

## McC Campbell Analytical, Inc. - Hold Time Table - Water and Aqueous Samples

Analyte - Aqueous	Method (s)	Holding Time	Minimum Volume	Containers	Conditions / Preservation
TPH (gas/ss/av)-BTEX	E8015 / 8021 / 8260	7d if unprev, 14d	40mL	2 V	0-6°C, HCL, ZHS
TPH (diesel/jf/k/motor oil) / Large Volume Ext.	E8015	7d	40mL / 1aL	2 aV / 1 L aG	0-6°C
TRPH / Oil & Grease - HEM / HEM-SGT	E418 / 1664	28d if presv/4h if NP	40mL / 1aL	2 V / 1 L aG	0-6°C, HCL
EDB, DBCP, 123TCP	E8260 / 524.3 / DWRL524M	14d	40mL	2 aV	0-6°C, AA + MA, ZHS
VOCs (DW)	E524.3	14d	40mL	2 aV	0-6°C, AA + MA, ZHS
VOCs except AAC	E8260 / 624.1	14d	40mL	2 V	0-6°C, HCL, ZHS
Acrolein, Acrylonitrile, 2-CEVE	E8260 / 624.1	3d	40mL	2 V	0-6°C, ZHS
SVOCs (DW)	E525.3	14d	1 L	1 L G	6°,C6H8O6+C6H7KO7+EDTA
SVOCs	E8270 / 625.1	7d	1 L	1 L G	0-6°C
PNAs/PAHs	E8270 / 8310 / 610	7d	500mL	1 L G	0-6°C
Dioxins & Dibenzofurans	E1613 / 1668 / 8290	365d	500mL	2 L aG	0-6°C, if pH>9 adjust 7-9
PFAs (DW)	E533	28d	250mL	2 250mL HDPE	0-6°C, NH4OAc
PFAs (DW)	E537	28d	250mL	2 250mL HDPE	0-6°C, Trizma
PFAs	E1633	28d	125mL	2 500mL, 1 125mL HDPE	0-6°C
Carbamates	E531.1	28d	40mL	2 aV	pH~3.8, <6°C, MAI P
	E8318	7d	40mL	2 aV	pH<4-5, 6°C, CH3COOH
Chlorinated Herbicides	E515.3	14d	40mL	2 aV	0-6°C, Na2S2O3
	E8151	7d	1 L	1 L aG	0-6°C
Chlorinated Pesticides / PCBS	508	14d	40mL	2 V	0-6°C, Na2S2O3
	E608.3	7d	1 L	1 L aG, NM	0-6°C
	E8081 / 8082	7d	40mL	2 aV	0-6°C
Diquat & Paraquat	E549.2	7d	500mL	500mL aHDPE	0-6°C, Na2S2O3 + H2SO4
Endothall	E548.1	7d	500mL	500mL aG	0-6°C, Na2S2O3
Glyphosate	E547	14d	40mL	2 aV	0-6°C, Na2S2O3
Organo-Nitrogen/Phosphorus Pesticides	E8141	7d	500mL	1 L aG	0-6°C
Pyrethroids	E625.1	7d	200mL	2 L aG	0-6°C
Aldehydes / Carbonyls / Formaldehyde	E8315	3d	40mL	1 L aG	0-6°C
Haloacetic Acids (HAAs)	E552.3	14d	40mL	2 V	0-6°C, NH4CL
CO <sub>2</sub> , Methane, Ethane, Ethene	RSK 175	7d	40mL	2 aV	0-6°C, ZHE
Nitroaromatics / Explosives	E8330	7d	1 L	1 L aG	0-6°C
ICP/MS Metals incl. Hg & Hardness	E200.8 / 6020 / SM2340B	180d, Hg 28d	200mL	250mL HDPE	HNO3, pH<2
Mercury, trace level	E1631E	90d if presv/2d if NP	100mL	500mL G, Pre-Cl	add HCl < 2d, dbl.-bagged
