PROFIL LAJU PELEPASAN PIROKSIKAM DARI SEDIAAN GEL DISPERSI SOLIDA PIROKSIKAM-ASAM SITRAT 1 = 4

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ABSTRAK

Dalam upaya untuk mendapatkan sediaan farmasi yang bermutu tinggi, telah dilakukan usaha peningkatan laju pelepasan piroksikam. Piroksikam dimodifikasi struktur kristalnya dengan sistem dispersi solida metode pelarutan menggunakan asam sitrat sebagai pembawanya, kemudian dibuat sediaan gel berbasis *Polyacrilamide, C13-14 Isoparaffin, Laureth-7*. Sebagai pembanding adalah campuran fisis piroksikam dengan komposisi yang sama. Setelah kedua sistem tersebut diformulasikan dalam bentuk sediaan gel, dilakukan pengujian laju pelepasan piroksikam dari sediaan gel menggunakan membran sintetis *Dialysis tubing cellulose membrane*. Alat yang digunakan sesuai dengan yang tertera pada USP XXVI yaitu *apparatus 5 paddle over disk* dan dapar fosfat pH 6,8 ± 0,05 sebagai medium. Pengujian dilakukan selama 240 menit. Dari hasil pengujian laju pelepasan, diperoleh profil persentase piroksikam terlepas terhadap waktu (menit). Dari profil tersebut didapatkan AUC gel campuran fisis 11,64 % menit dan 67,43 % menit untuk sediaan gel piroksikam sistem dispersi solida. Profil laju pelepasan piroksikam meningkat secara bermakna, apabila dibuat dalam bentuk dispersi solida piroksikam-asam sitrat 1=4.

Kata Kunci : laju pelepasan, piroksikam, asam sitrat, dispersi solida, pelarutan..

ABSTRACT

As an effort to get a better quality pharmaceutical product, it has been done a study to increase piroxicam release rate. The crystal structure of piroxicam was modified, by making a solid dispersion system. The solvent method was used to disperse piroxicam and citric acid as the carrier, for then to be made into gel preparation with Polyacrilamide, C13-14 Isoparaffin, Laureth-7 gel basis. For a comparison is a physical mixture of piroxicam with the same composition. After both systems were formulated into gel, a test of piroxicam release rate was done in the form of gels with the aid of synthetic membrane Dialysis tubing cellulose membrane. The instruments one used, as accordance with USP XXVI was apparatus 5 paddle over disk and phosphate buffer pH 6,8 ± 0,05 as the medium. The tests were conducted in 240 minutes. The profile of released piroxicam percentage versus time (minutes) was gained as a result from the release rate testing. From those profiles, AUC was extracted 11.64 % minutes for physical mixture gel and 67.43 % minutes for piroxicam gel with solid dispersion system. The profile of piroxicam release rate increase significantly if it is made in the form of piroxicam solid dispersion-citric acid 1=4.

Key Word: *release rate, piroxicam, citric acid, solid dispersion, dilution.*