

**ENVIS Centre : Punjab**

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BIS (ISI) Water Quality Standards for Classifying Surface Water Sources

Characteristic	Tolerance Limit				
	Class A	Class B	Class C	Class D	Class E
pH value	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5
Dissolved Oxygen (mg/l), min.	6	5	4	4	--
BOD (5-days at 20° C, mg/l, min.	2	3	3	--	--
Total Coliform Organism, MPN/100ml, max	50	500	5000	--	--
Colour, Hazen units, max.	10	300	300	--	--
Odour	10	300	300	--	--
Taste	Tasteless	--	--	--	--
Total dissolved solids, mg/l, max.	500	--	1500	--	2100
Total hardness(as CaCO ₃), mg/l, max.	300	--	--	--	--
Calcium hardness (as CaCO ₃), mg/l, max.	200	--	--	--	--
Magnesium hardness (as CaCO ₃), mg/l, max.	100	--	--	--	--
Copper (as Cu), mg/l, max.	1.5	--	1.5	--	--
Iron (as Fe), Mg/l, max.	0.3	--	0.5	--	--
Manganese (as Mn), mg/l, max.	0.5	--	--	--	--
Chlorides (as Cl), mg/l, max.	250	--	600	--	600
Sulphates (as SO ₄), mg/l, max.	400	--	400	--	1000
Nitrates (as NO ₃), mg/l, max.	20	--	50	--	--
Fluorides (as F), mg/l, max.	1.5	1.5	1.5	--	--
Phenolic compounds (as C ₆ H ₅ OH), mg/l, max.	0.002	0.005	0.005	--	--
Mercury (as Hg), mg/l, max.	0.001	--	--	--	--
Cadmium (as Cd), mg/l, max.	0.01	--	0.01	--	--
Selenium (as Se), mg/l, max.	0.01	--	0.05	--	--
Arsenic (as As), mg/l, max.	0.05	0.2	0.2	--	--
Cyanide (as CN), mg/l, max.	0.05	0.05	0.05	--	--
Lead (as Pb), mg/l, max.	0.1	--	0.1	--	--
Zinc (as Zn), mg/l, max.	15	--	15	--	--

Chromium (as Cr ⁶), mg/l, max.	0.05	--	0.05	--	--
Anionic detergents (as MBAS) mg/l, max.	0.2	1	1	--	--
Polynuclear aromatic hydrocarbons, (as PAH)	0.2	--	--	--	--
Mineral oil, mg/l, max.	0.01	--	0.1	0.1	--
Barium (as Ba), mg/l, max.	1	--	--	--	--
Silver (as Ag), mg/l, max.	0.05	--	--	--	--
Pesticides	Absent	--	Absent	--	--
Alpha emitters, uC/ml, max.	10 ⁻⁹	10 ⁻⁹	10 ⁻⁹		
Beta emitters, uC/ml, max.	10 ⁻⁸	10 ⁻⁸	10 ⁻⁸	10 ⁻⁸	10 ⁻⁸
Free ammonia (as N), mg/l, max.	--	--	--	1.2	--
Electrical conductance at 25° C, mhos, max.	--	--	--	1000 x 10 ⁻⁶	2250 x 10 ⁻⁶
Free carbon dioxide (as CO), mg/l, max.	--	--	--	61	--
Sodium absorption ratio	--	--	--	--	26
Boron (as B), mg/l, max.	--	--	--	--	--
Percent sodium, max.	--	--	--	--	--

Source: BIS