

## Crystallization of N-vinyl-2-pyrrolidone with 2-pyrrolidinone

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To separate the N-vinyl-2-pyrrolidone from 2-pyrrolidinone by crystallization, the binary melting point phase diagram is needed. N-vinyl-2-pyrrolidone and 2-pyrrolidinone binary system melting point was measured at 25°C ~ -20°C in this study. A jacketed reactor was used in measuring melting points to control the temperature of system above melting point. A cooling stick was set at the center of the reactor to keep the temperature below melting point for the crystallization. The purity of crystals was measured by UV/Vis spectrometer and Gas Chromatography. Overall heat transfer coefficient, kc for melt crystallization was calculated. In this study, calculated results have been compared with experimental data using N-vinyl-2-pyrrolidone and 2-pyrrolidinone.