

**Proficiency Testing Scheme für die
Umweltanalytik
AB11 Abfall nach der Deponie-VO
(Eluat Metalle)**

**Proficiency Testing Scheme for
Environmental Analysis
AB11 Waste according to landfill directive
(eluate metals)**

BERICHT / REPORT

Probenversand / Sample dispatch: 20.09.2022

Ausgabe/Edition 1: 04.11.2022

Dieser Report umfasst 228 Seiten.
This report comprises 228 pages.

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Leitung Eignungsprüfungen für den Bereich chemische Analytik / Management for proficiency tests for chemical analysis

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D1. Beschreibung des Ringversuchs

D1.1. Ausgestaltung und Durchführung

- Anzahl der Anmeldungen: 30
- Anzahl der übermittelten Datensätze: 29
- Probenversand: 20.09.2022
- Einsendeschluss der Daten: 18.10.2022

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

Als Probenmaterial diente ein Abfalleluat (Mischung Aushubmaterial, Rauchgasreinigungsrückstand).

Das Probenmaterial umfasste:

- 2 Proben Eluat (AB11 und AB11Hg)

Um homogene Probeneluate zu erzielen, wurde die Herstellung der Eluatprobe bereits am 11.07.2022 begonnen (gemäß ÖNORM EN 12457-4 L/S=10 l/kg TM). Nach der Elution wurde das Eluat über einen 0,45 µm Membranfilter am 15.09.2022 filtriert. Danach wurden die Proben bis zur Abfüllung gekühlt gelagert (4 +/-3°C).

Die o.a. Proben wurden im Rührkessel unter ständigem Rühren zusätzlich mit einzelnen Substanzen dotiert.

Das Abfüllen der Proben erfolgte unter ständigem Rühren (Rührkessel). Die Stabilisierung erfolgte durch Zusatz von Salpetersäure (Probe AB11, final 1 % HNO₃) bzw. durch Zusatz von Salzsäure (Probe AB11Hg, final 1 % HCl).

Die homogenen Prüfgegenstände wurden am 20.09.2022 verschickt.

Jedes Teilnehmerlabor erhielt:

- 2 Proben zu je 100 ml, jeweils abgefüllt in 1 x 100 ml LDPE-Flaschen

D1.3. Anweisungen für die Teilnehmenden

Aus Stabilitätsgründen wurde empfohlen bis spätestens 28.09.2022 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 zeitnah zum Probenversand analysiert (Prüfstelle für Umwelt-, GVO- & Treibstoffanalytik, akkreditiert nach EN ISO/IEC 17025 für die angeführten Parameter). Die Selenbestimmung in den Eluatproben gemäß DIN 38405-23 wurde zusätzlich an ein externes Labor im Unterauftrag vergeben (13.10.–17.10.2022; verdeckte Vergabe - Proben anonymisiert; akkreditiert nach EN ISO/IEC 17025).

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

Um die ausreichende Stabilität der Prüfgegenstände der aktuellen Eignungsprüfungsrunde 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 Eignungsprüfungsrunde 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 18.10.2022 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 eingestuft 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:

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

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.
<i>Kriterium</i>	Vergleichsstandardabweichung berechnet aus den Statistiken der ausreißerbereinigten Ergebnissen der Teilnehmenden (sR) des aktuellen Ringversuchs. 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_n-Score

Für die Ringversuchsproben erfolgen seit 2019 zusätzliche Bewertungen unter Einbeziehung der erweiterten Messunsicherheiten der Teilnehmenden und der erweiterten Messunsicherheit des zugewiesenen Wertes, gemäß E_n-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_n-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 mitberücksichtigt. 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_n -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 Ergebnisstreuung dazu kommen kann, dass der Bereich z-Score - 2 bis z-Score + 2 einen ungewöhnlich hohen Wiederfindungsbereich abdeckt (vergleiche hier Silber). 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.

Parameter Aluminium, Arsen, Bor, Barium, Cobalt, Chrom, Kupfer, Eisen, Molybdän, Nickel, Antimon, Zinn, Vanadium, Zink bei Probe AB11:

Bei diesen Parametern erfolgt die Berechnung der Scores nach D2. Die Kriterien für Aluminium, Arsen, Barium, Cobalt, Kupfer, Antimon und Zinn wurden auf 10 % aufgerundet.

Parameter Silber, Cadmium, Blei bei Probe AB11 und Parameter Quecksilber bei Probe AB11 Hg:

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. Das Kriterium für Silber wurde über die Gruppe der akkreditierten Teilnehmenden berechnet (vR 49 %), das Kriterium für Cadmium wurde auf 10 % aufgerundet.

Parameter Selen Probe AB11:

Ein hoher Anteil an teilnehmenden Labore (8 von 27 abgegebenen Daten), welche mittels ICP-MS analysiert haben und stark erhöhte Selenergebnisse berichtet hatten, wurden als Hampel-Ausreißer identifiziert. Zur Absicherung der Selengehalte mittels einer unabhängigen Methode (DIN 38405-23) wurden die Eluate an ein dafür akkreditiertes Labor extern vergeben. Die niedrigen Selengehalte wurden bestätigt (<0,002 mg/l Selen; im Vergleich dazu: informativer Mittelwert über akkreditierte, ausreißerbereinigte Labore: MW (n=13): 0,0014 +/- 0,0002 mg/l U(k=2). Aufgrund der hohen Streuung zwischen den Ergebnissen der Teilnehmenden wurde kein zugewiesener Wert definiert. Für diesen Parameter empfehlen wir einen Vergleich mit den Ergebnissen des Kontrolllabors.

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)

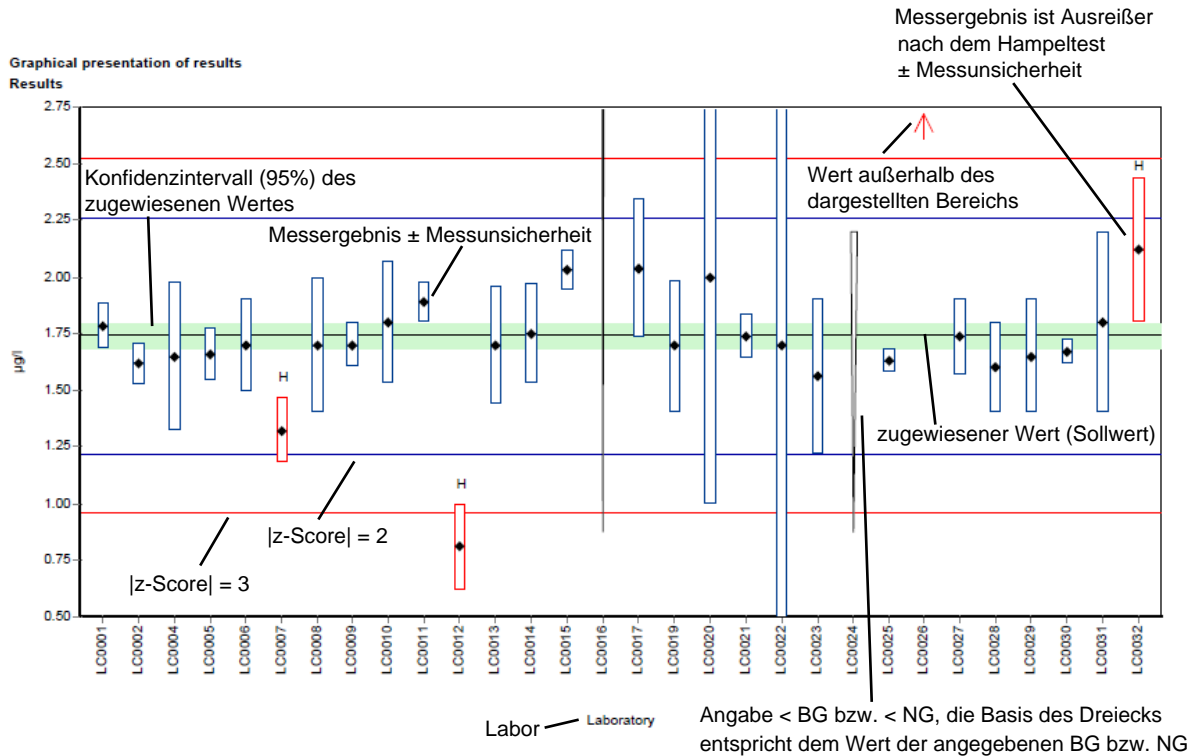
sR	Vergleichsstandardabweichung, berechnet aus den ausreißerbereinigten Ergebnissen der Teilnehmenden des aktuellen Ringversuchs (angegeben auf 3 signifikante Stellen)
vR	relative Vergleichsstandardabweichung in %, berechnet aus den ausreißerbereinigten Ergebnissen der Teilnehmenden des aktuellen Ringversuchs bezogen auf den Mittelwert (angegeben auf 2 signifikante Stellen)
Kontrollwert \pm U (k=2)	Mittelwert der Kontrollmessungen des Veranstalters \pm 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.
\pm 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 _n -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_n -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

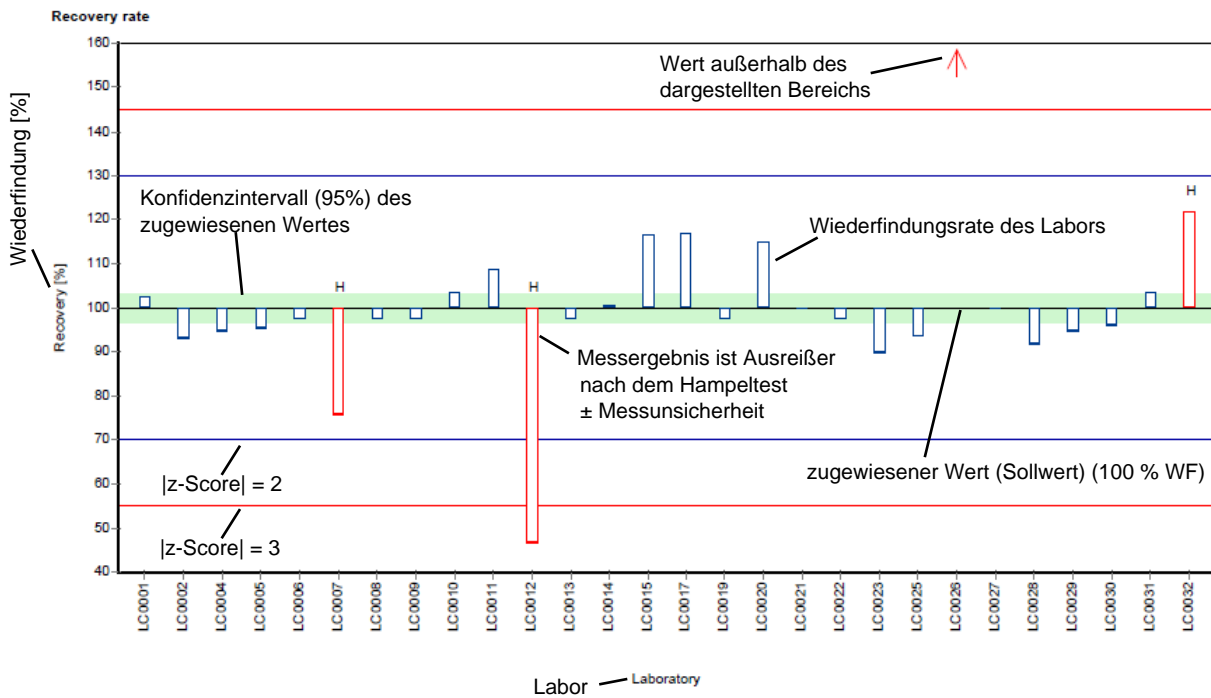
Nachfolgend wird die graphische Darstellung anhand von kommentierten Beispieldiagrammen erläutert.

Beispieldiagramm: Messwerte



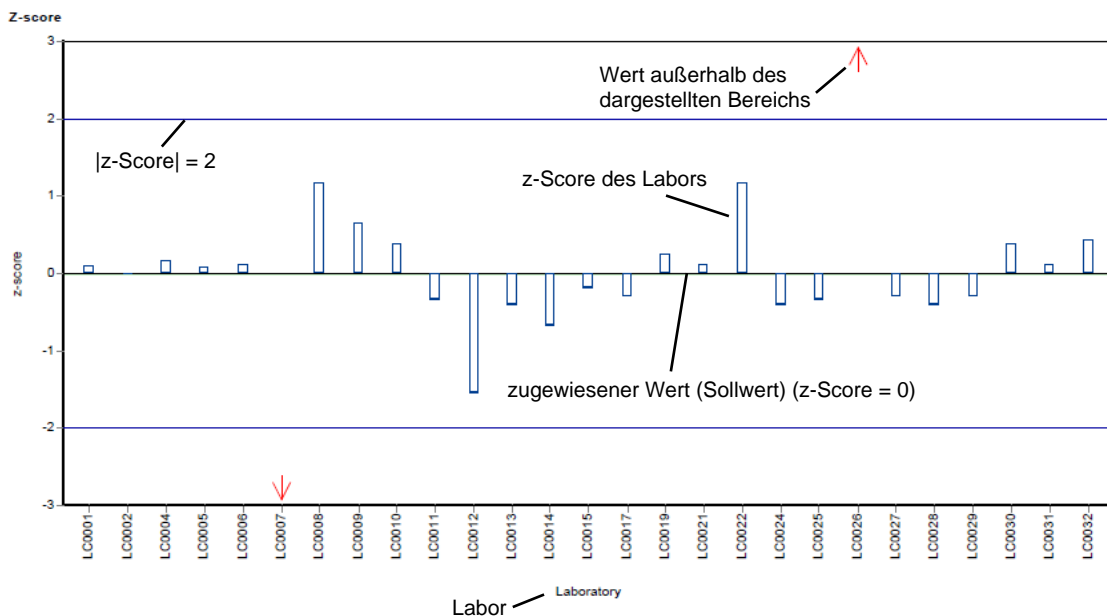
Unterschiedliche Analysenmethoden werden mit unterschiedlichen Farben kenntlich gemacht.

Beispieldiagramm: Wiederfindung zum zugewiesenen Wert



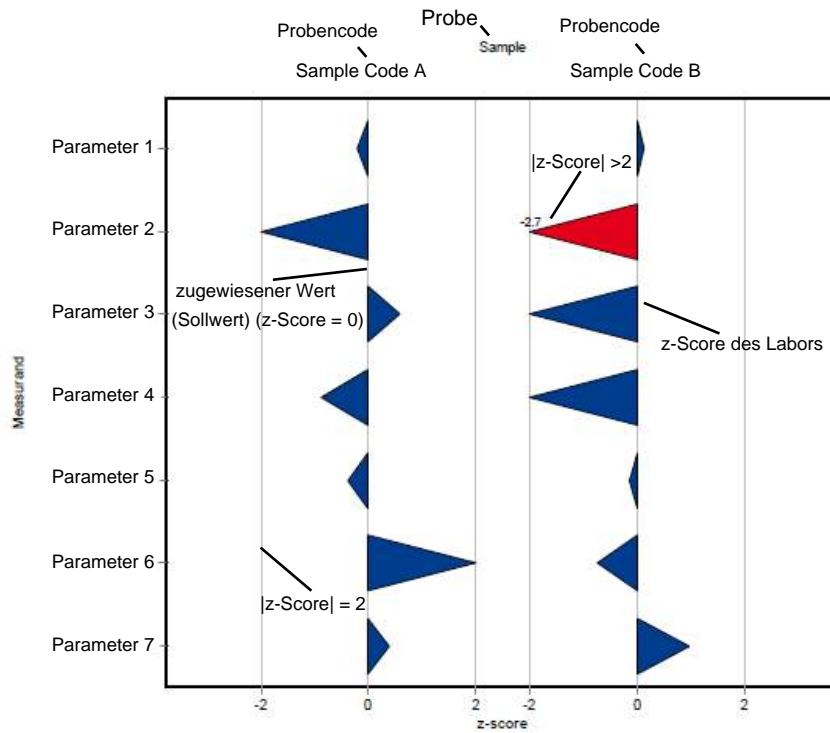
Unterschiedliche Analysenmethoden werden mit unterschiedlichen Farben kenntlich gemacht.

Beispieldiagramm: z-Score

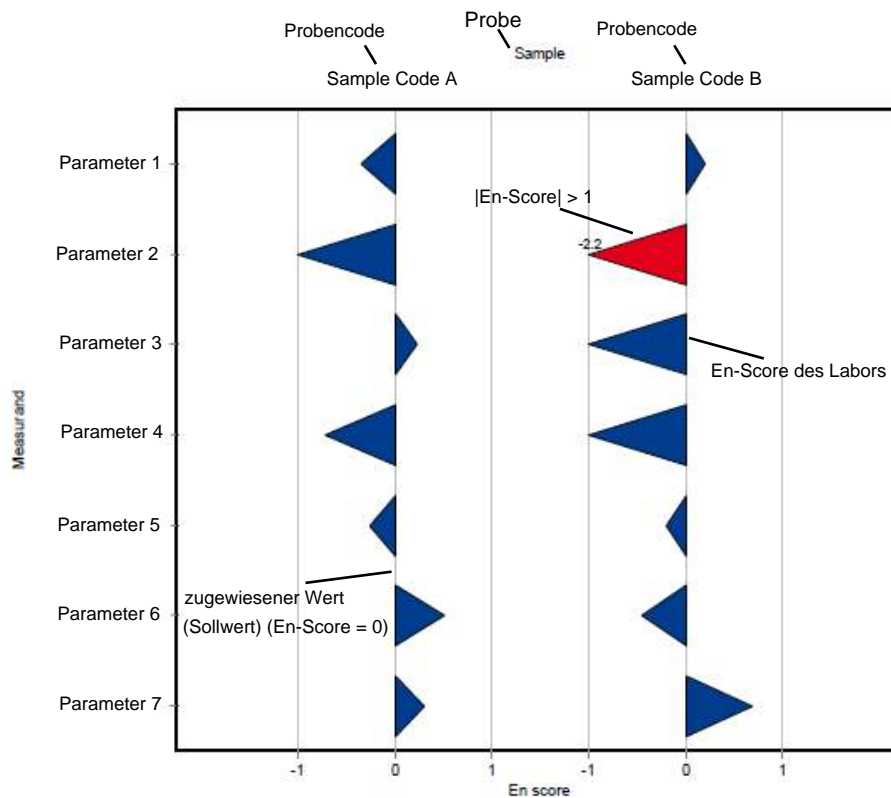


Unterschiedliche Analysenmethoden werden mit unterschiedlichen Farben kenntlich gemacht.

Beispieldiagramm: z-Score (labororientierte Auswertung)



Beispieldiagramm: En-Score (labororientierte Auswertung)



D6. Zusammenfassung

D6.1. Tabelle der zugewiesenen Werte

Parameter	Probe	Einheit	zugewiesener Wert	±	U (k=2)	Kriterium	Kriterium [%]
Aluminium	AB11	mg/l	29.5	± 0.506	2.95	10	
Antimon	AB11	mg/l	0.00752	± 0.000279	0.000752	10	
Arsen	AB11	mg/l	0.00937	± 0.000185	0.000937	10	
Barium	AB11	mg/l	3.31	± 0.127	0.331	10	
Bor	AB11	mg/l	0.324	± 0.015	0.0324	10	
Cadmium	AB11	mg/l	0.000721	± 0.0000196	0.0000721	10	
Chrom	AB11	mg/l	0.0344	± 0.00163	0.00413	12	
Cobalt	AB11	mg/l	0.0199	± 0.000808	0.00199	10	
Kupfer	AB11	mg/l	0.0675	± 0.00215	0.00675	10	
Eisen	AB11	mg/l	0.544	± 0.0269	0.0653	12	
Blei	AB11	mg/l	0.0118	± 0.00052	0.00118	10	
Quecksilber	AB11 HG	mg/l	0.000548	± 0.0000524	0.000115	21	
Molybdän	AB11	mg/l	0.023	± 0.001	0.00253	11	
Nickel	AB11	mg/l	0.0198	± 0.000858	0.00218	11	
Selen*	AB11	mg/l	-	± -	-	-	
Silber	AB11	mg/l	0.00222	± 0.000581	0.00109	49	
Zinn	AB11	mg/l	0.0335	± 0.000982	0.00335	10	
Vanadium	AB11	mg/l	0.0255	± 0.00113	0.00255	10	
Zink	AB11	mg/l	0.0997	± 0.00672	0.0179	18	

*informativer Wert AB11 – Selen <0.002 mg/l (Kontrolllabor;GF-AAS)

D6.2. Zusammenfassung der ausreißerbereinigten Ringversuchsergebnisse

Parameter	Probe	Anzahl Labors für Berechnung	Anzahl Ausreißer Labors	Einheit	Mittelwert	± VB (99%)	Minimum	Maximum	sR	vR [%]
Aluminium	AB11	22	3	mg/l	29.5	± 0.76	27.2	31.3	1.19	4
Antimon	AB11	24	3	mg/l	0.00752	± 0.000419	0.0059	0.00886	0.000684	9.1
Arsen	AB11	20	6	mg/l	0.00937	± 0.000278	0.00853	0.0102	0.000414	4.4
Barium	AB11	26	0	mg/l	3.31	± 0.19	2.47	3.82	0.324	9.8
Bor	AB11	19	2	mg/l	0.324	± 0.0226	0.255	0.4	0.0328	10
Cadmium	AB11	17	8	mg/l	0.000721	± 0.000029	0.00061	0.0008	0.0000404	5.6
Chrom	AB11	28	0	mg/l	0.0344	± 0.00244	0.0229	0.0428	0.0043	12
Cobalt	AB11	23	2	mg/l	0.0199	± 0.00121	0.015	0.0233	0.00194	9.7
Kupfer	AB11	27	0	mg/l	0.0675	± 0.00323	0.056	0.0771	0.00559	8.3
Eisen	AB11	25	0	mg/l	0.544	± 0.0404	0.43	0.708	0.0674	12
Blei	AB11	22	4	mg/l	0.0118	± 0.00078	0.0089	0.0136	0.00122	10
Quecksilber	AB11 HG	21	2	mg/l	0.000547	± 0.000075	0.000239	0.00075	0.000115	21
Molybdän	AB11	26	0	mg/l	0.023	± 0.00151	0.017	0.0284	0.00256	11
Nickel	AB11	25	1	mg/l	0.0198	± 0.00129	0.0158	0.0243	0.00214	11
Selen	AB11	14	8	mg/l	0.00142	± 0.000263	0.001	0.0021	0.000328	23
Silber	AB11	15	1	mg/l	0.00227	± 0.000828	0.0008	0.005	0.00107	47
Zinn	AB11	21	2	mg/l	0.0335	± 0.00147	0.0293	0.037	0.00225	6.7
Vanadium	AB11	22	1	mg/l	0.0255	± 0.0017	0.0208	0.0317	0.00266	10
Zink	AB11	27	1	mg/l	0.0997	± 0.0101	0.0674	0.14	0.0175	18

E1. Description of the proficiency test

E1.1. Design and implementation

- Number of registrations: 30
- Number of submitted data records: 29
- Dispatch of samples: 20th September 2022
- Closing date for submission of data: 18th October 2022

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 sample material was waste eluate (mixture of excavated material, flue gas cleaning residue).

The following samples were made available:

- 2 samples eluate (AB11 and AB11Hg)

To guarantee homogenous samples, the production of the eluate samples was started on 11th of July 2022 (eluate according to ÖNORM EN 12457-4; s : l = 1:10). After the elution, the eluate was filtered using 0.45 µm membrane disc filters on 15th of September 2022. Afterwards, the samples were stored at 4 +/- 3°C until further processing.

The samples were partly spiked with specific substances under continuous stirring in the stirring vessel.

The samples were filled into bottles under continuous stirring (stirring vessel) and stabilized by addition of nitric acid (final concentration 1 % HNO₃) and by addition of hydrochloric acid (final concentration 1 % HCl) (Sample AB11Hg), respectively.

The homogeneous proficiency test items were dispatched on 20th September 2022.

Each participant received:

- 2 samples of 100 ml each, filled in 1 x 100ml LDPE bottles

E1.3. Instructions for the participants

For reasons of stability, it was recommended to start the analysis by the 28th September 2022 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 sample were transferred to the laboratory for control testing.

All parameters were analyzed in the testing laboratory at the Environment Agency Austria close to the time of sample dispatch (Prüfstelle für Umwelt-, GVO- & Treibstoffanalytik, accredited according to EN ISO/IEC 17025 for the parameters listed). The determination of selenium in the eluate samples according to DIN 38405-23 was performed at 13.10.–17.10.2022 at an external laboratory in subcontract (anonymous submission; accredited acc. to EN ISO/IEC 17025).

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 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 from 2013 to 2021 and based on the trend test evaluation of the current round, the stability of the test items for proficiency

testing of real 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 18th October 2022. 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 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 ($vR > 50\%$) 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:

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

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 the participants' results after removal of outliers (sR) in the current round. Where justified (e.g. results for real 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_n-Score

Since 2019 additional assessment of the participants' results using E_n-Scores for proficiency testing of real 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_n-Scores were calculated on the basis of the following formula:

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

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 (see e.g. silver in the current round). 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.

Parameters aluminium, arsenic, boron, barium, cobalt, chromium, copper, iron, molybdenum, nickel, antimony, tin, vanadium, zinc for sample AB11:

Scores for all listed parameters were calculated according to E2. The criteria for aluminum, arsenic, barium, cobalt, copper, antimony and tin were rounded up to 10%.

Parameters silver, cadmium, lead for sample AB11 and parameters mercury for sample AB11HG:

The assigned values calculated based on the results of the participants 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. The criteria for silver was set to 49 % (vR of accredited laboratories), the criteria for cadmium was rounded up to 10 %.

Parameter selenium for sample AB11:

A high proportion of participating laboratories (8 of 27 submitted data) that analyzed by ICP-MS and reported strongly elevated selenium results were identified as Hampel outliers. To confirm the selenium levels by an independent method (DIN 38405-23), the eluates were subcontracted to an accredited testing laboratory. The low selenium contents were confirmed (<0.002 mg/l selenium; in comparison: informative mean value over accredited, outlier-adjusted laboratories: MV (n=13): 0.0014 +/- 0.0002 mg/l U(k=2)). No assigned value was defined due to the high dispersion between the results of the participants. For this parameter we recommend a comparison with the results of the control laboratory.

E5. Annotations on tables and charts

E5.1. Information and abbreviations in tables

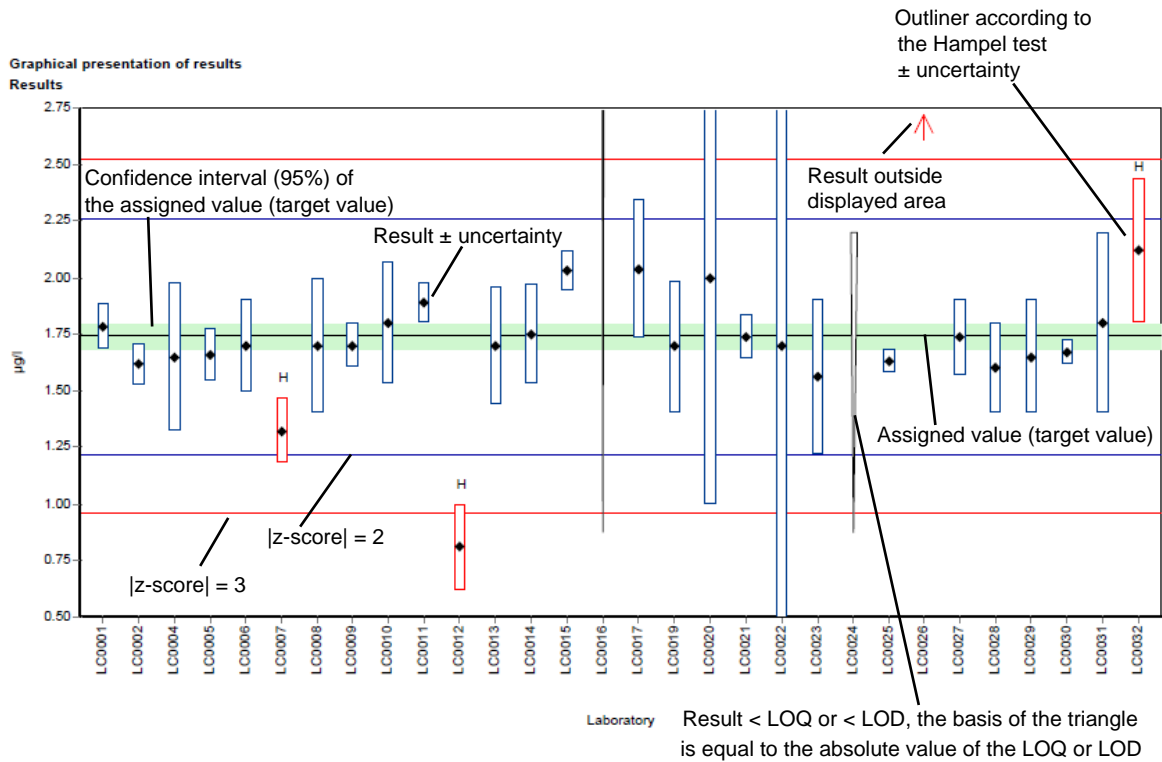
Parameter	Analyte identifier
Sample	Sample identifier
Unit	Given unit for result and uncertainty (e.g. µg/l)
Assigned value	Target value for proficiency assessment of the participants (3 significant digits)
U (k=2)	Expanded uncertainty (k=2) of the assigned value (3 significant digits)
Criteria	Specified 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 ± U	Result as indicated by participant (max. 5 decimal places) 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

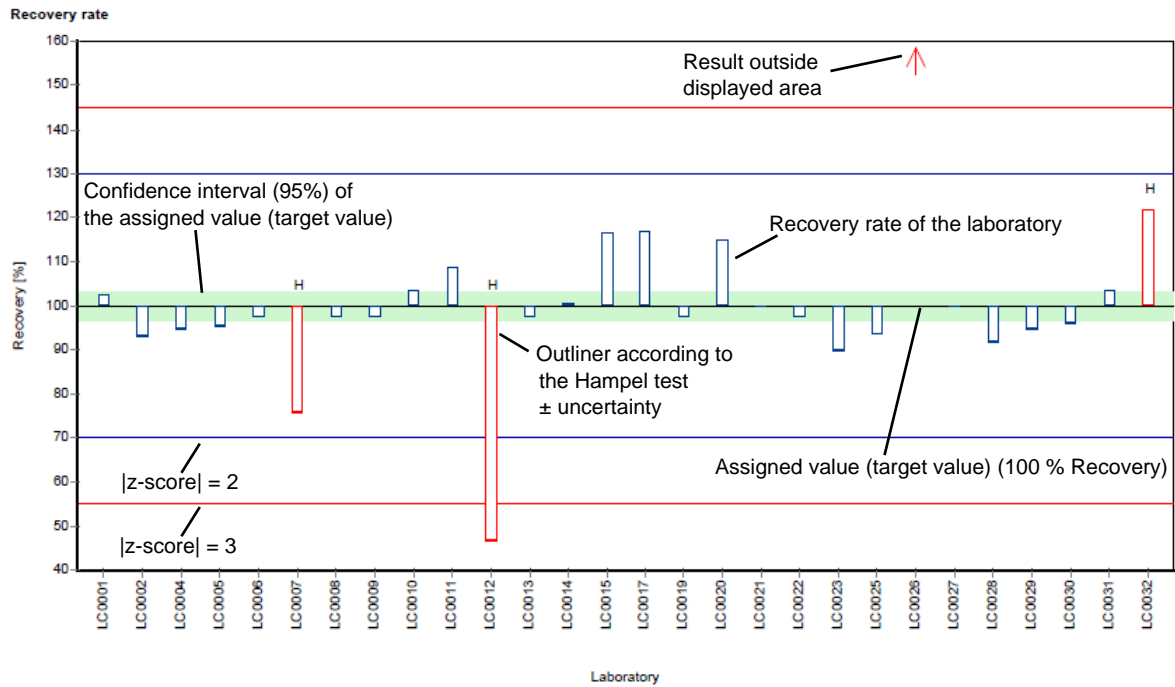
The graphic representation in the report is explained below by means of commented example diagrams:

Example chart: Results



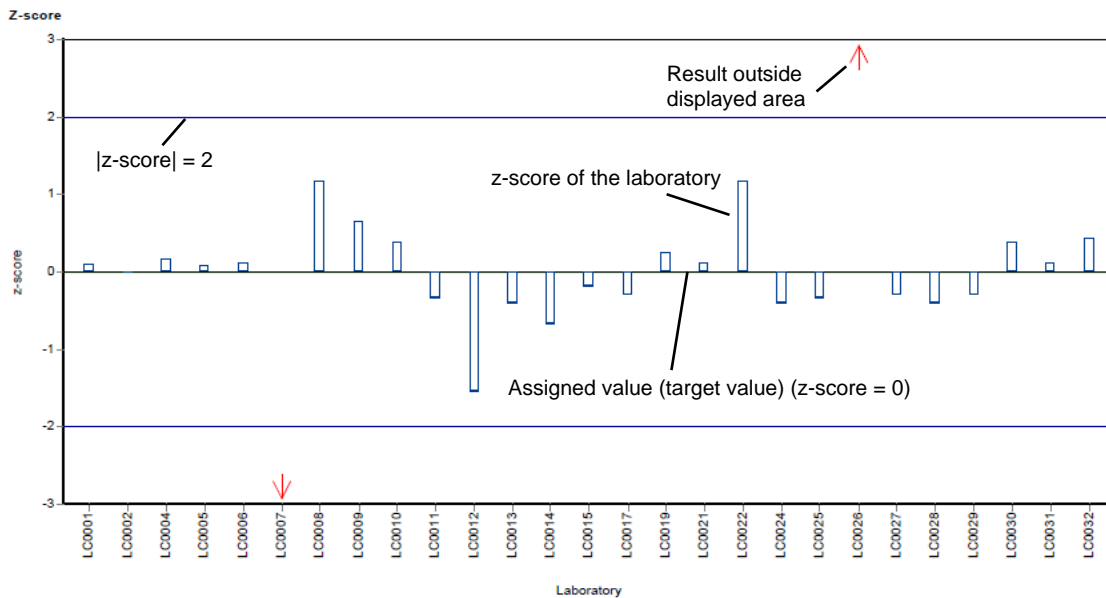
Different analysis methods are represented with different colors.

Example chart: Recovery



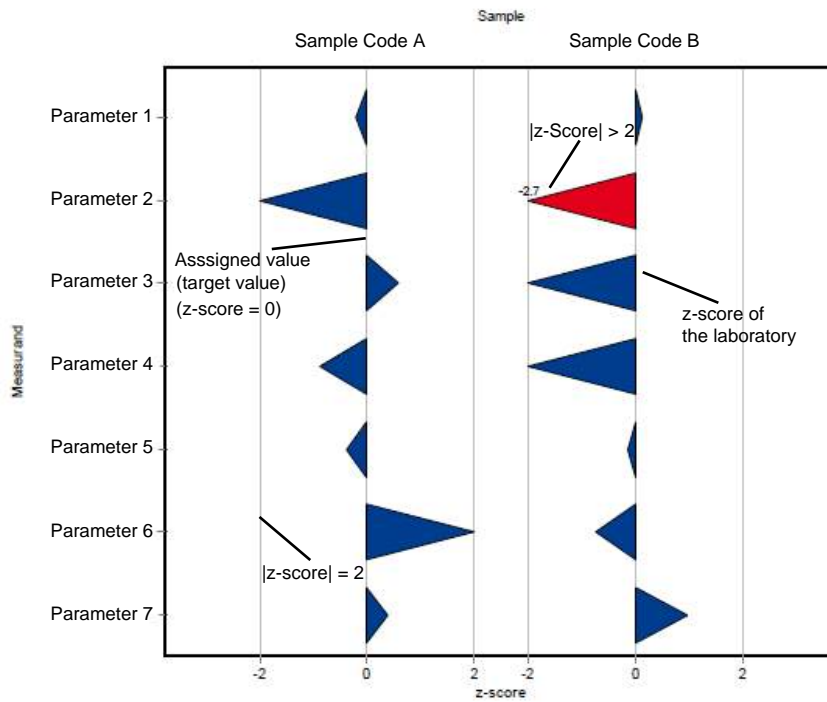
Different analysis methods are represented with different colors.

Example chart: z-score

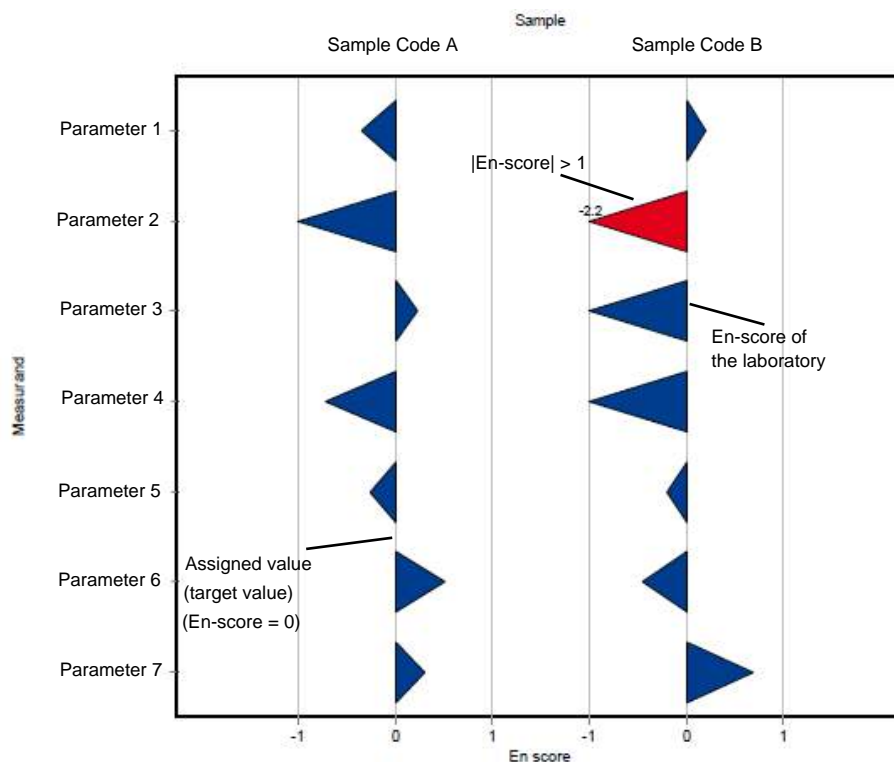


Different analysis methods are represented with different colors.

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	±	U (k=2)	Criterion	Criterion [%]
Aluminium	AB11	mg/l	29.5	± 0.506		2.95	10
Antimony	AB11	mg/l	0.00752	± 0.000279		0.000752	10
Arsenic	AB11	mg/l	0.00937	± 0.000185		0.000937	10
Barium	AB11	mg/l	3.31	± 0.127		0.331	10
Boron	AB11	mg/l	0.324	± 0.015		0.0324	10
Cadmium	AB11	mg/l	0.000721	± 0.0000196		0.0000721	10
Chromium	AB11	mg/l	0.0344	± 0.00163		0.00413	12
Cobalt	AB11	mg/l	0.0199	± 0.000808		0.00199	10
Copper	AB11	mg/l	0.0675	± 0.00215		0.00675	10
Iron	AB11	mg/l	0.544	± 0.0269		0.0653	12
Lead	AB11	mg/l	0.0118	± 0.00052		0.00118	10
Mercury	AB11 HG	mg/l	0.000548	± 0.0000524		0.000115	21
Molybdenum	AB11	mg/l	0.023	± 0.001		0.00253	11
Nickel	AB11	mg/l	0.0198	± 0.000858		0.00218	11
Selenium*	AB11	mg/l	-	± -		-	-
Silver	AB11	mg/l	0.00222	± 0.000581		0.00109	49
Tin	AB11	mg/l	0.0335	± 0.000982		0.00335	10
Vanadium	AB11	mg/l	0.0255	± 0.00113		0.00255	10
Zinc	AB11	mg/l	0.0997	± 0.00672		0.0179	18

*informative value AB11 – Selenium <0.002 mg/l (control laboratory: GF-AAS)

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	AB11	22	3	mg/l	29.5	± 0.76	27.2	31.3	1.19	4
Antimony	AB11	24	3	mg/l	0.00752	± 0.000419	0.0059	0.00886	0.000684	9.1
Arsenic	AB11	20	6	mg/l	0.00937	± 0.000278	0.00853	0.0102	0.000414	4.4
Barium	AB11	26	0	mg/l	3.31	± 0.19	2.47	3.82	0.324	9.8
Boron	AB11	19	2	mg/l	0.324	± 0.0226	0.255	0.4	0.0328	10
Cadmium	AB11	17	8	mg/l	0.000721	± 0.000029	0.00061	0.0008	0.0000404	5.6
Chromium	AB11	28	0	mg/l	0.0344	± 0.00244	0.0229	0.0428	0.0043	12
Cobalt	AB11	23	2	mg/l	0.0199	± 0.00121	0.015	0.0233	0.00194	9.7
Copper	AB11	27	0	mg/l	0.0675	± 0.00323	0.056	0.0771	0.00559	8.3
Iron	AB11	25	0	mg/l	0.544	± 0.0404	0.43	0.708	0.0674	12
Lead	AB11	22	4	mg/l	0.0118	± 0.00078	0.0089	0.0136	0.00122	10
Mercury	AB11 HG	21	2	mg/l	0.000547	± 0.000075	0.000239	0.00075	0.000115	21
Molybdenum	AB11	26	0	mg/l	0.023	± 0.00151	0.017	0.0284	0.00256	11
Nickel	AB11	25	1	mg/l	0.0198	± 0.00129	0.0158	0.0243	0.00214	11
Selenium	AB11	14	8	mg/l	0.00142	± 0.000263	0.001	0.0021	0.000328	23
Silver	AB11	15	1	mg/l	0.00227	± 0.000828	0.0008	0.005	0.00107	47
Tin	AB11	21	2	mg/l	0.0335	± 0.00147	0.0293	0.037	0.00225	6.7
Vanadium	AB11	22	1	mg/l	0.0255	± 0.0017	0.0208	0.0317	0.00266	10
Zinc	AB11	27	1	mg/l	0.0997	± 0.0101	0.0674	0.14	0.0175	18

E7. Parameterorientierte Auswertung / Parameter oriented report

Aluminium	33
Antimony	37
Arsenic	41
Barium.....	45
Boron	49
Cadmium.....	53
Chromium.....	57
Cobalt.....	61
Copper	65
Iron.....	69
Lead	73
Mercury	77
Molybdenum.....	81
Nickel	85
Selenium	89
Silver	91
Tin.....	95
Vanadium	99
Zinc	103

Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Aluminium

Parameter oriented report

AB11

Aluminium

Unit	mg/l
Assigned value ± U (k=2)	29.5 ± 0.506
Criterion	2.95 (10 %)
Minimum - Maximum	27.2 - 31.3
Control test value ± U (k=2)	32.40 ± 4.53

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	28.92	1.269	98.2	-0.18	
LC0002	29.19	5.72708	99.1	-0.09	
LC0003	25.3	4.3	85.9	-1.41	H
LC0004	31.2	2.4	106	0.59	
LC0005	30.9	0.806	105	0.49	
LC0006	28.9	13.4	98.1	-0.19	
LC0007	35.09	2.1	119	1.91	H
LC0008	37.367	1.858	127	2.68	H
LC0009	31	2.3	105	0.52	
LC0010	30.11	1.5	102	0.22	
LC0011	28.8	0.611	97.8	-0.22	
LC0012	-	-	-	-	
LC0013	29.4	3.8	99.8	-0.02	
LC0014	-	-	-	-	
LC0015	28.78	2.88	97.7	-0.23	
LC0016	27.33	1.23	92.8	-0.72	
LC0017	-	-	-	-	
LC0018	30.09	5.4	102	0.21	
LC0019	29.1	2.91	98.8	-0.12	
LC0020	31.34	0.9	106	0.64	
LC0021	30.86	0.75	105	0.48	
LC0022	29.9	2.9	101	0.15	
LC0023	29.5	2.9	100	0.01	
LC0024	29.36	0.1	99.7	-0.03	
LC0025	27.36	1.64	92.9	-0.71	
LC0026	29.2	2.33	99.1	-0.09	
LC0027	-	-	-	-	
LC0028	27.2485	9	92.5	-0.75	
LC0029	-	-	-	-	
LC0030	29.6	2.8	100	0.05	

Characteristics of parameter

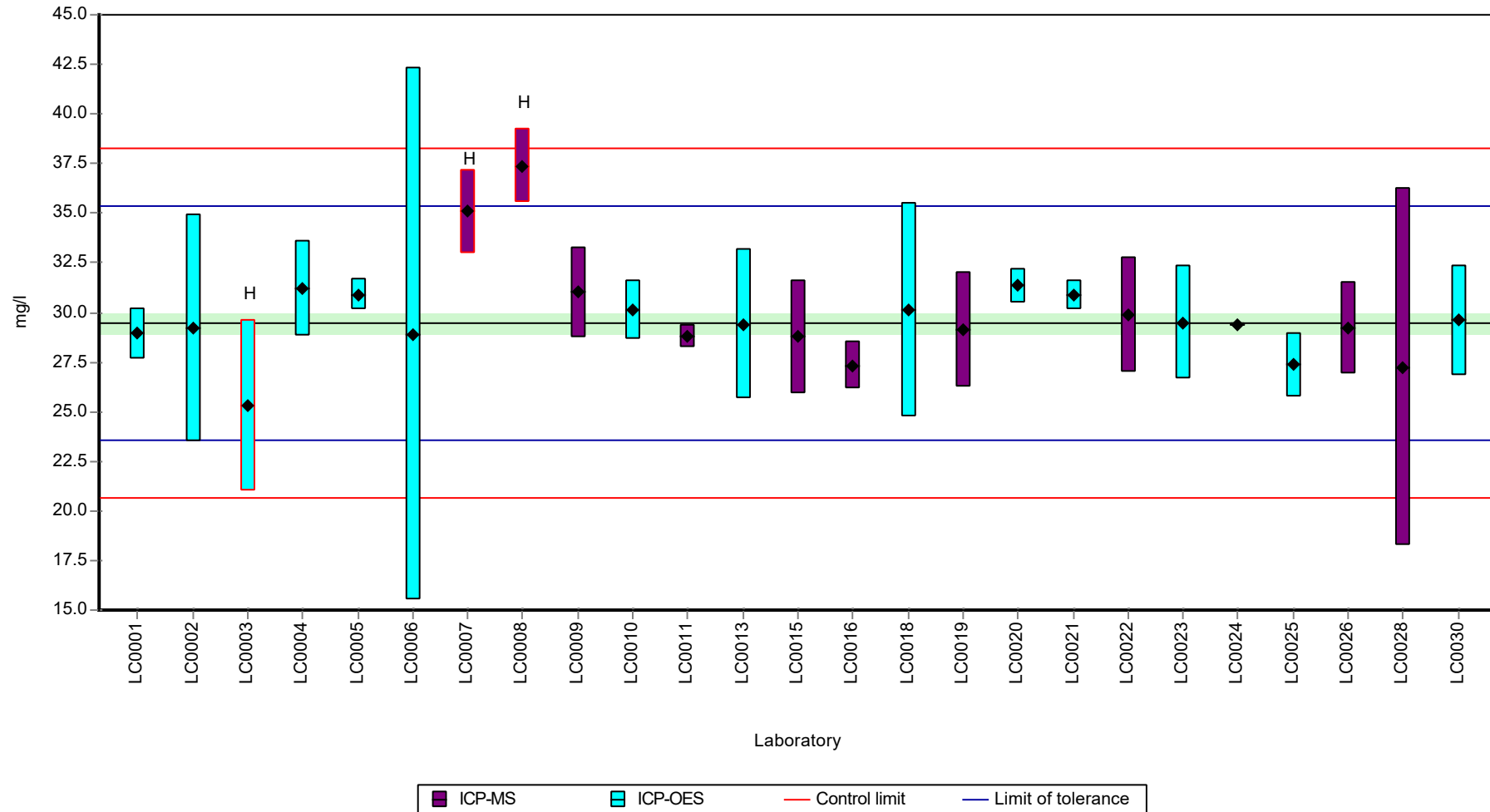
	all results	without outliers	Unit
Mean ± CI (99%)	29.8 ± 1.44	29.5 ± 0.76	mg/l
Minimum	25.3	27.2	mg/l
Maximum	37.4	31.3	mg/l
Standard deviation	2.39	1.19	mg/l
rel. standard deviation	8.03	4.03	%
n	25	22	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Aluminium

Graphical presentation of results

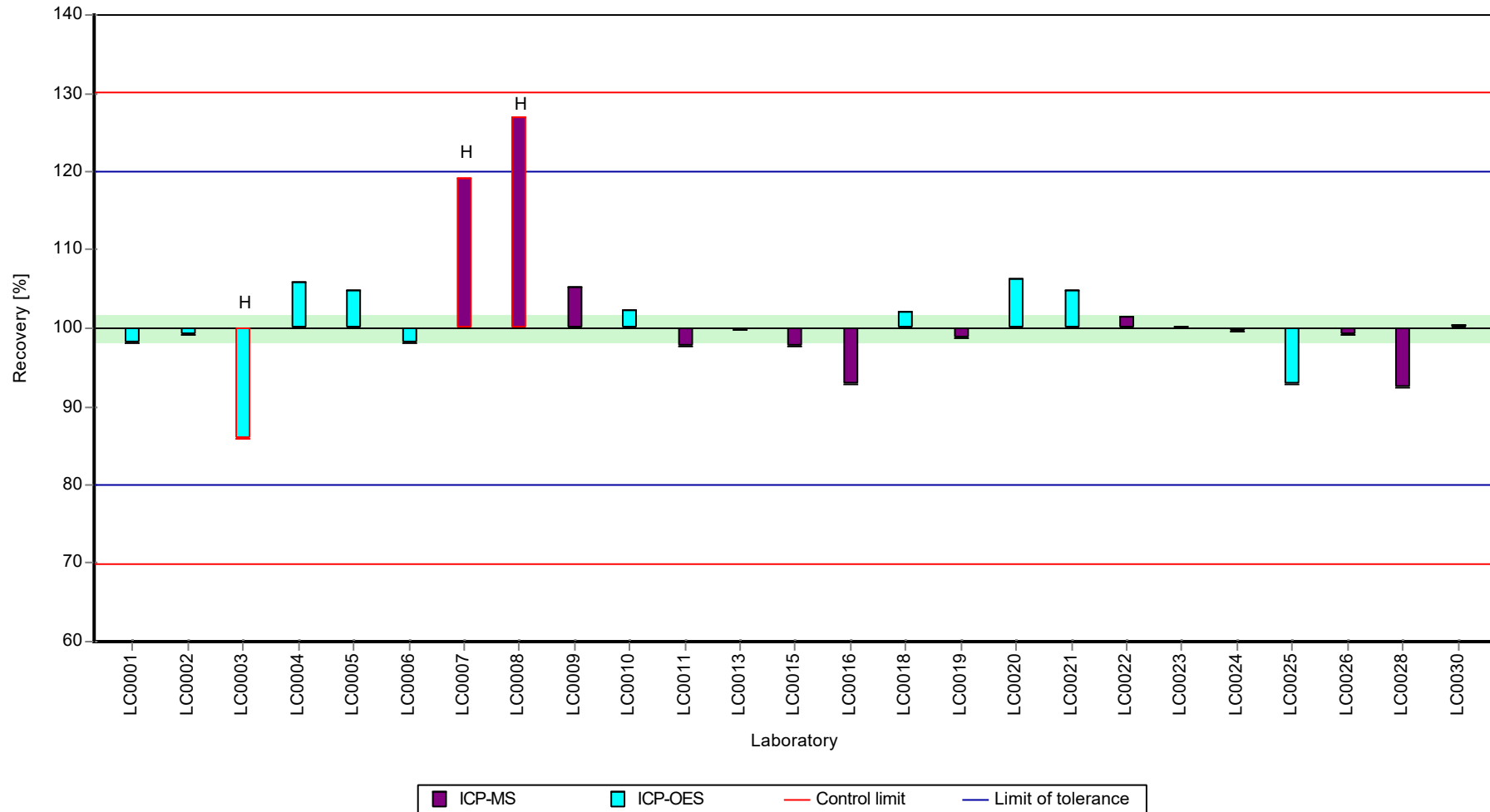
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

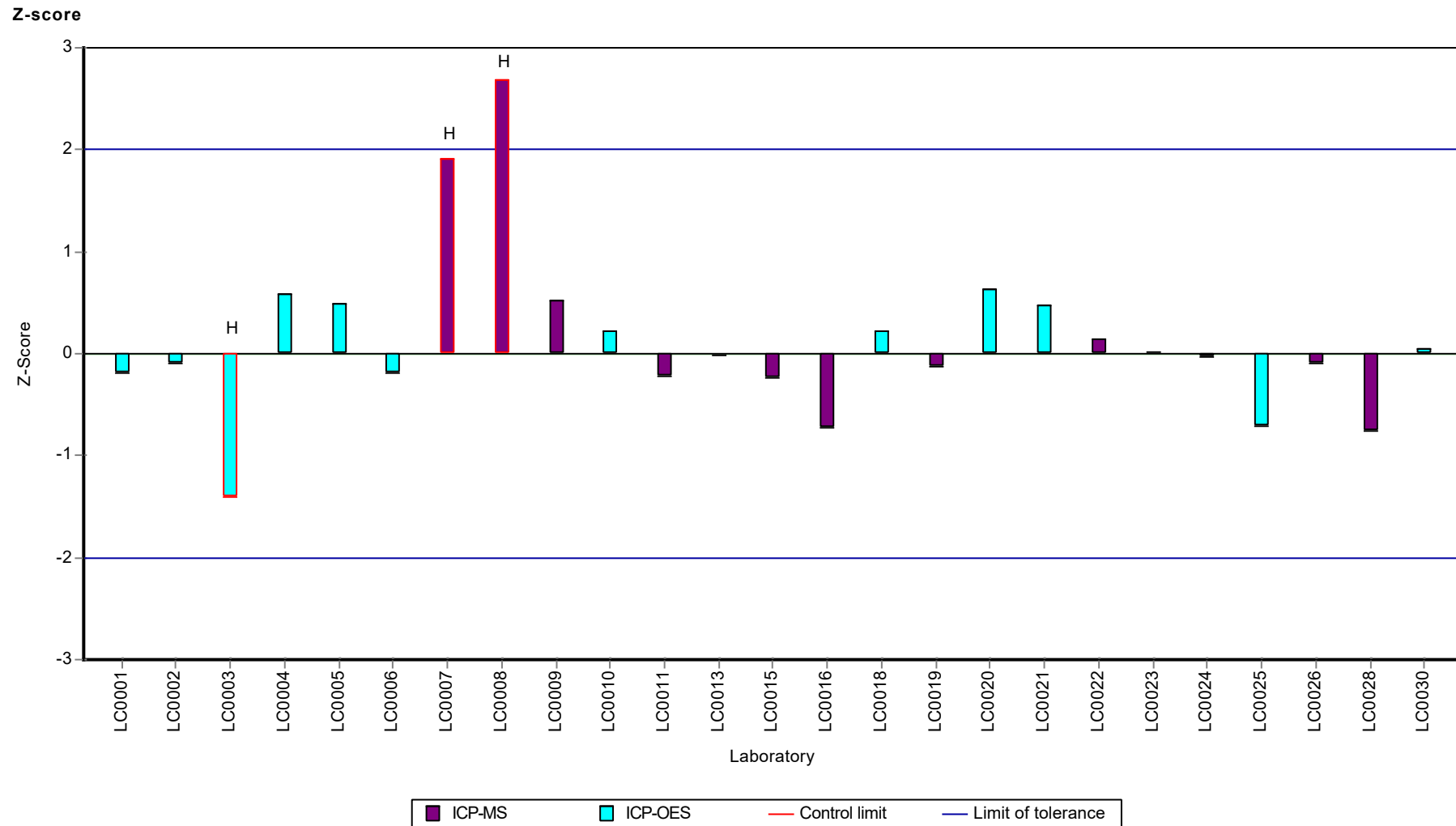
Sample: AB11, Parameter: Aluminium

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Aluminium



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Antimony

Parameter oriented report

AB11

Antimony

Unit	mg/l
Assigned value ± U (k=2)	0.00752 ± 0.000279
Criterion	0.000752 (10 %)
Minimum - Maximum	0.0059 - 0.00886
Control test value ± U (k=2)	0.007870 ± 0.000551

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.0162	0.0005	215	11.55	H
LC0002	0.008	0.00158	106	0.64	
LC0003	0.0067	0.0016	89.1	-1.09	
LC0004	0.0076	0.0006	101	0.11	
LC0005	0.0121	0.00184	161	6.09	H
LC0006	0.0073	0.0034	97.1	-0.29	
LC0007	0.0059	0.001	78.5	-2.15	
LC0008	0.008	0.0001	106	0.64	
LC0009	0.0074	0.002	98.4	-0.16	
LC0010	0.00457	0.001	60.8	-3.92	H
LC0011	0.00751	0.0001	99.9	-0.01	
LC0012	-	-	-	-	
LC0013	0.0074	0.0019	98.4	-0.16	
LC0014	-	-	-	-	
LC0015	0.00773	0.00077	103	0.28	
LC0016	0.00761	0.00075	101	0.12	
LC0017	0.00798	0.00053	106	0.61	
LC0018	0.007	0.001	93.1	-0.69	
LC0019	0.0084	0.00084	112	1.17	
LC0020	0.00745	0.0003	99.1	-0.09	
LC0021	0.0063	0.0012	83.8	-1.62	
LC0022	0.0078	0.0008	104	0.37	
LC0023	0.0066	0.00132	87.8	-1.22	
LC0024	0.00886	0.001	118	1.78	
LC0025	0.0079	0.0035	105	0.51	
LC0026	0.007	0.00063	93.1	-0.69	
LC0027	-	-	-	-	
LC0028	0.00796	0.00021	106	0.59	
LC0029	0.00839	0.00126	112	1.16	
LC0030	0.00766	0.0012	102	0.19	

Characteristics of parameter

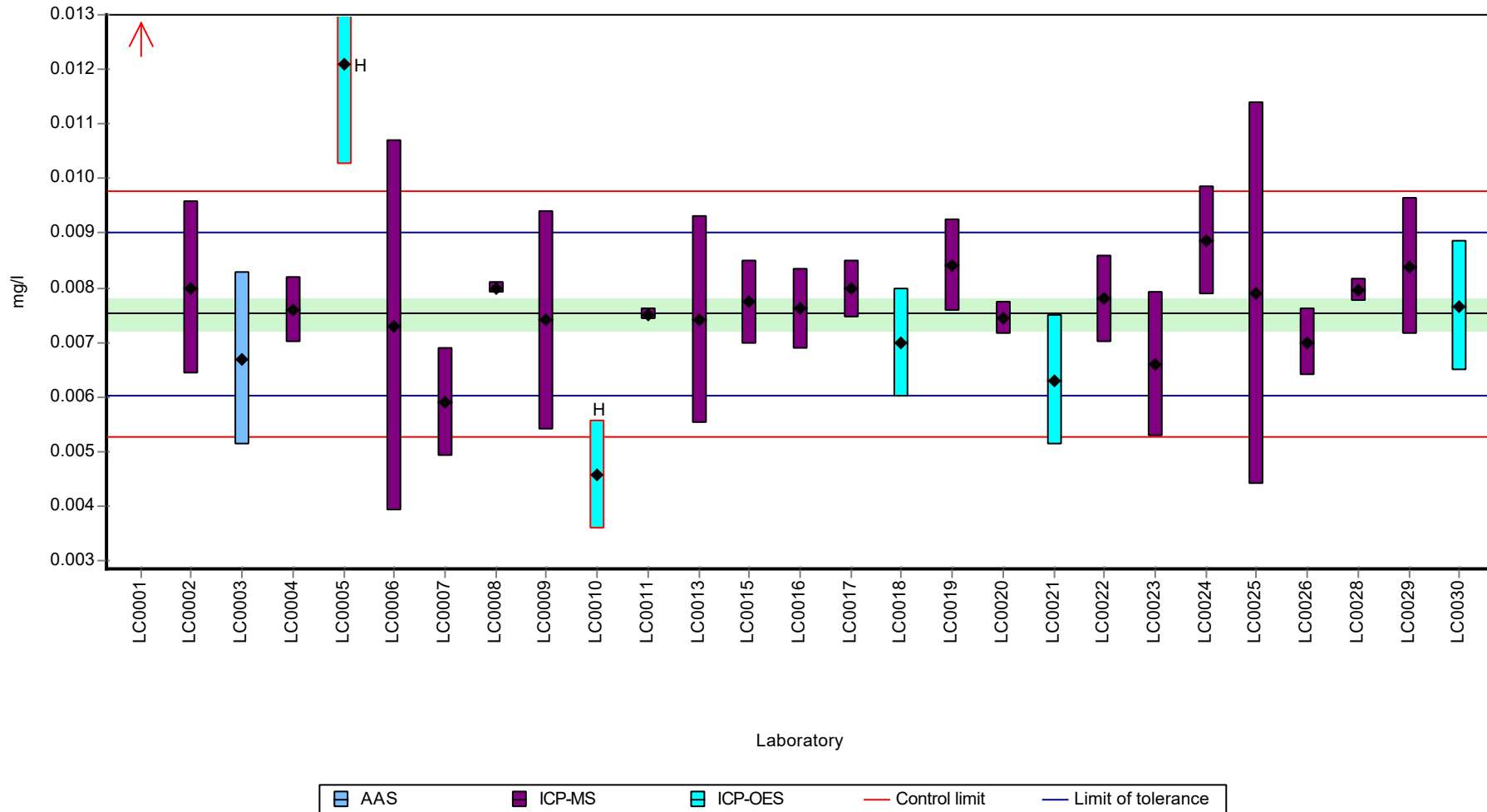
	all results	without outliers	Unit
Mean ± CI (99%)	0.0079 ± 0.0012	0.00752 ± 0.000419	mg/l
Minimum	0.00457	0.0059	mg/l
Maximum	0.0162	0.00886	mg/l
Standard deviation	0.00207	0.000684	mg/l
rel. standard deviation	26.3	9.09	%
n	27	24	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Antimony

Graphical presentation of results

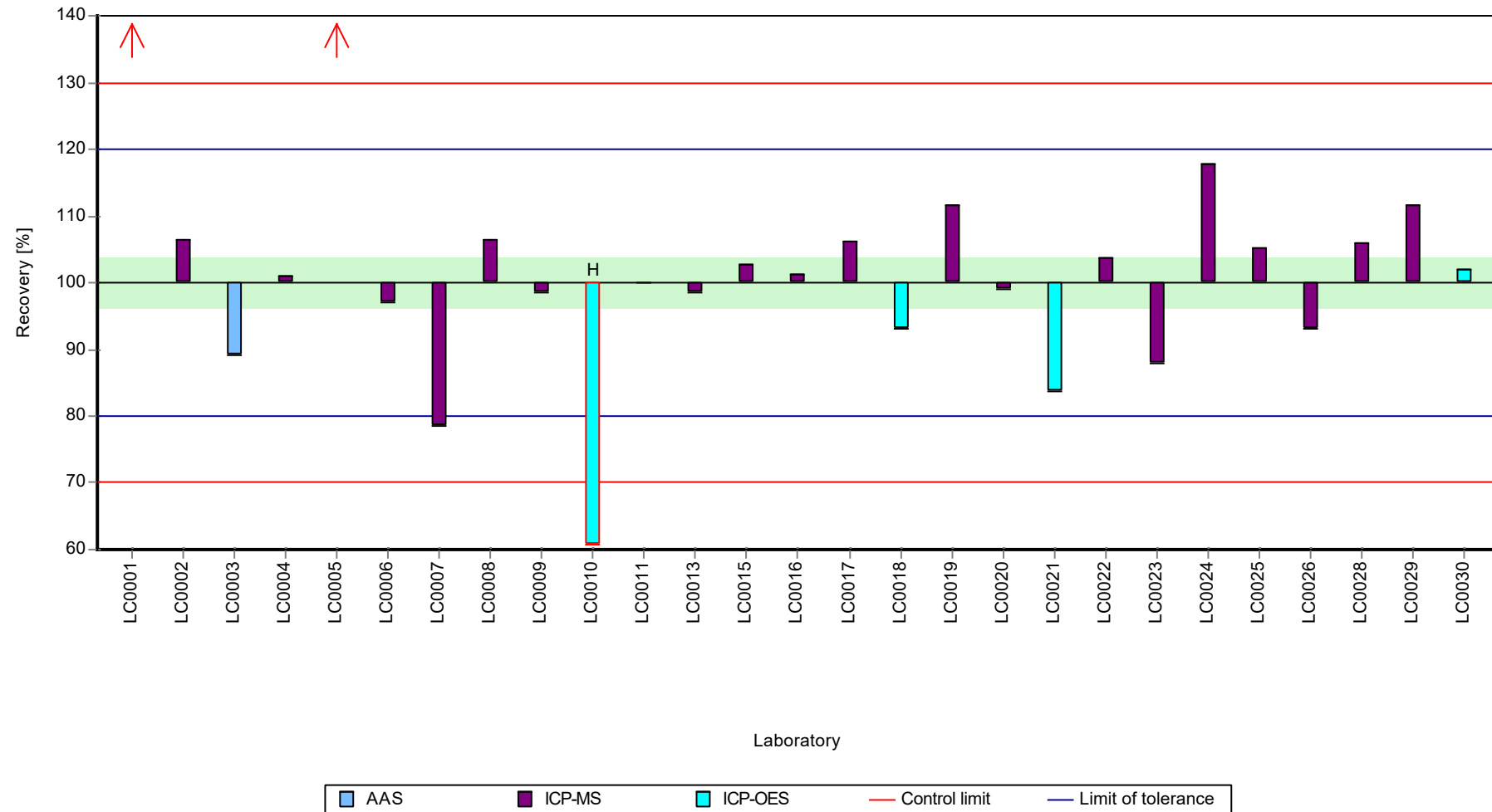
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Antimony

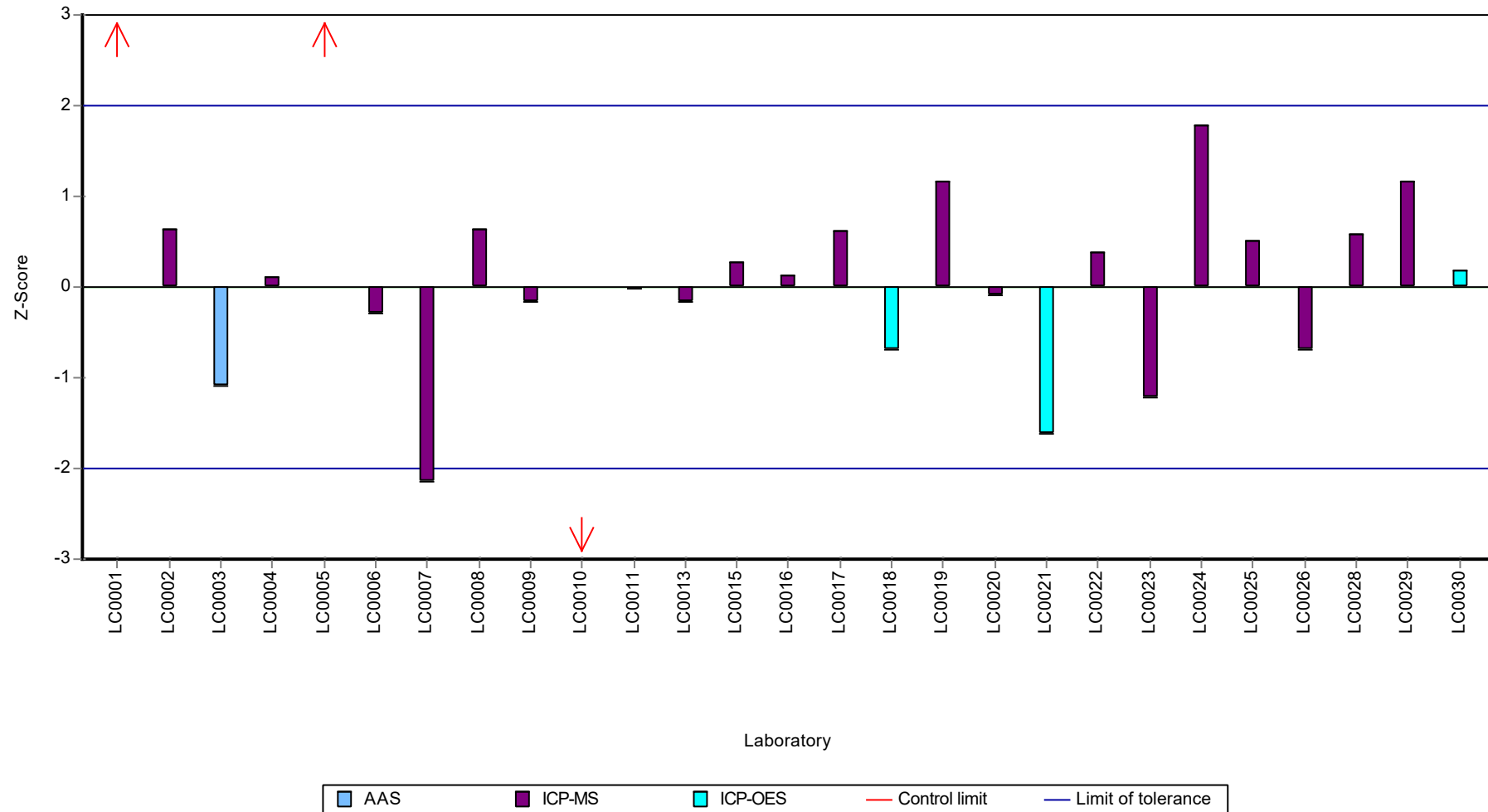
Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Antimony

Z-score



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Arsenic

Parameter oriented report

AB11

Arsenic

Unit	mg/l
Assigned value ± U (k=2)	0.00937 ± 0.000185
Criterion	0.000937 (10 %)
Minimum - Maximum	0.00853 - 0.0102
Control test value ± U (k=2)	0.008640 ± 0.000951

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.0145	0.0004	155	5.48	H
LC0002	0.01	0.00118	107	0.68	
LC0003	0.0094	0.0014	100	0.03	
LC0004	0.0087	0.0011	92.9	-0.71	
LC0005	< 0.01 (LOQ)	-	-	-	
LC0006	0.0097	0.0044	104	0.35	
LC0007	0.0093	0.0005	99.3	-0.07	
LC0008	0.01	0.0001	107	0.68	
LC0009	0.0096	0.00065	102	0.25	
LC0010	0.00853	0.001	91.1	-0.89	
LC0011	0.00917	0.0001	97.9	-0.21	
LC0012	-	-	-	-	
LC0013	0.0093	0.0026	99.3	-0.07	
LC0014	-	-	-	-	
LC0015	0.0095	0.00096	101	0.14	
LC0016	0.00912	0.00043	97.4	-0.26	
LC0017	0.0151	0.0024	161	6.12	H
LC0018	0.009	0.002	96.1	-0.39	
LC0019	0.00931	0.00139	99.4	-0.06	
LC0020	0.00923	0.00033	98.5	-0.15	
LC0021	0.00715	0.0012	76.3	-2.37	H
LC0022	0.0094	0.001	100	0.03	
LC0023	0.0114	0.0023	122	2.17	H
LC0024	0.01018	0.002	109	0.87	
LC0025	0.0093	0.00125	99.3	-0.07	
LC0026	0.009	0.00081	96.1	-0.39	
LC0027	-	-	-	-	
LC0028	0.01126	0.003	120	2.02	H
LC0029	0.00961	0.00144	103	0.26	
LC0030	0.0947	0.017	1010	91.09	H

Characteristics of parameter

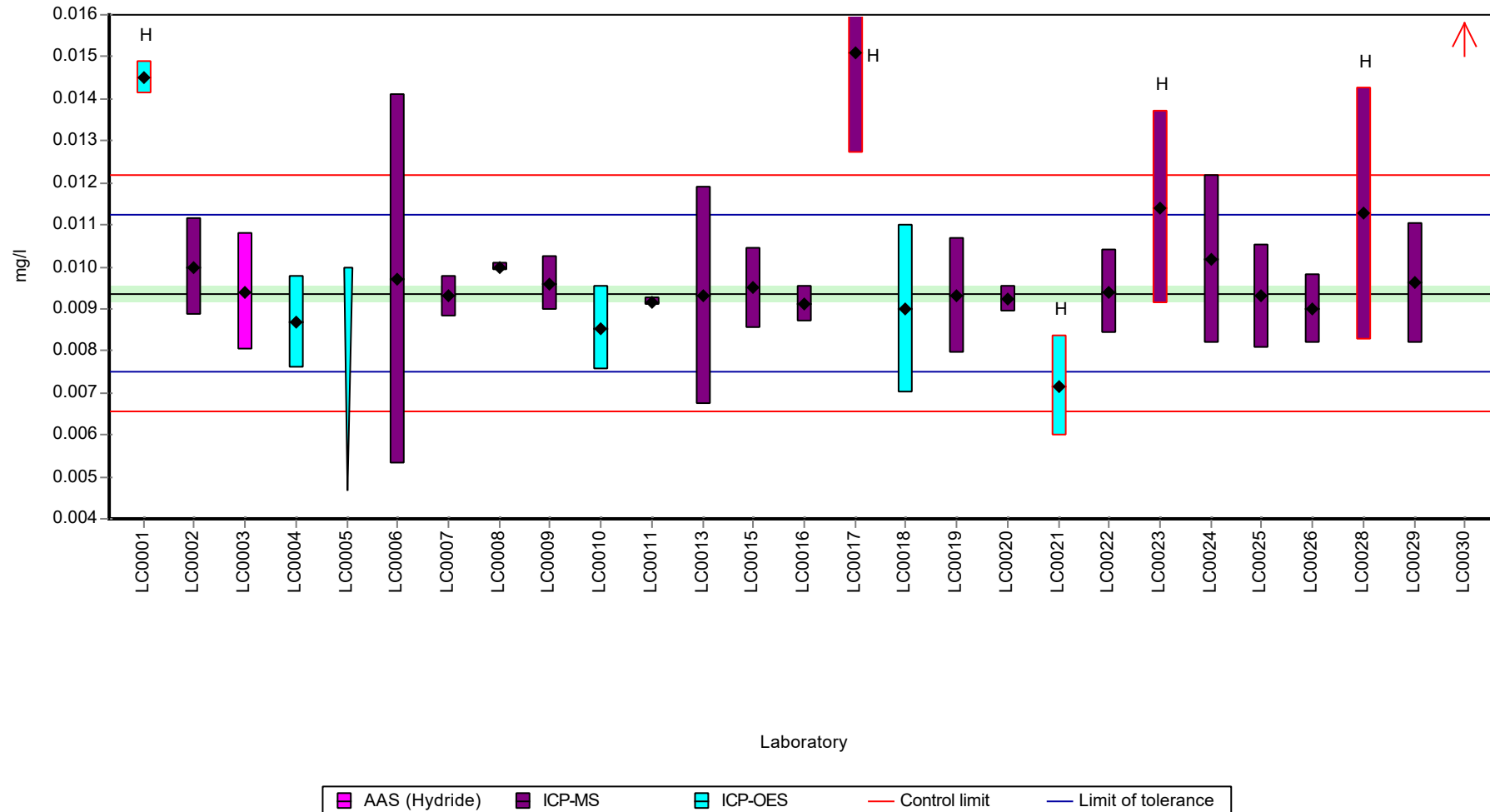
	all results	without outliers	Unit
Mean ± CI (99%)	0.0131 ± 0.00984	0.00937 ± 0.000278	mg/l
Minimum	0.00715	0.00853	mg/l
Maximum	0.0947	0.0102	mg/l
Standard deviation	0.0167	0.000414	mg/l
rel. standard deviation	127	4.42	%
n	26	20	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Arsenic

Graphical presentation of results

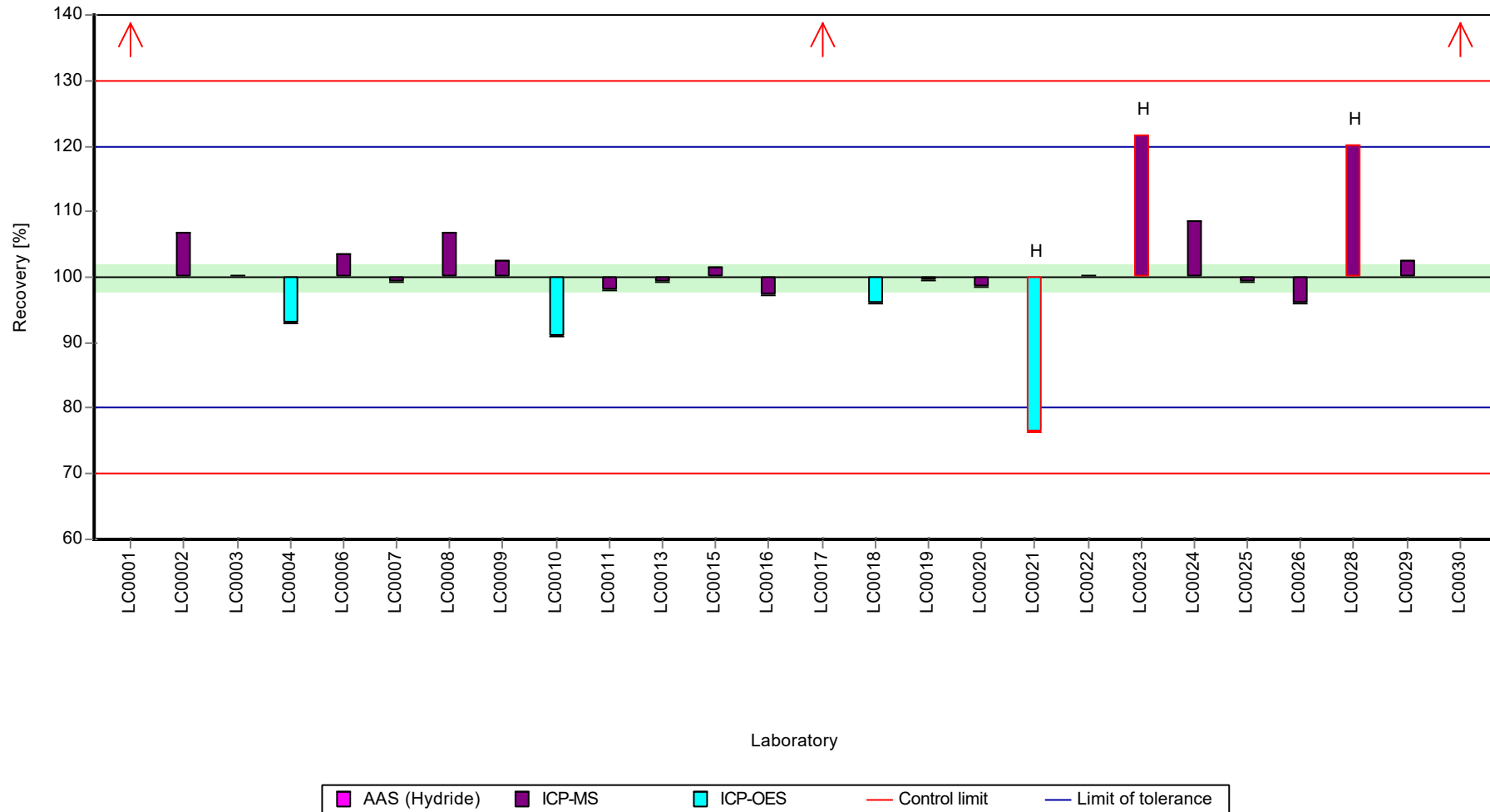
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

