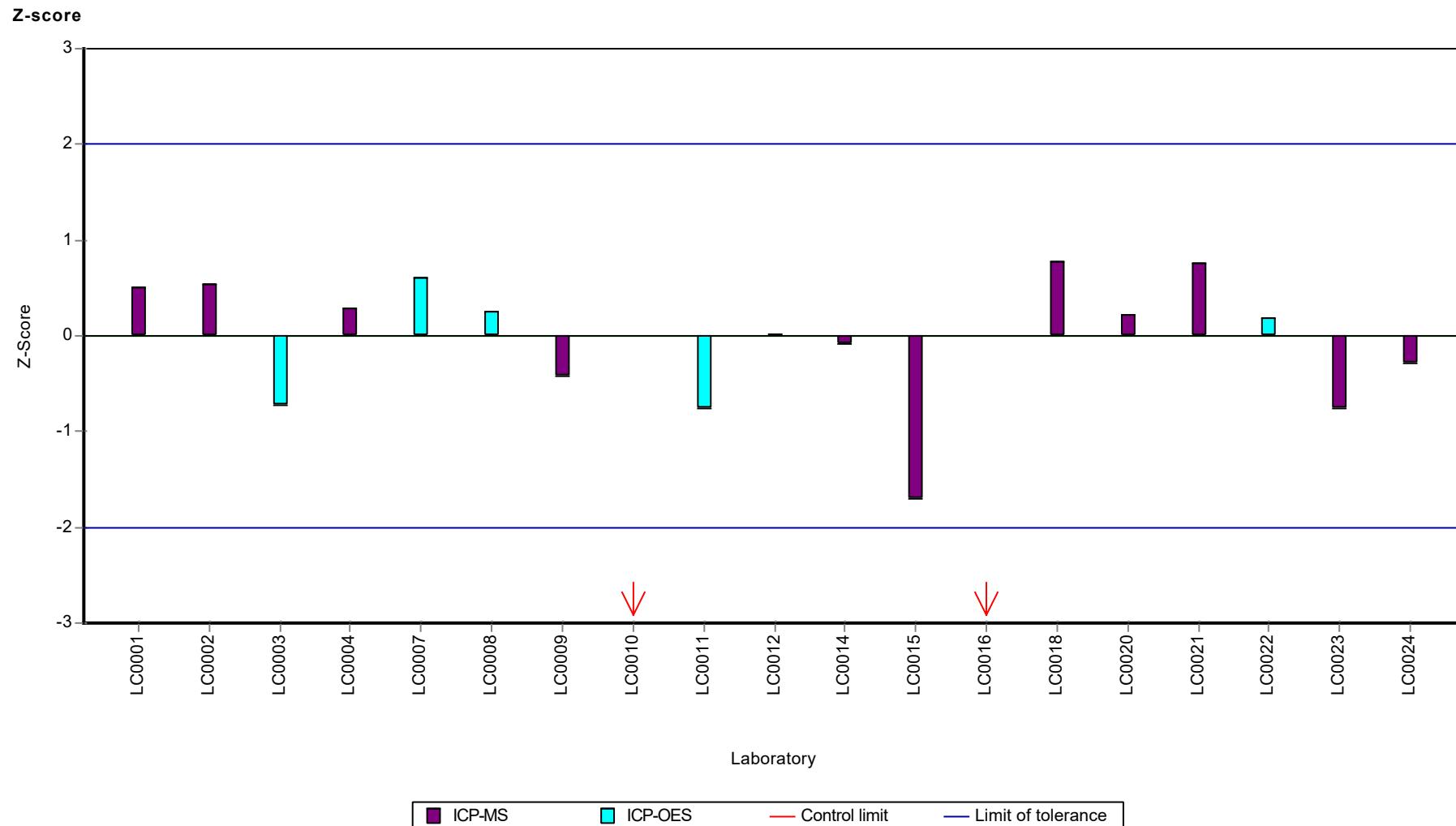
Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Chromium



Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Chromium



Parameter oriented report Metals and trace elements  
M165

Sample: M165A, Parameter: Copper

## Parameter oriented report

### M165 A

#### Copper

Unit	µg/l
Assigned value ± U (k=2)	12.5 ± 0.473
Criterion	1.13 (9 %)
Minimum - Maximum	10.7 - 15
Control test value ± U (k=2)	9.59 ± 0.959

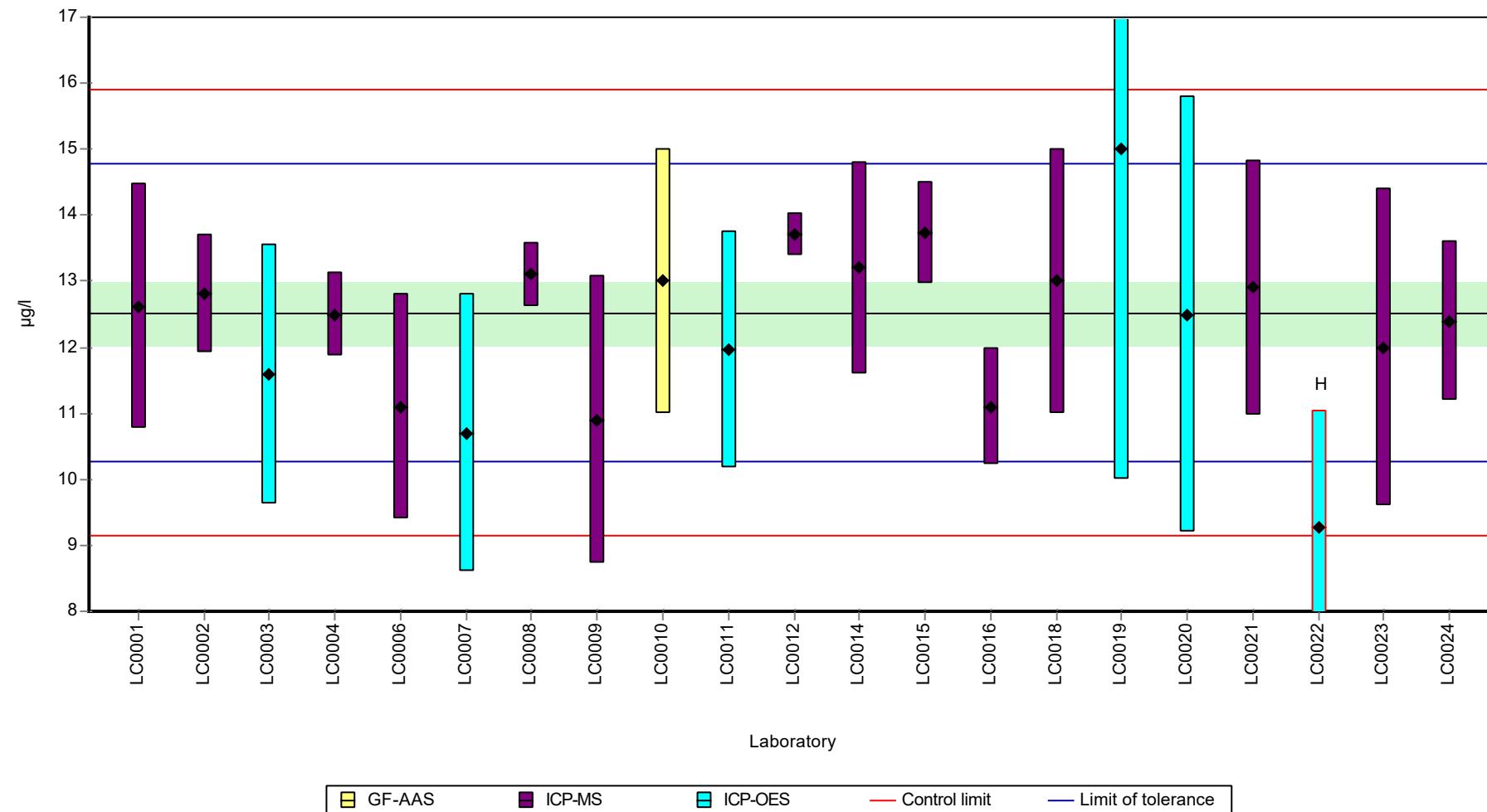
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	12.62	1.86	101	0.09	
LC0002	12.82	0.9	102	0.26	
LC0003	11.6	1.97	92.6	-0.82	
LC0004	12.5	0.63	99.8	-0.02	
LC0005	-	-	-	-	
LC0006	11.1	1.7	88.6	-1.26	
LC0007	10.7	2.1	85.4	-1.62	
LC0008	13.1	0.478	105	0.51	
LC0009	10.9	2.18	87	-1.44	
LC0010	13	2	104	0.42	
LC0011	11.96	1.794	95.5	-0.5	
LC0012	13.7	0.321	109	1.05	
LC0013	-	-	-	-	
LC0014	13.2	1.6	105	0.6	
LC0015	13.73	0.775	110	1.07	
LC0016	11.1	0.888	88.6	-1.26	
LC0017	-	-	-	-	
LC0018	13	2	104	0.42	
LC0019	15	5	120	2.2	
LC0020	12.5	3.3	99.8	-0.02	
LC0021	12.9	1.94	103	0.34	
LC0022	9.277	1.763	74.1	-2.88	H
LC0023	12	2.4	95.8	-0.46	
LC0024	12.4	1.2	99	-0.11	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	12.3 ± 0.825	12.5 ± 0.72	µg/l
Minimum	9.28	10.7	µg/l
Maximum	15	15	µg/l
Standard deviation	1.26	1.07	µg/l
rel. standard deviation	10.2	8.6	%
n	21	20	-

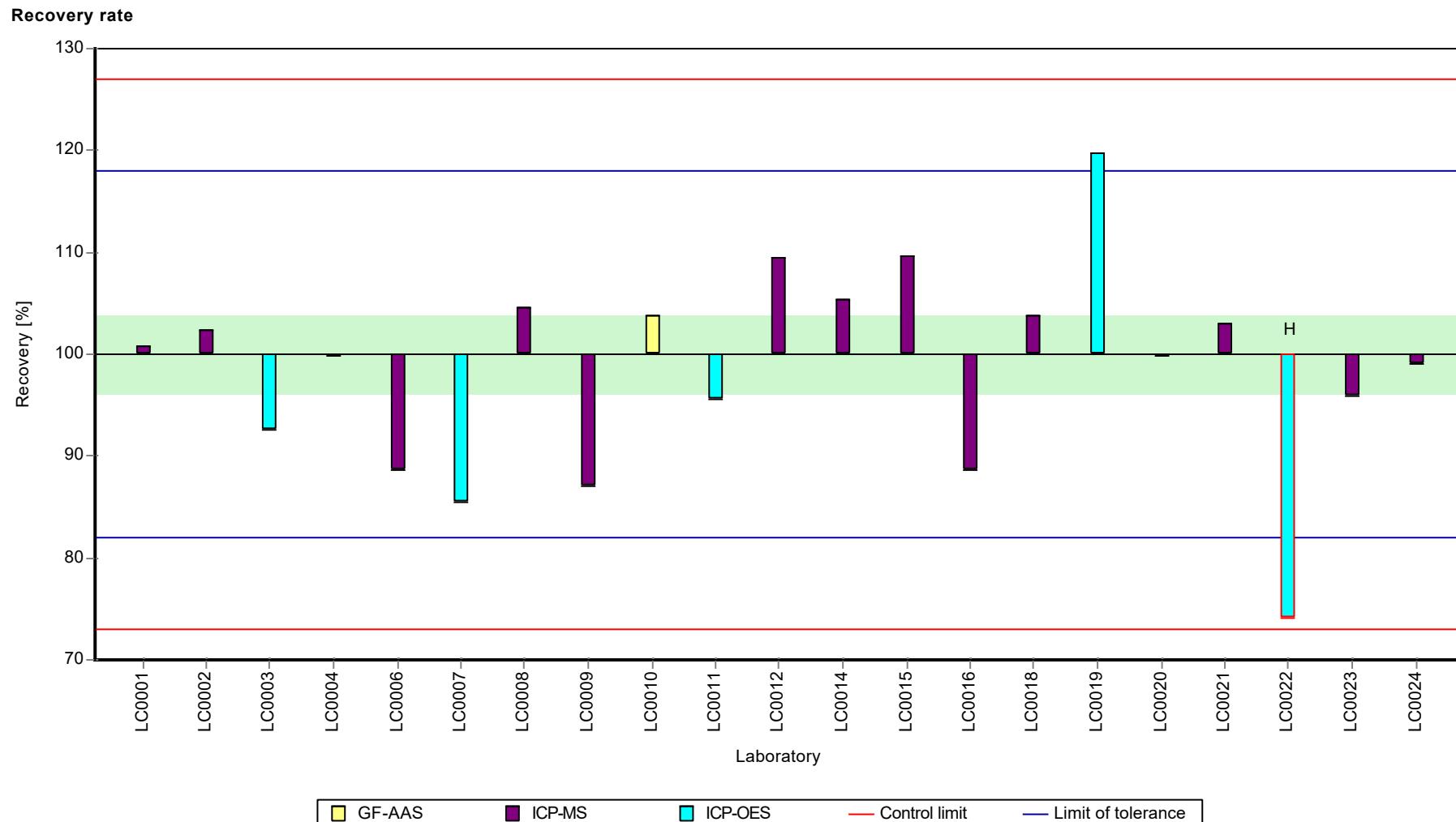
**Graphical presentation of results**

**Results**



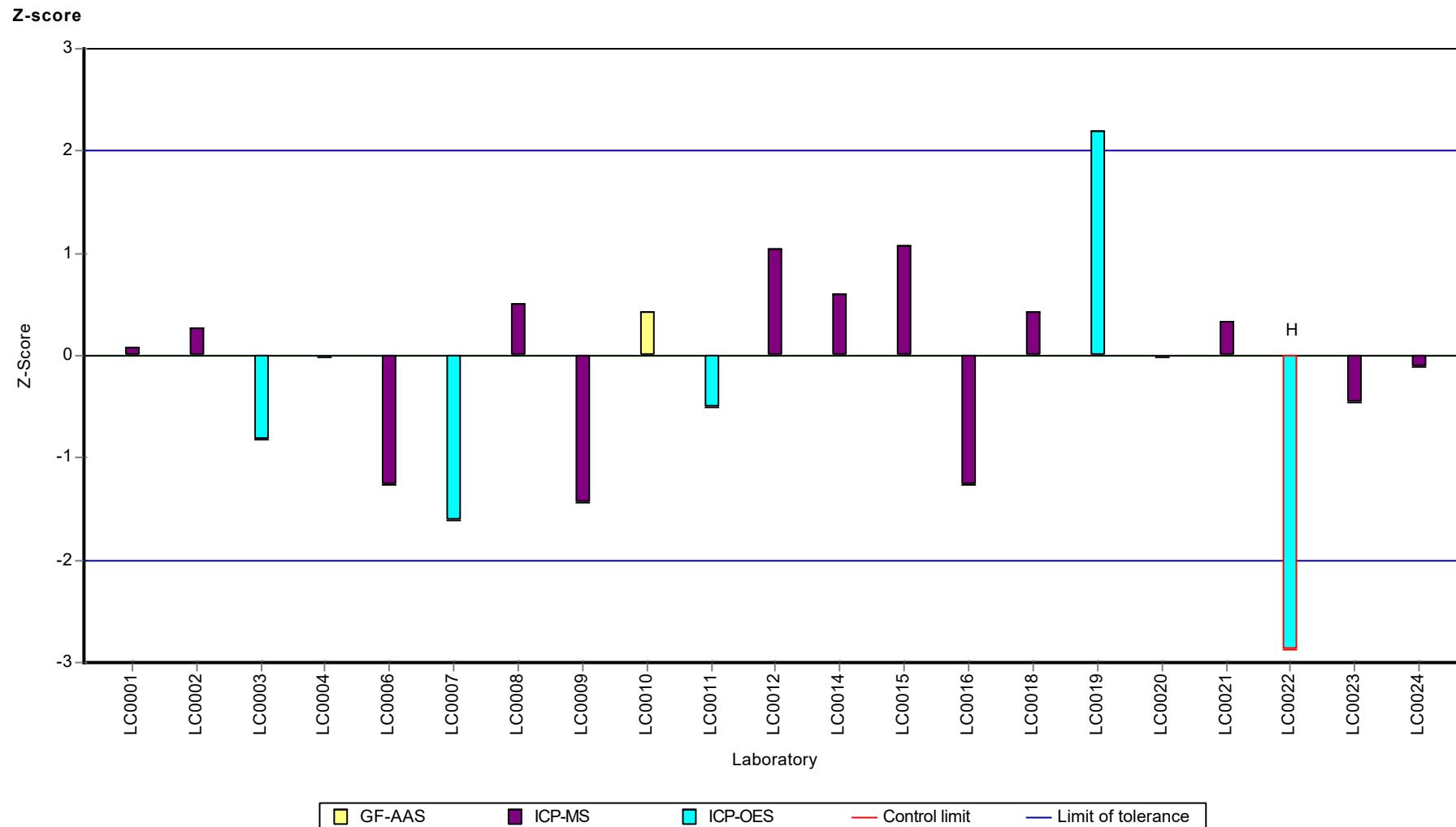
Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Copper



Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Copper



Parameter oriented report Metals and trace elements  
M165

Sample: M165B, Parameter: Copper

## Parameter oriented report

### M165 B

#### Copper

Unit	µg/l
Assigned value ± U (k=2)	10.7 ± 0.28
Criterion	0.963 (9 %)
Minimum - Maximum	9.67 - 12.1
Control test value ± U (k=2)	9.14 ± 0.914

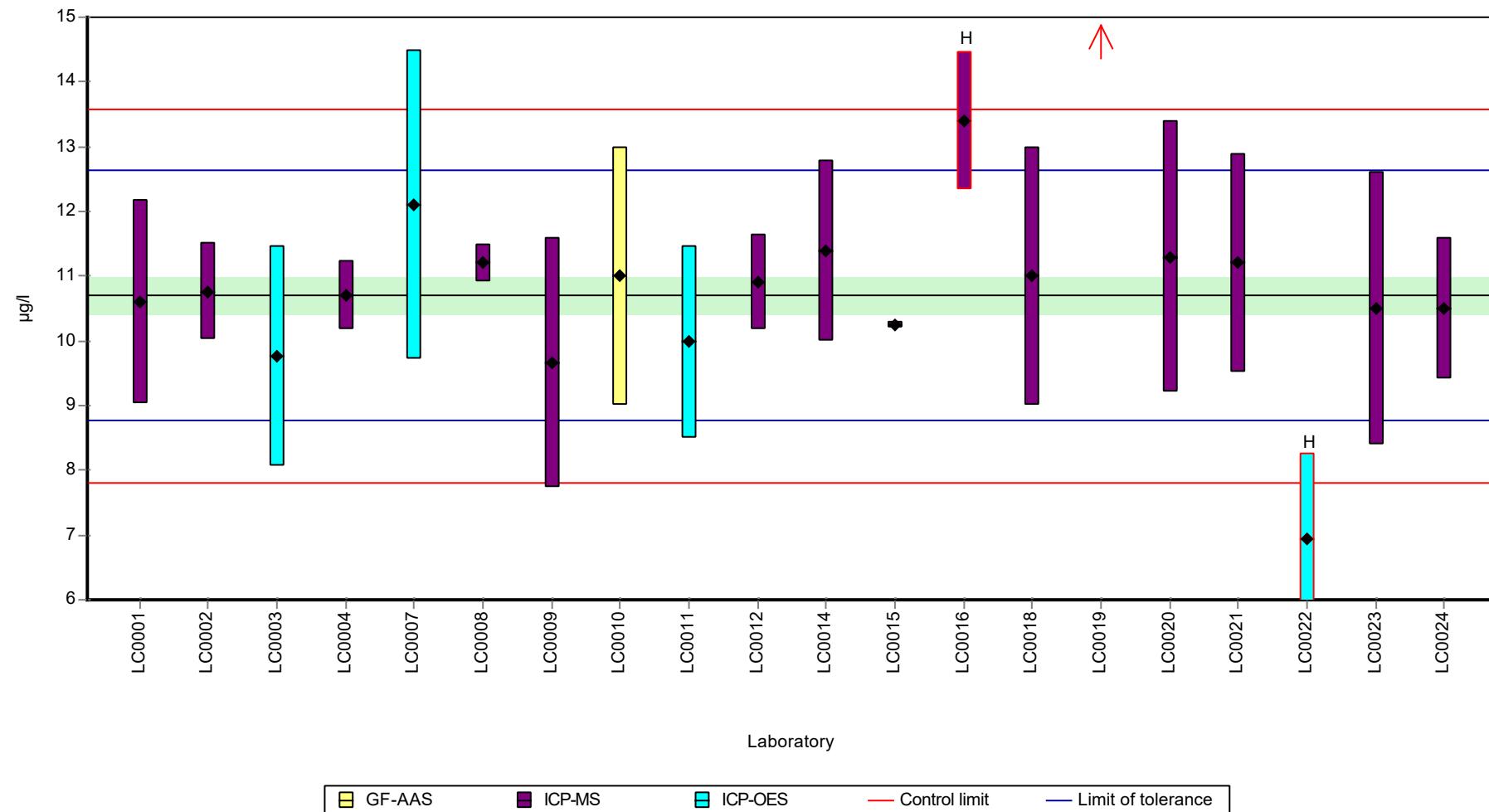
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	10.6	1.57	99.1	-0.1	
LC0002	10.76	0.75	101	0.06	
LC0003	9.76	1.7	91.2	-0.97	
LC0004	10.7	0.54	100	0.00	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	12.1	2.4	113	1.46	
LC0008	11.2	0.294	105	0.52	
LC0009	9.67	1.934	90.4	-1.07	
LC0010	11	2	103	0.31	
LC0011	9.98	1.497	93.3	-0.75	
LC0012	10.9	0.737	102	0.21	
LC0013	-	-	-	-	
LC0014	11.4	1.4	107	0.73	
LC0015	10.25	0.0589	95.8	-0.47	
LC0016	13.4	1.072	125	2.81	H
LC0017	-	-	-	-	
LC0018	11	2	103	0.31	
LC0019	59	5	552	50.17	H
LC0020	11.3	2.1	106	0.63	
LC0021	11.2	1.68	105	0.52	
LC0022	6.938	1.318	64.9	-3.91	H
LC0023	10.5	2.1	98.1	-0.21	
LC0024	10.5	1.1	98.1	-0.21	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	13.1 ± 7.29	10.8 ± 0.454	µg/l
Minimum	6.94	9.67	µg/l
Maximum	59	12.1	µg/l
Standard deviation	10.9	0.625	µg/l
rel. standard deviation	82.9	5.81	%
n	20	17	-

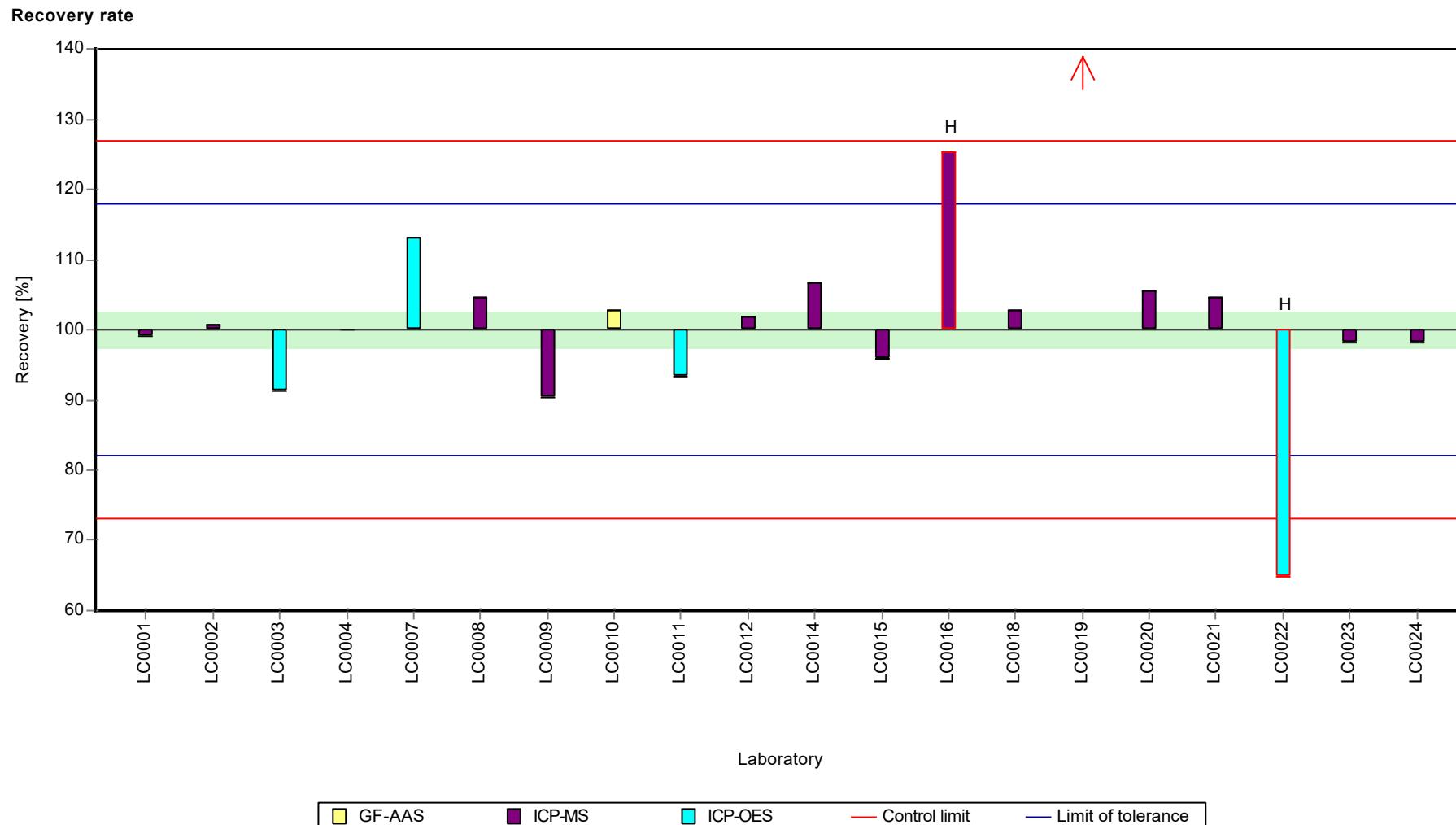
**Graphical presentation of results**

**Results**



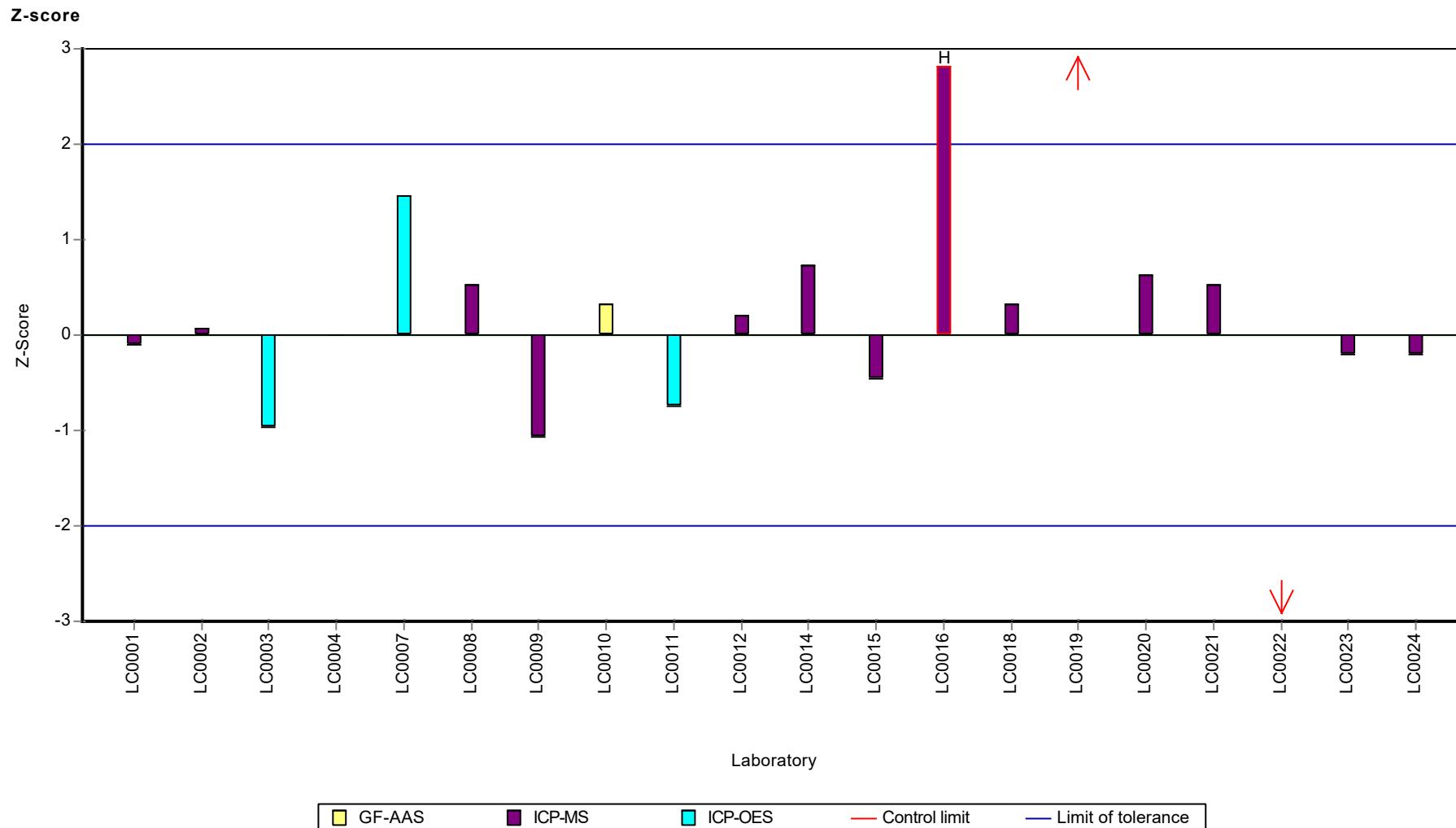
Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Copper



Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Copper



Parameter oriented report Metals and trace elements  
M165

Sample: M165A, Parameter: Iron

## Parameter oriented report

### M165 A

#### Iron

Unit	µg/l
Assigned value ± U (k=2)	118 ± 3.21
Criterion	13 (11 %)
Minimum - Maximum	104 - 127
Control test value ± U (k=2)	94.2 ± 10.4

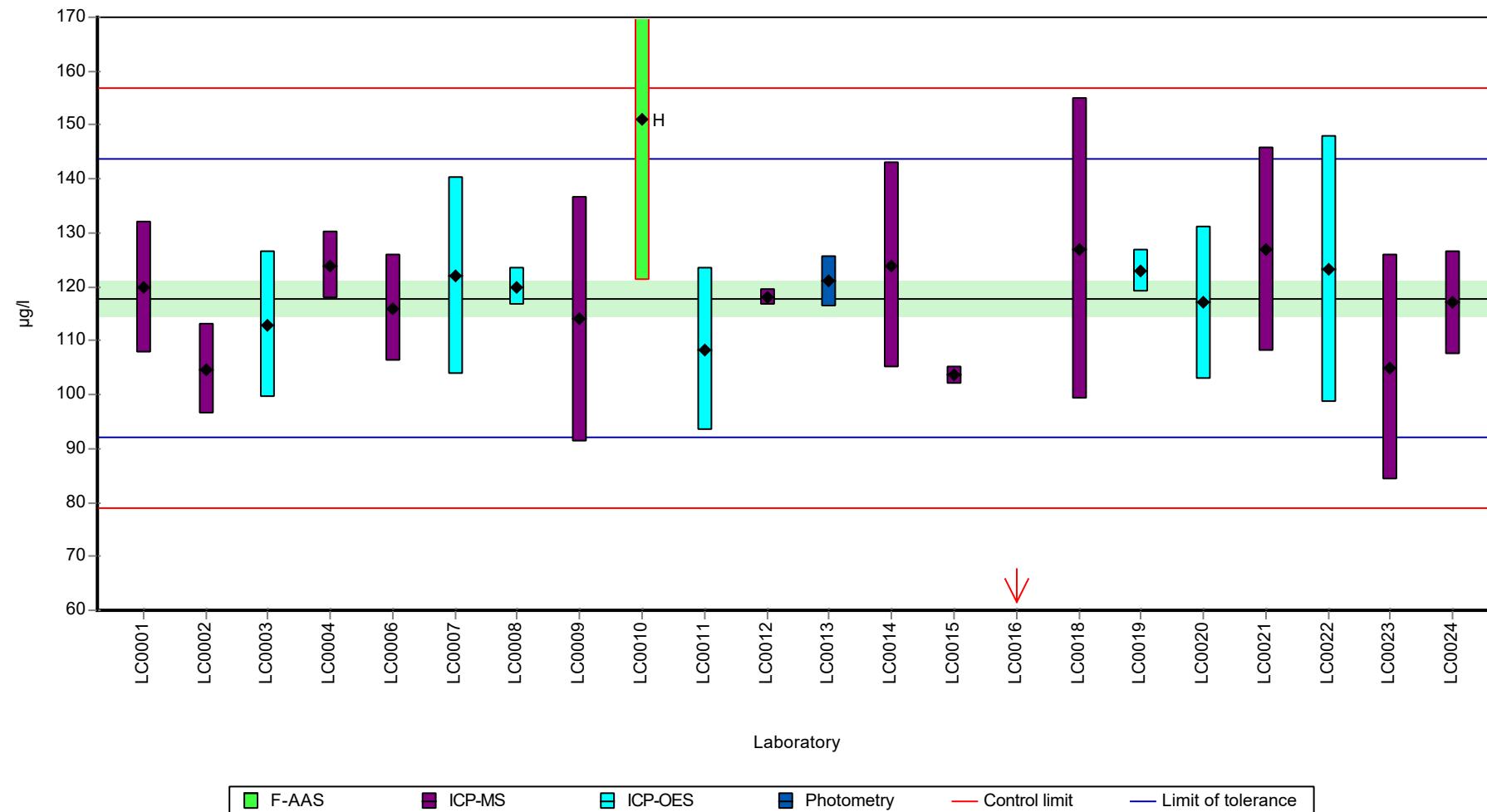
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	119.81	12.2	102	0.15	
LC0002	104.7	8.38	88.8	-1.02	
LC0003	113	13.6	95.8	-0.38	
LC0004	124	6.2	105	0.47	
LC0005	-	-	-	-	
LC0006	116	10	98.4	-0.15	
LC0007	122	18.3	103	0.32	
LC0008	120	3.59	102	0.16	
LC0009	114	22.8	96.7	-0.3	
LC0010	151	30	128	2.55	H
LC0011	108.43	15.1802	92	-0.73	
LC0012	118	1.528	100	0.01	
LC0013	121	4.84	103	0.24	
LC0014	124	19	105	0.47	
LC0015	103.6	1.674	87.9	-1.1	
LC0016	41	10.66	34.8	-5.93	H
LC0017	-	-	-	-	
LC0018	127	28	108	0.7	
LC0019	123	4	104	0.39	
LC0020	117	14.1	99.2	-0.07	
LC0021	127	19	108	0.7	
LC0022	123.25	24.65	105	0.41	
LC0023	105	21	89.1	-0.99	
LC0024	117	9.6	99.2	-0.07	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	115 ± 12.4	117 ± 4.87	µg/l
Minimum	41	104	µg/l
Maximum	151	127	µg/l
Standard deviation	19.4	7.27	µg/l
rel. standard deviation	16.8	6.19	%
n	22	20	-

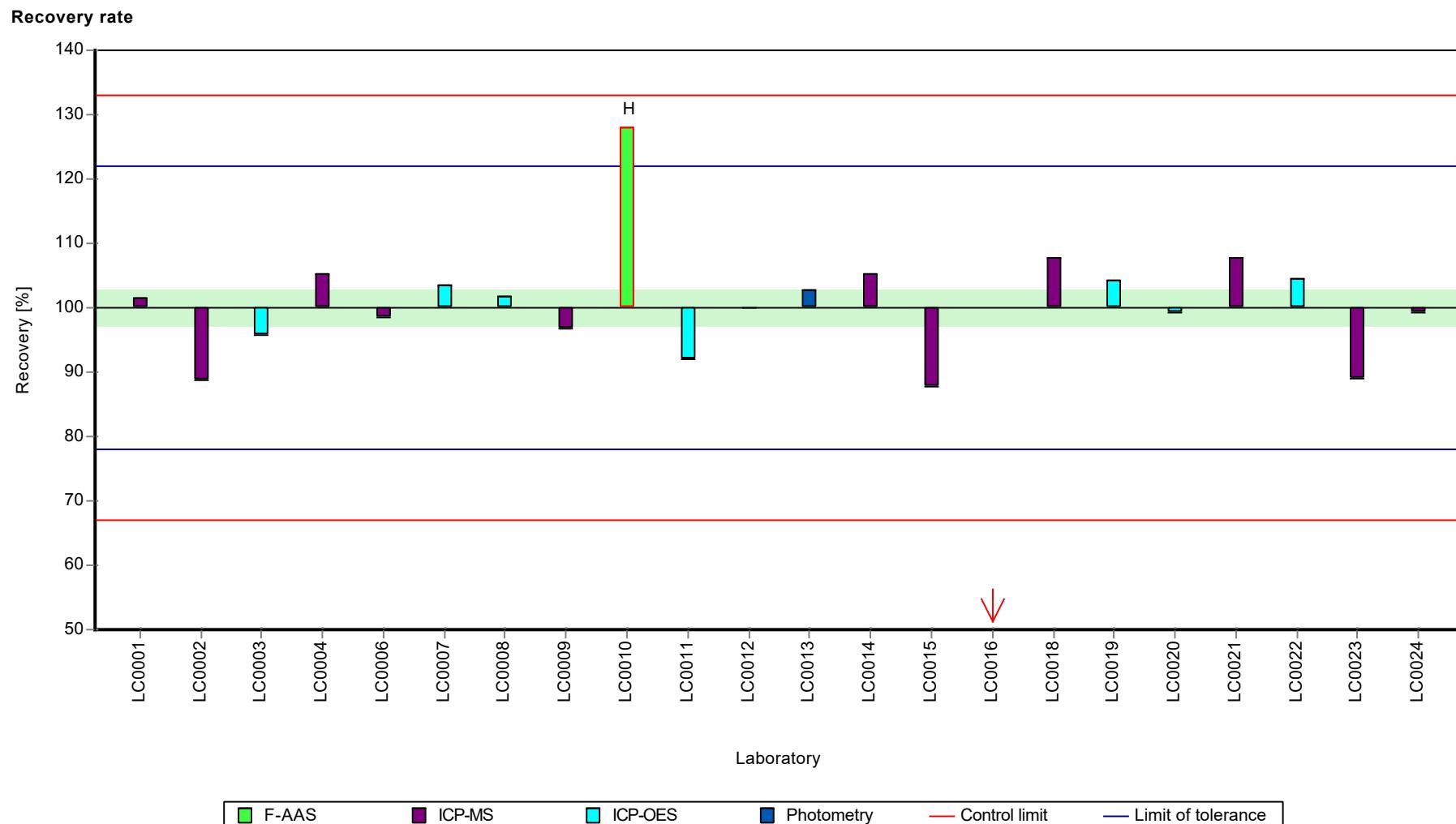
**Graphical presentation of results**

**Results**



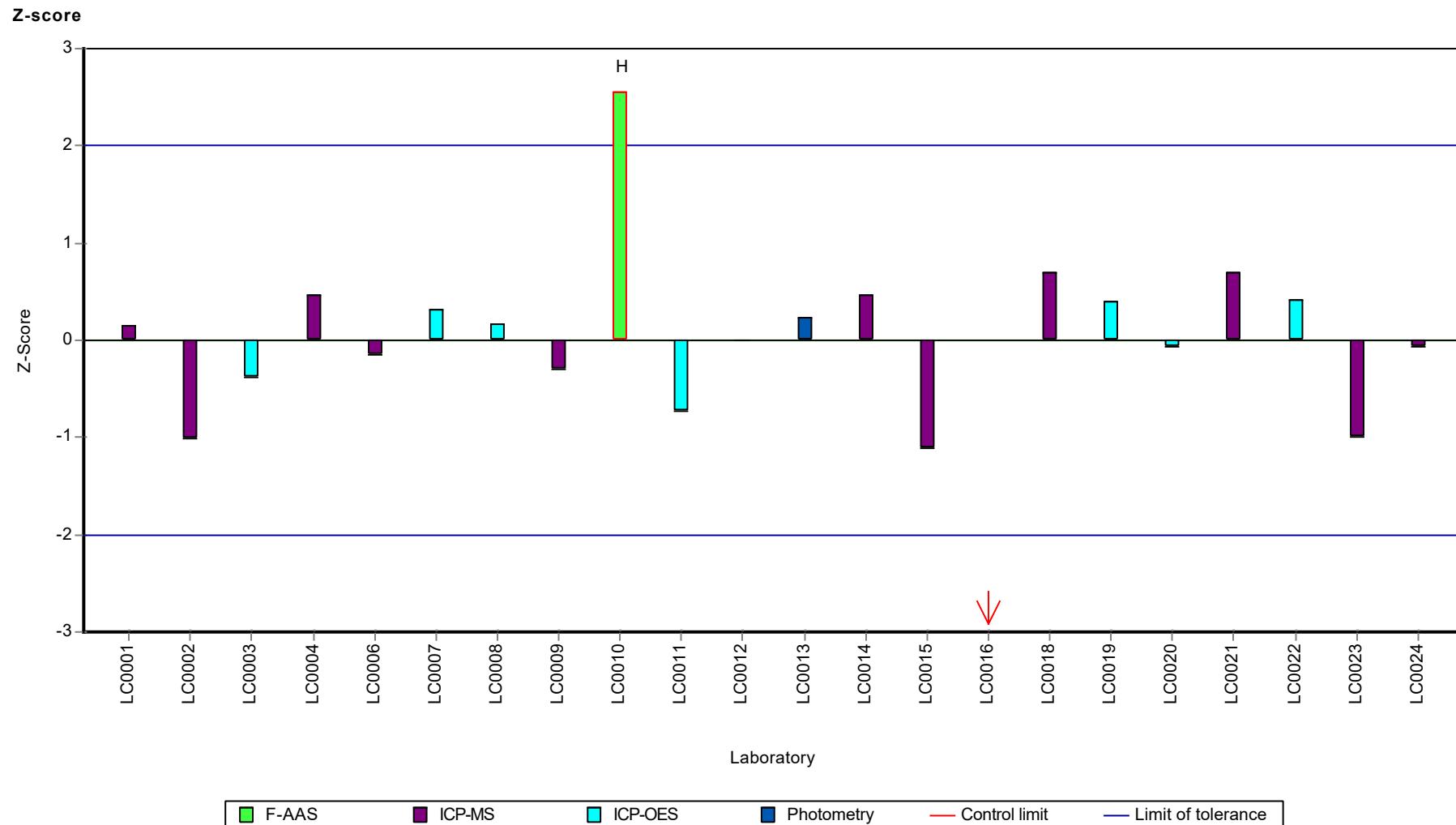
Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Iron



Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Iron



Parameter oriented report Metals and trace elements  
M165

Sample: M165B, Parameter: Iron

## Parameter oriented report

### M165 B

#### Iron

Unit	µg/l
Assigned value ± U (k=2)	30.3 ± 1.28
Criterion	3.33 (11 %)
Minimum - Maximum	18.8 - 35
Control test value ± U (k=2)	26.0 ± 2.86

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	28.51	2.89	94.1	-0.54	
LC0002	13.5	1.08	44.6	-5.04	H
LC0003	27	3.2	89.1	-0.99	
LC0004	32	1.6	106	0.51	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	32.9	4.9	109	0.78	
LC0008	32.8	0.935	108	0.75	
LC0009	28.7	5.74	94.7	-0.48	
LC0010	60	30	198	8.91	H
LC0011	27.83	3.8962	91.8	-0.74	
LC0012	31.9	0.115	105	0.48	
LC0013	28.9	1.15	95.4	-0.42	
LC0014	32	4.8	106	0.51	
LC0015	18.82	0.583	62.1	-3.44	
LC0016	121	31.46	399	27.21	H
LC0017	-	-	-	-	
LC0018	35	6	116	1.41	
LC0019	43.5	4	144	3.96	H
LC0020	30	5.1	99	-0.09	
LC0021	34	5.09	112	1.11	
LC0022	29	5.8	95.7	-0.39	
LC0023	27.3	5.5	90.1	-0.9	
LC0024	29.6	2.4	97.7	-0.21	

#### Characteristics of parameter

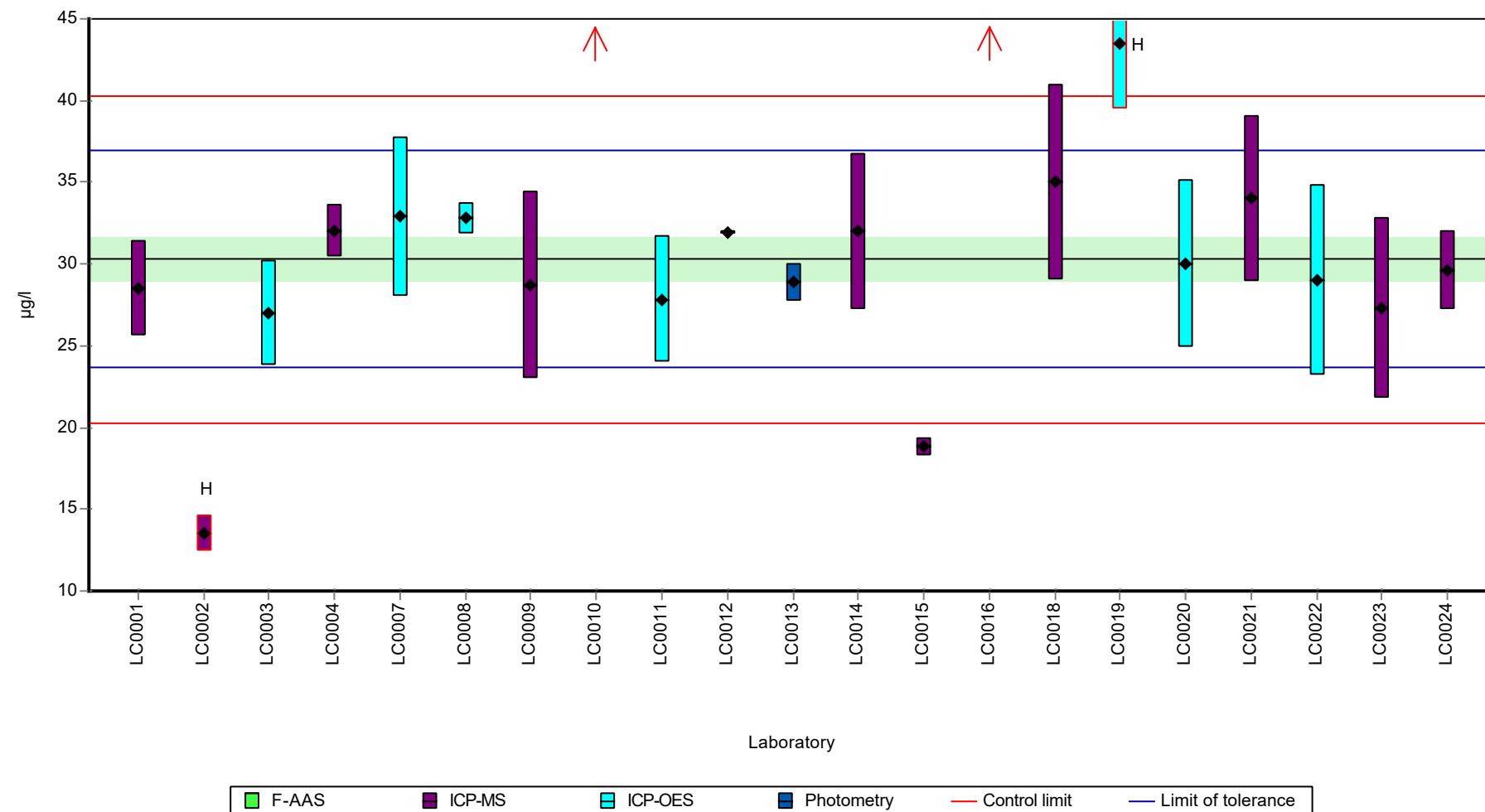
	all results	without outliers	Unit
Mean ± CI (99%)	35.4 ± 14.1	29.8 ± 2.7	µg/l
Minimum	13.5	18.8	µg/l
Maximum	121	35	µg/l
Standard deviation	21.5	3.71	µg/l
rel. standard deviation	60.6	12.5	%
n	21	17	-

Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Iron

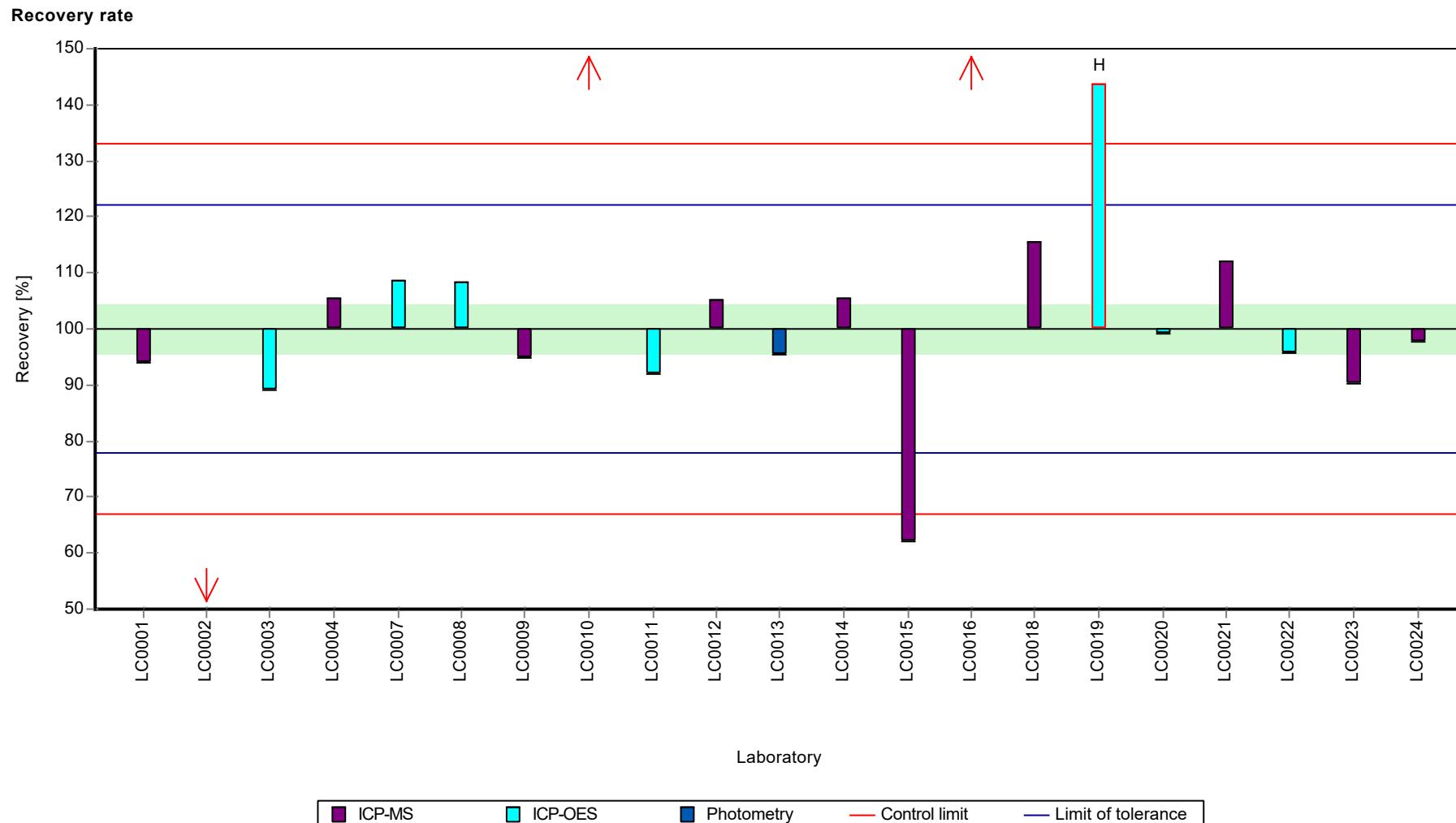
#### Graphical presentation of results

##### Results



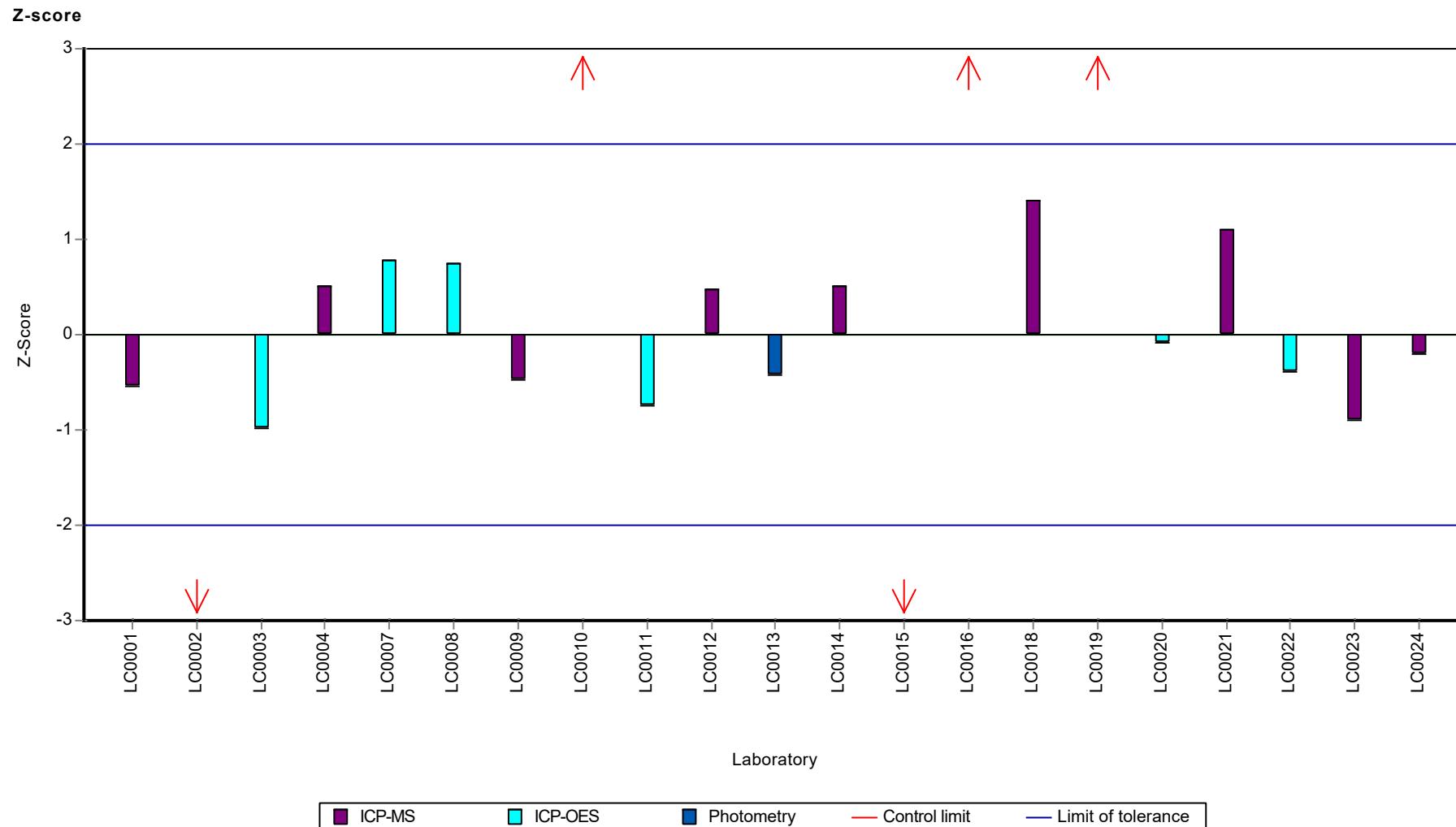
Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Iron



Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Iron



Parameter oriented report Metals and trace elements  
M165

Sample: M165A, Parameter: Lead

## Parameter oriented report

### M165 A

#### Lead

Unit	µg/l
Assigned value ± U (k=2)	2.14 ± 0.0665
Criterion	0.32 (15 %)
Minimum - Maximum	1.95 - 2.31
Control test value ± U (k=2)	1.66 ± 0.249

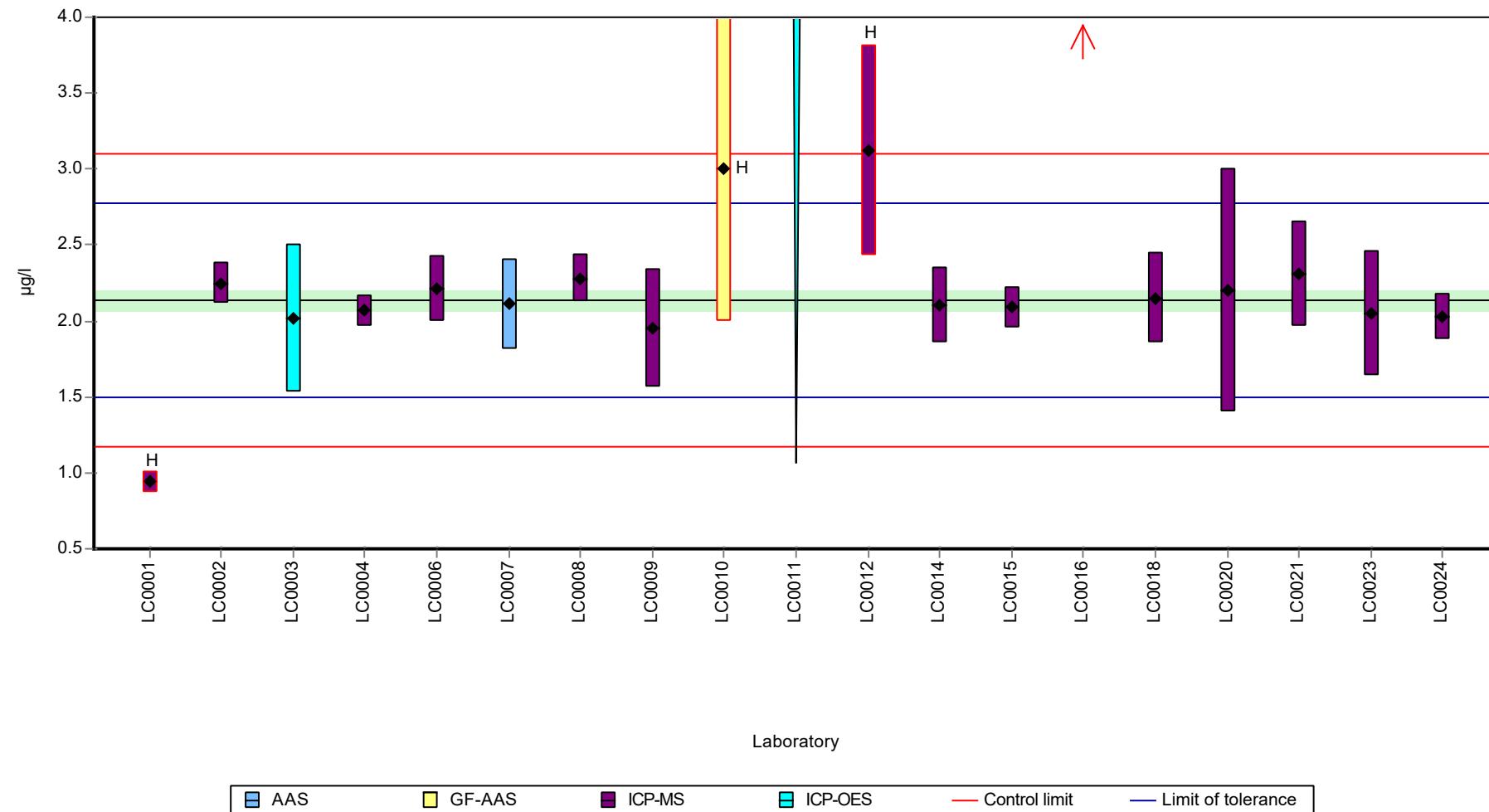
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.94	0.07	44	-3.73	
LC0002	2.25	0.14	105	0.36	
LC0003	2.02	0.49	94.6	-0.36	
LC0004	2.07	0.104	97	-0.2	
LC0005	-	-	-	-	
LC0006	2.21	0.22	104	0.23	
LC0007	2.11	0.3	98.8	-0.08	
LC0008	2.28	0.157	107	0.45	
LC0009	1.95	0.39	91.3	-0.58	
LC0010	3	1	141	2.7	H
LC0011	< 5 (LOQ)	-	-	-	
LC0012	3.12	0.693	146	3.08	H
LC0013	-	-	-	-	
LC0014	2.1	0.25	98.4	-0.11	
LC0015	2.09	0.134	97.9	-0.14	
LC0016	6.9	0.552	323	14.88	H
LC0017	-	-	-	-	
LC0018	2.15	0.3	101	0.05	
LC0019	-	-	-	-	
LC0020	2.2	0.8	103	0.2	
LC0021	2.31	0.35	108	0.55	
LC0022	-	-	-	-	
LC0023	2.05	0.41	96	-0.27	
LC0024	2.03	0.15	95.1	-0.33	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	2.43 ± 0.847	2.13 ± 0.0857	µg/l
Minimum	0.94	1.95	µg/l
Maximum	6.9	2.31	µg/l
Standard deviation	1.2	0.107	µg/l
rel. standard deviation	49.3	5.02	%
n	18	14	-

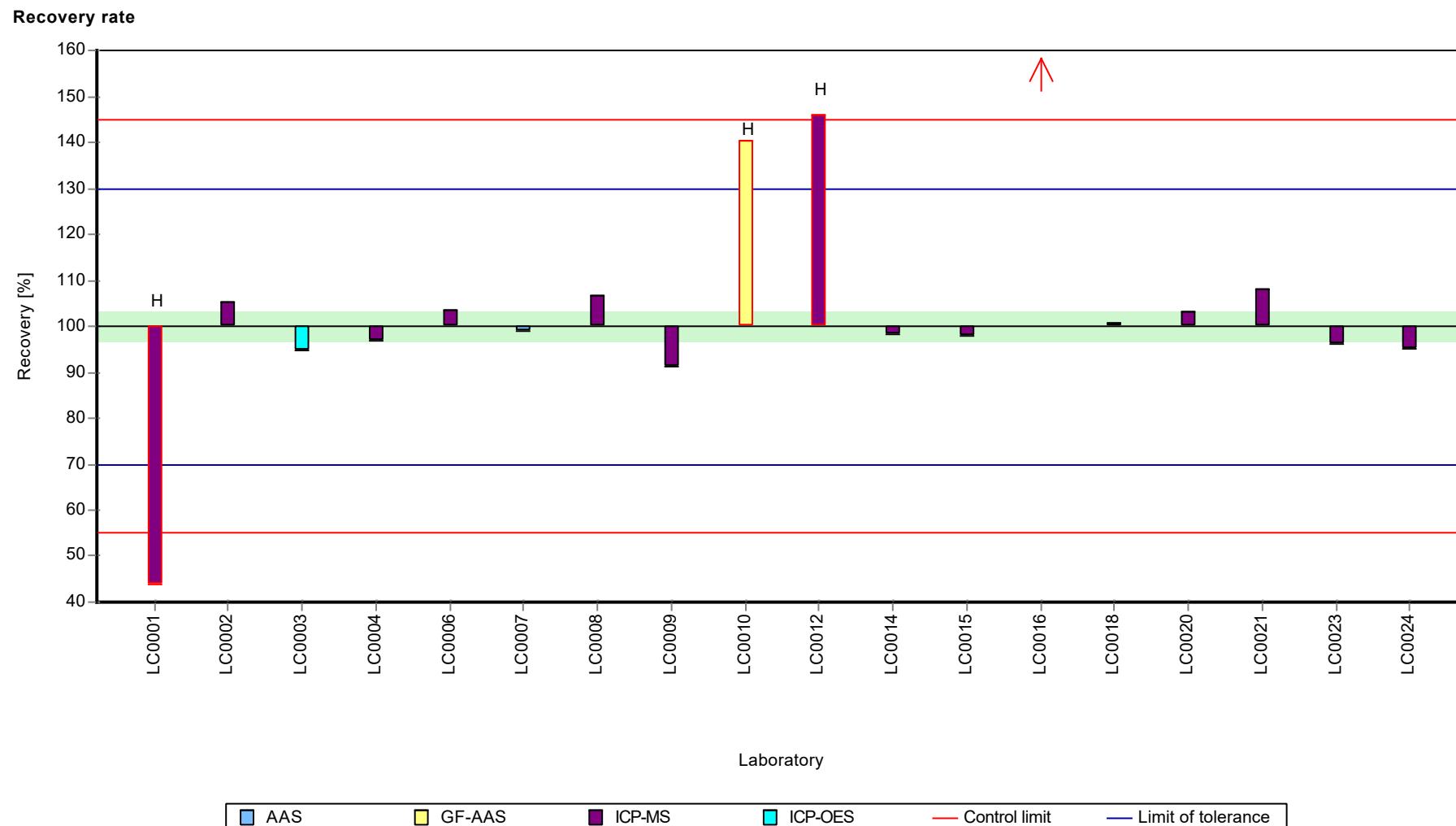
**Graphical presentation of results**

**Results**



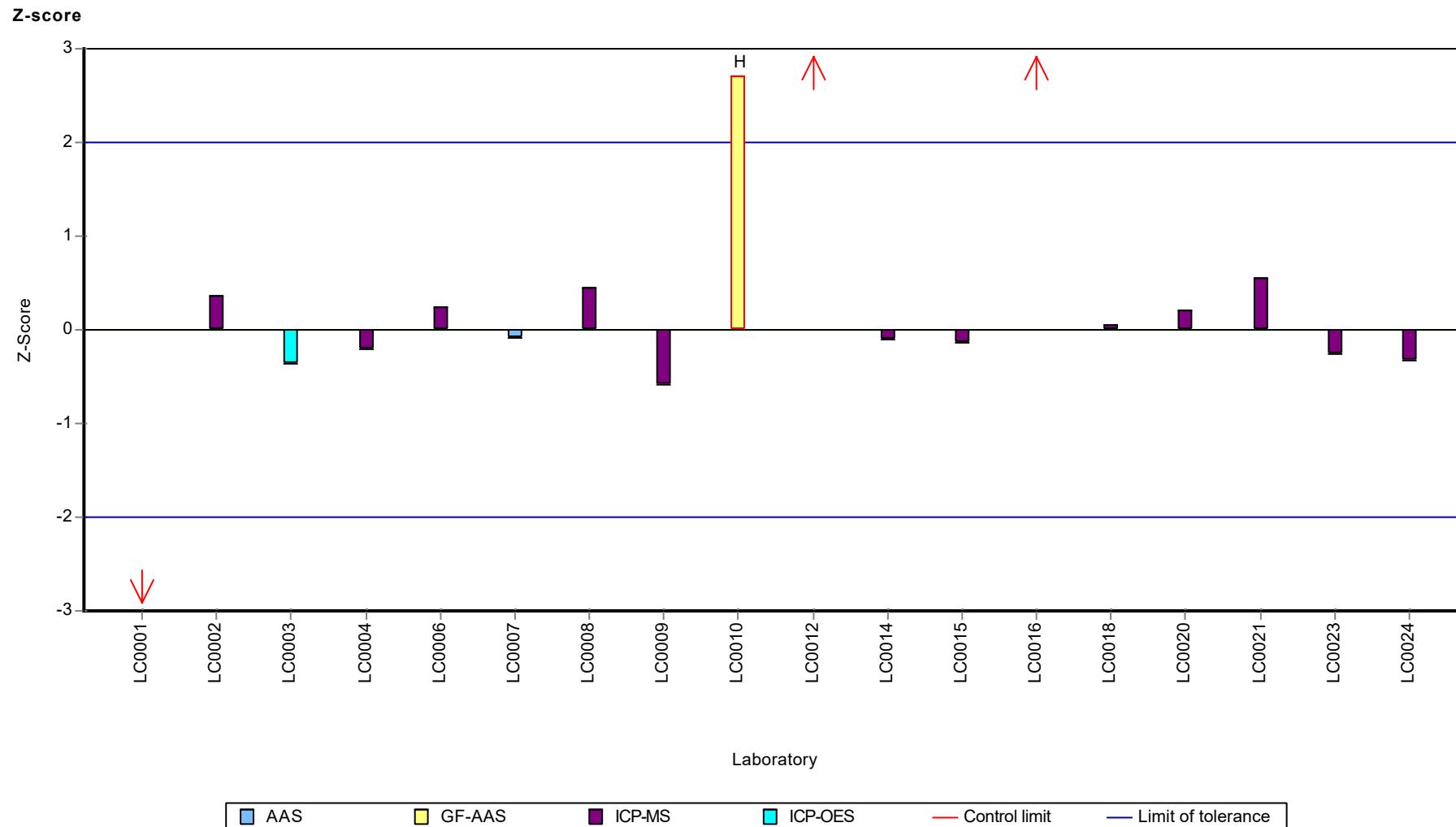
Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Lead



Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Lead



Parameter oriented report Metals and trace elements  
M165

Sample: M165B, Parameter: Lead

## Parameter oriented report

### M165 B

#### Lead

Unit	$\mu\text{g/l}$
Assigned value $\pm U$ ( $k=2$ )	$6.45 \pm 0.323$
Criterion	0.968 (15 %)
Minimum - Maximum	5.28 - 8
Control test value $\pm U$ ( $k=2$ )	$5.37 \pm 0.806$

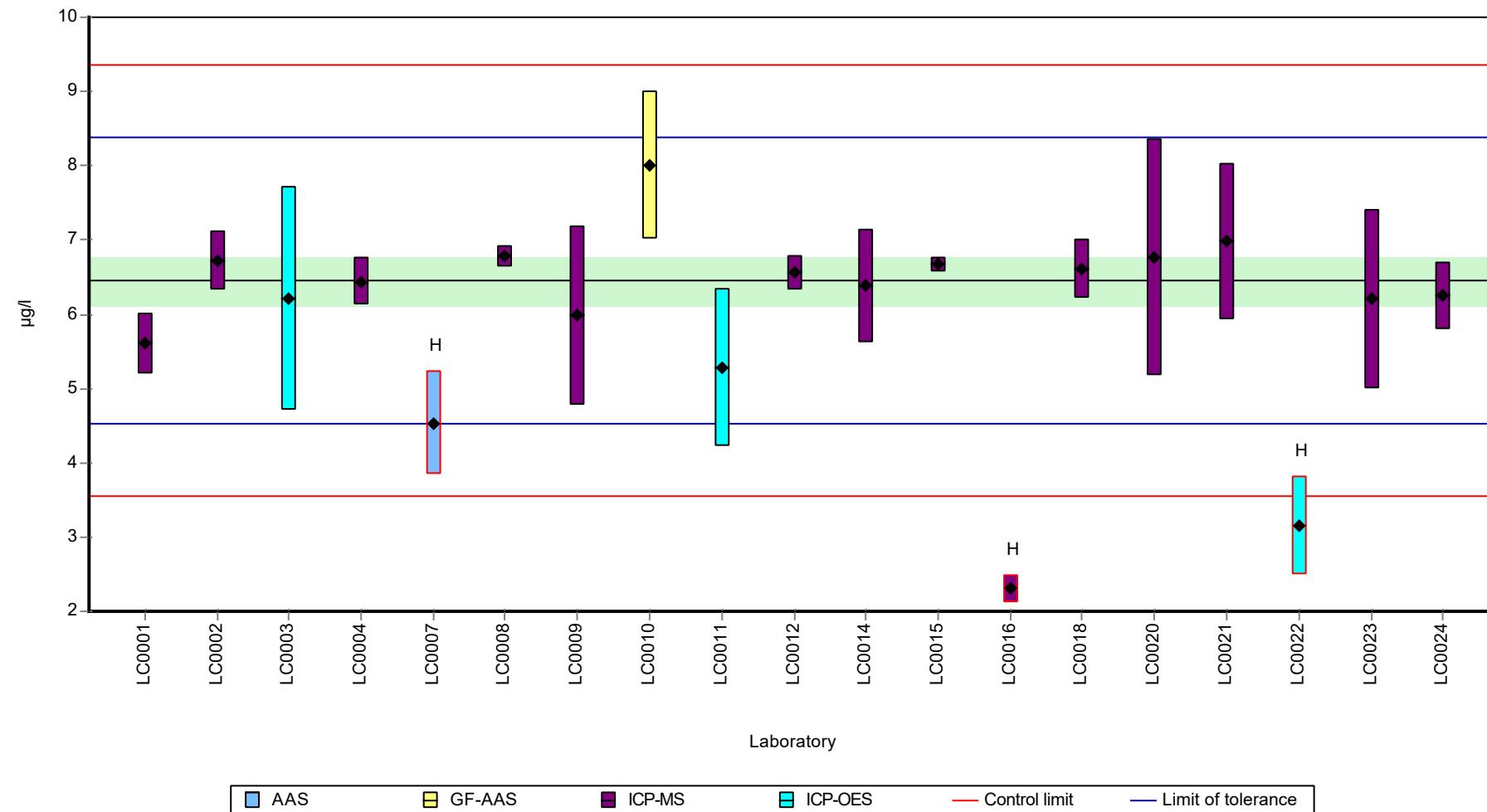
Labcode	Result	$\pm U$	Recovery [%]	z-score	Comments
LC0001	5.61	0.41	87	-0.87	
LC0002	6.73	0.4	104	0.29	
LC0003	6.21	1.5	96.3	-0.25	
LC0004	6.44	0.322	99.8	-0.01	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	4.53	0.7	70.2	-1.99	H
LC0008	6.78	0.139	105	0.34	
LC0009	5.98	1.2	92.7	-0.49	
LC0010	8	1	124	1.6	
LC0011	5.28	1.056	81.8	-1.21	
LC0012	6.56	0.229	102	0.11	
LC0013	-	-	-	-	
LC0014	6.38	0.77	98.9	-0.07	
LC0015	6.67	0.105	103	0.23	
LC0016	2.3	0.184	35.7	-4.29	H
LC0017	-	-	-	-	
LC0018	6.6	0.4	102	0.15	
LC0019	-	-	-	-	
LC0020	6.77	1.59	105	0.33	
LC0021	6.98	1.05	108	0.55	
LC0022	3.162	0.664	49	-3.4	H
LC0023	6.2	1.2	96.1	-0.26	
LC0024	6.25	0.45	96.9	-0.21	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean $\pm CI$ (99%)	$5.97 \pm 0.93$	$6.47 \pm 0.455$	$\mu\text{g/l}$
Minimum	2.3	5.28	$\mu\text{g/l}$
Maximum	8	8	$\mu\text{g/l}$
Standard deviation	1.35	0.606	$\mu\text{g/l}$
rel. standard deviation	22.6	9.38	%
n	19	16	-

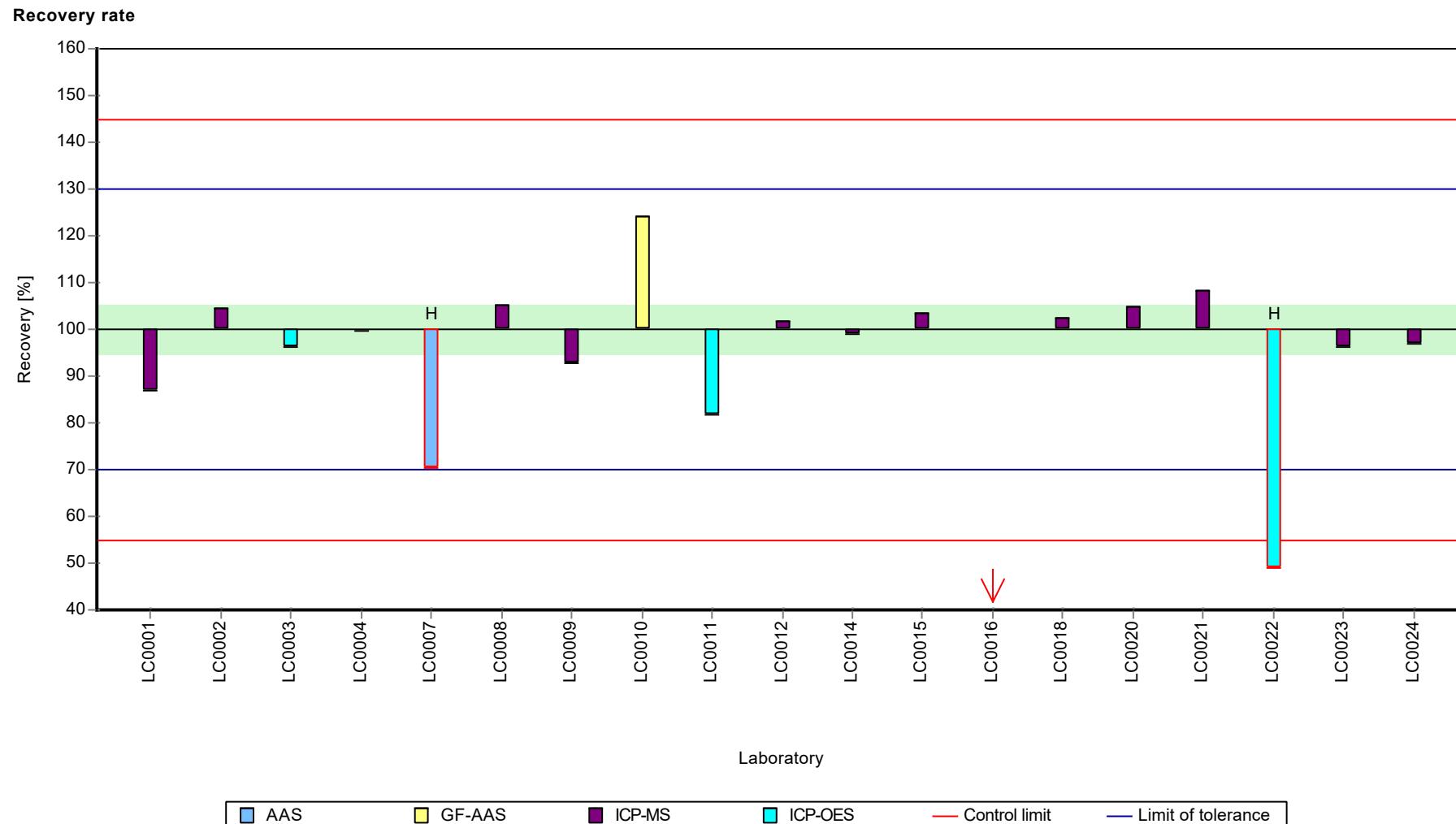
**Graphical presentation of results**

**Results**



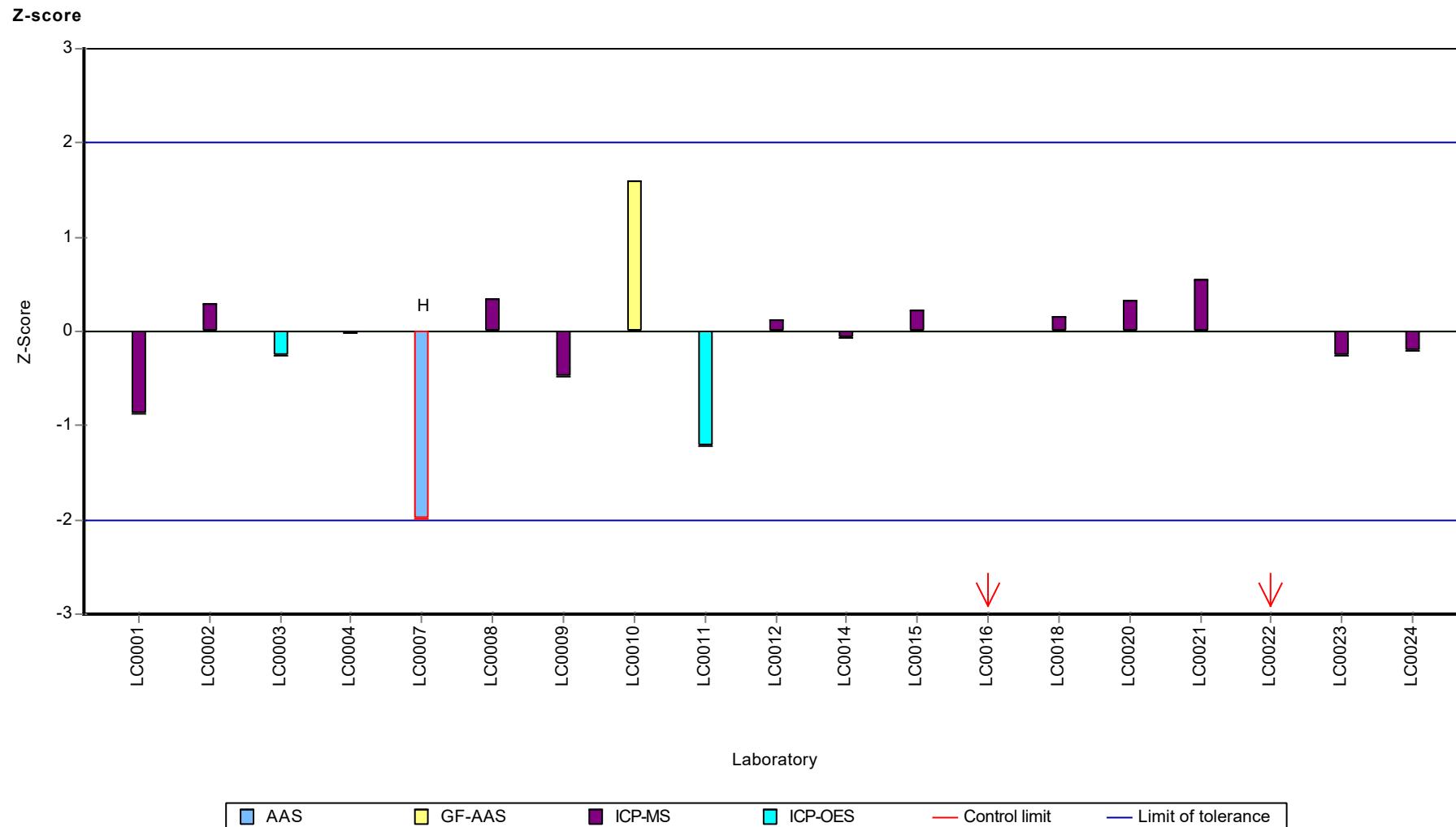
Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Lead



Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Lead



Parameter oriented report Metals and trace elements  
M165

Sample: M165A, Parameter: Manganese

## Parameter oriented report

### M165 A

#### Manganese

Unit	µg/l
Assigned value ± U (k=2)	33.8 ± 1.02
Criterion	2.43 (7.2 %)
Minimum - Maximum	29.9 - 38
Control test value ± U (k=2)	26.9 ± 2.69

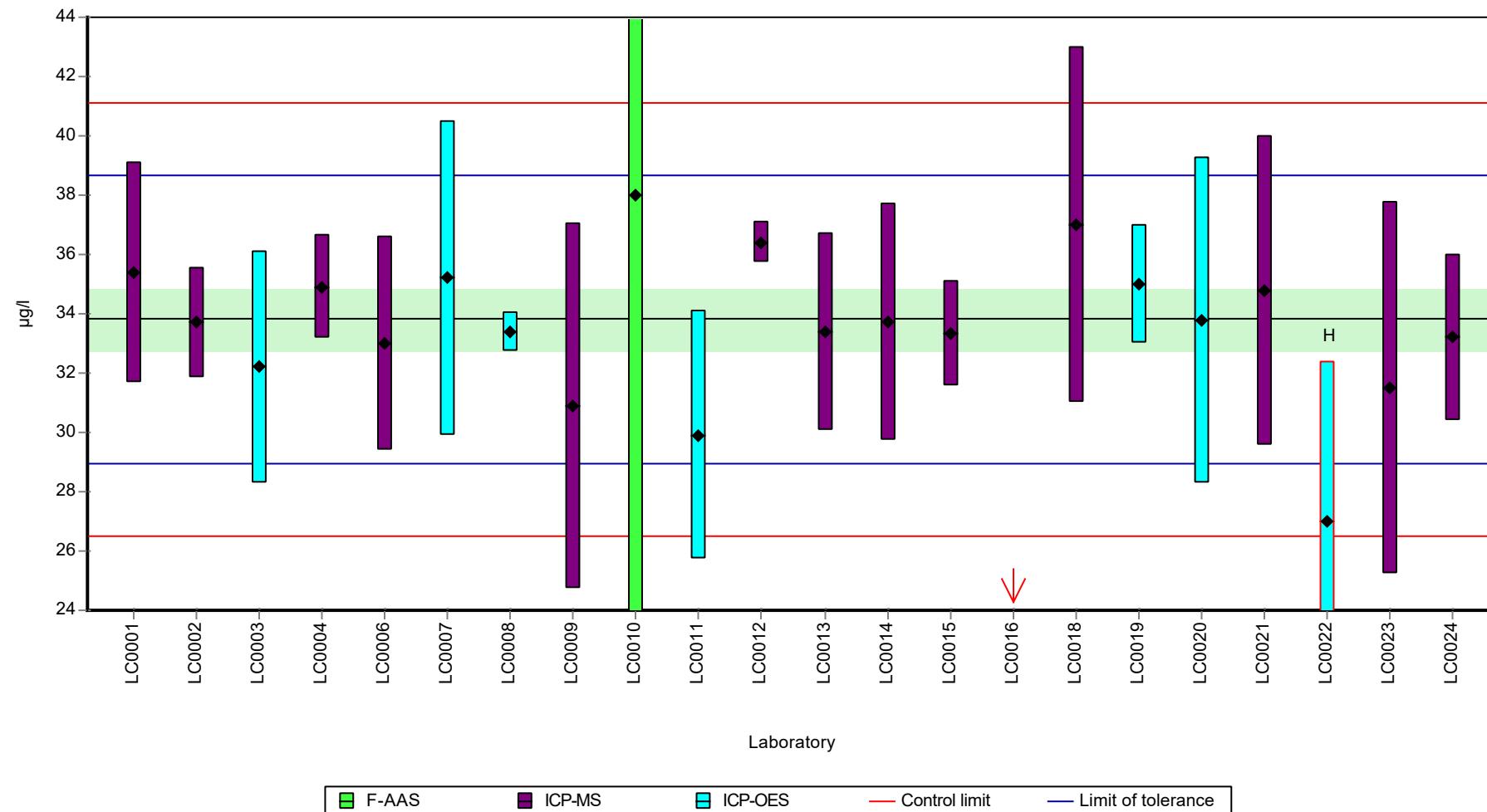
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	35.38	3.73	105	0.64	
LC0002	33.7	1.85	99.7	-0.05	
LC0003	32.2	3.9	95.2	-0.66	
LC0004	34.9	1.75	103	0.45	
LC0005	-	-	-	-	
LC0006	33	3.6	97.6	-0.33	
LC0007	35.2	5.3	104	0.57	
LC0008	33.4	0.672	98.8	-0.17	
LC0009	30.9	6.18	91.4	-1.2	
LC0010	38	15	112	1.72	
LC0011	29.91	4.1874	88.5	-1.6	
LC0012	36.4	0.7	108	1.06	
LC0013	33.4	3.34	98.8	-0.17	
LC0014	33.7	4	99.7	-0.05	
LC0015	33.33	1.765	98.6	-0.2	
LC0016	8	0.8	23.7	-10.6	H
LC0017	-	-	-	-	
LC0018	37	6	109	1.31	
LC0019	35	2	104	0.49	
LC0020	33.8	5.5	100	-0.01	
LC0021	34.8	5.22	103	0.41	
LC0022	27	5.4	79.9	-2.8	H
LC0023	31.5	6.3	93.2	-0.95	
LC0024	33.2	2.8	98.2	-0.25	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	32.4 ± 3.81	33.9 ± 1.34	µg/l
Minimum	8	29.9	µg/l
Maximum	38	38	µg/l
Standard deviation	5.96	1.99	µg/l
rel. standard deviation	18.4	5.87	%
n	22	20	-

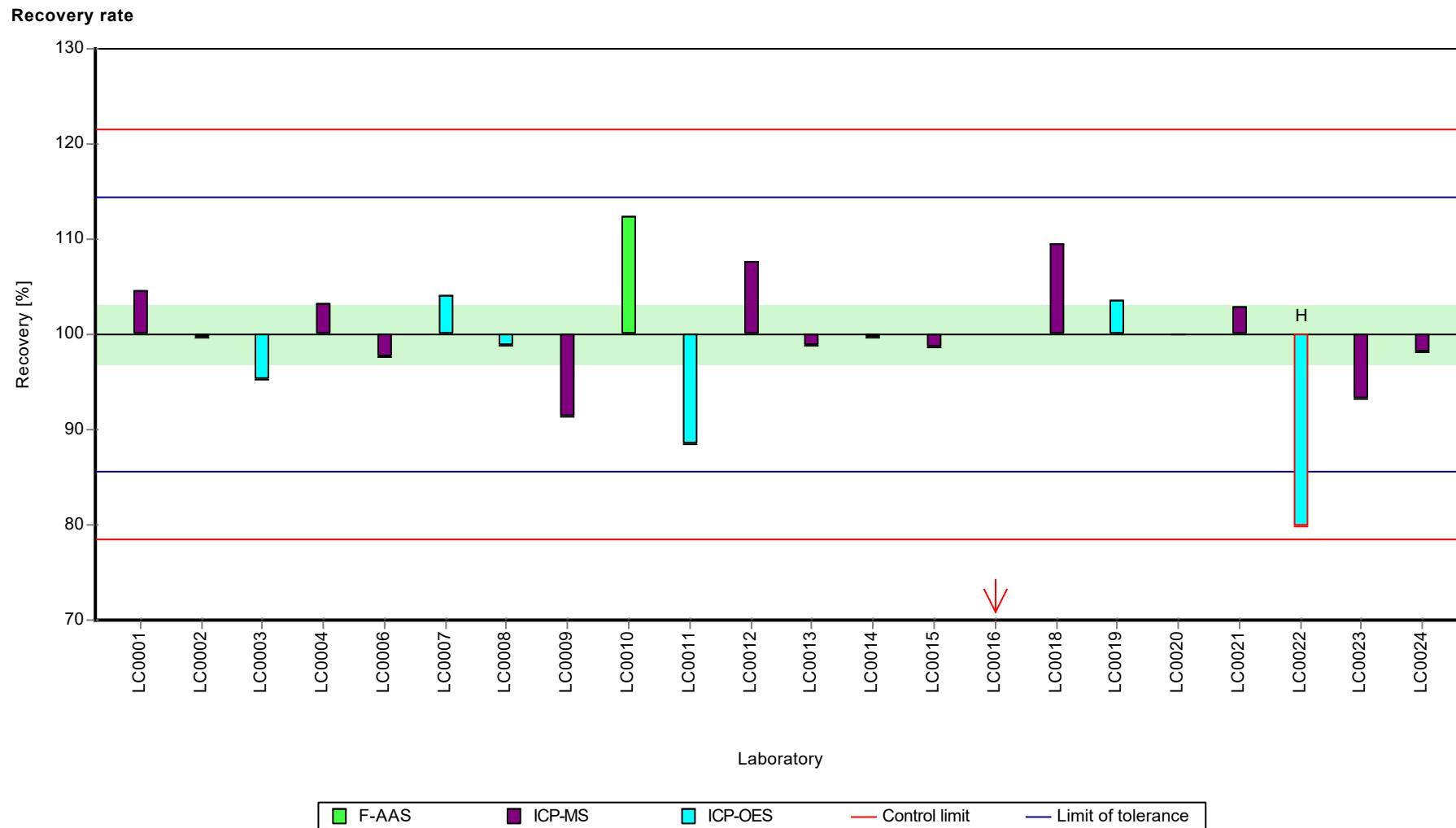
**Graphical presentation of results**

**Results**



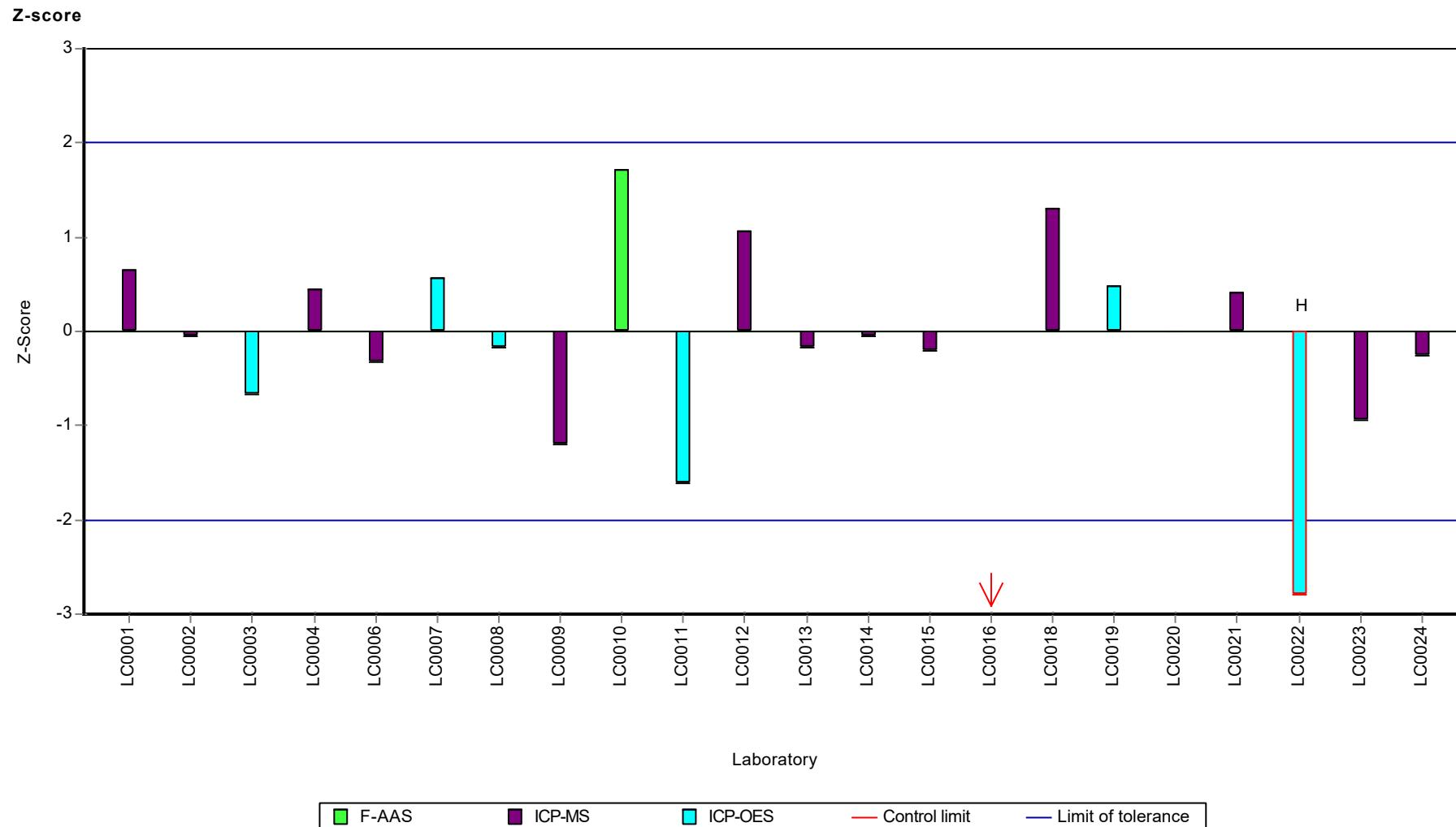
Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Manganese



Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Manganese



Parameter oriented report Metals and trace elements  
M165

Sample: M165B, Parameter: Manganese

## Parameter oriented report

### M165 B

#### Manganese

Unit	µg/l
Assigned value ± U (k=2)	7.91 ± 0.339
Criterion	0.632 (8 %)
Minimum - Maximum	6.66 - 9.55
Control test value ± U (k=2)	6.75 ± 0.675

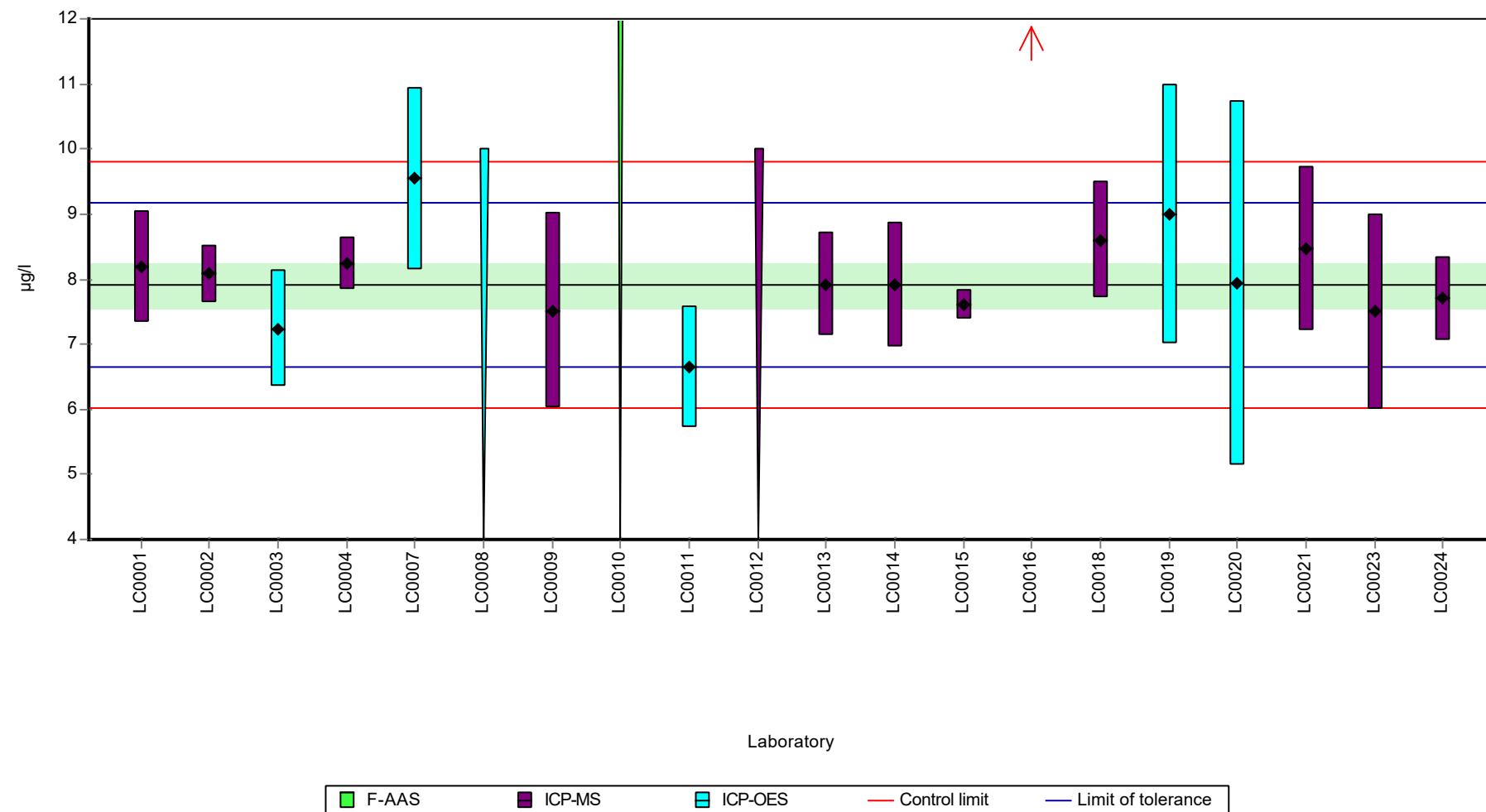
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	8.18	0.86	103	0.43	
LC0002	8.08	0.44	102	0.28	
LC0003	7.24	0.9	91.6	-1.05	
LC0004	8.24	0.412	104	0.53	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	9.55	1.4	121	2.6	
LC0008	< 10 (LOQ)	-	-	-	
LC0009	7.52	1.5	95.1	-0.61	
LC0010	< 20 (LOQ)	-	-	-	
LC0011	6.66	0.9324	84.2	-1.97	
LC0012	< 10 (LOQ)	-	-	-	
LC0013	7.92	0.792	100	0.02	
LC0014	7.91	0.95	100	0.01	
LC0015	7.6	0.226	96.1	-0.48	
LC0016	36	3.6	455	44.42	H
LC0017	-	-	-	-	
LC0018	8.6	0.9	109	1.1	
LC0019	9	2	114	1.73	
LC0020	7.93	2.8	100	0.04	
LC0021	8.47	1.27	107	0.89	
LC0022	-	-	-	-	
LC0023	7.5	1.5	94.9	-0.64	
LC0024	7.7	0.65	97.4	-0.32	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	9.65 ± 4.96	8.01 ± 0.52	µg/l
Minimum	6.66	6.66	µg/l
Maximum	36	9.55	µg/l
Standard deviation	6.82	0.693	µg/l
rel. standard deviation	70.7	8.65	%
n	17	16	-

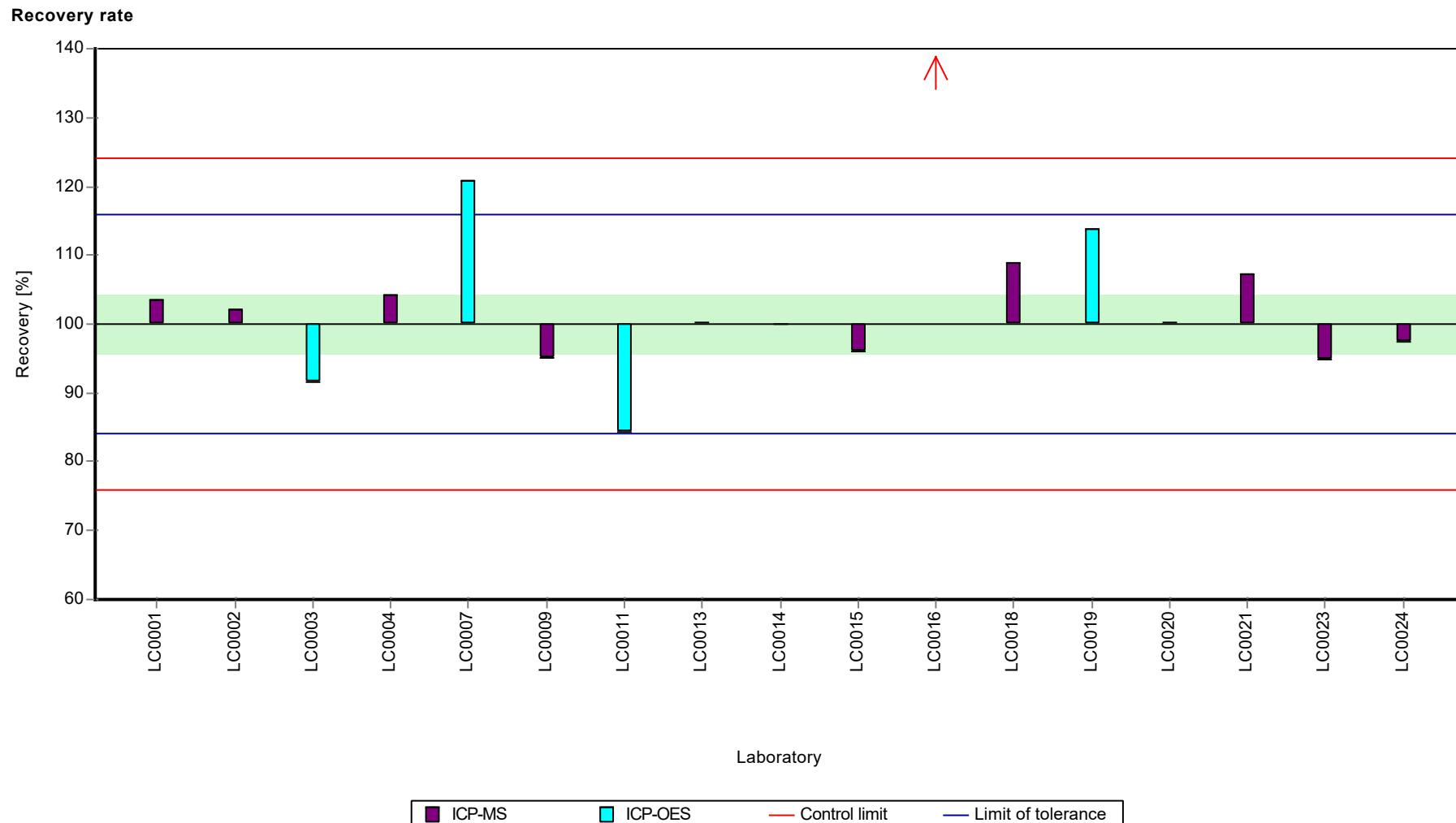
**Graphical presentation of results**

**Results**



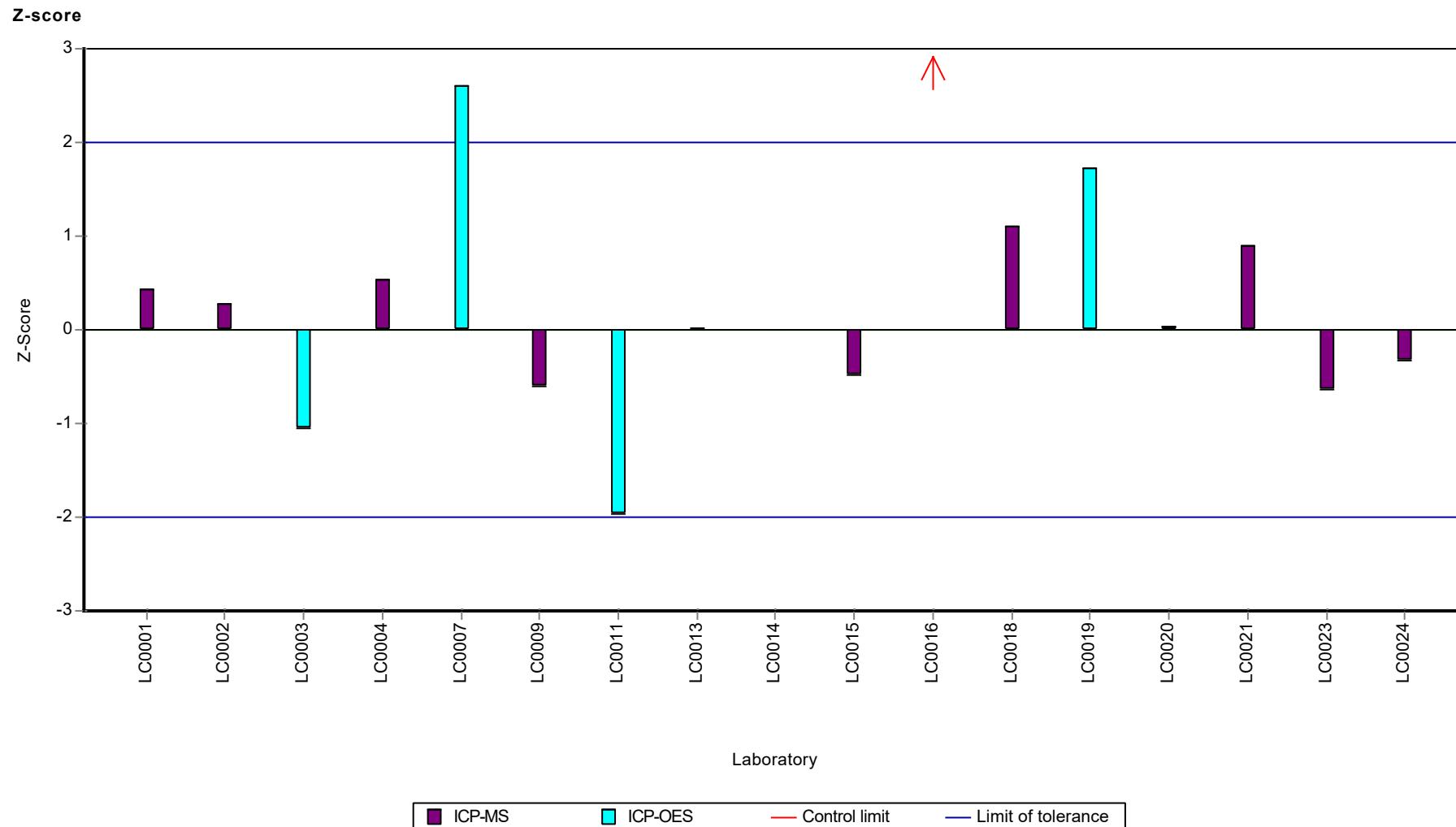
Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Manganese



Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Manganese



Parameter oriented report Metals and trace elements  
M165

Sample: M165AHG, Parameter: Mercury

## Parameter oriented report

### M165 A Hg

#### Mercury

Unit	µg/l
Assigned value ± U (k=2)	3.73 ± 0.197
Criterion	0.522 (14 %)
Minimum - Maximum	3.08 - 4.44
Control test value ± U (k=2)	3.6 ± 0.9

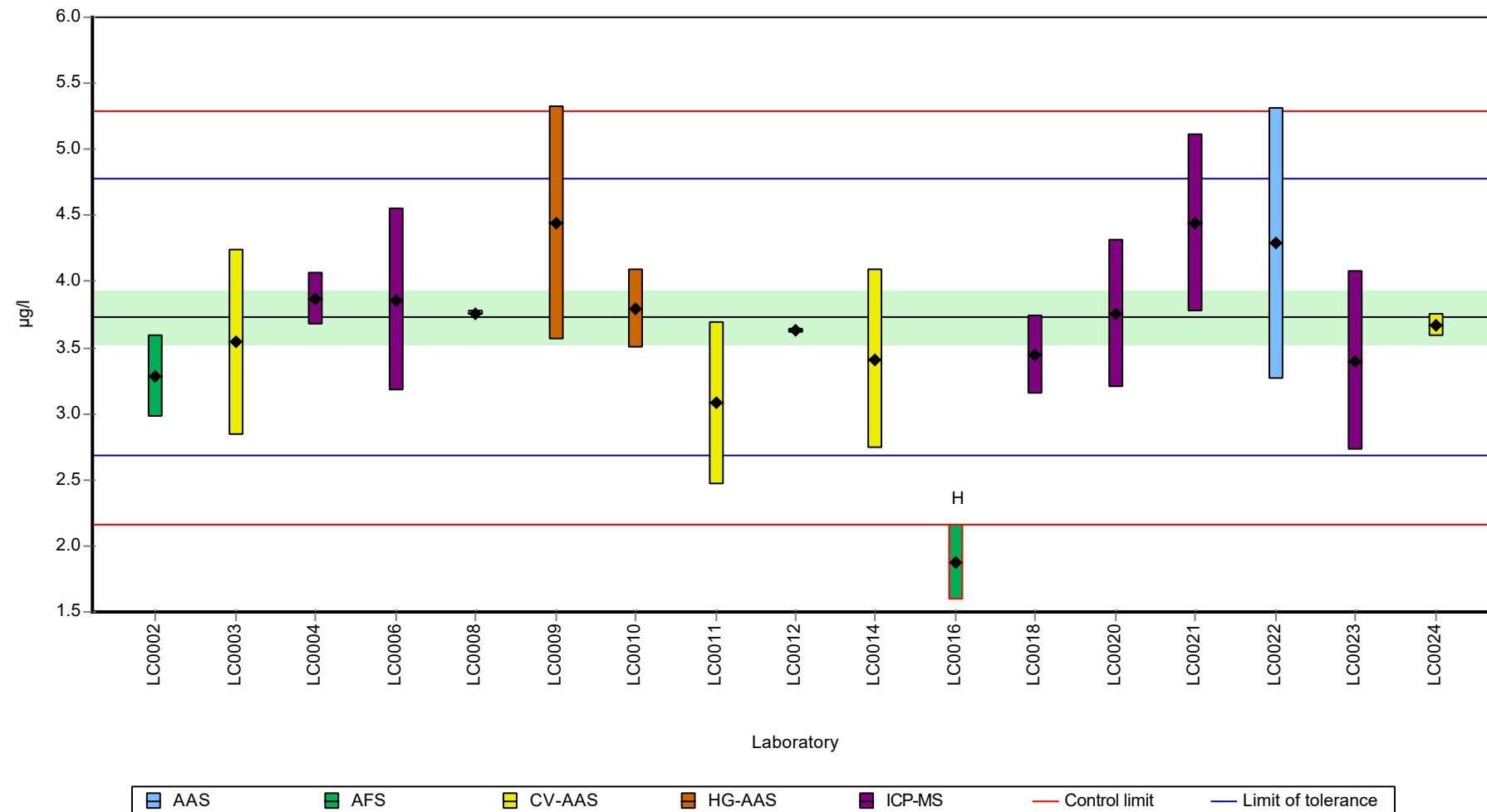
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	-	-	-	-	
LC0002	3.28	0.31	88	-0.86	
LC0003	3.54	0.7	94.9	-0.36	
LC0004	3.87	0.2	104	0.27	
LC0005	-	-	-	-	
LC0006	3.86	0.69	104	0.25	
LC0007	-	-	-	-	
LC0008	3.76	0.0171	101	0.06	
LC0009	4.44	0.888	119	1.36	
LC0010	3.79	0.3	102	0.12	
LC0011	3.08	0.616	82.6	-1.24	
LC0012	3.63	0.02	97.4	-0.19	
LC0013	-	-	-	-	
LC0014	3.41	0.68	91.5	-0.61	
LC0015	-	-	-	-	
LC0016	1.874	0.281	50.3	-3.55	H
LC0017	-	-	-	-	
LC0018	3.44	0.3	92.3	-0.55	
LC0019	-	-	-	-	
LC0020	3.76	0.56	101	0.06	
LC0021	4.44	0.67	119	1.36	
LC0022	4.288	1.029	115	1.07	
LC0023	3.4	0.68	91.2	-0.63	
LC0024	3.67	0.09	98.4	-0.11	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	3.62 ± 0.429	3.73 ± 0.296	µg/l
Minimum	1.87	3.08	µg/l
Maximum	4.44	4.44	µg/l
Standard deviation	0.59	0.394	µg/l
rel. standard deviation	16.3	10.6	%
n	17	16	-

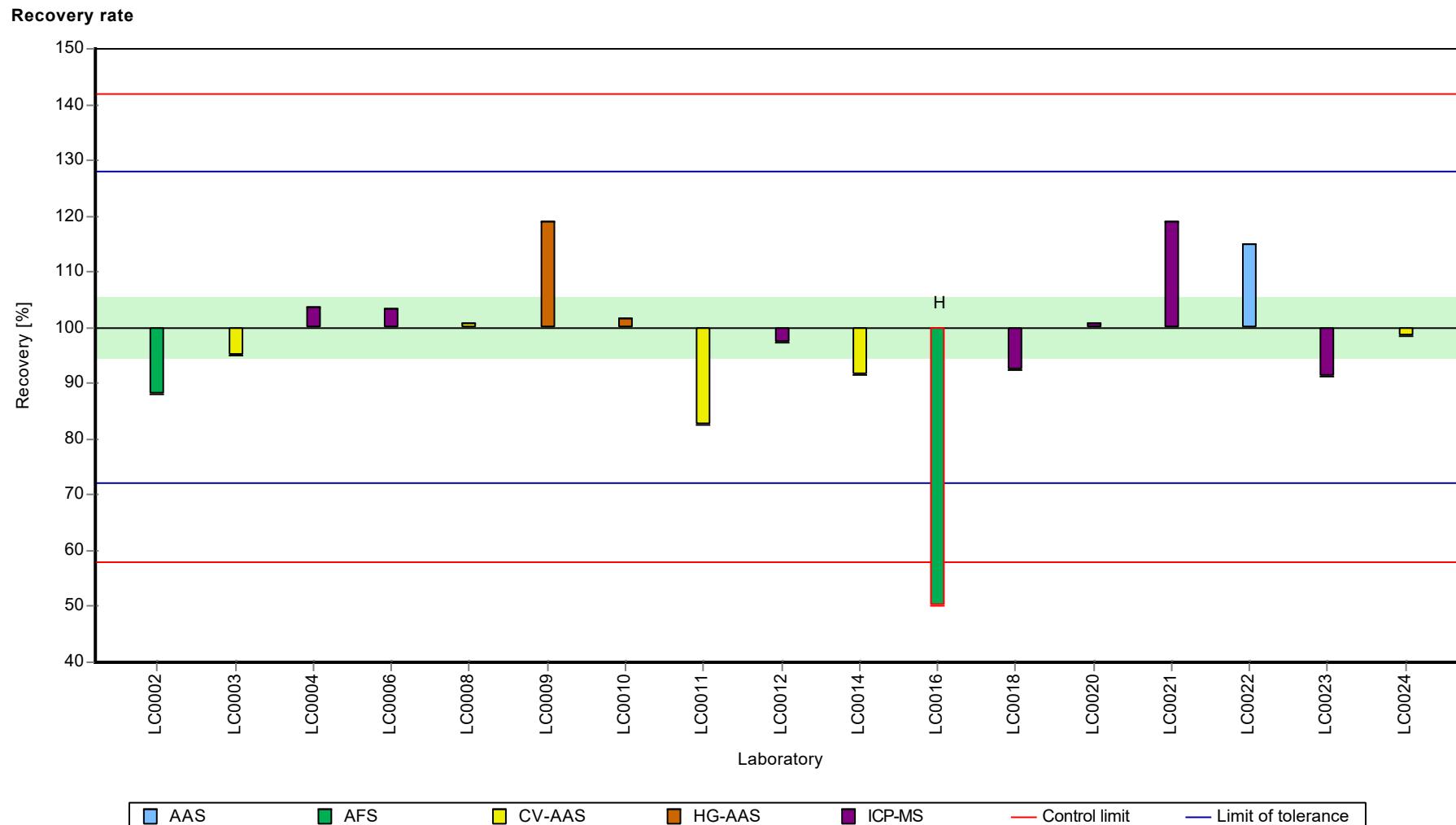
**Graphical presentation of results**

**Results**



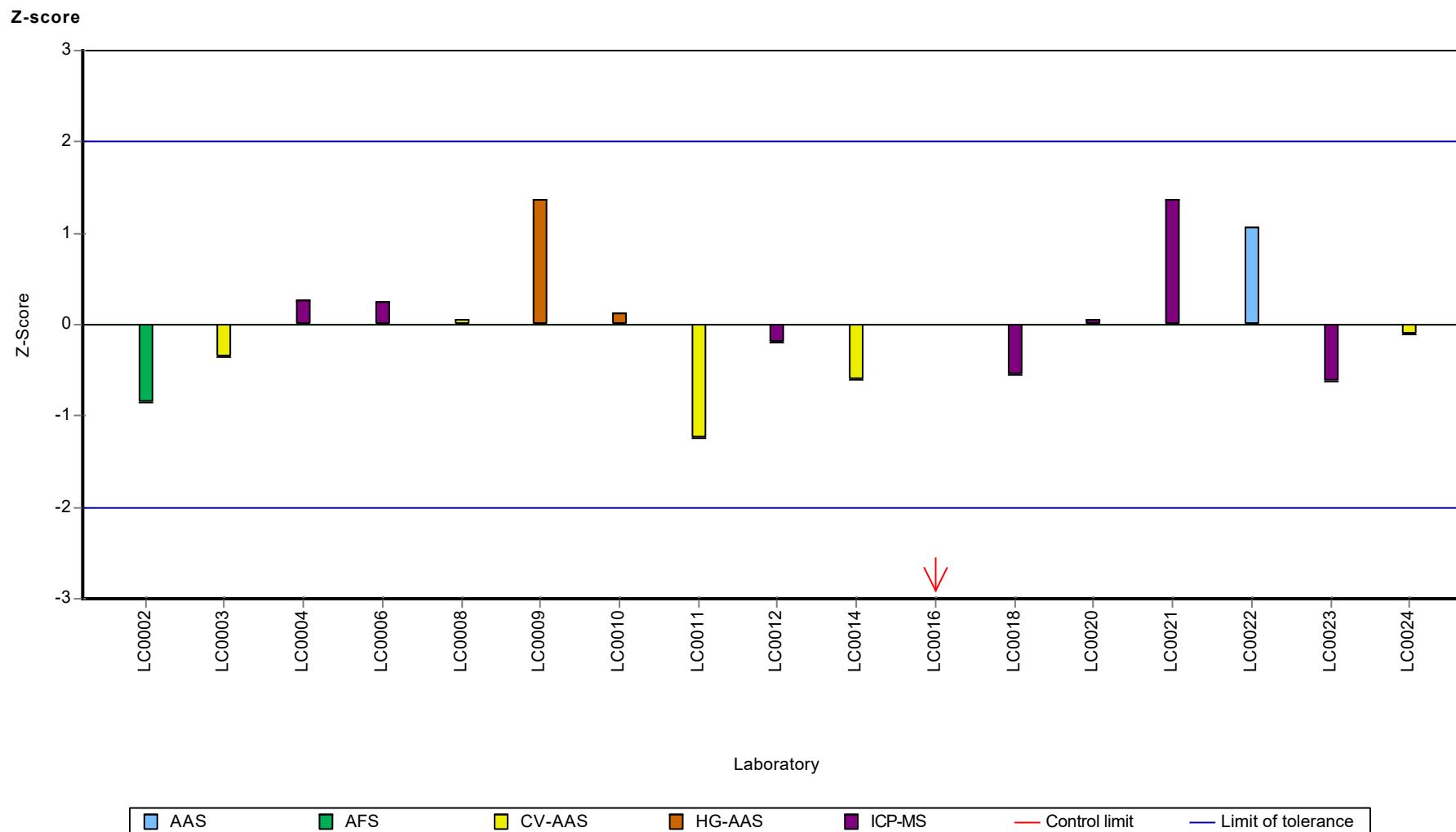
Parameter oriented report Metals and trace elements M165

Sample: M165AHG, Parameter: Mercury



Parameter oriented report Metals and trace elements M165

Sample: M165AHG, Parameter: Mercury



Parameter oriented report Metals and trace elements  
M165

Sample: M165BHG, Parameter: Mercury

## Parameter oriented report

### M165 B Hg

#### Mercury

Unit	µg/l
Assigned value ± U (k=2)	1.64 ± 0.0704
Criterion	0.23 (14 %)
Minimum - Maximum	1.51 - 1.96
Control test value ± U (k=2)	1.79 ± 0.448

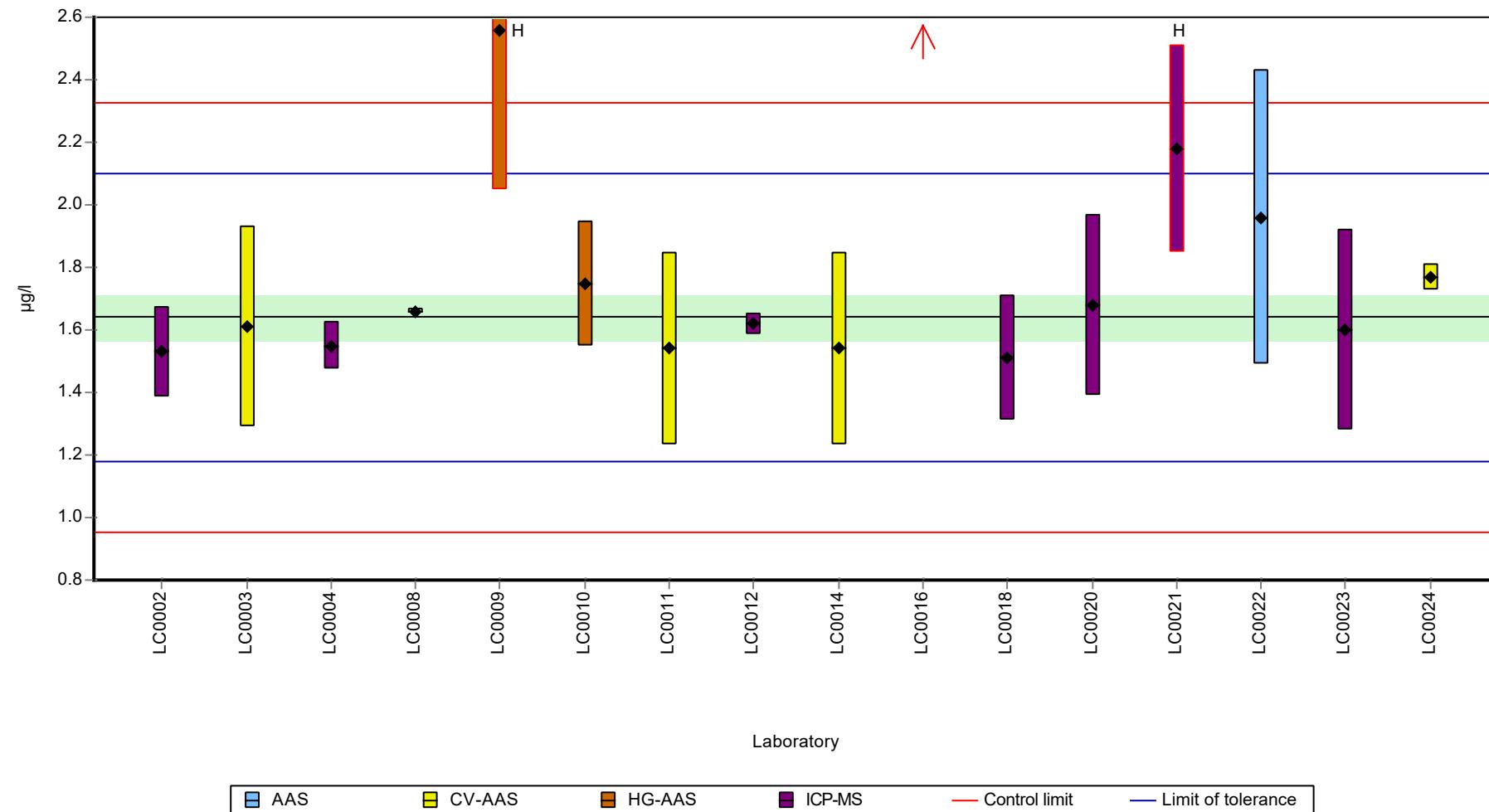
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	-	-	-	-	
LC0002	1.53	0.145	93.3	-0.48	
LC0003	1.61	0.32	98.2	-0.13	
LC0004	1.55	0.078	94.5	-0.39	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	-	-	-	-	
LC0008	1.66	0.00821	101	0.09	
LC0009	2.56	0.512	156	4.01	H
LC0010	1.75	0.2	107	0.48	
LC0011	1.54	0.308	93.9	-0.44	
LC0012	1.62	0.035	98.8	-0.09	
LC0013	-	-	-	-	
LC0014	1.54	0.31	93.9	-0.44	
LC0015	-	-	-	-	
LC0016	4.093	0.614	250	10.68	H
LC0017	-	-	-	-	
LC0018	1.51	0.2	92.1	-0.57	
LC0019	-	-	-	-	
LC0020	1.68	0.29	102	0.17	
LC0021	2.18	0.33	133	2.35	H
LC0022	1.96	0.47	120	1.39	
LC0023	1.6	0.32	97.6	-0.17	
LC0024	1.77	0.043	108	0.57	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	1.88 ± 0.49	1.64 ± 0.106	µg/l
Minimum	1.51	1.51	µg/l
Maximum	4.09	1.96	µg/l
Standard deviation	0.653	0.127	µg/l
rel. standard deviation	34.6	7.74	%
n	16	13	-

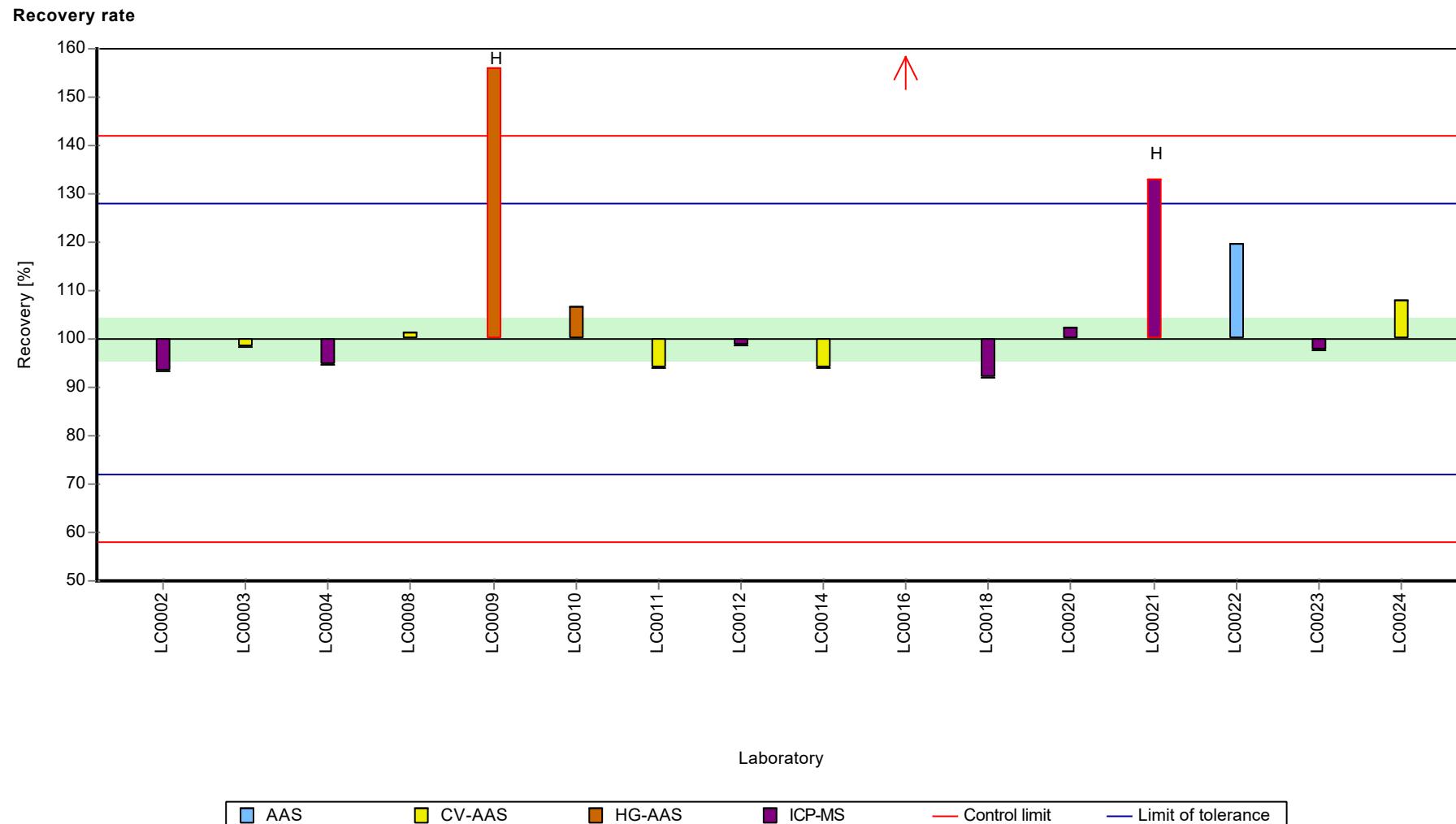
**Graphical presentation of results**

**Results**



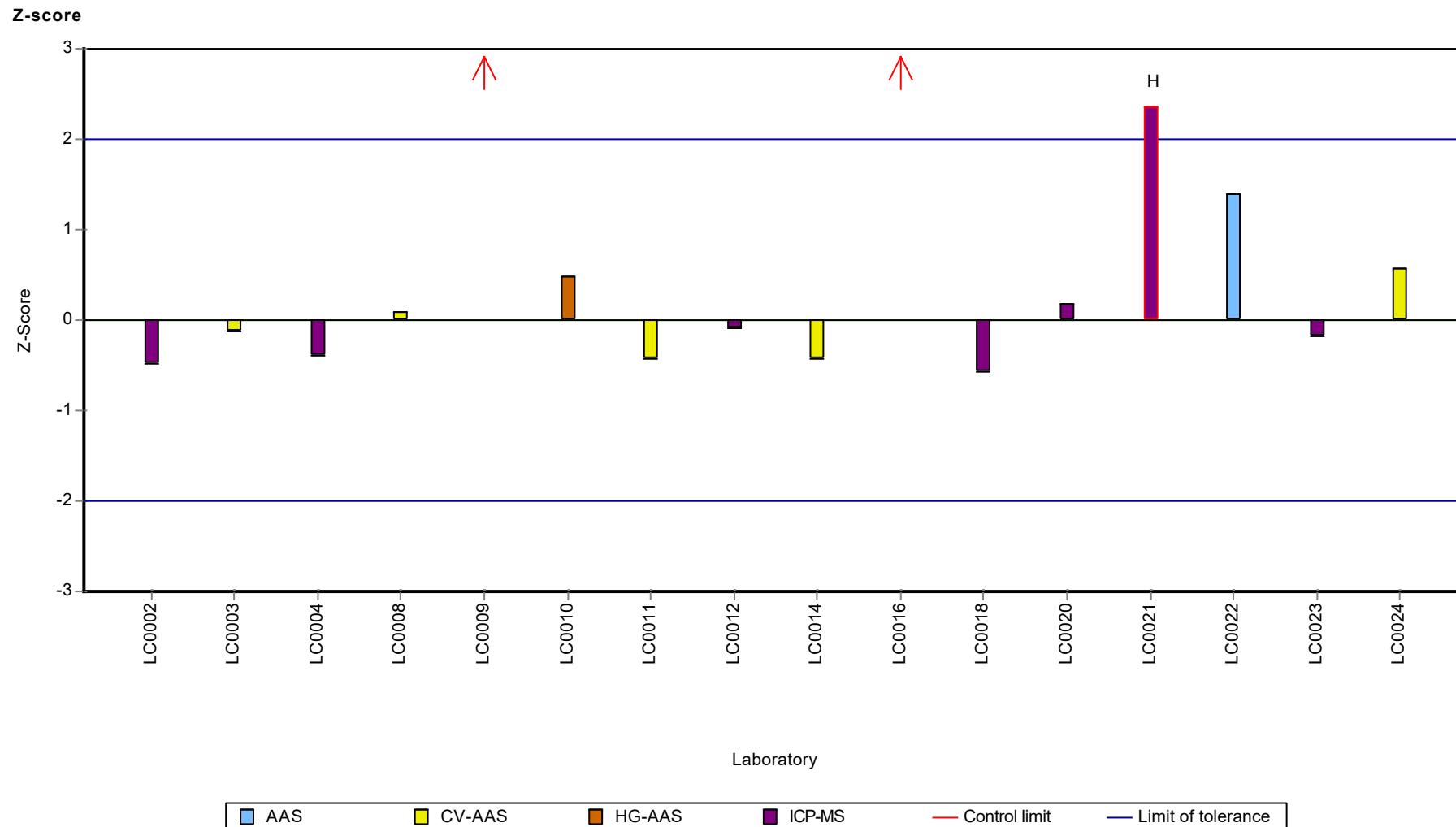
Parameter oriented report Metals and trace elements M165

