

VOLATILE ORGANICS

SAMPLING CONTAINERS & HOLDING TIMES



Parameter	Matrix	Prep Method	Analytical Method	Holding Time ³	Minimum Volume	Sampling	
						Container	Preservative ⁴
TPH/Gasoline ²	Water	EPA 5030	EPA 8015	14 days	40 mL	3 x 40mL VOA	HCL ⁵
		EPA 5030	8260mod	14 days	40 mL	3 x 40mL VOA	HCL ⁵
	Soil	EPA 5035 ⁶	EPA 8015	14 days	5 g	TerraCore kit ⁶	See Note ⁶
Alcohols (Methanol, Ethanol)	Water	Direct Inject	EPA 8015	14 days	40 mL	2 x 40mL VOA	None
BTXE ¹	Water	EPA 5030	EPA 8021	14 days	40 mL	3 x 40mL VOA	HCL ⁵
	Soil	EPA 5035 ⁶	EPA 8021	14 days	5 g	TerraCore kit ⁶	See Note ⁶
Carbon Dioxide (dissolved)	Water	METHOD	RSK-175	14 days	40 mL	3 x 20mL vial	None
Dissolved Gasses (except CO ₂)	Water	METHOD	RSK-175	14 days	40 mL	3 x 40mL VOA	HCL
Dissolved Gasses (CO ₂)	Water	METHOD	RSK-175	14 days	40 mL	3 x 40mL VOA	None
Gasoline Oxygenates	Water	EPA 5030	EPA 8260	14 days	40 mL	3 x 40mL VOA	HCL ⁵
	Soil	EPA 5035 ⁶	EPA 8260	14 days	5 g	TerraCore kit ⁶	See Note ⁶
Halogenated VOCs	Water	EPA 5030	EPA 8260	14 days	40 mL	3 x 40mL VOA	HCL ⁵
	Soil	EPA 5035 ⁶	EPA 8260	14 days	5 g	TerraCore kit ⁶	See Note ⁶
MTBE (Methyl tert-Butyl Ether)	Water	EPA 5030	EPA 8021	14 days	40 mL	3 x 40mL VOA	HCL ⁵
		EPA 5030	EPA 8260	14 days	40 mL	3 x 40mL VOA	HCL ⁵
	Soil	EPA 5035 ⁶	EPA 8021	14 days	5 g	TerraCore kit ⁶	See Note ⁶
		EPA 5035 ⁶	EPA 8260	14 days	5 g	TerraCore kit ⁶	See Note ⁶
TCLP-ZHE Extraction for Volatiles	Soil	EPA 1311	Various	14 days	25 g		None
Volatile Organics	Water	EPA 5030	EPA 8260	14 days	40 mL	3 x 40mL VOA	HCL ⁵
		EPA 624	EPA 624	14 days	40 mL	3 x 40mL VOA	HCL ⁵
	TCLP Leachate	EPA 5030	EPA 8260	14 days	40 mL		None
	Soil	EPA 5035 ⁶	EPA 8260	14 days	5 g	TerraCore kit ⁶	See Note ⁶

Notes:

1. Benzene, Toluene, Ethylbenzene, and Xylenes; MTBE (Methyl tert-Butyl Ether) may be added upon request.
2. Total Petroleum Hydrocarbons as Gasoline: JP-4, Aviation Gas, Mineral spirits, or Stoddard solvent may be added upon request. Reporting limits may be higher for fuels other than gasoline.
3. Holding time specified in 40CFR136 Table 2 (Clean Water Act/ NPDES 2016) and SW-846 Table 2-36 (1996)
4. Samples should be kept at $\leq 6^{\circ}\text{C}$ from time of collection until analysis. Containers can be supplied by C&T.

Legend:

- mg/L milligrams per liter (ppm)
 µg/L micrograms per liter (ppb)
 mg/Kg milligrams per kilogram (ppm)
 µg/Kg micrograms per kilogram (ppb)

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HCL: Hydrochloric Acid to pH < 2

5. Free chlorine should be neutralized with 0.008% Na₂S₂O₃ at time of sampling.
6. Prep method EPA 5035 uses Encore, TerraCore or similar sampling devices for collecting soil.

Three aliquots of each sample should be submitted for analysis (2 Soil + 1 Methanol).

Samples should be frozen, or chemically preserved (with Sodium Bisulfate or Methanol) within 48 hours of collection. Freezing extends the holding time to 7 days; chemical preservation extends the holding time to 14 days but may create matrix interferences.

VOA 40mL Amber VOA Vial

G Amber Glass

P Polyethylene

Vial 20mL Amber RSK Vial