

# Phase Separation Science, Inc.



## Environmental Sampling Guide



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Analysis	Method	Matrix	Sample Container/ Min. Volume	Preservative	Holding Time
Acidity	SM 2310B (4a)	Water	250mL Plastic / 50mL	Cool, ≤ 6°C	14 Days
Alkalinity	SM 2320B	Water	250mL Plastic / 20mL	Cool, ≤ 6°C	14 Days
Ammonia, Nitrogen	SM 4500-NH <sub>3</sub> B, C, D, E or F / EPA 350.1	Water	250mL Plastic / 110mL	H <sub>2</sub> SO <sub>4</sub> pH<2 Cool, ≤ 6°C	28 Days
		Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	28 Days
Bacteria, Coliforms	SM 9223B	Water	100mL Sterile / 100mL	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , Cool, ≤ 6°C	8 hrs non-potable / 30 hrs potable
Bacteria, Total Plate Count	SM 9215B	Water	100mL Sterile / 100mL	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , Cool, ≤ 6°C	24 hrs non-potable / 8 hrs potable
Bacteroides	SOP	Water	100mL Sterile / 100mL	Cool, ≤ 6°C	14 Days
Biochemical Oxygen Demand (BOD <sub>5</sub> )	SM 5210B	Water	1L Plastic / 1000mL	Cool, ≤ 6°C	48 Hours
Bromide	EPA 300.0	Water	250mL Plastic / 10mL	Cool, ≤ 6°C	28 Days
		Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	28 Days
BTEX plus MTBE and Naphthalene	EPA 8021B / 8260B	Water	3-40mL Vials / 2 vials	HCL pH<2, Cool, ≤ 6°C	14 Days
		Solid	4oz GL Wide Mouth / 15g	Cool, ≤ 6°C	14 Days
Chemical Oxygen Demand (COD)	SM 5220D	Water	250mL Plastic / 10mL	H <sub>2</sub> SO <sub>4</sub> pH<2 Cool, ≤ 6°C	28 Days
Chloride	EPA 300.0	Water	250mL Plastic / 10mL	Cool, ≤ 6°C	28 Days
		Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	28 Days
Chlorine, Total Residual	SM 4500CL-G	Water	2-40mL Vials	Cool, ≤ 6°C	Immediately
Chromium, Hexavalent	SM 3500Cr B / EPA 7196A	Water	250mL Plastic / 50mL	Cool, ≤ 6°C	24 Hours
		Solid	4oz GL Wide Mouth / 20g	Cool, ≤ 6°C	30 Days
Coliform, Bacteria	SM 9223B	Water	100mL Sterile / 100mL	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> , Cool, ≤ 6°C	8 hrs non-potable / 30 hrs potable
Conductance	SM 2510B / EPA 120.1	Water	250mL Plastic / 15mL	Cool, ≤ 6°C	28 Days
Cyanide, Total	SM 4500CN E / EPA 9014	Water	250mL Plastic / 110mL	NaOH pH>12 Cool, ≤ 6°C	14 Days
		Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	14 Days
Dioxins	EPA 8290 / 1631	Water	2-1L Amber Glass / 1000mL	Cool, ≤ 6°C	30 Days
		Solid	4oz GL Wide Mouth / 100g	Cool, ≤ 6°C	30 Days
Dioxins (2378-tcdd only)	EPA 8290 / 1631	Water	2-1L Amber Glass / 1000mL	Cool, ≤ 6°C	30 Days
		Solid	4oz GL Wide Mouth / 100g	Cool, ≤ 6°C	30 Days



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Analysis	Method	Matrix	Sample Container/ Min. Volume	Preservative	Holding Time