Hexavalent chromium	E218.6 / 218.7	28d if presv	20mL	125mL HDPE	0-6°C, NH42SO4 + NH4OH
Organic Lead	8270 - MAI	14d	200mL	2 aV	0-6°C
Organic Tin	MAI	7d	200mL	1 L aG	0-6°C, ZHS
Anions (nitrite, nitrate, phosphate)	E300.1	2d	20mL	125mL HDPE	0-6°C, phosphate filter <12h
Anions (bromide, chloride, fluoride, sulfate)	E300.1	28d	20mL	125mL HDPE	0-6°C
Anions DBP (bromate, chlorate, chlorite)	E300.1SPE	28d	50mL	250mL aG	purge if ClO2g, 0-6°C, EDA
Perchlorate	E314.0	28d	50mL	125mL HDPE	0-6°C
Acidity / Alkalinity	SM2310B / SM2320B	14d	20mL	250mL HDPE	0-6°C
Ammonia as N	E350.1 / SM4500-NH3G	28d	100mL	250mL aG	0-6°C, H2SO4
BOD/cBOD	SM5210 B	2d	500mL	500m L HDPE	0-6°C, ZHS
Chlorine, residual / forms	SM4500CI DE	field / ASAP	200mL	1 L aG	0-6°C
COD	E410.4 / SM5220D	28d	20mL	2 aV	0-6°C, H2SO4
Color	SM2120B	2d	50mL	250mL HDPE	0-6°C
Conductivity	E120.1 / SM2510	28d	20mL	250mL HDPE	0-6°C
Cyanide, Amenable or Total	Kelada / E335.4 / 9012 / SM4500CN	14d	100mL	250mL aHDPE	0-6°C, NaOH
Dissolved Oxygen	SM4500-O G	field / ASAP	300mL	300mL Glass BOD Bottle	ZHS
Ferrous iron	SM3500 Fe B4c	field / 2d	40mL	2 aV	Concentrated (1.6M) HCl, ZHS
MBAS (Anionic Surfactants)	SM5540C	NS / 2d	100mL	1 L HDPE	0-6°C
Nitrogen, TKN or Organic	E351.2 / SM4500N	28d	100mL	250mL aG	0-6°C, H2SO4
Nitrogen/ Carbon Dioxide / Inorganic Carbon	E415.3	28d	40mL	2 V	0-6°C, HCL
Odor	SM2150	1d / NS	200mL	500mL G	0-4 °C, ZHS
ORP (Oxidation-Reduction Potential)	SM2580B	NS / ASAP	50mL	125mL HDPE	0-6°C, ZHS
pH	SM4500H+B, E9045	ASAP	20mL	125mL HDPE	0-6°C
Phenolics, Total	E420.1 / 420.4	28d	50mL	250mL aG	0-6°C, H2SO4
Phosphorous, Ortho / Dissolved	E365.3	28d	50mL	500mL HDPE	0-6°C, add H2SO4 < 2d
Phosphorous, Total / Organic	E365.1	28d	50mL	500mL aG	0-6°C, H2SO4
RCI - Reactivity, Corrosivity, Flashpoint	SW846 Chpt. 7	NS	100mL	250mL HDPE	0-6°C, Dark, ZHS
Settleable Solids	SM2540F	2d	1 L	1 L HDPE	0-6°C
Sulfide	SM4500S2D	7d	100mL	250mL HDPE	0-6°C, NaOH+ZnAc
TDS	SM2540C	7d	100mL	500mL HDPE	0-6°C
TOC	E415.3 / SM5310B	28d	40mL	2 V	pH<2, 6°C, HCL
TSS	SM2540D	7d	500mL	1 L HDPE	0-6°C
Turbidity	SM2130B	2d	20mL	125mL HDPE	0-6°C
UV254	SM5910B	2d	40mL	2 V	0-6°C, ZHS

