STUDIES ON THE USE OF A CASTOR OIL BASED LIGAND IN THE EXTRACTIVE SEPARATION OF TITANIUM

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A hydroxamic acid type of ligand was prepared using castor oil as the starting material. Liquid-liquid extraction properties of certain metal chelates of this ligand into petroleum ether (B.P. 100-120°) were studied with the aid of UV/Visible absorption spectra. Studies on the effect of pH on the extraction of metal chelates have revaled an achievement of a selective extraction of about 20% titanium (IV) from a solution of a mixture of iron and titanium. However, in the presence of oxyanions such as sulphate, nitrate and perchlorate, extraction of a mixed metal species of iron (III) and titanium (IV) was observed. A selective extraction of titanium (IV) into petroleum ether from a sample of ilmenite leached with hydrochloric acid is described.

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