



## Analytical Methods Recommended for Drinking Water Compliance Monitoring of Secondary Contaminants

Analysis for the following contaminants may be conducted with the methods in the following table, or their equivalent as determined by EPA. Methods for copper, fluoride and pH are listed in 40 CFR 141.23 and methods for the remaining contaminants are in 40 CFR 143.4. Additional methods are listed in Appendix A to Subpart C of Part 141. The recommended monitoring for these contaminants is specified in 40 CFR 143.4.

*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 and 143.*

### Secondary Contaminants:

#### Aluminum

Criteria for analyzing water samples for aluminum, copper, iron, manganese, silver and zinc with digestion or directly, without digestion, and other recommended procedures are contained in *Technical Notes on Drinking Water Methods* (EPA/600/R-94/173), available through EPA's digital publications National Environmental Publications Internet Site ([EPA/600/R-94/173](http://www.epa.gov/epa/600/R-94/173)).

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
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	<a href="http://www.epa.gov/epa/600-R-06/115">EPA/600-R-06/115</a>
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	<a href="#">National Environmental Methods Index</a>
200.8, Rev. 5.4	EPA	<i>In Methods for the Determination of Metals in Environmental Samples, Supplement I</i>	May 1994	EPA/600/R-94/111	<a href="#">National Environmental Methods Index</a>
200.9, Rev. 2.2	EPA	<i>In Methods for the Determination of Metals in Environmental Samples, Supplement I</i>	May 1994	EPA/600/R-94/111	<a href="#">National Environmental Methods Index</a>
3111 D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
3111 D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3111 D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
3111 D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3111 D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3111 D-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.	1999		<a href="#">Standard Methods</a>
3113 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.	1999		<a href="#">Standard Methods</a>
3113 B-04	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.	2004		<a href="#">Standard Methods</a>
3113 B-10	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.	2010		<a href="#">Standard Methods</a>
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.	1999		<a href="#">Standard Methods</a>

## Chloride

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D4327-97	ASTM International	<i>Standard Test Method for Anions in Water by Suppressed Ion Chromatography</i>	1997		<a href="#">ASTM International</a>
D4327-03	ASTM International	<i>Standard Test Method for Anions in Water by Suppressed Ion Chromatography</i>	2003		<a href="#">ASTM International</a>
D4327-11	ASTM International	<i>Standard Test Method for Anions in Water by Suppressed Ion Chromatography</i>	2011		<a href="#">ASTM International</a>
D512-89 B	ASTM International	<i>Standard Test Method for Chloride Ion in Water – Silver Nitrate Titration</i>	1989		<a href="#">ASTM International</a>
D512-04 B	ASTM International	<i>Standard Test Method for Chloride Ion in Water – Silver Nitrate Titration</i>	2004		<a href="#">ASTM International</a>
D512-12 B	ASTM International	<i>Standard Test Method for Chloride Ion in Water – Silver Nitrate Titration</i>	2012		<a href="#">ASTM International</a>
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	<a href="#">National Environmental Methods Index</a>
300.1, Rev. 1.0	EPA	<i>In Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Vol. 1</i>	August 2000	EPA 815-R-00-014	<a href="#">National Environmental Methods Index</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
4500-Cl B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
4500-Cl B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
4500-Cl B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
4500-Cl B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
4500-Cl B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
4500-Cl B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
4500-Cl D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
4500-Cl D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
4500-Cl D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
4500-Cl D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
4500-Cl D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
4500-Cl D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
4110 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.	2000		<a href="#">Standard Methods</a>
4500-Cl 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.	1997		<a href="#">Standard Methods</a>
4500-Cl D-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.	1997		<a href="#">Standard Methods</a>
Method D6508, Rev. 2	Waters Corporation	<i>Test Method for Determination of Dissolved Inorganic Anions in Aqueous Matrices Using Capillary Ion Electrophoresis and Chromate Electrolyte</i>			<a href="#">Waters Corporation</a>

## Color

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
2120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
2120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
2120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
2120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
2120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
2120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
2120 B-01	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.	2001		<a href="#">Standard Methods</a>

## Copper

Criteria for analyzing water samples for aluminum, copper, iron, manganese, silver and zinc with digestion or directly, without digestion, and other recommended procedures are contained in *Technical Notes on Drinking Water Methods* (EPA/600/R-94/173), available through EPA's digital publications National Environmental Publications Internet Site ([EPA/600/R-94/173](#)).

