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Content

Title: Drinking Water Quality Standards Ch

Date: 2024.11.25

Legislative: 1. Nine Articles drafted and promulgated by Environmental Protection Administration Order (87) Huan-Shu-Tu-Tzu No. 004428 on February 4, 1998 2. Revisions to Article 3 promulgated by Environmental Protection Administration Order Huan-Shu-Tu-Tzu No. 0920028896 on May 7, 2003 3. Revisions to Articles 3, 4, 5 and 6 promulgated by Environmental Protection Administration Order Huan-Shu-Tu-Tzu No. 0940039894 on May 30,

> 4. Revisions to Article 3 promulgated by Environmental Protection Administration Order Huan-Shu-Tu-Tzu No. 0960100652 on January 2, 2008 5. Revisions to Article 3 promulgated by Environmental Protection Administration Order Huan-Shu-Tu-Tzu No.0980106331E on November 26, 2009. 6. Revisions to Article 3 promulgated by Environmental Protection Administration Order Huan-Shu-Tu-Tzu No.1030001229 on January 9, 2014. 7. Revisions to Article 3, 4, 5 promulgated by Environmental Protection Administration Order Huan-Shu-Tu-Tzu No.1060000881 on January 10, 2017. 8. Revisions to Article 5 and addition of Articles 5-1 promulgated by Environmental Protection Administration Order Huan-Shu-Shui-Tzu No. 1111059186A on May 23, 2022.

9. Addition of Articles 3-1 promulgated by Ministry of Environment Order Huan-Bu-Shui-Tzu No. 1131072826 on November 25, 2024.

Content: Article 1 These Standards are determined pursuant to Article 11, Paragraph 2 of the Drinking Water Management Act (herein referred to as "this Act").

> Article 2 These standards shall apply to drinking water supplied from drinking water equipment designated in Article 4 of this Act and other drinking water designated by the central competent authority.

Regulations of these standards are set forth herein. I. Bacterial standards: (Samples for total bacterial count must be collected from the finished water distribution networks that receive water from water treatment utilities with disinfection regime)

Item	Maximum limit	Unit
1. Coliform group	6 (Multiple-tube	Most probable number (MPN)/100
	fermentation method)	milliliters
	6 (Membrane filtration	Colony-forming unit(CFU)/100
	method)	milliliters
2. Total	100	Colony-forming
bacterial count		unit(CFU)/milliliter

II. Physical standards:

njertur etunioni.			
Item	Maximum limit	Unit	
1. Odor	3	Threshold odor number (TON)	
2. Turbidity	2	NTU (nephelometric turbidity	
		unit)	
3. Color	5	Platinum-cobalt unit	

III. Chemical standards:

A. Substances that impact health:

Item	Maximum limit	Unit
1. Arsenic	0.01	milligrams/li
		ter
2. Lead	0.01	milligrams/li
		ter

3. Selenium	1	0.01	milligrams/li
4. Total ch	nromium	0.05	ter milligrams/li
	TO MIT OM		ter
5. Cadmium		0.005	milligrams/li ter
6. Barium		2.0	milligrams/li ter
7. Antimony	/	0.01	milligrams/li ter
8. Nickel		0.1	milligrams/li ter
		0.07 This standard is effective starting on July 1, 2018. 0.02 This standard is	
		effective starting on July 1, 2020.	
9. Mercury		0.002	milligrams/li
		0.001 This standard is effective starting on July 1, 2020.	ter
10. Cyanide	e (as CN-)	0.05	milligrams/li
11. Nitrite	e-nitrogen	0.1	ter milligrams/li ter
Disinfecti on	12. Total Trihalomethanes	0.08	milligrams/li ter
byproducts	13. Haloacetic acids (This concentration is defined as the sum of measured concentrations for five haloacetic acids, including monochloroacetic acid (MCAA), dichloroacetic acid (DCAA), trichloroacetic acid (TCAA), monobromoacetic acid (MBAA), and dibromoacetic acid.)	0.060	milligrams/li ter
	14. Bromate	0.01	milligrams/li ter
	15. Chlorite (This regulation only applies to water supply systems that use gaseous chlorine dioxide as disinfectant)	0.7	milligrams/li ter
Volatile organic	16. Trichloroethene	0.005	milligrams/li ter
compounds	17. Carbon tetrachloride	0.005	milligrams/li ter
	18. 1,1,1-Trichloroethane	0.20	milligrams/li ter
	19. 1,2-Dichloroethane	0.005	milligrams/li

