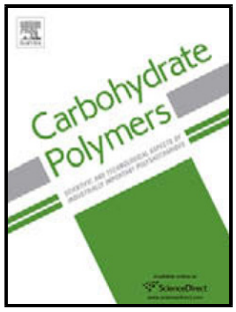

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Characterization of amylose nanoparticles prepared via nanoprecipitation: Influence of chain length distribution

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Abstract

The influence of chain length distribution of amylose on size and structure of the amylose nanoparticles (ANPs) prepared through nanoprecipitation was investigated. Amylose with different chain length distributions was obtained by β-amylase treating amylose paste for different times and measured by size exclusion chromatography (SEC) and fluorophore-assisted carbohydrate electrophoresis (FACE). ANPs prepared via precipitation were characterized by using dynamic light scattering (DLS), scanning electron microscopy (SEM) and X-ray diffraction (XRD). Results showed that the β-amylase treatments led to decrease in chain length of amylose, and it was