



# H.P. STATE POLLUTION CONTROL BOARD

REG. LAB. B.B.M.B. COLONY SUNDER NAGAR DISTT. MANDI (H.P.)

Report No.

C-108

Issued To:-

The Project Engineer & Estate Officer,  
Indian Institute of Technology, Mandi,  
Distt. Mandi, (HP) 175001

Sample received on :- 21.01.2011

Description of Sample:- Grab, Uhl River

Sr. No.	Parameters	Results		Sr. No.	Parameters	Results	
1.	pH	7.55		21.	T. PO <sub>4</sub> P	--	mg/l
2.	Cond.	--	(umohm-cm-1)	22.	Mn.	--	mg/l
3.	TDS	72.0	mg/l	23.	An.	--	mg/l
4.	TSS	3.0	mg/l	24.	TKN	--	mg/l
5.	COD	--	mg/l	25.	Mercury	--	mg/l
6.	BOD	--	mg/l	26.	Arsenic	--	mg/l
7.	Sulphate	1.464	mg/l	27.	Selenium	--	mg/l
8.	NO <sub>3</sub> -N	0.27	mg/l	28.	Temp.	--	mg/l
9.	Chloride	3.88	mg/l	29.	Fluoride	--	mg/l
10.	Na	--	mg/l	30.	Vanadium as V	--	mg/l
11.	Fe	ND*	mg/kg	31.	Potassium	--	mg/l
12.	NH <sub>3</sub> -N	Nil	mg/l	32.	Phenol	--	mg/l
13.	Calcium ions	24.02	mg/l	33.	T. Coliform	--	/100ml
14.	Magnesium ions	7.29	mg/kg	34.	Faecal Coliform	--	/100ml
15.	Cu	--	mg/kg	35.			
16.	T.Cyanide	--	mg/l	36.			
17.	Ni	--	mg/l	37.			
18.	Pb	--	mg/kg	38.			
19.	Cd	--	mg/l	39.			
20.	Oil & Grease	--	mg/l	40.			

**Note:-**

1. Sample not collected by us Sample consumed in testing.
2. Water Sample got analysed by the unit for their own purpose.
3. Analysis Report shall not be valid for any official use.

  
Scientific Officer



# H.P. STATE POLLUTION CONTROL BOARD

REG. LAB. B.B.M.B. COLONY BUNDER NAGAR DISTT. MANDI (H.P.)

Report No. C-109  
Dated :- 24.01.2011

Issued To:- *Parameter* The Project Engineer & Estate Officer,  
Indian Institute of Technology, Mandi,  
Distt. Mandi, (HP) 175001

Sample received on :- 21.01.2011

Description of Sample: *Crab, Dulski River*

Sr. No.	Parameters	Results		Sr. No.	Parameters	Results	
1.	pH	7.77		21.	T. PO <sub>4</sub> -P	--	mg/l
2.	Cond.	--	( $\mu$ mohm-1)	22.	Mn.	--	mg/l
3.	TDS	79.0	mg/l	23.	An.	--	mg/l
4.	TSS	5.0	mg/l	24.	TKN	--	mg/l
5.	COD	--	mg/l	25.	Mercury	--	mg/l
6.	BOD	--	mg/l	26.	Arsenic	--	mg/l
7.	Sulphate	1.356	mg/l	27.	Selenium	--	mg/l
8.	NO <sub>3</sub> -N	0.306	mg/l	28.	Temp.	--	mg/l
9.	Chloride	2.91	mg/l	29.	Fluoride	--	mg/l
10.	Na	--	mg/l	30.	Vanadium as V	--	mg/l
11.	Fe	ND*	mg/kg	31.	Potassium	--	mg/l
12.	NH <sub>3</sub> -N	Nil	mg/l	32.	Phenol	--	mg/l
13.	Calcium ions	28.02	mg/l	33.	T. Coliforms	--	/100ml
14.	Magnesium ions	6.22	mg/kg	34.	Faecal Coliforms	--	/100ml
15.	Cu	--	mg/kg	35.			
16.	T.Cyanide	--	mg/l	36.			
17.	Ni	--	mg/l	37.			
18.	Pb	--	mg/kg	38.			
19.	Cd	--	mg/l	39.			
20.	Oil & Grease	--	mg/l	40.			

