

INTISARI

Rimpang tanaman kunyit mengandung senyawa aktif farmakologis yaitu kurkumin yang memiliki keterbatasan dalam hal kelarutannya dalam air. Permasalahan kelarutan kurkumin ini dapat diatasi dengan pembuatan dispersi padat.

Penelitian ini merupakan penelitian eksperimental yang bertujuan untuk mengetahui pengaruh proporsi *drug load* terhadap disolusi dispersi padat *spray dried* isolat ekstrak rimpang kunyit – HPMC E-5. Proporsi *drug load* yang digunakan adalah 0,66%, 1% dan 2%.

Uji disolusi yang dilakukan menggunakan alat disolusi tipe *paddle* pada medium cairan lambung buatan tanpa pepsin pH 1,2. Kadar kurkumin dinyatakan sebagai persentase kurkumin yang terdisolusi. Hasil yang didapat diuji statistik menggunakan uji korelasi Spearman dan analisis regresi linear untuk mengetahui korelasi dan hubungan antara *drug load* terhadap disolusi dispersi padat isolat ekstrak rimpang kunyit.

Dari hasil uji disolusi diketahui bahwa dispersi padat menghasilkan disolusi yang lebih baik dibandingkan dengan serbuk campuran fisik. Dispersi padat dengan proporsi *drug load* 0,66% memberikan profil disolusi yang lebih tinggi dibandingkan dengan proporsi *drug load* 1% dan 2%. Secara statistik terdapat korelasi yang bermakna antara peningkatan proporsi *drug load* terhadap disolusi kurkumin, yaitu dengan nilai signifikansi $< 0,05$.

Kata kunci : kurkumin, isolat ekstrak rimpang kunyit, dispersi padat, *spray dried*, HPMC E-5, *drug load*

ABSTRACT

Curcumin was active constituent derived from turmeric rhizomes which has limited solubility in water. The limited of curcumin solubility can be solved by made it into solid dispersion.

This research was experimental research. The aim of this research is to know the effect of drug load proportion to dissolution of spray dried solid dispersion of isolate turmeric rhizome extract – HPMC E-5. In this research, solid dispersion and physical mixture were made with proportion 2%, 1% and 0,66%.

Dissolution apparatus type II (paddle) and simulated gastric fluid without pepsin as medium used in dissolution test. Concentration of curcumin expressed as per centation of curcumin dissolved. The result were analyzed by using Spearman correlation and linear regresion analysis to know the correlation and effect of drug load proportion of solid dispersion isolate turmeric rhizome extract to curcumin dissolution.

The result showed that solid dispersion has better dissolution than physical mixture. Solid dispersion with drug load 0,66% showed the highest dissolution profile of curcumin between the other proportion. Statistically, there was significant correlation between drug load increase and curcumin dissolution, with significant value $< 0,05$.

Key words: curcumin, isolate turmeric rhizome extract, solid dispersion, spray dried, HPMC E-5, drug load