Proficiency Testing Scheme für die Wasseranalytik - Realproben

P27 Polyzyklische Aromatische Kohlenwasserstoffe (PAK)

Proficiency Testing Scheme for Water Analysis - natural water samples

P27 Polycyclic aromatic hydrocarbons (PAH)

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D1. Beschreibung des Ringversuchs

D1.1. Ausgestaltung und Durchführung

- Anzahl der Anmeldungen: 13
- Anzahl der übermittelten Datensätze: 13
- Probenversand: 17.02.2026
- Einsendeschluss der Daten: 17.03.2026

Die Ergebnisabgabe erfolgte auf elektronischem Weg mittels passwortgeschützter Online-Dateneingabe.
Beim Abschluss der Dateneingabe bestätigten die Teilnehmenden die vollständige und korrekte Eingabe aller Daten und die Freigabe der Ergebnisse zur Auswertung.
Zur Anonymisierung der Ergebnisse wurde jedem Labor willkürlich ein Laborcode zugeteilt.

D1.2. Beschreibung der Prüfgegenstände

Die Probenahme von Trinkwasser und Grundwasser erfolgte am 11.02.2026.

Das Probenmaterial umfasste:

- 1 Probe Trinkwasser (P27 A)
- 1 Probe Grundwasser (P27 B)

Alle Proben wurden bis zur weiteren Verarbeitung gekühlt gelagert (4 +/- 3°C).

Das Abfüllen der Proben erfolgte nach Filtration (40 µm) unter ständigem Rühren (Rührkessel). Anschließend wurden die Proben in den Flaschen mit einzelnen Substanzen dotiert und durch Schütteln homogenisiert. Die Stabilisierung erfolgte durch Kühlung.

Die homogenen Prüfgegenstände wurden am 17.02.2026 verschickt.

Jedes teilnehmende Labor erhielt:

- 2 Proben zu je ca. 2000 ml, abgefüllt in je 2 x 1000 ml Braunglasflaschen.

D1.3. Anweisungen für die Teilnehmenden

Aus Stabilitätsgründen wurde empfohlen bis spätestens 19.02.2026 mit den Analysen zu beginnen.

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

D1.4. Kontrollanalytik zur Bewertung der Homogenität

Im Zuge der Abfüllung wurden zu willkürlichen Zeitpunkten mehrere Aliquote pro Probe zur Kontrollanalytik entnommen.
Es wurden für die A- bzw. B-Probe jeweils n=5 Kontrollproben sowie n=1 undotierte Realprobe dem Labor zur Analyse übergeben.

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

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

Die Ergebnisse der Kontrollanalytik sind in der 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

Die Bewertung der Stabilität der Prüfgegenstände (Realproben) erfolgte auf Basis der Datenstatistik aus den vergangenen Runden für Realproben im Zeitraum 2013 bis 2025.

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 17.03.2026 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 Stunden 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 gleicher 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 Expert:innenbefund). 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 n=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. Die Prüfung auf Rückführbarkeit des zugewiesenen Wertes erfolgt durch Vergleich mit dem Mittelwert des Kontrolllabores.

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:

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

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 für reale Wasserproben der vorangegangenen Runden im Zeitraum 2013 bis 2025 (RSDpooled) 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 realen Wasserproben erfolgen 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:

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

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:

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

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

D3. Darstellung und Interpretation der Messergebnisse

In der parameterorientierten Auswertung ist eine tabellarische Übersicht mit den Messergebnissen inklusive der Unsicherheit (± 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 (vgl. Benzo[a]pyren (P27 A, P27 B), Dibenzo[a,h]anthracen (P27 A, P27 B), Indeno[1,2,3-c,d]pyren (P27 B) und Naphthalin (P27 B)).

Umgekehrt führt eine sehr geringe Streuung der Ergebnisse der Teilnehmenden dazu, dass z-Score - 2 bis z-Score + 2 einen ungewöhnlich kleinen Wiederfindungsbereich abdeckt.

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

Als Ergebnis einer Langzeitauswertung von Eignungsprüfungen (Realproben) von 2013 bis 2025 wurden Kriterien (RSDpool) zur Ergebnisbewertung berechnet. Diese wurden im Zuge der Auswertung den relativen Vergleichsstandardabweichungen (vR) des aktuellen Ringversuchs gegenübergestellt.

Probe P27 A
Bei Acenaphthen, Acenaphthylen, Anthracen, Benzo[a]anthracen, Benzo[b]fluoranthen, Benzo[g,h,i]perylen, Benzo[k]fluoranthen, Chrysen, Dibenzo[a,h]anthracen, Fluoranthen, Phenanthren und Pyren erfolgte die Berechnung der Scores nach D2.

Für die nachfolgenden Parameter der Probe P27 A wurden nach Prüfung und statistischen Ausreißertests Messergebnisse der Labore als Hampelausreißer eliminiert: Fluoren (LC0011 H95, LC0006 H99), Indeno[1,2,3-c,d]pyren (LC0007 H95, LC0011 H95) und Naphthalin (LC0011 H68). Als Bewertungskriterium wurde RSDpool herangezogen.

Bei Benzo[a]pyren wurde die Vergleichsstandardabweichung aus der aktuellen Runde zur Bewertung herangezogen (vR 45 %; kein H95, kein H99).

Probe P27 B
Bei den Parametern Acenaphthylen, Anthracen, Benzo[a]anthracen, Benzo[b]fluoranthen, Chrysen, Phenanthren und Pyren erfolgte die Berechnung der Scores nach D2.

Zur Bewertung für Benzo[a]pyren (vR 35 %), Fluoranthen (vR 21 %), Fluoren (vR 15 %), Indeno[1,2,3-c,d]pyren (vR 43 %) und Naphthalin (vR 30 %) wurden die jeweiligen Vergleichsstandardabweichungen (vR) aus der aktuellen Runde als Kriterium herangezogen.

Im Zuge der statistischen Bewertung der nachfolgenden Parameter für Probe P27 B wurden nach Prüfung Laborergebnisse als Hampelausreißer eliminiert: Acenaphthen (LC0011 H95, LC0014 H99), Benzo[g,h,i]perylen (LC0001, LC0002, LC0005 – H95, LC0007 H99) sowie Fluoren (LC0011 H95, LC0014 H99). Als Bewertungskriterium wurde jeweils RSDpool für Acenaphthen und Benzo[g,h,i]perylen sowie die ermittelte Vergleichsstandardabweichung (vR) für Fluoren herangezogen.

Parameter Benzo[k]fluoranthen und Dibenzo[a,h]anthracen bei Probe P27 B:
Die auf Basis der Ergebnisse der Teilnehmenden berechneten Sollwerte lagen außerhalb der Messunsicherheit des Kontrollwertes und es war über das Kontrolllabor keine Rückführbarkeit möglich. Bei Benzo[k]fluoranthen wurden die Messergebnisse von LC0001 und LC0007 als Ausreißer (H95) eliminiert. Bei Dibenzo[a,h]anthracen wurden keine Hampelausreißer (H95, H99) identifiziert. Der zugewiesene Wert wurde jeweils über die (ausreißerbereinigten) Mittelwerte aus der Gruppe der akkreditierten Teilnehmenden berechnet. Für die Bewertung wurde jeweils RSDpool als Kriterium gewählt.

D5. Erläuterung zu Tabellen und Grafiken

D5.1. Angaben und Abkürzungen in Tabellen

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

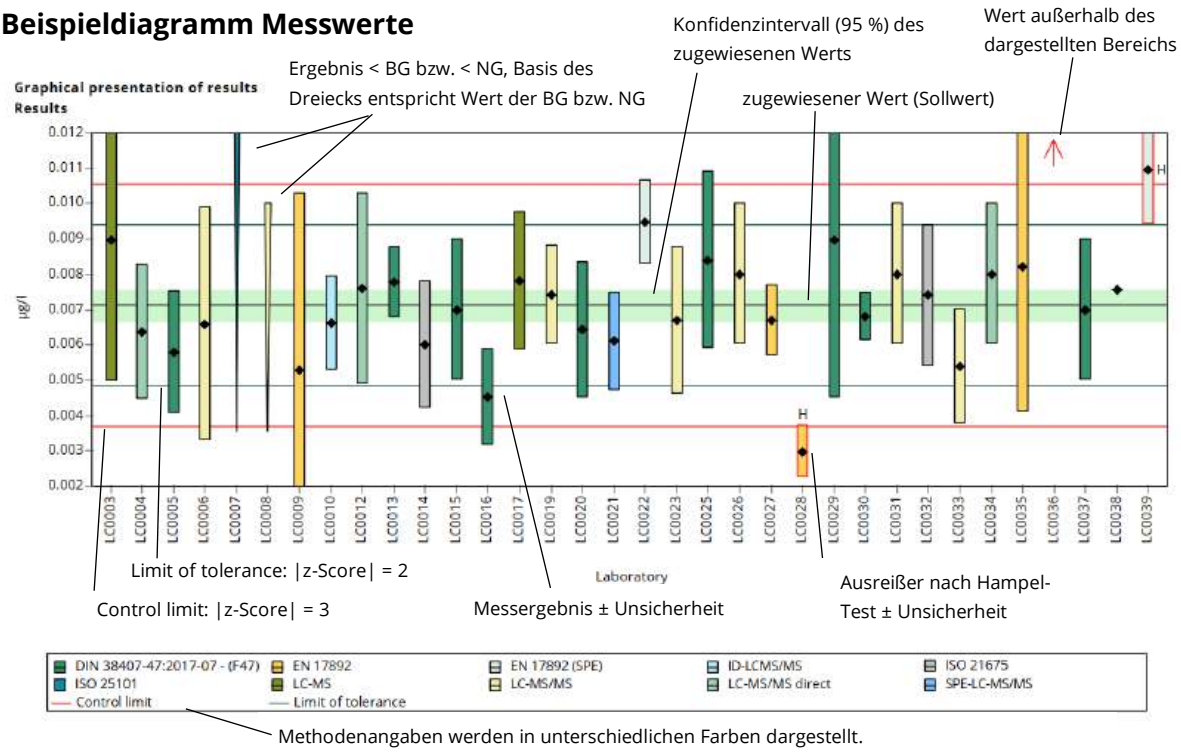
sR	Vergleichsstandardabweichung, berechnet aus den ausreißerbereinigten Ergebnissen der Teilnehmenden des aktuellen Ringversuchs (angegeben auf 3 signifikante Stellen)
vR	relative Vergleichsstandardabweichung in %, berechnet aus den ausreißerbereinigten Ergebnissen der Teilnehmenden des aktuellen Ringversuchs 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

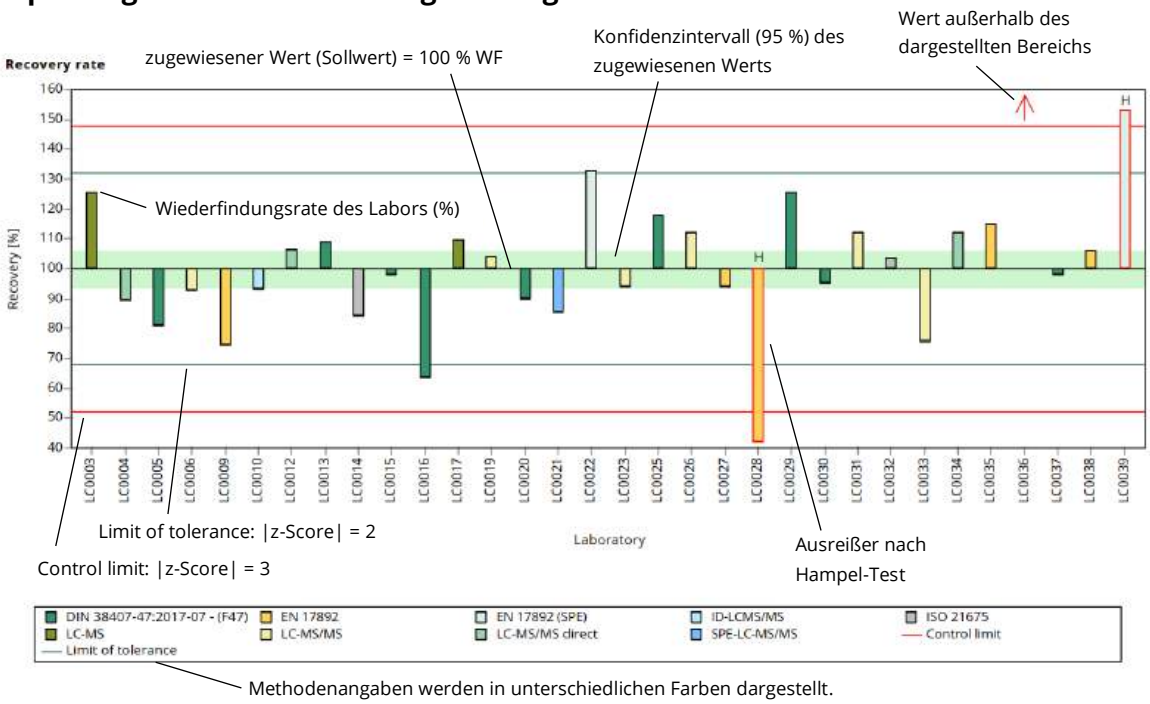
D5.2. Graphische Darstellung der Ergebnisse

Nachfolgend wird die graphische Darstellung anhand von kommentierten Beispieldiagrammen erläutert.

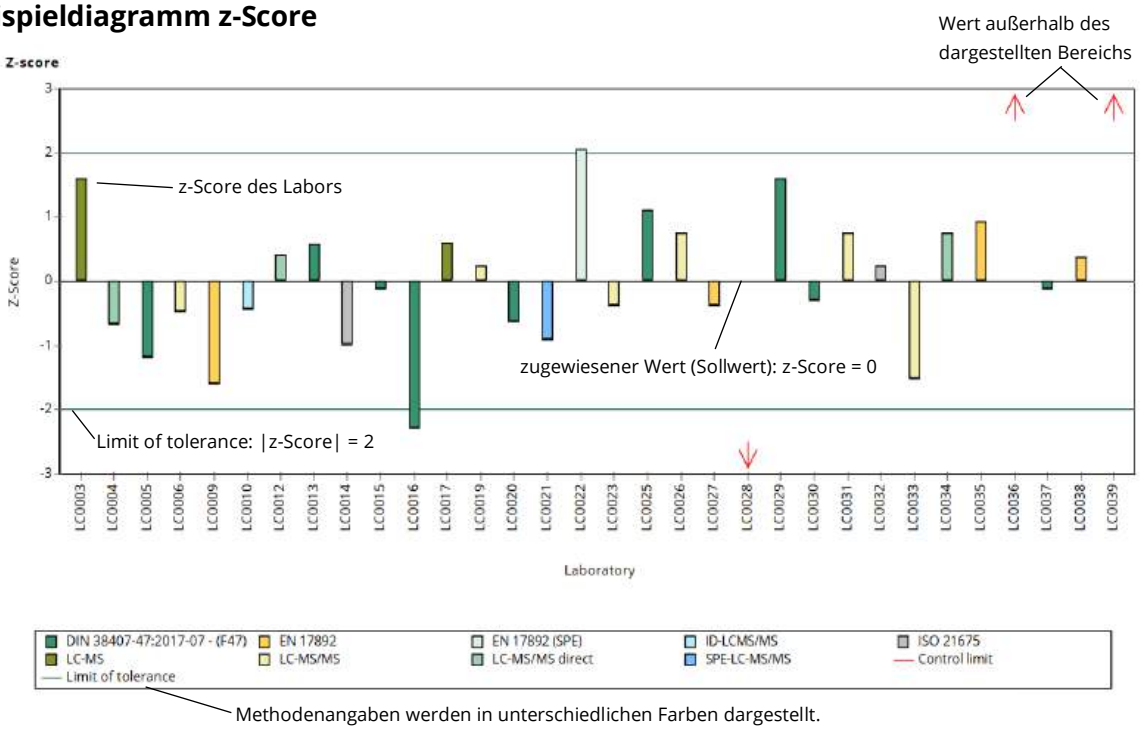
Beispieldiagramm Messwerte



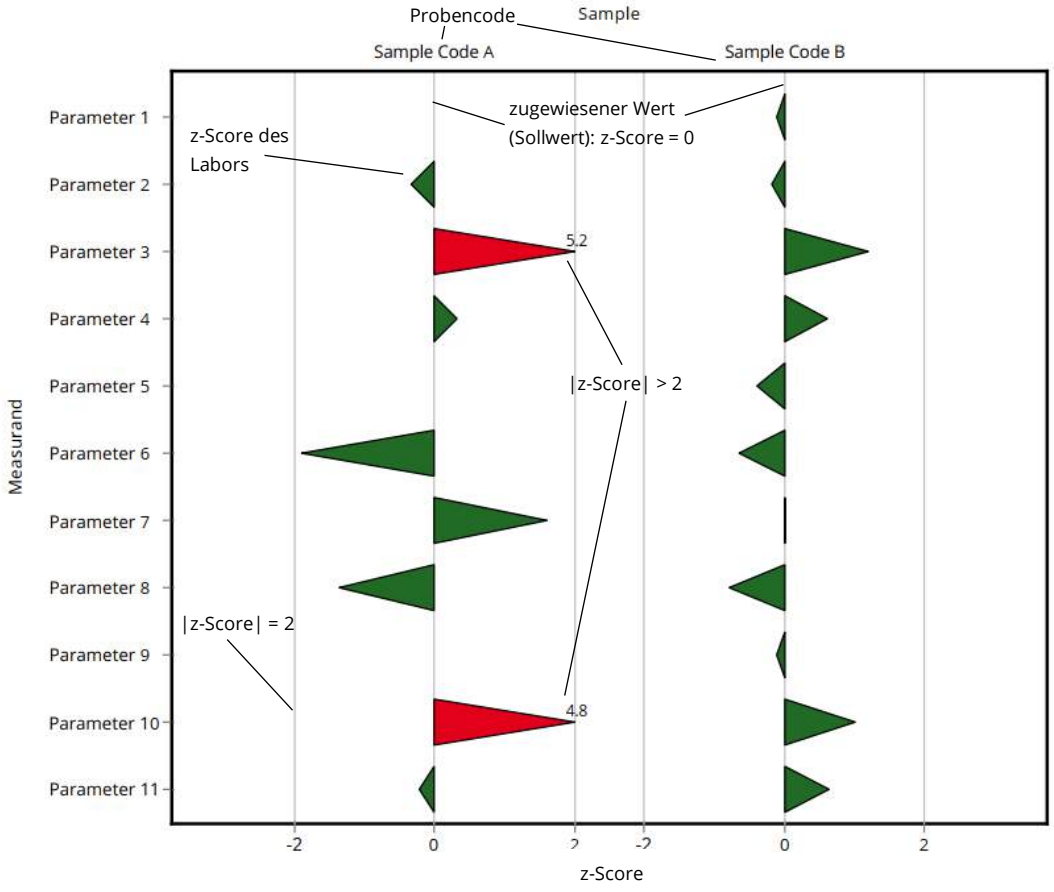
Beispieldiagramm Wiederfindung zum zugewiesenen Wert



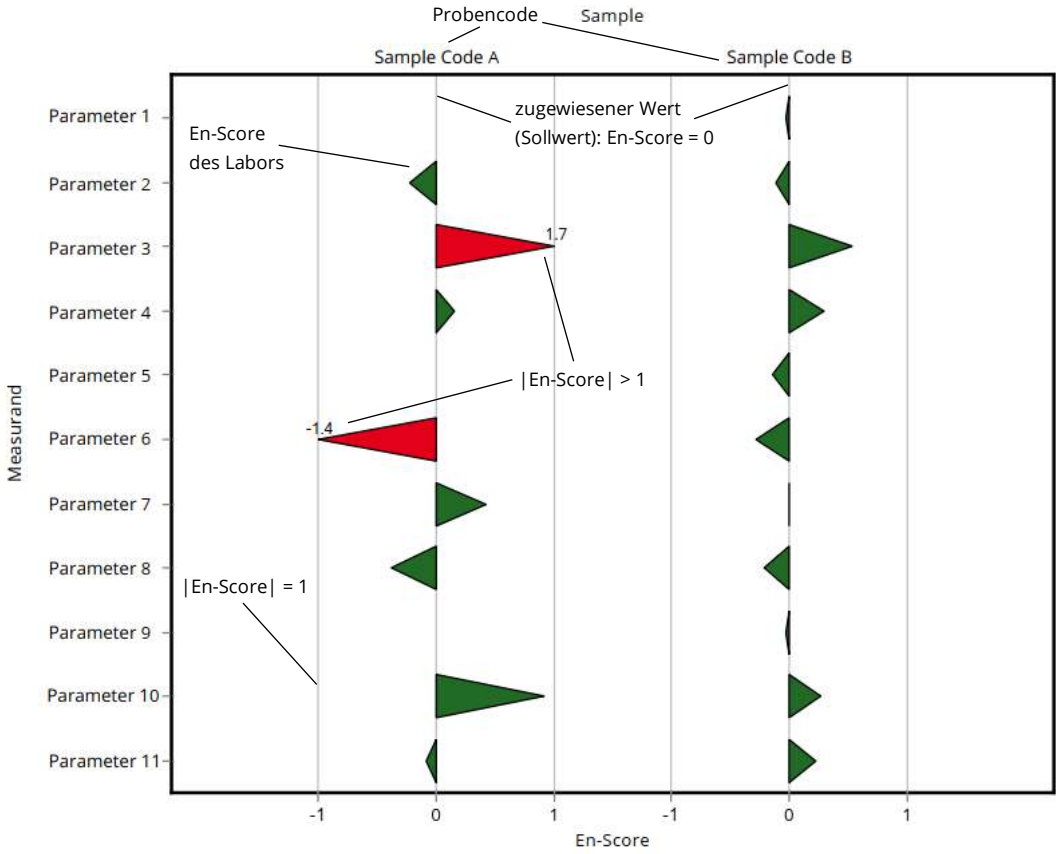
Beispieldiagramm z-Score



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 [%]
Acenaphthen	P27 A	ng/l	23.8	±	3.37	4.53	19
	P27 B	ng/l	324	±	36	61.5	19
Acenaphthylen	P27 A	ng/l	14	±	1.76	3.35	24
	P27 B	ng/l	251	±	29.9	60.1	24
Anthracen	P27 A	ng/l	24.7	±	2.33	5.19	21
	P27 B	ng/l	355	±	52.6	74.6	21
Benzo[a]anthracen	P27 A	ng/l	22.5	±	1.54	4.72	21
	P27 B	ng/l	313	±	30.1	65.8	21
Benzo[a]pyren	P27 A	ng/l	22.3	±	6.03	10	45
	P27 B	ng/l	249	±	47.7	87.1	35
Benzo[b]fluoranthen	P27 A	ng/l	27.8	±	0.891	4.72	17
	P27 B	ng/l	341	±	26.9	57.9	17
Benzo[g,h,i]perylen	P27 A	ng/l	16.6	±	2.11	4.15	25
	P27 B	ng/l	281	±	18.9	70.2	25
Benzo[k]fluoranthen	P27 A	ng/l	14.7	±	1.56	3.09	21
	P27 B	ng/l	244	±	30.6	51.2	21
Chrysen	P27 A	ng/l	24.2	±	1.66	5.32	22
	P27 B	ng/l	275	±	25.1	60.5	22
Dibenzo[a,h]anthracen	P27 A	ng/l	16.9	±	1.7	5.08	30
	P27 B	ng/l	203	±	47.3	60.9	30
Fluoranthen	P27 A	ng/l	21.6	±	1.56	3.89	18
	P27 B	ng/l	346	±	44.3	72.6	21
Fluoren	P27 A	ng/l	22.1	±	2.07	3.09	14
	P27 B	ng/l	218	±	21.7	32.6	15
Indeno[1,2,3-cd]pyren	P27 A	ng/l	20.9	±	2.29	5.22	25
	P27 B	ng/l	228	±	56.1	98.1	43
Naphthalin	P27 A	ng/l	23.9	±	3.19	5.03	21
	P27 B	ng/l	452	±	86.9	136	30
Phenanthren	P27 A	ng/l	21.1	±	1.43	3.17	15
	P27 B	ng/l	301	±	27.2	45.1	15
Pyren	P27 A	ng/l	24	±	1.48	3.83	16
	P27 B	ng/l	295	±	20.2	47.2	16

D6.2. Zusammenfassung der ausreißerbereinigten Ringversuchsergebnisse

Parameter	Probe	Anzahl Labors für Berechnung	Anzahl Ausreißer Labors	Einheit	Mittelwert	±	VB (99%)	Minimum	Maximum	sR	vR [%]
Acenaphthen	P27 A	9	1	ng/l	23.8	±	5.05	13.1	31	5.05	21
	P27 B	9	2	ng/l	324	±	54	228	388	54	17
Acenaphthylen	P27 A	7	2	ng/l	14	±	2.63	10	17.9	2.32	17
	P27 B	10	1	ng/l	251	±	44.9	182	314	47.3	19
Anthracen	P27 A	9	2	ng/l	24.7	±	3.5	16.6	28.8	3.5	14
	P27 B	11	0	ng/l	355	±	78.8	236	486	87.1	25
Benzo[a]anthracen	P27 A	9	1	ng/l	22.5	±	2.31	18.5	25.9	2.31	10
	P27 B	9	1	ng/l	313	±	45.2	235	381	45.2	14
Benzo[a]pyren	P27 A	11	0	ng/l	22.3	±	9.05	9.5	42.3	10	45
	P27 B	13	0	ng/l	249	±	71.5	92.8	400	85.9	35
Benzo[b]fluoranthen	P27 A	8	3	ng/l	27.8	±	1.34	25.8	29	1.26	4.5
	P27 B	9	2	ng/l	341	±	40.3	262	406	40.3	12
Benzo[g,h,i]perylen	P27 A	12	0	ng/l	16.6	±	3.16	9.76	20.8	3.65	22
	P27 B	9	4	ng/l	281	±	28.3	233	318	28.3	10
Benzo[k]fluoranthen	P27 A	8	3	ng/l	14.7	±	2.33	10	17.2	2.2	15
	P27 B	9	2	ng/l	239	±	42.7	174	299	42.7	18
Chrysen	P27 A	8	2	ng/l	24.2	±	2.49	20	27.7	2.35	9.7
	P27 B	10	0	ng/l	275	±	37.7	202	337	39.7	14
Dibenzo[a,h]anthracen	P27 A	8	1	ng/l	16.9	±	2.55	12.4	19.5	2.41	14
	P27 B	10	0	ng/l	188	±	73.5	66.8	285	77.5	41
Fluoranthen	P27 A	8	4	ng/l	21.6	±	2.35	16.7	23.6	2.21	10
	P27 B	10	3	ng/l	346	±	66.5	236	472	70.1	20

Parameter	Probe	Anzahl Labors für Berechnung	Anzahl Ausreißer Labors	Einheit	Mittelwert	±	VB (99%)	Minimum	Maximum	sR	vR [%]
Fluoren	P27 A	8	2	ng/l	22.1	±	3.11	18	26	2.93	13
	P27 B	9	2	ng/l	218	±	32.6	146	254	32.6	15
Indeno[1,2,3-cd]pyren	P27 A	9	2	ng/l	20.9	±	3.44	15.9	24.5	3.44	16
	P27 B	12	0	ng/l	228	±	84.1	77.8	349	97.1	43
Naphthalin	P27 A	8	1	ng/l	23.9	±	4.79	17.1	28.9	4.51	19
	P27 B	10	1	ng/l	452	±	130	205	662	137	30
Phenanthren	P27 A	9	1	ng/l	21.1	±	2.14	16.6	23.6	2.14	10
	P27 B	10	0	ng/l	301	±	40.8	211	351	43	14
Pyren	P27 A	8	2	ng/l	24	±	2.22	19.6	26.2	2.1	8.7
	P27 B	9	2	ng/l	295	±	30.2	226	332	30.2	10

E1. Description of the proficiency test

E1.1. Design and implementation

- Number of registrations: 13
- Number of submitted data records: 13
- Dispatch of samples: February 17th, 2026
- Closing date for submission of data: March 17th, 2026

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

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

E1.2. Description of the proficiency test items

The sampling of drinking water and groundwater was carried out on February 11th, 2026.

The following samples were made available:

- 1 sample drinking water (P27 A)
- 1 sample groundwater (P27 B)

Both samples were stored at 4 +/- 3°C until further processing. After filtration (40 µm), the samples were filled into bottles under continuous stirring (stirring vessel). Afterwards the samples were partly spiked in the bottles with specific substances and homogenized by shaking. The samples were stabilized by cooling.

The homogeneous proficiency test items were dispatched on the 17th of February 2026.

Each participant received:

- 2 samples, each approximately 2000 ml, filled in 2 x 1000 ml brown glass bottles

E1.3. Instructions for the participants

For reasons of stability, it was recommended to start the analysis by the 19th of February 2026 at the latest.

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

E1.4. Control testing for homogeneity evaluation

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

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

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

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

E1.5. Trend test for stability evaluation

The evaluation of stability of the proficiency test items was performed using the data statistics of the results of previous proficiency testing rounds for real water samples of the period from 2013 to 2025.

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 water samples can be confirmed for the recommended analysis period until deadline for submission of data.

E1.6. Determination of the assigned values

The analytical results had to be made available to the organiser not later than 17th of March 2026. Any values received at later date were not considered.

During 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 prompt feedback within 24 hours.

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 n=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. The traceability of the assigned value is checked by comparing it with the mean value of the control testing laboratory.

For real water samples in some exceptional cases, it might occur that no assigned value based on participants' results can be calculated and no evaluation of the participants' results can be made. E.g due to large variations in the participant results (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 statistical data provided is 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 based on the following formula:

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

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
Criterion	is the reproducibility standard deviation calculated from previous rounds for proficiency testing for real water samples from 2013 to 2025 (as RSD pooled) Where justified (e.g. results for real water samples are close to minimum quantification limit or in case of regulatory requirements) the criterion is defined by expert judgement and the procedure is clearly described in section E4 of the report.

E2.2. Performance criterion E_n-Score

In addition, an assessment of the participants' results using E_n-Scores for proficiency testing of real water samples is performed. This additional assessment considers 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 based on the following formula:

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

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 considered. 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 considered. $|E_n$-Score| > 1.0 might indicate to check the measurement uncertainty estimation or might point out to correct a measurement problem.

E3. Representation and interpretation of measurement results

The parameter-oriented report provides the measurement values (results) including uncertainty (± 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 (e.g. benzo[a]pyrene (P27 A, P27 B), dibenzo[a,h]anthracene (P27 A, P27 B), indeno[1,2,3-c,d]pyrene (P27 B) and naphthalene (P27 B)).

On the other hand, the range of good results can be very narrow, when the variation of the participants' results is small.

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

As a result of a long-term evaluation of proficiency testing rounds between 2013 and 2025 in real samples, evaluation criteria (RSDpool) were calculated. These criteria were compared with the relative reproducibility standard deviation (vR) of the current proficiency testing.

Sample P27 A
Scores for parameters acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[b]fluoranthene, benzo[g,h,i]perylene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, fluoranthene, phenanthrene and pyrene were calculated according to E2.

For the following parameters statistical outliers according to Hampel were eliminated before calculation of the mean values: fluorene (LC0011 H95, LC0006 H99), indeno[1,2,3-c,d]pyrene (LC0007 H95, LC0011 H95) and naphthalene (LC0011 H68). The respective RSDpooled values were used as evaluation criteria.

For benzo[a]pyrene the reproducibility standard deviation (vR) of the current proficiency testing round was chosen for assessment (vR 45 %; no outliers H95, H99).

Sample P27 B
For parameters acenaphthylene, anthracene, benzo[a]anthracene, benzo[b]fluoranthene, chrysene, phenanthrene and pyrene the scores were calculated according to E2.

The relative reproducibility standard deviation of the current proficiency testing was chosen for assessment of benzo[a]pyrene (vR 35 %), fluoranthene (vR 21 %), fluorene (vR 15 %), indeno[1,2,3-c,d]pyrene (vR 43 %) and naphthalene (vR 30 %).

During the statistical data evaluation outliers according to Hampel were eliminated before calculation of mean values for the following parameters in sample P27 B: acenaphthene (LC0011 H95, LC0014 H99), benzo[g,h,i]perylene (LC0001, LC0002, LC0005 – H95, LC0007 H99) and fluorene (LC0011 H95, LC0014 H99). For acenaphthene and benzo[g,h,i]perylene the RSDpooled values were used as criterion. For fluorene the current reproducibility standard deviation was set.

Parameters benzo[k]fluoranthene and dibenzo[a,h]anthracene for sample P27 B:
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. For benzo[k]fluoranthene (P27 B) laboratory results of LC0001 and LC0007 were eliminated as Hampel outliers (H95), whereas for dibenzo[a,h]anthracene no outliers could be identified (no H95, H99). For data assessment the RSDpooled value was chosen as criterion.

E5. Annotations on tables and charts

E5.1. Information and abbreviations in tables

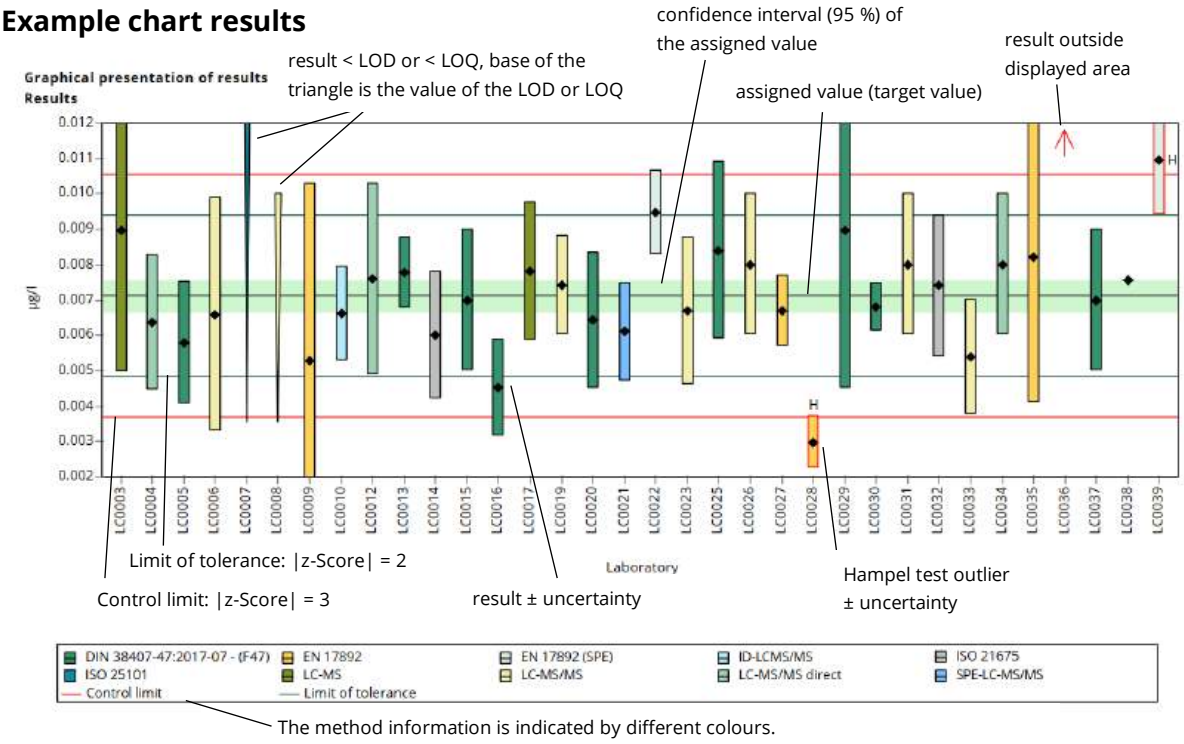
Parameter	Analyte identifier
Sample	Sample identifier
Unit	Given unit for result and uncertainty (e.g. µg/l)
Assigned value	Target value for proficiency assessment of the participants (3 significant digits)
U (k=2)	Expanded uncertainty (k=2) of the assigned value (3 significant digits)
Criteria	Specified value for the determination of the z-score in the given unit (3 significant digits)
Criteria [%]	Specified value for the determination of the z-score in % of the assigned value (2 significant digits)
Mean	Mean of the results of the participants, 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 considers 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

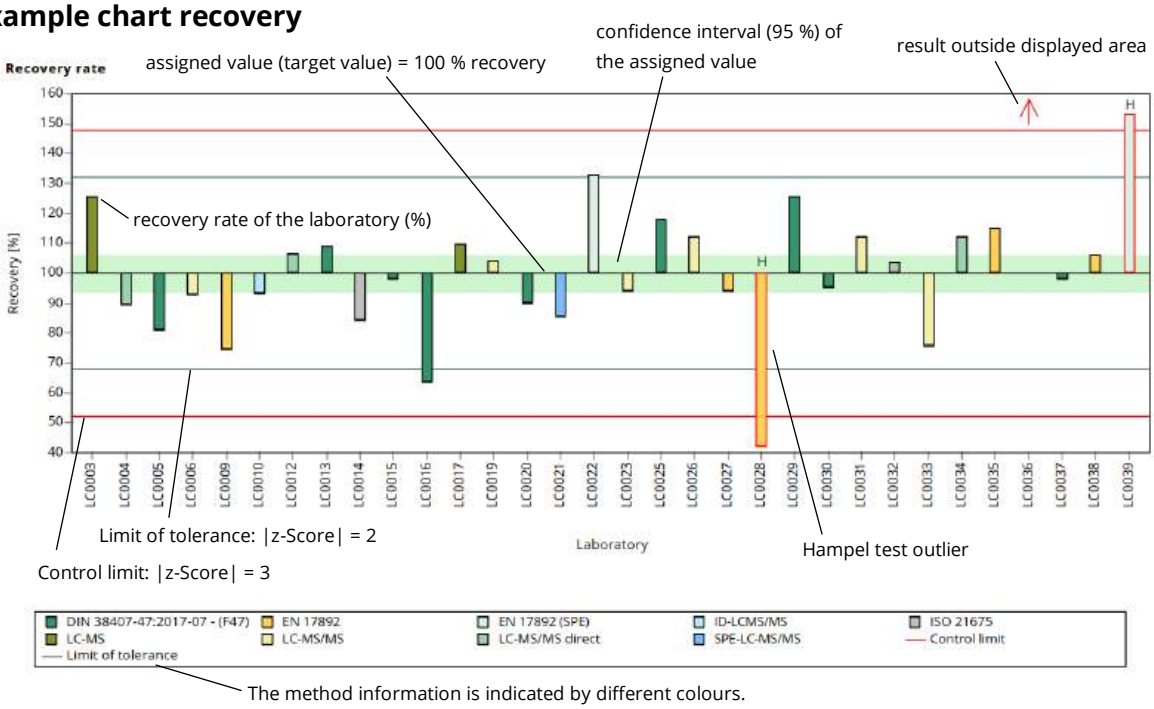
E5.2. Graphical presentation of results

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

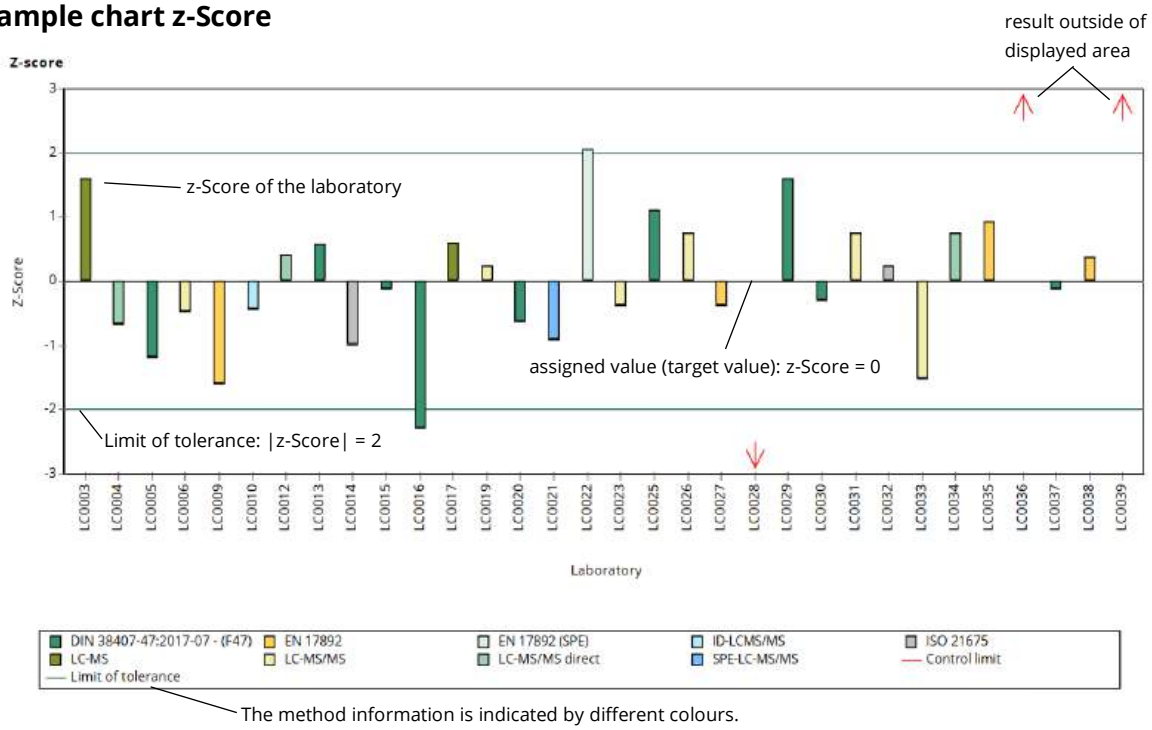
Example chart results



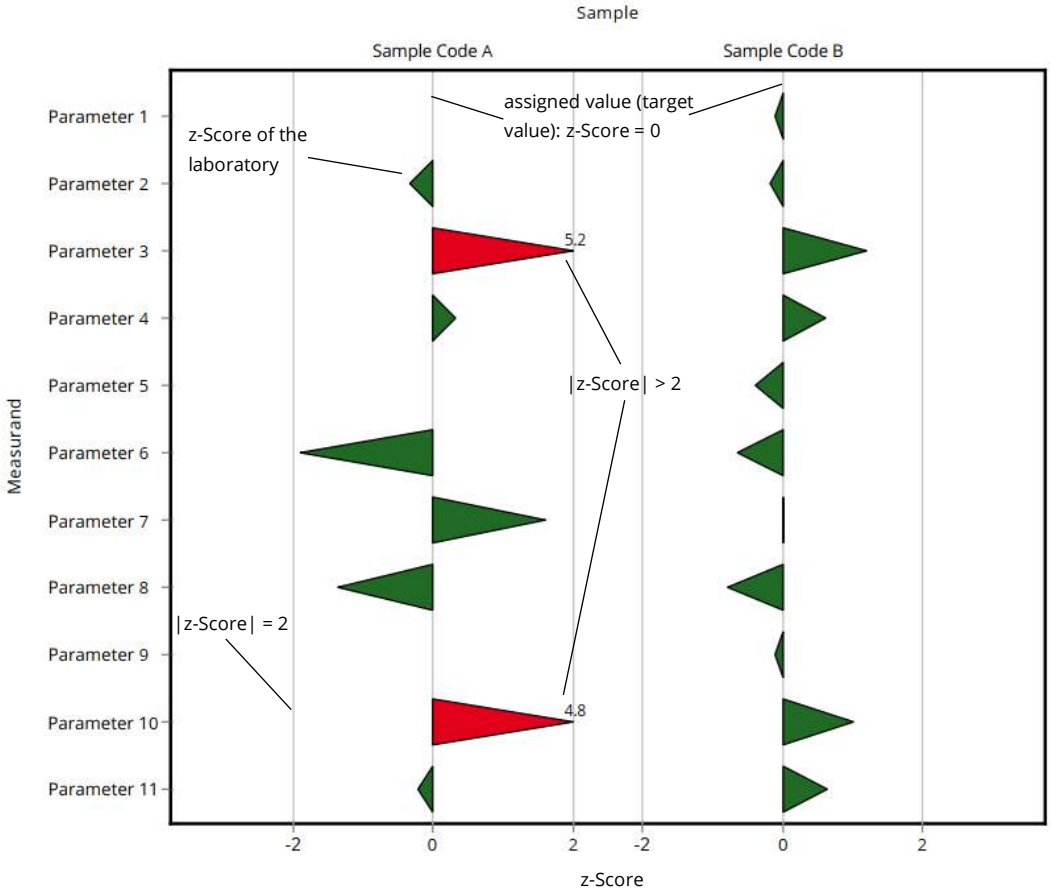
Example chart recovery



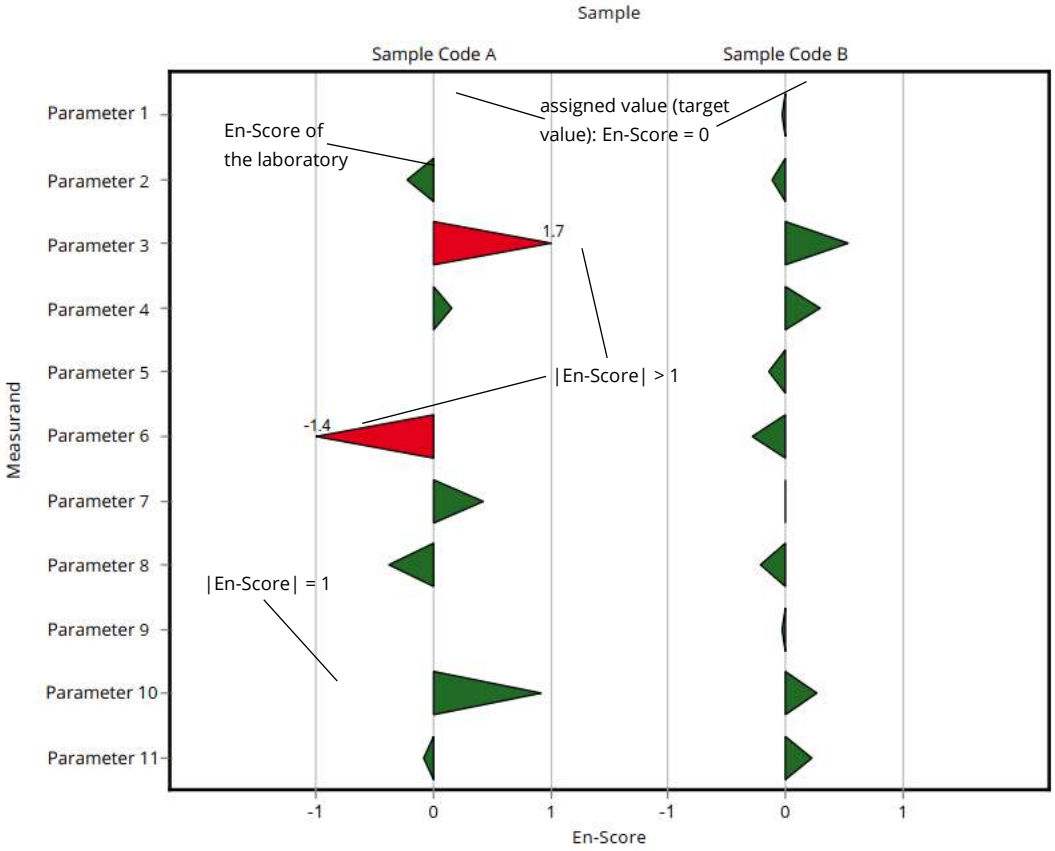
Example chart z-Score



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 [%]
Acenaphthene	P27 A	ng/l	23.8	±	3.37	4.53	19
	P27 B	ng/l	324	±	36	61.5	19
Acenaphthylene	P27 A	ng/l	14	±	1.76	3.35	24
	P27 B	ng/l	251	±	29.9	60.1	24
Anthracene	P27 A	ng/l	24.7	±	2.33	5.19	21
	P27 B	ng/l	355	±	52.6	74.6	21
Benzo[a]anthracene	P27 A	ng/l	22.5	±	1.54	4.72	21
	P27 B	ng/l	313	±	30.1	65.8	21
Benzo[a]pyrene	P27 A	ng/l	22.3	±	6.03	10	45
	P27 B	ng/l	249	±	47.7	87.1	35
Benzo[b]fluoranthene	P27 A	ng/l	27.8	±	0.891	4.72	17
	P27 B	ng/l	341	±	26.9	57.9	17
Benzo[g,h,i]perylene	P27 A	ng/l	16.6	±	2.11	4.15	25
	P27 B	ng/l	281	±	18.9	70.2	25
Benzo[k]fluoranthene	P27 A	ng/l	14.7	±	1.56	3.09	21
	P27 B	ng/l	244	±	30.6	51.2	21
Chrysene	P27 A	ng/l	24.2	±	1.66	5.32	22
	P27 B	ng/l	275	±	25.1	60.5	22
Dibenzo[a,h]anthracene	P27 A	ng/l	16.9	±	1.7	5.08	30
	P27 B	ng/l	203	±	47.3	60.9	30
Fluoranthene	P27 A	ng/l	21.6	±	1.56	3.89	18
	P27 B	ng/l	346	±	44.3	72.6	21
Fluorene	P27 A	ng/l	22.1	±	2.07	3.09	14
	P27 B	ng/l	218	±	21.7	32.6	15
Indeno[1,2,3-cd]pyrene	P27 A	ng/l	20.9	±	2.29	5.22	25
	P27 B	ng/l	228	±	56.1	98.1	43
Naphthalene	P27 A	ng/l	23.9	±	3.19	5.03	21
	P27 B	ng/l	452	±	86.9	136	30
Phenanthrene	P27 A	ng/l	21.1	±	1.43	3.17	15
	P27 B	ng/l	301	±	27.2	45.1	15
Pyrene	P27 A	ng/l	24	±	1.48	3.83	16
	P27 B	ng/l	295	±	20.2	47.2	16

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 [%]
Acenaphthene	P27 A	9	1	ng/l	23.8 ± 5.05	13.1	31	5.05	21
	P27 B	9	2	ng/l	324 ± 54	228	388	54	17
Acenaphthylene	P27 A	7	2	ng/l	14 ± 2.63	10	17.9	2.32	17
	P27 B	10	1	ng/l	251 ± 44.9	182	314	47.3	19
Anthracene	P27 A	9	2	ng/l	24.7 ± 3.5	16.6	28.8	3.5	14
	P27 B	11	0	ng/l	355 ± 78.8	236	486	87.1	25
Benzo[a]anthracene	P27 A	9	1	ng/l	22.5 ± 2.31	18.5	25.9	2.31	10
	P27 B	9	1	ng/l	313 ± 45.2	235	381	45.2	14
Benzo[a]pyrene	P27 A	11	0	ng/l	22.3 ± 9.05	9.5	42.3	10	45
	P27 B	13	0	ng/l	249 ± 71.5	92.8	400	85.9	35
Benzo[b]fluoranthene	P27 A	8	3	ng/l	27.8 ± 1.34	25.8	29	1.26	4.5
	P27 B	9	2	ng/l	341 ± 40.3	262	406	40.3	12
Benzo[g,h,i]perylene	P27 A	12	0	ng/l	16.6 ± 3.16	9.76	20.8	3.65	22
	P27 B	9	4	ng/l	281 ± 28.3	233	318	28.3	10
Benzo[k]fluoranthene	P27 A	8	3	ng/l	14.7 ± 2.33	10	17.2	2.2	15
	P27 B	9	2	ng/l	239 ± 42.7	174	299	42.7	18
Chrysene	P27 A	8	2	ng/l	24.2 ± 2.49	20	27.7	2.35	9.7
	P27 B	10	0	ng/l	275 ± 37.7	202	337	39.7	14
Dibenzo[a,h]anthracene	P27 A	8	1	ng/l	16.9 ± 2.55	12.4	19.5	2.41	14
	P27 B	10	0	ng/l	188 ± 73.5	66.8	285	77.5	41
Fluoranthene	P27 A	8	4	ng/l	21.6 ± 2.35	16.7	23.6	2.21	10
	P27 B	10	3	ng/l	346 ± 66.5	236	472	70.1	20

Parameter	Sample	Number of results for calculation	Number of outliers	Unit	Mean	±	CI (99%)	Minimum	Maximum	sR	vR [%]
Fluorene	P27 A	8	2	ng/l	22.1	±	3.11	18	26	2.93	13
	P27 B	9	2	ng/l	218	±	32.6	146	254	32.6	15
Indeno[1,2,3-cd]pyrene	P27 A	9	2	ng/l	20.9	±	3.44	15.9	24.5	3.44	16
	P27 B	12	0	ng/l	228	±	84.1	77.8	349	97.1	43
Naphthalene	P27 A	8	1	ng/l	23.9	±	4.79	17.1	28.9	4.51	19
	P27 B	10	1	ng/l	452	±	130	205	662	137	30
Phenanthrene	P27 A	9	1	ng/l	21.1	±	2.14	16.6	23.6	2.14	10
	P27 B	10	0	ng/l	301	±	40.8	211	351	43	14
Pyrene	P27 A	8	2	ng/l	24	±	2.22	19.6	26.2	2.1	8.7
	P27 B	9	2	ng/l	295	±	30.2	226	332	30.2	10

E7. Parameterorientierte Auswertung / Parameter oriented report

Parameter oriented report

P27 A

Acenaphthene

Unit	ng/l
Assigned value ± U (k=2)	23.8 ± 3.37
Criterion	4.53 (19 %)
Minimum - Maximum	13.1 - 31
Control test value ± U (k=2)	24.7 ± 8.65

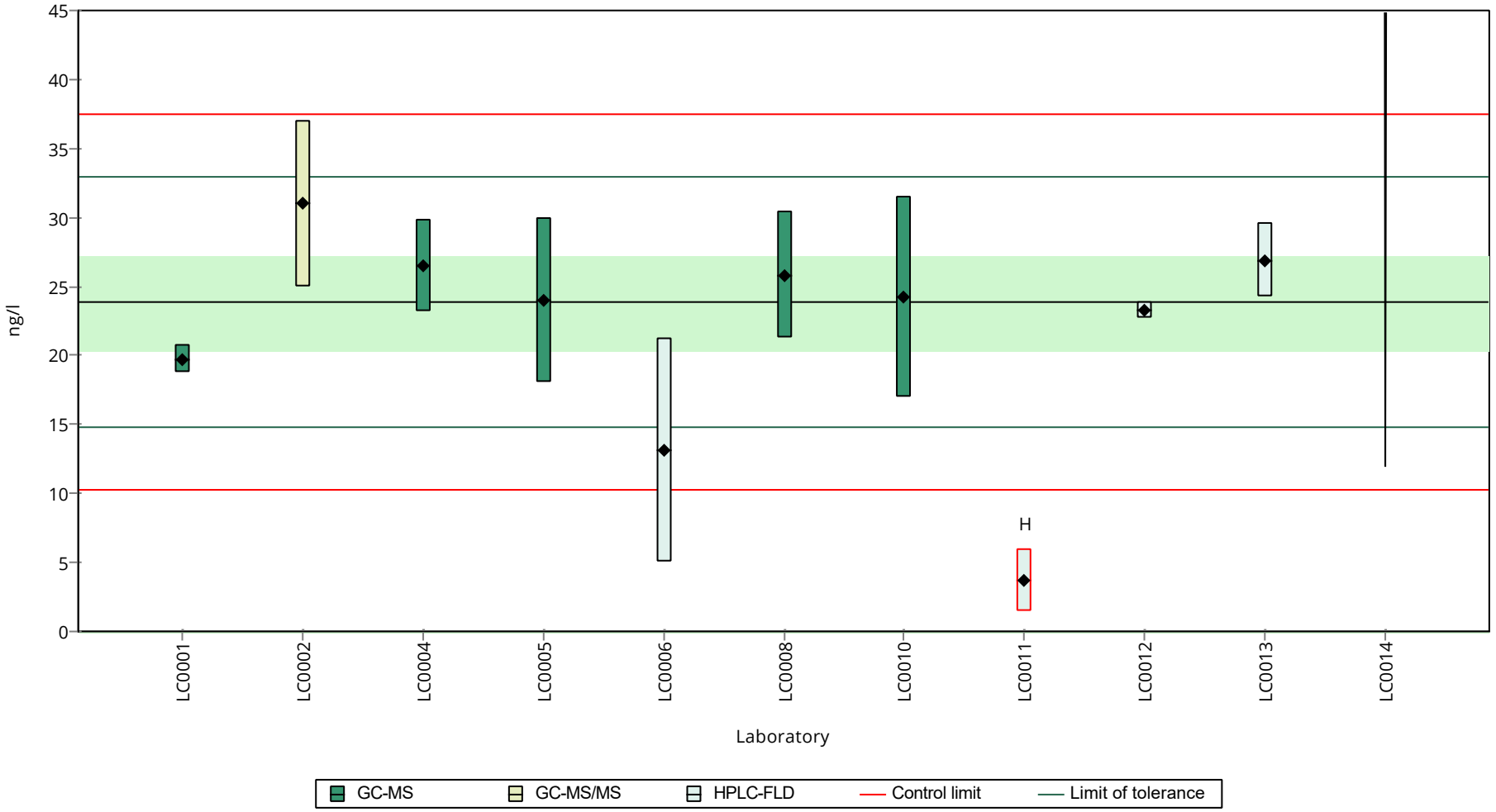
Labcode	Result	±	U	Recovery [%]	z-Score	Comments
LC0001	19.72	±	1	82.7	-0.91	
LC0002	31	±	6	130	1.58	
LC0004	26.48	±	3.35	111	0.58	
LC0005	24	±	5.99	101	0.04	
LC0006	13.1	±	8.1	55	-2.37	
LC0007	-	±	-	-	-	
LC0008	25.8	±	4.6	108	0.43	
LC0009	-	±	-	-	-	
LC0010	24.25	±	7.28	102	0.09	
LC0011	3.69	±	2.24	15.5	-4.45	H
LC0012	23.3	±	0.616	97.7	-0.12	
LC0013	26.9	±	2.7	113	0.68	
LC0014	< 200 (LOQ)	±	-	-	-	

Characteristics of parameter

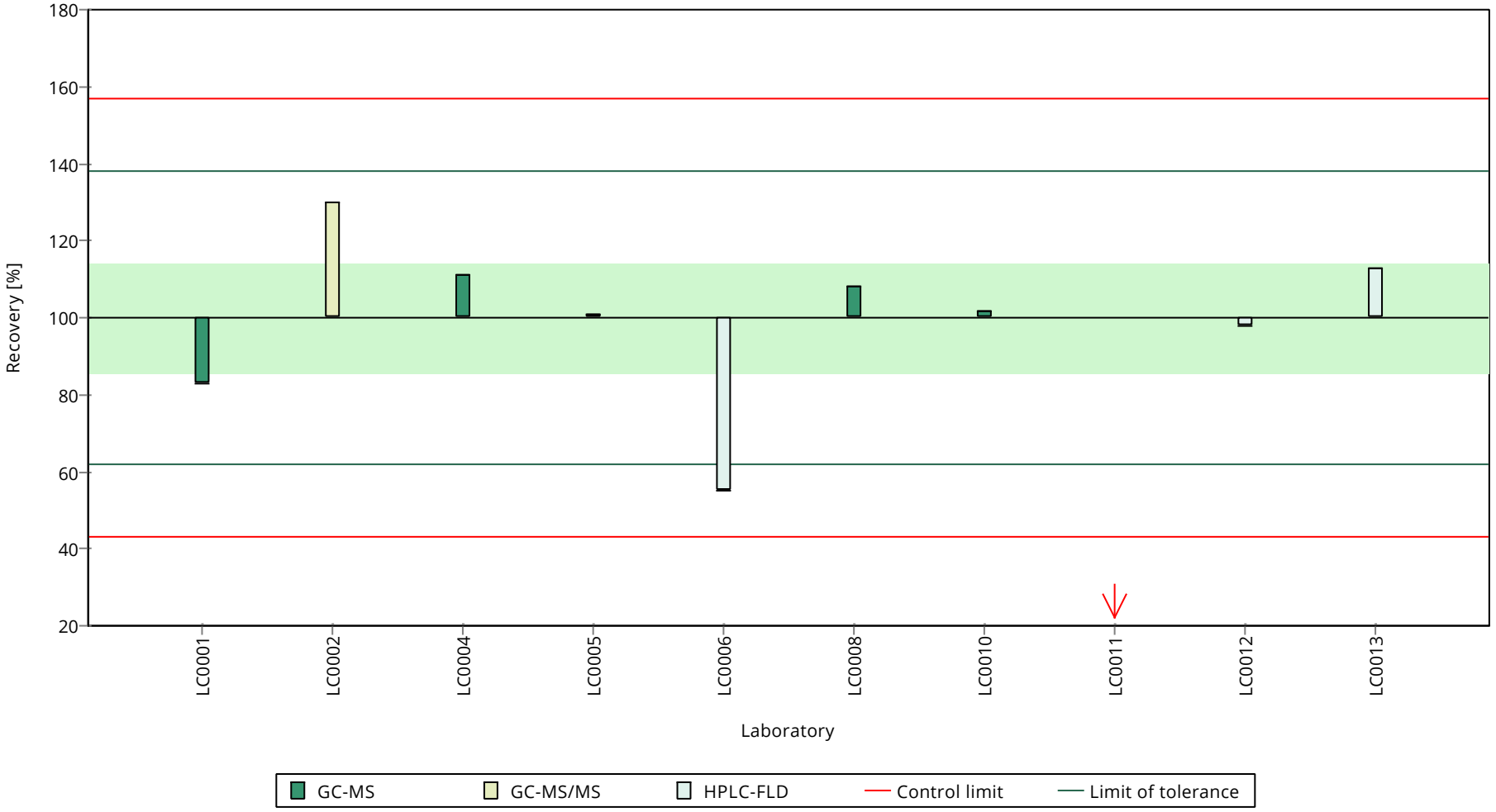
	all results	without outliers	Unit
Mean ± CI (99%)	21.8 ± 7.55	23.8 ± 5.05	ng/l
Minimum	3.69	13.1	ng/l
Maximum	31	31	ng/l
Standard deviation	7.96	5.05	ng/l
rel. standard deviation	36.5	21.2	%
n	10	9	-

Graphical presentation of results

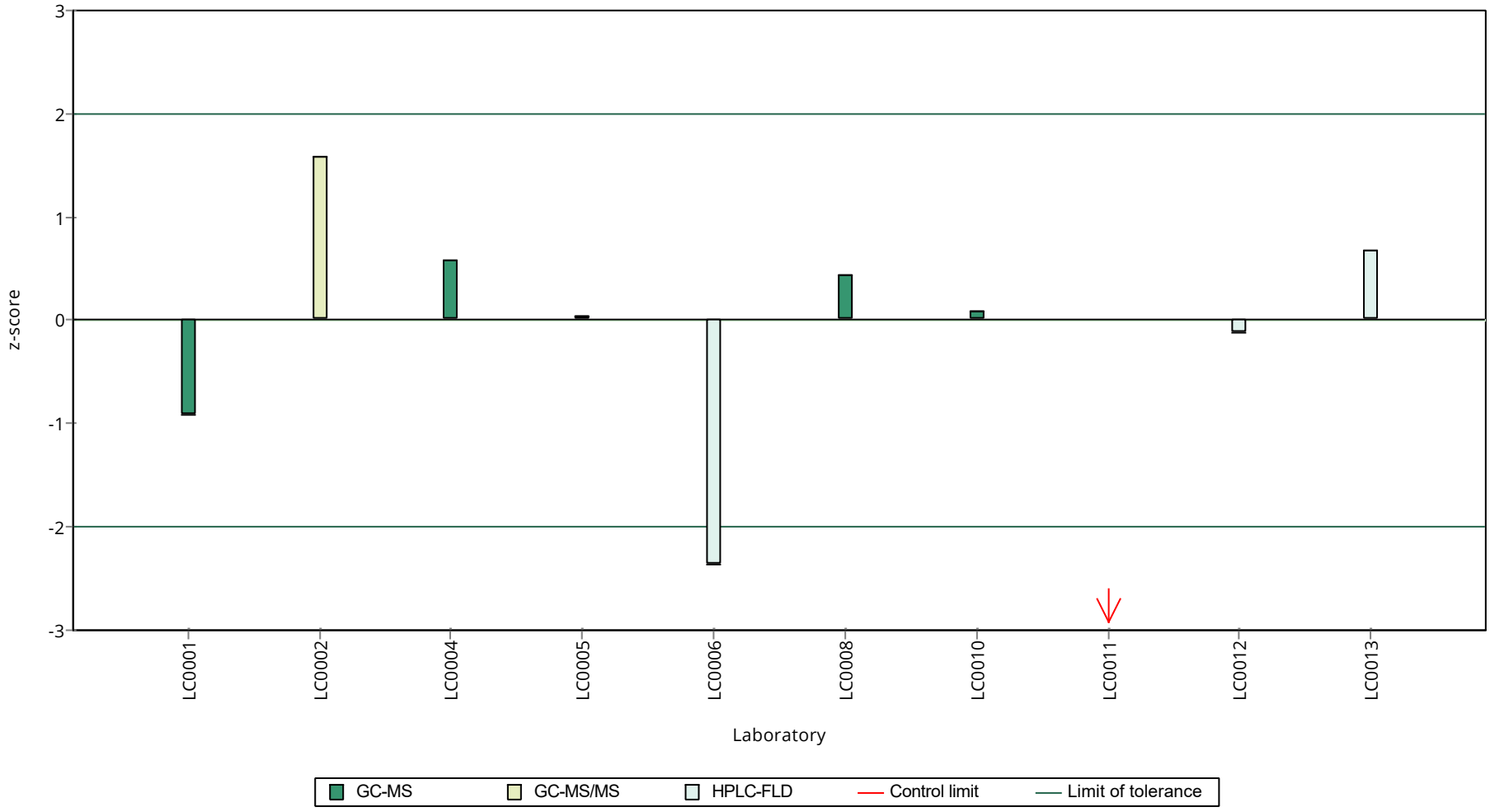
Results



Recovery rate



z-Score


3
2
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-1
-2
-3
z-score
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Acenaphthene

Unit	ng/l
Assigned value ± U (k=2)	324 ± 36
Criterion	61.5 (19 %)
Minimum - Maximum	228 - 388
Control test value ± U (k=2)	340 ± 119

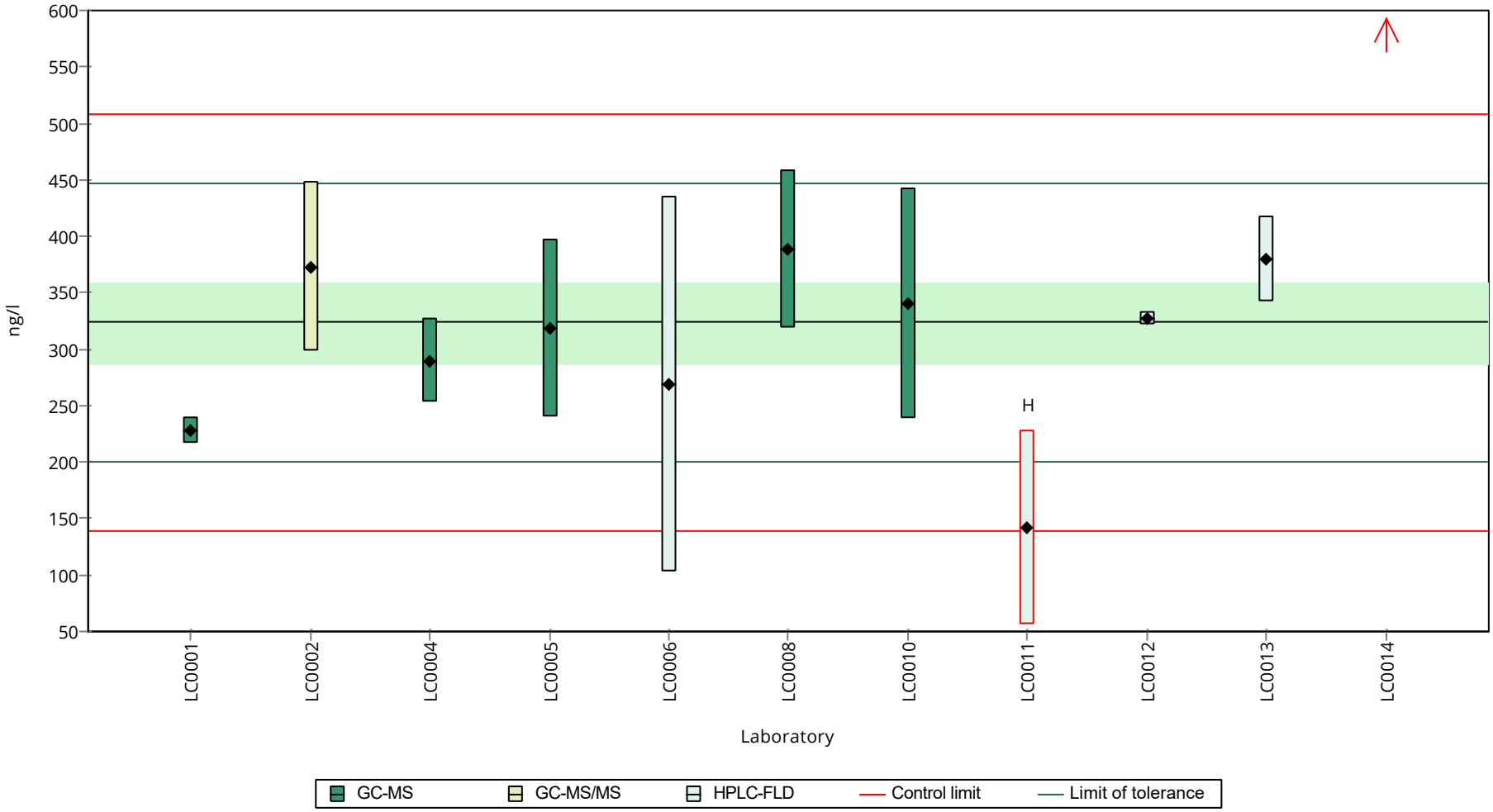
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	227.93 ± 11.4	70.4	-1.56	
LC0002	373 ± 75	115	0.8	
LC0004	289.93 ± 36.67	89.6	-0.55	
LC0005	318 ± 79	98.3	-0.09	
LC0006	268.7 ± 166.8	83	-0.89	
LC0007	- ± -	-	-	
LC0008	388 ± 70	120	1.05	
LC0009	- ± -	-	-	
LC0010	340.5 ± 102.15	105	0.28	
LC0011	141.9 ± 85.9	43.9	-2.96	H
LC0012	327 ± 6.19	101	0.06	
LC0013	379.2 ± 37.9	117	0.9	
LC0014	1000 ± 100	309	11	H

Characteristics of parameter

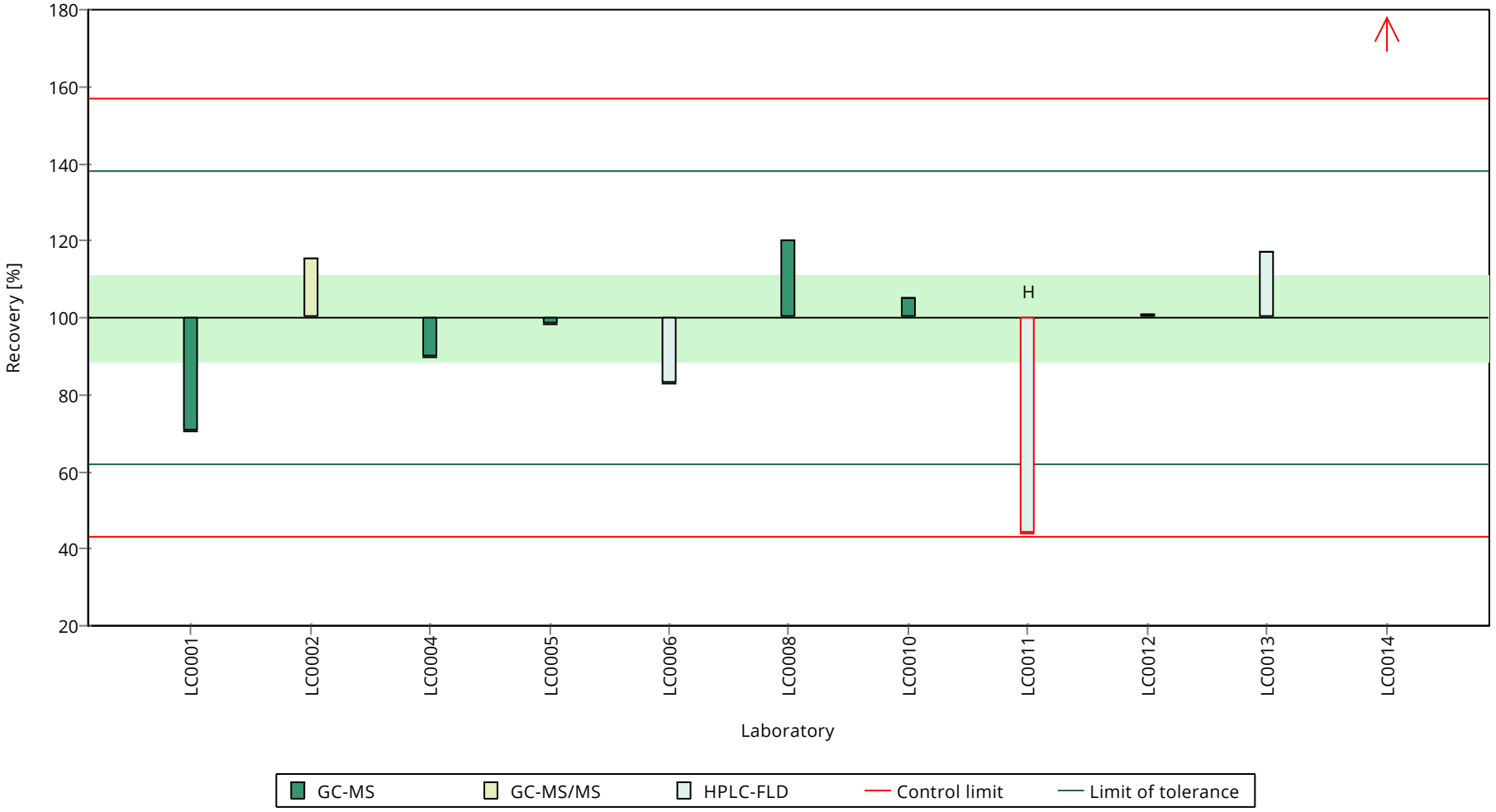
	all results	without outliers	Unit
Mean ± CI (99%)	369 ± 201	324 ± 54	ng/l
Minimum	142	228	ng/l
Maximum	1000	388	ng/l
Standard deviation	222	54	ng/l
rel. standard deviation	60.2	16.7	%
n	11	9	-

Graphical presentation of results

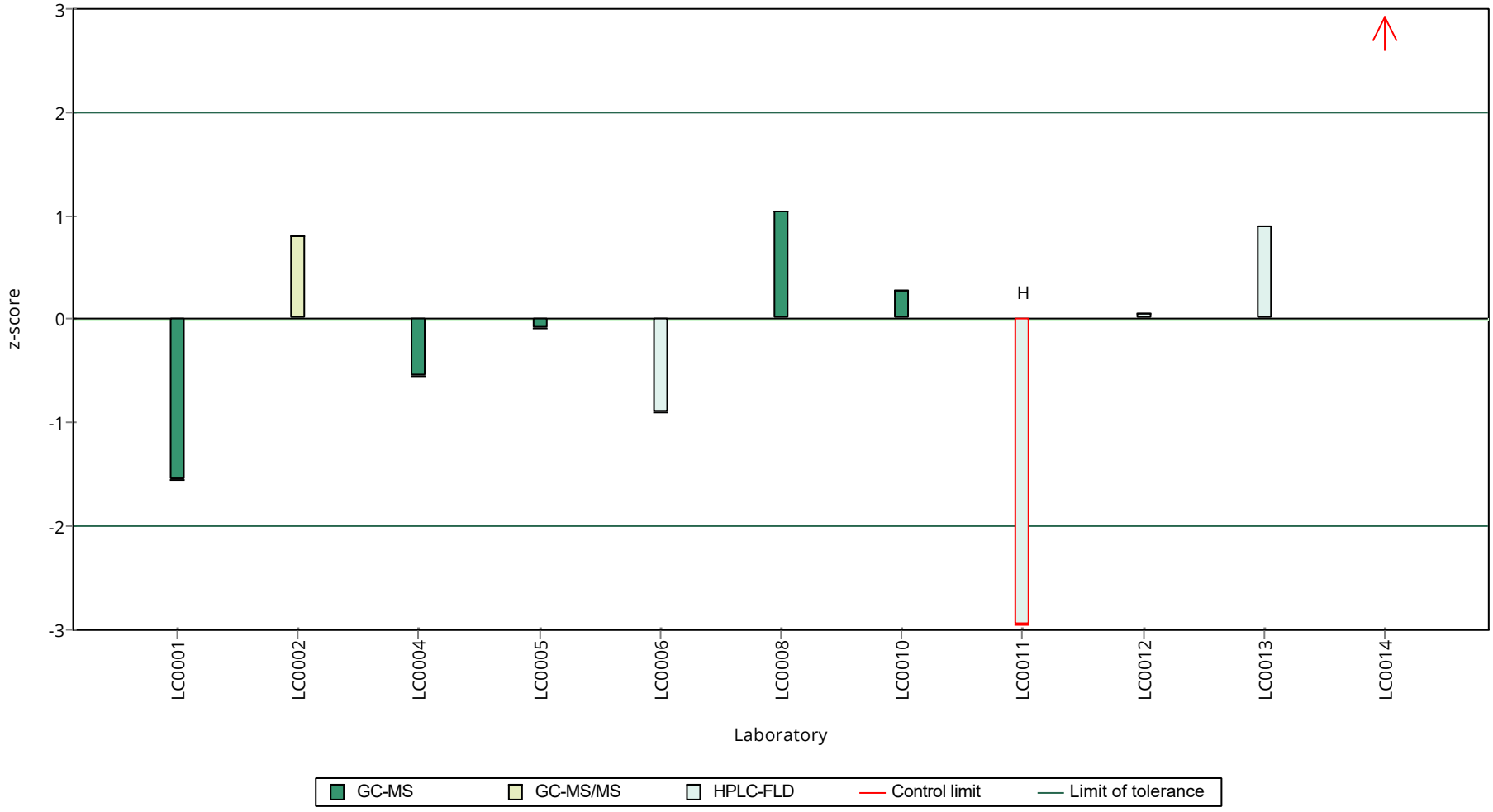
Results



Recovery rate



z-Score


3
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-2
-3
z-score
H
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
LC0014
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Acenaphthylene

Unit	ng/l
Assigned value ± U (k=2)	14 ± 1.76
Criterion	3.35 (24 %)
Minimum - Maximum	10 - 17.9
Control test value ± U (k=2)	16.4 ± 4.92

