umweltbundesamt
ENVIRONMENT AGENCY AUSTRIA

Proficiency Testing Scheme für die Umweltanalytik

AB15 Abfall nach der Deponie-VO (Eluat Ionen)

Proficiency Testing Scheme for Environmental Analysis

AB15 Waste according to landfill directive (eluate ions)

BERICHT / REPORT

Probenversand / Sample dispatch: 24.09.2024

Ausgabe/Edition 1: 13.11.2024

Dieser Report umfasst 206 Seiten.
This report comprises 206 pages.

Anbieter der Eignungsprüfung / Provider of the proficiency test:
Anschrift / Address: Umweltbundesamt GmbH
Spittelauer Lände 5
1090 Vienna/Austria
E-Mail: ringversuche@umweltbundesamt.at
Tel: +43 (0) 1 31304 4334

Website deutsch: www.umweltbundesamt.at/ringversuche
www.ifatest.at

Website english: https://www.umweltbundesamt.at/en/proficiency-testing
www.ifatest.eu

Koordination und technische Leitung Eignungsprüfungen / coordinator and technical management:
Dipl.-Ing. Monika Denner

Verantwortlich für die Durchführung der Eignungsprüfungsrunde / Responsible for the implementation of this proficiency test:
Dipl.-Ing. Johannes Urteil, Martha Schmid MSc unter Mitarbeit von Mag. Vito Satrapa und Ing. Martina Wagner
Tel.: +43 (0) 1 31304 4334

Verantwortlich für die Freigabe des Berichts / Responsible for authorizing the report:
Dipl.-Ing. Monika Denner
Leitung Eignungsprüfungen für den Bereich chemische Analytik / Management for proficiency tests for chemical analysis

umweltbundesamt	**Signatory**	Monika Christine Denner
	Date/Time-UTC	2024-11-13T15:21:45+01:00
Note	According to EU regulation No 910/2014 (eIDAS) this qualified electronic signature is legally equivalent to a handwritten signature. Verification at: http://www.signature-verification.gv.at	

Inhaltsverzeichnis / Table of Contents

D1. Beschreibung des Ringversuchs

D1.1. Ausgestaltung und Durchführung

- Anzahl der Anmeldungen: 29
- Anzahl der übermittelten Datensätze: 29
- Probenversand: 24.09.2024
- Einsendeschluss der Daten: 22.10.2024

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, hergestellt aus Bodenaushubmaterial und Filterstaub.

Das Probenmaterial umfasste:

- 2 Proben Eluat (AB15 und AB15TOC)

Um homogene Probeneluate zu erzielen, wurde die Herstellung der Eluatprobe bereits am 18.07.2024 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 21.08.2024 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 Kühlung bzw. durch Zusatz von Salzsäure (Probe AB15TOC, final 1 % HCl). Die Probe AB15 wurde durch Kühlung stabilisiert (kein Zusatz).

Die homogenen Prüfgegenstände wurden am 24.09.2024 verschickt.

Jedes Teilnehmerlabor erhielt:

- 2 Proben (insgesamt 600 ml), abgefüllt in je 1 x 500ml PET-Flasche und in 1 x 100 ml LDPE-Flasche (Probe AB15TOC)

D1.3. Anweisungen für die Teilnehmenden

Aus Stabilitätsgründen wurde empfohlen bis spätestens 02.10.2024 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.

Die Bestimmung aller Parameter wurde an ein externes Labor (akkreditiert nach EN ISO/IEC 17025) im Unterauftrag vergeben (verdeckte Vergabe, Proben anonymisiert) und erfolgte zeitnah zum Probenversand.

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 parameterorientieren Auswertung (E7) in Form von Mittelwerten ± Messunsicherheit als Kontrollwert (control test value) ± 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 22.10.2024 beim Veranstalter vorliegen. Später eingehende Werte wurden nicht berücksichtigt.

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

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

Die weitere Auswertung erfolgte gemäß ISO 5725-2. Eine statistische Auswertung der Ringversuchsdaten erfolgte erst ab zumindest 6 gültigen, nummerischen 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:

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

Dabei ist:

x_i	Messergebnis des teilnehmenden Labors
$\overline{X}$	zugewiesener Wert Sollwert für die Leistungsbewertung der Teilnehmenden (angegeben auf 3 signifikante Stellen); im Regelfall: ausreißerbereinigter Mittelwert der Ergebnisse der Teilnehmenden. Eine davon abweichende Vorgehensweise wird unter Punkt D4 des Berichts beschrieben.
Kriterium	Vergleichsstandardabweichung berechnet aus den Statistiken der ausreißerbereinigten Teilnehmerergebnissen (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 Realproben 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

$\overline{X}$	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-Score| ≤ 2.0 Ergebnis gut
- 2.0 < |z-Score| < 3.0 Ergebnis fragwürdig
- |z-Score| ≥ 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-Score| ≤ 1.0 zufriedenstellende Leistung
- |E_n-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-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 (± 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 laborientierten Auswertung werden pro Labor in anonymisierter Form die Ergebnisse der einzelnen Labore als Messergebnis ± 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 laborientierten 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. 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 NH4 (als N), NO3 (als N), Sulfat (als SO4), elektr. Leitfähigkeit (25°C) bei Probe AB15 und Parameter TOC (als C) bei Probe AB15TOC:
Bei diesen Parametern erfolgt die Berechnung der Scores nach D2. Das Kriterium wurde jeweils aufgerundet (Kriterien: NH4 (als N): 10 %, NO3 (als N): 6 %, Sulfat (als SO4): 5 %, el. LF: 2 %, TOC (als C): 7.2 %).

Parameter Abdampfrückstand, NO2 (als N), Chlorid, pH-Wert, Fluorid bei Probe AB15:
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. Als Kriterium wurden für den Abdampfrückstand 10 %, für NO2 (als N) 8.5 %, für Chlorid 5 %, für pH-Wert 2 % und bei Fluorid 37 % für die Auswertung festgelegt.

Parameter PO4 (als P) Probe AB15: Aufgrund der Vielzahl an abgegebenen Ergebnisse unter der Bestimmungsgrenze und wegen der starken Unterschiede zwischen den abgegebenen Ergebnissen über der jeweiligen Bestimmungsgrenze (Minimum–Maximum: 0.0143–0.21 mg/l PO4 (als P)) konnte kein zugewiesener Wert festgelegt werden. Für diesen Parameter empfehlen wir einen Vergleich mit den in D6.1 angeführten informativen Daten.

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. mg/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, ausreißer-bereinigt (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 ± U (k=2)	Mittelwert der Kontrollmessungen des Veranstalters ± erweiterte Ergebnisunsicherheit des Kontrollwertes (jeweils angegeben auf 3 signifikante Stellen)
Laborcode	anonymisierte, eindeutige Kennung des teilnehmenden Labors im jeweiligen Ringversuch
Messwert	einzelne(r) Messwert(e) lt. Angabe der Teilnehmenden (maximal 5 Nachkommastellen dargestellt)
Messergebnis	Für die Bewertung herangezogenes Ergebnis lt. Angabe der Teilnehmenden (maximal 5 Nachkommastellen dargestellt).

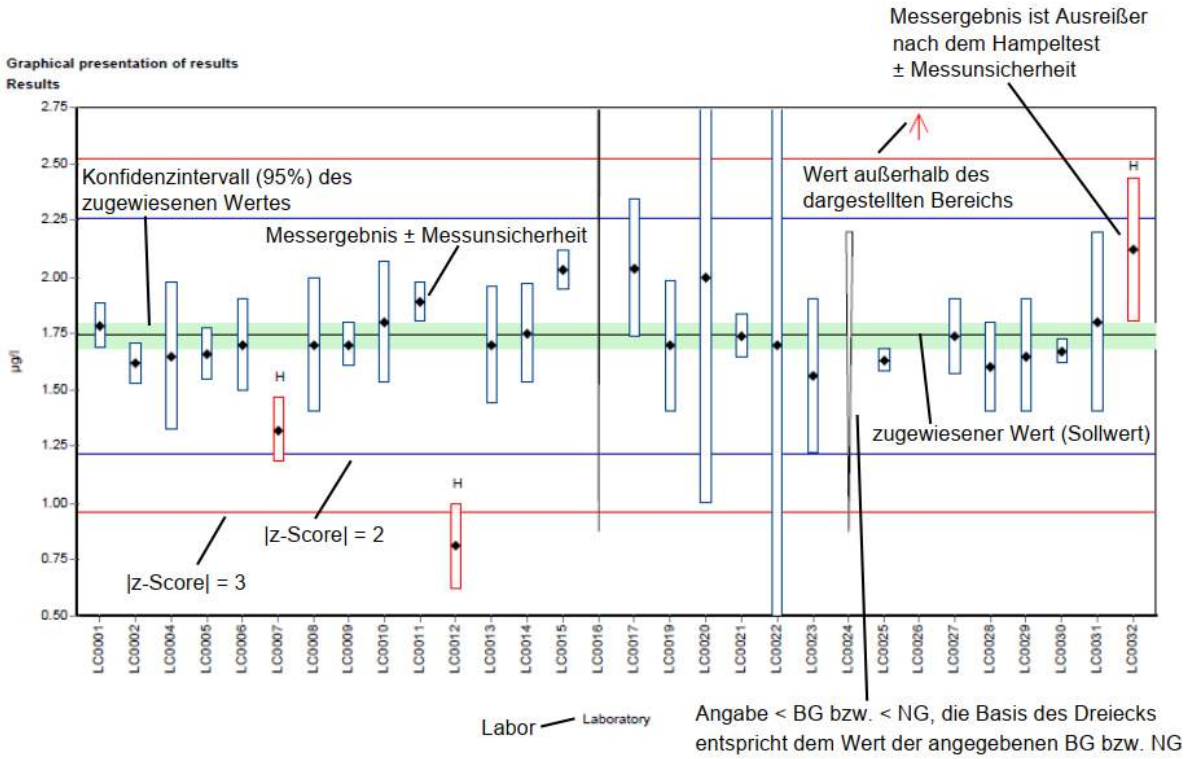
	Bei Eignungsprüfungsrunden mit Vorgabe von unabhängigen Mehrfachbestimmungen, entspricht dies dem berechneten Mittelwert aus den einzelnen Messwerten der Teilnehmenden.
± U	kombinierte Messunsicherheit ohne Erweiterungsfaktor (k=1) lt. Angabe der Teilnehmenden (maximal 5 Nachkommastellen dargestellt)
BG	Bestimmungsgrenze
NG	Nachweisgrenze
WF	Wiederfindungsrate in %, bezogen auf den zugewiesenen Wert (angegeben auf 3 signifikante Stellen, dargestellt maximal 1 Nachkommastelle)
MW	Mittelwert
z-Score	Abweichung des Messergebnisses zum zugewiesenen Wert, ausgedrückt als Vielfaches des Kriteriums (angegeben auf 3 signifikante Stellen, dargestellt maximal 2 Nachkommastellen)
E_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

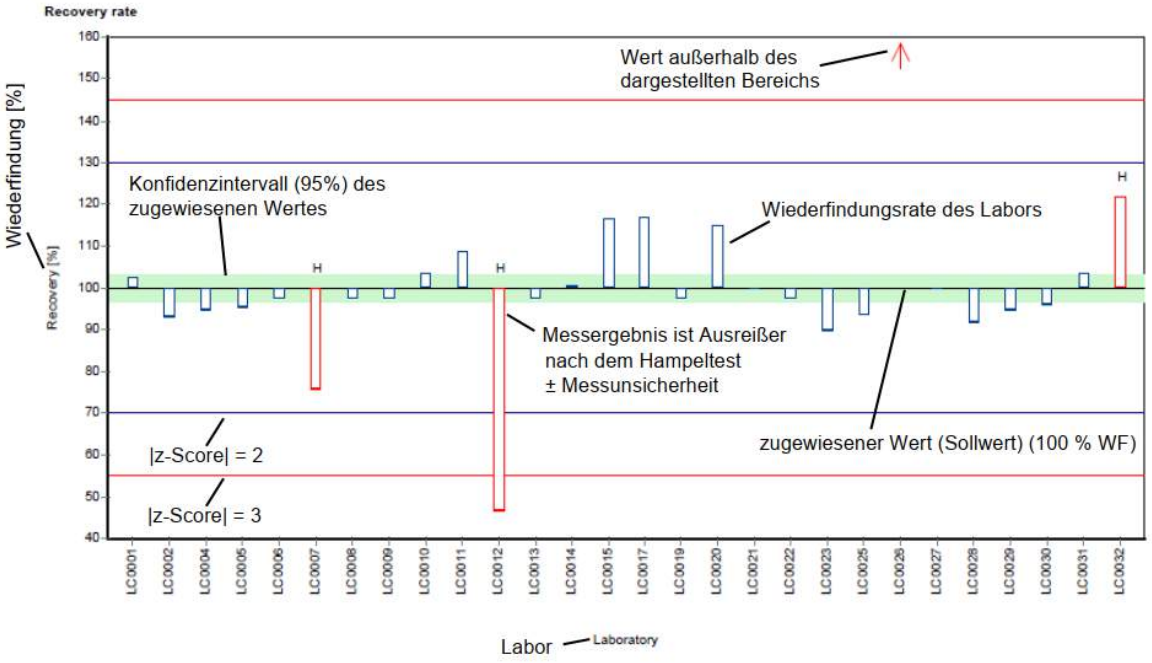
Nachfolgend wird die graphische Darstellung anhand von kommentierten Beispieldiagrammen erläutert.

Beispieldiagramm: Messwerte



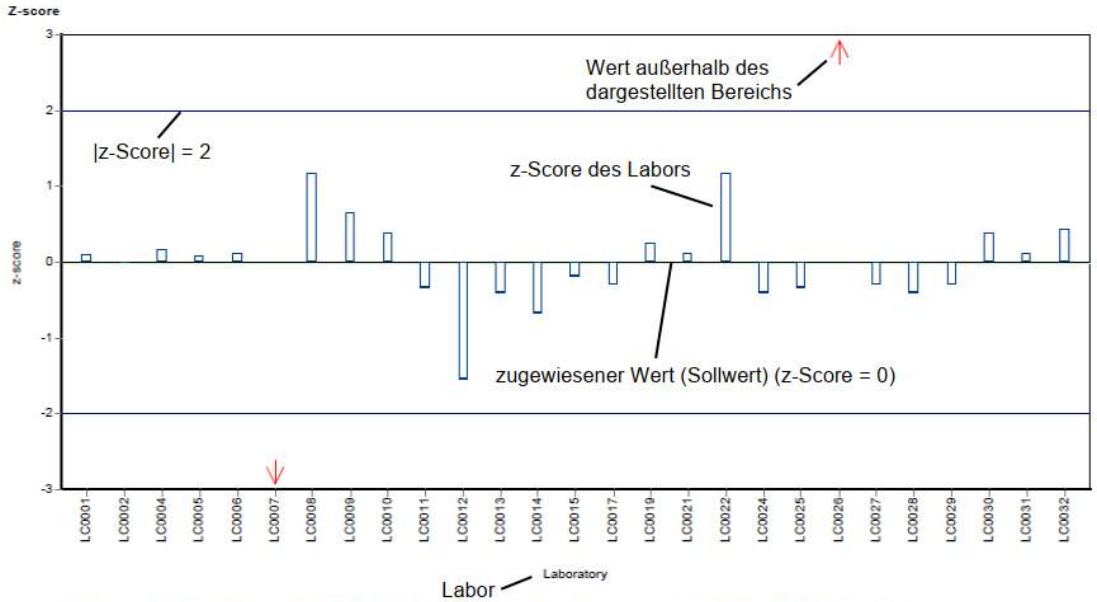
Unterschiedliche Analysenmethoden werden mit unterschiedlichen Farben kenntlich gemacht.

Beispieldiagramm: Wiederfindung zum zugewiesenen Wert



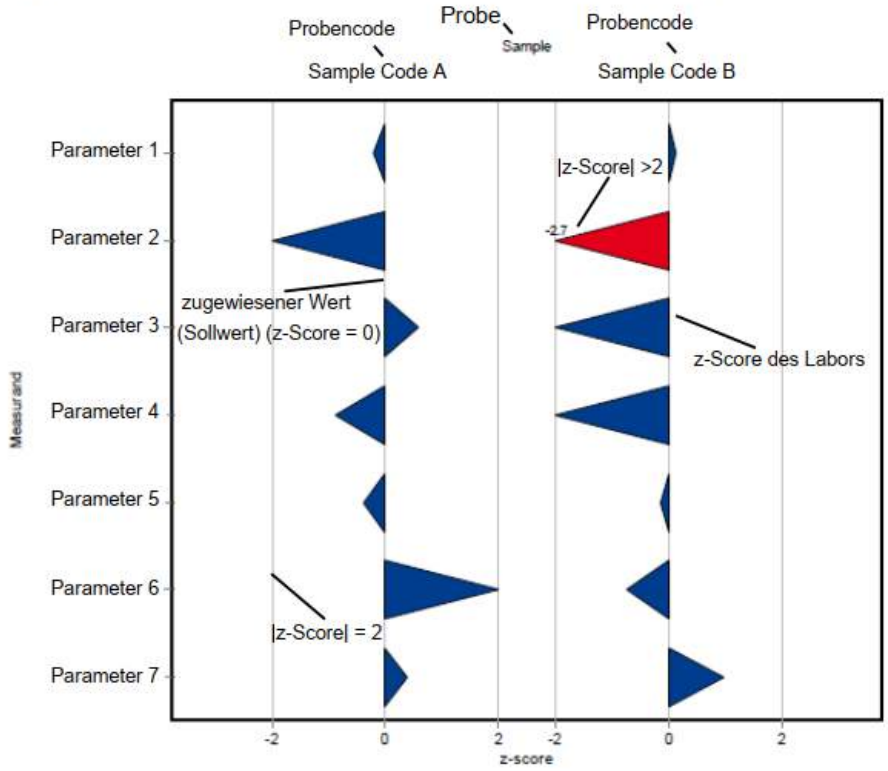
Unterschiedliche Analysenmethoden werden mit unterschiedlichen Farben kenntlich gemacht.

Beispieldiagramm: z-Score

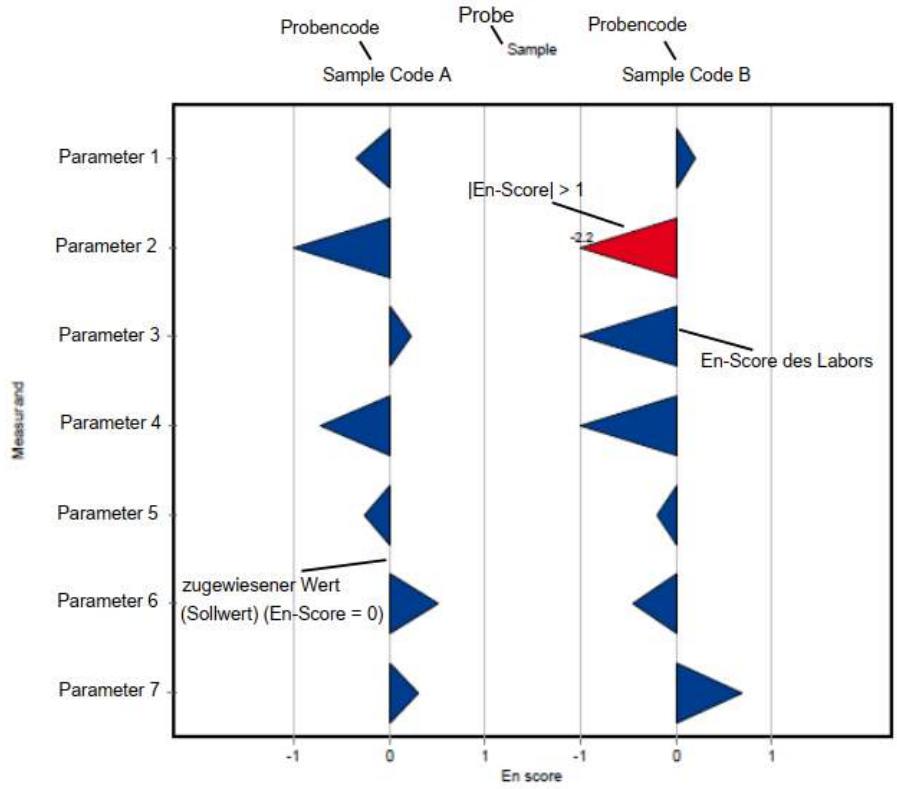


Unterschiedliche Analysenmethoden werden mit unterschiedlichen Farben kenntlich gemacht.

Beispieldiagramm: z-Score (laborientierte Auswertung)



Beispieldiagramm: En-Score (laborientierte Auswertung)



D6. Zusammenfassung

D6.1. Tabelle der zugewiesenen Werte

Parameter	Probe	Einheit	zugewiesener Wert	±	U (k=2)	Kriterium	Kriterium [%]
Chlorid	AB15	mg/l	1650	±	23.6	82.4	5
elektr. Leitfähigkeit (25°C)	AB15	mS/m	753	±	5.26	15.1	2
Abdampfrückstand	AB15	mg/l	5190	±	212	519	10
Fluorid	AB15	mg/l	0.575	±	0.0938	0.213	37
NH4 (als N)	AB15	mg/l	29.9	±	1.24	2.99	10
NO2 (als N)	AB15	mg/l	1.11	±	0.0302	0.0942	8.5
NO3 (als N)	AB15	mg/l	27.4	±	0.587	1.65	6
pH-Wert	AB15		11.7	±	0.0602	0.234	2
PO4 (als P)*	AB15	mg/l	-	±	-	-	-
Sulfat (als SO4)	AB15	mg/l	448	±	7.35	22.4	5
TOC (als C)	AB15 -	mg/l	18.7	±	0.489	1.34	7.2

*Für nachfolgenden Parameter können keine zugewiesenen Werte ermittelt werden (Vergleichsstandardabweichung >50%). Daher ist zur Information der berechnete Mittelwert MW+/- U(k=2) über die Daten der akkreditierten Labore (n) nach Ausreißerbereinigung angeführt. Dieser kann zum Vergleich im Rahmen Ihrer internen QS-Maßnahmen herangezogen werden.

PO4 (als P): MW (n=9; akkr.) +/- U(k=2): <0.100 (0.0747+/- 0.0474) mg/l

D6.2. Zusammenfassung der ausreißerbereinigten Ringversuchsergebnisse

Parameter	Probe	Anzahl Labors für Berechnung	Anzahl Ausreißer Labors	Einheit	Mittelwert	±	VB (99%)	Minimum	Maximum	sR	vR [%]
Chlorid	AB15	26	2	mg/l	1640	±	33.7	1510	1780	57.3	3.5
elektr. Leitfähigkeit (25°C)	AB15	26	3	mS/m	753	±	7.89	722	780	13.4	1.8
Abdampfrückstand	AB15	27	0	mg/l	5210	±	301	4510	6520	521	10
Fluorid	AB15	22	2	mg/l	0.576	±	0.13	0.0725	0.973	0.204	35
NH4 (als N)	AB15	23	2	mg/l	29.9	±	1.87	22.6	37.2	2.98	10
NO2 (als N)	AB15	22	3	mg/l	1.11	±	0.0453	0.96	1.25	0.0708	6.4
NO3 (als N)	AB15	26	0	mg/l	27.4	±	0.881	24.5	29.6	1.5	5.5
pH-Wert	AB15	28	1		11.7	±	0.0873	11.5	12.1	0.154	1.3
PO4 (als P)	AB15	9	4	mg/l	0.0747	±	0.0711	0.0143	0.21	0.0711	95
Sulfat (als SO4)	AB15	26	2	mg/l	448	±	11	411	495	18.7	4.2
TOC (als C)	AB15 - TOC	22	4	mg/l	18.7	±	0.734	16.7	21.4	1.15	6.1

E1. Description of the proficiency test

E1.1. Design and implementation

- Number of registrations: 29
- Number of submitted data records: 29
- Dispatch of samples: September 24th, 2024
- Closing date for submission of data: October 22nd, 2024

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 prepared from excavated soil and fly ash.

The following samples were made available:

- 2 samples eluate (AB15 and AB15TOC)

To guarantee homogenous samples, the production of the eluate samples was started on 18th of July 2024 (eluate according to OENORM EN 12457-4; s : l = 1 : 10). After the elution, the eluate was filtered using 0.45 µm membrane disc filters on 21st of August 2024. 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 sample AB15TOC was stabilized by cooling and by addition of hydrochloric acid (final concentration 1 % HCl). Sample AB15 was stabilized by cooling.

The homogeneous proficiency test items were dispatched on 24th September 2024.

Each participant received:

- 2 samples (altogether 600 ml), filled in 1 x 500 ml PET bottle and 1 x 100 ml LDPE bottle (sample AB15TOC)

E1.3. Instructions for the participants

For reasons of stability, it was recommended to start the analysis by the 02nd of October 2024 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.

The determination of all parameters was performed at an external laboratory (accredited according to EN ISO/IEC 17025) in subcontract (anonymous submission) and testing was performed close to the time of sample dispatch.

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

In the parameter-oriented evaluation (E7), the results of the control testing are given in the form of arithmetic means of the detected concentrations ± expanded measurement uncertainty as control test value ± 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 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 22nd of October 2024. 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:

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

In this context,

x_i	is the measurement value (result) of the participating laboratory;
$\overline{X}$	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
$\overline{X}$	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-Score| ≤ 2.0 good result
- 2.0 < |z-Score| < 3.0 questionable result
- |z-Score| ≥ 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-Score| ≤ 1.0 satisfactory performance
- |E_n-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. IE_n-ScoreI > 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 (± 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 (± U), recovery rates, z-Scores and additionally evaluation of E_n-Scores on separate pages.

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

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

E4. Explanatory notes

As explained in section E2, the z-Score can also be calculated using the reproducibility standard deviation, calculated from the participants' results (after removal of outliers) in the relevant test round. It might occur that the z-Score between -2 and 2 covers a large range of measurement values when the variance of the results is high. On the other hand, the range of good results can be very narrow, when the variation of the participants' results is small.
The recovery rate is calculated for the individual result based on the assigned value and is thus independent of the reproducibility standard deviation. In the case of a high variance of the results, participants should also consider recovery rates as additional criteria to decide on the necessity of internal quality assurance measures.

Parameters NH4 (as N), NO3 (as N), sulfate (as SO4), electr. conductivity (25°C) for sample AB15 and parameter TOC (as C) in sample AB15TOC:
Scores for all listed parameters were calculated according to E2. The criterion was rounded up in each case (criteria: NH4 (as N): 10 %, NO3 (as N): 6 %, sulfate (as SO4): 5 %, el. conductivity (25°C): 2 %, TOC (as C): 7.2 %).

Parameters evaporation residue, NO2 (as N), chloride, pH-value and fluoride for sample AB15:
The assigned values calculated based on the participants' results were outside of the measurement uncertainty of the control test value and thus traceability could not be proven by this procedure. Therefore, new assigned values were defined by the group of accredited participating laboratories after outlier-assessment. The criteria defined for the evaluation were 10 % for evaporation residue, 8.5 % for NO2 (as N), 5 % for chloride, 2 % for pH-value and 37 % for fluoride.

Parameter PO4 (as P) for sample AB15: Due to the large number of results submitted berlow the limit of quantification (<LOQ) and due to the observed differences between the results above LOQ (minimum–maximum: 0.0143–0.21 mg/l PO4 (as P)), no assigned value could be determined. For this parameter, we recommend a comparison with the informative data listed in E6.1.

E5. Annotations on tables and charts

E5.1. Information and abbreviations in tables

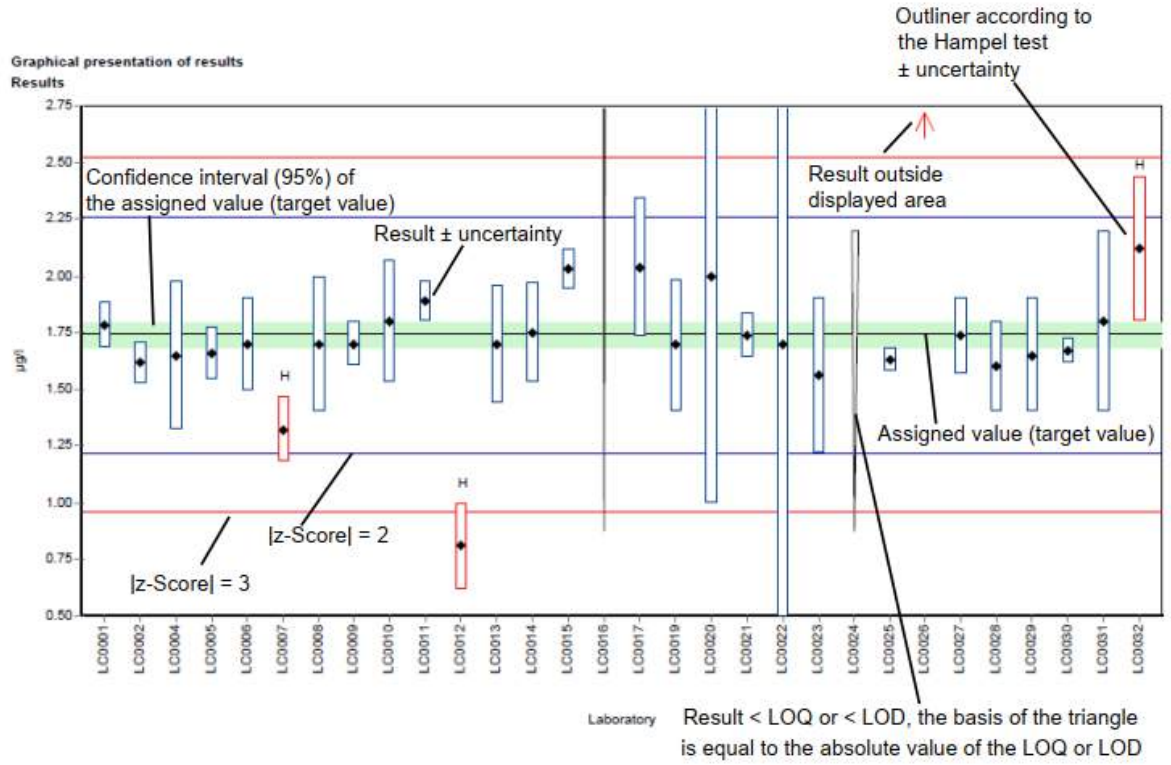
Parameter	Analyte identifier
Sample	Sample identifier
Unit	Given unit for result and uncertainty (e.g. mg/l)
Assigned value	Target value for proficiency assessment of the participants (3 significant digits)
U (k=2)	Expanded uncertainty (k=2) of the assigned value (3 significant digits)
Criteria	Specified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

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

E5.2. Graphical presentation of results

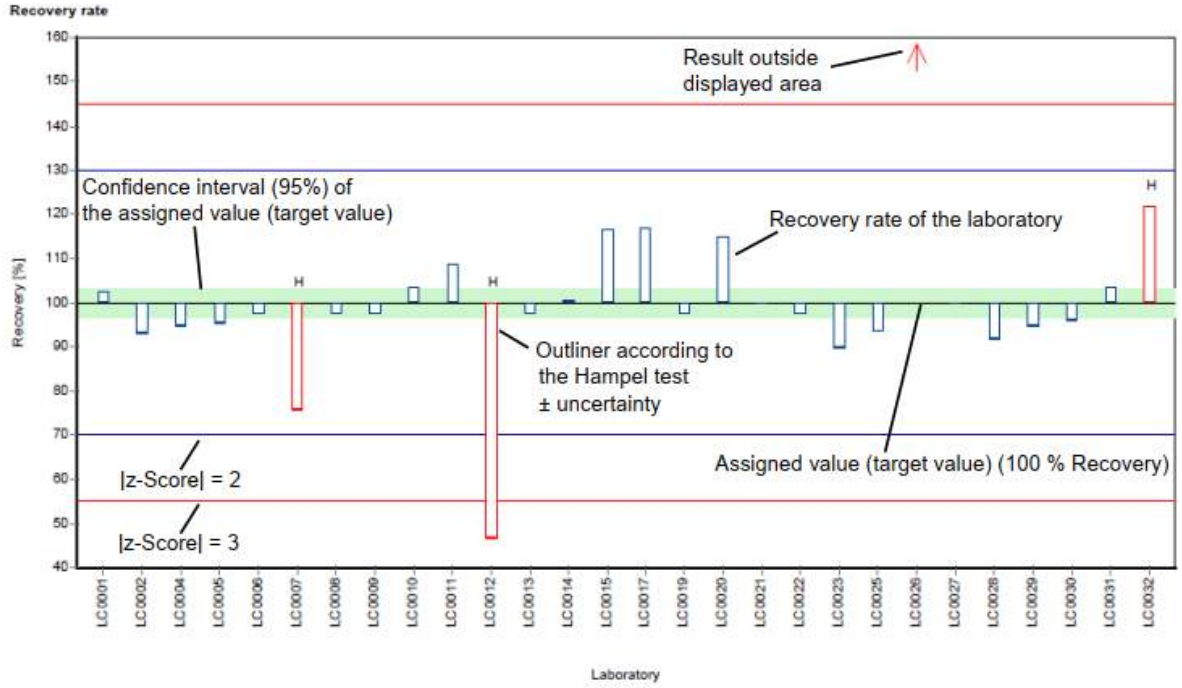
The graphic representation in the report is explained below by means of commented example diagrams:

Example chart: Results



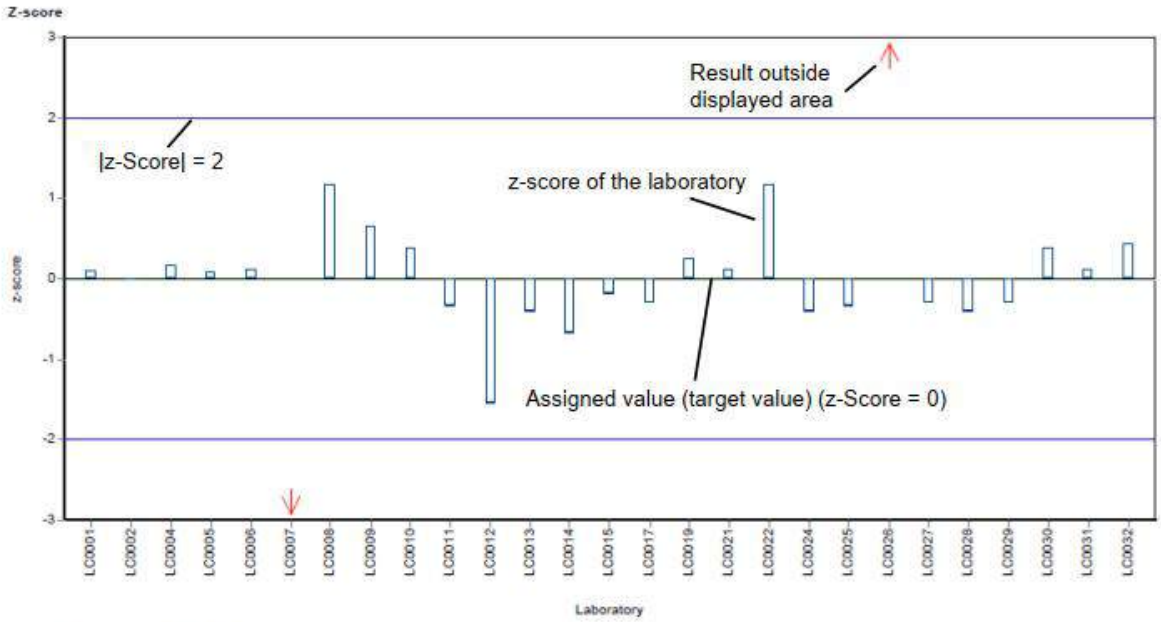
Different analysis methods are represented with different colors.

Example chart: Recovery



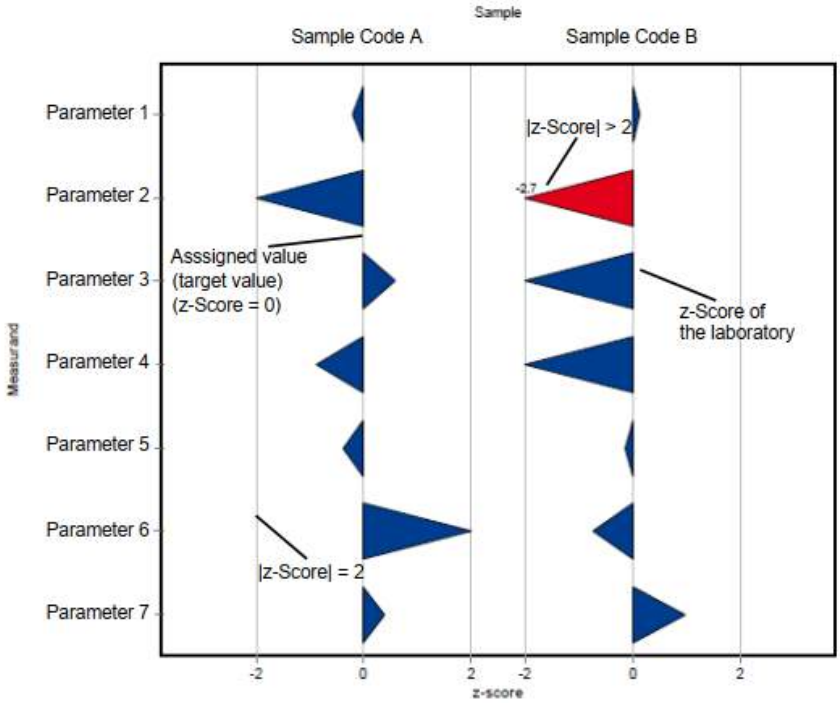
Different analysis methods are represented with different colors.

Example chart: z-Score

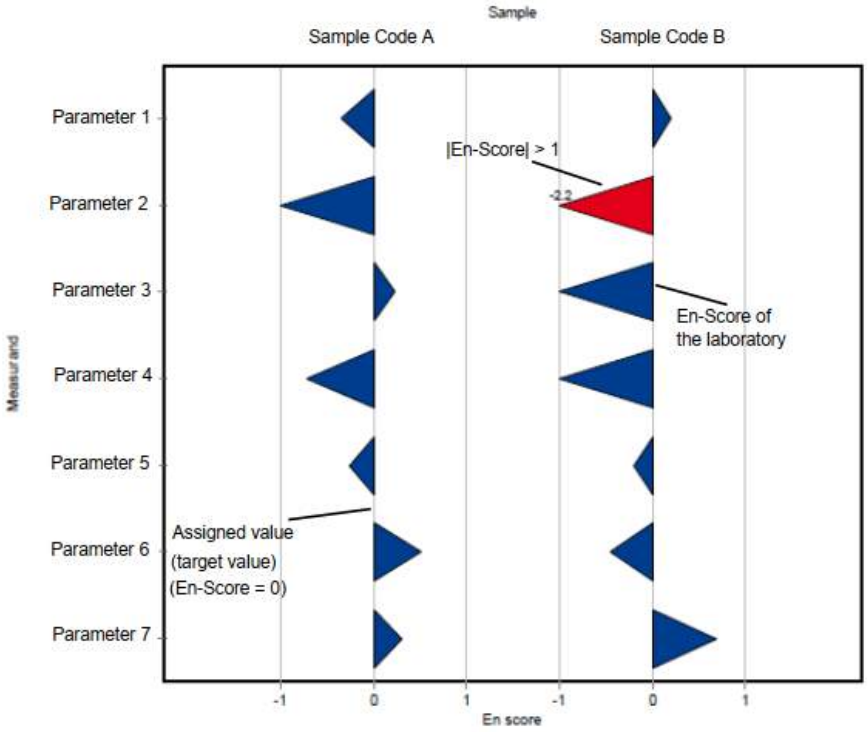


Different analysis methods are represented with different colors.

Example chart: z-Score (laboratory oriented report)



Example chart: En-Score (laboratory oriented report)



E6. Summary

E6.1. Table of assigned values

Parameter	Sample	Unit	Assigned value	±	U (k=2)	Criterion	Criterion [%]
Chloride	AB15	mg/l	1650	±	23.6	82.4	5
El. conductivity (25°C)	AB15	mS/m	753	±	5.26	15.1	2
Evaporation residue	AB15	mg/l	5190	±	212	519	10
Fluoride	AB15	mg/l	0.575	±	0.0938	0.213	37
NH4 (as N)	AB15	mg/l	29.9	±	1.24	2.99	10
NO2 (as N)	AB15	mg/l	1.11	±	0.0302	0.0942	8.5
NO3 (as N)	AB15	mg/l	27.4	±	0.587	1.65	6
pH-value	AB15		11.7	±	0.0602	0.234	2
PO4 (as P)*	AB15	mg/l	-	±	-	-	-
Sulfate (as SO4)	AB15	mg/l	448	±	7.35	22.4	5
TOC (as C)	AB15 -	mg/l	18.7	±	0.489	1.34	7.2

*Due to the high reproducibility standard deviation (>50%) for the following parameter no assigned value can be determined. Therefore, the calculated mean value MV+/- U(k=2) based on the data of the accredited laboratories (n) after outlier removal is listed for information and can be used for comparison as part of your internal QA measures.

PO4 (as P): MV (n=9; accr.) +/- U(k=2): <0.100 (0.0747+/- 0.0474) mg/l

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 [%]
Chloride	AB15	26	2	mg/l	1640	±	33.7	1510	1780	57.3	3.5
El. conductivity (25°C)	AB15	26	3	mS/m	753	±	7.89	722	780	13.4	1.8
Evaporation residue	AB15	27	0	mg/l	5210	±	301	4510	6520	521	10
Fluoride	AB15	22	2	mg/l	0.576	±	0.13	0.0725	0.973	0.204	35
NH4 (as N)	AB15	23	2	mg/l	29.9	±	1.87	22.6	37.2	2.98	10
NO2 (as N)	AB15	22	3	mg/l	1.11	±	0.0453	0.96	1.25	0.0708	6.4
NO3 (as N)	AB15	26	0	mg/l	27.4	±	0.881	24.5	29.6	1.5	5.5
pH-value	AB15	28	1		11.7	±	0.0873	11.5	12.1	0.154	1.3
PO4 (as P)	AB15	9	4	mg/l	0.0747	±	0.0711	0.0143	0.21	0.0711	95
Sulfate (as SO4)	AB15	26	2	mg/l	448	±	11	411	495	18.7	4.2
TOC (as C)	AB15 - TOC	22	4	mg/l	18.7	±	0.734	16.7	21.4	1.15	6.1

E7. Parameterorientierte Auswertung / Parameter oriented report

Parameter oriented report

AB15

Chloride

Unit	mg/l
Assigned value ± U (k=2)	1650 ± 23.6
Criterion	82.4 (5 %)
Minimum - Maximum	1510 - 1780
Control test value ± U (k=2)	1830 ± 183

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	1680	551.27	102	0.39	
LC0002	1653	82.7	100	0.06	
LC0003	1636	272	99.3	-0.15	
LC0004	1550.7	63.4	94.1	-1.18	
LC0005	1650	165	100	0.02	
LC0006	1643.5	203.3	99.7	-0.06	
LC0007	1507	180	91.4	-1.71	
LC0008	1577	63	95.7	-0.86	
LC0009	1675	190	102	0.33	
LC0010	1780	180	108	1.6	
LC0011	1703	958	103	0.67	
LC0012	1710	86	104	0.75	
LC0013	1696	51	103	0.58	
LC0014	1627	131	98.7	-0.26	
LC0015	1671	40	101	0.28	
LC0016	1660	54.6	101	0.14	
LC0017	1650	83	100	0.02	
LC0018	1711	144	104	0.76	
LC0019	1584	90.11	96.1	-0.78	
LC0020	2216	303	134	6.89	H
LC0021	1684	135	102	0.43	
LC0022	-	-	-	-	
LC0023	1435.2	100	87.1	-2.58	H
LC0024	1600	320	97.1	-0.58	
LC0025	1659	20	101	0.13	
LC0026	1633.302	326.6604	99.1	-0.18	
LC0027	1616	145	98	-0.39	
LC0028	1578	79	95.7	-0.85	
LC0029	1628	100	98.8	-0.24	

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

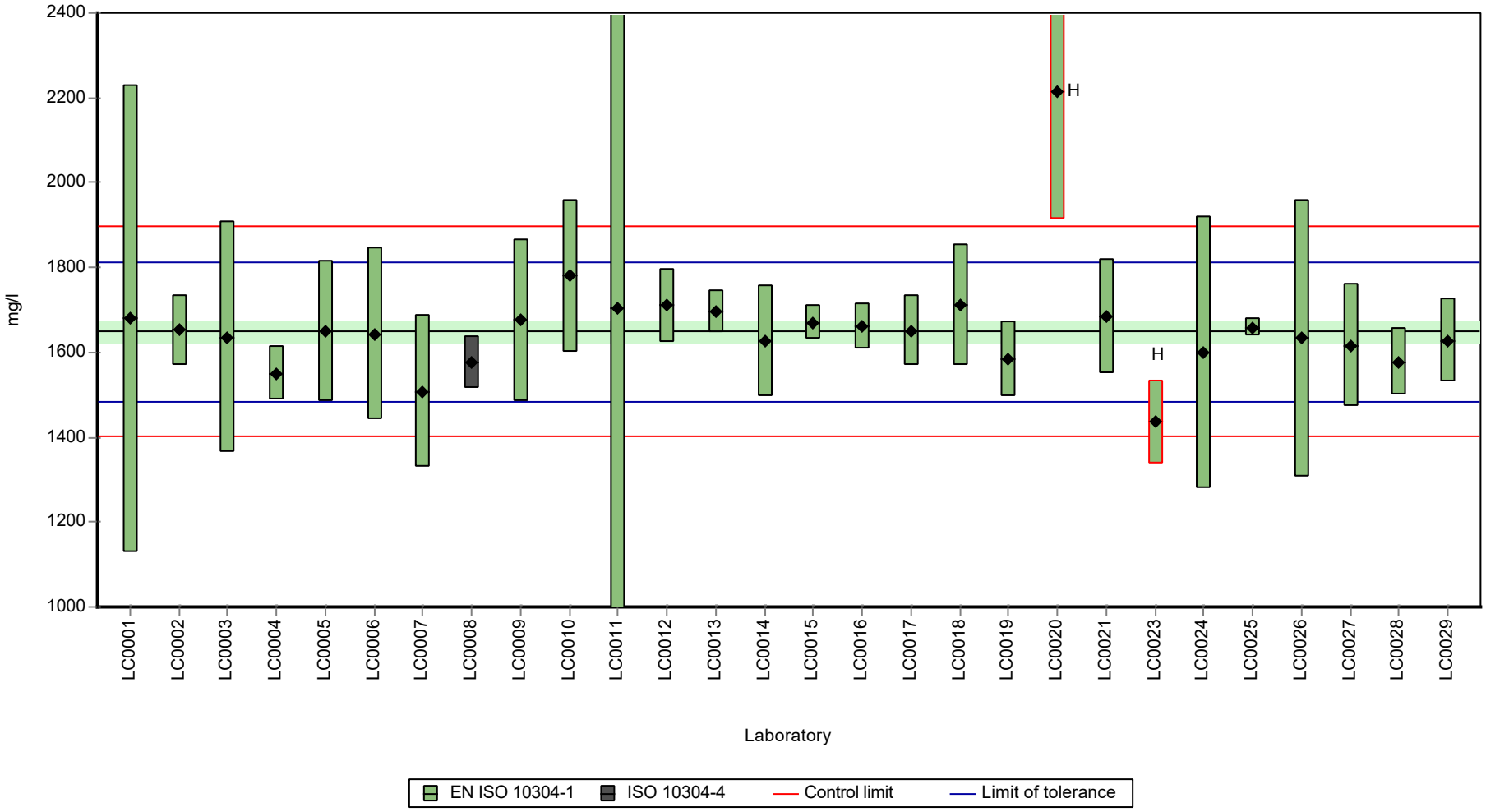
Sample: AB15, Parameter: Chloride

Characteristics of parameter

	all results	w ithout outliers	Unit
Mean ± CI (99%)	1660 ± 73	1640 ± 33.7	mg/l
Minimum	1440	1510	mg/l
Maximum	2220	1780	mg/l
Standard deviation	129	57.3	mg/l
rel. standard deviation	7.77	3.48	%
n	28	26	-

Graphical presentation of results

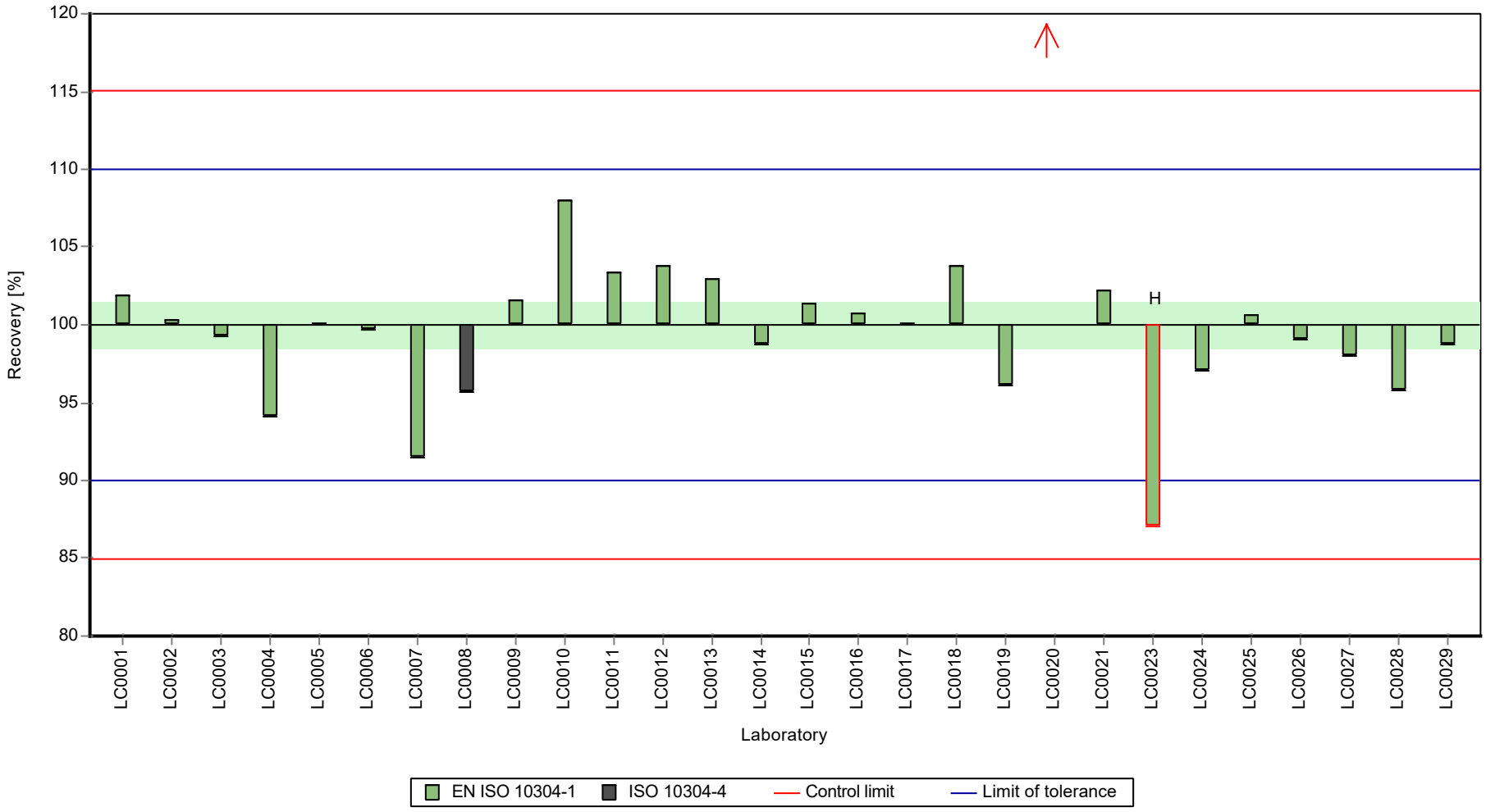
Results



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

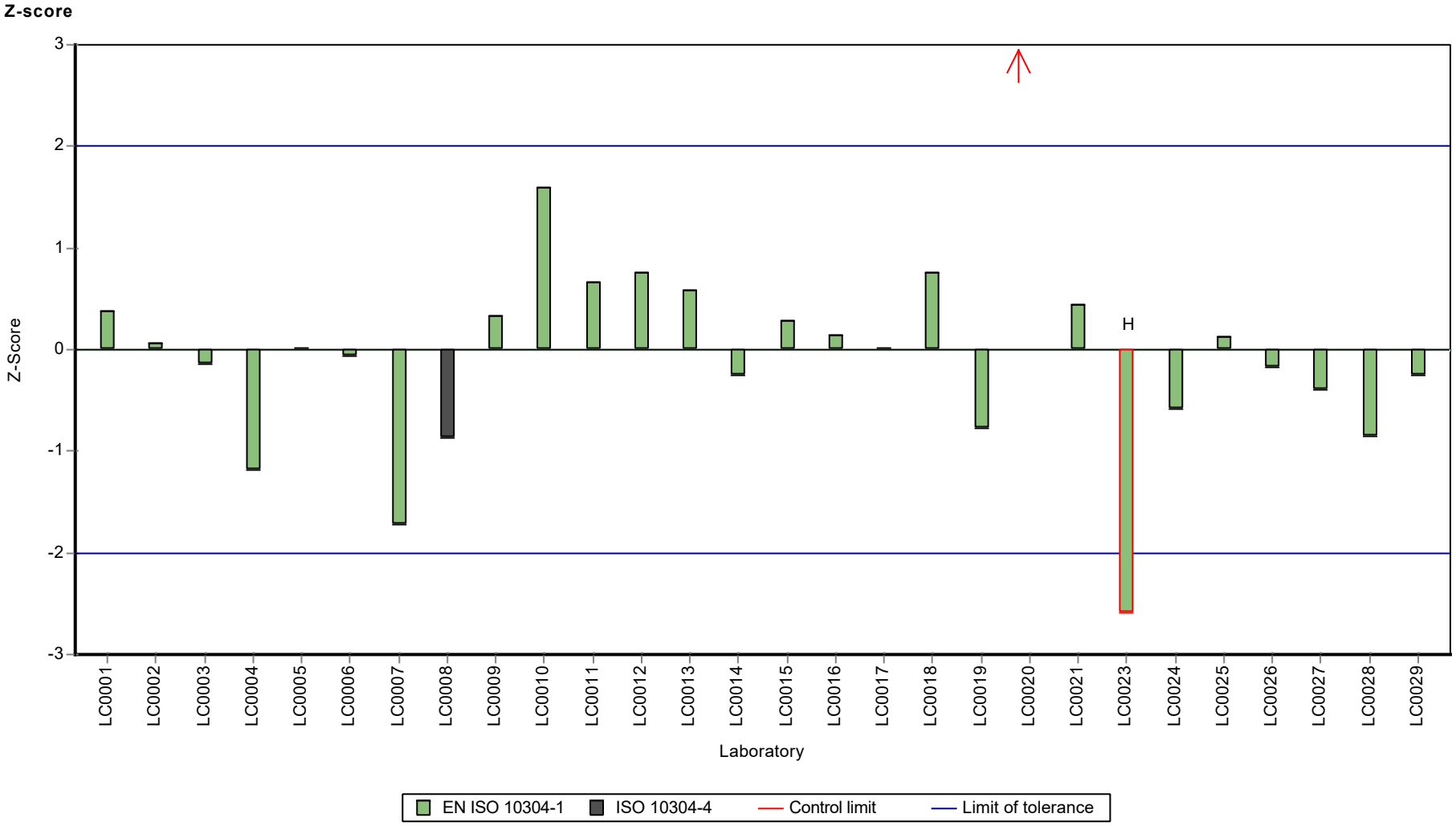
Sample: AB15, Parameter: Chloride

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: Chloride



Parameter oriented report

AB15

El. conductivity (25°C)

Unit	mS/m
Assigned value ± U (k=2)	753 ± 5.26
Criterion	15.1 (2 %)
Minimum - Maximum	722 - 780
Control test value ± U (k=2)	774 ± 23.2

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	748	40.8	99.4	-0.3	
LC0002	752	15	99.9	-0.03	
LC0003	745.8	21	99.1	-0.45	
LC0004	755	13.96	100	0.17	
LC0005	751.5	75	99.9	-0.07	
LC0006	751	4.5	99.8	-0.1	
LC0007	773	61.8	103	1.36	
LC0008	750	23	99.7	-0.17	
LC0009	752	74.4	99.9	-0.03	
LC0010	780	78	104	1.83	
LC0011	760	152	101	0.5	
LC0012	745	5.6	99	-0.5	
LC0013	759	7.6	101	0.43	
LC0014	739.7	4.44	98.3	-0.85	
LC0015	764	15	102	0.76	
LC0016	761	119	101	0.56	
LC0017	766	20	102	0.9	
LC0018	733	11	97.4	-1.3	
LC0019	757	20.8	101	0.3	
LC0020	7210	263	958	429.07	H
LC0021	772	19	103	1.3	
LC0022	746	10	99.1	-0.43	
LC0023	729	4	96.9	-1.56	
LC0024	7.27	0.727	1	-49.52	H
LC0025	7.51	0.01	1	-49.5	H
LC0026	763	76.3	101	0.7	
LC0027	744	29.8	98.9	-0.56	
LC0028	722	3.5	95.9	-2.03	
LC0029	746	20	99.1	-0.43	

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

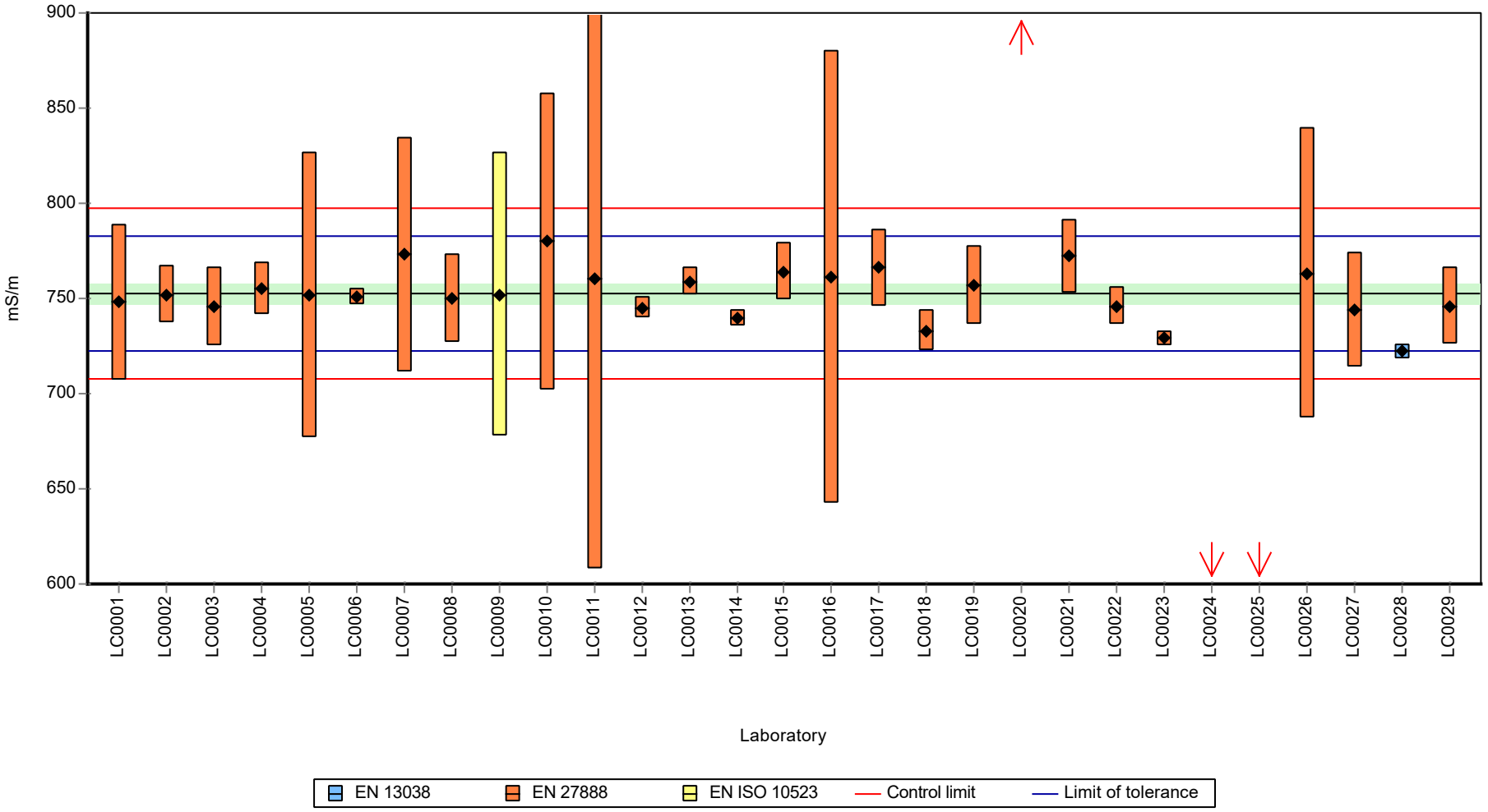
Sample: AB15, Parameter: El. conductivity (25°C)