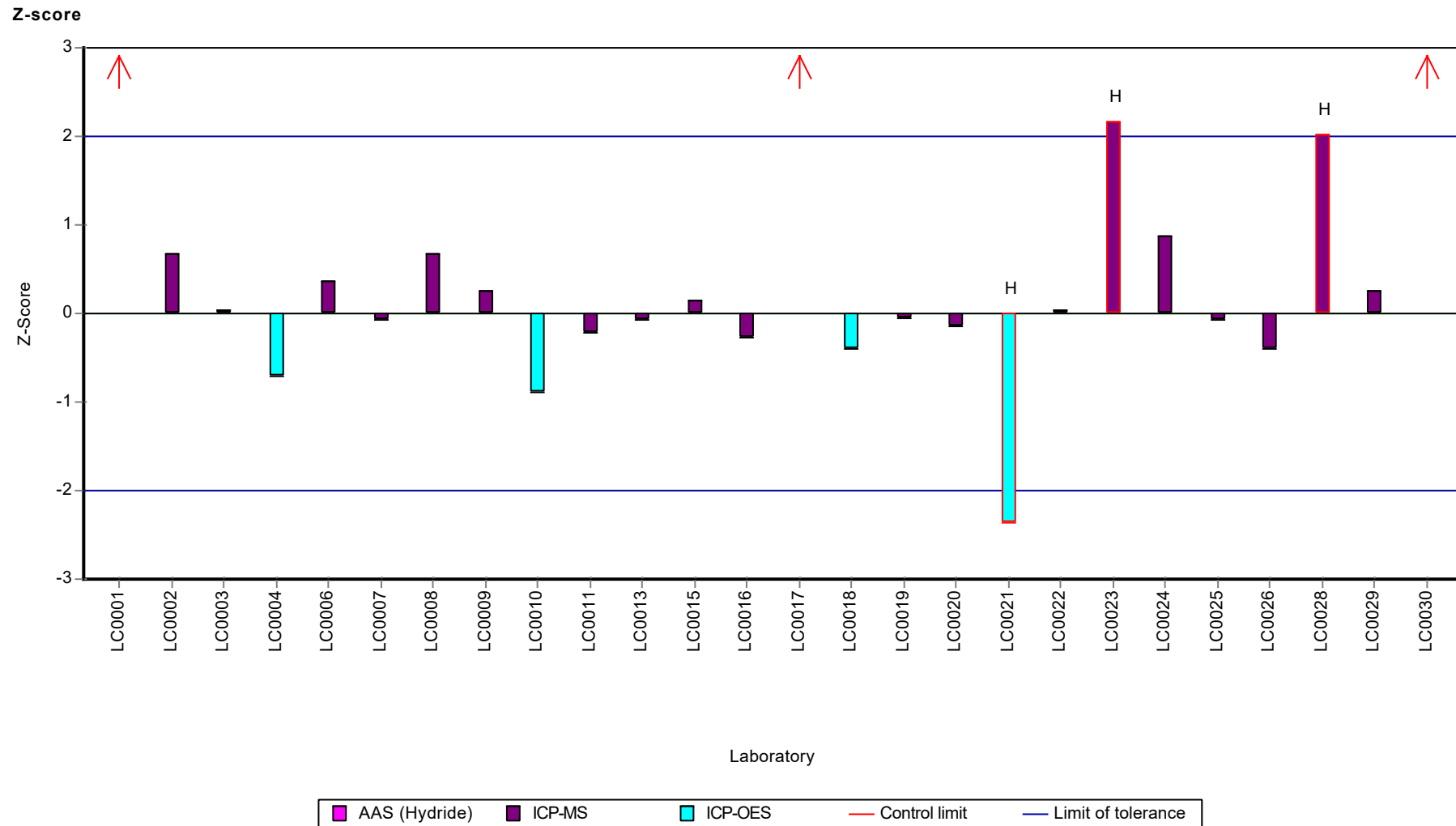
Sample: AB11, Parameter: Arsenic

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Arsenic



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Barium

Parameter oriented report

AB11

Barium

Unit	mg/l
Assigned value ± U (k=2)	3.31 ± 0.127
Criterion	0.331 (10 %)
Minimum - Maximum	2.47 - 3.82
Control test value ± U (k=2)	3.350 ± 0.167

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	3.037	0.0963	91.8	-0.82	
LC0002	3.18	0.26839	96.1	-0.39	
LC0003	2.78	0.5	84	-1.6	
LC0004	3.82	0.25	115	1.54	
LC0005	3.31	0.064	100	0.00	
LC0006	-	-	-	-	
LC0007	3.532	0.19	107	0.67	
LC0008	3.7087	0.005	112	1.21	
LC0009	3.4	0.16	103	0.28	
LC0010	2.468	0.001	74.6	-2.54	
LC0011	3.5	0.081	106	0.58	
LC0012	-	-	-	-	
LC0013	3.2	0.384	96.7	-0.33	
LC0014	-	-	-	-	
LC0015	3.35	0.335	101	0.12	
LC0016	3.235	0.22	97.8	-0.22	
LC0017	3.62	0.51	109	0.94	
LC0018	3.144	0.44	95	-0.5	
LC0019	3.67	0.367	111	1.09	
LC0020	3.561	0.112	108	0.76	
LC0021	3.145	0.081	95	-0.5	
LC0022	3.37	0.34	102	0.18	
LC0023	3.46	0.35	105	0.46	
LC0024	3.359	0.05	102	0.15	
LC0025	2.628	0.197	79.4	-2.06	
LC0026	3.13	0.282	94.6	-0.54	
LC0027	-	-	-	-	
LC0028	3.5145	0.9	106	0.62	
LC0029	3.61746	0.54262	109	0.93	
LC0030	3.29	0.14	99.4	-0.06	

Characteristics of parameter

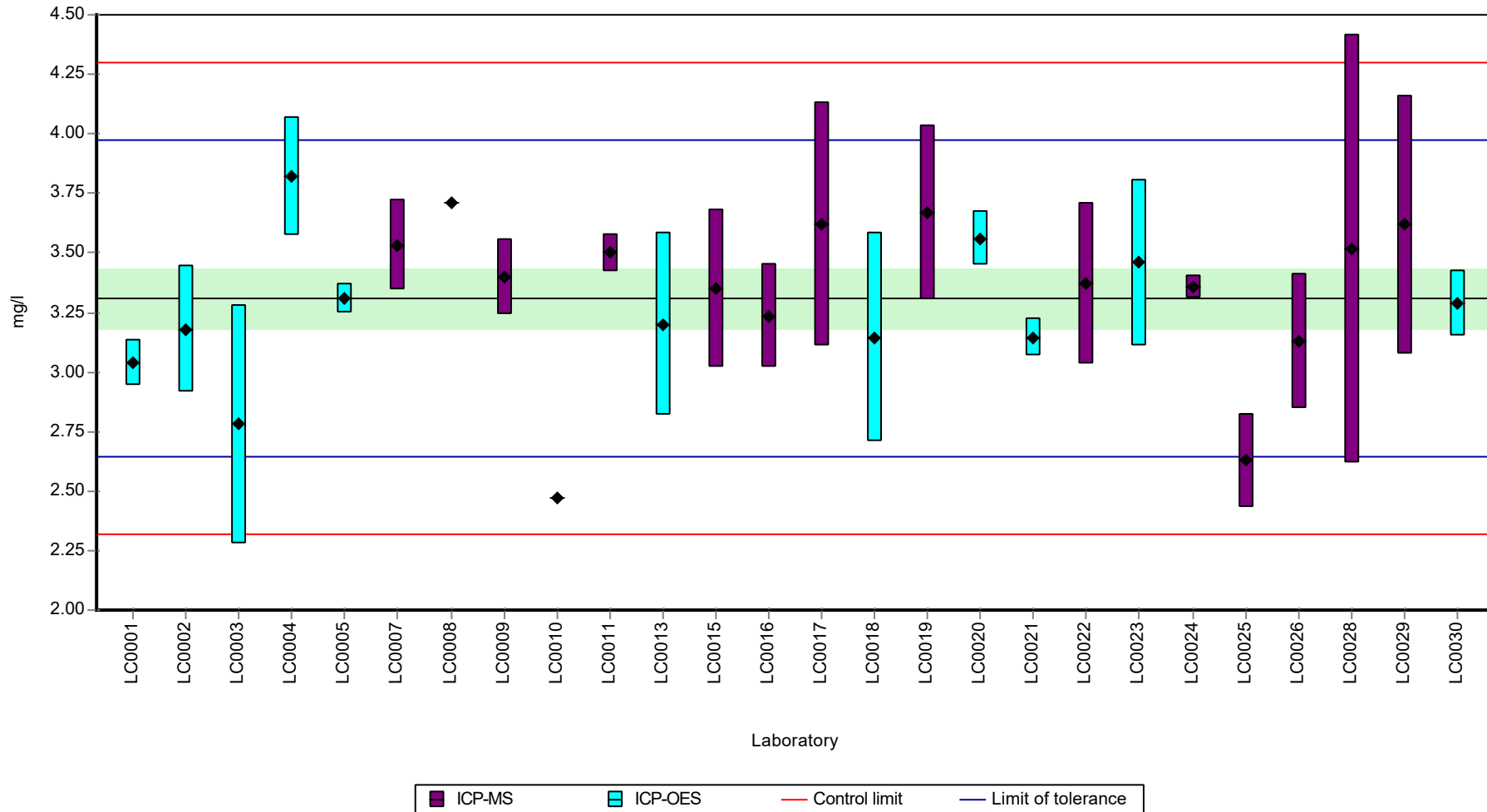
	all results	without outliers	Unit
Mean ± CI (99%)	3.31 ± 0.19	3.31 ± 0.19	mg/l
Minimum	2.47	2.47	mg/l
Maximum	3.82	3.82	mg/l
Standard deviation	0.324	0.324	mg/l
rel. standard deviation	9.78	9.78	%
n	26	26	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Barium

Graphical presentation of results

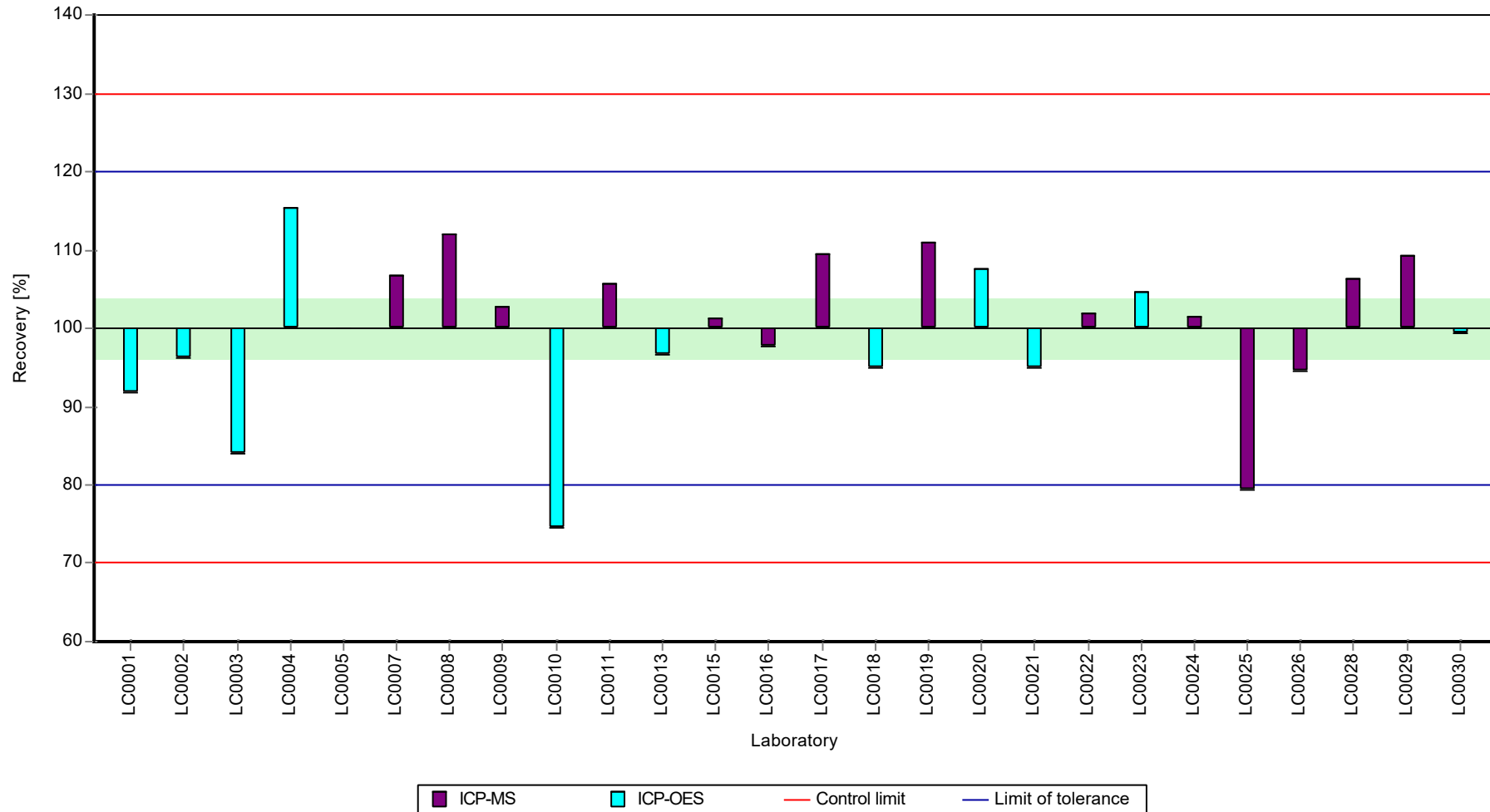
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Barium

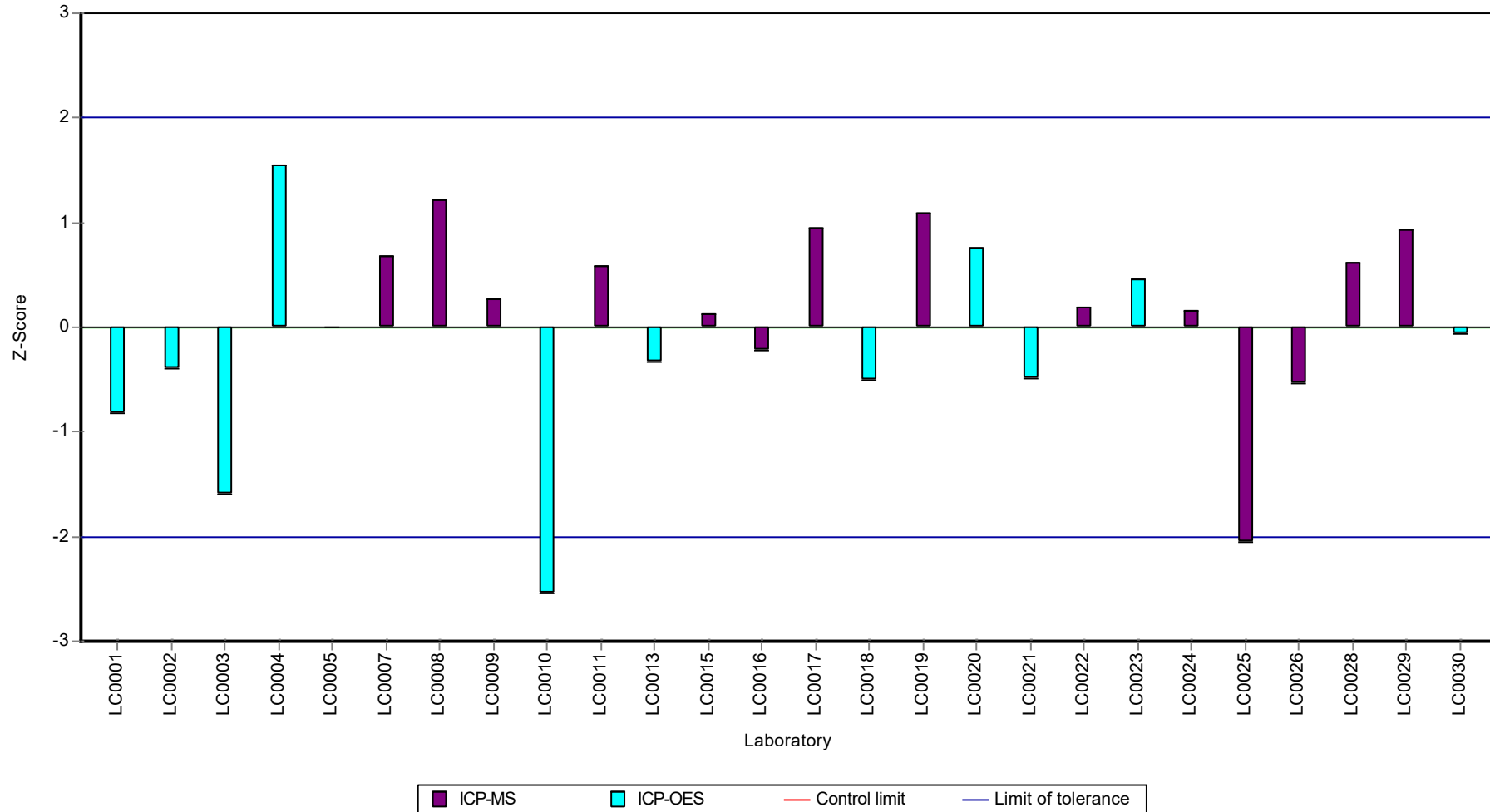
Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Barium

Z-score



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Boron

Parameter oriented report

AB11

Boron

Unit	mg/l
Assigned value ± U (k=2)	0.324 ± 0.015
Criterion	0.0324 (10 %)
Minimum - Maximum	0.255 - 0.4
Control test value ± U (k=2)	0.3210 ± 0.0224

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.299	0.0101	92.2	-0.78	
LC0002	0.323	0.05388	99.7	-0.03	
LC0003	0.473	0.089	146	4.59	H
LC0004	0.318	0.025	98.1	-0.19	
LC0005	0.733	0.0603	226	12.61	H
LC0006	0.315	0.139	97.2	-0.28	
LC0007	-	-	-	-	
LC0008	0.3063	0.014	94.5	-0.55	
LC0009	0.4	0.03	123	2.34	
LC0010	-	-	-	-	
LC0011	-	-	-	-	
LC0012	-	-	-	-	
LC0013	0.351	0.06	108	0.83	
LC0014	-	-	-	-	
LC0015	0.308	0.0308	95	-0.5	
LC0016	0.347	0.018	107	0.71	
LC0017	-	-	-	-	
LC0018	0.27	0.054	83.3	-1.67	
LC0019	0.321	0.0321	99	-0.1	
LC0020	0.3316	0.0098	102	0.23	
LC0021	0.255	0.0041	78.7	-2.13	
LC0022	0.333	0.03	103	0.27	
LC0023	0.328	0.033	101	0.12	
LC0024	0.36979	0.02	114	1.41	
LC0025	0.3048	0.0195	94	-0.6	
LC0026	0.35	0.0315	108	0.8	
LC0027	-	-	-	-	
LC0028	-	-	-	-	
LC0029	-	-	-	-	
LC0030	0.328	0.023	101	0.12	

Characteristics of parameter

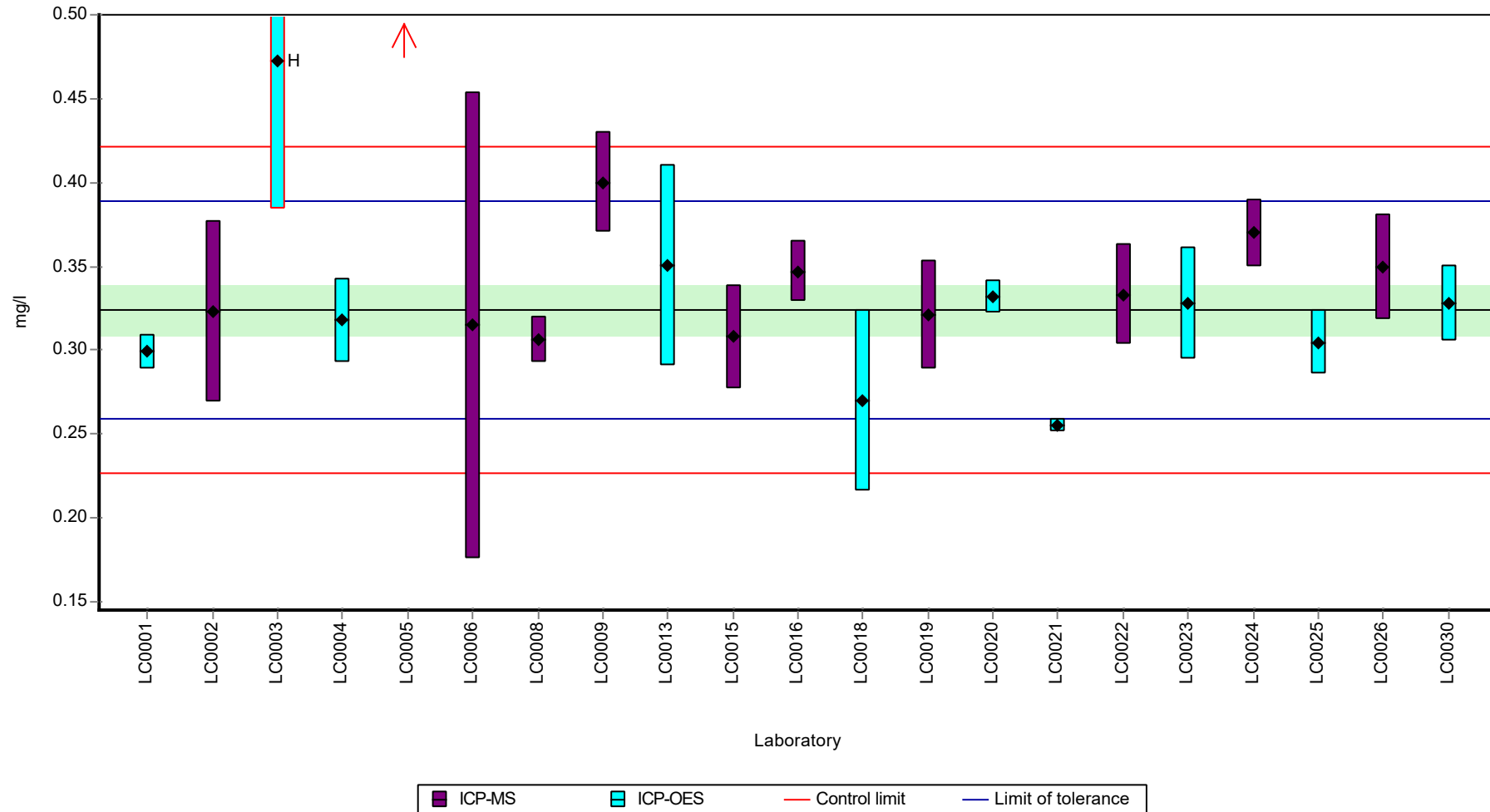
	all results	without outliers	Unit
Mean ± CI (99%)	0.351 ± 0.0645	0.324 ± 0.0226	mg/l
Minimum	0.255	0.255	mg/l
Maximum	0.733	0.4	mg/l
Standard deviation	0.0985	0.0328	mg/l
rel. standard deviation	28.1	10.1	%
n	21	19	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Boron

Graphical presentation of results

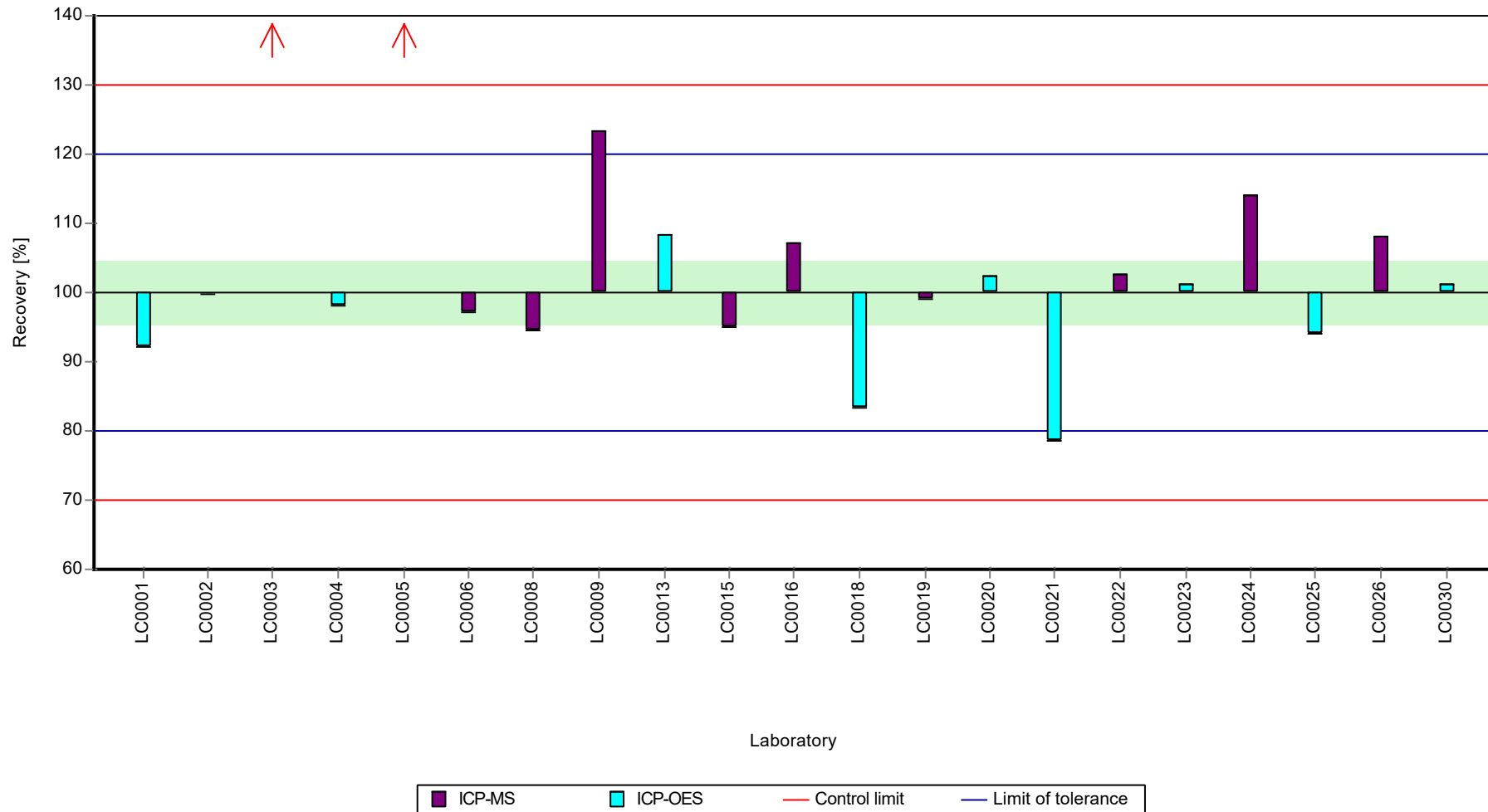
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

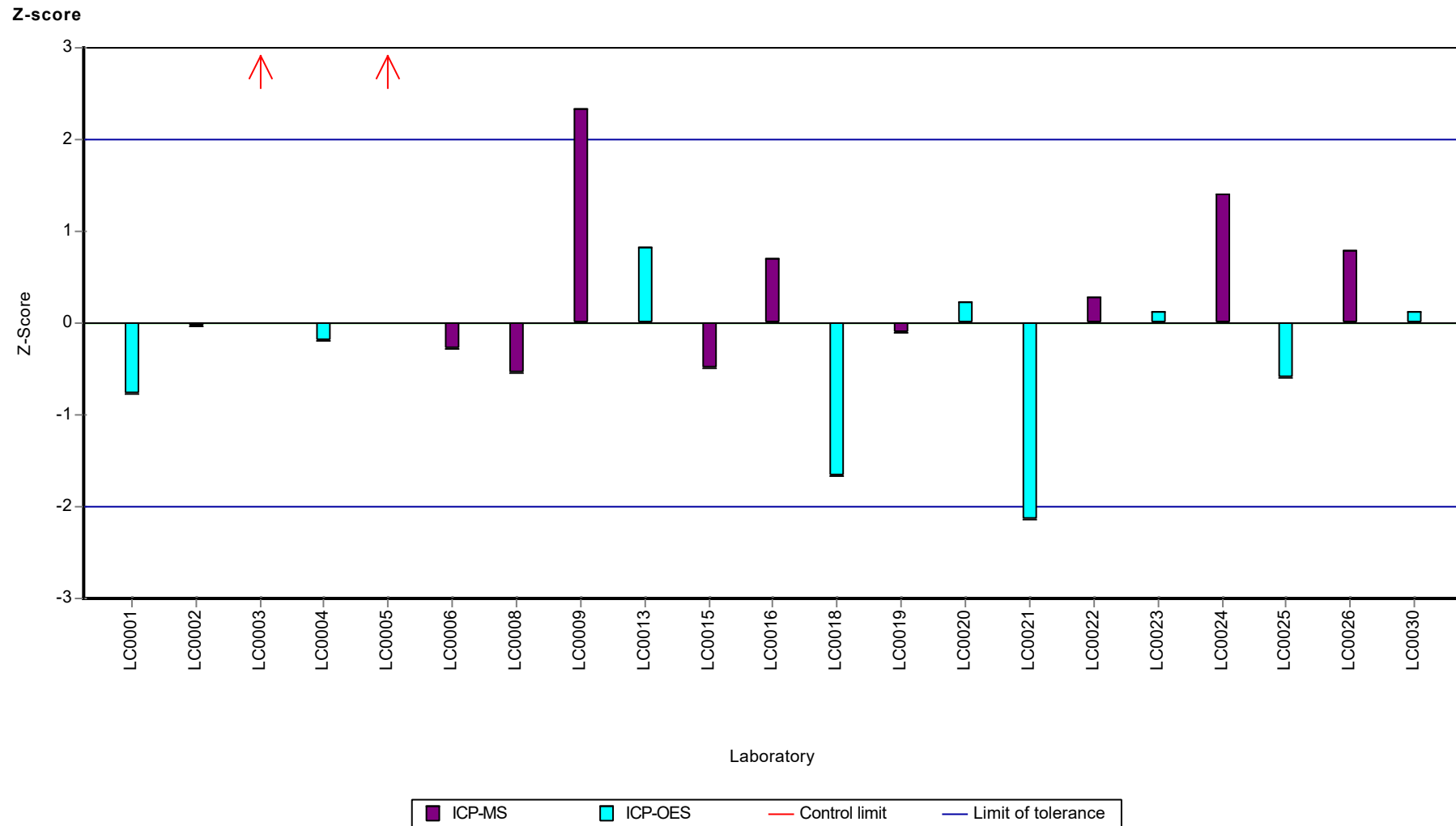
Sample: AB11, Parameter: Boron

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Boron



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Cadmium

Parameter oriented report

AB11

Cadmium

Unit	mg/l
Assigned value ± U (k=2)	0.000721 ± 0.0000196
Criterion	0.0000721(10 %)
Minimum - Maximum	0.00061 - 0.0008
Control test value ± U (k=2)	0.000519 ± 0.000026

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.0051	0.0002	707	60.74	H
LC0002	0.0008	0.00009	111	1.1	
LC0003	0.00056	0.0001	77.7	-2.23	H
LC0004	0.0007	0.0001	97.1	-0.29	
LC0005	< 0.001 (LOQ)	-	-	-	
LC0006	0.0007	0.00031	97.1	-0.29	
LC0007	0.0007	0.0002	97.1	-0.29	
LC0008	0.0007	0.00000	97.1	-0.29	
LC0009	0.0014	0.00009	194	9.42	H
LC0010	0.00043	0.0001	59.6	-4.04	H
LC0011	0.00072	0.0001	100	0.03	
LC0012	-	-	-	-	
LC0013	0.0007	0.0001	97.1	-0.29	
LC0014	0.00095	0.00008	132	3.18	H
LC0015	0.00074	0.00007	102	0.24	
LC0016	0.00076	0.00009	105	0.54	
LC0017	0.00075	0.0002	103	0.35	
LC0018	< 0.005 (LOQ)	-	-	-	
LC0019	0.00073	0.00007	101	0.12	
LC0020	0.00072	0.00003	100	0.01	
LC0021	0.00026	0.00005	36.1	-6.39	H
LC0022	< 0.001 (LOQ)	-	-	-	
LC0023	0.001	0.0002	139	3.86	H
LC0024	0.00073	0.001	101	0.12	
LC0025	0.00061	0.0002	84.6	-1.54	
LC0026	0.0007	0.00021	97.1	-0.29	
LC0027	< 0.03 (LOQ)	-	-	-	
LC0028	0.00073	0.00002	101	0.12	
LC0029	0.00077	0.00012	107	0.65	
LC0030	0.0009	0.00022	125	2.48	H

Characteristics of parameter

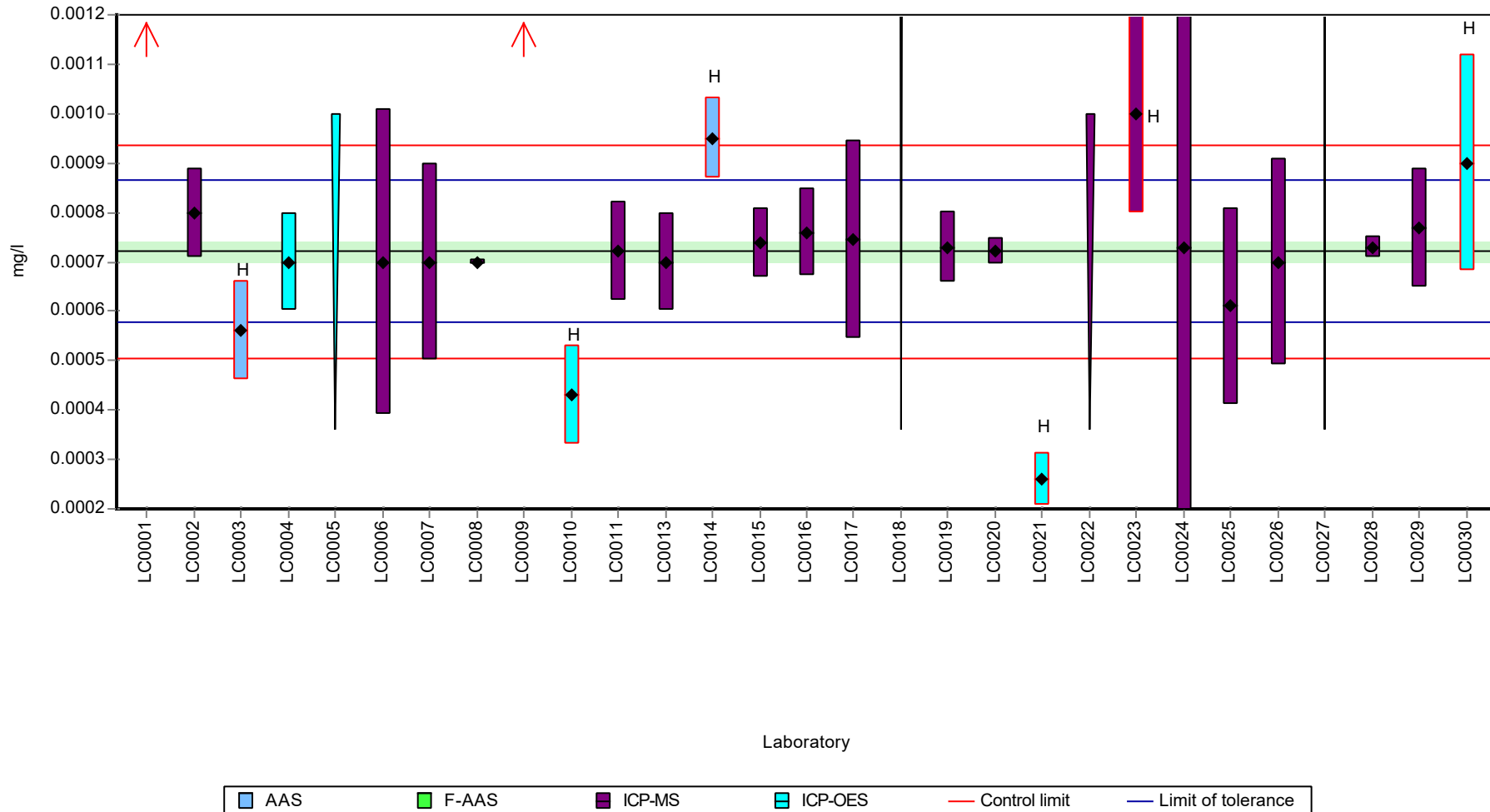
	all results	without outliers	Unit
Mean ± CI (99%)	0.000914 ± 0.000537	0.000721 ± 0.0000294	mg/l
Minimum	0.00026	0.00061	mg/l
Maximum	0.0051	0.0008	mg/l
Standard deviation	0.000895	0.0000404	mg/l
rel. standard deviation	97.9	5.6 %	
n	25	17	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Cadmium

Graphical presentation of results

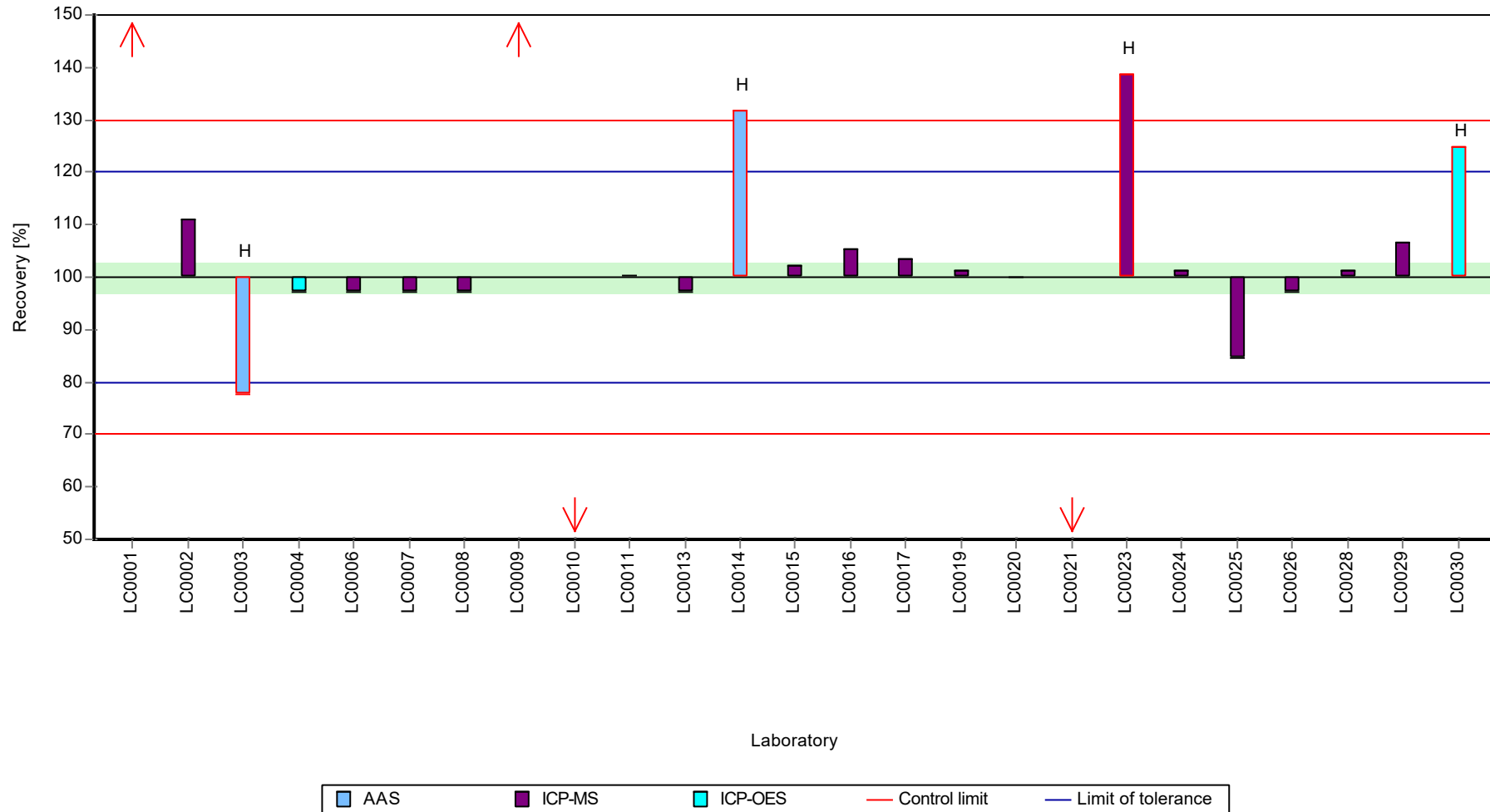
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Cadmium

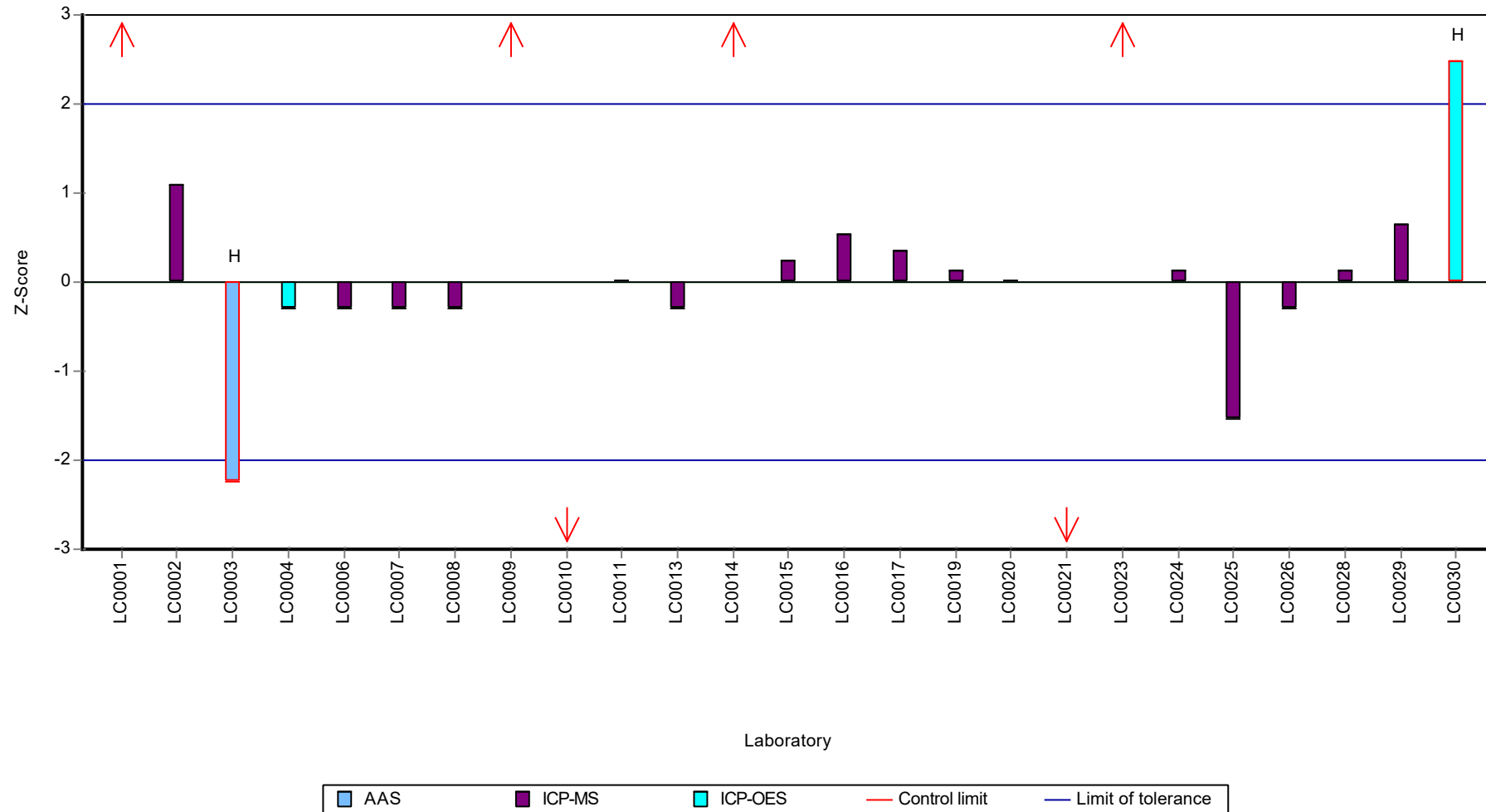
Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Cadmium

Z-score



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Chromium

Parameter oriented report

AB11

Chromium

Unit	mg/l
Assigned value ± U (k=2)	0.0344 ± 0.00163
Criterion	0.00413 (12 %)
Minimum - Maximum	0.0229 - 0.0428
Control test value ± U (k=2)	0.03390 ± 0.00372

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.0404	0.001	117	1.44	
LC0002	0.034	0.00295	98.7	-0.1	
LC0003	0.0298	0.004	86.5	-1.12	
LC0004	0.0333	0.004	96.7	-0.27	
LC0005	0.0302	0.0001	87.7	-1.02	
LC0006	0.037	0.0166	107	0.62	
LC0007	0.0359	0.0013	104	0.36	
LC0008	0.0369	0.0003	107	0.6	
LC0009	0.037	0.0016	107	0.62	
LC0010	0.03073	0.001	89.2	-0.9	
LC0011	0.0335	0.001	97.3	-0.23	
LC0012	-	-	-	-	
LC0013	0.0363	0.0069	105	0.45	
LC0014	0.031	0.0026	90	-0.83	
LC0015	0.0324	0.0035	94.1	-0.49	
LC0016	0.0345	0.0055	100	0.02	
LC0017	0.0385	0.005	112	0.98	
LC0018	0.029	0.004	84.2	-1.31	
LC0019	0.0361	0.0036	105	0.4	
LC0020	0.0356	0.0007	103	0.28	
LC0021	0.0229	0.0013	66.5	-2.79	
LC0022	0.0351	0.004	102	0.16	
LC0023	0.027	0.0027	78.4	-1.8	
LC0024	0.03884	0.002	113	1.07	
LC0025	0.0391	0.0016	114	1.13	
LC0026	0.036	0.00324	105	0.38	
LC0027	< 0.35 (LOQ)	-	-	-	
LC0028	0.04275	0.009	124	2.01	
LC0029	0.03789	0.00568	110	0.84	
LC0030	0.0324	0.0017	94.1	-0.49	

Characteristics of parameter

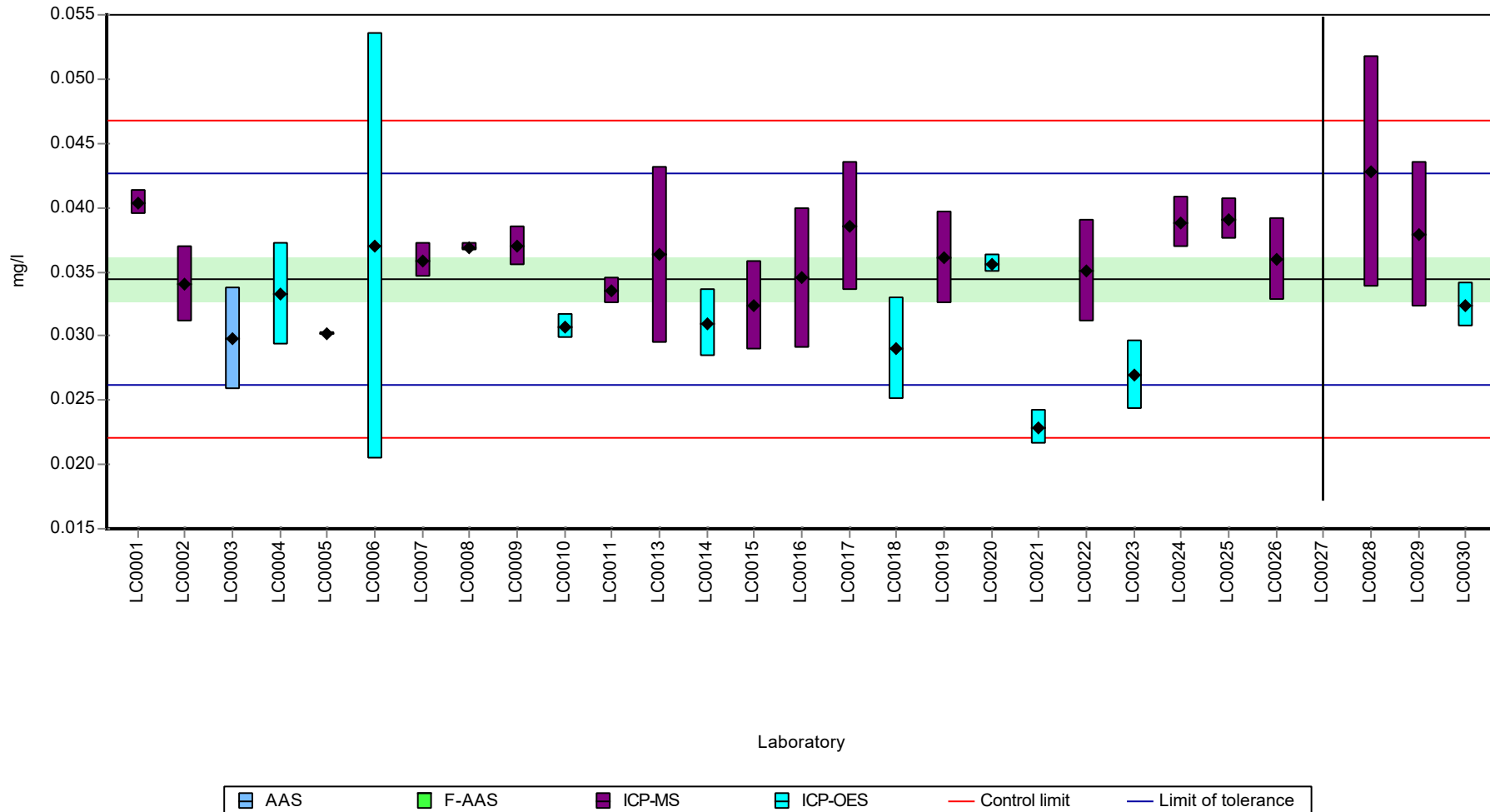
	all results	without outliers	Unit
Mean ± CI (99%)	0.0344 ± 0.00244	0.0344 ± 0.00244	mg/l
Minimum	0.0229	0.0229	mg/l
Maximum	0.0428	0.0428	mg/l
Standard deviation	0.0043	0.0043	mg/l
rel. standard deviation	12.5	12.5	%
n	28	28	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Chromium

Graphical presentation of results

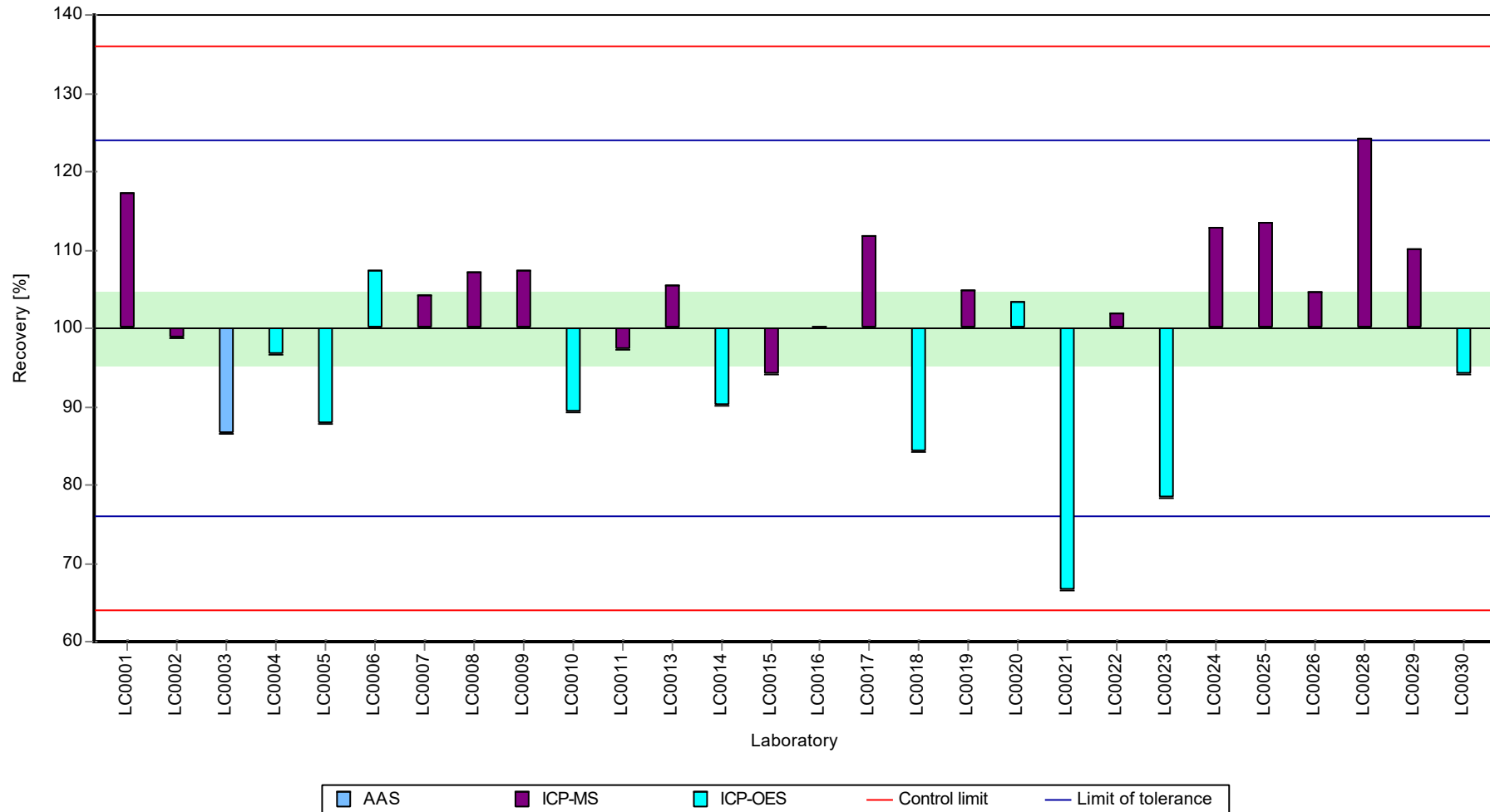
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Chromium

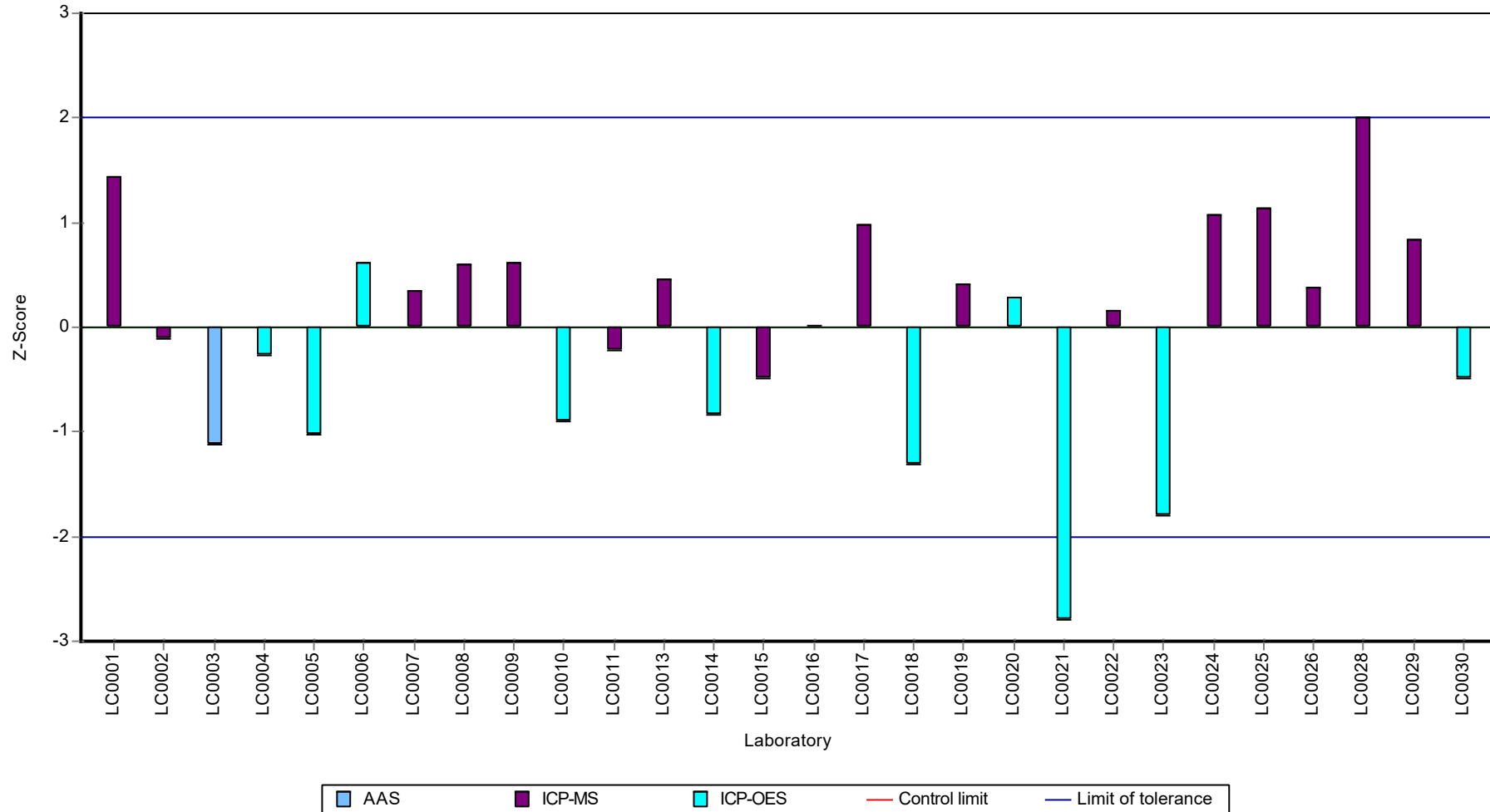
Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Chromium

Z-score



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Cobalt

Parameter oriented report

AB11

Cobalt

Unit	mg/l
Assigned value ± U (k=2)	0.0199 ± 0.000808
Criterion	0.00199 (10 %)
Minimum - Maximum	0.015 - 0.0234
Control test value ± U (k=2)	0.01930 ± 0.00116

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.0223	0.0007	112	1.22	
LC0002	0.02	0.00183	101	0.07	
LC0003	0.013	0.002	65.4	-3.46	H
LC0004	0.0187	0.0016	94.1	-0.59	
LC0005	0.0166	0.0001	83.5	-1.65	
LC0006	0.0213	0.01	107	0.72	
LC0007	0.0223	0.001	112	1.22	
LC0008	0.0196	0.0001	98.6	-0.14	
LC0009	0.02	0.0012	101	0.07	
LC0010	0.01707	0.001	85.9	-1.41	
LC0011	0.0194	0.0005	97.6	-0.24	
LC0012	-	-	-	-	
LC0013	0.0203	0.0035	102	0.22	
LC0014	0.0185	0.0027	93.1	-0.69	
LC0015	0.0187	0.00187	94.1	-0.59	
LC0016	0.0202	0.001	102	0.17	
LC0017	-	-	-	-	
LC0018	0.015	0.003	75.5	-2.45	
LC0019	0.0206	0.00206	104	0.37	
LC0020	0.0207	0.0004	104	0.42	
LC0021	0.0188	0.0008	94.6	-0.54	
LC0022	< 0.025 (LOQ)	-	-	-	
LC0023	0.012	0.0012	60.4	-3.96	H
LC0024	0.0217	0.002	109	0.92	
LC0025	0.0213	0.0012	107	0.72	
LC0026	0.021	0.00189	106	0.57	
LC0027	-	-	-	-	
LC0028	0.02335	0.009	118	1.75	
LC0029	-	-	-	-	
LC0030	0.0196	0.0012	98.6	-0.14	

Characteristics of parameter

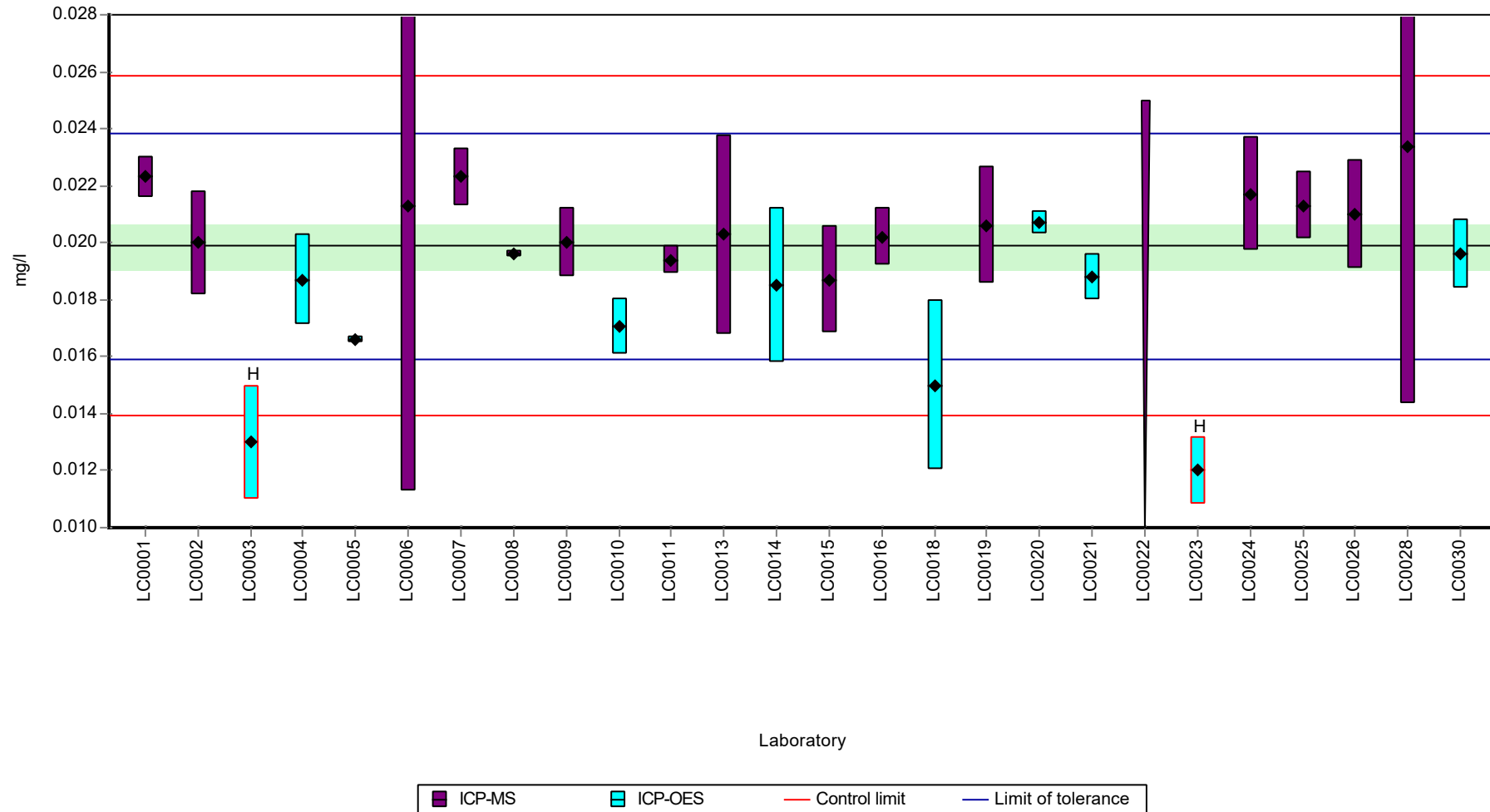
	all results	without outliers	Unit
Mean ± CI (99%)	0.0193 ± 0.00166	0.0199 ± 0.00121	mg/l
Minimum	0.012	0.015	mg/l
Maximum	0.0234	0.0234	mg/l
Standard deviation	0.00276	0.00194	mg/l
rel. standard deviation	14.3	9.75	%
n	25	23	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Cobalt

Graphical presentation of results

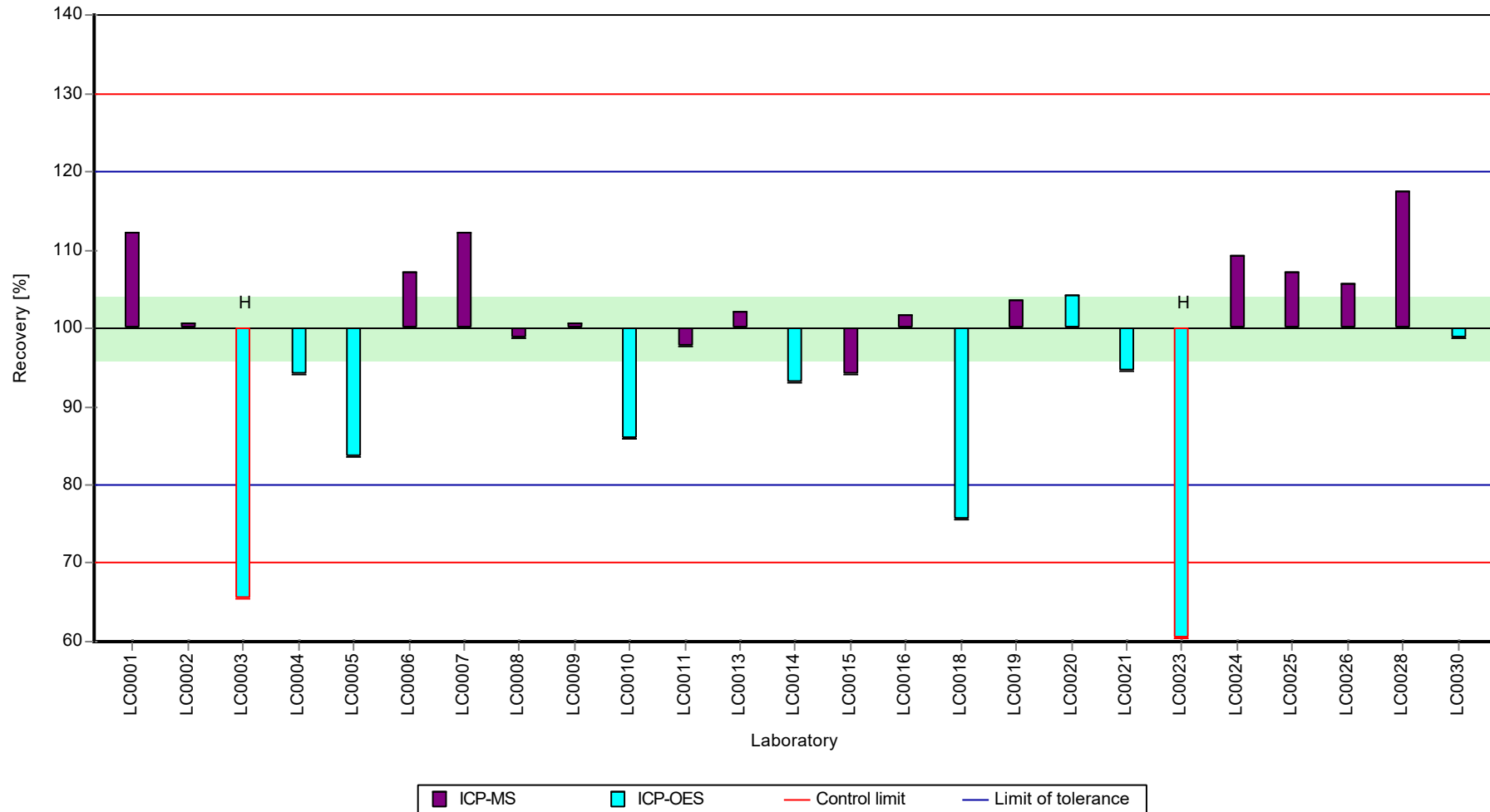
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Cobalt

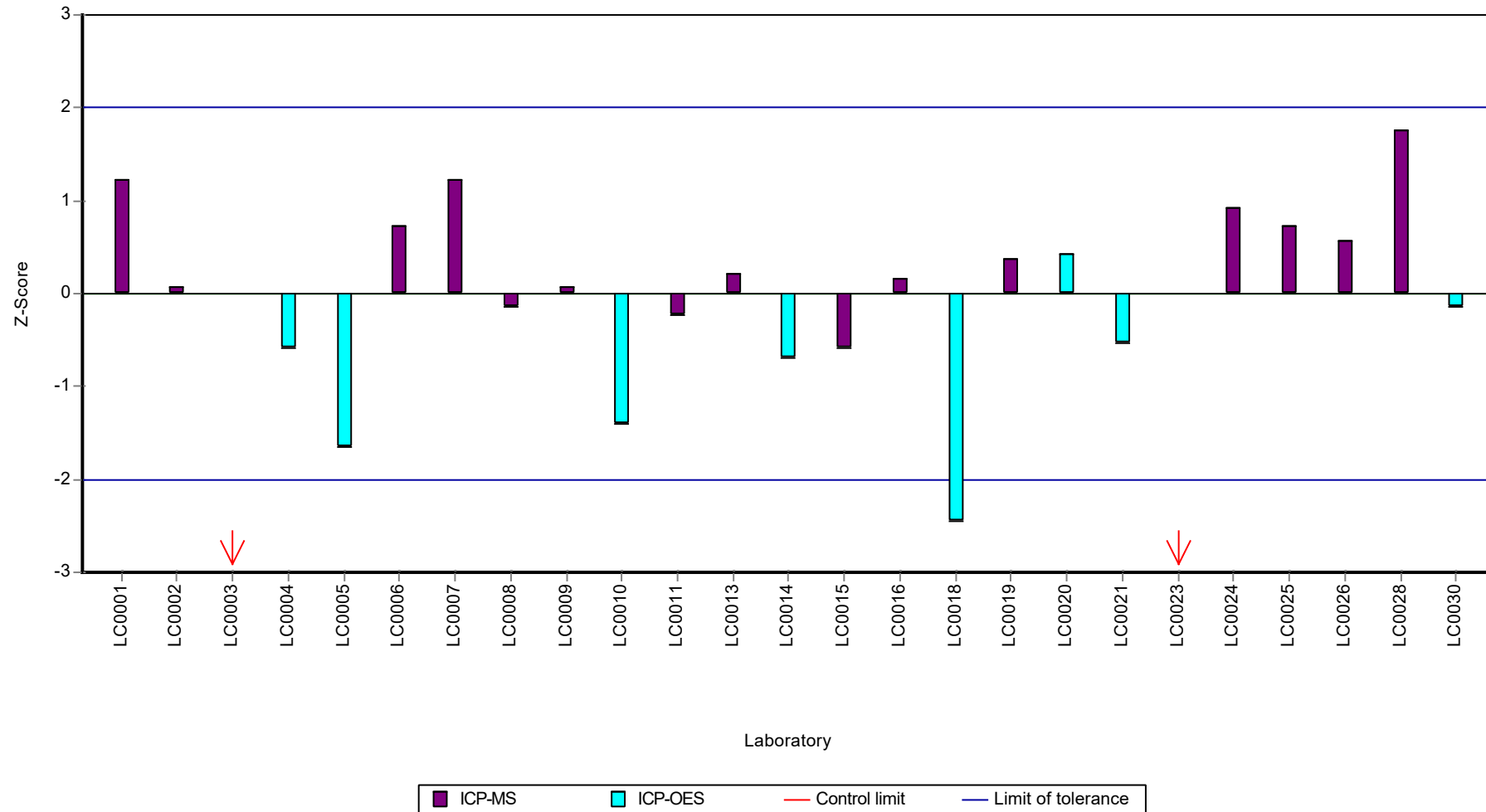
Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Cobalt

Z-score



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Copper

Parameter oriented report

AB11

Copper

Unit	mg/l
Assigned value ± U (k=2)	0.0675 ± 0.00215
Criterion	0.00675 (10 %)
Minimum - Maximum	0.056 - 0.0771
Control test value ± U (k=2)	0.0708 ± 0.0085

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.0667	0.0021	98.8	-0.12	
LC0002	0.067	0.00741	99.3	-0.07	
LC0003	0.056	0.009	83	-1.7	
LC0004	0.0682	0.0067	101	0.11	
LC0005	0.0594	0.00154	88	-1.2	
LC0006	0.074	0.033	110	0.97	
LC0007	0.0771	0.0074	114	1.43	
LC0008	0.0601	0.0003	89.1	-1.09	
LC0009	0.067	0.011	99.3	-0.07	
LC0010	0.0638	0.001	94.5	-0.55	
LC0011	0.0647	0.001	95.9	-0.41	
LC0012	-	-	-	-	
LC0013	0.0662	0.0066	98.1	-0.19	
LC0014	0.0693	0.0028	103	0.27	
LC0015	0.0625	0.0059	92.6	-0.74	
LC0016	0.0747	0.003	111	1.07	
LC0017	0.0621	0.013	92	-0.8	
LC0018	0.068	0.01	101	0.08	
LC0019	0.064	0.0064	94.8	-0.52	
LC0020	0.0739	0.0012	110	0.95	
LC0021	< 0.00287 (LOQ)	-	-	-	FN
LC0022	0.0701	0.007	104	0.39	
LC0023	0.074	0.007	110	0.97	
LC0024	0.06536	0.002	96.9	-0.31	
LC0025	0.0637	0.0041	94.4	-0.56	
LC0026	0.074	0.00666	110	0.97	
LC0027	< 0.2 (LOQ)	-	-	-	
LC0028	0.07555	0.0021	112	1.2	
LC0029	0.07279	0.01092	108	0.79	
LC0030	0.0617	0.0049	91.4	-0.86	

Characteristics of parameter

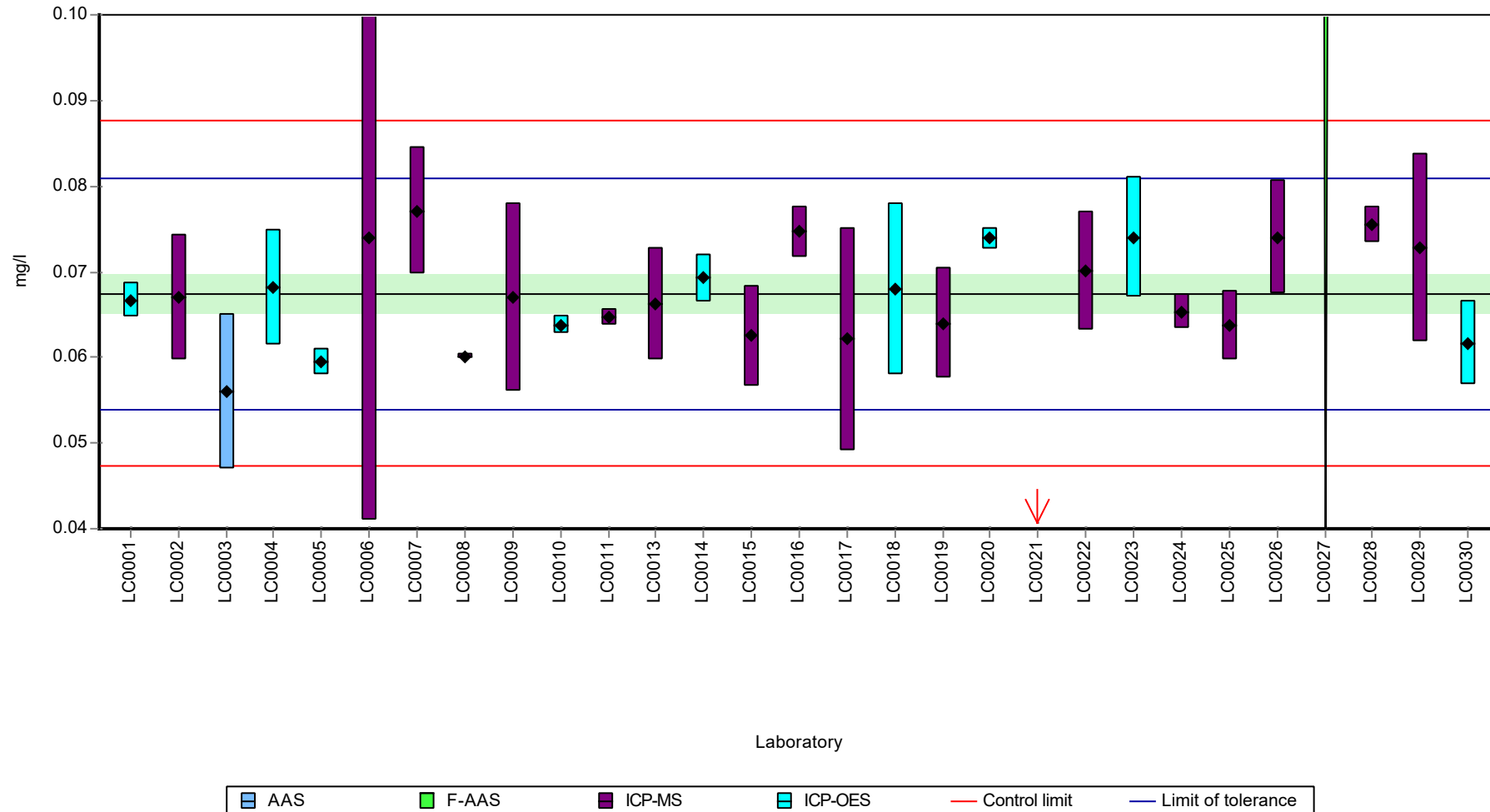
	all results	without outliers	Unit
Mean ± CI (99%)	0.0675 ± 0.00323	0.0675 ± 0.00323	mg/l
Minimum	0.056	0.056	mg/l
Maximum	0.0771	0.0771	mg/l
Standard deviation	0.00559	0.00559	mg/l
rel. standard deviation	8.28	8.28	%
n	27	27	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Copper