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D1688-95 A	ASTM International	<i>Standard Test Methods for Copper in Water – Atomic Absorption, Direct</i>	1995		<a href="#">ASTM International</a>
D1688-02 A	ASTM International	<i>Standard Test Methods for Copper in Water – Atomic Absorption, Direct</i>	2002		<a href="#">ASTM International</a>
D1688-07 A	ASTM International	<i>Standard Test Methods for Copper in Water – Atomic Absorption, Direct</i>	2007		<a href="#">ASTM International</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D1688-12 A	ASTM International	<i>Standard Test Methods for Copper in Water – Atomic Absorption, Direct</i>	2012		<a href="#">ASTM International</a>
D1688-95 C	ASTM International	<i>Standard Test Method for Copper in Water – Atomic Absorption, Graphite Furnace</i>	1995		<a href="#">ASTM International</a>
D1688-02 C	ASTM International	<i>Standard Test Method for Copper in Water – Atomic Absorption, Graphite Furnace</i>	2002		<a href="#">ASTM International</a>
D1688-07 C	ASTM International	<i>Standard Test Method for Copper in Water – Atomic Absorption, Graphite Furnace</i>	2007		<a href="#">ASTM International</a>
D1688-12 C	ASTM International	<i>Standard Test Method for Copper in Water – Atomic Absorption, Graphite Furnace</i>	2012		<a href="#">ASTM International</a>
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	<a href="#">EPA/600-R-06/115</a>
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	<a href="#">National Environmental Methods Index</a>
200.8, Rev. 5.4	EPA	<i>In Methods for the Determination of Metals in Environmental Samples, Supplement I</i>	May 1994	EPA/600/R-94/111	<a href="#">National Environmental Methods Index</a>
200.9, Rev. 2.2	EPA	<i>In Methods for the Determination of Metals in Environmental Samples, Supplement I</i>	May 1994	EPA/600/R-94/111	<a href="#">National Environmental Methods Index</a>
Hach 8026, Rev. 1.2	Hach Company	<i>Spectrophotometric Measurement of Copper in Finished Drinking Water</i>	December 2015		<a href="#">Hach 8026, Rev. 1.2</a>
Hach 10272, Rev. 1.2	Hach Company	<i>Spectrophotometric Measurement of Copper in Finished Drinking Water</i>	December 2015		<a href="#">Hach 10272, Rev. 1.2</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>



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3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3111 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.	1999		<a href="#">Standard Methods</a>
3113 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.	1999		<a href="#">Standard Methods</a>
3113 B-04	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.	2004		<a href="#">Standard Methods</a>
3113 B-10	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.	2010		<a href="#">Standard Methods</a>
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.	1999		<a href="#">Standard Methods</a>