Characteristics of parameter

	all results	w ithout outliers	Unit
Mean ± CI (99%)	924 ± 682	753 ± 7.89	mS/m
Minimum	7.27	722	mS/m
Maximum	7210	780	mS/m
Standard deviation	1220	13.4	mS/m
rel. standard deviation	133	1.78	%
n	29	26	-

Graphical presentation of results

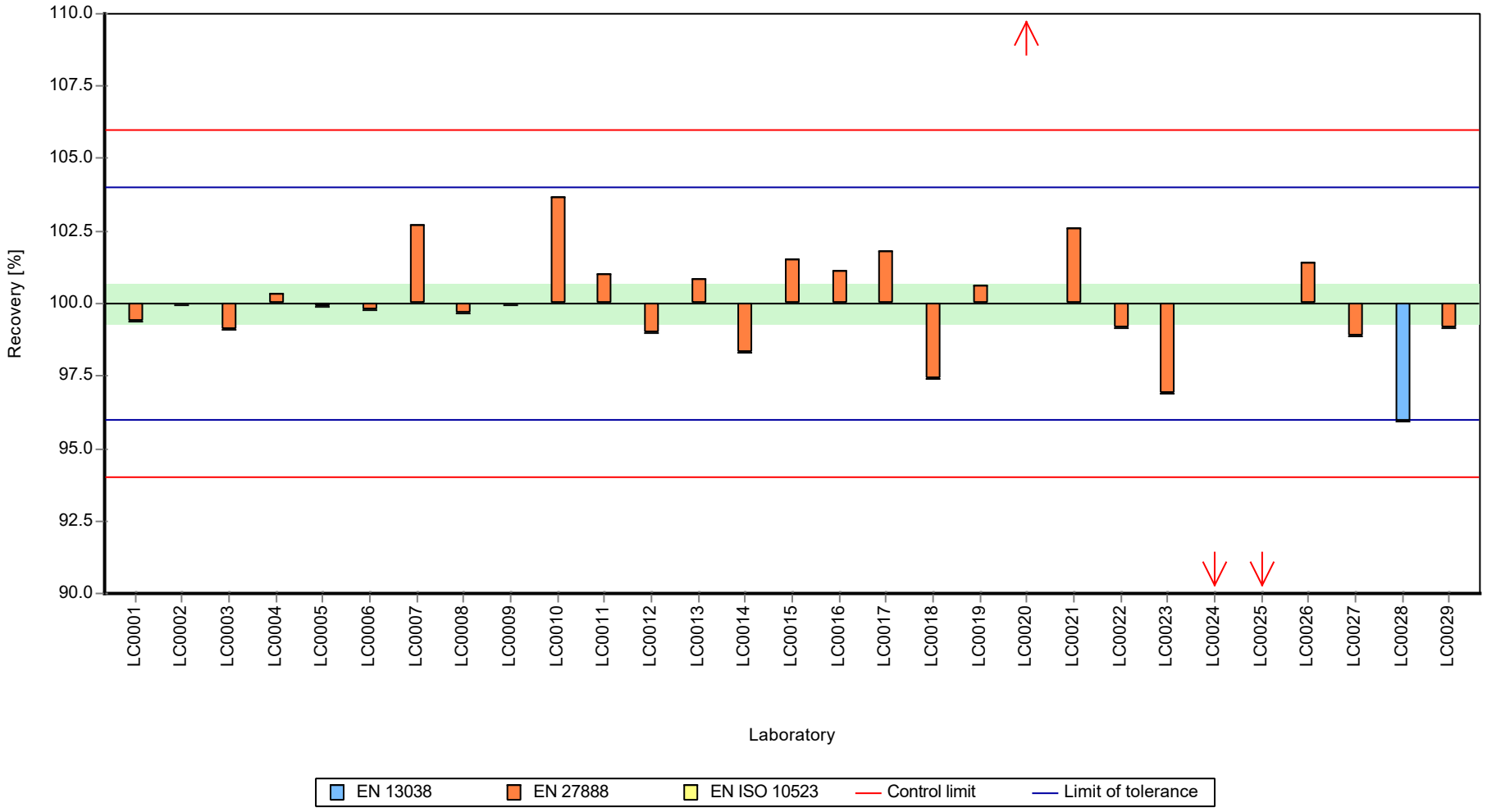
Results



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

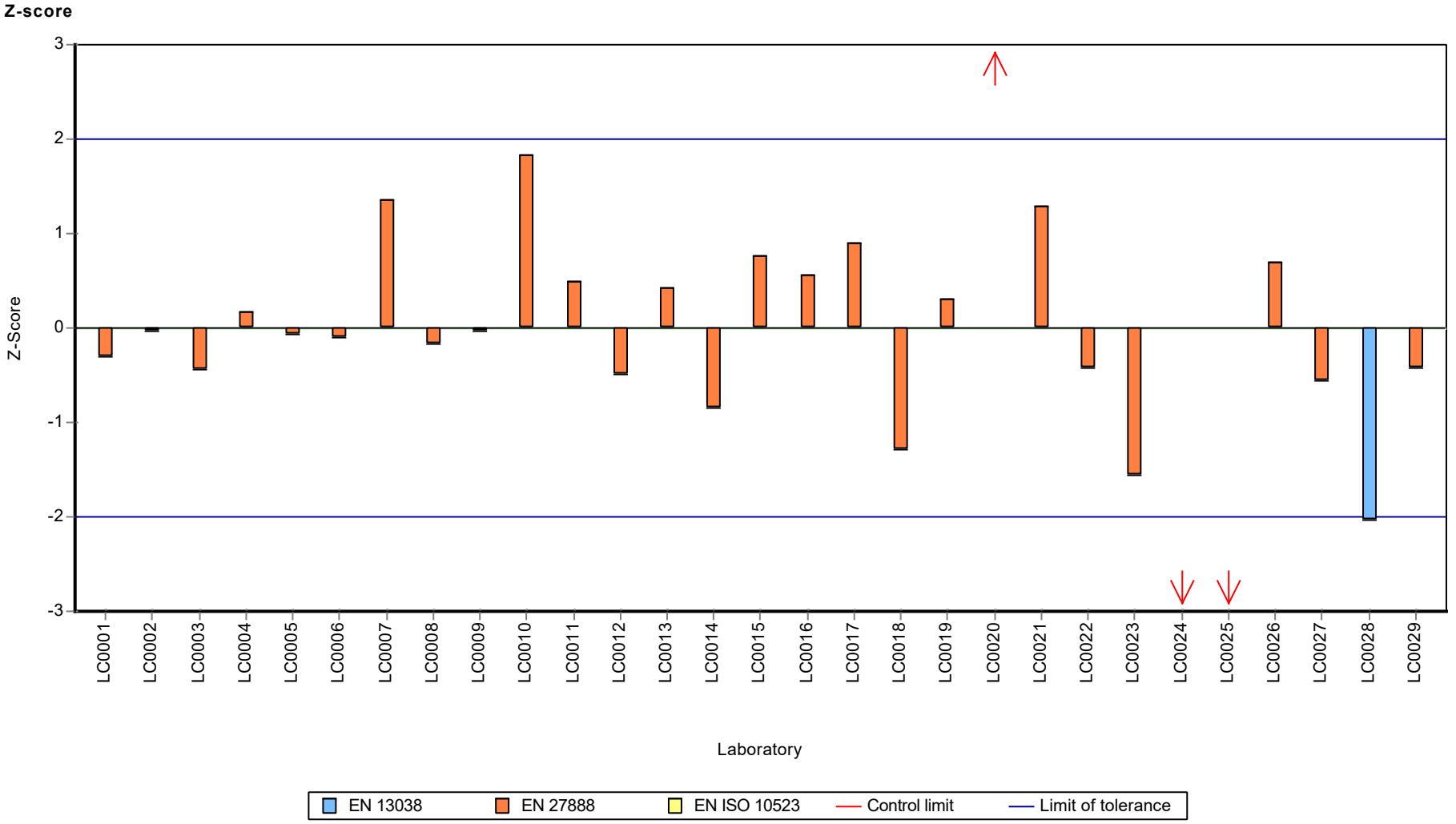
Sample: AB15, Parameter: El. conductivity (25°C)

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: El. conductivity (25°C)



Parameter oriented report

AB15

Evaporation residue

Unit	mg/l
Assigned value ± U (k=2)	5190 ± 212
Criterion	519 (10 %)
Minimum - Maximum	4510 - 6520
Control test value ± U (k=2)	4500 ± 450

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	4779	2136.36	92.1	-0.79	
LC0002	-	-	-	-	
LC0003	5290	530	102	0.2	
LC0004	6026	602.6	116	1.62	
LC0005	4612	1	88.9	-1.11	
LC0006	5786	0.81	112	1.15	
LC0007	5950	890	115	1.47	
LC0008	4610	498	88.9	-1.11	
LC0009	4546	727	87.6	-1.24	
LC0010	4820	480	92.9	-0.71	
LC0011	4820	192	92.9	-0.71	
LC0012	5330	815	103	0.27	
LC0013	4887	147	94.2	-0.58	
LC0014	5924	444	114	1.42	
LC0015	4509	108	86.9	-1.31	
LC0016	6520	1300	126	2.57	
LC0017	4900	490	94.5	-0.55	
LC0018	5242	225	101	0.1	
LC0019	5409	649	104	0.43	
LC0020	5317	1600	102	0.25	
LC0021	4979	291	96	-0.4	
LC0022	5180	200	99.9	-0.01	
LC0023	4785	9	92.2	-0.78	
LC0024	5440	1630	105	0.49	
LC0025	5493	53	106	0.59	
LC0026	4773.5	954.7	92	-0.8	
LC0027	5052	202	97.4	-0.26	
LC0028	-	-	-	-	
LC0029	5751	500	111	1.09	

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: Evaporation residue

Characteristics of parameter

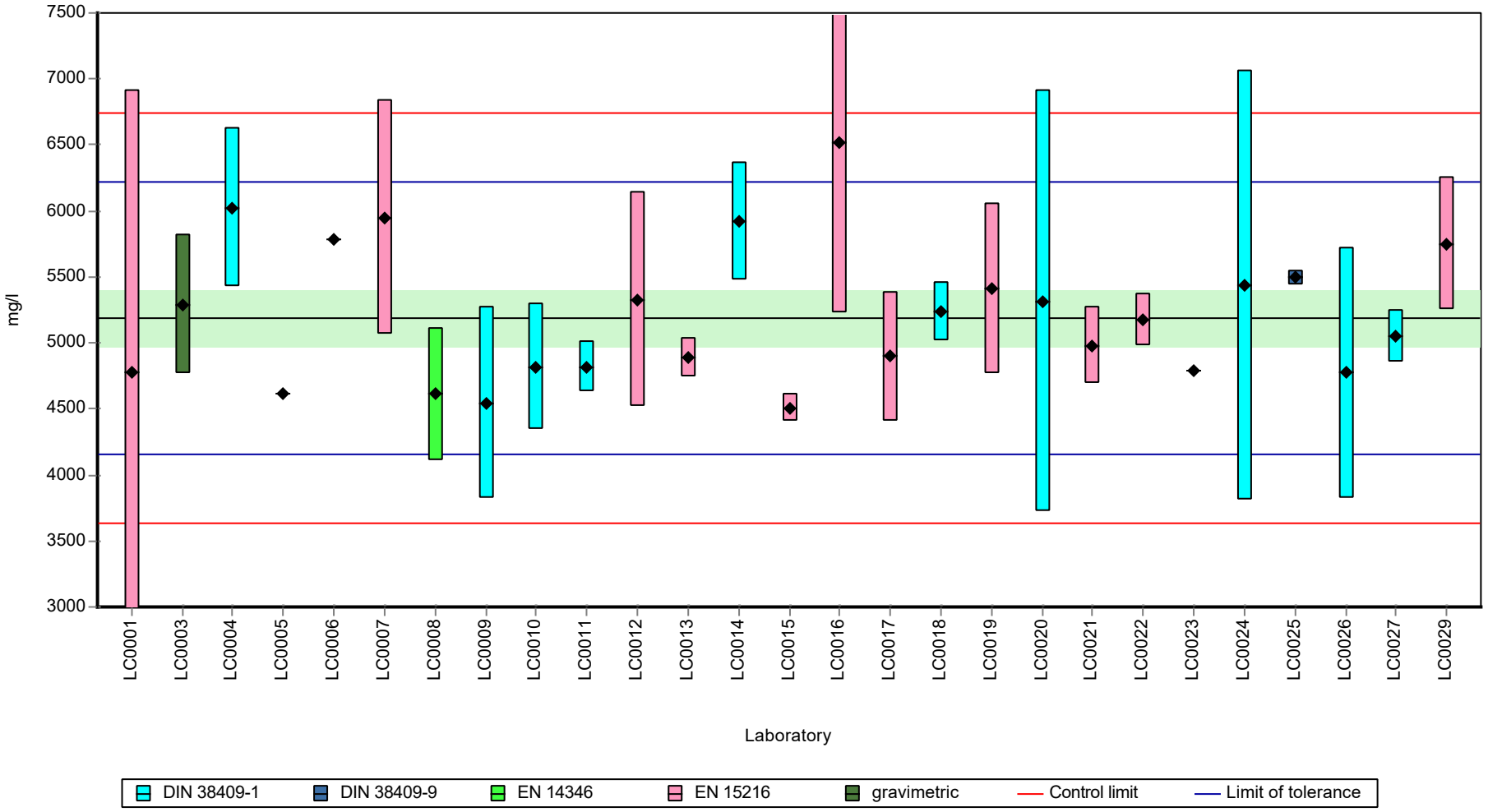
	all results	w ithout outliers	Unit
Mean ± CI (99%)	5210 ± 301	5210 ± 301	mg/l
Minimum	4510	4510	mg/l
Maximum	6520	6520	mg/l
Standard deviation	521	521	mg/l
rel. standard deviation	10	10	%
n	27	27	-

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: Evaporation residue

Graphical presentation of results

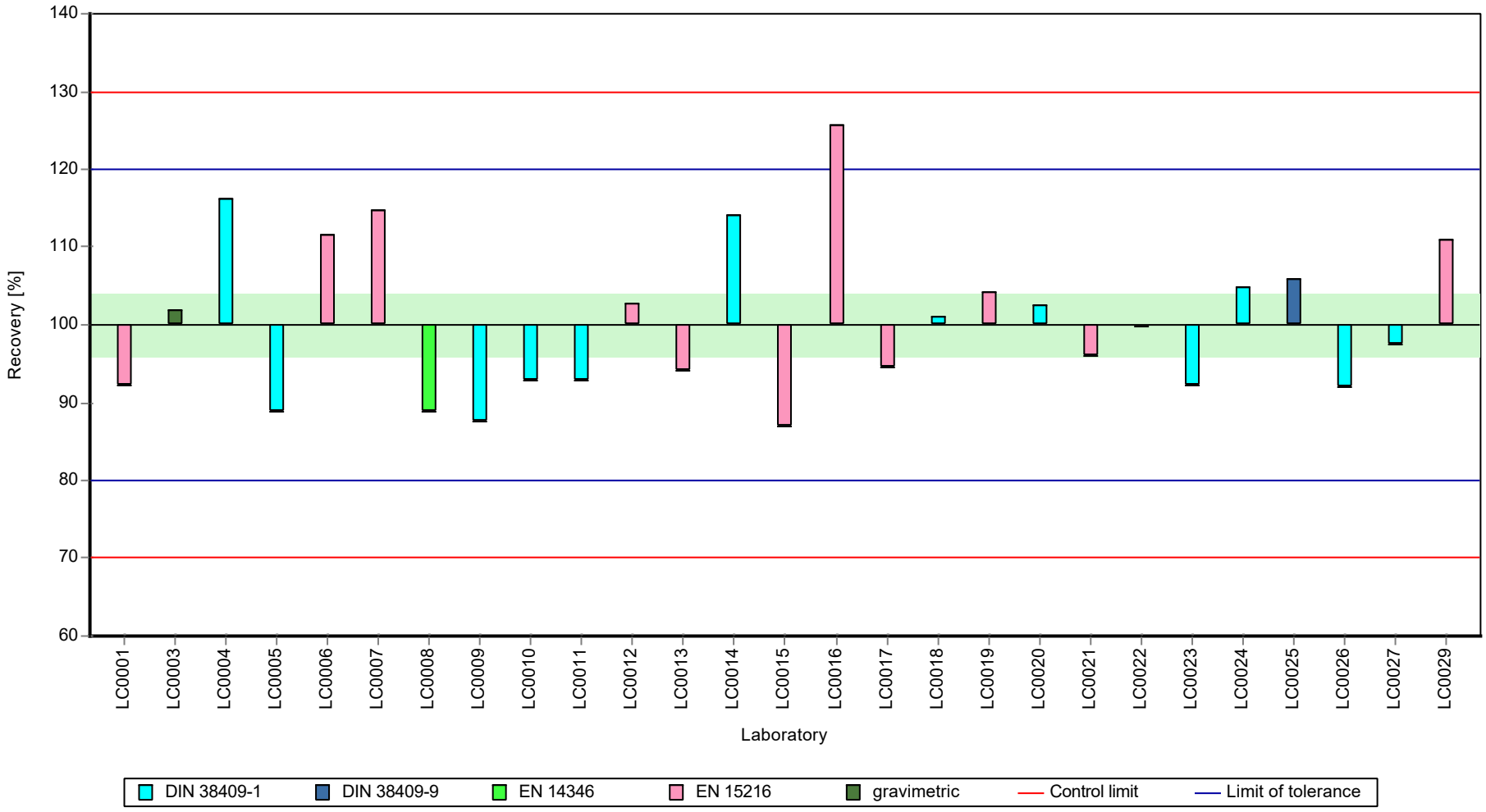
Results



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

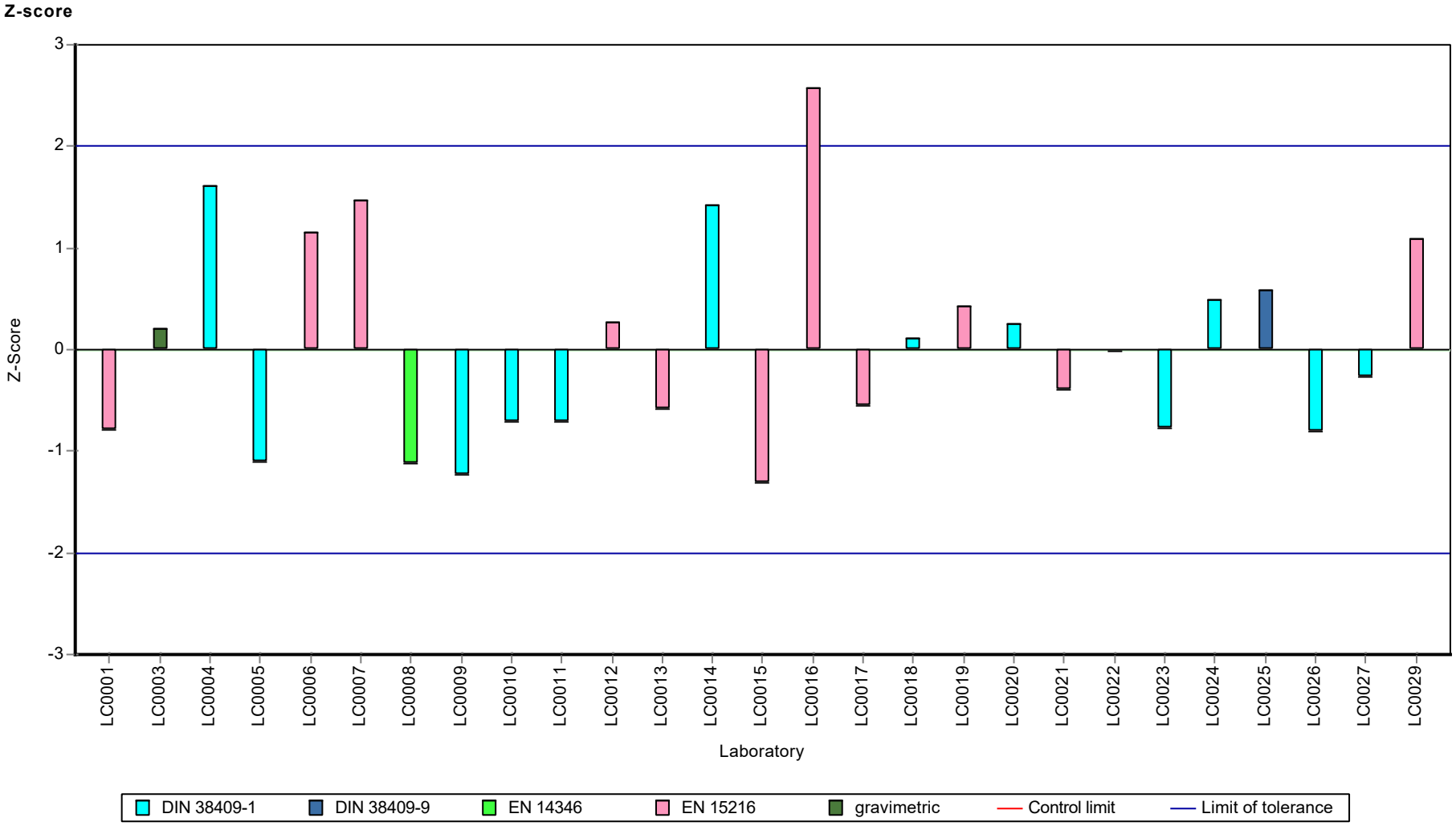
Sample: AB15, Parameter: Evaporation residue

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: Evaporation residue



Parameter oriented report

AB15

Fluoride

Unit	mg/l
Assigned value ± U (k=2)	0.575 ± 0.0938
Criterion	0.213 (37 %)
Minimum - Maximum	0.0725 - 0.973
Control test value ± U (k=2)	0.788 ± 0.118

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.363	0.128	63.2	-1	
LC0002	0.34316	0.01716	59.7	-1.09	
LC0003	-	-	-	-	
LC0004	0.292	0.013	50.8	-1.33	
LC0005	0.575	0.0575	100	0.00	
LC0006	0.9732	0.081	169	1.88	
LC0007	0.711	0.11	124	0.64	
LC0008	1.41	0.09	245	3.93	H
LC0009	0.485	0.09	84.4	-0.42	
LC0010	0.518	0.052	90.2	-0.27	
LC0011	3.4	0.68	592	13.29	H
LC0012	< 1 (LOQ)	-	-	-	
LC0013	0.904	0.059	157	1.55	
LC0014	0.497	0.0399	86.5	-0.36	
LC0015	0.0725	0.0015	12.6	-2.36	
LC0016	0.53	0.0249	92.3	-0.21	
LC0017	0.606	0.03	105	0.15	
LC0018	0.536	0.045	93.3	-0.18	
LC0019	0.617	0.07	107	0.2	
LC0020	0.459	0.104	79.9	-0.54	
LC0021	0.7535	0.1108	131	0.84	
LC0022	-	-	-	-	
LC0023	0.78	0.05	136	0.97	
LC0024	0.66	0.13	115	0.4	
LC0025	0.696	0.01	121	0.57	
LC0026	< 2.5 (LOQ)	-	-	-	
LC0027	0.578	0.052	101	0.02	
LC0028	0.721	0.036	125	0.69	
LC0029	< 1 (LOQ)	-	-	-	

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: Fluoride

Characteristics of parameter

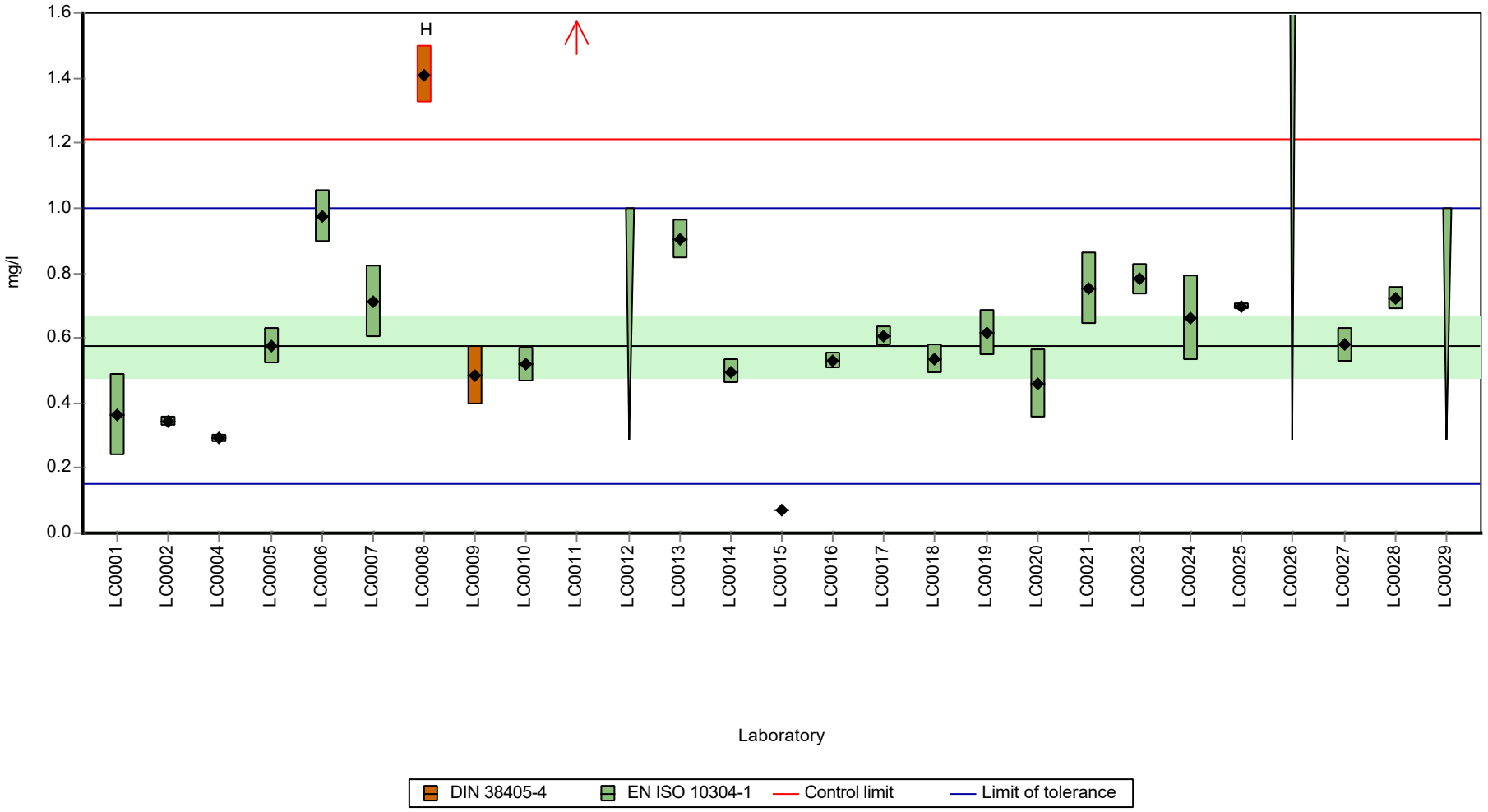
	all results	w ithout outliers	Unit
Mean ± CI (99%)	0.728 ± 0.383	0.576 ± 0.13	mg/l
Minimum	0.0725	0.0725	mg/l
Maximum	3.4	0.973	mg/l
Standard deviation	0.625	0.204	mg/l
rel. standard deviation	85.8	35.4	%
n	24	22	-

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: Fluoride

Graphical presentation of results

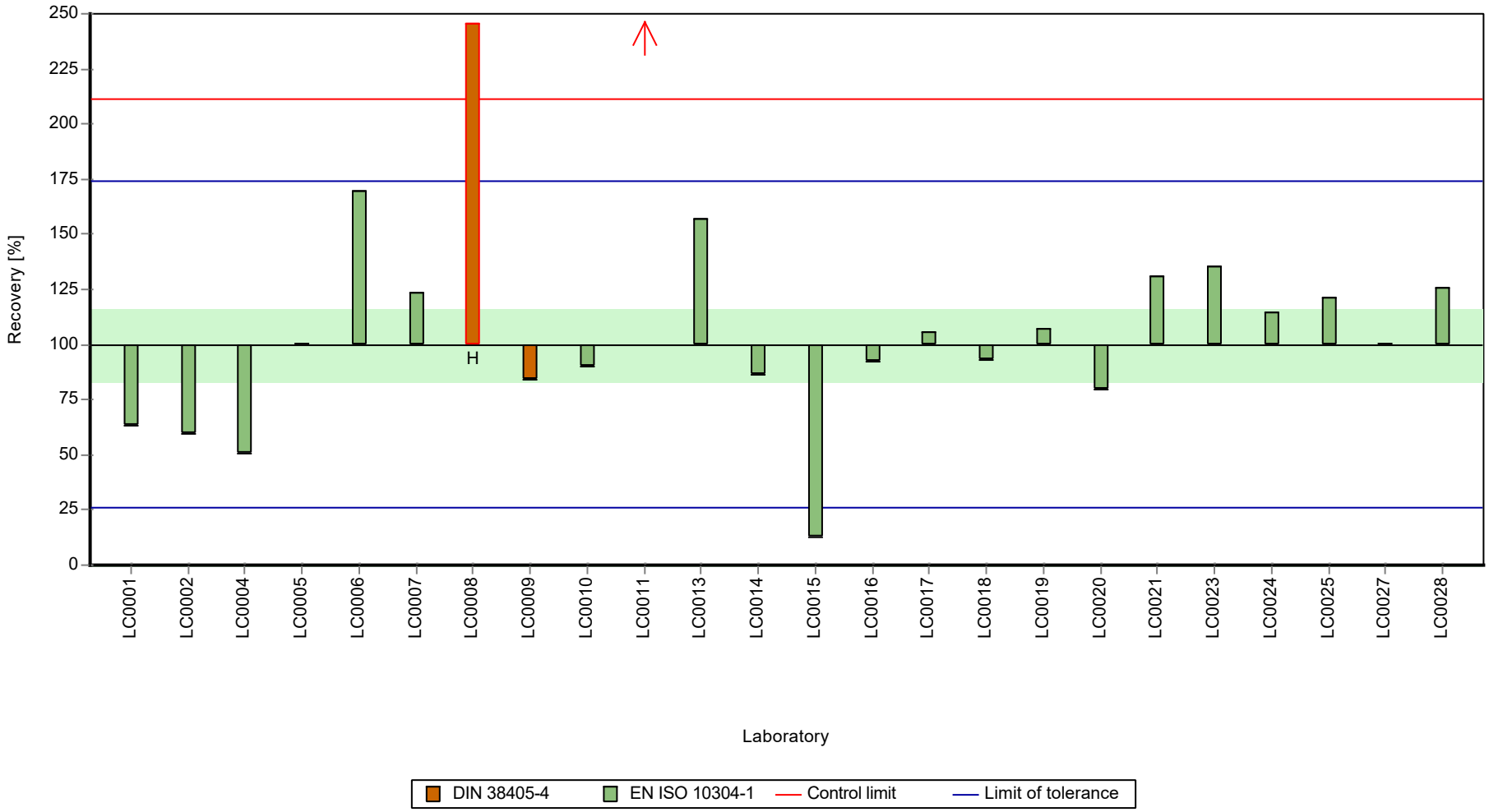
Results



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

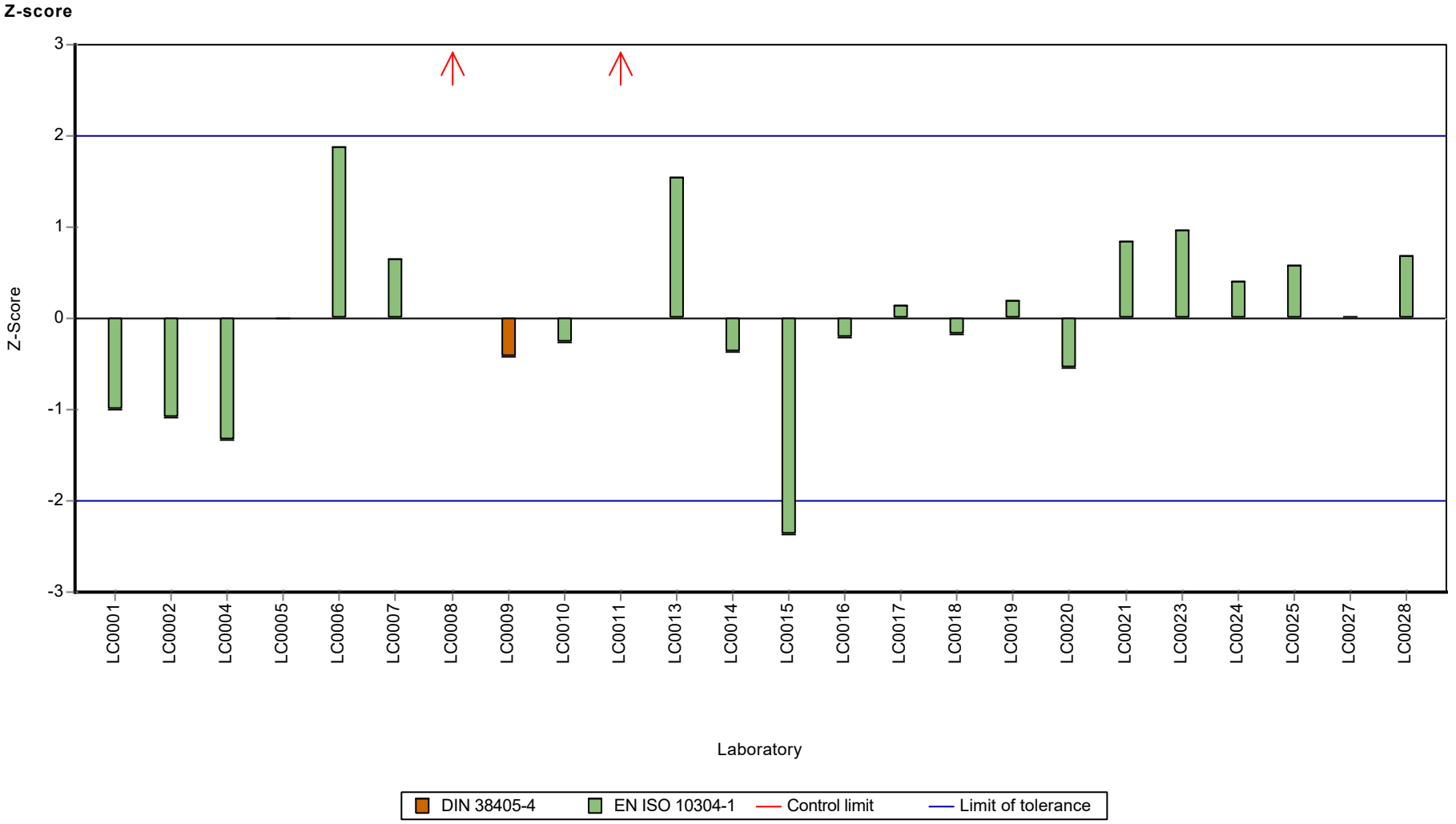
Sample: AB15, Parameter: Fluoride

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: Fluoride



Parameter oriented report

AB15

NH4 (as N)

Unit	mg/l
Assigned value ± U (k=2)	29.9 ± 1.24
Criterion	2.99 (10 %)
Minimum - Maximum	22.6 - 37.2
Control test value ± U (k=2)	32.50 ± 3.25

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	27.35	2.664	91.5	-0.85	
LC0002	-	-	-	-	
LC0003	29	4.5	97	-0.3	
LC0004	31.36	1.22	105	0.49	
LC0005	37.2	3.72	124	2.44	
LC0006	28.89	2.21	96.6	-0.34	
LC0007	31.5	4.7	105	0.53	
LC0008	35.2	3.2	118	1.77	
LC0009	29.89	5.7	99.9	-0.01	
LC0010	17.7	1.8	59.2	-4.08	H
LC0011	31.8	11.7	106	0.63	
LC0012	22.3	0.65	74.6	-2.54	H
LC0013	29.5	2.4	98.6	-0.14	
LC0014	31.8	2.08	106	0.63	
LC0015	31.6	0.835	106	0.57	
LC0016	29.9	2.1	100	0.00	
LC0017	-	-	-	-	
LC0018	30.96	1.83	104	0.35	
LC0019	26.3	6.87	87.9	-1.21	
LC0020	22.59	5.06	75.5	-2.45	
LC0021	29.3	3.5	98	-0.2	
LC0022	-	-	-	-	
LC0023	29.87	0.2	99.9	-0.01	
LC0024	25.6	6.4	85.6	-1.44	
LC0025	29.05	0.5	97.1	-0.29	
LC0026	28.096	5.6192	93.9	-0.61	
LC0027	30.6	5.51	102	0.23	
LC0028	-	-	-	-	
LC0029	30.5	3	102	0.2	

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: NH4 (as N)

Characteristics of parameter

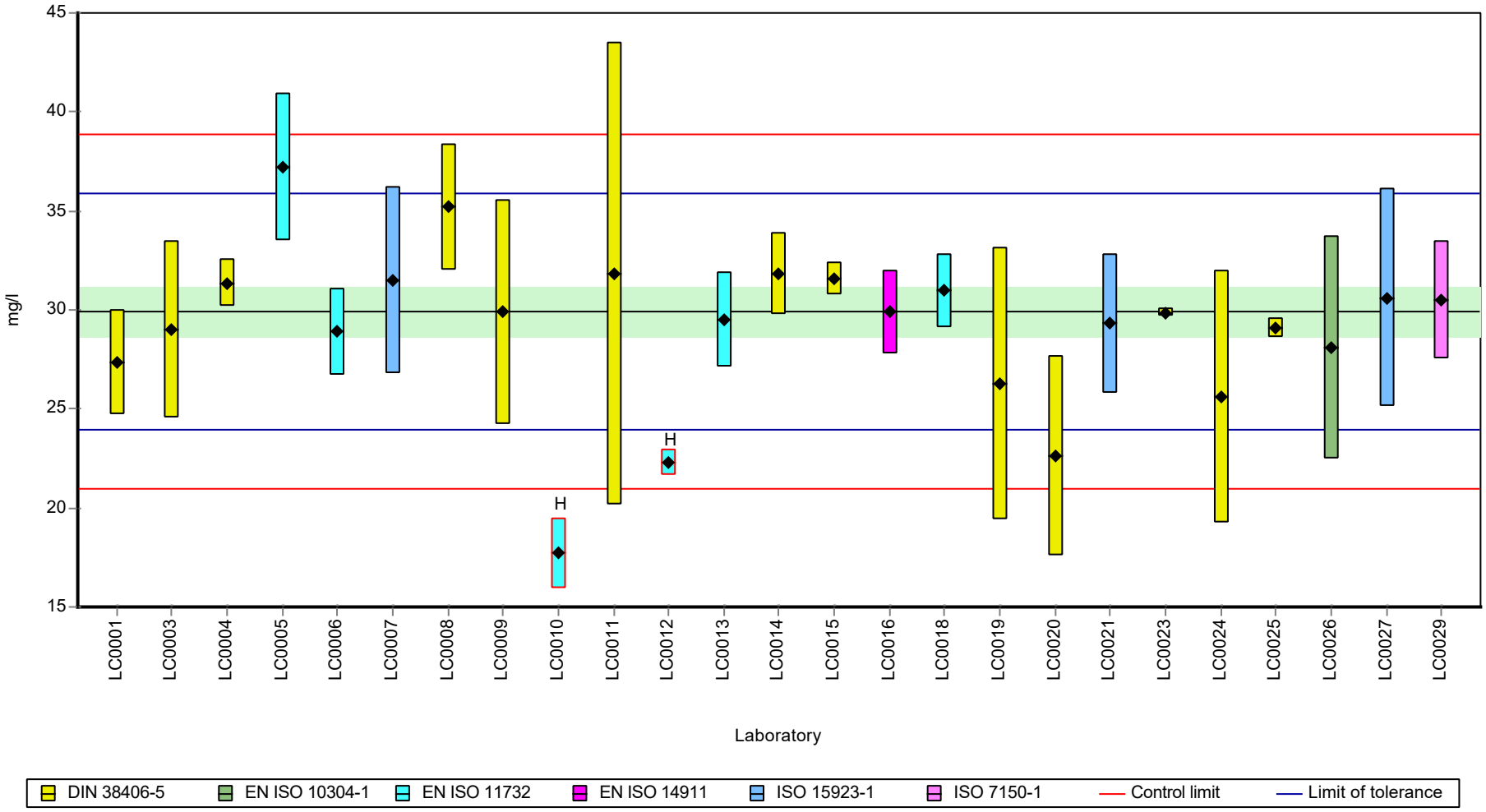
	all results	w ithout outliers	Unit
Mean ± CI (99%)	29.1 ± 2.41	29.9 ± 1.87	mg/l
Minimum	17.7	22.6	mg/l
Maximum	37.2	37.2	mg/l
Standard deviation	4.02	2.98	mg/l
rel. standard deviation	13.8	9.98	%
n	25	23	-

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: NH4 (as N)

Graphical presentation of results

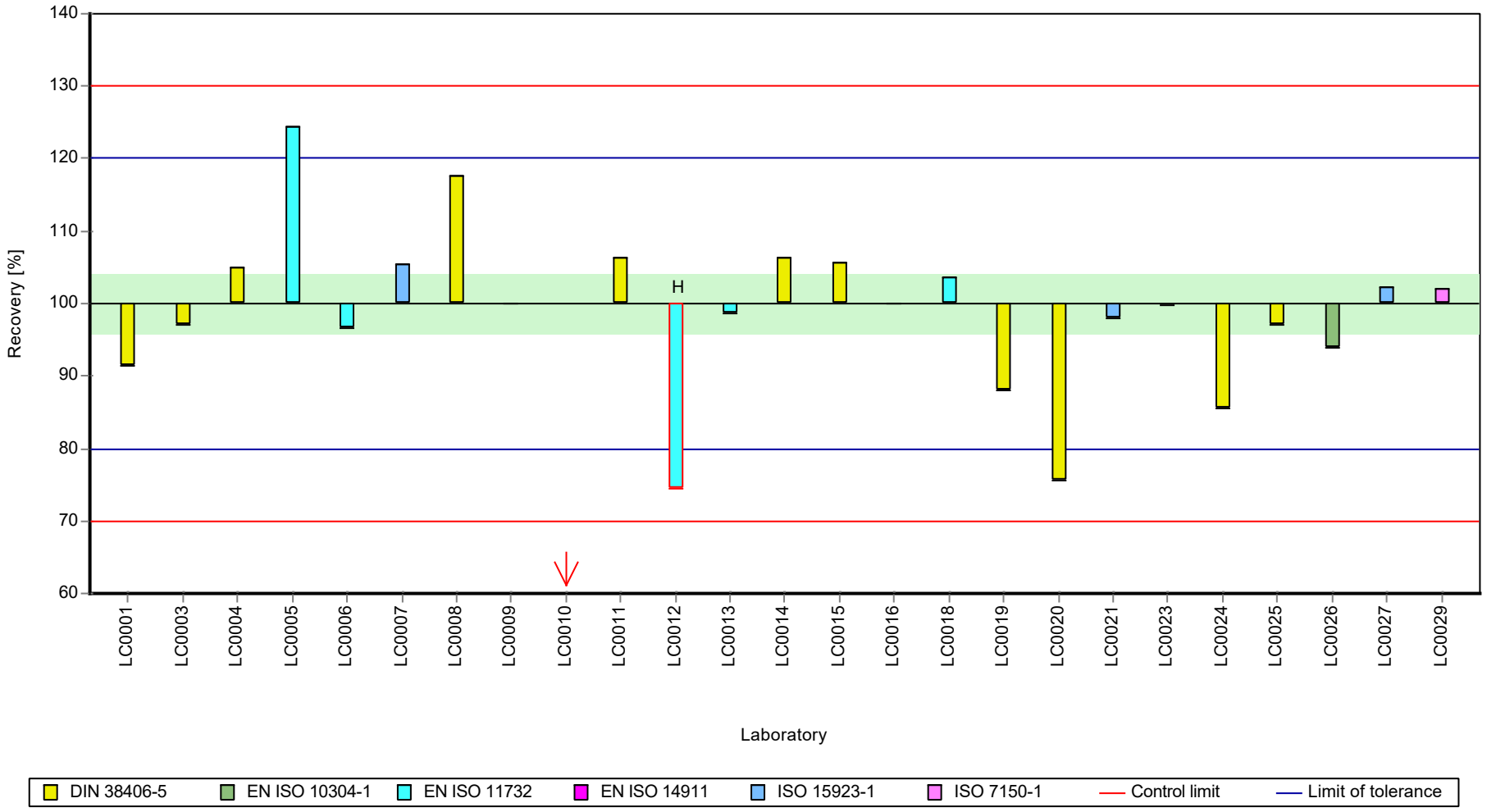
Results



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

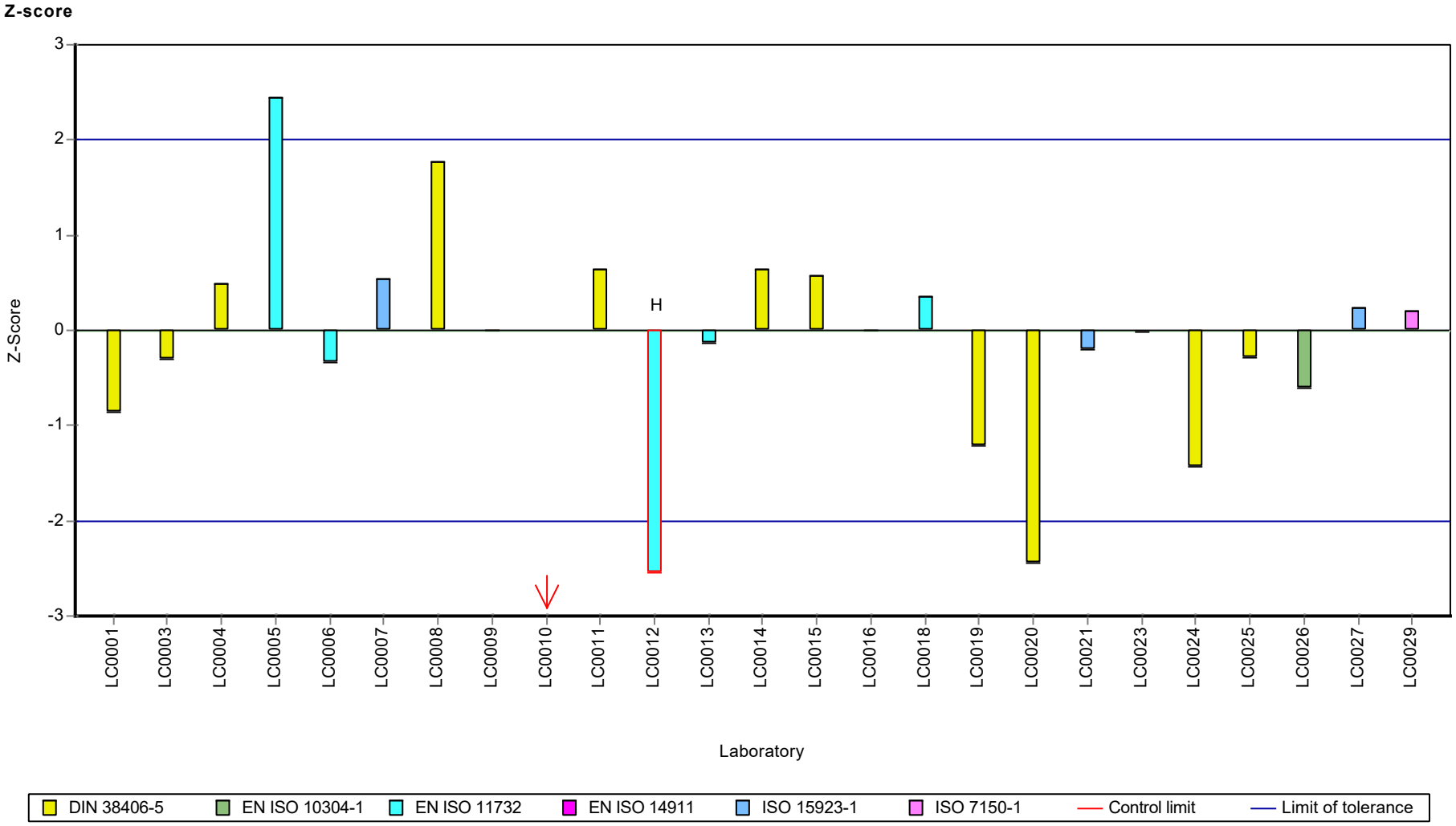
Sample: AB15, Parameter: NH4 (as N)

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: NH4 (as N)



Parameter oriented report

AB15

NO2 (as N)

Unit	mg/l
Assigned value ± U (k=2)	1.11 ± 0.0302
Criterion	0.0942 (8.5 %)
Minimum - Maximum	0.96 - 1.25
Control test value ± U (k=2)	1.27 ± 0.127

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	0.991	0.26	89.5	-1.24	
LC0002	-	-	-	-	
LC0003	1.12	0.19	101	0.13	
LC0004	1.122	0.043	101	0.15	
LC0005	1.14	0.114	103	0.34	
LC0006	1.25	0.1765	113	1.51	
LC0007	1.1	0.33	99.3	-0.08	
LC0008	0.98	0.047	88.5	-1.36	
LC0009	1.152	0.18	104	0.47	
LC0010	1.18	0.12	107	0.77	
LC0011	1.1	0.2	99.3	-0.08	
LC0012	1.11	0.028	100	0.02	
LC0013	1.095	0.044	98.9	-0.13	
LC0014	1.149	0.101	104	0.44	
LC0015	1.11	0.0195	100	0.02	
LC0016	1.09	0.0525	98.4	-0.19	
LC0017	-	-	-	-	
LC0018	1.19	0.099	107	0.87	
LC0019	0.96	0.19	86.7	-1.57	
LC0020	0.402	0.123	36.3	-7.5	H
LC0021	1.2	0.14	108	0.98	
LC0022	-	-	-	-	
LC0023	1.03	0.03	93	-0.83	
LC0024	1.1	0.22	99.3	-0.08	
LC0025	1.08	0.05	97.5	-0.29	
LC0026	1.432	0.2864	129	3.44	H
LC0027	1.12	0.202	101	0.13	
LC0028	1.43	0.07	129	3.42	H
LC0029	< 0.03 (LOQ)	-	-	-	FN

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: NO2 (as N)

Characteristics of parameter

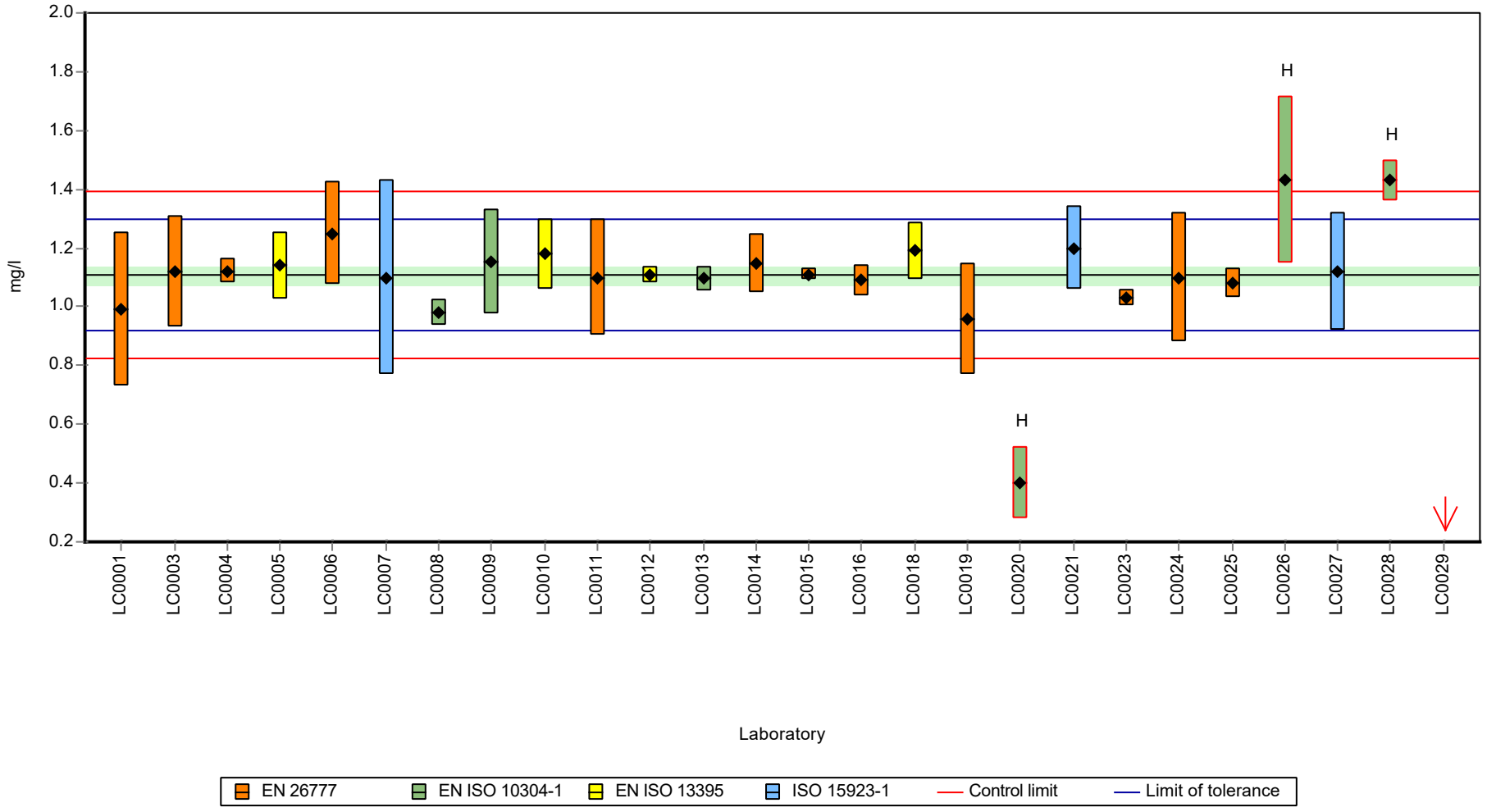
	all results	w ithout outliers	Unit
Mean ± CI (99%)	1.11 ± 0.11	1.11 ± 0.0453	mg/l
Minimum	0.402	0.96	mg/l
Maximum	1.43	1.25	mg/l
Standard deviation	0.184	0.0708	mg/l
rel. standard deviation	16.6	6.39	%
n	25	22	-

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: NO2 (as N)

