

Product Information

56681 Kit for the chromatographic determination of hydrocarbon content in soil according to DIN ISO 16703:2011 and in waste according to EN 14039

This kit contains all reagents and standards for the quantitative determination of mineral-oil content in soil samples by gas chromatography.

The method allows determination of mineral oil in concentrations between 100mg/kg and 1000mg/kg soil, specified as dry soil.

The kit can also be applied to the quantitative determination of hydrocarbon content in liquid or solid waste by gas chromatography. Hydrocarbon contents above 100mg/kg can be determined (referred to dry matter).

Component List:

Cat.No.	Description	Amount
67583	Standard solution for the determination of the retention time window (RTW)	2 x 250mL
69246	Mineral oil standard mixture type A and B for DIN EN 14039 and ISO 16703	5x2ml (ampules)
68281	Alkane standard mixture for the assay of the system efficiency of GC's (C ₁₀ - C ₄₀)	1 x 1.5mL (Certan® vial)
51745	Heptane, puriss.p.a.	1 x 10mL
40080-1ea-F	Dual Layer Florisil®/Na ₂ SO ₄ SPE Tube, 2g/2g/6mL	Pk 8 (8 x 3 tubes)

The kit is developed for the extraction and analysis of the mineral oil content in 22 soil samples (DIN ISO 16703) or in 20 samples (solid waste) or in 8 samples (liquid waste) (EN 14039).

Blank analysis should be run in duplicate after each series.

The following solutions should be diluted as follows prior to use:

69246 – Aliquots of the mineral oil stock solution shall be diluted with 67583 according to the working range. At least 6 different concentrations should be prepared.

Product Description 69246:

The mineral oil standard mixture type A and B for DIN EN 14039 and ISO 16703 is produced gravimetrically from the certified reference material BAM-K010 – supplied by the Federal Institute for Materials Research and Testing BAM - and diluted with n-heptane (~8 mg/mL).

The exact content including the expanded uncertainty and the expiry date can be found on the label.

Product Description 40080-1ea-f

Inside the kit, you can find the dual layer glass Florisil®/Na₂SO₄ SPE Tube 40080-1ea-f. These tubes have Na₂SO₄ in upper layer and Florisil® (magnesium silicate) in the lower layer, separated and packed with PTFE frits. The upper Na₂SO₄ layer aids in removing aqueous sample residues that may hinder Florisil® performance and/or subsequent GC analysis. The efficiency of clean-up by ratio of stearyl stearate peak area determination < 10% (treated/untreated – EN14039), < 5% (ISO 16703) and the recovery rate of the mineral oil standard solution is > 90% (EN 14039), > 80% (ISO 16703).



Dual Layer Florisil[®]/Na₂SO₄ SPE Tube 2g/2g/6mL

Retention Mechanism:	Normal-phase adsorbent suitable for the removal/isolation of polar substances from organic matrices
Scope:	This product is suitable for determination of the hydrocarbon oil index in water (surface, waste, and sewage treatment plants), soil and waste (liquid and solid) by GC-FID analysis according to <ul style="list-style-type: none"> • EN ISO 9377-2 (water) • ISO 16703 (soil) • EN 14039 (waste)
SPE Tube:	Glass, 6mL
Adsorbent:	Upper layer- Na ₂ SO ₄ , 2g Bottom layer- Florisil [®] , 2g
Frit:	PTFE, 20µm (adsorbent layers separated by PTFE frit)

Adsorbents:

<i>Florisil[®]</i>	▪ Particle Size.- 60/100 mesh (150-200µm)	
	▪ Efficiency of clean-up by ratio of stearyl stearate peak area determination	≤ 10% EN 14039 (treated/untreated) ≤ 5% ISO 16703
	▪ Recovery of mineral oils	≥ 90% EN 14039 ≥ 80% ISO 16703
Na₂SO₄	▪ Purity- 99.99+% ▪ Density- 2.68 g/mL ▪ mp- 884°C	

Care and Use:

Florisil[®] is a hygroscopic adsorbent that may lose activity (extraction efficiency) with increased exposure to air. Florisil[®] adsorbents should be stored in a desiccator or dry environment.

If activity loss occurs (as determined by suitability testing), Dual Layer Florisil[®]/Na₂SO₄ SPE Tubes can be reactivated by heating at 140°C for 16 h.

Florisil[®] is a registered Trademark of U.S. Silica Company

Certain[®] is a registered Trademark of LGC Group

Precautions and Disclaimer:

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

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