عنوان مقاله:

Measurment and correlation of liquid-liquid equilibria of water+butyric acid+sesame oil ternary system

محل انتشار:

دومین کنفرانس بین المللی فناوری های نوین در علوم (سال: 1397)

تعداد صفحات اصل مقاله: 5

نویسندگان:

Fatemeh Abbasnezhad irisofla - *Department of Chemical Engineering, Faculty of Engineering, University of Guilan, Rasht, Iran*

Hossein Ghanadzadeh gilani - *Department of Chemical Engineering, Faculty of Engineering, University of Guilan, Rasht, Iran*

خلاصه مقاله:

In this study the correlation of phase equilibrium data of ternary system (water + butyric acid + Sesame oil) under atmospheric pressure at 308.15 K was investigated.Type 1 behavior of LLE was observed in this ternary system. Also, at this temperature Experimental distribution coefficients and separation factors were calculated to evaluate the extracting ability of the solvent. This amount varies from 75.200 to 9.993.The reliability and consistency of the tie line experimental data determined by applying Othmer–Tobias and Hand equations. The correlation of experimental data was obtained using NRTL model. The values of the parameters of NRTL model were determined by the root-mean-square deviation (rmsd) method. The amount of rmsd between experimental and calculated equilibrium mass .fractions is about 0.957% that means NRTL model is suitabe for explain phase behavior of this system

کلمات کلیدی:

.Liquid-liquid equilibrium. Tie-line data, Separation factor, NRTL model