Dichloromethane for TPH CL0353

Scharlab THE LAB SOURCING GROUP

Scharlau
The wise choice

Petroleum hydrocarbons (PHCs) are some of the organic pollutants that are often deposited in the marine environment as a result of automobile waste, storm water, industrial effluents, household waste or oil spills. The main components of these PHCs are degraded crude oils, burned fossil fuels and normal alkanes. The danger in sedimentation of these organic pollutants is their tendency to accumulate and bioconcentrate over time in aquatic organisms.

Total Petroleum Hydrocarbons (TPH)

Total Petroleum Hydrocarbons (TPH) is the term used to describe the quantity of hydrocarbons derived from petroleum extracted and quantified by a particular method in an environmental matrix. Alkanes are the key components of many refined petroleum products (gasoline, diesel, kerosene, jet fuel and heating oil).

The TPH value is determined as the sum of the concentrations of n-alkanes and complex mixtures between n-nonane (C9) and n-hexatriacontane (C36), excluding polycyclic aromatic hydrocarbons. This determination is especially important in the analysis of water and soil samples with possible contamination by oil residues. There are multiple detection methods, some of which are regulated by EPA 8015 or ISO 15009.
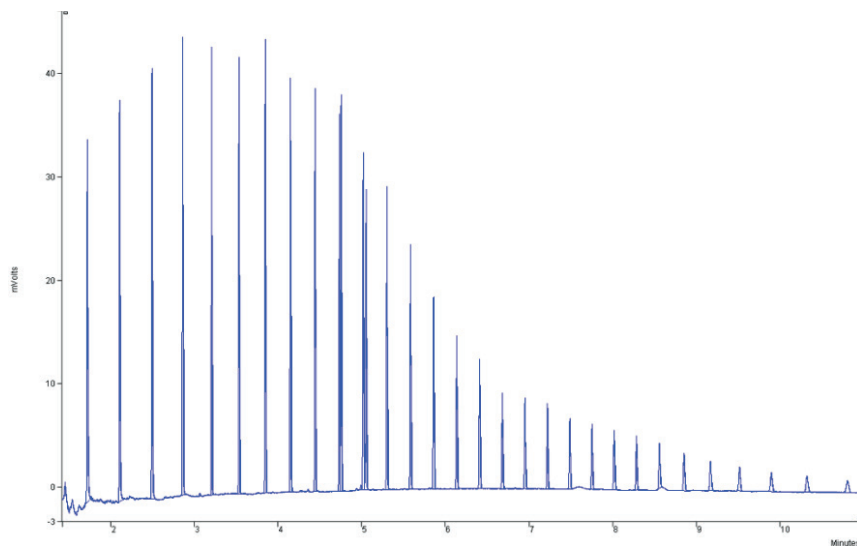
Dichloromethane as extractive and analytical solvent

The choice of the solvent used for the organic extraction of these alkanes determines the efficiency of the process. A good extraction solvent should have a low boiling point, low water miscibility and high solubility for the desired analytes. Other eligibility criteria when choosing the solvent include cost, spectral qualities, availability, method regulations and extraction efficiency. Dichloromethane is one of the solvents which best meets these requirements, being one of the most widely used for the analysis of TPH.

Scharlab offers a dichloromethane for TPH analysis, CL0353, specifically tested for this application, which meets the following requirements:

- 35 different alkanes are analysed, from n-octane (C8) to n-tetracontane (C40)

- Total impurities below 30 ppm are guaranteed in each of the 4 analysis ranges

- There will be no individual impurity above 7.5 ppm

Range	Product	Analised alkanes	Total maximum per range	Maximum per alkane
C8 to C11	Gasoline & Petroleum	4		
C12 to C14	Kerosene	3	30 ppm	7.5 ppm
C15 to C20	Diesel	8		
C21 to C40	Lubricant oil	20		

Dichloromethane for TPH CL0535

Standard of the C8-C40 analised compounds

Real chromatogram of the standard of the C8-C40 analysed compounds.

GC conditions:

Gas chromatograph Varian 3400CX

Injector: Split/Splitless
- Temperature: 270 ºC
- Constant pressure: 30 psi
- Mode: Split 10:1
- Injection volume: 1 µl

Column: SC-5 20 m, 0.18 mm, 0.18 µm
- Starting temperature: 50 ºC
- Starting time: 0.5 min
- Ramp: 50 ºC/min
- Final temperature: 340 ºC
- Final time: 8 min

Detector: FID
- Temperature: 280 ºC
- Innert gas flow (N_2): 28 ml/min
- Hydrogen flow: 30 ml/min
- Air flow: 300 ml/min

Ordering information:

Description	Art. No.
Dichloromethane HPLC for TPH analysis	CL0353
Hydrocarbon Window Defining Standard C8-C40 (ISO 3924:1999). 35 components	PS90200001
Column GC SC-5 20m x 0.18mm x 0.18µm	SC51523212

Reference CL0353 (Dichloromethane for TPH analysis) is available in different packages.

Contact us at helpdesk@scharlab.com

Scharlab has a wide range of Scharlau standards

The wise choice

- Organic standards according to EPA, ISO, ASTM standards
- Neat standards
- Standards in solution in various concentrations and different solvents
- Mix of organic standards
- Possibility of custom-made standards

➔ **Contact us at helpdesk@scharlab.com for more information**