

# Porous GelMA hydrogel

## EFL-GM-PR

### Product component

Item	character	Package Size	Notes
Porous GelMA hydrogel	White spongy	0.6 g/ bottle x2	Keep in dark

This instruction applies to EFL-GM-PR-001/002

### Storage

**Dry kit:** room temperature, 3 months; 4°C, 12 months; -20°C, 18 months. **Sterile solution:** 4°C (in dark), 7 days; -20°C (in dark), 6 months. **Please note that repeated freezing and thawing of the solution will affect the performance of the product, so it is best to prepare it when using it.**

### period of validity

The date of manufacture is shown in the package.

### Required materials

- EFL-GM-PR series porous GelMA hydrogel products <sup>EFL</sup>
- EFL-LS-1601 series 405nm curing light source equipment <sup>EFL</sup>
- PBS (1X)
- Constant temperature magnetic stirring water baths
- 0.22 μm Sterile needle filters
- 10-50 mL Sterile centrifuge tubes
- 10 mL Syringes
- 1-5 mL Pipettes & tips

<sup>EFL</sup> Products can be purchased from EFL



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## Operation steps (3D cell culture)

Steps	Title	Materials	Processes
1	Prepare solution	<ul style="list-style-type: none"> <li>➤ EFL-GM-PR series porous GelMA hydrogel products</li> <li>➤ PBS (1X)</li> <li>➤ Pipette guns</li> <li>➤ constant temperature magnetic stirring water baths</li> </ul>	<ol style="list-style-type: none"> <li>1) Add appropriate amount of PBS to the porous GelMA bottle; Recommended concentration for porous GelMA is 6-8% w/v. (bottle contains magnetic rotor and 0.6g porous GelMA product).</li> <li>2) Preparation of porous GelMA hydrogel precursor solution by <b>magnetic stirring at 37°C in a water bath keeping in dark for 1h (important step).</b></li> </ol>
2	Sterilise solution	<ul style="list-style-type: none"> <li>➤ 0.22 μm Sterile needle filters</li> <li>➤ Constant temperature water baths</li> <li>➤ Sterile centrifuge tubes</li> </ul>	<ol style="list-style-type: none"> <li>1) Sterilise the above solution immediately with a sterile 0.22μm needle filter (to prevent gelation when the temperature drops) and store at 37°C in dark.  Note: If it is not possible to use it all at once, store in the refrigerator for a short period of time (&lt; 7 days). Before the next use, redissolve at 37°C and <b>shake for 20-30 seconds to homogenise the material.</b></li> </ol>
3	Mixe cells		<ol style="list-style-type: none"> <li>1) Collecte cells.</li> <li>2) Resuspension of cells with sterile precursor solution (multiple blowing or shaking).</li> </ol>
4	Cure GelMA	<ul style="list-style-type: none"> <li>➤ Pipettes &amp; tips</li> <li>➤ EFL-LS-1601 series 405nm curing light source equipment</li> </ul>	<ol style="list-style-type: none"> <li>1) Add precursor solution to the well plate; 96-well plate: 50-100 μL/ well, 48-well plate: 100-300 μL/ well, 24-well plate: 300-500 μL/ well.</li> <li>2) <b>Leave at room temperature for 2 min.</b></li> <li>3) Irradiation with <b>EFL-LS-1601 series 405nm light source</b> to cure hydrogels, <b>Irradiation times are shown in the table below:</b></li> </ol>

			Models	6%	7%	8%
			001	16~18s	13~16s	8~10s
			002			
<b>5</b>	Wash samples	➤ Pipettes & tips	1) Add medium and incubate at 37°C for 5 minutes. 2) Remove the medium.			
<b>6</b>	Culture cell		1) Change medium, observe and photograph according to experimental design.			

### Operation steps (2D cell culture)

The main steps of 2D cell culture are the same as those of 3D culture, except that step 3 mixing cells. Once the sample has been washed in step 5, the cells are ready to be grown on the surface.