

# Corning® Elplasia® 48K Vessel

Scale Up 3D Cultures Even Further

CORNING

With the effectiveness of 3D cell culture in many areas of research, including anti-cancer drug screening and *in vitro* tumor studies, the need for better methods to produce replicate spheroids of uniform size in mass quantities has emerged.

The Corning Elplasia 48K vessel addresses this need by enabling researchers to generate an even greater number of spheroids in a scaffold-free model compared to our Elplasia 12K flask and 12K open well plate.

The Elplasia 48K vessel utilizes the same 152 microcavities per cm<sup>2</sup> geometry as the 12K flask and 12K open well plate, but with four times the capacity in a larger vessel footprint like that of a Corning CellSTACK® 1-Chamber vessel. Gravity, in conjunction with the Corning Ultra-Low Attachment (ULA) surface, and a rounded microcavity geometry enable formation of approximately 48,000 spheroids of similar shape and size.

The ULA surface, a proprietary, animal-free, covalently bonded hydrogel, promotes the formation and easy harvesting of spheroids.

The microcavity geometry allows spheroids to remain in place during medium exchange without compromising full recovery at harvest time. The vessel's three-port design provides a dedicated "Harvest/Media Exchange" port with a flat landing area and liquid diverter to minimize spheroid disruption during liquid handling steps. Access ports provide direct access to 3D cultures and the microcavity surface. All ports come with standard 33 mm threaded caps with 0.2 µm pore non-wettable membranes to allow gas exchange. Optional Corning CellSTACK 33 mm threaded caps are available with integrally sealed chemically resistant, heat sealable flexible tubing to allow direct transfer of media and cells.

The vessel is currently for research use only and is produced on a development pilot line.

The Corning Elplasia technology is compatible with multiple cell types often used for 3D cell culture, and may be used across many applications including:

- ▶ Spheroid biobanking
- ▶ Cancer/Tumor biology
- ▶ 3D tissue engineering
- ▶ Drug screening
- ▶ Stem cell biology
- ▶ Extracellular vesicle production
- ▶ Regenerative medicine

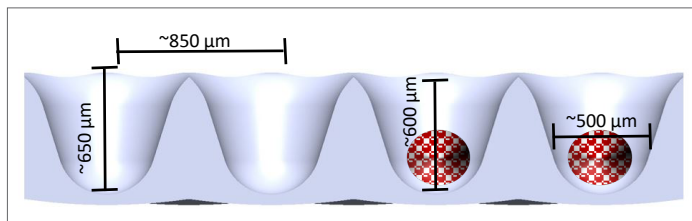
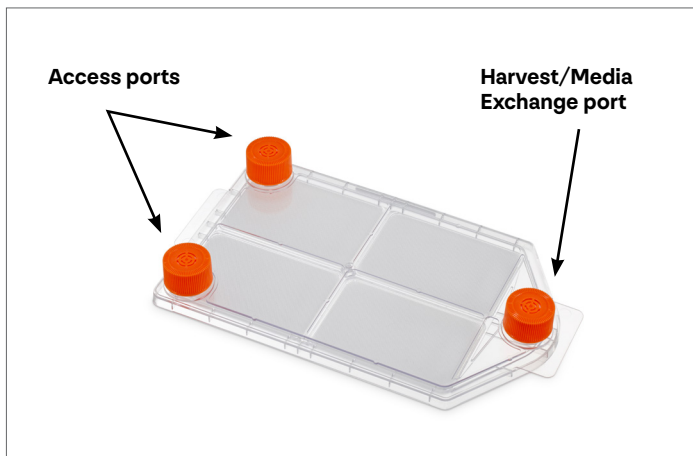


## Features

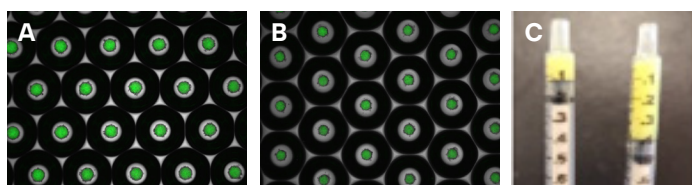
- ▶ Corning ULA surface
- ▶ Optically clear, gas permeable polystyrene film with low autofluorescence
- ▶ Harvest/media exchange port and liquid diverter minimizes impact of liquid flow during medium exchange and handling
- ▶ 320 cm<sup>2</sup> surface area with 152 microcavities per cm<sup>2</sup> generate approximately 48,000 spheroids of uniform size and shape
- ▶ Round well-bottom geometry
- ▶ Microcavity geometry dimensions: 850 x 650 µm (top diameter x depth), with working spheroid growth dimensions of 500 x 600 µm (diameter x depth)
- ▶ 50 - 250 mL working volume

