49. Länderübergreifender Ringversuch

–BTXE/LHKW in Abwasser –

Benzol, Toluol, o-Xylo, m-Xylo, Ethylbenzol
Trichlorehren, Tetrachlorehren, 1,1,1-Trichlorehren, Dichlormethan

März 2018

Abschlussbericht

Hamburg, 3. Juli 2018
Revisionstabelle

<table>
<thead>
<tr>
<th>Version-Nr.</th>
<th>Ausgabedatum</th>
<th>Beschreibung</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3. Juli 2018</td>
<td>Abschlussbericht</td>
</tr>
</tbody>
</table>

**Verantwortlich:**
Behörde für Gesundheit und Verbraucherschutz (BGV)
Institut für Hygiene und Umwelt
Bereich Umweltuntersuchungen
Frau Dr. Elke Beintner
Marckmannstraße 129 b
D-20539 Hamburg
Telefon: 040/428453645
E-Mail: ringversuche@hu.hamburg.de
http://www.hamburg.de/bgv/ringversuche

**Ringversuchsleiterin**
Dr. Elke Beintner

**Stellvertretende Ringversuchsleiterin**
Dr. Ines Holz

**Freigabe des Berichts durch**
Dr. Elke Beintner
Inhaltsverzeichnis

1. Allgemeines ................................................................................................................................. 5
2. Teilnehmerzahlen .......................................................................................................................... 5
3. Ringversuchsdesign ...................................................................................................................... 5
4. Proben .......................................................................................................................................... 5
5. Probenverteilung .......................................................................................................................... 5
6. Homogenität und Stabilität ......................................................................................................... 6
7. Analysenverfahren ...................................................................................................................... 6
8. Arbeitsbereich ............................................................................................................................. 6
9. Ergebnisabgabe ........................................................................................................................... 6
10. Angabe des Ergebnisses ............................................................................................................. 6
11. Statistische Auswertung ............................................................................................................. 7
12. Varianzfunktion ......................................................................................................................... 7
13. Limitierung der Standardabweichung ....................................................................................... 7
14. Bewertungsgrundlagen .............................................................................................................. 7
15. Messunsicherheit des zugewiesenen Wertes ............................................................................. 7
16. Rückführbarkeit ........................................................................................................................ 8
17. Ergebnisse .................................................................................................................................. 8
18. Bemerkungen ............................................................................................................................ 8
19. Verfügbarkeit des Berichts ......................................................................................................... 8

Länderspezifische Hinweise zum 49. Länderübergreifenden Ringversuch ........................................ 9

Statistische Auswertung ................................................................................................................ 11

Probe 1 ............................................................................................................................................. 12
   Kennwerte – Probe 1 .................................................................................................................... 13
   Übersicht z_{u}-Scores .................................................................................................................... 14
   Einzeldarstellung der Parameter .............................................................................................. 16

Probe 2 ............................................................................................................................................ 33
   Kennwerte – Probe 2 .................................................................................................................... 34
   Übersicht z_{u}-Scores .................................................................................................................... 35
   Einzeldarstellung der Parameter .............................................................................................. 37

Probe 3 ............................................................................................................................................ 56
   Kennwerte – Probe 3 .................................................................................................................... 57
   Übersicht z_{u}-Scores .................................................................................................................... 58
   Einzeldarstellung der Parameter .............................................................................................. 60

Probe 4 ............................................................................................................................................ 89
   Kennwerte – Probe 4 .................................................................................................................... 90
   Übersicht z_{u}-Scores .................................................................................................................... 91
   Einzeldarstellung der Parameter .............................................................................................. 93

Probe 5 ............................................................................................................................................. 113
   Kennwerte – Probe 5 ................................................................................................................... 114
1. Allgemeines

Im Zuge der Harmonisierungsbestrebungen für die Notifizierung von Laboratorien im gesetzlich geregelten Umweltbereich wurde dieser Ringversuch länderübergreifend organisiert und von der AQS Baden-Württemberg und dem Institut für Hygiene und Umwelt der Behörde für Gesundheit und Verbraucherschutz Hamburg ausgerichtet. Die Aufteilung der Teilnehmer auf die Ausrichter erfolgte nach Bundesländern:

**AQS Baden-Württemberg**

Baden-Württemberg, Bayern, Nordrhein-Westfalen, Schleswig-Holstein, Sachsen-Anhalt, Thüringen, Niederlande, Schweiz

**Institut für Hygiene und Umwelt**

Berlin, Brandenburg, Bremen, Hessen, Hamburg, Mecklenburg-Vorpommern, Niedersachsen, Rheinland-Pfalz, Saarland, Sachsen


2. Teilnehmerzahlen

87 Labore erhielten Proben vom Institut für Hygiene und Umwelt. 4 Teilnehmer gaben keine Ergebnisse ab. Nicht alle Teilnehmer analysierten alle Parameter.

3. Ringversuchsdesign

Jeder Teilnehmer erhielt 3 x 2 Proben für eine Doppelbestimmung der unten genannten Parameter in 250 mL Braunglasflaschen mit Schliffstopfen. Die Proben wurden durch Kühlung und durch Zugabe von H₂SO₄ (pH 2,1) konserviert. Es wurden 6 Konzentrationsniveaus hergestellt. Die Verteilung der Niveaus auf die Teilnehmer erfolgte zufällig.

4. Proben

**Zu untersuchende Parameter**

Benzol, Toluol, o-Xylol, m-Xylol, Ethylbenzol, Dichlormethan, Trichlorethen, Tetrachlorethen, 1,1,1-Trichlorethan.

**Matrix**

Von der AQS Baden-Württemberg zur Verfügung gestelltes kommunales Abwasser, filtriert über 5 μm und 1 μm Filterkartuschen, um sämtliche Partikel zu entfernen und zur Verringerung etwaiger Keimbelastungen bei 80°C in einem Edelstahltank über Nacht pasteurisiert.

**Probenherstellung**


5. Probenverteilung

Der Versand der gekühlten Proben erfolgte mittels Paketdienst am 26.02.2018 mit einer garantierten Lieferung bis 27.02.2018 um 12 Uhr.

---

1 Länderarbeitsgemeinschaft Wasser (Hrsg.): AQS-Merkblätter für die Wasser-, Abwasser- und Schlammuntersuchung, Erich Schmidt Verlag, Berlin.
Aufgrund der niedrigen Temperaturen während des Versands über Nacht (teils < -15°C) sind bei einigen Paketen Proben gefroren und Flaschen geplatzt. Ersatzproben wurden am 05.03.2018 mit einer garantierten Lieferung am 06.03.2018 bis 12 Uhr mittels Paketdienst versendet.

6. Homogenität und Stabilität


7. Analysenverfahren


Zugelassene Analysenverfahren

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Verfahren</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LHKW</strong></td>
<td>DIN EN ISO 10301: 1997-08 (F 4)* - GC-ECD</td>
</tr>
<tr>
<td></td>
<td>DIN EN ISO 15680: 2004-04 (F 19) – GC-Purge &amp; Trap</td>
</tr>
<tr>
<td></td>
<td>DIN 38407-43: 2014-10 (F43) – HS-GC-MS</td>
</tr>
<tr>
<td><strong>BTXE</strong></td>
<td>DIN 38407-F 9: 1991-05* - GC-FID</td>
</tr>
<tr>
<td></td>
<td>DIN EN ISO 15680: 2004-04 (F 19) – GC-Purge &amp; Trap</td>
</tr>
<tr>
<td></td>
<td>DIN 38407-43: 2014-10 (F43) – HS-GC-MS</td>
</tr>
<tr>
<td>*eine massenspektrometrische Detektion war zugelassen</td>
<td></td>
</tr>
</tbody>
</table>


8. Arbeitsbereich

Folgende unteren Grenzen der Arbeitsbereiche mussten im Ringversuch erreicht werden:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>untere Grenze des Arbeitsbereiches [µg/l]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzol</td>
<td>5</td>
</tr>
<tr>
<td>Toluol</td>
<td>5</td>
</tr>
<tr>
<td>o-Xylol</td>
<td>5</td>
</tr>
<tr>
<td>m-Xylol</td>
<td>5</td>
</tr>
<tr>
<td>Ethylbenzol</td>
<td>5</td>
</tr>
<tr>
<td>Trichlorethen</td>
<td>5</td>
</tr>
<tr>
<td>Tetrachlorethen</td>
<td>5</td>
</tr>
<tr>
<td>1,1,1-Trichlorethen</td>
<td>5</td>
</tr>
<tr>
<td>Dichlormethan</td>
<td>10</td>
</tr>
</tbody>
</table>

9. Ergebnisabgabe

Die Teilnehmer wurden darauf hingewiesen, spätestens am Tag nach Erhalt der Proben mit der Analytik zu beginnen.


10. Angabe des Ergebnisses

Die Proben waren jeweils zweifach über das Gesamtverfahren zu analysieren. Anzugeben war der Mittelwert aus beiden Bestimmungen in µg/l mit drei signifikanten Stellen.
11. Statistische Auswertung


Als zugewiesener Wert $x_{pt}$ wurde der Hampel-Schätzer als robuster Gesamtmittelwert aus den Teilnehmerwerten berechnet. Die Vergleichsstandardabweichung $\sigma_{pt}$ wurde nach der Q-Methode berechnet. Aus der Vergleichsstandardabweichung $\sigma_{pt}$ wurden die Toleranzgrenzen bestimmt.

Aus zugewiesenem Wert $x_{pt}$ und Standardabweichung zur Eignungsbeurteilung $\sigma_{pt}$ wurde für jeden Messwert $x$ nach folgender Formel ein $z$-Score berechnet:

$$z = \frac{x - x_{pt}}{\sigma_{pt}}$$

Dieser $z$-Score wurde gemäß den Vorgaben des LAWA-Merkblatts A-3 mittels Korrekturfaktoren zu $z_U$-Scores modifiziert. Als Toleranzgrenze wurde $|z_U| = 2,0$ festgelegt.

12. Varianzfunktion

Um Ungerechtigkeiten bei der Bewertung unterschiedlicher Konzentrationsniveaus zu vermeiden, wurde geprüft, in wieweit dies mit der Anwendung der Varianzfunktion vermieden werden kann. Die Entscheidung für die Anwendung der Varianzfunktion erfolgte nach Vorlage aller Daten.

Die Varianzfunktion wurde nicht angewendet.

13. Limitierung der Standardabweichung

Zur Beurteilung wurde die Vergleichsstandardabweichung herangezogen, auf deren Grundlage die Toleranzgrenzen ermittelt wurden. Damit diese weder zu weit noch zu eng berechnet wurden, galt folgende Limitierung der relativen Vergleichsstandardabweichung $\sigma_{pt}$:

Untergrenze: 10%, Obergrenze: 25%

Die untere Grenze wurde bei keinem Parameter, die obere Grenze in Probe 1 (meta-Xylol), Probe 2 (Benzol, ortho-Xylol, meta-Xylol, Toluol, Tetrachlorethen, Trichlorethen, 1,1,1-Trichlorethan, Dichlormethan), Probe 3 (Ethylbenzol, ortho-Xylol, meta-Xylol, Tetrachlorethen, Trichlorethen) und Probe 4 (meta-Xylol, Tetrachlorethen, Trichlorethen) angewandt.

14. Bewertungsgrundlagen

Die Bewertung erfolgte parameterspezifisch. Ein Parameter wurde als erfolgreich bestimmt anerkannt, wenn mindestens 2 von 3 Werten innerhalb der Toleranzgrenzen lagen. War die Auswertung eines Niveaus für einen Parameter nicht auswertbar, so galt ein Parameter als erfolgreich bestimmt, wenn mindestens 50% der Werte innerhalb der Toleranzgrenzen lagen.

Als nicht erfolgreich analysiert galten:

- Nicht bestimmte Werte,
- Werte, die mit „kleiner (<) untere Grenze des Arbeitsbereichs“ angegeben wurden,
- Werte, die aus Untervergaben an ein Fremdlabor resultierten,
- Werte, die mit einem von den vorgegebenen Analysenverfahren abweichendem Verfahren ermittelt wurden,
- Werte, die nicht innerhalb des vorgegebenen Analysenzeitraumes ermittelt wurden und
- Werte, die nicht innerhalb der festgesetzten Frist beim Veranstalter eintrafen.

15. Messunsicherheit des zugewiesenen Wertes

Die Messunsicherheit des mittels robuster Statistik berechneten Gesamtmittelwertes wurde nach DIN ISO 13528:2009-01 folgendermaßen abgeschätzt,

$$u_x = 1,25 * \sigma_{pt} / (p^{1/2})$$

wobei $\sigma_{pt}$ die robuste Standardabweichung und $p$ die Anzahl der Teilnehmer des Ringversuchs ist. Sie wird im Folgenden als MU zugewiesener Wert aufgeführt.
16. Rückführbarkeit

Da in der Matrix Abwasser keine ausreichend rückführbaren Referenzwerte zur Verfügung standen, wurde als zugewiesener Wert der mittels Hampel-Schätzer berechnete Gesamtmittelwert der Teilnehmerergebnisse genutzt. Dieser ist auf die Werte des Teilnehmerkollektivs zurückzuführen.

17. Ergebnisse

83 Labore haben Ergebnisse zu diesem Ringversuch abgegeben, davon haben 76 Labore alle Parameter bestimmt.

**Tabelle: Anzahl Labore mit Ergebnisabgabe, sowie erfolgreicher und nicht erfolgreicher Labore je Parameter.**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Anzahl Labore</th>
<th>Parameter erfolgreich bestimmt</th>
<th>Parameter nicht erfolgreich bestimmt</th>
<th>Anteil erfolgreicher Bestimmungen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzol</td>
<td>82</td>
<td>71</td>
<td>11</td>
<td>87%</td>
</tr>
<tr>
<td>Toluol</td>
<td>82</td>
<td>72</td>
<td>10</td>
<td>88%</td>
</tr>
<tr>
<td>o-Xylol</td>
<td>82</td>
<td>79</td>
<td>3</td>
<td>96%</td>
</tr>
<tr>
<td>m-Xylol</td>
<td>80</td>
<td>71</td>
<td>9</td>
<td>89%</td>
</tr>
<tr>
<td>Ethylbenzol</td>
<td>82</td>
<td>76</td>
<td>6</td>
<td>93%</td>
</tr>
<tr>
<td>Trichlorethen</td>
<td>79</td>
<td>70</td>
<td>9</td>
<td>90%</td>
</tr>
<tr>
<td>Tetrachlorethen</td>
<td>79</td>
<td>71</td>
<td>8</td>
<td>90%</td>
</tr>
<tr>
<td>1,1,1-Trichlorethan</td>
<td>78</td>
<td>71</td>
<td>7</td>
<td>91%</td>
</tr>
<tr>
<td>Dichlormethan</td>
<td>77</td>
<td>69</td>
<td>8</td>
<td>90%</td>
</tr>
</tbody>
</table>

**Grafik: Anzahl erfolgreicher und nicht erfolgreicher Labore je Parameter:**

18. Bemerkungen

Für den Parameter ortho-Xylol waren die Werte der Probe 1 nicht auswertbar. Für die betroffenen Labore galt dieser Parameter als bestanden, wenn mindestens 50% der Werte erfolgreich bestimmt wurden. Die betroffenen Labore wurden in keinem Fall durch diese Vorgehensweise benachteiligt.

19. Verfügbarkeit des Berichts

Der Bericht ist im Internet verfügbar unter [www.hamburg.de/bgv/ringversuche-auswertungen/](http://www.hamburg.de/bgv/ringversuche-auswertungen/).
Länderspezifische Hinweise zum 49. Länderübergreifenden Ringversuch – BTXE/LHKW in Abwasser

Die Ergebnisse dieses Ringversuchs werden in allen Bundesländern anerkannt. Somit entfällt für die Untersuchungsstellen eine unnötige Mehrfachbeteiligung an gleichen Ringversuchen in mehreren Bundesländern. Hierzu sind jedoch die ggf. vorhandenen länderspezifischen Regelungen zu beachten.

**Baden-Württemberg**


Die Teilnahme an diesem Ringversuch gilt auch als Kompetenznachweis für Untersuchungsstellen, die nach "Verordnung des Umweltministeriums über Sachverständige und Untersuchungsstellen für Bodenschutz und Altlasten" (BodSchASUVO) vom 13.4.2011 für den Untersuchungsbereich 7 anerkannt sind.

**Bayern**

Untersuchungsstellen mit einer entsprechenden Zulassung nach LaborV und VSU Boden und Altlasten (Untersuchungsbereich 4 c) sind verpflichtet an diesem Ringversuch teilzunehmen.

**Berlin**

"Dieser Ringversuch gilt als Nachweis der Eignung für Akkreditierungen/Zulassungen nach der Berliner IndV und für Abwasseruntersuchungen nach § 68 Abs. 1 BWG."

**Brandenburg**

Untersuchungsstellen, die eine Zulassung nach der Untersuchungsstellen-Zulassungsverordnung (UstZulV) vom 17.12.1997 zur Untersuchung von Abwasser gemäß § 73 Abs. 1 des Brandenburgischen Wassergesetzes BbgWG), zur Untersuchung von Indirekteinleitungen gemäß § 74 Satz 1 BbgWG oder Untersuchungen gemäß § 110 BbgWG besitzen, sind zur Teilnahme an diesem Ringversuch entsprechend ihres Zulassungsumfanges verpflichtet. Untersuchungsstellen, die eine solche Zulassung beantragen wollen, wird die Teilnahme empfohlen.

**Bremen**

- keine -

**Hamburg**


**Hessen**


**Mecklenburg-Vorpommern:**


**Niedersachsen:**

Staatlich anerkannte Untersuchungsstellen der wasser- und abfallrechtlichen Überwachung nach § 125 NWG und § 44 NAbfG sind verpflichtet an diesem Ringversuch teilzunehmen, sofern sie für die in diesem Ringversuch geprüften Parameter anerkannt sind. Staatlich anerkannte Untersuchungsstellen müssen hierbei grundsätzlich das Verfahren anwenden, für das die Anerkennung erteilt wurde. Die Anwendung der DIN 38407-43: 2014-10 (F43) ist ebenfalls zulässig, wenn die Methode bereits akkreditiert ist oder für den Bereich eine flexible Akkreditierung

*Seite 9 von 163*
beantragt ist. Das Bestehen des Ringversuchs ist für Laboratorien, die sich im Anerkennungsverfahren befinden, noch keine hinreichende Voraussetzung für die Erlangung der Anerkennung.

**Nordrhein-Westfalen**

Untersuchungsstellen mit einer Zulassung nach § 25 LAbfG NRW (Teilbereich 3 oder B-4) sowie nach § 17 LBodSchG (Untersuchungsbereich 4) werden verpflichtet, an diesem Ringversuch teilzunehmen.

**Rheinland-Pfalz**


Eine Notifizierung ist in Rheinland-Pfalz nicht vorgesehen.

**Sachsen-Anhalt**

Die Teilnahme am Ringversuch bewirkt keinerlei Zulassung oder Auftrag für Wasseruntersuchungen zur behördlichen Überwachung in Sachsen-Anhalt.

**Saarland:**


**Sachsen**


**Schleswig-Holstein**

Untersuchungsstellen (Laboratorien) mit einer Zulassung nach der Landesverordnung über die Zulassung von Wasseruntersuchungsstellen (ZWVO) für den entsprechenden Teilbereich bzw. für die entsprechenden Parameter, sind verpflichtet, sich an diesem Ringversuch zu beteiligen. Die Ergebnisse des Länderübergreifenden Ringversuchs werden als wiederkehrende AQS-Maßnahme für die Zulassung nach ZWVO verwendet.

**Thüringen**

Die erfolgreiche Teilnahme an diesem Länderübergreifenden Ringversuch ist Voraussetzung für folgende Zulassungen:

2. Thüringer Deponieeigenkontrollverordnung – ThürDepEKVO vom 08. August 1994

Zur erfolgreichen Teilnahme an diesem Ringversuch sind weiterhin alle Laboratorien verpflichtet, die Auftragsanalytik im zu bewertenden Parameterspektrum für die Thüringer Landesanstalt für Umwelt und Geologie durchführen bzw. sich dafür bewerben.

Für Sie gelten die länderspezifischen Regelungen des Bundeslandes, in dem Ihr Labor eine Anerkennung (Zulassung) hat.
Statistische Auswertung
Probe 1
## Kennwerte – Probe 1

49. LÜRV BTXE/LHKW in Abwasser

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzol</td>
<td>40,599</td>
<td>9,674</td>
<td>9,674</td>
<td>23,83</td>
<td>23,83</td>
<td>22,611</td>
<td>63,421</td>
<td>5,0</td>
<td>36</td>
</tr>
<tr>
<td>Dichlormethan</td>
<td>166,567</td>
<td>34,841</td>
<td>34,841</td>
<td>20,92</td>
<td>20,92</td>
<td>101,155</td>
<td>247,174</td>
<td>4,4</td>
<td>36</td>
</tr>
<tr>
<td>Ethylbenzol</td>
<td>70,441</td>
<td>14,302</td>
<td>14,302</td>
<td>20,30</td>
<td>20,30</td>
<td>43,532</td>
<td>103,397</td>
<td>4,2</td>
<td>36</td>
</tr>
<tr>
<td>meta-Xylol</td>
<td>71,373</td>
<td>17,843</td>
<td>19,418</td>
<td>25,00</td>
<td>27,21</td>
<td>38,320</td>
<td>113,808</td>
<td>5,7</td>
<td>36</td>
</tr>
<tr>
<td>1,1,1-Trichlorethan</td>
<td>136,341</td>
<td>23,977</td>
<td>23,977</td>
<td>17,59</td>
<td>17,59</td>
<td>90,791</td>
<td>190,634</td>
<td>3,7</td>
<td>36</td>
</tr>
<tr>
<td>Tetrachlorethen</td>
<td>110,161</td>
<td>22,513</td>
<td>22,513</td>
<td>20,44</td>
<td>20,44</td>
<td>67,824</td>
<td>162,082</td>
<td>4,3</td>
<td>36</td>
</tr>
<tr>
<td>Toluol</td>
<td>25,756</td>
<td>6,084</td>
<td>6,084</td>
<td>23,62</td>
<td>23,62</td>
<td>14,436</td>
<td>40,088</td>
<td>4,9</td>
<td>36</td>
</tr>
<tr>
<td>Trichlorethen</td>
<td>85,013</td>
<td>16,921</td>
<td>16,921</td>
<td>19,90</td>
<td>19,90</td>
<td>53,134</td>
<td>123,901</td>
<td>4,1</td>
<td>36</td>
</tr>
</tbody>
</table>
Übersicht z_U-Scores

Scores für PROBE_1

Merkmal

Labor
Einzeldarstellung der Parameter

Grafik und Tabelle
### Einzeldarstellung

<table>
<thead>
<tr>
<th>Probe</th>
<th>PROBE_1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vergleich-STD (SR):</td>
<td>9,674 µg/l</td>
</tr>
<tr>
<td>Methode:</td>
<td>DIN 38402 A45</td>
</tr>
<tr>
<td>Merkmal:</td>
<td>Benzol</td>
</tr>
<tr>
<td>Rel. Vergleich-STD (VR):</td>
<td>23,83%</td>
</tr>
<tr>
<td>Rel. Soll-STD:</td>
<td>23,83% (Limited)</td>
</tr>
<tr>
<td>Anzahl Labore:</td>
<td>36</td>
</tr>
<tr>
<td>Sollwert:</td>
<td>40,599 µg/l (empirischer Wert)</td>
</tr>
</tbody>
</table>

#### Diagramm

![Diagramm](image)

*Institut für Hygiene und Umwelt Hamburg*
### Einzeldarstellung Tabelle

<table>
<thead>
<tr>
<th>Probe</th>
<th>Vergleich-STD (SR): 9,674 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal</td>
<td>Rel. Vergleich-STD (VR): 23,83%</td>
</tr>
<tr>
<td>Methode</td>
<td>Toleranzbereich: 22,611 - 63,421 µg/l (</td>
</tr>
<tr>
<td>Anzahl Labore</td>
<td>Rel. Soll-STD: 23,83% (Limited)</td>
</tr>
<tr>
<td>Sollwert</td>
<td>40,599 µg/l (empirischer Wert)</td>
</tr>
</tbody>
</table>

#### Laborcode | Labormittelwert | STD | Zu-Score | Messwert |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>50,700</td>
<td>0,9</td>
<td>50,700</td>
<td>50,700</td>
</tr>
<tr>
<td>005</td>
<td>53,000</td>
<td>1,1</td>
<td>53,000</td>
<td>53,000</td>
</tr>
<tr>
<td>010</td>
<td>26,700</td>
<td>-1,6</td>
<td>26,700</td>
<td>26,700</td>
</tr>
<tr>
<td>015</td>
<td>28,000</td>
<td>-1,9</td>
<td>28,000</td>
<td>28,000</td>
</tr>
<tr>
<td>010</td>
<td>23,650</td>
<td>0,0</td>
<td>23,650</td>
<td>22,611</td>
</tr>
<tr>
<td>035</td>
<td>34,200</td>
<td>-1,7</td>
<td>34,200</td>
<td>22,611</td>
</tr>
<tr>
<td>036</td>
<td>35,100</td>
<td>0,6</td>
<td>35,100</td>
<td>23,83%</td>
</tr>
<tr>
<td>046</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>053</td>
<td>43,600</td>
<td>-0,7</td>
<td>43,600</td>
<td>46,200</td>
</tr>
<tr>
<td>058</td>
<td>46,700</td>
<td>-0,6</td>
<td>46,700</td>
<td>46,700</td>
</tr>
<tr>
<td>060</td>
<td>47,700</td>
<td>0,5</td>
<td>47,700</td>
<td>47,700</td>
</tr>
<tr>
<td>062</td>
<td>47,700</td>
<td>0,6</td>
<td>47,700</td>
<td>47,700</td>
</tr>
<tr>
<td>065</td>
<td>48,900</td>
<td>0,7</td>
<td>48,900</td>
<td>48,900</td>
</tr>
<tr>
<td>067</td>
<td>50,700</td>
<td>0,9</td>
<td>50,700</td>
<td>50,700</td>
</tr>
<tr>
<td>068</td>
<td>53,000</td>
<td>1,1</td>
<td>53,000</td>
<td>53,000</td>
</tr>
<tr>
<td>072</td>
<td>26,700</td>
<td>-1,6</td>
<td>26,700</td>
<td>26,700</td>
</tr>
<tr>
<td>078</td>
<td>28,000</td>
<td>-1,9</td>
<td>28,000</td>
<td>28,000</td>
</tr>
<tr>
<td>080</td>
<td>34,200</td>
<td>-1,7</td>
<td>34,200</td>
<td>34,200</td>
</tr>
<tr>
<td>084</td>
<td>35,100</td>
<td>-1,1</td>
<td>35,100</td>
<td>35,100</td>
</tr>
<tr>
<td>085</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>090</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>133</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>149</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>155</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>160</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>180</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>40,599</td>
<td>23,83% (Limited)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Einzeldarstellung

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBE_1</td>
<td>34,841 µg/l</td>
<td>20,92%</td>
<td>20,92% (Limited)</td>
</tr>
<tr>
<td>Merkmal:</td>
<td>Dichlormethan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methode:</td>
<td>DIN 38402 A45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anzahl Labore:</td>
<td>36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sollwert:</td>
<td>166,567 µg/l (empirischer Wert)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Graph showing data distribution and tolerance limits]
BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

<table>
<thead>
<tr>
<th>Probe: PROBE_1</th>
<th>Vergleich-STD (SR): 34,841 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal: Dichlormethan</td>
<td>Rel. Vergleich-STD (VR): 20,92%</td>
</tr>
<tr>
<td>Methode: DIN 38402 A45</td>
<td>Toleranzbereich: 101,155 - 247,174 µg/l (</td>
</tr>
<tr>
<td>Anzahl Labore: 36</td>
<td>Rel. Soll-STD: 20,92% (Limited)</td>
</tr>
<tr>
<td>Sollwert: 166,567 µg/l (empirischer Wert)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>211,000</td>
<td>1,1</td>
<td>211,000</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>192,000</td>
<td>0,6</td>
<td>192,000</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>116,000</td>
<td>-1,6</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>133,000</td>
<td>-1,1</td>
<td>133,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>110,510</td>
<td>-1,8</td>
<td>110,510</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>125,000</td>
<td>-1,3</td>
<td>125,000</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>120,000</td>
<td>-1,5</td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>186,000</td>
<td>0,5</td>
<td>186,000</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>117,600</td>
<td>-1,5</td>
<td>117,600</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>173,000</td>
<td>0,2</td>
<td>173,000</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>185,000</td>
<td>0,5</td>
<td>185,000</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>124,900</td>
<td>-1,3</td>
<td>124,900</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>149,000</td>
<td>-0,6</td>
<td>149,000</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>198,000</td>
<td>0,8</td>
<td>198,000</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>209,000</td>
<td>1,1</td>
<td>209,000</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>130,000</td>
<td>-1,1</td>
<td>130,000</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>171,200</td>
<td>0,1</td>
<td>171,200</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>172,000</td>
<td>0,1</td>
<td>172,000</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>118,000</td>
<td>-1,5</td>
<td>118,000</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>119,000</td>
<td>-1,5</td>
<td>119,000</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>215,000</td>
<td>1,2</td>
<td>215,000</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>183,000</td>
<td>0,4</td>
<td>183,000</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>177,010</td>
<td>0,3</td>
<td>177,010</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>204,000</td>
<td>1,0</td>
<td>204,000</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>172,000</td>
<td>0,1</td>
<td>172,000</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>179,000</td>
<td>0,3</td>
<td>179,000</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>179,260</td>
<td>0,3</td>
<td>179,260</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>189,000</td>
<td>0,6</td>
<td>189,000</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>163,000</td>
<td>-0,1</td>
<td>163,000</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>183,000</td>
<td>0,4</td>
<td>183,000</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>144,000</td>
<td>-0,7</td>
<td>144,000</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>256,000</td>
<td>2,3</td>
<td>256,000</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>63,000</td>
<td>-3,2</td>
<td>63,000</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>227,300</td>
<td>1,5</td>
<td>227,300</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>180,300</td>
<td>0,3</td>
<td>180,300</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>211,880</td>
<td>1,2</td>
<td>211,880</td>
<td></td>
</tr>
</tbody>
</table>

Institut für Hygiene und Umwelt Hamburg

PROLab
**Einzeldarstellung**

<table>
<thead>
<tr>
<th>Probe</th>
<th>PROBE_1</th>
<th>Vergleich-STD (SR): 14,302 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal</td>
<td>Ethylbenzol</td>
<td>Rel. Vergleich-STD (VR): 20,30%</td>
</tr>
<tr>
<td>Methode</td>
<td>DIN 38402 A45</td>
<td>Rel. Soll-STD: 20,30% (Limited)</td>
</tr>
<tr>
<td>Anzahl Labore</td>
<td>36</td>
<td>Toleranzbereich: 43,532 - 103,397 µg/l (</td>
</tr>
<tr>
<td>Sollwert</td>
<td>70,441 µg/l (empirischer Wert)</td>
<td></td>
</tr>
</tbody>
</table>

![Graph showing the results of the test](image-url)
### BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

<table>
<thead>
<tr>
<th>Probe</th>
<th>Merkmal</th>
<th>Methode</th>
<th>Anzahl Labore</th>
<th>Sollwert:</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBE_1</td>
<td>Ethylbenzol</td>
<td>DIN 38402 A45</td>
<td>36</td>
<td>70,441 µg/l (empirischer Wert)</td>
</tr>
</tbody>
</table>

**Vergleich-STD (SR):** 14,392 µg/l  
**Rel. Vergleich-STD (VR):** 20,30%  
**Toleranzbereich:** 43,532 - 103,397 µg/l (|Zu-Score| <= 2,0)  
**Rel. Soll-STD:** 20,30% (Limited)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>89,700</td>
<td>1,2</td>
<td>89,700</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>87,400</td>
<td>1,1</td>
<td>87,400</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>55,500</td>
<td>-1,1</td>
<td>55,500</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>54,000</td>
<td>-1,3</td>
<td>54,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>58,380</td>
<td>-0,9</td>
<td>58,380</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>63,800</td>
<td>-0,5</td>
<td>63,800</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>73,500</td>
<td>0,2</td>
<td>73,500</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>76,700</td>
<td>0,4</td>
<td>76,700</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>58,000</td>
<td>-0,9</td>
<td>58,000</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>29,100</td>
<td>-3,1</td>
<td>29,100</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>78,600</td>
<td>0,5</td>
<td>78,600</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>55,870</td>
<td>-1,1</td>
<td>55,870</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>52,400</td>
<td>-1,4</td>
<td>52,400</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>91,400</td>
<td>1,3</td>
<td>91,400</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>73,200</td>
<td>0,2</td>
<td>73,200</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>61,800</td>
<td>-0,7</td>
<td>61,800</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>79,000</td>
<td>0,5</td>
<td>79,000</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>73,000</td>
<td>0,2</td>
<td>73,000</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>51,200</td>
<td>-1,5</td>
<td>51,200</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>52,200</td>
<td>-1,4</td>
<td>52,200</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>89,400</td>
<td>1,2</td>
<td>89,400</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>71,300</td>
<td>0,1</td>
<td>71,300</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>81,030</td>
<td>0,7</td>
<td>81,030</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>75,900</td>
<td>0,3</td>
<td>75,900</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>80,000</td>
<td>0,6</td>
<td>80,000</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>70,000</td>
<td>0,0</td>
<td>70,000</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>70,524</td>
<td>0,0</td>
<td>70,524</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>56,400</td>
<td>-1,1</td>
<td>56,400</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>67,000</td>
<td>0,3</td>
<td>67,000</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>75,700</td>
<td>0,3</td>
<td>75,700</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>66,200</td>
<td>-0,3</td>
<td>66,200</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>94,100</td>
<td>1,5</td>
<td>94,100</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>63,000</td>
<td>-0,6</td>
<td>63,000</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>97,920</td>
<td>1,7</td>
<td>97,920</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>76,969</td>
<td>0,4</td>
<td>76,969</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>75,016</td>
<td>0,3</td>
<td>75,016</td>
<td></td>
</tr>
</tbody>
</table>
### Einzeldarstellung

<table>
<thead>
<tr>
<th>Probe:</th>
<th>PROBE_1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vergleich-STD (SR):</td>
<td>19,418 µg/l</td>
</tr>
<tr>
<td>Merkmal:</td>
<td>meta-Xylool</td>
</tr>
<tr>
<td>Rel. Vergleich-STD (VR):</td>
<td>27,21%</td>
</tr>
<tr>
<td>Methode:</td>
<td>DIN 38402 A45</td>
</tr>
<tr>
<td>Rel. Soll-STD:</td>
<td>25,00% (Limited)</td>
</tr>
<tr>
<td>Anzahl Labore:</td>
<td>36</td>
</tr>
<tr>
<td>Toleranzbereich:</td>
<td>38,320 - 113,808 µg/l (</td>
</tr>
<tr>
<td>Sollwert:</td>
<td>71,373 µg/l (empirischer Wert)</td>
</tr>
</tbody>
</table>

![Graph showing experimental data and tolerance limits](image-url)
**Probe:** PROBE_1  
**Vergleich-STD (SR):** 19,418 µg/l  
**Merkmal:** meta-Xylool  
**Rel. Vergleich-STD (VR):** 27,21%  
**Methode:** DIN 38402 A45  
**Rel. Soll-STD:** 25,00% (Limited)  
**Toleranzbereich:** 38,320 - 113,808 µg/l (|Zu-Score| <= 2,0)  

