



Holding Times and Containers for Water/Aqueous Samples

| General Chemistry | Method | Holding Time (days) | Min Volume (mls) | Container | Preservation |
|--|---|----------------------|------------------|-------------------------|---|
| Alkalinity | EPA 2320B | 14 | 200 | 250 ml HDPE | 0-6°C |
| Anions: Bromide, Chloride, Fluoride, Sulfate | EPA 300.0 | 28 | 50 | 125 ml HDPE | 0-6°C |
| Anions: o-Phosphate, Nitrate, Nitrite | EPA 300.0 | 48 Hours | 50 | 125 ml HDPE | 0-6°C |
| Biochemical Oxygen Demand (BOD) | SM5210B | 48 hours | 1000 | 1 L HDPE | 0-6°C |
| Chemical Oxygen Demand (COD) | EPA SM5220D | 28 | 100 | 125 ml HDPE | H ₂ SO ₄ < pH 2 & 0-6°C |
| Chlorine, Total Residual | SM 4500-Cl | ASAP (15 minutes) | 500 | 500 ml HDPE | 0-6°C |
| Chlorophyll | SM 10200H-1, 2 | 1 (pH<7) / 21 (pH≥7) | 1000 | 1 L amber glass | 0-6°C (pH<7) / < 0°C (pH≥7) |
| Chromium VI (Hexavalent Chromium) | EPA 7196A/7199 | 28 | 100 | 250 ml HDPE | 0-6°C |
| Cyanide, Total or Amenable | SM 4500CN-C,E,G/EPA 9014 | 14 | 500 | 1 L HDPE | NaOH > pH 12 & 0-6°C |
| Hardness, Total | SM 2340C | 180 | 100 | 250 ml HDPE | HNO ₃ < pH 2 & 0-6°C |
| Ignitability (Flashpoint) | EPA 1010 | 14 | 150 | 125 ml HDPE | 0-6°C |
| Nitrogen, Ammonia (NH ₃) | SM4500-NH ₃ D | 28 | 500 | 500 ml HDPE | H ₂ SO ₄ < pH 2 & 0-6°C |
| Nitrogen, Total Kjeldahl (TKN) | SM4500-NH ₃ D, -N _{org} C | 28 | 500 | 500 ml HDPE | H ₂ SO ₄ < pH 2 & 0-6°C |
| Nitrogen, Total | TKN + NO ₃ -N + NO ₂ -N | 48 hours | 500/50 | 500 ml HDPE/125 ml HDPE | H ₂ SO ₄ < pH 2 & 0-6°C/0-6°C |
| Oil and Grease | EPA 1664A/SM 5520B | 28 | 1000 | 1 L amber glass | HCl < pH 2, 0-6°C |
| pH | SM 4500-H ⁺ /EPA 9040B | ASAP (15 minutes) | 50 | 100 ml HDPE | 0-6°C |
| Phenolics, Total | EPA 420.1 | 28 | 500 | 1 L amber glass | CuSO ₄ 1g/1L, 0-6°C |
| Phosphate, Total | EPA 365.3 | 28 | 50 | 125 ml HDPE | 0-6°C |
| Phosphorus, Dissolved | EPA 365.3 | 28 | 100 | 125 ml HDPE | Field filter into H ₂ SO ₄ < pH 2 & 0-6°C |
| Phosphorus, Total | EPA 365.3 | 28 | 100 | 125 ml HDPE | H ₂ SO ₄ < pH 2 & 0-6°C/0-6°C |
| Reactive Cyanide &/or Sulfide | SW-846 Section 7.3 | 1 | 100 | 125 ml HDPE | 0-6°C |
| Solids, Total Dissolved (TDS) | SM 2540C/EPA 160.1 | 7 | 1000 | 250 ml HDPE | 0-6°C |
| Solids, Total Suspended (TSS) | SM 2540D/EPA 160.2 | 7 | 1000 | 1 L HDPE | 0-6°C |
| Solids, Total (TS) | SM 2540B/EPA 160.3 | 7 | 1000 | 250 ml HDPE | 0-6°C |
| Solids, Volatile (VS) | SM 2540G/EPA 160.4 | 7 | 1000 | 250 ml HDPE | 0-6°C |
| Solids, Settleable (SS) | SM 2540F/EPA 160.5 | 48 hours | 1000 | 1 L HDPE | 0-6°C |
| Solids, Volatile Suspended (VSS) | SM 2540D/G | 7 | 200 | 500 ml HDPE | 0-6°C |
| Specific Conductance | SM 2510B/EPA 120.1 | ASAP (24 hours) | 100 | 250 ml HDPE | 0-6°C |
| Sulfide, Total | EPA 9034 | 7 | 500 | 1 L HDPE | NaOH > pH 12, 4 drops 2N Zinc Acetate/Liter & 0-6°C |
| Surfactants (MBAS) | EPA 5540C | 48 hours | 1000 | 1 L HDPE | 0-6°C |
| Total Organic Carbon (TOC) | EPA 415.1/9060/SM5310B | 28 | 100 | 125 ml glass | HCl < pH 2, 0-6°C |
| Turbidity | EPA 180.1/SM2130B | 48 hours | 100 | 250 ml HDPE | 0-6°C |

