



Analytical Methods Approved for Drinking Water Compliance Monitoring under the Disinfection Byproduct Rules

Analysis for the following disinfectants, contaminants and other parameters shall be conducted in accordance with the methods in the following table, or their equivalent as determined by EPA. The methods are specified in 40 CFR 141.131 and in Appendix A to Subpart C of Part 141. The monitoring requirements are specified in 40 CFR 141.132, 141.135, 141.600-141.603, and 141.620-141.268.

The CFR is the legal reference for approved methods and takes precedence over this table. The table should accurately reflect the analytical methods information published in 40 CFR 141. If discrepancies are found, please notify the Safe Drinking Water Hotline (800-426-4791) so that EPA can correct the table.

Disinfectants: If approved by the State, residual disinfectant concentrations for chlorine, chloramines, and chlorine dioxide may be measured using DPD colorimetric test kits.

Chlorine Dioxide

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
327, Rev. 1.1	EPA	<i>Determination of Chlorine Dioxide and Chlorite Ion in Drinking Water using Lissamine Green B and Horseradish Peroxidase with Detection by Visible Spectrometry</i>	May 2005	EPA-815-R-05-008	National Environmental Methods Index
ChlordioX Plus	Palintest, Ltd.	<i>Palintest ChlordioX Plus Method – Chlorine Dioxide and Chlorite in Drinking Water by Amperometry using Disposable Sensors</i>	November 2013		Palintest
4500-ClO ₂ D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
4500-ClO ₂ D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
4500-ClO ₂ E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
4500-ClO ₂ E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
4500-ClO ₂ E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
4500-ClO ₂ E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
4500-ClO ₂ E-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods

Combined Chlorine

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D1253-86	ASTM International	<i>Standard Test Method for Residual Chlorine in Water</i>	1986		ASTM International
D1253-03	ASTM International	<i>Standard Test Method for Residual Chlorine in Water</i>	2003		ASTM International
D1253-08	ASTM International	<i>Standard Test Method for Residual Chlorine in Water</i>	2008		ASTM International
D1253-14	ASTM International	<i>Standard Test Method for Residual Chlorine in Water</i>	2014		ASTM International
Hach 10260, Rev. 1.0	Hach Company	<i>Determination of Chlorinated Oxidants (Free and Total) in Water using Disposable Planar Reagent-Filled Cuvettes and Mesofluidic Channel Colorimetry</i>	April 2013		Hach Company
4500-Cl D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
4500-Cl D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
4500-Cl D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
4500-CI D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
4500-CI F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
4500-CI F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
4500-CI F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
4500-CI F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
4500-CI G	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
4500-CI G	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
4500-CI G	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
4500-CI G	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
4500-CI D-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods
4500-CI F-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
4500-Cl G-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods

Free Chlorine

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D99-003	Industrial Test Systems, Inc.	<i>Free Chlorine Species (HOCl and OCl⁻) by Test Strip</i>	November 2003		Industrial Test System, Inc., 1875 Langston St., Rock Hill, SC 29730
D1253-86	ASTM International	<i>Standard Test Method for Residual Chlorine in Water</i>	1986		ASTM International
D1253-03	ASTM International	<i>Standard Test Method for Residual Chlorine in Water</i>	2003		ASTM International
D1253-08	ASTM International	<i>Standard Test Method for Residual Chlorine in Water</i>	2008		ASTM International
D1253-14	ASTM International	<i>Standard Test Method for Residual Chlorine in Water</i>	2014		ASTM International
334.0	EPA	<i>Determination of Residual Chlorine in Drinking Water using an On-line Chlorine Analyzer</i>	September 2009	EPA 815-B-09-013	National Environmental Methods Index
Hach 10260, Rev. 1.0	Hach Company	<i>Determination of Chlorinated Oxidants (Free and Total) in Water using Disposable Planar Reagent-Filled Cuvettes and Mesofluidic Channel Colorimetry</i>	April 2013		Hach Company
Hach 10241, Rev. 1.2	Hach Company	<i>Spectrophotometric Measurement of Free Chlorine (Cl₂) in Finished Drinking Water</i>	November 2015		Hach Company
ChloroSense	Palintest Ltd.	<i>Measurement of Free and Total Chlorine in Drinking Water by Palintest ChloroSense</i>	August 2009		National Environmental Methods Index
4500-Cl D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
4500-CI D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
4500-CI D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
4500-CI D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
4500-CI F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
4500-CI F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
4500-CI F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
4500-CI F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
4500-CI G	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
4500-CI G	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
4500-CI G	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
4500-CI G	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
4500-CI H	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
4500-CI H	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
4500-Cl H	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
4500-Cl H	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
4500-Cl D-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods
4500-Cl F-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods
4500-Cl G-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods
4500-Cl H-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods

