

Analyte Reference Guide

Legend	Contaminant	Public Health Goal	EPA MCL (mg/L)	FDA SOQ (mg/L)	IBWA SOQ (mg/L)	Potential Health effects from exposure above the MCL	Common sources of contaminate in drinking water	Additional Sources of contamination in bottled water operations
OC	Acrylamide	zero	TT8			Nervous system or blood problems. Probable cause of cancer	Added to water during sewage/wastewater increased risk of cancer treatment	
OC	Alachlor	zero	0.002	0.002	0.002	Eye, liver, kidney or spleen problems; anemia; increased risk of cancer	Runoff from herbicide used on row crops such as corn, soybeans, sugar cane and wheat	Air vents (to plant or storage tanks) if vented to outdoors, within close range of agriculture, etc.
OC	Aldicarb		0.003	NA	0.003	Immune system effects, neurological syndromes.	Frequently found contaminant esp. in sandy soil	
OC	Aldicarb Sulfone		0.003	NA	0.003	Immune system effects, neurological syndromes.	Frequently found contaminant esp. in sandy soil	
OC	Aldicarb Sulfoxide		0.004	NA	0.004	Immune system effects, neurological syndromes.	Frequently found contaminant esp. in sandy soil	
R	Alpha particles	zero	15 picocuries per Liter (pCi/L)	15 picocuries per Liter (pCi/L)	15 picocuries per Liter (pCi/L)	Affects skeletal tissue, bone sarcomas, head sarcomas; probable cause of cancer	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation	
IOC	Aluminum		0.2 ⁹	0.2	0.2	Implicated in neurodegenerative disease.	Naturally occurring as a consequence of leaching from soil and rock. Aluminum salts used as coagulants in water treatment.	Residual aluminum due to high aluminum concentrations in source water.
IOC	Antimony	0.006	0.006	0.006	0.006	Increase in blood cholesterol; decrease in blood sugar. Carcinogen. Irritation to eyes & skin tissue.	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder, iron & steel mfg as a hardening alloy and textile mills.	Trace contaminant from leaching of certain types of carbon.
IOC	Arsenic	0	Currently 0.050. Will be 0.010 as of 1/23/06	0.050 (currently under review for SOQ revision)	0.010	Malignant tumors of skin and lungs. May cause problems with the nervous system.	Erosion of natural deposits; runoff from orchards, runoff from glass, electronics production waste, wood treatment compounds, pharmaceutical manufacturing, and paint & ink formulation.	



Disinfectant



Inorganic Chemical



Organic Chemical



Disinfection Byproduct



Microorganism



Radionuclide

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IOC	Asbestos (fibers >10 micrometers)	7 MFL	7 million fibers per Liter (MFL)			Increased risk of developing benign intestinal polyps	Cement pipe, fireproofing materials, insulation; erosion of natural mineral deposits	
OC	Atrazine	0.003	0.003	0.003	0.003	Affects reproductive system, liver, heart & kidneys; probably cause of cancer	Runoff from herbicide used on row crops such as corn, soybeans, sugar cane and wheat	Air vents (to plant or storage tanks) if vented to outdoors, within close range of agriculture, etc.
IOC	Barium	2	2	2	1	Increase in blood pressure; affects nervous & circulatory systems	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	
OC	Benzene	zero	0.005	0.005	0.001	Anemia; decrease in blood platelets; Leukemia	Used as a solvent in mfg pharmaceuticals, plastics, pesticides & paints; leaching from gas storage tanks and landfills	Environmental exposure either in plant, during transportation or in storage; sometimes present in sources which are naturally carbonated.
OC	Benzo(a)pyrene (PAHs)	zero	0.0002	0.0002	0.0002	Reproductive difficulties; increased risk of cancer	Leaching from linings of water storage tanks and distribution lines	
IOC	Beryllium	0.004	0.004	0.004	0.004	Intestinal lesions; effects skin and lung tissues; carcinogen	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries	
R	Beta particles and photon emitters	zero	4 millirems per year	50 pCi/L	50 pCi/L	Affects skeletal tissue, bone sarcomas, head sarcomas; probable cause of cancer	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation	Addition of potassium minerals.
DBP	Bromate	zero	0.010	0.010	0.010	Increased risk of cancer	Byproduct of drinking water disinfection	By-product of ozonation
IOC	Cadmium	0.005	0.005	0.005	0.005	Kidney disorders, bronchitis, anemia	Used in textile mills and timber product processing; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	
OC	Carbofuran	0.04	0.04	0.04	0.04	Affects nervous & reproductive systems, liver & kidneys. Caused leukemia & anemia; probable cause of cancer	Leaching of soil fumigant used on Rice, alfalfa, corn, potatoes & cotton	Air vents (to plant or storage tanks) if vented to outdoors, within close range of agriculture, etc.
OC	Carbon Tetrachloride	zero	0.005	0.005	0.005	Affects nervous system; liver problems; increased risk of cancer	Used as a cleaning agent & in mfg of refrigerants, fumigants, propellants, resins, paint & ink formulation	Environmental exposure either in plant, during transportation or in storage;

