

US EPA approvals under the Clean Water Act correlated with SM edition numbers

The US EPA under the Clean Water Act lists methods that can be used to evaluate specific analytes. The EPA provides the method number and the approval year. Although the US EPA approves only one method, states may provide the option to laboratories to use prior methods.

To locate the edition in which a specific method appears, find the relevant method number in the left column and read across to locate the version noted by the EPA. Some versions appear in more than one edition of *Standard Methods*.

Standard Method	SM 20 th Edition (1999)	SM 21 st Edition (2005)	SM 22 nd Edition (2012)	SM 23 rd Edition (2017)	SM 24 th Edition (2023)
2120 B		2120 B-2001	2120 B-2011	2120 B-2011	2120 B-2021
2120 F		...	2120 F-2011	2120 F-2011	2120 F-2021
2130 B		2130 B-2001	2130 B-2011	2130 B-2011	2130 B-2020
2310 B	2310 B-1997	2310 B-1997	2310 B-2011	2310 B-2011	2310 B-2020
2320 B	2320 B-1997	2320 B-1997	2320 B-2011	2320 B-2011	2320 B-2021
2340 B	2340 B-1997	2340 B-1997	2340 B-2011	2340 B-2011	2340 B-2021
2340 C	2340 C-1997	2340 C-1997	2340 C-2011	2340 C-2011	2340 C-2021
2510 B	2510 B-1997	2510 B-1997	2510 B-2011	2510 B-2011	2510 B-2021
2540 B	2540 B-1997	2540 B-1997	2540 B-2011	2540 B-2015	2540 B-2020
2540 C	2540 C-1997	2540 C-1997	2540 C-2011	2540 C-2015	2540 C-2020
2540 D	2540 D-1997	2540 D-1997	2540 D-2011	2540 D-2015	2540 D-2020
2540 E	2540 E-1997	2540 E-1997	2540 E-2011	2540 E-2015	2540 E-2020
2540 F	2540 F-1997	2540 F-1997	2540 F-2011	2540 F-2015	2540 F-2020
2550 B		2550 B-2000	2550 B-2010	2550 B-2010	2550 B-2010
3111 B	3111 B-1999	3111 B-1999	3111 B-2011	3111 B-2011	3111 B-2019
3111 C	3111 C-1999	3111 C-1999	3111 C-1999	3111 C-1999	3111 C-2019
3111 D	3111 D-1999	3111 D-1999	3111 D-2011	3111 D-2011	3111 D-2019
3111 E	3111 E-1999	3111 E-1999	3111 E-2010	3111 E-2010	3111 E-2019
3112 B			3112 B-2011	3112 B-2011	3112 B-2020
3113 B		3113 B-2004	3113 B-2010	3113 B-2010	3113 B-2020
3113 C			3113 C-2010	3113 C-2010	
3114 B			3114 B-2009	3114 B-2011	3114 B-2020
3114 C			3114 C-2009	3114 C-2011	3114 C-2020
3120 B	3120 B-1999	3120 B-1999	3120 B-2009	3120 B-2011	3120 B-2020
3125 B			3125 B-2009	3125 B-2011	3125 B-2020
3500-Al B		3500-Al B-2001	3500-Al B-2011	3500-Al B-2011	3500-Al B-2020
3500-As B	3500-As B-1997	3500-As B-1997	3500-As B-2011	3500-As B-2011	3500-As B-2020
3500-Ca B	3500-Ca B-1997	3500-Ca B-1997	3500-Ca B-2011	3500-Ca B-2011	3500-Ca B-2020
3500-Cd	3500-Cd-1990	3500-Cd-2001	3500-Cd-2001	3500-Cd-2001	3500-Cd-2020
3500-Cr B			3500-Cr B-2009	3500-Cr B-2011	3500-Cr B-2020
3500-Cr C			3500-Cr C-2009	3500-Cr C-2011	3500-Cr C-2020
3500-Cu B	3500-Cu B-1999	3500-Cu B-1999	3500-Cu B-2011	3500-Cu B-2011	3500-Cu B-2020
3500-Cu C	3500-Cu C-1999	3500-Cu C-1999	3500-Cu C-2011	3500-Cu C-2011	3500-Cu C-2020
3500-Fe B	3500-Fe B-1997	3500-Fe B-1997	3500-Fe B-2011	3500-Fe B-2011	3500-Fe B-2020
3500-Pb B	3500-Pb B-1997	3500-Pb B-1997	3500-Pb B-2011	3500-Pb B-2011	3500-Pb B-2020

