Inorganic and Microbiological Parameter PQLs

Parameter	EPA Methods	APHA Methods	Other Methods	Practical Quantitation Limit (PQL)	PQL Revision Date
pH		SM 4500-H+ B		0.01 units from 4.01 - 9.18 s.u.	3/13/2001
Conductance @ 25°C		SM 2510 B		14.9 µmhos/cm	3/30/2001
BOD_5		SM 5210 B		2.0 mg/L	3/13/2001
$CBOD_5$		SM 5210 B		2.0 mg/L	6/5/2007
COD			HACH 8000	20 mg/L	9/5/2002
Coliform, MF Fecal		SM 9222 D		1 colony/100 mL	3/13/2001
Coliform, MF Total		SM 9222 B		1 colony/100 mL	3/13/2001
Coliform, Tube Fecal		SM 9221 B		MPN/100 mL	3/13/2001
Coliform, Fecal Strep		SM 9230 C		1 colony/100 mL	3/13/2001
Total Residue		SM 2540 B		12 mg/L	6/1/2007
Total Volatile Residue	EPA 160.4			12 mg/L	6/1/2007
Total Fixed Residue	EPA 160.4			12 mg/L	6/1/2007
Total Suspended Residue		SM 2540 D		6.2 mg/L	6/1/2007
Suspended Volatile Residue	EPA 160.4			6.2 mg/L	6/1/2007
Suspended Fixed Residue	EPA 160.4			6.2 mg/L	6/1/2007
Total Dissolved Residue		SM 2540 C		12 mg/L	6/1/2007
Alkalinity to pH 8.3		SM 2320 B		1 mg/L	3/13/2001
Alkalinity to pH 4.5		SM 2320 B		1 mg/L	3/13/2001
TOC		SM 5310 B		2 mg/L	
Turbidity	EPA 180.1 Rev. 2.0 (1993)	SM 2130 B		1 NTU	3/13/2001
Chloride	EPA 300.0 Rev. 2.1 (1993)		QUIK CHEM 10-510-00-1-A$	1 mg/L	4/1/2007
Chlorophyll *a* EPA 445.0 modified option	EPA 445.0			1 µg/L*	3/13/2001
Color: True		SM 2120 C		5 color units	3/13/2001
Color: ADMI		SM 2120 E		25 color units	3/13/2001
Cyanide, Total	EPA 335.4 Rev. 1.0 (1993)$		QUIK CHEM 10-204-00-1-A QUIK CHEM 10-204-00-1-X	0.02 mg/L	4/22/2002
Fluoride	EPA 300.0 Rev. 2.1 (1993)		QUIK CHEM 10-510-00-1-A$	0.4 mg/L	4/1/2007
Formaldehyde			APHA, 1972 Method 111	0.2 mg/L	2/21/2003
HEM (Oil and Grease)	EPA 1664 A			10 mg/L	11/1/2005
HEM (Oil and Grease) sludge, sediment and solid samples			SW-846 9071 B	1000 mg/Kg	11/1/2005

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Parameter	EPA Methods	APHA Methods	Other Methods	Practical Quantitation Limit (PQL)	PQL Revision Date
MBAS		SM 5540 C		0.1 mg/L	3/13/2001
Phenols	EPA 420.4 Rev. 1.0 (1993)		QUIK CHEM 10-210-00-1-A$	10 µg/L	
Silica		SM 4500-SiO2 C	QUIK CHEM 10-114-27-1-A$	2 mg/L	4/16/2002
Sulfate	EPA 300.0 Rev. 2.1 (1993)		QUIK CHEM 10-510-00-1-A$	2 mg/L	4/1/2007
Sulfide		SM 4500-S2 D		0.1 mg/L	3/13/2001
Hexavalent Chromium		SM 3500-Cr B (20th Edition)		50 µg/L	4/22/2002
NH3 as N	EPA 350.1 Rev. 2.0 (1993)		QUIK CHEM 10-107-06-1-J$	0.02 mg/L	3/1/2009
TKN as N	EPA 351.2 Rev. 2.0 (1993)		QUIK CHEM 10-107-06-2-H$	0.20 mg/L	3/1/2009
NO2 + NO3 as N	EPA 353.2 Rev. 2.0 (1993)		QUIK CHEM 10-107-04-1-C$	0.02 mg/L	3/1/2009
P, Total as P	EPA 365.1 Rev. 2.0 (1993)		QUIK CHEM 10-115-01-1-EF$	0.02 mg/L	6/1/2008
PO4 as P	EPA 365.1 Rev. 2.0 (1993)		QUIK CHEM 10-115-01-1-A$	0.02 mg/L	3/1/2009
P, Dissolved as P	EPA 365.1 Rev. 2.0 (1993)		QUIK CHEM 10-115-01-1-EF$	0.02 mg/L	3/1/2009
NO2 as N	EPA 353.2 Rev. 2.0 (1993)		QUIK CHEM 10-107-04-1-C$	0.01 mg/L	3/1/2009
Boron	EPA 200.7 Rev. 4.4 (1994)			50 µg/L	1/12/2009
Cadmium	EPA 200.8 Rev. 5.4 (1994) EPA 200.9 Rev. 2.2 (1994)$			1.0 µg/L	1/2/2007
Chromium, Total	EPA 200.8 Rev. 5.4 (1994) EPA 200.7 Rev. 4.4 (1994)$			10 µg/L	1/2/2007
Copper	EPA 200.8 Rev. 5.4 (1994) EPA 200.9 Rev. 2.2 (1994)$			2.0 µg/L	3/13/2001
Nickel	EPA 200.8 Rev. 5.4 (1994) EPA 200.9 Rev. 2.2 (1994)$			2 µg/L	3/1/2011
Lead	EPA 200.8 Rev. 5.4 (1994) EPA 200.9 Rev. 2.2 (1994)$			2 µg/L	3/1/2011
Zinc	EPA 200.8 Rev. 5.4 (1994) EPA 200.7 Rev. 4.4 (1994)$			10 µg/L	3/13/2001
Silver	EPA 200.8 Rev. 5.4 (1994) EPA 200.9 Rev. 2.2 (1994)$			5 µg/L	3/13/2001
Aluminum	EPA 200.7 Rev. 4.4 (1994)			50 µg/L	3/13/2001

