

PROCESS SELECTION IN EXTRACTIVE METALLURGY

TABLE 6.6.2. World Health Organization drinking water standards (WHO)

Characteristic	Highest desirable level*	Maximum permissible level*
Total solids	500	1500
Colour (II)	5	50
Taste	unobjectionable	
Odour	unobjectionable	
Turbidity (Formazin units)	5	25
Chloride	200	600
Iron	0.1	1
Manganese	0.05	0.5
Copper	0.05	1.5
Zinc	5	15
Calcium	75	200
Magnesium	30	150
Sulphate	200	400
Total hardness (as CaCO ₃)	100	500
Nitrate (as NO ₃)	45	—
Phenol	0.001	0.002
Anionic detergent	0.02	1.0
	0.9-1.7	
	(mean temp. 12°C)	
Fluoride	0.6-0.8	
	(mean temp. 32°C)	
pH (units)	7-8	min. 6.5 max. 9.2
Arsenic	—	0.05
Cadmium	—	0.01
Chromium (6 +)	—	0.05
Cyanide	—	0.05
Lead	—	0.10
Mercury	—	0.001
Selenium	—	0.01
Polynuclear aromatic hydrocarbons	—	0.0002
Gross alpha radioactivity (pCi/l)	—	3
Gross beta radioactivity (pCi/l)	—	30

*Concentration in mg l⁻¹ except where noted.

Bacteriological standard for water in the distribution system:

- In 95% of samples examined throughout a year coliform bacteria should be absent in 100 ml.
- No sample should contain *E. coli* in 100 ml.
- No sample should contain more than 10 coliform organisms per 100 ml.
- Coliform organisms should not be detectable in 100 ml of any two consecutive samples.

* Hayes, P.C. : "Process Selection in Extractive Metallurgy."
Ed. Hyes Publishing Co. Brisbane, Australia. (1985)