	20. Vinyl chloride	0.002	milligrams/li
			ter
		0.0003	
		This standard is	
		effective starting	
		on July 1, 2018.	
	21. Benzene	0.005	milligrams/li
			ter
	22. 1,4-Dichlorobenzene	0.075	milligrams/li
	22. 1,4-Bienforobenzene	0.075	ter
	23. 1.1-Dichloroethylene	0.007	milligrams/li
	23. 1.1-Dienioloethylene	0.007	ter
	24. Dichloromethane	0.02	milligrams/li
	24. Dienioromethane	0.02	
	25. 1,2-Dichlorobenzene	0.6	ter milligrams/li
	23. 1,2-Dichiorobenzene	0.0	
	26. Toluene	0.7	ter
	26. ToTuene	0.7	milligrams/li
	07 V 1	0 6	ter
	27. Xylenes	0.5	milligrams/li
	(This regulated concentration		ter
	for Xylenes is defined as the		
	sum of the measured concentrations of three		
	xylene isomers, including		
	1,2-Xylene, 1,3-Xylene, and		
	1,4-Xylene.) 28. Cis-1,2-Dichloroethene	0.07	millianama/li
	28. CIS-1,2-DICHTOTOETHERE	0.07	milligrams/li
	20 Tuese 1 2 Dichle seethers	0 1	ter
	29. Trans-1,2-Dichloroethene	0.1	milligrams/li
	20 Tet	0.005	ter
	30. Tetrachloroethene	0.005	milligrams/li
A : 1,	21 5 1 10	0.002	ter
	31. Endosulfan	0.003	milligrams/li
al		0.000	ter
chemicals	32. Lindane	0.0002	milligrams/li
		0.00	ter
	33. Butachlor	0.02	milligrams/li
			ter
	34. Dichlorophenoxyacetic	0.07	milligrams/li
	acid		ter
	35. Paraquat	0.01	milligrams/li
			ter
	36. Methomyl	0.01	milligrams/li
			ter
	37. Carbofuran	0.02	milligrams/li
			ter
	38. Isoprocarb	0.02	milligrams/li
			ter
	39. Methamidophos	0.02	milligrams/li
			ter
	40. Diazinon	0.005	milligrams/li
			ter
	41. Parathion	0.02	milligrams/li
			ter
	42. EPN	0.005	milligrams/li
			ter
	43. Monocrotophos	0.003	milligrams/li
	F		ter
		1	1

Persistent	44 Dioxin	3	Petagram -
organic	This regulated concentration		World Health
pollutants	for Dioxin is defined as the		Organization
	sum of the measured		-
	concentrations of 17		total
	compounds, including 2,3,7,8-		toxicity
	Tetrachlorinated dibenzo-p-		equivalency
	dioxin-2,3,7,8-TeCDD,		quantity/lite
	2,3,7,8-Tetra chlorinated		r
	dibenzofuran,2,3,7,8-TeCDF		(pg-WHO-
	and 2,3,7,8- penta-, hexa-,		TEQ/L)
	hepta-, and octa-chlorinated		
	dioxins and furan. This		
	regulated concentration for		
	Dioxin is multiplied by the		
	dioxin toxic equivalency		
	factor (WHO-TEFs) provided by		
	World Health Organization,		
	and is expressed as a total		
	toxicity equivalency quantity		
	(TEQ). (If any drinking		
	water treatment facilities		
	locate within a 5-kilometer		
	distance having a large		
	pollution source, it must be		
	monitored once every year. If		
	the measured Dioxin		
	concentrations do not exceed		
	the maximum permitted limit		
	for two consecutive years,		
	the monitoring frequency may		
	be reduced to once every two		
	years starting in the		
	following year.)		