Standard Method	SM 20 th Edition (1999)	SM 21 st Edition (2005)	SM 22 nd Edition (2012)	SM 23 rd Edition (2017)	SM 24 th Edition (2023)
3500-Mn B	3500-Mn B-1999	3500-Mn B-1999	3500-Mn B-2011	3500-Mn B-2011	3500-Mn B-2020
3500-K B	3500-K B-1997	3500-K B-1997	3500-K B-2011	3500-K B-2011	3500-K B-2020
3500-K C	3500-K C-1997	3500-K C-1997	3500-K C-2011	3500-K C-2011	3500-K C-2020
3500-Na B	3500-Na B-1997	3500-Na B-1997	3500-Na B-2011	3500-Na B-2011	3500-Na B-2020
3500-V B	3500-V B-1997	3500-V B-1997	3500-V B-2011	3500-V B-2011	3500-V B-2020
3500-Zn B	3500-Zn B-1997	3500-Zn B-1997	3500-Zn B-2011	3500-Zn B-2011	3500-Zn B-2020
4110 B		4110 B-2000	4110 B-2011	4110 B-2011	4110 B-2020
4110 C		4110 C-2000	4110 C-2011	4110 C-2011	4110 C-2020
4110 D		4110 D-2000	4110 D-2011	4110 D-2011	4110 D-2020
4140 B	4140 B-1997	4140 B-1997	4140 B-2011	4140 B-2011	4140 B-2020
4500-B B		4500-B B-2000	4500-B B-2011	4500-B B-2011	4500 B-2020
4500-Cl B		4500-Cl B-2000	4500-Cl B-2011	4500-Cl B-2011	4500-Cl B-2021
4500-Cl C		4500-Cl C-2000	4500-Cl C-2011	4500-Cl C-2011	4500-Cl C-2021
4500-Cl D		4500-Cl D-2000	4500-Cl D-2011	4500-Cl D-2011	4500-Cl D-2021
4500-Cl E		4500-Cl E-2000	4500-Cl E-2011	4500-Cl E-2011	4500-Cl E-2021
4500-Cl F		4500-Cl F-2000	4500-Cl F-2011	4500-Cl F-2011	4500-Cl F-2021
4500-Cl G		4500-Cl G-2000	4500-Cl G-2011	4500-Cl G-2011	4500-Cl G-2021
4500-Cl ⁻ B	4500-Cl ⁻ B-1997	4500-Cl ⁻ B-1997	4500-Cl ⁻ B-2011	4500-Cl ⁻ B-2011	4500-Cl ⁻ B-2021
4500-Cl ⁻ C	4500-Cl ⁻ C-1997	4500-Cl ⁻ C-1997	4500-Cl ⁻ C-2011	4500-Cl ⁻ C-2011	4500-Cl ⁻ C-2021
4500-Cl ⁻ D	4500-Cl ⁻ D-1997	4500-Cl ⁻ D-1997	4500-Cl ⁻ D-2011	4500-Cl ⁻ D-2011	4500-Cl ⁻ D-2021
