

## M.J. Reider Associates Preservation and Holding Times Chart

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<b>Parameter/ Method</b>	<b>Preservative</b>	<b>Extraction Holding Time (Organics Only)</b>	<b>Sample/ Analysis Holding Time</b>	<b>Container Size</b>	<b>Container Type</b>
<b>EPA 504.1</b> EDB, DBCP, 123 TCP	Cool to $\leq 6^{\circ}\text{C}$ * 3 mg Sodium Thiosulfate/40 mL	14 Days	< 24 Hours after extraction	4 x 40 mL vials plus a <b>Field Reagent Blank</b>	Glass
<b>EPA 505</b> DW Pesticides/ PCBs	Cool to $\leq 6^{\circ}\text{C}$ * 3 mg Sodium Thiosulfate/40 mL	14 Days (Exception: Heptachlor 7 Days)	as soon as possible	4 x 40 mL vials plus a <b>Field Reagent Blank</b>	Glass
<b>EPA 515.3</b> DW Herbicides	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 20 mg Sodium Thiosulfate /250 mL)	14 Days	14 Days	250 mL	Amber Glass with Teflon lined lid
<b>EPA 524.2</b> DW Volatiles	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 25 mg Ascorbic Acid /40 mL), pH to <2 w/1:1 HCl	NA	14 Days	4 x 40 mL vials with zero headspace plus a <b>Field Reagent Blank</b>	Glass
<b>EPA 524.2</b> All DW Volatiles except TTHMs***	Cool to $\leq 6^{\circ}\text{C}$ * Samples that are not acidified	NA	24 hours	4 x 40 mL vials with zero headspace plus a <b>Field Reagent Blank</b>	Glass

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<b>EPA 524.2</b> DW TTHMs only	Cool to $\leq 6^{\circ}\text{C}$ * 3 mg Sodium Thiosulfate /40 mL <b>NO Acid necessary</b> (NA if Ascorbic used for dechlorinating)	NA	14 Days	4 x 40 mL vials with zero headspace	Glass
<b>EPA 525.2</b> DW Semi- Volatiles	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 40- 50 mg/L Sodium Sulfite), pH <2 w/HCl	14 Days	30 Days	2 x 1 Liter plus 1 Liter <b>Field Reagent Blank</b>	Amber Glass
<b>EPA 531.1</b> Carbamates	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 4 mg Sodium Thiosulfate), 1.2 ml of 2.5M Monochloroacetic Acid Buffer to pH 3	NA	28 Days	40 mL vial	Glass
<b>EPA 547</b> Glyphosate	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 4 mg Sodium Thiosulfate/40 mL)	NA	14 Days	2 x 40 mL vials	Glass
<b>EPA 548.1</b> Endothall	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 80 mg Sodium Thiosulfate)	7 Days	14 Days	1 Liter	Amber Glass

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<b>EPA 549.2</b> Diquat	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 100 mg Sodium Thiosulfate) (Biologically active, add $\text{H}_2\text{SO}_4$ to pH2) <b>pH may be adjusted at Lab</b>	7 Days	21 Days	1 Liter	Amber PVC High Density or silanized amber glass
<b>EPA 552.2</b> Haloacetic Acids – HAA5	Cool to $\leq 6^{\circ}\text{C}$ * 25 mg Ammonium Chloride/250mL	14 Days	7 Days at $4^{\circ}\text{C}$ or 14 Days at $-10^{\circ}\text{C}$ or less	250 mL	Amber Glass
<b>EPA 608</b> <b>SW846 8081</b> NPW Pesticides/ PCBs	Cool to $\leq 6^{\circ}\text{C}$ * if pH 5-9. <b>For EPA 608:</b> If not 5-9, adjust pH or extract within 72hrs (Aldrin: Chlorinated source add 80 mg Sodium Thiosulfate) <b>Adjust at Lab</b>	7 Days	40 Days	2 x 1 Liter	Amber Glass
<b>EPA 624</b> <b>/SW846 8260</b> NPW Purgeable Aromatic Hydrocarbons	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 10mg Sodium Thiosulfate/40mL) pH 2 w/ HCl	NA	14 Days	4 x 40 mL vials with zero headspace <b>Field Reagent Blank</b>	Glass
<b>EPA 624</b> NPW Purgeable Aromatic Hydrocarbons	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 10mg Sodium Thiosulfate/40mL) <b>NOT</b> pH adjusted to pH 2	NA	7 Days <b>without pH adjustment</b>	4 x 40 mL vials with zero headspace	Glass

