

Table D.2. Reference standards for chemicals and metals in water

Parameter	National drinking water standards		Tennessee water quality criteria ^c			
	Primary ^a	Secondary ^b	Domestic water	Fish and aquatic life	Recreation	
					Organisms	Water and organisms ^d
<i>Anions (mg/L)</i>						
Chloride		250				
Fluoride	4	2				
Nitrate	10					
Nitrite	1					
Sulfate, as SO ₄		250				
<i>Base/neutral/acid extractable organics (µg/L)</i>						
1,2-Dichlorobenzene	600				17,000	2,700
1,2,4-Trichlorobenzene	70					
1,3-Dichlorobenzene					2,600	400
1,4-Dichlorobenzene (para)	75	5	75		2,600	400
2,4-Dinitrophenol					14,000	70
2,4-Dinitrotoluene					91	1.1
2,4,6-Trichlorophenol					65	21
2-Methyl-4,6-Dinitrophenol					765	13.4
3,4-Benzofluoranthene					0.49	0.044
Benzo(k)fluoranthene					0.49	0.044
Acenaphthylene					2,700	1,200
Anthracene					110,000	9,600
Benzo(a)anthracene					0.49	0.044
Benzo(a)pyrene	0.2			0.2	0.49	0.044
bis-(2-chloroethyl)ether					14	0.31
bis-(2-ethylhexyl)phthalate					59	18
Di-n-butyl phthalate					12,000	2,700
Diethyl phthalate					120,000	23,000
Dimethyl phthalate					2,900,000	313,000
Fluoranthene					370	300
Fluorene					14,000	1,300
Hexachlorobenzene	1				0.0077	0.0075
Hexachlorocyclopentadiene	50				17,000	240
Hexachloroethane					89	19
Nitrobenzene					1,900	17
Pentachlorophenol	1			20	82	2.8
Pyrene					11,000	960
<i>Field measurements</i>						
Chlorine, mg/L				19		
Dissolved oxygen, mg/L				5		
Temperature, °C			30.5		30.5	
Turbidity, JTU ^e	1					
pH, standard units		(6.5, 8.5)	(6.0, 9.0)	(6.5, 8.5)	(6.0, 9.0)	
<i>Metals (mg/L)</i>						
Aluminum		0.2				
Antimony	0.006				4.30	0.014
Arsenic	0.05		0.05	0.36	0.0014	0.00018
Barium	2					
Beryllium	0.004				0.0013	
Cadmium	0.005		0.005	0.0039 ^f		
Chromium, total	0.1		0.1			
Chromium (hexavalent)				0.016		
Copper	1.3 ^g	1		0.018 ^f		
Iron		0.3				

Table D.2 (continued)

Parameter	National drinking water standards		Tennessee water quality criteria ^c			
	Primary ^a	Secondary ^b	Domestic water	Fish and aquatic life	Recreation	
					Organisms	Water and organisms ^d
Lead	0.015 ^g		0.005	0.082 ^f		
Manganese		0.05				
Mercury	0.002		0.002	0.0024	0.00015	0.00014
Nickel	0.1 ^h		0.1	1.418 ^f	4.6	0.61
Selenium	0.05		0.050	0.02		
Silver		0.1		0.004 ^f		
Thallium	0.002		0.002			
Zinc		5		0.117 ^f	0.0063	0.0017
<i>Others</i>						
Asbestos (fibers/L)	7,000,000					
Coliform bacteria (mL)	0.01			0.01		
Color (color units)		15				
Cyanide (mg/L)	0.2		200	0.022	220	0.7
Odor (T.O.N.)		3				
Total dissolved solids (mg/L)		500	500			
<i>Pesticides/herbicides/PCBs (µg/L)</i>						
2,3,7,8-TCDD (Dioxin)	0.00003		0.000001		0.000001	
2,4-D	70					
2,4,5-TP (Silvex)	50					
4,4'-DDT				1.1	0.0059	0.0059
4,4'-DDE					0.0059	0.0059
4,4'-DDD					0.0084	0.0083
Alachlor	2		2			
Aldicarb sulfoxide	4					
Aldrin				3	0.014	0.0013
Atrazine	3		3			
Carbofuran	40		40			
Chlordane	2		2	2.4	0.0059	0.0057
Dalapon	200		200			
Dibromochloropropane	0.2		0.2			
Di(ethylhexyl)adipate	400		400			
Di(ethylhexyl)phthalate	7		6			
Dinoseb	7					
Diquat	20					
a-Endosulfan				0.22	159	74
b-Endosulfan				0.22	159	74
Endothall	100		100			
Endrin	2			0.18	0.81	0.76
Ethylene dibromide	0.05		0.05			
Glyphosate	700		700			
Heptachlor	0.4		0.4	0.52	0.0021	0.0021
Heptachlor epoxide	0.2		0.2	0.52	0.001	0.0011
g-BHC (Lindane)	0.2		0.2	2	0.63	0.19
Methoxychlor	40		40			
Oxamyl (Vydate)	200		200			
PCB-1242					0.00045	0.00044
PCB-1254					0.00045	0.00044
PCB-1221					0.00045	0.00044
PCB-1232					0.00045	0.00044
PCB-1248					0.00045	0.00044
PCB-1260					0.00045	0.00044
PCB-1016					0.00045	0.00044