Graphical presentation of results

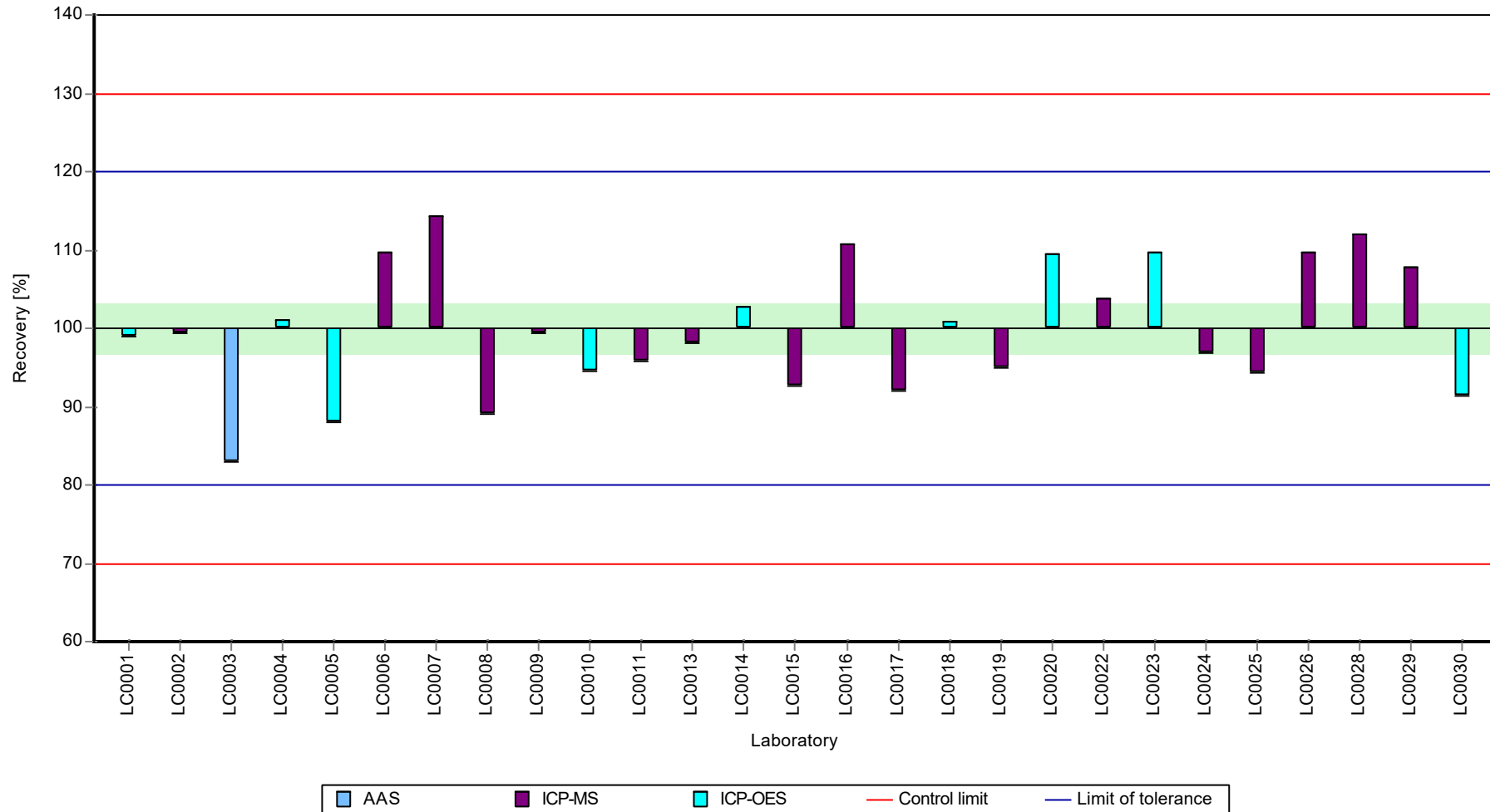
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Copper

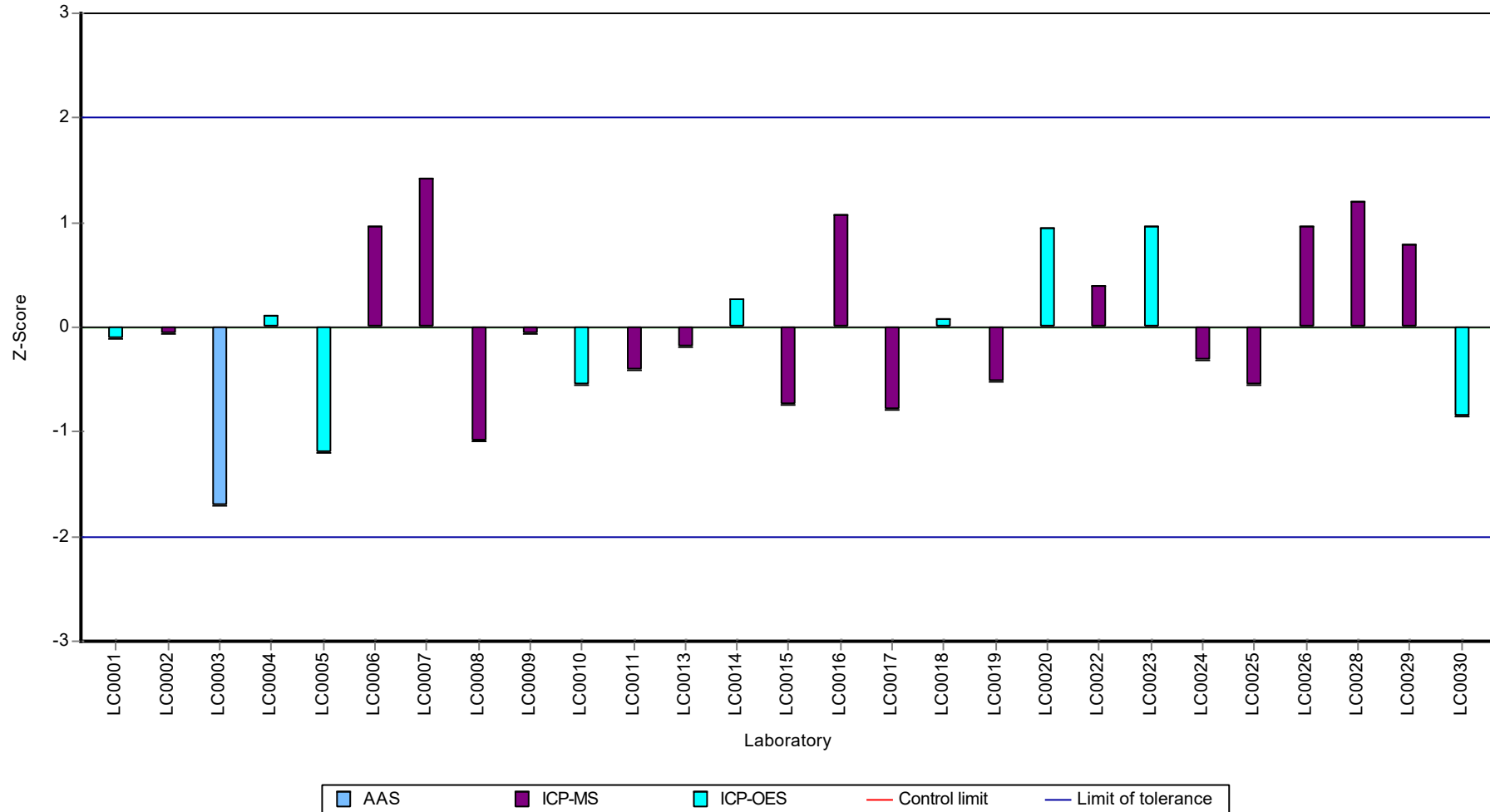
Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Copper

Z-score



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Iron

Parameter oriented report

AB11

Iron

Unit	mg/l
Assigned value ± U (k=2)	0.544 ± 0.0269
Criterion	0.0653 (12 %)
Minimum - Maximum	0.43 - 0.708
Control test value ± U (k=2)	0.4810 ± 0.0578

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.572	0.0153	105	0.43	
LC0002	0.667	0.1294	123	1.89	
LC0003	0.46	0.069	84.6	-1.28	
LC0004	0.535	0.041	98.4	-0.13	
LC0005	0.51	0.023	93.8	-0.52	
LC0006	0.533	0.218	98	-0.17	
LC0007	0.5926	0.018	109	0.75	
LC0008	0.6052	0.0098	111	0.94	
LC0009	0.49	0.05	90.1	-0.82	
LC0010	0.44473	0.022	81.8	-1.52	
LC0011	0.549	0.009	101	0.08	
LC0012	-	-	-	-	
LC0013	0.535	0.107	98.4	-0.13	
LC0014	-	-	-	-	
LC0015	0.554	0.0554	102	0.16	
LC0016	0.557	0.021	102	0.2	
LC0017	-	-	-	-	
LC0018	0.449	0.063	82.6	-1.45	
LC0019	0.582	0.0582	107	0.59	
LC0020	0.5544	0.0143	102	0.16	
LC0021	< 0.0313 (LOQ)	-	-	-	FN
LC0022	0.534	0.05	98.2	-0.15	
LC0023	0.515	0.052	94.7	-0.44	
LC0024	0.58892	0.02	108	0.69	
LC0025	0.4838	0.0193	89	-0.92	
LC0026	0.63	0.0567	116	1.32	
LC0027	0.43	0.0246	79.1	-1.74	
LC0028	0.70812	0.021	130	2.52	
LC0029	-	-	-	-	
LC0030	0.515	0.027	94.7	-0.44	

Characteristics of parameter

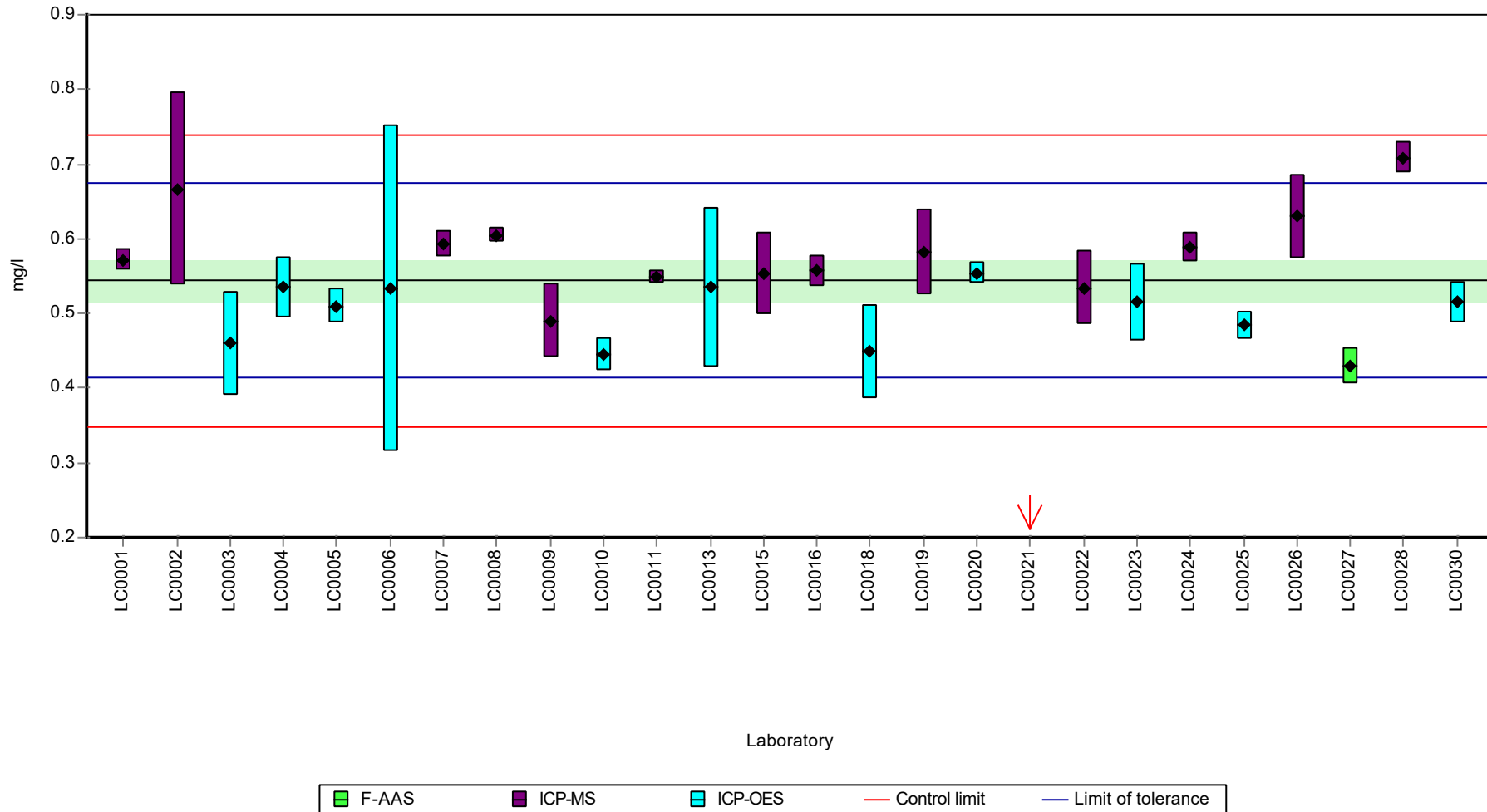
	all results	without outliers	Unit
Mean ± CI (99%)	0.544 ± 0.0404	0.544 ± 0.0404	mg/l
Minimum	0.43	0.43	mg/l
Maximum	0.708	0.708	mg/l
Standard deviation	0.0674	0.0674	mg/l
rel. standard deviation	12.4	12.4	%
n	25	25	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Iron

Graphical presentation of results

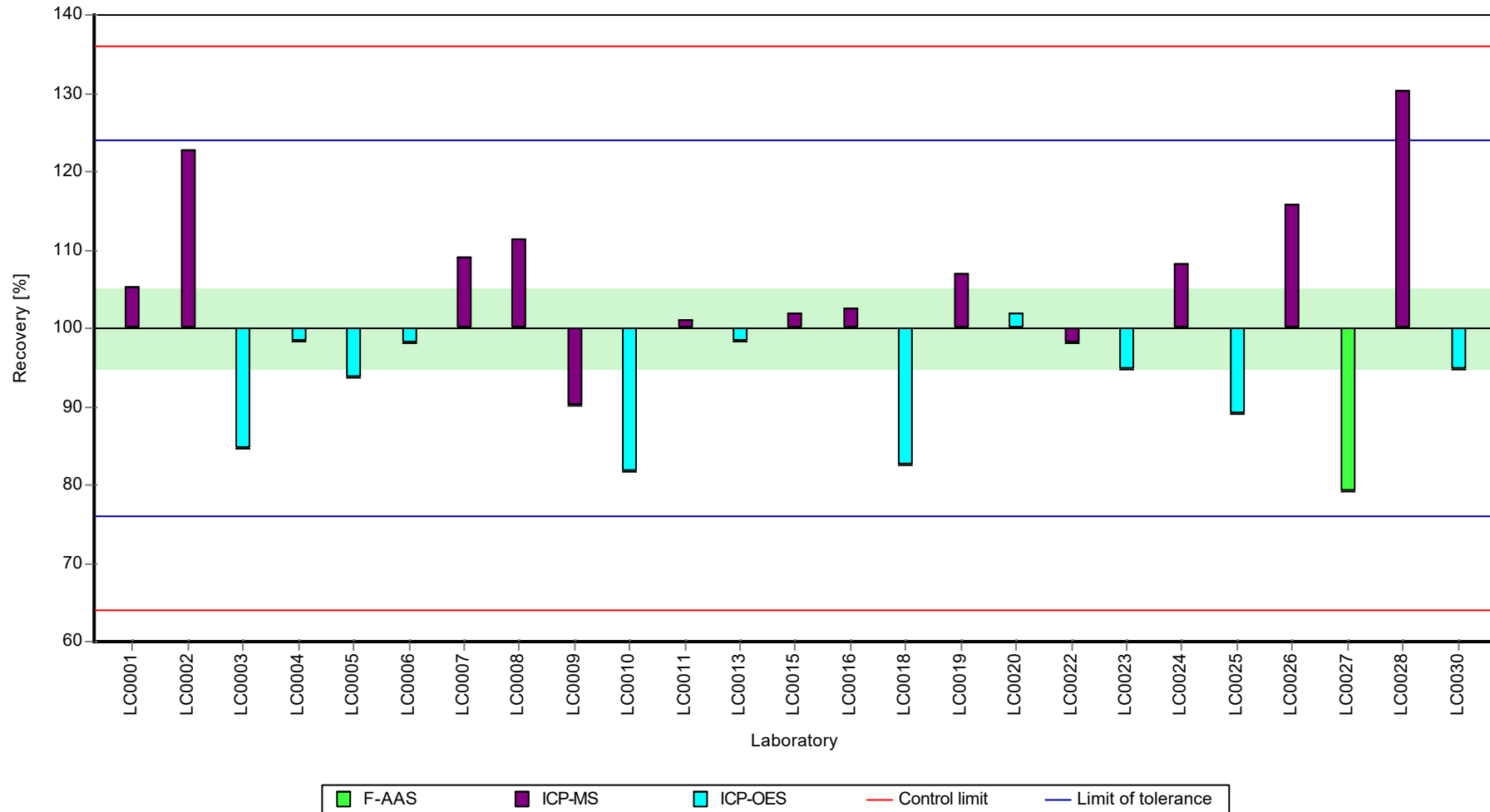
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Iron

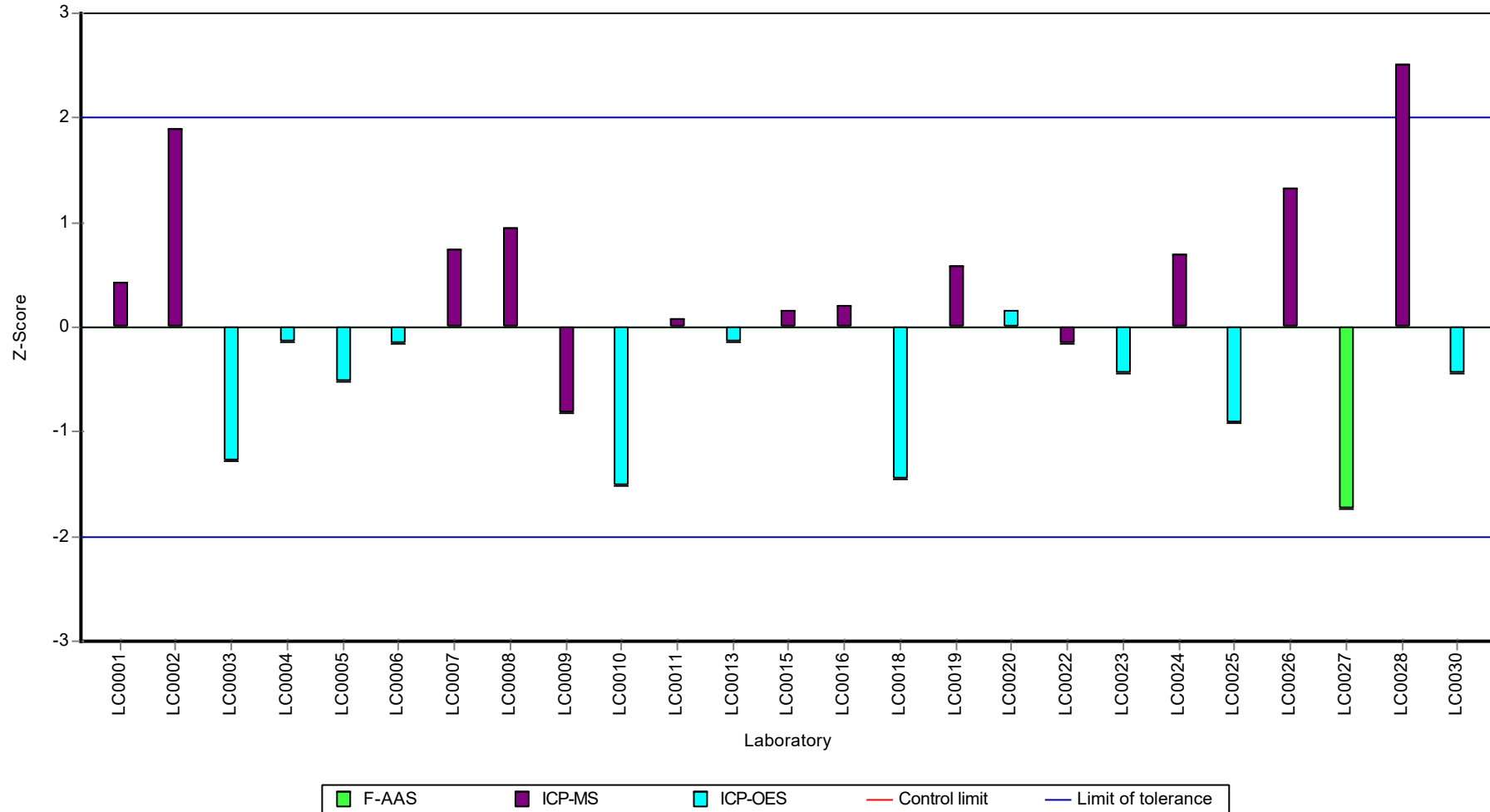
Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Iron

Z-score



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Lead

Parameter oriented report

AB11

Lead

Unit	mg/l
Assigned value ± U (k=2)	0.0118 ± 0.00052
Criterion	0.00118 (10 %)
Minimum - Maximum	0.0089 - 0.0136
Control test value ± U (k=2)	0.01360 ± 0.00122

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.0089	0.0003	75.5	-2.45	
LC0002	0.013	0.00156	110	1.03	
LC0003	0.0054	0.001	45.8	-5.42	H
LC0004	0.0132	0.001	112	1.2	
LC0005	< 0.01 (LOQ)	-	-	-	
LC0006	0.0116	0.0051	98.5	-0.15	
LC0007	0.0111	0.0013	94.2	-0.58	
LC0008	0.0113	0.0001	95.9	-0.41	
LC0009	0.012	0.001	102	0.19	
LC0010	0.0025	0.001	21.2	-7.88	H
LC0011	0.0124	0.0002	105	0.52	
LC0012	-	-	-	-	
LC0013	0.0121	0.0011	103	0.27	
LC0014	-	-	-	-	
LC0015	0.0117	0.00099	99.3	-0.07	
LC0016	0.0136	0.002	115	1.54	
LC0017	0.011	0.0047	93.4	-0.66	
LC0018	0.007	0.001	59.4	-4.06	H
LC0019	0.0125	0.00125	106	0.61	
LC0020	0.0133	0.00028	113	1.29	
LC0021	0.0165	0.0041	140	4	H
LC0022	0.0133	0.001	113	1.29	
LC0023	0.0107	0.0021	90.8	-0.92	
LC0024	0.01164	0.001	98.8	-0.12	
LC0025	0.0101	0.0005	85.7	-1.43	
LC0026	0.012	0.00144	102	0.19	
LC0027	< 0.3 (LOQ)	-	-	-	
LC0028	0.01182	0.003	100	0.03	
LC0029	0.01234	0.00185	105	0.47	
LC0030	0.0096	0.0013	81.5	-1.85	

Characteristics of parameter

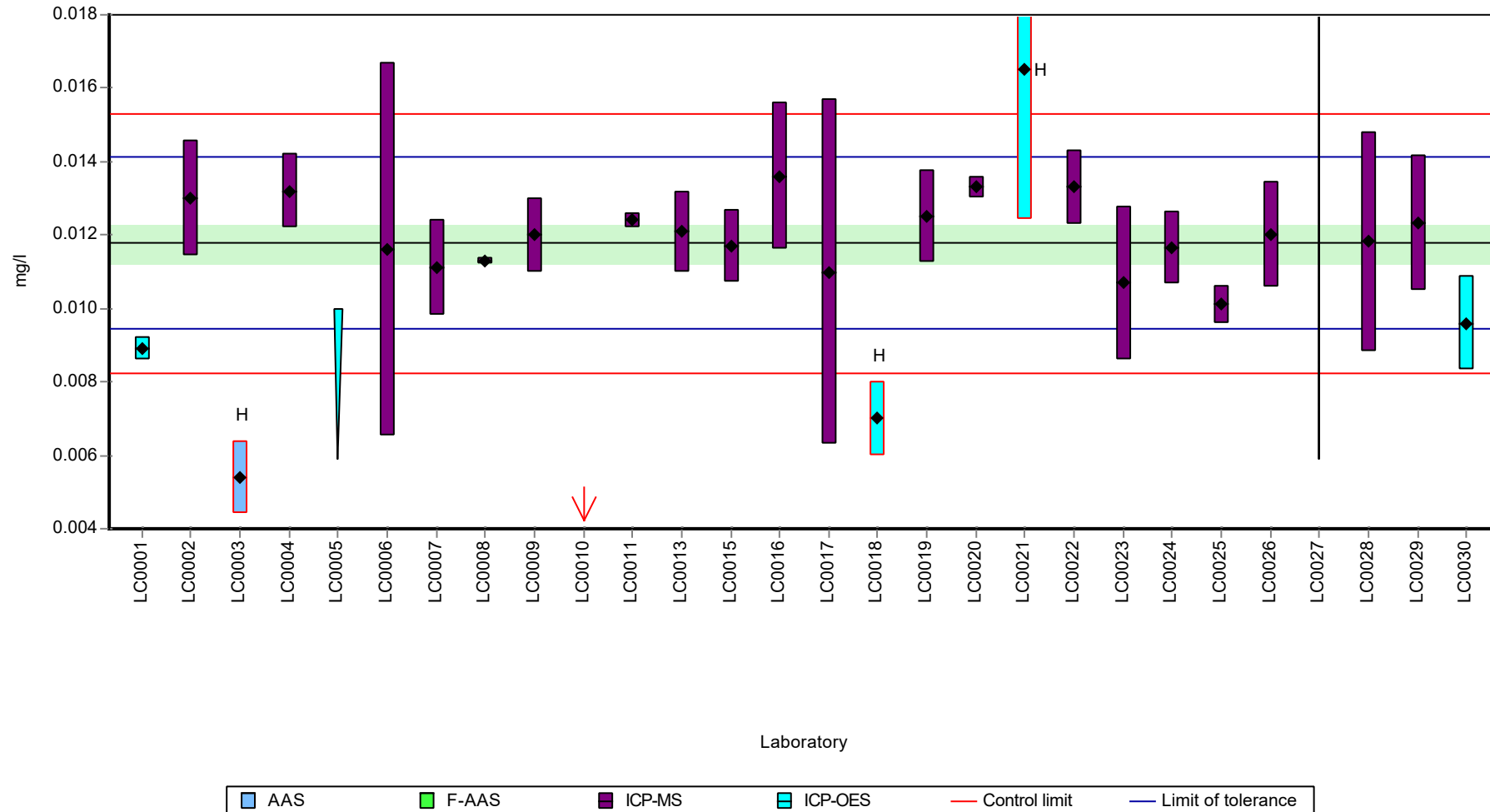
	all results	without outliers	Unit
Mean ± CI (99%)	0.0112 ± 0.00164	0.0118 ± 0.00078	mg/l
Minimum	0.0025	0.0089	mg/l
Maximum	0.0165	0.0136	mg/l
Standard deviation	0.00278	0.00122	mg/l
rel. standard deviation	24.9	10.4	%
n	26	22	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Lead

Graphical presentation of results

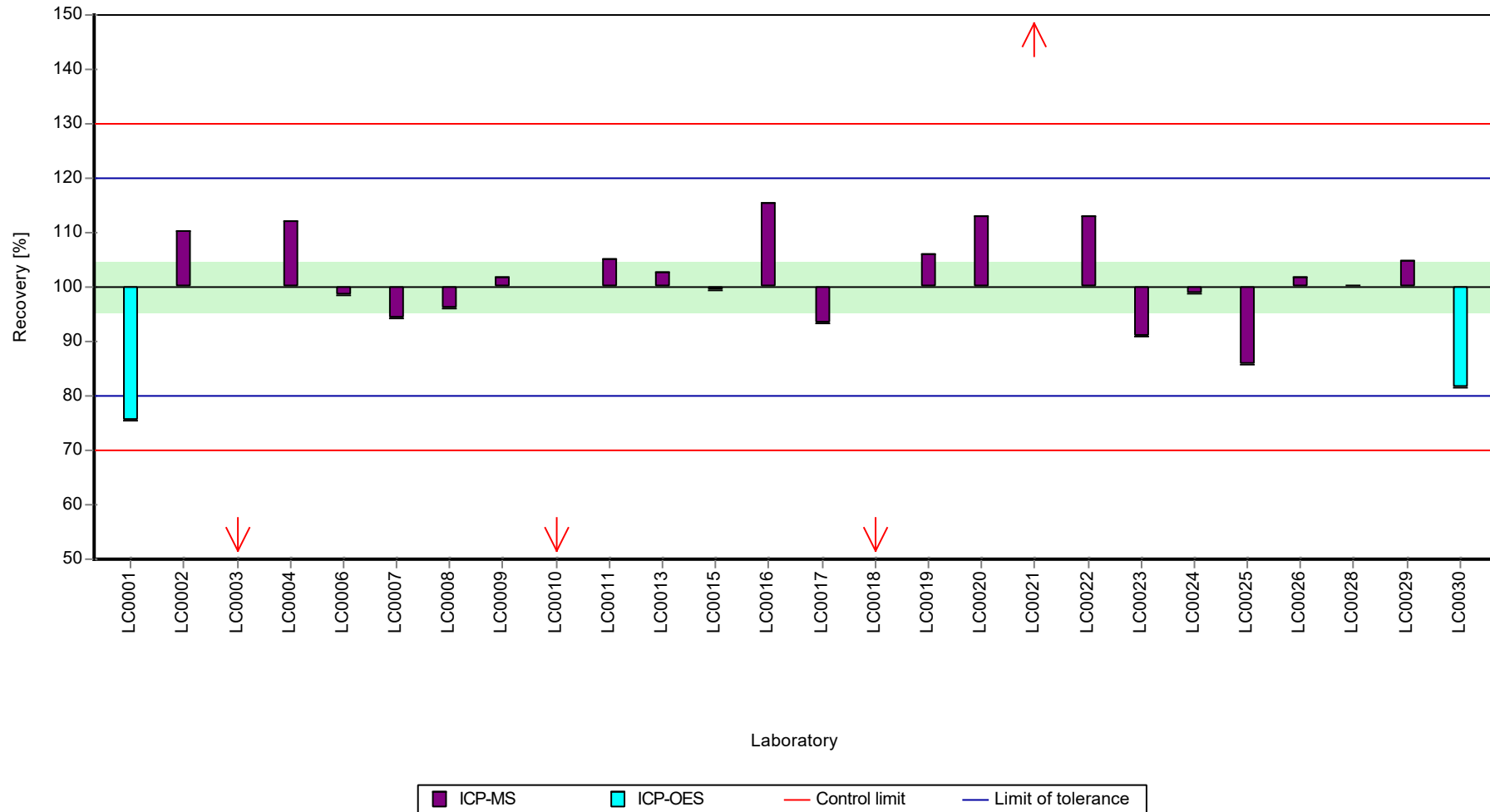
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

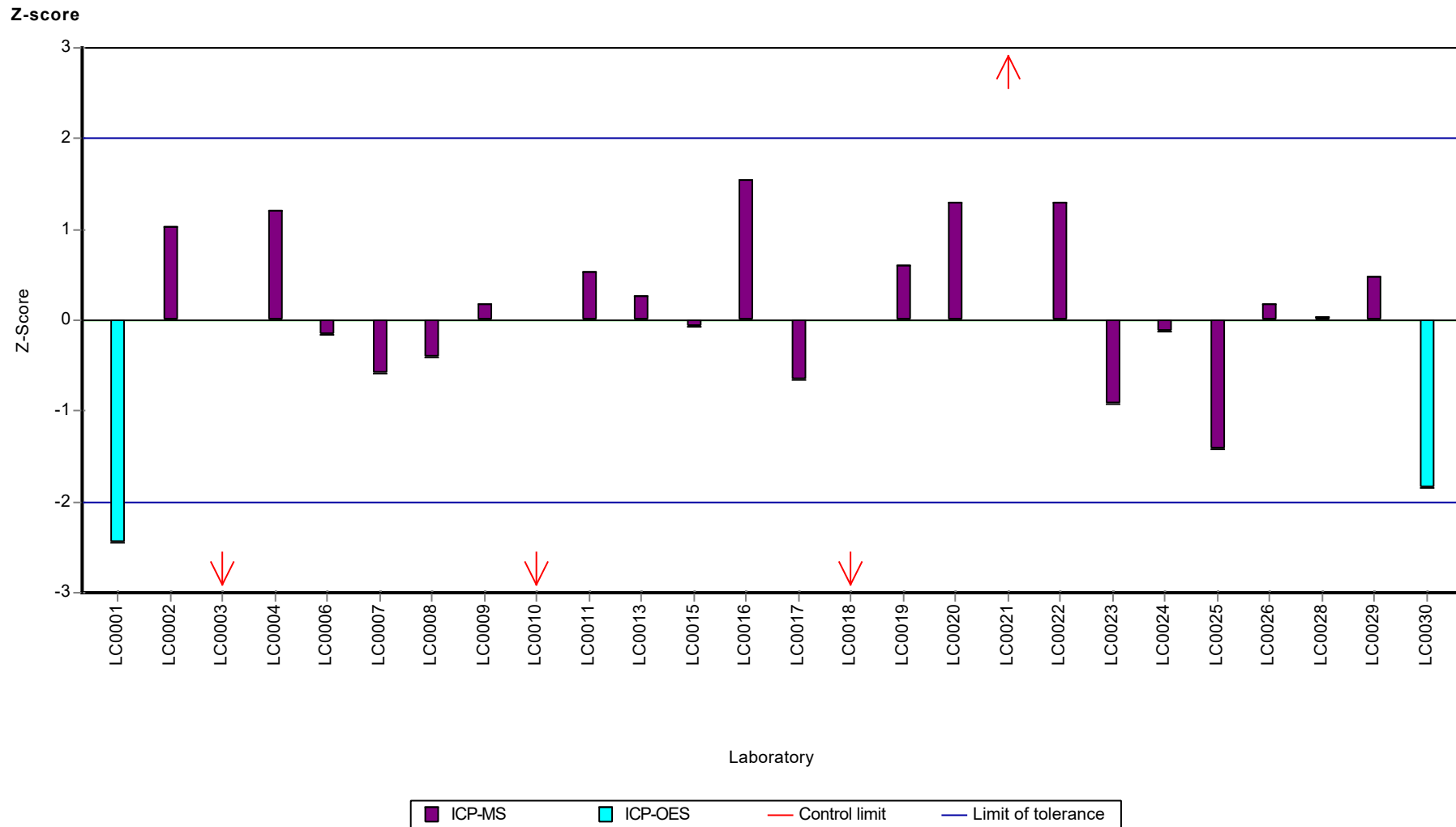
Sample: AB11, Parameter: Lead

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Lead



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11HG, Parameter: Mercury

Parameter oriented report

AB11 HG

Mercury

Unit	mg/l
Assigned value ± U (k=2)	0.000548 ± 0.0000524
Criterion	0.000115 (21 %)
Minimum - Maximum	0.000239 - 0.00075
Control test value ± U (k=2)	0.000718 ± 0.000108

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.0006	0.00001	109	0.45	
LC0002	< 0.0005 (LOQ)	-	-	-	
LC0003	0.00024	0.00008	43.6	-2.69	
LC0004	0.00047	0.00001	85	-0.72	
LC0005	0.00065	0	118	0.87	
LC0006	-	-	-	-	
LC0007	0.00048	0.00001	87.5	-0.59	
LC0008	0.0006	0.00002	109	0.45	
LC0009	0.00075	0.00007	137	1.75	
LC0010	0.00053	0.0001	97.2	-0.13	
LC0011	0.00057	0.00002	105	0.22	
LC0012	-	-	-	-	
LC0013	0.00057	0.00012	104	0.18	
LC0014	-	-	-	-	
LC0015	0.00044	0.00005	79.7	-0.97	
LC0016	0.00063	0.00004	115	0.69	
LC0017	0.00055	0.00014	99.4	-0.03	
LC0018	0.0004	0.00008	72.9	-1.29	
LC0019	0.00054	0.00005	98.5	-0.07	
LC0020	0.411	0.009	74900	3563.8	H
LC0021	< 0.00029 (LOQ)	-	-	-	
LC0022	0.0007	0.0001	128	1.32	
LC0023	0.00059	0.00012	107	0.34	
LC0024	0.00054	0.00001	99.1	-0.05	
LC0025	0.00067	0.0001	122	1.06	
LC0026	< 0.0001 (LOQ)	-	-	-	FN
LC0027	-	-	-	-	
LC0028	0.00041	0.00002	74.8	-1.2	
LC0029	0.00056	0.00006	102	0.08	
LC0030	0.00151	0.00057	275	8.35	H

Characteristics of parameter

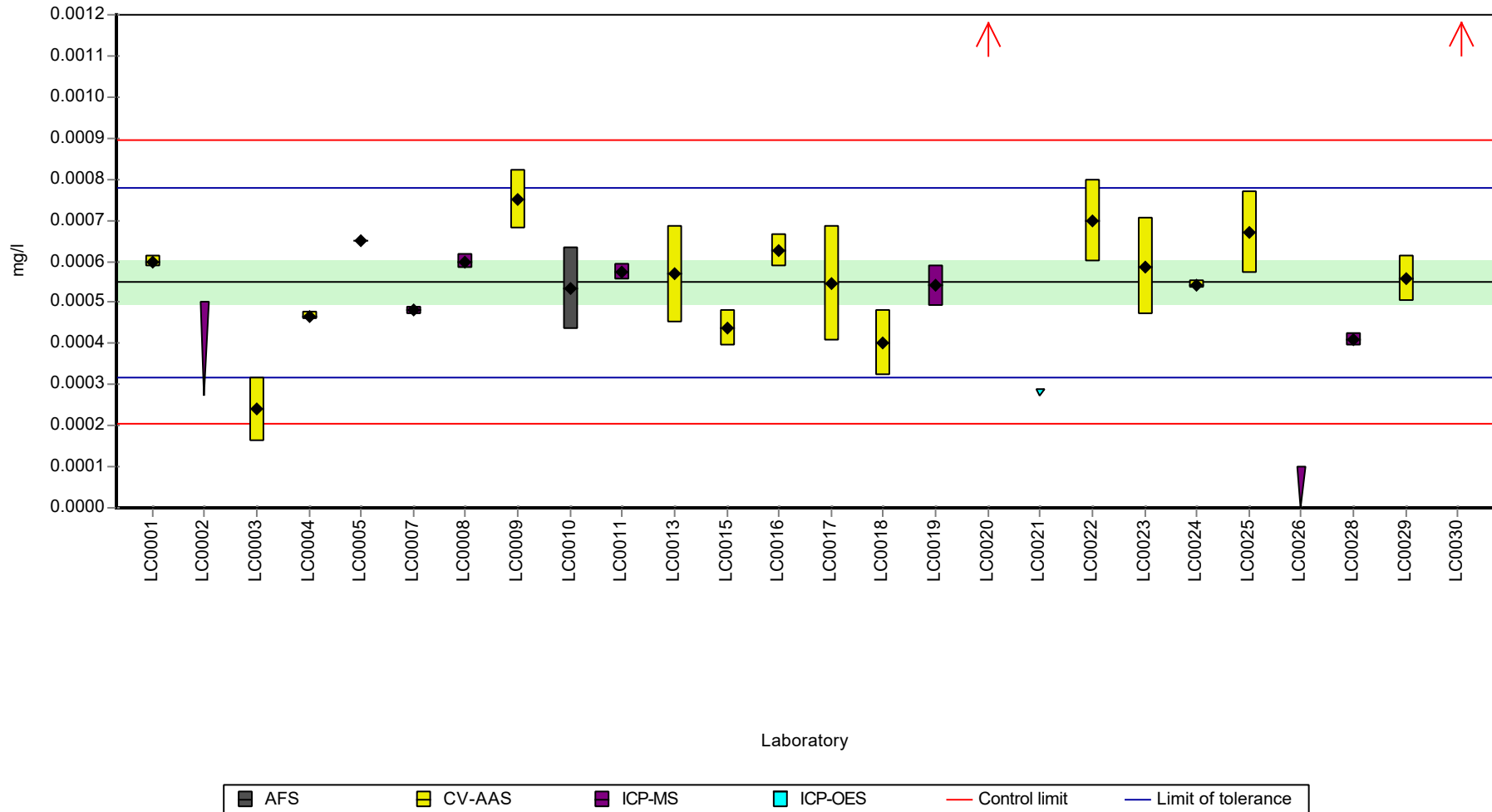
	all results	without outliers	Unit
Mean ± CI (99%)	0.0184 ± 0.0535	0.000547 ± 0.0000752	mg/l
Minimum	0.000239	0.000239	mg/l
Maximum	0.411	0.00075	mg/l
Standard deviation	0.0856	0.000115	mg/l
rel. standard deviation	464	21	%
n	23	21	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11HG, Parameter: Mercury

Graphical presentation of results

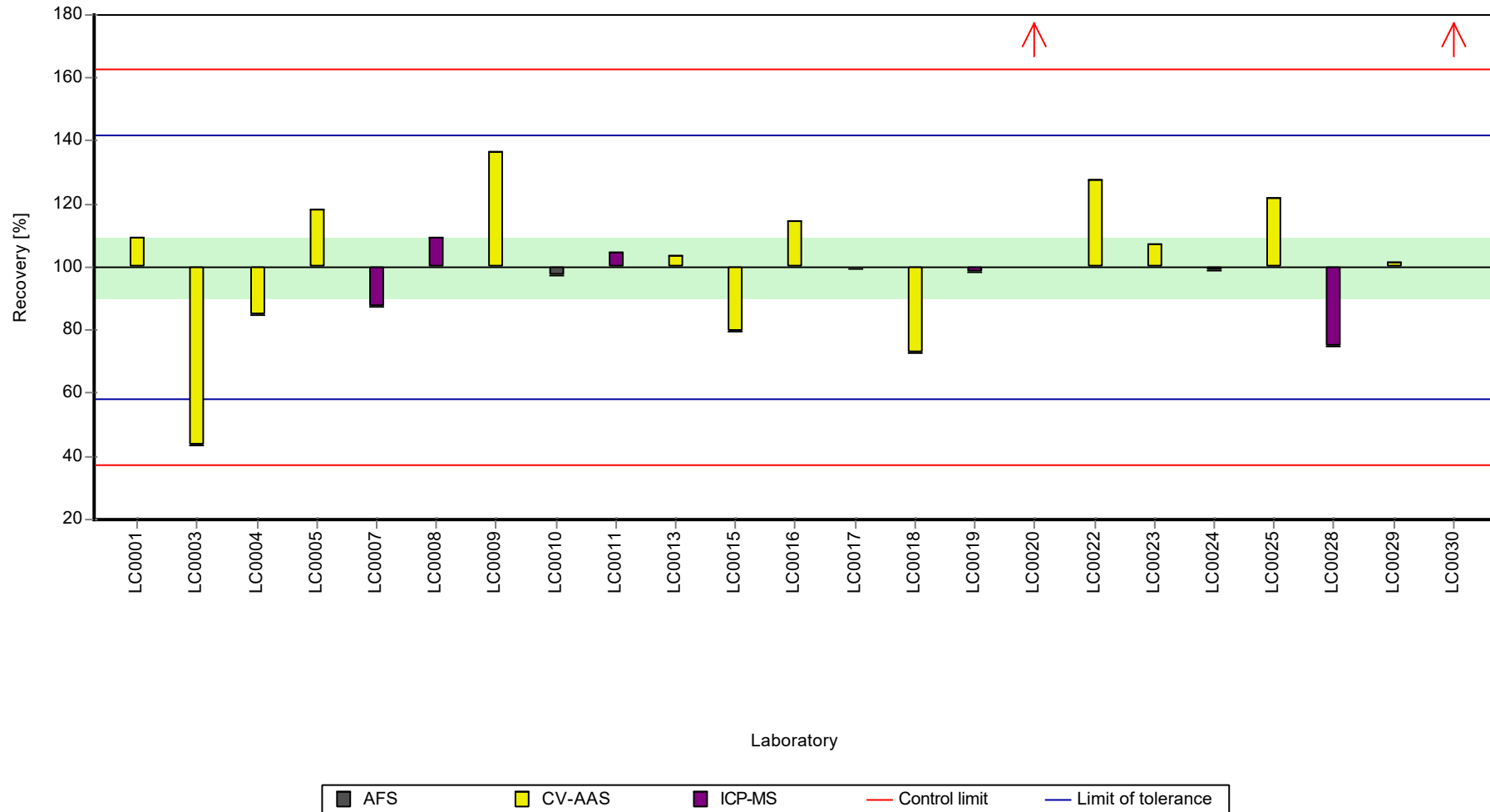
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11HG, Parameter: Mercury

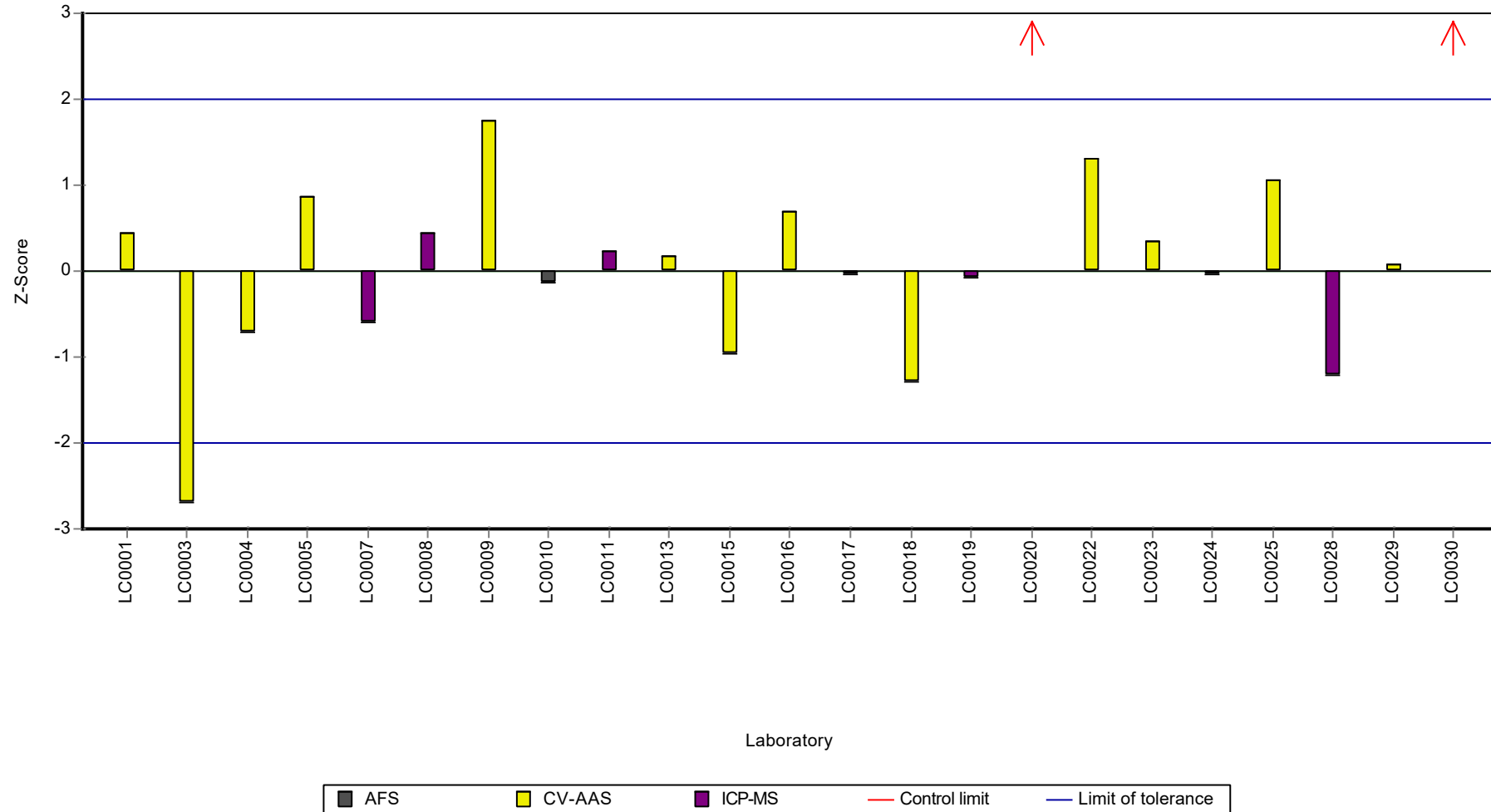
Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11HG, Parameter: Mercury

Z-score



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Molybdenum

Parameter oriented report

AB11

Molybdenum

Unit	mg/l
Assigned value ± U (k=2)	0.023 ± 0.001
Criterion	0.00253 (11 %)
Minimum - Maximum	0.017 - 0.0284
Control test value ± U (k=2)	0.02400 ± 0.00168

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.0261	0.0005	114	1.23	
LC0002	0.023	0.0025	100	0.00	
LC0003	0.02	0.0036	87	-1.18	
LC0004	0.0218	0.0019	94.8	-0.47	
LC0005	0.025	0.00166	109	0.79	
LC0006	-	-	-	-	
LC0007	0.025	0.0018	109	0.79	
LC0008	0.0248	0.0005	108	0.71	
LC0009	0.023	0.0015	100	0.00	
LC0010	0.01957	0.001	85.1	-1.35	
LC0011	0.0221	0.0002	96.1	-0.35	
LC0012	-	-	-	-	
LC0013	0.0234	0.0054	102	0.16	
LC0014	0.0246	0.0031	107	0.64	
LC0015	0.0225	0.00225	97.9	-0.2	
LC0016	0.0212	0.0016	92.2	-0.71	
LC0017	0.0284	0.0043	124	2.14	
LC0018	0.019	0.003	82.6	-1.58	
LC0019	0.0262	0.00262	114	1.27	
LC0020	0.0224	0.0004	97.4	-0.23	
LC0021	0.0227	0.0015	98.7	-0.12	
LC0022	< 0.05 (LOQ)	-	-	-	
LC0023	0.017	0.002	73.9	-2.37	
LC0024	0.02368	0.002	103	0.27	
LC0025	0.0243	0.0017	106	0.52	
LC0026	0.023	0.00207	100	0.00	
LC0027	-	-	-	-	
LC0028	0.02518	0.009	110	0.86	
LC0029	0.0245	0.00368	107	0.6	
LC0030	0.0194	0.00072	84.4	-1.42	

Characteristics of parameter

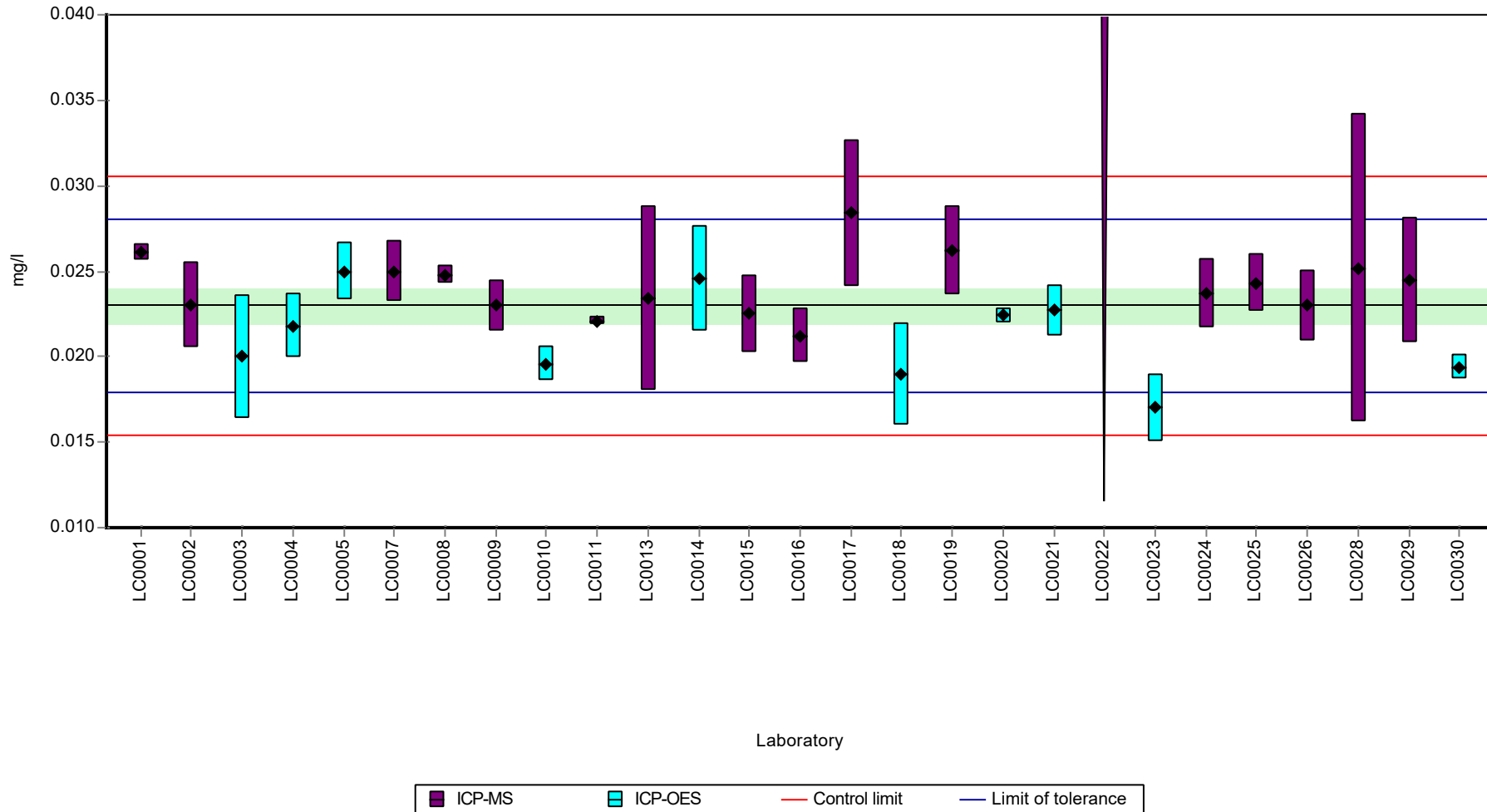
	all results	without outliers	Unit
Mean ± CI (99%)	0.023 ± 0.00151	0.023 ± 0.00151	mg/l
Minimum	0.017	0.017	mg/l
Maximum	0.0284	0.0284	mg/l
Standard deviation	0.00256	0.00256	mg/l
rel. standard deviation	11.1	11.1	%
n	26	26	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Molybdenum

Graphical presentation of results

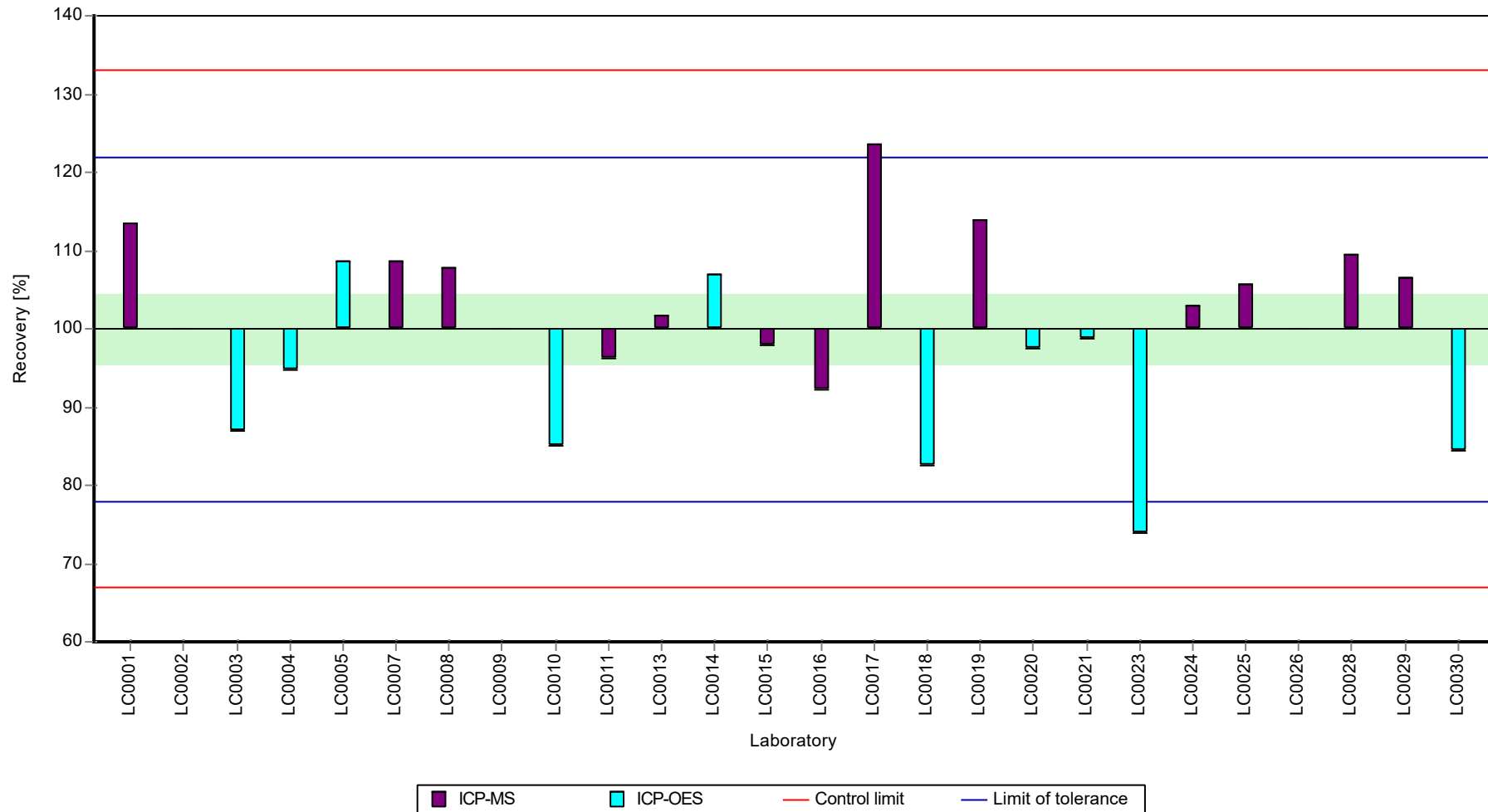
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Molybdenum

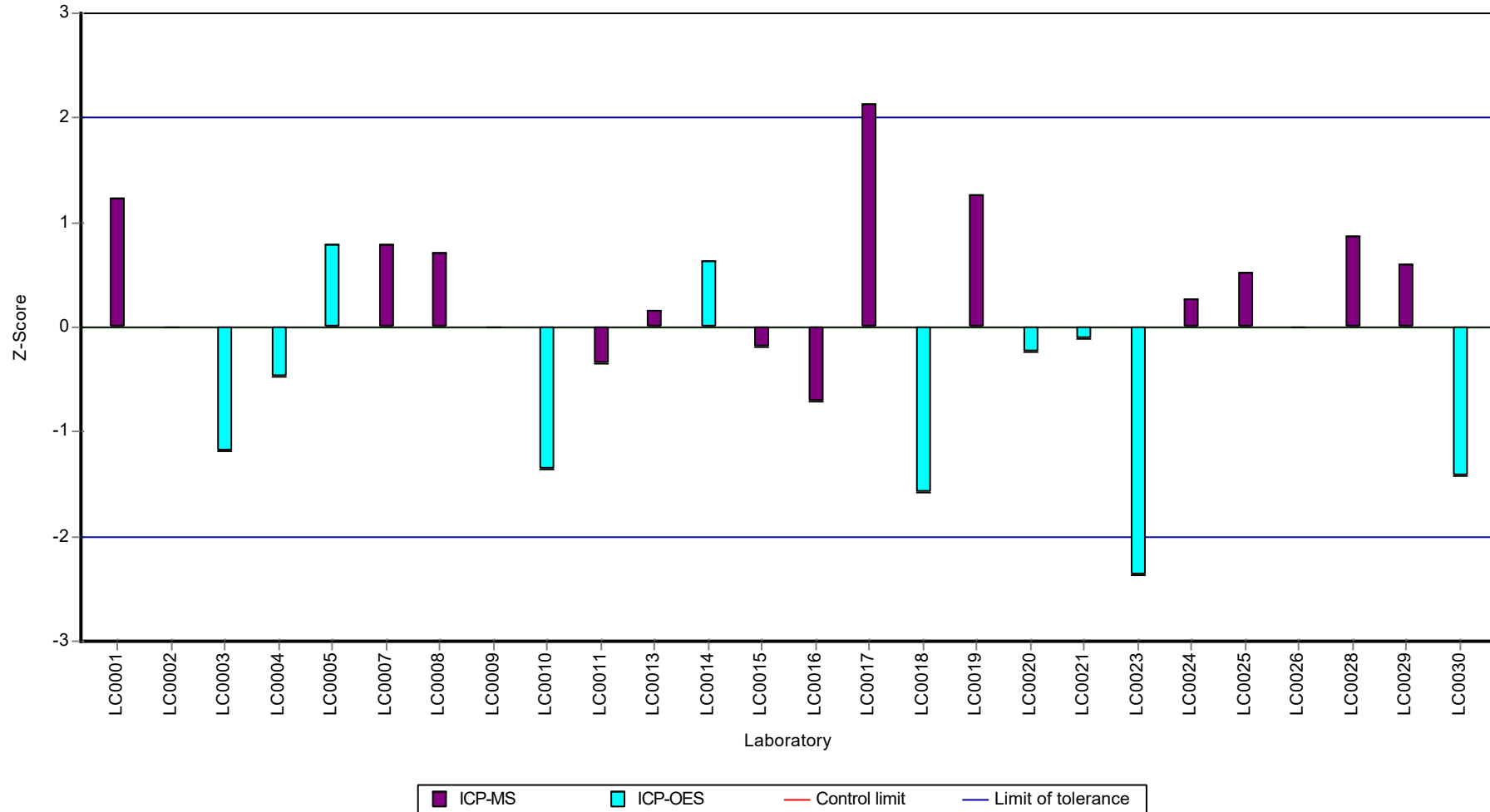
Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Molybdenum

Z-score



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Nickel

Parameter oriented report

AB11

Nickel

Unit	mg/l
Assigned value ± U (k=2)	0.0198 ± 0.000858
Criterion	0.00218 (11 %)
Minimum - Maximum	0.0158 - 0.0243
Control test value ± U (k=2)	0.01900 ± 0.00228

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.0205	0.0006	104	0.33	
LC0002	0.02	0.00217	101	0.1	
LC0003	0.0143	0.003	72.3	-2.52	H
LC0004	0.019	0.0017	96	-0.36	
LC0005	0.0163	0.00039	82.4	-1.6	
LC0006	0.0243	0.0105	123	2.08	
LC0007	0.0197	0.0016	99.6	-0.04	
LC0008	0.0191	0.0005	96.5	-0.31	
LC0009	0.023	0.0014	116	1.48	
LC0010	0.01697	0.001	85.8	-1.29	
LC0011	0.0187	0.001	94.5	-0.5	
LC0012	-	-	-	-	
LC0013	0.0203	0.0043	103	0.24	
LC0014	0.0176	0.0013	89	-1	
LC0015	0.0186	0.00093	94	-0.54	
LC0016	0.0208	0.001	105	0.47	
LC0017	0.0201	0.0038	102	0.15	
LC0018	0.016	0.003	80.9	-1.74	
LC0019	0.02	0.002	101	0.1	
LC0020	0.0208	0.0004	105	0.47	
LC0021	< 0.00036 (LOQ)	-	-	-	FN
LC0022	0.0203	0.002	103	0.24	
LC0023	< 0.02 (LOQ)	-	-	-	
LC0024	0.02188	0.002	111	0.96	
LC0025	0.0196	0.0009	99.1	-0.08	
LC0026	0.021	0.00189	106	0.56	
LC0027	< 0.2 (LOQ)	-	-	-	
LC0028	0.02274	0.009	115	1.36	
LC0029	0.0215	0.00322	109	0.79	
LC0030	0.0158	0.0017	79.9	-1.83	

Characteristics of parameter

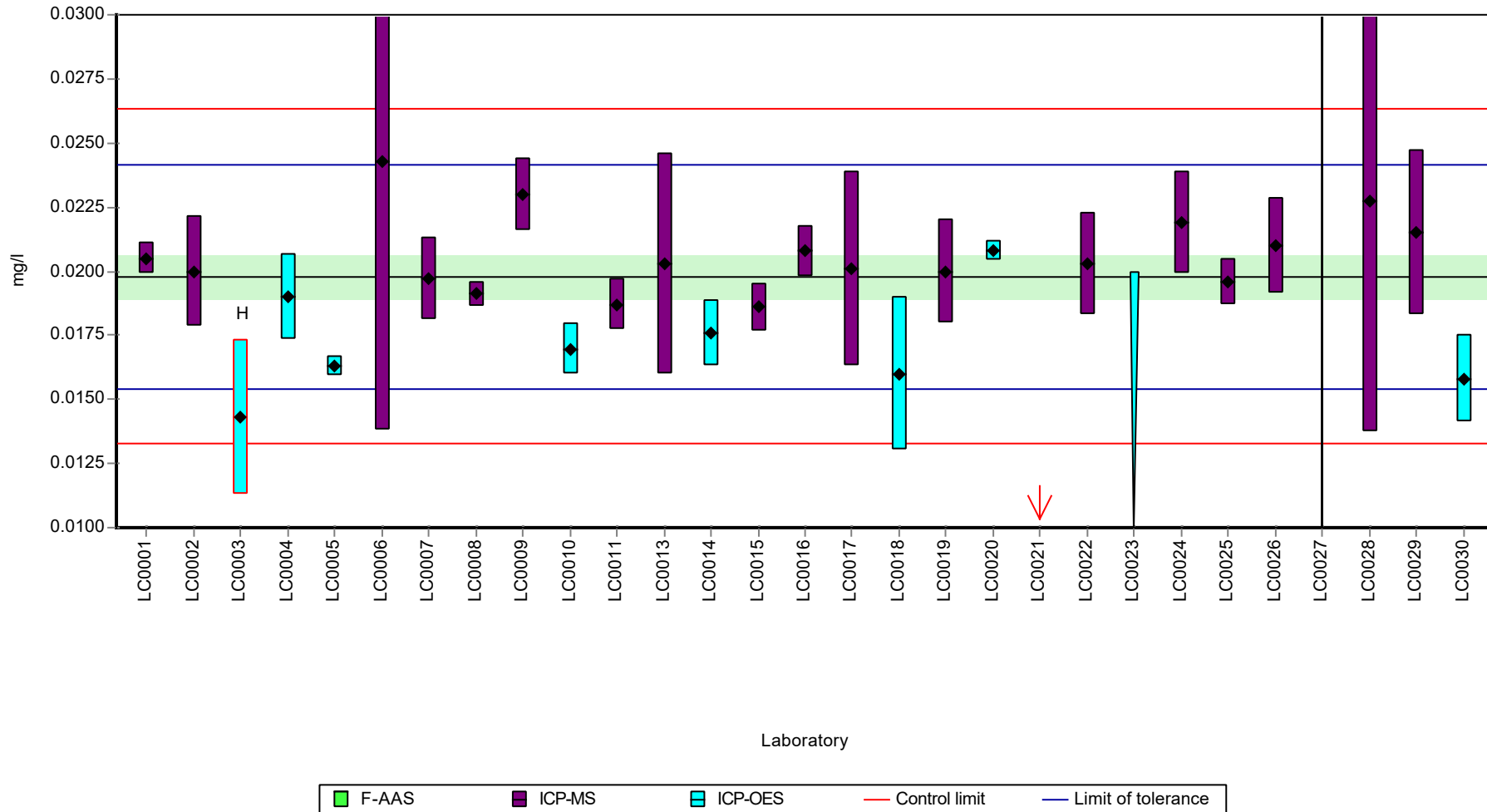
	all results	without outliers	Unit
Mean ± CI (99%)	0.0196 ± 0.00139	0.0198 ± 0.00129	mg/l
Minimum	0.0143	0.0158	mg/l
Maximum	0.0243	0.0243	mg/l
Standard deviation	0.00236	0.00214	mg/l
rel. standard deviation	12.1	10.8	%
n	26	25	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Nickel

Graphical presentation of results

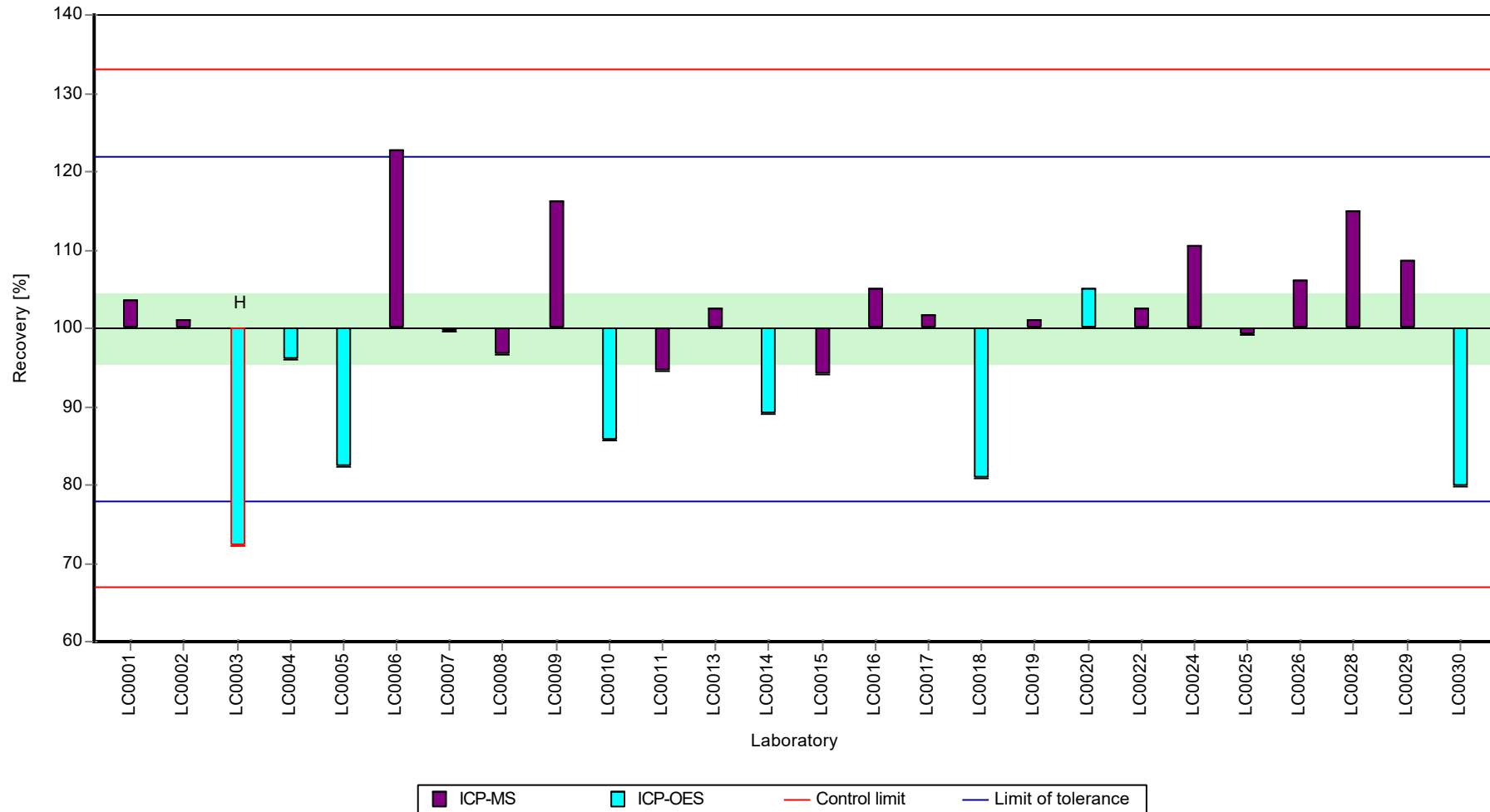
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Nickel

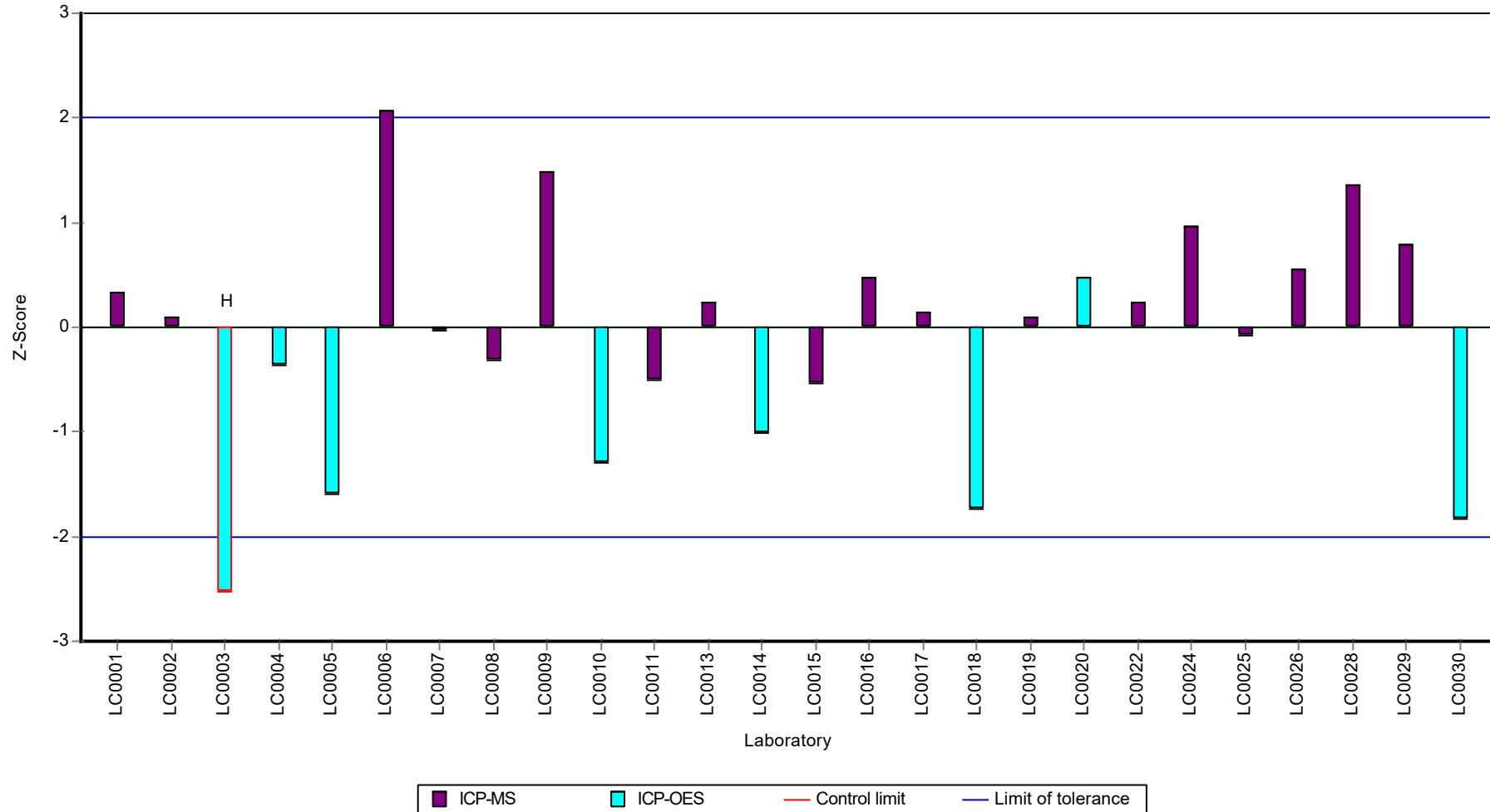
Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Nickel

Z-score



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Selenium

Parameter oriented report

AB11

Selenium

Nur informative Bewertung möglich – siehe Anmerkungen unter D4.
Only informative evaluation possible – see notes under E4.

