

RESEARCH NOTES

超临界反溶剂过程制备鞣花素超细颗粒

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摘要 Supercritical antisolvent (SAS) process is a recently developed technology to produce micro- and nanoparticles. This paper presents a continuous apparatus to conduct experiment of SAS process. With the apparatus, the effects of pressure, temperature and flow ratio of CO2 to the solution on the shape and size of particles are studied for the quercetin-ethanol-CO2 system. Spherical quercetin microparticles with diameters ranging from 1 μm to 6 μm can be obtained while ethanol is used as organic solvent. The most effective fact on the shape and size of particles is pressure, the next is temperature and the last is the flow ratio of CO2 to solution.

关键词 超精, 鞣花素, 超临界流体, 微粒, 抗溶解能力, 化学结构

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Supercritical Antisolvent Precipitation of Microparticles of Quercetin

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Abstract Supercritical antisolvent (SAS) process is a recently developed technology to produce micro- and nanoparticles. This paper presents a continuous apparatus to conduct experiment of SAS process. With the apparatus, the effects of pressure, temperature and flow ratio of CO2 to the solution on the shape and size of particles are studied for the quercetin-ethanol-CO2 system. Spherical quercetin microparticles with diameters ranging from 1 μm to 6 μm can be obtained while ethanol is used as organic solvent. The most effective fact on the shape and size of particles is pressure, the next is temperature and the last is the flow ratio of CO2 to solution.

Key words supercritical antisolvent process, microparticles, quercetin

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