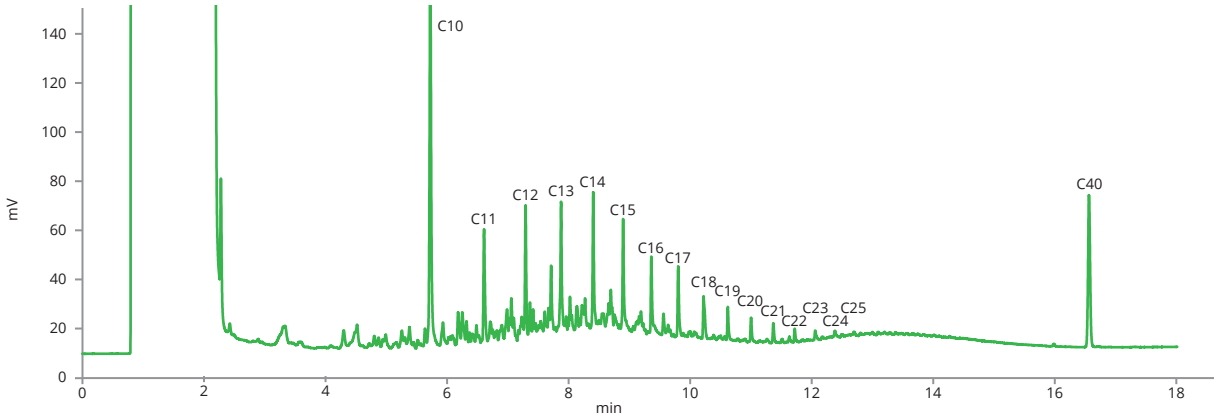
# Total Petroleum Hydrocarbons (C10-C40 Hydroxarbon index)

Total petroleum hydrocarbons index (TPH) is a typical environmental analysis. It has replaced the infrared spectroscopy method using problematic solvents, i.e. Freons. This gas chromatography analysis (GC) monitors hydrocarbons between n-decane and n-tetracontane. These two hydrocarbons are used as the range marker and injection efficiency control. Aditionally, the GC method has an important advantage – this can show a type of hadrocarbon contamination (e.g. gasoline, naphtha, motor oil) and weathering status (some n-alkanes disappear during their stay in the enviroment).

| **Substance** | Total petroleum hydrocarbons in the range of C10 to C40 |
|---|---|




*Calibration standard on LION™ LN-5HT capillary column*

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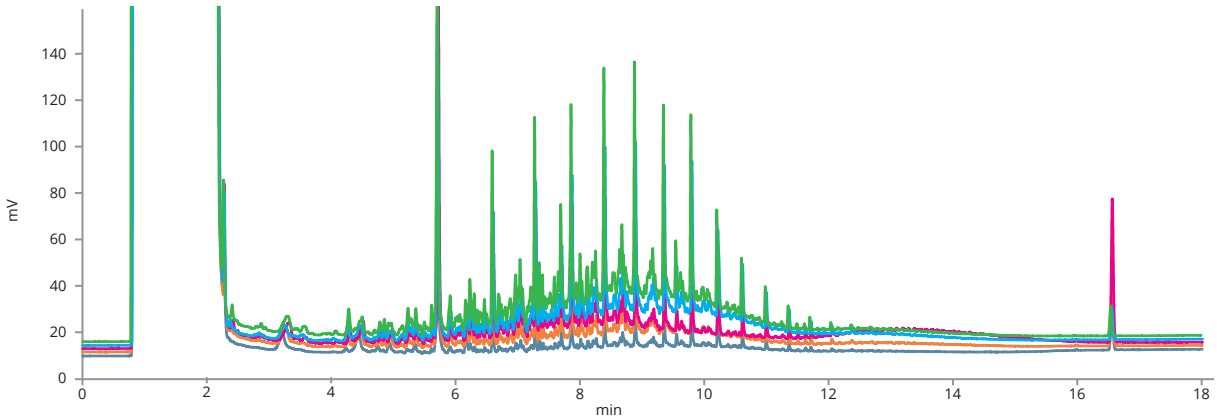
| | |
|---|---|
| **Column** | LION™ LN-5HT |
| **Dimensions** | 15 m × 0.25 mm × 0.10 µm |
| **Part number** | LNI-5765-FB15 |
| **Injection volume** | 1 µl |
| **Injector temp.** | 300 °C |
| **Injection mode** | Splitless, hold 1 min, Split purge 50 ml/min,<br>Septum purge 5 ml/min |
| **Column flowrate** | 1 ml/min, constant flow, nitrogen |
| **Oven program** | 40 °C, hold 4 min<br>25 °C/min, 330 °C, hold 2.4 min<br>Total run time 18 min |
| **Detection** | FID @350 °C<br>Air: 280 ml/min<br>Hydrogen: 40 ml/min<br>Make-up gas (nitrogen): 30 ml/min |
| **Instrument** | Master GC (Dani/Perkin-Elmer) |

