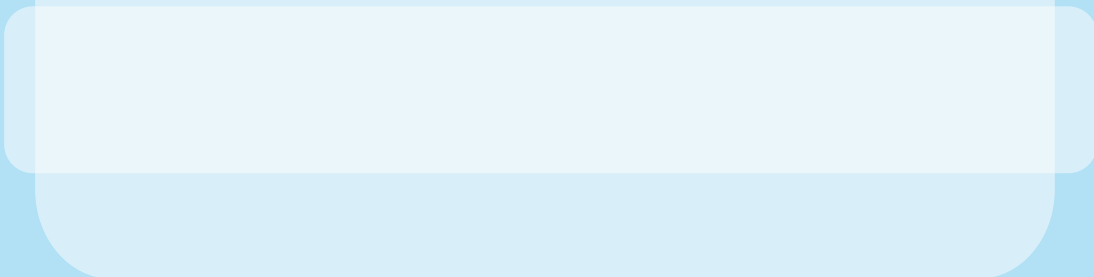


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KARAKTERISASI FISIKOKIMIA DAN LAJU DISOLUSI DISPERSI PADAT IBUPROFEN DENGAN PEMBAWA POLIETILENGLIKOL 6000

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ABSTRACT

Solid dispersions of the antiinflammation drug ibuprofen and polyethylene glycol 6000 (PEG 6000) were prepared by the melting method in order to increase the dissolution rates of this poorly water-soluble compound. The temperature/composition phase diagram of binary system was analyzed by thermal analysis hot-stage microscopy, showing an eutectic formation. Polarized light hot stage microscopy and X-ray-powder diffraction confirmed, that solid dispersion technique decrease the crystallinity of ibuprofen after melting and solidifying of a 4/6 (w/w) mixture of ibuprofen and polyethylene glycol 6000 respectively, which the results enhanced dissolution rates compared to the physical mixtures and ibuprofen intact. However, no such chemical interactions in the solid state were confirmed by FTIR spectra which showed the presence of ibuprofen crystalline in solid dispersion.

Keywords: solid dispersions, ibuprofen, polyethylene glycol 6000