

## DEPARTMENT OF PUBLIC HEALTH AND PREVENTIVE MEDICINE REGIONAL PUBLIC HEALTH WATER ANALYSIS LABORATORY, TIRUNELVELI-11

From
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To
Nathan Central school,
Anjugramam- Tiruchendhur Main road,
Vairavikinaru vilakku,
Koodangulam
Tirunelveli District -627 106.

R.No: 240/L/2025/M.9/CWA/Tvl., Dated: .03.2025

Sir / Madam,

Sub: Report on Examination of water sample from Nathan Central School, Anjugramam- Tiruchendhur Main road, Vairavikinaru vilakku, Koodangulam, Tirunelveli district collected on 24.03.2025.

A sample of water stated to have been collected on 24.03.2025 from R.O unit outlet tap near Office room Nathan Central School, Anjugramam- Tiruchendhur Main road, Vairavikinaru vilakku, Koodangulam, Tirunelveli district (Source: Bore well) by ThiruMeganathan, correspondent was received at this laboratory on the same day from the addressee to assess its suitability for drinking purpose.

The results of analysis are furnished overleaf.

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

It is of satisfactory bacteriological quality for drinking.

The chemical analysis reveals that it is soft. Though, it is of drinkable chemical quality, the total hardness is only 12 mg/l. The Calcium and Magnesium minerals are almost removed from the water, Calcium and Magnesium are very essential minerals for healthy living of human beings. Consumption of water with such very low content of Calcium and Magnesium minerals for a prolonged period will be deleterious to the health of the consumers.

Hence, it is advised that, the supplier of the R.O. unit should be contacted immediately to set right the R.O. unit in such a way that, the outlet water should contains atleast a minimum content of total hardness (30 mg/l) so as to have some amount of Calcium and Magnesium in the outlet water of R.O. unit, which are very essential for a healthy life of the consumers.

The R.O. unit should be maintained periodically as per the supplier's manual to get hygienically safe water at all times.

Chief Water Analyst, Regional Public Health Water Analysis Laboratory, Tirunelveli-11.

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| REGIO   | NAL PUBLIC HEALTH WA  |  | TORY, TIRUNELVE                       | LI-11          |                    |
|---|---|--|---------------------------------------|----------------|--------------------|
|   | RESULTS OF EXAI   | MINATION OF SAMPLES  | OF WATER                              |                |                    |
| Samples from :                                | Nathan Central School, Anjugramam- Tiruchendhur Main road, Vairavikinaru vilakku, Koodankulam, Tirunelveli district |  |                                       |                |                    |
| Collected by :                                | Thiru.Meganathan, Correspondent   |  |                                       |                |                    |
| Date of collection :                          | 24.03.2025  |  |                                       |                |                    |
| Date of Receipt :                             | 24.03.2025  |  |                                       |                |                    |
|   | M-9   |  |                                       |                |                    |
| Source as per label<br>(Bore well)            | R.O outlet tap near office room   |  | 100 8 mm                              |                |                    |
| Bacteriological Examination                   |   |  |                                       |                |                    |
| Plate count per ml.on agar at 37°C            | 20  |  | 22                                    |                |                    |
| MPN of Coliform bacteria/100 ml               | 0   |  |                                       |                |                    |
| Rapid test for E.Coli-I                       |   |  |                                       |                | Contraction of the |
| Results of Vibrio test                        |   |  |                                       |                |                    |
| Physical Examination                          |   |  |                                       |                |                    |
| Colour  | Colourless  |  |                                       |                |                    |
| Turbidity (NTU)                               | 5   |  |                                       |                |                    |
| Smell   | None  |  |                                       |                |                    |
| Chemical Examination (in mg/l)                |   |  |                                       |                |                    |
| Total Dissolved solids                        | 110   |  |                                       |                |                    |
| Carbonate Hardness (as CaCO <sub>3</sub> )    | 12  |  |                                       |                |                    |
| Non-carbonate Hardness(as CaCO <sub>3</sub> ) | 0   |  | Y                                     |                |                    |
| Total Hardness (as CaCO <sub>3</sub> )        | 12  |  | Ž-                                    |                |                    |
| Calcium Hardness (as CaCO3)                   | 6   |  |                                       |                |                    |
| Magnesium Hardness (as CaCO3)                 | 6   |  |                                       |                |                    |
| Chloride (as CI)                              | 26  |  | 02 21 22 24                           | CO DOMETRIA    |                    |
| Ammoniacal Nitrogen (as N)                    |   |  |                                       |                |                    |
| Albuminoid Nitrogen (as N)                    |   | Difference   |                                       | Company of the |                    |
| Oxygen absorbed (Tidys test)                  | 0.08  |  |                                       |                |                    |
| Nitrate Nitrogen                              | 0.5   | 137  |                                       |                |                    |
| Acidity/Alkalinity} Phenolphthalein           | 0.3   |  | - 6                                   |                |                    |
| as CaCO <sub>3</sub> } Methyl Orange          | 20  | The second secon | 100 100 100 100 100                   |                |                    |
| Fluoride (as F)                               | 0.1   |  |                                       | -              |                    |
| oH value                                      | 6.5   |  |                                       |                |                    |
| Total Iron (as Fe)                            | 0.05  |  |                                       |                |                    |
| Manganese (as Mn)                             | 0.05  |  |                                       |                |                    |
| Qualitative Tests:                            |   |  |                                       |                |                    |
| Nitrite Nitrogen                              | Trace   | 312 312 31 31  |                                       |                |                    |
| Sulphate                                      | Trace   |  |                                       |                |                    |
|   |   |  |                                       |                |                    |
| Phosphate Toxic Substance                     | Trace   | -AME ALCOHOLOGICAL   | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |                |                    |
| Electrical conductivity(Reciprocal            |   |  | 13 16 7119                            |                |                    |
| megohms per cm at 20°C)                       | . 160   |  |                                       |                |                    |
| Microscopical Examination                     | Amorphous Matter  |  |                                       |                |                    |