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DEPARTMENT OF PUBLIC HEALTH AND PREVENTIVE MEDICINE

From

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Chennai-600 032.

To

The Principal,
Kendriya Vidyalaya DGQA,
Palavanthangal,
(Near Meenambakkam Railway Station),
Chennai – 600 114.

R.No. 3952/C/2023 Misc – 4 & 5 Dated: 23.01.2024

Sir,

Sub : Report on examination of water samples - Regarding.
Ref : Your letter dated: 26.12.2023.

Two samples of water stated to have been collected on 04.01.2024 by Mr. Arokyadass from the following sources/points located within the premises of Kendriya Vidyalaya DGQA, Palavanthangal, (Near Meenambakkam Railway Station), Chennai-600 114 were received at this laboratory on the same day from the addressee to assess their suitability for drinking purposes.

1. Water from bore well (Pump delivery) near Coastguard Compound (Misc.4)
2. Water from RO unit delivery tap at 1st floor (Misc.5)

The results of analysis are furnished overleaf.

1. Water from bore well (Pump delivery) near Coastguard Compound (Misc. 4)

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

Chemical analysis reveals that it is moderately hard and is of acceptable chemical quality for drinking.

However, it is of poor bacteriological quality for drinking purposes as evidenced by the presence of coliform organisms.

Hence the source of water needs disinfection before consumption.

It is therefore advised to chlorinate the water source at the storage units 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 by allowing half an hour contact time before distribution.

Handwritten signature
18/03/2024
Principal
KENDRIYA VIDYALAYA
D.G.Q.A.
Palavanthangal P.O.

RESULTS OF EXAMINATION OF SAMPLES OF WATER

From: The Principal, Kendriya Vidyalaya DGQA, Palavanthangal, (Near Meenambakkam Railway Station), Chennai – 600 114.

Collected by : Thiru. Arokyadass.

		M – 4	M – 5		
Date of Collection : 04.01.2024		Water from bore well (Pump delivery) near Coastguard Compund	Water from RO unit delivery tap at 1 st floor		Maximum permissible limit for drinking water as per BIS 10500/2012
Date of Receipt : 04.01.2024					
Source as per label:					
Bacteriological Examination	Total colonies per ml on agar at 37°C	60	5		20
	MPN of Coliform bacteria per 100 ml.	240	0		0
	Rapid Test for Ecoli	Klebsiella Aerogans II			absent
	Results of vibrio test				
Physical Examination	Colour	Colourless	Colourless		Colourless
	Turbidity (Units)	5	2		5
	Smell	None	None		None
Chemical Examination (in mg/l).	Total dissolved Solids	580	20		2000
	Carbonate hardness as CaCO ₃	196	2.8		-
	Non- Carbonate hardness as CaCO ₃	36	0		-
	Total hardness as CaCO ₃	232	2.8		600
	Chloride as Chlorine	68	4.8		1000
	Ammoniacal nitrogen	-	-		Nil
	Albuminoid nitrogen	-	-		Nil
	Oxygen absorbed (Tidy's test)	0.72	0.24		-
	Nitrate-nitrogen	0.5	0.5		10.2
	Alkalinity } Phenolphthalein	0	0		-
	as CaCO ₃ } Methyl Orange	196	6.8		600
	Fluoride as Fluorine	0.4	0.1		1.5
	PH.	6.9	6.6		6.5-8.5
	Iron as Fe Total	0.05	Nil		1.0
	Ferrous	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 ³ at 20°C)	830	30		-
Microscopical Examination		Amorphous Matter	Amorphous Matter		

2. Water from RO unit delivery tap at 1st floor (Misc.5)

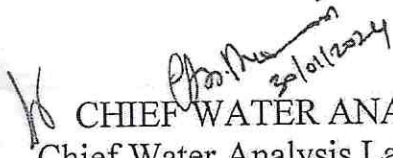
The sample of water is colourless and clear in physical appearance.

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 only 2.8mg/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 water for a prolonged time shall 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. 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 which are essential for healthy life.

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

Copy to: Lab & File


CHIEF WATER ANALYST,
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30/1/24