Unit mg/l
Assigned value ± U (k=2) -
Criterion -
Minimum - Maximum -
Control test value ± U (k=2) < 0.002 (control laboratory; GF-AAS)

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.0258	0.0004	-	-	H
LC0002	0.002	0.00044	-	-	
LC0003	< 0.001 (LOQ)	-	-	-	
LC0004	0.001	0.0001	-	-	
LC0005	< 0.01 (LOQ)	-	-	-	
LC0006	0.0014	0.0007	-	-	
LC0007	0.0053	0.00018	-	-	H
LC0008	0.0013	0.0001	-	-	
LC0009	0.015	0.0035	-	-	H
LC0010	< 0.001 (LOQ)	-	-	-	
LC0011	0.00109	0.0001	-	-	
LC0012	-	-	-	-	
LC0013	0.0251	0.0075	-	-	H
LC0014	-	-	-	-	
LC0015	0.0013	0.00013	-	-	
LC0016	0.00114	0.0001	-	-	
LC0017	0.0021	0.0004	-	-	
LC0018	< 0.005 (LOQ)	-	-	-	
LC0019	0.0204	0.003	-	-	H
LC0020	0.00128	0.00005	-	-	
LC0021	0.0015	0.0009	-	-	
LC0022	< 0.005 (LOQ)	-	-	-	
LC0023	0.0533	0.0107	-	-	H
LC0024	0.00126	0.001	-	-	
LC0025	0.0331	0.0025	-	-	H
LC0026	0.0014	0.0004	-	-	
LC0027	-	-	-	-	
LC0028	0.01708	0.003	-	-	H
LC0029	0.0013	0.00019	-	-	
LC0030	0.0018	0.00056	-	-	

Characteristics of parameter

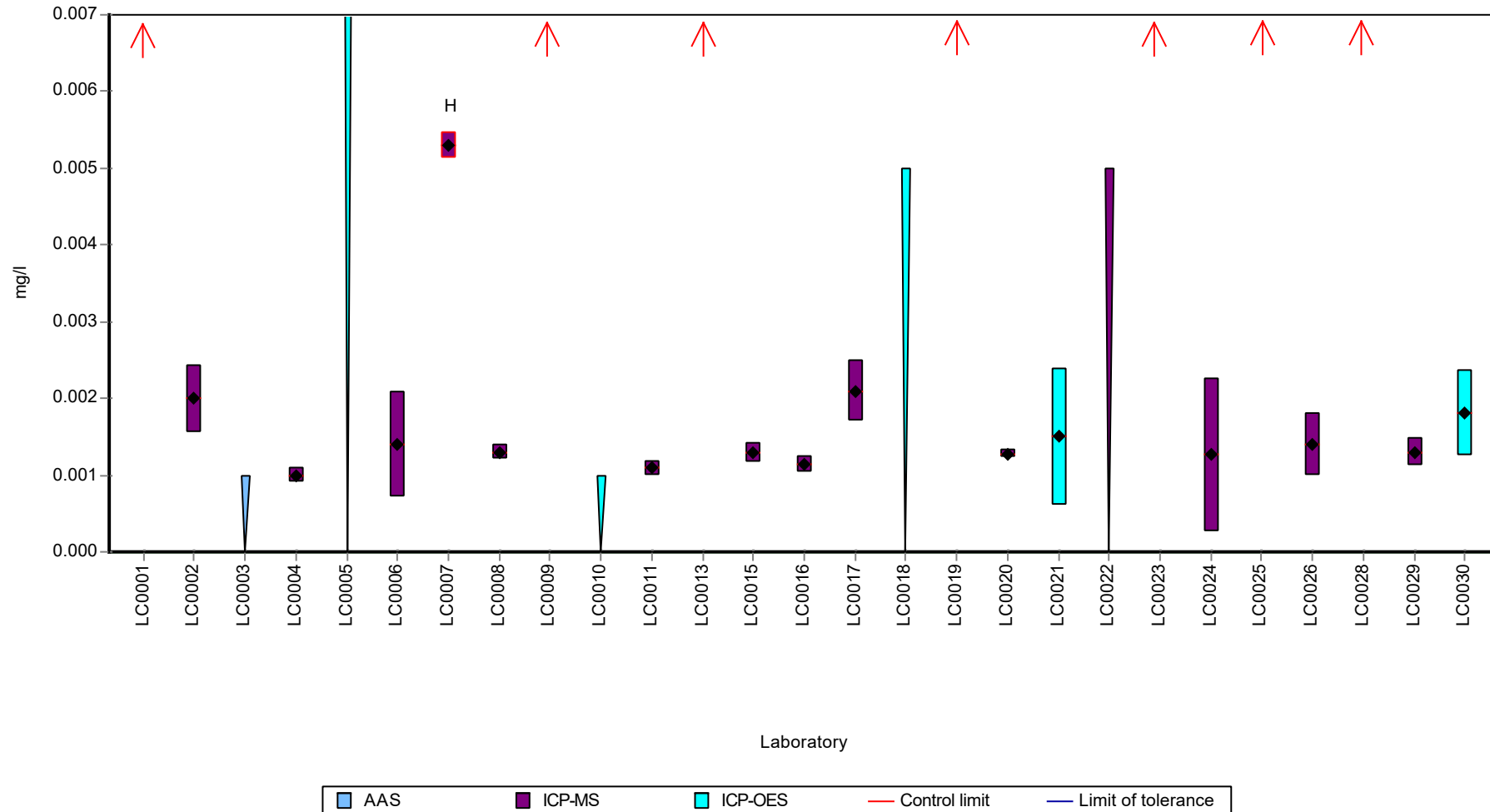
	all results	without outliers	Unit
Mean ± CI (99%)	0.00977 ± 0.00896	-	mg/l
Minimum	0.001	-	mg/l
Maximum	0.0533	-	mg/l
Standard deviation	0.014	-	mg/l
rel. standard deviation	143	-	%
n	22	(14)	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Selenium

Graphical presentation of results

Results



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Silver

Parameter oriented report

AB11

Silver

Unit	mg/l
Assigned value ± U (k=2)	0.00222 ± 0.000581
Criterion	0.00109 (49 %)
Minimum - Maximum	0.0008 - 0.005
Control test value ± U (k=2)	0.000873 ± 0.000079

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.0013	0.00003	58.7	-0.84	
LC0002	0.002	0.00027	90.3	-0.2	
LC0003	0.096	0.02	4330	86.41	H
LC0004	0.0031	0.0005	140	0.82	
LC0005	-	-	-	-	
LC0006	-	-	-	-	
LC0007	-	-	-	-	
LC0008	0.0008	0.00004	36.1	-1.3	
LC0009	< 0.002 (LOQ)	-	-	-	
LC0010	-	-	-	-	
LC0011	0.00208	0.0001	93.9	-0.12	
LC0012	-	-	-	-	
LC0013	0.00306	0.00077	138	0.78	
LC0014	-	-	-	-	
LC0015	0.00177	0.00014	79.9	-0.41	
LC0016	0.0012	0.0001	54.2	-0.94	
LC0017	-	-	-	-	
LC0018	0.005	0.001	226	2.57	
LC0019	< 0.002 (LOQ)	-	-	-	
LC0020	0.00288	0.00013	130	0.61	
LC0021	< 0.00042 (LOQ)	-	-	-	
LC0022	<0.015 (LOD)	-	-	-	
LC0023	< 0.01 (LOQ)	-	-	-	
LC0024	0.00249	0.001	112	0.25	
LC0025	0.00243	0.00024	110	0.2	
LC0026	0.0011	0.0004	49.7	-1.03	
LC0027	-	-	-	-	
LC0028	0.00304	0.0009	137	0.76	
LC0029	-	-	-	-	
LC0030	0.0018	0.00009	81.3	-0.38	

Characteristics of parameter

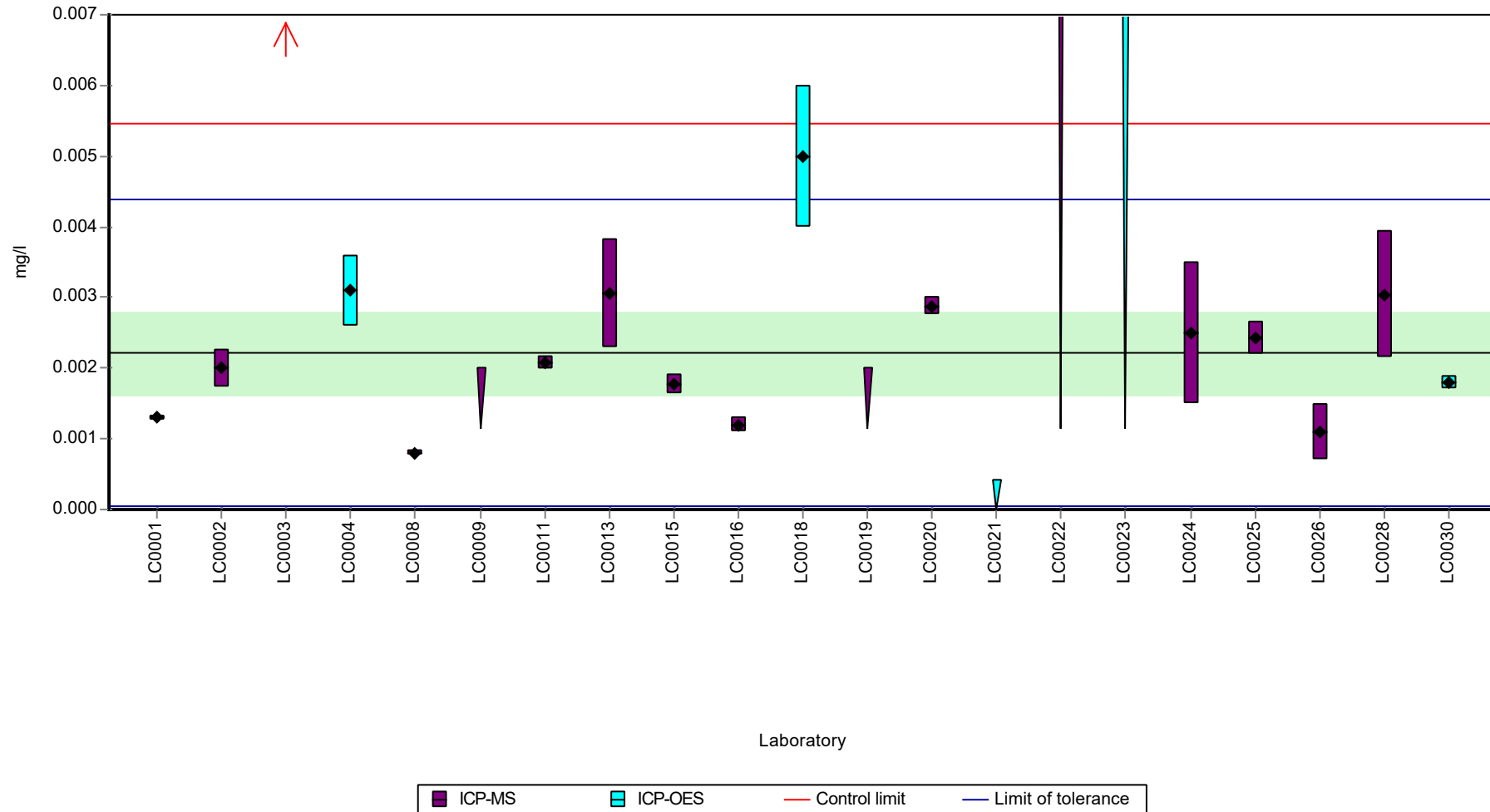
	all results	without outliers	Unit
Mean ± CI (99%)	0.00813 ± 0.0176	0.00227 ± 0.000828	mg/l
Minimum	0.0008	0.0008	mg/l
Maximum	0.096	0.005	mg/l
Standard deviation	0.0235	0.00107	mg/l
rel. standard deviation	289	47.1	%
n	16	15	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Silver

Graphical presentation of results

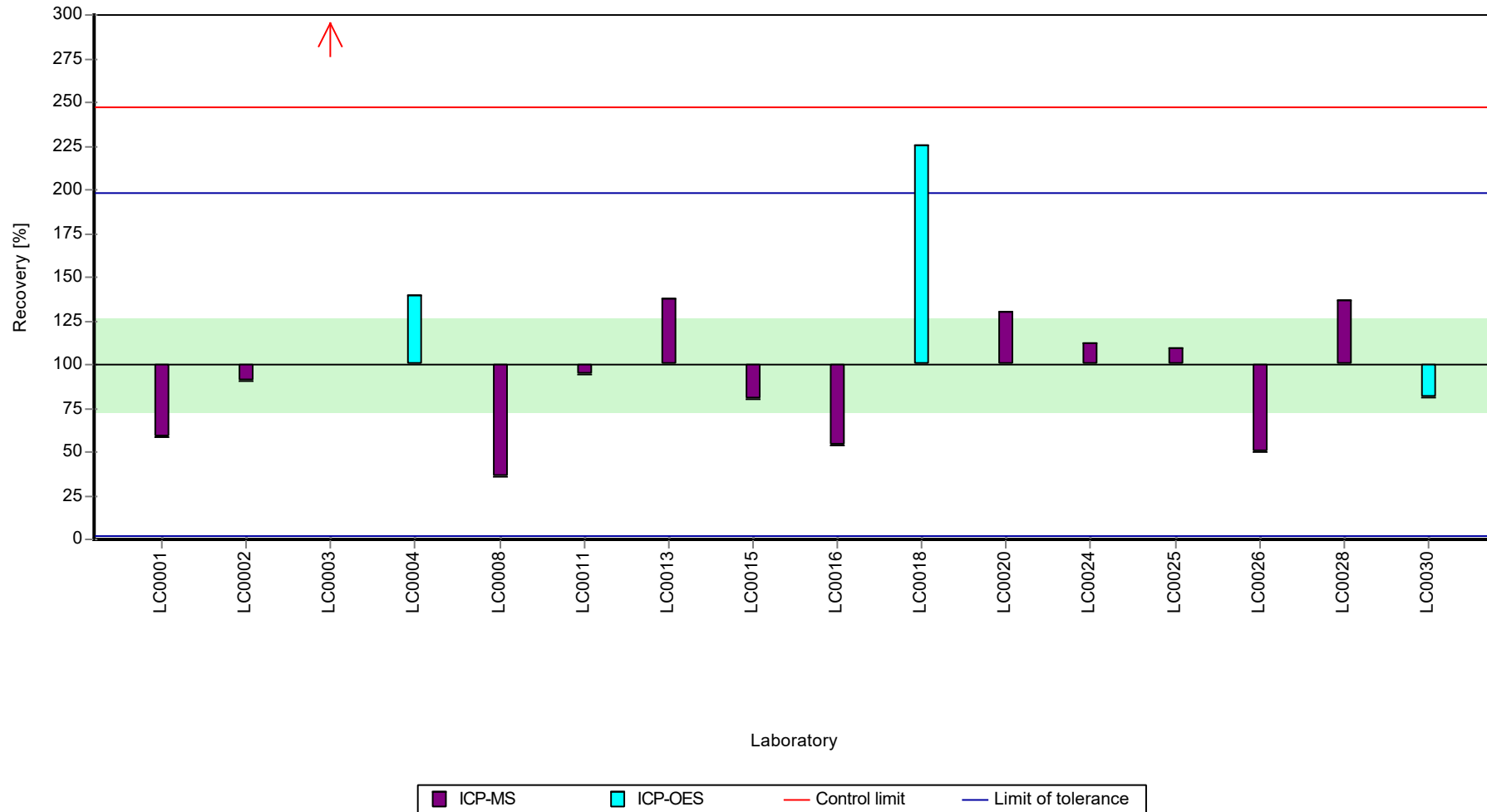
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

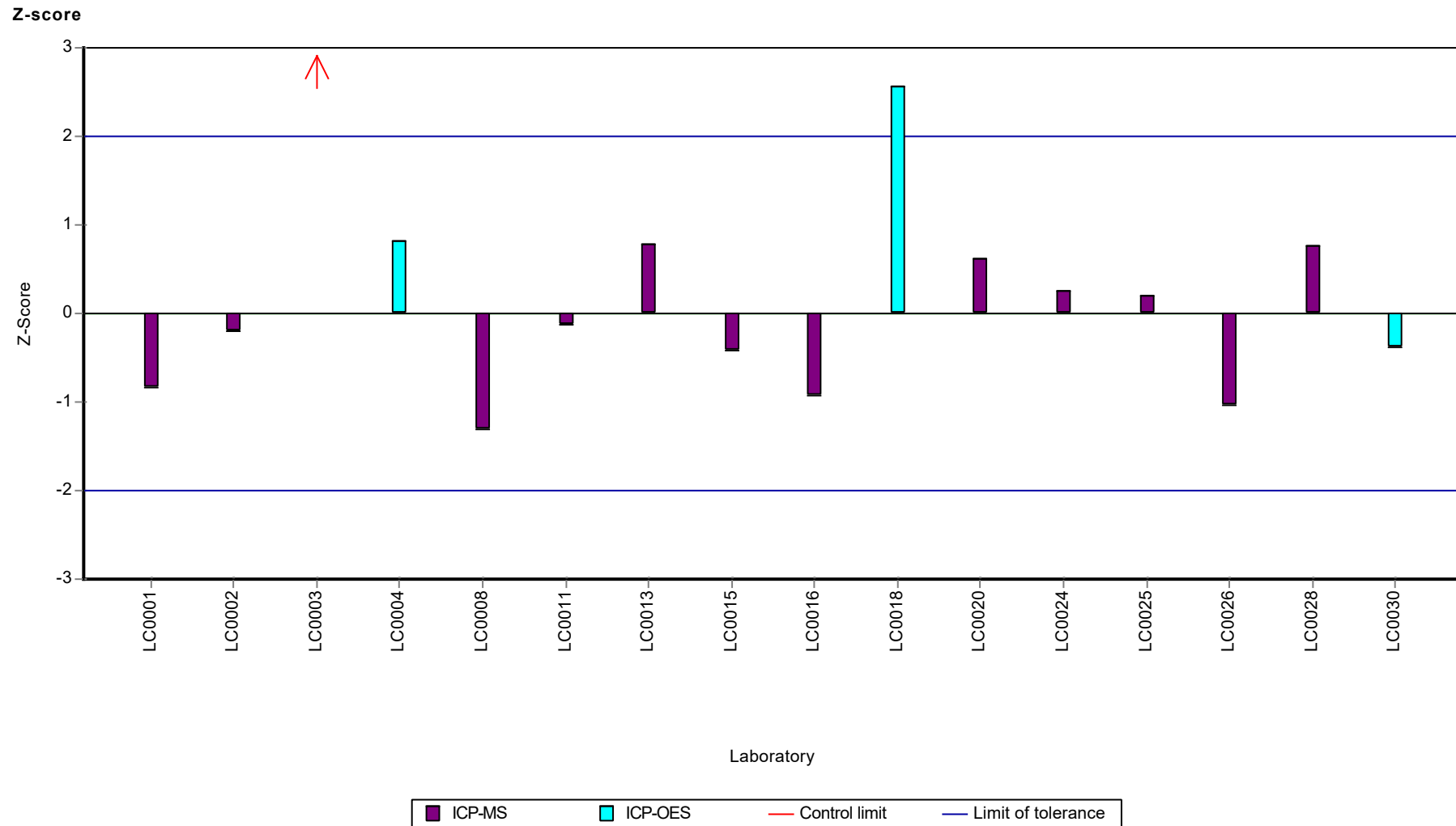
Sample: AB11, Parameter: Silver

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Silver



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Tin

Parameter oriented report

AB11

Tin

Unit	mg/l
Assigned value ± U (k=2)	0.0335 ± 0.000982
Criterion	0.00335 (10 %)
Minimum - Maximum	0.0293 - 0.037
Control test value ± U (k=2)	0.03380 ± 0.00338

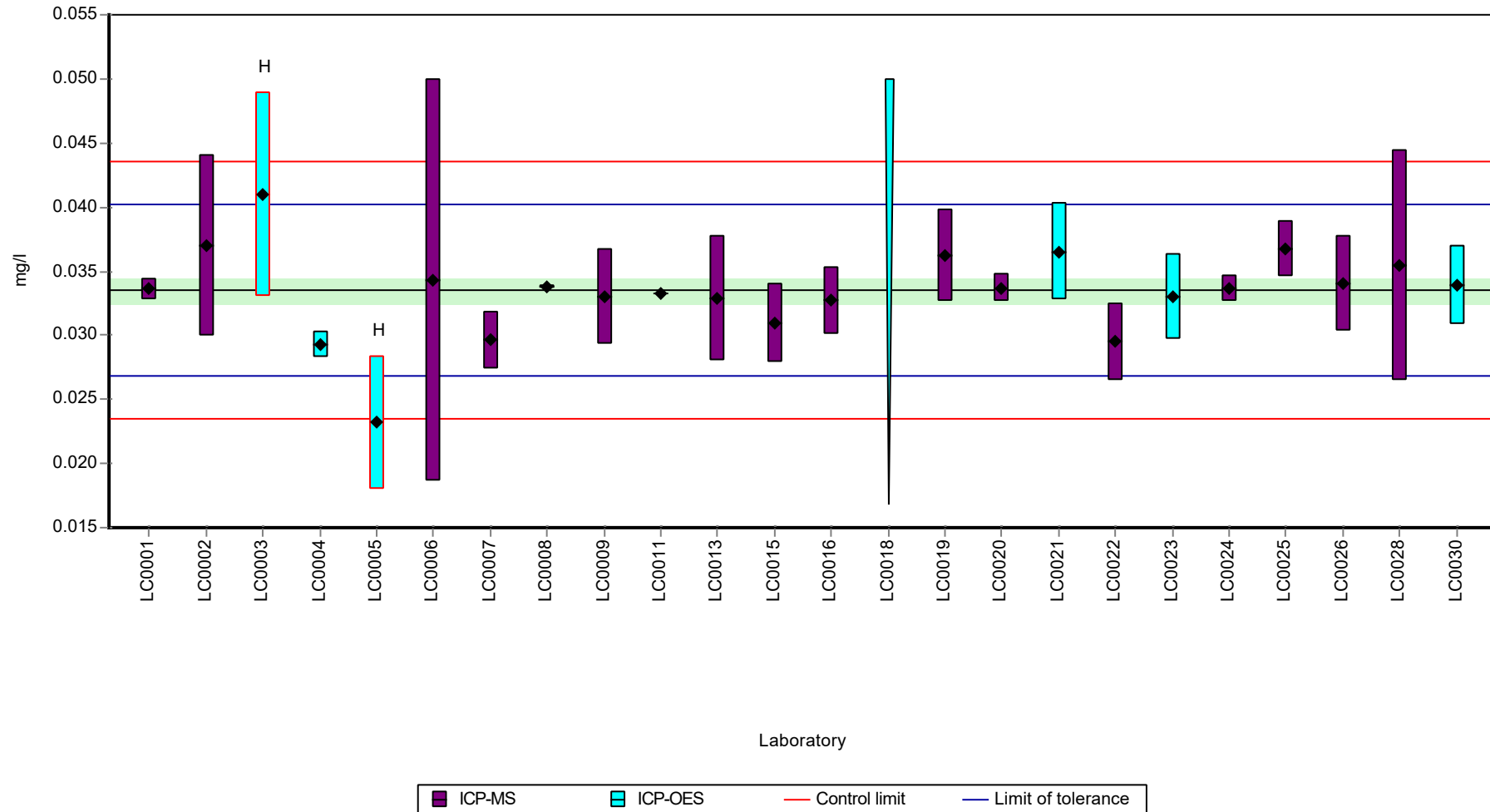
Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.0336	0.0008	100	0.04	
LC0002	0.037	0.00706	111	1.05	
LC0003	0.041	0.008	122	2.25	H
LC0004	0.0293	0.001	87.5	-1.25	
LC0005	0.0232	0.00523	69.3	-3.07	H
LC0006	0.0343	0.0157	102	0.25	
LC0007	0.0296	0.0023	88.4	-1.16	
LC0008	0.0338	0.0001	101	0.1	
LC0009	0.033	0.0037	98.6	-0.14	
LC0010	-	-	-	-	
LC0011	0.0332	0.0001	99.2	-0.08	
LC0012	-	-	-	-	
LC0013	0.0329	0.0049	98.3	-0.17	
LC0014	-	-	-	-	
LC0015	0.0309	0.00309	92.3	-0.77	
LC0016	0.0327	0.0026	97.7	-0.23	
LC0017	-	-	-	-	
LC0018	< 0.05 (LOQ)	-	-	-	
LC0019	0.0362	0.00362	108	0.81	
LC0020	0.0337	0.0011	101	0.07	
LC0021	0.0365	0.0038	109	0.9	
LC0022	0.0295	0.003	88.1	-1.19	
LC0023	0.033	0.0033	98.6	-0.14	
LC0024	0.03368	0.001	101	0.06	
LC0025	0.0367	0.0022	110	0.96	
LC0026	0.034	0.00374	102	0.16	
LC0027	-	-	-	-	
LC0028	0.03549	0.009	106	0.6	
LC0029	-	-	-	-	
LC0030	0.0339	0.0031	101	0.13	

Characteristics of parameter

	all results	without outliers	Unit
Mean ± CI (99%)	0.0334 ± 0.00216	0.0335 ± 0.00147	mg/l
Minimum	0.0232	0.0293	mg/l
Maximum	0.041	0.037	mg/l
Standard deviation	0.00346	0.00225	mg/l
rel. standard deviation	10.4	6.72	%
n	23	21	-

Graphical presentation of results

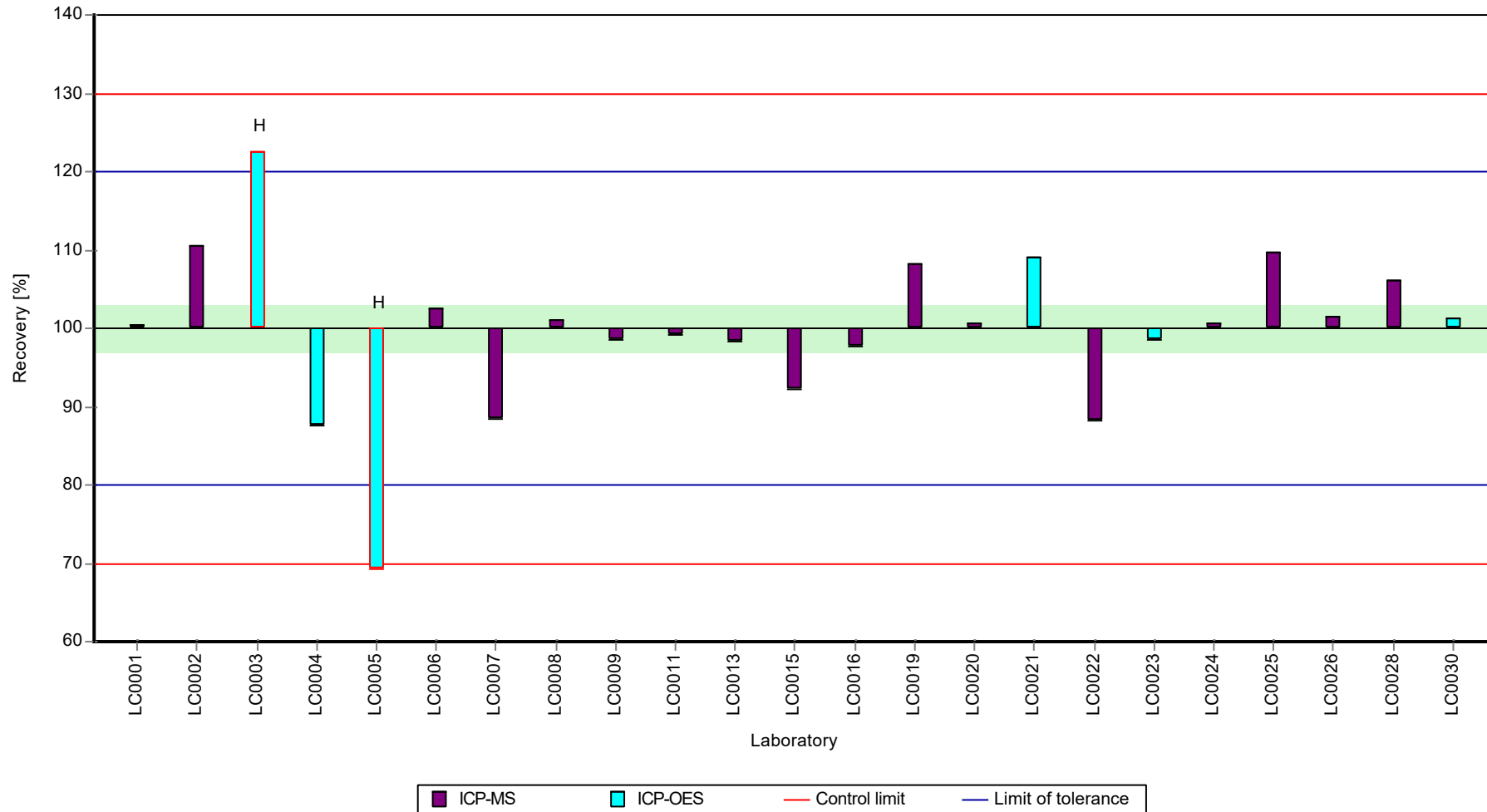
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Tin

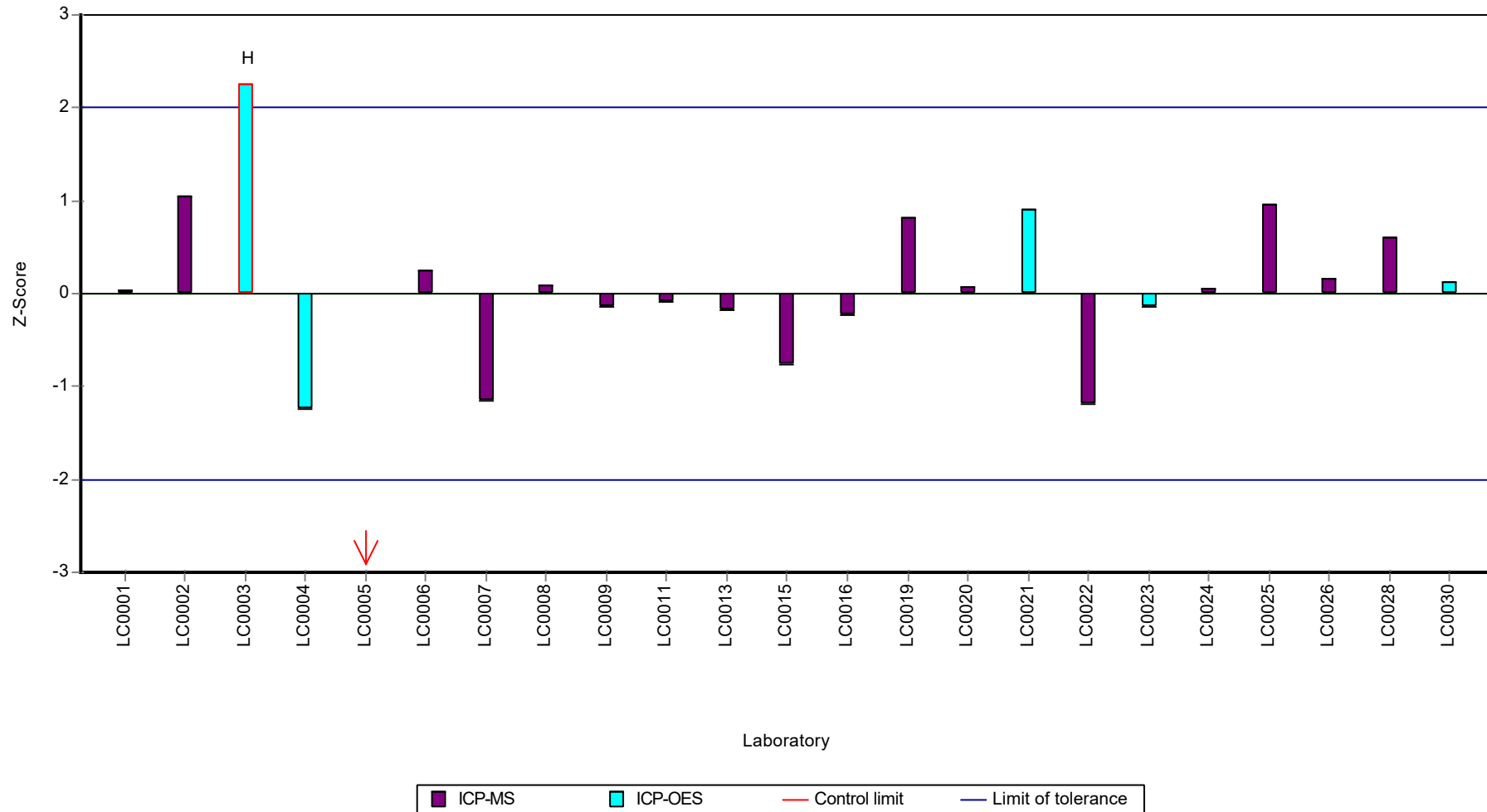
Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Tin

Z-score



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Vanadium

Parameter oriented report

AB11

Vanadium

Unit	mg/l
Assigned value ± U (k=2)	0.0255 ± 0.00113
Criterion	0.00255 (10 %)
Minimum - Maximum	0.0208 - 0.0317
Control test value ± U (k=2)	0.02480 ± 0.00248

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.029	0.0007	114	1.38	
LC0002	0.024	0.00204	94.2	-0.58	
LC0003	0.024	0.0045	94.2	-0.58	
LC0004	0.0243	0.0018	95.4	-0.46	
LC0005	< 0.01 (LOQ)	-	-	-	FN
LC0006	0.0261	0.0113	102	0.25	
LC0007	0.0261	0.0037	102	0.25	
LC0008	0.0289	0.0003	113	1.34	
LC0009	0.027	0.001	106	0.6	
LC0010	-	-	-	-	
LC0011	0.0244	0.001	95.8	-0.42	
LC0012	-	-	-	-	
LC0013	0.0264	0.0048	104	0.36	
LC0014	0.0226	0.0024	88.7	-1.13	
LC0015	0.0234	0.00234	91.9	-0.81	
LC0016	0.023	0.001	90.3	-0.97	
LC0017	-	-	-	-	
LC0018	0.021	0.004	82.4	-1.76	
LC0019	0.0266	0.00266	104	0.44	
LC0020	0.0247	0.0006	97	-0.3	
LC0021	0.0171	0.005	67.1	-3.29	H
LC0022	< 0.025 (LOQ)	-	-	-	
LC0023	0.026	0.0026	102	0.21	
LC0024	0.02693	0.001	106	0.57	
LC0025	0.0285	0.0023	112	1.19	
LC0026	0.025	0.00225	98.1	-0.19	
LC0027	-	-	-	-	
LC0028	0.03172	0.009	125	2.45	
LC0029	-	-	-	-	
LC0030	0.0208	0.0026	81.6	-1.84	

Characteristics of parameter

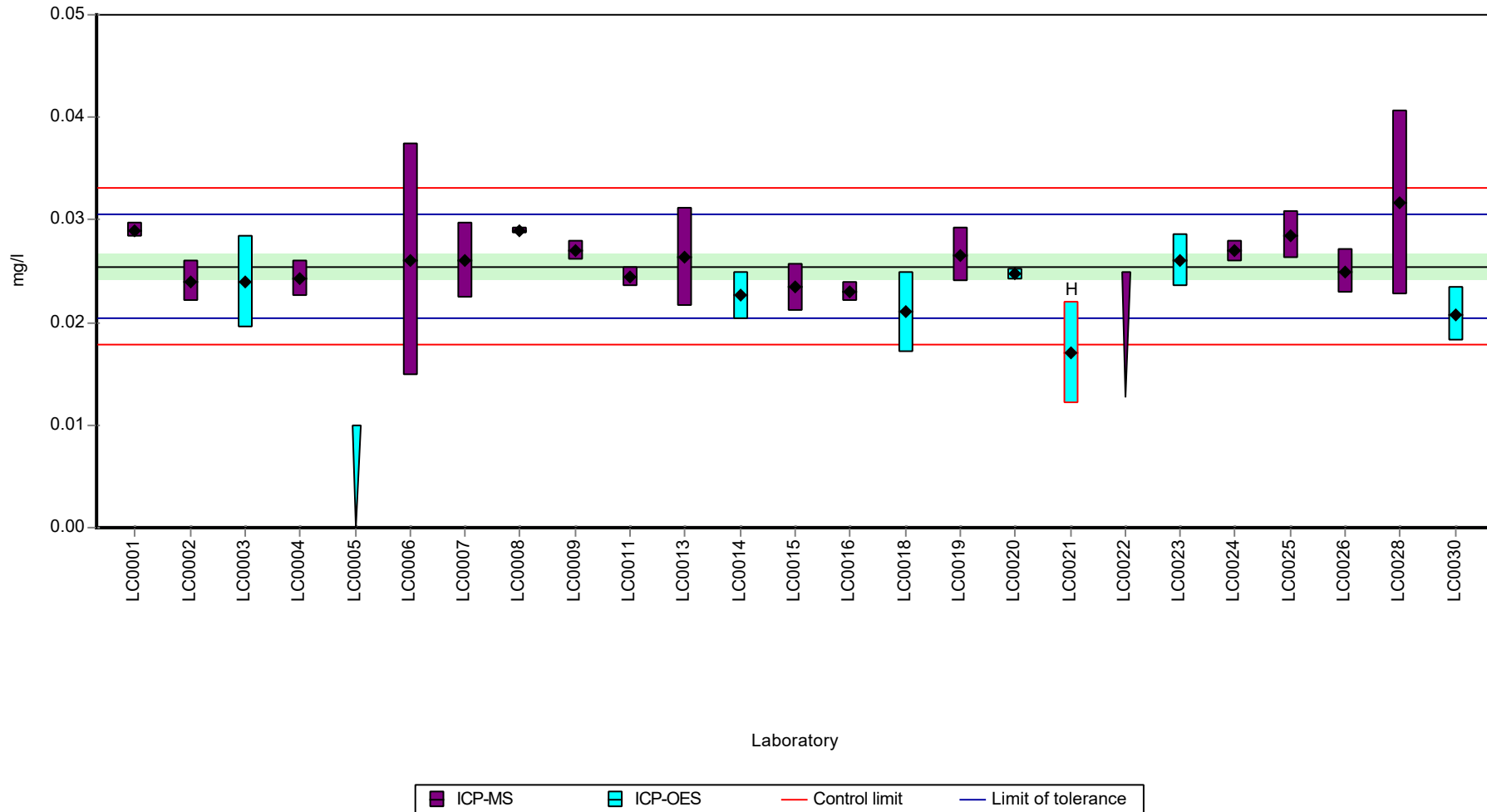
	all results	without outliers	Unit
Mean ± CI (99%)	0.0251 ± 0.00196	0.0255 ± 0.0017	mg/l
Minimum	0.0171	0.0208	mg/l
Maximum	0.0317	0.0317	mg/l
Standard deviation	0.00313	0.00266	mg/l
rel. standard deviation	12.5	10.4	%
n	23	22	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Vanadium

Graphical presentation of results

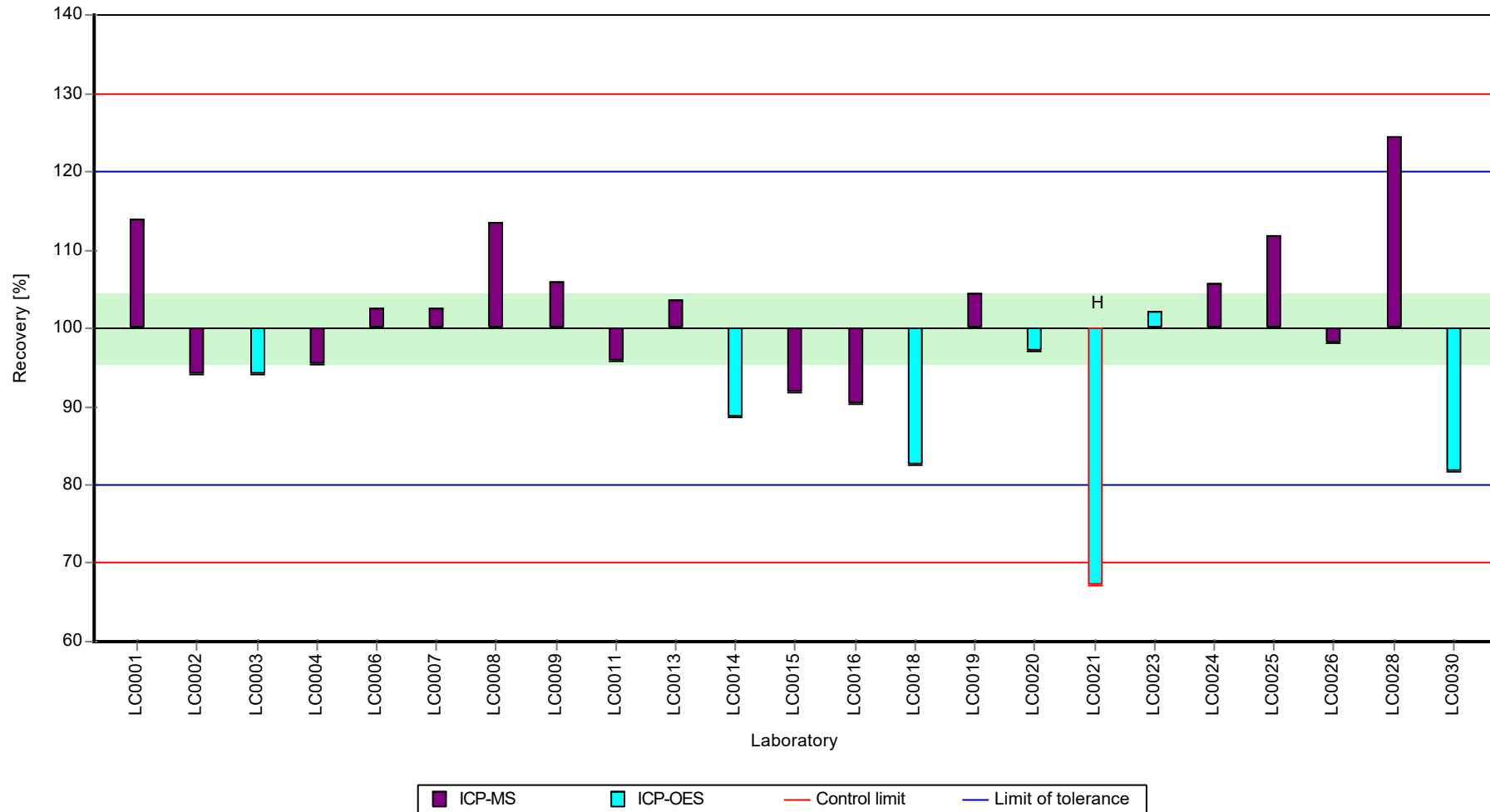
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

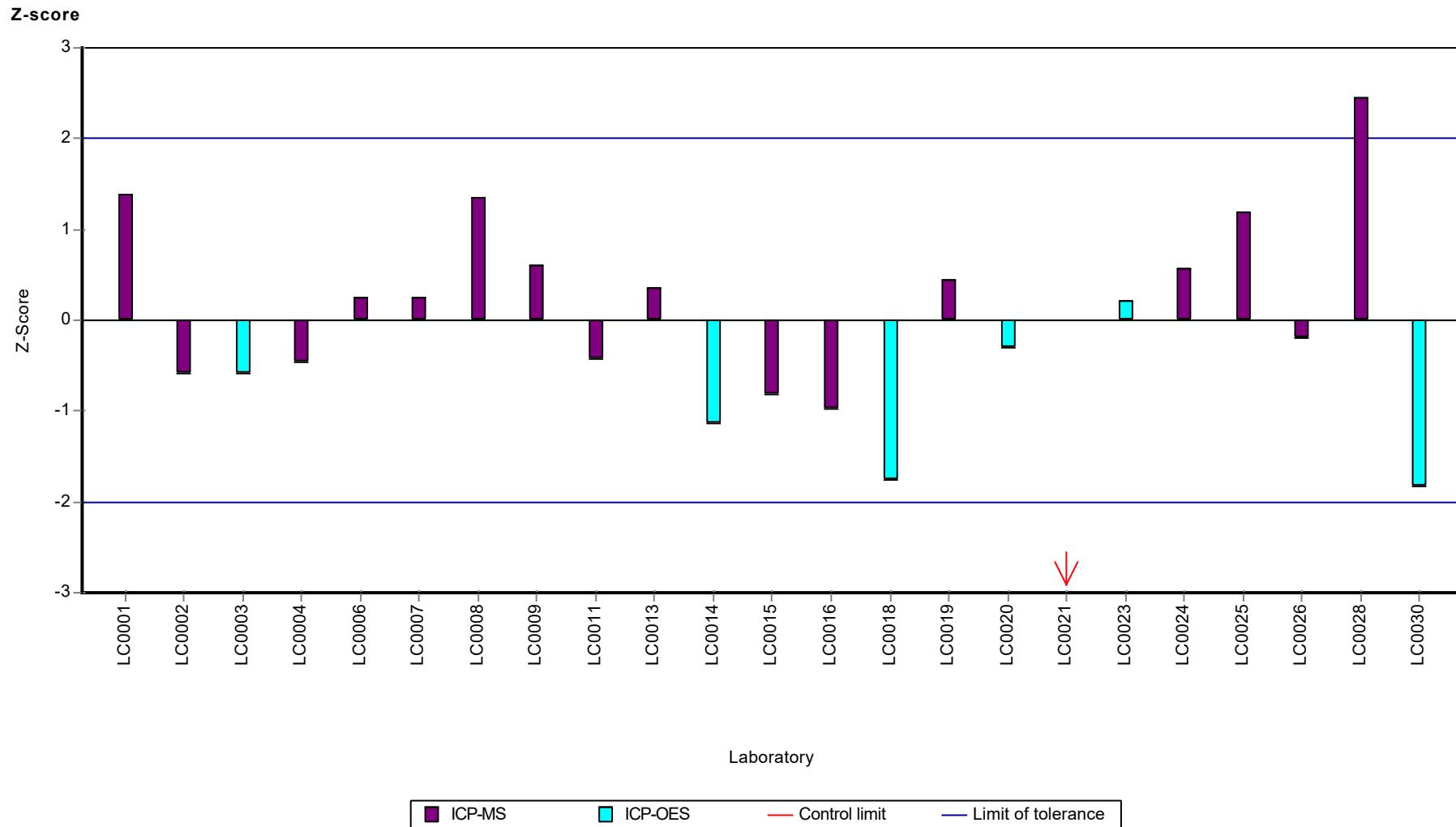
Sample: AB11, Parameter: Vanadium

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Vanadium



Parameter oriented report Waste acc to landfill
directive (eluate metals) - AB11

Sample: AB11, Parameter: Zinc

Parameter oriented report

AB11

Zinc

Unit	mg/l
Assigned value ± U (k=2)	0.0997 ± 0.00672
Criterion	0.0179 (18 %)
Minimum - Maximum	0.0674 - 0.14
Control test value ± U (k=2)	0.1070 ± 0.0129

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.0674	0.0022	67.6	-1.8	
LC0002	0.124	0.02101	124	1.35	
LC0003	0.075	0.006	75.2	-1.38	
LC0004	0.103	0.011	103	0.18	
LC0005	0.0725	0.0013	72.7	-1.52	
LC0006	-	-	-	-	
LC0007	0.1161	0.036	116	0.91	
LC0008	0.0976	0.0015	97.9	-0.12	
LC0009	0.094	0.0057	94.3	-0.32	
LC0010	0.09967	0.001	100	0.00	
LC0011	0.0926	0.001	92.9	-0.4	
LC0012	-	-	-	-	
LC0013	0.0945	0.0151	94.8	-0.29	
LC0014	0.0913	0.0036	91.6	-0.47	
LC0015	0.109	0.0097	109	0.52	
LC0016	0.127	0.01	127	1.52	
LC0017	0.0787	0.0197	78.9	-1.17	
LC0018	0.085	0.01	85.3	-0.82	
LC0019	0.086	0.0086	86.3	-0.76	
LC0020	0.1248	0.0023	125	1.4	
LC0021	0.818	0.0029	820	40.02	H
LC0022	0.14	0.01	140	2.25	
LC0023	0.108	0.011	108	0.46	
LC0024	0.10108	0.002	101	0.08	
LC0025	0.0828	0.0046	83	-0.94	
LC0026	0.103	0.0113	103	0.18	
LC0027	0.11	0.0109	110	0.57	
LC0028	0.10416	0.03	104	0.25	
LC0029	0.10655	0.01598	107	0.38	
LC0030	0.0982	0.0051	98.5	-0.08	

Characteristics of parameter

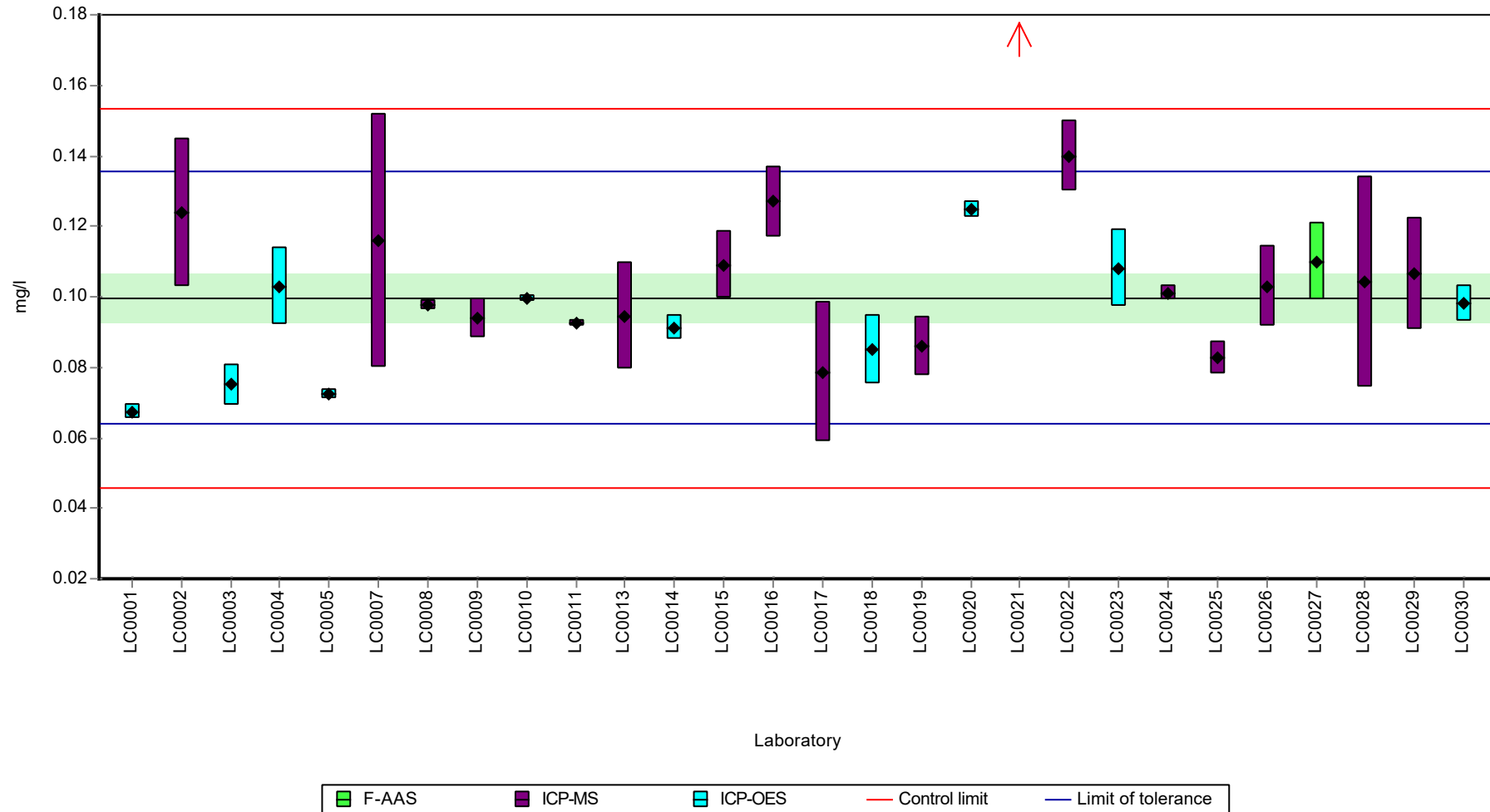
	all results	without outliers	Unit
Mean ± CI (99%)	0.125 ± 0.0776	0.0997 ± 0.0101	mg/l
Minimum	0.0674	0.0674	mg/l
Maximum	0.818	0.14	mg/l
Standard deviation	0.137	0.0175	mg/l
rel. standard deviation	109	17.5	%
n	28	27	-

Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Zinc

Graphical presentation of results

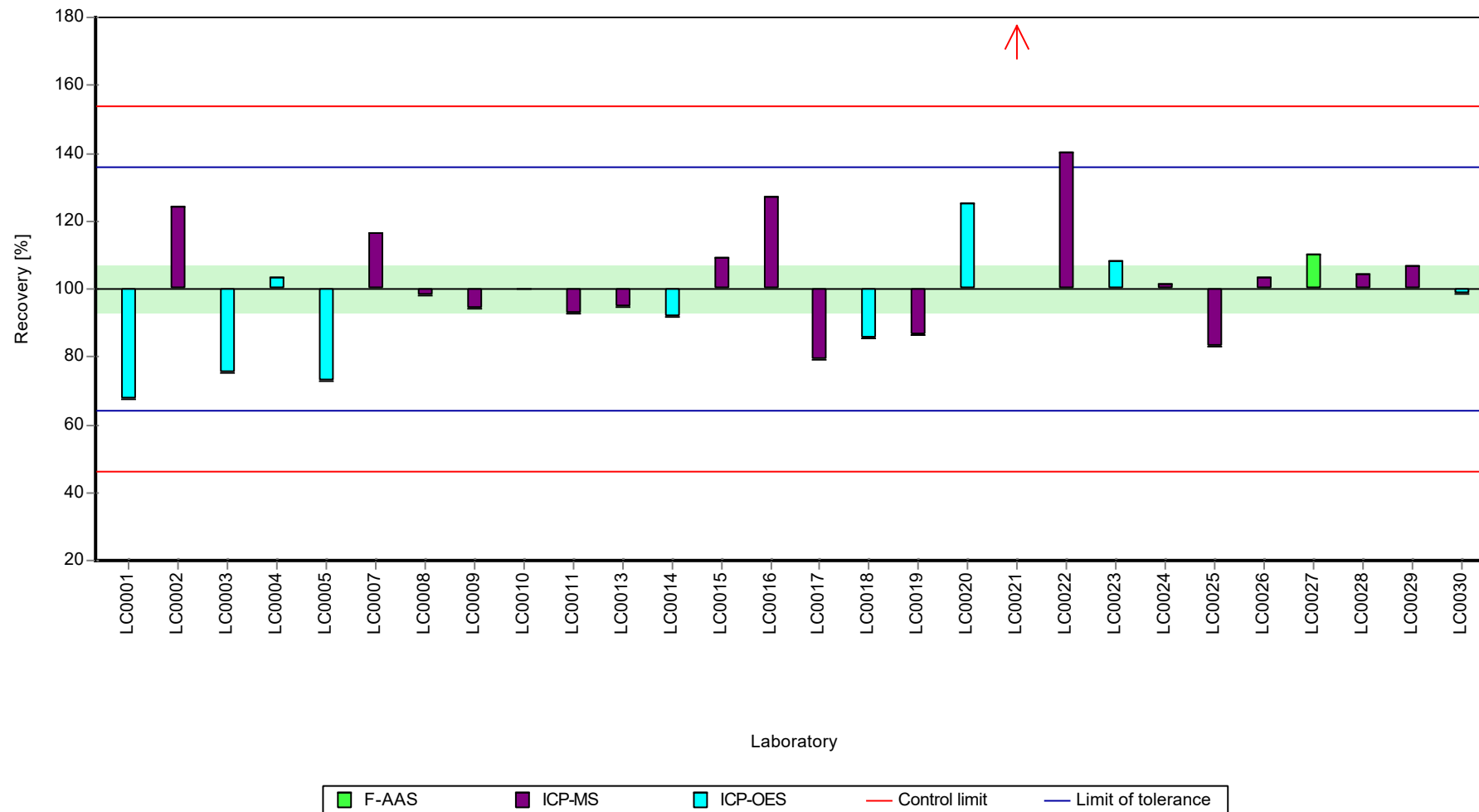
Results



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Zinc

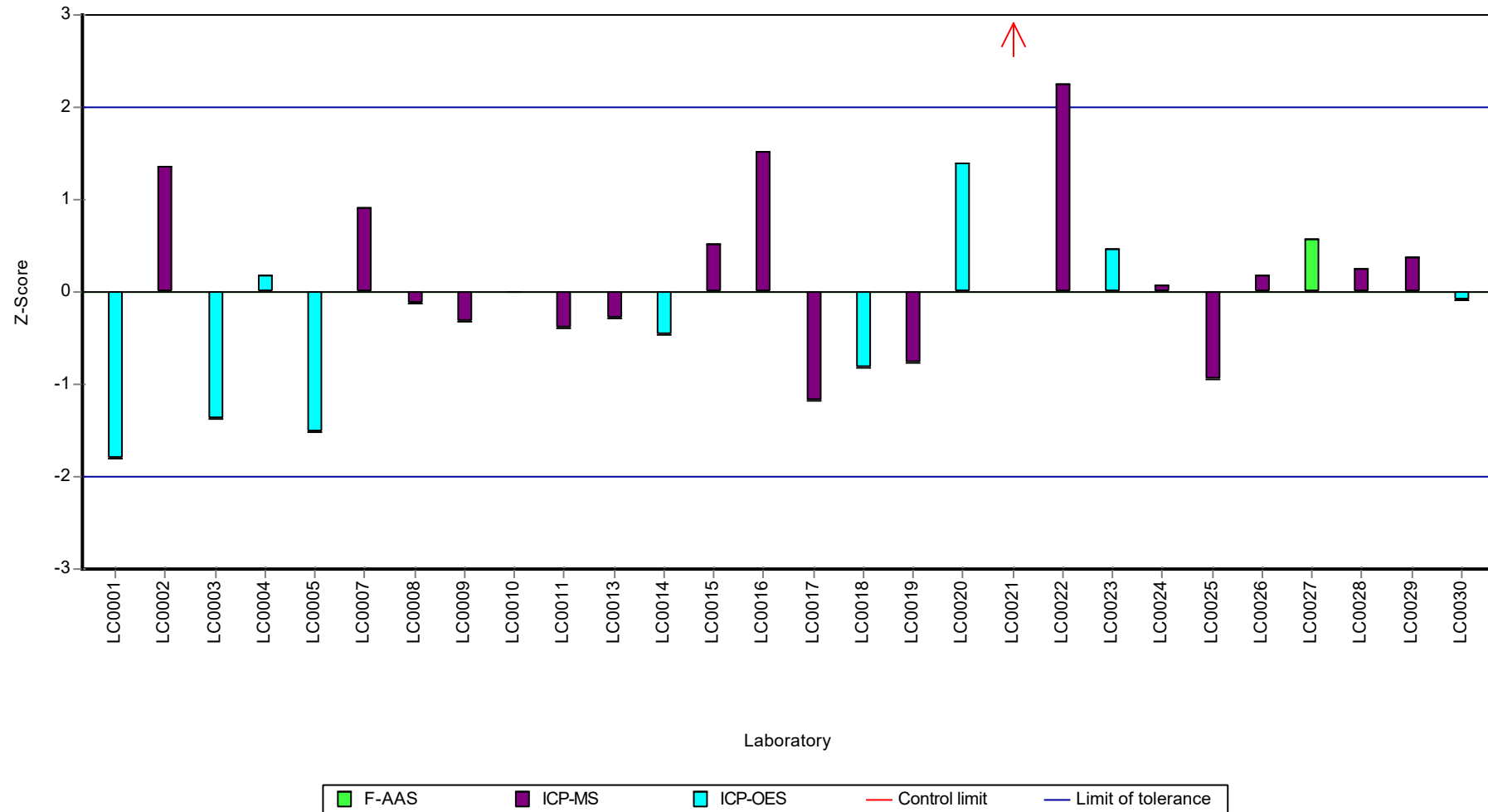
Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate metals) - AB11

Sample: AB11, Parameter: Zinc

Z-score



E8. Labororientierte Auswertung / Laboratory oriented report

Die Labororientierte Auswertung ist nach dem Laborcode sortiert.

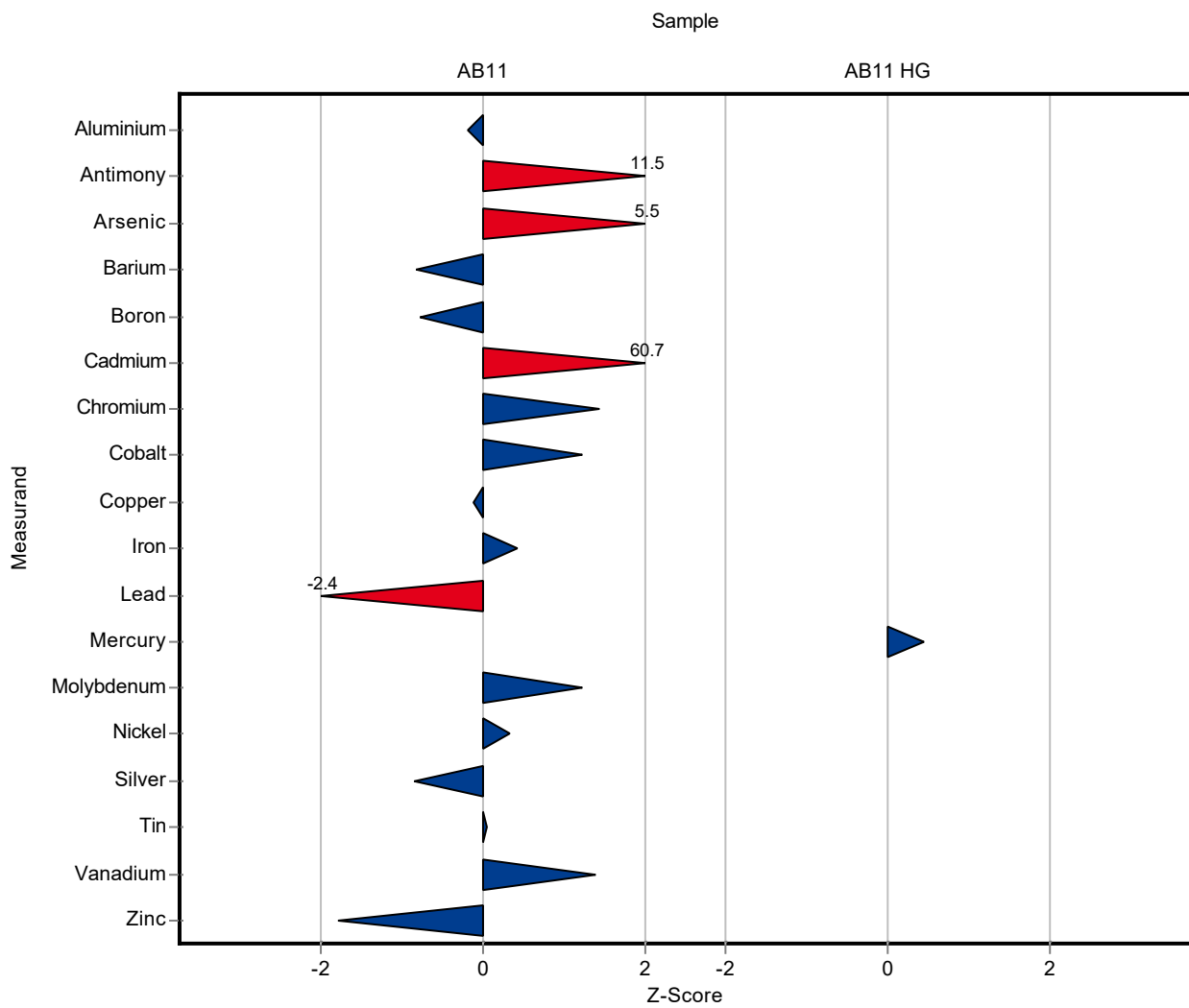
The laboratory oriented report is sorted by laboratory code.

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	28.92 ± 1.269	2.95	98.2	-0.18
Antimony	mg/l	0.00752 ± 0.000279	0.0162 ± 0.0005	0.000752	215	11.55
Arsenic	mg/l	0.00937 ± 0.000185	0.0145 ± 0.0004	0.000937	155	5.48
Barium	mg/l	3.31 ± 0.127	3.037 ± 0.0963	0.331	91.8	-0.82
Boron	mg/l	0.324 ± 0.015	0.299 ± 0.0101	0.0324	92.2	-0.78
Cadmium	mg/l	0.000721 ± 0.0000196	0.0051 ± 0.0002	0.000072	707	60.74
Chromium	mg/l	0.0344 ± 0.00163	0.0404 ± 0.001	0.00413	117	1.44
Cobalt	mg/l	0.0199 ± 0.000808	0.0223 ± 0.0007	0.00199	112	1.22
Copper	mg/l	0.0675 ± 0.00215	0.0667 ± 0.0021	0.00675	98.8	-0.12
Iron	mg/l	0.544 ± 0.0269	0.572 ± 0.0153	0.0653	105	0.43
Lead	mg/l	0.0118 ± 0.00052	0.0089 ± 0.0003	0.00118	75.5	-2.45
Molybdenum	mg/l	0.023 ± 0.001	0.0261 ± 0.0005	0.00253	114	1.23
Nickel	mg/l	0.0198 ± 0.000858	0.0205 ± 0.0006	0.00218	104	0.33
Selenium	mg/l	- ± -	0.0258 ± 0.0004	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.0013 ± 0.00003	0.00109	58.7	-0.84
Tin	mg/l	0.0335 ± 0.000982	0.0336 ± 0.0008	0.00335	100	0.04
Vanadium	mg/l	0.0255 ± 0.00113	0.029 ± 0.0007	0.00255	114	1.38
Zinc	mg/l	0.0997 ± 0.00672	0.0674 ± 0.0022	0.0179	67.6	-1.80

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.0006 ± 0.000013	0.000115	109	0.45



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

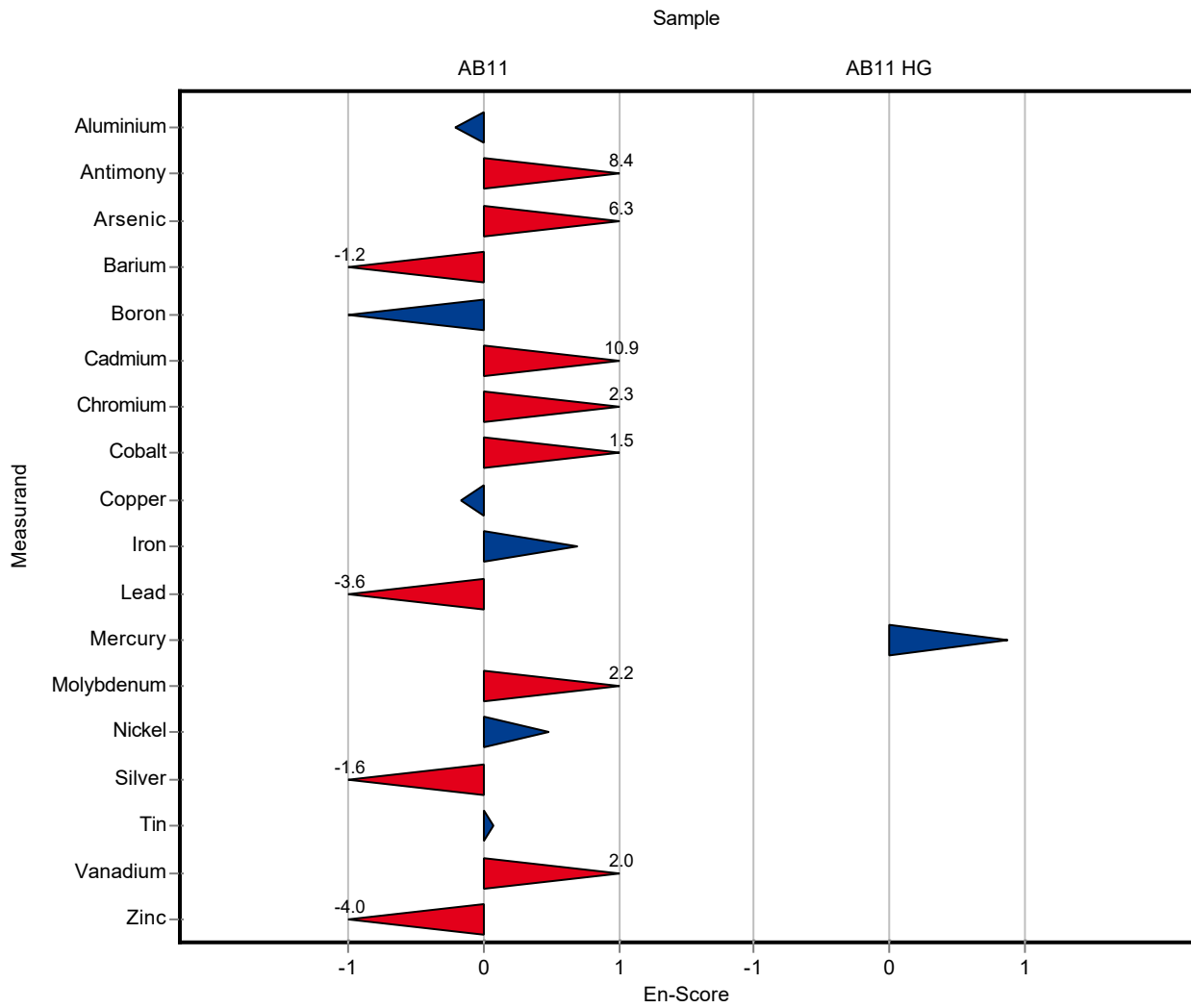
Labcode: LC0001

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	28.92 ± 1.269	2.95	98.2	-0.21
Antimony	mg/l	0.00752 ± 0.000279	0.0162 ± 0.0005	0.000752	215	8.36
Arsenic	mg/l	0.00937 ± 0.000185	0.0145 ± 0.0004	0.000937	155	6.25
Barium	mg/l	3.31 ± 0.127	3.037 ± 0.0963	0.331	91.8	-1.18
Boron	mg/l	0.324 ± 0.015	0.299 ± 0.0101	0.0324	92.2	-1.00
Cadmium	mg/l	0.000721 ± 0.0000196	0.0051 ± 0.0002	0.000072	707	10.93
Chromium	mg/l	0.0344 ± 0.00163	0.0404 ± 0.001	0.00413	117	2.32
Cobalt	mg/l	0.0199 ± 0.000808	0.0223 ± 0.0007	0.00199	112	1.50
Copper	mg/l	0.0675 ± 0.00215	0.0667 ± 0.0021	0.00675	98.8	-0.16
Iron	mg/l	0.544 ± 0.0269	0.572 ± 0.0153	0.0653	105	0.69
Lead	mg/l	0.0118 ± 0.00052	0.0089 ± 0.0003	0.00118	75.5	-3.63
Molybdenum	mg/l	0.023 ± 0.001	0.0261 ± 0.0005	0.00253	114	2.19
Nickel	mg/l	0.0198 ± 0.000858	0.0205 ± 0.0006	0.00218	104	0.49
Selenium	mg/l	- ± -	0.0258 ± 0.0004	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.0013 ± 0.00003	0.00109	58.7	-1.57
Tin	mg/l	0.0335 ± 0.000982	0.0336 ± 0.0008	0.00335	100	0.07
Vanadium	mg/l	0.0255 ± 0.00113	0.029 ± 0.0007	0.00255	114	1.96
Zinc	mg/l	0.0997 ± 0.00672	0.0674 ± 0.0022	0.0179	67.6	-4.02

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.0006 ± 0.000013	0.000115	109	0.88

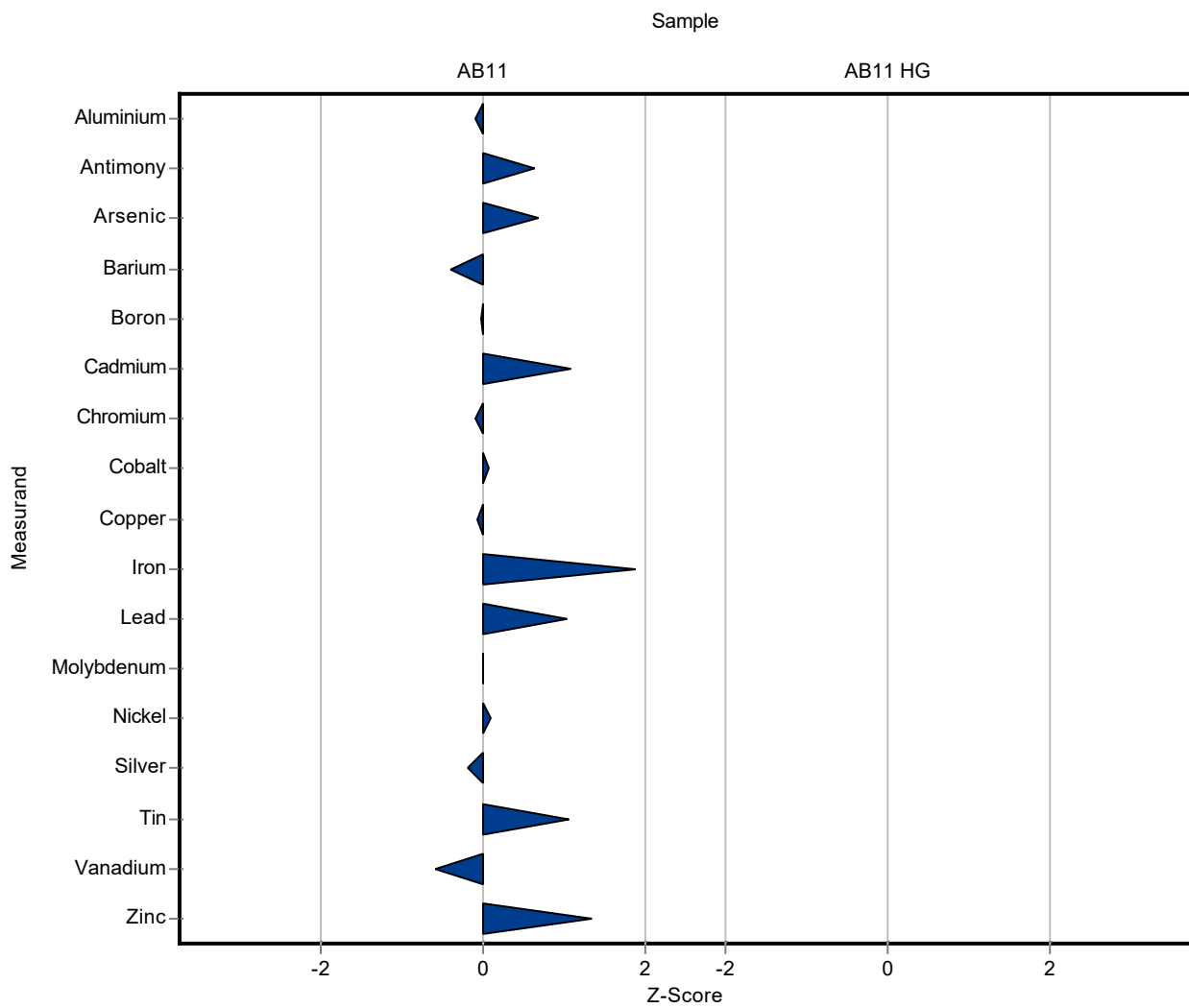


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	29.19 ± 5.72708	2.95	99.1	-0.09
Antimony	mg/l	0.00752 ± 0.000279	0.008 ± 0.00158	0.000752	106	0.64
Arsenic	mg/l	0.00937 ± 0.000185	0.01 ± 0.00118	0.000937	107	0.68
Barium	mg/l	3.31 ± 0.127	3.18 ± 0.26839	0.331	96.1	-0.39
Boron	mg/l	0.324 ± 0.015	0.323 ± 0.05388	0.0324	99.7	-0.03
Cadmium	mg/l	0.000721 ± 0.0000196	0.0008 ± 0.00009	0.000072	111	1.10
Chromium	mg/l	0.0344 ± 0.00163	0.034 ± 0.00295	0.00413	98.7	-0.10
Cobalt	mg/l	0.0199 ± 0.000808	0.02 ± 0.00183	0.00199	101	0.07
Copper	mg/l	0.0675 ± 0.00215	0.067 ± 0.00741	0.00675	99.3	-0.07
Iron	mg/l	0.544 ± 0.0269	0.667 ± 0.1294	0.0653	123	1.89
Lead	mg/l	0.0118 ± 0.00052	0.013 ± 0.00156	0.00118	110	1.03
Molybdenum	mg/l	0.023 ± 0.001	0.023 ± 0.0025	0.00253	100	0.00
Nickel	mg/l	0.0198 ± 0.000858	0.02 ± 0.00217	0.00218	101	0.10
Selenium	mg/l	- ± -	0.002 ± 0.00044	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.002 ± 0.00027	0.00109	90.3	-0.20
Tin	mg/l	0.0335 ± 0.000982	0.037 ± 0.00706	0.00335	111	1.05
Vanadium	mg/l	0.0255 ± 0.00113	0.024 ± 0.00204	0.00255	94.2	-0.58
Zinc	mg/l	0.0997 ± 0.00672	0.124 ± 0.02101	0.0179	124	1.35

