

Recrystallization of Itraconazole using Aerosol Solvent Extraction System

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Itraconazole crystallization has many difficulties because of Itraconazole's poor solubility and bioavailability of a poorly water-soluble antifungal agent. The main purpose of this research was to find the improved Itraconazole recrystallization using the Aerosol Solvent Extraction System (ASES) with supercritical CO₂. The solvent was used freely soluble Methylene Chloride. The experiments have been conducted according to various temperature, pressure, flow ratio. It was found that ASES gave fine particle size with a narrow size distribution by spraying methylene chloride solution including Itraconazole. The precipitated particles were measured particle size distribution and morphology using Scanning Electron Microscopy (SEM), Particle Size Analyzer (PSA). The initial particles look like rod shape. The experimented particles have the thin plates shape.