

Sales presentation

Innovative Ingredient Formulation

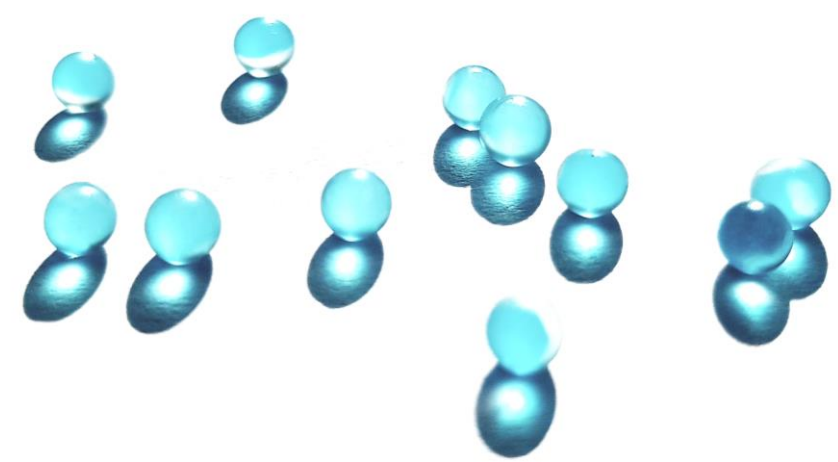
2024



CAPSULAE

Research & Innovation Center

Overview



Company

- About Capsulae
- A subsidiary of Innov'ia
- Commitments



Technologies

- Technological platforms
- Proprietary solutions



Services

- Contract Research
- Development of prototypes
- Micro-Production
- Analyses 

1

Company

About Capsulae

A subsidiary of Innov'ia

Commitments

About Capsulae

- Research and Innovation Center of excellence in the field of formulation, **specialized in microencapsulation**
- Capsulae designs and develops for its industrial partners **customized solutions** which facilitate the use and **optimize the performance** of ingredients and active compounds

+30
years of
expertise

+25
researchers

200nm-8mm

Size range of the particles we develop



A subsidiary of Innov'ia

- 📌 The expert and leader in the production of tailor-made powders in Europe


>350
EMPLOYEES

€
50M€
TURNOVER


70M€
OF INVESTMENTS IN
10 YEARS
7M€ FOR THE
ENVIRONNEMENT


MULTI MARKET:
Food, baby food, feed,
pharma, cosmetics,
technical, green chemical


QUALITY
MANAGEMENT
CERTIFICATIONS:
ISO 22000 , FSSC22000,
BPF (part 2), Cacher, Halal,
Organic, FAMI'QS




7

PRODUCTION SITES, WITH MULTI-
TECHNOLOGIES CAPABILITIES

13
Fluid bed
drying

8
Spray drying

2
Prilling


30KT
OF FUNCTIONAL INGREDIENTS FOR
30 MT finished products per year,
used on a daily basis by end-users

To accompany


600
CLIENTS

Commitments

Capsulae is committed to its industrial partners in the fields of:

- Food and human nutrition
- Feed and animal health
- Crop protection and biocontrol
- Cosmetics and personal care products
- Laundry and home care products
- Technical specialties

to face their major challenges of today and tomorrow:

- 📌 **Develop new applications**
- 📌 **Bring out new markets**
- 📌 **Answer to major environmental issues**
- 📌 **Meet new regulatory constraints**
- 📌 **Meet their CSR objectives**



2

Technologies

Technological platforms

Proprietary solutions

Technological platforms

▼ A unique multi-technology expertise



Emulsification

(emulsion, double emulsion, nano-emulsion, microencapsulation)



Spray-Drying

(drying, co-drying, micro-granulation, continuous agglomeration, microencapsulation)



Fluid Bed Drying

(drying, overdrying, pre-agglomeration, granulation, impregnation)



Spray-cooling / Prilling

(microencapsulation)



Dripping

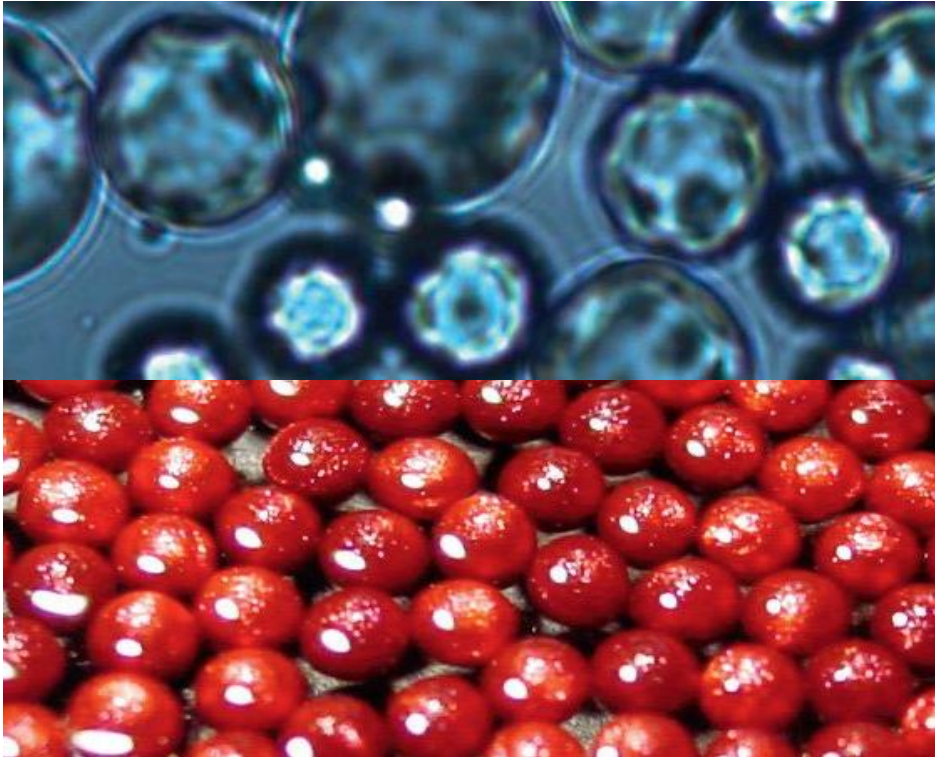
(encapsulation)