### Laborcode  
<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>67,800</td>
<td>-0,2</td>
<td></td>
<td>67,800</td>
</tr>
<tr>
<td>009</td>
<td>62,500</td>
<td>-0,6</td>
<td></td>
<td>62,500</td>
</tr>
<tr>
<td>010</td>
<td>82,300</td>
<td>0,5</td>
<td></td>
<td>82,300</td>
</tr>
<tr>
<td>015</td>
<td>89,500</td>
<td>0,9</td>
<td></td>
<td>89,500</td>
</tr>
<tr>
<td>016</td>
<td>23,280</td>
<td>-3,0</td>
<td></td>
<td>23,280</td>
</tr>
<tr>
<td>035</td>
<td>104,000</td>
<td>1,6</td>
<td></td>
<td>104,000</td>
</tr>
<tr>
<td>036</td>
<td>112,000</td>
<td>2,0</td>
<td></td>
<td>112,000</td>
</tr>
<tr>
<td>046</td>
<td>60,300</td>
<td>-0,7</td>
<td></td>
<td>60,300</td>
</tr>
<tr>
<td>058</td>
<td>93,000</td>
<td>1,0</td>
<td></td>
<td>93,000</td>
</tr>
<tr>
<td>060</td>
<td>63,500</td>
<td>-0,5</td>
<td></td>
<td>63,500</td>
</tr>
<tr>
<td>062</td>
<td>58,400</td>
<td>-0,7</td>
<td></td>
<td>58,400</td>
</tr>
<tr>
<td>065</td>
<td>95,150</td>
<td>1,1</td>
<td></td>
<td>95,150</td>
</tr>
<tr>
<td>067</td>
<td>90,700</td>
<td>0,9</td>
<td></td>
<td>90,700</td>
</tr>
<tr>
<td>068</td>
<td>65,300</td>
<td>-0,4</td>
<td></td>
<td>65,300</td>
</tr>
<tr>
<td>072</td>
<td>55,100</td>
<td>-1,0</td>
<td></td>
<td>55,100</td>
</tr>
<tr>
<td>084</td>
<td>98,000</td>
<td>1,3</td>
<td></td>
<td>98,000</td>
</tr>
<tr>
<td>085</td>
<td>69,000</td>
<td>-0,1</td>
<td></td>
<td>69,000</td>
</tr>
<tr>
<td>089</td>
<td>56,600</td>
<td>-0,9</td>
<td></td>
<td>56,600</td>
</tr>
<tr>
<td>097</td>
<td>87,500</td>
<td>0,8</td>
<td></td>
<td>87,500</td>
</tr>
<tr>
<td>105</td>
<td>92,700</td>
<td>1,0</td>
<td></td>
<td>92,700</td>
</tr>
<tr>
<td>110</td>
<td>69,200</td>
<td>-0,1</td>
<td></td>
<td>69,200</td>
</tr>
<tr>
<td>115</td>
<td>59,800</td>
<td>-0,7</td>
<td></td>
<td>59,800</td>
</tr>
<tr>
<td>124</td>
<td>62,810</td>
<td>-0,5</td>
<td></td>
<td>62,810</td>
</tr>
<tr>
<td>131</td>
<td>67,700</td>
<td>-0,2</td>
<td></td>
<td>67,700</td>
</tr>
<tr>
<td>134</td>
<td>69,500</td>
<td>-0,1</td>
<td></td>
<td>69,500</td>
</tr>
<tr>
<td>140</td>
<td>53,900</td>
<td>-1,1</td>
<td></td>
<td>53,900</td>
</tr>
<tr>
<td>151</td>
<td>57,802</td>
<td>-0,8</td>
<td></td>
<td>57,802</td>
</tr>
<tr>
<td>153</td>
<td>42,100</td>
<td>-1,8</td>
<td></td>
<td>42,100</td>
</tr>
<tr>
<td>158</td>
<td>125,000</td>
<td>2,6</td>
<td></td>
<td>125,000</td>
</tr>
<tr>
<td>162</td>
<td>54,900</td>
<td>-1,0</td>
<td></td>
<td>54,900</td>
</tr>
<tr>
<td>164</td>
<td>102,000</td>
<td>1,5</td>
<td></td>
<td>102,000</td>
</tr>
<tr>
<td>178</td>
<td>71,900</td>
<td>0,0</td>
<td></td>
<td>71,900</td>
</tr>
<tr>
<td>184</td>
<td>44,700</td>
<td>-1,7</td>
<td></td>
<td>44,700</td>
</tr>
<tr>
<td>186</td>
<td>75,790</td>
<td>0,2</td>
<td></td>
<td>75,790</td>
</tr>
<tr>
<td>188</td>
<td>64,348</td>
<td>-0,4</td>
<td></td>
<td>64,348</td>
</tr>
<tr>
<td>194</td>
<td>39,458</td>
<td>-2,0</td>
<td></td>
<td>39,458</td>
</tr>
</tbody>
</table>

---

Institut für Hygiene und Umwelt Hamburg  
**PROLab**  

---

Seite 24 von 163
BTXELHKW in Abwasser - 49. Länderübergreifender Ringversuch

**Einzeldarstellung**

Probe: PROBE_1
Merkmal: 1,1,1-Trichlorethan
Methode: DIN 38402 A45
Anzahl Labore: 36
Sollwert: 136,341 µg/l (empirischer Wert)

Vergleich-STD (SR): 23,977 µg/l
Rel. Vergleich-STD (VR): 17,59%
Rel. Soll-STD: 17,59% (Limited)
Toleranzbereich: 90,791 - 190,634 µg/l (|Zu-Score| <= 2,0)

PROLab

Institut für Hygiene und Umwelt Hamburg

PROLab
EinzelDarstellung Tabelle

<table>
<thead>
<tr>
<th>Probe: PROBE_1</th>
<th>Vergleich-STD (SR): 23,977 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal: 1,1,1-Trichlorethan</td>
<td>Rel. Vergleich-STD (VR): 17,59%</td>
</tr>
<tr>
<td>Methode: DIN 38402 A45</td>
<td>Toleranzbereich: 90,791 - 190,634 µg/l (</td>
</tr>
<tr>
<td>Anzahl Labore: 36</td>
<td>Rel. Soll-STD: 17,59% (Limited)</td>
</tr>
<tr>
<td>Sollwert: 136,341 µg/l (empirischer Wert)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>134,000</td>
<td>-0,1</td>
<td>134,000</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>152,000</td>
<td>0,6</td>
<td>152,000</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>145,000</td>
<td>0,3</td>
<td>145,000</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>147,000</td>
<td>0,4</td>
<td>147,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>117,880</td>
<td>-0,8</td>
<td>117,880</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>106,000</td>
<td>-1,4</td>
<td>106,000</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>162,000</td>
<td>1,0</td>
<td>162,000</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>134,000</td>
<td>-0,1</td>
<td>134,000</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>146,400</td>
<td>0,4</td>
<td>146,400</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>122,000</td>
<td>-0,6</td>
<td>122,000</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>136,000</td>
<td>0,0</td>
<td>136,000</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>148,000</td>
<td>0,4</td>
<td>148,000</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>186,000</td>
<td>1,9</td>
<td>186,000</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>101,000</td>
<td>-1,6</td>
<td>101,000</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>133,000</td>
<td>-0,2</td>
<td>133,000</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>159,000</td>
<td>0,9</td>
<td>159,000</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>118,500</td>
<td>-1,2</td>
<td>118,500</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>128,000</td>
<td>-0,4</td>
<td>128,000</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>130,000</td>
<td>-0,3</td>
<td>130,000</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>142,000</td>
<td>0,2</td>
<td>142,000</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>124,000</td>
<td>-0,6</td>
<td>124,000</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>127,520</td>
<td>-0,4</td>
<td>127,520</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>142,000</td>
<td>0,2</td>
<td>142,000</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>138,000</td>
<td>0,1</td>
<td>138,000</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>116,000</td>
<td>-0,9</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>131,091</td>
<td>-0,2</td>
<td>131,091</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>116,000</td>
<td>-0,9</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>203,000</td>
<td>2,5</td>
<td>203,000</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>123,000</td>
<td>-0,6</td>
<td>123,000</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>167,000</td>
<td>1,2</td>
<td>167,000</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>161,000</td>
<td>0,9</td>
<td>161,000</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>71,200</td>
<td>-2,9</td>
<td>71,200</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>172,500</td>
<td>1,4</td>
<td>172,500</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>122,815</td>
<td>-0,6</td>
<td>122,815</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>151,790</td>
<td>0,6</td>
<td>151,790</td>
<td></td>
</tr>
</tbody>
</table>
### Einzeldarstellung

<table>
<thead>
<tr>
<th>Probe</th>
<th>PROBE_1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vergleich-STD (SR):</td>
<td>22,513 µg/l</td>
</tr>
<tr>
<td>Merkmal:</td>
<td>Tetrachlorethen</td>
</tr>
<tr>
<td>Methode:</td>
<td>DIN 38402 A45</td>
</tr>
<tr>
<td>Anzahl Labore:</td>
<td>36</td>
</tr>
<tr>
<td>Sollwert:</td>
<td>110,161 µg/l (empirischer Wert)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Probe</th>
<th>PROBE_1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vergleich-STD (VR):</td>
<td>22,513 µg/l</td>
</tr>
<tr>
<td>Rel. Vergleich-STD (VR):</td>
<td>20,44%</td>
</tr>
<tr>
<td>Toleranzbereich:</td>
<td>67,824 - 162,082 µg/l (</td>
</tr>
<tr>
<td>Rel. Soll-STD:</td>
<td>20,44% (Limited)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>184</td>
</tr>
<tr>
<td>183</td>
</tr>
<tr>
<td>182</td>
</tr>
<tr>
<td>181</td>
</tr>
<tr>
<td>180</td>
</tr>
<tr>
<td>179</td>
</tr>
<tr>
<td>178</td>
</tr>
<tr>
<td>177</td>
</tr>
<tr>
<td>176</td>
</tr>
<tr>
<td>175</td>
</tr>
<tr>
<td>174</td>
</tr>
<tr>
<td>173</td>
</tr>
<tr>
<td>172</td>
</tr>
<tr>
<td>171</td>
</tr>
<tr>
<td>170</td>
</tr>
<tr>
<td>169</td>
</tr>
<tr>
<td>168</td>
</tr>
<tr>
<td>167</td>
</tr>
<tr>
<td>166</td>
</tr>
<tr>
<td>165</td>
</tr>
<tr>
<td>164</td>
</tr>
<tr>
<td>163</td>
</tr>
<tr>
<td>162</td>
</tr>
<tr>
<td>161</td>
</tr>
<tr>
<td>160</td>
</tr>
<tr>
<td>159</td>
</tr>
<tr>
<td>158</td>
</tr>
<tr>
<td>157</td>
</tr>
<tr>
<td>156</td>
</tr>
<tr>
<td>155</td>
</tr>
<tr>
<td>154</td>
</tr>
<tr>
<td>153</td>
</tr>
<tr>
<td>152</td>
</tr>
<tr>
<td>151</td>
</tr>
<tr>
<td>150</td>
</tr>
<tr>
<td>149</td>
</tr>
<tr>
<td>148</td>
</tr>
<tr>
<td>147</td>
</tr>
<tr>
<td>146</td>
</tr>
<tr>
<td>145</td>
</tr>
<tr>
<td>144</td>
</tr>
<tr>
<td>143</td>
</tr>
<tr>
<td>142</td>
</tr>
<tr>
<td>141</td>
</tr>
<tr>
<td>140</td>
</tr>
<tr>
<td>139</td>
</tr>
<tr>
<td>138</td>
</tr>
<tr>
<td>137</td>
</tr>
<tr>
<td>136</td>
</tr>
<tr>
<td>135</td>
</tr>
<tr>
<td>134</td>
</tr>
<tr>
<td>133</td>
</tr>
<tr>
<td>132</td>
</tr>
<tr>
<td>131</td>
</tr>
<tr>
<td>130</td>
</tr>
<tr>
<td>129</td>
</tr>
<tr>
<td>128</td>
</tr>
<tr>
<td>127</td>
</tr>
<tr>
<td>126</td>
</tr>
<tr>
<td>125</td>
</tr>
<tr>
<td>124</td>
</tr>
<tr>
<td>123</td>
</tr>
<tr>
<td>122</td>
</tr>
<tr>
<td>121</td>
</tr>
<tr>
<td>120</td>
</tr>
<tr>
<td>119</td>
</tr>
<tr>
<td>118</td>
</tr>
<tr>
<td>117</td>
</tr>
<tr>
<td>116</td>
</tr>
<tr>
<td>115</td>
</tr>
<tr>
<td>114</td>
</tr>
<tr>
<td>113</td>
</tr>
<tr>
<td>112</td>
</tr>
<tr>
<td>111</td>
</tr>
<tr>
<td>110</td>
</tr>
<tr>
<td>109</td>
</tr>
<tr>
<td>108</td>
</tr>
<tr>
<td>107</td>
</tr>
<tr>
<td>106</td>
</tr>
<tr>
<td>105</td>
</tr>
<tr>
<td>104</td>
</tr>
<tr>
<td>103</td>
</tr>
<tr>
<td>102</td>
</tr>
<tr>
<td>101</td>
</tr>
<tr>
<td>100</td>
</tr>
<tr>
<td>99</td>
</tr>
<tr>
<td>98</td>
</tr>
<tr>
<td>97</td>
</tr>
<tr>
<td>96</td>
</tr>
<tr>
<td>95</td>
</tr>
<tr>
<td>94</td>
</tr>
<tr>
<td>93</td>
</tr>
<tr>
<td>92</td>
</tr>
<tr>
<td>91</td>
</tr>
<tr>
<td>90</td>
</tr>
<tr>
<td>89</td>
</tr>
<tr>
<td>88</td>
</tr>
<tr>
<td>87</td>
</tr>
<tr>
<td>86</td>
</tr>
<tr>
<td>85</td>
</tr>
<tr>
<td>84</td>
</tr>
<tr>
<td>83</td>
</tr>
<tr>
<td>82</td>
</tr>
<tr>
<td>81</td>
</tr>
<tr>
<td>80</td>
</tr>
<tr>
<td>79</td>
</tr>
<tr>
<td>78</td>
</tr>
<tr>
<td>77</td>
</tr>
<tr>
<td>76</td>
</tr>
<tr>
<td>75</td>
</tr>
<tr>
<td>74</td>
</tr>
<tr>
<td>73</td>
</tr>
<tr>
<td>72</td>
</tr>
<tr>
<td>71</td>
</tr>
<tr>
<td>70</td>
</tr>
<tr>
<td>69</td>
</tr>
<tr>
<td>68</td>
</tr>
<tr>
<td>67</td>
</tr>
<tr>
<td>66</td>
</tr>
<tr>
<td>65</td>
</tr>
<tr>
<td>64</td>
</tr>
<tr>
<td>63</td>
</tr>
<tr>
<td>62</td>
</tr>
<tr>
<td>61</td>
</tr>
<tr>
<td>60</td>
</tr>
<tr>
<td>59</td>
</tr>
<tr>
<td>58</td>
</tr>
<tr>
<td>57</td>
</tr>
<tr>
<td>56</td>
</tr>
<tr>
<td>55</td>
</tr>
<tr>
<td>54</td>
</tr>
<tr>
<td>53</td>
</tr>
<tr>
<td>52</td>
</tr>
<tr>
<td>51</td>
</tr>
<tr>
<td>50</td>
</tr>
<tr>
<td>49</td>
</tr>
<tr>
<td>48</td>
</tr>
<tr>
<td>47</td>
</tr>
<tr>
<td>46</td>
</tr>
<tr>
<td>45</td>
</tr>
<tr>
<td>44</td>
</tr>
<tr>
<td>43</td>
</tr>
<tr>
<td>42</td>
</tr>
<tr>
<td>41</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td>39</td>
</tr>
<tr>
<td>38</td>
</tr>
<tr>
<td>37</td>
</tr>
<tr>
<td>36</td>
</tr>
<tr>
<td>35</td>
</tr>
<tr>
<td>34</td>
</tr>
<tr>
<td>33</td>
</tr>
<tr>
<td>32</td>
</tr>
<tr>
<td>31</td>
</tr>
<tr>
<td>30</td>
</tr>
<tr>
<td>29</td>
</tr>
<tr>
<td>28</td>
</tr>
<tr>
<td>27</td>
</tr>
<tr>
<td>26</td>
</tr>
<tr>
<td>25</td>
</tr>
<tr>
<td>24</td>
</tr>
<tr>
<td>23</td>
</tr>
<tr>
<td>22</td>
</tr>
<tr>
<td>21</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>19</td>
</tr>
<tr>
<td>18</td>
</tr>
<tr>
<td>17</td>
</tr>
<tr>
<td>16</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>13</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>11</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>
**Probe:** PROBE_1  
**Vergleich-STD (SR):** 22,513 µg/l

**Merkmal:** Tetrachlorethen  
**Rel. Vergleich-STD (VR):** 20,44%

**Methode:** DIN 38402 A45  
**Toleranzbereich:** 67,824 - 162,082 µg/l (|Zu-Score| ≤ 2,0)

**Anzahl Labore:** 36  
**Rel. Soll-STD:** 20,44% (Limited)

**Sollwert:** 110,161 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>99,100</td>
<td>-0,5</td>
<td>99,100</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>96,600</td>
<td>-0,7</td>
<td>96,600</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>122,000</td>
<td>0,5</td>
<td>122,000</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>124,000</td>
<td>0,5</td>
<td>124,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>92,710</td>
<td>-0,8</td>
<td>92,710</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>97,500</td>
<td>-0,6</td>
<td>97,500</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>138,000</td>
<td>1,1</td>
<td>138,000</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>103,000</td>
<td>-0,3</td>
<td>103,000</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>125,800</td>
<td>0,6</td>
<td>125,800</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>90,200</td>
<td>-1,0</td>
<td>90,200</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>109,000</td>
<td>-0,1</td>
<td>109,000</td>
<td></td>
</tr>
<tr>
<td>055</td>
<td>129,800</td>
<td>0,8</td>
<td>129,800</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>147,000</td>
<td>1,5</td>
<td>147,000</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>79,000</td>
<td>-1,5</td>
<td>79,000</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>110,000</td>
<td>0,0</td>
<td>110,000</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>136,000</td>
<td>1,0</td>
<td>136,000</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>91,200</td>
<td>-0,9</td>
<td>91,200</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>93,400</td>
<td>-0,8</td>
<td>93,400</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>116,000</td>
<td>0,2</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>120,000</td>
<td>0,4</td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>127,000</td>
<td>0,7</td>
<td>127,000</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>110,000</td>
<td>0,0</td>
<td>110,000</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>105,860</td>
<td>-0,2</td>
<td>105,860</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>108,000</td>
<td>-0,1</td>
<td>108,000</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>109,000</td>
<td>-0,1</td>
<td>109,000</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>91,700</td>
<td>-0,9</td>
<td>91,700</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>92,301</td>
<td>-0,9</td>
<td>92,301</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>65,500</td>
<td>-2,2</td>
<td>65,500</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>180,000</td>
<td>2,8</td>
<td>180,000</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>101,000</td>
<td>-0,4</td>
<td>101,000</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>142,000</td>
<td>1,3</td>
<td>142,000</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>120,000</td>
<td>0,4</td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>49,600</td>
<td>-2,9</td>
<td>49,600</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>148,900</td>
<td>1,5</td>
<td>148,900</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>100,320</td>
<td>-0,5</td>
<td>100,320</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>103,020</td>
<td>-0,3</td>
<td>103,020</td>
<td></td>
</tr>
</tbody>
</table>
### Einzeldarstellung

<table>
<thead>
<tr>
<th>Probe</th>
<th>PROBE_1</th>
<th>Vergleich-STD (SR): 6,084 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal</td>
<td>Toluol</td>
<td>Rel. Vergleich-STD (VR): 23,62%</td>
</tr>
<tr>
<td>Methode</td>
<td>DIN 38402 A45</td>
<td>Toleranzbereich: 14,436 - 40,088 µg/l (</td>
</tr>
<tr>
<td>Anzahl Labore</td>
<td>36</td>
<td>Rel. Soll-STD: 23,62% (Limited)</td>
</tr>
<tr>
<td>Sollwert</td>
<td>25,756 µg/l (empirischer Wert)</td>
<td></td>
</tr>
</tbody>
</table>

![Graph showing toluol levels across different laboratories with tolerances and comparison standards.](PROLab)
### Probe: PROBE_1

**Merkmal:** Toluol  
**Methode:** DIN 38402 A45  
**Anzahl Labore:** 36

#### Rel. Vergleich-STD (VR): 6,084 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>32,300</td>
<td>0,9</td>
<td>32,300</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>29,600</td>
<td>0,6</td>
<td>29,600</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>18,400</td>
<td>-1,3</td>
<td>18,400</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>19,000</td>
<td>-1,2</td>
<td>19,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>18,180</td>
<td>-1,4</td>
<td>18,180</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>21,800</td>
<td>-0,7</td>
<td>21,800</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>30,300</td>
<td>0,6</td>
<td>30,300</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>20,600</td>
<td>-0,9</td>
<td>20,600</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>28,600</td>
<td>0,4</td>
<td>28,600</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>28,500</td>
<td>0,9</td>
<td>28,500</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>17,300</td>
<td>-1,5</td>
<td>17,300</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>29,900</td>
<td>0,6</td>
<td>29,900</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>60,700</td>
<td>0,0</td>
<td>60,700</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>23,000</td>
<td>-0,5</td>
<td>23,000</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>29,900</td>
<td>0,6</td>
<td>29,900</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>26,700</td>
<td>0,1</td>
<td>26,700</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>18,180</td>
<td>-1,3</td>
<td>18,180</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>20,800</td>
<td>-0,9</td>
<td>20,800</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>30,000</td>
<td>0,6</td>
<td>30,000</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>26,700</td>
<td>0,1</td>
<td>26,700</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>29,800</td>
<td>0,6</td>
<td>29,800</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>29,400</td>
<td>0,5</td>
<td>29,400</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>25,400</td>
<td>-0,1</td>
<td>25,400</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>29,900</td>
<td>0,5</td>
<td>29,900</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>23,900</td>
<td>-0,3</td>
<td>23,900</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>26,700</td>
<td>0,1</td>
<td>26,700</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>27,000</td>
<td>0,2</td>
<td>27,000</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>25,800</td>
<td>0,0</td>
<td>25,800</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>33,300</td>
<td>1,1</td>
<td>33,300</td>
<td></td>
</tr>
<tr>
<td>181</td>
<td>21,200</td>
<td>-0,8</td>
<td>21,200</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>36,240</td>
<td>1,5</td>
<td>36,240</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>29,115</td>
<td>0,5</td>
<td>29,115</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>28,189</td>
<td>0,1</td>
<td>28,189</td>
<td></td>
</tr>
</tbody>
</table>

**Sollwert:** 25,756 µg/l (empirischer Wert)
**Einzeldarstellung**

<table>
<thead>
<tr>
<th>Probe</th>
<th>PROBE_1</th>
<th>Vergleich-STD (SR):</th>
<th>16,921 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal</td>
<td>Trichlorethen</td>
<td>Rel. Vergleich-STD (VR):</td>
<td>19,90%</td>
</tr>
<tr>
<td>Methode</td>
<td>DIN 38402 A45</td>
<td>Toleranzbereich:</td>
<td>53,134 - 123,901 µg/l (</td>
</tr>
<tr>
<td>Anzahl Labore</td>
<td>36</td>
<td>Rel. Soll-STD:</td>
<td>19,90% (Limited)</td>
</tr>
<tr>
<td>Sollwert</td>
<td>85,013 µg/l (empirischer Wert)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Diagram:**

- Toleranzgrenze
- Labor

**Institut für Hygiene und Umwelt Hamburg**

**PROLab**
### Probe: PROBE_1

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>91,500</td>
<td>0,3</td>
<td>91,500</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>89,000</td>
<td>0,2</td>
<td>89,000</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>72,800</td>
<td>-0,8</td>
<td>72,800</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>73,000</td>
<td>-0,8</td>
<td>73,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>33,970</td>
<td>-3,3</td>
<td>33,970</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>59,500</td>
<td>-1,6</td>
<td>59,500</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>83,200</td>
<td>-0,1</td>
<td>83,200</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>96,600</td>
<td>0,6</td>
<td>96,600</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>77,400</td>
<td>-0,5</td>
<td>77,400</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>90,200</td>
<td>0,3</td>
<td>90,200</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>98,100</td>
<td>0,7</td>
<td>98,100</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>81,670</td>
<td>-0,2</td>
<td>81,670</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>71,800</td>
<td>-0,8</td>
<td>71,800</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>71,100</td>
<td>-0,9</td>
<td>71,100</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>95,300</td>
<td>0,5</td>
<td>95,300</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>83,200</td>
<td>-0,1</td>
<td>83,200</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>90,900</td>
<td>0,3</td>
<td>90,900</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>84,200</td>
<td>-0,1</td>
<td>84,200</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>68,300</td>
<td>-1,1</td>
<td>68,300</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>67,100</td>
<td>-1,2</td>
<td>67,100</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>112,000</td>
<td>1,4</td>
<td>112,000</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>94,000</td>
<td>0,5</td>
<td>94,000</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>95,700</td>
<td>0,6</td>
<td>95,700</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>98,300</td>
<td>0,7</td>
<td>98,300</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>95,400</td>
<td>0,5</td>
<td>95,400</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>82,000</td>
<td>-0,2</td>
<td>82,000</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>85,144</td>
<td>0,0</td>
<td>85,144</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>81,900</td>
<td>-0,2</td>
<td>81,900</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>96,400</td>
<td>0,6</td>
<td>96,400</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>93,900</td>
<td>0,5</td>
<td>93,900</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>84,700</td>
<td>0,0</td>
<td>84,700</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>115,000</td>
<td>1,6</td>
<td>115,000</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>47,300</td>
<td>-2,4</td>
<td>47,300</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>116,600</td>
<td>1,7</td>
<td>116,600</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>72,277</td>
<td>-0,6</td>
<td>72,277</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>161,543</td>
<td>4,0</td>
<td>161,543</td>
<td></td>
</tr>
</tbody>
</table>

**Merkmal:** Trichlorethen  
**Methode:** DIN 38402 A45  
**Sollwert:** 85,013 µg/l (empirischer Wert)  

**Vergleich-STD (SR):** 16,921 µg/l  
**Rel. Vergleich-STD (VR):** 19,90%  
**Toleranzbereich:** 53,134 - 123,901 µg/l (|Zu-Score| <= 2,0)  
**Rel. Soll-STD:** 19,90% (Limited)

**Laborcode**  
**Messwert**  
**STD**  
**Zu-Score**
Probe 2
### Kennwerte – Probe 2

49. LÜRV BTXE/LHKW in Abwasser

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzol</td>
<td>36,717</td>
<td>9,179</td>
<td>12,893</td>
<td>25,00</td>
<td>35,11</td>
<td>19,714</td>
<td>58,547</td>
<td>6,9</td>
<td>40</td>
</tr>
<tr>
<td>Dichlormethan</td>
<td>160,273</td>
<td>40,068</td>
<td>58,533</td>
<td>25,00</td>
<td>36,52</td>
<td>86,051</td>
<td>255,561</td>
<td>7,7</td>
<td>35</td>
</tr>
<tr>
<td>Ethylbenzol</td>
<td>69,600</td>
<td>15,011</td>
<td>15,011</td>
<td>21,57</td>
<td>21,57</td>
<td>41,479</td>
<td>104,478</td>
<td>4,3</td>
<td>40</td>
</tr>
<tr>
<td>meta-Xylol</td>
<td>81,098</td>
<td>20,275</td>
<td>31,495</td>
<td>25,00</td>
<td>38,84</td>
<td>43,542</td>
<td>129,315</td>
<td>7,9</td>
<td>38</td>
</tr>
<tr>
<td>ortho-Xylol</td>
<td>34,383</td>
<td>8,596</td>
<td>10,969</td>
<td>25,00</td>
<td>31,90</td>
<td>18,46</td>
<td>54,825</td>
<td>6,3</td>
<td>40</td>
</tr>
<tr>
<td>1,1,1-Trichlorethan</td>
<td>139,335</td>
<td>34,834</td>
<td>41,694</td>
<td>25,00</td>
<td>29,92</td>
<td>74,809</td>
<td>222,176</td>
<td>6,1</td>
<td>36</td>
</tr>
<tr>
<td>Tetrachlorethen</td>
<td>118,033</td>
<td>29,508</td>
<td>32,105</td>
<td>25,00</td>
<td>27,20</td>
<td>63,372</td>
<td>188,209</td>
<td>5,5</td>
<td>37</td>
</tr>
<tr>
<td>Toluol</td>
<td>24,585</td>
<td>6,146</td>
<td>6,925</td>
<td>25,00</td>
<td>28,17</td>
<td>13,2</td>
<td>39,201</td>
<td>5,6</td>
<td>40</td>
</tr>
<tr>
<td>Trichlorethen</td>
<td>83,119</td>
<td>20,780</td>
<td>26,208</td>
<td>25,00</td>
<td>31,53</td>
<td>44,627</td>
<td>132,538</td>
<td>6,2</td>
<td>37</td>
</tr>
</tbody>
</table>
Übersicht zu-U-Scores

Scores für PROBE_2

Merkmale: ...
Einzeldarstellung der Parameter

Grafik und Tabelle
**Einzeldarstellung**

Probe: PROBE_2  
Vergleich-STD (SR): 12,893 µg/l

Merkmal: Benzol  
Rel. Vergleich-STD (VR): 35,11%

Methode: DIN 38402 A45  
Toleranzbereich: 19,714 - 58,547 µg/l (|Zu-Score| <= 2,0)

Anzahl Labore: 40  
Rel. Soll-STD: 25,00% (Limited)

Sollwert: 36,717 µg/l (empirischer Wert)
**BTX/LHKW in Abwasser - 49. Länderübergreifender Ringversuch**

**Probe:** PROBE_2  **Vergleich-STD (SR):** 12,893 µg/l

**Merkmal:** Benzol  **Rel. Vergleich-STD (VR):** 35,11%

**Methode:** DIN 38402 A45  **Toleranzbereich:** 19,714 - 58,547 µg/l (|Zu-Score| <= 2,0)

**Anzahl Labore:** 40  **Rel. Soll-STD:** 25,00% (Limited)

**Sollwert:** 36,717 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>54,000</td>
<td>1,6</td>
<td>54,000</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>27,830</td>
<td>-1,1</td>
<td>27,830</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>43,000</td>
<td>0,6</td>
<td>43,000</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>26,790</td>
<td>-1,2</td>
<td>26,790</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,057</td>
<td>-4,4</td>
<td>0,057</td>
<td></td>
</tr>
<tr>
<td>026</td>
<td>45,500</td>
<td>0,8</td>
<td>45,500</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>25,400</td>
<td>-1,4</td>
<td>25,400</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>59,700</td>
<td>2,2</td>
<td>59,700</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>44,400</td>
<td>0,7</td>
<td>44,400</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>201,300</td>
<td>15,5</td>
<td>201,300</td>
<td></td>
</tr>
<tr>
<td>043</td>
<td>30,100</td>
<td>-0,8</td>
<td>30,100</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>42,800</td>
<td>0,6</td>
<td>42,800</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>32,610</td>
<td>-0,5</td>
<td>32,610</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>45,000</td>
<td>0,8</td>
<td>45,000</td>
<td></td>
</tr>
<tr>
<td>064</td>
<td>59,200</td>
<td>2,1</td>
<td>59,200</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>28,600</td>
<td>-1,0</td>
<td>28,600</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>28,700</td>
<td>-1,0</td>
<td>28,700</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>92,900</td>
<td>5,3</td>
<td>92,900</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>29,200</td>
<td>-0,9</td>
<td>29,200</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>43,900</td>
<td>0,7</td>
<td>43,900</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>43,800</td>
<td>0,7</td>
<td>43,800</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>29,600</td>
<td>-0,9</td>
<td>29,600</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>27,500</td>
<td>-1,1</td>
<td>27,500</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>32,300</td>
<td>-0,5</td>
<td>32,300</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>43,630</td>
<td>0,6</td>
<td>43,630</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>64,800</td>
<td>2,6</td>
<td>64,800</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>36,600</td>
<td>0,0</td>
<td>36,600</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>17,900</td>
<td>-2,3</td>
<td>17,900</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>33,800</td>
<td>-0,4</td>
<td>33,800</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>62,100</td>
<td>2,4</td>
<td>62,100</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>34,000</td>
<td>-0,3</td>
<td>34,000</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>23,450</td>
<td>-1,6</td>
<td>23,450</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>36,100</td>
<td>-0,1</td>
<td>36,100</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>32,900</td>
<td>-0,5</td>
<td>32,900</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>38,800</td>
<td>0,2</td>
<td>38,800</td>
<td></td>
</tr>
<tr>
<td>181</td>
<td>29,500</td>
<td>-0,9</td>
<td>29,500</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>31,500</td>
<td>-0,6</td>
<td>31,500</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>35,700</td>
<td>-0,1</td>
<td>35,700</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>40,240</td>
<td>0,3</td>
<td>40,240</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>124,000</td>
<td>8,2</td>
<td>124,000</td>
<td></td>
</tr>
</tbody>
</table>
**Einzeldarstellung**

<table>
<thead>
<tr>
<th>Probe:</th>
<th>PROBE_2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vergleich-STD (SR):</td>
<td>58,533 µg/l</td>
</tr>
<tr>
<td>Merkmal:</td>
<td>Dichlormethan</td>
</tr>
<tr>
<td>Rel. Vergleich-STD (VR):</td>
<td>36,52%</td>
</tr>
<tr>
<td>Methode:</td>
<td>DIN 38402 A45</td>
</tr>
<tr>
<td>Rel. Soll-STD:</td>
<td>25,00% (Limited)</td>
</tr>
<tr>
<td>Anzahl Labore:</td>
<td>35</td>
</tr>
<tr>
<td>Sollwert:</td>
<td>160,273 µg/l (empirischer Wert)</td>
</tr>
<tr>
<td>Toleranzbereich:</td>
<td>86,051 - 255,561 µg/l (</td>
</tr>
</tbody>
</table>

![Graph showing the data distribution with tolerance limits and mean values.](image)