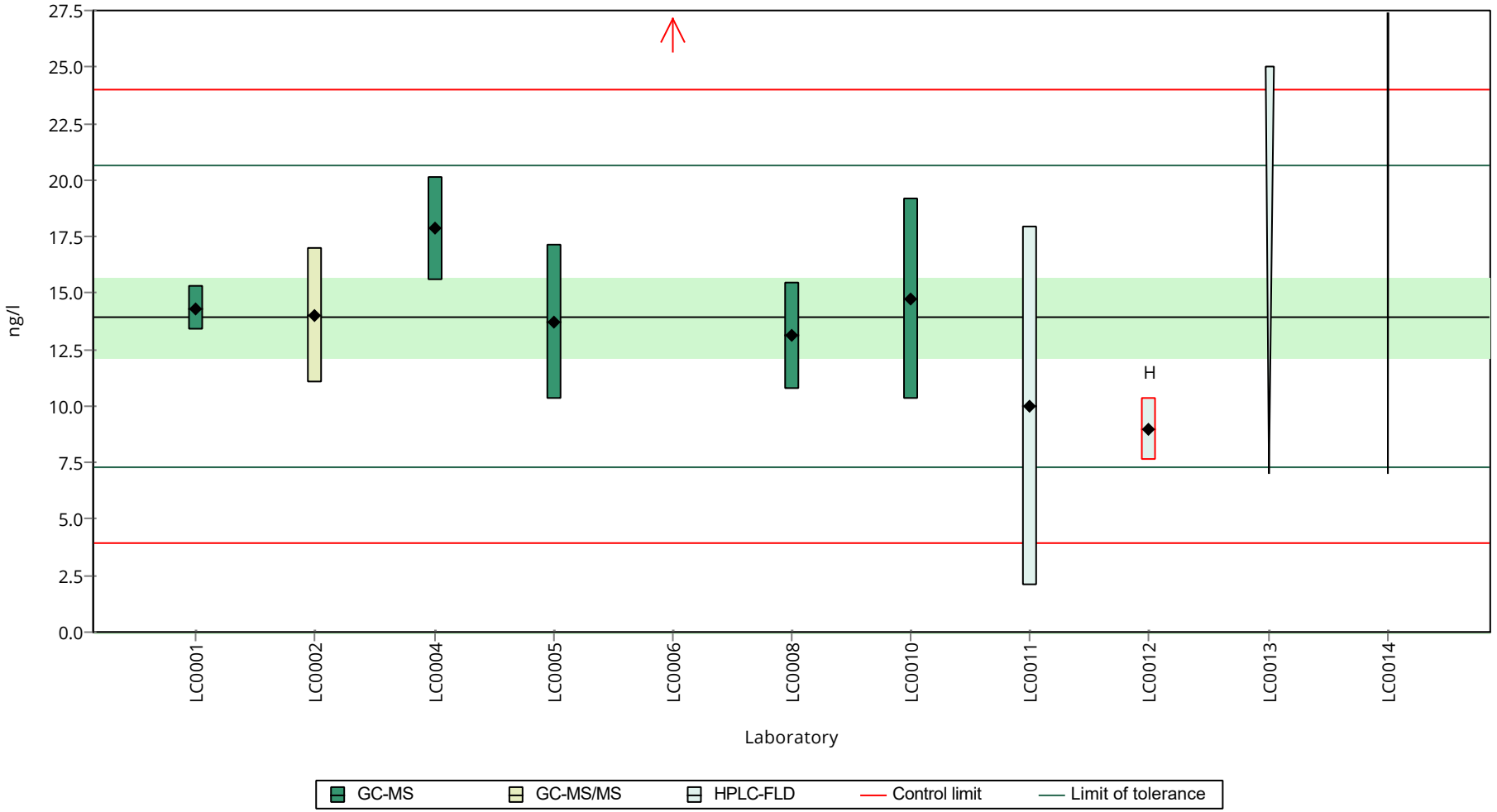
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	14.32 ± 1	103	0.11	
LC0002	14 ± 3	100	0.01	
LC0004	17.85 ± 2.28	128	1.16	
LC0005	13.7 ± 3.43	98.1	-0.08	
LC0006	87 ± 35.6	623	21.8	H
LC0007	- ± -	-	-	
LC0008	13.1 ± 2.4	93.8	-0.26	
LC0009	- ± -	-	-	
LC0010	14.75 ± 4.43	106	0.24	
LC0011	10 ± 7.97	71.6	-1.18	
LC0012	8.99 ± 1.4	64.4	-1.48	H
LC0013	< 25 (LOQ) ± -	-	-	
LC0014	< 200 (LOQ) ± -	-	-	

Characteristics of parameter

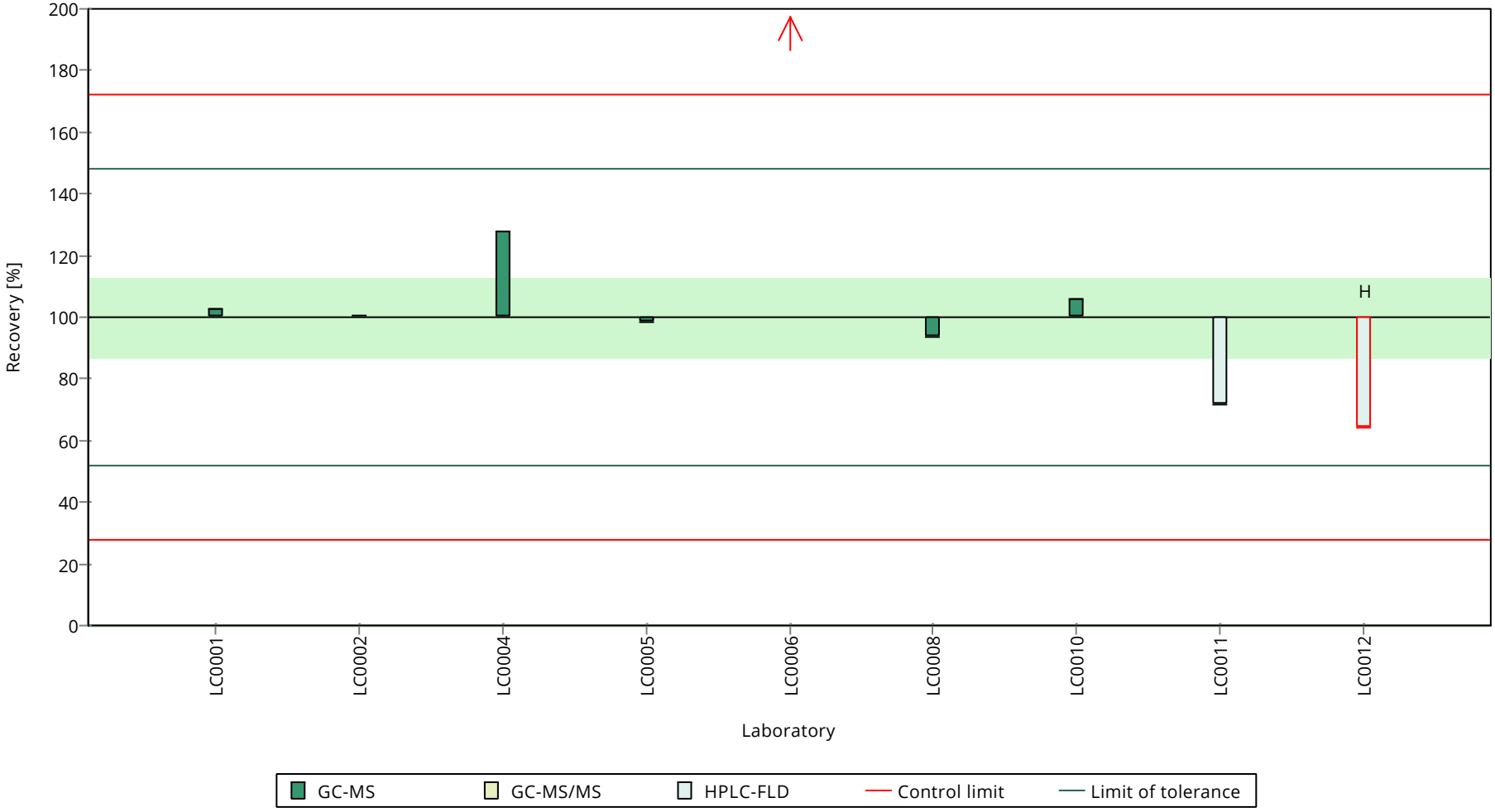
	all results	without outliers	Unit
Mean ± CI (99%)	21.5 ± 24.7	14 ± 2.63	ng/l
Minimum	8.99	10	ng/l
Maximum	87	17.9	ng/l
Standard deviation	24.7	2.32	ng/l
rel. standard deviation	115	16.6	%
n	9	7	-

Graphical presentation of results

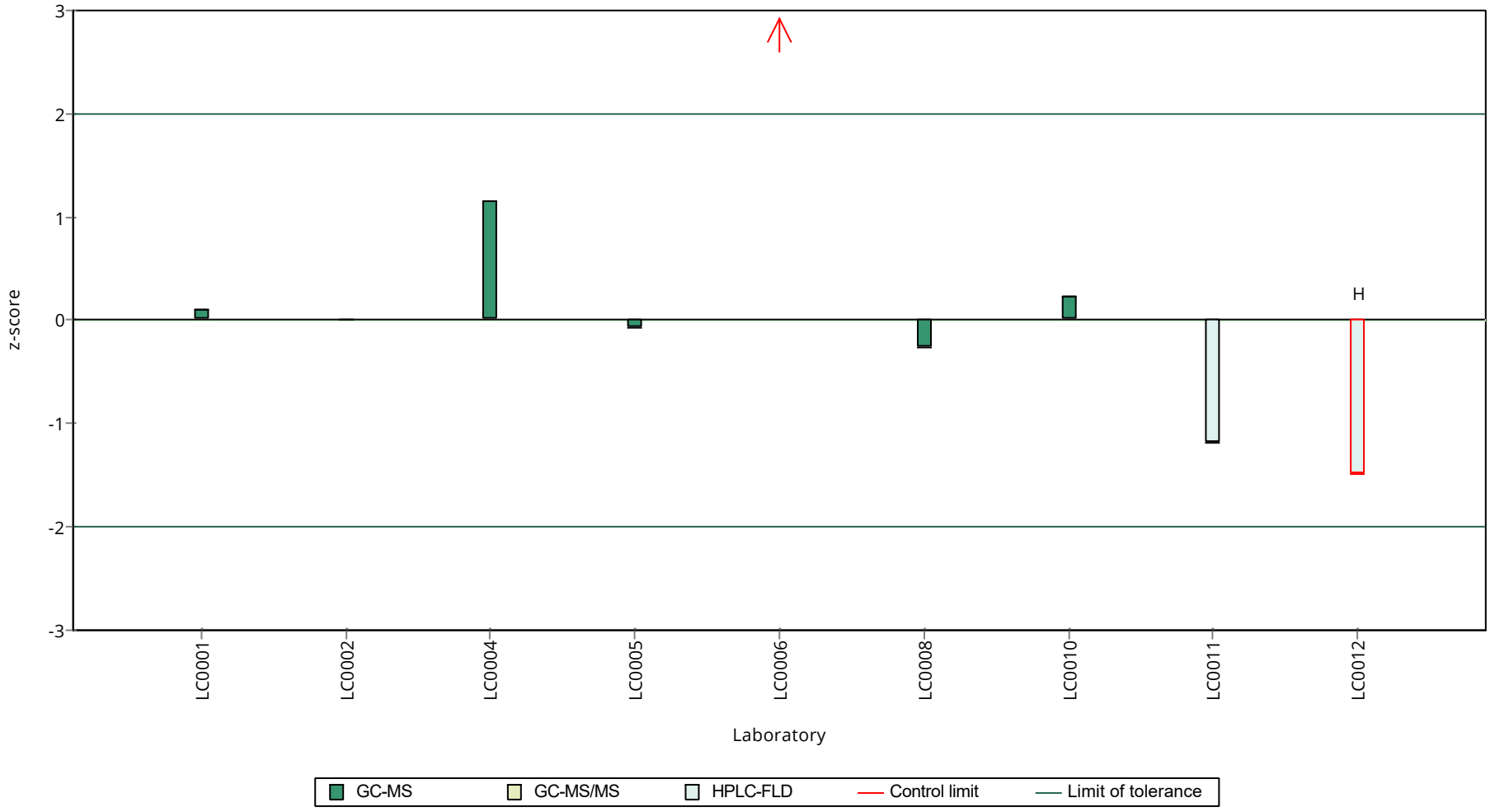
Results



Recovery rate



z-Score


3
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z-score
H
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Acenaphthylene

Unit	ng/l
Assigned value ± U (k=2)	251 ± 29.9
Criterion	60.1 (24 %)
Minimum - Maximum	182 - 314
Control test value ± U (k=2)	311 ± 93.2

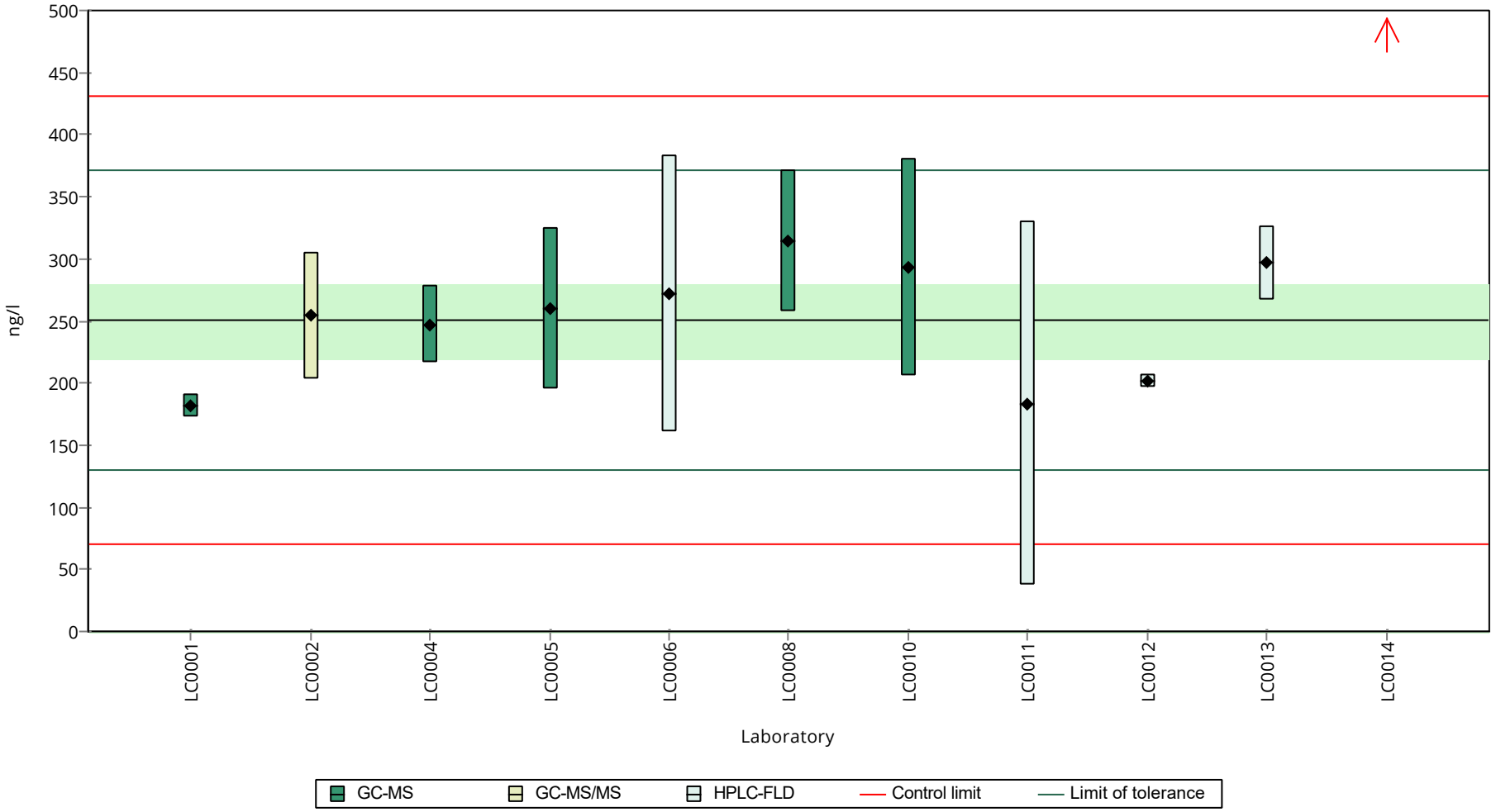
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	181.9 ± 9.1	72.6	-1.14	
LC0002	254 ± 51	101	0.06	
LC0004	247.29 ± 31.63	98.7	-0.05	
LC0005	260 ± 65	104	0.16	
LC0006	272.5 ± 111.4	109	0.37	
LC0007	- ± -	-	-	
LC0008	314 ± 57	125	1.06	
LC0009	- ± -	-	-	
LC0010	293.25 ± 87.98	117	0.71	
LC0011	183.6 ± 146.3	73.3	-1.11	
LC0012	202 ± 5.53	80.6	-0.81	
LC0013	296.6 ± 29.7	118	0.77	
LC0014	780 ± 78	311	8.81	H

Characteristics of parameter

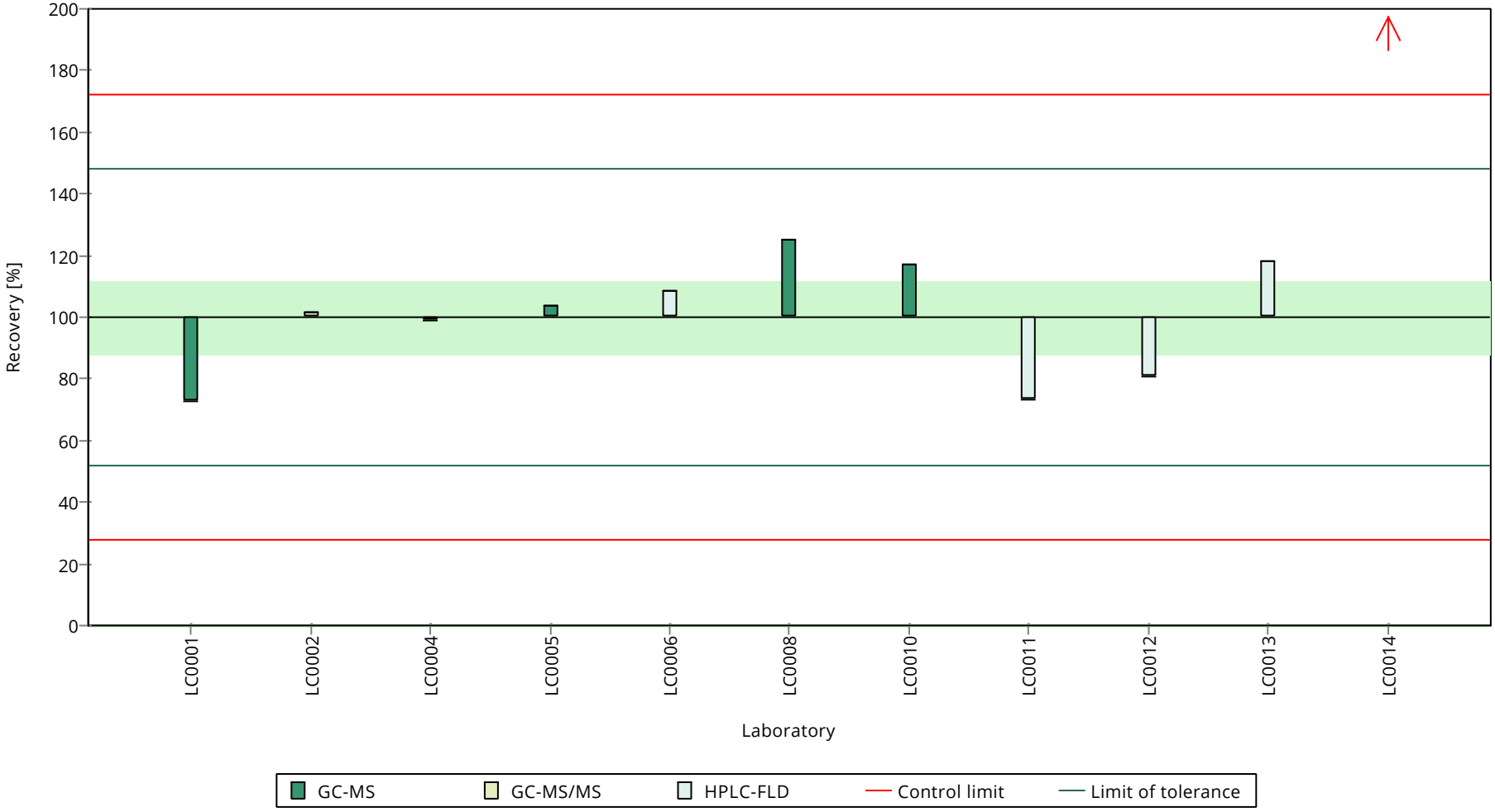
	all results	without outliers	Unit
Mean ± CI (99%)	299 ± 150	251 ± 44.9	ng/l
Minimum	182	182	ng/l
Maximum	780	314	ng/l
Standard deviation	166	47.3	ng/l
rel. standard deviation	55.5	18.9	%
n	11	10	-

Graphical presentation of results

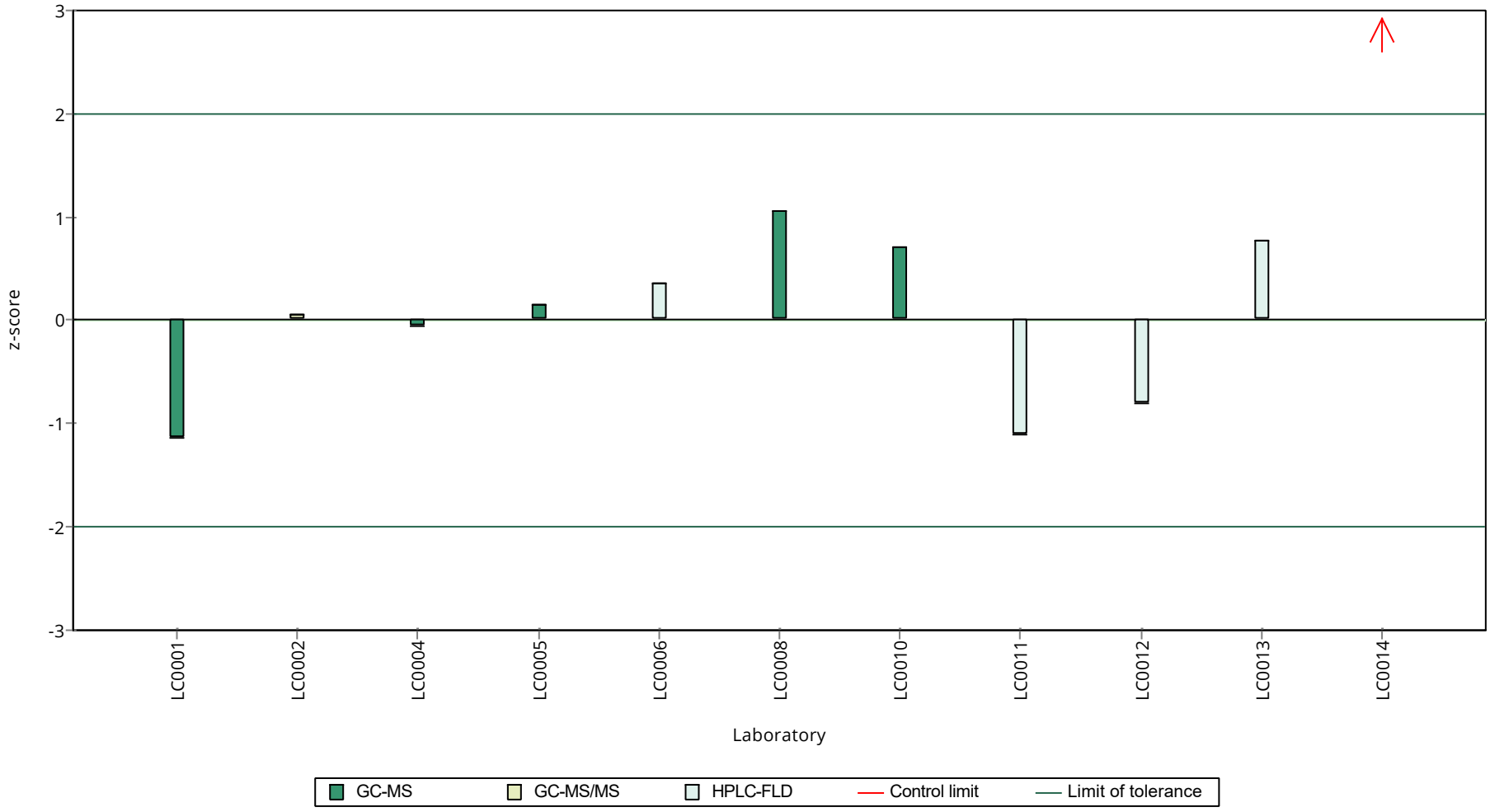
Results



Recovery rate



z-Score


3
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-1
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-3
z-score
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
LC0014
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Anthracene

Unit	ng/l
Assigned value ± U (k=2)	24.7 ± 2.33
Criterion	5.19 (21 %)
Minimum - Maximum	16.6 - 28.8
Control test value ± U (k=2)	25.2 ± 6.29

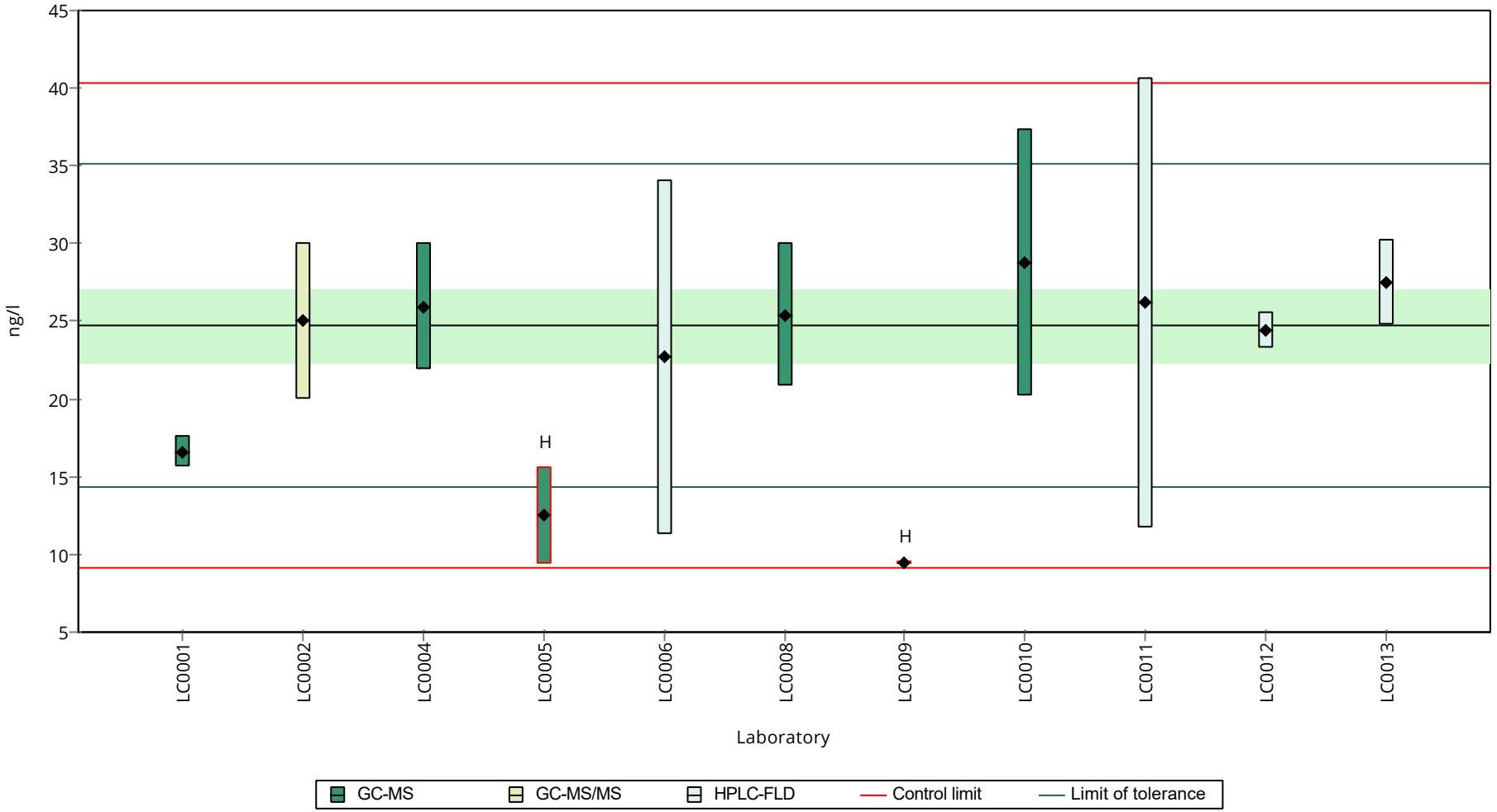
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	16.61 ± 1	67.2	-1.56	
LC0002	25 ± 5	101	0.05	
LC0004	25.92 ± 4.08	105	0.23	
LC0005	12.5 ± 3.14	50.6	-2.35	H
LC0006	22.7 ± 11.4	91.8	-0.39	
LC0007	- ± -	-	-	
LC0008	25.4 ± 4.6	103	0.13	
LC0009	9.483 ± 0.117	38.4	-2.94	H
LC0010	28.75 ± 8.63	116	0.78	
LC0011	26.2 ± 14.5	106	0.29	
LC0012	24.4 ± 1.16	98.7	-0.06	
LC0013	27.5 ± 2.8	111	0.54	
LC0014	- ± -	-	-	

Characteristics of parameter

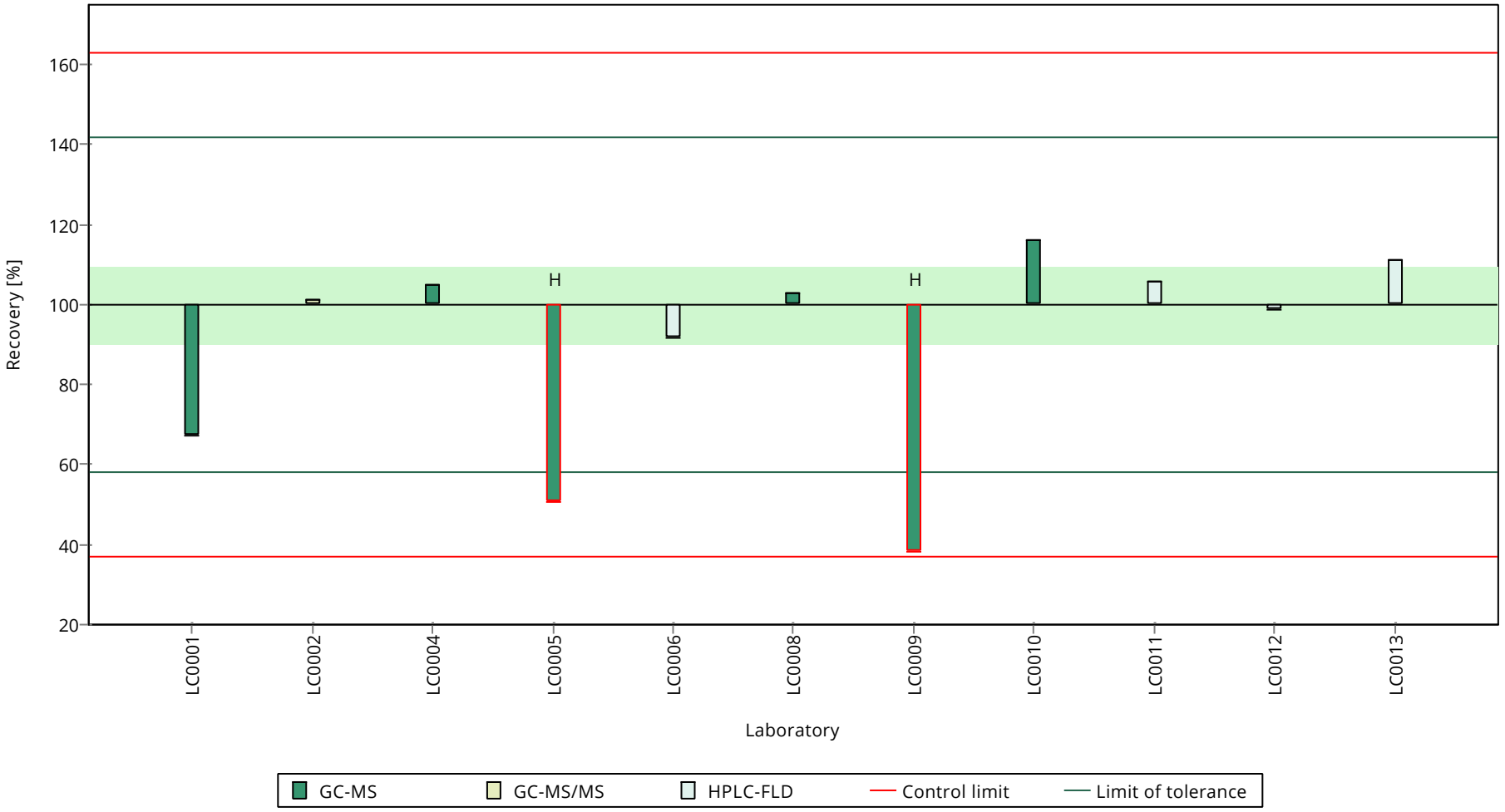
	all results	without outliers	Unit
Mean ± Cl (99%)	22.2 ± 5.8	24.7 ± 3.5	ng/l
Minimum	9.48	16.6	ng/l
Maximum	28.8	28.8	ng/l
Standard deviation	6.41	3.5	ng/l
rel. standard deviation	28.8	14.2	%
n	11	9	-

Graphical presentation of results

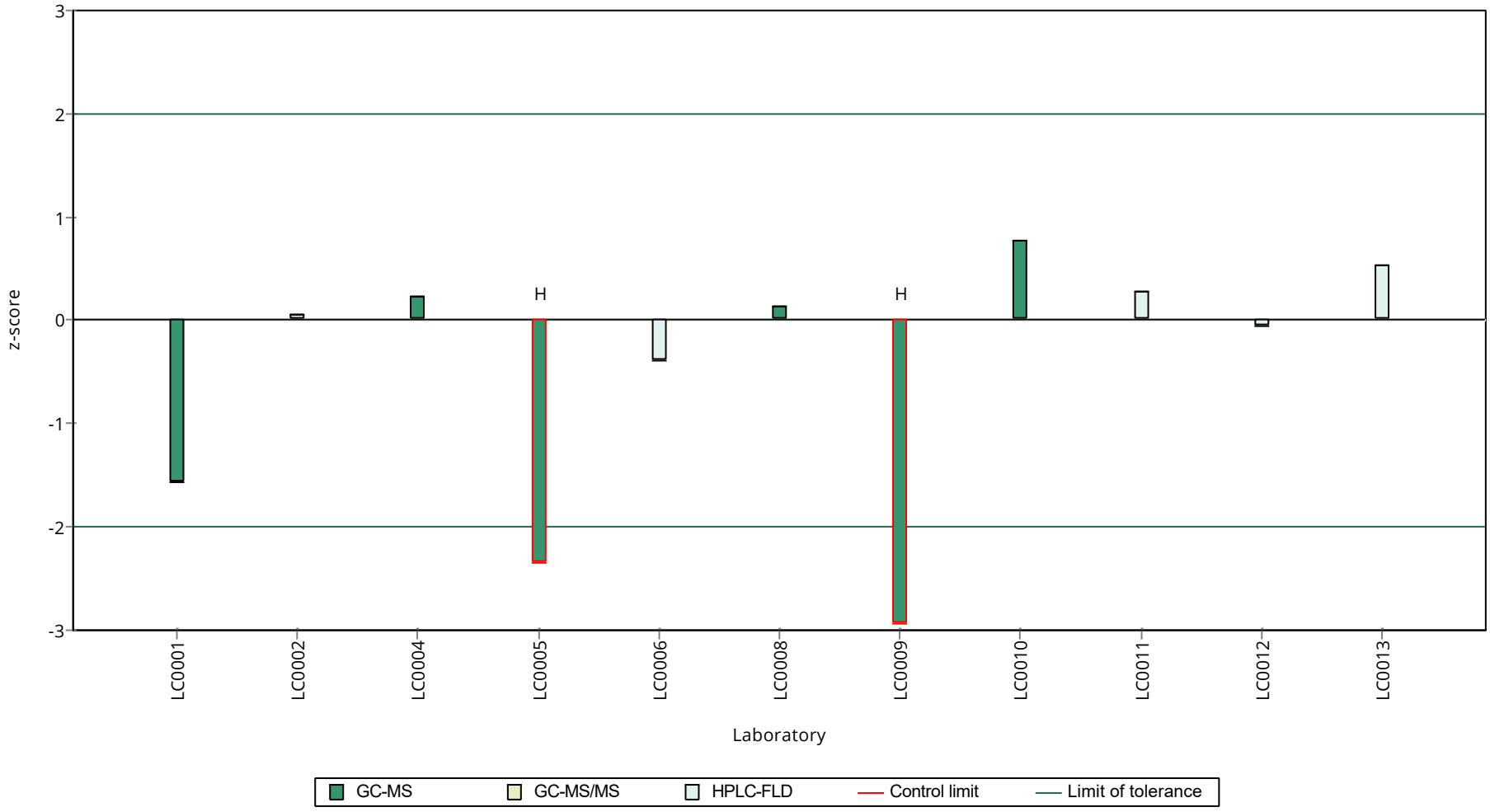
Results



Recovery rate



z-Score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z-score
H
H
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0009
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Anthracene

Unit	ng/l
Assigned value ± U (k=2)	355 ± 52.6
Criterion	74.6 (21 %)
Minimum - Maximum	236 - 486
Control test value ± U (k=2)	364 ± 91

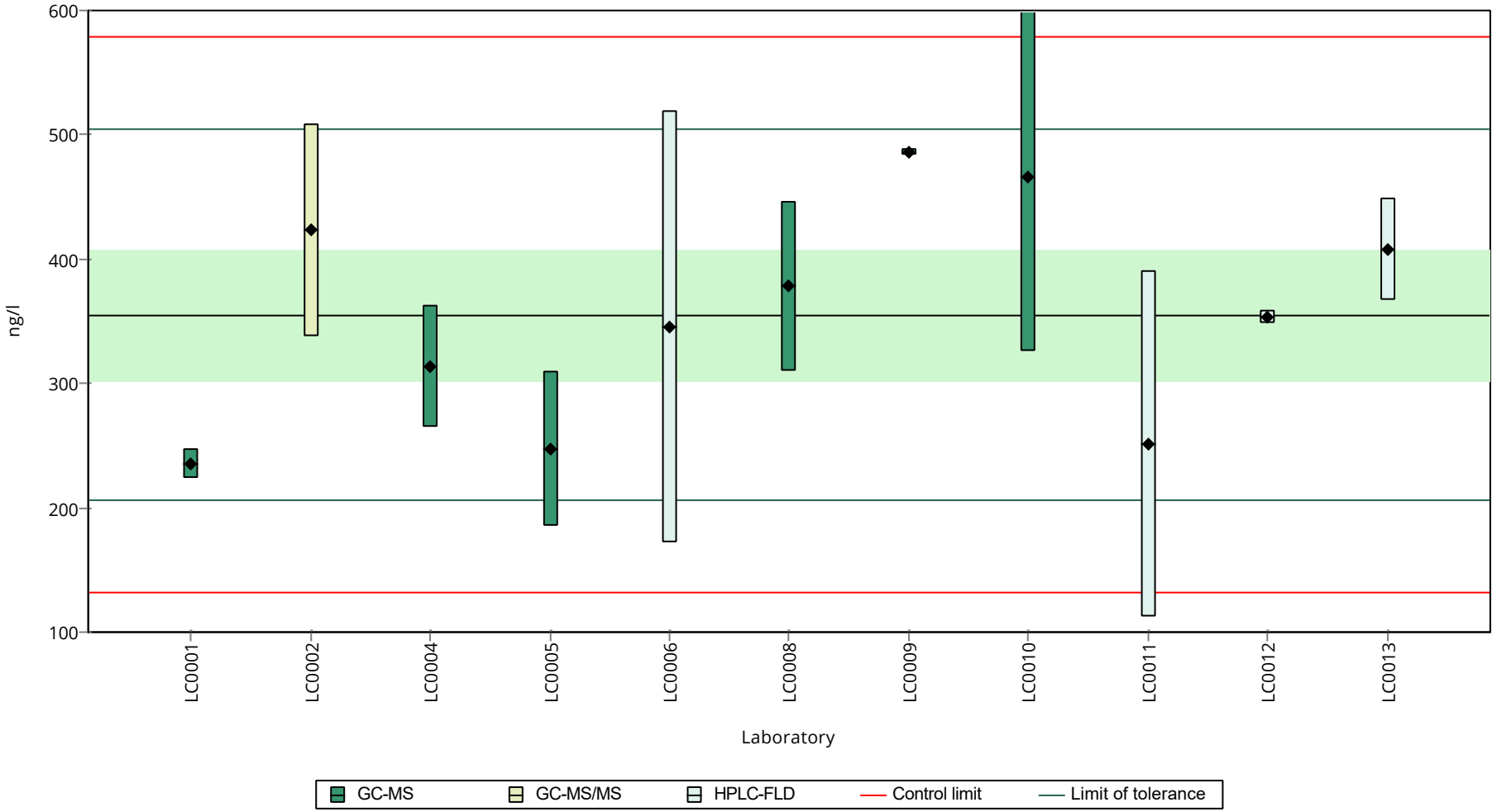
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	235.61 ± 11.78	66.4	-1.6	
LC0002	423 ± 85	119	0.91	
LC0004	313.19 ± 49.27	88.2	-0.56	
LC0005	247 ± 62	69.6	-1.45	
LC0006	345.3 ± 173.7	97.3	-0.13	
LC0007	- ± -	-	-	
LC0008	378 ± 68	106	0.31	
LC0009	486.06 ± 2.554	137	1.76	
LC0010	465.67 ± 139.7	131	1.48	
LC0011	250.9 ± 139.1	70.7	-1.4	
LC0012	353 ± 5.14	99.4	-0.03	
LC0013	407.6 ± 40.8	115	0.71	
LC0014	- ± -	-	-	

Characteristics of parameter

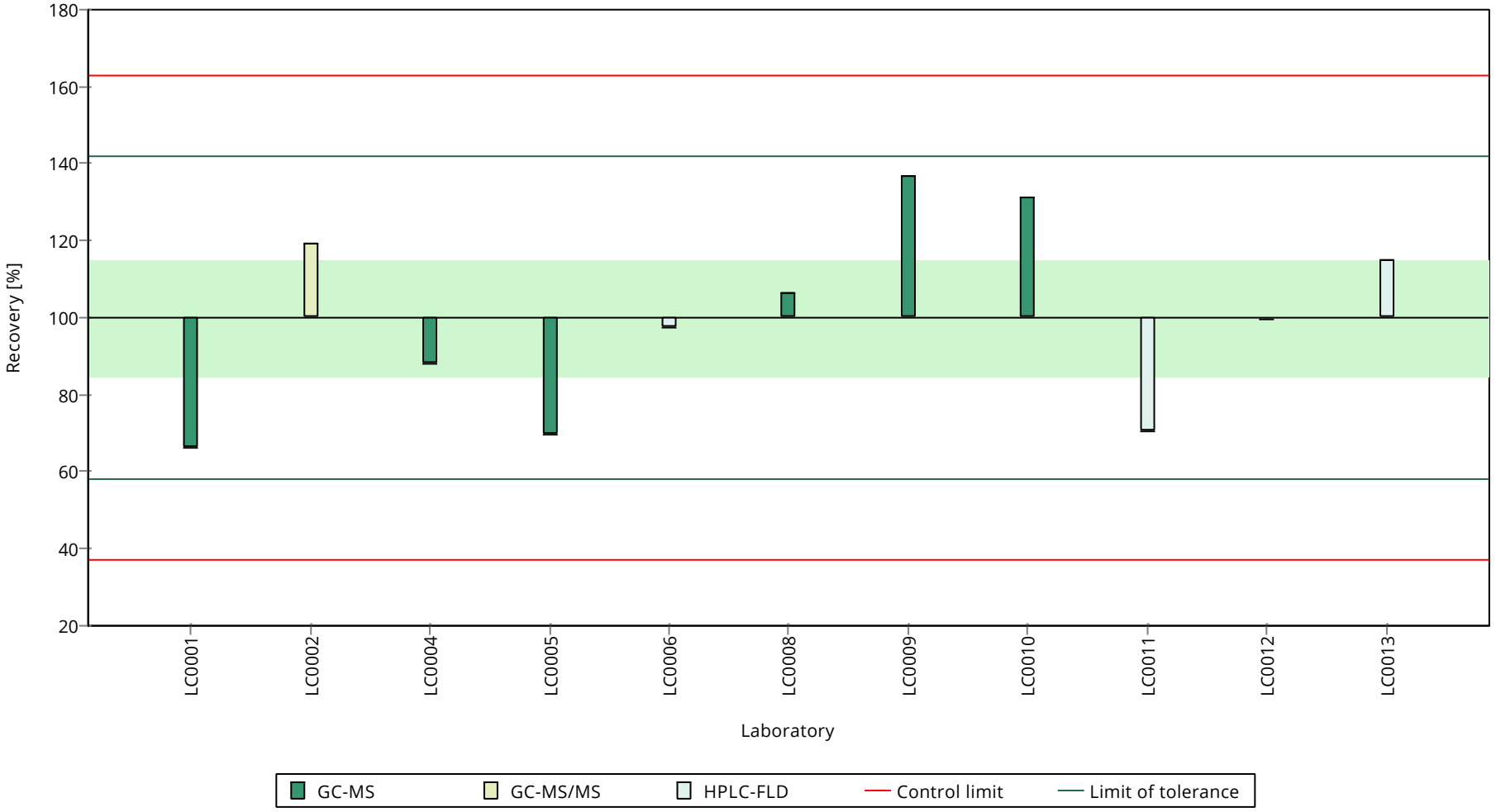
	all results	without outliers	Unit
Mean ± CI (99%)	355 ± 78.8	355 ± 78.8	ng/l
Minimum	236	236	ng/l
Maximum	486	486	ng/l
Standard deviation	87.1	87.1	ng/l
rel. standard deviation	24.5	24.5	%
n	11	11	-

Graphical presentation of results

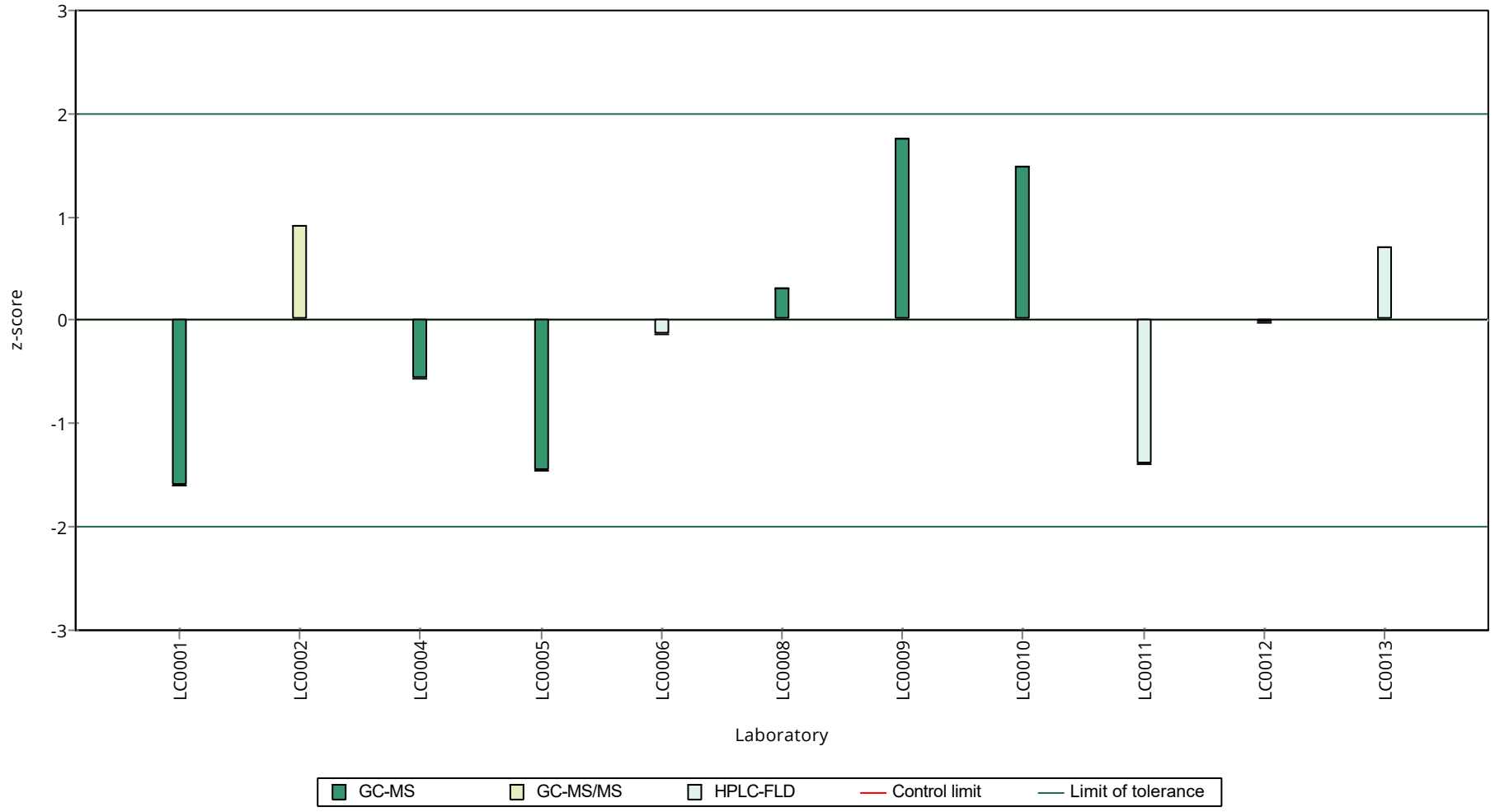
Results



Recovery rate



z-Score


3
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-1
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-3
z-score
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0009
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Benzo[a]anthracene

Unit	ng/l
Assigned value ± U (k=2)	22.5 ± 1.54
Criterion	4.72 (21 %)
Minimum - Maximum	18.5 - 25.9
Control test value ± U (k=2)	28.3 ± 7.06

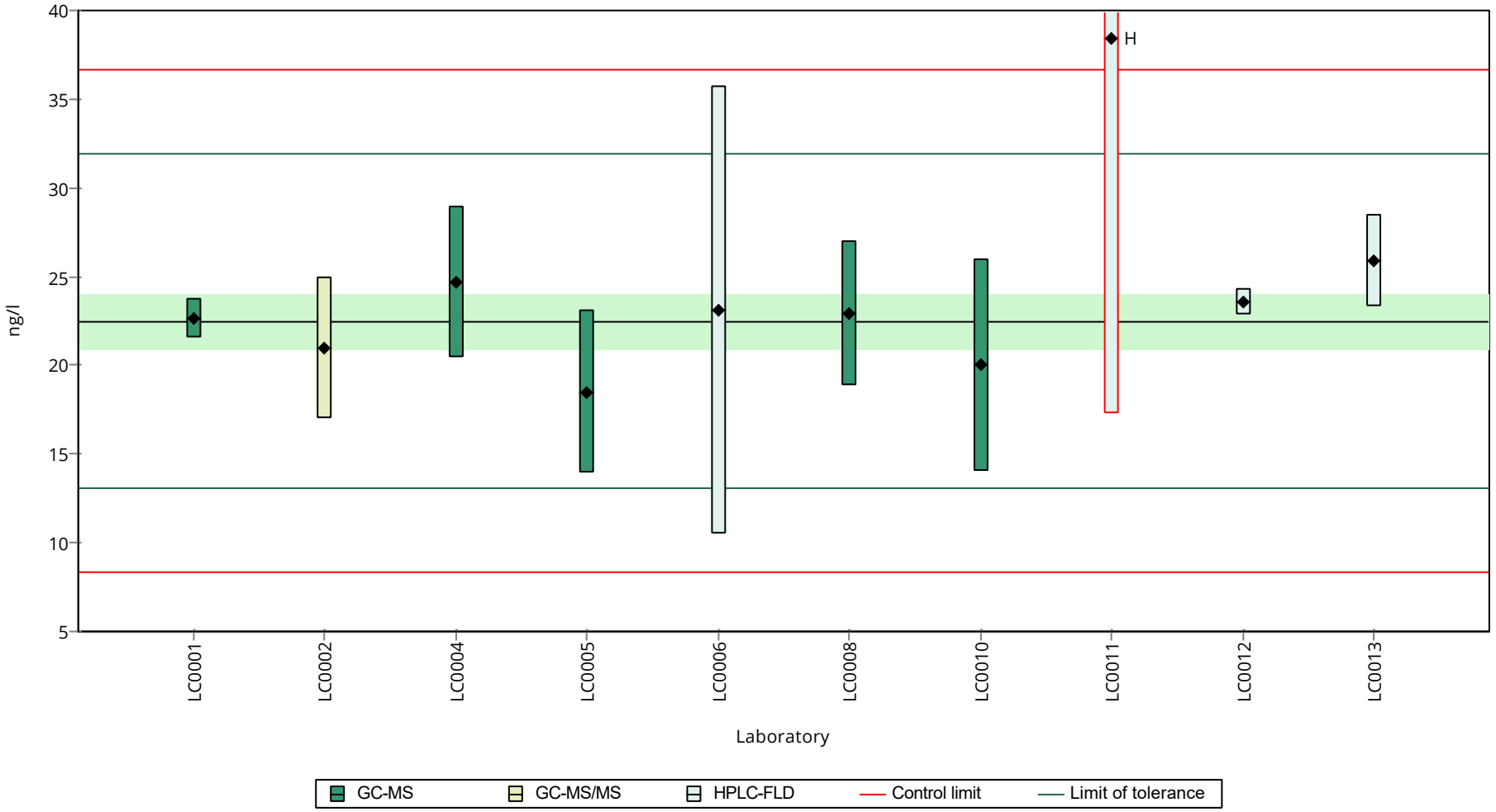
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	22.61 ± 1.13	101	0.03	
LC0002	21 ± 4	93.4	-0.31	
LC0004	24.68 ± 4.31	110	0.47	
LC0005	18.5 ± 4.63	82.3	-0.84	
LC0006	23.1 ± 12.6	103	0.13	
LC0007	- ± -	-	-	
LC0008	22.9 ± 4.1	102	0.09	
LC0009	- ± -	-	-	
LC0010	20 ± 6	89	-0.52	
LC0011	38.4 ± 21.1	171	3.37	H
LC0012	23.6 ± 0.731	105	0.24	
LC0013	25.9 ± 2.6	115	0.73	
LC0014	- ± -	-	-	

Characteristics of parameter

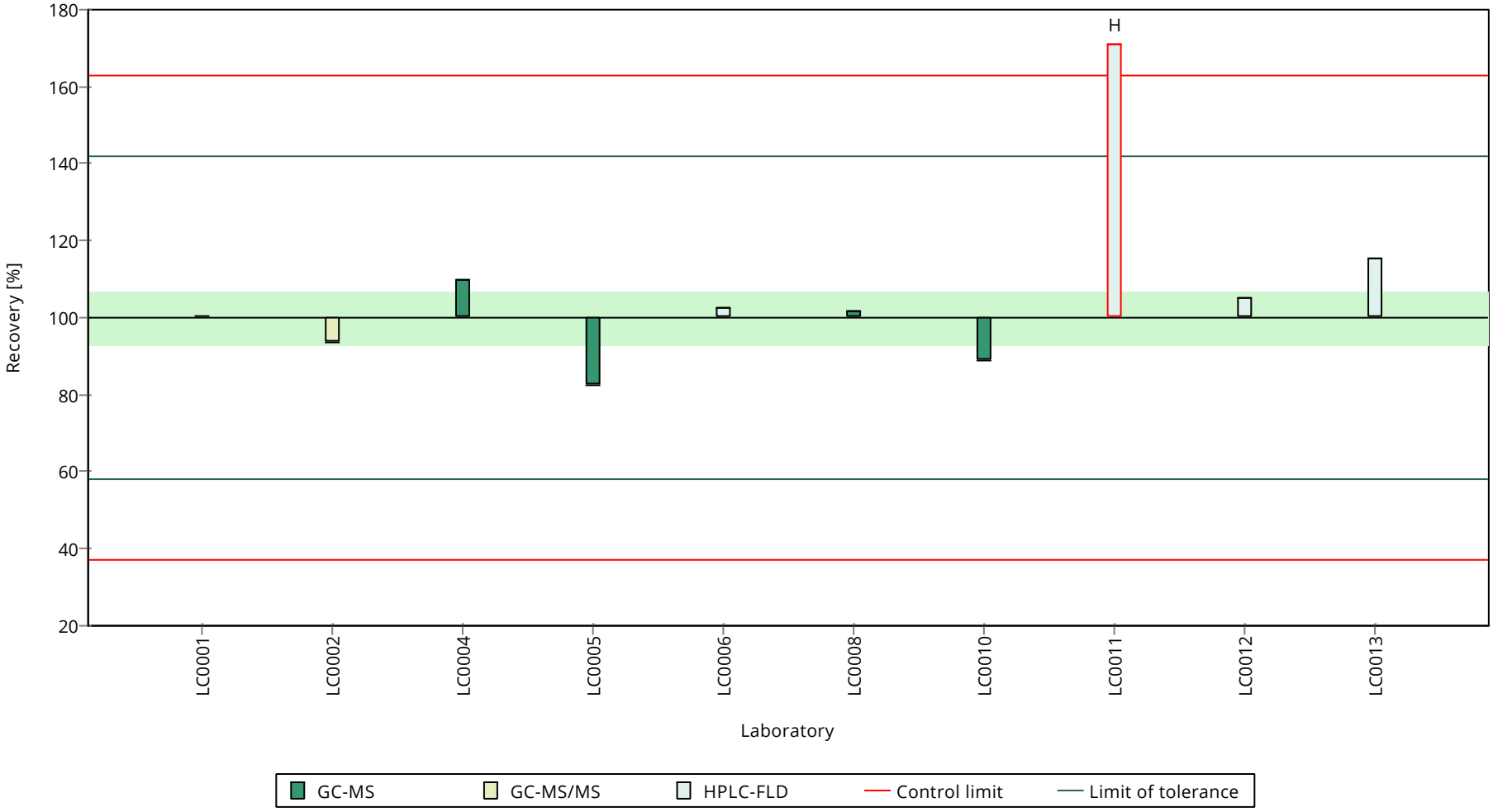
	all results	without outliers	Unit
Mean ± CI (99%)	24.1 ± 5.2	22.5 ± 2.31	ng/l
Minimum	18.5	18.5	ng/l
Maximum	38.4	25.9	ng/l
Standard deviation	5.48	2.31	ng/l
rel. standard deviation	22.8	10.3	%
n	10	9	-

Graphical presentation of results

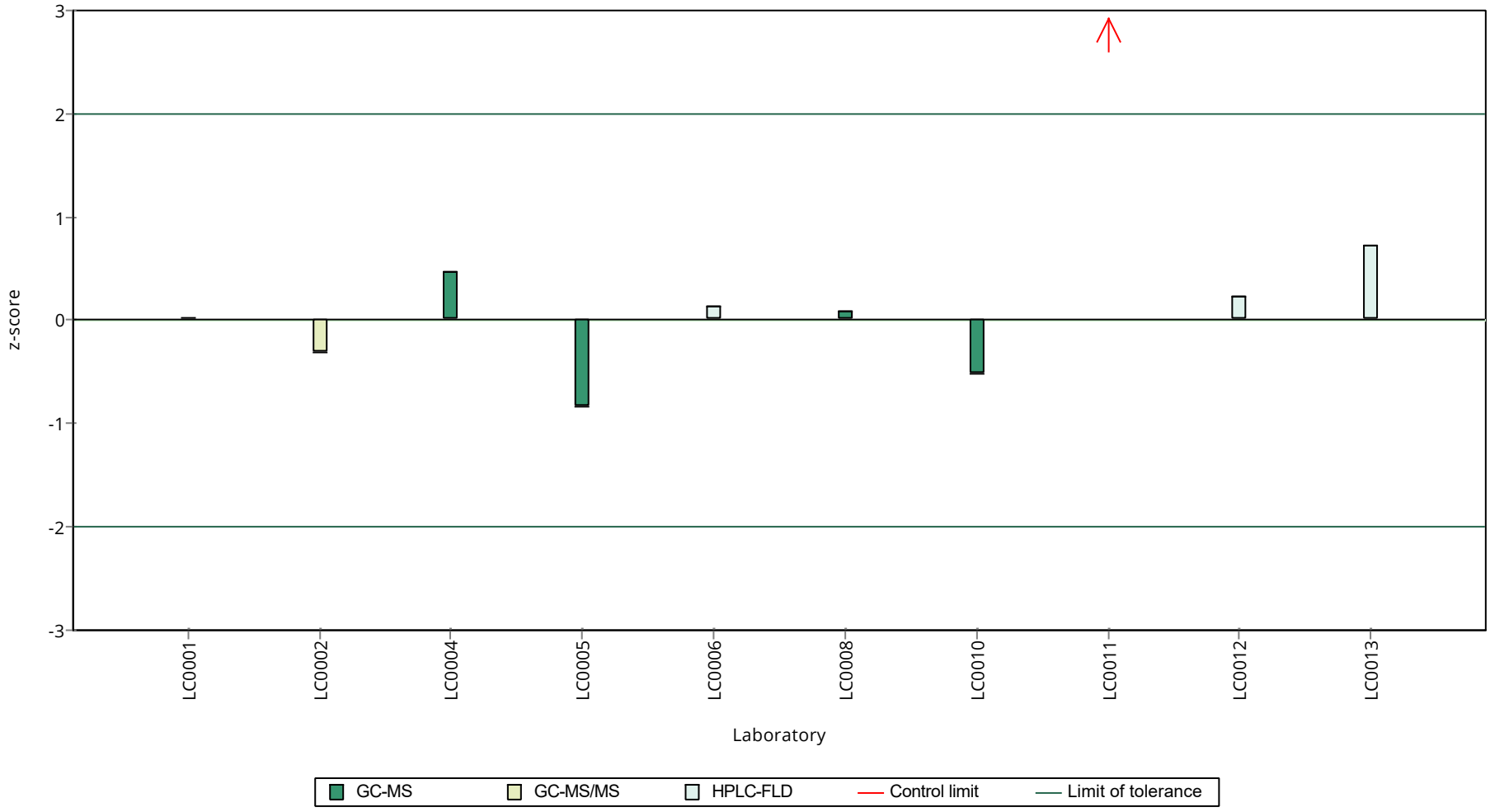
Results



Recovery rate



z-Score


3
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-2
-3
z-score
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Benzo[a]anthracene

Unit	ng/l
Assigned value ± U (k=2)	313 ± 30.1
Criterion	65.8 (21 %)
Minimum - Maximum	235 - 381
Control test value ± U (k=2)	373 ± 93.3

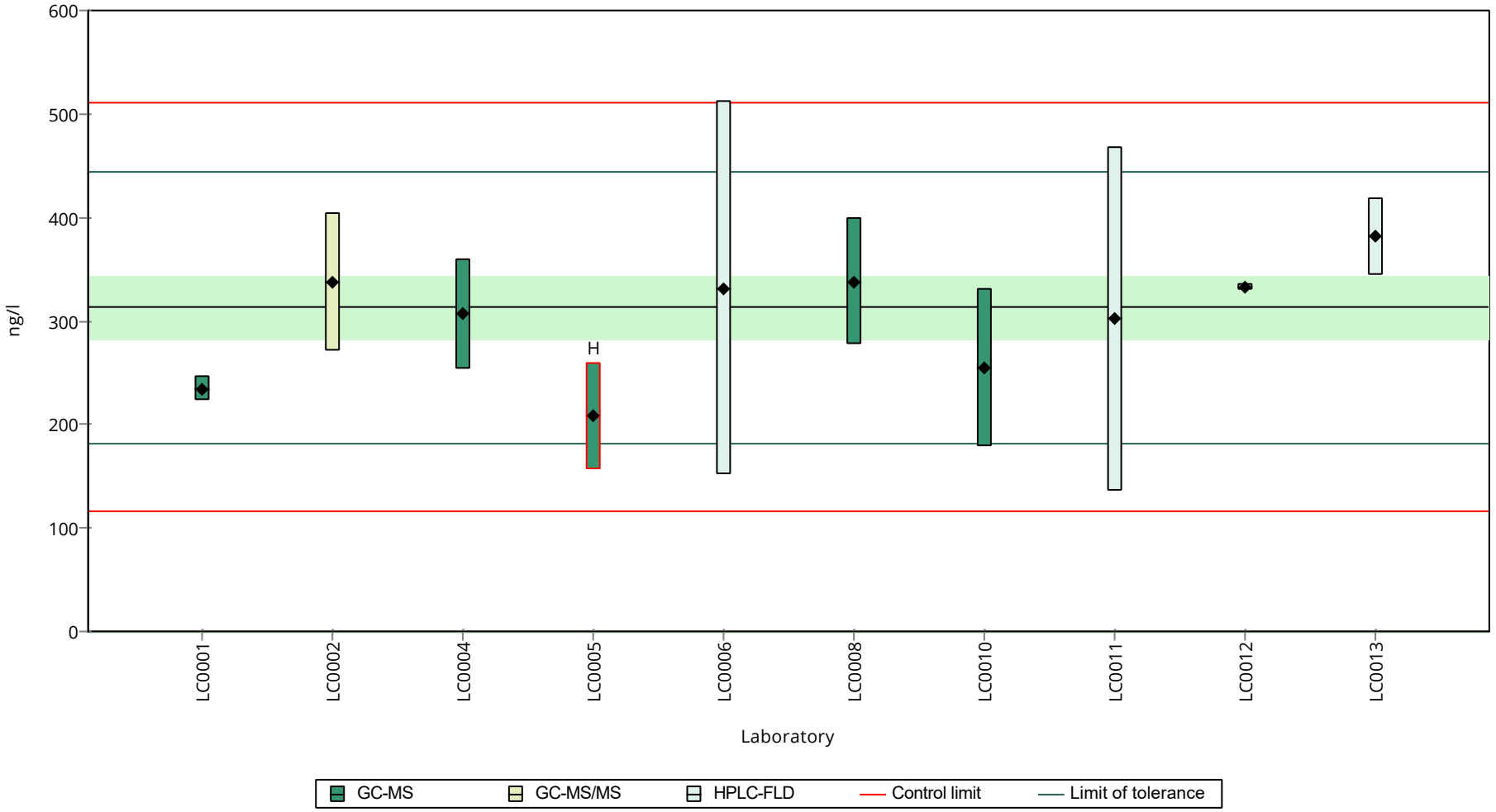
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	234.59 ± 11.73	74.9	-1.19	
LC0002	337 ± 67	108	0.36	
LC0004	306.73 ± 53.53	98	-0.1	
LC0005	208 ± 52	66.4	-1.6	H
LC0006	331.3 ± 180.6	106	0.28	
LC0007	- ± -	-	-	
LC0008	338 ± 61	108	0.38	
LC0009	- ± -	-	-	
LC0010	254.25 ± 76.28	81.2	-0.9	
LC0011	301.8 ± 166	96.4	-0.17	
LC0012	333 ± 3.25	106	0.3	
LC0013	381.2 ± 38.1	122	1.04	
LC0014	- ± -	-	-	

Characteristics of parameter

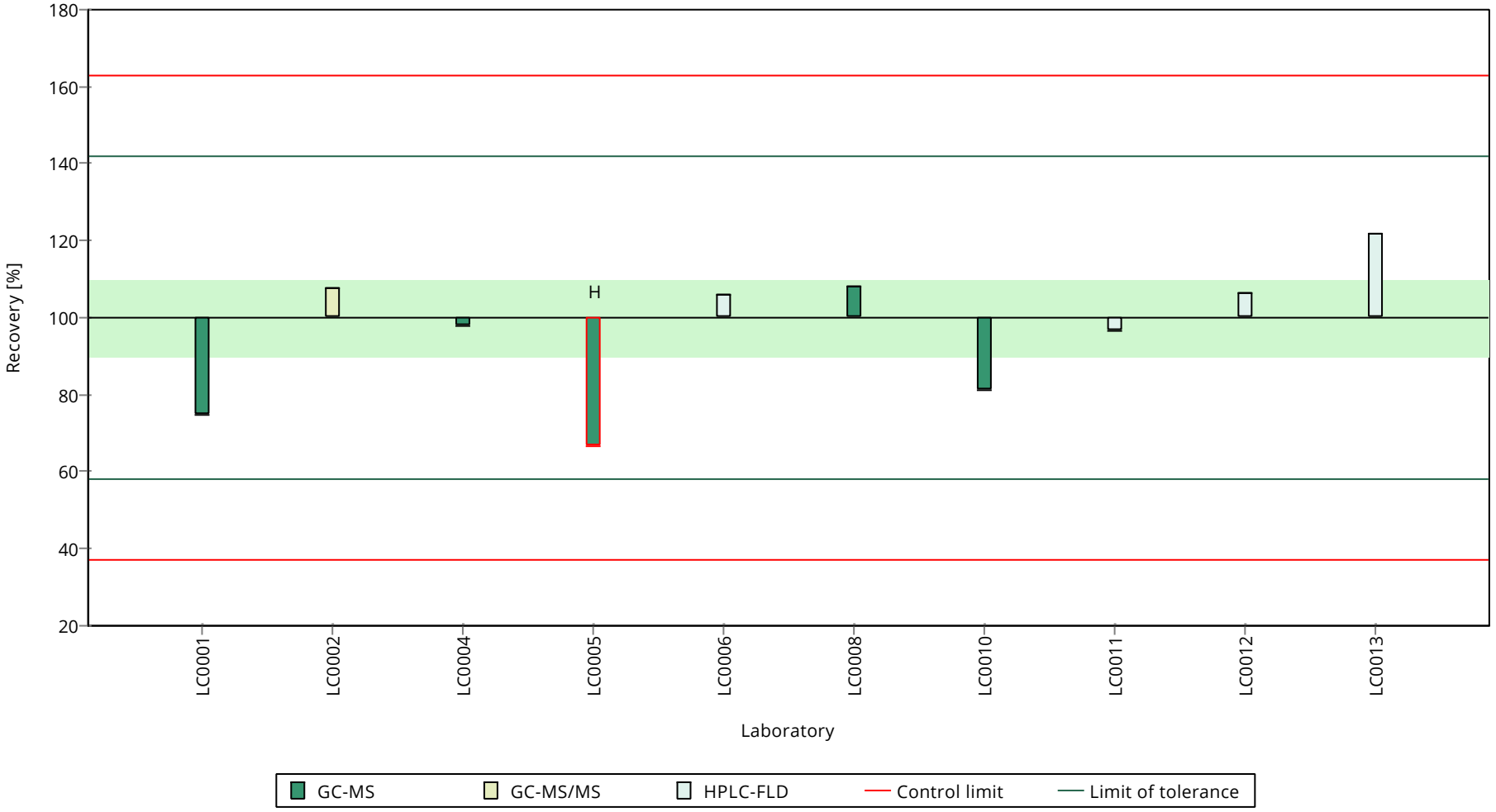
	all results	without outliers	Unit
Mean ± CI (99%)	303 ± 51.3	313 ± 45.2	ng/l
Minimum	208	235	ng/l
Maximum	381	381	ng/l
Standard deviation	54	45.2	ng/l
rel. standard deviation	17.9	14.4	%
n	10	9	-

Graphical presentation of results

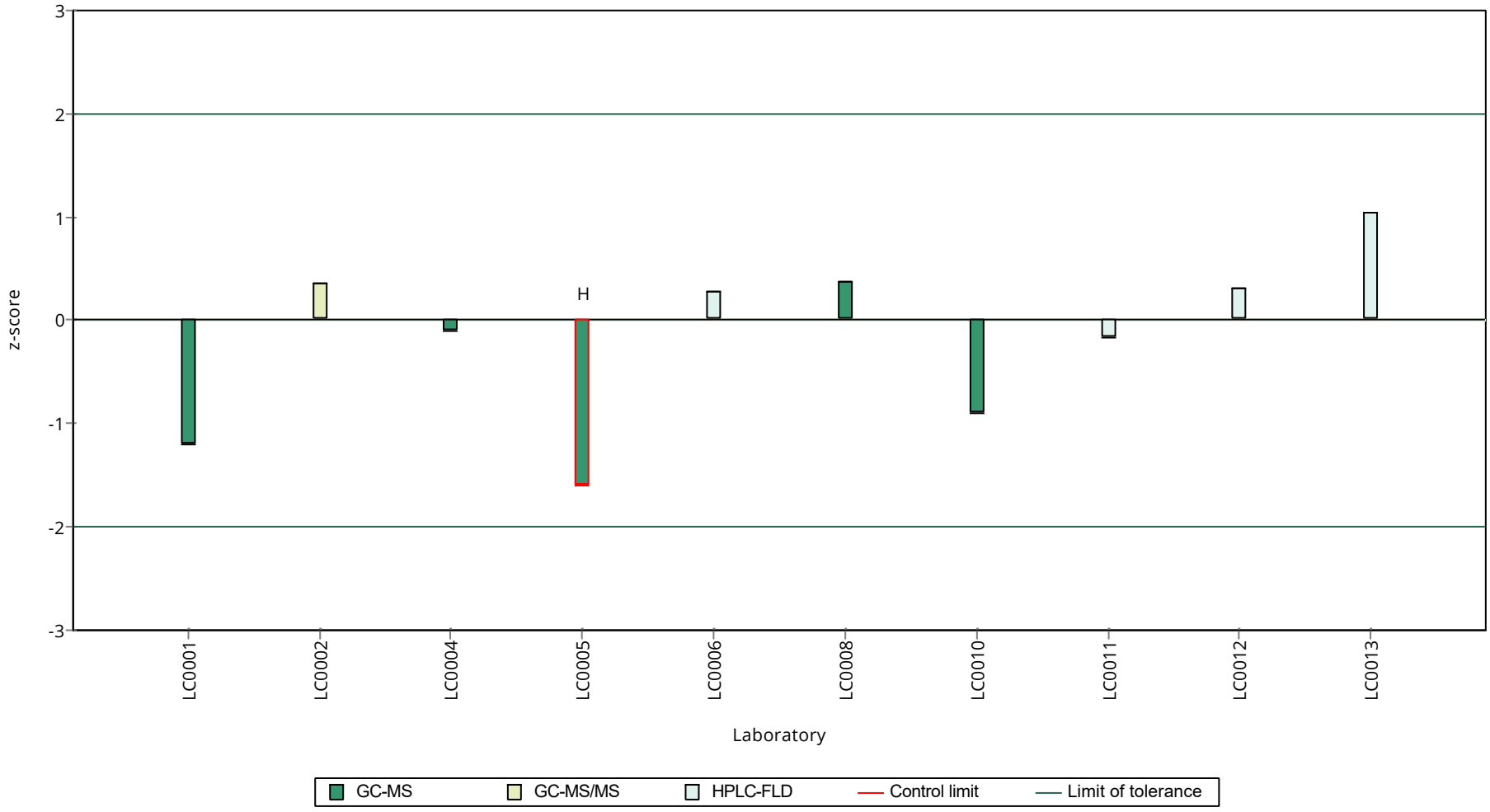
Results



Recovery rate



z-Score


3
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-1
-2
-3
z-score
H
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Benzo[a]pyrene

Unit	ng/l
Assigned value ± U (k=2)	22.3 ± 6.03
Criterion	10 (45 %)
Minimum - Maximum	9.5 - 42.3
Control test value ± U (k=2)	29.7 ± 10.4

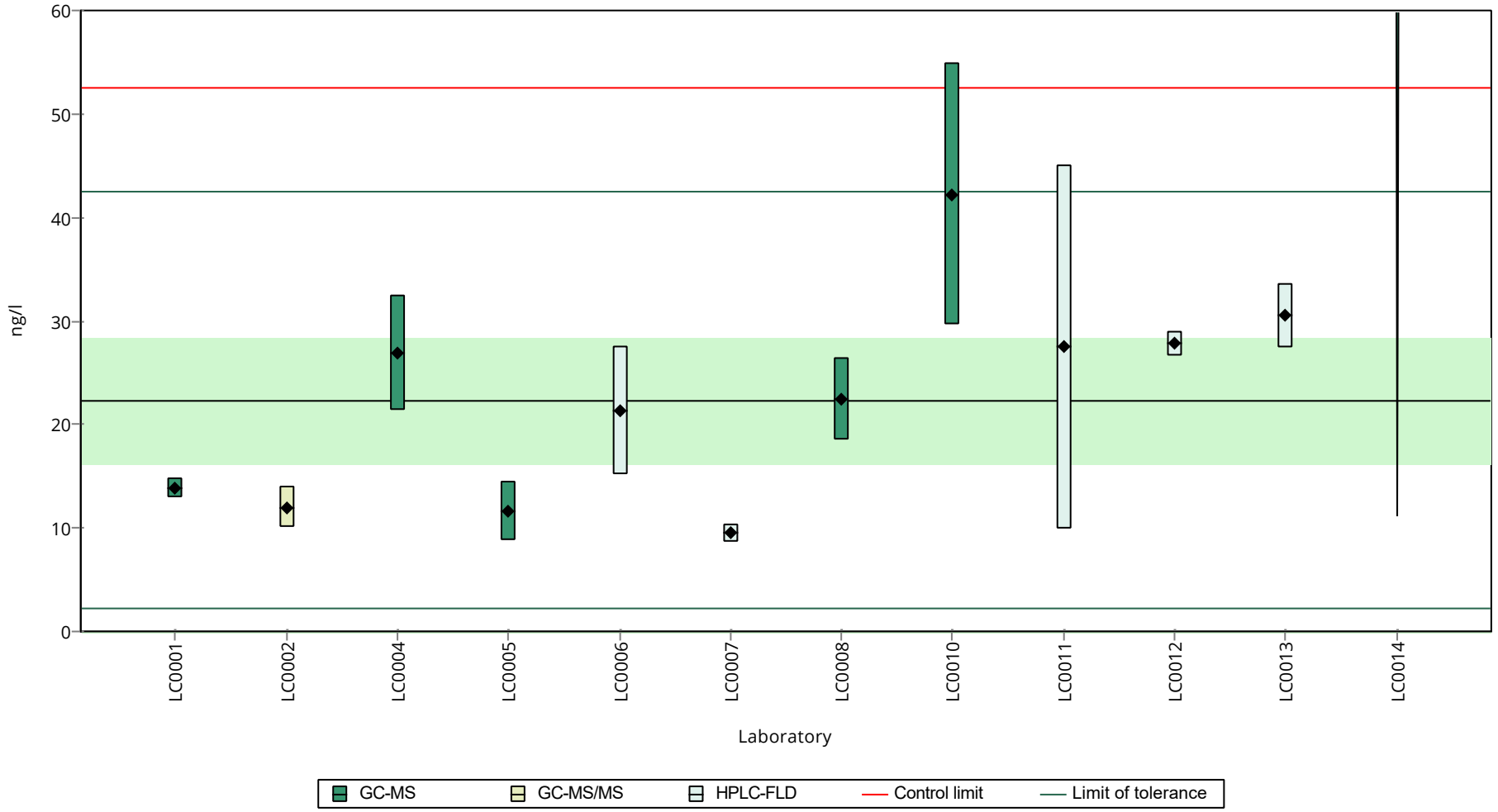
Labcode	Result	±	U	Recovery [%]	z-Score	Comments
LC0001	13.83	±	1	61.9	-0.85	
LC0002	12	±	2	53.7	-1.03	
LC0004	26.93	±	5.54	121	0.46	
LC0005	11.6	±	2.91	52	-1.07	
LC0006	21.3	±	6.2	95.4	-0.1	
LC0007	9.5	±	0.9	42.5	-1.28	
LC0008	22.4	±	4	100	0.01	
LC0009	-	±	-	-	-	
LC0010	42.25	±	12.68	189	1.98	
LC0011	27.5	±	17.6	123	0.51	
LC0012	27.8	±	1.16	125	0.54	
LC0013	30.5	±	3.1	137	0.81	
LC0014	< 200 (LOQ)	±	-	-	-	

