

# Weck Laboratories, Inc. - Sampling Guidelines

Test Name	Matrix	Bottle Type	Bottle size	Preservative			Holding Time until start of analysis	Analytical Technique	Analytical Method
				Unchlorinated Water (Raw)	Chlorinated Water (Treated)	Soil/Solid			
1,2,3-TCP	Water	Amber Glass	2 x 40 ml	HCl	Ascorbic/HCl		14 days	GC/MS Isot. Dil.	EPA 524.2SIM
1,4-Dioxane	Water	Amber Glass	2 x 1 L (*)	None	None		7 days	GC/MS Isot. Dil.	EPA 8270M
Acrolein/Acrylonitrile	Water	Glass	2 x 40 ml	None	Thiosulfate		3 Days	GC/MS	EPA 624/8260B
Alcohols	Water	Glass	1 x 40 ml	None	None		14 days	Dir. Inj./FID	EPA 8015B
Aldehydes	Water	Amber Glass	2 x 40 ml	CuSO4	NH4Cl/CuSO4		7 Days	GC/ECD	EPA 556
Aldehydes	Water	Glass	1 L (*)	None	None		3 days	HPLC-UV	EPA 8315
Aldehydes <sup>(1)</sup>	Soil/Solid	Glass	4 oz			None	3 days	HPLC-UV	EPA 8315
Alkalinity, Total	Water	Poly	250 ml		None		14 Days	Titration	SM2320B
Anions by IC (F-, Cl-, SO4=)	Water	Poly	250 ml	None	None		28 days	IC	EPA 300.0
Anions by IC (NO2-, NO3-, PO4=)	Water	Poly	250 ml	None	None		48 hours	IC	EPA 300.0
Arsenic speciation	Water	Poly	250 ml	EDTA/acetic acid	EDTA/acetic acid		14 Days	Resin-ICP/MS	EPA 200.8
Asbestos-Sub	Water	Poly	1 L	None	None		48 Hours	TEM	EPA 100.1/2-
Bacteria-Coliform - solid/sludge/soil	Soil/solid	Glass-Sterile	4 oz			None	N/A	MTF	SM 9221B
Bacteria-Coliform - Wastewater	Water	Poly-Sterile	125 ml	Thiosulfate	Thiosulfate		6 hours	MTF	SM 9221B
Bacteria-Coliform - Drinking Water	Water	Poly-Sterile	125 ml	Thiosulfate	Thiosulfate		24 Hours	Colilert P/A or enumeration	SM 9223B
Bacteria-Enterococcus - Wastewater	Water	Poly-Sterile	125 ml	Thiosulfate	Thiosulfate		6 Hours	Enumeration Quantitray	Enterolert
Bacteria-Heterotrophic Plate Count	Water	Poly-Sterile	125 ml	Thiosulfate	Thiosulfate		24 Hours	Pour Plate Method	SM 9215B
BOD	Water	Poly	1 L	None	None		48 Hours	DO Probe	SM 5210B
BOD, Carbonaceous	Water	Poly	1 L	None	None		48 Hours	DO Probe	SM 5210
Bromate	Water	Amber Glass	40 ml	EDA	EDA		28 Days	IC	EPA 300.1
Bromate- Low Level	Water	Amber Glass	40 ml	EDA	EDA		28 Days	IC	EPA 326
Bromide	Water	Poly	250 ml	None	None		28 Days	IC	EPA 300.0
Bromide-Low Level	Water	Amber Glass	40 ml	None	None		28 Days	IC	EPA 300.1
Carbamates	Water	Amber Glass	1 x 40 ml	MCAA	MCAA/thiosulfate		28 Days	HPLC	EPA 531.1
COD	Water	Poly	250 ml	H2SO4	H2SO4		28 Days	Colorimetric	EPA 410.4
Chloral Hydrate	Water	Glass	2 x 60 ml	Sulfite/buffer	Sulfite/buffer		14 days	GC/ECD	EPA 551.1
Chlorate	Water	Amber Glass	40 ml	EDA	EDA		28 Days	IC	EPA 300.1
Chloride	Water	Poly	250 ml	None	None		28 Days	IC	EPA 300.0
Chlorine Dioxide	Water	Amber Glass	250 ml	None	None		24 Hours	Colorimetric	SM 4500CLO2D
Chlorine Residual	Water	Amber Glass	250 ml	None	None		15 Minutes <sup>(2)</sup>	Colorimetric	SM 4500CL-G
Chlorite	Water	Amber Glass	40 ml	EDA	EDA		14 Days	IC	EPA 300.1
Chlorophyll-a	Water	Amber Poly	2 x 1L	None	None		48 Hours	Spectrophotometric	SM 10200H
Chromium, Hexavalent	Water	Poly	250 ml	(NH4)2SO4 buffer pH 9.3-9.7	(NH4)2SO4 buffer pH 9.3-9.7		28 days	Spectrophotometric	SM3500CR-D
Chromium, Hexavalent	Soil/solid	Glass	4 oz	None	None		30 days	Spectrophotometric	EPA 3060/7196