D

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IOC

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M

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R

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D	Chloramines (as Cl₂)	MRDLG=4 ¹	MRDL=4.0 ¹	4.0	4.0	Eye/nose irritation; stomach discomfort, anemia	Water additive used to control Microbes	Carbon breakthrough of disinfectant used by municipal sources.
OC	Chlordane	zero	0.002	0.002	0.002	Liver or nervous system problems; increased risk of cancer	Residue of banned termiticide	
IOC	Chloride		250 ⁹	250	250	Unknown for Chloride alone. Effect depends on the cation present.	Widely distributed in nature as salts of sodium (NaCl), Potassium (KCl) and Calcium (CaCl ₂) Leached from rocks into soil and water by weathering	Natural Sources, Sewage and industrial effluents. Urban run-off containing de-icing salts
D	Chlorine (as Cl₂)	MRDLG=4 ¹	MRDL=4.0 ¹	4.0	0.1	Eye/nose irritation; stomach discomfort	Water additive used to control microbes	Carbon breakthrough of disinfectant used by municipal sources.
D	Chlorine Dioxide (as ClO₂)	MRDLG=0.8 ¹	MRDL=0.8 ¹	0.8	0.8	Anemia; infants & young children: nervous system effects	Water additive used to control microbes	Carbon breakthrough of disinfectant used by municipal sources.
DBP	Chlorite	0.8	1.0	1.0	1.0	Anemia; infants & young children: nervous system effects	Byproduct of drinking water disinfection.	By-product from chlorine dioxide treatment.
OC	Chlorobenzene	0.1	0.1	0.1	0.05	Liver or kidney problems	Discharge from chemical and Agricultural chemical factories	Environmental exposure either in plant, during transportation or in storage;
IOC	Chromium (total)	0.1	0.1	0.1	0.05	Liver & kidney disorders; affects skin & digestive system	Discharge from steel and pulp mills; erosion of natural deposits; used in leather & tanning & iron & steel mfg.	
IOC	Copper	1.3	TT ⁷ ; Action Level = 1.3	1.0	1.0	Short term exposure: Gastrointestinal distress. Long term exposure: Liver or kidney damage. People with Wilson's Disease should consult their personal doctor if the amount of copper in their water exceeds the action level	Corrosion of household plumbing systems; erosion of natural deposits	Trace contaminant from contact with copper plumbing and or brass fittings or other components.
M	Cryptosporidium	zero	TT ³			Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	
IOC	Cyanide (as free cyanide)	0.2	0.2	0.1	0.1	Nerve system; endocrine system; thyroid problems	Discharge from steel/metal factories; discharge from plastic and fertilizer factories; leather tanning & finishing	
OC	2,4-D	0.07	0.07	0.07	0.07	Kidney, liver, or adrenal gland problems	Runoff from herbicide used on row crops such as corn, soybeans, sugar cane, and wheat.	Air vents (to plant or storage tanks) if vented to outdoors, within close range of agriculture, etc.

D

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M

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R

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OC	Dalapon	0.2	0.2	0.2	0.2	Affects nervous & reproductive systems, liver, heart & kidneys; probable cause of cancer	Runoff from herbicide used on Row crops such as corn, soybeans, sugar cane, and wheat.	Air vents (to plant or storage tanks) if vented to outdoors, within close range of agriculture, etc.
OC	1,2-Dibromo-3-chloropropane (DBCP)	zero	0.0002	0.0002	0.0002	Reproductive difficulties; increased risk of cancer	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards. Discontinued in 1977	
OC	o-Dichlorobenzene	0.6	0.6	0.6	0.6	Liver, kidney, lungs; circulatory system problems	Discharge from industrial chemical factories; mfg of fumigants, insecticides, waxes, resins, rubber & asphalt	Environmental exposure either in plant, during transportation or in storage
OC	p-Dichlorobenzene	0.075	0.075	0.075	0.075	Anemia; liver, kidney or spleen damage; changes in blood	Discharge from industrial chemical factories; used in moth repellent, germicides, pesticides and soil fumigants	Environmental exposure either in plant, during transportation or in storage
OC	1,2-Dichloroethane	zero	0.005	0.005	0.002	Increased risk of cancer; damage to kidneys & liver	Discharge from industrial chemical factories; mfg. of gasoline, paint, varnish, metal degreasing and insecticide fumigants	Environmental exposure either in plant, during transportation or in storage
OC	1,1-Dichloroethylene	0.007	0.007	0.007	0.002	Liver & kidney problems	Discharge from industrial chemical factories; mfg. of dyes, plastics, perfumes, paints and adhesives	Environmental exposure either in plant, during transportation or in storage
OC	cis-1,2-Dichloroethylene	0.07	0.07	0.07	0.07	Affects liver & nervous circulatory problems	Discharge from industrial chemical factories; used as an industrial solvent in mfg. of dyes, perfumes and lacquers	Environmental exposure either in plant, during transportation or in storage
OC	trans-1,2-Dichloroethylene	0.1	0.1	0.1	0.1	Affects liver nervous circulatory problems	Discharge from industrial chemical factories; used as an industrial solvent in mfg. of dyes, perfumes, lacquers and rubber	Environmental exposure either in plant, during transportation or in storage
OC	Dichloromethane	zero	0.005	0.005	.003	Liver problems; increased risk of cancer	Discharge from drug & chemical factories; photographic film, textile and leather coatings, foam products, paint removers, solvent degreasing aerosol sprays, fumigants, and plastic mfg.	Environmental exposure either in plant, during transportation or in storage
OC	1,2-Dichloropropane	zero	0.005	0.005	0.005	Affects lungs, liver & kidneys	Discharge from industrial chemical factories, insecticidal fumigants, dry cleaning fluids, and mfg. of waxes and petroleum products	Environmental exposure either in plant, during transportation or in storage



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