Characteristics of parameter

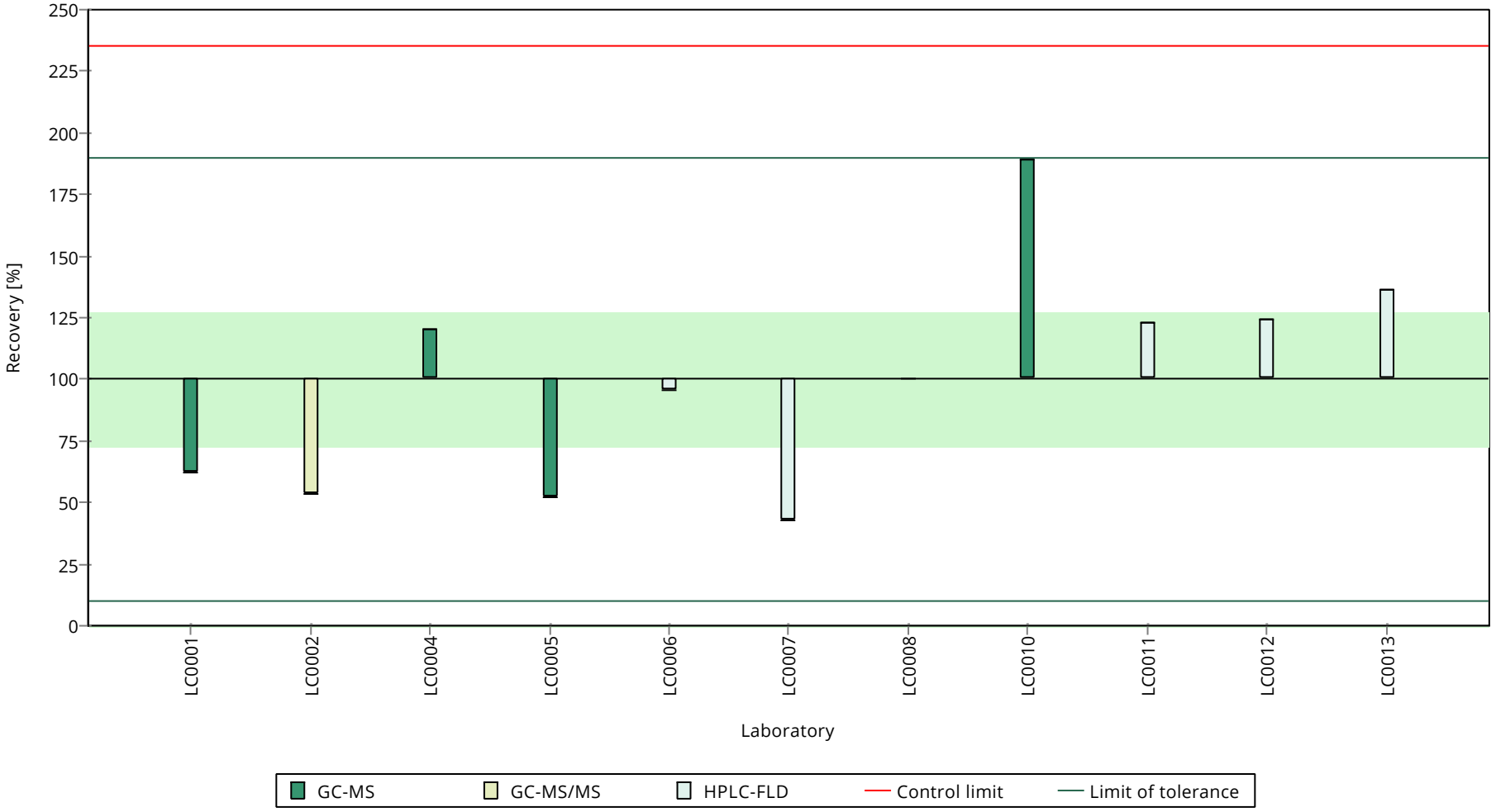
	all results	without outliers	Unit
Mean ± CI (99%)	22.3 ± 9.05	22.3 ± 9.05	ng/l
Minimum	9.5	9.5	ng/l
Maximum	42.3	42.3	ng/l
Standard deviation	10	10	ng/l
rel. standard deviation	44.8	44.8	%
n	11	11	-

Graphical presentation of results

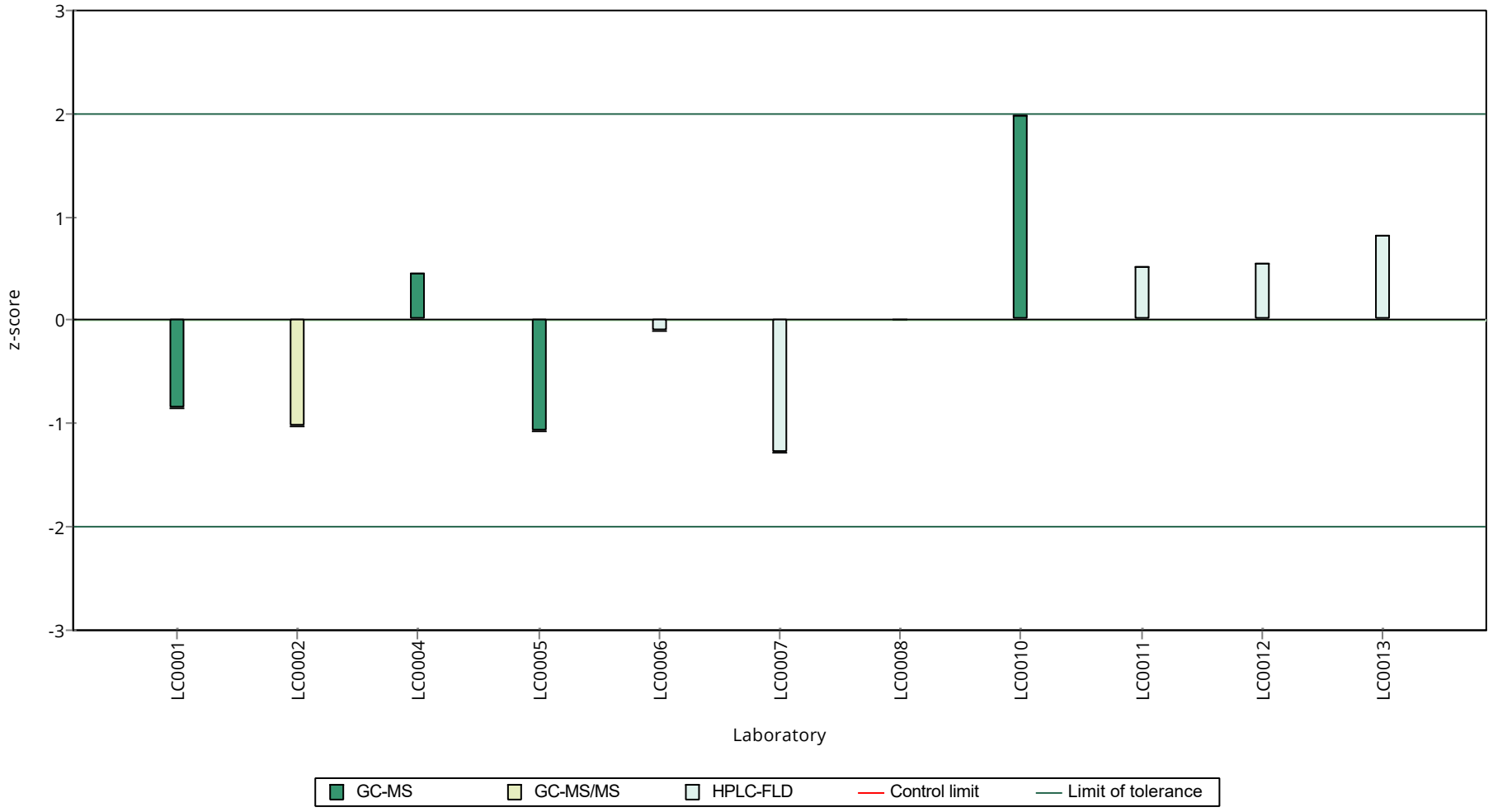
Results



Recovery rate



z-Score


3
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z-score
LC0001
LC0002
LC0004
LC0005
LC0006
LC0007
LC0008
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Benzo[a]pyrene

Unit	ng/l
Assigned value ± U (k=2)	249 ± 47.7
Criterion	87.1 (35 %)
Minimum - Maximum	92.8 - 400
Control test value ± U (k=2)	312 ± 109

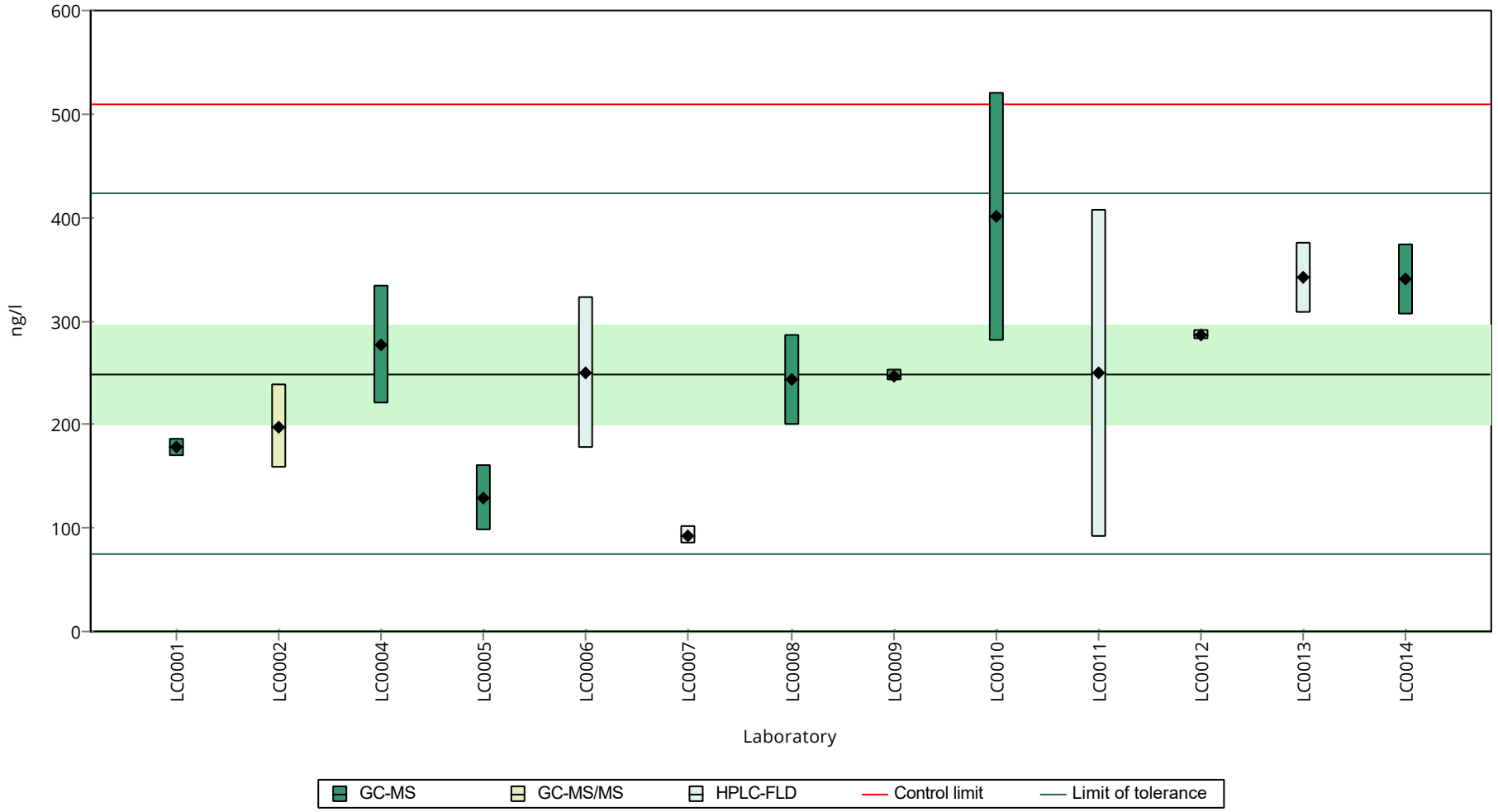
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	178.04 ± 8.9	71.6	-0.81	
LC0002	198 ± 40	79.6	-0.58	
LC0004	277.48 ± 57.07	112	0.33	
LC0005	129 ± 32	51.9	-1.38	
LC0006	250.1 ± 73.6	101	0.02	
LC0007	92.8 ± 8.4	37.3	-1.79	
LC0008	243 ± 44	97.7	-0.07	
LC0009	247.051 ± 5.526	99.3	-0.02	
LC0010	400.33 ± 120.1	161	1.74	
LC0011	249.1 ± 159	100	0.00	
LC0012	287 ± 4.91	115	0.44	
LC0013	342.1 ± 34.2	138	1.07	
LC0014	340 ± 34	137	1.05	

Characteristics of parameter

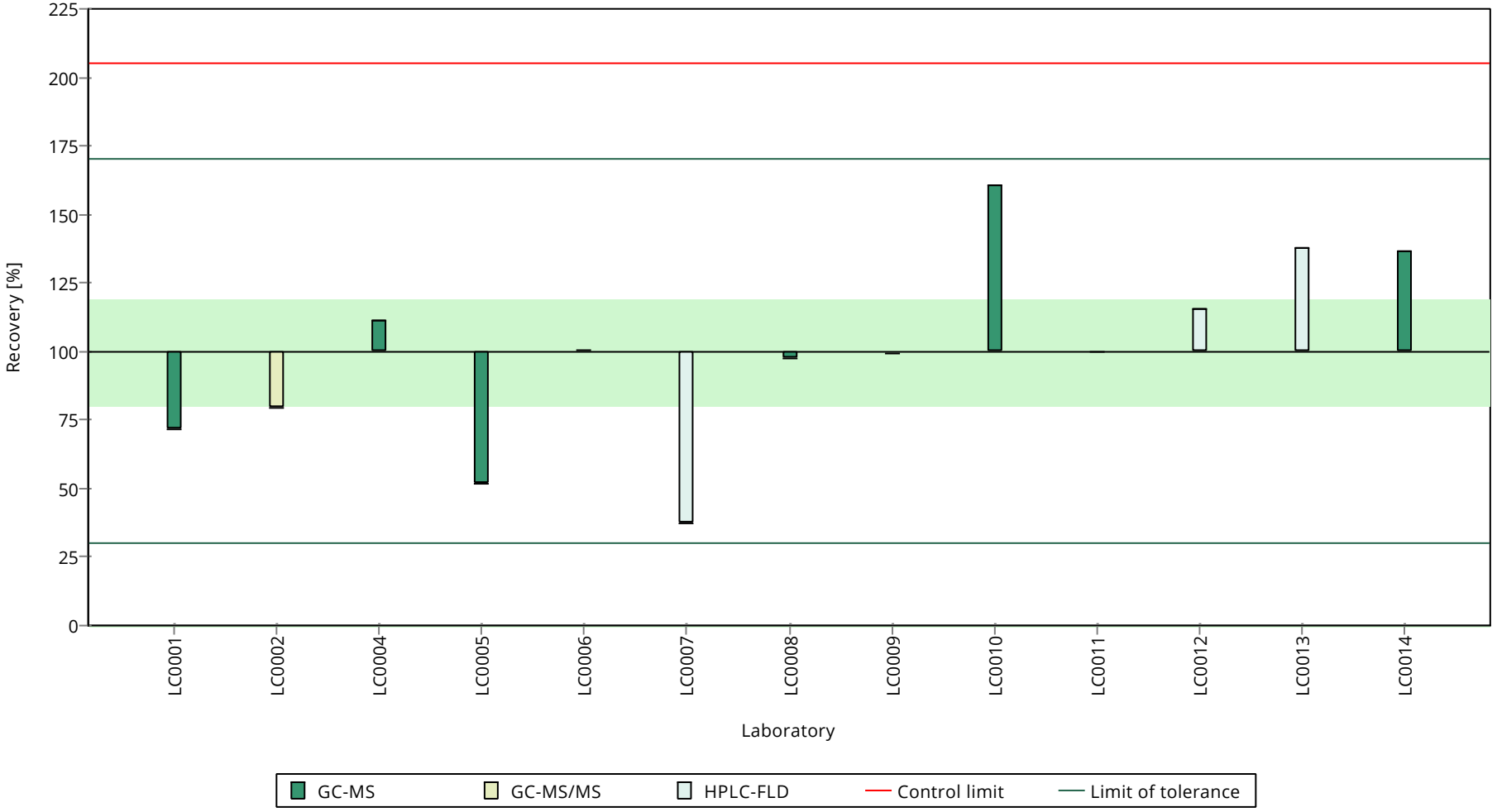
	all results	without outliers	Unit
Mean ± CI (99%)	249 ± 71.5	249 ± 71.5	ng/l
Minimum	92.8	92.8	ng/l
Maximum	400	400	ng/l
Standard deviation	85.9	85.9	ng/l
rel. standard deviation	34.5	34.5	%
n	13	13	-

Graphical presentation of results

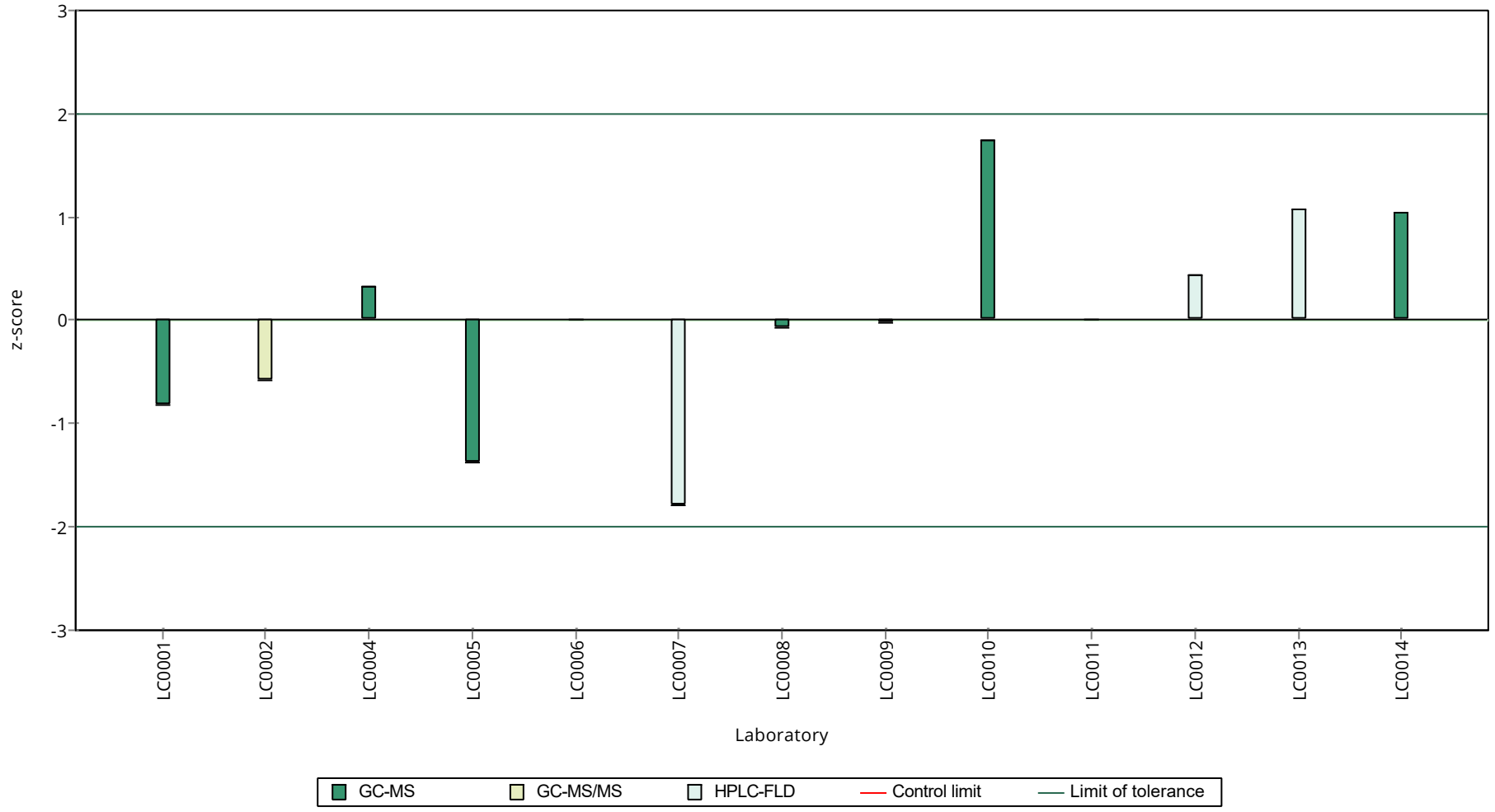
Results



Recovery rate



z-Score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z-score
LC0001
LC0002
LC0004
LC0005
LC0006
LC0007
LC0008
LC0009
LC0010
LC0011
LC0012
LC0013
LC0014
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Benzo[b]fluoranthene

Unit	ng/l
Assigned value ± U (k=2)	27.8 ± 0.891
Criterion	4.72 (17 %)
Minimum - Maximum	25.8 - 29
Control test value ± U (k=2)	32.0 ± 8

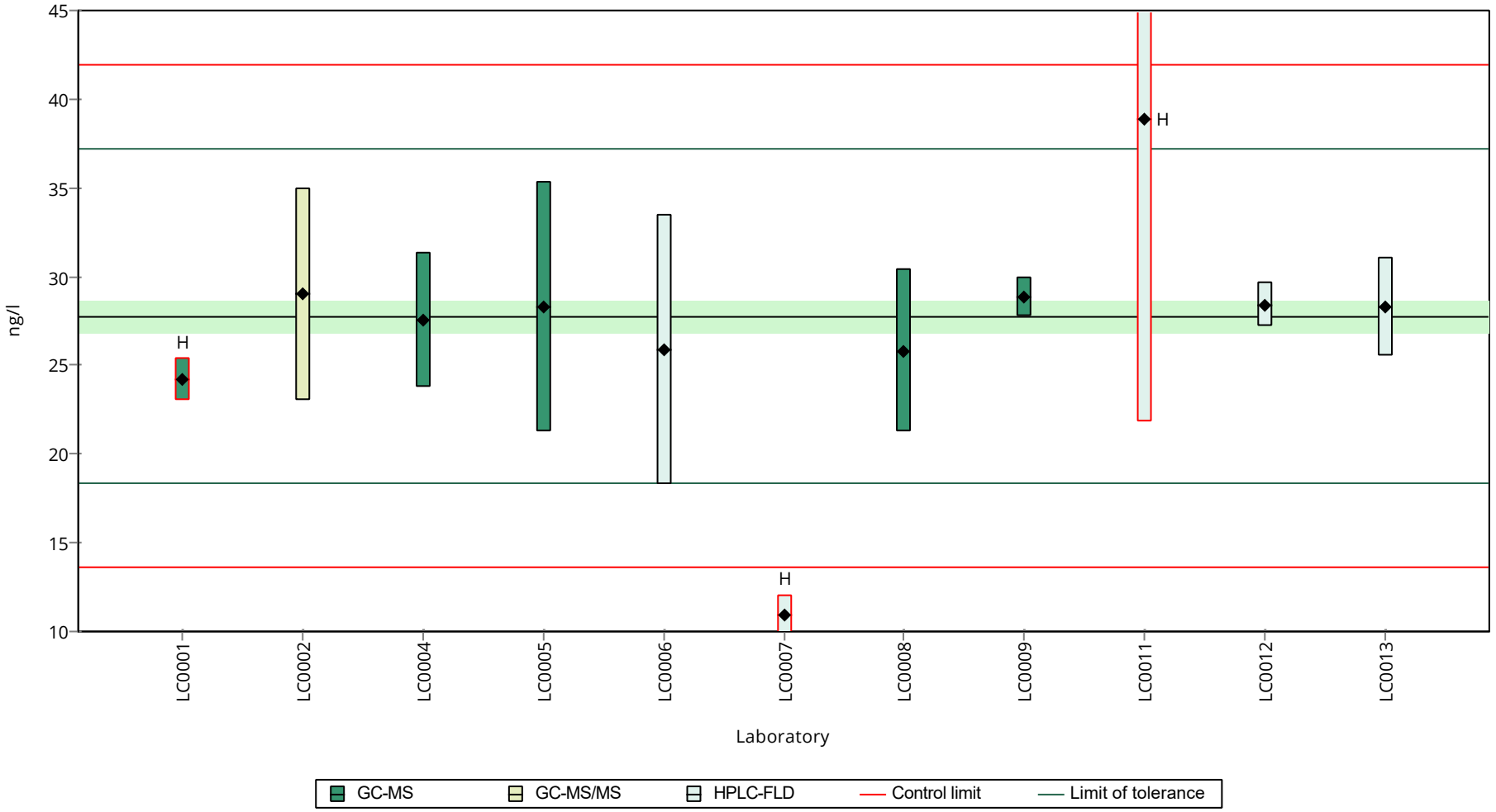
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	24.2 ± 1.21	87.2	-0.75	H
LC0002	29 ± 6	104	0.26	
LC0004	27.53 ± 3.8	99.2	-0.05	
LC0005	28.3 ± 7.08	102	0.11	
LC0006	25.9 ± 7.6	93.3	-0.39	
LC0007	10.9 ± 1.1	39.3	-3.57	H
LC0008	25.8 ± 4.6	92.9	-0.42	
LC0009	28.865 ± 1.139	104	0.23	
LC0010	- ± -	-	-	
LC0011	38.9 ± 17.1	140	2.36	H
LC0012	28.4 ± 1.26	102	0.14	
LC0013	28.3 ± 2.8	102	0.11	
LC0014	- ± -	-	-	

Characteristics of parameter

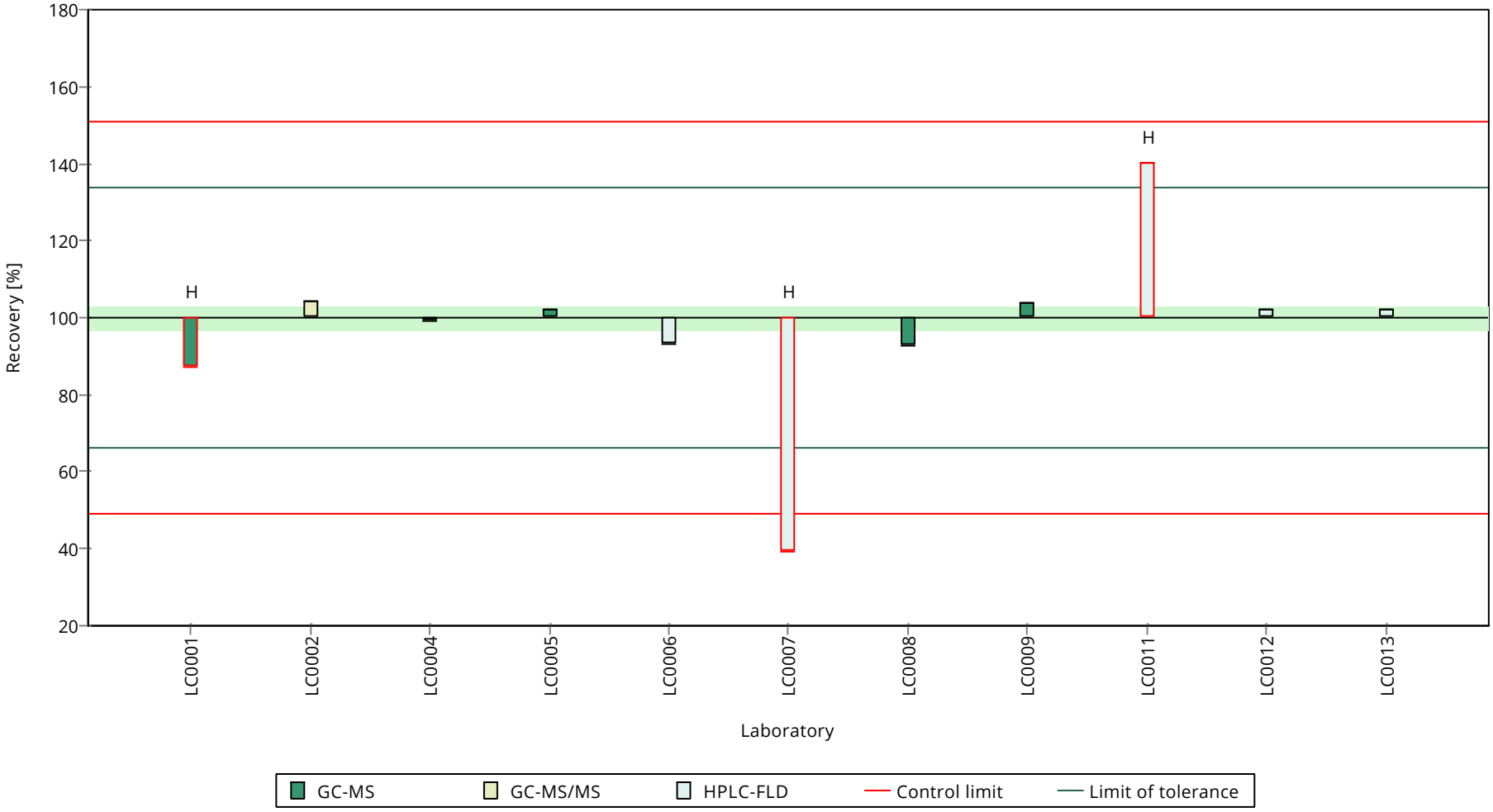
	all results	without outliers	Unit
Mean ± CI (99%)	26.9 ± 5.89	27.8 ± 1.34	ng/l
Minimum	10.9	25.8	ng/l
Maximum	38.9	29	ng/l
Standard deviation	6.51	1.26	ng/l
rel. standard deviation	24.2	4.54	%
n	11	8	-

Graphical presentation of results

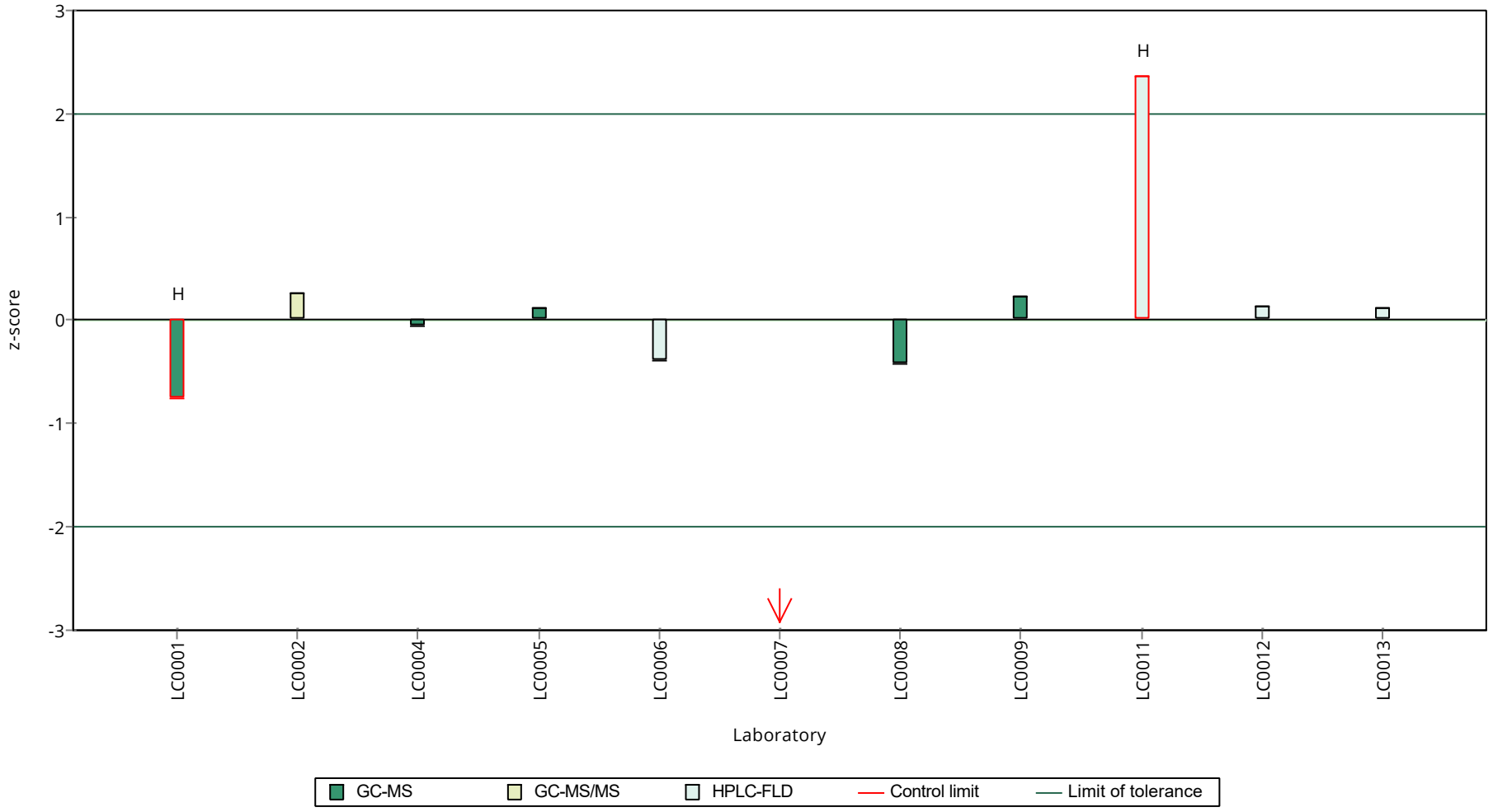
Results



Recovery rate



z-Score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z-score
H
H
LC0001
LC0002
LC0004
LC0005
LC0006
LC0007
LC0008
LC0009
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Benzo[b]fluoranthene

Unit	ng/l
Assigned value ± U (k=2)	341 ± 26.9
Criterion	57.9 (17 %)
Minimum - Maximum	262 - 406
Control test value ± U (k=2)	385 ± 96.2

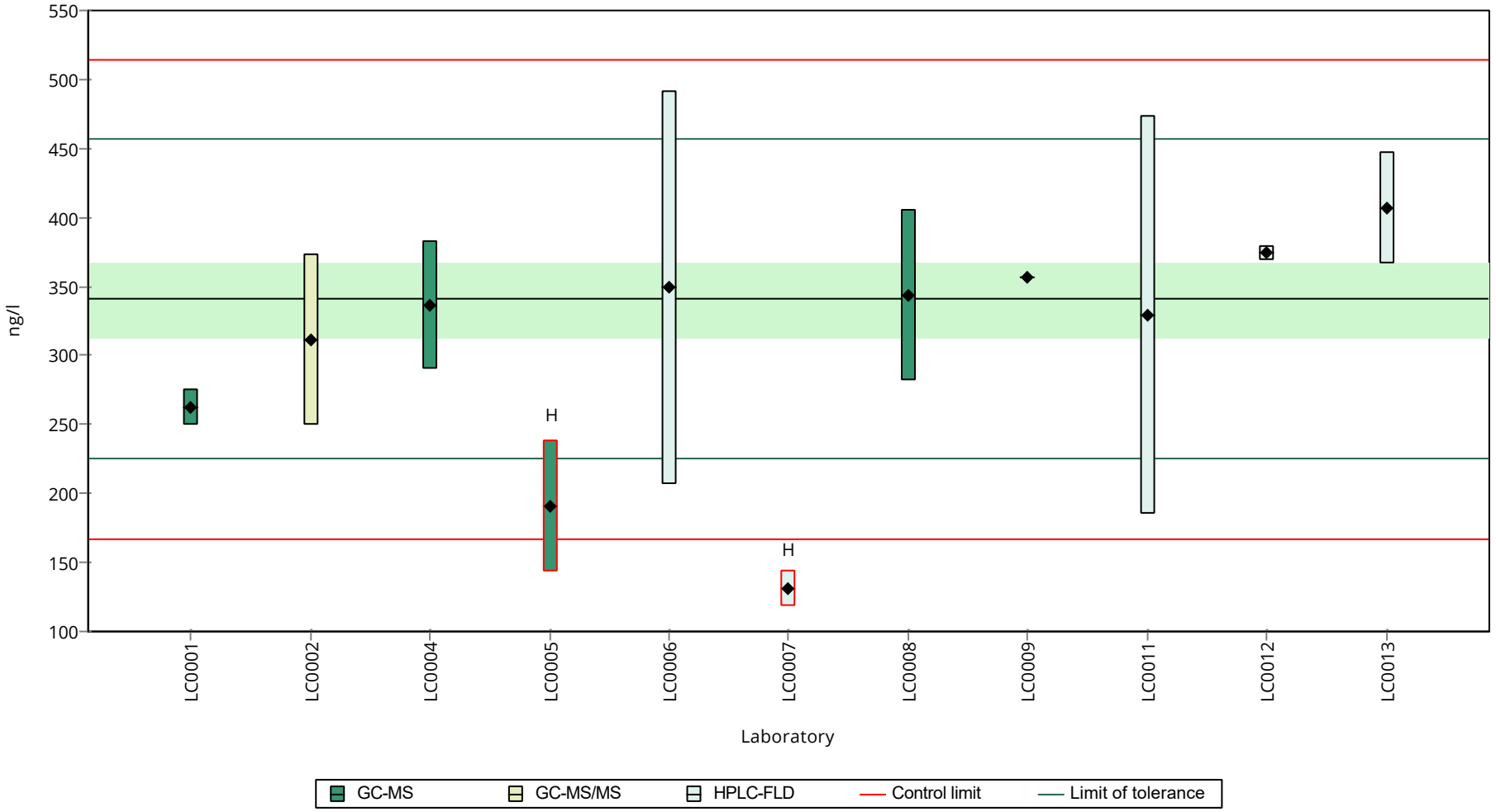
Labcode	Result	±	U	Recovery [%]	z-Score	Comments
LC0001	261.88	±	13.09	76.8	-1.36	
LC0002	311	±	62	91.2	-0.52	
LC0004	336.32	±	46.4	98.7	-0.08	
LC0005	191	±	48	56	-2.59	H
LC0006	349.1	±	142.6	102	0.14	
LC0007	131.2	±	13.1	38.5	-3.62	H
LC0008	343	±	62	101	0.04	
LC0009	357.131	±	0.467	105	0.28	
LC0010	-	±	-	-	-	
LC0011	329.1	±	144.6	96.5	-0.2	
LC0012	374	±	5.72	110	0.57	
LC0013	406.3	±	40.6	119	1.13	
LC0014	-	±	-	-	-	

Characteristics of parameter

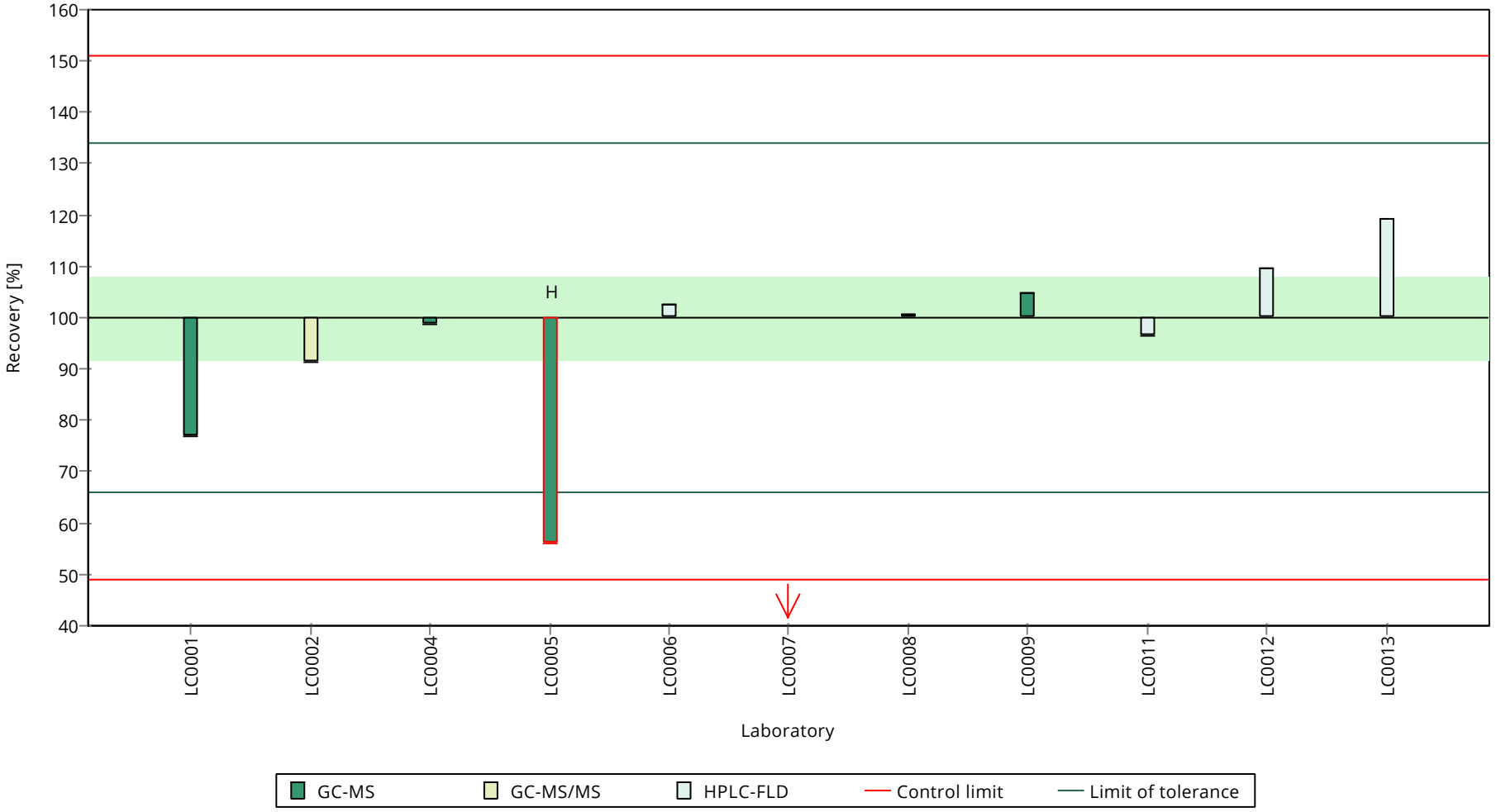
	all results	without outliers	Unit
Mean ± CI (99%)	308 ± 74.4	341 ± 40.3	ng/l
Minimum	131	262	ng/l
Maximum	406	406	ng/l
Standard deviation	82.3	40.3	ng/l
rel. standard deviation	26.7	11.8	%
n	11	9	-

Graphical presentation of results

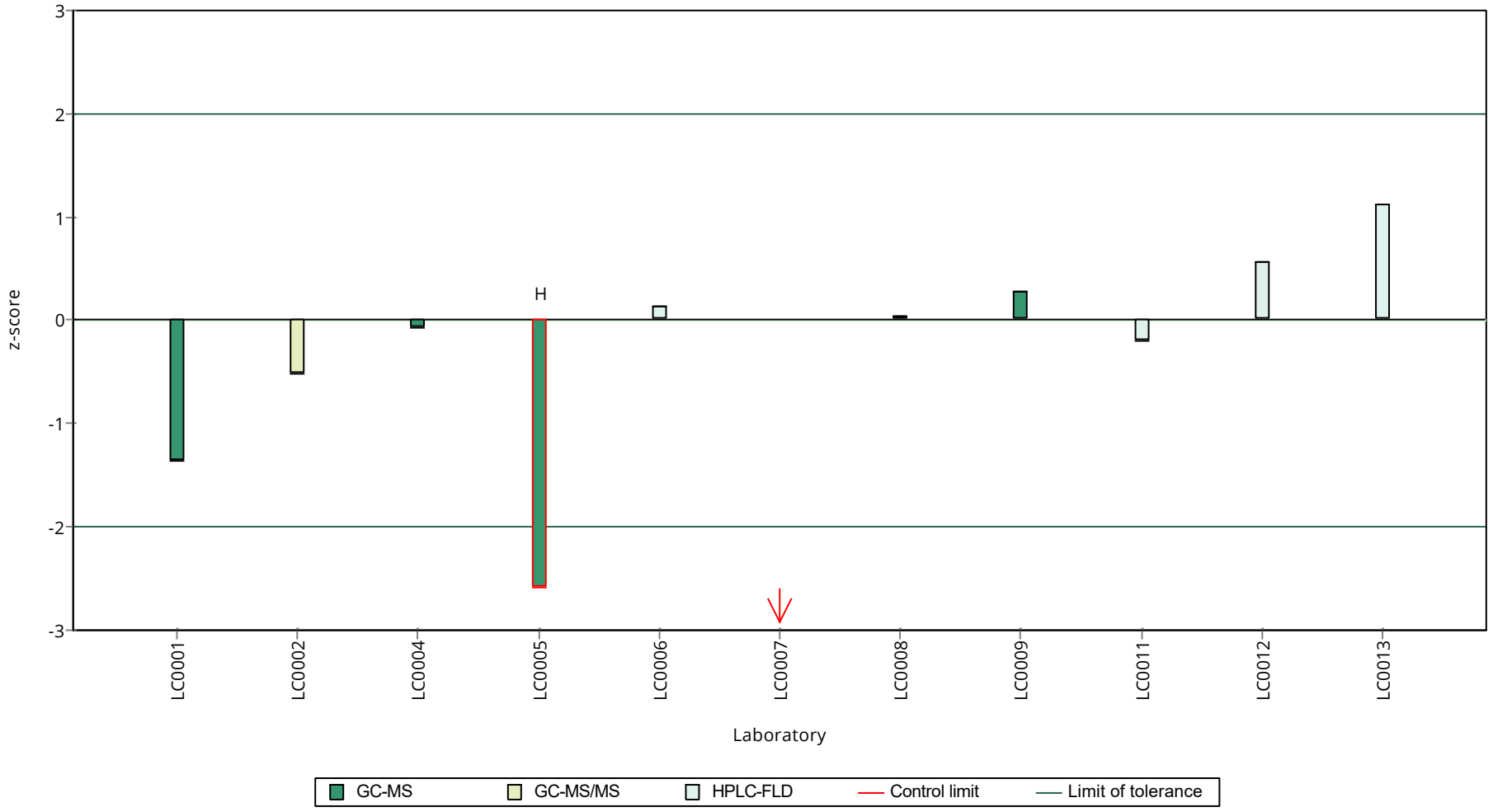
Results



Recovery rate



z-Score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z-score
H
LC0001
LC0002
LC0004
LC0005
LC0006
LC0007
LC0008
LC0009
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Benzo[g,h,i]perylene

Unit	ng/l
Assigned value ± U (k=2)	16.6 ± 2.11
Criterion	4.15 (25 %)
Minimum - Maximum	9.76 - 20.8
Control test value ± U (k=2)	21.2 ± 7.41

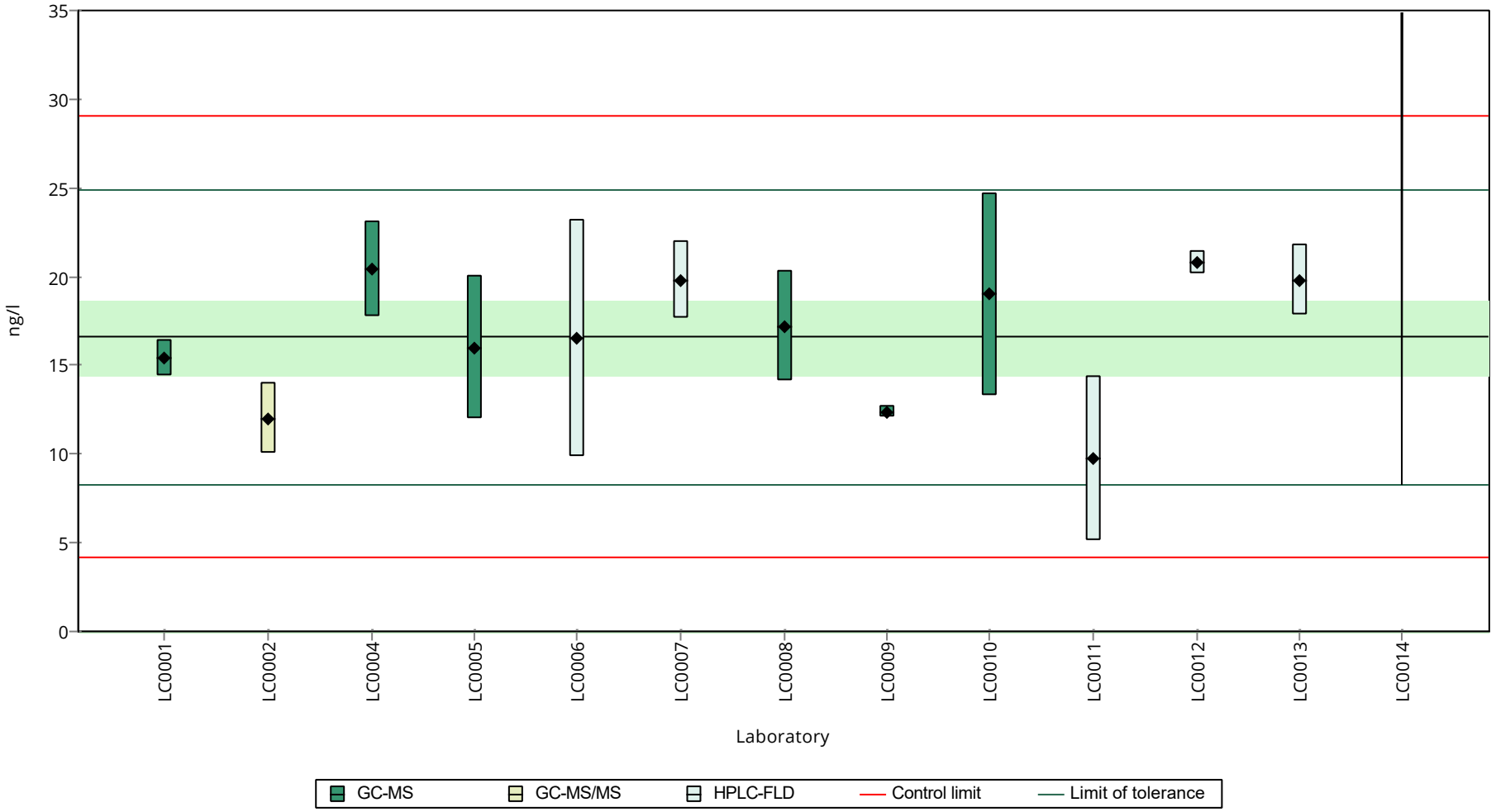
Labcode	Result	±	U	Recovery [%]	z-Score	Comments
LC0001	15.42	±	1	93	-0.28	
LC0002	12	±	2	72.3	-1.11	
LC0004	20.4	±	2.68	123	0.92	
LC0005	16	±	4.01	96.5	-0.14	
LC0006	16.5	±	6.7	99.5	-0.02	
LC0007	19.8	±	2.2	119	0.77	
LC0008	17.2	±	3.1	104	0.15	
LC0009	12.368	±	0.338	74.6	-1.02	
LC0010	19	±	5.7	115	0.58	
LC0011	9.76	±	4.66	58.8	-1.65	
LC0012	20.8	±	0.656	125	1.02	
LC0013	19.8	±	2	119	0.77	
LC0014	< 200 (LOQ)	±	-	-	-	

Characteristics of parameter

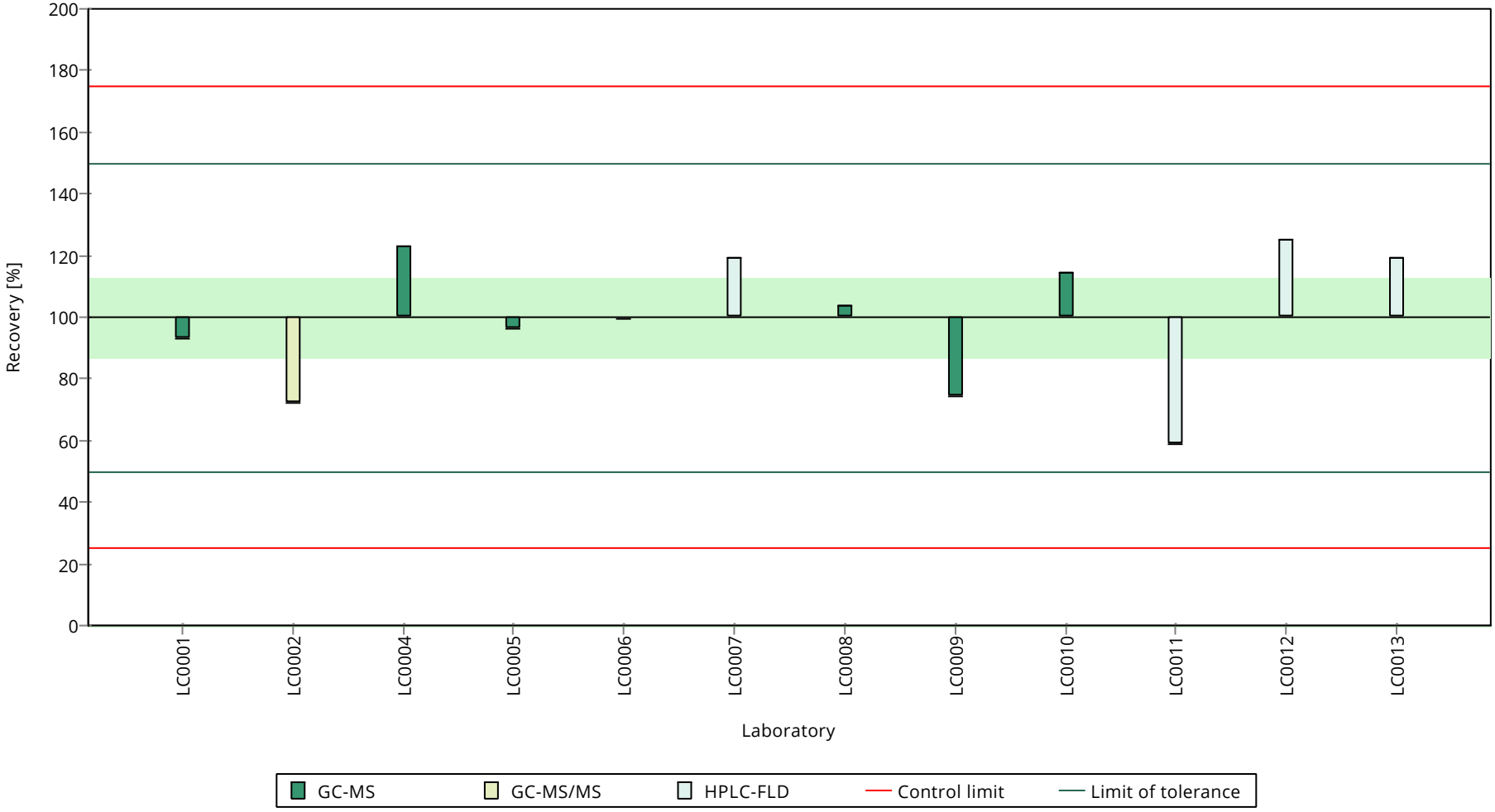
	all results	without outliers	Unit
Mean ± CI (99%)	16.6 ± 3.16	16.6 ± 3.16	ng/l
Minimum	9.76	9.76	ng/l
Maximum	20.8	20.8	ng/l
Standard deviation	3.65	3.65	ng/l
rel. standard deviation	22	22	%
n	12	12	-

Graphical presentation of results

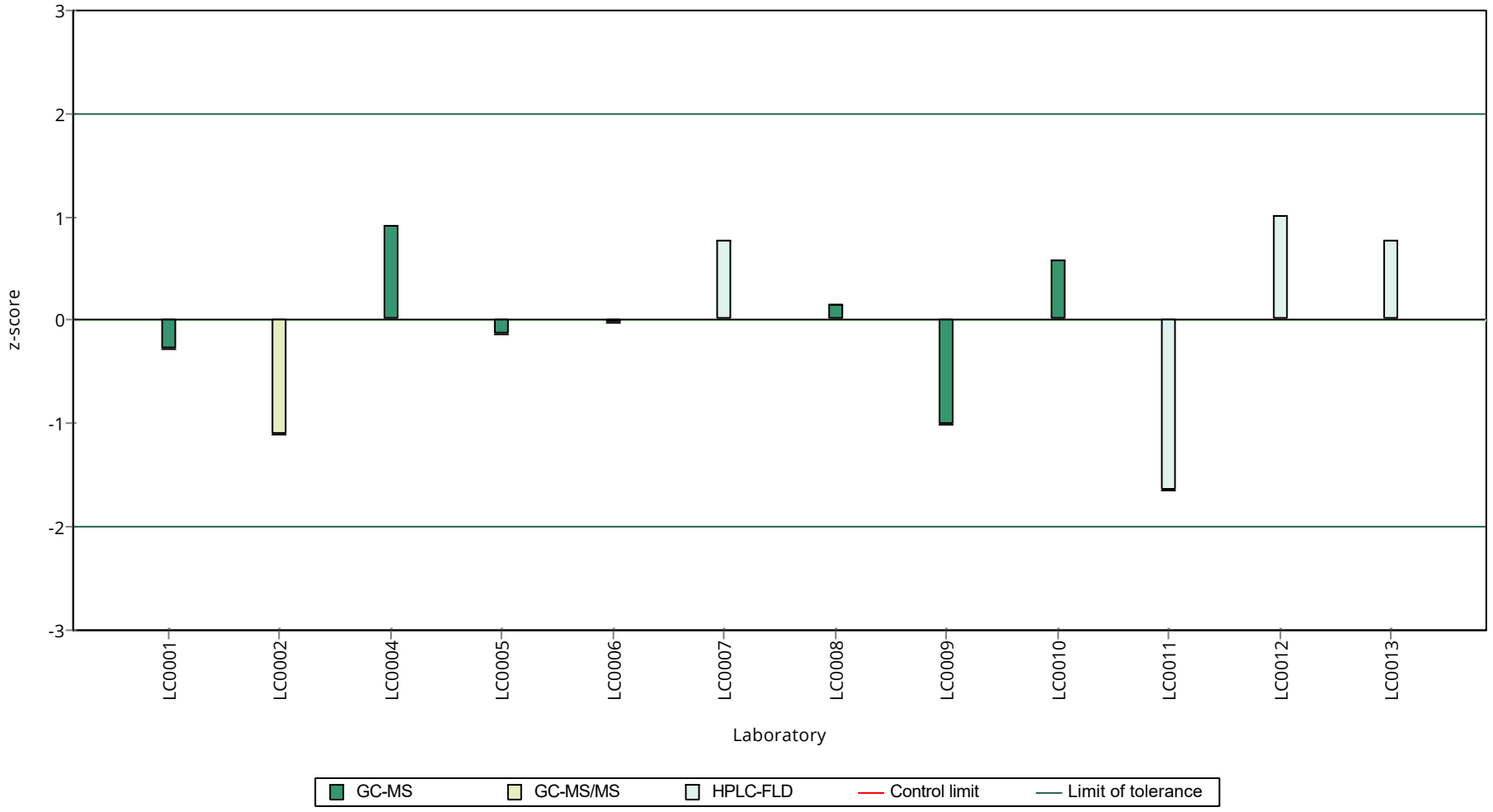
Results



Recovery rate



z-Score


3
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z-score
LC0001
LC0002
LC0004
LC0005
LC0006
LC0007
LC0008
LC0009
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Benzo[g,h,i]perylene

Unit	ng/l
Assigned value ± U (k=2)	281 ± 18.9
Criterion	70.2 (25 %)
Minimum - Maximum	233 - 318
Control test value ± U (k=2)	360 ± 126

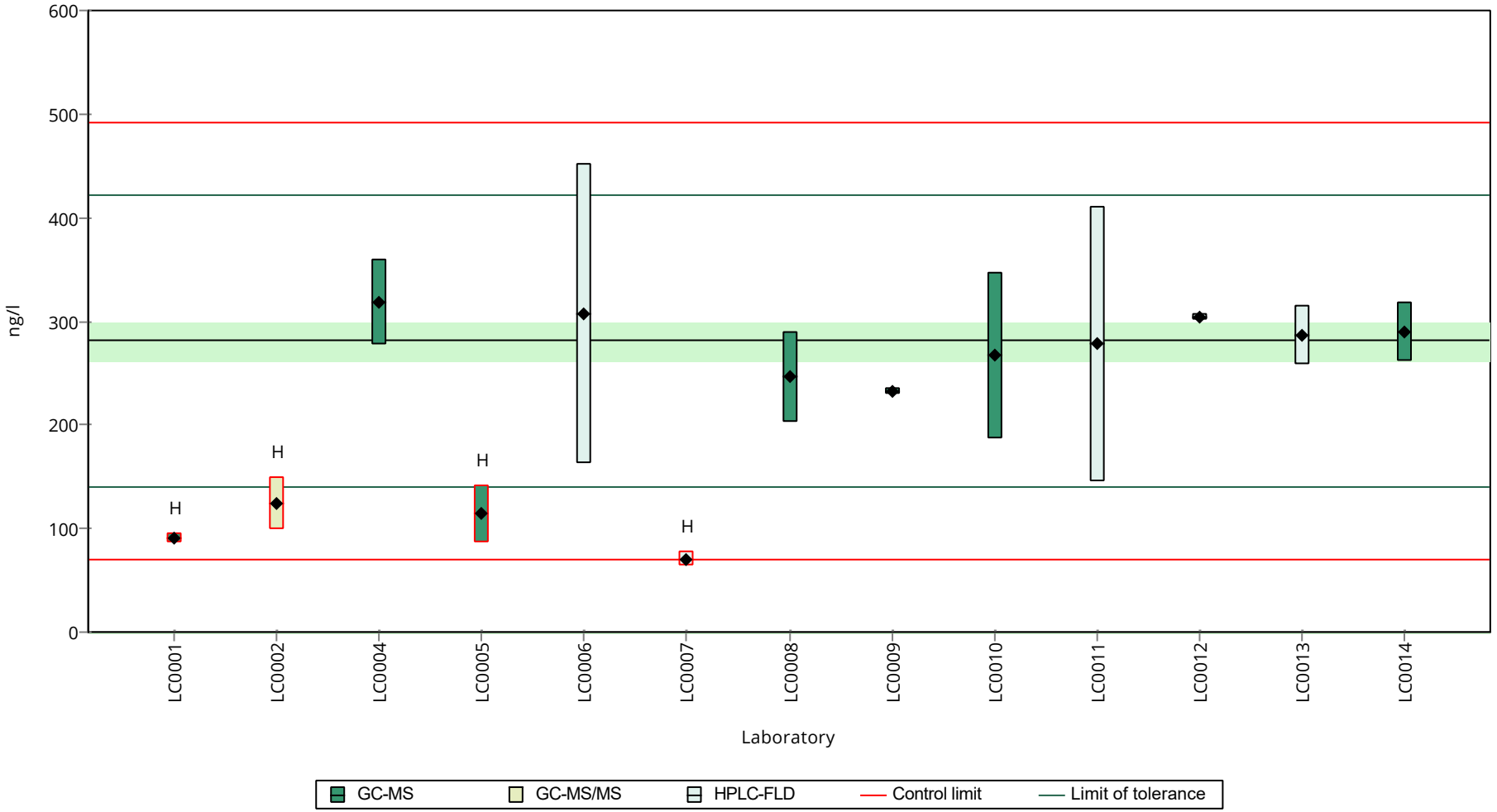
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	90.8 ± 4.54	32.3	-2.71	H
LC0002	124 ± 25	44.1	-2.23	H
LC0004	317.97 ± 41.83	113	0.53	
LC0005	114 ± 28	40.6	-2.38	H
LC0006	306.5 ± 144.9	109	0.36	
LC0007	70.8 ± 7.8	25.2	-2.99	H
LC0008	246 ± 44	87.6	-0.5	
LC0009	232.621 ± 2.805	82.8	-0.69	
LC0010	267 ± 80.1	95	-0.2	
LC0011	278.2 ± 132.9	99	-0.04	
LC0012	304 ± 2.84	108	0.33	
LC0013	286.1 ± 28.6	102	0.07	
LC0014	290 ± 29	103	0.13	

Characteristics of parameter

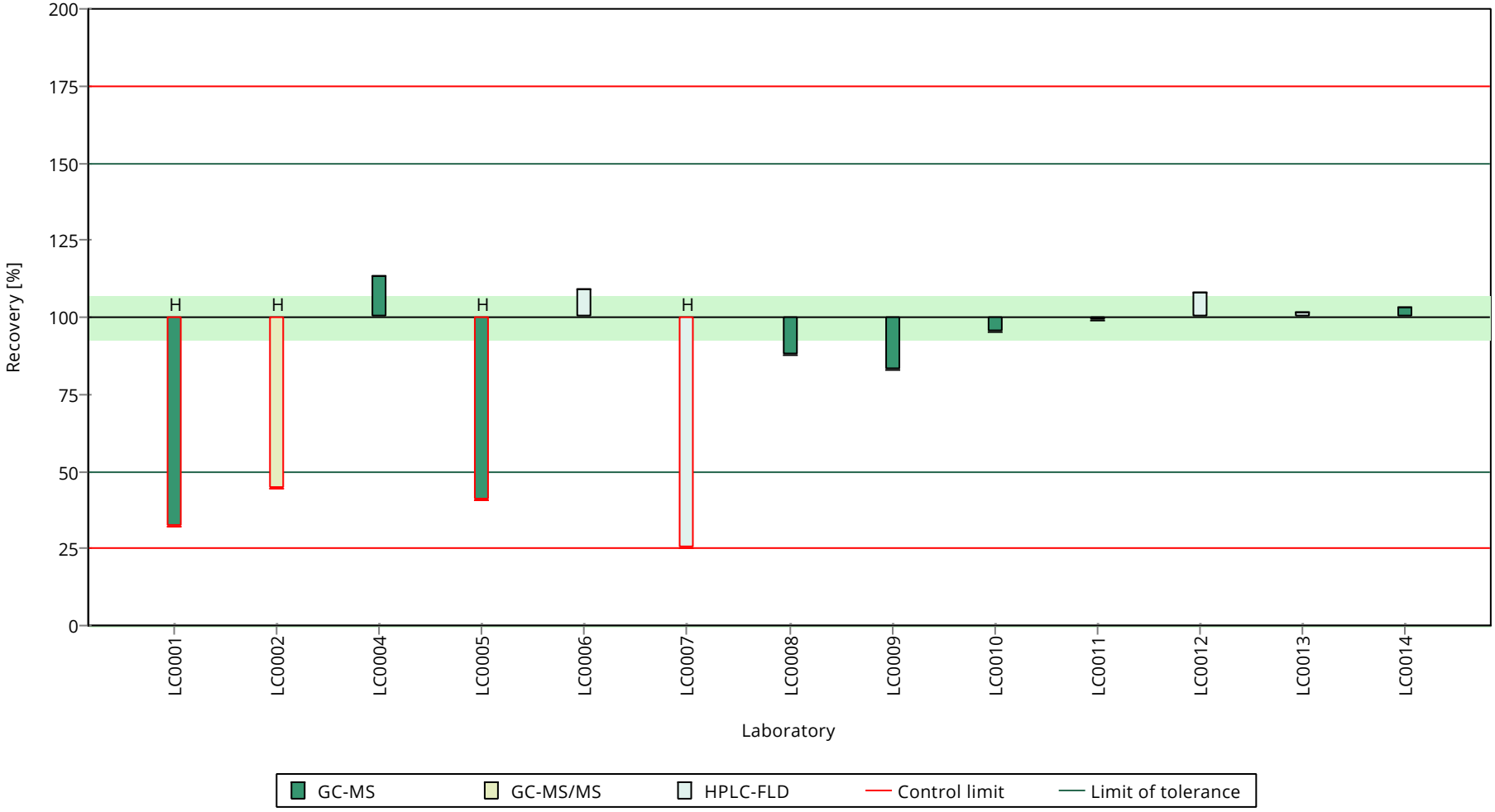
	all results	without outliers	Unit
Mean ± CI (99%)	225 ± 75.5	281 ± 28.3	ng/l
Minimum	70.8	233	ng/l
Maximum	318	318	ng/l
Standard deviation	90.8	28.3	ng/l
rel. standard deviation	40.3	10.1	%
n	13	9	-

Graphical presentation of results

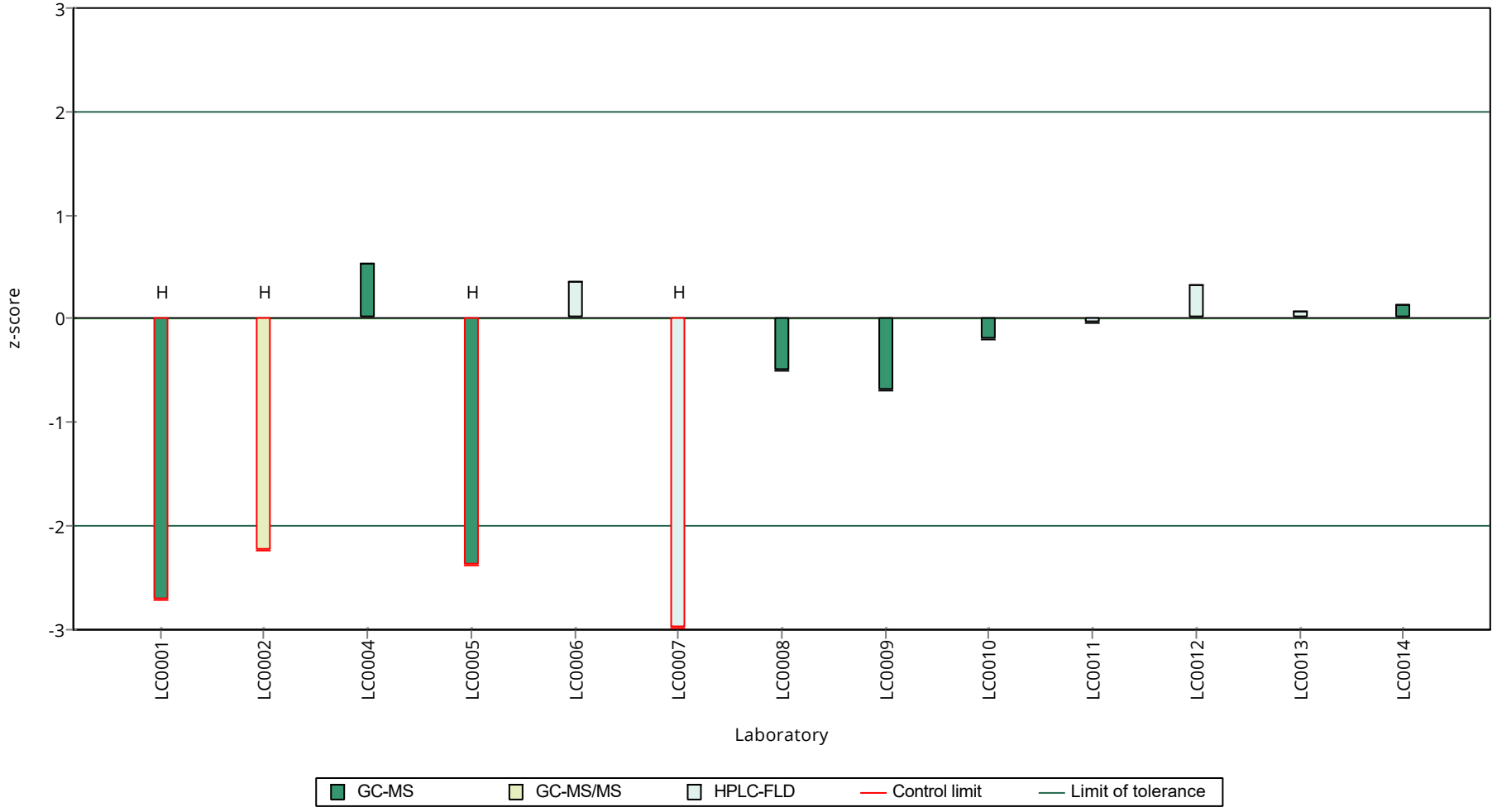
Results



Recovery rate



z-Score


3
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z-score
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LC0001
LC0002
LC0004
LC0005
LC0006
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LC0008
LC0009
LC0010
LC0011
LC0012
LC0013
LC0014
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Benzo[k]fluoranthene

Unit	ng/l
Assigned value ± U (k=2)	14.7 ± 1.56
Criterion	3.09 (21 %)
Minimum - Maximum	10 - 17.2
Control test value ± U (k=2)	18.4 ± 5.51

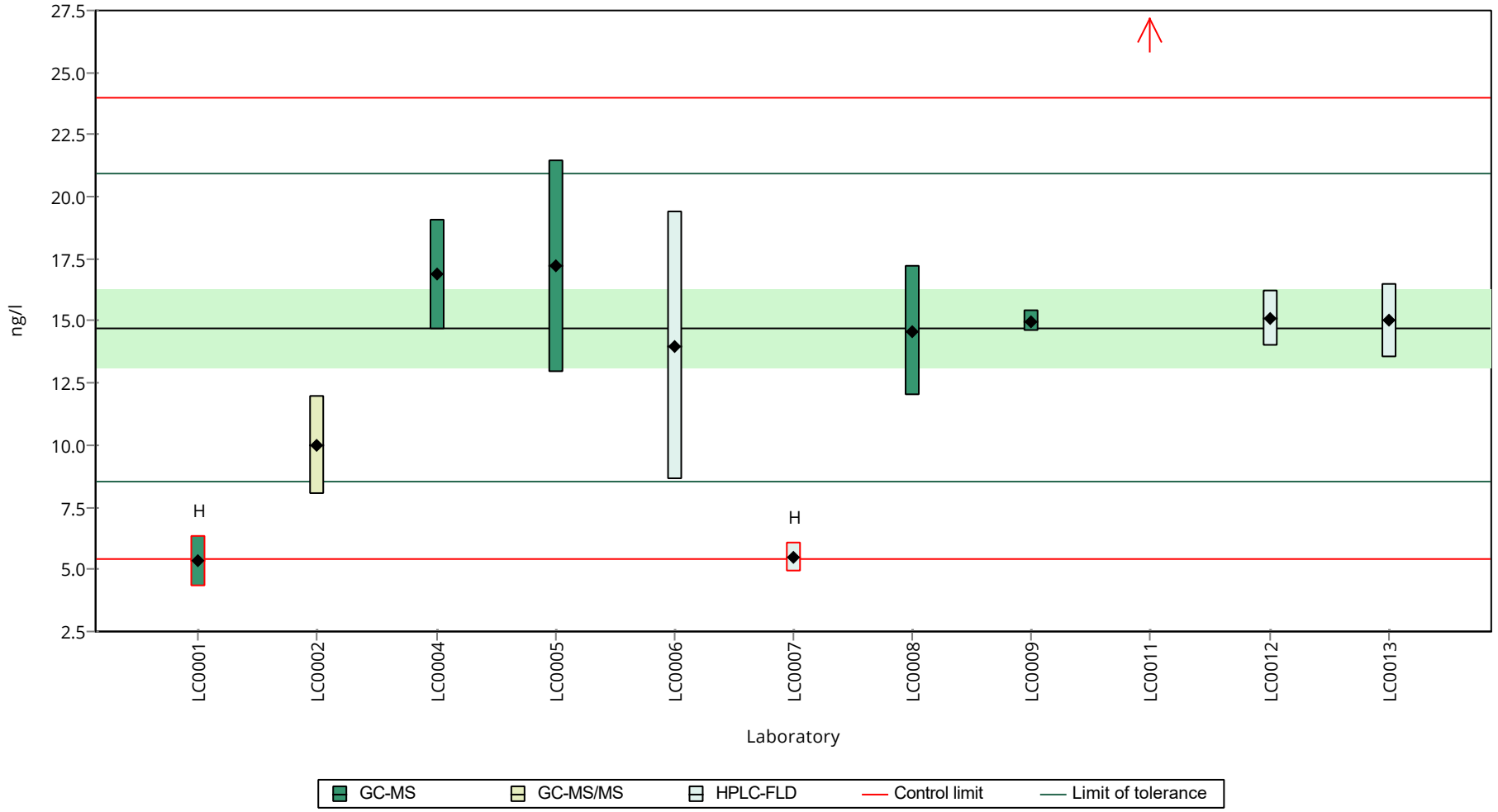
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	5.32 ± 1	36.1	-3.04	H
LC0002	10 ± 2	67.9	-1.53	
LC0004	16.87 ± 2.22	115	0.7	
LC0005	17.2 ± 4.29	117	0.8	
LC0006	14 ± 5.4	95.1	-0.23	
LC0007	5.5 ± 0.6	37.4	-2.98	H
LC0008	14.6 ± 2.6	99.2	-0.04	
LC0009	14.993 ± 0.447	102	0.09	
LC0010	- ± -	-	-	
LC0011	50.7 ± 19.3	344	11.64	H
LC0012	15.1 ± 1.14	103	0.12	
LC0013	15 ± 1.5	102	0.09	
LC0014	- ± -	-	-	

Characteristics of parameter

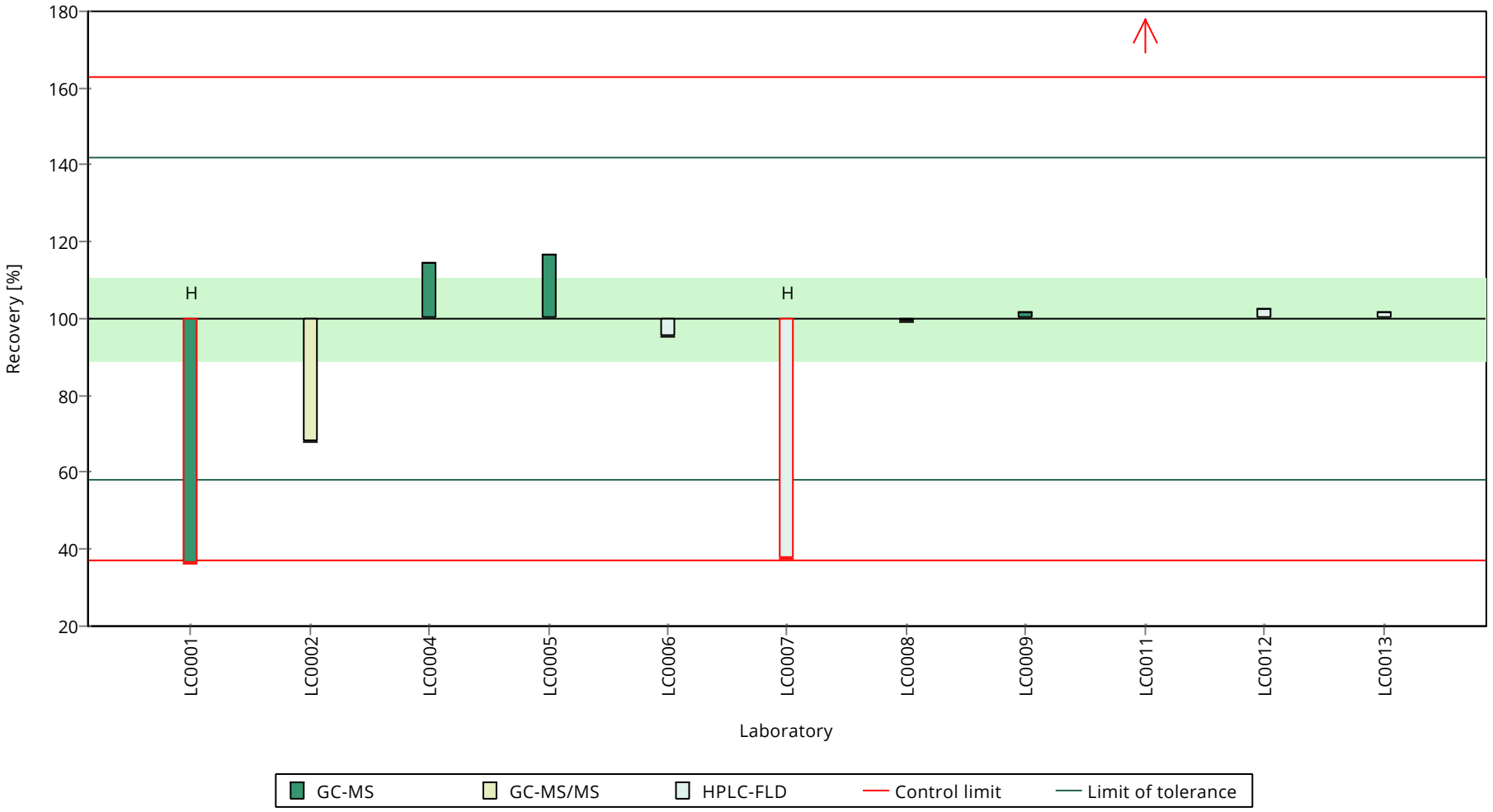
	all results	without outliers	Unit
Mean ± CI (99%)	16.3 ± 11	14.7 ± 2.33	ng/l
Minimum	5.32	10	ng/l
Maximum	50.7	17.2	ng/l
Standard deviation	12.1	2.2	ng/l
rel. standard deviation	74.5	14.9	%
n	11	8	-

