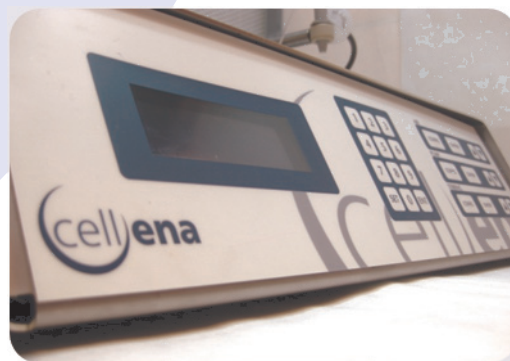


## Benchtop bioencapsulator

**Cell encapsulation technology** is based on the immobilization of cells within a semipermeable membrane that protects them from mechanical stress and immunological responses, allowing the bidirectional diffusion of nutrients, oxygen and secretory products including waste.

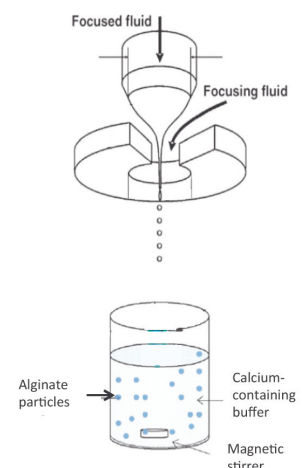


Cellena® is a **user-friendly** equipment for biotechnological research based on the Flow Focusing® technology developed by Ingeniatrix S.L. Cellena® allows **homogeneous encapsulation** of cells/organisms under sterile conditions and selecting the particle size as required each specific applications.

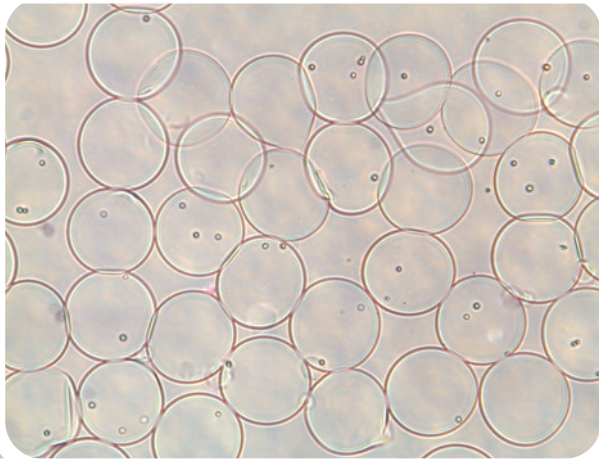
**Flow Focusing®** is able to very gently produce and process aerosols and emulsions which, after the solidification process best suited to each system, gives rise to microparticles of the required composition and dimension, all the same as each other, something hardly any other technology can achieve without further treatment.

### Procedure

1. Focused fluid: alginic acid solution containing simple cells.
2. The sample is injected through a capillary feed tube.
3. The stationary jet breaks up by capillary instability into homogeneous droplets which gelify in a continuously stirred calcium chloride solution at room temperature.







## Main Features & Advantages



- Particle size small enough for measurement by **Flow Cytometry**.
- Methodology in **sterile** conditions.
- Selectable particle size: direct generation of equal particles from **95 µm to 460 µm**.
- Encapsulation of **individual or bulk quantities** microorganism in very small particles sizes without losing viability.
- **Semipermeable** biocompatible matrixes.
- Encapsulated active ingredients.

## Disposable Nebulizers



Colour	Nebulizer	Particle Size
	200 µm	95-120 µm
	350 µm	160-190 µm
	500 µm	170-350 µm
	700 µm	360-460 µm



Cellena® commercializes kits with all the necessary elements for its correct use\*:

- Pressure tube
- 5 ferules
- Syringe - liquid Connector
- 5 filters
- 5 syringes

\*Air compressor required and non-provided

## Applications Fields

### Research

- Cellular susceptibility studies.
- Accelerated microbial analysis in microcolonies.
- Your innovative application.

### Healthcare

- Drug microencapsulation.
- Cell therapy preventing immune reaction or inflammation.
- Accelerated antibiograms.

### Biotech Industry

- Bioreactors: protecting cells from damage.
- Feeder cells: allowing them to grow and be productive.
- Enzymes and biologicals microencapsulation.

### Environmental

- Bacteria and algae protection from environment.
- Chosen area containing them allowing easy removal.
- Culture of difficult-to-grow microorganisms.

For more information, please, contact us

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