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Chromium, Hexavalent (low level)	Water	Poly	250 ml	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> buffer pH 9.3-9.7	(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> buffer pH 9.3-9.7		24 Hours	IC	EPA 218.6
Chromium, Hexavalent (low level)	Soil/solid	Glass	4 oz	None	None		30 days	IC	EPA 3060/7199
Color	Water	Glass	500 ml	None	None		48 Hours	Visual	SM2120B
Conductivity (Specific Conductance)	Water	Poly	250 ml	None	None		28 Days	Electrometric	SM2510B
Cyanide	Water	Poly	500 ml	NaOH	NaOH/ascorbic		14 Days	FIA-Colorimetric	EPA 335.2/335.4
Dioxin-Sub	Water	Glass	2 x 1 L	None	None		1 year	HR GC/ MS	EPA 1613/8290
Dioxin-Sub	Soil/Solid	Glass	4 oz	None	None		1 year	HR GC/ MS	EPA 8280/8290
Diquat/Paraquat	Water	Amber poly	1L	None	Thiosulfate		7 Days	HPLC	EPA 549.2
Disinfection by-products	Water	Glass	2 x 60 ml	Sulfite/buffer	Sulfite/buffer		14 days	GC/ECD	EPA 551.1
Diuron	Water	Amber Glass	1 L (*)	None	None		7 days	HPLC/UV	EPA 632
Diuron-UCMR	Water	Amber Glass	1 L (*)	CuSO <sub>4</sub> /Trizma	CuSO <sub>4</sub> /Trizma		14 days	HPLC/UV	EPA 532
EDB and DBCP	Water	Glass	2 x 40ml	None	Thiosulfate		14 Days	GC/ECD	EPA 504.1
Endothall	Water	Amber Glass	250 ml	None	None		7 days	GCMS	EPA 548.1
Ethanol	Water	Glass	1 x 40 ml	None	None		14 Days	Dir. Inj./FID	EPA 8015B
Explosives	Water	Amber Glass	1 L (*)	None	Thiosulfate		7 days	HPLC/UV	EPA 8330A
Explosives	Soil/Solid	Amber Glass	4 oz	None	None		14 days	HPLC/UV	EPA 8330A
Fluoride	Water	Poly	250 ml	None	None		28 Days	IC	EPA 300.0
General Minerals (excluding metals)	Water	Poly	1 L	None	None		Various	Wet Chem methods	various
General Minerals (metals only)	Water	Poly	250 ml	HNO <sub>3</sub> <sup>(3)</sup>	HNO <sub>3</sub> <sup>(3)</sup>		6 Months	ICP-AES	EPA 200.7
General Physical (Color, Odor, Turbidity)	Water	Glass	500 ml	None	None		24 Hours	Wet Chem methods	various
Glyphosate	Water	Amber Glass	1 x 40 ml	None	Thiosulfate		14 Days	HPLC	EPA 547
HAAs	Water	Amber Glass	250 ml (*)	NH <sub>4</sub> Cl	NH <sub>4</sub> Cl		14 days	GC/ECD	EPA 552.2
HAAs-Formation Potential	Water	Amber Glass	1L	None	None		14 days	GC/ECD	SM 5710B/EPA 552.2
Herbicides-DW	Water	Amber Glass	250 ml (*)	None	Thiosulfate		14 days	GC/ECD	EPA 515.3
Herbicides-GW	Water	Amber Glass	2 x 1 L (*)	None	Thiosulfate		7 Days	GC/ECD	EPA 8151A
Herbicides-Soil	Soil/solid	Glass	4 oz	None	None		14 Days	GC/ECD	EPA 8151A
Mercury	Water	Glass jar	250 ml	HNO <sub>3</sub>	HNO <sub>3</sub>		28 Days	Cold Vapor AAS	EPA 245.1/7470
Mercury in soil/solid/sludge	Soil/Solid	Glass jar	4 oz.	None	None		28 Days	Cold Vapor AAS	SW 7471
Metals	Water	Poly	250 ml	HNO <sub>3</sub> <sup>(3)</sup>	HNO <sub>3</sub> <sup>(3)</sup>		6 Months	ICP/MS or ICP-AES	EPA 200.8/200.7
Metals	Soil/solid	Glass/Poly	4 oz	None	None		6 Months	ICP/MS or ICP-AES	EPA 6010B/6020
Methanol	Water	Glass	1 x 40 ml	None	None		14 Days	Dir. Inj./FID	EPA 8015B
NDMA	Water	Amber Glass	2 x 1 L (*)	None	Thiosulfate		7 days	GC/MS/CI SIM	EPA1625M

