



dolomite
bio

μ Encapsulator System

high-throughput encapsulation of single cells or nucleic acid
in monodisperse droplets



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μ Encapsulator System - simple, quick, reliable encapsulations

What is the μ Encapsulator System?

The μ Encapsulator System from Dolomite Bio enables simple, quick and reliable encapsulation of single cells, DNA and/or functionalized beads in high precision, monodisperse picoliter droplets. The high-throughput system can encapsulate 300,000 cells into 3 million droplets in 15 minutes.

μ Encapsulator System benefits:

- Works with small samples of 100 μ l or less
- Quick and reproducible encapsulation of single cells, DNA, etc.
- Encapsulates 300,000 cells in 15 minutes
- Second channel allows co-encapsulation with functionalized beads and/or reaction mix
- Ideal for profiling natively paired TCRs, isolating antibody coding sequences, encapsulating cells in hydrogels or encapsulating expression libraries for FACS sorting
- Automation and integrated droplet analysis via PC software
- Premium service - installation and training included

μ Encapsulator System features:

To encapsulate a sample, the user loads sample and reagent into the 100 μ l reservoirs, closes the module, and starts the program.

The droplets are collected in the built-in output reservoir. 200 μ l of reagent and sample, containing 300,000 cells, can be converted into 3 million droplets in 15 minutes.

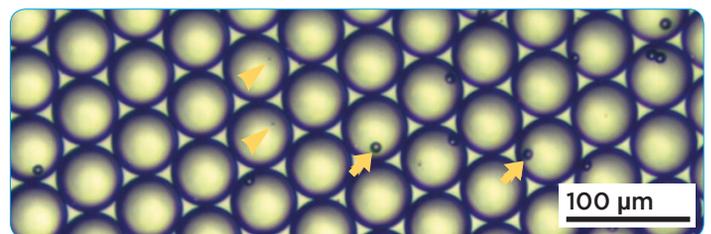
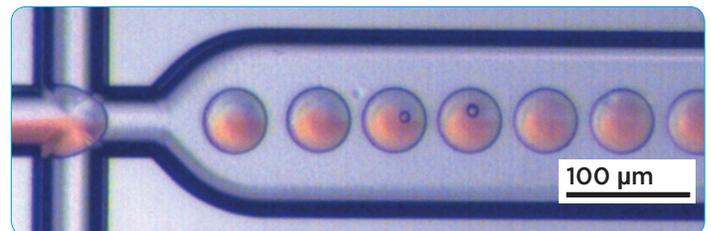
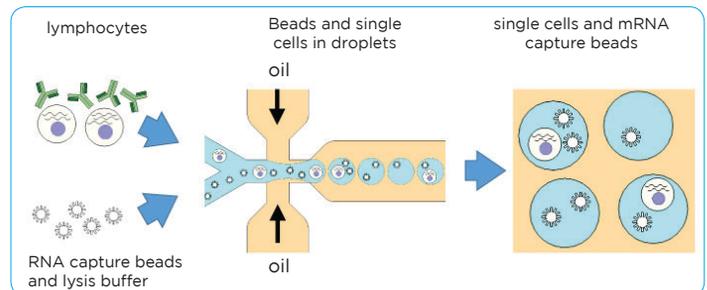
Highly monodisperse droplets can be produced with precise control using the pressure pumps. The flow sensors provide real time display of micro-scale flow rate and pressure.

The entire cell path (reservoir, chip junction and collection) can be maintained at a set temperature (typically at 4 $^{\circ}$ C for cells) with the TCU-100 temperature control unit. Droplet production can be monitored with the High Speed Camera and Microscope System.

The hardware can be controlled by the μ Encapsulator program in the Flow Control Centre software.

A μ Encapsulator system includes:

Hardware (μ Encapsulator, 3 pressure pumps, 3 flow sensors, temperature controller, microscope and camera), control software (Flow Control Centre Advanced), accessories & consumables (chips, connectors, valves and pipes), reagents (emulsion oil) and installation & training.



Top: Schematic of an example workflow, in which antibody-secreting B cells are encapsulated with mRNA-capture beads.

Middle: 50 μ m droplets (65pl) formed with beads and dye.

Bottom: Droplets with a limiting dilution of beads (arrows) and cells (arrowheads). A droplet with one cell and one bead is indicated.



Left: μ Encapsulator
Below Right: μ Encapsulator System
Below: Close-up of μ Encapsulator System



For more information and to watch a video on the μ Encapsulator System visit <http://www.dolomite-bio.com/product/uencapsulator-system/>



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