

Electronic Filing: Received, Clerk's Office 4/8/2019 P.C. #5

From: [McCambridge, Michael](#)
To: [Brown, Don](#)
Cc: [Fox, Tim](#); [Tipsord, Marie](#); [McGill, Richard](#)
Subject: FW: [External] Re: SM 23rd Edition Method Version Dates
Date: Monday, April 8, 2019 11:21:03 AM
Attachments: [SM 23rd Edition SDWA Method Approvals.xlsx](#)
[fact-sheet-expedited-approvals-2018.pdf](#)

Please enter this e-mail and attachments into the record of R19-6 SDWA update.

From: Customer Service <customerservice1@subscriptionoffice.desk-mail.com>
Sent: Friday, April 5, 2019 1:56 PM
To: McCambridge, Michael <Michael.McCambridge@illinois.gov>
Subject: [External] Re: SM 23rd Edition Method Version Dates

From: Wendy Struzik <customerservice1@subscriptionoffice.desk-mail.com>
Sent: Mar 27, 2019, 03:45PM CDT
To: michael.mccambridge@illinois.gov
Subject: Re: SM 23rd Edition Method Version Dates

Dear Michael,

Please see the attached information requested. Please let me know if you require any additional information.

Thank you,

Wendy R. Struzik
Customer Service Specialist
(800) 633-4931

From: Wendy Struzik <michael.mccambridge@illinois.gov>
Sent: Mar 27, 2019, 04:52PM CDT
To: "customerservice1@subscriptionoffice.com"
Subject: RE: [External] Re: SM 23rd Edition Method Version Dates

Thank you, but I got all the information but for the method for chloride. Can you provide that one?

From: Wendy Struzik <customerservice1@subscriptionoffice.desk-mail.com>
Sent: Mar 22, 2019, 10:00AM CDT
To: michael.mccambridge@illinois.gov
Subject: Re: SM 23rd Edition Method Version Dates

Dear Michael,

Thank you for contacting the Subscription Office. I have forwarded your request to my colleague. As soon as I receive the information, I will provide it to you.

Thank you,

Wendy R. Struzik
Customer Service Specialist
(800) 633-4931

From: Wendy Struzik <michael.mccambridge@illinois.gov>

Sent: Mar 12, 2019, 04:24PM CDT

To: "customerservice1@subscriptionoffice.desk-mail.com"

Subject: SM 23rd Edition Method Version Dates

I need method version dates for various methods in Standard Methods, 23rd edition. I am incorporating the latest round of USEPA methods approvals into the Illinois drinking water regulations. I do not yet have a copy of the document. If you provide the needed dates, it will spare the delay that waiting for a copy would cause.

Below are the methods for which I need the approval (version) dates:

Method 2130 B

Method 2320 B

Method 2510 B

Method 2550

Method 3111 B, D

Method 3112 B

Method 3113 B

Method 3114 B

Method 3120 B

Method 3500-Ca B

Method 3500-Mg B

Method 4110 B

Method 4500-Cl D, E, F, G, H, I

Method 4500-ClO₂ C, E

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Method 4500-CN⁻ C, E, F, G

Method 4500-F⁻ B, C, D, E

Method 4500-H⁺ B

Method 4500-NO₃⁻ D, E, F

Method 4500-NO₂⁻ B

Method 4500-O₃ B

Method 4500-P E, F

Method 4500-SiO₂ C, D, E

Method 5310 B, C

Method 5910 B

Method 6251 B

Method 6610 B

Method 6640 B

Method 6651 B

Method 7110 B, C

Method 7120

Method 7500-Cs B

Method 7500-I B, C, D

Method 7500-Ra B, C, D, E

Method 7500-Sr B

Method 7500-3H B

Method 7500-U B, C

Method 9215 B

Method 9221 A, B, C, D, E, F

Method 9222 A, B, C, D, H, I, J

Method 9223 B

Method 9230 C, D

I thank you for your help.

Michael J. McCambridge, Attorney

Illinois Pollution Control Board

312-814-6924 (9:00 a.m. to 7:00 p.m. Mon. through Thurs.)