Sample: M165BHG, Parameter: Mercury



Parameter oriented report Metals and trace elements M165

Sample: M165BHG, Parameter: Mercury



Parameter oriented report Metals and trace elements  
M165

Sample: M165A, Parameter: Nickel

## Parameter oriented report

### M165 A

#### Nickel

Unit	µg/l
Assigned value ± U (k=2)	4.42 ± 0.275
Criterion	0.53 (12 %)
Minimum - Maximum	3.27 - 5.76
Control test value ± U (k=2)	3.56 ± 0.427

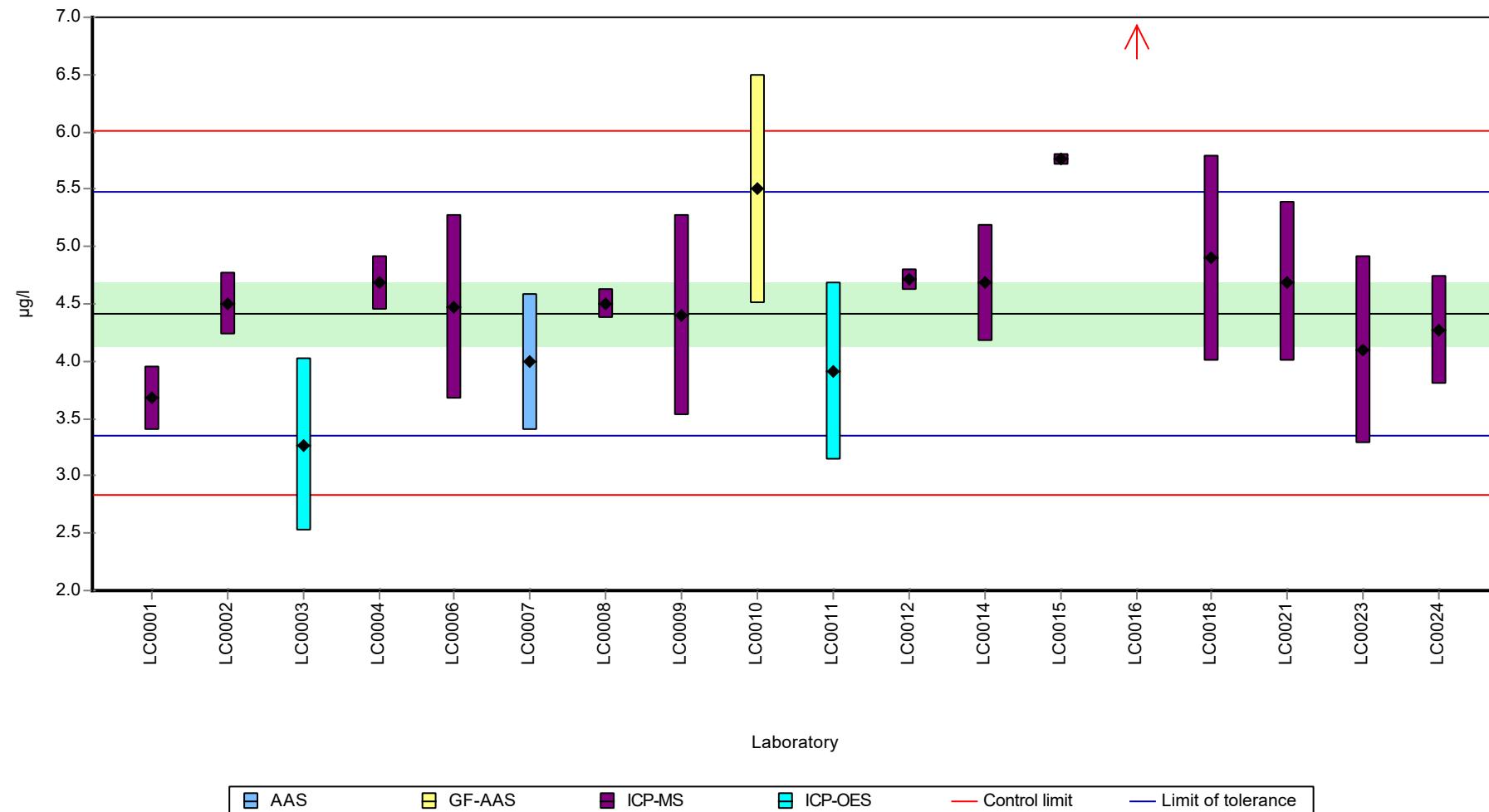
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	3.68	0.28	83.3	-1.39	
LC0002	4.5	0.27	102	0.16	
LC0003	3.27	0.75	74	-2.16	
LC0004	4.68	0.234	106	0.5	
LC0005	-	-	-	-	
LC0006	4.47	0.8	101	0.1	
LC0007	3.99	0.6	90.3	-0.81	
LC0008	4.5	0.136	102	0.16	
LC0009	4.4	0.88	99.6	-0.03	
LC0010	5.5	1	125	2.04	
LC0011	3.91	0.782	88.5	-0.96	
LC0012	4.71	0.095	107	0.55	
LC0013	-	-	-	-	
LC0014	4.68	0.51	106	0.5	
LC0015	5.76	0.0499	130	2.53	
LC0016	27.1	2.71	613	42.79	H
LC0017	-	-	-	-	
LC0018	4.9	0.9	111	0.91	
LC0019	-	-	-	-	
LC0020	-	-	-	-	
LC0021	4.69	0.7	106	0.51	
LC0022	-	-	-	-	
LC0023	4.1	0.82	92.8	-0.6	
LC0024	4.27	0.47	96.7	-0.28	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	5.73 ± 3.79	4.47 ± 0.442	µg/l
Minimum	3.27	3.27	µg/l
Maximum	27.1	5.76	µg/l
Standard deviation	5.37	0.607	µg/l
rel. standard deviation	93.7	13.6	%
n	18	17	-

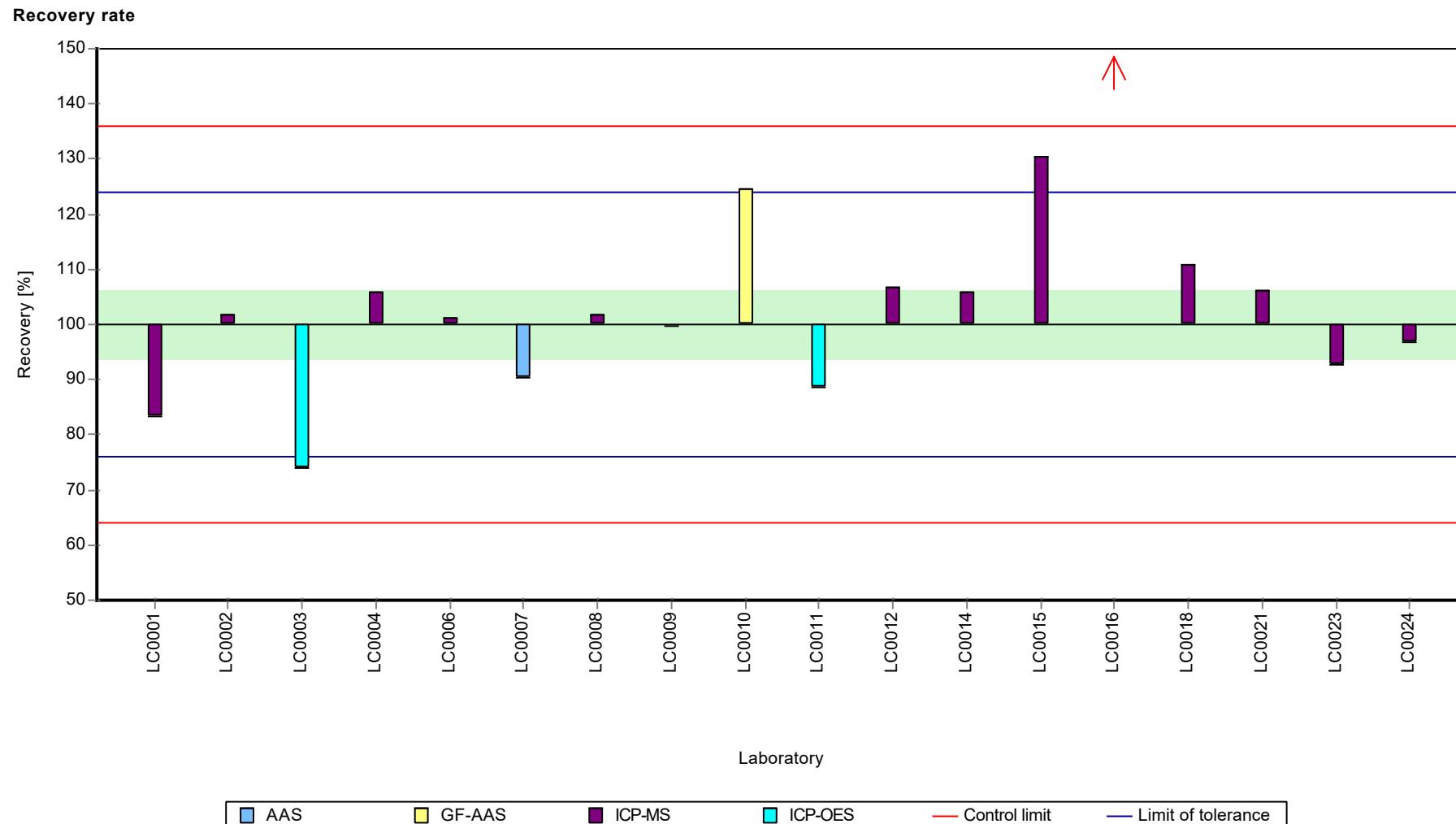
**Graphical presentation of results**

**Results**



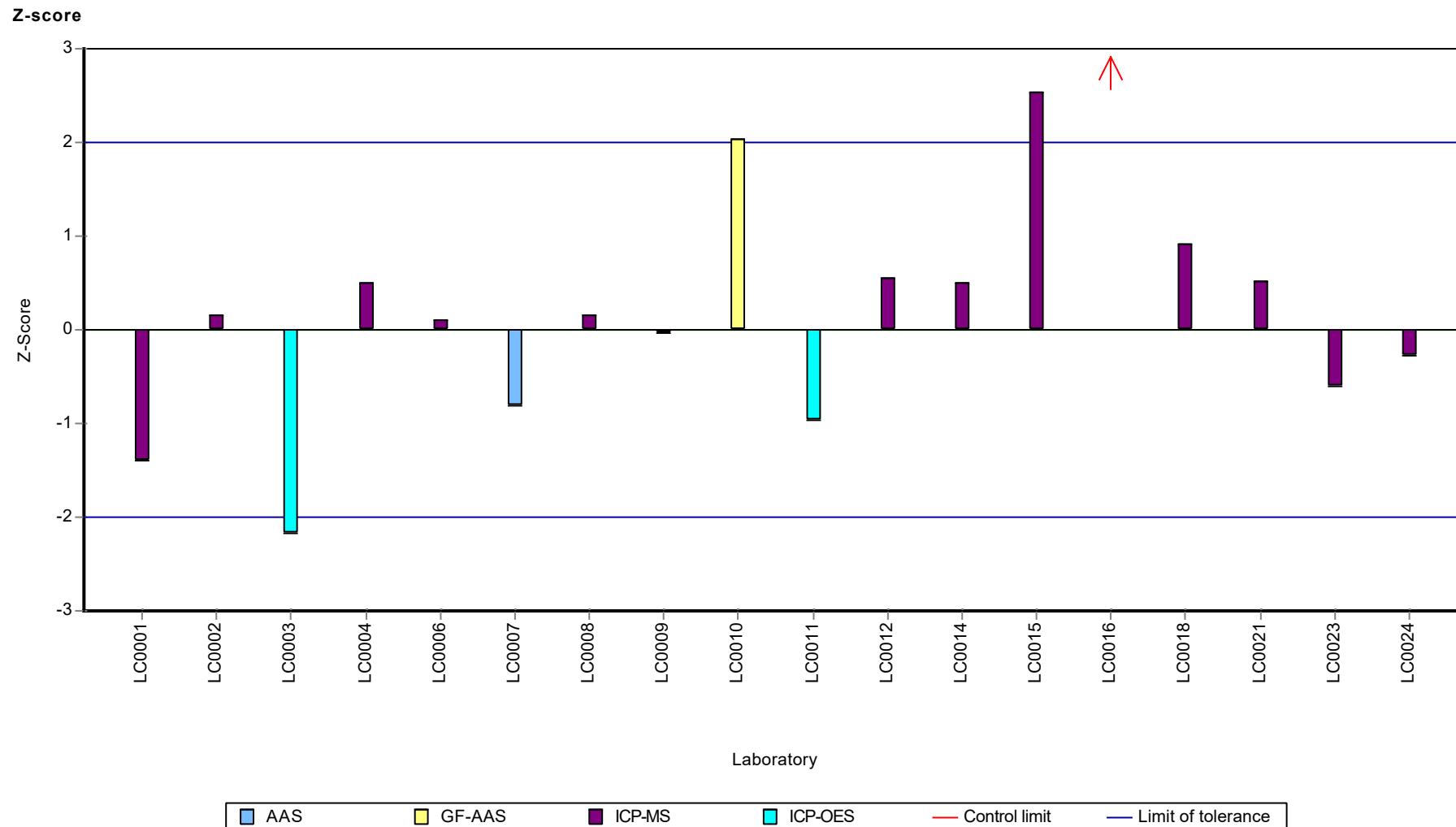
Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Nickel



Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Nickel



Parameter oriented report Metals and trace elements  
M165

Sample: M165B, Parameter: Nickel

## Parameter oriented report

### M165 B

#### Nickel

Unit	µg/l
Assigned value ± U (k=2)	26.1 ± 0.637
Criterion	3.13 (12 %)
Minimum - Maximum	23.7 - 28
Control test value ± U (k=2)	22.1 ± 2.65

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	26.75	2.05	102	0.2	
LC0002	25.7	1.54	98.4	-0.13	
LC0003	23.7	5.5	90.8	-0.77	
LC0004	27.6	1.38	106	0.48	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	25.4	3.8	97.3	-0.23	
LC0008	27.1	0.342	104	0.32	
LC0009	25.7	5.14	98.4	-0.13	
LC0010	26	2	99.6	-0.04	
LC0011	25.06	5.012	96	-0.34	
LC0012	26.1	1.779	100	0.00	
LC0013	-	-	-	-	
LC0014	27.2	3	104	0.35	
LC0015	23.89	0.859	91.5	-0.71	
LC0016	4.5	0.45	17.2	-6.9	H
LC0017	-	-	-	-	
LC0018	28	4	107	0.6	
LC0019	-	-	-	-	
LC0020	-	-	-	-	
LC0021	27.4	4.1	105	0.41	
LC0022	25.65	4.104	98.2	-0.15	
LC0023	24.3	4.9	93.1	-0.58	
LC0024	25.4	2.8	97.3	-0.23	

#### Characteristics of parameter

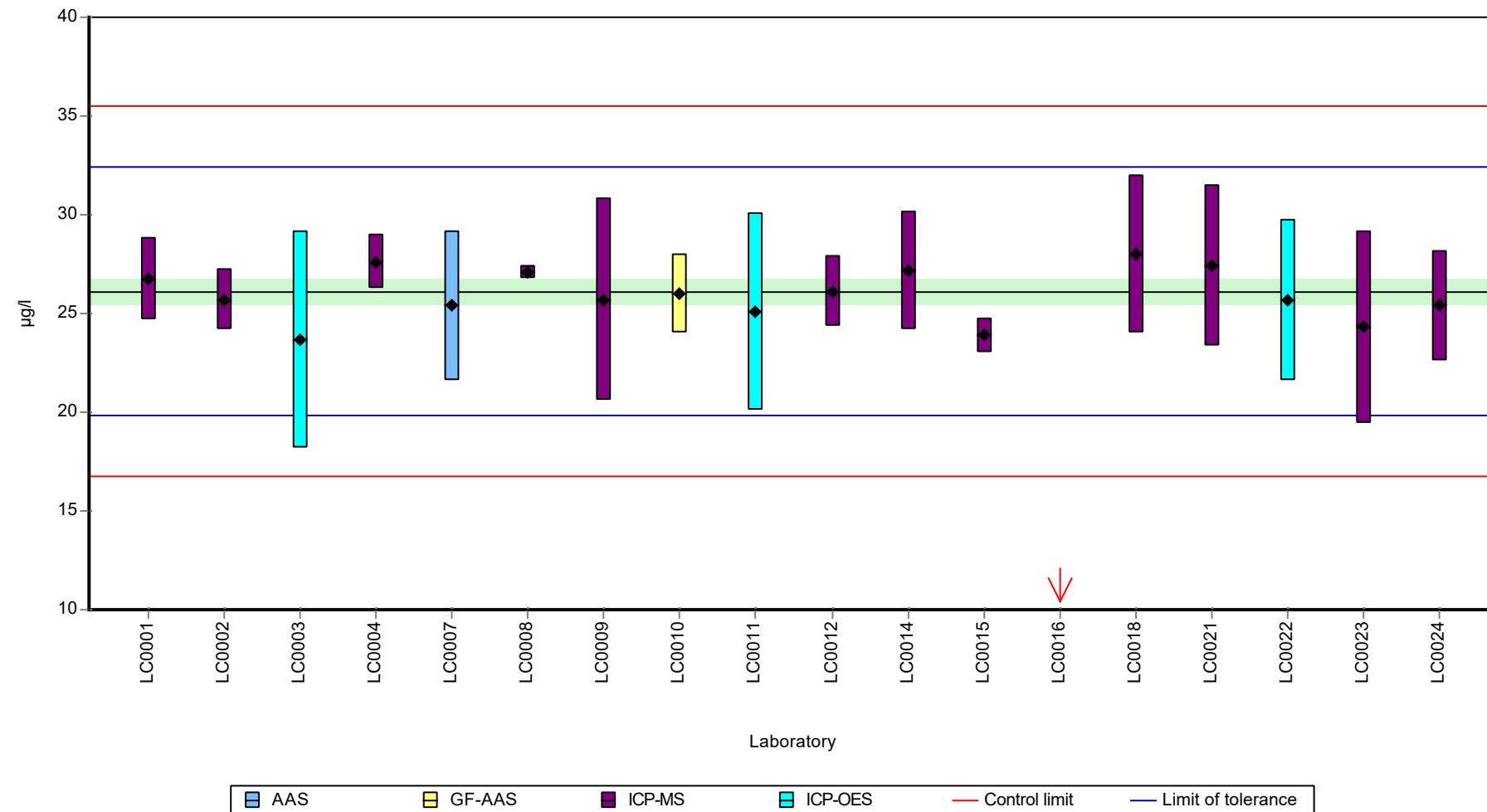
	all results	without outliers	Unit
Mean ± CI (99%)	24.7 ± 3.68	25.9 ± 0.931	µg/l
Minimum	4.5	23.7	µg/l
Maximum	28	28	µg/l
Standard deviation	5.2	1.28	µg/l
rel. standard deviation	21	4.93	%
n	18	17	-

Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Nickel

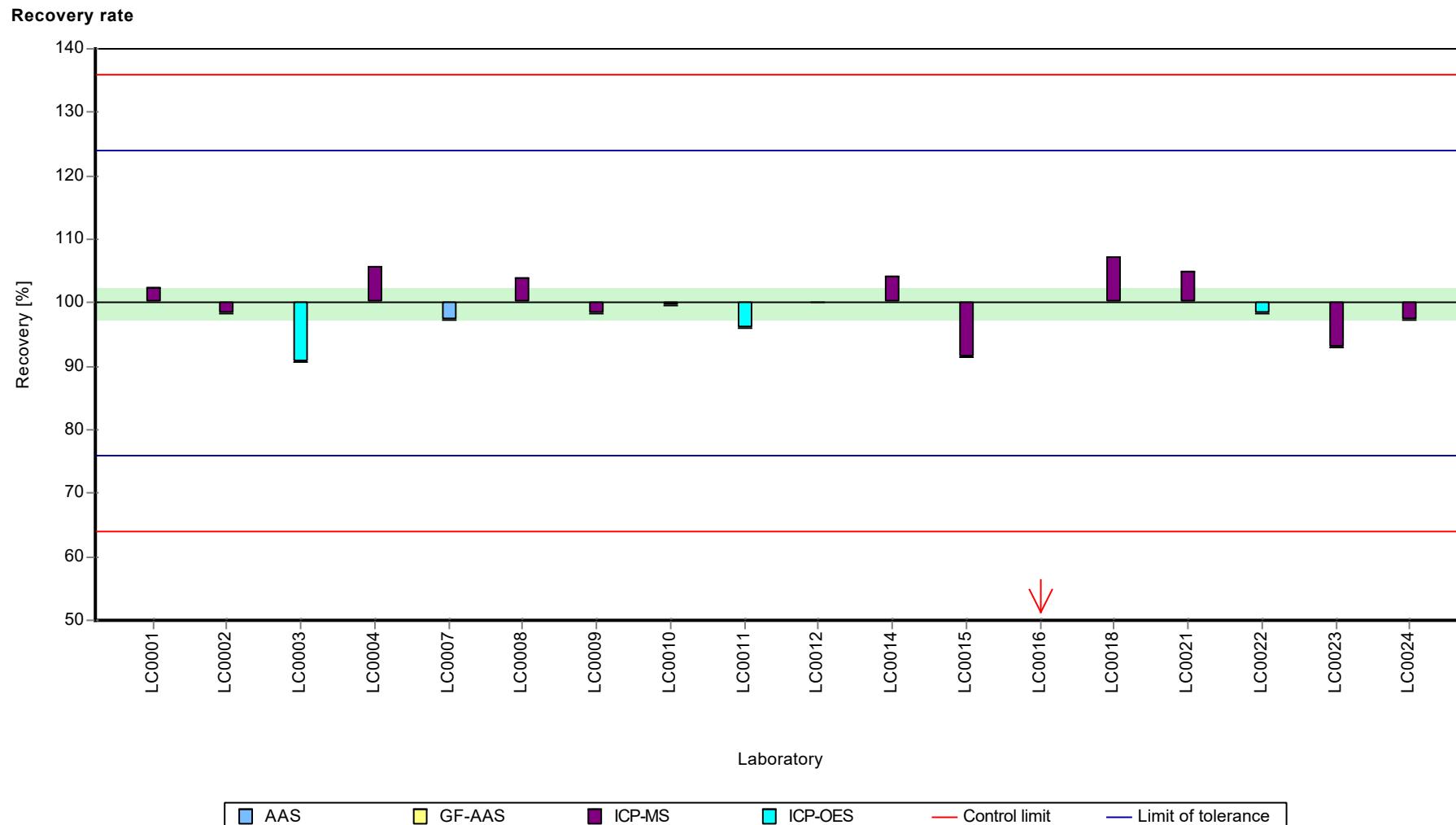
**Graphical presentation of results**

**Results**



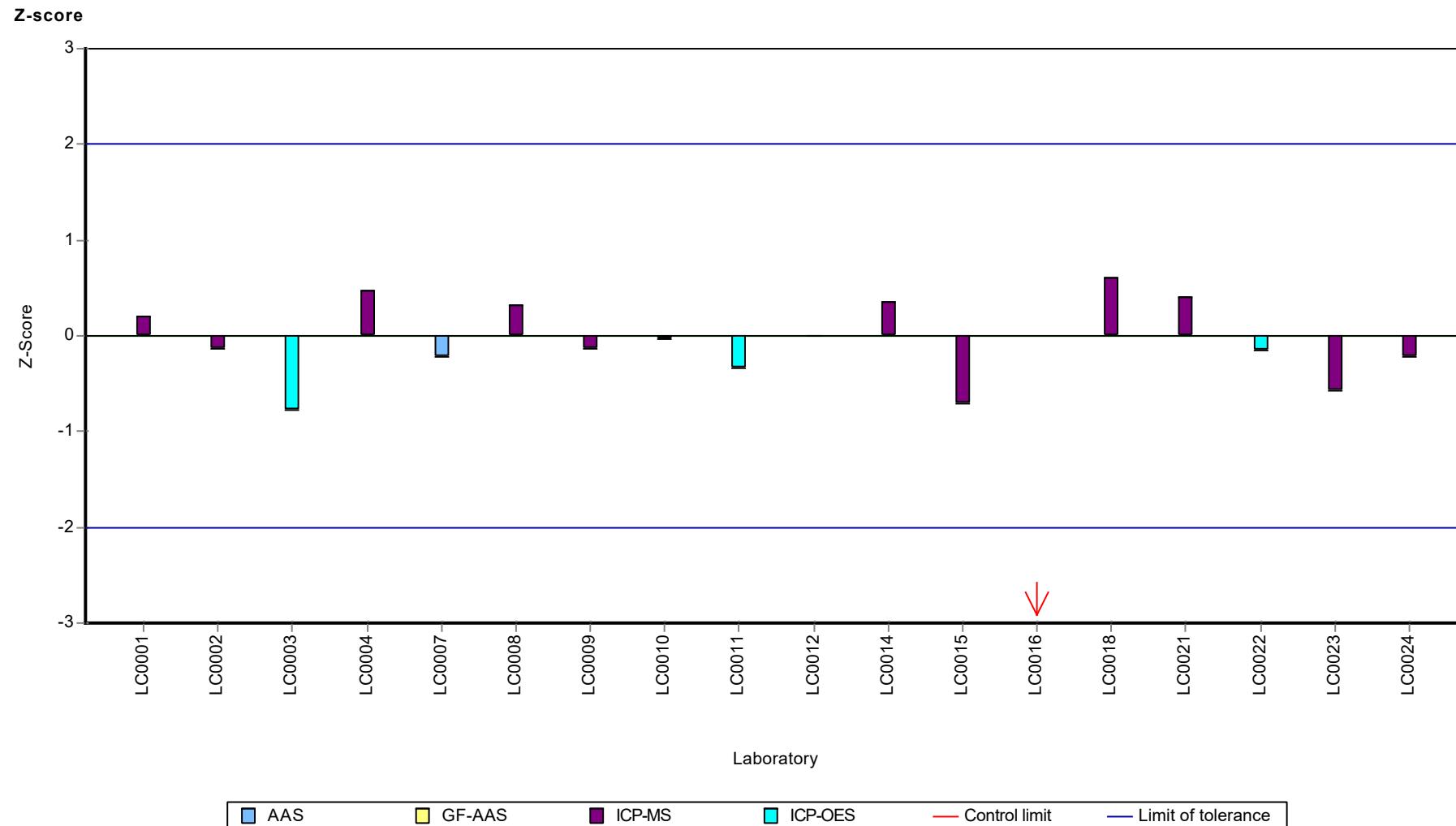
Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Nickel



Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Nickel



Parameter oriented report Metals and trace elements  
M165

Sample: M165A, Parameter: Selenium

## Parameter oriented report

### M165 A

#### Selenium

Unit	µg/l
Assigned value ± U (k=2)	13.9 ± 0.565
Criterion	1.67 (12 %)
Minimum - Maximum	12.3 - 16.1
Control test value ± U (k=2)	14.3 ± 2.14

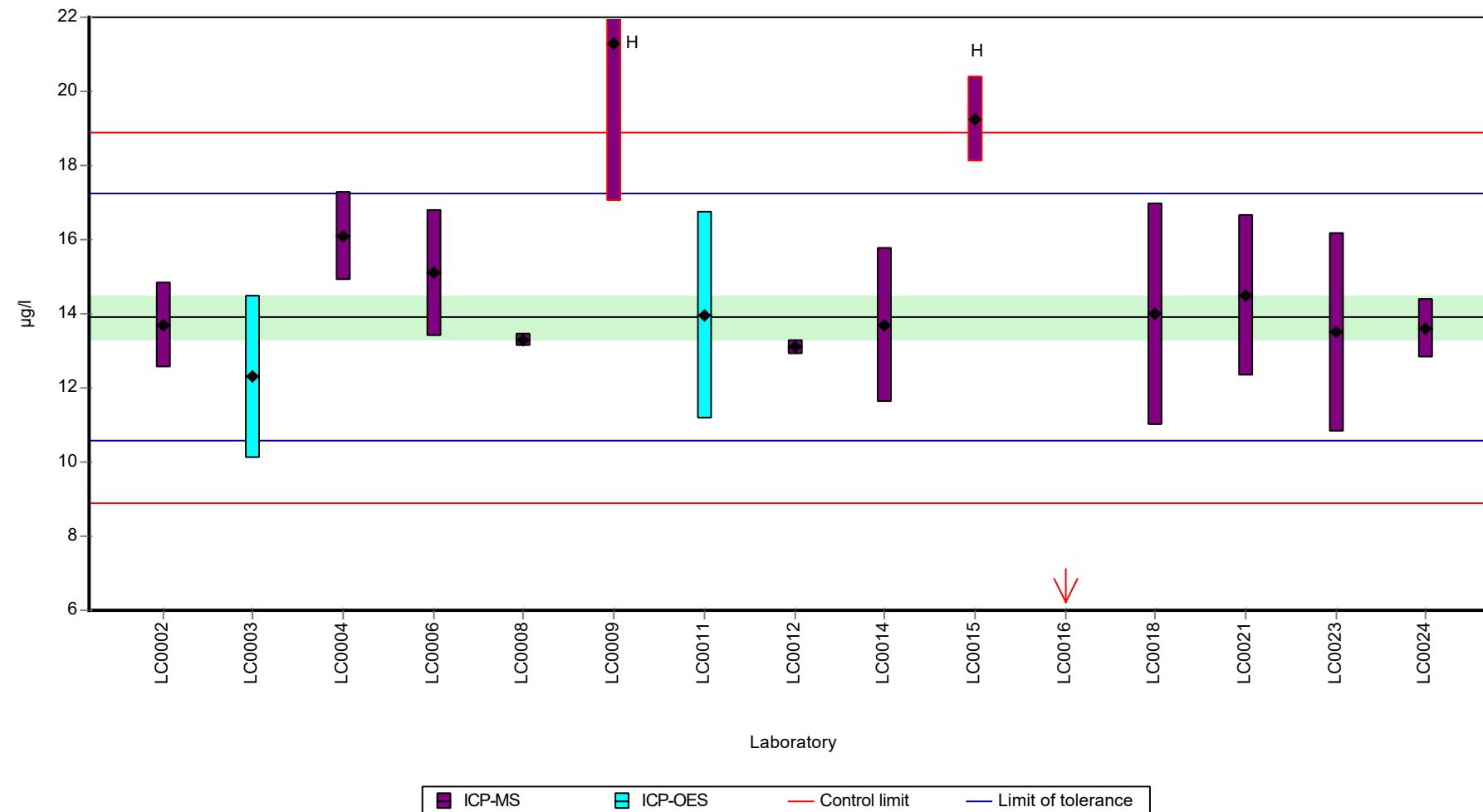
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	-	-	-	-	
LC0002	13.7	1.16	98.5	-0.12	
LC0003	12.3	2.21	88.5	-0.96	
LC0004	16.1	1.21	116	1.32	
LC0005	-	-	-	-	
LC0006	15.1	1.7	109	0.72	
LC0007	-	-	-	-	
LC0008	13.3	0.179	95.6	-0.36	
LC0009	21.3	4.26	153	4.43	H
LC0010	-	-	-	-	
LC0011	13.96	2.792	100	0.03	
LC0012	13.1	0.208	94.2	-0.48	
LC0013	-	-	-	-	
LC0014	13.7	2.1	98.5	-0.12	
LC0015	19.25	1.1502	138	3.2	H
LC0016	5.1	0.765	36.7	-5.28	H
LC0017	-	-	-	-	
LC0018	14	3	101	0.06	
LC0019	-	-	-	-	
LC0020	-	-	-	-	
LC0021	14.5	2.17	104	0.36	
LC0022	-	-	-	-	
LC0023	13.5	2.7	97.1	-0.24	
LC0024	13.6	0.8	97.8	-0.18	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	14.2 ± 2.7	13.9 ± 0.848	µg/l
Minimum	5.1	12.3	µg/l
Maximum	21.3	16.1	µg/l
Standard deviation	3.49	0.979	µg/l
rel. standard deviation	24.6	7.04	%
n	15	12	-

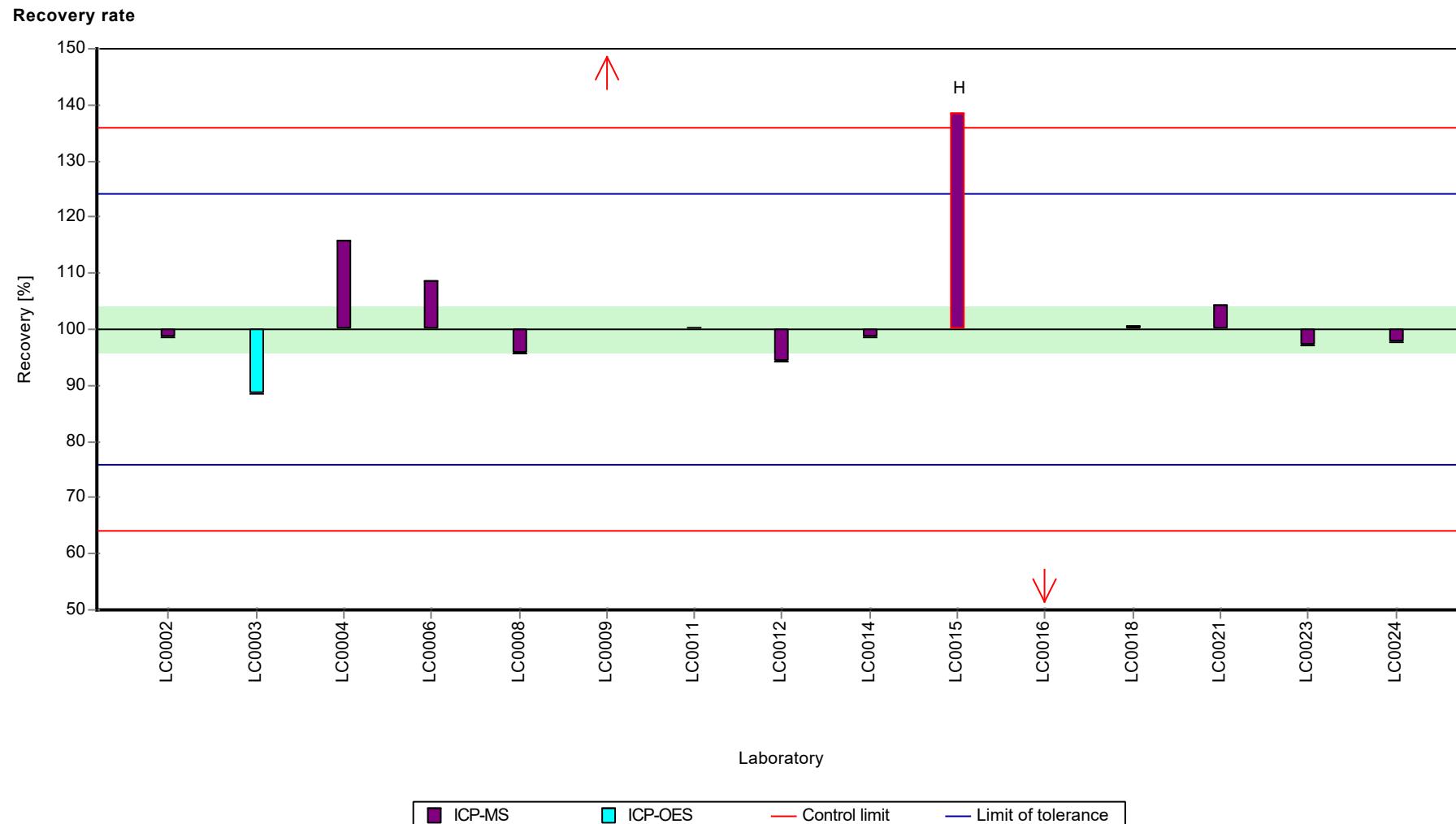
**Graphical presentation of results**

**Results**



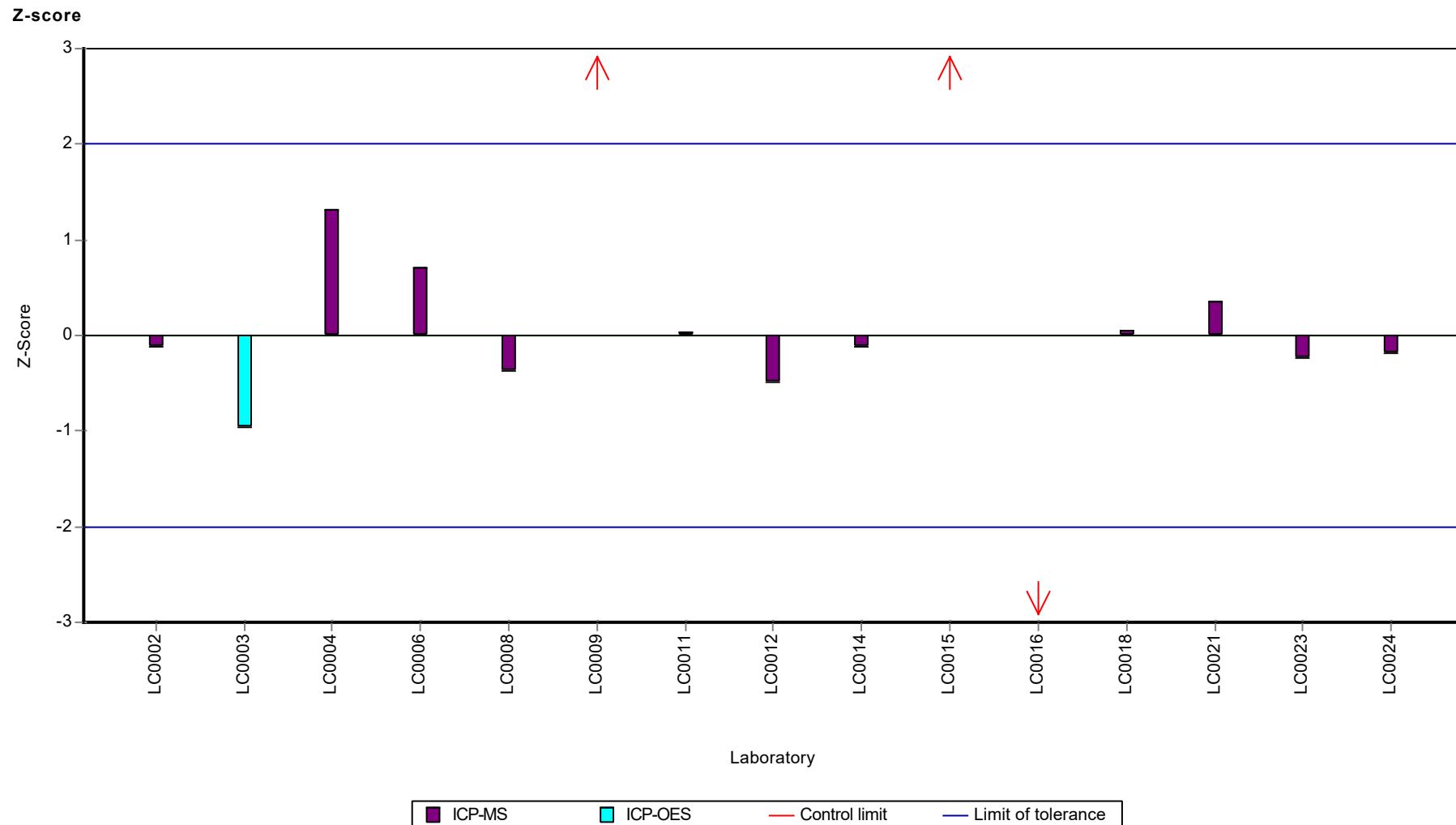
Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Selenium



Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Selenium



Parameter oriented report Metals and trace elements  
M165

Sample: M165B, Parameter: Selenium

## Parameter oriented report

### M165 B

#### Selenium

Unit	µg/l
Assigned value ± U (k=2)	4.79 ± 0.282
Criterion	0.575 (12 %)
Minimum - Maximum	3.98 - 5.65
Control test value ± U (k=2)	5.22 ± 0.783

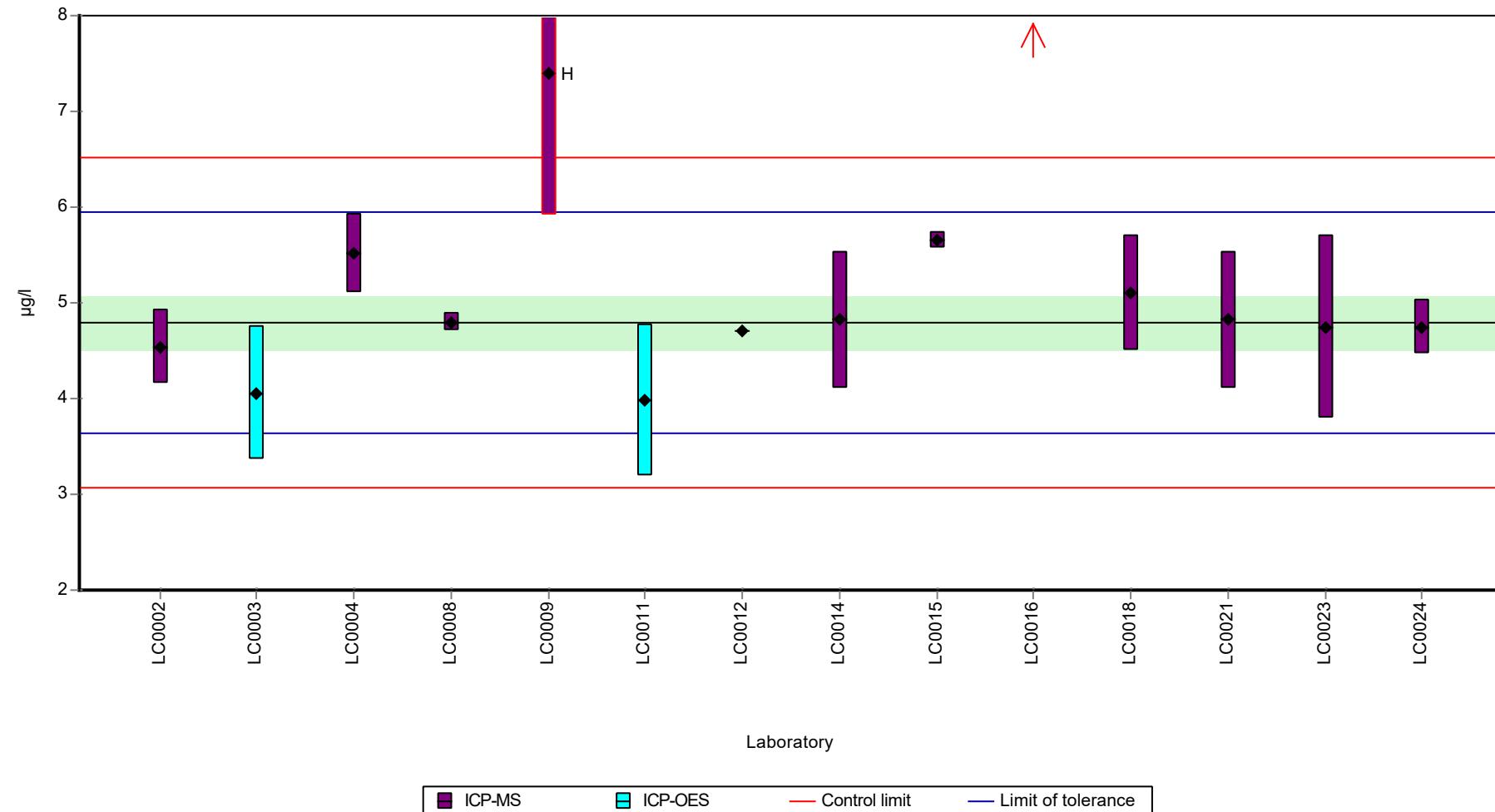
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	-	-	-	-	
LC0002	4.54	0.39	94.7	-0.44	
LC0003	4.06	0.7	84.7	-1.27	
LC0004	5.52	0.41	115	1.27	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	-	-	-	-	
LC0008	4.8	0.089	100	0.01	
LC0009	7.39	1.478	154	4.52	H
LC0010	-	-	-	-	
LC0011	3.98	0.796	83.1	-1.41	
LC0012	4.71	0.006	98.3	-0.14	
LC0013	-	-	-	-	
LC0014	4.82	0.72	101	0.05	
LC0015	5.65	0.0856	118	1.49	
LC0016	14.5	2.175	303	16.88	H
LC0017	-	-	-	-	
LC0018	5.1	0.6	106	0.54	
LC0019	-	-	-	-	
LC0020	-	-	-	-	
LC0021	4.82	0.72	101	0.05	
LC0022	-	-	-	-	
LC0023	4.75	0.95	99.1	-0.07	
LC0024	4.75	0.28	99.1	-0.07	

#### Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	5.67 ± 2.14	4.79 ± 0.424	µg/l
Minimum	3.98	3.98	µg/l
Maximum	14.5	5.65	µg/l
Standard deviation	2.67	0.489	µg/l
rel. standard deviation	47.1	10.2 %	
n	14	12	-

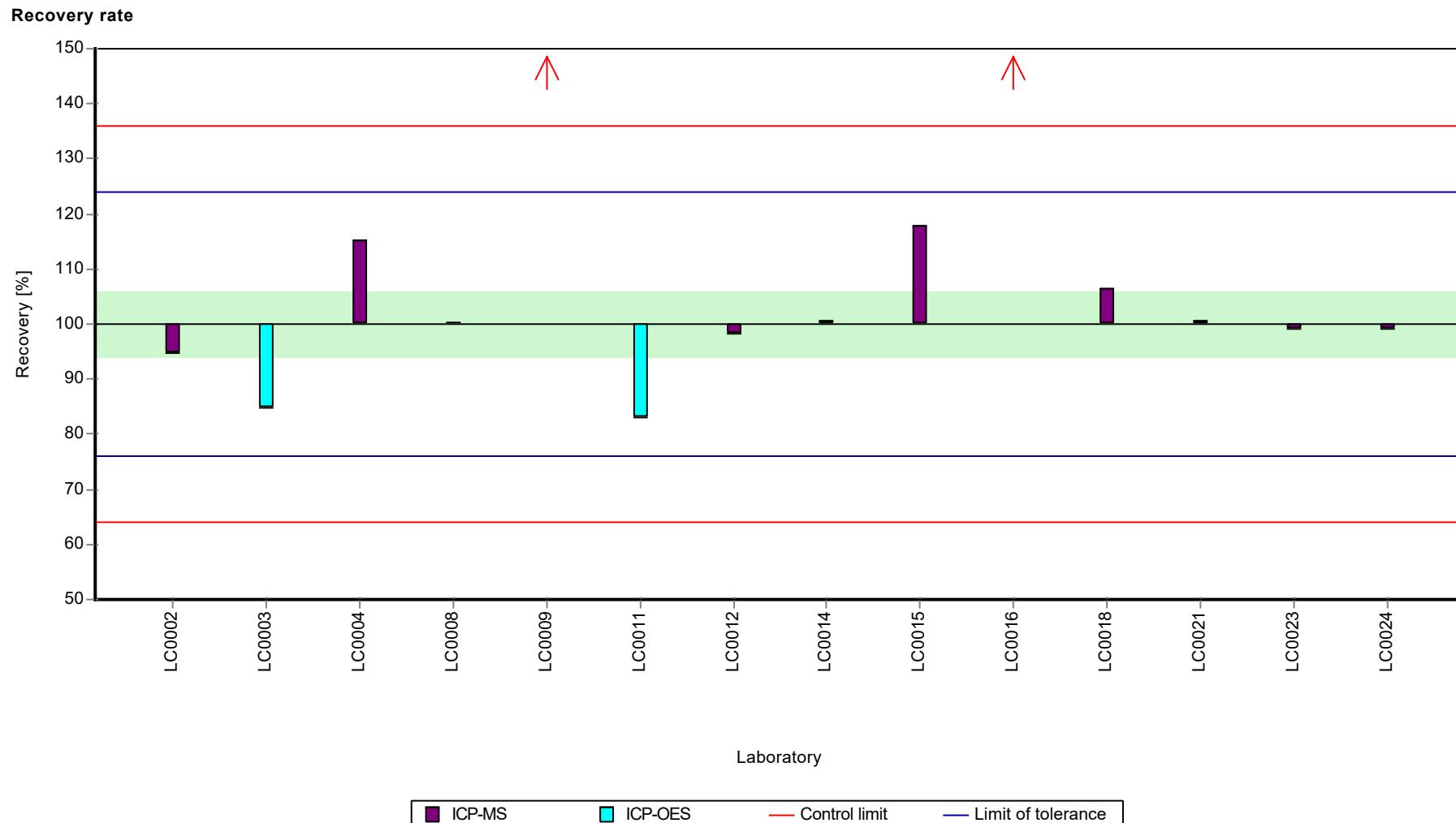
**Graphical presentation of results**

**Results**



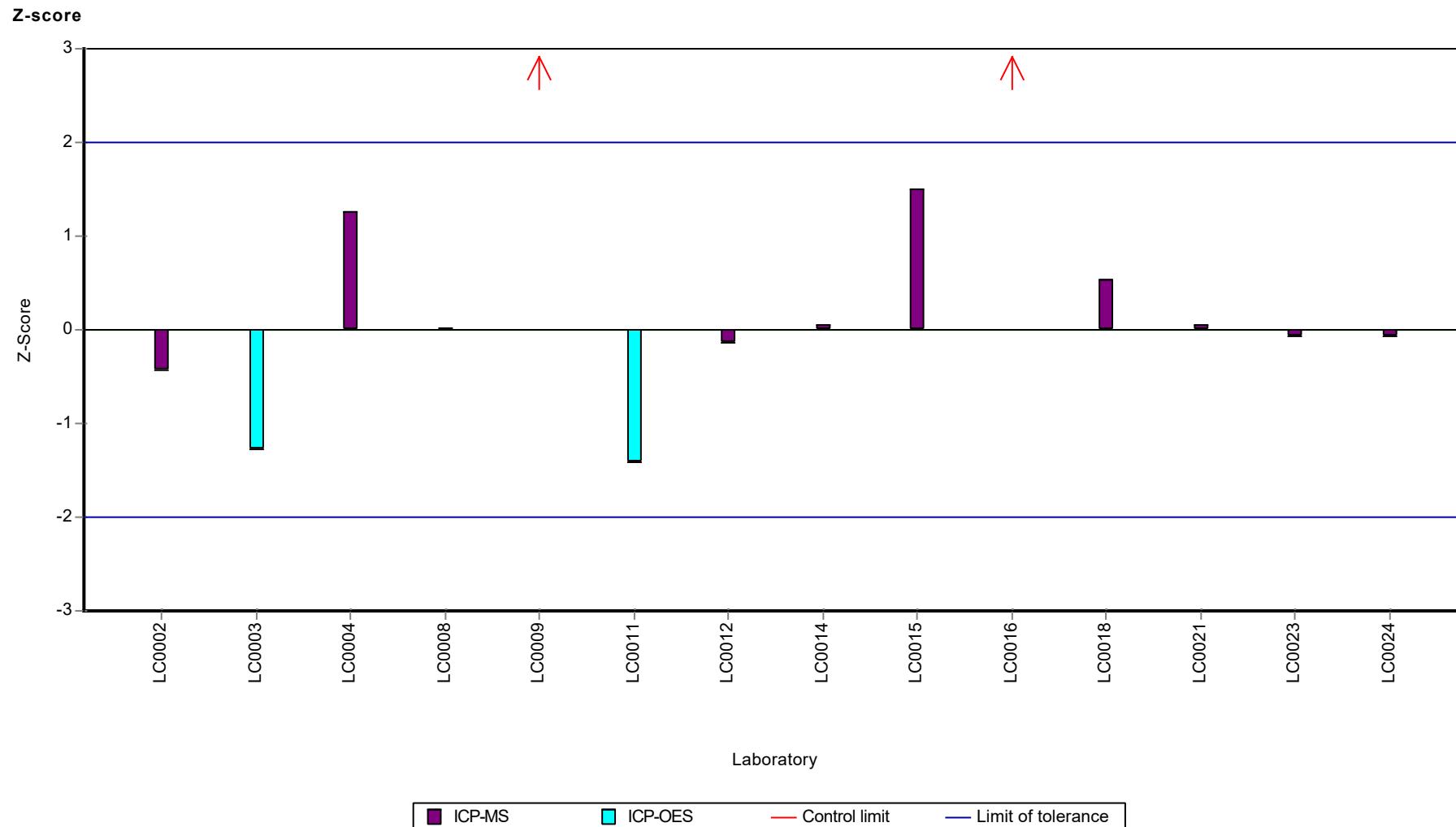
Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Selenium



Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Selenium



Parameter oriented report Metals and trace elements  
M165

Sample: M165A, Parameter: Uranium

## Parameter oriented report

### M165 A

#### Uranium

Unit	µg/l
Assigned value ± U (k=2)	3.6 ± 0.318
Criterion	0.54 (15 %)
Minimum - Maximum	2.49 - 4.39
Control test value ± U (k=2)	3.07 ± 0.307

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	-	-	-	-	
LC0002	3.8	0.21	106	0.37	
LC0003	3.1	0.19	86.1	-0.93	
LC0004	3.87	0.194	107	0.5	
LC0005	-	-	-	-	
LC0006	3.71	3.71	103	0.2	
LC0007	-	-	-	-	
LC0008	4.06	0.127	113	0.85	
LC0009	4.09	0.818	114	0.91	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	3.51	0.051	97.5	-0.17	
LC0013	-	-	-	-	
LC0014	3.61	0.54	100	0.02	
LC0015	3.72	0.404	103	0.22	
LC0016	2.49	0.125	69.1	-2.06	
LC0017	-	-	-	-	
LC0018	3.34	0.25	92.8	-0.48	
LC0019	-	-	-	-	
LC0020	-	-	-	-	
LC0021	4.39	2.41	122	1.46	
LC0022	-	-	-	-	
LC0023	3.25	0.65	90.3	-0.65	
LC0024	3.2	0.38	88.9	-0.74	

#### Characteristics of parameter

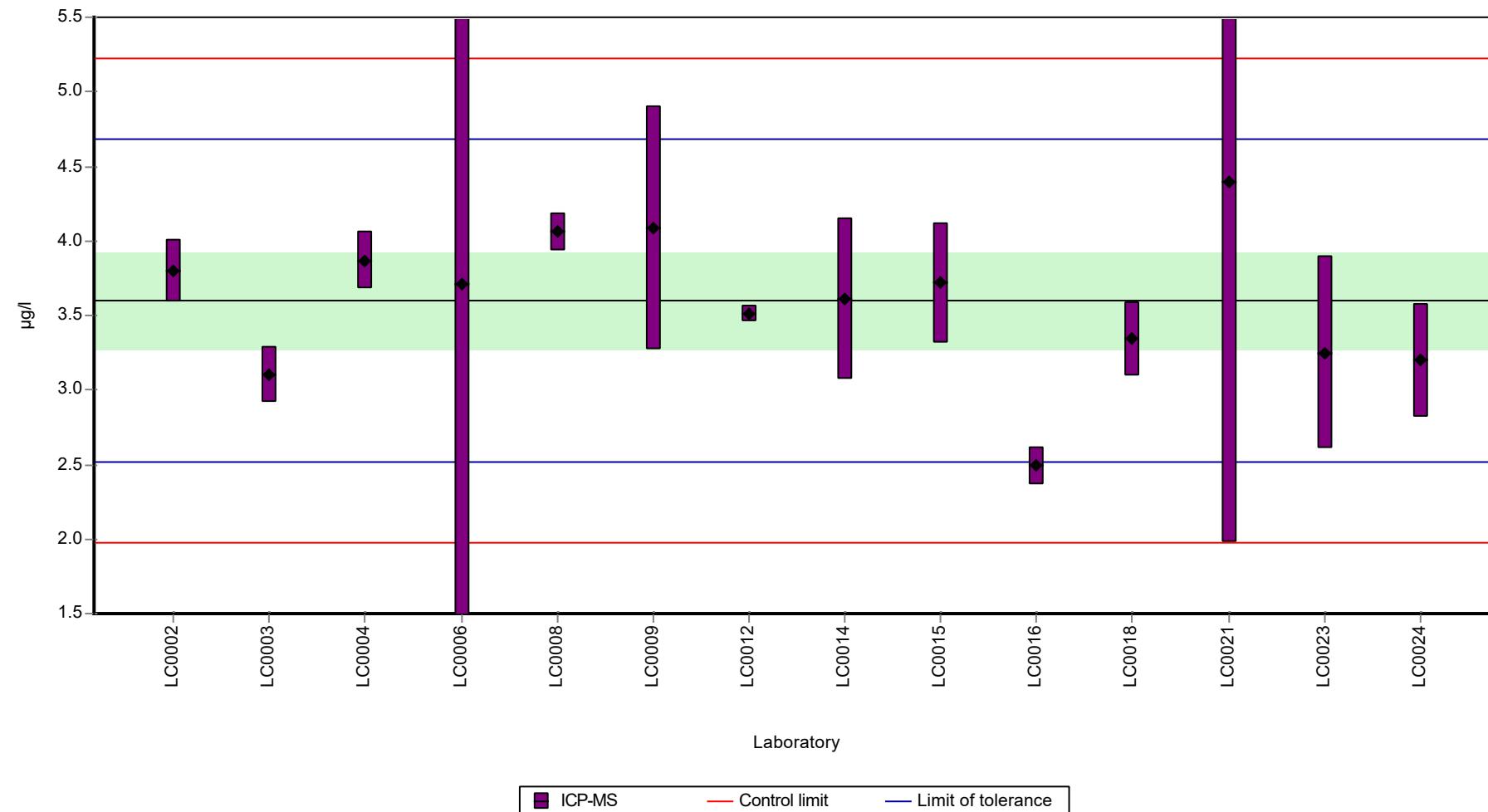
	all results	without outliers	Unit
Mean ± CI (99%)	3.58 ± 0.388	3.58 ± 0.388	µg/l
Minimum	2.49	2.49	µg/l
Maximum	4.39	4.39	µg/l
Standard deviation	0.484	0.484	µg/l
rel. standard deviation	13.5	13.5	%
n	14	14	-

Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Uranium

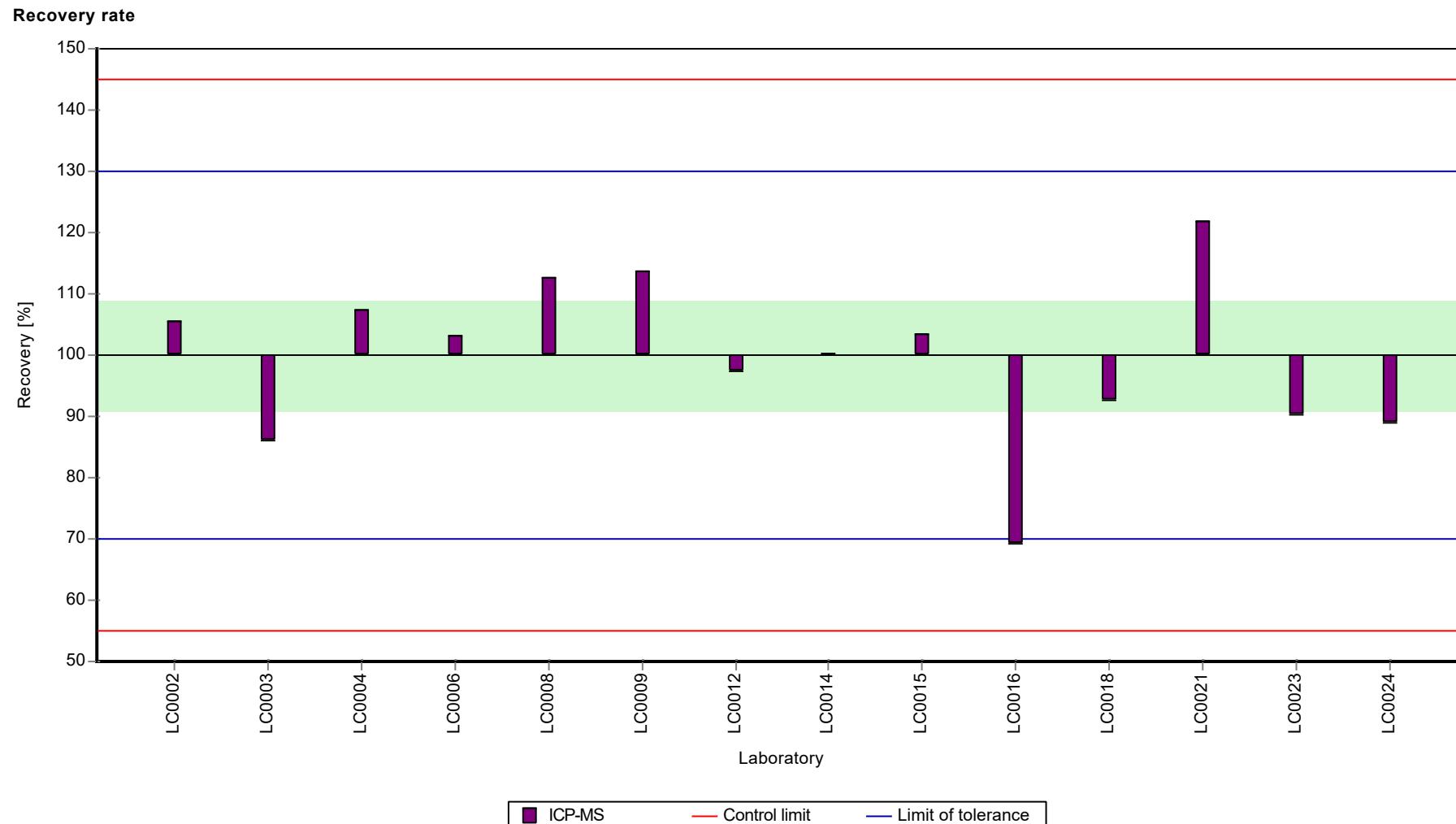
**Graphical presentation of results**

**Results**



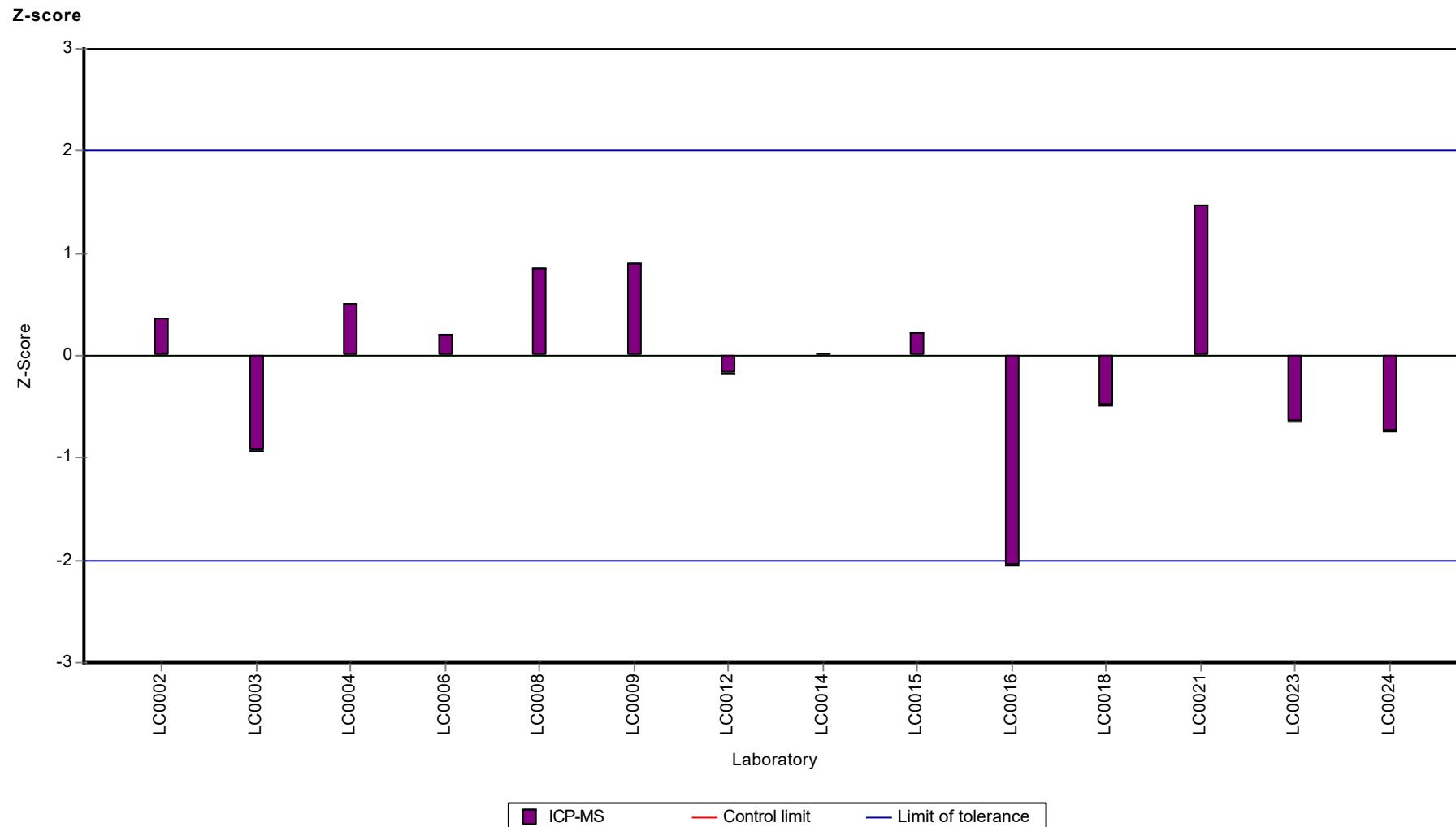
Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Uranium



Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Uranium



Parameter oriented report Metals and trace elements  
M165

Sample: M165B, Parameter: Uranium

## Parameter oriented report

### M165 B

#### Uranium

Unit	µg/l
Assigned value ± U (k=2)	2.35 ± 0.139
Criterion	0.246 (10.5 %)
Minimum - Maximum	2.07 - 2.75
Control test value ± U (k=2)	2.12 ± 0.212

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	-	-	-	-	
LC0002	2.42	0.133	103	0.29	
LC0003	2.1	0.13	89.5	-1	
LC0004	2.5	0.13	106	0.62	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	-	-	-	-	
LC0008	2.5	0.135	106	0.62	
LC0009	2.75	0.55	117	1.63	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	2.07	0.092	88.2	-1.13	
LC0013	-	-	-	-	
LC0014	2.35	0.35	100	0.01	
LC0015	2.31	0.04703	98.4	-0.15	
LC0016	3.93	0.197	167	6.42	H
LC0017	-	-	-	-	
LC0018	2.17	0.2	92.4	-0.72	
LC0019	-	-	-	-	
LC0020	-	-	-	-	
LC0021	2.74	0.41	117	1.59	
LC0022	-	-	-	-	
LC0023	2.15	0.43	91.6	-0.8	
LC0024	2.11	0.25	89.9	-0.96	

#### Characteristics of parameter

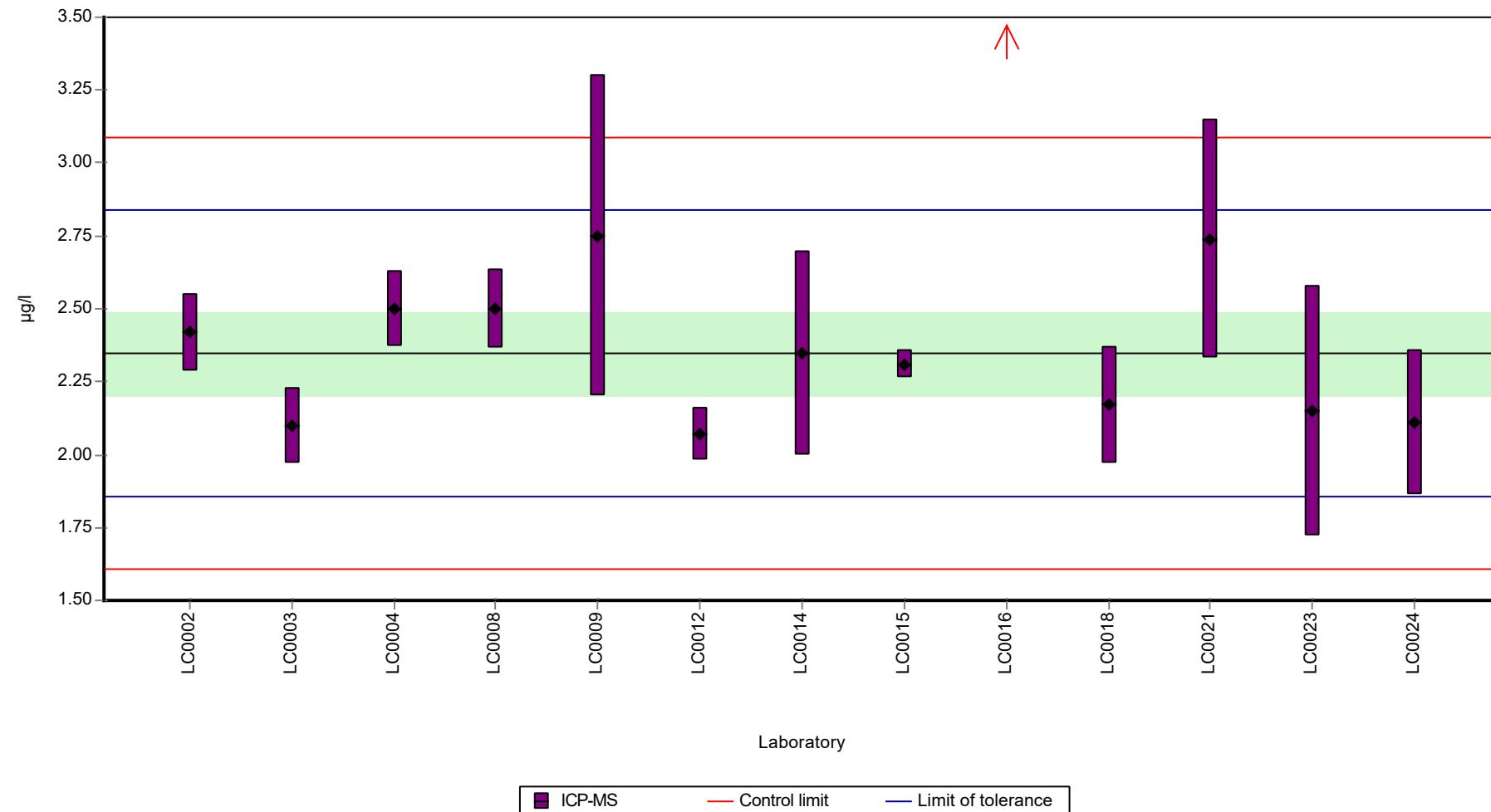
	all results	without outliers	Unit
Mean ± CI (99%)	2.47 ± 0.412	2.35 ± 0.208	µg/l
Minimum	2.07	2.07	µg/l
Maximum	3.93	2.75	µg/l
Standard deviation	0.495	0.24	µg/l
rel. standard deviation	20.1	10.2	%
n	13	12	-

Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Uranium

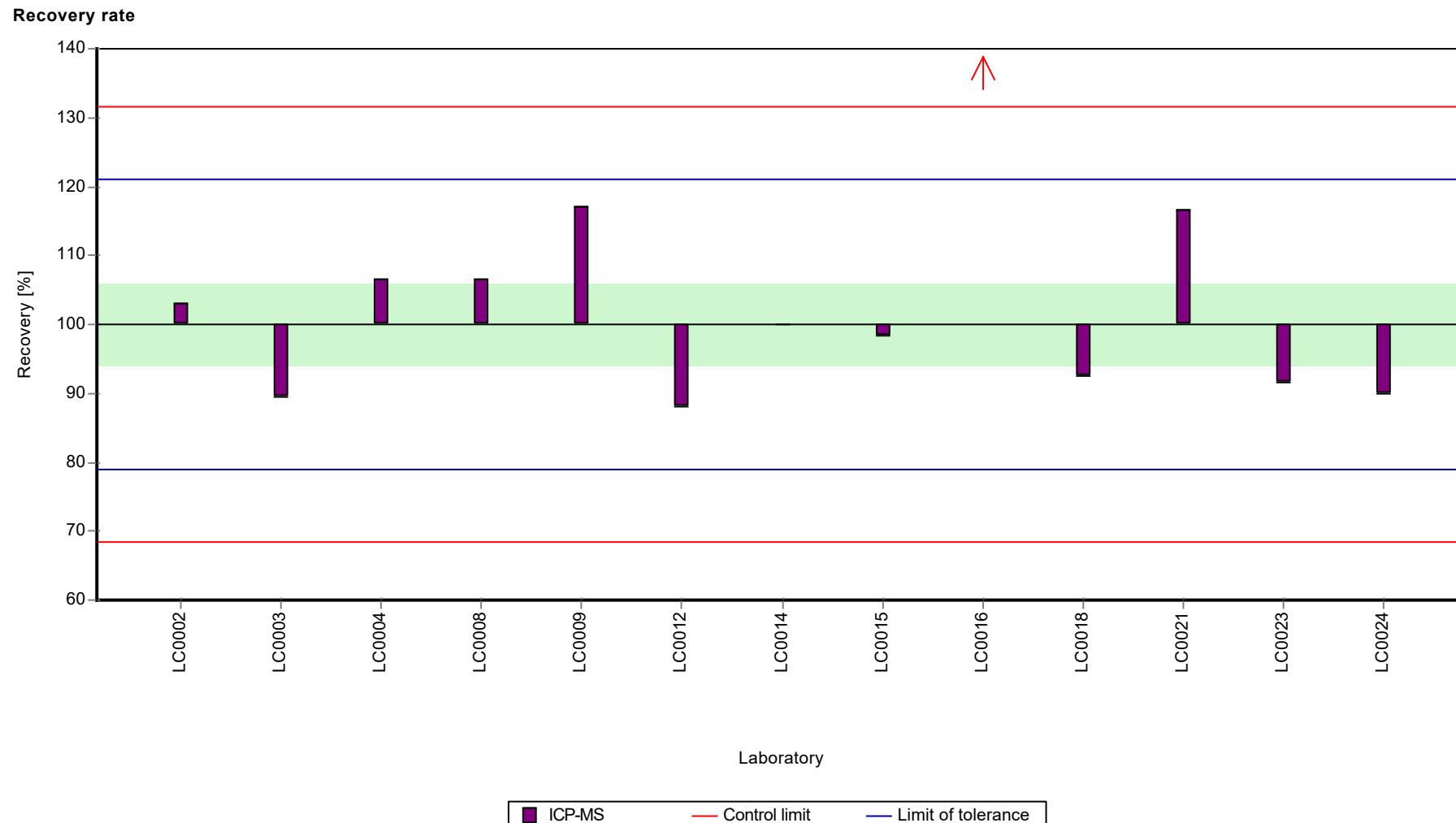
**Graphical presentation of results**

**Results**



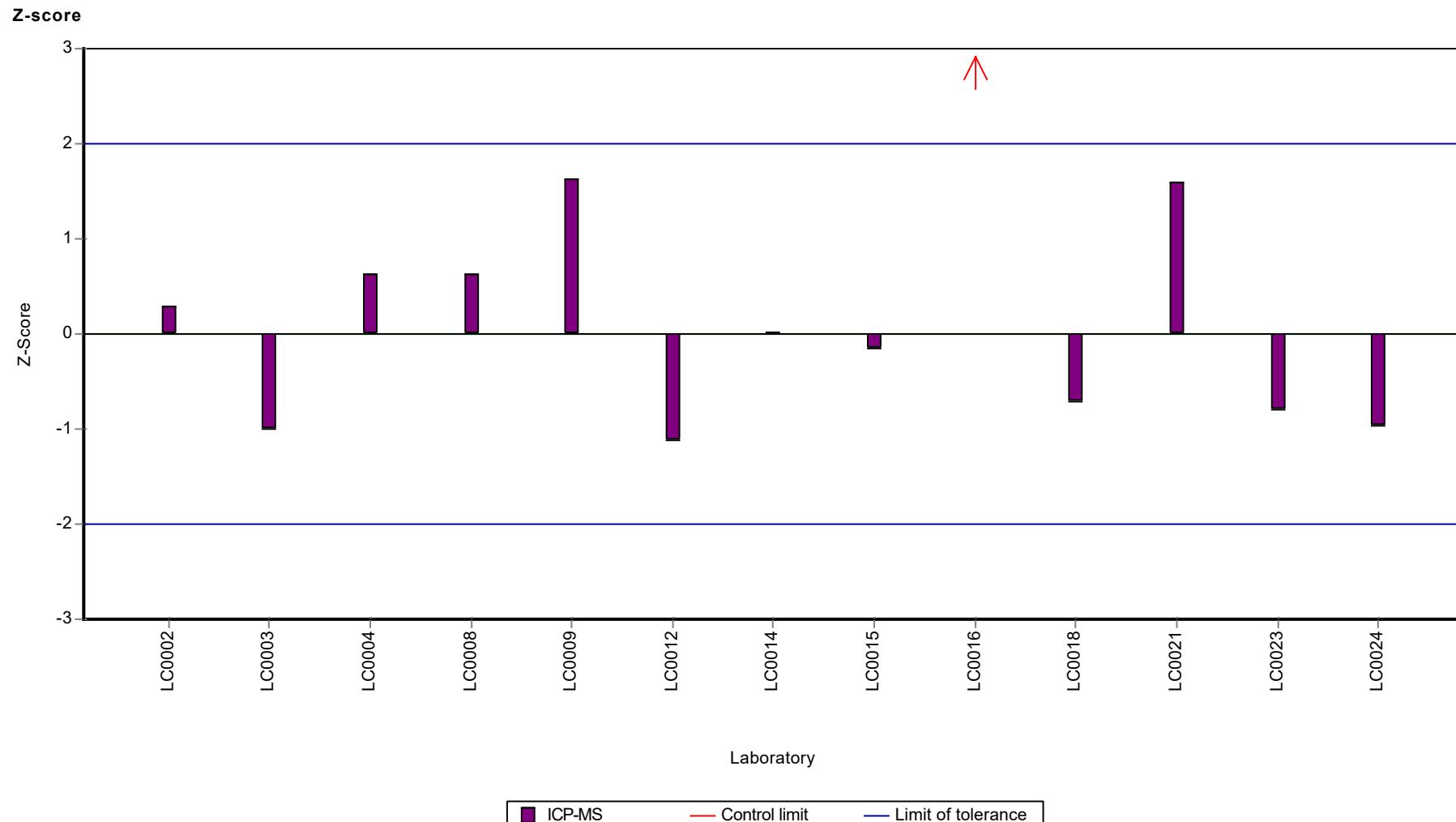
Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Uranium



Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Uranium



Parameter oriented report Metals and trace elements  
M165

Sample: M165A, Parameter: Zinc

## Parameter oriented report

### M165 A

#### Zinc

Unit	µg/l
Assigned value ± U (k=2)	168 ± 4.7
Criterion	15.1 (9 %)
Minimum - Maximum	155 - 192
Control test value ± U (k=2)	153.0 ± 16.8

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	174.9	17.37	104	0.44	
LC0002	169.4	12.7	101	0.07	
LC0003	175	40.3	104	0.44	
LC0004	173	8.7	103	0.31	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	155	23.2	92.1	-0.88	
LC0008	174	3.5	103	0.38	
LC0009	192	38.4	114	1.57	
LC0010	182	20	108	0.91	
LC0011	157.93	18.9516	93.9	-0.68	
LC0012	175	3.215	104	0.44	
LC0013	-	-	-	-	
LC0014	159	24	94.5	-0.61	
LC0015	165.78	9.373	98.5	-0.16	
LC0016	239	23.9	142	4.67	H
LC0017	-	-	-	-	
LC0018	169	37	100	0.05	
LC0019	176	10	105	0.51	
LC0020	161	19.4	95.7	-0.48	
LC0021	155	23	92.1	-0.88	
LC0022	155.04	27.97	92.1	-0.87	
LC0023	158	32	93.9	-0.68	
LC0024	170	14	101	0.11	

#### Characteristics of parameter

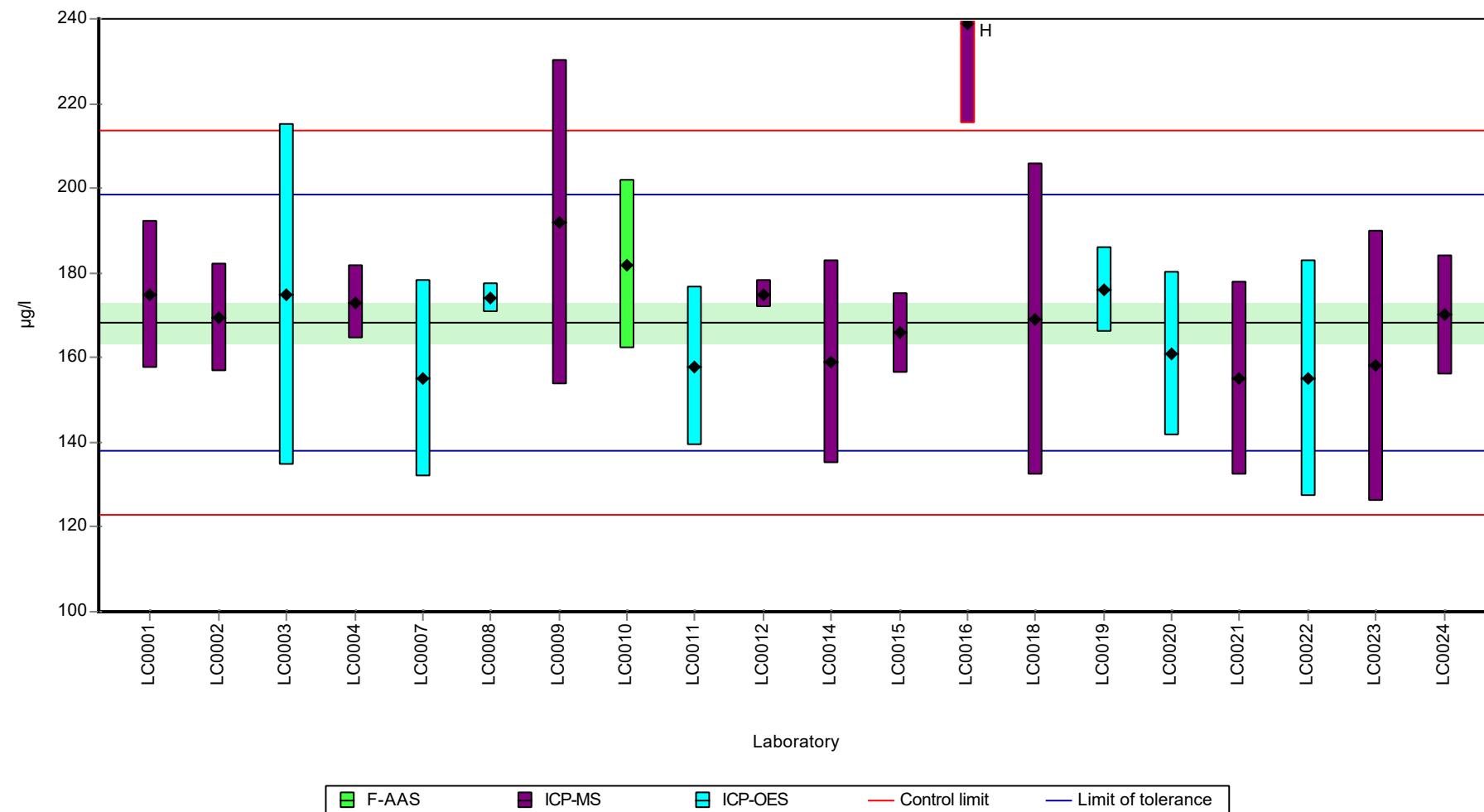
	all results	without outliers	Unit
Mean ± CI (99%)	172 ± 12.5	168 ± 7.05	µg/l
Minimum	155	155	µg/l
Maximum	239	192	µg/l
Standard deviation	18.7	10.2	µg/l
rel. standard deviation	10.9	6.09	%
n	20	19	-

Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Zinc

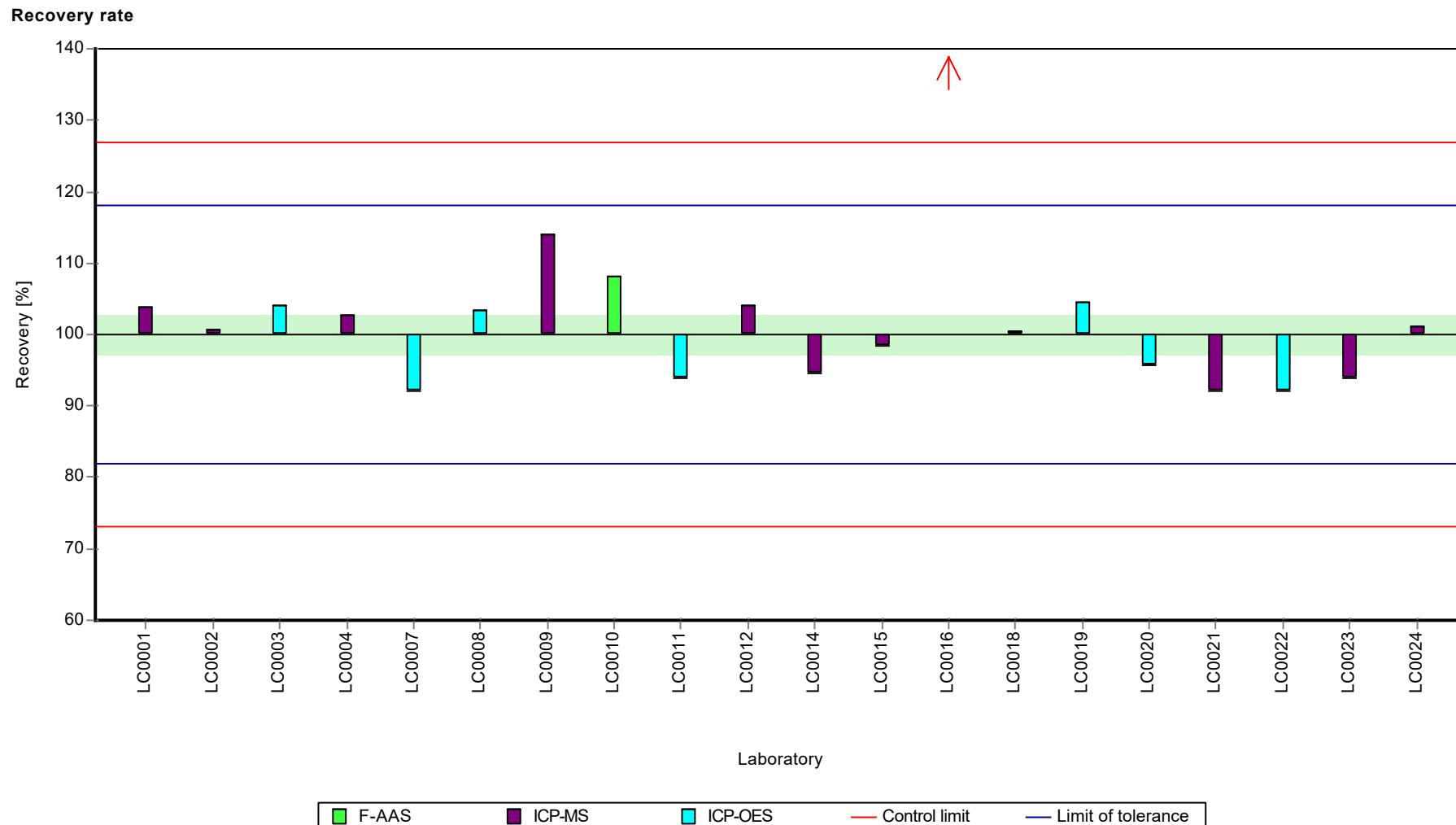
**Graphical presentation of results**

**Results**



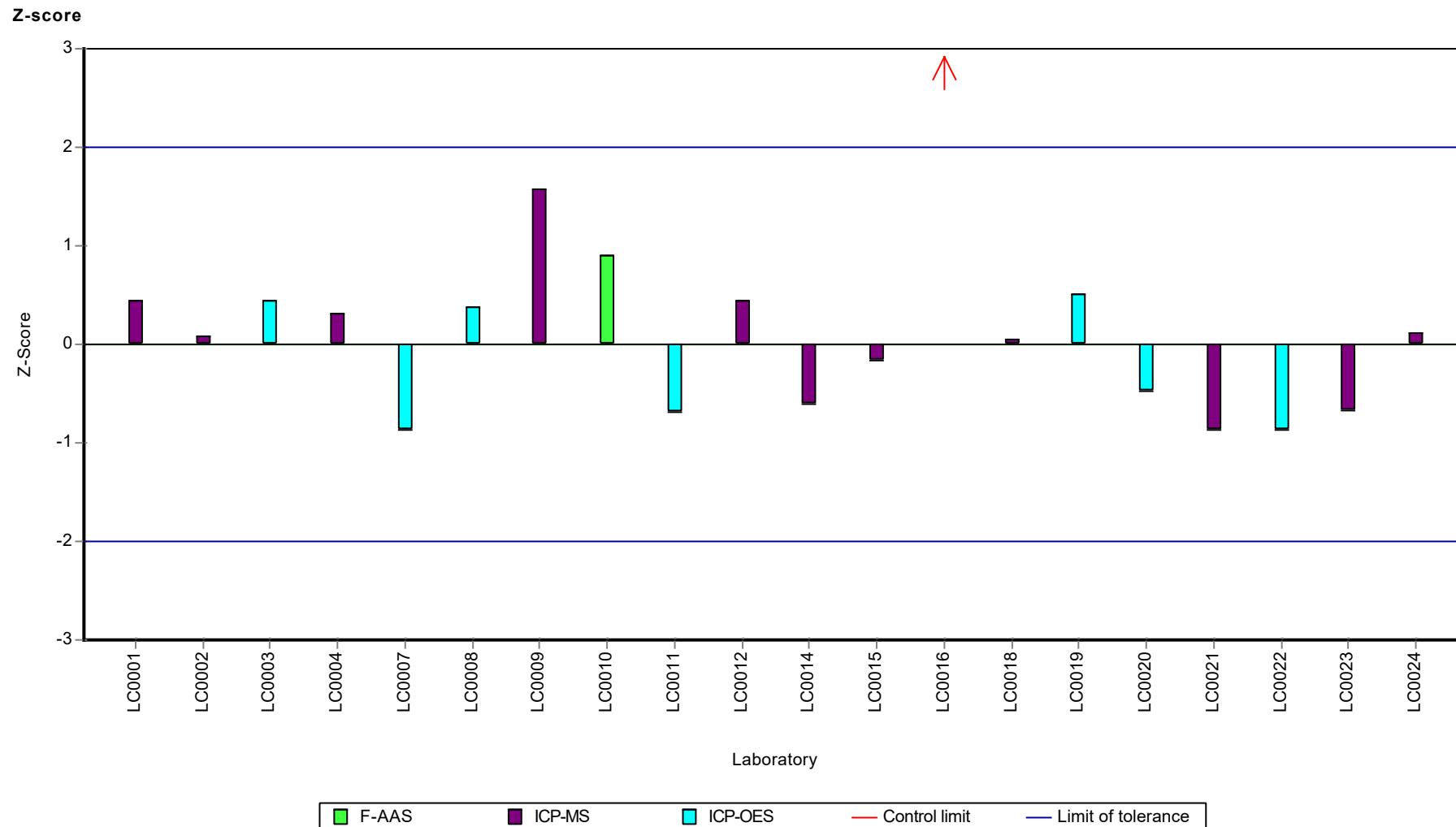
Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Zinc



Parameter oriented report Metals and trace elements M165

Sample: M165A, Parameter: Zinc



Parameter oriented report Metals and trace elements  
M165

Sample: M165B, Parameter: Zinc

## Parameter oriented report

### M165 B

#### Zinc

Unit	µg/l
Assigned value ± U (k=2)	235 ± 7.06
Criterion	21.1 (9 %)
Minimum - Maximum	210 - 266
Control test value ± U (k=2)	220.0 ± 24.2

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	251.35	24.96	107	0.79	
LC0002	236.4	17.7	101	0.08	
LC0003	235	54	100	0.01	
LC0004	244	12.2	104	0.44	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	221	33.1	94.2	-0.65	
LC0008	245	3.38	104	0.49	
LC0009	266	53.2	113	1.48	
LC0010	252	30	107	0.82	
LC0011	226.73	27.2076	96.6	-0.38	
LC0012	229	14.422	97.6	-0.27	
LC0013	-	-	-	-	
LC0014	220	33	93.7	-0.7	
LC0015	210.39	3.0951	89.6	-1.15	
LC0016	168	16.8	71.6	-3.16	H
LC0017	-	-	-	-	
LC0018	235	38	100	0.01	
LC0019	262	10	112	1.29	
LC0020	223	26.2	95	-0.55	
LC0021	235	35	100	0.01	
LC0022	223.7	40.27	95.3	-0.52	
LC0023	215	43	91.6	-0.93	
LC0024	229	19	97.6	-0.27	

#### Characteristics of parameter

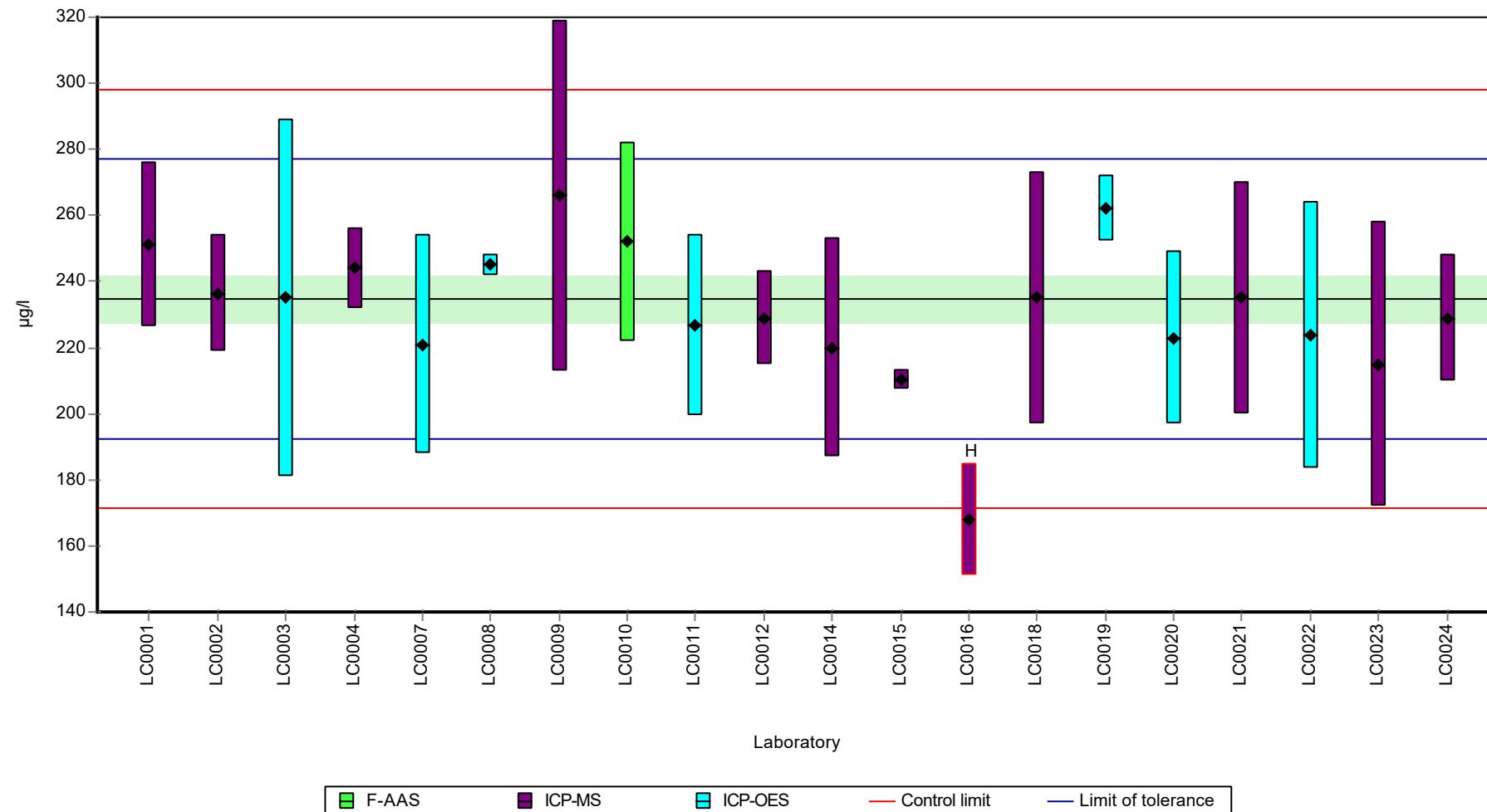
	all results	without outliers	Unit
Mean ± CI (99%)	231 ± 14.2	235 ± 10.6	µg/l
Minimum	168	210	µg/l
Maximum	266	266	µg/l
Standard deviation	21.1	15.4	µg/l
rel. standard deviation	9.14	6.56	%
n	20	19	-

Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Zinc

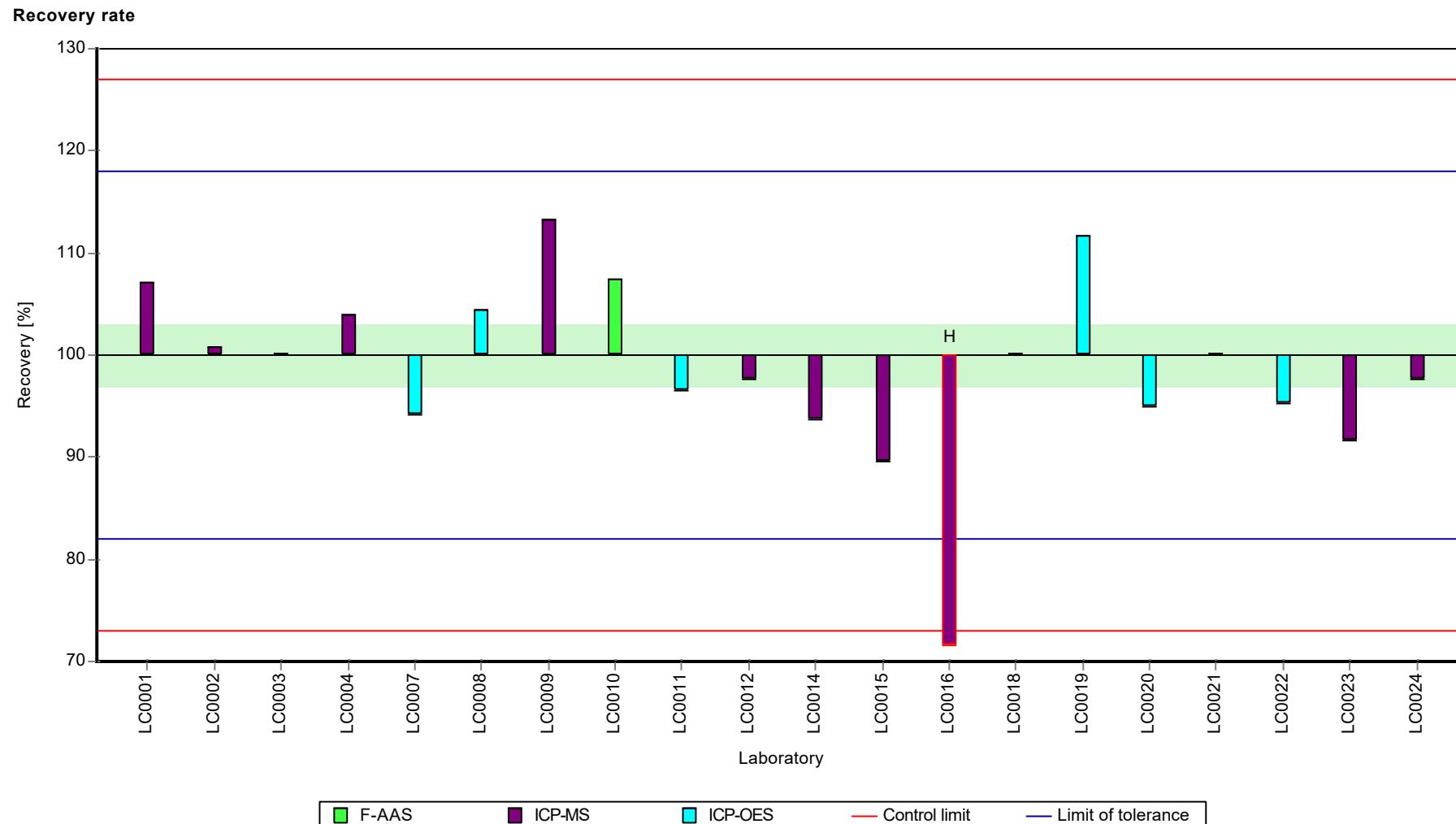
#### Graphical presentation of results

##### Results



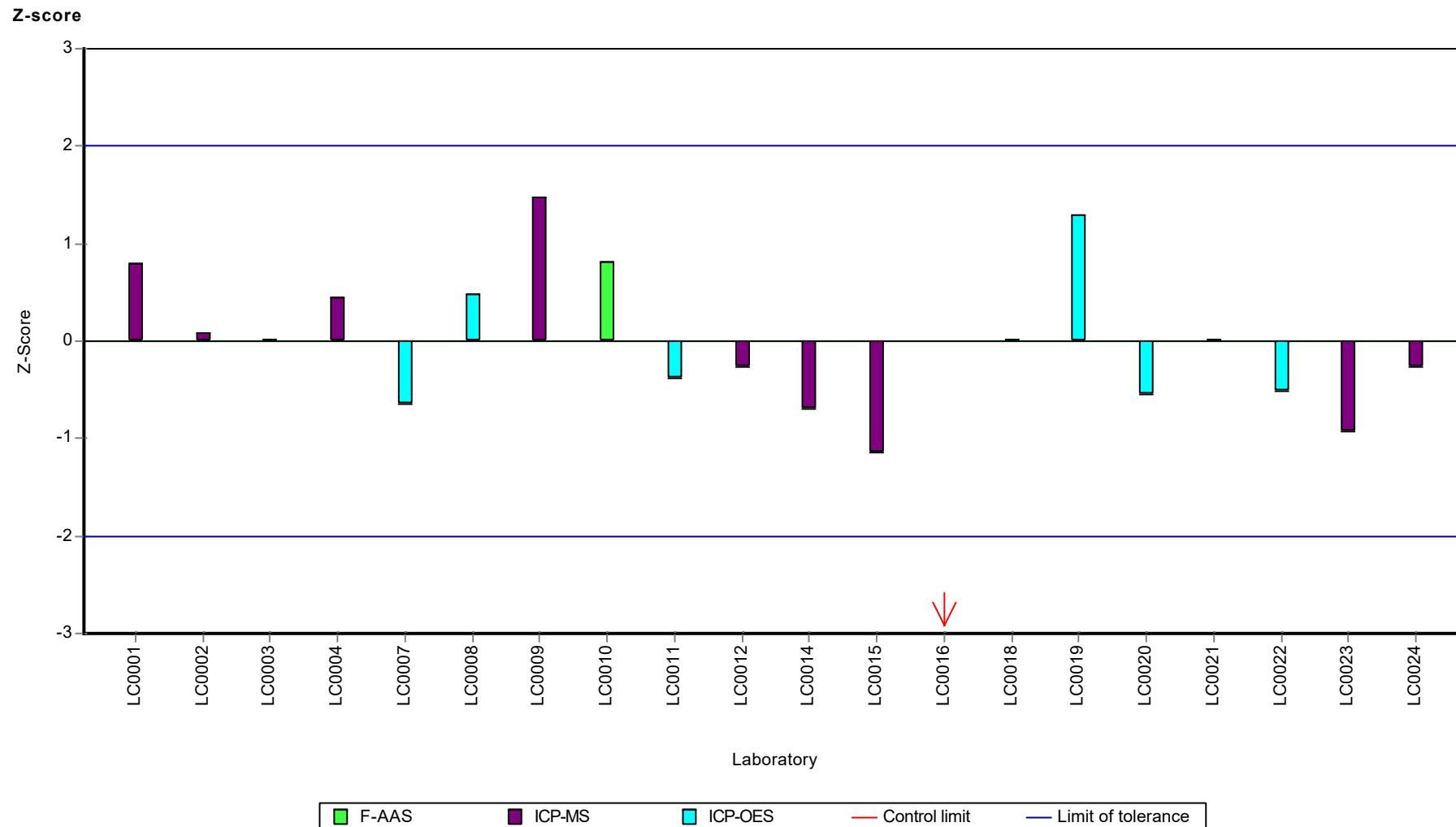
Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Zinc



Parameter oriented report Metals and trace elements M165

Sample: M165B, Parameter: Zinc



## **E8. Labororientierte Auswertung / Laboratory oriented report**

Die Labororientierte Auswertung ist nach dem Laborcode sortiert.

The laboratory oriented report is sorted by laboratory code.

Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	293.13 ± 28.3	47.7	92.1	-0.52
Arsenic	µg/l	5.86 ± 0.245	6.34 ± 0.43	0.761	108	0.64
Cadmium	µg/l	1.64 ± 0.0718	1.81 ± 0.25	0.164	110	1.01
Chromium	µg/l	13.2 ± 0.432	13.5 ± 1.31	1.12	102	0.26
Copper	µg/l	12.5 ± 0.473	12.62 ± 1.86	1.13	101	0.09
Iron	µg/l	118 ± 3.21	119.81 ± 12.2	13	102	0.15
Lead	µg/l	2.14 ± 0.0665	0.94 ± 0.07	0.32	44	-3.73
Manganese	µg/l	33.8 ± 1.02	35.38 ± 3.73	2.43	105	0.64
Nickel	µg/l	4.42 ± 0.275	3.68 ± 0.28	0.53	83.3	-1.39
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	174.9 ± 17.37	15.1	104	0.44

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	- ± -	0.522	-	-

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	46.8 ± 4.52	8.04	87.3	-0.84
Arsenic	µg/l	29.8 ± 1.13	32.11 ± 2.18	3.88	108	0.59
Cadmium	µg/l	12.9 ± 0.534	13.98 ± 1.91	1.29	108	0.80
Chromium	µg/l	59.1 ± 1.42	61.67 ± 5.98	5.03	104	0.51
Copper	µg/l	10.7 ± 0.28	10.6 ± 1.57	0.963	99.1	-0.10

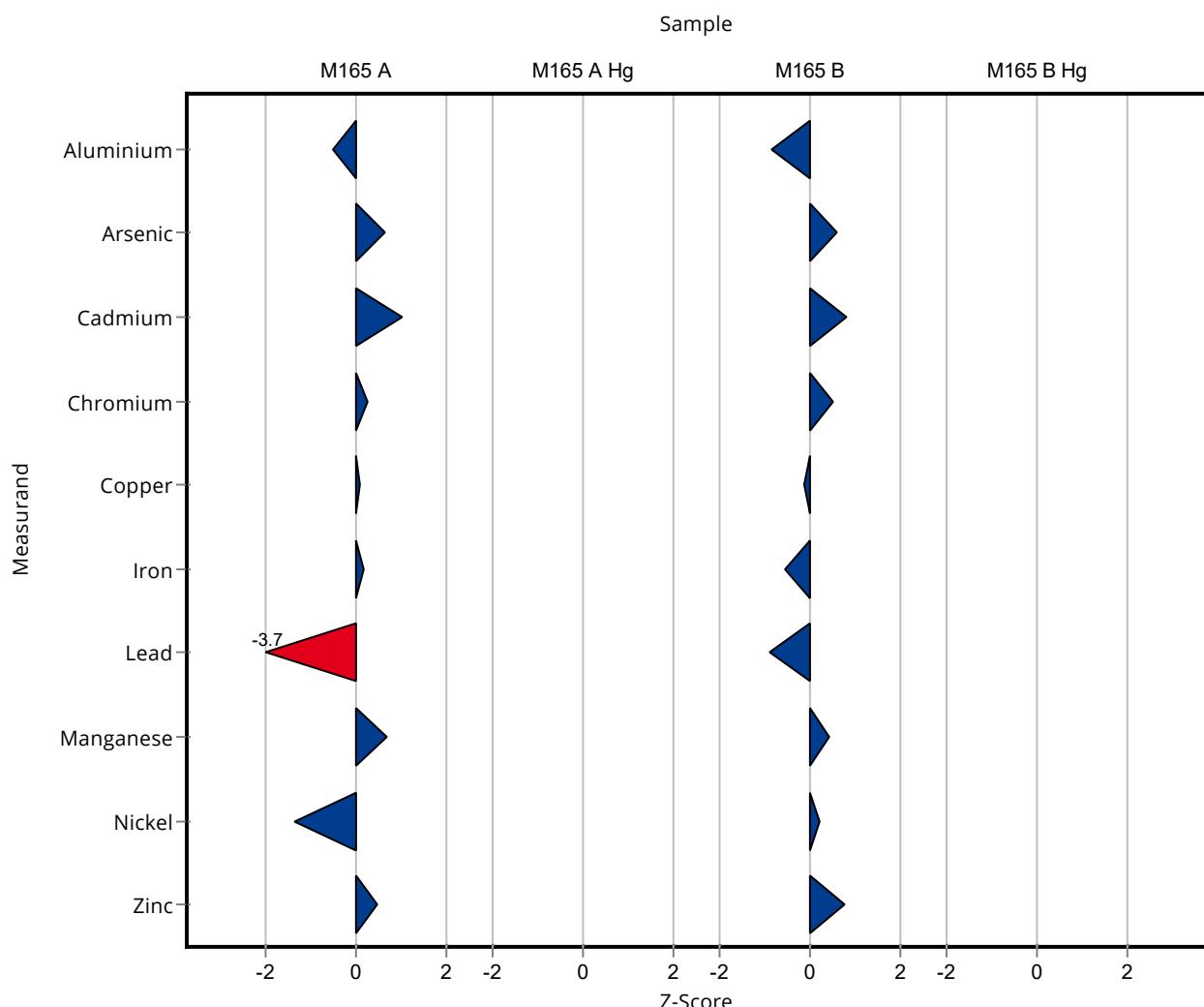
Summary of results Metals and trace elements M165

Labcode: LC0001

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	28.51 ± 2.89	3.33	94.1	-0.54
Lead	µg/l	6.45 ± 0.323	5.61 ± 0.41	0.968	87	-0.87
Manganese	µg/l	7.91 ± 0.339	8.18 ± 0.86	0.632	103	0.43
Nickel	µg/l	26.1 ± 0.637	26.75 ± 2.05	3.13	102	0.20
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	251.35 ± 24.96	21.1	107	0.79

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	293.13 ± 28.3	47.7	92.1	-0.44
Arsenic	µg/l	5.86 ± 0.245	6.34 ± 0.43	0.761	108	0.54
Cadmium	µg/l	1.64 ± 0.0718	1.81 ± 0.25	0.164	110	0.33
Chromium	µg/l	13.2 ± 0.432	13.5 ± 1.31	1.12	102	0.11
Copper	µg/l	12.5 ± 0.473	12.62 ± 1.86	1.13	101	0.03
Iron	µg/l	118 ± 3.21	119.81 ± 12.2	13	102	0.08
Lead	µg/l	2.14 ± 0.0665	0.94 ± 0.07	0.32	44	-7.71
Manganese	µg/l	33.8 ± 1.02	35.38 ± 3.73	2.43	105	0.21
Nickel	µg/l	4.42 ± 0.275	3.68 ± 0.28	0.53	83.3	-1.18
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	174.9 ± 17.37	15.1	104	0.19

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	- ± -	0.522	-	-

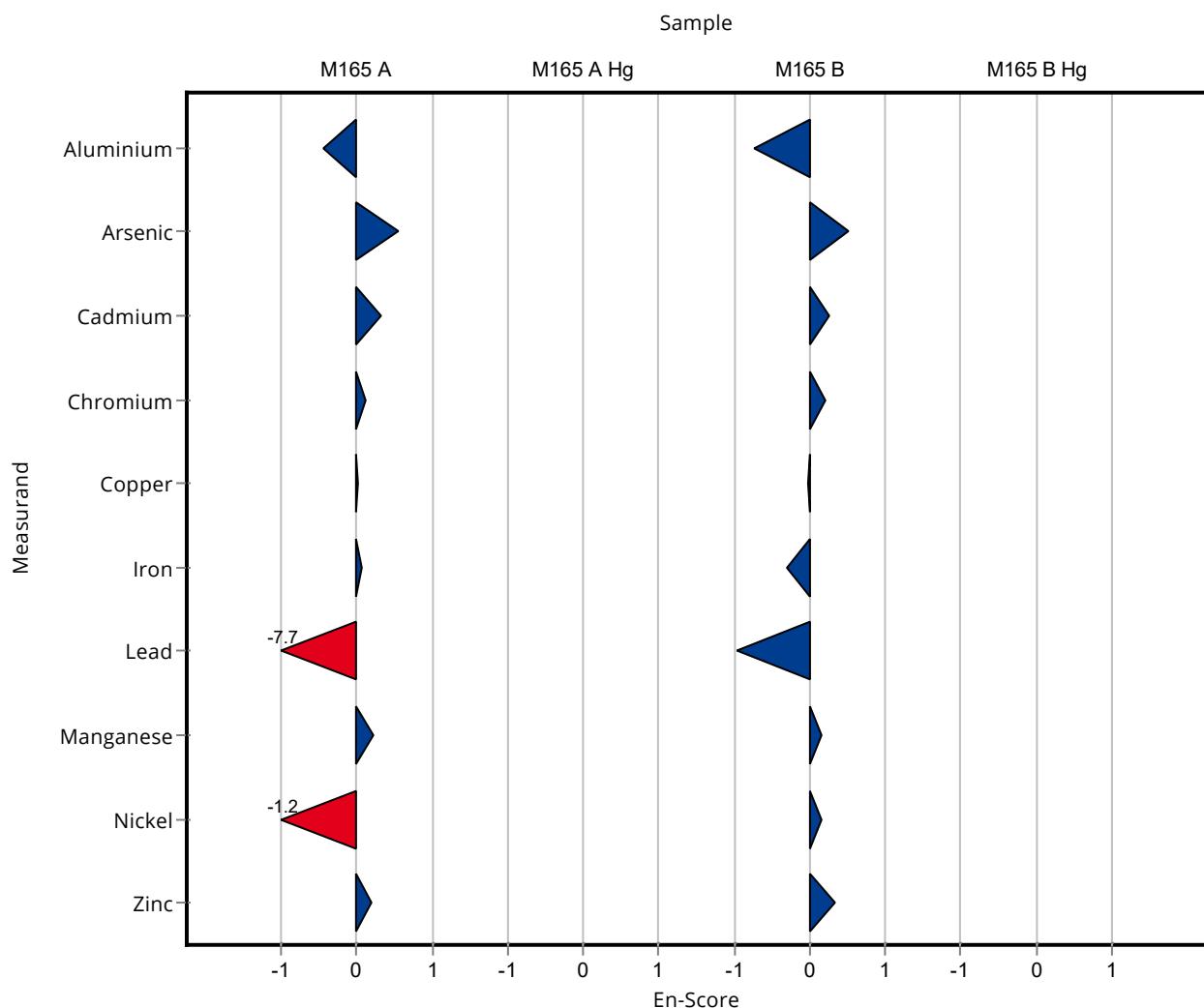
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	46.8 ± 4.52	8.04	87.3	-0.73
Arsenic	µg/l	29.8 ± 1.13	32.11 ± 2.18	3.88	108	0.51
Cadmium	µg/l	12.9 ± 0.534	13.98 ± 1.91	1.29	108	0.27
Chromium	µg/l	59.1 ± 1.42	61.67 ± 5.98	5.03	104	0.21
Copper	µg/l	10.7 ± 0.28	10.6 ± 1.57	0.963	99.1	-0.03
Iron	µg/l	30.3 ± 1.28	28.51 ± 2.89	3.33	94.1	-0.30

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	5.61 ± 0.41	0.968	87	-0.95
Manganese	µg/l	7.91 ± 0.339	8.18 ± 0.86	0.632	103	0.16
Nickel	µg/l	26.1 ± 0.637	26.75 ± 2.05	3.13	102	0.15
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	251.35 ± 24.96	21.1	107	0.33

Sample: M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	306 ± 26	47.7	96.2	-0.25
Arsenic	µg/l	5.86 ± 0.245	5.38 ± 0.38	0.761	91.9	-0.63
Cadmium	µg/l	1.64 ± 0.0718	1.62 ± 0.089	0.164	98.6	-0.14
Chromium	µg/l	13.2 ± 0.432	13.4 ± 0.87	1.12	101	0.17
Copper	µg/l	12.5 ± 0.473	12.82 ± 0.9	1.13	102	0.26
Iron	µg/l	118 ± 3.21	104.7 ± 8.38	13	88.8	-1.02
Lead	µg/l	2.14 ± 0.0665	2.25 ± 0.14	0.32	105	0.36
Manganese	µg/l	33.8 ± 1.02	33.7 ± 1.85	2.43	99.7	-0.05
Nickel	µg/l	4.42 ± 0.275	4.5 ± 0.27	0.53	102	0.16
Selenium	µg/l	13.9 ± 0.565	13.7 ± 1.16	1.67	98.5	-0.12
Uranium	µg/l	3.6 ± 0.318	3.8 ± 0.21	0.54	106	0.37
Zinc	µg/l	168 ± 4.7	169.4 ± 12.7	15.1	101	0.07

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	3.28 ± 0.31	0.522	88	-0.86

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	51.9 ± 4.41	8.04	96.8	-0.21
Arsenic	µg/l	29.8 ± 1.13	28.57 ± 2	3.88	95.8	-0.32
Cadmium	µg/l	12.9 ± 0.534	13.17 ± 0.72	1.29	102	0.17
Chromium	µg/l	59.1 ± 1.42	61.8 ± 4.02	5.03	105	0.53
Copper	µg/l	10.7 ± 0.28	10.76 ± 0.75	0.963	101	0.06

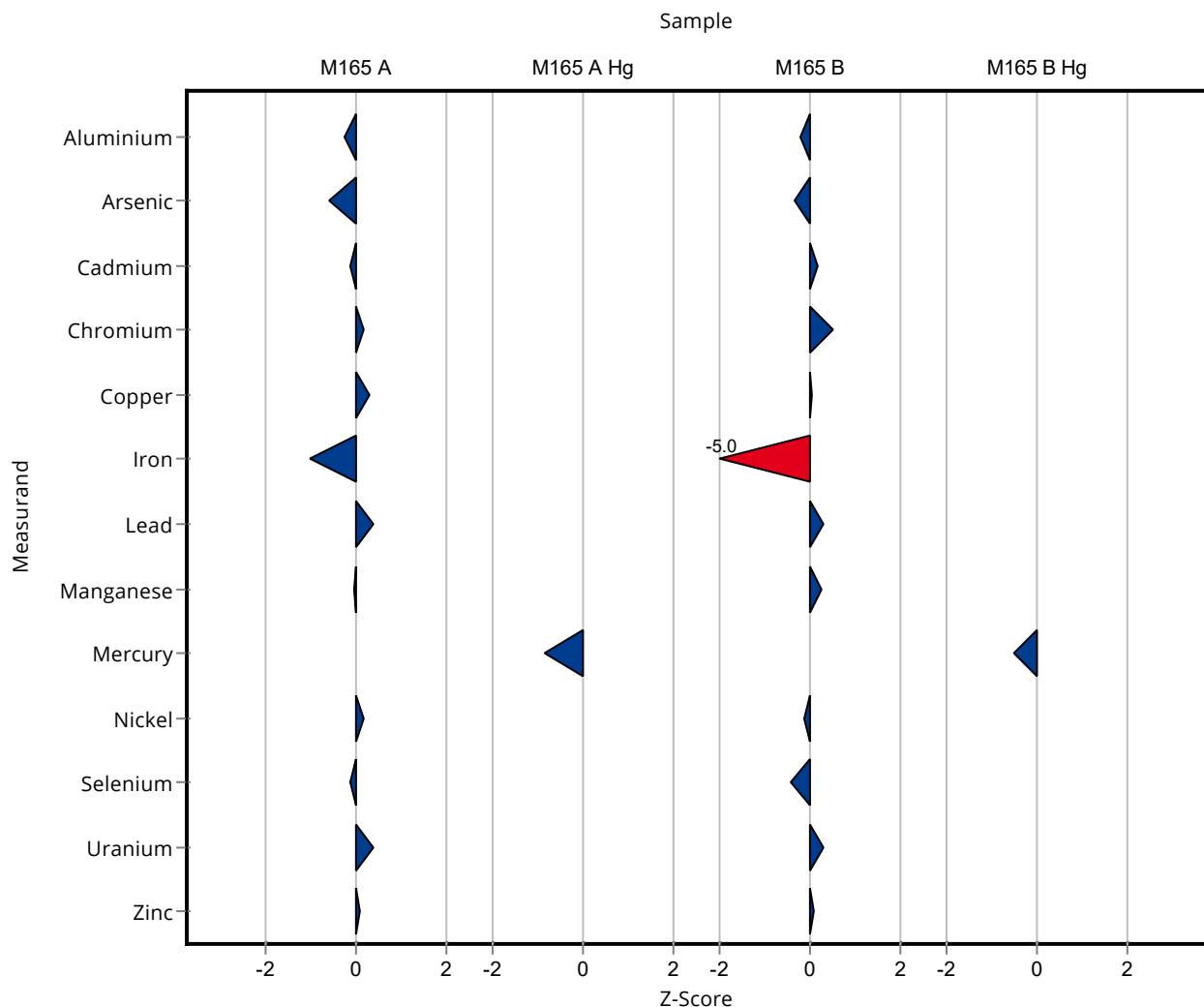
Summary of results Metals and trace elements M165

Labcode: LC0002

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	13.5 ± 1.08	3.33	44.6	-5.04
Lead	µg/l	6.45 ± 0.323	6.73 ± 0.4	0.968	104	0.29
Manganese	µg/l	7.91 ± 0.339	8.08 ± 0.44	0.632	102	0.28
Nickel	µg/l	26.1 ± 0.637	25.7 ± 1.54	3.13	98.4	-0.13
Selenium	µg/l	4.79 ± 0.282	4.54 ± 0.39	0.575	94.7	-0.44
Uranium	µg/l	2.35 ± 0.139	2.42 ± 0.133	0.246	103	0.29
Zinc	µg/l	235 ± 7.06	236.4 ± 17.7	21.1	101	0.08

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	1.53 ± 0.145	0.23	93.3	-0.48



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	306 ± 26	47.7	96.2	-0.23
Arsenic	µg/l	5.86 ± 0.245	5.38 ± 0.38	0.761	91.9	-0.60
Cadmium	µg/l	1.64 ± 0.0718	1.62 ± 0.089	0.164	98.6	-0.12
Chromium	µg/l	13.2 ± 0.432	13.4 ± 0.87	1.12	101	0.11
Copper	µg/l	12.5 ± 0.473	12.82 ± 0.9	1.13	102	0.16
Iron	µg/l	118 ± 3.21	104.7 ± 8.38	13	88.8	-0.77
Lead	µg/l	2.14 ± 0.0665	2.25 ± 0.14	0.32	105	0.40
Manganese	µg/l	33.8 ± 1.02	33.7 ± 1.85	2.43	99.7	-0.03
Nickel	µg/l	4.42 ± 0.275	4.5 ± 0.27	0.53	102	0.14
Selenium	µg/l	13.9 ± 0.565	13.7 ± 1.16	1.67	98.5	-0.09
Uranium	µg/l	3.6 ± 0.318	3.8 ± 0.21	0.54	106	0.38
Zinc	µg/l	168 ± 4.7	169.4 ± 12.7	15.1	101	0.04

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	3.28 ± 0.31	0.522	88	-0.69

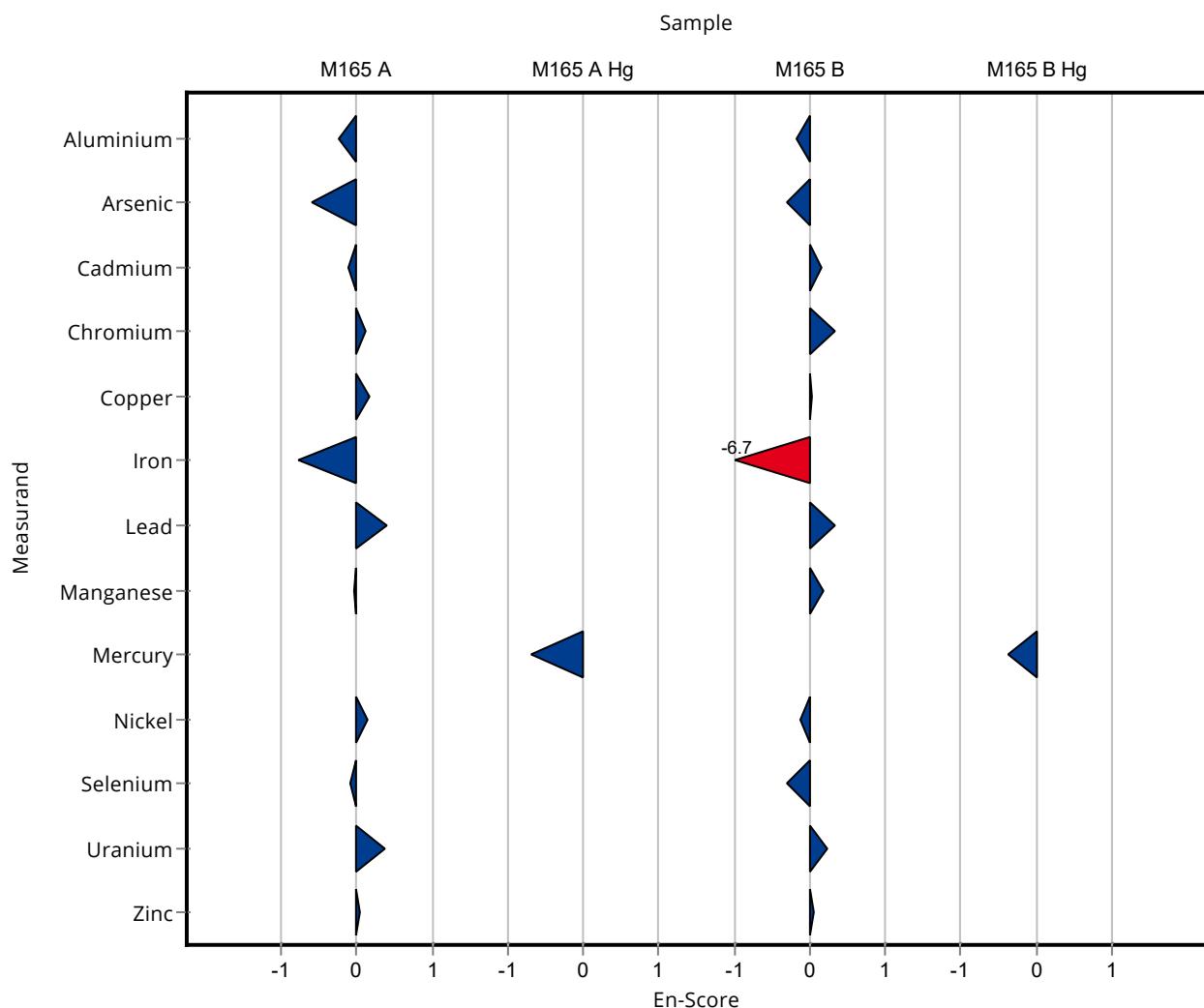
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	51.9 ± 4.41	8.04	96.8	-0.19
Arsenic	µg/l	29.8 ± 1.13	28.57 ± 2	3.88	95.8	-0.30
Cadmium	µg/l	12.9 ± 0.534	13.17 ± 0.72	1.29	102	0.15
Chromium	µg/l	59.1 ± 1.42	61.8 ± 4.02	5.03	105	0.33
Copper	µg/l	10.7 ± 0.28	10.76 ± 0.75	0.963	101	0.04
Iron	µg/l	30.3 ± 1.28	13.5 ± 1.08	3.33	44.6	-6.69

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	6.73 ± 0.4	0.968	104	0.32
Manganese	µg/l	7.91 ± 0.339	8.08 ± 0.44	0.632	102	0.19
Nickel	µg/l	26.1 ± 0.637	25.7 ± 1.54	3.13	98.4	-0.13
Selenium	µg/l	4.79 ± 0.282	4.54 ± 0.39	0.575	94.7	-0.30
Uranium	µg/l	2.35 ± 0.139	2.42 ± 0.133	0.246	103	0.24
Zinc	µg/l	235 ± 7.06	236.4 ± 17.7	21.1	101	0.05

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	1.53 ± 0.145	0.23	93.3	-0.37



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	316 ± 47.4	47.7	99.3	-0.04
Arsenic	µg/l	5.86 ± 0.245	6.02 ± 0.9	0.761	103	0.22
Cadmium	µg/l	1.64 ± 0.0718	1.7 ± 0.26	0.164	103	0.34
Chromium	µg/l	13.2 ± 0.432	13.2 ± 2.8	1.12	99.9	-0.01
Copper	µg/l	12.5 ± 0.473	11.6 ± 1.97	1.13	92.6	-0.82
Iron	µg/l	118 ± 3.21	113 ± 13.6	13	95.8	-0.38
Lead	µg/l	2.14 ± 0.0665	2.02 ± 0.49	0.32	94.6	-0.36
Manganese	µg/l	33.8 ± 1.02	32.2 ± 3.9	2.43	95.2	-0.66
Nickel	µg/l	4.42 ± 0.275	3.27 ± 0.75	0.53	74	-2.16
Selenium	µg/l	13.9 ± 0.565	12.3 ± 2.21	1.67	88.5	-0.96
Uranium	µg/l	3.6 ± 0.318	3.1 ± 0.19	0.54	86.1	-0.93
Zinc	µg/l	168 ± 4.7	175 ± 40.3	15.1	104	0.44

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	3.54 ± 0.7	0.522	94.9	-0.36

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	57.1 ± 8.6	8.04	107	0.44
Arsenic	µg/l	29.8 ± 1.13	29.1 ± 4.4	3.88	97.6	-0.19
Cadmium	µg/l	12.9 ± 0.534	13.5 ± 2	1.29	104	0.43
Chromium	µg/l	59.1 ± 1.42	55.5 ± 11.7	5.03	93.9	-0.72
Copper	µg/l	10.7 ± 0.28	9.76 ± 1.7	0.963	91.2	-0.97