Abbreviations: V = 40ml VOA vial; L = Liter; P = plastic; a/G = amber/glass; ZHS=zero head space; HS=head space; NS=not specified; AA=ascorbic acid, MA=maleic acid

\*\* All treated water samples that are to be tested for organics, bacteria & cyanide MUST be dechlorinated at time of collection prior to addition of preservative. Regulations do not address dechlorination for O&G, wet chemistry (except cyanide), anions & metals. Aquatic Toxicity effluent samples are not to be dechlorinated.

**McC Campbell Analytical, Inc. \* Laboratory Sample Receiving: M-F, 8am-8pm \* (877-252-9262) \* 1534 Willow Pass Rd Pittsburg CA 94565-1701**

## McC Campbell Analytical, Inc. - Hold Time Table - Soil, Solid, Air Samples

Analyte - Soil and Solid	Method (s)	Holding Time	Minimum Volume	Containers	Conditions / Preservation
TPH (gas/ss/av)-BTEX	E8015/ 8021	14d	4oz GJ	8oz GJ	0-6°C, ZHS
TPH (diesel/jf/k/motor oil) / Large Volume Ext.	E8015	14d	4oz GJ	8oz GJ	0-6°C, ZHS
Oil & Grease	E9071	28d	4oz GJ	8oz GJ	0-6°C
EnCore 5g: VOCs, Gas, 1,4-Dioxane	E8260/ 5035	2d	1/sample	1 EnCores	0-6°C
VOCs, incl. ACRO, ACRY & 2-CEVE	E8260	14d*	4oz GJ	8oz GJ	0-6°C, ZHS
PFA's	E1633	28d	10 gram	1-125mL HDPE	0-6°C
SVOCs	E8270	14d	4oz GJ	8oz GJ	0-6°C
PNAs/PAHs	E8270SIM / 8310	14d	4oz GJ	8oz GJ	0-6°C
Dioxins & Dibenzofurans	E8290 / 1613	365d	4oz GJ	8oz GJ	dark, 0-6°C
Carbamates	E8318	14d	4oz GJ	8oz GJ	0-6°C
Chlorinated Herbicides	E8151	14d	4oz GJ	8oz GJ	0-6°C
Chlorinated Pesticides	E8081	14d	4oz GJ	8oz GJ	0-6°C
Diquat & Paraquat	E549.2m	7d	4oz GJ	8oz GJ	0-6°C
Glyphosate	E547m	14d	4oz GJ	8oz GJ	0-6°C
Organo-Nitrogen/Phosphorus Pesticides	E8270	14d	4oz GJ	8oz GJ	0-6°C
Pyrethrins & Pyrethroids	GCMS-NCI	3d	4oz GJ	8oz GJ	0-6°C
Acrylamide	E8316	7d	4oz GJ	8oz GJ	0-6°C, ZHS
Alcohols / Ethylene Glycol	MAI - Alcohols	---	4oz GJ	8oz GJ	0-6°C, ZHS
Aldehydes / Carbonyls / Formaldehyde	E8315	---	4oz GJ	8oz GJ	0-6°C
Nitroaromatics / Explosives	E8330	14d	4oz GJ	8oz GJ	0-6°C
ICP-MS Metals incl. Hg	E6020	180d, Hg 28d	4oz GJ	8oz GJ	---
ICP-OES Metals	E6010	180d	4oz GJ	8oz GJ	---
Hexavalent chromium (low level)	E7199	30d	4oz GJ	8oz GJ	0-6°C
Methylmercury	E1630	90d	4oz GJ	8oz GJ	Freeze
Organic Lead	8270 - MAI	NS	4oz GJ	8oz GJ	0-6°C, ZHS
Organic Tin	MAI	14d	4oz GJ	8oz GJ	0-6°C
Anions (nitrite, nitrate, phosphate)	E300	2d	4oz GJ	8oz GJ	0-6°C
Anions (bromide, chloride, fluoride, sulfate)	E300	28d	4oz GJ	8oz GJ	0-6°C
Anions DBP (bromate, chlorate, chlorite)	E300	28d	4oz GJ	8oz GJ	0-6°C
Perchlorate	E314.0m	28d	4oz GJ	8oz GJ	0-6°C
Alkalinity	SM2320Bm	14d	4oz GJ	8oz GJ	0-6°C
Ammonia as N	E350.1m	NS	4oz GJ	8oz GJ	0-6°C
Carbon Dioxide / Inorganic Carbon	SM5310Bm	28d	4oz GJ	8oz GJ	0-6°C
COD	SM5220Dm	NS	4oz GJ	8oz GJ	0-6°C