219-614-5082 (personal cell at all other times)

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APPROVED METHODS IN 23RD EDITION		
PART 2000		
Method	Title	Year of Approval
2120 B	Color - Visual Comparison Method	2001, Editorial Revisions 2011
2130 B	Turbidity - Nephelometric Method	2001, Editorial Revisions 2011
2150 B	Odor - Threshold Odor Test	1997, Editorial Revisions 2011
2320 B	Alkalinity - Titration Method	1997, Editorial Revisions 2011
2510 B	Conductivity - Laboratory Method	1997, Editorial Revisions 2011
2540 C	Solids - Total Dissolved Solids Dried at 180 C	2015
2550	Temperature	2010
PART 3000		
Method	Title	Year of Approval
3111 B	Metals by Flame Atomic Absorption Spectrometry - Direct Air-Acetylene Flame Method	1999, Editorial Revisions 2011
3111 D	Metals by Flame Atomic Absorption Spectrometry - Direct Nitrous Oxide-Acetylene Flame Method	1999, Editorial Revisions 2011
3113 B	Metals by Electrothermal Atomic Absorption Spectrometry - Electrothermal Atomic Absorption Spectrometric Method	2010
3114 B	Arsenic and Selenium by Hydride Generation/Atomic Absorption Spectrometry - Manual Hydride Generation/Atomic Absorption Spectrometric Method	2009, Editorial Revisions 2011
3112 B	Metals by Cold-Vapor Atomic Absorption Spectrometry - Cold-Vapor Atomic Absorption Spectrometric Method	2009, Editorial Revisions 2011
3120 B	Metals by Plasma Emission Spectroscopy - Inductively Coupled Plasma (ICP) Method	1999, Editorial Revisions 2011
3500-Ca B	Calcium - EDTA Titrimetric Method	1997, Editorial Revisions 2011
3500-Mg B	Magnesium - Calculation Method	1997
PART 4000		
Method	Title	Year of Approval
4110 B	Determination of Anions by Ion Chromatography - Ion Chromatography with Chemical Suppression of Eluent Conductivity	2000, Editorial Revisions 2011
4500-Cl D	Chlorine (Residual) - Amperometric Titration Method	2000, Editorial Revisions 2011
4500-Cl E	Chlorine (Residual) - Low-Level Amperometric Titration Method	2000, Editorial Revisions 2011

4500-CI F	Chlorine (Residual) - DPD Ferrous Titrimetric Method	2000, Editorial Revisions 2011
4500-CI G	Chlorine (Residual) - DPD Colorimetric Method	2000, Editorial Revisions 2011
4500-CI H	Chlorine (Residual) - Syringaldazine (FACTS) Method	2000, Editorial Revisions 2011
4500-CI I	Chlorine (Residual) - Iodometric Electrode Technique	2000, Editorial Revisions 2011
4500-CI- B	Chloride - Argentometric Method	1997, Editorial Revisions 2011
4500-CI- D	Chloride - Potentiometric Method	1997, Editorial Revisions 2011
4500-CIO2 C	Chlorine Dioxide - Amperometric Method I	2000, Editorial Revisions 2011
4500-CIO2 E	Chlorine Dioxide - Amperometric Method II	2000, Editorial Revisions 2011
4500-CN- C	Cyanide - Total Cyanide after Distillation	2016
4500-CN- E	Cyanide - Colorimetric Method	2016
4500-CN- F	Cyanide - Cyanide-Ion Selective Electrode Method	2016
4500-CN- G	Cyanide - Cyanides Amenable to Chlorination after Distillation	2016
4500-F- B	Fluoride - Preliminary Distillation Step	1997, Editorial Revisions 2011
4500-F- C	Fluoride - Ion-Selective Electrode Method	1997, Editorial Revisions 2011
4500-F- D	Fluoride - SPADNS Method	1997, Editorial Revisions 2011
4500-F- E	Fluoride - Complexone Method	1997, Editorial Revisions 2011
4500-H+ B	pH Value - Electrometric Method	2000, Editorial Revisions 2011
4500-NO3- D	Nitrogen (Nitrate) - Nitrate Electrode Method	2016
4500-NO3- E	Nitrogen (Nitrate) - Cadmium Reduction Method	2016
4500-NO3- F	Nitrogen (Nitrate) - Automated Cadmium Reduction Method	2016
4500-NO2- B	Nitrogen (Nitrite) - Colorimetric Method	2000, Editorial Revisions 2011
4500-O3 B	Ozone (Residual) - Indigo Colorimetric Method	1997, Editorial Revisions 2011
4500-P E	Phosphorus - Ascorbic Acid Method	2005, Editorial Revisions 2011
4500-P F	Phosphorus - Automated Ascorbic Acid Reduction Method	2005, Editorial Revisions 2011
4500-SiO2 C	Silica - Molybdosilicate Method	1997, Editorial Revisions 2011
4500-SiO2 D	Silica - Heteropoly Blue Method	1997, Editorial Revisions 2011
4500-SiO2 E	Silica - Automated Method for Molybdate-Reactive Silica	1997, Editorial Revisions 2011
4500-SO4-2 C	Sulfate - Gravimetric Method with Ignition of Residue	1997, Editorial Revisions 2011