Dissolved Gases (Landfill)	EPA 8015M	Water	3-40mL Vials	HCL pH<2, Cool, ≤ 6°C	14 Days
		Air	Tedlar Bag / 1L	Cool, ≤ 6°C	72 Hours
Extractable Organic Halides (EOX)	EPA 9020B / 9023 / 9078	Water	250 mL Amber/10000 mL	H <sub>2</sub> SO <sub>4</sub> pH<2, Cool, ≤ 6°C	14 Days
		Soil	4oz GL Wide Mouth 10g	Cool, ≤ 6°C	14 Hours
		Oil / Solven	20mL Vial	Cool, ≤ 6°C	28 Days
Fluoride	EPA 300.0	Water	250mL Plastic / 10mL	Cool, ≤ 6°C	28 Days
		Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	28 Days
Gases, Dissolved (Methane and/or Ethane, Ethene and Propane)	EPA 8015M	Water	3-40mL Vials	HCL pH<2, Cool, ≤ 6°C	14 Days
		Air	Tedlar Bag / 1L	Cool, ≤ 6°C	72 Hours
Gases, Dissolved (Landfill)	EPA 8015M	Water	3-40mL Vials	HCL pH<2, Cool, ≤ 6°C	14 Days
		Air	Tedlar Bag / 1L	Cool, ≤ 6°C	72 Hours
Glycols (Propylene and Ethylene)	EPA 8015M	Water	250mL Amber / 100mL	Cool, ≤ 6°C	14 Days
		Solid	4oz GL Wide Mouth / 20g	Cool, ≤ 6°C	14 Days
Hardness, Total	SM 2340B or C / EPA 6020A /	Water	250mL Plastic / 50mL	HNO <sub>3</sub> pH<2, Cool, ≤ 6°C	6 Months
Herbicides, Chlorinated	EPA 8151A	Water	1L Amber Glass / 1000mL	Cool, ≤ 6°C	7 Days
		Solid	4oz GL Wide Mouth / 150g	Cool, ≤ 6°C	14 Days
Mercury	EPA 6020A / 200.8 / 245.1	Water	250mL Plastic / 200mL	HNO <sub>3</sub> pH<2 Cool, ≤ 6°C	28 Days
	EPA 6020A	Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	28 Days
Mercury, Elemental	EPA 3200	Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	28 Days
Metals, except Mercury	EPA 6020A / 200.8	Water	250mL Plastic / 200mL	HNO <sub>3</sub> pH<2 Cool, ≤ 6°C	6 Months
	EPA 6020A	Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	6 Months
Metals, Lab Filtering	EPA 6020A / 200.8	Water	250mL Plastic / 50mL	Cool, ≤ 6°C	28 Days for Mercury, Rest 6 Months
Metal, Mercury Cold Vapor	EPA 245.2	Water	250mL Plastic / 50mL	HNO <sub>3</sub> pH<2 Cool, ≤ 6°C	28 Days
		Solid	4oz GL Wide Mouth / 10g	Cool, ≤ 6°C	28 Days
Metal, Mercury Low Level	EPA 1631E	Water	250mL Plastic / 200mL	Cool, ≤ 6°C	28 Days
Metals, Priority Pollutant (13)	EPA 6020A / 200.8	Water	250mL Plastic / 200mL	HNO <sub>3</sub> pH<2 Cool, ≤ 6°C	28 Days for Mercury, Rest 6 Months
	EPA 6020A	Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	28 Days for Mercury, Rest 6 Months



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Analysis	Method	Matrix	Sample Container/ Min. Volume	Preservative	Holding Time
Metals, RCRA (8)	EPA 6020A / 200.8	Water	250mL Plastic / 200mL	HNO <sub>3</sub> pH<2 Cool, ≤ 6°C	28 Days for Mercury, Rest 6 Months