**Note:-**

4. Sample not collected by us Sample consumed in testing.
5. Water Sample got analysed by the unit for their own purpose.
6. Analysis Report shall not be valid for any official use

  
Scientific Officer

# Drinking water specifications

10520 - 1992

## TOLERANCE LIMITS

S.No	Parameter	IS: 10500 Requirement (Desirable limit)	Undesirable effect outside the desirable limit	IS: 10500 Permissible limit in the absence of alternate source
<b>Essential Characteristics</b>				
1.	pH	6.5 - 8.5	Beyond this range the water will effect the mucous membrane and / or water supply system	No relaxation
2.	Colour (Hazen Units), Maximum	5	Above 5, consumer acceptance decreases	25
3.	Odour	Unobjectionable	--	--
4.	Taste	Agreeable	--	--
5.	Turbidity, NTU, Max	5	Above 5, consumer acceptance decreases	10
<b>Following Results are expressed in mg/l :</b>				
6.	Total hardness as CaCO <sub>3</sub> , Max	300	Encrustation in water supply structure and adverse effects on domestic use	600
7.	Iron as Fe, Max	0.30	Beyond this limit taste/appearance are affected, has adverse effect on domestic uses and water supply structures, and promotes iron bacteria.	1.0
8.	Chlorides as Cl, Max	250	Beyond this limit tast, corrosion and palatability are effected	1000
9.	Residual, Free Chlorine, Min	0.20	--	--
<b>Desirable Characteristics</b>				
10.	Dissolved solids, Max	500	Beyond this palatability decreases and may cause gastro intentional irritation	2000
11.	Calcium as Ca, Max	75	Encrustation in water supply structure and adverse effects on domestic use	200

12.	Magnesium as Mg, Max	30	--	100
13.	Copper as Cu, Max	0.05	Astringent taste, discoloration and corrosion of pipes, fitting and utensils will be caused beyond this	1.5
14.	Manganese as Mn, Max	0.1	Beyond this limit taste/appearance are affected, has adverse effect on domestic uses and water supply structures	0.3
15.	Sulphate as SO <sub>4</sub> Max	200	Beyond this causes gastro intentional irritation when magnesium or sodium are present	400
16.	Nitrates as NO <sub>3</sub>	45	Beyond this methanemoglobinemia takes place	100
17.	Fluoride, Max	1.0	Fluoride may be kept as low as possible. High fluoride may cause fluorosis	1.5
18.	Phenolic compounds as C <sub>6</sub> H <sub>5</sub> OH, Max	0.001	Beyond this, it may cause objectionable taste and odour	0.002
19.	Mercury as Hg, Max	0.001	Beyond this, the water becomes toxic	No relaxation
20.	Cadmium as Cd, Max	0.01	Beyond this, the water becomes toxic	No relaxation
21.	Selenium as Se, Max	0.01	Beyond this, the water becomes toxic	No relaxation
22.	Arsenic as As, Max	0.05	Beyond this, the water becomes toxic	No relaxation
23.	Cyanide as CN, Max	0.05	Beyond this, the water becomes toxic	No relaxation
24.	Lead as Pb, Max	0.05	Beyond this, the water becomes toxic	No relaxation
25.	Zinc as Zn, Max	5	Beyond this limit it can cause astringent taste and an opalescence in water	15
26.	Anionic detergents as MBAS, Max	0.2	Beyond this limit it can cause a light froth in water	1.0
27.	Chromium as Cr <sup>6+</sup> , Max	0.05	May be carcinogenic above this limit	No relaxation
28.	Poly-nuclear aromatic hydrocarbons as PAH, Max	--	May be carcinogenic	--

29.	Mineral Oil, Max	0.01	Beyond this limit undesirable taste and odour after chlorination take place	0.03
30.	Pesticides, Max	Absent	Toxic	0.001
31.	Radioactive materials	--	--	0.1
	a) $\alpha$ emitters Bq/l, Max	--	--	1
	b) $\beta$ emitters Pci/l, Max	--	--	1
32.	Alkalinity, Max	200	Beyond this limit taste becomes unpleasant	600
33.	Aluminum as Al, Max	0.03	Cumulative effect is reported to cause dementia	0.2
34.	Boron, Max	1	--	5