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<b>EPA 624</b> NPW Purgeable Halocarbons	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 10mg Sodium Thiosulfate/40mL)	NA	14 days	4 x 40 mL vials with zero headspace	Glass
<b>EPA 624</b> NPW Acrolein & Acrylonitrile	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 10mg Sodium Thiosulfate/40mL) <b>pH 4-5 w/HCl</b> *****	NA	14 days	2 x 40 mL vials with zero headspace	Glass
<b>EPA 624</b> NPW Acrolein & Acrylonitrile	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 10mg Sodium Thiosulfate/40mL)	NA	3 days *****	2 x 40 mL vials with zero headspace	Glass
<b>EPA 625 / SW846 8270</b> NPW Semivolatiles	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 80 mg Sodium Thiosulfate/L)	7 Days	40 Days	2 x 1 Liter with Teflon lined lid	Amber Glass
<b>EPA 625 / SW846 8270</b> NPW Benzidine analysis	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 80 mg Sodium Thiosulfate/L). If 1,2DPH likely to be present, adjust pH to 4.0 +/_0.2	7 Days	30 days if stored at <0°C	2 x 1 Liter with Teflon lined lid	Amber Glass
<b>EPA 1666</b> Pharmaceuticals by GC/MS	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 10mg Na Thiosulfate/40 mL vial), pH $\leq 2$ w/ HCl	NA	14 Days	4 x 40 mL vials <b>Field Reagent Blank</b>	Glass

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<b>EPA 1671</b> Pharmaceuticals by GC (Subcontract)	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 10mg Na Thiosulfate/40 mL vial), $\text{pH} \leq 2$ w/ HCl	NA	14 Days	2 x 40 mL vials <b>Field Reagent Blank</b>	Glass
<b>SM 6640B</b> NPW Herbicides	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 2 mg Sodium Sulfite /40mL)	14 Days	21 Days	3 x 40 mL vials	Glass
<b>SM 6640B</b> (24D, 245T, Silvex & Dicamba) Compliance samples	Cool to $\leq 6^{\circ}\text{C}$ * $\text{pH} 5-9$ w/HCl *****	7 Days	40 Days		
<b>SW846 8015</b> NPW Diesel Range Organics DRO, (Subcontract)	Cool to $\leq 6^{\circ}\text{C}$ *	7 Days	40 Days	2 x 1 Liter	Amber glass
<b>SW846 8015</b> <b>SOLID</b> Diesel Range Organics (Subcontract)	Cool to $\leq 6^{\circ}\text{C}$ *	14 Days	40 Days	8 oz Jar with Teflon lined lid	Glass
<b>SW846 8081</b> <b>SW846 8082</b> <b>SOLID</b> Pest/ PCBs	Cool to $\leq 6^{\circ}\text{C}$ *	14 Days	40 Days	4 oz Jar with Teflon lined lid	Glass
<b>SW846 8082</b> NPW PCBs	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 80 mg Sodium Thiosulfate/L)	7 Days	40 Days	2 x 1 Liter	Amber glass

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<b>SW846 8141</b> NPW Organo- phosphate Pesticides (Subcontract)	Cool to $\leq 6^{\circ}\text{C}$ * Adjust pH between 5 and 8	7 Days	40 Days	2 x 1 Liter	Amber glass
<b>SW846 8141</b> <b>SOLID</b> Organo- phosphate Pesticides (Subcontract)	Cool to $\leq 6^{\circ}\text{C}$ *	14 Days	40 Days	4 oz Jar with Teflon lined lid	Glass
<b>SW846 8151</b> <b>SOLID</b> (Subcontract)	Cool to $\leq 6^{\circ}\text{C}$ *	14 Days	40 Days	4 oz Jar with Teflon lined lid	Glass
<b>SW846 8260</b> NPW Volatiles	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 10mg Sodium Thiosulfate/40mL) pH < 2 w/ HCl	NA	14 Days	4 x 40 mL vials with zero headspace Trip blank	Glass
<b>SW846 8260</b> NPW Volatiles: Required for <u>Styrene, Vinyl</u> <u>Chloride and</u> <u>2CEVE</u>	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 10mg Sodium Thiosulfate/40mL) <b>pH NOT adjusted to pH &lt; 2</b>	NA	7 Days	4 x 40 mL vials with zero headspace	Glass
<b>SW846 8260</b> NPW Acrolein & Acrylonitrile	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 10mg Sodium Thiosulfate/40mL) <b>pH 4-5 w/HCl</b>	NA	7 days	2 x 40 mL vials with zero headspace	Glass

