

Food Technologies - Extraction

Principle :

Spray drying is a unique process (one step) of conversion of a solution, suspension or emulsion in a solid powder. This process is widely established in many industries such as pharmaceutical, food, chemical and materials science.

The basic principle consists in a fine spray of the liquid product (solution or suspension) in a hot air

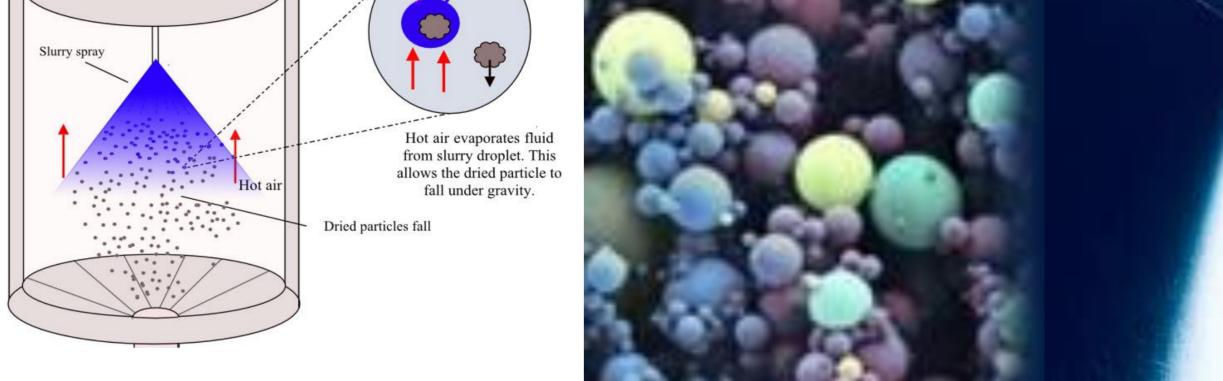


flow which evaporates the water, leaving a dry powder which may be collected.



Food and Feed:

Micronisation technology continues to emerge also in food industry. Food companies increasingly conduct research in micro technology and its application to food products with new features.

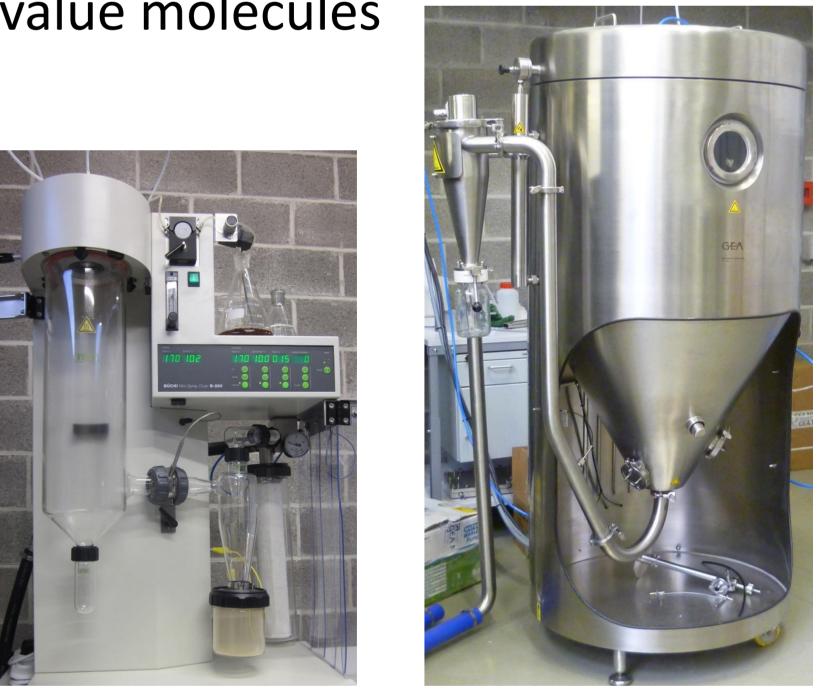


Equipment :

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Micronisation and microencapsulation technology. Our lab and pilot scale spray dryers are the solution for: ✓ Quick and smooth drying of temperature-sensitive products ✓ Production fluid powder

- ✓ R&D feasibility studies on food products, biotechnology products, and high value pharmaceutical products
- Microencapsulation of high value molecules



✓ Additives

✓ Flavor powder

 \checkmark Encapsulation of Omega 3, flavors (eg fruit), vitamins, food additives, ...)





Milk powder production

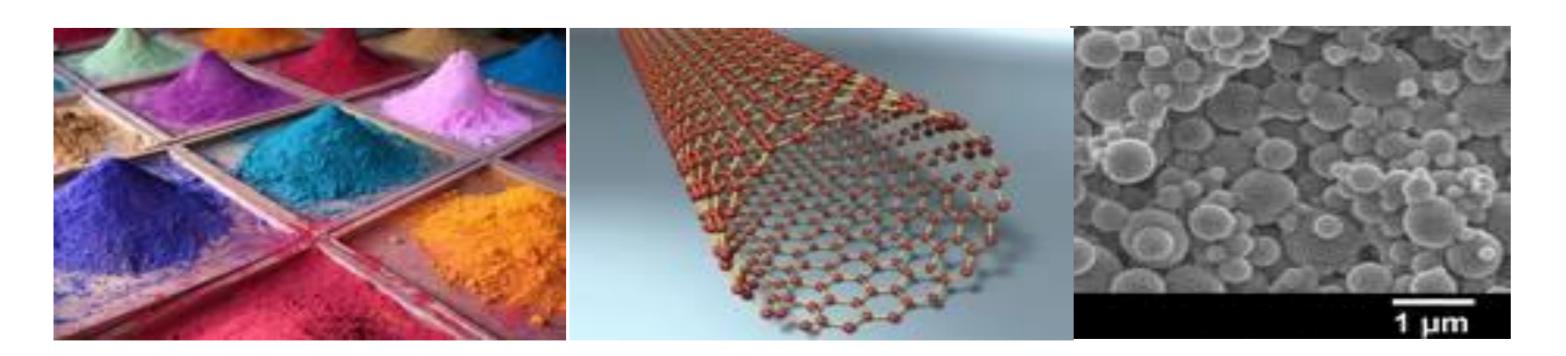
Mango juice powder

Beer powder

Microencapsulation vitamine from fruits

Micro technology:

Ability to produce very fine particles, the spray drying offers new innovations in R & D for micro materials.



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Spray Drying & **Encapsulation**

Feed

Encapsulation of additives, flavors, vitamins,

Spray Drying &

and coatings

Active pharmaceutical ingredients, drug delivery, vaccines, inhalable drugs, taste masking

Nanotechnology, catalysts, fuel cells, batteries,

accumulators, ceramics, UV absorbers, pigments

Encapsulation **Pharmaceuticals**







Spray Drying & Encapsulation Food

proteins, probiotic bacteria, controlled release

Encapsulation of additives, controlled release, nutraceuticals, functional foods, flavors, vitamins, proteins, probiotic bacteria, juice concentrate, milk powder

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