

Conference abstract PDD18

Dissolution Rate of Microencapsulated Active Substances

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In modern pharmaceutical technology a number of methods offer themselves to enhancement of dissolution and rate of dissolution. The insert to a micelle or an inclusion complex and conjugatum between active agent and a polymer molecule can increase both solubility and the rate of dissolution, but then the microencapsulation increases only the rate of dissolution [1–3].

Aim of our research was to increase of solubility and rate of dissolution of poorly water-soluble active agents. Seven active agents poorly, slightly and very slightly soluble in water were investigated. In the course of preformulation the wettability of these active agents with different polymer solutions was studied. The contact angle of wetting was measured by OCA 20 equipment (produced Dataphysics). On the grounds of contact angle values the polymers with best wettability was chosen, which – presumaby – is most suitable to prepare microcapsules. The microcapsules was produced with Büchi's spray drying equipment.

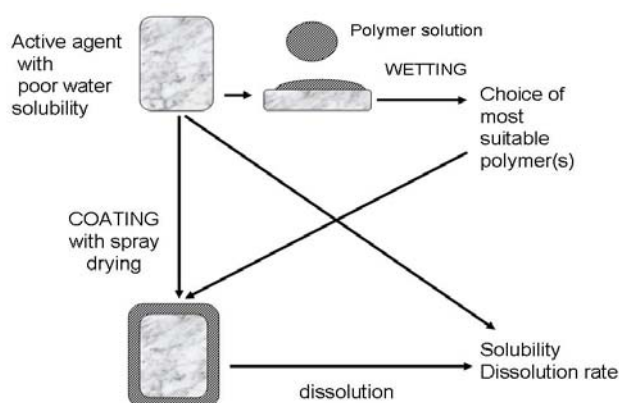


Fig. 1. Flow diagram

The microcapsules was produced with Büchi's spray drying equipment. Relationships were appointed between the technical parameters of spraying (e. g. rate of spraying, the temperature of incoming and outgoing air) and the properties of microcapsules (e. g. size distribution, morphology and surfaces, and dissolution rate).

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