

## Drinking Water Quality for the Period of April 2009 - March 2010

### Part B. Chemicals of health significance as described by World Health Organization Guidelines for Drinking-water Quality 2006

#### General Points

- Hong Kong enjoys one of the safest water supplies in the world. We monitored the quality of our drinking water according to the World Health Organization (WHO) Guidelines for Drinking-water Quality (2006). The WHO recommends a set of Guideline Values (GVs) representing the concentration of constituents in drinking water that will not result in any significant health risk to a consumer weighing 60 kg 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.
- Occasional deviations above the WHO GV's do not mean that the water is unsuitable for consumption. Large safety margins have been allowed for in the derivation of the GV's.
- 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 were taken at water treatment works, service reservoirs, connection points and consumer taps and analysed at site and in WSD's laboratories by WSD's qualified staff.
- The drinking water quality for this period fully complied with the World Health Organization Guidelines for Drinking-water Quality (2006).
- Compliance is based on the annual average of monitoring data in accordance with international practice.

Parameter	Unit	Monitoring Data (04/2009 - 03/2010)			WHO 2006 Guideline Value	Compliance
		Minimum	Maximum	Average		
Acrylamide	µg/L	< 0.4	< 0.4	< 0.4	0.5	✓
Alachlor	µg/L	< 5.0	< 5.0	< 5.0	20	✓
Aldicarb	µg/L	< 2.5	< 2.5	< 2.5	10	✓
Aldrin and Dieldrin	µg/L	< 0.008	< 0.008	< 0.008	0.03	✓
Antimony	mg/L	< 0.001	< 0.001	< 0.001	0.02	✓
Arsenic	mg/L	< 0.001	0.001	< 0.001	0.01 (P)	✓
Atrazine	µg/L	< 0.50	< 0.50	< 0.50	2	✓
Barium	mg/L	0.004	0.035	0.018	0.7	✓
Benzene	µg/L	< 2.5	< 2.5	< 2.5	10	✓
Benzo(a)pyrene	µg/L	< 0.0020	< 0.0020	< 0.0020	0.7	✓

Parameter	Unit	Monitoring Data (04/2009 - 03/2010)			WHO 2006 Guideline Value	Compliance
		Minimum	Maximum	Average		
Boron	mg/L	< 0.02	0.03	< 0.02	0.5 (T)	✓
Bromate	µg/L	< 2.5	< 2.5	< 2.5	10 (A,T)	✓
Bromodichloromethane	µg/L	< 15	19	< 15	60	✓
Bromoform	µg/L	< 25	< 25	< 25	100	✓
Cadmium	mg/L	< 0.001	< 0.001	< 0.001	0.003	✓
Carbofuran	µg/L	< 1.2	< 1.2	< 1.2	7	✓
Carbon tetrachloride	µg/L	< 0.50	< 0.50	< 0.50	4	✓
Chlorate	µg/L	< 175	< 175	< 175	700 (D)	✓
Chlordane	µg/L	< 0.050	< 0.050	< 0.050	0.2	✓
Chlorine	mg/L	< 0.1	1.5	0.7	5 (C)	✓
Chlorite	µg/L	< 50	< 50	< 50	700 (D)	✓
Chloroform	µg/L	< 50	59	< 50	300	✓
Chlorotoluron	µg/L	< 7.5	< 7.5	< 7.5	30	✓
Chlorpyrifos	µg/L	< 7.5	< 7.5	< 7.5	30	✓
Chromium	mg/L	< 0.002	< 0.002	< 0.002	0.05 (P)	✓
Copper	mg/L	< 0.003	0.033	< 0.003	2	✓
Cyanazine	µg/L	< 0.15	< 0.15	< 0.15	0.6	✓
Cyanide	mg/L	< 0.01	< 0.01	< 0.01	0.07	✓
Cyanogen chloride (as CN)	mg/L	< 0.02	< 0.02	< 0.02	0.07	✓
2,4-D (or 2,4-dichlorophenoxyacetic acid)	µg/L	< 7.5	< 7.5	< 7.5	30	✓
2,4-DB ( or 4-(2,4-dichlorophenoxy) butyric acid)	µg/L	< 22	< 22	< 22	90	✓
DDT and metabolites	µg/L	< 0.50	< 0.50	< 0.50	1	✓
Di(2-ethylhexyl)phthalate	µg/L	< 2	< 2	< 2	8	✓
Dibromoacetonitrile	µg/L	< 25	< 25	< 25	70	✓
Dibromochloromethane	µg/L	< 25	< 25	< 25	100	✓