Institut für Hygiene und Umwelt Hamburg

PROLab
### Probename: PROBE_2

#### Merkmal: Dichlormethan

#### Methode: DIN 38402 A45

#### Anzahl Labore: 35

#### Sollwert: 160,273 µg/l (empirischer Wert)

#### Rel. Vergleich-STD (VR): 36,52%

#### Rel. Soll-STD: 25,00% (Limited)

#### Toleranzbereich: 86,051 - 255,561 µg/l (|Zu-Score| <= 2,0)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>004</td>
<td>116,340</td>
<td></td>
<td>-1,2</td>
<td>116,340</td>
</tr>
<tr>
<td>017</td>
<td>180,000</td>
<td>0,4</td>
<td>180,000</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>101,600</td>
<td>-1,6</td>
<td>101,600</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,148</td>
<td>-4,4</td>
<td>0,148</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>116,000</td>
<td>-1,2</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>260,000</td>
<td>2,1</td>
<td>260,000</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>184,000</td>
<td>0,5</td>
<td>184,000</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>172,900</td>
<td>0,3</td>
<td>172,900</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>180,000</td>
<td>0,4</td>
<td>180,000</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>141,300</td>
<td>-0,5</td>
<td>141,300</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>182,000</td>
<td>0,5</td>
<td>182,000</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>103,000</td>
<td>-1,6</td>
<td>103,000</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>75,900</td>
<td>-2,3</td>
<td>75,900</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>345,000</td>
<td>4,0</td>
<td>345,000</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>131,800</td>
<td>-0,8</td>
<td>131,800</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>166,000</td>
<td>0,1</td>
<td>166,000</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>213,000</td>
<td>1,1</td>
<td>213,000</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>116,000</td>
<td>-1,2</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>115,000</td>
<td>-1,3</td>
<td>115,000</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>136,900</td>
<td>-0,6</td>
<td>136,900</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>235,450</td>
<td>1,6</td>
<td>235,450</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>257,000</td>
<td>2,1</td>
<td>257,000</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>143,000</td>
<td>-0,5</td>
<td>143,000</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>117,000</td>
<td>-1,2</td>
<td>117,000</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>149,000</td>
<td>-0,3</td>
<td>149,000</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>239,000</td>
<td>1,7</td>
<td>239,000</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>141,000</td>
<td>-0,5</td>
<td>141,000</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>209,000</td>
<td>1,0</td>
<td>209,000</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>143,000</td>
<td>-0,5</td>
<td>143,000</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>179,000</td>
<td>0,4</td>
<td>179,000</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>169,000</td>
<td>0,2</td>
<td>169,000</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>117,000</td>
<td>-1,2</td>
<td>117,000</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>147,100</td>
<td>-0,4</td>
<td>147,100</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>147,750</td>
<td>-0,3</td>
<td>147,750</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>350,000</td>
<td>4,1</td>
<td>350,000</td>
<td></td>
</tr>
</tbody>
</table>
Einzeldarstellung

Probe: PROBE_2  Vergleich-STD (SR): 15,011 µg/l
Merkmale: Ethylbenzol  Rel. Vergleich-STD (VR): 21,57%
Methode: DIN 38402 A45  Toleranzbereich: 41,479 - 104,478 µg/l (|Zu-Score| <= 2,0)
Anzahl Labore: 40  Rel. Soll-STD: 21,57% (Limited)
Sollwert: 69,600 µg/l (empirischer Wert)
BTXe/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

Probe: PROBE_2
Merkmal: Ethylbenzol
Methode: DIN 38402 A45
Anzahl Labore: 40
Sollwert: 69,600 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>81,100</td>
<td>0.7</td>
<td>81,100</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>60,360</td>
<td>-0.7</td>
<td>60,360</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>73,400</td>
<td>0.2</td>
<td>73,400</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>59,180</td>
<td>-0.8</td>
<td>59,180</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,304</td>
<td>-5.1</td>
<td>0,304</td>
<td></td>
</tr>
<tr>
<td>026</td>
<td>77,000</td>
<td>0.4</td>
<td>77,000</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>47,900</td>
<td>-1.6</td>
<td>47,900</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>101,000</td>
<td>1.8</td>
<td>101,000</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>68,200</td>
<td>-0.1</td>
<td>68,200</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>117,300</td>
<td>2.8</td>
<td>117,300</td>
<td></td>
</tr>
<tr>
<td>043</td>
<td>58,200</td>
<td>-0.8</td>
<td>58,200</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>74,300</td>
<td>0.3</td>
<td>74,300</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>67,510</td>
<td>-0.2</td>
<td>67,510</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>77,200</td>
<td>0.4</td>
<td>77,200</td>
<td></td>
</tr>
<tr>
<td>064</td>
<td>101,000</td>
<td>1.8</td>
<td>101,000</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>56,400</td>
<td>-1.0</td>
<td>56,400</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>60,800</td>
<td>-0.6</td>
<td>60,800</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>143,000</td>
<td>4.3</td>
<td>143,000</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>69,200</td>
<td>0.0</td>
<td>69,200</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>78,500</td>
<td>0.5</td>
<td>78,500</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>75,200</td>
<td>0.3</td>
<td>75,200</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>63,400</td>
<td>-0.5</td>
<td>63,400</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>59,500</td>
<td>-0.7</td>
<td>59,500</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>68,300</td>
<td>-0.1</td>
<td>68,300</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>61,270</td>
<td>-0.6</td>
<td>61,270</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>92,500</td>
<td>1.3</td>
<td>92,500</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>64,800</td>
<td>-0.3</td>
<td>64,800</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>38,000</td>
<td>-2.3</td>
<td>38,000</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>61,000</td>
<td>-0.6</td>
<td>61,000</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>91,500</td>
<td>1.3</td>
<td>91,500</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>65,700</td>
<td>-0.3</td>
<td>65,700</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>55,800</td>
<td>-1.0</td>
<td>55,800</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>74,100</td>
<td>0.3</td>
<td>74,100</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>61,700</td>
<td>-0.6</td>
<td>61,700</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>70,400</td>
<td>0.0</td>
<td>70,400</td>
<td></td>
</tr>
<tr>
<td>181</td>
<td>62,200</td>
<td>-0.5</td>
<td>62,200</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>64,200</td>
<td>-0.4</td>
<td>64,200</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>71,000</td>
<td>0.1</td>
<td>71,000</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>82,990</td>
<td>0.8</td>
<td>82,990</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>187,000</td>
<td>6.9</td>
<td>187,000</td>
<td></td>
</tr>
</tbody>
</table>

Institut für Hygiene und Umwelt Hamburg
PROLab
**Einzeldarstellung**

<table>
<thead>
<tr>
<th>Probe</th>
<th>PROBE_2</th>
<th>Vergleich-STD (SR): 31,495 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal</td>
<td>meta-Xylol</td>
<td>Rel. Vergleich-STD (VR): 38,84%</td>
</tr>
<tr>
<td>Methode</td>
<td>DIN 38402 A45</td>
<td>Toleranzbereich: 43,542 - 129,315 µg/l (</td>
</tr>
<tr>
<td>Anzahl Labore</td>
<td>38</td>
<td>Rel. Soll-STD: 25,00% (Limited)</td>
</tr>
<tr>
<td>Sollwert</td>
<td>81,098 µg/l (empirischer Wert)</td>
<td></td>
</tr>
<tr>
<td>Laborcode</td>
<td>Labormittelwert</td>
<td>STD</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------</td>
<td>------</td>
</tr>
<tr>
<td>004</td>
<td>93,790</td>
<td>0,5</td>
</tr>
<tr>
<td>017</td>
<td>56,600</td>
<td>1,3</td>
</tr>
<tr>
<td>023</td>
<td>95,300</td>
<td>0,6</td>
</tr>
<tr>
<td>025</td>
<td>0,488</td>
<td>4,4</td>
</tr>
<tr>
<td>026</td>
<td>57,700</td>
<td>1,3</td>
</tr>
<tr>
<td>034</td>
<td>85,900</td>
<td>2,2</td>
</tr>
<tr>
<td>037</td>
<td>78,500</td>
<td>0,1</td>
</tr>
<tr>
<td>039</td>
<td>49,100</td>
<td>1,7</td>
</tr>
<tr>
<td>041</td>
<td>140,000</td>
<td>1,2</td>
</tr>
<tr>
<td>043</td>
<td>95,000</td>
<td>0,6</td>
</tr>
<tr>
<td>045</td>
<td>57,900</td>
<td>1,3</td>
</tr>
<tr>
<td>047</td>
<td>112,300</td>
<td>1,3</td>
</tr>
<tr>
<td>059</td>
<td>63,800</td>
<td>0,6</td>
</tr>
<tr>
<td>064</td>
<td>79,600</td>
<td>0,1</td>
</tr>
<tr>
<td>069</td>
<td>80,700</td>
<td>0,0</td>
</tr>
<tr>
<td>070</td>
<td>90,500</td>
<td>0,4</td>
</tr>
<tr>
<td>074</td>
<td>112,000</td>
<td>1,3</td>
</tr>
<tr>
<td>085</td>
<td>107,200</td>
<td>1,1</td>
</tr>
<tr>
<td>087</td>
<td>62,000</td>
<td>0,0</td>
</tr>
<tr>
<td>092</td>
<td>61,000</td>
<td>1,1</td>
</tr>
<tr>
<td>103</td>
<td>86,200</td>
<td>0,2</td>
</tr>
<tr>
<td>104</td>
<td>89,900</td>
<td>0,4</td>
</tr>
<tr>
<td>113</td>
<td>100,700</td>
<td>0,8</td>
</tr>
<tr>
<td>116</td>
<td>50,950</td>
<td>1,6</td>
</tr>
<tr>
<td>117</td>
<td>86,500</td>
<td>0,2</td>
</tr>
<tr>
<td>118</td>
<td>105,000</td>
<td>1,0</td>
</tr>
<tr>
<td>128</td>
<td>23,000</td>
<td>3,2</td>
</tr>
<tr>
<td>129</td>
<td>49,400</td>
<td>1,7</td>
</tr>
<tr>
<td>135</td>
<td>70,000</td>
<td>0,6</td>
</tr>
<tr>
<td>136</td>
<td>107,000</td>
<td>1,1</td>
</tr>
<tr>
<td>137</td>
<td>41,900</td>
<td>2,1</td>
</tr>
<tr>
<td>152</td>
<td>125,000</td>
<td>1,9</td>
</tr>
<tr>
<td>156</td>
<td>44,500</td>
<td>2,0</td>
</tr>
<tr>
<td>157</td>
<td>52,300</td>
<td>1,6</td>
</tr>
<tr>
<td>181</td>
<td>96,800</td>
<td>0,7</td>
</tr>
<tr>
<td>182</td>
<td>97,200</td>
<td>0,7</td>
</tr>
<tr>
<td>190</td>
<td>115,100</td>
<td>1,4</td>
</tr>
<tr>
<td>191</td>
<td></td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>138,000</td>
<td>2,4</td>
</tr>
</tbody>
</table>
Einzeldarstellung

Probe: PROBE_2
Merkmal: ortho-Xylol
Methode: DIN 38402 A45
Anzahl Labore: 40

Vergleich-STD (SR): 10,969 µg/l
Rel. Vergleich-STD (VR): 31,90%
Rel. Soll-STD: 25,00% (Limited)

Sollwert: 34,383 µg/l (empirischer Wert)

Toleranzbereich: 18,460 - 54,825 µg/l (|Zu-Score| <= 2,0)

PROLab Institut für Hygiene und Umwelt Hamburg
**BTXE/LHKW in Abwasser – 49. Länderübergreifender Ringversuch**

- **Probe:** PROBE_2
- **Merkmal:** ortho-Xylol
- **Methode:** DIN 38402 A45
- **Anzahl Labore:** 40
- **Sollwert:** 34,383 µg/l (empirischer Wert)

### Laborcode | Labormittelwert | STD | Zu-Score | Messwert
--- | --- | --- | --- | ---
001 | 20,500 | -1,8 | 20,500 | 20,500
004 | 45,890 | 1,2 | 45,890 | 45,890
017 | 23,400 | -1,4 | 23,400 | 23,400
023 | 46,600 | 1,2 | 46,600 | 46,600
025 | 0,238 | -4,4 | 0,238 | 0,238
026 | 19,900 | -1,9 | 19,900 | 19,900
034 | 40,300 | 0,6 | 40,300 | 40,300
037 | 24,100 | -1,3 | 24,100 | 24,100
039 | 19,700 | -1,9 | 19,700 | 19,700
041 | 48,200 | 1,4 | 48,200 | 48,200
043 | 47,200 | 1,3 | 47,200 | 47,200
045 | 21,900 | -1,6 | 21,900 | 21,900
047 | 52,570 | 1,8 | 52,570 | 52,570
059 | 20,000 | -1,9 | 20,000 | 20,000
064 | 26,400 | -1,0 | 26,400 | 26,400
069 | 44,500 | 1,0 | 44,500 | 44,500
070 | 40,800 | 0,6 | 40,800 | 40,800
074 | 32,500 | -0,2 | 32,500 | 32,500
086 | 48,100 | 1,4 | 48,100 | 48,100
087 | 22,300 | -1,6 | 22,300 | 22,300
092 | 20,100 | -1,8 | 20,100 | 20,100
103 | 45,700 | 1,1 | 45,700 | 45,700
104 | 42,500 | 0,8 | 42,500 | 42,500
113 | 51,900 | 1,8 | 51,900 | 51,900
116 | 18,180 | -2,1 | 18,180 | 18,180
117 | 27,000 | -1,0 | 27,000 | 27,000
118 | 50,700 | 1,6 | 50,700 | 50,700
128 | 5,930 | -3,7 | 5,930 | 5,930
129 | 18,400 | -2,1 | 18,400 | 18,400
135 | 24,100 | -1,3 | 24,100 | 24,100
136 | 50,500 | 1,6 | 50,500 | 50,500
137 | 16,800 | -2,3 | 16,800 | 16,800
152 | 54,700 | 2,0 | 54,700 | 54,700
156 | 18,000 | -2,1 | 18,000 | 18,000
157 | 17,600 | -2,2 | 17,600 | 17,600
161 | 46,400 | 1,2 | 46,400 | 46,400
182 | 48,900 | 1,5 | 48,900 | 48,900
190 | 53,200 | 1,9 | 53,200 | 53,200
191 | 65,680 | 3,1 | 65,680 | 65,680
195 | 45,400 | 1,1 | 45,400 | 45,400

**Abschlussbericht Vs. 0**

**PROLabInstitut für Hygiene und Umwelt Hamburg**
Einzeldarstellung

Probe: PROBE_2  
Vergleich-STD (SR): 41,694 µg/l

Merkmal: 1,1,1-Trichlorethan  
Rel. Vergleich-STD (VR): 29,92%

Methode: DIN 38402 A45  
Toleranzbereich: 74,809 - 222,176 µg/l (|Zu-Score| <= 2,0)

Anzahl Labore: 36  
Rel. Soll-STD: 25,00% (Limited)

Sollwert: 139,335 µg/l (empirischer Wert)

Institut für Hygiene und Umwelt Hamburg PROLab
### BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

**Probe:** PROBE_2  
**Vergleich-STD (SR):** 41,694 µg/l

**Merkmal:** 1,1,1-Trichlorethan  
**Rel. Vergleich-STD (VR):** 29,92%

**Methode:** DIN 38402 A45  
**Rel. Soll-STD:** 74,809 - 222,176 µg/l ([|Zu-Score| <= 2,0])

**Anzahl Labore:** 36  
**Rel. Soll-STD (Limited):** 25,00%

**Sollwert:** 139,335 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>004</td>
<td>156,030</td>
<td>0.4</td>
<td>156,030</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>136,000</td>
<td>-0.1</td>
<td>136,000</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>147,900</td>
<td>0.2</td>
<td>147,900</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,349</td>
<td>-4,4</td>
<td>0,349</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>126,000</td>
<td>-0.4</td>
<td>126,000</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>147,000</td>
<td>0.2</td>
<td>147,000</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>143,000</td>
<td>0.1</td>
<td>143,000</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>29,950</td>
<td>-3.5</td>
<td>29,950</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>128,000</td>
<td>-0.4</td>
<td>128,000</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>179,300</td>
<td>1.0</td>
<td>179,300</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>132,000</td>
<td>-0.2</td>
<td>132,000</td>
<td></td>
</tr>
<tr>
<td>066</td>
<td>111,000</td>
<td>-0.9</td>
<td>111,000</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>121,000</td>
<td>-0.6</td>
<td>121,000</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>117,000</td>
<td>-0.7</td>
<td>117,000</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>320,000</td>
<td>4.5</td>
<td>320,000</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>156,800</td>
<td>0.4</td>
<td>156,800</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>120,000</td>
<td>-0.6</td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>160,000</td>
<td>0.5</td>
<td>160,000</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>140,000</td>
<td>0.0</td>
<td>140,000</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>158,000</td>
<td>0.5</td>
<td>158,000</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>164,800</td>
<td>0.6</td>
<td>164,800</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>110,620</td>
<td>-0.8</td>
<td>110,620</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>178,000</td>
<td>1.0</td>
<td>178,000</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>175,000</td>
<td>0.9</td>
<td>175,000</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>72,800</td>
<td>-2.1</td>
<td>72,800</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>94,700</td>
<td>-1.4</td>
<td>94,700</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>138,000</td>
<td>0.0</td>
<td>138,000</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>197,000</td>
<td>1.4</td>
<td>197,000</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>148,000</td>
<td>0.2</td>
<td>148,000</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>190,000</td>
<td>1.3</td>
<td>190,000</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>98,800</td>
<td>-1.3</td>
<td>98,800</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>117,000</td>
<td>-0.7</td>
<td>117,000</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>136,000</td>
<td>-0.1</td>
<td>136,000</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>189,200</td>
<td>1.2</td>
<td>189,200</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>172,000</td>
<td>0.8</td>
<td>172,000</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>348,000</td>
<td>5.2</td>
<td>348,000</td>
<td></td>
</tr>
</tbody>
</table>
**Einzeldarstellung**

**Probe:** PROBE_2  
**Vergleich-STD (SR):** 32,105 µg/l

**Merkmal:** Tetrachlorethen  
**Rel. Vergleich-STD (VR):** 27,20%

**Methode:** DIN 38402 A45  
**Rel. Soll-STD:** 25,00% (Limited)

**Anzahl Labore:** 37  
**Toleranzbereich:** 63,372 - 188,209 µg/l (|Zu-Score| <= 2,0)

**Sollwert:** 118,033 µg/l (empirischer Wert)
**BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch**

**Probe:** PROBE_2  
**Vergleich-STD (SR):** 32,105 µg/l  
**Rel. Vergleich-STD (VR):** 27,20%  
**Methode:** DIN 38402 A45  
**Toleranzbereich:** 63,372 - 188,209 µg/l (|Zu-Score| <= 2,0)  
**Rel. Soll-STD:** 25,00% (Limited)  
**Anzahl Labore:** 37  
**Rel. Soll-STD:** 25,00% (Limited)  
**Sollwert:** 118,033 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>129,000</td>
<td>0.3</td>
<td>129,000</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>127,540</td>
<td>0.3</td>
<td>127,540</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>117,060</td>
<td>0</td>
<td>117,060</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>125,800</td>
<td>0.2</td>
<td>125,600</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0.581</td>
<td>-4.4</td>
<td>0.581</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>100,000</td>
<td>-0.7</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>116,000</td>
<td>-0.1</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>118,000</td>
<td>0</td>
<td>118,000</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>83,840</td>
<td>-1.3</td>
<td>83,840</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>103,000</td>
<td>-0.6</td>
<td>103,000</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>163,900</td>
<td>1.3</td>
<td>163,900</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>103,000</td>
<td>-0.6</td>
<td>103,000</td>
<td></td>
</tr>
<tr>
<td>066</td>
<td>98,600</td>
<td>-0.7</td>
<td>98,600</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>102,000</td>
<td>-0.6</td>
<td>102,000</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>101,000</td>
<td>-0.6</td>
<td>101,000</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>232,000</td>
<td>3.3</td>
<td>232,000</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>135,000</td>
<td>0.5</td>
<td>135,000</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>99,800</td>
<td>-0.7</td>
<td>99,800</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>112,000</td>
<td>-0.2</td>
<td>112,000</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>122,000</td>
<td>0.1</td>
<td>122,000</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>130,000</td>
<td>0.3</td>
<td>130,000</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>146,700</td>
<td>0.8</td>
<td>146,700</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>90,170</td>
<td>-1.0</td>
<td>90,170</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>135,000</td>
<td>0.5</td>
<td>135,000</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>131,000</td>
<td>0.4</td>
<td>131,000</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>54,400</td>
<td>-2.4</td>
<td>54,400</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>78,200</td>
<td>-1.5</td>
<td>78,200</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>95,200</td>
<td>-0.9</td>
<td>95,200</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>160,000</td>
<td>1.2</td>
<td>160,000</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>103,000</td>
<td>-0.6</td>
<td>103,000</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>162,000</td>
<td>1.3</td>
<td>162,000</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>78,800</td>
<td>-1.5</td>
<td>78,800</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>102,000</td>
<td>-0.6</td>
<td>102,000</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>113,000</td>
<td>-0.2</td>
<td>113,000</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>160,700</td>
<td>1.2</td>
<td>160,700</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>158,750</td>
<td>1.2</td>
<td>158,750</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>156,000</td>
<td>1.1</td>
<td>156,000</td>
<td></td>
</tr>
</tbody>
</table>
**Einzeldarstellung**

Probe: PROBE_2  
Vergleich-STD (SR): 6,925 µg/l

Merkmal: Toluol  
Rel. Vergleich-STD (VR): 28,17%

Methode: DIN 38402 A45  
Toleranzbereich: 13,200 - 39,201 µg/l (|Zu-Score| <= 2,0)

Anzahl Labore: 40  
Rel. Soll-STD: 25,00% (Limited)

Sollwert: 24,585 µg/l (empirischer Wert)
**Probe:** PROBE_2  
**Vergleich-STD (SR):** 6,625 µg/l  
**Rel. Vergleich-STD (VR):** 28,17%  
**Methode:** DIN 38402 A45  
**Toleranzbereich:** 13,200 - 39,201 µg/l  
**Anzahl Labore:** 40  
**Rel. Soll-STD:** 25,00%  

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>30,600</td>
<td>0,8</td>
<td>30,600</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>20,270</td>
<td>-0,8</td>
<td>20,270</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>30,600</td>
<td>0,8</td>
<td>30,600</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>18,680</td>
<td>-1,1</td>
<td>18,680</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,057</td>
<td>-4,4</td>
<td>0,057</td>
<td></td>
</tr>
<tr>
<td>026</td>
<td>27,800</td>
<td>0,5</td>
<td>27,800</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>19,700</td>
<td>-0,9</td>
<td>19,700</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>35,100</td>
<td>1,5</td>
<td>35,100</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>28,000</td>
<td>0,5</td>
<td>28,000</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>63,650</td>
<td>5,5</td>
<td>63,650</td>
<td></td>
</tr>
<tr>
<td>043</td>
<td>18,700</td>
<td>-1,1</td>
<td>18,700</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>28,100</td>
<td>0,5</td>
<td>28,100</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>26,460</td>
<td>0,3</td>
<td>26,460</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>28,300</td>
<td>0,5</td>
<td>28,300</td>
<td></td>
</tr>
<tr>
<td>064</td>
<td>36,500</td>
<td>1,7</td>
<td>36,500</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>20,800</td>
<td>-0,7</td>
<td>20,800</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>20,100</td>
<td>-0,8</td>
<td>20,100</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>53,700</td>
<td>4,1</td>
<td>53,700</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>21,600</td>
<td>-0,5</td>
<td>21,600</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>27,300</td>
<td>0,4</td>
<td>27,300</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>27,100</td>
<td>0,4</td>
<td>27,100</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>20,800</td>
<td>-0,7</td>
<td>20,800</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>17,600</td>
<td>-1,3</td>
<td>17,600</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>23,100</td>
<td>-0,3</td>
<td>23,100</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>23,970</td>
<td>-0,1</td>
<td>23,970</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>41,900</td>
<td>2,4</td>
<td>41,900</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>25,300</td>
<td>0,1</td>
<td>25,300</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>10,200</td>
<td>-2,6</td>
<td>10,200</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>22,500</td>
<td>-0,4</td>
<td>22,500</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>35,800</td>
<td>1,6</td>
<td>35,800</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>22,500</td>
<td>-0,4</td>
<td>22,500</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>20,700</td>
<td>-0,7</td>
<td>20,700</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>25,400</td>
<td>0,1</td>
<td>25,400</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>18,300</td>
<td>-1,1</td>
<td>18,300</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>23,600</td>
<td>-0,2</td>
<td>23,600</td>
<td></td>
</tr>
<tr>
<td>181</td>
<td>20,800</td>
<td>-0,7</td>
<td>20,800</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>22,400</td>
<td>-0,4</td>
<td>22,400</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>23,700</td>
<td>-0,2</td>
<td>23,700</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>30,770</td>
<td>0,9</td>
<td>30,770</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>72,200</td>
<td>6,7</td>
<td>72,200</td>
<td></td>
</tr>
</tbody>
</table>
**Einzeldarstellung**

<table>
<thead>
<tr>
<th>Probe</th>
<th>PROBE_2</th>
<th>Vergleich-STD (SR):</th>
<th>26,208 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal</td>
<td>Trichlorethen</td>
<td>Rel. Vergleich-STD (VR):</td>
<td>31,53%</td>
</tr>
<tr>
<td>Methode</td>
<td>DIN 38402 A45</td>
<td>Toleranzbereich:</td>
<td>44,627 - 132,538 µg/l (</td>
</tr>
<tr>
<td>Anzahl Labore</td>
<td>37</td>
<td>Rel. Soll-STD:</td>
<td>25,00% (Limited)</td>
</tr>
<tr>
<td>Sollwert</td>
<td>83,119 µg/l (empirischer Wert)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Graph showing data distribution and tolerances](image-url)
### BTX/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>114,000</td>
<td>1,3</td>
<td>114,000</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>76,840</td>
<td>-0,3</td>
<td>76,840</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>96,400</td>
<td>0,6</td>
<td>96,400</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>73,880</td>
<td>-0,5</td>
<td>73,880</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,195</td>
<td>-4,4</td>
<td>0,195</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>65,000</td>
<td>-1,0</td>
<td>65,000</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>115,000</td>
<td>1,3</td>
<td>115,000</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>103,000</td>
<td>0,8</td>
<td>103,000</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>21,740</td>
<td>-3,3</td>
<td>21,740</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>90,100</td>
<td>0,3</td>
<td>90,100</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>101,000</td>
<td>0,7</td>
<td>101,000</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>95,100</td>
<td>0,5</td>
<td>95,100</td>
<td></td>
</tr>
<tr>
<td>066</td>
<td>62,000</td>
<td>-1,1</td>
<td>62,000</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>71,500</td>
<td>-0,6</td>
<td>71,500</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>56,400</td>
<td>-1,4</td>
<td>56,400</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>210,000</td>
<td>5,3</td>
<td>210,000</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>83,600</td>
<td>0,0</td>
<td>83,600</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>88,800</td>
<td>0,2</td>
<td>88,800</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>108,000</td>
<td>1,0</td>
<td>108,000</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>79,000</td>
<td>-0,2</td>
<td>79,000</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>80,500</td>
<td>-0,1</td>
<td>80,500</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>78,900</td>
<td>-0,2</td>
<td>78,900</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>69,300</td>
<td>-0,7</td>
<td>69,300</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>122,000</td>
<td>1,6</td>
<td>122,000</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>81,200</td>
<td>-0,1</td>
<td>81,200</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>30,200</td>
<td>-2,8</td>
<td>30,200</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>69,600</td>
<td>-0,7</td>
<td>69,600</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>94,900</td>
<td>0,5</td>
<td>94,900</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>90,300</td>
<td>0,3</td>
<td>90,300</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>107,000</td>
<td>1,0</td>
<td>107,000</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>96,700</td>
<td>0,6</td>
<td>96,700</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>49,700</td>
<td>-1,8</td>
<td>49,700</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>91,100</td>
<td>0,3</td>
<td>91,100</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>69,300</td>
<td>-0,7</td>
<td>69,300</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>96,500</td>
<td>0,6</td>
<td>96,500</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>96,750</td>
<td>0,6</td>
<td>96,750</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>206,000</td>
<td>5,1</td>
<td>206,000</td>
<td></td>
</tr>
</tbody>
</table>
Probe 3
Kennwerte – Probe 3

49. LÜRV BTXE/LHKW in Abwasser

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzol</td>
<td>128,952</td>
<td>19,458</td>
<td>19,458</td>
<td>15,09</td>
<td>15,09</td>
<td>91,639</td>
<td>172,333</td>
<td>2,7</td>
<td>48</td>
</tr>
<tr>
<td>Dichlormethan</td>
<td>110,878</td>
<td>23,555</td>
<td>23,555</td>
<td>21,24</td>
<td>21,24</td>
<td>66,704</td>
<td>165,491</td>
<td>4,0</td>
<td>45</td>
</tr>
<tr>
<td>Ethylbenzol</td>
<td>25,672</td>
<td>6,418</td>
<td>8,388</td>
<td>25,00</td>
<td>32,67</td>
<td>13,783</td>
<td>40,934</td>
<td>5,9</td>
<td>48</td>
</tr>
<tr>
<td>meta-Xylol</td>
<td>29,656</td>
<td>7,414</td>
<td>13,711</td>
<td>25,00</td>
<td>46,23</td>
<td>15,922</td>
<td>47,288</td>
<td>8,4</td>
<td>47</td>
</tr>
<tr>
<td>ortho-Xylol</td>
<td>146,844</td>
<td>36,711</td>
<td>43,616</td>
<td>25,00</td>
<td>29,70</td>
<td>78,841</td>
<td>234,149</td>
<td>5,4</td>
<td>48</td>
</tr>
<tr>
<td>1,1,1-Trichlorethan</td>
<td>76,284</td>
<td>19,071</td>
<td>20,816</td>
<td>25,00</td>
<td>27,29</td>
<td>40,957</td>
<td>121,638</td>
<td>5,1</td>
<td>45</td>
</tr>
<tr>
<td>Tetrachlorethen</td>
<td>71,637</td>
<td>17,909</td>
<td>25,512</td>
<td>25,00</td>
<td>35,61</td>
<td>38,462</td>
<td>114,228</td>
<td>6,6</td>
<td>46</td>
</tr>
<tr>
<td>Toluol</td>
<td>149,517</td>
<td>28,729</td>
<td>28,729</td>
<td>19,21</td>
<td>19,21</td>
<td>95,259</td>
<td>215,249</td>
<td>3,5</td>
<td>48</td>
</tr>
<tr>
<td>Trichlorethen</td>
<td>39,265</td>
<td>9,816</td>
<td>16,200</td>
<td>25,00</td>
<td>41,26</td>
<td>21,082</td>
<td>62,610</td>
<td>7,6</td>
<td>46</td>
</tr>
</tbody>
</table>
Übersicht zu \( z_U \)-Scores

Scores für PROBE_3

Merkmal

<table>
<thead>
<tr>
<th>Probe</th>
<th>Dioxinenbelag</th>
<th>Benzolbelag</th>
<th>Toluolbelag</th>
<th>Methanolbelag</th>
<th>1,1,1-Trichlorethan</th>
<th>Tetrachlorkohlenstoff</th>
<th>Toluol</th>
<th>Tetrachlorkohlenstoff</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>-2</td>
<td>2.5</td>
<td>0.3</td>
<td>-1</td>
<td>-2</td>
<td>2</td>
<td>-2</td>
<td>2</td>
</tr>
<tr>
<td>002</td>
<td>-1</td>
<td>0</td>
<td>0</td>
<td>-1</td>
<td>-1</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

Seite 58 von 163
Einzeldarstellung der Parameter

Grafik und Tabelle
Einzelarstellung

<table>
<thead>
<tr>
<th>Probe</th>
<th>Vergleich-STD (SR): 19,458 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal: Benzol</td>
<td></td>
</tr>
<tr>
<td>Methode: DIN 38402 A45</td>
<td></td>
</tr>
<tr>
<td>Anzahl Labore: 48</td>
<td></td>
</tr>
<tr>
<td>Sollwert: 128,952 µg/l (empirischer Wert)</td>
<td></td>
</tr>
</tbody>
</table>

Rel. Vergleich-STD (VR): 15,09%
Rel. Soll-STD: 15,09% (Limited)

Toleranzbereich: 91,639 - 172,333 µg/l (|Zu-Score| <= 2,0)

Institut für Hygiene und Umwelt Hamburg PROLlab
<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>169,000</td>
<td>1.9</td>
<td>169,000</td>
<td></td>
</tr>
<tr>
<td>002</td>
<td>128,000</td>
<td>-0.1</td>
<td>128,000</td>
<td></td>
</tr>
<tr>
<td>006</td>
<td>146,000</td>
<td>0.8</td>
<td>146,000</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>123,000</td>
<td>-0.3</td>
<td>123,000</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>135,000</td>
<td>0.3</td>
<td>135,000</td>
<td></td>
</tr>
<tr>
<td>026</td>
<td>140,000</td>
<td>0.5</td>
<td>140,000</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>156,000</td>
<td>1.3</td>
<td>156,000</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>120,000</td>
<td>-0.5</td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>87,920</td>
<td>-2.3</td>
<td>87,920</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>119,000</td>
<td>-0.5</td>
<td>119,000</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>120,000</td>
<td>-0.5</td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>135,000</td>
<td>0.3</td>
<td>135,000</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>121,000</td>
<td>-0.4</td>
<td>121,000</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>131,000</td>
<td>0.1</td>
<td>131,000</td>
<td></td>
</tr>
<tr>
<td>064</td>
<td>170,000</td>
<td>1.9</td>
<td>170,000</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>99,300</td>
<td>-1.6</td>
<td>99,300</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>107,000</td>
<td>-1.2</td>
<td>107,000</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>288,000</td>
<td>7.5</td>
<td>288,000</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>129,600</td>
<td>0.0</td>
<td>129,600</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>137,000</td>
<td>0.4</td>
<td>137,000</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>124,200</td>
<td>-0.3</td>
<td>124,200</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>130,000</td>
<td>0.0</td>
<td>130,000</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>132,000</td>
<td>0.1</td>
<td>132,000</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>116,800</td>
<td>-0.7</td>
<td>116,800</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>133,340</td>
<td>0.2</td>
<td>133,340</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>181,000</td>
<td>2.5</td>
<td>181,000</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>124,570</td>
<td>-0.2</td>
<td>124,570</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>78,450</td>
<td>-2.8</td>
<td>78,450</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>120,000</td>
<td>-0.5</td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>122,000</td>
<td>-0.4</td>
<td>122,000</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>117,000</td>
<td>-0.7</td>
<td>117,000</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>185,000</td>
<td>2.6</td>
<td>185,000</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>74,700</td>
<td>-3.0</td>
<td>74,700</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>178,000</td>
<td>2.3</td>
<td>178,000</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>111,398</td>
<td>-1.0</td>
<td>111,398</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>124,000</td>
<td>-0.3</td>
<td>124,000</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>122,000</td>
<td>-0.4</td>
<td>122,000</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>130,000</td>
<td>0.0</td>
<td>130,000</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>121,000</td>
<td>-0.4</td>
<td>121,000</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>127,000</td>
<td>-0.1</td>
<td>127,000</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>129,000</td>
<td>0.0</td>
<td>129,000</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>147,000</td>
<td>0.9</td>
<td>147,000</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>51,500</td>
<td>-4.3</td>
<td>51,500</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>151,800</td>
<td>1.1</td>
<td>151,800</td>
<td></td>
</tr>
<tr>
<td>Nr.</td>
<td>Wert (mg/kg)</td>
<td>Abweichung (mg/kg)</td>
<td>Korrigierter Wert (mg/kg)</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td>-------------------</td>
<td>------------------------</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>117,798</td>
<td>-0,6</td>
<td>117,798</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>146,000</td>
<td>0,8</td>
<td>146,000</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>128,687</td>
<td>0,0</td>
<td>128,687</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>343,000</td>
<td>10,1</td>
<td>343,000</td>
<td></td>
</tr>
</tbody>
</table>
Einzeldarstellung

Probe: PROBE_3
Merkmal: Dichlormethan
Method: DIN 38402 A45

Vergleich-STD (SR): 23,555 µg/l
Rel. Vergleich-STD (VR): 21,24%
Toleranzbereich: 66,704 - 165,491 µg/l (|Zu-Score| <= 2,0)
Rel. Soll-STD: 21,24% (Limited)
Sollwert: 110,878 µg/l (empirischer Wert)

