

STUDIES ON THE REMOVAL OF FLOURIDE FROM AQUEOUS SOLUTIONS USING LIME

**V. SUBHASHINI¹, A. V. V. S. SWAMY², Z. VISHNUVARDHA²,
P. BRAHMLI RAO², K. SASIDHAR² AND R. HEMA KRISHNA³**

^{1, 2} Department of Environmental Sciences, Acharya Nagarjuna University,
Nagarjuna Nager-522510, Guntur (Dist.) Andhra Pradesh, India.

³ Department of Chemistry, University of Toronto, Ontario, Canada. M3J 1P3

Abstract

The potential of lime to remove the fluoride from aqueous solution by bench scale experiments has been investigated. In the present study, the defluoridating agent, which was easily available even in rural areas, has been selected. Known concentrations of fluorides were prepared using anhydrous sodium fluoride. The removal of fluorides by the defluoridating agent was studied up to 4 hours for all the fluoride concentrations. The variations in the percentage removal and attainment of equilibrium were recorded. A standard curve also prepared by taking standard fluoride solution of 1-15 mg/l at intervals of 1 mg/l (i.e. 1,2,3,4,.....,15 mg/l) and analytical procedure was carried out as per the NEERI manual. All the concentrations of defluoridating agent have successfully reduced the fluoride content in waters to permissible limits.

Keywords ; Deflouridation, Lime, Equilibrium time, Batch tests, Aqueous solutions.