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DEPARTMENT OF PUBLIC HEALTH AND PREVENTIVE MEDICINE

From

To

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King Institute Campus, Guindy,
Chennai-600 032.

The Principal,
Bhaktavatsalam Vidyashram,
No.14 TNHB Colony, 31st Street,
Korattur,
Chennai - 600 050.

R.No.1671/C/2023Misc – 189&190

Dated: 01.06.2023

Sir,

Subject: Report on examination of water samples - Regarding.

Two samples of water stated to have been collected on 22.05.2023 from the following points by Mr. G. Venkatesan at the premises of Bhaktavatsalam Vidyashram, No.14 31st Street, TNHB Colony, Korattur, Chennai- 600 050 were received at this laboratory on the same day from the addressee to assess their suitability for drinking purposes.

1. Closed Spring Well water from delivery tap at School Campus (Misc.189)
2. RO Water from RO Plant tap(Misc.190)

The results of analysis are furnished overleaf.

1.Closed Spring Well water from delivery tap at School Campus (Misc. 189)

The sample of water is whitish and highly turbid (20NTU) in physical appearance.

Chemical analysis reveals that it is highly mineralized and the parameters of sulphate (>400mg/l) and total Iron (1.0mg/l) content are exceeding the maximum permissible limit (400mg/l & 0.3mg/l respectively) prescribed by BIS for a drinking water. Hence as such this closed spring well water is UNFIT for drinking purposes.

It is also poor bacteriological and biological quality on this occasion.

RESULTS OF EXAMINATION OF SAMPLES OF WATER

From: The Principal, Bhaktavatsalam Vidyashram, No.14, TNHB Colony, 31st Street,
Karattur, Chennai -600 050.

Collected by: Thiru. G. Venkatesan

M - 189

M- 190

Date of Collection : 22.05.2023		Closed Spring Well water from delivery tap at School Campus	RO Water from RO Plant tap	Maximum permissible limit for drinking water as per BIS 10500/2012
Date of Receipt : 22.05.2023				
Source as per label				
Bacteriological Examination	Total colonies per ml on agar at 37°C	100	5	20
	MPN of Coliform bacteria per 100 ml.	150	0	0
	Nature of coliform bacteria isolated.	K. Aerogens - II		absent
	Results of vibrio test			
Physical Examination	Colour	Whitish	Colourless	Colourless
	Turbidity (Units)	20	3	5
	Smell	None	None	None
Chemical Examination (in mg/l).	Total dissolved Solids ₈	1330	60	2000
	Carbonate hardness as CaCO ₃	208	10	-
	Non- Carbonate hardness as CaCO ₃	168	0	-
	Total hardness as CaCO ₃	376	10	600
	Chloride as Chlorine	196	14	1000
	Ammoniacal nitrogen	--	--	Nil
	Albuminoid nitrogen	--	--	Nil
	Oxygen absorbed (Tidy's test)	0.64	0.48	-
	Nitrate-nitrogen	0.5	Nil	10.2
	Alkalinity	0	0	-
	as CaCO ₃ } Phenolphthalein	208	0.0	600
	Methyl Orange			
	Fluoride as Fluorine	0.2	Nil	1.5
	PH.	6.9	6.9	6.5-8.5
	Iron as Fe Total	1.0	Nil	0.3
	Ferrous	0.6	Nil	Nil
	Manganese as Mn.	Nil	Nil	0.3
	Qualitative- Nitrite nitrogen			
	Sulphate	Trace	Trace	Trace
	Phosphate	Marked	Trace	400
Toxic substances	Trace	Trace	Trace	
Electrical conductivity (Reciprocal megohms per Cm ³ at 20°C)	1900	90	-	
Microscopical Examination	Monas, & Amorphous matter	Amorphous matter		

2. RO Water from RO Plant tap (Misc.190)

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

Chemical analysis reveals that it is very soft and less mineralized. Eventhough it is of usable chemical quality for drinking, the total hardness is only 10.0mg/l. The calcium and magnesium elements are almost removed from this water, which are very essential for healthy living of human beings. Consumption of this type of low content Calcium and Magnesium for a prolonged time would be deleterious to the health of the consumer.

Hence it is advised that the firm that installed the R.O. unit should be contacted along with a copy of this analysis report and arrangements may be made to set right the R.O. units 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.

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

Copy to: Lab & File

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01.05.2013

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7/6/2013