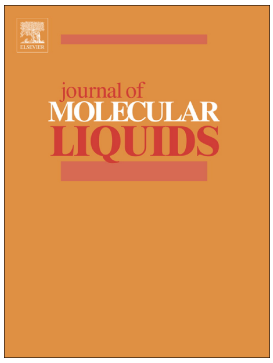

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SOLUBILITY ENHANCEMENT OF SIMVASTATIN AND ATORVASTATIN BY ARGININE: CONTACT ANGLE DETERMINATION, WETTABILITY AND SURFACE ENERGY CHARACTERISTICS

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ABSTRACT

Surface wettability and energy of powders are most critical properties during development and formulation of a solid and liquid dosage forms in pharmaceutical industry. Changes in wettability and surface energy characteristics of powders can have significant effect on pharmaceutical product physicochemical properties and processes. The present study investigated the influence of various ratio of simvastatin-arginine and atorvastatin-arginine complexes on its surface wettability and energy. The wettability of all complexes was evaluated through the contact angle measurement using the sessile drop technique. Data derived were then used to determined wettability parameter such as work of adhesion, wetting envelope and surface energy. Results revealed that at high ratio of arginine (ARG) in the statin-arginine complexes resulted in a reduction in contact angle values and leads to an increased in the work of adhesion and surface energy values.

Keywords: arginine-statin complexes, wettability, contact angle.