Characterization of microspheres prepared with extracellular polysaccharide p-m10356 for protein delivery system

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Abstract

The extracellular polysaccharide (EPS) p-m10356 of Hahella chejuensis 96CJ10356 which is non-pigment mutant was studied in a wide variety of industrial applications such as food, pharmaceutical, textile and oil industries. The goal of this study was to evaluate the EPS p-m10356 microspheres as a drug delivery system for a protein. The microspheres were prepared at 1%(w/w), 1.5%(w/w) EPS p-m01356 concentration by w/o emulsion method. The shape of the microspheres observed by SEM was spherical and uniform. In ovalbumin (OVA) release test, the amount of OVA released from the microspheres at pH 7.4 showed higher than those released at pH 1.2. In addition, the amount of OVA released from the microspheres prepared at 1.0%(w/w) EPS concentration was 56% for 4h. On the other hand, The drug at 1.5%(w/w) was released 39% for 4h. Therefore, The microspheres using EPS p-m10356 may be used as a probable system for oral delivery of protein drugs.

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Reference

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