

Encapsulate cells, DNA, and more with this benchtop instrument



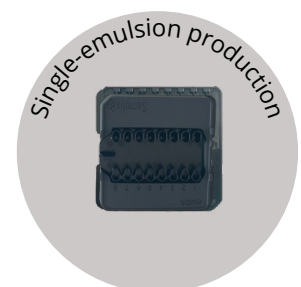
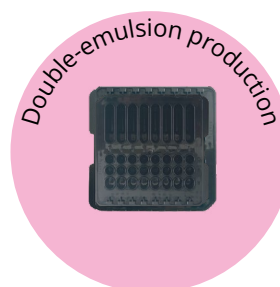
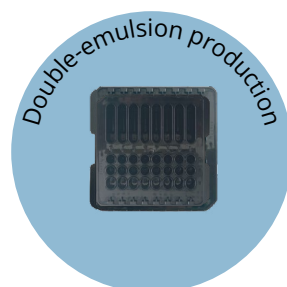
Xdrop is a unique, user-friendly microfluidics instrument for preparing living mammalian or microbial cells, organelles, DNA, or other biological material for high-resolution downstream analyses. Workflows possible with this versatile instrument include encapsulating:

- Living mammalian cells for functional assays
- DNA fragments for highly targeted sequencing
- Cells for unbiased whole genome amplification
- Living microbial cells for enzyme activity assays

User-friendly cartridge-based workflow

To encapsulate biological material, load an Xdrop DE20, DE50, or SE85 Cartridge with your sample, growth medium or buffer, and our oil, then select the production program on the intuitive instrument touchscreen.

All the liquids stay on the cartridge, reducing contamination risk, and you can run up to eight samples simultaneously.



Cartridge type	Xdrop DE20	Xdrop DE50	Xdrop SE85
Inner diameter of droplets	15 µm	60 µm	85 µm
Droplet volume	1.6 pl	100 pl	300 pl
Droplets per sample per run	8 million	500,000	65,000
Run time (up to 8 samples)	40 minutes	8 minutes	45 seconds

Versatile droplets

Biological material such as **living mammalian or microbial cells**, or fragments of **DNA** can be encapsulated in double- or single-emulsion droplets for incubation, singlecell analysis, targeted sequencing, or other high-resolution analyses.

Double-emulsion droplets are robust oil shells containing and surrounded by growth medium or buffers, permeable to gases but not to large molecules. **DE20 and DE50 droplets are compatible with:**

- Flow cytometry analysis
- Sorting using cell sorters
- Incubation in CO₂ incubators
- Storage for months
- A range of buffers and culture media

Workflows based on DE20 and DE50 droplets include:

- Screening of secreted proteins, including cytokines and antibodies
- Single-cell analysis of killer cell activity
- Enzyme activity analyses
- Incubation of microbial cells (DE20 or DE50) or mammalian cells (DE50 only)
- Targeted enrichment of DNA
- Validation of gene edits and viral integrations

Workflows based on SE85 droplets include:

- General amplification of small amounts of DNA
- Single-cell whole genome amplification

Samplix supplies all the necessary consumables for droplet production and sorting, including cartridges, gaskets, storage film, oil, and other reagents.

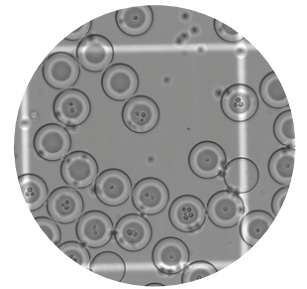
Xdrop or Xdrop Sort?

Both of our versatile microfluidics instruments can encapsulate microbial cells, organelles, DNA fragments, proteins, and other molecules in double-emulsion or single-emulsion droplets.

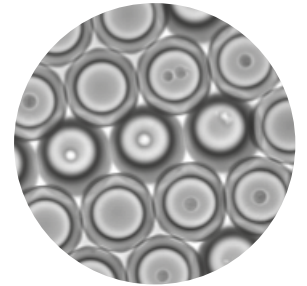
Xdrop uniquely offers a cartridge and protocols for mammalian cell workflows that use DE50 droplets.

Xdrop Sort uniquely enables DNA or microbial cell encapsulation **and** high-throughput sorting in DE20 droplets. This enables the screening of large, complex gene libraries with unprecedented speed.

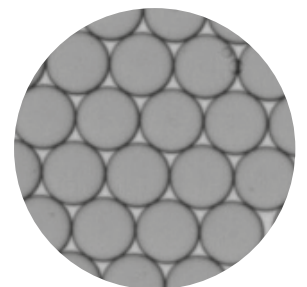
Visit samplix.com/products for more information.



Yeast cells in DE20 droplets in growth medium



Natural killer cells in DE50 droplets in growth medium



SE85 droplets in our buffer

Contact us about Xdrop at samplix.com/contact.

Xdrop specifications

Width:	25 cm	9.8 inches	Voltage requirements:	110–240 V
Height:	25 cm	9.8 inches	Line frequency:	50–60 Hz
Length:	48 cm	18.9 inches	Max current:	2.3 A
Weight:	17 kg	37.5 lbs		

Xdrop operating conditions

Temperature:	20–25°C
Relative humidity (RH):	0–75%.
Altitude:	max. 2,000 m
Pollution degree:	2