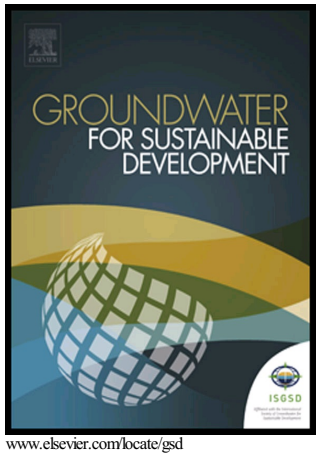


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# "Evaluation of Water Quality Suitability for Drinking using Drinking Water Quality Index in Nagapattinam district,Tamil Nadu in Southern India"

**S.Ponsadai Lakshmi[a*], S.Ganapathy Sankari [b], S. Mythili Prasanna[c], G.Madhurambal[d]**

[a] Professor, Department of Chemistry, E.G.S.Pillay Engineering College, Nagapattinam,Tamil Nadu, India.

[b] Department of Chemistry, Sri Venkateshwara college of Engineering and Technology,Thirupatchur, Thiruvallur, Tamil Nadu, India.

[c] Assistant Professor, Department of Chemistry, PET Engineering College, Valliyur, Tamil Nadu, India.

[d] Professor, Department of Chemistry, A.D.M.College, Nagapattinam,Tamil Nadu, India.

## Abstract

The overall water quality condition is explained using multiple water quality variables by developing a water quality index as a single number. The index consists of water quality variables: pH,EC,totalalkalinity,totalhardness,calcium,magnesium,chloride,sulphate,fluoride,nitrate,sodium,chromium,copper,iron,manganese, zinc and lead.The present study aims to assess the drinking water quality of the study area in and around Mayiladuthurai taluk using drinking water quality index system. Seventeen water quality parameters are selected for evaluation of water quality. A data set of 20 ground water samples collected from the study area in and around Mayiladuthurai taluk, Tamil Nadu is used to evaluate the quality of water samples through arithmetic and geometric index system.

Key words: Drinking water quality index, Sub index, Min-Max operator, Mayiladuthurai taluk

## 1.Introduction

In a drinking water quality assessment, the decision making based on water quality data is a crucial issue. Traditionally, water resource professional communicates their decision on drinking water quality status by comparing the individual parameters with guideline values. While this decision is too technical and detailed, without providing a whole picture of drinking water quality (Cude, 2001).To resolve this decision making problem, Horton (1965) made a pioneering attempt to