B. Substances with potential health impact:

Item	Maximum limit	Unit
1. Flouride (as F-)	0.8	milligrams/li
		ter
2. Nitrate nitrogen	10.0	milligrams/li
		ter
3. Silver	0.05	milligrams/li
		ter
4. Molybdenum	0.07	milligrams/li
(This regulation only applies to water		ter
supply systems with a potential		
pollution source, such as those with		
semiconductor fabrication plants,		
optoelectronic manufacturing plants, or		
parts manufacturing plants, located		
within a 5-kilometer distance upstream		
from their water intake. The testing		
frequency is once per quarter. If the		
test values do not exceed the maximum		
permissible limits for two consecutive		
years, the testing frequency could		
reduce to once per year from the		
following year.)		

5. Indium	0.07	milligrams/li
(This regulation only applies to water		ter
supply systems with a potential		
pollution source, such as those with		
semiconductor fabrication plants,		
optoelectronic manufacturing plants, or		
parts manufacturing plants, located		
within a 5-kilometer distance upstream		
from their water intake The testing		
frequency is once per quarter. If the		
test values do not exceed the maximum		
permissible limits for two consecutive		
years, the testing frequency could		
reduce to once per year from the		
following year.)		
ionioning jour.		

Contaminants that cause aesthetic, cosme		
Item	Maximum limit	Unit
1. Iron	0.3	milligrams/li
		ter
2. Manganese	0.05	milligrams/li
		ter
3. Copper	1.0	milligrams/li
		ter
4. Zinc	5.0	milligrams/li
		ter
5. Sulfate (as SO_4^{2-})	250	milligrams/li
·		ter
6. Phenols	0.001	milligrams/li
		ter
7. Anionic surface-active agents	0.5	milligrams/li
		ter
8. Chloride (as Cl-)	250	milligrams/li
		ter
9. Ammonia nitrogen	0.1	milligrams/li
		ter
10. Total hardness (as CaCO ₃)	300	milligrams/li
		ter
11. Total dissolved solids	500	milligrams/li
		ter
12. Aluminum	0.3	milligrams/li
(This regulation concentration is		ter
defined as the concentration of total	0.2	
aluminum.)	This standard is	
	effective starting	
	on July 1, 2019. (This regulation is	
	not applicable when	
	the turbidity of the	
	water source is over	
	500 NTU in the	
	period of typhoon	
	landfall warning,	
	and when the	
	turbidity of water	
	source is over 1000	
	NTU during the three	
	days after the	
	warning is lifted.)	

D. Limit range of residual chlorine (Limited to water supply systems using chlorine as disinfectant):

		Item	Limit raı	nge	Jn i t		
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Free available res	sidual chlorine	0.2-1.0	milligrams/li
			ter

E. Range for pH index (water treated by stationary continuous water supply equipment on public or private premises are not be subjected to this limitation):

Item	Limit range	Unit
Hydrogen ion concentration index (pH	6.0-8.5	No unit
value)		

Article 3-1 The standards for Per- and Polyfluoroalkyl Substances (PFAS) are as follows:

Item		Limit range	Unit
impact health (Persistent	(PFOA)	This standard is effective starting	milligrams/li ter
pollutants)	acid (PFOS) Perfluorooctane sulfonic acid (PFOS)	0.00007 This standard is effective starting	milligrams/li ter
	acid (PFHxS)		

The water supply entities or management entities of water purification equipment shall, from January 1, 2025, until the effective date mentioned in the preceding paragraph, conduct water quality testing as follows: for equipment with a water supply exceeding 20,000 cubic meters per day, testing shall be performed at least twice, with a minimum interval of 360 days between tests. For equipment with daily water supply below 20,000 cubic meters, at least one test shall be conducted. If any water quality parameter exceeds the maximum limit, the water supply or management entities of the water purification equipment must, within seven days of the issuance of the test report, notify the central competent authority, the central competent authority under the Water Supply Act, and the competent authority of the municipality or county (city) where the equipment is located. Additionally, within 30 days, they must submit a drinking water quality management plan to the central competent authority for recordkeeping and send a copy to the central competent authority under the Water Supply Act and the competent authority of the municipality or county (city) where the equipment is located.

