

Drinking Water Quality for the Period April 2002 - March 2003

Part B. Chemicals of health significance as described by World Health Organization Guidelines for Drinking-water Quality 1993

General Points

- We monitor the quality of our drinking water to the World Health Organization (WHO) Guidelines for Drinking-water Quality (1993) which recommend a set of Guideline Values (GVs) representing the concentration of constituents that will not result in any significant health risk to a consumer over a lifetime consumption of 2 litres per day for 70 years.
- Some GV's are recommended by WHO as provisional GV's where available health effect information is limited.
- Short-term deviations above the WHO GV's do not mean that the water is unsuitable for consumption. There is no question of acute toxicity at concentrations near the GV's as huge safety margins have been allowed for in their derivation.
- In extreme cases of contamination, we will take concerted actions with the Department of Health. The public will be informed to take appropriate measures if necessary.
- Samples are taken at treatment works, service reservoirs, connection points and consumer taps and analysed at site and at WSD's laboratories by WSD's qualified staff.
- Compliance is based on the annual average of monitoring data in accordance with international practice.
- Over 15,000 determinations on the parameters of health significance listed below have been conducted during April 2002 and March 2003.

Parameter	Unit	WHO Guideline Value	Compliance	Monitoring Data (04/2002-03/2003)		
				Average	Minimum	Maximum
Antimony	mg/L	0.005 (P)	✓	<0.001	<0.001	<0.001
Arsenic	mg/L	0.01 (P)	✓	<0.001	<0.001	0.002
Barium	mg/L	0.7	✓	0.014	0.003	0.032
Boron	mg/L	0.3	✓	0.03	<0.02	0.06
Cadmium	mg/L	0.003	✓	<0.001	<0.001	<0.001
Chromium	mg/L	0.05 (P)	✓	<0.002	<0.002	<0.002

Parameter	Unit	WHO Guideline Value	Compliance	Monitoring Data (04/2002-03/2003)		
				Average	Minimum	Maximum
Copper	mg/L	2 (P)	✓	0.003	<0.003	0.045
Cyanide	mg/L	0.07	✓	<0.01	<0.01	<0.01
Fluoride	mg/L	1.5	✓	0.49	<0.10	0.87
Lead	mg/L	0.01	✓	<0.003	<0.003	<0.003
Manganese	mg/L	0.5 (P)	✓	<0.01	<0.01	0.08
Mercury (total)	mg/L	0.001	✓	<0.00005	<0.00005	<0.00005
Molybdenum	mg/L	0.07	✓	0.0015	<0.0004	0.0042
Nickel	mg/L	0.02	✓	0.006	<0.001	0.016
Nitrate (as NO ₃ ⁻)	mg/L	50	✓	13	<2.5	38
Nitrite (as NO ₂ ⁻)	mg/L	3 (P)	✓	<0.004	<0.004	0.010
Selenium	mg/L	0.01	✓	<0.001	<0.001	<0.001
Carbon tetrachloride	µg/L	2	✓	<0.50	<0.50	0.68
Dichloromethane	µg/L	20	✓	<5.0	<5.0	<5.0
1,2-Dichloroethane	µg/L	30	✓	<7.5	<7.5	<7.5
1,1,1-Trichloroethane	µg/L	2000 (P)	✓	<500	<500	<500
Vinyl chloride	µg/L	5	✓	<1.2	<1.2	<1.2
1,1-Dichloroethene	µg/L	30	✓	<7.5	<7.5	<7.5
1,2-Dichloroethene	µg/L	50	✓	<12	<12	<12
Trichloroethene	µg/L	70 (P)	✓	<18	<18	<18
Tetrachloroethene	µg/L	40	✓	<10	<10	<10
Benzene	µg/L	10	✓	<2.5	<2.5	<2.5
Toluene	µg/L	700	✓	<175	<175	<175
Xylenes	µg/L	500	✓	<125	<125	<125
Ethylbenzene	µg/L	300	✓	<75	<75	<75
Styrene	µg/L	20	✓	<5.0	<5.0	<5.0

