



Synergistic Extraction of Chromium (III) using TPPO and TMA

A.V.L.N.S.H. Hariharan* and K.C. Purnima

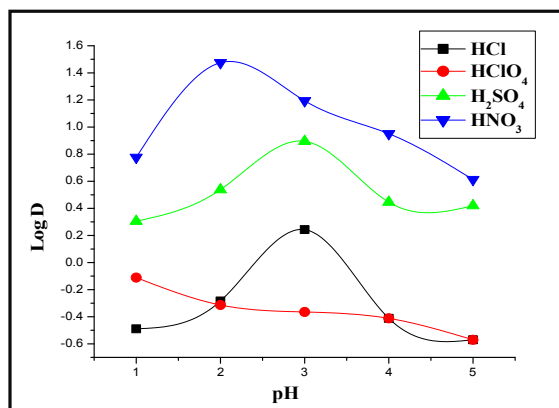
Department of Chemistry, GITAM Institute of Technology, GITAM, Visakhapatnam-530 045, **INDIA**
Email: ahharan@gmail.com

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ABSTRACT

The extraction of chromium (III) from sulphuric, nitric, hydrochloric and perchloric acid solutions has been studied using mixtures of Triphenylphosphine oxide (TPPO) and Trimethylamine (TMA) in chloroform. The investigations were carried out to study the effect of various parameters like shaking time, pH, concentration of synergistic mixture, temperature, diluents on the extraction of chromium (III). Stoichiometries of extracted species in both individual and mixed extraction were ascertained by slope ratio analysis. Thermodynamic parameters controlling the nature of the extraction were also evaluated from the distribution ratio values obtained at different temperatures in order to explain the extraction mechanism.

Graphical Abstract



Effect of pH by mixture of TPPO+TMA and synergistic extractants.

Keywords: Chromium (III), TPPO, TMA, Synergistic extraction, separation.