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**DEPARTMENT OF PUBLIC HEALTH AND PREVENTIVE MEDICINE**

**From :**

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**To :**

The Principal,  
Mahatma Gandhi Vidyalaya (CBSE),  
D.B Hindi Prachar Sabha,  
Thanikachalam Road,  
T.Nagar, Chennai – 600 017.

**R.No.3215/C/2022 Misc – 340 and 341 Dated: 25.10.2022**

Sir,

Subject: Report on examination of water samples - Regarding.

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Two samples of water stated to have been collected on 10.10.2022 by Thiru. J. Shankar from the following Sources located within the premises of Mahatma Gandhi Vidhyalaya , D.B. Hindi Prachar Sabha, Thanikachalam Road, T.Nagar, Chennai-17 were received at this laboratory from the addressee on the same day to assess their suitability for drinking purposes.

1. Borewell near School Building (MISC 340)
2. R.O Plant at New Block (MISC 341)

The results of analysis are furnished overleaf.

**1.Bore well near School Building (MISC 340)**

The sample of water is colourless and clear in physical appearance.

Chemical analysis reveals that it is slightly hard and is of satisfactory chemical quality for drinking purposes.

It is also of satisfactory biological and bacteriological quality for drinking purposes on this occasion.

**2. R.O Plant at New Block (MISC 341)**

The above sample of RO water is colourless and clear in physical appearance.

Chemical analysis reveals that it is very soft and less mineralized. Even though it is of usable chemical quality for drinking, the total hardness is too low with only 2 mg/l. The calcium and magnesium elements are almost removed from this water, which are very essential for healthy living of human beings including growing children.

## RESULTS OF EXAMINATION OF SAMPLES OF WATER

From : The Principal, Mahatma Gandhi Vidyalaya (CBSE), Thanikachalam Road, T.Nagar,  
Chennai – 600 017.

Collected by: Thiru. J. Shankar.

Misc – 340

Misc-341

	Bore well near School Building	R.O Plant at New Block		Maximum permissible limit for drinking water as per BIS 10500/1991
Date of Collection : 10.10.2022				
Date of Receipt : 10.10.2022				
Source as per label				
Bacteriological Examination	Total colonies per ml on agar at 37°C	10	5	20
	MPN of Coliform bacteria per 100 ml.	0	0	0
	Nature of coliform bacteria isolated.			absent
	Results of vibrio test			
Physical Examination	Colour	Colourless	Colourless	Colourless
	Turbidity (Units)	5	3	10
	Smell	None	None	None
Chemical Examination (in mg/l).	Total dissolved Solids	390	30	2000
	Carbonate hardness as CaCO <sub>3</sub>	120	2	-
	Non-Carbonate hardness as CaCO <sub>3</sub>	0	0	-
	Total hardness as CaCO <sub>3</sub>	120	2	600
	Chloride as Chlorine	84	7	1000
	Ammoniacal nitrogen	-	-	Nil
	Albuminoid nitrogen	-	-	Nil
	Oxygen absorbed (Tidy's test)	0.48	0.24	-
	Nitrate-nitrogen	0.5	0	10
	Alkalinity } Phenolphthalein as CaCO <sub>3</sub> } Methyl Orange	0	0	-
		120	6	600
	Fluoride as Fluorine	0.4	Nil	1.5
	PH.	7.3	6.7	6.5-8.5
	Iron as Fe Total	0.05	Nil	0.3
	Ferrous	Nil	Nil	Nil
	Manganese as Mn.	Nil	Nil	0.3
	Qualitative-Nitrite nitrogen	Trace	Trace	Trace
	Sulphate	Trace	Trace	400
	Phosphate	Trace	Trace	Trace
	Toxic substances			
Electrical conductivity (Reciprocal megohms per Cm <sup>3</sup> at 25°C)	550	40	-	
Microscopical Examination	-----Amorphous matter-----			



Hence it is advised that the firm that installed the R.O. unit should be contacted and arrangements may be made to set right the R.O. unit in such a way that the outlet water should contain atleast a minimum content of total hardness of 30 mg/l so as to have some amount of calcium and magnesium that are very essential for healthy life.

The above sample of R.O. water is of satisfactory biological and bacteriological quality for drinking purposes on this occasion.

**Conclusion:**

It is advised that the Bore well source itself is of good chemical quality for drinking and can be used directly for drinking purposes after disinfection at the respective storage units and there is no need to use RO water.

**Method of Disinfection:**

The disinfection is carried out by chlorinating the water collected from the Borewell at the storage units (OHT/ Sump) by using 4 gms of BIS grade bleaching powder containing 32 to 34 % of chlorine content or 20 ml of 4 to 6 % sodium hypochlorite solution for every 1000 litres of water with half an hour contact time before distribution.

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for CHIEF WATER ANALYST,  
Chief Water Analysis Laboratory,  
Guindy, Chennai - 32.  
28.10.2022