Graphical presentation of results

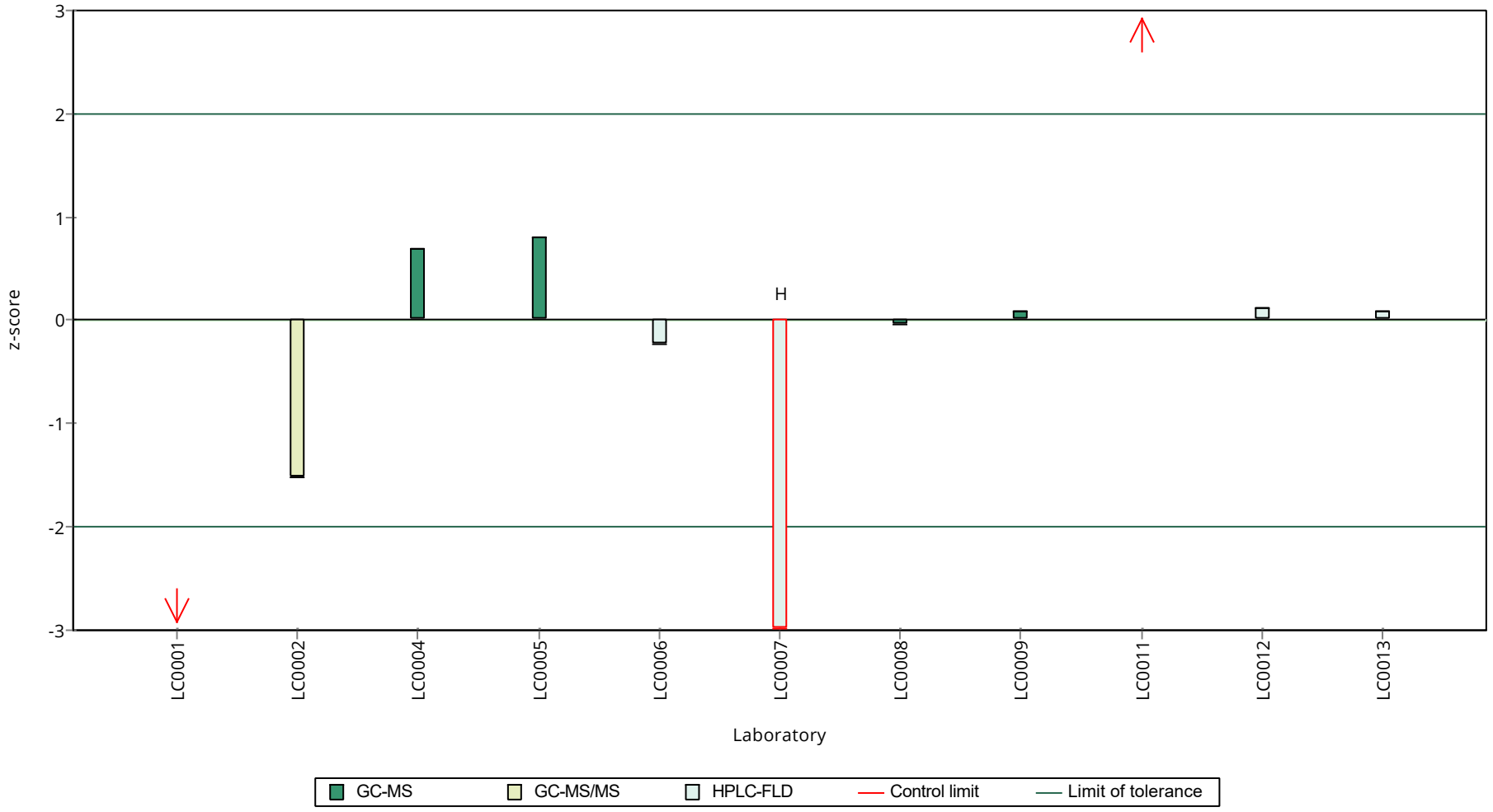
Results



Recovery rate



z-Score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z-score
H
LC0001
LC0002
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LC0008
LC0009
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Benzo[k]fluoranthene

Unit	ng/l
Assigned value ± U (k=2)	244 ± 30.6
Criterion	51.2 (21 %)
Minimum - Maximum	174 - 299
Control test value ± U (k=2)	321 ± 96.3

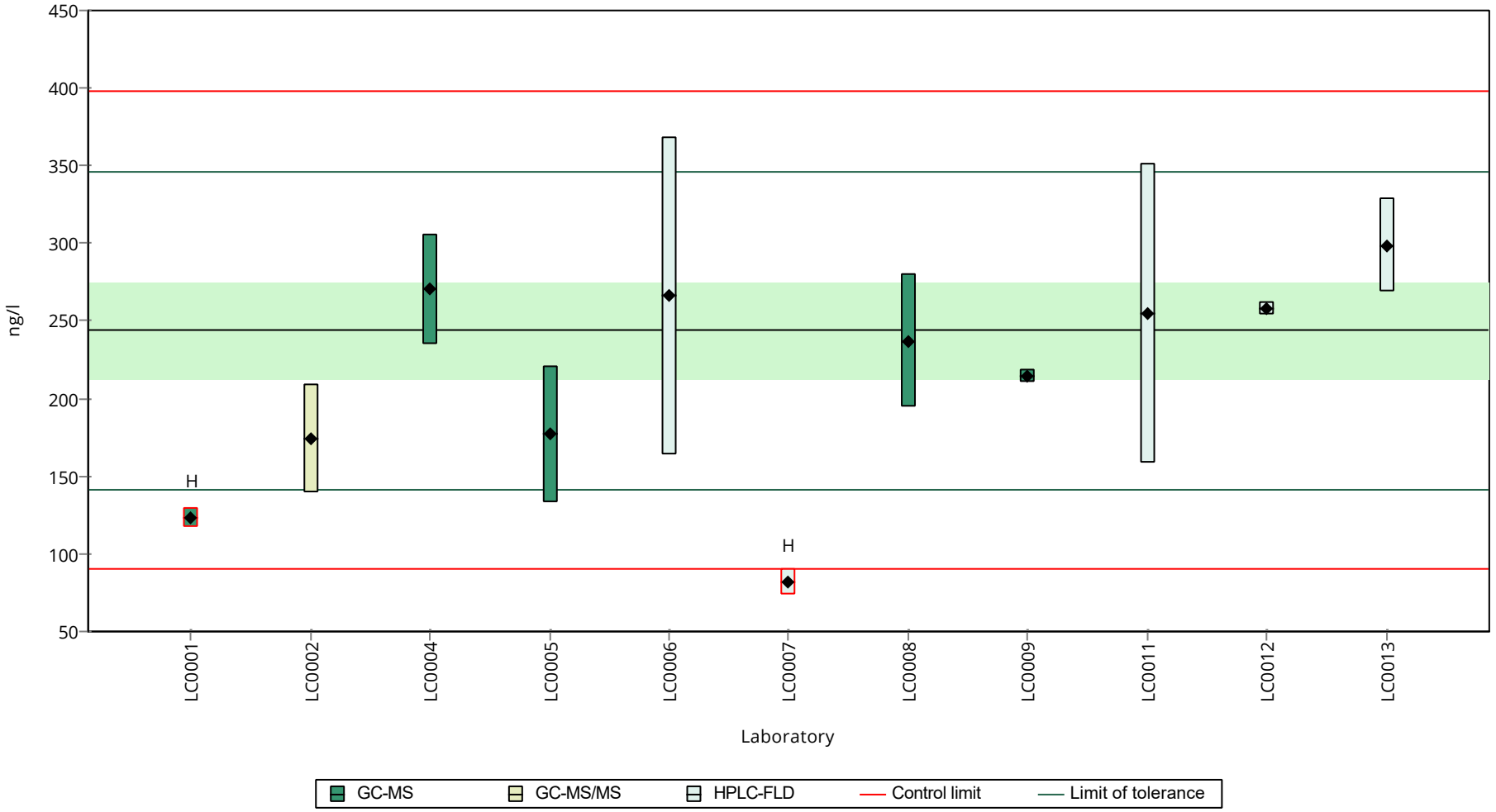
Labcode	Result	±	U	Recovery [%]	z-Score	Comments
LC0001	123.29	±	6.16	50.6	-2.35	H
LC0002	174	±	35	71.4	-1.36	
LC0004	270.28	±	35.64	111	0.52	
LC0005	177	±	44	72.6	-1.31	
LC0006	266.3	±	102.5	109	0.44	
LC0007	81.6	±	8.2	33.5	-3.17	H
LC0008	237	±	43	97.2	-0.13	
LC0009	214.475	±	3.949	87.9	-0.57	
LC0010	-	±	-	-	-	
LC0011	254.5	±	96.8	104	0.21	
LC0012	258	±	4.66	106	0.28	
LC0013	298.8	±	29.9	123	1.07	
LC0014	-	±	-	-	-	

Characteristics of parameter

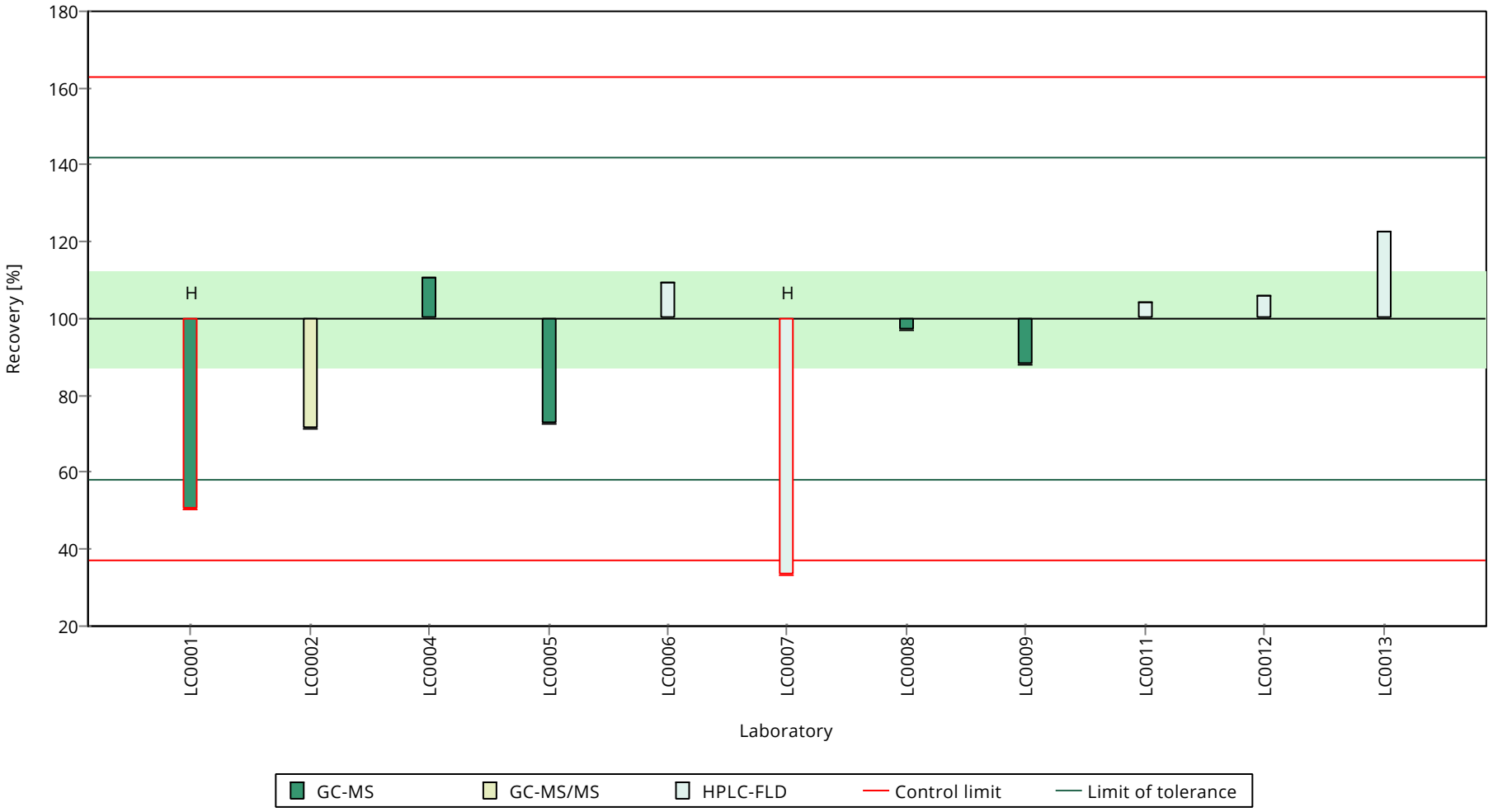
	all results	without outliers	Unit
Mean ± CI (99%)	214 ± 61.3	239 ± 42.7	ng/l
Minimum	81.6	174	ng/l
Maximum	299	299	ng/l
Standard deviation	67.8	42.7	ng/l
rel. standard deviation	31.7	17.9	%
n	11	9	-

Graphical presentation of results

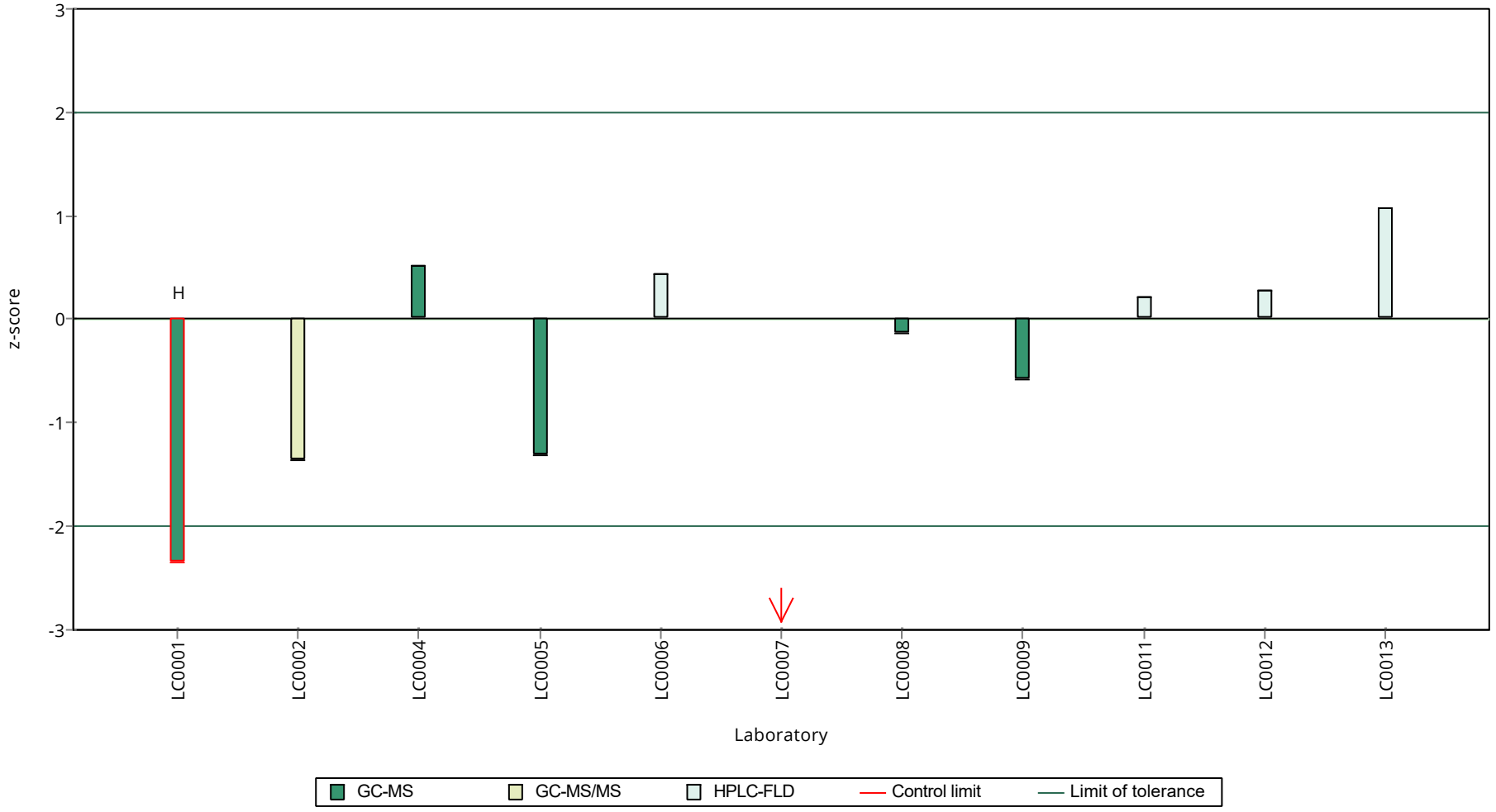
Results



Recovery rate



z-Score


3
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z-score
H
LC0001
LC0002
LC0004
LC0005
LC0006
LC0007
LC0008
LC0009
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Chrysene

Unit	ng/l
Assigned value ± U (k=2)	24.2 ± 1.66
Criterion	5.32 (22 %)
Minimum - Maximum	20 - 27.7
Control test value ± U (k=2)	30.3 ± 7.58

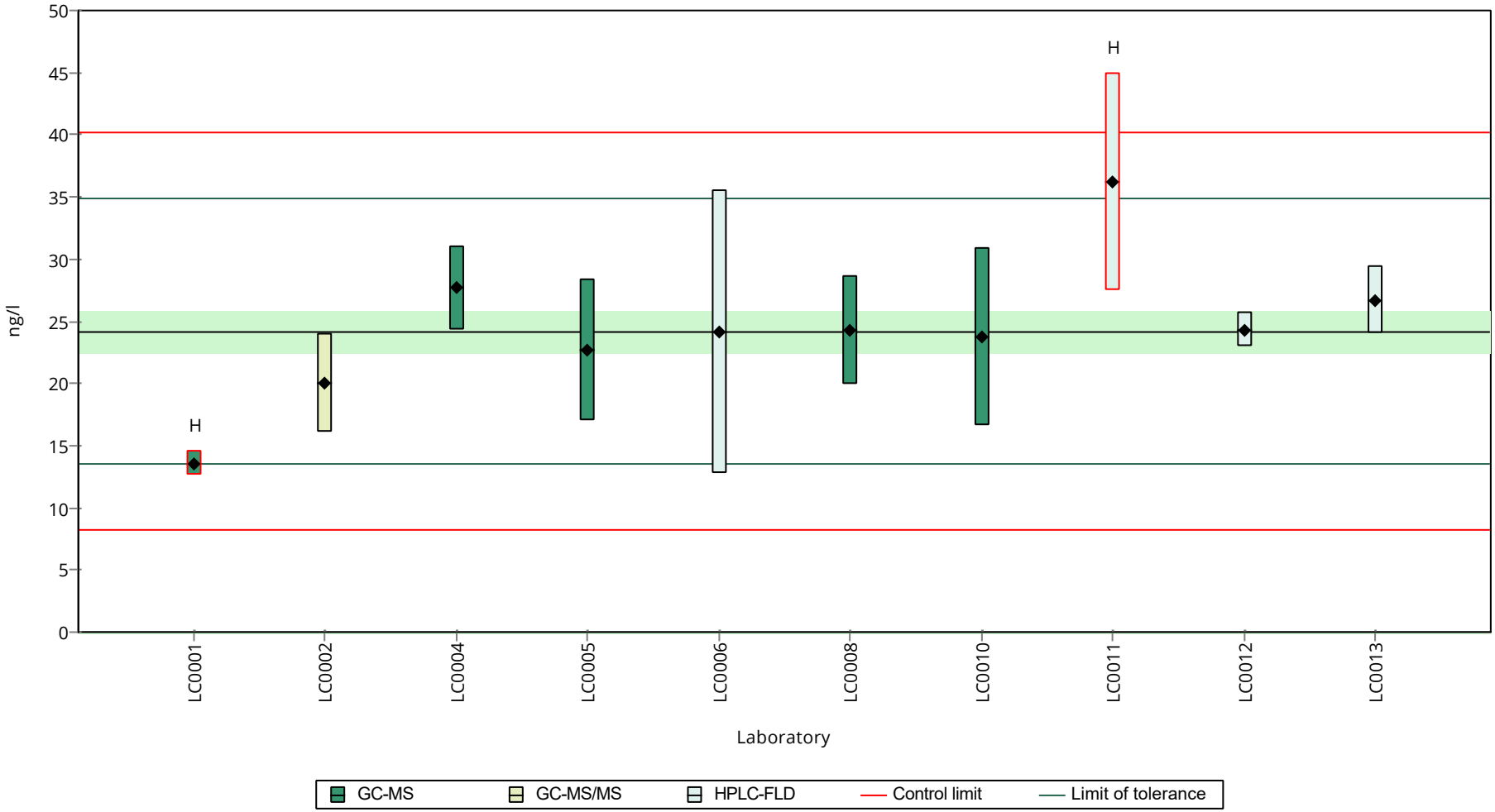
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	13.59 ± 1	56.2	-1.99	H
LC0002	20 ± 4	82.7	-0.79	
LC0004	27.7 ± 3.37	114	0.66	
LC0005	22.7 ± 5.67	93.8	-0.28	
LC0006	24.1 ± 11.4	99.6	-0.02	
LC0007	- ± -	-	-	
LC0008	24.3 ± 4.4	100	0.02	
LC0009	- ± -	-	-	
LC0010	23.75 ± 7.13	98.2	-0.08	
LC0011	36.2 ± 8.72	150	2.26	H
LC0012	24.3 ± 1.4	100	0.02	
LC0013	26.7 ± 2.7	110	0.47	
LC0014	- ± -	-	-	

Characteristics of parameter

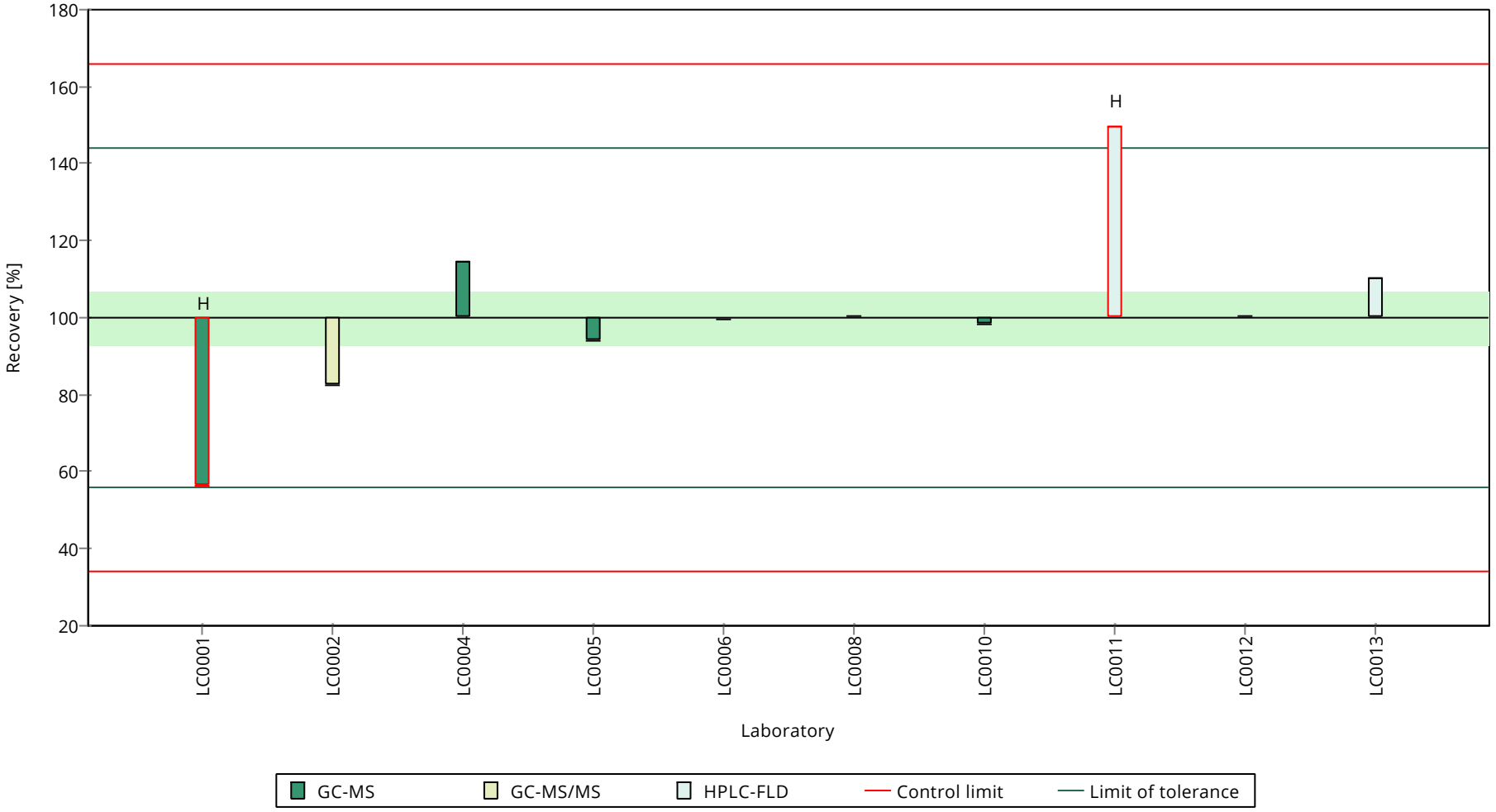
	all results	without outliers	Unit
Mean ± CI (99%)	24.3 ± 5.43	24.2 ± 2.49	ng/l
Minimum	13.6	20	ng/l
Maximum	36.2	27.7	ng/l
Standard deviation	5.73	2.35	ng/l
rel. standard deviation	23.5	9.71	%
n	10	8	-

Graphical presentation of results

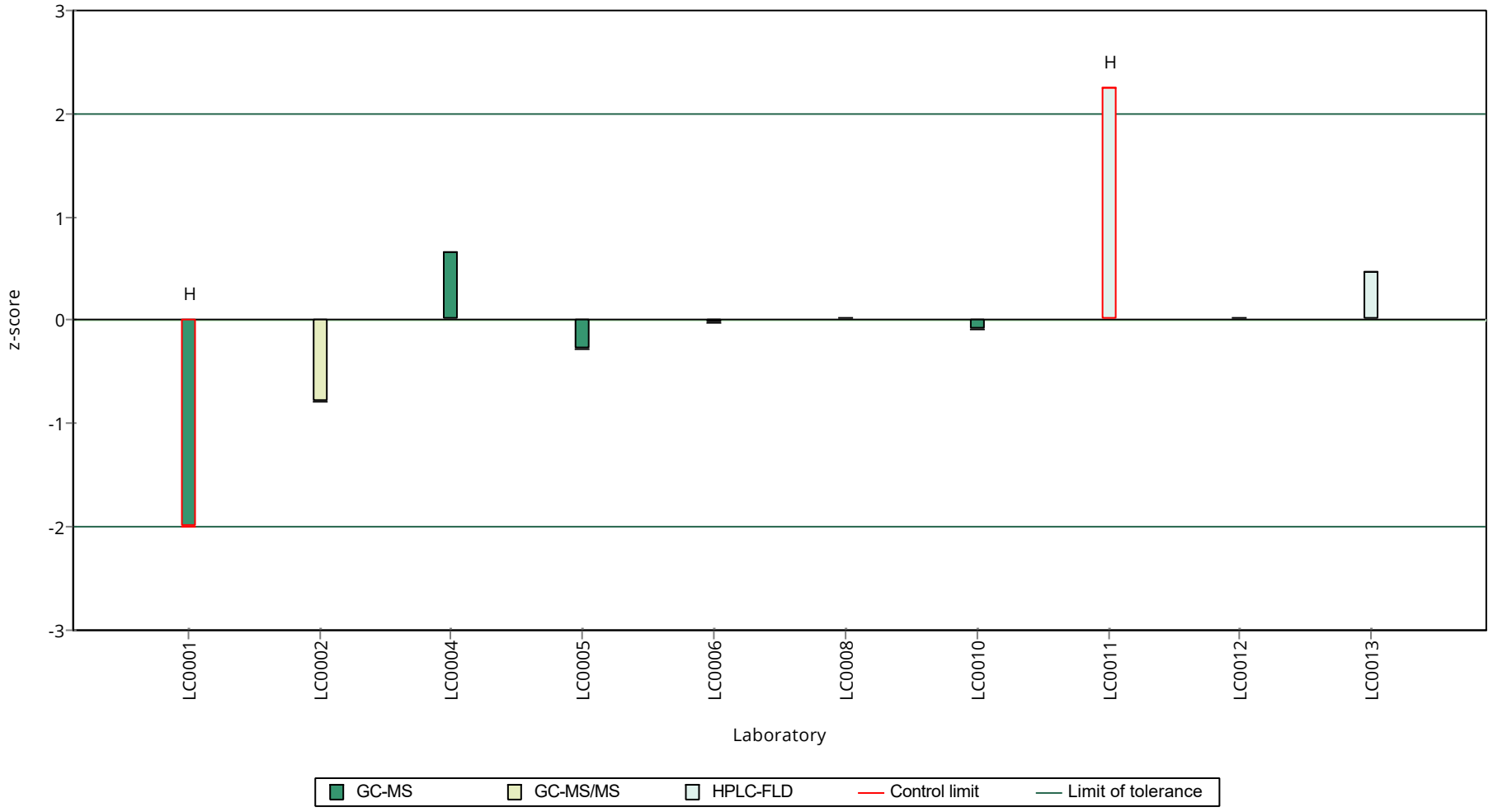
Results



Recovery rate



z-Score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z-score
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H
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Chrysene

Unit	ng/l
Assigned value ± U (k=2)	275 ± 25.1
Criterion	60.5 (22 %)
Minimum - Maximum	202 - 337
Control test value ± U (k=2)	333 ± 83.2

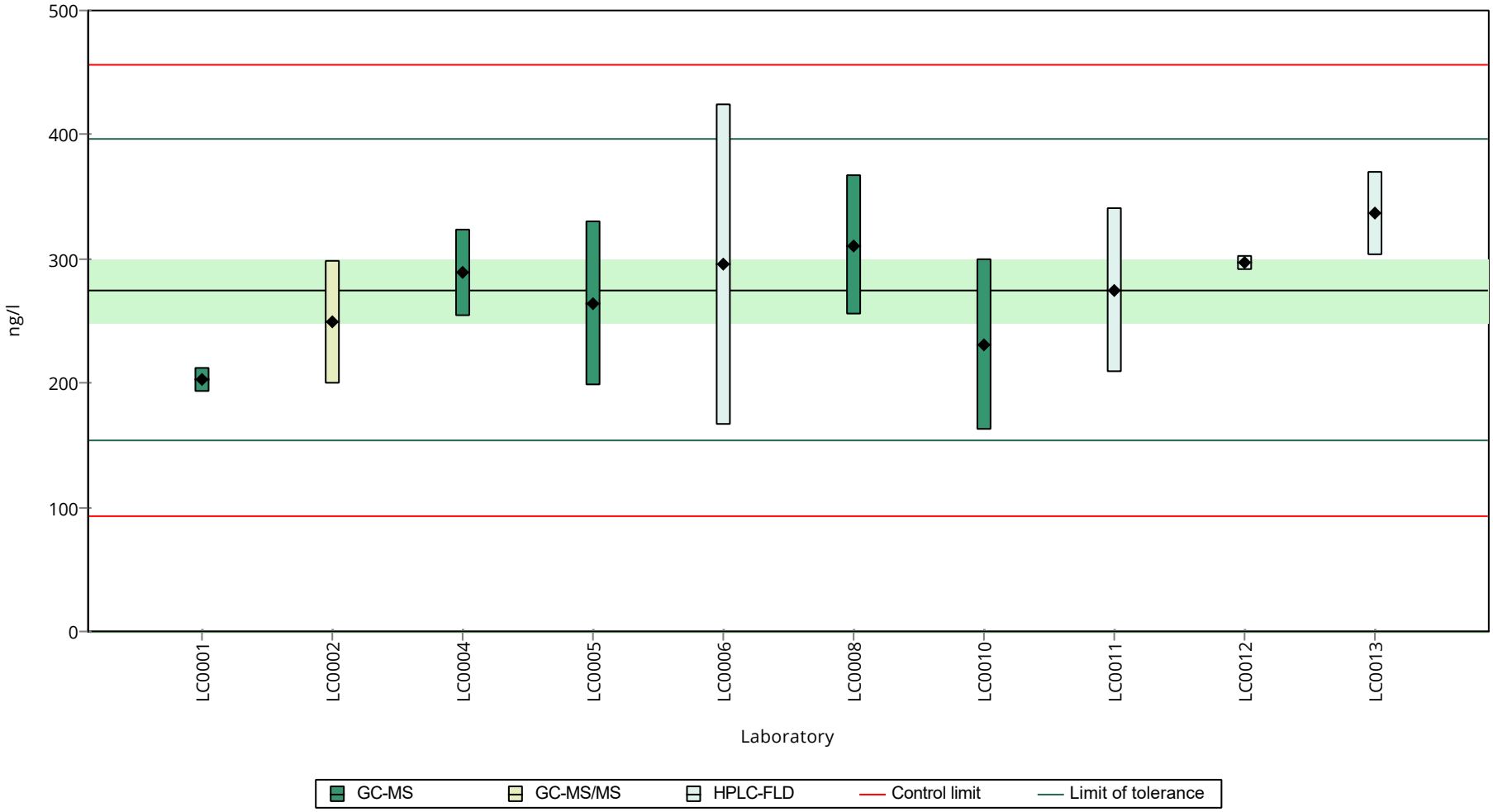
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	202.49 ± 10.12	73.6	-1.2	
LC0002	249 ± 50	90.6	-0.43	
LC0004	288.73 ± 35.16	105	0.23	
LC0005	264 ± 66	96	-0.18	
LC0006	295.5 ± 129.5	107	0.34	
LC0007	- ± -	-	-	
LC0008	311 ± 56	113	0.6	
LC0009	- ± -	-	-	
LC0010	230.75 ± 69.23	83.9	-0.73	
LC0011	274.5 ± 66.2	99.8	-0.01	
LC0012	297 ± 5.97	108	0.36	
LC0013	336.6 ± 33.7	122	1.02	
LC0014	- ± -	-	-	

Characteristics of parameter

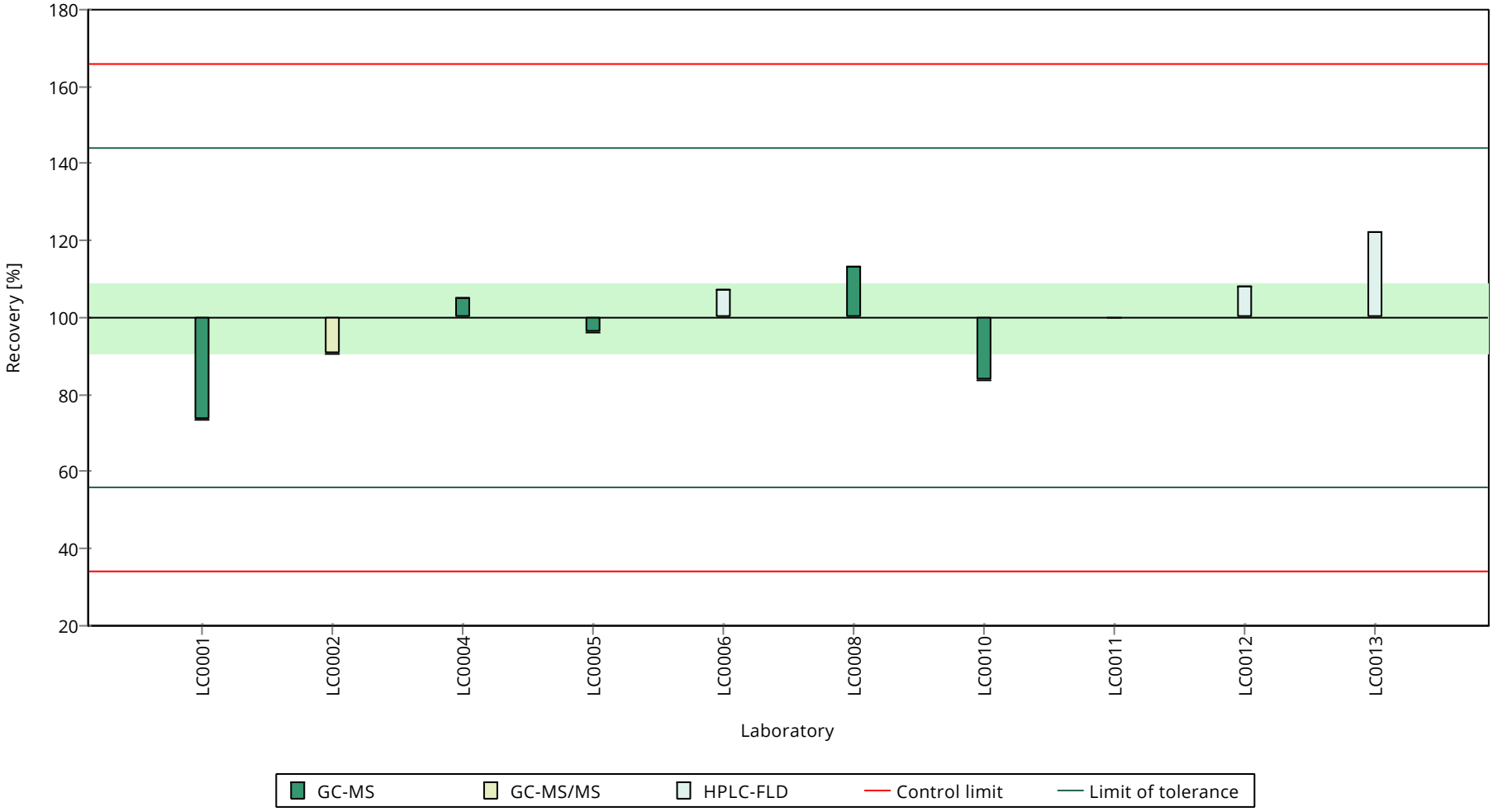
	all results	without outliers	Unit
Mean ± CI (99%)	275 ± 37.7	275 ± 37.7	ng/l
Minimum	202	202	ng/l
Maximum	337	337	ng/l
Standard deviation	39.7	39.7	ng/l
rel. standard deviation	14.4	14.4	%
n	10	10	-

Graphical presentation of results

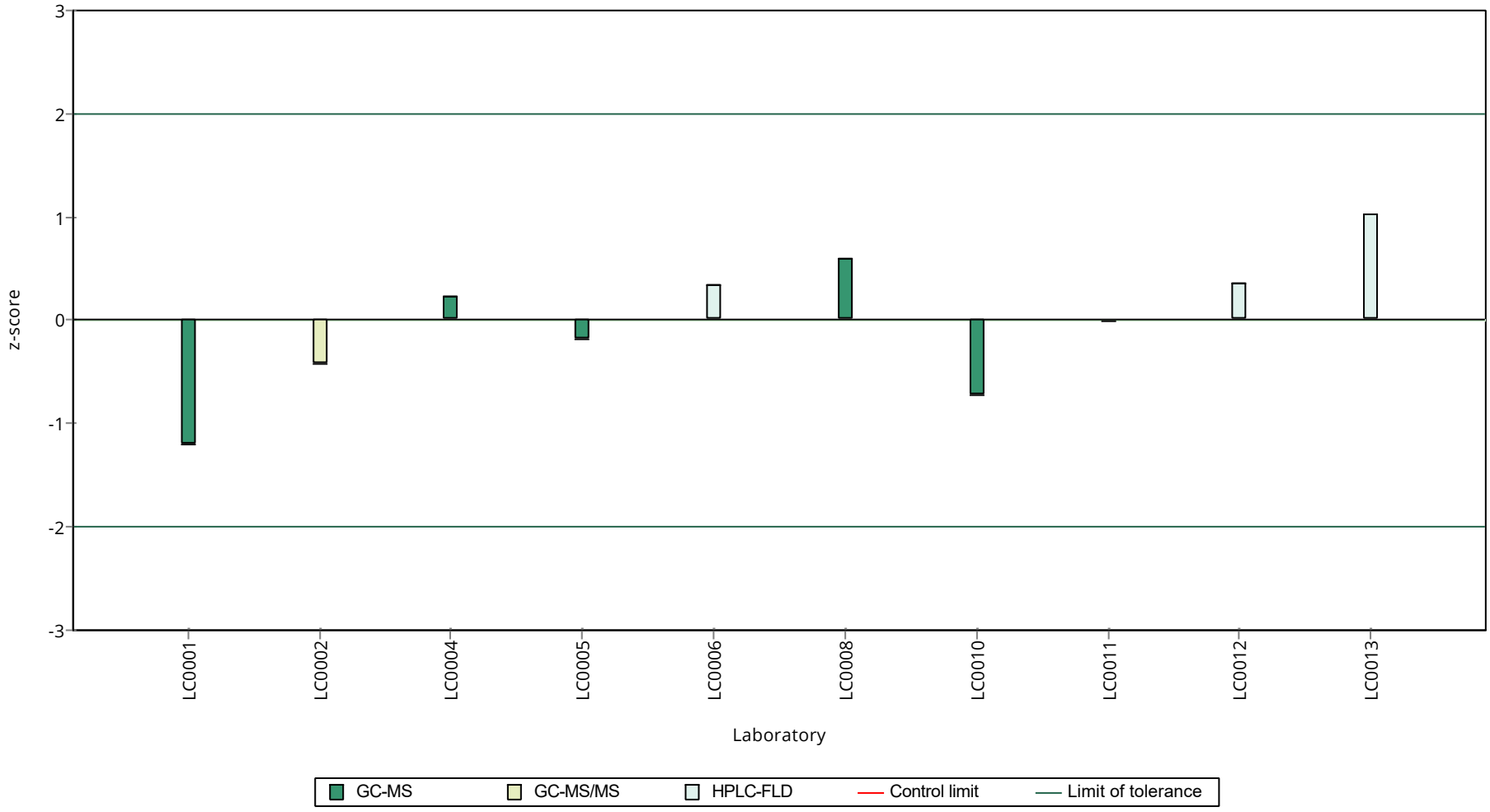
Results



Recovery rate



z-Score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z-score
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Dibenzo[a,h]anthracene

Unit	ng/l
Assigned value ± U (k=2)	16.9 ± 1.7
Criterion	5.08 (30 %)
Minimum - Maximum	12.4 - 19.5
Control test value ± U (k=2)	19.4 ± 6.79

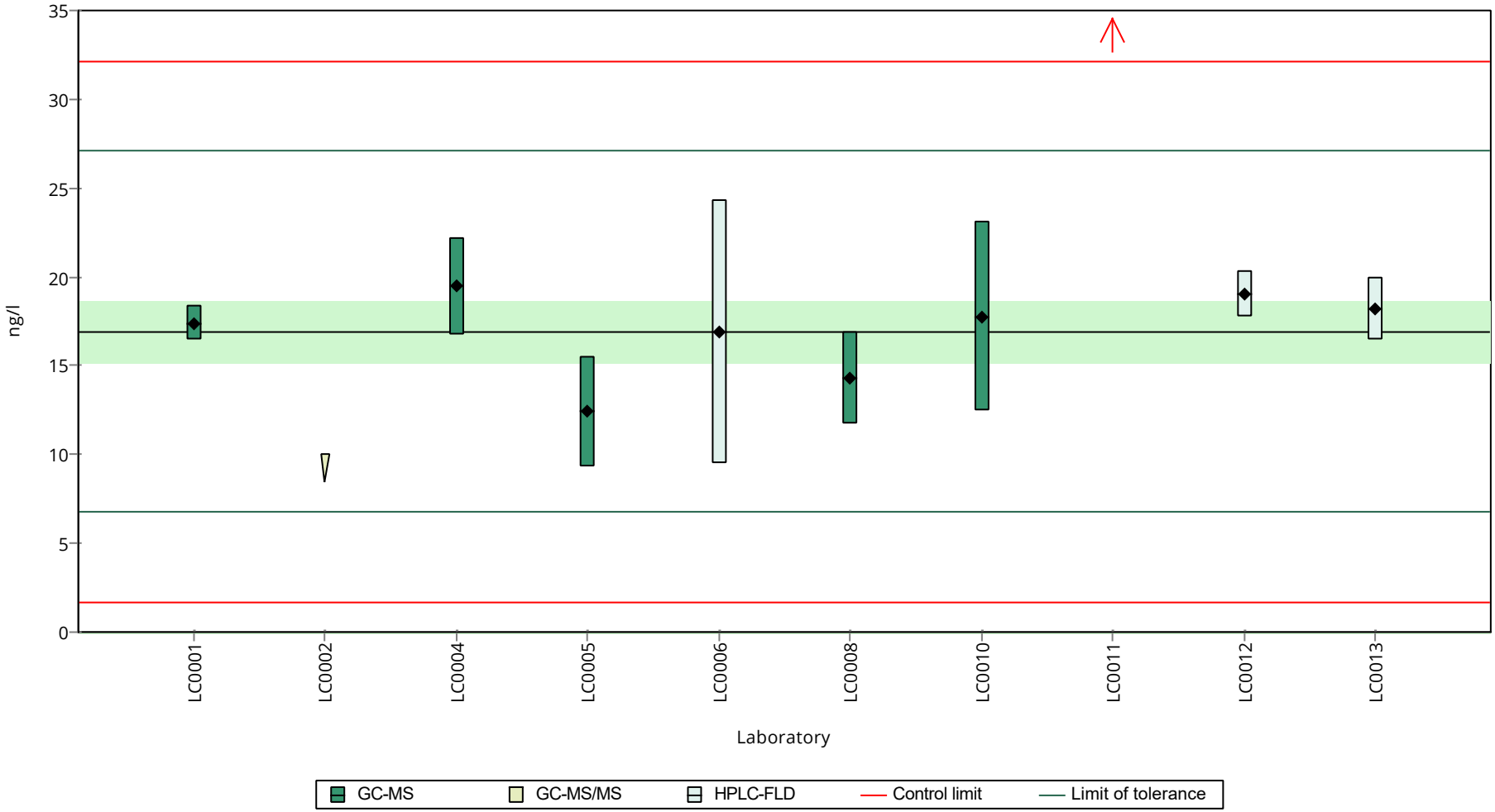
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	17.4 ± 1	103	0.09	
LC0002	< 10 (LOQ) ± -	-	-	FN
LC0004	19.45 ± 2.72	115	0.5	
LC0005	12.4 ± 3.1	73.3	-0.89	
LC0006	16.9 ± 7.4	99.9	0.00	
LC0007	- ± -	-	-	
LC0008	14.3 ± 2.6	84.5	-0.52	
LC0009	- ± -	-	-	
LC0010	17.75 ± 5.33	105	0.16	
LC0011	73.5 ± 35.5	434	11.14	H
LC0012	19 ± 1.31	112	0.41	
LC0013	18.2 ± 1.8	108	0.25	
LC0014	- ± -	-	-	

Characteristics of parameter

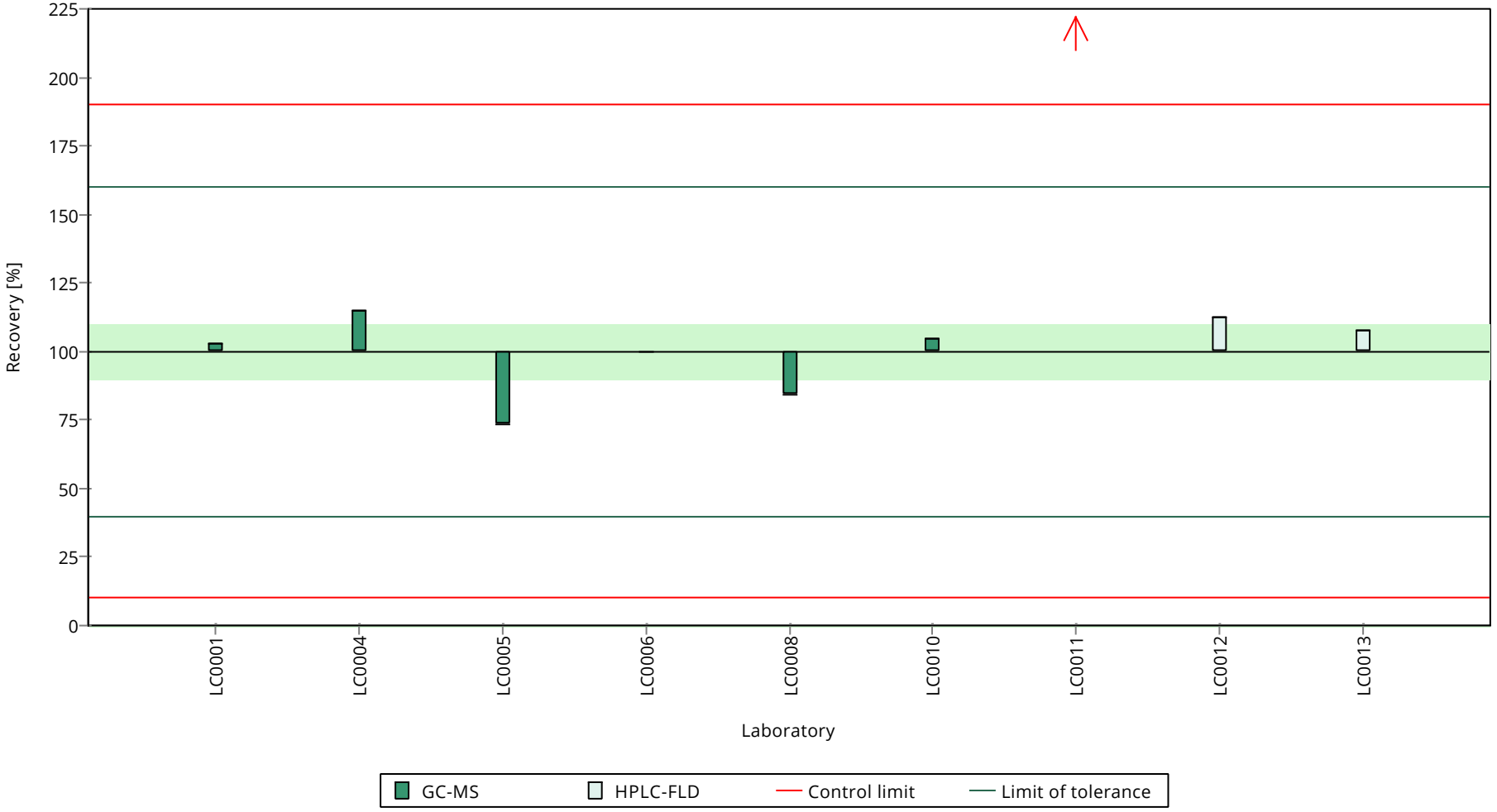
	all results	without outliers	Unit
Mean ± CI (99%)	23.2 ± 19	16.9 ± 2.55	ng/l
Minimum	12.4	12.4	ng/l
Maximum	73.5	19.5	ng/l
Standard deviation	19	2.41	ng/l
rel. standard deviation	81.8	14.2	%
n	9	8	-

Graphical presentation of results

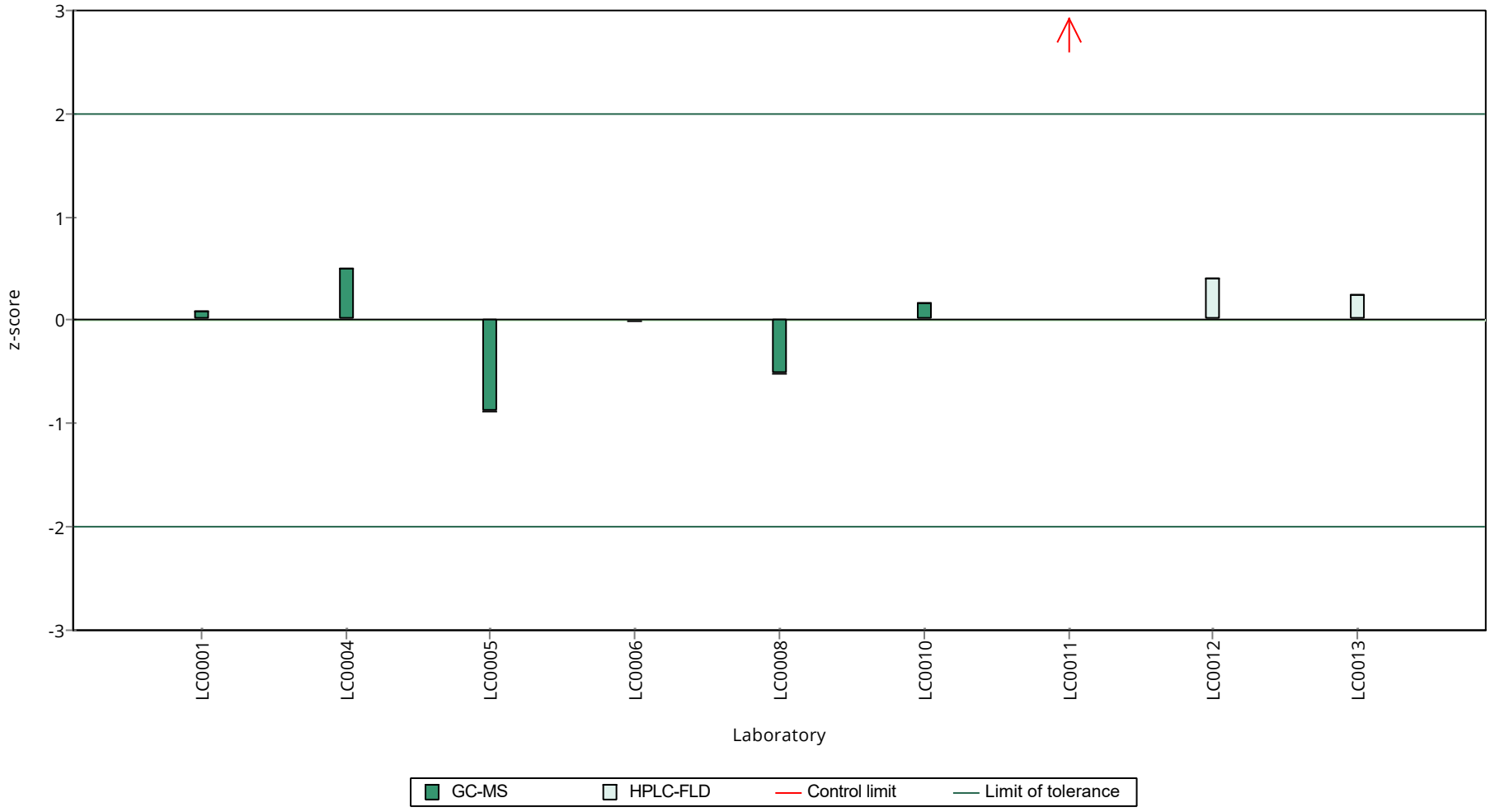
Results



Recovery rate



z-Score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z-score
LC0001
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Dibenzo[a,h]anthracene

Unit	ng/l
Assigned value ± U (k=2)	203 ± 47.3
Criterion	60.9 (30 %)
Minimum - Maximum	66.8 - 285
Control test value ± U (k=2)	327 ± 114

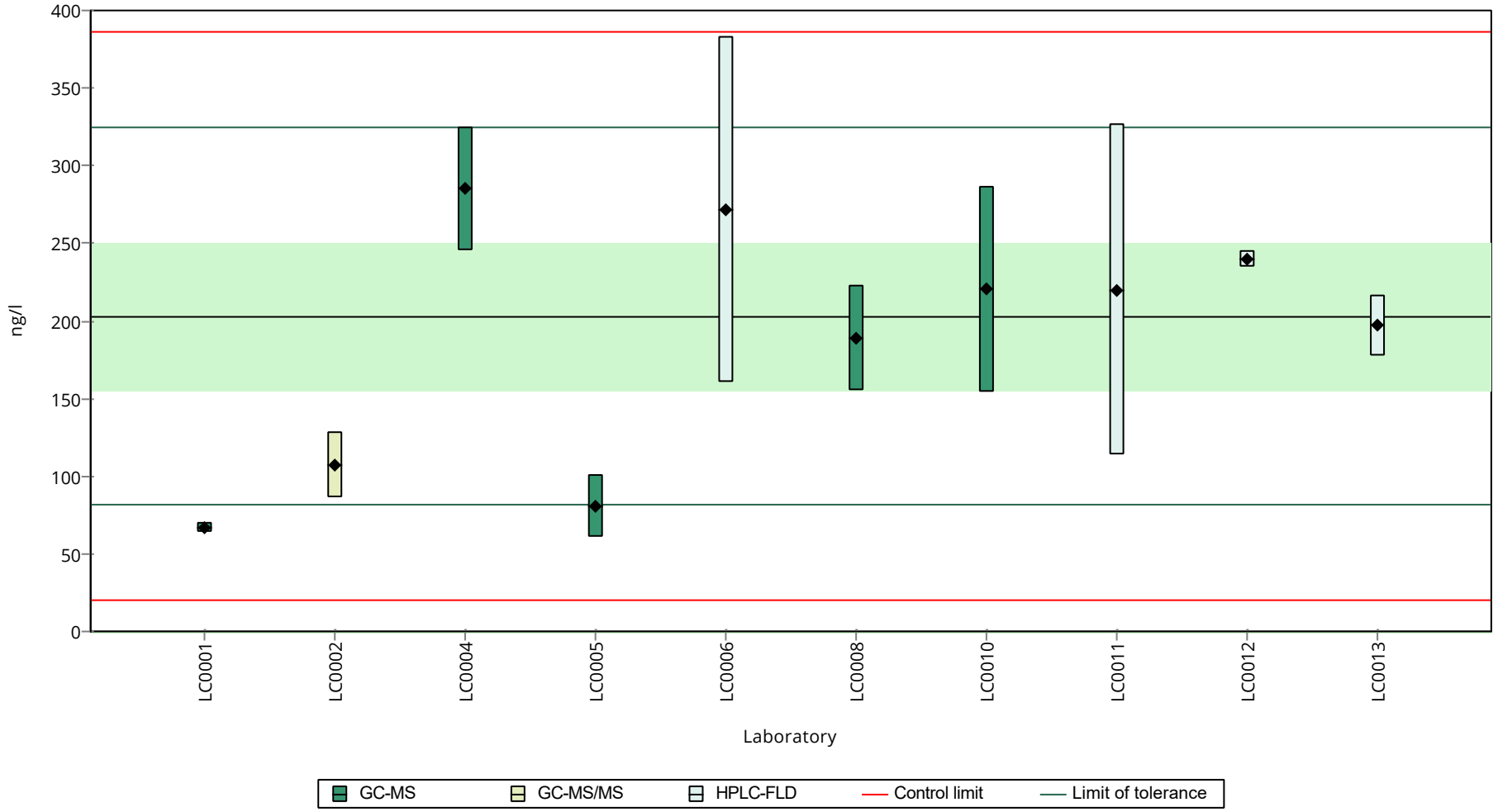
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	66.79 ± 3.34	32.9	-2.24	
LC0002	107 ± 21	52.7	-1.58	
LC0004	285.24 ± 39.85	140	1.35	
LC0005	81 ± 20	39.9	-2	
LC0006	271.8 ± 111.7	134	1.13	
LC0007	- ± -	-	-	
LC0008	189 ± 34	93.1	-0.23	
LC0009	- ± -	-	-	
LC0010	220.33 ± 66.1	108	0.28	
LC0011	220 ± 106.3	108	0.28	
LC0012	240 ± 5.33	118	0.61	
LC0013	197.1 ± 19.7	97	-0.1	
LC0014	- ± -	-	-	

Characteristics of parameter

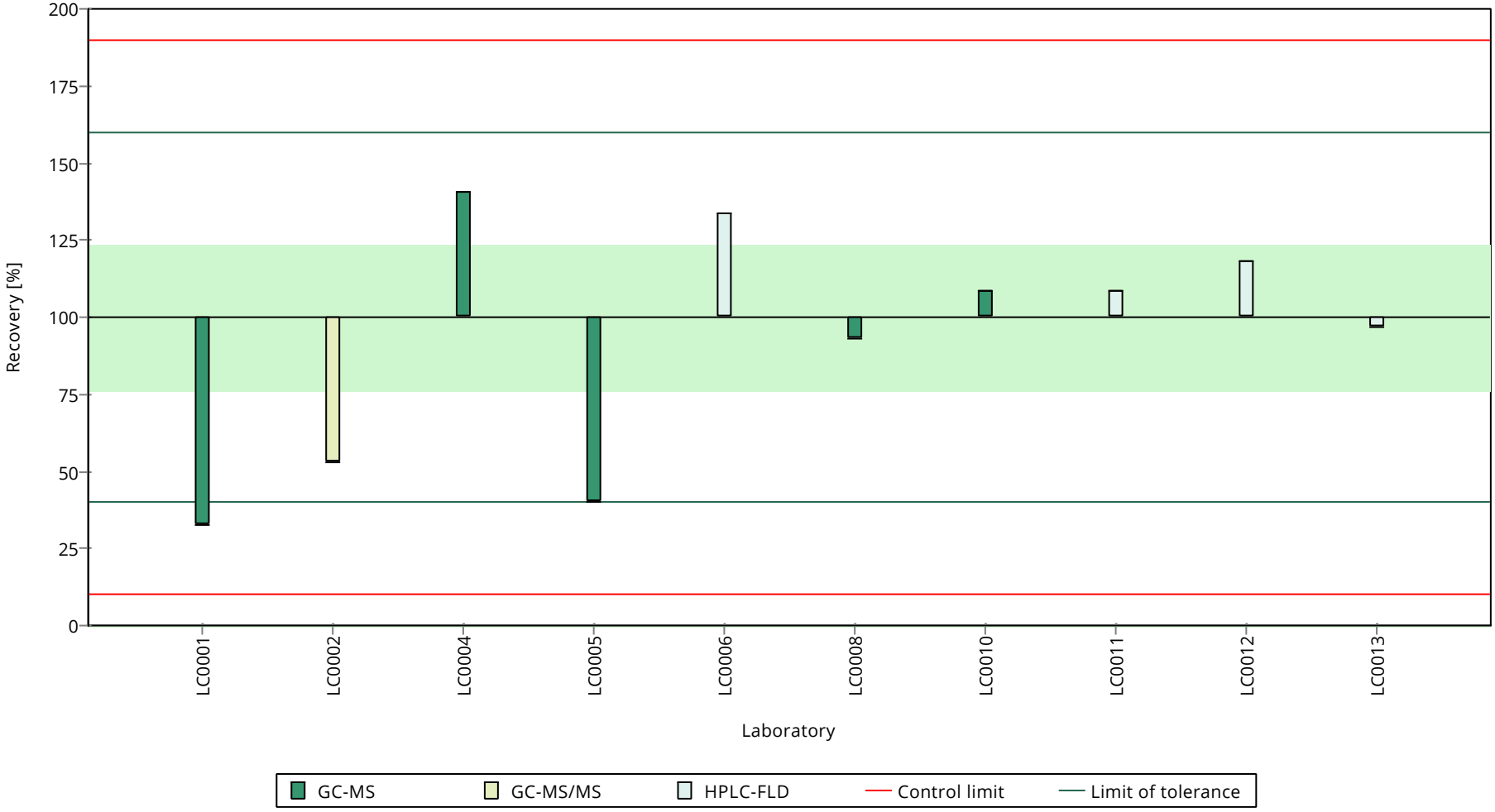
	all results	without outliers	Unit
Mean ± CI (99%)	188 ± 73.5	188 ± 73.5	ng/l
Minimum	66.8	66.8	ng/l
Maximum	285	285	ng/l
Standard deviation	77.5	77.5	ng/l
rel. standard deviation	41.3	41.3	%
n	10	10	-

Graphical presentation of results

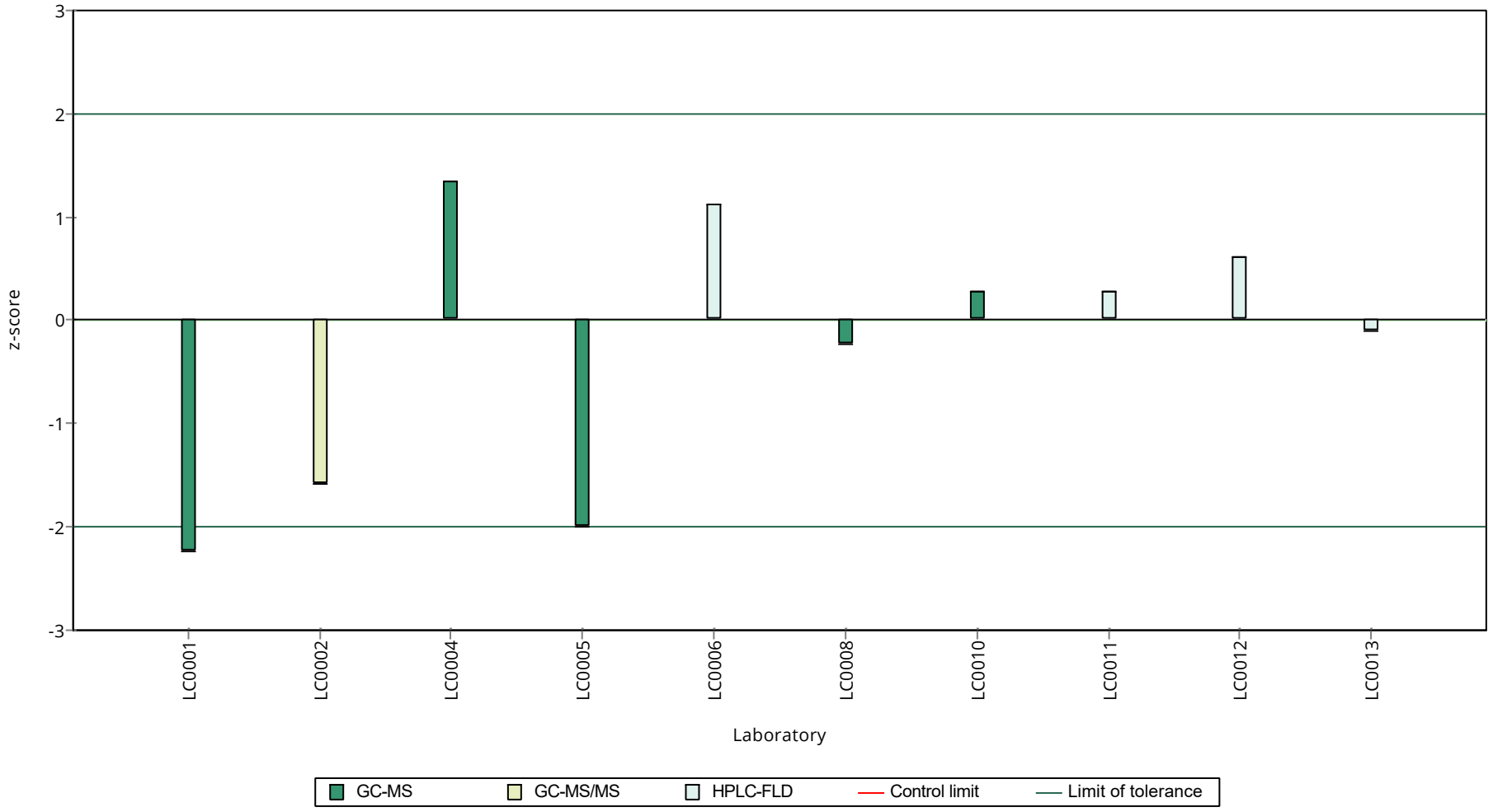
Results



Recovery rate



z-Score


3
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z-score
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Fluoranthene

Unit	ng/l
Assigned value ± U (k=2)	21.6 ± 1.56
Criterion	3.89 (18 %)
Minimum - Maximum	16.7 - 23.6
Control test value ± U (k=2)	23.3 ± 5.83

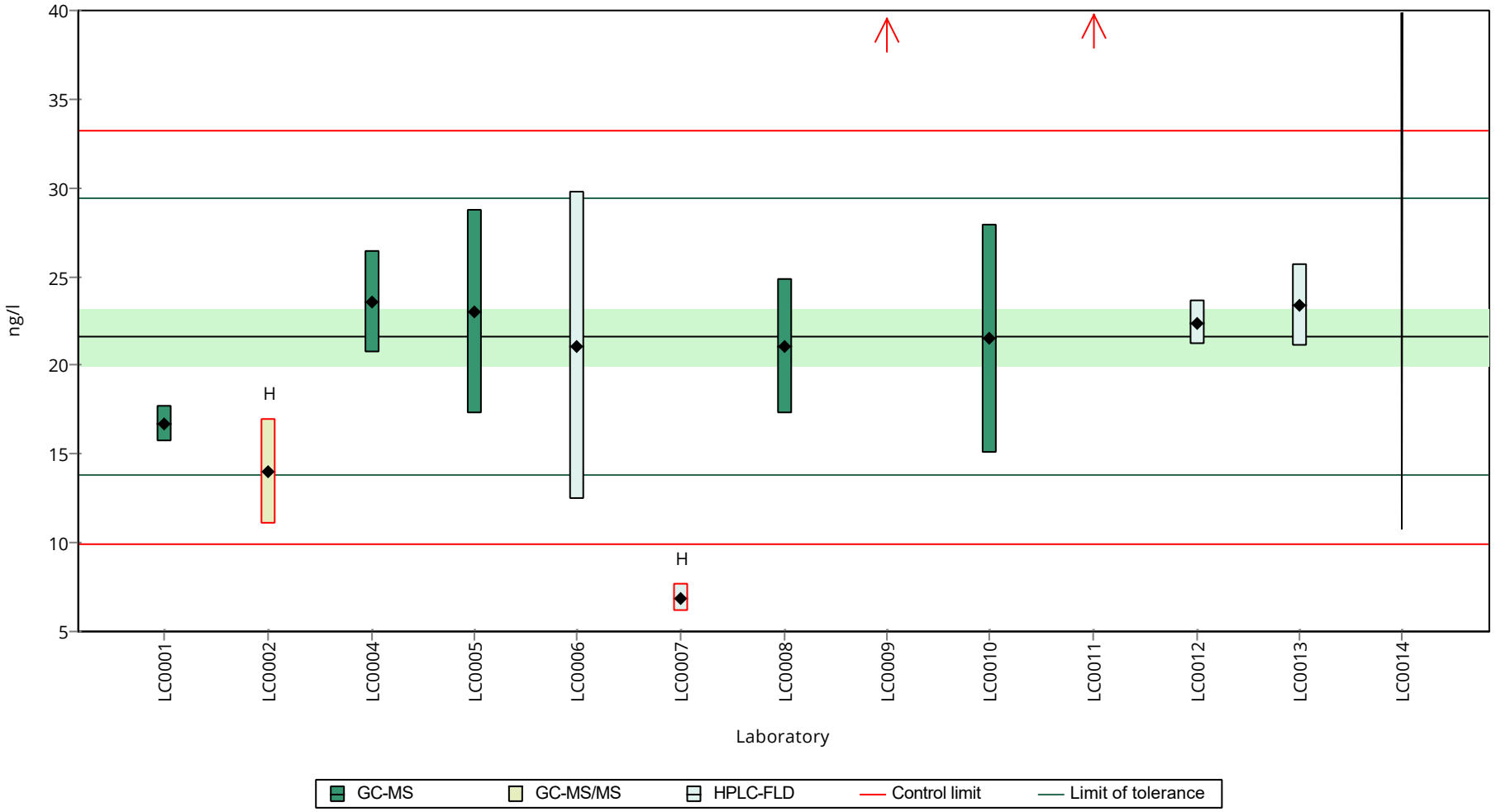
Labcode	Result	±	U	Recovery [%]	z-Score	Comments
LC0001	16.71	±	1	77.4	-1.26	
LC0002	14	±	3	64.8	-1.95	H
LC0004	23.59	±	2.88	109	0.51	
LC0005	23	±	5.76	106	0.36	
LC0006	21.1	±	8.7	97.7	-0.13	
LC0007	6.9	±	0.8	31.9	-3.78	H
LC0008	21.1	±	3.8	97.7	-0.13	
LC0009	42.154	±	0.447	195	5.29	H
LC0010	21.5	±	6.45	99.5	-0.03	
LC0011	46.9	±	21.9	217	6.51	H
LC0012	22.4	±	1.25	104	0.21	
LC0013	23.4	±	2.3	108	0.46	
LC0014	< 200 (LOQ)	±	-	-	-	

Characteristics of parameter

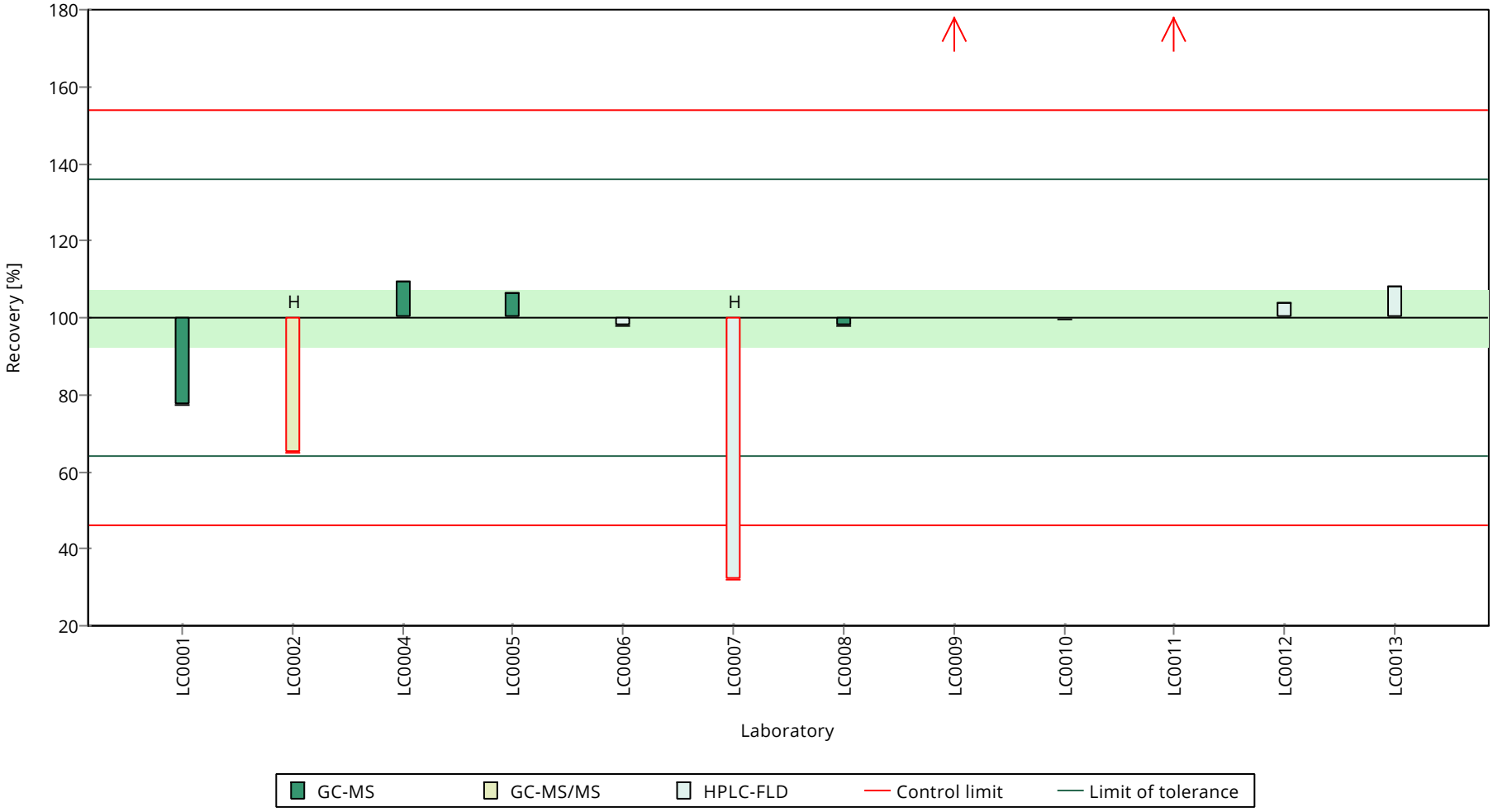
	all results	without outliers	Unit
Mean ± CI (99%)	23.6 ± 9.5	21.6 ± 2.35	ng/l
Minimum	6.9	16.7	ng/l
Maximum	46.9	23.6	ng/l
Standard deviation	11	2.21	ng/l
rel. standard deviation	46.6	10.2	%
n	12	8	-

Graphical presentation of results

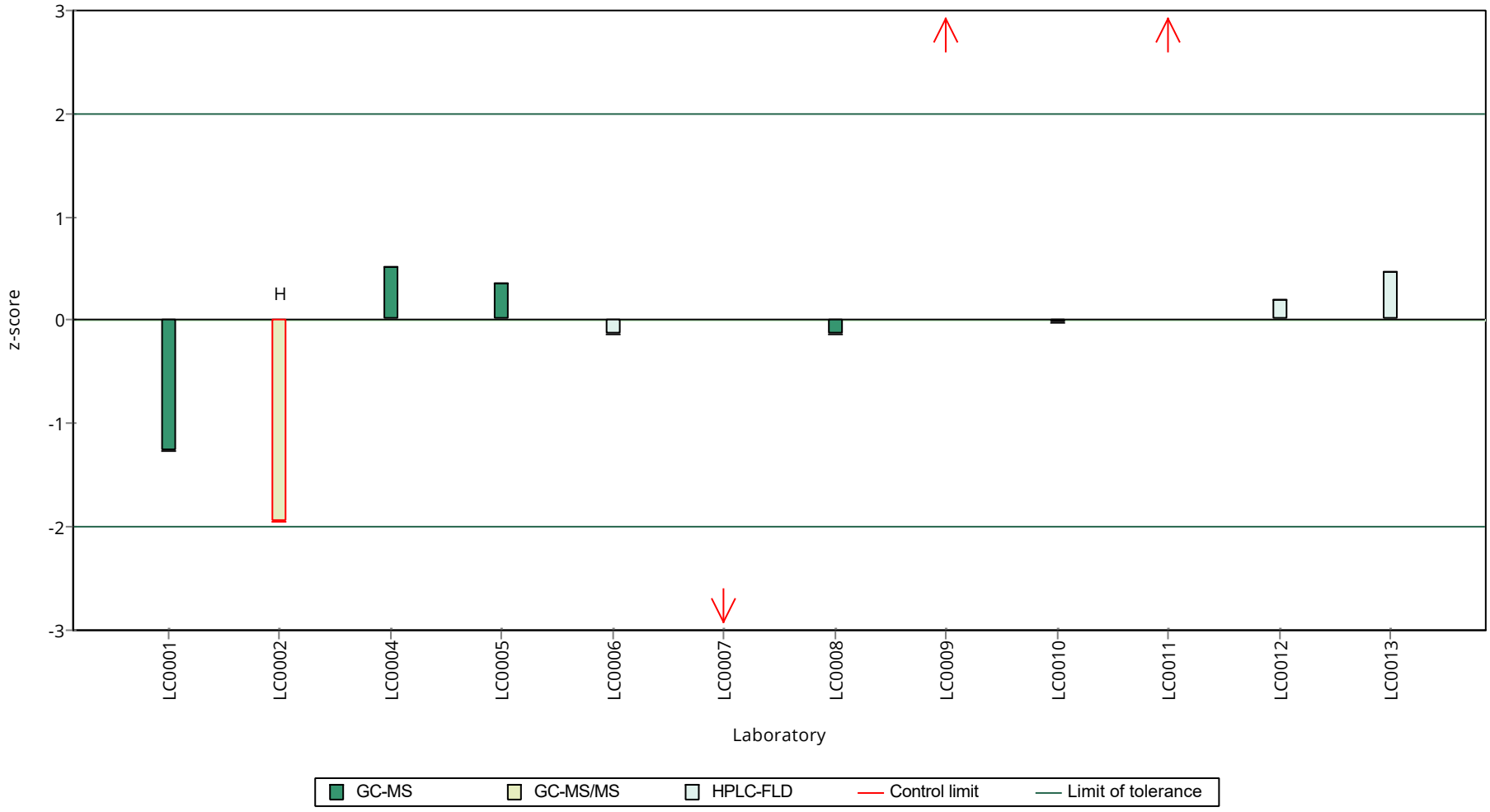
Results



Recovery rate



z-Score


3
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z-score
H
LC0001
LC0002
LC0004
LC0005
LC0006
LC0007
LC0008
LC0009
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Fluoranthene

Unit	ng/l
Assigned value ± U (k=2)	346 ± 44.3
Criterion	72.6 (21 %)
Minimum - Maximum	236 - 472
Control test value ± U (k=2)	370 ± 92.6