Parameter/ Method	Preservative	Extraction Holding Time (Organics Only)	Sample/ Analysis Holding Time	Container Size	Container Type
<b>SW846 8260 SOLID</b> Volatiles	Cool to $\leq 6^{\circ}\text{C}$ *	NA	14 Days	Soil Kit or 4 oz Jar with Teflon lined lid	Glass
<b>SW846 8260 SOLID</b> Volatiles	Cool to $\leq 6^{\circ}\text{C}$ *	NA	14 Days	Encores or 4 oz Jar with Teflon lined lid *****	Glass
<b>SW846 8260 SOLID</b> <u>Styrene, Vinyl Chloride and 2CEVE</u>	Cool to $\leq 6^{\circ}\text{C}$ *	NA	7 Days	Encores or 4 oz Jar with Teflon lined lid	Glass
<b>SW846 8270 NPW</b> Semivolatiles	Cool to $\leq 6^{\circ}\text{C}$ * (Chlorinated source, add 80 mg Sodium Thiosulfate)	7 Days	40 Days	2 x 1 Liter with Teflon lined lid	Amber Glass
<b>SW846 8270 SOLID</b> Semivolatiles	Cool to $\leq 6^{\circ}\text{C}$ *	14 Days	40 Days	4 oz Jar with Teflon lined lid	Glass
<b>Acidity</b>	Cool to $\leq 6^{\circ}\text{C}$ *	NA	14 Days	500 mL	Plastic or Glass
<b>Alkalinity</b> Alk	Cool to $\leq 6^{\circ}\text{C}$ * Minimal Head Space	NA	14 Days	500 mL	Plastic or Glass
<b>Ammonia</b> NH <sub>3</sub> -N	Cool to $\leq 6^{\circ}\text{C}$ * pH <2 w/H <sub>2</sub> SO <sub>4</sub>	NA	28 Days	500 mL	Plastic
<b>Asbestos</b> (Subcontract)	Cool to $\leq 6^{\circ}\text{C}$ *		48 Hours or (if 20 mg/L Hg as HgCl <sub>2</sub> added - 6 months)		Plastic

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Parameter/ Method	Preservative	Extraction Holding Time (Organics Only)	Sample/ Analysis Holding Time	Container Size	Container Type
<b>Biochemical Oxygen Demand BOD</b>	Cool to $\leq 6^{\circ}\text{C}$ *	NA	48 Hours	1 Liter	Plastic or Glass
<b>Bromate **** BrO<sub>3</sub>-</b>	Typically, Cool to $\leq 6^{\circ}\text{C}$ *, but not required. 50 mg/L EDA	NA	28 Days	250 mL	Plastic or Glass
<b>Bromide **** Br-</b>	Typically, Cool to $\leq 6^{\circ}\text{C}$ *, but not required. (Addition of 50 mg/L EDA permitted)	NA	28 Days	250 mL	Plastic or Glass
<b>Calcium Hardness, CaCO<sub>3</sub></b>	Cool to $\leq 6^{\circ}\text{C}$ * pH <2 with HNO <sub>3</sub>	NA	6 months		Plastic or Glass
<b>Carbonaceous Biochemical Oxygen Demand CBOD</b>	Cool to $\leq 6^{\circ}\text{C}$ *	NA	48 Hours	1 Liter	Plastic or Glass
<b>Chemical Oxygen Demand COD</b>	Cool to $\leq 6^{\circ}\text{C}$ * pH to <2 with H <sub>2</sub> SO <sub>4</sub>	NA	28 Days	250 mL	Plastic or Glass
<b>Chloramines (Subcontract)</b>	Typically, Cool to $\leq 6^{\circ}\text{C}$ *, but not required. Zero Head Space	NA	15 minutes	250 mL	Plastic or Glass
<b>Chlorate **** ClO<sub>3</sub>-</b>	Typically, Cool to $\leq 6^{\circ}\text{C}$ *, but not required. 50 mg/L EDA	NA	28 Days	250 mL	Plastic or Glass
<b>Chloride Cl-</b>	Typically, Cool to $\leq 6^{\circ}\text{C}$ *, but not required	NA	28 Days	500 mL	Plastic or Glass

