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**Effects of Granulation Method and Drug Dissolved in Binder Solution on Compressibility of Granules.**

KEN-ICHI SUGIMORI, YOSHIAKI KAWASHIMA\*, HIROFUMI TAKEUCHI,  
TOMOAKI HINO, TOSHIYUKI NIWA, SAYURI OHNO, SHOICHI MORI

Acetaminophen and ascorbic acid, which are slightly and highly soluble in water, respectively, were granulated with a low viscosity grade of hydroxypropylcellulose (HPC-L) aqueous solution by high-speed mixing, fluidized bed granulation, and spray drying. The granules obtained were compacted into tablets and their strengths were evaluated.

The binding strength of acetaminophen granules increased with increase in the amount of water used, irrespective of the granulation method. On the other hand, the binding strength of ascorbic acid granules depended greatly on the granulation method and decreased when an excessive amount of water was used.

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**Particle Design of Tolbutamide by the Spherical Crystallization Technique III, Micromeritic Properties and Dissolution Rate of Tolbutamide Spherical Agglomerates Prepared by the Quasi-Emulsion Solvent Diffusion Method and the Solvent Change Method.**

AKIMITSU SANO, TAKEO KURIKI, YOSHIAKI KAWASHIMA\*,  
HIROFUMI TAKEUCHI, TOMOAKI HINO, TOSHIYUKI NIWA

With the objective of modifying the micromeritic properties of tolbutamide (*i.e.*, to manufacture a highly functional powder form), particle design was attempted using a quasi-emulsion solvent diffusion (QESD) method, and the micromeritic properties and dissolution rate of the obtained spherical agglomerates were evaluated by comparison with agglomerates prepared by the solvent change (SC) method.

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**Indomethacin Sustained-Release Suppositories Containing Sugar Ester.**

TOSHIAKI NAKAJIMA, YASUJI TAKASHIMA, ATSUSHI FURUYA,  
YASUO OZAWA, YOSHIAKI KAWASHIMA\*

We prepared indomethacin (IM) sustained-release suppositories using sugar ester (SE) as an additive. The suppositories were prepared by the fusion method with IM, SE, and Witepsol® H-15 (H-15) and their availabilities *in vitro* and *in vivo* were evaluated mainly by the drug release test and the absorption test in rabbits, respectively.

The softening point of the suppositories increased with increasing SE content. In the release test with the Muranishi method, slow-release profiles were obtained when the SE content was more than 52.5%. The absorption of IM from these suppositories, however, was very little.