

# LeProlif™ Sphere

LeProlif™ Sphere microcarriers enables most anchorage dependent cells to grow in suspension cultures, in either batch or perfusion culture format. Additionally they can be used to increase the surface area of traditional mono-layer cultures.



## Advantage

- Uniform particle size distribution, excellent cell growth condition, conducive to further protein secretion or titer expression etc
- Higher cell density and viability, rapid proliferation
- Strong supply chain with more cost effective solutions

## Technical specification

### Physical Parameters

Tests	Unit	LeProlif™ Sphere
Buoyant Density <sup>1</sup>	g/ml	1.030
Ionic capacity	mmol/g	1.47
Particle size <sup>1,2</sup>	d <sub>50</sub> (μm) d <sub>5</sub> -d <sub>95</sub> (μm)	d <sub>50</sub> :174 d <sub>5</sub> -d <sub>95</sub> :140-215
Approx. area (wet) <sup>1,2</sup>	cm <sup>2</sup> /g dry powder	4400
pprox. no. microcarriers/g dry weight	↑/g	4.8 *10 <sup>6</sup>
Swelling factor <sup>1,2</sup>	ml/g	17
Heavy metals	μg/g	≤5
Bioburden	CFU/g	<100

1 — Tested in saline

2 — Some varies from batch to batch

### Product Parameters

Materials	Cross-linked dextran matrix with N, N diethylaminoethyl group (DEAE) for positively charged
Size	50~100μm( dry powder) ; 150~250μm ( in solution )
Surface area	~4400 cm <sup>2</sup> /g
Sterilization	Autoclaved sterilization (121 °C,30min)
Method Concentration	3~5 g/L

## Test and Data

### Test 1: Vero Cell Culture in Spinner Flasks

Test 1: Vero Cell Culture in Spinner Flasks

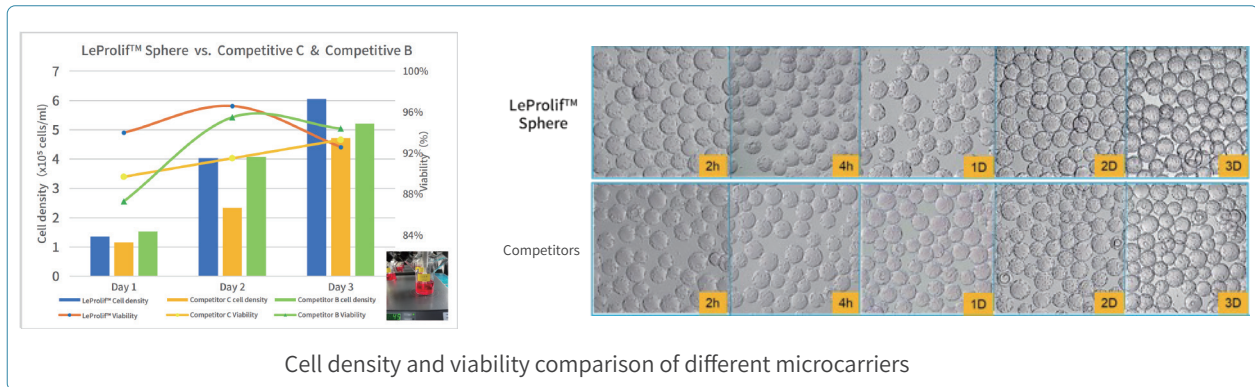
Culture method: Batch

Culture Volume: 100ml

Cells: Vero, Inoculum density 1.8E5 cells/ml

Periods: 3 days cultivation, bead to bead migration for sub cultivation

Results: LeProlif™ Sphere is competitive with Competitor C, even higher cells concentration and viability



### Test 2: Beads to Beads Scale-up in Glass Bioreactor for Vero Cells

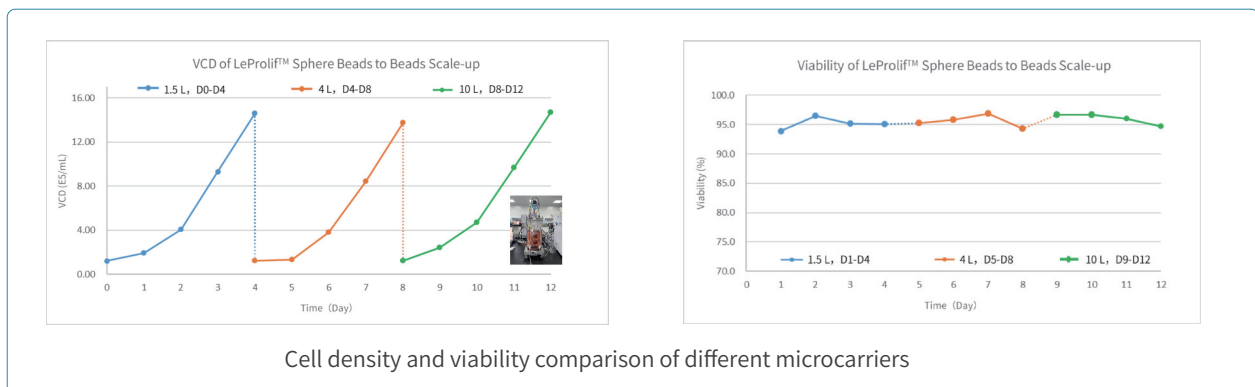
Equipment: LePhenix® EZG Pro 3L & 10L glass bioreactor

Culture Volume: 1.5L & 4L & 10L

Cells: Vero, Inoculum density 1.2E5 cells/ml

Periods: 4 days cultivation per cycle, 3 cycles, twice beads to beads

Results: LeProlif™ Sphere has 14 times cell density growth, presents excellent beads to beads performance



## Ordering information

Art.No.	Package
LPS0025	25g
LPS0100	100g
LPS0500	500g
LPS1000	1000g

**China, Shanghai LePure Biotech Co., Ltd.**

Building 3, 410 Yunzhen Road, Songjiang, Shanghai, China 201600  
Tel:021-37635888  
Email : marketing@lepure-bio.com

**United States LePure Biotech LLC**

2200 West Park Drive, Suite 300, Westborough, MA 01581, USA  
Tel: +1-978-355-8050 Fax: +1-978-355-8053  
www.lepure-biotech.com