

ABSTRACT**The influence of L-Arginin about dissolution rate of ketoprofen within solid dispersion of ketoprofen-PVP K-30 – L-Arginin**

Ketoprofen is a nonsteroidal anti-inflammatory drug that exhibits analgesic, antipyretic and anti-inflammatory activities. It is practically insoluble in water and has low bioavailability, so that dissolution rate is the rate limiting step of drug absorption process and determine bioavailability of oral drug administration.

This research observe influence of L-Arginin concentration to enhancement ketoprofen dissolution rate in ketoprofen-PVP K-30 – L-Arginin solid dispersion. PVP K-30 is the matrix that usually used in solid dispersion. L-Arginin could enhance dissolution rate of ketoprofen with ion interaction between ketoprofen- L-Arginin to be a soluble substance easily in water. Solid dispersion system were prepared by solvent method in two weight ratio : (5:5:1) and (5:5:2) so is called ternary solid dispersion That is compared with pure ketoprofen, binary physical mixtures and binary solid dispersion are made in equivalent weight ratio with ternary solid dispersion.

The dissolution rate was examined by basket method in water. The result show that solid dispersion system could significant increase in ketoprofen dissolution rate than physical mixture and pure ketoprofen. The solid dispersion system with ratio 5:5:2 has the highest dissolution rate than other comparison. The increase in dissolution rate of the drug may be due to increase of wettability, hydrophilic nature of PVP K-30, also possibly due to reduction in drug crystallinity and happen ion interaction between ketoprofen –L-Arginin when it contact with a media is used.

Key words : ketoprofen, PVP K-30, L-Arginin, solid dispersion, dissolution rate