4500-SO4-2 D	Sulfate - Gravimetric Method with Drying of Residue	1997, Editorial Revisions 2011
4500-SO4-2 E	Sulfate - Turbidimetric Method	1997, Editorial Revisions 2011
4500-SO4-2 F	Sulfate - Automated Methylthymol Blue Method	1997, Editorial Revisions 2011
PART 5000		
Method	Title	Year of Approval
5310 B	Total Organic Carbon - High-Temperature Combustion Method	2014
5310 C	Total Organic Carbon - Persulfate-Ultraviolet or Heated-Persulfate Oxidation Method	2014
5540 C	Surfactants - Anionic Surfactants as MBAS	2000, Editorial Revisions 2011
5910 B	UV-Absorbing Organic Constituents - Ultraviolet Absorption Method	2013
PART 6000		
Method	Title	Year of Approval
6251 B	Disinfection Byproducts: Haloacetic Acids and Trichlorophenol - Micro Liquid-Liquid Extraction Gas Chromatographic Method	2007
6610 B	Carbamate Pesticides - High-Performance Liquid Chromatographic Method	2004, Editorial Revisions 2011
6640 B	Acidic Herbicide Compounds - Micro Liquid-Liquid Extraction Gas Chromatographic Method	2006, Editorial Revisions 2011
6651 B	Glyphosate Herbicide - Liquid Chromatographic Post-Column Fluorescence Method	2005
PART 7000		
Method	Title	Year of Approval
7110 B	Gross Alpha and Gross Beta Radioactivity (Total, Suspended, and Dissolved) - Evaporation Method for Gross Alpha-Beta	2000, Editorial Revisions 2011
7110 C	Gross Alpha and Gross Beta Radioactivity (Total, Suspended, and Dissolved) - Coprecipitation Method for Gross Alpha Radioactivity in Drinking Water	2000, Editorial Revisions 2011
7120	Gamma-Emitting Radionuclides	1997, Editorial Revisions 2011
7500-Cs B	Radioactive Cesium - Precipitation Method	2000, Editorial Revisions 2011

