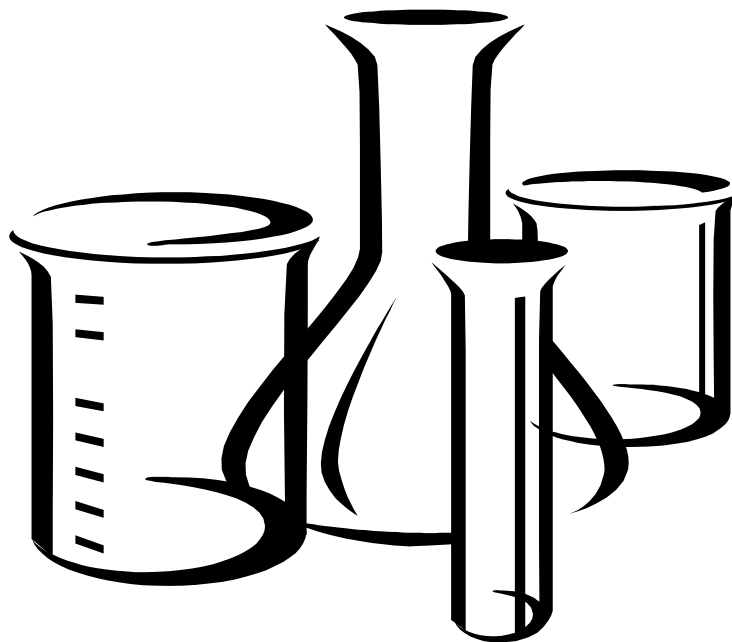


“The quality of the analysis is only as good as the quality of the sample”



This pamphlet is provided by Midway Laboratory, Inc. as a guide to assist our clients with their analytical needs. Improper sample container use may affect analysis results. If you require further assistance please contact our office.

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PROPER SAMPLE CONTAINERS

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WATER/WASTE WATER METHOD – GENERAL INORGANIC CHEMISTRY

ANALYSIS	CONTAINERS	PRESERVATIVES	HOLDING TIME
Acidity	100ml Poly	Cool 4°C	24 hrs/14days
Acrolein	*3 / 40ml VOA's with TCL	Adjust to pH 4-5, Cool 4°C	14 days
Acrylonitrile	*3 / 40ml VOA's with TCL	Adjust to pH 4-5, Cool 4°C	14 days
Actronitrile	*3 / 40ml VOA's with TCL	Adjust to pH 4-5, Cool 4°C	14 days
Alkalinity	200ml P	Cool 4°C	24 hrs/14 days
Ammonia	100ml G	pH<2, H ₂ SO ₄ Cool 4°C	7 days/28 days
Aromatic Volatiles	120ml G	pH<2, 1:1 HG1, Na ₂ S ₂ O ₃ or Ascorbic Acid, Cool 4°C	14 days
Asbestos	1000ml P	None	48 hrs
Atrazine	1L Amber G with TCL	Na ₂ S ₂ O ₃ , Cool 4°C	7 days
Bentazon	1L Amber G with TCL	Na ₂ S ₂ O ₃ , Cool 4°C	7 days
Bicarbonate	2L P	None	28 days
BOD (Biochemical Oxygen Demand)	1000ml P	Cool 4°C	6 hrs/ 48 hrs
Boron	100ml P	None	28 days/ 6 months
Bromate	250ml P	None	14 days
Bromide	100ml G	None	28 days
BTEX water analysis	*2 / 40ml VOA's with TCL	pH<2, 1:1 HG1, Na ₂ S ₂ O ₃ or Ascorbic Acid, Cool 4°C	14 days
Carbonate	1L P	None	ASAP/ 28 days
Carbon Dioxide	100ml P	None	ASAP – Analyze Immediately
Chloride	50ml P	None	28 days
Chlorinated Herbicides	2L Amber G	Cool 4°C	7 days until ext./ 40 days after ext.
Chlorinated Hydrocarbons	2L Amber G	.008% Na ₂ S ₂ O ₃ , Cool 4°C, Store in dark	7 days until ext./ 40 days after ext.
Chlorine (Free & Residual)	500ml P	Cool 4°C	ASAP/ 28 days
Chlorite	250ml P	None	14 days
Chromium (Hexavalent, Trivalent, Total, Color)	500ml P, 4 oz jar	NaOH	ASAP – Analyze Immediately
COD (Chemical Oxygen Demand)	100ml P	pH<2, H ₂ SO ₄ , Cool 4°C	7 days/ 28 days
Color	125ml P	Cool 4°C	48 hrs
Conductivity	500ml P	Cool 4°C	28 days
Cyanide (Total, Amenable, Reactive)	1L P	NaOH to pH 12, .6g Ascorbic Acid	ASAP/ 14 days - 24 hrs if sulfide present
DBCP (Dibromochloropropane)	*2 / 40ml VOA's, Travel blank required	Cool 4°C	14 days
Dioxins & Furons	*10grams Amber G	.008% Na ₂ S ₂ O ₃ , Cool 4°C	7 days until ext./ 40 days after ext.
EDB (Ethylene Dibromide)	*2 / 40ml VOA's, Travel blank required	Cool 4°C	14 days
Electrical Conductivity	500ml P	Cool 4°C	28 days
Fluoride	100ml P	Cool 4°C	28 days
Gasoline & Diesel	1L Amber G	HCL, Cool 4°C	14 days
Glycols	*2 / 40ml VOA's with TCL	Cool 4°C	14 days
Haloethers	*10grams Amber G WM	.008% Na ₂ S ₂ O ₃ , Cool 4°C	7 days until ext./ 40 days after ext.
Halogenated Volatile Organics	120ml G	pH<2, Na ₂ S ₂ O ₃ , Cool 4°C	14 days
Hardness as CaCO ₃ (Calculation /Titration)	100ml P	pH<2, HNO	6 months
Hydrogen Ion (pH)	*100grams Clear G WM	None	ASAP-Analyze immediately
Hydroxide	2L P	None	ASAP/ 28 days