Parameter	Unit	WHO Guideline Value	Compliance	Monitoring Data (04/2002-03/2003)		
				Average	Minimum	Maximum
Benzo(a)pyrene	µg/L	0.7	✓	<0.18	<0.18	<0.18
Monochlorobenzene	µg/L	300	✓	<75	<75	<75
1,2-Dichlorobenzene	µg/L	1000	✓	<250	<250	<250
1,4-Dichlorobenzene	µg/L	300	✓	<75	<75	<75
Trichlorobenzenes (total)	µg/L	20	✓	<5.0	<5.0	<5.0
Di(2-ethylhexyl)adipate	µg/L	80	✓	<20	<20	<20
Di(2-ethylhexyl)phthalate	µg/L	8	✓	<2	<2	<2
Acrylamide	µg/L	0.5	✓	<0.4	<0.4	<0.4
Epichlorohydrin	µg/L	0.4 (P)	✓	<0.4	<0.4	<0.4
Hexachlorobutadiene	µg/L	0.6	✓	<0.15	<0.15	<0.15
Edetic acid (EDTA)	µg/L	200 (P)	✓	<50	<50	<50
Nitrilotriacetic acid	µg/L	200	✓	<50	<50	<50
Tributyltin oxide	µg/L	2	✓	<0.5	<0.5	<0.5
Alachlor	µg/L	20	✓	<5.0	<5.0	<5.0
Aldicarb	µg/L	10	✓	<2.5	<2.5	<2.5
Aldrin/Dieldrin	µg/L	0.03	✓	<0.008	<0.008	<0.008
Atrazine	µg/L	2	✓	<0.50	<0.50	<0.50
Bentazon	µg/L	30	✓	<7.5	<7.5	<7.5
Carbofuran	µg/L	5	✓	<1.2	<1.2	<1.2
Chlordane	µg/L	0.2	✓	<0.050	<0.050	<0.050
Chlorotoluron	µg/L	30	✓	<7.5	<7.5	<7.5
DDT	µg/L	2	✓	<0.50	<0.50	<0.50
1,2-Dibromo-3-chloropropane	µg/L	1	✓	<0.25	<0.25	<0.25
2,4-D	µg/L	30	✓	<7.5	<7.5	<7.5
1,2-Dichloropropane	µg/L	20 (P)	✓	<5.0	<5.0	<5.0

Parameter	Unit	WHO Guideline Value	Compliance	Monitoring Data (04/2002-03/2003)		
				Average	Minimum	Maximum
1,3-Dichloropropene	µg/L	20	✓	<5.0	<5.0	<5.0
Heptachlor/Heptachlor epoxide	µg/L	0.03	✓	<0.008	<0.008	<0.008
Hexachlorobenzene	µg/L	1	✓	<0.25	<0.25	<0.25
Isoproturon	µg/L	9	✓	<2.2	<2.2	<2.2
Lindane	µg/L	2	✓	<0.50	<0.50	<0.50
MCPA	µg/L	2	✓	<2.0	<2.0	<2.0
Methoxychlor	µg/L	20	✓	<5.0	<5.0	<5.0
Metolachlor	µg/L	10	✓	<2.5	<2.5	<2.5
Molinate	µg/L	6	✓	<1.5	<1.5	<1.5
Pendimethalin	µg/L	20	✓	<5.0	<5.0	<5.0
Pentachlorophenol	µg/L	9 (P)	✓	<2.2	<2.2	<2.2
Permethrin	µg/L	20	✓	<5.0	<5.0	<5.0
Propanil	µg/L	20	✓	<5.0	<5.0	<5.0
Pyridate	µg/L	100	✓	<25	<25	<25
Simazine	µg/L	2	✓	<0.50	<0.50	<0.50
Trifluralin	µg/L	20	✓	<5.0	<5.0	<5.0
2,4-DB	µg/L	90	✓	<22	<22	<22
Dichlorprop (or 2,4-DP)	µg/L	100	✓	<25	<25	<25
Fenoprop (or 2,4,5-TP)	µg/L	9	✓	<2.2	<2.2	<2.2
Mecoprop (or MCPP)	µg/L	10	✓	<2.5	<2.5	<2.5
2,4,5-T	µg/L	9	✓	<2.2	<2.2	<2.2
Monochloramine	mg/L	3	✓	<1.0	<1.0	<1.0
Chlorine	mg/L	5	✓	0.6	<0.1	3.0
Bromate	µg/L	25 (P)	✓	<15	<15	<15
Chlorite	µg/L	200 (P)	✓	<50	<50	<50

Parameter	Unit	WHO Guideline Value	Compliance	Monitoring Data (04/2002-03/2003)		
				Average	Minimum	Maximum
2,4,6-Trichlorophenol	µg/L	200	✓	<50	<50	<50
Formaldehyde	µg/L	900	✓	<225	<225	<225
Bromoform	µg/L	100	✓	<25	<25	<25
Dibromochloromethane	µg/L	100	✓	<25	<25	<25
Bromodichloromethane	µg/L	60	✓	<15	<15	20
Chloroform	µg/L	200	✓	<50	<50	103
Dichloroacetic acid	µg/L	50 (P)	✓	17	<12	62
Trichloroacetic acid	µg/L	100 (P)	✓	<25	<25	72
Chloral hydrate	µg/L	10 (P)	✓	9.2	<2.5	34
Dichloroacetonitrile	µg/L	90 (P)	✓	<22	<22	<22
Dibromoacetonitrile	µg/L	100 (P)	✓	<25	<25	<25
Trichloroacetonitrile	µg/L	1 (P)	✓	<0.25	<0.25	<0.25
Cyanogen chloride (as CN)	mg/L	0.07	✓	<0.02	<0.02	<0.02

Note:

- (1) This is a summary report on drinking water quality.
- (2) All values are compiled in accordance with requirements stipulated by the current quality assurance protocol of the Water Science Division of Water Supplies Department.
- (3) (P) - Provisional guideline value
- (4) < - smaller than
- (5) For heavy metals and trace organics, 100-300 samples per parameter have been analysed.