Table D.2 (continued)

Parameter	National drinking water standards		Tennessee water quality criteria ^c			
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PCB, total	0.5		0.5		0.00045	0.00044
Picloram	500		500			
Simazine	4		4			
Toxaphene	3		3	0.73	0.0075	0.0073
<i>Volatile organics (µg/L)</i>						
1,1,1-Trichloroethane	200		200		170,000	
1,1-Dichloroethene	7		7		32	0.57
1,1,2-Trichloroethane	5		5		420	6
1,1,2,2-Tetrachloroethane			5		110	
1,2-Dichloroethane	5		5		990	3.8
1,2-Dichloroethene	70 ⁱ					
cis-1,2-Dichloroethene	70		70			
trans-1,2-Dichloroethene	100		100			
1,2-Dichloropropane	5		5		39	0.52
cis-1,3-Dichloropropane					1,700	10
trans-1,2-Dichloropropane					1,700	10
Acrolein					780	320
Acrylonitrile					6.6	0.59
Benzene	5		5		710	12
Bromodichloromethane	100 ^j					
Bromoform	100 ^j				3,600	43
Carbon tetrachloride	5		5		44	2.5
Chlorobenzene	100				21,000	680
Chloroethane	200					
Chloroform	100 ^j				4,700	57
Dibromochloromethane	100 ^j				340	4.1
Ethylbenzene	700		700		29,000	3,100
Methylene chloride	5		5		16,000	47
Styrene	100		100			
Tetrachloroethene	5		5		88.5	8
Toluene	1,000		1,000		200,000	6,800
Trichloroethene	5		5		810	27
Trihalomethanes, total	100				100	
Vinyl chloride	2		2		5,250	20
Xylene, total	10,000		10,000			

^a40 CFR Part 141—National Primary Drinking Water Regulations, Subparts B and G, as amended.

^b40 CFR Part 143—National Secondary Drinking Water Regulations, as amended.

^cRules of Tennessee Department of Environment and Conservation, Division of Water Pollution Control, Chapter 1200-4-3, General Water Quality Criteria, as amended.

^dThese criteria, for the protection of public health, pertain to the consumption of water and organisms. They are applied only to waters designated for both recreation and domestic water supply.

^eJTU an NTU are roughly equivalent in the range of 25 to 1000 JTU.

^fThe standard is a function of total hardness. The values in this table correspond to a total-hardness value of 100 mg/L.

^gAction level, which is applicable to community water systems and non-transient, non-community water systems.

^hEPA has deleted the MCL for nickel from the *Code of Federal Regulations*. The state of Tennessee retains a nickel MCL of 100 g/L in its currently effective drinking water regulations.

ⁱSee *cis*-Dichloroethene and *trans*-Dichloroethane of uranium isotopes.

^jLimit for total trihalomethanes (bromodichloromethane + bromoform + chloroform + dibromochloromethane).