	EPA 6020A	Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	28 Days for Mercury, Rest 6 Months
Metals, TAL (23)	EPA 6020A / 200.8	Water	250mL Plastic / 200mL	HNO <sub>3</sub> pH<2 Cool, ≤ 6°C	28 Days for Mercury, Rest 6 Months
	EPA 6020A	Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	28 Days for Mercury, Rest 6 Months
Moisture Content	ASTM D 2216	Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	28 Days
Nitrogen, Ammonia	SM 4500-NH <sub>3</sub> B, C, D, E or F / EPA 350.1	Water	250mL Plastic / 50mL	H <sub>2</sub> SO <sub>4</sub> pH<2 Cool, ≤ 6°C	28 Days
		Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	28 Days
Nitrogen, Nitrate	SM 4500-NO <sub>3</sub> D / EPA 300.0	Water	250mL Plastic / 10mL	Cool, ≤ 6°C	48 Hours
		Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	48 Hours
Nitrogen, Nitrite	SM 4500-NO <sub>2</sub> B / EPA 300.0	Water	250mL Plastic / 10mL	Cool, ≤ 6°C	48 Hours
		Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	48 Hours
Nitrogen, Nitrate-Nitrite	SM 4500-NO <sub>3</sub> H	Water	250mL Plastic / 50mL	H <sub>2</sub> SO <sub>4</sub> pH<2 Cool, ≤ 6°C	28 Days
		Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	28 Days
Nitrogen, Total Kjeldahl (TKN)	SM 4500-NH <sub>3</sub> B, C or E	Water	250mL Plastic / 50mL	H <sub>2</sub> SO <sub>4</sub> pH<2 Cool, ≤ 6°C	28 Days
		Solid	4oz GL Wide Mouth	Cool, ≤ 6°C	28 Days
Oil and Grease (Gravimetric)	EPA 1664A	Water	1L GL / 1000mL ★	H <sub>2</sub> SO <sub>4</sub> pH<2 Cool, ≤ 6°C	28 Days
	EPA 1664M / 9071BM	Solid	4oz GL Wide Mouth / 150g	Cool, ≤ 6°C	28 Days
Paint Filter Liquids Test	EPA 9095B	Solid	4oz GL Wide Mouth / 200g	Cool, ≤ 6°C	28 Days
PCBs	EPA 8082A / 608	Water	1L Amber GL / 1000mL ★	Cool, ≤ 6°C	7 Days
		Solid	4oz GL Wide Mouth / 30g	Cool, ≤ 6°C	None
		Oil / Solvent	20mL Vial	Cool, ≤ 6°C	None
PCB Congeners	EPA 1668	Water	2-1L Amber GL/1000mL	Cool, ≤ 6°C	1 Year
Perchlorate	EPA 314.1	Water	250mL GL or PL / 50mL	Cool, ≤ 6°C	28 Days
Pesticides, Organochlorine	EPA 8081B / 608 ★	Water	1L Amber GL / 1000mL ★	Cool, ≤ 6°C	7 Days
	EPA 8081B	Solid	4oz GL Wide Mouth / 50g	Cool, ≤ 6°C	14 Days
Pesticides, Organophosphorus	EPA 8141	Water	1L Amber GL / 1000mL ★	Cool, ≤ 6°C	7 Days
		Solid	4oz GL Wide Mouth / 50g	Cool, ≤ 6°C	14 Days
pH - Corrosivity	SM 4500 H+B	Water	250mL Plastic / 15mL	Cool, ≤ 6°C	Immediately
		Solid	4oz GL Wide Mouth / 20g	Cool, ≤ 6°C	Immediately
Phenolics	EPA 420.1, 420.4	Water	250mL GL / 50mL	H <sub>2</sub> SO <sub>4</sub> pH<2 Cool, ≤ 6°C	28 Days
Phosphorus, Orthophosphate	EPA 365.1, SM 4500PE	Water	250mL Plastic / 50mL	Cool, ≤ 6°C	48 Hours
