

# Toward a Global Drinking Water Quality Standard

## Inorganics - mg/L

	BST	WHO	EPA	Canada	EEC	S. Africa	UN	Taiwan	CCL	EPA Method
Ammonia	0.3	1.5			0.5	1.5				4500
Bromate	0.02	25			0.01	0.025				300.0
Bromide	0.02									"
Chlorate	0.02	NAD								"
Chloride	2	250	250	250	250	250		250		"
Chlorite	0.02	200				0.2				"
Fluoride	0.2	1.5	4	1.5	1.5	1		0.8		"
Hardness	0.2			x	>60 (as Ca)	20-300		300		2340B
Iodine		NAD								345.1
Nitrate (as NO <sub>3</sub> -)	0.2	50	10	10	50	10		10		300.0
Nitrite (as NO <sub>2</sub> -)	0.1	3	1	3.2	0.5	1				353.2
Sulfate	0.5	250	250	500	250	200		250		300.0

## DBPs - ug/L

Bromochloroacetonitrile	0.5	NAD								551.1
Chloral hydrate	0.5	10								"
Chlorinated acetic acids										552.2
Dichloroacetic acid	1	50								"
Monochloroacetic acid	2	NAD								"
Trichloroacetic acid	1	100								"
Chloropicrin	0.5	NAD								551.1
Dibromoacetonitrile	0.5	100								"
Dichloroacetonitrile	0.5	90								551.1
Nitritotriacetic acid	x	200		400						430.2
Trichloroacetonitrile	0.5	1								551.1

EHL-I301

## Metals - mg/L

	BST	WHO	EPA	Canada	EEC	S. Africa	UN	Taiwan	CCL	EPA Method
Aluminum	0.001	0.2	0.2 - .05		0.2	0.2				200.8
Antimony	0.001	0.005	0.006		0.005	0.005				"
Arsenic	0.001	0.01	0.05	0.025	0.01	0.01		0.05		"
Barium	0.001	0.7	2	1		0.7				"
Beryllium	0.001	NAD	0.004							"
Boron	0.001	0.3		5	1	0.3				"
Cadmium	0.001	0.003	0.005	0.005	0.005	0.01		0.01		"
Chromium	0.001	0.05	0.1	0.05	0.05	0.05		0.05		"
Copper	0.001	1	1 (AL)	1	2	0.5		1		"
Iron	0.001	0.3	0.3	0.3	0.2	0.2		0.3		3111B
Lead	0.0001	0.01	0.015 (AL)	0.01	0.01	0.05		0.05		200.8
Manganese	0.001	0.1	0.05	0.05	0.05	0.05		0.05		"
Mercury (total)	0.0001	0.001	0.002	0.001	0.001	0.005		0.002		"
Molybdenum	0.001	0.07				0.07				"
Nickel	0.001	0.02	0.1		0.02	0.02				"
Selenium	0.002	0.01	0.05	0.01	0.01	0.02		0.01		"
Silver	0.001	U	0.1	0.05	0.01	0.1		0.05		"
Sodium	0.1	200		200	200	100				3111B
Tin	0.001	U								200.8
Uranium	0.001	NAD		0.1						"
Vanadium	0.001									"
Zinc	0.001	3	5	5		1		5		"
Plus 42 additional analytes										"

EHL-M201

## Radiological

Gross alpha activity	0.1 Bq/L	15 pCi/L								900.0
Gross beta activity	1 Bq/L									"

**SOCs - ug/L**

	BST	WHO	EPA	Canada	EEC	S. Africa	UN	Taiwan	CCL	EPA Method
2,4,5-T	0.5	9								515.1
2,4-D	0.5	30	70	100				100		"
2,4-DB	0.5	90								"
Acrylamide	5	0.5			0.1					8316
Aldicarb	1	10	3	9						531.1
Bentazon	0.5	30								515.1
Carbofuran	1	5	40	90						531.1
Chlorophenols										604
2,4,6-Trichlorophenol	0.5	2-300		5						"
2,4-Dichlorophenol	0.5	0.3-40		900						"
2-Chlorophenol	0.5	0.1-10								"
Chlorotoluron	0.5	30								ASTM D4861
DCPA-Acid	0.5									515.1
Dichlorprop	0.5	100								No Method
2,4-Dinitrophenol	0.5									604
Diuron	0.5			150						632
Fenoprop (Silvex) 2,4,5-TP	0.5	9	50							515.1
Isoproturon	0.5	9								242.4 (FDA)
Linuron	0.5									632
MCPA	0.5	2								555
MCPB-Acid	1	NAD								221.1
Mecoprop	0.5	10								555
Pentachlorophenol	0.5	9	1	60				5		515.1
Plus 69 additional analytes										