7500-3H B	Tritium - Liquid Scintillation Spectrometric Method	2000, Editorial Revisions 2011
7500-I B	Radioactive Iodine - Precipitation Method	2000, Editorial Revisions 2011
7500-I C	Radioactive Iodine - Ion-Exchange Method	2000, Editorial Revisions 2011
7500-I D	Radioactive Iodine - Distillation Method	2000, Editorial Revisions 2011
7500-Ra B	Radium - Precipitation Method	2001, Editorial Revisions 2011
7500-Ra C	Radium - Emanation Method	2001, Editorial Revisions 2011
7500-Ra D	Radium - Sequential Precipitation Method	2001, Editorial Revisions 2011
7500-Ra E	Radium - Gamma Spectroscopy Method	2007, Editorial Revisions 2011
7500-Sr B	Total Radioactive Strontium and Strontium-90 - Precipitation Method	2001, Editorial Revisions 2011
7500-U B	Uranium - Radiochemical Method	2000, Editorial Revisions 2011
7500-U C	Uranium - Isotopic Method	2000, Editorial Revisions 2011
PART 9000		
Method	Title	Year of Approval
9221 A	Multiple-Tube Fermentation Technique for Members of the Coliform Group - Introduction	2014
9221 B	Multiple-Tube Fermentation Technique for Members of the Coliform Group - Standard Coliform Fermentation Technique	2014
9221 C	Multiple-Tube Fermentation Technique for Members of the Coliform Group - Estimation of Bacterial Density	2014
9221 D	Multiple-Tube Fermentation Technique for Members of the Coliform Group - Presence-Absence (P-A) Coliform Test	2014
9221 E	Multiple-Tube Fermentation Technique for Members of the Coliform Group - Thermotolerant (Fecal) Coliform Procedure	2014
9221 F	Multiple-Tube Fermentation Technique for Members of the Coliform Group - <i>Escherichia coli</i> Procedure Using Fluorogenic Substrate	2014
9222 A	Membrane Filter Technique for Members of the Coliform Group - Introduction	2015
9222 B	Membrane Filter Technique for Members of the Coliform Group - Standard Total Coliform Membrane Filter Procedure using Endo Media	2015

9222 C	Membrane Filter Technique for Members of the Coliform Group - Delayed-Incubation Total Coliform Procedure	2015
9222 D	Membrane Filter Technique for Members of the Coliform Group - Thermotolerant (Fecal) Coliform Membrane Filter Procedure	2015
9222 H	Membrane Filter Technique for Members of the Coliform Group - Partitioning <i>E. coli</i> from MF Total Coliform using EC-MUG Broth	2015
9222 I	Membrane Filter Technique for Members of the Coliform Group - Partitioning <i>E. coli</i> from MF Total Coliform using NA-MUG Agar	2015
9222 J	Membrane Filter Technique for Members of the Coliform Group - Simultaneous Detection of Total Coliform and <i>E. coli</i> by Dual-Chromogen Membrane Filter Procedure	2015
9223 B	Enzyme Substrate Coliform Test - Enzyme Substrate Test	2016
9215 B	Heterotrophic Plate Count - Pour Plate Method	2016
9230 C	Fecal Enterococcus/Streptococcus Groups - Membrane Filter Techniques	2013
9230 D	Fecal Enterococcus/Streptococcus Groups - Fluorogenic Substrate Enterococcus Test	2013



Federal Register Action: Expedited Approval of Alternative Test Procedures for the Analysis of Contaminants Under the Safe Drinking Water Act; Analysis and Sampling Procedures

The EPA is approving 100 alternative test procedures for contaminants listed in the drinking water regulations. These procedures have been determined by the Agency to be as effective as the methods already established in the regulations for the same contaminants. The EPA has used its streamlined approval authority to make these 100 alternative methods available for determining contaminant concentrations in samples collected under the Safe Drinking Water Act (SDWA).

Background

When the EPA establishes a monitoring requirement for a drinking water contaminant, it also specifies at least one “reference” analytical method that can be used to determine the contaminant’s concentration in drinking water. Public water systems must use a testing method approved by the Agency when performing analyses of samples required by regulation.

Reference methods that are incorporated into the regulations are approved through a rulemaking process. In general, this means that EPA publishes a proposed rule, citing the method along with a discussion of how the method can be used to analyze compliance samples. The method is proposed for approval in conjunction with monitoring requirements for one or more specific contaminants. Public comment is solicited. The EPA then decides whether to approve the method. If the method is deemed suitable, it is approved via a final rule. Under that process, the method is not approved for analysis of samples until it is referenced in a final rule.

