

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 Analyst's Laboratory,
King Institute Campus, Guindy,
Chennai-600 032.

To

Dr. JACOB'S HITECH SCHOOL,
No.114, Vilangadu,
Acharapakkam,
Kancheepuram District,
Pincode:603 201.

R.No. 35 /C/2025 Misc -48 & 49

Dated: 12.02.2025.

Sir/Madam,

Sub: Report on examination of water samples - Regarding.

Ref: Your letter dated. 07.01.2025.

Two samples of water stated to have been collected on 28.01.2025 by Thiru.A.Prakash from the following Source/ Point located within the premises Dr.JACOB's HITECH SCHOOL, No.114, Vilangadu, Kancheepuram District were received at this laboratory from the addressee on the same day to assess their suitability for drinking purposes.

- 1 .Water from the Open well near Entrance Gate (MISC 48)
2. Water from the RO Plant Outlet tap at First floor of the School (MISC 49)

The results of analysis are furnished overleaf.

1. Water from the Open well near Entrance Gate (MISC 48)

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

Chemical analysis reveals that it is hard, with high value for alkalinity and it is considered to be acceptable chemical quality for drinking purposes.

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

Hence the source of water needs disinfection before consumption.

RESULTS OF EXAMINATION OF SAMPLES OF WATER

From : Dr. JACOB's HITECH SCHOOL, No.114, Vilangadu, Acharapakkam, Kancheepuram
District - 603 201.

Collected by : Thiru. A. Prakash.

M - 48

M - 49

| Date of Collection : 28.01.2025 Date of Receipt : 28.01.2025 Source as per label: | | Water from the Open well near Entrance Gate | Water from the R.O plant outlet tap at First Floor of the School | | Maximum permissible limit for drinking water as per BIS 10500/2012 |
|---|---|---|---|--|--|
| Bacteriological Examination | Total colonies per ml on agar at 37°C | 40 | 10 | | 10 |
| | MPN of Coliform bacteria per 100 ml. | 75 | 0 | | 0 |
| | Nature of Coliform bacteria isolated | Klebsiella aerogens II | | | absent |
| | Rapid Test for Ecoli | | | | |
| Physical Examination | Colour | Colourless | Colourless | | Colourless |
| | Turbidity (Units) | 5 | 2 | | 5 |
| | Smell | None | None | | None |
| Chemical Examination (in mg/l). | Total dissolved Solids | 850 | 30 | | 2000 |
| | Carbonate hardness as CaCO ₃ | 344 | 2.0 | | - |
| | Non- Carbonate hardness as CaCO ₃ | 0 | 0 | | - |
| | Total hardness as CaCO ₃ | 344 | 2.0 | | 600 |
| | Chloride as Chlorine | 104 | 6.5 | | 1000 |
| | Ammoniacal nitrogen | - | - | | Nil |
| | Albuminoid nitrogen | - | - | | Nil |
| | Oxygen absorbed (Tidy's test) | 0.72 | 0.32 | | - |
| | Nitrate-nitrogen | 2.0 | Nil | | 10.2 |
| | Alkalinity } as CaCO ₃ } | 0 | 0 | | - |
| | | 468 | 15 | | 600 |
| | Fluoride as Fluorine | 0.4 | 0.1 | | 1.5 |
| | PH. | 7.6 | 6.2 | | 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) | 1220 | 40 | | - |
| Microscopical Examination | | -----Amorphous Matter ----- | | | |

Method of Disinfection :

The disinfection is carried out by chlorinating the water collected from the Source (Open well) 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 Consumption.

The Storage units should be cleaned with strong bleaching powder solution periodically atleast once in a month to ensure hygienic safety of storage units.

2. Water from the RO Plant Outlet tap at First Floor of the School (MISC 49)

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 too low with only 2.0 mg/l. The calcium and magnesium elements are almost removed from this water, which are very essential for healthy living of human beings. Consumption of such low content of Calcium and Magnesium water for a prolonged time shall be deleterious to the health of the consumers including growing Children.

Hence it is advised that the firm which installed the R.O unit should be contacted with this analytical 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 (30mg/l) so as to have some amount of calcium and magnesium which are very essential for healthy life.

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

Copy to: Lab & File

S. Yashwanth
18.2.2025
for CHIEF WATER ANALYST,
Chief Water Analysis Laboratory,
Guindy, Chennai - 32.
12/2/25