Graphical presentation of results

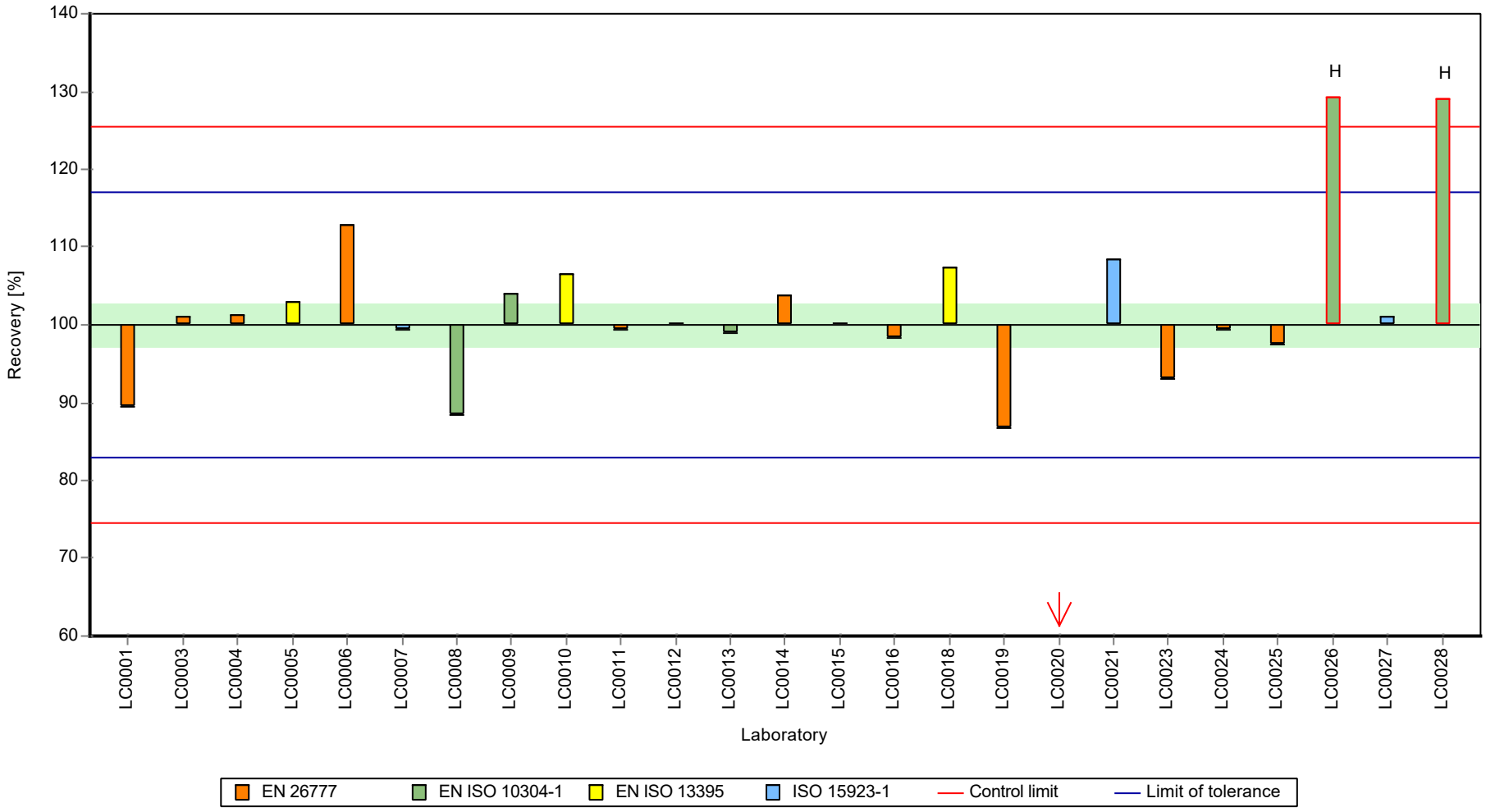
Results



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

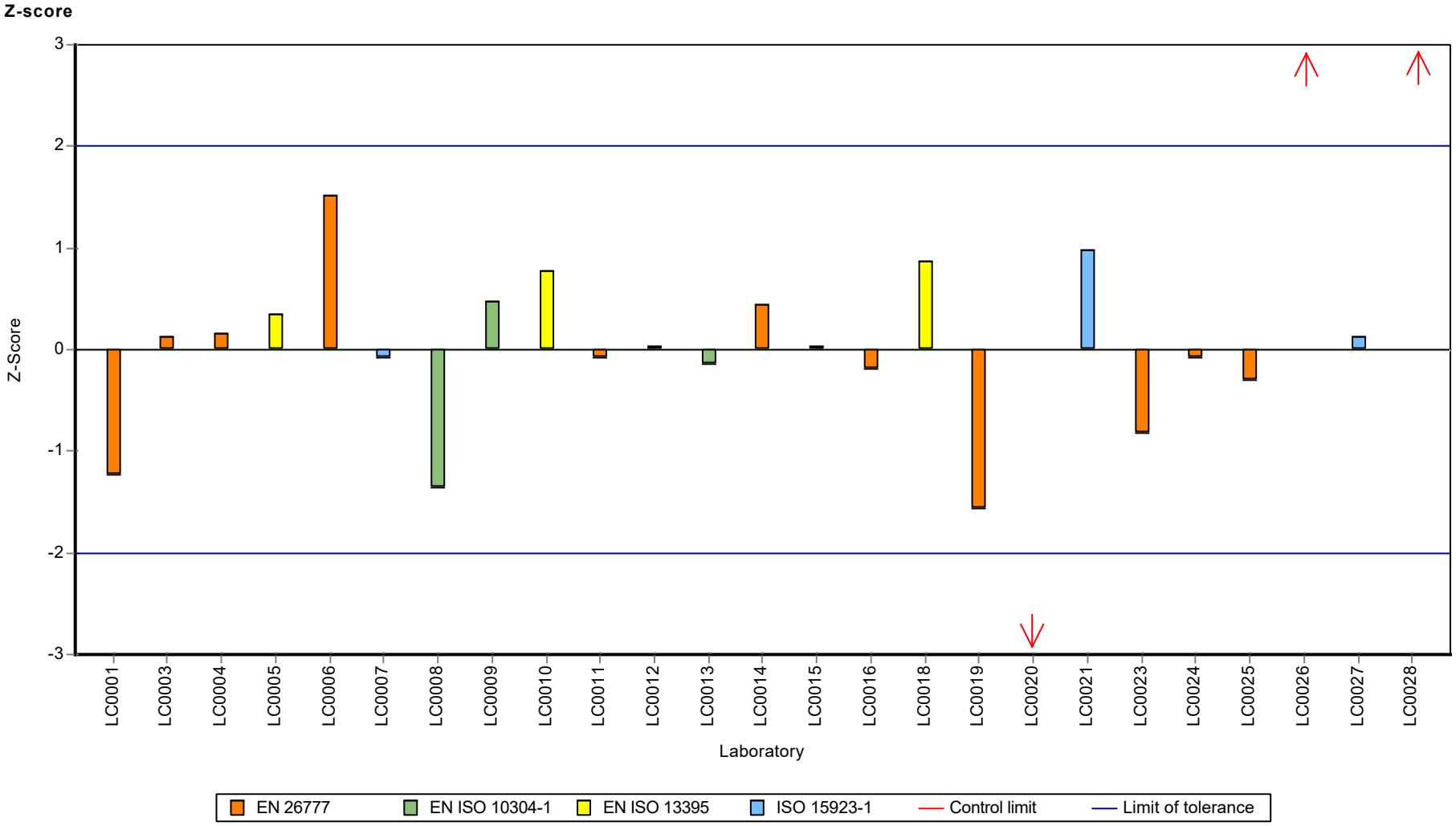
Sample: AB15, Parameter: NO2 (as N)

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: NO2 (as N)



Parameter oriented report

AB15

NO3 (as N)

Unit	mg/l
Assigned value ± U (k=2)	27.4 ± 0.587
Criterion	1.65 (6 %)
Minimum - Maximum	24.5 - 29.6
Control test value ± U (k=2)	27.9 ± 2.79

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	24.5	4.497	89.4	-1.77	
LC0002	-	-	-	-	
LC0003	27.7	3.8	101	0.17	
LC0004	25.47	1.09	92.9	-1.18	
LC0005	28.5	2.85	104	0.66	
LC0006	28.59	2.189	104	0.71	
LC0007	28.5	3.4	104	0.66	
LC0008	25.08	0.98	91.5	-1.42	
LC0009	28.32	3.96	103	0.55	
LC0010	28.8	2.9	105	0.84	
LC0011	28	1.1	102	0.35	
LC0012	26.5	1.3	96.6	-0.56	
LC0013	29.4	1	107	1.2	
LC0014	25.24	2.373	92.1	-1.32	
LC0015	27.99	0.52	102	0.35	
LC0016	27.6	1	101	0.11	
LC0017	-	-	-	-	
LC0018	27.5	2.3	100	0.05	
LC0019	28.6	3.05	104	0.72	
LC0020	27.76	5.72	101	0.21	
LC0021	29.6	2.3	108	1.33	
LC0022	-	-	-	-	
LC0023	26.7	0.8	97.4	-0.44	
LC0024	26.7	5.34	97.4	-0.44	
LC0025	28.25	0.5	103	0.51	
LC0026	24.615	4.923	89.8	-1.7	
LC0027	26.6	2.39	97	-0.5	
LC0028	29.57	1.48	108	1.31	
LC0029	26.8	2	97.7	-0.38	

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: NO3 (as N)

Characteristics of parameter

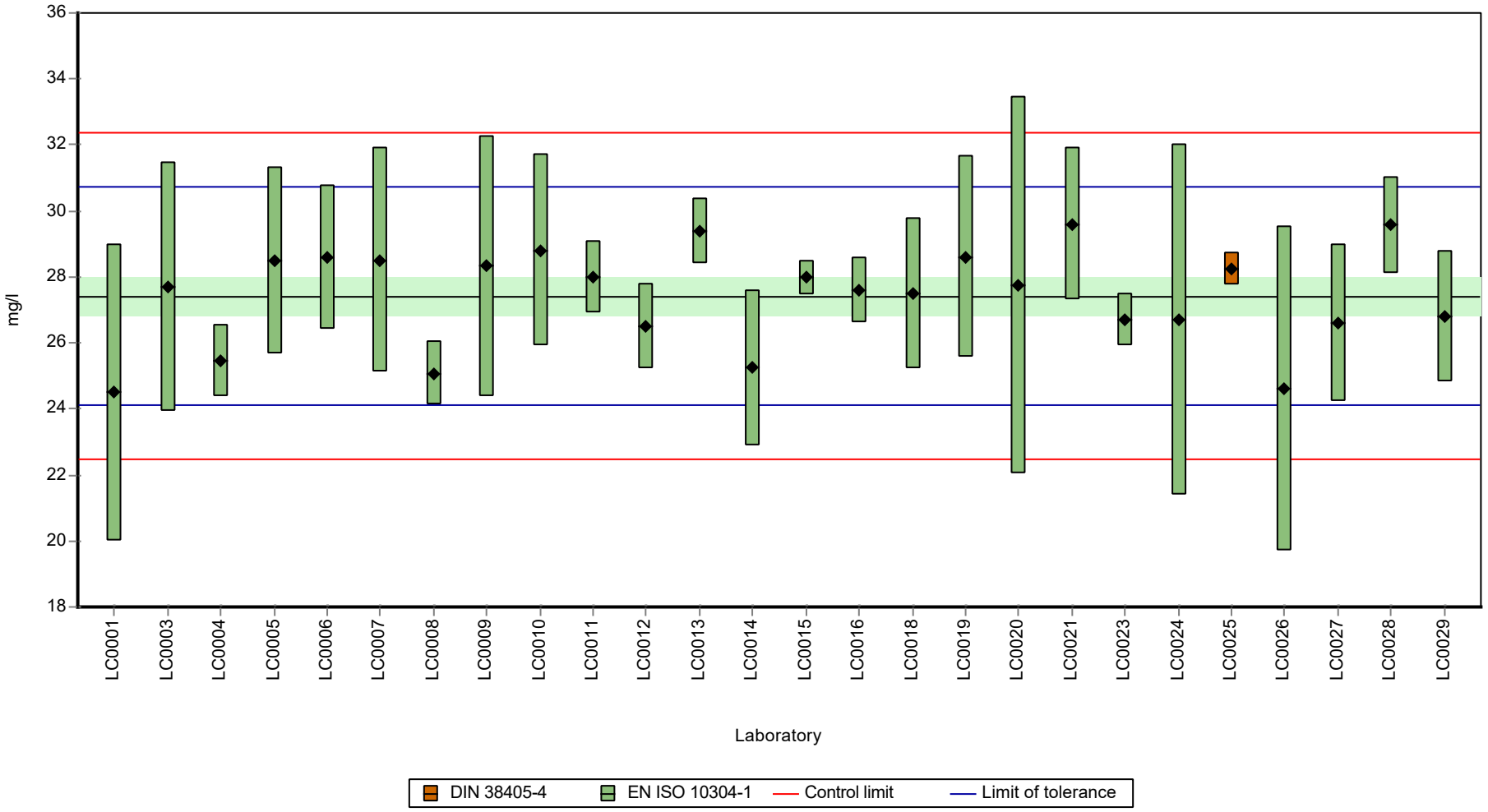
	all results	w ithout outliers	Unit
Mean ± CI (99%)	27.4 ± 0.881	27.4 ± 0.881	mg/l
Minimum	24.5	24.5	mg/l
Maximum	29.6	29.6	mg/l
Standard deviation	1.5	1.5	mg/l
rel. standard deviation	5.46	5.46	%
n	26	26	-

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: NO3 (as N)

Graphical presentation of results

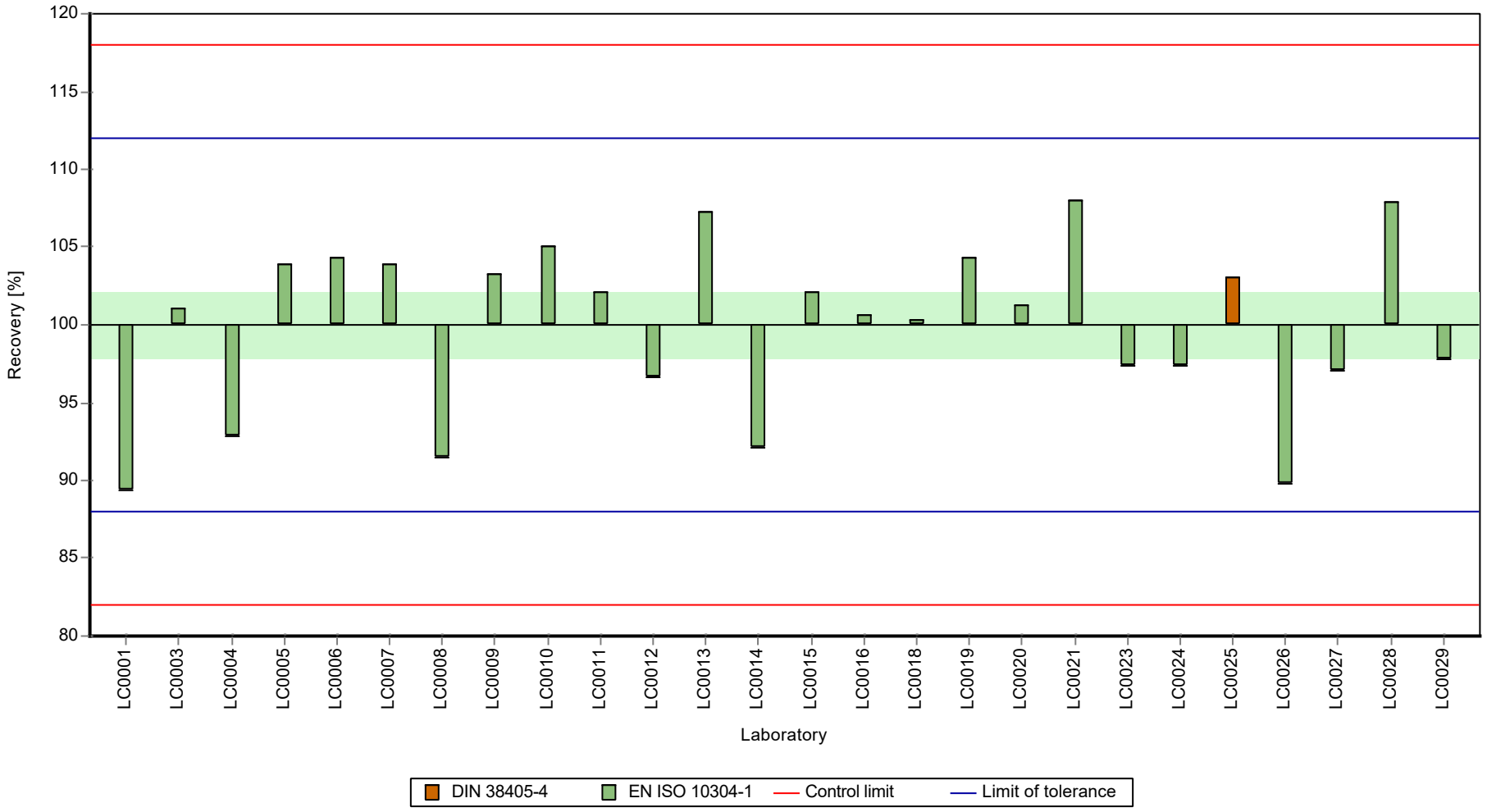
Results



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

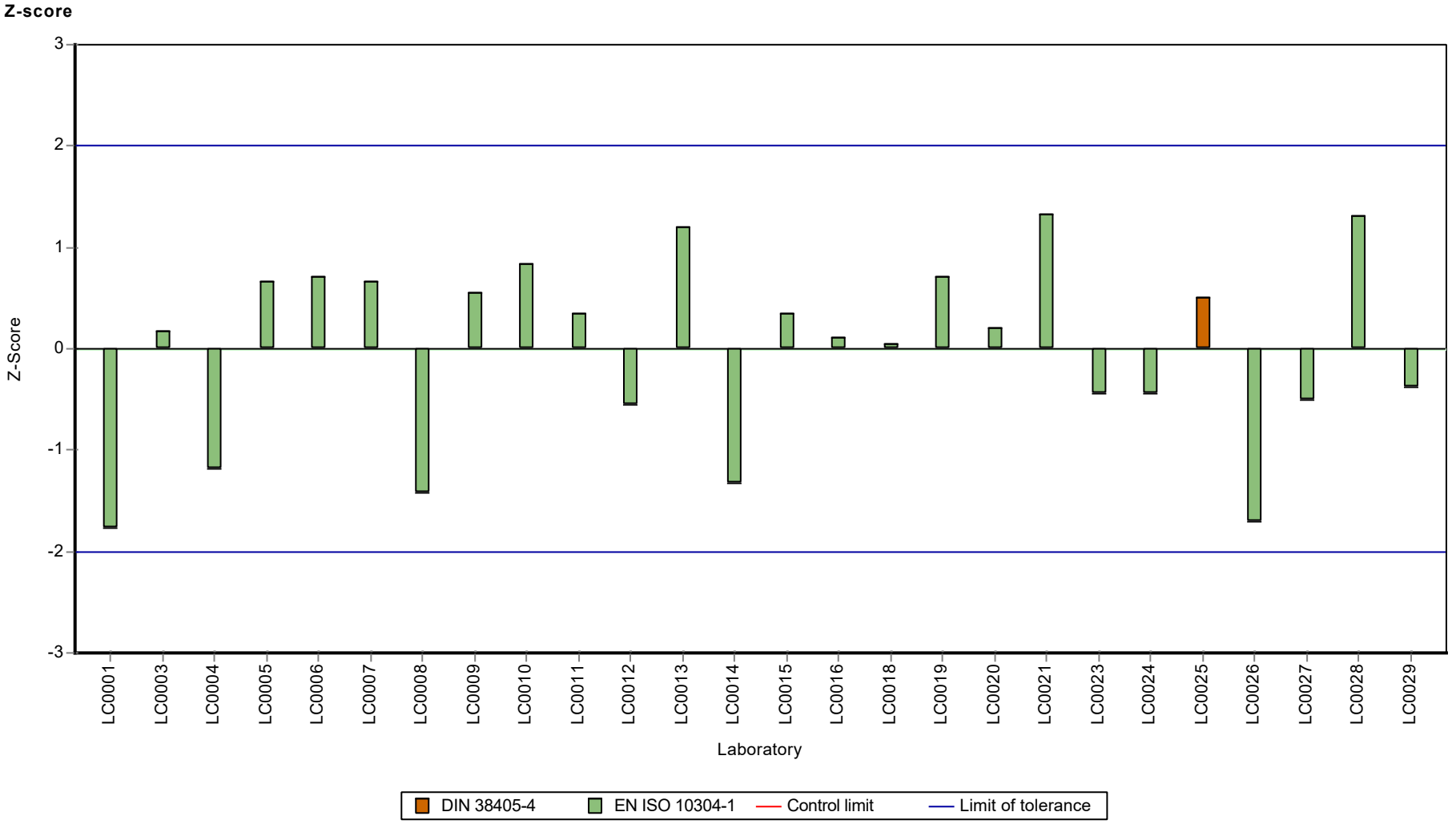
Sample: AB15, Parameter: NO3 (as N)

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: NO3 (as N)



Parameter oriented report

AB15

pH-value

Unit

Assigned value ± U (k=2)	11.7 ± 0.0602
Criterion	0.234 (2 %)
Minimum - Maximum	11.5 - 12.1
Control test value ± U (k=2)	11.8 ± 0.0236

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	11.78	0.348	101	0.31	
LC0002	11.5	0.2	98.2	-0.89	
LC0003	11.46	0.2	97.9	-1.06	
LC0004	11.799	0.24	101	0.39	
LC0005	11.59	0.05	99	-0.5	
LC0006	11.66	0.069	99.6	-0.21	
LC0007	11.6	0.2	99.1	-0.46	
LC0008	12.1	0.1	103	1.67	
LC0009	11.72	0.12	100	0.05	
LC0010	11.7	0.2	99.9	-0.03	
LC0011	11.8	0.52	101	0.39	
LC0012	11.55	0.017	98.7	-0.67	
LC0013	11.71	0.35	100	0.01	
LC0014	12.12	0.35	104	1.76	
LC0015	11.81	0.14	101	0.44	
LC0016	11.6	0.1	99.1	-0.46	
LC0017	11.6	0.2	99.1	-0.46	
LC0018	11.55	0.1	98.7	-0.67	
LC0019	11.7	0.2	99.9	-0.03	
LC0020	11.59	0.489	99	-0.5	
LC0021	11.81	0.42	101	0.44	
LC0022	11.6	0.05	99.1	-0.46	
LC0023	11.71	0.02	100	0.01	
LC0024	11.9	0.1	102	0.82	
LC0025	11.75	0.25	100	0.18	
LC0026	11.708	1.1708	100	0	
LC0027	11.7	0.468	99.9	-0.03	
LC0028	11.65	0.07	99.5	-0.25	
LC0029	12.2	1	104	2.1	H

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: pH-value

Characteristics of parameter

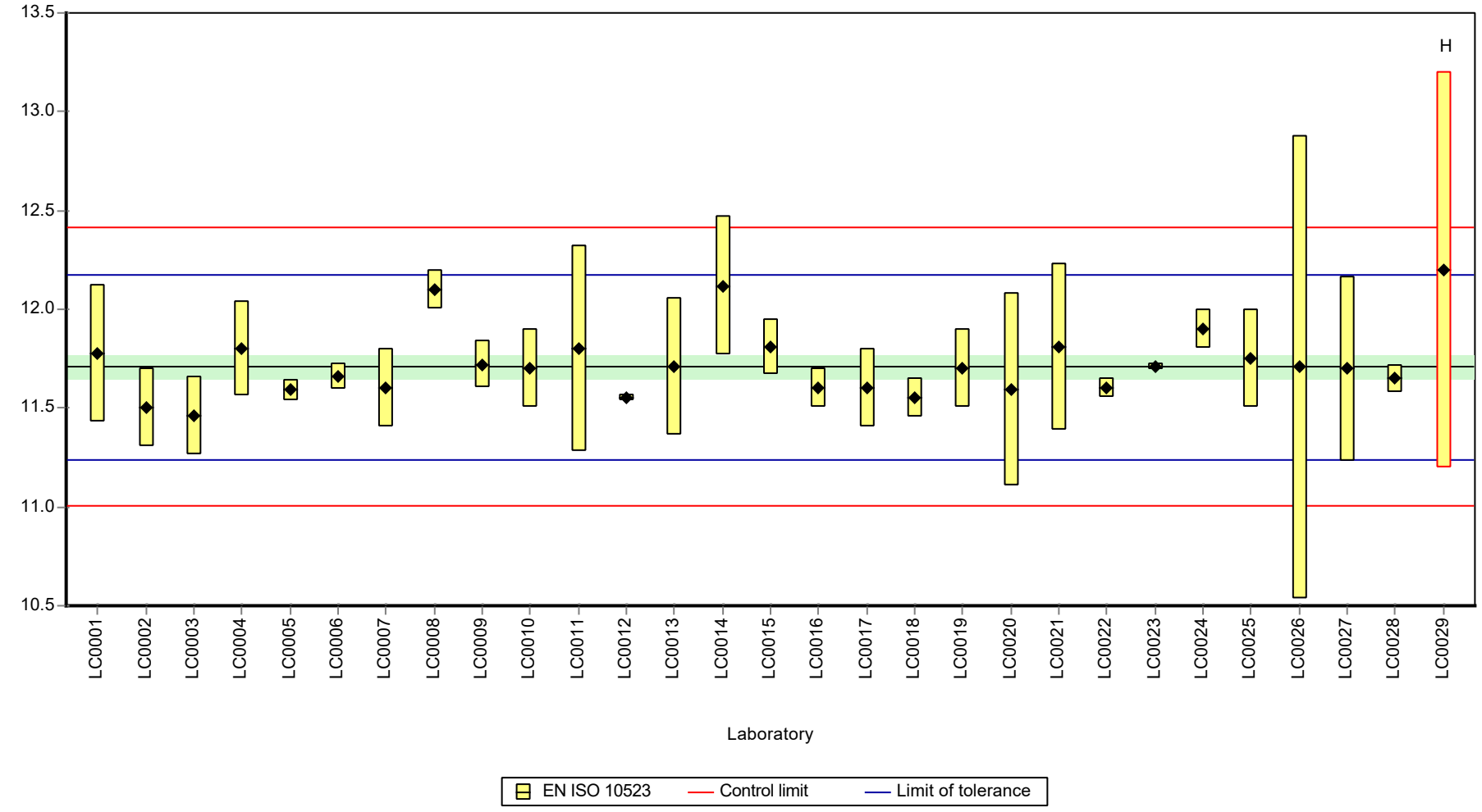
	all results	w ithout outliers	Unit
Mean ± CI (99%)	11.7 ± 0.0985	11.7 ± 0.0873	
Minimum	11.5	11.5	
Maximum	12.2	12.1	
Standard deviation	0.177	0.154	
rel. standard deviation	1.51	1.31	%
n	29	28	-

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: pH-value

Graphical presentation of results

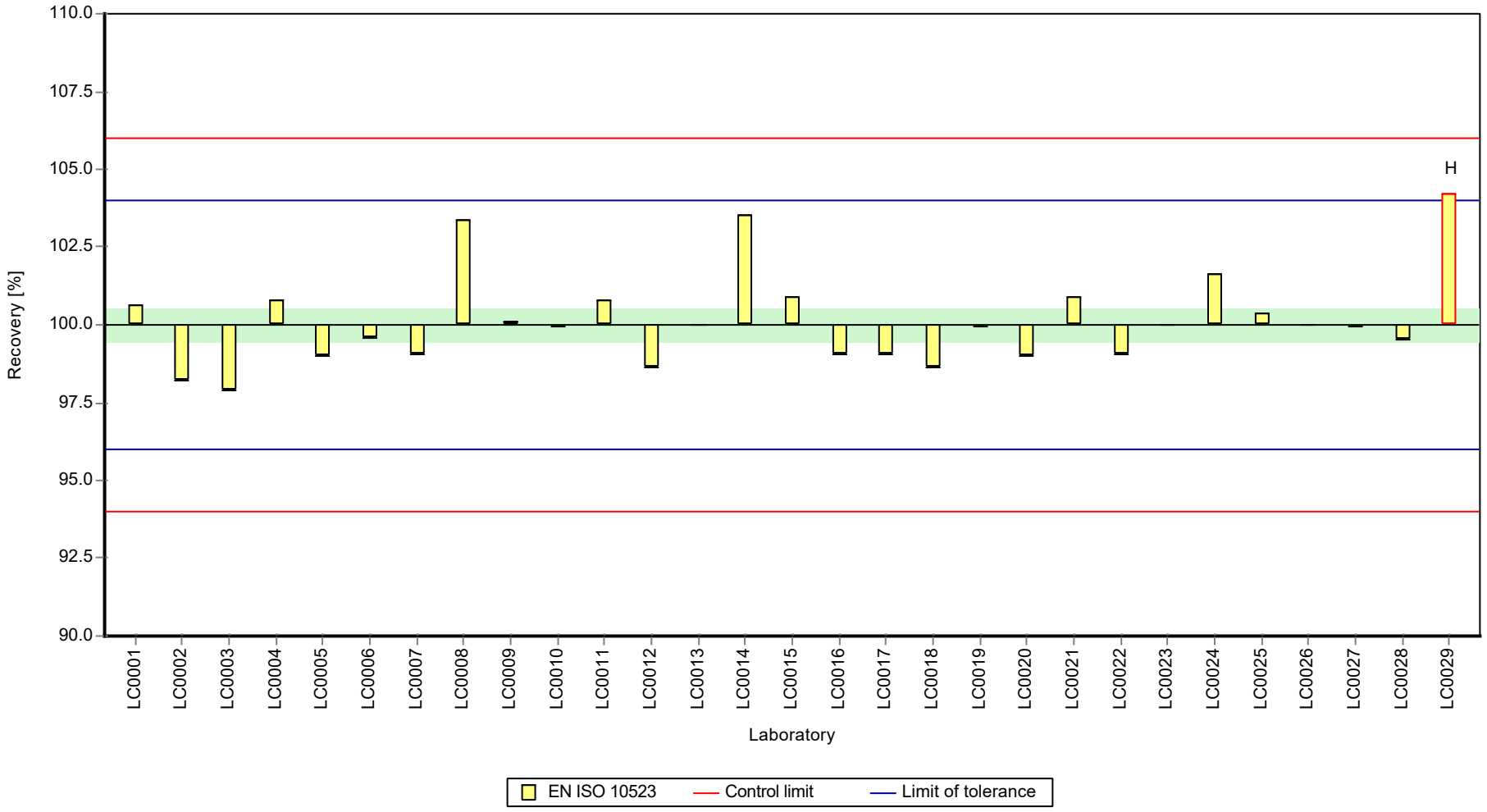
Results



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

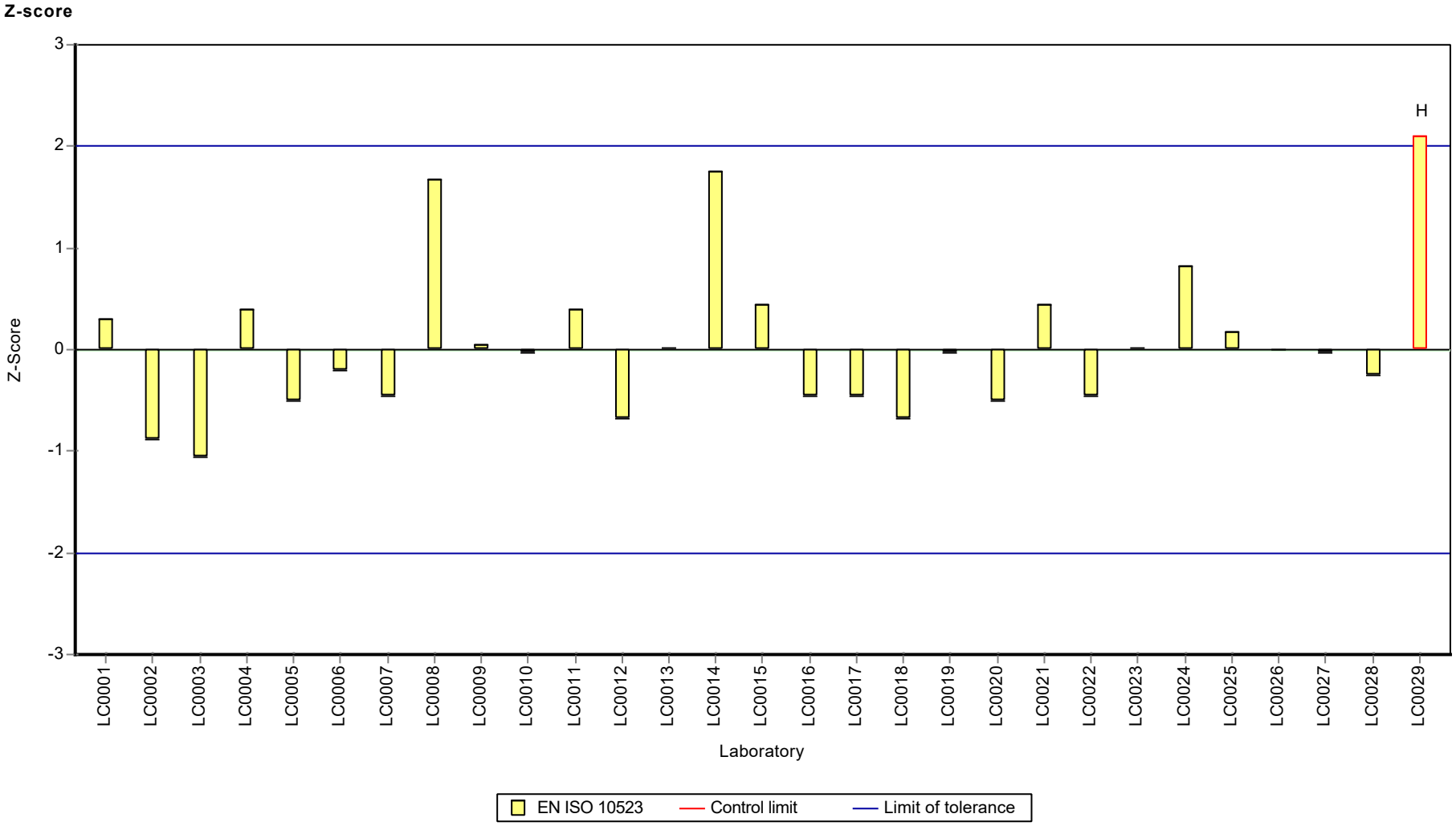
Sample: AB15, Parameter: pH-value

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: pH-value



Parameter oriented report

AB15

PO4 (as P)*

Unit	mg/l
Assigned value ± U (k=2)	-
Criterion	-
Minimum - Maximum	0.0143 - 0.21
Control test value ± U (k=2)	<0.100

*Due to the high reproducibility standard deviation (>50%) no assigned value can be determined. Therefore, the calculated mean value MV+/- U(k=2) based on the data of the accredited laboratories (n) after outlier removal is listed for information and can be used for comparison as part of your internal QA measures.

MV (n=9; accr.) +/- U(k=2): <0.100 (0.0747+/- 0.0474) mg/l

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	< 0.016 (LOQ)	-	-	-	
LC0002	-	-	-	-	
LC0003	< 0.005 (LOQ)	-	-	-	
LC0004	< 0.04 (LOQ)	-	-	-	
LC0005	0.05	0.005	-	-	
LC0006	0.06	0.00255	-	-	
LC0007	47.1	7.1	-	-	H
LC0008	0.054	0.004	-	-	
LC0009	< 0.0652 (LOQ)	-	-	-	
LC0010	< 0.003 (LOQ)	-	-	-	
LC0011	0.21	0.04	-	-	
LC0012	< 0.005 (LOQ)	-	-	-	
LC0013	< 0.03 (LOQ)	-	-	-	
LC0014	< 0.4 (LOQ)	-	-	-	
LC0015	< 0.005 (LOQ)	-	-	-	
LC0016	< 1 (LOQ)	-	-	-	
LC0017	-	-	-	-	
LC0018	< 0.015 (LOQ)	-	-	-	
LC0019	0.054	0.007	-	-	
LC0020	1.434	0.275	-	-	H
LC0021	0.0319	0.0052	-	-	
LC0022	-	-	-	-	
LC0023	0.016	0.005	-	-	
LC0024	0.0143	0.002	-	-	
LC0025	0.182	0.032	-	-	
LC0026	6.245	1.249	-	-	H
LC0027	< 0.02 (LOQ)	-	-	-	
LC0028	< 0.02 (LOQ)	-	-	-	
LC0029	2.76	0.2	-	-	H

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

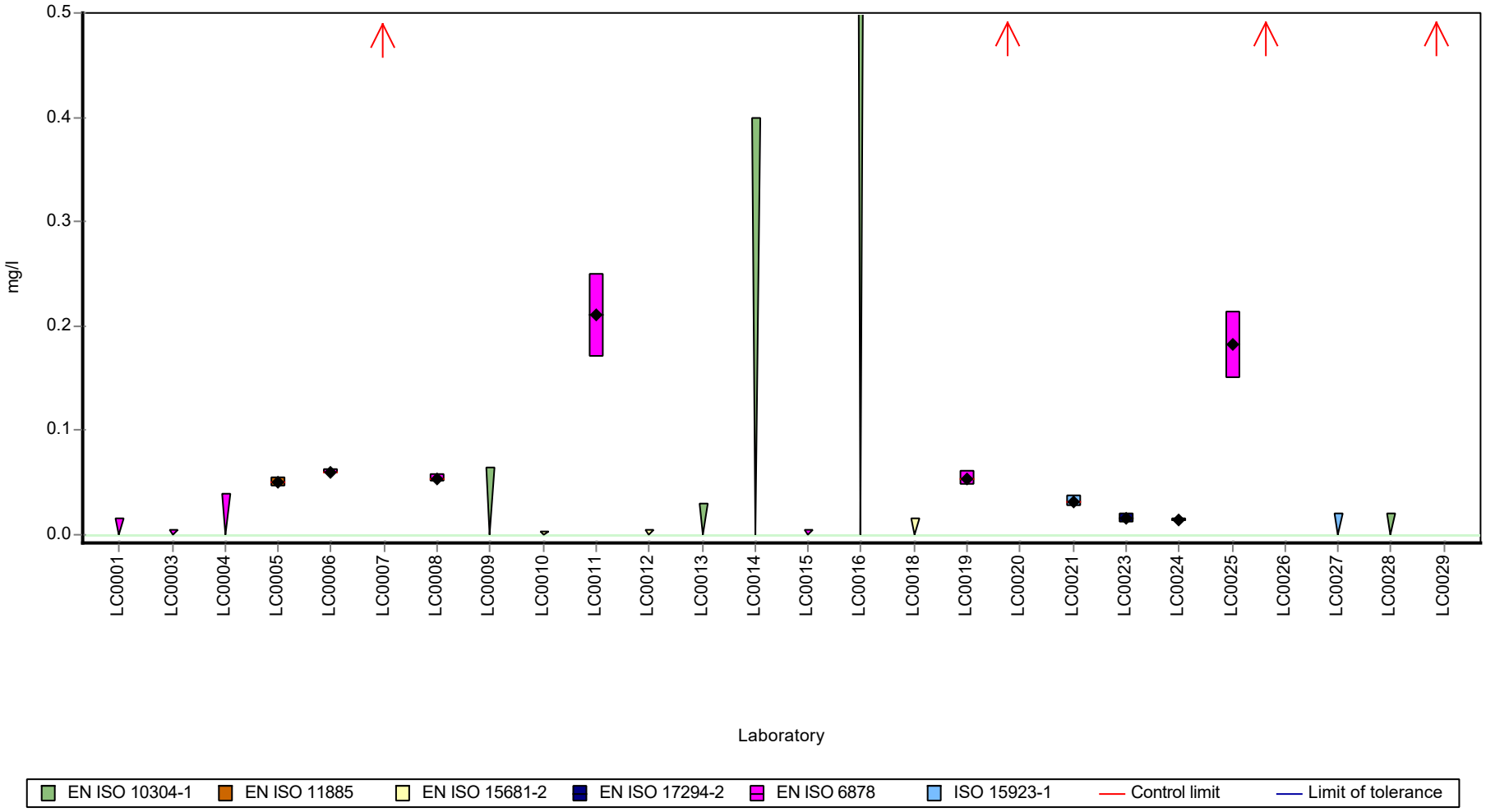
Sample: AB15, Parameter: PO4 (as P)

Characteristics of parameter

	all results	w ithout outliers	Unit
Mean ± CI (99%)	4.48 ± 10.8	0.0747 ± 0.0711	mg/l
Minimum	0.0143	0.0143	mg/l
Maximum	47.1	0.21	mg/l
Standard deviation	12.9	0.0711	mg/l
rel. standard deviation	289	95	%
n	13	9	-

Graphical presentation of results

Results



Parameter oriented report

AB15

Sulfate (as SO4)

Unit	mg/l
Assigned value ± U (k=2)	448 ± 7.35
Criterion	22.4 (5 %)
Minimum - Maximum	411 - 495
Control test value ± U (k=2)	484 ± 48.4

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	423.34	150.71	94.5	-1.1	
LC0002	454.6	22.7	101	0.3	
LC0003	446	58	99.6	-0.09	
LC0004	411.2	19.1	91.8	-1.64	
LC0005	454	45.4	101	0.27	
LC0006	471.05	47.15	105	1.03	
LC0007	444	44	99.1	-0.18	
LC0008	416	26	92.9	-1.43	
LC0009	458.2	53.4	102	0.46	
LC0010	468	47	104	0.9	
LC0011	467	32	104	0.85	
LC0012	450	23	100	0.09	
LC0013	461	14	103	0.58	
LC0014	495.4	43.5	111	2.12	
LC0015	452	10.4	101	0.18	
LC0016	443	21.9	98.9	-0.22	
LC0017	450	23	100	0.09	
LC0018	463	32	103	0.67	
LC0019	440	40.4	98.2	-0.35	
LC0020	510	47.6	114	2.77	H
LC0021	502	34	112	2.41	H
LC0022	-	-	-	-	
LC0023	418.7	12	93.5	-1.3	
LC0024	447	89.4	99.8	-0.04	
LC0025	460	10	103	0.54	
LC0026	437.003	87.4006	97.6	-0.49	
LC0027	439	39.5	98	-0.4	
LC0028	446.5	22.3	99.7	-0.06	
LC0029	430	40	96	-0.8	

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

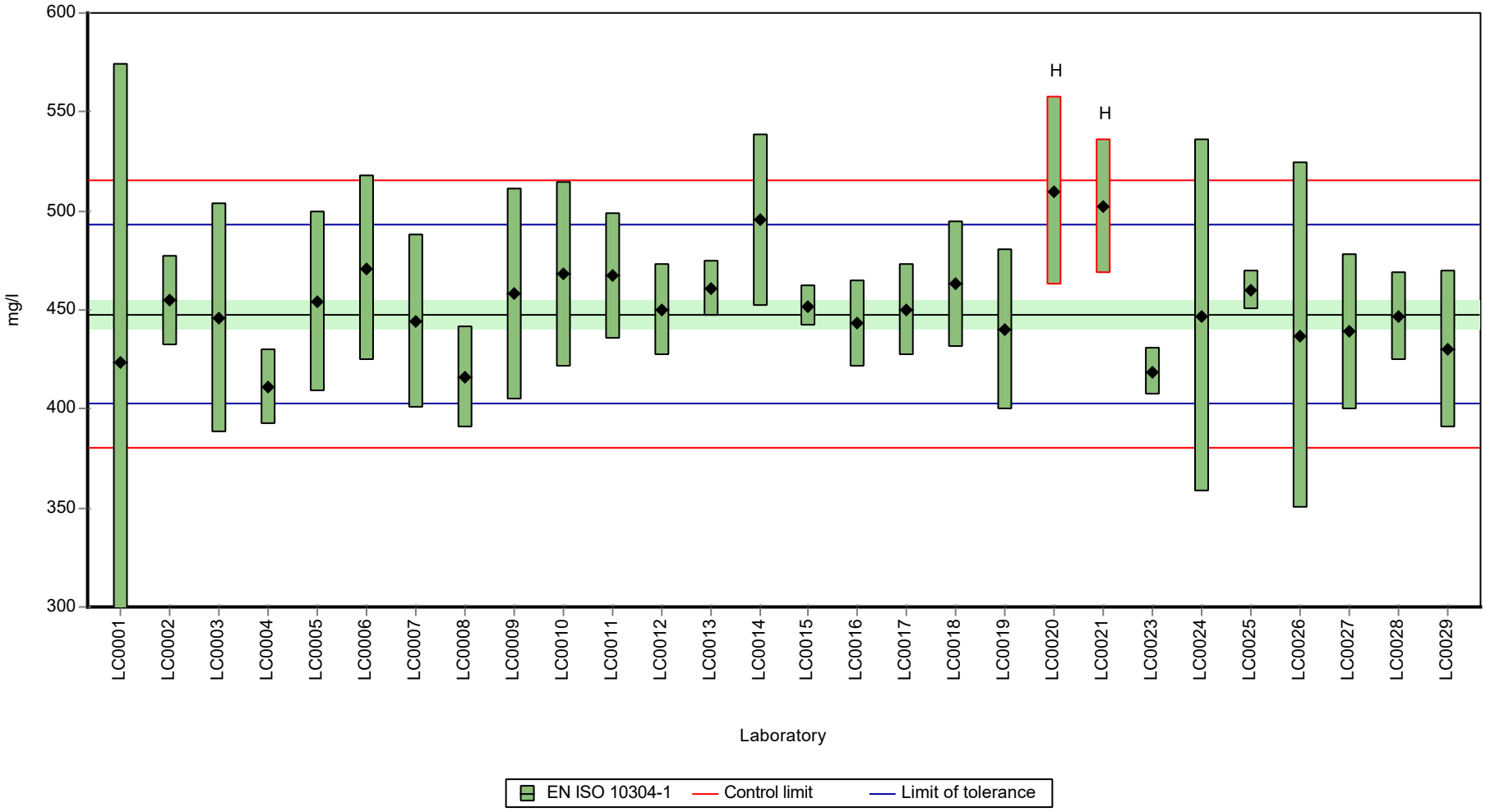
Sample: AB15, Parameter: Sulfate (as SO4)

Characteristics of parameter

	all results	w ithout outliers	Unit
Mean ± CI (99%)	452 ± 13.4	448 ± 11	mg/l
Minimum	411	411	mg/l
Maximum	510	495	mg/l
Standard deviation	23.6	18.7	mg/l
rel. standard deviation	5.22	4.18	%
n	28	26	-

Graphical presentation of results

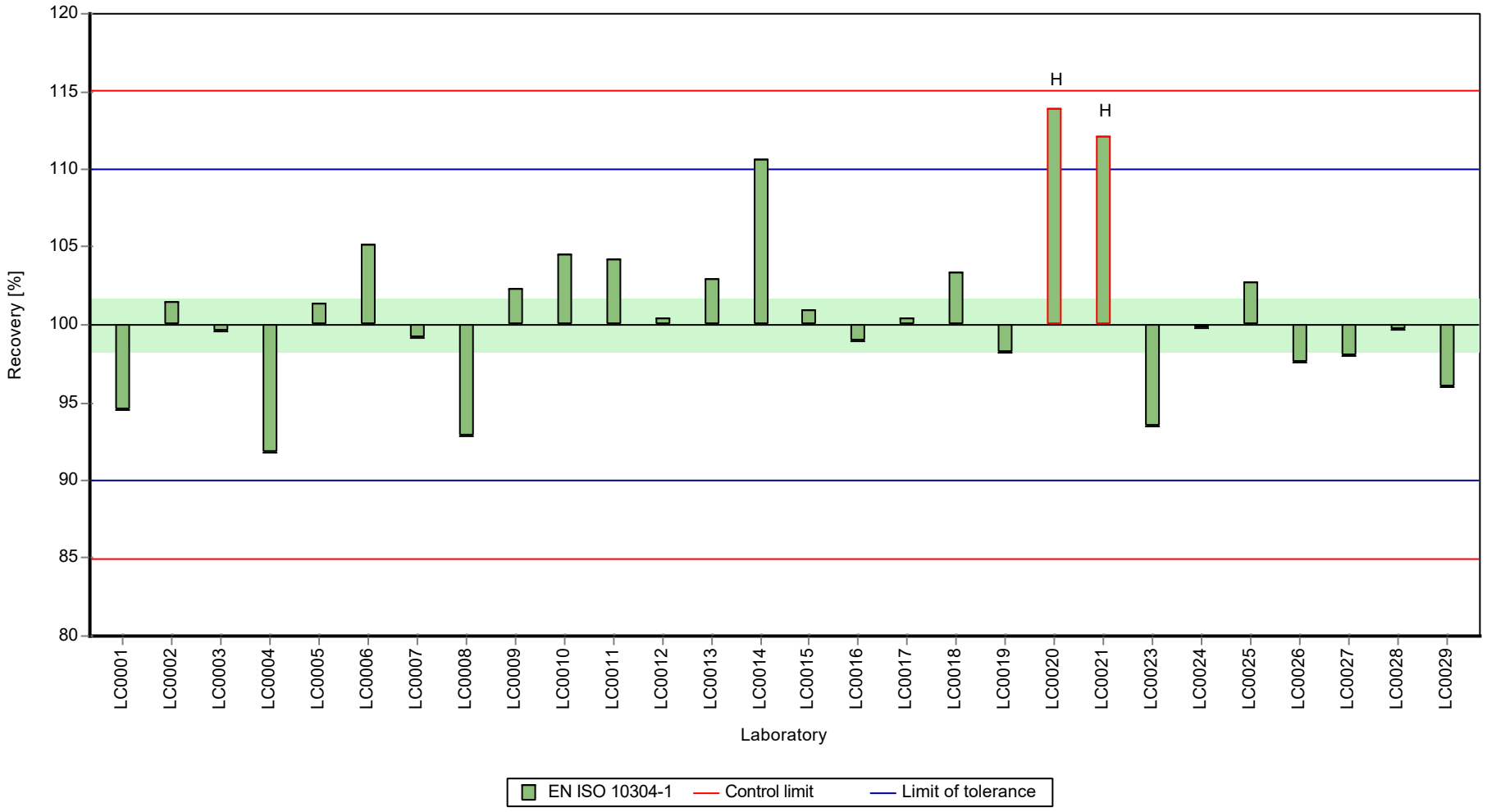
Results



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

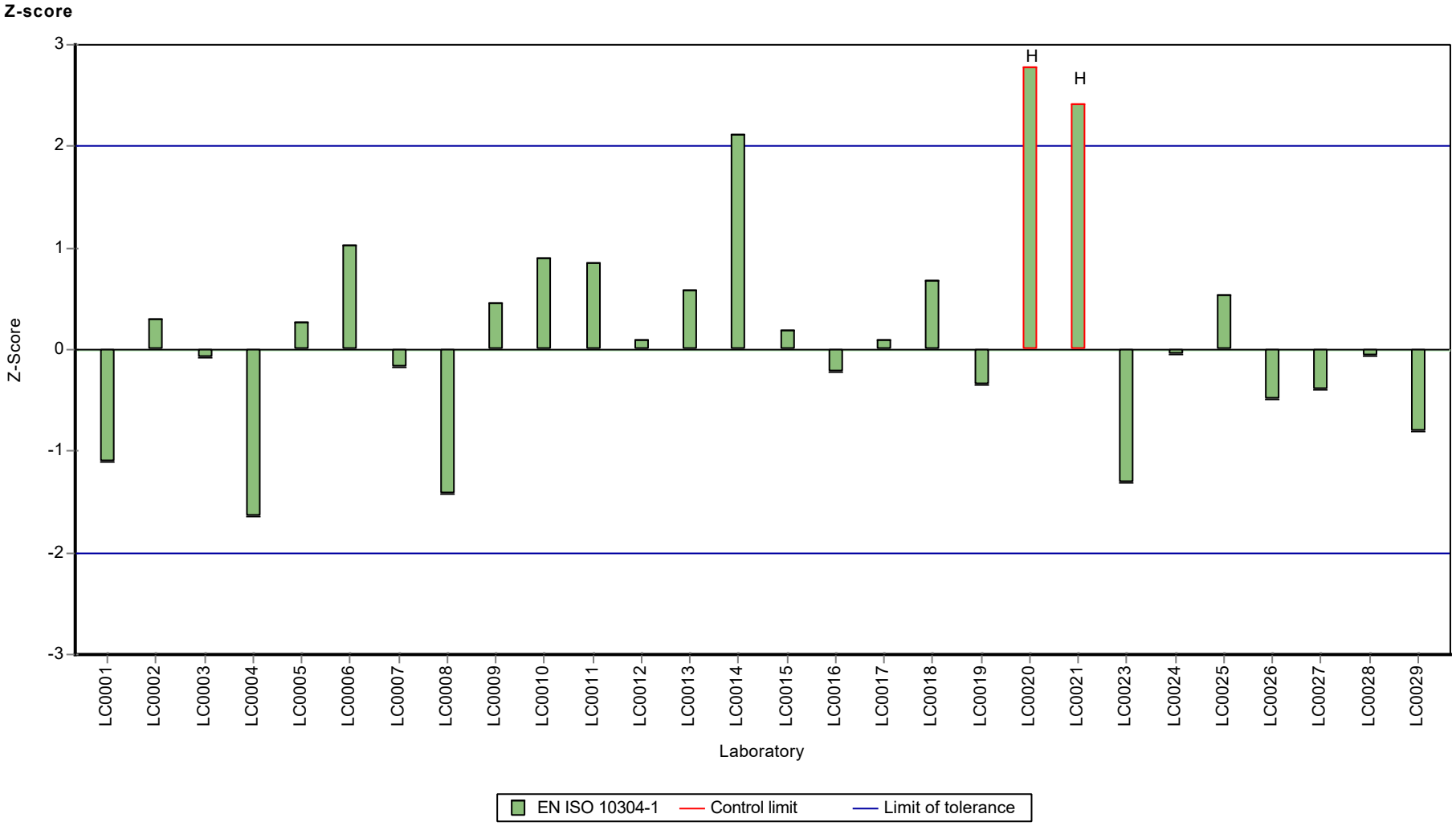
Sample: AB15, Parameter: Sulfate (as SO4)

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15, Parameter: Sulfate (as SO4)



Parameter oriented report

AB15 - TOC

TOC (as C)

Unit	mg/l
Assigned value ± U (k=2)	18.7 ± 0.489
Criterion	1.34 (7.2 %)
Minimum - Maximum	16.7 - 21.4
Control test value ± U (k=2)	18.2 ± 3.64

Labcode	Result	± U	Recovery [%]	z-score	Comments
LC0001	18.43	6.59	98.7	-0.18	
LC0002	19.39	1.22	104	0.53	
LC0003	18.1	1.02	96.9	-0.43	
LC0004	17.9	1.79	95.9	-0.58	
LC0005	16.72	1.67	89.5	-1.45	
LC0006	20.78	0.65	111	1.57	
LC0007	18.1	3.6	96.9	-0.43	
LC0008	16.9	1.56	90.5	-1.32	
LC0009	19.4	3.9	104	0.54	
LC0010	18.4	1.8	98.5	-0.2	
LC0011	-	-	-	-	
LC0012	18.5	2.3	99.1	-0.13	
LC0013	19.3	2.9	103	0.46	
LC0014	20.6	3.13	110	1.43	
LC0015	18.9	0.545	101	0.17	
LC0016	18.6	1.02	99.6	-0.06	
LC0017	-	-	-	-	
LC0018	23.6	0.81	126	3.66	H
LC0019	18.53	0.959	99.2	-0.11	
LC0020	23.3	7.3	125	3.44	H
LC0021	18.3	3.2	98	-0.28	
LC0022	21.4	2.14	115	2.03	
LC0023	17.5	1.5	93.7	-0.87	
LC0024	18.7	4.68	100	0.02	
LC0025	28.24	0.5	151	7.11	H
LC0026	18.5	3.7	99.1	-0.13	
LC0027	17.9	1.61	95.9	-0.58	
LC0028	-	-	-	-	
LC0029	26.1	2	140	5.52	H

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15TOC, Parameter: TOC (as C)

Characteristics of parameter

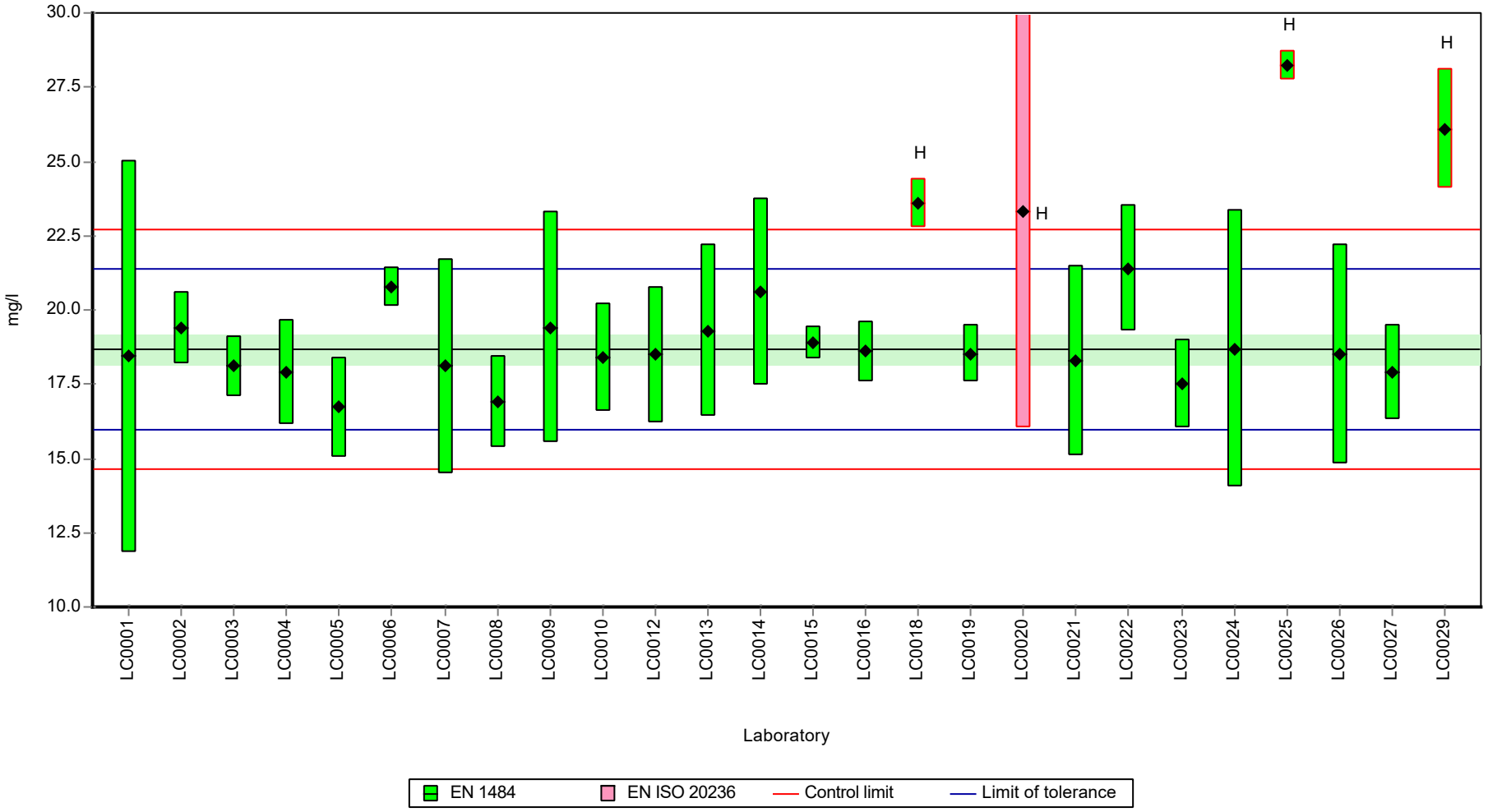
	all results	w ithout outliers	Unit
Mean ± CI (99%)	19.7 ± 1.63	18.7 ± 0.734	mg/l
Minimum	16.7	16.7	mg/l
Maximum	28.2	21.4	mg/l
Standard deviation	2.78	1.15	mg/l
rel. standard deviation	14.1	6.14	%
n	26	22	-

Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15TOC, Parameter: TOC (as C)

Graphical presentation of results

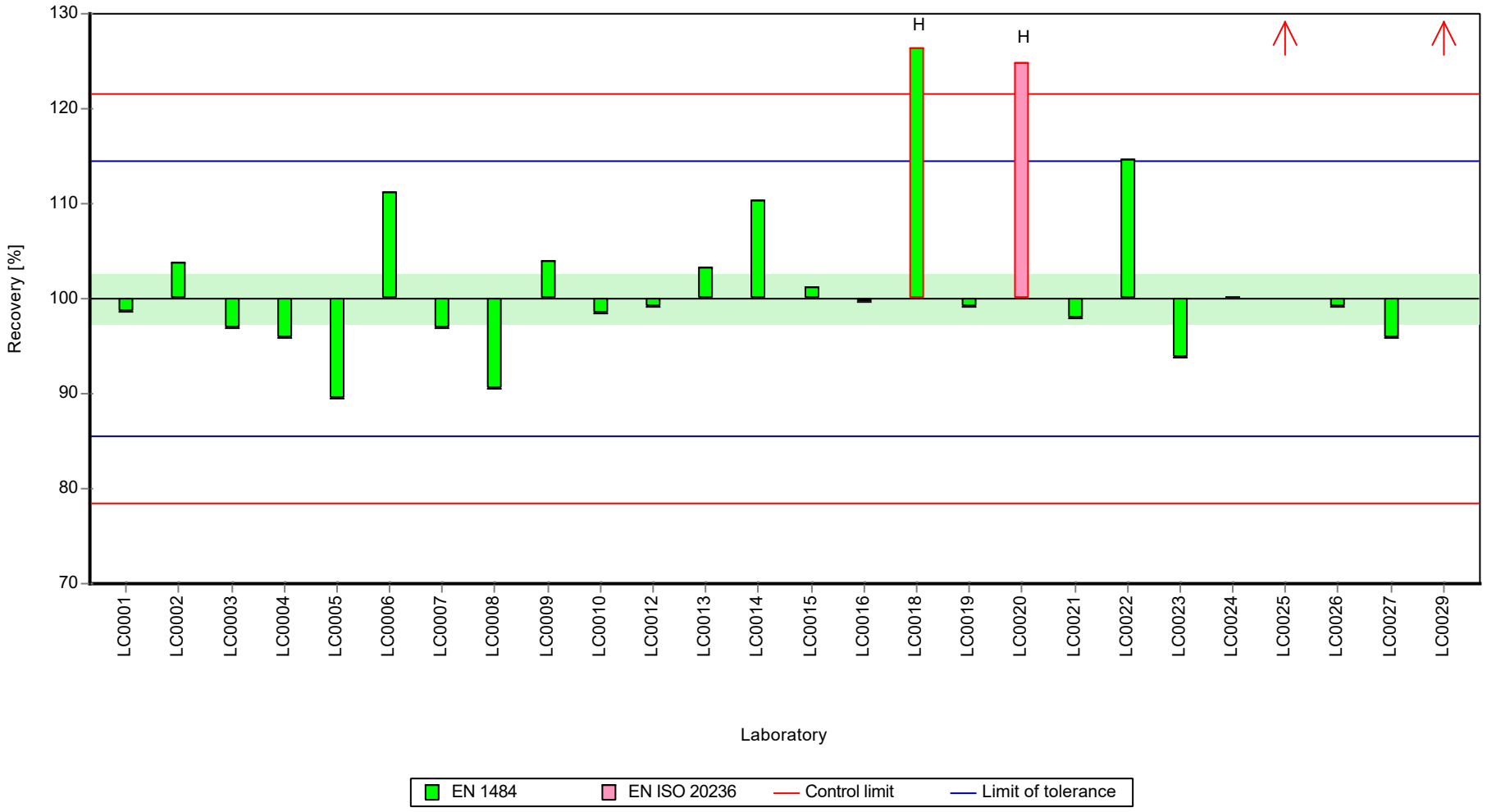
Results



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

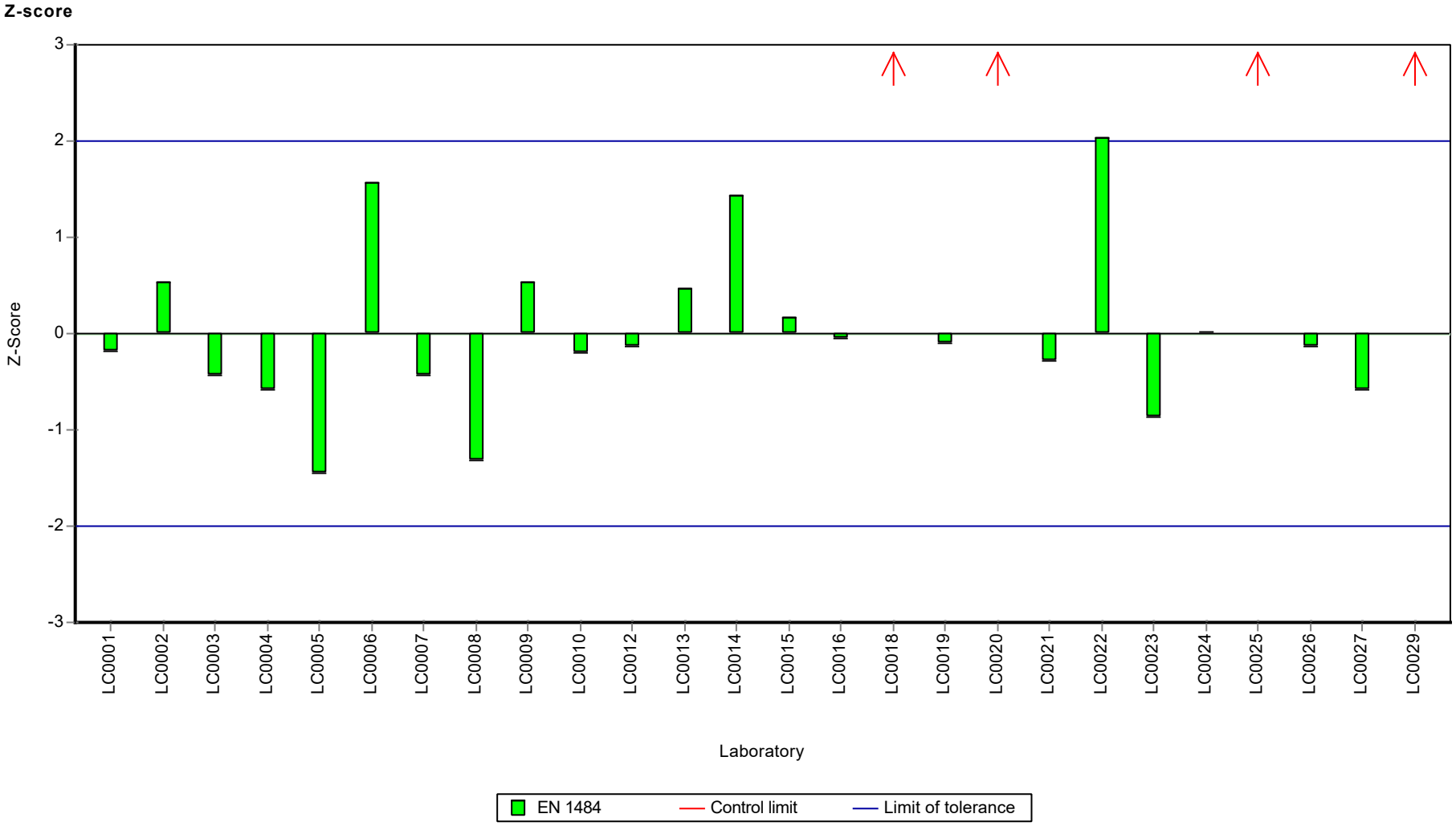
Sample: AB15TOC, Parameter: TOC (as C)

Recovery rate



Parameter oriented report Waste acc to landfill directive (eluate ions) - AB15

Sample: AB15TOC, Parameter: TOC (as C)



E8. Laborорientierte Auswertung / Laboratory oriented report

Die Laborорientierte Auswertung ist nach dem Laborcode sortiert.

