

10.3.6 PERFORMANCE REPORTING

Performance assessment, based on the long-term review of monitoring data, should be reported internally to relevant staff and departments, as well as to senior management.

Performance reporting on water supply systems is also an important issue for health and regulatory authorities, and for consumers. Providing assurance that performance is reviewed regularly and that improvements are made in response to identified problems contributes to confidence in the water supplied and the water supply organisation. External reporting ensures that system management and drinking water quality performance remains open and transparent. External reporting may be done through an annual report, the contents of which may be determined by a regulatory agency.



10.3.7 SUMMARY OF GUIDELINE VALUES FOR MICROBIAL, CHEMICAL AND PHYSICAL AND CHARACTERISTICS

Tables 10.4 and 10.5 summarise of the guideline values for microbial, chemical and physical and characteristics, to provide a ready reference when monitoring results are being evaluated. More detailed information on each characteristic can be found in the relevant fact sheet.

Table 10.4 Performance measure for *Escherichia coli* within the distribution system

- *Escherichia coli* (*E. coli*) should not be detected in a minimum 100 mL sample of drinking water.
- If detected, immediate corrective action must be taken

Table 10.5 Guideline values for physical and chemical characteristics

Characteristic	Guideline values (mg/L unless otherwise specified)		Comments
	Health	Aesthetic	
Acephate	0.008		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Acrylamide	0.0002		Minor impurity of polyacrylamide, used sometimes as a flocculant aid.
Aldicarb	0.004		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Aldrin & Dieldrin	0.0003 (combined)		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Aluminium (acid-soluble)	c	0.2	Guideline value based on post-flocculation problems; < 0.1 mg/L desirable. Lower levels needed for renal dialysis. No health-based guideline value can be established currently.
Ametryn	0.07		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Amitraz	0.009		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Amitrole	0.009		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Ammonia (as NH ₃)	c	0.5	Presence may indicate sewage contamination and/or microbial activity. High levels may corrode copper pipes and fittings.
Antimony	0.003		Exposure may rise with increasing use of antimony–tin solder.

Characteristic	Guideline values (mg/L unless otherwise specified)		Comments
	Health	Aesthetic	
Arsenic	0.01		From natural sources and mining/industrial/agricultural wastes.
Asbestos	c		From dissolution of minerals/industrial waste, deterioration of asbestos-cement pipes in distribution systems. No evidence of cancer when ingested (unlike inhaled asbestos).
Asulam	0.07		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Atrazine	0.02		Pesticide, has occasionally been reported in Australian drinking waters, but unlikely to be found at levels that may cause health concerns.
Azinphos-methyl	0.03		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Barium	2		Primarily from natural sources.
Benomyl	0.09		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns
Bentazone	0.4		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Benzene	0.001		Could occur in drinking water from atmospheric deposition (motor vehicle emissions) and chemical plant effluent. Human carcinogen.
Beryllium	0.06		From weathering of rocks, atmospheric deposition (burning of fossil fuels) discharges.
Bioresmethrin	0.1		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Boron	4		From natural leaching of minerals and contamination. <1 mg/L in uncontaminated sources; higher levels may be associated with seawater intrusion.
Bromacil	0.4		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Bromate	0.02		Possible by-product of disinfection using ozone, otherwise unlikely to be found in drinking water.
Bromophos-ethyl	0.01		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Bromoxynil	0.01		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Cadmium	0.002		Indicates industrial or agricultural contamination; from impurities in galvanised (zinc) fittings, solders and brasses.
Captan	0.4		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Carbaryl	0.03		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Carbendazim	0.09		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Carfentrazone-ethyl	0.1		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.

Characteristic	Guideline values (mg/L unless otherwise specified)		Comments
	Health	Aesthetic	
Carbofuran	0.01		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Carbon tetrachloride	0.003		Sometimes occurs as impurity in chlorine used for disinfection (it is not a disinfection by-product).
Carbophenothion	0.0005		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Carboxin	0.3		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Chloramine — see monochloramine			
Chlorantraniliprole	6		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Chlorate	c e		By-product of chlorination. Insufficient data to set a health-related guideline value.
Chlordane	0.002		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Chlorfenvinphos	0.002		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Chloride	c	250	From natural mineral salts, effluent contamination. High concentrations more common in groundwater and certain catchments.
Chlorinated furanones (MX)	c e		By-product of chlorination. Insufficient data to set a health-related guideline value.
Chlorine	5 (4.1 for chloram- inated systems)	0.6	Widely used to disinfect water, and this can produce (free) chlorinated organic by-products. Odour threshold generally 0.6 mg/L, but 0.2 mg/L for a few people. In some supplies it may be necessary to exceed the aesthetic guideline in order to maintain an effective disinfectant residual throughout the system.
Chlorine dioxide	c	0.4	Oxidising agent and disinfectant in water treatment.
Chlorite	0.8		By-product of chlorine dioxide disinfection. Action to reduce chlorite is encouraged, but must not compromise disinfection, as non-disinfected water poses significantly greater risk than chlorite.
Chloroacetic acids chloroacetic acid dichloroacetic acid trichloroacetic acid	e 0.15 0.1 0.1		By-product of chlorination. Action to reduce chloroacetic acids is encouraged, but must not compromise disinfection, as non-disinfected water poses significantly greater risk than chloroacetic acids.
Chlorobenzene	0.3	0.01	Could occur in drinking water from spills or discharges. Taste/odour threshold (0.01 mg/L) is well below health level.
Chloroketones 1,1-dichloropropanone 1,3-dichloropropanone 1,1,1-trichloropropanone 1,1,3-trichloropropanone	e c c c c		By-product of chlorination.

Characteristic	Guideline values (mg/L unless otherwise specified)		Comments
	Health	Aesthetic	
Chlorophenols	e		By-product of chlorination of water containing phenol or related chemicals. Action to reduce chlorophenols is encouraged, but must not compromise disinfection, as non-disinfected water poses significantly greater risk than chlorophenols.
2-chlorophenol	0.3	0.0001	
2,4-dichlorophenol	0.2	0.0003	
2,4,6-trichlorophenol	0.02	0.002	
Chloropicrin	c		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns. Data are inadequate to set a health-based guideline.
Chlorothalonil	0.05		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Chloroxuron	0.01		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Chlorpyrifos	0.01		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Chlorsulfuron	0.2		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Chromium (as Cr(VI))	0.05		From industrial/agricultural contamination of raw water or corrosion of materials in distribution system/plumbing. If guideline value exceeded, analyse for hexavalent chromium.
Clopyralid	2		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Colour (true)		15 HU	An important aesthetic characteristic for customer acceptance. Treatment processes can be optimised to remove colour.
Copper	2	1	From corrosion of pipes/fittings by salt, low pH water. Taste threshold 3 mg/L. High concentrations colour water blue/green. >1 mg/L may stain fittings. >2 mg/L can cause ill effects in some people.
Cyanide	0.08		From industrial waste and some plants and bacteria.
Cyanogen chloride (as cyanide)	0.08		By-product of chloramination. Action to reduce cyanogen chloride is encouraged, but must not compromise disinfection, as non-disinfected water poses significantly greater risk than cyanogen chloride.
Cyfluthrin, Beta-cyfluthrin	0.05		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Cypermethrin isomers	0.2		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Cyprodinil	0.09		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
2,4-D [(2,4-Dichlorophenoxy) acetic acid]	0.03		Pesticide, has occasionally been reported in Australian drinking waters, but unlikely to be found at levels that may cause health concerns.
DDT	0.009		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.
Deltamethrin	0.04		Pesticide, unlikely to be found in drinking water at levels that may cause health concerns.