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	<0.0005 ± -	0.000115	-	-



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

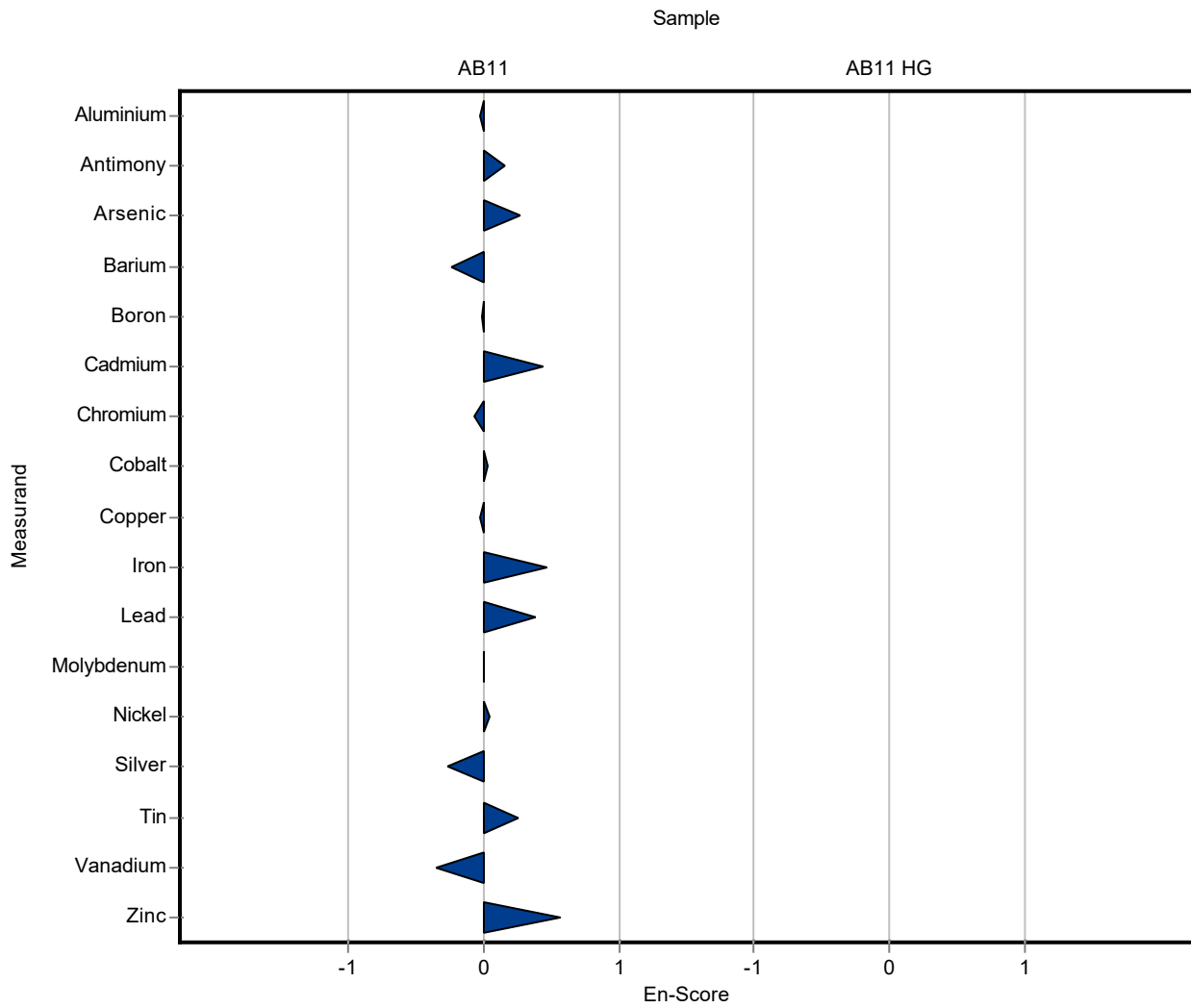
Labcode: LC0002

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	29.19 ± 5.72708	2.95	99.1	-0.02
Antimony	mg/l	0.00752 ± 0.000279	0.008 ± 0.00158	0.000752	106	0.15
Arsenic	mg/l	0.00937 ± 0.000185	0.01 ± 0.00118	0.000937	107	0.27
Barium	mg/l	3.31 ± 0.127	3.18 ± 0.26839	0.331	96.1	-0.23
Boron	mg/l	0.324 ± 0.015	0.323 ± 0.05388	0.0324	99.7	-0.01
Cadmium	mg/l	0.000721 ± 0.0000196	0.0008 ± 0.00009	0.000072	111	0.44
Chromium	mg/l	0.0344 ± 0.00163	0.034 ± 0.00295	0.00413	98.7	-0.07
Cobalt	mg/l	0.0199 ± 0.000808	0.02 ± 0.00183	0.00199	101	0.03
Copper	mg/l	0.0675 ± 0.00215	0.067 ± 0.00741	0.00675	99.3	-0.03
Iron	mg/l	0.544 ± 0.0269	0.667 ± 0.1294	0.0653	123	0.47
Lead	mg/l	0.0118 ± 0.00052	0.013 ± 0.00156	0.00118	110	0.39
Molybdenum	mg/l	0.023 ± 0.001	0.023 ± 0.0025	0.00253	100	0.00
Nickel	mg/l	0.0198 ± 0.000858	0.02 ± 0.00217	0.00218	101	0.05
Selenium	mg/l	- ± -	0.002 ± 0.00044	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.002 ± 0.00027	0.00109	90.3	-0.27
Tin	mg/l	0.0335 ± 0.000982	0.037 ± 0.00706	0.00335	111	0.25
Vanadium	mg/l	0.0255 ± 0.00113	0.024 ± 0.00204	0.00255	94.2	-0.35
Zinc	mg/l	0.0997 ± 0.00672	0.124 ± 0.02101	0.0179	124	0.57

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	<0.0005 ± -	0.000115	-	-

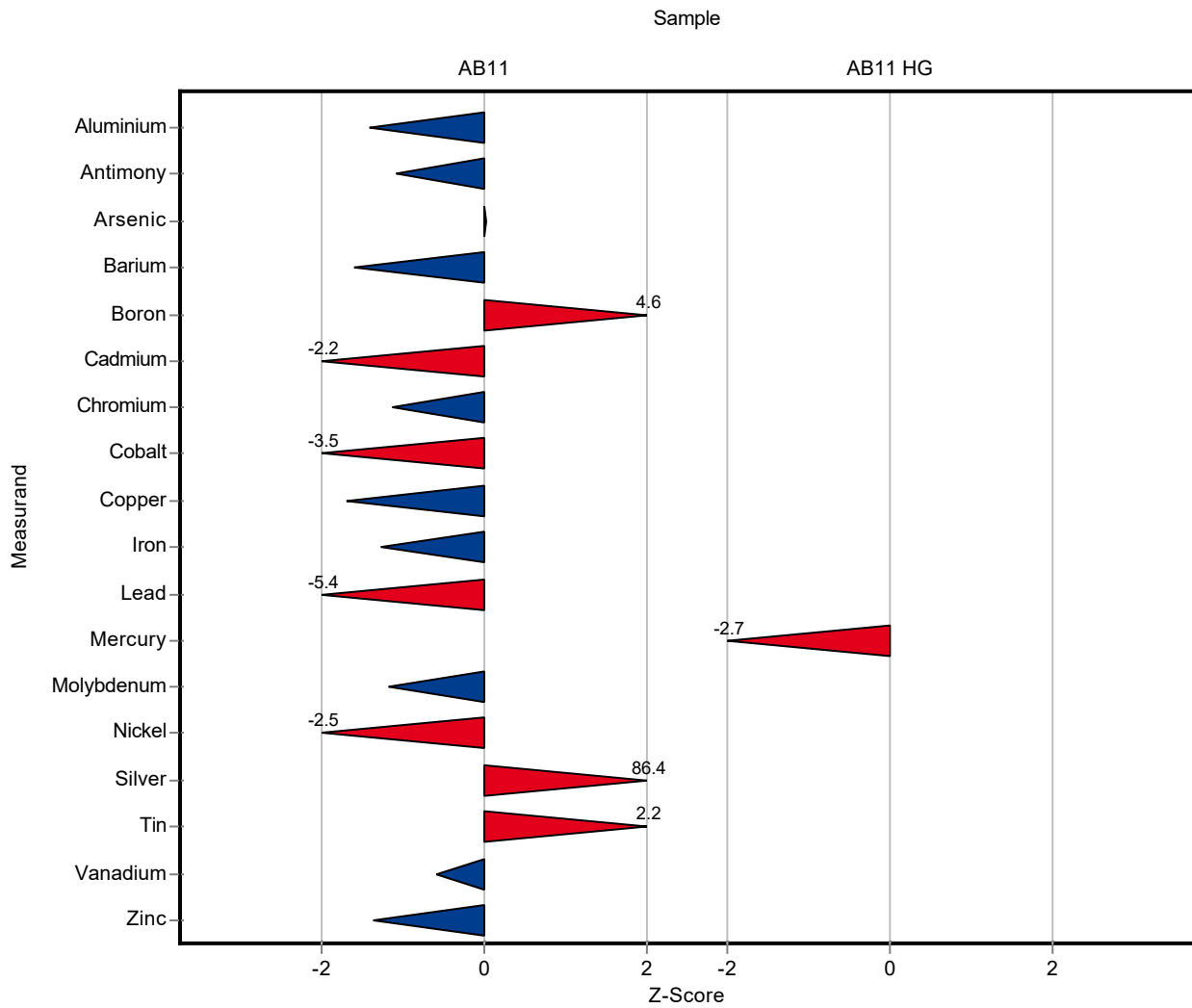


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	25.3 ± 4.3	2.95	85.9	-1.41
Antimony	mg/l	0.00752 ± 0.000279	0.0067 ± 0.0016	0.000752	89.1	-1.09
Arsenic	mg/l	0.00937 ± 0.000185	0.0094 ± 0.0014	0.000937	100	0.03
Barium	mg/l	3.31 ± 0.127	2.78 ± 0.5	0.331	84	-1.60
Boron	mg/l	0.324 ± 0.015	0.473 ± 0.089	0.0324	146	4.59
Cadmium	mg/l	0.000721 ± 0.0000196	0.00056 ± 0.0001	0.000072	77.7	-2.23
Chromium	mg/l	0.0344 ± 0.00163	0.0298 ± 0.004	0.00413	86.5	-1.12
Cobalt	mg/l	0.0199 ± 0.000808	0.013 ± 0.002	0.00199	65.4	-3.46
Copper	mg/l	0.0675 ± 0.00215	0.056 ± 0.009	0.00675	83	-1.70
Iron	mg/l	0.544 ± 0.0269	0.46 ± 0.069	0.0653	84.6	-1.28
Lead	mg/l	0.0118 ± 0.00052	0.0054 ± 0.001	0.00118	45.8	-5.42
Molybdenum	mg/l	0.023 ± 0.001	0.02 ± 0.0036	0.00253	87	-1.18
Nickel	mg/l	0.0198 ± 0.000858	0.0143 ± 0.003	0.00218	72.3	-2.52
Selenium	mg/l	- ± -	<0.001 (LOQ) ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.096 ± 0.02	0.00109	4330	86.41
Tin	mg/l	0.0335 ± 0.000982	0.041 ± 0.008	0.00335	122	2.25
Vanadium	mg/l	0.0255 ± 0.00113	0.024 ± 0.0045	0.00255	94.2	-0.58
Zinc	mg/l	0.0997 ± 0.00672	0.075 ± 0.006	0.0179	75.2	-1.38

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000239 ± 0.00008	0.000115	43.6	-2.69



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

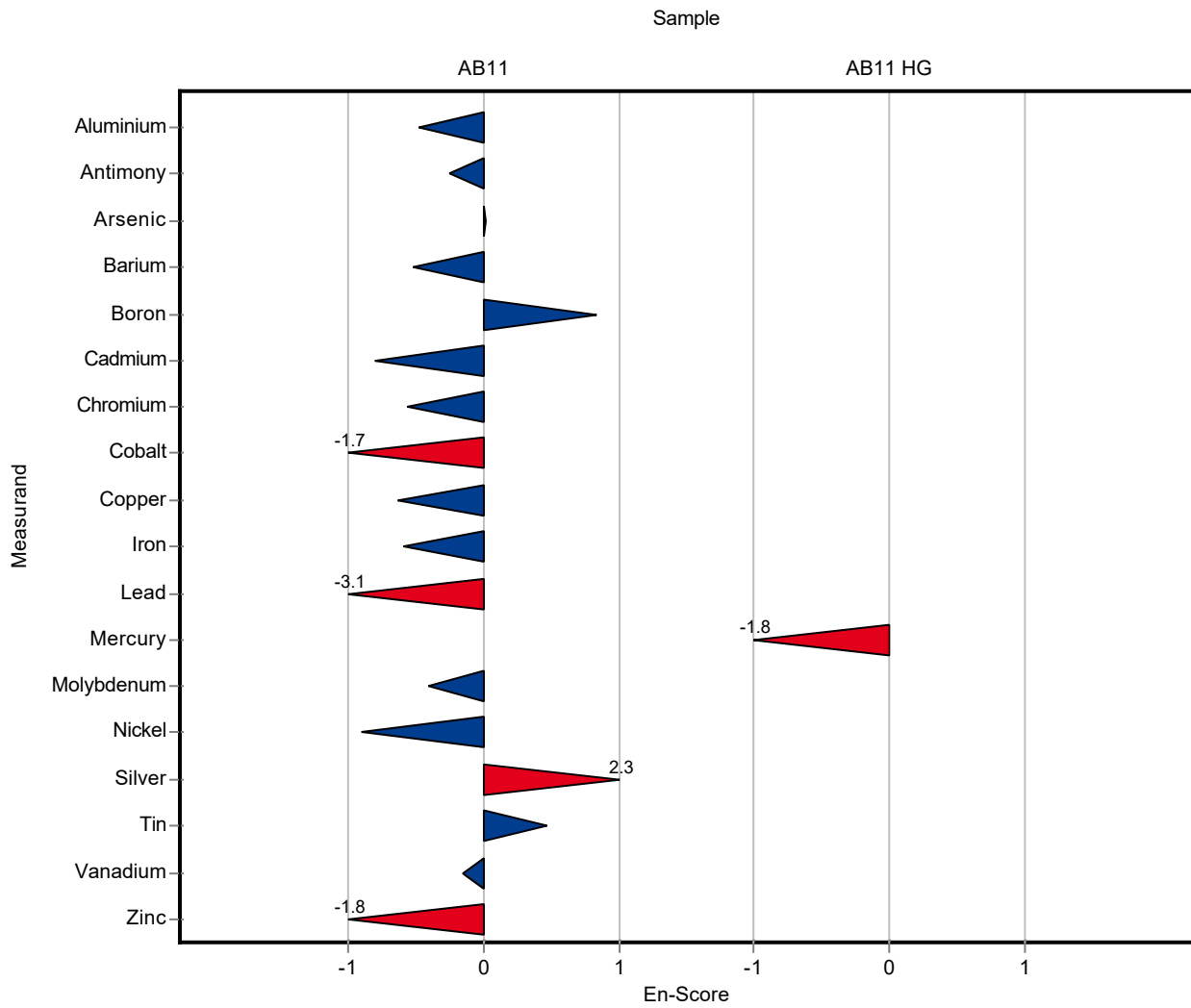
Labcode: LC0003

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	25.3 ± 4.3	2.95	85.9	-0.48
Antimony	mg/l	0.00752 ± 0.000279	0.0067 ± 0.0016	0.000752	89.1	-0.25
Arsenic	mg/l	0.00937 ± 0.000185	0.0094 ± 0.0014	0.000937	100	0.01
Barium	mg/l	3.31 ± 0.127	2.78 ± 0.5	0.331	84	-0.52
Boron	mg/l	0.324 ± 0.015	0.473 ± 0.089	0.0324	146	0.83
Cadmium	mg/l	0.000721 ± 0.0000196	0.00056 ± 0.0001	0.000072	77.7	-0.80
Chromium	mg/l	0.0344 ± 0.00163	0.0298 ± 0.004	0.00413	86.5	-0.57
Cobalt	mg/l	0.0199 ± 0.000808	0.013 ± 0.002	0.00199	65.4	-1.68
Copper	mg/l	0.0675 ± 0.00215	0.056 ± 0.009	0.00675	83	-0.63
Iron	mg/l	0.544 ± 0.0269	0.46 ± 0.069	0.0653	84.6	-0.60
Lead	mg/l	0.0118 ± 0.00052	0.0054 ± 0.001	0.00118	45.8	-3.09
Molybdenum	mg/l	0.023 ± 0.001	0.02 ± 0.0036	0.00253	87	-0.41
Nickel	mg/l	0.0198 ± 0.000858	0.0143 ± 0.003	0.00218	72.3	-0.90
Selenium	mg/l	- ± -	<0.001 (LOQ) ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.096 ± 0.02	0.00109	4330	2.34
Tin	mg/l	0.0335 ± 0.000982	0.041 ± 0.008	0.00335	122	0.47
Vanadium	mg/l	0.0255 ± 0.00113	0.024 ± 0.0045	0.00255	94.2	-0.16
Zinc	mg/l	0.0997 ± 0.00672	0.075 ± 0.006	0.0179	75.2	-1.80

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000239 ± 0.00008	0.000115	43.6	-1.84

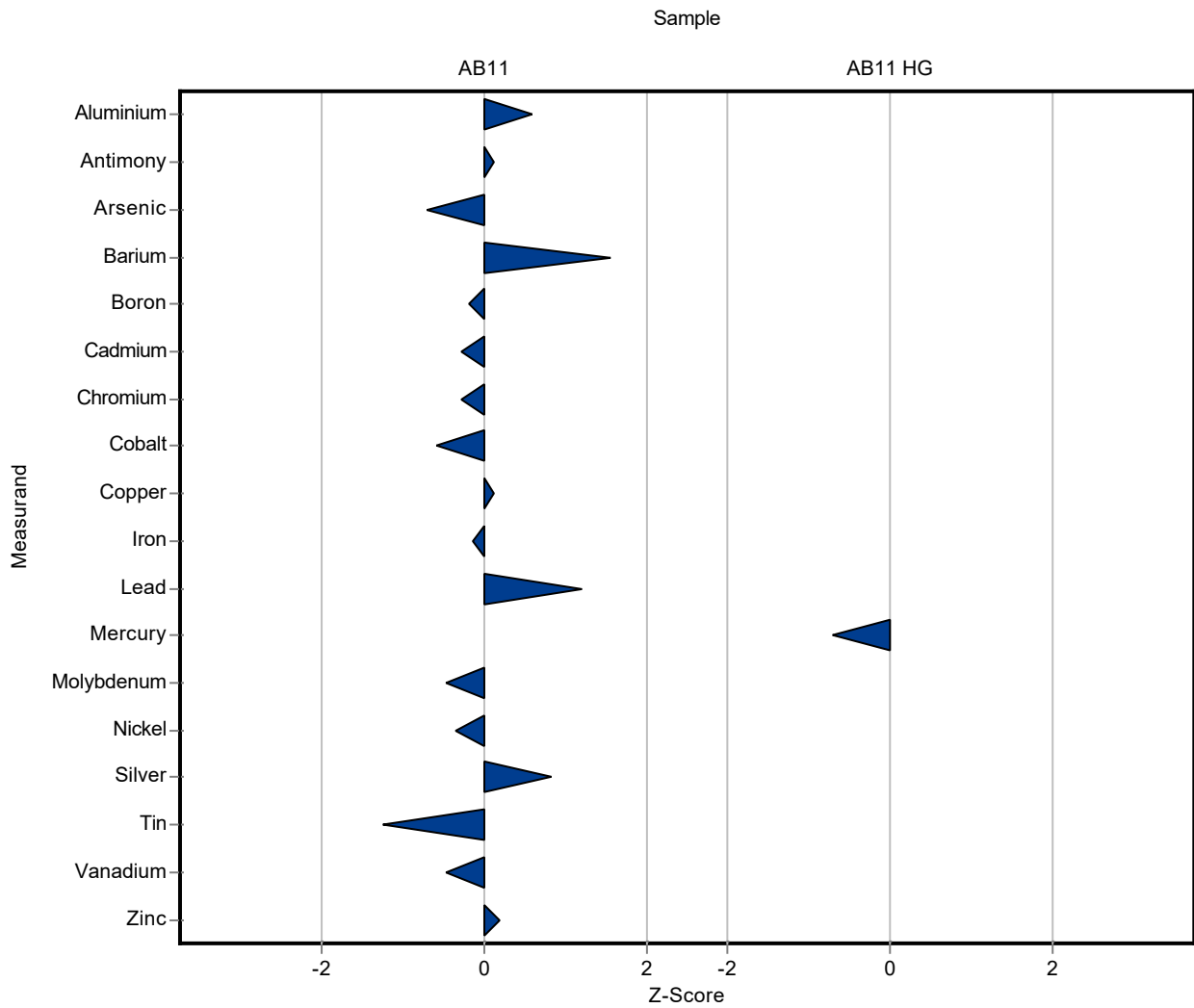


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	31.2 ± 2.4	2.95	106	0.59
Antimony	mg/l	0.00752 ± 0.000279	0.0076 ± 0.0006	0.000752	101	0.11
Arsenic	mg/l	0.00937 ± 0.000185	0.0087 ± 0.0011	0.000937	92.9	-0.71
Barium	mg/l	3.31 ± 0.127	3.82 ± 0.25	0.331	115	1.54
Boron	mg/l	0.324 ± 0.015	0.318 ± 0.025	0.0324	98.1	-0.19
Cadmium	mg/l	0.000721 ± 0.0000196	0.0007 ± 0.0001	0.000072	97.1	-0.29
Chromium	mg/l	0.0344 ± 0.00163	0.0333 ± 0.004	0.00413	96.7	-0.27
Cobalt	mg/l	0.0199 ± 0.000808	0.0187 ± 0.0016	0.00199	94.1	-0.59
Copper	mg/l	0.0675 ± 0.00215	0.0682 ± 0.0067	0.00675	101	0.11
Iron	mg/l	0.544 ± 0.0269	0.535 ± 0.041	0.0653	98.4	-0.13
Lead	mg/l	0.0118 ± 0.00052	0.0132 ± 0.001	0.00118	112	1.20
Molybdenum	mg/l	0.023 ± 0.001	0.0218 ± 0.0019	0.00253	94.8	-0.47
Nickel	mg/l	0.0198 ± 0.000858	0.019 ± 0.0017	0.00218	96	-0.36
Selenium	mg/l	- ± -	0.001 ± 0.0001	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.0031 ± 0.0005	0.00109	140	0.82
Tin	mg/l	0.0335 ± 0.000982	0.0293 ± 0.001	0.00335	87.5	-1.25
Vanadium	mg/l	0.0255 ± 0.00113	0.0243 ± 0.0018	0.00255	95.4	-0.46
Zinc	mg/l	0.0997 ± 0.00672	0.103 ± 0.011	0.0179	103	0.18

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000466 ± 0.00001	0.000115	85	-0.72



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

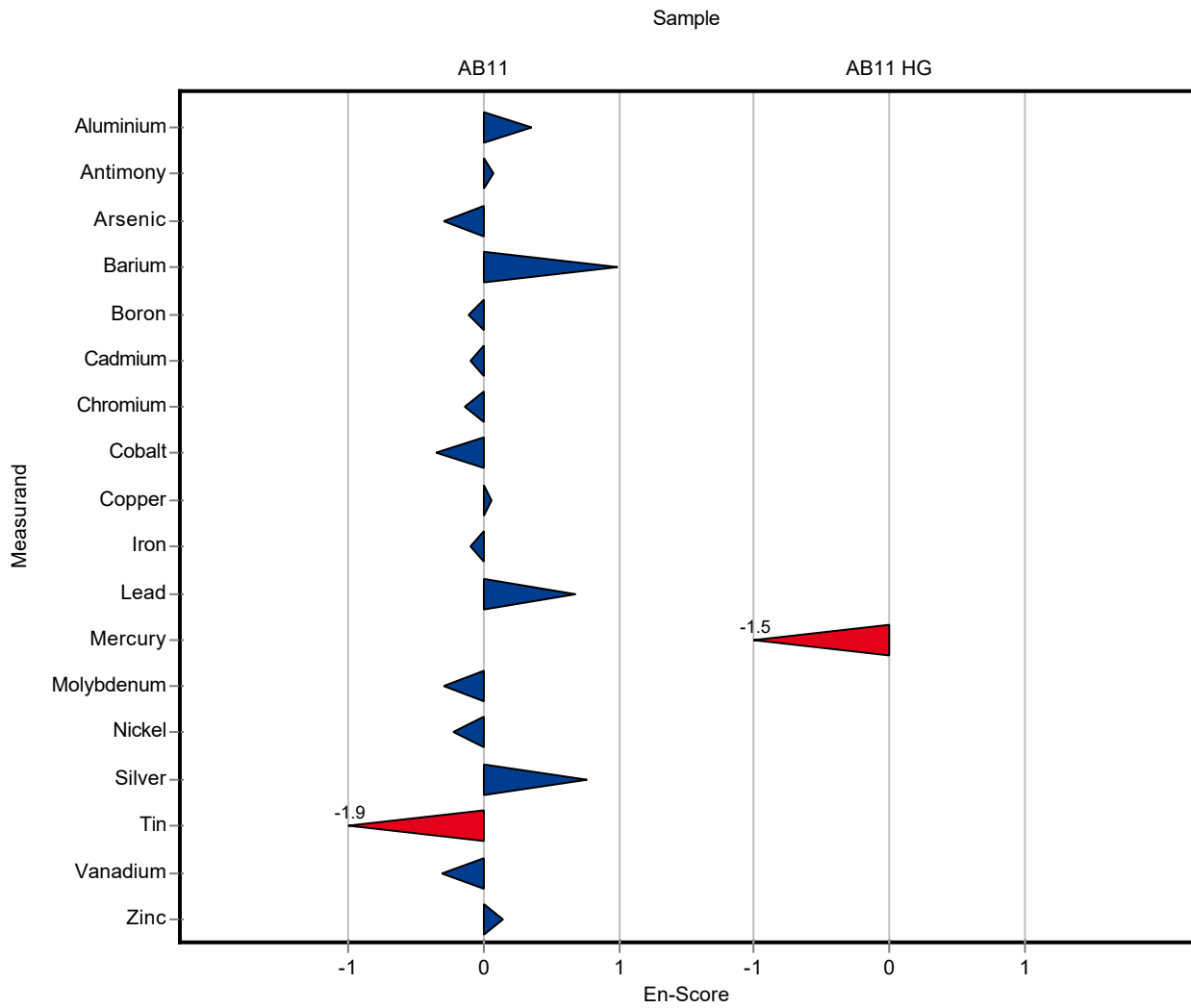
Labcode: LC0004

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	31.2 ± 2.4	2.95	106	0.36
Antimony	mg/l	0.00752 ± 0.000279	0.0076 ± 0.0006	0.000752	101	0.07
Arsenic	mg/l	0.00937 ± 0.000185	0.0087 ± 0.0011	0.000937	92.9	-0.30
Barium	mg/l	3.31 ± 0.127	3.82 ± 0.25	0.331	115	0.99
Boron	mg/l	0.324 ± 0.015	0.318 ± 0.025	0.0324	98.1	-0.12
Cadmium	mg/l	0.000721 ± 0.0000196	0.0007 ± 0.0001	0.000072	97.1	-0.10
Chromium	mg/l	0.0344 ± 0.00163	0.0333 ± 0.004	0.00413	96.7	-0.14
Cobalt	mg/l	0.0199 ± 0.000808	0.0187 ± 0.0016	0.00199	94.1	-0.35
Copper	mg/l	0.0675 ± 0.00215	0.0682 ± 0.0067	0.00675	101	0.05
Iron	mg/l	0.544 ± 0.0269	0.535 ± 0.041	0.0653	98.4	-0.10
Lead	mg/l	0.0118 ± 0.00052	0.0132 ± 0.001	0.00118	112	0.69
Molybdenum	mg/l	0.023 ± 0.001	0.0218 ± 0.0019	0.00253	94.8	-0.30
Nickel	mg/l	0.0198 ± 0.000858	0.019 ± 0.0017	0.00218	96	-0.22
Selenium	mg/l	- ± -	0.001 ± 0.0001	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.0031 ± 0.0005	0.00109	140	0.77
Tin	mg/l	0.0335 ± 0.000982	0.0293 ± 0.001	0.00335	87.5	-1.87
Vanadium	mg/l	0.0255 ± 0.00113	0.0243 ± 0.0018	0.00255	95.4	-0.31
Zinc	mg/l	0.0997 ± 0.00672	0.103 ± 0.011	0.0179	103	0.14

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000466 ± 0.00001	0.000115	85	-1.47

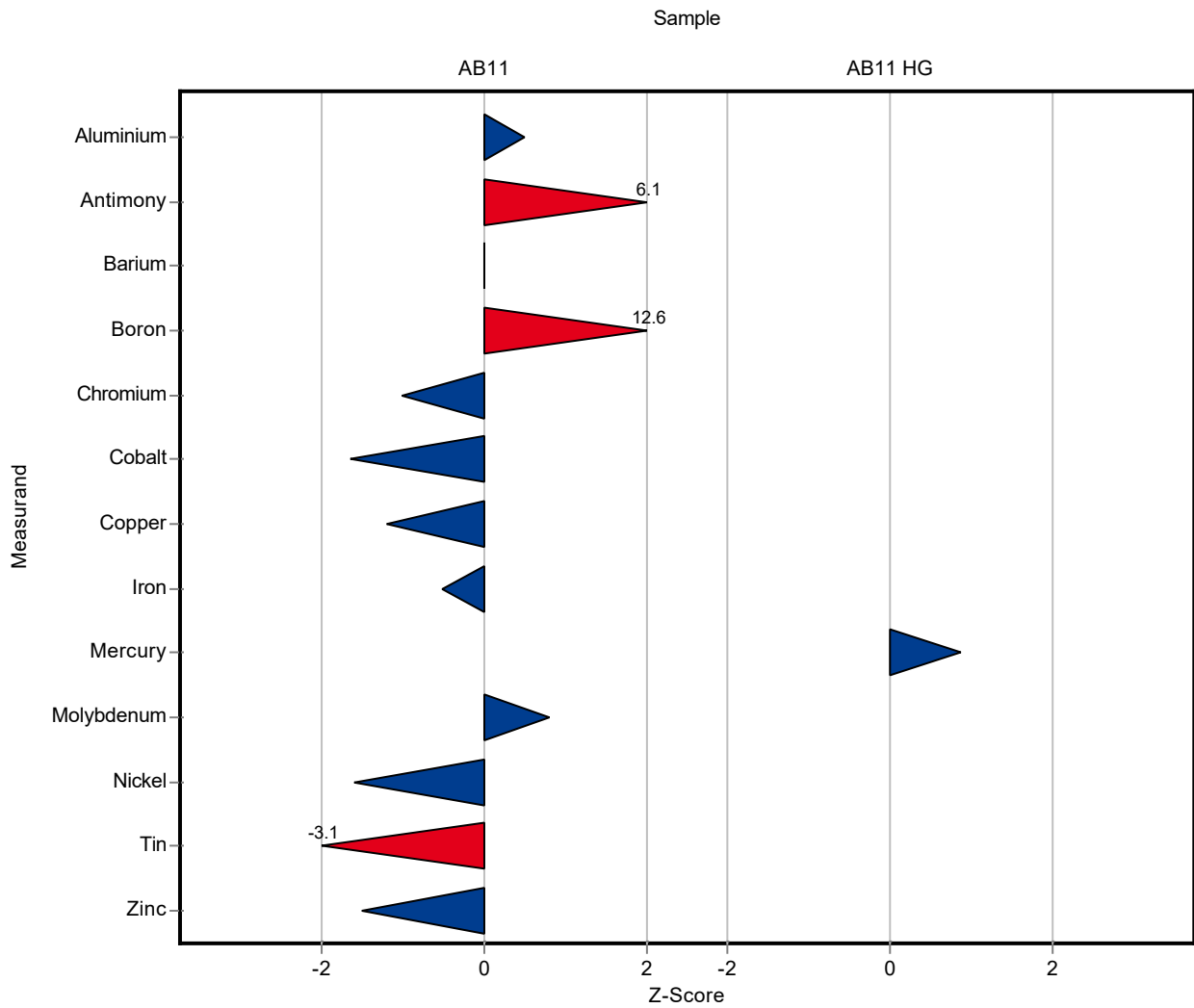


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	30.9 ± 0.806	2.95	105	0.49
Antimony	mg/l	0.00752 ± 0.000279	0.0121 ± 0.00184	0.000752	161	6.09
Arsenic	mg/l	0.00937 ± 0.000185	<0.01 (LOQ) ± -	0.000937	-	-
Barium	mg/l	3.31 ± 0.127	3.31 ± 0.064	0.331	100	0.00
Boron	mg/l	0.324 ± 0.015	0.733 ± 0.0603	0.0324	226	12.61
Cadmium	mg/l	0.000721 ± 0.0000196	<0.001 (LOQ) ± -	0.000072	-	-
Chromium	mg/l	0.0344 ± 0.00163	0.0302 ± 0.0001	0.00413	87.7	-1.02
Cobalt	mg/l	0.0199 ± 0.000808	0.0166 ± 0.0001	0.00199	83.5	-1.65
Copper	mg/l	0.0675 ± 0.00215	0.0594 ± 0.00154	0.00675	88	-1.20
Iron	mg/l	0.544 ± 0.0269	0.51 ± 0.023	0.0653	93.8	-0.52
Lead	mg/l	0.0118 ± 0.00052	<0.01 (LOQ) ± -	0.00118	-	-
Molybdenum	mg/l	0.023 ± 0.001	0.025 ± 0.00166	0.00253	109	0.79
Nickel	mg/l	0.0198 ± 0.000858	0.0163 ± 0.000386	0.00218	82.4	-1.60
Selenium	mg/l	- ± -	<0.01 (LOQ) ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.0232 ± 0.00523	0.00335	69.3	-3.07
Vanadium	mg/l	0.0255 ± 0.00113	<0.01 (LOQ) ± -	0.00255	-	-
Zinc	mg/l	0.0997 ± 0.00672	0.0725 ± 0.0013	0.0179	72.7	-1.52

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000649 ± 0.000001	0.000115	118	0.87



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

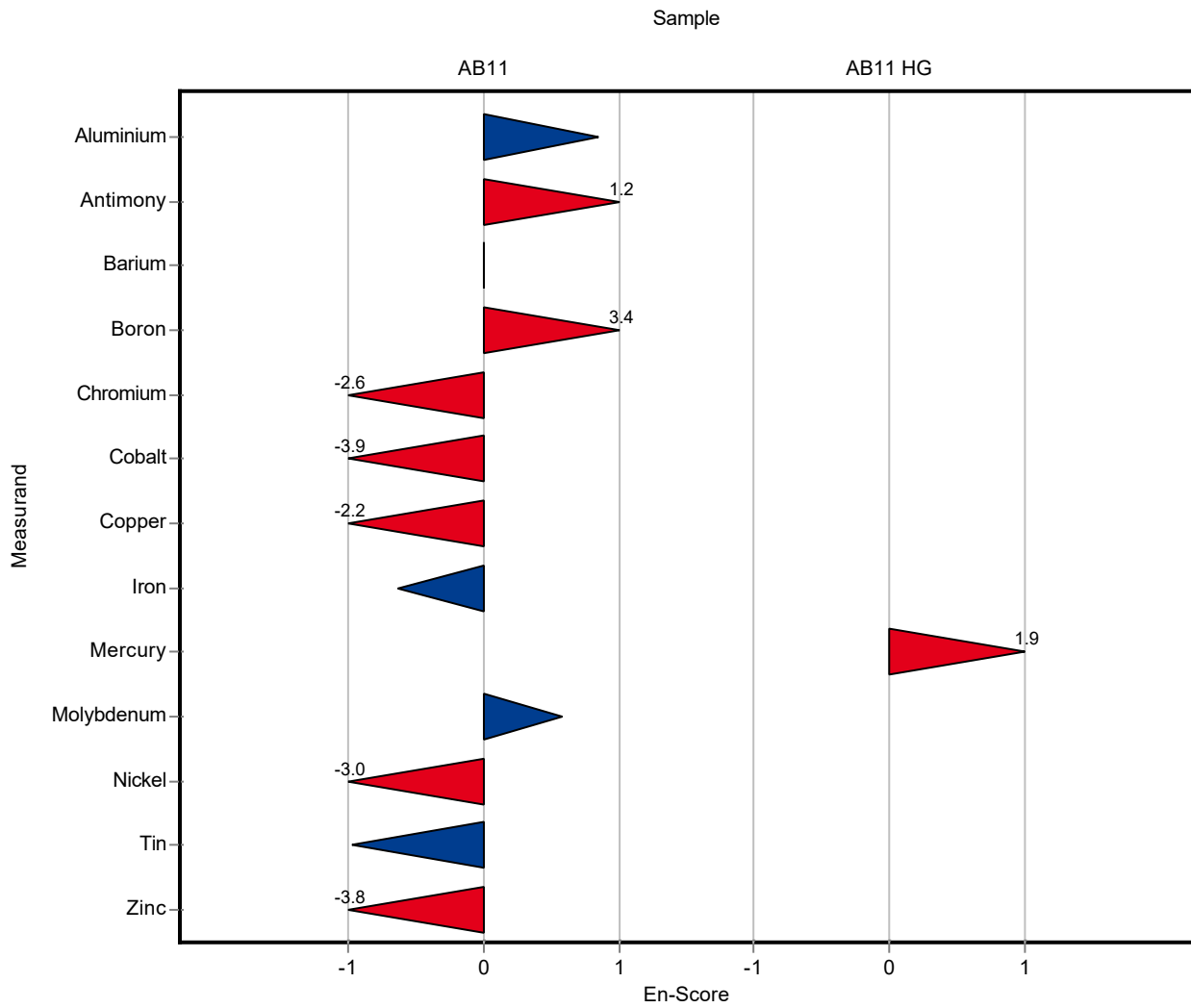
Labcode: LC0005

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	30.9 ± 0.806	2.95	105	0.85
Antimony	mg/l	0.00752 ± 0.000279	0.0121 ± 0.00184	0.000752	161	1.24
Arsenic	mg/l	0.00937 ± 0.000185	<0.01 (LOQ) ± -	0.000937	-	-
Barium	mg/l	3.31 ± 0.127	3.31 ± 0.064	0.331	100	0.01
Boron	mg/l	0.324 ± 0.015	0.733 ± 0.0603	0.0324	226	3.36
Cadmium	mg/l	0.000721 ± 0.0000196	<0.001 (LOQ) ± -	0.000072	-	-
Chromium	mg/l	0.0344 ± 0.00163	0.0302 ± 0.0001	0.00413	87.7	-2.58
Cobalt	mg/l	0.0199 ± 0.000808	0.0166 ± 0.0001	0.00199	83.5	-3.93
Copper	mg/l	0.0675 ± 0.00215	0.0594 ± 0.00154	0.00675	88	-2.15
Iron	mg/l	0.544 ± 0.0269	0.51 ± 0.023	0.0653	93.8	-0.63
Lead	mg/l	0.0118 ± 0.00052	<0.01 (LOQ) ± -	0.00118	-	-
Molybdenum	mg/l	0.023 ± 0.001	0.025 ± 0.00166	0.00253	109	0.58
Nickel	mg/l	0.0198 ± 0.000858	0.0163 ± 0.000386	0.00218	82.4	-3.02
Selenium	mg/l	- ± -	<0.01 (LOQ) ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.0232 ± 0.00523	0.00335	69.3	-0.98
Vanadium	mg/l	0.0255 ± 0.00113	<0.01 (LOQ) ± -	0.00255	-	-
Zinc	mg/l	0.0997 ± 0.00672	0.0725 ± 0.0013	0.0179	72.7	-3.78

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000649 ± 0.000001	0.000115	118	1.92

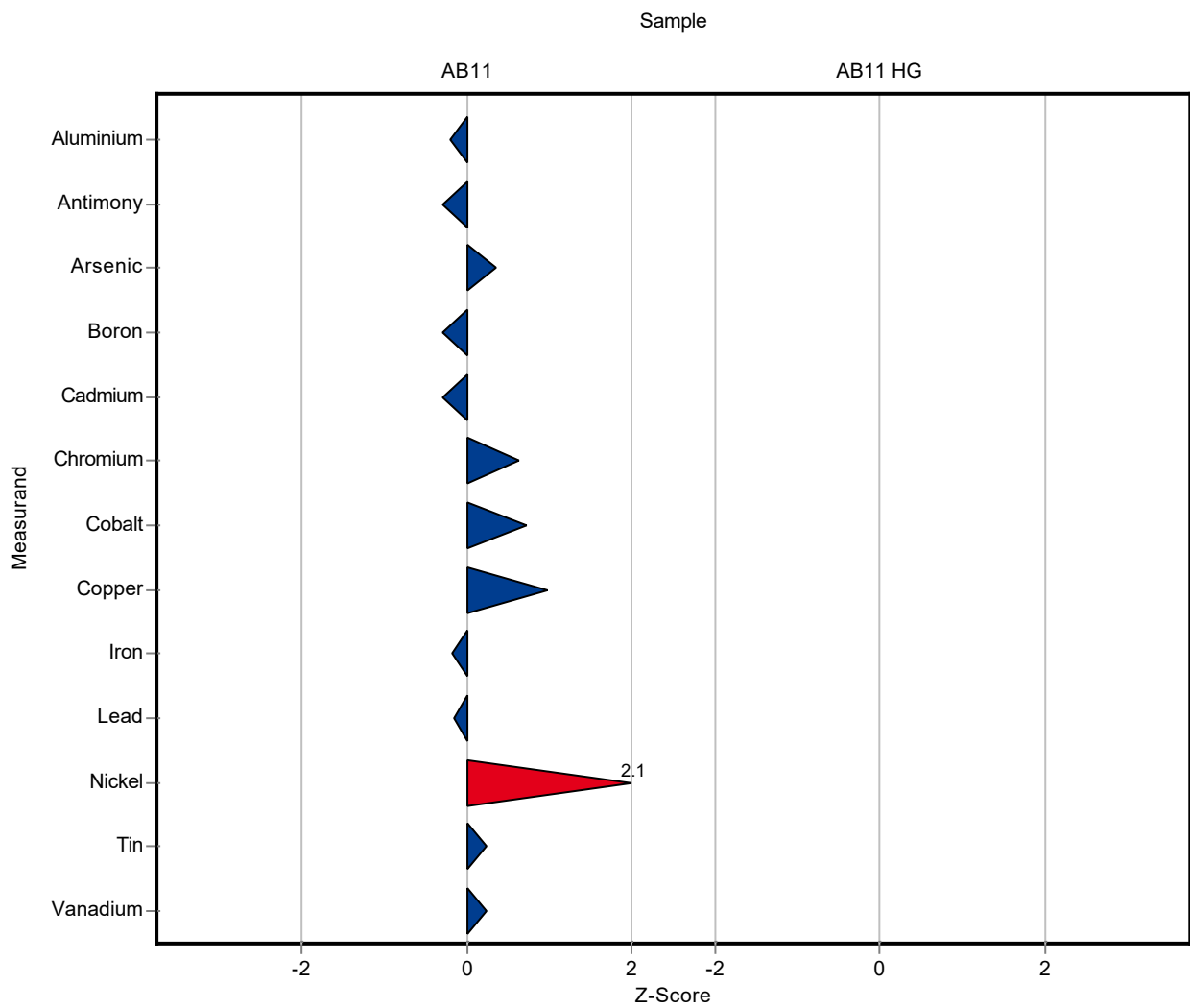


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	28.9 ± 13.4	2.95	98.1	-0.19
Antimony	mg/l	0.00752 ± 0.000279	0.0073 ± 0.0034	0.000752	97.1	-0.29
Arsenic	mg/l	0.00937 ± 0.000185	0.0097 ± 0.0044	0.000937	104	0.35
Barium	mg/l	3.31 ± 0.127	- ± -	0.331	-	-
Boron	mg/l	0.324 ± 0.015	0.315 ± 0.139	0.0324	97.2	-0.28
Cadmium	mg/l	0.000721 ± 0.0000196	0.0007 ± 0.00031	0.000072	97.1	-0.29
Chromium	mg/l	0.0344 ± 0.00163	0.037 ± 0.0166	0.00413	107	0.62
Cobalt	mg/l	0.0199 ± 0.000808	0.0213 ± 0.01	0.00199	107	0.72
Copper	mg/l	0.0675 ± 0.00215	0.074 ± 0.033	0.00675	110	0.97
Iron	mg/l	0.544 ± 0.0269	0.533 ± 0.218	0.0653	98	-0.17
Lead	mg/l	0.0118 ± 0.00052	0.0116 ± 0.0051	0.00118	98.5	-0.15
Molybdenum	mg/l	0.023 ± 0.001	- ± -	0.00253	-	-
Nickel	mg/l	0.0198 ± 0.000858	0.0243 ± 0.0105	0.00218	123	2.08
Selenium	mg/l	- ± -	0.0014 ± 0.0007	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.0343 ± 0.0157	0.00335	102	0.25
Vanadium	mg/l	0.0255 ± 0.00113	0.0261 ± 0.0113	0.00255	102	0.25
Zinc	mg/l	0.0997 ± 0.00672	- ± -	0.0179	-	-

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	- ± -	0.000115	-	-



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

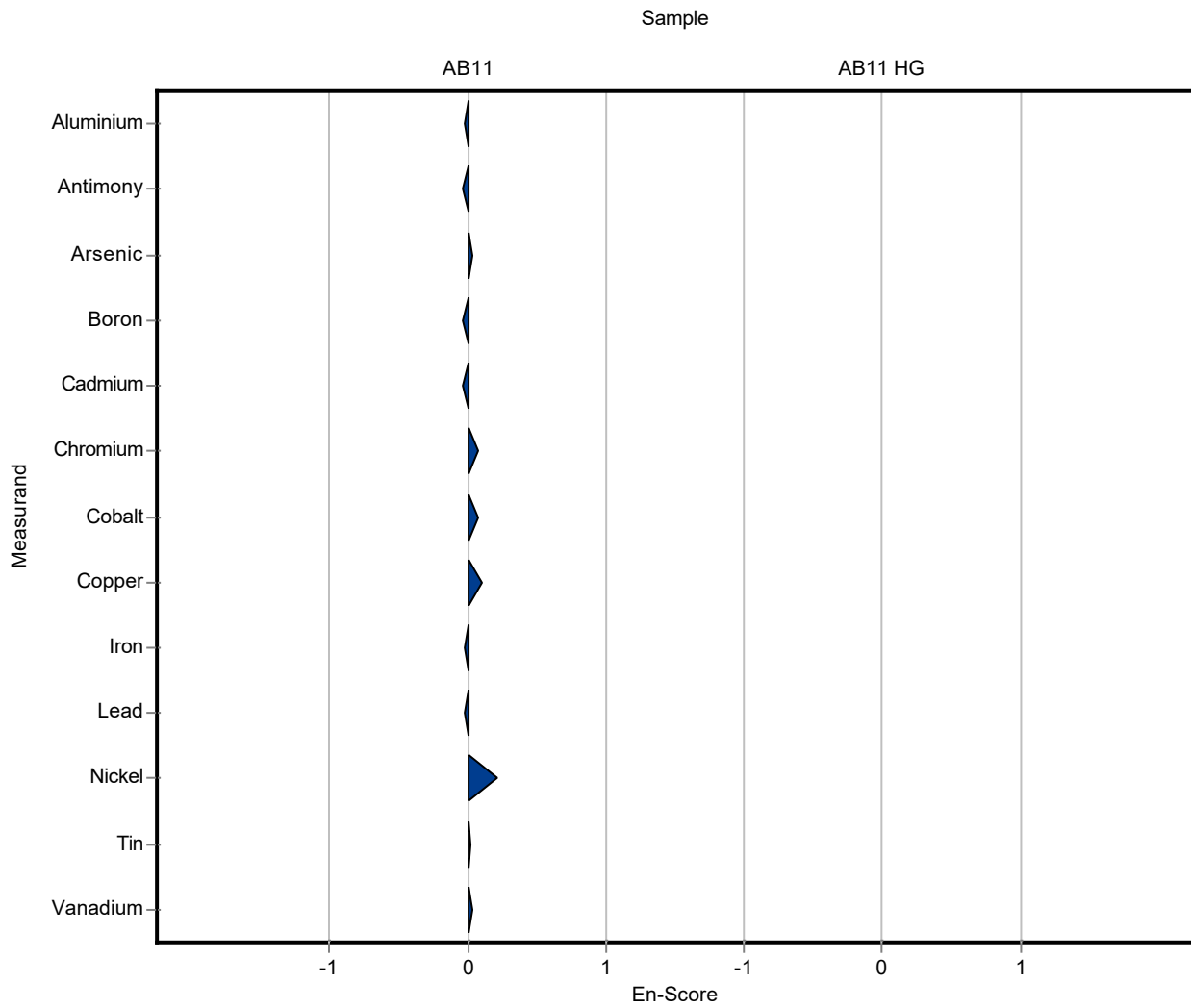
Labcode: LC0006

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	28.9 ± 13.4	2.95	98.1	-0.02
Antimony	mg/l	0.00752 ± 0.000279	0.0073 ± 0.0034	0.000752	97.1	-0.03
Arsenic	mg/l	0.00937 ± 0.000185	0.0097 ± 0.0044	0.000937	104	0.04
Barium	mg/l	3.31 ± 0.127	- ± -	0.331	-	-
Boron	mg/l	0.324 ± 0.015	0.315 ± 0.139	0.0324	97.2	-0.03
Cadmium	mg/l	0.000721 ± 0.0000196	0.0007 ± 0.00031	0.000072	97.1	-0.03
Chromium	mg/l	0.0344 ± 0.00163	0.037 ± 0.0166	0.00413	107	0.08
Cobalt	mg/l	0.0199 ± 0.000808	0.0213 ± 0.01	0.00199	107	0.07
Copper	mg/l	0.0675 ± 0.00215	0.074 ± 0.033	0.00675	110	0.10
Iron	mg/l	0.544 ± 0.0269	0.533 ± 0.218	0.0653	98	-0.02
Lead	mg/l	0.0118 ± 0.00052	0.0116 ± 0.0051	0.00118	98.5	-0.02
Molybdenum	mg/l	0.023 ± 0.001	- ± -	0.00253	-	-
Nickel	mg/l	0.0198 ± 0.000858	0.0243 ± 0.0105	0.00218	123	0.21
Selenium	mg/l	- ± -	0.0014 ± 0.0007	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.0343 ± 0.0157	0.00335	102	0.03
Vanadium	mg/l	0.0255 ± 0.00113	0.0261 ± 0.0113	0.00255	102	0.03
Zinc	mg/l	0.0997 ± 0.00672	- ± -	0.0179	-	-

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	- ± -	0.000115	-	-

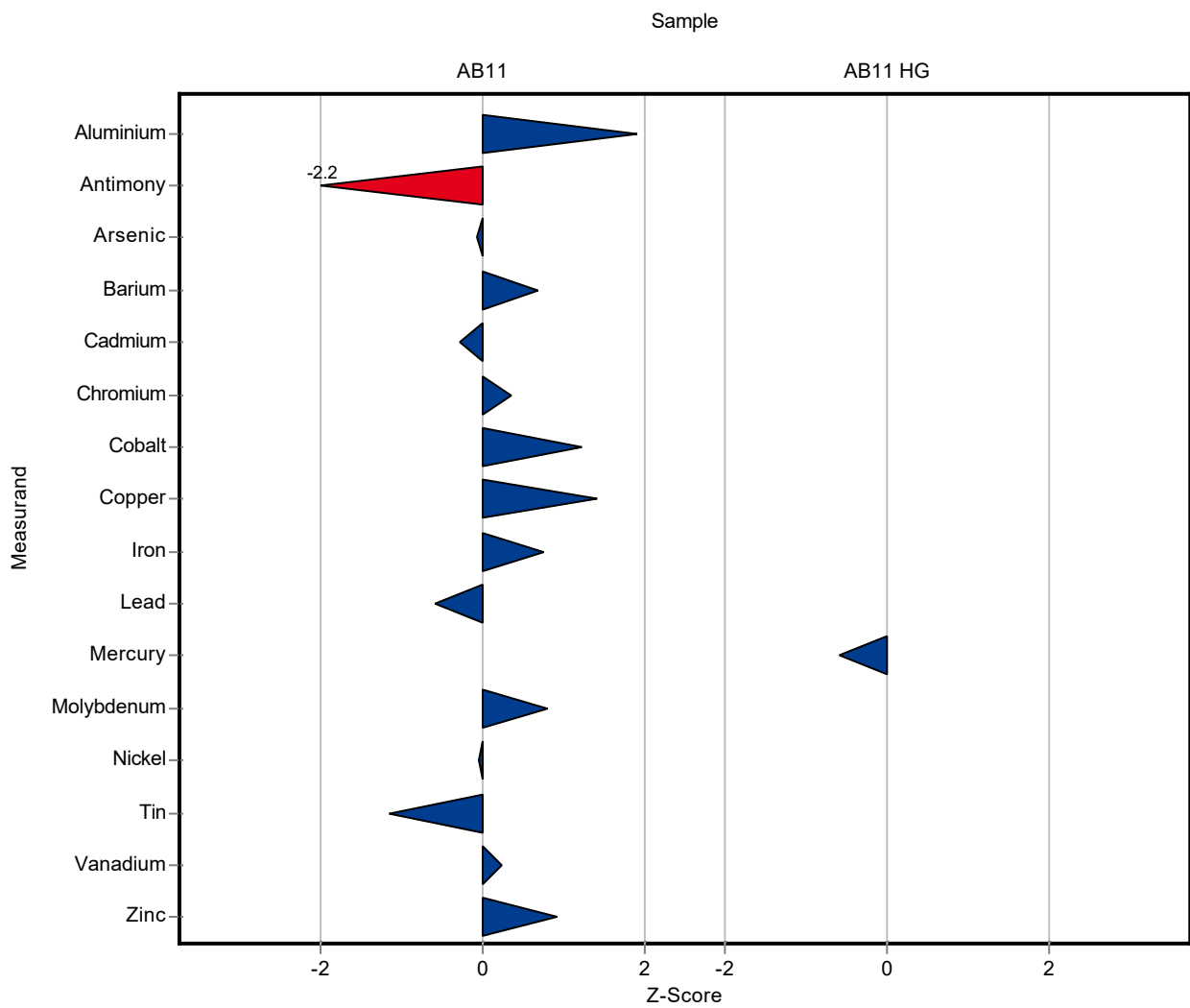


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	35.09 ± 2.1	2.95	119	1.91
Antimony	mg/l	0.00752 ± 0.000279	0.0059 ± 0.001	0.000752	78.5	-2.15
Arsenic	mg/l	0.00937 ± 0.000185	0.0093 ± 0.0005	0.000937	99.3	-0.07
Barium	mg/l	3.31 ± 0.127	3.532 ± 0.19	0.331	107	0.67
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	0.0007 ± 0.0002	0.000072	97.1	-0.29
Chromium	mg/l	0.0344 ± 0.00163	0.0359 ± 0.0013	0.00413	104	0.36
Cobalt	mg/l	0.0199 ± 0.000808	0.0223 ± 0.001	0.00199	112	1.22
Copper	mg/l	0.0675 ± 0.00215	0.0771 ± 0.0074	0.00675	114	1.43
Iron	mg/l	0.544 ± 0.0269	0.5926 ± 0.018	0.0653	109	0.75
Lead	mg/l	0.0118 ± 0.00052	0.0111 ± 0.0013	0.00118	94.2	-0.58
Molybdenum	mg/l	0.023 ± 0.001	0.025 ± 0.0018	0.00253	109	0.79
Nickel	mg/l	0.0198 ± 0.000858	0.0197 ± 0.0016	0.00218	99.6	-0.04
Selenium	mg/l	- ± -	0.0053 ± 0.00018	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.0296 ± 0.0023	0.00335	88.4	-1.16
Vanadium	mg/l	0.0255 ± 0.00113	0.0261 ± 0.0037	0.00255	102	0.25
Zinc	mg/l	0.0997 ± 0.00672	0.1161 ± 0.036	0.0179	116	0.91

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.00048 ± 0.00001	0.000115	87.5	-0.59



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

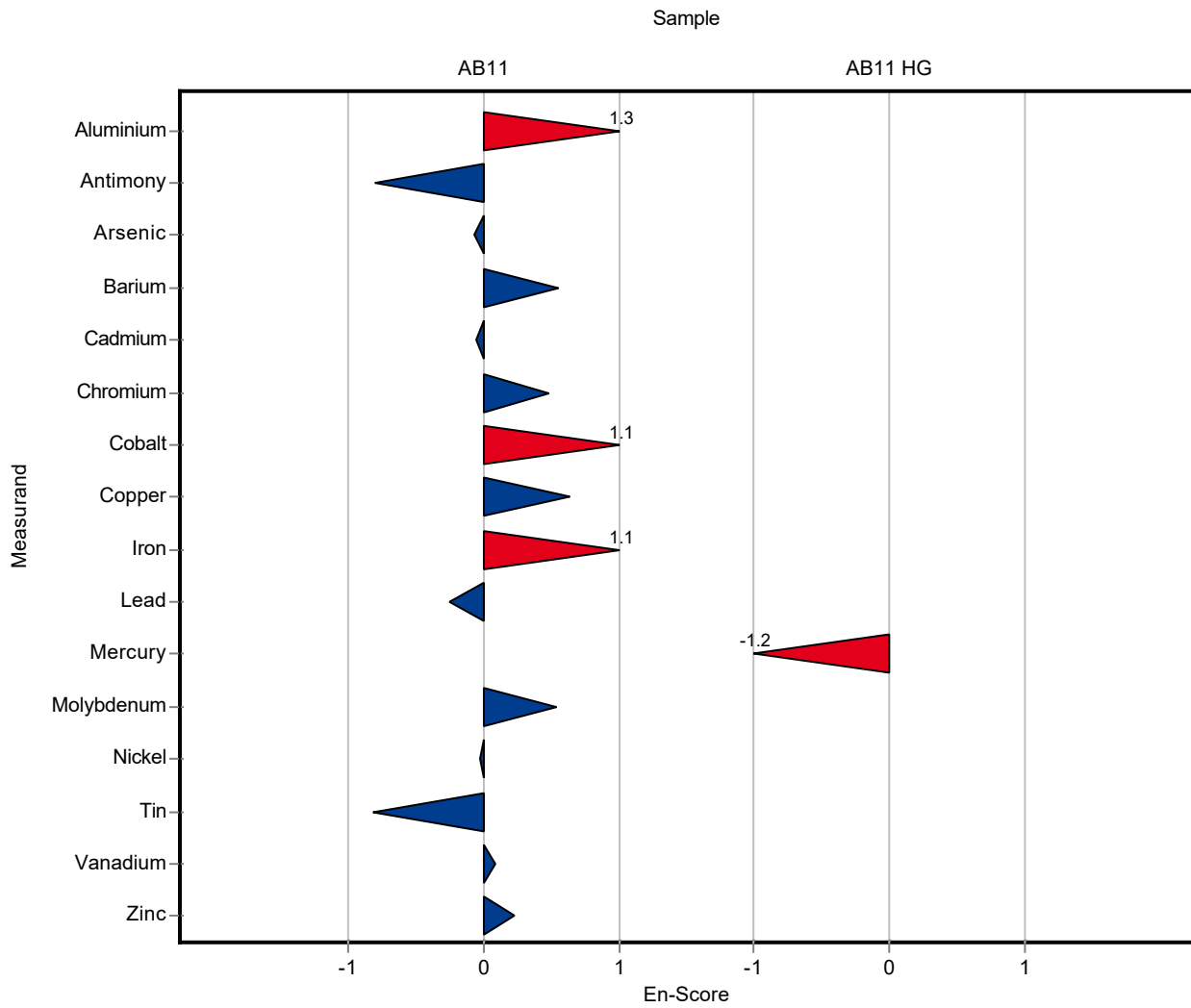
Labcode: LC0007

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	35.09 ± 2.1	2.95	119	1.33
Antimony	mg/l	0.00752 ± 0.000279	0.0059 ± 0.001	0.000752	78.5	-0.80
Arsenic	mg/l	0.00937 ± 0.000185	0.0093 ± 0.0005	0.000937	99.3	-0.07
Barium	mg/l	3.31 ± 0.127	3.532 ± 0.19	0.331	107	0.56
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	0.0007 ± 0.0002	0.000072	97.1	-0.05
Chromium	mg/l	0.0344 ± 0.00163	0.0359 ± 0.0013	0.00413	104	0.48
Cobalt	mg/l	0.0199 ± 0.000808	0.0223 ± 0.001	0.00199	112	1.13
Copper	mg/l	0.0675 ± 0.00215	0.0771 ± 0.0074	0.00675	114	0.64
Iron	mg/l	0.544 ± 0.0269	0.5926 ± 0.018	0.0653	109	1.09
Lead	mg/l	0.0118 ± 0.00052	0.0111 ± 0.0013	0.00118	94.2	-0.26
Molybdenum	mg/l	0.023 ± 0.001	0.025 ± 0.0018	0.00253	109	0.54
Nickel	mg/l	0.0198 ± 0.000858	0.0197 ± 0.0016	0.00218	99.6	-0.03
Selenium	mg/l	- ± -	0.0053 ± 0.00018	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.0296 ± 0.0023	0.00335	88.4	-0.82
Vanadium	mg/l	0.0255 ± 0.00113	0.0261 ± 0.0037	0.00255	102	0.08
Zinc	mg/l	0.0997 ± 0.00672	0.1161 ± 0.036	0.0179	116	0.23

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.00048 ± 0.00001	0.000115	87.5	-1.22

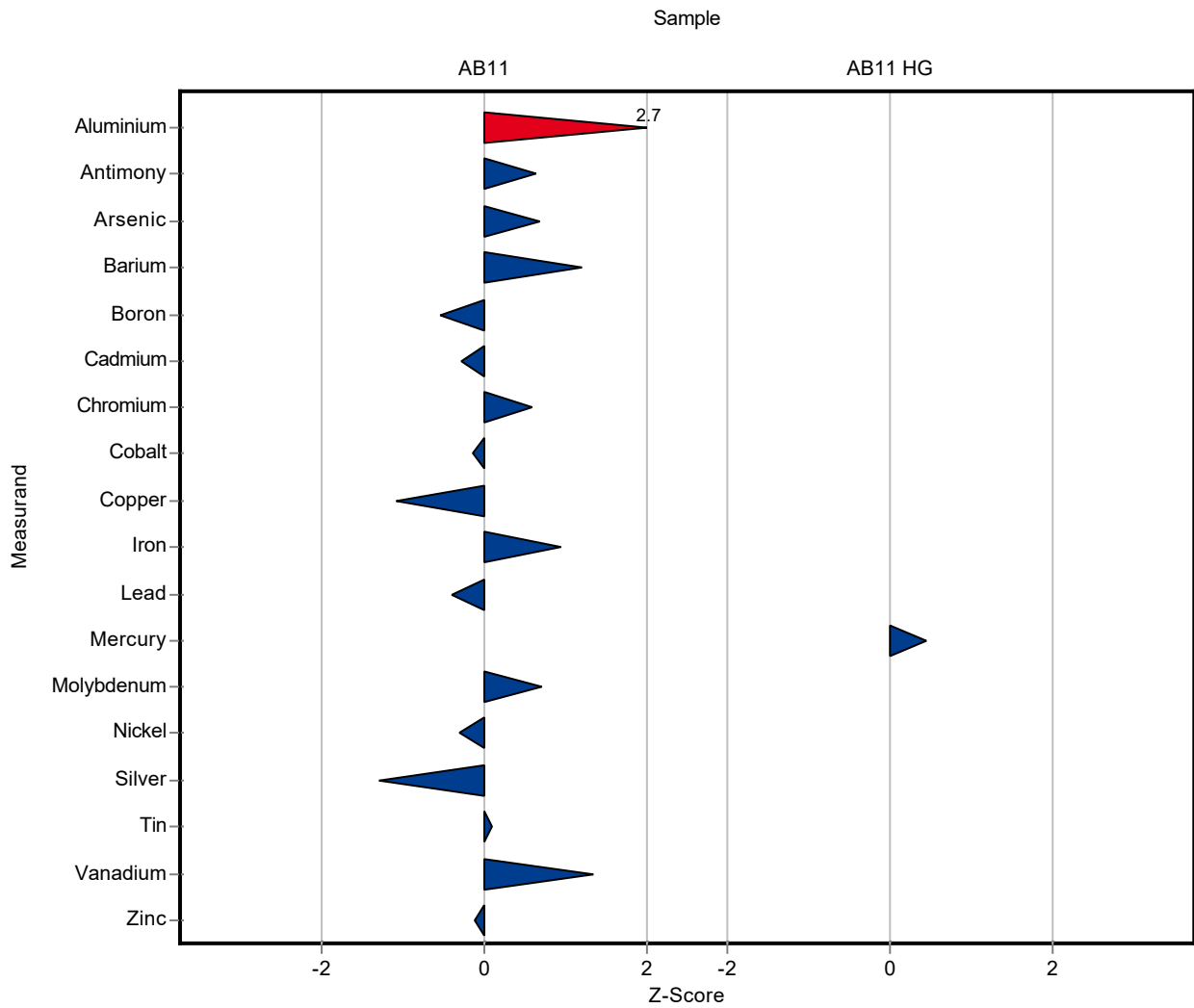


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	37.367 ± 1.858	2.95	127	2.68
Antimony	mg/l	0.00752 ± 0.000279	0.008 ± 0.0001	0.000752	106	0.64
Arsenic	mg/l	0.00937 ± 0.000185	0.01 ± 0.0001	0.000937	107	0.68
Barium	mg/l	3.31 ± 0.127	3.7087 ± 0.005	0.331	112	1.21
Boron	mg/l	0.324 ± 0.015	0.3063 ± 0.014	0.0324	94.5	-0.55
Cadmium	mg/l	0.000721 ± 0.0000196	0.0007 ± 0.000004	0.000072	97.1	-0.29
Chromium	mg/l	0.0344 ± 0.00163	0.0369 ± 0.0003	0.00413	107	0.60
Cobalt	mg/l	0.0199 ± 0.000808	0.0196 ± 0.0001	0.00199	98.6	-0.14
Copper	mg/l	0.0675 ± 0.00215	0.0601 ± 0.0003	0.00675	89.1	-1.09
Iron	mg/l	0.544 ± 0.0269	0.6052 ± 0.0098	0.0653	111	0.94
Lead	mg/l	0.0118 ± 0.00052	0.0113 ± 0.0001	0.00118	95.9	-0.41
Molybdenum	mg/l	0.023 ± 0.001	0.0248 ± 0.0005	0.00253	108	0.71
Nickel	mg/l	0.0198 ± 0.000858	0.0191 ± 0.0005	0.00218	96.5	-0.31
Selenium	mg/l	- ± -	0.0013 ± 0.0001	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.0008 ± 0.00004	0.00109	36.1	-1.30
Tin	mg/l	0.0335 ± 0.000982	0.0338 ± 0.0001	0.00335	101	0.10
Vanadium	mg/l	0.0255 ± 0.00113	0.0289 ± 0.0003	0.00255	113	1.34
Zinc	mg/l	0.0997 ± 0.00672	0.0976 ± 0.0015	0.0179	97.9	-0.12

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.0006 ± 0.00002	0.000115	109	0.45



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

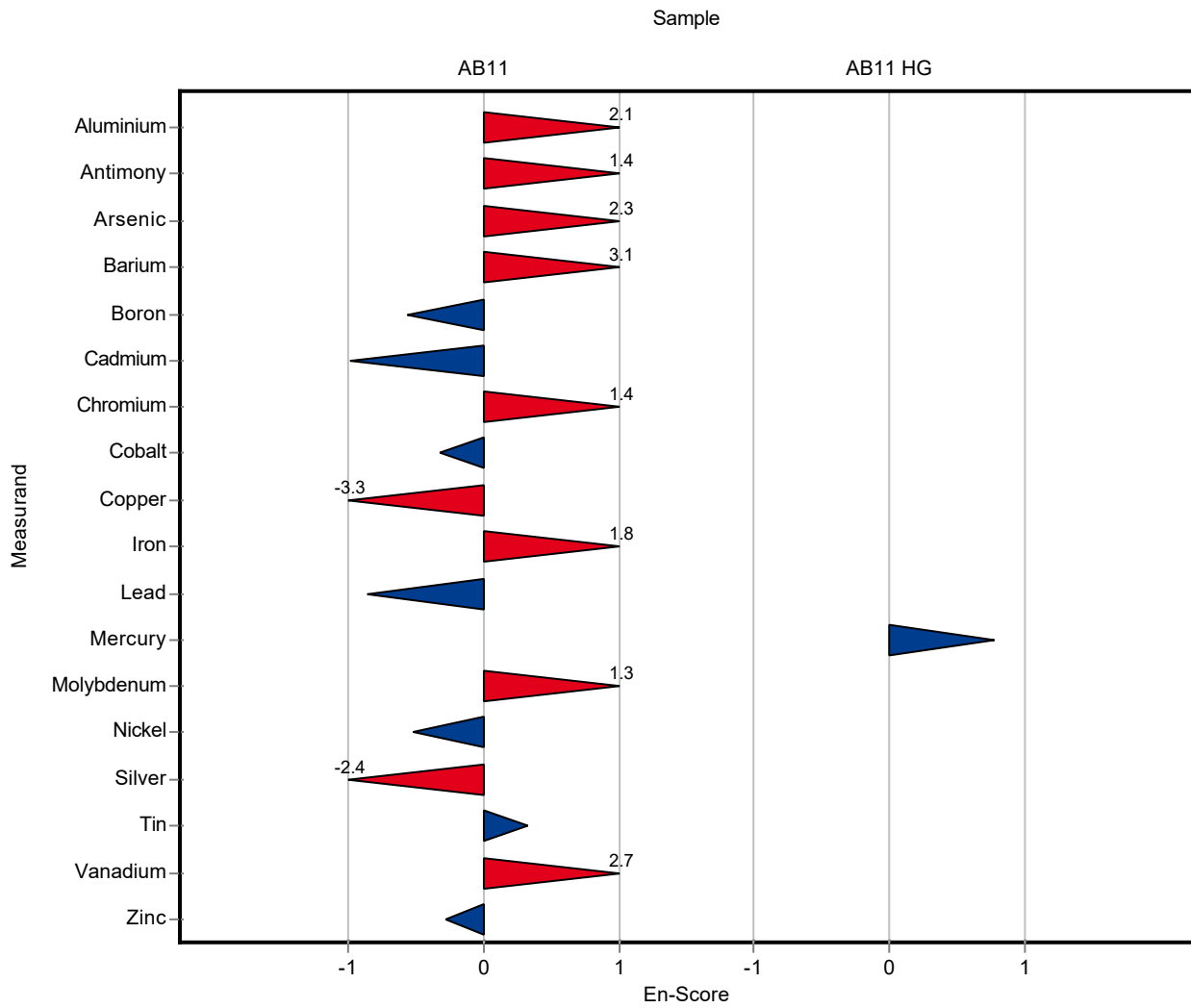
Labcode: LC0008

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	37.367 ± 1.858	2.95	127	2.11
Antimony	mg/l	0.00752 ± 0.000279	0.008 ± 0.0001	0.000752	106	1.40
Arsenic	mg/l	0.00937 ± 0.000185	0.01 ± 0.0001	0.000937	107	2.32
Barium	mg/l	3.31 ± 0.127	3.7087 ± 0.005	0.331	112	3.14
Boron	mg/l	0.324 ± 0.015	0.3063 ± 0.014	0.0324	94.5	-0.56
Cadmium	mg/l	0.000721 ± 0.0000196	0.0007 ± 0.000004	0.000072	97.1	-0.99
Chromium	mg/l	0.0344 ± 0.00163	0.0369 ± 0.0003	0.00413	107	1.42
Cobalt	mg/l	0.0199 ± 0.000808	0.0196 ± 0.0001	0.00199	98.6	-0.32
Copper	mg/l	0.0675 ± 0.00215	0.0601 ± 0.0003	0.00675	89.1	-3.31
Iron	mg/l	0.544 ± 0.0269	0.6052 ± 0.0098	0.0653	111	1.84
Lead	mg/l	0.0118 ± 0.00052	0.0113 ± 0.0001	0.00118	95.9	-0.86
Molybdenum	mg/l	0.023 ± 0.001	0.0248 ± 0.0005	0.00253	108	1.27
Nickel	mg/l	0.0198 ± 0.000858	0.0191 ± 0.0005	0.00218	96.5	-0.52
Selenium	mg/l	- ± -	0.0013 ± 0.0001	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.0008 ± 0.00004	0.00109	36.1	-2.41
Tin	mg/l	0.0335 ± 0.000982	0.0338 ± 0.0001	0.00335	101	0.32
Vanadium	mg/l	0.0255 ± 0.00113	0.0289 ± 0.0003	0.00255	113	2.67
Zinc	mg/l	0.0997 ± 0.00672	0.0976 ± 0.0015	0.0179	97.9	-0.29

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.0006 ± 0.00002	0.000115	109	0.78

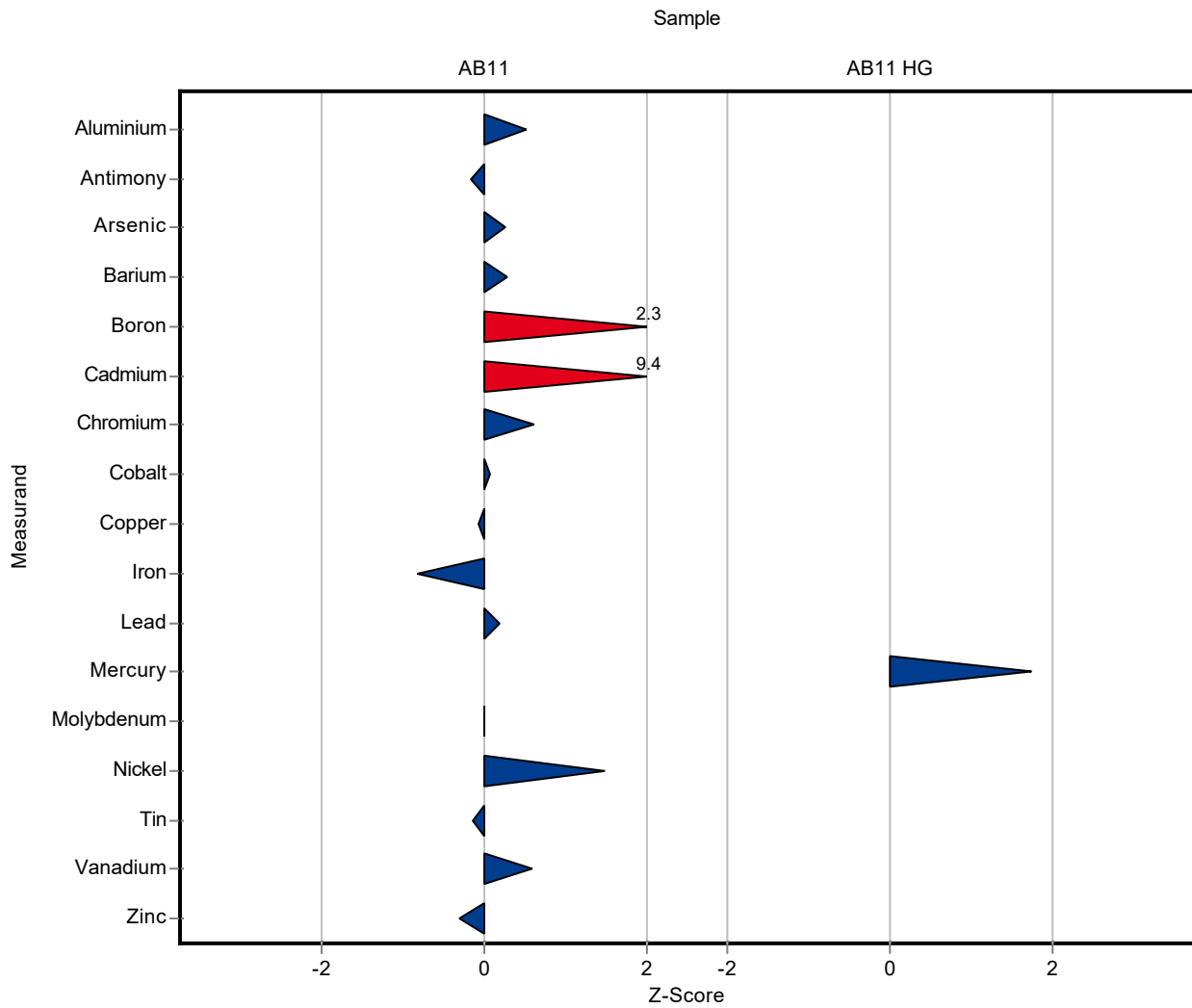


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	31 ± 2.3	2.95	105	0.52
Antimony	mg/l	0.00752 ± 0.000279	0.0074 ± 0.002	0.000752	98.4	-0.16
Arsenic	mg/l	0.00937 ± 0.000185	0.0096 ± 0.00065	0.000937	102	0.25
Barium	mg/l	3.31 ± 0.127	3.4 ± 0.16	0.331	103	0.28
Boron	mg/l	0.324 ± 0.015	0.4 ± 0.03	0.0324	123	2.34
Cadmium	mg/l	0.000721 ± 0.0000196	0.0014 ± 0.000094	0.000072	194	9.42
Chromium	mg/l	0.0344 ± 0.00163	0.037 ± 0.0016	0.00413	107	0.62
Cobalt	mg/l	0.0199 ± 0.000808	0.02 ± 0.0012	0.00199	101	0.07
Copper	mg/l	0.0675 ± 0.00215	0.067 ± 0.011	0.00675	99.3	-0.07
Iron	mg/l	0.544 ± 0.0269	0.49 ± 0.05	0.0653	90.1	-0.82
Lead	mg/l	0.0118 ± 0.00052	0.012 ± 0.001	0.00118	102	0.19
Molybdenum	mg/l	0.023 ± 0.001	0.023 ± 0.0015	0.00253	100	0.00
Nickel	mg/l	0.0198 ± 0.000858	0.023 ± 0.0014	0.00218	116	1.48
Selenium	mg/l	- ± -	0.015 ± 0.0035	-	-	-
Silver	mg/l	0.00222 ± 0.000581	<0.002 (LOQ) ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.033 ± 0.0037	0.00335	98.6	-0.14
Vanadium	mg/l	0.0255 ± 0.00113	0.027 ± 0.001	0.00255	106	0.60
Zinc	mg/l	0.0997 ± 0.00672	0.094 ± 0.0057	0.0179	94.3	-0.32

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.00075 ± 0.000072	0.000115	137	1.75



