

WATER SUPPLIES DEPARTMENT, HONG KONG
QUALITY OF DONGJIANG WATER AT MUK WU PUMPING STATION

Chemical values expressed in mg/l (parts per million)

PRINCIPAL PHYSICAL AND CHEMICAL PARAMETERS	Typical Quality of Dongjiang Water at Muk Wu Pumping Station
	Average (1995/96)
pH Value	7.0
Colour (Hazen)02	5
Turbidity (N.T.U.)	4.0
Conductivity (μ S/cm @ 25°C)	134
Temperature (°C)	24.0
Ammoniacal nitrogen (N)	0.88
Albuminoid nitrogen (N)	0.20
Nitrite nitrogen (N)	0.301
Nitrate nitrogen (N)	1.41
Oxygen absorbed value	0.98
Dissolved solids (180°C)	76
Total alkalinity (CaCO ₃)	27
Total hardness (CaCO ₃)	36
Calcium (Ca)	11.6
Magnesium (Mg)	1.8
Chlorides (Cl)	11
Sulphates (SO ₄)	13
Ortho-phosphates (PO ₄)	0.13
O+AH-phosphates (PO ₄)	0.20
Fluorides (F)	0.27
Iron (Fe)	0.08
Manganese (Mn)	0.13
Silica (SiO ₂)	9.7
BOD (5 days)	5.4
Dissolved Oxygen	4.5
BACTERIOLOGICAL QUALITY	
Coliform/100ml	710
E. Coli/100ml	310
Agar plate count/ml (1 day @ 37°C)	4200

Typical Concentration of Organic and Inorganic Chemical Constituents in Dongjiang Water at Muk Wu Pumping Station (1995/1996)

Parameter	Concentration	Parameter	Concentration	Parameter	Concentration
Organic		Organic		Organic	
Carbon tetrachloride	<0.50	Chlordane	<0.050	Isoproturon	-
Dichloromethane	-	DDT	<0.50	Di(2-ethylhexyl)adipate	-
1,2-dichloroethane	<7.5	Heptachlor/Heptachlor epoxide	<0.008	Di(2-ethylhexyl)phthalate	-
1,1,1-trichloroethane	-	Hexachlorobenzene	<0.25	Formaldehyde	-
Vinyl chloride	-	Lindane	<0.50	Acrylamide	-
1,1-dichloroethene	<7.5	Methoxychlor	<5.0	Tributyltin oxide	-
1,2-dichloroethene	<12	Permethrin	-	Dichloroacetic acid	-
Trichloroethene	<18	Trifluralin	-	Trichloroacetic acid	-
Tetrachloroethene	<10	Propanil	-	Trichloroacetaldehyde	-
Monochlorobenzene	-	Benzo(a)pyrene	<0.18	Dichloroacetonitrile	-
1,2-dichlorobenzene	-	2,4-D	<7.5	Dibromoacetonitrile	-
1,4-dichlorobenzene	-	MCPA	-	Trichloroacetonitrile	-
Trichlorobenzenes (total)	-	Dichlorprop	-	Inorganic	-
Bromoform	<25	2,4-DB	-	Cyanogen Chloride	-
Dibromochloromethane	<25	2,4,5-T	-	Bromate	-
Bromodichloromethane	<15	Fenoprop	-	Chlorite	-
Chloroform	<50	Mecoprop	-	Antimony (mg/l)	-
Benzene	<2.5	Pentachlorophenol	-	Arsenic (mg/l)	<0.001
Toluene	-	2,4,6-trichlorophenol	-	Cadmium (mg/l)	<0.0002
Xylenes	-	Alachlor	-	Lead (mg/l)	<0.004
Ethylbenzene	-	Atrazine	-	Mercury (mg/l)	<0.001
Styrene	-	Metolachlor	-	Selenium (mg/l)	<0.003
1,2-dibromo-3-chloropropane	-	Molinate	-	Barium (mg/l)	-
1,2-dichloropropane	-	Simazine	-	Boron (mg/l)	-
1,3-dichloropropene	-	Pendimethalin	-	Chromium (mg/l)	<0.04
Hexachlorobutadiene	-	Aldicarb	-	Copper (mg/l)	<0.09
Epichlorohydrin	-	Carbofuran	-	Molybdenum (mg/l)	-
Aldrin/Dieldrin	<0.008	Chlorotoluron	-	Nickel (mg/l)	-

(Average values expressed in ug/l except otherwise specified.)

