〔Chem. Pharm. Bull., **39**, 1277-1281 (1991)〕 [Lab. of Pharm. Engineering]

Particle Design of Enoxacin by Spherical Crystallization Technique. II. Characteristics of Agglomerated Crystals.

MASUMI UEDA, YASUHIKO NAKAMURA, HIROKAZU MAKITA,
YU IMASATO, YOSHIAKI KAWASHIMA*

The characteristics of agglomerated crystals of enoxacin prepared by a spherical crystallization technique with the acetone-ammonia water-dichloromethane solvent system were investigated. Enoxacin forms a sesquihydrate, but has two different pseudopolymorphs, *i.e.* anhydrate and trihydrate. The crystalline form of the resultant agglomerates could be controlled by selecting the composition ratio of the three solvents and their mixing procedure. In order to obtain the sesquihydrous agglomerates, the mixing of an ammonia water solution of enoxacin with acetone in the first stage was required.

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Preparation of Powdered Redispersible Vitamin E Acetate Emulsion by Spray-Drying Technique.

HIROFUMI TAKEUCHI, HIDETO SASAKI, TOSHIYUKI NIWA, TOMOAKI HINO,
YOSHIAKI KAWASHIMA*, KEIZOU UESUGI, MASANORI KAYANO, YASUO MIYAKE

Vitamin E acetate (VEA) was transformed into powdered from by a spray-drying technique and the water dispersible or drug releasing property of the dried particle was evaluated. The powdered VEA was prepared by spray-drying emulsified VEA with colloidal silica (Aerosil 200) and a disintegrant such as low-substituted-hydroxypropylcellulose (L-HPC). VEA in the spray-dried particle was chemically stable in storage longer than three years. On being disoersed in water with gentle shaking, the spray-dried particle released a large number of VEA droplets into the water, which formed a stable emulsion without additional stirring processes.

〔Chem. Pharm. Bull., **39**, 3362-3364 (1991)〕 [Lab. of Pharm. Engineering]

Redispersible Dry Emulsion System as Novel Oral Dosage From of Oily Drugs: *In Vivo* Studies in Beagle Dogs.

HIROFUMI TAKEUCHI, HIDETO SASAKI, TOSHIYUKI NIWA, TOMOAKI HINO,
YOSHIAKI KAWASHIMA*, KEIZOU UESUGI and HIROSHI OZAWA

The absorption characteristics of vitamin E acetate (VEA) formulated into a dry emulsion system after its oral administration to beagle dogs were determined and compared to those two different dosage forms (an oily mixture of the drug with cottonseed oil and an oil (drug)-in-water emulsion). The three dosage forms were administered in a crossover fashion to six nonfasting subjects, and the drug absorption was assessed from the plasma concentration of the major metabolite (free vitamin E).