		Solid	4oz GL Wide Mouth / 50g	Cool, ≤ 6°C	48 Hours



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Analysis	Method	Matrix	Sample Container/ Min. Volume	Preservative	Holding Time
Phosphorus, Total	EPA 365.1, EPA 365.3, and SM 4500PE	Water	250mL Plastic / 50mL	H <sub>2</sub> SO <sub>4</sub> pH<2 Cool, ≤ 6°C	28 Days
		Solid	4oz GL Wide Mouth / 50g	Cool, ≤ 6°C	28 Days
Polynuclear Aromatic Hydrocarbons (PAHs)	EPA 8270C / 625	Water	1L Amber GL / 1000mL ★	Cool, ≤ 6°C	7 Days
Polynuclear Aromatic Hydrocarbons (PAHs) Selective Ion Monitoring (SIM)	EPA 8270C	Water	1L Amber GL / 1000mL ★	Cool, ≤ 6°C	7 Days
		Solid	4oz GL Wide Mouth / 90g	Cool, ≤ 6°C	14 Days
Priority Pollutant Pesticides	EPA 8081B / 608 ★	Water	1L Amber GL / 1000mL ★	Cool, ≤ 6°C	7 Days
		Solid	4oz GL Wide Mouth / 30g	Cool, ≤ 6°C	14 Days
Priority Pollutant PCBs (Polychlorinated Biphenyls)	EPA 8082A / 608	Water	1L Amber GL / 1000mL ★	Cool, ≤ 6°C	7 Days
		Solid	4oz GL Wide Mouth / 30g	Cool, ≤ 6°C	14 Days
Priority Pollutant Semi-Volatile Organic Compounds	EPA 8270C / 625 ★	Water	1L Amber GL / 1000mL ★	Cool, ≤ 6°C	7 Days
		Solid	4oz GL Wide Mouth / 90g	Cool, ≤ 6°C	14 Days
Priority Pollutant Volatile Organic Compounds	EPA 8260B / 624 ★	Water	3-40mL Vials / 1 vial	HCL pH<2, Cool, ≤ 6°C	14 Days
		Solid	4oz GL Wide Mouth / 15g	Cool, ≤ 6°C	14 Days
Product ID or Comparison By Gas Chromatography	Various	Water	Contact Lab		
		Oil / Solvent	20mL Vial	Cool, ≤ 6°C	14 Days
Reactivity (Cyanide, Sulfide)	EPA SW 846-7.3	Solid	4oz GL Wide Mouth / 50g	Cool, ≤ 6°C	14 Days
Semi-Volatile Organic Compounds	EPA 8270C / 625 ★	Water	1L Amber GL / 1000mL ★	Cool, ≤ 6°C	7 Days
		Solid	4oz GL Wide Mouth / 90g	Cool, ≤ 6°C	14 Days
Solids, Settleable	SM 2540F	Water	1L Plastic / 1000mL	Cool, ≤ 6°C	48 Hours
Solids, Total	SM 2540B	Water	250mL Plastic / 200mL	Cool, ≤ 6°C	7 Days
Solids, Total Dissolved	SM 2540C	Water	1L Plastic / 200mL	Cool, ≤ 6°C	7 Days
Solids, Total Suspended	SM 2540D	Water	1L Plastic / 1000mL	Cool, ≤ 6°C	7 Days
Solids, Total Volatile	SM 2540E / EPA 160.4	Water	1L Plastic / 1000mL	Cool, ≤ 6°C	7 Days
Specific Conductance	SM 2510B / EPA 120.1	Water	250mL Plastic / 10mL	Cool, ≤ 6°C	28 Days
Sulfate	SM 4500-SO <sub>4</sub> C or D, EPA 300.0	Water	250mL Plastic / 10mL	Cool, ≤ 6°C	28 Days
		Solid	4oz GL Wide Mouth / 5g	Cool, ≤ 6°C	28 Days
Sulfide, Total	EPA 9030B	Water	250mL Plastic / 200mL	NaOH + Zn acetate pH>9, Cool, ≤ 6°C	7 Days
TCLP/SPLP (VOC, SVOC, Pests, Herbs, Metals, DRO, ORO and/or GRO)	EPA 1311 / 1312 / Various	Solid	3-4oz GL Wide Mouth / 200g	Cool, ≤ 6°C	14 Days / 6 months for Metals (except Mercury-28 days)