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<b>Chlorine, Residual</b> Res Cl2	Typically, Cool to $\leq 6^{\circ}\text{C}$ *, but not required. Zero Head Space	NA	15 minutes	250 mL	Plastic or Glass
<b>Chlorine Demand</b> Cl2 Dem	Do Not Store – minimal light and agitation	NA	Immediately	Liter	Glass
<b>Chlorine Dioxide</b> Cl Diox	Cool to $\leq 6^{\circ}\text{C}$ *, but not required	NA	Immediately	500 mL	Plastic or Glass
<b>Chlorite</b> **** ClO2-	Cool to $\leq 6^{\circ}\text{C}$ * 50 mg/L EDA	NA	14 Days	250 mL	Opaque Plastic or Amber Glass
<b>Coliform, Fecal (FC)</b>  NPW (CWA)  9222D-MF Colilert 18	Cool to $< 10^{\circ}\text{C}$ 0.0008% Sodium Thiosulfate	NA  <b>SWTR=</b> Surface Water Treatment Rule	8 Hours *****  <b>CWA =</b> Clean Water Act	120 mL Sterile	Plastic or Glass
<b>Coliform, Fecal (FC)</b> Sludge- Biosolids 9221E-MPN	Cool to $< 10^{\circ}\text{C}$	NA	8 Hours *****	8 oz Jar Sterile	Glass
<b>Coliform, Fecal (FC)</b>  Colilert 18/ Quantitray	Cool to $< 10^{\circ}\text{C}$ 0.0008% Sodium Thiosulfate	NA	8 Hours *****	120 mL Sterile	Plastic or Glass
<b>Coliform, Total (TC)</b>  DW (TCR)  9223B- Colilert P/A	Cool to $< 10^{\circ}\text{C}$ 0.0008% Sodium Thiosulfate	NA  <b>TCR =</b> Total Coliform Rule	30 Hours	120 mL Sterile	Plastic or Glass

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<b>Coliform:</b> TC, FC and HPC for SWTR (DW)	Cool to <10°C 0.0008% Sodium Thiosulfate	NA	8 Hours	120 mL Sterile	Plastic or Glass
<b>Coliform, E. Coli (EC)</b> Enumeration for SWTR 9223B-Colilert	Cool to <10°C 0.0008% Sodium Thiosulfate	NA	30 Hours	120 mL Sterile	Plastic or Glass
<b>Coliform, E. Coli (EC)</b> P/A for GWR – PWS not homeowners	Cool to <10°C 0.0008% Sodium Thiosulfate	NA  <b>GWR =</b> Ground Water Rule	30 hours	120 mL Sterile	Plastic or Glass
<b>Color</b>	Cool to ≤6°C *	NA	48 Hours	500 mL	Plastic or Glass
<b>Cyanide, Total and Free</b> Cn Tot Cn-f	Cool to ≤6°C * (Chlorinated source, add 4 mL of Sodium Arsenite), DW: pH >12, WW: pH >10 w/NaOH	NA	14 Days	500 mL	Plastic or Glass
<b>Cyanide, Total SOLID</b>	Cool to ≤6°C *		14 Days	8 oz Jar	Plastic or Glass
<b>Dioxin</b> in DW- method 1613 (Subcontract)	Cool to ≤6°C * 80 mg Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> . If pH > 9 adjust to pH 7-9 with H <sub>2</sub> SO <sub>4</sub>	1 year	1 year	Liter Amber	Glass
<b>Dissolved Oxygen, DO</b>	Typically, Cool to ≤6°C *, but not required	NA	Immediately	300 mL	Disposable BOD Bottles

