

## **RECONCENTRATION OF SOME TRACE ELEMENTS WITH MICROORGANİSM IMMOBILIZED ON SEPIOLITE**

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A method for the preconcentration of Cu, Zn, Fe, Cd and Ni by using some microorganisms (*Saccharomyces cerevisiae*, *Aspergillus niger* and *Escherichia coli*) immobilized on sepiolite as an adsorbent has been developed. The column adsorption method was used for the preconcentration studies. Optimum pH values, amount of adsorbent, elution solution and flow rate of sample solutions for the preconcentration have been obtained for the elements studied. The elements preconcentrated have been determined by flame atomic absorption spectrophotometry. Precision and accuracy of the method have been evaluated. The adsorption capacities of the microorganisms immobilized on sepiolite and limit of detections have also been determined. At the optimum conditions, recoveries of the elements studied were above 95 %. The proposed method has been applied to the determination of Cu, Zn and Fe in geological samples and Fe, and Ni in brass and Cu, Zn, Fe and Ni in aluminum alloy.

The elements have been determined with about 5% relative error.