Recrystallization of silibinin using antisolvent processes and the effect of ultrasound

김희정, 여상도*
경북대학교
(syeo@knu.ac.kr*)

Silibinin has been recrystallized from organic solutions using liquid antisolvent processes. As a model pharmaceutical compound, silibinin, which is used in treatment of severe intoxications with hepatotoxic substances, was selected. Ethanol, methamol, acetone and DMSO were used as solvents for silibinin, and distilled water was used as an antisolvent. Silibinin was dissolved in a selected solvent and the drug solution was injected into the antisolvent causing particle precipitation. As a result, the variation of crystal habit, crystal size, internal structure, crystallinity were observed depending on the process parameters such as type of solvent, temperature, antisolvent injection rate, concentration, and the presence of ultrasonic wave. The recrystallized silibinin was characterized by various analytical instruments such as XRD, PSA, SEM and DSC.