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ANALYSIS	CONTAINERS	PRESERVATIVES	HOLDING TIME
Iron	100ml P	pH<2, HNO ₃	6 months
Kjeldahl & Organic Nitrogen	*500ml P	pH<2, H ₂ SO ₄ Cool 4°C	28 days
Langlier Index	500ml P	Cool 4°C	2 hrs
MBAS	500ml P	Cool 4°C	48 hrs
Nonhalogenated Volatile Organics	*40ml VOA	Cool 4°C	14 days
Nitrate	500ml P	Cool 4°C	48 hrs
Nitrate & Nitrite as N	500ml P	pH<2, H ₂ SO ₄ Cool 4°C	28 days
Nitrite	500ml P	Cool 4°C	48 hrs
Nitroaromatics & Isophorone	2L Amber G	.008% Na ₂ S ₂ O ₃ , Store in dark	7 days until ext./ 40 days after ext.
Nitrosamines	2L Amber G	.008% Na ₂ S ₂ O ₃ , Store in dark	7 days until ext./ 40 days after ext.
Odor	500ml P	Cool 4°C	28 days
Oil & Grease (Gravimetric/Infrared)	1000ml G	pH<2, HCl, Cool 4°C	28 days
Organic Carbon	125ml P	pH<2, H ₂ SO ₄ Cool 4°C	28 days
Ortho-Phosphate	125ml P	Filter immediately, Cool 4°C	48 hrs
Oxygen (Dissolved Probe)	1L P	None	ASAP-Analyze Immediately
PCB's	2L Amber G	Cool 4°C	7 days until ext./ 40 days after ext.
Pesticides (Chlorinated)	2L Amber G	Cool 4°C, pH 5.9,	7 days until ext./ 40 days after ext.
pH	500ml P or G	None	ASAP – Analyze Immediately
Phthalates	1L G with TCL	Cool 4°C	7 days until ext./ 40 days after ext.
Phenolics (Total)	1L G	pH<2, H ₂ SO ₄ Cool 4°C	28 days
Phenols	1L G	pH<2, H ₂ SO ₄ Cool 4°C	28 days
Phosphate (Total)	100ml G	pH<2, H ₂ SO ₄ Cool 4°C	28 days
Phosphorus (Elemental)	100ml G	Cool 4°C	48 hrs
Phosphorus (Total)	125ml G	pH<2, H ₂ SO ₄ Cool 4°C	28 days
Phthalate Esters	2L Amber G	Cool 4°C	7 days until ext./ 40 days after ext.
Polynuclear Aromatic Hydrocarbons	1L Amber G	.008% Na ₂ S ₂ O ₃ , Store in dark	7 days until ext./ 40 days after ext.
Purgeable Aromatic Hydrocarbons	*2 / 40ml VOA's	.008% Na ₂ S ₂ O ₃ , HCl<2	4 days
Purgeable Halocarbons	*2 / 40ml VOA's	.008% Na ₂ S ₂ O ₃	14 days
Resistivity	500ml P	Cool 4°C	28 days
Residue (Total)	250ml P	Cool 4°C	7 days
Residue (Filterable /Non-Filterable)	250ml P	Cool 4°C	7 days
Residue (Settable)	*Imhoff Cone	Cool 4°C	48 hrs
Residue (Volatile)	250ml P	Cool 4°C	7 days
Salinity, as NaCl	250ml G with wax seal	None	ASAP – Analyze Immediately
Semi-Volatile Organics	2L G	Cool 4°C	7 days until ext./ 40 days after ext.
Silica	500ml P	Cool 4°C	28 days
Simazine	1L Amber G with TCL	Na ₂ S ₂ O ₃ , Cool 4°C	14 days
Solids (Total)	500ml P	Cool 4°C	7 days
Solids (Dissolved/Suspended/Fixed)	500ml P	Cool 4°C	7 days
Solids (Volatile/Settable)	500ml P	Cool 4°C	7 days

