

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY,
BELGAUM**



**A PROJECT REPORT
ON**

**“ STUDY OF NITRATE ADSORPTION
CHARACTERISTICS ON BLACK COTTON SOIL ”**

A project report submitted in partial fulfillment of requirement of 8th semester
B.E course 2011-2012

Submitted by:

SHAMBHULING.S

3RB05CV021

SANTHOSH REDDY.S

3RB06CV017

SHIVA

3RB08CV020

SHIVASHARAN KUMAR

3RB09CV403

**Under the guidance of:
Prof. RAMESH BASHETTY**



**DEPARTMENT OF
CIVIL ENGINEERING**

RURAL ENGINEERING COLLEGE BHALKI, 585-328

ABSTRACT

Soil was collected from a number of sites and depths to 300 cm within four great soil groups. Nitrate, chloride and sulfate adsorption were determined at the soil pH. Various soil properties likely to influence the magnitude of adsorption were determined, and their relative importance to adsorption was assessed using stepwise multiple regressions. The subsoils of all four soil groups adsorbed nitrate ranging up to 0.47 mmol/100 g from 0.005 M potassium nitrate solution. The mean adsorption for soil groups decreased in the order krasnozem, xanthozem, red earth and podzolic. Chloride and sulfate adsorption was largely equivalent to that of nitrate. The variations in adsorption between and within great soil groups could be attributed to changes in organic matter, smectite minerals, hydroxy aluminium, surface area and pH.