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

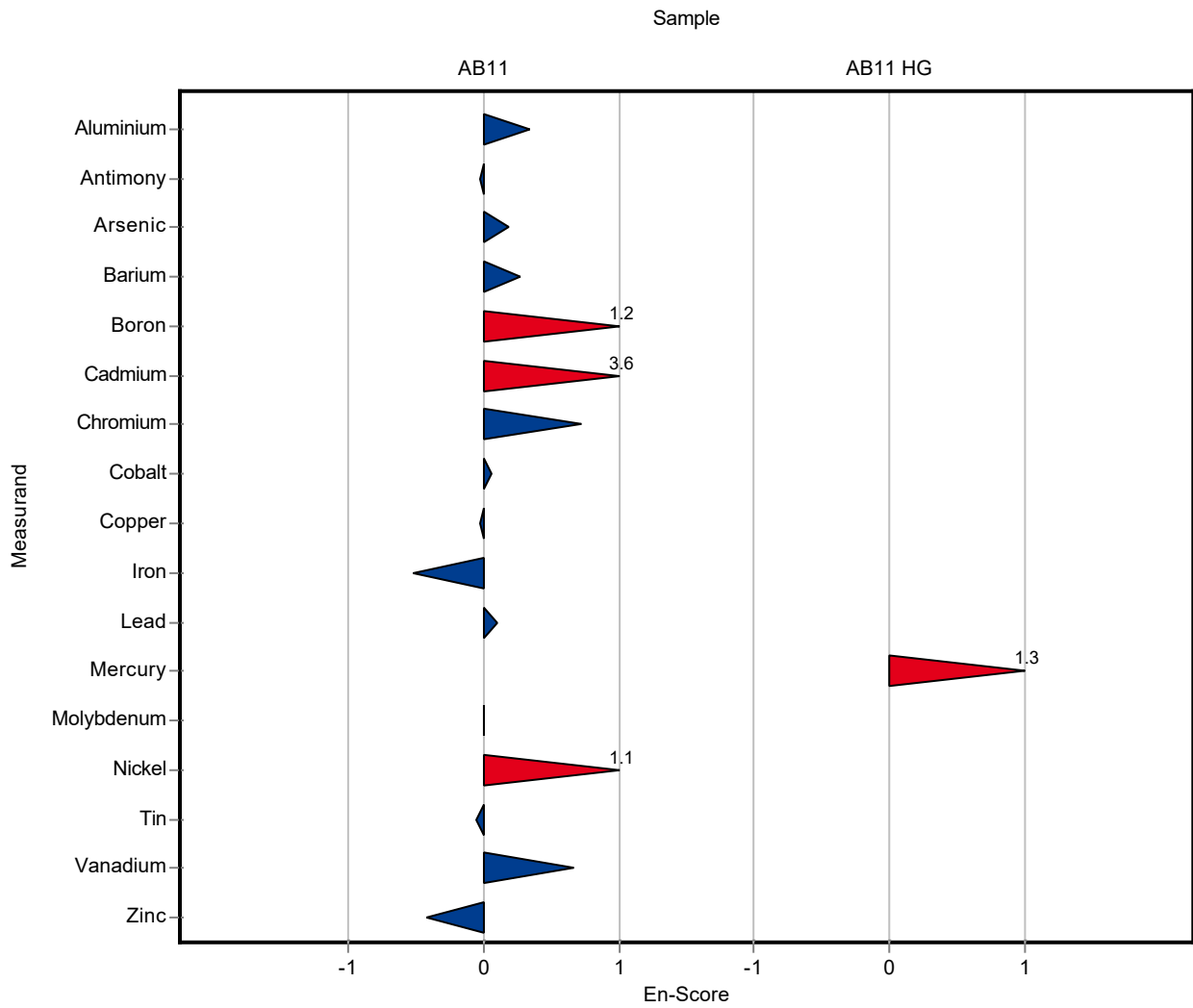
Labcode: LC0009

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	31 ± 2.3	2.95	105	0.33
Antimony	mg/l	0.00752 ± 0.000279	0.0074 ± 0.002	0.000752	98.4	-0.03
Arsenic	mg/l	0.00937 ± 0.000185	0.0096 ± 0.00065	0.000937	102	0.18
Barium	mg/l	3.31 ± 0.127	3.4 ± 0.16	0.331	103	0.26
Boron	mg/l	0.324 ± 0.015	0.4 ± 0.03	0.0324	123	1.23
Cadmium	mg/l	0.000721 ± 0.0000196	0.0014 ± 0.000094	0.000072	194	3.59
Chromium	mg/l	0.0344 ± 0.00163	0.037 ± 0.0016	0.00413	107	0.72
Cobalt	mg/l	0.0199 ± 0.000808	0.02 ± 0.0012	0.00199	101	0.05
Copper	mg/l	0.0675 ± 0.00215	0.067 ± 0.011	0.00675	99.3	-0.02
Iron	mg/l	0.544 ± 0.0269	0.49 ± 0.05	0.0653	90.1	-0.52
Lead	mg/l	0.0118 ± 0.00052	0.012 ± 0.001	0.00118	102	0.11
Molybdenum	mg/l	0.023 ± 0.001	0.023 ± 0.0015	0.00253	100	0.00
Nickel	mg/l	0.0198 ± 0.000858	0.023 ± 0.0014	0.00218	116	1.10
Selenium	mg/l	- ± -	0.015 ± 0.0035	-	-	-
Silver	mg/l	0.00222 ± 0.000581	<0.002 (LOQ) ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.033 ± 0.0037	0.00335	98.6	-0.06
Vanadium	mg/l	0.0255 ± 0.00113	0.027 ± 0.001	0.00255	106	0.66
Zinc	mg/l	0.0997 ± 0.00672	0.094 ± 0.0057	0.0179	94.3	-0.43

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.00075 ± 0.000072	0.000115	137	1.32

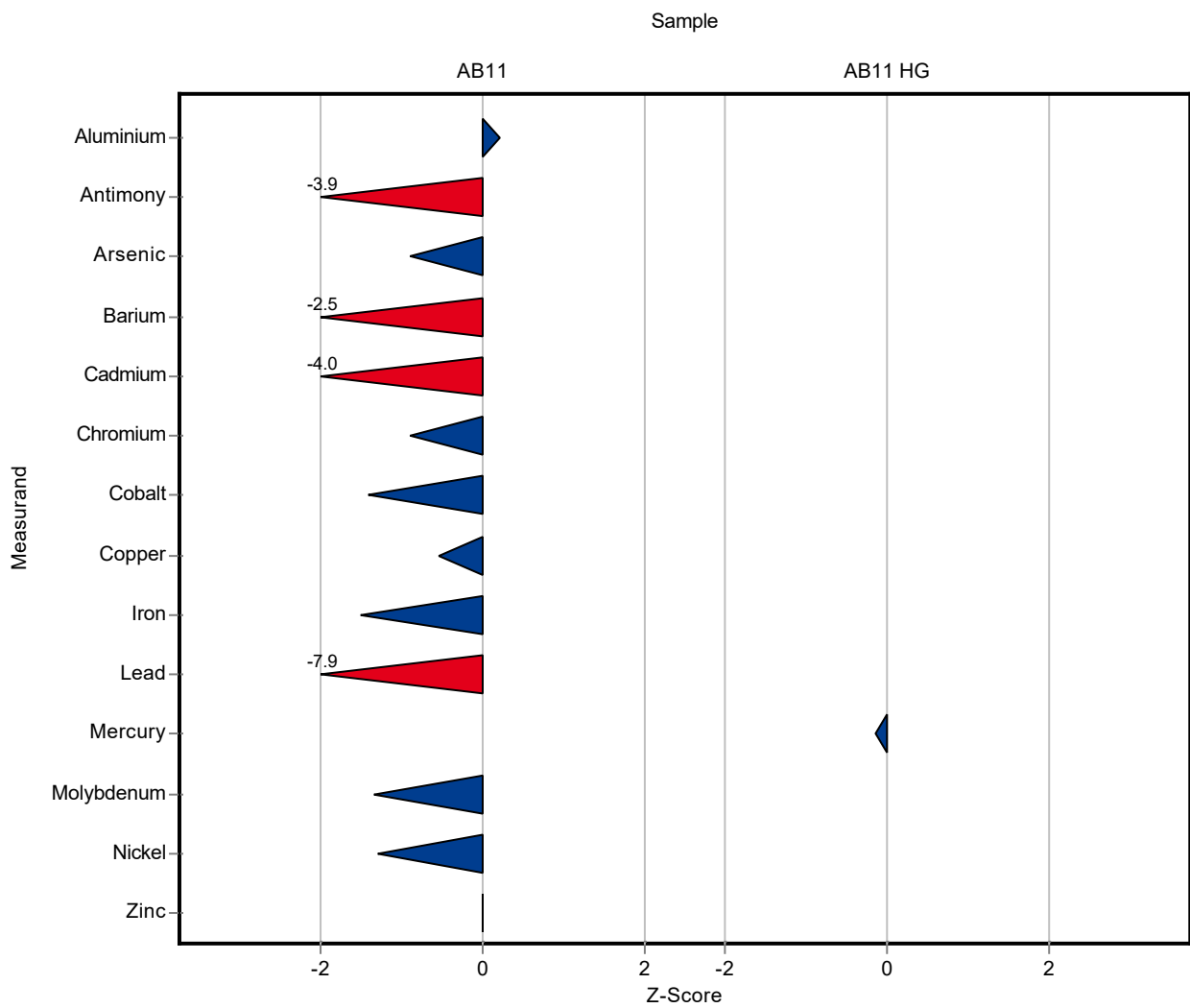


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	30.11 ± 1.5	2.95	102	0.22
Antimony	mg/l	0.00752 ± 0.000279	0.00457 ± 0.001	0.000752	60.8	-3.92
Arsenic	mg/l	0.00937 ± 0.000185	0.00853 ± 0.001	0.000937	91.1	-0.89
Barium	mg/l	3.31 ± 0.127	2.468 ± 0.001	0.331	74.6	-2.54
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	0.00043 ± 0.0001	0.000072	59.6	-4.04
Chromium	mg/l	0.0344 ± 0.00163	0.03073 ± 0.001	0.00413	89.2	-0.90
Cobalt	mg/l	0.0199 ± 0.000808	0.01707 ± 0.001	0.00199	85.9	-1.41
Copper	mg/l	0.0675 ± 0.00215	0.0638 ± 0.001	0.00675	94.5	-0.55
Iron	mg/l	0.544 ± 0.0269	0.44473 ± 0.022	0.0653	81.8	-1.52
Lead	mg/l	0.0118 ± 0.00052	0.0025 ± 0.001	0.00118	21.2	-7.88
Molybdenum	mg/l	0.023 ± 0.001	0.01957 ± 0.001	0.00253	85.1	-1.35
Nickel	mg/l	0.0198 ± 0.000858	0.01697 ± 0.001	0.00218	85.8	-1.29
Selenium	mg/l	- ± -	<0.001 (LOQ) ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	- ± -	0.00335	-	-
Vanadium	mg/l	0.0255 ± 0.00113	- ± -	0.00255	-	-
Zinc	mg/l	0.0997 ± 0.00672	0.09967 ± 0.001	0.0179	100	0.00

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000533 ± 0.0001	0.000115	97.2	-0.13



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

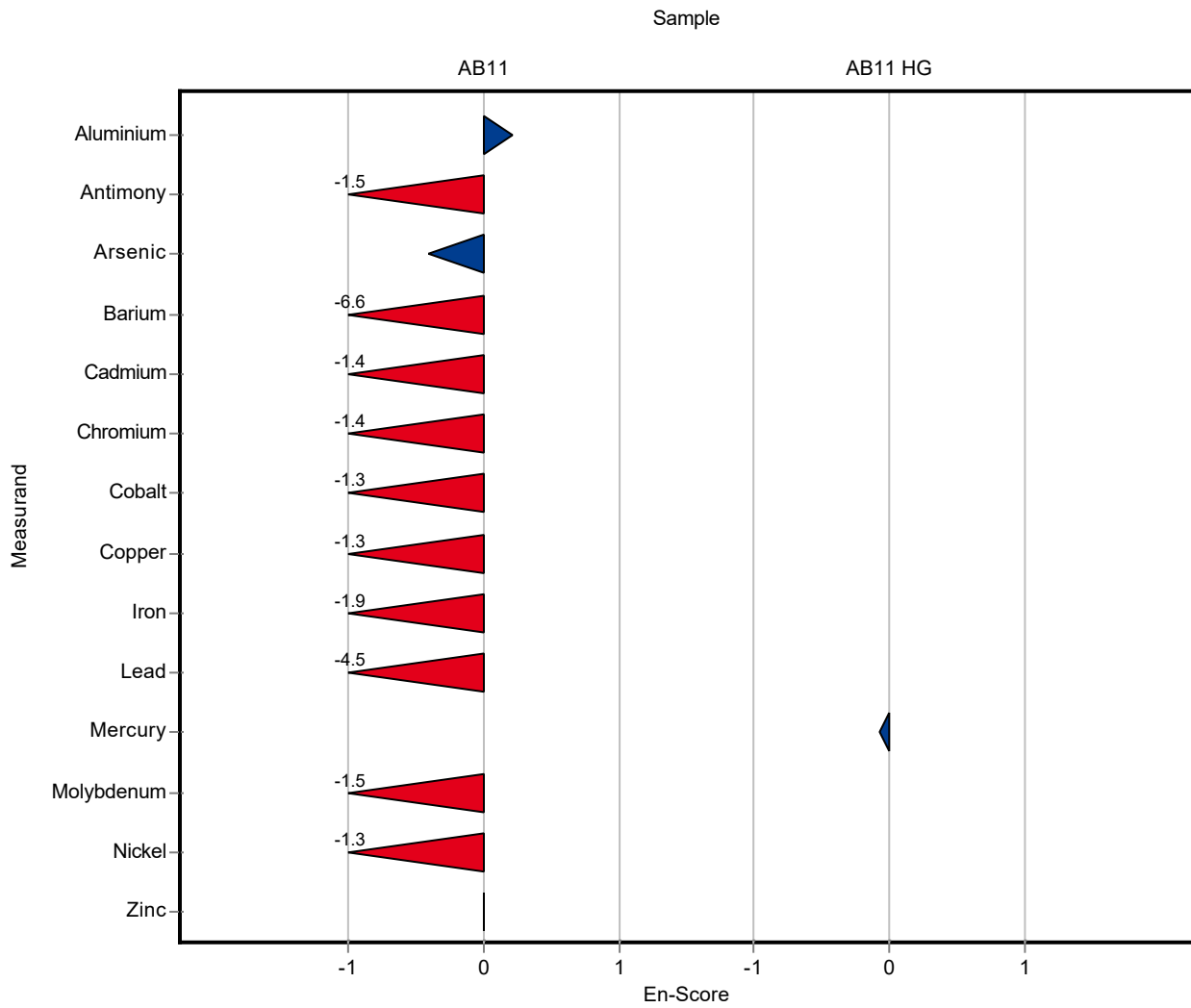
Labcode: LC0010

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	30.11 ± 1.5	2.95	102	0.21
Antimony	mg/l	0.00752 ± 0.000279	0.00457 ± 0.001	0.000752	60.8	-1.46
Arsenic	mg/l	0.00937 ± 0.000185	0.00853 ± 0.001	0.000937	91.1	-0.42
Barium	mg/l	3.31 ± 0.127	2.468 ± 0.001	0.331	74.6	-6.62
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	0.00043 ± 0.0001	0.000072	59.6	-1.45
Chromium	mg/l	0.0344 ± 0.00163	0.03073 ± 0.001	0.00413	89.2	-1.44
Cobalt	mg/l	0.0199 ± 0.000808	0.01707 ± 0.001	0.00199	85.9	-1.30
Copper	mg/l	0.0675 ± 0.00215	0.0638 ± 0.001	0.00675	94.5	-1.25
Iron	mg/l	0.544 ± 0.0269	0.44473 ± 0.022	0.0653	81.8	-1.92
Lead	mg/l	0.0118 ± 0.00052	0.0025 ± 0.001	0.00118	21.2	-4.49
Molybdenum	mg/l	0.023 ± 0.001	0.01957 ± 0.001	0.00253	85.1	-1.53
Nickel	mg/l	0.0198 ± 0.000858	0.01697 ± 0.001	0.00218	85.8	-1.29
Selenium	mg/l	- ± -	<0.001 (LOQ) ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	- ± -	0.00335	-	-
Vanadium	mg/l	0.0255 ± 0.00113	- ± -	0.00255	-	-
Zinc	mg/l	0.0997 ± 0.00672	0.09967 ± 0.001	0.0179	100	0.00

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000533 ± 0.0001	0.000115	97.2	-0.07

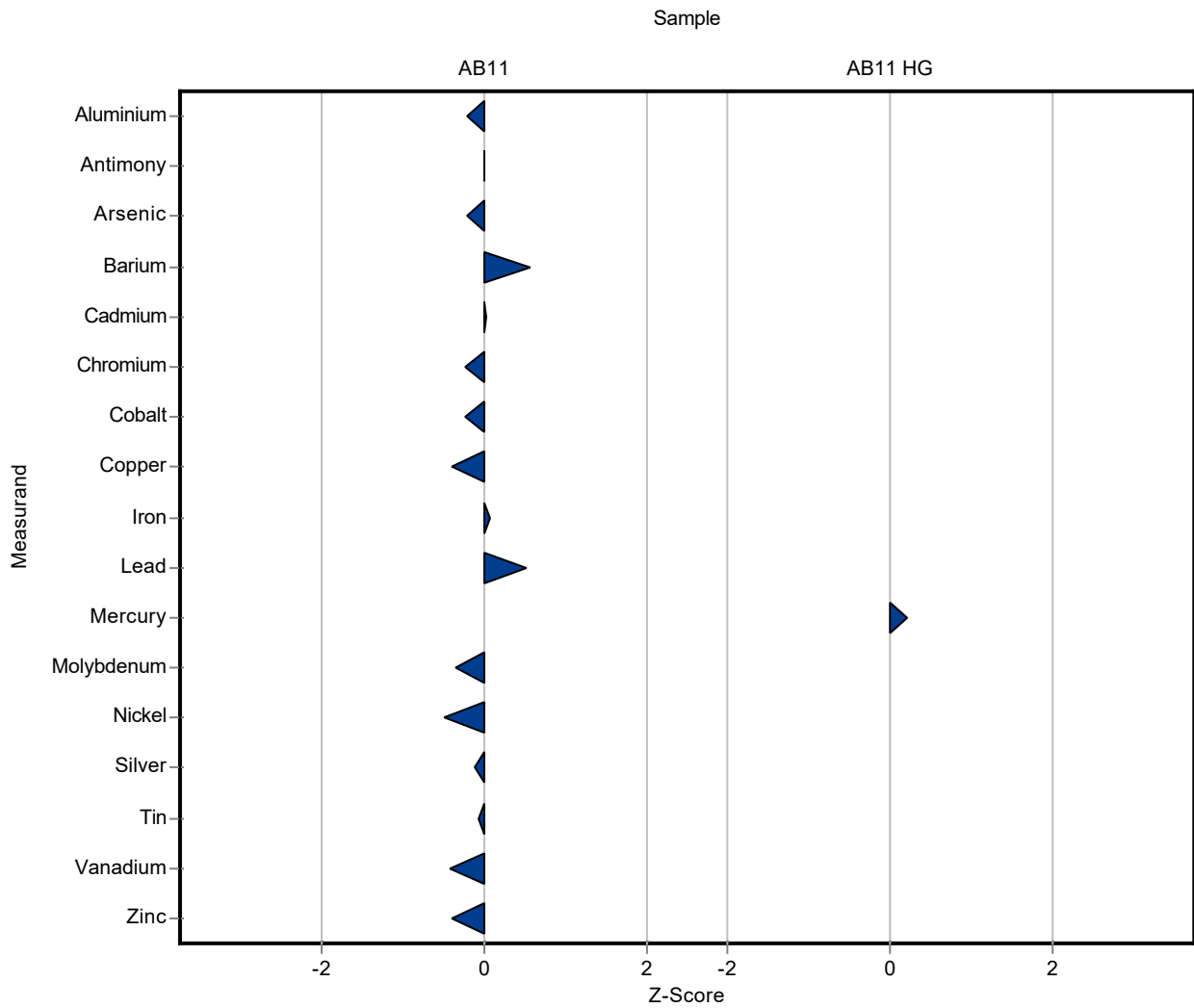


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	28.8 ± 0.611	2.95	97.8	-0.22
Antimony	mg/l	0.00752 ± 0.000279	0.00751 ± 0.0001	0.000752	99.9	-0.01
Arsenic	mg/l	0.00937 ± 0.000185	0.00917 ± 0.0001	0.000937	97.9	-0.21
Barium	mg/l	3.31 ± 0.127	3.5 ± 0.081	0.331	106	0.58
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	0.000723 ± 0.0001	0.000072	100	0.03
Chromium	mg/l	0.0344 ± 0.00163	0.0335 ± 0.001	0.00413	97.3	-0.23
Cobalt	mg/l	0.0199 ± 0.000808	0.0194 ± 0.0005	0.00199	97.6	-0.24
Copper	mg/l	0.0675 ± 0.00215	0.0647 ± 0.001	0.00675	95.9	-0.41
Iron	mg/l	0.544 ± 0.0269	0.549 ± 0.009	0.0653	101	0.08
Lead	mg/l	0.0118 ± 0.00052	0.0124 ± 0.0002	0.00118	105	0.52
Molybdenum	mg/l	0.023 ± 0.001	0.0221 ± 0.0002	0.00253	96.1	-0.35
Nickel	mg/l	0.0198 ± 0.000858	0.0187 ± 0.001	0.00218	94.5	-0.50
Selenium	mg/l	- ± -	0.00109 ± 0.0001	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.00208 ± 0.0001	0.00109	93.9	-0.12
Tin	mg/l	0.0335 ± 0.000982	0.0332 ± 0.0001	0.00335	99.2	-0.08
Vanadium	mg/l	0.0255 ± 0.00113	0.0244 ± 0.001	0.00255	95.8	-0.42
Zinc	mg/l	0.0997 ± 0.00672	0.0926 ± 0.001	0.0179	92.9	-0.40

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000574 ± 0.00002	0.000115	105	0.22



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

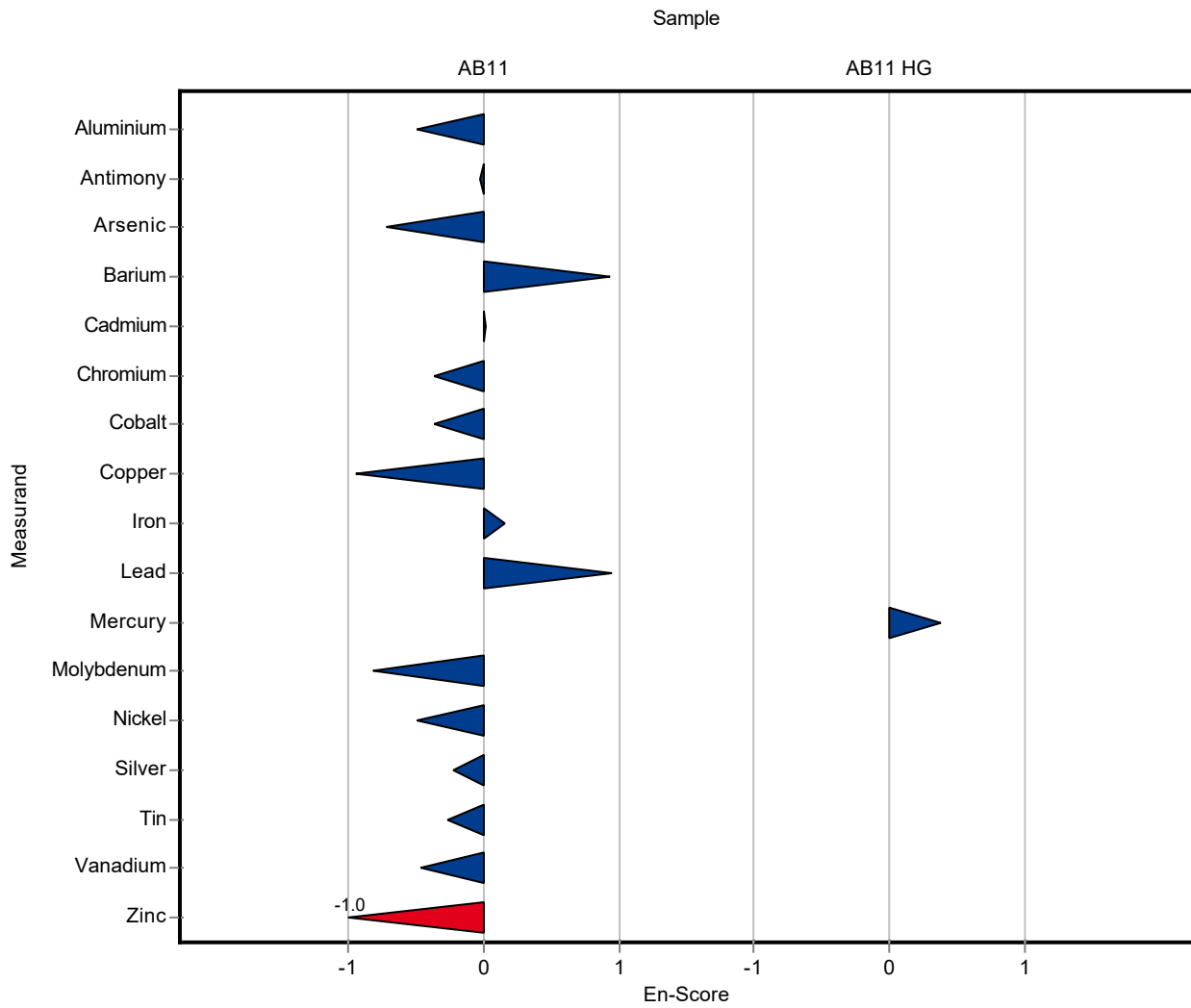
Labcode: LC0011

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	28.8 ± 0.611	2.95	97.8	-0.50
Antimony	mg/l	0.00752 ± 0.000279	0.00751 ± 0.0001	0.000752	99.9	-0.03
Arsenic	mg/l	0.00937 ± 0.000185	0.00917 ± 0.0001	0.000937	97.9	-0.72
Barium	mg/l	3.31 ± 0.127	3.5 ± 0.081	0.331	106	0.93
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	0.000723 ± 0.0001	0.000072	100	0.01
Chromium	mg/l	0.0344 ± 0.00163	0.0335 ± 0.001	0.00413	97.3	-0.36
Cobalt	mg/l	0.0199 ± 0.000808	0.0194 ± 0.0005	0.00199	97.6	-0.37
Copper	mg/l	0.0675 ± 0.00215	0.0647 ± 0.001	0.00675	95.9	-0.95
Iron	mg/l	0.544 ± 0.0269	0.549 ± 0.009	0.0653	101	0.16
Lead	mg/l	0.0118 ± 0.00052	0.0124 ± 0.0002	0.00118	105	0.94
Molybdenum	mg/l	0.023 ± 0.001	0.0221 ± 0.0002	0.00253	96.1	-0.83
Nickel	mg/l	0.0198 ± 0.000858	0.0187 ± 0.001	0.00218	94.5	-0.50
Selenium	mg/l	- ± -	0.00109 ± 0.0001	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.00208 ± 0.0001	0.00109	93.9	-0.22
Tin	mg/l	0.0335 ± 0.000982	0.0332 ± 0.0001	0.00335	99.2	-0.27
Vanadium	mg/l	0.0255 ± 0.00113	0.0244 ± 0.001	0.00255	95.8	-0.47
Zinc	mg/l	0.0997 ± 0.00672	0.0926 ± 0.001	0.0179	92.9	-1.01

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000574 ± 0.00002	0.000115	105	0.39



Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	- ± -	2.95	-	-
Antimony	mg/l	0.00752 ± 0.000279	- ± -	0.000752	-	-
Arsenic	mg/l	0.00937 ± 0.000185	- ± -	0.000937	-	-
Barium	mg/l	3.31 ± 0.127	- ± -	0.331	-	-
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	- ± -	0.000072	-	-
Chromium	mg/l	0.0344 ± 0.00163	- ± -	0.00413	-	-
Cobalt	mg/l	0.0199 ± 0.000808	- ± -	0.00199	-	-
Copper	mg/l	0.0675 ± 0.00215	- ± -	0.00675	-	-
Iron	mg/l	0.544 ± 0.0269	- ± -	0.0653	-	-
Lead	mg/l	0.0118 ± 0.00052	- ± -	0.00118	-	-
Molybdenum	mg/l	0.023 ± 0.001	- ± -	0.00253	-	-
Nickel	mg/l	0.0198 ± 0.000858	- ± -	0.00218	-	-
Selenium	mg/l	- ± -	- ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	- ± -	0.00335	-	-
Vanadium	mg/l	0.0255 ± 0.00113	- ± -	0.00255	-	-
Zinc	mg/l	0.0997 ± 0.00672	- ± -	0.0179	-	-

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	- ± -	0.000115	-	-

Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

Labcode: LC0012

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	- ± -	2.95	-	-
Antimony	mg/l	0.00752 ± 0.000279	- ± -	0.000752	-	-
Arsenic	mg/l	0.00937 ± 0.000185	- ± -	0.000937	-	-
Barium	mg/l	3.31 ± 0.127	- ± -	0.331	-	-
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.00002	- ± -	0.000072	-	-
Chromium	mg/l	0.0344 ± 0.00163	- ± -	0.00413	-	-
Cobalt	mg/l	0.0199 ± 0.000808	- ± -	0.00199	-	-
Copper	mg/l	0.0675 ± 0.00215	- ± -	0.00675	-	-
Iron	mg/l	0.544 ± 0.0269	- ± -	0.0653	-	-
Lead	mg/l	0.0118 ± 0.00052	- ± -	0.00118	-	-
Molybdenum	mg/l	0.023 ± 0.001	- ± -	0.00253	-	-
Nickel	mg/l	0.0198 ± 0.000858	- ± -	0.00218	-	-
Selenium	mg/l	- ± -	- ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	- ± -	0.00335	-	-
Vanadium	mg/l	0.0255 ± 0.00113	- ± -	0.00255	-	-
Zinc	mg/l	0.0997 ± 0.00672	- ± -	0.0179	-	-

Sample: AB11HG

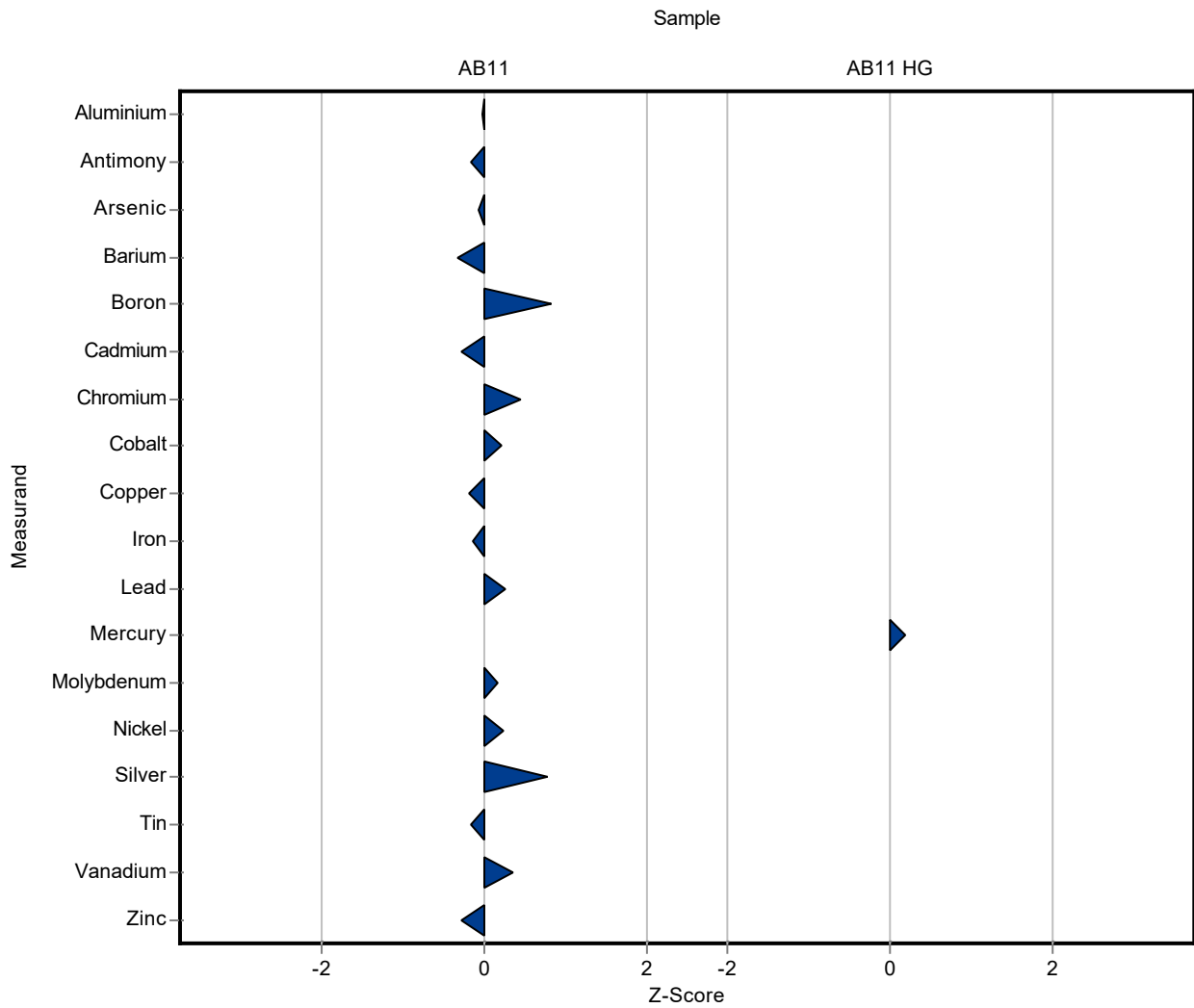
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	- ± -	0.000115	-	-

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	29.4 ± 3.8	2.95	99.8	-0.02
Antimony	mg/l	0.00752 ± 0.000279	0.0074 ± 0.0019	0.000752	98.4	-0.16
Arsenic	mg/l	0.00937 ± 0.000185	0.0093 ± 0.0026	0.000937	99.3	-0.07
Barium	mg/l	3.31 ± 0.127	3.2 ± 0.384	0.331	96.7	-0.33
Boron	mg/l	0.324 ± 0.015	0.351 ± 0.06	0.0324	108	0.83
Cadmium	mg/l	0.000721 ± 0.0000196	0.0007 ± 0.0001	0.000072	97.1	-0.29
Chromium	mg/l	0.0344 ± 0.00163	0.0363 ± 0.0069	0.00413	105	0.45
Cobalt	mg/l	0.0199 ± 0.000808	0.0203 ± 0.0035	0.00199	102	0.22
Copper	mg/l	0.0675 ± 0.00215	0.0662 ± 0.0066	0.00675	98.1	-0.19
Iron	mg/l	0.544 ± 0.0269	0.535 ± 0.107	0.0653	98.4	-0.13
Lead	mg/l	0.0118 ± 0.00052	0.0121 ± 0.0011	0.00118	103	0.27
Molybdenum	mg/l	0.023 ± 0.001	0.0234 ± 0.0054	0.00253	102	0.16
Nickel	mg/l	0.0198 ± 0.000858	0.0203 ± 0.0043	0.00218	103	0.24
Selenium	mg/l	- ± -	0.0251 ± 0.0075	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.00306 ± 0.00077	0.00109	138	0.78
Tin	mg/l	0.0335 ± 0.000982	0.0329 ± 0.0049	0.00335	98.3	-0.17
Vanadium	mg/l	0.0255 ± 0.00113	0.0264 ± 0.0048	0.00255	104	0.36
Zinc	mg/l	0.0997 ± 0.00672	0.0945 ± 0.0151	0.0179	94.8	-0.29

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000569 ± 0.000119	0.000115	104	0.18



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

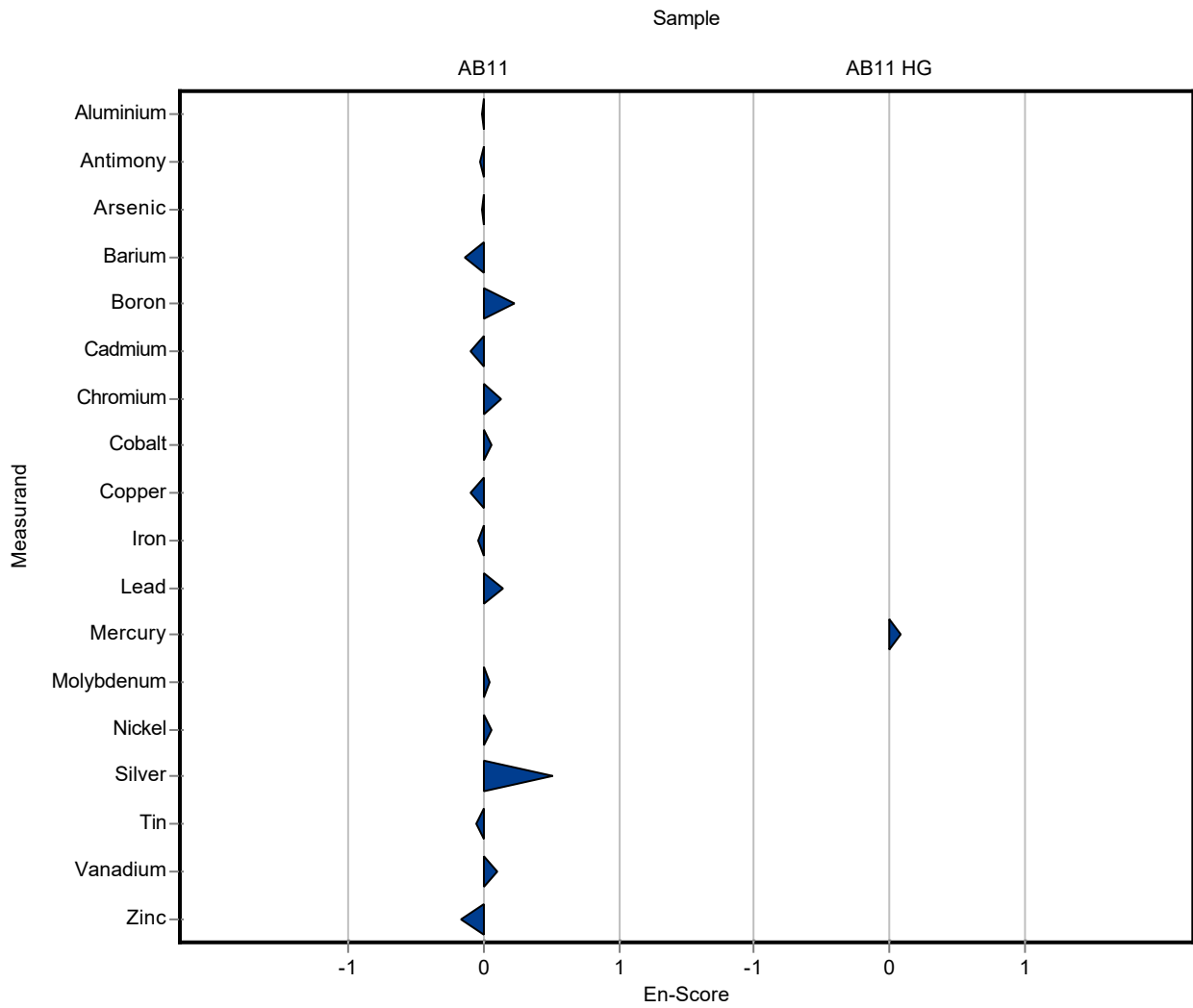
Labcode: LC0013

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	29.4 ± 3.8	2.95	99.8	-0.01
Antimony	mg/l	0.00752 ± 0.000279	0.0074 ± 0.0019	0.000752	98.4	-0.03
Arsenic	mg/l	0.00937 ± 0.000185	0.0093 ± 0.0026	0.000937	99.3	-0.01
Barium	mg/l	3.31 ± 0.127	3.2 ± 0.384	0.331	96.7	-0.14
Boron	mg/l	0.324 ± 0.015	0.351 ± 0.06	0.0324	108	0.22
Cadmium	mg/l	0.000721 ± 0.0000196	0.0007 ± 0.0001	0.000072	97.1	-0.10
Chromium	mg/l	0.0344 ± 0.00163	0.0363 ± 0.0069	0.00413	105	0.13
Cobalt	mg/l	0.0199 ± 0.000808	0.0203 ± 0.0035	0.00199	102	0.06
Copper	mg/l	0.0675 ± 0.00215	0.0662 ± 0.0066	0.00675	98.1	-0.10
Iron	mg/l	0.544 ± 0.0269	0.535 ± 0.107	0.0653	98.4	-0.04
Lead	mg/l	0.0118 ± 0.00052	0.0121 ± 0.0011	0.00118	103	0.14
Molybdenum	mg/l	0.023 ± 0.001	0.0234 ± 0.0054	0.00253	102	0.04
Nickel	mg/l	0.0198 ± 0.000858	0.0203 ± 0.0043	0.00218	103	0.06
Selenium	mg/l	- ± -	0.0251 ± 0.0075	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.00306 ± 0.00077	0.00109	138	0.51
Tin	mg/l	0.0335 ± 0.000982	0.0329 ± 0.0049	0.00335	98.3	-0.06
Vanadium	mg/l	0.0255 ± 0.00113	0.0264 ± 0.0048	0.00255	104	0.10
Zinc	mg/l	0.0997 ± 0.00672	0.0945 ± 0.0151	0.0179	94.8	-0.17

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000569 ± 0.000119	0.000115	104	0.08

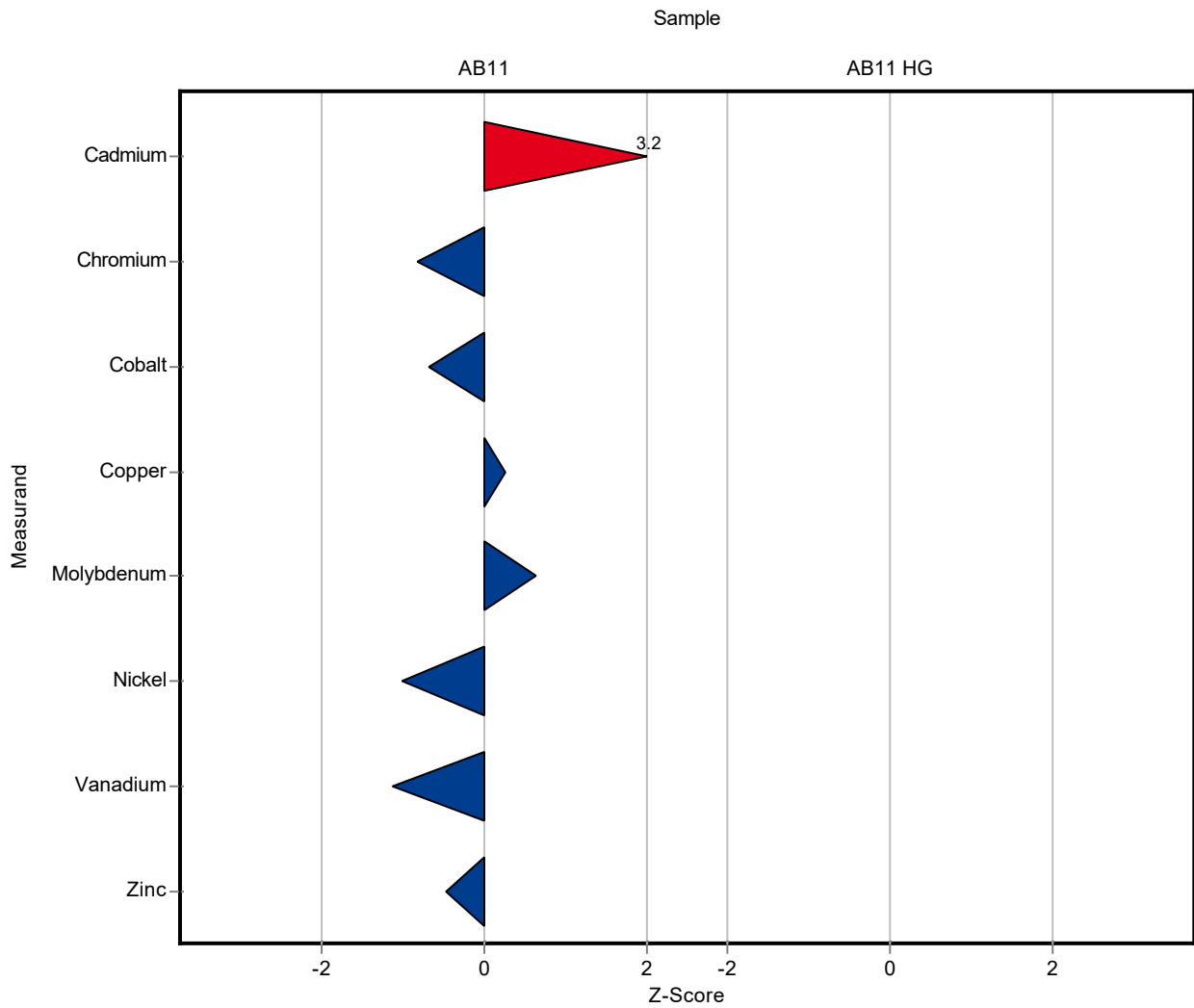


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	- ± -	2.95	-	-
Antimony	mg/l	0.00752 ± 0.000279	- ± -	0.000752	-	-
Arsenic	mg/l	0.00937 ± 0.000185	- ± -	0.000937	-	-
Barium	mg/l	3.31 ± 0.127	- ± -	0.331	-	-
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	0.00095 ± 0.000082	0.000072	132	3.18
Chromium	mg/l	0.0344 ± 0.00163	0.031 ± 0.0026	0.00413	90	-0.83
Cobalt	mg/l	0.0199 ± 0.000808	0.0185 ± 0.0027	0.00199	93.1	-0.69
Copper	mg/l	0.0675 ± 0.00215	0.0693 ± 0.0028	0.00675	103	0.27
Iron	mg/l	0.544 ± 0.0269	- ± -	0.0653	-	-
Lead	mg/l	0.0118 ± 0.00052	- ± -	0.00118	-	-
Molybdenum	mg/l	0.023 ± 0.001	0.0246 ± 0.0031	0.00253	107	0.64
Nickel	mg/l	0.0198 ± 0.000858	0.0176 ± 0.0013	0.00218	89	-1.00
Selenium	mg/l	- ± -	- ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	- ± -	0.00335	-	-
Vanadium	mg/l	0.0255 ± 0.00113	0.0226 ± 0.0024	0.00255	88.7	-1.13
Zinc	mg/l	0.0997 ± 0.00672	0.0913 ± 0.0036	0.0179	91.6	-0.47

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	- ± -	0.000115	-	-



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

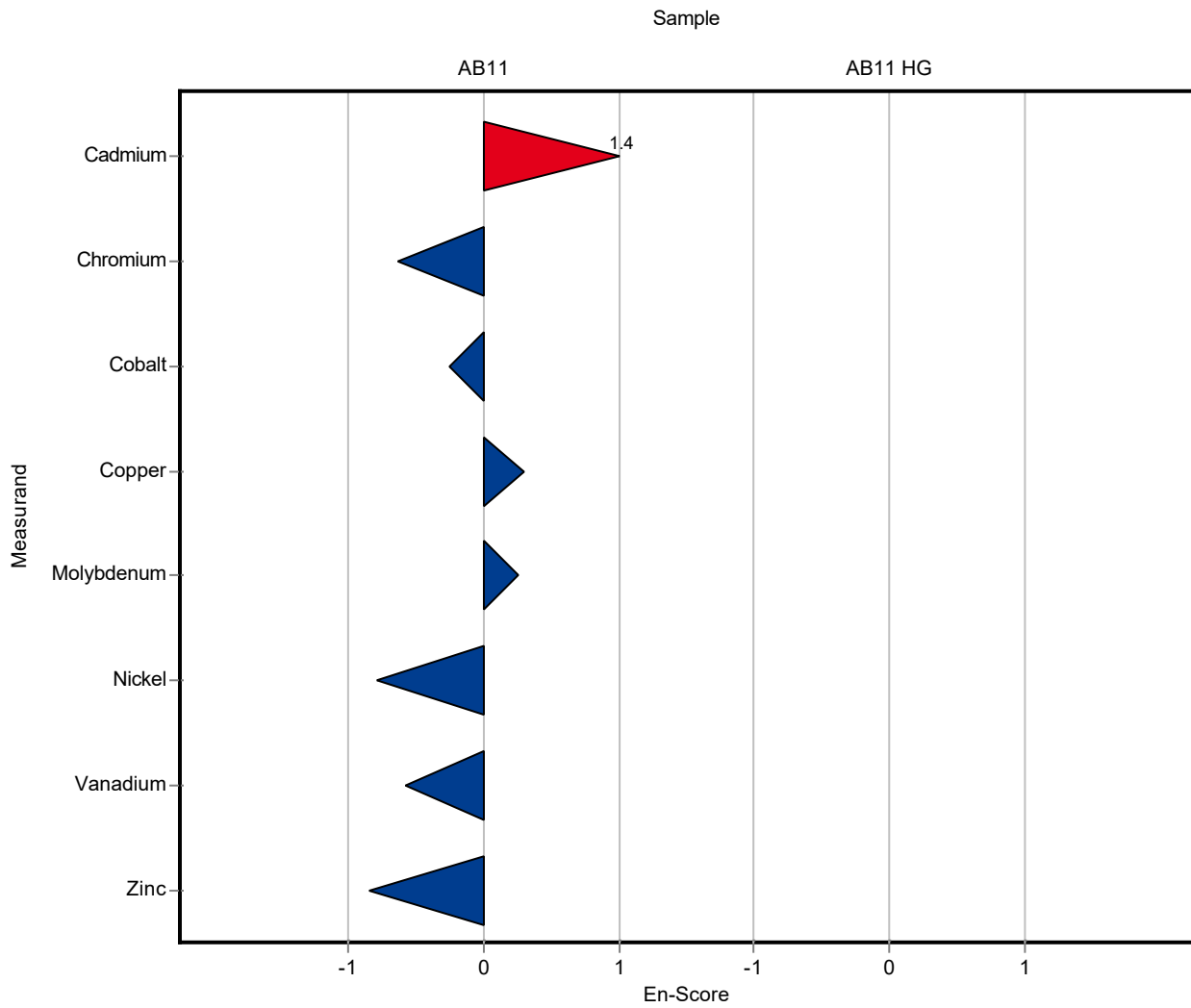
Labcode: LC0014

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	- ± -	2.95	-	-
Antimony	mg/l	0.00752 ± 0.000279	- ± -	0.000752	-	-
Arsenic	mg/l	0.00937 ± 0.000185	- ± -	0.000937	-	-
Barium	mg/l	3.31 ± 0.127	- ± -	0.331	-	-
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	0.00095 ± 0.000082	0.000072	132	1.39
Chromium	mg/l	0.0344 ± 0.00163	0.031 ± 0.0026	0.00413	90	-0.63
Cobalt	mg/l	0.0199 ± 0.000808	0.0185 ± 0.0027	0.00199	93.1	-0.25
Copper	mg/l	0.0675 ± 0.00215	0.0693 ± 0.0028	0.00675	103	0.30
Iron	mg/l	0.544 ± 0.0269	- ± -	0.0653	-	-
Lead	mg/l	0.0118 ± 0.00052	- ± -	0.00118	-	-
Molybdenum	mg/l	0.023 ± 0.001	0.0246 ± 0.0031	0.00253	107	0.26
Nickel	mg/l	0.0198 ± 0.000858	0.0176 ± 0.0013	0.00218	89	-0.80
Selenium	mg/l	- ± -	- ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	- ± -	0.00335	-	-
Vanadium	mg/l	0.0255 ± 0.00113	0.0226 ± 0.0024	0.00255	88.7	-0.58
Zinc	mg/l	0.0997 ± 0.00672	0.0913 ± 0.0036	0.0179	91.6	-0.85

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	- ± -	0.000115	-	-

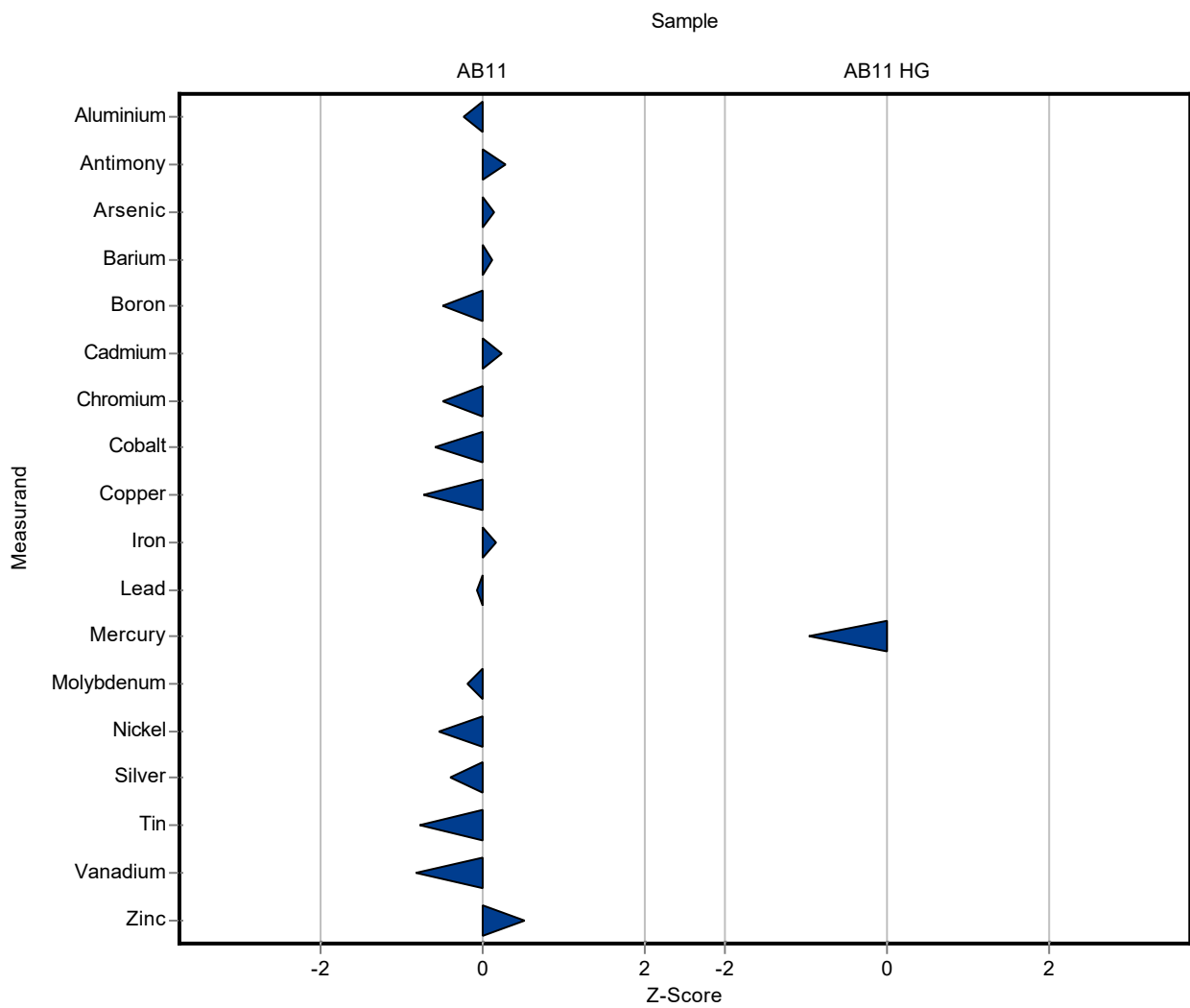


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	28.78 ± 2.88	2.95	97.7	-0.23
Antimony	mg/l	0.00752 ± 0.000279	0.00773 ± 0.000773	0.000752	103	0.28
Arsenic	mg/l	0.00937 ± 0.000185	0.0095 ± 0.00096	0.000937	101	0.14
Barium	mg/l	3.31 ± 0.127	3.35 ± 0.335	0.331	101	0.12
Boron	mg/l	0.324 ± 0.015	0.308 ± 0.0308	0.0324	95	-0.50
Cadmium	mg/l	0.000721 ± 0.0000196	0.000738 ± 0.000071	0.000072	102	0.24
Chromium	mg/l	0.0344 ± 0.00163	0.0324 ± 0.0035	0.00413	94.1	-0.49
Cobalt	mg/l	0.0199 ± 0.000808	0.0187 ± 0.00187	0.00199	94.1	-0.59
Copper	mg/l	0.0675 ± 0.00215	0.0625 ± 0.0059	0.00675	92.6	-0.74
Iron	mg/l	0.544 ± 0.0269	0.554 ± 0.0554	0.0653	102	0.16
Lead	mg/l	0.0118 ± 0.00052	0.0117 ± 0.000986	0.00118	99.3	-0.07
Molybdenum	mg/l	0.023 ± 0.001	0.0225 ± 0.00225	0.00253	97.9	-0.20
Nickel	mg/l	0.0198 ± 0.000858	0.0186 ± 0.000931	0.00218	94	-0.54
Selenium	mg/l	- ± -	0.0013 ± 0.00013	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.00177 ± 0.000145	0.00109	79.9	-0.41
Tin	mg/l	0.0335 ± 0.000982	0.0309 ± 0.00309	0.00335	92.3	-0.77
Vanadium	mg/l	0.0255 ± 0.00113	0.0234 ± 0.00234	0.00255	91.9	-0.81
Zinc	mg/l	0.0997 ± 0.00672	0.109 ± 0.0097	0.0179	109	0.52

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.0004371 ± 0.000045	0.000115	79.7	-0.97



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

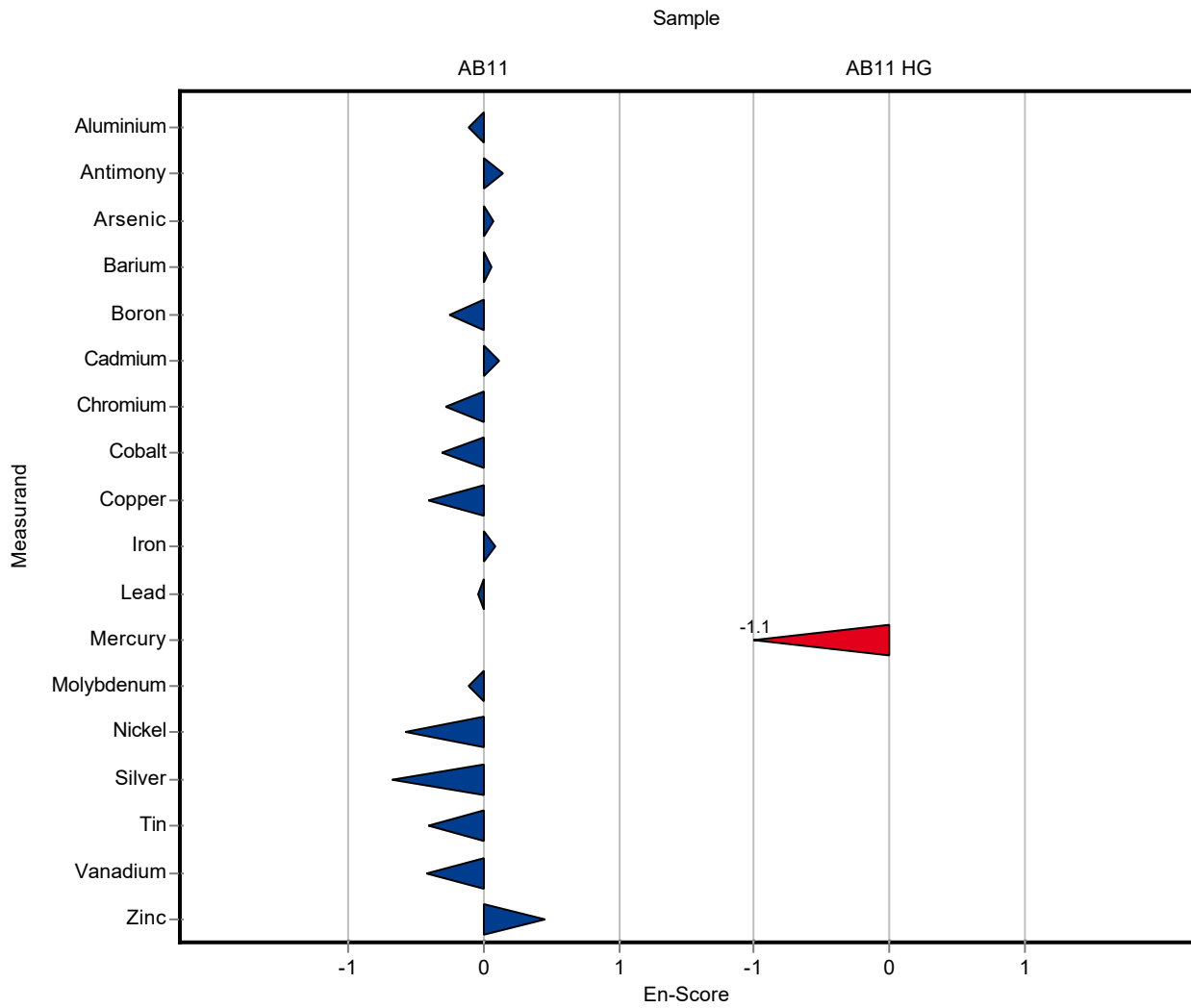
Labcode: LC0015

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	28.78 ± 2.88	2.95	97.7	-0.12
Antimony	mg/l	0.00752 ± 0.000279	0.00773 ± 0.000773	0.000752	103	0.13
Arsenic	mg/l	0.00937 ± 0.000185	0.0095 ± 0.00096	0.000937	101	0.07
Barium	mg/l	3.31 ± 0.127	3.35 ± 0.335	0.331	101	0.06
Boron	mg/l	0.324 ± 0.015	0.308 ± 0.0308	0.0324	95	-0.25
Cadmium	mg/l	0.000721 ± 0.0000196	0.000738 ± 0.000071	0.000072	102	0.12
Chromium	mg/l	0.0344 ± 0.00163	0.0324 ± 0.0035	0.00413	94.1	-0.28
Cobalt	mg/l	0.0199 ± 0.000808	0.0187 ± 0.00187	0.00199	94.1	-0.31
Copper	mg/l	0.0675 ± 0.00215	0.0625 ± 0.0059	0.00675	92.6	-0.42
Iron	mg/l	0.544 ± 0.0269	0.554 ± 0.0554	0.0653	102	0.09
Lead	mg/l	0.0118 ± 0.00052	0.0117 ± 0.000986	0.00118	99.3	-0.04
Molybdenum	mg/l	0.023 ± 0.001	0.0225 ± 0.00225	0.00253	97.9	-0.11
Nickel	mg/l	0.0198 ± 0.000858	0.0186 ± 0.000931	0.00218	94	-0.58
Selenium	mg/l	- ± -	0.0013 ± 0.00013	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.00177 ± 0.000145	0.00109	79.9	-0.69
Tin	mg/l	0.0335 ± 0.000982	0.0309 ± 0.00309	0.00335	92.3	-0.41
Vanadium	mg/l	0.0255 ± 0.00113	0.0234 ± 0.00234	0.00255	91.9	-0.43
Zinc	mg/l	0.0997 ± 0.00672	0.109 ± 0.0097	0.0179	109	0.45

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.0004371 ± 0.000045	0.000115	79.7	-1.07

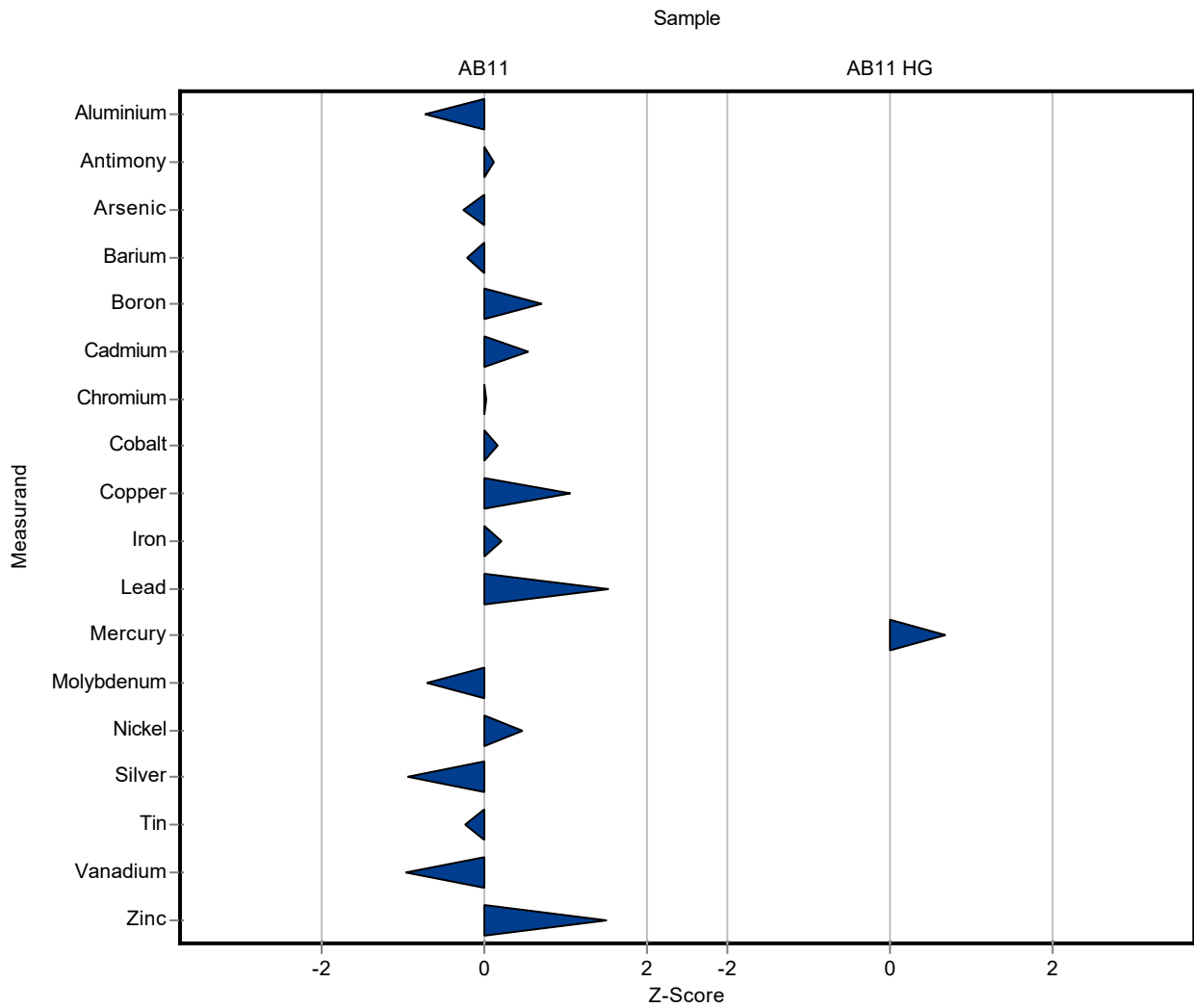


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	27.33 ± 1.23	2.95	92.8	-0.72
Antimony	mg/l	0.00752 ± 0.000279	0.00761 ± 0.00075	0.000752	101	0.12
Arsenic	mg/l	0.00937 ± 0.000185	0.00912 ± 0.00043	0.000937	97.4	-0.26
Barium	mg/l	3.31 ± 0.127	3.235 ± 0.22	0.331	97.8	-0.22
Boron	mg/l	0.324 ± 0.015	0.347 ± 0.018	0.0324	107	0.71
Cadmium	mg/l	0.000721 ± 0.0000196	0.00076 ± 0.00009	0.000072	105	0.54
Chromium	mg/l	0.0344 ± 0.00163	0.0345 ± 0.0055	0.00413	100	0.02
Cobalt	mg/l	0.0199 ± 0.000808	0.0202 ± 0.001	0.00199	102	0.17
Copper	mg/l	0.0675 ± 0.00215	0.0747 ± 0.003	0.00675	111	1.07
Iron	mg/l	0.544 ± 0.0269	0.557 ± 0.021	0.0653	102	0.20
Lead	mg/l	0.0118 ± 0.00052	0.0136 ± 0.002	0.00118	115	1.54
Molybdenum	mg/l	0.023 ± 0.001	0.0212 ± 0.0016	0.00253	92.2	-0.71
Nickel	mg/l	0.0198 ± 0.000858	0.0208 ± 0.001	0.00218	105	0.47
Selenium	mg/l	- ± -	0.00114 ± 0.0001	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.0012 ± 0.0001	0.00109	54.2	-0.94
Tin	mg/l	0.0335 ± 0.000982	0.0327 ± 0.0026	0.00335	97.7	-0.23
Vanadium	mg/l	0.0255 ± 0.00113	0.023 ± 0.001	0.00255	90.3	-0.97
Zinc	mg/l	0.0997 ± 0.00672	0.127 ± 0.01	0.0179	127	1.52

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000628 ± 0.00004	0.000115	115	0.69



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

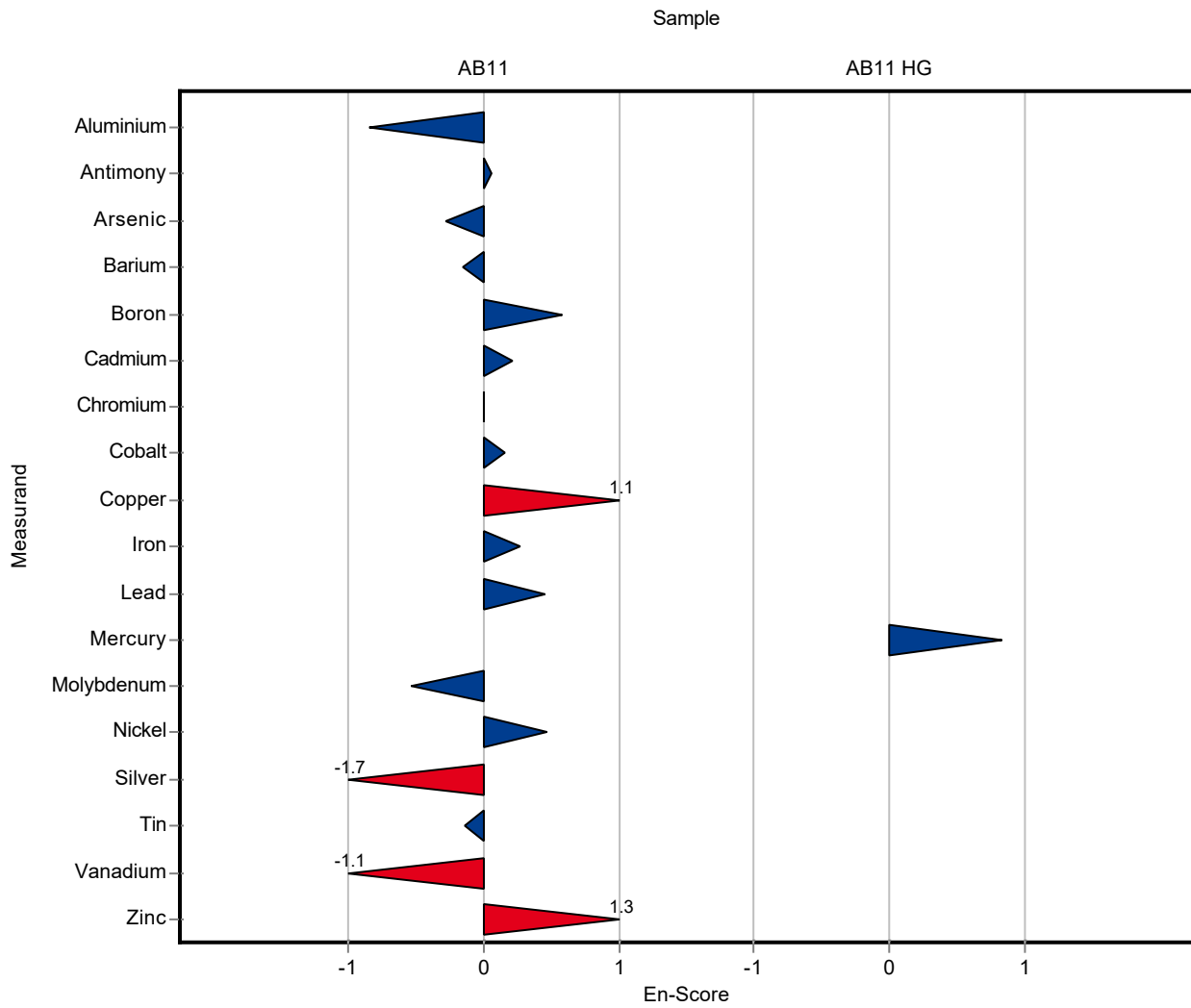
Labcode: LC0016

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	27.33 ± 1.23	2.95	92.8	-0.85
Antimony	mg/l	0.00752 ± 0.000279	0.00761 ± 0.00075	0.000752	101	0.06
Arsenic	mg/l	0.00937 ± 0.000185	0.00912 ± 0.00043	0.000937	97.4	-0.28
Barium	mg/l	3.31 ± 0.127	3.235 ± 0.22	0.331	97.8	-0.16
Boron	mg/l	0.324 ± 0.015	0.347 ± 0.018	0.0324	107	0.59
Cadmium	mg/l	0.000721 ± 0.0000196	0.00076 ± 0.00009	0.000072	105	0.22
Chromium	mg/l	0.0344 ± 0.00163	0.0345 ± 0.0055	0.00413	100	0.01
Cobalt	mg/l	0.0199 ± 0.000808	0.0202 ± 0.001	0.00199	102	0.15
Copper	mg/l	0.0675 ± 0.00215	0.0747 ± 0.003	0.00675	111	1.13
Iron	mg/l	0.544 ± 0.0269	0.557 ± 0.021	0.0653	102	0.26
Lead	mg/l	0.0118 ± 0.00052	0.0136 ± 0.002	0.00118	115	0.45
Molybdenum	mg/l	0.023 ± 0.001	0.0212 ± 0.0016	0.00253	92.2	-0.53
Nickel	mg/l	0.0198 ± 0.000858	0.0208 ± 0.001	0.00218	105	0.47
Selenium	mg/l	- ± -	0.00114 ± 0.0001	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.0012 ± 0.0001	0.00109	54.2	-1.65
Tin	mg/l	0.0335 ± 0.000982	0.0327 ± 0.0026	0.00335	97.7	-0.15
Vanadium	mg/l	0.0255 ± 0.00113	0.023 ± 0.001	0.00255	90.3	-1.08
Zinc	mg/l	0.0997 ± 0.00672	0.127 ± 0.01	0.0179	127	1.29

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000628 ± 0.00004	0.000115	115	0.83

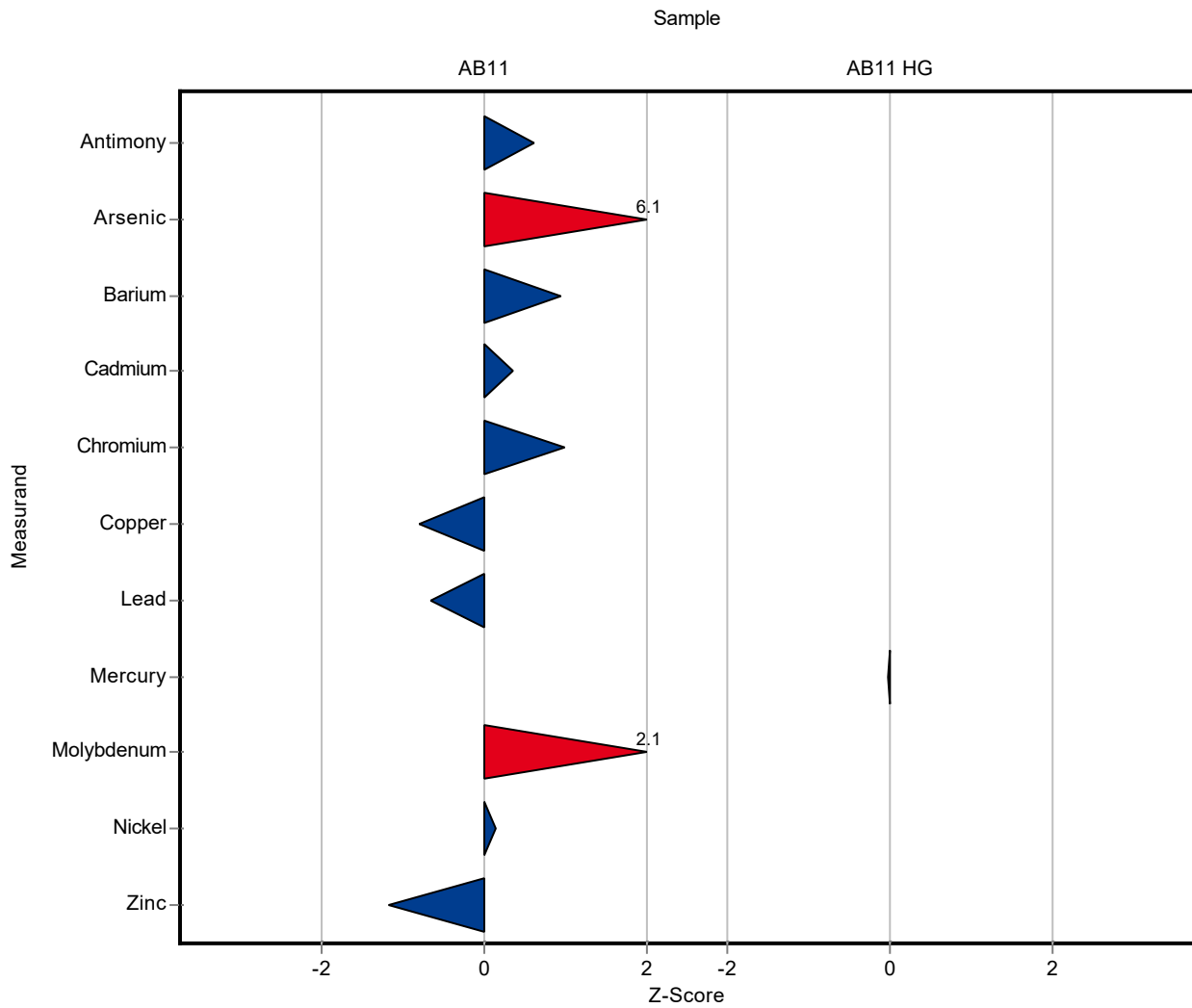


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	- ± -	2.95	-	-
Antimony	mg/l	0.00752 ± 0.000279	0.00798 ± 0.00053	0.000752	106	0.61
Arsenic	mg/l	0.00937 ± 0.000185	0.0151 ± 0.0024	0.000937	161	6.12
Barium	mg/l	3.31 ± 0.127	3.62 ± 0.51	0.331	109	0.94
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	0.000746 ± 0.0002	0.000072	103	0.35
Chromium	mg/l	0.0344 ± 0.00163	0.0385 ± 0.005	0.00413	112	0.98
Cobalt	mg/l	0.0199 ± 0.000808	- ± -	0.00199	-	-
Copper	mg/l	0.0675 ± 0.00215	0.0621 ± 0.013	0.00675	92	-0.80
Iron	mg/l	0.544 ± 0.0269	- ± -	0.0653	-	-
Lead	mg/l	0.0118 ± 0.00052	0.011 ± 0.0047	0.00118	93.4	-0.66
Molybdenum	mg/l	0.023 ± 0.001	0.0284 ± 0.0043	0.00253	124	2.14
Nickel	mg/l	0.0198 ± 0.000858	0.0201 ± 0.0038	0.00218	102	0.15
Selenium	mg/l	- ± -	0.0021 ± 0.0004	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	- ± -	0.00335	-	-
Vanadium	mg/l	0.0255 ± 0.00113	- ± -	0.00255	-	-
Zinc	mg/l	0.0997 ± 0.00672	0.0787 ± 0.0197	0.0179	78.9	-1.17