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WATER/WASTE WATER METHOD – GENERAL INORGANIC CHEMISTRY

ANALYSIS	CONTAINERS	PRESERVATIVES	HOLDING TIME
Sulfate (Gravimetric/Turbidimetric)	125ml P	Cool 4°C	28 days
Sulfide (Dissolved/Reactive/Total)	1L P	ZnAc plus NaOH ₉	7 days
Sulfite	1L P	None	ASAP – Analyze Immediately
Surfactants	500ml P	Cool 4°C	48 hrs
TCLP Extraction	32oz Amber G WM (ABSOLUTELY NO PLASTIC)	None	7 days until ext./ 40 days after ext.
TDS (Total Dissolved Solids) – See Solids	500ml P	Cool 4°C	7 days
Temperature	2L P	None	ASAP – Analyze Immediately
Thiobencarb	1L Amber G with TCL	Na ₂ S ₂ O ₃ , Cool 4°C	14 days
Titration (pH Adjustment)	500ml P or G	Cool 4°C	14 days
TOC (Total Organic Carbon)	100mg P	pH<2, H ₂ SO ₄	7 days/ 28 days
TOX (Total Organic Halogens)	16L Amber G	pH<2, H ₂ SO ₄ , Cool 4°C	7 days until ext./ 40 days after ext.
TRPH (418.1)	1 quart G with TCL	pH<2, HCl, Cool 4°C	14 days
TSS (Total Suspended Solids) – See Solids	500ml P	Cool 4°C	7 days
Turbidity	100ml P or G	Cool 4°C	48 hrs
VOC (Volatile Organic Compound)	*2 / 40ml VOA's	Cool 4°C	14 days
Volatile Aromatics	1 quart G with TCL	None	14 days
Volatiles by GC-MS	1L Amber G	Na ₂ S ₂ O ₃ , Na ₂ AsO ₂ , pH<2, 6N, HCl, Cool 4°C	7 days until ext./ 40 days after ext.

