

Data Reconciliation of Excess Enthalpy for Water + Ethanol, Ethanol+ 1,4-Dioxane and Ethyl Acetate + Methanol System

강정원, 김문갑<sup>1,†</sup>

고려대학교; <sup>1</sup>경북대학교

(mg\_kim@knu.ac.kr<sup>†</sup>)

Thermophysical properties data plays important role in design, operation and optimization of chemical processes. Many thermophysical data are reported and published each year but in many instances, measured data for same system do not coincide due to many reasons. These inconsistency may originated from degree of impurities in the sample used, inappropriate measurement technique, typos /mistakes during publication and etc. ThermoData Engine software developed by NIST provide a unique capability called “Experimental Planning” which identifies such inconsistencies in the same data among huge collection of thermophysical property database. In this study, three system with disagreeing excess enthalpy data were identified and new measurements were performed to verify the data. We hope that our new measurements can be data reconciliations among conflicting data sets and help to remove erroneous measurement results in the database system.