

CellScrew®

Single-use device for adherent cells cultures with better growth area to volume ratio and made from plant-derived PLA by an additive manufacturing process

Applications

- Adherent cell cultures
- R&D, pilot and production scales (GMP certification soon available)

Advantages

- **Reduced manufacturing costs:**
The large growth area, intensified processes and ease of handling reduce labour costs and required manufacturing space.
- **Reduced time to market:**
As the CellScrew® can be applied from lab scale to manufacturing scale, no additional process development is necessary to scale-up.
- **Reduced environmental impact:**
CO₂ emission is reduced by more than 90% using the CellScrew®, compared to conventional multilayer flasks as it is made from plant-derived PLA by an additive manufacturing process.



Large growth area, low-shear mixing.

The CellScrew® is a cell culture system designed for mass expansion of adherent cells. By rotation of the CellScrew®, media and gas are transferred through an Archimedean screw, providing an excellent environment for the cells. Concentric cylinders form the large growth area. Due to TC-treatment, the surface is ideal for cell attachment and growth. The compact design allows easy handling and saves incubator space.



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PRODUCT SPECIFICATIONS

Models	CellScrew® 6k	CellScrew® 10k
Cell culture area	6 000 cm ³	10 000 cm ³
Medium volume	500 to 600 mL	800 to 1000 mL
Dimensions	<ul style="list-style-type: none"> • Heigth: 191.88 mm • Diameter: 120 mm • Cylinder height: 136.43 mm • Konus height: 32 mm • Konus angle: 34.78 ° • Cap diameter: 39 mm • Cap height: 24 mm 	<ul style="list-style-type: none"> • Heigth: 283.88 mm • Diameter: 228.43 mm • Cylinder height: 120 mm • Konus height: 32 mm • Konus angle: 34.78 ° • Cap diameter: 39 mm • Cap height: 24 mm
Properties	CS-6K	CS-10K
Description	<ul style="list-style-type: none"> • Green Elephant Biotech GmbH CellScrew® 6k • GEB-CS-6k: TC treated surface, with filter cap 	<ul style="list-style-type: none"> • Green Elephant Biotech GmbH CellScrew® 10k • GEB-CS-10k: TC treated surface, with filter cap
Packaging dimensions	130 mm x 130 mm x 300 mm	
Weigth	385 g	600 g
Theoretical total volume	1 360 mL	2193 mL
Working volume	500 to 600 mL	800 to 1000 mL
Growth area	6 066 cm ³	10 313 cm ³
Material	Polylactic acid	
Color	Translucent	
Sterilization method	Gamma irradiation	
Operating temperature	2 °C to 45 °C	
Storage	Room temperature	

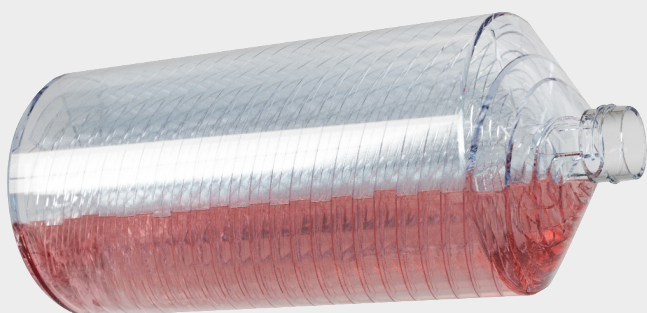


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PRODUCT SPECIFICATIONS

Properties	CS-6K	CS-10K
Centrifugability		No
Autoclavability		No
Recommended rotating speed		0.5 to 2 rpm
Mixing time	< 9 min (@0.5 rpm)	< 27 min (@0.5 rpm)
kLa - value		1.95 h ⁻¹ (@0.5 rpm)
Shelf life		12 months
Packing unit	1 CellScrew®, 1 bag of 1 piece	



90% LESS PLASTIC WASTE!

The CellScrew® is made from plant derived PLA by an additive manufacturing process. By this, we were able to reduce its carbon footprint ~ 90% when compared to standard single-use cell culture dishes.

