

InstaDrop

Plug, set and encaps



Integrated platform for simple and double emulsion

- Fast and easy set-up
- Easy adaptation to user's formulation
- Handling of low volume samples for screening purposes
- Flow and emulsion production control through large touchscreen
- Compatible with the single and double emulsion RayDrop®

The InstaDrop is designed to allow a fast and easy set-up for precise, repeatable and cost-effective encapsulation processes.

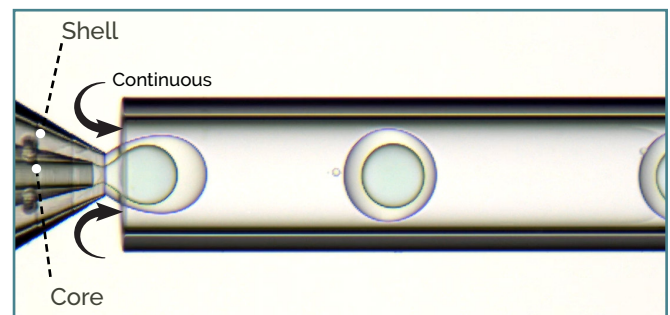
This benchtop instrument is ideal for your developments in small molecules and biological material encapsulation.

➤ Applications

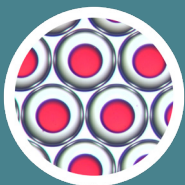
- Controlled and targeted release
- Dosing flexibility
- Precise loading of cargo (API, cells...)
- Combination product
- Taste Masking

The way we produce beads, micro-capsules, multi-particulates, nanoparticles relies on the use of couples of capillaries perfectly aligned in a metallic chamber.

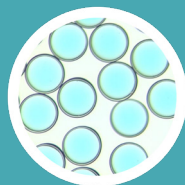
The droplets are produced by the controlled squeezing of the droplet phase by the continuous phase at the entrance of the collection capillary.



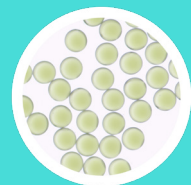
➤ Possible formulations



Chitosan microcapsules
Encapsulation of oil material



PLGA microcapsules
Encapsulation of aqueous solution

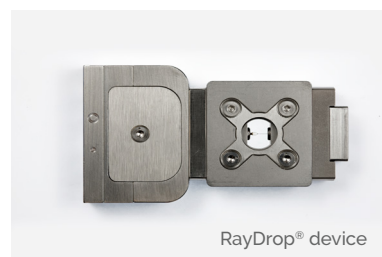
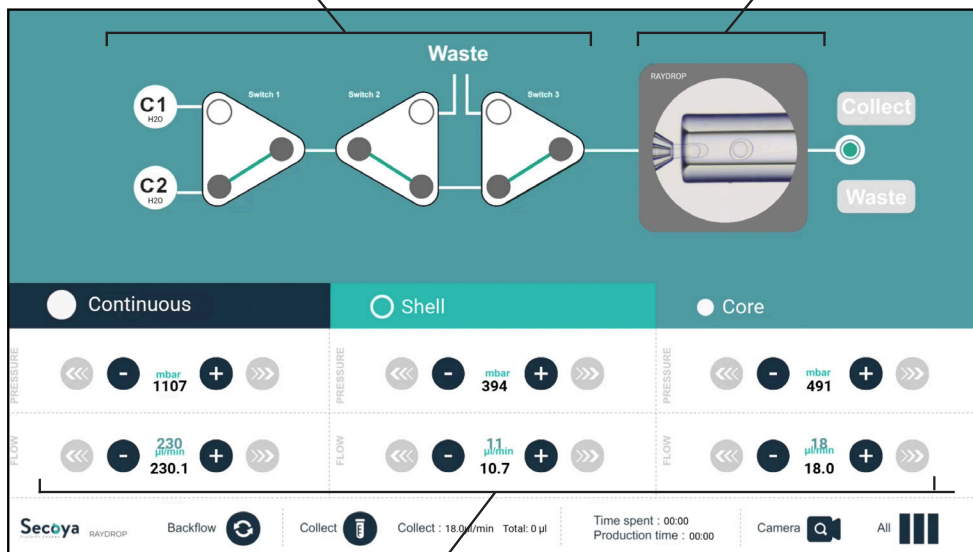


Eudragit beads
For targeted release

Thanks to its large touchscreen, valves, flowmeters and pressure controllers can be easily controlled to obtain the optimal parameters

Semi-automated process

Droplet size control (30 - 400 µm)



Easy flow and pressure set-up

Within a compact design, the InstaDrop integrates everything required to generate microbeads and micro-capsules with the RayDrop®

Description	Product
Single and double emulsion production device	Compatible with any RayDrop® device
Fluid handling system	<ul style="list-style-type: none"> • 3 pressure controllers (0-7 Bars) • Solenoid valves • Tubing: 1/16" PFA; 1/32" PEAK • 2 µm PEAK inline Filters
Reservoirs	<ul style="list-style-type: none"> • Continuous phase: 1*50mL Pcap with 50mL Falcon tube • Shell Phase: 2*15mL Pcap with 15mL Falcon tube • Core Phase: 2*15mL Pcap with 15mL Falcon tube
Flow meters	<ul style="list-style-type: none"> • Continuous phase: 0-1 mL/min (water) • Shell Phase: 0-120 µL/min (water) • Core Phase: 0-120 µL/min (water)
Optical system	<ul style="list-style-type: none"> • High power LED • Colour camera with microscopic objective • XYZ translation stages
Wetted material	• PP, FFKM, PFA, PEAK, GLASS, SS316L, PCTFE
Unit dimensions	• 85 x 51 x 48 cm (L x W x H)
Weight	40 kg
Power supply	230 V (110 V upon request)

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