

NATIONAL ENVIRONMENTAL QUALITY STANDARDS (OF PAKISTAN)

FOR MUNICIPAL AND INDUSTRIAL LIQUID EFFLUENTS (mg/l, unless otherwise defined)

S. No.	Parameter	Existing Standards	Revised Standards		Into Sea ⁽⁶⁾
			Into Inland Waters	Into Sewage Treatment ⁽⁵⁾	
1	Temperature or Temperature Increase*	40°C	≤3°C	≤3°C	≤3°C
2	pH Value	6-10	6-9	6-9	6-9
3	BioChemical Oxygen Demand (BOD) ₅ at 20°C ⁽¹⁾	80	80	250	80**
4	Chemical Oxygen Demand (COD) ⁽¹⁾	150	150	400	400
5	Total Suspended Solids (TSS)	150	200	400	200
6	Total Dissolved Solids (TDS)	3500	3500	3500	3500
7	Grease and Oil	10	10	10	10
8	Phenolic Compounds (as phenol)	0.1	0.1	0.3	0.3
9	Chloride (as Cl')	1000	1000	1000	SC***
10	Fluoride (as F')	20	10	10	10
11	Cyanide (as CN') Total	2	1.0	1.0	1.0
12	An-ionic Detergents (as MBAs) ⁽²⁾	20	20	20	20
13	Sulphate (SO ⁴) ⁴	600	600	1000	SC***
14	Sulphide (S')	1.0	1.0	1.0	1.0
15	Ammonia (NH ₃)	40	40	40	40
16	Pesticides ⁽³⁾	0.15	0.15	0.15	0.15
17	Cadmium ⁽⁴⁾	0.1	0.1	0.1	0.1
18	Chromium (Trivalent and Hexavalent) ⁽⁴⁾	1.0	1.0	1.0	1.0
19	Copper ⁽⁴⁾	1.0	1.0	1.0	1.0
20	Lead ⁽⁴⁾	0.5	0.5	0.5	0.5
21	Mercury ⁽⁴⁾	0.01	0.01	0.01	0.01
22	Selenium ⁽⁴⁾	0.5	0.5	0.5	0.5
23	Nickel ⁽⁴⁾	1.0	1.0	1.0	1.0
24	Silver ⁽⁴⁾	1.0	1.0	1.0	1.0
25	Total Toxic Metals	2.0	2.0	2.0	2.0
26	Zinc	5.0	5.0	5.0	5.0
27	Arsenic ⁽⁴⁾	1.0	1.0	1.0	1.0
28	Barium ⁽⁴⁾	1.5	1.5	1.5	1.5
29	Iron	2.0	8.0	8.0	8.0
30	Manganese	1.5	1.5	1.5	1.5
31	Boron ⁽⁴⁾	6.0	6.0	6.0	6.0
32	Chlorine	1.0	1.0	1.0	1.0

Explanation to above parameters marked from 1 to 6:

- 1 Assuming minimum dilution 1:10 on discharge, lower ratio would attract progressively stringent standards to be determined by the Federal Environmental Protection Agency. By 1:10 dilution means, for example that for each one cubic meter of treated effluent, the recipient water body should have 10 cubic meter of water for dilution of this effluent.
- 2 Modified Benzene Alkyl Sulphate; assuming surfactant as biodegradable.
- 3 Pesticides include herbicides, fungicides, and insecticides.
- 4 Subject to total toxic metals discharge should not exceed level given at S.No. 25.
- 5 Applicable only when and where sewage treatment is operational and BOD₅ = 80mg/l is achieved by the sewage treatment system.
- 6 Provided discharge is not at shore and not within 10 miles of mangrove or other important estuaries.