

### Solid-Liquid Equilibrium, Excess Molar Volumes and Molar Refractivity Deviations for Solvent and Modifiers in the Molybdenum Extraction Process

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Molybdenum (Mo) is a strategic metal and industrially used in high-pressure and high temperature resistant greases between metals and catalysts. Besides, the phase equilibrium between solvent and modifiers are very important for a study of solvent recovery process and also for development of clean technology. In this work, the solid-liquid equilibrium (SLE) for binary system of solvent-modifier, widely used for extraction of Mo was determined by synthetic method. The experimental data have been correlated by the NRTL and the UNIQUAC models. In addition, excess molar volumes ( $V^E$ ) and deviations in molar refractivity ( $\Delta R$ ) data were reported at 298.15 K under atmospheric pressure. The determined  $V^E$  and  $\Delta R$  data were correlated with compositions using the Redlich-Kister polynomial.

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