Institut für Hygiene und Umwelt Hamburg
PROLab

PROBE_3

160
180
200
220

Toleranzgrenze
Mittelwert

PROLab
### BTXELHKW in Abwasser – 49. Länderübergreifender Ringversuch

#### Probe: PROBE_3
#### Merkmal: Dichlormethan
#### Methode: DIN 38402 A45
#### Anzahl Labore: 45
#### Sollwert: 110,878 µg/l (empirischer Wert)

#### Vergleich-STD (SR):
- Werte: 23,555 µg/l
  - Rel. Vergleich-STD (VR): 21,24%
  - Toleranzbereich: 66,704 - 165,491 µg/l ([Zu-Score] ≤ 2,0)

#### Rel. Soll-STD:
- Werte: 21,24% (Limited)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>113,000</td>
<td>0,1</td>
<td>113,000</td>
<td></td>
</tr>
<tr>
<td>006</td>
<td>186,000</td>
<td>2,8</td>
<td>186,000</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>116,000</td>
<td>0,2</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>85,700</td>
<td>-1,2</td>
<td>85,700</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>139,000</td>
<td>1,1</td>
<td>139,000</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>86,900</td>
<td>-1,1</td>
<td>86,900</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>71,820</td>
<td>-1,8</td>
<td>71,820</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>91,600</td>
<td>-0,9</td>
<td>91,600</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>107,000</td>
<td>-0,2</td>
<td>107,000</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>91,100</td>
<td>-0,9</td>
<td>91,100</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>103,000</td>
<td>-0,4</td>
<td>103,000</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>115,000</td>
<td>0,2</td>
<td>115,000</td>
<td></td>
</tr>
<tr>
<td>063</td>
<td>97,800</td>
<td>-0,6</td>
<td>97,800</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>120,000</td>
<td>0,3</td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>172,000</td>
<td>2,3</td>
<td>172,000</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>108,900</td>
<td>-0,1</td>
<td>108,900</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>83,700</td>
<td>-1,3</td>
<td>83,700</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>101,000</td>
<td>-0,5</td>
<td>101,000</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>106,000</td>
<td>-0,2</td>
<td>106,000</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>126,000</td>
<td>0,6</td>
<td>126,000</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>115,700</td>
<td>0,2</td>
<td>115,700</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>113,510</td>
<td>0,1</td>
<td>113,510</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>119,000</td>
<td>0,3</td>
<td>119,000</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>108,200</td>
<td>-0,1</td>
<td>108,200</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>60,800</td>
<td>-2,3</td>
<td>60,800</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>75,400</td>
<td>-1,6</td>
<td>75,400</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>117,000</td>
<td>0,2</td>
<td>117,000</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>104,000</td>
<td>-0,3</td>
<td>104,000</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>118,000</td>
<td>0,3</td>
<td>118,000</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>106,000</td>
<td>-0,2</td>
<td>106,000</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>153,000</td>
<td>1,6</td>
<td>153,000</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>114,789</td>
<td>0,1</td>
<td>114,789</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>125,000</td>
<td>0,5</td>
<td>125,000</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>106,000</td>
<td>-0,2</td>
<td>106,000</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>95,200</td>
<td>-0,7</td>
<td>95,200</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>75,800</td>
<td>-1,6</td>
<td>75,800</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>112,000</td>
<td>0,0</td>
<td>112,000</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>106,000</td>
<td>-0,2</td>
<td>106,000</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>158,000</td>
<td>1,8</td>
<td>158,000</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>37,900</td>
<td>-3,4</td>
<td>37,900</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>149,900</td>
<td>1,5</td>
<td>149,900</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>107,996</td>
<td>-0,1</td>
<td>107,996</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>130,100</td>
<td>0,7</td>
<td>130,100</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>163,104</td>
<td>2,0</td>
<td>163,104</td>
<td></td>
</tr>
</tbody>
</table>

Institut für Hygiene und Umwelt Hamburg
PROLab

Seite 65 von 163
| 195 | 156,000 | 1,7 | 156,000 |
Einzeldarstellung

Probe: PROBE_3  
Vergleich-STD (SR): 8,388 µg/l  
Merkmal: Ethylbenzol  
Rel. Vergleich-STD (VR): 32,67%  
Methode: DIN 38402 A45  
Toleranzbereich: 13,783 - 40,934 µg/l (|Zu-Score| <= 2,0)  
Anzahl Labore: 48  
Rel. Soll-STD: 25,00% (Limited)  
Sollwert: 25,672 µg/l (empirischer Wert)

![Graphik der Einzeldarstellung]

PROLab

Institut für Hygiene und Umwelt Hamburg
### BTXELHKW in Abwasser - 49. Länderübergreifender Ringversuch

**Probe:** PROBE_3  
**Merkmal:** Ethylbenzol  
**Methode:** DIN 38402 A45  
**Anzahl Labore:** 48  
**Sollwert:** 25,672 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>22,500</td>
<td>-0,5</td>
<td>22,500</td>
<td></td>
</tr>
<tr>
<td>002</td>
<td>32,100</td>
<td>0,9</td>
<td>32,100</td>
<td></td>
</tr>
<tr>
<td>006</td>
<td>21,900</td>
<td>-0,7</td>
<td>21,900</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>27,000</td>
<td>0,2</td>
<td>27,000</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>21,200</td>
<td>-0,8</td>
<td>21,200</td>
<td></td>
</tr>
<tr>
<td>026</td>
<td>20,400</td>
<td>-0,9</td>
<td>20,400</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>22,600</td>
<td>-0,5</td>
<td>22,600</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>18,700</td>
<td>-1,2</td>
<td>18,700</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>32,050</td>
<td>0,9</td>
<td>32,050</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>20,000</td>
<td>-1,0</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>27,500</td>
<td>0,2</td>
<td>27,500</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>19,100</td>
<td>-1,1</td>
<td>19,100</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>145,000</td>
<td>16,0</td>
<td>145,000</td>
<td></td>
</tr>
<tr>
<td>006</td>
<td>28,900</td>
<td>0,4</td>
<td>28,900</td>
<td></td>
</tr>
<tr>
<td>064</td>
<td>23,900</td>
<td>-0,3</td>
<td>23,900</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>30,200</td>
<td>0,6</td>
<td>30,200</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>23,300</td>
<td>-0,4</td>
<td>23,300</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>36,600</td>
<td>1,5</td>
<td>36,600</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>40,400</td>
<td>2,0</td>
<td>40,400</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>19,200</td>
<td>-1,1</td>
<td>19,200</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>33,200</td>
<td>1,0</td>
<td>33,200</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>18,700</td>
<td>-1,2</td>
<td>18,700</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>28,450</td>
<td>0,4</td>
<td>28,450</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>27,400</td>
<td>0,2</td>
<td>27,400</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>16,370</td>
<td>-1,6</td>
<td>16,370</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>25,700</td>
<td>0,0</td>
<td>25,700</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>29,910</td>
<td>0,6</td>
<td>29,910</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>6,730</td>
<td>-3,3</td>
<td>6,730</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>18,000</td>
<td>-1,3</td>
<td>18,000</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>35,300</td>
<td>1,3</td>
<td>35,300</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>30,100</td>
<td>0,6</td>
<td>30,100</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>22,450</td>
<td>-0,6</td>
<td>22,450</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>14,900</td>
<td>-1,9</td>
<td>14,900</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>40,200</td>
<td>2,0</td>
<td>40,200</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>24,282</td>
<td>-0,2</td>
<td>24,282</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>19,000</td>
<td>-1,2</td>
<td>19,000</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>30,600</td>
<td>0,7</td>
<td>30,600</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>18,700</td>
<td>-1,2</td>
<td>18,700</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>14,600</td>
<td>-1,9</td>
<td>14,600</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>26,000</td>
<td>0,0</td>
<td>26,000</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>30,800</td>
<td>0,7</td>
<td>30,800</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>33,800</td>
<td>1,1</td>
<td>33,800</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>13,000</td>
<td>-2,2</td>
<td>13,000</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>34,620</td>
<td>1,2</td>
<td>34,620</td>
<td></td>
</tr>
</tbody>
</table>

Institut für Hygiene und Umwelt Hamburg  
PROLab
### BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Werte</th>
<th>Einheit</th>
<th>Prozent</th>
<th>Ergebnis</th>
</tr>
</thead>
<tbody>
<tr>
<td>188</td>
<td>27,637</td>
<td>-</td>
<td>0,3</td>
<td>27,637</td>
</tr>
<tr>
<td>190</td>
<td>32,900</td>
<td>-</td>
<td>1,0</td>
<td>32,900</td>
</tr>
<tr>
<td>194</td>
<td>25,153</td>
<td>-</td>
<td>-0,1</td>
<td>25,153</td>
</tr>
<tr>
<td>195</td>
<td>45,200</td>
<td>-</td>
<td>2,6</td>
<td>45,200</td>
</tr>
</tbody>
</table>
Einzeldarstellung

Probe: PROBE_3
Merkmal: meta-Xylol
Methode: DIN 38402 A45
Anzahl Labore: 47
Sollwert: 29,656 µg/l (empirischer Wert)

Vergleich-STD (SR): 13,711 µg/l
Rel. Vergleich-STD (VR): 46,23%
Rel. Soll-STD: 25,00% (Limited)

Toleranzbereich: 15,922 - 47,288 µg/l (|Zu-Score| <= 2,0)

Labor
**BTX/LHKW in Abwasser - 49. Länderübergreifender Ringversuch**

**Probe:** PROBE_3  
**Vergleich-STD (SR):** 13,711 µg/l  
**Rel. Vergleich-STD (VR):** 46,23%  
**Merkmal:** meta-Xylol  
**Rel. Soll-STD:** 25,00% (Limited)

**Anzahl Labore:** 47  
**Toleranzbereich:** 15,922 - 47,288 µg/l (|Zu-Score| <= 2,0)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>24,000</td>
<td>-0,8</td>
<td>24,000</td>
<td></td>
</tr>
<tr>
<td>006</td>
<td>17,000</td>
<td>-1,9</td>
<td>17,000</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>20,800</td>
<td>-1,3</td>
<td>20,800</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>40,800</td>
<td>1,3</td>
<td>40,800</td>
<td></td>
</tr>
<tr>
<td>026</td>
<td>45,500</td>
<td>1,8</td>
<td>45,500</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>52,500</td>
<td>2,7</td>
<td>52,500</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>41,200</td>
<td>1,3</td>
<td>41,200</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>114,400</td>
<td>9,9</td>
<td>114,400</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>42,500</td>
<td>1,5</td>
<td>42,500</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>22,600</td>
<td>-1,1</td>
<td>22,600</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>44,200</td>
<td>1,7</td>
<td>44,200</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>18,700</td>
<td>-1,6</td>
<td>18,700</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>20,800</td>
<td>-1,3</td>
<td>20,800</td>
<td></td>
</tr>
<tr>
<td>064</td>
<td>55,500</td>
<td>3,0</td>
<td>55,500</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>25,700</td>
<td>-0,6</td>
<td>25,700</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>16,400</td>
<td>-2,0</td>
<td>16,400</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>82,700</td>
<td>6,2</td>
<td>82,700</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>28,400</td>
<td>-0,2</td>
<td>28,400</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>42,100</td>
<td>1,4</td>
<td>42,100</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>15,000</td>
<td>-2,2</td>
<td>15,000</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>42,400</td>
<td>1,5</td>
<td>42,400</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>23,600</td>
<td>-0,9</td>
<td>23,600</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>19,300</td>
<td>-1,5</td>
<td>19,300</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>37,450</td>
<td>0,9</td>
<td>37,450</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>61,400</td>
<td>3,7</td>
<td>61,400</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>23,110</td>
<td>-1,0</td>
<td>23,110</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>17,400</td>
<td>-1,8</td>
<td>17,400</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>40,100</td>
<td>1,2</td>
<td>40,100</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>62,800</td>
<td>3,9</td>
<td>62,800</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>23,100</td>
<td>-1,0</td>
<td>23,100</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>50,700</td>
<td>2,4</td>
<td>50,700</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>37,700</td>
<td>0,4</td>
<td>37,700</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>29,900</td>
<td>0,0</td>
<td>29,900</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>19,523</td>
<td>-1,5</td>
<td>19,523</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>14,300</td>
<td>-2,3</td>
<td>14,300</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>24,200</td>
<td>-0,8</td>
<td>24,200</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>36,500</td>
<td>0,8</td>
<td>36,500</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>34,600</td>
<td>0,6</td>
<td>34,600</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>17,200</td>
<td>-1,9</td>
<td>17,200</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>22,800</td>
<td>-1,0</td>
<td>22,800</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>26,900</td>
<td>-0,4</td>
<td>26,900</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>8,270</td>
<td>-3,2</td>
<td>8,270</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>27,210</td>
<td>-0,4</td>
<td>27,210</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>22,199</td>
<td>-1,1</td>
<td>22,199</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24,200</td>
<td>-0,8</td>
<td>24,200</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>--------</td>
<td>------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>24,200</td>
<td>-0,8</td>
<td>24,200</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>11,226</td>
<td>-2,8</td>
<td>11,226</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>96,100</td>
<td>7,7</td>
<td>96,100</td>
<td></td>
</tr>
</tbody>
</table>
**Einzeldarstellung**

Probe: PROBE_3  
Merkmal: ortho-Xylol  
Methode: DIN 38402 A45  
Anzahl Labore: 48

<table>
<thead>
<tr>
<th>Labore</th>
</tr>
</thead>
<tbody>
<tr>
<td>128</td>
</tr>
<tr>
<td>137</td>
</tr>
<tr>
<td>184</td>
</tr>
<tr>
<td>157</td>
</tr>
<tr>
<td>039</td>
</tr>
<tr>
<td>116</td>
</tr>
<tr>
<td>156</td>
</tr>
<tr>
<td>129</td>
</tr>
<tr>
<td>045</td>
</tr>
<tr>
<td>087</td>
</tr>
<tr>
<td>017</td>
</tr>
<tr>
<td>092</td>
</tr>
<tr>
<td>059</td>
</tr>
<tr>
<td>001</td>
</tr>
<tr>
<td>026</td>
</tr>
<tr>
<td>131</td>
</tr>
<tr>
<td>037</td>
</tr>
<tr>
<td>117</td>
</tr>
<tr>
<td>135</td>
</tr>
<tr>
<td>153</td>
</tr>
<tr>
<td>064</td>
</tr>
<tr>
<td>068</td>
</tr>
<tr>
<td>009</td>
</tr>
<tr>
<td>041</td>
</tr>
<tr>
<td>194</td>
</tr>
<tr>
<td>134</td>
</tr>
<tr>
<td>162</td>
</tr>
<tr>
<td>151</td>
</tr>
<tr>
<td>111</td>
</tr>
<tr>
<td>046</td>
</tr>
<tr>
<td>072</td>
</tr>
<tr>
<td>188</td>
</tr>
<tr>
<td>124</td>
</tr>
<tr>
<td>002</td>
</tr>
<tr>
<td>060</td>
</tr>
<tr>
<td>062</td>
</tr>
<tr>
<td>154</td>
</tr>
<tr>
<td>170</td>
</tr>
<tr>
<td>110</td>
</tr>
<tr>
<td>085</td>
</tr>
<tr>
<td>074</td>
</tr>
<tr>
<td>178</td>
</tr>
<tr>
<td>190</td>
</tr>
<tr>
<td>186</td>
</tr>
<tr>
<td>006</td>
</tr>
<tr>
<td>088</td>
</tr>
<tr>
<td>150</td>
</tr>
<tr>
<td>195</td>
</tr>
</tbody>
</table>

Sollwert: 146.844 µg/l (empirischer Wert)

Vergleich-STD (SR): 43,616 µg/l
Rel. Vergleich-STD (VR): 29,70%
Toleranzbereich: 78,841 - 234,149 µg/l (Zu-Score <= 2,0)
Rel. Soll-STD: 25,00% (Limited)

**Diagramm:**
- Toleranzgrenze
- Mittelwert
- Messwerte
### BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>114,000</td>
<td>-1,0</td>
<td>114,000</td>
<td></td>
</tr>
<tr>
<td>002</td>
<td>173,000</td>
<td>0,6</td>
<td>173,000</td>
<td></td>
</tr>
<tr>
<td>006</td>
<td>207,000</td>
<td>1,4</td>
<td>207,000</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>147,000</td>
<td>0,0</td>
<td>147,000</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>107,000</td>
<td>-1,2</td>
<td>107,000</td>
<td></td>
</tr>
<tr>
<td>026</td>
<td>116,000</td>
<td>-0,9</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>124,000</td>
<td>-0,7</td>
<td>124,000</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>96,000</td>
<td>-1,5</td>
<td>96,000</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>149,600</td>
<td>0,1</td>
<td>149,600</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>103,000</td>
<td>-1,3</td>
<td>103,000</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>159,000</td>
<td>0,3</td>
<td>159,000</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>108,000</td>
<td>-1,2</td>
<td>108,000</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>175,000</td>
<td>0,7</td>
<td>175,000</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>177,000</td>
<td>0,7</td>
<td>177,000</td>
<td></td>
</tr>
<tr>
<td>064</td>
<td>139,000</td>
<td>-0,2</td>
<td>139,000</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>141,000</td>
<td>-0,2</td>
<td>141,000</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>159,000</td>
<td>0,3</td>
<td>159,000</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>192,000</td>
<td>1,1</td>
<td>192,000</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>187,500</td>
<td>1,0</td>
<td>187,500</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>106,000</td>
<td>-1,2</td>
<td>106,000</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>209,800</td>
<td>1,5</td>
<td>209,800</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>107,000</td>
<td>-1,2</td>
<td>107,000</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>186,000</td>
<td>0,9</td>
<td>186,000</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>158,800</td>
<td>0,3</td>
<td>158,800</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>99,720</td>
<td>-1,4</td>
<td>99,720</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>128,000</td>
<td>-0,6</td>
<td>128,000</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>172,100</td>
<td>0,6</td>
<td>172,100</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>56,500</td>
<td>-2,7</td>
<td>56,500</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>102,000</td>
<td>-1,4</td>
<td>102,000</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>122,000</td>
<td>-0,7</td>
<td>122,000</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>158,000</td>
<td>0,3</td>
<td>158,000</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>132,000</td>
<td>-0,4</td>
<td>132,000</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>85,200</td>
<td>-1,9</td>
<td>85,200</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>222,000</td>
<td>1,8</td>
<td>222,000</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>158,272</td>
<td>0,3</td>
<td>158,272</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>132,000</td>
<td>-0,4</td>
<td>132,000</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>177,000</td>
<td>0,7</td>
<td>177,000</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>101,000</td>
<td>-1,4</td>
<td>101,000</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>95,100</td>
<td>-1,6</td>
<td>95,100</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>158,000</td>
<td>0,3</td>
<td>158,000</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>182,000</td>
<td>0,8</td>
<td>182,000</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>197,000</td>
<td>1,2</td>
<td>197,000</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>87,000</td>
<td>-1,8</td>
<td>87,000</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>201,100</td>
<td>1,3</td>
<td>201,100</td>
<td></td>
</tr>
</tbody>
</table>

Institut für Hygiene und Umwelt Hamburg

PROLab
### BTX/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

<table>
<thead>
<tr>
<th>Value</th>
<th>BTX</th>
<th>LHKW</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>188</td>
<td>159,889</td>
<td>0.3</td>
<td>159,889</td>
</tr>
<tr>
<td>190</td>
<td>200,000</td>
<td>1.2</td>
<td>200,000</td>
</tr>
<tr>
<td>194</td>
<td>153,486</td>
<td>0.2</td>
<td>153,486</td>
</tr>
<tr>
<td>195</td>
<td>260,000</td>
<td>2.7</td>
<td>260,000</td>
</tr>
</tbody>
</table>
### Einzeldarstellung

#### Probe:
PROBE_3

#### Merkmal:
1,1,1-Trichlorethan

#### Methode:
DIN 38402 A45

#### Anzahl Labore:
45

#### Sollwert:
76,284 µg/l (empirischer Wert)

#### Vergleich-STD (SR):
20,816 µg/l

#### Rel. Vergleich-STD (VR):
27,29%

#### Toleranzbereich:
40,957 - 121,638 µg/l (|Zu-Score| <= 2,0)

#### Rel. Soll-STD:
25,00% (Limited)

![Diagramm der Messwerte mit Toleranzgrenzen](image-url)
## BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

**Probe:** PROBE_3  
**Vergleich-STD (SR):** 20,816 µg/l

**Merkmal:** 1,1,1-Trichlorethan  
**Rel. Vergleich-STD (VR):** 27,29%

**Methode:** DIN 38402 A45  
**Toleranzbereich:** 40,957 - 121,638 µg/l ([Zu-Score] <= 2,0)

**Anzahl Labore:** 45  
**Rel. Soll-STD:** 25,00% (Limited)

**Sollwert:** 76,284 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>82,500</td>
<td>0,3</td>
<td></td>
<td>82,500</td>
</tr>
<tr>
<td>006</td>
<td>103,000</td>
<td>1,2</td>
<td></td>
<td>103,000</td>
</tr>
<tr>
<td>009</td>
<td>78,900</td>
<td>0,1</td>
<td></td>
<td>78,900</td>
</tr>
<tr>
<td>017</td>
<td>52,300</td>
<td>-1,4</td>
<td></td>
<td>52,300</td>
</tr>
<tr>
<td>037</td>
<td>72,500</td>
<td>-0,2</td>
<td></td>
<td>72,500</td>
</tr>
<tr>
<td>039</td>
<td>59,100</td>
<td>-1,0</td>
<td></td>
<td>59,100</td>
</tr>
<tr>
<td>041</td>
<td>168,100</td>
<td>4,2</td>
<td></td>
<td>168,100</td>
</tr>
<tr>
<td>045</td>
<td>63,900</td>
<td>-0,7</td>
<td></td>
<td>63,900</td>
</tr>
<tr>
<td>046</td>
<td>78,400</td>
<td>0,1</td>
<td></td>
<td>78,400</td>
</tr>
<tr>
<td>059</td>
<td>57,800</td>
<td>-1,1</td>
<td></td>
<td>57,800</td>
</tr>
<tr>
<td>060</td>
<td>76,700</td>
<td>0,0</td>
<td></td>
<td>76,700</td>
</tr>
<tr>
<td>062</td>
<td>88,300</td>
<td>0,5</td>
<td></td>
<td>88,300</td>
</tr>
<tr>
<td>068</td>
<td>63,000</td>
<td>-0,8</td>
<td></td>
<td>63,000</td>
</tr>
<tr>
<td>072</td>
<td>74,400</td>
<td>-0,1</td>
<td></td>
<td>74,400</td>
</tr>
<tr>
<td>074</td>
<td>138,000</td>
<td>2,8</td>
<td></td>
<td>138,000</td>
</tr>
<tr>
<td>085</td>
<td>91,100</td>
<td>0,7</td>
<td></td>
<td>91,100</td>
</tr>
<tr>
<td>087</td>
<td>57,100</td>
<td>-1,1</td>
<td></td>
<td>57,100</td>
</tr>
<tr>
<td>089</td>
<td>76,100</td>
<td>0,0</td>
<td></td>
<td>76,100</td>
</tr>
<tr>
<td>092</td>
<td>73,900</td>
<td>-0,1</td>
<td></td>
<td>73,900</td>
</tr>
<tr>
<td>110</td>
<td>84,000</td>
<td>0,3</td>
<td></td>
<td>84,000</td>
</tr>
<tr>
<td>111</td>
<td>87,900</td>
<td>0,5</td>
<td></td>
<td>87,900</td>
</tr>
<tr>
<td>116</td>
<td>50,030</td>
<td>-1,5</td>
<td></td>
<td>50,030</td>
</tr>
<tr>
<td>117</td>
<td>77,500</td>
<td>0,1</td>
<td></td>
<td>77,500</td>
</tr>
<tr>
<td>124</td>
<td>81,030</td>
<td>0,2</td>
<td></td>
<td>81,030</td>
</tr>
<tr>
<td>128</td>
<td>29,200</td>
<td>-2,7</td>
<td></td>
<td>29,200</td>
</tr>
<tr>
<td>129</td>
<td>49,700</td>
<td>-1,5</td>
<td></td>
<td>49,700</td>
</tr>
<tr>
<td>131</td>
<td>85,800</td>
<td>0,4</td>
<td></td>
<td>85,800</td>
</tr>
<tr>
<td>134</td>
<td>81,300</td>
<td>0,2</td>
<td></td>
<td>81,300</td>
</tr>
<tr>
<td>135</td>
<td>59,900</td>
<td>-1,0</td>
<td></td>
<td>59,900</td>
</tr>
<tr>
<td>137</td>
<td>73,300</td>
<td>-0,2</td>
<td></td>
<td>73,300</td>
</tr>
<tr>
<td>150</td>
<td>111,000</td>
<td>1,6</td>
<td></td>
<td>111,000</td>
</tr>
<tr>
<td>151</td>
<td>76,952</td>
<td>0,0</td>
<td></td>
<td>76,952</td>
</tr>
<tr>
<td>153</td>
<td>75,300</td>
<td>-0,1</td>
<td></td>
<td>75,300</td>
</tr>
<tr>
<td>154</td>
<td>75,600</td>
<td>0,0</td>
<td></td>
<td>75,600</td>
</tr>
<tr>
<td>156</td>
<td>53,700</td>
<td>-1,3</td>
<td></td>
<td>53,700</td>
</tr>
<tr>
<td>157</td>
<td>50,100</td>
<td>-1,5</td>
<td></td>
<td>50,100</td>
</tr>
<tr>
<td>162</td>
<td>76,200</td>
<td>0,0</td>
<td></td>
<td>76,200</td>
</tr>
<tr>
<td>170</td>
<td>88,000</td>
<td>0,5</td>
<td></td>
<td>88,000</td>
</tr>
<tr>
<td>178</td>
<td>100,000</td>
<td>1,1</td>
<td></td>
<td>100,000</td>
</tr>
<tr>
<td>184</td>
<td>48,400</td>
<td>-1,6</td>
<td></td>
<td>48,400</td>
</tr>
<tr>
<td>186</td>
<td>110,100</td>
<td>1,5</td>
<td></td>
<td>110,100</td>
</tr>
<tr>
<td>188</td>
<td>83,992</td>
<td>0,3</td>
<td></td>
<td>83,992</td>
</tr>
<tr>
<td>190</td>
<td>95,800</td>
<td>0,9</td>
<td></td>
<td>95,800</td>
</tr>
<tr>
<td>194</td>
<td>162,930</td>
<td>3,9</td>
<td></td>
<td>162,930</td>
</tr>
<tr>
<td>Wert 1</td>
<td>Wert 2</td>
<td>Wert 3</td>
<td>Wert 4</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>146,000</td>
<td>3,2</td>
<td>146,000</td>
<td></td>
</tr>
</tbody>
</table>
Einzeldarstellung

Probe: PROBE_3
Merkmal: Tetrachlorethen
Methode: DIN 38402 A46
Anzahl Labore: 46
Sollwert: 71,637 µg/l (empirischer Wert)

Vergleich-STD (SR): 25,512 µg/l
Rel. Vergleich-STD (VR): 35,61
Rel. Soll-STD: 25,00% (Limited)
Toleranzbereich: 38,462 - 114,228 µg/l (|Zu-Score| <= 2,0)
### BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

#### Probe: PROBE_3  
#### Vergleich-STD (SR): 25,512 µg/l

| Merkmal: | Tetrachlorethen  
| Methoden: | DIN 38402 A45  
| Anzahl Labore: | 46  
| Sollwert: | 71,637 µg/l (empirischer Wert)  

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>134,000</td>
<td>3,0</td>
<td>134,000</td>
<td></td>
</tr>
<tr>
<td>002</td>
<td>60,600</td>
<td>-0,7</td>
<td>60,600</td>
<td></td>
</tr>
<tr>
<td>006</td>
<td>66,400</td>
<td>-0,3</td>
<td>66,400</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>51,700</td>
<td>-1,2</td>
<td>51,700</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>92,800</td>
<td>1,0</td>
<td>92,800</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>106,000</td>
<td>1,7</td>
<td>106,000</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>95,700</td>
<td>1,2</td>
<td>95,700</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>20,050</td>
<td>-3,2</td>
<td>20,050</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>96,000</td>
<td>1,2</td>
<td>96,000</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>56,700</td>
<td>-0,9</td>
<td>56,700</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>86,900</td>
<td>0,7</td>
<td>86,900</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>51,700</td>
<td>-1,2</td>
<td>51,700</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>65,600</td>
<td>-0,4</td>
<td>65,600</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>47,200</td>
<td>-1,5</td>
<td>47,200</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>56,000</td>
<td>-1,0</td>
<td>56,000</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>198,000</td>
<td>6,1</td>
<td>198,000</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>58,900</td>
<td>-0,8</td>
<td>58,900</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>91,900</td>
<td>1,0</td>
<td>91,900</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>60,400</td>
<td>-0,7</td>
<td>60,400</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>94,800</td>
<td>1,1</td>
<td>94,800</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>68,100</td>
<td>-0,2</td>
<td>68,100</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>60,600</td>
<td>-0,7</td>
<td>60,600</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>77,450</td>
<td>0,3</td>
<td>77,450</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>108,000</td>
<td>1,8</td>
<td>108,000</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>61,900</td>
<td>-0,6</td>
<td>61,900</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>47,100</td>
<td>-1,5</td>
<td>47,100</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>75,500</td>
<td>0,2</td>
<td>75,500</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>59,300</td>
<td>-0,8</td>
<td>59,300</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>59,400</td>
<td>-0,8</td>
<td>59,400</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>79,800</td>
<td>0,4</td>
<td>79,800</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>108,000</td>
<td>1,8</td>
<td>108,000</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>77,100</td>
<td>0,3</td>
<td>77,100</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>44,850</td>
<td>-1,7</td>
<td>44,850</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>35,400</td>
<td>-2,2</td>
<td>35,400</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>56,900</td>
<td>-0,9</td>
<td>56,900</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>83,200</td>
<td>0,6</td>
<td>83,200</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>85,700</td>
<td>0,7</td>
<td>85,700</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>58,800</td>
<td>-0,8</td>
<td>58,800</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>68,700</td>
<td>-0,2</td>
<td>68,700</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>73,200</td>
<td>0,1</td>
<td>73,200</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>27,600</td>
<td>-2,7</td>
<td>27,600</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>77,920</td>
<td>0,3</td>
<td>77,920</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>59,968</td>
<td>-0,7</td>
<td>59,968</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>72,900</td>
<td>0,1</td>
<td>72,900</td>
<td></td>
</tr>
</tbody>
</table>

Institut für Hygiene und Umwelt Hamburg

PROLab
<table>
<thead>
<tr>
<th></th>
<th>Ergebniss</th>
<th>relativer Fehler</th>
<th>Ermitteltes Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>194</td>
<td>104,855</td>
<td>1,6</td>
<td>104,855</td>
</tr>
<tr>
<td>195</td>
<td>155,000</td>
<td>4,0</td>
<td>155,000</td>
</tr>
</tbody>
</table>
Einzelne Darstellung

Probe: PROBE 3  
Merkmal: Toluol  
Method: DIN 38402 A45  
Anzahl Labore: 48  
Sollwert: 149,517 µg/l (empirischer Wert)

Vergleich-STD (SR): 28,729 µg/l  
Rel. Vergleich-STD (VR): 19,21%  
Toleranzbereich: 95,259 - 215,249 µg/l (|Zu-Score| <= 2,0)

Rel. Soll-STD: 19,21% (Limited)

Institut für Hygiene und Umwelt Hamburg PROLab
### BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

**Probe:** PROBE_3  
**Vergleich-STD (SR):** 28,729 µg/l  
**Merkmal:** Toluol  
**Rel. Vergleich-STD (VR):** 19,21%  
**Methoden:** DIN 38402 A45  
**Toleranzbereich:** 95,259 - 215,249 µg/l (|Zu-Score| <= 2,0)  
**Anzahl Labore:** 48  
**Rel. Soll-STD:** 19,21% (Limited)

**Sollwert:** 149,517 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>182,000</td>
<td>1,0</td>
<td>182,000</td>
<td></td>
</tr>
<tr>
<td>002</td>
<td>154,000</td>
<td>0,1</td>
<td>154,000</td>
<td></td>
</tr>
<tr>
<td>006</td>
<td>165,000</td>
<td>0,5</td>
<td>165,000</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>137,000</td>
<td>-0,5</td>
<td>137,000</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>161,000</td>
<td>0,4</td>
<td>161,000</td>
<td></td>
</tr>
<tr>
<td>026</td>
<td>165,000</td>
<td>0,5</td>
<td>165,000</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>176,000</td>
<td>0,8</td>
<td>176,000</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>136,000</td>
<td>-0,5</td>
<td>136,000</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>46,110</td>
<td>-3,9</td>
<td>46,110</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>141,000</td>
<td>-0,3</td>
<td>141,000</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>138,000</td>
<td>-0,4</td>
<td>138,000</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>154,000</td>
<td>0,1</td>
<td>154,000</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>30,200</td>
<td>-4,5</td>
<td>30,200</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>153,000</td>
<td>0,1</td>
<td>153,000</td>
<td></td>
</tr>
<tr>
<td>064</td>
<td>196,000</td>
<td>1,4</td>
<td>196,000</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>117,000</td>
<td>-1,2</td>
<td>117,000</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>322,000</td>
<td>5,4</td>
<td>322,000</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>325,000</td>
<td>5,5</td>
<td>325,000</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>157,400</td>
<td>0,2</td>
<td>157,400</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>163,000</td>
<td>0,4</td>
<td>163,000</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>142,100</td>
<td>-0,3</td>
<td>142,100</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>147,000</td>
<td>-0,1</td>
<td>147,000</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>190,000</td>
<td>0,3</td>
<td>190,000</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>145,200</td>
<td>-0,2</td>
<td>145,200</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>131,880</td>
<td>-0,7</td>
<td>131,880</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>207,000</td>
<td>1,8</td>
<td>207,000</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>152,920</td>
<td>0,1</td>
<td>152,920</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>89,300</td>
<td>-2,3</td>
<td>89,300</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>139,000</td>
<td>-0,4</td>
<td>139,000</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>115,000</td>
<td>-1,3</td>
<td>115,000</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>141,000</td>
<td>-0,3</td>
<td>141,000</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>199,000</td>
<td>1,5</td>
<td>199,000</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>121,000</td>
<td>-1,1</td>
<td>121,000</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>208,000</td>
<td>1,8</td>
<td>208,000</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>138,209</td>
<td>-0,4</td>
<td>138,209</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>126,000</td>
<td>-0,9</td>
<td>126,000</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>147,000</td>
<td>-0,1</td>
<td>147,000</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>149,000</td>
<td>0,0</td>
<td>149,000</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>138,000</td>
<td>-0,5</td>
<td>138,000</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>142,000</td>
<td>-0,3</td>
<td>142,000</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>155,000</td>
<td>0,2</td>
<td>155,000</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>161,000</td>
<td>0,4</td>
<td>161,000</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>70,600</td>
<td>-3,0</td>
<td>70,600</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>178,700</td>
<td>0,9</td>
<td>178,700</td>
<td></td>
</tr>
</tbody>
</table>
### BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

