

SmartChem Methods List

Method Name	Method #	Range [†]	MDL [*]	Filter (nm)	Comments
Alkalinity	2001N-0406W	10-200 mg/L	1.77 mg/L	550	EPA 310.2 Methyl Orange; SM 403
Ammonia in Water	2010N-0406W	0.01-2 mg/L	0.005 mg/L	630	EPA 350.1 Automated Phenate; SM 4500-NH3-G; 4500-NH3-H
Chemical Oxygen Demand, COD	501-04A	20-900 mg/L	10 mg/L	600	EPA 410.4
Chloride	2031N-0405W	1-200 mg/L	0.87 mg/L	480	EPA 325.2 Automated Ferricyanide; SM 4500-Cl-E
Chloride	2031N-0405W	1-50 mg/L	0.05 mg/L	480	EPA 325.2 Automated Ferricyanide; SM 4500-Cl-E
Chlorine, Total Residual	240-100A	0.1-4 mg/L	0.01 mg/L	550	EPA 330.5 Manual DPD
Chromium (Hexavalent)	518-04A	1-25 mg/L	0.28 mg/L	540	SW846 Method 7196A, Diphenylcarbazide
Chromium (Hexavalent)	518-04A	0.05-4 mg/L	0.01 mg/L	540	SW846 Method 7196A, Diphenylcarbazide
Cyanide, Total	281-0405C	5-500 µg/L	0.8 µg/L	570	EPA 335.4 Post Distillation Pyridine; SM 4500-CN-E
Fluoride, Total	290-200A	0.1-1.4 mg/L		570	EPA 340.1 Manual Colorimetric; SPADNS
Hardness	300-100A	10-400 mg/L		520	EPA 130.1 Automated EDTA/Calmagite
Nitrate + Nitrite by Cd Reduction	2025N-0406W	0.02-2.0 mg/L	0.0044 mg/L	550	EPA 353.2 Automated Cadmium; SM 4500-NO3-F
Nitrate + Nitrite by Hydrazine	370-200A	0.01-10 mg/L	0.002 mg/L	550	EPA 353.1 Automated Hydrazine
Nitrite	2026N-0406W	0.01-1 mg/L	0.0019 mg/L	550	EPA 352.2 Automated; SM4500-NO2-B
Nitrogen, TKN	2040N-0406W	0.01-1.5 mg/L	0.021 mg/L	660	EPA 351.2 Automated Salicylate
Nitrogen, TKN	2040N-0406W	0.05-5 mg/L	0.041 mg/L	660	EPA 351.2 Automated Salicylate
Nitrogen, TKN	2040N-0406W	0.1-10 mg/L	0.1 mg/L	660	EPA 351.2 Automated Salicylate
Phenol	2050N-0406W	10-1000 µg/L	1.0 µg/L	510	EPA 420. Automated 4-AAP; SM 5530 Phenols-D
Phosphate, Ortho	2072N-0406W	0.01-1 mg/L	0.0014 mg/L	880	EPA 365.2 Automated Ascorbic Acid; SM 4500-P-F
Phosphate, Ortho	2071N-0406W	0.01-1 mg/L	0.0018 mg/L	880	EPA 365.1 Automated Ascorbic Acid; SM 4500-P-F
Phosphorus, Total in acid persulfate digest	2071N-0406A	0.01-1 mg/L	0.0018 mg/L	880	EPA 365.1 Automated Ascorbic Acid; SM 4500-P-F
Phosphorus, Total in alkaline persulfate digest	2071N-0406A	0.01-1 mg/L	0.0019 mg/L	880	EPA 365.1 Automated Ascorbic Acid; SM 4500-P-F
Phosphorus, Hydrolyzable	2071N-0406A	0.01-1 mg/L	0.0018 mg/L	880	EPA 365.1 Automated Ascorbic Acid; SM 4500-P-F
Phosphorous, Total TKP	2074NR1-0706	0.01-2mg/L	0.0029 mg/L	880	EPA 365.4 Automated
Phosphorous, Total TKP	421N-304A	0.1-10mg/L	0.02 mg/L	880	EPA 365.4 Automated
Silica, Dissolved in Water	440-100A	0-25 mg/L	0.23 mg/L	660	EPA 370.1 Manual
Sulfate	2060N-0406W	1-40 mg/L	0.23 mg/L	420	EPA 375.4 Manual Turbidimetric; SM 4500-SO4-E
Sulfide	480-100A	2-20 mg/L	1.0 mg/L	630	EPA 376.2 Manual Methylene Blue

*Method Detection Limit is determined by EPA procedure 40 CFR Part 136, Appendix B

†Method Range can be extended either by manual or SmartChem sample pre-dilution



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