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Physico-Chemical Analysis Of Water Samples Near Industrial Area, Kurinjipadi Block, Cuddalore District, Tamilnadu, India

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Abstract: The present investigation was carried out to assess the impacts of industrial activities on the ground water quality in and around SIPCOT Industrial complex in Cuddalore District (kurinjipadi block). The quality was assessed in terms of physico-chemical parameters. Ground water and municipal water samples were collected from seven (7) villages in kurinjipadi block during December 2010- February 2011. The physico-chemical parameters such as pH, Electrical Conductivity (EC), total dissolved solids (TDS), turbidity, dissolved oxygen (DO), total alkalinity (TA), total hardness (TH), Calcium (Ca^{2+}), magnesium (Mg^{2+}), Sodium (Na^+), Potassium (K^+), Chloride (Cl^-), Nitrate (NO_3^-), Sulphate (SO_4^{2-}) were analyzed (APHA, 1998) to know the present status of the groundwater quality. The results were compared with standards prescribed by ISI 10500-91. It was found that the underground water was contaminated at few sampling sites. The remaining sampling sites shows physicochemical parameters within the water quality standards and the quality of water is good and it is fit for drinking purpose. The correlation coefficients were calculated for water quality assessment.

Keywords: Water quality, Physico-chemical characteristics, municipal water, drinking water quality, SIPCOT.

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