

## ABSTRACT

### **Influence of Poloxamer 188 Concentration in Solid Dispersion of Curcumin- PEG 8000 on Dissolution of Curcumin**

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Curcumin is a substance obtained from *Curcuma longa Linn* which has therapeutical effects. Curcumin is insoluble in water and has poor bioavailability. This problem could be resolve by improving drug dissolution. Solid dispersion is one of the commonly used methods to improve the dissolution rate. Combination of PEG 8000 as polymer and poloxamer 188 as surfactant could increase dissolution rate of curcumin.

Solid dispersion of curcumin- PEG 800- poloxamer 188 in the ratio 1:2:0,5 and 1:2:1 were prepared with melting method. Dissolution and powder X-ray diffraction (XRD) of solid dispersion, physical mixture, and pure curcumin were evaluated.

The result showed that solid dispersion with ratio 1:2:1 has higher dissolution rate than solid dispersion with less poloxamer 188. According to XRD studies, solid dispersion as well as physical mixture was present as a crystalline form.

Keywords: *curcumin, PEG 8000, poloxamer 188, solid dispersion, dissolution.*

