

SOLVENT EXTRACTION STUDIES WITH A SOYA
OIL BASED N-PHENYLHYDROXAMIC
ACID TYPE LIGAND

L. Nilmini Fernando and H. Dasaratha Gunawardhana
Department of Chemistry, University of Colombo.

N-phenylhydroxamic acid type ligand was prepared using Soya oil as the starting material. The extraction studies of iron (II), iron (III), titanium (IV) and tungsten (VI) have been carried out using a solution of the ligand in 100-120 petroleum ether. The extraction of iron (II), iron (III) and titanium (IV) exhibited similar behaviour indicating that titanium cannot be separated from iron. This is in contrast to observation made with coconut oil based¹ N-phenylhydroxamic acid type ligand where titanium can be separated from iron. However, the extraction behaviour of tungsten (VI) indicates a possibility of extracting tungsten (VI) selectively from a 3M hydrochloric acid medium. Further investigations on the extracted species revealed that the nature of the anion of the mineral acid employed to control the hydrogen ion concentration plays a vital role in the extraction behaviour. It was established that tungsten (VI) can be selectively extracted from a mixture of iron and titanium using the ligand.

Reference:

Gunawardhana, H.D. and Asiriwatham, Dushyanthi, (1982),
Indian J. Chem., 21A:338 - 340.