4500-Cl ⁻ E	4500-Cl ⁻ E-1997	4500-Cl ⁻ E-1997	4500-Cl ⁻ E-2011	4500-Cl ⁻ E-2011	4500-Cl ⁻ E-2021
4500-CN ⁻ B	4500-CN ⁻ B-1999	4500-CN ⁻ B-1999	4500-CN ⁻ B-2011	4500-CN ⁻ B-2016	4500-CN ⁻ B-2021
4500-CN ⁻ C	4500-CN ⁻ C-1999	4500-CN ⁻ C-1999	4500-CN ⁻ C-2011	4500-CN ⁻ C-2016	4500-CN ⁻ C-2021
4500-CN ⁻ D	4500-CN ⁻ D-1999	4500-CN ⁻ D-1999	4500-CN ⁻ D-2011	4500-CN ⁻ D-2016	4500-CN ⁻ D-2021
4500-CN ⁻ E	4500-CN ⁻ E-1999	4500-CN ⁻ E-1999	4500-CN ⁻ E-2011	4500-CN ⁻ E-2016	4500-CN ⁻ E-2021
4500-CN ⁻ F	4500-CN ⁻ F-1999	4500-CN ⁻ F-1999	4500-CN ⁻ F-2011	4500-CN ⁻ F-2016	4500-CN ⁻ F-2021
4500-CN ⁻ G	4500-CN ⁻ G-1999	4500-CN ⁻ G-1999	4500-CN ⁻ G-2011	4500-CN ⁻ G-2016	4500-CN ⁻ G-2021
4500-CN ⁻ N	...	...	...	4500-CN ⁻ N-2016	4500-CN ⁻ N-2021
4500-CN ⁻ P					4500-CN ⁻ P-2021
4500-CN ⁻ Q					4500-CN ⁻ Q-2021
4500-CN ⁻ R					4500-CN ⁻ R-2021
4500-F ⁻ B	4500-F ⁻ B-1997	4500-F ⁻ B-1997	4500-F ⁻ B-2011	4500-F ⁻ B-2011	4500-F ⁻ B-2021
4500-F ⁻ C	4500-F ⁻ C-1997	4500-F ⁻ C-1997	4500-F ⁻ C-2011	4500-F ⁻ C-2011	4500-F ⁻ C-2021
4500-F ⁻ D	4500-F ⁻ D-1997	4500-F ⁻ D-1997	4500-F ⁻ D-2011	4500-F ⁻ D-2011	4500-F ⁻ D-2021
4500-F ⁻ E	4500-F ⁻ E-1997	4500-F ⁻ E-1997	4500-F ⁻ E-2011	4500-F ⁻ E-2011	4500-F ⁻ E-2021
4500-F ⁻ G					4500-F ⁻ G-2021
4500-NH ₃ B	4500-NH ₃ B-1997	4500-NH ₃ B-1997	4500-NH ₃ B-2011	4500-NH ₃ B-2011	4500-NH ₃ B-2021
4500-NH ₃ C	4500-NH ₃ C-1997	4500-NH ₃ C-1997	4500-NH ₃ C-2011	4500-NH ₃ C-2011	4500-NH ₃ C-2021
4500-NH ₃ D	4500-NH ₃ D-1997	4500-NH ₃ D-1997	4500-NH ₃ D-2011	4500-NH ₃ D-2011	4500-NH ₃ D-2021
4500-NH ₃ E	4500-NH ₃ E-1997	4500-NH ₃ E-1997	4500-NH ₃ E-2011	4500-NH ₃ E-2011	4500-NH ₃ E-2021
4500-NH ₃ F	4500-NH ₃ F-1997	4500-NH ₃ F-1997	4500-NH ₃ F-2011	4500-NH ₃ F-2011	4500-NH ₃ F-2021