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000545 ± 0.00014	0.000115	99.4	-0.03



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

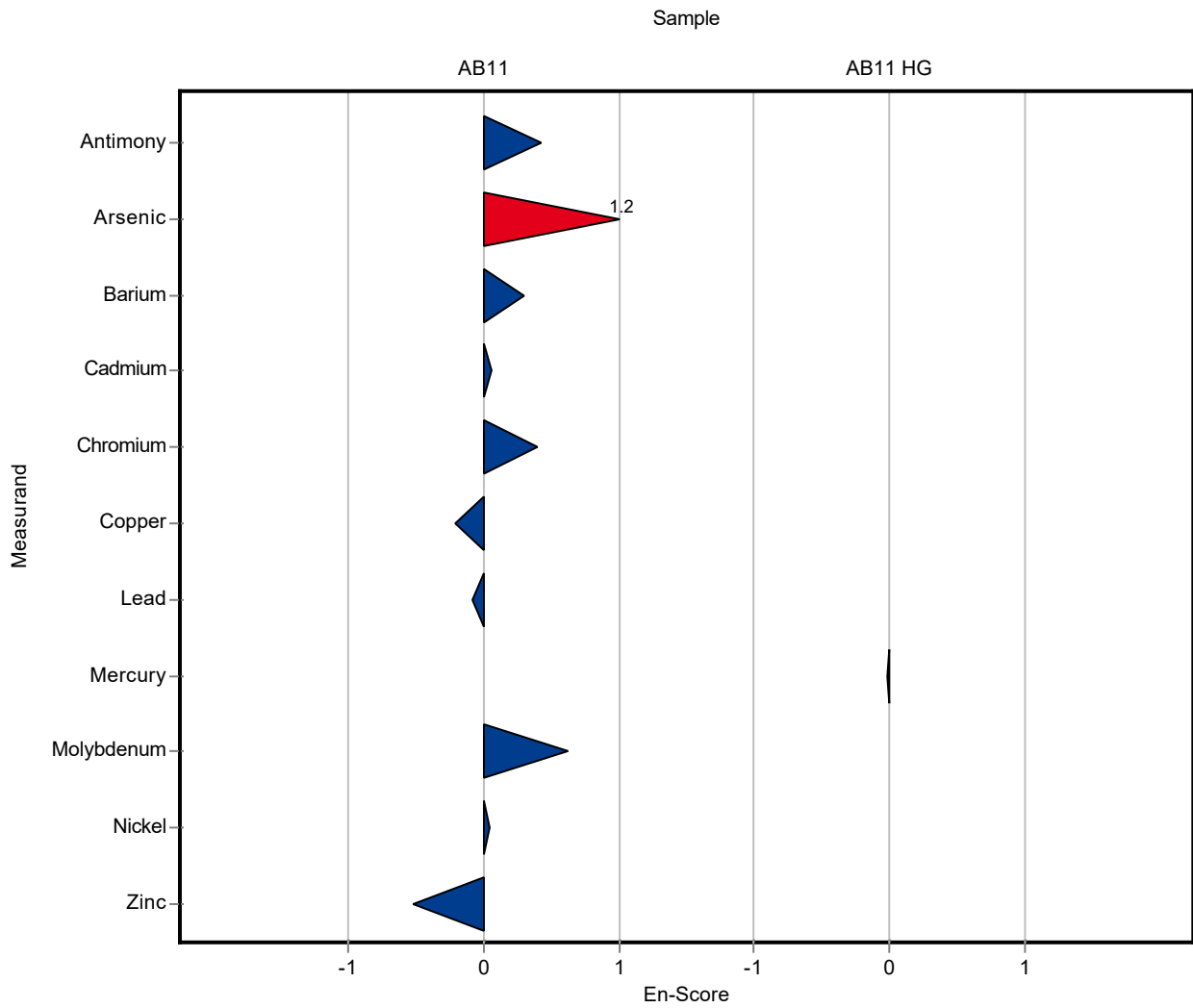
Labcode: LC0017

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	- ± -	2.95	-	-
Antimony	mg/l	0.00752 ± 0.000279	0.00798 ± 0.00053	0.000752	106	0.42
Arsenic	mg/l	0.00937 ± 0.000185	0.0151 ± 0.0024	0.000937	161	1.19
Barium	mg/l	3.31 ± 0.127	3.62 ± 0.51	0.331	109	0.30
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	0.000746 ± 0.0002	0.000072	103	0.06
Chromium	mg/l	0.0344 ± 0.00163	0.0385 ± 0.005	0.00413	112	0.40
Cobalt	mg/l	0.0199 ± 0.000808	- ± -	0.00199	-	-
Copper	mg/l	0.0675 ± 0.00215	0.0621 ± 0.013	0.00675	92	-0.21
Iron	mg/l	0.544 ± 0.0269	- ± -	0.0653	-	-
Lead	mg/l	0.0118 ± 0.00052	0.011 ± 0.0047	0.00118	93.4	-0.08
Molybdenum	mg/l	0.023 ± 0.001	0.0284 ± 0.0043	0.00253	124	0.62
Nickel	mg/l	0.0198 ± 0.000858	0.0201 ± 0.0038	0.00218	102	0.04
Selenium	mg/l	- ± -	0.0021 ± 0.0004	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	- ± -	0.00335	-	-
Vanadium	mg/l	0.0255 ± 0.00113	- ± -	0.00255	-	-
Zinc	mg/l	0.0997 ± 0.00672	0.0787 ± 0.0197	0.0179	78.9	-0.53

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000545 ± 0.00014	0.000115	99.4	-0.01

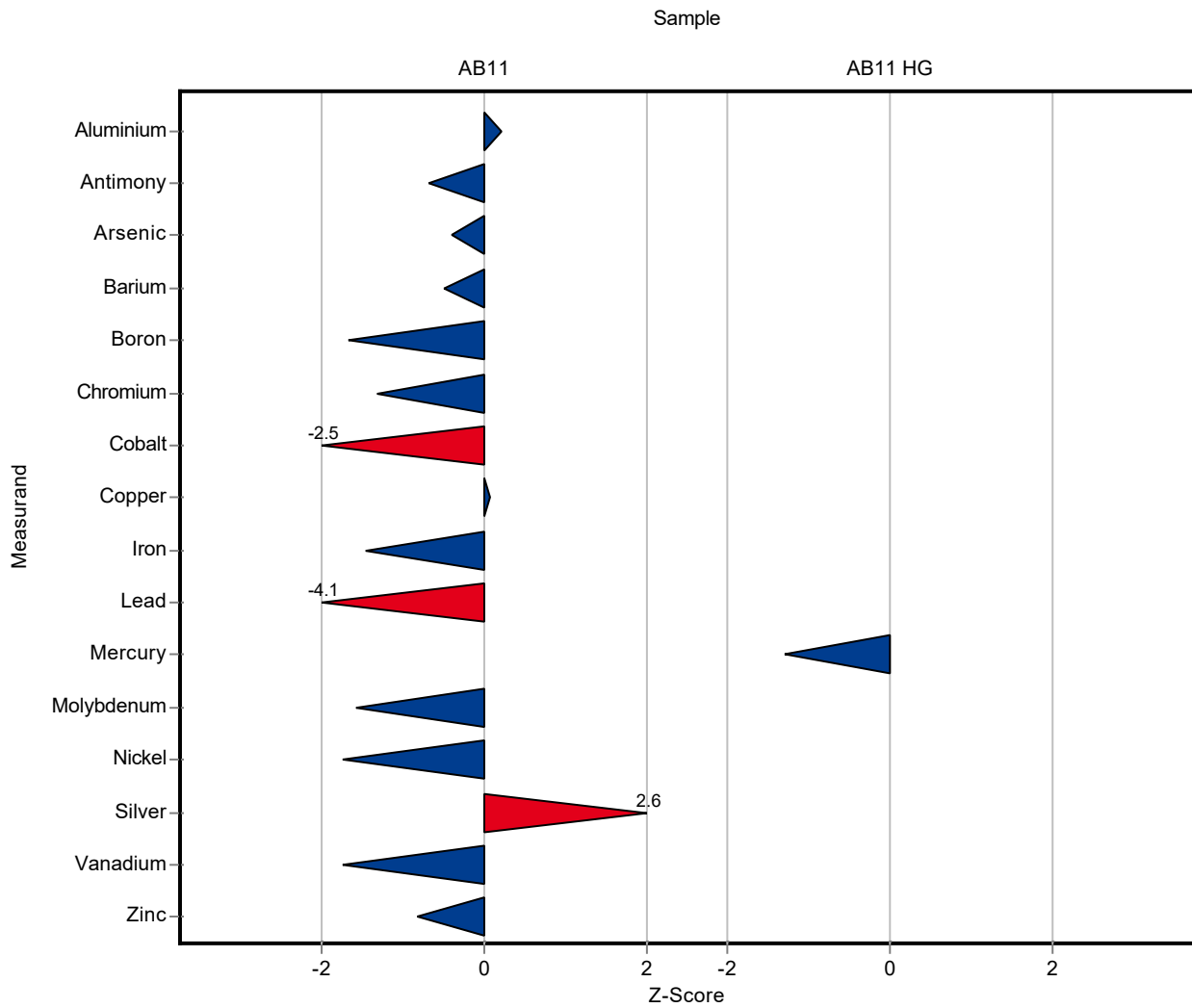


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	30.09 ± 5.4	2.95	102	0.21
Antimony	mg/l	0.00752 ± 0.000279	0.007 ± 0.001	0.000752	93.1	-0.69
Arsenic	mg/l	0.00937 ± 0.000185	0.009 ± 0.002	0.000937	96.1	-0.39
Barium	mg/l	3.31 ± 0.127	3.144 ± 0.44	0.331	95	-0.50
Boron	mg/l	0.324 ± 0.015	0.27 ± 0.054	0.0324	83.3	-1.67
Cadmium	mg/l	0.000721 ± 0.0000196	<0.005 (LOQ) ± -	0.000072	-	-
Chromium	mg/l	0.0344 ± 0.00163	0.029 ± 0.004	0.00413	84.2	-1.31
Cobalt	mg/l	0.0199 ± 0.000808	0.015 ± 0.003	0.00199	75.5	-2.45
Copper	mg/l	0.0675 ± 0.00215	0.068 ± 0.01	0.00675	101	0.08
Iron	mg/l	0.544 ± 0.0269	0.449 ± 0.063	0.0653	82.6	-1.45
Lead	mg/l	0.0118 ± 0.00052	0.007 ± 0.001	0.00118	59.4	-4.06
Molybdenum	mg/l	0.023 ± 0.001	0.019 ± 0.003	0.00253	82.6	-1.58
Nickel	mg/l	0.0198 ± 0.000858	0.016 ± 0.003	0.00218	80.9	-1.74
Selenium	mg/l	- ± -	<0.005 (LOQ) ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.005 ± 0.001	0.00109	226	2.57
Tin	mg/l	0.0335 ± 0.000982	<0.05 (LOQ) ± -	0.00335	-	-
Vanadium	mg/l	0.0255 ± 0.00113	0.021 ± 0.004	0.00255	82.4	-1.76
Zinc	mg/l	0.0997 ± 0.00672	0.085 ± 0.01	0.0179	85.3	-0.82

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.0004 ± 0.00008	0.000115	72.9	-1.29



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

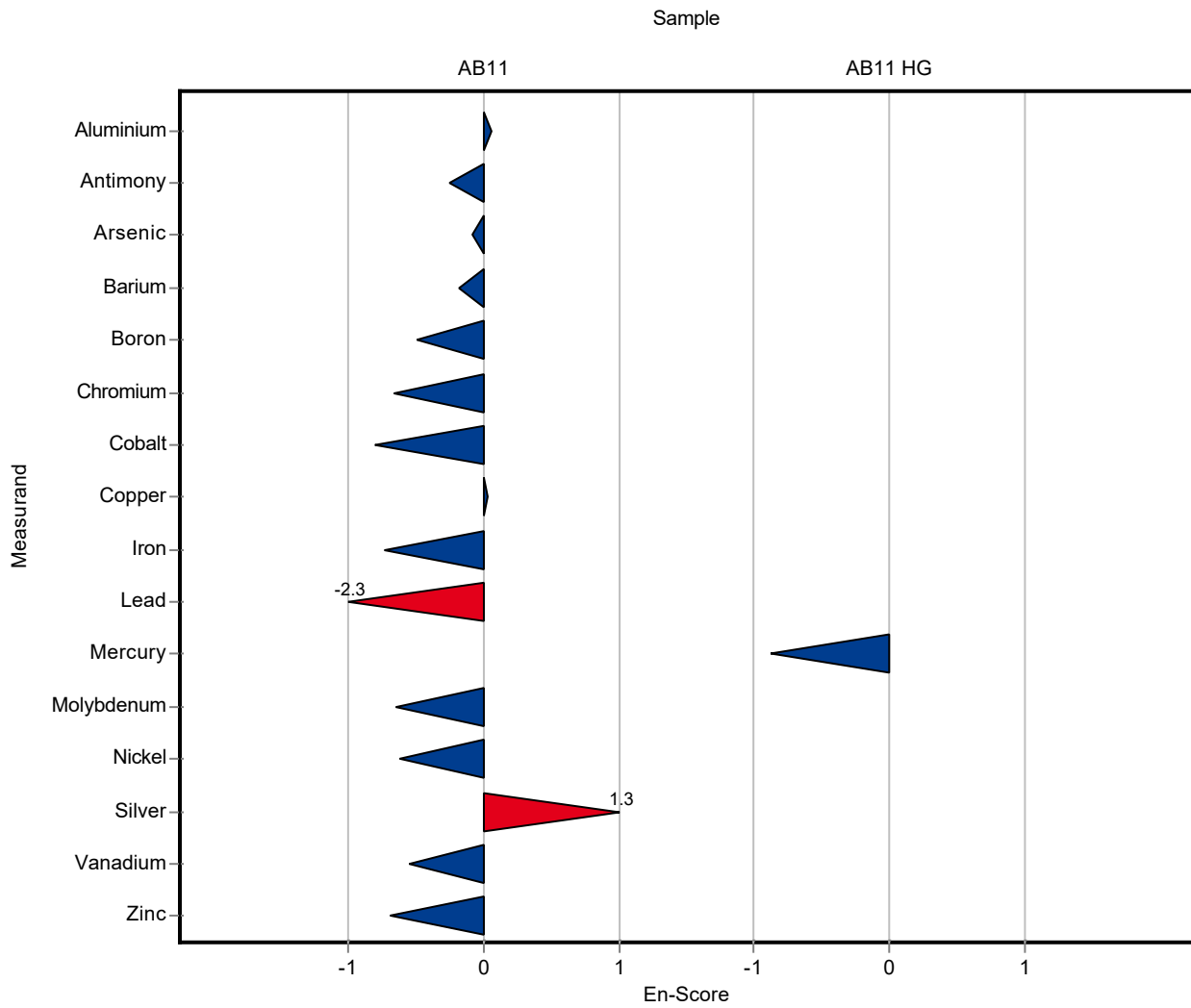
Labcode: LC0018

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	30.09 ± 5.4	2.95	102	0.06
Antimony	mg/l	0.00752 ± 0.000279	0.007 ± 0.001	0.000752	93.1	-0.26
Arsenic	mg/l	0.00937 ± 0.000185	0.009 ± 0.002	0.000937	96.1	-0.09
Barium	mg/l	3.31 ± 0.127	3.144 ± 0.44	0.331	95	-0.19
Boron	mg/l	0.324 ± 0.015	0.27 ± 0.054	0.0324	83.3	-0.50
Cadmium	mg/l	0.000721 ± 0.0000196	<0.005 (LOQ) ± -	0.000072	-	-
Chromium	mg/l	0.0344 ± 0.00163	0.029 ± 0.004	0.00413	84.2	-0.67
Cobalt	mg/l	0.0199 ± 0.000808	0.015 ± 0.003	0.00199	75.5	-0.80
Copper	mg/l	0.0675 ± 0.00215	0.068 ± 0.01	0.00675	101	0.03
Iron	mg/l	0.544 ± 0.0269	0.449 ± 0.063	0.0653	82.6	-0.74
Lead	mg/l	0.0118 ± 0.00052	0.007 ± 0.001	0.00118	59.4	-2.31
Molybdenum	mg/l	0.023 ± 0.001	0.019 ± 0.003	0.00253	82.6	-0.66
Nickel	mg/l	0.0198 ± 0.000858	0.016 ± 0.003	0.00218	80.9	-0.62
Selenium	mg/l	- ± -	<0.005 (LOQ) ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.005 ± 0.001	0.00109	226	1.34
Tin	mg/l	0.0335 ± 0.000982	<0.05 (LOQ) ± -	0.00335	-	-
Vanadium	mg/l	0.0255 ± 0.00113	0.021 ± 0.004	0.00255	82.4	-0.55
Zinc	mg/l	0.0997 ± 0.00672	0.085 ± 0.01	0.0179	85.3	-0.70

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.0004 ± 0.00008	0.000115	72.9	-0.88

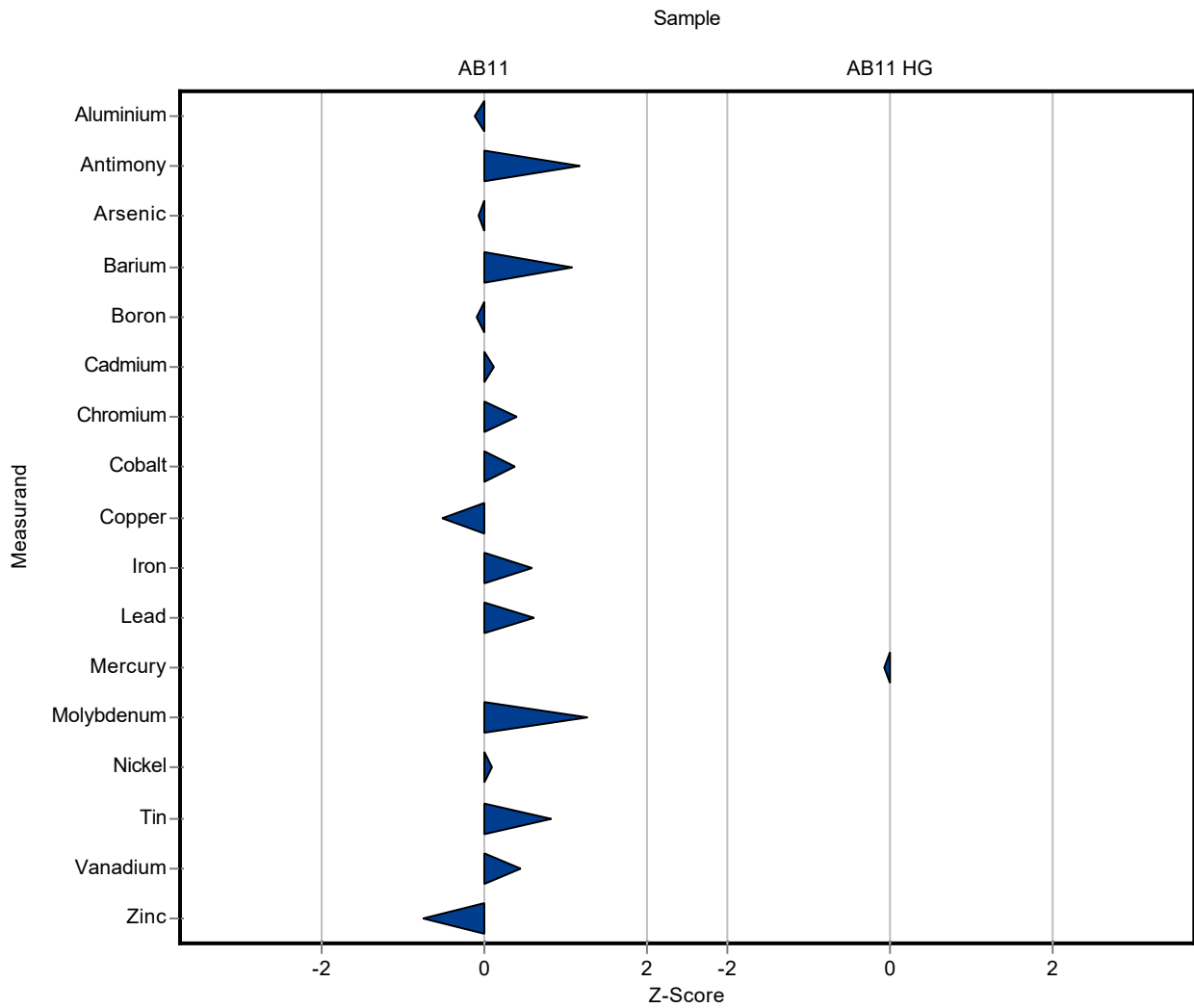


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	29.1 ± 2.91	2.95	98.8	-0.12
Antimony	mg/l	0.00752 ± 0.000279	0.0084 ± 0.00084	0.000752	112	1.17
Arsenic	mg/l	0.00937 ± 0.000185	0.00931 ± 0.00139	0.000937	99.4	-0.06
Barium	mg/l	3.31 ± 0.127	3.67 ± 0.367	0.331	111	1.09
Boron	mg/l	0.324 ± 0.015	0.321 ± 0.0321	0.0324	99	-0.10
Cadmium	mg/l	0.000721 ± 0.0000196	0.00073 ± 0.000073	0.000072	101	0.12
Chromium	mg/l	0.0344 ± 0.00163	0.0361 ± 0.0036	0.00413	105	0.40
Cobalt	mg/l	0.0199 ± 0.000808	0.0206 ± 0.00206	0.00199	104	0.37
Copper	mg/l	0.0675 ± 0.00215	0.064 ± 0.0064	0.00675	94.8	-0.52
Iron	mg/l	0.544 ± 0.0269	0.582 ± 0.0582	0.0653	107	0.59
Lead	mg/l	0.0118 ± 0.00052	0.0125 ± 0.00125	0.00118	106	0.61
Molybdenum	mg/l	0.023 ± 0.001	0.0262 ± 0.00262	0.00253	114	1.27
Nickel	mg/l	0.0198 ± 0.000858	0.02 ± 0.002	0.00218	101	0.10
Selenium	mg/l	- ± -	0.0204 ± 0.003	-	-	-
Silver	mg/l	0.00222 ± 0.000581	<0.002 (LOQ) ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.0362 ± 0.00362	0.00335	108	0.81
Vanadium	mg/l	0.0255 ± 0.00113	0.0266 ± 0.00266	0.00255	104	0.44
Zinc	mg/l	0.0997 ± 0.00672	0.086 ± 0.0086	0.0179	86.3	-0.76

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.00054 ± 0.00005	0.000115	98.5	-0.07



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

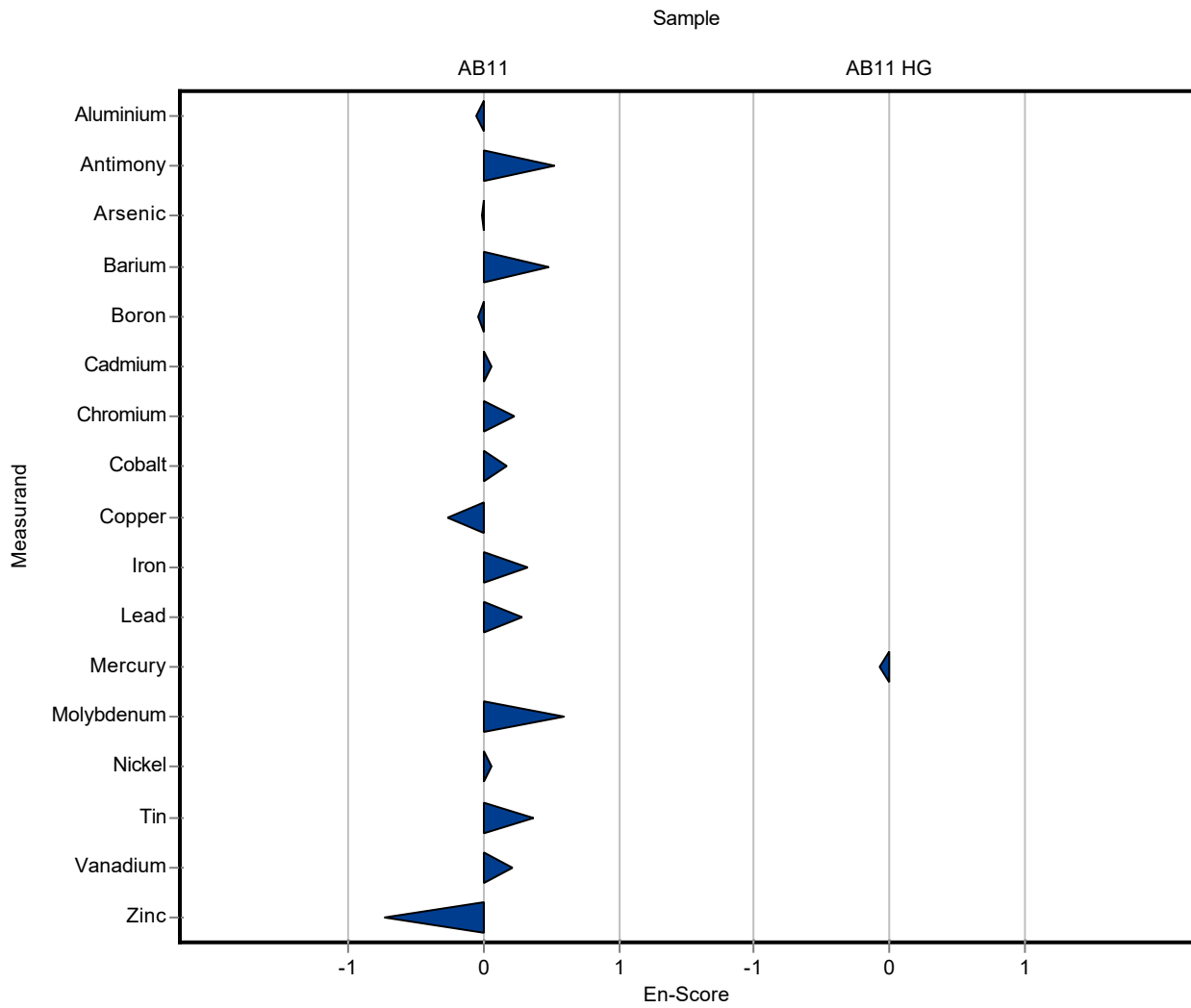
Labcode: LC0019

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	29.1 ± 2.91	2.95	98.8	-0.06
Antimony	mg/l	0.00752 ± 0.000279	0.0084 ± 0.00084	0.000752	112	0.52
Arsenic	mg/l	0.00937 ± 0.000185	0.00931 ± 0.00139	0.000937	99.4	-0.02
Barium	mg/l	3.31 ± 0.127	3.67 ± 0.367	0.331	111	0.48
Boron	mg/l	0.324 ± 0.015	0.321 ± 0.0321	0.0324	99	-0.05
Cadmium	mg/l	0.000721 ± 0.0000196	0.00073 ± 0.000073	0.000072	101	0.06
Chromium	mg/l	0.0344 ± 0.00163	0.0361 ± 0.0036	0.00413	105	0.23
Cobalt	mg/l	0.0199 ± 0.000808	0.0206 ± 0.00206	0.00199	104	0.17
Copper	mg/l	0.0675 ± 0.00215	0.064 ± 0.0064	0.00675	94.8	-0.27
Iron	mg/l	0.544 ± 0.0269	0.582 ± 0.0582	0.0653	107	0.32
Lead	mg/l	0.0118 ± 0.00052	0.0125 ± 0.00125	0.00118	106	0.28
Molybdenum	mg/l	0.023 ± 0.001	0.0262 ± 0.00262	0.00253	114	0.60
Nickel	mg/l	0.0198 ± 0.000858	0.02 ± 0.002	0.00218	101	0.05
Selenium	mg/l	- ± -	0.0204 ± 0.003	-	-	-
Silver	mg/l	0.00222 ± 0.000581	<0.002 (LOQ) ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.0362 ± 0.00362	0.00335	108	0.37
Vanadium	mg/l	0.0255 ± 0.00113	0.0266 ± 0.00266	0.00255	104	0.21
Zinc	mg/l	0.0997 ± 0.00672	0.086 ± 0.0086	0.0179	86.3	-0.74

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.00054 ± 0.00005	0.000115	98.5	-0.07

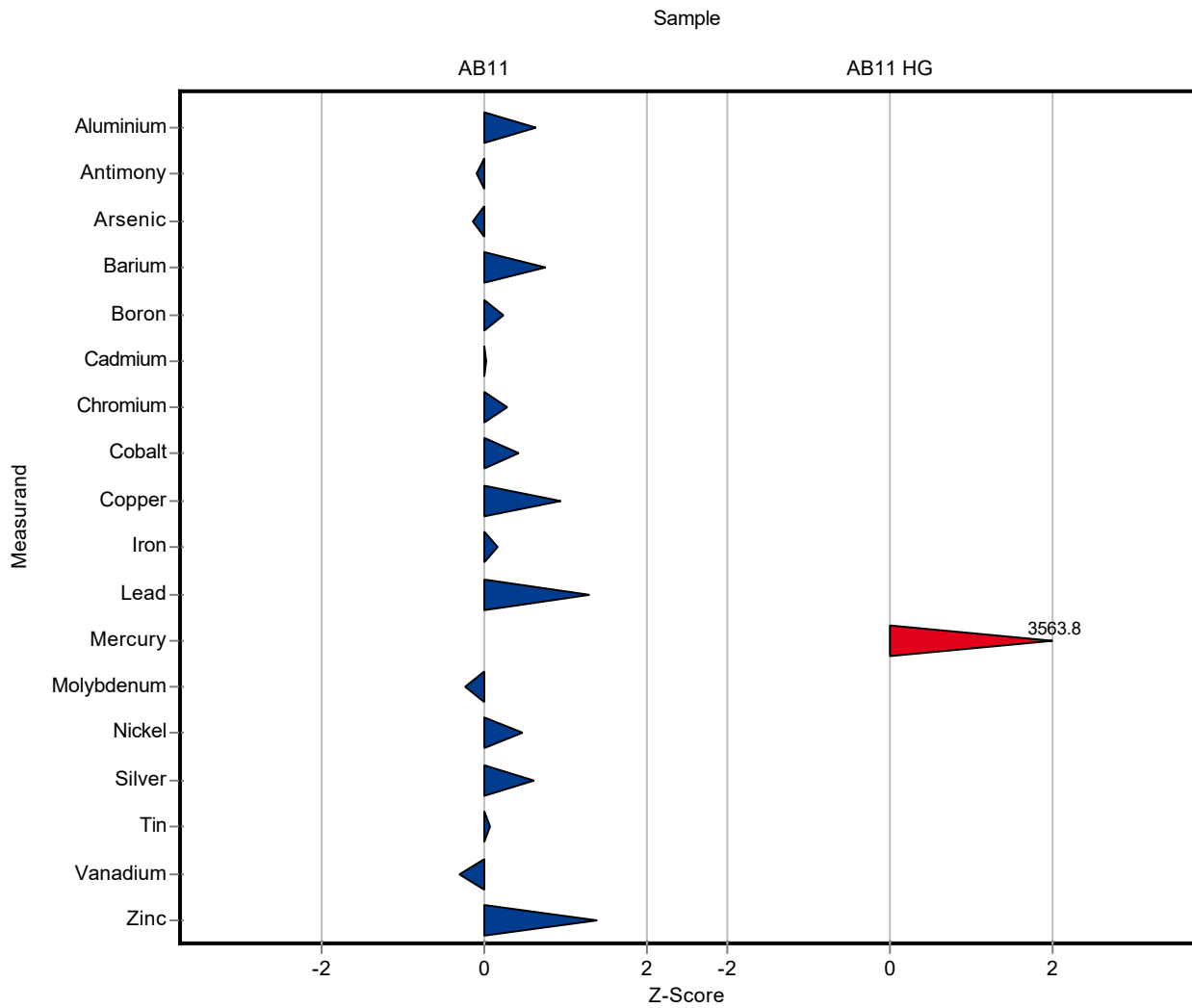


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	31.34 ± 0.9	2.95	106	0.64
Antimony	mg/l	0.00752 ± 0.000279	0.00745 ± 0.0003	0.000752	99.1	-0.09
Arsenic	mg/l	0.00937 ± 0.000185	0.00923 ± 0.00033	0.000937	98.5	-0.15
Barium	mg/l	3.31 ± 0.127	3.561 ± 0.112	0.331	108	0.76
Boron	mg/l	0.324 ± 0.015	0.3316 ± 0.0098	0.0324	102	0.23
Cadmium	mg/l	0.000721 ± 0.0000196	0.000722 ± 0.000026	0.000072	100	0.01
Chromium	mg/l	0.0344 ± 0.00163	0.0356 ± 0.0007	0.00413	103	0.28
Cobalt	mg/l	0.0199 ± 0.000808	0.0207 ± 0.0004	0.00199	104	0.42
Copper	mg/l	0.0675 ± 0.00215	0.0739 ± 0.0012	0.00675	110	0.95
Iron	mg/l	0.544 ± 0.0269	0.5544 ± 0.0143	0.0653	102	0.16
Lead	mg/l	0.0118 ± 0.00052	0.0133 ± 0.00028	0.00118	113	1.29
Molybdenum	mg/l	0.023 ± 0.001	0.0224 ± 0.0004	0.00253	97.4	-0.23
Nickel	mg/l	0.0198 ± 0.000858	0.0208 ± 0.0004	0.00218	105	0.47
Selenium	mg/l	- ± -	0.00128 ± 0.000051	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.00288 ± 0.00013	0.00109	130	0.61
Tin	mg/l	0.0335 ± 0.000982	0.0337 ± 0.0011	0.00335	101	0.07
Vanadium	mg/l	0.0255 ± 0.00113	0.0247 ± 0.0006	0.00255	97	-0.30
Zinc	mg/l	0.0997 ± 0.00672	0.1248 ± 0.0023	0.0179	125	1.40

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.411 ± 0.009	0.000115	74900	3563.80



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

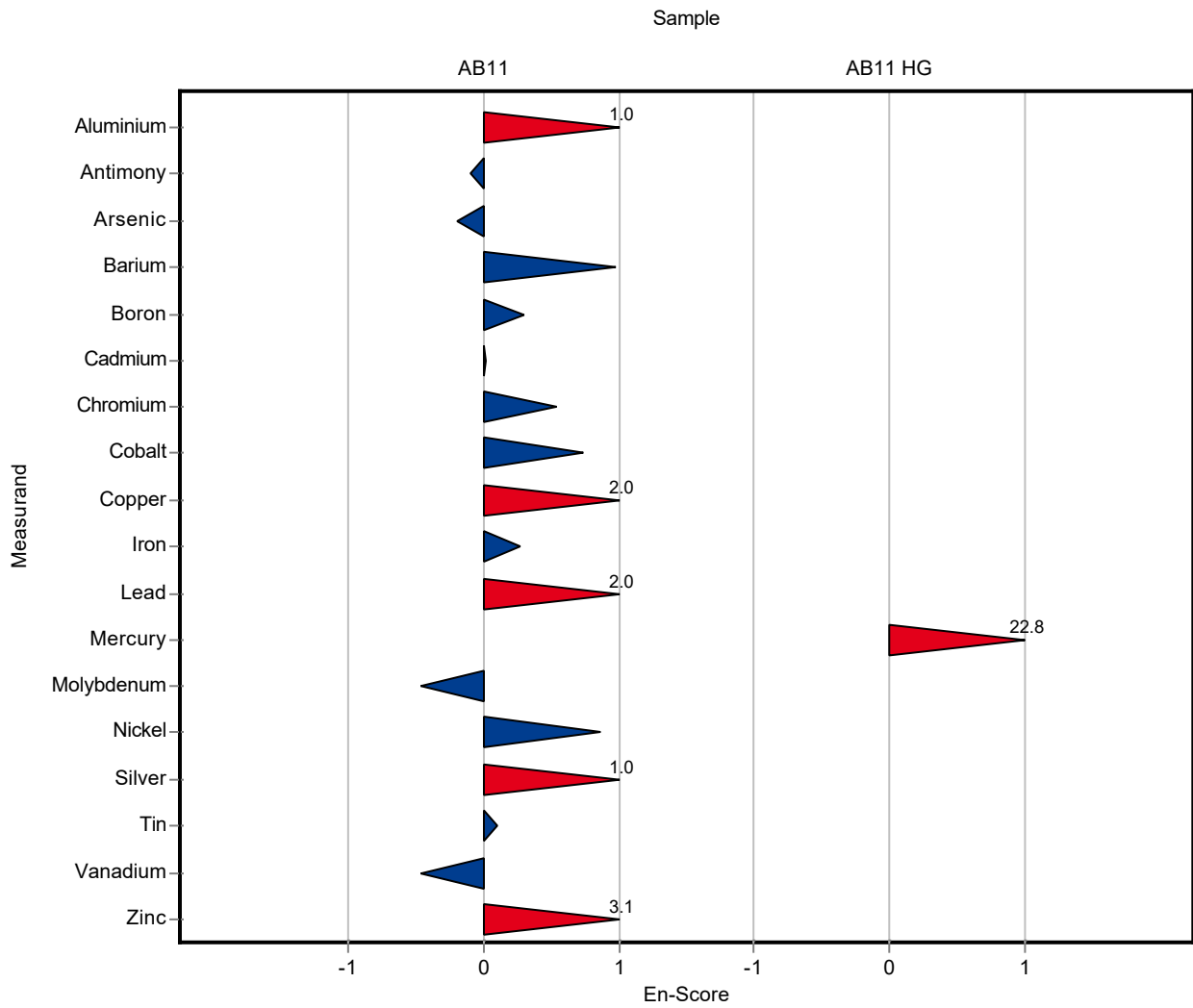
Labcode: LC0020

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	31.34 ± 0.9	2.95	106	1.01
Antimony	mg/l	0.00752 ± 0.000279	0.00745 ± 0.0003	0.000752	99.1	-0.10
Arsenic	mg/l	0.00937 ± 0.000185	0.00923 ± 0.00033	0.000937	98.5	-0.20
Barium	mg/l	3.31 ± 0.127	3.561 ± 0.112	0.331	108	0.98
Boron	mg/l	0.324 ± 0.015	0.3316 ± 0.0098	0.0324	102	0.30
Cadmium	mg/l	0.000721 ± 0.0000196	0.000722 ± 0.000026	0.000072	100	0.02
Chromium	mg/l	0.0344 ± 0.00163	0.0356 ± 0.0007	0.00413	103	0.54
Cobalt	mg/l	0.0199 ± 0.000808	0.0207 ± 0.0004	0.00199	104	0.73
Copper	mg/l	0.0675 ± 0.00215	0.0739 ± 0.0012	0.00675	110	1.99
Iron	mg/l	0.544 ± 0.0269	0.5544 ± 0.0143	0.0653	102	0.27
Lead	mg/l	0.0118 ± 0.00052	0.0133 ± 0.00028	0.00118	113	1.99
Molybdenum	mg/l	0.023 ± 0.001	0.0224 ± 0.0004	0.00253	97.4	-0.46
Nickel	mg/l	0.0198 ± 0.000858	0.0208 ± 0.0004	0.00218	105	0.87
Selenium	mg/l	- ± -	0.00128 ± 0.000051	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.00288 ± 0.00013	0.00109	130	1.04
Tin	mg/l	0.0335 ± 0.000982	0.0337 ± 0.0011	0.00335	101	0.09
Vanadium	mg/l	0.0255 ± 0.00113	0.0247 ± 0.0006	0.00255	97	-0.47
Zinc	mg/l	0.0997 ± 0.00672	0.1248 ± 0.0023	0.0179	125	3.08

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.411 ± 0.009	0.000115	74900	22.80

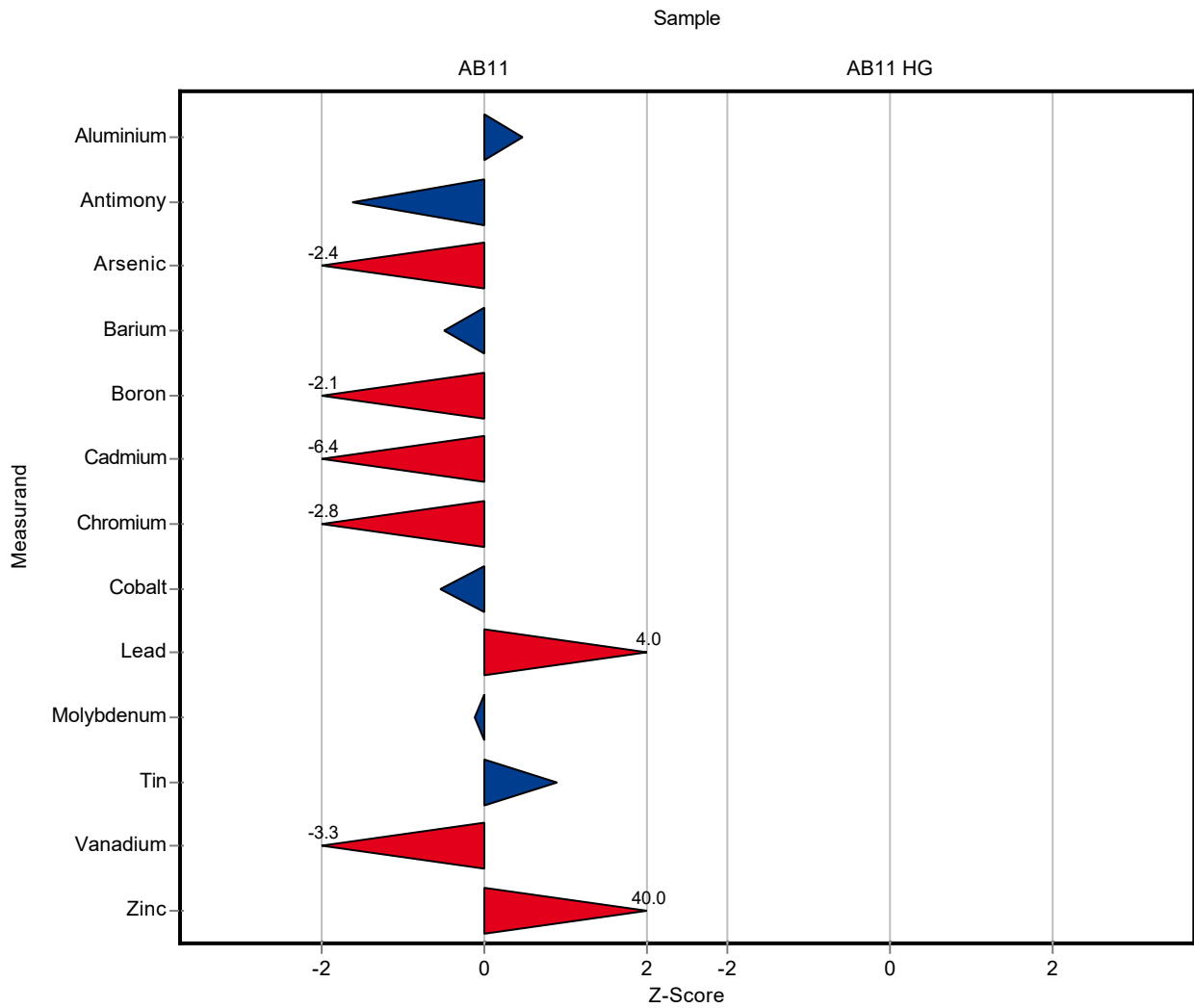


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	30.86 ± 0.75	2.95	105	0.48
Antimony	mg/l	0.00752 ± 0.000279	0.0063 ± 0.0012	0.000752	83.8	-1.62
Arsenic	mg/l	0.00937 ± 0.000185	0.00715 ± 0.0012	0.000937	76.3	-2.37
Barium	mg/l	3.31 ± 0.127	3.145 ± 0.081	0.331	95	-0.50
Boron	mg/l	0.324 ± 0.015	0.255 ± 0.0041	0.0324	78.7	-2.13
Cadmium	mg/l	0.000721 ± 0.0000196	0.00026 ± 0.000054	0.000072	36.1	-6.39
Chromium	mg/l	0.0344 ± 0.00163	0.0229 ± 0.0013	0.00413	66.5	-2.79
Cobalt	mg/l	0.0199 ± 0.000808	0.0188 ± 0.0008	0.00199	94.6	-0.54
Copper	mg/l	0.0675 ± 0.00215	<0.00287 (LOQ) ± -	0.00675	-	-
Iron	mg/l	0.544 ± 0.0269	<0.0313 ± -	0.0653	-	-
Lead	mg/l	0.0118 ± 0.00052	0.0165 ± 0.0041	0.00118	140	4.00
Molybdenum	mg/l	0.023 ± 0.001	0.0227 ± 0.0015	0.00253	98.7	-0.12
Nickel	mg/l	0.0198 ± 0.000858	<0.00036 (LOQ) ± -	0.00218	-	-
Selenium	mg/l	- ± -	0.0015 ± 0.0009	-	-	-
Silver	mg/l	0.00222 ± 0.000581	<0.00042 (LOQ) ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.0365 ± 0.0038	0.00335	109	0.90
Vanadium	mg/l	0.0255 ± 0.00113	0.0171 ± 0.005	0.00255	67.1	-3.29
Zinc	mg/l	0.0997 ± 0.00672	0.818 ± 0.0029	0.0179	820	40.02

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	<0.00029 (LOQ) ± -	0.000115	-	-



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

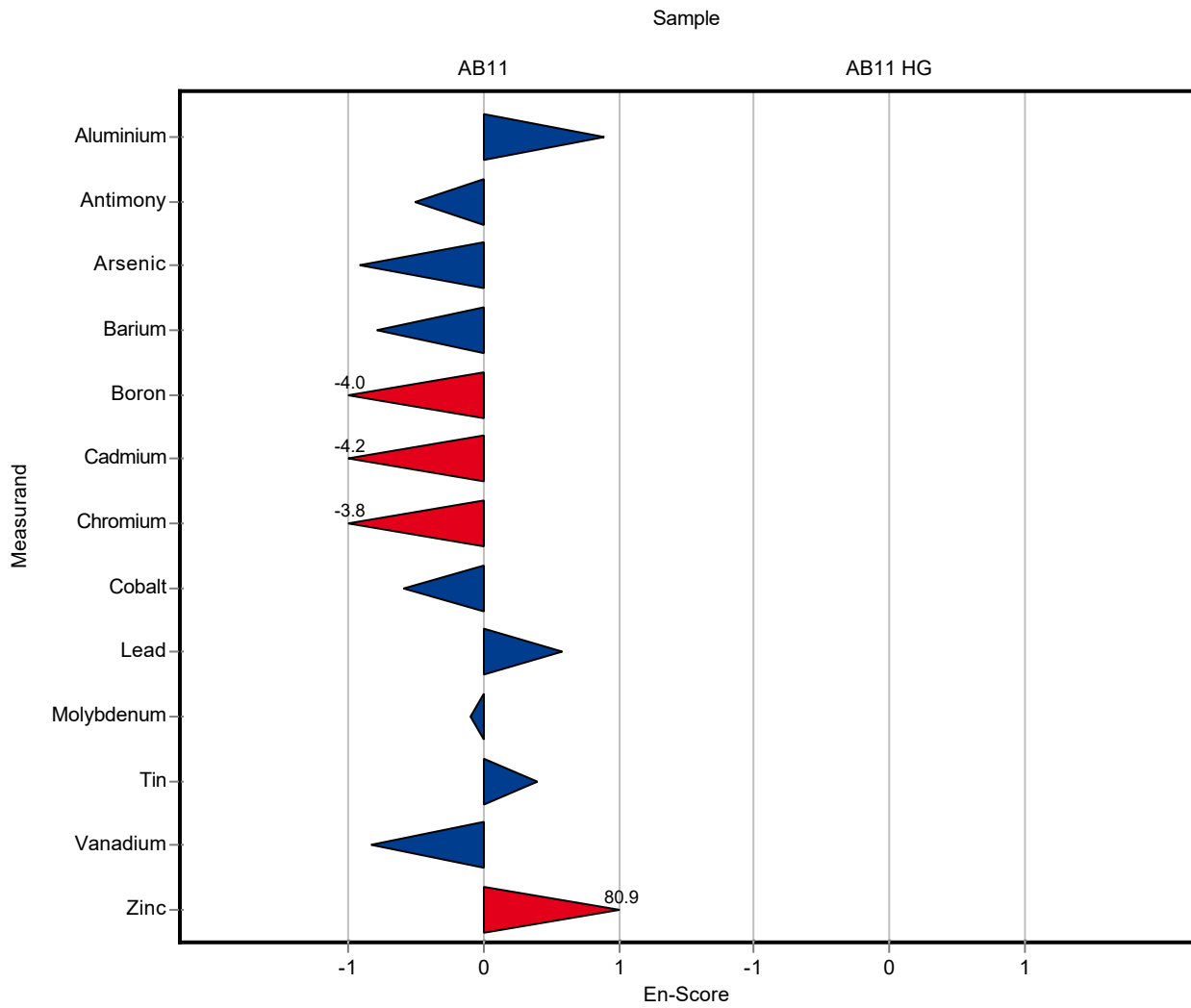
Labcode: LC0021

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	30.86 ± 0.75	2.95	105	0.89
Antimony	mg/l	0.00752 ± 0.000279	0.0063 ± 0.0012	0.000752	83.8	-0.50
Arsenic	mg/l	0.00937 ± 0.000185	0.00715 ± 0.0012	0.000937	76.3	-0.92
Barium	mg/l	3.31 ± 0.127	3.145 ± 0.081	0.331	95	-0.80
Boron	mg/l	0.324 ± 0.015	0.255 ± 0.0041	0.0324	78.7	-4.04
Cadmium	mg/l	0.000721 ± 0.0000196	0.00026 ± 0.000054	0.000072	36.1	-4.20
Chromium	mg/l	0.0344 ± 0.00163	0.0229 ± 0.0013	0.00413	66.5	-3.76
Cobalt	mg/l	0.0199 ± 0.000808	0.0188 ± 0.0008	0.00199	94.6	-0.60
Copper	mg/l	0.0675 ± 0.00215	<0.00287 (LOQ) ± -	0.00675	-	-
Iron	mg/l	0.544 ± 0.0269	<0.0313 (LOQ) ± -	0.0653	-	-
Lead	mg/l	0.0118 ± 0.00052	0.0165 ± 0.0041	0.00118	140	0.57
Molybdenum	mg/l	0.023 ± 0.001	0.0227 ± 0.0015	0.00253	98.7	-0.09
Nickel	mg/l	0.0198 ± 0.000858	<0.00036 (LOQ) ± -	0.00218	-	-
Selenium	mg/l	- ± -	0.0015 ± 0.0009	-	-	-
Silver	mg/l	0.00222 ± 0.000581	<0.00042 (LOQ) ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.0365 ± 0.0038	0.00335	109	0.39
Vanadium	mg/l	0.0255 ± 0.00113	0.0171 ± 0.005	0.00255	67.1	-0.83
Zinc	mg/l	0.0997 ± 0.00672	0.818 ± 0.0029	0.0179	820	80.93

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	<0.00029 (LOQ) ± -	0.000115	-	-

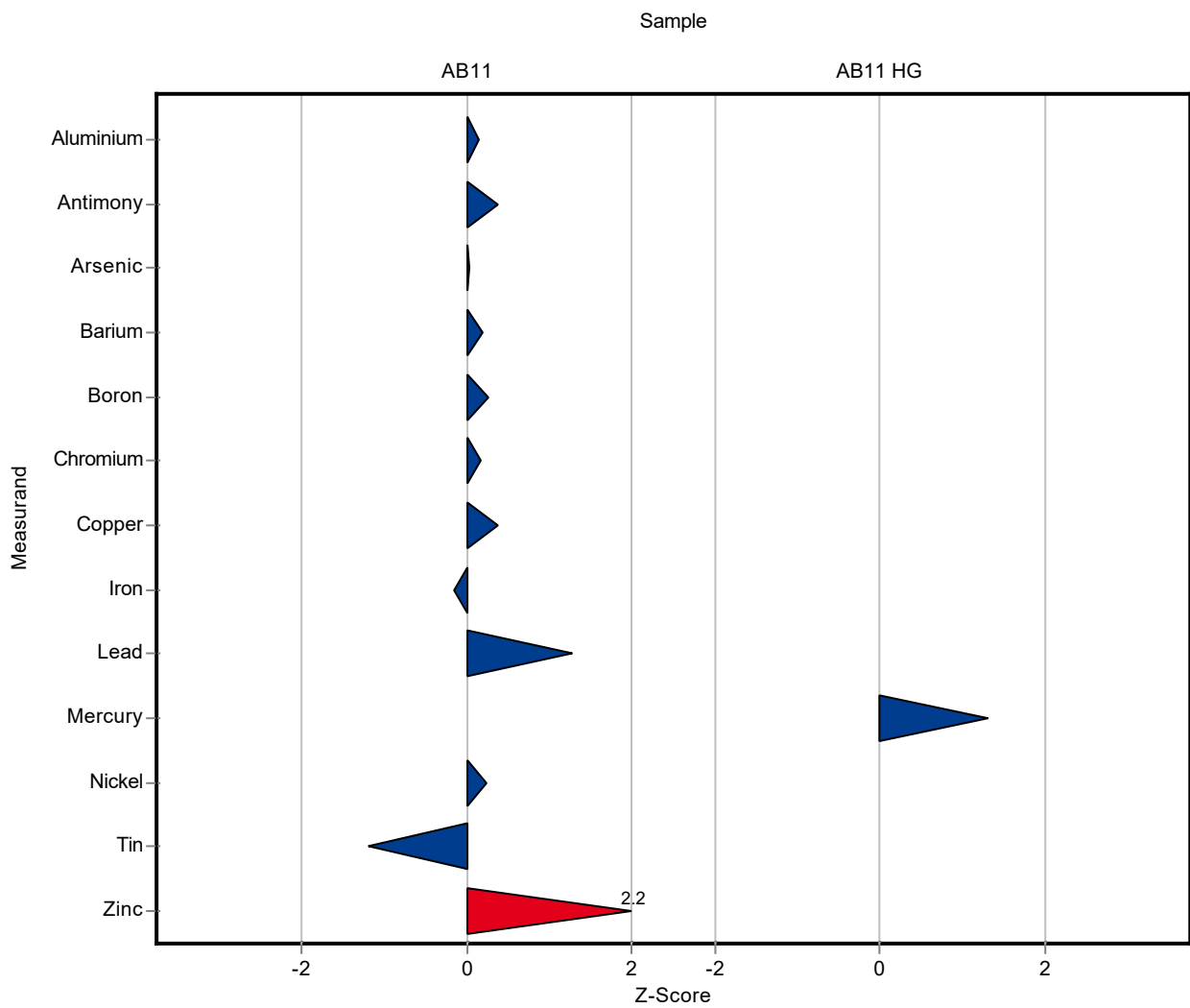


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	29.9 ± 2.9	2.95	101	0.15
Antimony	mg/l	0.00752 ± 0.000279	0.0078 ± 0.0008	0.000752	104	0.37
Arsenic	mg/l	0.00937 ± 0.000185	0.0094 ± 0.001	0.000937	100	0.03
Barium	mg/l	3.31 ± 0.127	3.37 ± 0.34	0.331	102	0.18
Boron	mg/l	0.324 ± 0.015	0.333 ± 0.03	0.0324	103	0.27
Cadmium	mg/l	0.000721 ± 0.0000196	<0.001 (LOQ) ± -	0.000072	-	-
Chromium	mg/l	0.0344 ± 0.00163	0.0351 ± 0.004	0.00413	102	0.16
Cobalt	mg/l	0.0199 ± 0.000808	<0.025 (LOQ) ± -	0.00199	-	-
Copper	mg/l	0.0675 ± 0.00215	0.0701 ± 0.007	0.00675	104	0.39
Iron	mg/l	0.544 ± 0.0269	0.534 ± 0.05	0.0653	98.2	-0.15
Lead	mg/l	0.0118 ± 0.00052	0.0133 ± 0.001	0.00118	113	1.29
Molybdenum	mg/l	0.023 ± 0.001	<0.05 (LOQ) ± -	0.00253	-	-
Nickel	mg/l	0.0198 ± 0.000858	0.0203 ± 0.002	0.00218	103	0.24
Selenium	mg/l	- ± -	<0.005 (LOQ) ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	<0.015 (LOD) ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.0295 ± 0.003	0.00335	88.1	-1.19
Vanadium	mg/l	0.0255 ± 0.00113	<0.025 (LOQ) ± -	0.00255	-	-
Zinc	mg/l	0.0997 ± 0.00672	0.14 ± 0.01	0.0179	140	2.25

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.0007 ± 0.0001	0.000115	128	1.32



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

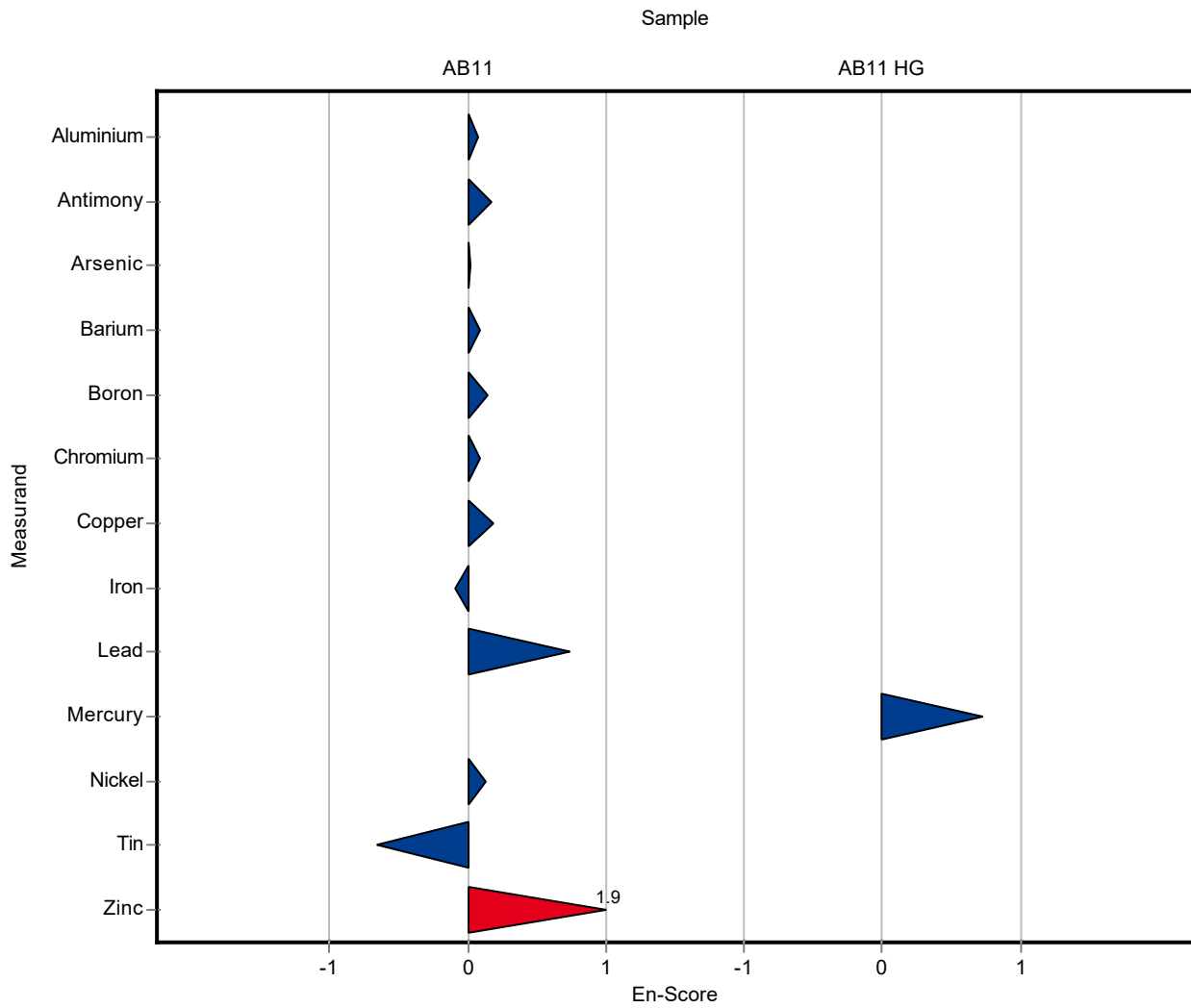
Labcode: LC0022

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	29.9 ± 2.9	2.95	101	0.08
Antimony	mg/l	0.00752 ± 0.000279	0.0078 ± 0.0008	0.000752	104	0.17
Arsenic	mg/l	0.00937 ± 0.000185	0.0094 ± 0.001	0.000937	100	0.02
Barium	mg/l	3.31 ± 0.127	3.37 ± 0.34	0.331	102	0.09
Boron	mg/l	0.324 ± 0.015	0.333 ± 0.03	0.0324	103	0.14
Cadmium	mg/l	0.000721 ± 0.0000196	<0.001 (LOQ) ± -	0.000072	-	-
Chromium	mg/l	0.0344 ± 0.00163	0.0351 ± 0.004	0.00413	102	0.08
Cobalt	mg/l	0.0199 ± 0.000808	<0.025 (LOQ) ± -	0.00199	-	-
Copper	mg/l	0.0675 ± 0.00215	0.0701 ± 0.007	0.00675	104	0.19
Iron	mg/l	0.544 ± 0.0269	0.534 ± 0.05	0.0653	98.2	-0.09
Lead	mg/l	0.0118 ± 0.00052	0.0133 ± 0.001	0.00118	113	0.73
Molybdenum	mg/l	0.023 ± 0.001	<0.05 (LOQ) ± -	0.00253	-	-
Nickel	mg/l	0.0198 ± 0.000858	0.0203 ± 0.002	0.00218	103	0.13
Selenium	mg/l	- ± -	<0.005 (LOQ) ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	<0.015 (LOD) ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.0295 ± 0.003	0.00335	88.1	-0.65
Vanadium	mg/l	0.0255 ± 0.00113	<0.025 (LOQ) ± -	0.00255	-	-
Zinc	mg/l	0.0997 ± 0.00672	0.14 ± 0.01	0.0179	140	1.91

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.0007 ± 0.0001	0.000115	128	0.73

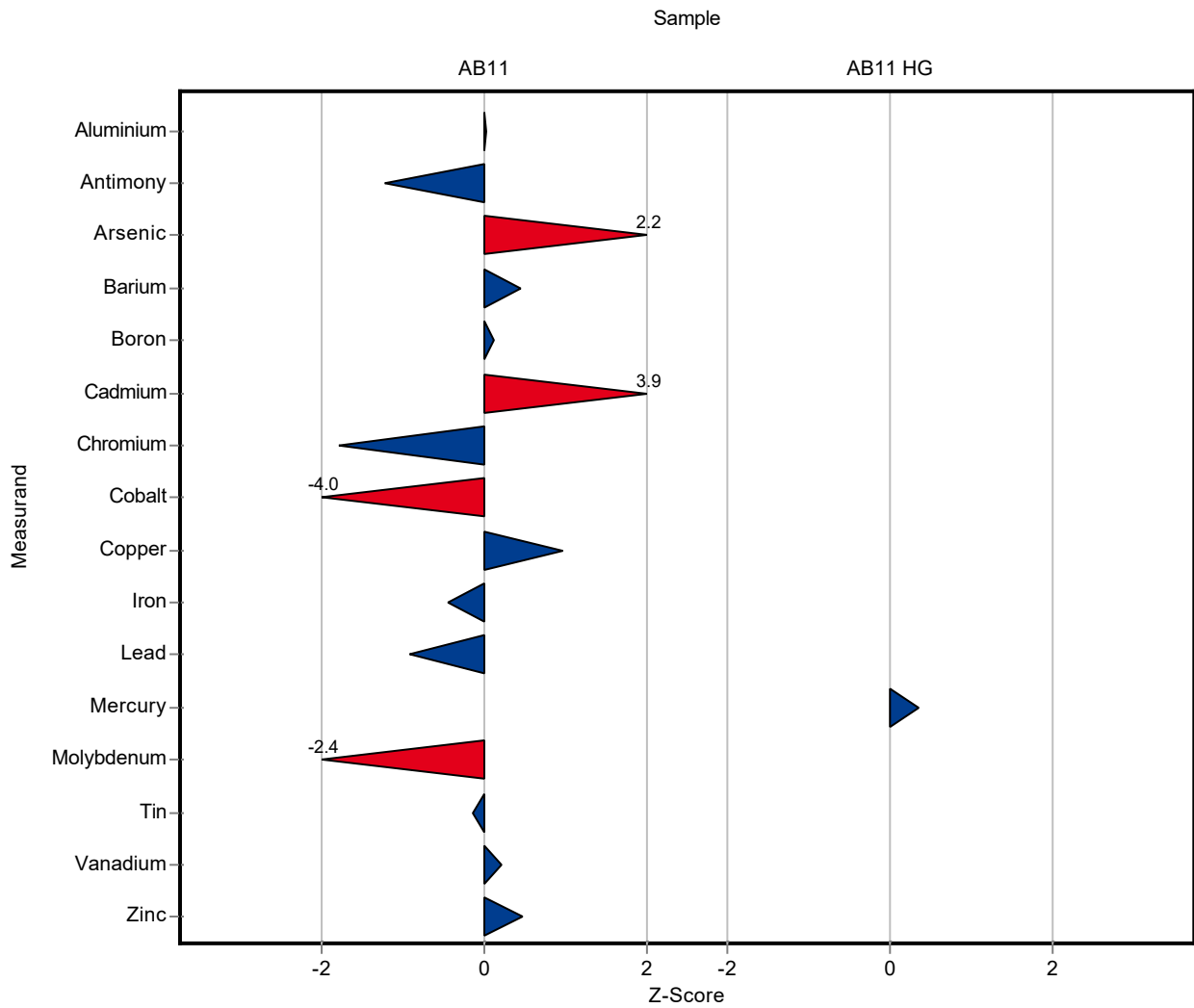


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	29.5 ± 2.9	2.95	100	0.01
Antimony	mg/l	0.00752 ± 0.000279	0.0066 ± 0.00132	0.000752	87.8	-1.22
Arsenic	mg/l	0.00937 ± 0.000185	0.0114 ± 0.0023	0.000937	122	2.17
Barium	mg/l	3.31 ± 0.127	3.46 ± 0.35	0.331	105	0.46
Boron	mg/l	0.324 ± 0.015	0.328 ± 0.033	0.0324	101	0.12
Cadmium	mg/l	0.000721 ± 0.0000196	0.000999 ± 0.0002	0.000072	139	3.86
Chromium	mg/l	0.0344 ± 0.00163	0.027 ± 0.0027	0.00413	78.4	-1.80
Cobalt	mg/l	0.0199 ± 0.000808	0.012 ± 0.0012	0.00199	60.4	-3.96
Copper	mg/l	0.0675 ± 0.00215	0.074 ± 0.007	0.00675	110	0.97
Iron	mg/l	0.544 ± 0.0269	0.515 ± 0.052	0.0653	94.7	-0.44
Lead	mg/l	0.0118 ± 0.00052	0.0107 ± 0.0021	0.00118	90.8	-0.92
Molybdenum	mg/l	0.023 ± 0.001	0.017 ± 0.002	0.00253	73.9	-2.37
Nickel	mg/l	0.0198 ± 0.000858	<0.02 (LOQ) ± -	0.00218	-	-
Selenium	mg/l	- ± -	0.0533 ± 0.0107	-	-	-
Silver	mg/l	0.00222 ± 0.000581	<0.01 (LOQ) ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.033 ± 0.0033	0.00335	98.6	-0.14
Vanadium	mg/l	0.0255 ± 0.00113	0.026 ± 0.0026	0.00255	102	0.21
Zinc	mg/l	0.0997 ± 0.00672	0.108 ± 0.011	0.0179	108	0.46

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000588 ± 0.000118	0.000115	107	0.34



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

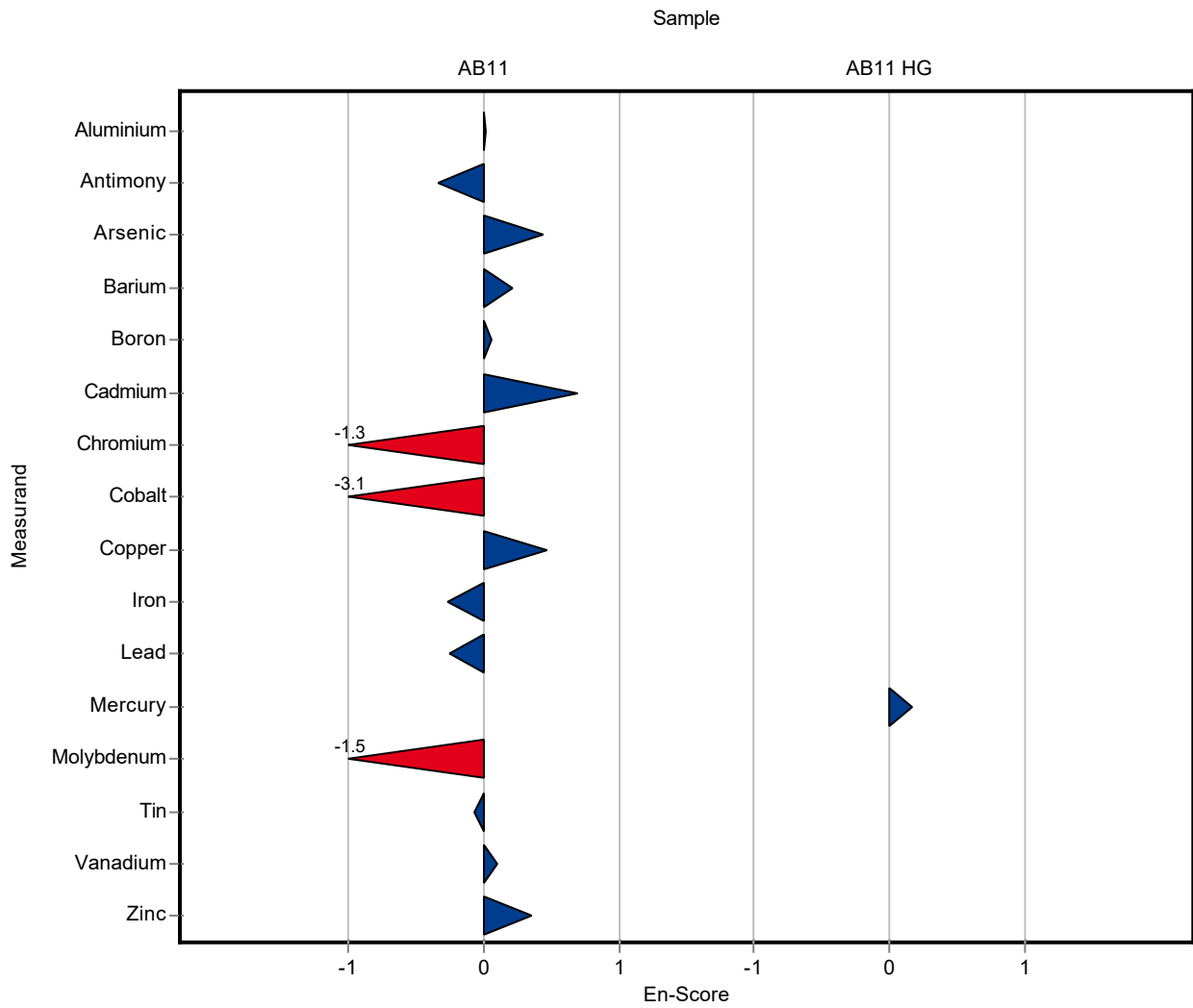
Labcode: LC0023

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	29.5 ± 2.9	2.95	100	0.01
Antimony	mg/l	0.00752 ± 0.000279	0.0066 ± 0.00132	0.000752	87.8	-0.35
Arsenic	mg/l	0.00937 ± 0.000185	0.0114 ± 0.0023	0.000937	122	0.44
Barium	mg/l	3.31 ± 0.127	3.46 ± 0.35	0.331	105	0.21
Boron	mg/l	0.324 ± 0.015	0.328 ± 0.033	0.0324	101	0.06
Cadmium	mg/l	0.000721 ± 0.0000196	0.000999 ± 0.0002	0.000072	139	0.69
Chromium	mg/l	0.0344 ± 0.00163	0.027 ± 0.0027	0.00413	78.4	-1.32
Cobalt	mg/l	0.0199 ± 0.000808	0.012 ± 0.0012	0.00199	60.4	-3.11
Copper	mg/l	0.0675 ± 0.00215	0.074 ± 0.007	0.00675	110	0.46
Iron	mg/l	0.544 ± 0.0269	0.515 ± 0.052	0.0653	94.7	-0.27
Lead	mg/l	0.0118 ± 0.00052	0.0107 ± 0.0021	0.00118	90.8	-0.26
Molybdenum	mg/l	0.023 ± 0.001	0.017 ± 0.002	0.00253	73.9	-1.45
Nickel	mg/l	0.0198 ± 0.000858	<0.02 (LOQ) ± -	0.00218	-	-
Selenium	mg/l	- ± -	0.0533 ± 0.0107	-	-	-
Silver	mg/l	0.00222 ± 0.000581	<0.01 (LOQ) ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	0.033 ± 0.0033	0.00335	98.6	-0.07
Vanadium	mg/l	0.0255 ± 0.00113	0.026 ± 0.0026	0.00255	102	0.10
Zinc	mg/l	0.0997 ± 0.00672	0.108 ± 0.011	0.0179	108	0.36

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000588 ± 0.000118	0.000115	107	0.16

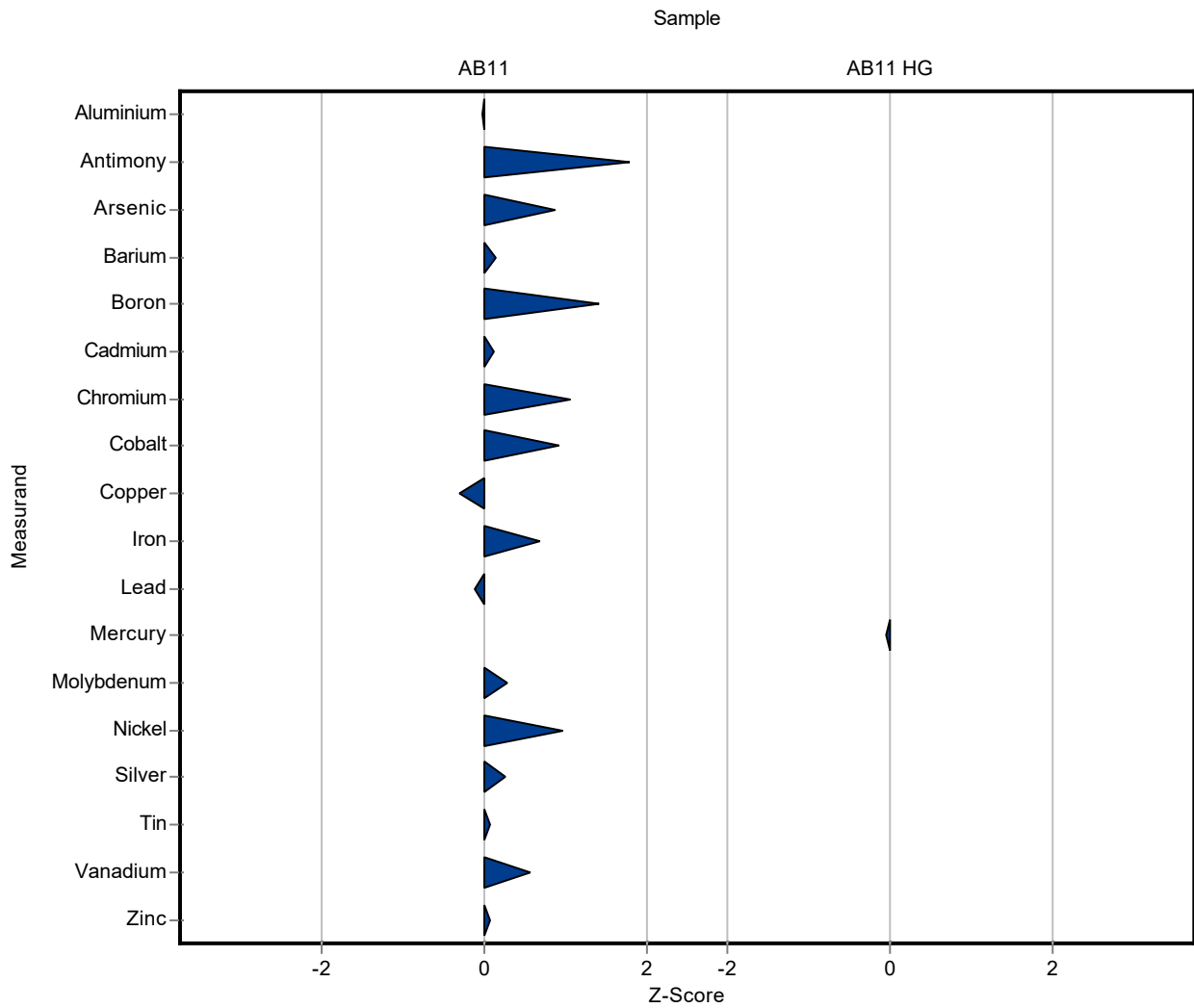


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	29.36 ± 0.1	2.95	99.7	-0.03
Antimony	mg/l	0.00752 ± 0.000279	0.00886 ± 0.001	0.000752	118	1.78
Arsenic	mg/l	0.00937 ± 0.000185	0.01018 ± 0.002	0.000937	109	0.87
Barium	mg/l	3.31 ± 0.127	3.359 ± 0.05	0.331	102	0.15
Boron	mg/l	0.324 ± 0.015	0.36979 ± 0.02	0.0324	114	1.41
Cadmium	mg/l	0.000721 ± 0.0000196	0.00073 ± 0.001	0.000072	101	0.12
Chromium	mg/l	0.0344 ± 0.00163	0.03884 ± 0.002	0.00413	113	1.07
Cobalt	mg/l	0.0199 ± 0.000808	0.0217 ± 0.002	0.00199	109	0.92
Copper	mg/l	0.0675 ± 0.00215	0.06536 ± 0.002	0.00675	96.9	-0.31
Iron	mg/l	0.544 ± 0.0269	0.58892 ± 0.02	0.0653	108	0.69
Lead	mg/l	0.0118 ± 0.00052	0.01164 ± 0.001	0.00118	98.8	-0.12
Molybdenum	mg/l	0.023 ± 0.001	0.02368 ± 0.002	0.00253	103	0.27
Nickel	mg/l	0.0198 ± 0.000858	0.02188 ± 0.002	0.00218	111	0.96
Selenium	mg/l	- ± -	0.00126 ± 0.001	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.00249 ± 0.001	0.00109	112	0.25
Tin	mg/l	0.0335 ± 0.000982	0.03368 ± 0.001	0.00335	101	0.06
Vanadium	mg/l	0.0255 ± 0.00113	0.02693 ± 0.001	0.00255	106	0.57
Zinc	mg/l	0.0997 ± 0.00672	0.10108 ± 0.002	0.0179	101	0.08

