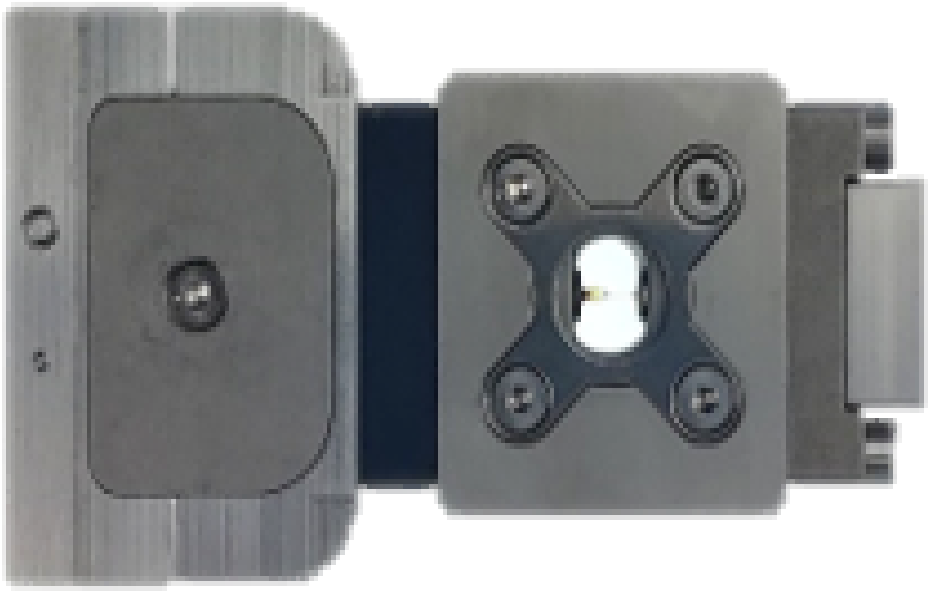
DATASHEET

FLUIGENT
SMART MICROFLUIDICS™

RAYDROP DOUBLE EMULSION

PRODUCT DESCRIPTION

P/N: ORDRPDE-30-70

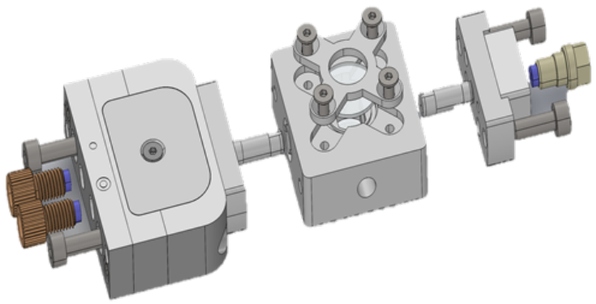


DESCRIPTION

The Fluigent RayDrop chip is a patented device for droplet generation presenting most of the advantages of a glass chips as resistance to strong chemicals and compatibility with high pressures (> 2 bar).

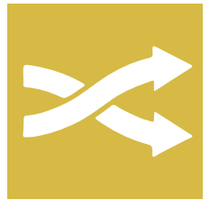
Although glass chips represent a very expensive disposable in everyday lab work, they can lead to leackage issues and have limited lifetimes as they are almost impossible to recover once clogged. The RayDrop device uses standard fittings leading to sealed connections and its design allows for easy recovery and cleaning if clogging occurs.

The RayDrop technology has three additional features:
Double emulsions can be produced in only one step in a single device
It can produce water-oil-water and oil-water-oil droplets without any surface coatings needed.
The system does not need any surfactant for droplet formation.

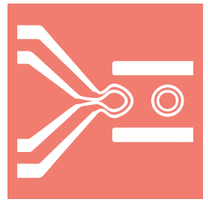


ADVANTAGES & BENEFITS

Droplet size from 70µm to 150µm diameter



Easy to clean exchangeable nozzle



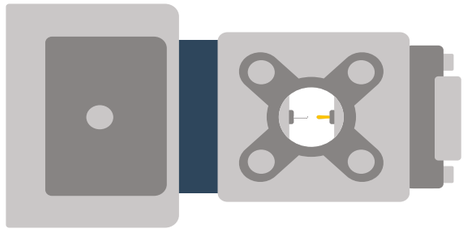
Perform double emulsion in one single device

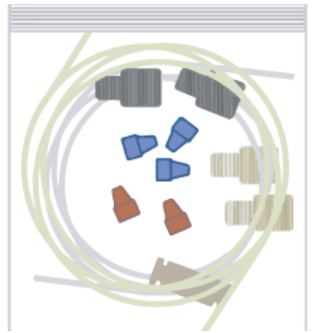
Highly flexible (w/o/w or o/w/o)

- Surface coating free
- No need of surfactants for droplet formation
- Up to 5 000 Hz droplet generation rate *
- No leakage, uses standard HPLC PEEK connectors
- Easy microscope visualization

CONTENT

1 * RayDrop
1 * Double Emulsion connector and tubing kit





TECHNICAL SPECIFICATIONS

BEADS PRODUCTION	
Chip characteristics	Co-flow focusing design
	3 inputs, 1 output
	Water-in oil-in-water and oil-in-water-in-oil double emulsion
Connectors	Standard ¼-28 flat-bottom connectors
Double emulsion size	Shell: from 70 to 150 µm
	Core: from 20 to 120 µm
Generation rate	5 000 Hz (measured for the smallest double emulsion size) can go higher under specific conditions
Capillaries dimension	Nozzle: Core: 30 µm ID
	Shell: 70 µm ID
	Output: 150 µm ID
External dimension	92.5*52*13.5 mm3
Weight	340g
Operating Pressure	0-5 bar
Burst pressure	10 bar
Wetted material continuous phase	PEEK, FEP, glass, stainless steel 316L, polyimide, Viton (seal), resin (nozzle)
Wetted material dispersed phase	PEEK, FEP, Glass, resin (nozzle)
Solvent compatibility	Water, mineral oil, fluorinated oil, ethanol, ethyl acetate, acetone, acid (ph>5), tetrahydrofurane