| Metals | Method | Holding Time (days) | Min Volume (mls) | Container | Preservation |
|---------------|-----------------|---------------------|------------------|-------------|---------------------------------|
| Mercury | EPA 7470A/245.1 | 90 | 100 | 250 ml HDPE | HNO ₃ < pH 2 & 0-6°C |
| ICP Metals | EPA 6010B/200.7 | 180 | 100 | 250 ml HDPE | HNO ₃ < pH 2 & 0-6°C |
| ICP/MS Metals | EPA 6020/200.8 | 180 | 100 | 250 ml HDPE | HNO ₃ < pH 2 & 0-6°C |

| Semi-Volatile Organics | Method | Holding Time (days) | Min Volume (mls) | Container | Preservation |
|------------------------------|---------------|---------------------|------------------|-------------------|--|
| EDB/DBCP | EPA 504.1 | 14 | 40 | 3-40 ml VOA vials | 0.008% Na ₂ S ₂ O ₃ /L if residual chlorine present & 0-6°C |
| Herbicides, Chlorinated | EPA 8151A | 7* | 1000 | 1 L amber glass | 0.008% Na ₂ S ₂ O ₃ /L if residual chlorine present & 0-6°C |
| PCBs | EPA 8082/608 | 7* | 1000 | 1 L amber glass | 0.008% Na ₂ S ₂ O ₃ /L if residual chlorine present & 0-6°C |
| Pesticides, Organochlorine | EPA 8081A/608 | 7* | 1000 | 1 L amber glass | 0.008% Na ₂ S ₂ O ₃ /L if residual chlorine present & 0-6°C |
| Pesticides, Organophosphorus | EPA 8141A | 7* | 1000 | 1 L amber glass | 0.008% Na ₂ S ₂ O ₃ /L if residual chlorine present & 0-6°C |
| Herbicides, Chlorinated | EPA 8151A | 7* | 1000 | 1 L amber glass | 0.008% Na ₂ S ₂ O ₃ /L if residual chlorine present & 0-6°C |
| Phenols | EPA 8270C | 7* | 1000 | 1 L amber glass | 0.008% Na ₂ S ₂ O ₃ /L if residual chlorine present & 0-6°C |
| PAHs (PNAs) Low-Level | EPA 8270M-SIM | 7* | 1000 | 1 L amber glass | 0.008% Na ₂ S ₂ O ₃ /L if residual chlorine present & 0-6°C |
| SVOCs (BNAs) | EPA 8270C/625 | 7* | 1000 | 1 L amber glass | 0.008% Na ₂ S ₂ O ₃ /L if residual chlorine present & 0-6°C |

* 7 days for extraction; 40 days after extraction for analysis.

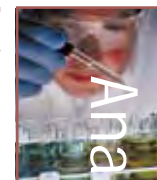
| Volatile Organics | Method | Holding Time (days) | Min Volume (mls) | Container | Preservation |
|---------------------------------|-----------------------|---------------------|------------------|-------------------|-----------------------------------|
| Purgeable Halocarbons/Aromatics | EPA 8260/(8021B list) | 14 | 40 | 3-40 ml VOA vials | HCl < pH 2 & 0-6°C |
| VOCS | EPA 8206B/624 | 14 | 40 | 3-40 ml VOA vials | HCl < pH 2 & 0-6°C |
| VOCS (drinking water) | EPA 524.2 | 14 | 40 | 3-40 ml VOA vials | Ascorbic Acid, HCl < pH 2 & 0-6°C |

| LUFT | Method | Holding Time (days) | Min Volume (mls) | Container | Preservation |
|------------------|-----------------------|---------------------|------------------|-------------------|--------------------|
| TPH(d) | EPA 8015M/GC/MS | 14 | 1000 | 1 L amber glass | 0-6°C |
| TPH(g)/BTEX/MTBE | EPA 8015M/8021B/GC/MS | 14 | 40 | 3-40 ml VOA vials | HCl < pH 2 & 0-6°C |
| TPH-CC | EPA 8015M/GC/MS | 14 | 1000 | 1 L amber glass | 0-6°C |
| TRPH | EPA 1664A-SGT | 28 | 1000 | 1 L amber glass | HCl < pH 2 & 0-6°C |