Total Chlorine

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D1253-86	ASTM International	<i>Standard Test Method for Residual Chlorine in Water</i>	1986		ASTM International
D1253-03	ASTM International	<i>Standard Test Method for Residual Chlorine in Water</i>	2003		ASTM International

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D1253-08	ASTM International	<i>Standard Test Method for Residual Chlorine in Water</i>	2008		ASTM International
D1253-14	ASTM International	<i>Standard Test Method for Residual Chlorine in Water</i>	2014		ASTM International
334.0	EPA	<i>Determination of Residual Chlorine in Drinking Water using an On-line Chlorine Analyzer</i>	September 2009	EPA 815-B-09-013	National Environmental Methods Index
Hach 10260, Rev. 1.0	Hach Company	<i>Determination of Chlorinated Oxidants (Free and Total) in Water using Disposable Planar Reagent-Filled Cuvettes and Mesofluidic Channel Colorimetry</i>	April 2013		Hach Company
Palintest Ltd.	ChloroSense	<i>Measurement of Free and Total Chlorine in Drinking Water by Palintest ChloroSense</i>	August 2009		National Environmental Methods Index
4500-Cl D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
4500-Cl D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
4500-Cl D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
4500-Cl D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
4500-Cl E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
4500-Cl E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
4500-Cl E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
4500-Cl E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
4500-CI F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
4500-CI F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
4500-CI F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
4500-CI F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
4500-CI G	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
4500-CI G	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
4500-CI G	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
4500-CI G	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
4500-CI I	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
4500-CI I	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
4500-CI I	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
4500-CI I	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
4500-CI D-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the			Standard Methods

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
		regulations or in Appendix A to Subpart C of Part 141 are approved.			
4500-CI E-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods
4500-CI F-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods
4500-CI G-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods
4500-CI I-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods

Disinfection Byproducts:

Bromate

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D6581-00	ASTM International	<i>Standard Test Methods for Bromate, Bromide, Chlorate and Chlorite in Drinking Water by Chemically Suppressed Ion Chromatography</i>	2000		ASTM International

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D6581-08 A	ASTM International	<i>Standard Test Methods for Bromate, Bromide, Chlorate and Chlorite in Drinking Water by (Chemically) Suppressed Ion Chromatography</i>	2008		ASTM International
D6581-08 B	ASTM International	<i>Standard Test Methods for Bromate, Bromide, Chlorate and Chlorite in Drinking Water by (Electrolytically) Suppressed Ion Chromatography</i>	2008		ASTM International
300.1, Rev. 1.0	EPA	<i>In Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume I</i>	August 2000	EPA 815-R-00-014	National Environmental Methods Index
321.8	EPA	<i>In Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume I</i>	August 2000	EPA 815-R-00-014	National Environmental Methods Index
317, Rev. 2.0	EPA	<i>Determination of Inorganic Oxyhalide Disinfection Byproducts in Drinking Water using Ion Chromatography with the Addition of a Postcolumn Reagent for Trace Bromate Analysis</i>	July 2001	EPA 815-B-01-001	National Environmental Methods Index
326.0, Rev. 1.0	EPA	<i>Determination of Inorganic Oxyhalide Disinfection Byproducts in Drinking Water using Ion Chromatography Incorporating the Addition of a Suppressor Acidified Postcolumn Reagent for Trace Bromate Analysis</i>	June 2002	EPA 815-R-03-007	National Environmental Methods Index
302.0	EPA	<i>Determination of Bromate in Drinking Water using Two-Dimensional Ion Chromatography with Suppressed Conductivity Detection</i>	September 2009	EPA 815-B-09-014	National Environmental Methods Index
557	EPA	<i>Determination of Haloacetic Acids, Bromate, and Dalapon in Drinking Water by Ion Chromatography</i>	September 2009	EPA 815-B-09-012	National Environmental Methods Index