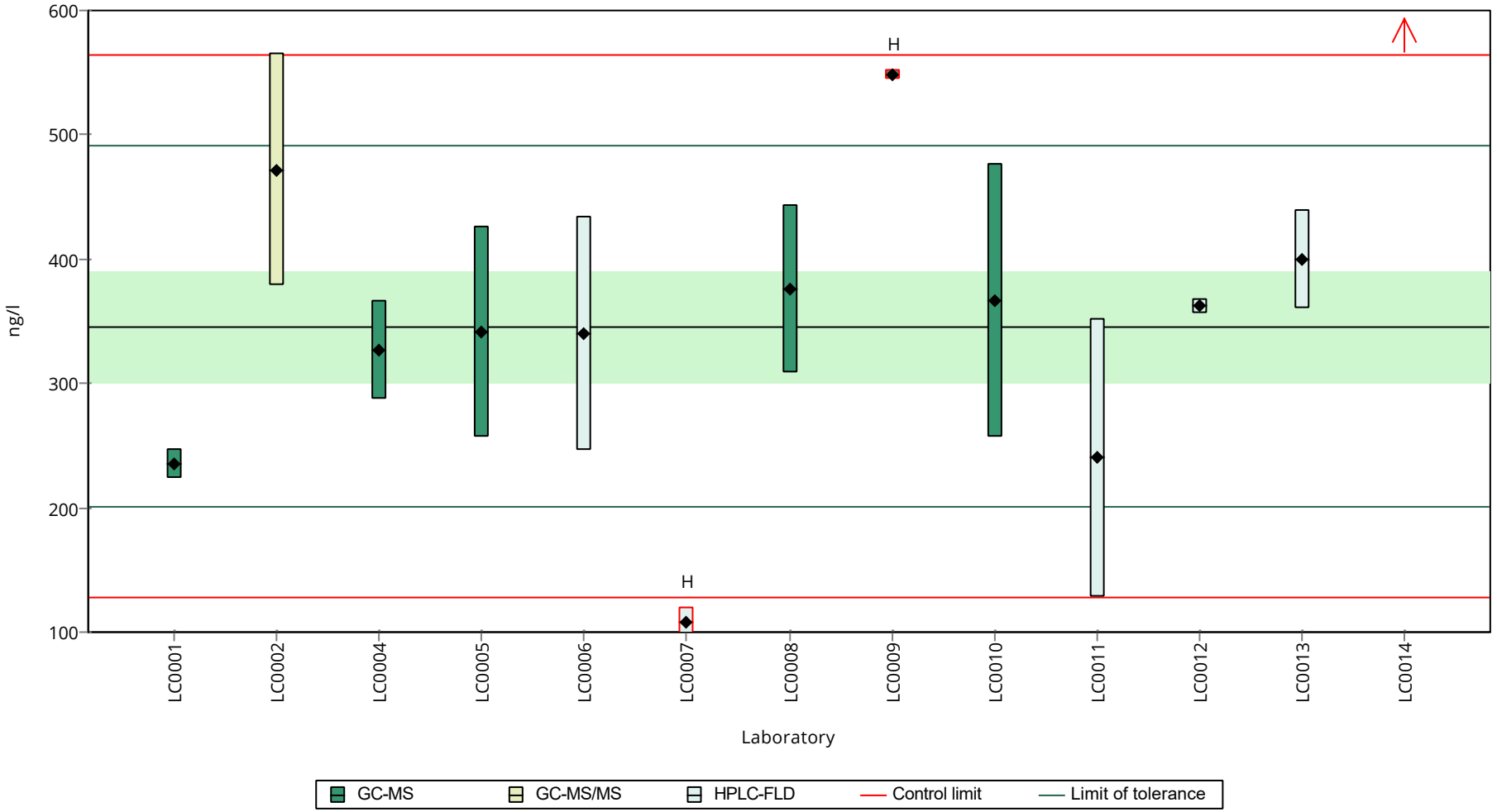
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	235.61 ± 11.78	68.1	-1.52	
LC0002	472 ± 94	136	1.74	
LC0004	326.46 ± 39.86	94.4	-0.27	
LC0005	341 ± 85	98.6	-0.07	
LC0006	339.9 ± 94.1	98.3	-0.08	
LC0007	108.4 ± 11.9	31.3	-3.27	H
LC0008	376 ± 68	109	0.41	
LC0009	547.826 ± 4.098	158	2.78	H
LC0010	366.25 ± 109.88	106	0.28	
LC0011	240 ± 112.1	69.4	-1.46	
LC0012	362 ± 5.58	105	0.22	
LC0013	399.8 ± 40	116	0.74	
LC0014	1110 ± 111	321	10.52	H

Characteristics of parameter

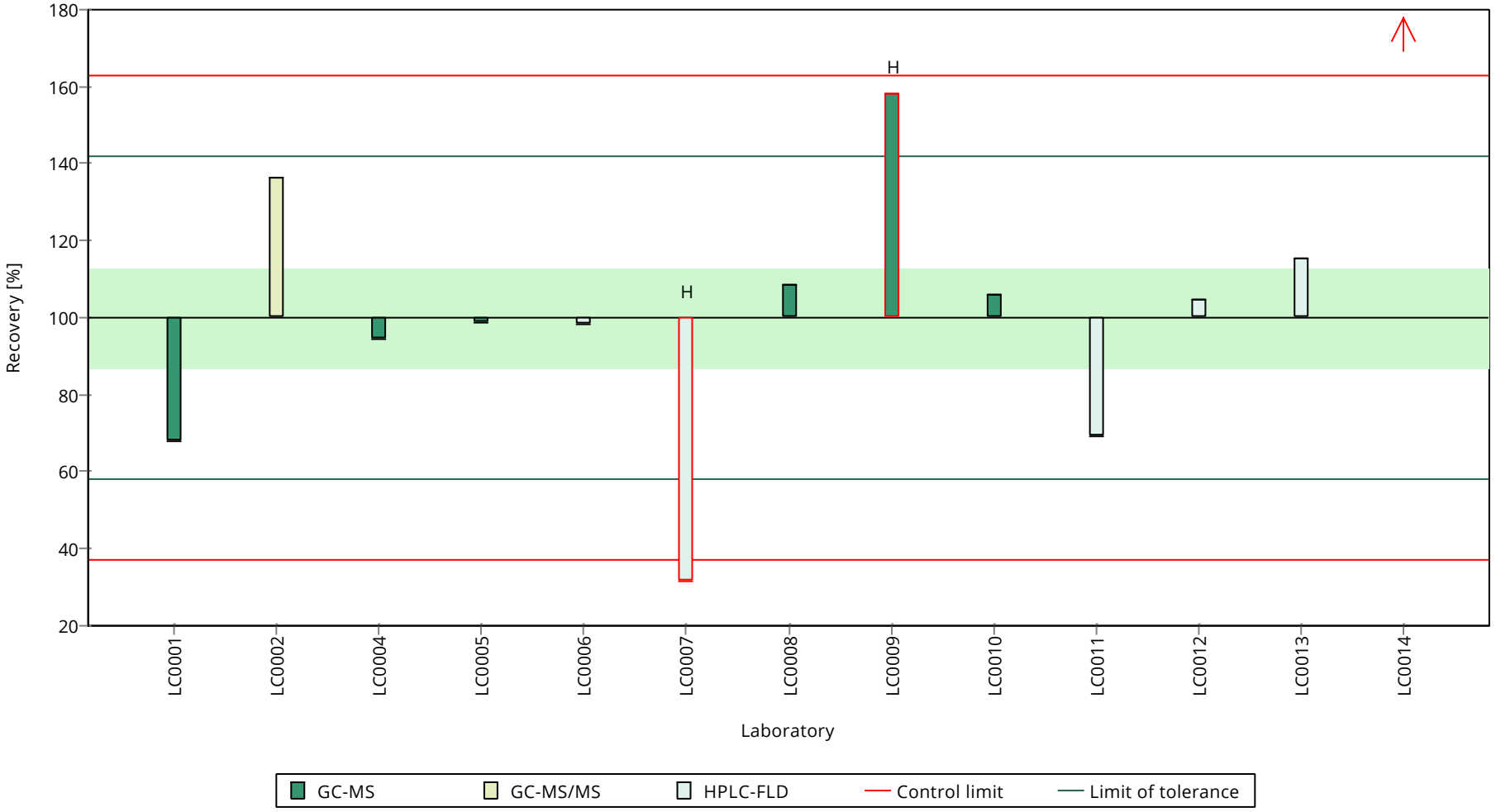
	all results	without outliers	Unit
Mean ± CI (99%)	402 ± 199	346 ± 66.5	ng/l
Minimum	108	236	ng/l
Maximum	1110	472	ng/l
Standard deviation	239	70.1	ng/l
rel. standard deviation	59.4	20.3	%
n	13	10	-

Graphical presentation of results

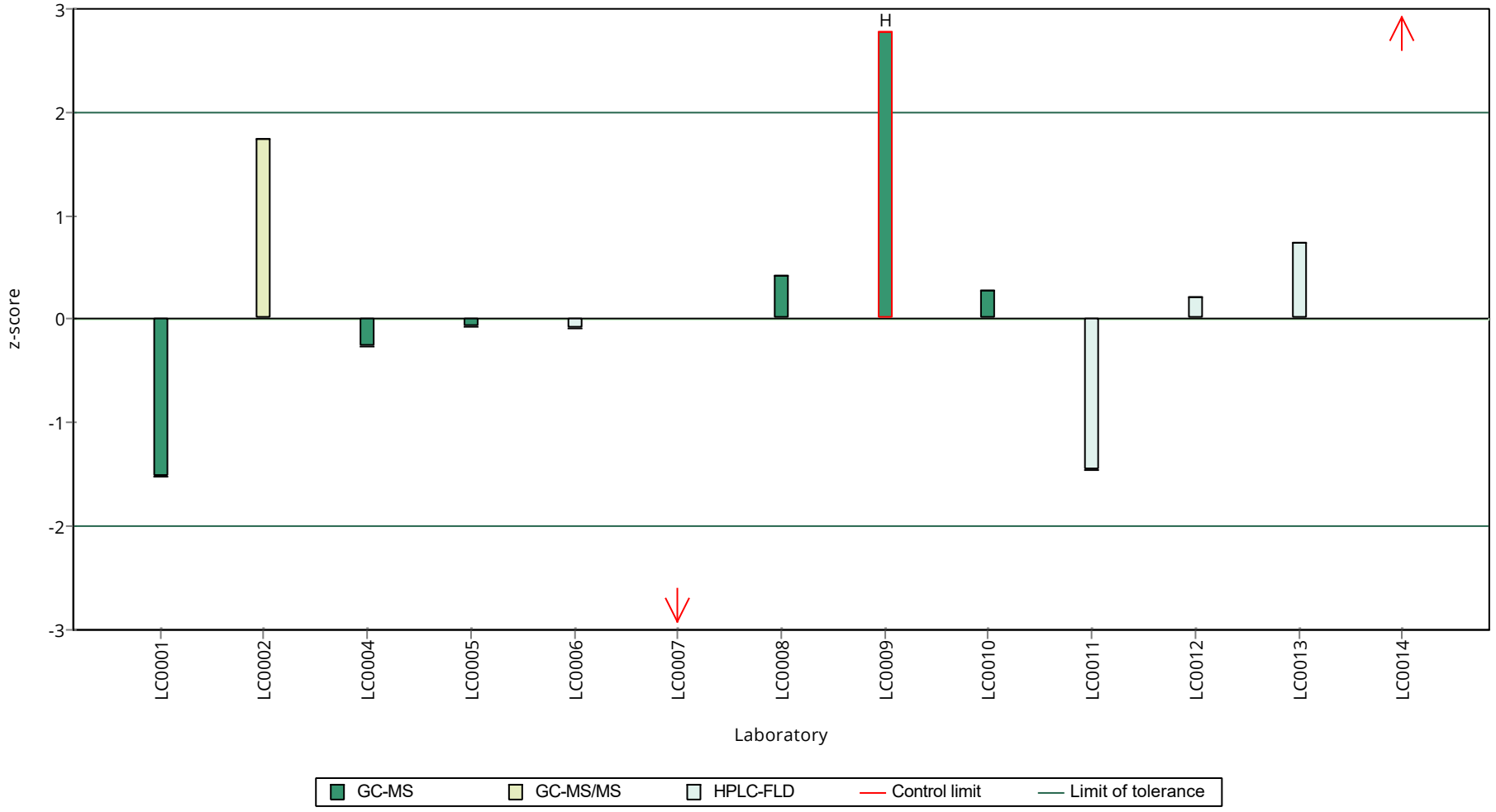
Results



Recovery rate



z-Score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z-score
H
LC0001
LC0002
LC0004
LC0005
LC0006
LC0007
LC0008
LC0009
LC0010
LC0011
LC0012
LC0013
LC0014
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Fluorene

Unit	ng/l
Assigned value ± U (k=2)	22.1 ± 2.07
Criterion	3.09 (14 %)
Minimum - Maximum	18 - 26
Control test value ± U (k=2)	22.6 ± 7.92

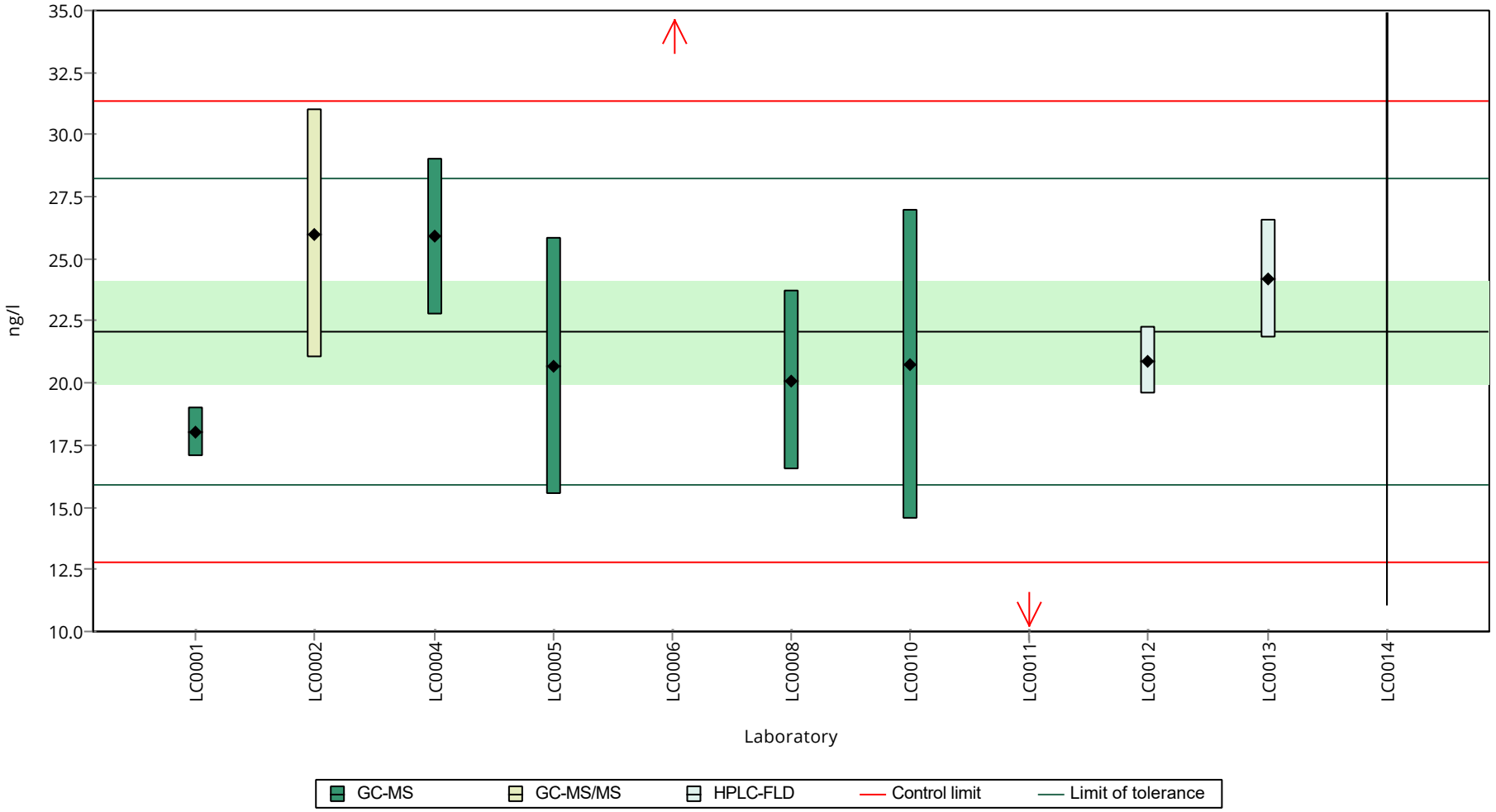
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	18 ± 1	81.6	-1.32	
LC0002	26 ± 5	118	1.27	
LC0004	25.9 ± 3.14	117	1.24	
LC0005	20.7 ± 5.17	93.8	-0.44	
LC0006	48.5 ± 21.7	220	8.55	H
LC0007	- ± -	-	-	
LC0008	20.1 ± 3.6	91.1	-0.64	
LC0009	- ± -	-	-	
LC0010	20.75 ± 6.23	94	-0.43	
LC0011	8.56 ± 3.66	38.8	-4.37	H
LC0012	20.9 ± 1.38	94.7	-0.38	
LC0013	24.2 ± 2.4	110	0.69	
LC0014	< 200 (LOQ) ± -	-	-	

Characteristics of parameter

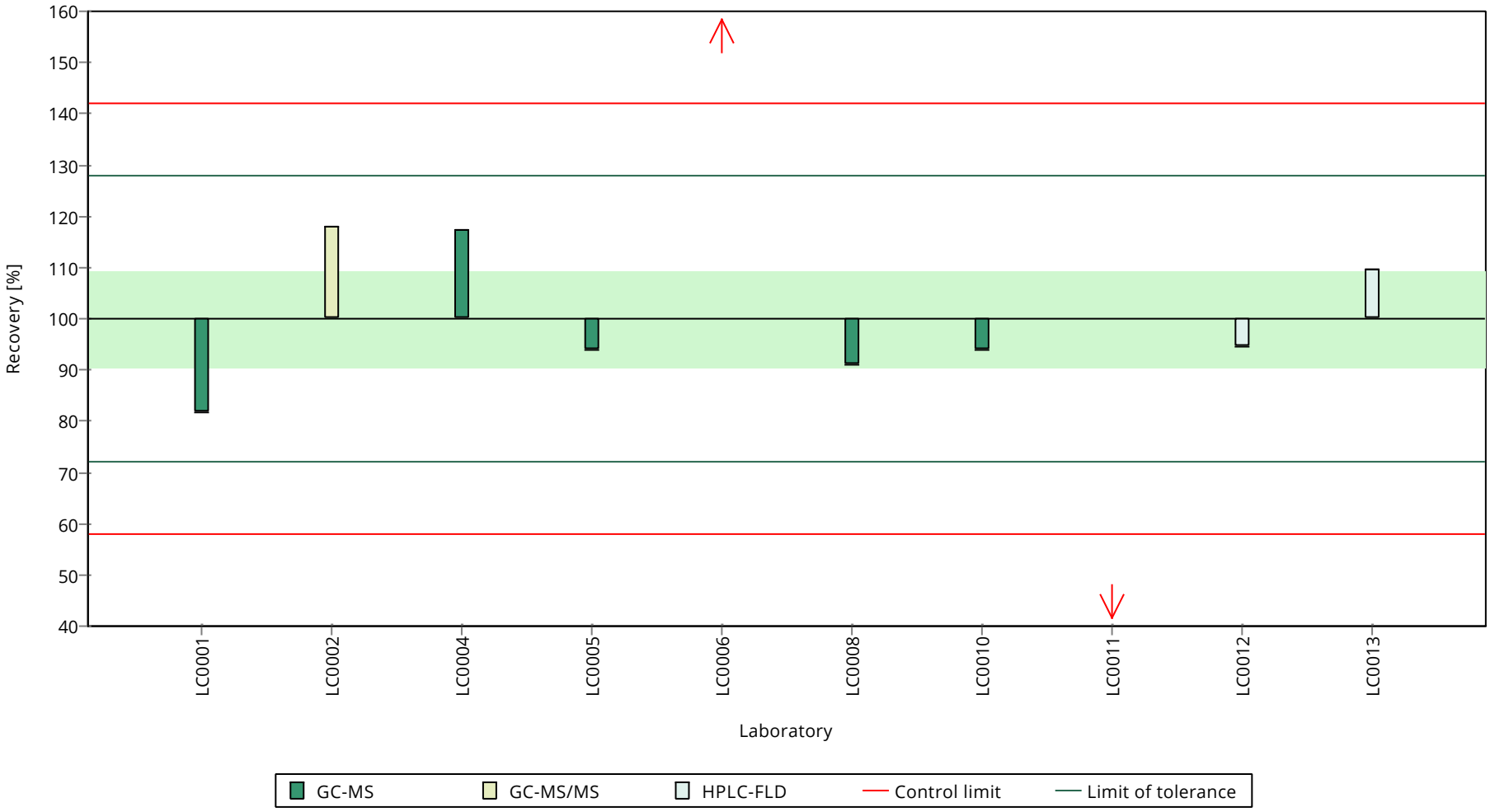
	all results	without outliers	Unit
Mean ± CI (99%)	23.4 ± 9.62	22.1 ± 3.11	ng/l
Minimum	8.56	18	ng/l
Maximum	48.5	26	ng/l
Standard deviation	10.1	2.93	ng/l
rel. standard deviation	43.4	13.3	%
n	10	8	-

Graphical presentation of results

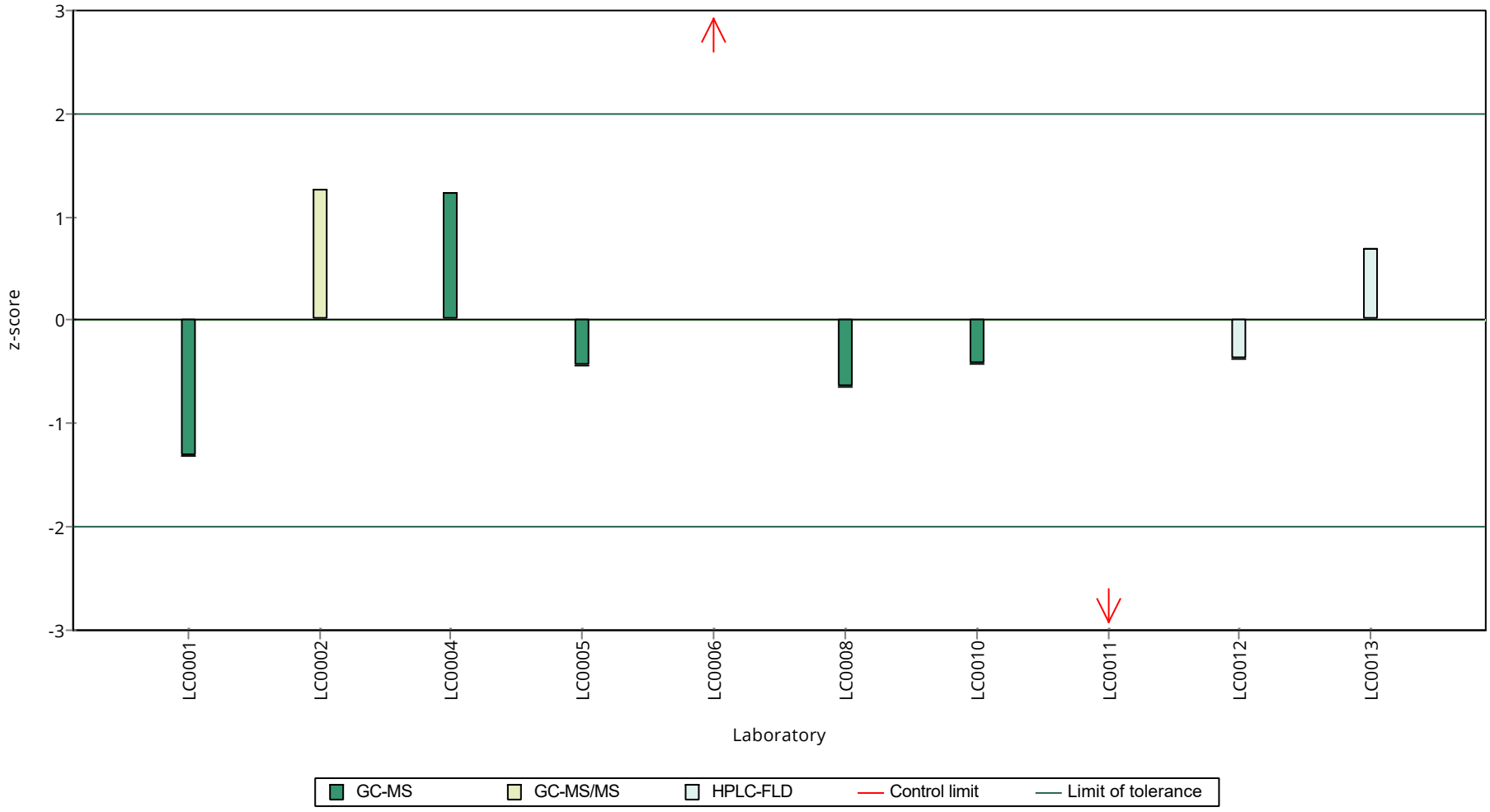
Results



Recovery rate



z-Score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z-score
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Fluorene

Unit	ng/l
Assigned value ± U (k=2)	218 ± 21.7
Criterion	32.6 (15 %)
Minimum - Maximum	146 - 254
Control test value ± U (k=2)	222 ± 77.6

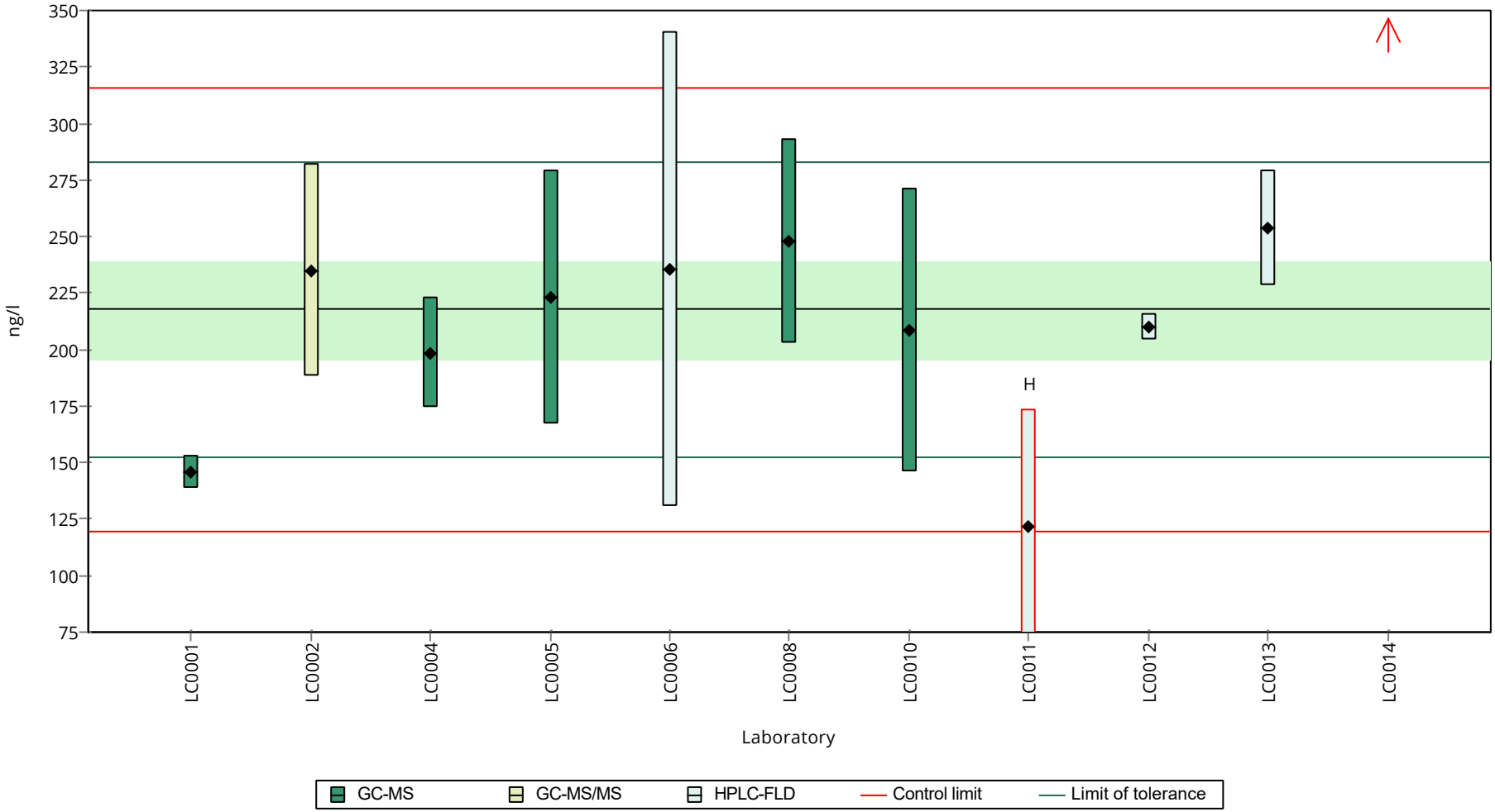
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	146.04 ± 7.3	67.1	-2.19	
LC0002	235 ± 47	108	0.53	
LC0004	198.61 ± 24.11	91.3	-0.58	
LC0005	223 ± 56	102	0.16	
LC0006	235.5 ± 105.3	108	0.55	
LC0007	- ± -	-	-	
LC0008	248 ± 45	114	0.93	
LC0009	- ± -	-	-	
LC0010	208.75 ± 62.63	95.9	-0.27	
LC0011	121.6 ± 51.9	55.9	-2.94	H
LC0012	210 ± 5.56	96.5	-0.23	
LC0013	253.7 ± 25.4	117	1.11	
LC0014	550 ± 55	253	10.18	H

Characteristics of parameter

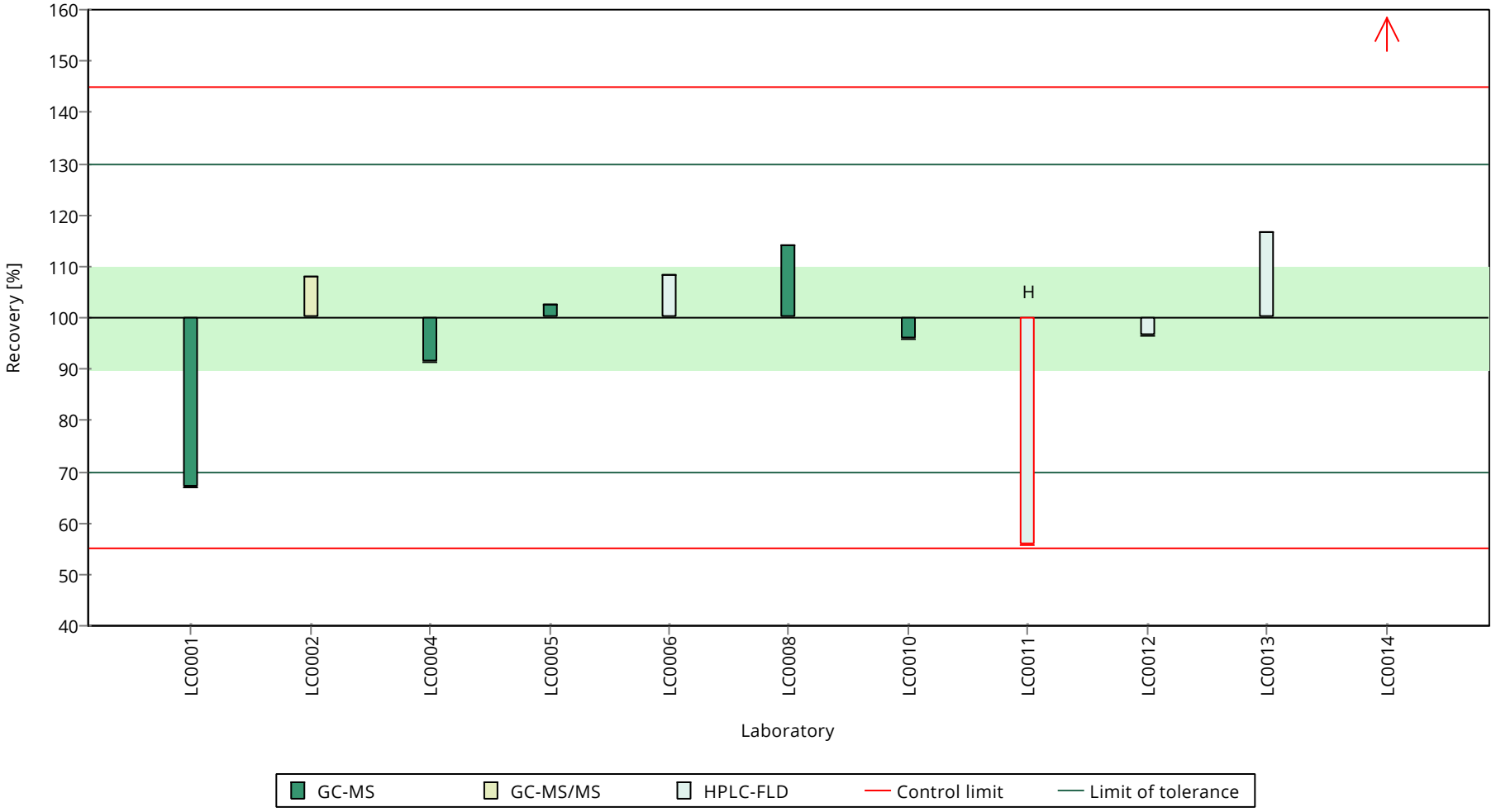
	all results	without outliers	Unit
Mean ± CI (99%)	239 ± 100	218 ± 32.6	ng/l
Minimum	122	146	ng/l
Maximum	550	254	ng/l
Standard deviation	111	32.6	ng/l
rel. standard deviation	46.4	15	%
n	11	9	-

Graphical presentation of results

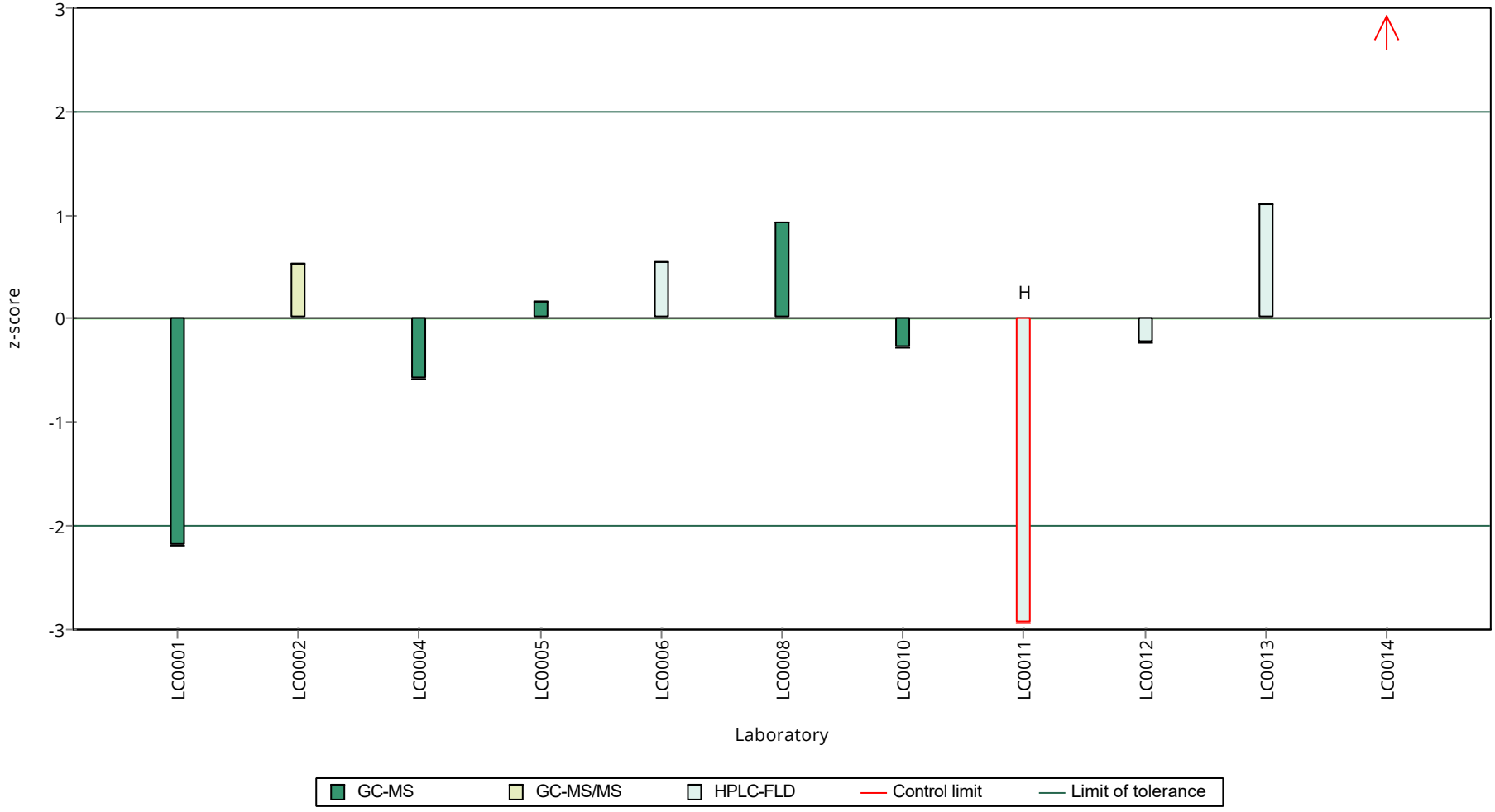
Results



Recovery rate



z-Score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z-score
H
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
LC0014
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Indeno[1,2,3-cd]pyrene

Unit	ng/l
Assigned value ± U (k=2)	20.9 ± 2.29
Criterion	5.22 (25 %)
Minimum - Maximum	15.9 - 24.5
Control test value ± U (k=2)	25.8 ± 9.04

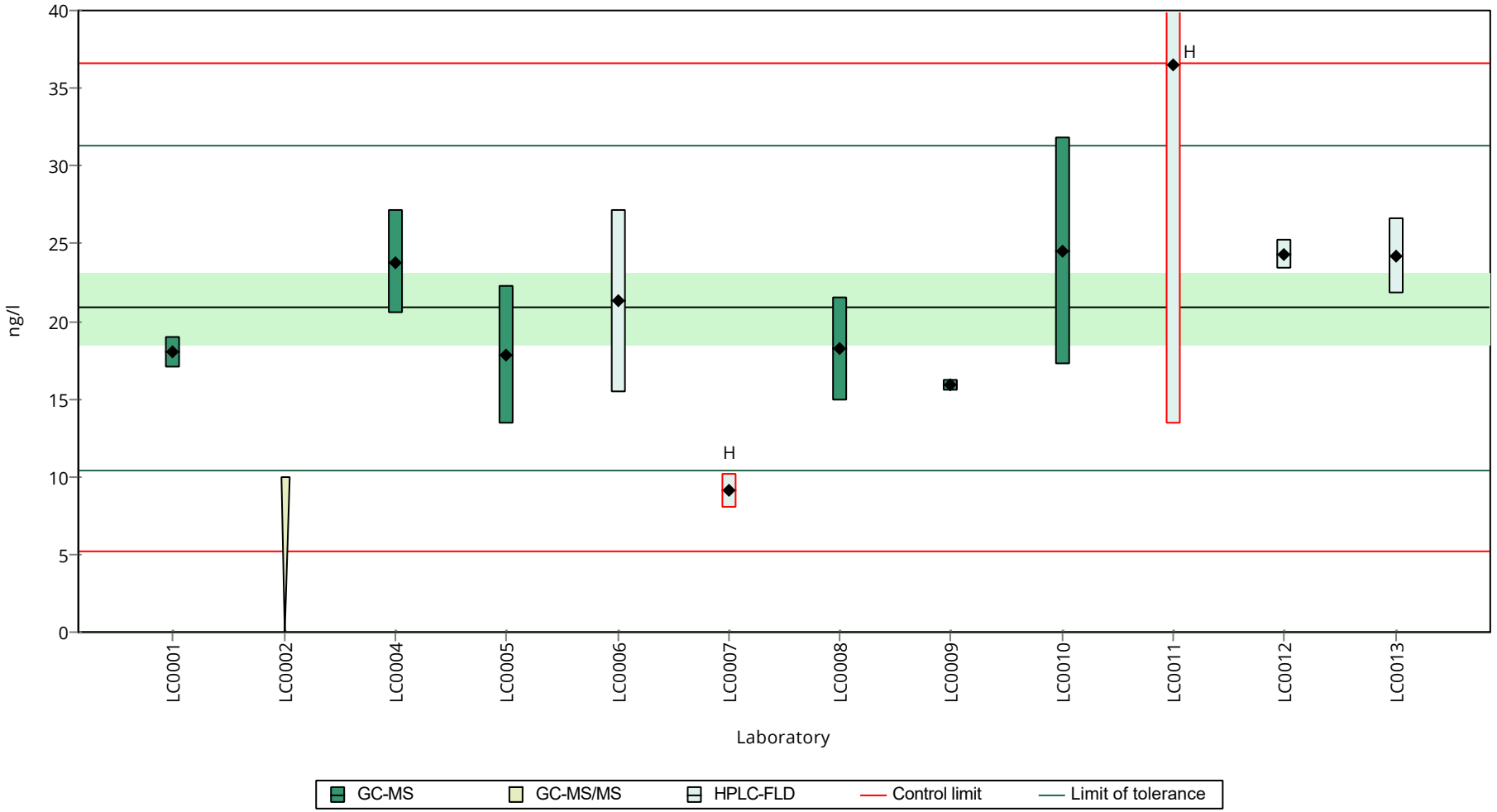
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	17.99 ± 1	86.1	-0.55	
LC0002	< 10 (LOQ) ± -	-	-	
LC0004	23.81 ± 3.33	114	0.56	
LC0005	17.8 ± 4.46	85.2	-0.59	
LC0006	21.3 ± 5.9	102	0.08	
LC0007	9.1 ± 1.1	43.6	-2.26	H
LC0008	18.2 ± 3.3	87.1	-0.51	
LC0009	15.883 ± 0.381	76	-0.96	
LC0010	24.5 ± 7.35	117	0.69	
LC0011	36.5 ± 23.1	175	2.99	H
LC0012	24.3 ± 0.957	116	0.65	
LC0013	24.2 ± 2.4	116	0.63	
LC0014	- ± -	-	-	

Characteristics of parameter

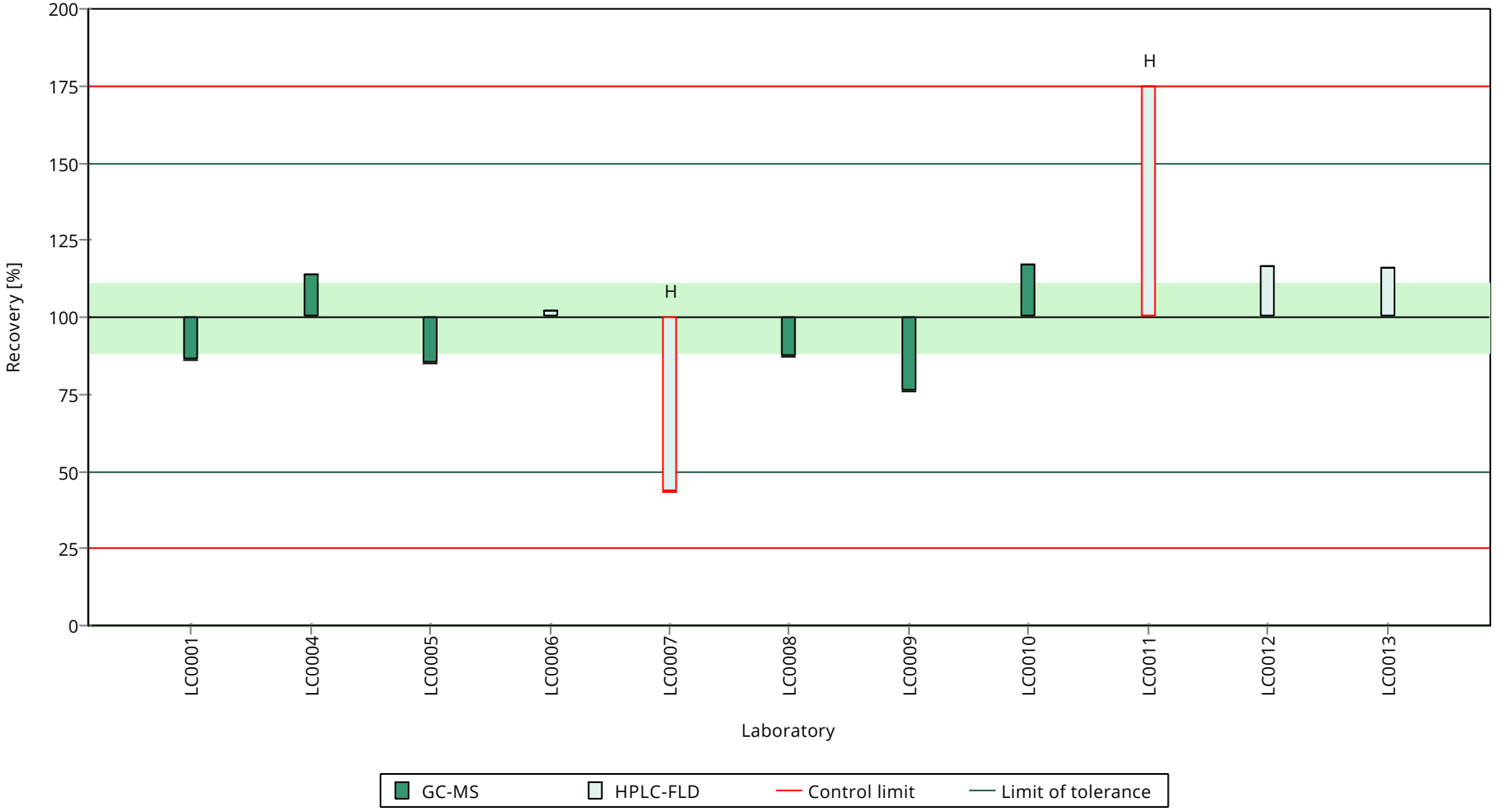
	all results	without outliers	Unit
Mean ± CI (99%)	21.2 ± 6.24	20.9 ± 3.44	ng/l
Minimum	9.1	15.9	ng/l
Maximum	36.5	24.5	ng/l
Standard deviation	6.9	3.44	ng/l
rel. standard deviation	32.5	16.5	%
n	11	9	-

Graphical presentation of results

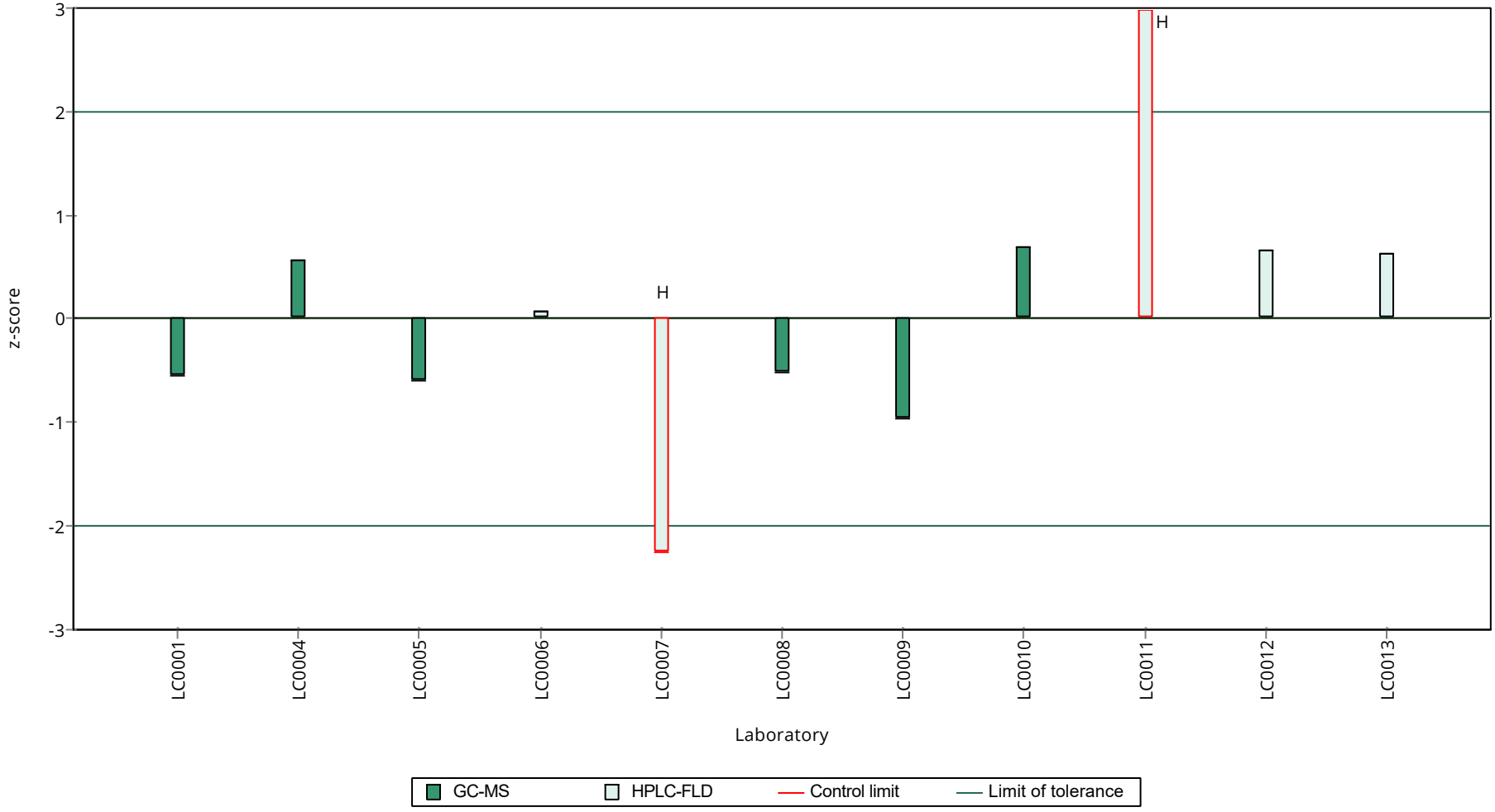
Results



Recovery rate



z-Score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z-score
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H
LC0001
LC0004
LC0005
LC0006
LC0007
LC0008
LC0009
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Indeno[1,2,3-cd]pyrene

Unit	ng/l
Assigned value ± U (k=2)	228 ± 56.1
Criterion	98.1 (43 %)
Minimum - Maximum	77.8 - 349
Control test value ± U (k=2)	354 ± 124

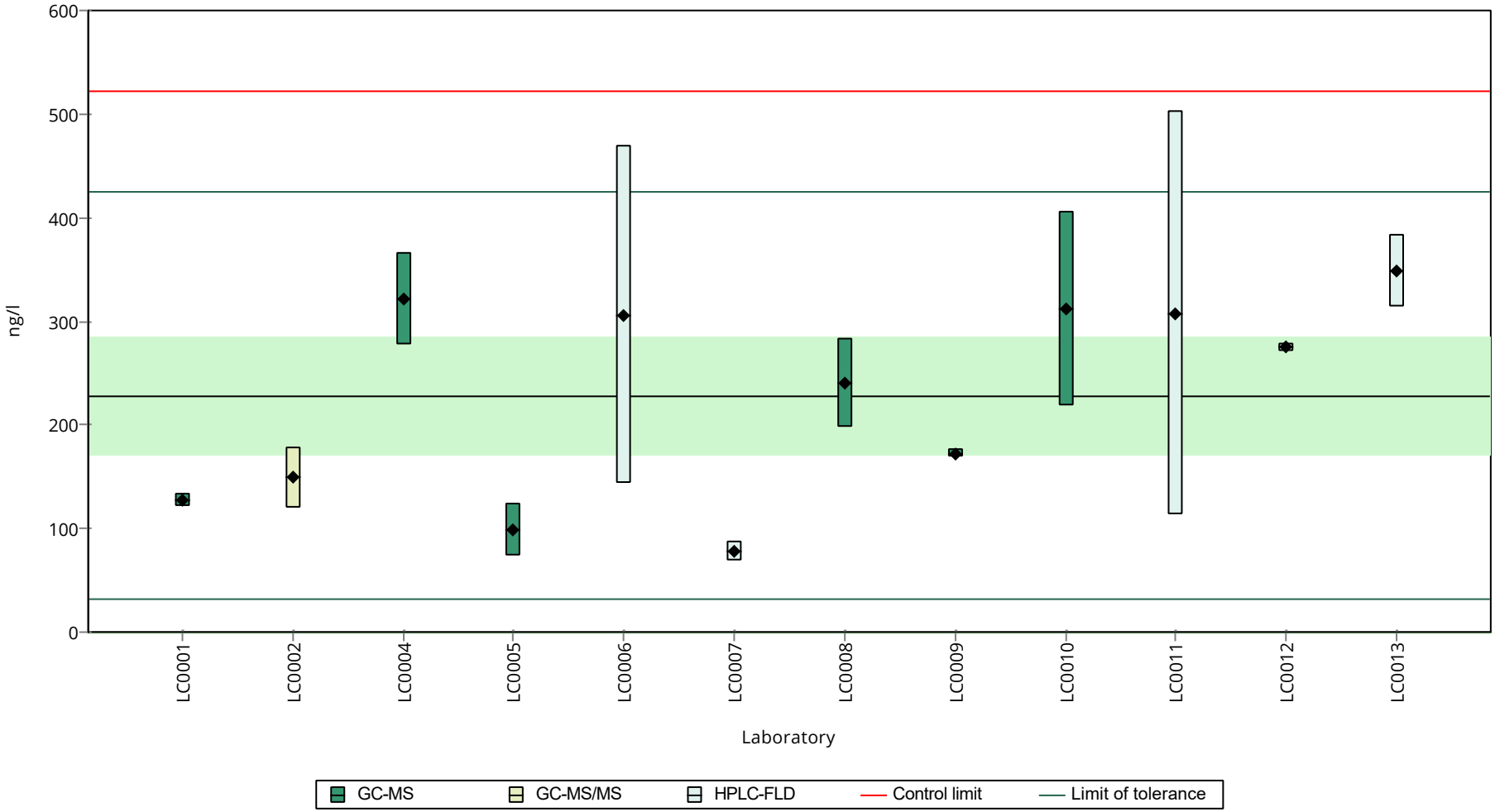
Labcode	Result	±	U	Recovery [%]	z-Score	Comments
LC0001	127.27	±	6.36	55.8	-1.03	
LC0002	149	±	30	65.3	-0.81	
LC0004	321.22	±	44.96	141	0.95	
LC0005	99	±	25	43.4	-1.32	
LC0006	306	±	163.4	134	0.79	
LC0007	77.8	±	9.3	34.1	-1.53	
LC0008	241	±	43	106	0.13	
LC0009	172.362	±	3.546	75.6	-0.57	
LC0010	312	±	93.6	137	0.86	
LC0011	307.3	±	195	135	0.81	
LC0012	275	±	4	121	0.48	
LC0013	348.9	±	34.9	153	1.23	
LC0014	-	±	-	-	-	

Characteristics of parameter

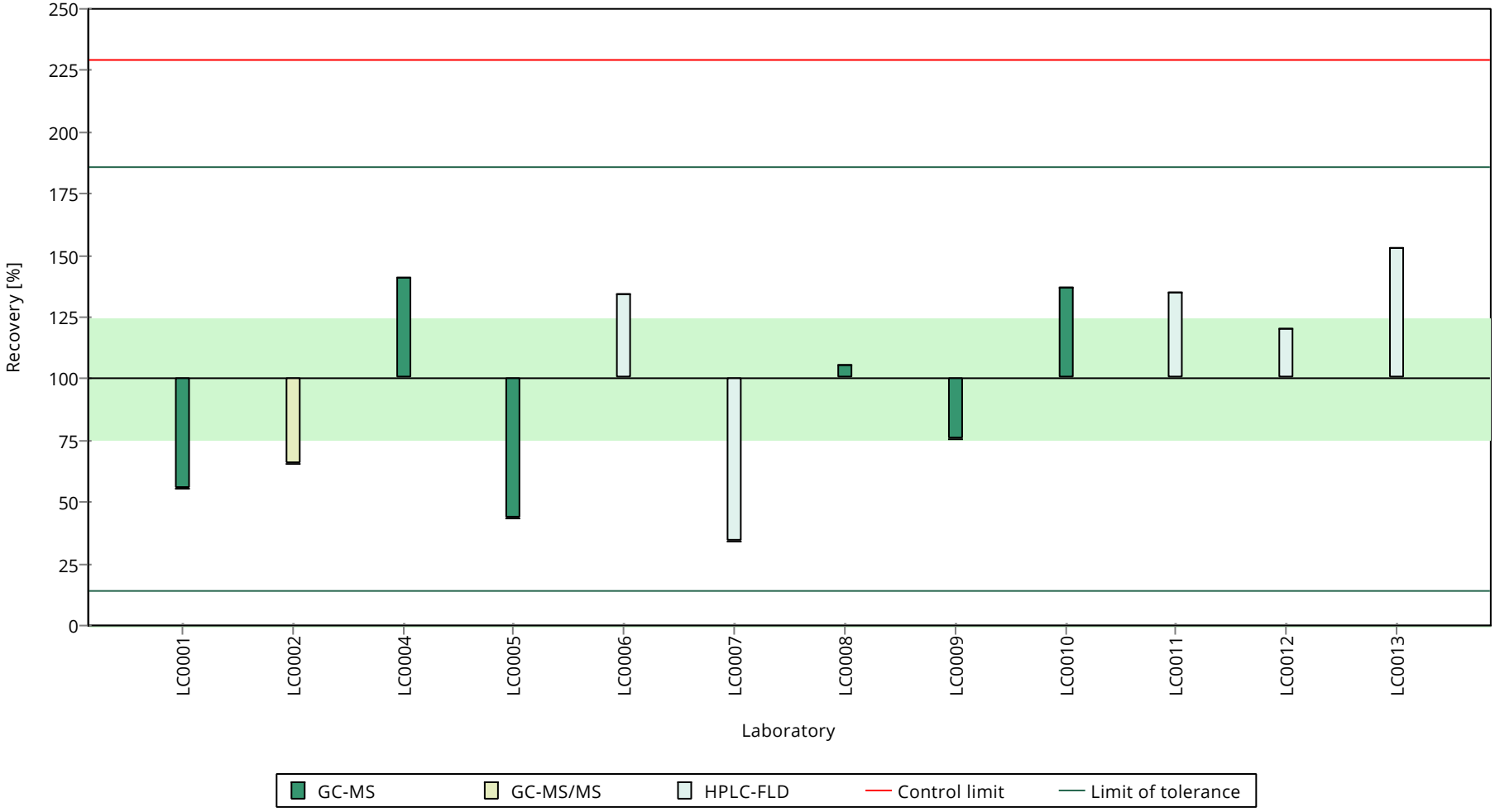
	all results	without outliers	Unit
Mean ± CI (99%)	228 ± 84.1	228 ± 84.1	ng/l
Minimum	77.8	77.8	ng/l
Maximum	349	349	ng/l
Standard deviation	97.1	97.1	ng/l
rel. standard deviation	42.6	42.6	%
n	12	12	-

Graphical presentation of results

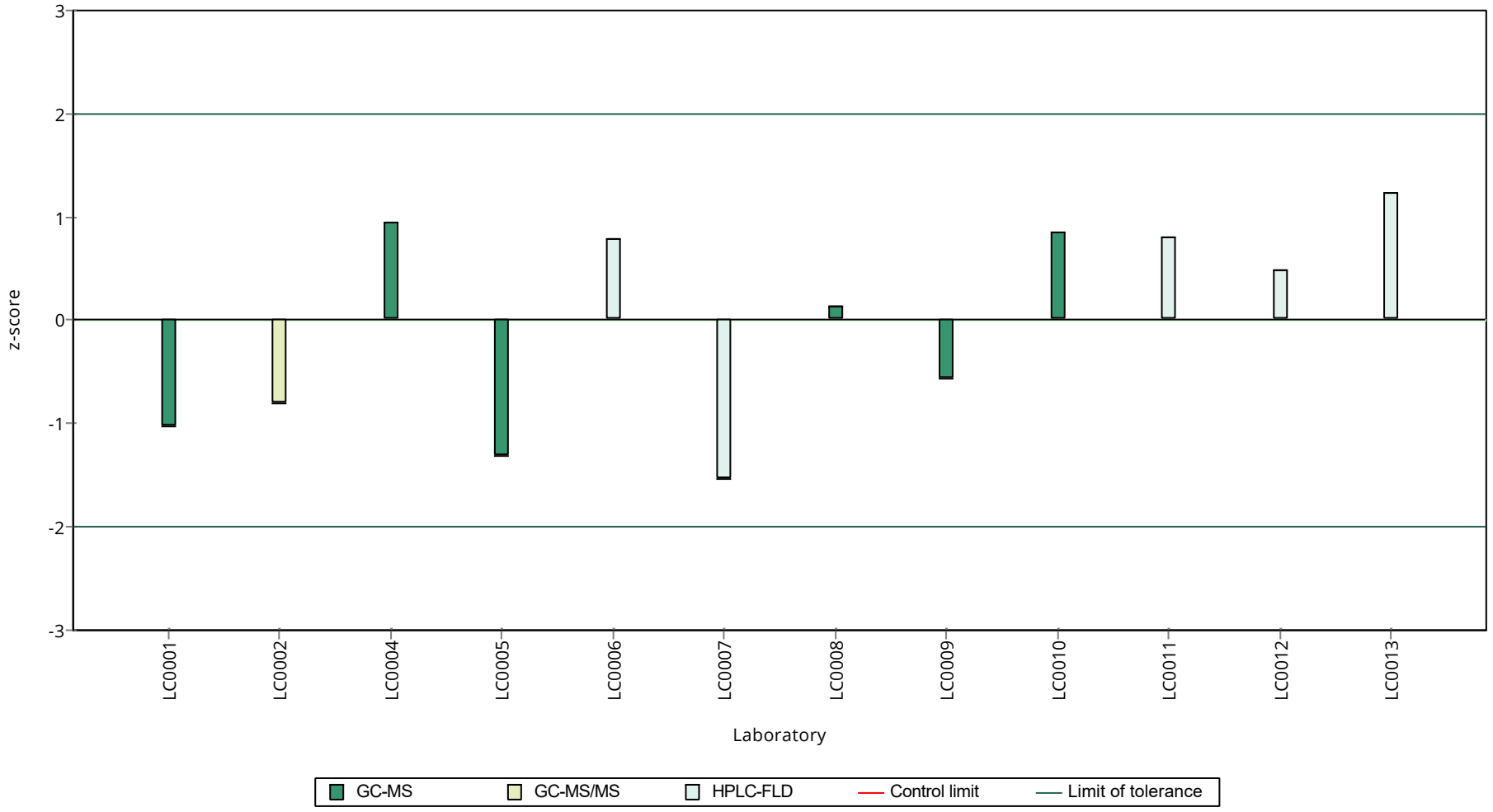
Results



Recovery rate



z-Score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z-score
LC0001
LC0002
LC0004
LC0005
LC0006
LC0007
LC0008
LC0009
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Naphthalene

Unit	ng/l
Assigned value ± U (k=2)	23.9 ± 3.19
Criterion	5.03 (21 %)
Minimum - Maximum	17.1 - 28.9
Control test value ± U (k=2)	25.4 ± 7.63

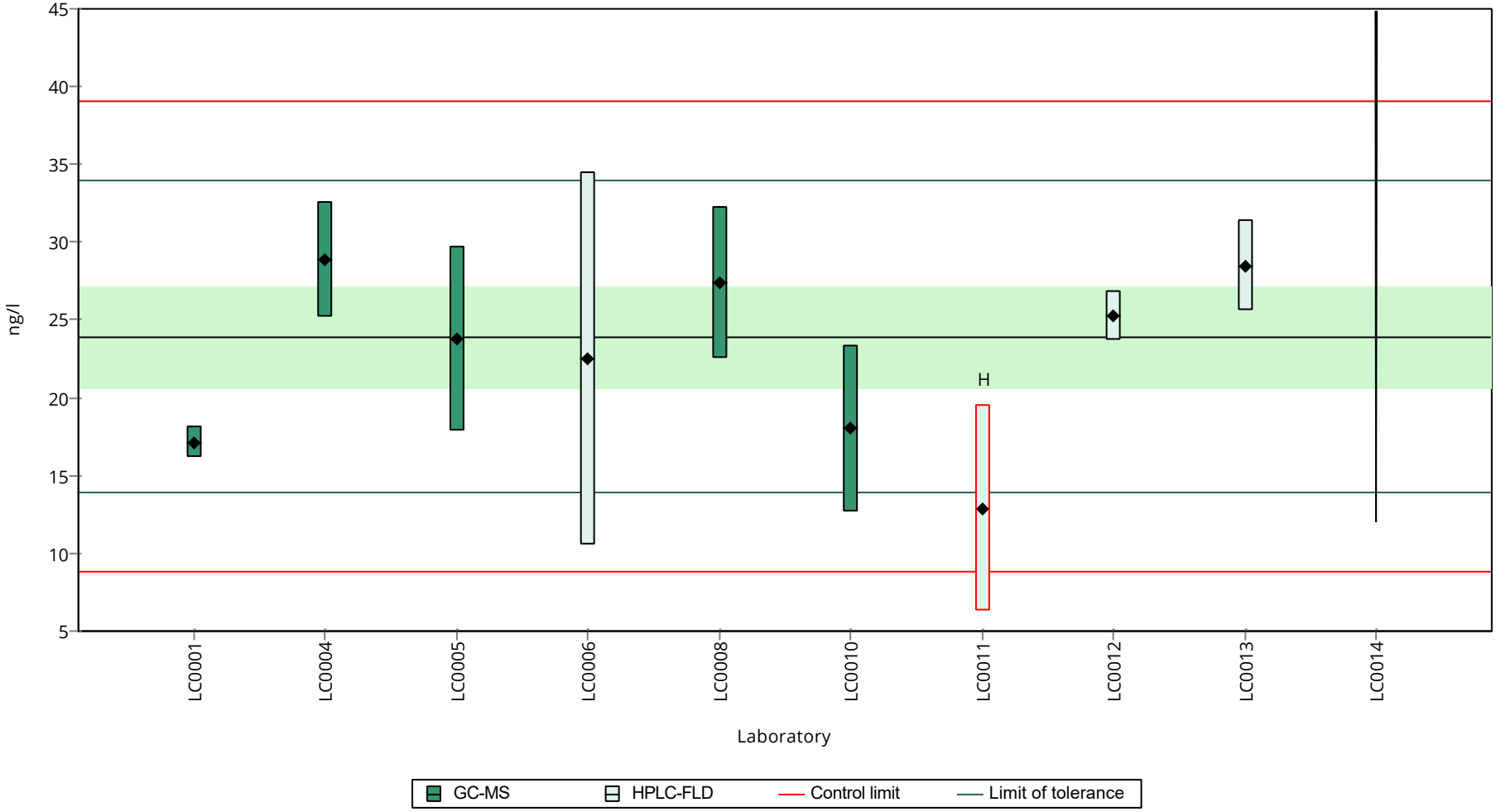
Labcode	Result	±	U	Recovery [%]	z-Score	Comments
LC0001	17.13	±	1	71.6	-1.35	
LC0002	-	±	-	-	-	
LC0004	28.87	±	3.74	121	0.98	
LC0005	23.8	±	5.94	99.4	-0.03	
LC0006	22.5	±	12	94	-0.29	
LC0007	-	±	-	-	-	
LC0008	27.4	±	4.9	114	0.69	
LC0009	-	±	-	-	-	
LC0010	18	±	5.4	75.2	-1.18	
LC0011	12.9	±	6.59	53.9	-2.2	H
LC0012	25.3	±	1.6	106	0.27	
LC0013	28.5	±	2.9	119	0.91	
LC0014	< 200 (LOQ)	±	-	-	-	

Characteristics of parameter

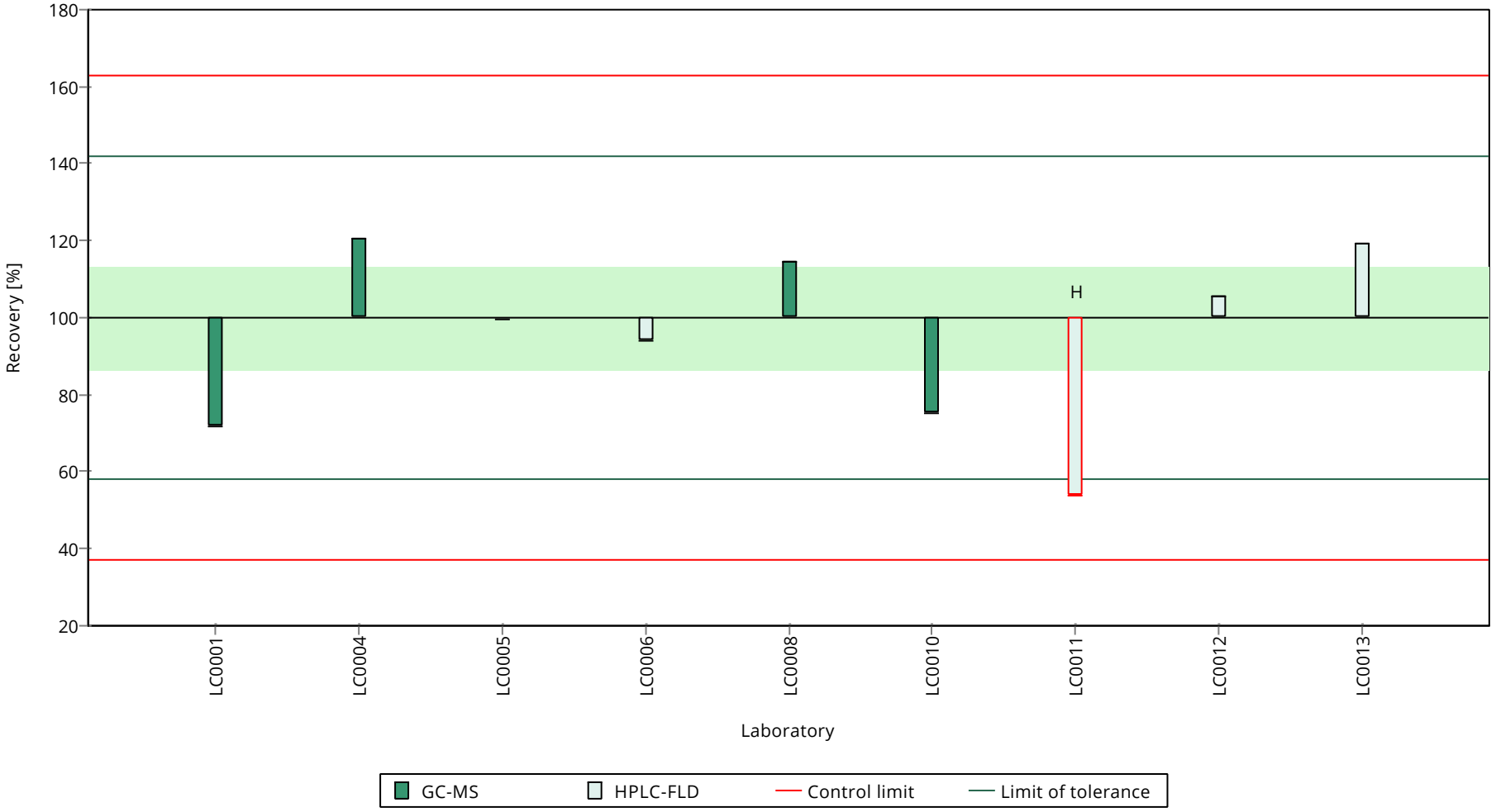
	all results	without outliers	Unit
Mean ± CI (99%)	22.7 ± 5.6	23.9 ± 4.79	ng/l
Minimum	12.9	17.1	ng/l
Maximum	28.9	28.9	ng/l
Standard deviation	5.6	4.51	ng/l
rel. standard deviation	24.7	18.9	%
n	9	8	-

Graphical presentation of results

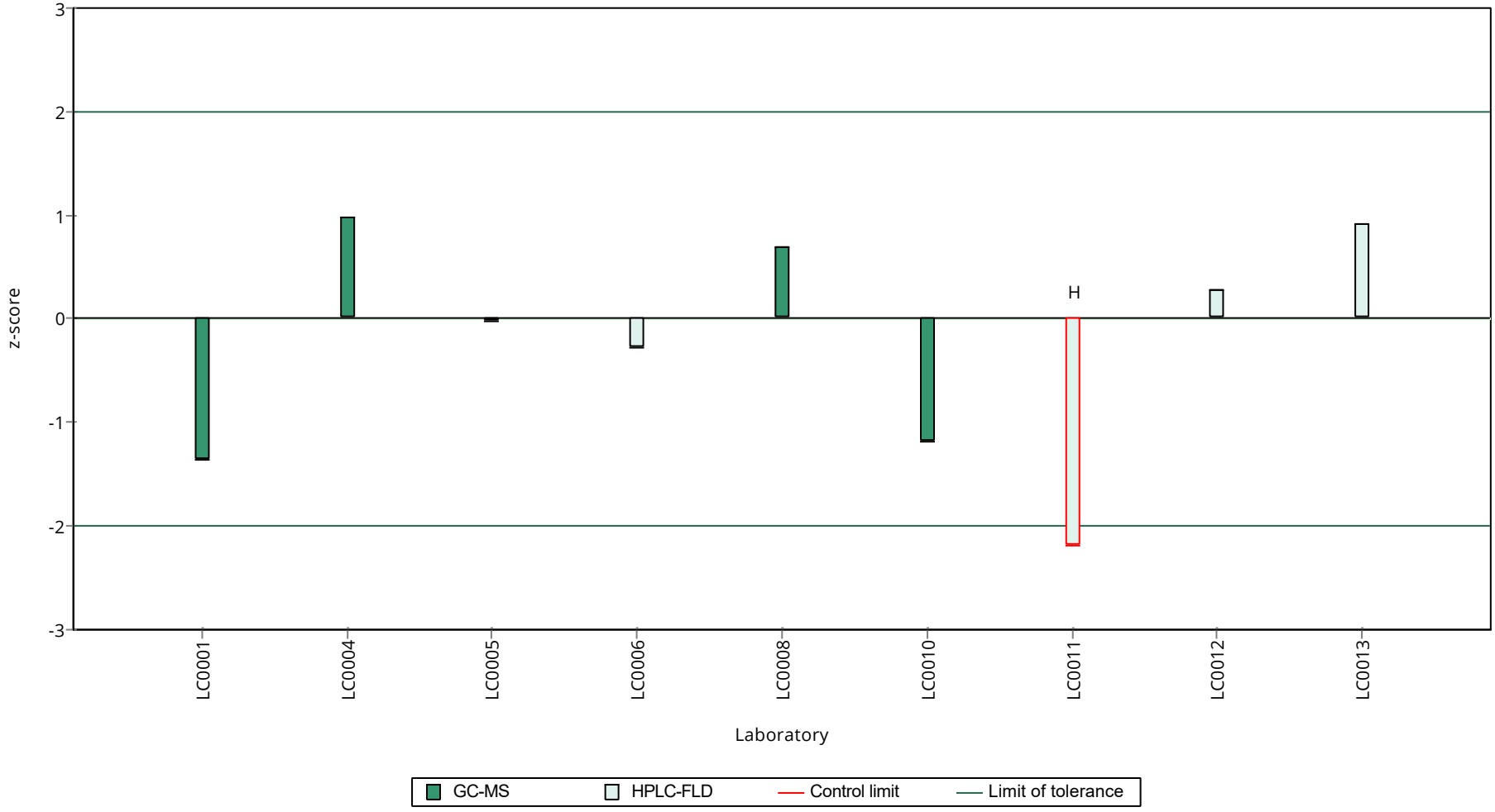
Results



Recovery rate



z-Score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z-score
H
LC0001
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Naphthalene

Unit	ng/l
Assigned value ± U (k=2)	452 ± 86.9
Criterion	136 (30 %)
Minimum - Maximum	205 - 662
Control test value ± U (k=2)	601 ± 180

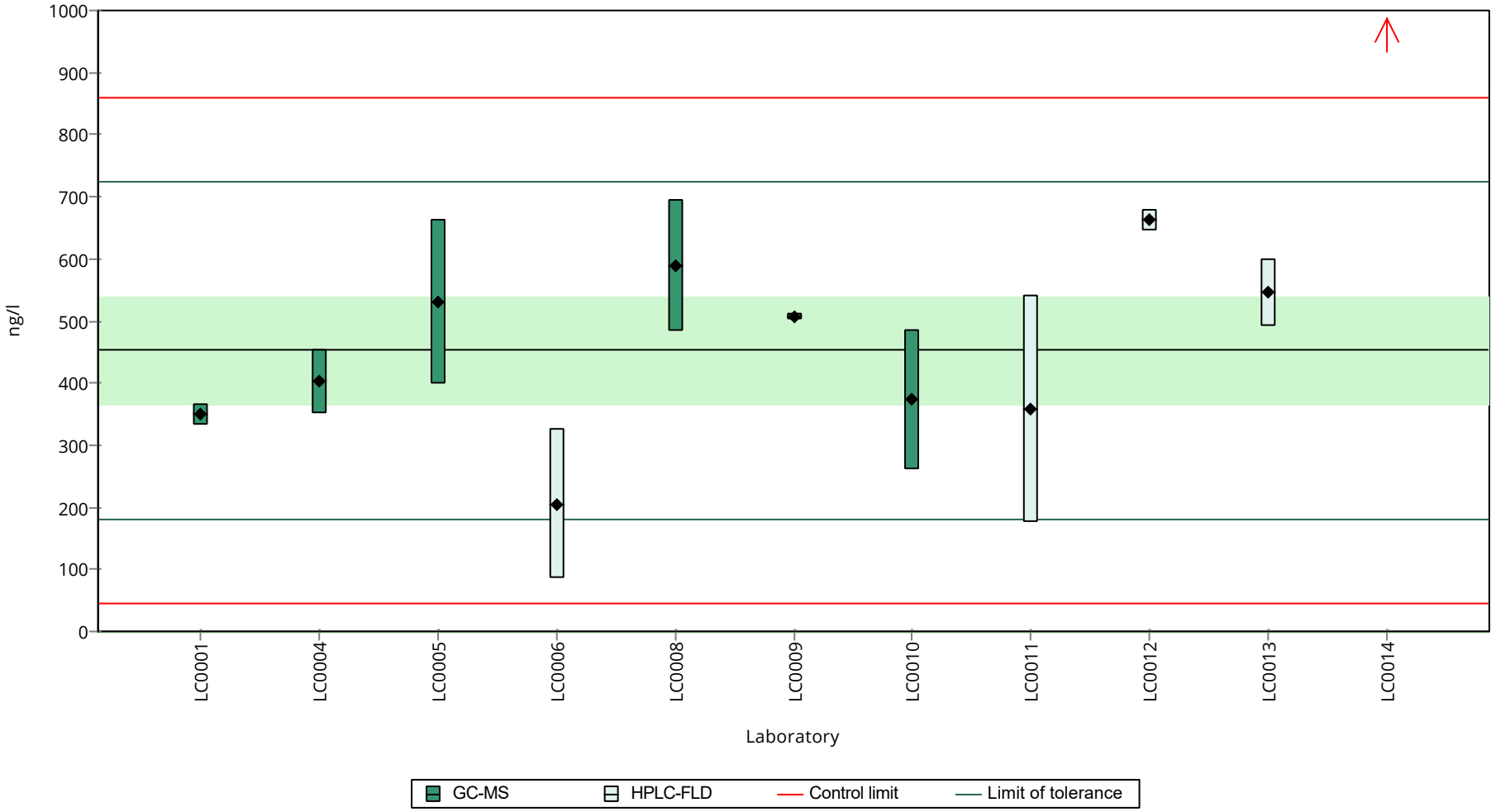
Labcode	Result	±	U	Recovery [%]	z-Score	Comments
LC0001	349.49	±	17.47	77.3	-0.76	
LC0002	-	±	-	-	-	
LC0004	402.6	±	52.13	89	-0.37	
LC0005	531	±	133	117	0.58	
LC0006	205.3	±	119.8	45.4	-1.82	
LC0007	-	±	-	-	-	
LC0008	590	±	106	130	1.01	
LC0009	506.552	±	5.893	112	0.4	
LC0010	372.75	±	111.83	82.4	-0.59	
LC0011	358.1	±	182.8	79.2	-0.69	
LC0012	662	±	16.5	146	1.54	
LC0013	545.7	±	54.6	121	0.69	
LC0014	1250	±	125	276	5.88	H