Parameter	Unit	Monitoring Data (04/2009 - 03/2010)			WHO 2006 Guideline Value	Compliance
		Minimum	Maximum	Average		
1,2-Dibromo-3-chloropropane	µg/L	< 0.25	< 0.25	< 0.25	1	✓
1,2-Dibromoethane	µg/L	< 0.10	< 0.10	< 0.10	0.4(P)	✓
Dichloroacetate	µg/L	< 12	19	< 12	50 (T,D)	✓
Dichloroacetonitrile	µg/L	< 5.0	< 5.0	< 5.0	20 (P)	✓
1,2-Dichlorobenzene	µg/L	< 250	< 250	< 250	1000 (C)	✓
1,4-Dichlorobenzene	µg/L	< 75	< 75	< 75	300 (C)	✓
1,2-Dichloroethane	µg/L	< 7.5	< 7.5	< 7.5	30	✓
1,2-Dichloroethene	µg/L	< 12	< 12	< 12	50	✓
Dichloromethane	µg/L	< 5.0	< 5.0	< 5.0	20	✓
1,2-Dichloropropane	µg/L	< 5.0	< 5.0	< 5.0	40 (P)	✓
1,3-Dichloropropene	µg/L	< 5.0	< 5.0	< 5.0	20	✓
Dichlorprop (or 2,4-DP)	µg/L	< 25	< 25	< 25	100	✓
Dimethoate	µg/L	< 1.5	< 1.5	< 1.5	6	✓
1,4-Dioxane	µg/L	< 12.5	< 12.5	< 12.5	50	✓
Edetic acid (EDTA)	µg/L	< 50	< 50	< 50	600	✓
Endrin	µg/L	< 0.15	< 0.15	< 0.15	0.6	✓
Epichlorohydrin	µg/L	< 0.4	< 0.4	< 0.4	0.4 (P)	✓
Ethylbenzene	µg/L	< 75	< 75	< 75	300 (C)	✓
Fenoprop (or 2,4,5-TP)	µg/L	< 2.2	< 2.2	< 2.2	9	✓
Fluoride	mg/L	0.10	0.74	0.49	1.5	✓
Hexachlorobutadiene	µg/L	< 0.15	< 0.15	< 0.15	0.6	✓
Isoproturon	µg/L	< 2.2	< 2.2	< 2.2	9	✓
Lead	mg/L	< 0.003	0.006	< 0.003	0.01	✓
Lindane	µg/L	< 0.50	< 0.50	< 0.50	2	✓
Manganese	mg/L	< 0.01	0.03	< 0.01	0.4 (C)	✓
MCPA (or 4-(2-methyl-4-chlorophenoxy) acetic acid)	µg/L	< 2.0	< 2.0	< 2.0	2	✓

Parameter	Unit	Monitoring Data (04/2009 - 03/2010)			WHO 2006 Guideline Value	Compliance
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Mecoprop (or MCP)	µg/L	< 2.5	< 2.5	< 2.5	10	✓
Mercury	mg/L	< 0.00005	< 0.00005	< 0.00005	0.006	✓
Methoxychlor	µg/L	< 5.0	< 5.0	< 5.0	20	✓
Metolachlor	µg/L	< 2.5	< 2.5	< 2.5	10	✓
Microcystin-LR (total)	µg/L	< 0.5	< 0.5	< 0.5	1 (P)	✓
Molinate	µg/L	< 1.5	< 1.5	< 1.5	6	✓
Molybdenum	mg/L	< 0.0004	0.0010	0.0006	0.07	✓
Monochloramine	mg/L	< 1.0	< 1.0	< 1.0	3	✓
Monochloroacetate	µg/L	< 10	< 10	< 10	20	✓
Nickel	mg/L	< 0.001	0.009	0.003	0.07	✓
Nitrate (as NO <sub>3</sub> <sup>-</sup> )	mg/L	< 2.5	17	5.5	50	✓
Nitrioltriacetic acid	µg/L	< 50	< 50	< 50	200	✓
Nitrite (as NO <sub>2</sub> <sup>-</sup> )	mg/L	< 0.004	0.006	< 0.004	3	✓
Pendimethalin	µg/L	< 5.0	< 5.0	< 5.0	20	✓
Pentachlorophenol	µg/L	< 2.2	< 2.2	< 2.2	9 (P)	✓
Permethrin	µg/L	< 5.0	< 5.0	< 5.0	300	✓
Pyriproxyfen	µg/L	< 75	< 75	< 75	300	✓
Selenium	mg/L	< 0.003	< 0.003	< 0.003	0.01	✓
Simazine	µg/L	< 0.50	< 0.50	< 0.50	2	✓
Styrene	µg/L	< 5.0	< 5.0	< 5.0	20 (C)	✓
2,4,5-T (or 2,4,5-trichlorophenoxy acetic acid)	µg/L	< 2.2	< 2.2	< 2.2	9	✓
Terbutylazine	µg/L	< 1.8	< 1.8	< 1.8	7	✓
Tetrachloroethene	µg/L	< 10	< 10	< 10	40	✓
Toluene	µg/L	< 175	< 175	< 175	700 (C)	✓
Trichloroacetate	µg/L	< 25	< 25	< 25	200	✓
Trichloroethene	µg/L	< 18	< 18	< 18	20 (P)	✓

Parameter	Unit	Monitoring Data (04/2009 - 03/2010)			WHO 2006 Guideline Value	Compliance
		Minimum	Maximum	Average		
2,4,6-Trichlorophenol	µg/L	< 50	< 50	< 50	200 (C)	✓
Trifluralin	µg/L	< 5.0	< 5.0	< 5.0	20	✓
Uranium	mg/L	< 0.0002	0.0004	< 0.0002	0.015 (P,T)	✓
Vinyl chloride	µg/L	< 0.2	< 0.2	< 0.2	0.3	✓
Xylenes	µg/L	< 125	< 125	< 125	500 (C)	✓

**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 WSD.
- (3) For heavy metals and trace organics, 100-300 samples per parameter have been analysed.
- (4) According to WHO 2006:
  - P = provisional guideline value, the available information on health effects is limited.
  - T = provisional guideline value as calculated guideline value is below the level that can be achieved through practical treatment methods, source protection, etc.
  - A = provisional guideline value as calculated guideline value is below the achievable quantification level.
  - D = provisional guideline value as disinfection may result in the guideline value being exceeded.
  - C = concentrations of the substance at or below the health-based guideline value may affect the appearance, taste or odour of the water, leading to consumer complaints.