MONODISPERSED MICRO-PARTICLES FOR ENCAPSULATED DRUGS

Secoya Technologies

Based on the principles of microfluidics, Secoya provides a novel technology – RayDrop®for the production of monodispersed droplets or particles.

This can be used for encapsulated drugs or to produce capsules (with a core/shell structure).



Principles

The emulsification process of the Ray-Drop® is based on co-flow and flow-focusing technologies embedded in a stainless-steel housing. The equipment's specific design guarantees a robust and controlled production of particles.



These technologies are inherently compatible with continuous manufacturing.



Monodispersed PLGA particles produced with RayDrop

Micro-encapsulation

Efficient and versatile

Monodispersed PLGA particles are easy to produce with the RayDrop® technology, with particle sizes ranging from 10 to 200 μ m and without using chlorinated solvents.

The technology is suitable for the efficient encapsulation of active ingredients such as proteins, genetic material and fragrances, whether hydrophobic or hydrophilic.

The double emulsion technology is an easy way to obtain monodispersed capsule-type particles.

Key Features

Particle size: from 10 to 200µm Size distribution: dispersity < 2%

High frequency: >1000 droplets per sec. (kHz)

Surfactant-free: no need for surfactants

Robustness: as no coating is required inside the capillaries, it is compatible with long run production.

Scalable: through number-up

API encapsulation efficiency: >95% (e.g. in PLGA)

Encapsulation versatility: hydrophobic and hydrophilic ingredients can be encapsulated using the same technology.



For any request, please contact Secoya Technologies.



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