Characteristics of parameter

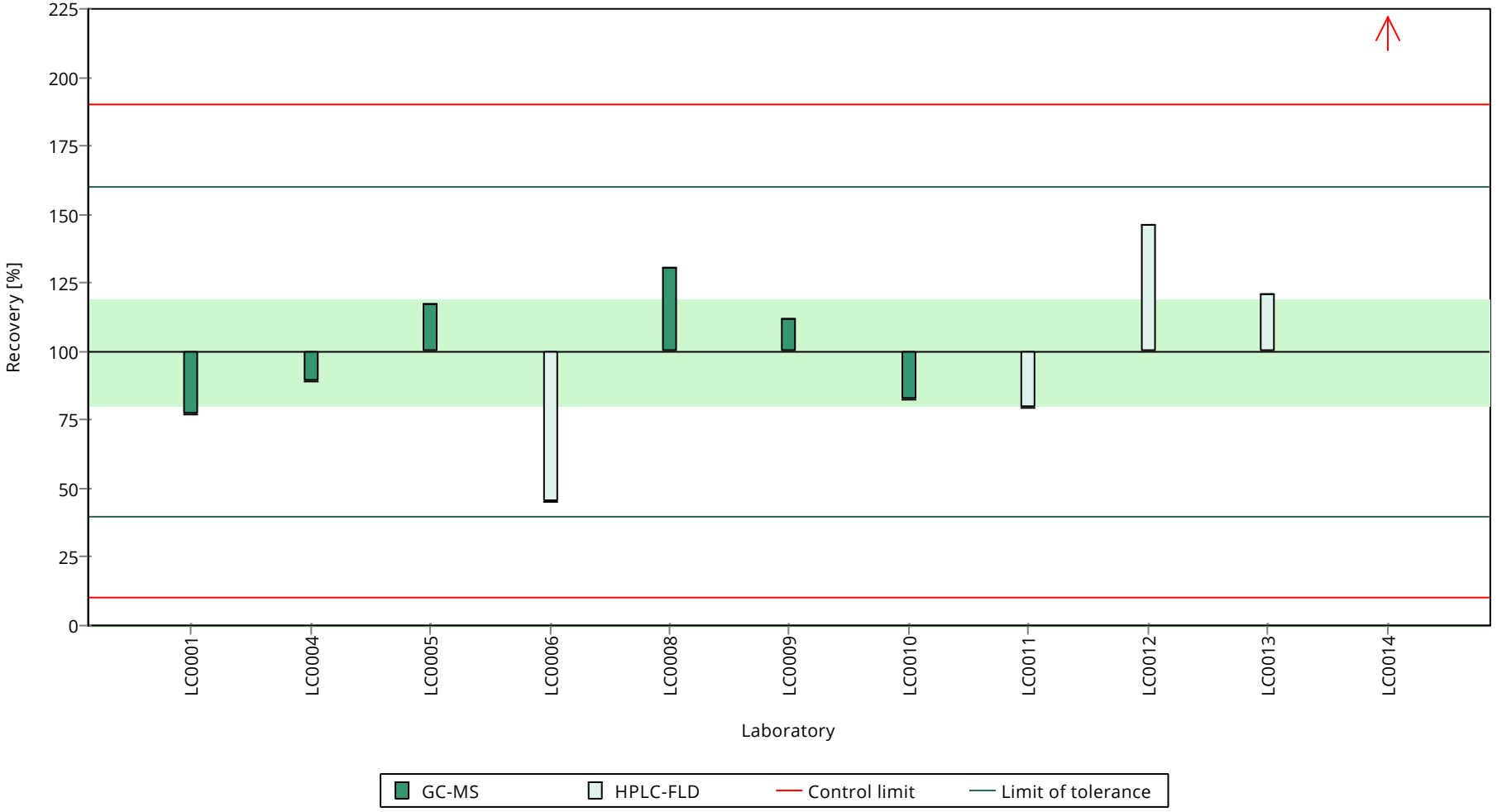
	all results	without outliers	Unit
Mean ± CI (99%)	525 ± 247	452 ± 130	ng/l
Minimum	205	205	ng/l
Maximum	1250	662	ng/l
Standard deviation	274	137	ng/l
rel. standard deviation	52.1	30.4	%
n	11	10	-

Graphical presentation of results

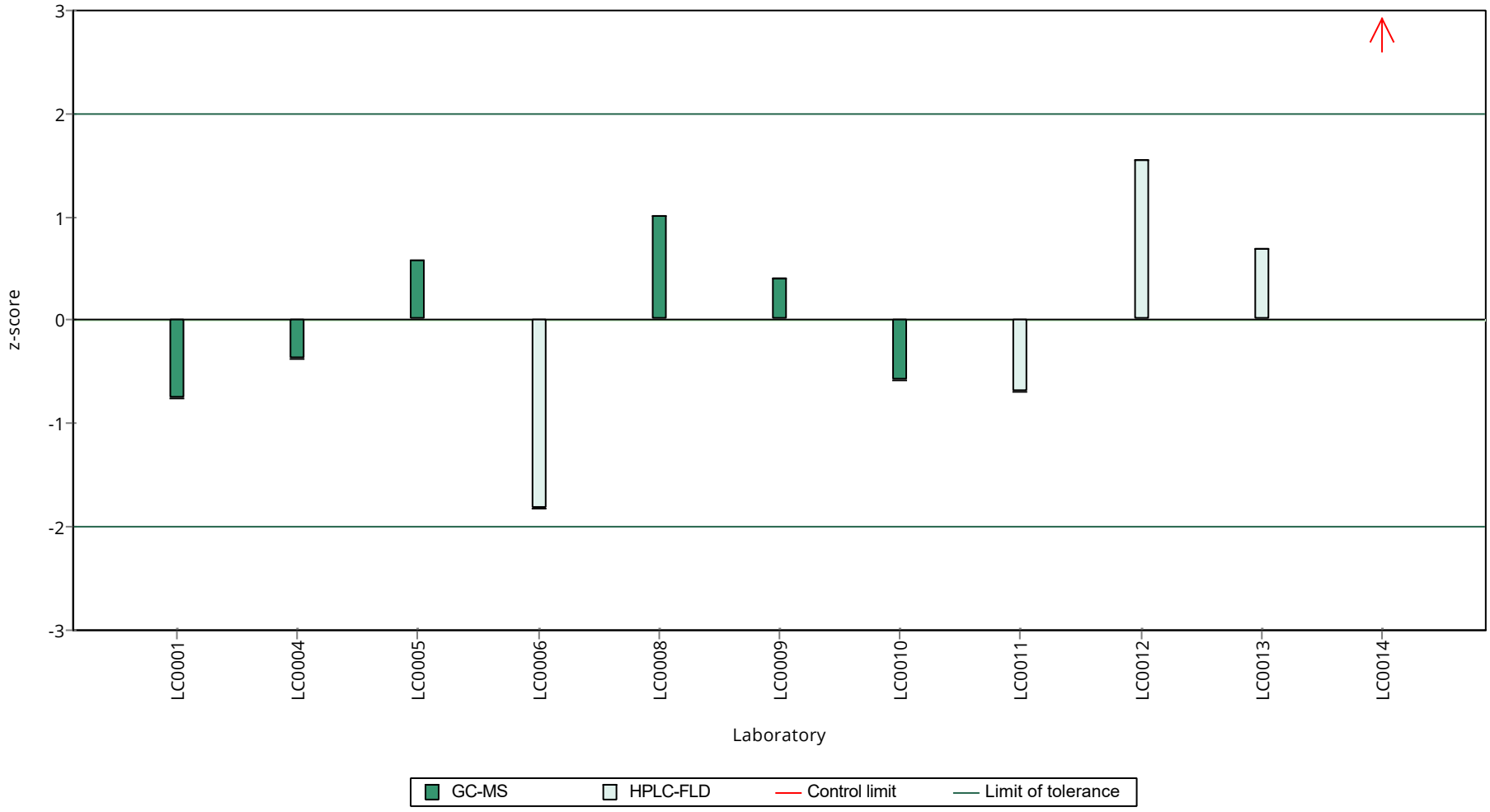
Results



Recovery rate



z-Score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z-score
LC0001
LC0004
LC0005
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LC0009
LC0010
LC0011
LC0012
LC0013
LC0014
Laboratory
GC-MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Phenanthrene

Unit	ng/l
Assigned value ± U (k=2)	21.1 ± 1.43
Criterion	3.17 (15 %)
Minimum - Maximum	16.6 - 23.6
Control test value ± U (k=2)	21.5 ± 5.36

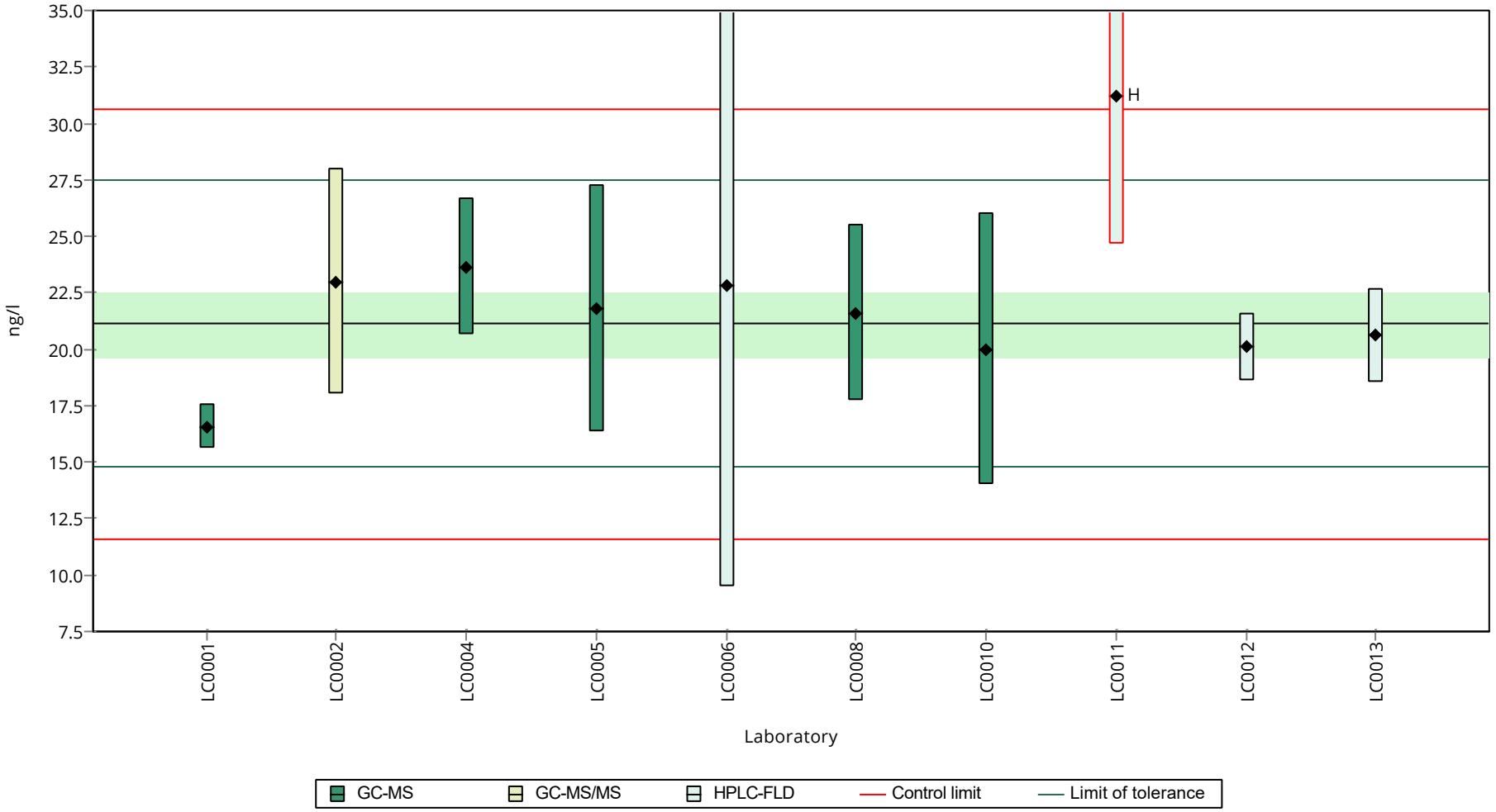
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	16.58 ± 1	78.5	-1.43	
LC0002	23 ± 5	109	0.59	
LC0004	23.64 ± 3.04	112	0.79	
LC0005	21.8 ± 5.46	103	0.21	
LC0006	22.8 ± 13.3	108	0.53	
LC0007	- ± -	-	-	
LC0008	21.6 ± 3.9	102	0.15	
LC0009	- ± -	-	-	
LC0010	20 ± 6	94.7	-0.35	
LC0011	31.2 ± 6.53	148	3.18	H
LC0012	20.1 ± 1.48	95.2	-0.32	
LC0013	20.6 ± 2.1	97.5	-0.17	
LC0014	- ± -	-	-	

Characteristics of parameter

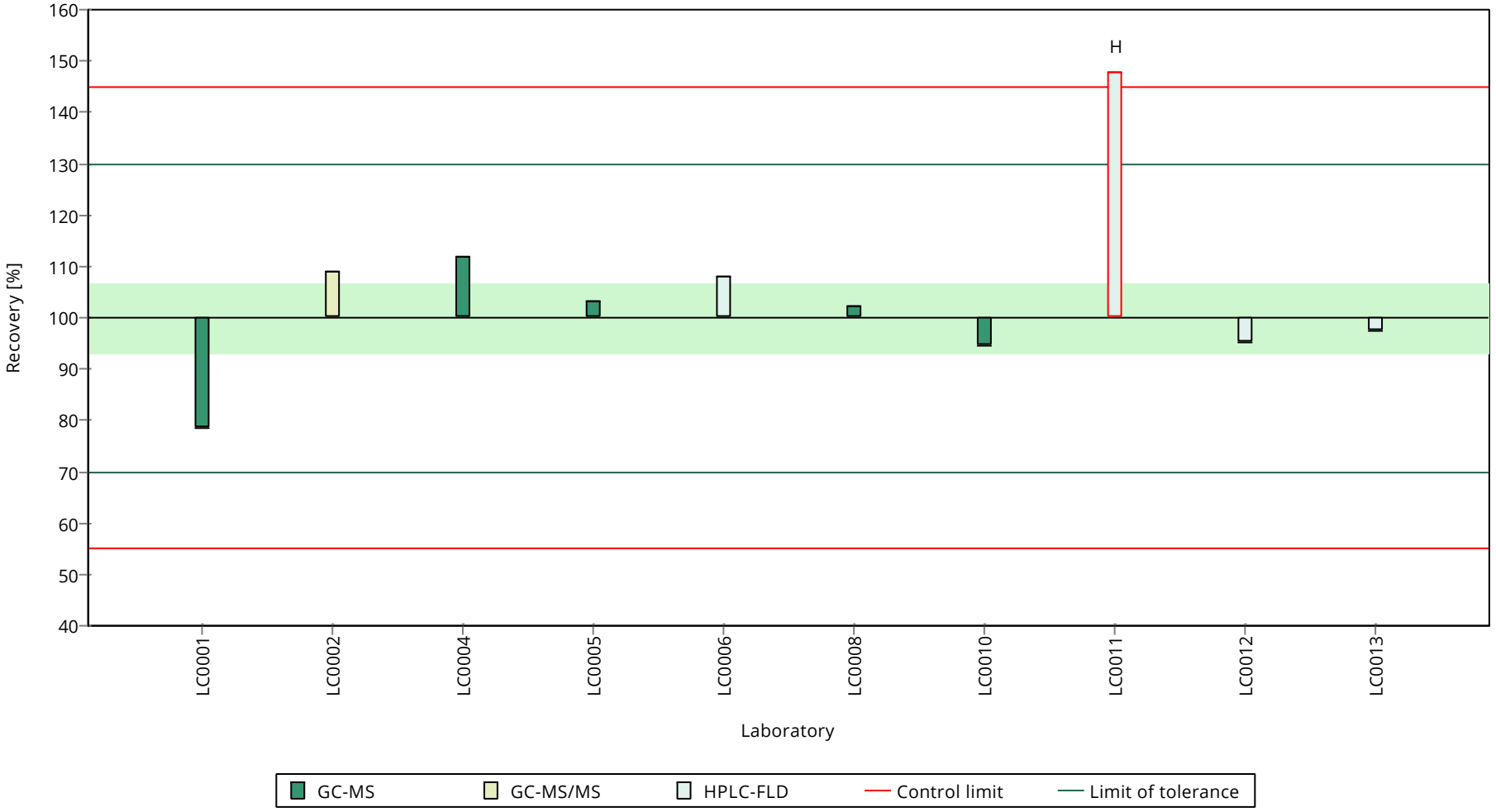
	all results	without outliers	Unit
Mean ± CI (99%)	22.1 ± 3.58	21.1 ± 2.14	ng/l
Minimum	16.6	16.6	ng/l
Maximum	31.2	23.6	ng/l
Standard deviation	3.77	2.14	ng/l
rel. standard deviation	17	10.1	%
n	10	9	-

Graphical presentation of results

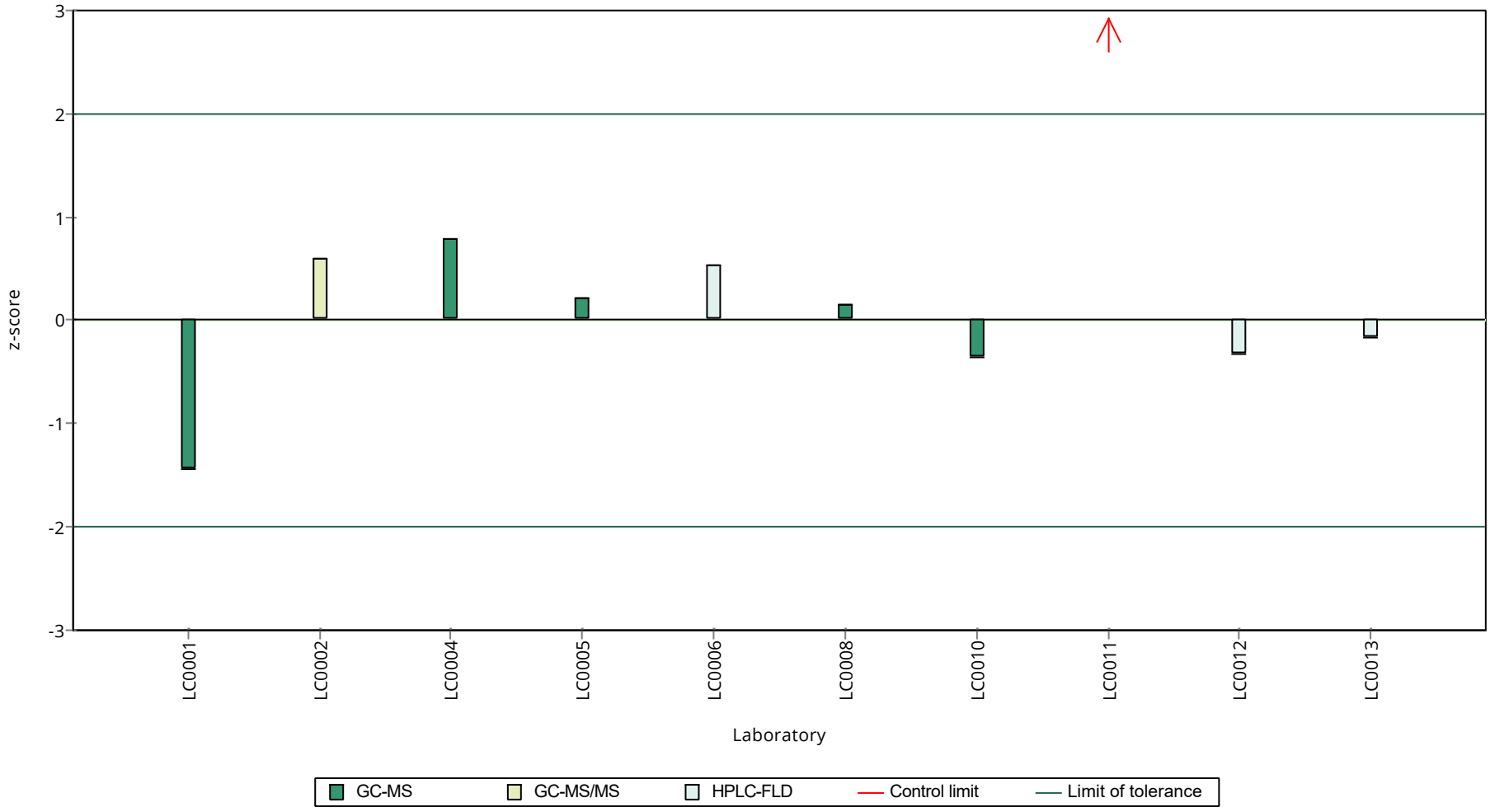
Results



Recovery rate



z-Score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z-score
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Phenanthrene

Unit	ng/l
Assigned value ± U (k=2)	301 ± 27.2
Criterion	45.1 (15 %)
Minimum - Maximum	211 - 351
Control test value ± U (k=2)	328 ± 82.1

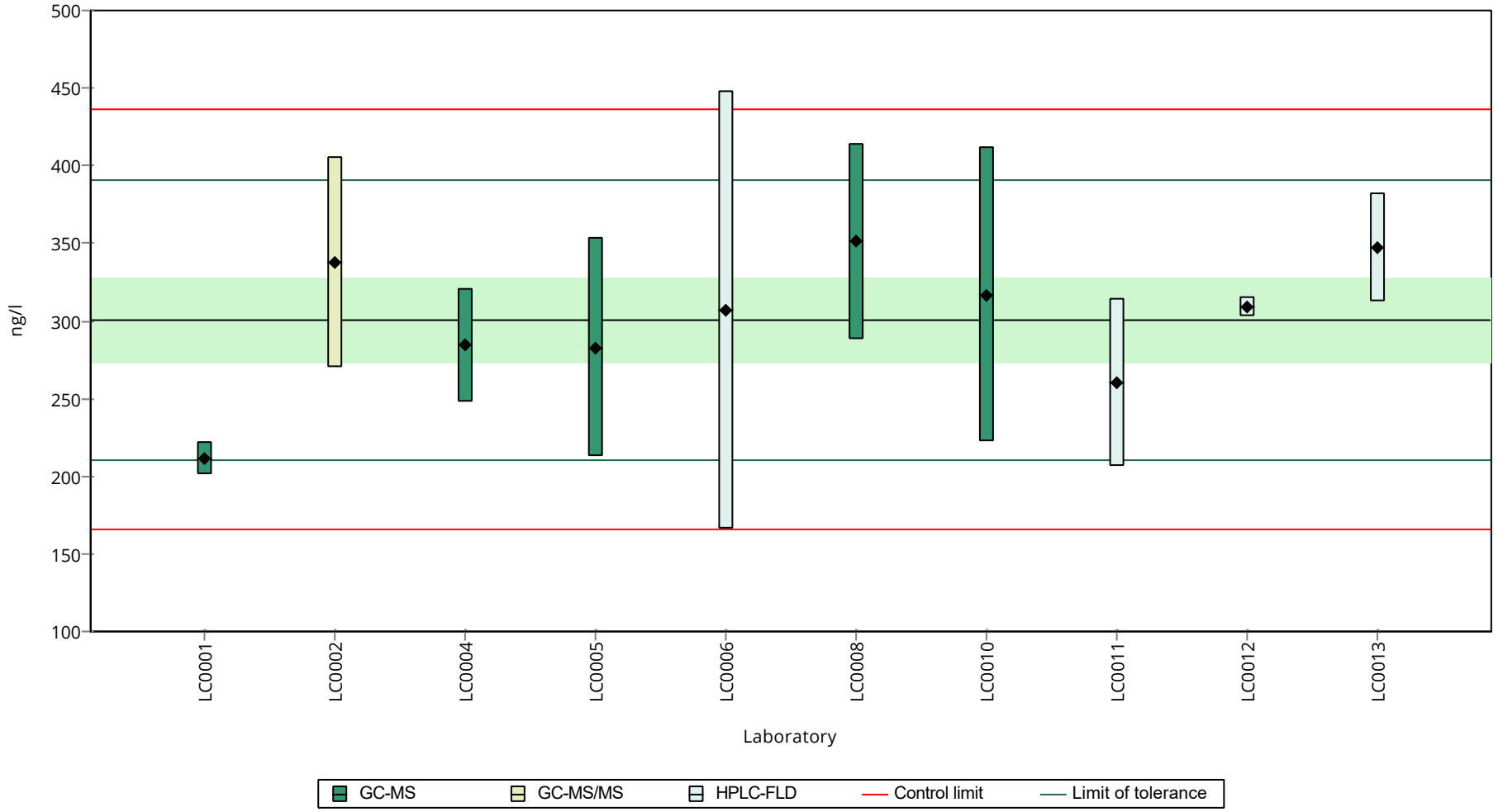
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	211.46 ± 10.57	70.3	-1.98	
LC0002	338 ± 68	112	0.83	
LC0004	284.53 ± 36.54	94.6	-0.36	
LC0005	283 ± 71	94.1	-0.39	
LC0006	306.9 ± 141.1	102	0.14	
LC0007	- ± -	-	-	
LC0008	351 ± 63	117	1.11	
LC0009	- ± -	-	-	
LC0010	316.75 ± 95.03	105	0.35	
LC0011	260 ± 54.4	86.4	-0.9	
LC0012	309 ± 6.33	103	0.18	
LC0013	347.1 ± 34.7	115	1.03	
LC0014	- ± -	-	-	

Characteristics of parameter

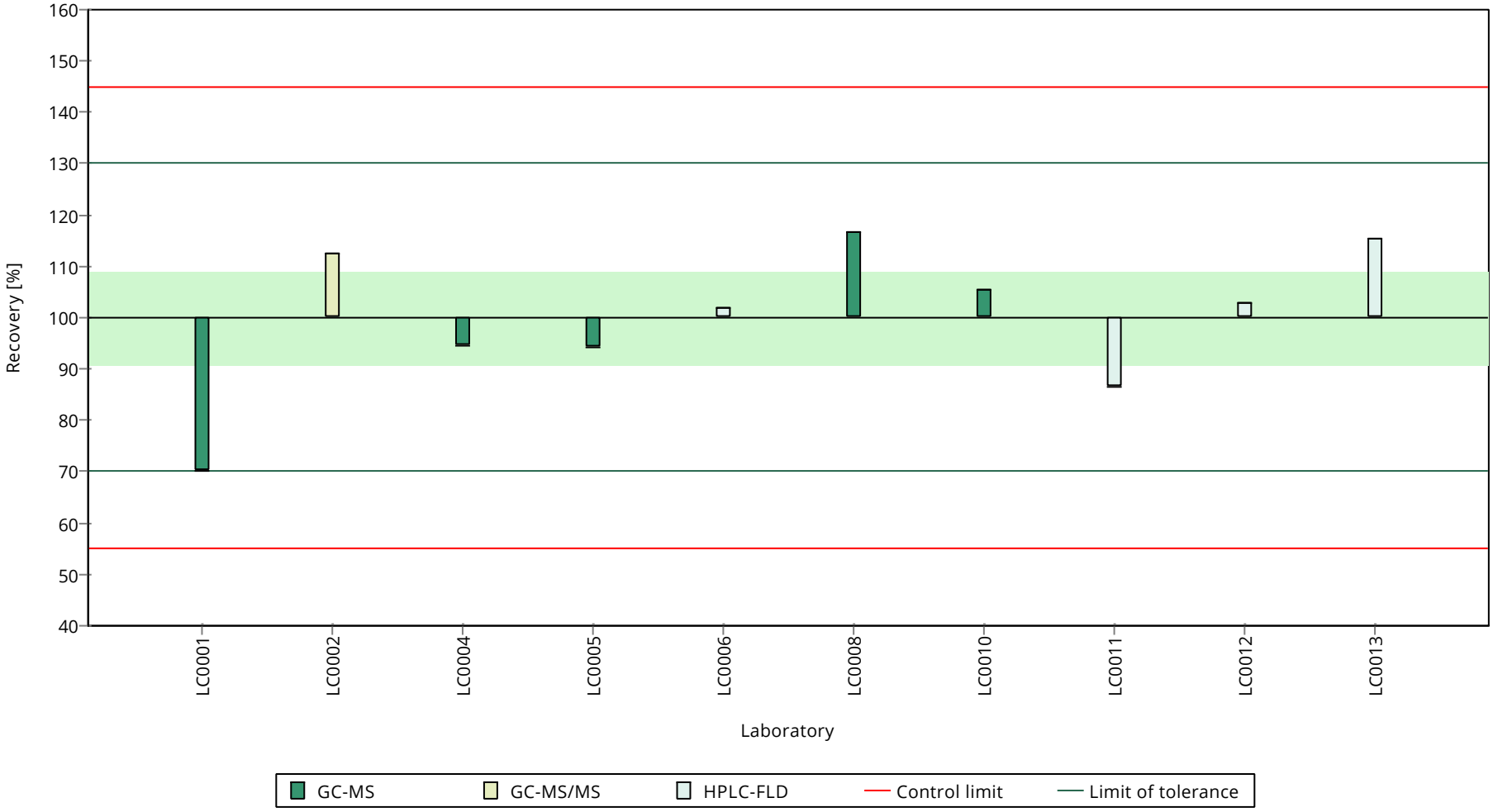
	all results	without outliers	Unit
Mean ± CI (99%)	301 ± 40.8	301 ± 40.8	ng/l
Minimum	211	211	ng/l
Maximum	351	351	ng/l
Standard deviation	43	43	ng/l
rel. standard deviation	14.3	14.3	%
n	10	10	-

Graphical presentation of results

Results



Recovery rate



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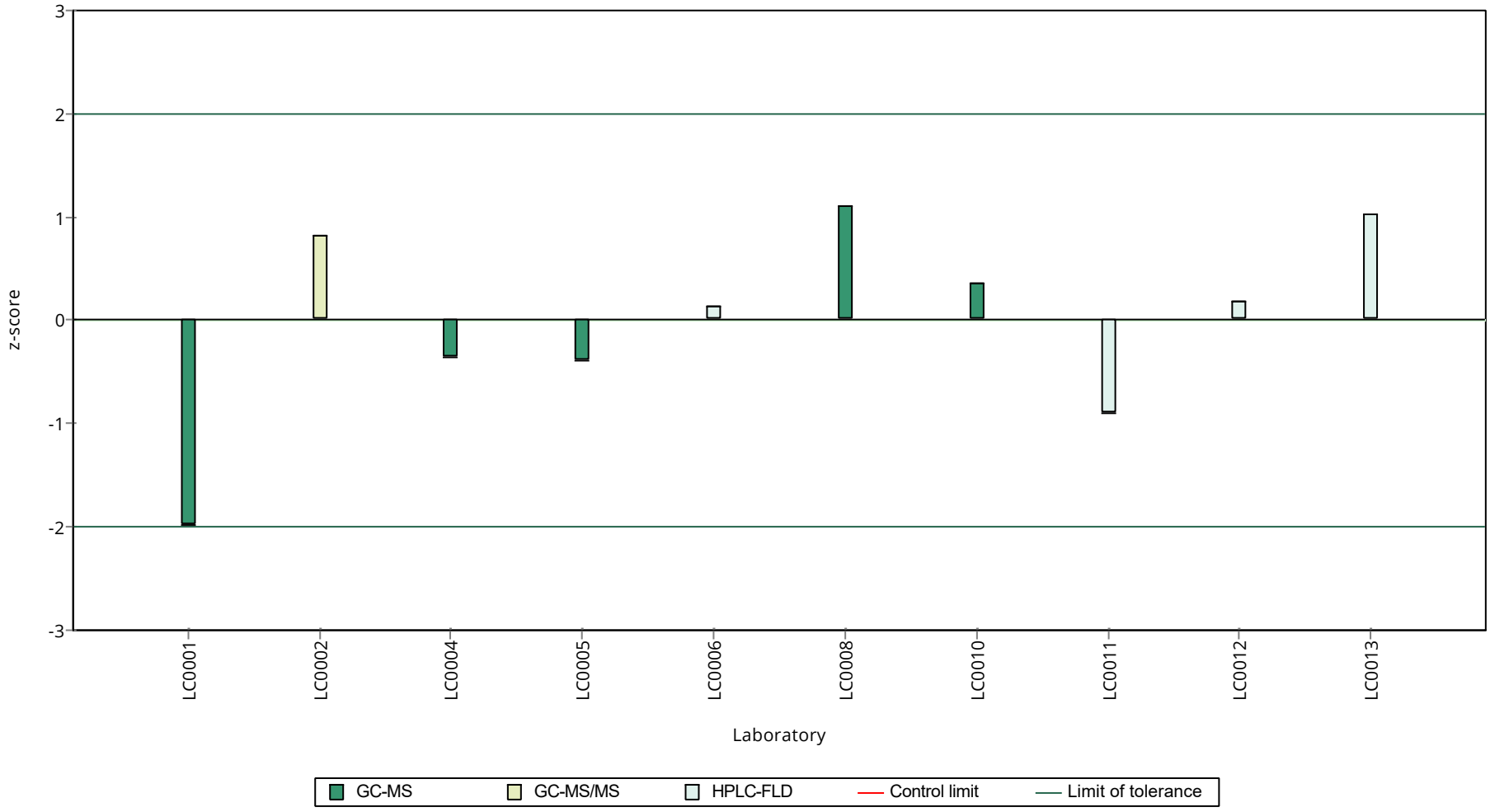
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-2
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z-score
LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 A

Pyrene

Unit	ng/l
Assigned value ± U (k=2)	24 ± 1.48
Criterion	3.83 (16 %)
Minimum - Maximum	19.6 - 26.2
Control test value ± U (k=2)	27.3 ± 6.82

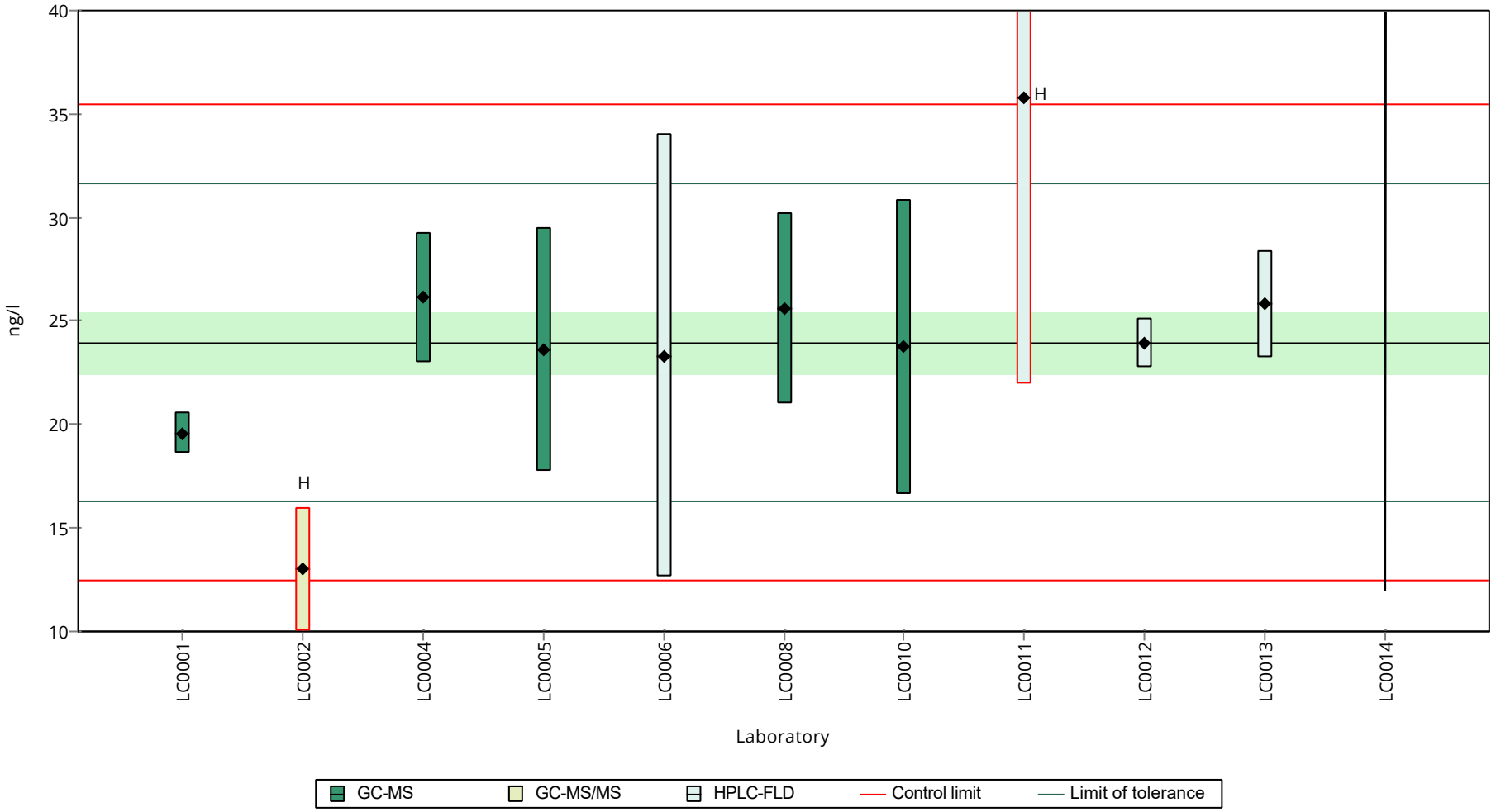
Labcode	Result	±	U	Recovery [%]	z-Score	Comments
LC0001	19.57	±	1	81.7	-1.14	
LC0002	13	±	3	54.3	-2.86	H
LC0004	26.15	±	3.14	109	0.57	
LC0005	23.6	±	5.9	98.5	-0.09	
LC0006	23.3	±	10.7	97.3	-0.17	
LC0007	-	±	-	-	-	
LC0008	25.6	±	4.6	107	0.43	
LC0009	-	±	-	-	-	
LC0010	23.75	±	7.13	99.1	-0.05	
LC0011	35.8	±	13.9	149	3.09	H
LC0012	23.9	±	1.19	99.8	-0.02	
LC0013	25.8	±	2.6	108	0.48	
LC0014	< 200 (LOQ)	±	-	-	-	

Characteristics of parameter

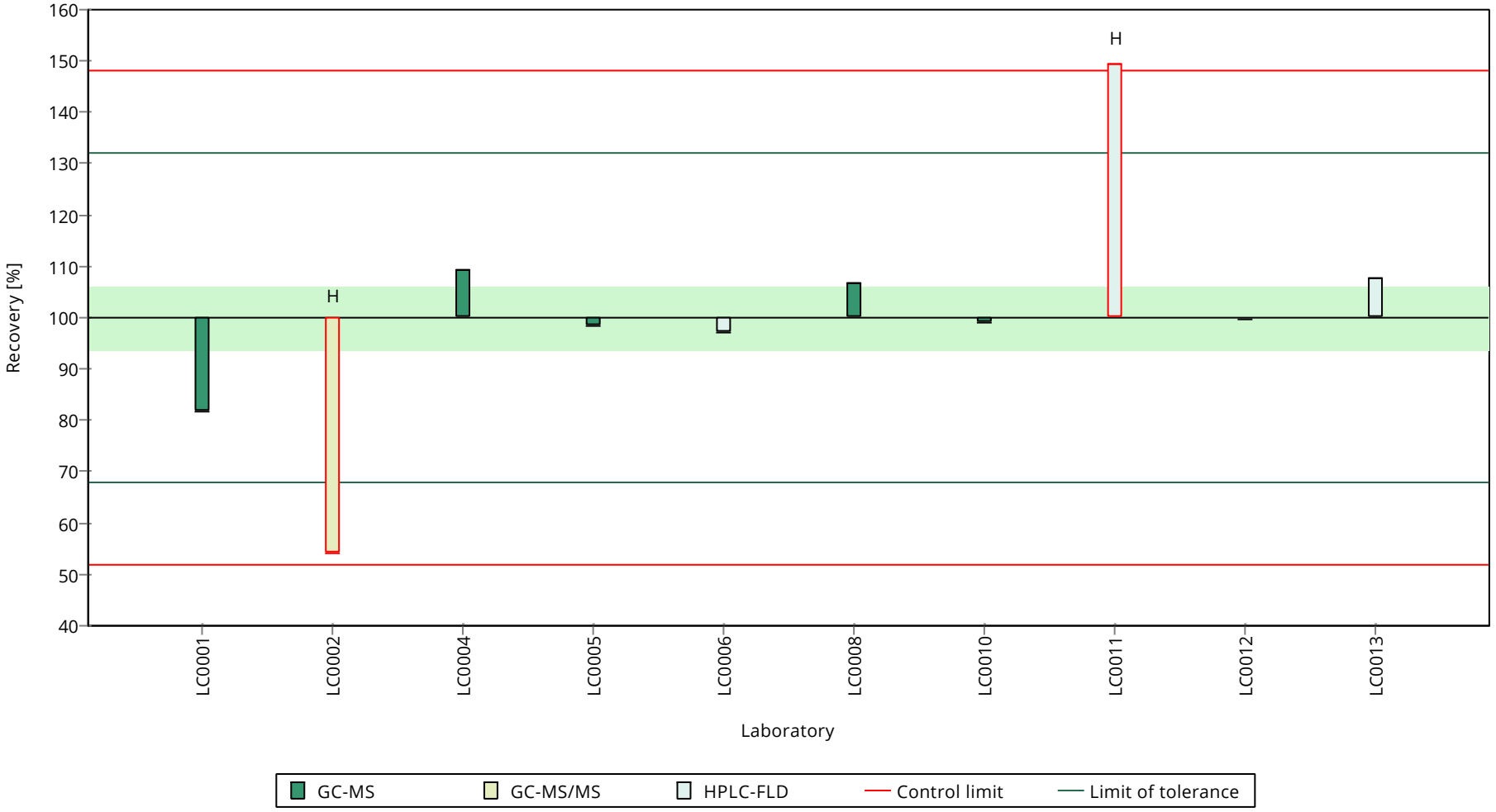
	all results	without outliers	Unit
Mean ± CI (99%)	24 ± 5.39	24 ± 2.22	ng/l
Minimum	13	19.6	ng/l
Maximum	35.8	26.2	ng/l
Standard deviation	5.69	2.1	ng/l
rel. standard deviation	23.6	8.75	%
n	10	8	-

Graphical presentation of results

Results



Recovery rate



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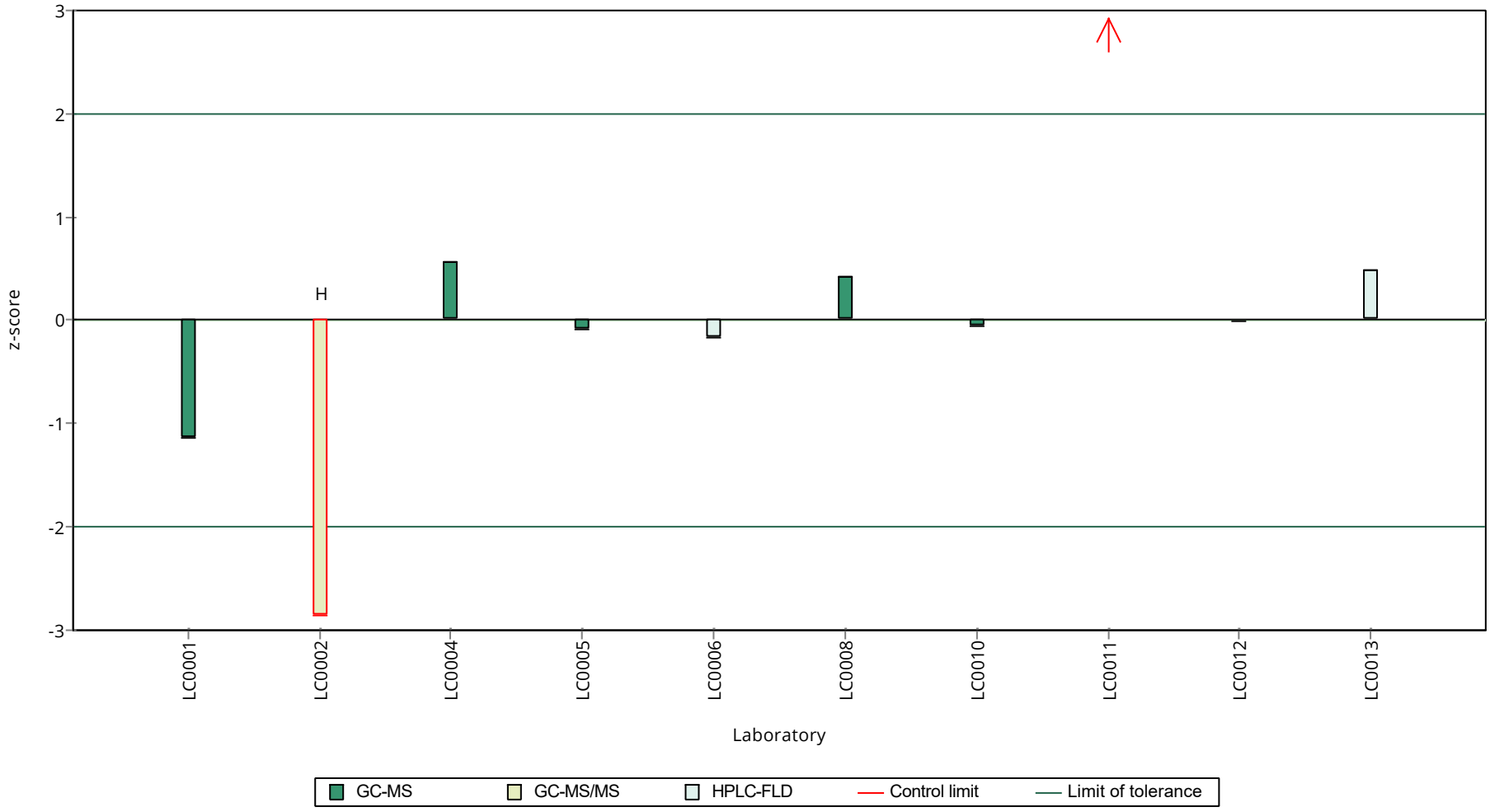
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z-score
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LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

Parameter oriented report

P27 B

Pyrene

Unit	ng/l
Assigned value ± U (k=2)	295 ± 20.2
Criterion	47.2 (16 %)
Minimum - Maximum	226 - 332
Control test value ± U (k=2)	318 ± 79.4

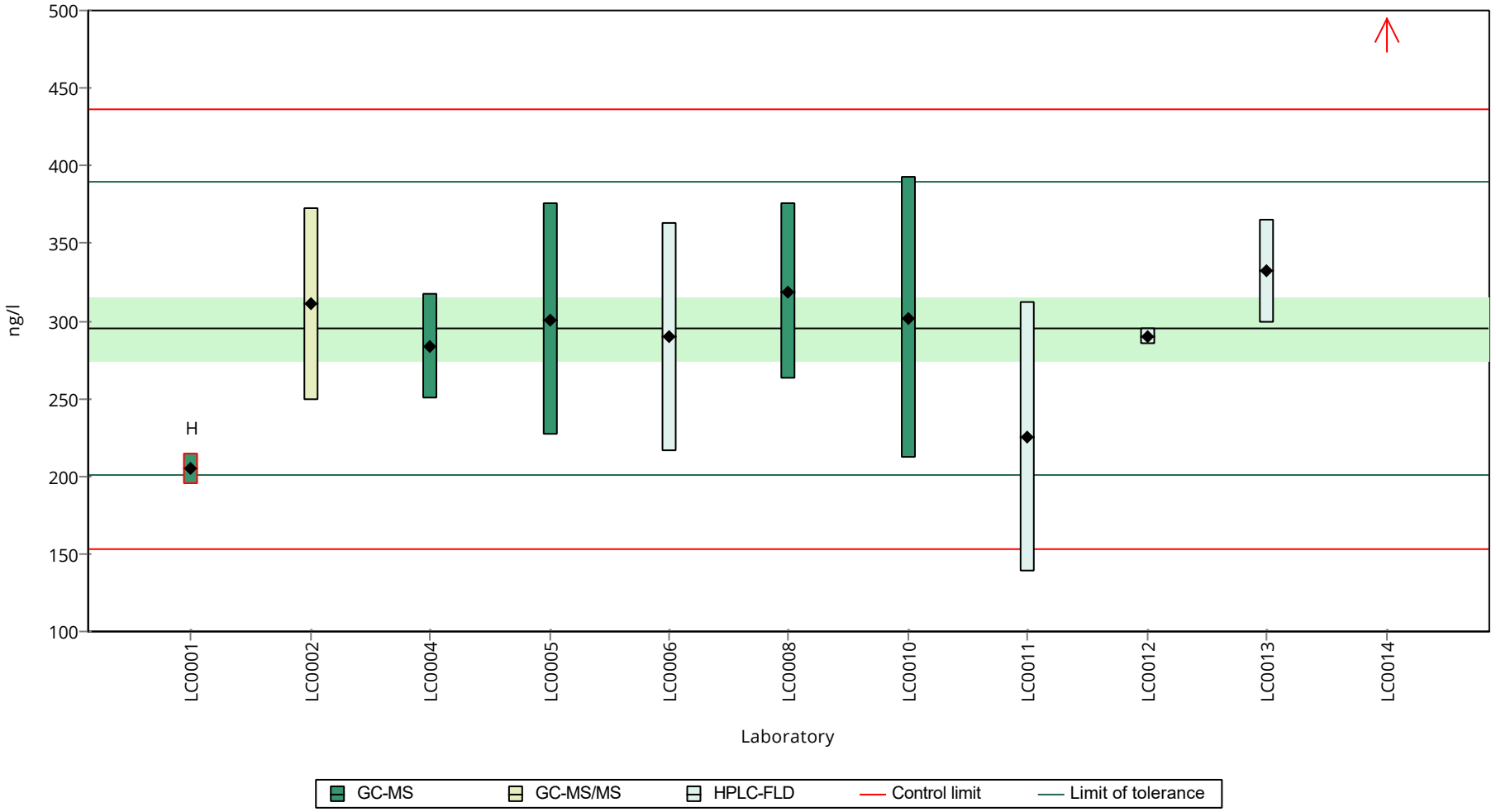
Labcode	Result ± U	Recovery [%]	z-Score	Comments
LC0001	204.74 ± 10.24	69.4	-1.91	H
LC0002	311 ± 62	105	0.34	
LC0004	283.22 ± 34	96.1	-0.25	
LC0005	301 ± 75	102	0.13	
LC0006	289.6 ± 73.5	98.2	-0.11	
LC0007	- ± -	-	-	
LC0008	319 ± 57	108	0.51	
LC0009	- ± -	-	-	
LC0010	302 ± 90.6	102	0.15	
LC0011	225.5 ± 87.2	76.5	-1.47	
LC0012	290 ± 5.01	98.4	-0.1	
LC0013	332 ± 33.2	113	0.79	
LC0014	990 ± 99	336	14.74	H

Characteristics of parameter

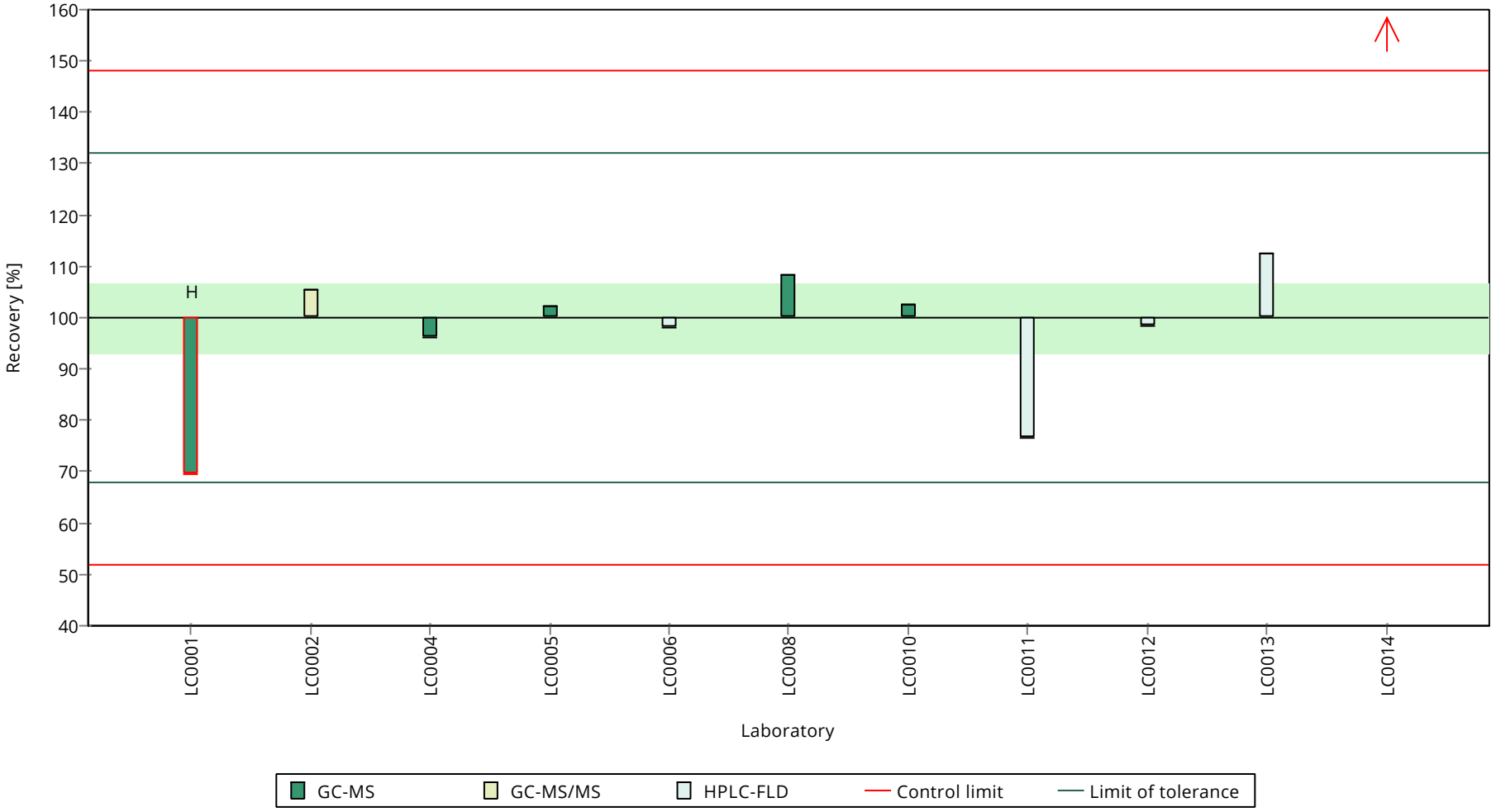
	all results	without outliers	Unit
Mean ± CI (99%)	350 ± 195	295 ± 30.2	ng/l
Minimum	205	226	ng/l
Maximum	990	332	ng/l
Standard deviation	216	30.2	ng/l
rel. standard deviation	61.7	10.3	%
n	11	9	-

Graphical presentation of results

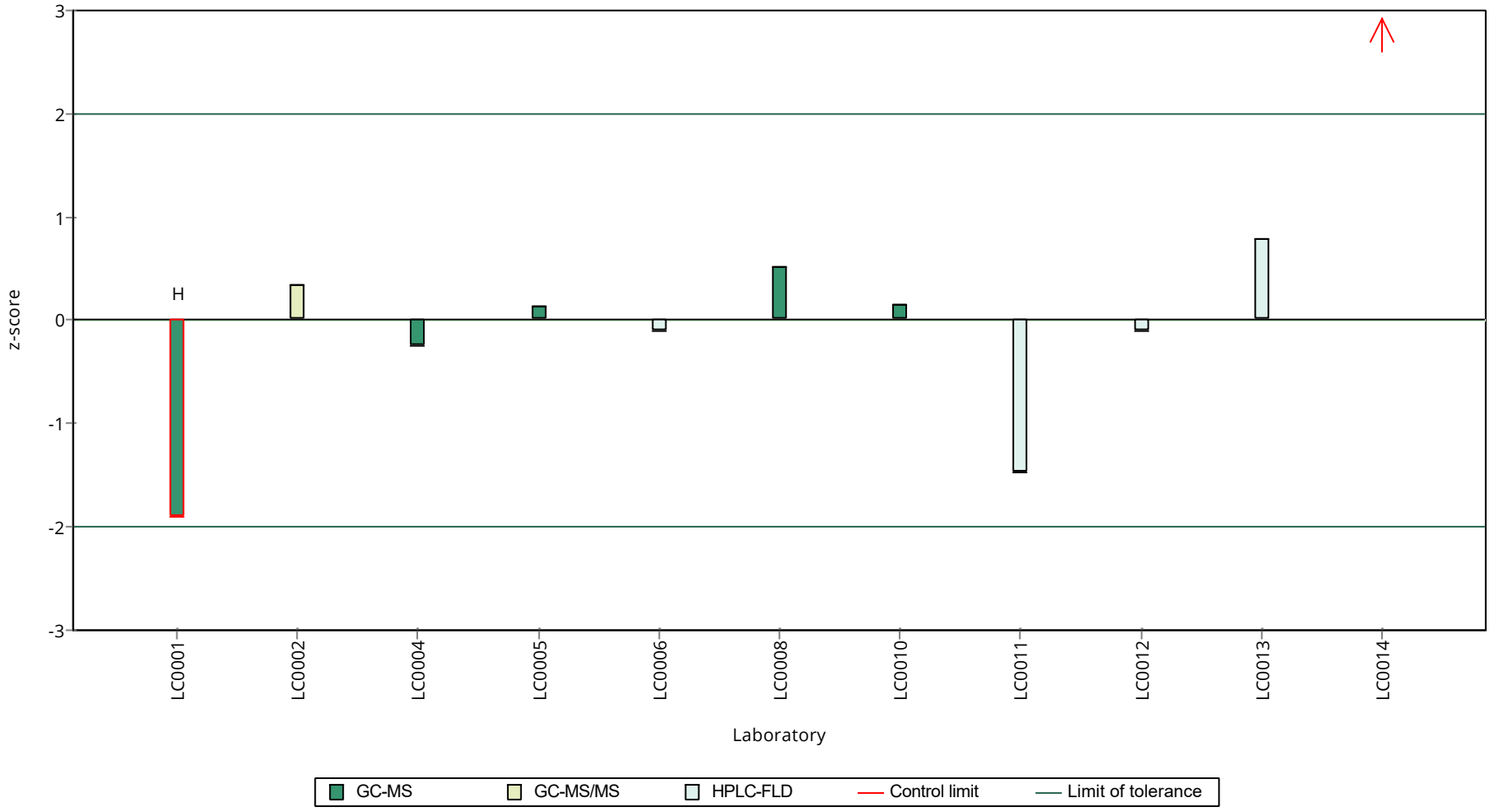
Results



Recovery rate



z-Score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-2
-3
z-score
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LC0001
LC0002
LC0004
LC0005
LC0006
LC0008
LC0010
LC0011
LC0012
LC0013
LC0014
Laboratory
GC-MS
GC-MS/MS
HPLC-FLD
Control limit
Limit of tolerance

E8. Laborientierte Auswertung / Laboratory oriented report

Die Laborientierte Auswertung ist nach dem Laborcode sortiert.

The laboratory oriented report is sorted by laboratory code.

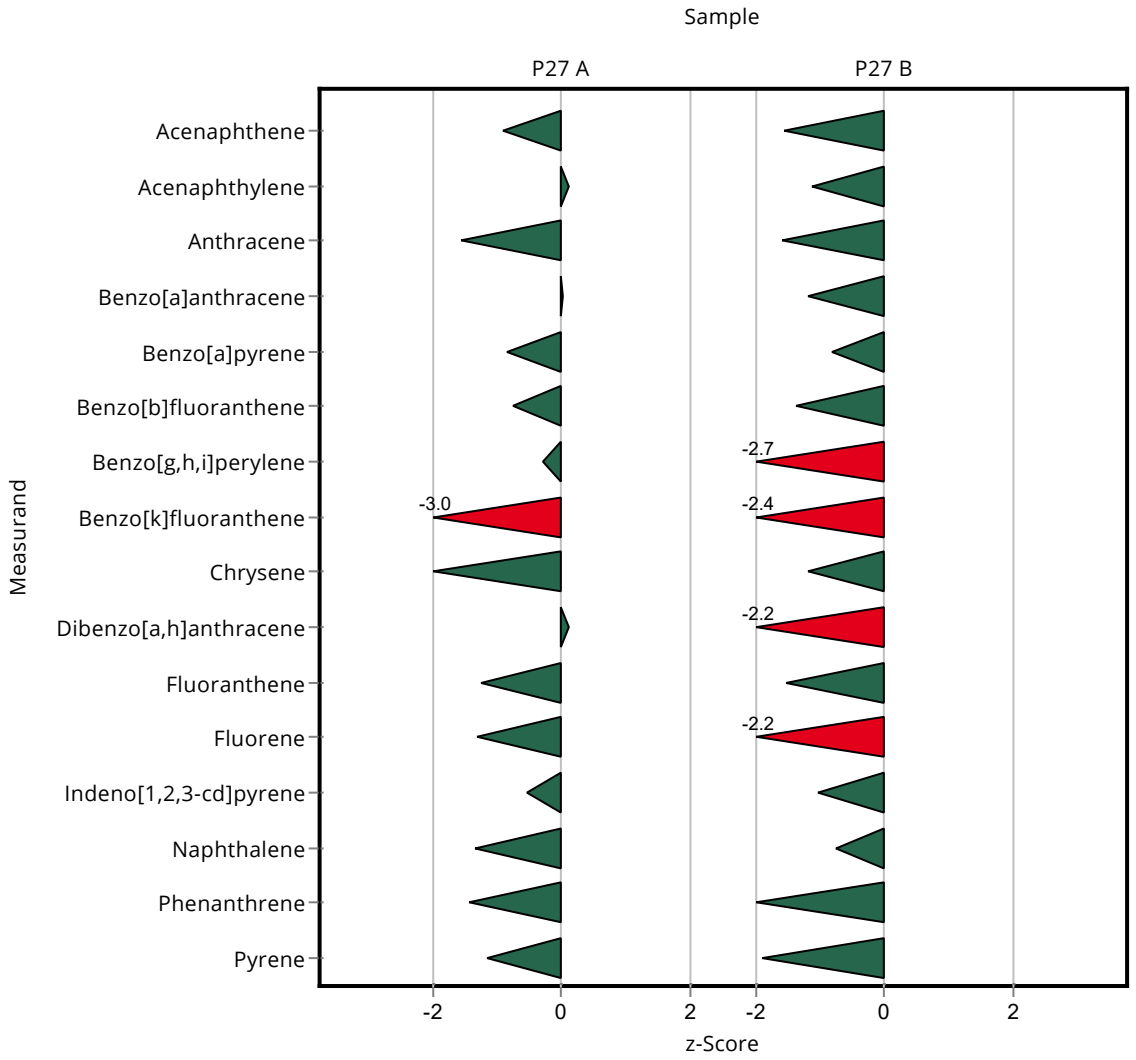
Sample: P27A

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	23.8	3.37	19.72	1	4.53	82.7	-0.91
Acenaphthylene	ng/l	14	1.76	14.32	1	3.35	103	0.11
Anthracene	ng/l	24.7	2.33	16.61	1	5.19	67.2	-1.56
Benzo[a]anthracene	ng/l	22.5	1.54	22.61	1.13	4.72	101	0.03
Benzo[a]pyrene	ng/l	22.3	6.03	13.83	1	10	61.9	-0.85
Benzo[b]fluoranthene	ng/l	27.8	0.891	24.2	1.21	4.72	87.2	-0.75
Benzo[g,h,i]perylene	ng/l	16.6	2.11	15.42	1	4.15	93	-0.28
Benzo[k]fluoranthene	ng/l	14.7	1.56	5.32	1	3.09	36.1	-3.04
Chrysene	ng/l	24.2	1.66	13.59	1	5.32	56.2	-1.99
Dibenzo[a,h]anthracene	ng/l	16.9	1.7	17.4	1	5.08	103	0.09
Fluoranthene	ng/l	21.6	1.56	16.71	1	3.89	77.4	-1.26
Fluorene	ng/l	22.1	2.07	18	1	3.09	81.6	-1.32
Indeno[1,2,3-cd]pyrene	ng/l	20.9	2.29	17.99	1	5.22	86.1	-0.55
Naphthalene	ng/l	23.9	3.19	17.13	1	5.03	71.6	-1.35
Phenanthrene	ng/l	21.1	1.43	16.58	1	3.17	78.5	-1.43
Pyrene	ng/l	24	1.48	19.57	1	3.83	81.7	-1.14

Sample: P27B

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	324	36	227.93	11.4	61.5	70.4	-1.56
Acenaphthylene	ng/l	251	29.9	181.9	9.1	60.1	72.6	-1.14
Anthracene	ng/l	355	52.6	235.61	11.78	74.6	66.4	-1.60
Benzo[a]anthracene	ng/l	313	30.1	234.59	11.73	65.8	74.9	-1.19
Benzo[a]pyrene	ng/l	249	47.7	178.04	8.9	87.1	71.6	-0.81
Benzo[b]fluoranthene	ng/l	341	26.9	261.88	13.09	57.9	76.8	-1.36
Benzo[g,h,i]perylene	ng/l	281	18.9	90.8	4.54	70.2	32.3	-2.71

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	z-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	123.29 ± 6.16	51.2	50.6	-2.35
Chrysene	ng/l	275 ± 25.1	202.49 ± 10.12	60.5	73.6	-1.20
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	66.79 ± 3.34	60.9	32.9	-2.24
Fluoranthene	ng/l	346 ± 44.3	235.61 ± 11.78	72.6	68.1	-1.52
Fluorene	ng/l	218 ± 21.7	146.04 ± 7.3	32.6	67.1	-2.19
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	127.27 ± 6.36	98.1	55.8	-1.03
Naphthalene	ng/l	452 ± 86.9	349.49 ± 17.47	136	77.3	-0.76
Phenanthrene	ng/l	301 ± 27.2	211.46 ± 10.57	45.1	70.3	-1.98
Pyrene	ng/l	295 ± 20.2	204.74 ± 10.24	47.2	69.4	-1.91


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
-3.0
-2.7
-2.4
-2.2
-2.2
-2
0
2
-2
0
2
z-Score

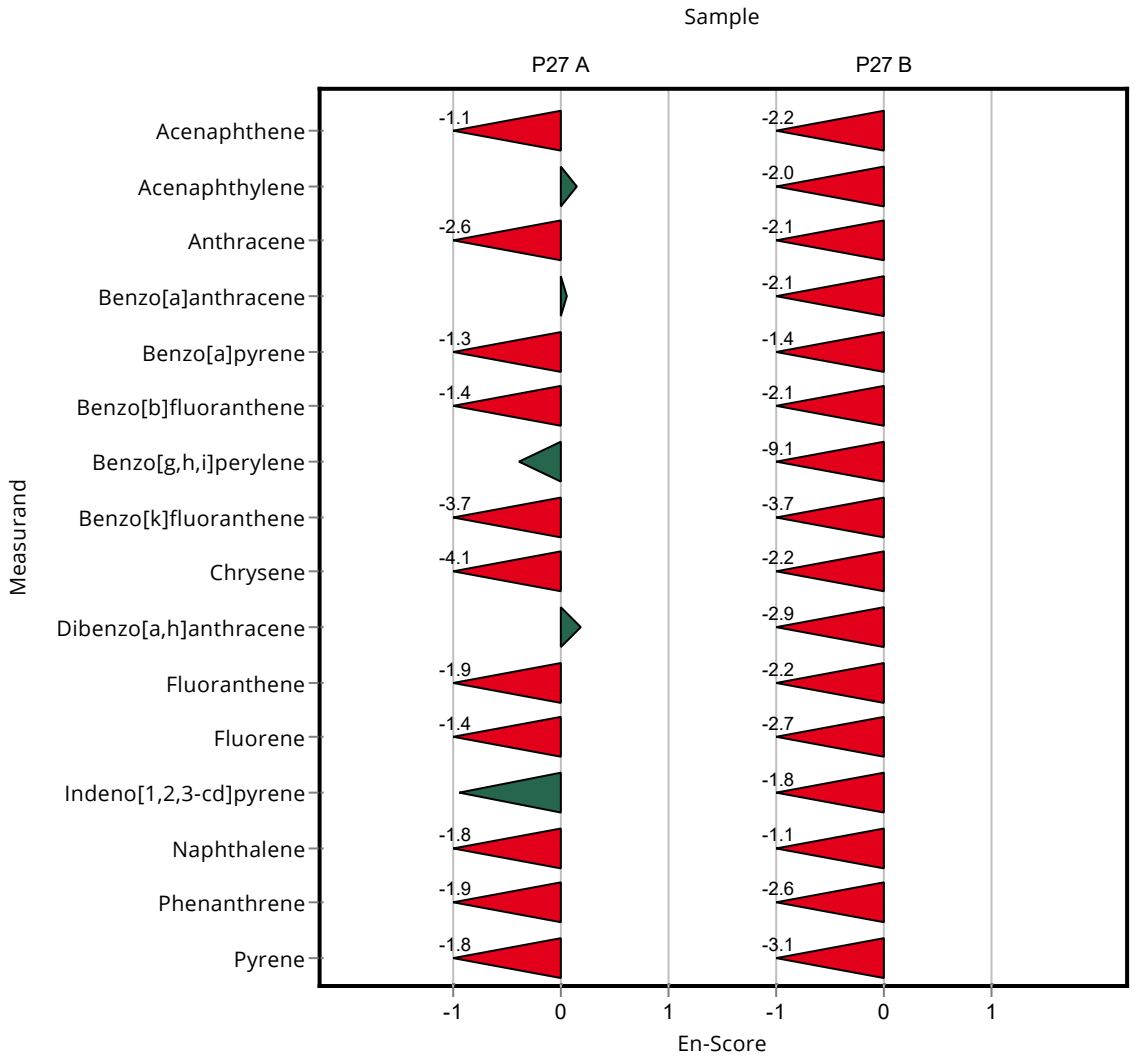
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	23.8 ± 3.37	19.72 ± 1	4.53	82.7	-1.05
Acenaphthylene	ng/l	14 ± 1.76	14.32 ± 1	3.35	103	0.14
Anthracene	ng/l	24.7 ± 2.33	16.61 ± 1	5.19	67.2	-2.64
Benzo[a]anthracene	ng/l	22.5 ± 1.54	22.61 ± 1.13	4.72	101	0.05
Benzo[a]pyrene	ng/l	22.3 ± 6.03	13.83 ± 1	10	61.9	-1.34
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	24.2 ± 1.21	4.72	87.2	-1.38
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	15.42 ± 1	4.15	93	-0.40
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	5.32 ± 1	3.09	36.1	-3.71
Chrysene	ng/l	24.2 ± 1.66	13.59 ± 1	5.32	56.2	-4.08
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	17.4 ± 1	5.08	103	0.18
Fluoranthene	ng/l	21.6 ± 1.56	16.71 ± 1	3.89	77.4	-1.93
Fluorene	ng/l	22.1 ± 2.07	18 ± 1	3.09	81.6	-1.41
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	17.99 ± 1	5.22	86.1	-0.95
Naphthalene	ng/l	23.9 ± 3.19	17.13 ± 1	5.03	71.6	-1.81
Phenanthrene	ng/l	21.1 ± 1.43	16.58 ± 1	3.17	78.5	-1.85
Pyrene	ng/l	24 ± 1.48	19.57 ± 1	3.83	81.7	-1.76

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	324 ± 36	227.93 ± 11.4	61.5	70.4	-2.25
Acenaphthylene	ng/l	251 ± 29.9	181.9 ± 9.1	60.1	72.6	-1.96
Anthracene	ng/l	355 ± 52.6	235.61 ± 11.78	74.6	66.4	-2.07
Benzo[a]anthracene	ng/l	313 ± 30.1	234.59 ± 11.73	65.8	74.9	-2.06
Benzo[a]pyrene	ng/l	249 ± 47.7	178.04 ± 8.9	87.1	71.6	-1.39
Benzo[b]fluoranthene	ng/l	341 ± 26.9	261.88 ± 13.09	57.9	76.8	-2.11
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	90.8 ± 4.54	70.2	32.3	-9.07

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	En-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	123.29 ± 6.16	51.2	50.6	-3.66
Chrysene	ng/l	275 ± 25.1	202.49 ± 10.12	60.5	73.6	-2.25
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	66.79 ± 3.34	60.9	32.9	-2.85
Fluoranthene	ng/l	346 ± 44.3	235.61 ± 11.78	72.6	68.1	-2.20
Fluorene	ng/l	218 ± 21.7	146.04 ± 7.3	32.6	67.1	-2.73
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	127.27 ± 6.36	98.1	55.8	-1.75
Naphthalene	ng/l	452 ± 86.9	349.49 ± 17.47	136	77.3	-1.10
Phenanthrene	ng/l	301 ± 27.2	211.46 ± 10.57	45.1	70.3	-2.59
Pyrene	ng/l	295 ± 20.2	204.74 ± 10.24	47.2	69.4	-3.14


Sample
P27 A
P27 B
Measurand
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
-1.1
-2.2
-2.0
-2.6
-2.1
-2.1
-1.3
-1.4
-1.4
-2.1
-9.1
-3.7
-3.7
-4.1
-2.2
-2.9
-1.9
-2.2
-1.4
-2.7
-1.8
-1.8
-1.1
-1.9
-2.6
-1.8
-3.1
-1
0
1
-1
0
1
En-Score

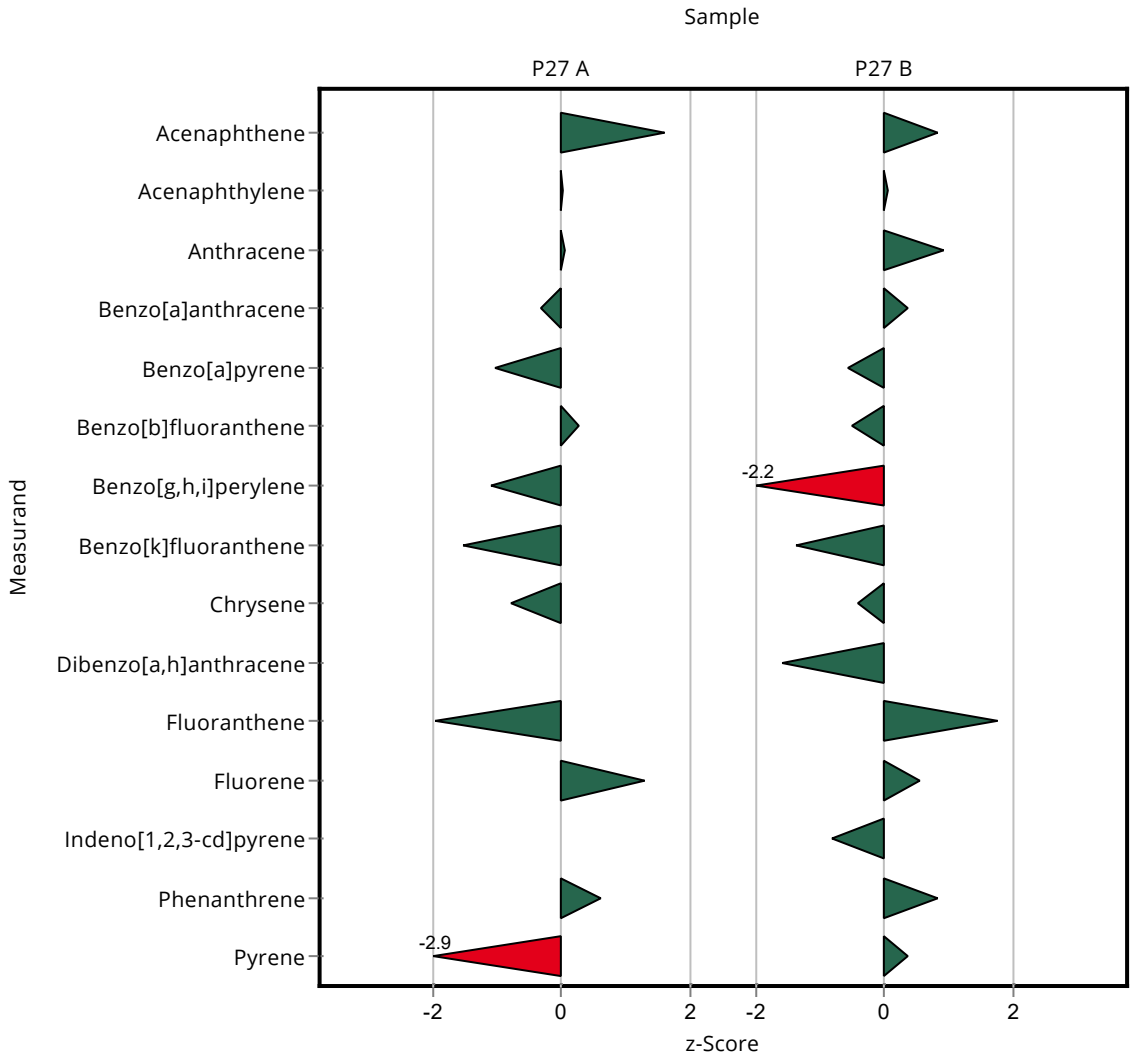
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	23.8 ± 3.37	31 ± 6	4.53	130	1.58
Acenaphthylene	ng/l	14 ± 1.76	14 ± 3	3.35	100	0.01
Anthracene	ng/l	24.7 ± 2.33	25 ± 5	5.19	101	0.05
Benzo[a]anthracene	ng/l	22.5 ± 1.54	21 ± 4	4.72	93.4	-0.31
Benzo[a]pyrene	ng/l	22.3 ± 6.03	12 ± 2	10	53.7	-1.03
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	29 ± 6	4.72	104	0.26
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	12 ± 2	4.15	72.3	-1.11
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	10 ± 2	3.09	67.9	-1.53
Chrysene	ng/l	24.2 ± 1.66	20 ± 4	5.32	82.7	-0.79
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	<10 ± -	5.08	-	-
Fluoranthene	ng/l	21.6 ± 1.56	14 ± 3	3.89	64.8	-1.95
Fluorene	ng/l	22.1 ± 2.07	26 ± 5	3.09	118	1.27
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	<10 ± -	5.22	-	-
Naphthalene	ng/l	23.9 ± 3.19	- ± -	5.03	-	-
Phenanthrene	ng/l	21.1 ± 1.43	23 ± 5	3.17	109	0.59
Pyrene	ng/l	24 ± 1.48	13 ± 3	3.83	54.3	-2.86

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	324 ± 36	373 ± 75	61.5	115	0.80
Acenaphthylene	ng/l	251 ± 29.9	254 ± 51	60.1	101	0.06
Anthracene	ng/l	355 ± 52.6	423 ± 85	74.6	119	0.91
Benzo[a]anthracene	ng/l	313 ± 30.1	337 ± 67	65.8	108	0.36
Benzo[a]pyrene	ng/l	249 ± 47.7	198 ± 40	87.1	79.6	-0.58
Benzo[b]fluoranthene	ng/l	341 ± 26.9	311 ± 62	57.9	91.2	-0.52
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	124 ± 25	70.2	44.1	-2.23

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	z-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	174 ± 35	51.2	71.4	-1.36
Chrysene	ng/l	275 ± 25.1	249 ± 50	60.5	90.6	-0.43
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	107 ± 21	60.9	52.7	-1.58
Fluoranthene	ng/l	346 ± 44.3	472 ± 94	72.6	136	1.74
Fluorene	ng/l	218 ± 21.7	235 ± 47	32.6	108	0.53
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	149 ± 30	98.1	65.3	-0.81
Naphthalene	ng/l	452 ± 86.9	- ± -	136	-	-
Phenanthrene	ng/l	301 ± 27.2	338 ± 68	45.1	112	0.83
Pyrene	ng/l	295 ± 20.2	311 ± 62	47.2	105	0.34


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Phenanthrene
Pyrene
Measurand
-2.2
-2.9
-2
0
2
-2
0
2
z-Score

