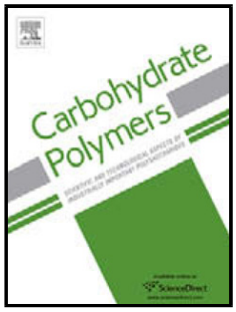

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Self-association of sodium deoxycholate with EHEC cellulose cooperatively induced by sodium dodecanoate

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Abstract

Some aspects of ethyl (hydroxyethyl) cellulose (EHEC) aqueous behavior in the presence of ionic surfactants are described in the literature; however, most of the studies reported address moderately concentrated solutions. Few studies have been carried out in the dilute regime using mixtures of biosurfactants. The main purpose of this work is to investigate the interaction of EHEC in the dilute regime and to verify the mixture of two surfactants: sodium deoxycholate (NaDC) and sodium dodecanoate (SDoD). The parameters of the surfactant to polymer association processes such as the critical aggregation concentration (cac) and saturation of the polymer by surfactants (psp) were determined from the plots of surface tension and specific conductivity versus surfactant concentration in basic conditions. The cmc of NaDC-SDoD mixtures showed nonideal behavior. However, EHEC added to mixtures of SDoD and NaDC acts as a stabilizer for the mixed aggregate during the association process.

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