



Telephone: 044-2999 7572.

DEPARTMENT OF PUBLIC HEALTH AND PREVENTIVE MEDICINE

From

Tmt.L.Sujatha, M.Sc., M.A., B.Ed.,
CHIEF WATER ANALYST,
Chief Water Analysis Laboratory,
King Institute Campus, Guindy,
Chennai-600 032.

To

✓ **Muna HI - Tech International School,**
Karikuppam Main Road,
Parangipettai – 608 502,
Cuddalore District.

R.No. 841/C/2022 Misc – 109 and 110 Dated: 20.04.2022

Sir,

Subject: Report on examination of water samples - Regarding.

Two samples of water stated to have been collected by Thiru. R. Manikandan on 31.03.2022 from a Bore well and from the R.O plant outlet located within the premises of Muna HI – Tech International school, Karikuppam Main Road, Parangipettai, Cuddalore District were received at this laboratory on the same day from the addressee to assess their suitability for drinking purposes.

The results of analysis are furnished overleaf.

1. Bore well water (Misc. 109)

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

Judged by the results of analysis, it is of satisfactory chemical quality for drinking purposes.

But it is of poor bacteriological quality for drinking as evidenced by the presence of coliform group of organisms and hence needs disinfection before distribution.

It is therefore advised to chlorinate the bore well water by using 4gms of BIS grade Bleaching powder containing 32 to 34% chlorine content or 20 ml of 4. to 6% Sodium Hypo Chlorite solution for every 1000 litres of water at the storage units (OHT / Sump) and allow half an hour contact time before distribution.

The storage units (OHT / Sump) should also be cleaned periodically with strong solution of Bleaching powder to ensure hygienic safety of drinking water at all times.

RESULTS OF EXAMINATION OF SAMPLES OF WATER

From : The Chairman, Muna HI – Tech International School, Karikuppam Main Road,
Parangipettai – 608 502, Cuddalore District.

Collected by: Thiru. R. Manikandan.

Misc – 109

Misc - 110

Date of Collection : 31.03.2022		Bore well water in the above mentioned address	R.O water in the above mentioned address	Maximum permissible limit for drinking water as per BIS 10500/1991
Date of Receipt : 31.03.2022				
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.	460	0	0
	Nature of coliform bacteria isolated.	Citrobacter Frundii-II		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 ⁸	520	20	2000
	Carbonate hardness as CaCO ₃	128	4	7
	Non- Carbonate hardness as CaCO ₃	0	0	-
	Total hardness as CaCO ₃	128	4	600
	Chloride as Chlorine	94	5	1000
	Ammoniacal nitrogen	--	--	Nil
	Albuminoid nitrogen	--	--	Nil
	Oxygen absorbed (Tidy's test)	0.72	0.24	-
	Nitrate-nitrogen	Nil	Nil	10
	Alkalinity } Phenolphthalein as CaCO ₃ } Methyl Orange	0	0	-
		144	6	600
	Fluoride as Fluorine	0.3	Nil	1.5
	PH.	7.4	6.5	6.5-8.5
	Iron as Fe Total	0.05	Nil	0.3
	Ferrous	Nil	Nil	Nil
		Nil	Nil	0.3
	Manganese as Mn.			
	Qualitative- Nitrite nitrogen	Trace	Trace	Trace
	Sulphate	Trace	Trace	Present
	Phosphate	Trace	Trace	Trace
Toxic substances				
Electrical conductivity (Reciprocal megohms per Cm ³ at 25°C)	740	30	-	
Microscopical Examination	Monas and Amorphous matter	Amorphous matter		

2. R.O water (Misc. 110)

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

Chemical analysis reveals that it is soft and less mineralized. Eventhough it is of usable chemical quality for drinking, the total hardness is only 4 mg/l. The Calcium and Magnesium elements are almost removed from this water that are essential for healthy living of human beings including growing children.

Hence, it is advised that the supplier of the R.O unit should be contacted and make necessary arrangements to set right the R.O unit in such a way that the R.O 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 which are essential for healthy life.

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

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சு. பனிதரவல்லி
27.4.2022
for CHIEF WATER ANALYST,
Chief Water Analysis Laboratory,
Guindy, Chennai - 32.