The laboratory oriented report is sorted by laboratory code.

Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0001

Sample: AB15

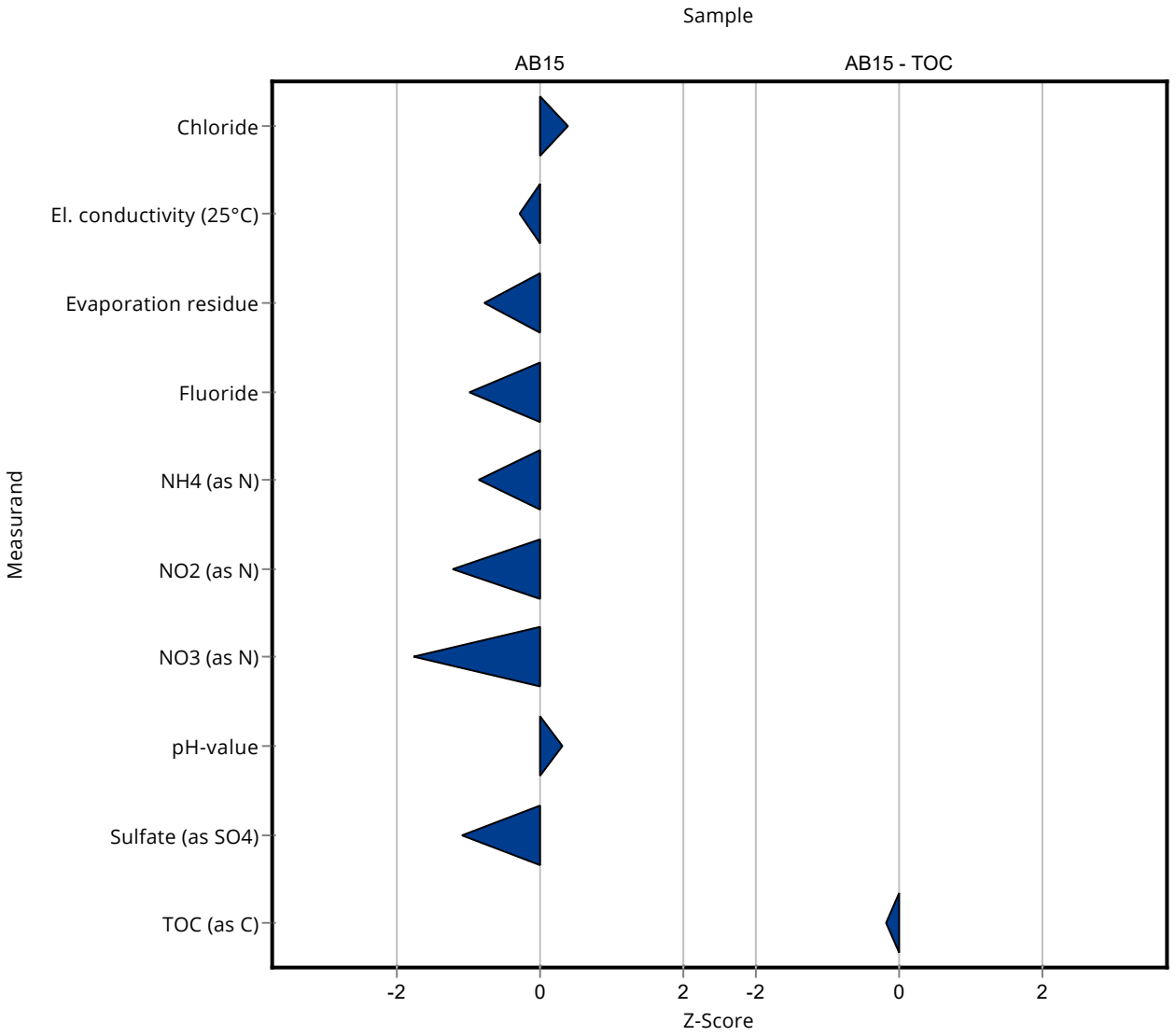
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1680 ± 551.27	82.4	102	0.39
El. conductivity (25°C)	mS/m	753 ± 5.26	748 ± 40.8	15.1	99.4	-0.30
Evaporation residue	mg/l	5190 ± 212	4779 ± 2136.36	519	92.1	-0.79
Fluoride	mg/l	0.575 ± 0.0938	0.363 ± 0.128	0.213	63.2	-1.00
NH4 (as N)	mg/l	29.9 ± 1.24	27.35 ± 2.664	2.99	91.5	-0.85
NO2 (as N)	mg/l	1.11 ± 0.0302	0.991 ± 0.26	0.0942	89.5	-1.24
NO3 (as N)	mg/l	27.4 ± 0.587	24.5 ± 4.497	1.65	89.4	-1.77
pH-value		11.7 ± 0.0602	11.78 ± 0.348	0.234	101	0.31
PO4 (as P)	mg/l	- ± -	<0.016 (LOQ) ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	423.34 ± 150.71	22.4	94.5	-1.10

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.43 ± 6.59	1.34	98.7	-0.18

Summary of results Waste acc to landfill directive (eluate ions) - AB15

Labcode: LC0001



Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0001

Sample: AB15

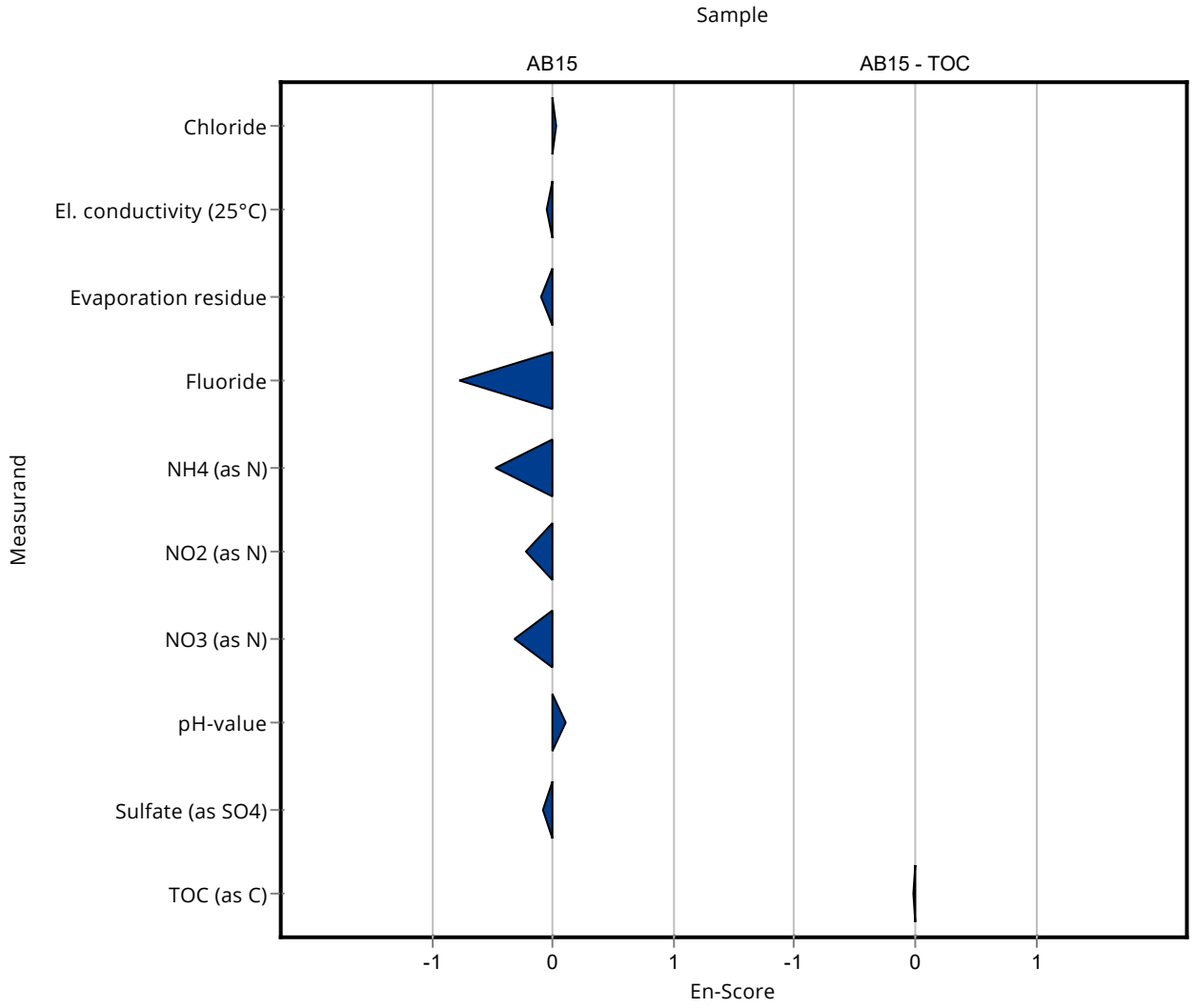
Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	±	23.6	1680	±	551.27	82.4	102	0.03
El. conductivity (25°C)	mS/m	753	±	5.26	748	±	40.8	15.1	99.4	-0.06
Evaporation residue	mg/l	5190	±	212	4779	±	2136.36	519	92.1	-0.10
Fluoride	mg/l	0.575	±	0.0938	0.363	±	0.128	0.213	63.2	-0.78
NH4 (as N)	mg/l	29.9	±	1.24	27.35	±	2.664	2.99	91.5	-0.47
NO2 (as N)	mg/l	1.11	±	0.0302	0.991	±	0.26	0.0942	89.5	-0.22
NO3 (as N)	mg/l	27.4	±	0.587	24.5	±	4.497	1.65	89.4	-0.32
pH-value		11.7	±	0.0602	11.78	±	0.348	0.234	101	0.10
PO4 (as P)	mg/l	-	±	-	<0.016 (LOQ)	±	-	-	-	-
Sulfate (as SO4)	mg/l	448	±	7.35	423.34	±	150.71	22.4	94.5	-0.08

Sample: AB15TOC

Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	±	0.489	18.43	±	6.59	1.34	98.7	-0.02

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0001



Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0002

Sample: AB15

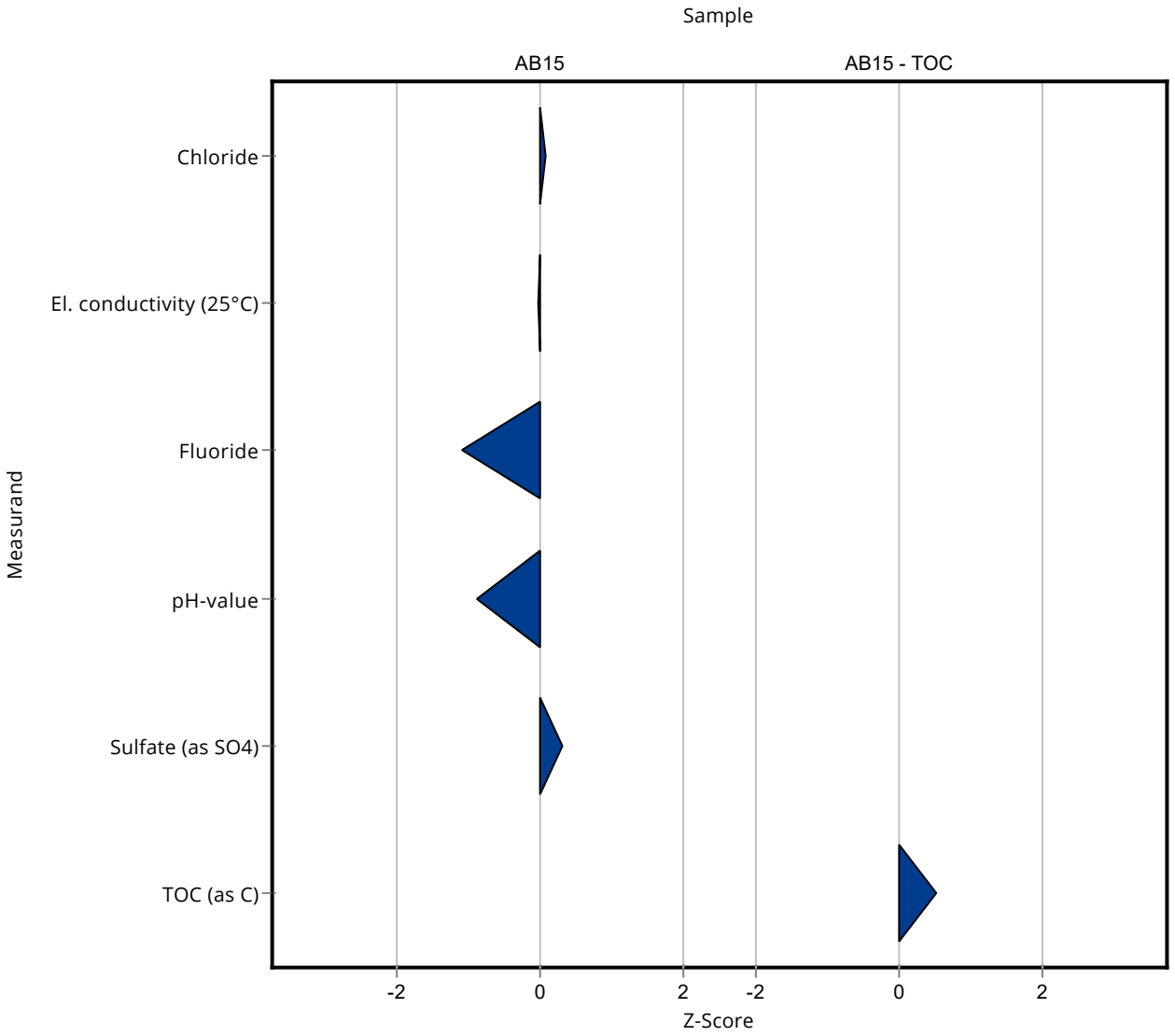
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1653 ± 82.7	82.4	100	0.06
El. conductivity (25°C)	mS/m	753 ± 5.26	752 ± 15	15.1	99.9	-0.03
Evaporation residue	mg/l	5190 ± 212	- ± -	519	-	-
Fluoride	mg/l	0.575 ± 0.0938	0.34316 ± 0.01716	0.213	59.7	-1.09
NH4 (as N)	mg/l	29.9 ± 1.24	- ± -	2.99	-	-
NO2 (as N)	mg/l	1.11 ± 0.0302	- ± -	0.0942	-	-
NO3 (as N)	mg/l	27.4 ± 0.587	- ± -	1.65	-	-
pH-value		11.7 ± 0.0602	11.5 ± 0.2	0.234	98.2	-0.89
PO4 (as P)	mg/l	- ± -	- ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	454.6 ± 22.7	22.4	101	0.30

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	19.39 ± 1.22	1.34	104	0.53

Summary of results Waste acc to landfill directive (eluate ions) - AB15

Labcode: LC0002



Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0002

Sample: AB15

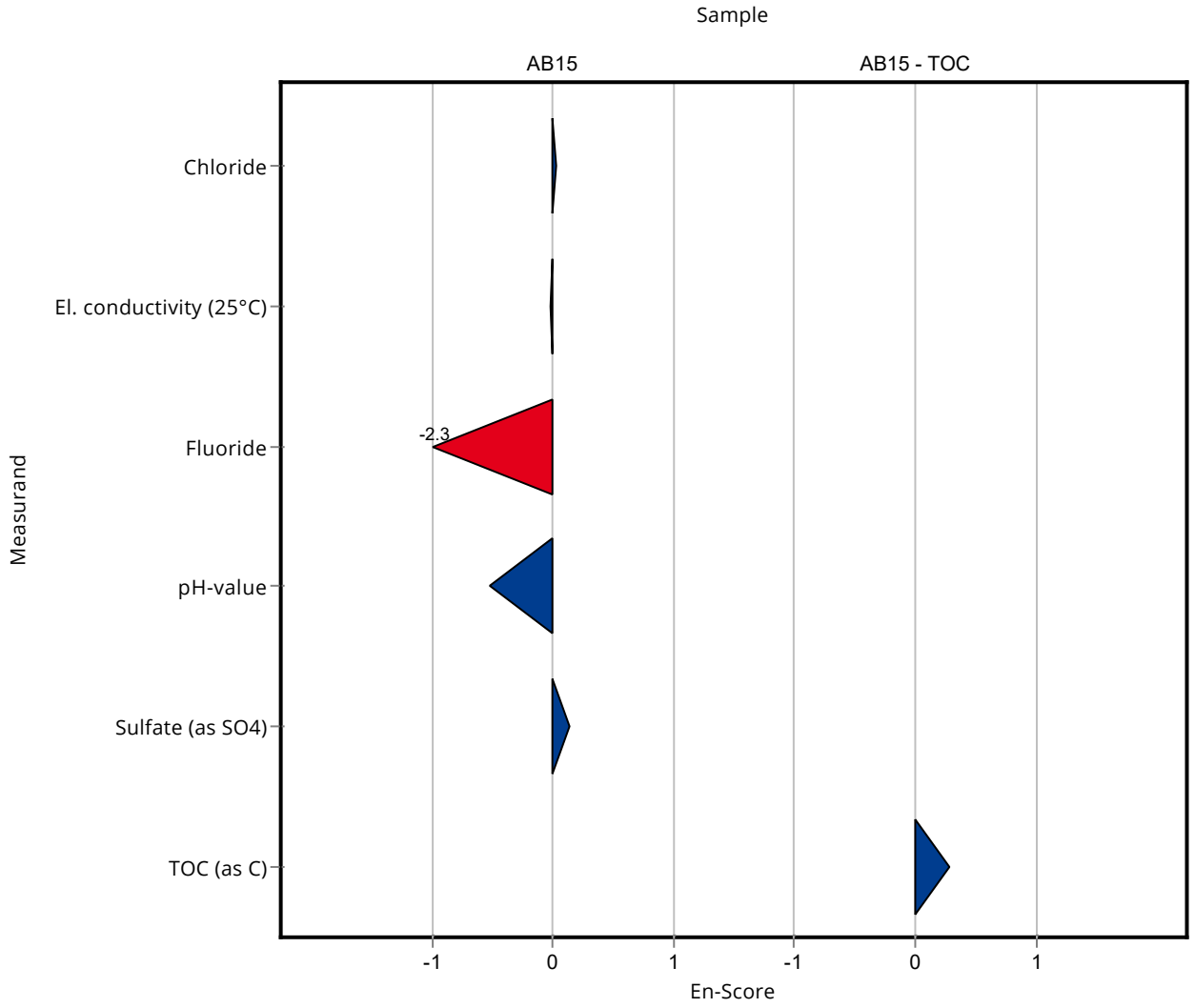
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650 ± 23.6	1653 ± 82.7	82.4	100	0.03
El. conductivity (25°C)	mS/m	753 ± 5.26	752 ± 15	15.1	99.9	-0.02
Evaporation residue	mg/l	5190 ± 212	- ± -	519	-	-
Fluoride	mg/l	0.575 ± 0.0938	0.34316 ± 0.01716	0.213	59.7	-2.32
NH4 (as N)	mg/l	29.9 ± 1.24	- ± -	2.99	-	-
NO2 (as N)	mg/l	1.11 ± 0.0302	- ± -	0.0942	-	-
NO3 (as N)	mg/l	27.4 ± 0.587	- ± -	1.65	-	-
pH-value		11.7 ± 0.0602	11.5 ± 0.2	0.234	98.2	-0.51
PO4 (as P)	mg/l	- ± -	- ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	454.6 ± 22.7	22.4	101	0.15

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7 ± 0.489	19.39 ± 1.22	1.34	104	0.29

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0002



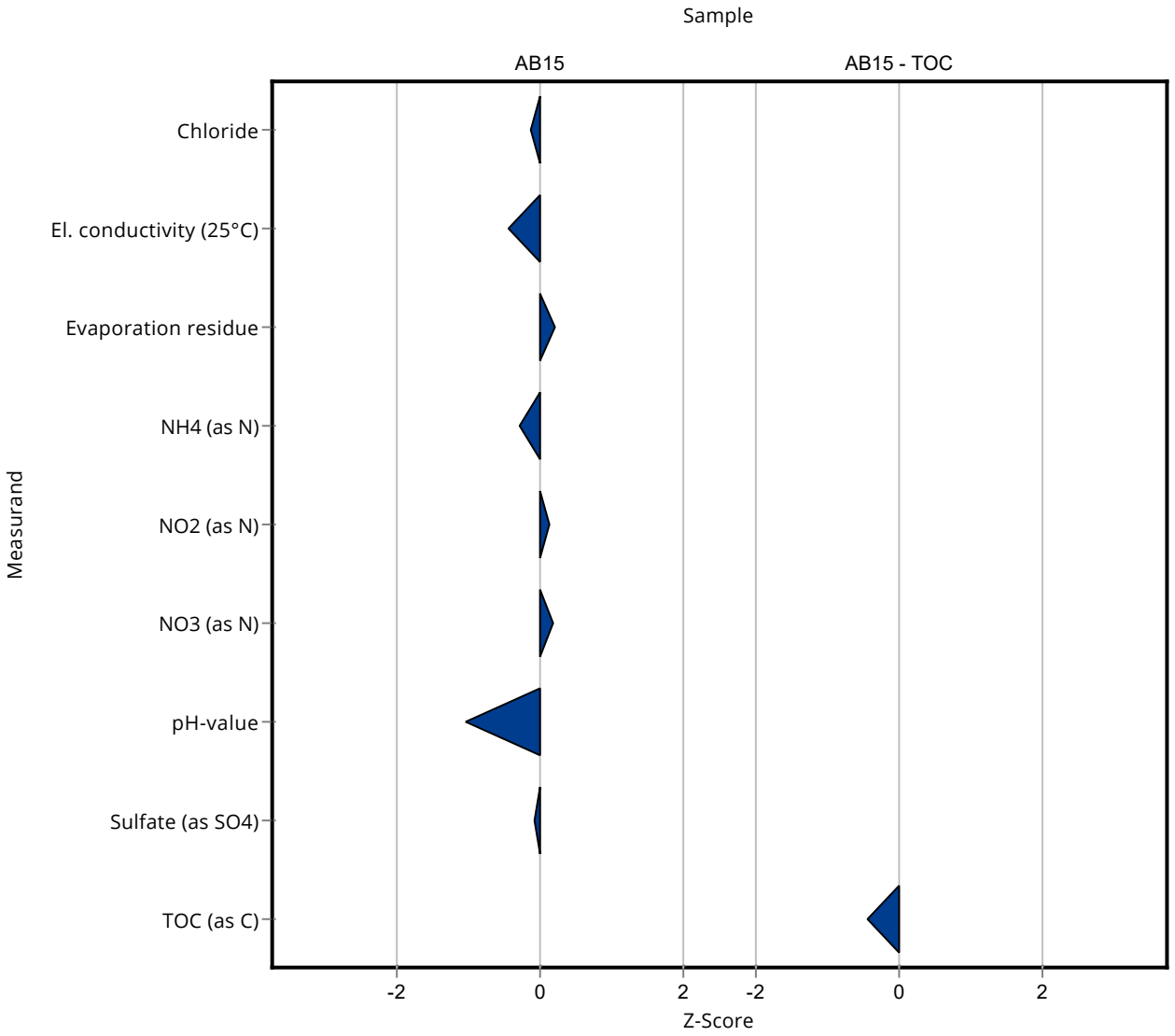
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0003

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1636 ± 272	82.4	99.3	-0.15
El. conductivity (25°C)	mS/m	753 ± 5.26	745.8 ± 21	15.1	99.1	-0.45
Evaporation residue	mg/l	5190 ± 212	5290 ± 530	519	102	0.20
Fluoride	mg/l	0.575 ± 0.0938	- ± -	0.213	-	-
NH4 (as N)	mg/l	29.9 ± 1.24	29 ± 4.5	2.99	97	-0.30
NO2 (as N)	mg/l	1.11 ± 0.0302	1.12 ± 0.19	0.0942	101	0.13
NO3 (as N)	mg/l	27.4 ± 0.587	27.7 ± 3.8	1.65	101	0.17
pH-value		11.7 ± 0.0602	11.46 ± 0.2	0.234	97.9	-1.06
PO4 (as P)	mg/l	- ± -	<0.005 (LOQ) ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	446 ± 58	22.4	99.6	-0.09

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.1 ± 1.02	1.34	96.9	-0.43


Sample
AB15
AB15 - TOC
Chloride
El. conductivity (25°C)
Evaporation residue
NH4 (as N)
NO2 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
Measurand
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0003

Sample: AB15

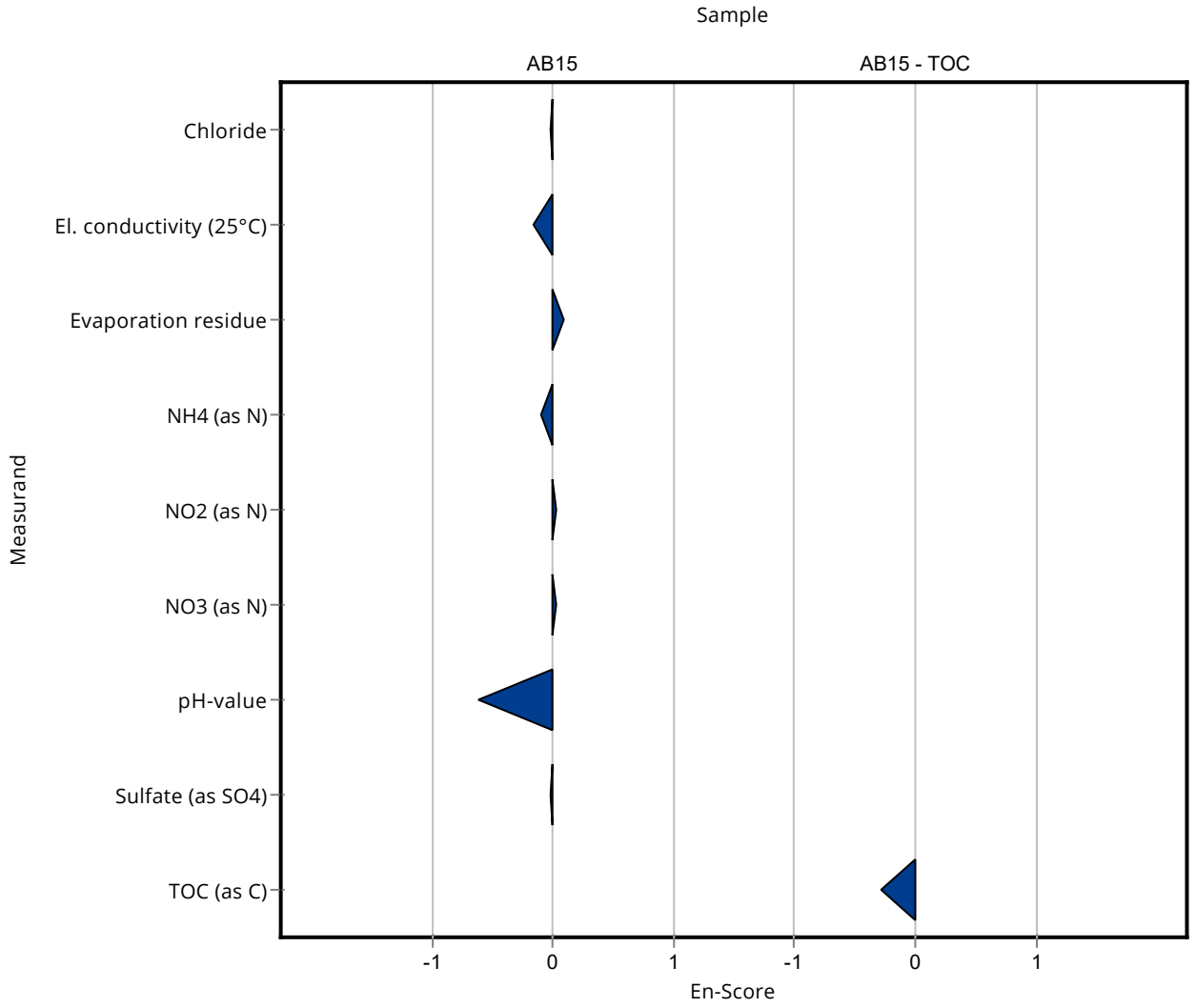
Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	±	23.6	1636	±	272	82.4	99.3	-0.02
El. conductivity (25°C)	mS/m	753	±	5.26	745.8	±	21	15.1	99.1	-0.16
Evaporation residue	mg/l	5190	±	212	5290	±	530	519	102	0.09
Fluoride	mg/l	0.575	±	0.0938	-	±	-	0.213	-	-
NH4 (as N)	mg/l	29.9	±	1.24	29	±	4.5	2.99	97	-0.10
NO2 (as N)	mg/l	1.11	±	0.0302	1.12	±	0.19	0.0942	101	0.03
NO3 (as N)	mg/l	27.4	±	0.587	27.7	±	3.8	1.65	101	0.04
pH-value		11.7	±	0.0602	11.46	±	0.2	0.234	97.9	-0.61
PO4 (as P)	mg/l	-	±	-	<0.005 (LOQ)	±	-	-	-	-
Sulfate (as SO4)	mg/l	448	±	7.35	446	±	58	22.4	99.6	-0.02

Sample: AB15TOC

Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	±	0.489	18.1	±	1.02	1.34	96.9	-0.27

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0003



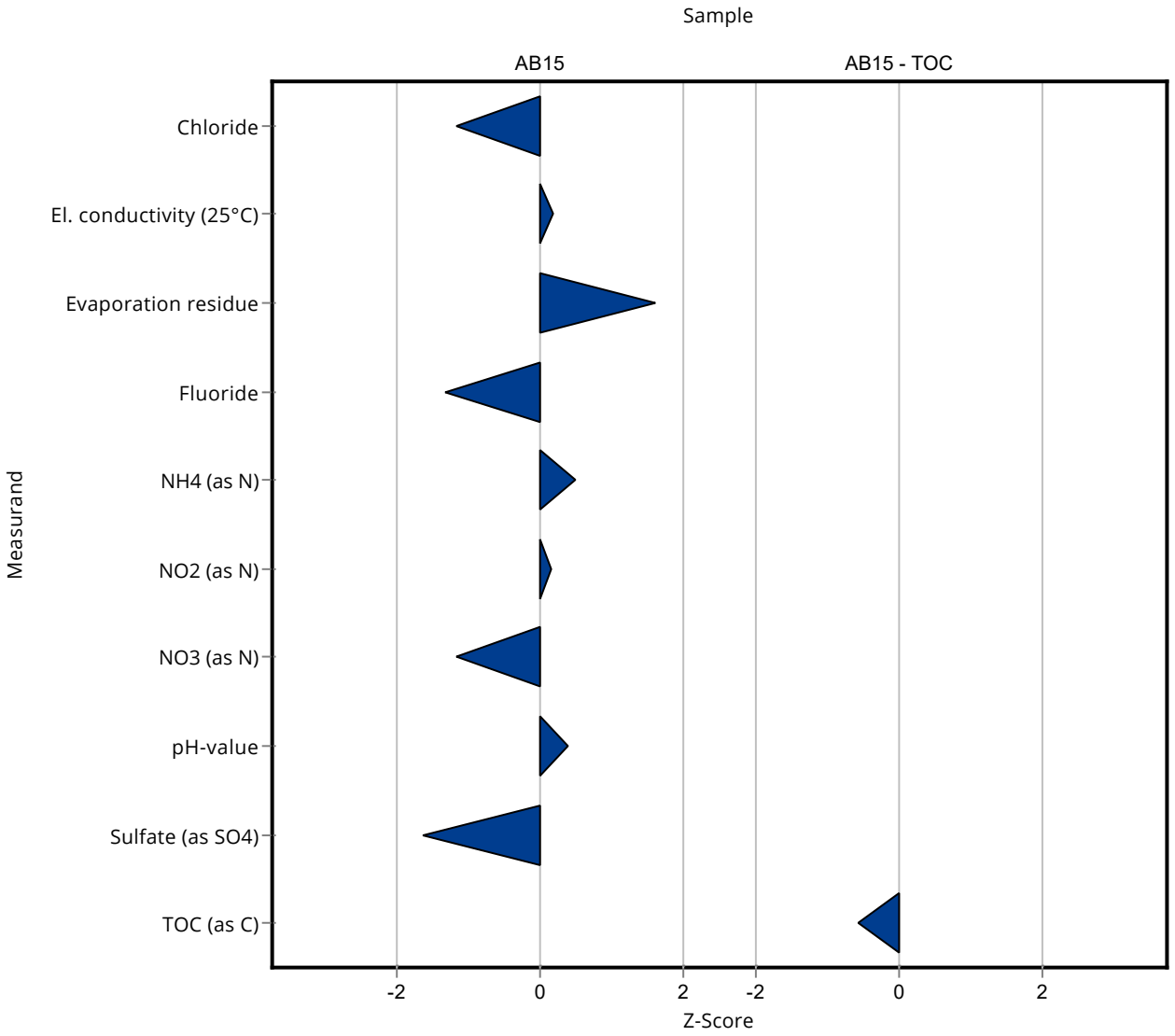
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0004

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1550.7 ± 63.4	82.4	94.1	-1.18
El. conductivity (25°C)	mS/m	753 ± 5.26	755 ± 13.96	15.1	100	0.17
Evaporation residue	mg/l	5190 ± 212	6026 ± 602.6	519	116	1.62
Fluoride	mg/l	0.575 ± 0.0938	0.292 ± 0.013	0.213	50.8	-1.33
NH4 (as N)	mg/l	29.9 ± 1.24	31.36 ± 1.22	2.99	105	0.49
NO2 (as N)	mg/l	1.11 ± 0.0302	1.122 ± 0.043	0.0942	101	0.15
NO3 (as N)	mg/l	27.4 ± 0.587	25.47 ± 1.09	1.65	92.9	-1.18
pH-value		11.7 ± 0.0602	11.799 ± 0.24	0.234	101	0.39
PO4 (as P)	mg/l	- ± -	<0.04 (LOQ) ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	411.2 ± 19.1	22.4	91.8	-1.64

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	17.9 ± 1.79	1.34	95.9	-0.58


Sample
AB15
AB15 - TOC
Chloride
El. conductivity (25°C)
Evaporation residue
Fluoride
NH4 (as N)
NO2 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
Measurand
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0004

Sample: AB15

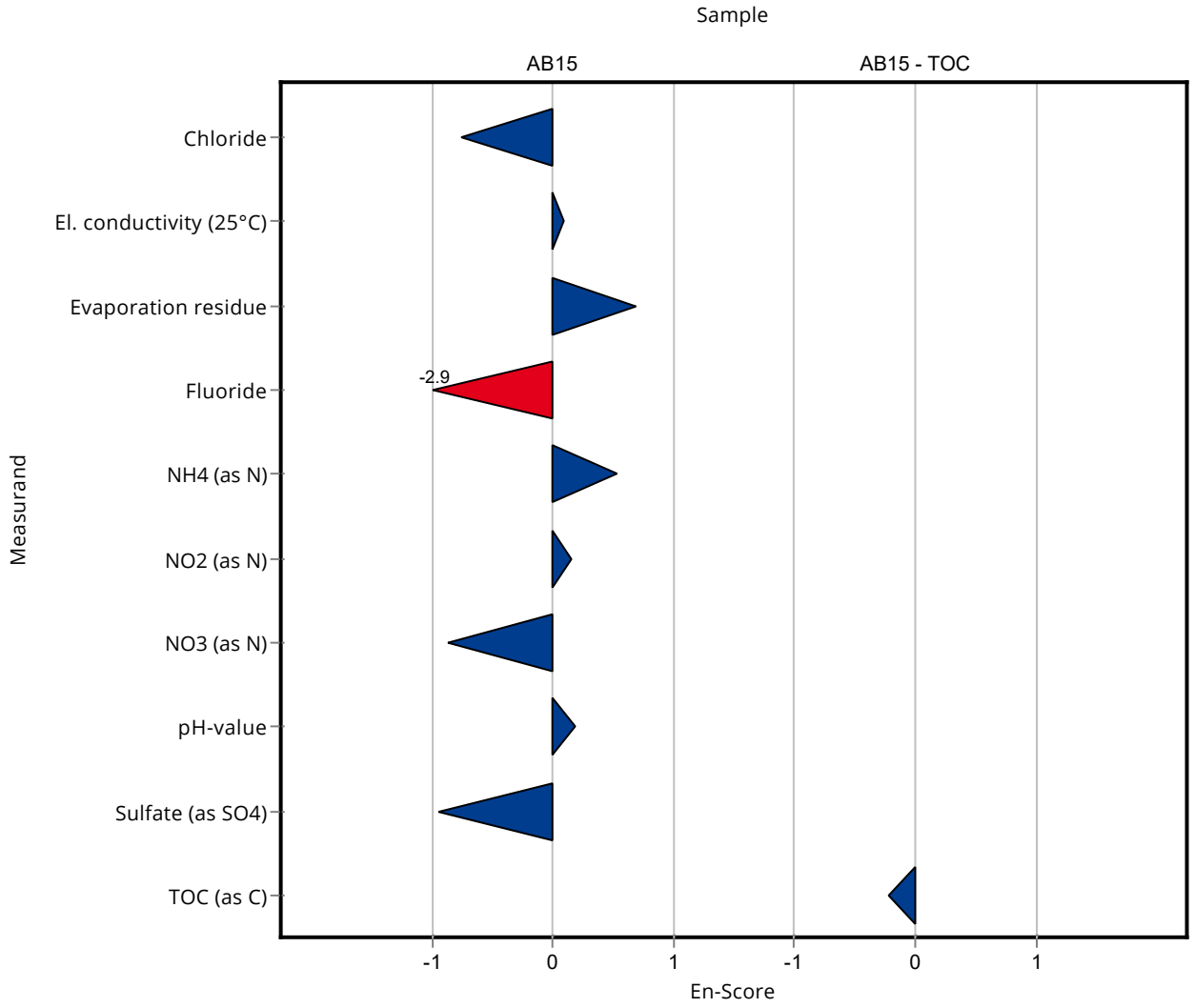
Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	±	23.6	1550.7	±	63.4	82.4	94.1	-0.76
El. conductivity (25°C)	mS/m	753	±	5.26	755	±	13.96	15.1	100	0.09
Evaporation residue	mg/l	5190	±	212	6026	±	602.6	519	116	0.69
Fluoride	mg/l	0.575	±	0.0938	0.292	±	0.013	0.213	50.8	-2.90
NH4 (as N)	mg/l	29.9	±	1.24	31.36	±	1.22	2.99	105	0.53
NO2 (as N)	mg/l	1.11	±	0.0302	1.122	±	0.043	0.0942	101	0.16
NO3 (as N)	mg/l	27.4	±	0.587	25.47	±	1.09	1.65	92.9	-0.86
pH-value		11.7	±	0.0602	11.799	±	0.24	0.234	101	0.19
PO4 (as P)	mg/l	-	±	-	<0.04 (LOQ)	±	-	-	-	-
Sulfate (as SO4)	mg/l	448	±	7.35	411.2	±	19.1	22.4	91.8	-0.94

Sample: AB15TOC

Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	±	0.489	17.9	±	1.79	1.34	95.9	-0.21

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0004



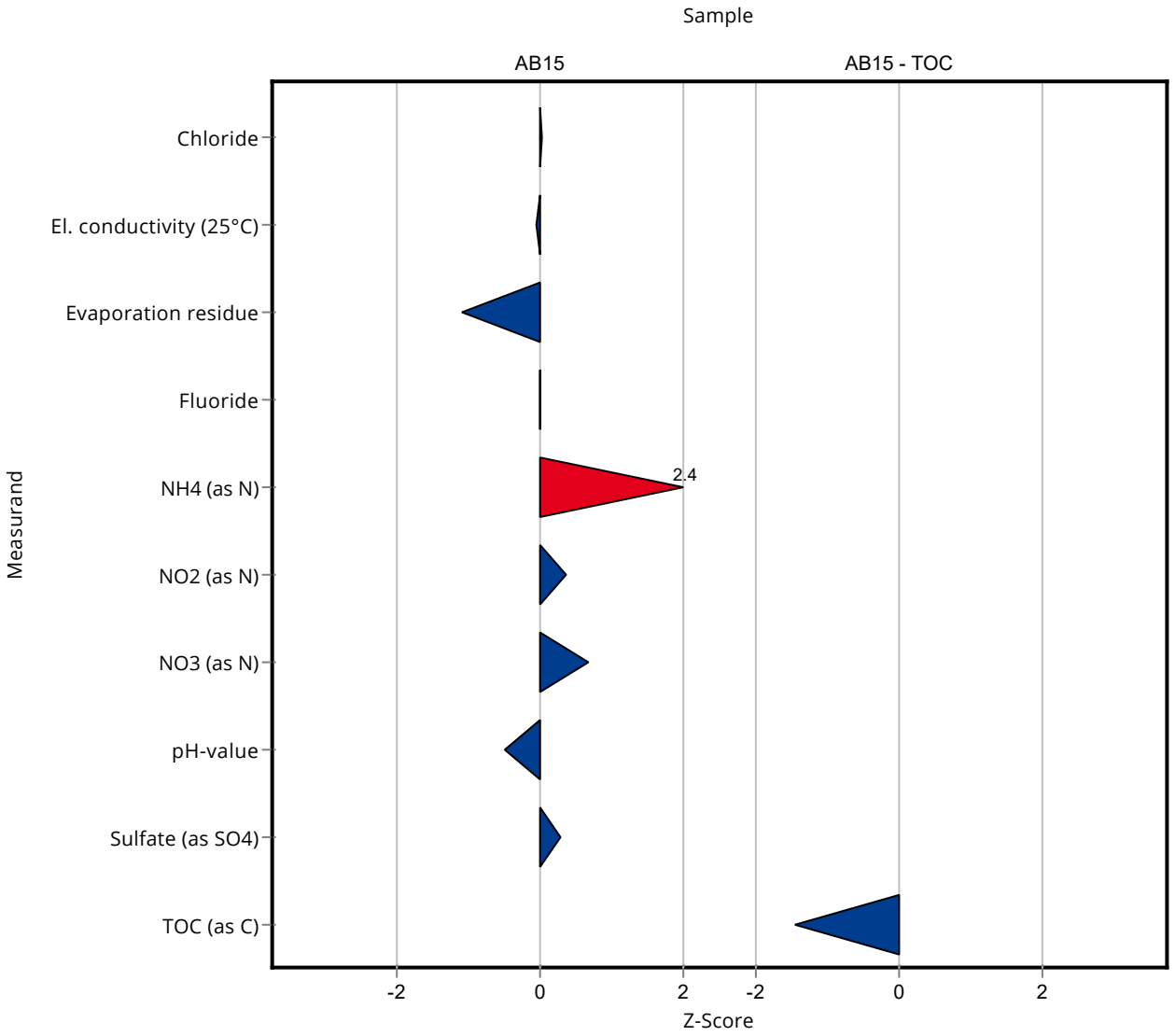
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0005

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1650 ± 165	82.4	100	0.02
El. conductivity (25°C)	mS/m	753 ± 5.26	751.5 ± 75	15.1	99.9	-0.07
Evaporation residue	mg/l	5190 ± 212	4612 ± 1	519	88.9	-1.11
Fluoride	mg/l	0.575 ± 0.0938	0.575 ± 0.0575	0.213	100	0.00
NH4 (as N)	mg/l	29.9 ± 1.24	37.2 ± 3.72	2.99	124	2.44
NO2 (as N)	mg/l	1.11 ± 0.0302	1.14 ± 0.114	0.0942	103	0.34
NO3 (as N)	mg/l	27.4 ± 0.587	28.5 ± 2.85	1.65	104	0.66
pH-value		11.7 ± 0.0602	11.59 ± 0.05	0.234	99	-0.50
PO4 (as P)	mg/l	- ± -	0.05 ± 0.005	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	454 ± 45.4	22.4	101	0.27

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	16.72 ± 1.67	1.34	89.5	-1.45


Sample
AB15
AB15 - TOC
Chloride
El. conductivity (25°C)
Evaporation residue
Fluoride
NH4 (as N)
NO2 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
Measurand
2.4
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0005

Sample: AB15

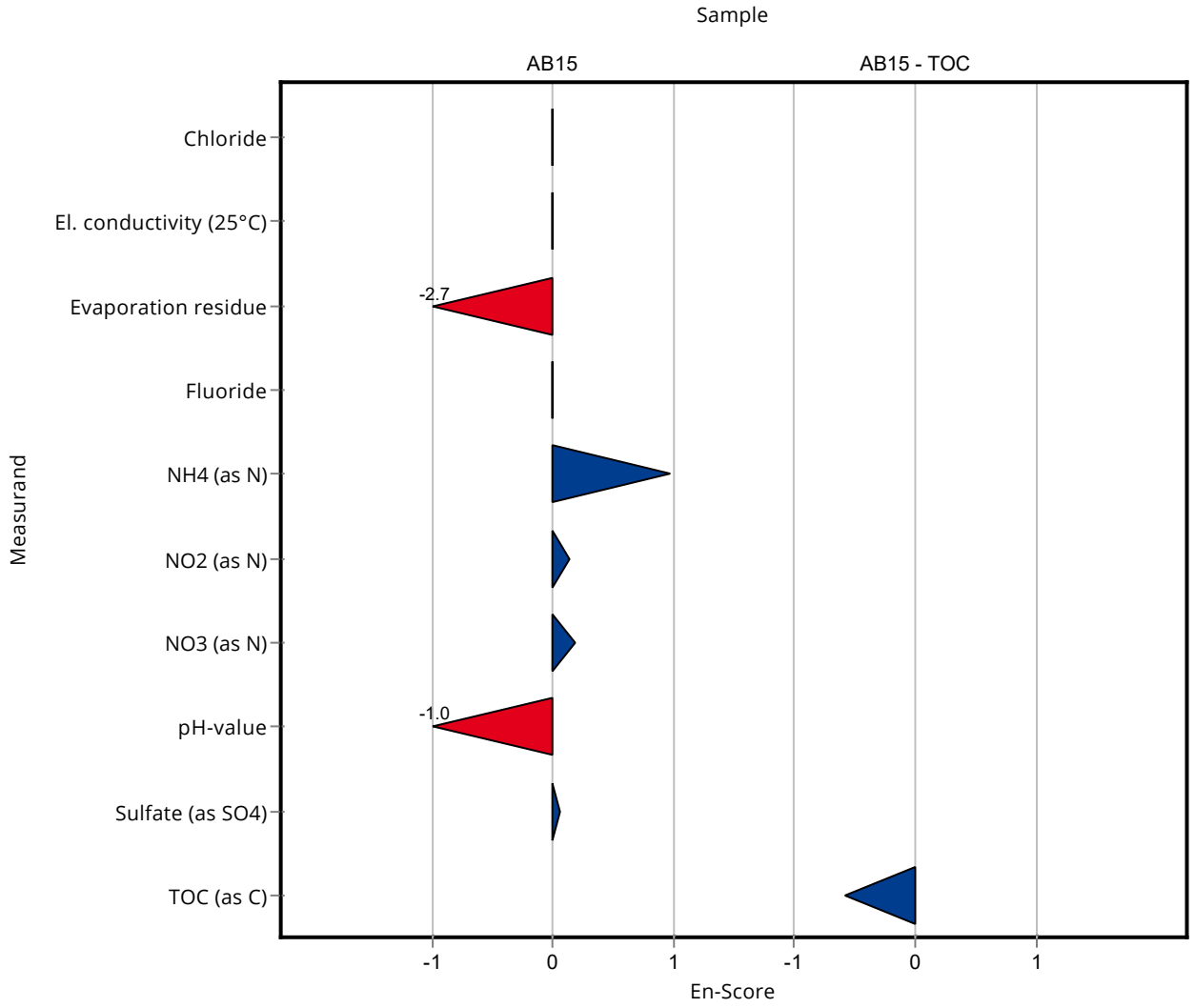
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650 ± 23.6	1650 ± 165	82.4	100	0.01
El. conductivity (25°C)	mS/m	753 ± 5.26	751.5 ± 75	15.1	99.9	-0.01
Evaporation residue	mg/l	5190 ± 212	4612 ± 1	519	88.9	-2.71
Fluoride	mg/l	0.575 ± 0.0938	0.575 ± 0.0575	0.213	100	0.00
NH4 (as N)	mg/l	29.9 ± 1.24	37.2 ± 3.72	2.99	124	0.97
NO2 (as N)	mg/l	1.11 ± 0.0302	1.14 ± 0.114	0.0942	103	0.14
NO3 (as N)	mg/l	27.4 ± 0.587	28.5 ± 2.85	1.65	104	0.19
pH-value		11.7 ± 0.0602	11.59 ± 0.05	0.234	99	-1.01
PO4 (as P)	mg/l	- ± -	0.05 ± 0.005	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	454 ± 45.4	22.4	101	0.07

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7 ± 0.489	16.72 ± 1.67	1.34	89.5	-0.58

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0005



Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0006

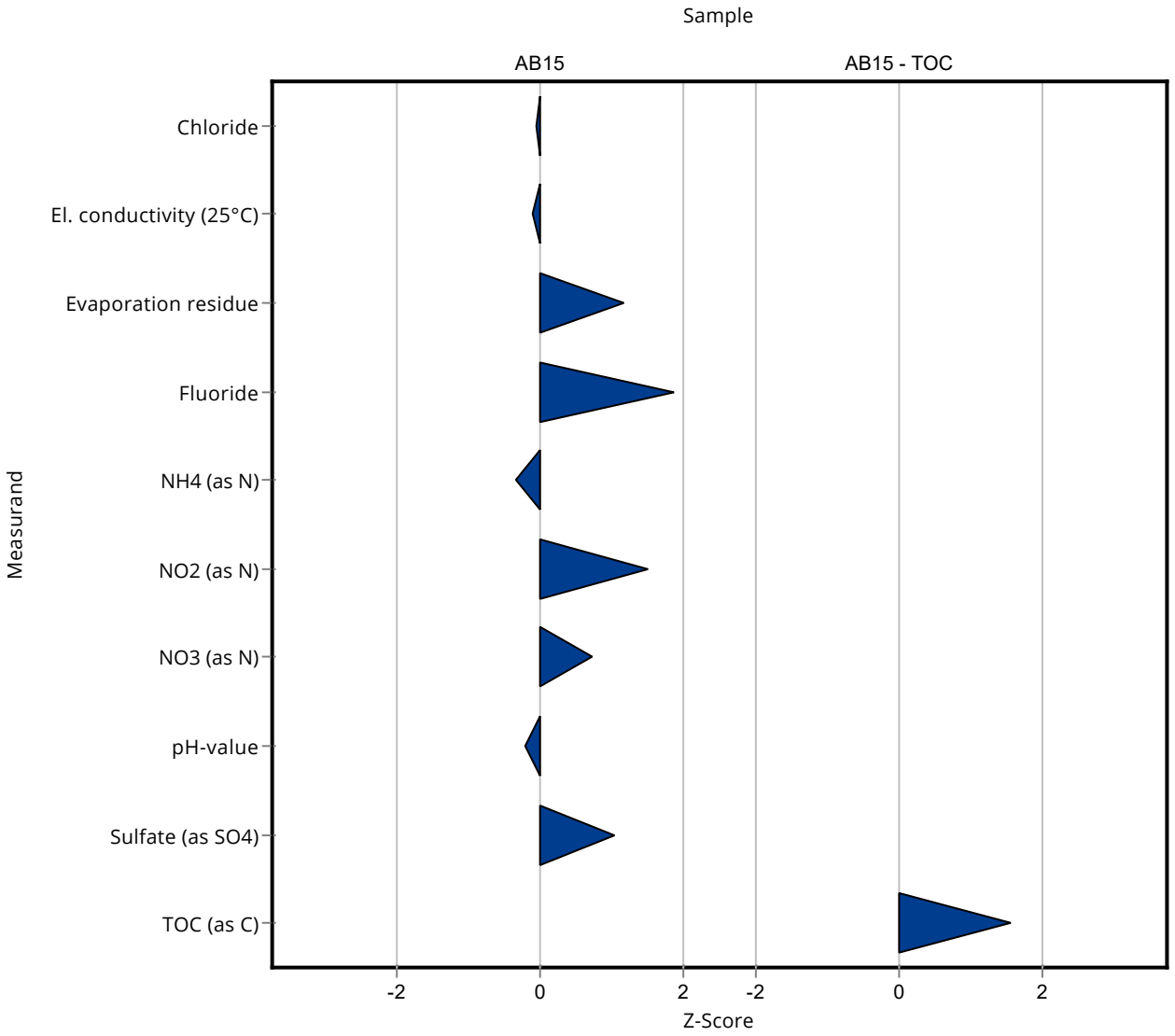
Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1643.5 ± 203.3	82.4	99.7	-0.06
El. conductivity (25°C)	mS/m	753 ± 5.26	751 ± 4.5	15.1	99.8	-0.10
Evaporation residue	mg/l	5190 ± 212	5786 ± 0.81	519	112	1.15
Fluoride	mg/l	0.575 ± 0.0938	0.9732 ± 0.081	0.213	169	1.88
NH4 (as N)	mg/l	29.9 ± 1.24	28.89 ± 2.21	2.99	96.6	-0.34
NO2 (as N)	mg/l	1.11 ± 0.0302	1.25 ± 0.1765	0.0942	113	1.51
NO3 (as N)	mg/l	27.4 ± 0.587	28.59 ± 2.189	1.65	104	0.71
pH-value		11.7 ± 0.0602	11.66 ± 0.069	0.234	99.6	-0.21
PO4 (as P)	mg/l	- ± -	0.06 ± 0.00255	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	471.05 ± 47.15	22.4	105	1.03