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
		<i>Electrospray Ionization Tandem Mass Spectrometry (IC-ESI-MS/MS)</i>			

Chlorite (Daily Monitoring)

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D6581-00	ASTM International	<i>Standard Test Methods for Bromate, Bromide, Chlorate and Chlorite in Drinking Water by Chemically Suppressed Ion Chromatography</i>	2000		ASTM International
D6581-08 A	ASTM International	<i>Standard Test Methods for Bromate, Bromide, Chlorate and Chlorite in Drinking Water by (Chemically) Suppressed Ion Chromatography</i>	2008		ASTM International
D6581-08 B	ASTM International	<i>Standard Test Methods for Bromate, Bromide, Chlorate and Chlorite in Drinking Water by (Electrolytically) Suppressed Ion Chromatography</i>	2008		ASTM International
300.0, Rev. 2.1	EPA	<i>In Methods for the Determination of Inorganic Substances in Environmental Samples</i>	August 1993	EPA/600/R-93-100	National Environmental Methods Index
300.1, Rev. 1.0	EPA	<i>In Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume I</i>	August 2000	EPA 815-R-00-014	National Environmental Methods Index
317, Rev. 2.0	EPA	<i>Determination of Inorganic Oxyhalide Disinfection Byproducts in Drinking Water using Ion Chromatography with the Addition of a Postcolumn Reagent for Trace Bromate Analysis</i>	July 2001	EPA 815-B-01-001	National Environmental Methods Index
326.0, Rev. 1.0	EPA	<i>Determination of Inorganic Oxyhalide Disinfection Byproducts in Drinking Water using Ion</i>	June 2002	EPA 815-R-03-007	National Environmental Methods Index

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
		<i>Chromatography Incorporating the Addition of a Suppressor Acidified Postcolumn Reagent for Trace Bromate Analysis</i>			
327, Rev. 1.1	EPA	<i>Determination of Chlorine Dioxide and Chlorite Ion in Drinking Water using Lissamine Green B and Horseradish Peroxidase with Detection by Visible Spectrometry</i>	May 2005	EPA-815-R-05-008	National Environmental Methods Index
ChlordioX Plus	Palintest, Ltd.	<i>Palintest ChlordioX Plus Method – Chlorine Dioxide and Chlorite in Drinking Water by Amperometry using Disposable Sensors</i>	November 2013		Palintest
4500-ClO ₂ E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
4500-ClO ₂ E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
4500-ClO ₂ E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
4500-ClO ₂ E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
4500-ClO ₂ E-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods

Chlorite (Distribution System Monitoring)

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D6581-00	ASTM International	<i>Standard Test Methods for Bromate, Bromide, Chlorate and Chlorite in Drinking Water by</i>	2000		ASTM International

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
		<i>Chemically Suppressed Ion Chromatography</i>			
D6581-08 A	ASTM International	<i>Standard Test Methods for Bromate, Bromide, Chlorate and Chlorite in Drinking Water by (Chemically) Suppressed Ion Chromatography</i>	2008		ASTM International
D6581-08 B	ASTM International	<i>Standard Test Methods for Bromate, Bromide, Chlorate and Chlorite in Drinking Water by (Electrolytically) Suppressed Ion Chromatography</i>	2008		ASTM International
300.0, Rev. 2.1	EPA	<i>In Methods for the Determination of Inorganic Substances in Environmental Samples</i>	August 1993	EPA/600/R-93-100	National Environmental Methods Index
300.1, Rev. 1.0	EPA	<i>In Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume I</i>	August 2000	EPA 815-R-00-014	National Environmental Methods Index
317, Rev. 2.0	EPA	<i>Determination of Inorganic Oxyhalide Disinfection Byproducts in Drinking Water using Ion Chromatography with the Addition of a Postcolumn Reagent for Trace Bromate Analysis</i>	July 2001	EPA 815-B-01-001	National Environmental Methods Index
326.0, Rev. 1.0	EPA	<i>Determination of Inorganic Oxyhalide Disinfection Byproducts in Drinking Water using Ion Chromatography Incorporating the Addition of a Suppressor Acidified Postcolumn Reagent for Trace Bromate Analysis</i>	June 2002	EPA 815-R-03-007	National Environmental Methods Index