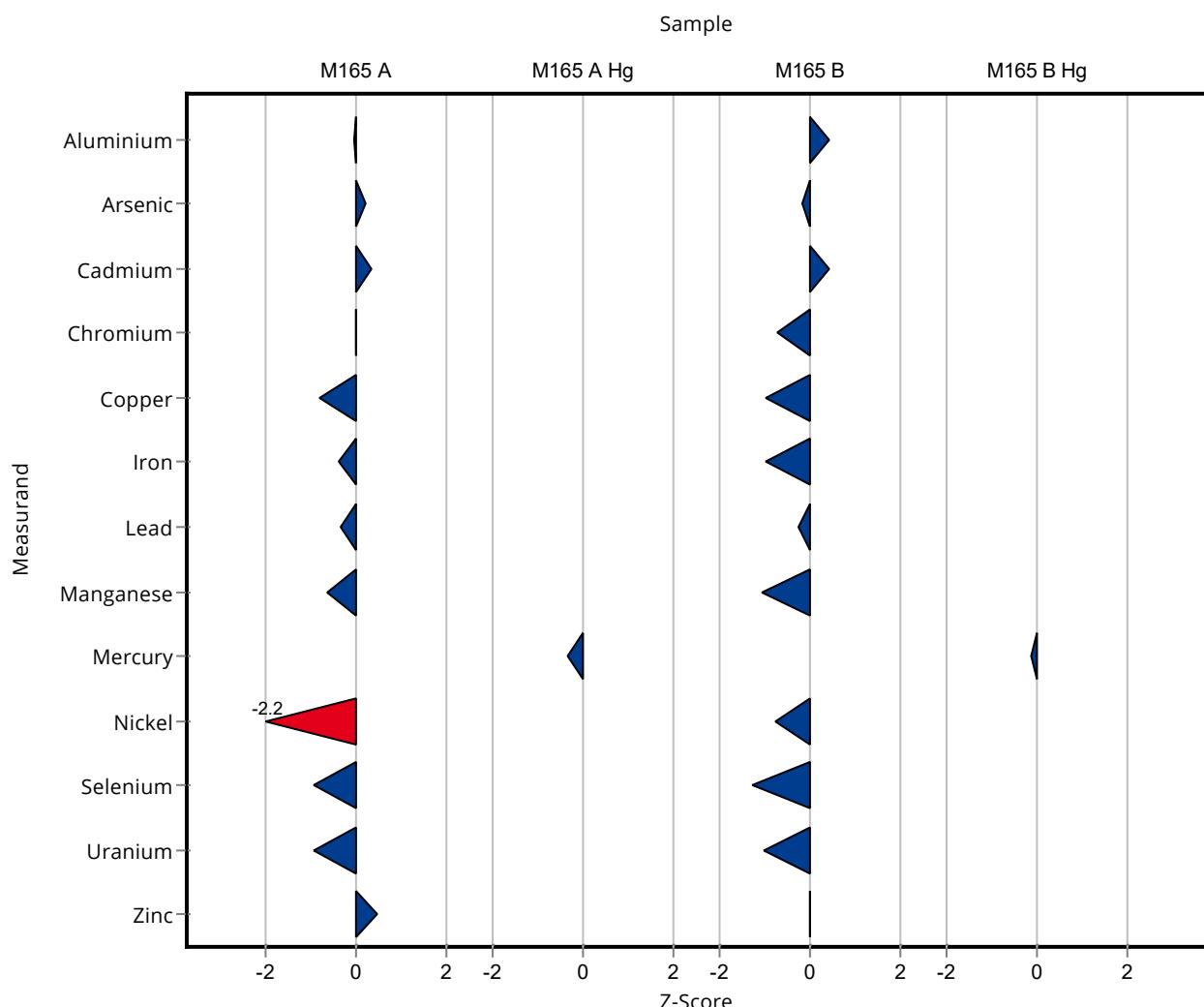
Summary of results Metals and trace elements M165

Labcode: LC0003

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	27 ± 3.2	3.33	89.1	-0.99
Lead	µg/l	6.45 ± 0.323	6.21 ± 1.5	0.968	96.3	-0.25
Manganese	µg/l	7.91 ± 0.339	7.24 ± 0.9	0.632	91.6	-1.05
Nickel	µg/l	26.1 ± 0.637	23.7 ± 5.5	3.13	90.8	-0.77
Selenium	µg/l	4.79 ± 0.282	4.06 ± 0.7	0.575	84.7	-1.27
Uranium	µg/l	2.35 ± 0.139	2.1 ± 0.13	0.246	89.5	-1.00
Zinc	µg/l	235 ± 7.06	235 ± 54	21.1	100	0.01

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	1.61 ± 0.32	0.23	98.2	-0.13



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	316 ± 47.4	47.7	99.3	-0.02
Arsenic	µg/l	5.86 ± 0.245	6.02 ± 0.9	0.761	103	0.09
Cadmium	µg/l	1.64 ± 0.0718	1.7 ± 0.26	0.164	103	0.11
Chromium	µg/l	13.2 ± 0.432	13.2 ± 2.8	1.12	99.9	0.00
Copper	µg/l	12.5 ± 0.473	11.6 ± 1.97	1.13	92.6	-0.23
Iron	µg/l	118 ± 3.21	113 ± 13.6	13	95.8	-0.18
Lead	µg/l	2.14 ± 0.0665	2.02 ± 0.49	0.32	94.6	-0.12
Manganese	µg/l	33.8 ± 1.02	32.2 ± 3.9	2.43	95.2	-0.20
Nickel	µg/l	4.42 ± 0.275	3.27 ± 0.75	0.53	74	-0.75
Selenium	µg/l	13.9 ± 0.565	12.3 ± 2.21	1.67	88.5	-0.36
Uranium	µg/l	3.6 ± 0.318	3.1 ± 0.19	0.54	86.1	-1.01
Zinc	µg/l	168 ± 4.7	175 ± 40.3	15.1	104	0.08

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	3.54 ± 0.7	0.522	94.9	-0.13

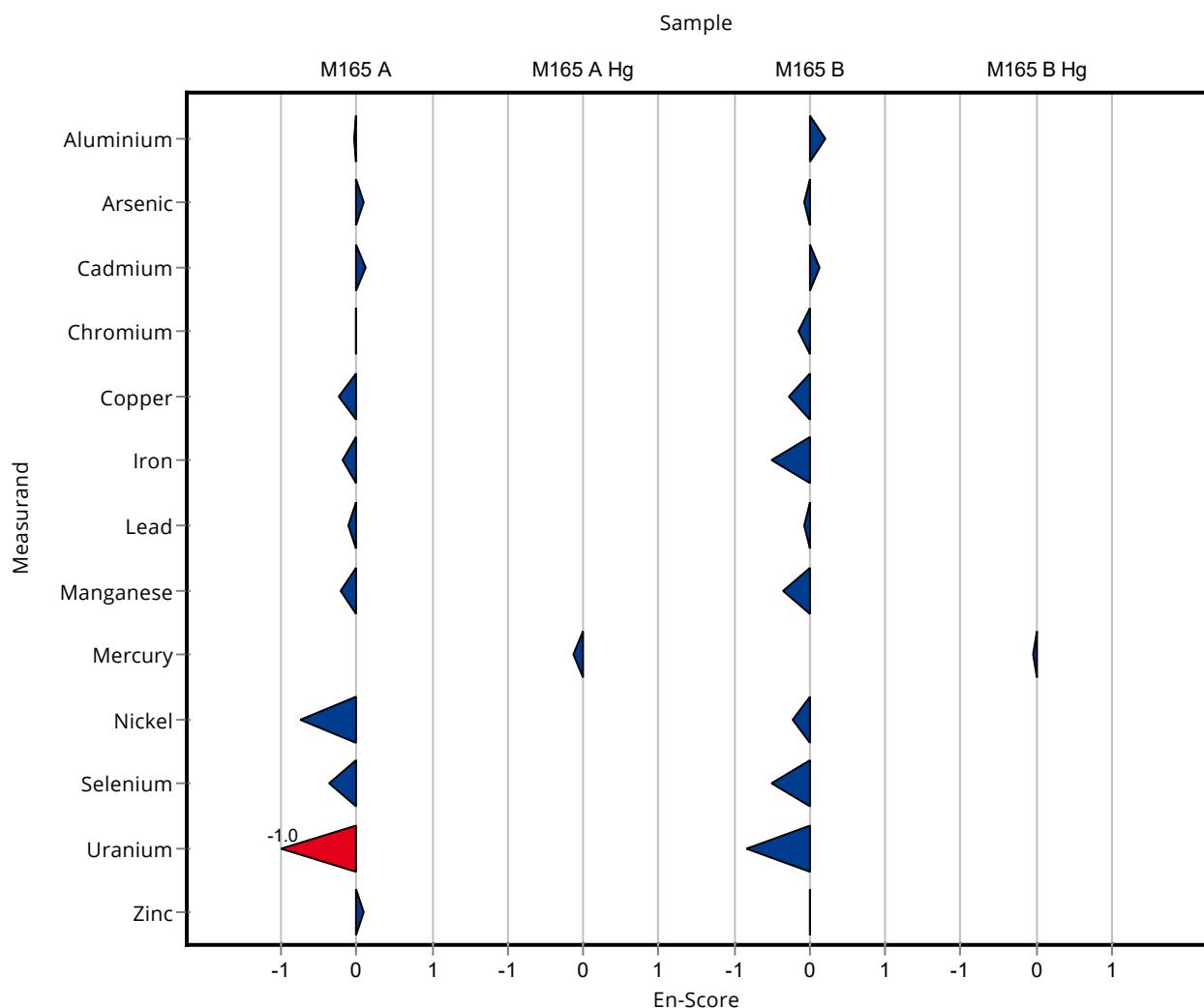
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	57.1 ± 8.6	8.04	107	0.20
Arsenic	µg/l	29.8 ± 1.13	29.1 ± 4.4	3.88	97.6	-0.08
Cadmium	µg/l	12.9 ± 0.534	13.5 ± 2	1.29	104	0.14
Chromium	µg/l	59.1 ± 1.42	55.5 ± 11.7	5.03	93.9	-0.15
Copper	µg/l	10.7 ± 0.28	9.76 ± 1.7	0.963	91.2	-0.27
Iron	µg/l	30.3 ± 1.28	27 ± 3.2	3.33	89.1	-0.51

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	6.21 ± 1.5	0.968	96.3	-0.08
Manganese	µg/l	7.91 ± 0.339	7.24 ± 0.9	0.632	91.6	-0.36
Nickel	µg/l	26.1 ± 0.637	23.7 ± 5.5	3.13	90.8	-0.22
Selenium	µg/l	4.79 ± 0.282	4.06 ± 0.7	0.575	84.7	-0.51
Uranium	µg/l	2.35 ± 0.139	2.1 ± 0.13	0.246	89.5	-0.84
Zinc	µg/l	235 ± 7.06	235 ± 54	21.1	100	0.00

Sample: M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	1.61 ± 0.32	0.23	98.2	-0.05



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	326 ± 16.3	47.7	102	0.17
Arsenic	µg/l	5.86 ± 0.245	6.89 ± 0.52	0.761	118	1.36
Cadmium	µg/l	1.64 ± 0.0718	1.71 ± 0.086	0.164	104	0.40
Chromium	µg/l	13.2 ± 0.432	13.9 ± 0.7	1.12	105	0.62
Copper	µg/l	12.5 ± 0.473	12.5 ± 0.63	1.13	99.8	-0.02
Iron	µg/l	118 ± 3.21	124 ± 6.2	13	105	0.47
Lead	µg/l	2.14 ± 0.0665	2.07 ± 0.104	0.32	97	-0.20
Manganese	µg/l	33.8 ± 1.02	34.9 ± 1.75	2.43	103	0.45
Nickel	µg/l	4.42 ± 0.275	4.68 ± 0.234	0.53	106	0.50
Selenium	µg/l	13.9 ± 0.565	16.1 ± 1.21	1.67	116	1.32
Uranium	µg/l	3.6 ± 0.318	3.87 ± 0.194	0.54	107	0.50
Zinc	µg/l	168 ± 4.7	173 ± 8.7	15.1	103	0.31

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	3.87 ± 0.2	0.522	104	0.27

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	55.4 ± 2.77	8.04	103	0.23
Arsenic	µg/l	29.8 ± 1.13	31.7 ± 2.4	3.88	106	0.49
Cadmium	µg/l	12.9 ± 0.534	13.8 ± 0.69	1.29	107	0.66
Chromium	µg/l	59.1 ± 1.42	60.6 ± 3.03	5.03	103	0.29
Copper	µg/l	10.7 ± 0.28	10.7 ± 0.54	0.963	100	0.00

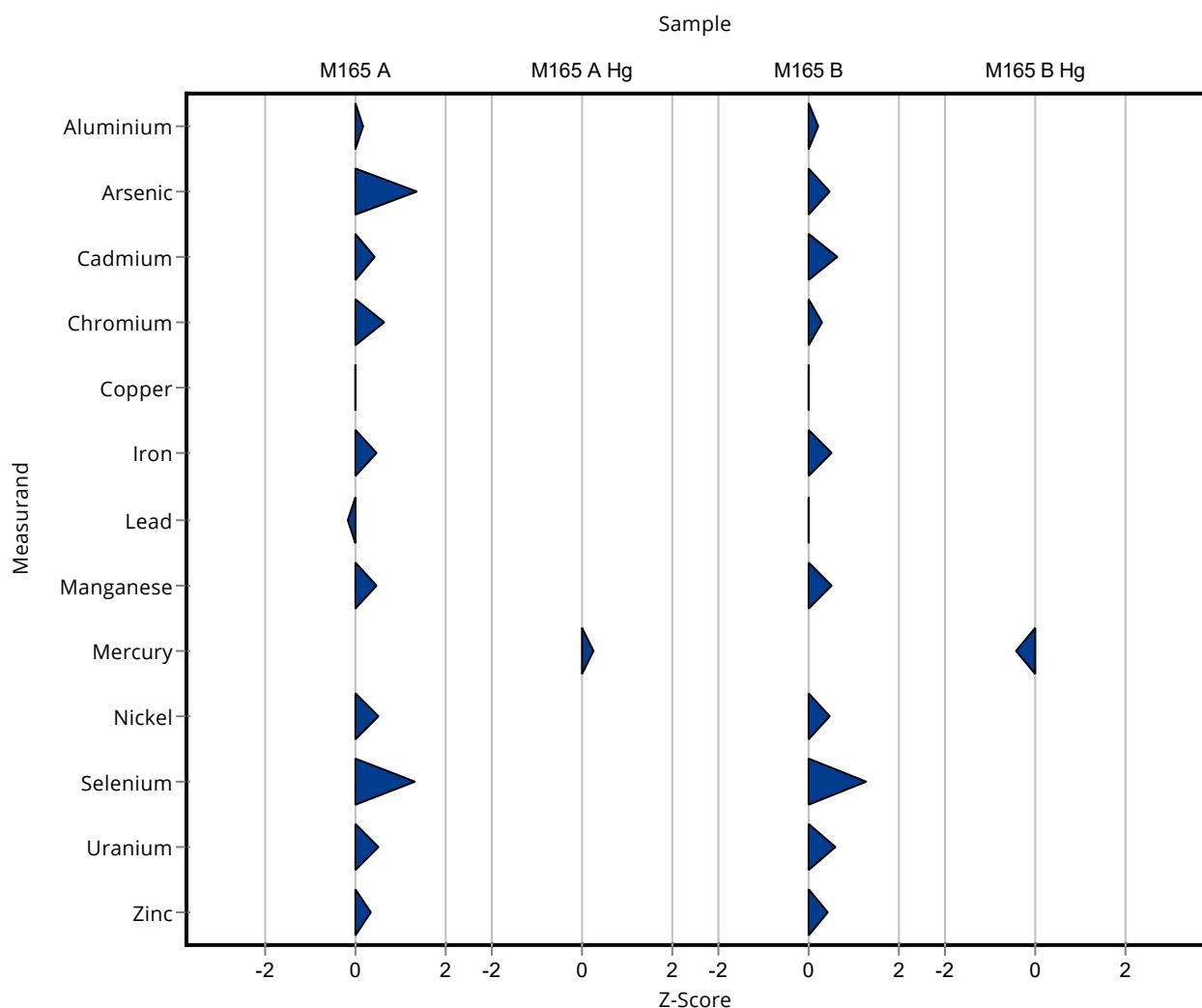
Summary of results Metals and trace elements M165

Labcode: LC0004

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	32 ± 1.6	3.33	106	0.51
Lead	µg/l	6.45 ± 0.323	6.44 ± 0.322	0.968	99.8	-0.01
Manganese	µg/l	7.91 ± 0.339	8.24 ± 0.412	0.632	104	0.53
Nickel	µg/l	26.1 ± 0.637	27.6 ± 1.38	3.13	106	0.48
Selenium	µg/l	4.79 ± 0.282	5.52 ± 0.41	0.575	115	1.27
Uranium	µg/l	2.35 ± 0.139	2.5 ± 0.13	0.246	106	0.62
Zinc	µg/l	235 ± 7.06	244 ± 12.2	21.1	104	0.44

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	1.55 ± 0.078	0.23	94.5	-0.39



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	326 ± 16.3	47.7	102	0.23
Arsenic	µg/l	5.86 ± 0.245	6.89 ± 0.52	0.761	118	0.97
Cadmium	µg/l	1.64 ± 0.0718	1.71 ± 0.086	0.164	104	0.36
Chromium	µg/l	13.2 ± 0.432	13.9 ± 0.7	1.12	105	0.47
Copper	µg/l	12.5 ± 0.473	12.5 ± 0.63	1.13	99.8	-0.02
Iron	µg/l	118 ± 3.21	124 ± 6.2	13	105	0.48
Lead	µg/l	2.14 ± 0.0665	2.07 ± 0.104	0.32	97	-0.30
Manganese	µg/l	33.8 ± 1.02	34.9 ± 1.75	2.43	103	0.30
Nickel	µg/l	4.42 ± 0.275	4.68 ± 0.234	0.53	106	0.48
Selenium	µg/l	13.9 ± 0.565	16.1 ± 1.21	1.67	116	0.88
Uranium	µg/l	3.6 ± 0.318	3.87 ± 0.194	0.54	107	0.54
Zinc	µg/l	168 ± 4.7	173 ± 8.7	15.1	103	0.26

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	3.87 ± 0.2	0.522	104	0.32

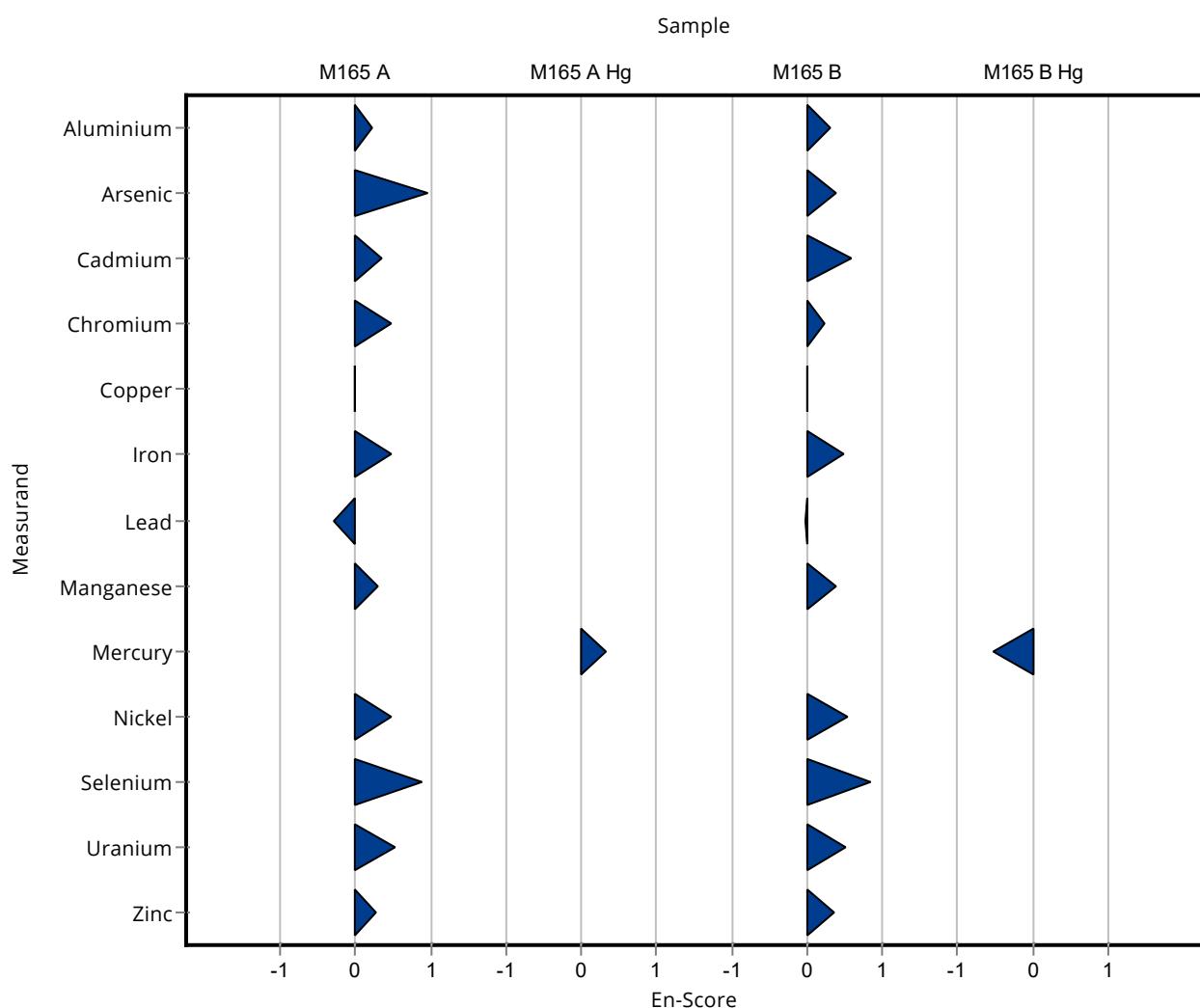
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	55.4 ± 2.77	8.04	103	0.30
Arsenic	µg/l	29.8 ± 1.13	31.7 ± 2.4	3.88	106	0.38
Cadmium	µg/l	12.9 ± 0.534	13.8 ± 0.69	1.29	107	0.58
Chromium	µg/l	59.1 ± 1.42	60.6 ± 3.03	5.03	103	0.24
Copper	µg/l	10.7 ± 0.28	10.7 ± 0.54	0.963	100	0.00
Iron	µg/l	30.3 ± 1.28	32 ± 1.6	3.33	106	0.49

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	6.44 ± 0.322	0.968	99.8	-0.02
Manganese	µg/l	7.91 ± 0.339	8.24 ± 0.412	0.632	104	0.38
Nickel	µg/l	26.1 ± 0.637	27.6 ± 1.38	3.13	106	0.53
Selenium	µg/l	4.79 ± 0.282	5.52 ± 0.41	0.575	115	0.84
Uranium	µg/l	2.35 ± 0.139	2.5 ± 0.13	0.246	106	0.52
Zinc	µg/l	235 ± 7.06	244 ± 12.2	21.1	104	0.37

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	1.55 ± 0.078	0.23	94.5	-0.53



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	- ± -	47.7	-	-
Arsenic	µg/l	5.86 ± 0.245	4.27 ± 0.25	0.761	72.9	-2.08
Cadmium	µg/l	1.64 ± 0.0718	- ± -	0.164	-	-
Chromium	µg/l	13.2 ± 0.432	- ± -	1.12	-	-
Copper	µg/l	12.5 ± 0.473	- ± -	1.13	-	-
Iron	µg/l	118 ± 3.21	- ± -	13	-	-
Lead	µg/l	2.14 ± 0.0665	- ± -	0.32	-	-
Manganese	µg/l	33.8 ± 1.02	- ± -	2.43	-	-
Nickel	µg/l	4.42 ± 0.275	- ± -	0.53	-	-
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	- ± -	15.1	-	-

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	- ± -	0.522	-	-

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	- ± -	8.04	-	-
Arsenic	µg/l	29.8 ± 1.13	25.5 ± 1.6	3.88	85.5	-1.11
Cadmium	µg/l	12.9 ± 0.534	- ± -	1.29	-	-
Chromium	µg/l	59.1 ± 1.42	- ± -	5.03	-	-
Copper	µg/l	10.7 ± 0.28	- ± -	0.963	-	-

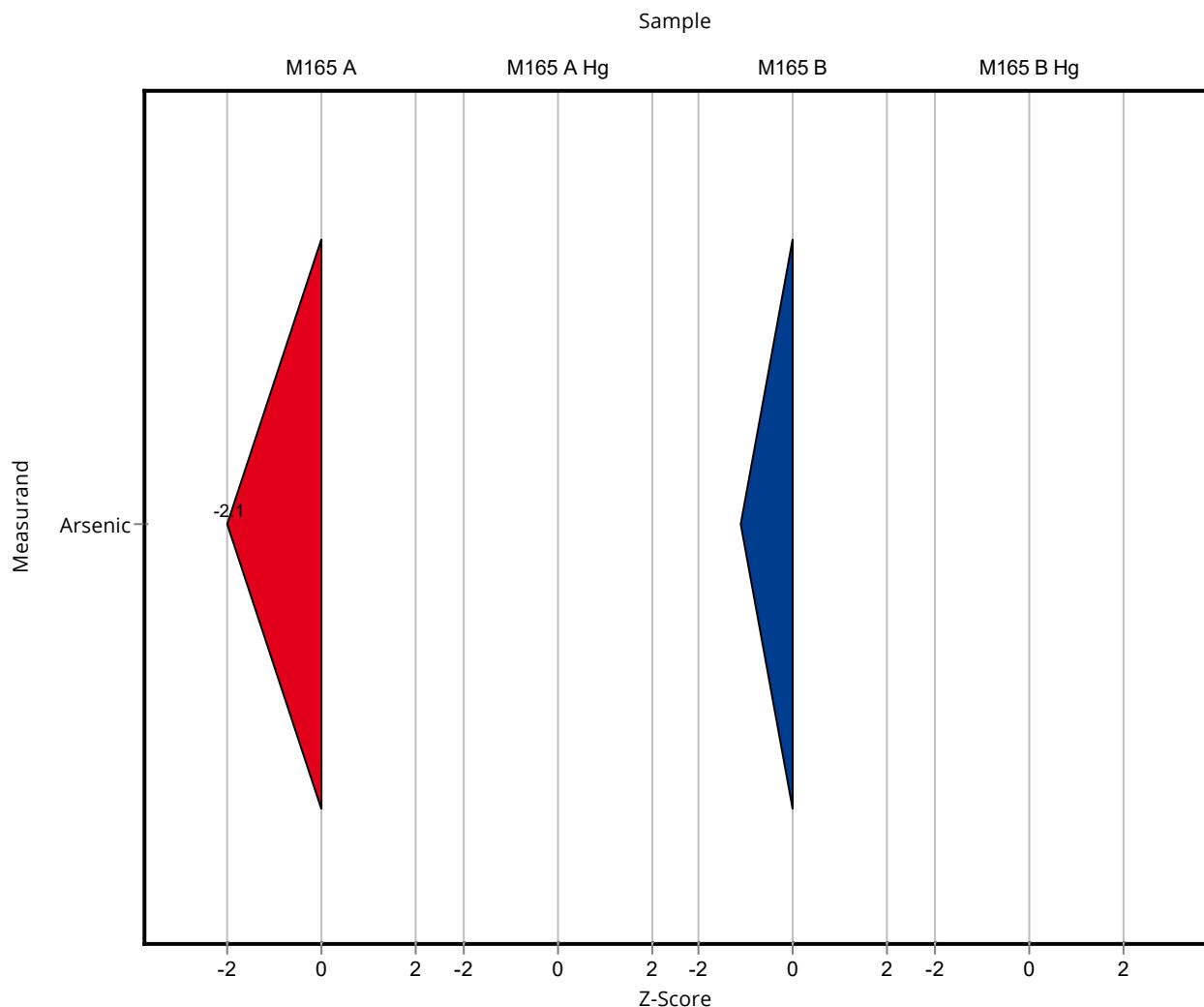
Summary of results Metals and trace elements M165

Labcode: LC0005

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	- ± -	3.33	-	-
Lead	µg/l	6.45 ± 0.323	- ± -	0.968	-	-
Manganese	µg/l	7.91 ± 0.339	- ± -	0.632	-	-
Nickel	µg/l	26.1 ± 0.637	- ± -	3.13	-	-
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	- ± -	21.1	-	-

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	- ± -	47.7	-	-
Arsenic	µg/l	5.86 ± 0.245	4.27 ± 0.25	0.761	72.9	-2.85
Cadmium	µg/l	1.64 ± 0.0718	- ± -	0.164	-	-
Chromium	µg/l	13.2 ± 0.432	- ± -	1.12	-	-
Copper	µg/l	12.5 ± 0.473	- ± -	1.13	-	-
Iron	µg/l	118 ± 3.21	- ± -	13	-	-
Lead	µg/l	2.14 ± 0.0665	- ± -	0.32	-	-
Manganese	µg/l	33.8 ± 1.02	- ± -	2.43	-	-
Nickel	µg/l	4.42 ± 0.275	- ± -	0.53	-	-
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	- ± -	15.1	-	-

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	- ± -	0.522	-	-

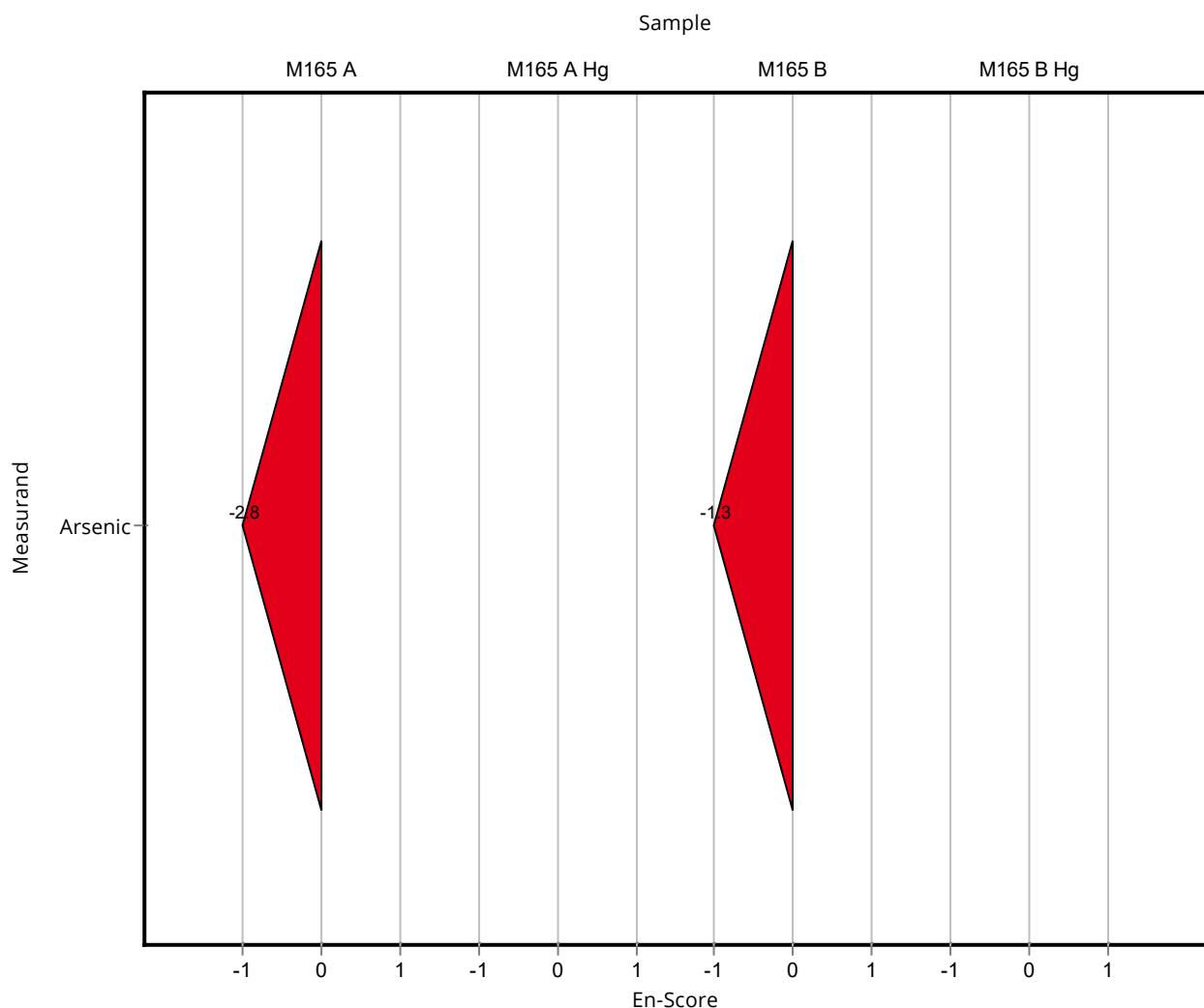
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	- ± -	8.04	-	-
Arsenic	µg/l	29.8 ± 1.13	25.5 ± 1.6	3.88	85.5	-1.27
Cadmium	µg/l	12.9 ± 0.534	- ± -	1.29	-	-
Chromium	µg/l	59.1 ± 1.42	- ± -	5.03	-	-
Copper	µg/l	10.7 ± 0.28	- ± -	0.963	-	-
Iron	µg/l	30.3 ± 1.28	- ± -	3.33	-	-

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	- ± -	0.968	-	-
Manganese	µg/l	7.91 ± 0.339	- ± -	0.632	-	-
Nickel	µg/l	26.1 ± 0.637	- ± -	3.13	-	-
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	- ± -	21.1	-	-

Sample: M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	326 ± 29	47.7	102	0.17
Arsenic	µg/l	5.86 ± 0.245	5.74 ± 0.69	0.761	98	-0.15
Cadmium	µg/l	1.64 ± 0.0718	1.61 ± 0.29	0.164	98	-0.20
Chromium	µg/l	13.2 ± 0.432	12.8 ± 1.4	1.12	96.9	-0.36
Copper	µg/l	12.5 ± 0.473	11.1 ± 1.7	1.13	88.6	-1.26
Iron	µg/l	118 ± 3.21	116 ± 10	13	98.4	-0.15
Lead	µg/l	2.14 ± 0.0665	2.21 ± 0.22	0.32	104	0.23
Manganese	µg/l	33.8 ± 1.02	33 ± 3.6	2.43	97.6	-0.33
Nickel	µg/l	4.42 ± 0.275	4.47 ± 0.8	0.53	101	0.10
Selenium	µg/l	13.9 ± 0.565	15.1 ± 1.7	1.67	109	0.72
Uranium	µg/l	3.6 ± 0.318	3.71 ± 3.71	0.54	103	0.20
Zinc	µg/l	168 ± 4.7	- ± -	15.1	-	-

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	3.86 ± 0.69	0.522	104	0.25

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	- ± -	8.04	-	-
Arsenic	µg/l	29.8 ± 1.13	- ± -	3.88	-	-
Cadmium	µg/l	12.9 ± 0.534	- ± -	1.29	-	-
Chromium	µg/l	59.1 ± 1.42	- ± -	5.03	-	-
Copper	µg/l	10.7 ± 0.28	- ± -	0.963	-	-

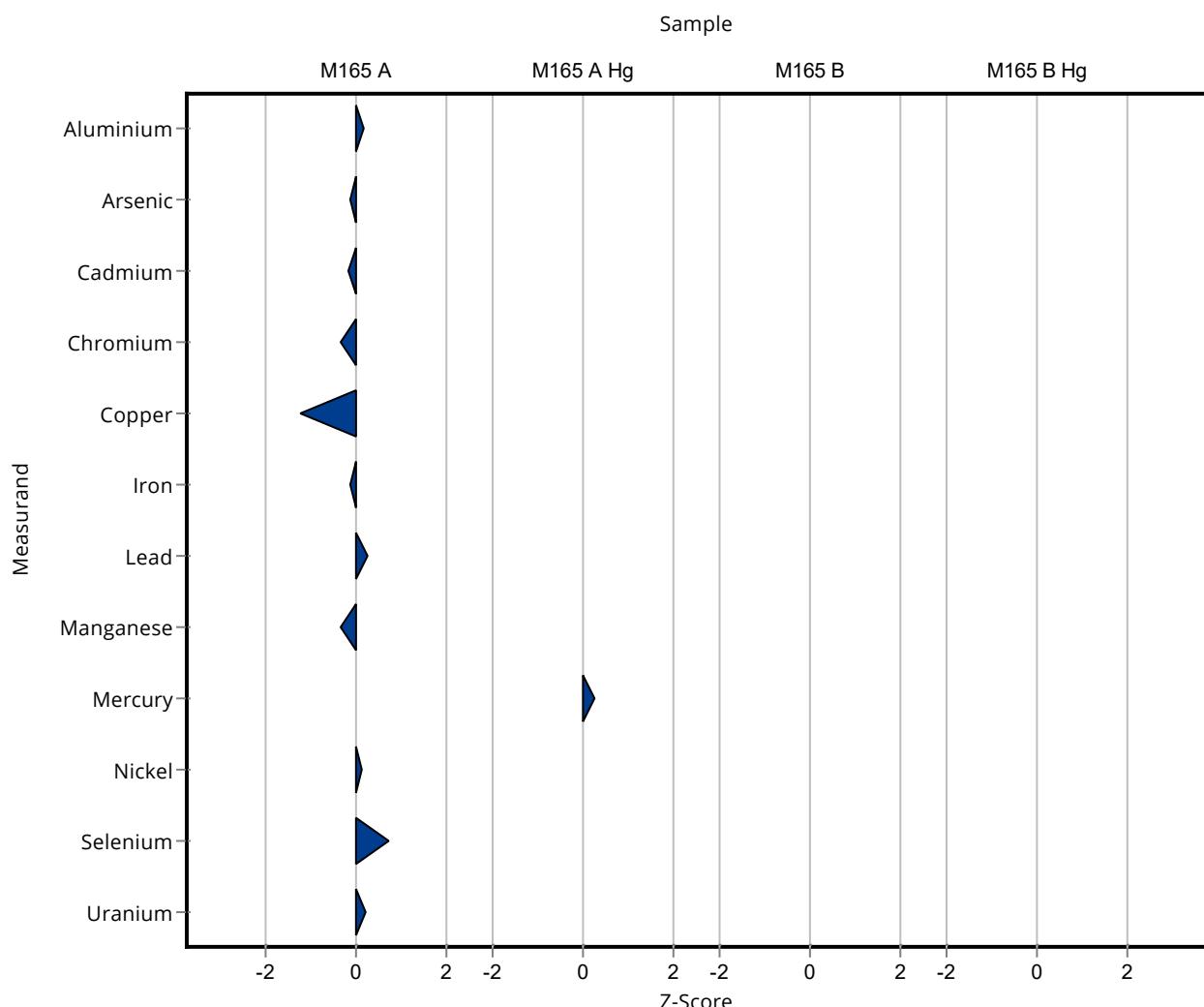
Summary of results Metals and trace elements M165

Labcode: LC0006

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	- ± -	3.33	-	-
Lead	µg/l	6.45 ± 0.323	- ± -	0.968	-	-
Manganese	µg/l	7.91 ± 0.339	- ± -	0.632	-	-
Nickel	µg/l	26.1 ± 0.637	- ± -	3.13	-	-
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	- ± -	21.1	-	-

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	326 ± 29	47.7	102	0.13
Arsenic	µg/l	5.86 ± 0.245	5.74 ± 0.69	0.761	98	-0.08
Cadmium	µg/l	1.64 ± 0.0718	1.61 ± 0.29	0.164	98	-0.06
Chromium	µg/l	13.2 ± 0.432	12.8 ± 1.4	1.12	96.9	-0.14
Copper	µg/l	12.5 ± 0.473	11.1 ± 1.7	1.13	88.6	-0.41
Iron	µg/l	118 ± 3.21	116 ± 10	13	98.4	-0.09
Lead	µg/l	2.14 ± 0.0665	2.21 ± 0.22	0.32	104	0.17
Manganese	µg/l	33.8 ± 1.02	33 ± 3.6	2.43	97.6	-0.11
Nickel	µg/l	4.42 ± 0.275	4.47 ± 0.8	0.53	101	0.03
Selenium	µg/l	13.9 ± 0.565	15.1 ± 1.7	1.67	109	0.35
Uranium	µg/l	3.6 ± 0.318	3.71 ± 3.71	0.54	103	0.01
Zinc	µg/l	168 ± 4.7	- ± -	15.1	-	-

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	3.86 ± 0.69	0.522	104	0.09

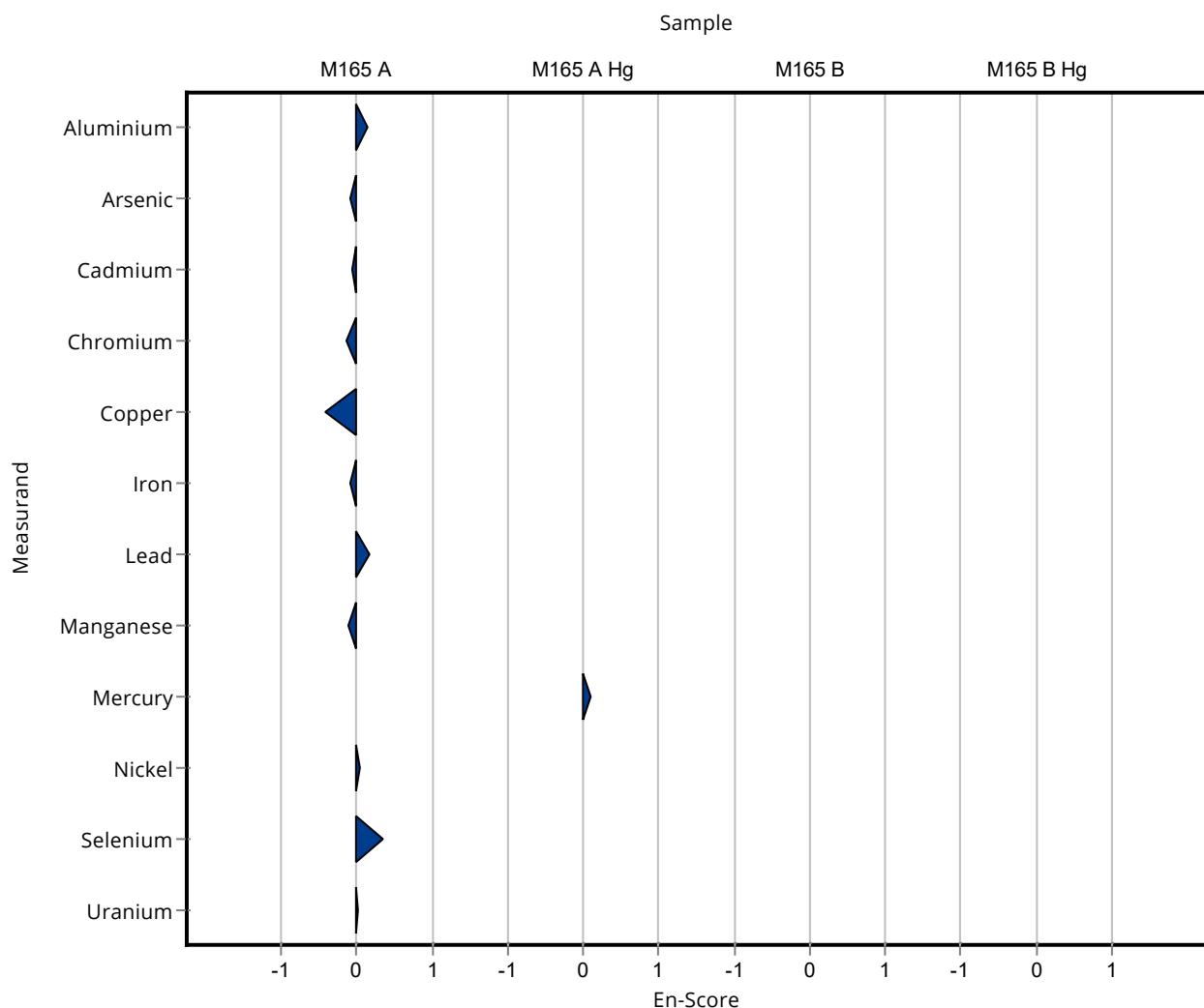
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	- ± -	8.04	-	-
Arsenic	µg/l	29.8 ± 1.13	- ± -	3.88	-	-
Cadmium	µg/l	12.9 ± 0.534	- ± -	1.29	-	-
Chromium	µg/l	59.1 ± 1.42	- ± -	5.03	-	-
Copper	µg/l	10.7 ± 0.28	- ± -	0.963	-	-
Iron	µg/l	30.3 ± 1.28	- ± -	3.33	-	-

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	- ± -	0.968	-	-
Manganese	µg/l	7.91 ± 0.339	- ± -	0.632	-	-
Nickel	µg/l	26.1 ± 0.637	- ± -	3.13	-	-
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	- ± -	21.1	-	-

Sample: M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	339 ± 50.9	47.7	107	0.44
Arsenic	µg/l	5.86 ± 0.245	6.04 ± 0.9	0.761	103	0.24
Cadmium	µg/l	1.64 ± 0.0718	2.32 ± 0.4	0.164	141	4.12
Chromium	µg/l	13.2 ± 0.432	15.1 ± 3	1.12	114	1.68
Copper	µg/l	12.5 ± 0.473	10.7 ± 2.1	1.13	85.4	-1.62
Iron	µg/l	118 ± 3.21	122 ± 18.3	13	103	0.32
Lead	µg/l	2.14 ± 0.0665	2.11 ± 0.3	0.32	98.8	-0.08
Manganese	µg/l	33.8 ± 1.02	35.2 ± 5.3	2.43	104	0.57
Nickel	µg/l	4.42 ± 0.275	3.99 ± 0.6	0.53	90.3	-0.81
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	155 ± 23.2	15.1	92.1	-0.88

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	- ± -	0.522	-	-

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	74.7 ± 11.2	8.04	139	2.63
Arsenic	µg/l	29.8 ± 1.13	33.5 ± 5.1	3.88	112	0.95
Cadmium	µg/l	12.9 ± 0.534	9.64 ± 1.5	1.29	74.5	-2.55
Chromium	µg/l	59.1 ± 1.42	62.2 ± 12.4	5.03	105	0.61
Copper	µg/l	10.7 ± 0.28	12.1 ± 2.4	0.963	113	1.46

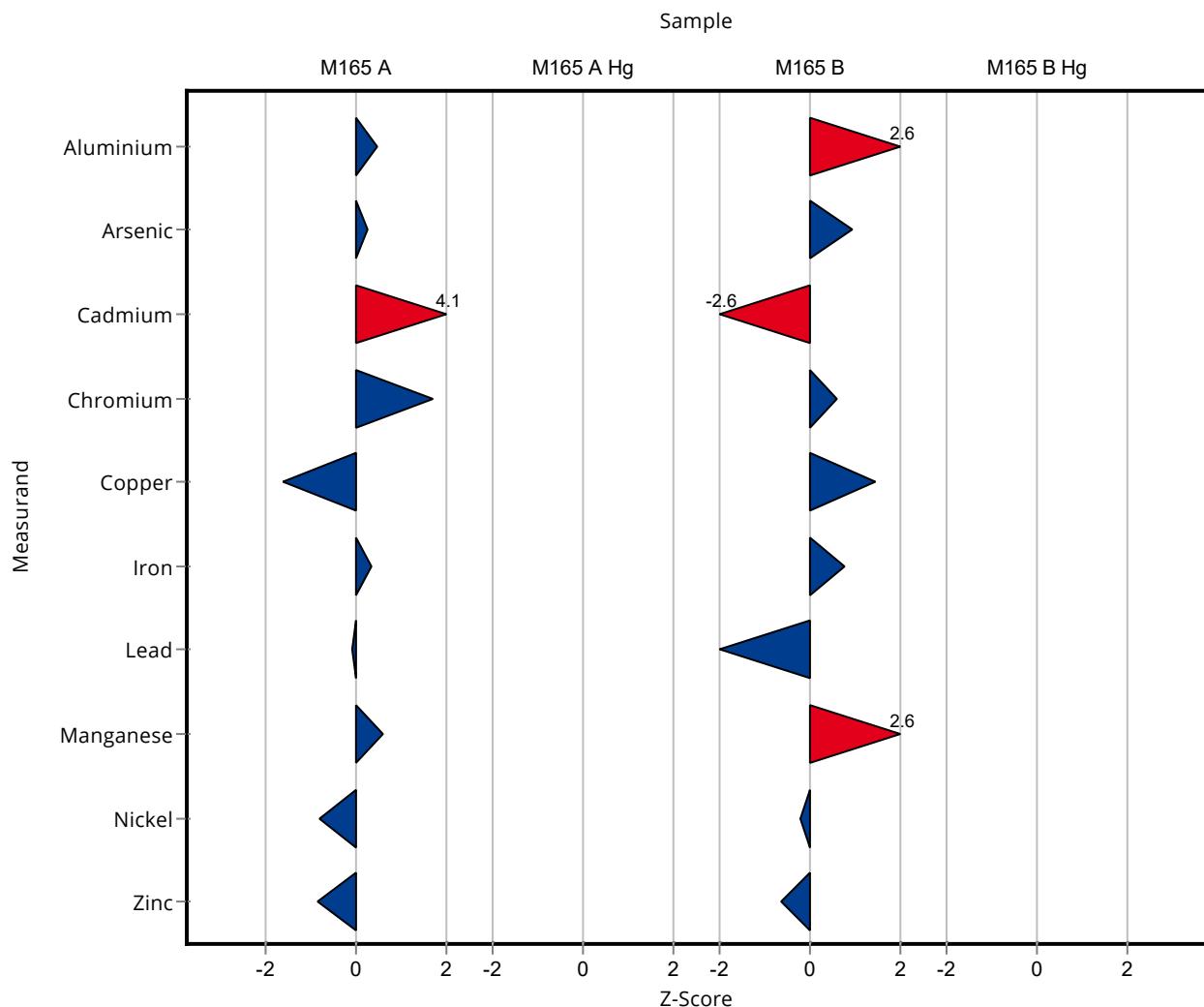
Summary of results Metals and trace elements M165

Labcode: LC0007

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	32.9 ± 4.9	3.33	109	0.78
Lead	µg/l	6.45 ± 0.323	4.53 ± 0.7	0.968	70.2	-1.99
Manganese	µg/l	7.91 ± 0.339	9.55 ± 1.4	0.632	121	2.60
Nickel	µg/l	26.1 ± 0.637	25.4 ± 3.8	3.13	97.3	-0.23
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	221 ± 33.1	21.1	94.2	-0.65

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	339 ± 50.9	47.7	107	0.20
Arsenic	µg/l	5.86 ± 0.245	6.04 ± 0.9	0.761	103	0.10
Cadmium	µg/l	1.64 ± 0.0718	2.32 ± 0.4	0.164	141	0.84
Chromium	µg/l	13.2 ± 0.432	15.1 ± 3	1.12	114	0.31
Copper	µg/l	12.5 ± 0.473	10.7 ± 2.1	1.13	85.4	-0.43
Iron	µg/l	118 ± 3.21	122 ± 18.3	13	103	0.11
Lead	µg/l	2.14 ± 0.0665	2.11 ± 0.3	0.32	98.8	-0.04
Manganese	µg/l	33.8 ± 1.02	35.2 ± 5.3	2.43	104	0.13
Nickel	µg/l	4.42 ± 0.275	3.99 ± 0.6	0.53	90.3	-0.35
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	155 ± 23.2	15.1	92.1	-0.28

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	- ± -	0.522	-	-

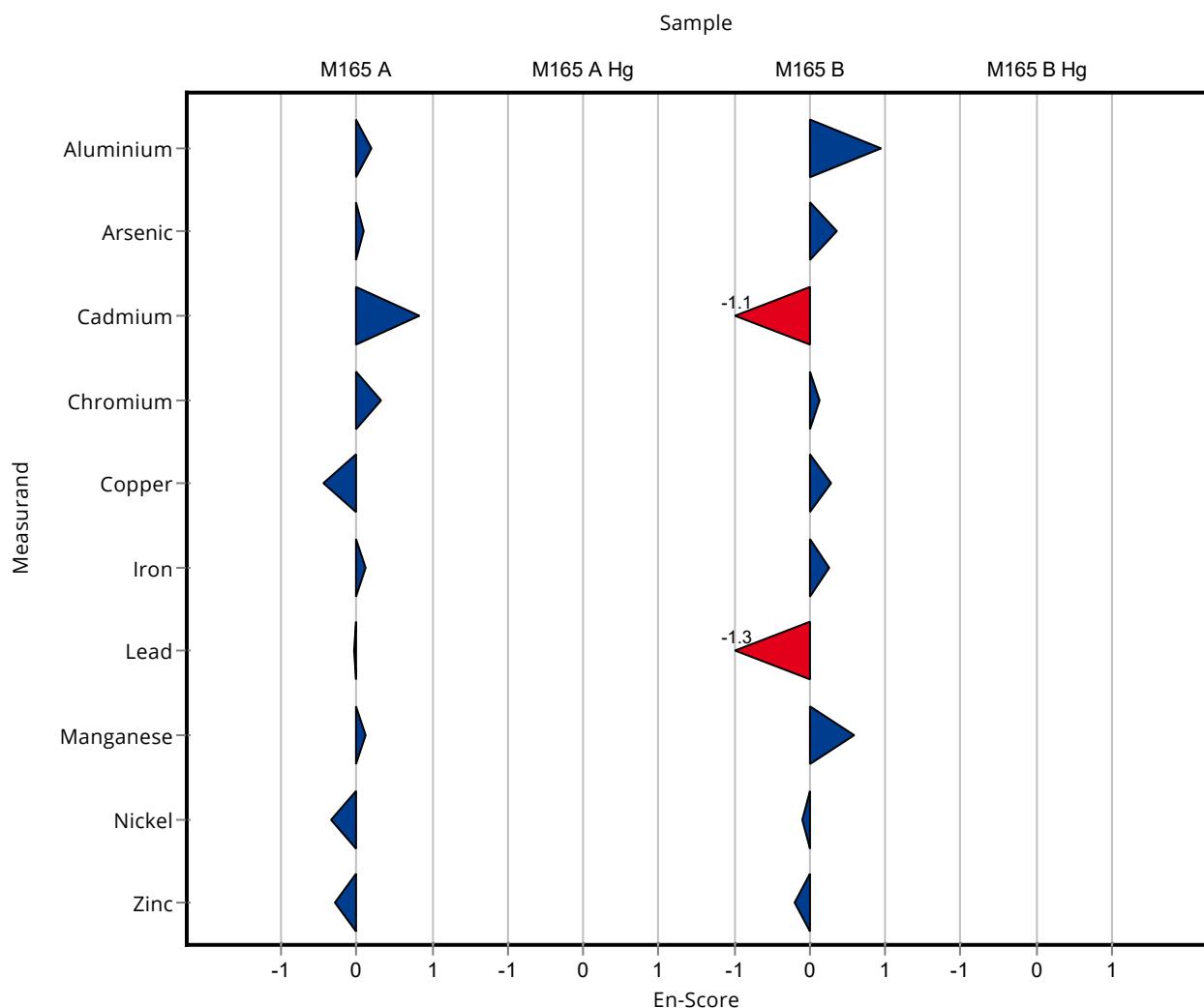
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	74.7 ± 11.2	8.04	139	0.94
Arsenic	µg/l	29.8 ± 1.13	33.5 ± 5.1	3.88	112	0.36
Cadmium	µg/l	12.9 ± 0.534	9.64 ± 1.5	1.29	74.5	-1.09
Chromium	µg/l	59.1 ± 1.42	62.2 ± 12.4	5.03	105	0.12
Copper	µg/l	10.7 ± 0.28	12.1 ± 2.4	0.963	113	0.29
Iron	µg/l	30.3 ± 1.28	32.9 ± 4.9	3.33	109	0.26

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	4.53 ± 0.7	0.968	70.2	-1.34
Manganese	µg/l	7.91 ± 0.339	9.55 ± 1.4	0.632	121	0.58
Nickel	µg/l	26.1 ± 0.637	25.4 ± 3.8	3.13	97.3	-0.09
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	221 ± 33.1	21.1	94.2	-0.21

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	335 ± 3.29	47.7	105	0.35
Arsenic	µg/l	5.86 ± 0.245	5.69 ± 0.0617	0.761	97.2	-0.22
Cadmium	µg/l	1.64 ± 0.0718	1.68 ± 0.026	0.164	102	0.22
Chromium	µg/l	13.2 ± 0.432	13.1 ± 0.616	1.12	99.2	-0.10
Copper	µg/l	12.5 ± 0.473	13.1 ± 0.478	1.13	105	0.51
Iron	µg/l	118 ± 3.21	120 ± 3.59	13	102	0.16
Lead	µg/l	2.14 ± 0.0665	2.28 ± 0.157	0.32	107	0.45
Manganese	µg/l	33.8 ± 1.02	33.4 ± 0.672	2.43	98.8	-0.17
Nickel	µg/l	4.42 ± 0.275	4.5 ± 0.136	0.53	102	0.16
Selenium	µg/l	13.9 ± 0.565	13.3 ± 0.179	1.67	95.6	-0.36
Uranium	µg/l	3.6 ± 0.318	4.06 ± 0.127	0.54	113	0.85
Zinc	µg/l	168 ± 4.7	174 ± 3.5	15.1	103	0.38

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	3.76 ± 0.0171	0.522	101	0.06

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	54.5 ± 0.846	8.04	102	0.11
Arsenic	µg/l	29.8 ± 1.13	30.7 ± 0.412	3.88	103	0.23
Cadmium	µg/l	12.9 ± 0.534	13.7 ± 0.251	1.29	106	0.58
Chromium	µg/l	59.1 ± 1.42	60.4 ± 0.537	5.03	102	0.25
Copper	µg/l	10.7 ± 0.28	11.2 ± 0.294	0.963	105	0.52

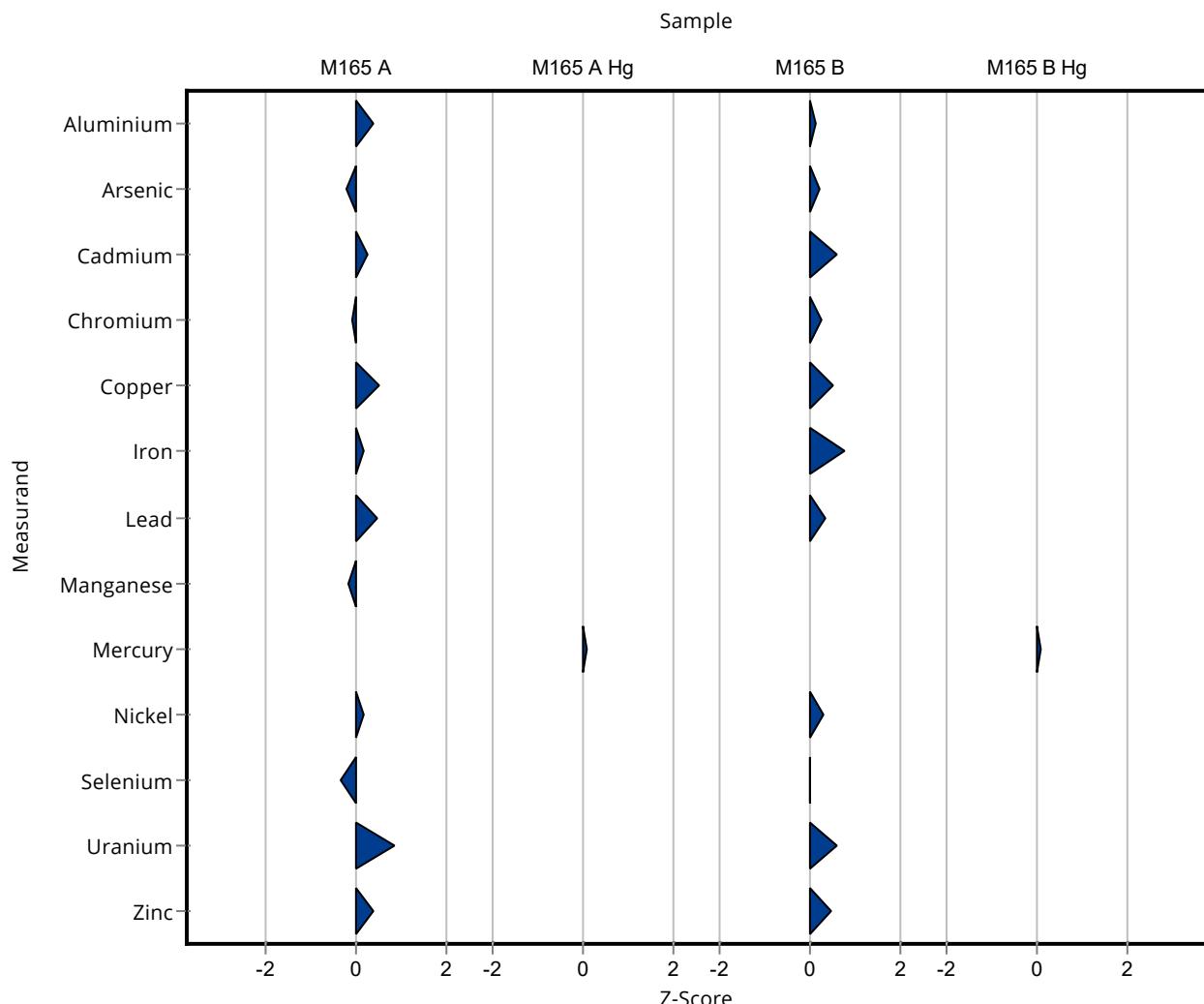
Summary of results Metals and trace elements M165

Labcode: LC0008

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	32.8 ± 0.935	3.33	108	0.75
Lead	µg/l	6.45 ± 0.323	6.78 ± 0.139	0.968	105	0.34
Manganese	µg/l	7.91 ± 0.339	<10 (LOQ) ± -	0.632	-	-
Nickel	µg/l	26.1 ± 0.637	27.1 ± 0.342	3.13	104	0.32
Selenium	µg/l	4.79 ± 0.282	4.8 ± 0.089	0.575	100	0.01
Uranium	µg/l	2.35 ± 0.139	2.5 ± 0.135	0.246	106	0.62
Zinc	µg/l	235 ± 7.06	245 ± 3.38	21.1	104	0.49

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	1.66 ± 0.00821	0.23	101	0.09



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	335 ± 3.29	47.7	105	1.52
Arsenic	µg/l	5.86 ± 0.245	5.69 ± 0.0617	0.761	97.2	-0.61
Cadmium	µg/l	1.64 ± 0.0718	1.68 ± 0.026	0.164	102	0.41
Chromium	µg/l	13.2 ± 0.432	13.1 ± 0.616	1.12	99.2	-0.08
Copper	µg/l	12.5 ± 0.473	13.1 ± 0.478	1.13	105	0.54
Iron	µg/l	118 ± 3.21	120 ± 3.59	13	102	0.27
Lead	µg/l	2.14 ± 0.0665	2.28 ± 0.157	0.32	107	0.45
Manganese	µg/l	33.8 ± 1.02	33.4 ± 0.672	2.43	98.8	-0.24
Nickel	µg/l	4.42 ± 0.275	4.5 ± 0.136	0.53	102	0.21
Selenium	µg/l	13.9 ± 0.565	13.3 ± 0.179	1.67	95.6	-0.90
Uranium	µg/l	3.6 ± 0.318	4.06 ± 0.127	0.54	113	1.13
Zinc	µg/l	168 ± 4.7	174 ± 3.5	15.1	103	0.68

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	3.76 ± 0.0171	0.522	101	0.16

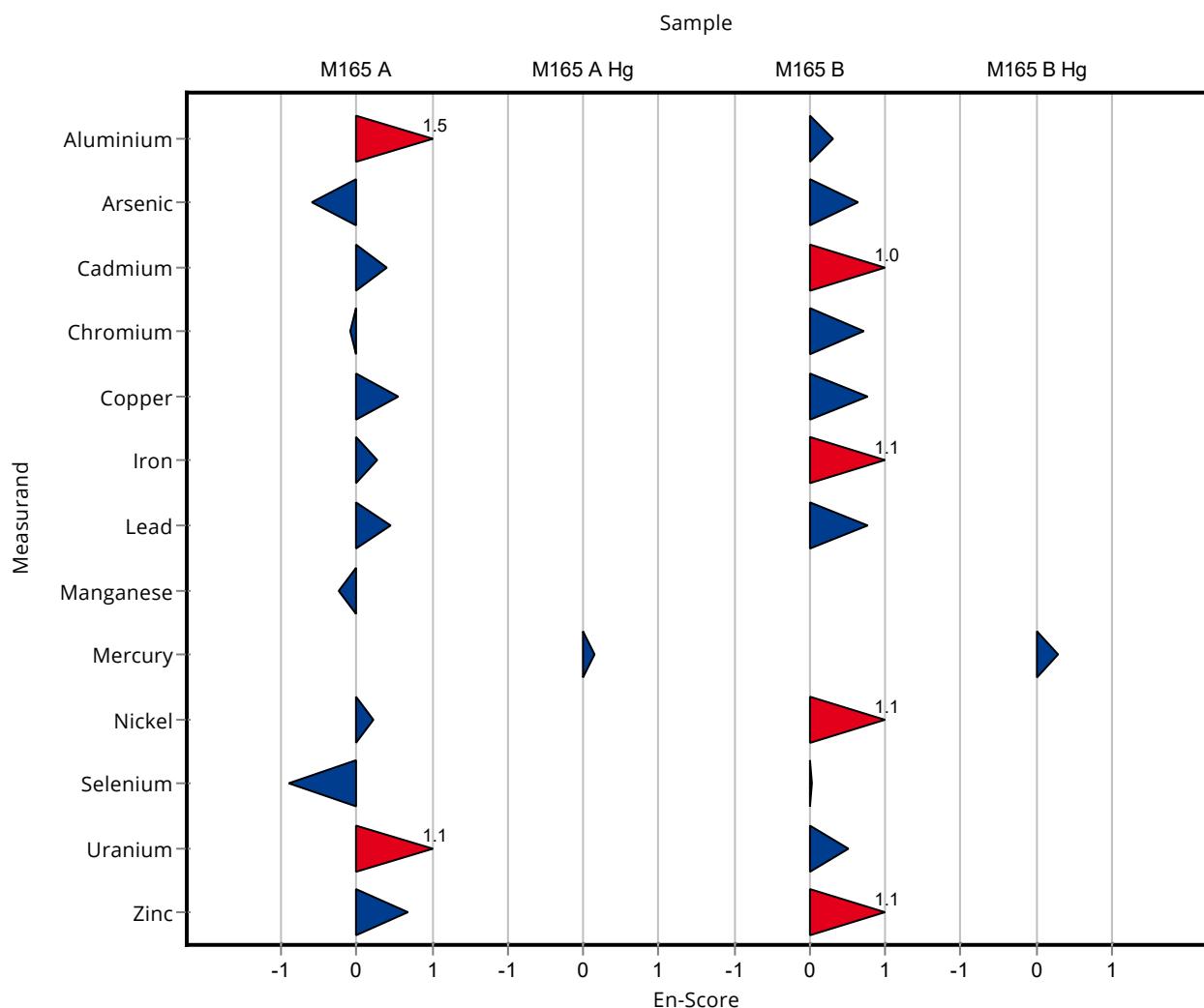
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	54.5 ± 0.846	8.04	102	0.31
Arsenic	µg/l	29.8 ± 1.13	30.7 ± 0.412	3.88	103	0.63
Cadmium	µg/l	12.9 ± 0.534	13.7 ± 0.251	1.29	106	1.03
Chromium	µg/l	59.1 ± 1.42	60.4 ± 0.537	5.03	102	0.72
Copper	µg/l	10.7 ± 0.28	11.2 ± 0.294	0.963	105	0.77
Iron	µg/l	30.3 ± 1.28	32.8 ± 0.935	3.33	108	1.10