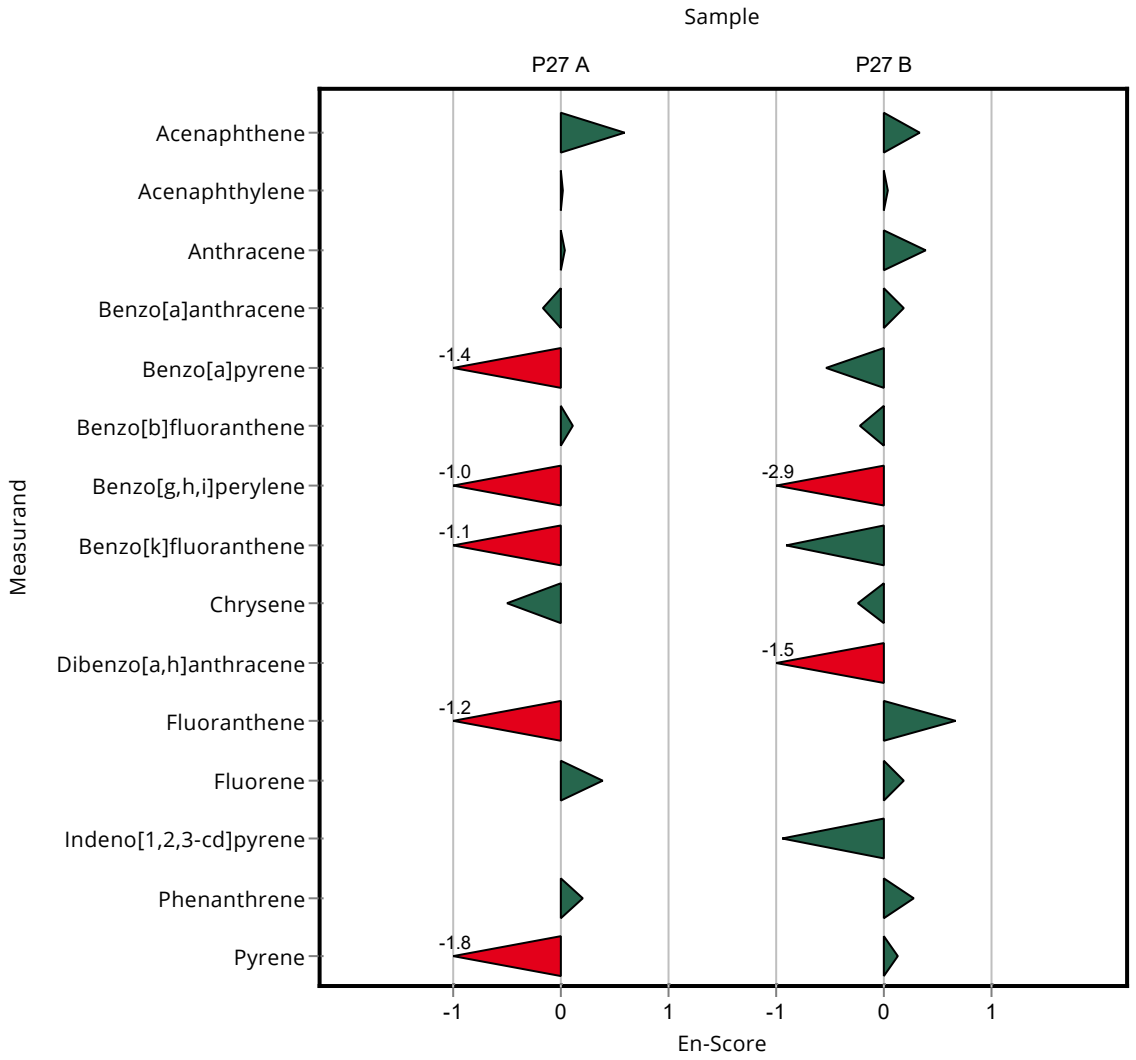
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	23.8 ± 3.37	31 ± 6	4.53	130	0.57
Acenaphthylene	ng/l	14 ± 1.76	14 ± 3	3.35	100	0.01
Anthracene	ng/l	24.7 ± 2.33	25 ± 5	5.19	101	0.03
Benzo[a]anthracene	ng/l	22.5 ± 1.54	21 ± 4	4.72	93.4	-0.18
Benzo[a]pyrene	ng/l	22.3 ± 6.03	12 ± 2	10	53.7	-1.43
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	29 ± 6	4.72	104	0.10
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	12 ± 2	4.15	72.3	-1.01
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	10 ± 2	3.09	67.9	-1.10
Chrysene	ng/l	24.2 ± 1.66	20 ± 4	5.32	82.7	-0.51
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	<10 ± -	5.08	-	-
Fluoranthene	ng/l	21.6 ± 1.56	14 ± 3	3.89	64.8	-1.23
Fluorene	ng/l	22.1 ± 2.07	26 ± 5	3.09	118	0.38
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	<10 ± -	5.22	-	-
Naphthalene	ng/l	23.9 ± 3.19	- ± -	5.03	-	-
Phenanthrene	ng/l	21.1 ± 1.43	23 ± 5	3.17	109	0.19
Pyrene	ng/l	24 ± 1.48	13 ± 3	3.83	54.3	-1.77

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	324 ± 36	373 ± 75	61.5	115	0.32
Acenaphthylene	ng/l	251 ± 29.9	254 ± 51	60.1	101	0.03
Anthracene	ng/l	355 ± 52.6	423 ± 85	74.6	119	0.38
Benzo[a]anthracene	ng/l	313 ± 30.1	337 ± 67	65.8	108	0.17
Benzo[a]pyrene	ng/l	249 ± 47.7	198 ± 40	87.1	79.6	-0.55
Benzo[b]fluoranthene	ng/l	341 ± 26.9	311 ± 62	57.9	91.2	-0.24
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	124 ± 25	70.2	44.1	-2.94

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	En-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	174 ± 35	51.2	71.4	-0.91
Chrysene	ng/l	275 ± 25.1	249 ± 50	60.5	90.6	-0.25
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	107 ± 21	60.9	52.7	-1.52
Fluoranthene	ng/l	346 ± 44.3	472 ± 94	72.6	136	0.65
Fluorene	ng/l	218 ± 21.7	235 ± 47	32.6	108	0.18
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	149 ± 30	98.1	65.3	-0.96
Naphthalene	ng/l	452 ± 86.9	- ± -	136	-	-
Phenanthrene	ng/l	301 ± 27.2	338 ± 68	45.1	112	0.27
Pyrene	ng/l	295 ± 20.2	311 ± 62	47.2	105	0.13


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Phenanthrene
Pyrene
Measurand
-1.4
-1.0
-1.1
-1.2
-1.8
-2.9
-1.5
-1
0
1
-1
0
1
En-Score

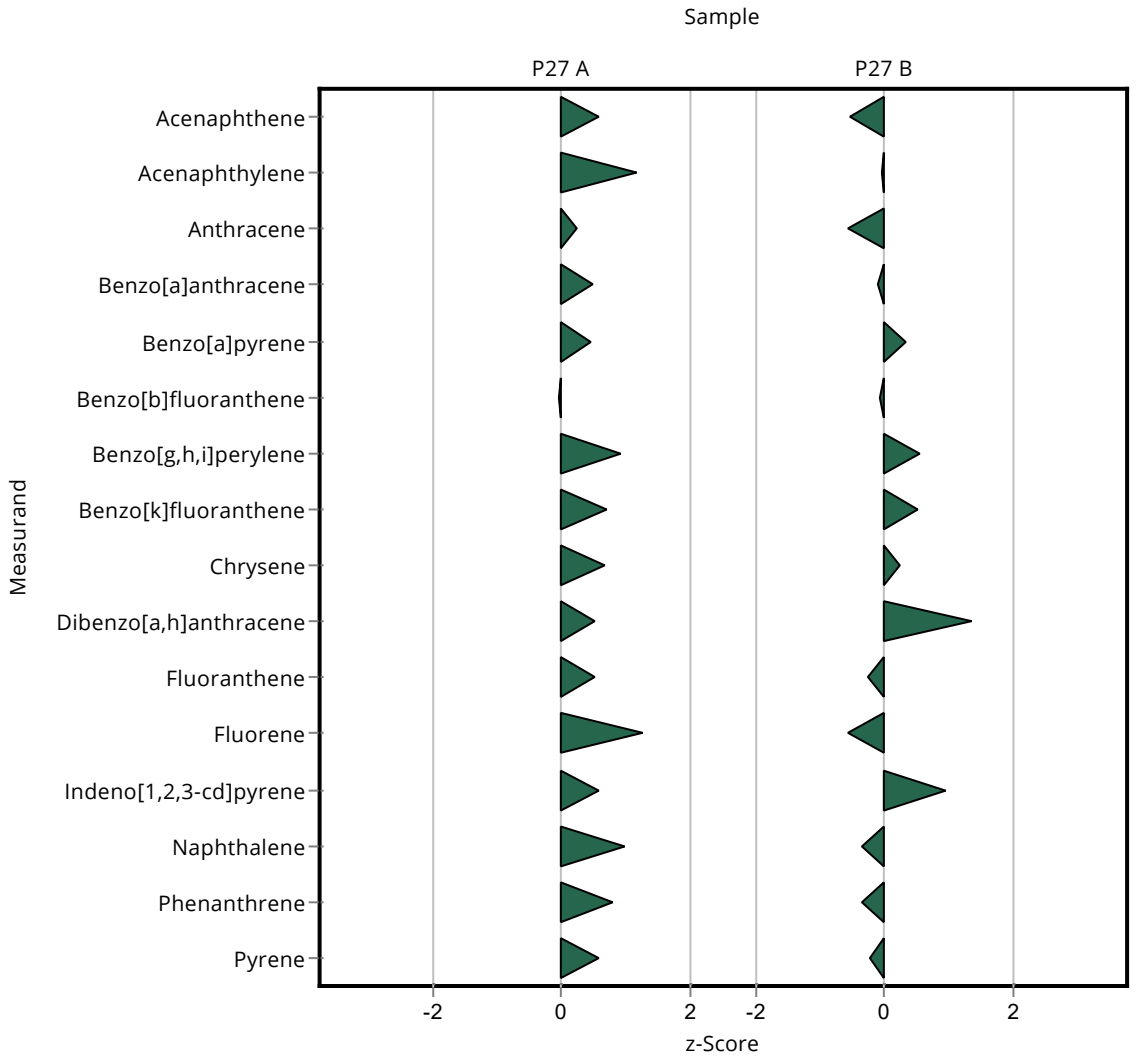
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	23.8 ± 3.37	26.48 ± 3.35	4.53	111	0.58
Acenaphthylene	ng/l	14 ± 1.76	17.85 ± 2.28	3.35	128	1.16
Anthracene	ng/l	24.7 ± 2.33	25.92 ± 4.08	5.19	105	0.23
Benzo[a]anthracene	ng/l	22.5 ± 1.54	24.68 ± 4.31	4.72	110	0.47
Benzo[a]pyrene	ng/l	22.3 ± 6.03	26.93 ± 5.54	10	121	0.46
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	27.53 ± 3.8	4.72	99.2	-0.05
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	20.4 ± 2.68	4.15	123	0.92
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	16.87 ± 2.22	3.09	115	0.70
Chrysene	ng/l	24.2 ± 1.66	27.7 ± 3.37	5.32	114	0.66
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	19.45 ± 2.72	5.08	115	0.50
Fluoranthene	ng/l	21.6 ± 1.56	23.59 ± 2.88	3.89	109	0.51
Fluorene	ng/l	22.1 ± 2.07	25.9 ± 3.14	3.09	117	1.24
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	23.81 ± 3.33	5.22	114	0.56
Naphthalene	ng/l	23.9 ± 3.19	28.87 ± 3.74	5.03	121	0.98
Phenanthrene	ng/l	21.1 ± 1.43	23.64 ± 3.04	3.17	112	0.79
Pyrene	ng/l	24 ± 1.48	26.15 ± 3.14	3.83	109	0.57

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	324 ± 36	289.93 ± 36.67	61.5	89.6	-0.55
Acenaphthylene	ng/l	251 ± 29.9	247.29 ± 31.63	60.1	98.7	-0.05
Anthracene	ng/l	355 ± 52.6	313.19 ± 49.27	74.6	88.2	-0.56
Benzo[a]anthracene	ng/l	313 ± 30.1	306.73 ± 53.53	65.8	98	-0.10
Benzo[a]pyrene	ng/l	249 ± 47.7	277.48 ± 57.07	87.1	112	0.33
Benzo[b]fluoranthene	ng/l	341 ± 26.9	336.32 ± 46.4	57.9	98.7	-0.08
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	317.97 ± 41.83	70.2	113	0.53

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	z-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	270.28 ± 35.64	51.2	111	0.52
Chrysene	ng/l	275 ± 25.1	288.73 ± 35.16	60.5	105	0.23
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	285.24 ± 39.85	60.9	140	1.35
Fluoranthene	ng/l	346 ± 44.3	326.46 ± 39.86	72.6	94.4	-0.27
Fluorene	ng/l	218 ± 21.7	198.61 ± 24.11	32.6	91.3	-0.58
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	321.22 ± 44.96	98.1	141	0.95
Naphthalene	ng/l	452 ± 86.9	402.6 ± 52.13	136	89	-0.37
Phenanthrene	ng/l	301 ± 27.2	284.53 ± 36.54	45.1	94.6	-0.36
Pyrene	ng/l	295 ± 20.2	283.22 ± 34	47.2	96.1	-0.25


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
-2
0
2
-2
0
2
z-Score

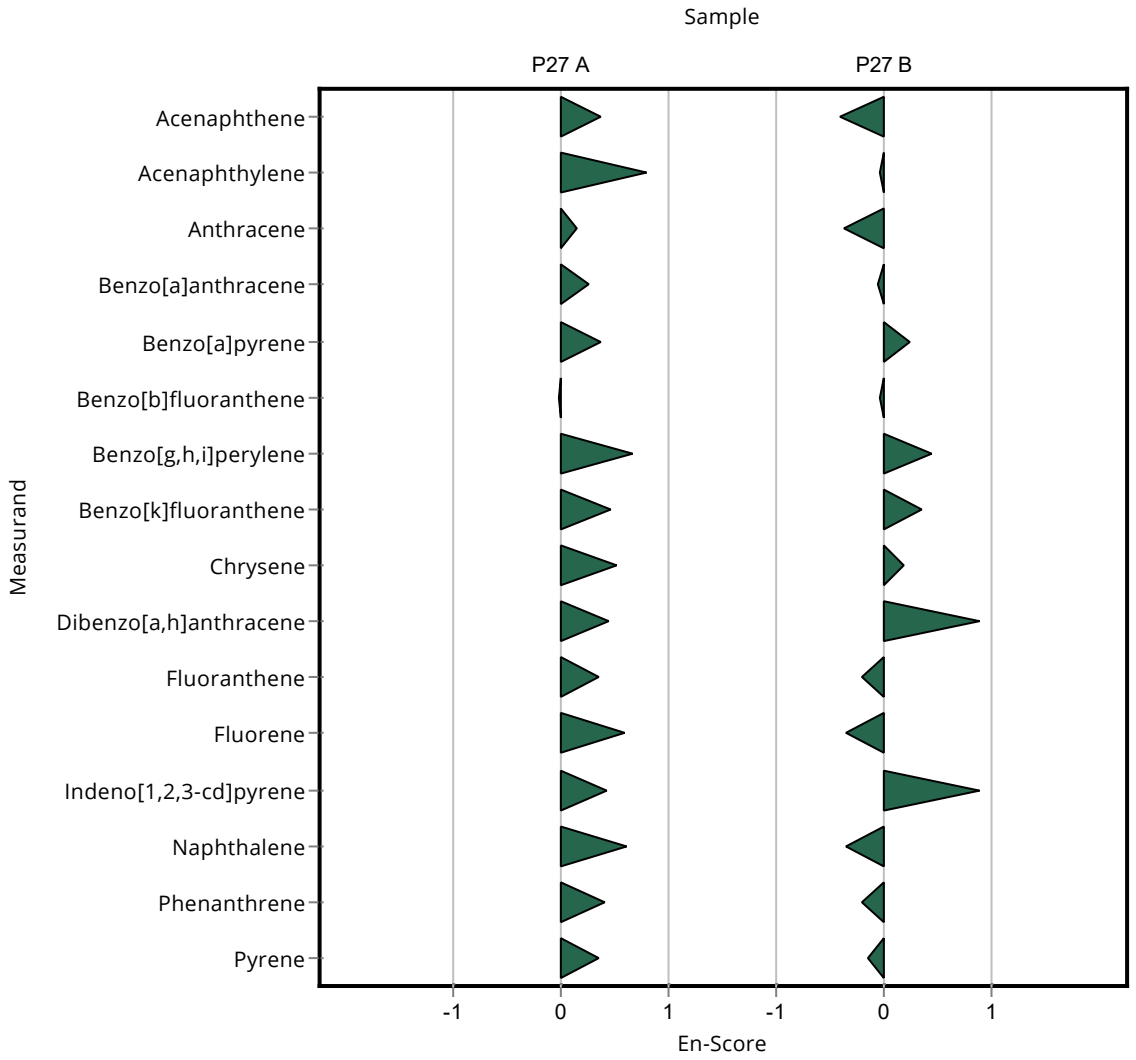
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	23.8 ± 3.37	26.48 ± 3.35	4.53	111	0.35
Acenaphthylene	ng/l	14 ± 1.76	17.85 ± 2.28	3.35	128	0.80
Anthracene	ng/l	24.7 ± 2.33	25.92 ± 4.08	5.19	105	0.14
Benzo[a]anthracene	ng/l	22.5 ± 1.54	24.68 ± 4.31	4.72	110	0.25
Benzo[a]pyrene	ng/l	22.3 ± 6.03	26.93 ± 5.54	10	121	0.36
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	27.53 ± 3.8	4.72	99.2	-0.03
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	20.4 ± 2.68	4.15	123	0.66
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	16.87 ± 2.22	3.09	115	0.46
Chrysene	ng/l	24.2 ± 1.66	27.7 ± 3.37	5.32	114	0.51
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	19.45 ± 2.72	5.08	115	0.44
Fluoranthene	ng/l	21.6 ± 1.56	23.59 ± 2.88	3.89	109	0.33
Fluorene	ng/l	22.1 ± 2.07	25.9 ± 3.14	3.09	117	0.58
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	23.81 ± 3.33	5.22	114	0.41
Naphthalene	ng/l	23.9 ± 3.19	28.87 ± 3.74	5.03	121	0.61
Phenanthrene	ng/l	21.1 ± 1.43	23.64 ± 3.04	3.17	112	0.40
Pyrene	ng/l	24 ± 1.48	26.15 ± 3.14	3.83	109	0.34

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	324 ± 36	289.93 ± 36.67	61.5	89.6	-0.41
Acenaphthylene	ng/l	251 ± 29.9	247.29 ± 31.63	60.1	98.7	-0.05
Anthracene	ng/l	355 ± 52.6	313.19 ± 49.27	74.6	88.2	-0.37
Benzo[a]anthracene	ng/l	313 ± 30.1	306.73 ± 53.53	65.8	98	-0.06
Benzo[a]pyrene	ng/l	249 ± 47.7	277.48 ± 57.07	87.1	112	0.23
Benzo[b]fluoranthene	ng/l	341 ± 26.9	336.32 ± 46.4	57.9	98.7	-0.05
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	317.97 ± 41.83	70.2	113	0.43

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	En-Score
Benzo[k]fluoranthene	ng/l	244	30.6	270.28	35.64	51.2	111	0.34
Chrysene	ng/l	275	25.1	288.73	35.16	60.5	105	0.18
Dibenzo[a,h]anthracene	ng/l	203	47.3	285.24	39.85	60.9	140	0.89
Fluoranthene	ng/l	346	44.3	326.46	39.86	72.6	94.4	-0.21
Fluorene	ng/l	218	21.7	198.61	24.11	32.6	91.3	-0.36
Indeno[1,2,3-cd]pyrene	ng/l	228	56.1	321.22	44.96	98.1	141	0.88
Naphthalene	ng/l	452	86.9	402.6	52.13	136	89	-0.37
Phenanthrene	ng/l	301	27.2	284.53	36.54	45.1	94.6	-0.21
Pyrene	ng/l	295	20.2	283.22	34	47.2	96.1	-0.16


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
-1
0
1
-1
0
1
En-Score

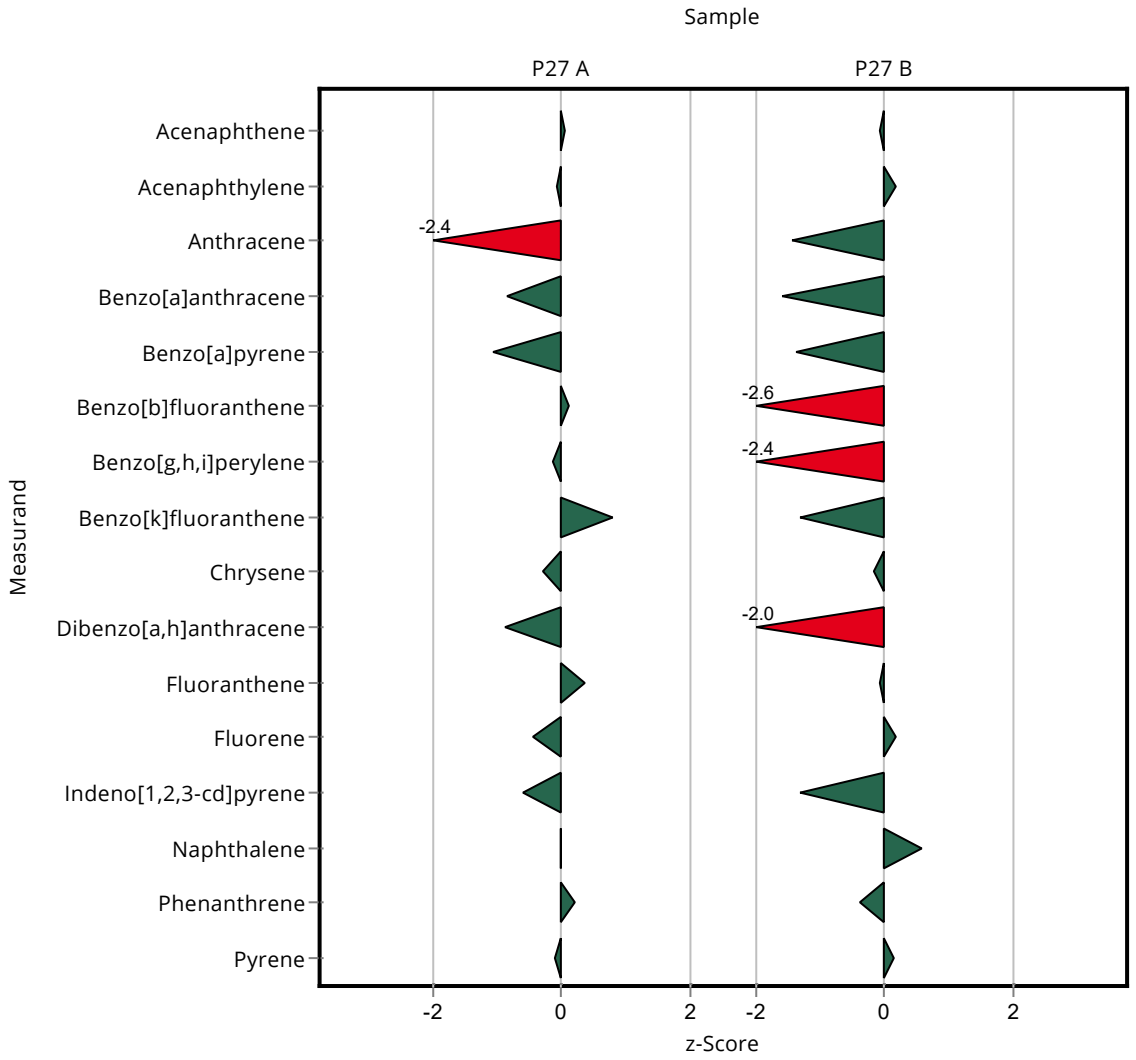
Sample: P27A

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	23.8	3.37	24	5.99	4.53	101	0.04
Acenaphthylene	ng/l	14	1.76	13.7	3.43	3.35	98.1	-0.08
Anthracene	ng/l	24.7	2.33	12.5	3.14	5.19	50.6	-2.35
Benzo[a]anthracene	ng/l	22.5	1.54	18.5	4.63	4.72	82.3	-0.84
Benzo[a]pyrene	ng/l	22.3	6.03	11.6	2.91	10	52	-1.07
Benzo[b]fluoranthene	ng/l	27.8	0.891	28.3	7.08	4.72	102	0.11
Benzo[g,h,i]perylene	ng/l	16.6	2.11	16	4.01	4.15	96.5	-0.14
Benzo[k]fluoranthene	ng/l	14.7	1.56	17.2	4.29	3.09	117	0.80
Chrysene	ng/l	24.2	1.66	22.7	5.67	5.32	93.8	-0.28
Dibenzo[a,h]anthracene	ng/l	16.9	1.7	12.4	3.1	5.08	73.3	-0.89
Fluoranthene	ng/l	21.6	1.56	23	5.76	3.89	106	0.36
Fluorene	ng/l	22.1	2.07	20.7	5.17	3.09	93.8	-0.44
Indeno[1,2,3-cd]pyrene	ng/l	20.9	2.29	17.8	4.46	5.22	85.2	-0.59
Naphthalene	ng/l	23.9	3.19	23.8	5.94	5.03	99.4	-0.03
Phenanthrene	ng/l	21.1	1.43	21.8	5.46	3.17	103	0.21
Pyrene	ng/l	24	1.48	23.6	5.9	3.83	98.5	-0.09

Sample: P27B

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	324	36	318	79	61.5	98.3	-0.09
Acenaphthylene	ng/l	251	29.9	260	65	60.1	104	0.16
Anthracene	ng/l	355	52.6	247	62	74.6	69.6	-1.45
Benzo[a]anthracene	ng/l	313	30.1	208	52	65.8	66.4	-1.60
Benzo[a]pyrene	ng/l	249	47.7	129	32	87.1	51.9	-1.38
Benzo[b]fluoranthene	ng/l	341	26.9	191	48	57.9	56	-2.59
Benzo[g,h,i]perylene	ng/l	281	18.9	114	28	70.2	40.6	-2.38

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	z-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	177 ± 44	51.2	72.6	-1.31
Chrysene	ng/l	275 ± 25.1	264 ± 66	60.5	96	-0.18
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	81 ± 20	60.9	39.9	-2.00
Fluoranthene	ng/l	346 ± 44.3	341 ± 85	72.6	98.6	-0.07
Fluorene	ng/l	218 ± 21.7	223 ± 56	32.6	102	0.16
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	99 ± 25	98.1	43.4	-1.32
Naphthalene	ng/l	452 ± 86.9	531 ± 133	136	117	0.58
Phenanthrene	ng/l	301 ± 27.2	283 ± 71	45.1	94.1	-0.39
Pyrene	ng/l	295 ± 20.2	301 ± 75	47.2	102	0.13


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
-2.4
-2.6
-2.4
-2.0
-2
0
2
-2
0
2
z-Score

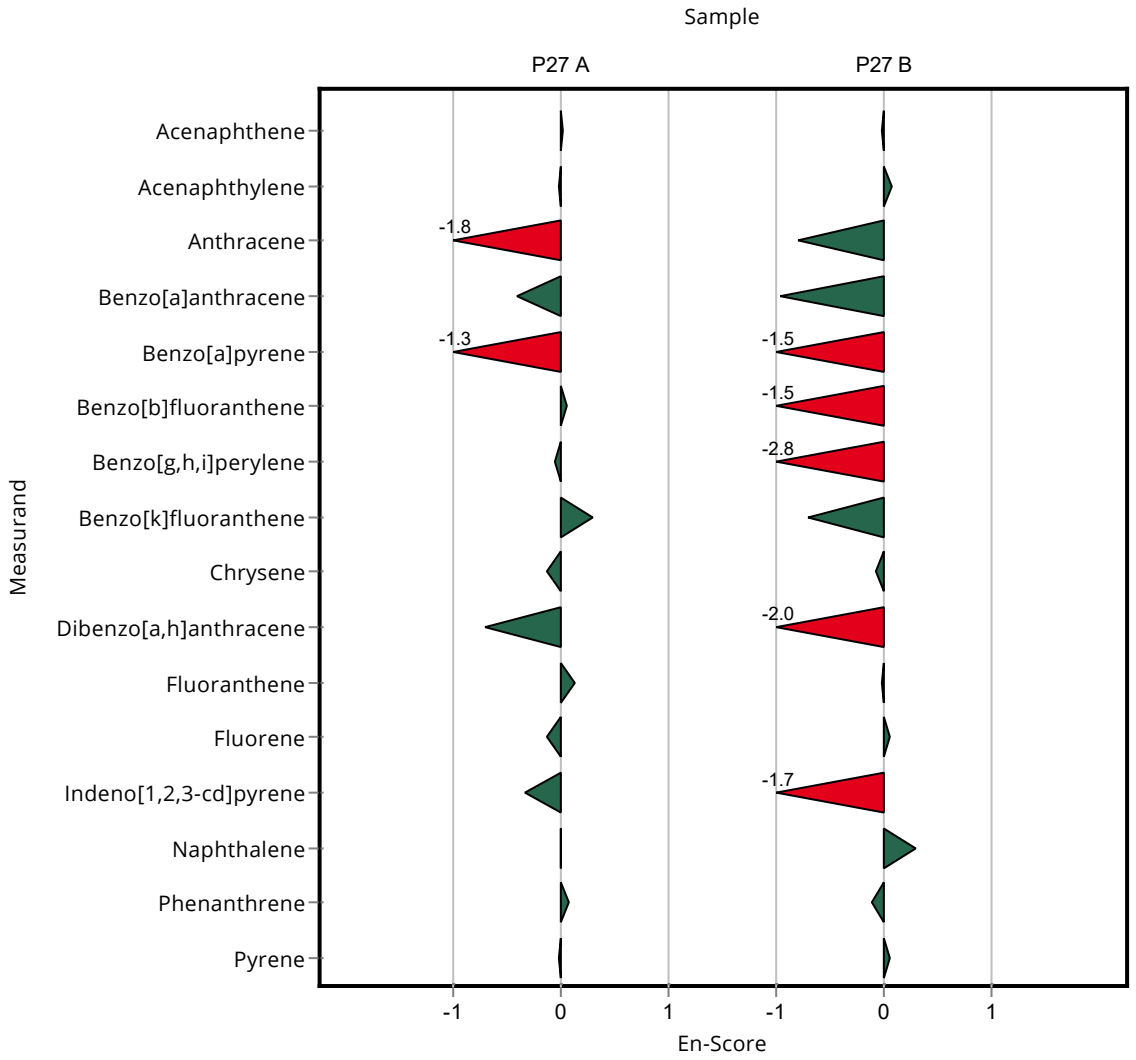
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	23.8 ± 3.37	24 ± 5.99	4.53	101	0.01
Acenaphthylene	ng/l	14 ± 1.76	13.7 ± 3.43	3.35	98.1	-0.04
Anthracene	ng/l	24.7 ± 2.33	12.5 ± 3.14	5.19	50.6	-1.82
Benzo[a]anthracene	ng/l	22.5 ± 1.54	18.5 ± 4.63	4.72	82.3	-0.42
Benzo[a]pyrene	ng/l	22.3 ± 6.03	11.6 ± 2.91	10	52	-1.28
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	28.3 ± 7.08	4.72	102	0.04
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	16 ± 4.01	4.15	96.5	-0.07
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	17.2 ± 4.29	3.09	117	0.28
Chrysene	ng/l	24.2 ± 1.66	22.7 ± 5.67	5.32	93.8	-0.13
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	12.4 ± 3.1	5.08	73.3	-0.70
Fluoranthene	ng/l	21.6 ± 1.56	23 ± 5.76	3.89	106	0.12
Fluorene	ng/l	22.1 ± 2.07	20.7 ± 5.17	3.09	93.8	-0.13
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	17.8 ± 4.46	5.22	85.2	-0.34
Naphthalene	ng/l	23.9 ± 3.19	23.8 ± 5.94	5.03	99.4	-0.01
Phenanthrene	ng/l	21.1 ± 1.43	21.8 ± 5.46	3.17	103	0.06
Pyrene	ng/l	24 ± 1.48	23.6 ± 5.9	3.83	98.5	-0.03

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	324 ± 36	318 ± 79	61.5	98.3	-0.03
Acenaphthylene	ng/l	251 ± 29.9	260 ± 65	60.1	104	0.07
Anthracene	ng/l	355 ± 52.6	247 ± 62	74.6	69.6	-0.80
Benzo[a]anthracene	ng/l	313 ± 30.1	208 ± 52	65.8	66.4	-0.97
Benzo[a]pyrene	ng/l	249 ± 47.7	129 ± 32	87.1	51.9	-1.50
Benzo[b]fluoranthene	ng/l	341 ± 26.9	191 ± 48	57.9	56	-1.50
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	114 ± 28	70.2	40.6	-2.82

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	En-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	177 ± 44	51.2	72.6	-0.72
Chrysene	ng/l	275 ± 25.1	264 ± 66	60.5	96	-0.08
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	81 ± 20	60.9	39.9	-1.97
Fluoranthene	ng/l	346 ± 44.3	341 ± 85	72.6	98.6	-0.03
Fluorene	ng/l	218 ± 21.7	223 ± 56	32.6	102	0.05
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	99 ± 25	98.1	43.4	-1.72
Naphthalene	ng/l	452 ± 86.9	531 ± 133	136	117	0.28
Phenanthrene	ng/l	301 ± 27.2	283 ± 71	45.1	94.1	-0.12
Pyrene	ng/l	295 ± 20.2	301 ± 75	47.2	102	0.04


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
-1.8
-1.3
-1.5
-1.5
-2.8
-2.0
-1.7
-1
0
1
-1
0
1
En-Score

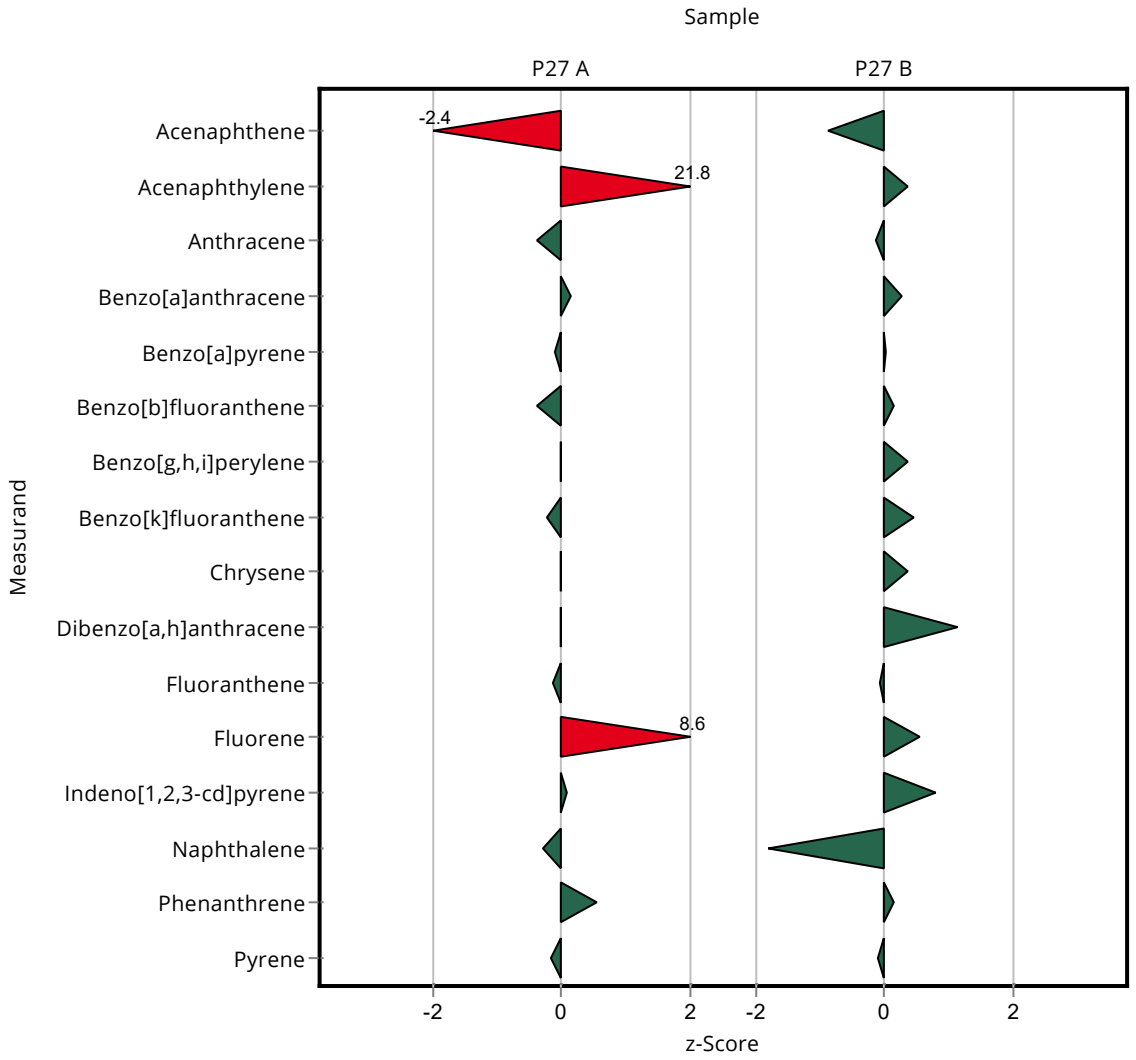
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	23.8 ± 3.37	13.1 ± 8.1	4.53	55	-2.37
Acenaphthylene	ng/l	14 ± 1.76	87 ± 35.6	3.35	623	21.80
Anthracene	ng/l	24.7 ± 2.33	22.7 ± 11.4	5.19	91.8	-0.39
Benzo[a]anthracene	ng/l	22.5 ± 1.54	23.1 ± 12.6	4.72	103	0.13
Benzo[a]pyrene	ng/l	22.3 ± 6.03	21.3 ± 6.2	10	95.4	-0.10
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	25.9 ± 7.6	4.72	93.3	-0.39
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	16.5 ± 6.7	4.15	99.5	-0.02
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	14 ± 5.4	3.09	95.1	-0.23
Chrysene	ng/l	24.2 ± 1.66	24.1 ± 11.4	5.32	99.6	-0.02
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	16.9 ± 7.4	5.08	99.9	0.00
Fluoranthene	ng/l	21.6 ± 1.56	21.1 ± 8.7	3.89	97.7	-0.13
Fluorene	ng/l	22.1 ± 2.07	48.5 ± 21.7	3.09	220	8.55
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	21.3 ± 5.9	5.22	102	0.08
Naphthalene	ng/l	23.9 ± 3.19	22.5 ± 12	5.03	94	-0.29
Phenanthrene	ng/l	21.1 ± 1.43	22.8 ± 13.3	3.17	108	0.53
Pyrene	ng/l	24 ± 1.48	23.3 ± 10.7	3.83	97.3	-0.17

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	324 ± 36	268.7 ± 166.8	61.5	83	-0.89
Acenaphthylene	ng/l	251 ± 29.9	272.5 ± 111.4	60.1	109	0.37
Anthracene	ng/l	355 ± 52.6	345.3 ± 173.7	74.6	97.3	-0.13
Benzo[a]anthracene	ng/l	313 ± 30.1	331.3 ± 180.6	65.8	106	0.28
Benzo[a]pyrene	ng/l	249 ± 47.7	250.1 ± 73.6	87.1	101	0.02
Benzo[b]fluoranthene	ng/l	341 ± 26.9	349.1 ± 142.6	57.9	102	0.14
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	306.5 ± 144.9	70.2	109	0.36

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	z-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	266.3 ± 102.5	51.2	109	0.44
Chrysene	ng/l	275 ± 25.1	295.5 ± 129.5	60.5	107	0.34
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	271.8 ± 111.7	60.9	134	1.13
Fluoranthene	ng/l	346 ± 44.3	339.9 ± 94.1	72.6	98.3	-0.08
Fluorene	ng/l	218 ± 21.7	235.5 ± 105.3	32.6	108	0.55
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	306 ± 163.4	98.1	134	0.79
Naphthalene	ng/l	452 ± 86.9	205.3 ± 119.8	136	45.4	-1.82
Phenanthrene	ng/l	301 ± 27.2	306.9 ± 141.1	45.1	102	0.14
Pyrene	ng/l	295 ± 20.2	289.6 ± 73.5	47.2	98.2	-0.11


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
-2.4
21.8
8.6
-2
0
2
-2
0
2
z-Score

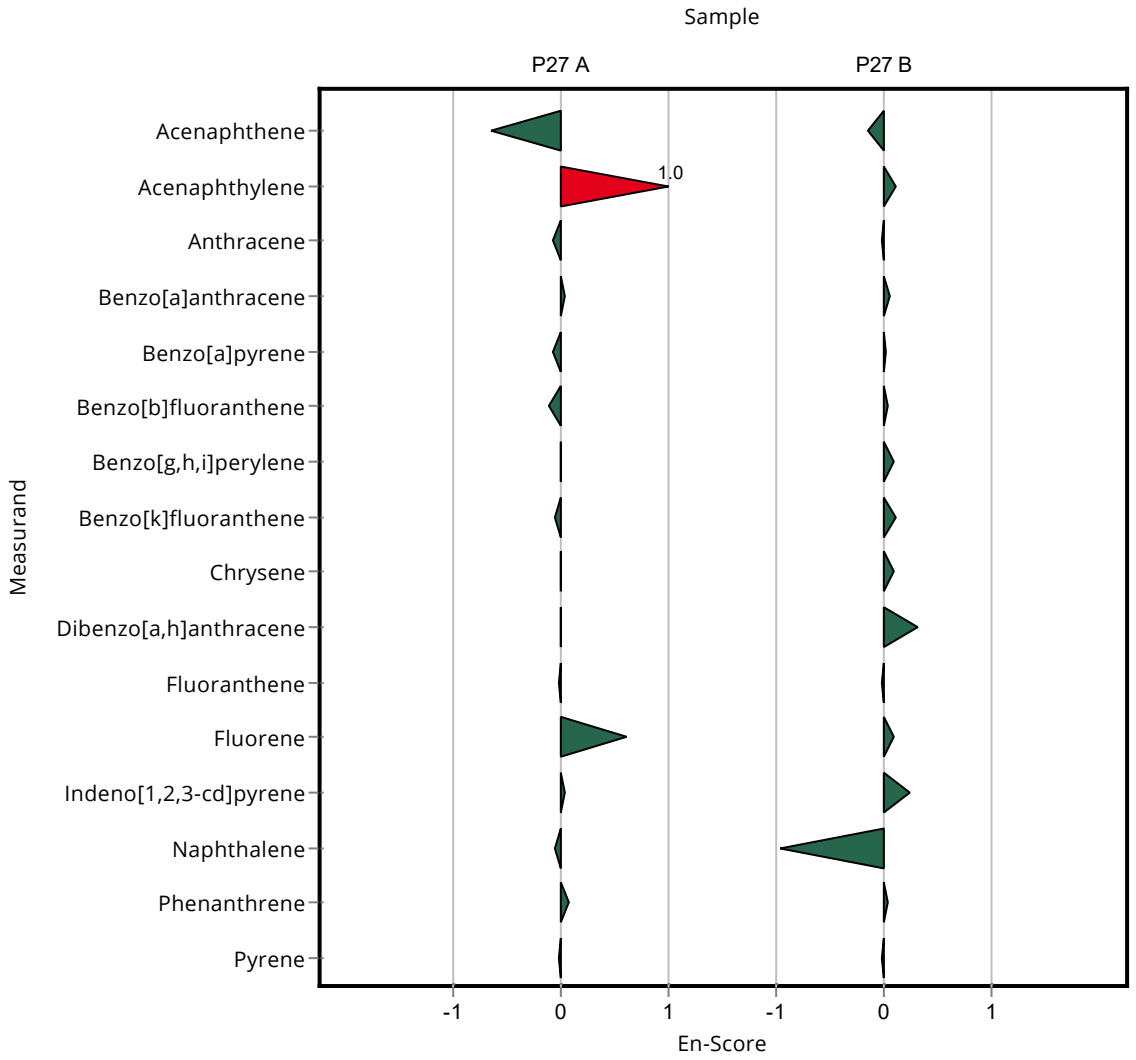
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	23.8 ± 3.37	13.1 ± 8.1	4.53	55	-0.65
Acenaphthylene	ng/l	14 ± 1.76	87 ± 35.6	3.35	623	1.03
Anthracene	ng/l	24.7 ± 2.33	22.7 ± 11.4	5.19	91.8	-0.09
Benzo[a]anthracene	ng/l	22.5 ± 1.54	23.1 ± 12.6	4.72	103	0.02
Benzo[a]pyrene	ng/l	22.3 ± 6.03	21.3 ± 6.2	10	95.4	-0.07
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	25.9 ± 7.6	4.72	93.3	-0.12
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	16.5 ± 6.7	4.15	99.5	-0.01
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	14 ± 5.4	3.09	95.1	-0.07
Chrysene	ng/l	24.2 ± 1.66	24.1 ± 11.4	5.32	99.6	0.00
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	16.9 ± 7.4	5.08	99.9	0.00
Fluoranthene	ng/l	21.6 ± 1.56	21.1 ± 8.7	3.89	97.7	-0.03
Fluorene	ng/l	22.1 ± 2.07	48.5 ± 21.7	3.09	220	0.61
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	21.3 ± 5.9	5.22	102	0.03
Naphthalene	ng/l	23.9 ± 3.19	22.5 ± 12	5.03	94	-0.06
Phenanthrene	ng/l	21.1 ± 1.43	22.8 ± 13.3	3.17	108	0.06
Pyrene	ng/l	24 ± 1.48	23.3 ± 10.7	3.83	97.3	-0.03

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	324 ± 36	268.7 ± 166.8	61.5	83	-0.16
Acenaphthylene	ng/l	251 ± 29.9	272.5 ± 111.4	60.1	109	0.10
Anthracene	ng/l	355 ± 52.6	345.3 ± 173.7	74.6	97.3	-0.03
Benzo[a]anthracene	ng/l	313 ± 30.1	331.3 ± 180.6	65.8	106	0.05
Benzo[a]pyrene	ng/l	249 ± 47.7	250.1 ± 73.6	87.1	101	0.01
Benzo[b]fluoranthene	ng/l	341 ± 26.9	349.1 ± 142.6	57.9	102	0.03
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	306.5 ± 144.9	70.2	109	0.09

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	En-Score
Benzo[k]fluoranthene	ng/l	244	30.6	266.3	102.5	51.2	109	0.11
Chrysene	ng/l	275	25.1	295.5	129.5	60.5	107	0.08
Dibenzo[a,h]anthracene	ng/l	203	47.3	271.8	111.7	60.9	134	0.30
Fluoranthene	ng/l	346	44.3	339.9	94.1	72.6	98.3	-0.03
Fluorene	ng/l	218	21.7	235.5	105.3	32.6	108	0.08
Indeno[1,2,3-cd]pyrene	ng/l	228	56.1	306	163.4	98.1	134	0.24
Naphthalene	ng/l	452	86.9	205.3	119.8	136	45.4	-0.97
Phenanthrene	ng/l	301	27.2	306.9	141.1	45.1	102	0.02
Pyrene	ng/l	295	20.2	289.6	73.5	47.2	98.2	-0.04


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
1.0
-1
0
1
-1
0
1
En-Score

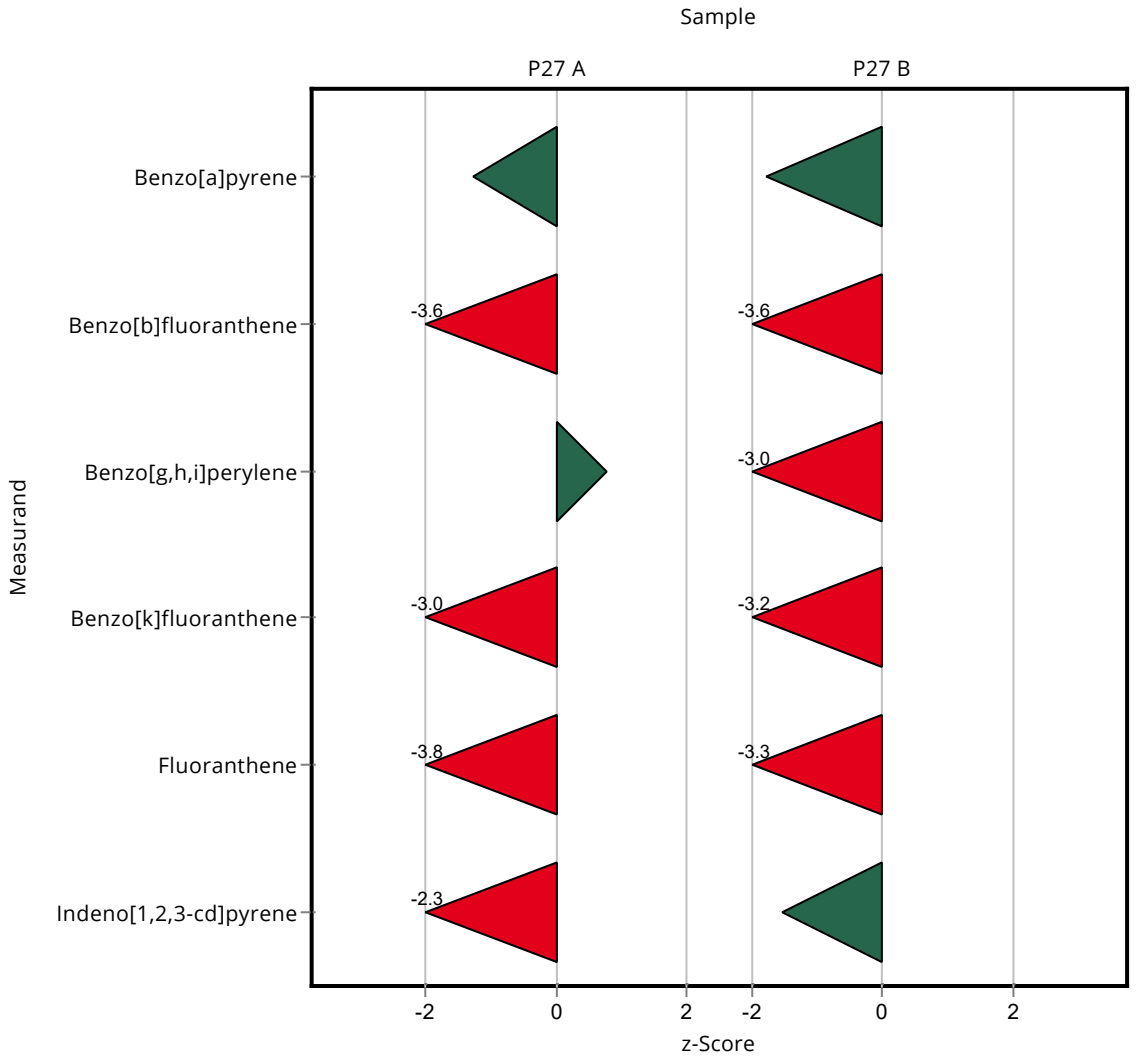
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	23.8 ± 3.37	- ± -	4.53	-	-
Acenaphthylene	ng/l	14 ± 1.76	- ± -	3.35	-	-
Anthracene	ng/l	24.7 ± 2.33	- ± -	5.19	-	-
Benzo[a]anthracene	ng/l	22.5 ± 1.54	- ± -	4.72	-	-
Benzo[a]pyrene	ng/l	22.3 ± 6.03	9.5 ± 0.9	10	42.5	-1.28
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	10.9 ± 1.1	4.72	39.3	-3.57
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	19.8 ± 2.2	4.15	119	0.77
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	5.5 ± 0.6	3.09	37.4	-2.98
Chrysene	ng/l	24.2 ± 1.66	- ± -	5.32	-	-
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	- ± -	5.08	-	-
Fluoranthene	ng/l	21.6 ± 1.56	6.9 ± 0.8	3.89	31.9	-3.78
Fluorene	ng/l	22.1 ± 2.07	- ± -	3.09	-	-
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	9.1 ± 1.1	5.22	43.6	-2.26
Naphthalene	ng/l	23.9 ± 3.19	- ± -	5.03	-	-
Phenanthrene	ng/l	21.1 ± 1.43	- ± -	3.17	-	-
Pyrene	ng/l	24 ± 1.48	- ± -	3.83	-	-

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	324 ± 36	- ± -	61.5	-	-
Acenaphthylene	ng/l	251 ± 29.9	- ± -	60.1	-	-
Anthracene	ng/l	355 ± 52.6	- ± -	74.6	-	-
Benzo[a]anthracene	ng/l	313 ± 30.1	- ± -	65.8	-	-
Benzo[a]pyrene	ng/l	249 ± 47.7	92.8 ± 8.4	87.1	37.3	-1.79
Benzo[b]fluoranthene	ng/l	341 ± 26.9	131.2 ± 13.1	57.9	38.5	-3.62
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	70.8 ± 7.8	70.2	25.2	-2.99

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	z-Score
Benzo[k]fluoranthene	ng/l	244	30.6	81.6	8.2	51.2	33.5	-3.17
Chrysene	ng/l	275	25.1	-	-	60.5	-	-
Dibenzo[a,h]anthracene	ng/l	203	47.3	-	-	60.9	-	-
Fluoranthene	ng/l	346	44.3	108.4	11.9	72.6	31.3	-3.27
Fluorene	ng/l	218	21.7	-	-	32.6	-	-
Indeno[1,2,3-cd]pyrene	ng/l	228	56.1	77.8	9.3	98.1	34.1	-1.53
Naphthalene	ng/l	452	86.9	-	-	136	-	-
Phenanthrene	ng/l	301	27.2	-	-	45.1	-	-
Pyrene	ng/l	295	20.2	-	-	47.2	-	-


Sample
P27 A
P27 B
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Fluoranthene
Indeno[1,2,3-cd]pyrene
Measurand
-3.6
-3.6
-3.0
-3.0
-3.2
-3.8
-3.3
-2.3
-2
0
2
-2
0
2
z-Score

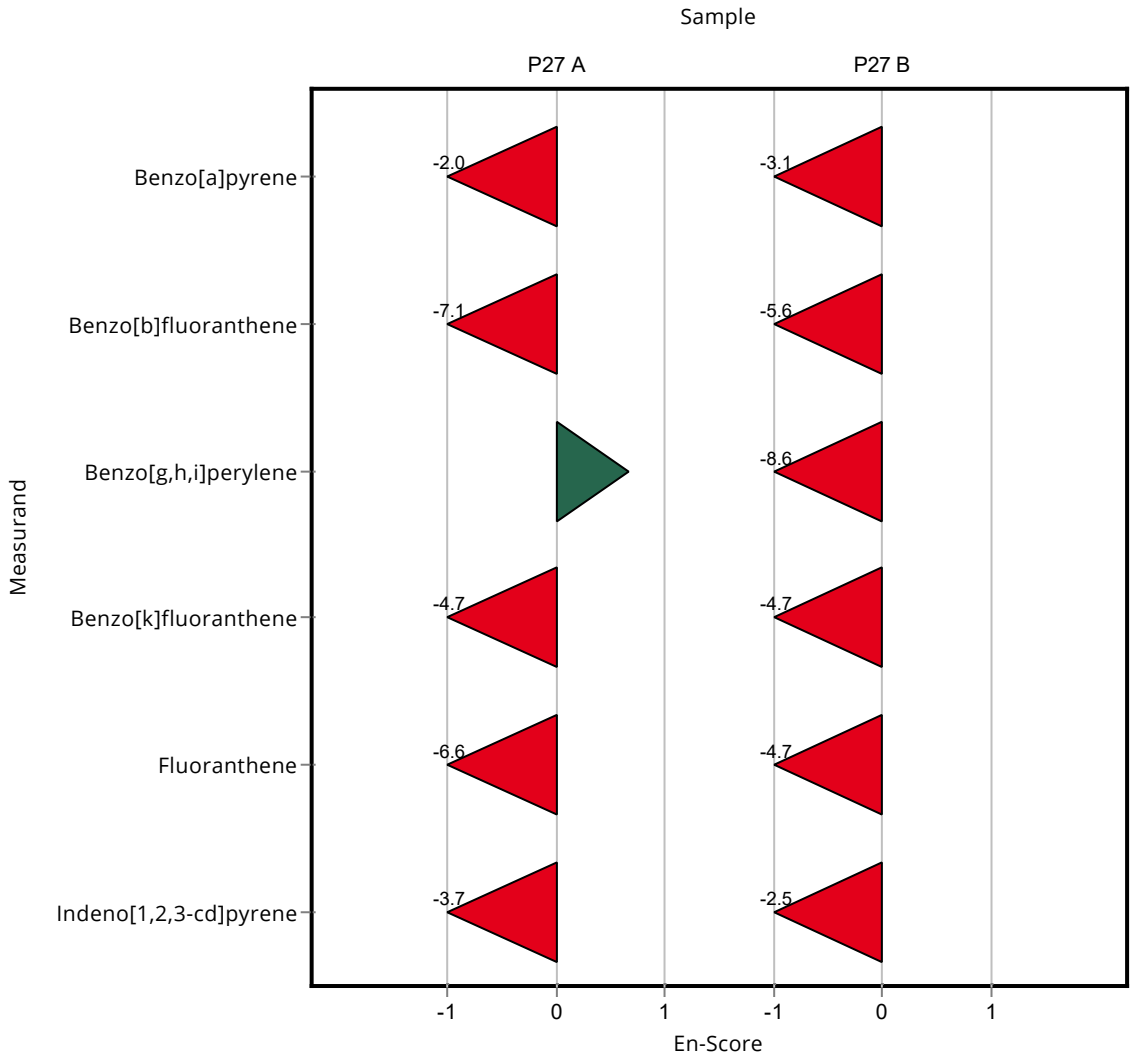
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	23.8 ± 3.37	- ± -	4.53	-	-
Acenaphthylene	ng/l	14 ± 1.76	- ± -	3.35	-	-
Anthracene	ng/l	24.7 ± 2.33	- ± -	5.19	-	-
Benzo[a]anthracene	ng/l	22.5 ± 1.54	- ± -	4.72	-	-
Benzo[a]pyrene	ng/l	22.3 ± 6.03	9.5 ± 0.9	10	42.5	-2.04
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	10.9 ± 1.1	4.72	39.3	-7.10
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	19.8 ± 2.2	4.15	119	0.66
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	5.5 ± 0.6	3.09	37.4	-4.69
Chrysene	ng/l	24.2 ± 1.66	- ± -	5.32	-	-
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	- ± -	5.08	-	-
Fluoranthene	ng/l	21.6 ± 1.56	6.9 ± 0.8	3.89	31.9	-6.57
Fluorene	ng/l	22.1 ± 2.07	- ± -	3.09	-	-
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	9.1 ± 1.1	5.22	43.6	-3.71
Naphthalene	ng/l	23.9 ± 3.19	- ± -	5.03	-	-
Phenanthrene	ng/l	21.1 ± 1.43	- ± -	3.17	-	-
Pyrene	ng/l	24 ± 1.48	- ± -	3.83	-	-

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	324 ± 36	- ± -	61.5	-	-
Acenaphthylene	ng/l	251 ± 29.9	- ± -	60.1	-	-
Anthracene	ng/l	355 ± 52.6	- ± -	74.6	-	-
Benzo[a]anthracene	ng/l	313 ± 30.1	- ± -	65.8	-	-
Benzo[a]pyrene	ng/l	249 ± 47.7	92.8 ± 8.4	87.1	37.3	-3.09
Benzo[b]fluoranthene	ng/l	341 ± 26.9	131.2 ± 13.1	57.9	38.5	-5.59
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	70.8 ± 7.8	70.2	25.2	-8.58

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	En-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	81.6 ± 8.2	51.2	33.5	-4.68
Chrysene	ng/l	275 ± 25.1	- ± -	60.5	-	-
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	- ± -	60.9	-	-
Fluoranthene	ng/l	346 ± 44.3	108.4 ± 11.9	72.6	31.3	-4.72
Fluorene	ng/l	218 ± 21.7	- ± -	32.6	-	-
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	77.8 ± 9.3	98.1	34.1	-2.54
Naphthalene	ng/l	452 ± 86.9	- ± -	136	-	-
Phenanthrene	ng/l	301 ± 27.2	- ± -	45.1	-	-
Pyrene	ng/l	295 ± 20.2	- ± -	47.2	-	-


Sample
P27 A
P27 B
Measurand
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Fluoranthene
Indeno[1,2,3-cd]pyrene
-2.0
-3.1
-7.1
-5.6
-8.6
-4.7
-4.7
-6.6
-4.7
-3.7
-2.5
-1
0
1
-1
0
1
En-Score

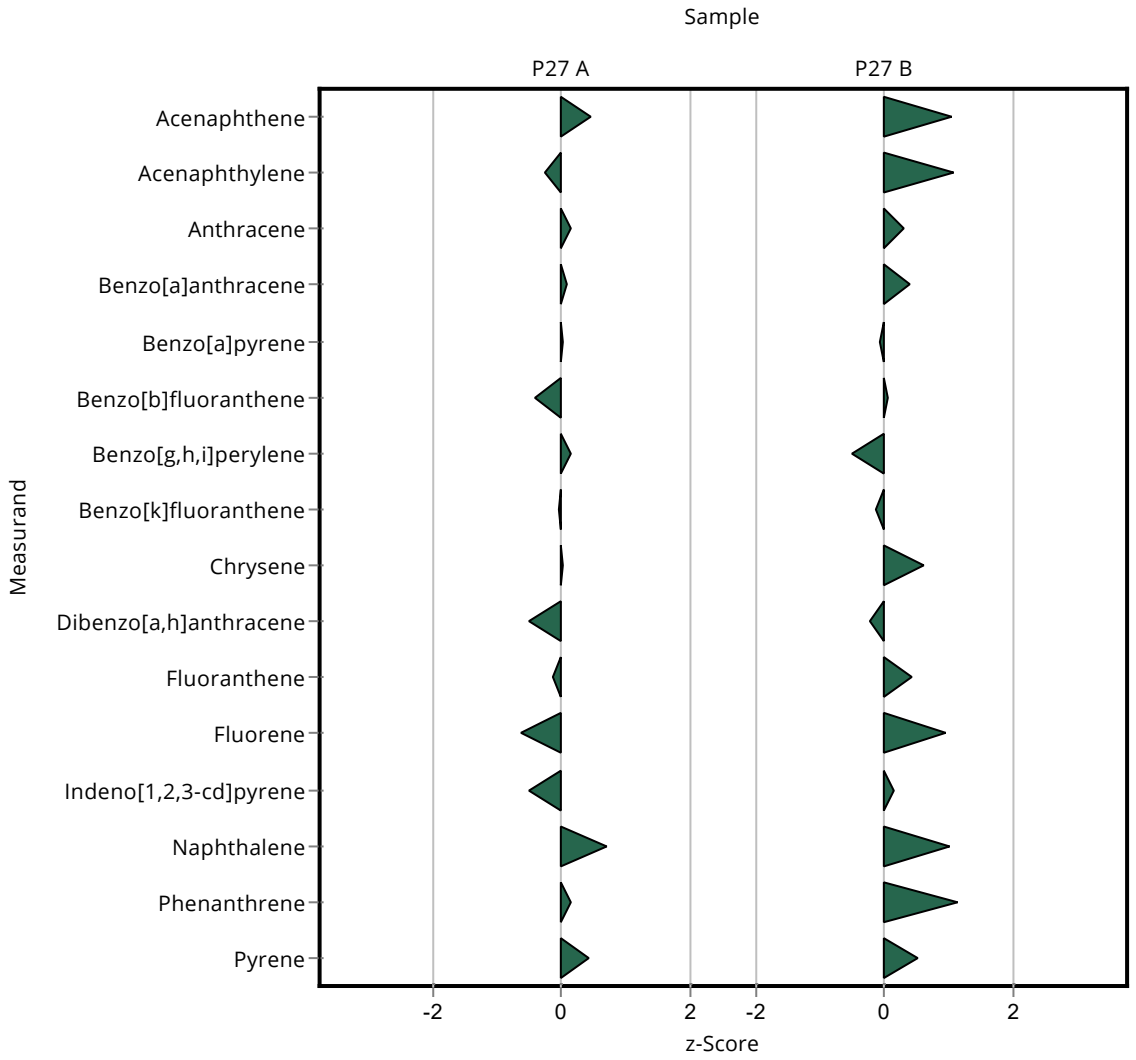
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	23.8 ± 3.37	25.8 ± 4.6	4.53	108	0.43
Acenaphthylene	ng/l	14 ± 1.76	13.1 ± 2.4	3.35	93.8	-0.26
Anthracene	ng/l	24.7 ± 2.33	25.4 ± 4.6	5.19	103	0.13
Benzo[a]anthracene	ng/l	22.5 ± 1.54	22.9 ± 4.1	4.72	102	0.09
Benzo[a]pyrene	ng/l	22.3 ± 6.03	22.4 ± 4	10	100	0.01
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	25.8 ± 4.6	4.72	92.9	-0.42
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	17.2 ± 3.1	4.15	104	0.15
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	14.6 ± 2.6	3.09	99.2	-0.04
Chrysene	ng/l	24.2 ± 1.66	24.3 ± 4.4	5.32	100	0.02
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	14.3 ± 2.6	5.08	84.5	-0.52
Fluoranthene	ng/l	21.6 ± 1.56	21.1 ± 3.8	3.89	97.7	-0.13
Fluorene	ng/l	22.1 ± 2.07	20.1 ± 3.6	3.09	91.1	-0.64
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	18.2 ± 3.3	5.22	87.1	-0.51
Naphthalene	ng/l	23.9 ± 3.19	27.4 ± 4.9	5.03	114	0.69
Phenanthrene	ng/l	21.1 ± 1.43	21.6 ± 3.9	3.17	102	0.15
Pyrene	ng/l	24 ± 1.48	25.6 ± 4.6	3.83	107	0.43

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	324 ± 36	388 ± 70	61.5	120	1.05
Acenaphthylene	ng/l	251 ± 29.9	314 ± 57	60.1	125	1.06
Anthracene	ng/l	355 ± 52.6	378 ± 68	74.6	106	0.31
Benzo[a]anthracene	ng/l	313 ± 30.1	338 ± 61	65.8	108	0.38
Benzo[a]pyrene	ng/l	249 ± 47.7	243 ± 44	87.1	97.7	-0.07
Benzo[b]fluoranthene	ng/l	341 ± 26.9	343 ± 62	57.9	101	0.04
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	246 ± 44	70.2	87.6	-0.50

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	z-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	237 ± 43	51.2	97.2	-0.13
Chrysene	ng/l	275 ± 25.1	311 ± 56	60.5	113	0.60
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	189 ± 34	60.9	93.1	-0.23
Fluoranthene	ng/l	346 ± 44.3	376 ± 68	72.6	109	0.41
Fluorene	ng/l	218 ± 21.7	248 ± 45	32.6	114	0.93
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	241 ± 43	98.1	106	0.13
Naphthalene	ng/l	452 ± 86.9	590 ± 106	136	130	1.01
Phenanthrene	ng/l	301 ± 27.2	351 ± 63	45.1	117	1.11
Pyrene	ng/l	295 ± 20.2	319 ± 57	47.2	108	0.51


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
-2
0
2
-2
0
2
z-Score

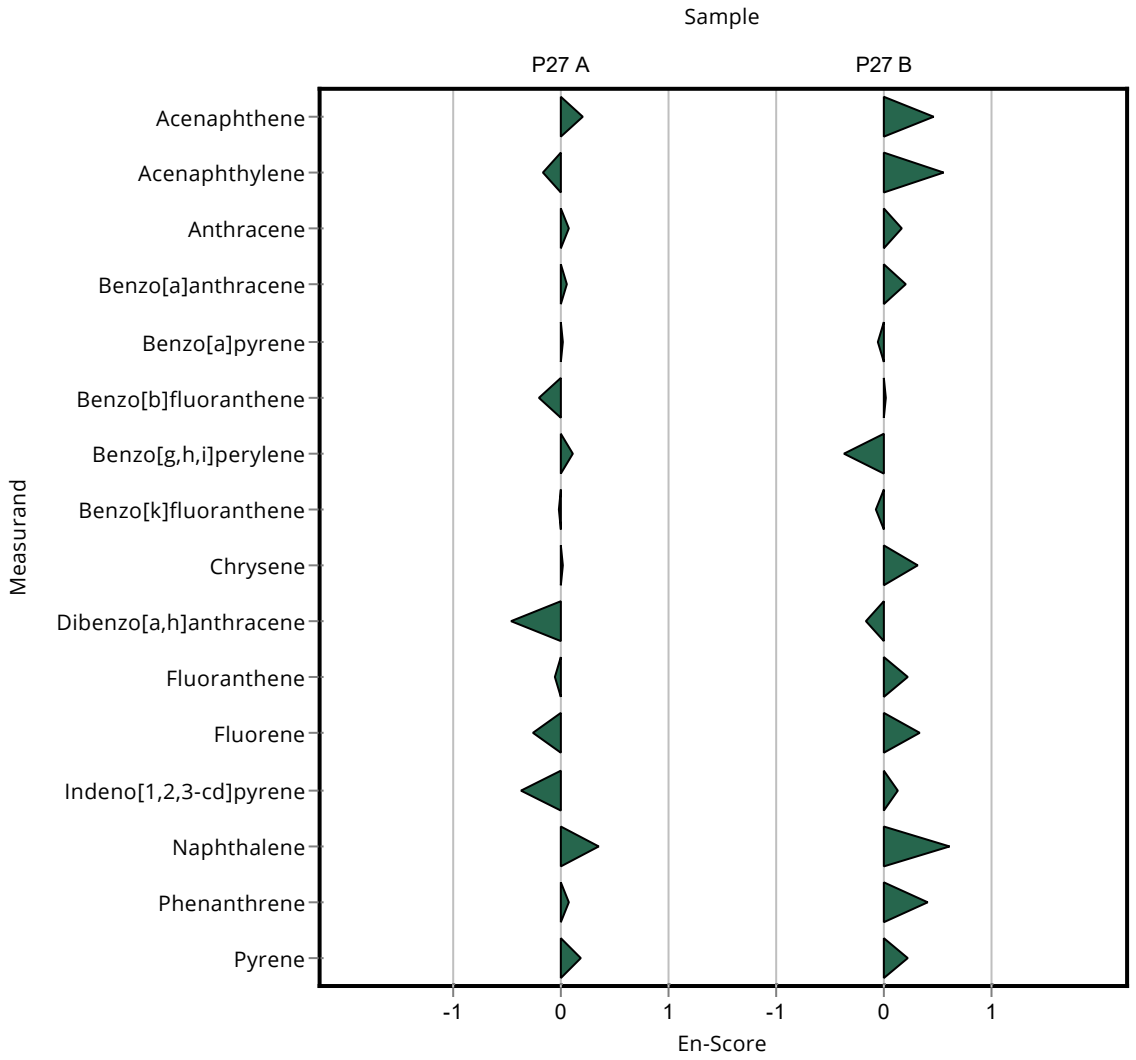
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	23.8 ± 3.37	25.8 ± 4.6	4.53	108	0.20
Acenaphthylene	ng/l	14 ± 1.76	13.1 ± 2.4	3.35	93.8	-0.17
Anthracene	ng/l	24.7 ± 2.33	25.4 ± 4.6	5.19	103	0.07
Benzo[a]anthracene	ng/l	22.5 ± 1.54	22.9 ± 4.1	4.72	102	0.05
Benzo[a]pyrene	ng/l	22.3 ± 6.03	22.4 ± 4	10	100	0.01
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	25.8 ± 4.6	4.72	92.9	-0.21
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	17.2 ± 3.1	4.15	104	0.09
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	14.6 ± 2.6	3.09	99.2	-0.02
Chrysene	ng/l	24.2 ± 1.66	24.3 ± 4.4	5.32	100	0.01
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	14.3 ± 2.6	5.08	84.5	-0.48
Fluoranthene	ng/l	21.6 ± 1.56	21.1 ± 3.8	3.89	97.7	-0.06
Fluorene	ng/l	22.1 ± 2.07	20.1 ± 3.6	3.09	91.1	-0.26
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	18.2 ± 3.3	5.22	87.1	-0.38
Naphthalene	ng/l	23.9 ± 3.19	27.4 ± 4.9	5.03	114	0.34
Phenanthrene	ng/l	21.1 ± 1.43	21.6 ± 3.9	3.17	102	0.06
Pyrene	ng/l	24 ± 1.48	25.6 ± 4.6	3.83	107	0.18

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	324 ± 36	388 ± 70	61.5	120	0.45
Acenaphthylene	ng/l	251 ± 29.9	314 ± 57	60.1	125	0.54
Anthracene	ng/l	355 ± 52.6	378 ± 68	74.6	106	0.16
Benzo[a]anthracene	ng/l	313 ± 30.1	338 ± 61	65.8	108	0.20
Benzo[a]pyrene	ng/l	249 ± 47.7	243 ± 44	87.1	97.7	-0.06
Benzo[b]fluoranthene	ng/l	341 ± 26.9	343 ± 62	57.9	101	0.02
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	246 ± 44	70.2	87.6	-0.39

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	En-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	237 ± 43	51.2	97.2	-0.08
Chrysene	ng/l	275 ± 25.1	311 ± 56	60.5	113	0.31
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	189 ± 34	60.9	93.1	-0.17
Fluoranthene	ng/l	346 ± 44.3	376 ± 68	72.6	109	0.21
Fluorene	ng/l	218 ± 21.7	248 ± 45	32.6	114	0.33
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	241 ± 43	98.1	106	0.13
Naphthalene	ng/l	452 ± 86.9	590 ± 106	136	130	0.60
Phenanthrene	ng/l	301 ± 27.2	351 ± 63	45.1	117	0.39
Pyrene	ng/l	295 ± 20.2	319 ± 57	47.2	108	0.21


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
-1
0
1
-1
0
1
En-Score

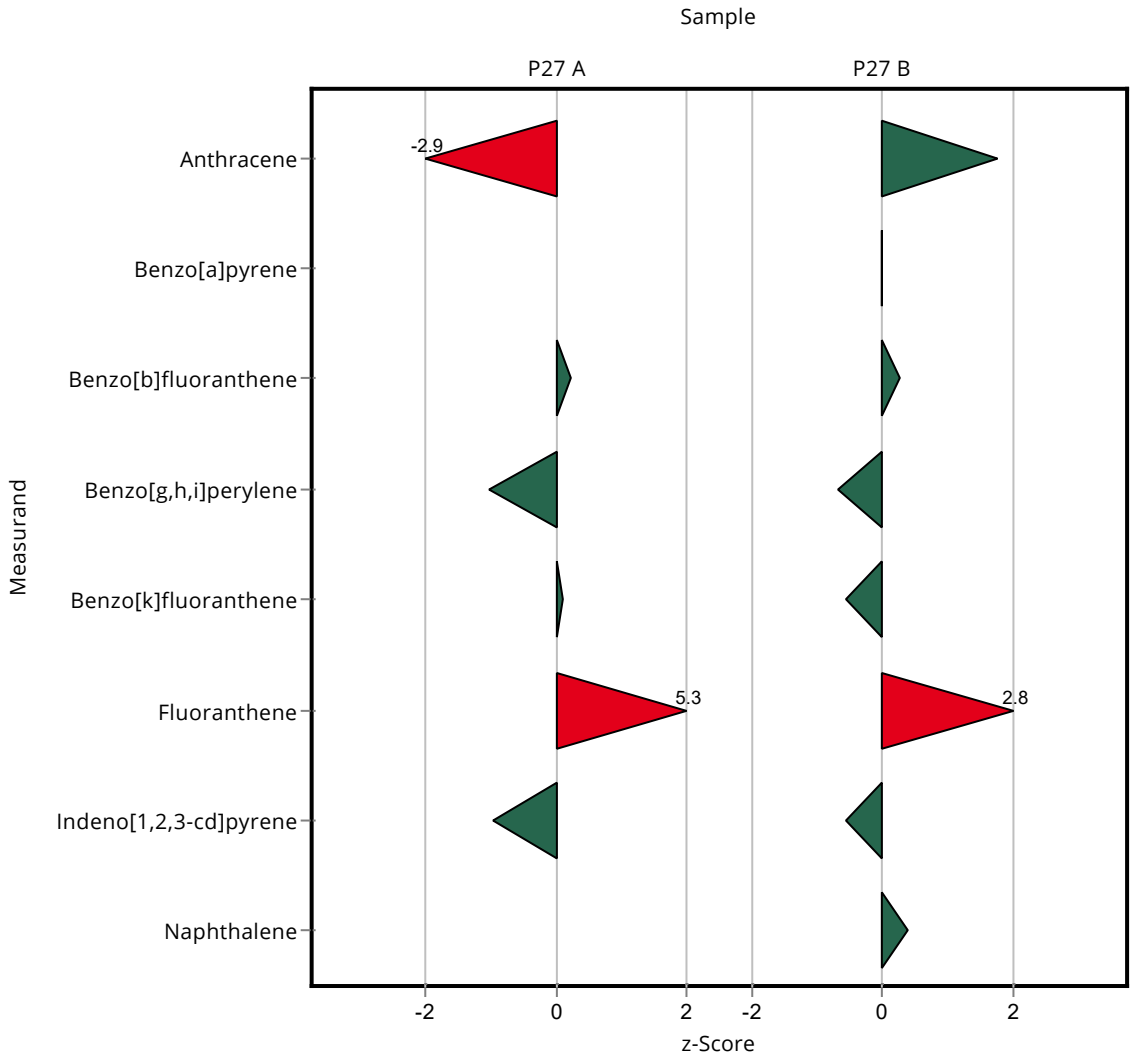
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	23.8 ± 3.37	- ± -	4.53	-	-
Acenaphthylene	ng/l	14 ± 1.76	- ± -	3.35	-	-
Anthracene	ng/l	24.7 ± 2.33	9.483 ± 0.117	5.19	38.4	-2.94
Benzo[a]anthracene	ng/l	22.5 ± 1.54	- ± -	4.72	-	-
Benzo[a]pyrene	ng/l	22.3 ± 6.03	- ± -	10	-	-
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	28.865 ± 1.139	4.72	104	0.23
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	12.368 ± 0.338	4.15	74.6	-1.02
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	14.993 ± 0.447	3.09	102	0.09
Chrysene	ng/l	24.2 ± 1.66	- ± -	5.32	-	-
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	- ± -	5.08	-	-
Fluoranthene	ng/l	21.6 ± 1.56	42.154 ± 0.447	3.89	195	5.29
Fluorene	ng/l	22.1 ± 2.07	- ± -	3.09	-	-
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	15.883 ± 0.381	5.22	76	-0.96
Naphthalene	ng/l	23.9 ± 3.19	- ± -	5.03	-	-
Phenanthrene	ng/l	21.1 ± 1.43	- ± -	3.17	-	-
Pyrene	ng/l	24 ± 1.48	- ± -	3.83	-	-

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	324 ± 36	- ± -	61.5	-	-
Acenaphthylene	ng/l	251 ± 29.9	- ± -	60.1	-	-
Anthracene	ng/l	355 ± 52.6	486.06 ± 2.554	74.6	137	1.76
Benzo[a]anthracene	ng/l	313 ± 30.1	- ± -	65.8	-	-
Benzo[a]pyrene	ng/l	249 ± 47.7	247.051 ± 5.526	87.1	99.3	-0.02
Benzo[b]fluoranthene	ng/l	341 ± 26.9	357.131 ± 0.467	57.9	105	0.28
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	232.621 ± 2.805	70.2	82.8	-0.69

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	z-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	214.475 ± 3.949	51.2	87.9	-0.57
Chrysene	ng/l	275 ± 25.1	- ± -	60.5	-	-
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	- ± -	60.9	-	-
Fluoranthene	ng/l	346 ± 44.3	547.826 ± 4.098	72.6	158	2.78
Fluorene	ng/l	218 ± 21.7	- ± -	32.6	-	-
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	172.362 ± 3.546	98.1	75.6	-0.57
Naphthalene	ng/l	452 ± 86.9	506.552 ± 5.893	136	112	0.40
Phenanthrene	ng/l	301 ± 27.2	- ± -	45.1	-	-
Pyrene	ng/l	295 ± 20.2	- ± -	47.2	-	-


Sample
P27 A
P27 B
Anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Fluoranthene
Indeno[1,2,3-cd]pyrene
Naphthalene
Measurand
-2.9
5.3
2.8
-2
0
2
-2
0
2
z-Score

