

Water Quality Standards for Best Designated Usage (MPCB)

Category of Fresh Water	A – I	A – II	A – III	A - IV
Best Usage	Unfiltered Public water supply after approved disinfection	Public water supply with approved treatment equal to coagulation, sedimentation and disinfection	Not fit for human consumption, Fish & Wildlife Propagation	Fit for Agriculture, Industrial cooling & process water
Chemical Qualities: Maximum allowable concentration				
1. Toxic Substances				
Arsenic (As)	0.3 mg/l	0.3 mg/l	1.0 mg/l	0.1 mg/l
Cadmium (Cd)	0.01 mg/l	0.01 mg/l	-	-
Chromium (Cr)	0.05 mg/l	0.05 mg/l	0.05 mg/l	0.2 mg/l
Cyanide (Cn)	0.05 mg/l	0.1 mg/l	0.05 mg/l	0.2 mg/l
Lead (Pb)	0.1 mg/l	0.1 mg/l	-	0.1 mg/l
Boron (B)	-	-	-	0.2 mg/l
Mercury (Hg)	0.001 mg/l	0.001 mg/l	0.001 mg/l	2.0 mg/l
Gross alpha activity	3 PCI/l	10-9 uc/ml	3 PCI/l	3 PCI/l
Gross Beta activity	30 PCI/l	10-8 uc/ml	30 PCI/l	30 PCI/l
2. Substances affecting health				
Fluoride (F)	1.5 mg/l	1.5 mg/l	-	1.0 mg/l
Nitrates(NO ₃)	45 mg/l	45mg/l	-	-
3. Substances affecting the potability of water				
pH	6.5 to 8.5	6.0 to 8.5	6.5 to 9.0	6.5 to 9.0
TDS	-	-	-	-
Total Solids	1500 mg/l	1500 mg/l	-	-
Total Suspended Solids	25 mg/l	-	-	-
Total Hardness (CaCO ₃)	50 mg/l	-	-	-
Total Residual Chlorine	-	-	-	-
Electrical conduct at 25 ⁰ C	-	-	1000 X 10 ⁻⁶ mhos	3000 X 10 ⁻⁶ mhos
Free Carbon Di Oxide	-	-	12 mg/l	-
Free Ammonical Nitrogen	-	-	1.2 mg/l	-

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pH	6.5 to 8.5	6.0 to 8.5	6.5 to 9.0	6.5 to 9.0
BOD (5 days 20°C)	2.0 mg/l (monthly average of at least 10 samples)	5.0 (monthly average of at least 10 samples)	10 mg/l	30 mg/l
COD	-	-	-	150 mg/l
DO	Not less than 5 mg/l (monthly average of 100 samples)	4.0 mg/l	Not less than 3 mg/l	Not less than 2 mg/l
Bacteriological Standards: MPN/100 ml	Coliform Bacteria 250	Not greater than 5000		
Total Ammonical Nitrogen	1.5 mg/l	1.5 mg/l	-	50 mg/l

Annexure 10a (Contd.)
General Standards for Discharge of Environmental Pollutants

Part – A: Effluents

Sl. No.	Parameter	Standards			
		Inland Surface Water	Public Sewers	Land of Irrigation	Marine/ Coastal Areas
1.	Colour and odour	Of Annexure-1	--	See 6 of Annexure -1	See 6 of Annexure -1
2.	Suspended solids mg/l, max.	100	600	200	a. For process wastewater 100 b. For cooling water effluent 10 per cent above total suspended mater of influent
3.	Particle size of suspended solids	Shall pass 850 micron IS Sieve	--	--	a. Floatable solids, solids max.3mm b. Settleable solids. Max 856 microns
4.	pH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
5.	Temperature	Shall not exceed 5°C above the receiving water temp.	--	--	Shall not exceed 5°C above the receiving water temperature
6.	Oil and grease, mg/l max.	10	20	10	20
7.	Total residual chlorine, mg/l max	1.0	--	--	1.0
8.	Ammonical nitrogen (as N), mg/l, max.	50	50	--	50
9.	Total nitrogen (as N), mg/l, max.	100	--	--	100
10.	Free ammonia (as NH ₃), mg/l, max	5.0	--	--	5.0
11.	Biochemical oxygen demand (3 days at 27°C), mg/l, max	30	350	100	100
12.	Chemical oxygen demand, mg/l, max	250	--	--	250

General Standards for Discharge (Contd..)

Sl. No.	Parameter	Standards			
		Inland Surface Water	Public Sewers	Land of Irrigation	Marine/ Coastal Areas
13.	Arsenic (as As) mg/l, max	0.2	0.2	0.2	0.2
14.	Mercury (as Hg), mg/l, max	0.01	0.01	--	0.01
15.	Lead (as Pb), mg/l, max	0.1	0.1	--	2.0
16.	Cadmium (as Cd), mg/l, max	2.0	1.0	--	2.0
17.	Hexavalent chromium (as Cr ⁺⁶), mg/l, max	0.1	2.0	--	1.0
18.	Total chromium (as Cr), mg/l, max	2.0	2.0	--	2.0
19.	Copper (as Cu), mg/l, max	3.0	3.0	--	30
20.	Zinc (as Zn), mg/l, max	5.0	15	--	15
21.	Selenium (as Se), mg/l, max	0.05	0.05	--	0.05
22.	Nickel (as Ni), mg/l, max	3.0	3.0	--	50
23.	Cyanide (as CN), mg/l, max	0.2	0.2	0.2	0.2
24.	Fluoride (as F), mg/l, max	2.0	15	--	15
25.	Dissolved phosphates (as P), mg/l, max	5.0	--	--	--
26.	Sulphide (as S), mg/l, max	2.0	--	--	5.0
27.	Phenolic compounds (as C ₆ H ₅ OH), mg/l, max	1.0	5.0	--	5.0
28.	Radioactive materials				
	a. α emitters micro cure mg/l, max	10 ⁻⁷	10 ⁻⁷	10 ⁻⁸	10 ⁻⁷
	β emitters micro cure mg/l, max	10 ⁻⁶	10 ⁻⁶	10 ⁻⁷	10 ⁻⁶

General Standards for Discharge (Contd..)

Sl. No.	Parameter	Standards			
		Inland Surface Water	Public Sewers	Land of Irrigation	Marine/ Coastal Areas
29.	Bio-assay test	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent	90 % survival of fish after 96 hours in 100 % effluent
30.	Manganese (as Mn)	2 mg/l	2 mg/l	2 mg/l	2 mg/l
31.	Iron (as Fe)	3 mg/l	3 mg/l	3 mg/l	3 mg/l
32.	Vanadium (as V)	0.2 mg/l	0.2 mg/l	--	0.2 mg/l
33.	Nitrate Nitrogen	10 mg/l	--	--	20 mg/l

* These standards shall be applicable for industries, operations or processes other than those industries. Operations or process for which standards have been specified in Schedule of the Environment Protection Rules 1