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Nitrate	Water	Poly	250 ml	None	None		48 Hours	IC or FIA	EPA 300.0/353.2
Nitrite	Water	Poly	250 ml	None	None		48 Hours	IC or FIA	EPA 300.0/353.2
Nitrite+Nitrate as N	Water	Poly	250 ml	H2SO4	H2SO4		28 Days	FIA-Colorimetric	EPA353.2
Nitrogen, Total Kjeldahl (TKN)	Water	Poly	250 ml	H2SO4	H2SO4		28 Days	FIA-Colorimetric	EPA 351.2
Nitrogen-Ammonia	Water	Poly	250 ml	H2SO4	H2SO4		28 Days	FIA-Colorimetric	EPA 350.1
Nitrogen-Ammonia in ww with distillation	Water	Poly	250 ml	H2SO4	H2SO4		28 Days	FIA-Colorimetric	EPA 350.1
Nitrosamines	Water	Amber Glass	2 x 1 L (*)	None	Thiosulfate		14 days	GC/MS/CI SIM	EPA 521
Odor	Water	Glass	500 ml	None	None		24 Hours	Odor	SM 2150B
Oil and Grease	Water	Glass	1 L	HCL	HCL		28 Days	Gravimetric	EPA1664
Organotins (tributyltin)	Water	Glass	1 L (*)	None	None		7 Days	GC/MS	GC/MS
Oxygen, Dissolved	Water	Glass	BOD bottle	None	None		15 Minutes <sup>(2)</sup>	O2 Probe	SM 4500-OG
PBDEs	Water	Amber Glass	2 x 1 L (*)	None	None		14 days	GC/MS SIM	EPA 1614M
Perchlorate	Water	Poly	250 ml	None	None		28 Days	IC	EPA 314
Perchlorate - Low Level by LC/MS/MS	Water	Poly Sterile	125 ml	Sterile field filtration	Sterile field filtration		28 Days	LC/MS/MS	EPA 331/332
Perchlorate in soils	Soil	Glass jar	4 oz	None	None		28 Days	IC	EPA 314M
PCBs - GW	Water	Amber Glass	2 x 1 L (*)	None	Thiosulfate		7 Days	GC/ECD	EPA 8082
Pesticides- Organophosphorus	Water	Amber Glass	2 x 1 L (*)	None	Thiosulfate		7 Days	GC/NPD	EPA8141
Pesticides- Chlorinated (DW)	Water	Amber Glass	2 x 1 L (*)	None	Thiosulfate		7 days	GC/ECD	EPA 508
Pesticides- Chlorinated WW/GW	Water	Amber Glass	2 x 1 L (*)	None	Thiosulfate		7 Days	GC/ECD	EPA 608/8081
Pesticides- N/P -DW	Water	Amber Glass	2 x 1 L (*)	None	Thiosulfate		14 days	GC/ NPD	EPA 507/8141
Pesticides- All & PCBs Soil/solid	Soil/solid	Glass jar	4 oz	None	None		14 days	GC/ ECD or NPD	EPA 8081/8141/8082
pH	Water	Poly	250 ml	None	None		15 Minutes <sup>(2)</sup>	Electrometric	SM4500H
Phenolics	Water	Amber Glass	500 ml	H2SO4	H2SO4		28 Days	Spectrophotometric	EPA 420.1
Phosphate, Ortho	Water	Poly	250 ml	None	None		48 hours	FIA-Colorimetric	EPA 365.1
Phosphate, Total	Water	Poly	250 ml	H2SO4	H2SO4		28 Days	FIA-Colorimetric	EPA 365.1
Polynuclear Aromatics (PNAs) Low level	Water	Amber Glass	2 x 1L	None	Thiosulfate		7 Days	GC/MS SIM mode	EPA 625/8270SIM
Polynuclear Aromatics (PNAs) Low level	soil/solid	Glass jar	4 oz	None	None		14 Days	GC/MS SIM Mode	EPA 625/8270SIM
Radiological-Gross Alpha	Water	Poly	1 L	None <sup>(5)</sup>	None <sup>(5)</sup>		6 Months	GPC	EPA 900.0
Radiological-Gross Alpha high TDS	Water	Poly	1 L	None <sup>(5)</sup>	None <sup>(5)</sup>		6 Months	Coprecipitation-GPC	SM7110C
Radiological-Gross Beta	Water	Poly	1 L	None <sup>(5)</sup>	None <sup>(5)</sup>		6 Months	GPC	EPA 900.0