| Natural Attenuation Parameters | Method | Holding Time (days) | Min Volume (mls) | Container | Preservation |
|--------------------------------|---|---------------------|------------------|----------------------|--------------|
| Dissolved Oxygen | SM 4500-O G | ASAP (15 minutes) | 300 | 500 ml amber glass | 0-6°C |
| Ferrous Iron | SM 3500-Fe D(18 ^h ,19 th)/B(20 th) | 24 hours | 50 | 125 ml HDPE | 0-6°C |
| Redox Potential | ASTM D-1498 | 24 hours | 50 | 125 ml HDPE | 0-6°C |
| Methane in Water | RSK 175M | 7 | 125 | 2-125 ml amber glass | HCl |

| Aquatic Toxicity/Microbiology | Method | Holding Time (days) | Min Volume (mls) | Container | Preservation |
|-------------------------------------|-------------------|---------------------|------------------|---------------------|--------------|
| 96-hour Aquatic Toxicity, Haz Waste | Dept. Fish & Game | 7 | 100 | 250 ml HDPE | 0-6°C |
| 96-hour Aquatic Toxicity, Effluent | EPA 600/4-85/013 | 36 hours | 5 gallons | 5 gallon cubitainer | 0-6°C |

| CA Emergent Chemicals | Method | Holding Time (days) | Min Volume (mls) | Container | Preservation |
|-----------------------|------------------------|---------------------|------------------|-------------------|---|
| NDMA | EPA 1625C (M) | 7 | 1000 | 1 L amber glass | Na ₂ S ₂ O ₃ |
| Chromium VI | EPA 218.6 | 24 hours | 200 | 250 ml HDPE | 0-6°C |
| 1,4-Dioxane | GC/MS Isotope Dilution | 7 | 1000 | 1 L amber glass | 0-6°C |
| Perchlorate | EPA 314.0 | 28 | 50 | 125 ml HDPE | 0-6°C |
| 1,2,3-TCP | EPA 8260B | 14 | 40 | 3-40 ml VOA vials | HCl < pH 2 & 0-6°C |



Analytical Testing
Call OEC at 805 922-4772



Geoprobe Services



Holding Times and Containers for Soil/Solid Samples

| General Chemistry | Method | Holding Time (days) | Min Mass (g) | Container | Preservation |
|--|---|---------------------|--------------|-----------------------------|--------------|
| Anions: Bromide, Chloride, Fluoride, Sulfate | EPA 300.0M | 28 | 10 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Anions: o-Phosphate, Nitrate, Nitrite | EPA 300.0M | 48 hours | 10 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Chromium IV (Hexavalent Chromium) | EPA 7196A/7199M/3060A | 30 | 10 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Cyanide, Amenable | EPA 9010B/9013/9014 | 14 | 40 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Cyanide, Reactive | SW-846 Section 7.3 | 14 | 20 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Cyanide, Total | EPA 9010B/9013/9014 | 14 | 20 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Ignitability (Flashpoint) | EPA 1010 | 14 | 100 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Moisture Content | SM 2540B M | ASAP (10 days) | 20 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Nitrogen, Ammonia | SM 4500-NH ₃ D M | 28 | 20 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Nitrogen, Organic | TKN - NH ₃ -N | 28 | 10 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Nitrogen, Total Kjeldahl (TKN) | SM 4500-NH ₃ D/-Norg C M | 28 | 10 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Nitrogen, Total | TKN + NO ₃ -N + NO ₂ -N | 48 hours | 30 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Oil and Grease | EPA 1664M | 28 | 30 | 4 oz glass jar w/Teflon lid | 0-6°C |
| pH | EPA 9045B | ASAP (24 hours) | 20 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Phenolics, Total | EPA 9065 | 28 | 20 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Phosphate, Total | EPA 365.3M | 28 | 20 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Phosphorus, Total | EPA 365.3M | 28 | 20 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Specific Conductance | SM 2510B M | 24 hours | 20 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Sulfide, Reactive | SW-846 Section 7.3 | 14 | 20 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Sulfide, Total | EPA 9034 | 7 | 50 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Total Organic Carbon (TOC) | Lloyd Kahn | 28 | 200 | 4 oz glass jar w/Teflon lid | 0-6°C |

