Application

Pharmaceutical

Nano-emulsion
Fat emulsion
Liposome drugs
Inhalation formulations
Nano-suspensions

Cosmetics

Nano-encapsulated raw materials
Liposomal cosmetics
Essential oil delivery systems
Liquid crystal system
Collagen dispersion

Fine chemical

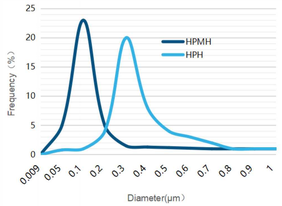
Catalyst dispersion
Nano-oxide dispersion
MLCC binder dispersion
Chemical mechanical polishing fluid
Graphene, carbon tubes, carbon black

Food

Food nano-emulsion
Macromolecule modification
Active substance lipid encapsulation
Vegetable protein drinks
Suspension and dispersion of solids

HPMH VS HPH

Easier access to smaller particle sizes
More uniform particle size distribution
More stable pressure
Fewer cycles
Better emulsification effect



Yocell Biotechnology (Qingdao) Co., LTD

Add： 1215-5, No. 176 Jufeng Road, 266199, Qingdao, China

Tel： 0086-532-80920900

Email： info@yocellbio.com

Web： www.yocellbio.com

YOCELL

High Pressure Microfluidization Homogenizer

www.yocellbio.com

About Us

YOCELL Biotechnology is your trusted partner in the field of bio-process.
YOCELL has a team of energetic young scientists and engineers. From initial R&D to production, we are committed to providing the most reliable solutions for biotechnology scientists and engineers around the world. Accepting the challenges of continuous innovation in biotechnology and solving problems from multiple perspectives are the most impressive qualities of the team.

System Features

Ultra high pressure

Up to 2000 bar（30,000psi）

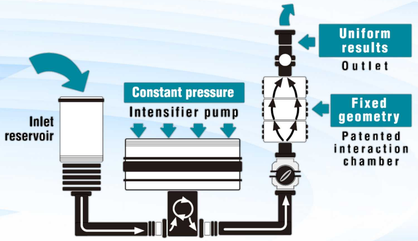
Extremely small orifice

Orifice size selectable according to application direction, min. 75μm.

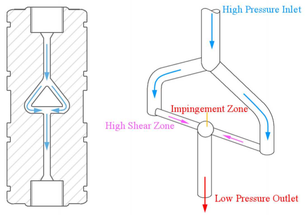
Improvement of material properties

Improve the emulsification, solubility, stability, transparency and other properties of the material. Particle size refinement, narrow distribution.

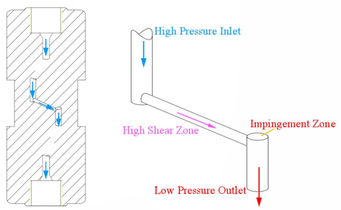
Working Principle



High-pressure microfluidization technology is to use hydraulic pressure within 2000bar to pass the material through the special diamond micro-orifices (Y-type and Z-type) in the interactive chamber, to form the strong shear, impact and cavitation of supersonic jet, to emulsify and disperse the particles in the material at nanoscale, and then to improve the product's transparency and aesthetics, stability, encapsulation rate, osmosis and absorption, slow release of the target, to reduce the allergy, to mask the odor, and to improve the taste and so on.

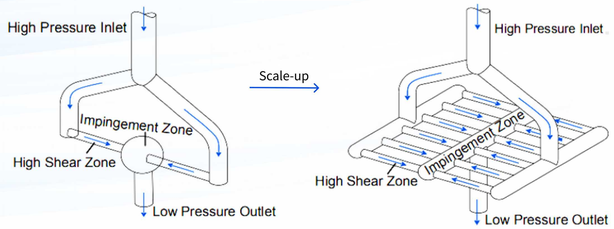


Y type single channel



Z type single channel

Y type chamber has better shearing effect, generally used as emulsification system.
Z type chamber has better pulverizing effect and is generally used as dispersing system.



Micro-Channels, Y TYPE DIXC

Technical Parameter

Model	YC-MH06	YC-MH24	YC-MH120	YC-MH250	YC-MH500
Type	Lab	Pilot	Production		
Maximum operating pressure	1800bar	2000bar	2000bar	2000bar	2000bar
Flow rate (related to pressure, viscosity)	3-5L/h	≈24 L/h	≈120L/h	≈240L/h	≈480L/h
Minimum sample volume	20ml	120ml	120ml	120ml	120ml
Dimensions (W×D×H cm)	71×42×35	80×80×130	180×74×145	180×74×145	180×150×160
Weight	45kg	245kg	815kg	1000kg	2000kg
Max. feed temperature	90℃	80℃	80℃	80℃	80℃
Power	2.17KW，220V，50Hz	4kW, 380V/50Hz	18.5kW, 380V/50Hz	37kW, 380V/50Hz	75kW, 380V/50Hz
	single phase electrical	3 phase electrical	3 phase electrical	3 phase electrical	3 phase electrical