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Radiological-Radium 226-Sub	Water	Poly	2 x 1 L	HNO3	HNO3		6 Months		EPA 903.1 Sub
Radiological-Radium 228-Sub	Water	A-Poly	1 L	HNO3	HNO3		6 Months		RA-05 Sub
Radiological-Radon 222-Sub	Water	Glass	2 x 60 ml	None	None		4 Days	LSC	EPA 913.0
Radiological-Strontium 90-Sub	Water	Poly	1 L	HNO3	HNO3		6 Months		EPA 905.0 sub
Radiological-Tritium-Sub	Water	Amber Glass	125 ml	None	None		6 Months	LSC	EPA 906.0 sub
Radiological-Uranium-	Water	Poly	250 ml	HNO3	HNO3		6 Months	ICP-MS	EPA 200.8
Semivolatile Organics (BNA) - GW or WW	Water	Amber Glass	2 x 1L	None	Thiosulfate		7 Days	GC/MS	EPA 625/8270C
Semivolatile Organics (BNA) - Soil/Solid	Soil/solid	Glass jar	4 oz	None	None		14 Days	GC/MS	EPA 8270C
Silica by ICP	Water	Poly	250 ml	None	None		28 Days	ICP	EPA 200.7
SOCs - Drinking Water	Water	Amber Glass	2 x 1 L	HCL	Sulfite/HCL		14 days	GC/MS	EPA 525.2
SOCs - Special Analytes	Water	Amber Glass	2 x 1 L	HCL	Asc., EDTA, Diazol. Urea, Buffer		14 days	GCMS	EPA 526
SOCs - Phenolics	Water	Amber Glass	2 x 1 L	HCL	Sulfite/HCL		14 days	GCMS	EPA 528
Solids, Settleable	Water	Poly	1 L	None	None		48 Hours	Gravimetric	EPA 160.5
Solids, TDS	Water	Poly	500 ml	None	None		7 Days	Gravimetric	SM2540C
Solids, Total	Water	Poly	500 ml	None	None		7 Days	Gravimetric	SM2540B
Solids, TSS	Water	Poly	500 ml	None	None		7 Days	Gravimetric	EPA 160.2
Solids, TVS	Water	Poly	500 ml	None	None		7 Days	Gravimetric	EPA 160.4
Solids, VSS	Water	Poly	500 ml	None	None		7 Days	Gravimetric	SM 2540E
Sulfate	Water	Poly	250 ml	None	None		28 Days	IC	EPA 300.0
Sulfide, Dissolved	Water	Poly	250 ml	ZnAc/NaOH	ZnAc/NaOH		7 Days	Colorimetric	SM4500S2D
Surfactants (MBAS)	Water	Poly	500 ml	None	None		48 Hours	Colorimetric	SM5540C
t-Butyl Alcohol	Water	Glass	2 x 40 ml	none	None		14 Days	GC/MS	EPA 524.2
THMs	Water	Amber Glass	2 x 40 ml	Thiosulfate	Thiosulfate		14 Days	GC/MS	EPA 524.2
THMs-Formation Potential	Water	Amber Glass	1L	None	None		14 Days	GC/MS	SM5710/EPA 524.2
Total Organic Carbon	Water	Amber Glass	250 ml	H3PO4	H3PO4		28 Days	UV-Persulfate	SM5310C
Total Organic Halides	Water	Amber Glass	500 ml	H2SO4	Sulfite/H2SO4		14 Days	Pyrolysis/ Coulometric	SM5320B/EPA 9020
Turbidity	Water	Poly	250 ml	None	None		48 Hours	Nephelometric	EPA 180.1
UCMR2-PBDEs	Water	Amber Glass	2 x 1 L	Ascorbic, EDTA, Citrate	Ascorbic, EDTA, Citrate		14 days	GCMS	EPA 527
UCMR2-Explosives	Water	Amber Glass	2 x 1 L	CuSO4/Trizma Buffer	CuSO4/Trizma Buffer		14 days	GCMS	EPA 529
UCMR2-Perchlorate	Water	Poly-Sterile	125 ml	Sterile Field Filtration	Sterile Field Filtration		28 days	LC/MS/MS	EPA 331/332

