

## BelloCell<sup>®</sup> - Cell Culture System

BelloCell<sup>®</sup> is a disposable bioreactor capable of high density cell culture for protein expression, virus and monoclonal antibody production.

BelloCell<sup>®</sup> is designed based on the concept of bellows-induced alternation flow of media and air through porous matrices, where cell reside and grow, providing a low shear, high aeration and foam free culture environment.

BelloCell<sup>®</sup> bioreactor consists of two components: a sterile, single-use culture bottle BelloCell<sup>®</sup>-500 and a bellows compressor BelloStage<sup>®</sup>-3000. When in use, BelloCell<sup>®</sup>-500 bottle is partially filled with media and inoculated with cells. The media are raised and lowered alternatively to submerge and expose the microcarriers, creating a dynamic interface between air and media on cell surface to maximize nutrient uptake and oxygen transfer.

Because of its high efficiency in nutrient and oxygen transfer, one BelloCell<sup>®</sup> bottle, with specific surface area of 15.600 cm<sup>2</sup>, is capable of producing cell mass comparable to 15 to 20 roller bottles. Since the microcarriers surface is specially treated, BelloCell<sup>®</sup>-500 can grow both anchorage-dependent and independent cells and allow easy harvest of whole cells, cell components or secreted proteins.



### Features and Advantages

- ◆ Sterile, ready to use, disposable
- ◆ Low shear stress, foam free, no O<sub>2</sub> limitation
- ◆ Large surface area for high density cell culture
- ◆ Compatible with most serum free media
- ◆ Anchorage-dependent and independent cells
- ◆ Able to collect whole cells or cell components

### Applications

- ◆ Mammalian and insect cell culture
- ◆ Protein and virus production
- ◆ Monoclonal antibody production
- ◆ Proteome research
- ◆ Gene and cell therapy
- ◆ Seed preparation

**Specifications:****BelloCell®-500 Culture Bottle**

Dimensions: 243 mm (H) x 100 mm (OD)  
 Working Volume: 500 ml  
 Porous matrix: 100 cm<sup>3</sup>  
 Matrix surface area: 15.600 cm<sup>2</sup>  
 Matrix type: BioNOC II® PET microcarriers  
 Materials: PETG, LDPE/EVA, PP

**BelloCell®-500 Validation:**

- ◆ Gamma sterilized (25kGy)
- ◆ Meets USP Class VI
- ◆ Non-pyrogenic
- ◆ Non-cytotoxic

**BelloStage®-3000 Bellows Compressor**

Dimensions (W x L x H): 260 x 360 x 175 mm  
 Weight: 7,0 kg  
 Power: requires 100-240 VAC, 2,0 A, 24 Watts  
 Up-Down Rate: adjustable 0,25 ~ 2,0 mm/sec  
 Operating environment: 20 ~ 42 °C, 0 ~ 99% RH, CO<sub>2</sub>  
 Mechanical protection: Hi-Low optical sensor  
 Materials: alloy, chromic steel



## Order information:

Cat. No.	Description	Case Qty.
BS4000	BelloCell complete System ( <b>without</b> Bottles): – 1 BelloStage® Compressor – Glucose Meter and 50 Glucose Test Strips – 2 Forceps, CD with Manual	1
BS7000	BelloCell complete Perfusion System ( <b>without</b> Bottles): – 1 BelloStage® Compressor – 1 Bello Feeder®-1300 Pump Module for Perfusion – 2 Tubing Set & Pump Head for BelloFeeder® – Glucose Meter and 50 Glucose Test Strips – 2 Forceps, CD with Manual	1
	<b>BelloCell 500 ml culture bottles:</b> – Pre-sterilized, ready-to-use, disposable – Empty or filled with BioNOC™ II PET macroporous carriers – Batch, semi-batch culture	
BC0500	BelloCell-500: carrier volume 865 pcs. +/- 5 %	4
BC0250	BelloCell-500H: half carrier volume 430 pcs. +/- 5 %	4
BE0500	BelloCell-500E: <b>empty</b> bottle which allows users to load required carriers, scaffolds etc.	4
BC1000	BelloCell-500P: for continuous culture with automatic medium recirculation function, carrier vol.: 865 pcs. +/- 5 %	4
BA1000	BelloCell-500AP: for continuous culture design of removing the lid on the matrix basket, carrier volume 865 pcs. +/- 5 %	4
BE1000	BelloCell-500EP: <b>empty</b> bottle for continuous culture	4
DG1000	GlucCell Glucose Monitoring Kit incl. 50 test strips	1
DGA050	Glucose Test Strips (Box/50)	1
BN0050	BioNOC® II (50 g)	1
BN0250	BioNOC® II (250 g)	1
AB0100	CVD Nucleus Count Kit (100 ml Bottle)	1