

BIS (10500:1991) Water Quality Standards for Classifying Surface Water Sources

Sl. No.	Characteristic	Tolerance Limit				
		Class A	Class B	Class C	Class D	Class E
1	pH value	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5
2	Dissolved Oxygen (mg/l), min.	6	5	4	4	--
3	BOD (5-days at 20° C, mg/l, min.	2	3	3	--	--
4	Total Coliform Organism, MPN/100ml, max	50	500	5000	--	--
5	Colour, Hazen units, max.	10	300	300	--	--
6	Odour	10	300	300	--	--
7	Taste	Tasteless	--	--	--	--
8	Total dissolved solids, mg/l, max.	500	--	1500	--	2100
9	Total hardness(as CaCO ₃), mg/l, max.	300	--	--	--	--
10	Calcium hardness (as CaCO ₃), mg/l, max.	200	--	--	--	--
11	Magnesium hardness (as CaCO ₃), mg/l, max.	100	--	--	--	--
12	Copper (as Cu), mg/l, max.	1.5	--	1.5	--	--
13	Iron (as Fe), Mg/l, max.	0.3	--	0.5	--	--
14	Manganese (as Mn), mg/l, max.	0.5	--	--	--	--
15	Chlorides (as Cl), mg/l, max.	250	--	600	--	600
16	Sulphates (as SO ₄), mg/l, max.	400	--	400	--	1000
17	Nitrates (as NO ₃), mg/l, max.	20	--	50	--	--

18	Fluorides (as F), mg/l, max.	1.5	1.5	1.5	--	--
19	Phenolic compounds (as C ₆ H ₅ OH), mg/l, max.	0.002	0.005	0.005	--	--
20	Mercury (as Hg), mg/l, max.	0.001	--	--	--	--
21	Cadmium (as Cd), mg/l, max.	0.01	--	0.01	--	--
22	Selenium (as Se), mg/l, max.	0.01	--	0.05	--	--
23	Arsenic (as As), mg/l, max.	0.05	0.2	0.2	--	--
24	Cyanide (as CN), mg/l, max.	0.05	0.05	0.05	--	--
25	Lead (as Pb), mg/l, max.	0.1	--	0.1	--	--
26	Zinc (as Zn), mg/l, max.	15	--	15	--	--
27	Chromium (as Cr ⁶⁺), mg/l, max.	0.05	--	0.05	--	--
28	Anionic detergents (as MBAS) mg/l, max.	0.2	1	1	--	--
29	Polynuclear aromatic hydrocarbons, (as PAH)	0.2	--	--	--	--
30	Mineral oil, mg/l, max.	0.01	--	0.1	0.1	--
31	Barium (as Ba), mg/l, max.	1	--	--	--	--
32	Silver (as Ag), mg/l, max.	0.05	--	--	--	--
33	Pesticides	Absent	--	Absent	--	--
34	Alpha emitters, uC/ml, max.	10 ⁻⁹	10 ⁻⁹	10 ⁻⁹		
35	Beta emitters, uC/ml, max.	10 ⁻⁸	10 ⁻⁸	10 ⁻⁸	10 ⁻⁸	10 ⁻⁸
36	Free ammonia (as N), mg/l, max.	--	--	--	1.2	--
37	Electrical conductance at 25° C, mhos,	--	--	--	1000 x 10 ⁻⁶	2250 x 10 ⁻⁶

	max.					
38	Free carbon dioxide (as CO), mg/l, max.	--	--	--	61	--
39	Sodium absorption ratio	--	--	--	--	26
40	Boron (as B), mg/l, max.	--	--	--	--	--
41	Percent sodium, max.	--	--	--	--	--