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<b>Fluoride</b> F-	Typically, Cool to $\leq 6^{\circ}\text{C}$ *, but not required.	NA	28 Days	500 mL	Plastic
<b>Glyphosate</b> Gly	Cool to $\leq 6^{\circ}\text{C}$ *. 4 mg Sodium Thiosulfate/40 mL	NA	14 Days	2 x 40 mL vials	Glass
<b>Hardness</b> Hardness	Typically, Cool to $\leq 6^{\circ}\text{C}$ *, but not required. pH <2 with HNO <sub>3</sub>	NA	6 Months	500 mL	Plastic or Glass
<b>Heterotrophic Plate Count</b> HPC, Standard Plate Count. SWTR, BWR, NPDES	Cool to <10°C Sodium Thiosulfate	NA	8 Hours *****	120 mL Sterile	Plastic or Glass
<b>Hexavalent Chromium</b> NPW Cr+6 EPA 218.6	Cool to $\leq 6^{\circ}\text{C}$ * Filter then adjust pH to 9.3 - 9.7 with 1mL of NH <sub>4</sub> OH/(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> per 100 mL <b>or Lab filter and preserve</b>	NA	28 days when preserved, 24 hrs if not preserved	500 mL	Plastic or Glass
<b>Hexavalent Chromium</b> DW Cr+6 EPA 218.7	Cool to $\leq 6^{\circ}\text{C}$ * 1 ml of NH <sub>4</sub> OH/(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> /100ml	NA	14 days	500 ml	Plastic or Glass
<b>Hexavalent Chromium</b> NPW Cr+6 SM 3500 Cr-B	Cool to $\leq 6^{\circ}\text{C}$ * Adjust pH to 9.3 - 9.7 with Ammonium Sulfate Buffer Solution (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> <b>or Lab preserve</b>	NA	28 days when preserved, 24 hrs if not preserved	500 mL	Plastic or Glass

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<b>Hexavalent Chromium Cr+6 SOLID SM 3500 Cr-B</b>	Cool to $\leq 6^{\circ}\text{C}$ *	30 days until digestion	7 days after digested, if properly preserved	8 oz Jar	Glass
<b>Ignitability SW846- 1010A-liquid 1030-solid</b>	Cool to $\leq 6^{\circ}\text{C}$ * unless refrigeration would adversely affect the sample. Minimal Headspace				Glass or Plastic
<b>Lead/Copper, First Draw Pb/Cu</b>	Water must not be used for 6hrs. Aerator on. pH <2 with HNO <sub>3</sub>	NA	6 months	1 Liter	Plastic
<b>Lead/Copper, First Draw Pb/Cu</b>	Cool to $\leq 6^{\circ}\text{C}$ until preserved. If not preserved immediately must add acid within 14 days	NA	6 months	1 Liter	Plastic
<b>Mercury Hg</b>	pH <2 with HNO <sub>3</sub>	NA	28 Days	500 mL	Plastic or Glass
<b>Mercury, Low Level EPA1631 EPA 1669 (Subcontract)</b>	HCl – refer to method for special instructions			2-40 mL vials and 1-250 mL Glass <b>FB</b>	Glass
<b>Mercury SOLID</b>	Cool to $\leq 6^{\circ}\text{C}$ *	NA	28 Days	4 oz Jar with Teflon lined lid	Plastic or Glass

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<b>Metals</b> (except Hg)	pH <2 with HNO <sub>3</sub> at least 24 hrs prior to analysis. To analyze immediately, add the acid within 15 min of collection. If not preserved immediately, must add acid within 14 days	NA	6 Months	1 Liter	Plastic or Glass (Boron and Silica must be in Plastic)
<b>Metals</b> (except Hg) <b>SOLID</b>	Cool to ≤6°C *	NA	6 Months	4 oz Jar with Teflon lined lid	Glass
<b>Metals, Dissolved</b> (except Hg)	Filter within 15 min of collection and before adding acid. pH <2 with HNO <sub>3</sub>	NA	6 Months	1 Liter	Plastic or Glass (Boron and Silica must be in Plastic)
<b>Nitrate</b> NO <sub>3</sub> -N	Cool to ≤6°C *	NA	48 Hours	500 mL	Plastic or Glass
<b>Nitrate/ Nitrite,</b> combined NO <sub>3</sub> -NO <sub>2</sub>	Cool to ≤6°C * pH <2 with H <sub>2</sub> SO <sub>4</sub>	NA	28 Days	500 mL	Plastic or Glass
<b>Nitrate/ Nitrite,</b> combined	Cool to ≤6°C *	NA	48 Hours	500 mL	Plastic or Glass
<b>Nitrite</b> NO <sub>2</sub> -N	Cool to ≤6°C *	NA	48 Hours	500 mL	Plastic or Glass
<b>Nitrogen, Total Kjeldahl</b> TKN	Cool to ≤6°C * pH to <2 with H <sub>2</sub> SO <sub>4</sub>	NA	28 Days	500 mL	Plastic or Glass
<b>Odor</b>	Cool to ≤6°C * Fill completely	NA	24 Hours	250 mL	Glass