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	20.78 ± 0.65	1.34	111	1.57

Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0006



Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0006

Sample: AB15

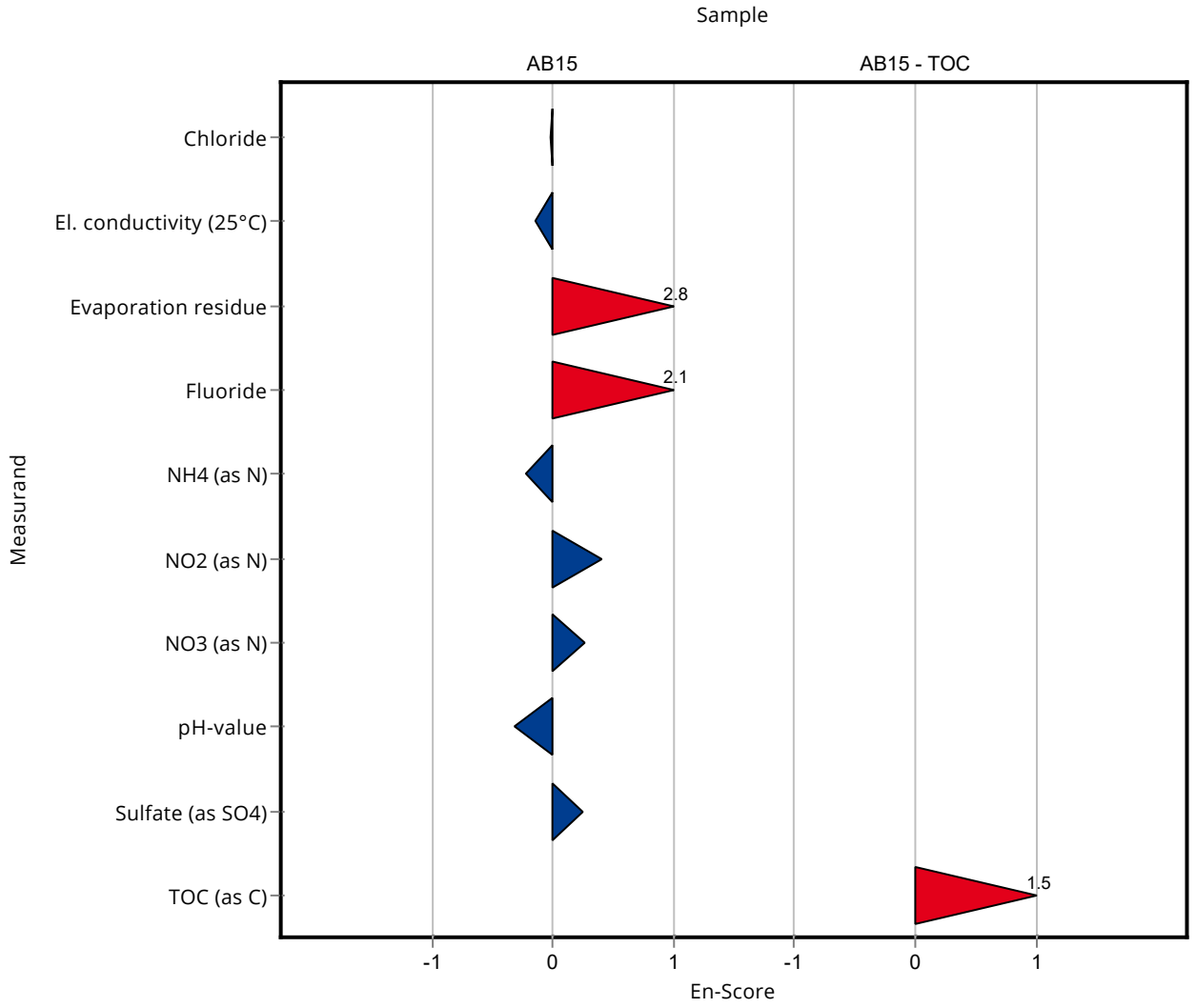
Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	±	23.6	1643.5	±	203.3	82.4	99.7	-0.01
El. conductivity (25°C)	mS/m	753	±	5.26	751	±	4.5	15.1	99.8	-0.14
Evaporation residue	mg/l	5190	±	212	5786	±	0.81	519	112	2.82
Fluoride	mg/l	0.575	±	0.0938	0.9732	±	0.081	0.213	169	2.13
NH4 (as N)	mg/l	29.9	±	1.24	28.89	±	2.21	2.99	96.6	-0.22
NO2 (as N)	mg/l	1.11	±	0.0302	1.25	±	0.1765	0.0942	113	0.40
NO3 (as N)	mg/l	27.4	±	0.587	28.59	±	2.189	1.65	104	0.27
pH-value		11.7	±	0.0602	11.66	±	0.069	0.234	99.6	-0.32
PO4 (as P)	mg/l	-	±	-	0.06	±	0.00255	-	-	-
Sulfate (as SO4)	mg/l	448	±	7.35	471.05	±	47.15	22.4	105	0.24

Sample: AB15TOC

Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	±	0.489	20.78	±	0.65	1.34	111	1.52

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0006



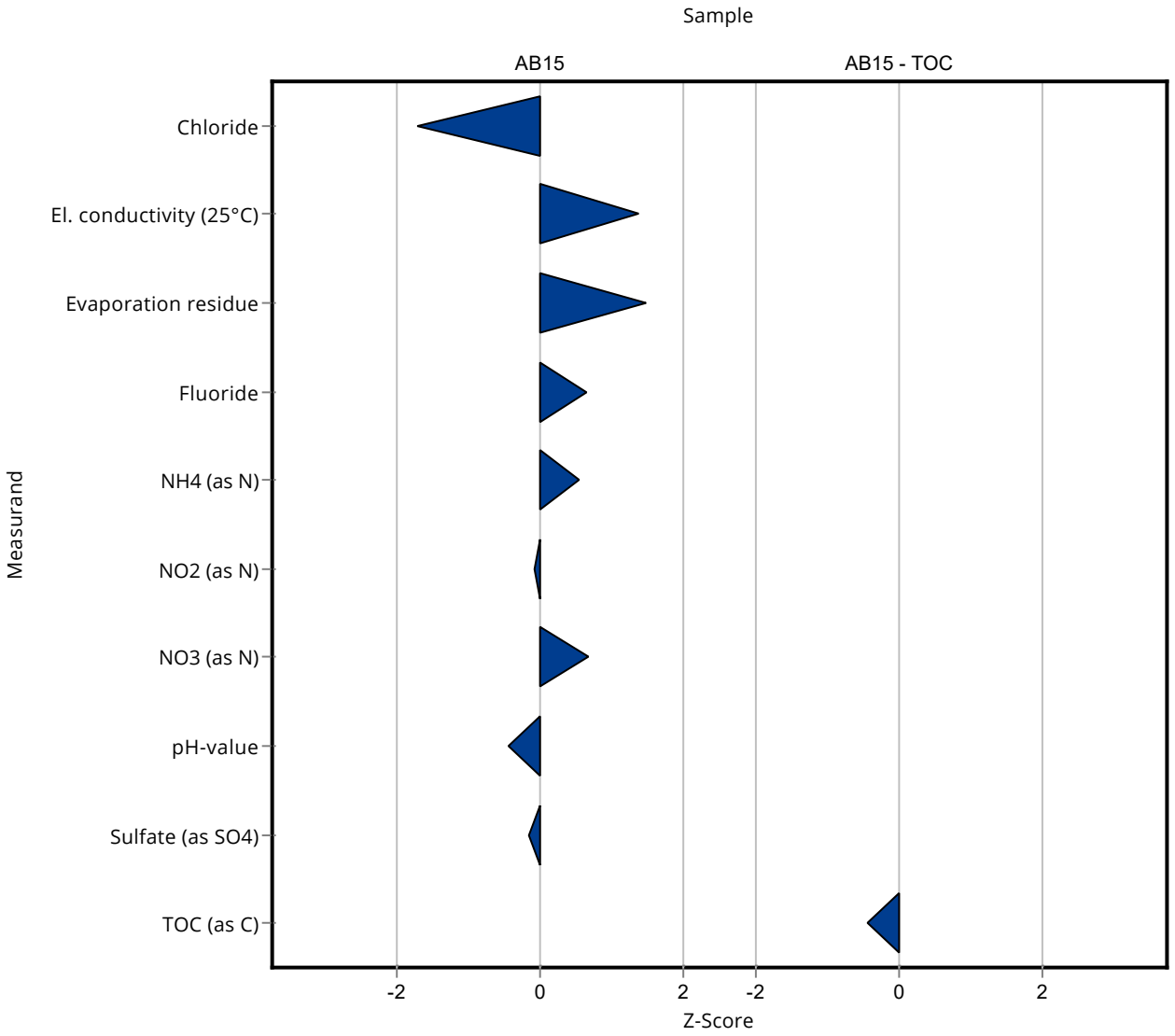
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0007

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1507 ± 180	82.4	91.4	-1.71
El. conductivity (25°C)	mS/m	753 ± 5.26	773 ± 61.8	15.1	103	1.36
Evaporation residue	mg/l	5190 ± 212	5950 ± 890	519	115	1.47
Fluoride	mg/l	0.575 ± 0.0938	0.711 ± 0.11	0.213	124	0.64
NH4 (as N)	mg/l	29.9 ± 1.24	31.5 ± 4.7	2.99	105	0.53
NO2 (as N)	mg/l	1.11 ± 0.0302	1.1 ± 0.33	0.0942	99.3	-0.08
NO3 (as N)	mg/l	27.4 ± 0.587	28.5 ± 3.4	1.65	104	0.66
pH-value		11.7 ± 0.0602	11.6 ± 0.2	0.234	99.1	-0.46
PO4 (as P)	mg/l	- ± -	47.1 ± 7.1	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	444 ± 44	22.4	99.1	-0.18

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.1 ± 3.6	1.34	96.9	-0.43


Sample
AB15
AB15 - TOC
Chloride
El. conductivity (25°C)
Evaporation residue
Fluoride
NH4 (as N)
NO2 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
Measurand
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0007

Sample: AB15

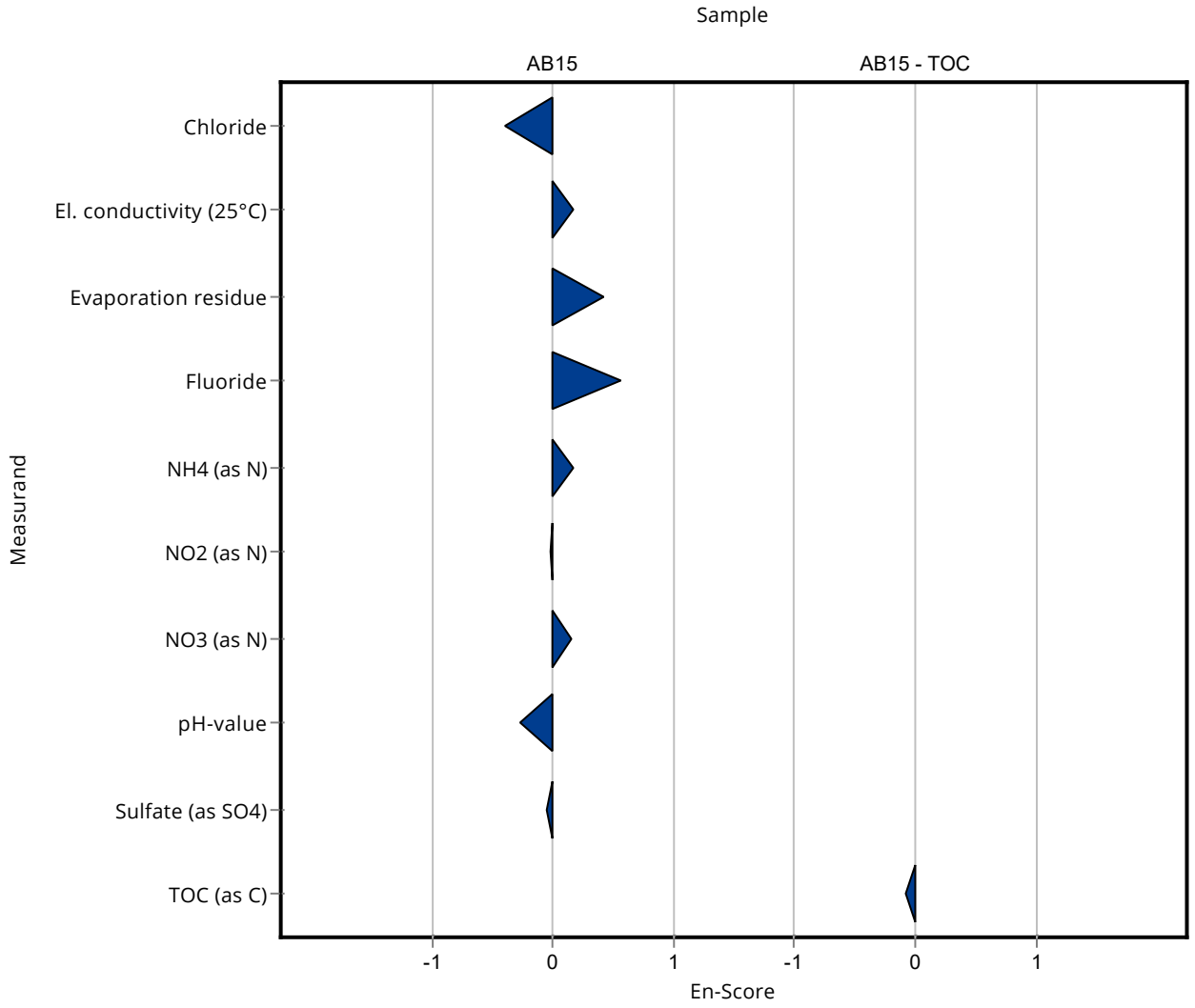
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650 ± 23.6	1507 ± 180	82.4	91.4	-0.39
El. conductivity (25°C)	mS/m	753 ± 5.26	773 ± 61.8	15.1	103	0.17
Evaporation residue	mg/l	5190 ± 212	5950 ± 890	519	115	0.43
Fluoride	mg/l	0.575 ± 0.0938	0.711 ± 0.11	0.213	124	0.57
NH4 (as N)	mg/l	29.9 ± 1.24	31.5 ± 4.7	2.99	105	0.17
NO2 (as N)	mg/l	1.11 ± 0.0302	1.1 ± 0.33	0.0942	99.3	-0.01
NO3 (as N)	mg/l	27.4 ± 0.587	28.5 ± 3.4	1.65	104	0.16
pH-value		11.7 ± 0.0602	11.6 ± 0.2	0.234	99.1	-0.27
PO4 (as P)	mg/l	- ± -	47.1 ± 7.1	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	444 ± 44	22.4	99.1	-0.04

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.1 ± 3.6	1.34	96.9	-0.08

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0007



Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0008

Sample: AB15

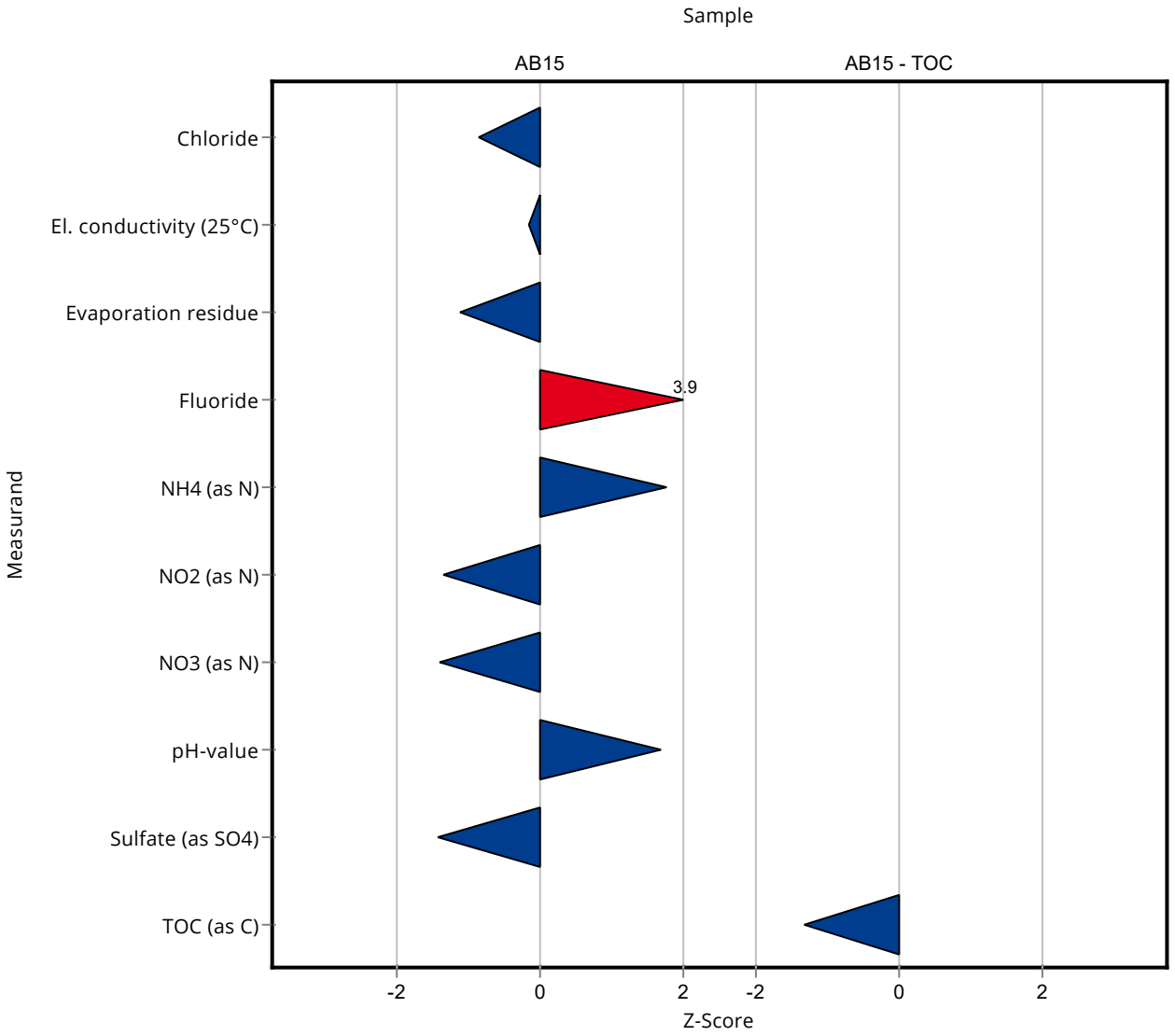
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1577 ± 63	82.4	95.7	-0.86
El. conductivity (25°C)	mS/m	753 ± 5.26	750 ± 23	15.1	99.7	-0.17
Evaporation residue	mg/l	5190 ± 212	4610 ± 498	519	88.9	-1.11
Fluoride	mg/l	0.575 ± 0.0938	1.41 ± 0.09	0.213	245	3.93
NH4 (as N)	mg/l	29.9 ± 1.24	35.2 ± 3.2	2.99	118	1.77
NO2 (as N)	mg/l	1.11 ± 0.0302	0.98 ± 0.047	0.0942	88.5	-1.36
NO3 (as N)	mg/l	27.4 ± 0.587	25.08 ± 0.98	1.65	91.5	-1.42
pH-value		11.7 ± 0.0602	12.1 ± 0.1	0.234	103	1.67
PO4 (as P)	mg/l	- ± -	0.054 ± 0.004	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	416 ± 26	22.4	92.9	-1.43

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	16.9 ± 1.56	1.34	90.5	-1.32

Summary of results Waste acc to landfill directive (eluate ions) - AB15

Labcode: LC0008



Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0008

Sample: AB15

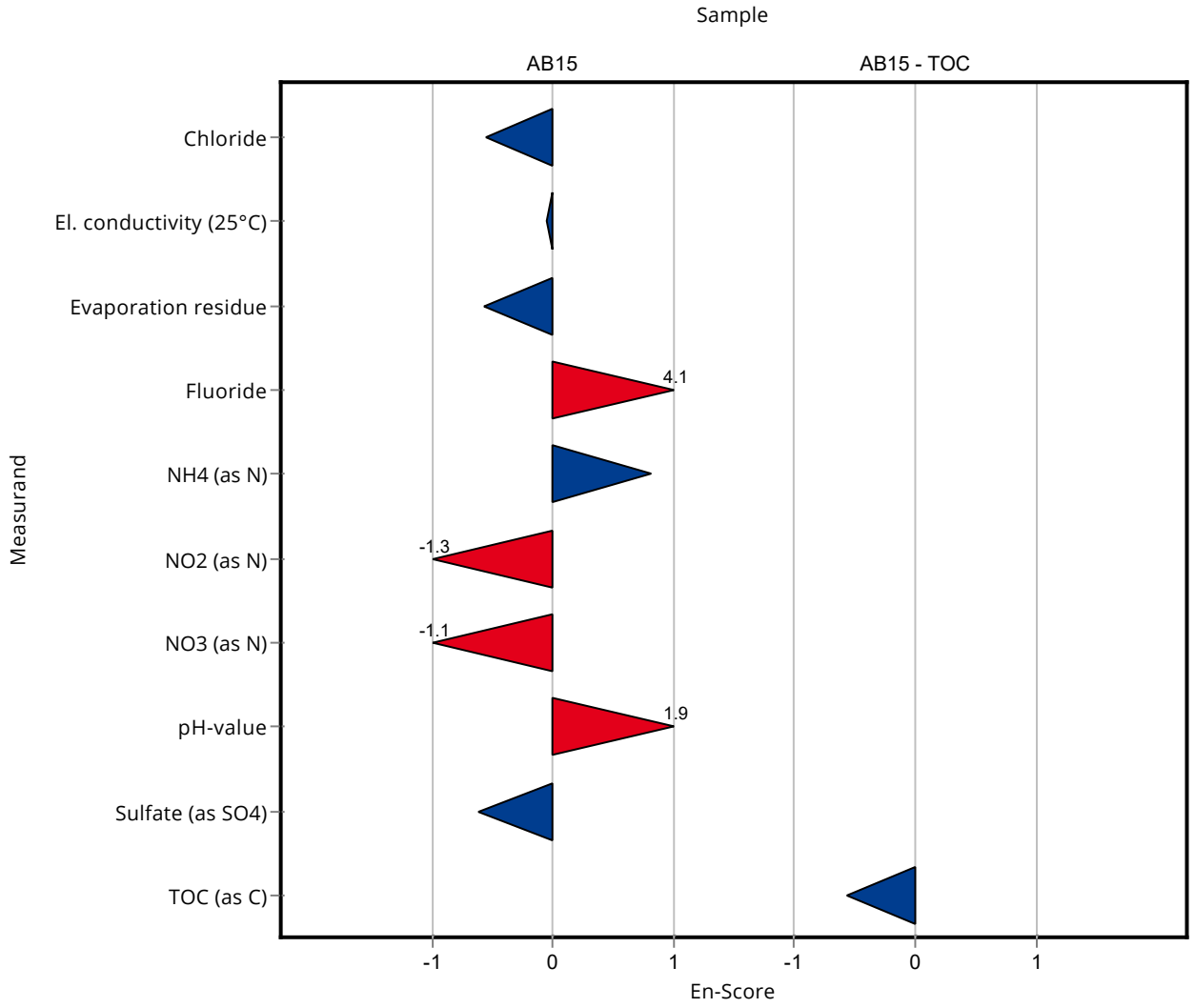
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650 ± 23.6	1577 ± 63	82.4	95.7	-0.56
El. conductivity (25°C)	mS/m	753 ± 5.26	750 ± 23	15.1	99.7	-0.05
Evaporation residue	mg/l	5190 ± 212	4610 ± 498	519	88.9	-0.57
Fluoride	mg/l	0.575 ± 0.0938	1.41 ± 0.09	0.213	245	4.12
NH4 (as N)	mg/l	29.9 ± 1.24	35.2 ± 3.2	2.99	118	0.81
NO2 (as N)	mg/l	1.11 ± 0.0302	0.98 ± 0.047	0.0942	88.5	-1.29
NO3 (as N)	mg/l	27.4 ± 0.587	25.08 ± 0.98	1.65	91.5	-1.14
pH-value		11.7 ± 0.0602	12.1 ± 0.1	0.234	103	1.88
PO4 (as P)	mg/l	- ± -	0.054 ± 0.004	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	416 ± 26	22.4	92.9	-0.61

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7 ± 0.489	16.9 ± 1.56	1.34	90.5	-0.56

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0008



Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0009

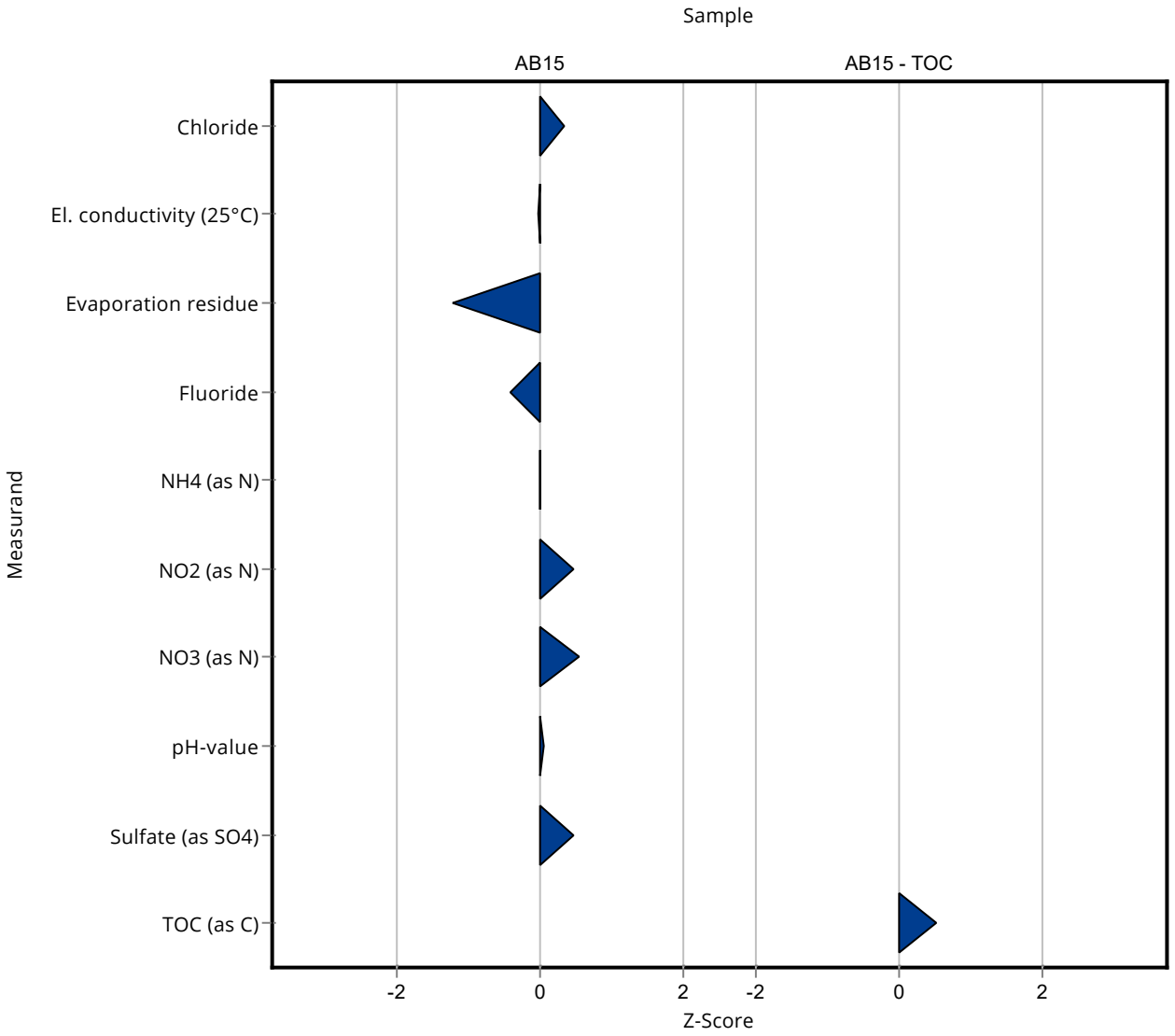
Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1675 ± 190	82.4	102	0.33
El. conductivity (25°C)	mS/m	753 ± 5.26	752 ± 74.4	15.1	99.9	-0.03
Evaporation residue	mg/l	5190 ± 212	4546 ± 727	519	87.6	-1.24
Fluoride	mg/l	0.575 ± 0.0938	0.485 ± 0.09	0.213	84.4	-0.42
NH4 (as N)	mg/l	29.9 ± 1.24	29.89 ± 5.7	2.99	99.9	-0.01
NO2 (as N)	mg/l	1.11 ± 0.0302	1.152 ± 0.18	0.0942	104	0.47
NO3 (as N)	mg/l	27.4 ± 0.587	28.32 ± 3.96	1.65	103	0.55
pH-value		11.7 ± 0.0602	11.72 ± 0.12	0.234	100	0.05
PO4 (as P)	mg/l	- ± -	<0.0652 ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	458.2 ± 53.4	22.4	102	0.46

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	19.4 ± 3.9	1.34	104	0.54

Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0009



Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0009

Sample: AB15

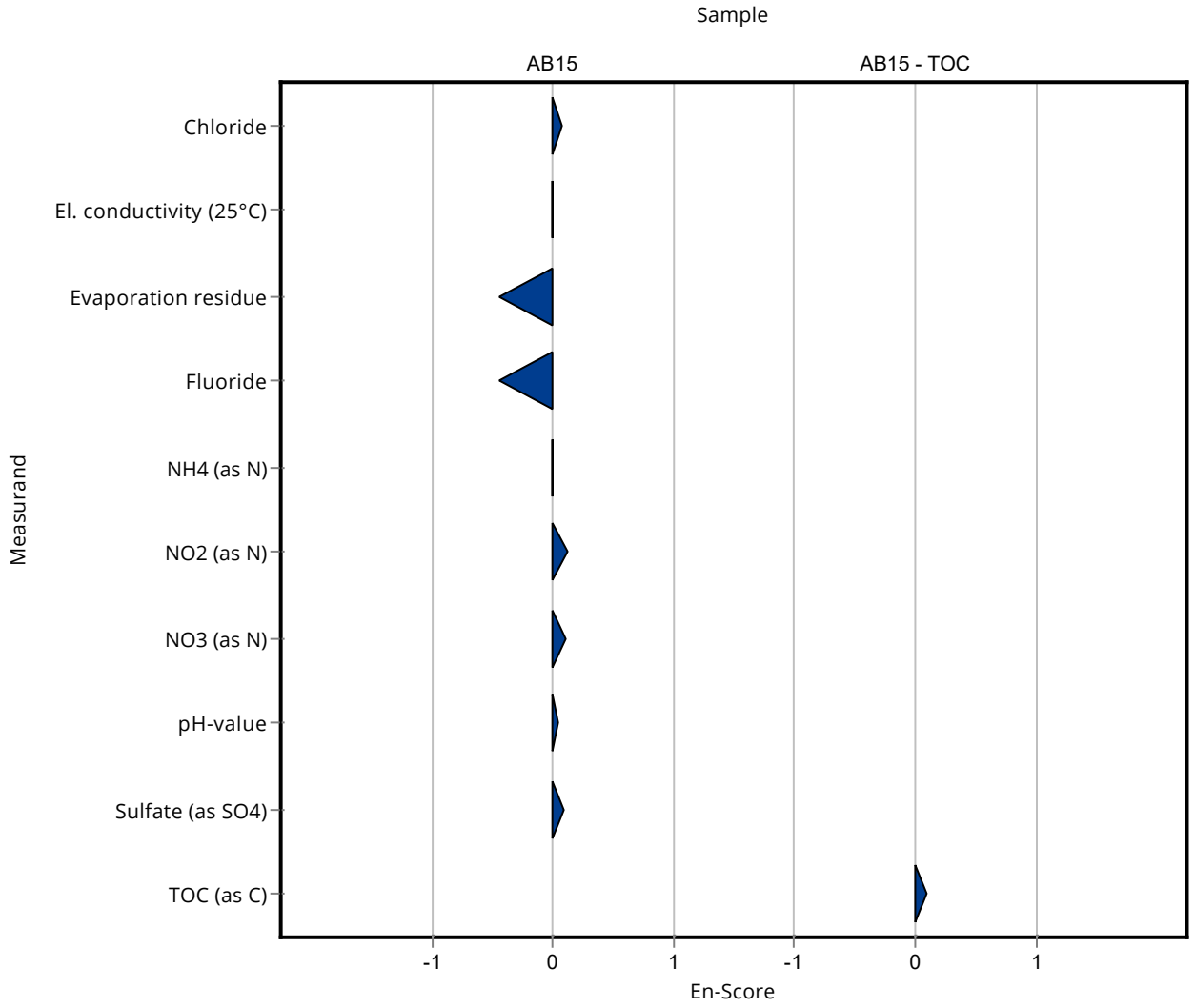
Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	± 23.6	1675	± 190	82.4	102	0.07
El. conductivity (25°C)	mS/m	753	± 5.26	752	± 74.4	15.1	99.9	0.00
Evaporation residue	mg/l	5190	± 212	4546	± 727	519	87.6	-0.44
Fluoride	mg/l	0.575	± 0.0938	0.485	± 0.09	0.213	84.4	-0.44
NH4 (as N)	mg/l	29.9	± 1.24	29.89	± 5.7	2.99	99.9	0.00
NO2 (as N)	mg/l	1.11	± 0.0302	1.152	± 0.18	0.0942	104	0.12
NO3 (as N)	mg/l	27.4	± 0.587	28.32	± 3.96	1.65	103	0.11
pH-value		11.7	± 0.0602	11.72	± 0.12	0.234	100	0.05
PO4 (as P)	mg/l	-	± -	<0.0652	± -	-	-	-
Sulfate (as SO4)	mg/l	448	± 7.35	458.2	± 53.4	22.4	102	0.10

Sample: AB15TOC

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	± 0.489	19.4	± 3.9	1.34	104	0.09

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0009



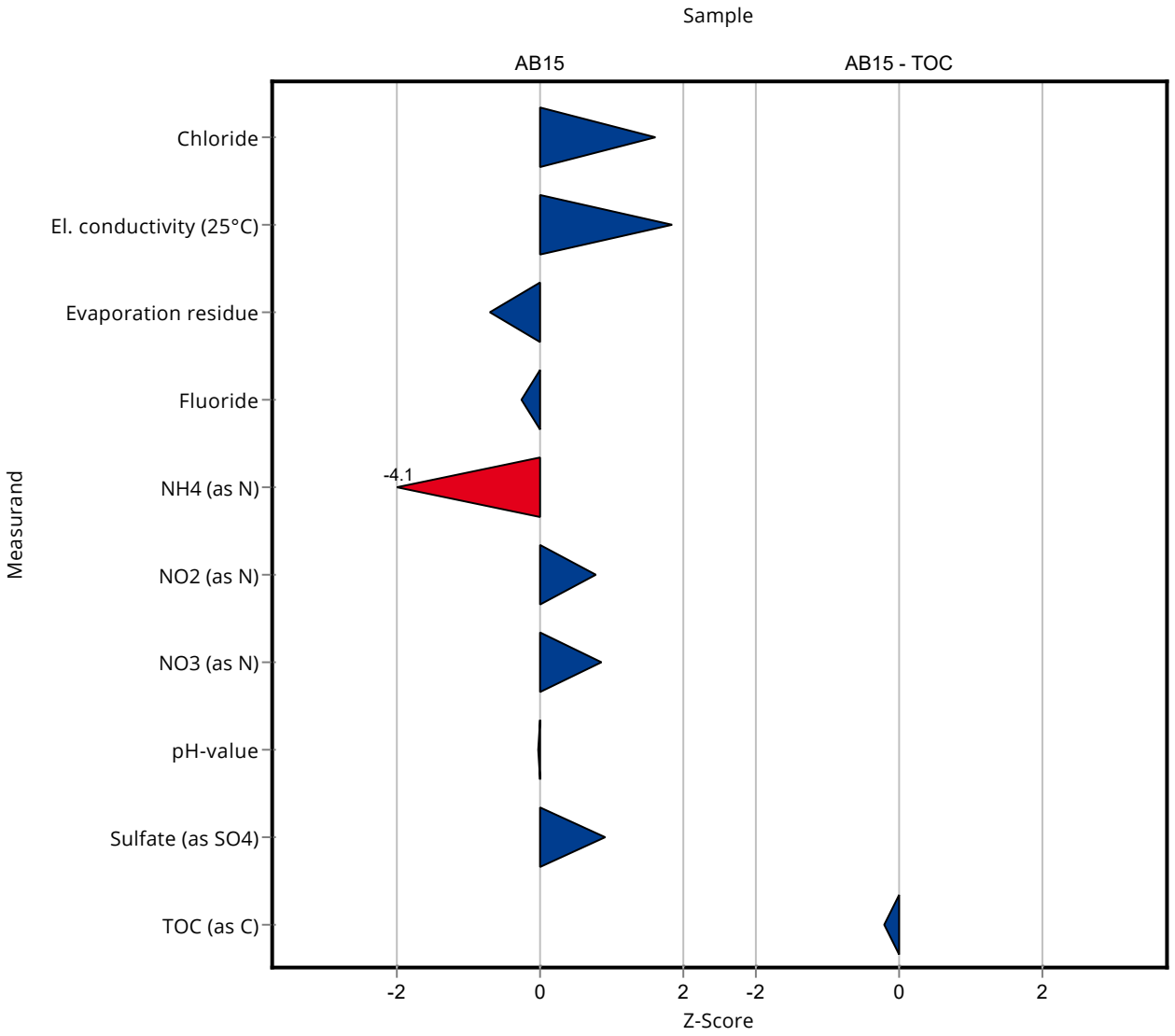
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0010

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1780 ± 180	82.4	108	1.60
El. conductivity (25°C)	mS/m	753 ± 5.26	780 ± 78	15.1	104	1.83
Evaporation residue	mg/l	5190 ± 212	4820 ± 480	519	92.9	-0.71
Fluoride	mg/l	0.575 ± 0.0938	0.518 ± 0.052	0.213	90.2	-0.27
NH4 (as N)	mg/l	29.9 ± 1.24	17.7 ± 1.8	2.99	59.2	-4.08
NO2 (as N)	mg/l	1.11 ± 0.0302	1.18 ± 0.12	0.0942	107	0.77
NO3 (as N)	mg/l	27.4 ± 0.587	28.8 ± 2.9	1.65	105	0.84
pH-value		11.7 ± 0.0602	11.7 ± 0.2	0.234	99.9	-0.03
PO4 (as P)	mg/l	- ± -	<0.003 (LOQ) ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	468 ± 47	22.4	104	0.90

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.4 ± 1.8	1.34	98.5	-0.20


Sample
AB15
AB15 - TOC
Chloride
El. conductivity (25°C)
Evaporation residue
Fluoride
NH4 (as N)
-4.1
NO2 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
Measurand
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0010

Sample: AB15

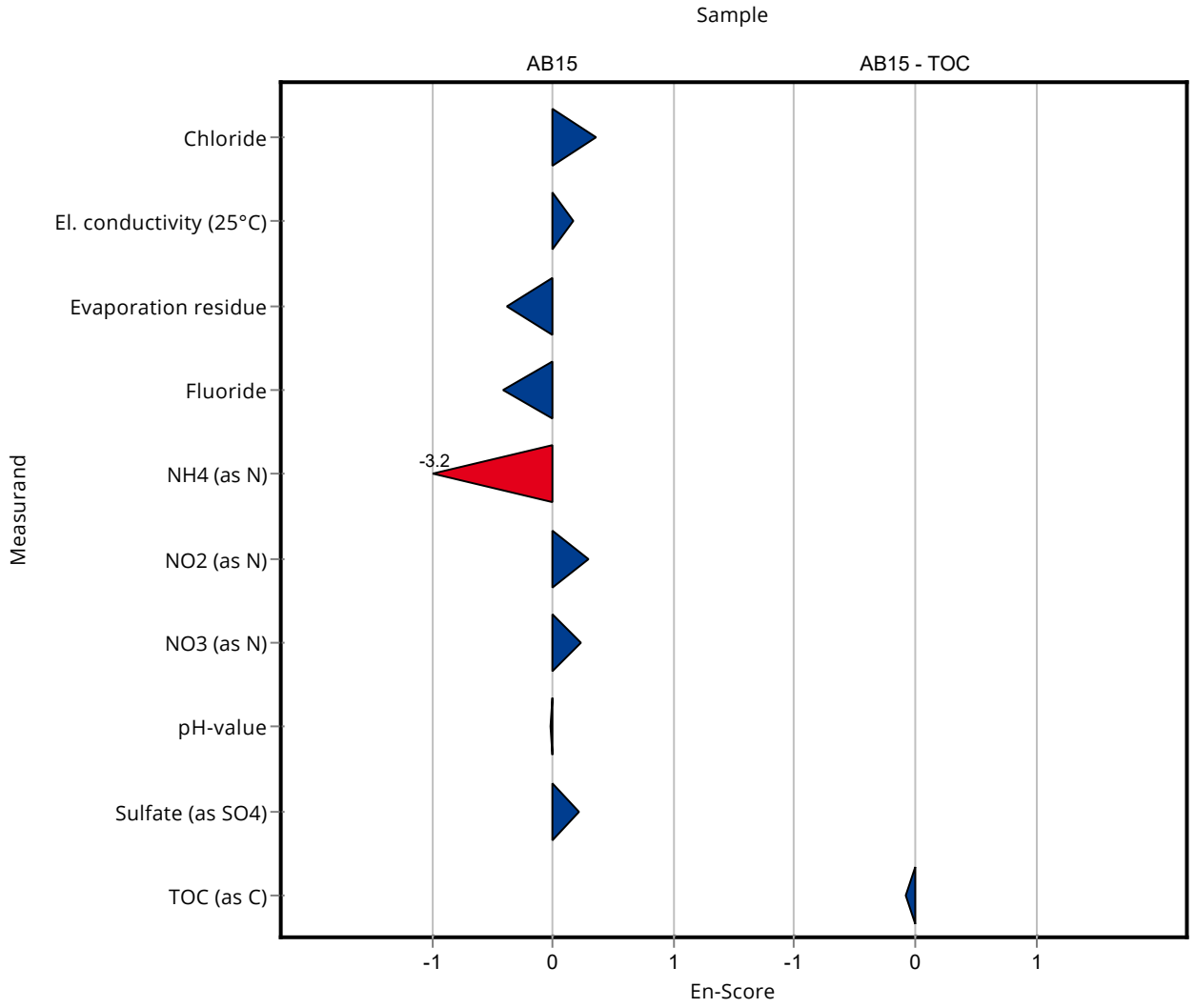
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650 ± 23.6	1780 ± 180	82.4	108	0.37
El. conductivity (25°C)	mS/m	753 ± 5.26	780 ± 78	15.1	104	0.18
Evaporation residue	mg/l	5190 ± 212	4820 ± 480	519	92.9	-0.37
Fluoride	mg/l	0.575 ± 0.0938	0.518 ± 0.052	0.213	90.2	-0.40
NH4 (as N)	mg/l	29.9 ± 1.24	17.7 ± 1.8	2.99	59.2	-3.20
NO2 (as N)	mg/l	1.11 ± 0.0302	1.18 ± 0.12	0.0942	107	0.30
NO3 (as N)	mg/l	27.4 ± 0.587	28.8 ± 2.9	1.65	105	0.24
pH-value		11.7 ± 0.0602	11.7 ± 0.2	0.234	99.9	-0.02
PO4 (as P)	mg/l	- ± -	<0.003 (LOQ) ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	468 ± 47	22.4	104	0.21

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.4 ± 1.8	1.34	98.5	-0.08

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0010



Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0011

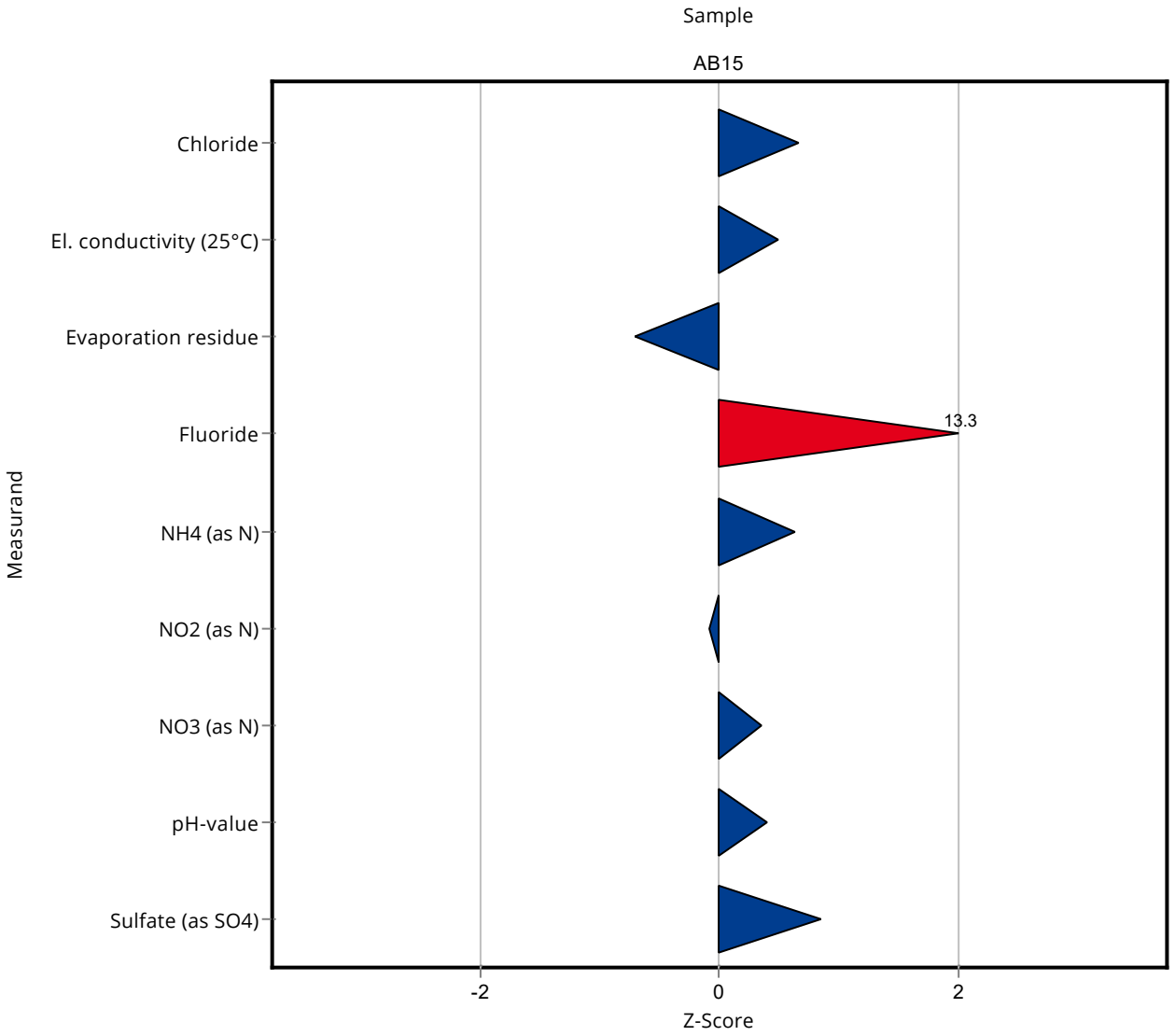
Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1703 ± 958	82.4	103	0.67
El. conductivity (25°C)	mS/m	753 ± 5.26	760 ± 152	15.1	101	0.50
Evaporation residue	mg/l	5190 ± 212	4820 ± 192	519	92.9	-0.71
Fluoride	mg/l	0.575 ± 0.0938	3.4 ± 0.68	0.213	592	13.29
NH4 (as N)	mg/l	29.9 ± 1.24	31.8 ± 11.7	2.99	106	0.63
NO2 (as N)	mg/l	1.11 ± 0.0302	1.1 ± 0.2	0.0942	99.3	-0.08
NO3 (as N)	mg/l	27.4 ± 0.587	28 ± 1.1	1.65	102	0.35
pH-value		11.7 ± 0.0602	11.8 ± 0.52	0.234	101	0.39
PO4 (as P)	mg/l	- ± -	0.21 ± 0.04	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	467 ± 32	22.4	104	0.85

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	- ± -	1.34	-	-

Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0011



Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0011

Sample: AB15

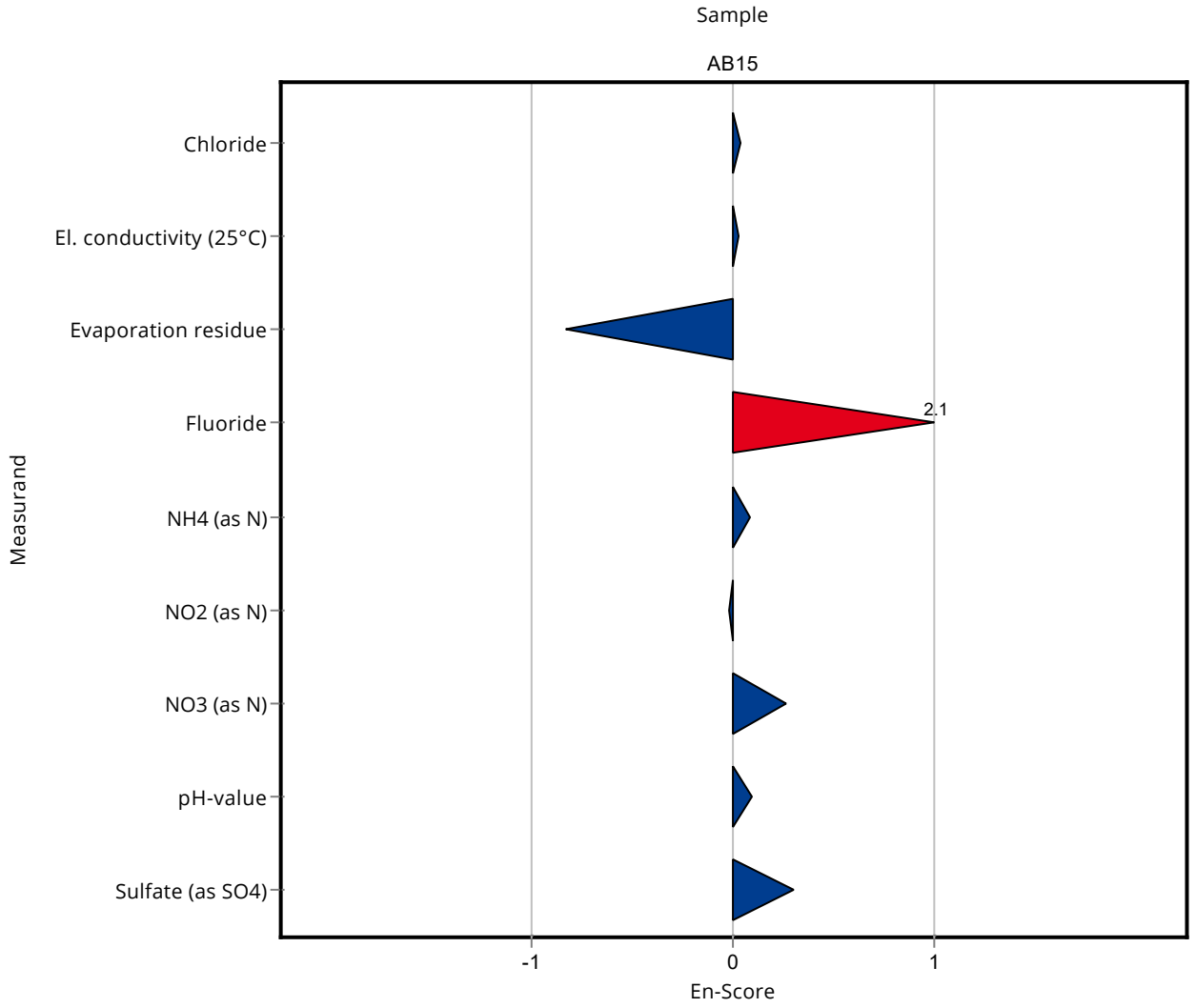
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650 ± 23.6	1703 ± 958	82.4	103	0.03
El. conductivity (25°C)	mS/m	753 ± 5.26	760 ± 152	15.1	101	0.02
Evaporation residue	mg/l	5190 ± 212	4820 ± 192	519	92.9	-0.84
Fluoride	mg/l	0.575 ± 0.0938	3.4 ± 0.68	0.213	592	2.07
NH4 (as N)	mg/l	29.9 ± 1.24	31.8 ± 11.7	2.99	106	0.08
NO2 (as N)	mg/l	1.11 ± 0.0302	1.1 ± 0.2	0.0942	99.3	-0.02
NO3 (as N)	mg/l	27.4 ± 0.587	28 ± 1.1	1.65	102	0.26
pH-value		11.7 ± 0.0602	11.8 ± 0.52	0.234	101	0.09
PO4 (as P)	mg/l	- ± -	0.21 ± 0.04	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	467 ± 32	22.4	104	0.30

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7 ± 0.489	- ± -	1.34	-	-

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0011



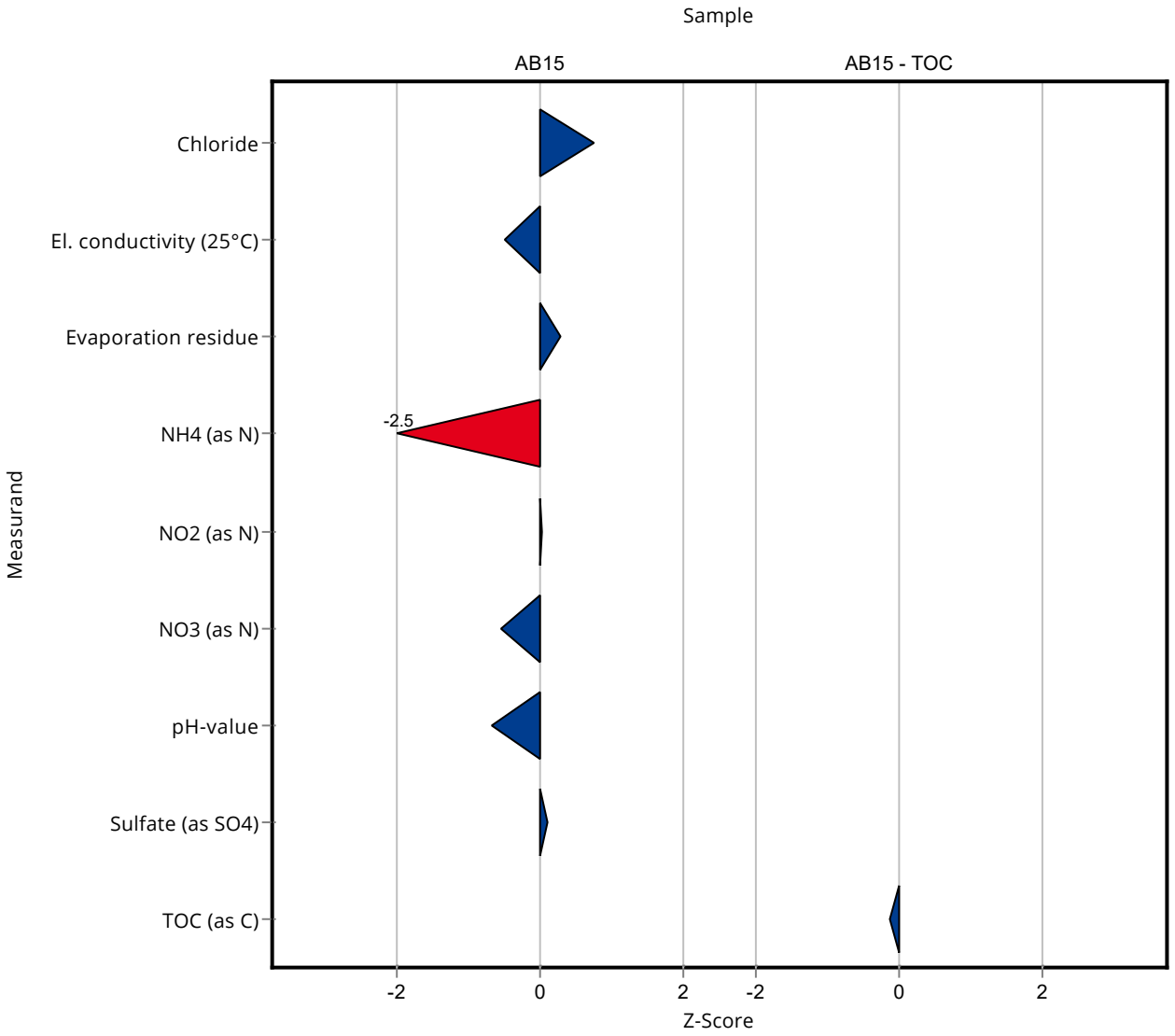
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0012

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1710 ± 86	82.4	104	0.75
El. conductivity (25°C)	mS/m	753 ± 5.26	745 ± 5.6	15.1	99	-0.50
Evaporation residue	mg/l	5190 ± 212	5330 ± 815	519	103	0.27
Fluoride	mg/l	0.575 ± 0.0938	<1 (LOQ) ± -	0.213	-	-
NH4 (as N)	mg/l	29.9 ± 1.24	22.3 ± 0.65	2.99	74.6	-2.54
NO2 (as N)	mg/l	1.11 ± 0.0302	1.11 ± 0.028	0.0942	100	0.02
NO3 (as N)	mg/l	27.4 ± 0.587	26.5 ± 1.3	1.65	96.6	-0.56
pH-value		11.7 ± 0.0602	11.55 ± 0.017	0.234	98.7	-0.67
PO4 (as P)	mg/l	- ± -	<0.005 (LOQ) ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	450 ± 23	22.4	100	0.09

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.5 ± 2.3	1.34	99.1	-0.13


Sample
AB15
AB15 - TOC
Chloride
El. conductivity (25°C)
Evaporation residue
NH4 (as N)
NO2 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
Measurand
-2.5
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0012

Sample: AB15

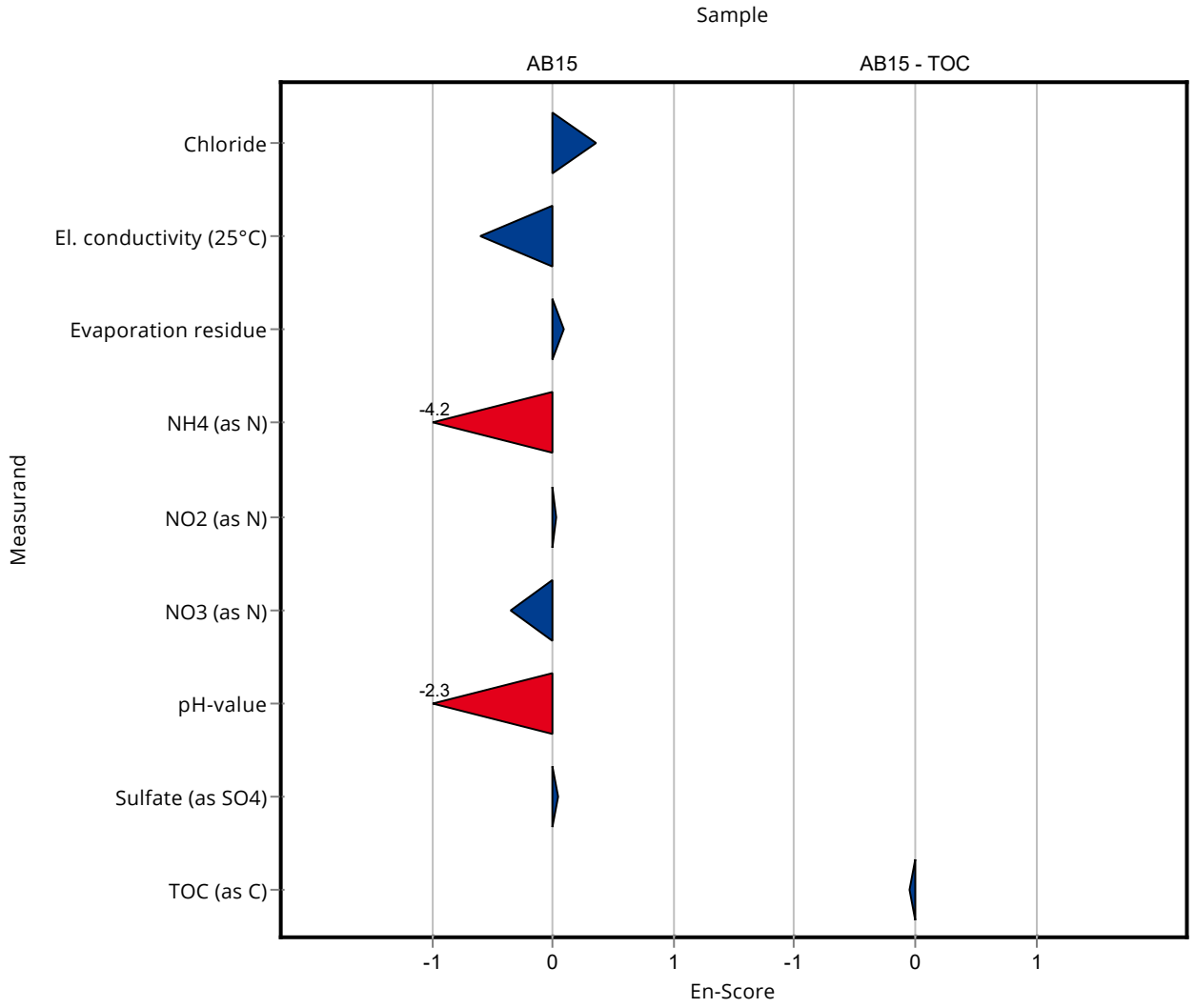
Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	±	23.6	1710	±	86	82.4	104	0.36
El. conductivity (25°C)	mS/m	753	±	5.26	745	±	5.6	15.1	99	-0.61
Evaporation residue	mg/l	5190	±	212	5330	±	815	519	103	0.09
Fluoride	mg/l	0.575	±	0.0938	<1 (LOQ)	±	-	0.213	-	-
NH4 (as N)	mg/l	29.9	±	1.24	22.3	±	0.65	2.99	74.6	-4.23
NO2 (as N)	mg/l	1.11	±	0.0302	1.11	±	0.028	0.0942	100	0.04
NO3 (as N)	mg/l	27.4	±	0.587	26.5	±	1.3	1.65	96.6	-0.34
pH-value		11.7	±	0.0602	11.55	±	0.017	0.234	98.7	-2.29
PO4 (as P)	mg/l	-	±	-	<0.005 (LOQ)	±	-	-	-	-
Sulfate (as SO4)	mg/l	448	±	7.35	450	±	23	22.4	100	0.04