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.00054325 ± 0.00001	0.000115	99.1	-0.05



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

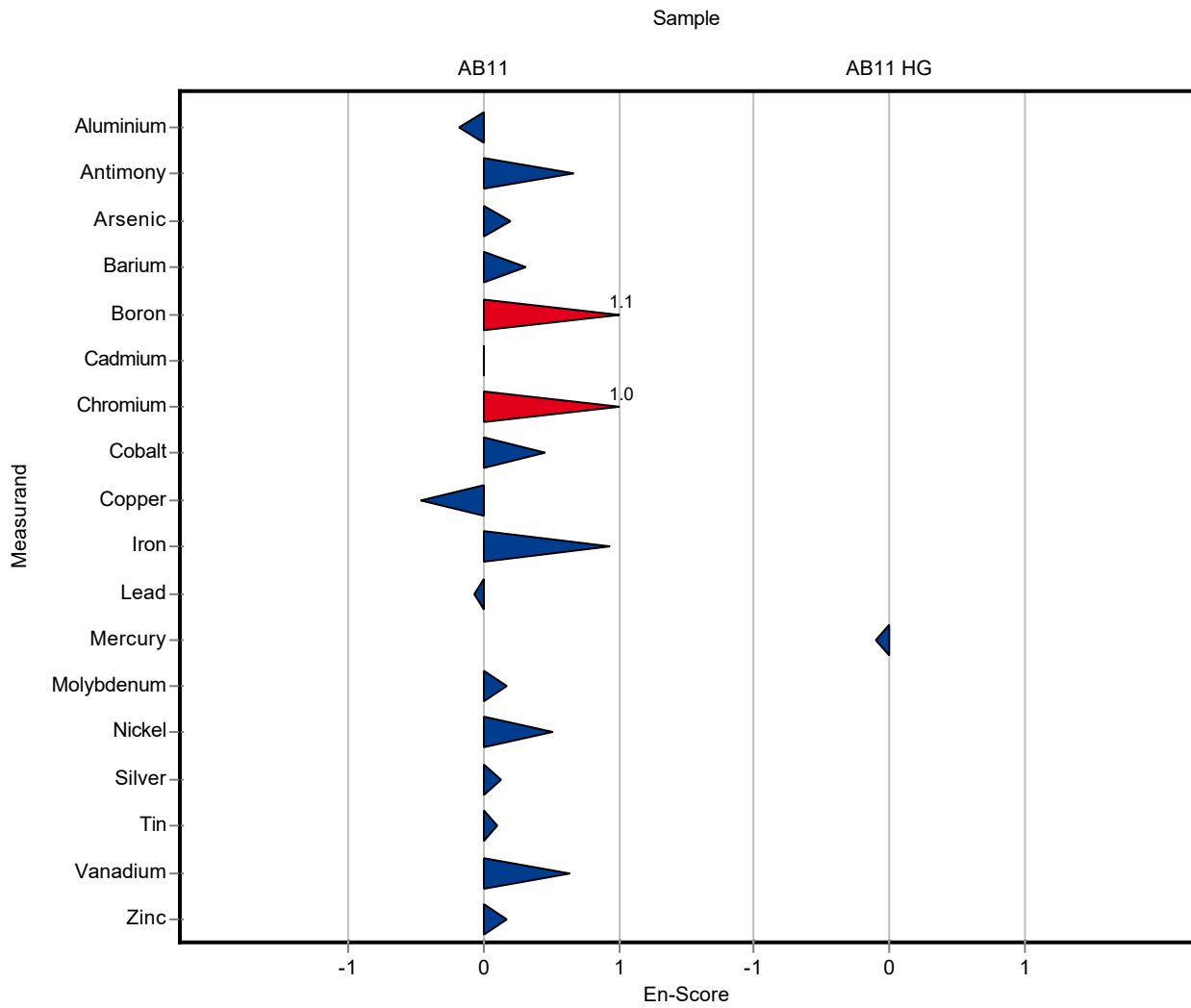
Labcode: LC0024

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	29.36 ± 0.1	2.95	99.7	-0.18
Antimony	mg/l	0.00752 ± 0.000279	0.00886 ± 0.001	0.000752	118	0.66
Arsenic	mg/l	0.00937 ± 0.000185	0.01018 ± 0.002	0.000937	109	0.20
Barium	mg/l	3.31 ± 0.127	3.359 ± 0.05	0.331	102	0.31
Boron	mg/l	0.324 ± 0.015	0.36979 ± 0.02	0.0324	114	1.07
Cadmium	mg/l	0.000721 ± 0.0000196	0.00073 ± 0.001	0.000072	101	0.00
Chromium	mg/l	0.0344 ± 0.00163	0.03884 ± 0.002	0.00413	113	1.02
Cobalt	mg/l	0.0199 ± 0.000808	0.0217 ± 0.002	0.00199	109	0.45
Copper	mg/l	0.0675 ± 0.00215	0.06536 ± 0.002	0.00675	96.9	-0.47
Iron	mg/l	0.544 ± 0.0269	0.58892 ± 0.02	0.0653	108	0.94
Lead	mg/l	0.0118 ± 0.00052	0.01164 ± 0.001	0.00118	98.8	-0.07
Molybdenum	mg/l	0.023 ± 0.001	0.02368 ± 0.002	0.00253	103	0.17
Nickel	mg/l	0.0198 ± 0.000858	0.02188 ± 0.002	0.00218	111	0.51
Selenium	mg/l	- ± -	0.00126 ± 0.001	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.00249 ± 0.001	0.00109	112	0.13
Tin	mg/l	0.0335 ± 0.000982	0.03368 ± 0.001	0.00335	101	0.09
Vanadium	mg/l	0.0255 ± 0.00113	0.02693 ± 0.001	0.00255	106	0.63
Zinc	mg/l	0.0997 ± 0.00672	0.10108 ± 0.002	0.0179	101	0.18

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.00054325 ± 0.00001	0.000115	99.1	-0.09

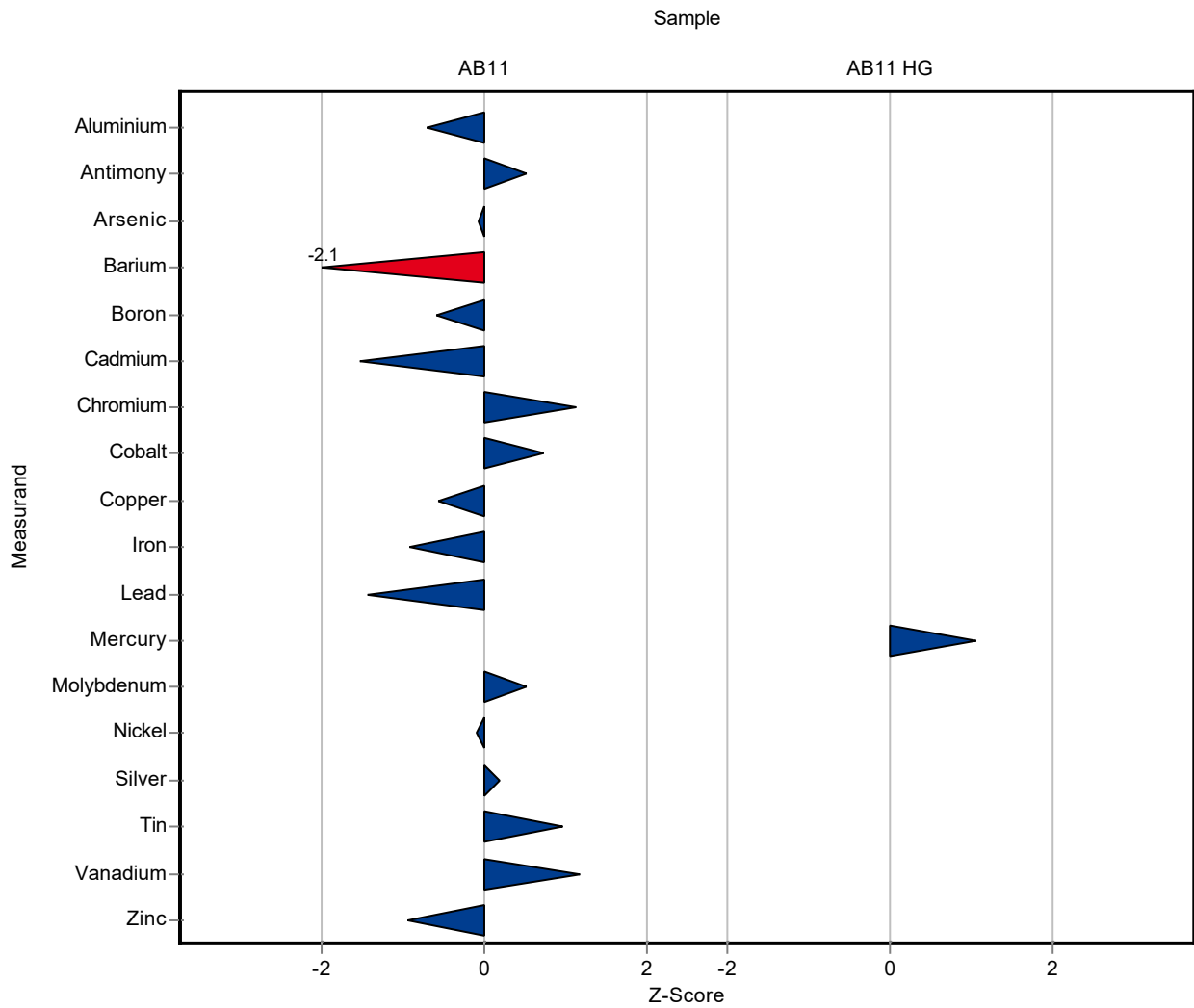


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	27.36 ± 1.64	2.95	92.9	-0.71
Antimony	mg/l	0.00752 ± 0.000279	0.0079 ± 0.0035	0.000752	105	0.51
Arsenic	mg/l	0.00937 ± 0.000185	0.0093 ± 0.00125	0.000937	99.3	-0.07
Barium	mg/l	3.31 ± 0.127	2.628 ± 0.197	0.331	79.4	-2.06
Boron	mg/l	0.324 ± 0.015	0.3048 ± 0.0195	0.0324	94	-0.60
Cadmium	mg/l	0.000721 ± 0.0000196	0.00061 ± 0.0002	0.000072	84.6	-1.54
Chromium	mg/l	0.0344 ± 0.00163	0.0391 ± 0.0016	0.00413	114	1.13
Cobalt	mg/l	0.0199 ± 0.000808	0.0213 ± 0.0012	0.00199	107	0.72
Copper	mg/l	0.0675 ± 0.00215	0.0637 ± 0.0041	0.00675	94.4	-0.56
Iron	mg/l	0.544 ± 0.0269	0.4838 ± 0.0193	0.0653	89	-0.92
Lead	mg/l	0.0118 ± 0.00052	0.0101 ± 0.0005	0.00118	85.7	-1.43
Molybdenum	mg/l	0.023 ± 0.001	0.0243 ± 0.0017	0.00253	106	0.52
Nickel	mg/l	0.0198 ± 0.000858	0.0196 ± 0.0009	0.00218	99.1	-0.08
Selenium	mg/l	- ± -	0.0331 ± 0.0025	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.00243 ± 0.00024	0.00109	110	0.20
Tin	mg/l	0.0335 ± 0.000982	0.0367 ± 0.0022	0.00335	110	0.96
Vanadium	mg/l	0.0255 ± 0.00113	0.0285 ± 0.0023	0.00255	112	1.19
Zinc	mg/l	0.0997 ± 0.00672	0.0828 ± 0.0046	0.0179	83	-0.94

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.00067 ± 0.0001	0.000115	122	1.06



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

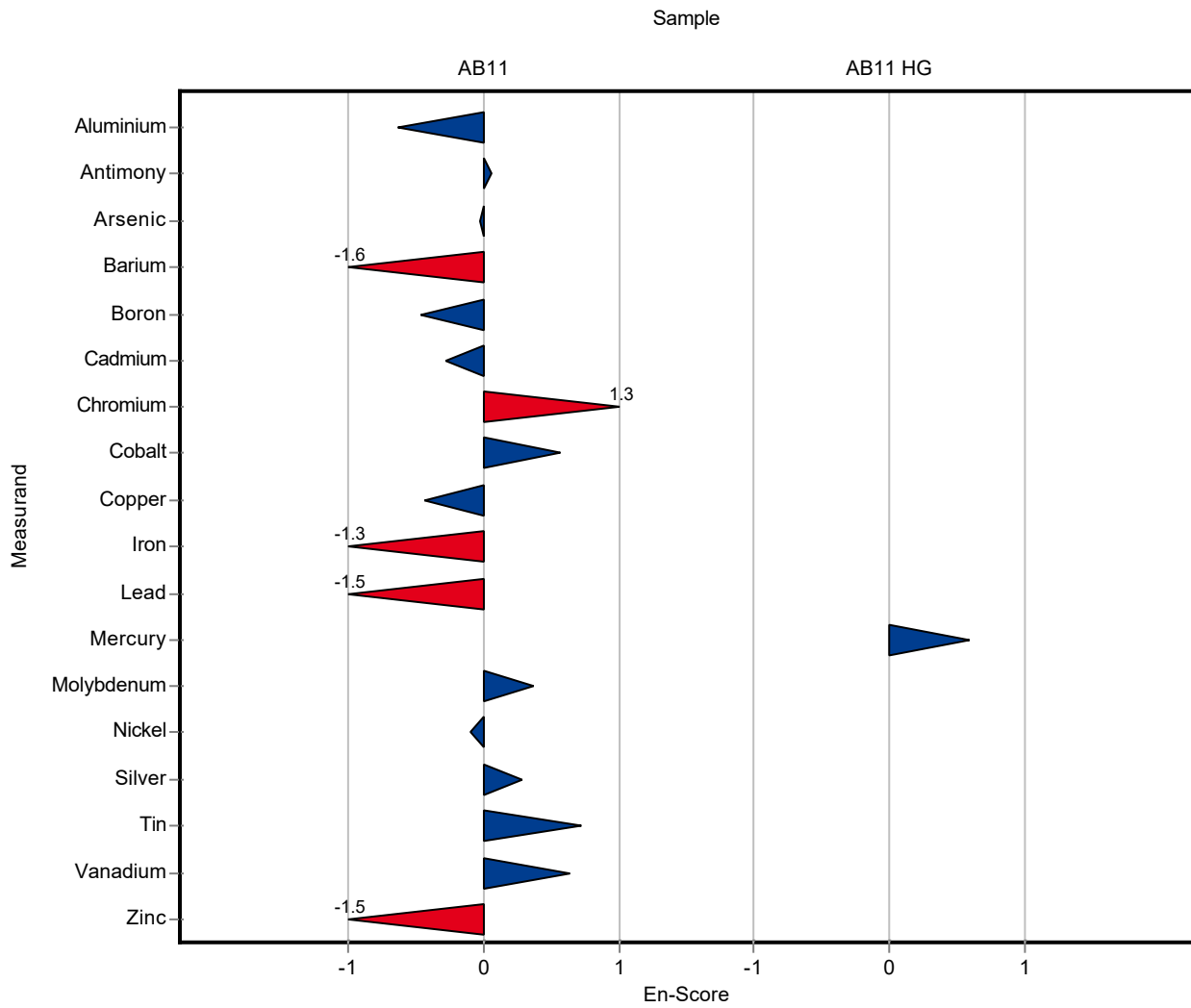
Labcode: LC0025

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	27.36 ± 1.64	2.95	92.9	-0.63
Antimony	mg/l	0.00752 ± 0.000279	0.0079 ± 0.0035	0.000752	105	0.05
Arsenic	mg/l	0.00937 ± 0.000185	0.0093 ± 0.00125	0.000937	99.3	-0.03
Barium	mg/l	3.31 ± 0.127	2.628 ± 0.197	0.331	79.4	-1.64
Boron	mg/l	0.324 ± 0.015	0.3048 ± 0.0195	0.0324	94	-0.46
Cadmium	mg/l	0.000721 ± 0.0000196	0.00061 ± 0.0002	0.000072	84.6	-0.28
Chromium	mg/l	0.0344 ± 0.00163	0.0391 ± 0.0016	0.00413	114	1.30
Cobalt	mg/l	0.0199 ± 0.000808	0.0213 ± 0.0012	0.00199	107	0.56
Copper	mg/l	0.0675 ± 0.00215	0.0637 ± 0.0041	0.00675	94.4	-0.45
Iron	mg/l	0.544 ± 0.0269	0.4838 ± 0.0193	0.0653	89	-1.27
Lead	mg/l	0.0118 ± 0.00052	0.0101 ± 0.0005	0.00118	85.7	-1.49
Molybdenum	mg/l	0.023 ± 0.001	0.0243 ± 0.0017	0.00253	106	0.37
Nickel	mg/l	0.0198 ± 0.000858	0.0196 ± 0.0009	0.00218	99.1	-0.09
Selenium	mg/l	- ± -	0.0331 ± 0.0025	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.00243 ± 0.00024	0.00109	110	0.29
Tin	mg/l	0.0335 ± 0.000982	0.0367 ± 0.0022	0.00335	110	0.72
Vanadium	mg/l	0.0255 ± 0.00113	0.0285 ± 0.0023	0.00255	112	0.64
Zinc	mg/l	0.0997 ± 0.00672	0.0828 ± 0.0046	0.0179	83	-1.48

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.00067 ± 0.0001	0.000115	122	0.59

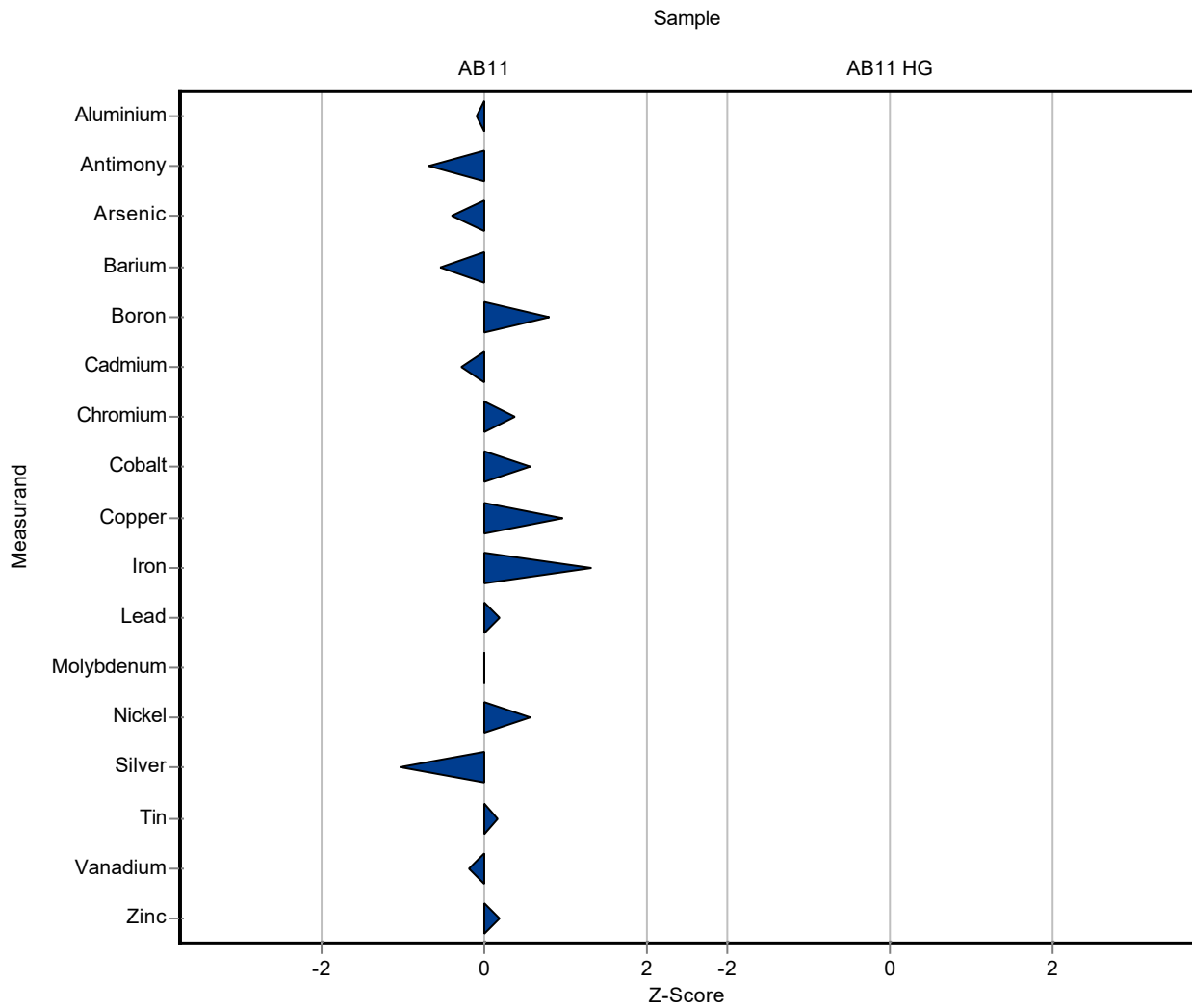


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	29.2 ± 2.33	2.95	99.1	-0.09
Antimony	mg/l	0.00752 ± 0.000279	0.007 ± 0.00063	0.000752	93.1	-0.69
Arsenic	mg/l	0.00937 ± 0.000185	0.009 ± 0.00081	0.000937	96.1	-0.39
Barium	mg/l	3.31 ± 0.127	3.13 ± 0.282	0.331	94.6	-0.54
Boron	mg/l	0.324 ± 0.015	0.35 ± 0.0315	0.0324	108	0.80
Cadmium	mg/l	0.000721 ± 0.0000196	0.0007 ± 0.00021	0.000072	97.1	-0.29
Chromium	mg/l	0.0344 ± 0.00163	0.036 ± 0.00324	0.00413	105	0.38
Cobalt	mg/l	0.0199 ± 0.000808	0.021 ± 0.00189	0.00199	106	0.57
Copper	mg/l	0.0675 ± 0.00215	0.074 ± 0.00666	0.00675	110	0.97
Iron	mg/l	0.544 ± 0.0269	0.63 ± 0.0567	0.0653	116	1.32
Lead	mg/l	0.0118 ± 0.00052	0.012 ± 0.00144	0.00118	102	0.19
Molybdenum	mg/l	0.023 ± 0.001	0.023 ± 0.00207	0.00253	100	0.00
Nickel	mg/l	0.0198 ± 0.000858	0.021 ± 0.00189	0.00218	106	0.56
Selenium	mg/l	- ± -	0.0014 ± 0.0004	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.0011 ± 0.0004	0.00109	49.7	-1.03
Tin	mg/l	0.0335 ± 0.000982	0.034 ± 0.00374	0.00335	102	0.16
Vanadium	mg/l	0.0255 ± 0.00113	0.025 ± 0.00225	0.00255	98.1	-0.19
Zinc	mg/l	0.0997 ± 0.00672	0.103 ± 0.0113	0.0179	103	0.18

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	<0.0001 ± -	0.000115	-	-



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

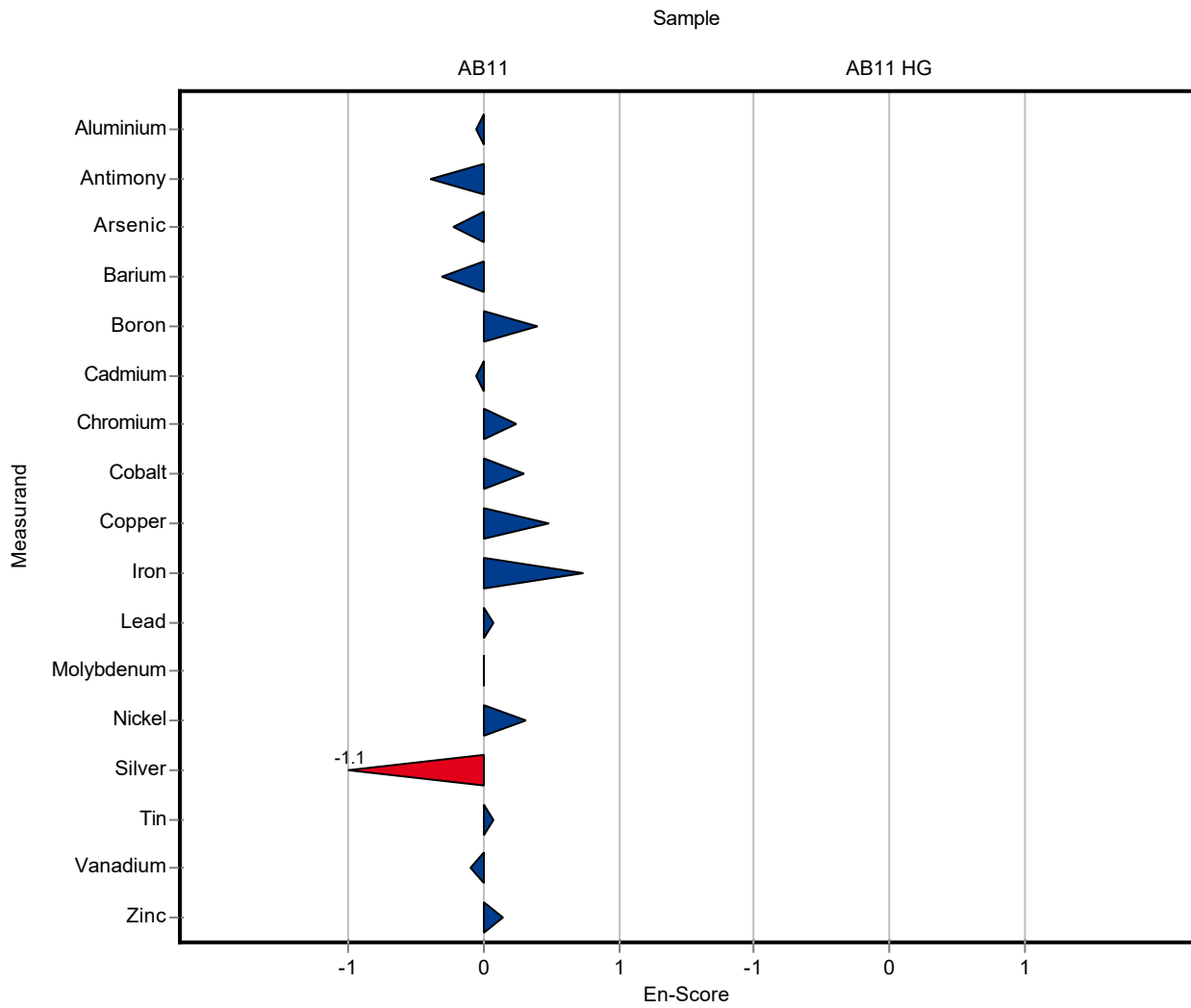
Labcode: LC0026

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	29.2 ± 2.33	2.95	99.1	-0.06
Antimony	mg/l	0.00752 ± 0.000279	0.007 ± 0.00063	0.000752	93.1	-0.40
Arsenic	mg/l	0.00937 ± 0.000185	0.009 ± 0.00081	0.000937	96.1	-0.23
Barium	mg/l	3.31 ± 0.127	3.13 ± 0.282	0.331	94.6	-0.31
Boron	mg/l	0.324 ± 0.015	0.35 ± 0.0315	0.0324	108	0.40
Cadmium	mg/l	0.000721 ± 0.0000196	0.0007 ± 0.00021	0.000072	97.1	-0.05
Chromium	mg/l	0.0344 ± 0.00163	0.036 ± 0.00324	0.00413	105	0.23
Cobalt	mg/l	0.0199 ± 0.000808	0.021 ± 0.00189	0.00199	106	0.29
Copper	mg/l	0.0675 ± 0.00215	0.074 ± 0.00666	0.00675	110	0.48
Iron	mg/l	0.544 ± 0.0269	0.63 ± 0.0567	0.0653	116	0.74
Lead	mg/l	0.0118 ± 0.00052	0.012 ± 0.00144	0.00118	102	0.07
Molybdenum	mg/l	0.023 ± 0.001	0.023 ± 0.00207	0.00253	100	0.00
Nickel	mg/l	0.0198 ± 0.000858	0.021 ± 0.00189	0.00218	106	0.31
Selenium	mg/l	- ± -	0.0014 ± 0.0004	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.0011 ± 0.0004	0.00109	49.7	-1.13
Tin	mg/l	0.0335 ± 0.000982	0.034 ± 0.00374	0.00335	102	0.07
Vanadium	mg/l	0.0255 ± 0.00113	0.025 ± 0.00225	0.00255	98.1	-0.10
Zinc	mg/l	0.0997 ± 0.00672	0.103 ± 0.0113	0.0179	103	0.14

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	<0.0001 ± -	0.000115	-	-

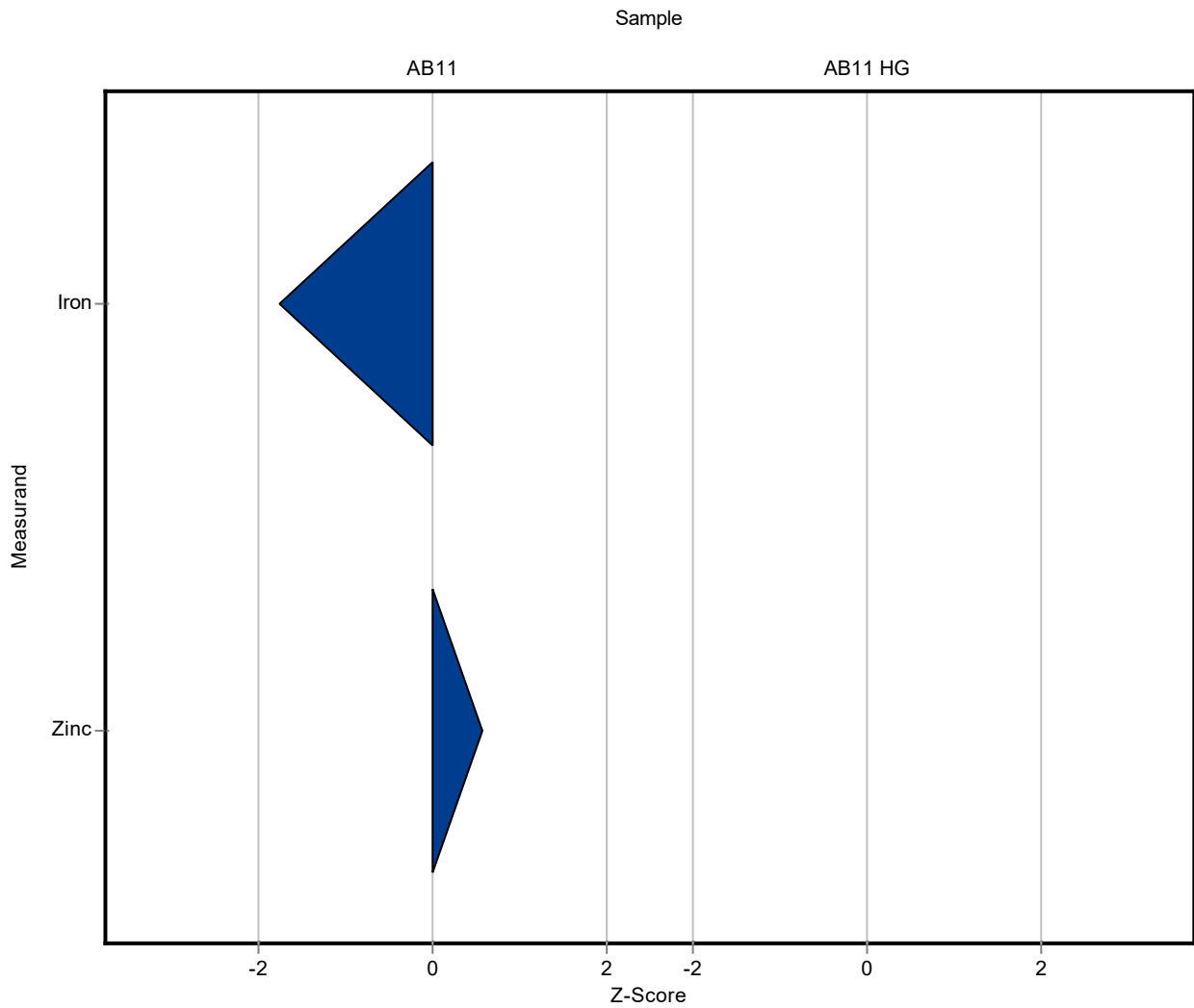


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	- ± -	2.95	-	-
Antimony	mg/l	0.00752 ± 0.000279	- ± -	0.000752	-	-
Arsenic	mg/l	0.00937 ± 0.000185	- ± -	0.000937	-	-
Barium	mg/l	3.31 ± 0.127	- ± -	0.331	-	-
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	<0.03 (LOQ) ± -	0.000072	-	-
Chromium	mg/l	0.0344 ± 0.00163	<0.35 (LOQ) ± -	0.00413	-	-
Cobalt	mg/l	0.0199 ± 0.000808	- ± -	0.00199	-	-
Copper	mg/l	0.0675 ± 0.00215	<0.2 (LOQ) ± -	0.00675	-	-
Iron	mg/l	0.544 ± 0.0269	0.43 ± 0.0246	0.0653	79.1	-1.74
Lead	mg/l	0.0118 ± 0.00052	<0.3 (LOQ) ± -	0.00118	-	-
Molybdenum	mg/l	0.023 ± 0.001	- ± -	0.00253	-	-
Nickel	mg/l	0.0198 ± 0.000858	<0.2 (LOQ) ± -	0.00218	-	-
Selenium	mg/l	- ± -	- ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	- ± -	0.00335	-	-
Vanadium	mg/l	0.0255 ± 0.00113	- ± -	0.00255	-	-
Zinc	mg/l	0.0997 ± 0.00672	0.11 ± 0.0109	0.0179	110	0.57

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	- ± -	0.000115	-	-



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

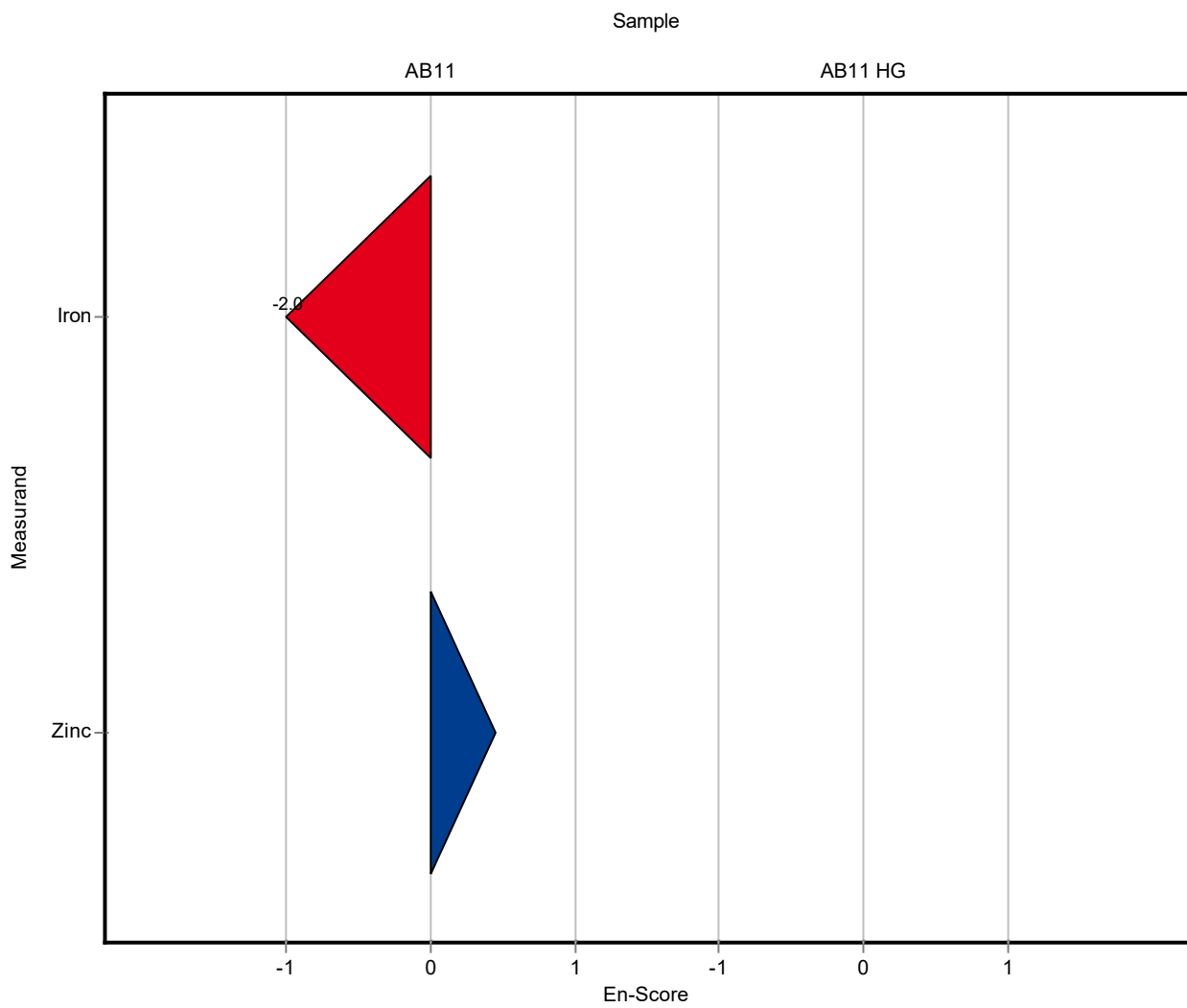
Labcode: LC0027

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	- ± -	2.95	-	-
Antimony	mg/l	0.00752 ± 0.000279	- ± -	0.000752	-	-
Arsenic	mg/l	0.00937 ± 0.000185	- ± -	0.000937	-	-
Barium	mg/l	3.31 ± 0.127	- ± -	0.331	-	-
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	<0.03 (LOQ) ± -	0.000072	-	-
Chromium	mg/l	0.0344 ± 0.00163	<0.35 (LOQ) ± -	0.00413	-	-
Cobalt	mg/l	0.0199 ± 0.000808	- ± -	0.00199	-	-
Copper	mg/l	0.0675 ± 0.00215	<0.2 (LOQ) ± -	0.00675	-	-
Iron	mg/l	0.544 ± 0.0269	0.43 ± 0.0246	0.0653	79.1	-2.03
Lead	mg/l	0.0118 ± 0.00052	<0.3 (LOQ) ± -	0.00118	-	-
Molybdenum	mg/l	0.023 ± 0.001	- ± -	0.00253	-	-
Nickel	mg/l	0.0198 ± 0.000858	<0.2 (LOQ) ± -	0.00218	-	-
Selenium	mg/l	- ± -	- ± -	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	- ± -	0.00335	-	-
Vanadium	mg/l	0.0255 ± 0.00113	- ± -	0.00255	-	-
Zinc	mg/l	0.0997 ± 0.00672	0.11 ± 0.0109	0.0179	110	0.45

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	- ± -	0.000115	-	-

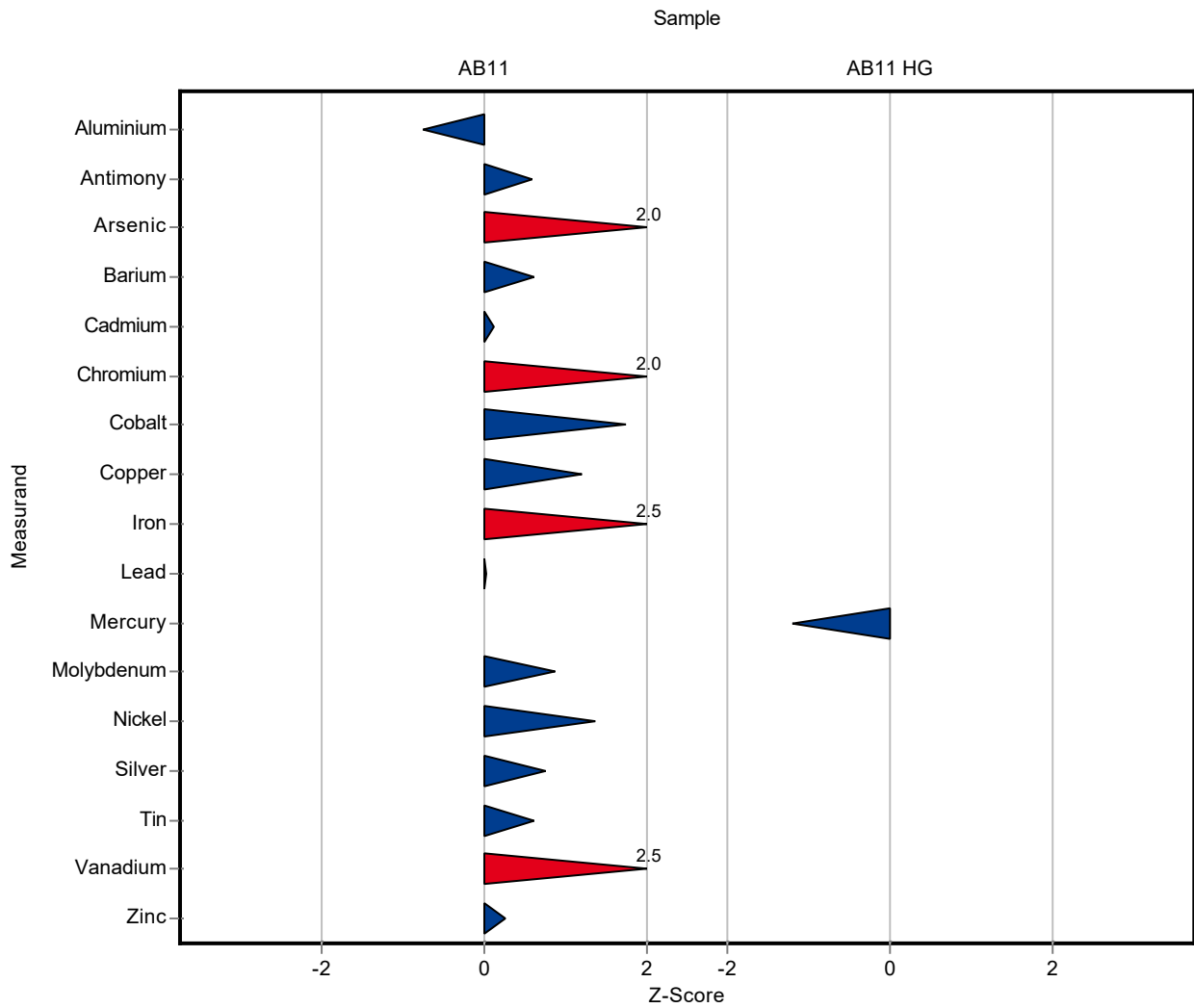


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	27.2485 ± 9	2.95	92.5	-0.75
Antimony	mg/l	0.00752 ± 0.000279	0.00796 ± 0.00021	0.000752	106	0.59
Arsenic	mg/l	0.00937 ± 0.000185	0.01126 ± 0.003	0.000937	120	2.02
Barium	mg/l	3.31 ± 0.127	3.5145 ± 0.9	0.331	106	0.62
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	0.00073 ± 0.000021	0.000072	101	0.12
Chromium	mg/l	0.0344 ± 0.00163	0.04275 ± 0.009	0.00413	124	2.01
Cobalt	mg/l	0.0199 ± 0.000808	0.02335 ± 0.009	0.00199	118	1.75
Copper	mg/l	0.0675 ± 0.00215	0.07555 ± 0.0021	0.00675	112	1.20
Iron	mg/l	0.544 ± 0.0269	0.70812 ± 0.021	0.0653	130	2.52
Lead	mg/l	0.0118 ± 0.00052	0.01182 ± 0.003	0.00118	100	0.03
Molybdenum	mg/l	0.023 ± 0.001	0.02518 ± 0.009	0.00253	110	0.86
Nickel	mg/l	0.0198 ± 0.000858	0.02274 ± 0.009	0.00218	115	1.36
Selenium	mg/l	- ± -	0.01708 ± 0.003	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.00304 ± 0.0009	0.00109	137	0.76
Tin	mg/l	0.0335 ± 0.000982	0.03549 ± 0.009	0.00335	106	0.60
Vanadium	mg/l	0.0255 ± 0.00113	0.03172 ± 0.009	0.00255	125	2.45
Zinc	mg/l	0.0997 ± 0.00672	0.10416 ± 0.03	0.0179	104	0.25

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.00041 ± 0.000015	0.000115	74.8	-1.20



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

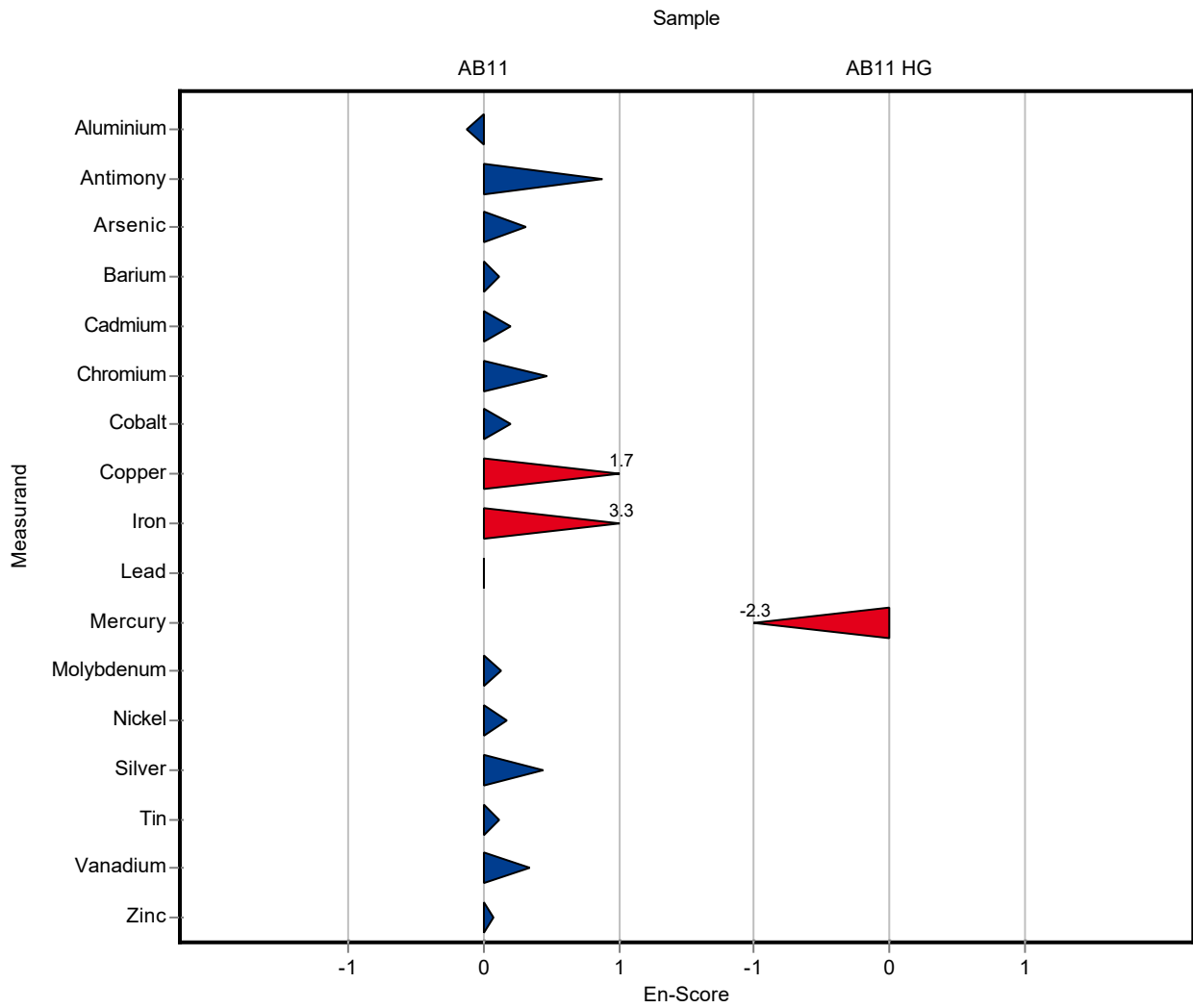
Labcode: LC0028

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	27.2485 ± 9	2.95	92.5	-0.12
Antimony	mg/l	0.00752 ± 0.000279	0.00796 ± 0.00021	0.000752	106	0.88
Arsenic	mg/l	0.00937 ± 0.000185	0.01126 ± 0.003	0.000937	120	0.32
Barium	mg/l	3.31 ± 0.127	3.5145 ± 0.9	0.331	106	0.11
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	0.00073 ± 0.000021	0.000072	101	0.19
Chromium	mg/l	0.0344 ± 0.00163	0.04275 ± 0.009	0.00413	124	0.46
Cobalt	mg/l	0.0199 ± 0.000808	0.02335 ± 0.009	0.00199	118	0.19
Copper	mg/l	0.0675 ± 0.00215	0.07555 ± 0.0021	0.00675	112	1.71
Iron	mg/l	0.544 ± 0.0269	0.70812 ± 0.021	0.0653	130	3.29
Lead	mg/l	0.0118 ± 0.00052	0.01182 ± 0.003	0.00118	100	0.01
Molybdenum	mg/l	0.023 ± 0.001	0.02518 ± 0.009	0.00253	110	0.12
Nickel	mg/l	0.0198 ± 0.000858	0.02274 ± 0.009	0.00218	115	0.16
Selenium	mg/l	- ± -	0.01708 ± 0.003	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.00304 ± 0.0009	0.00109	137	0.44
Tin	mg/l	0.0335 ± 0.000982	0.03549 ± 0.009	0.00335	106	0.11
Vanadium	mg/l	0.0255 ± 0.00113	0.03172 ± 0.009	0.00255	125	0.35
Zinc	mg/l	0.0997 ± 0.00672	0.10416 ± 0.03	0.0179	104	0.07

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.00041 ± 0.000015	0.000115	74.8	-2.29

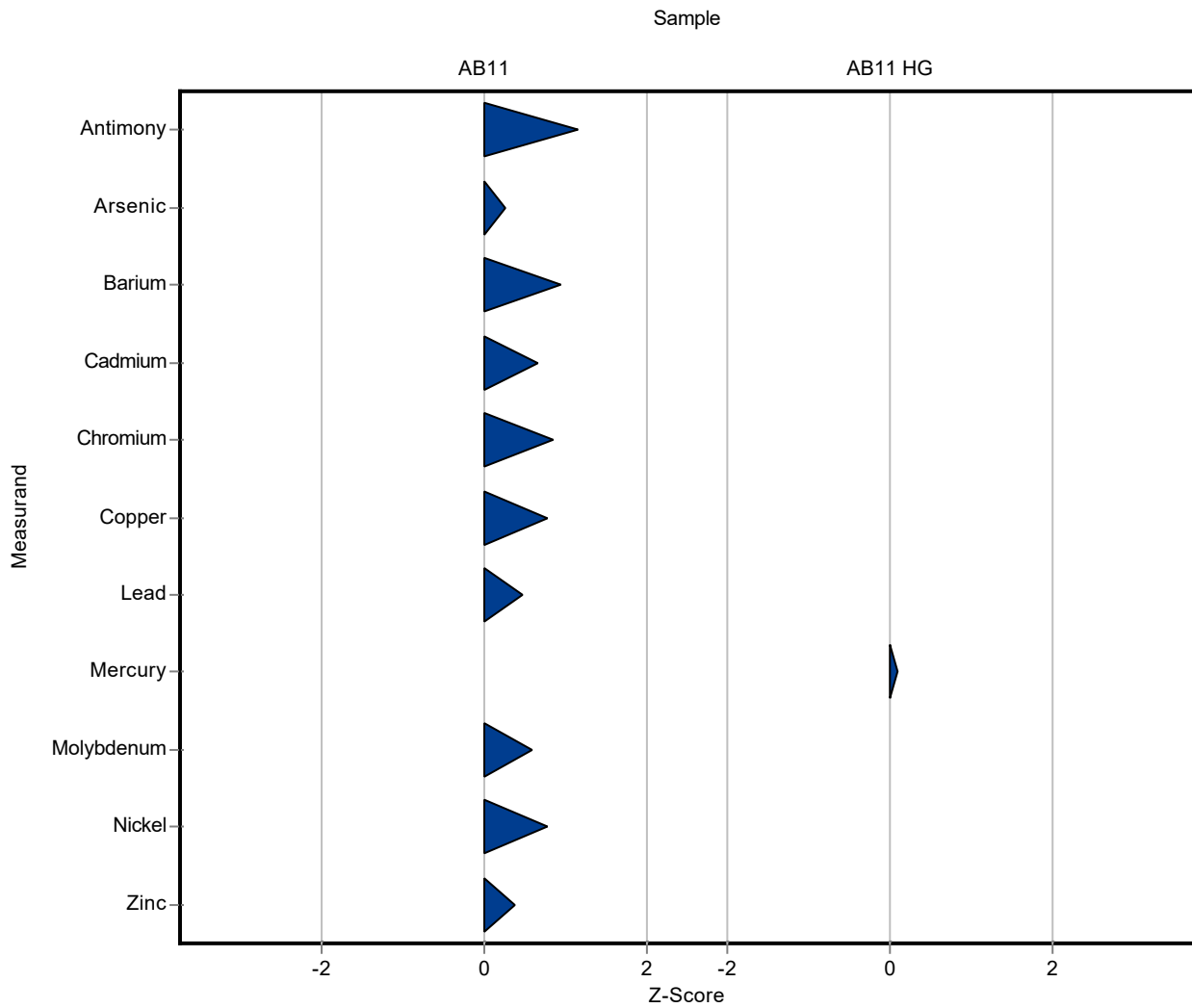


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	- ± -	2.95	-	-
Antimony	mg/l	0.00752 ± 0.000279	0.008389 ± 0.00126	0.000752	112	1.16
Arsenic	mg/l	0.00937 ± 0.000185	0.009612 ± 0.00144	0.000937	103	0.26
Barium	mg/l	3.31 ± 0.127	3.617461 ± 0.54262	0.331	109	0.93
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	0.000768 ± 0.00012	0.000072	107	0.65
Chromium	mg/l	0.0344 ± 0.00163	0.037895 ± 0.00568	0.00413	110	0.84
Cobalt	mg/l	0.0199 ± 0.000808	- ± -	0.00199	-	-
Copper	mg/l	0.0675 ± 0.00215	0.072793 ± 0.01092	0.00675	108	0.79
Iron	mg/l	0.544 ± 0.0269	- ± -	0.0653	-	-
Lead	mg/l	0.0118 ± 0.00052	0.012338 ± 0.00185	0.00118	105	0.47
Molybdenum	mg/l	0.023 ± 0.001	0.024503 ± 0.00368	0.00253	107	0.60
Nickel	mg/l	0.0198 ± 0.000858	0.021496 ± 0.00322	0.00218	109	0.79
Selenium	mg/l	- ± -	0.0013 ± 0.00019	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	- ± -	0.00335	-	-
Vanadium	mg/l	0.0255 ± 0.00113	- ± -	0.00255	-	-
Zinc	mg/l	0.0997 ± 0.00672	0.106545 ± 0.01598	0.0179	107	0.38

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000558 ± 0.000056	0.000115	102	0.08



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

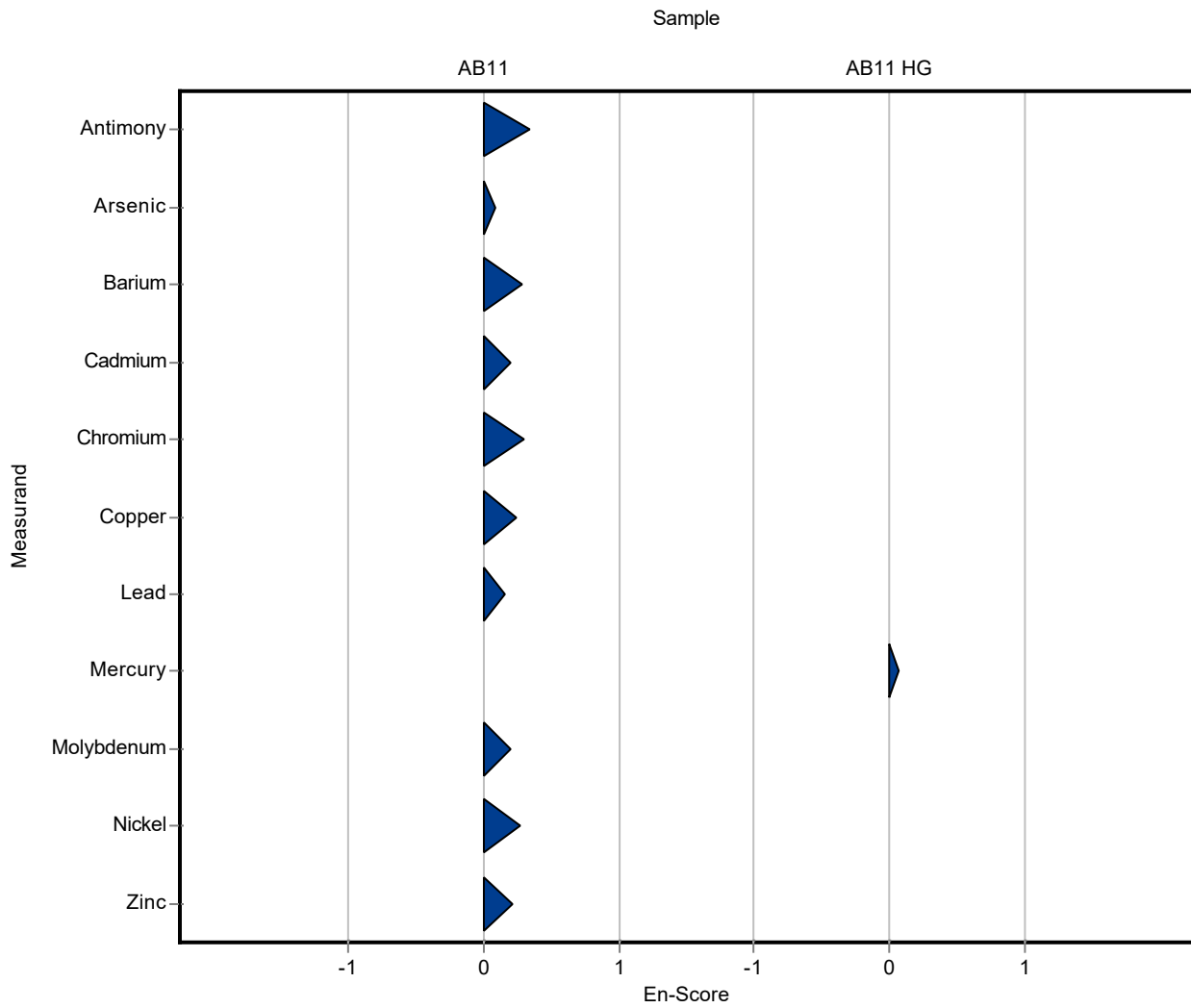
Labcode: LC0029

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	- ± -	2.95	-	-
Antimony	mg/l	0.00752 ± 0.000279	0.008389 ± 0.00126	0.000752	112	0.34
Arsenic	mg/l	0.00937 ± 0.000185	0.009612 ± 0.00144	0.000937	103	0.08
Barium	mg/l	3.31 ± 0.127	3.617461 ± 0.54262	0.331	109	0.28
Boron	mg/l	0.324 ± 0.015	- ± -	0.0324	-	-
Cadmium	mg/l	0.000721 ± 0.0000196	0.000768 ± 0.00012	0.000072	107	0.20
Chromium	mg/l	0.0344 ± 0.00163	0.037895 ± 0.00568	0.00413	110	0.30
Cobalt	mg/l	0.0199 ± 0.000808	- ± -	0.00199	-	-
Copper	mg/l	0.0675 ± 0.00215	0.072793 ± 0.01092	0.00675	108	0.24
Iron	mg/l	0.544 ± 0.0269	- ± -	0.0653	-	-
Lead	mg/l	0.0118 ± 0.00052	0.012338 ± 0.00185	0.00118	105	0.15
Molybdenum	mg/l	0.023 ± 0.001	0.024503 ± 0.00368	0.00253	107	0.20
Nickel	mg/l	0.0198 ± 0.000858	0.021496 ± 0.00322	0.00218	109	0.26
Selenium	mg/l	- ± -	0.0013 ± 0.00019	-	-	-
Silver	mg/l	0.00222 ± 0.000581	- ± -	0.00109	-	-
Tin	mg/l	0.0335 ± 0.000982	- ± -	0.00335	-	-
Vanadium	mg/l	0.0255 ± 0.00113	- ± -	0.00255	-	-
Zinc	mg/l	0.0997 ± 0.00672	0.106545 ± 0.01598	0.0179	107	0.21

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.000558 ± 0.000056	0.000115	102	0.08

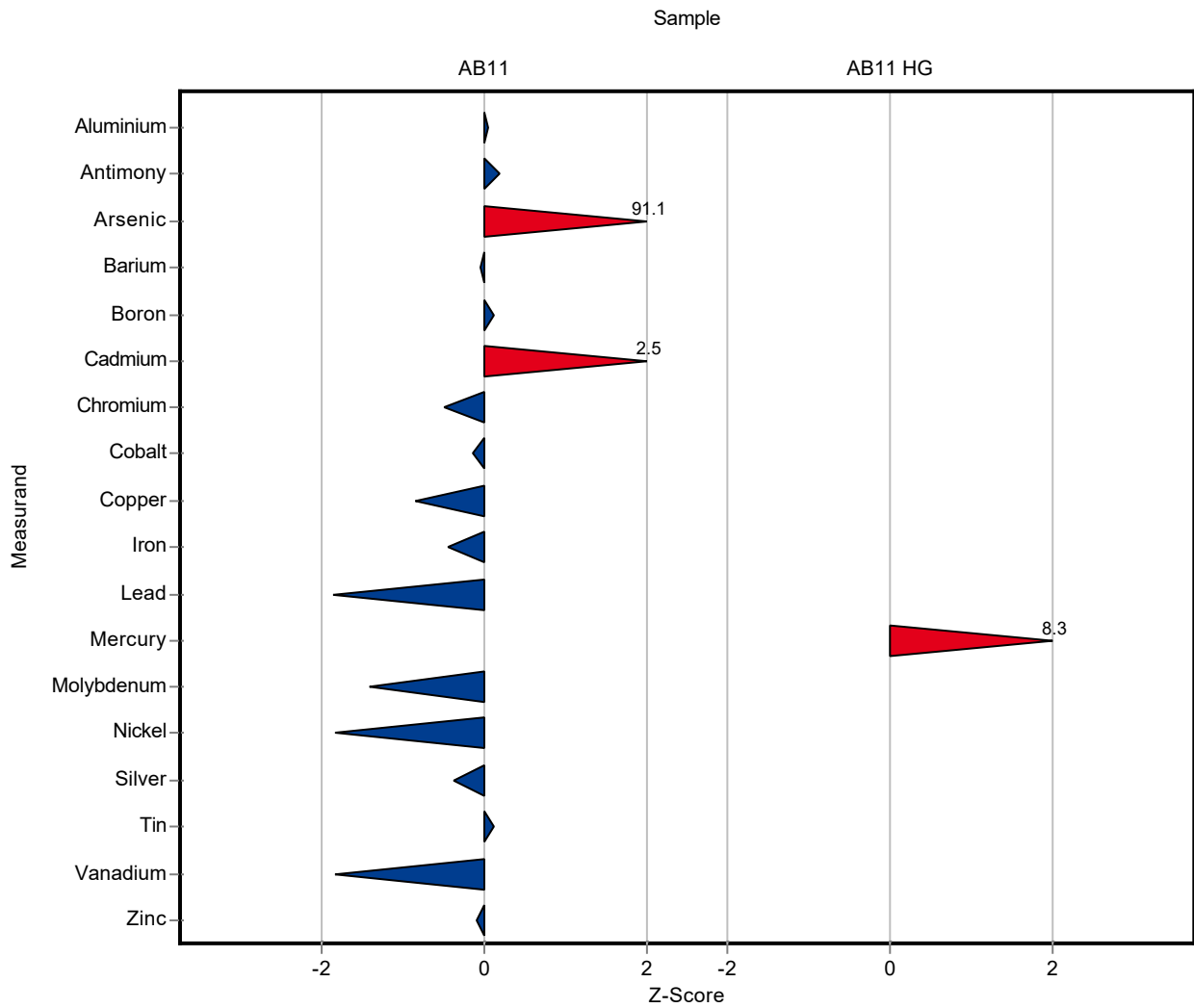


Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Aluminium	mg/l	29.5 ± 0.506	29.6 ± 2.8	2.95	100	0.05
Antimony	mg/l	0.00752 ± 0.000279	0.00766 ± 0.0012	0.000752	102	0.19
Arsenic	mg/l	0.00937 ± 0.000185	0.0947 ± 0.017	0.000937	1010	91.09
Barium	mg/l	3.31 ± 0.127	3.29 ± 0.14	0.331	99.4	-0.06
Boron	mg/l	0.324 ± 0.015	0.328 ± 0.023	0.0324	101	0.12
Cadmium	mg/l	0.000721 ± 0.0000196	0.0009 ± 0.00022	0.000072	125	2.48
Chromium	mg/l	0.0344 ± 0.00163	0.0324 ± 0.0017	0.00413	94.1	-0.49
Cobalt	mg/l	0.0199 ± 0.000808	0.0196 ± 0.0012	0.00199	98.6	-0.14
Copper	mg/l	0.0675 ± 0.00215	0.0617 ± 0.0049	0.00675	91.4	-0.86
Iron	mg/l	0.544 ± 0.0269	0.515 ± 0.027	0.0653	94.7	-0.44
Lead	mg/l	0.0118 ± 0.00052	0.0096 ± 0.0013	0.00118	81.5	-1.85
Molybdenum	mg/l	0.023 ± 0.001	0.0194 ± 0.00072	0.00253	84.4	-1.42
Nickel	mg/l	0.0198 ± 0.000858	0.0158 ± 0.0017	0.00218	79.9	-1.83
Selenium	mg/l	- ± -	0.0018 ± 0.00056	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.0018 ± 0.000085	0.00109	81.3	-0.38
Tin	mg/l	0.0335 ± 0.000982	0.0339 ± 0.0031	0.00335	101	0.13
Vanadium	mg/l	0.0255 ± 0.00113	0.0208 ± 0.0026	0.00255	81.6	-1.84
Zinc	mg/l	0.0997 ± 0.00672	0.0982 ± 0.0051	0.0179	98.5	-0.08

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.00151 ± 0.00057	0.000115	275	8.35



Summary of results Waste acc to landfill directive (eluate metals) - AB11 - En-Score

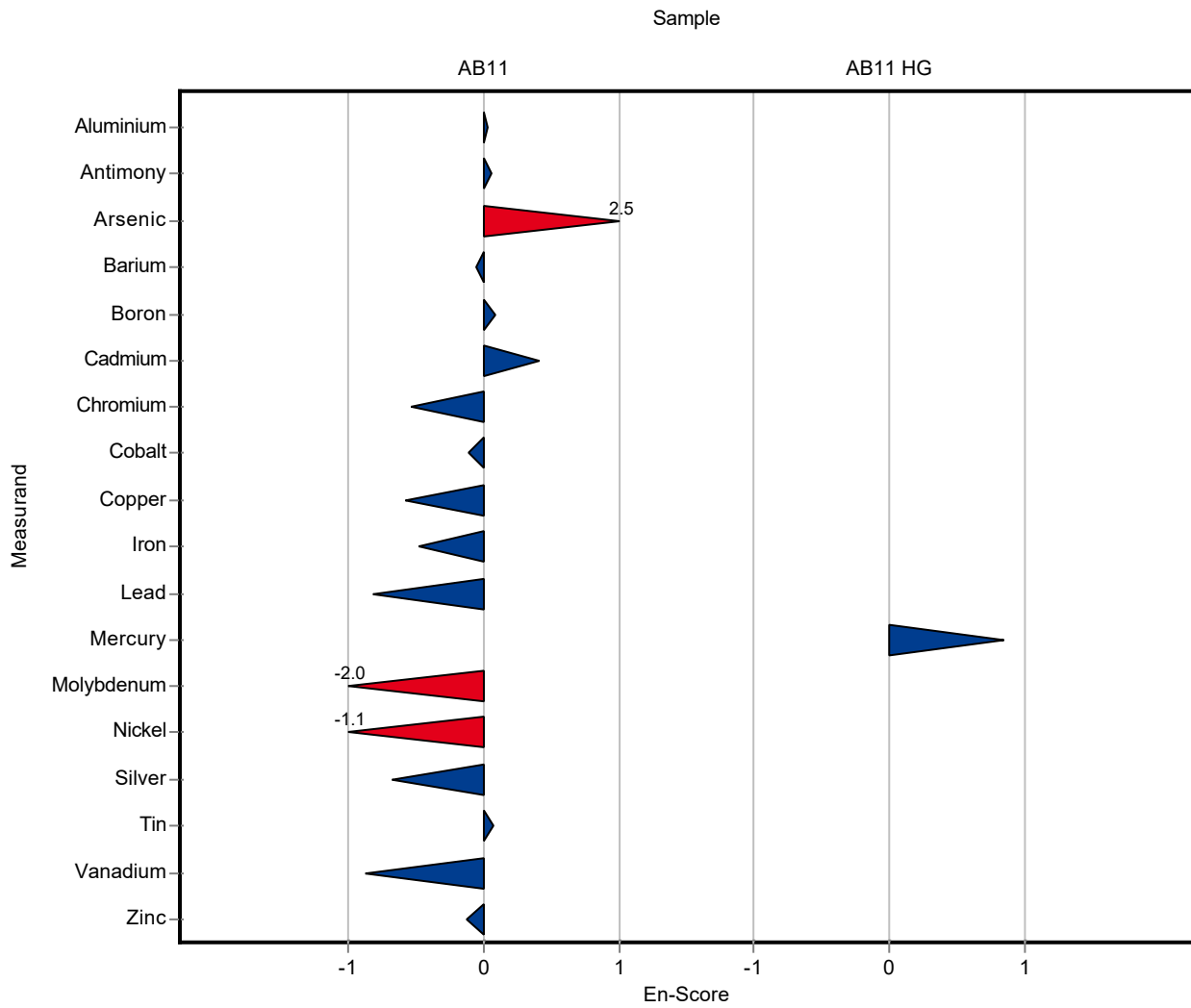
Labcode: LC0030

Sample: AB11

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Aluminium	mg/l	29.5 ± 0.506	29.6 ± 2.8	2.95	100	0.03
Antimony	mg/l	0.00752 ± 0.000279	0.00766 ± 0.0012	0.000752	102	0.06
Arsenic	mg/l	0.00937 ± 0.000185	0.0947 ± 0.017	0.000937	1010	2.51
Barium	mg/l	3.31 ± 0.127	3.29 ± 0.14	0.331	99.4	-0.06
Boron	mg/l	0.324 ± 0.015	0.328 ± 0.023	0.0324	101	0.08
Cadmium	mg/l	0.000721 ± 0.0000196	0.0009 ± 0.00022	0.000072	125	0.41
Chromium	mg/l	0.0344 ± 0.00163	0.0324 ± 0.0017	0.00413	94.1	-0.54
Cobalt	mg/l	0.0199 ± 0.000808	0.0196 ± 0.0012	0.00199	98.6	-0.11
Copper	mg/l	0.0675 ± 0.00215	0.0617 ± 0.0049	0.00675	91.4	-0.58
Iron	mg/l	0.544 ± 0.0269	0.515 ± 0.027	0.0653	94.7	-0.48
Lead	mg/l	0.0118 ± 0.00052	0.0096 ± 0.0013	0.00118	81.5	-0.82
Molybdenum	mg/l	0.023 ± 0.001	0.0194 ± 0.00072	0.00253	84.4	-2.05
Nickel	mg/l	0.0198 ± 0.000858	0.0158 ± 0.0017	0.00218	79.9	-1.14
Selenium	mg/l	- ± -	0.0018 ± 0.00056	-	-	-
Silver	mg/l	0.00222 ± 0.000581	0.0018 ± 0.000085	0.00109	81.3	-0.69
Tin	mg/l	0.0335 ± 0.000982	0.0339 ± 0.0031	0.00335	101	0.07
Vanadium	mg/l	0.0255 ± 0.00113	0.0208 ± 0.0026	0.00255	81.6	-0.88
Zinc	mg/l	0.0997 ± 0.00672	0.0982 ± 0.0051	0.0179	98.5	-0.12

Sample: AB11HG

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Mercury	mg/l	0.000548 ± 0.0000524	0.00151 ± 0.00057	0.000115	275	0.84



E9. Methodenübersicht / Overview of methods

LabCode	Sample	Aluminium	Antimony	Arsenic	Barium	Boron	Cadmium	Chromium	Cobalt
LC0001	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0002	AB11	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0003	AB11	ICP-OES; EN ISO 11885	AAS; DIN 38405-D 32	AAS (Hydride); EN ISO 11969	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	AAS; EN ISO 5961	AAS; EN 1233	ICP-OES; EN ISO 11885
LC0004	AB11	ICP-OES; EN ISO 11885 (E22)	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885 (E22)	ICP-OES; EN ISO 11885 (E22)	ICP-OES; EN ISO 11885 (E22)	ICP-OES; EN ISO 11885 (E22)	ICP-OES; EN ISO 11885 (E22)	ICP-OES; EN ISO 11885 (E22)
LC0005	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885
LC0006	AB11	ICP-OES;	ICP-MS;	ICP-MS;		ICP-MS;	ICP-MS;	ICP-OES;	ICP-MS;
LC0007	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2		ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0008	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0009	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0010	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885		ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885
LC0011	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2		ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0012	AB11								
LC0013	AB11	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0014	AB11						AAS; EN ISO 5961	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885
LC0015	AB11	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)
LC0016	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0017	AB11		ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2		ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	
LC0018	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885
LC0019	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0020	AB11	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885
LC0021	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885
LC0022	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0023	AB11	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885
LC0024	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0025	AB11	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0026	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0027	AB11						F-AAS; ISO 8288	F-AAS; ISO 8288	
LC0028	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2		ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0029	AB11		ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2		ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	
LC0030	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885

LabCode	Sample	Copper	Iron	Lead	Molybdenum	Nickel	Selenium	Silver
LC0001	AB11	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0002	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0003	AB11	AAS; DIN 38406-E 7	ICP-OES; EN ISO 11885	AAS; DIN 38406-E 6	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	AAS; DIN 38406-23	ICP-OES; EN ISO 11885
LC0004	AB11	ICP-OES; EN ISO 11885 (E22)	ICP-OES; EN ISO 11885 (E22)	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885 (E22)	ICP-OES; EN ISO 11885 (E22)	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885 (E22)
LC0005	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	
LC0006	AB11	ICP-MS;	ICP-OES;	ICP-MS;		ICP-MS;	ICP-MS;	
LC0007	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	
LC0008	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0009	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0010	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	
LC0011	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0012	AB11							
LC0013	AB11	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0014	AB11	ICP-OES; EN ISO 11885			ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885		
LC0015	AB11	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)
LC0016	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0017	AB11	ICP-MS; EN ISO 17294-2		ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	
LC0018	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885
LC0019	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0020	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0021	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885
LC0022	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0023	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885
LC0024	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0025	AB11	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0026	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0027	AB11	F-AAS; ISO 8288	F-AAS; SR 13315/C91 atomic absorption FAAS	F-AAS; ISO 8288		F-AAS; ISO 8288		
LC0028	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0029	AB11	ICP-MS; EN ISO 17294-2		ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	
LC0030	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885

LabCode	Sample	Tin	Vanadium	Zinc	Mercury
LC0001	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885	CV-AAS; EN ISO 12846
LC0002	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0003	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	CV-AAS; EN ISO 12846
LC0004	AB11	ICP-OES; EN ISO 11885 (E22)	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885 (E22)	CV-AAS; EN ISO 12846
LC0005	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	CV-AAS; EN ISO 12846
LC0006	AB11	ICP-MS;	ICP-MS;		
LC0007	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0008	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0009	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	CV-AAS; EN ISO 12846
LC0010	AB11			ICP-OES; EN ISO 11885	AFS; EN ISO 17852
LC0011	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0012	AB11				
LC0013	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	CV-AAS; EN ISO 12846
LC0014	AB11		ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	
LC0015	AB11	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)	ICP-MS; EN ISO 17294-2 (E29)	CV-AAS; EN ISO 12846
LC0016	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	CV-AAS; EN ISO 12846
LC0017	AB11			ICP-MS; EN ISO 17294-2	CV-AAS; EN ISO 12846
LC0018	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	CV-AAS; EN ISO 12846
LC0019	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0020	AB11	ICP-MS; EN ISO 17294-2	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	AFS; EN ISO 17852 (E35)
LC0021	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885
LC0022	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	CV-AAS; EN ISO 12846
LC0023	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	CV-AAS; EN ISO 12846
LC0024	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	CV-AAS; EN ISO 12846
LC0025	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	CV-AAS; EN ISO 12846 FIMS
LC0026	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0027	AB11			F-AAS; ISO 8288	
LC0028	AB11	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2	ICP-MS; EN ISO 17294-2
LC0029	AB11			ICP-MS; EN ISO 17294-2	CV-AAS; EN ISO 12846 (E12)
LC0030	AB11	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	ICP-OES; EN ISO 11885	CV-AAS; EN ISO 12846