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<b>Oil and Grease O&amp;G HEM</b>	Cool to $\leq 6^{\circ}\text{C}$ * pH <2 with HCl (or H <sub>2</sub> SO <sub>4</sub> )	NA	28 Days	2x1 Liter	Glass
<b>Oil and Grease SOLID</b>	Cool to $\leq 6^{\circ}\text{C}$ *	NA	28 Days	4 oz Jar with Teflon lined lid	Glass
<b>Organic Carbon, Total  TOC</b>	Cool to $\leq 6^{\circ}\text{C}$ * pH <2 with H <sub>3</sub> PO <sub>4</sub>	NA	28 Days	250 mL or 4 x 40ml vials with <b>Field Blank</b>	Amber Glass
<b>Organic Carbon, Total  SOLID TOC</b>	Cool to $\leq 6^{\circ}\text{C}$ . *	NA	28 Days	8 oz jar	Plastic or Glass
<b>Organic Carbon, Dissolved ** DOC</b>	Cool to $\leq 6^{\circ}\text{C}$ * Filter sample and pH <2 with H <sub>3</sub> PO <sub>4</sub>	NA	28 Days	250 mL or 4 x 40 mL vials with Field Blank	Amber Glass
<b>Organic Halogens, Total TOX</b>	Cool to $\leq 6^{\circ}\text{C}$ * pH <2 with HNO <sub>3</sub> (Chlorinated source, add Na Thiosulfate to reduce Free Chlorine)	NA	6 months	500 mL	Amber Glass with Teflon- lined lid
<b>Ortho- Phosphate as P o-PO<sub>4</sub></b>	Cool to $\leq 6^{\circ}\text{C}$ * Filter within 15 min of collection	NA	48 Hours	500 mL	Plastic or Glass
<b>Osmotic Pressure OP</b>	Cool to $\leq 6^{\circ}\text{C}$ *	NA	48 Hours	500 mL	Plastic or Glass

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<b>Parameter/ Method</b>	<b>Preservative</b>	<b>Extraction Holding Time (Organics Only)</b>	<b>Sample/ Analysis Holding Time</b>	<b>Container Size</b>	<b>Container Type</b>
<b>Paint</b>	Cool to $\leq 6^{\circ}\text{C}$ * unless refrigeration would adversely affect the sample. Minimal Headspace				Glass or Plastic
<b>Perchlorate (Subcontract)</b>	Typically, Cool to $\leq 6^{\circ}\text{C}$ *, but not required	NA	28 Days	500 mL	Plastic or Glass
<b>pH</b>	Typically, Cool to $\leq 6^{\circ}\text{C}$ *, but not required	NA	15 minutes	500 mL	Plastic or Glass
<b>Phenols</b>	Cool to $\leq 6^{\circ}\text{C}$ * pH <2 with H <sub>2</sub> SO <sub>4</sub>	NA	28 Days	500 mL	Glass
<b>Phosphorus, Total PO<sub>4</sub>-P</b>	Cool to $\leq 6^{\circ}\text{C}$ * pH <2 with H <sub>2</sub> SO <sub>4</sub>	NA	28 Days	500 mL	Plastic or Glass
<b>Rads (Subcontract)</b>	pH <2 with HCl or HNO <sub>3</sub>	NA	6 months	½ Gallon	Plastic or Glass
<b>Silica as SiO<sub>2</sub> Silica</b>	pH <2 with HNO <sub>3</sub>	NA	28 Days	500 mL	Plastic
<b>Solids, Settleable Set Sol</b>	Cool to $\leq 6^{\circ}\text{C}$ *	NA	48 Hours	1 Liter	Plastic or Glass
<b>Solids TS, TSS, TDS, TVS, VSS</b>	Cool to $\leq 6^{\circ}\text{C}$ *	NA	7 Days	500 mL	Plastic or Glass
<b>Specific Conductance Sp Cond</b>	Cool to $\leq 6^{\circ}\text{C}$ *	NA	28 Days	500 mL	Plastic or Glass
<b>Sulfate SO<sub>4</sub></b>	Cool to $\leq 6^{\circ}\text{C}$ *	NA	28 Days	500 mL	Plastic or Glass

