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Abstract

Introduction

Deoxycholic acid (DCA) has improved gliclazide oral absorption while Eudragit (ED) polymers have improved formulation stability of antidiabetic drugs. The aim of the study is to test if DCA and ED encapsulation will optimise the release and stability of the potential antidiabetic drug probucol (PB).

Materials and methods

PB formulations were prepared using Eudragit polymers and DCA and formulations were analyzed for their rheological and biological properties.

Results

Rheological properties and size distribution were similar among all groups. β -cell survival and biological activities were best with NM30D microcapsules. The inflammatory profile and oxidative stress effects of microcapsules remained similar among all groups.

Conclusion

ED NM30D and DCA incorporation can exert positive and stabilizing effects on PB oral microcapsules.

Keywords: Probucol; Microencapsulation; Deoxycholic acid