| Metals | Method | Holding Time (days) | Min Mass (g) | Container | Preservation |
|---------------|-----------|---------------------|--------------|-----------------------------|--------------|
| Mercury | EPA 7471A | 28 | 2 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Organic Lead | DHS-LUFT | 14 | 10 | 4 oz glass jar w/Teflon lid | 0-6°C |
| ICP Metals | EPA 6010B | 180 | 2 | 4 oz glass jar w/Teflon lid | 0-6°C |
| ICP/MS Metals | EPA 6020 | 180 | 2 | 4 oz glass jar w/Teflon lid | 0-6°C |

| Semi-Volatile Organics | Method | Holding Time (days) | Min Mass (g) | Container | Preservation |
|------------------------------|---------------|---------------------|--------------|-----------------------------|--------------|
| Herbicides, Chlorinated | EPA 8151A | 14* | 30 | 4 oz glass jar w/Teflon lid | 0-6°C |
| PCBs | EPA 8082 | 14* | 30 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Pesticides, Organochlorine | EPA 8081A | 14* | 30 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Pesticides, Organophosphorus | EPA 8141A | 14* | 30 | 4 oz glass jar w/Teflon lid | 0-6°C |
| Phenols | EPA 8270C | 14* | 30 | 4 oz glass jar w/Teflon lid | 0-6°C |
| PAHs (PNAs) Low-Level | EPA 8270M-SIM | 14* | 30 | 4 oz glass jar w/Teflon lid | 0-6°C |
| SVOCs (BNAs) | EPA 8270C/625 | 14* | 30 | 4 oz glass jar w/Teflon lid | 0-6°C |

* 14 days for extraction; 40 days after extraction for analysis.

| Volatile Organics | Method | Holding Time (days) | Min Mass (g) | Container | Preservation |
|---------------------------------|-----------------------|---------------------|--------------|-----------------------------|--------------|
| Purgeable Halocarbons/Aromatics | EPA 8260/(8021B list) | 14 | 10 | 4 oz glass jar w/Teflon lid | 0-6°C |
| VOCs | EPA 8206B | 14 | 10 | 4 oz glass jar w/Teflon lid | 0-6°C |
| VOCs (EnCORE) | EPA 5035/8260B | 2 | 3/sample | 3 EnCORE sampler | 0-6°C |

| LUFT | Method | Holding Time (days) | Min Mass (g) | Container | Preservation |
|------------------|-----------------------|---------------------|--------------|-----------------------------|--------------|
| TPH(d) | EPA 8015M/GC/MS | 14 | 10 | 4 oz glass jar w/Teflon lid | 0-6°C |
| TPH(g)/BTEx/MTBE | EPA 8015M/8021B/GC/MS | 14 | 10 | 4 oz glass jar w/Teflon lid | 0-6°C |
| TPH-CC | EPA 8015M/GC/MS | 14 | 10 | 4 oz glass jar w/Teflon lid | 0-6°C |
| TRPH | EPA 1664M-SGT | 28 | 50 | 4 oz glass jar w/Teflon lid | 0-6°C |
| TPH(g) (EnCORE) | EPA 5035/8015M | 2 | 2/sample | 2 EnCORE sampler | 0-6°C |

| TCLP/SPLP | Method | TCLP/SPLP Ext. Holding Time (days) | Method Ext. After TCLP/SPLP Ext. (days) | Holding Time After Ext. (days) |
|-----------|--------------------------|------------------------------------|---|--------------------------------|
| Mercury | EPA 1311/1312/7470A | 28 | N/A | 28 |
| Metals | EPA 1311/1312/6010B/6020 | 180 | N/A | 180 |
| SVOCs | EPA 1311/1312/8270C | 14 | 14 | 40 |
| VOCs | EPA 1311/1312/8260B | 14 | N/A | 14 |



Holding Times and Containers for Air/Vapor Samples

| Analysis | Method | Holding Time (days) | Min Mass (L) | Container | Preservation |
|----------------------------|------------------------------|---------------------|--------------|----------------------------|----------------------|
| Fixed Gases | ASTM D1946 | 3/14 | 1/5 | Tedlar Bag/Summa Canister | Keep out of sunlight |
| BTU-Hydrocarbon Speciation | ASTM E260/D3588 | 3/14 | 1/5 | Tedlar Bag/Summa Canister | Keep out of sunlight |
| TRS-H ₂ S | GC/SCD | 24 hours | 1/5 | Tedlar Bag/Silica Canister | Keep out of sunlight |
| Landfill Gases (NMOCs) | EPA 25C/SCAQMD25.1/ASTM E260 | 3/14 | 1/5 | Tedlar Bag/Summa Canister | N/A |
| TPH(g) | EPA TO-15 | 3/14 | 1/5 | Tedlar Bag/Summa Canister | N/A |
| VOCs | EPA TO-15 | 3/14 | 1/5 | Tedlar Bag/Summa Canister | N/A |