EHL-L131

**SOCs - ug/L**

	BST	WHO	EPA	Canada	EEC	S. Africa	UN	Taiwan	CCL	EPA Method
Acetochlor	0.1									242.1
Alachlor	0.1	20	2							525.2
Aldrin	0.1	0.03		0.7				3		"
PCBs (Aroclor 1016 - 1260)	0.1 - 5.0									505
Atrazine	0.1	2	3	5						525.2
Chlordane	0.05	0.2	2							505
Chlordecone										No Method
4,4-DDE	0.1									525.2
DDT	0.1	2		3				1		"
Dialkyltins		NAD								No Method
Di(2-ethylhexyl)adipate	1	80	400							525.2
Di(2-ethylhexyl)phthalate	1	8	6							"
Diazinon	0.1			20						"
Dieldrin	0.1	0.03		0.7				3		"
2,4-Dinitrotoluene	0.1									"
2,6-Dinitrotoluene	0.1									"
Disulfoton	0.1									"
Dyfonate	0.1									No Method
Endosulfan	0.1							3		525.2
Endrin	0.1		2	0.2				0.2		"
EPTC	0.1									"
Heptachlor	0.1	0.03	0.4	3				1		"
Heptachlor epoxide	0.1	0.03	0.2	3				1		"
Hexachlorobenzene	0.1	1	1							"
Hexachlorocyclohexanes										No Method
Hexabromobiphenyl										No Method
Lindane	0.1	2	0.2	4				4		525.2
Methoxychlor	0.1	20	4	900						"
Metolachlor	0.1	10		50						"
Metribuzin	0.1			80						"
Mirex	0.5									"
Molinate	0.1	6								"
MX *		NAD								No Method
PAHs - 12 analytes										525.2
Benzo[a]pyrene	0.1	0.7	0.2	0.01	0.01					"
Benzo[b]fluoranthene	0.1				0.1					"
Benzo[k]fluoranthene	0.1				0.1					"
Benzo[g,h,i]perylene	0.1				0.1					"
Indeno[1,2,3-cd]pyrene	0.1				0.1					"
Pendimethalin	0.1	20								8091
Permethrin (cis,trans)	0.1	20								525.2
Prometon	0.1									"
Propanil	0.1	20								632.1
Pyridate		100								No Method
Simazine	0.1	2	4	10						525.2
2,3,7,8-TCDD (Dioxin)			3x10-5							1613
Terbacil	0.1									525.2
Terbufos	0.1			1						"
Toxaphene	10		3					5		505
Tributyltin oxide		2								No Method
Trifuralin	0.1	20								525.2
Plus 128 additional analytes										

EHL-S125

**Volatiles - ug/L**

	BST	WHO	EPA	Canada	EEC	S. Africa	UN	Taiwan	CCL	EPA Method
Benzene	0.5	10	5	5	1			5		524.2
Bromobenzene	0.2									"
Bromomethane	0.5									"
Carbon tetrachloride	0.1	2	5	5				5		"
Chloroacetone		NAD								"
Cyanogen chloride	0.2	70								4500
1,2-Dibromo-3-chloropropane	0.2	1	0.2							504.1
1,2-Dichlorobenzene	0.1	1-10	600	200						524.2
1,3-Dichlorobenzene	0.1	NAD	600							"
1,4-Dichlorobenzene	0.1	0.3-30	75							"
1,1-Dichloroethane	0.1	NAD								"
1,2-Dichloroethane,	0.1	30	5	5	3			5		"
1,1-Dichloroethene	0.2	30	7					7		"
1,2-Dichloroethene (cis)	0.1	50	70							"
Dichloromethane	0.5	20	5	50						"
1,2-Dichloropropane	0.1	20	5							"
1,3-Dichloropropane,	0.1	NAD								"
2,2-Dichloropropane	0.2									"
1,3-Dichloropropene	0.1	20								"
1,1-Dichloropropylene	0.1									"
Epichlorohydrin	1	0.4			0.1					8240 B
Ethylbenzene	0.1	2-200	700	2.4						524.2
Ethylene dibromide (EDB)	0.1	NAD	0.05							504.1
Hexachlorobutadiene	0.2	0.6								524.2
Methyl-t-butyl ether (MTBE)	0.5		20-40							"
Monochlorobenzene	0.2	10-120	100							"
Naphthalene	0.2									"
Nitrobenzene	5									"
Styrene	0.2	20	100							"
1,1,2,2,-Tetrachloroethane	0.1									"
Tetrachloroethene	0.2	40	5		10					"
Toluene	0.5	24-170	1000	2.4						"
Trichlorobenzenes (total)	0.2	5-50	70							"
1,1,1-Trichloroethane	0.1	2000	200					200		"
Trichloroethene	0.1	70	5					5		"
Trihalomethanes			100	100	100			100		"
Bromodichloromethane	0.1	60				60				"
Bromoform	0.1	100				100				"
Chloroform	0.1	200				200				"
Dibromochloromethane	0.1	100				100				"
1,2,4-Trimethylbenzene	0.1									"
Vinyl chloride	0.2	5	2	2	0.5			2		"
Xylenes, Total	0.2	20-1800	10000	300						"
Plus 56 additional analytes										"