<table>
<thead>
<tr>
<th>188</th>
<th>140,135</th>
<th>-0,4</th>
<th>140,135</th>
</tr>
</thead>
<tbody>
<tr>
<td>190</td>
<td>170,300</td>
<td>0,6</td>
<td>170,300</td>
</tr>
<tr>
<td>194</td>
<td>143,927</td>
<td>-0,2</td>
<td>143,927</td>
</tr>
<tr>
<td>195</td>
<td>389,000</td>
<td>7,5</td>
<td>389,000</td>
</tr>
</tbody>
</table>
Einzelne Darstellung

Probe: PROBE_3  Vergleich-STD (SR): 16,200 µg/l
Merkmal: Trichlorethen  Rel. Vergleich-STD (VR): 41,26%
Methode: DIN 38402 A45  Toleranzbereich: 21,082 - 62,610 µg/l (|Zu-Score| <= 2,0)
Anzahl Labore: 46  Rel. Soll-STD: 25,00% (Limited)
Sollwert: 39,265 µg/l (empirischer Wert)

Institut für Hygiene und Umwelt Hamburg PROLab
## BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

<table>
<thead>
<tr>
<th>Probe</th>
<th>Merkmal</th>
<th>Methode</th>
<th>Anzahl Labore</th>
<th>Sollwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBE_3</td>
<td>Trichlorethen</td>
<td>DIN 38402 A45</td>
<td>46</td>
<td>39,265 µg/l (empirischer Wert)</td>
</tr>
</tbody>
</table>

Vergleich-STD (SR): 16,200 µg/l
Rel. Vergleich-STD (VR): 41,26%
Toleranzbereich: 21,082 - 62,610 µg/l (|Zu-Score| <= 2,0)
Rel. Soll-STD: 25,00% (Limited)

### Laborergebnisse

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>36,100</td>
<td>-0,4</td>
<td>36,100</td>
<td></td>
</tr>
<tr>
<td>002</td>
<td>47,800</td>
<td>0,7</td>
<td>47,800</td>
<td></td>
</tr>
<tr>
<td>006</td>
<td>46,400</td>
<td>0,6</td>
<td>46,400</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>38,800</td>
<td>-0,1</td>
<td>38,800</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>29,200</td>
<td>-1,1</td>
<td>29,200</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>30,100</td>
<td>-1,0</td>
<td>30,100</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>27,600</td>
<td>-1,3</td>
<td>27,600</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>119,800</td>
<td>7,1</td>
<td>119,800</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>26,800</td>
<td>-1,4</td>
<td>26,800</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>44,800</td>
<td>0,5</td>
<td>44,800</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>27,600</td>
<td>-1,3</td>
<td>27,600</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>26,400</td>
<td>-1,5</td>
<td>26,400</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>48,500</td>
<td>0,8</td>
<td>48,500</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>35,700</td>
<td>-0,4</td>
<td>35,700</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>42,700</td>
<td>0,3</td>
<td>42,700</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>60,100</td>
<td>1,8</td>
<td>60,100</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>52,700</td>
<td>1,2</td>
<td>52,700</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>26,500</td>
<td>-1,4</td>
<td>26,500</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>47,800</td>
<td>0,7</td>
<td>47,800</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>28,500</td>
<td>-1,2</td>
<td>28,500</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>50,500</td>
<td>1,0</td>
<td>50,500</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>39,300</td>
<td>0,0</td>
<td>39,300</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>20,480</td>
<td>-2,1</td>
<td>20,480</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>37,200</td>
<td>-0,2</td>
<td>37,200</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>46,930</td>
<td>0,7</td>
<td>46,930</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>5,780</td>
<td>-3,8</td>
<td>5,780</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>23,400</td>
<td>-1,8</td>
<td>23,400</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>50,000</td>
<td>0,9</td>
<td>50,000</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>43,400</td>
<td>0,4</td>
<td>43,400</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>27,200</td>
<td>-1,4</td>
<td>27,200</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>35,700</td>
<td>-0,4</td>
<td>35,700</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>69,700</td>
<td>2,7</td>
<td>69,700</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>38,562</td>
<td>-0,1</td>
<td>38,562</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>39,800</td>
<td>0,0</td>
<td>39,800</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>44,800</td>
<td>0,5</td>
<td>44,800</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>18,400</td>
<td>-2,4</td>
<td>18,400</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>24,900</td>
<td>-1,6</td>
<td>24,900</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>45,200</td>
<td>0,5</td>
<td>45,200</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>53,800</td>
<td>1,3</td>
<td>53,800</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>56,900</td>
<td>1,5</td>
<td>56,900</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>24,500</td>
<td>-1,7</td>
<td>24,500</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>60,490</td>
<td>1,9</td>
<td>60,490</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>32,842</td>
<td>-0,7</td>
<td>32,842</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>54,200</td>
<td>1,3</td>
<td>54,200</td>
<td></td>
</tr>
</tbody>
</table>

---

Institut für Hygiene und Umwelt Hamburg
PROLab
### BTX/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>194</td>
<td>94,890</td>
<td>4,9</td>
<td>94,890</td>
</tr>
<tr>
<td>195</td>
<td>155,000</td>
<td>10,2</td>
<td>155,000</td>
</tr>
</tbody>
</table>

Institut für Hygiene und Umwelt Hamburg
Probe 4
## Kennwerte – Probe 4

49. LÜRV BTXE/LHKW in Abwasser

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzol</td>
<td>139,689</td>
<td>23,854</td>
<td>23,854</td>
<td>17,08</td>
<td>17,08</td>
<td>94,290</td>
<td>193,529</td>
<td>3,5</td>
<td>37</td>
</tr>
<tr>
<td>Dichlormethan</td>
<td>102,731</td>
<td>19,036</td>
<td>19,036</td>
<td>18,53</td>
<td>18,53</td>
<td>66,693</td>
<td>146,094</td>
<td>3,9</td>
<td>35</td>
</tr>
<tr>
<td>Ethylbenzol</td>
<td>24,374</td>
<td>5,559</td>
<td>5,559</td>
<td>22,81</td>
<td>22,81</td>
<td>14,003</td>
<td>37,398</td>
<td>4,7</td>
<td>37</td>
</tr>
<tr>
<td>meta-Xylol</td>
<td>36,966</td>
<td>9,242</td>
<td>10,46</td>
<td>25,00</td>
<td>28,30</td>
<td>19,847</td>
<td>58,944</td>
<td>5,9</td>
<td>36</td>
</tr>
<tr>
<td>ortho-Xylol</td>
<td>137,834</td>
<td>28,648</td>
<td>28,648</td>
<td>20,78</td>
<td>20,78</td>
<td>84,024</td>
<td>204,054</td>
<td>4,3</td>
<td>37</td>
</tr>
<tr>
<td>1,1,1-Trichlorethan</td>
<td>69,658</td>
<td>17,202</td>
<td>17,202</td>
<td>24,70</td>
<td>24,70</td>
<td>37,761</td>
<td>110,483</td>
<td>5,0</td>
<td>36</td>
</tr>
<tr>
<td>Tetrachlorethen</td>
<td>83,011</td>
<td>20,753</td>
<td>26,63</td>
<td>25,00</td>
<td>32,08</td>
<td>44,569</td>
<td>132,365</td>
<td>6,4</td>
<td>36</td>
</tr>
<tr>
<td>Toluol</td>
<td>162,849</td>
<td>24,388</td>
<td>24,388</td>
<td>14,98</td>
<td>14,98</td>
<td>116,063</td>
<td>217,183</td>
<td>3,1</td>
<td>37</td>
</tr>
<tr>
<td>Trichlorethen</td>
<td>34,581</td>
<td>8,645</td>
<td>9,454</td>
<td>25,00</td>
<td>27,34</td>
<td>18,567</td>
<td>55,141</td>
<td>5,6</td>
<td>36</td>
</tr>
</tbody>
</table>
Übersicht zu U-Scores

Scores für PROBE_4
Merkmal

<table>
<thead>
<tr>
<th>Labor</th>
<th>Z-Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>-3</td>
</tr>
<tr>
<td>004</td>
<td>-3</td>
</tr>
<tr>
<td>010</td>
<td>-3</td>
</tr>
<tr>
<td>016</td>
<td>-3</td>
</tr>
<tr>
<td>023</td>
<td>-3</td>
</tr>
<tr>
<td>025</td>
<td>-3</td>
</tr>
<tr>
<td>034</td>
<td>-3</td>
</tr>
<tr>
<td>036</td>
<td>-3</td>
</tr>
<tr>
<td>067</td>
<td>-2</td>
</tr>
<tr>
<td>069</td>
<td>-2</td>
</tr>
<tr>
<td>070</td>
<td>-2</td>
</tr>
<tr>
<td>084</td>
<td>-2</td>
</tr>
</tbody>
</table>

PROLab
Einzeldarstellung der Parameter

Grafik und Tabelle
BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

Einzeldarstellung

| Probe: | PROBE_4 | Vergleich-STD (SR): | 23,854 µg/l |
| Merkmal: | Benzol | Rel. Vergleich-STD (VR): | 17,08% |
| Methode: | DIN 38402 A45 | Toleranzbereich: | 94,290 - 193,529 µg/l (|Zu-Score| <= 2,0) |
| Anzahl Labore: | 37 | Rel. Soll-STD: | 17,08% (Limited) |
| Sollwert: | 139,689 µg/l (empirischer Wert) |

Institut für Hygiene und Umwelt Hamburg

PROLab
**BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch**

**Probe:** PROBE_4  
**Vergleich-STD (SR):** 23,854 µg/l  
**Merkmal:** Benzol  
**Rel. Vergleich-STD (VR):** 17,08%  
**Methode:** DIN 38402 A45  
**Toleranzbereich:** 94,290 - 193,529 µg/l ([Zu-Score] <= 2,0)  
**Anzahl Labore:** 37  
**Rel. Soll-STD:** 17,08% (Limited)  
**Sollwert:** 139,689 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>148,000</td>
<td>0,3</td>
<td>148,000</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>137,050</td>
<td>-0,1</td>
<td>137,050</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>114,000</td>
<td>-1,2</td>
<td>114,000</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>122,000</td>
<td>-0,8</td>
<td>122,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>107,240</td>
<td>-1,5</td>
<td>107,240</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>129,600</td>
<td>-0,5</td>
<td>129,600</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,285</td>
<td>-6,3</td>
<td>0,285</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>132,000</td>
<td>-0,3</td>
<td>132,000</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>138,000</td>
<td>-0,1</td>
<td>138,000</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>143,000</td>
<td>-1,4</td>
<td>143,000</td>
<td></td>
</tr>
<tr>
<td>043</td>
<td>143,000</td>
<td>0,1</td>
<td>143,000</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>165,700</td>
<td>1,0</td>
<td>165,700</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>109,100</td>
<td>-1,4</td>
<td>109,100</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>115,100</td>
<td>-1,1</td>
<td>115,100</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>116,000</td>
<td>-1,1</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>130,000</td>
<td>-0,4</td>
<td>130,000</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>143,000</td>
<td>0,1</td>
<td>143,000</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>126,000</td>
<td>-0,6</td>
<td>126,000</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>155,100</td>
<td>0,6</td>
<td>155,100</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>139,000</td>
<td>0,0</td>
<td>139,000</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>115,000</td>
<td>-1,1</td>
<td>115,000</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>141,000</td>
<td>0,0</td>
<td>141,000</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>142,000</td>
<td>0,1</td>
<td>142,000</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>137,000</td>
<td>-0,1</td>
<td>137,000</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>143,300</td>
<td>0,1</td>
<td>143,300</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>162,500</td>
<td>0,9</td>
<td>162,500</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>108,000</td>
<td>-1,4</td>
<td>108,000</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>176,000</td>
<td>1,4</td>
<td>176,000</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>166,000</td>
<td>1,0</td>
<td>166,000</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>130,000</td>
<td>-0,4</td>
<td>130,000</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>225,000</td>
<td>3,2</td>
<td>225,000</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>181,000</td>
<td>1,6</td>
<td>181,000</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>151,000</td>
<td>0,4</td>
<td>151,000</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>126,000</td>
<td>-0,6</td>
<td>126,000</td>
<td></td>
</tr>
<tr>
<td>181</td>
<td>148,000</td>
<td>0,3</td>
<td>148,000</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>158,000</td>
<td>0,7</td>
<td>158,000</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>205,750</td>
<td>2,5</td>
<td>205,750</td>
<td></td>
</tr>
</tbody>
</table>
**Einzeldarstellung**

Probe: PROBE_4  
Vergleich-STD (SR): 19,636 µg/l  
Rel. Vergleich-STD (VR): 18,53%  
Merkmal: Dichlormethan  
Rel. Soll-STD: 18,53% (Limited)  
Methode: DIN 38402 A45  
Toleranzbereich: 66,693 - 146,094 µg/l (|Zu-Score| <= 2,0)  
Anzahl Labore: 35  
Sollwert: 102,731 µg/l (empirischer Wert)

---

Institut für Hygiene und Umwelt Hamburg

PROLab
**BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch**

**Probe:** PROBE_4  
**Vergleich-STD (SR):** 19,036 µg/l  
**Merkmal:** Dichlormethan  
**Rel. Vergleich-STD (VR):** 18,53%  
**Methode:** DIN 38402 A45  
**Rel. Soll-STD:** 18,53% (Limited)  
**Anzahl Labore:** 35  
**Toleranzbereich:** 66,693 - 146,094 µg/l (|Zu-Score| <= 2,0)

**Sollwert:** 102,731 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>90,100</td>
<td>-0,7</td>
<td>90,100</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>85,456</td>
<td>-1,0</td>
<td>85,456</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>114,000</td>
<td>0,5</td>
<td>114,000</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>116,000</td>
<td>0,6</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>96,290</td>
<td>-0,4</td>
<td>96,290</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>71,580</td>
<td>-1,8</td>
<td>71,580</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,097</td>
<td>-5,8</td>
<td>0,097</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>86,200</td>
<td>-0,9</td>
<td>86,200</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>105,000</td>
<td>0,1</td>
<td>105,000</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>109,000</td>
<td>0,3</td>
<td>109,000</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>102,900</td>
<td>0,0</td>
<td>102,900</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>102,400</td>
<td>0,0</td>
<td>102,400</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>116,100</td>
<td>0,6</td>
<td>116,100</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>144,000</td>
<td>2,0</td>
<td>144,000</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>88,400</td>
<td>-0,8</td>
<td>88,400</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>51,700</td>
<td>-2,9</td>
<td>51,700</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>115,000</td>
<td>0,6</td>
<td>115,000</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>102,500</td>
<td>0,0</td>
<td>102,500</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>96,700</td>
<td>-0,3</td>
<td>96,700</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>113,000</td>
<td>0,5</td>
<td>113,000</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>86,400</td>
<td>-0,9</td>
<td>86,400</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>87,600</td>
<td>-0,9</td>
<td>87,600</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>94,200</td>
<td>-0,5</td>
<td>94,200</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>96,200</td>
<td>-0,4</td>
<td>96,200</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>105,600</td>
<td>0,1</td>
<td>105,600</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>109,000</td>
<td>0,3</td>
<td>109,000</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>106,000</td>
<td>0,2</td>
<td>106,000</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>98,300</td>
<td>-0,3</td>
<td>98,300</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>86,900</td>
<td>-0,9</td>
<td>86,900</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>138,000</td>
<td>1,7</td>
<td>138,000</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>106,000</td>
<td>0,2</td>
<td>106,000</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>143,000</td>
<td>1,9</td>
<td>143,000</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>130,000</td>
<td>1,3</td>
<td>130,000</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>89,900</td>
<td>-0,7</td>
<td>89,900</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>115,500</td>
<td>0,6</td>
<td>115,500</td>
<td></td>
</tr>
</tbody>
</table>
**Einzeldarstellung**

<table>
<thead>
<tr>
<th>Probe</th>
<th>PROBE_4</th>
<th>Vergleich-STD (SR): 5,559 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal</td>
<td>Ethylbenzol</td>
<td>Rel. Vergleich-STD (VR): 22,81%</td>
</tr>
<tr>
<td>Methode</td>
<td>DIN 38402 A45</td>
<td>Rel. Soll-STD: 22,81% (Limited)</td>
</tr>
<tr>
<td>Anzahl Labore</td>
<td>37</td>
<td>Toleranzbereich: 14,003 - 37,398 µg/l (</td>
</tr>
<tr>
<td>Sollwert</td>
<td>24,374 µg/l (empirischer Wert)</td>
<td></td>
</tr>
</tbody>
</table>

**Diagramm:**
- **Mittelwert:**
- **Toleranzgrenze:**

**Institut für Hygiene und Umwelt Hamburg PROLab**
<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>21,600</td>
<td>-0,5</td>
<td>21,600</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>20,190</td>
<td>-0,8</td>
<td>20,190</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>26,800</td>
<td>0,4</td>
<td>26,800</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>27,000</td>
<td>0,4</td>
<td>27,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>25,350</td>
<td>0,2</td>
<td>25,350</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>18,940</td>
<td>-1,1</td>
<td>18,940</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,090</td>
<td>-4,8</td>
<td>0,090</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>19,100</td>
<td>-1,0</td>
<td>19,100</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>31,100</td>
<td>1,1</td>
<td>31,100</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>33,900</td>
<td>1,5</td>
<td>33,900</td>
<td></td>
</tr>
<tr>
<td>043</td>
<td>18,000</td>
<td>-1,3</td>
<td>18,000</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>22,710</td>
<td>-0,3</td>
<td>22,710</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>26,300</td>
<td>0,3</td>
<td>26,300</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>25,000</td>
<td>0,2</td>
<td>25,000</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>26,100</td>
<td>0,5</td>
<td>26,100</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>23,500</td>
<td>-0,2</td>
<td>23,500</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>20,200</td>
<td>-0,8</td>
<td>20,200</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>31,600</td>
<td>1,1</td>
<td>31,600</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>22,800</td>
<td>-0,3</td>
<td>22,800</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>20,100</td>
<td>-0,8</td>
<td>20,100</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>27,400</td>
<td>0,5</td>
<td>27,400</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>19,500</td>
<td>-1,0</td>
<td>19,500</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>20,800</td>
<td>-0,7</td>
<td>20,800</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>18,200</td>
<td>-1,2</td>
<td>18,200</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>19,200</td>
<td>-1,0</td>
<td>19,200</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>24,600</td>
<td>0,0</td>
<td>24,600</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>29,000</td>
<td>0,7</td>
<td>29,000</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>24,500</td>
<td>0,0</td>
<td>24,500</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>22,200</td>
<td>-0,4</td>
<td>22,200</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>17,100</td>
<td>-1,4</td>
<td>17,100</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>31,900</td>
<td>1,2</td>
<td>31,900</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>24,900</td>
<td>0,1</td>
<td>24,900</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>33,300</td>
<td>1,4</td>
<td>33,300</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>37,000</td>
<td>2,0</td>
<td>37,000</td>
<td></td>
</tr>
<tr>
<td>181</td>
<td>19,300</td>
<td>-1,0</td>
<td>19,300</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>22,400</td>
<td>-0,4</td>
<td>22,400</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>30,010</td>
<td>0,9</td>
<td>30,010</td>
<td></td>
</tr>
</tbody>
</table>
Einzeldarstellung

Probe: PROBE_4  
Vergleich-STD (SR): 10,460 µg/l

Merkmal: meta-Xylol  
Rel. Vergleich-STD (VR): 28,30%

Methode: DIN 38402 A45  
Rel. Soll-STD: 25,00% (Limited)

Anzahl Labore: 36  
Toleranzbereich: 19,847 - 58,944 µg/l (|Zu-Score| <= 2,0)

Sollwert: 36,966 µg/l (empirischer Wert)
BTX/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

Probe: PROBE_4  
Vergleich-STD (SR): 10,466 µg/l  
Merkmal: meta-Xylol  
Rel. Vergleich-STD (VR): 28,30%  
Methode: DIN 38402 A45  
Rel. Soll-STD: 25,00% (Limited)  
Toleranzbereich: 19,847 - 58,944 µg/l (|Zu-Score| <= 2,0)  
Anzahl Labore: 36

Sollwert: 36,966 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>47,600</td>
<td>1,0</td>
<td></td>
<td>47,600</td>
</tr>
<tr>
<td>004</td>
<td>43,910</td>
<td>0,6</td>
<td></td>
<td>43,910</td>
</tr>
<tr>
<td>010</td>
<td>20,300</td>
<td>-2,0</td>
<td></td>
<td>20,300</td>
</tr>
<tr>
<td>015</td>
<td>20,000</td>
<td>-2,0</td>
<td></td>
<td>20,000</td>
</tr>
<tr>
<td>016</td>
<td>4,650</td>
<td>-3,9</td>
<td></td>
<td>4,650</td>
</tr>
<tr>
<td>023</td>
<td>43,420</td>
<td>0,6</td>
<td></td>
<td>43,420</td>
</tr>
<tr>
<td>025</td>
<td>0,145</td>
<td>-4,4</td>
<td></td>
<td>0,145</td>
</tr>
<tr>
<td>034</td>
<td>44,400</td>
<td>0,7</td>
<td></td>
<td>44,400</td>
</tr>
<tr>
<td>035</td>
<td>23,800</td>
<td>-1,6</td>
<td></td>
<td>23,800</td>
</tr>
<tr>
<td>036</td>
<td>25,600</td>
<td>-1,4</td>
<td></td>
<td>25,600</td>
</tr>
<tr>
<td>043</td>
<td>42,000</td>
<td>0,5</td>
<td></td>
<td>42,000</td>
</tr>
<tr>
<td>047</td>
<td>51,970</td>
<td>1,4</td>
<td></td>
<td>51,970</td>
</tr>
<tr>
<td>059</td>
<td>20,000</td>
<td>-2,0</td>
<td></td>
<td>20,000</td>
</tr>
<tr>
<td>065</td>
<td>22,110</td>
<td>-1,8</td>
<td></td>
<td>22,110</td>
</tr>
<tr>
<td>067</td>
<td>21,600</td>
<td>-1,8</td>
<td></td>
<td>21,600</td>
</tr>
<tr>
<td>069</td>
<td>42,700</td>
<td>0,5</td>
<td></td>
<td>42,700</td>
</tr>
<tr>
<td>070</td>
<td>43,900</td>
<td>-1,4</td>
<td></td>
<td>44,900</td>
</tr>
<tr>
<td>084</td>
<td>24,900</td>
<td>-1,4</td>
<td></td>
<td>24,900</td>
</tr>
<tr>
<td>086</td>
<td>45,100</td>
<td>0,8</td>
<td></td>
<td>45,100</td>
</tr>
<tr>
<td>089</td>
<td>46,700</td>
<td>0,9</td>
<td></td>
<td>46,700</td>
</tr>
<tr>
<td>097</td>
<td>21,500</td>
<td>-1,9</td>
<td></td>
<td>21,500</td>
</tr>
<tr>
<td>103</td>
<td>39,100</td>
<td>0,2</td>
<td></td>
<td>39,100</td>
</tr>
<tr>
<td>104</td>
<td>41,900</td>
<td>0,5</td>
<td></td>
<td>41,900</td>
</tr>
<tr>
<td>105</td>
<td>43,400</td>
<td>0,6</td>
<td></td>
<td>43,400</td>
</tr>
<tr>
<td>111</td>
<td>41,300</td>
<td>0,4</td>
<td></td>
<td>41,300</td>
</tr>
<tr>
<td>113</td>
<td>49,800</td>
<td>1,2</td>
<td></td>
<td>49,800</td>
</tr>
<tr>
<td>115</td>
<td>23,800</td>
<td>-1,6</td>
<td></td>
<td>23,800</td>
</tr>
<tr>
<td>118</td>
<td>56,000</td>
<td>1,8</td>
<td></td>
<td>56,000</td>
</tr>
<tr>
<td>136</td>
<td>50,900</td>
<td>1,3</td>
<td></td>
<td>50,900</td>
</tr>
<tr>
<td>140</td>
<td>38,800</td>
<td>0,2</td>
<td></td>
<td>38,800</td>
</tr>
<tr>
<td>150</td>
<td>73,300</td>
<td>3,4</td>
<td></td>
<td>73,300</td>
</tr>
<tr>
<td>152</td>
<td>59,100</td>
<td>2,1</td>
<td></td>
<td>59,100</td>
</tr>
<tr>
<td>158</td>
<td>27,900</td>
<td>-1,1</td>
<td></td>
<td>27,900</td>
</tr>
<tr>
<td>164</td>
<td>27,600</td>
<td>-1,1</td>
<td></td>
<td>27,600</td>
</tr>
<tr>
<td>181</td>
<td>42,300</td>
<td>0,5</td>
<td></td>
<td>42,300</td>
</tr>
<tr>
<td>182</td>
<td>47,000</td>
<td>0,9</td>
<td></td>
<td>47,000</td>
</tr>
<tr>
<td>191</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Einzeldarstellung

<table>
<thead>
<tr>
<th>Probe</th>
<th>Merkmal</th>
<th>Methode</th>
<th>Anzahl Labore</th>
<th>Sollwert</th>
<th>Vergleich-STD (SR)</th>
<th>Rel. Vergleich-STD (VR)</th>
<th>Tolereanzbereich</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBE_4</td>
<td>ortho-Xylo</td>
<td>DIN 38402 A45</td>
<td>37</td>
<td>137,834 µg/l</td>
<td>28,648 µg/l</td>
<td>20,78%</td>
<td>84,024 - 204,054 µg/l (</td>
</tr>
</tbody>
</table>

#### Diagramm

- **Probe:** PROBE_4
- **Merkmal:** ortho-Xylo
- **Methode:** DIN 38402 A45
- **Anzahl Labore:** 37
- **Sollwert:** 137,834 µg/l

#### Diagramm Beschreibung

- **Mittelwert:** 137,834 µg/l
- **Toleranzbereich:** 84,024 - 204,054 µg/l
- **Toleranzgrenze:** ±20,78%

#### Laborliste

- PROLab
  - 025
  - 034
  - 069
  - 140
  - 111
  - 089
  - 104
  - 105
  - 103
  - 002
  - 070
  - 023
  - 004
  - 043
  - 181
  - 047
  - 086
  - 118
  - 182
  - 136
  - 113
  - 152
  - 010
  - 015
  - 191
  - 115
  - 065
  - 097
  - 058
  - 164
  - 067
  - 084
  - 016
  - 150
  - 035
  - 036
  - 158

#### Institute

- Institut für Hygiene und Umwelt Hamburg
- PROLab
**BTX/LHKW in Abwasser - 49. Länderübergreifender Ringversuch**

**Probe:** PROBE_4  
**Vergleich-STD (SR):** 28,648 µg/l  
**Merkmal:** ortho-Xylol  
**Anzahl Labore:** 37  
**Sollwert:** 137,834 µg/l (empirischer Wert)

**Methoden:** DIN 38402 A45

**Rel. Vergleich-STD (VR):** 20,78%  
**Rel. Soll-STD:** 20,78% (Limited)

**Toleranzbereich:** 84,024 - 204,054 µg/l (|Zu-Score| <= 2,0)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>116,000</td>
<td>-0,8</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>118,390</td>
<td>-0,7</td>
<td>118,000</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>148,000</td>
<td>0,3</td>
<td>148,000</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>152,000</td>
<td>0,4</td>
<td>152,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>177,830</td>
<td>1,2</td>
<td>177,830</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>116,100</td>
<td>-0,8</td>
<td>116,100</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,849</td>
<td>-5,2</td>
<td>0,849</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>83,600</td>
<td>-2,1</td>
<td>83,600</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>185,000</td>
<td>1,5</td>
<td>185,000</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>196,000</td>
<td>1,8</td>
<td>196,000</td>
<td></td>
</tr>
<tr>
<td>043</td>
<td>119,000</td>
<td>-0,7</td>
<td>119,000</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>123,900</td>
<td>-0,5</td>
<td>123,900</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>159,200</td>
<td>0,7</td>
<td>159,200</td>
<td></td>
</tr>
<tr>
<td>095</td>
<td>158,100</td>
<td>0,6</td>
<td>158,100</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>169,000</td>
<td>1,0</td>
<td>169,000</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>92,500</td>
<td>-1,7</td>
<td>92,500</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>116,000</td>
<td>-0,8</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>169,000</td>
<td>1,0</td>
<td>169,000</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>124,100</td>
<td>-0,5</td>
<td>124,100</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>111,000</td>
<td>-1,0</td>
<td>111,000</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>159,000</td>
<td>0,7</td>
<td>159,000</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>113,000</td>
<td>-0,9</td>
<td>113,000</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>111,000</td>
<td>-1,0</td>
<td>111,000</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>110,000</td>
<td>-1,0</td>
<td>110,000</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>136,200</td>
<td>-0,1</td>
<td>136,200</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>157,000</td>
<td>0,6</td>
<td>157,000</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>126,000</td>
<td>-0,5</td>
<td>126,000</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>134,000</td>
<td>-0,1</td>
<td>134,000</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>104,000</td>
<td>-1,3</td>
<td>104,000</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>180,000</td>
<td>1,3</td>
<td>180,000</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>145,000</td>
<td>0,2</td>
<td>145,000</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>206,000</td>
<td>2,1</td>
<td>206,000</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>160,000</td>
<td>0,7</td>
<td>160,000</td>
<td></td>
</tr>
<tr>
<td>181</td>
<td>122,000</td>
<td>-0,6</td>
<td>122,000</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>127,000</td>
<td>-0,4</td>
<td>127,000</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>155,250</td>
<td>0,5</td>
<td>155,250</td>
<td></td>
</tr>
</tbody>
</table>
BTX/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

**Einzeldarstellung**

<table>
<thead>
<tr>
<th>Probe:</th>
<th>PROBE_4</th>
<th>Vergleich-STD (SR): 17,202 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal:</td>
<td>1,1,1-Trichlorethan</td>
<td>Rel. Vergleich-STD (VR): 24,70%</td>
</tr>
<tr>
<td>Methode:</td>
<td>DIN 38402 A45</td>
<td>Toleranzbereich: 37,761 - 110,483 µg/l (</td>
</tr>
<tr>
<td>Anzahl Labore:</td>
<td>36</td>
<td>Rel. Soll-STD: 24,70% (Limited)</td>
</tr>
<tr>
<td>Sollwert:</td>
<td>69,658 µg/l (empirischer Wert)</td>
<td></td>
</tr>
</tbody>
</table>

![Graph showing measurement results and tolerance limits for 1,1,1-Trichlorethan](image)

**PROLab**

Institut für Hygiene und Umwelt Hamburg

PROLab

Seite 105 von 163
### BTXE / LHKW in Abwasser - 49. Länderübergreifender Ringversuch

#### Probe: Vergleich-STD (SR):

| Merkmal: 1,1,1-Trichlorethan | Methode: DIN 38402 A45 |

#### Anzahl Labore: 36

#### Sollwert: 69,658 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>57,200</td>
<td>0,8</td>
<td>57,200</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>60,410</td>
<td>0,6</td>
<td>60,410</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>79,400</td>
<td>0,5</td>
<td>79,400</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>82,000</td>
<td>0,6</td>
<td>82,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>73,150</td>
<td>0,2</td>
<td>73,150</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>54,960</td>
<td>0,9</td>
<td>54,960</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,111</td>
<td>4,5</td>
<td>0,111</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>49,300</td>
<td>1,3</td>
<td>49,300</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>52,500</td>
<td>1,1</td>
<td>52,500</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>90,100</td>
<td>1,0</td>
<td>90,100</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>66,010</td>
<td>0,2</td>
<td>66,010</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>76,700</td>
<td>0,4</td>
<td>76,700</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>80,180</td>
<td>0,5</td>
<td>80,180</td>
<td></td>
</tr>
<tr>
<td>066</td>
<td>56,800</td>
<td>0,8</td>
<td>56,800</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>107,000</td>
<td>1,9</td>
<td>107,000</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>60,400</td>
<td>0,6</td>
<td>60,400</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>44,900</td>
<td>1,6</td>
<td>44,900</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>82,600</td>
<td>0,6</td>
<td>82,600</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>65,900</td>
<td>0,2</td>
<td>65,900</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>58,200</td>
<td>0,7</td>
<td>58,200</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>80,500</td>
<td>0,5</td>
<td>80,500</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>54,700</td>
<td>1,0</td>
<td>54,700</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>63,900</td>
<td>0,4</td>
<td>63,900</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>50,100</td>
<td>1,3</td>
<td>50,100</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>65,500</td>
<td>0,3</td>
<td>65,500</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>63,900</td>
<td>0,4</td>
<td>63,900</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>81,600</td>
<td>0,6</td>
<td>81,600</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>72,700</td>
<td>0,2</td>
<td>72,700</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>71,700</td>
<td>0,1</td>
<td>71,700</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>54,200</td>
<td>1,0</td>
<td>54,200</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>90,000</td>
<td>1,0</td>
<td>90,000</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>75,200</td>
<td>0,3</td>
<td>75,200</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>108,000</td>
<td>1,9</td>
<td>108,000</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>96,600</td>
<td>1,4</td>
<td>96,600</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>61,300</td>
<td>0,5</td>
<td>61,300</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>83,500</td>
<td>0,7</td>
<td>83,500</td>
<td></td>
</tr>
</tbody>
</table>
**Einzeldarstellung**

Probe: PROBE_4  
Vergleich-STD (SR): 26,630 µg/l

Merkmal: Tetrachlorethen  
Rel. Vergleich-STD (VR): 32,06%

Methode: DIN 38402 A45  
Toleranzbereich: 44,569 - 132,365 µg/l (|Zu-Score| ≤ 2,0)

Anzahl Labore: 36  
Rel. Soll-STD: 25,00% (Limited)

Sollwert: 83,011 µg/l (empirischer Wert)

![Diagramm zur Probenanalyse](image-url)
<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>88,900</td>
<td>0,2</td>
<td>88,900</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>90,958</td>
<td>0,3</td>
<td>90,958</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>60,100</td>
<td>-1,2</td>
<td>60,100</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>58,000</td>
<td>-1,3</td>
<td>58,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>50,250</td>
<td>-1,7</td>
<td>50,250</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>86,960</td>
<td>0,2</td>
<td>86,960</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,401</td>
<td>-4,4</td>
<td>0,401</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>79,500</td>
<td>-0,2</td>
<td>79,500</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>42,800</td>
<td>-2,1</td>
<td>42,800</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>71,800</td>
<td>-0,6</td>
<td>71,800</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>114,900</td>
<td>1,3</td>
<td>114,900</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>55,000</td>
<td>-1,5</td>
<td>55,000</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>58,970</td>
<td>-1,3</td>
<td>58,970</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>92,400</td>
<td>0,4</td>
<td>92,400</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>72,100</td>
<td>-0,6</td>
<td>72,100</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>91,100</td>
<td>0,3</td>
<td>91,100</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>75,700</td>
<td>-0,4</td>
<td>75,700</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>62,000</td>
<td>-1,1</td>
<td>62,000</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>105,000</td>
<td>0,9</td>
<td>105,000</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>97,000</td>
<td>0,6</td>
<td>97,000</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>58,400</td>
<td>-1,3</td>
<td>58,400</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>88,500</td>
<td>0,2</td>
<td>88,500</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>90,700</td>
<td>0,3</td>
<td>90,700</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>74,900</td>
<td>-0,4</td>
<td>74,900</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>96,800</td>
<td>0,6</td>
<td>96,800</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>106,800</td>
<td>1,0</td>
<td>106,800</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>65,600</td>
<td>-0,9</td>
<td>65,600</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>101,000</td>
<td>0,7</td>
<td>101,000</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>113,000</td>
<td>1,2</td>
<td>113,000</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>81,500</td>
<td>-0,1</td>
<td>81,500</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>133,000</td>
<td>2,1</td>
<td>133,000</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>120,000</td>
<td>1,5</td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>81,600</td>
<td>-0,1</td>
<td>81,600</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>71,200</td>
<td>-0,6</td>
<td>71,200</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>93,000</td>
<td>0,4</td>
<td>93,000</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>133,750</td>
<td>2,1</td>
<td>133,750</td>
<td></td>
</tr>
</tbody>
</table>
**Einzeldarstellung**

