

DEPARTMENT OF CHEMISTRY

Physico-chemical Analysis of Bore well Water samples of Thondaimanpatti area in Madurai District

Objective of the work:

To analyze the Physico chemical parameters of water samples in Thondaimanpatti, Madurai.

To create awareness regarding the quality of water among the people in Thondaimanpatti.

Methodology and technical aspects:

Water samples were collected from 4 different places at Thondaimanpatti, Madurai. The location of the collected water samples for physico-chemical analysis of water samples in Thondaimanpatti, Madurai was tapwater, borewell water, tank water and pump water. The ground water quality and suitability of its use were analyzed. The water quality parameters like pH, electrical conductance, total hardness, Dissolved Oxygen (DO), Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), sodium (Na), potassium (K), salinity or total dissolved solids (TDS), and Chloride (Cl) has been studied.

Outcome:

The analysis of the water quality parameters from the different places in Thondaimanpatti Village in the Madurai City showed that pH, conductivity, Chloride, total hardness and salinity were well within the permissible limits. (BIS Standard) The sodium levels of all the samples were well above the permissible limit. The potassium level of some of the samples was above the permissible limit. Adverse health effects due

to sodium and potassium consumption from drinking-water are unlikely to occur in healthy individuals. The BOD level of almost all the samples was above the permissible limit. In conclusion from the results of the present study it may be considered that the water samples of Thondaimanpatti are fit for domestic purpose.

