

DP 05

**SYNTHESIS OF ORGANIC MAGNETIC PARTICLES FOR THE REMOVAL OF HEAVY METALS
FROM AQUEOUS WASTE**

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Polymeric coated ferromagnetic particles with an absorbed layer of extractant have been synthesized and are being evaluated for application in the separation and the recovery of low concentrations of lanthanides from water solutions and suspensions. Physical characterization of the extractant absorbed particles were performed by Scanning Electron Microscope and FT-IR spectra. Metal separations have been performed at various HNO₃ concentrations. Separation capabilities of the polymeric magnetic particles and equilibrium adsorption isotherm of europium were investigated. Moreover, studies of magnetic separation of polymeric magnetic particles using a magnet were also verified.