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Chemical values expressed in mg/l (parts per million)

PRINCIPAL PHYSICAL AND CHEMICAL PARAMETERS	Typical Quality of Dongjiang Water at Muk Wu Pumping Station
	Average (1996/97)
pH Value	6.8
Colour (Hazen)	5
Turbidity (N.T.U.)	3.9
Conductivity (μ S/cm @ 25°C)	150
Temperature (°C)	23.3
Ammoniacal nitrogen (N)	1.35
Albuminoid nitrogen (N)	0.20
Nitrite nitrogen (N)	0.192
Nitrate nitrogen (N)	1.23
Oxygen absorbed value	0.98
Dissolved solids (180°C)	107
Total alkalinity (CaCO ₃)	33
Total hardness (CaCO ₃)	41
Calcium (Ca)	12.8
Magnesium (Mg)	2.2
Chlorides (Cl)	12
Sulphates (SO ₄)	16
Ortho-phosphates (PO ₄)	0.17
O+AH-phosphates (PO ₄)	0.25
Fluorides (F)	0.33
Iron (Fe)	0.10
Manganese (Mn)	0.22
Silica (SiO ₂)	8.0
BOD (5 days)	6.0
Dissolved Oxygen	3.9
BACTERIOLOGICAL QUALITY	
Coliform/100ml	910
E. Coli/100ml	240
Agar plate count/ml (1 day @ 37°C)	2100

Typical Concentration of Organic and Inorganic Chemical Constituents in Dongjiang Water at Muk Wu Pumping Station (1996/1997)

Parameter	Concentration	Parameter	Concentration	Parameter	Concentration
Organic		Organic		Organic	
Carbon tetrachloride	<0.50	Chlordane	<0.050	Isoproturon	<2.2
Dichloromethane	<5.0	DDT	<0.50	Di(2-ethylhexyl)adipate	<20
1,2-dichloroethane	<7.5	Heptachlor/Heptachlor epoxide	<0.008	Di(2-ethylhexyl)phthalate	<2.0
1,1,1-trichloroethane	<500	Hexachlorobenzene	<0.25	Formaldehyde	-
Vinyl chloride	<1.2	Lindane	<0.50	Acrylamide	<0.2
1,1-dichloroethene	<7.5	Methoxychlor	<5.0	Tributyltin oxide	-
1,2-dichloroethene	<12	Permethrin	<5.0	Dichloroacetic acid	-
Trichloroethene	<18	Trifluralin	<5.0	Trichloroacetic acid	-
Tetrachloroethene	<10	Propanil	-	Trichloroacetaldehyde	-
Monochlorobenzene	<75	Benzo(a)pyrene	<0.18	Dichloroacetonitrile	-
1,2-dichlorobenzene	<250	2,4-D	<7.5	Dibromoacetonitrile	-
1,4-dichlorobenzene	<75	MCPA	<2.0	Trichloroacetonitrile	-
Trichlorobenzenes (total)	<5.0	Dichlorprop	<25	Inorganic	
Bromoform	<25	2,4-DB	<22	Cyanogen Chloride	-
Dibromochloromethane	<25	2,4,5-T	<2.2	Bromate	-
Bromodichloromethane	<15	Fenoprop	-	Chlorite	-
Chloroform	<50	Mecoprop	<2.5	Antimony (mg/l)	<0.005
Benzene	<2.5	Pentachlorophenol	<2.2	Arsenic (mg/l)	<0.001
Toluene	<175	2,4,6-trichlorophenol	<50	Cadmium (mg/l)	<0.0002
Xylenes	<125	Alachlor	-	Lead (mg/l)	<0.004
Ethylbenzene	<75	Atrazine	<0.50	Mercury (mg/l)	<0.001
Styrene	<5.0	Metolachlor	-	Selenium (mg/l)	<0.003
1,2-dibromo-3-chloropropane	<0.25	Molinate	-	Barium (mg/l)	0.026
1,2-dichloropropane	<5.0	Simazine	<0.50	Boron (mg/l)	<0.07
1,3-dichloropropene	<5.0	Pendimethalin	-	Chromium (mg/l)	<0.04
Hexachlorobutadiene	<0.15	Aldicarb	-	Copper (mg/l)	<0.09
Epichlorohydrin	-	Carbofuran	-	Molybdenum (mg/l)	<0.02
Aldrin/Dieldrin	<0.008	Chlorotoluron	<7.5	Nickel (mg/l)	<0.02

(Average values expressed in ug/l except otherwise specified.)

