

# Studies on Groundwater Samples Collected from Ranipet Town, Tamilnadu and Incorporation of Natural Polymeric Material

G. Archana<sup>1</sup> and D. Rekha<sup>2</sup>

Research scholar, Department of Chemistry<sup>1</sup>

Assistant Professor, Department of Chemistry<sup>2</sup>

Kamban College of Arts & Science for Women, Tiruvannamalai

**Abstract:** Groundwater quality study was carried out in the Tiruvannamalai Town water samples, Tamilnadu. The objective of this study is to identify the quality of groundwater especially in the town areas where groundwater is used for domestic, agriculture and industrial purposes. Ten locations of ground water samples were collected and studied for a month of January-2024. The present investigation is focused on the determination of Physico-Chemical and Mechanical parameters such as temperature, taste, Electrical conductivity, pH, hardness, total solids, total dissolved solids, total suspended solids, chlorides, sulphate, nitrate, fluorides, Dissolved Oxygen, corrosion resistance, abrasion resistance and strength of materials on water. Then, groundwater suitability was examined by using WHO and BIS standards. Therefore, the some of the water samples are not good agreement within the limits; those waters are treated with natural polymeric material like Ricinus Communis seed shell nano-aggregates, and then used for domestic, agricultural, industrial and machinery purposes

**Keywords:** Bore well water, Water quality parameters, Ricinus Communis, WHO and BIS standards