Conductivity	SM2510Bm	NS	4oz GJ	8oz GJ	0-6°C
Cyanide, Amenable or Total	E9012 / SM4500CN	14d	4oz GJ	8oz GJ	0-6°C, dark
Ferrous iron	SM3500 Fe B4c	NS	4oz GJ	8oz GJ	0-6°C
MBAS (Anionic Surfactants)	SM5540C	NS / EPA 2d	4oz GJ	8oz GJ	0-6°C
Nitrogen, Ammonia	E350.1m	NS	4oz GJ	8oz GJ	0-6°C
Nitrogen, TKN / Organic / Total	E351.2m / SM4500N / E415.3m	NS	4oz GJ	8oz GJ	0-6°C
ORP (Oxidation-Reduction Potential)	SM2580	NS	4oz GJ	8oz GJ	0-6°C, ZHS rec.
pH	SW9045C	NS	4oz GJ	8oz GJ	0-6°C
Phenolics, Total	E420.4m	NS	4oz GJ	8oz GJ	0-6°C
Phosphorous, Total / Organic / Ortho	E365.1	NS	4oz GJ	8oz GJ	0-6°C
RCI - Reactivity, Corrosivity, Ignitability	SW846 Chpt. 7	NS	4oz GJ	8oz GJ	0-6°C
Sulfide	E376.2 / 9034	14d	4oz GJ	8oz GJ	ZHS, 6°C, moisten w/ZnAc
TOC	SW9060A	NS	4oz GJ	8oz GJ	0-6°C
Enterococci	Idexx / SM9230D	8h W, 24h S, 30h DW	120mL Sterile P	2-120mL Sterile P	0-6°C, HS, Na2S2O3 for DW
Fecal Coliform / Fecal Streptococci	SM9221E / 9222D / SM9230B	24h W/S, 30h DW	120mL Sterile P	2-120mL Sterile P	0-6°C, HS, Na2S2O3 for DW
Heterotrophs (POUR / SIM / SPREAD)	SM9215B / SM9215C / SM9215E	8 h	120mL Sterile P	2-120mL Sterile P	0-6°C, HS, Na2S2O3 for DW
Legionella	IDEXX Legiolert	8h W, 30h DW	120mL Sterile P	2-120mL Sterile P	0-6°C, HS, Na2S2O3 for DW
Pseudomonas aeruginosa	SM9213E	24h W/S, 30h DW	120mL Sterile P	2-120mL Sterile P	0-6°C, HS, Na2S2O3 for DW
Salmonella / Staphylococcus aureus	SM9620B / SM9213B.8	8h W, 24h S	120mL Sterile P	2-120mL Sterile P	0-6°C, HS, Na2S2O3 for DW
Total Coliform & E Coli	SM9221B / 9222B / 9223 B	8h W, 24h S, 30h DW	120mL Sterile P	2-120mL Sterile P	0-6°C, HS, Na2S2O3 for DW
96-Hour Acute Aquatic Toxicity, Effluent	EPA-821-R-02-012	36h	INQUIRE	1-5 Gal HDPE	0-6°C
Chronic Toxicity (Fresh / Marine Species)	EPA - Multiple	36h	INQUIRE	1-5 Gal HDPE	0-6°C
96-Hour Aquatic Toxicity, Haz Waste	Polisini & Miller (CDFG 1988) (Haz.)	NS	250mL / 4oz GJ	500mL P/G 8oz GJ	---
<b>Analyte - Air</b>	<b>Method (s)</b>	<b>Holding Time</b>	<b>Minimum Volume</b>	<b>Containers</b>	<b>---</b>
Leed Indoor Air Testing	TO-15 / ASTM D1946-90m	30d / 6hr Tedlar	6L (indoor) / 1L	Summa / Tedlar	---
Light Gases	ASTM D1946-90m	30d / 6hr Tedlar	40ml	Summa / Tedlar	---
TPH(g)	E TO-15 / 8015	30d / 6hr Tedlar	1L	1L Summa / Tedlar	---
TPH(d), VOCs	E TO-17	30d	varys	Summa / ST	---
VOCs	E TO-15 / 8260	30d / 6hr Tedlar	6L (indoor) / 1L	1L Summa / Tedlar	---

Abbreviations: V = 40ml VOA vial; L = Liter; P = plastic; a/G = amber/glass; ZHS=zero head space; HS=head space; NS=not specified; AA=ascorbic acid, MA=maleic acid

5g Encores have a 2d HT and are available for purchase from MAI. Additional encores per sample may be required for multiple methods.

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