

## Recrystallization of Polymer Coated Cetirizine Particles by Aerosol Solvent Extraction System

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Antihistamines are important drugs to modern people suffering from allergic symptom. Cetirizine, which is one of these antihistamines, is widely used to treat allergic rhinitis. It has a short duration time in human body due to its fast dissolution rate in water. Because of this reason, it needs to be taken whenever people has allergic problems. In this research, release rate of cetirizine was controlled by encapsulation in poly(lactide) stereocomplex coat which is biodegradable polymer to enhance dosage convenience. This process was carried out by aerosol solvent extraction system(ASES), which is one of the supercritical antisolvent processes, using supercritical CO<sub>2</sub> as antisolvent. By using ASES, polymer coated and micro-sized cetirizine particles could be obtained in a short time. Precipitated cetirizine-poly(lactide) stereocomplex particles were analyzed by field emission scanning electron microscope(FE-SEM) with energy dispersive X-ray spectrometer(EDS) and in-vitro dissolution rate test. From those data, it is thought that ASES can be utilized as process for preparation of encapsulation particles.