

Liquid-Liquid Equilibria for the Ternary {sulfuric acid solution + modifier + molybdenum extraction solvent} Systems at 298.15 K

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Molybdenum (Mo) is metallic element which is most frequently used to make high-strength metal alloys by alloying addition in alloy and stainless steels. Mo can be extracted by acid leaching from roasted Mo ore. It means that the LLE data for the acid leaching mixture will be needed to analyze solvent capability and to develop Mo extraction process. Trioctylamine (TOA) and Tributylphosphinate (TBP) are commonly used to Mo selective solvent and 1-dodecanol and 1-dodecane are used as an effective modifier. For mutual separation between solvent and modifier should be done for recycling of solvent and also modifier. In this work, therefore, the ternary liquid-liquid equilibrium (LLE) data are reported for the system sulfuric acid aqueous solution + modifier + solvent at 298.15 K. The experimental LLE data has been correlated by using GE models: the NRTL and the UNIQUAC model.

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