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PRINCIPAL PHYSICAL AND CHEMICAL PARAMETERS	Typical Quality of Dongjiang Water at Muk Wu Pumping Station
	Average (1997/98)
pH Value	7.0
Colour (Hazen)	7
Turbidity (N.T.U.)	3.9
Conductivity (μ S/cm @ 25°C)	183
Temperature(°C)	22.7
Ammoniacal nitrogen (N)	2.31
Albuminoid nitrogen (N)	0.16
Nitrite nitrogen (N)	0.220
Nitrate nitrogen (N)	1.48
Oxygen absorbed value	1.00
Dissolved solids (180°C)	108
Total alkalinity (CaCO ₃)	29
Total hardness (CaCO ₃)	45
Calcium (Ca)	14.3
Magnesium (Mg)	2.2
Chlorides (Cl)	14
Sulphates (SO ₄)	16
Ortho-phosphates (PO ₄)	0.29
O+AH-phosphates (PO ₄)	0.30
Fluorides (F)	0.47
Iron (Fe)	0.11
Manganese (Mn)	0.22
Silica (SiO ₂)	8.3
BOD (5 days)	8.1
Dissolved Oxygen	4.3
BACTERIOLOGICAL QUALITY	
Coliform/100ml	780
E. Coli/100ml	240
Agar plate count/ml (1 day @ 37°C)	2300

Typical Concentration of Organic and Inorganic Chemical Constituents in Dongjiang Water at Muk Wu Pumping Station (1997/1998)

Parameter	Concentration	Parameter	Concentration	Parameter	Concentration
Organic		Organic		Organic	
Carbon tetrachloride	<0.50	Chlordane	<0.050	Isoproturon	<2.2
Dichloromethane	<5.0	DDT	<0.50	Di(2-ethylhexyl)adipate	<20
1,2-dichloroethane	<7.5	Heptachlor/Heptachlor epoxide	<0.008	Di(2-ethylhexyl)phthalate	<2.0
1,1,1-trichloroethane	<500	Hexachlorobenzene	<0.25	Formaldehyde	<225
Vinyl chloride	<1.2	Lindane	<0.50	Acrylamide	<0.2
1,1-dichloroethene	<7.5	Methoxychlor	<5.0	Tributyltin oxide	<0.5
1,2-dichloroethene	<12	Permethrin	<5.0	Dichloroacetic acid	<12
Trichloroethene	<18	Trifluralin	<5.0	Trichloroacetic acid	<25
Tetrachloroethene	<10	Propanil	<5.0	Trichloroacetaldehyde	<2.5
Monochlorobenzene	<75	Benzo(a)pyrene	<0.18	Dichloroacetonitrile	<23
1,2-dichlorobenzene	<250	2,4-D	<7.5	Dibromoacetonitrile	<25
1,4-dichlorobenzene	<75	MCPA	<2.0	Trichloroacetonitrile	<0.3
Trichlorobenzenes (total)	<5.0	Dichlorprop	<25	Inorganic	
Bromoform	<25	2,4-DB	<22	Cyanogen Chloride	<70
Dibromochloromethane	<25	2,4,5-T	<2.2	Bromate	<25
Bromodichloromethane	<15	Fenoprop	<2.2	Chlorite	<200
Chloroform	<50	Mecoprop	<2.5	Antimony (mg/l)	<0.005
Benzene	<2.5	Pentachlorophenol	<2.2	Arsenic (mg/l)	<0.001
Toluene	<175	2,4,6-trichlorophenol	<50	Cadmium (mg/l)	<0.0002
Xylenes	<125	Alachlor	<5.0	Lead (mg/l)	<0.004
Ethylbenzene	<75	Atrazine	<0.50	Mercury (mg/l)	<0.001
Styrene	<5.0	Metolachlor	<2.5	Selenium (mg/l)	<0.003
1,2-dibromo-3-chloropropane	<0.25	Molinate	<1.5	Barium (mg/l)	0.028
1,2-dichloropropane	<5.0	Simazine	<0.50	Boron (mg/l)	<0.07
1,3-dichloropropene	<5.0	Pendimethalin	<5.0	Chromium (mg/l)	<0.04
Hexachlorobutadiene	<0.15	Aldicarb	<2.5	Copper (mg/l)	<0.09
Epichlorohydrin	<0.2	Carbofuran	<1.2	Molybdenum (mg/l)	<0.02
Aldrin/Dieldrin	<0.008	Chlorotoluron	<7.5	Nickel (mg/l)	<0.02

(Average values expressed in ug/l except otherwise specified.)

Concentration of Trihalomethanes in Treated Water in Hong Kong

Determinand	1995/1996		1996/1997		1997/1998	
	Average	Range	Average	Range	Average	Range
Chloroform	22	<1 - 87	26	<1 - 95	23	<1 - 65
Bromodichloromethane	6	<1 - 14	6	<1 - 15	6	<1 - 19
Dibromochloromethane	1	<1 - 5	1	<1 - 4	2	<1 - 6
Bromoform	<1	<1 - 1	<1	<1 - 1	<1	<1 - 1

Note: Chemical values are expressed in ug/l.