

**Isothermal Vapor-Liquid Equilibrium at 323.15 K for the Ternary Mixture of Propyl
vinyl ether (PVE) +
1-Propanol + Toluene and their Binary Sub-Systems**

곽해연, 황인찬, 박소진*, 한규진¹
충남대학교 공과대학 화학공학과;
¹대덕대학교 공과대학 유도탄약과
(sjpark@cnu.ac.kr*)

Vinyl ethers (ROCH=CH₂, where R is an alkyl group) are used in different industries, particularly as solvents, motor oil additives, for the manufacturing of coatings or as intermediates for the synthesis of flavors, fragrances and pharmaceuticals.¹ For the synthesis and separation of these compounds, reliable data of the physical properties and phase equilibrium behavior are required. However, to date, only a limited number of studies have been performed on these type of compounds. Relatively few investigations have been reported for alkyl vinyl ether compounds and there is no data for propyl vinyl ether (PVE) as far as we know. In the present work, we report vapor-liquid equilibrium (VLE) data at 323.15K for the binary and ternary system PVE + 1-propanol + toluene determined by using headspace gas chromatography (HSGC). The experimental binary VLE data were correlated with using the Margules, van Laar, Wilson, NRTL and UNIQUAC equations, the ternary VLE data were correlated with the Wilson, NRTL models.