VLE Measurements at Low Pressure in Polycarbonate Polymerization

S. Lee [S], W. Bae and H.Y. Kim [C]
School of Chemical Engineering and Institute of Chemical Processes, Seoul National University, Seoul, Korea

Polycarbonate has been used widely because of its useful characteristics like thermal resistance, flexibility, transparency, high intensity, etc. The demands for high purity polycarbonate are increasing in the optical media industry nowadays. As the concerns about environment, health and safety (EHS) are growing, the non-phosgene process has been replacing the phosgene process in the polycarbonate polymerization. In industry, diphenyl carbonate (DPC), the major material in the polycarbonate polymerization, is synthesized from dimethylcarbonate (DMC) with catalysis. In this study, VLE data of DPC-phenol, DPC-anisole and anisole-phenol were measured with the T-P-x method under low pressure conditions. The experimental data were correlated by the Peng-Robinson equation of state with the Wong-Sandler mixing rule.