

## **Agenda Item No. 2 (d)**

### **The Punjab Standards for Drinking Water Quality**

<b>Property/Parameter</b>	<b>Standard</b>	<b>WHO Guideline</b>	<b>Remarks</b>
<b>Bacterial</b>			
All water intended for drinking (E. Coli or Thermotolerant Coliform bacteria)	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	Most Asian countries also follow WHO standards
Treated water entering distribution system (E.Coli or thermo tolerant coliform and total coliform bacteria)	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	Most Asian countries also follow WHO standards
Treated water in the distribution system (E.coli or thermo tolerant coliform and total coliform bacteria)	Must not be detectable in any 100 ml sample  In case of large supplies, where sufficient samples are examined, must not be present in 95% of the samples taken throughout any 12- month period.	Must not be detectable in any 100 ml sample  In case of large supplies, where sufficient samples are examined, must not be present in 95% of the samples taken throughout any 12- month period.	Most Asian countries also follow WHO standards
<b>Physical</b>			
Colour	≤15 TCU	≤15 TCU	
Taste	Non objectionable/ Acceptable	Non objectionable/ Acceptable	
Odour	Non objectionable/ Acceptable	Non objectionable/ Acceptable	
Turbidity	< 5 NTU	< 5 NTU	

Total hardness	< 500 mg/l	---	
TDS	< 1000	< 1000	
pH	6.5 – 8.5	6.5 – 8.5	
<b>Chemical</b>			
Essential Inorganic	mg/Litre	mg/Litre	
Aluminium (Al) mg/1	<0.2	0.2	
Antimony (Sb)	<0.005 (P)	0.02	
Arsenic (As)	< 0.05 (P)	0.01	Standard for Pakistan similar to most Asian developing countries
Barium (Ba)	0.7	0.7	
Boron (B)	0.3	0.3	
Cadmium (Cd)	0.01	0.003	Standard for Pakistan similar to most Asian developing countries
Chloride (Cl)	<250	250	
Chromium (Cr)	<0.05	0.05	
Copper (Cu)	2	2	
Toxic Inorganic	mg/Litre	mg/Litre	
Cyanide (CN)	<0.05	0.07	Standard for Pakistan similar to Asian developing countries
Fluoride (F)*	<1.5	1.5	

Lead (Pb)	<0.05	0.01	Standard for Pakistan similar to most Asian developing countries
Manganese (Mn)	< 0.5	0.5	
Mercury (Hg)	<0.001	0.001	
Nickel (Ni)	<0.02	0.02	
Nitrate (NO <sub>3</sub> )*	<50	50	
Nitrite (NO <sub>3</sub> )*	<3 (P)	3	
Selenium (Se)	0.01(P)	0.01	
Residual chlorine	0.2-0.5 at consumer end 0.5-1.5 at source		
Zinc (Zn)	5.0	3	Standard for Pakistan similar to most Asian developing countries
Organic			
Pesticides mg/L			PSQCA No. 4639- 2004, Page No. 4 Table No. 3 Serial No. 20-58 may be consulted.***
Phenolic compounds (as Phenols) mg/L			< 0.002
Polynuclear aromatic hydrocarbons (as PAH) g/L			0.01 (By GC/MS method)
<b>Radioactive</b>			
Alpha Emitters bq/L or pCi	0.1	0.1	

Beta emitters	1	1	
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\* Indicates priority health related inorganic constituents which need regular monitoring.

\*\*\* PSQCA: Pakistan Standards Quality Control Authority.