Sample: AB15TOC

Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	±	0.489	18.5	±	2.3	1.34	99.1	-0.04

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0012



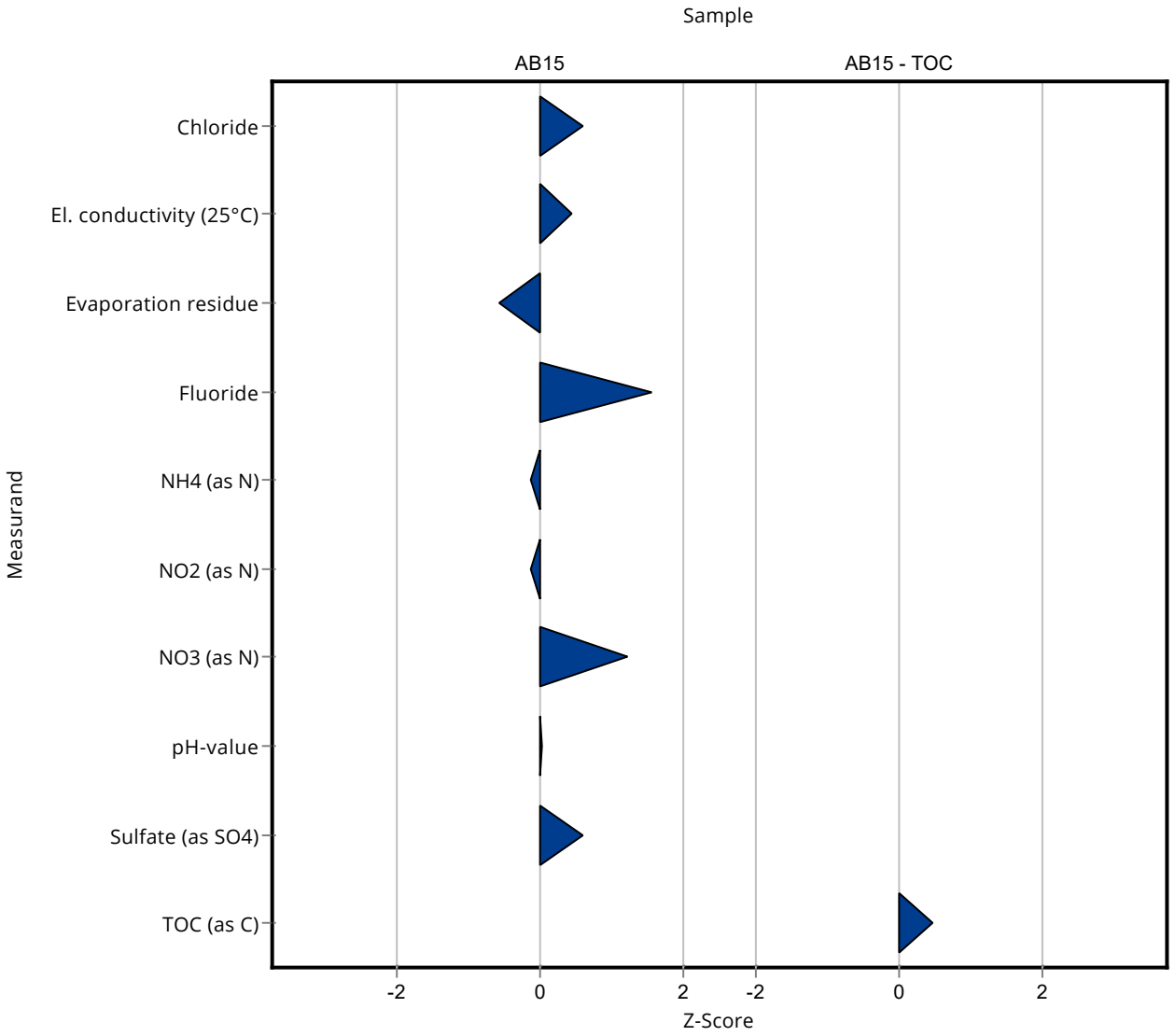
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0013

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1696 ± 51	82.4	103	0.58
El. conductivity (25°C)	mS/m	753 ± 5.26	759 ± 7.6	15.1	101	0.43
Evaporation residue	mg/l	5190 ± 212	4887 ± 147	519	94.2	-0.58
Fluoride	mg/l	0.575 ± 0.0938	0.904 ± 0.059	0.213	157	1.55
NH4 (as N)	mg/l	29.9 ± 1.24	29.5 ± 2.4	2.99	98.6	-0.14
NO2 (as N)	mg/l	1.11 ± 0.0302	1.095 ± 0.044	0.0942	98.9	-0.13
NO3 (as N)	mg/l	27.4 ± 0.587	29.4 ± 1	1.65	107	1.20
pH-value		11.7 ± 0.0602	11.71 ± 0.35	0.234	100	0.01
PO4 (as P)	mg/l	- ± -	<0.03 (LOQ) ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	461 ± 14	22.4	103	0.58

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	19.3 ± 2.9	1.34	103	0.46


Sample
AB15
AB15 - TOC
Chloride
El. conductivity (25°C)
Evaporation residue
Fluoride
NH4 (as N)
NO2 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
Measurand
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0013

Sample: AB15

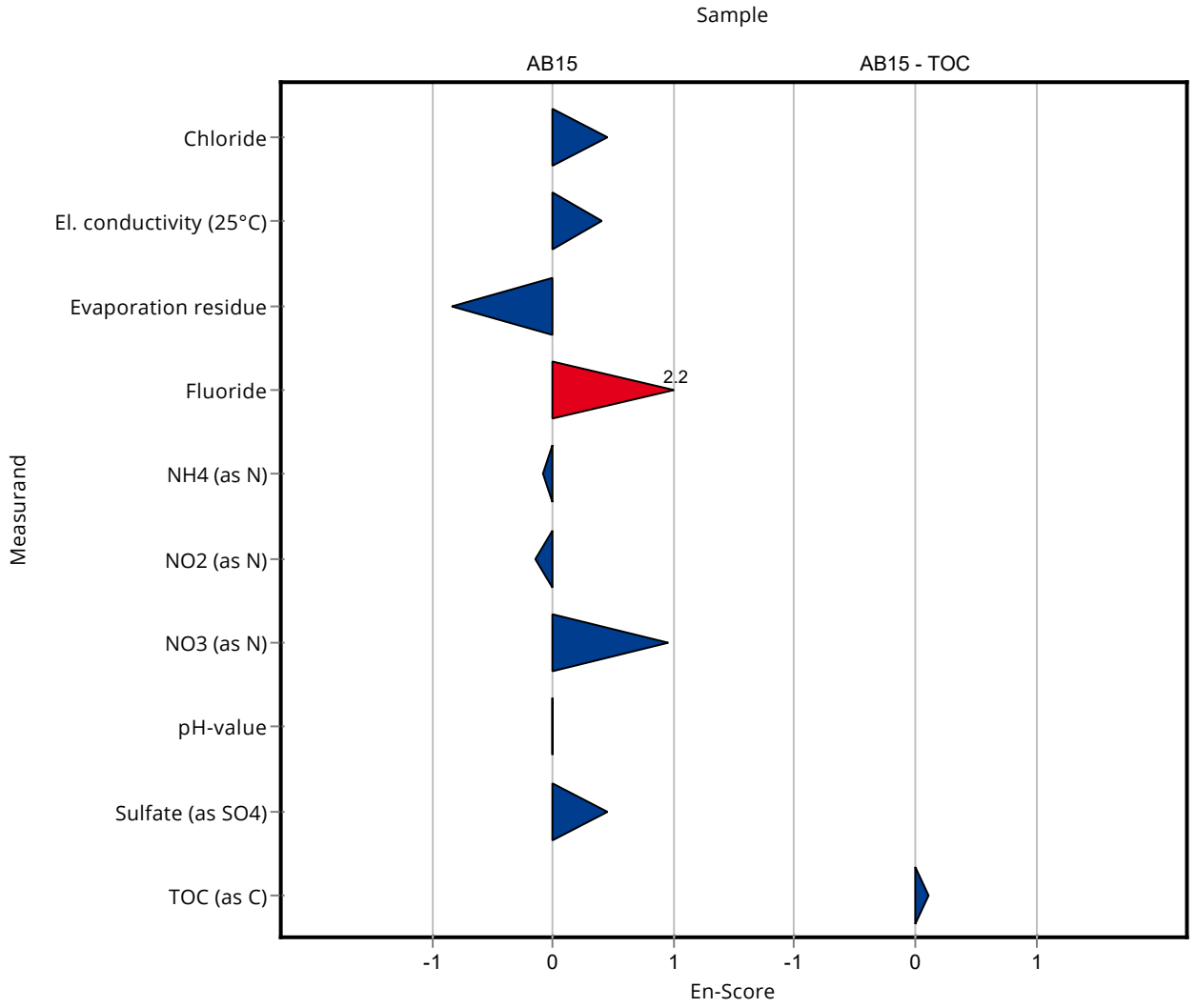
Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	±	23.6	1696	±	51	82.4	103	0.46
El. conductivity (25°C)	mS/m	753	±	5.26	759	±	7.6	15.1	101	0.40
Evaporation residue	mg/l	5190	±	212	4887	±	147	519	94.2	-0.83
Fluoride	mg/l	0.575	±	0.0938	0.904	±	0.059	0.213	157	2.19
NH4 (as N)	mg/l	29.9	±	1.24	29.5	±	2.4	2.99	98.6	-0.08
NO2 (as N)	mg/l	1.11	±	0.0302	1.095	±	0.044	0.0942	98.9	-0.14
NO3 (as N)	mg/l	27.4	±	0.587	29.4	±	1	1.65	107	0.95
pH-value		11.7	±	0.0602	11.71	±	0.35	0.234	100	0.00
PO4 (as P)	mg/l	-	±	-	<0.03 (LOQ)	±	-	-	-	-
Sulfate (as SO4)	mg/l	448	±	7.35	461	±	14	22.4	103	0.45

Sample: AB15TOC

Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	±	0.489	19.3	±	2.9	1.34	103	0.11

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0013



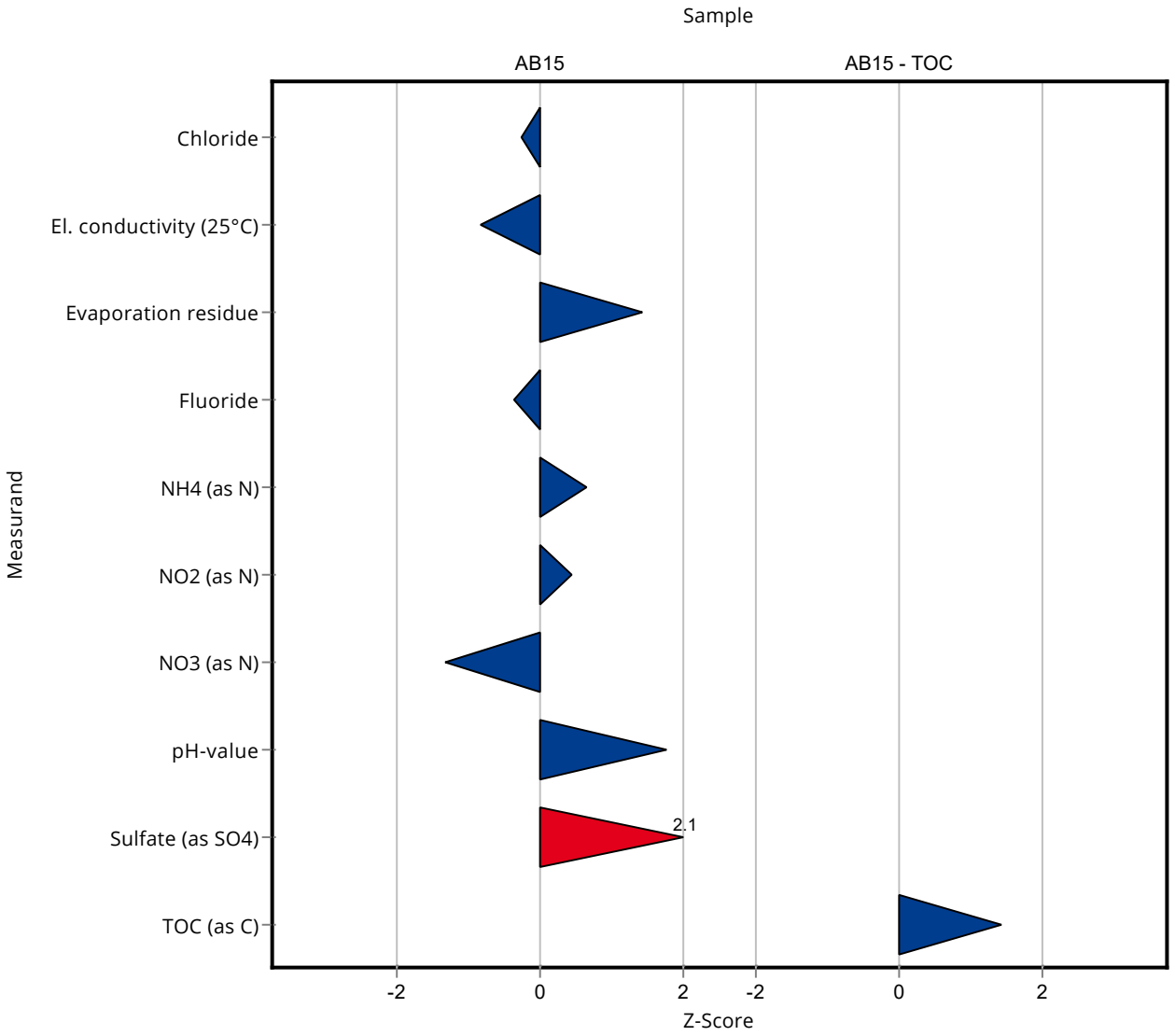
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0014

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1627 ± 131	82.4	98.7	-0.26
El. conductivity (25°C)	mS/m	753 ± 5.26	739.7 ± 4.44	15.1	98.3	-0.85
Evaporation residue	mg/l	5190 ± 212	5924 ± 444	519	114	1.42
Fluoride	mg/l	0.575 ± 0.0938	0.497 ± 0.0399	0.213	86.5	-0.36
NH4 (as N)	mg/l	29.9 ± 1.24	31.8 ± 2.08	2.99	106	0.63
NO2 (as N)	mg/l	1.11 ± 0.0302	1.149 ± 0.101	0.0942	104	0.44
NO3 (as N)	mg/l	27.4 ± 0.587	25.24 ± 2.373	1.65	92.1	-1.32
pH-value		11.7 ± 0.0602	12.12 ± 0.35	0.234	104	1.76
PO4 (as P)	mg/l	- ± -	<0.4 (LOQ) ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	495.4 ± 43.5	22.4	111	2.12

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	20.6 ± 3.13	1.34	110	1.43


Sample
AB15
AB15 - TOC
Chloride
El. conductivity (25°C)
Evaporation residue
Fluoride
NH4 (as N)
NO2 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
Measurand
2.1
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0014

Sample: AB15

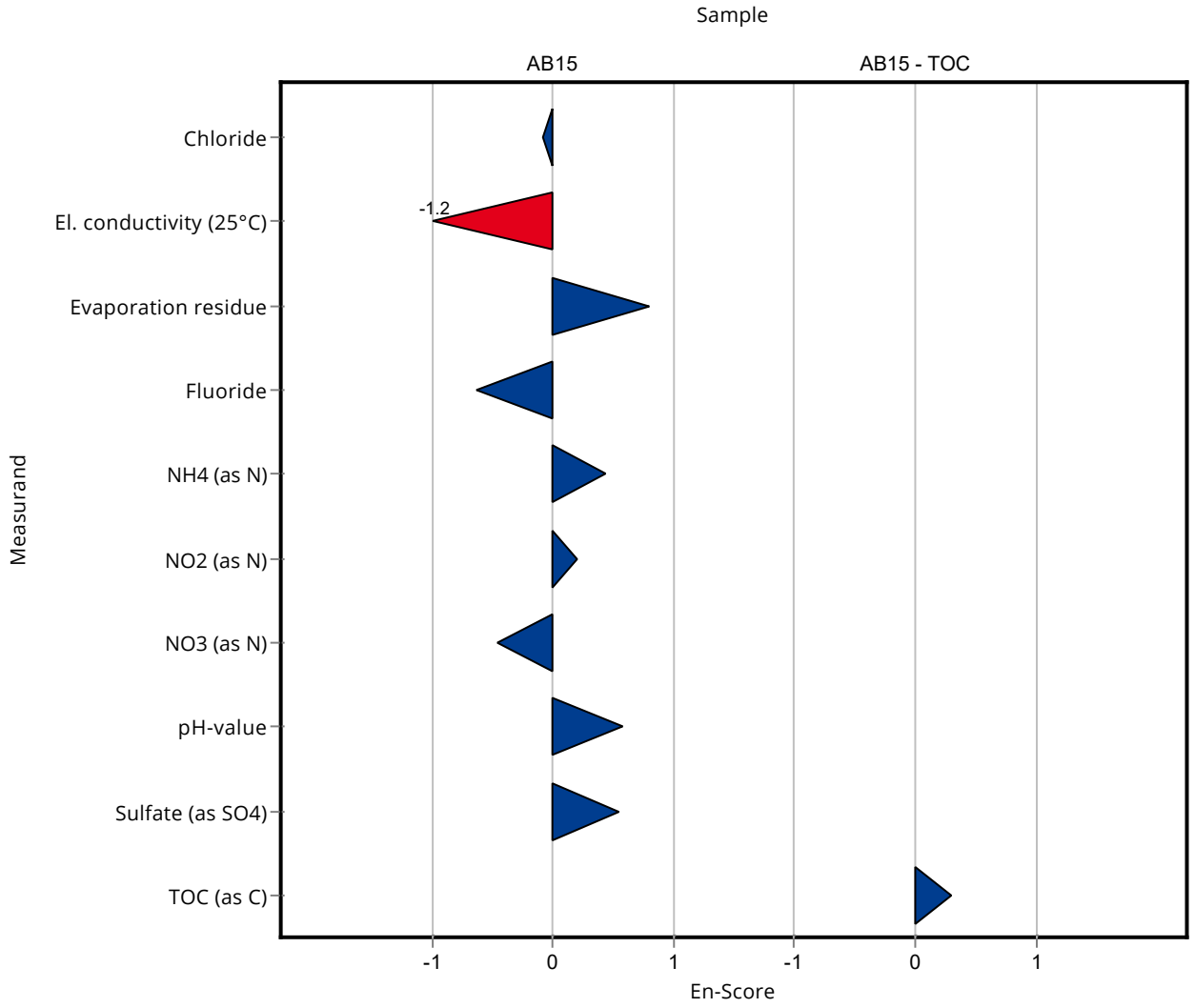
Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	± 23.6	1627	± 131	82.4	98.7	-0.08
El. conductivity (25°C)	mS/m	753	± 5.26	739.7	± 4.44	15.1	98.3	-1.24
Evaporation residue	mg/l	5190	± 212	5924	± 444	519	114	0.81
Fluoride	mg/l	0.575	± 0.0938	0.497	± 0.0399	0.213	86.5	-0.63
NH4 (as N)	mg/l	29.9	± 1.24	31.8	± 2.08	2.99	106	0.44
NO2 (as N)	mg/l	1.11	± 0.0302	1.149	± 0.101	0.0942	104	0.20
NO3 (as N)	mg/l	27.4	± 0.587	25.24	± 2.373	1.65	92.1	-0.46
pH-value		11.7	± 0.0602	12.12	± 0.35	0.234	104	0.59
PO4 (as P)	mg/l	-	± -	<0.4 (LOQ)	± -	-	-	-
Sulfate (as SO4)	mg/l	448	± 7.35	495.4	± 43.5	22.4	111	0.54

Sample: AB15TOC

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	± 0.489	20.6	± 3.13	1.34	110	0.31

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0014



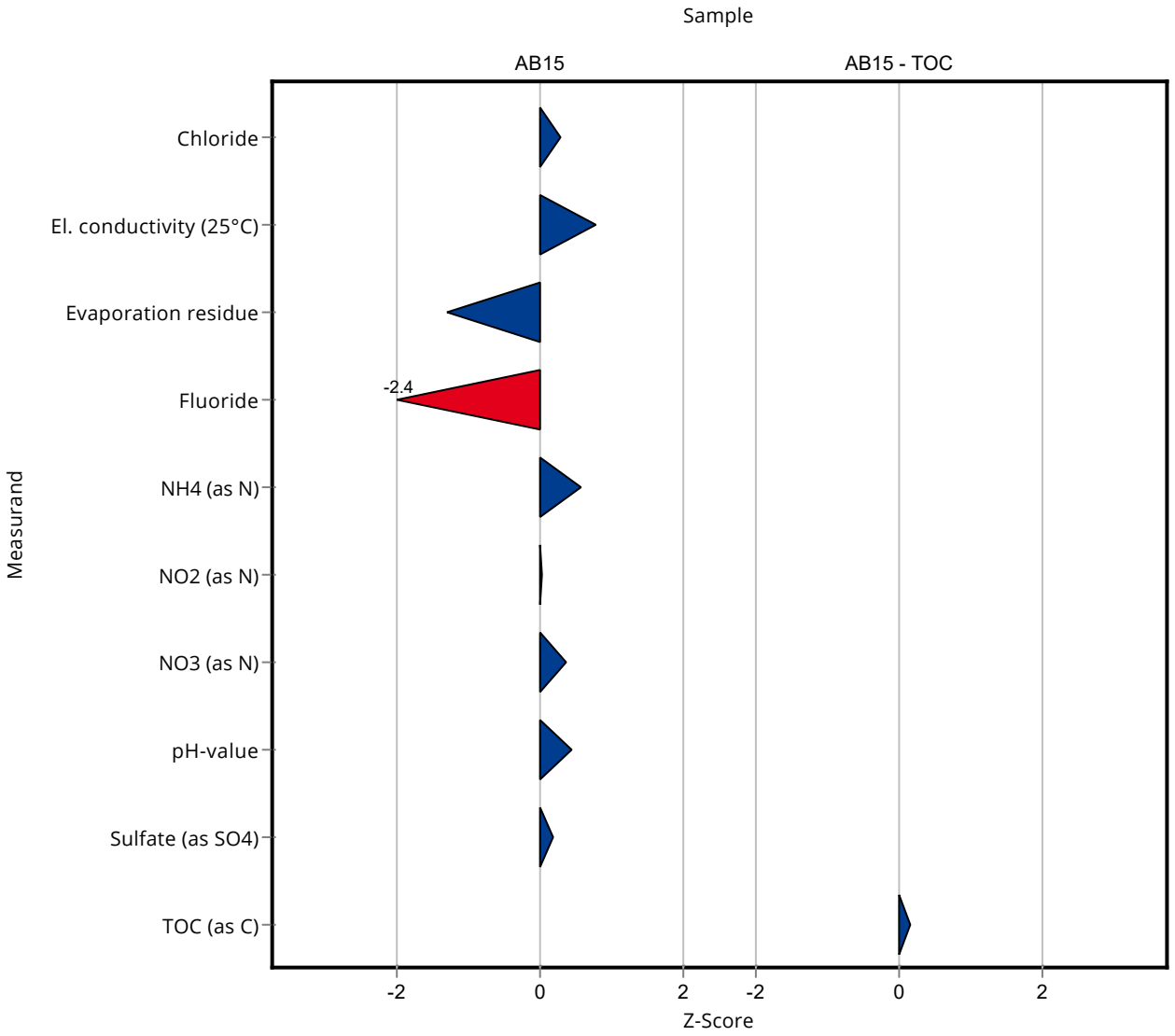
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0015

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1671 ± 40	82.4	101	0.28
El. conductivity (25°C)	mS/m	753 ± 5.26	764 ± 15	15.1	102	0.76
Evaporation residue	mg/l	5190 ± 212	4509 ± 108	519	86.9	-1.31
Fluoride	mg/l	0.575 ± 0.0938	0.0725 ± 0.0015	0.213	12.6	-2.36
NH4 (as N)	mg/l	29.9 ± 1.24	31.6 ± 0.835	2.99	106	0.57
NO2 (as N)	mg/l	1.11 ± 0.0302	1.11 ± 0.0195	0.0942	100	0.02
NO3 (as N)	mg/l	27.4 ± 0.587	27.99 ± 0.52	1.65	102	0.35
pH-value		11.7 ± 0.0602	11.81 ± 0.14	0.234	101	0.44
PO4 (as P)	mg/l	- ± -	<0.005 (LOQ) ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	452 ± 10.4	22.4	101	0.18

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.9 ± 0.545	1.34	101	0.17


Sample
AB15
AB15 - TOC
Chloride
El. conductivity (25°C)
Evaporation residue
Fluoride
-2.4
NH4 (as N)
NO2 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
Measurand
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0015

Sample: AB15

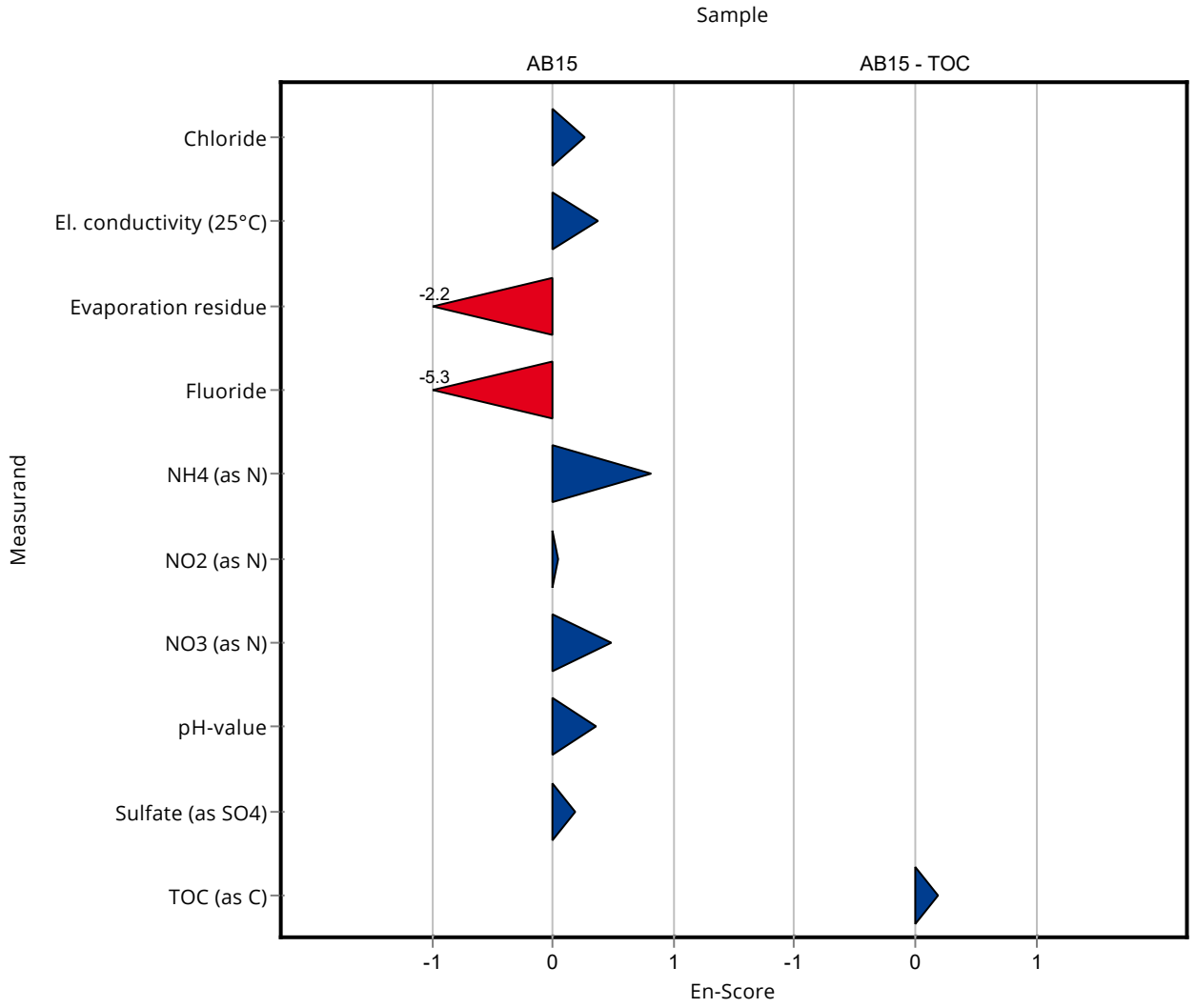
Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	±	23.6	1671	±	40	82.4	101	0.27
El. conductivity (25°C)	mS/m	753	±	5.26	764	±	15	15.1	102	0.38
Evaporation residue	mg/l	5190	±	212	4509	±	108	519	86.9	-2.24
Fluoride	mg/l	0.575	±	0.0938	0.0725	±	0.0015	0.213	12.6	-5.35
NH4 (as N)	mg/l	29.9	±	1.24	31.6	±	0.835	2.99	106	0.81
NO2 (as N)	mg/l	1.11	±	0.0302	1.11	±	0.0195	0.0942	100	0.05
NO3 (as N)	mg/l	27.4	±	0.587	27.99	±	0.52	1.65	102	0.48
pH-value		11.7	±	0.0602	11.81	±	0.14	0.234	101	0.36
PO4 (as P)	mg/l	-	±	-	<0.005 (LOQ)	±	-	-	-	-
Sulfate (as SO4)	mg/l	448	±	7.35	452	±	10.4	22.4	101	0.18

Sample: AB15TOC

Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	±	0.489	18.9	±	0.545	1.34	101	0.19

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0015



Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0016

Sample: AB15

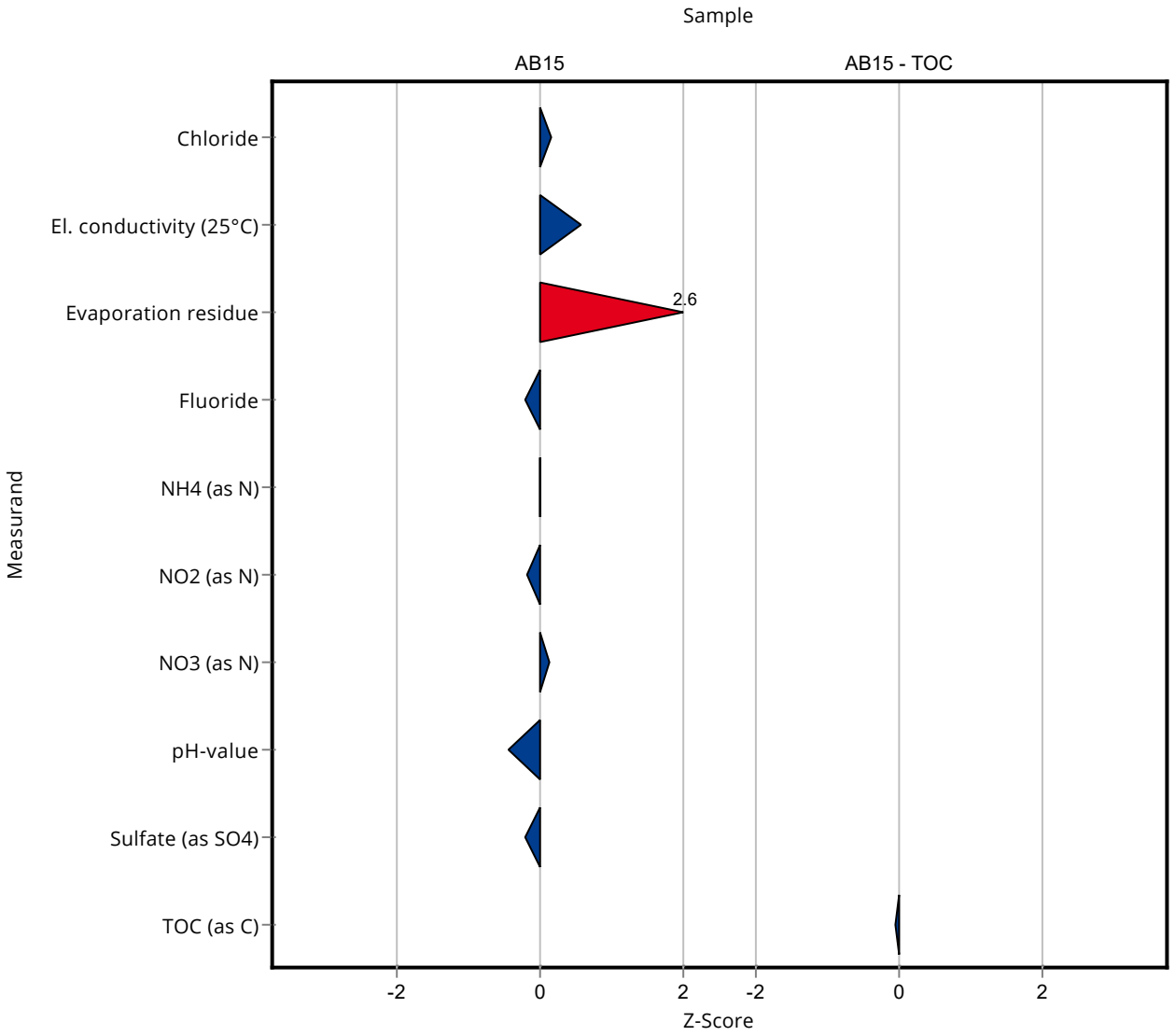
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1660 ± 54.6	82.4	101	0.14
El. conductivity (25°C)	mS/m	753 ± 5.26	761 ± 119	15.1	101	0.56
Evaporation residue	mg/l	5190 ± 212	6520 ± 1300	519	126	2.57
Fluoride	mg/l	0.575 ± 0.0938	0.53 ± 0.0249	0.213	92.3	-0.21
NH4 (as N)	mg/l	29.9 ± 1.24	29.9 ± 2.1	2.99	100	0.00
NO2 (as N)	mg/l	1.11 ± 0.0302	1.09 ± 0.0525	0.0942	98.4	-0.19
NO3 (as N)	mg/l	27.4 ± 0.587	27.6 ± 1	1.65	101	0.11
pH-value		11.7 ± 0.0602	11.6 ± 0.1	0.234	99.1	-0.46
PO4 (as P)	mg/l	- ± -	<1 (LOQ) ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	443 ± 21.9	22.4	98.9	-0.22

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.6 ± 1.02	1.34	99.6	-0.06

Summary of results Waste acc to landfill directive (eluate ions) - AB15

Labcode: LC0016



Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0016

Sample: AB15

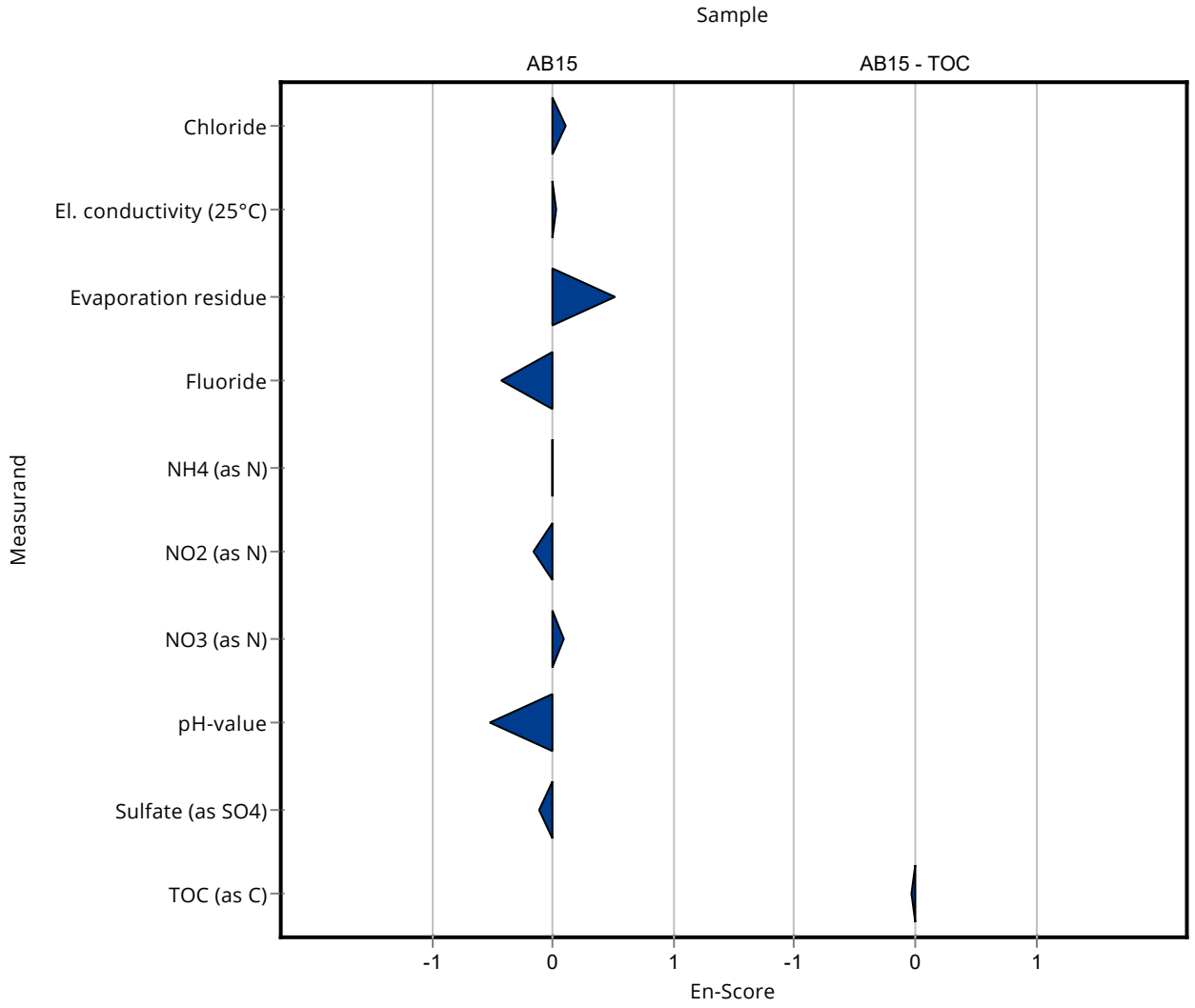
Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	±	23.6	1660	±	54.6	82.4	101	0.11
El. conductivity (25°C)	mS/m	753	±	5.26	761	±	119	15.1	101	0.04
Evaporation residue	mg/l	5190	±	212	6520	±	1300	519	126	0.51
Fluoride	mg/l	0.575	±	0.0938	0.53	±	0.0249	0.213	92.3	-0.42
NH4 (as N)	mg/l	29.9	±	1.24	29.9	±	2.1	2.99	100	0.00
NO2 (as N)	mg/l	1.11	±	0.0302	1.09	±	0.0525	0.0942	98.4	-0.16
NO3 (as N)	mg/l	27.4	±	0.587	27.6	±	1	1.65	101	0.09
pH-value		11.7	±	0.0602	11.6	±	0.1	0.234	99.1	-0.52
PO4 (as P)	mg/l	-	±	-	<1 (LOQ)	±	-	-	-	-
Sulfate (as SO4)	mg/l	448	±	7.35	443	±	21.9	22.4	98.9	-0.11

Sample: AB15TOC

Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	±	0.489	18.6	±	1.02	1.34	99.6	-0.04

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0016



Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0017

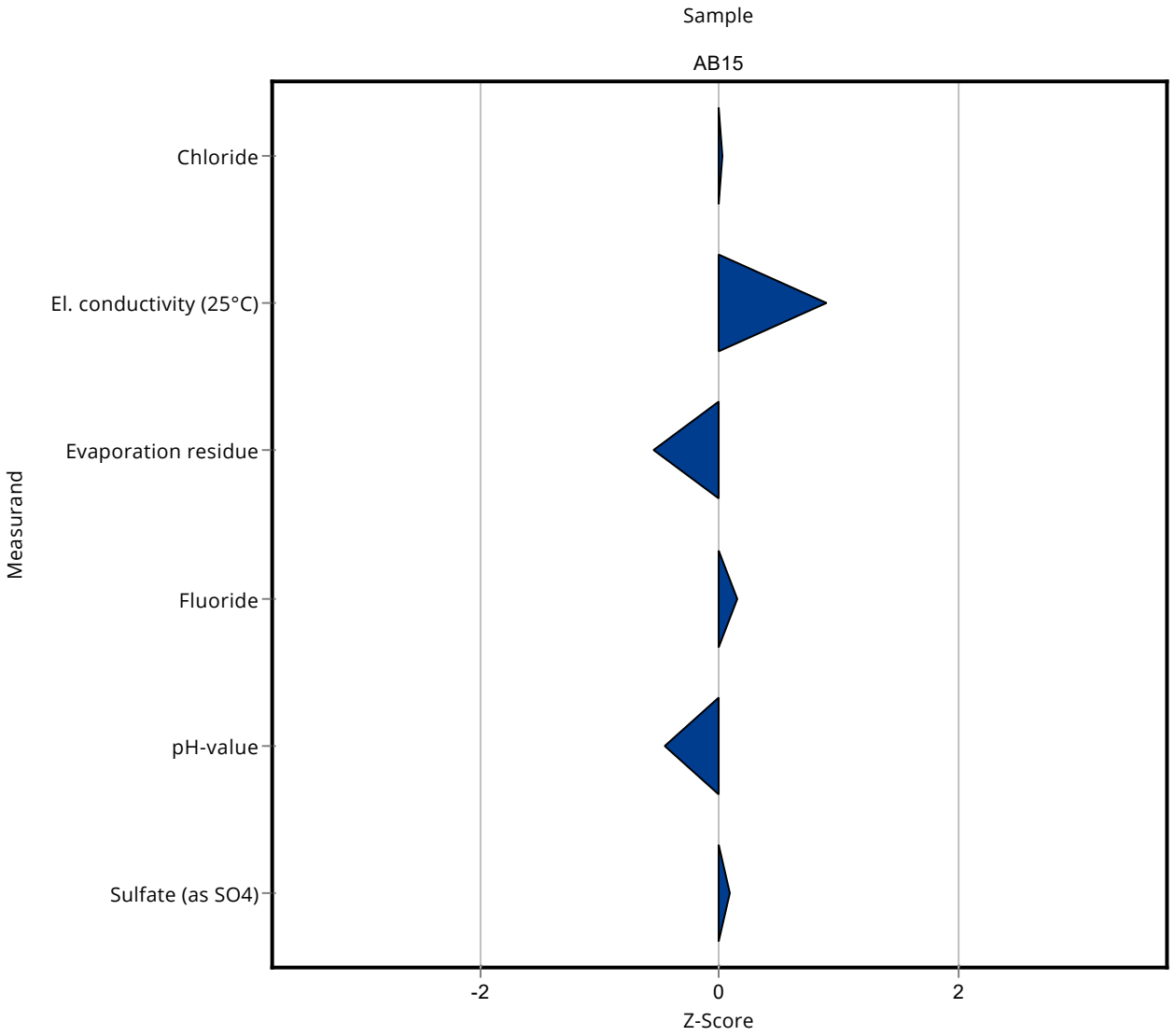
Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1650 ± 83	82.4	100	0.02
El. conductivity (25°C)	mS/m	753 ± 5.26	766 ± 20	15.1	102	0.90
Evaporation residue	mg/l	5190 ± 212	4900 ± 490	519	94.5	-0.55
Fluoride	mg/l	0.575 ± 0.0938	0.606 ± 0.03	0.213	105	0.15
NH4 (as N)	mg/l	29.9 ± 1.24	- ± -	2.99	-	-
NO2 (as N)	mg/l	1.11 ± 0.0302	- ± -	0.0942	-	-
NO3 (as N)	mg/l	27.4 ± 0.587	- ± -	1.65	-	-
pH-value		11.7 ± 0.0602	11.6 ± 0.2	0.234	99.1	-0.46
PO4 (as P)	mg/l	- ± -	- ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	450 ± 23	22.4	100	0.09

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	- ± -	1.34	-	-

Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0017



Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0017

Sample: AB15

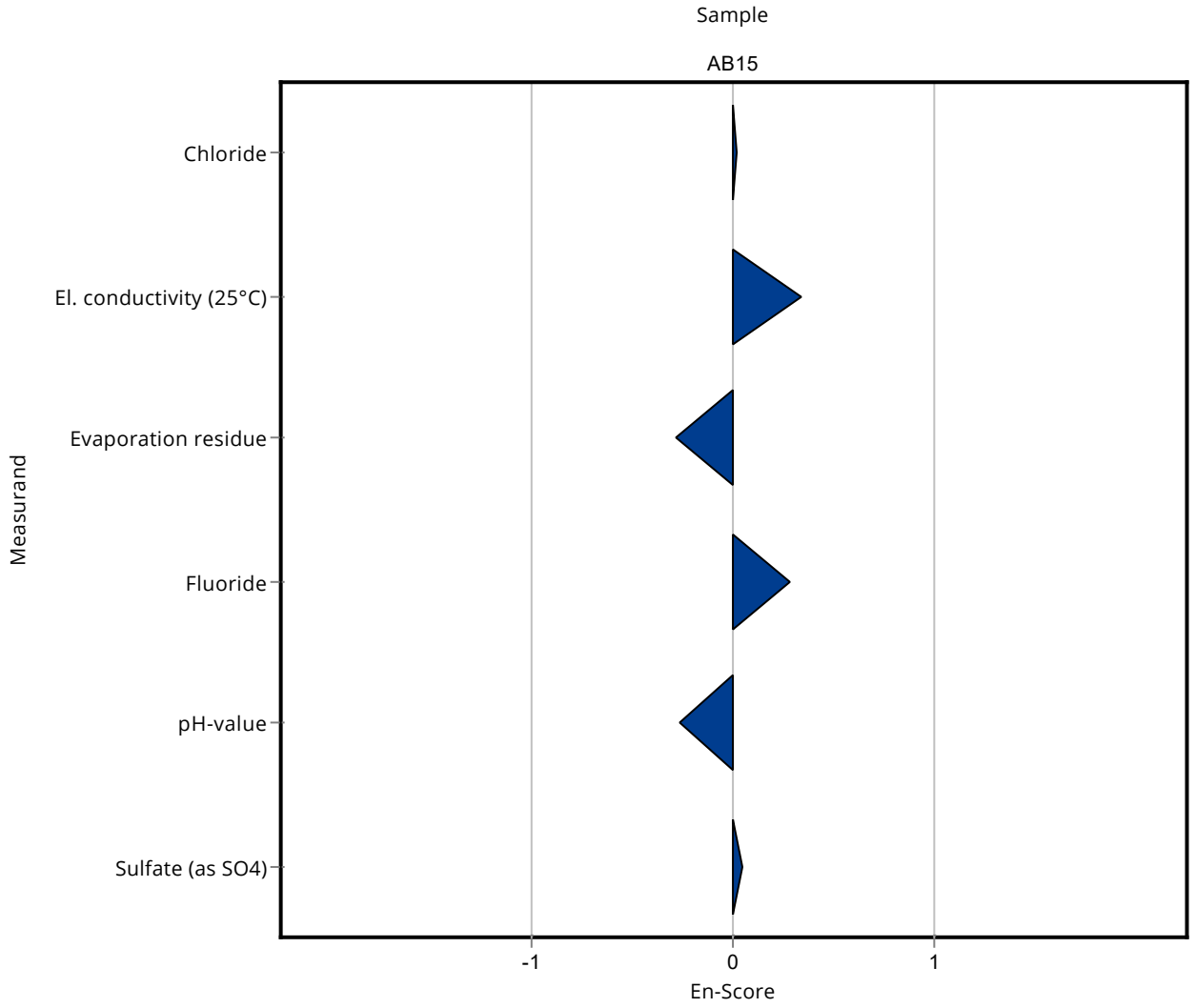
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650 ± 23.6	1650 ± 83	82.4	100	0.01
El. conductivity (25°C)	mS/m	753 ± 5.26	766 ± 20	15.1	102	0.33
Evaporation residue	mg/l	5190 ± 212	4900 ± 490	519	94.5	-0.29
Fluoride	mg/l	0.575 ± 0.0938	0.606 ± 0.03	0.213	105	0.28
NH4 (as N)	mg/l	29.9 ± 1.24	- ± -	2.99	-	-
NO2 (as N)	mg/l	1.11 ± 0.0302	- ± -	0.0942	-	-
NO3 (as N)	mg/l	27.4 ± 0.587	- ± -	1.65	-	-
pH-value		11.7 ± 0.0602	11.6 ± 0.2	0.234	99.1	-0.27
PO4 (as P)	mg/l	- ± -	- ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	450 ± 23	22.4	100	0.04

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7 ± 0.489	- ± -	1.34	-	-

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0017



Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0018

Sample: AB15

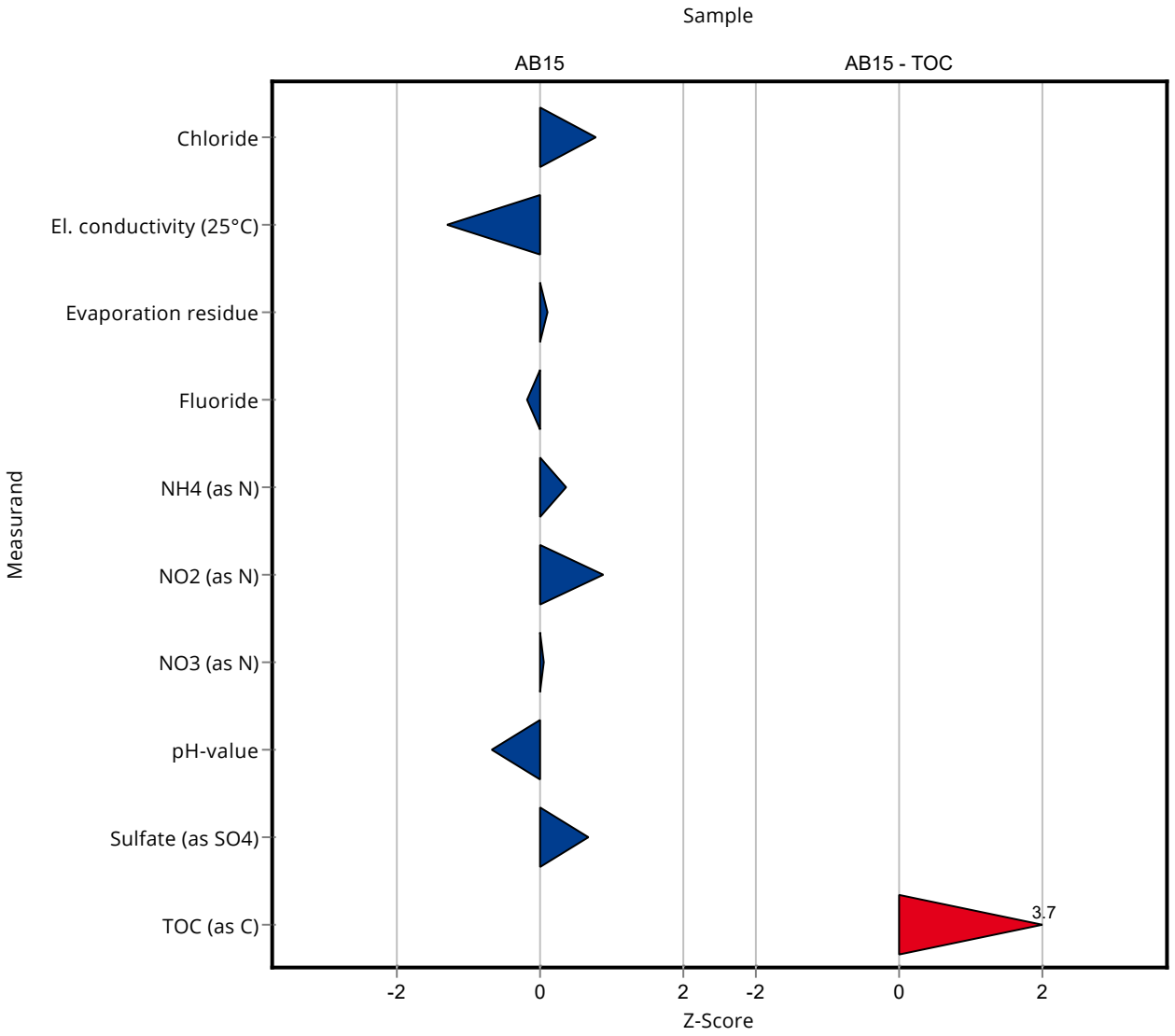
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1711 ± 144	82.4	104	0.76
El. conductivity (25°C)	mS/m	753 ± 5.26	733 ± 11	15.1	97.4	-1.30
Evaporation residue	mg/l	5190 ± 212	5242 ± 225	519	101	0.10
Fluoride	mg/l	0.575 ± 0.0938	0.536 ± 0.045	0.213	93.3	-0.18
NH4 (as N)	mg/l	29.9 ± 1.24	30.96 ± 1.83	2.99	104	0.35
NO2 (as N)	mg/l	1.11 ± 0.0302	1.19 ± 0.099	0.0942	107	0.87
NO3 (as N)	mg/l	27.4 ± 0.587	27.5 ± 2.3	1.65	100	0.05
pH-value		11.7 ± 0.0602	11.55 ± 0.1	0.234	98.7	-0.67
PO4 (as P)	mg/l	- ± -	<0.015 (LOQ) ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	463 ± 32	22.4	103	0.67

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	23.6 ± 0.81	1.34	126	3.66

Summary of results Waste acc to landfill directive (eluate ions) - AB15

Labcode: LC0018



Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0018

Sample: AB15

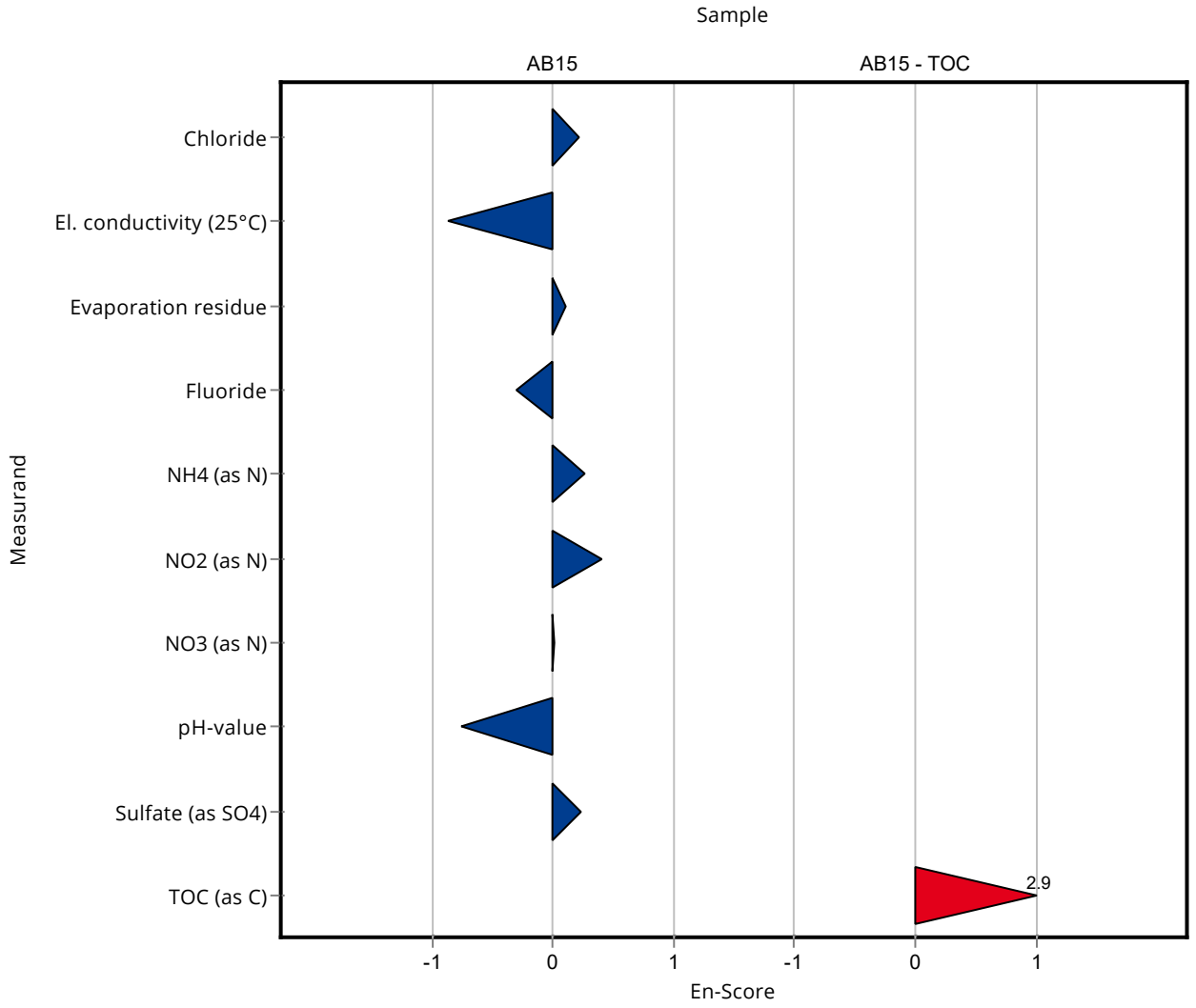
Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	±	23.6	1711	±	144	82.4	104	0.22
El. conductivity (25°C)	mS/m	753	±	5.26	733	±	11	15.1	97.4	-0.86
Evaporation residue	mg/l	5190	±	212	5242	±	225	519	101	0.11
Fluoride	mg/l	0.575	±	0.0938	0.536	±	0.045	0.213	93.3	-0.30
NH4 (as N)	mg/l	29.9	±	1.24	30.96	±	1.83	2.99	104	0.27
NO2 (as N)	mg/l	1.11	±	0.0302	1.19	±	0.099	0.0942	107	0.41
NO3 (as N)	mg/l	27.4	±	0.587	27.5	±	2.3	1.65	100	0.02
pH-value		11.7	±	0.0602	11.55	±	0.1	0.234	98.7	-0.76
PO4 (as P)	mg/l	-	±	-	<0.015 (LOQ)	±	-	-	-	-
Sulfate (as SO4)	mg/l	448	±	7.35	463	±	32	22.4	103	0.23

