

ENVIRONMENTAL METHODS LIST – USEPA Rev 5

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-B Rev. 0	6.5 mg CaCO ₃ /L (Range: 10 to 100 mg/L)	EPA 310.2
		EPA-102-B Rev. 0	22 mg CaCO ₃ /L (Range: 50 to 500 mg/L)	
AMMONIA	Alkaline phenate method with hypochlorite and sodium nitroprusside (indophenol blue)	EPA-129-B Rev. 1	0.05 mg N/L (Range: 0.2 to 10 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-B Rev. 1	0.4 mg/L (Range: 2.5 to 100 mg/L)	Std. Methods 4500-Cl ⁻ E (18 th ,19 th ,20 th)
		EPA-124-B Rev. 1	0.4 mg/L (Range: 2 to 200 mg/L)	
CHROMIUM, Hexavalent	Colorimetric	EPA-108-B Rev. 1	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-B Rev. 1	0.011 mg/L (Range: 0.3 to 5.0 mg Cr(VI)/L)	
COLOR	Platinum-cobalt standard comparison	EPA-140-B Rev. 1	2 Color Units (Range: 5 to 150 Color Units)	Std. Methods 2120 B (18 th ,19 th ,20 th)
CYANIDE	Chloramine-T with pyridine barbituric acid color reaction (Manual distillation required)	EPA-130-B Rev. 0	0.0015 mg CN/L (Range: 0.003 to 0.25 mg CN/L)	EPA 335.4 Std. Methods 4500-CN E (18 th ,19 th ,20 th)
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-B Rev. 1	0.03 mg N/L (Range: 0.1 to 4.0 mg N/L)	EPA 351.2, version 2 (1993)
		EPA-110-B Rev. 1	0.2 mg N/L (Range: 0.5 to 24 mg N/L)	
NITROGEN, Total Kjeldahl (TKN)	Kjeldahl digests (Cu catalyst) are reacted with alkaline salicylate in the presence of hypochlorite and sodium nitroprusside (Digestion required)	EPA-111-B Rev. 0	0.1 mg N/L (Range: 0.2 to 4.0 mg N/L)	EPA 351.2, version 2 (1993)
		EPA-136-B Rev. 0	0.12 mg N/L (Range: 0.5 to 25 mg N/L)	

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NITRATE + NITRITE	Cadmium coil reduction followed by sulfanilamide reaction in the presence of N-(1-naphthylethylenediamine) dihydrochloride	EPA-127-B Rev. 1	0.006 mg N/L (Range: 0.016 to 2.0 mg N/L)	EPA 353.2 Std. Methods 4500-NO ₃ F (18 th ,19 th ,20 th)
		EPA-126-B Rev. 1	0.015 mg N/L (Range: 0.06 to 5.0 mg N/L)	
		EPA-114-B Rev. 1	0.04 mg N/L (Range: 0.25 to 15 mg N/L)	
NITRATE + NITRITE	Cadmium coil reduction followed by sulfanilamide reaction in the presence of N-(1-naphthylethylenediamine) dihydrochloride (Imidazole buffer used)	EPA-132-B Rev. 1	0.004 mg N/L (Range: 0.012 to 2.0 mg N/L)	N/A
NITRITE	Sulfanilamide reaction in the presence of N-(1-naphthylethylenediamine) dihydrochloride	EPA-115-B Rev. 1	0.002 mg N/L (Range: 0.0125 to 1.0 mg N/L)	EPA 353.2 Std. Methods 4500-NO ₃ F (18 th ,19 th ,20 th)
		EPA-137-B Rev. 1	0.0005 mg N/L (Range: 0.002 to 0.2 mg N/L)	
PHENOLICS	Sample distillates are reacted with alkaline ferricyanide and 4-aminoantipyrine (Manual distillation required)	EPA-117-B Rev. 1	0.003 mg/L (Range: 0.01 to 0.4 mg phenol/L)	EPA 420.4
PHOSPHATE, Ortho	Acidic molybdate/antimony with ascorbic acid reduction (phosphomolybdenum blue)	EPA-118-B Rev. 1	0.002 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-145-B Rev 1	0.005 mg P/L (0.05 – 5.0 mg P/L)	
		EPA-146-B Rev 0	0.007 mg P/L (0.125 – 12.5 mg P/L)	
PHOSPHORUS, Total (TP)	Acidic molybdate/antimony with ascorbic acid reduction (Manual persulfate digestion required)	EPA-119-B Rev. 1	0.002 mg P/L (Range: 0.01 to 1.0 mg P/L)	EPA 365.1 Std. Methods 4500-P B, F (18 th ,19 th ,20 th)
		EPA-134-B Rev. 1	0.007 mg P/L (Range: 0.063 to 5.0 mg P/L)	
PHOSPHORUS, Total Kjeldahl (TKP)	Kjeldahl digests (Hg catalyst) are reacted with acidic molybdate/antimony with ascorbic acid reduction	EPA-120-B Rev. 1	0.007 mg P/L (Range: 0.04 to 3.2 mg P/L)	EPA 365.4

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PHOSPHORUS, Total Kjeldahl (TKP)	Kjeldahl digests (Cu catalyst) are reacted with acidic molybdate/antimony with ascorbic acid reduction. Method range depends on digestion protocol	EPA-135-B Rev. 1	0.009 mg P/L (Range: 0.04 to 3.2 mg P/L)	N/A
		EPA-138-B Rev. 1	TBD mg P/L (Range: 0.05 to 3.0 mg P/L)	
SILICA (Reactive silica)	Acidic molybdate, no reduction (molybdo-silicic acid)	EPA-121-B Rev. 0	0.07 mg/L (Range: 0.25 to 25 mg/L)	Std. Methods 4500-SiO ₂ C (20 th)

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 at:

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