<table>
<thead>
<tr>
<th>Probe:</th>
<th>PROBE_4</th>
<th>Vergleich-STD (SR):</th>
<th>24,388 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal:</td>
<td>Toluol</td>
<td>Rel. Vergleich-STD (VR):</td>
<td>14,98%</td>
</tr>
<tr>
<td>Methode:</td>
<td>DIN 38402 A45</td>
<td>Toleranzbereich:</td>
<td>116,063 - 217,183 µg/l (</td>
</tr>
<tr>
<td>Anzahl Labore:</td>
<td>37</td>
<td>Rel. Soll-STD:</td>
<td>14,98% (Limited)</td>
</tr>
<tr>
<td>Sollwert:</td>
<td>162,849 µg/l (empirischer Wert)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Graph showing the distribution of results from different laboratories with PROLab]
**BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch**

**Probe:** PROBE_4  
**Vergleich-STD (SR):** 24,388 µg/l

**Merkmal:** Toluol  
**Rel. Vergleich-STD (VR):** 14,98%

**Methode:** DIN 38402 A45  
**Toleranzbereich:** 116,063 - 217,183 µg/l ([Zu-Score] <= 2,0)

**Anzahl Labore:** 37  
**Rel. Soll-STD:** 14,98% (Limited)

**Sollwert:** 162,849 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>172,000</td>
<td>0,3</td>
<td>172,000</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>164,167</td>
<td>0,0</td>
<td>164,167</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>136,000</td>
<td>-1,2</td>
<td>136,000</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>136,000</td>
<td>-1,2</td>
<td>136,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>147,160</td>
<td>-0,7</td>
<td>147,160</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>153,350</td>
<td>-0,4</td>
<td>153,350</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,821</td>
<td>-7,1</td>
<td>0,821</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>167,000</td>
<td>0,2</td>
<td>167,000</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>160,000</td>
<td>-0,1</td>
<td>160,000</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>139,000</td>
<td>-1,0</td>
<td>139,000</td>
<td></td>
</tr>
<tr>
<td>043</td>
<td>156,000</td>
<td>-0,3</td>
<td>156,000</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>154,500</td>
<td>0,8</td>
<td>154,500</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>136,800</td>
<td>-1,1</td>
<td>136,800</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>140,700</td>
<td>-1,0</td>
<td>140,700</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>145,000</td>
<td>-0,8</td>
<td>145,000</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>140,000</td>
<td>-0,6</td>
<td>140,000</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>164,000</td>
<td>0,0</td>
<td>164,000</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>147,000</td>
<td>-0,7</td>
<td>147,000</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>138,500</td>
<td>0,8</td>
<td>138,500</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>173,000</td>
<td>0,4</td>
<td>173,000</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>141,000</td>
<td>-1,0</td>
<td>141,000</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>169,000</td>
<td>0,2</td>
<td>169,000</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>161,000</td>
<td>-0,1</td>
<td>161,000</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>158,000</td>
<td>-0,2</td>
<td>158,000</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>173,400</td>
<td>0,4</td>
<td>173,400</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>189,900</td>
<td>1,0</td>
<td>189,900</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>128,000</td>
<td>-1,6</td>
<td>128,000</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>197,000</td>
<td>1,3</td>
<td>197,000</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>182,000</td>
<td>0,7</td>
<td>182,000</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>150,000</td>
<td>-0,6</td>
<td>150,000</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>254,000</td>
<td>3,4</td>
<td>254,000</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>211,000</td>
<td>1,8</td>
<td>211,000</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>177,000</td>
<td>0,5</td>
<td>177,000</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>149,000</td>
<td>-0,6</td>
<td>149,000</td>
<td></td>
</tr>
<tr>
<td>181</td>
<td>175,000</td>
<td>0,5</td>
<td>175,000</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>181,000</td>
<td>0,7</td>
<td>181,000</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>237,500</td>
<td>2,8</td>
<td>237,500</td>
<td></td>
</tr>
</tbody>
</table>
Einzeldarstellung

Probe: PROBE_4

Vergleich-STD (SR): 9,454 µg/l

Merkmal: Trichlorethen

Rel. Vergleich-STD (VR): 27,34%

Methode: DIN 38402 A45

Rel. Soll-STD: 25,00% (Limited)

Toleranzbereich: 18,567 - 55,141 µg/l (|Zu-Score| <= 2,0)

Sollwert: 34,581 µg/l (empirischer Wert)

Institut für Hygiene und Umwelt Hamburg PROLab
**BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBE_4</td>
<td>9,454 µg/l</td>
<td>27,34%</td>
</tr>
</tbody>
</table>

**Merkmal:** Trichlorethen  
**Methode:** DIN 38402 A45  
**Anzahl Labore:** 36  
**Sollwert:** 34,581 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>002</td>
<td>27,500</td>
<td>-0,9</td>
<td>27,500</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>27,010</td>
<td>-1,0</td>
<td>27,010</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>44,400</td>
<td>1,0</td>
<td>44,400</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>42,500</td>
<td>0,8</td>
<td>42,500</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>21,750</td>
<td>-1,6</td>
<td>21,750</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>25,780</td>
<td>-1,1</td>
<td>25,780</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,693</td>
<td>-4,3</td>
<td>0,693</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>25,000</td>
<td>-1,2</td>
<td>25,000</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>34,200</td>
<td>0,0</td>
<td>34,200</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>53,100</td>
<td>1,8</td>
<td>53,100</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>32,120</td>
<td>-0,3</td>
<td>32,120</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>43,200</td>
<td>0,9</td>
<td>43,200</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>46,200</td>
<td>1,2</td>
<td>46,200</td>
<td></td>
</tr>
<tr>
<td>066</td>
<td>28,400</td>
<td>-0,8</td>
<td>28,400</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>43,700</td>
<td>0,9</td>
<td>43,700</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>30,100</td>
<td>-0,6</td>
<td>30,100</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>20,400</td>
<td>-1,6</td>
<td>20,400</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>47,900</td>
<td>1,3</td>
<td>47,900</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>32,500</td>
<td>-0,3</td>
<td>32,500</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>27,900</td>
<td>-0,9</td>
<td>27,900</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>45,400</td>
<td>1,1</td>
<td>45,400</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>29,400</td>
<td>-0,7</td>
<td>29,400</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>24,400</td>
<td>-1,3</td>
<td>24,400</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>24,900</td>
<td>-1,2</td>
<td>24,900</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>31,000</td>
<td>-0,5</td>
<td>31,000</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>48,600</td>
<td>1,4</td>
<td>48,600</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>32,300</td>
<td>-0,3</td>
<td>32,300</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>33,200</td>
<td>-0,2</td>
<td>33,200</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>24,100</td>
<td>-1,3</td>
<td>24,100</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>46,800</td>
<td>1,2</td>
<td>46,800</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>35,900</td>
<td>0,1</td>
<td>35,900</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>56,800</td>
<td>2,2</td>
<td>56,800</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>51,900</td>
<td>1,7</td>
<td>51,900</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>28,200</td>
<td>-0,8</td>
<td>28,200</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>41,140</td>
<td>0,7</td>
<td>41,140</td>
<td></td>
</tr>
</tbody>
</table>

**PROLabInstitut für Hygiene und Umwelt Hamburg**
Probe 5
## Kennwerte – Probe 5

49. LÜRV BTXE/LHKW in Abwasser

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzol</td>
<td>67,067</td>
<td>9,942</td>
<td>9,942</td>
<td>14,82</td>
<td>14,82</td>
<td>47,984</td>
<td>89,196</td>
<td>2,9</td>
<td>40</td>
</tr>
<tr>
<td>Dichlormethan</td>
<td>52,795</td>
<td>8,335</td>
<td>8,335</td>
<td>15,79</td>
<td>15,79</td>
<td>36,854</td>
<td>71,457</td>
<td>3,2</td>
<td>38</td>
</tr>
<tr>
<td>Ethylbenzol</td>
<td>141,588</td>
<td>22,813</td>
<td>22,813</td>
<td>16,11</td>
<td>16,11</td>
<td>98,013</td>
<td>192,769</td>
<td>3,2</td>
<td>40</td>
</tr>
<tr>
<td>meta-Xylol</td>
<td>120,622</td>
<td>19,266</td>
<td>19,266</td>
<td>15,97</td>
<td>15,97</td>
<td>83,803</td>
<td>163,807</td>
<td>3,2</td>
<td>39</td>
</tr>
<tr>
<td>ortho-Xylol</td>
<td>105,607</td>
<td>15,893</td>
<td>15,893</td>
<td>15,05</td>
<td>15,05</td>
<td>75,128</td>
<td>141,030</td>
<td>3,0</td>
<td>40</td>
</tr>
<tr>
<td>1,1,1-Trichlorethan</td>
<td>28,659</td>
<td>4,331</td>
<td>4,331</td>
<td>15,11</td>
<td>15,11</td>
<td>20,354</td>
<td>38,316</td>
<td>3,0</td>
<td>39</td>
</tr>
<tr>
<td>Tetrachlorethen</td>
<td>19,959</td>
<td>3,585</td>
<td>3,585</td>
<td>17,96</td>
<td>17,96</td>
<td>13,158</td>
<td>28,096</td>
<td>3,6</td>
<td>39</td>
</tr>
<tr>
<td>Toluol</td>
<td>85,960</td>
<td>13,500</td>
<td>13,500</td>
<td>15,70</td>
<td>15,70</td>
<td>60,135</td>
<td>116,171</td>
<td>3,1</td>
<td>40</td>
</tr>
<tr>
<td>Trichlorethen</td>
<td>161,186</td>
<td>26,221</td>
<td>26,221</td>
<td>16,27</td>
<td>16,27</td>
<td>111,131</td>
<td>220,070</td>
<td>3,3</td>
<td>39</td>
</tr>
</tbody>
</table>
Übersicht zu U-Scores

Scores für PROBE_5
Merkmal

Labor
Einzeldarstellung der Parameter

Grafik und Tabelle
Einzeldarstellung

Probe: PROBE_5
Merkmal: Benzol
Methode: DIN 38402 A45
Anzahl Labore: 40
Sollwert: 67,067 µg/l (empirischer Wert)

Vergleich-STD (SR): 9,942 µg/l
Rel. Vergleich-STD (VR): 14,82%
Rel. Soll-STD: 14,82% (Limited)
Toleranzbereich: 47,984 - 89,196 µg/l (|Zu-Score| <= 2,0)

PROBE_5

Mittelwert

Toleranzgrenze

Institut für Hygiene und Umwelt Hamburg

PROLab

PROLab
### BTXELHKW in Abwasser - 49. Länderübergreifender Ringversuch

**Probe:** PROBE_5  
**Merkmal:** Benzol  
**Methode:** DIN 38402 A45  
**Anzahl Labore:** 40  
**Sollwert:** 67,067 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>006</td>
<td>68,600</td>
<td>0,1</td>
<td>68,600</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>68,000</td>
<td>0,1</td>
<td>68,000</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>59,300</td>
<td>-0,8</td>
<td>59,300</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>56,500</td>
<td>-1,1</td>
<td>56,500</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>55,200</td>
<td>-1,3</td>
<td>55,200</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>60,340</td>
<td>-0,7</td>
<td>60,340</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>68,800</td>
<td>0,2</td>
<td>68,800</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>54,800</td>
<td>-1,3</td>
<td>54,800</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>57,500</td>
<td>-1,0</td>
<td>57,500</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>74,620</td>
<td>0,7</td>
<td>74,620</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>56,200</td>
<td>-1,2</td>
<td>56,200</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>65,400</td>
<td>-0,2</td>
<td>65,400</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>71,600</td>
<td>0,4</td>
<td>71,600</td>
<td></td>
</tr>
<tr>
<td>064</td>
<td>84,100</td>
<td>1,6</td>
<td>84,100</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>65,700</td>
<td>-0,1</td>
<td>65,700</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>60,100</td>
<td>-0,7</td>
<td>60,100</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>70,100</td>
<td>0,3</td>
<td>70,100</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>59,000</td>
<td>-0,9</td>
<td>59,000</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>61,500</td>
<td>-0,6</td>
<td>61,500</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>74,600</td>
<td>0,7</td>
<td>74,600</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>68,100</td>
<td>0,1</td>
<td>68,100</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>87,300</td>
<td>1,9</td>
<td>87,300</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>28,400</td>
<td>-4,2</td>
<td>28,400</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>56,100</td>
<td>-1,2</td>
<td>56,100</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>62,800</td>
<td>-0,5</td>
<td>62,800</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>60,500</td>
<td>-0,7</td>
<td>60,500</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>79,800</td>
<td>1,2</td>
<td>79,800</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>80,200</td>
<td>1,2</td>
<td>80,200</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>60,700</td>
<td>-0,7</td>
<td>60,700</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>63,250</td>
<td>-0,4</td>
<td>63,250</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>76,000</td>
<td>0,8</td>
<td>76,000</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>67,700</td>
<td>0,1</td>
<td>67,700</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>72,400</td>
<td>0,5</td>
<td>72,400</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>65,100</td>
<td>-0,2</td>
<td>65,100</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>70,600</td>
<td>0,3</td>
<td>70,600</td>
<td></td>
</tr>
<tr>
<td>181</td>
<td>65,500</td>
<td>-0,2</td>
<td>65,500</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>76,010</td>
<td>0,8</td>
<td>76,010</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>61,359</td>
<td>-0,6</td>
<td>61,359</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>82,400</td>
<td>1,4</td>
<td>82,400</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>89,500</td>
<td>2,1</td>
<td>89,500</td>
<td></td>
</tr>
</tbody>
</table>
## Einzeldarstellung

<table>
<thead>
<tr>
<th>Probe</th>
<th>Vergleich-STD (SR)</th>
<th>Rel. Vergleich-STD (VR)</th>
<th>Toleranzbereich</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBE_5</td>
<td>8,335 µg/l</td>
<td>15,79%</td>
<td>36,854 - 71,457 µg/l (</td>
</tr>
<tr>
<td>Merkmal: Dichlormethan</td>
<td>Rel. Soll-STD: 15,79% (Limited)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methode: DIN 38402 A45</td>
<td>Toleranzbereich: 36,854 - 71,457 µg/l (</td>
<td>Zu-Score</td>
<td>&lt;= 2,0)</td>
</tr>
<tr>
<td>Anzahl Labore: 38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sollwert: 52,795 µg/l (empirischer Wert)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Diagram](image-url)
**BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch**

**Probe:** PROBE_5  
**Vergleich-STD (SR):** 8,335 µg/l  
**Merkmal:** Dichlormethan  
**Rel. Vergleich-STD (VR):** 15,79%  
**Methode:** DIN 38402 A45  
**Rel. Soll-STD:** 15,79% (Limited)  
**Toleranzbereich:** 36,854 - 71,457 µg/l (|Zu-Score| <= 2,0)  
**Anzahl Labore:** 38  
**Sollwert:** 52,795 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>006</td>
<td>95,200</td>
<td>4,7</td>
<td>95,200</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>55,100</td>
<td>0,3</td>
<td>55,100</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>48,700</td>
<td>-0,5</td>
<td>48,700</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>45,500</td>
<td>-0,9</td>
<td>45,500</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>47,300</td>
<td>-0,7</td>
<td>47,300</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>45,530</td>
<td>-0,9</td>
<td>45,530</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>43,000</td>
<td>-1,3</td>
<td>43,000</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>52,400</td>
<td>-0,1</td>
<td>52,400</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>54,700</td>
<td>0,2</td>
<td>54,700</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>58,740</td>
<td>0,7</td>
<td>58,740</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>48,000</td>
<td>-0,6</td>
<td>48,000</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>55,200</td>
<td>0,3</td>
<td>55,200</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>51,700</td>
<td>-0,1</td>
<td>51,700</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>31,200</td>
<td>-2,8</td>
<td>31,200</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>47,400</td>
<td>-0,7</td>
<td>47,400</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>50,100</td>
<td>-0,3</td>
<td>50,100</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>59,600</td>
<td>0,7</td>
<td>59,600</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>50,400</td>
<td>-0,3</td>
<td>50,400</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>58,700</td>
<td>0,6</td>
<td>58,700</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>56,700</td>
<td>0,4</td>
<td>56,700</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>71,900</td>
<td>2,1</td>
<td>71,900</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>28,500</td>
<td>-3,1</td>
<td>28,500</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>44,400</td>
<td>-1,1</td>
<td>44,400</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>49,000</td>
<td>-0,5</td>
<td>49,000</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>47,600</td>
<td>-0,7</td>
<td>47,600</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>64,400</td>
<td>1,3</td>
<td>64,400</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>55,600</td>
<td>0,3</td>
<td>55,600</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>50,700</td>
<td>-0,3</td>
<td>50,700</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>51,888</td>
<td>-0,1</td>
<td>51,888</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>56,600</td>
<td>0,4</td>
<td>56,600</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>45,400</td>
<td>-1,0</td>
<td>45,400</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>60,000</td>
<td>0,8</td>
<td>60,000</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>51,000</td>
<td>-0,2</td>
<td>51,000</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>58,400</td>
<td>0,6</td>
<td>58,400</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>69,470</td>
<td>1,8</td>
<td>69,470</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>50,502</td>
<td>-0,3</td>
<td>50,502</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>63,300</td>
<td>1,2</td>
<td>63,300</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>64,660</td>
<td>1,3</td>
<td>64,660</td>
<td></td>
</tr>
</tbody>
</table>

**Institut für Hygiene und Umwelt Hamburg**

**PROLab**
**Einzeldarstellung**

**Probe:** PROBE_5  
**Merkmal:** Ethylbenzol  
**Methode:** DIN 38402 A45

- **Vergleich-STD (SR):** 22,813 µg/l  
- **Rel. Vergleich-STD (VR):** 16,11%  
- **Rel. Soll-STD:** 16,11% (Limited)  
- **Sollwert:** 141,588 µg/l (empirischer Wert)

**Toleranzbereich:** 98,013 - 192,769 µg/l (|Zu-Score| <= 2,0)

---

**Diagramm**

- Mittelwert  
- Toleranzgrenze  
- Labor
**BTXE /LHKW in Abwasser - 49. Länderübergreifender Ringversuch**

**Probe:** PROBE_5  
**Merkmal:** Ethylbenzol  
**Methode:** DIN 38402 A45  
**Anzahl Labore:** 40  
**Sollwert:** 141,588 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>006</td>
<td>174,000</td>
<td>1,3</td>
<td>174,000</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>122,000</td>
<td>-0,9</td>
<td>122,000</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>121,000</td>
<td>-1,0</td>
<td>121,000</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>135,000</td>
<td>-0,3</td>
<td>135,000</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>132,000</td>
<td>-0,5</td>
<td>132,000</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>138,500</td>
<td>-0,1</td>
<td>138,500</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>140,000</td>
<td>-0,1</td>
<td>140,000</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>118,000</td>
<td>-1,1</td>
<td>118,000</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>125,000</td>
<td>-0,8</td>
<td>125,000</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>143,600</td>
<td>0,1</td>
<td>143,600</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>133,200</td>
<td>-0,4</td>
<td>133,200</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>135,000</td>
<td>-0,3</td>
<td>135,000</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>93,500</td>
<td>-2,3</td>
<td>93,500</td>
<td></td>
</tr>
<tr>
<td>064</td>
<td>179,000</td>
<td>1,5</td>
<td>179,000</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>114,000</td>
<td>-1,3</td>
<td>114,000</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>139,000</td>
<td>-0,1</td>
<td>139,000</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>143,700</td>
<td>0,1</td>
<td>143,700</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>126,000</td>
<td>-0,7</td>
<td>126,000</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>126,000</td>
<td>-0,7</td>
<td>126,000</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>157,000</td>
<td>0,6</td>
<td>157,000</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>169,300</td>
<td>1,1</td>
<td>169,300</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>162,000</td>
<td>0,8</td>
<td>162,000</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>67,200</td>
<td>-3,5</td>
<td>67,200</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>121,000</td>
<td>-1,0</td>
<td>121,000</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>122,000</td>
<td>-0,9</td>
<td>122,000</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>140,000</td>
<td>-0,1</td>
<td>140,000</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>148,000</td>
<td>0,3</td>
<td>148,000</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>181,000</td>
<td>1,6</td>
<td>181,000</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>129,000</td>
<td>-0,6</td>
<td>129,000</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>121,349</td>
<td>-1,0</td>
<td>121,349</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>168,000</td>
<td>1,1</td>
<td>168,000</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>148,000</td>
<td>0,3</td>
<td>148,000</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>163,000</td>
<td>0,9</td>
<td>163,000</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>135,000</td>
<td>-0,3</td>
<td>135,000</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>157,000</td>
<td>0,6</td>
<td>157,000</td>
<td></td>
</tr>
<tr>
<td>181</td>
<td>144,000</td>
<td>0,1</td>
<td>144,000</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>160,300</td>
<td>0,7</td>
<td>160,300</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>128,648</td>
<td>-0,6</td>
<td>128,648</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>179,300</td>
<td>1,5</td>
<td>179,300</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>189,000</td>
<td>1,9</td>
<td>189,000</td>
<td></td>
</tr>
</tbody>
</table>

**Toleranzbereich:** 98,013 - 192,769 µg/l (|Zu-Score| <= 2,0)  
**Rel. Vergleich-STD (VR):** 16,11%  
**Rel. Soll-STD:** 16,11% (Limited)
**Einzeldarstellung**

<table>
<thead>
<tr>
<th>Probe</th>
<th>PROBE_5</th>
<th>Vergleich-STD (SR): 19,266 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal</td>
<td>meta-Xylol</td>
<td>Rel. Vergleich-STD (VR): 15,97%</td>
</tr>
<tr>
<td>Methode</td>
<td>DIN 38402 A45</td>
<td>Toleranzbereich: 83,803 - 163,807 µg/l (</td>
</tr>
<tr>
<td>Anzahl Labore</td>
<td>39</td>
<td>Rel. Soll-STD: 15,97% (Limited)</td>
</tr>
<tr>
<td>Sollwert</td>
<td>120,622 µg/l (empirischer Wert)</td>
<td></td>
</tr>
</tbody>
</table>

---

Diagramm zeigt die Ergebnisse der Laboranalysen für die Probe PROBE_5. Mittelwert und Toleranzgrenzen sind markiert. PROTech und Institut für Hygiene und Umwelt Hamburg PROLab.
### Probe: PROBE_5

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>006</td>
<td>182,000</td>
<td>2,9</td>
<td>182,000</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>102,000</td>
<td>-1,0</td>
<td>102,000</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>99,300</td>
<td>-1,2</td>
<td>99,300</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>114,000</td>
<td>-0,4</td>
<td>114,000</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>110,000</td>
<td>-0,6</td>
<td>110,000</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>116,300</td>
<td>-0,2</td>
<td>116,300</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>119,000</td>
<td>-0,1</td>
<td>119,000</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>92,500</td>
<td>-1,6</td>
<td>92,500</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>106,000</td>
<td>-0,8</td>
<td>106,000</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>128,200</td>
<td>0,4</td>
<td>128,200</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>111,200</td>
<td>-0,5</td>
<td>111,200</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>122,000</td>
<td>0,1</td>
<td>122,000</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>133,000</td>
<td>0,6</td>
<td>133,000</td>
<td></td>
</tr>
<tr>
<td>064</td>
<td>154,000</td>
<td>1,6</td>
<td>154,000</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>102,000</td>
<td>-1,0</td>
<td>102,000</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>117,000</td>
<td>-0,2</td>
<td>117,000</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>84,500</td>
<td>-3,1</td>
<td>84,500</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>109,000</td>
<td>-0,6</td>
<td>109,000</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>113,000</td>
<td>-0,4</td>
<td>113,000</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>137,000</td>
<td>0,8</td>
<td>137,000</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>118,800</td>
<td>-0,1</td>
<td>118,800</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>158,000</td>
<td>1,8</td>
<td>158,000</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>50,000</td>
<td>-3,9</td>
<td>50,000</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>102,000</td>
<td>-1,0</td>
<td>102,000</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>116,000</td>
<td>-0,3</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>119,000</td>
<td>-0,1</td>
<td>119,000</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>127,000</td>
<td>0,3</td>
<td>127,000</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>162,000</td>
<td>2,0</td>
<td>162,000</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>109,000</td>
<td>-0,6</td>
<td>109,000</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>110,650</td>
<td>-0,6</td>
<td>110,650</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>146,000</td>
<td>1,2</td>
<td>146,000</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>128,000</td>
<td>0,4</td>
<td>128,000</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>150,000</td>
<td>1,4</td>
<td>150,000</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>110,000</td>
<td>-0,6</td>
<td>110,000</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>130,000</td>
<td>0,4</td>
<td>130,000</td>
<td></td>
</tr>
<tr>
<td>181</td>
<td>115,000</td>
<td>-0,3</td>
<td>115,000</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>136,300</td>
<td>0,7</td>
<td>136,300</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>117,211</td>
<td>-0,2</td>
<td>117,211</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>147,500</td>
<td>1,3</td>
<td>147,500</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

**Einzeldarstellung**

<table>
<thead>
<tr>
<th>Probe:</th>
<th>PROBE_5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal:</td>
<td>ortho-Xylol</td>
</tr>
<tr>
<td>Methode:</td>
<td>DIN 38402 A45</td>
</tr>
<tr>
<td>Anzahl Labore:</td>
<td>40</td>
</tr>
<tr>
<td>Sollwert:</td>
<td>105,607 µg/l (empirischer Wert)</td>
</tr>
</tbody>
</table>

**Vergleich-STD (SR):** 15,893 µg/l

**Rel. Vergleich-STD (VR):** 15,05%

**Rel. Soll-STD:** 15,05% (Limited)

**Toleranzbereich:** 75,128 - 141,030 µg/l (|Zu-Score| <= 2,0)

![Diagramm der Einzeldarstellung](image)
BTXE/LHKW in Abwasser – 49. Länderübergreifender Ringversuch

Probe: PROBE_5  
Vergleich-STD (SR): 15,893 µg/l  
Merkmal: ortho-Xylol  
Rel. Vergleich-STD (VR): 15,05%  
Methode: DIN 38402 A45  
Rel. Soll-STD: 15,05% (Limited)  
Anzahl Labore: 40  
Toleranzbereich: 75,128 - 141,030 µg/l (|Zu-Score| <= 2,0)  
Sollwert: 105,607 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>006</td>
<td>129,000</td>
<td>1,4</td>
<td></td>
<td>129,000</td>
</tr>
<tr>
<td>009</td>
<td>89,700</td>
<td>-1,1</td>
<td></td>
<td>89,700</td>
</tr>
<tr>
<td>010</td>
<td>87,600</td>
<td>-1,2</td>
<td></td>
<td>87,600</td>
</tr>
<tr>
<td>015</td>
<td>105,000</td>
<td>0,0</td>
<td></td>
<td>105,000</td>
</tr>
<tr>
<td>017</td>
<td>91,300</td>
<td>-1,0</td>
<td></td>
<td>91,300</td>
</tr>
<tr>
<td>023</td>
<td>104,100</td>
<td>-0,1</td>
<td></td>
<td>104,100</td>
</tr>
<tr>
<td>035</td>
<td>109,000</td>
<td>0,2</td>
<td></td>
<td>109,000</td>
</tr>
<tr>
<td>039</td>
<td>86,200</td>
<td>-1,3</td>
<td></td>
<td>86,200</td>
</tr>
<tr>
<td>045</td>
<td>93,500</td>
<td>-0,8</td>
<td></td>
<td>93,500</td>
</tr>
<tr>
<td>047</td>
<td>102,000</td>
<td>-0,2</td>
<td></td>
<td>102,000</td>
</tr>
<tr>
<td>058</td>
<td>97,700</td>
<td>-0,5</td>
<td></td>
<td>97,700</td>
</tr>
<tr>
<td>059</td>
<td>98,800</td>
<td>-0,5</td>
<td></td>
<td>98,800</td>
</tr>
<tr>
<td>060</td>
<td>113,000</td>
<td>0,4</td>
<td></td>
<td>113,000</td>
</tr>
<tr>
<td>064</td>
<td>130,000</td>
<td>1,4</td>
<td></td>
<td>130,000</td>
</tr>
<tr>
<td>070</td>
<td>88,600</td>
<td>-1,1</td>
<td></td>
<td>88,600</td>
</tr>
<tr>
<td>087</td>
<td>104,000</td>
<td>0,1</td>
<td></td>
<td>104,000</td>
</tr>
<tr>
<td>088</td>
<td>118,600</td>
<td>0,8</td>
<td></td>
<td>118,600</td>
</tr>
<tr>
<td>092</td>
<td>91,800</td>
<td>-0,9</td>
<td></td>
<td>91,800</td>
</tr>
<tr>
<td>097</td>
<td>95,800</td>
<td>-0,7</td>
<td></td>
<td>95,800</td>
</tr>
<tr>
<td>100</td>
<td>108,000</td>
<td>0,1</td>
<td></td>
<td>108,000</td>
</tr>
<tr>
<td>110</td>
<td>113,400</td>
<td>0,5</td>
<td></td>
<td>113,400</td>
</tr>
<tr>
<td>117</td>
<td>119,000</td>
<td>0,8</td>
<td></td>
<td>119,000</td>
</tr>
<tr>
<td>129</td>
<td>43,600</td>
<td>-4,2</td>
<td></td>
<td>43,600</td>
</tr>
<tr>
<td>129</td>
<td>92,500</td>
<td>-0,9</td>
<td></td>
<td>92,500</td>
</tr>
<tr>
<td>131</td>
<td>83,600</td>
<td>-1,5</td>
<td></td>
<td>83,600</td>
</tr>
<tr>
<td>134</td>
<td>99,400</td>
<td>-0,4</td>
<td></td>
<td>99,400</td>
</tr>
<tr>
<td>135</td>
<td>110,000</td>
<td>0,3</td>
<td></td>
<td>110,000</td>
</tr>
<tr>
<td>136</td>
<td>133,000</td>
<td>1,6</td>
<td></td>
<td>133,000</td>
</tr>
<tr>
<td>140</td>
<td>95,900</td>
<td>-0,7</td>
<td></td>
<td>95,900</td>
</tr>
<tr>
<td>151</td>
<td>100,885</td>
<td>-0,3</td>
<td></td>
<td>100,885</td>
</tr>
<tr>
<td>152</td>
<td>120,000</td>
<td>0,6</td>
<td></td>
<td>120,000</td>
</tr>
<tr>
<td>154</td>
<td>111,000</td>
<td>0,3</td>
<td></td>
<td>111,000</td>
</tr>
<tr>
<td>158</td>
<td>119,000</td>
<td>0,8</td>
<td></td>
<td>119,000</td>
</tr>
<tr>
<td>162</td>
<td>98,800</td>
<td>-0,5</td>
<td></td>
<td>98,800</td>
</tr>
<tr>
<td>170</td>
<td>112,000</td>
<td>0,4</td>
<td></td>
<td>112,000</td>
</tr>
<tr>
<td>181</td>
<td>106,000</td>
<td>0,0</td>
<td></td>
<td>106,000</td>
</tr>
<tr>
<td>186</td>
<td>119,700</td>
<td>0,8</td>
<td></td>
<td>119,700</td>
</tr>
<tr>
<td>188</td>
<td>97,769</td>
<td>-0,5</td>
<td></td>
<td>97,769</td>
</tr>
<tr>
<td>190</td>
<td>127,200</td>
<td>1,2</td>
<td></td>
<td>127,200</td>
</tr>
<tr>
<td>191</td>
<td>144,250</td>
<td>2,2</td>
<td></td>
<td>144,250</td>
</tr>
</tbody>
</table>
### Einzeldarstellung

<table>
<thead>
<tr>
<th>Probe:</th>
<th>PROBE_5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal:</td>
<td>1,1,1-Trichlorethan</td>
</tr>
<tr>
<td>Methode:</td>
<td>DIN 38402 A45</td>
</tr>
<tr>
<td>Anzahl Labore:</td>
<td>39</td>
</tr>
<tr>
<td>Sollwert:</td>
<td>28,659 µg/l (empirischer Wert)</td>
</tr>
</tbody>
</table>

**Vergleich-STD (SR):** 4,331 µg/l  
**Rel. Vergleich-STD (VR):** 15,11%  
**Rel. Soll-STD:** 15,11% (Limited)  
**Toleranzbereich:** 20,354 - 38,316 µg/l (|Zu-Score| <= 2,0)