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UCMR2-Acetanihide Degradates	Water	Amber Glass	2 x 500 ml	NH4Cl	NH4Cl		14 days	LC/MS/MS	EPA 535
UCMR2-Acetamide Pesticides	Water	Amber Glass	2 x 1 L	Sulfite/HCL	Sulfite/HCL		14 days	GCMS	EPA 525.2
UCMR2-Nitrosamines	Water	Amber Glass	1 x 1 L	Thiosulfate	Thiosulfate		14 days	GCMS	EPA 521
UV254	Water	Amber Glass	250 ml	None	None		48 Hours	Spectrophotometric	SM 5910B
Volatile Organics-DW	Water	Glass	3 x 40 ml	HCL	Ascorbic/HCL		14 Days	GC/MS	EPA 524.2
Volatile Organics-Aromatics only	Water	Glass	2 x 40 ml	HCL	Thiosulfate/HCL		14 Days	P&T/PID	EPA 602
Volatile Organics-WW/GW	Water	Glass	2 x 40 ml	HCL	Thiosulfate/HCL		14 Days	GC/MS	EPA 624/8260B
Volatile Organics-Soil/Solid	Soil/solid	Glass Jar/other <sup>(6)</sup>	4 oz/other <sup>(6)</sup>	None	None		14 Days	GC/MS	EPA 8260B
Gasoline -TPH	Water	Glass	2 x 40 ml	HCL	Thiosulfate/HCL		14 Days	P&T/FID	EPA 8015B
Gasoline -TPH soil/solid	Soil/solid	Glass Jar/other <sup>(6)</sup>	4 oz/other <sup>(6)</sup>	None	None		14 Days	P&T/FID	EPA 8015B
Diesel/Oil-TPH	Water	Amber Glass	1 L (*)	HCL	Thiosulfate/HCL		14 Days	GC/FID	EPA 8015B
Diesel/Oil-TPH	Soil/Solid	Glass jar	4 oz	None	None		14 Days	GC/FID	EPA 8015B

### Notes:

(1): Formaldehyde and acetaldehyde only

(2): This is field test; if requested to be performed at the lab it will be done ASAP

(3): Samples can be received unpreserved and preserved at the lab at least 24 hours before analysis.

(4): Al, Sb, As, Ba, Be, B, Cd, Ca, Na, Mg, K, Cr, Co, Cu, Fe, Pb, Li, Mn, Mo, Ni, Se, Ag, Sr, Tl, Ti, V, Zn

(5): Preserve at the lab with Nitric Acid to pH <2 and wait 24 hours before analysis starts.

(6): No headspace required or preferably EPA Method 5035 sample collection. Consult the laboratory for special requirements

(\*) : Needs extra bottles for QA/QC for certain projects.

Effective as of 1/12/10