Preparation of thermosensitive PVA-NiPAAm microcapsules by coacervation and its application in controlled release

서명주, 이종은, 여경희, 김미희, 양재호*
전남대학교 화학공학부
(jhyang@chonnam.ac.kr*)

Thermosensitive PVA-NiPAAm polymer were prepared by graft- copolymerization of N-isopropylacrylamide (NiPAAm) onto poly (vinyl alcohol)(PVA) in dimetyl sulfoxide (DMSO). The microcapsules containing OS (octyl salicylate) were made by coacervation method. Phase transfer temperature was obtained by measuring the cloud point of PVA-NiPAAm copolymers. The PVA-NiPAAm microcapsules exhibited obvious thermal sensitivity, which was observed from the difference of release behavior of OS at different temperature. In addition, the effect of various parameters such as the microcapsule size, the degree of cross-linking of the coacervated polymer membrane, the surfactant concentration was experimentally investigated.