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	6.78 ± 0.139	0.968	105	0.77
Manganese	µg/l	7.91 ± 0.339	<10 (LOQ) ± -	0.632	-	-
Nickel	µg/l	26.1 ± 0.637	27.1 ± 0.342	3.13	104	1.06
Selenium	µg/l	4.79 ± 0.282	4.8 ± 0.089	0.575	100	0.02
Uranium	µg/l	2.35 ± 0.139	2.5 ± 0.135	0.246	106	0.50
Zinc	µg/l	235 ± 7.06	245 ± 3.38	21.1	104	1.05

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	1.66 ± 0.00821	0.23	101	0.28



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	297 ± 59.4	47.7	93.4	-0.44
Arsenic	µg/l	5.86 ± 0.245	7.55 ± 1.51	0.761	129	2.22
Cadmium	µg/l	1.64 ± 0.0718	1.81 ± 0.362	0.164	110	1.01
Chromium	µg/l	13.2 ± 0.432	12.4 ± 2.48	1.12	93.9	-0.72
Copper	µg/l	12.5 ± 0.473	10.9 ± 2.18	1.13	87	-1.44
Iron	µg/l	118 ± 3.21	114 ± 22.8	13	96.7	-0.30
Lead	µg/l	2.14 ± 0.0665	1.95 ± 0.39	0.32	91.3	-0.58
Manganese	µg/l	33.8 ± 1.02	30.9 ± 6.18	2.43	91.4	-1.20
Nickel	µg/l	4.42 ± 0.275	4.4 ± 0.88	0.53	99.6	-0.03
Selenium	µg/l	13.9 ± 0.565	21.3 ± 4.26	1.67	153	4.43
Uranium	µg/l	3.6 ± 0.318	4.09 ± 0.818	0.54	114	0.91
Zinc	µg/l	168 ± 4.7	192 ± 38.4	15.1	114	1.57

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	4.44 ± 0.888	0.522	119	1.36

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	48 ± 9.6	8.04	89.6	-0.70
Arsenic	µg/l	29.8 ± 1.13	38 ± 7.6	3.88	127	2.11
Cadmium	µg/l	12.9 ± 0.534	14.2 ± 2.84	1.29	110	0.97
Chromium	µg/l	59.1 ± 1.42	57 ± 11.4	5.03	96.4	-0.42
Copper	µg/l	10.7 ± 0.28	9.67 ± 1.934	0.963	90.4	-1.07

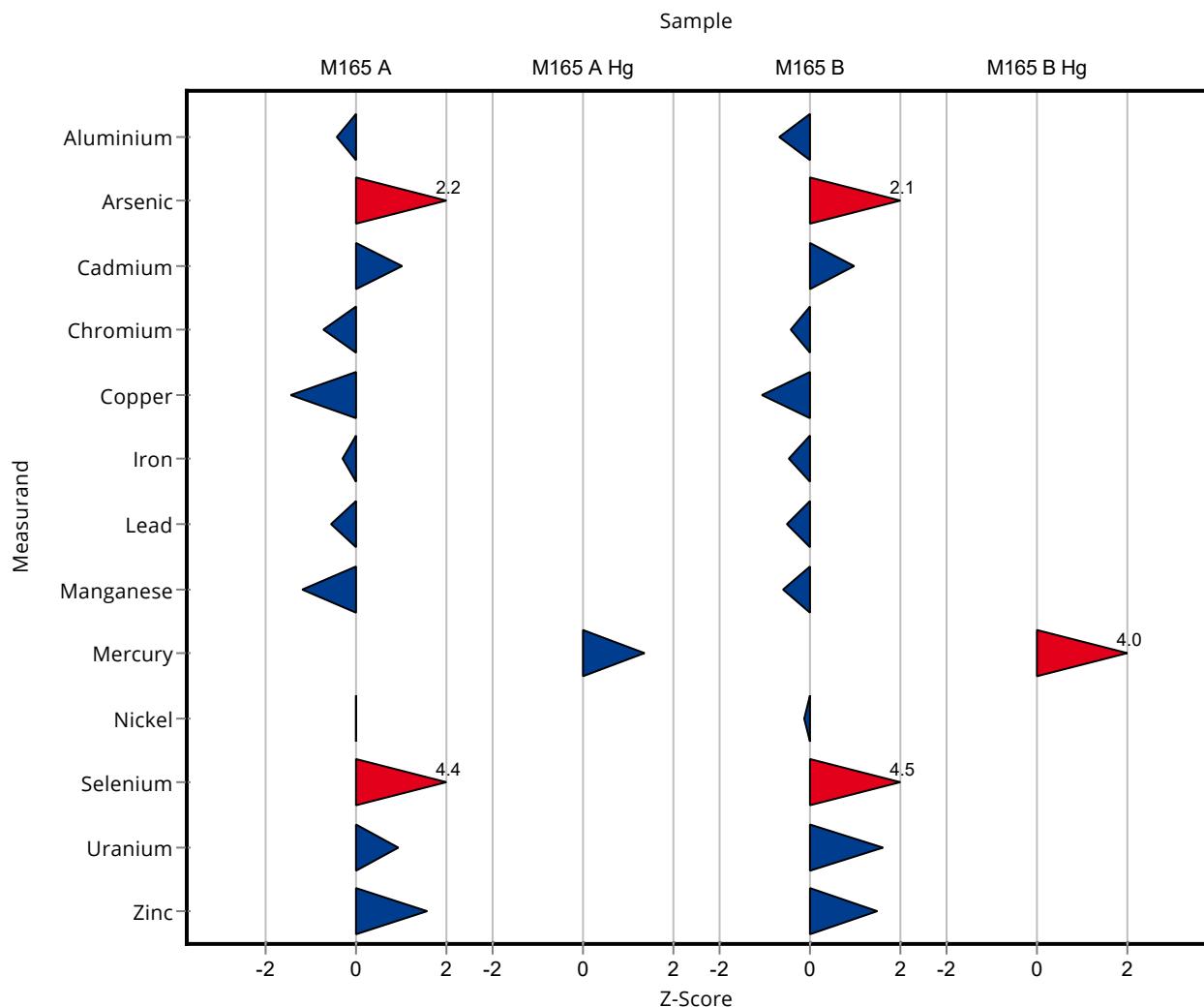
Summary of results Metals and trace elements M165

Labcode: LC0009

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	28.7 ± 5.74	3.33	94.7	-0.48
Lead	µg/l	6.45 ± 0.323	5.98 ± 1.2	0.968	92.7	-0.49
Manganese	µg/l	7.91 ± 0.339	7.52 ± 1.5	0.632	95.1	-0.61
Nickel	µg/l	26.1 ± 0.637	25.7 ± 5.14	3.13	98.4	-0.13
Selenium	µg/l	4.79 ± 0.282	7.39 ± 1.478	0.575	154	4.52
Uranium	µg/l	2.35 ± 0.139	2.75 ± 0.55	0.246	117	1.63
Zinc	µg/l	235 ± 7.06	266 ± 53.2	21.1	113	1.48

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	2.56 ± 0.512	0.23	156	4.01



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	297 ± 59.4	47.7	93.4	-0.18
Arsenic	µg/l	5.86 ± 0.245	7.55 ± 1.51	0.761	129	0.56
Cadmium	µg/l	1.64 ± 0.0718	1.81 ± 0.362	0.164	110	0.23
Chromium	µg/l	13.2 ± 0.432	12.4 ± 2.48	1.12	93.9	-0.16
Copper	µg/l	12.5 ± 0.473	10.9 ± 2.18	1.13	87	-0.37
Iron	µg/l	118 ± 3.21	114 ± 22.8	13	96.7	-0.09
Lead	µg/l	2.14 ± 0.0665	1.95 ± 0.39	0.32	91.3	-0.24
Manganese	µg/l	33.8 ± 1.02	30.9 ± 6.18	2.43	91.4	-0.23
Nickel	µg/l	4.42 ± 0.275	4.4 ± 0.88	0.53	99.6	-0.01
Selenium	µg/l	13.9 ± 0.565	21.3 ± 4.26	1.67	153	0.87
Uranium	µg/l	3.6 ± 0.318	4.09 ± 0.818	0.54	114	0.29
Zinc	µg/l	168 ± 4.7	192 ± 38.4	15.1	114	0.31

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	4.44 ± 0.888	0.522	119	0.40

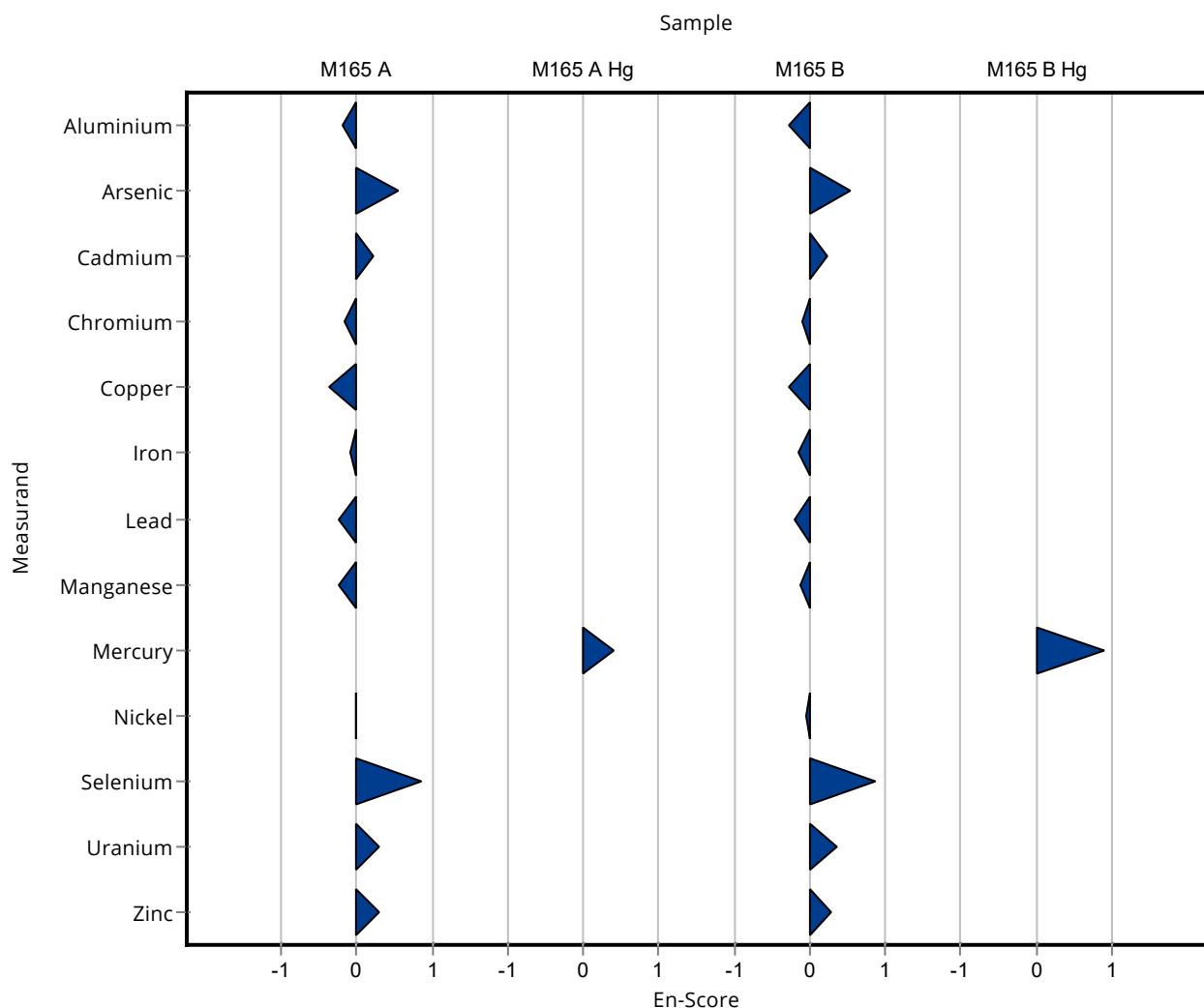
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	48 ± 9.6	8.04	89.6	-0.29
Arsenic	µg/l	29.8 ± 1.13	38 ± 7.6	3.88	127	0.54
Cadmium	µg/l	12.9 ± 0.534	14.2 ± 2.84	1.29	110	0.22
Chromium	µg/l	59.1 ± 1.42	57 ± 11.4	5.03	96.4	-0.09
Copper	µg/l	10.7 ± 0.28	9.67 ± 1.934	0.963	90.4	-0.27
Iron	µg/l	30.3 ± 1.28	28.7 ± 5.74	3.33	94.7	-0.14

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	5.98 ± 1.2	0.968	92.7	-0.19
Manganese	µg/l	7.91 ± 0.339	7.52 ± 1.5	0.632	95.1	-0.13
Nickel	µg/l	26.1 ± 0.637	25.7 ± 5.14	3.13	98.4	-0.04
Selenium	µg/l	4.79 ± 0.282	7.39 ± 1.478	0.575	154	0.88
Uranium	µg/l	2.35 ± 0.139	2.75 ± 0.55	0.246	117	0.36
Zinc	µg/l	235 ± 7.06	266 ± 53.2	21.1	113	0.29

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	2.56 ± 0.512	0.23	156	0.90



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	282 ± 40	47.7	88.6	-0.76
Arsenic	µg/l	5.86 ± 0.245	6 ± 1	0.761	102	0.19
Cadmium	µg/l	1.64 ± 0.0718	1.6 ± 0.2	0.164	97.3	-0.27
Chromium	µg/l	13.2 ± 0.432	15 ± 2	1.12	114	1.60
Copper	µg/l	12.5 ± 0.473	13 ± 2	1.13	104	0.42
Iron	µg/l	118 ± 3.21	151 ± 30	13	128	2.55
Lead	µg/l	2.14 ± 0.0665	3 ± 1	0.32	141	2.70
Manganese	µg/l	33.8 ± 1.02	38 ± 15	2.43	112	1.72
Nickel	µg/l	4.42 ± 0.275	5.5 ± 1	0.53	125	2.04
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	182 ± 20	15.1	108	0.91

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	3.79 ± 0.3	0.522	102	0.12

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	66 ± 10	8.04	123	1.54
Arsenic	µg/l	29.8 ± 1.13	31 ± 2	3.88	104	0.30
Cadmium	µg/l	12.9 ± 0.534	12 ± 0.3	1.29	92.7	-0.73
Chromium	µg/l	59.1 ± 1.42	37 ± 3	5.03	62.6	-4.40
Copper	µg/l	10.7 ± 0.28	11 ± 2	0.963	103	0.31

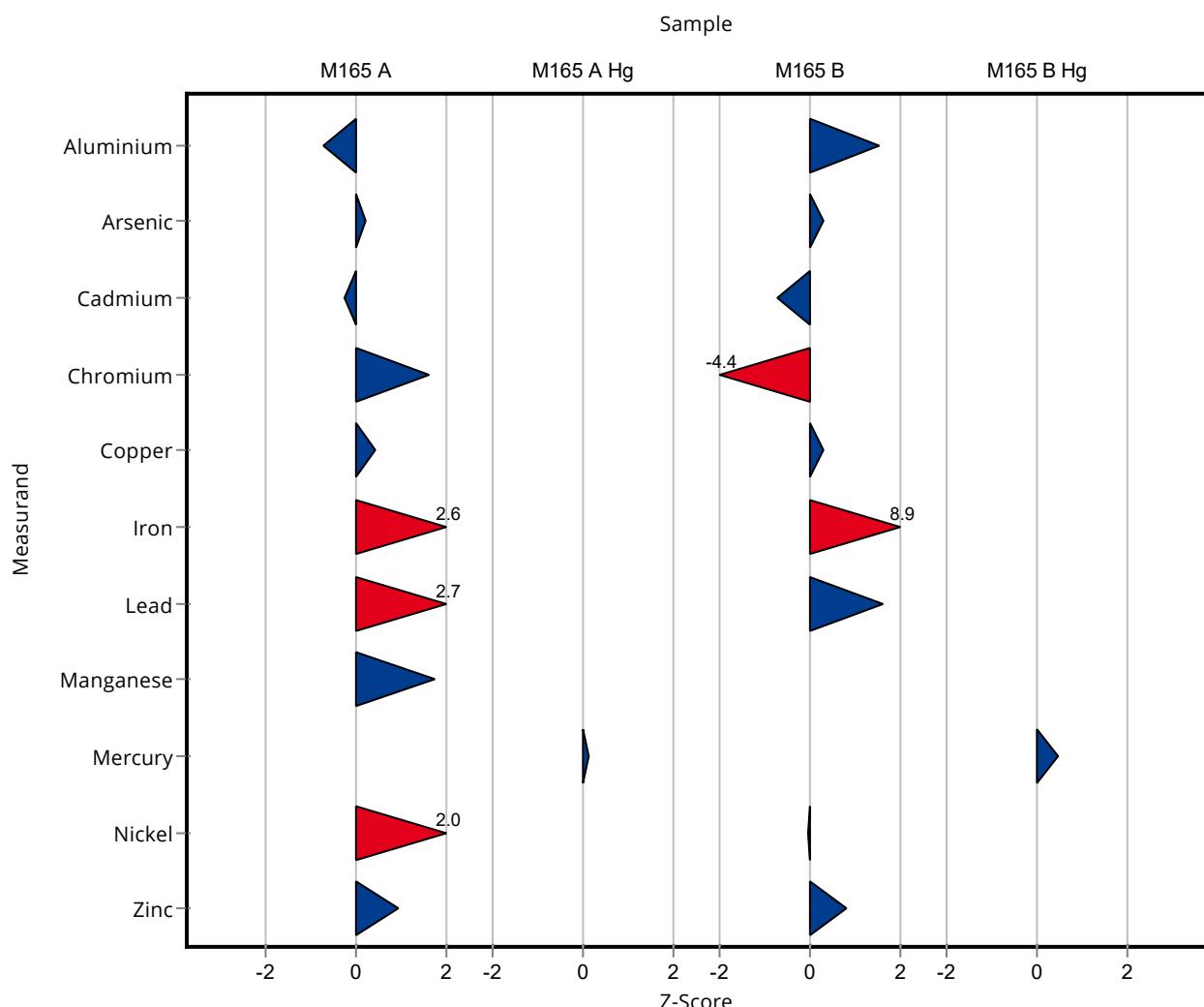
Summary of results Metals and trace elements M165

Labcode: LC0010

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	60 ± 30	3.33	198	8.91
Lead	µg/l	6.45 ± 0.323	8 ± 1	0.968	124	1.60
Manganese	µg/l	7.91 ± 0.339	<20 (LOQ) ± -	0.632	-	-
Nickel	µg/l	26.1 ± 0.637	26 ± 2	3.13	99.6	-0.04
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	252 ± 30	21.1	107	0.82

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	1.75 ± 0.2	0.23	107	0.48



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	282 ± 40	47.7	88.6	-0.45
Arsenic	µg/l	5.86 ± 0.245	6 ± 1	0.761	102	0.07
Cadmium	µg/l	1.64 ± 0.0718	1.6 ± 0.2	0.164	97.3	-0.11
Chromium	µg/l	13.2 ± 0.432	15 ± 2	1.12	114	0.45
Copper	µg/l	12.5 ± 0.473	13 ± 2	1.13	104	0.12
Iron	µg/l	118 ± 3.21	151 ± 30	13	128	0.55
Lead	µg/l	2.14 ± 0.0665	3 ± 1	0.32	141	0.43
Manganese	µg/l	33.8 ± 1.02	38 ± 15	2.43	112	0.14
Nickel	µg/l	4.42 ± 0.275	5.5 ± 1	0.53	125	0.54
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	182 ± 20	15.1	108	0.34

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	3.79 ± 0.3	0.522	102	0.10

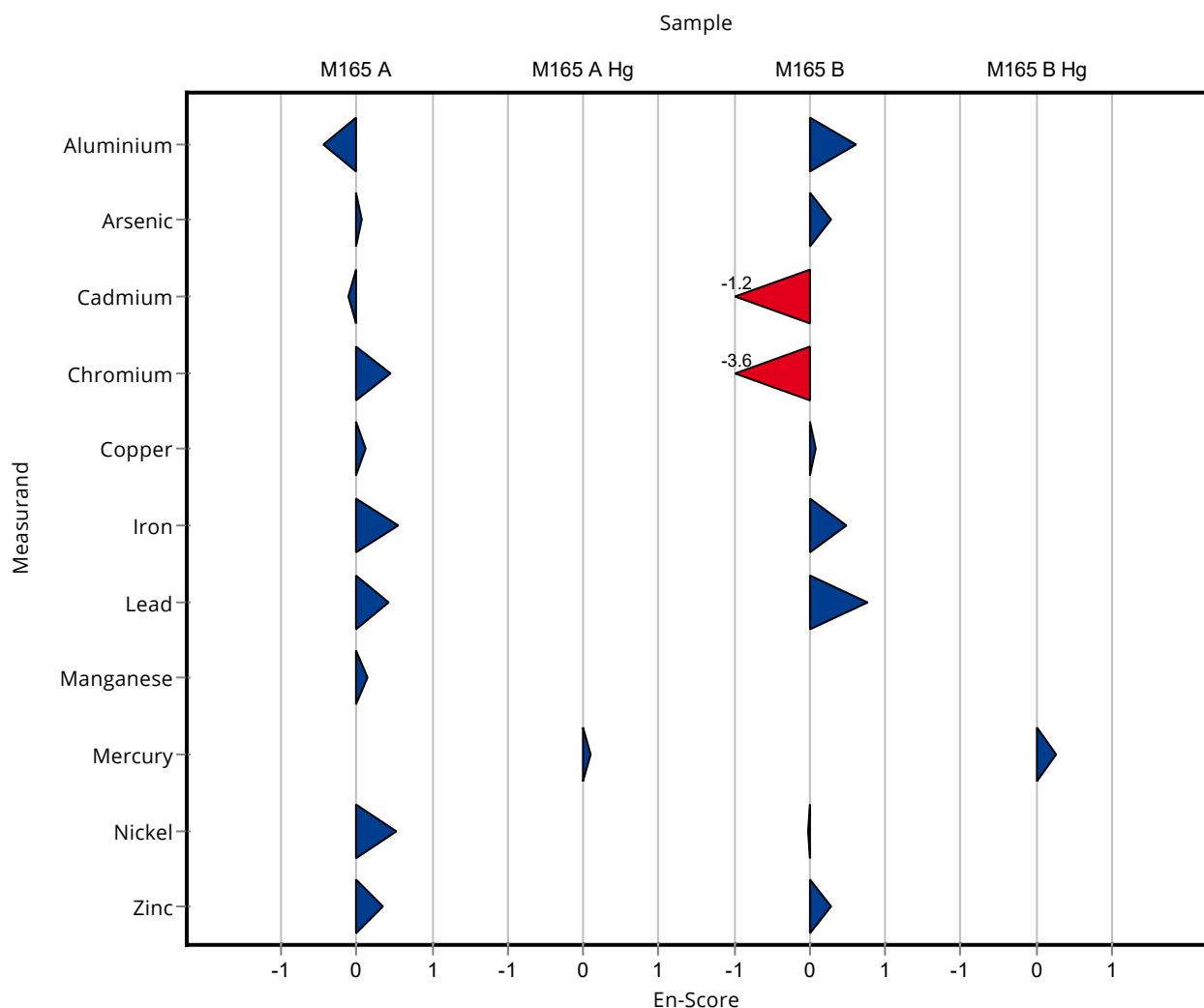
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	66 ± 10	8.04	123	0.62
Arsenic	µg/l	29.8 ± 1.13	31 ± 2	3.88	104	0.28
Cadmium	µg/l	12.9 ± 0.534	12 ± 0.3	1.29	92.7	-1.18
Chromium	µg/l	59.1 ± 1.42	37 ± 3	5.03	62.6	-3.59
Copper	µg/l	10.7 ± 0.28	11 ± 2	0.963	103	0.08
Iron	µg/l	30.3 ± 1.28	60 ± 30	3.33	198	0.49

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	8 ± 1	0.968	124	0.76
Manganese	µg/l	7.91 ± 0.339	<20 (LOQ) ± -	0.632	-	-
Nickel	µg/l	26.1 ± 0.637	26 ± 2	3.13	99.6	-0.03
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	252 ± 30	21.1	107	0.29

Sample: M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	1.75 ± 0.2	0.23	107	0.27



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	301.44 ± 54.2592	47.7	94.8	-0.35
Arsenic	µg/l	5.86 ± 0.245	3.86 ± 0.6562	0.761	65.9	-2.62
Cadmium	µg/l	1.64 ± 0.0718	<5 (LOQ) ± -	0.164	-	-
Chromium	µg/l	13.2 ± 0.432	11.46 ± 1.4898	1.12	86.8	-1.56
Copper	µg/l	12.5 ± 0.473	11.96 ± 1.794	1.13	95.5	-0.50
Iron	µg/l	118 ± 3.21	108.43 ± 15.1802	13	92	-0.73
Lead	µg/l	2.14 ± 0.0665	<5 (LOQ) ± -	0.32	-	-
Manganese	µg/l	33.8 ± 1.02	29.91 ± 4.1874	2.43	88.5	-1.60
Nickel	µg/l	4.42 ± 0.275	3.91 ± 0.782	0.53	88.5	-0.96
Selenium	µg/l	13.9 ± 0.565	13.96 ± 2.792	1.67	100	0.03
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	157.93 ± 18.9516	15.1	93.9	-0.68

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	3.08 ± 0.616	0.522	82.6	-1.24

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	<100 (LOQ) ± -	8.04	-	-
Arsenic	µg/l	29.8 ± 1.13	28.87 ± 4.9079	3.88	96.8	-0.24
Cadmium	µg/l	12.9 ± 0.534	12.34 ± 1.6042	1.29	95.3	-0.47
Chromium	µg/l	59.1 ± 1.42	55.32 ± 7.1916	5.03	93.6	-0.76
Copper	µg/l	10.7 ± 0.28	9.98 ± 1.497	0.963	93.3	-0.75

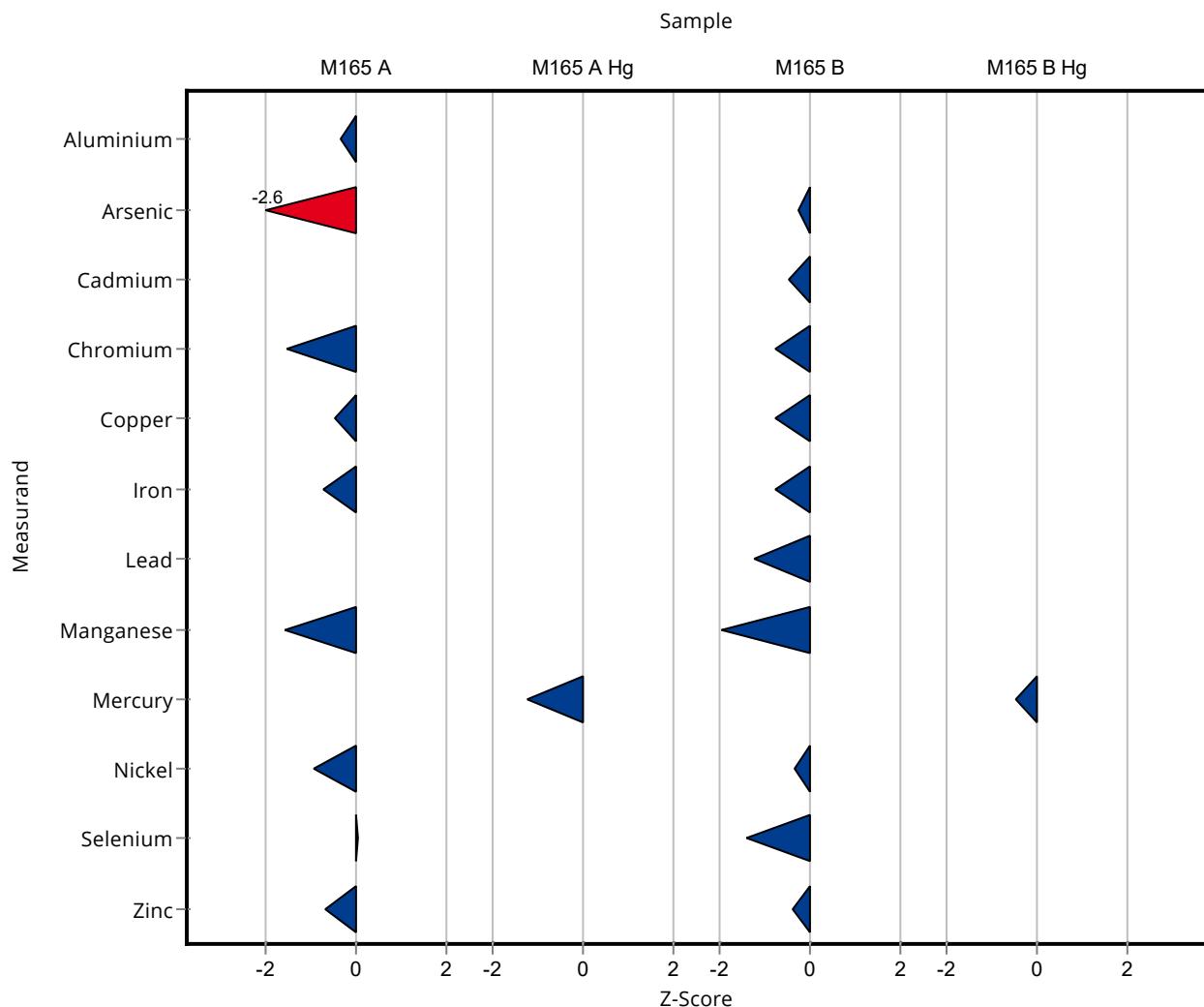
Summary of results Metals and trace elements M165

Labcode: LC0011

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	27.83 ± 3.8962	3.33	91.8	-0.74
Lead	µg/l	6.45 ± 0.323	5.28 ± 1.056	0.968	81.8	-1.21
Manganese	µg/l	7.91 ± 0.339	6.66 ± 0.9324	0.632	84.2	-1.97
Nickel	µg/l	26.1 ± 0.637	25.06 ± 5.012	3.13	96	-0.34
Selenium	µg/l	4.79 ± 0.282	3.98 ± 0.796	0.575	83.1	-1.41
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	226.73 ± 27.2076	21.1	96.6	-0.38

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	1.54 ± 0.308	0.23	93.9	-0.44



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	301.44 ± 54.2592	47.7	94.8	-0.15
Arsenic	µg/l	5.86 ± 0.245	3.86 ± 0.6562	0.761	65.9	-1.50
Cadmium	µg/l	1.64 ± 0.0718	<5 (LOQ) ± -	0.164	-	-
Chromium	µg/l	13.2 ± 0.432	11.46 ± 1.4898	1.12	86.8	-0.58
Copper	µg/l	12.5 ± 0.473	11.96 ± 1.794	1.13	95.5	-0.16
Iron	µg/l	118 ± 3.21	108.43 ± 15.1802	13	92	-0.31
Lead	µg/l	2.14 ± 0.0665	<5 (LOQ) ± -	0.32	-	-
Manganese	µg/l	33.8 ± 1.02	29.91 ± 4.1874	2.43	88.5	-0.46
Nickel	µg/l	4.42 ± 0.275	3.91 ± 0.782	0.53	88.5	-0.32
Selenium	µg/l	13.9 ± 0.565	13.96 ± 2.792	1.67	100	0.01
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	157.93 ± 18.9516	15.1	93.9	-0.27

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	3.08 ± 0.616	0.522	82.6	-0.52

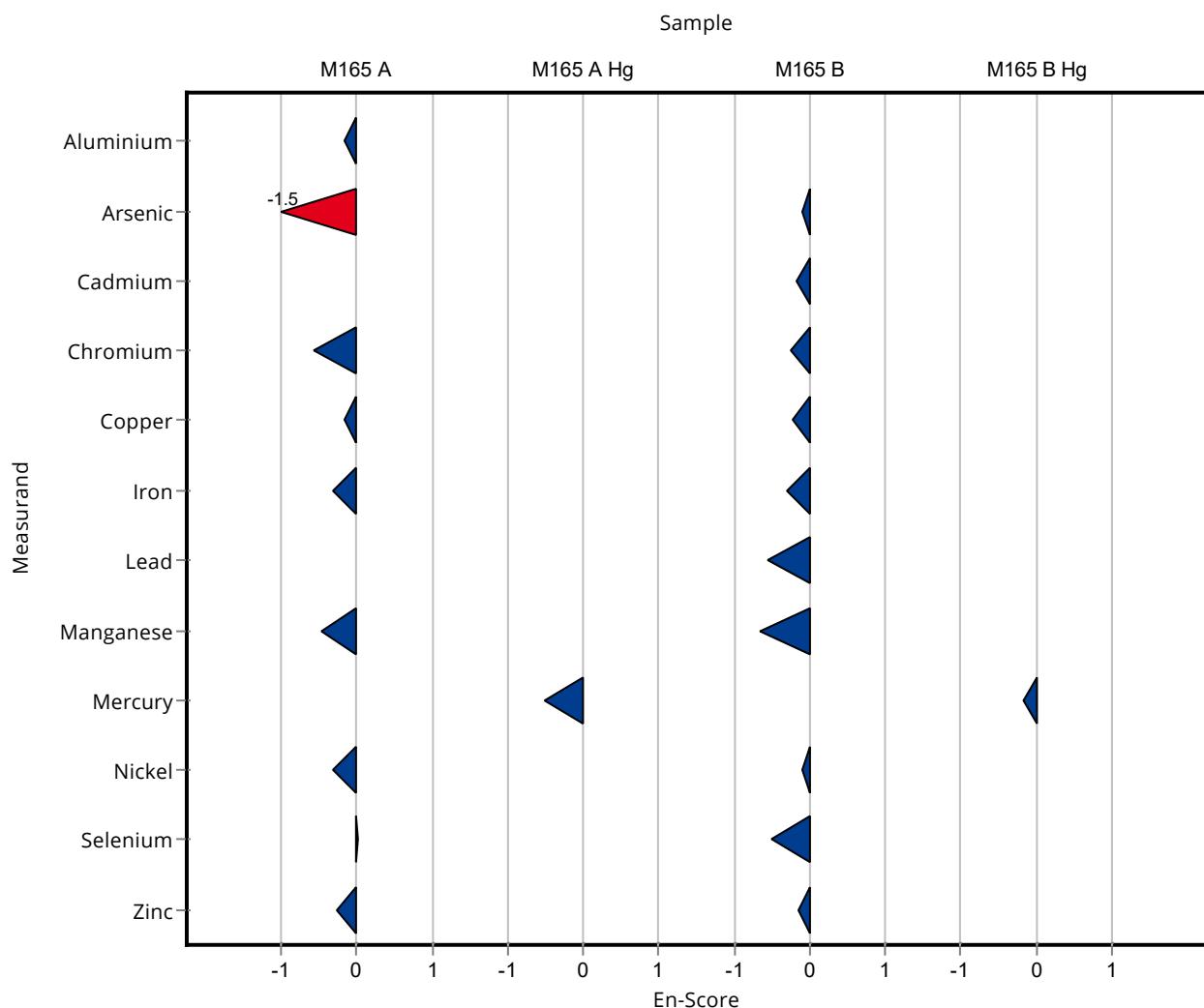
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	<100 (LOQ) ± -	8.04	-	-
Arsenic	µg/l	29.8 ± 1.13	28.87 ± 4.9079	3.88	96.8	-0.10
Cadmium	µg/l	12.9 ± 0.534	12.34 ± 1.6042	1.29	95.3	-0.19
Chromium	µg/l	59.1 ± 1.42	55.32 ± 7.1916	5.03	93.6	-0.26
Copper	µg/l	10.7 ± 0.28	9.98 ± 1.497	0.963	93.3	-0.24
Iron	µg/l	30.3 ± 1.28	27.83 ± 3.8962	3.33	91.8	-0.31

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	5.28 ± 1.056	0.968	81.8	-0.55
Manganese	µg/l	7.91 ± 0.339	6.66 ± 0.9324	0.632	84.2	-0.66
Nickel	µg/l	26.1 ± 0.637	25.06 ± 5.012	3.13	96	-0.10
Selenium	µg/l	4.79 ± 0.282	3.98 ± 0.796	0.575	83.1	-0.50
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	226.73 ± 27.2076	21.1	96.6	-0.15

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	1.54 ± 0.308	0.23	93.9	-0.16



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	337 ± 8.185	47.7	106	0.40
Arsenic	µg/l	5.86 ± 0.245	5.84 ± 0.174	0.761	99.7	-0.02
Cadmium	µg/l	1.64 ± 0.0718	1.87 ± 0.132	0.164	114	1.38
Chromium	µg/l	13.2 ± 0.432	14 ± 0.306	1.12	106	0.70
Copper	µg/l	12.5 ± 0.473	13.7 ± 0.321	1.13	109	1.05
Iron	µg/l	118 ± 3.21	118 ± 1.528	13	100	0.01
Lead	µg/l	2.14 ± 0.0665	3.12 ± 0.693	0.32	146	3.08
Manganese	µg/l	33.8 ± 1.02	36.4 ± 0.7	2.43	108	1.06
Nickel	µg/l	4.42 ± 0.275	4.71 ± 0.095	0.53	107	0.55
Selenium	µg/l	13.9 ± 0.565	13.1 ± 0.208	1.67	94.2	-0.48
Uranium	µg/l	3.6 ± 0.318	3.51 ± 0.051	0.54	97.5	-0.17
Zinc	µg/l	168 ± 4.7	175 ± 3.215	15.1	104	0.44

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	3.63 ± 0.02	0.522	97.4	-0.19

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	54.6 ± 2.042	8.04	102	0.13
Arsenic	µg/l	29.8 ± 1.13	28.9 ± 1.861	3.88	96.9	-0.24
Cadmium	µg/l	12.9 ± 0.534	13.1 ± 0.8	1.29	101	0.12
Chromium	µg/l	59.1 ± 1.42	59.2 ± 3.721	5.03	100	0.02
Copper	µg/l	10.7 ± 0.28	10.9 ± 0.737	0.963	102	0.21

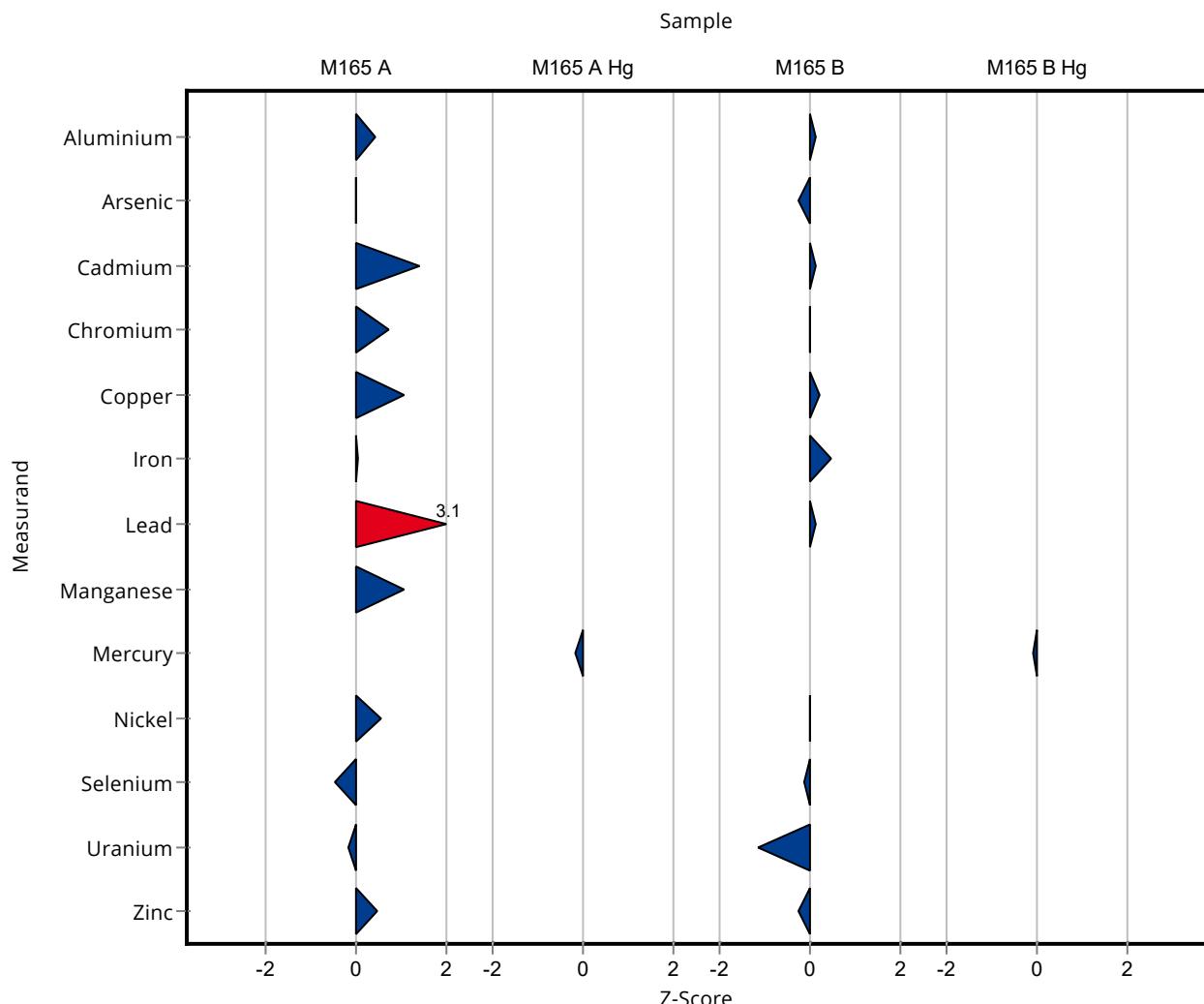
Summary of results Metals and trace elements M165

Labcode: LC0012

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	31.9 ± 0.115	3.33	105	0.48
Lead	µg/l	6.45 ± 0.323	6.56 ± 0.229	0.968	102	0.11
Manganese	µg/l	7.91 ± 0.339	<10 (LOQ) ± -	0.632	-	-
Nickel	µg/l	26.1 ± 0.637	26.1 ± 1.779	3.13	100	0.00
Selenium	µg/l	4.79 ± 0.282	4.71 ± 0.006	0.575	98.3	-0.14
Uranium	µg/l	2.35 ± 0.139	2.07 ± 0.092	0.246	88.2	-1.13
Zinc	µg/l	235 ± 7.06	229 ± 14.422	21.1	97.6	-0.27

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	1.62 ± 0.035	0.23	98.8	-0.09



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	337 ± 8.185	47.7	106	1.01
Arsenic	µg/l	5.86 ± 0.245	5.84 ± 0.174	0.761	99.7	-0.04
Cadmium	µg/l	1.64 ± 0.0718	1.87 ± 0.132	0.164	114	0.83
Chromium	µg/l	13.2 ± 0.432	14 ± 0.306	1.12	106	1.06
Copper	µg/l	12.5 ± 0.473	13.7 ± 0.321	1.13	109	1.48
Iron	µg/l	118 ± 3.21	118 ± 1.528	13	100	0.02
Lead	µg/l	2.14 ± 0.0665	3.12 ± 0.693	0.32	146	0.71
Manganese	µg/l	33.8 ± 1.02	36.4 ± 0.7	2.43	108	1.49
Nickel	µg/l	4.42 ± 0.275	4.71 ± 0.095	0.53	107	0.88
Selenium	µg/l	13.9 ± 0.565	13.1 ± 0.208	1.67	94.2	-1.15
Uranium	µg/l	3.6 ± 0.318	3.51 ± 0.051	0.54	97.5	-0.27
Zinc	µg/l	168 ± 4.7	175 ± 3.215	15.1	104	0.85

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	3.63 ± 0.02	0.522	97.4	-0.49

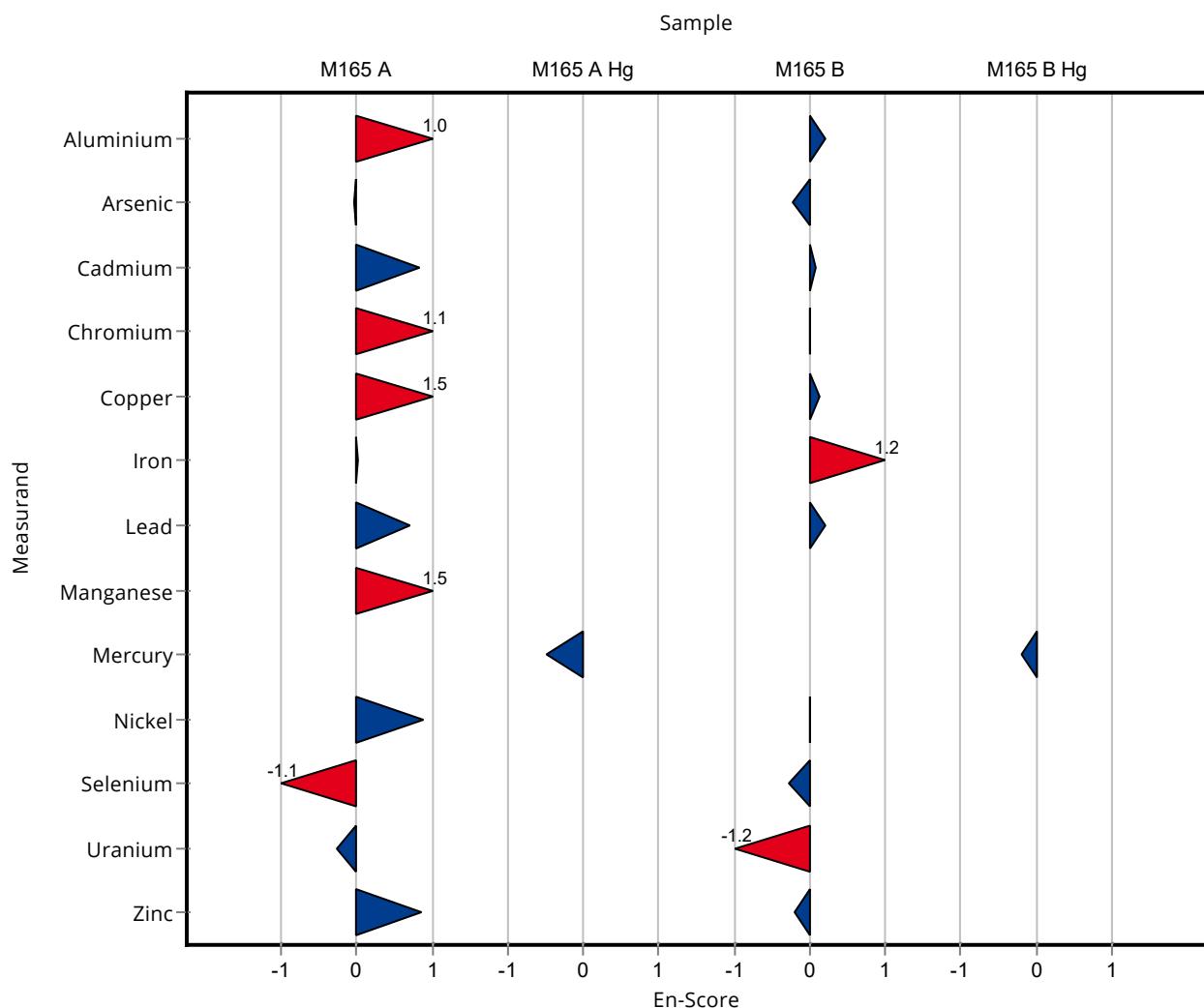
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	54.6 ± 2.042	8.04	102	0.21
Arsenic	µg/l	29.8 ± 1.13	28.9 ± 1.861	3.88	96.9	-0.24
Cadmium	µg/l	12.9 ± 0.534	13.1 ± 0.8	1.29	101	0.09
Chromium	µg/l	59.1 ± 1.42	59.2 ± 3.721	5.03	100	0.01
Copper	µg/l	10.7 ± 0.28	10.9 ± 0.737	0.963	102	0.13
Iron	µg/l	30.3 ± 1.28	31.9 ± 0.115	3.33	105	1.23

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	6.56 ± 0.229	0.968	102	0.19
Manganese	µg/l	7.91 ± 0.339	<10 (LOQ) ± -	0.632	-	-
Nickel	µg/l	26.1 ± 0.637	26.1 ± 1.779	3.13	100	0.00
Selenium	µg/l	4.79 ± 0.282	4.71 ± 0.006	0.575	98.3	-0.29
Uranium	µg/l	2.35 ± 0.139	2.07 ± 0.092	0.246	88.2	-1.20
Zinc	µg/l	235 ± 7.06	229 ± 14.422	21.1	97.6	-0.19

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	1.62 ± 0.035	0.23	98.8	-0.20



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	335 ± 33.5	47.7	105	0.35
Arsenic	µg/l	5.86 ± 0.245	- ± -	0.761	-	-
Cadmium	µg/l	1.64 ± 0.0718	- ± -	0.164	-	-
Chromium	µg/l	13.2 ± 0.432	- ± -	1.12	-	-
Copper	µg/l	12.5 ± 0.473	- ± -	1.13	-	-
Iron	µg/l	118 ± 3.21	121 ± 4.84	13	103	0.24
Lead	µg/l	2.14 ± 0.0665	- ± -	0.32	-	-
Manganese	µg/l	33.8 ± 1.02	33.4 ± 3.34	2.43	98.8	-0.17
Nickel	µg/l	4.42 ± 0.275	- ± -	0.53	-	-
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	- ± -	15.1	-	-

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	- ± -	0.522	-	-

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	55.7 ± 5.57	8.04	104	0.26
Arsenic	µg/l	29.8 ± 1.13	- ± -	3.88	-	-
Cadmium	µg/l	12.9 ± 0.534	- ± -	1.29	-	-
Chromium	µg/l	59.1 ± 1.42	- ± -	5.03	-	-
Copper	µg/l	10.7 ± 0.28	- ± -	0.963	-	-

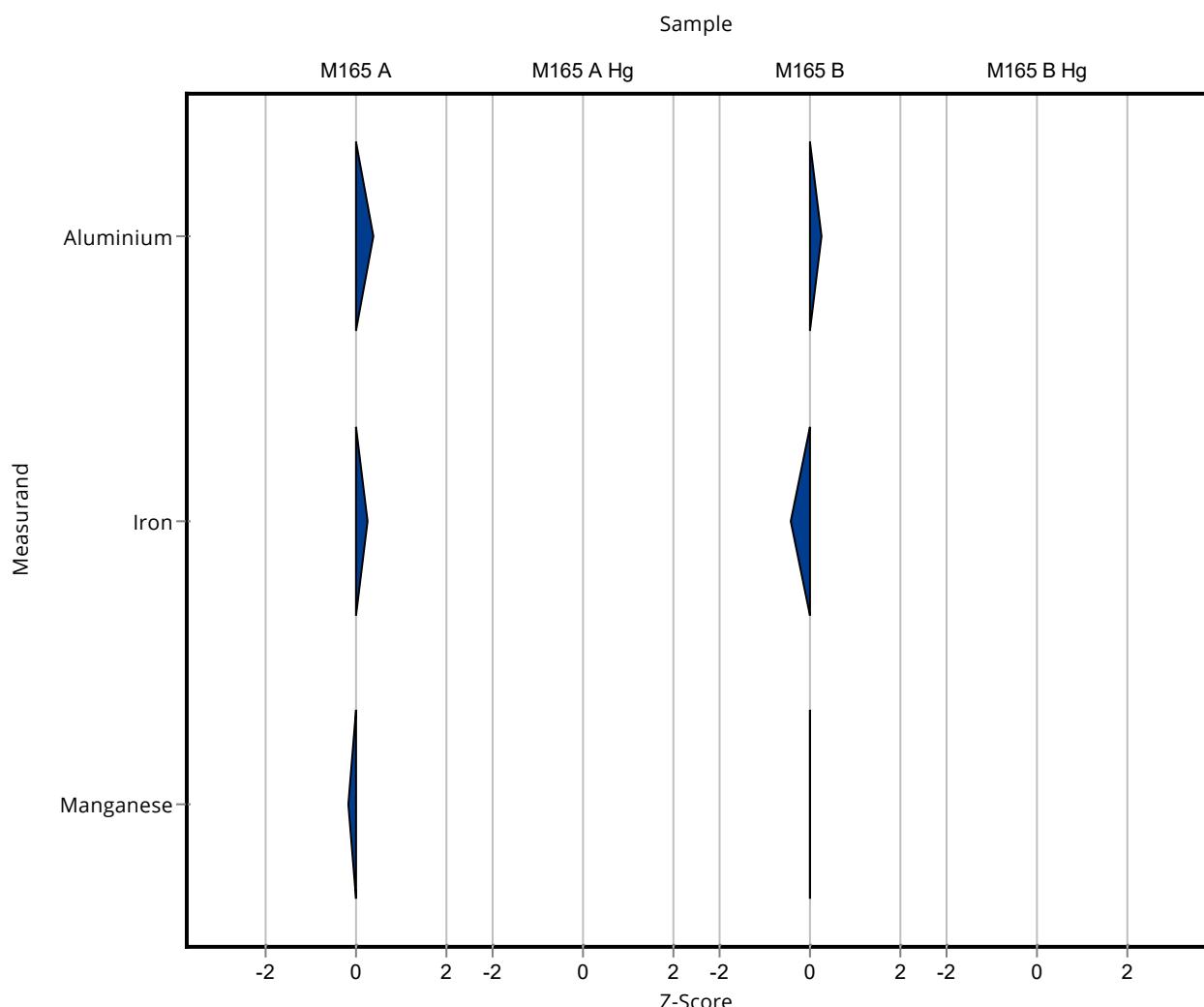
Summary of results Metals and trace elements M165

Labcode: LC0013

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	28.9 ± 1.15	3.33	95.4	-0.42
Lead	µg/l	6.45 ± 0.323	- ± -	0.968	-	-
Manganese	µg/l	7.91 ± 0.339	7.92 ± 0.792	0.632	100	0.02
Nickel	µg/l	26.1 ± 0.637	- ± -	3.13	-	-
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	- ± -	21.1	-	-

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	335 ± 33.5	47.7	105	0.25
Arsenic	µg/l	5.86 ± 0.245	- ± -	0.761	-	-
Cadmium	µg/l	1.64 ± 0.0718	- ± -	0.164	-	-
Chromium	µg/l	13.2 ± 0.432	- ± -	1.12	-	-
Copper	µg/l	12.5 ± 0.473	- ± -	1.13	-	-
Iron	µg/l	118 ± 3.21	121 ± 4.84	13	103	0.30
Lead	µg/l	2.14 ± 0.0665	- ± -	0.32	-	-
Manganese	µg/l	33.8 ± 1.02	33.4 ± 3.34	2.43	98.8	-0.06
Nickel	µg/l	4.42 ± 0.275	- ± -	0.53	-	-
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	- ± -	15.1	-	-

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	- ± -	0.522	-	-

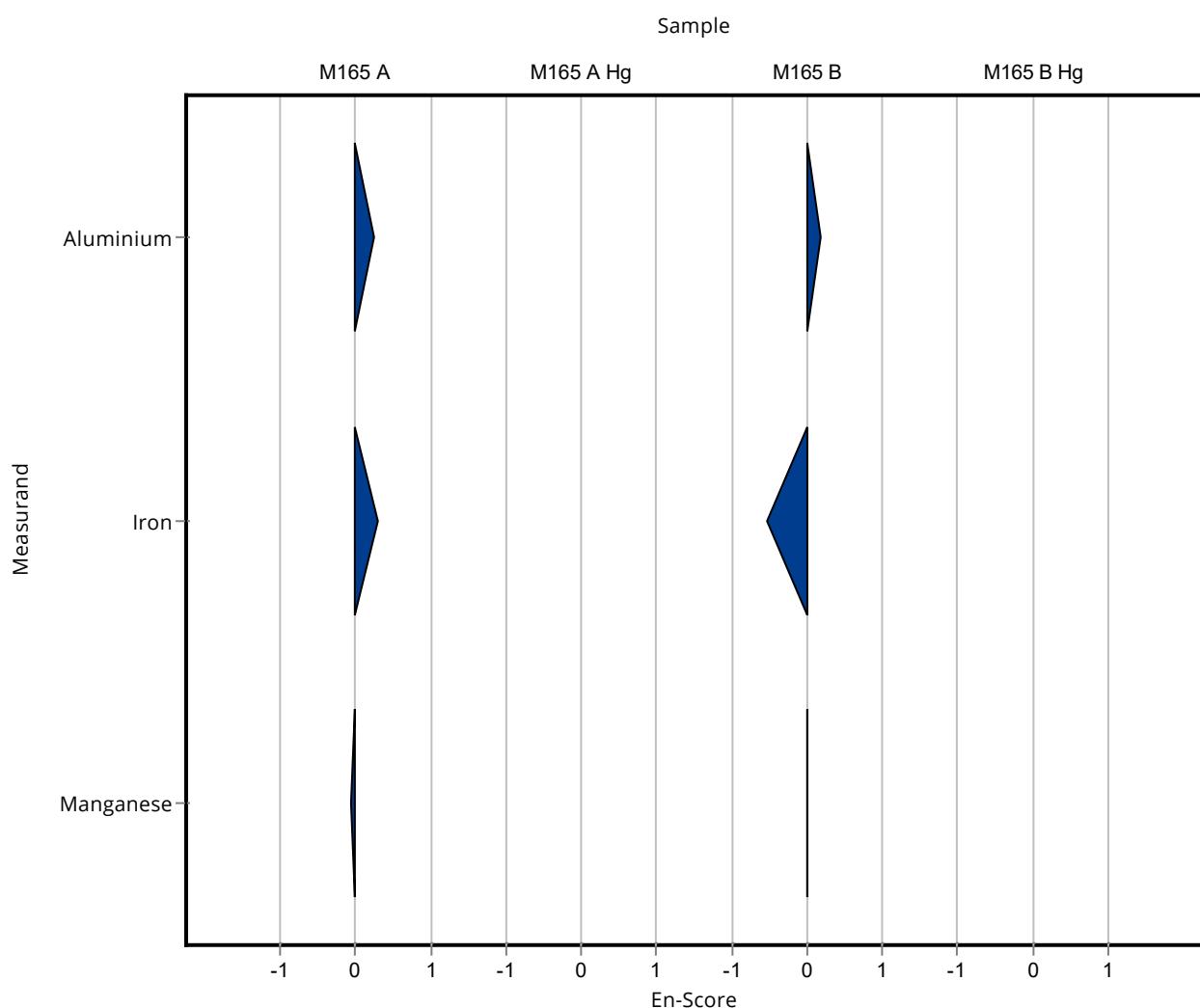
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	55.7 ± 5.57	8.04	104	0.19
Arsenic	µg/l	29.8 ± 1.13	- ± -	3.88	-	-
Cadmium	µg/l	12.9 ± 0.534	- ± -	1.29	-	-
Chromium	µg/l	59.1 ± 1.42	- ± -	5.03	-	-
Copper	µg/l	10.7 ± 0.28	- ± -	0.963	-	-
Iron	µg/l	30.3 ± 1.28	28.9 ± 1.15	3.33	95.4	-0.53

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	- ± -	0.968	-	-
Manganese	µg/l	7.91 ± 0.339	7.92 ± 0.792	0.632	100	0.01
Nickel	µg/l	26.1 ± 0.637	- ± -	3.13	-	-
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	- ± -	21.1	-	-

Sample: M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	346 ± 69	47.7	109	0.58
Arsenic	µg/l	5.86 ± 0.245	5.55 ± 0.83	0.761	94.8	-0.40
Cadmium	µg/l	1.64 ± 0.0718	1.71 ± 0.21	0.164	104	0.40
Chromium	µg/l	13.2 ± 0.432	13 ± 2	1.12	98.4	-0.19
Copper	µg/l	12.5 ± 0.473	13.2 ± 1.6	1.13	105	0.60
Iron	µg/l	118 ± 3.21	124 ± 19	13	105	0.47
Lead	µg/l	2.14 ± 0.0665	2.1 ± 0.25	0.32	98.4	-0.11
Manganese	µg/l	33.8 ± 1.02	33.7 ± 4	2.43	99.7	-0.05
Nickel	µg/l	4.42 ± 0.275	4.68 ± 0.51	0.53	106	0.50
Selenium	µg/l	13.9 ± 0.565	13.7 ± 2.1	1.67	98.5	-0.12
Uranium	µg/l	3.6 ± 0.318	3.61 ± 0.54	0.54	100	0.02
Zinc	µg/l	168 ± 4.7	159 ± 24	15.1	94.5	-0.61

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	3.41 ± 0.68	0.522	91.5	-0.61

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	58.1 ± 12	8.04	108	0.56
Arsenic	µg/l	29.8 ± 1.13	30 ± 4.5	3.88	101	0.05
Cadmium	µg/l	12.9 ± 0.534	13.7 ± 1.6	1.29	106	0.58
Chromium	µg/l	59.1 ± 1.42	58.7 ± 8.8	5.03	99.3	-0.08
Copper	µg/l	10.7 ± 0.28	11.4 ± 1.4	0.963	107	0.73

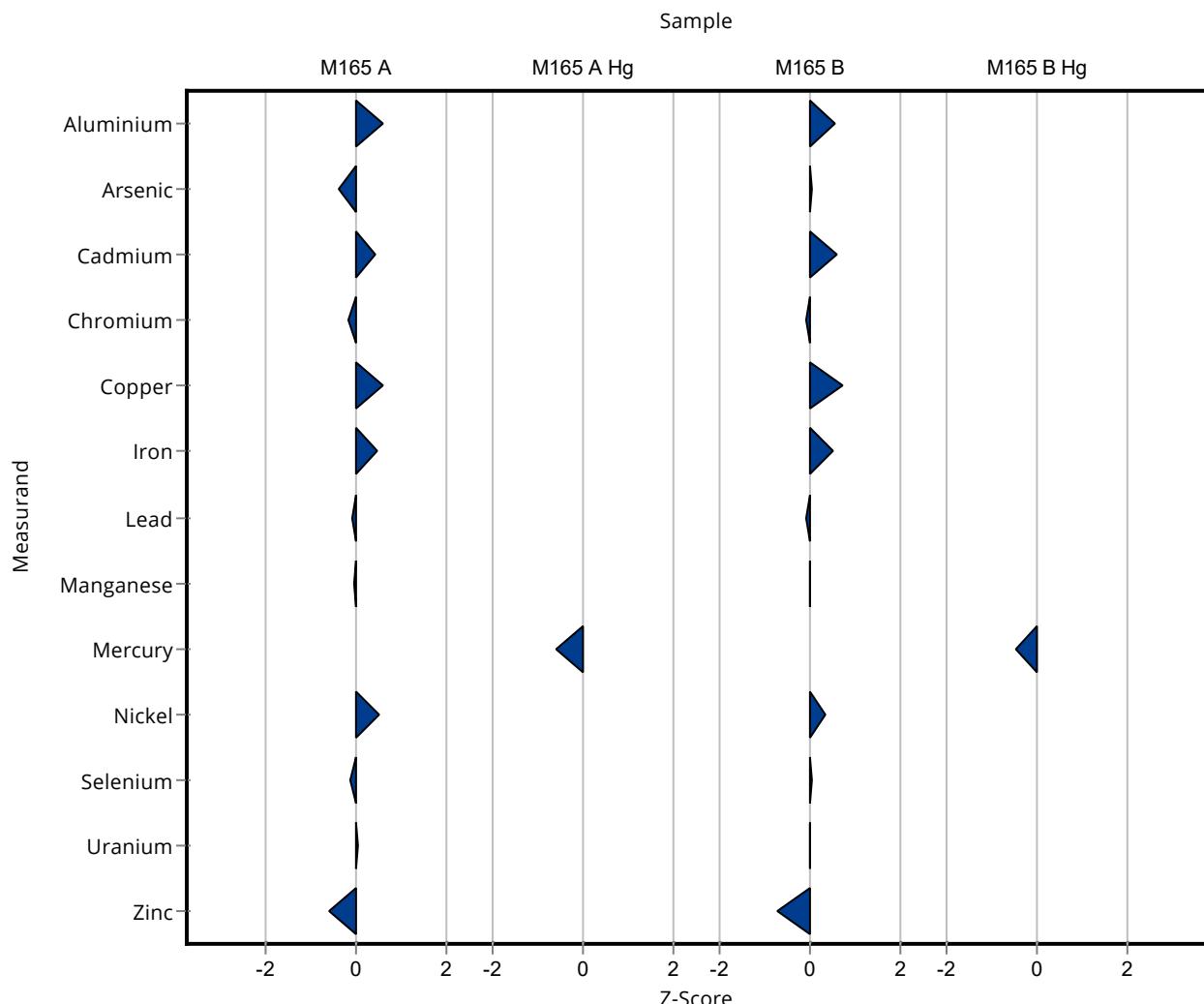
Summary of results Metals and trace elements M165

Labcode: LC0014

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	32 ± 4.8	3.33	106	0.51
Lead	µg/l	6.45 ± 0.323	6.38 ± 0.77	0.968	98.9	-0.07
Manganese	µg/l	7.91 ± 0.339	7.91 ± 0.95	0.632	100	0.01
Nickel	µg/l	26.1 ± 0.637	27.2 ± 3	3.13	104	0.35
Selenium	µg/l	4.79 ± 0.282	4.82 ± 0.72	0.575	101	0.05
Uranium	µg/l	2.35 ± 0.139	2.35 ± 0.35	0.246	100	0.01
Zinc	µg/l	235 ± 7.06	220 ± 33	21.1	93.7	-0.70

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	1.54 ± 0.31	0.23	93.9	-0.44