## Fluoride

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D1179-93 B	ASTM International	<i>Standard Test Methods for Fluoride in Water – Ion Selective Electrode</i>	1993		<a href="#">ASTM International</a>
D1179-99 B	ASTM International	<i>Standard Test Methods for Fluoride in Water – Ion Selective Electrode</i>	1999		<a href="#">ASTM International</a>
D1179-04 B	ASTM International	<i>Standard Test Methods for Fluoride in Water – Ion Selective Electrode</i>	2004		<a href="#">ASTM International</a>
D1179-10 B	ASTM International	<i>Standard Test Methods for Fluoride in Water – Ion Selective Electrode</i>	2010		<a href="#">ASTM International</a>
D1179-16 B	ASTM International	<i>Standard Test Methods for Fluoride in Water – Ion Selective Electrode</i>	2010		<a href="#">ASTM International</a>
D4327-97	ASTM International	<i>Standard Test Method for Anions in Water by Suppressed Ion Chromatography</i>	1997		<a href="#">ASTM International</a>
D4327-03	ASTM International	<i>Standard Test Method for Anions in Water by Suppressed Ion Chromatography</i>	2003		<a href="#">ASTM International</a>
D4327-11	ASTM International	<i>Standard Test Method for Anions in Water by Suppressed Ion Chromatography</i>	2011		<a href="#">ASTM International</a>
129-71W	Bran + Luebbe	<i>Fluoride in Water and Wastewater</i>	December 1972		<a href="#">Seal Analytical</a>
380-75WE	Bran + Luebbe	<i>Fluoride in Water and Wastewater</i>	February 1976		<a href="#">Seal Analytical</a>
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	<a href="#">National Environmental Methods Index</a>
300.1, Rev. 1.0	EPA	<i>In Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Vol. 1</i>	August 2000	EPA 815-R-00-014	<a href="#">National Environmental Methods Index</a>
Hach 10225, Rev. 2.0	Hach Company	<i>Hach Company SPADNS 2 (Arsenic-free) Fluoride Method 10225 –</i>	January 2011		<a href="#">Hach 10225, Rev. 2.0</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
		<i>Spectrophotometric Measurement of Fluoride in Water and Wastewater</i>			
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
4500-F B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
4500-F B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
4500-F B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
4500-F B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
4500-F B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
4500-F B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
4500-F C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
4500-F C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
4500-F C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
4500-F C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
4500-F C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
4500-F C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
4500-F D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
4500-F D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
4500-F D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
4500-F D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
4500-F D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
4500-F D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
4500-F E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
4500-F E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
4500-F E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
4500-F E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
4500-F E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
4500-F E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
4110 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.	2000		<a href="#">Standard Methods</a>
4500-F 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.	1997		<a href="#">Standard Methods</a>
4500-F C-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.	1997		<a href="#">Standard Methods</a>
4500-F D-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.	1977		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
4500-F E-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.	1997		<a href="#">Standard Methods</a>
D6508, Rev. 2	Waters Corp.	<i>Test Method for Determination of Dissolved Inorganic Anions in Aqueous Matrices Using Capillary Ion Electrophoresis and Chromate Electrolyte</i>			<a href="#">Waters Corporation</a>

### Foaming Agent

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
5540 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
5540 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
5540 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
5540 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
5540 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
5540 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
5540 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	2000		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
		Subpart C of Part 141 are approved.			

## Iron

Criteria for analyzing water samples for aluminum, copper, iron, manganese, silver and zinc with digestion or directly, without digestion, and other recommended procedures are contained in *Technical Notes on Drinking Water Methods* (EPA/600/R-94/173), available through EPA's digital publications National Environmental Publications Internet Site ([EPA/600/R-94/173](http://www.epa.gov/epa/600/R-94/173)).

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
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	<a href="http://www.epa.gov/epa/600-R-06/115">EPA/600-R-06/115</a>
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	<a href="#">National Environmental Methods Index</a>
200.9, Rev. 2.2	EPA	<i>In Methods for the Determination of Metals in Environmental Samples, Supplement I</i>	May 1994	EPA/600/R-94/111	<a href="#">National Environmental Methods Index</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>



Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3111 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.	1999		<a href="#">Standard Methods</a>
3113 B-99	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the	1999		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
		regulations or in Appendix A to Subpart C of Part 141 are approved.			
3113 B-04	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.	2004		<a href="#">Standard Methods</a>
3113 B-10	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.	2010		<a href="#">Standard Methods</a>
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.	1999		<a href="#">Standard Methods</a>

## Manganese

Criteria for analyzing water samples for aluminum, copper, iron, manganese, silver and zinc with digestion or directly, without digestion, and other recommended procedures are contained in *Technical Notes on Drinking Water Methods* (EPA/600/R-94/173), available through EPA's digital publications National Environmental Publications Internet Site ([EPA/600/R-94/173](#)).

