Total Extractable Hydrocarbons (C10-C30) in Water

Parameters

<table>
<thead>
<tr>
<th>Analyte Symbols and EMS Codes</th>
<th>Analyte Symbol</th>
<th>Approx MDL</th>
<th>EMS Analyte Codes</th>
<th>EMS Method Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEH&lt;sub&gt;10-30&lt;/sub&gt;</td>
<td>250 ug/L</td>
<td>H109</td>
<td></td>
<td>EPH3</td>
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</table>

Refer to [EMS Parameter Dictionary](#) on the ministry website for current EMS codes.

Analytical Method
Hexane Micro-Extraction - Gas Chromatography with Flame Ionization Detection (GC/FID).

Method Summary
Total Extractable Hydrocarbons (nC10-nC30) in water is analyzed and calculated using the BC ENV method for Extractable Petroleum Hydrocarbons in water, but using a hydrocarbon range of nC10-nC30 instead of nC10-nC32. The hydrocarbon range of nC10-nC30 for this method has been selected to maintain consistency with legacy definitions of TEH, which were in use prior to the adoption of the BC EPH method. Silica gel cleanup is not conducted with this method.

This method for TEH<sub>10-30</sub> is Director-authorized and intended for use in support of the BC Petroleum Storage and Distribution Facilities Storm Water Regulation. This method is deemed equivalent to US EPA SW-846 method 3510/8000A (utilizing extraction with methylene chloride), but has been updated to utilize current BC industry standard methods for analysis of extractable hydrocarbons in water using hexane micro-extraction techniques, to reduce the use of chlorinated solvents in environmental testing laboratories, improving health, safety, and environmental impacts of testing.

Matrix
Fresh water, wastewater, seawater.

Procedure
Calculate TEH<sub>10-30</sub> as follows:

$$\text{TEH}_{10-30} = \text{EPH}_{w10-19} + \text{EPH}_{w19-30}$$

Where:

- EPH<sub>w10-19</sub> is analyzed by the EPHw test method.
- EPH<sub>w19-30</sub> is analyzed by the EPHw test method as per EPH<sub>w19-32</sub>, but using peak area integrations beginning at the apex of the nC19 peak, and ending at the apex of nC30.

Refer to the BC ENV Lab Manual method for Extractable Petroleum Hydrocarbons (EPH) in Water by GC/FID for all specific details and requirements of the test method.

Revision History

- **Nov 16, 2018** Method revised to use current BC ENV industry standard EPHw hexane micro-extraction method (as per EPHw<sub>10-19</sub> and EPHw<sub>19-32</sub>), for standardization, and to reduce health, safety, and environmental impacts of testing. Legacy DCM extraction method now deleted.
- **Dec 31, 2000** SEAM codes replaced by EMS codes. Note that Freon extraction methods now deleted.
- **Feb 14, 1994** Publication in 1994 Laboratory Manual (DCM extraction).