Sample: AB15TOC

Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	±	0.489	23.6	±	0.81	1.34	126	2.91

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0018



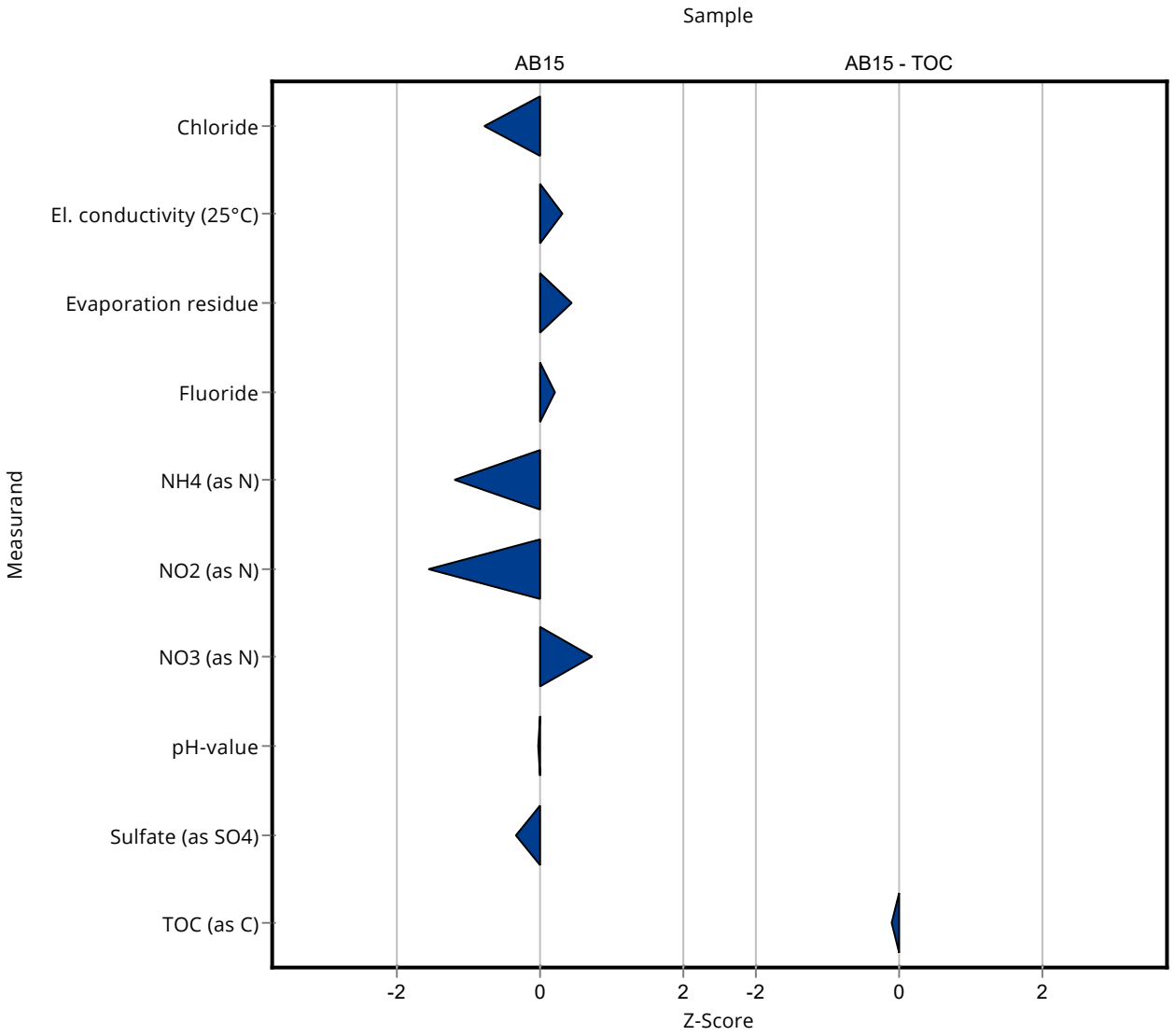
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0019

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1584 ± 90.11	82.4	96.1	-0.78
El. conductivity (25°C)	mS/m	753 ± 5.26	757 ± 20.8	15.1	101	0.30
Evaporation residue	mg/l	5190 ± 212	5409 ± 649	519	104	0.43
Fluoride	mg/l	0.575 ± 0.0938	0.617 ± 0.07	0.213	107	0.20
NH4 (as N)	mg/l	29.9 ± 1.24	26.3 ± 6.87	2.99	87.9	-1.21
NO2 (as N)	mg/l	1.11 ± 0.0302	0.96 ± 0.19	0.0942	86.7	-1.57
NO3 (as N)	mg/l	27.4 ± 0.587	28.6 ± 3.05	1.65	104	0.72
pH-value		11.7 ± 0.0602	11.7 ± 0.2	0.234	99.9	-0.03
PO4 (as P)	mg/l	- ± -	0.054 ± 0.007	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	440 ± 40.4	22.4	98.2	-0.35

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.53 ± 0.959	1.34	99.2	-0.11


Sample
AB15
AB15 - TOC
Chloride
El. conductivity (25°C)
Evaporation residue
Fluoride
NH4 (as N)
NO2 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
Measurand
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0019

Sample: AB15

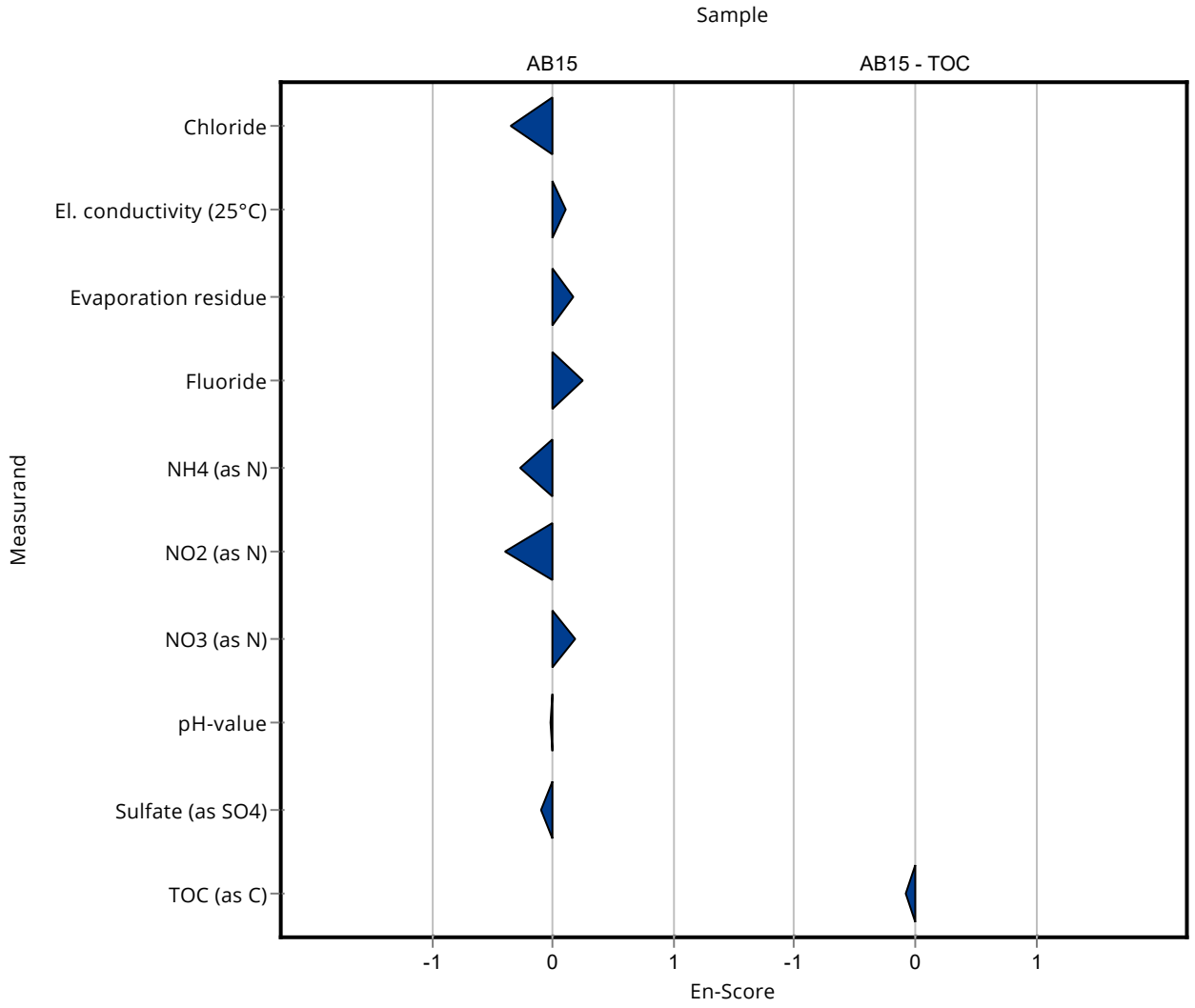
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650 ± 23.6	1584 ± 90.11	82.4	96.1	-0.35
El. conductivity (25°C)	mS/m	753 ± 5.26	757 ± 20.8	15.1	101	0.11
Evaporation residue	mg/l	5190 ± 212	5409 ± 649	519	104	0.17
Fluoride	mg/l	0.575 ± 0.0938	0.617 ± 0.07	0.213	107	0.25
NH4 (as N)	mg/l	29.9 ± 1.24	26.3 ± 6.87	2.99	87.9	-0.26
NO2 (as N)	mg/l	1.11 ± 0.0302	0.96 ± 0.19	0.0942	86.7	-0.39
NO3 (as N)	mg/l	27.4 ± 0.587	28.6 ± 3.05	1.65	104	0.19
pH-value		11.7 ± 0.0602	11.7 ± 0.2	0.234	99.9	-0.02
PO4 (as P)	mg/l	- ± -	0.054 ± 0.007	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	440 ± 40.4	22.4	98.2	-0.10

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.53 ± 0.959	1.34	99.2	-0.07

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0019



Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0020

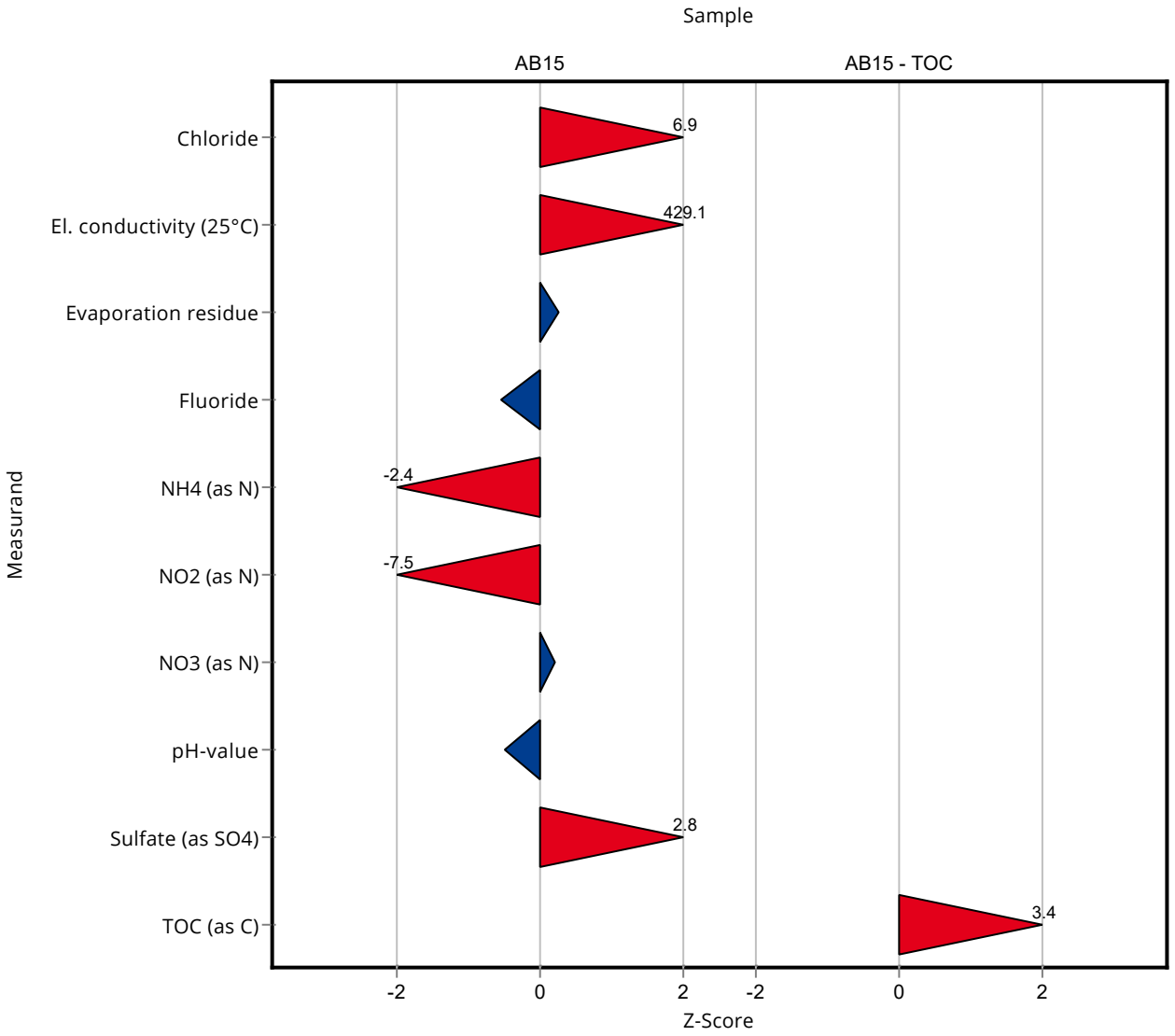
Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	2216 ± 303	82.4	134	6.89
El. conductivity (25°C)	mS/m	753 ± 5.26	7210 ± 263	15.1	958	429.07
Evaporation residue	mg/l	5190 ± 212	5317 ± 1600	519	102	0.25
Fluoride	mg/l	0.575 ± 0.0938	0.459 ± 0.104	0.213	79.9	-0.54
NH4 (as N)	mg/l	29.9 ± 1.24	22.59 ± 5.06	2.99	75.5	-2.45
NO2 (as N)	mg/l	1.11 ± 0.0302	0.402 ± 0.123	0.0942	36.3	-7.50
NO3 (as N)	mg/l	27.4 ± 0.587	27.76 ± 5.72	1.65	101	0.21
pH-value		11.7 ± 0.0602	11.59 ± 0.489	0.234	99	-0.50
PO4 (as P)	mg/l	- ± -	1.434 ± 0.275	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	510 ± 47.6	22.4	114	2.77

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	23.3 ± 7.3	1.34	125	3.44

Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0020



Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0020

Sample: AB15

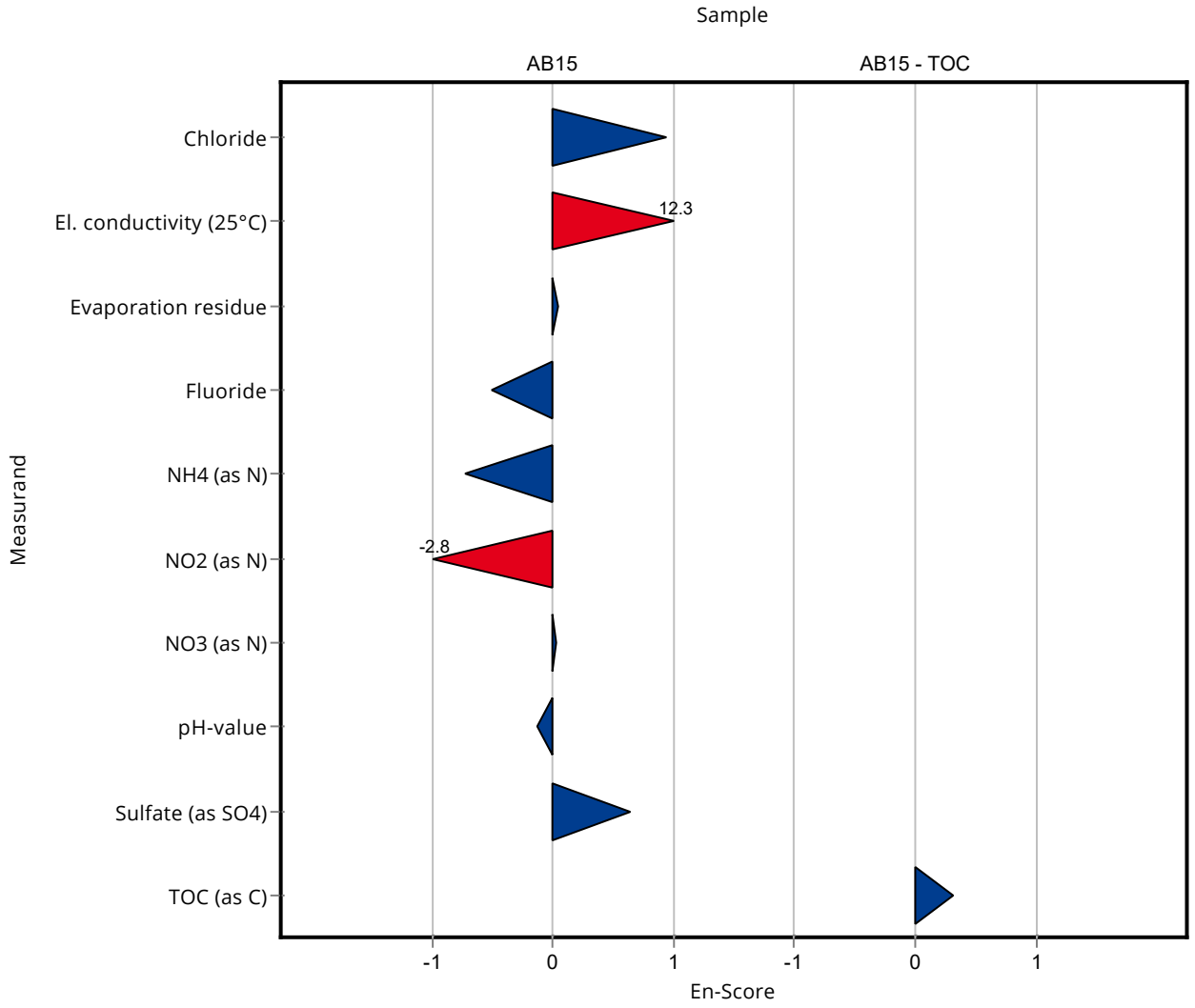
Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	± 23.6	2216	± 303	82.4	134	0.94
El. conductivity (25°C)	mS/m	753	± 5.26	7210	± 263	15.1	958	12.28
Evaporation residue	mg/l	5190	± 212	5317	± 1600	519	102	0.04
Fluoride	mg/l	0.575	± 0.0938	0.459	± 0.104	0.213	79.9	-0.51
NH4 (as N)	mg/l	29.9	± 1.24	22.59	± 5.06	2.99	75.5	-0.72
NO2 (as N)	mg/l	1.11	± 0.0302	0.402	± 0.123	0.0942	36.3	-2.85
NO3 (as N)	mg/l	27.4	± 0.587	27.76	± 5.72	1.65	101	0.03
pH-value		11.7	± 0.0602	11.59	± 0.489	0.234	99	-0.12
PO4 (as P)	mg/l	-	± -	1.434	± 0.275	-	-	-
Sulfate (as SO4)	mg/l	448	± 7.35	510	± 47.6	22.4	114	0.65

Sample: AB15TOC

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	± 0.489	23.3	± 7.3	1.34	125	0.32

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0020



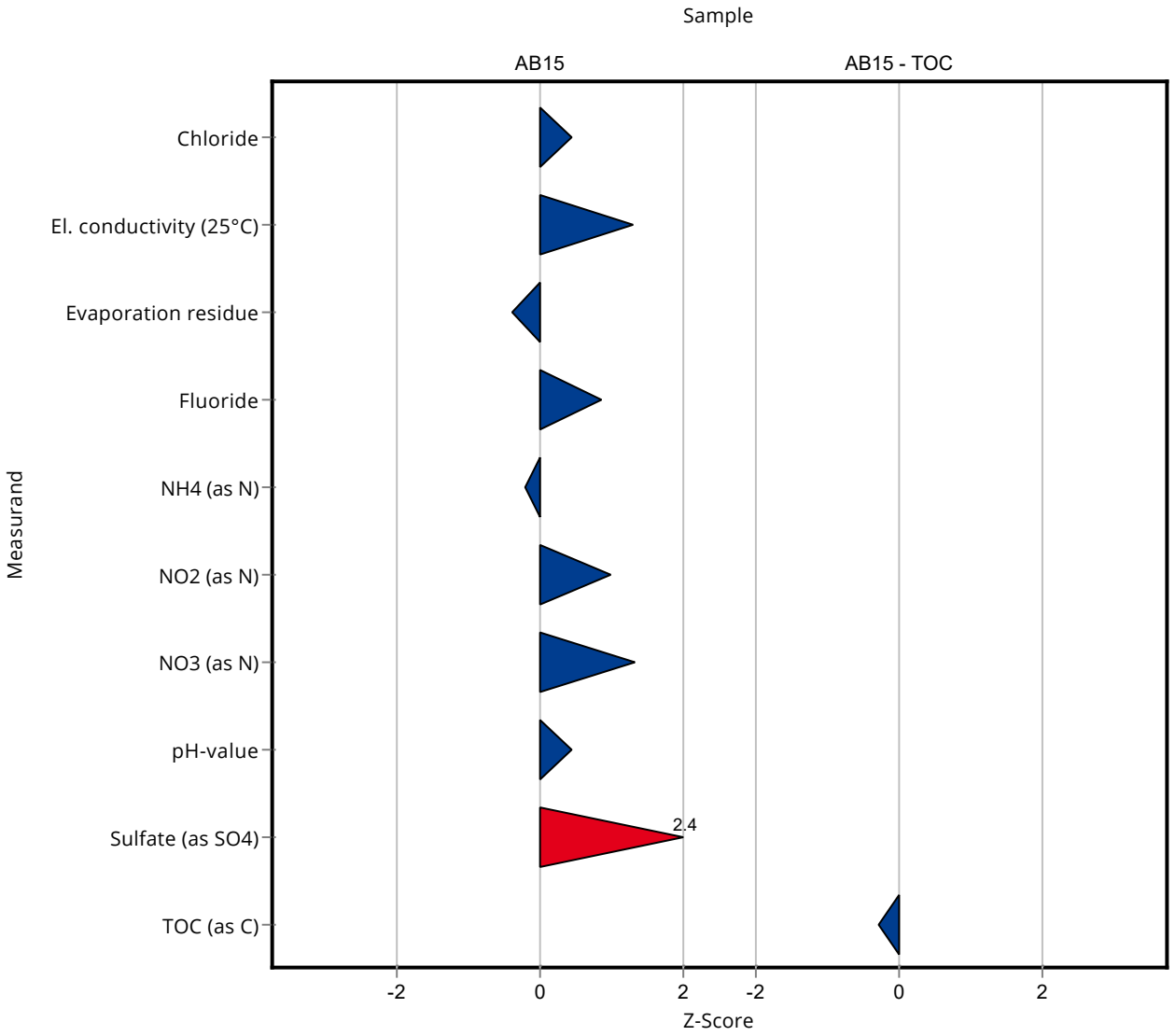
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0021

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1684 ± 135	82.4	102	0.43
El. conductivity (25°C)	mS/m	753 ± 5.26	772 ± 19	15.1	103	1.30
Evaporation residue	mg/l	5190 ± 212	4979 ± 291	519	96	-0.40
Fluoride	mg/l	0.575 ± 0.0938	0.7535 ± 0.1108	0.213	131	0.84
NH4 (as N)	mg/l	29.9 ± 1.24	29.3 ± 3.5	2.99	98	-0.20
NO2 (as N)	mg/l	1.11 ± 0.0302	1.2 ± 0.14	0.0942	108	0.98
NO3 (as N)	mg/l	27.4 ± 0.587	29.6 ± 2.3	1.65	108	1.33
pH-value		11.7 ± 0.0602	11.81 ± 0.42	0.234	101	0.44
PO4 (as P)	mg/l	- ± -	0.0319 ± 0.0052	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	502 ± 34	22.4	112	2.41

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.3 ± 3.2	1.34	98	-0.28


Sample
AB15
AB15 - TOC
Chloride
El. conductivity (25°C)
Evaporation residue
Fluoride
NH4 (as N)
NO2 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
Measurand
2.4
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0021

Sample: AB15

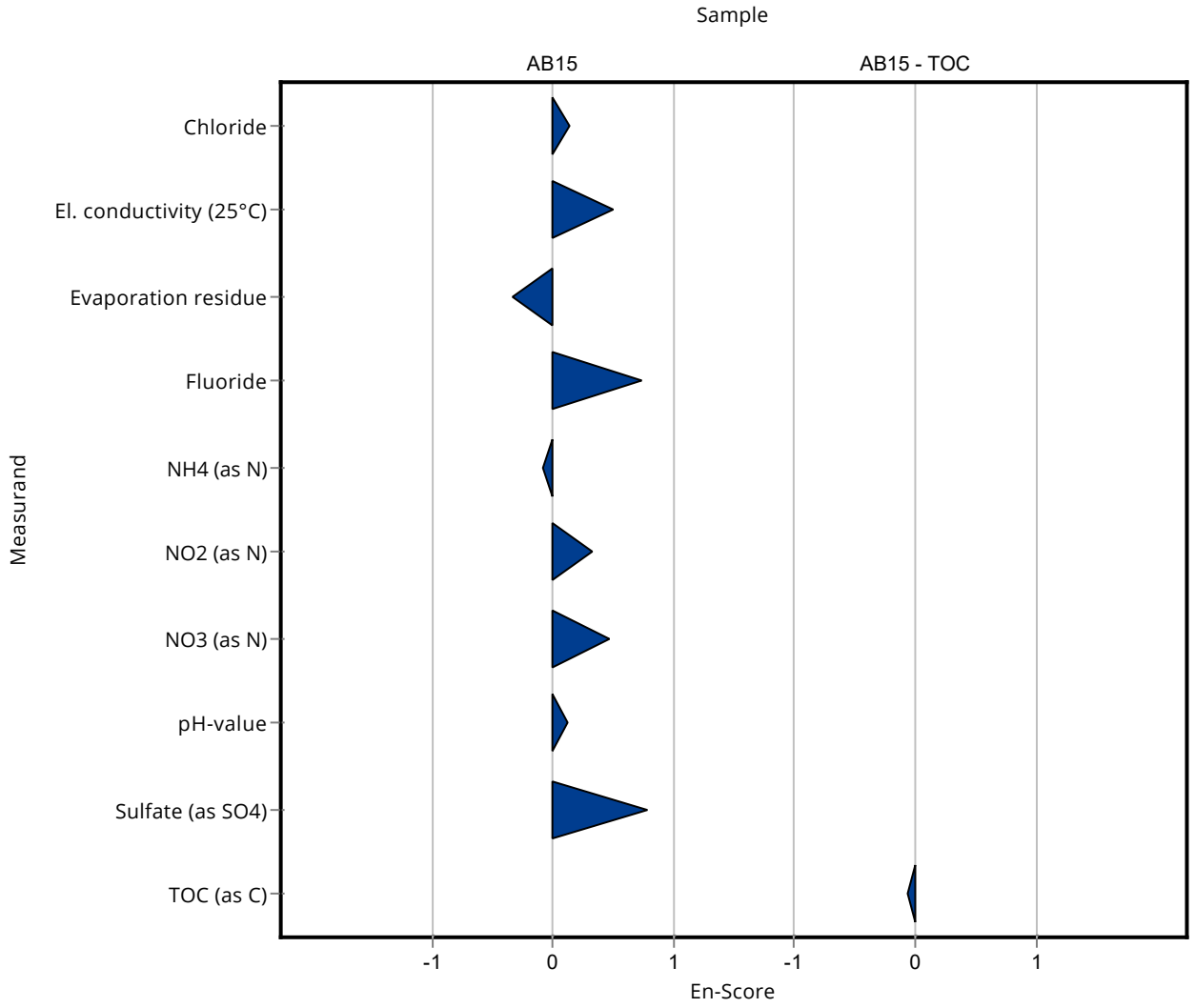
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650 ± 23.6	1684 ± 135	82.4	102	0.13
El. conductivity (25°C)	mS/m	753 ± 5.26	772 ± 19	15.1	103	0.51
Evaporation residue	mg/l	5190 ± 212	4979 ± 291	519	96	-0.34
Fluoride	mg/l	0.575 ± 0.0938	0.7535 ± 0.1108	0.213	131	0.74
NH4 (as N)	mg/l	29.9 ± 1.24	29.3 ± 3.5	2.99	98	-0.09
NO2 (as N)	mg/l	1.11 ± 0.0302	1.2 ± 0.14	0.0942	108	0.33
NO3 (as N)	mg/l	27.4 ± 0.587	29.6 ± 2.3	1.65	108	0.47
pH-value		11.7 ± 0.0602	11.81 ± 0.42	0.234	101	0.12
PO4 (as P)	mg/l	- ± -	0.0319 ± 0.0052	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	502 ± 34	22.4	112	0.79

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.3 ± 3.2	1.34	98	-0.06

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0021



Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0022

Sample: AB15

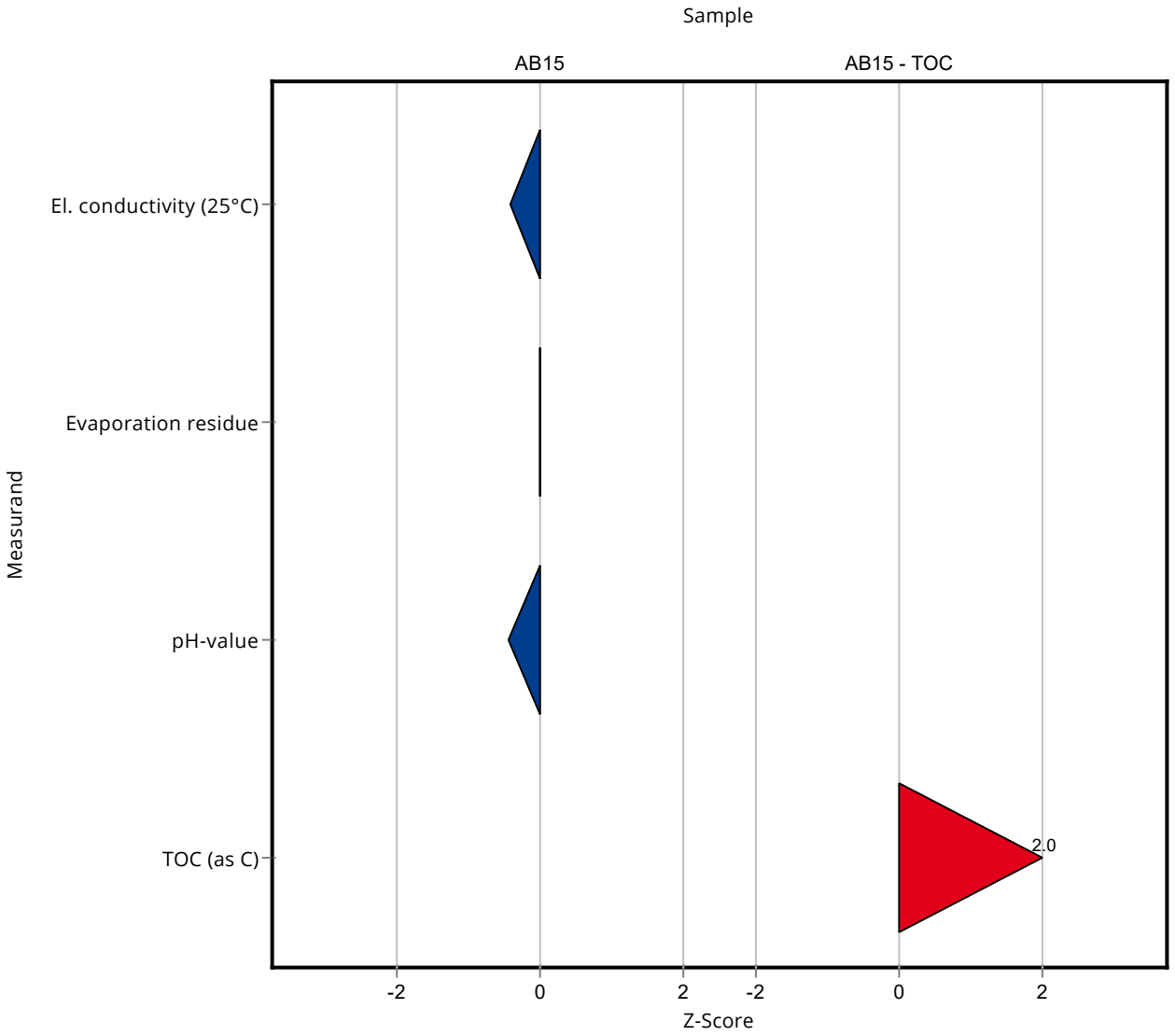
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	- ± -	82.4	-	-
El. conductivity (25°C)	mS/m	753 ± 5.26	746 ± 10	15.1	99.1	-0.43
Evaporation residue	mg/l	5190 ± 212	5180 ± 200	519	99.9	-0.01
Fluoride	mg/l	0.575 ± 0.0938	- ± -	0.213	-	-
NH4 (as N)	mg/l	29.9 ± 1.24	- ± -	2.99	-	-
NO2 (as N)	mg/l	1.11 ± 0.0302	- ± -	0.0942	-	-
NO3 (as N)	mg/l	27.4 ± 0.587	- ± -	1.65	-	-
pH-value		11.7 ± 0.0602	11.6 ± 0.05	0.234	99.1	-0.46
PO4 (as P)	mg/l	- ± -	- ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	- ± -	22.4	-	-

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	21.4 ± 2.14	1.34	115	2.03

Summary of results Waste acc to landfill directive (eluate ions) - AB15

Labcode: LC0022



Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0022

Sample: AB15

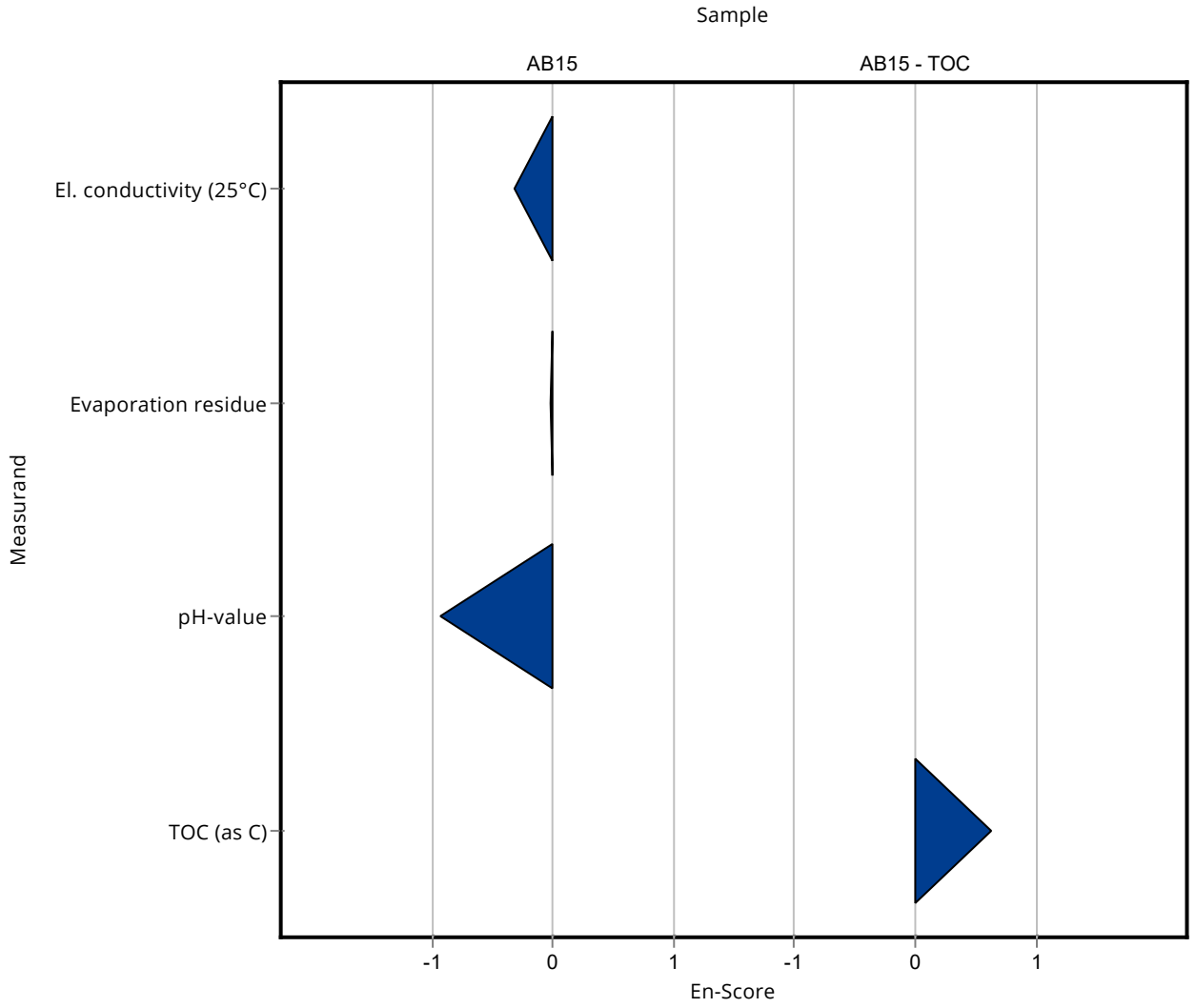
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650 ± 23.6	- ± -	82.4	-	-
El. conductivity (25°C)	mS/m	753 ± 5.26	746 ± 10	15.1	99.1	-0.31
Evaporation residue	mg/l	5190 ± 212	5180 ± 200	519	99.9	-0.02
Fluoride	mg/l	0.575 ± 0.0938	- ± -	0.213	-	-
NH4 (as N)	mg/l	29.9 ± 1.24	- ± -	2.99	-	-
NO2 (as N)	mg/l	1.11 ± 0.0302	- ± -	0.0942	-	-
NO3 (as N)	mg/l	27.4 ± 0.587	- ± -	1.65	-	-
pH-value		11.7 ± 0.0602	11.6 ± 0.05	0.234	99.1	-0.93
PO4 (as P)	mg/l	- ± -	- ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	- ± -	22.4	-	-

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7 ± 0.489	21.4 ± 2.14	1.34	115	0.63

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0022



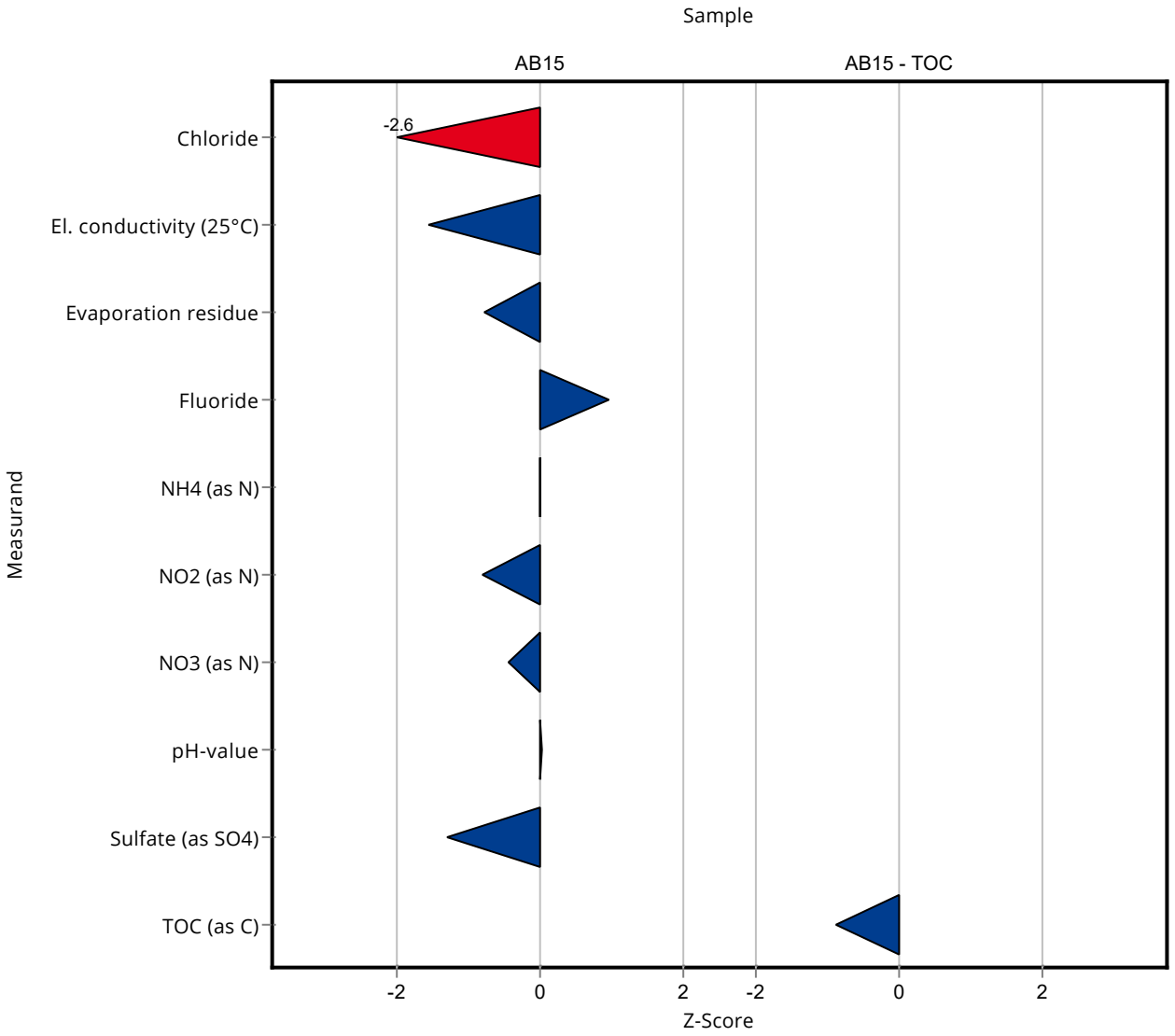
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0023

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1435.2 ± 100	82.4	87.1	-2.58
El. conductivity (25°C)	mS/m	753 ± 5.26	729 ± 4	15.1	96.9	-1.56
Evaporation residue	mg/l	5190 ± 212	4785 ± 9	519	92.2	-0.78
Fluoride	mg/l	0.575 ± 0.0938	0.78 ± 0.05	0.213	136	0.97
NH4 (as N)	mg/l	29.9 ± 1.24	29.87 ± 0.2	2.99	99.9	-0.01
NO2 (as N)	mg/l	1.11 ± 0.0302	1.03 ± 0.03	0.0942	93	-0.83
NO3 (as N)	mg/l	27.4 ± 0.587	26.7 ± 0.8	1.65	97.4	-0.44
pH-value		11.7 ± 0.0602	11.71 ± 0.02	0.234	100	0.01
PO4 (as P)	mg/l	- ± -	0.016 ± 0.005	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	418.7 ± 12	22.4	93.5	-1.30

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	17.5 ± 1.5	1.34	93.7	-0.87


Sample
AB15
AB15 - TOC
Measurand
Chloride
El. conductivity (25°C)
Evaporation residue
Fluoride
NH4 (as N)
NO2 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
-2.6
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0023

Sample: AB15

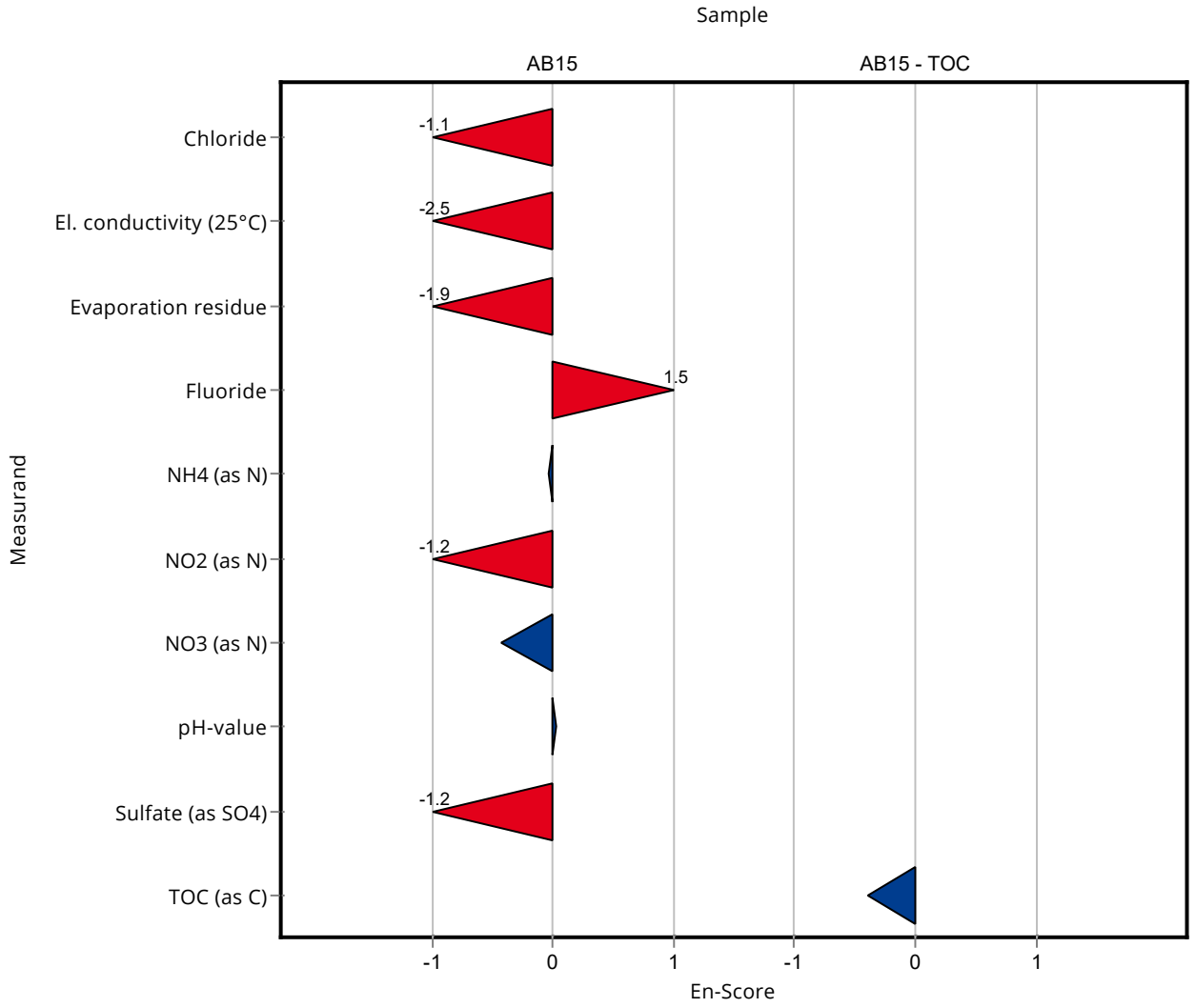
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650 ± 23.6	1435.2 ± 100	82.4	87.1	-1.06
El. conductivity (25°C)	mS/m	753 ± 5.26	729 ± 4	15.1	96.9	-2.45
Evaporation residue	mg/l	5190 ± 212	4785 ± 9	519	92.2	-1.89
Fluoride	mg/l	0.575 ± 0.0938	0.78 ± 0.05	0.213	136	1.50
NH4 (as N)	mg/l	29.9 ± 1.24	29.87 ± 0.2	2.99	99.9	-0.03
NO2 (as N)	mg/l	1.11 ± 0.0302	1.03 ± 0.03	0.0942	93	-1.16
NO3 (as N)	mg/l	27.4 ± 0.587	26.7 ± 0.8	1.65	97.4	-0.42
pH-value		11.7 ± 0.0602	11.71 ± 0.02	0.234	100	0.03
PO4 (as P)	mg/l	- ± -	0.016 ± 0.005	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	418.7 ± 12	22.4	93.5	-1.16

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7 ± 0.489	17.5 ± 1.5	1.34	93.7	-0.39

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0023



Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0024

Sample: AB15

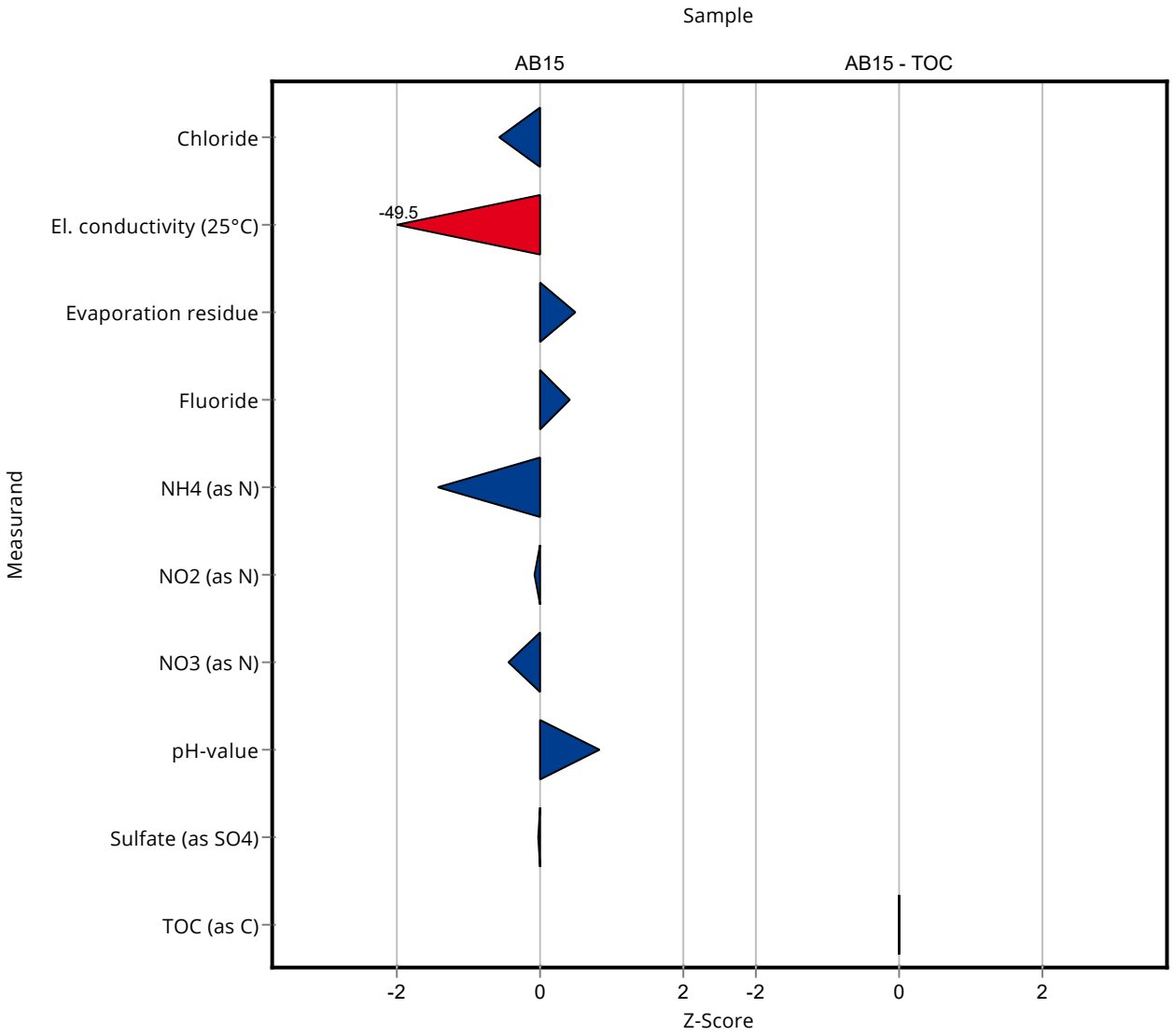
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1600 ± 320	82.4	97.1	-0.58
El. conductivity (25°C)	mS/m	753 ± 5.26	7.27 ± 0.727	15.1	0.966	-49.52
Evaporation residue	mg/l	5190 ± 212	5440 ± 1630	519	105	0.49
Fluoride	mg/l	0.575 ± 0.0938	0.66 ± 0.13	0.213	115	0.40
NH4 (as N)	mg/l	29.9 ± 1.24	25.6 ± 6.4	2.99	85.6	-1.44
NO2 (as N)	mg/l	1.11 ± 0.0302	1.1 ± 0.22	0.0942	99.3	-0.08
NO3 (as N)	mg/l	27.4 ± 0.587	26.7 ± 5.34	1.65	97.4	-0.44
pH-value		11.7 ± 0.0602	11.9 ± 0.1	0.234	102	0.82
PO4 (as P)	mg/l	- ± -	0.0143 ± 0.002	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	447 ± 89.4	22.4	99.8	-0.04

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.7 ± 4.68	1.34	100	0.02

Summary of results Waste acc to landfill directive (eluate ions) - AB15

Labcode: LC0024



Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0024

Sample: AB15

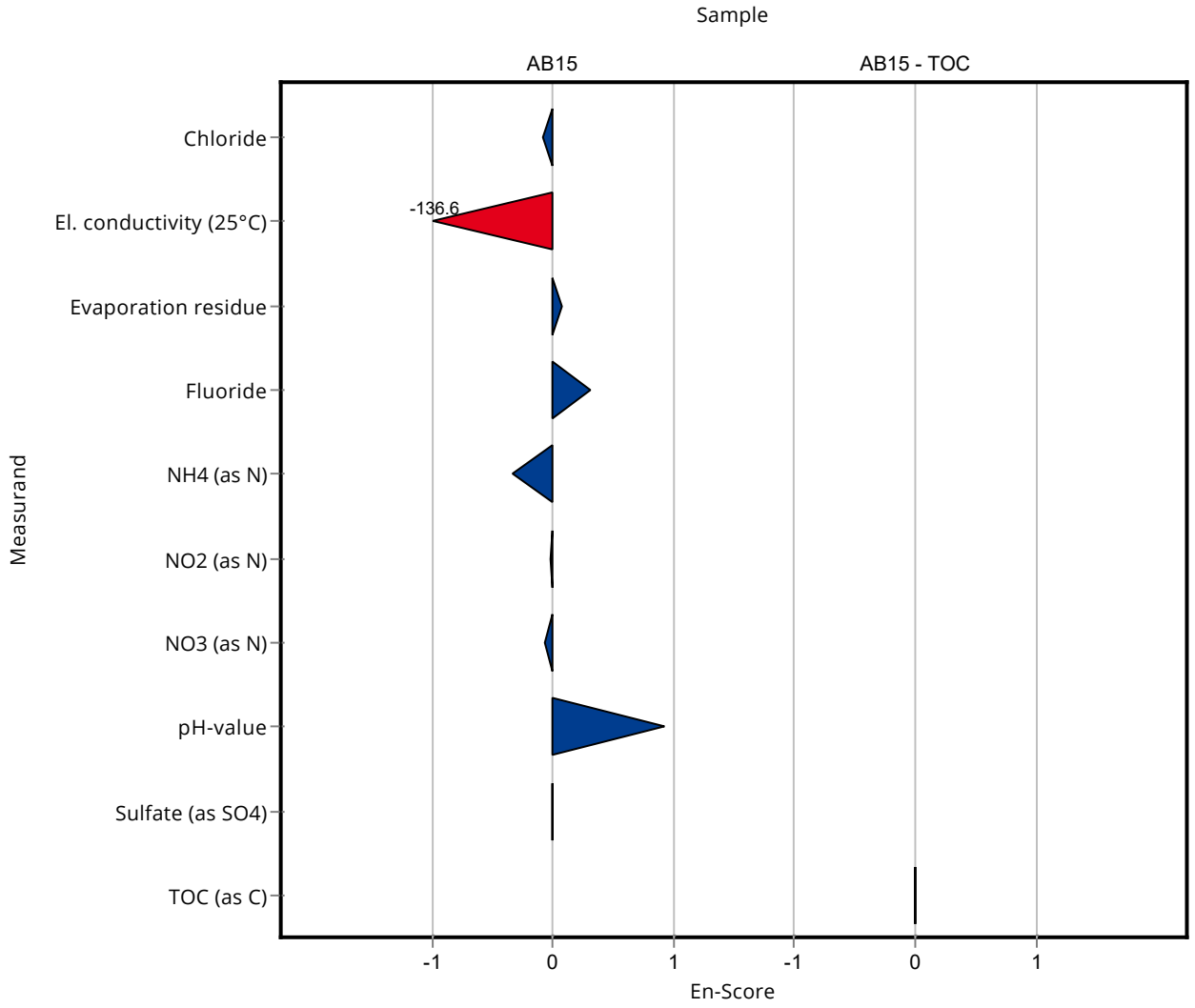
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650 ± 23.6	1600 ± 320	82.4	97.1	-0.08
El. conductivity (25°C)	mS/m	753 ± 5.26	7.27 ± 0.727	15.1	0.966	-136.59
Evaporation residue	mg/l	5190 ± 212	5440 ± 1630	519	105	0.08
Fluoride	mg/l	0.575 ± 0.0938	0.66 ± 0.13	0.213	115	0.31
NH4 (as N)	mg/l	29.9 ± 1.24	25.6 ± 6.4	2.99	85.6	-0.33
NO2 (as N)	mg/l	1.11 ± 0.0302	1.1 ± 0.22	0.0942	99.3	-0.02
NO3 (as N)	mg/l	27.4 ± 0.587	26.7 ± 5.34	1.65	97.4	-0.07
pH-value		11.7 ± 0.0602	11.9 ± 0.1	0.234	102	0.92
PO4 (as P)	mg/l	- ± -	0.0143 ± 0.002	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	447 ± 89.4	22.4	99.8	-0.01