WATER/WASTE WATER METHOD – TRACE METALS

NOTE: For dissolved metals the sample must be filtered prior to acidification

ANALYSIS	CONTAINERS	PRESERVATIVES	HOLDING TIME
Chromium VI	500ml P	Cool 4°C	24 hrs
Copper	1000ml P	Cool 4°C	14 days
Lead	1000ml P	Cool 4°C	14 days
Mercury	500ml P	pH<2, HNO ₃	28 days
All Other Metals	500ml P	pH<2, HNO ₃	6 months

WATER/WASTE WATER METHOD – RADIOCHEMICAL

ANALYSIS	CONTAINERS	PRESERVATIVES	HOLDING TIME
Gamma Isotope	1000ml P	None	None Specified
Gross Alpha	1000ml P	None	None Specified
Gross Beta	1000ml P	None	None Specified
Radium (Drinking Water)	2000ml P	HNO ₃	None Specified
Radium (Non-Drinking Water)	1000ml P	Cool 4°C	None Specified
Radium (Total)	1000ml P	HNO ₃	None Specified
Strontium	1000ml P	None	None Specified
Tritium	250ml G	None	None Specified
Uranium (Total)	1000ml P	None	None Specified

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WATER/WASTE WATER METHOD – BACTERIOLOGICAL

ANALYSIS	CONTAINERS	PRESERVATIVES	HOLDING TIME
Coliform (Total/Fecal)-Drinking Water	Bacti Bottle – 120ml, sterile	Na ₂ S ₂ O ₄ , Cool 4°C	6 hrs
Coliform (Total/Fecal)-Raw Water	Bacti Bottle – 120ml, sterile	Na ₂ S ₂ O ₄ , Cool 4°C	8 hrs
Coliform (Total/Fecal)-Waste Water	Bacti Bottle – 120ml, sterile	Na ₂ S ₂ O ₄ , Cool 4°C	6 hrs
HPC (Heterotropic Plate Count)	Bacti Bottle – 120ml, sterile	Na ₂ S ₂ O ₄ , Cool 4°C	24 hrs

WATER/WASTE WATER METHOD – HAZARDOUS WASTE CHARACTERIZATION

ANALYSIS	CONTAINERS	PRESERVATIVES	HOLDING TIME
Corrosivity (pH)	1L P, 4oz jar	None	ASAP-Analyze Immediately
Ignitability (Flashpoint)	500ml P or G, 4 oz jar	None	None Specified
Reactivity (Cyanide/Sulfide)	1L P, 4oz jar	NaOH	4 days/ 14 days
Fish Bioassay	1 pint P	Cool	None

WATER/WASTE WATER METHOD – QUICK REFERENCE

ANALYSIS	CONTAINERS	PRESERVATIVES	HOLDING TIME
BLM Geotechnical Prod. Brine Analysis	2L P	None	ASAP/ 28 days
D.O.G. Water Analysis	2L P	None	ASAP/ 28 days
General Mineral	1L P	None	ASAP/ 28 days
General Physical	1L Amber G	None	24 hrs/ 48 hrs
Geochemical Water Analysis	1L P, 1quart G	None	ASAP/ 28 days
Inorganic Chemical Analysis	250ml P, 250ml P, 1L P	HNO ₃ , Cool 4°C, pH<2 (Nitrates & Nitrites have a hold time of 48 hrs)	ASAP/ 28 days
Storm Water Analysis	2L P	None	ASAP/ 28 days

SOLID, SEMI-SOLID (SLUDGE) & SOIL SAMPLES:

ALL Solid, Semi-Solid (Sludge) and Soil samples should be collected in clear or amber glass WM jars with TCL and should be a minimum of 1000grams of material (Approx. 1 Quart) capacity.

OIL SAMPLES:

Production samples should be collected **at the well head**. Well head samples are preferable to header samples, because header samples may be contaminated by leaking valves, corrosion inhibitor, ect. Oil samples should be collected in glass bottles with foil lined lids or metal containers (Quart sized samples are preferred), avoiding contact with any plastic surfaces (plastic bottles contain plasticizers that may leach into the sample). It is NOT necessary to separate oil from water, or try to break emulsions. Collection temperatures **MUST** be listed for RVP and TVP measurement and calculations.

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