

The generation of Bovine Serum Albumin (BSA) micro particulate using supercritical CO₂ as an anti-solvent

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Micro particles of the protein, Bovine Serum Albumin (BSA), was prepared by Aerosol Solvent Extraction System (ASES) using supercritical CO₂ as an anti-solvent. The experiments were performed by changing variables such as pressure (80–150bar), temperature (35–60°C), initial concentration (0.2–0.6wt%) and solution flow rate (1.0–5.0ml/min). It is found that ASES gives fine particle size with a narrow size distribution by simple adjusting of the process parameters. The particle size and morphology were measured using Scanning Election Microscopy (SEM) and Particle Size Analyzer (PSA). In all cases of ASES experiments, it can be obtained non-agglomerated, free flowing and spherical fine particles with smooth surface.