

Synthesis and characterization of pH sensitive PEG-b-PDPG block copolymer

한종권, 김민상, 이두성*
성균관대학교
(dslee@skku.edu*)

pH sensitive polymeric micelles can strengthen the anti-tumor efficiency of a drug by accumulating in the target area. In order to synthesize pH sensitive block copolymer, we synthesized PEG-b-PBLG(Poly Benzyl-L-Glutamate) via polymerization of N-carboxyanhydrides. According to substituting side groups by aminolysis, PEG-b-PDPG(Poly (N'-Diisopropyl) ethyl-Glutamine) was synthesized. The chemical structure of PEG-b-PBLG and PEG-b-PDPG was characterized by ^1H NMR spectroscopy. The molecular weights of the synthesized polymer was measured by a gel permeation chromatography (GPC). The pH sensitivity of polymeric micelles was determined by fluorescence using pyrene as a probe. The particle size of polymeric micelles was measured by dynamic light scattering measurements.