---

**Diagramm:**

- X-Achse: Labor
- Y-Achse: µg/l
- Mittelwert
- Toleranzgrenze

---

Institut für Hygiene und Umwelt Hamburg

PROLab
### BTXE / LHKW in Abwasser - 49. Länderübergreifender Ringversuch

**Probe:** PROBE_5  
**Vergleich-STD (SR):** 4,331 µg/l  
**Rel. Vergleich-STD (VR):** 15,11%  
**Merkmal:** 1,1,1-Trichlorethan  
**Rel. Soll-STD:** 15,11% (Limited)  
**Methode:** DIN 38402 A45  
**Toleranzbereich:** 20,354 - 38,316 µg/l (|Zu-Score| <= 2,0)  
**Anzahl Labore:** 39  
**Sollwert:** 28,659 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>006</td>
<td>32,200</td>
<td>0,8</td>
<td></td>
<td>32,200</td>
</tr>
<tr>
<td>009</td>
<td>29,500</td>
<td>0,2</td>
<td></td>
<td>29,500</td>
</tr>
<tr>
<td>010</td>
<td>26,100</td>
<td>-0,6</td>
<td></td>
<td>26,100</td>
</tr>
<tr>
<td>015</td>
<td>25,000</td>
<td>-0,9</td>
<td></td>
<td>25,000</td>
</tr>
<tr>
<td>017</td>
<td>26,300</td>
<td>-0,6</td>
<td></td>
<td>26,300</td>
</tr>
<tr>
<td>023</td>
<td>26,170</td>
<td>-0,6</td>
<td></td>
<td>26,170</td>
</tr>
<tr>
<td>035</td>
<td>22,100</td>
<td>-1,6</td>
<td></td>
<td>22,100</td>
</tr>
<tr>
<td>039</td>
<td>28,400</td>
<td>-0,1</td>
<td></td>
<td>28,400</td>
</tr>
<tr>
<td>045</td>
<td>28,700</td>
<td>0,0</td>
<td></td>
<td>28,700</td>
</tr>
<tr>
<td>047</td>
<td>33,330</td>
<td>1,0</td>
<td></td>
<td>33,330</td>
</tr>
<tr>
<td>058</td>
<td>25,700</td>
<td>-0,7</td>
<td></td>
<td>25,700</td>
</tr>
<tr>
<td>059</td>
<td>28,800</td>
<td>0,0</td>
<td></td>
<td>28,800</td>
</tr>
<tr>
<td>060</td>
<td>26,500</td>
<td>0,2</td>
<td></td>
<td>26,500</td>
</tr>
<tr>
<td>066</td>
<td>21,800</td>
<td>-1,7</td>
<td></td>
<td>21,800</td>
</tr>
<tr>
<td>070</td>
<td>21,700</td>
<td>-1,7</td>
<td></td>
<td>21,700</td>
</tr>
<tr>
<td>087</td>
<td>26,400</td>
<td>-0,6</td>
<td></td>
<td>26,400</td>
</tr>
<tr>
<td>088</td>
<td>26,800</td>
<td>0,0</td>
<td></td>
<td>26,800</td>
</tr>
<tr>
<td>092</td>
<td>32,600</td>
<td>0,8</td>
<td></td>
<td>32,600</td>
</tr>
<tr>
<td>097</td>
<td>27,000</td>
<td>-0,4</td>
<td></td>
<td>27,000</td>
</tr>
<tr>
<td>110</td>
<td>27,600</td>
<td>-0,3</td>
<td></td>
<td>27,600</td>
</tr>
<tr>
<td>113</td>
<td>29,300</td>
<td>0,1</td>
<td></td>
<td>29,300</td>
</tr>
<tr>
<td>117</td>
<td>38,400</td>
<td>2,1</td>
<td></td>
<td>38,400</td>
</tr>
<tr>
<td>129</td>
<td>9,460</td>
<td>-4,7</td>
<td></td>
<td>9,460</td>
</tr>
<tr>
<td>129</td>
<td>24,600</td>
<td>-1,0</td>
<td></td>
<td>24,600</td>
</tr>
<tr>
<td>131</td>
<td>30,800</td>
<td>0,5</td>
<td></td>
<td>30,800</td>
</tr>
<tr>
<td>134</td>
<td>26,600</td>
<td>-0,5</td>
<td></td>
<td>26,600</td>
</tr>
<tr>
<td>135</td>
<td>26,700</td>
<td>-0,5</td>
<td></td>
<td>26,700</td>
</tr>
<tr>
<td>136</td>
<td>43,500</td>
<td>3,2</td>
<td></td>
<td>43,500</td>
</tr>
<tr>
<td>140</td>
<td>26,000</td>
<td>-0,7</td>
<td></td>
<td>26,000</td>
</tr>
<tr>
<td>151</td>
<td>26,921</td>
<td>-0,4</td>
<td></td>
<td>26,921</td>
</tr>
<tr>
<td>152</td>
<td>31,800</td>
<td>0,7</td>
<td></td>
<td>31,800</td>
</tr>
<tr>
<td>154</td>
<td>27,800</td>
<td>-0,2</td>
<td></td>
<td>27,800</td>
</tr>
<tr>
<td>158</td>
<td>33,900</td>
<td>1,1</td>
<td></td>
<td>33,900</td>
</tr>
<tr>
<td>162</td>
<td>25,000</td>
<td>-0,9</td>
<td></td>
<td>25,000</td>
</tr>
<tr>
<td>170</td>
<td>30,700</td>
<td>0,4</td>
<td></td>
<td>30,700</td>
</tr>
<tr>
<td>185</td>
<td>40,310</td>
<td>2,5</td>
<td></td>
<td>40,310</td>
</tr>
<tr>
<td>188</td>
<td>27,040</td>
<td>-0,4</td>
<td></td>
<td>27,040</td>
</tr>
<tr>
<td>190</td>
<td>34,800</td>
<td>1,3</td>
<td></td>
<td>34,800</td>
</tr>
<tr>
<td>191</td>
<td>39,340</td>
<td>2,3</td>
<td></td>
<td>39,340</td>
</tr>
</tbody>
</table>
**Probe:** PROBE_5  
**Merkmal:** Tetrachlorethen  
**Methoden:** DIN 38402 A45  
**Anzahl Labore:** 39  
**Sollwert:** 19,959 µg/l (empirischer Wert)

**Vergleich-STD (SR):** 3,585 µg/l  
**Rel. Vergleich-STD (VR):** 17,96%  
**Rel. Soll-STD:** 17,96% (Limited)  
**Toleranzbereich:** 13,158 - 28,096 µg/l (|Zu-Score| <= 2,0)
### BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

**Probe:** PROBE_5  
**Merkmal:** Tetrachlorethen  
**Methode:** DIN 38402 A45  
**Anzahl Labore:** 39  
**Sollwert:** 19,959 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>006</td>
<td>17,100</td>
<td>-0,9</td>
<td>17,100</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>16,400</td>
<td>-1,1</td>
<td>16,400</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>18,700</td>
<td>-0,4</td>
<td>18,700</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>20,000</td>
<td>0,0</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>21,400</td>
<td>0,4</td>
<td>21,400</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>20,340</td>
<td>0,1</td>
<td>20,340</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>17,300</td>
<td>-0,8</td>
<td>17,300</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>19,500</td>
<td>-0,1</td>
<td>19,500</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>16,200</td>
<td>-1,1</td>
<td>16,200</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>22,410</td>
<td>0,6</td>
<td>22,410</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>17,800</td>
<td>-0,7</td>
<td>17,800</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>20,500</td>
<td>0,1</td>
<td>20,500</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>16,200</td>
<td>-1,1</td>
<td>16,200</td>
<td></td>
</tr>
<tr>
<td>066</td>
<td>15,900</td>
<td>-1,2</td>
<td>15,900</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>14,200</td>
<td>-1,7</td>
<td>14,200</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>18,800</td>
<td>-0,3</td>
<td>18,800</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>21,600</td>
<td>0,4</td>
<td>21,600</td>
<td></td>
</tr>
<tr>
<td>092</td>
<td>19,300</td>
<td>-0,2</td>
<td>19,300</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>18,700</td>
<td>-0,4</td>
<td>18,700</td>
<td></td>
</tr>
<tr>
<td>101</td>
<td>21,600</td>
<td>0,4</td>
<td>21,600</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>20,900</td>
<td>0,2</td>
<td>20,900</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>27,500</td>
<td>1,8</td>
<td>27,500</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>3,430</td>
<td>-5,0</td>
<td>3,430</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>17,200</td>
<td>-0,8</td>
<td>17,200</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>22,200</td>
<td>0,6</td>
<td>22,200</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>19,000</td>
<td>-0,3</td>
<td>19,000</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>15,900</td>
<td>-1,2</td>
<td>15,900</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>27,100</td>
<td>1,8</td>
<td>27,100</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>17,800</td>
<td>-0,7</td>
<td>17,800</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>17,953</td>
<td>-0,6</td>
<td>17,953</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>23,100</td>
<td>0,8</td>
<td>23,100</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>20,500</td>
<td>0,1</td>
<td>20,500</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>23,700</td>
<td>0,9</td>
<td>23,700</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>18,600</td>
<td>-0,4</td>
<td>18,600</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>22,800</td>
<td>0,7</td>
<td>22,800</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>24,540</td>
<td>1,2</td>
<td>24,540</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>18,604</td>
<td>-0,4</td>
<td>18,604</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>25,300</td>
<td>1,3</td>
<td>25,300</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>30,160</td>
<td>2,6</td>
<td>30,160</td>
<td></td>
</tr>
</tbody>
</table>
### Einzeldarstellung

**Probe:** PROBE_5  
**Merkmal:** Toluol  
**Methode:** DIN 38402 A45  
**Anzahl Labore:** 40  
**Sollwert:** 85,960 µg/l (empirischer Wert)  
**Vergleich-STD (SR):** 13,500 µg/l  
**Rel. Vergleich-STD (VR):** 15,70%  
**Rel. Soll-STD:** 15,70% (Limited)  
**Toleranzbereich:** 60,135 - 116,171 µg/l (|Zu-Score| <= 2,0)
<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>006</td>
<td>92,200</td>
<td>0,4</td>
<td>92,200</td>
<td></td>
</tr>
<tr>
<td>009</td>
<td>80,000</td>
<td>-0,5</td>
<td>80,000</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>74,700</td>
<td>-0,9</td>
<td>74,700</td>
<td></td>
</tr>
<tr>
<td>015</td>
<td>76,000</td>
<td>-0,8</td>
<td>76,000</td>
<td></td>
</tr>
<tr>
<td>017</td>
<td>70,500</td>
<td>-1,2</td>
<td>70,500</td>
<td></td>
</tr>
<tr>
<td>023</td>
<td>80,090</td>
<td>-0,5</td>
<td>80,090</td>
<td></td>
</tr>
<tr>
<td>035</td>
<td>89,200</td>
<td>0,2</td>
<td>89,200</td>
<td></td>
</tr>
<tr>
<td>039</td>
<td>70,600</td>
<td>-1,2</td>
<td>70,600</td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>75,600</td>
<td>-0,8</td>
<td>75,600</td>
<td></td>
</tr>
<tr>
<td>047</td>
<td>93,200</td>
<td>0,5</td>
<td>93,200</td>
<td></td>
</tr>
<tr>
<td>058</td>
<td>81,200</td>
<td>-0,4</td>
<td>81,200</td>
<td></td>
</tr>
<tr>
<td>059</td>
<td>84,200</td>
<td>-0,1</td>
<td>84,200</td>
<td></td>
</tr>
<tr>
<td>060</td>
<td>157,000</td>
<td>4,8</td>
<td>157,000</td>
<td></td>
</tr>
<tr>
<td>064</td>
<td>109,000</td>
<td>1,6</td>
<td>109,000</td>
<td></td>
</tr>
<tr>
<td>070</td>
<td>85,200</td>
<td>-0,1</td>
<td>85,200</td>
<td></td>
</tr>
<tr>
<td>087</td>
<td>81,200</td>
<td>-0,4</td>
<td>81,200</td>
<td></td>
</tr>
<tr>
<td>096</td>
<td>72,900</td>
<td>-1,0</td>
<td>72,900</td>
<td></td>
</tr>
<tr>
<td>097</td>
<td>80,200</td>
<td>-0,5</td>
<td>80,200</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>88,500</td>
<td>0,2</td>
<td>88,500</td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>91,100</td>
<td>0,3</td>
<td>91,100</td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>114,000</td>
<td>1,9</td>
<td>114,000</td>
<td></td>
</tr>
<tr>
<td>128</td>
<td>37,900</td>
<td>-3,8</td>
<td>37,900</td>
<td></td>
</tr>
<tr>
<td>129</td>
<td>75,100</td>
<td>-0,9</td>
<td>75,100</td>
<td></td>
</tr>
<tr>
<td>131</td>
<td>71,000</td>
<td>-1,2</td>
<td>71,000</td>
<td></td>
</tr>
<tr>
<td>134</td>
<td>84,300</td>
<td>-0,1</td>
<td>84,300</td>
<td></td>
</tr>
<tr>
<td>135</td>
<td>96,100</td>
<td>0,7</td>
<td>96,100</td>
<td></td>
</tr>
<tr>
<td>136</td>
<td>99,900</td>
<td>0,9</td>
<td>99,900</td>
<td></td>
</tr>
<tr>
<td>140</td>
<td>78,400</td>
<td>-0,6</td>
<td>78,400</td>
<td></td>
</tr>
<tr>
<td>151</td>
<td>80,972</td>
<td>-0,4</td>
<td>80,972</td>
<td></td>
</tr>
<tr>
<td>152</td>
<td>100,000</td>
<td>1,0</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>179,000</td>
<td>6,3</td>
<td>179,000</td>
<td></td>
</tr>
<tr>
<td>158</td>
<td>94,200</td>
<td>0,6</td>
<td>94,200</td>
<td></td>
</tr>
<tr>
<td>162</td>
<td>79,800</td>
<td>-0,5</td>
<td>79,800</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>93,300</td>
<td>0,5</td>
<td>93,300</td>
<td></td>
</tr>
<tr>
<td>181</td>
<td>86,600</td>
<td>0,0</td>
<td>86,600</td>
<td></td>
</tr>
<tr>
<td>186</td>
<td>99,460</td>
<td>0,9</td>
<td>99,460</td>
<td></td>
</tr>
<tr>
<td>188</td>
<td>81,862</td>
<td>-0,3</td>
<td>81,862</td>
<td></td>
</tr>
<tr>
<td>190</td>
<td>105,100</td>
<td>1,3</td>
<td>105,100</td>
<td></td>
</tr>
<tr>
<td>191</td>
<td>121,000</td>
<td>2,4</td>
<td>121,000</td>
<td></td>
</tr>
</tbody>
</table>
**Einzeldarstellung**

**Probe:** PROBE_5  
**Merkmal:** Trichlorethen  
**Anzahl Labore:** 39  
**Sollwert:** 161,186 µg/l (empirischer Wert)

**Vergleich-STD (SR):** 26,221 µg/l  
**Rel. Vergleich-STD (VR):** 16,27%  
**Rel. Soll-STD:** 16,27% (Limited)

**Methoden:**  
DIN 38402 A45

**Toleranzbereich:** 111,131 - 220,070 µg/l ([Zu-Score] <= 2,0)
## BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

### Probe: PROBE_5

#### Vergleich-STD (SR): 26,221 µg/l

#### Merkmal: Trichlorethen

#### Methode: DIN 38402 A45

#### Anzahl Labore: 39

#### Sollwert: 161,186 µg/l (empirischer Wert)

#### Rel. Vergleich-STD (VR): 16,27%

#### Rel. Soll-STD: 16,27% (Limited)

#### Toleranzbereich: 111,131 - 220,070 µg/l (|Zu-Score| <= 2,0)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>006</td>
<td>203,000</td>
<td>1,5</td>
<td></td>
<td>203,000</td>
</tr>
<tr>
<td>009</td>
<td>133,000</td>
<td>-1,2</td>
<td></td>
<td>133,000</td>
</tr>
<tr>
<td>010</td>
<td>153,000</td>
<td>-0,3</td>
<td></td>
<td>153,000</td>
</tr>
<tr>
<td>015</td>
<td>141,000</td>
<td>-0,8</td>
<td></td>
<td>141,000</td>
</tr>
<tr>
<td>017</td>
<td>153,000</td>
<td>-0,3</td>
<td></td>
<td>153,000</td>
</tr>
<tr>
<td>023</td>
<td>153,600</td>
<td>-0,3</td>
<td></td>
<td>153,600</td>
</tr>
<tr>
<td>035</td>
<td>126,000</td>
<td>-1,4</td>
<td></td>
<td>126,000</td>
</tr>
<tr>
<td>039</td>
<td>173,000</td>
<td>0,4</td>
<td></td>
<td>173,000</td>
</tr>
<tr>
<td>045</td>
<td>156,000</td>
<td>-0,2</td>
<td></td>
<td>156,000</td>
</tr>
<tr>
<td>047</td>
<td>181,800</td>
<td>0,7</td>
<td></td>
<td>181,800</td>
</tr>
<tr>
<td>058</td>
<td>150,900</td>
<td>-0,4</td>
<td></td>
<td>150,900</td>
</tr>
<tr>
<td>059</td>
<td>173,000</td>
<td>0,4</td>
<td></td>
<td>173,000</td>
</tr>
<tr>
<td>060</td>
<td>107,000</td>
<td>-2,2</td>
<td></td>
<td>107,000</td>
</tr>
<tr>
<td>065</td>
<td>155,000</td>
<td>-0,3</td>
<td></td>
<td>155,000</td>
</tr>
<tr>
<td>070</td>
<td>113,000</td>
<td>-2,0</td>
<td></td>
<td>113,000</td>
</tr>
<tr>
<td>087</td>
<td>157,000</td>
<td>-0,2</td>
<td></td>
<td>157,000</td>
</tr>
<tr>
<td>088</td>
<td>146,500</td>
<td>-0,6</td>
<td></td>
<td>146,500</td>
</tr>
<tr>
<td>092</td>
<td>159,000</td>
<td>-0,1</td>
<td></td>
<td>159,000</td>
</tr>
<tr>
<td>097</td>
<td>158,000</td>
<td>-0,1</td>
<td></td>
<td>158,000</td>
</tr>
<tr>
<td>110</td>
<td>184,000</td>
<td>0,8</td>
<td></td>
<td>184,000</td>
</tr>
<tr>
<td>113</td>
<td>149,400</td>
<td>-0,5</td>
<td></td>
<td>149,400</td>
</tr>
<tr>
<td>117</td>
<td>208,000</td>
<td>1,6</td>
<td></td>
<td>208,000</td>
</tr>
<tr>
<td>128</td>
<td>53,300</td>
<td>-4,4</td>
<td></td>
<td>53,300</td>
</tr>
<tr>
<td>129</td>
<td>140,000</td>
<td>-0,9</td>
<td></td>
<td>140,000</td>
</tr>
<tr>
<td>131</td>
<td>160,000</td>
<td>0,0</td>
<td></td>
<td>160,000</td>
</tr>
<tr>
<td>134</td>
<td>152,000</td>
<td>-0,4</td>
<td></td>
<td>152,000</td>
</tr>
<tr>
<td>135</td>
<td>148,000</td>
<td>-0,5</td>
<td></td>
<td>148,000</td>
</tr>
<tr>
<td>136</td>
<td>211,000</td>
<td>1,7</td>
<td></td>
<td>211,000</td>
</tr>
<tr>
<td>140</td>
<td>147,000</td>
<td>-0,6</td>
<td></td>
<td>147,000</td>
</tr>
<tr>
<td>151</td>
<td>139,220</td>
<td>-0,9</td>
<td></td>
<td>139,220</td>
</tr>
<tr>
<td>152</td>
<td>191,000</td>
<td>1,0</td>
<td></td>
<td>191,000</td>
</tr>
<tr>
<td>154</td>
<td>154,000</td>
<td>-0,3</td>
<td></td>
<td>154,000</td>
</tr>
<tr>
<td>158</td>
<td>198,000</td>
<td>1,3</td>
<td></td>
<td>198,000</td>
</tr>
<tr>
<td>162</td>
<td>156,000</td>
<td>-0,2</td>
<td></td>
<td>156,000</td>
</tr>
<tr>
<td>170</td>
<td>193,000</td>
<td>1,1</td>
<td></td>
<td>193,000</td>
</tr>
<tr>
<td>186</td>
<td>185,600</td>
<td>0,8</td>
<td></td>
<td>185,600</td>
</tr>
<tr>
<td>188</td>
<td>119,914</td>
<td>-1,7</td>
<td></td>
<td>119,914</td>
</tr>
<tr>
<td>190</td>
<td>209,500</td>
<td>1,7</td>
<td></td>
<td>209,500</td>
</tr>
<tr>
<td>191</td>
<td>222,750</td>
<td>2,1</td>
<td></td>
<td>222,750</td>
</tr>
</tbody>
</table>
Probe 6
### Kennwerte – Probe 6

49. LÜRV BTXE/LHKW in Abwasser

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzol</td>
<td>97,949</td>
<td>15,464</td>
<td>15,464</td>
<td>15,79</td>
<td>15,79</td>
<td>68,375</td>
<td>132,574</td>
<td>2,9</td>
<td>45</td>
</tr>
<tr>
<td>Dichlormethan</td>
<td>43,236</td>
<td>7,960</td>
<td>7,960</td>
<td>18,41</td>
<td>18,41</td>
<td>28,159</td>
<td>61,355</td>
<td>3,4</td>
<td>42</td>
</tr>
<tr>
<td>Ethylbenzol</td>
<td>156,907</td>
<td>24,604</td>
<td>24,604</td>
<td>15,68</td>
<td>15,68</td>
<td>109,835</td>
<td>211,959</td>
<td>2,9</td>
<td>45</td>
</tr>
<tr>
<td>meta-Xylool</td>
<td>133,032</td>
<td>26,325</td>
<td>26,325</td>
<td>19,79</td>
<td>19,79</td>
<td>83,416</td>
<td>193,487</td>
<td>3,7</td>
<td>44</td>
</tr>
<tr>
<td>ortho-Xylool</td>
<td>82,879</td>
<td>11,688</td>
<td>11,688</td>
<td>14,10</td>
<td>14,10</td>
<td>60,380</td>
<td>108,781</td>
<td>2,6</td>
<td>45</td>
</tr>
<tr>
<td>1,1,1-Trichlorethan</td>
<td>18,917</td>
<td>3,967</td>
<td>3,967</td>
<td>20,97</td>
<td>20,97</td>
<td>11,471</td>
<td>28,098</td>
<td>4,0</td>
<td>42</td>
</tr>
<tr>
<td>Tetrachlorethen</td>
<td>41,557</td>
<td>8,127</td>
<td>8,127</td>
<td>19,56</td>
<td>19,56</td>
<td>26,227</td>
<td>60,192</td>
<td>3,6</td>
<td>43</td>
</tr>
<tr>
<td>Toluol</td>
<td>60,510</td>
<td>7,638</td>
<td>7,638</td>
<td>12,62</td>
<td>12,62</td>
<td>45,721</td>
<td>77,286</td>
<td>2,4</td>
<td>45</td>
</tr>
<tr>
<td>Trichlorethen</td>
<td>108,455</td>
<td>17,484</td>
<td>17,484</td>
<td>16,12</td>
<td>16,12</td>
<td>75,059</td>
<td>147,683</td>
<td>3,1</td>
<td>43</td>
</tr>
</tbody>
</table>
Übersicht zu $z_U$-Scores
Einzeldarstellung der Parameter

Grafik und Tabelle
## Einzeldarstellung

<table>
<thead>
<tr>
<th>Probe:</th>
<th>PROBE_6</th>
<th>Vergleich-STD (SR):</th>
<th>15,464 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal:</td>
<td>Benzol</td>
<td>Rel. Vergleich-STD (VR):</td>
<td>15,79%</td>
</tr>
<tr>
<td>Methode:</td>
<td>DIN 38402 A45</td>
<td>Toleranzbereich:</td>
<td>68,375 - 132,574 µg/l (</td>
</tr>
<tr>
<td>Anzahl Labore:</td>
<td>45</td>
<td>Rel. Soll-STD:</td>
<td>15,79% (Limited)</td>
</tr>
<tr>
<td>Sollwert:</td>
<td>97,949 µg/l (empirischer Wert)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch**

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>112,000</td>
<td>0,8</td>
<td></td>
<td>112,000</td>
</tr>
<tr>
<td>004</td>
<td>90,049</td>
<td>-0,5</td>
<td>90,049</td>
<td></td>
</tr>
<tr>
<td>006</td>
<td>117,000</td>
<td>1,1</td>
<td>117,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>81,200</td>
<td>-1,2</td>
<td>81,200</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,227</td>
<td>-6,6</td>
<td></td>
<td>0,227</td>
</tr>
<tr>
<td>026</td>
<td>101,000</td>
<td>0,2</td>
<td>101,000</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>91,200</td>
<td>-0,5</td>
<td>91,200</td>
<td></td>
</tr>
<tr>
<td>038</td>
<td>110,000</td>
<td>0,7</td>
<td>110,000</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>116,000</td>
<td>1,1</td>
<td>116,000</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>42,180</td>
<td>-3,9</td>
<td>42,180</td>
<td></td>
</tr>
<tr>
<td>043</td>
<td>99,900</td>
<td>0,1</td>
<td>99,900</td>
<td></td>
</tr>
<tr>
<td>049</td>
<td>92,200</td>
<td>-0,4</td>
<td>92,200</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>102,000</td>
<td>0,2</td>
<td>102,000</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>89,690</td>
<td>-0,6</td>
<td>89,690</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>91,600</td>
<td>-0,4</td>
<td>91,600</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>81,200</td>
<td>-1,2</td>
<td>81,200</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>93,500</td>
<td>-0,3</td>
<td>93,500</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>87,400</td>
<td>-0,7</td>
<td>87,400</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>110,000</td>
<td>0,7</td>
<td>110,000</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>94,200</td>
<td>-0,3</td>
<td>94,200</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>104,300</td>
<td>0,4</td>
<td>104,300</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>100,400</td>
<td>0,1</td>
<td>100,400</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>105,100</td>
<td>0,4</td>
<td>105,100</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>92,900</td>
<td>-0,4</td>
<td>92,900</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>102,000</td>
<td>0,2</td>
<td>102,000</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>93,500</td>
<td>-0,3</td>
<td>93,500</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>91,500</td>
<td>-0,4</td>
<td>91,500</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>100,600</td>
<td>0,2</td>
<td>100,600</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>86,700</td>
<td>-0,8</td>
<td>86,700</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>102,690</td>
<td>0,3</td>
<td>102,690</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>126,000</td>
<td>1,7</td>
<td>126,000</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>101,280</td>
<td>0,2</td>
<td>101,280</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>52,800</td>
<td>-3,1</td>
<td>52,800</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>162,000</td>
<td>3,8</td>
<td>162,000</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>97,000</td>
<td>-0,1</td>
<td>97,000</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>102,000</td>
<td>0,2</td>
<td>102,000</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>84,300</td>
<td>-0,9</td>
<td>84,300</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>81,200</td>
<td>-1,2</td>
<td>81,200</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>104,000</td>
<td>0,4</td>
<td>104,000</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>102,000</td>
<td>0,2</td>
<td>102,000</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>117,000</td>
<td>1,1</td>
<td>117,000</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>98,900</td>
<td>0,1</td>
<td>98,900</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>25,600</td>
<td>-5,0</td>
<td>25,600</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>90,794</td>
<td>-0,5</td>
<td>90,794</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>110,000</td>
<td>0,7</td>
<td>110,000</td>
<td></td>
</tr>
</tbody>
</table>

PROLabInstitut für Hygiene und Umwelt Hamburg
Einzelanalyse

Probe: PROBE_6
Merkmal: Dichlormethan
Methode: DIN 38402 A45
Anzahl Labore: 42

Sollwert: 43,236 µg/l (empirischer Wert)

Vergleich-STD (SR): 7,960 µg/l
Rel. Vergleich-STD (VR): 18,41%
Rel. Soll-STD: 18,41% (Limited)

Toleranzbereich: 28,159 - 61,355 µg/l (|Zu-Score| <= 2,0)

Laborographie:

Institut für Hygiene und Umwelt Hamburg PROLab
### BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

**Probe:** PROBE_6  
**Merkmal:** Dichlormethan  
**Methode:** DIN 38402 A45  
**Anzahl Labore:** 42  
**Sollwert:** 43,236 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>004</td>
<td>44,020</td>
<td>0,1</td>
<td>44,020</td>
<td>44,020</td>
</tr>
<tr>
<td>006</td>
<td>66,300</td>
<td>2,6</td>
<td>66,300</td>
<td>66,300</td>
</tr>
<tr>
<td>016</td>
<td>33,550</td>
<td>-1,3</td>
<td>33,550</td>
<td>33,550</td>
</tr>
<tr>
<td>025</td>
<td>0,044</td>
<td>-5,9</td>
<td>0,044</td>
<td>0,044</td>
</tr>
<tr>
<td>034</td>
<td>36,300</td>
<td>-0,9</td>
<td>36,300</td>
<td>36,300</td>
</tr>
<tr>
<td>036</td>
<td>35,500</td>
<td>-1,1</td>
<td>35,500</td>
<td>35,500</td>
</tr>
<tr>
<td>037</td>
<td>70,800</td>
<td>3,1</td>
<td>70,800</td>
<td>70,800</td>
</tr>
<tr>
<td>041</td>
<td>24,540</td>
<td>-2,5</td>
<td>24,540</td>
<td>24,540</td>
</tr>
<tr>
<td>046</td>
<td>36,500</td>
<td>-0,9</td>
<td>36,500</td>
<td>36,500</td>
</tr>
<tr>
<td>062</td>
<td>41,300</td>
<td>-0,3</td>
<td>41,300</td>
<td>41,300</td>
</tr>
<tr>
<td>065</td>
<td>36,700</td>
<td>-0,9</td>
<td>36,700</td>
<td>36,700</td>
</tr>
<tr>
<td>067</td>
<td>50,300</td>
<td>0,8</td>
<td>50,300</td>
<td>50,300</td>
</tr>
<tr>
<td>069</td>
<td>40,490</td>
<td>-0,4</td>
<td>40,490</td>
<td>40,490</td>
</tr>
<tr>
<td>072</td>
<td>38,200</td>
<td>-0,7</td>
<td>38,200</td>
<td>38,200</td>
</tr>
<tr>
<td>074</td>
<td>56,800</td>
<td>1,5</td>
<td>56,800</td>
<td>56,800</td>
</tr>
<tr>
<td>084</td>
<td>37,200</td>
<td>-0,8</td>
<td>37,200</td>
<td>37,200</td>
</tr>
<tr>
<td>085</td>
<td>41,600</td>
<td>-0,2</td>
<td>41,600</td>
<td>41,600</td>
</tr>
<tr>
<td>086</td>
<td>45,300</td>
<td>0,2</td>
<td>45,300</td>
<td>45,300</td>
</tr>
<tr>
<td>088</td>
<td>41,200</td>
<td>-0,3</td>
<td>41,200</td>
<td>41,200</td>
</tr>
<tr>
<td>089</td>
<td>42,700</td>
<td>-0,1</td>
<td>42,700</td>
<td>42,700</td>
</tr>
<tr>
<td>103</td>
<td>39,600</td>
<td>-0,5</td>
<td>39,600</td>
<td>39,600</td>
</tr>
<tr>
<td>104</td>
<td>42,450</td>
<td>-0,1</td>
<td>42,450</td>
<td>42,450</td>
</tr>
<tr>
<td>111</td>
<td>44,100</td>
<td>0,1</td>
<td>44,100</td>
<td>44,100</td>
</tr>
<tr>
<td>115</td>
<td>36,000</td>
<td>-1,0</td>
<td>36,000</td>
<td>36,000</td>
</tr>
<tr>
<td>116</td>
<td>58,740</td>
<td>1,8</td>
<td>58,740</td>
<td>58,740</td>
</tr>
<tr>
<td>118</td>
<td>48,600</td>
<td>0,6</td>
<td>48,600</td>
<td>48,600</td>
</tr>
<tr>
<td>124</td>
<td>39,000</td>
<td>-0,6</td>
<td>39,000</td>
<td>39,000</td>
</tr>
<tr>
<td>137</td>
<td>52,500</td>
<td>1,0</td>
<td>52,500</td>
<td>52,500</td>
</tr>
<tr>
<td>150</td>
<td>60,200</td>
<td>1,9</td>
<td>60,200</td>
<td>60,200</td>
</tr>
<tr>
<td>153</td>
<td>42,200</td>
<td>-0,1</td>
<td>42,200</td>
<td>42,200</td>
</tr>
<tr>
<td>154</td>
<td>41,900</td>
<td>-0,2</td>
<td>41,900</td>
<td>41,900</td>
</tr>
<tr>
<td>156</td>
<td>36,200</td>
<td>-1,0</td>
<td>36,200</td>
<td>36,200</td>
</tr>
<tr>
<td>157</td>
<td>36,400</td>
<td>-0,9</td>
<td>36,400</td>
<td>36,400</td>
</tr>
<tr>
<td>164</td>
<td>47,100</td>
<td>0,4</td>
<td>47,100</td>
<td>47,100</td>
</tr>
<tr>
<td>170</td>
<td>44,700</td>
<td>0,2</td>
<td>44,700</td>
<td>44,700</td>
</tr>
<tr>
<td>178</td>
<td>54,500</td>
<td>1,3</td>
<td>54,500</td>
<td>54,500</td>
</tr>
<tr>
<td>182</td>
<td>39,700</td>
<td>-0,5</td>
<td>39,700</td>
<td>39,700</td>
</tr>
<tr>
<td>184</td>
<td>6,820</td>
<td>-5,0</td>
<td>6,820</td>
<td>6,820</td>
</tr>
<tr>
<td>194</td>
<td>66,752</td>
<td>2,7</td>
<td>66,752</td>
<td>66,752</td>
</tr>
<tr>
<td>195</td>
<td>39,700</td>
<td>-0,5</td>
<td>39,700</td>
<td>39,700</td>
</tr>
</tbody>
</table>
BTX/EHKW in Abwasser - 49. Länderübergreifender Ringversuch

Einzeldarstellung

Probe: PROBE_6  Vergleich-STD (SR): 24,604 µg/l
Merkmal: Ethylbenzol  Rel. Vergleich-STD (VR): 15,68%
Methode: DIN 38402 A45  Rel. Soll-STD: 15,68% (Limited)
Anzahl Labore: 45  Toleranzbereich: 109,835 - 211,959 µg/l (|Zu-Score| <= 2,0)
Sollwert: 156,907 µg/l (empirischer Wert)

Institut für Hygiene und Umwelt Hamburg PROLab
### PROBE_6

#### Merkmal: Ethylbenzol

#### Methode: DIN 38402 A45

#### Anzahl Labore: 45

#### Sollwert: 156,907 µg/l (empirischer Wert)

#### Rel. Vergleich-STD (VR): 15,68%

#### Rel. Soll-STD: 15,68% (Limited)

#### Toleranzbereich: 109,835 - 211,959 µg/l (|Zu-Score| <= 2,0)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>163,000</td>
<td>0.2</td>
<td></td>
<td>163,000</td>
</tr>
<tr>
<td>004</td>
<td>148,503</td>
<td>-0.4</td>
<td></td>
<td>148,503</td>
</tr>
<tr>
<td>006</td>
<td>200,000</td>
<td>1.6</td>
<td></td>
<td>200,000</td>
</tr>
<tr>
<td>015</td>
<td>158,330</td>
<td>0.1</td>
<td></td>
<td>158,330</td>
</tr>
<tr>
<td>025</td>
<td>1,628</td>
<td>-6.8</td>
<td></td>
<td>1,628</td>
</tr>
<tr>
<td>026</td>
<td>168,000</td>
<td>0.4</td>
<td></td>
<td>168,000</td>
</tr>
<tr>
<td>034</td>
<td>142,000</td>
<td>-0.6</td>
<td></td>
<td>142,000</td>
</tr>
<tr>
<td>036</td>
<td>179,000</td>
<td>0.8</td>
<td></td>
<td>179,000</td>
</tr>
<tr>
<td>037</td>
<td>163,000</td>
<td>0.2</td>
<td></td>
<td>163,000</td>
</tr>
<tr>
<td>041</td>
<td>126,500</td>
<td>-1.3</td>
<td></td>
<td>126,500</td>
</tr>
<tr>
<td>043</td>
<td>154,700</td>
<td>-0.1</td>
<td></td>
<td>154,700</td>
</tr>
<tr>
<td>046</td>
<td>138,000</td>
<td>-0.8</td>
<td></td>
<td>138,000</td>
</tr>
<tr>
<td>062</td>
<td>173,000</td>
<td>0.6</td>
<td></td>
<td>173,000</td>
</tr>
<tr>
<td>065</td>
<td>136,800</td>
<td>-0.9</td>
<td></td>
<td>136,800</td>
</tr>
<tr>
<td>067</td>
<td>148,000</td>
<td>-0.4</td>
<td></td>
<td>148,000</td>
</tr>
<tr>
<td>068</td>
<td>125,000</td>
<td>-1.4</td>
<td></td>
<td>125,000</td>
</tr>
<tr>
<td>069</td>
<td>139,000</td>
<td>-0.8</td>
<td></td>
<td>139,000</td>
</tr>
<tr>
<td>072</td>
<td>152,000</td>
<td>-0.2</td>
<td></td>
<td>152,000</td>
</tr>
<tr>
<td>074</td>
<td>161,000</td>
<td>0.2</td>
<td></td>
<td>161,000</td>
</tr>
<tr>
<td>084</td>
<td>140,000</td>
<td>-0.7</td>
<td></td>
<td>140,000</td>
</tr>
<tr>
<td>085</td>
<td>176,700</td>
<td>0.7</td>
<td></td>
<td>176,700</td>
</tr>
<tr>
<td>089</td>
<td>190,300</td>
<td>1.2</td>
<td></td>
<td>190,300</td>
</tr>
<tr>
<td>089</td>
<td>167,100</td>
<td>0.4</td>
<td></td>
<td>167,100</td>
</tr>
<tr>
<td>089</td>
<td>157,400</td>
<td>0.0</td>
<td></td>
<td>157,400</td>
</tr>
<tr>
<td>103</td>
<td>160,000</td>
<td>0.1</td>
<td></td>
<td>160,000</td>
</tr>
<tr>
<td>104</td>
<td>147,000</td>
<td>-0.4</td>
<td></td>
<td>147,000</td>
</tr>
<tr>
<td>105</td>
<td>153,000</td>
<td>-0.2</td>
<td></td>
<td>153,000</td>
</tr>
<tr>
<td>111</td>
<td>165,300</td>
<td>0.3</td>
<td></td>
<td>165,300</td>
</tr>
<tr>
<td>115</td>
<td>141,000</td>
<td>-0.7</td>
<td></td>
<td>141,000</td>
</tr>
<tr>
<td>116</td>
<td>137,390</td>
<td>-0.8</td>
<td></td>
<td>137,390</td>
</tr>
<tr>
<td>118</td>
<td>178,000</td>
<td>0.8</td>
<td></td>
<td>178,000</td>
</tr>
<tr>
<td>124</td>
<td>165,330</td>
<td>0.3</td>
<td></td>
<td>165,330</td>
</tr>
<tr>
<td>137</td>
<td>113,000</td>
<td>-1.9</td>
<td></td>
<td>113,000</td>
</tr>
<tr>
<td>150</td>
<td>228,000</td>
<td>2.6</td>
<td></td>
<td>228,000</td>
</tr>
<tr>
<td>153</td>
<td>122,000</td>
<td>-1.5</td>
<td></td>
<td>122,000</td>
</tr>
<tr>
<td>154</td>
<td>169,000</td>
<td>0.5</td>
<td></td>
<td>169,000</td>
</tr>
<tr>
<td>156</td>
<td>140,000</td>
<td>-0.7</td>
<td></td>
<td>140,000</td>
</tr>
<tr>
<td>157</td>
<td>134,000</td>
<td>-1.0</td>
<td></td>
<td>134,000</td>
</tr>
<tr>
<td>164</td>
<td>172,000</td>
<td>0.6</td>
<td></td>
<td>172,000</td>
</tr>
<tr>
<td>170</td>
<td>167,000</td>
<td>0.4</td>
<td></td>
<td>167,000</td>
</tr>
<tr>
<td>178</td>
<td>184,000</td>
<td>1.0</td>
<td></td>
<td>184,000</td>
</tr>
<tr>
<td>182</td>
<td>156,000</td>
<td>0.0</td>
<td></td>
<td>156,000</td>
</tr>
<tr>
<td>184</td>
<td>50,000</td>
<td>-4.7</td>
<td></td>
<td>50,000</td>
</tr>
<tr>
<td>194</td>
<td>151,012</td>
<td>-0.3</td>
<td></td>
<td>151,012</td>
</tr>
<tr>
<td>BTEX/LHKW in Abwasser - 49. Länderübergreifender Ringversuch</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>208,000</td>
<td>1,9</td>
<td>208,000</td>
<td></td>
</tr>
</tbody>
</table>