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4500-NH ₃ G	4500-NH ₃ G-1997	4500-NH ₃ G-1997	4500-NH ₃ G-2011	4500-NH ₃ G-2011	4500-NH ₃ G-2021
4500-NH ₃ H	4500-NH ₃ H-1997	4500-NH ₃ H-1997	4500-NH ₃ H-2011	4500-NH ₃ H-2011	4500-NH ₃ H-2021
4500-N _{org} B	4500-N _{org} B-1997	4500-N _{org} B-1997	4500-N _{org} B-2011	4500-N _{org} B-2011	4500-N _{org} B-2021
4500-N _{org} C	4500-N _{org} C-1997	4500-N _{org} C-1997	4500-N _{org} C-2011	4500-N _{org} C-2011	4500-N _{org} C-2021
4500-N _{org} D	4500-N _{org} D-1997	4500-N _{org} D-1997	4500-N _{org} D-2011	4500-N _{org} D-2011	4500-N _{org} D-2021
4500-NO ₂ ⁻ B		4500-NO ₂ ⁻ B-2000	4500-NO ₂ ⁻ B-2011	4500-NO ₂ ⁻ B-2011	4500-NO ₂ ⁻ B-2021
4500-NO ₃ ⁻ D		4500-NO ₃ ⁻ D-2000	4500-NO ₃ ⁻ D-2011	4500-NO ₃ ⁻ D-2016	4500-NO ₃ ⁻ D-2019
4500-NO ₃ ⁻ E		4500-NO ₃ ⁻ E-2000	4500-NO ₃ ⁻ E-2011	4500-NO ₃ ⁻ E-2016	4500-NO ₃ ⁻ E-2019
4500-NO ₃ ⁻ F		4500-NO ₃ ⁻ F-2000	4500-NO ₃ ⁻ F-2011	4500-NO ₃ ⁻ F-2016	4500-NO ₃ ⁻ F-2019
4500-NO ₃ ⁻ H		4500-NO ₃ ⁻ H-2000	4500-NO ₃ ⁻ H-2011	4500-NO ₃ ⁻ H-2016	4500-NO ₃ ⁻ H-2019
4500-NO ₃ ⁻ I	...	...	...	4500-NO ₃ ⁻ I-2016	4500-NO ₃ ⁻ I-2019
4500-NO ₃ ⁻ J	...	...	...	...	4500-NO ₃ ⁻ J-2019
4500-H ⁺ B		4500-H ⁺ B-2000	4500-H ⁺ B-2011	4500-H ⁺ B-2011	4500-H ⁺ B-2021
4500-O (B thru G)	...	4500-O (B-G)-2001	4500-O (B-G)-2001	4500-O (B-G)-2016	4500-O (B-G)-2021
4500-O H					4500-O H-2021
4500-P B	4500-P B-1999	4500-P B-1999	4500-P B-2011	4500-P B-2011	4500-P B-2021
4500-P E	4500-P E-1999	4500-P E-1999	4500-P E-2011	4500-P E-2011	4500-P E-2021
4500-P F	4500-P F-1999	4500-P F-1999	4500-P F-2011	4500-P F-2011	4500-P F-2021
4500-P G	4500-P G-1999	4500-P G-1999	4500-P G-2011	4500-P G-2011	4500-P G-2021
4500-P H	4500-P H-1999	4500-P H-1999	4500-P H-2011	4500-P H-2011	4500-P H-2021
4500-SiO ₂ C	4500-SiO ₂ C-1997	4500-SiO ₂ C-1997	4500-SiO ₂ C-2011	4500-SiO ₂ C-2011	4500-SiO ₂ C-2021
4500-SiO ₂ E	4500-SiO ₂ E-1997	4500-SiO ₂ E-1997	4500-SiO ₂ E-2011	4500-SiO ₂ E-2011	4500-SiO ₂ E-2021
4500-SiO ₂ F	4500-SiO ₂ F-1997	4500-SiO ₂ F-1997	4500-SiO ₂ F-2011	4500-SiO ₂ F-2011	4500-SiO ₂ F-2021
4500-SO ₃ ²⁻ B		4500-SO ₃ ²⁻ B-2000	4500-SO ₃ ²⁻ B-2011	4500-SO ₃ ²⁻ B-2011	4500-SO ₃ ²⁻ B-2021
4500-SO ₄ ²⁻ C	4500-SO ₄ ²⁻ C-1997	4500-SO ₄ ²⁻ C-1997	4500-SO ₄ ²⁻ C-2011	4500-SO ₄ ²⁻ C-2011	4500-SO ₄ ²⁻ C-2021
4500-SO ₄ ²⁻ D	4500-SO ₄ ²⁻ D-1997	4500-SO ₄ ²⁻ D-1997	4500-SO ₄ ²⁻ D-2011	4500-SO ₄ ²⁻ D-2011	4500-SO ₄ ²⁻ D-2021
4500-SO ₄ ²⁻ E	4500-SO ₄ ²⁻ E-1997	4500-SO ₄ ²⁻ E-1997	4500-SO ₄ ²⁻ E-2011	4500-SO ₄ ²⁻ E-2011	4500-SO ₄ ²⁻ E-2021
4500-SO ₄ ²⁻ F	4500-SO ₄ ²⁻ F-1997	4500-SO ₄ ²⁻ F-1997	4500-SO ₄ ²⁻ F-2011	4500-SO ₄ ²⁻ F-2011	4500-SO ₄ ²⁻ F-2021
4500-SO ₄ ²⁻ G	4500-SO ₄ ²⁻ G-1997	4500-SO ₄ ²⁻ G-1997	4500-SO ₄ ²⁻ G-2011	4500-SO ₄ ²⁻ G-2011	4500-SO ₄ ²⁻ G-2021