Fluid Bed Coating

(microencapsulation)

Proprietary solutions



- Thanks to a performing and dynamic internal research, Capsulae possesses a **patent portfolio** and **turnkey solutions** available to its customers according to their project specifications and expectations
- The POC or Feasibility study stage is already carried out, allowing the **technical and financial risk** to be **significantly reduced** (i.e., innovation process secured)
- The technologies currently available include:

CapsuCaps™ **CapsuBeads™** **CapsuPearls™**

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Services

Contract Research

Development of prototypes

Micro-production

Analyses

Contract Research

- As a private RTD performer, **Contract Research** has always been **our core business** since the inception of the company
- This service is offered when the **design of new methods**, the **evaluation of alternative technological pathways**, and the need to conduct exploratory work prior to the production of the first laboratory batches is required.
- It consists of **three successive stages**:
 - Feasibility study – Proof of concept**
 - Optimization and Validation of the process developed**
 - Technology transfer and Support to industrialization**



A comprehensive and customized support on each design and development phase of your innovation

Development of prototypes



The assurance to have access to an optimal and reliable solution, immediately ready for large-scale production

Development of prototypes is proposed when the resolution of the customer problem is possible through the **adaptation of an existing solution**, already proven, **identified in our wide technological portfolio**

1

Short adaptation study leading to the production of 1-2 kg demonstration batches

2

Validation of the process on a pilot scale (i.e., 15-20 kg)

3

Transfer to a semi-industrial or industrial scale

Micro-Production

Micro-production allows to meet customer needs for manufacture of:

- 📌 Batch sizes from 5-15 kg up to 400 kg
- 📌 Products with high added value

Manufacturing is carried out following standard industrial procedures:

- 📌 Batch production records
- 📌 Food safety and HACCP compliance records
- 📌 Quality control

Volume produced in 2022: ~6100 kg of powder

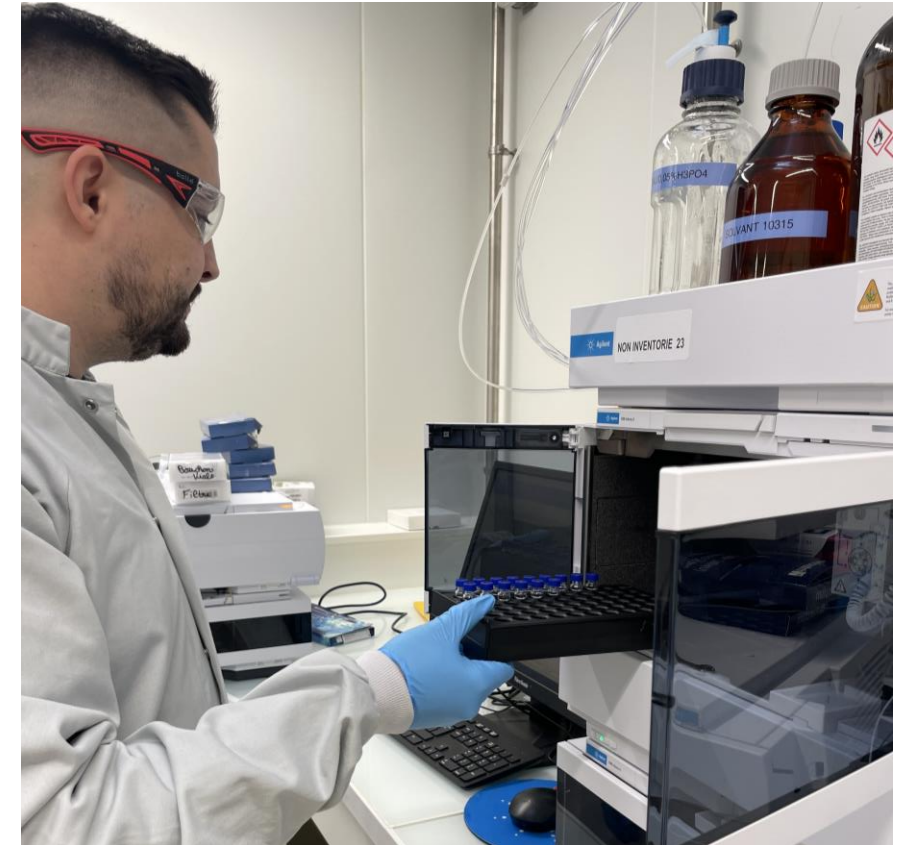


Analyses

NEW

▼ Analytical services

- Particle size analysis: laser diffraction, image analysis
- Optical microscopy (light and fluorescence), ESEM-EDX
- Thermal analysis: Melting point, DSC, DVS
- Chromatography: LC-DAD, LC-MS, GC-MS, GC-FID
- Spectroscopy: FTIR, UV-Vis/Fluorescence
- Powder characterization; Rheological analysis
- Surface tension analysis; Zeta potential analysis
- Stability and release tests



A high-performing and very complete set of analytical and characterization tools



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