Synthesis of poly(glycidyl methacrylate) microspheres by dispersion polymerization in compressed liquid dimethyl ether

조동우, 오경실[1], 배 원[2], 신문삼[3], 김화용*
서울대학교; [1]LG화학; [2]미원스페셜티케미컬; [3]을지대학교
(hwayongk@snu.ac.kr*)

In this study, spherical particles of poly(Glycidyl methacrylate) (PGMA)) were synthesized via dispersion polymerization in compressed liquid dimethyl ether using AIBN as an initiator and five kinds of surfactants : PDMS-g-pyrrolidonecarboxylic acid (Monasil PCATM), PDMS modified surfactants, SS-5050KTM, and KF-6017TM, Poly (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10- heptadecafluorodecyl acrylate) (poly(HDFDA)), and poly (3, 3, 4, 4, 5, 5, 6, 6, 7, 7, 8, 8, 9, 9, 10, 10, 10 - heptadecafluorodecyl methacrylate) (poly (HDFDMA)). To study the effect of reactant concentration on the polymer particle size and distribution, the experiments are performed with changing the concentration of monomer, initiator, and surfactant. And the experiments with changing the polymerization of temperature and pressure are performed.