After establishing monitoring requirements in the final rule, the EPA continues to evaluate additional analytical methods as they become available. When new or revised testing methods for drinking water contaminants are determined to be as effective as methods already established in the regulations, then the Agency can use its streamlined approval authority to make the new methods available for determining contaminant concentrations in samples collected under the Safe Drinking Water Act. Methods approved under the expedited approval process are referenced in Appendix A to Subpart C of Part 141 of the *Code of Federal Regulations*.

Summary of Action

The EPA has evaluated 100 testing methods for contaminants listed in the regulations and determined them to be as effective as methods already established in the regulations for those contaminants. The Agency is using its streamlined approval authority to make these 100 optional, alternative methods listed in Tables 1 and 2 available for determining contaminant concentrations in samples collected under SDWA.

Table 1. EPA, ASTM, and Vendor-Developed Methods

Method	Contaminant(s)/Parameter(s)
EPA Method 900.0, Rev. 1.0	Gross alpha and gross beta activity
ASTM D 516-16	Sulfate
ASTM D 859-16	Silica
ASTM D 1067-16 B	Alkalinity
ASTM D 1179-16 B	Fluoride
ASTM D 5673-16	Uranium
Hach Method 10258, Rev. 2.0	Turbidity
Hach Method 8195, Rev. 3.0	Turbidity

Table 2. Standard methods

Chemistry Methods (23rd edition)

2120 B	4110 B	4500-F ⁻ B	4500-SO ₄ ²⁻ C	7500-Cs B
2130 B	4500-Cl D	4500-F ⁻ C	4500-SO ₄ ²⁻ D	7500- ³ H B
2150 B	4500-Cl E	4500-F ⁻ D	4500-SO ₄ ²⁻ E	7500-I B
2320 B	4500-Cl F	4500-F ⁻ E	4500-SO ₄ ²⁻ F	7500-I C
2510 B	4500-Cl G	4500-H ⁺ B	5310 B	7500-I D
2540 C	4500-Cl H	4500-NO ₃ ⁻ D	5310 C	7500-Ra B
2550	4500-Cl I	4500-NO ₃ ⁻ E	5540 C	7500-Ra C
3111 B	4500-Cl ⁻ B	4500-NO ₃ ⁻ F	5910 B	7500-Ra D
3111 D	4500-Cl ⁻ D	4500-NO ₂ ⁻ B	6251 B	7500-Ra E
3113 B	4500-ClO ₂ C	4500-O ₃ B	6610 B	7500-Sr B
3114 B	4500-ClO ₂ E	4500-P E	6640 B	7500-U B
3112 B	4500-CN ⁻ C	4500-P F	6651 B	7500-U C
3120 B	4500-CN ⁻ E	4500-SiO ₂ C	7110 B	
3500-Ca B	4500-CN ⁻ F	4500-SiO ₂ D	7110 C	
3500-Mg B	4500-CN ⁻ G	4500-SiO ₂ E	7120	

Micro Methods (23rd edition)

9221 A	9221 E	9222 C	9222 J	9230 D
9221 B	9221 F	9222 D	9223 B	
9221 C	9222 A	9222 H	9215 B	
9221 D	9222 B	9222 I	9230 C	

Additional Methods

4500-CN- C (22nd edition)	4500-CN- C (21st edition)	4500-CN- C-99 (online)
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Additional Information and Copies

You can view or download the complete text of the [Expedited Method Approval Federal Register final action](https://www.epa.gov/dwanalyticalmethods) (<https://www.epa.gov/dwanalyticalmethods>).

A listing of the methods approved using the expedited approval process can also be downloaded from the same website.

You can learn more about the Expedited Method Approval Process for drinking water and the alternative testing methods approved under the program by contacting the Safe Drinking Water Hotline (1-800-426-4791) or Glynda Smith, Technical Support Center (MC-140), U.S. Environmental Protection Agency, Office of Water, Office of Ground Water and Drinking Water, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268; (e-mail [Glynda Smith: smith.glynda@epa.gov](mailto:smith.glynda@epa.gov)).