

DIRECTORATE OF WATER DEVELOPMENT

WATER RESOURCES MANAGEMENT DEPARTMENT

WATER QUALITY DIVISION

March 2007

Water Quality Standards

Table 1 Physical, chemical and microbiological Standards for urban treated drinking water

Parameter	Requirements
Colour	10 (Platinum scale)
Odour	Unobjectionable
Taste	Acceptable
Turbidity	10 NTU
Dissolved solids	500 mg/l
PH	6.5 – 8.5
Total hardness (CaCo ₃)	500 mg/l
Calcium (Ca)	75 mg/l
Sodium (Na)	200 mg/l
Magnesium (Mg)	50 mg/l
Barium (Ba)	1.0 mg/l
Iron (Fe)	0.3 mg/l
Copper (Cu)	1.0 mg/l
Aluminium (Al)	0.1 mg/l
Manganese (Mn)	0.1 mg/l
Zinc (Zn)	5.0 mg/l
Arsenic (As)	0.05 mg/l
Lead (Pb)	0.05 mg/l
Selenium (Se)	0.01 mg/l
Chromium (Cr 6+)	0.05 mg/l
Cadmium (Cd)	0.01 mg/l
Mercury (Hg)	0.001 mg/l
Nitrates (No-3)	10 mg/l
Chloride (Cl)	250 mg/l
Fluoride (Fe)	1.0 mg/l
Phenolic substances (e.g C ₆ H ₅ OH)	0.001 mg/l
Cyanide	0.01
Poly Nuclear Aromatic Carbons	Nil mg/l
Residual, free chlorine	0.2 mg/l
Mineral oil	0.01 mg/l
Anionic detergents	0.2 mg/l
Sulphate	200 mg/l
Pesticides	Trace
Carbon chloroform (CCE, org. pollutants)	0.2 mg/l
Microscopic organisms (algae, parasites, toxin producing org. etc.)	Nil
Coliforms	0 / 100 ml

Table 2 Rural drinking water standards

Parameter	Guideline Values	MAC
Hardness (CaCo ₃)	600 mg/l	800 mg/l
Iron total (Fe)	1 mg/l	2 mg/l
Manganese (Mn)	1 mg/l	2 mg/l
Chloride (Cl)	250 mg/l	500 mg/l
Fluoride (Fe)	2 mg/l	4 mg/l
Sulphate	250 mg/l	500 mg/l
Nitrate (NO ₃)	20 mg/l	50 mg/l
Nitrite (NO ₂)	0 mg/l	3 mg/l
TDS	1000 mg/l	1500 mg/l
Turbidity	10 NTU	30 NTU
PH	5.5 – 8.5	5.0 – 9.5
E. Coli	0 / 100 ml	50 / 100 ml

Table 3 Effluent standards for waste water

Parameter	Max. Limits
1,1,1 – Trichloroethane	3.0 mg/l
1,1,2 – Dichloroethylene	0.2 mg/l
1,1,2 – Trichloroethane	0.06 mg/l
1,2 Dichloroethane	0.04 mg/l
1,3 Dichloropropene	0.2 mg/l
Aluminium	0.5 mg/l
Ammonia Nitrogen	10 mg/l
Arsenic	0.2 mg/l
Barium	10 mg/l
Benzene	0.2 mg/l
BOD ₅	50 mg/l
Boron	5 mg/l
Cadmium	0.1 mg/l
Calcium	100 mg/l
Chloride	500 mg/l
Chlorine	1 mg/l
Chromium (total)	1.0 mg/l
Chromium (VI)	0.05 mg/l
Cis – 1,2 - Dichloroethylene	0.4 mg/l
Cobalt	1.0 mg/l
COD	100 mg/l
Coliforms	10000 / 100 ml
Colour	300 TCU
Copper	1.0 mg/l
Cyanide	0.1 mg/l
Detergents	10 mg/l
Dichloromethane	0.2 mg/l
Iron	10 mg/l
Lead	0.1 mg/l
Magnesium	100 mg/l
Manganese	1.0 mg/l
Mercury	0.01 mg/l
Nickel	1.0 mg/l

Nitrate-N	20 mg/l
Nitrite-N	2 mg/l
Nitrogen total	10 mg/l
Oil and Grease	10 mg/l
PH	6.0 – 8.0
Phenols	0.2 mg/l
Phosphate (total)	10 mg/l
Phosphate (soluble)	5 mg/l
Selenium	1.0 mg/l
Silver	0.5 mg/l
Sulphate	500 mg/l
Sulphide	1.0 mg/l
TDS	1200 mg/l
Temperature	20 – 35 °C
Tetrachloroethylene	0.1 mg/l
Tetrachloromethane	0.02 mg/l
Tin	5 mg/l
TSS	100 mg/l
Trichloroethylene	0.3 mg/l
Turbidity	300 NTU
Zinc	5 mg/l