



ENVIRONMENTAL METHODS LIST – USEPA Rev 4

AQ2

Method Detection Limits are calculated using USEPA procedure 40 CFR, Part 136, Appendix B

ANALYTE	METHOD DESCRIPTION	METHOD NUMBER	METHOD DETECTION LIMIT	EQUIVALENCE
ALKALINITY	Buffered methyl orange color reduction	EPA-100-A	3.5 mg CaCO ₃ /L (Range: 5 to 80 mg/L)	EPA 310.2
		EPA-101-A	8 mg CaCO ₃ /L (Range: 15 to 200 mg/L)	
		EPA-102-A	27 mg CaCO ₃ /L (Range: 44 to 550 mg/L)	
AMMONIA	Alkaline phenate method with hypochlorite and sodium nitroprusside (indophenol blue)	EPA-103-A	0.007 mg N/L (Range: 0.02 to 2.0 mg N/L)	EPA 350.1 Std. Methods 4500-NH ₃ G (19 th , 20 th)
		EPA-129-A	TBD mg N/L (Range: 0.2 to 10 mg N/L)	
AMMONIA	Alkaline phenate method with hypochlorite and sodium nitroprusside (indophenol blue). This is a brackish method.	EPA-104-A	0.02 mg N/L (Range: 0.05 to 2.0 mg N/L)	EPA 350.1 Std. Methods 4500-NH ₃ G (19 th , 20 th)
CHLORIDE	Mercuric thiocyanate reaction in the presence of ferric nitrate	EPA-105-A	0.5 mg/L (Range: 1 to 100 mg/L)	EPA 325.2 Std. Methods 4500-Cl E (18 th , 19 th , 20 th)
		EPA-124-A	0.62 mg/L (Range: 2 to 200 mg/L)	
CHROMIUM, Hexavalent	Colorimetric	EPA-108-A	0.001 mg/L (Range: 0.025 to 0.5 mg Cr(VI)/L)	EPA 218.4 Std. Methods 3500-Cr B (20 th)
		EPA-109-A	0.011 mg/L (Range: 0.3 to 5.0 mg Cr(VI)/L)	
CYANIDE	Amenable to chlorination (Manual distillation required)	EPA-107-A	0.001 mg CN/L (Range: 0.004 to 0.25 mg CN/L)	EPA 335.1 Std. Methods 4500-CN G (18 th , 19 th , 20 th)
CYANIDE	Chloramine-T with pyridine barbituric acid color reaction (Manual distillation required)	EPA-107-A	0.001 mg CN/L (Range: 0.004 to 0.25 mg CN/L)	EPA 335.2 Std. Methods 4500-CN E (18 th , 19 th , 20 th)
CYANIDE	Chloramine-T with pyridine barbituric acid color reaction (Manual distillation required)	EPA-130-A	0.0013 mg CN/L (Range: 0.005 to 0.25 mg CN/L)	EPA 335.4 Std. Methods 4500-CN E (18 th , 19 th , 20 th)
HARDNESS, Total	Calmagite indicator reaction	EPA-106-A	11 mg CaCO ₃ /L (Range: 25 to 400 mg/L)	EPA 130.1

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NITROGEN, Total Kjeldahl (TKN)	Kjeldahl digests (Hg catalyst) are reacted with alkaline salicylate in the presence of hypochlorite and sodium nitroprusside (Digestion required)	EPA-125-A	0.04 mg N/L (Range: 0.1 to 5.0 mg N/L)	EPA 351.2
		EPA-110-A	0.1 mg N/L (Range: 0.4 to 20 mg N/L)	
NITRATE + NITRITE	Cadmium column reduction followed by sulfanilamide reaction in the presence of N-(1-naphthylethylenediamine) dihydrochloride	EPA-127-A	0.004 mg N/L (Range: 0.01 to 2.0 mg N/L)	EPA 353.2 Std. Methods 4500-NO ₃ F (18 th ,19 th ,20 th)
		EPA-126-A	0.023 mg N/L (Range: 0.04 to 5.0 mg N/L)	
		EPA-114-A	0.023 mg N/L (Range: 0.2 to 12 mg N/L)	
NITRITE	Sulfanilamide reaction in the presence of N-(1-naphthylethylenediamine) dihydrochloride	EPA-115-A	0.01 mg N/L (Range: 0.05 to 2.0 mg N/L)	EPA 353.2 Std. Methods 4500-NO ₃ F (18 th ,19 th ,20 th)
NITRITE	Sulfanilamide reaction in the presence of N-(1-naphthylethylenediamine) dihydrochloride	EPA-116-A	0.0012 mg N/L (Range: 0.002 to 0.2 mg N/L)	EPA 354.1 Std. Methods 4500-NO ₂ B (18 th ,19 th ,20 th)
PHENOLICS	Sample distillates are reacted with alkaline ferricyanide and 4-aminoantipyrine (Manual distillation required)	EPA-117-A	0.003 mg/L (Range: 0.005 to 0.4 mg phenol/L)	EPA 420.2
PHOSPHATE, Ortho	Acidic molybdate/antimony with ascorbic acid reduction (phosphomolybdenum blue)	EPA-118-A	0.004 mg P/L (Range: 0.01 to 1.0 mg P/L)	EPA 365.1 Std. Methods 4500-P F (18 th ,19 th ,20 th)
		EPA-128-A	0.03 mg P/L (Range: 0.1 to 20 mg P/L)	
PHOSPHORUS, Total (TP)	Manual, single reagent, persulfate digest	EPA-119-A	0.004 mg P/L (Range: 0.01 to 1.0 mg P/L)	EPA 365.1 Std. Methods 4500-P B,5 & E (18 th ,19 th ,20 th)
PHOSPHORUS, Total Kjeldahl (TKP)	Kjeldahl digests are reacted with acidic molybdate/antimony with ascorbic acid reduction (phosphomolybdenum blue)	EPA-120-A	0.008 mg P/L (Range: 0.05 to 5.0 mg P/L)	EPA 365.4
SILICA (Reactive silica)	Acidic molybdate with reduction (silicomolybdenum blue)	EPA-122-A	0.03 mg/L (Range: 1 to 25 mg/L)	EPA 370.1 Std. Methods 4500-SiO ₂ C (20 th)
SULFATE	Barium chloride turbidimetric method	EPA-123-A	1.0 mg/L (Range: 5 to 35 mg/L)	EPA 375.4

SEAL Analytical is continually developing methods. Please note that others may exist. If you do not see your chosen method on this list, please consult your SEAL Analytical Technical Support Team.