



Monash University Laboratory of Biotechnological Engineering

Cordelia Selomulya

Assembly of Functional Particles via Spray Drying

A/Prof. [Name] group has developed an assembly approach for functional particles with tightly controlled characteristics and sizes in a scalable, waste-free process, utilising a microfluidic spray-drying device at Monash University (the only facility of its kind in Australia). The synthesis route is capable of effectively producing functional particles with uniform properties for various applications. Examples include thermal sensitive and bioactive particles, microparticles for controlled release and microencapsulation, magnetic and fluorescent composites, as well as mesoporous microspheres with hierarchal structures and properties



Making ultrafine uniform particles with ethanol vapour

Conventional spray drying uses hot air to dehydrate moisture from atomized droplets. This process has been used to make milk powder and other food and pharmaceutical powder products. Typically, each droplet dehydrates into single particles. We have developed a new drying technique which can produce hundreds of particles within each atomized droplet. This can potentially mean that more uniform and fine droplets can be produced



produsp(m)]ET@MC /P

inf@EMC@/P2MOTL@NBDCP@MCOO13B02b010256W8BT/032501V0nB0