

SPECIFICATION FOR POTABLE WATER

This is a proposed standard for 'Potable' water which should ideally be made available to public through the municipal or local body's water distribution system. The water used by Food Industry in their manufacturing process should be of this standard.

1. Bacteriological Examination

All samples taken from the distribution system including manufacturer's premises to be used in food manufacturing should ideally be free from coliform organisms and Faecal streptococci. Since, this is not always attainable in practice, the following standard for water is recommended:

Comment [A1]: BIS testing method is IS 1622 : 1981.

- a) Throughout any year, 95 percent of samples should not contain any coliform organisms in 100 ml;
- b) No sample should contain E. Coli in 100 ml;
- c) No sample should contain more than 10 coliform organisms per 100 ml; and
- d) Coliform organisms should not be detectable in 100 ml of any two consecutive sample.

If any coliform organisms are found the minimum action required is immediate resampling. The repeated finding of 1 to 10 coliform organisms in 100 ml or the appearance of higher numbers in individual samples suggests that undesirable material is gaining access to the water and measures should at once be taken to discover and remove the source of the pollution.

- e) Aerobic Microbial Count - The total viable colony count shall not exceed 100 per ml at 20°C to 22°C in 72 h on agar-agar or on agar-gelatin mixture, and 20 per ml at 37°C in 24 h on agar-agar.

2. Biological Examination

The potable water shall be free from disease causing microscopic organisms such as algae, zooplanktons, flagellates, parasites and toxin-producing organisms.

3. Essential Test Characteristics For Potable Water and water used in manufacturing of food

a. Colour	25 Hazen units Max
b. Odour	Unobjectionable
c. Taste	Agreeable
d. Turbidity	10 NTU Max
e. pH value	6.5-8.5
f. Total hardness (as CaCo ₂)	600 mg/l max
g. Iron (as Fe)	1 mg/l max
h. Chlorides	1000 mg/l max
i. Dissolved solids	2000 mg/l min
j. Calcium	200 mg/l
k. Sulphate	400 mg/l
l. Nitrate (as NO ₃) mg/l, Max	100 mg/l max
m. Fluoride (as F)	1.5 mg/l Max
n. Mercury (as Hg)	0.0001 mg/l
o. Aluminium (as Al)	0.02 mg/l max
p. Boron	5 mg/l max
q. Cadmium (as Cd)	0.01 mg/l max
r. Selenium (as Se)	0.05 mg/l max
s. Arsenic (as As)	0.05 mg/l max
t. Cyanide (as CN)	0.05 mg/l max
u. Lead (as Pb)	0.05 mg/l max
v. Chromium (as Cr)	0.05 mg/l max
w. Mineral oil	0.03 mg/l max
x. Polynuclear aromatic hydrocarbons (as PAH)	-
y. Pesticides	0.001 mg/l max

Comment [A2]: The parameters from BIS drinking water standards which only affect taste, colour or turbidity have not been retained here because specification on color, taste and turbidity have already been mentioned in a, b, c and d. The ones not included are copper, manganese, phenolic compounds, zinc, anionic detergents, alkalinity. Also radioactive materials have not been included.