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.7 ± 4.68	1.34	100	0.00

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0024



Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0025

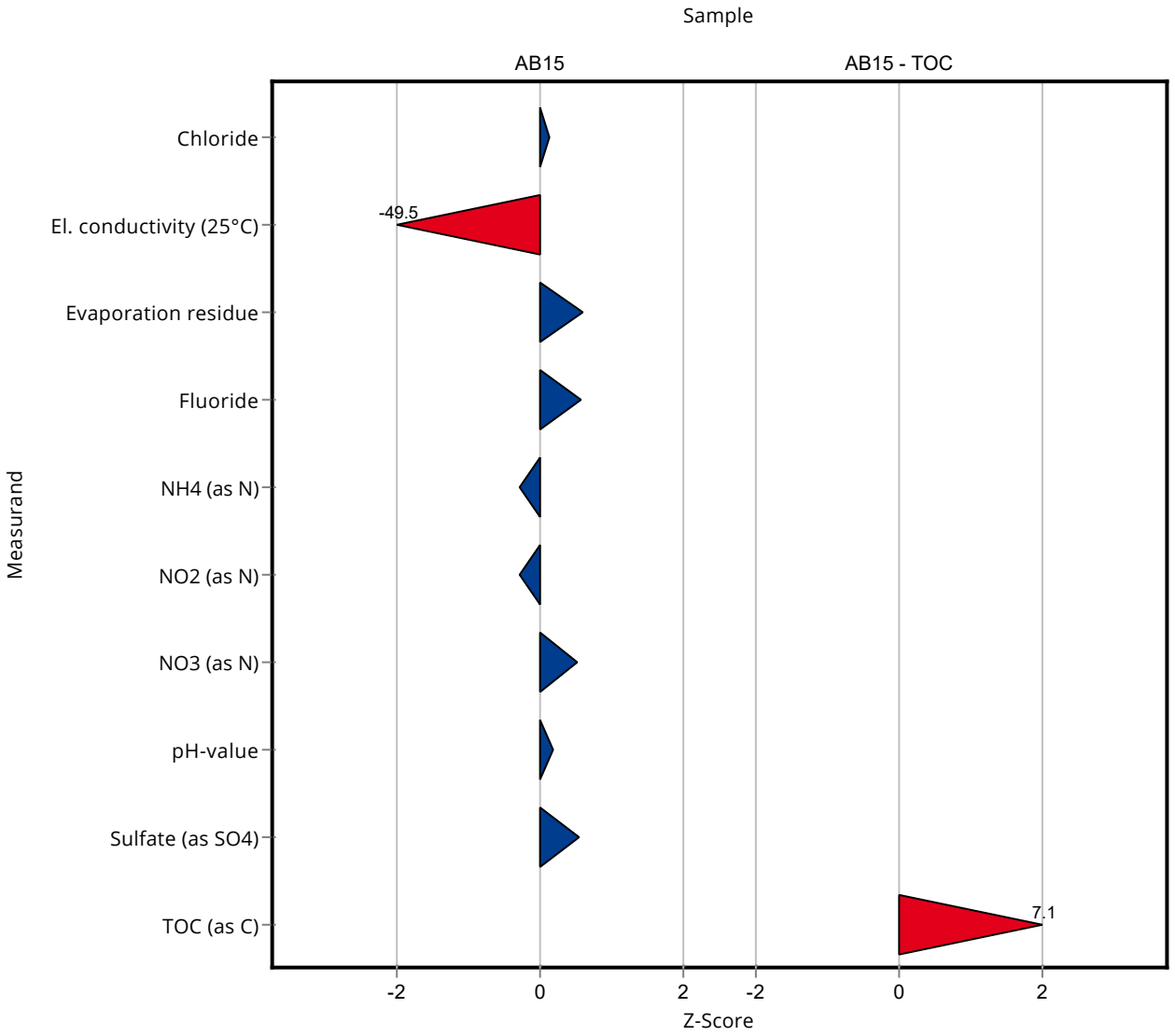
Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1659 ± 20	82.4	101	0.13
El. conductivity (25°C)	mS/m	753 ± 5.26	7.51 ± 0.01	15.1	0.998	-49.50
Evaporation residue	mg/l	5190 ± 212	5493 ± 53	519	106	0.59
Fluoride	mg/l	0.575 ± 0.0938	0.696 ± 0.01	0.213	121	0.57
NH4 (as N)	mg/l	29.9 ± 1.24	29.05 ± 0.5	2.99	97.1	-0.29
NO2 (as N)	mg/l	1.11 ± 0.0302	1.08 ± 0.05	0.0942	97.5	-0.29
NO3 (as N)	mg/l	27.4 ± 0.587	28.25 ± 0.5	1.65	103	0.51
pH-value		11.7 ± 0.0602	11.75 ± 0.25	0.234	100	0.18
PO4 (as P)	mg/l	- ± -	0.182 ± 0.032	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	460 ± 10	22.4	103	0.54

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	28.24 ± 0.5	1.34	151	7.11

Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0025



Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0025

Sample: AB15

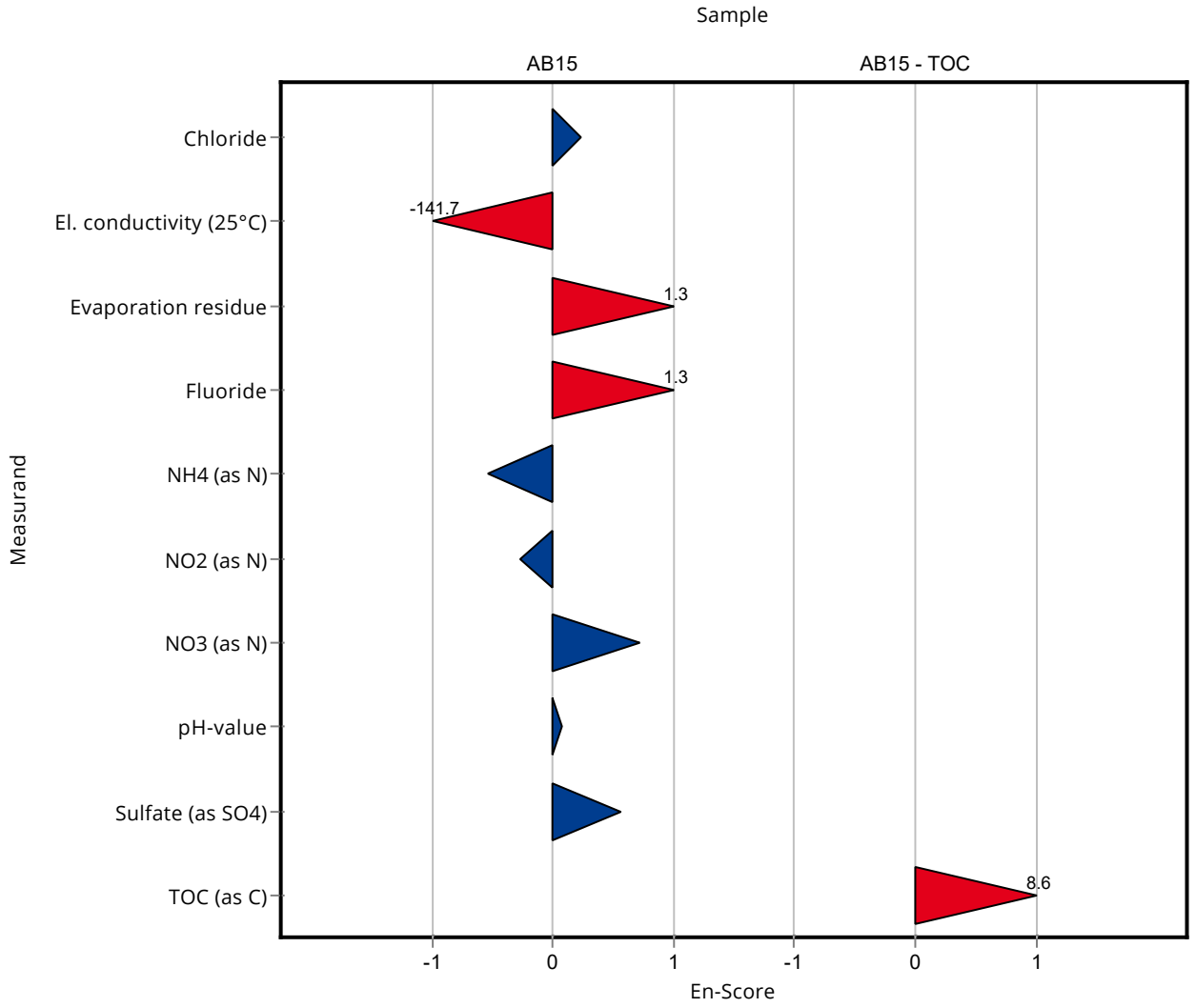
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650 ± 23.6	1659 ± 20	82.4	101	0.23
El. conductivity (25°C)	mS/m	753 ± 5.26	7.51 ± 0.01	15.1	0.998	-141.67
Evaporation residue	mg/l	5190 ± 212	5493 ± 53	519	106	1.29
Fluoride	mg/l	0.575 ± 0.0938	0.696 ± 0.01	0.213	121	1.27
NH4 (as N)	mg/l	29.9 ± 1.24	29.05 ± 0.5	2.99	97.1	-0.54
NO2 (as N)	mg/l	1.11 ± 0.0302	1.08 ± 0.05	0.0942	97.5	-0.27
NO3 (as N)	mg/l	27.4 ± 0.587	28.25 ± 0.5	1.65	103	0.72
pH-value		11.7 ± 0.0602	11.75 ± 0.25	0.234	100	0.08
PO4 (as P)	mg/l	- ± -	0.182 ± 0.032	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	460 ± 10	22.4	103	0.57

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7 ± 0.489	28.24 ± 0.5	1.34	151	8.59

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0025



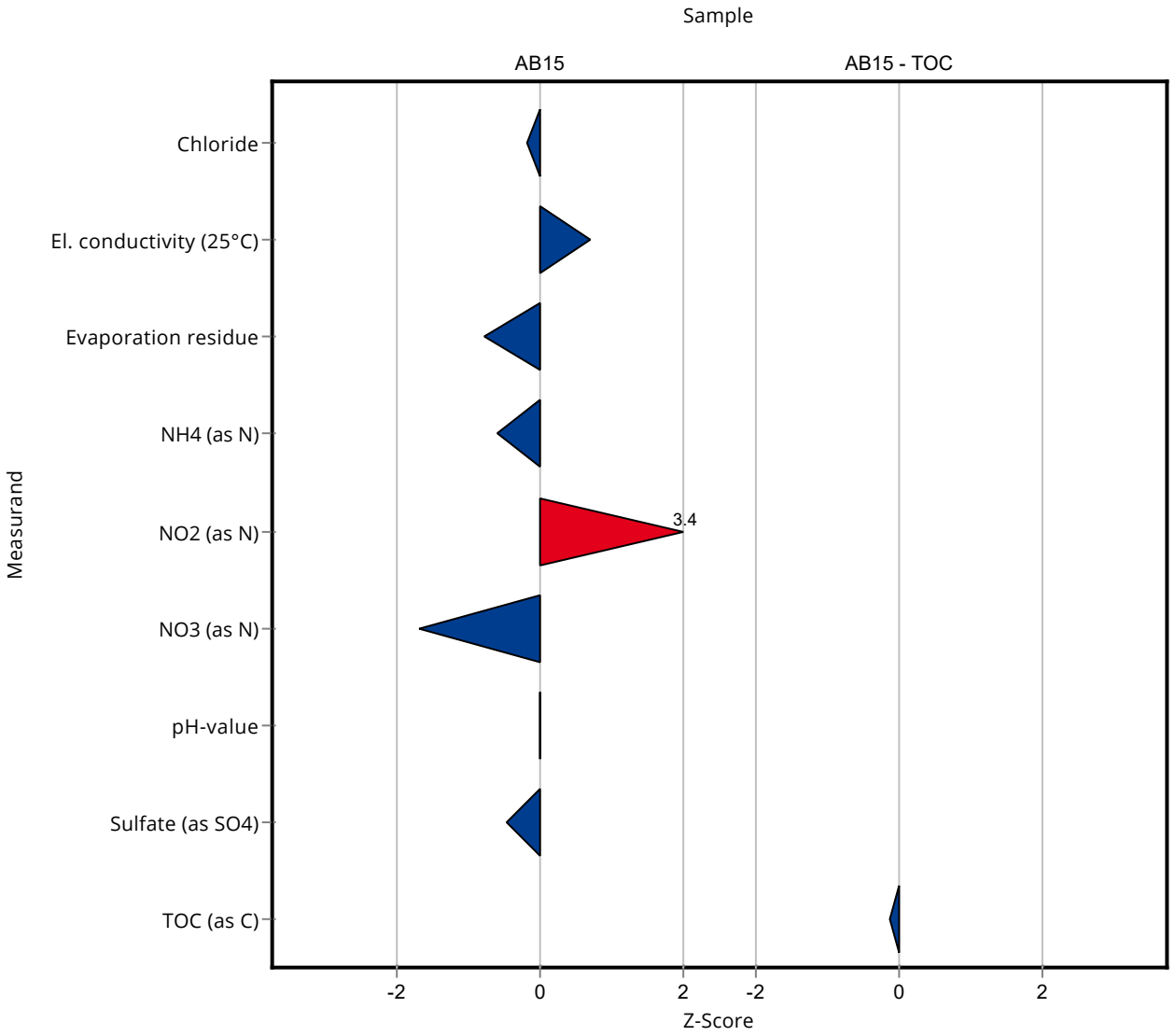
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0026

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1633.302 ± 326.6604	82.4	99.1	-0.18
El. conductivity (25°C)	mS/m	753 ± 5.26	763 ± 76.3	15.1	101	0.70
Evaporation residue	mg/l	5190 ± 212	4773.5 ± 954.7	519	92	-0.80
Fluoride	mg/l	0.575 ± 0.0938	<2.5 (LOQ) ± -	0.213	-	-
NH4 (as N)	mg/l	29.9 ± 1.24	28.096 ± 5.6192	2.99	93.9	-0.61
NO2 (as N)	mg/l	1.11 ± 0.0302	1.432 ± 0.2864	0.0942	129	3.44
NO3 (as N)	mg/l	27.4 ± 0.587	24.615 ± 4.923	1.65	89.8	-1.70
pH-value		11.7 ± 0.0602	11.708 ± 1.1708	0.234	100	0.00
PO4 (as P)	mg/l	- ± -	6.245 ± 1.249	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	437.003 ± 87.4006	22.4	97.6	-0.49

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	18.5 ± 3.7	1.34	99.1	-0.13


Sample
AB15
AB15 - TOC
Chloride
El. conductivity (25°C)
Evaporation residue
NH4 (as N)
NO2 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
Measurand
3.4
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0026

Sample: AB15

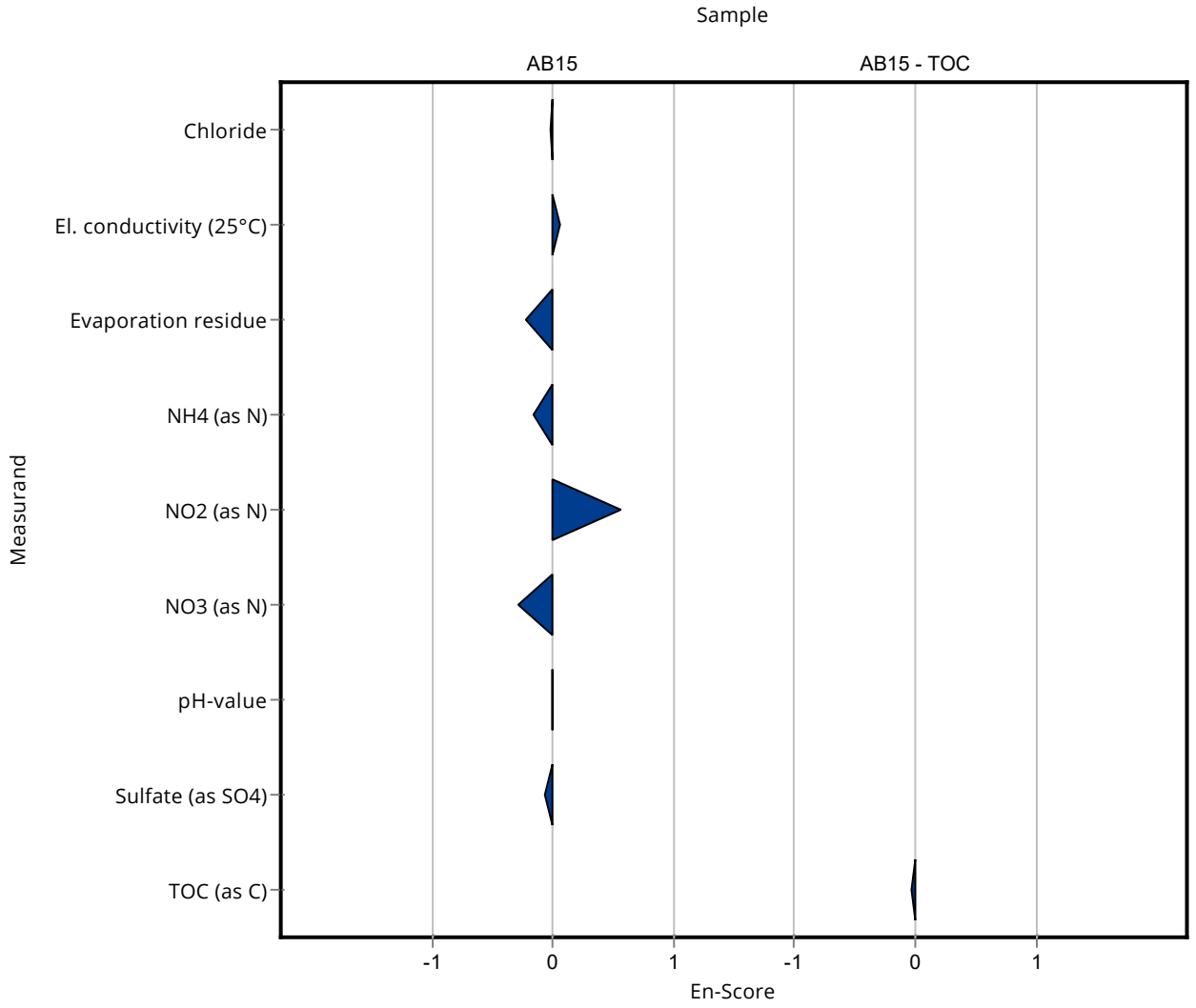
Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	±	23.6	1633.302	±	326.6604	82.4	99.1	-0.02
El. conductivity (25°C)	mS/m	753	±	5.26	763	±	76.3	15.1	101	0.07
Evaporation residue	mg/l	5190	±	212	4773.5	±	954.7	519	92	-0.22
Fluoride	mg/l	0.575	±	0.0938	<2.5 (LOQ)	±	-	0.213	-	-
NH4 (as N)	mg/l	29.9	±	1.24	28.096	±	5.6192	2.99	93.9	-0.16
NO2 (as N)	mg/l	1.11	±	0.0302	1.432	±	0.2864	0.0942	129	0.57
NO3 (as N)	mg/l	27.4	±	0.587	24.615	±	4.923	1.65	89.8	-0.28
pH-value		11.7	±	0.0602	11.708	±	1.1708	0.234	100	0.00
PO4 (as P)	mg/l	-	±	-	6.245	±	1.249	-	-	-
Sulfate (as SO4)	mg/l	448	±	7.35	437.003	±	87.4006	22.4	97.6	-0.06

Sample: AB15TOC

Parameter	Unit	Assigned value	±	U (k=2)	Result	±	U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	±	0.489	18.5	±	3.7	1.34	99.1	-0.02

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0026



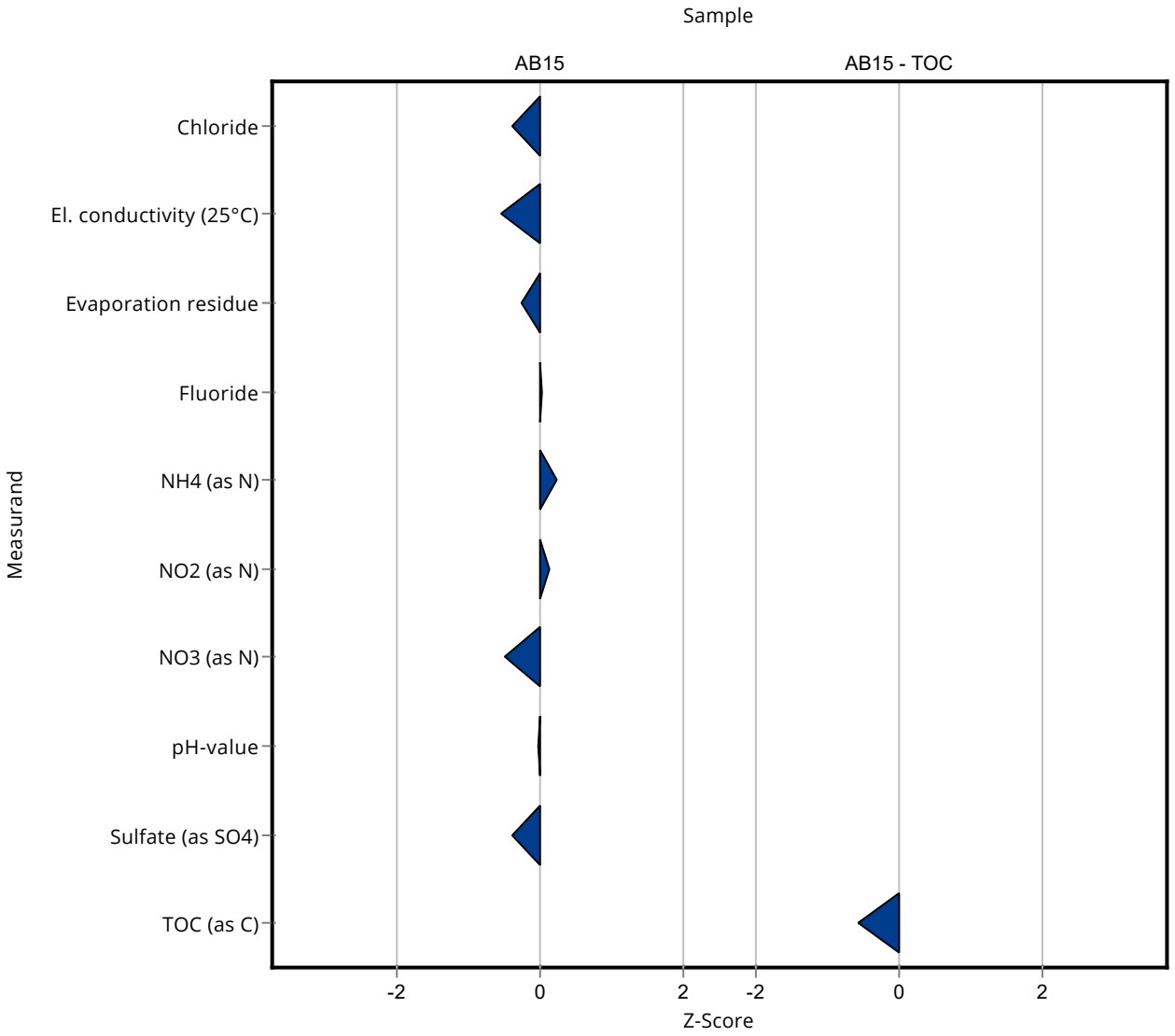
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0027

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1616 ± 145	82.4	98	-0.39
El. conductivity (25°C)	mS/m	753 ± 5.26	744 ± 29.8	15.1	98.9	-0.56
Evaporation residue	mg/l	5190 ± 212	5052 ± 202	519	97.4	-0.26
Fluoride	mg/l	0.575 ± 0.0938	0.578 ± 0.052	0.213	101	0.02
NH4 (as N)	mg/l	29.9 ± 1.24	30.6 ± 5.51	2.99	102	0.23
NO2 (as N)	mg/l	1.11 ± 0.0302	1.12 ± 0.202	0.0942	101	0.13
NO3 (as N)	mg/l	27.4 ± 0.587	26.6 ± 2.39	1.65	97	-0.50
pH-value		11.7 ± 0.0602	11.7 ± 0.468	0.234	99.9	-0.03
PO4 (as P)	mg/l	- ± -	<0.02 (LOQ) ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	439 ± 39.5	22.4	98	-0.40

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	17.9 ± 1.61	1.34	95.9	-0.58


Sample
AB15
AB15 - TOC
Chloride
El. conductivity (25°C)
Evaporation residue
Fluoride
NH4 (as N)
NO2 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
Measurand
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0027

Sample: AB15

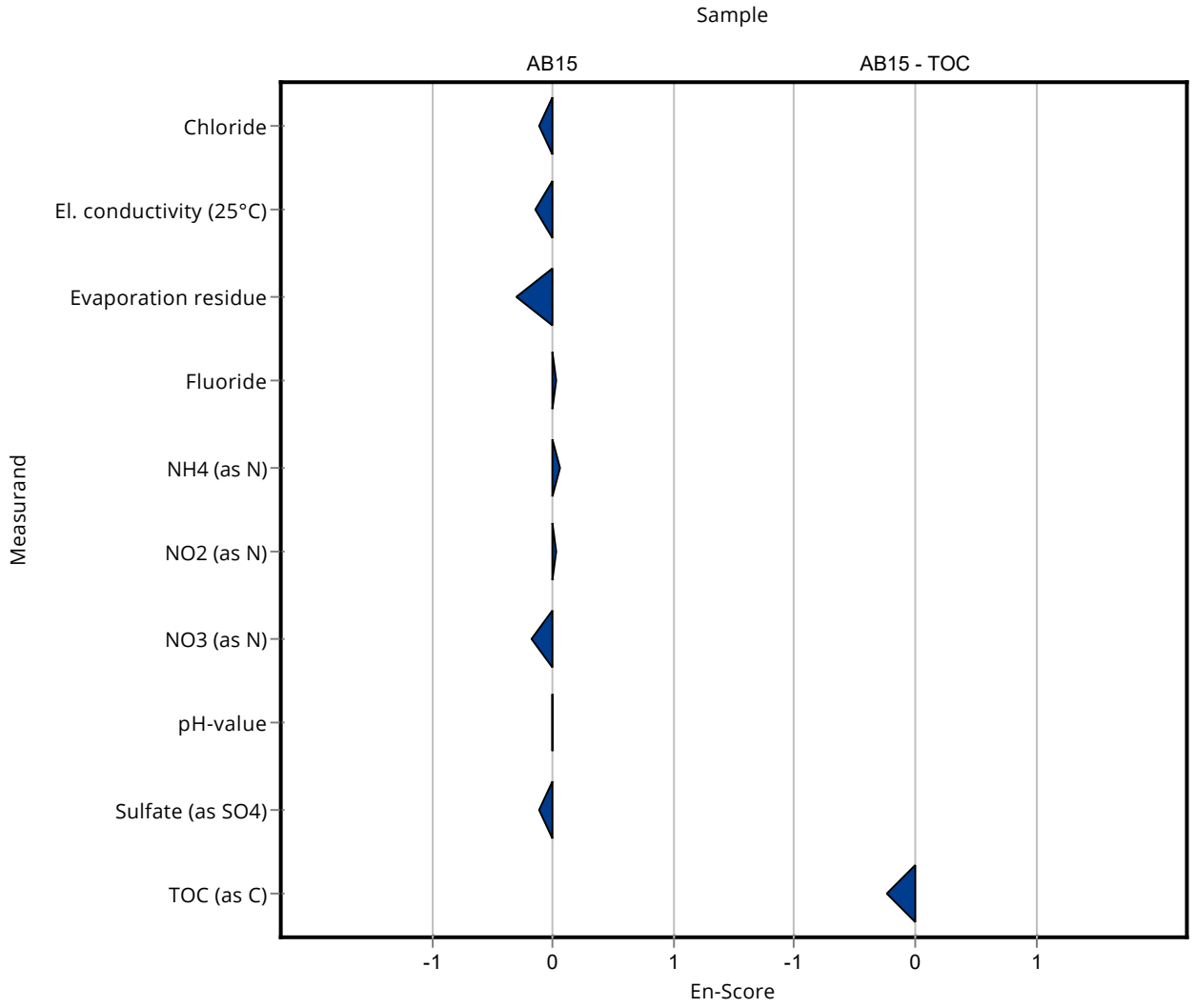
Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	± 23.6	1616	± 145	82.4	98	-0.11
El. conductivity (25°C)	mS/m	753	± 5.26	744	± 29.8	15.1	98.9	-0.14
Evaporation residue	mg/l	5190	± 212	5052	± 202	519	97.4	-0.30
Fluoride	mg/l	0.575	± 0.0938	0.578	± 0.052	0.213	101	0.02
NH4 (as N)	mg/l	29.9	± 1.24	30.6	± 5.51	2.99	102	0.06
NO2 (as N)	mg/l	1.11	± 0.0302	1.12	± 0.202	0.0942	101	0.03
NO3 (as N)	mg/l	27.4	± 0.587	26.6	± 2.39	1.65	97	-0.17
pH-value		11.7	± 0.0602	11.7	± 0.468	0.234	99.9	-0.01
PO4 (as P)	mg/l	-	± -	<0.02 (LOQ)	± -	-	-	-
Sulfate (as SO4)	mg/l	448	± 7.35	439	± 39.5	22.4	98	-0.11

Sample: AB15TOC

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	± 0.489	17.9	± 1.61	1.34	95.9	-0.24

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0027



Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0028

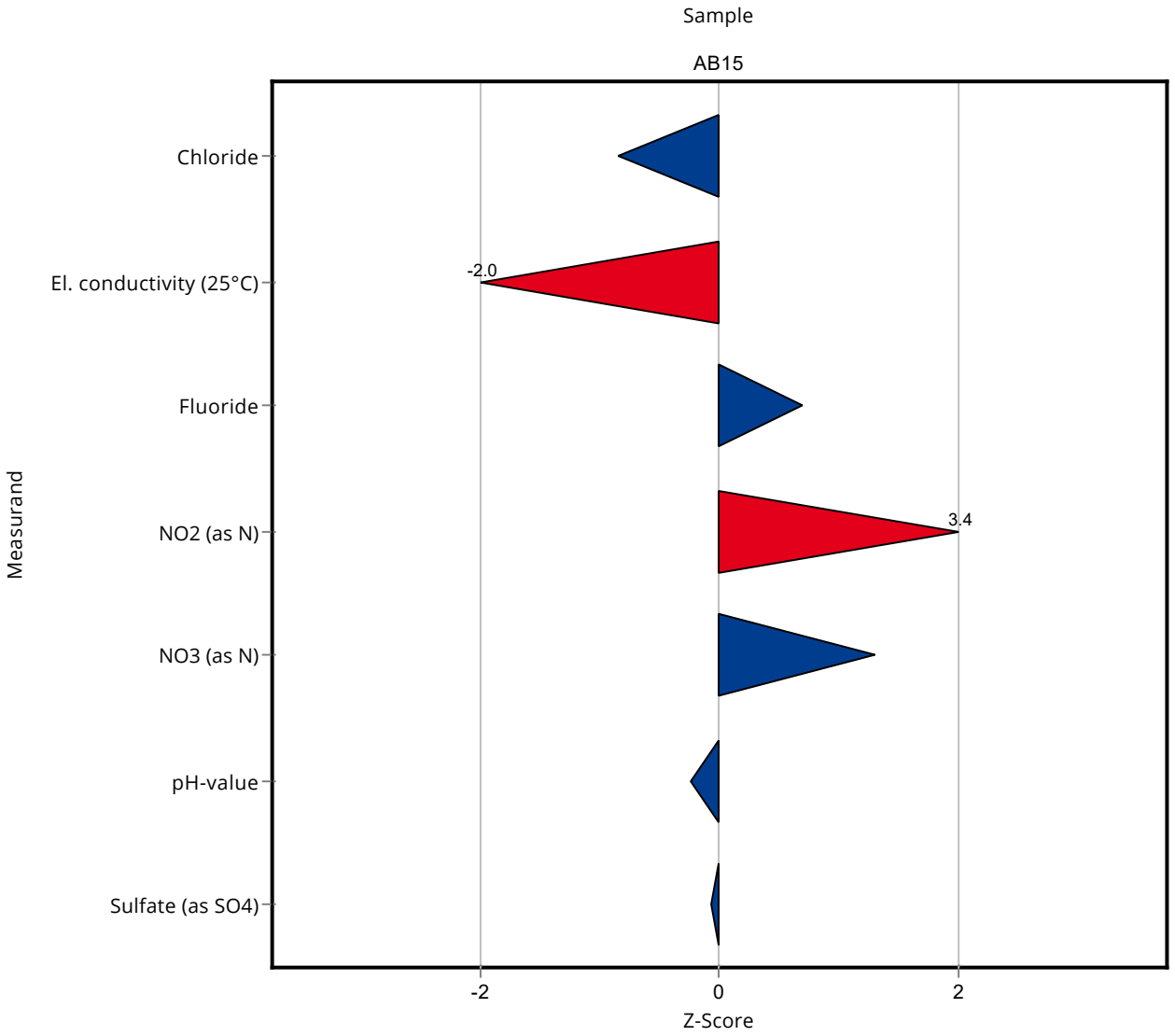
Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1578 ± 79	82.4	95.7	-0.85
El. conductivity (25°C)	mS/m	753 ± 5.26	722 ± 3.5	15.1	95.9	-2.03
Evaporation residue	mg/l	5190 ± 212	- ± -	519	-	-
Fluoride	mg/l	0.575 ± 0.0938	0.721 ± 0.036	0.213	125	0.69
NH4 (as N)	mg/l	29.9 ± 1.24	- ± -	2.99	-	-
NO2 (as N)	mg/l	1.11 ± 0.0302	1.43 ± 0.07	0.0942	129	3.42
NO3 (as N)	mg/l	27.4 ± 0.587	29.57 ± 1.48	1.65	108	1.31
pH-value		11.7 ± 0.0602	11.65 ± 0.07	0.234	99.5	-0.25
PO4 (as P)	mg/l	- ± -	<0.02 (LOQ) ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	446.5 ± 22.3	22.4	99.7	-0.06

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	- ± -	1.34	-	-

Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0028



Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0028

Sample: AB15

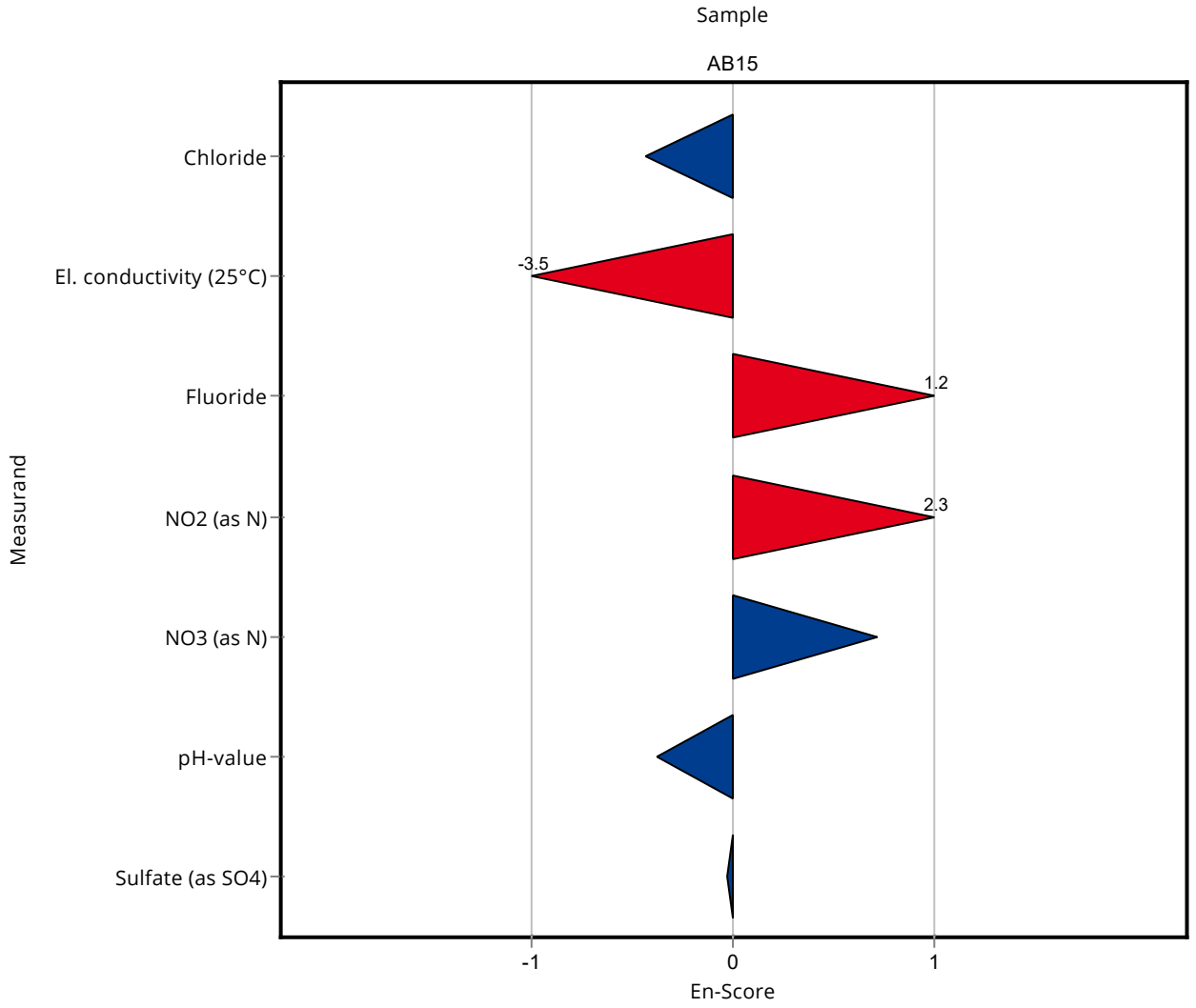
Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650 ± 23.6	1578 ± 79	82.4	95.7	-0.44
El. conductivity (25°C)	mS/m	753 ± 5.26	722 ± 3.5	15.1	95.9	-3.48
Evaporation residue	mg/l	5190 ± 212	- ± -	519	-	-
Fluoride	mg/l	0.575 ± 0.0938	0.721 ± 0.036	0.213	125	1.24
NH4 (as N)	mg/l	29.9 ± 1.24	- ± -	2.99	-	-
NO2 (as N)	mg/l	1.11 ± 0.0302	1.43 ± 0.07	0.0942	129	2.25
NO3 (as N)	mg/l	27.4 ± 0.587	29.57 ± 1.48	1.65	108	0.71
pH-value		11.7 ± 0.0602	11.65 ± 0.07	0.234	99.5	-0.38
PO4 (as P)	mg/l	- ± -	<0.02 (LOQ) ± -	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	446.5 ± 22.3	22.4	99.7	-0.03

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7 ± 0.489	- ± -	1.34	-	-

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0028



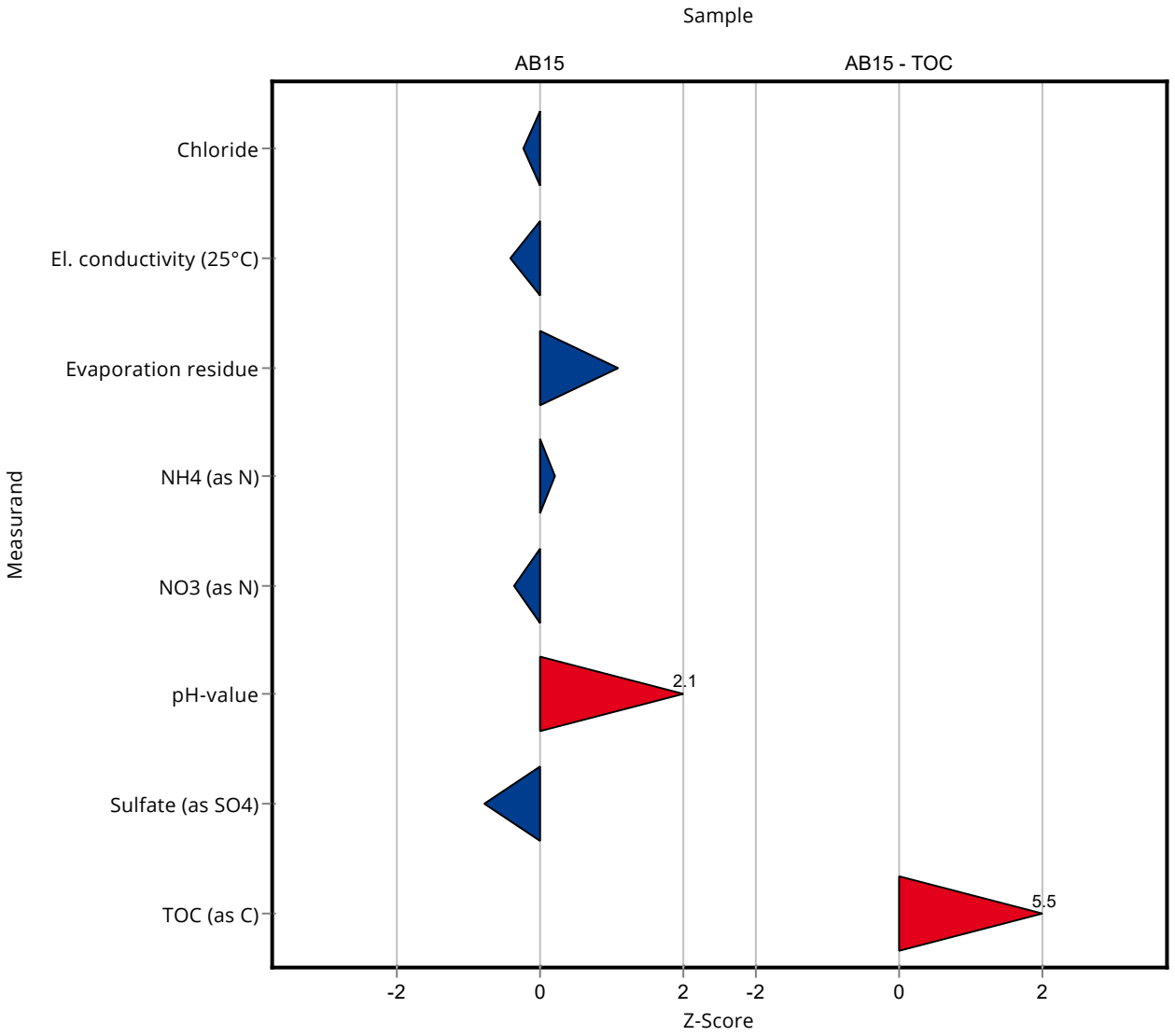
Summary of results Waste acc to landfill directive (eluate ions) - AB15 Labcode: LC0029

Sample: AB15

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Chloride	mg/l	1650 ± 23.6	1628 ± 100	82.4	98.8	-0.24
El. conductivity (25°C)	mS/m	753 ± 5.26	746 ± 20	15.1	99.1	-0.43
Evaporation residue	mg/l	5190 ± 212	5751 ± 500	519	111	1.09
Fluoride	mg/l	0.575 ± 0.0938	<1 (LOQ) ± -	0.213	-	-
NH4 (as N)	mg/l	29.9 ± 1.24	30.5 ± 3	2.99	102	0.20
NO2 (as N)	mg/l	1.11 ± 0.0302	<0.03 (LOQ) ± -	0.0942	-	-
NO3 (as N)	mg/l	27.4 ± 0.587	26.8 ± 2	1.65	97.7	-0.38
pH-value		11.7 ± 0.0602	12.2 ± 1	0.234	104	2.10
PO4 (as P)	mg/l	- ± -	2.76 ± 0.2	-	-	-
Sulfate (as SO4)	mg/l	448 ± 7.35	430 ± 40	22.4	96	-0.80

Sample: AB15TOC

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
TOC (as C)	mg/l	18.7 ± 0.489	26.1 ± 2	1.34	140	5.52


Sample
AB15
AB15 - TOC
Chloride
El. conductivity (25°C)
Evaporation residue
NH4 (as N)
NO3 (as N)
pH-value
Sulfate (as SO4)
TOC (as C)
Measurand
2.1
5.5
-2
0
2
-2
0
2
Z-Score

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0029

Sample: AB15

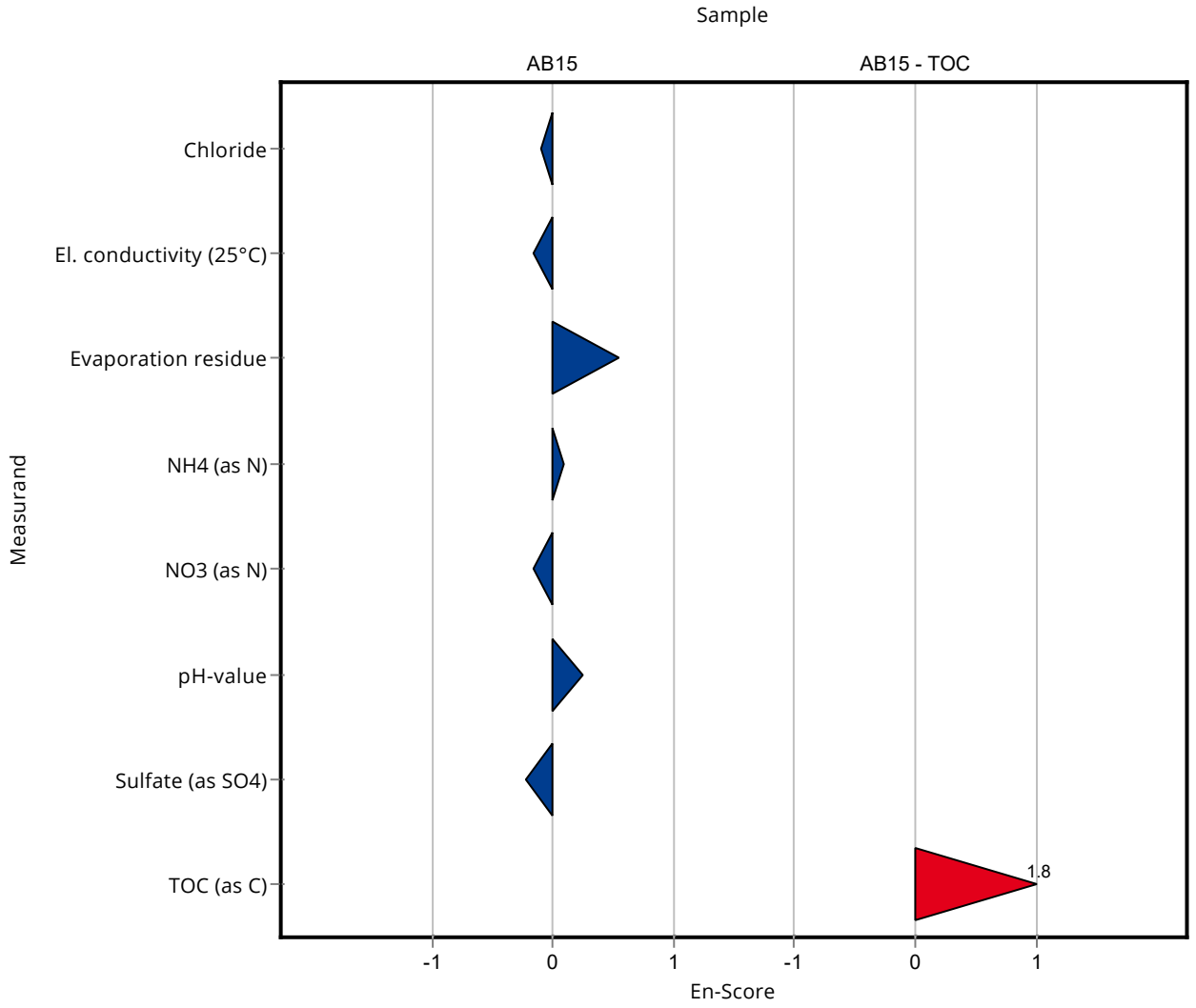
Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	En-Score
Chloride	mg/l	1650	± 23.6	1628	± 100	82.4	98.8	-0.10
El. conductivity (25°C)	mS/m	753	± 5.26	746	± 20	15.1	99.1	-0.16
Evaporation residue	mg/l	5190	± 212	5751	± 500	519	111	0.55
Fluoride	mg/l	0.575	± 0.0938	<1 (LOQ)	± -	0.213	-	-
NH4 (as N)	mg/l	29.9	± 1.24	30.5	± 3	2.99	102	0.10
NO2 (as N)	mg/l	1.11	± 0.0302	<0.03 (LOQ)	± -	0.0942	-	-
NO3 (as N)	mg/l	27.4	± 0.587	26.8	± 2	1.65	97.7	-0.15
pH-value		11.7	± 0.0602	12.2	± 1	0.234	104	0.25
PO4 (as P)	mg/l	-	± -	2.76	± 0.2	-	-	-
Sulfate (as SO4)	mg/l	448	± 7.35	430	± 40	22.4	96	-0.22

Sample: AB15TOC

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	En-Score
TOC (as C)	mg/l	18.7	± 0.489	26.1	± 2	1.34	140	1.84

Summary of results Waste acc to landfill directive (eluate ions) - AB15 - En-Score

Labcode: LC0029



E9. Methodenübersicht / Overview of methods

LabCode	Sample	Chloride	Electric conductivity (25°C)	Evaporation Residue	Fluoride
LC0001	**AB15**	EN ISO 10304-1; D20	EN 27888; C8	EN 15216;	EN ISO 10304-1; D20
LC0002	**AB15**	EN ISO 10304-1; IC	EN 27888;		EN ISO 10304-1; IC
LC0003	**AB15**	EN ISO 10304-1;	EN 27888;	gravimetric;	
LC0004	**AB15**	EN ISO 10304-1;	EN 27888;	DIN 38409-1;	EN ISO 10304-1;
LC0005	**AB15**	EN ISO 10304-1; D20	EN 27888; C8	DIN 38409-1; H1-1	EN ISO 10304-1; D20
LC0006	**AB15**	EN ISO 10304-1;	EN 27888; C8	EN 15216;	EN ISO 10304-1;
LC0007	**AB15**	EN ISO 10304-1;	EN 27888;	EN 15216;	EN ISO 10304-1;
LC0008	**AB15**	ISO 10304-4;	EN 27888;	EN 14346;	DIN 38405-4;
LC0009	**AB15**	EN ISO 10304-1; D20	EN ISO 10523; C5	DIN 38409-1; H1	DIN 38405-4; D4-1
LC0010	**AB15**	EN ISO 10304-1;	EN 27888;	DIN 38409-1;	EN ISO 10304-1;
LC0011	**AB15**	EN ISO 10304-1;	EN 27888;	DIN 38409-1;	EN ISO 10304-1;
LC0012	**AB15**	EN ISO 10304-1; IC	EN 27888;	EN 15216;	EN ISO 10304-1; IC
LC0013	**AB15**	EN ISO 10304-1;	EN 27888;	EN 15216;	EN ISO 10304-1;
LC0014	**AB15**	EN ISO 10304-1;	EN 27888;	DIN 38409-1;	EN ISO 10304-1;
LC0015	**AB15**	EN ISO 10304-1;	EN 27888;	EN 15216;	EN ISO 10304-1;
LC0016	**AB15**	EN ISO 10304-1;	EN 27888; C8	EN 15216;	EN ISO 10304-1;
LC0017	**AB15**	EN ISO 10304-1;	EN 27888; C8	EN 15216;	EN ISO 10304-1;
LC0018	**AB15**	EN ISO 10304-1;	EN 27888;	DIN 38409-1;	EN ISO 10304-1;
LC0019	**AB15**	EN ISO 10304-1;	EN 27888;	EN 15216;	EN ISO 10304-1;
LC0020	**AB15**	EN ISO 10304-1; D20	EN 27888; C8	DIN 38409-1; H1	EN ISO 10304-1; D20
LC0021	**AB15**	EN ISO 10304-1;	EN 27888;	EN 15216;	EN ISO 10304-1;
LC0022	**AB15**		EN 27888; C8	EN 15216;	
LC0023	**AB15**	EN ISO 10304-1;	EN 27888;	DIN 38409-1;	EN ISO 10304-1;
LC0024	**AB15**	EN ISO 10304-1;	EN 27888;	DIN 38409-1;	EN ISO 10304-1;
LC0025	**AB15**	EN ISO 10304-1; D20	EN 27888; C8	DIN 38409-9; H9	EN ISO 10304-1; D20
LC0026	**AB15**	EN ISO 10304-1;	EN 27888;	DIN 38409-1;	EN ISO 10304-1;
LC0027	**AB15**	EN ISO 10304-1;	EN 27888;	DIN 38409-1;	EN ISO 10304-1;
LC0028	**AB15**	EN ISO 10304-1;	EN 13038;		EN ISO 10304-1;
LC0029	**AB15**	EN ISO 10304-1;	EN 27888;	EN 15216;	EN ISO 10304-1;

LabCode	Sample	NH4 (as N)	NO2 (as N)	NO3 (as N)
LC0001	**AB15**	DIN 38406-5; E5-1	EN 26777; D10	EN ISO 10304-1; D20
LC0002	**AB15**			
LC0003	**AB15**	DIN 38406-5;	EN 26777;	EN ISO 10304-1;
LC0004	**AB15**	DIN 38406-5;	EN 26777;	EN ISO 10304-1;
LC0005	**AB15**	EN ISO 11732; E23	EN ISO 13395; D28	EN ISO 10304-1; D20
LC0006	**AB15**	EN ISO 11732; E23	EN 26777; D10	EN ISO 10304-1;
LC0007	**AB15**	ISO 15923-1;	ISO 15923-1;	EN ISO 10304-1;
LC0008	**AB15**	DIN 38406-5; E5	EN ISO 10304-1; D20	EN ISO 10304-1; D20
LC0009	**AB15**	DIN 38406-5; E5-1	EN ISO 10304-1; D20	EN ISO 10304-1; D20
LC0010	**AB15**	EN ISO 11732;	EN ISO 13395;	EN ISO 10304-1;
LC0011	**AB15**	DIN 38406-5; ISO 7150-1	EN 26777;	EN ISO 10304-1;
LC0012	**AB15**	EN ISO 11732; CFA	EN ISO 13395; CFA	EN ISO 10304-1; IC
LC0013	**AB15**	EN ISO 11732;	EN ISO 10304-1;	EN ISO 10304-1;
LC0014	**AB15**	DIN 38406-5;	EN 26777;	EN ISO 10304-1;
LC0015	**AB15**	DIN 38406-5;	EN 26777;	EN ISO 10304-1;
LC0016	**AB15**	EN ISO 14911; E34	EN 26777; D10	EN ISO 10304-1;
LC0017	**AB15**			
LC0018	**AB15**	EN ISO 11732; CFA	EN ISO 13395; CFA	EN ISO 10304-1;
LC0019	**AB15**	DIN 38406-5; E5	EN 26777;	EN ISO 10304-1;
LC0020	**AB15**	DIN 38406-5; E5	EN ISO 10304-1; D20	EN ISO 10304-1; D20
LC0021	**AB15**	ISO 15923-1;	ISO 15923-1;	EN ISO 10304-1;
LC0022	**AB15**			
LC0023	**AB15**	DIN 38406-5;	EN 26777;	EN ISO 10304-1;
LC0024	**AB15**	DIN 38406-5; part 5-1	EN 26777;	EN ISO 10304-1;
LC0025	**AB15**	DIN 38406-5; E5	EN 26777; D10	DIN 38405-4; D4
LC0026	**AB15**	EN ISO 10304-1;	EN ISO 10304-1;	EN ISO 10304-1;
LC0027	**AB15**	ISO 15923-1;	ISO 15923-1;	EN ISO 10304-1;
LC0028	**AB15**		EN ISO 10304-1;	EN ISO 10304-1;
LC0029	**AB15**	ISO 7150-1;	EN ISO 10304-1;	EN ISO 10304-1;

LabCode	Sample	pH-Value	PO4 (as P)	Sulfate (as SO4)
LC0001	**AB15**	EN ISO 10523; C5	EN ISO 6878; D11	EN ISO 10304-1; D20
LC0002	**AB15**	EN ISO 10523;		EN ISO 10304-1; IC
LC0003	**AB15**	EN ISO 10523;	EN ISO 6878;	EN ISO 10304-1;
LC0004	**AB15**	EN ISO 10523;	EN ISO 6878;	EN ISO 10304-1;
LC0005	**AB15**	EN ISO 10523; C5	EN ISO 11885; E22	EN ISO 10304-1; D20
LC0006	**AB15**	EN ISO 10523; C5	EN ISO 6878; D11	EN ISO 10304-1;
LC0007	**AB15**	EN ISO 10523;	ISO 15923-1;	EN ISO 10304-1;
LC0008	**AB15**	EN ISO 10523; C5	EN ISO 6878;	EN ISO 10304-1; D20
LC0009	**AB15**	EN ISO 10523; C5	EN ISO 10304-1; D20	EN ISO 10304-1; D20
LC0010	**AB15**	EN ISO 10523;	EN ISO 15681-2;	EN ISO 10304-1;
LC0011	**AB15**	EN ISO 10523; DIN 19268	EN ISO 6878;	EN ISO 10304-1;
LC0012	**AB15**	EN ISO 10523;	EN ISO 15681-2; CFA	EN ISO 10304-1; IC
LC0013	**AB15**	EN ISO 10523;	EN ISO 10304-1;	EN ISO 10304-1;
LC0014	**AB15**	EN ISO 10523;	EN ISO 10304-1;	EN ISO 10304-1;
LC0015	**AB15**	EN ISO 10523;	EN ISO 6878;	EN ISO 10304-1;
LC0016	**AB15**	EN ISO 10523; C5	EN ISO 10304-1;	EN ISO 10304-1;
LC0017	**AB15**	EN ISO 10523; C5		EN ISO 10304-1;
LC0018	**AB15**	EN ISO 10523;	EN ISO 15681-2;	EN ISO 10304-1;
LC0019	**AB15**	EN ISO 10523;	EN ISO 6878;	EN ISO 10304-1;
LC0020	**AB15**	EN ISO 10523; C5	EN ISO 10304-1; D20	EN ISO 10304-1; D20
LC0021	**AB15**	EN ISO 10523;	ISO 15923-1;	EN ISO 10304-1;
LC0022	**AB15**	EN ISO 10523; C5		
LC0023	**AB15**	EN ISO 10523;	EN ISO 17294-2;	EN ISO 10304-1;
LC0024	**AB15**	EN ISO 10523;	EN ISO 6878; Chapter 4	EN ISO 10304-1;
LC0025	**AB15**	EN ISO 10523; C5	EN ISO 6878; D11	EN ISO 10304-1; D20
LC0026	**AB15**	EN ISO 10523;	EN ISO 10304-1;	EN ISO 10304-1;
LC0027	**AB15**	EN ISO 10523;	ISO 15923-1;	EN ISO 10304-1;
LC0028	**AB15**	EN ISO 10523;	EN ISO 10304-1;	EN ISO 10304-1;
LC0029	**AB15**	EN ISO 10523;	EN ISO 10304-1;	EN ISO 10304-1;

LabCode	Sample	TOC (as C)
LC0001	**AB15TOC**	EN 1484; H3
LC0002	**AB15TOC**	EN 1484;
LC0003	**AB15TOC**	EN 1484;
LC0004	**AB15TOC**	EN 1484;
LC0005	**AB15TOC**	EN 1484; H3
LC0006	**AB15TOC**	EN 1484; H3
LC0007	**AB15TOC**	EN 1484;
LC0008	**AB15TOC**	EN 1484;
LC0009	**AB15TOC**	EN 1484; H3
LC0010	**AB15TOC**	EN 1484;
LC0011	**AB15TOC**	
LC0012	**AB15TOC**	EN 1484;
LC0013	**AB15TOC**	EN 1484;
LC0014	**AB15TOC**	EN 1484;
LC0015	**AB15TOC**	EN 1484;
LC0016	**AB15TOC**	EN 1484; H3
LC0017	**AB15TOC**	
LC0018	**AB15TOC**	EN 1484;
LC0019	**AB15TOC**	EN 1484;
LC0020	**AB15TOC**	EN ISO 20236; H62
LC0021	**AB15TOC**	EN 1484;
LC0022	**AB15TOC**	EN 1484; H3
LC0023	**AB15TOC**	EN 1484;
LC0024	**AB15TOC**	EN 1484;
LC0025	**AB15TOC**	EN 1484; H3
LC0026	**AB15TOC**	EN 1484;
LC0027	**AB15TOC**	EN 1484;
LC0028	**AB15TOC**	
LC0029	**AB15TOC**	EN 1484;