### Einzeldarstellung

<table>
<thead>
<tr>
<th>Probe</th>
<th>PROBE_6</th>
<th>Vergleich-STD (SR):</th>
<th>26,325 µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal</td>
<td>meta-Xylol</td>
<td>Rel. Vergleich-STD (VR):</td>
<td>19,79%</td>
</tr>
<tr>
<td>Methode</td>
<td>DIN 38402 A45</td>
<td>Toleranzbereich:</td>
<td>83,416 - 193,487 µg/l (</td>
</tr>
<tr>
<td>Anzahl Labore</td>
<td>44</td>
<td>Rel. Soll-STD:</td>
<td>19,79% (Limited)</td>
</tr>
<tr>
<td>Sollwert</td>
<td>133,032 µg/l (empirischer Wert)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Graph showing the results of the sample analysis](image-url)

Institut für Hygiene und Umwelt Hamburg PROLab
### Proben: PROBE_6 Vergleich-STD (SR): 26,325 µg/l

<table>
<thead>
<tr>
<th>Merkmal:</th>
<th>meta-Xylol</th>
<th>Rel. Vergleich-STD (VR): 19,79%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methode:</td>
<td>DIN 38402 A45</td>
<td>Toleranzbereich: 83,416 - 193,487 µg/l (</td>
</tr>
<tr>
<td>Anzahl Labore:</td>
<td>44</td>
<td>Rel. Soll-STD: 19,79% (Limited)</td>
</tr>
<tr>
<td>Sollwert:</td>
<td>133,032 µg/l (empirischer Wert)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>004</td>
<td>124,556</td>
<td>-0,4</td>
<td>124,556</td>
<td></td>
</tr>
<tr>
<td>006</td>
<td>220,000</td>
<td>2,9</td>
<td>220,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>31,920</td>
<td>-4,2</td>
<td>31,920</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,766</td>
<td>-5,5</td>
<td>0,766</td>
<td></td>
</tr>
<tr>
<td>026</td>
<td>143,000</td>
<td>0,3</td>
<td>143,000</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>117,000</td>
<td>-0,7</td>
<td>117,000</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>154,000</td>
<td>0,7</td>
<td>154,000</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>52,130</td>
<td>-3,3</td>
<td>52,130</td>
<td></td>
</tr>
<tr>
<td>043</td>
<td>130,600</td>
<td>-0,1</td>
<td>130,600</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>122,000</td>
<td>-0,5</td>
<td>122,000</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>150,000</td>
<td>0,6</td>
<td>150,000</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>125,500</td>
<td>-0,3</td>
<td>125,500</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>135,000</td>
<td>0,1</td>
<td>135,000</td>
<td></td>
</tr>
<tr>
<td>068</td>
<td>124,000</td>
<td>-0,4</td>
<td>124,000</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>128,000</td>
<td>-0,2</td>
<td>128,000</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>125,000</td>
<td>-0,3</td>
<td>125,000</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>141,000</td>
<td>0,3</td>
<td>141,000</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>125,000</td>
<td>-0,3</td>
<td>125,000</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>177,000</td>
<td>1,5</td>
<td>177,000</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>160,200</td>
<td>0,9</td>
<td>160,200</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>76,500</td>
<td>-2,3</td>
<td>76,500</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>142,000</td>
<td>0,3</td>
<td>142,000</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>123,000</td>
<td>-0,4</td>
<td>123,000</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>119,000</td>
<td>-0,6</td>
<td>119,000</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>131,000</td>
<td>-0,1</td>
<td>131,000</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>132,500</td>
<td>0,0</td>
<td>132,500</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>131,000</td>
<td>-0,1</td>
<td>131,000</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>128,170</td>
<td>-0,2</td>
<td>128,170</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>155,000</td>
<td>0,7</td>
<td>155,000</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>142,940</td>
<td>0,3</td>
<td>142,940</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>102,000</td>
<td>-1,3</td>
<td>102,000</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>200,000</td>
<td>2,3</td>
<td>200,000</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>105,000</td>
<td>-1,3</td>
<td>105,000</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>149,000</td>
<td>0,5</td>
<td>149,000</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>115,000</td>
<td>-0,7</td>
<td>115,000</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>111,000</td>
<td>-0,9</td>
<td>111,000</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>151,000</td>
<td>0,6</td>
<td>151,000</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>141,000</td>
<td>0,3</td>
<td>141,000</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>170,000</td>
<td>1,3</td>
<td>170,000</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>128,000</td>
<td>-0,2</td>
<td>128,000</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>40,300</td>
<td>-3,8</td>
<td>40,300</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>107,358</td>
<td>-1,1</td>
<td>107,358</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>156,000</td>
<td>0,8</td>
<td>156,000</td>
<td></td>
</tr>
</tbody>
</table>
**Einzeldarstellung**

<table>
<thead>
<tr>
<th>Probe</th>
<th>PROBE_6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal</td>
<td>ortho-Xylol</td>
</tr>
<tr>
<td>Methode</td>
<td>DIN 38402 A45</td>
</tr>
<tr>
<td>Anzahl Labore</td>
<td>45</td>
</tr>
<tr>
<td>Sollwert</td>
<td>82,879 µg/l (empirischer Wert)</td>
</tr>
</tbody>
</table>

Vergleich-STD (SR): 11,688 µg/l
Rel. Vergleich-STD (VR): 14,10%
Rel. Soll-STD: 14,10% (Limited)

![Graph showing measurements and tolerance limits](image)

Institut für Hygiene und Umwelt Hamburg

PROLab
**Probe:** PROBE_6  
**Merkmal:** ortho-Xylol  
**Methode:** DIN 38402 A45  
**Anzahl Labore:** 45  
**Sollwert:** 82,879 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>84,100</td>
<td>0.1</td>
<td></td>
<td>84,100</td>
</tr>
<tr>
<td>004</td>
<td>79,865</td>
<td>0.3</td>
<td></td>
<td>79,865</td>
</tr>
<tr>
<td>006</td>
<td>95,100</td>
<td>1.0</td>
<td></td>
<td>95,100</td>
</tr>
<tr>
<td>016</td>
<td>79,130</td>
<td>0.3</td>
<td></td>
<td>79,130</td>
</tr>
<tr>
<td>025</td>
<td>0.721</td>
<td>-7.5</td>
<td></td>
<td>0.721</td>
</tr>
<tr>
<td>026</td>
<td>84,800</td>
<td>0.2</td>
<td></td>
<td>84,800</td>
</tr>
<tr>
<td>029</td>
<td>71,000</td>
<td>-1.1</td>
<td></td>
<td>71,000</td>
</tr>
<tr>
<td>036</td>
<td>93,000</td>
<td>0.8</td>
<td></td>
<td>93,000</td>
</tr>
<tr>
<td>037</td>
<td>94,800</td>
<td>0.9</td>
<td></td>
<td>94,800</td>
</tr>
<tr>
<td>041</td>
<td>107,100</td>
<td>1.9</td>
<td></td>
<td>107,100</td>
</tr>
<tr>
<td>043</td>
<td>83,300</td>
<td>0.0</td>
<td></td>
<td>83,300</td>
</tr>
<tr>
<td>046</td>
<td>74,800</td>
<td>-0.7</td>
<td></td>
<td>74,800</td>
</tr>
<tr>
<td>062</td>
<td>83,100</td>
<td>0.0</td>
<td></td>
<td>83,100</td>
</tr>
<tr>
<td>065</td>
<td>74,160</td>
<td>-0.8</td>
<td></td>
<td>74,160</td>
</tr>
<tr>
<td>067</td>
<td>80,300</td>
<td>0.0</td>
<td></td>
<td>80,300</td>
</tr>
<tr>
<td>068</td>
<td>73,200</td>
<td>-0.9</td>
<td></td>
<td>73,200</td>
</tr>
<tr>
<td>069</td>
<td>80,900</td>
<td>0.2</td>
<td></td>
<td>80,900</td>
</tr>
<tr>
<td>072</td>
<td>73,400</td>
<td>-0.9</td>
<td></td>
<td>73,400</td>
</tr>
<tr>
<td>074</td>
<td>83,400</td>
<td>0.0</td>
<td></td>
<td>83,400</td>
</tr>
<tr>
<td>084</td>
<td>79,300</td>
<td>0.3</td>
<td></td>
<td>79,300</td>
</tr>
<tr>
<td>085</td>
<td>101,700</td>
<td>1.5</td>
<td></td>
<td>101,700</td>
</tr>
<tr>
<td>089</td>
<td>87,200</td>
<td>0.2</td>
<td></td>
<td>87,200</td>
</tr>
<tr>
<td>091</td>
<td>98,200</td>
<td>1.2</td>
<td></td>
<td>98,200</td>
</tr>
<tr>
<td>089</td>
<td>79,600</td>
<td>-0.3</td>
<td></td>
<td>79,600</td>
</tr>
<tr>
<td>103</td>
<td>80,900</td>
<td>0.2</td>
<td></td>
<td>80,900</td>
</tr>
<tr>
<td>104</td>
<td>74,000</td>
<td>-0.8</td>
<td></td>
<td>74,000</td>
</tr>
<tr>
<td>105</td>
<td>80,100</td>
<td>0.3</td>
<td></td>
<td>80,100</td>
</tr>
<tr>
<td>111</td>
<td>82,600</td>
<td>0.0</td>
<td></td>
<td>82,600</td>
</tr>
<tr>
<td>115</td>
<td>76,800</td>
<td>-0.6</td>
<td></td>
<td>76,800</td>
</tr>
<tr>
<td>116</td>
<td>77,920</td>
<td>0.4</td>
<td></td>
<td>77,960</td>
</tr>
<tr>
<td>118</td>
<td>91,500</td>
<td>0.7</td>
<td></td>
<td>91,500</td>
</tr>
<tr>
<td>124</td>
<td>85,300</td>
<td>0.2</td>
<td></td>
<td>85,300</td>
</tr>
<tr>
<td>137</td>
<td>61,800</td>
<td>-1.9</td>
<td></td>
<td>61,800</td>
</tr>
<tr>
<td>150</td>
<td>123,000</td>
<td>3.2</td>
<td></td>
<td>123,000</td>
</tr>
<tr>
<td>153</td>
<td>68,100</td>
<td>-1.3</td>
<td></td>
<td>68,100</td>
</tr>
<tr>
<td>154</td>
<td>88,900</td>
<td>0.5</td>
<td></td>
<td>88,900</td>
</tr>
<tr>
<td>156</td>
<td>65,900</td>
<td>-1.5</td>
<td></td>
<td>65,900</td>
</tr>
<tr>
<td>157</td>
<td>68,600</td>
<td>-1.3</td>
<td></td>
<td>68,600</td>
</tr>
<tr>
<td>164</td>
<td>93,200</td>
<td>0.8</td>
<td></td>
<td>93,200</td>
</tr>
<tr>
<td>170</td>
<td>84,900</td>
<td>0.2</td>
<td></td>
<td>84,900</td>
</tr>
<tr>
<td>178</td>
<td>98,900</td>
<td>1.3</td>
<td></td>
<td>98,900</td>
</tr>
<tr>
<td>182</td>
<td>83,200</td>
<td>0.0</td>
<td></td>
<td>83,200</td>
</tr>
<tr>
<td>184</td>
<td>26,800</td>
<td>-5.1</td>
<td></td>
<td>26,800</td>
</tr>
<tr>
<td>194</td>
<td>75,565</td>
<td>-0.7</td>
<td></td>
<td>75,565</td>
</tr>
</tbody>
</table>

Institut für Hygiene und Umwelt Hamburg 
PROLab
<table>
<thead>
<tr>
<th>Probenummer</th>
<th>Werte BTX</th>
<th>Werte LHKW</th>
<th>Werte Abwasser</th>
<th>Werte Wasser</th>
</tr>
</thead>
<tbody>
<tr>
<td>195</td>
<td>93,200</td>
<td>0,8</td>
<td>93,200</td>
<td></td>
</tr>
</tbody>
</table>

PROLabInstitut für Hygiene und Umwelt Hamburg
**Einzeldarstellung**

<table>
<thead>
<tr>
<th>Probe</th>
<th>PROBE_6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal</td>
<td>1,1,1-Trichlorethan</td>
</tr>
<tr>
<td>Methode</td>
<td>DIN 38402 A45</td>
</tr>
<tr>
<td>Anzahl Labore</td>
<td>42</td>
</tr>
<tr>
<td>Sollwert</td>
<td>18,917 µg/l (empirischer Wert)</td>
</tr>
</tbody>
</table>

**Vergleich-STD (SR):** 3,967 µg/l

**Rel. Vergleich-STD (VR):** 20,97%

**Rel. Soll-STD: **20,97% (Limited)

**Toleranzbereich: **11,471 - 28,098 µg/l (|Zu-Score| <= 2,0)

![Diagram](image)
<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>004</td>
<td>16,879</td>
<td>-0,6</td>
<td>16,879</td>
<td></td>
</tr>
<tr>
<td>006</td>
<td>18,100</td>
<td>-0,2</td>
<td>18,100</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>14,390</td>
<td>-1,2</td>
<td>14,390</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,035</td>
<td>-5,2</td>
<td>0,035</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>15,500</td>
<td>-0,9</td>
<td>15,500</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>17,900</td>
<td>-0,3</td>
<td>17,900</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>22,200</td>
<td>0,7</td>
<td>22,200</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>63,720</td>
<td>10,0</td>
<td>63,720</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>17,300</td>
<td>-0,4</td>
<td>17,300</td>
<td></td>
</tr>
<tr>
<td>052</td>
<td>19,900</td>
<td>0,2</td>
<td>19,900</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>17,310</td>
<td>-0,4</td>
<td>17,310</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>24,300</td>
<td>1,2</td>
<td>24,300</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>15,200</td>
<td>-1,0</td>
<td>15,200</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>19,000</td>
<td>0,0</td>
<td>19,000</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>18,300</td>
<td>-0,2</td>
<td>18,300</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>17,800</td>
<td>-0,3</td>
<td>17,800</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>17,100</td>
<td>-0,5</td>
<td>17,100</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>41,500</td>
<td>5,0</td>
<td>41,500</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>20,800</td>
<td>0,4</td>
<td>20,800</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>22,200</td>
<td>0,7</td>
<td>22,200</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>18,100</td>
<td>-0,2</td>
<td>18,100</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>17,000</td>
<td>-0,5</td>
<td>17,000</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>14,000</td>
<td>-1,4</td>
<td>14,000</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>15,700</td>
<td>-0,9</td>
<td>15,700</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>21,800</td>
<td>0,6</td>
<td>21,800</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>18,900</td>
<td>0,0</td>
<td>18,900</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>17,170</td>
<td>-0,5</td>
<td>17,170</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>23,800</td>
<td>1,1</td>
<td>23,800</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>19,210</td>
<td>0,1</td>
<td>19,210</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>25,900</td>
<td>1,6</td>
<td>25,900</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>28,600</td>
<td>2,2</td>
<td>28,600</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>16,500</td>
<td>-0,7</td>
<td>16,500</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>19,400</td>
<td>0,1</td>
<td>19,400</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>17,700</td>
<td>-0,3</td>
<td>17,700</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>19,800</td>
<td>0,2</td>
<td>19,800</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>23,100</td>
<td>0,9</td>
<td>23,100</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>19,300</td>
<td>0,1</td>
<td>19,300</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>22,800</td>
<td>0,9</td>
<td>22,800</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>17,500</td>
<td>-0,4</td>
<td>17,500</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>7,870</td>
<td>-3,0</td>
<td>7,870</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>39,405</td>
<td>4,6</td>
<td>39,405</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>20,200</td>
<td>0,3</td>
<td>20,200</td>
<td></td>
</tr>
</tbody>
</table>
**Einzeldarstellung**

Probe: PROBE_6

Merkmal: Tetrachlorethen

Methode: DIN 38402 A45

Anzahl Labore: 43

Sollwert: 41,557 µg/l (empirischer Wert)

Vergleich-STD (SR): 8,127 µg/l

Rel. Vergleich-STD (VR): 19,56%

Toleranzbereich: 26,227 - 60,192 µg/l (|Zu-Score| <= 2,0)

Rel. Soll-STD: 19,56% (Limited)

---

![Graphik der Meßwerte der Laboranalytik](#)
### Probe: PROBE_6

**Merkmal:** Tetrachlorethen  
**Methode:** DIN 38402 A45  
**Anzahl Labore:** 43  
**Sollwert:** 41,557 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>63,300</td>
<td>2,4</td>
<td>63,300</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>36,559</td>
<td>-0,7</td>
<td>36,559</td>
<td></td>
</tr>
<tr>
<td>005</td>
<td>47,400</td>
<td>0,6</td>
<td>47,400</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>33,500</td>
<td>-1,1</td>
<td>33,500</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,198</td>
<td>-5,5</td>
<td>0,198</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>33,900</td>
<td>-1,0</td>
<td>33,900</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>40,100</td>
<td>-0,2</td>
<td>40,100</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>48,500</td>
<td>0,6</td>
<td>48,500</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>168,600</td>
<td>14,0</td>
<td>168,600</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>35,600</td>
<td>-0,8</td>
<td>35,600</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>43,800</td>
<td>0,2</td>
<td>43,800</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>36,100</td>
<td>-0,7</td>
<td>36,100</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>48,700</td>
<td>0,8</td>
<td>48,700</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>31,200</td>
<td>-1,4</td>
<td>31,200</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>40,100</td>
<td>-0,2</td>
<td>40,100</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>40,600</td>
<td>-0,1</td>
<td>40,600</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>37,000</td>
<td>-0,6</td>
<td>37,000</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>38,200</td>
<td>-0,4</td>
<td>38,200</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>45,200</td>
<td>0,4</td>
<td>45,200</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>43,700</td>
<td>0,2</td>
<td>43,700</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>43,000</td>
<td>0,2</td>
<td>43,000</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>42,000</td>
<td>0,0</td>
<td>42,000</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>39,500</td>
<td>-0,3</td>
<td>39,500</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>45,300</td>
<td>0,4</td>
<td>45,300</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>32,800</td>
<td>-1,2</td>
<td>32,800</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>44,300</td>
<td>0,3</td>
<td>44,300</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>42,700</td>
<td>0,7</td>
<td>42,700</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>38,100</td>
<td>-0,5</td>
<td>38,100</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>44,500</td>
<td>0,3</td>
<td>44,500</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>42,540</td>
<td>0,1</td>
<td>42,540</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>52,500</td>
<td>1,2</td>
<td>52,500</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>55,800</td>
<td>1,6</td>
<td>55,800</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>27,800</td>
<td>-1,8</td>
<td>27,800</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>41,900</td>
<td>0,0</td>
<td>41,900</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>38,500</td>
<td>-0,4</td>
<td>38,500</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>38,100</td>
<td>-0,5</td>
<td>38,100</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>46,200</td>
<td>0,5</td>
<td>46,200</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>44,300</td>
<td>0,3</td>
<td>44,300</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>51,400</td>
<td>1,1</td>
<td>51,400</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>36,600</td>
<td>-0,7</td>
<td>36,600</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>15,600</td>
<td>-3,5</td>
<td>15,600</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>72,000</td>
<td>3,4</td>
<td>72,000</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>44,000</td>
<td>0,3</td>
<td>44,000</td>
<td></td>
</tr>
</tbody>
</table>
### Einzeldarstellung

<table>
<thead>
<tr>
<th>Probe</th>
<th>PROBE_6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merkmal</td>
<td>Toluol</td>
</tr>
<tr>
<td>Methode</td>
<td>DIN 38402 A45</td>
</tr>
<tr>
<td>Anzahl Labore</td>
<td>45</td>
</tr>
<tr>
<td>Sollwert</td>
<td>60,510 µg/l (empirischer Wert)</td>
</tr>
<tr>
<td>Vergleich-STD (SR)</td>
<td>7,638 µg/l</td>
</tr>
<tr>
<td>Rel. Vergleich-STD (VR)</td>
<td>12,62%</td>
</tr>
<tr>
<td>Rel. Soll-STD</td>
<td>12,62% (Limited)</td>
</tr>
<tr>
<td>Toleranzbereich</td>
<td>45,721 - 77,286 µg/l (</td>
</tr>
</tbody>
</table>

![Diagram](image-url)

Institut für Hygiene und Umwelt Hamburg

PROLab
BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

**Probe:** PROBE_6  
**Merkmal:** Toluol  
**Methode:** DIN 38402 A45  
**Anzahl Labore:** 45

**Sollwert:** 60,510 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>65,000</td>
<td>0,5</td>
<td></td>
<td>65,000</td>
</tr>
<tr>
<td>004</td>
<td>56,416</td>
<td>-0,6</td>
<td></td>
<td>56,416</td>
</tr>
<tr>
<td>006</td>
<td>59,700</td>
<td>-0,1</td>
<td></td>
<td>59,700</td>
</tr>
<tr>
<td>016</td>
<td>58,930</td>
<td>-0,2</td>
<td></td>
<td>58,930</td>
</tr>
<tr>
<td>025</td>
<td>0,262</td>
<td>-8,4</td>
<td></td>
<td>0,262</td>
</tr>
<tr>
<td>026</td>
<td>63,500</td>
<td>0,4</td>
<td></td>
<td>63,500</td>
</tr>
<tr>
<td>034</td>
<td>64,900</td>
<td>0,5</td>
<td></td>
<td>64,900</td>
</tr>
<tr>
<td>036</td>
<td>57,500</td>
<td>-0,4</td>
<td></td>
<td>57,500</td>
</tr>
<tr>
<td>037</td>
<td>69,900</td>
<td>1,1</td>
<td></td>
<td>69,900</td>
</tr>
<tr>
<td>041</td>
<td>173,300</td>
<td>13,8</td>
<td></td>
<td>173,300</td>
</tr>
<tr>
<td>043</td>
<td>58,400</td>
<td>-0,3</td>
<td></td>
<td>58,400</td>
</tr>
<tr>
<td>046</td>
<td>55,200</td>
<td>-0,7</td>
<td></td>
<td>55,200</td>
</tr>
<tr>
<td>062</td>
<td>63,800</td>
<td>0,4</td>
<td></td>
<td>63,800</td>
</tr>
<tr>
<td>065</td>
<td>55,950</td>
<td>-0,6</td>
<td></td>
<td>55,950</td>
</tr>
<tr>
<td>067</td>
<td>57,800</td>
<td>-0,4</td>
<td></td>
<td>57,800</td>
</tr>
<tr>
<td>068</td>
<td>54,300</td>
<td>-0,9</td>
<td></td>
<td>54,300</td>
</tr>
<tr>
<td>069</td>
<td>59,100</td>
<td>-0,2</td>
<td></td>
<td>59,100</td>
</tr>
<tr>
<td>072</td>
<td>132,000</td>
<td>8,7</td>
<td></td>
<td>132,000</td>
</tr>
<tr>
<td>074</td>
<td>63,000</td>
<td>0,3</td>
<td></td>
<td>63,000</td>
</tr>
<tr>
<td>084</td>
<td>56,800</td>
<td>-0,5</td>
<td></td>
<td>56,800</td>
</tr>
<tr>
<td>085</td>
<td>78,900</td>
<td>2,2</td>
<td></td>
<td>78,900</td>
</tr>
<tr>
<td>086</td>
<td>61,700</td>
<td>0,1</td>
<td></td>
<td>61,700</td>
</tr>
<tr>
<td>089</td>
<td>61,900</td>
<td>0,2</td>
<td></td>
<td>61,900</td>
</tr>
<tr>
<td>103</td>
<td>62,700</td>
<td>0,3</td>
<td></td>
<td>62,700</td>
</tr>
<tr>
<td>104</td>
<td>55,700</td>
<td>-0,7</td>
<td></td>
<td>55,700</td>
</tr>
<tr>
<td>105</td>
<td>54,600</td>
<td>-0,8</td>
<td></td>
<td>54,600</td>
</tr>
<tr>
<td>111</td>
<td>64,000</td>
<td>0,4</td>
<td></td>
<td>64,000</td>
</tr>
<tr>
<td>115</td>
<td>57,800</td>
<td>-0,4</td>
<td></td>
<td>57,800</td>
</tr>
<tr>
<td>116</td>
<td>57,460</td>
<td>-0,4</td>
<td></td>
<td>57,460</td>
</tr>
<tr>
<td>118</td>
<td>78,300</td>
<td>2,2</td>
<td></td>
<td>78,300</td>
</tr>
<tr>
<td>124</td>
<td>63,890</td>
<td>0,4</td>
<td></td>
<td>63,890</td>
</tr>
<tr>
<td>137</td>
<td>45,700</td>
<td>-2,1</td>
<td></td>
<td>45,700</td>
</tr>
<tr>
<td>150</td>
<td>96,700</td>
<td>4,4</td>
<td></td>
<td>96,700</td>
</tr>
<tr>
<td>153</td>
<td>53,700</td>
<td>-0,9</td>
<td></td>
<td>53,700</td>
</tr>
<tr>
<td>154</td>
<td>65,700</td>
<td>0,6</td>
<td></td>
<td>65,700</td>
</tr>
<tr>
<td>156</td>
<td>49,600</td>
<td>-1,5</td>
<td></td>
<td>49,600</td>
</tr>
<tr>
<td>157</td>
<td>48,900</td>
<td>-1,6</td>
<td></td>
<td>48,900</td>
</tr>
<tr>
<td>164</td>
<td>64,700</td>
<td>0,5</td>
<td></td>
<td>64,700</td>
</tr>
<tr>
<td>170</td>
<td>62,300</td>
<td>0,2</td>
<td></td>
<td>62,300</td>
</tr>
<tr>
<td>178</td>
<td>75,500</td>
<td>1,8</td>
<td></td>
<td>75,500</td>
</tr>
<tr>
<td>182</td>
<td>61,000</td>
<td>0,1</td>
<td></td>
<td>61,000</td>
</tr>
<tr>
<td>184</td>
<td>20,000</td>
<td>-5,6</td>
<td></td>
<td>20,000</td>
</tr>
<tr>
<td>194</td>
<td>61,544</td>
<td>0,1</td>
<td></td>
<td>61,544</td>
</tr>
</tbody>
</table>

PROLabInstitut für Hygiene und Umwelt Hamburg
<table>
<thead>
<tr>
<th></th>
<th>BTX/E/HKW in Abwasser - 49. Länderübergreifender Ringversuch</th>
</tr>
</thead>
<tbody>
<tr>
<td>195</td>
<td>66,200</td>
</tr>
</tbody>
</table>
**Einzeldarstellung**

**Probe:** PROBE_6  
**Merkmal:** Trichlorethen  
**Methode:** DIN 38402 A45  
**Sollwert:** 108,455 µg/l (empirischer Wert)

**Vergleich-STD (SR):** 17,484 µg/l  
**Rel. Vergleich-STD (VR):** 16,12%  
**Rel. Soll-STD:** 16,12% (Limited)

**Toleranzbereich:** 75,059 - 147,683 µg/l (|Zu-Score| <= 2,0)

![Graphik](graphik.png)

**Institut für Hygiene und Umwelt Hamburg PROLab**
### BTXE/LHKW in Abwasser - 49. Länderübergreifender Ringversuch

**Probe:** PROBE_6  
**Vergleich-STD (SR):** 17,484 µg/l  
**Merkmale:** Trichlorethen  
**Rel. Vergleich-STD (VR):** 16,12%  
**Methode:** DIN 38402 A45  
**Rel. Soll-STD:** 16,12% (Limited)  
**Anzahl Labore:** 43  
**Toleranzbereich:** 75,059 - 147,683 µg/l ([Zu-Score] <= 2,0)  
**Sollwert:** 108,455 µg/l (empirischer Wert)

<table>
<thead>
<tr>
<th>Laborcode</th>
<th>Labormittelwert</th>
<th>STD</th>
<th>Zu-Score</th>
<th>Messwert</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>140,000</td>
<td>1,6</td>
<td>140,000</td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>98,510</td>
<td>-0,6</td>
<td>98,510</td>
<td></td>
</tr>
<tr>
<td>006</td>
<td>132,000</td>
<td>1,2</td>
<td>132,000</td>
<td></td>
</tr>
<tr>
<td>016</td>
<td>51,730</td>
<td>-3,5</td>
<td>51,730</td>
<td></td>
</tr>
<tr>
<td>025</td>
<td>0,299</td>
<td>-6,6</td>
<td>0,299</td>
<td></td>
</tr>
<tr>
<td>034</td>
<td>96,900</td>
<td>-0,7</td>
<td>96,900</td>
<td></td>
</tr>
<tr>
<td>036</td>
<td>104,000</td>
<td>-0,3</td>
<td>104,000</td>
<td></td>
</tr>
<tr>
<td>037</td>
<td>137,000</td>
<td>1,5</td>
<td>137,000</td>
<td></td>
</tr>
<tr>
<td>041</td>
<td>103,500</td>
<td>-0,3</td>
<td>103,500</td>
<td></td>
</tr>
<tr>
<td>046</td>
<td>94,700</td>
<td>-0,8</td>
<td>94,700</td>
<td></td>
</tr>
<tr>
<td>062</td>
<td>113,000</td>
<td>0,2</td>
<td>113,000</td>
<td></td>
</tr>
<tr>
<td>065</td>
<td>102,000</td>
<td>-0,4</td>
<td>102,000</td>
<td></td>
</tr>
<tr>
<td>067</td>
<td>109,000</td>
<td>0,0</td>
<td>109,000</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>74,300</td>
<td>-2,1</td>
<td>74,300</td>
<td></td>
</tr>
<tr>
<td>069</td>
<td>98,700</td>
<td>-0,6</td>
<td>98,700</td>
<td></td>
</tr>
<tr>
<td>072</td>
<td>106,000</td>
<td>-0,2</td>
<td>106,000</td>
<td></td>
</tr>
<tr>
<td>074</td>
<td>108,000</td>
<td>0,0</td>
<td>108,000</td>
<td></td>
</tr>
<tr>
<td>084</td>
<td>97,700</td>
<td>-0,7</td>
<td>97,700</td>
<td></td>
</tr>
<tr>
<td>085</td>
<td>113,100</td>
<td>0,2</td>
<td>113,100</td>
<td></td>
</tr>
<tr>
<td>086</td>
<td>118,200</td>
<td>0,5</td>
<td>118,200</td>
<td></td>
</tr>
<tr>
<td>088</td>
<td>105,500</td>
<td>-0,2</td>
<td>105,500</td>
<td></td>
</tr>
<tr>
<td>089</td>
<td>112,000</td>
<td>0,2</td>
<td>112,000</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>110,000</td>
<td>0,1</td>
<td>110,000</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>118,000</td>
<td>0,5</td>
<td>118,000</td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>97,000</td>
<td>-0,7</td>
<td>97,000</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>101,800</td>
<td>-0,4</td>
<td>101,800</td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>114,000</td>
<td>0,3</td>
<td>114,000</td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>85,750</td>
<td>-1,4</td>
<td>85,750</td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>115,000</td>
<td>0,3</td>
<td>115,000</td>
<td></td>
</tr>
<tr>
<td>124</td>
<td>111,340</td>
<td>0,2</td>
<td>111,340</td>
<td></td>
</tr>
<tr>
<td>137</td>
<td>131,000</td>
<td>1,2</td>
<td>131,000</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>165,000</td>
<td>3,0</td>
<td>165,000</td>
<td></td>
</tr>
<tr>
<td>153</td>
<td>98,300</td>
<td>-0,6</td>
<td>98,300</td>
<td></td>
</tr>
<tr>
<td>154</td>
<td>107,000</td>
<td>-0,1</td>
<td>107,000</td>
<td></td>
</tr>
<tr>
<td>156</td>
<td>63,100</td>
<td>-2,8</td>
<td>63,100</td>
<td></td>
</tr>
<tr>
<td>157</td>
<td>106,000</td>
<td>-0,2</td>
<td>106,000</td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>120,000</td>
<td>0,6</td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>170</td>
<td>131,000</td>
<td>1,2</td>
<td>131,000</td>
<td></td>
</tr>
<tr>
<td>178</td>
<td>129,000</td>
<td>1,1</td>
<td>129,000</td>
<td></td>
</tr>
<tr>
<td>182</td>
<td>103,000</td>
<td>-0,3</td>
<td>103,000</td>
<td></td>
</tr>
<tr>
<td>184</td>
<td>45,500</td>
<td>-3,9</td>
<td>45,500</td>
<td></td>
</tr>
<tr>
<td>194</td>
<td>214,080</td>
<td>5,5</td>
<td>214,080</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td>112,000</td>
<td>0,2</td>
<td>112,000</td>
<td></td>
</tr>
</tbody>
</table>
Ende des Berichts