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
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	<a href="#">EPA/600-R-06/115</a>
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	<a href="#">National Environmental Methods Index</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
200.8, Rev. 5.4	EPA	<i>In Methods for the Determination of Metals in Environmental Samples, Supplement I</i>	May 1994	EPA/600/R-94/111	<a href="#">National Environmental Methods Index</a>
200.9, Rev. 2.2	EPA	<i>In Methods for the Determination of Metals in Environmental Samples, Supplement I</i>	May 1994	EPA/600/R-94/111	<a href="#">National Environmental Methods Index</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3111 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.	1999		<a href="#">Standard Methods</a>
3113 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.	1999		<a href="#">Standard Methods</a>
3113 B-04	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.	2004		<a href="#">Standard Methods</a>
3113 B-10	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.	2010		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
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.	1999		<a href="#">Standard Methods</a>

Odor

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
2150 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
2150 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
2150 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
2150 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
2150 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
2150 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
2150 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.	1997		<a href="#">Standard Methods</a>

## pH

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D1293-95	ASTM International	<i>Standard Test Methods for pH of Water</i>	1995		<a href="#">ASTM International</a>
D1293-99	ASTM International	<i>Standard Test Methods for pH of Water</i>	1999		<a href="#">ASTM International</a>
D1293-12	ASTM International	<i>Standard Test Methods for pH of Water</i>	2012		<a href="#">ASTM International</a>
150.1	EPA	In <i>Methods for Chemical Analysis of Water and Wastes</i>	March 1983	EPA/600/4-79/020	<a href="#">National Environmental Methods Index</a>
150.2	EPA	In <i>Methods for Chemical Analysis of Water and Wastes</i>	March 1983	EPA/600/4-79/020	<a href="#">National Environmental Methods Index</a>
150.3	EPA	<i>Determination of pH in Drinking Water</i>	February 2017	EPA-815-B-17-001	<a href="#">EPA-815-B-17-001</a>
4500-H <sup>+</sup> B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
4500-H <sup>+</sup> B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
4500-H <sup>+</sup> B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
4500-H <sup>+</sup> B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
4500-H <sup>+</sup> B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
4500-H <sup>+</sup> B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
4500-H <sup>+</sup> 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.	2000		<a href="#">Standard Methods</a>

## Silver

Criteria for analyzing water samples for aluminum, copper, iron, manganese, silver and zinc with digestion or directly, without digestion, and other recommended procedures are contained in *Technical Notes on Drinking Water Methods* (EPA/600/R-94/173), available through EPA's digital publications National Environmental Publications Internet Site ([EPA/600/R-94/173](http://www.epa.gov/epaosopr/nepis/index.cfm?fuseaction=main.npis)).

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
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	<a href="http://www.epa.gov/epaosopr/nepis/index.cfm?fuseaction=main.npis">EPA/600-R-06/115</a>
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	<a href="http://www.epa.gov/epaosopr/nepis/index.cfm?fuseaction=main.npis">National Environmental Methods Index</a>
200.8, Rev. 5.4	EPA	<i>In Methods for the Determination of Metals in Environmental Samples, Supplement I</i>	May 1994	EPA/600/R-94/111	<a href="http://www.epa.gov/epaosopr/nepis/index.cfm?fuseaction=main.npis">National Environmental Methods Index</a>
200.9, Rev. 2.2	EPA	<i>In Methods for the Determination of Metals in Environmental Samples, Supplement I</i>	May 1994	EPA/600/R-94/111	<a href="http://www.epa.gov/epaosopr/nepis/index.cfm?fuseaction=main.npis">National Environmental Methods Index</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="http://www.epa.gov/epaosopr/nepis/index.cfm?fuseaction=main.npis">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="http://www.epa.gov/epaosopr/nepis/index.cfm?fuseaction=main.npis">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="http://www.epa.gov/epaosopr/nepis/index.cfm?fuseaction=main.npis">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="http://www.epa.gov/epaosopr/nepis/index.cfm?fuseaction=main.npis">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="http://www.epa.gov/epaosopr/nepis/index.cfm?fuseaction=main.npis">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="http://www.epa.gov/epaosopr/nepis/index.cfm?fuseaction=main.npis">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3113 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3111 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.	1999		<a href="#">Standard Methods</a>
3113 B-99	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the	1999		<a href="#">Standard Methods</a>



Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
		regulations or in Appendix A to Subpart C of Part 141 are approved.			
3113 B-04	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.	2004		<a href="#">Standard Methods</a>
3113 B-10	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.	2010		<a href="#">Standard Methods</a>
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.	1999		<a href="#">Standard Methods</a>
I-3720-85	U.S. Geological Survey	In <i>Methods for Determination of Inorganic Substances in Water and Fluvial Sediments</i> , USGS Series: Techniques of Water-Resource Investigation Report; edited by Fishman, M.J. and Friedman, L.C.	1989		<a href="#">USGS</a>