Note: This method has been also developed on PTV injector. Ask for more details.




*Calibration standards for 5-level calibration*

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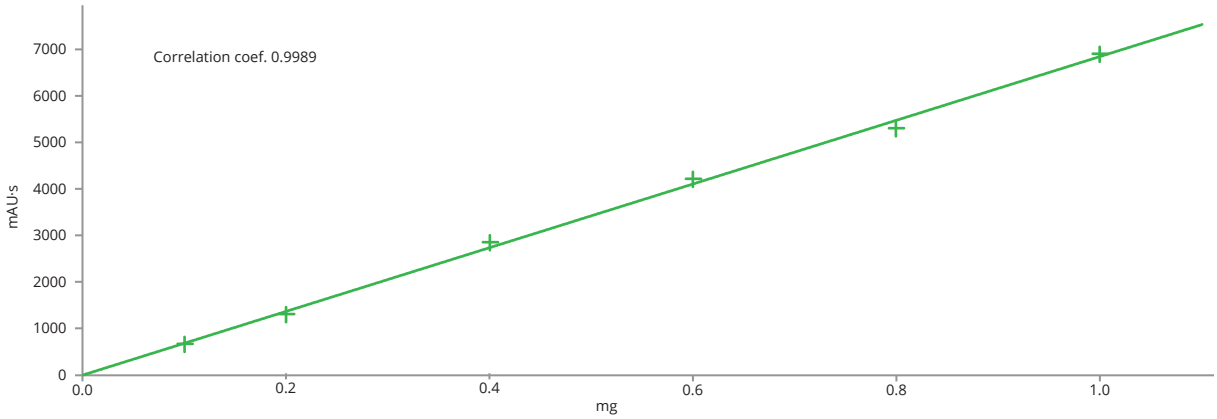
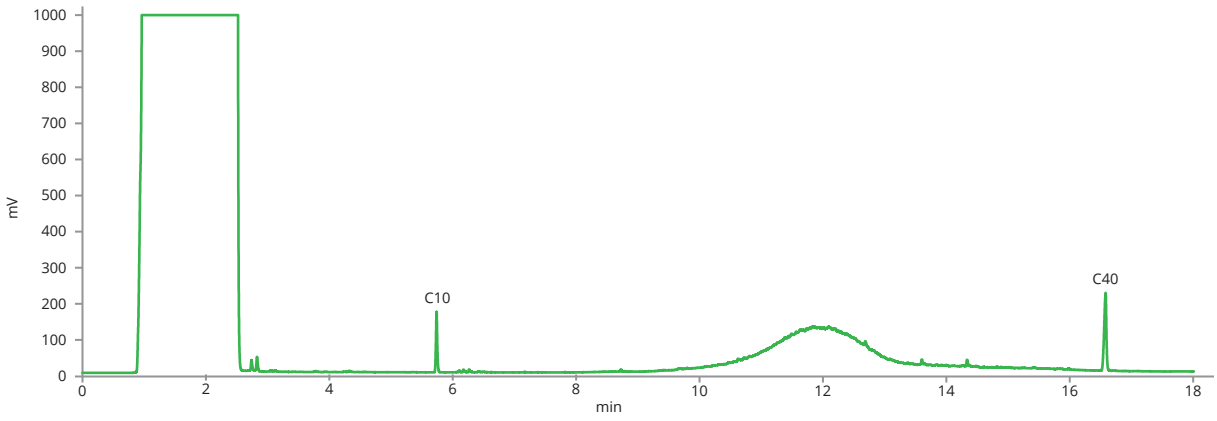



*Calibration curve*




*Analysis of sewer water with presence of TPH*