TKN, Total Kjeldahl Nitrogen	SM 4500-NH <sub>3</sub> B, C or E, EPA 351.2	Water	250mL Plastic / 50mL	H <sub>2</sub> SO <sub>4</sub> pH<2 Cool, ≤ 6°C	28 Days
		Solid	4oz GL Wide Mouth / 50g	Cool, ≤ 6°C	28 Days
TO-15 Volatile Organic Compounds	EPA TO-15	Air	1.4 L Canister	N/A	28 Days



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Analysis	Method	Matrix	Sample Container/ Min. Volume	Preservative	Holding Time
Total Organic Carbon (TOC)	SM 5310B, C or D	Water	2-40mL Vials	HCL pH<2, Cool, ≤ 6°C	28 Days
		Solid	4oz GL Wide Mouth / 50g	Cool, ≤ 6°C	28 Days
Total Organic Halogens (TOX)	EPA 9020B / 9023 / 9078	Water	250mL Amber GL / 100mL	H <sub>2</sub> SO <sub>4</sub> pH<2 Cool, ≤ 6°C	28 Days
		Solid	4oz GL Wide Mouth / 10g	Cool, ≤ 6°C	28 Days
TPH-GC (DRO)	EPA 8015C	Water	1L Amber GL / 1L	Cool, ≤ 6°C	7 Days
		Solid	4oz GL Wide Mouth / 90g	Cool, ≤ 6°C	14 Days
TPH-GC (GRO)	EPA 8015C with 5035 prep	Water	3-40mL Vials / 2 vials	HCL pH<2, Cool, ≤ 6°C	7 Days
		Solid	Terra Core Sampling Kit	Cool, ≤ 6°C	14 Days
TPH-GC (ORO)	EPA8015M	Water	1L Amber GL / 1000mL	Cool, ≤ 6°C	7 Days
		Solid	4oz GL Wide Mouth / 90g	Cool, ≤ 6°C	14 Days
TPH (SGT-HEM)	EPA 1664A	Water	1L Amber GL / 1000mL	HCL pH<2, Cool, ≤ 6°C	14 Days
	EPA 1664M / 9071BM	Solid	4oz GL Wide Mouth / 150g	Cool, ≤ 6°C	28 Days
Turbidity	EPA 180.1	Water	250mL Plastic / 20mL	Cool, ≤ 6°C	48 Hours
Volatile Organic Compounds	EPA 8260B	Water	3-40mL Vials / 2 vials	HCL pH<2, Cool, ≤ 6°C	14 Days
	8260B with 5035 prep	Solid	Terra Core Kit	Cool, ≤ 6°C	14 Days
	EPA 624	Water	3-40mL Vials / 2 vials	HCL pH<2, Cool, ≤ 6°C	14 Days
	EPA 624 Acrolein / Acrylonitrile	Water	1-40mL Vial	Cool, ≤ 6°C	3 Days
Volatile Organic Compounds in Drinking Water	EPA 524.2	Water	3-40mL Vials / 2 vials	HCL pH<2, Cool, ≤ 6°C	14 Days
Volatile Organic Compounds in Air	EPA TO-15	Air	1.4 L Canister	N/A	28 Days

- The analysis of matrix spike/matrix spike duplicate (MS/MSD) quality control samples for each of the aqueous extractable analyses requires the collection of additional sample volume. Please contact the lab.
- Wastewater containing residual chlorine needs to be preserved with sodium thiosulfate for the analysis of pesticides by EPA 608, SVOC by EPA 625, and VOC by EPA 624. Prior to sampling, add 80 mg of sodium thiosulfate to each liter amber and 10 mg to each 40ml vial.
- Per the method, a trip blank is required to be analyzed with samples if there are detections. Please let your project manager know when you order bottleware that you will be analyzing drinking water samples for 524.2 so trip blanks can be provided.