If, before the effective date mentioned in the preceding paragraph, the competent authority conducts random water quality inspections and finds that the drinking water quality test values exceed the maximum limit, the competent authority shall notify the water supply or management entities of the water purification equipment to make improvements. The water supply or management entities must, within 30 days after receiving the notification, submit a drinking water quality management plan to the central competent authority for record-keeping and send a copy to the central competent authority under the Water Supply Act and the competent authority of the municipality or county (city) where the equipment is located.

For the drinking water quality management plan outlined in the previous two paragraphs, if no additional equipment purchases or construction work are involved, the implementation must be completed within three months from the submission date of the plan to the central competent authority for record-keeping. If additional equipment purchases or construction work are required, which must be completed within a maximum of two years from the submission date of the drinking water quality management plan. If the plan cannot be completed within the stipulated timeframe due to natural disasters or other force majeure events, the relevant supporting documents and materials must be submitted to the central competent authority at least 30 days before the deadline to apply for an extension or modification of the management plan for re-approval. Copies of the request should also be sent to the central competent authority under the Water Supply Act, as well as to the competent authority of the municipality or county (city) where the water purification equipment is located.

The implementation deadlines for the previous three drinking water quality management plans shall not exceed the effective date specified in paragraph 1.

Article 4 For tap water, simple water supply and treatment facilities, and community-installed public water supply systems, when source water turbidity value exceeds 1,500 NTU caused by torrential rains or other natural disasters, the maximum turbidity limit for drinking water may apply to 4 NTU.

Drinking water source turbidity testing data in the foregoing paragraph shall be provided by tap water enterprises, simple water supply and treatment units or community-installed public water supply units. Article 5 For tap water, simple water supply and treatment facilities, and community-installed public water supply systems, when source water turbidity value exceeds 1,500 NTU caused by torrential rains or other natural disasters, the limit range of free residual chlorine may apply to the following values (shall apply only to water supply systems that add chlorine disinfectants).

Item	Limit range	Unit
Free residual chlorine	0.2-3.0	milligrams/liter

Article 5-1 For tap water that needs to be supplied by zones due to the natural disasters described in the preceding article, during the natural disaster response actions period, the drinking water quality standards in the supply districts are as follows.

I. Limit range of free residual chlorine (shall apply only to water supply systems that add chlorine disinfectants).

Item	Limit range	Unit
Free residual chlorine	0.2-3.0	milligrams/liter

II. Physical standards:

Item	Maximum limit	Unit
Turbidity		NTU(nephelometric turbidity unit)
Color	10	Platinum-cobalt unit

III. Contaminants that cause aesthetic, cosmetic, and technical effects:

Item	Maximum limit	Unit	
Iron	0.5	milligrams/liter	
Manganese	0.1	milligrams/liter	
Total hardness (as CaCO ₃)	400	milligrams/liter	
Total dissolved solids	800	milligrams/liter	

The natural disaster response actions period described in the first paragraph referred to the period which Central Emergency Operation Center is established to deal with natural disasters, in accordance with Article 13, Paragraph 1 of the Disaster Prevention and Protection Act.

Article 6 (Deleted)

Article 7 Testing methods for each water quality item designated in these Standards shall be designated and officially announced by the central competent authority.

Article 8 A competent authority that conducts water quality analysis in accordance with these Standards may commission an approved analysis laboratory to assist with analysis.

Article 9 Unless an implementation date is separately designated, the regulation items in these standards shall take effect on the date of promulgation.

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