Haloacetic Acids (HAA5)

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
552.1, Rev. 1.0	EPA	<i>In Methods for the Determination of Organic Compounds in Drinking Water – Supplement II</i>	August 1992	EPA/600/R-92-129	National Environmental Methods Index
552.2, Rev. 1.0	EPA	<i>In Methods for the Determination of Organic Compounds in Drinking Water – Supplement III</i>	August 1995	EPA/600/R-95-131	National Environmental Methods Index
552.3, Rev. 1.0	EPA	<i>Determination of Haloacetic Acids and Dalapon in Drinking Water by Liquid-Liquid Microextraction, Derivatization, and Gas Chromatography with Electron Capture Detection</i>	July 2003	EPA 815-B-03-002	EPA 815-B-03-002
557	EPA	<i>Determination of Haloacetic Acids, Bromate, and Dalapon in Drinking Water by Ion Chromatography Electrospray Ionization Tandem Mass Spectrometry (IC-ESI-MS/MS)</i>	September 2009	EPA 815-B-09-012	National Environmental Methods Index
6251 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
6251 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
6251 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
6251 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
6251 B-94	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
6251 B-07	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods

Total Trihalomethanes (TTHM)

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
502.2, Rev. 2.1	EPA	In <i>Methods for the Determination of Organic Compounds in Drinking Water – Supplement III</i>	August 1995	EPA/600/R-95-131	National Environmental Methods Index
524.2, Rev. 4.1	EPA	In <i>Methods for the Determination of Organic Compounds in Drinking Water – Supplement III</i>	August 1995	EPA/600/R-95-131	National Environmental Methods Index
524.3	EPA	<i>Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry</i>	June 2009	EPA 815-B-09-009	EPA 815-B-09-009
524.4	EPA	<i>Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry using Nitrogen Purge Gas</i>	May 2013	EPA 815-R-13-002	EPA 815-R-13-002
551.1, Rev. 1.0	EPA	In <i>Methods for the Determination of Organic Compounds in Drinking Water – Supplement III</i>	August 1995	EPA/600/R-95-131	National Environmental Methods Index

Water Quality Parameters

Alkalinity

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D1067-92 B	ASTM International	<i>Standard Test Methods for Acidity or Alkalinity of Water:</i>	1992		ASTM International

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
		<i>Electrometric or Color-Change Titration</i>			
D1067-02 B	ASTM International	<i>Standard Test Methods for Acidity or Alkalinity of Water: Electrometric or Color-Change Titration</i>	2002		ASTM International
D1067-06 B	ASTM International	<i>Standard Test Methods for Acidity or Alkalinity of Water: Electrometric or Color-Change Titration</i>	2006		ASTM International
D1067-11 B	ASTM International	<i>Standard Test Methods for Acidity or Alkalinity of Water: Electrometric or Color-Change Titration</i>	2011		ASTM International
2320 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18th Edition</i>	1992		Standard Methods
2320 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
2320 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
2320 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
2320 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
2320 B-97	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods
I-1030-85	US Geological Survey	<i>In Methods for Determination of Inorganic Substances in Water and Fluvial Sediments, USGS Series: Techniques of Water-Resource</i>	1989		USGS

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
		Investigation Report; edited by Fishman, M.J. and Friedman, L.C.			