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	346 ± 69	47.7	109	0.20
Arsenic	µg/l	5.86 ± 0.245	5.55 ± 0.83	0.761	94.8	-0.18
Cadmium	µg/l	1.64 ± 0.0718	1.71 ± 0.21	0.164	104	0.16
Chromium	µg/l	13.2 ± 0.432	13 ± 2	1.12	98.4	-0.05
Copper	µg/l	12.5 ± 0.473	13.2 ± 1.6	1.13	105	0.21
Iron	µg/l	118 ± 3.21	124 ± 19	13	105	0.16
Lead	µg/l	2.14 ± 0.0665	2.1 ± 0.25	0.32	98.4	-0.07
Manganese	µg/l	33.8 ± 1.02	33.7 ± 4	2.43	99.7	-0.01
Nickel	µg/l	4.42 ± 0.275	4.68 ± 0.51	0.53	106	0.25
Selenium	µg/l	13.9 ± 0.565	13.7 ± 2.1	1.67	98.5	-0.05
Uranium	µg/l	3.6 ± 0.318	3.61 ± 0.54	0.54	100	0.01
Zinc	µg/l	168 ± 4.7	159 ± 24	15.1	94.5	-0.19

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	3.41 ± 0.68	0.522	91.5	-0.23

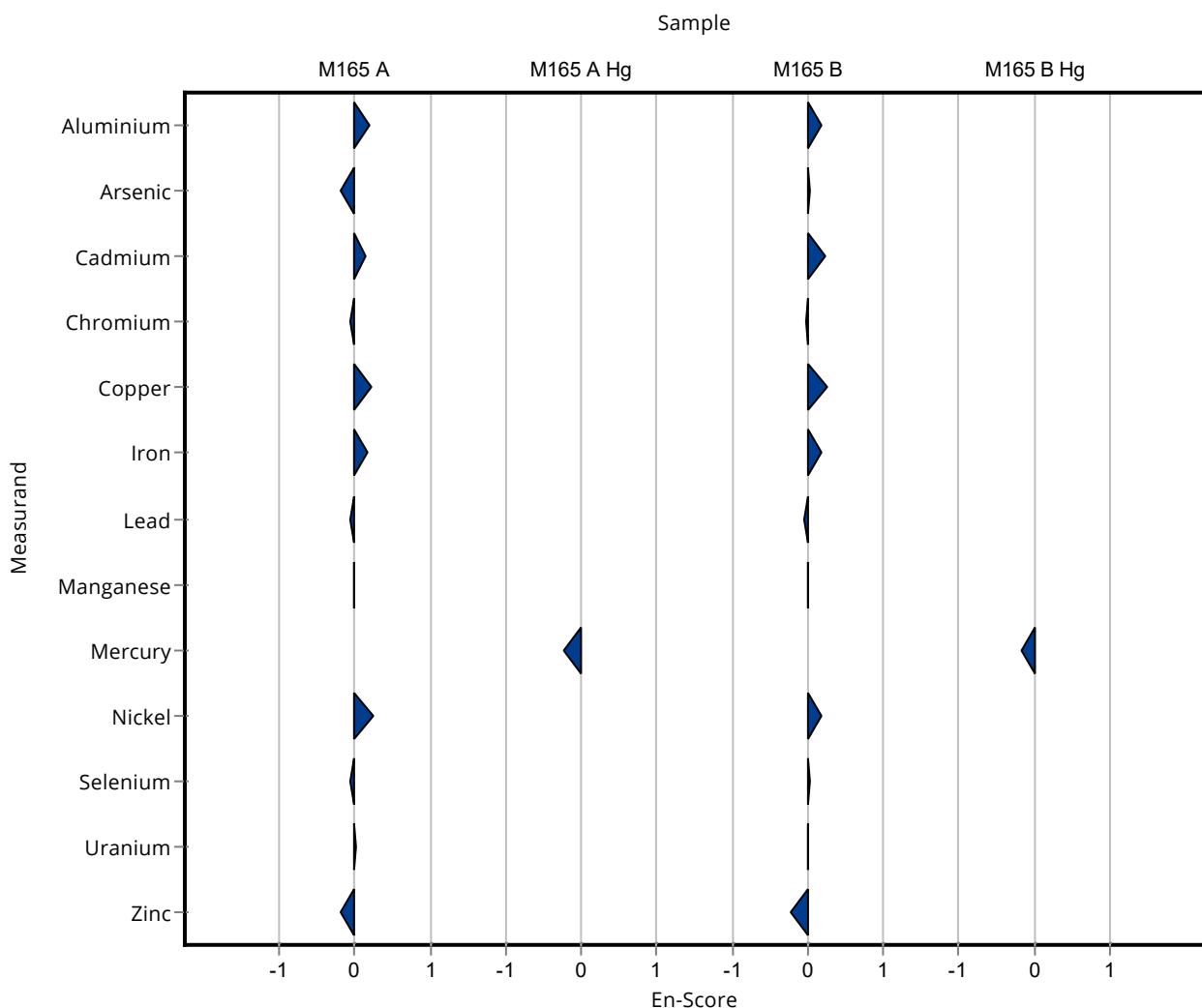
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	58.1 ± 12	8.04	108	0.19
Arsenic	µg/l	29.8 ± 1.13	30 ± 4.5	3.88	101	0.02
Cadmium	µg/l	12.9 ± 0.534	13.7 ± 1.6	1.29	106	0.23
Chromium	µg/l	59.1 ± 1.42	58.7 ± 8.8	5.03	99.3	-0.02
Copper	µg/l	10.7 ± 0.28	11.4 ± 1.4	0.963	107	0.25
Iron	µg/l	30.3 ± 1.28	32 ± 4.8	3.33	106	0.18

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	6.38 ± 0.77	0.968	98.9	-0.05
Manganese	µg/l	7.91 ± 0.339	7.91 ± 0.95	0.632	100	0.00
Nickel	µg/l	26.1 ± 0.637	27.2 ± 3	3.13	104	0.18
Selenium	µg/l	4.79 ± 0.282	4.82 ± 0.72	0.575	101	0.02
Uranium	µg/l	2.35 ± 0.139	2.35 ± 0.35	0.246	100	0.00
Zinc	µg/l	235 ± 7.06	220 ± 33	21.1	93.7	-0.22

Sample: M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	1.54 ± 0.31	0.23	93.9	-0.16



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	298.81 ± 11.71	47.7	93.9	-0.40
Arsenic	µg/l	5.86 ± 0.245	6.23 ± 0.219	0.761	106	0.49
Cadmium	µg/l	1.64 ± 0.0718	1.58 ± 0.0389	0.164	96.1	-0.39
Chromium	µg/l	13.2 ± 0.432	14.34 ± 0.708	1.12	109	1.01
Copper	µg/l	12.5 ± 0.473	13.73 ± 0.775	1.13	110	1.07
Iron	µg/l	118 ± 3.21	103.6 ± 1.674	13	87.9	-1.10
Lead	µg/l	2.14 ± 0.0665	2.09 ± 0.134	0.32	97.9	-0.14
Manganese	µg/l	33.8 ± 1.02	33.33 ± 1.765	2.43	98.6	-0.20
Nickel	µg/l	4.42 ± 0.275	5.76 ± 0.0499	0.53	130	2.53
Selenium	µg/l	13.9 ± 0.565	19.25 ± 1.1502	1.67	138	3.20
Uranium	µg/l	3.6 ± 0.318	3.72 ± 0.404	0.54	103	0.22
Zinc	µg/l	168 ± 4.7	165.78 ± 9.373	15.1	98.5	-0.16

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	- ± -	0.522	-	-

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	43.31 ± 0.704	8.04	80.8	-1.28
Arsenic	µg/l	29.8 ± 1.13	31.07 ± 0.107	3.88	104	0.32
Cadmium	µg/l	12.9 ± 0.534	13.87 ± 0.142	1.29	107	0.71
Chromium	µg/l	59.1 ± 1.42	50.57 ± 1.641	5.03	85.5	-1.70
Copper	µg/l	10.7 ± 0.28	10.25 ± 0.0589	0.963	95.8	-0.47

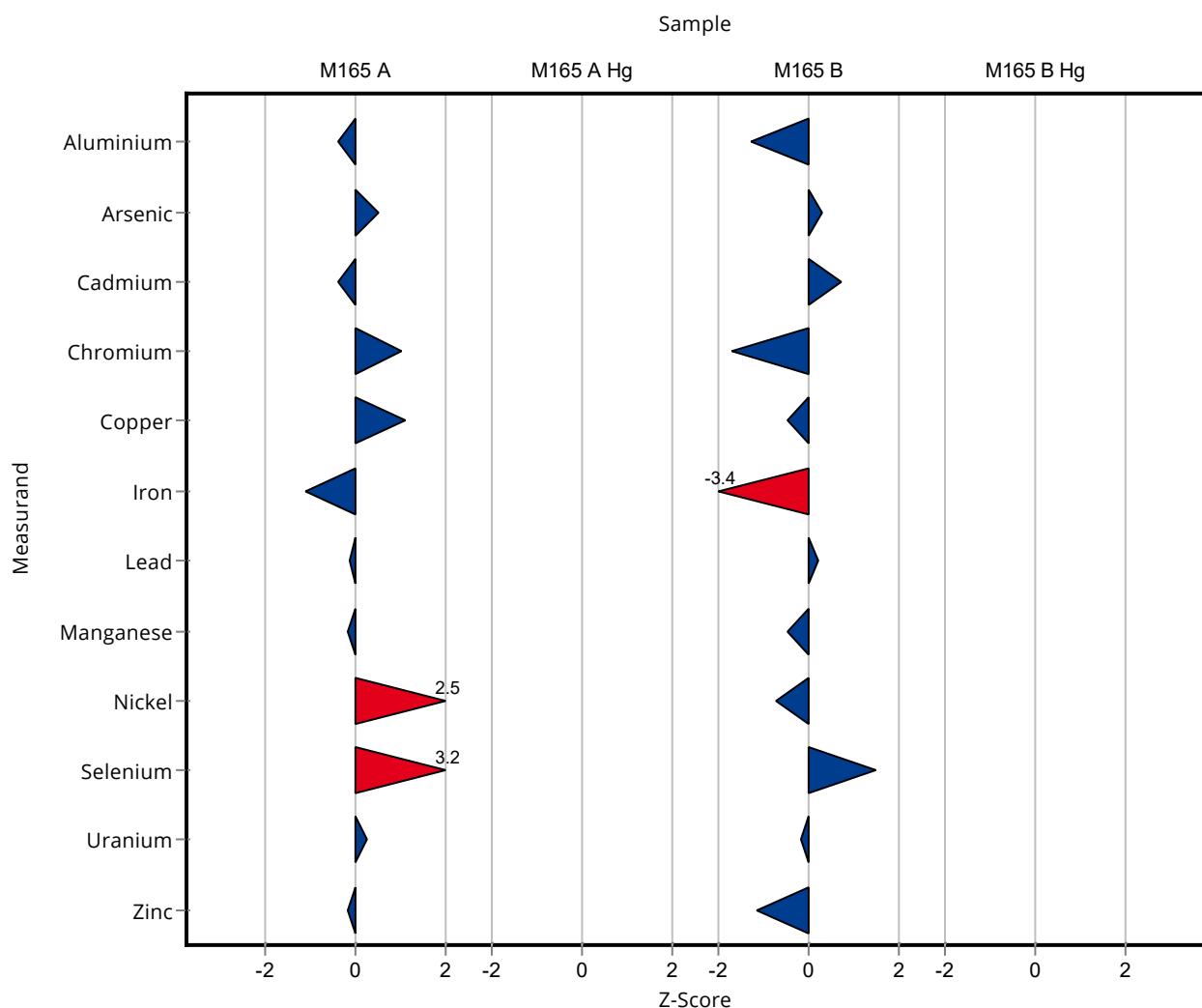
Summary of results Metals and trace elements M165

Labcode: LC0015

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	18.82 ± 0.583	3.33	62.1	-3.44
Lead	µg/l	6.45 ± 0.323	6.67 ± 0.105	0.968	103	0.23
Manganese	µg/l	7.91 ± 0.339	7.6 ± 0.226	0.632	96.1	-0.48
Nickel	µg/l	26.1 ± 0.637	23.89 ± 0.859	3.13	91.5	-0.71
Selenium	µg/l	4.79 ± 0.282	5.65 ± 0.0856	0.575	118	1.49
Uranium	µg/l	2.35 ± 0.139	2.31 ± 0.04703	0.246	98.4	-0.15
Zinc	µg/l	235 ± 7.06	210.39 ± 3.0951	21.1	89.6	-1.15

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	298.81 ± 11.71	47.7	93.9	-0.77
Arsenic	µg/l	5.86 ± 0.245	6.23 ± 0.219	0.761	106	0.74
Cadmium	µg/l	1.64 ± 0.0718	1.58 ± 0.0389	0.164	96.1	-0.60
Chromium	µg/l	13.2 ± 0.432	14.34 ± 0.708	1.12	109	0.76
Copper	µg/l	12.5 ± 0.473	13.73 ± 0.775	1.13	110	0.75
Iron	µg/l	118 ± 3.21	103.6 ± 1.674	13	87.9	-3.08
Lead	µg/l	2.14 ± 0.0665	2.09 ± 0.134	0.32	97.9	-0.16
Manganese	µg/l	33.8 ± 1.02	33.33 ± 1.765	2.43	98.6	-0.13
Nickel	µg/l	4.42 ± 0.275	5.76 ± 0.0499	0.53	130	4.59
Selenium	µg/l	13.9 ± 0.565	19.25 ± 1.1502	1.67	138	2.26
Uranium	µg/l	3.6 ± 0.318	3.72 ± 0.404	0.54	103	0.14
Zinc	µg/l	168 ± 4.7	165.78 ± 9.373	15.1	98.5	-0.13

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	- ± -	0.522	-	-

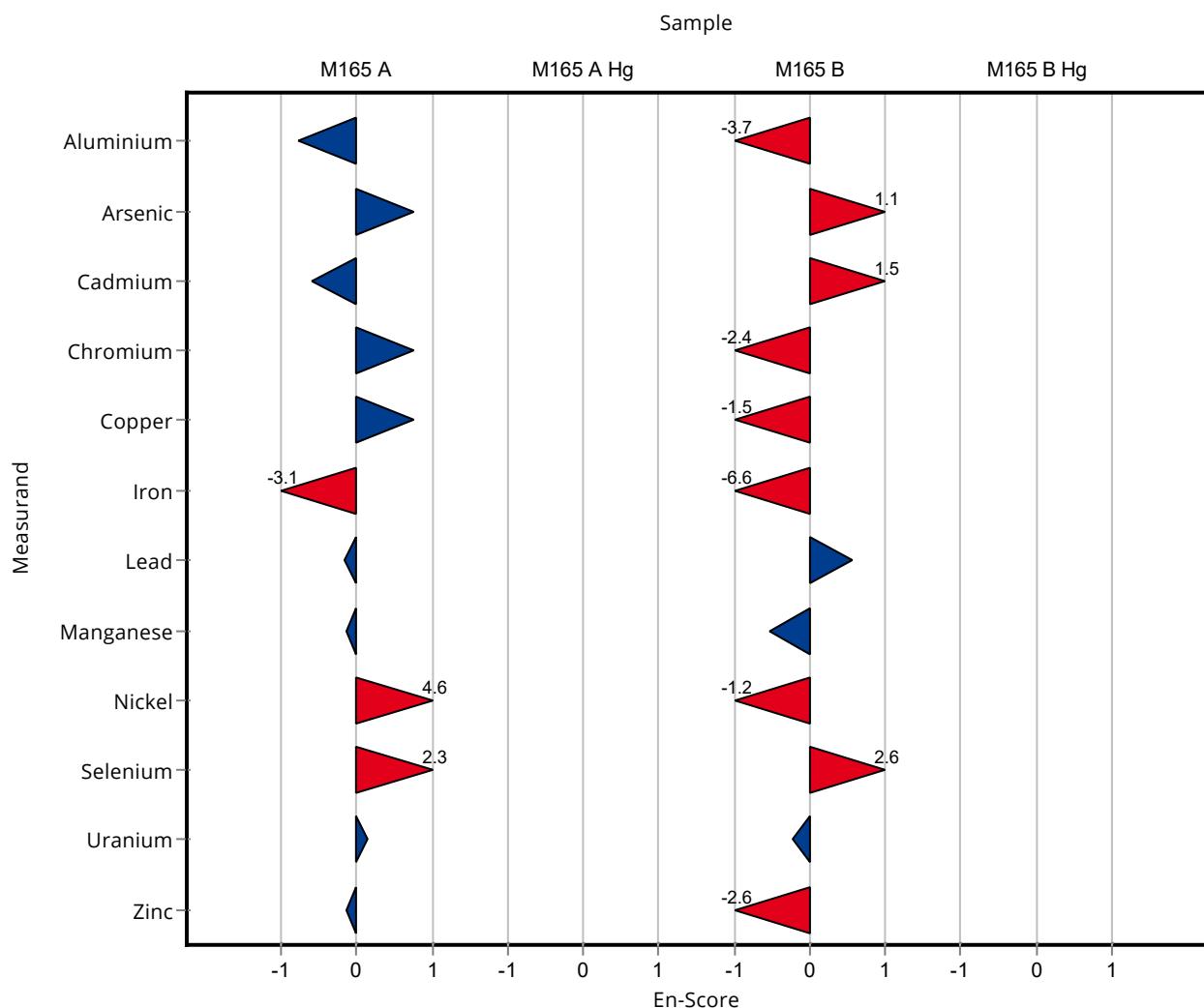
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	43.31 ± 0.704	8.04	80.8	-3.75
Arsenic	µg/l	29.8 ± 1.13	31.07 ± 0.107	3.88	104	1.09
Cadmium	µg/l	12.9 ± 0.534	13.87 ± 0.142	1.29	107	1.53
Chromium	µg/l	59.1 ± 1.42	50.57 ± 1.641	5.03	85.5	-2.39
Copper	µg/l	10.7 ± 0.28	10.25 ± 0.0589	0.963	95.8	-1.47
Iron	µg/l	30.3 ± 1.28	18.82 ± 0.583	3.33	62.1	-6.62

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	6.67 ± 0.105	0.968	103	0.57
Manganese	µg/l	7.91 ± 0.339	7.6 ± 0.226	0.632	96.1	-0.54
Nickel	µg/l	26.1 ± 0.637	23.89 ± 0.859	3.13	91.5	-1.21
Selenium	µg/l	4.79 ± 0.282	5.65 ± 0.0856	0.575	118	2.60
Uranium	µg/l	2.35 ± 0.139	2.31 ± 0.04703	0.246	98.4	-0.22
Zinc	µg/l	235 ± 7.06	210.39 ± 3.0951	21.1	89.6	-2.59

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	56 ± 5.6	47.7	17.6	-5.49
Arsenic	µg/l	5.86 ± 0.245	29 ± 3.48	0.761	495	30.40
Cadmium	µg/l	1.64 ± 0.0718	13.5 ± 1.08	0.164	821	72.14
Chromium	µg/l	13.2 ± 0.432	59.1 ± 7.09	1.12	447	40.87
Copper	µg/l	12.5 ± 0.473	11.1 ± 0.888	1.13	88.6	-1.26
Iron	µg/l	118 ± 3.21	41 ± 10.66	13	34.8	-5.93
Lead	µg/l	2.14 ± 0.0665	6.9 ± 0.552	0.32	323	14.88
Manganese	µg/l	33.8 ± 1.02	8 ± 0.8	2.43	23.7	-10.60
Nickel	µg/l	4.42 ± 0.275	27.1 ± 2.71	0.53	613	42.79
Selenium	µg/l	13.9 ± 0.565	5.1 ± 0.765	1.67	36.7	-5.28
Uranium	µg/l	3.6 ± 0.318	2.49 ± 0.125	0.54	69.1	-2.06
Zinc	µg/l	168 ± 4.7	239 ± 23.9	15.1	142	4.67

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	1.874 ± 0.281	0.522	50.3	-3.55

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	331 ± 33.1	8.04	618	34.51
Arsenic	µg/l	29.8 ± 1.13	5.6 ± 0.672	3.88	18.8	-6.25
Cadmium	µg/l	12.9 ± 0.534	1.67 ± 0.134	1.29	12.9	-8.71
Chromium	µg/l	59.1 ± 1.42	13.4 ± 1.608	5.03	22.7	-9.10
Copper	µg/l	10.7 ± 0.28	13.4 ± 1.072	0.963	125	2.81

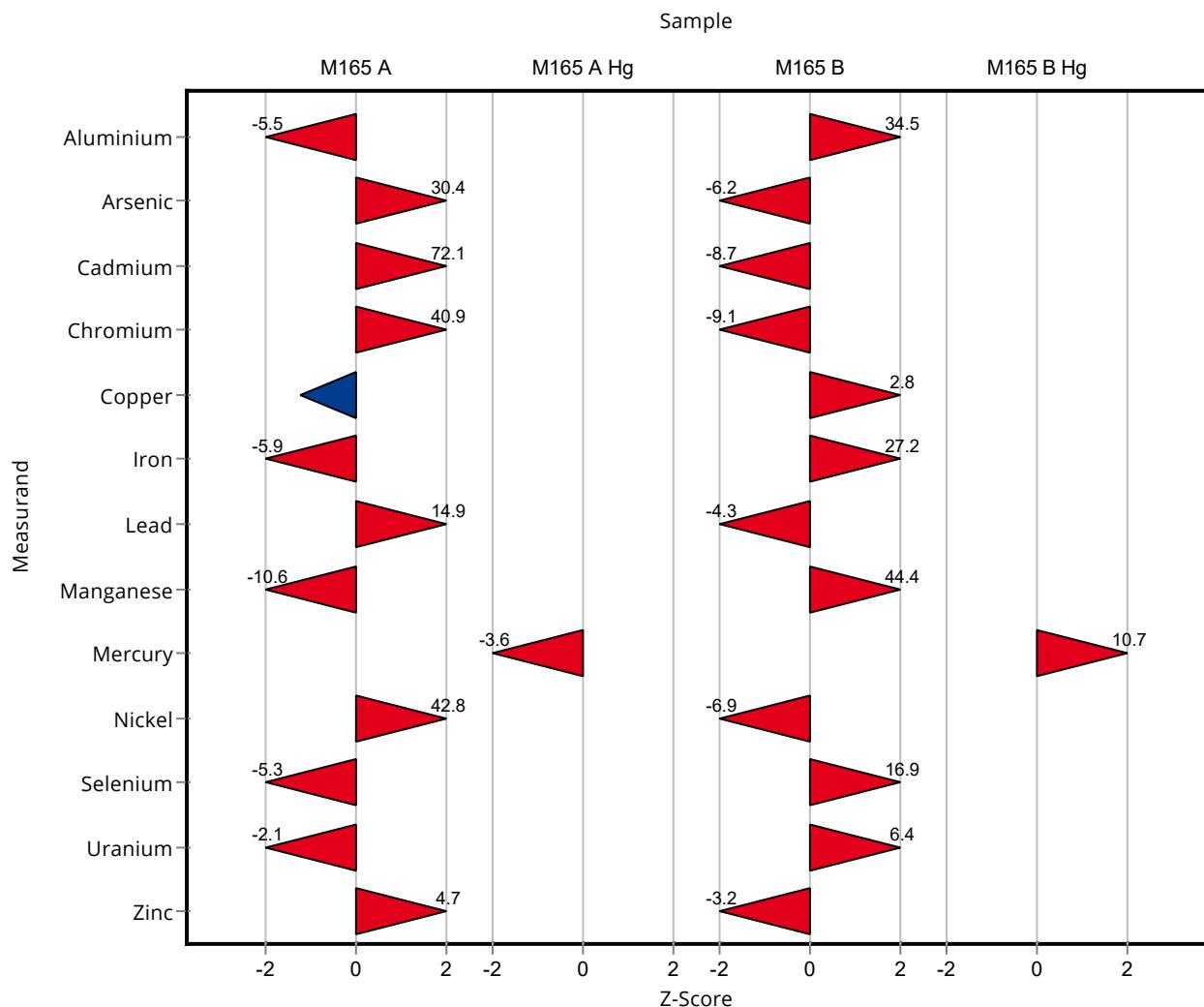
Summary of results Metals and trace elements M165

Labcode: LC0016

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	121 ± 31.46	3.33	399	27.21
Lead	µg/l	6.45 ± 0.323	2.3 ± 0.184	0.968	35.7	-4.29
Manganese	µg/l	7.91 ± 0.339	36 ± 3.6	0.632	455	44.42
Nickel	µg/l	26.1 ± 0.637	4.5 ± 0.45	3.13	17.2	-6.90
Selenium	µg/l	4.79 ± 0.282	14.5 ± 2.175	0.575	303	16.88
Uranium	µg/l	2.35 ± 0.139	3.93 ± 0.197	0.246	167	6.42
Zinc	µg/l	235 ± 7.06	168 ± 16.8	21.1	71.6	-3.16

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	4.093 ± 0.614	0.23	250	10.68



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	56 ± 5.6	47.7	17.6	-18.25
Arsenic	µg/l	5.86 ± 0.245	29 ± 3.48	0.761	495	3.32
Cadmium	µg/l	1.64 ± 0.0718	13.5 ± 1.08	0.164	821	5.49
Chromium	µg/l	13.2 ± 0.432	59.1 ± 7.09	1.12	447	3.23
Copper	µg/l	12.5 ± 0.473	11.1 ± 0.888	1.13	88.6	-0.77
Iron	µg/l	118 ± 3.21	41 ± 10.66	13	34.8	-3.57
Lead	µg/l	2.14 ± 0.0665	6.9 ± 0.552	0.32	323	4.31
Manganese	µg/l	33.8 ± 1.02	8 ± 0.8	2.43	23.7	-13.60
Nickel	µg/l	4.42 ± 0.275	27.1 ± 2.71	0.53	613	4.18
Selenium	µg/l	13.9 ± 0.565	5.1 ± 0.765	1.67	36.7	-5.40
Uranium	µg/l	3.6 ± 0.318	2.49 ± 0.125	0.54	69.1	-2.75
Zinc	µg/l	168 ± 4.7	239 ± 23.9	15.1	142	1.47

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	1.874 ± 0.281	0.522	50.3	-3.11

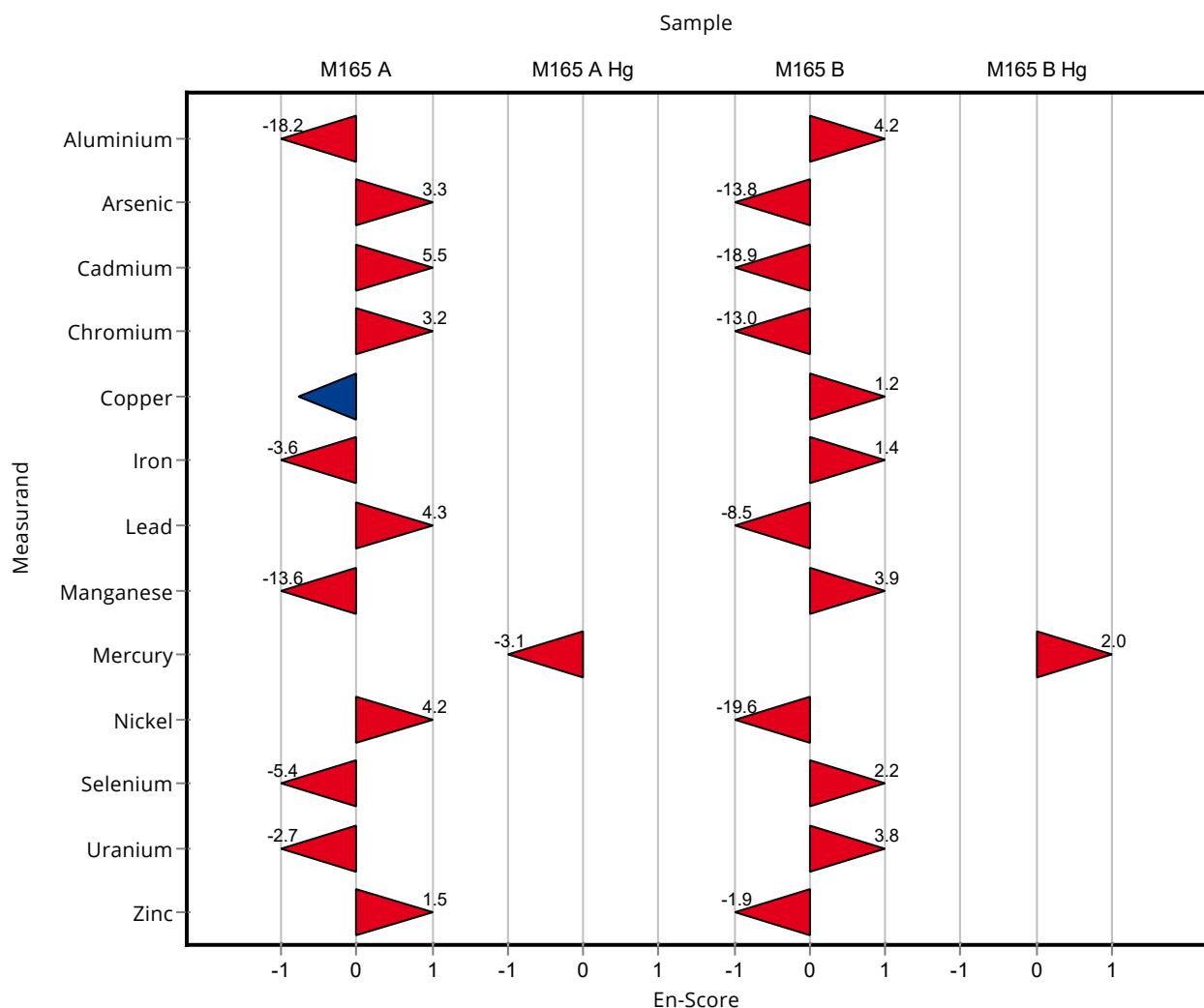
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	331 ± 33.1	8.04	618	4.19
Arsenic	µg/l	29.8 ± 1.13	5.6 ± 0.672	3.88	18.8	-13.81
Cadmium	µg/l	12.9 ± 0.534	1.67 ± 0.134	1.29	12.9	-18.87
Chromium	µg/l	59.1 ± 1.42	13.4 ± 1.608	5.03	22.7	-13.01
Copper	µg/l	10.7 ± 0.28	13.4 ± 1.072	0.963	125	1.25
Iron	µg/l	30.3 ± 1.28	121 ± 31.46	3.33	399	1.44

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	2.3 ± 0.184	0.968	35.7	-8.48
Manganese	µg/l	7.91 ± 0.339	36 ± 3.6	0.632	455	3.90
Nickel	µg/l	26.1 ± 0.637	4.5 ± 0.45	3.13	17.2	-19.60
Selenium	µg/l	4.79 ± 0.282	14.5 ± 2.175	0.575	303	2.23
Uranium	µg/l	2.35 ± 0.139	3.93 ± 0.197	0.246	167	3.79
Zinc	µg/l	235 ± 7.06	168 ± 16.8	21.1	71.6	-1.94

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	4.093 ± 0.614	0.23	250	1.99



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	322 ± 18	47.7	101	0.08
Arsenic	µg/l	5.86 ± 0.245	- ± -	0.761	-	-
Cadmium	µg/l	1.64 ± 0.0718	- ± -	0.164	-	-
Chromium	µg/l	13.2 ± 0.432	- ± -	1.12	-	-
Copper	µg/l	12.5 ± 0.473	- ± -	1.13	-	-
Iron	µg/l	118 ± 3.21	- ± -	13	-	-
Lead	µg/l	2.14 ± 0.0665	- ± -	0.32	-	-
Manganese	µg/l	33.8 ± 1.02	- ± -	2.43	-	-
Nickel	µg/l	4.42 ± 0.275	- ± -	0.53	-	-
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	- ± -	15.1	-	-

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	- ± -	0.522	-	-

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	55 ± 5	8.04	103	0.18
Arsenic	µg/l	29.8 ± 1.13	- ± -	3.88	-	-
Cadmium	µg/l	12.9 ± 0.534	- ± -	1.29	-	-
Chromium	µg/l	59.1 ± 1.42	- ± -	5.03	-	-
Copper	µg/l	10.7 ± 0.28	- ± -	0.963	-	-

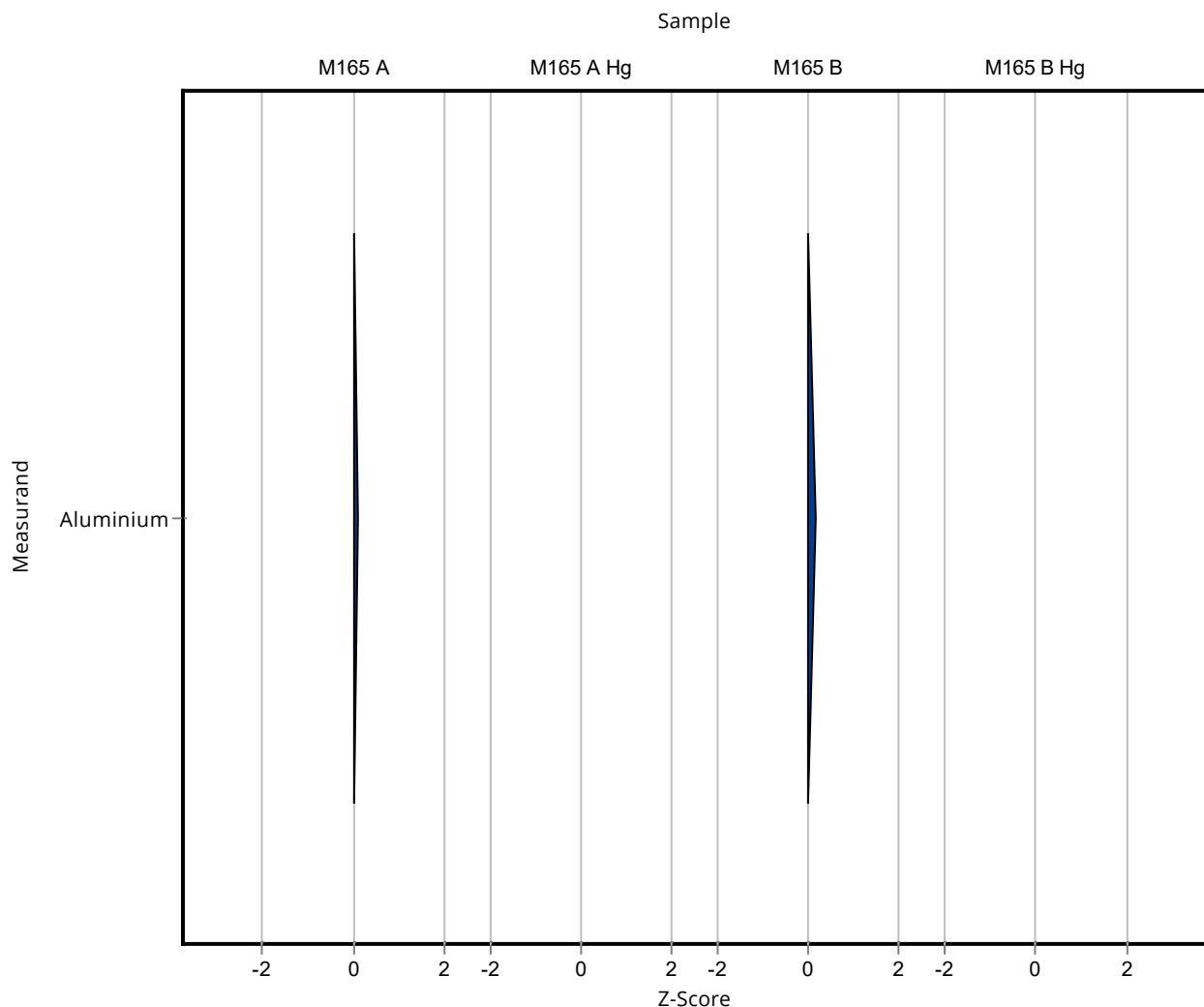
Summary of results Metals and trace elements M165

Labcode: LC0017

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	- ± -	3.33	-	-
Lead	µg/l	6.45 ± 0.323	- ± -	0.968	-	-
Manganese	µg/l	7.91 ± 0.339	- ± -	0.632	-	-
Nickel	µg/l	26.1 ± 0.637	- ± -	3.13	-	-
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	- ± -	21.1	-	-

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	322 ± 18	47.7	101	0.10
Arsenic	µg/l	5.86 ± 0.245	- ± -	0.761	-	-
Cadmium	µg/l	1.64 ± 0.0718	- ± -	0.164	-	-
Chromium	µg/l	13.2 ± 0.432	- ± -	1.12	-	-
Copper	µg/l	12.5 ± 0.473	- ± -	1.13	-	-
Iron	µg/l	118 ± 3.21	- ± -	13	-	-
Lead	µg/l	2.14 ± 0.0665	- ± -	0.32	-	-
Manganese	µg/l	33.8 ± 1.02	- ± -	2.43	-	-
Nickel	µg/l	4.42 ± 0.275	- ± -	0.53	-	-
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	- ± -	15.1	-	-

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	- ± -	0.522	-	-

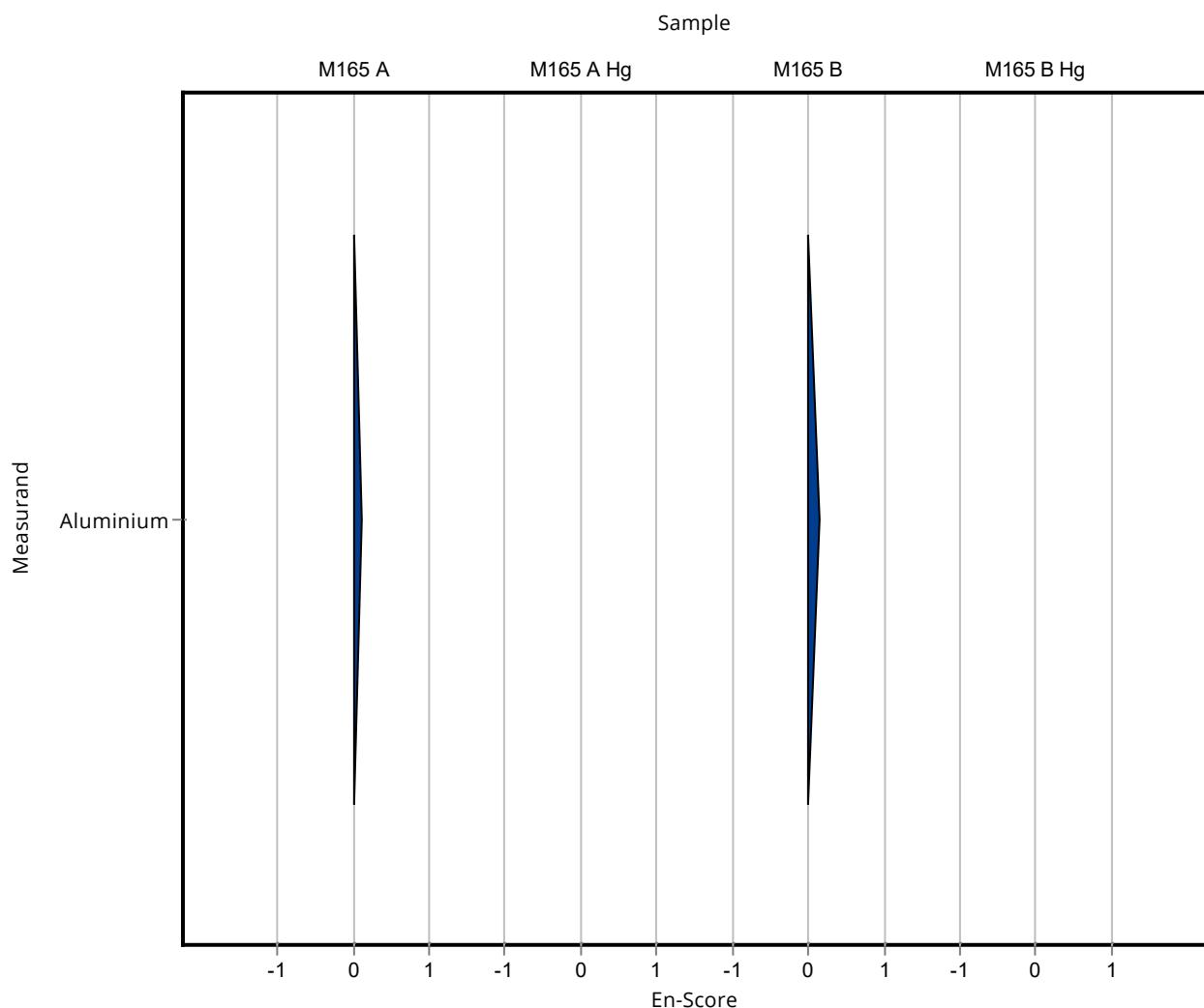
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	55 ± 5	8.04	103	0.14
Arsenic	µg/l	29.8 ± 1.13	- ± -	3.88	-	-
Cadmium	µg/l	12.9 ± 0.534	- ± -	1.29	-	-
Chromium	µg/l	59.1 ± 1.42	- ± -	5.03	-	-
Copper	µg/l	10.7 ± 0.28	- ± -	0.963	-	-
Iron	µg/l	30.3 ± 1.28	- ± -	3.33	-	-

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	- ± -	0.968	-	-
Manganese	µg/l	7.91 ± 0.339	- ± -	0.632	-	-
Nickel	µg/l	26.1 ± 0.637	- ± -	3.13	-	-
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	- ± -	21.1	-	-

Sample: M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	353 ± 25	47.7	111	0.73
Arsenic	µg/l	5.86 ± 0.245	6.2 ± 0.8	0.761	106	0.45
Cadmium	µg/l	1.64 ± 0.0718	1.76 ± 0.24	0.164	107	0.71
Chromium	µg/l	13.2 ± 0.432	14 ± 2	1.12	106	0.70
Copper	µg/l	12.5 ± 0.473	13 ± 2	1.13	104	0.42
Iron	µg/l	118 ± 3.21	127 ± 28	13	108	0.70
Lead	µg/l	2.14 ± 0.0665	2.15 ± 0.3	0.32	101	0.05
Manganese	µg/l	33.8 ± 1.02	37 ± 6	2.43	109	1.31
Nickel	µg/l	4.42 ± 0.275	4.9 ± 0.9	0.53	111	0.91
Selenium	µg/l	13.9 ± 0.565	14 ± 3	1.67	101	0.06
Uranium	µg/l	3.6 ± 0.318	3.34 ± 0.25	0.54	92.8	-0.48
Zinc	µg/l	168 ± 4.7	169 ± 37	15.1	100	0.05

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	3.44 ± 0.3	0.522	92.3	-0.55

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	58 ± 7	8.04	108	0.55
Arsenic	µg/l	29.8 ± 1.13	33 ± 5	3.88	111	0.82
Cadmium	µg/l	12.9 ± 0.534	14 ± 2.5	1.29	108	0.81
Chromium	µg/l	59.1 ± 1.42	63 ± 8	5.03	107	0.77
Copper	µg/l	10.7 ± 0.28	11 ± 2	0.963	103	0.31

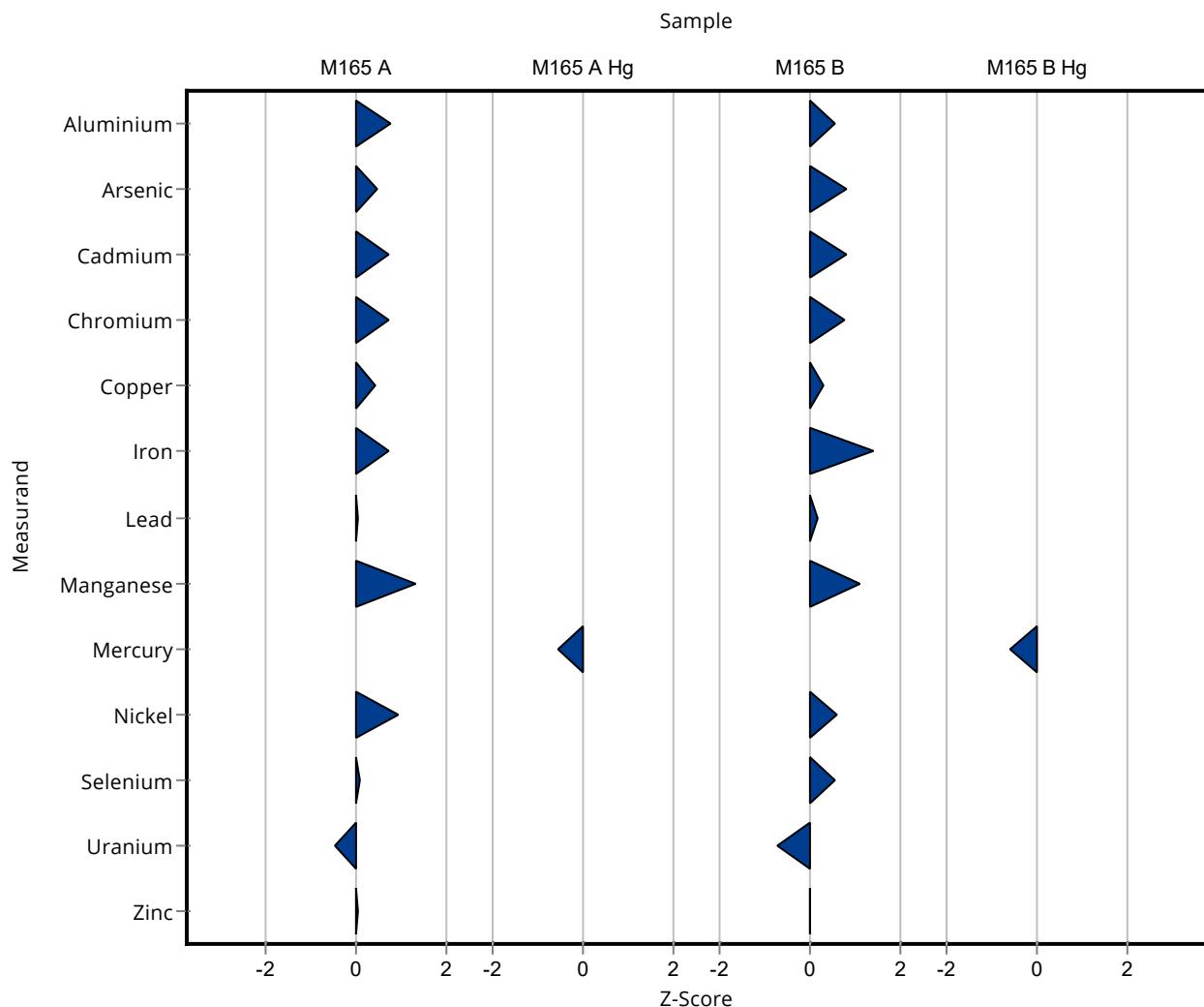
Summary of results Metals and trace elements M165

Labcode: LC0018

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	35 ± 6	3.33	116	1.41
Lead	µg/l	6.45 ± 0.323	6.6 ± 0.4	0.968	102	0.15
Manganese	µg/l	7.91 ± 0.339	8.6 ± 0.9	0.632	109	1.10
Nickel	µg/l	26.1 ± 0.637	28 ± 4	3.13	107	0.60
Selenium	µg/l	4.79 ± 0.282	5.1 ± 0.6	0.575	106	0.54
Uranium	µg/l	2.35 ± 0.139	2.17 ± 0.2	0.246	92.4	-0.72
Zinc	µg/l	235 ± 7.06	235 ± 38	21.1	100	0.01

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	1.51 ± 0.2	0.23	92.1	-0.57



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	353 ± 25	47.7	111	0.69
Arsenic	µg/l	5.86 ± 0.245	6.2 ± 0.8	0.761	106	0.21
Cadmium	µg/l	1.64 ± 0.0718	1.76 ± 0.24	0.164	107	0.24
Chromium	µg/l	13.2 ± 0.432	14 ± 2	1.12	106	0.20
Copper	µg/l	12.5 ± 0.473	13 ± 2	1.13	104	0.12
Iron	µg/l	118 ± 3.21	127 ± 28	13	108	0.16
Lead	µg/l	2.14 ± 0.0665	2.15 ± 0.3	0.32	101	0.02
Manganese	µg/l	33.8 ± 1.02	37 ± 6	2.43	109	0.26
Nickel	µg/l	4.42 ± 0.275	4.9 ± 0.9	0.53	111	0.27
Selenium	µg/l	13.9 ± 0.565	14 ± 3	1.67	101	0.02
Uranium	µg/l	3.6 ± 0.318	3.34 ± 0.25	0.54	92.8	-0.44
Zinc	µg/l	168 ± 4.7	169 ± 37	15.1	100	0.01

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	3.44 ± 0.3	0.522	92.3	-0.46

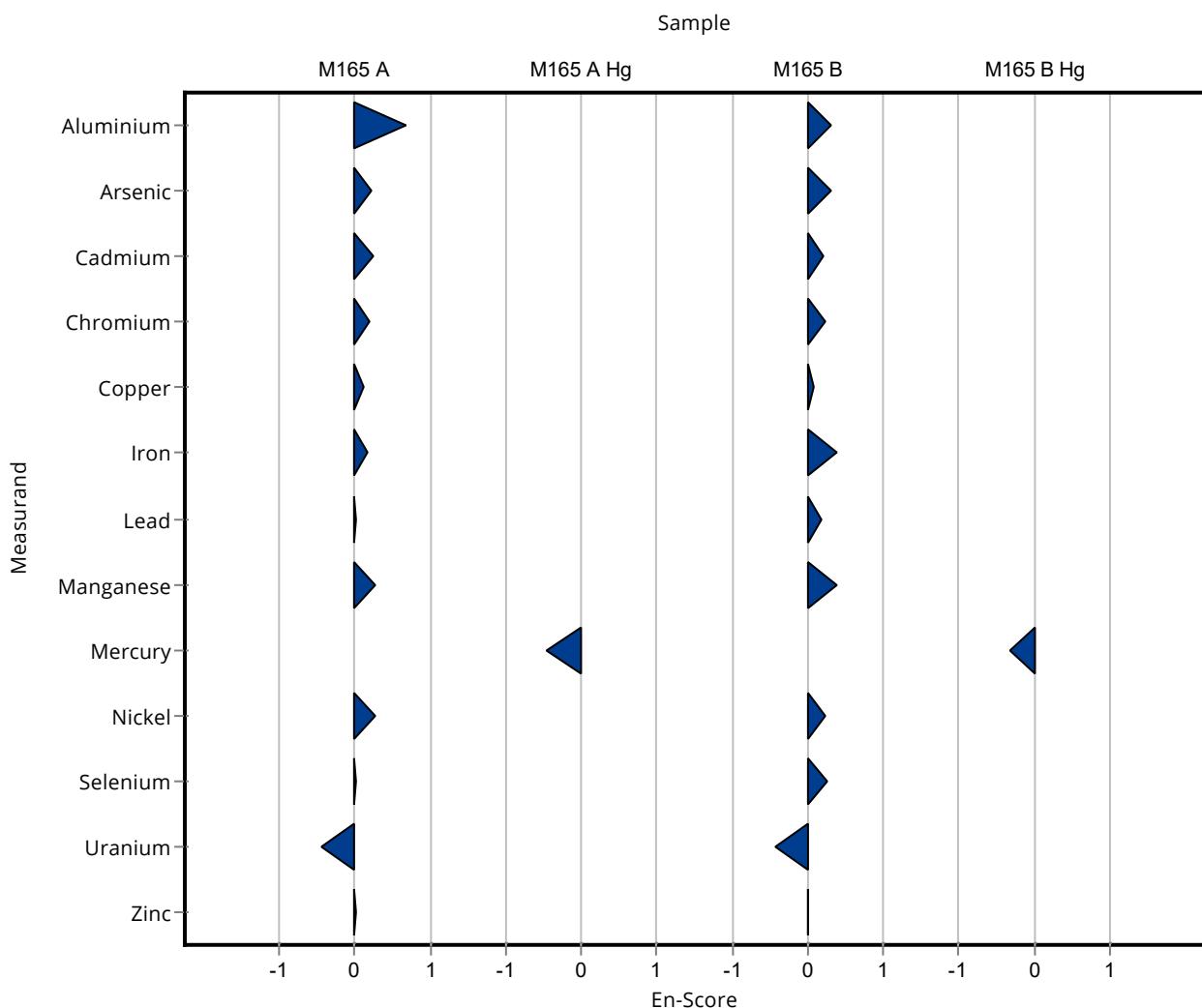
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	58 ± 7	8.04	108	0.31
Arsenic	µg/l	29.8 ± 1.13	33 ± 5	3.88	111	0.32
Cadmium	µg/l	12.9 ± 0.534	14 ± 2.5	1.29	108	0.21
Chromium	µg/l	59.1 ± 1.42	63 ± 8	5.03	107	0.24
Copper	µg/l	10.7 ± 0.28	11 ± 2	0.963	103	0.08
Iron	µg/l	30.3 ± 1.28	35 ± 6	3.33	116	0.39

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	6.6 ± 0.4	0.968	102	0.17
Manganese	µg/l	7.91 ± 0.339	8.6 ± 0.9	0.632	109	0.38
Nickel	µg/l	26.1 ± 0.637	28 ± 4	3.13	107	0.24
Selenium	µg/l	4.79 ± 0.282	5.1 ± 0.6	0.575	106	0.25
Uranium	µg/l	2.35 ± 0.139	2.17 ± 0.2	0.246	92.4	-0.42
Zinc	µg/l	235 ± 7.06	235 ± 38	21.1	100	0.00

Sample: M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	1.51 ± 0.2	0.23	92.1	-0.32



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	320.5 ± 4	47.7	101	0.05
Arsenic	µg/l	5.86 ± 0.245	- ± -	0.761	-	-
Cadmium	µg/l	1.64 ± 0.0718	- ± -	0.164	-	-
Chromium	µg/l	13.2 ± 0.432	- ± -	1.12	-	-
Copper	µg/l	12.5 ± 0.473	15 ± 5	1.13	120	2.20
Iron	µg/l	118 ± 3.21	123 ± 4	13	104	0.39
Lead	µg/l	2.14 ± 0.0665	- ± -	0.32	-	-
Manganese	µg/l	33.8 ± 1.02	35 ± 2	2.43	104	0.49
Nickel	µg/l	4.42 ± 0.275	- ± -	0.53	-	-
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	176 ± 10	15.1	105	0.51

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	- ± -	0.522	-	-

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	57 ± 4	8.04	106	0.42
Arsenic	µg/l	29.8 ± 1.13	- ± -	3.88	-	-
Cadmium	µg/l	12.9 ± 0.534	- ± -	1.29	-	-
Chromium	µg/l	59.1 ± 1.42	- ± -	5.03	-	-
Copper	µg/l	10.7 ± 0.28	59 ± 5	0.963	552	50.17

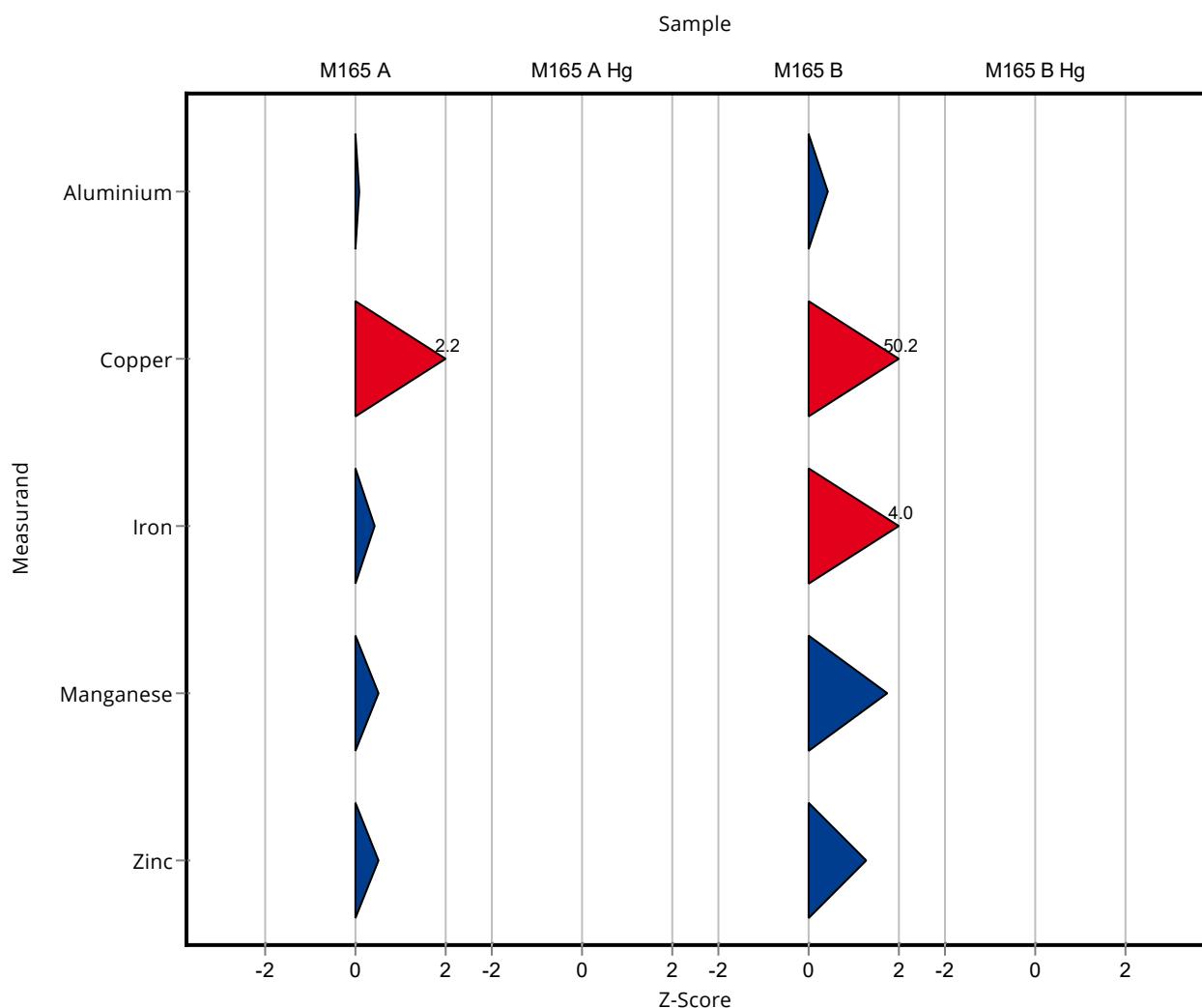
Summary of results Metals and trace elements M165

Labcode: LC0019

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	43.5 ± 4	3.33	144	3.96
Lead	µg/l	6.45 ± 0.323	- ± -	0.968	-	-
Manganese	µg/l	7.91 ± 0.339	9 ± 2	0.632	114	1.73
Nickel	µg/l	26.1 ± 0.637	- ± -	3.13	-	-
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	262 ± 10	21.1	112	1.29

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	320.5 ± 4	47.7	101	0.20
Arsenic	µg/l	5.86 ± 0.245	- ± -	0.761	-	-
Cadmium	µg/l	1.64 ± 0.0718	- ± -	0.164	-	-
Chromium	µg/l	13.2 ± 0.432	- ± -	1.12	-	-
Copper	µg/l	12.5 ± 0.473	15 ± 5	1.13	120	0.25
Iron	µg/l	118 ± 3.21	123 ± 4	13	104	0.59
Lead	µg/l	2.14 ± 0.0665	- ± -	0.32	-	-
Manganese	µg/l	33.8 ± 1.02	35 ± 2	2.43	104	0.29
Nickel	µg/l	4.42 ± 0.275	- ± -	0.53	-	-
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	176 ± 10	15.1	105	0.38

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	- ± -	0.522	-	-

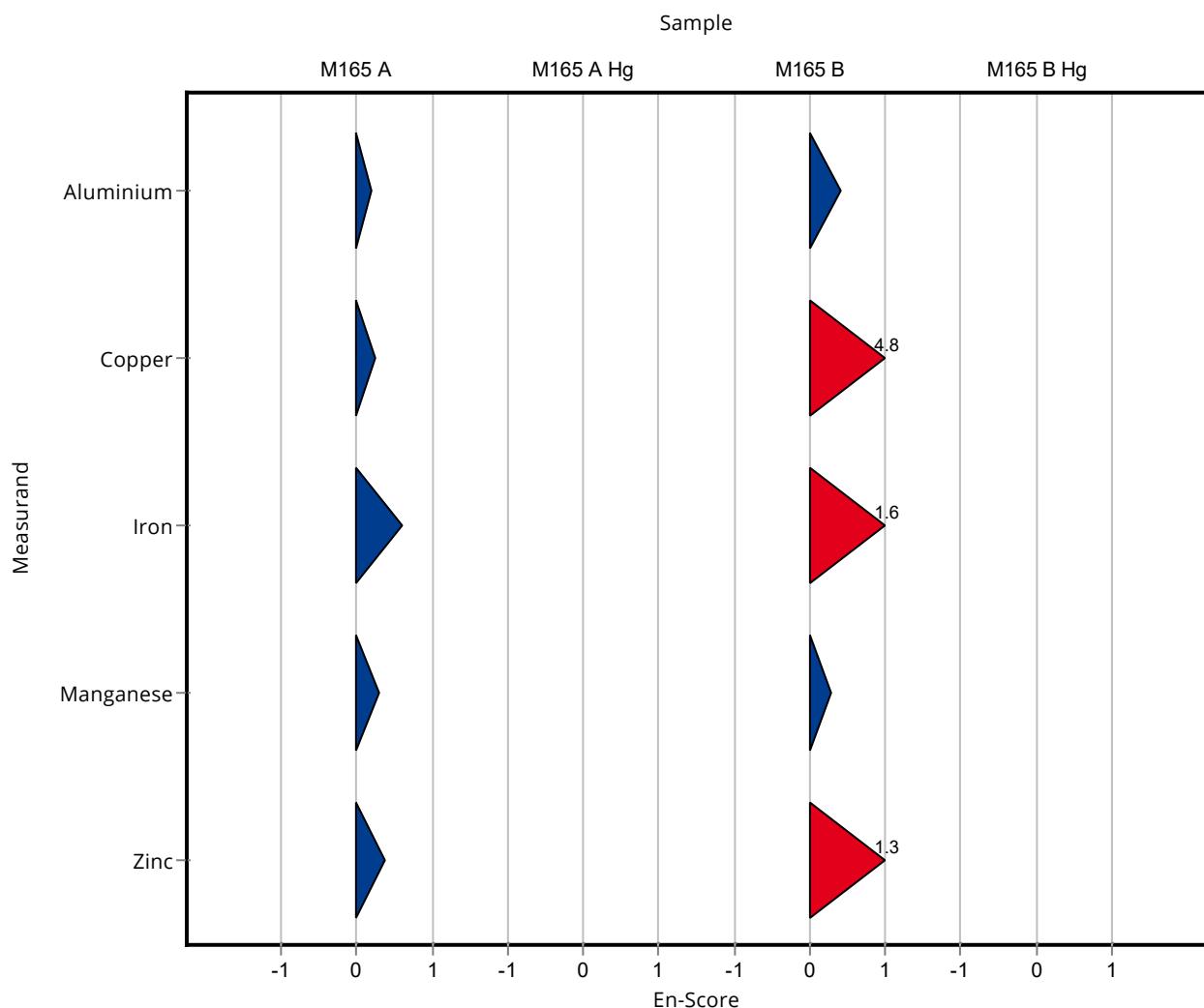
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	57 ± 4	8.04	106	0.41
Arsenic	µg/l	29.8 ± 1.13	- ± -	3.88	-	-
Cadmium	µg/l	12.9 ± 0.534	- ± -	1.29	-	-
Chromium	µg/l	59.1 ± 1.42	- ± -	5.03	-	-
Copper	µg/l	10.7 ± 0.28	59 ± 5	0.963	552	4.83
Iron	µg/l	30.3 ± 1.28	43.5 ± 4	3.33	144	1.63

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	- ± -	0.968	-	-
Manganese	µg/l	7.91 ± 0.339	9 ± 2	0.632	114	0.27
Nickel	µg/l	26.1 ± 0.637	- ± -	3.13	-	-
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	262 ± 10	21.1	112	1.29

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	- ± -	0.23	-	-



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	319.5 ± 36.2	47.7	100	0.03
Arsenic	µg/l	5.86 ± 0.245	6.06 ± 1.22	0.761	103	0.27
Cadmium	µg/l	1.64 ± 0.0718	1.44 ± 0.32	0.164	87.6	-1.24
Chromium	µg/l	13.2 ± 0.432	13.6 ± 2.2	1.12	103	0.35
Copper	µg/l	12.5 ± 0.473	12.5 ± 3.3	1.13	99.8	-0.02
Iron	µg/l	118 ± 3.21	117 ± 14.1	13	99.2	-0.07
Lead	µg/l	2.14 ± 0.0665	2.2 ± 0.8	0.32	103	0.20
Manganese	µg/l	33.8 ± 1.02	33.8 ± 5.5	2.43	100	-0.01
Nickel	µg/l	4.42 ± 0.275	- ± -	0.53	-	-
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	161 ± 19.4	15.1	95.7	-0.48

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	3.76 ± 0.56	0.522	101	0.06

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	53.8 ± 7.8	8.04	100	0.03
Arsenic	µg/l	29.8 ± 1.13	31.55 ± 5.28	3.88	106	0.45
Cadmium	µg/l	12.9 ± 0.534	10.55 ± 1.7	1.29	81.5	-1.85
Chromium	µg/l	59.1 ± 1.42	60.2 ± 7.8	5.03	102	0.21
Copper	µg/l	10.7 ± 0.28	11.3 ± 2.1	0.963	106	0.63

