MICROENCAPSULATION OF LUTEIN WITH PLA BY SAS

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Abstract

Lutein is a xanthophyll which has a role in reducing age-related macular degeneration and other chronic disease, such as cancer and cardiovascular diseases. But the lutein is sensitive to oxygen,heat and light. Microencapsulation of lutein with PLA by SAS was studied in order to increase its stability to air,heat and light and control release of lutein. Semi-continuous style of SAS was applied. The influence of process parameters on MEE and MEY,like temperature, pressure and concentration were investigated. The structure and morphology of the microcapsules were characterized by XRD, SEM, TEM and LS. MEE and MEY are 68.5% and 81.3%, respectively. The lutein was embedded in PLA with the microcapsule of size ranged from 200nm---500nm.

Keywords SAS, lutein,PLA, microencapsulation