VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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A Project Report on

"SAMPLING AND ANALYSIS OF DRINKING WATER IN ARSIKERE TALUK"

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BY

SHRUTHI B.R	4GH07CV041
DEEPIKA S.N	4GH07CV008
KANYAKUMARI R.P	4GH07CV013
HARISH KUMAR V.D	4GH08CV402

Carried out at
Government Engineering College, Hassan

Under the guidance of
Dr S.Prashanth
Professor & Head

Department of Civil Engineering

GOVERNMENT ENGINEERING COLLEGE

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ABSTRACT

Water is one of the essential elements needed by organisms without which they cannot survive. As far as human body is considered, it is required for wide variety of function including regulation of body temperatures, solvent action etc. Good quality water is one of the essential ingredients of a healthy productive life.

The term "ground water" refers to the water that occurs below the surface of the earth. The main source of ground water is infiltration. The ground water is relatively free from pollution and is very useful for domestic use. Arsikere is a taluk in Hassan at distance of 38 Km from Hassan. The major source of drinking after in Arsikere taluk is ground water as there is no perennial river system. In this project "Sampling and Analysis of Drinking Water in Arsikere Taluk", the ground water quality of some of the villages of Arsikere taluk has been studied. By general inspection it was observed that the water contains high degree of hardness and fluorides in some of these samples.

Occurrence of fluoride at excessive levels in drinking water in developing countries is a serious problem. Many filter media and several water treatment methods are known to remove fluoride from water. However, many deflouridation techniques have resulted in failure. Therefore an attempt has been made to remove fluoride from drinking water using soil rich in Magnetite as an adsorbent media.

The water samples were collected from different villages of Arsikere taluk and were tested in Department of Civil Engineering's Environmental Engineering Laboratory, Malnad College Of Engineering, Hassan. The tests for analyzing iron, fluoride, nitrate and sulphate were done using *UV spectrophotometer*. The total solids were analyzed using *Gravimetric Method*, the acidity, hardness, alkalinity and chloride using *Volumetric Method.*