

Expedited Site Assessment Tools For Underground Storage Tank Sites

A Guide For Regulators



Appendix B

Table Of U.S. EPA Test Methods For Petroleum Hydrocarbons

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SW-846 Method	Water/ Waste Water Method	Analytes	Primary Equipment	Sample Preparation ¹
4030 ²		TPHs	Immunoassay	Included in kit
4035 ²		PAHs	Immunoassay	Included in kit
8015 ³		Aliphatic and Aromatic Hydrocarbons; Nonhalogenated VOCs	GC/FID	Extraction (SVOCs) ⁴ ; Purge-and-Trap and Headspace (VOCs) ⁴ ; Azeotropic Distillation (Nonhalogenated VOCs) ^{3, 4}
8021 ^{3, 5}	502.2/602	Aromatic VOCs	GC/PID	Purge-and-Trap ⁴
8100		PAHs	GC/FID	Extraction ⁴
8260 ⁶	524.2/624	VOCs	GC/MS	Purge-and-Trap, Headspace, Azeotropic Distillation ⁴
8270	525/625	SVOCs	GC/MS	Extraction ⁴
8310	610	PAHs	High Performance Liquid Chromatography	Extraction ⁴
8440 ⁷	418.1 ⁸	TPH	IR Spectrophotometer	Supercritical Fluid Extraction from soils ⁴

¹ These are the standard methods of preparation for the corresponding method. They may vary depending on specific analytical needs.

² Screening method for soils

³ MTBE can be analyzed with U.S. EPA SW-846 Method 8015 or 8021, however, 8021 has lower detection limits, is subject to less interference in highly contaminated samples, and tends to be more economical by providing BTEX data in the same analysis. Concerns about coelution with some alkanes requires at least one confirmatory analysis with SW-846 Method 8260 per site.

⁴ See Chap. 4 of SW-846 for specific appropriate methods.

⁵ 8021 replaces 8010 and 8020.

⁶ The old method, 8240, is replaced by 8260.

⁷ This method is similar to 418.1, however, perchlorethane (PCE) is used as an IR solvent instead of Freon-113.

⁸ 418.1 is used extensively although it is not on the list of promulgated methods.

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