

# Information sheet

beadMATRIX+ are ready-to-use, animal component-free, pre-coated microcarriers for the in vitro culture of high-quality induced pluripotent stem cells (iPSCs). beadMATRIX+ is ideally suited for use in shaker flasks, shaker bags, stirred tank or vertical wheel bioreactors. In combination with controlled and closed bioreactor systems, beadMATRIX+ enables robust manufacturing processes for industrial scale production of iPSCs. The product family for iPSCs includes the myMATRIX iPSC and the beadMATRIX+, and facilitates iPSC manufacturing with consistency across scales.

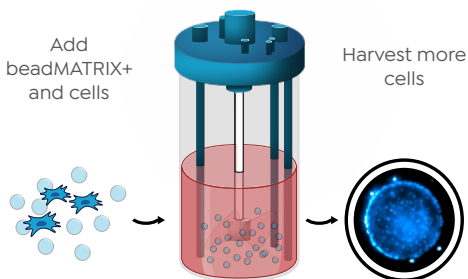


Figure 1. beadMATRIX+ is designed for the use in closed and controlled culture devices, e.g., stirred-tank bioreactors. Simply combine media, iPSCs and microcarriers, and run your processes.

## KEY FEATURES

- Higher shear-stress resistance
- Serum-free & xeno-free 3D culture
- Compliant with pharma grade requirements

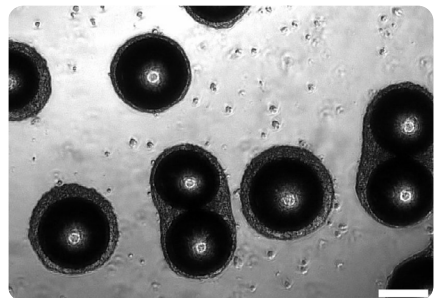


Figure 2. Phase-contrast image of iPSCs grown in a dynamic culture on beadMATRIX+. Scale bar: 100 µm

## beadMATRIX+ expansion maintains iPSC characteristics

- Robust proliferation
- Expression of stemness markers
- Trilineage differentiation potential
- Genetic fidelity



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For more information about beadMATRIX+ and our other products, please visit [www.denovomatrix.com](http://www.denovomatrix.com)

# Large-scale production of iPSCs with consistency across scales

## myMATRIX iPSC | beadMATRIX+

### Product specification

<b>Bead Material</b>	Cross-linked polystyrene
<b>Coating</b>	Biofunctional polymer
<b>Surface Charge</b>	Slight cationic charge
<b>Relative density range</b>	1.022 – 1.03 g/cm <sup>3</sup>
<b>Bead size</b>	179 μm ± 10% (see Figure 3)
<b>Specific surface area</b>	330 cm <sup>2</sup> /g
<b>No. of beads per gram</b>	3.3 x 10 <sup>5</sup>
<b>Appearance</b>	Dry, white to off-white powder
<b>Safety</b>	Free of Endotoxins/Animal components/BSE/TSE
<b>Application</b>	Sterile product, ready-to-use
<b>Certification</b>	ISO9001, pharma grade
<b>Quality standards</b>	Manufactured in clean room ISO14644-1 class 5
<b>Available formats</b>	10 g and 100 g (upon request)

denovoMATRIX is operating under ISO9001. beadMATRIX microcarriers are manufactured and processed in clean room environment according to ISO14644-1 class 5. Compliance with pharma grade quality standards is ensured by animal component- and serum-free raw materials, aseptic manufacturing and material safety assessments.

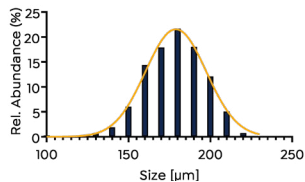


Figure 3. Size distribution of beadMATRIX+. Average bead size: 179 μm

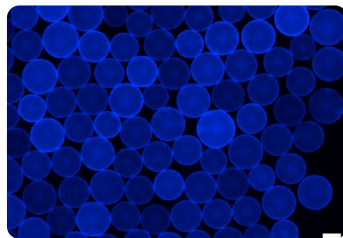


Figure 4. Microscopic appearance of beadMATRIX+. Scale bar: 100 μm



Figure 5. beadMATRIX+ product.

### Our services

We offer our expertise in biomaterial development, cell expansion and cell analysis to enhance your R&D projects. Customer-specific modifications and requirements are available upon request. Contact us for more information about our service and licensing offer.

For more information about beadMATRIX+ and our other products, visit [www.denovomatrix.com](http://www.denovomatrix.com)

denovoMATRIX receives support from