Standard Method	SM 20 th Edition (1999)	SM 21 st Edition (2005)	SM 22 nd Edition (2012)	SM 23 rd Edition (2017)	SM 24 th Edition (2023)
4500-S ² - B		4500-S ² - B-2000	4500-S ² - B-2011	4500-S ² - B-2011	4500-S ² - B-2021
4500-S ² - C		4500-S ² - C-2000	4500-S ² - C-2011	4500-S ² - C-2011	4500-S ² - C-2021
4500-S ² - D		4500-S ² - D-2000	4500-S ² - D-2011	4500-S ² - D-2011	4500-S ² - D-2021
4500-S ² - F		4500-S ² - F-2000	4500-S ² - F-2011	4500-S ² - F-2011	4500-S ² - F-2021
4500-S ² - G		4500-S ² - G-2000	4500-S ² - G-2011	4500-S ² - G-2011	4500-S ² - G-2021
5210		5210 B-2001	5210 B-2001	5210 B-2016	5210 B-2019
5220 B	5220 B-1997	5220 B-1997	5220 B-2011	5220 B-2011	
5220 C	5220 C-1997	5220 C-1997	5220 C-2011	5220 C-2011	
5220 D	5220 D-1997	5220 D-1997	5220 D-2011	5220 D-2011	
5310 B		5310 B-2000	5310 B-2011	5310 B-2014	
5310 C		5310 C-2000	5310 C-2011	5310 C-2014	
5310 D		5310 D-2000	5310 D-2011	5310 D-2011	
5520 B		5520 B-2001	5520 B-2011	5520 B-2011	5520 B-2021
5520 F		5520 F-2001	5520 F-2011	5520 F-2011	5520 F-2021
5520 G					5520 G-2021
5530 B		5530 B-2005	5530 B-2010	5530 B-2010	5530 B-2021
5530 D		5530 D-2005	5530 D-2010	5530 D-2010	5530 D-2021
5540 C		5540 C-2000	5540 C-2011	5540 C-2011	5540 C-2021
6200 B	6200 B-1997	6200 B-1997	6200 B-2011	6200 B-2011	6200 B-2020
6200 C	6200 C-1997	6200 C-1997	6200 C-2011	6200 C-2011	6200 C-2020
6410 B		6410 B-2000	6410 B-2000	6410 B-2000	6410 B-2020
6420 B		6420 B-2000	6420 B-2000	6420 B-2000	6420 B-2020
6440 B		6440 B-2005	6440 B-2005	6440 B-2005	6440 B-2021
6630 B		6630 B-2000	6630 B-2007	6630 B-2007	6630 B-2021
6630 C		6630 C-2000	6630 C-2007	6630 C-2007	6630 C-2021
6640 B		6640 B-2001	6640 B-2006	6640 B-2006	6640 B-2021
7110 B	7110 B	7110 B	7110 B	7110 B	7110 B
7500-Ra B	7500-Ra B	7500-Ra B	7500-Ra B	7500-Ra B	7500-Ra B
7500-Ra C	7500-Ra C	7500-Ra C	7500-Ra C	7500-Ra C	7500-Ra C
9213 D			9213 D-2007	9213 D-2007	9213 D-2007
9221 B			9221 B-2006	9221 B-2014	9221 B-2014
9221 C			9221 C E-2006	9221 C E-2006	9221C E-2006
9221 D			9221 D-1997	9221 D-2014	9221 D-2014
9221 E			9221 C E-2006	9221 E-2014	9221 E-2014
9221 F			9221 F-2006	9221 F-2014	9221 F-2014
9222 B		9222 B-1997	9222 B-2006	9222 B-2015	9222 B-2015
9222 D		9222 D-1997	9222 D-2006	9222 D-2015	9222 D-2015
9222 G	9222 G-1997	9222 G-1997	9222 G-2006		
9222 I				9222 I-2015	9222 I-2015
9223 B			9223 B-2004	9223 B-2016	9223 B-2016
9230 B			9230 B-2007	9230 B-2013	9230 B-2013
9230 C			9230 C-2007	9230 C-2013	9230 C-2013
9230 D			9230 D-2007	9230 D-2013	9230 D-2013

Note: At times the EPA may approve a method that has not yet been published in print format but has been approved by the Standard Methods Committee and is published online.

Note:

SM 18th edition = 1992
SM 19th edition = 1995
SM 20th edition = 1999
SM 21st edition = 2005

SM 22nd edition = 2012

SM 23rd edition = 2017

SM 24th edition = 2023

SM Online methods = see web site for latest available version

CWA approval information from:

40 CFR 136.3 (as of 22 April 2022)

Table 1A – List of Approved Biological Methods for Wastewater and Sewage Sludge

Table 1B – List of Approved Inorganic Test Procedures

Table 1C – List of Approved Test Procedures for Non-Pesticide Organic Compounds

Table 1D – List of Approved Test Procedures for Pesticides

Table 1E – List of Approved Radiologic Test Procedures

Table 1H – List of Approved Microbiological Methods for Ambient Water

<https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-136#136.3>