

## Extraction of Strontium Ions through Ligand Assisted Ionic Liquids

**Authors :** Pradeep Kumar, Abhishek Kumar Chandra, Ashok Khanna

**Abstract :** Extraction of Strontium by crown ether (DCH18C6) has been investigated in [BMIM][TF2N] Ionic Liquid (IL) giving higher extraction ~98% and distribution ratio as compared to other organic solvents (Dodecane, Hexane, & Isodecyl alcohol + Dodecane). Distribution ratio of Sr in IL at 0.15M DCH18C6 indicates an enhancement of 20000, 2000, 500 times over Dodecane, Hexane and 5% Isodecyl Alcohol + 95 % Dodecane at 0.01M aqueous acidity respectively. In presence of IL, Sr extraction decreases with increase in HNO<sub>3</sub> concentration in aqueous phase whereas opposite trend was observed with organic solvents. Extraction of Sr initially increases with increase in DCH18C6 concentration in IL, finally reaching an asymptotic constant.

**Keywords :** distribution ratio, ionic liquid, ligand, organic solvent, stripping

**Conference Title :** ICCEMM 2017 : International Conference on Chemical Engineering and Molecule Microscopy

**Conference Location :** Kuala Lumpur, Malaysia

**Conference Dates :** August 24-25, 2017