

ABSTRACT

CHARACTERIZATION OF QUERCETIN-PEG 8000 SOLID DISPERSIONS SYSTEM

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The flavonol quercetin is potentially clinically relevant for its antioxidant activity, antiinflammation, and others. However, its beneficial properties for therapeutic applications have been impeded by the fact that quercetin has poor aqueous solubility and low bioavailability. Solid dispersions of quercetin-PEG 8000 suggest way to increase quercetin solubility and bioavailability. The aim of this investigation is to get characterization of quercetin-PEG 8000 solid dispersions that were prepared by melting method. They were characterized by differential thermal analysis, powder X-ray diffraction, scanning electron microscope, and fourier transform infrared spectroscopy. The result was seen that solid dispersion has low melting point, decrease of diffractogram intensity, reduced particle size than quercetin and physical mixture. The infrared spectra of solid dispersions and physical mixtures are shown that the bands of quercetin were visible on their spectra and also the spectra were maintained.

Keywords: Quercetin, PEG 8000, Solid Dispersion, Physical characterization