Sulfate

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D4327-97	ASTM International	<i>Standard Test Method for Anions in Water by Suppressed Ion Chromatography</i>	1997		<a href="#">ASTM International</a>
D4327-03	ASTM International	<i>Standard Test Method for Anions in Water by Suppressed Ion Chromatography</i>	2003		<a href="#">ASTM International</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
D4327-11	ASTM International	<i>Standard Test Method for Anions in Water by Suppressed Ion Chromatography</i>	2011		<a href="#">ASTM International</a>
D516-90	ASTM International	<i>Standard Test Method for Sulfate Ion in Water</i>	1990		<a href="#">ASTM International</a>
D516-02	ASTM International	<i>Standard Test Method for Sulfate Ion in Water</i>	2002		<a href="#">ASTM International</a>
D516-07	ASTM International	<i>Standard Test Method for Sulfate Ion in Water</i>	2007		<a href="#">ASTM International</a>
D516-11	ASTM International	<i>Standard Test Method for Sulfate Ion in Water</i>	2011		<a href="#">ASTM International</a>
D516-16	ASTM International	<i>Standard Test Method for Sulfate ion in Water</i>	2016		<a href="#">ASTM International</a>
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	<a href="#">National Environmental Methods Index</a>
300.1, Rev. 1.0	EPA	<i>In Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Vol. 1</i>	August 2000	EPA 815-R-00-014	<a href="#">National Environmental Methods Index</a>
375.2, Rev. 2.0	EPA	<i>In Methods for the Determination of Inorganic Substances in Environmental Samples</i>	August 1993	EPA/600/R-93/100	<a href="#">National Environmental Methods Index</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
4110 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> D	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
4500-SO <sub>4</sub> <sup>2-</sup> E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> E	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> F	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
4110 B-00	Standard Methods Online	Online version. Approval year is designated by the last 2 digits. Only online versions cited in the	2000		<a href="#">Standard Methods</a>

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-SO <sub>4</sub> <sup>2-</sup> C-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.	1997		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> D-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.	1997		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> E-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.	1997		<a href="#">Standard Methods</a>
4500-SO <sub>4</sub> <sup>2-</sup> F-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.	1997		<a href="#">Standard Methods</a>
D6508, Rev. 2	Waters Corp.	<i>Test Method for Determination of Dissolved Inorganic Anions in Aqueous Matrices Using Capillary Ion Electrophoresis and Chromate Electrolyte</i>			<a href="#">Waters Corporation</a>

## Total Dissolved Solids

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
2540 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
2540 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
2540 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
2540 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
2540 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
2540 C	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
2540 C-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.	1997		<a href="#">Standard Methods</a>

## Zinc

Criteria for analyzing water samples for aluminum, copper, iron, manganese, silver and zinc with digestion or directly, without digestion, and other recommended procedures are contained in *Technical Notes on Drinking Water Methods* (EPA/600/R-94/173), available through EPA's digital publications National Environmental Publications Internet Site ([EPA/600/R-94/173](#)).

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
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	<a href="#">EPA/600-R-06/115</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
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	<a href="#">National Environmental Methods Index</a>
200.8, Rev. 5.4	EPA	<i>In Methods for the Determination of Metals in Environmental Samples, Supplement I</i>	May 1994	EPA/600/R-94/111	<a href="#">National Environmental Methods Index</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3111 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition</i>	1992		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 19<sup>th</sup> Edition</i>	1995		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition</i>	1998		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 21<sup>st</sup> Edition</i>	2005		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 22<sup>nd</sup> Edition</i>	2012		<a href="#">Standard Methods</a>
3120 B	Standard Methods	<i>Standard Methods for the Examination of Water and Wastewater, 23<sup>rd</sup> Edition</i>	2017		<a href="#">Standard Methods</a>

Method	Organization	Reference Title	Date	EPA Publication Number	Source of Method
3111 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.	1999		<a href="#">Standard Methods</a>
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.	1999		<a href="#">Standard Methods</a>