

Antisolvent Recrystallization of Griseofulvin from Organic Solutions and the Effect of Ultrasound

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Griseofulvin was recrystallized from organic solutions using liquid antisolvent process. Ethanol, methanol, acetone, benzene and ethyl acetate were used as solvents for griseofulvin, and distilled water was used as an antisolvent. Griseofulvin was dissolved in a selected solvent and the drug solution was injected into the antisolvent causing particle precipitation. During the recrystallization experiments, the effects of process parameters such as solution concentration, temperature, injection rate of solution, type of organic solvents, and the presence of ultrasound were investigated. The range of temperature for the experimental measurements was 20°C to 40°C. Larger particles were obtained when solutions with low drug concentrations were used. Particle size was influenced by injection rate of solution. Particle size of griseofulvin reduced when the ultrasonic wave was selectively applied. The recrystallized griseofulvin was characterized by various analytical instruments such as XRD, PSA, SEM and DSC.