Bromide

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D6581-00	ASTM International	<i>Standard Test Methods for Bromate, Bromide, Chlorate and Chlorite in Drinking Water by Chemically Suppressed Ion Chromatography</i>	2000		ASTM International
300.0, Rev. 2.1	EPA	<i>In Methods for the Determination of Inorganic Substances in Environmental Samples</i>	August 1993	EPA/600/R-93-100	National Environmental Methods Index
300.1, Rev. 1.0	EPA	<i>In Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume I</i>	August 2000	EPA 815-R-00-014	National Environmental Methods Index
317, Rev. 2.0	EPA	<i>Determination of Inorganic Oxyhalide Disinfection Byproducts in Drinking Water using Ion Chromatography with the Addition of a Postcolumn Reagent for Trace Bromate Analysis</i>	July 2001	EPA 815-B-01-001	National Environmental Methods Index
326.0, Rev. 1.0	EPA	<i>Determination of Inorganic Oxyhalide Disinfection Byproducts in Drinking Water using Ion Chromatography Incorporating the Addition of a Suppressor Acidified Postcolumn Reagent for Trace Bromate Analysis</i>	June 2002	EPA 815-R-03-007	National Environmental Methods Index

Dissolved Organic Carbon (DOC) for SUVA

DOC samples must be filtered through a 0.45 µm filter as soon as practical after sampling (not to exceed 48 hours). After filtration, DOC samples must be acidified to pH < 2. Analyze acidified DOC samples within 28 days of sample collection. Water passed through the filtration prior to filtration serves as the filtered blank. Filtered blank DOC must be < 0.5 mg/L. Inorganic carbon must be removed from samples prior to analysis.

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
415.3, Rev. 1.1	EPA	<i>Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source Water and Drinking Water</i>	February 2005	EPA/600/R-05/055	EPA/600/R-05/055
415.3, Rev. 1.2	EPA	<i>Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source Water and Drinking Water</i>	September 2009	EPA/600/R-09/122	National Environmental Methods Index
5310 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
5310 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
5310 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
5310 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
5310 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
5310 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
5310 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
5310 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
5310 D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
5310 D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
5310 D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
5310 D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
5310 B-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods
5310 C-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods
5310 D-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods

Magnesium

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D511-93 A	ASTM International	<i>Standard Test Methods for Calcium and Magnesium in Water: Complexometric Titration</i>	1993		ASTM International
D511-03 A	ASTM International	<i>Standard Test Methods for Calcium and Magnesium in Water: Complexometric Titration</i>	2003		ASTM International
D511-09 A	ASTM International	<i>Standard Test Methods for Calcium and Magnesium in Water: Complexometric Titration</i>	2009		ASTM International

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D511-14 A	ASTM International	<i>Standard Test Methods for Calcium and Magnesium in Water: Complexometric Titration</i>	2014		ASTM International
D511-93 B	ASTM International	<i>Standard Test Methods for Calcium and Magnesium in Water: Atomic Absorption Spectrometry</i>	1993		ASTM International
D511-03 B	ASTM International	<i>Standard Test Methods for Calcium and Magnesium in Water: Atomic Absorption Spectrometry</i>	2003		ASTM International
D511-09 B	ASTM International	<i>Standard Test Methods for Calcium and Magnesium in Water: Atomic Absorption Spectrometry</i>	2009		ASTM International
D511-14 B	ASTM International	<i>Standard Test Methods for Calcium and Magnesium in Water: Complexometric Titration</i>	2014		ASTM International
D6919-03	ASTM International	<i>Standard Test Method for Determination of Dissolved Alkali and Alkaline Earth Cations and Ammonium in Water by Ion Chromatography</i>	2003		ASTM International
D6919-09	ASTM International	<i>Standard Test Method for Determination of Dissolved Alkali and Alkaline Earth Cations and Ammonium in Water by Ion Chromatography</i>	2009		ASTM International
200.5, Rev. 4.2	EPA	<i>Determination of Trace Elements in Drinking Water by Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry</i>	October 2003	EPA/600-R-06/115	National Environmental Methods Index
200.7, Rev. 4.4	EPA	<i>In Methods for the Determination of Metals in Environmental Samples, Supplement I</i>	May 1994	EPA/600/R-94/111	National Environmental Methods Index
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18th Edition</i>	1992		Standard Methods
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18th Edition</i>	1992		Standard Methods
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
3500-Mg E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18th Edition</i>	1992		Standard Methods
3500-Mg E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
3500-Mg B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
3500-Mg B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
3500-Mg B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
3111 B-99	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the			Standard Methods

