

A Rheological Study on High Performance Liquid Chromatography

김수희, 김태후, 안기철, 정원일, 한원희†
동양대학교

As the composition of eluants in High Performance Liquid Chromatograph(HPLC) varies, the adsorption properties of solutes to the adsorbents and separation characteristics of solutes change. The composition variation also significantly affects thermodynamic rheological behavior of the carrier fluid. As the layers of eluants of different composition flow through the packed bed of solid particles, thermodynamic and rheological properties of mixing and dispersion should be considered. This dispersion phenomena can show up both in pressure profile and light absorption profile. Temperature dependences of binary and tertiary system viscosity and density changes are studied. Also, the relation between the pressure profile and HPLC column particles, absorption curves and the aggregation structure characteristics are examined.