MICRO BIO PRINTING

BMF BOSTON MICRO FABRICATION

microArch® S150 BIO

Cell-friendly heating system
Capable of constant temperature printing at 37°C

Micro resin vats
T5ml and T20ml are optional

Fresh Air Filtration System
HEPA13 filter and UV-C (253.7nm) sterilization

Desktop 3D printer
Can be placed in the biological safety cabinet

Specification

Light Source	UV LED [405nm]
Printing Material	Photosensitive Resin and Biomaterials, enabled by Open Material Mode
Optical Resolution	25μm
Layer Thickness	20-100μm
Micro Resin Tank	5ml/20ml
Standard Resin Tank	700ml
Build Size	5ml Tank：8mm[L] × 8mm[W] × 5mm[H]
	20ml Tank: 19.2mm[L] × 10.8mm[W] × 10mm[H]
	700ml Tank: 80 mm[L] × 48[W] × 50mm[H]
Input Data File Format	STL
External Dimensions	800mm[L] ×485mm[W] ×450mm[H]
Touchscreen Monitor Size	10.1 inch (1280*800)
Total Weight	70KG
Power Supply	100-240V AC, 50/60 Hz, 1.3kW

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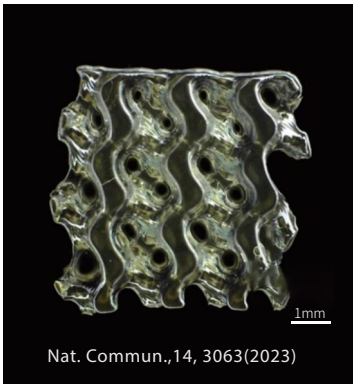
Your Reliable R&D Partner

Material Parameters

GelMA [Hydrogel]	Concentration	Modulus of Elasticity in Compression	Viscosity
GelMA-DS60	5%~10%	8.6~20kpa	$7x10^{-3}$~$1.8x10^{-2}$Pa·s
	10%~15%	20~43kpa	$1.8x10^{-3}$~$1.8x10^{-1}$Pa·s
	15%~20%	43~120kpa	$1.8x10^{-1}$~$6.6x10^{-1}$Pa·s
	High-fidelity, Cell-laden printing, Outstanding biocompatibility, degradability, and cell responsiveness		

Applications

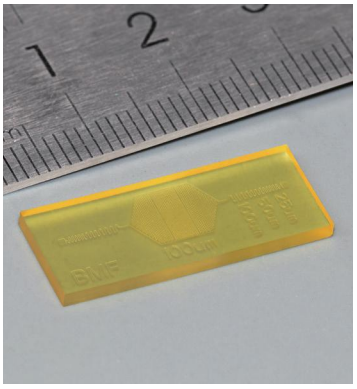


Nat. Commun.,14, 3063(2023)

Triply-Periodic Minimal Surface Hydrogel Scaffold

Application fields:
Biomedicine, regenerative medicine

Features:
- Sample Size: 6 x 6 x 2 mm^3
- Minimum diameter of interconnected pore: 300μm
- Made of smooth continuous curved surface and ordered interconnected pores.



Microfluidic Chip

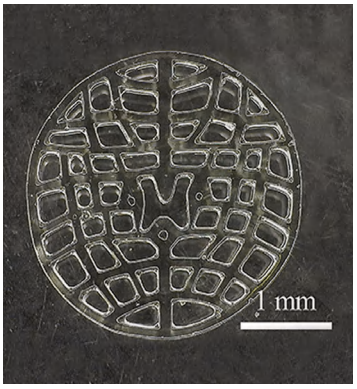
Application fields:
Microfluidics

Features:
- Sample size: 25 x 10 x 10 mm^3
- Width of lines: 25μm, 50μm, 100μm; Side length of the square cavity: 100μm; diameter of the circular cavity: 125μm

Hydrogel Vascular Scaffold

Application Field:
Tissue engineering, artificial tissues and organs, vascular repair

Features:
- Sample Size: 10mm x 12mm x 2mm
- With perfusable channels 300μm



Hydrogel spinal Cord Scaffold

Application Field:
Tissue engineering, spinal cord repair, drug testing, surgical implants

Features:
- Sample Size: 4.5mm x 5mm
- Thickness of thin-walled networks: 300μm

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