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
		regulations or in Appendix A to Subpart C of Part 141 are approved.			
3120 B-99	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods
3500-Mg B-97	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods

pH

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D1293-84	ASTM International	<i>Standard Test Methods for pH of Water</i>	1984		ASTM International
D1293-95	ASTM International	<i>Standard Test Methods for pH of Water</i>	1995		ASTM International
D1293-99	ASTM International	<i>Standard Test Methods for pH of Water</i>	1999		ASTM International
D1293-12	ASTM International	<i>Standard Test Methods for pH of Water</i>	2012		ASTM International
150.1	EPA	<i>In Methods for Chemical Analysis of Water and Wastes</i>	March 1983	EPA/600/4-79/020	National Environmental Methods Index
150.2	EPA	<i>In Methods for Chemical Analysis of Water and Wastes</i>	March 1983	EPA/600/4-79/020	National Environmental Methods Index
4500-H ⁺ B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18th Edition</i>	1992		Standard Methods
4500-H ⁺ B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
4500-H ⁺ B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
4500-H ⁺ B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
4500-H ⁺ B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
4500-H ⁺ B-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods

SUVA

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
415.3, Rev. 1.1	EPA	<i>Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source Water and Drinking Water</i>	February 2005	EPA/600/R-05/055	EPA/600/R-05/055
415.3, Rev. 1.2	EPA	<i>Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source Water and Drinking Water</i>	September 2009	EPA/600/R-09/122	National Environmental Methods Index

Total Organic Carbon

Inorganic carbon must be removed from samples prior to analysis. TOC samples are not filtered prior to analysis. Acidify TOC samples to pH < 2 at the time of sample collection. Analyze acidified TOC samples within 28 days.

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
415.3, Rev. 1.1	EPA	<i>Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source Water and Drinking Water</i>	February 2005	EPA/600/R-05/055	EPA/600/R-05/055

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
415.3, Rev. 1.2	EPA	<i>Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source Water and Drinking Water</i>	September 2009	EPA/600/R-09/122	National Environmental Methods Index
Hach 10261, Rev. 1.2	Hach Company	<i>Total Organic Carbon in Finished Drinking Water by Catalyzed Ozone Hydroxyl Radical Oxidation Infrared Analysis</i>	December 2015		Hach Company
Hach 10267, Rev. 1.2	Hach Company	<i>Spectrophotometric Measurement of Total Organic Carbon (TOC) in Finished Drinking Water</i>	December 2015		Hach Company
5310 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
5310 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
5310 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
5310 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
5310 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
5310 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
5310 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
5310 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
5310 D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
5310 D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
5310 D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
5310 D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
5310 B-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods
5310 C-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods
5310 D-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods

UV254 for SUVA

UV absorption must be measured at 253.7 nm (rounded to 254 nm). Prior to UV254 analysis, filter samples through 0.45 µm filter. Do not adjust pH of UV254 samples. Analyze samples as soon as practical after sampling, not to exceed 48 hours.

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
415.3, Rev. 1.1	EPA	<i>Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source Water and Drinking Water</i>	February 2005	EPA/600/R-05/055	EPA/600/R-05/055

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
415.3, Rev. 1.2	EPA	<i>Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source Water and Drinking Water</i>	September 2009	EPA/600/R-09/122	National Environmental Methods Index
5910 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19th Edition</i>	1995		Standard Methods
5910 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20th Edition</i>	1998		Standard Methods
5910 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21st Edition</i>	2005		Standard Methods
5910 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22nd Edition</i>	2012		Standard Methods
5910 B-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods
5910 B-11	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the regulations or in Appendix A to Subpart C of Part 141 are approved.			Standard Methods