Inorganic and Microbiological Parameter PQLs

Parameter	EPA Methods	APHA Methods	Other Methods	Practical Quantitation Limit (PQL)	PQL Revision Date
Beryllium	EPA 200.7 Rev. 4.4 (1994)			5 µg/L	1/2/2007
Calcium	EPA 200.7 Rev. 4.4 (1994)			0.10 mg/L	3/13/2001
Cobalt	EPA 200.7 Rev. 4.4 (1994)			50 µg/L	3/13/2001
Iron	EPA 200.7 Rev. 4.4 (1994)			50 µg/L	3/13/2001
Lithium	EPA 200.7 Rev. 4.4 (1994)			25 µg/L	3/13/2001
Magnesium	EPA 200.7 Rev. 4.4 (1994)			0.10 mg/L	3/13/2001
Manganese	EPA 200.8 Rev. 5.4 (1994)$ EPA 200.7 Rev. 4.4 (1994)			10 µg/L	3/13/2001
Sodium	EPA 200.7 Rev. 4.4 (1994)			0.10 mg/L	3/13/2001
Arsenic	EPA 200.8 Rev. 5.4 (1994) EPA 200.9 Rev. 2.2 (1994)$			2 µg/L	11/10/2008
Selenium	EPA 200.8 Rev. 5.4 (1994) EPA 200.9 Rev. 2.2 (1994)$			5 µg/L	3/13/2001
Mercury	EPA 245.1 Rev. 3.0 (1994)			0.2 µg/L	3/13/2001
Mercury - trace level	EPA 1631 E			1.00 ng/L	1/2/2007
Potassium	EPA 200.7 Rev. 4.4 (1994)			0.10 mg/L	7/24/2001
Barium	EPA 200.7 Rev. 4.4 (1994)			10 µg/L	7/24/2001
Vanadium	EPA 200.7 Rev. 4.4 (1994)			25 µg/L	7/24/2001
Molybdenum	EPA 200.8 Rev. 5.4 (1994)			10 µg/L	9/2/2008
Antimony	EPA 200.8 Rev. 5.4 (1994)			10 µg/L	9/2/2008
Tin	EPA 200.8 Rev. 5.4 (1994)			10 µg/L	5/30/2008
Thallium	EPA 200.8 Rev. 5.4 (1994)			10 µg/L	5/30/2008
Titanium	EPA 200.7 Rev. 4.4 (1994)			10 µg/L	9/8/2008

EPA refers to *Methods for Chemical Analysis of Water and Wastes* , USEPA Office of Research and Development, Rev. 3/83 (unless otherwise specified). Cincinnati, OH; EPA 600/4-79-020.

SM refers to *Standard Methods for the Examination of Water and Wastewater* , 18th Edition (unless otherwise specified), American Public Health Association, Washington, DC, 1992 (unless otherwise specified).

SW-846 refers to *Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods* ; 3rd edition (9/86), USEPA Office of Solid Waste and emergency Response, Washington, D.C.

HACH refers to Hach Chemical Company, PO Box 389, Loveland, CO 80537.

QUIK CHEM refers to HACH Company/Lachat Instruments, Milwaukee, WI, 53219.

* - under evaluation

$ - secondary method reference

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