

VLE equilibrium of CO<sub>2</sub> in aqueous alkanolamine : Experimental data and modelling  
with electrolyte NRTL model

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Phase equilibrium calculation of electrolyte-mixed solvent systems is important in separation processes including absorption. In this study, a thermodynamic model was applied for representing vapor-liquid equilibrium in CO<sub>2</sub>-alkanolamine-water system. As the alkanolamine, MEA (monoethanolamine), the most conventional absorbent in gas processing industries, was selected. Activity coefficients are represented with the Electrolyte Non-Random Two Liquid (NRTL) equation proposed by Chen and coworkers. This model treats long-range ion-ion interactions and local interactions between all liquid phase species. Both water and MEA were treated as solvents. The experimental partial pressure data and calculated by Electrolyte-NRTL parameters from literatures were compared.