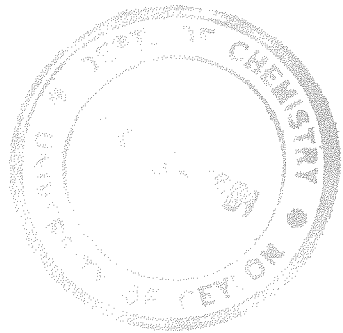


04



USE OF A SOLVENT IMPREGNATED RESIN

FOR COPPER AND ZINC SEPARATION.

BY

V. ABEYKOON.

PERMANENT
REFERENCE
NOT TO BE
REMOVED
FROM THE
LIBRARY

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE
OF THE UNIVERSITY OF COLOMBO, SRI LANKA.

DIVISION OF AGRICULTURAL CHEMISTRY,
CENTRAL AGRICULTURAL RESEARCH INSTITUTE,
GANNORUWA,
PERADENIYA.

14 th. sept.1980.

P.7879

SYNOPSIS

Knowledge of the properties of various ion exchange resins is important for commercial application of metal separations. In this study a solvent impregnated resin was prepared from Amberlite XAD-2 and a ligand, O-methoxyN benzoyl phenyl hydroxyl amine. Sorption capacities of this impregnated resin were studied under varying pH, time and ionic strength for nickel, copper and zinc. For nickel, a gradual increase in sorption capacity is shown with increase in pH, which further increases in the presence of tartarate. For copper and zinc, similar curves having different maxima at different pH values were obtained. For nickel and zinc, the time required for equilibration was similar, while copper showed a faster rate of equilibration. For all three metals, increasing the ionic strength of the medium brought about a decrease in adsorption by the resin. The variation of metal capacities with pH was used for a satisfactory separation of copper and zinc.