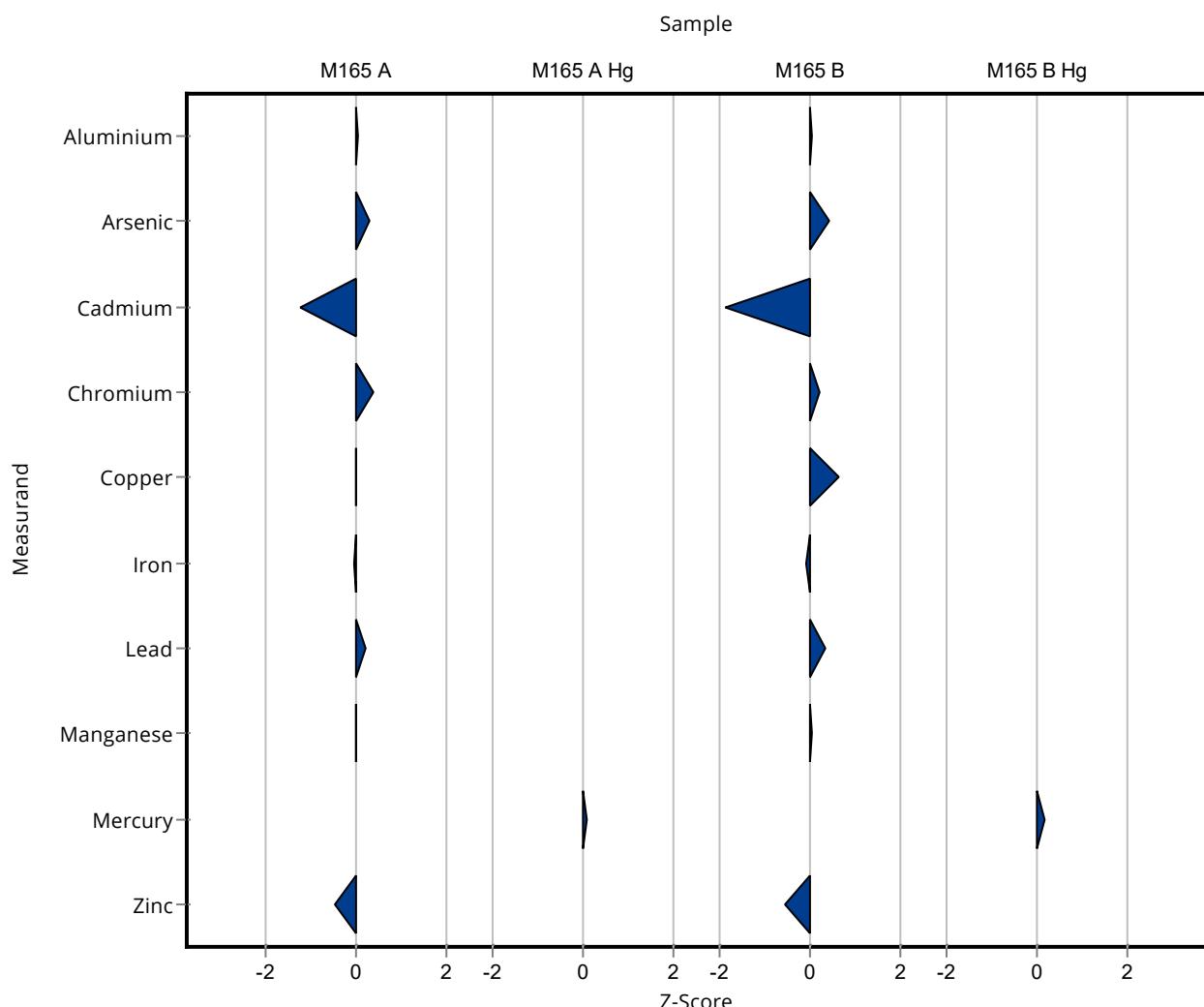
Summary of results Metals and trace elements M165

Labcode: LC0020

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	30 ± 5.1	3.33	99	-0.09
Lead	µg/l	6.45 ± 0.323	6.77 ± 1.59	0.968	105	0.33
Manganese	µg/l	7.91 ± 0.339	7.93 ± 2.8	0.632	100	0.04
Nickel	µg/l	26.1 ± 0.637	- ± -	3.13	-	-
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	223 ± 26.2	21.1	95	-0.55

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	1.68 ± 0.29	0.23	102	0.17



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	319.5 ± 36.2	47.7	100	0.02
Arsenic	µg/l	5.86 ± 0.245	6.06 ± 1.22	0.761	103	0.08
Cadmium	µg/l	1.64 ± 0.0718	1.44 ± 0.32	0.164	87.6	-0.32
Chromium	µg/l	13.2 ± 0.432	13.6 ± 2.2	1.12	103	0.09
Copper	µg/l	12.5 ± 0.473	12.5 ± 3.3	1.13	99.8	0.00
Iron	µg/l	118 ± 3.21	117 ± 14.1	13	99.2	-0.03
Lead	µg/l	2.14 ± 0.0665	2.2 ± 0.8	0.32	103	0.04
Manganese	µg/l	33.8 ± 1.02	33.8 ± 5.5	2.43	100	0.00
Nickel	µg/l	4.42 ± 0.275	- ± -	0.53	-	-
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	161 ± 19.4	15.1	95.7	-0.19

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	3.76 ± 0.56	0.522	101	0.03

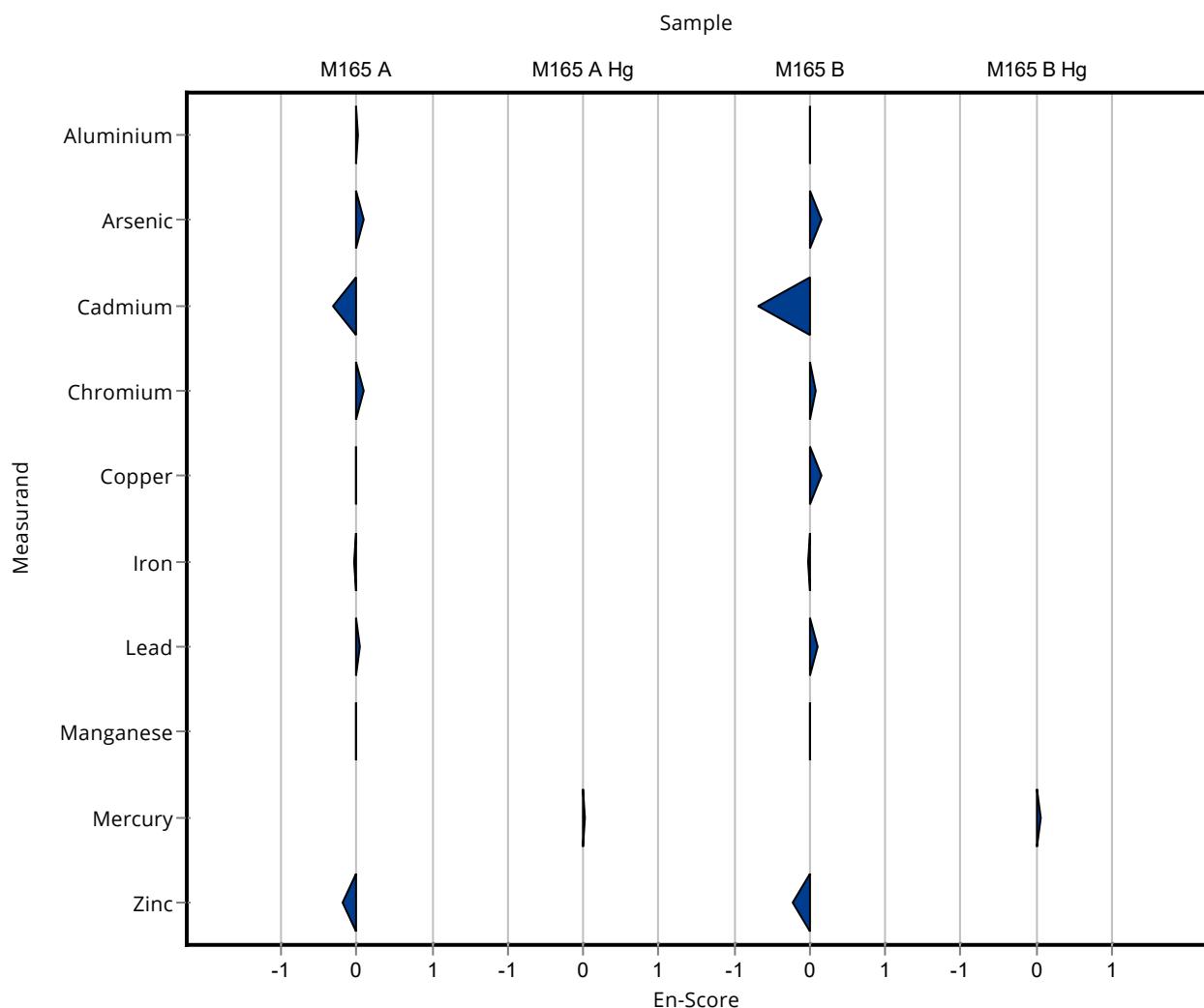
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	53.8 ± 7.8	8.04	100	0.01
Arsenic	µg/l	29.8 ± 1.13	31.55 ± 5.28	3.88	106	0.16
Cadmium	µg/l	12.9 ± 0.534	10.55 ± 1.7	1.29	81.5	-0.70
Chromium	µg/l	59.1 ± 1.42	60.2 ± 7.8	5.03	102	0.07
Copper	µg/l	10.7 ± 0.28	11.3 ± 2.1	0.963	106	0.14
Iron	µg/l	30.3 ± 1.28	30 ± 5.1	3.33	99	-0.03

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	6.77 ± 1.59	0.968	105	0.10
Manganese	µg/l	7.91 ± 0.339	7.93 ± 2.8	0.632	100	0.00
Nickel	µg/l	26.1 ± 0.637	- ± -	3.13	-	-
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	223 ± 26.2	21.1	95	-0.22

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	1.68 ± 0.29	0.23	102	0.07



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	321 ± 48	47.7	101	0.06
Arsenic	µg/l	5.86 ± 0.245	5.2 ± 0.78	0.761	88.8	-0.86
Cadmium	µg/l	1.64 ± 0.0718	1.57 ± 0.24	0.164	95.5	-0.45
Chromium	µg/l	13.2 ± 0.432	13.8 ± 2.07	1.12	104	0.53
Copper	µg/l	12.5 ± 0.473	12.9 ± 1.94	1.13	103	0.34
Iron	µg/l	118 ± 3.21	127 ± 19	13	108	0.70
Lead	µg/l	2.14 ± 0.0665	2.31 ± 0.35	0.32	108	0.55
Manganese	µg/l	33.8 ± 1.02	34.8 ± 5.22	2.43	103	0.41
Nickel	µg/l	4.42 ± 0.275	4.69 ± 0.7	0.53	106	0.51
Selenium	µg/l	13.9 ± 0.565	14.5 ± 2.17	1.67	104	0.36
Uranium	µg/l	3.6 ± 0.318	4.39 ± 2.41	0.54	122	1.46
Zinc	µg/l	168 ± 4.7	155 ± 23	15.1	92.1	-0.88

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	4.44 ± 0.67	0.522	119	1.36

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	53.9 ± 8.08	8.04	101	0.04
Arsenic	µg/l	29.8 ± 1.13	31 ± 4.65	3.88	104	0.30
Cadmium	µg/l	12.9 ± 0.534	12.7 ± 1.91	1.29	98.1	-0.19
Chromium	µg/l	59.1 ± 1.42	62.9 ± 9.44	5.03	106	0.75
Copper	µg/l	10.7 ± 0.28	11.2 ± 1.68	0.963	105	0.52

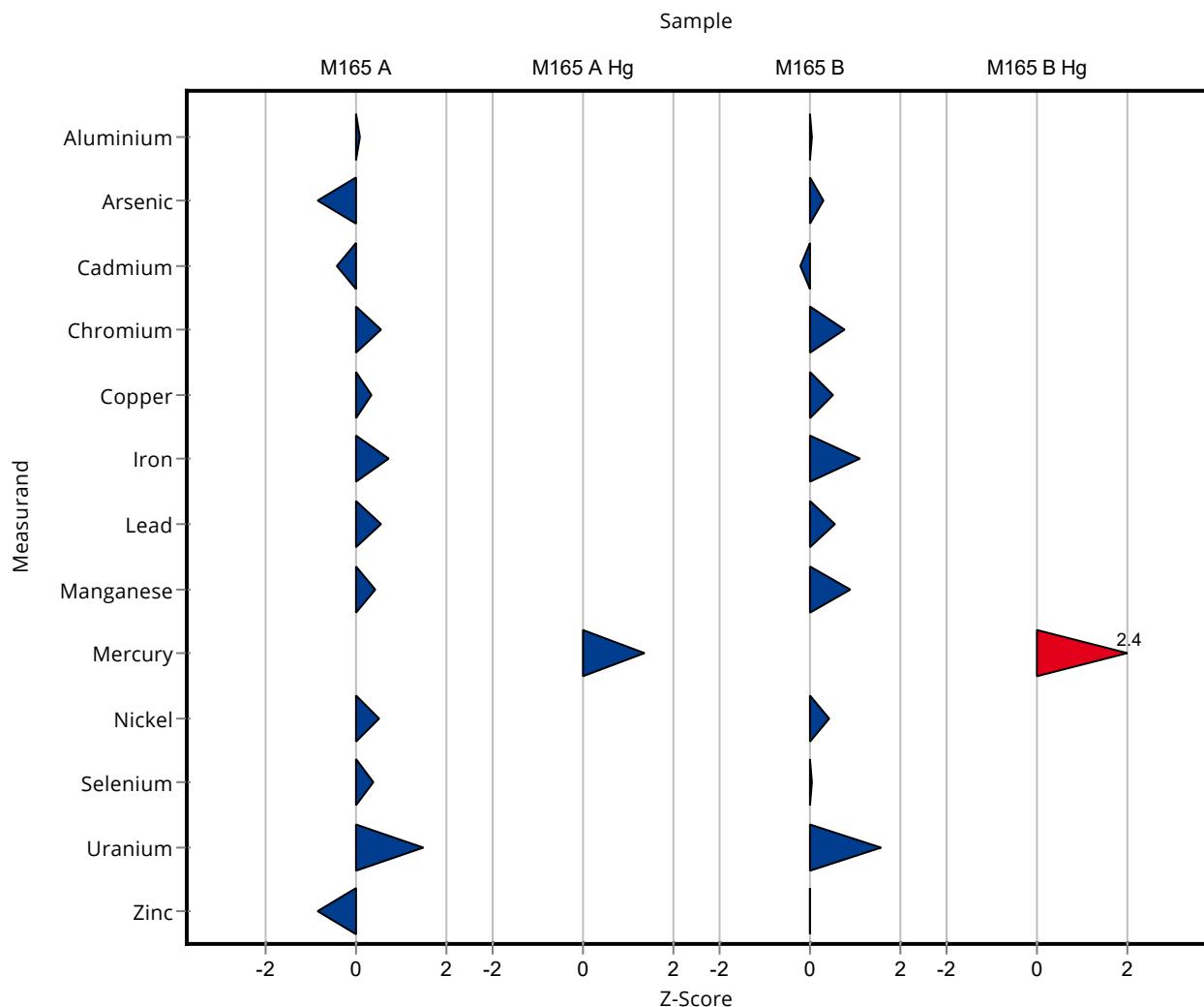
Summary of results Metals and trace elements M165

Labcode: LC0021

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	34 ± 5.09	3.33	112	1.11
Lead	µg/l	6.45 ± 0.323	6.98 ± 1.05	0.968	108	0.55
Manganese	µg/l	7.91 ± 0.339	8.47 ± 1.27	0.632	107	0.89
Nickel	µg/l	26.1 ± 0.637	27.4 ± 4.1	3.13	105	0.41
Selenium	µg/l	4.79 ± 0.282	4.82 ± 0.72	0.575	101	0.05
Uranium	µg/l	2.35 ± 0.139	2.74 ± 0.41	0.246	117	1.59
Zinc	µg/l	235 ± 7.06	235 ± 35	21.1	100	0.01

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	2.18 ± 0.33	0.23	133	2.35



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	321 ± 48	47.7	101	0.03
Arsenic	µg/l	5.86 ± 0.245	5.2 ± 0.78	0.761	88.8	-0.42
Cadmium	µg/l	1.64 ± 0.0718	1.57 ± 0.24	0.164	95.5	-0.15
Chromium	µg/l	13.2 ± 0.432	13.8 ± 2.07	1.12	104	0.14
Copper	µg/l	12.5 ± 0.473	12.9 ± 1.94	1.13	103	0.10
Iron	µg/l	118 ± 3.21	127 ± 19	13	108	0.24
Lead	µg/l	2.14 ± 0.0665	2.31 ± 0.35	0.32	108	0.25
Manganese	µg/l	33.8 ± 1.02	34.8 ± 5.22	2.43	103	0.09
Nickel	µg/l	4.42 ± 0.275	4.69 ± 0.7	0.53	106	0.19
Selenium	µg/l	13.9 ± 0.565	14.5 ± 2.17	1.67	104	0.14
Uranium	µg/l	3.6 ± 0.318	4.39 ± 2.41	0.54	122	0.16
Zinc	µg/l	168 ± 4.7	155 ± 23	15.1	92.1	-0.29

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	4.44 ± 0.67	0.522	119	0.53

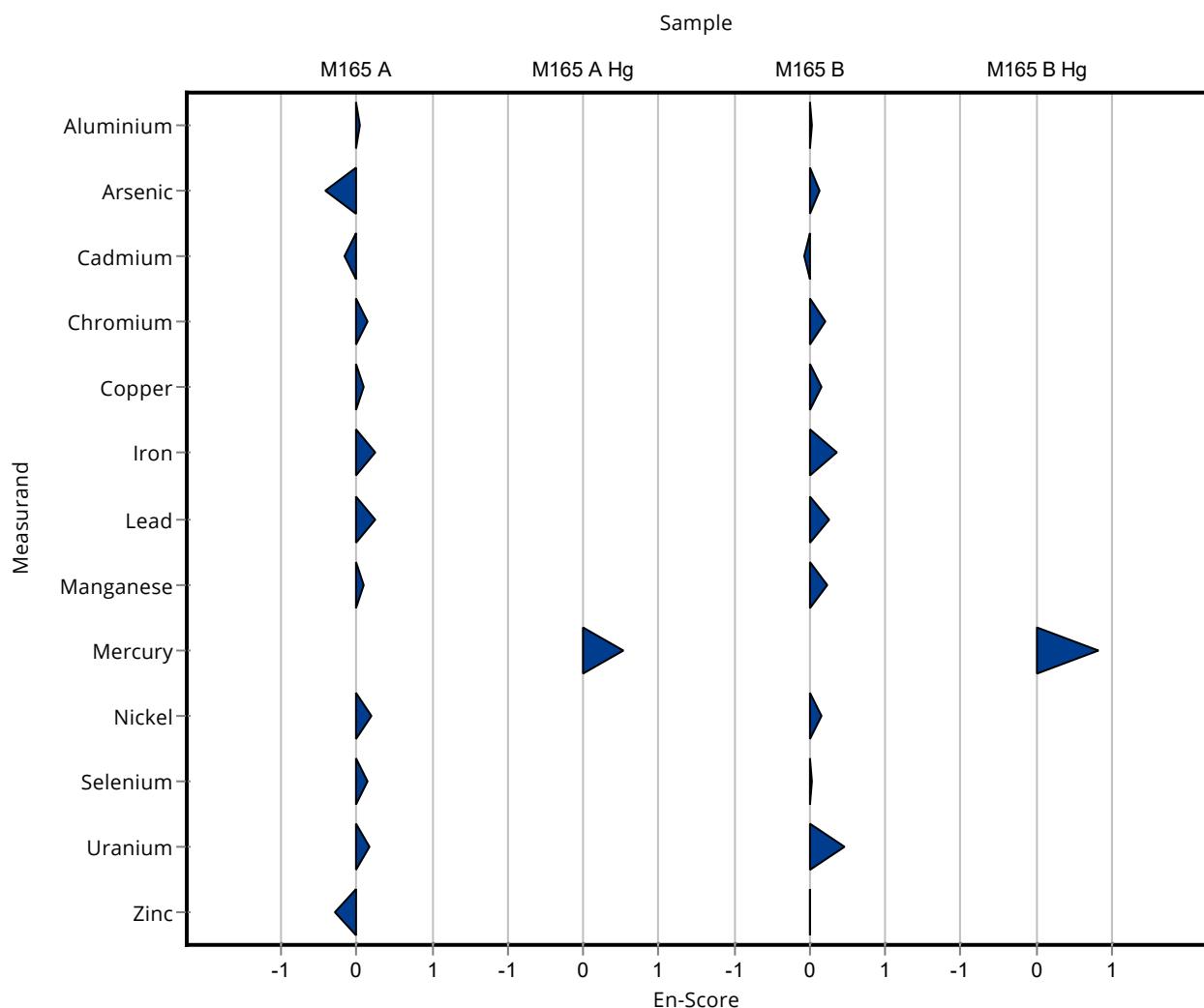
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	53.9 ± 8.08	8.04	101	0.02
Arsenic	µg/l	29.8 ± 1.13	31 ± 4.65	3.88	104	0.13
Cadmium	µg/l	12.9 ± 0.534	12.7 ± 1.91	1.29	98.1	-0.06
Chromium	µg/l	59.1 ± 1.42	62.9 ± 9.44	5.03	106	0.20
Copper	µg/l	10.7 ± 0.28	11.2 ± 1.68	0.963	105	0.15
Iron	µg/l	30.3 ± 1.28	34 ± 5.09	3.33	112	0.36

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	6.98 ± 1.05	0.968	108	0.25
Manganese	µg/l	7.91 ± 0.339	8.47 ± 1.27	0.632	107	0.22
Nickel	µg/l	26.1 ± 0.637	27.4 ± 4.1	3.13	105	0.16
Selenium	µg/l	4.79 ± 0.282	4.82 ± 0.72	0.575	101	0.02
Uranium	µg/l	2.35 ± 0.139	2.74 ± 0.41	0.246	117	0.47
Zinc	µg/l	235 ± 7.06	235 ± 35	21.1	100	0.00

Sample: M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	2.18 ± 0.33	0.23	133	0.81



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	307 ± 61.4	47.7	96.5	-0.23
Arsenic	µg/l	5.86 ± 0.245	- ± -	0.761	-	-
Cadmium	µg/l	1.64 ± 0.0718	- ± -	0.164	-	-
Chromium	µg/l	13.2 ± 0.432	12.685 ± 1.395	1.12	96	-0.47
Copper	µg/l	12.5 ± 0.473	9.277 ± 1.763	1.13	74.1	-2.88
Iron	µg/l	118 ± 3.21	123.25 ± 24.65	13	105	0.41
Lead	µg/l	2.14 ± 0.0665	- ± -	0.32	-	-
Manganese	µg/l	33.8 ± 1.02	27 ± 5.4	2.43	79.9	-2.80
Nickel	µg/l	4.42 ± 0.275	- ± -	0.53	-	-
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	155.04 ± 27.97	15.1	92.1	-0.87

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	4.288 ± 1.029	0.522	115	1.07

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	46.8 ± 9.36	8.04	87.3	-0.84
Arsenic	µg/l	29.8 ± 1.13	25.783 ± 5.157	3.88	86.5	-1.04
Cadmium	µg/l	12.9 ± 0.534	13.634 ± 1.636	1.29	105	0.53
Chromium	µg/l	59.1 ± 1.42	60.07 ± 6.608	5.03	102	0.19
Copper	µg/l	10.7 ± 0.28	6.938 ± 1.318	0.963	64.9	-3.91

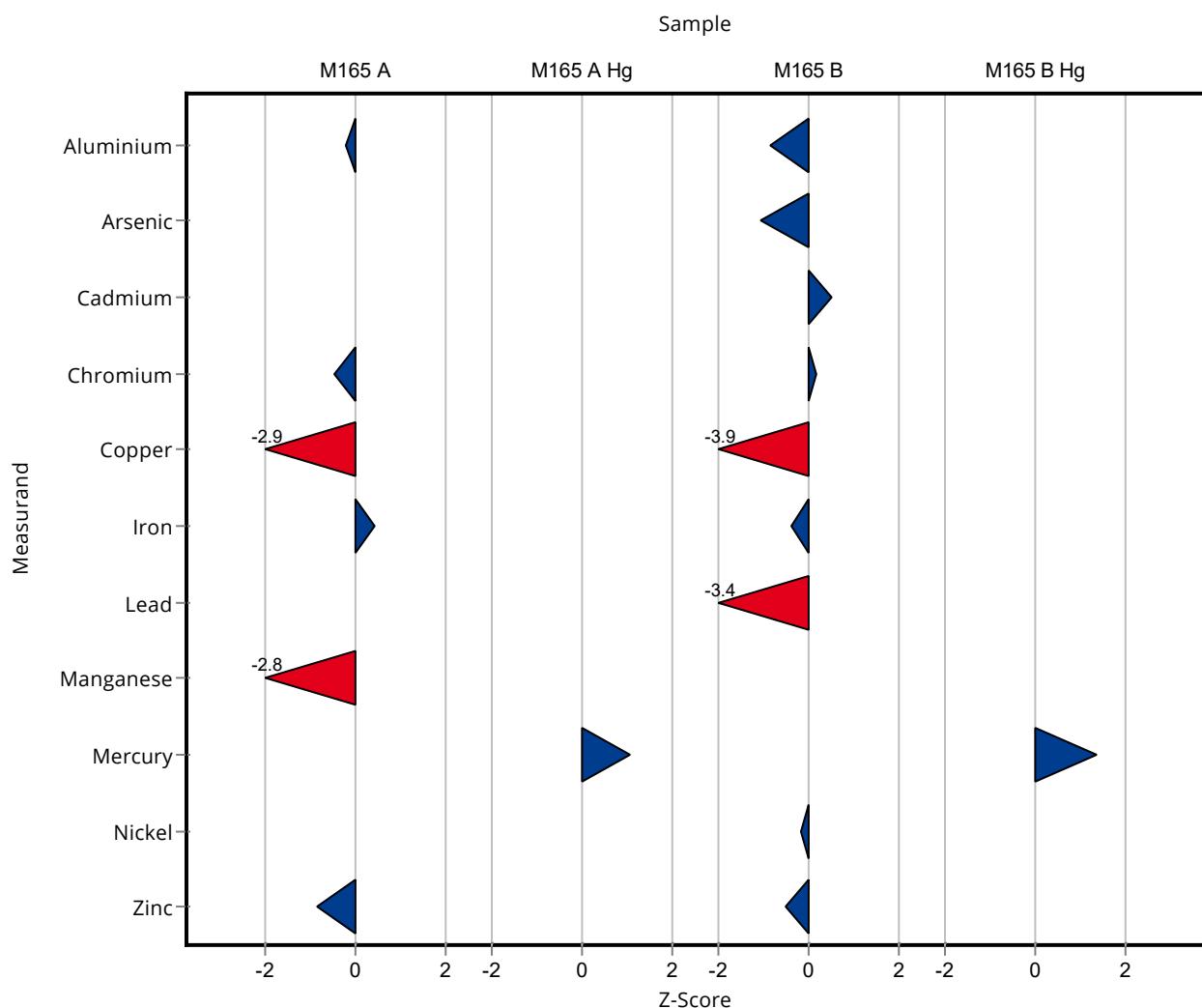
Summary of results Metals and trace elements M165

Labcode: LC0022

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	29 ± 5.8	3.33	95.7	-0.39
Lead	µg/l	6.45 ± 0.323	3.162 ± 0.664	0.968	49	-3.40
Manganese	µg/l	7.91 ± 0.339	- ± -	0.632	-	-
Nickel	µg/l	26.1 ± 0.637	25.65 ± 4.104	3.13	98.2	-0.15
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	223.7 ± 40.27	21.1	95.3	-0.52

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	1.96 ± 0.47	0.23	120	1.39



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	307 ± 61.4	47.7	96.5	-0.09
Arsenic	µg/l	5.86 ± 0.245	- ± -	0.761	-	-
Cadmium	µg/l	1.64 ± 0.0718	- ± -	0.164	-	-
Chromium	µg/l	13.2 ± 0.432	12.685 ± 1.395	1.12	96	-0.19
Copper	µg/l	12.5 ± 0.473	9.277 ± 1.763	1.13	74.1	-0.91
Iron	µg/l	118 ± 3.21	123.25 ± 24.65	13	105	0.11
Lead	µg/l	2.14 ± 0.0665	- ± -	0.32	-	-
Manganese	µg/l	33.8 ± 1.02	27 ± 5.4	2.43	79.9	-0.63
Nickel	µg/l	4.42 ± 0.275	- ± -	0.53	-	-
Selenium	µg/l	13.9 ± 0.565	- ± -	1.67	-	-
Uranium	µg/l	3.6 ± 0.318	- ± -	0.54	-	-
Zinc	µg/l	168 ± 4.7	155.04 ± 27.97	15.1	92.1	-0.24

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	4.288 ± 1.029	0.522	115	0.27

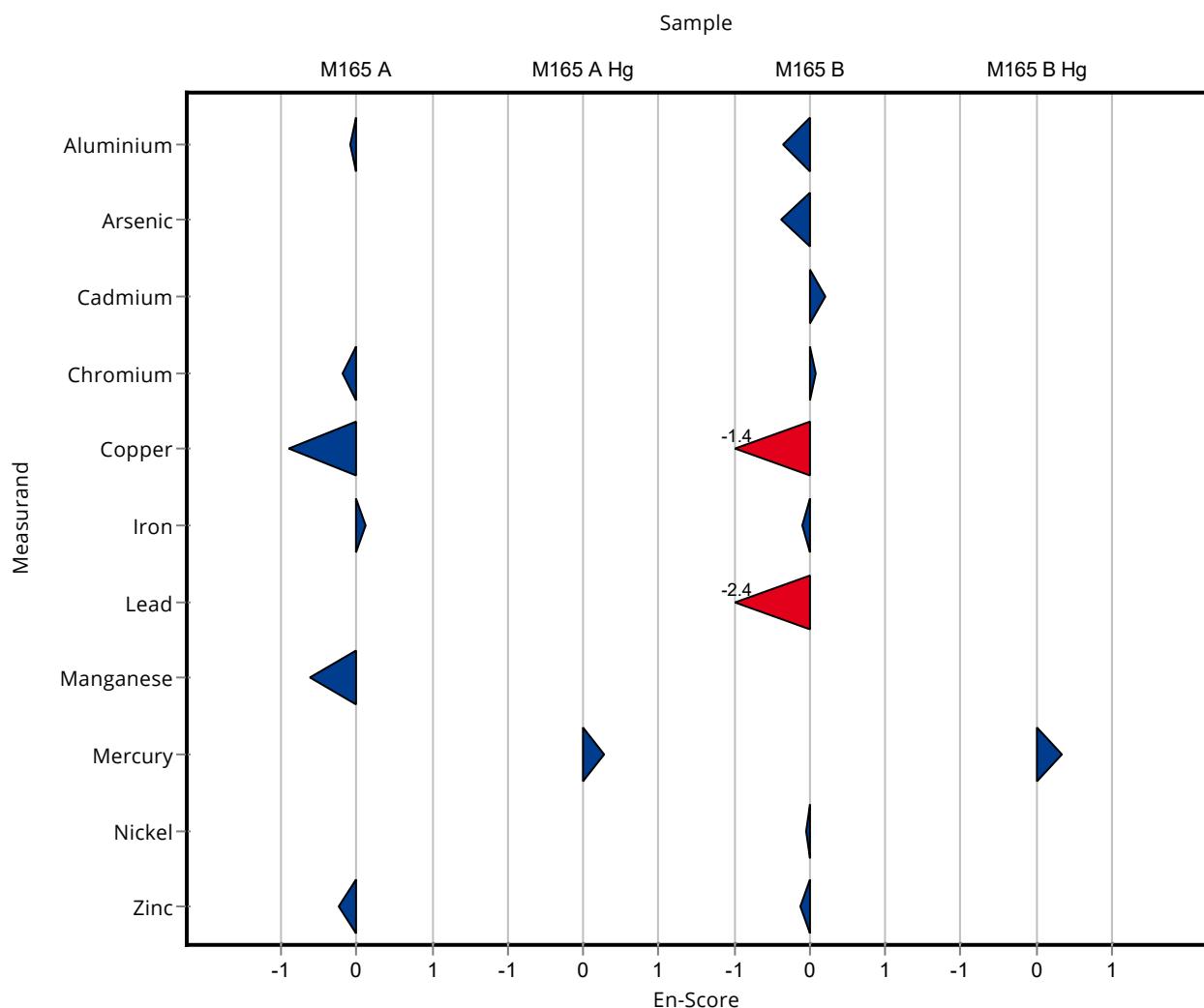
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	46.8 ± 9.36	8.04	87.3	-0.36
Arsenic	µg/l	29.8 ± 1.13	25.783 ± 5.157	3.88	86.5	-0.39
Cadmium	µg/l	12.9 ± 0.534	13.634 ± 1.636	1.29	105	0.21
Chromium	µg/l	59.1 ± 1.42	60.07 ± 6.608	5.03	102	0.07
Copper	µg/l	10.7 ± 0.28	6.938 ± 1.318	0.963	64.9	-1.42
Iron	µg/l	30.3 ± 1.28	29 ± 5.8	3.33	95.7	-0.11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	3.162 ± 0.664	0.968	49	-2.41
Manganese	µg/l	7.91 ± 0.339	- ± -	0.632	-	-
Nickel	µg/l	26.1 ± 0.637	25.65 ± 4.104	3.13	98.2	-0.06
Selenium	µg/l	4.79 ± 0.282	- ± -	0.575	-	-
Uranium	µg/l	2.35 ± 0.139	- ± -	0.246	-	-
Zinc	µg/l	235 ± 7.06	223.7 ± 40.27	21.1	95.3	-0.14

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	1.96 ± 0.47	0.23	120	0.34



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	300 ± 60	47.7	94.3	-0.38
Arsenic	µg/l	5.86 ± 0.245	4.8 ± 0.96	0.761	82	-1.39
Cadmium	µg/l	1.64 ± 0.0718	1.38 ± 0.28	0.164	84	-1.60
Chromium	µg/l	13.2 ± 0.432	12 ± 2.4	1.12	90.8	-1.08
Copper	µg/l	12.5 ± 0.473	12 ± 2.4	1.13	95.8	-0.46
Iron	µg/l	118 ± 3.21	105 ± 21	13	89.1	-0.99
Lead	µg/l	2.14 ± 0.0665	2.05 ± 0.41	0.32	96	-0.27
Manganese	µg/l	33.8 ± 1.02	31.5 ± 6.3	2.43	93.2	-0.95
Nickel	µg/l	4.42 ± 0.275	4.1 ± 0.82	0.53	92.8	-0.60
Selenium	µg/l	13.9 ± 0.565	13.5 ± 2.7	1.67	97.1	-0.24
Uranium	µg/l	3.6 ± 0.318	3.25 ± 0.65	0.54	90.3	-0.65
Zinc	µg/l	168 ± 4.7	158 ± 32	15.1	93.9	-0.68

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	3.4 ± 0.68	0.522	91.2	-0.63

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	51.3 ± 10	8.04	95.7	-0.28
Arsenic	µg/l	29.8 ± 1.13	25.8 ± 5.2	3.88	86.5	-1.04
Cadmium	µg/l	12.9 ± 0.534	11.5 ± 2.3	1.29	88.8	-1.12
Chromium	µg/l	59.1 ± 1.42	55.3 ± 11	5.03	93.5	-0.76
Copper	µg/l	10.7 ± 0.28	10.5 ± 2.1	0.963	98.1	-0.21

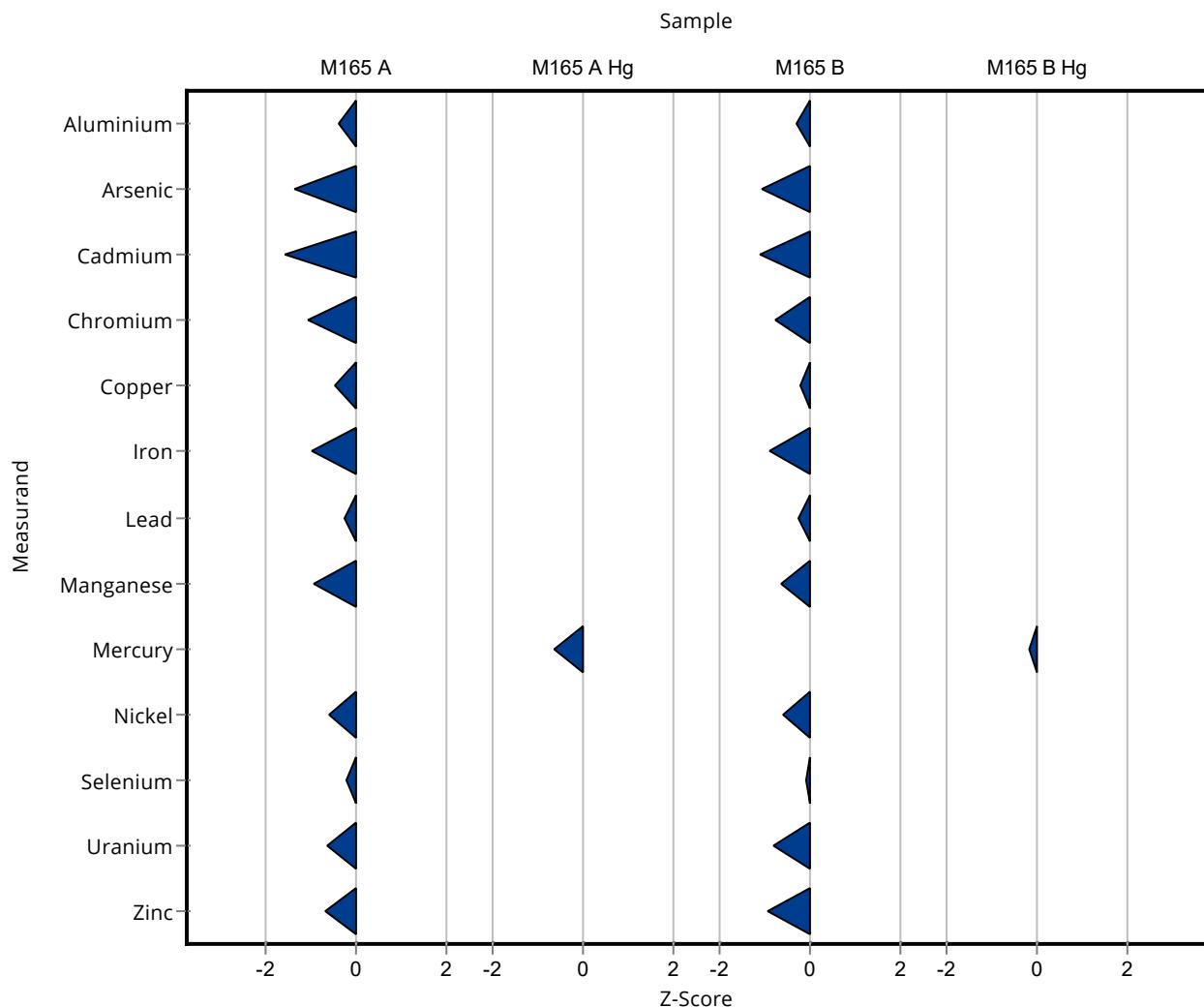
Summary of results Metals and trace elements M165

Labcode: LC0023

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	27.3 ± 5.5	3.33	90.1	-0.90
Lead	µg/l	6.45 ± 0.323	6.2 ± 1.2	0.968	96.1	-0.26
Manganese	µg/l	7.91 ± 0.339	7.5 ± 1.5	0.632	94.9	-0.64
Nickel	µg/l	26.1 ± 0.637	24.3 ± 4.9	3.13	93.1	-0.58
Selenium	µg/l	4.79 ± 0.282	4.75 ± 0.95	0.575	99.1	-0.07
Uranium	µg/l	2.35 ± 0.139	2.15 ± 0.43	0.246	91.6	-0.80
Zinc	µg/l	235 ± 7.06	215 ± 43	21.1	91.6	-0.93

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	1.6 ± 0.32	0.23	97.6	-0.17



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	300 ± 60	47.7	94.3	-0.15
Arsenic	µg/l	5.86 ± 0.245	4.8 ± 0.96	0.761	82	-0.55
Cadmium	µg/l	1.64 ± 0.0718	1.38 ± 0.28	0.164	84	-0.47
Chromium	µg/l	13.2 ± 0.432	12 ± 2.4	1.12	90.8	-0.25
Copper	µg/l	12.5 ± 0.473	12 ± 2.4	1.13	95.8	-0.11
Iron	µg/l	118 ± 3.21	105 ± 21	13	89.1	-0.31
Lead	µg/l	2.14 ± 0.0665	2.05 ± 0.41	0.32	96	-0.10
Manganese	µg/l	33.8 ± 1.02	31.5 ± 6.3	2.43	93.2	-0.18
Nickel	µg/l	4.42 ± 0.275	4.1 ± 0.82	0.53	92.8	-0.19
Selenium	µg/l	13.9 ± 0.565	13.5 ± 2.7	1.67	97.1	-0.07
Uranium	µg/l	3.6 ± 0.318	3.25 ± 0.65	0.54	90.3	-0.26
Zinc	µg/l	168 ± 4.7	158 ± 32	15.1	93.9	-0.16

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	3.4 ± 0.68	0.522	91.2	-0.24

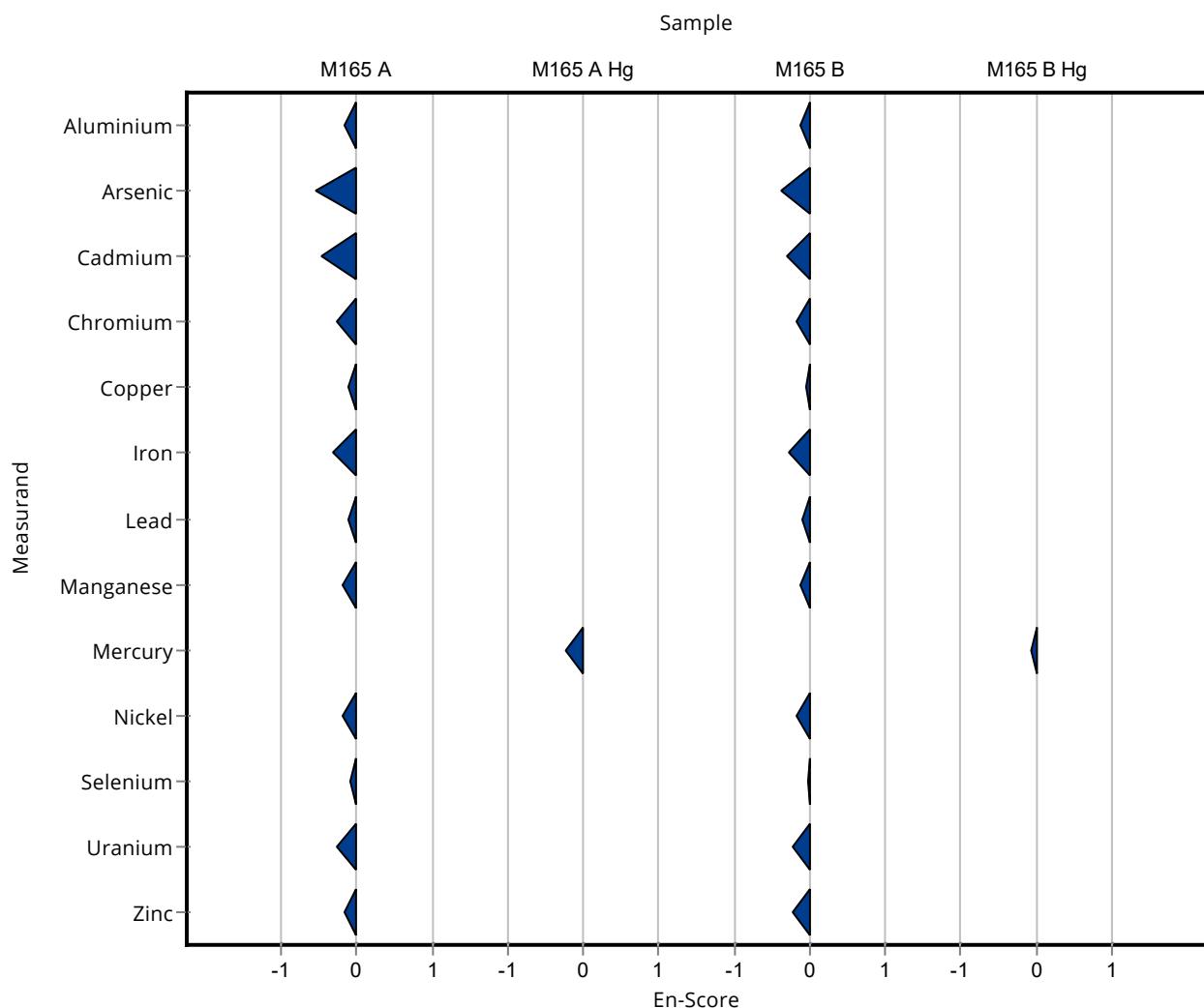
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	51.3 ± 10	8.04	95.7	-0.11
Arsenic	µg/l	29.8 ± 1.13	25.8 ± 5.2	3.88	86.5	-0.38
Cadmium	µg/l	12.9 ± 0.534	11.5 ± 2.3	1.29	88.8	-0.31
Chromium	µg/l	59.1 ± 1.42	55.3 ± 11	5.03	93.5	-0.17
Copper	µg/l	10.7 ± 0.28	10.5 ± 2.1	0.963	98.1	-0.05
Iron	µg/l	30.3 ± 1.28	27.3 ± 5.5	3.33	90.1	-0.27

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	6.2 ± 1.2	0.968	96.1	-0.10
Manganese	µg/l	7.91 ± 0.339	7.5 ± 1.5	0.632	94.9	-0.13
Nickel	µg/l	26.1 ± 0.637	24.3 ± 4.9	3.13	93.1	-0.18
Selenium	µg/l	4.79 ± 0.282	4.75 ± 0.95	0.575	99.1	-0.02
Uranium	µg/l	2.35 ± 0.139	2.15 ± 0.43	0.246	91.6	-0.23
Zinc	µg/l	235 ± 7.06	215 ± 43	21.1	91.6	-0.23

Sample: M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	1.6 ± 0.32	0.23	97.6	-0.06



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	318 ± 9	296 ± 29	47.7	93.1	-0.46
Arsenic	µg/l	5.86 ± 0.245	5.72 ± 0.24	0.761	97.7	-0.18
Cadmium	µg/l	1.64 ± 0.0718	1.55 ± 0.11	0.164	94.3	-0.57
Chromium	µg/l	13.2 ± 0.432	13 ± 0.91	1.12	98.4	-0.19
Copper	µg/l	12.5 ± 0.473	12.4 ± 1.2	1.13	99	-0.11
Iron	µg/l	118 ± 3.21	117 ± 9.6	13	99.2	-0.07
Lead	µg/l	2.14 ± 0.0665	2.03 ± 0.15	0.32	95.1	-0.33
Manganese	µg/l	33.8 ± 1.02	33.2 ± 2.8	2.43	98.2	-0.25
Nickel	µg/l	4.42 ± 0.275	4.27 ± 0.47	0.53	96.7	-0.28
Selenium	µg/l	13.9 ± 0.565	13.6 ± 0.8	1.67	97.8	-0.18
Uranium	µg/l	3.6 ± 0.318	3.2 ± 0.38	0.54	88.9	-0.74
Zinc	µg/l	168 ± 4.7	170 ± 14	15.1	101	0.11

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	3.73 ± 0.197	3.67 ± 0.09	0.522	98.4	-0.11

Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	µg/l	53.6 ± 2.35	51 ± 4.9	8.04	95.2	-0.32
Arsenic	µg/l	29.8 ± 1.13	28.6 ± 1.2	3.88	95.9	-0.31
Cadmium	µg/l	12.9 ± 0.534	12.3 ± 0.84	1.29	95	-0.50
Chromium	µg/l	59.1 ± 1.42	57.7 ± 4	5.03	97.6	-0.28
Copper	µg/l	10.7 ± 0.28	10.5 ± 1.1	0.963	98.1	-0.21

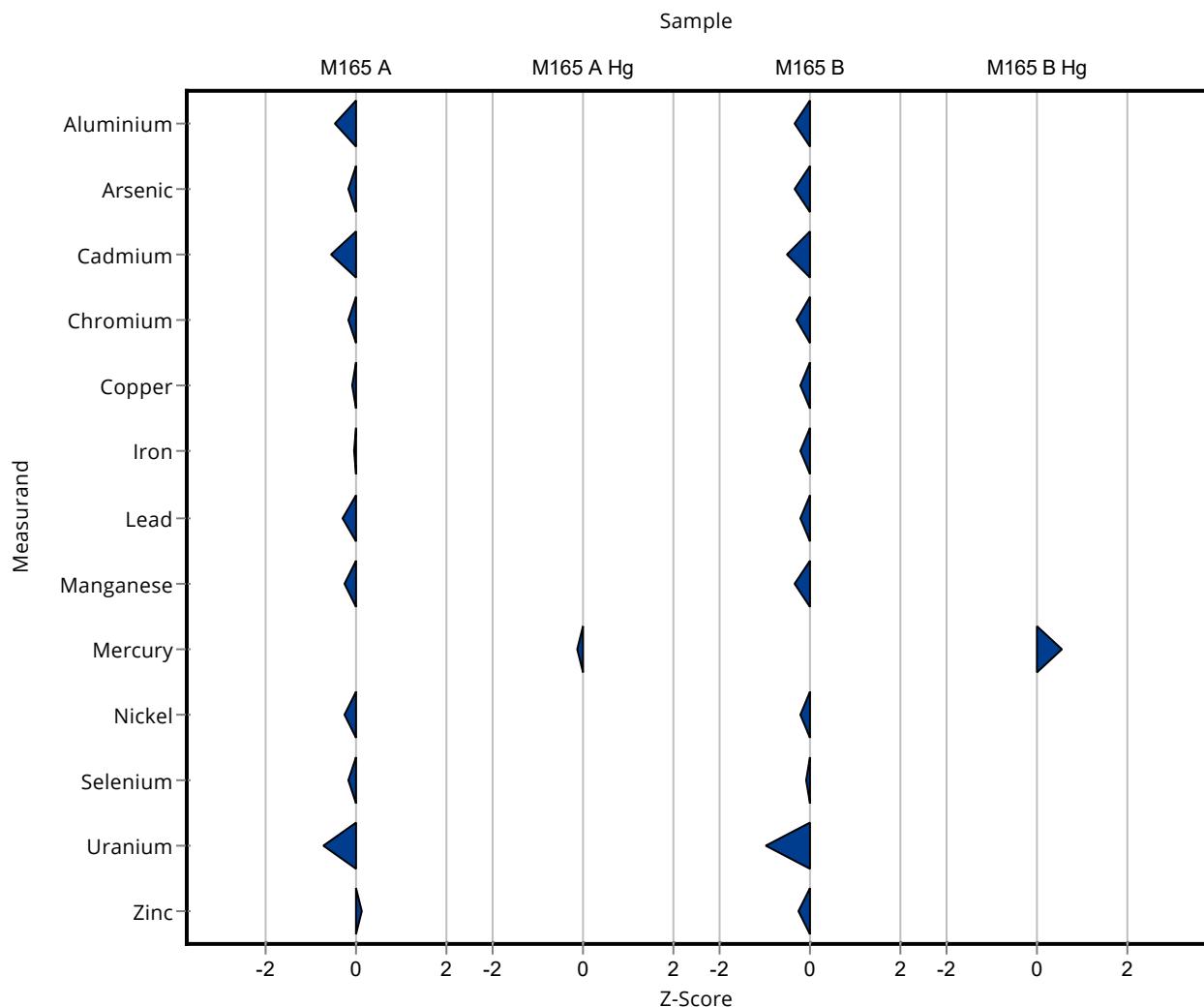
Summary of results Metals and trace elements M165

Labcode: LC0024

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Iron	µg/l	30.3 ± 1.28	29.6 ± 2.4	3.33	97.7	-0.21
Lead	µg/l	6.45 ± 0.323	6.25 ± 0.45	0.968	96.9	-0.21
Manganese	µg/l	7.91 ± 0.339	7.7 ± 0.65	0.632	97.4	-0.32
Nickel	µg/l	26.1 ± 0.637	25.4 ± 2.8	3.13	97.3	-0.23
Selenium	µg/l	4.79 ± 0.282	4.75 ± 0.28	0.575	99.1	-0.07
Uranium	µg/l	2.35 ± 0.139	2.11 ± 0.25	0.246	89.9	-0.96
Zinc	µg/l	235 ± 7.06	229 ± 19	21.1	97.6	-0.27

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	µg/l	1.64 ± 0.0704	1.77 ± 0.043	0.23	108	0.57



Sample:M165A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	318 ± 9	296 ± 29	47.7	93.1	-0.38
Arsenic	µg/l	5.86 ± 0.245	5.72 ± 0.24	0.761	97.7	-0.25
Cadmium	µg/l	1.64 ± 0.0718	1.55 ± 0.11	0.164	94.3	-0.40
Chromium	µg/l	13.2 ± 0.432	13 ± 0.91	1.12	98.4	-0.11
Copper	µg/l	12.5 ± 0.473	12.4 ± 1.2	1.13	99	-0.05
Iron	µg/l	118 ± 3.21	117 ± 9.6	13	99.2	-0.05
Lead	µg/l	2.14 ± 0.0665	2.03 ± 0.15	0.32	95.1	-0.34
Manganese	µg/l	33.8 ± 1.02	33.2 ± 2.8	2.43	98.2	-0.11
Nickel	µg/l	4.42 ± 0.275	4.27 ± 0.47	0.53	96.7	-0.15
Selenium	µg/l	13.9 ± 0.565	13.6 ± 0.8	1.67	97.8	-0.18
Uranium	µg/l	3.6 ± 0.318	3.2 ± 0.38	0.54	88.9	-0.49
Zinc	µg/l	168 ± 4.7	170 ± 14	15.1	101	0.06

Sample:M165AHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	3.73 ± 0.197	3.67 ± 0.09	0.522	98.4	-0.22

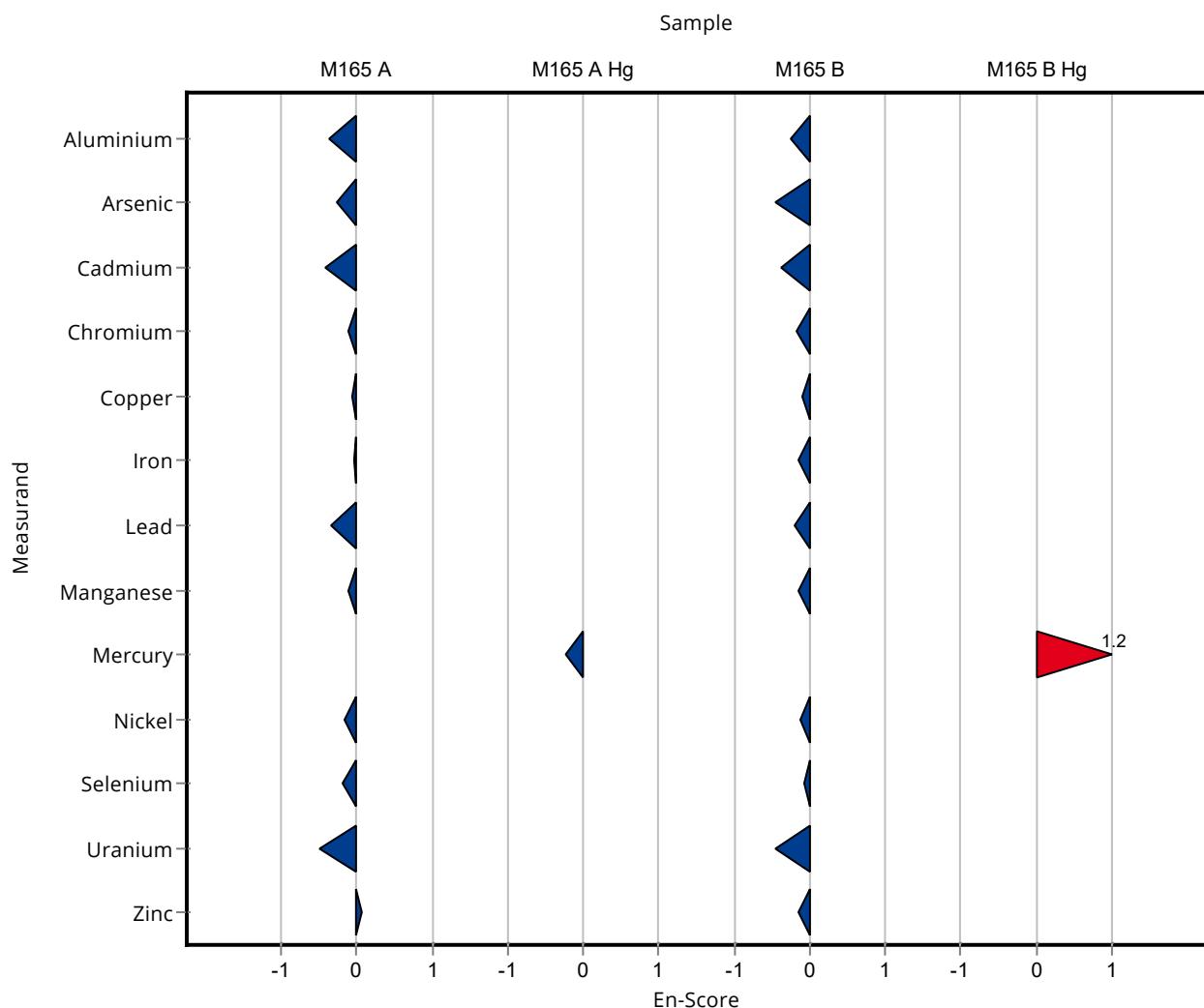
Sample:M165B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	µg/l	53.6 ± 2.35	51 ± 4.9	8.04	95.2	-0.26
Arsenic	µg/l	29.8 ± 1.13	28.6 ± 1.2	3.88	95.9	-0.46
Cadmium	µg/l	12.9 ± 0.534	12.3 ± 0.84	1.29	95	-0.37
Chromium	µg/l	59.1 ± 1.42	57.7 ± 4	5.03	97.6	-0.17
Copper	µg/l	10.7 ± 0.28	10.5 ± 1.1	0.963	98.1	-0.09
Iron	µg/l	30.3 ± 1.28	29.6 ± 2.4	3.33	97.7	-0.14

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Lead	µg/l	6.45 ± 0.323	6.25 ± 0.45	0.968	96.9	-0.21
Manganese	µg/l	7.91 ± 0.339	7.7 ± 0.65	0.632	97.4	-0.15
Nickel	µg/l	26.1 ± 0.637	25.4 ± 2.8	3.13	97.3	-0.13
Selenium	µg/l	4.79 ± 0.282	4.75 ± 0.28	0.575	99.1	-0.07
Uranium	µg/l	2.35 ± 0.139	2.11 ± 0.25	0.246	89.9	-0.46
Zinc	µg/l	235 ± 7.06	229 ± 19	21.1	97.6	-0.15

Sample:M165BHG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	µg/l	1.64 ± 0.0704	1.77 ± 0.043	0.23	108	1.17



## E9. Methodenübersicht / Overview of methods

LabCode	Sample	Aluminium	Arsenic	Cadmium	Chromium	Copper	Iron	Manganese
LC0001	M165A	ICP-MS; EN ISO 17294-2						
LC0002	M165A	ICP-MS; EN ISO 17294-2; E29						
LC0003	M165A	ICP-OES; EN ISO 11885; E22						
LC0004	M165A	ICP-MS; EN ISO 17294-2						
LC0005	M165A		ICP-OES;					
LC0006	M165A	ICP-MS;						
LC0007	M165A	ICP-OES;	AAS;	AAS;	ICP-OES;	ICP-OES;	ICP-OES;	ICP-OES;
LC0008	M165A	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294	ICP-MS; EN ISO 17294	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885
LC0009	M165A	ICP-MS; ISO 17294						
LC0010	M165A	GF-AAS;	GF-AAS;	GF-AAS;	GF-AAS;	GF-AAS;	F-AAS;	F-AAS;
LC0011	M165A	ICP-OES; EN ISO 11885; E22						
LC0012	M165A	ICP-MS; EN ISO 17294-2						
LC0013	M165A	ICP-MS; EN ISO 17294-2; E29					Photometry; DIN 38406-1; E1	ICP-MS; EN ISO 17294-2; E29
LC0014	M165A	ICP-MS; EN ISO 17294-2						
LC0015	M165A	ICP-MS; ISO 17294-2						
LC0016	M165A	ICP-MS; EN ISO 17294-2						
LC0017	M165A	ICP-MS; EN ISO 17294						
LC0018	M165A	ICP-MS; EN ISO 17294-2						
LC0019	M165A	ICP-OES;				ICP-OES;	ICP-OES;	ICP-OES;
LC0020	M165A	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294	ICP-MS; EN ISO 17294	ICP-MS; EN ISO 17294	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885
LC0021	M165A	ICP-MS; EN ISO 17294-2						
LC0022	M165A	ICP-OES;						
LC0023	M165A	ICP-MS; ISO 17294-2						
LC0024	M165A	ICP-MS; EN ISO 17294-2						

LabCode	Sample	Nickel	Lead	Selenium	Uranium	Zinc	Mercury (M165AHG)
LC0001	M165A	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2			ICP-MS; EN ISO 17294-2	
LC0002	M165A	ICP-MS; EN ISO 17294-2; E29	AFS; EN ISO 17852; E35				
LC0003	M165A	ICP-OES; EN ISO 11885; E22	ICP-OES; EN ISO 11885; E22	ICP-OES; EN ISO 11885; E22	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885; E22	CV-AAS; EN ISO 12846; E12
LC0004	M165A	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2				
LC0005	M165A						
LC0006	M165A	ICP-MS;	ICP-MS;	ICP-MS;	ICP-MS;		ICP-MS;
LC0007	M165A	AAS;	AAS;			ICP-OES;	
LC0008	M165A	ICP-MS; EN ISO 17294	ICP-OES; EN ISO 11885	CV-AAS; EN ISO 12846			
LC0009	M165A	ICP-MS; ISO 17294	HG-AAS; AAS-Hydrid				
LC0010	M165A	GF-AAS;	GF-AAS;			F-AAS;	HG-AAS;
LC0011	M165A	ICP-OES; EN ISO 11885; E22	ICP-OES; EN ISO 11885; E22	ICP-OES; EN ISO 11885; E22		ICP-OES; EN ISO 11885; E22	CV-AAS; EN ISO 12846; E12
LC0012	M165A	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2				
LC0013	M165A						
LC0014	M165A	ICP-MS; EN ISO 17294-2	CV-AAS; EN ISO 12846				
LC0015	M165A	ICP-MS; ISO 17294-2					
LC0016	M165A	ICP-MS; EN ISO 17294-2	AFS; EN ISO 17852				
LC0017	M165A						
LC0018	M165A	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2				
LC0019	M165A					ICP-OES;	
LC0020	M165A		ICP-MS; EN ISO 17294			ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294
LC0021	M165A	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2				
LC0022	M165A	ICP-OES;	ICP-OES;			ICP-OES;	AAS;
LC0023	M165A	ICP-MS; ISO 17294-2	ICP-MS; ISO 17294-2				
LC0024	M165A	ICP-MS; EN ISO 17294-2	CV-AAS; EN 1483				

LabCode	Sample	Aluminium	Arsenic	Cadmium	Chromium	Copper	Iron	Manganese
LC0001	M165B	ICP-MS; EN ISO 17294-2						
LC0002	M165B	ICP-MS; EN ISO 17294-2; E29						
LC0003	M165B	ICP-OES; EN ISO 11885; E22						
LC0004	M165B	ICP-MS; EN ISO 17294-2						
LC0005	M165B		ICP-OES;					
LC0006	M165B							
LC0007	M165B	ICP-OES;	AAS;	AAS;	ICP-OES;	ICP-OES;	ICP-OES;	ICP-OES;
LC0008	M165B	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294	ICP-MS; EN ISO 17294	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885
LC0009	M165B	ICP-MS; ISO 17294						
LC0010	M165B	GF-AAS;	GF-AAS;	GF-AAS;	GF-AAS;	GF-AAS;	F-AAS;	F-AAS;
LC0011	M165B	ICP-OES; EN ISO 11885; E22						
LC0012	M165B	ICP-MS; EN ISO 17294-2						
LC0013	M165B	ICP-MS; EN ISO 17294-2; E29					Photometry; DIN 38406-1; E1	ICP-MS; EN ISO 17294-2; E29
LC0014	M165B	ICP-MS; EN ISO 17294-2						
LC0015	M165B	ICP-MS; ISO 17294-2						
LC0016	M165B	ICP-MS; EN ISO 17294-2						
LC0017	M165B	ICP-MS; EN ISO 17294						
LC0018	M165B	ICP-MS; EN ISO 17294-2						
LC0019	M165B	ICP-OES;				ICP-OES;	ICP-OES;	ICP-OES;
LC0020	M165B	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885			
LC0021	M165B	ICP-MS; EN ISO 17294-2						
LC0022	M165B	ICP-OES;						
LC0023	M165B	ICP-MS; ISO 17294-2						
LC0024	M165B	ICP-MS; EN ISO 17294-2						

<b>LabCode</b>	<b>Sample</b>	<b>Nickel</b>	<b>Lead</b>	<b>Selenium</b>	<b>Uranium</b>	<b>Zinc</b>	<b>Mercury (M165BHG)</b>
LC0001	M165B	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2			ICP-MS; EN ISO 17294-2	
LC0002	M165B	ICP-MS; EN ISO 17294-2; E29					
LC0003	M165B	ICP-OES; EN ISO 11885; E22	ICP-OES; EN ISO 11885; E22	ICP-OES; EN ISO 11885; E22	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885; E22	CV-AAS; EN ISO 12846; E12
LC0004	M165B	ICP-MS; EN ISO 17294-2					
LC0005	M165B						
LC0006	M165B						
LC0007	M165B	AAS;	AAS;			ICP-OES;	
LC0008	M165B	ICP-MS; EN ISO 17294	ICP-OES; EN ISO 11885	CV-AAS; EN ISO 12846			
LC0009	M165B	ICP-MS; ISO 17294	HG-AAS; AAS-Hydrid				
LC0010	M165B	GF-AAS;	GF-AAS;			F-AAS;	HG-AAS;
LC0011	M165B	ICP-OES; EN ISO 11885; E22	ICP-OES; EN ISO 11885; E22	ICP-OES; EN ISO 11885; E22		ICP-OES; EN ISO 11885; E22	CV-AAS; EN ISO 12846; E12
LC0012	M165B	ICP-MS; EN ISO 17294-2					
LC0013	M165B						
LC0014	M165B	ICP-MS; EN ISO 17294-2	CV-AAS; EN ISO 12846				
LC0015	M165B	ICP-MS; ISO 17294-2					
LC0016	M165B	ICP-MS; EN ISO 17294-2	AFS; EN ISO 17852				
LC0017	M165B						
LC0018	M165B	ICP-MS; EN ISO 17294-2					
LC0019	M165B					ICP-OES;	
LC0020	M165B		ICP-MS; EN ISO 17294			ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294
LC0021	M165B	ICP-MS; EN ISO 17294-2					
LC0022	M165B	ICP-OES;	ICP-OES;			ICP-OES;	AAS;
LC0023	M165B	ICP-MS; ISO 17294-2					
LC0024	M165B	ICP-MS; EN ISO 17294-2	CV-AAS; EN 1483				