EHL-V124

Physical Parameters	BST	WHO	EPA	Canada	EEC	S. Africa	UN	Taiwan	CCL	EPA Method
Total dissolved solids	10 mg/L	1000 mg/L	500 mg/L	500 mg/L				500 mg/L		2540 C
Taste and Odor			3 TON							140.1
Temperature				15 deg C						120.1
Turbidity	0.1 NTU	5 NTU	1 NTU	1 NTU		0.5 NTU		4 NTU		180.1
<b>Additional Parameters</b>										
Asbestos		U	7 mf/L							2570B
Chlorine	0.1 mg/L	5 mg/L				0.1-2.5 mg/L		0.2-0.8 mg/L		4500-C1 G
Chlorine dioxide		NAD								4500-C1O2
Color	5 TCU	15 TCU	15 TCU	15 TCU				15 TCU		2120-B
Cyanide	0.02 mg/L	0.07 mg/L	0.2 mg/L	0.2 mg/L	0.05 mg/L			0.01 mg/L		335.4
Di and trichloramine		NAD								4500-C1 G
Monochloramine		3 mg/L								"
Dissolved oxygen										360.1
Edetic acid (EDTA)		0.2 mg/L								3113
Formaldehyde	5 mg/L	0.9 mg/L								6252
Hydrogen Sulfide	0.1 mg/L	0.05 mg/L								4500-S2A4C
pH	0.1	<8.0	6.5-8.5	6.5-8.5		6 - 9.5		6.5-8.5		150.1
Synthetic detergents										5540-C
<b>Microbiological</b>										
Acanthamoeba										
Adenoviruses										
Aeromonas hydrophila										
Caliciviruses										
Coxsackieviruses										
Cyanobacteria										
E-Coli	1 cfu	ND			0 cfu					9223
Echoviruses										
Helicobacter pylori										
Microsporidia										
Mycobacterium avium intracellulare (MAC)										
Total Coliform	1 cfu	ND		10 cfu				<1 cfu		9222 B

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- 1 EHL = Environmental Health Laboratories Broad Spectrum Test
- 2 US EPA = United States Environmental Protection Agency Regulated Analytes July 17, 1996
- 3 US EPA = United States Environmental Protection Agency Secondary or Unregulated Analytes July 17, 1996
- 4 WHO = World Health Organization 1993
- 5 Canada = Canadian Drinking Water Quality Guidelines April 1996
- 6 Taiwan, Taipei Drinking Water Regulations June 25, 1996
- 7 EEC = European Economic Community June 25, 1996
- 8 UN = United Nations June 1996
- 9 CCL = US EPA Contaminant Candidate List March 2, 1998
- 10 South Africa, Umgeni 1998

ND = Not detected in 100 ml sample

NAD - No Adequate Data to permit recommendation of a health-based guideline value.

U = It is unnecessary to recommend a health-based guideline value for these compounds because they are not hazardous to human health at concentrations normally found in drinking water.

□ = Under investigation for possible inclusion into our broad spectrum test.

mf/L = Million fibers per liter

cfu = Colony Forming Unit per 100 ml.

NTU = Nephelometric Turbidity Unit

TCU = True Color Unit

AL = Action Limits for the 90th percentile of samples collected by public water supplies.

Bq/L = becquerels per liter

MX \* = 3-chloro-4-dichloromethyl-5-hydroxy-2(5H)-furanone

EHL-S125 - Gas Chromatography/Mass Spectrometry (GC/MS)

EHL-L131 - Liquid Chromatography Photodiode Array (LC/PDA); Mass Spectrometry under development (LC/MS)

EHL-V124 - Gas Chromatography/Mass Spectrometry (GC/MS)

EHL-M201 - Inductively Coupled Plasma/Mass Spectrometry (ICP/MS)

EHL-I301 - Ion Chromatography (IC); Capillary Electrophoresis/Mass Spectrometry under development (CE/MS)