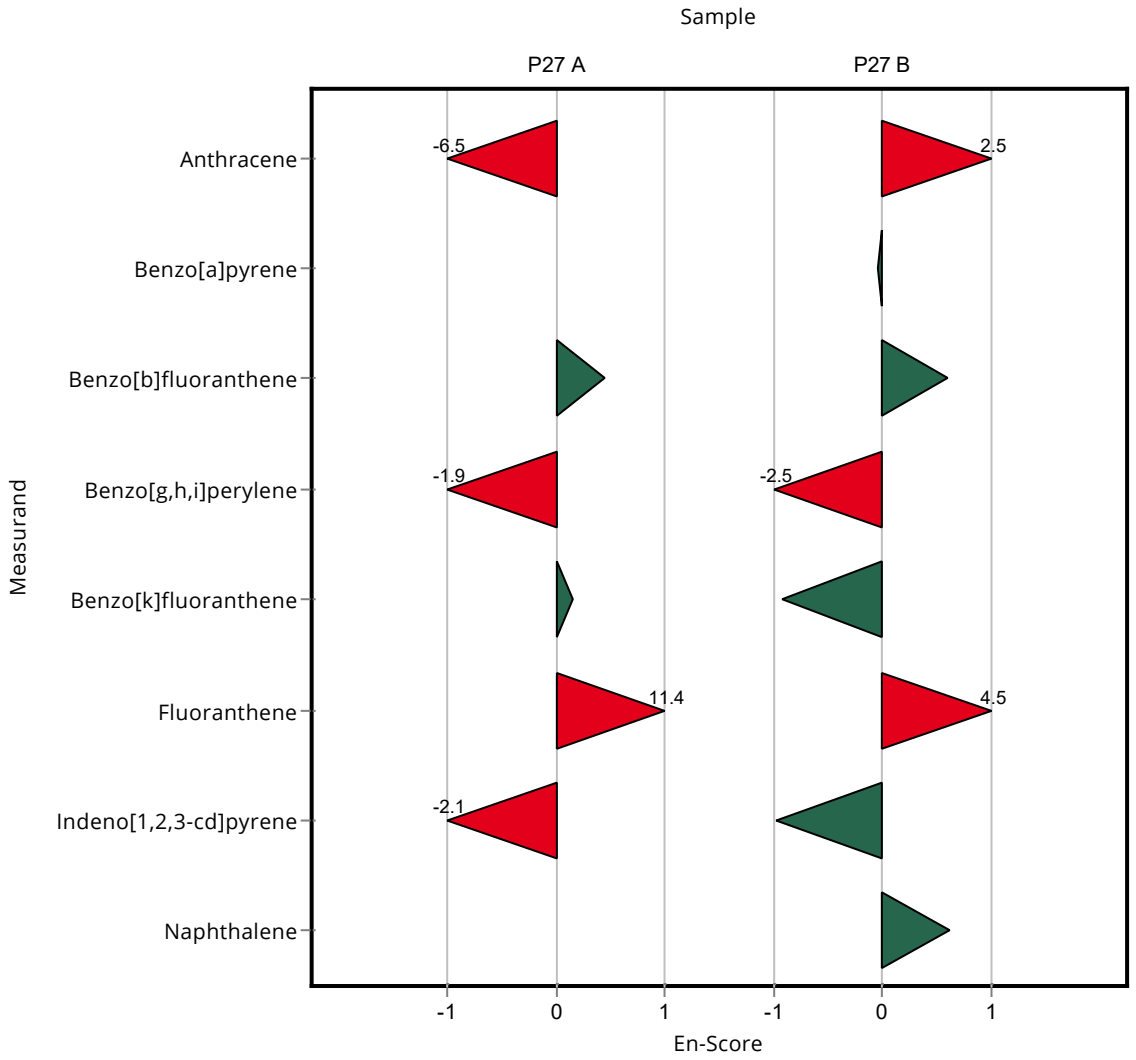
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	23.8 ± 3.37	- ± -	4.53	-	-
Acenaphthylene	ng/l	14 ± 1.76	- ± -	3.35	-	-
Anthracene	ng/l	24.7 ± 2.33	9.483 ± 0.117	5.19	38.4	-6.49
Benzo[a]anthracene	ng/l	22.5 ± 1.54	- ± -	4.72	-	-
Benzo[a]pyrene	ng/l	22.3 ± 6.03	- ± -	10	-	-
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	28.865 ± 1.139	4.72	104	0.45
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	12.368 ± 0.338	4.15	74.6	-1.91
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	14.993 ± 0.447	3.09	102	0.15
Chrysene	ng/l	24.2 ± 1.66	- ± -	5.32	-	-
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	- ± -	5.08	-	-
Fluoranthene	ng/l	21.6 ± 1.56	42.154 ± 0.447	3.89	195	11.41
Fluorene	ng/l	22.1 ± 2.07	- ± -	3.09	-	-
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	15.883 ± 0.381	5.22	76	-2.07
Naphthalene	ng/l	23.9 ± 3.19	- ± -	5.03	-	-
Phenanthrene	ng/l	21.1 ± 1.43	- ± -	3.17	-	-
Pyrene	ng/l	24 ± 1.48	- ± -	3.83	-	-

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	324 ± 36	- ± -	61.5	-	-
Acenaphthylene	ng/l	251 ± 29.9	- ± -	60.1	-	-
Anthracene	ng/l	355 ± 52.6	486.06 ± 2.554	74.6	137	2.48
Benzo[a]anthracene	ng/l	313 ± 30.1	- ± -	65.8	-	-
Benzo[a]pyrene	ng/l	249 ± 47.7	247.051 ± 5.526	87.1	99.3	-0.04
Benzo[b]fluoranthene	ng/l	341 ± 26.9	357.131 ± 0.467	57.9	105	0.60
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	232.621 ± 2.805	70.2	82.8	-2.45

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	214.475 ± 3.949	51.2	87.9	-0.93
Chrysene	ng/l	275 ± 25.1	- ± -	60.5	-	-
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	- ± -	60.9	-	-
Fluoranthene	ng/l	346 ± 44.3	547.826 ± 4.098	72.6	158	4.48
Fluorene	ng/l	218 ± 21.7	- ± -	32.6	-	-
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	172.362 ± 3.546	98.1	75.6	-0.99
Naphthalene	ng/l	452 ± 86.9	506.552 ± 5.893	136	112	0.62
Phenanthrene	ng/l	301 ± 27.2	- ± -	45.1	-	-
Pyrene	ng/l	295 ± 20.2	- ± -	47.2	-	-


Sample
P27 A
P27 B
Measurand
Anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Fluoranthene
Indeno[1,2,3-cd]pyrene
Naphthalene
-6.5
2.5
-1.9
-2.5
11.4
4.5
-2.1
-1
0
1
-1
0
1
En-Score

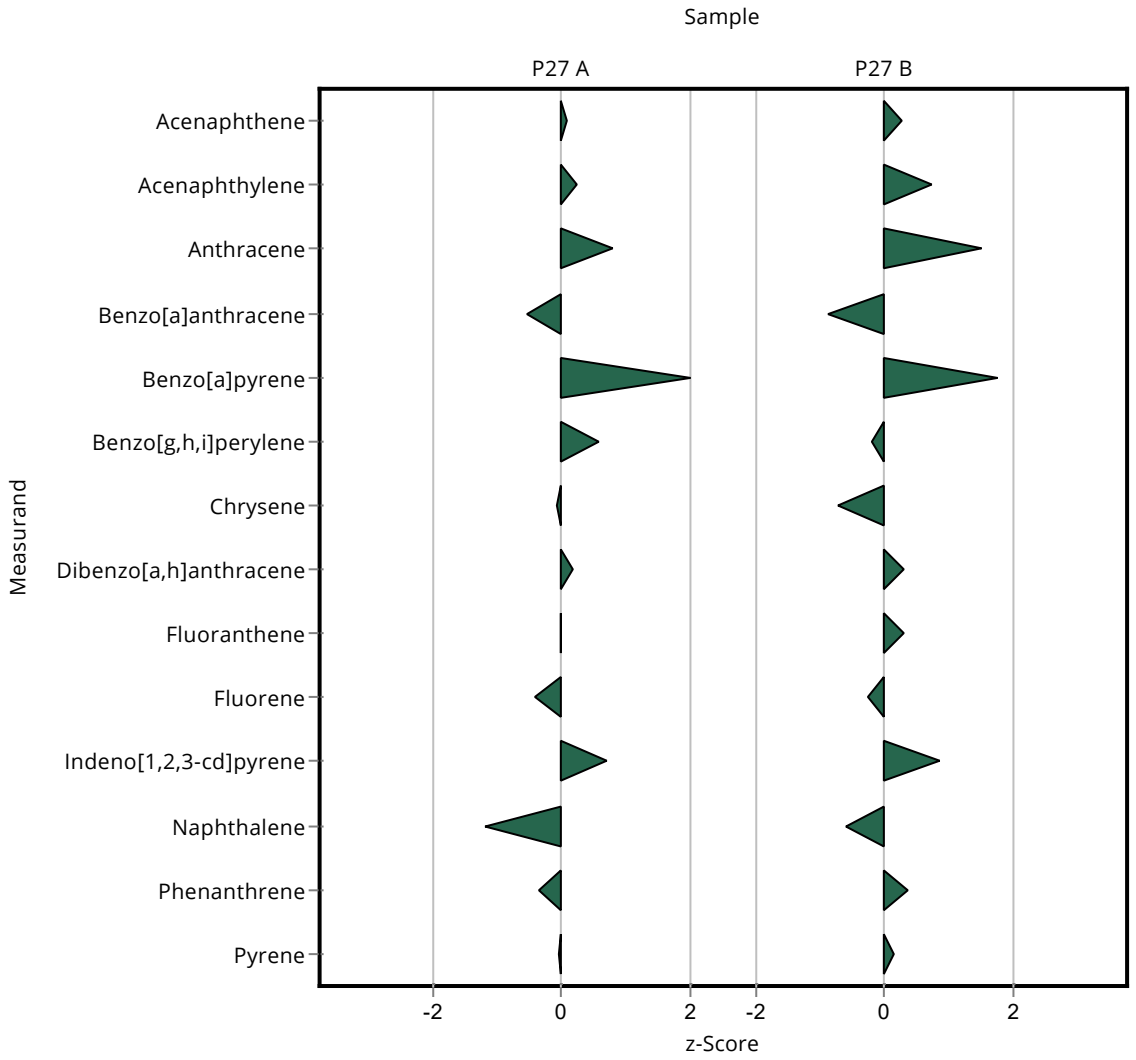
Sample: P27A

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	23.8	3.37	24.25	7.28	4.53	102	0.09
Acenaphthylene	ng/l	14	1.76	14.75	4.43	3.35	106	0.24
Anthracene	ng/l	24.7	2.33	28.75	8.63	5.19	116	0.78
Benzo[a]anthracene	ng/l	22.5	1.54	20	6	4.72	89	-0.52
Benzo[a]pyrene	ng/l	22.3	6.03	42.25	12.68	10	189	1.98
Benzo[b]fluoranthene	ng/l	27.8	0.891	-	-	4.72	-	-
Benzo[g,h,i]perylene	ng/l	16.6	2.11	19	5.7	4.15	115	0.58
Benzo[k]fluoranthene	ng/l	14.7	1.56	-	-	3.09	-	-
Chrysene	ng/l	24.2	1.66	23.75	7.13	5.32	98.2	-0.08
Dibenzo[a,h]anthracene	ng/l	16.9	1.7	17.75	5.33	5.08	105	0.16
Fluoranthene	ng/l	21.6	1.56	21.5	6.45	3.89	99.5	-0.03
Fluorene	ng/l	22.1	2.07	20.75	6.23	3.09	94	-0.43
Indeno[1,2,3-cd]pyrene	ng/l	20.9	2.29	24.5	7.35	5.22	117	0.69
Naphthalene	ng/l	23.9	3.19	18	5.4	5.03	75.2	-1.18
Phenanthrene	ng/l	21.1	1.43	20	6	3.17	94.7	-0.35
Pyrene	ng/l	24	1.48	23.75	7.13	3.83	99.1	-0.05

Sample: P27B

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	324	36	340.5	102.15	61.5	105	0.28
Acenaphthylene	ng/l	251	29.9	293.25	87.98	60.1	117	0.71
Anthracene	ng/l	355	52.6	465.67	139.7	74.6	131	1.48
Benzo[a]anthracene	ng/l	313	30.1	254.25	76.28	65.8	81.2	-0.90
Benzo[a]pyrene	ng/l	249	47.7	400.33	120.1	87.1	161	1.74
Benzo[b]fluoranthene	ng/l	341	26.9	-	-	57.9	-	-
Benzo[g,h,i]perylene	ng/l	281	18.9	267	80.1	70.2	95	-0.20

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	z-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	- ± -	51.2	-	-
Chrysene	ng/l	275 ± 25.1	230.75 ± 69.23	60.5	83.9	-0.73
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	220.33 ± 66.1	60.9	108	0.28
Fluoranthene	ng/l	346 ± 44.3	366.25 ± 109.88	72.6	106	0.28
Fluorene	ng/l	218 ± 21.7	208.75 ± 62.63	32.6	95.9	-0.27
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	312 ± 93.6	98.1	137	0.86
Naphthalene	ng/l	452 ± 86.9	372.75 ± 111.83	136	82.4	-0.59
Phenanthrene	ng/l	301 ± 27.2	316.75 ± 95.03	45.1	105	0.35
Pyrene	ng/l	295 ± 20.2	302 ± 90.6	47.2	102	0.15


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[g,h,i]perylene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
-2
0
2
-2
0
2
z-Score

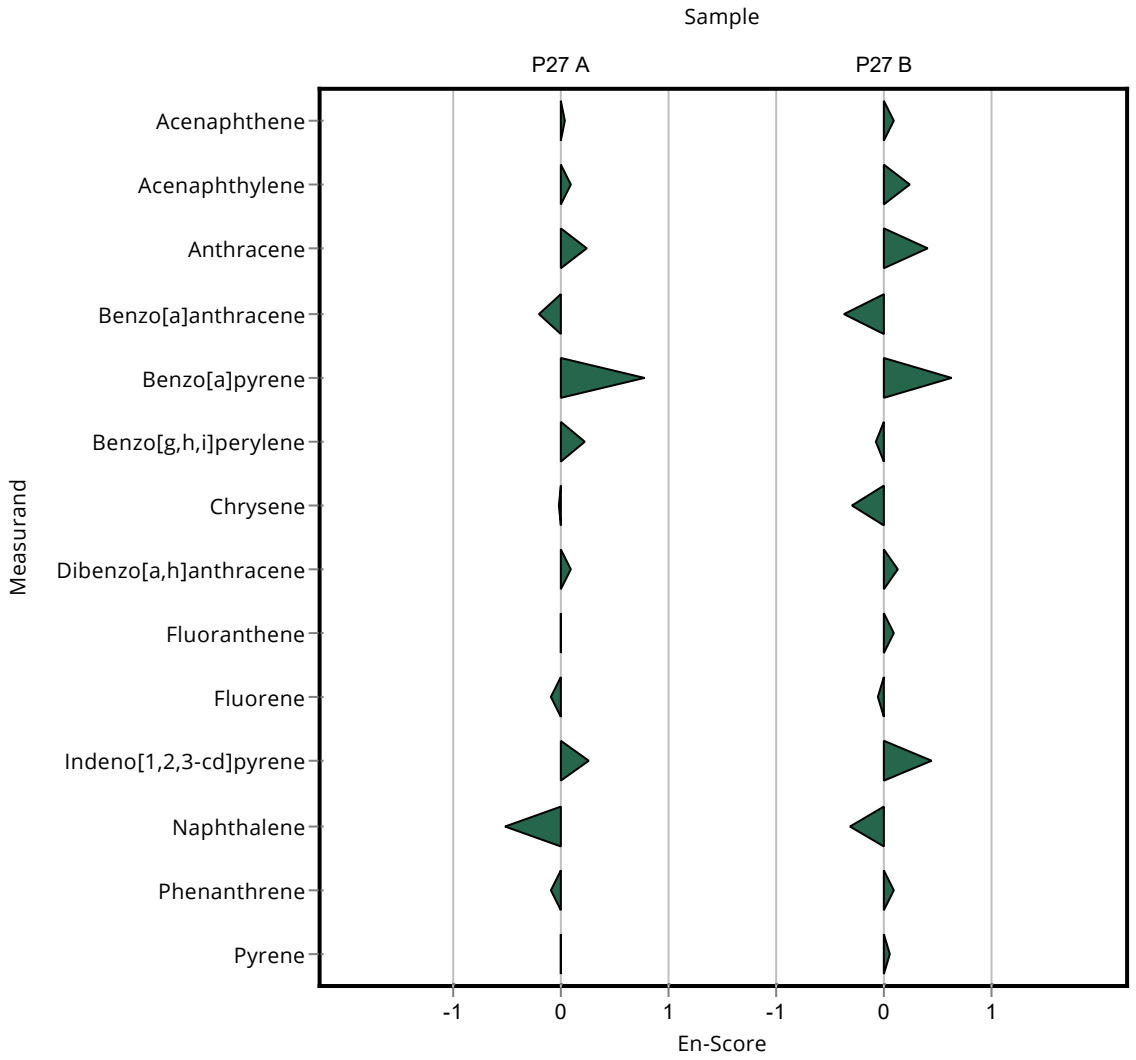
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	23.8 ± 3.37	24.25 ± 7.28	4.53	102	0.03
Acenaphthylene	ng/l	14 ± 1.76	14.75 ± 4.43	3.35	106	0.09
Anthracene	ng/l	24.7 ± 2.33	28.75 ± 8.63	5.19	116	0.23
Benzo[a]anthracene	ng/l	22.5 ± 1.54	20 ± 6	4.72	89	-0.20
Benzo[a]pyrene	ng/l	22.3 ± 6.03	42.25 ± 12.68	10	189	0.76
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	- ± -	4.72	-	-
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	19 ± 5.7	4.15	115	0.21
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	- ± -	3.09	-	-
Chrysene	ng/l	24.2 ± 1.66	23.75 ± 7.13	5.32	98.2	-0.03
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	17.75 ± 5.33	5.08	105	0.08
Fluoranthene	ng/l	21.6 ± 1.56	21.5 ± 6.45	3.89	99.5	-0.01
Fluorene	ng/l	22.1 ± 2.07	20.75 ± 6.23	3.09	94	-0.10
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	24.5 ± 7.35	5.22	117	0.24
Naphthalene	ng/l	23.9 ± 3.19	18 ± 5.4	5.03	75.2	-0.53
Phenanthrene	ng/l	21.1 ± 1.43	20 ± 6	3.17	94.7	-0.09
Pyrene	ng/l	24 ± 1.48	23.75 ± 7.13	3.83	99.1	-0.01

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	324 ± 36	340.5 ± 102.15	61.5	105	0.08
Acenaphthylene	ng/l	251 ± 29.9	293.25 ± 87.98	60.1	117	0.24
Anthracene	ng/l	355 ± 52.6	465.67 ± 139.7	74.6	131	0.39
Benzo[a]anthracene	ng/l	313 ± 30.1	254.25 ± 76.28	65.8	81.2	-0.38
Benzo[a]pyrene	ng/l	249 ± 47.7	400.33 ± 120.1	87.1	161	0.62
Benzo[b]fluoranthene	ng/l	341 ± 26.9	- ± -	57.9	-	-
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	267 ± 80.1	70.2	95	-0.09

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	En-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	- ± -	51.2	-	-
Chrysene	ng/l	275 ± 25.1	230.75 ± 69.23	60.5	83.9	-0.31
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	220.33 ± 66.1	60.9	108	0.12
Fluoranthene	ng/l	346 ± 44.3	366.25 ± 109.88	72.6	106	0.09
Fluorene	ng/l	218 ± 21.7	208.75 ± 62.63	32.6	95.9	-0.07
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	312 ± 93.6	98.1	137	0.43
Naphthalene	ng/l	452 ± 86.9	372.75 ± 111.83	136	82.4	-0.33
Phenanthrene	ng/l	301 ± 27.2	316.75 ± 95.03	45.1	105	0.08
Pyrene	ng/l	295 ± 20.2	302 ± 90.6	47.2	102	0.04


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[g,h,i]perylene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
-1
0
1
-1
0
1
En-Score

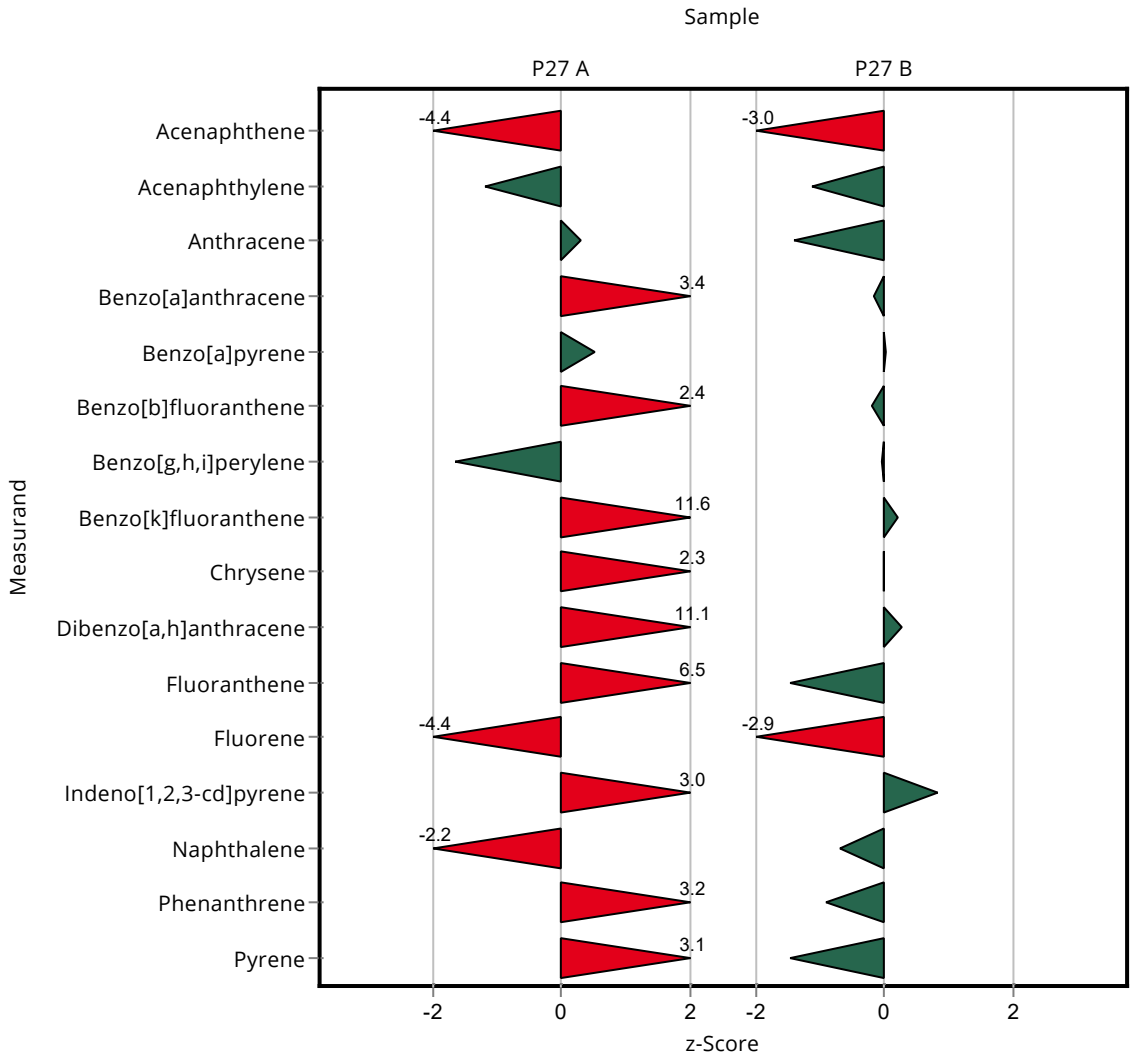
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	23.8 ± 3.37	3.69 ± 2.24	4.53	15.5	-4.45
Acenaphthylene	ng/l	14 ± 1.76	10 ± 7.97	3.35	71.6	-1.18
Anthracene	ng/l	24.7 ± 2.33	26.2 ± 14.5	5.19	106	0.29
Benzo[a]anthracene	ng/l	22.5 ± 1.54	38.4 ± 21.1	4.72	171	3.37
Benzo[a]pyrene	ng/l	22.3 ± 6.03	27.5 ± 17.6	10	123	0.51
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	38.9 ± 17.1	4.72	140	2.36
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	9.76 ± 4.66	4.15	58.8	-1.65
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	50.7 ± 19.3	3.09	344	11.64
Chrysene	ng/l	24.2 ± 1.66	36.2 ± 8.72	5.32	150	2.26
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	73.5 ± 35.5	5.08	434	11.14
Fluoranthene	ng/l	21.6 ± 1.56	46.9 ± 21.9	3.89	217	6.51
Fluorene	ng/l	22.1 ± 2.07	8.56 ± 3.66	3.09	38.8	-4.37
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	36.5 ± 23.1	5.22	175	2.99
Naphthalene	ng/l	23.9 ± 3.19	12.9 ± 6.59	5.03	53.9	-2.20
Phenanthrene	ng/l	21.1 ± 1.43	31.2 ± 6.53	3.17	148	3.18
Pyrene	ng/l	24 ± 1.48	35.8 ± 13.9	3.83	149	3.09

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	324 ± 36	141.9 ± 85.9	61.5	43.9	-2.96
Acenaphthylene	ng/l	251 ± 29.9	183.6 ± 146.3	60.1	73.3	-1.11
Anthracene	ng/l	355 ± 52.6	250.9 ± 139.1	74.6	70.7	-1.40
Benzo[a]anthracene	ng/l	313 ± 30.1	301.8 ± 166	65.8	96.4	-0.17
Benzo[a]pyrene	ng/l	249 ± 47.7	249.1 ± 159	87.1	100	0.00
Benzo[b]fluoranthene	ng/l	341 ± 26.9	329.1 ± 144.6	57.9	96.5	-0.20
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	278.2 ± 132.9	70.2	99	-0.04

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	z-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	254.5 ± 96.8	51.2	104	0.21
Chrysene	ng/l	275 ± 25.1	274.5 ± 66.2	60.5	99.8	-0.01
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	220 ± 106.3	60.9	108	0.28
Fluoranthene	ng/l	346 ± 44.3	240 ± 112.1	72.6	69.4	-1.46
Fluorene	ng/l	218 ± 21.7	121.6 ± 51.9	32.6	55.9	-2.94
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	307.3 ± 195	98.1	135	0.81
Naphthalene	ng/l	452 ± 86.9	358.1 ± 182.8	136	79.2	-0.69
Phenanthrene	ng/l	301 ± 27.2	260 ± 54.4	45.1	86.4	-0.90
Pyrene	ng/l	295 ± 20.2	225.5 ± 87.2	47.2	76.5	-1.47


Sample
P27 A
P27 B
Measurand
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
-4.4
-3.0
3.4
2.4
11.6
2.3
11.1
6.5
-4.4
-2.9
3.0
-2.2
3.2
3.1
-2
0
2
z-Score

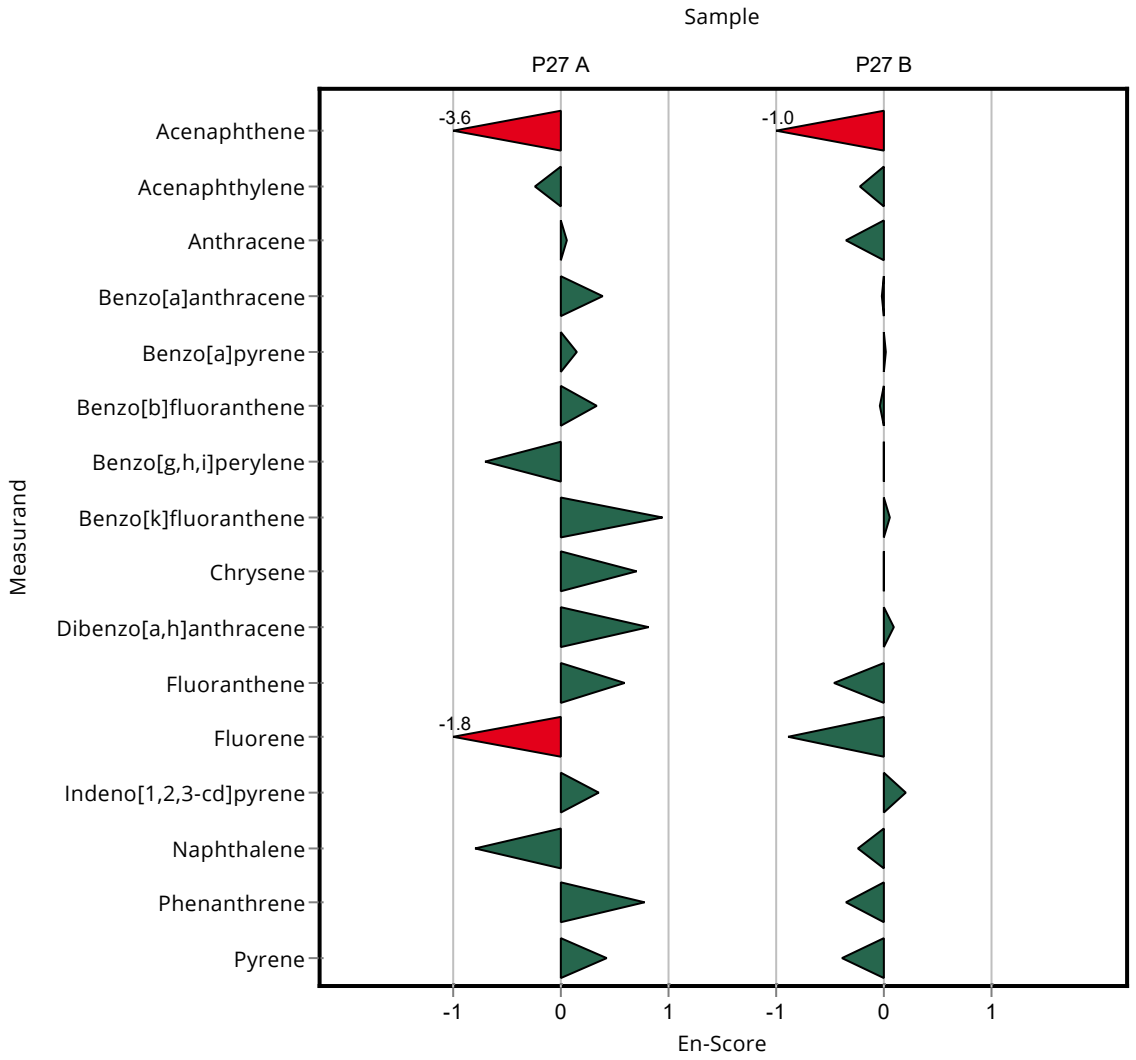
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	23.8 ± 3.37	3.69 ± 2.24	4.53	15.5	-3.59
Acenaphthylene	ng/l	14 ± 1.76	10 ± 7.97	3.35	71.6	-0.25
Anthracene	ng/l	24.7 ± 2.33	26.2 ± 14.5	5.19	106	0.05
Benzo[a]anthracene	ng/l	22.5 ± 1.54	38.4 ± 21.1	4.72	171	0.38
Benzo[a]pyrene	ng/l	22.3 ± 6.03	27.5 ± 17.6	10	123	0.14
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	38.9 ± 17.1	4.72	140	0.33
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	9.76 ± 4.66	4.15	58.8	-0.71
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	50.7 ± 19.3	3.09	344	0.93
Chrysene	ng/l	24.2 ± 1.66	36.2 ± 8.72	5.32	150	0.69
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	73.5 ± 35.5	5.08	434	0.80
Fluoranthene	ng/l	21.6 ± 1.56	46.9 ± 21.9	3.89	217	0.58
Fluorene	ng/l	22.1 ± 2.07	8.56 ± 3.66	3.09	38.8	-1.78
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	36.5 ± 23.1	5.22	175	0.34
Naphthalene	ng/l	23.9 ± 3.19	12.9 ± 6.59	5.03	53.9	-0.81
Phenanthrene	ng/l	21.1 ± 1.43	31.2 ± 6.53	3.17	148	0.77
Pyrene	ng/l	24 ± 1.48	35.8 ± 13.9	3.83	149	0.43

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	324 ± 36	141.9 ± 85.9	61.5	43.9	-1.04
Acenaphthylene	ng/l	251 ± 29.9	183.6 ± 146.3	60.1	73.3	-0.23
Anthracene	ng/l	355 ± 52.6	250.9 ± 139.1	74.6	70.7	-0.37
Benzo[a]anthracene	ng/l	313 ± 30.1	301.8 ± 166	65.8	96.4	-0.03
Benzo[a]pyrene	ng/l	249 ± 47.7	249.1 ± 159	87.1	100	0.00
Benzo[b]fluoranthene	ng/l	341 ± 26.9	329.1 ± 144.6	57.9	96.5	-0.04
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	278.2 ± 132.9	70.2	99	-0.01

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	En-Score
Benzo[k]fluoranthene	ng/l	244	30.6	254.5	96.8	51.2	104	0.05
Chrysene	ng/l	275	25.1	274.5	66.2	60.5	99.8	0.00
Dibenzo[a,h]anthracene	ng/l	203	47.3	220	106.3	60.9	108	0.08
Fluoranthene	ng/l	346	44.3	240	112.1	72.6	69.4	-0.46
Fluorene	ng/l	218	21.7	121.6	51.9	32.6	55.9	-0.91
Indeno[1,2,3-cd]pyrene	ng/l	228	56.1	307.3	195	98.1	135	0.20
Naphthalene	ng/l	452	86.9	358.1	182.8	136	79.2	-0.25
Phenanthrene	ng/l	301	27.2	260	54.4	45.1	86.4	-0.36
Pyrene	ng/l	295	20.2	225.5	87.2	47.2	76.5	-0.39


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
-3.6
-1.0
-1.8
-1
0
1
-1
0
1
En-Score

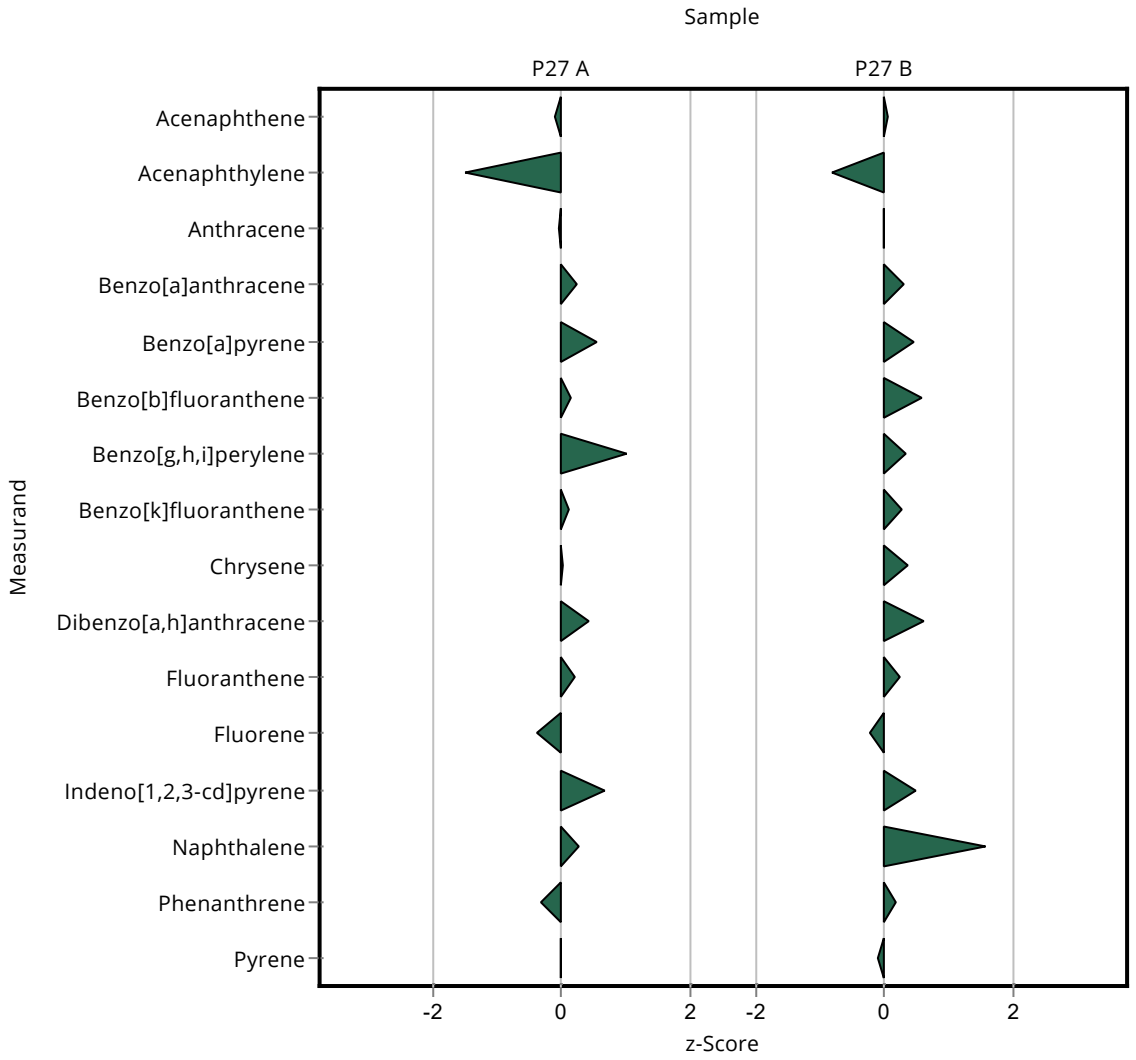
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	23.8 ± 3.37	23.3 ± 0.616	4.53	97.7	-0.12
Acenaphthylene	ng/l	14 ± 1.76	8.99 ± 1.4	3.35	64.4	-1.48
Anthracene	ng/l	24.7 ± 2.33	24.4 ± 1.16	5.19	98.7	-0.06
Benzo[a]anthracene	ng/l	22.5 ± 1.54	23.6 ± 0.731	4.72	105	0.24
Benzo[a]pyrene	ng/l	22.3 ± 6.03	27.8 ± 1.16	10	125	0.54
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	28.4 ± 1.26	4.72	102	0.14
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	20.8 ± 0.656	4.15	125	1.02
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	15.1 ± 1.14	3.09	103	0.12
Chrysene	ng/l	24.2 ± 1.66	24.3 ± 1.4	5.32	100	0.02
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	19 ± 1.31	5.08	112	0.41
Fluoranthene	ng/l	21.6 ± 1.56	22.4 ± 1.25	3.89	104	0.21
Fluorene	ng/l	22.1 ± 2.07	20.9 ± 1.38	3.09	94.7	-0.38
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	24.3 ± 0.957	5.22	116	0.65
Naphthalene	ng/l	23.9 ± 3.19	25.3 ± 1.6	5.03	106	0.27
Phenanthrene	ng/l	21.1 ± 1.43	20.1 ± 1.48	3.17	95.2	-0.32
Pyrene	ng/l	24 ± 1.48	23.9 ± 1.19	3.83	99.8	-0.02

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	324 ± 36	327 ± 6.19	61.5	101	0.06
Acenaphthylene	ng/l	251 ± 29.9	202 ± 5.53	60.1	80.6	-0.81
Anthracene	ng/l	355 ± 52.6	353 ± 5.14	74.6	99.4	-0.03
Benzo[a]anthracene	ng/l	313 ± 30.1	333 ± 3.25	65.8	106	0.30
Benzo[a]pyrene	ng/l	249 ± 47.7	287 ± 4.91	87.1	115	0.44
Benzo[b]fluoranthene	ng/l	341 ± 26.9	374 ± 5.72	57.9	110	0.57
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	304 ± 2.84	70.2	108	0.33

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	z-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	258 ± 4.66	51.2	106	0.28
Chrysene	ng/l	275 ± 25.1	297 ± 5.97	60.5	108	0.36
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	240 ± 5.33	60.9	118	0.61
Fluoranthene	ng/l	346 ± 44.3	362 ± 5.58	72.6	105	0.22
Fluorene	ng/l	218 ± 21.7	210 ± 5.56	32.6	96.5	-0.23
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	275 ± 4	98.1	121	0.48
Naphthalene	ng/l	452 ± 86.9	662 ± 16.5	136	146	1.54
Phenanthrene	ng/l	301 ± 27.2	309 ± 6.33	45.1	103	0.18
Pyrene	ng/l	295 ± 20.2	290 ± 5.01	47.2	98.4	-0.10


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
-2
0
2
-2
0
2
z-Score

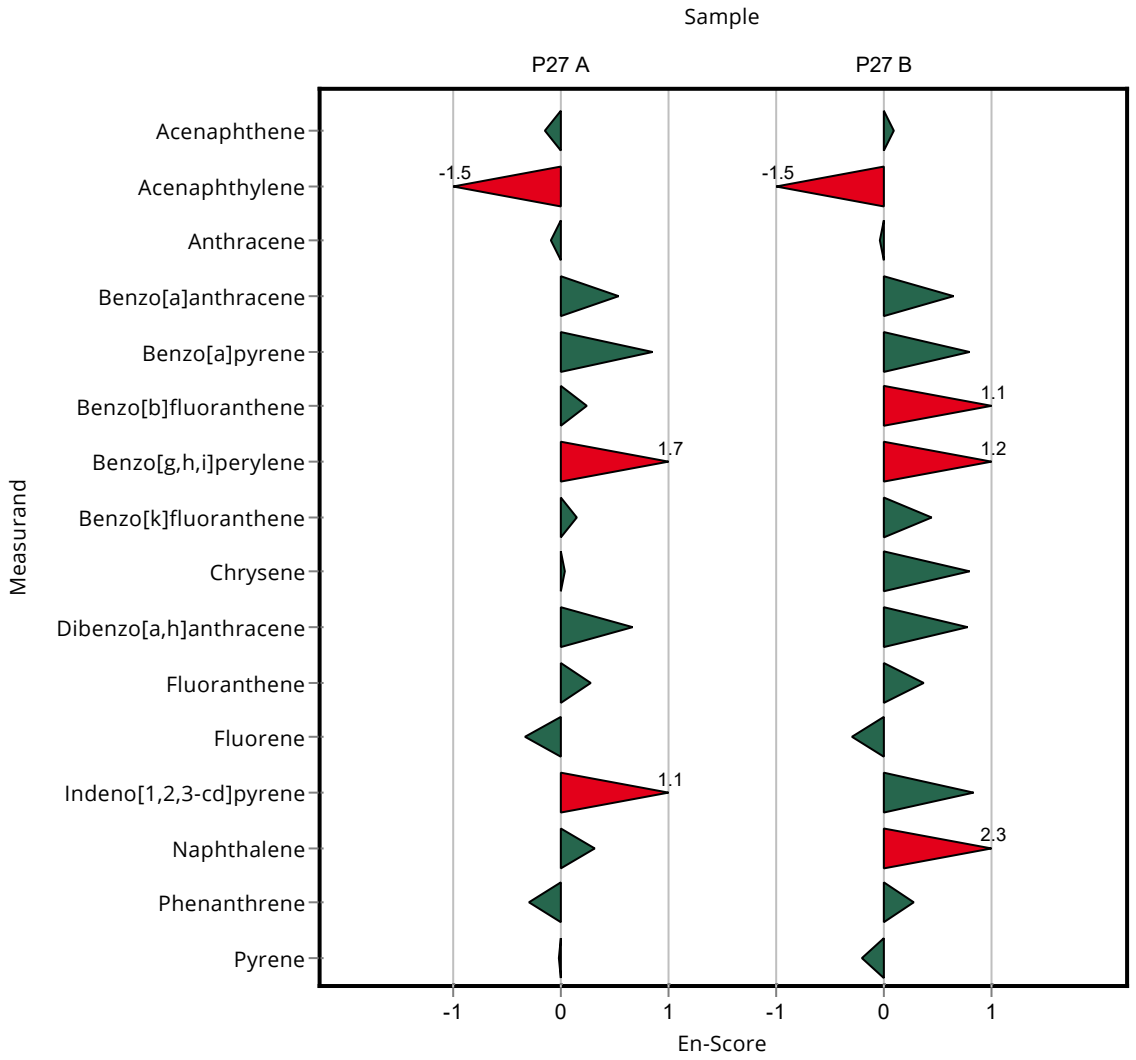
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	23.8 ± 3.37	23.3 ± 0.616	4.53	97.7	-0.15
Acenaphthylene	ng/l	14 ± 1.76	8.99 ± 1.4	3.35	64.4	-1.50
Anthracene	ng/l	24.7 ± 2.33	24.4 ± 1.16	5.19	98.7	-0.10
Benzo[a]anthracene	ng/l	22.5 ± 1.54	23.6 ± 0.731	4.72	105	0.53
Benzo[a]pyrene	ng/l	22.3 ± 6.03	27.8 ± 1.16	10	125	0.85
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	28.4 ± 1.26	4.72	102	0.24
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	20.8 ± 0.656	4.15	125	1.70
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	15.1 ± 1.14	3.09	103	0.14
Chrysene	ng/l	24.2 ± 1.66	24.3 ± 1.4	5.32	100	0.03
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	19 ± 1.31	5.08	112	0.66
Fluoranthene	ng/l	21.6 ± 1.56	22.4 ± 1.25	3.89	104	0.27
Fluorene	ng/l	22.1 ± 2.07	20.9 ± 1.38	3.09	94.7	-0.34
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	24.3 ± 0.957	5.22	116	1.14
Naphthalene	ng/l	23.9 ± 3.19	25.3 ± 1.6	5.03	106	0.30
Phenanthrene	ng/l	21.1 ± 1.43	20.1 ± 1.48	3.17	95.2	-0.31
Pyrene	ng/l	24 ± 1.48	23.9 ± 1.19	3.83	99.8	-0.02

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	324 ± 36	327 ± 6.19	61.5	101	0.09
Acenaphthylene	ng/l	251 ± 29.9	202 ± 5.53	60.1	80.6	-1.52
Anthracene	ng/l	355 ± 52.6	353 ± 5.14	74.6	99.4	-0.04
Benzo[a]anthracene	ng/l	313 ± 30.1	333 ± 3.25	65.8	106	0.65
Benzo[a]pyrene	ng/l	249 ± 47.7	287 ± 4.91	87.1	115	0.79
Benzo[b]fluoranthene	ng/l	341 ± 26.9	374 ± 5.72	57.9	110	1.13
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	304 ± 2.84	70.2	108	1.17

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	En-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	258 ± 4.66	51.2	106	0.44
Chrysene	ng/l	275 ± 25.1	297 ± 5.97	60.5	108	0.79
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	240 ± 5.33	60.9	118	0.76
Fluoranthene	ng/l	346 ± 44.3	362 ± 5.58	72.6	105	0.35
Fluorene	ng/l	218 ± 21.7	210 ± 5.56	32.6	96.5	-0.31
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	275 ± 4	98.1	121	0.83
Naphthalene	ng/l	452 ± 86.9	662 ± 16.5	136	146	2.25
Phenanthrene	ng/l	301 ± 27.2	309 ± 6.33	45.1	103	0.27
Pyrene	ng/l	295 ± 20.2	290 ± 5.01	47.2	98.4	-0.21


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
-1.5
-1.5
1.7
1.1
1.2
1.1
2.3
-1
0
1
-1
0
1
En-Score

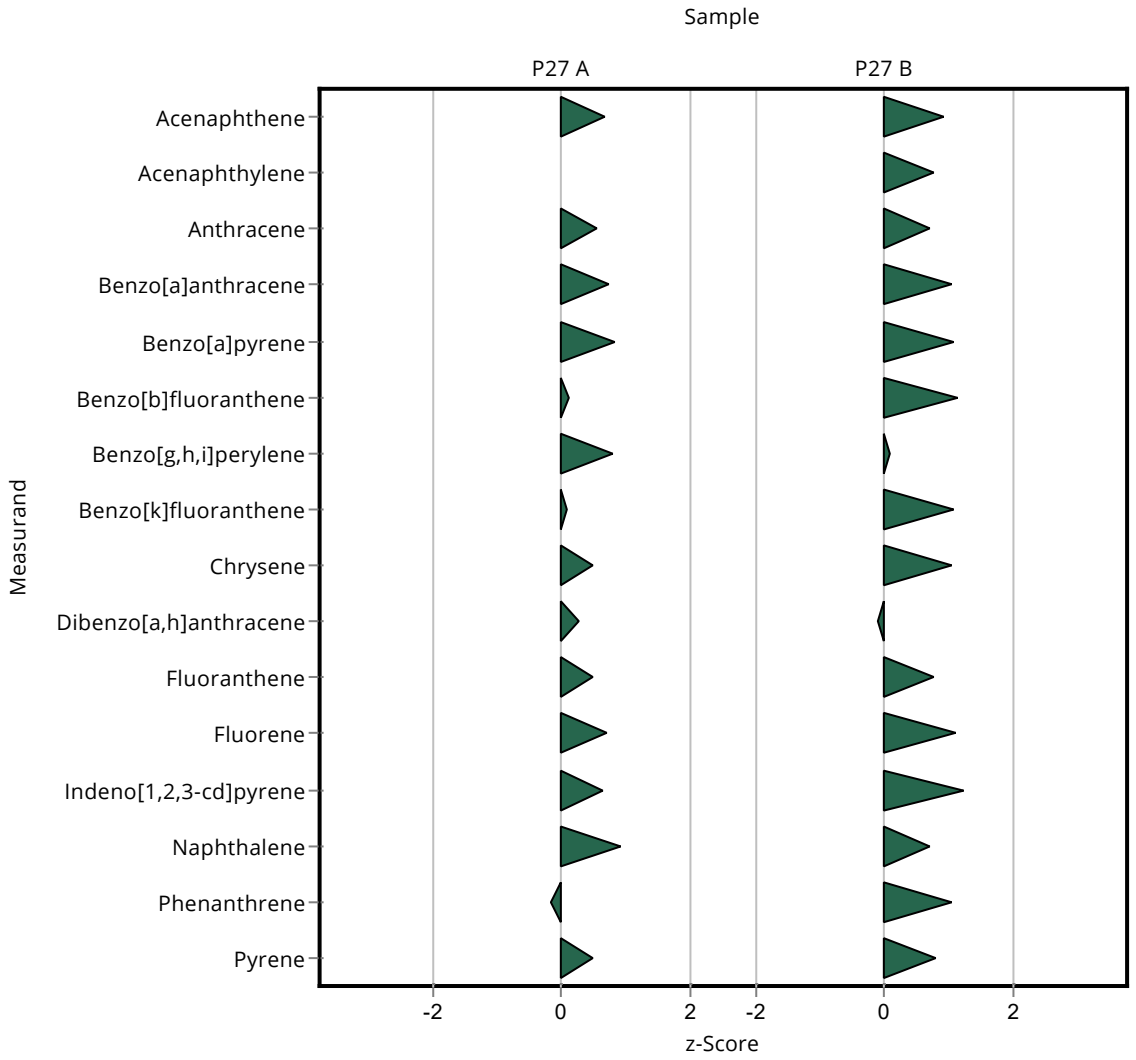
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	23.8 ± 3.37	26.9 ± 2.7	4.53	113	0.68
Acenaphthylene	ng/l	14 ± 1.76	<25 ± -	3.35	-	-
Anthracene	ng/l	24.7 ± 2.33	27.5 ± 2.8	5.19	111	0.54
Benzo[a]anthracene	ng/l	22.5 ± 1.54	25.9 ± 2.6	4.72	115	0.73
Benzo[a]pyrene	ng/l	22.3 ± 6.03	30.5 ± 3.1	10	137	0.81
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	28.3 ± 2.8	4.72	102	0.11
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	19.8 ± 2	4.15	119	0.77
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	15 ± 1.5	3.09	102	0.09
Chrysene	ng/l	24.2 ± 1.66	26.7 ± 2.7	5.32	110	0.47
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	18.2 ± 1.8	5.08	108	0.25
Fluoranthene	ng/l	21.6 ± 1.56	23.4 ± 2.3	3.89	108	0.46
Fluorene	ng/l	22.1 ± 2.07	24.2 ± 2.4	3.09	110	0.69
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	24.2 ± 2.4	5.22	116	0.63
Naphthalene	ng/l	23.9 ± 3.19	28.5 ± 2.9	5.03	119	0.91
Phenanthrene	ng/l	21.1 ± 1.43	20.6 ± 2.1	3.17	97.5	-0.17
Pyrene	ng/l	24 ± 1.48	25.8 ± 2.6	3.83	108	0.48

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	324 ± 36	379.2 ± 37.9	61.5	117	0.90
Acenaphthylene	ng/l	251 ± 29.9	296.6 ± 29.7	60.1	118	0.77
Anthracene	ng/l	355 ± 52.6	407.6 ± 40.8	74.6	115	0.71
Benzo[a]anthracene	ng/l	313 ± 30.1	381.2 ± 38.1	65.8	122	1.04
Benzo[a]pyrene	ng/l	249 ± 47.7	342.1 ± 34.2	87.1	138	1.07
Benzo[b]fluoranthene	ng/l	341 ± 26.9	406.3 ± 40.6	57.9	119	1.13
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	286.1 ± 28.6	70.2	102	0.07

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	z-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	298.8 ± 29.9	51.2	123	1.07
Chrysene	ng/l	275 ± 25.1	336.6 ± 33.7	60.5	122	1.02
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	197.1 ± 19.7	60.9	97	-0.10
Fluoranthene	ng/l	346 ± 44.3	399.8 ± 40	72.6	116	0.74
Fluorene	ng/l	218 ± 21.7	253.7 ± 25.4	32.6	117	1.11
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	348.9 ± 34.9	98.1	153	1.23
Naphthalene	ng/l	452 ± 86.9	545.7 ± 54.6	136	121	0.69
Phenanthrene	ng/l	301 ± 27.2	347.1 ± 34.7	45.1	115	1.03
Pyrene	ng/l	295 ± 20.2	332 ± 33.2	47.2	113	0.79


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
Measurand
-2
0
2
-2
0
2
z-Score

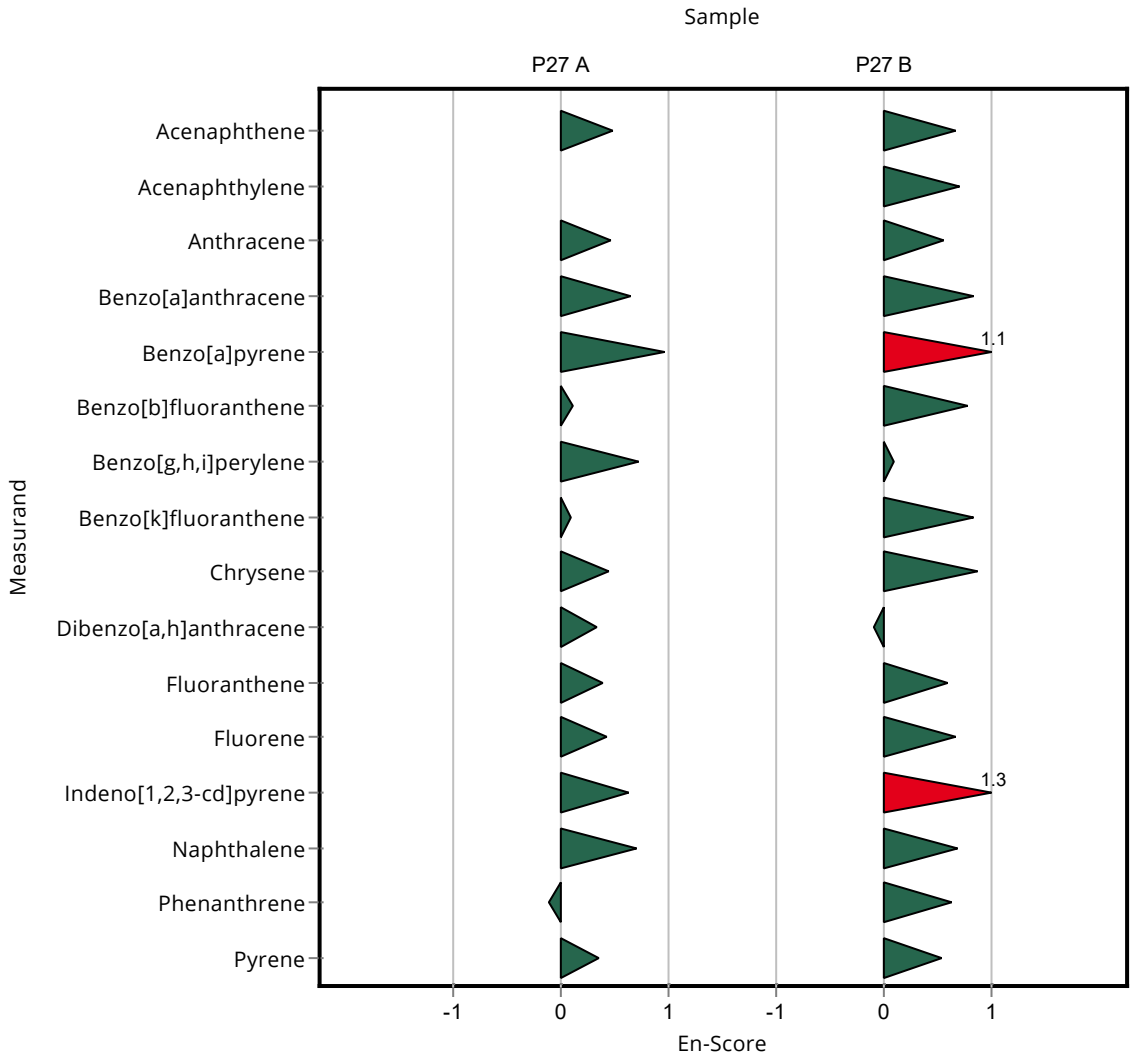
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	23.8 ± 3.37	26.9 ± 2.7	4.53	113	0.48
Acenaphthylene	ng/l	14 ± 1.76	<25 ± -	3.35	-	-
Anthracene	ng/l	24.7 ± 2.33	27.5 ± 2.8	5.19	111	0.46
Benzo[a]anthracene	ng/l	22.5 ± 1.54	25.9 ± 2.6	4.72	115	0.63
Benzo[a]pyrene	ng/l	22.3 ± 6.03	30.5 ± 3.1	10	137	0.94
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	28.3 ± 2.8	4.72	102	0.09
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	19.8 ± 2	4.15	119	0.71
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	15 ± 1.5	3.09	102	0.08
Chrysene	ng/l	24.2 ± 1.66	26.7 ± 2.7	5.32	110	0.44
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	18.2 ± 1.8	5.08	108	0.32
Fluoranthene	ng/l	21.6 ± 1.56	23.4 ± 2.3	3.89	108	0.37
Fluorene	ng/l	22.1 ± 2.07	24.2 ± 2.4	3.09	110	0.41
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	24.2 ± 2.4	5.22	116	0.62
Naphthalene	ng/l	23.9 ± 3.19	28.5 ± 2.9	5.03	119	0.69
Phenanthrene	ng/l	21.1 ± 1.43	20.6 ± 2.1	3.17	97.5	-0.12
Pyrene	ng/l	24 ± 1.48	25.8 ± 2.6	3.83	108	0.34

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	324 ± 36	379.2 ± 37.9	61.5	117	0.66
Acenaphthylene	ng/l	251 ± 29.9	296.6 ± 29.7	60.1	118	0.69
Anthracene	ng/l	355 ± 52.6	407.6 ± 40.8	74.6	115	0.54
Benzo[a]anthracene	ng/l	313 ± 30.1	381.2 ± 38.1	65.8	122	0.83
Benzo[a]pyrene	ng/l	249 ± 47.7	342.1 ± 34.2	87.1	138	1.12
Benzo[b]fluoranthene	ng/l	341 ± 26.9	406.3 ± 40.6	57.9	119	0.76
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	286.1 ± 28.6	70.2	102	0.09

Parameter	Unit	Assigned value	± U (k=2)	Result	± U	Criterion	Recovery [%]	En-Score
Benzo[k]fluoranthene	ng/l	244	30.6	298.8	29.9	51.2	123	0.82
Chrysene	ng/l	275	25.1	336.6	33.7	60.5	122	0.86
Dibenzo[a,h]anthracene	ng/l	203	47.3	197.1	19.7	60.9	97	-0.10
Fluoranthene	ng/l	346	44.3	399.8	40	72.6	116	0.59
Fluorene	ng/l	218	21.7	253.7	25.4	32.6	117	0.65
Indeno[1,2,3-cd]pyrene	ng/l	228	56.1	348.9	34.9	98.1	153	1.35
Naphthalene	ng/l	452	86.9	545.7	54.6	136	121	0.67
Phenanthrene	ng/l	301	27.2	347.1	34.7	45.1	115	0.62
Pyrene	ng/l	295	20.2	332	33.2	47.2	113	0.54


Sample
P27 A
P27 B
Acenaphthene
Acenaphthylene
Anthracene
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Chrysene
Dibenzo[a,h]anthracene
Fluoranthene
Fluorene
Indeno[1,2,3-cd]pyrene
Naphthalene
Phenanthrene
Pyrene
1.1
1.3
Measurand
-1
0
1
-1
0
1
En-Score

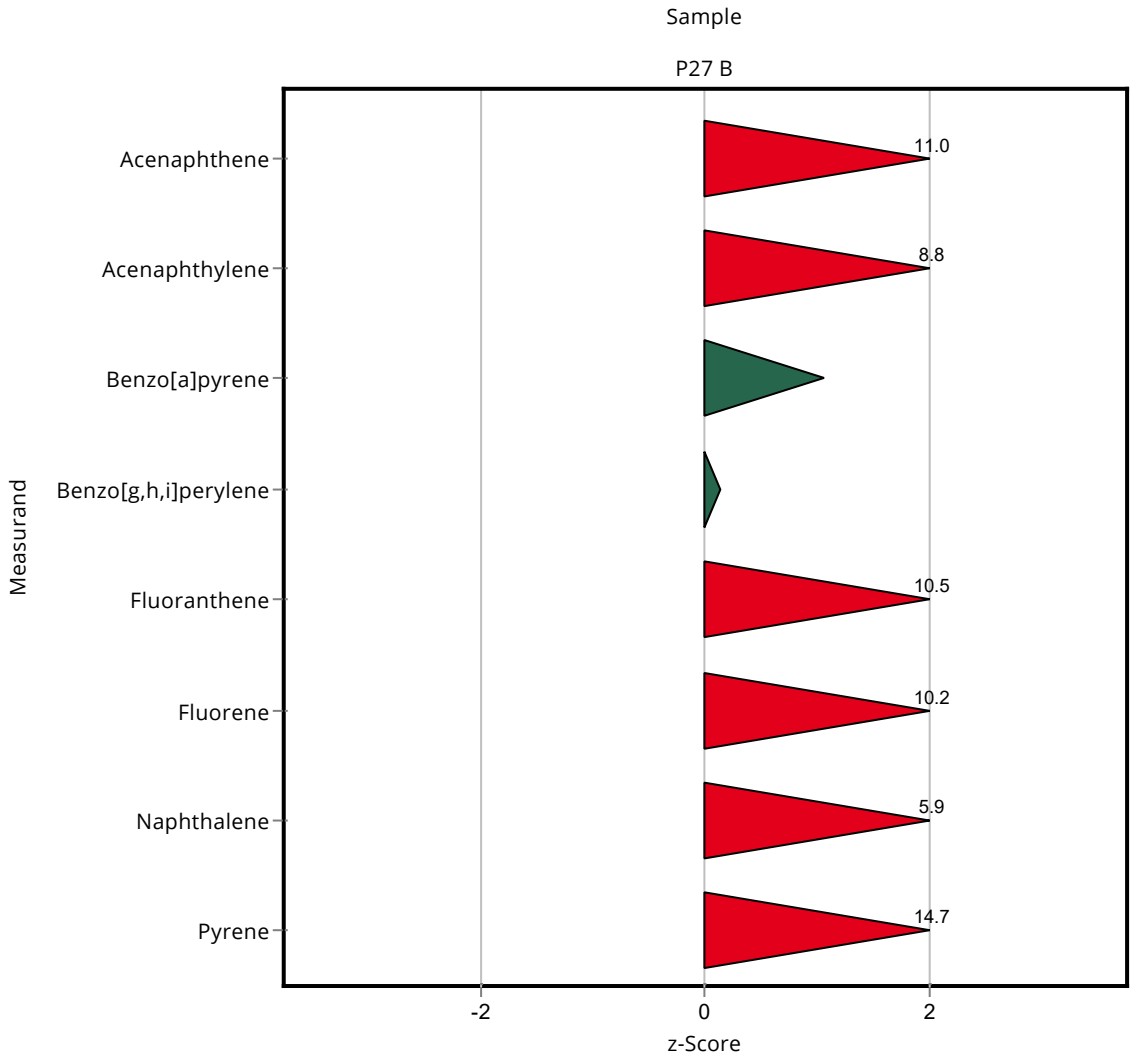
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	23.8 ± 3.37	<200 ± -	4.53	-	-
Acenaphthylene	ng/l	14 ± 1.76	<200 ± -	3.35	-	-
Anthracene	ng/l	24.7 ± 2.33	- ± -	5.19	-	-
Benzo[a]anthracene	ng/l	22.5 ± 1.54	- ± -	4.72	-	-
Benzo[a]pyrene	ng/l	22.3 ± 6.03	<200 ± -	10	-	-
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	- ± -	4.72	-	-
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	<200 ± -	4.15	-	-
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	- ± -	3.09	-	-
Chrysene	ng/l	24.2 ± 1.66	- ± -	5.32	-	-
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	- ± -	5.08	-	-
Fluoranthene	ng/l	21.6 ± 1.56	<200 ± -	3.89	-	-
Fluorene	ng/l	22.1 ± 2.07	<200 ± -	3.09	-	-
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	- ± -	5.22	-	-
Naphthalene	ng/l	23.9 ± 3.19	<200 ± -	5.03	-	-
Phenanthrene	ng/l	21.1 ± 1.43	- ± -	3.17	-	-
Pyrene	ng/l	24 ± 1.48	<200 ± -	3.83	-	-

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	z-Score
Acenaphthene	ng/l	324 ± 36	1000 ± 100	61.5	309	11.00
Acenaphthylene	ng/l	251 ± 29.9	780 ± 78	60.1	311	8.81
Anthracene	ng/l	355 ± 52.6	- ± -	74.6	-	-
Benzo[a]anthracene	ng/l	313 ± 30.1	- ± -	65.8	-	-
Benzo[a]pyrene	ng/l	249 ± 47.7	340 ± 34	87.1	137	1.05
Benzo[b]fluoranthene	ng/l	341 ± 26.9	- ± -	57.9	-	-
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	290 ± 29	70.2	103	0.13

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	z-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	- ± -	51.2	-	-
Chrysene	ng/l	275 ± 25.1	- ± -	60.5	-	-
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	- ± -	60.9	-	-
Fluoranthene	ng/l	346 ± 44.3	1110 ± 111	72.6	321	10.52
Fluorene	ng/l	218 ± 21.7	550 ± 55	32.6	253	10.18
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	- ± -	98.1	-	-
Naphthalene	ng/l	452 ± 86.9	1250 ± 125	136	276	5.88
Phenanthrene	ng/l	301 ± 27.2	- ± -	45.1	-	-
Pyrene	ng/l	295 ± 20.2	990 ± 99	47.2	336	14.74


Sample
P27 B
Acenaphthene
Acenaphthylene
Benzo[a]pyrene
Benzo[g,h,i]perylene
Fluoranthene
Fluorene
Naphthalene
Pyrene
Measurand
11.0
8.8
10.5
10.2
5.9
14.7
-2
0
2
z-Score

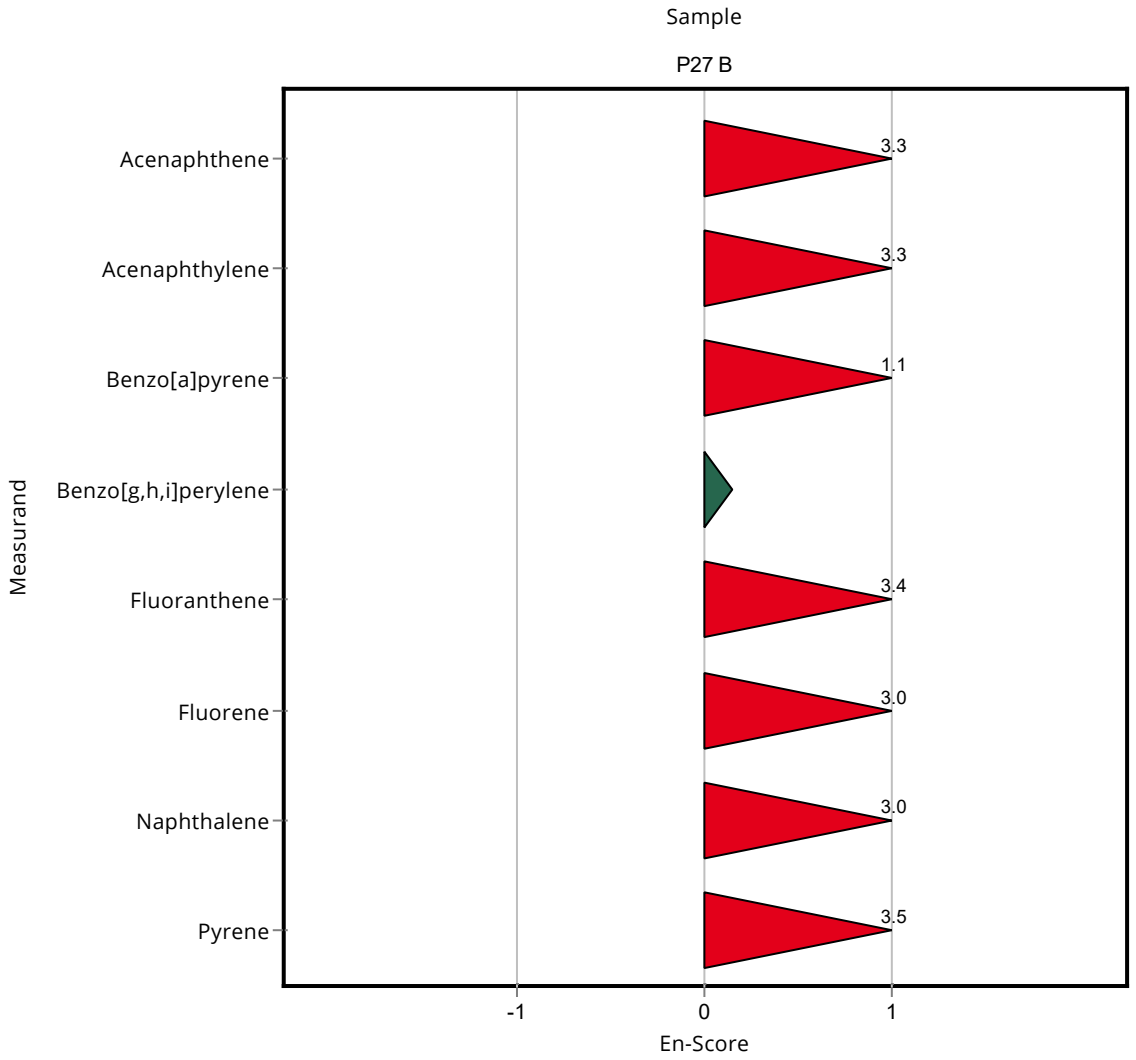
Sample: P27A

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	23.8 ± 3.37	<200 ± -	4.53	-	-
Acenaphthylene	ng/l	14 ± 1.76	<200 ± -	3.35	-	-
Anthracene	ng/l	24.7 ± 2.33	- ± -	5.19	-	-
Benzo[a]anthracene	ng/l	22.5 ± 1.54	- ± -	4.72	-	-
Benzo[a]pyrene	ng/l	22.3 ± 6.03	<200 ± -	10	-	-
Benzo[b]fluoranthene	ng/l	27.8 ± 0.891	- ± -	4.72	-	-
Benzo[g,h,i]perylene	ng/l	16.6 ± 2.11	<200 ± -	4.15	-	-
Benzo[k]fluoranthene	ng/l	14.7 ± 1.56	- ± -	3.09	-	-
Chrysene	ng/l	24.2 ± 1.66	- ± -	5.32	-	-
Dibenzo[a,h]anthracene	ng/l	16.9 ± 1.7	- ± -	5.08	-	-
Fluoranthene	ng/l	21.6 ± 1.56	<200 ± -	3.89	-	-
Fluorene	ng/l	22.1 ± 2.07	<200 ± -	3.09	-	-
Indeno[1,2,3-cd]pyrene	ng/l	20.9 ± 2.29	- ± -	5.22	-	-
Naphthalene	ng/l	23.9 ± 3.19	<200 ± -	5.03	-	-
Phenanthrene	ng/l	21.1 ± 1.43	- ± -	3.17	-	-
Pyrene	ng/l	24 ± 1.48	<200 ± -	3.83	-	-

Sample: P27B

Parameter	Unit	Assigned value ± U (k=2)	Result ± U	Criterion	Recovery [%]	En-Score
Acenaphthene	ng/l	324 ± 36	1000 ± 100	61.5	309	3.33
Acenaphthylene	ng/l	251 ± 29.9	780 ± 78	60.1	311	3.33
Anthracene	ng/l	355 ± 52.6	- ± -	74.6	-	-
Benzo[a]anthracene	ng/l	313 ± 30.1	- ± -	65.8	-	-
Benzo[a]pyrene	ng/l	249 ± 47.7	340 ± 34	87.1	137	1.10
Benzo[b]fluoranthene	ng/l	341 ± 26.9	- ± -	57.9	-	-
Benzo[g,h,i]perylene	ng/l	281 ± 18.9	290 ± 29	70.2	103	0.15

Parameter	Unit	Assigned ± U (k=2) value	Result ± U	Criterion	Recovery [%]	En-Score
Benzo[k]fluoranthene	ng/l	244 ± 30.6	- ± -	51.2	-	-
Chrysene	ng/l	275 ± 25.1	- ± -	60.5	-	-
Dibenzo[a,h]anthracene	ng/l	203 ± 47.3	- ± -	60.9	-	-
Fluoranthene	ng/l	346 ± 44.3	1110 ± 111	72.6	321	3.38
Fluorene	ng/l	218 ± 21.7	550 ± 55	32.6	253	2.96
Indeno[1,2,3-cd]pyrene	ng/l	228 ± 56.1	- ± -	98.1	-	-
Naphthalene	ng/l	452 ± 86.9	1250 ± 125	136	276	3.01
Phenanthrene	ng/l	301 ± 27.2	- ± -	45.1	-	-
Pyrene	ng/l	295 ± 20.2	990 ± 99	47.2	336	3.49


Sample
P27 B
Acenaphthene
Acenaphthylene
Benzo[a]pyrene
Benzo[g,h,i]perylene
Fluoranthene
Fluorene
Naphthalene
Pyrene
Measurand
3.3
3.3
1.1
3.4
3.0
3.0
3.5
-1
0
1
En-Score

E9. Methodenübersicht / Overview of methods

LabCode	Sample	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene
LC0001	**P27A**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0002	**P27A**	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;
LC0004	**P27A**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0005	**P27A**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0006	**P27A**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0007	**P27A**				
LC0008	**P27A**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0009	**P27A**			GC-MS; EN ISO 18857-2	
LC0010	**P27A**	GC-MS;	GC-MS;	GC-MS;	GC-MS;
LC0011	**P27A**	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18
LC0012	**P27A**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0013	**P27A**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0014	**P27A**	GC-MS; EN 16181	GC-MS; EN 16181		

LabCode	Sample	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene
LC0001	**P27A**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0002	**P27A**	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;
LC0004	**P27A**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0005	**P27A**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0006	**P27A**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0007	**P27A**	HPLC-FLD; referencestd.	HPLC-FLD; referencestd.	HPLC-FLD; referencestd.	HPLC-FLD; referencestd.
LC0008	**P27A**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0009	**P27A**		GC-MS; EN ISO 18857-2	GC-MS; EN ISO 18857-2	GC-MS; EN ISO 18857-2
LC0010	**P27A**	GC-MS;		GC-MS;	
LC0011	**P27A**	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18
LC0012	**P27A**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0013	**P27A**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0014	**P27A**	GC-MS; EN 16181		GC-MS; EN 16181	

LabCode	Sample	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene
LC0001	**P27A**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540

LC0002	**P27A**	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;
LC0004	**P27A**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0005	**P27A**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0006	**P27A**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0007	**P27A**			HPLC-FLD; referencestd.	
LC0008	**P27A**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0009	**P27A**			GC-MS; EN ISO 18857-2	
LC0010	**P27A**	GC-MS;	GC-MS;	GC-MS;	GC-MS;
LC0011	**P27A**	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18
LC0012	**P27A**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0013	**P27A**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0014	**P27A**			GC-MS; EN 16181	GC-MS; EN 16181

LabCode	Sample	Indeno[1,2,3-cd]pyrene	Naphthalene	Phenanthrene	Pyrene
LC0001	**P27A**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0002	**P27A**	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;
LC0004	**P27A**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0005	**P27A**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0006	**P27A**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0007	**P27A**	HPLC-FLD; referencestd.			
LC0008	**P27A**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0009	**P27A**	GC-MS; EN ISO 18857-2			
LC0010	**P27A**	GC-MS;	GC-MS;	GC-MS;	GC-MS;
LC0011	**P27A**	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18
LC0012	**P27A**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0013	**P27A**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0014	**P27A**		GC-MS; EN 16181		GC-MS; EN 16181

LabCode	Sample	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene
LC0001	**P27B**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0002	**P27B**	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;
LC0004	**P27B**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0005	**P27B**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0006	**P27B**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0007	**P27B**				
LC0008	**P27B**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0009	**P27B**			GC-MS; EN ISO 18857-2	
LC0010	**P27B**	GC-MS;	GC-MS;	GC-MS;	GC-MS;
LC0011	**P27B**	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18
LC0012	**P27B**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0013	**P27B**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0014	**P27B**	GC-MS; EN 16181	GC-MS; EN 16181		

LabCode	Sample	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene
LC0001	**P27B**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0002	**P27B**	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;
LC0004	**P27B**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0005	**P27B**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0006	**P27B**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0007	**P27B**	HPLC-FLD; referencestd.	HPLC-FLD; referencestd.	HPLC-FLD; referencestd.	HPLC-FLD; referencestd.
LC0008	**P27B**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0009	**P27B**	GC-MS; EN ISO 18857-2	GC-MS; EN ISO 18857-2	GC-MS; EN ISO 18857-2	GC-MS; EN ISO 18857-2
LC0010	**P27B**	GC-MS;		GC-MS;	
LC0011	**P27B**	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18
LC0012	**P27B**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0013	**P27B**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0014	**P27B**	GC-MS; EN 16181		GC-MS; EN 16181	

LabCode	Sample	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene
LC0001	**P27B**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0002	**P27B**	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;
LC0004	**P27B**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39

LC0005	**P27B**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0006	**P27B**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0007	**P27B**			HPLC-FLD; referencestd.	
LC0008	**P27B**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0009	**P27B**			GC-MS; EN ISO 18857-2	
LC0010	**P27B**	GC-MS;	GC-MS;	GC-MS;	GC-MS;
LC0011	**P27B**	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18
LC0012	**P27B**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0013	**P27B**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0014	**P27B**			GC-MS; EN 16181	GC-MS; EN 16181

LabCode	Sample	Indeno[1,2,3-cd]pyrene	Naphthalene	Phenanthrene	Pyrene
LC0001	**P27B**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0002	**P27B**	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;	GC-MS/MS;
LC0004	**P27B**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0005	**P27B**	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39	GC-MS; DIN 38407-39
LC0006	**P27B**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0007	**P27B**	HPLC-FLD; referencestd.			
LC0008	**P27B**	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540	GC-MS; ISO 28540
LC0009	**P27B**	GC-MS; EN ISO 18857-2	GC-MS; ISO 10301		
LC0010	**P27B**	GC-MS;	GC-MS;	GC-MS;	GC-MS;
LC0011	**P27B**	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18	HPLC-FLD; EN ISO 17993; F18
LC0012	**P27B**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0013	**P27B**	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993	HPLC-FLD; EN ISO 17993
LC0014	**P27B**		GC-MS; EN 16181		GC-MS; EN 16181