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<b>Parameter/ Method</b>	<b>Preservative</b>	<b>Extraction Holding Time (Organics Only)</b>	<b>Sample/ Analysis Holding Time</b>	<b>Container Size</b>	<b>Container Type</b>
<b>Sulfide</b> S-2	Cool to $\leq 6^{\circ}\text{C}$ * 1 mL 2N Zinc Acetate, pH > 9 with NaOH. Fill bottle completely	NA	7 Days	500 mL	Plastic or Glass
<b>Sulfide SOLID</b> S-2	Cool to $\leq 6^{\circ}\text{C}$ * Add 2N Zinc Acetate until moistened	NA	7 Days	8 oz Jar	Plastic or Glass
<b>Sulfite</b> SO3	Typically, Cool to $\leq 6^{\circ}\text{C}$ *, but not required. Required: $< 50^{\circ}\text{C}$ . Add 2.5 mL EDTA, Zero-Head Space	NA	15 minutes	250 mL	Glass
<b>Surfactants</b> MBAS	Cool to $\leq 6^{\circ}\text{C}$ *	NA	48 Hours	1 Liter	Plastic or Glass
<b>Suitability</b> Suitable	Cool to $< 10^{\circ}\text{C}$	NA	None listed	500 mL	Glass- Dry Heat Sterilized
<b>Temperature</b> Temp	NA	NA	15 minutes	NA	NA
<b>Total Kjeldahl Nitrogen</b> TKN	Cool to $\leq 6^{\circ}\text{C}$ * pH < 2 with H2SO4	NA	28 Days	500 mL	Plastic or Glass
<b>Total Organic Carbon</b>  TOC	Cool to $\leq 6^{\circ}\text{C}$ * pH < 2 with H3PO4	NA	28 Days	250 mL or 4 x 40mL vials with <b>Field Blank</b>	Amber Glass
<b>Total Organic Carbon SOLID</b> TOC	Cool to $\leq 6^{\circ}\text{C}$ . *	NA	28 Days	8 oz Jar	Plastic or Glass

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<b>Parameter/ Method</b>	<b>Preservative</b>	<b>Extraction Holding Time (Organics Only)</b>	<b>Sample/ Analysis Holding Time</b>	<b>Container Size</b>	<b>Container Type</b>
<b>Total Organic Halogens TOX</b>	Cool to $\leq 6^{\circ}\text{C}$ * pH <2 with HNO <sub>3</sub> (Chlorinated source, add Na Thiosulfate to reduce Free Chlorine)	NA	6 months	500 mL	Glass with Teflon- lined lid
<b>Total Petroleum Hydrocarbon TPH SGT-HEM</b>	Cool to $\leq 6^{\circ}\text{C}$ * pH <2 with HCl	NA	28 Days	2 x 1 Liter	Glass
<b>Turbidity Turbid</b>	Cool to $\leq 6^{\circ}\text{C}$ *	NA	48 Hours	500 mL	Plastic or Glass
<b>UV254</b>	Cool to $\leq 6^{\circ}\text{C}$ *	NA	48 Hours	250 mL	Amber Glass

\* Aqueous samples must be preserved at  $\leq 6^{\circ}\text{C}$  and should not be frozen unless there is data demonstrating that sample freezing does not affect the sample integrity.

\*\* Within 48 hours of sampling, the samples to be analyzed are filtered through a 0.45 um filter and analyzed immediately or preserved to pH <2 with Phosphoric Acid.

\*\*\* If the analysis is for TTHMs only and Sodium Thiosulfate was used to dechlorinate, acidification may be omitted and the holding time still be 14 days.

\*\*\*\* When collecting a sample for EPA 300.1 from a treatment plant employing Chlorine Dioxide, the sample must be sparged with an inert gas prior to the addition of the EDA at the time of sampling.

\*\*\*\*\* Sample analysis should begin as soon as possible after receipt; sample incubation must be started no later than 8 hours from the time of collection.

\*\*\*\*\* The pH adjustment is only required if Acrolein is being analyzed. Samples for Acrolein that receive no pH adjustment must be analyzed within 3 days of sampling. MJRA prefers to collect both preserved and unpreserved samples for Acrolein and Acrylonitrile in the event a 3-day analysis is not feasible.

\*\*\*\*\* If no soil kit is available, encores may be used, however, the sample must be transferred to soil vials within 48 hours of collection.

\*\*\*\*\* The pH adjustment for SM 6640B may be performed upon receipt at the laboratory and may be omitted if the samples are extracted within 72 hours of collection.