## Benefits

- ▶ Ease of spheroid formation, culture, and collection
- ▶ Creates uniform spheroid formation at large volumes
- ▶ Scaffold-free cultures
- ▶ Highly reproducible bulk spheroid formation across microcavities
- ▶ Common media reservoir for equivalent culture conditions for all spheroids
- ▶ Compatible with brightfield and fluorescent microscopy



The Corning Elplasia 48K vessel substrate contains approximately 48,000 round bottom cavities that each provide a growth area of approximately 500 x 600 μm (diameter x depth) with gas permeable polystyrene film bottoms.



The Corning Elplasia 48K vessel utilizes the same microcavity geometry as the Corning Elplasia 12K flask and open well plate in a larger footprint to generate 4X the number of 3D cultures. Images depict 72-hour culture of HT29/GFP spheroids in the (A) Elplasia 12K flask compared to (B) the Elplasia 48K vessel. Images were captured using the EVOS-FL microscope using a 2X objective under brightfield and FL modes. Image (C) shows the concentrated spheroid pellets from the Elplasia 12K flask and Elplasia 48K vessel to illustrate the 4X increase in 3D culture collection from the Elplasia 48K vessel.

The Corning® Elplasia® 48K vessel was designed to enable the generation of a large volume of uniform spheroids under one culture condition. For more details, refer to the Elplasia 48K Vessel Guidelines for Use (CLS-AN-865DOC).

**Table 1.** Cell lines evaluated using the Corning Elplasia 48K vessel.

Cell Type	Source
<b>Cancer Lines</b>	
HT-29/GFP	Human colon adenocarcinoma
<b>Stem Cells</b>	
iPSC	Human bone marrow mesenchymal stem cells
iPSC	Human induced pluripotent stem cells, normal
<b>Normal Lines</b>	
HEK-293	Human embryonic kidney



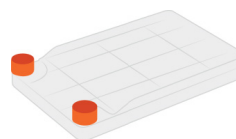
Corning Elplasia 48K Vessel



Corning Elplasia 12K Flask



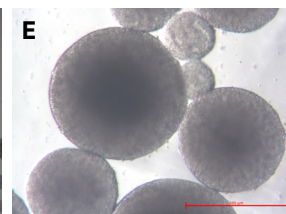
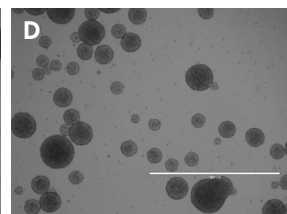
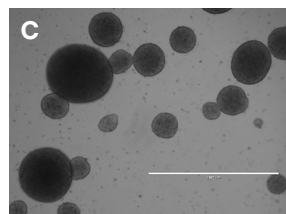
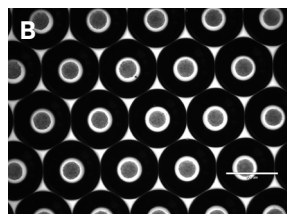
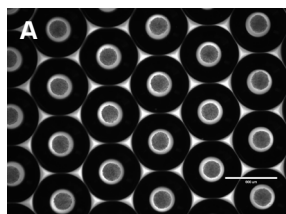
Corning 75 cm<sup>2</sup> U-shaped Flask



Corning CellSTACK® 1-chamber Vessel



Corning 125 mL Erlenmeyer Flask



iPSC aggregates/spheroids after 72-hour expansion using multiple scaffold-free ULA surface coated vessel types. The (A) Corning Elplasia 48K vessel and (B) Elplasia 12K flask form similarly sized spheroids compared to (C-E) other vessel types tested used for aggregate/spheroid scale up. Images were captured using the EVOS-FL microscope using a 2X objective under brightfield mode.

## Ordering Information

Product is made-to-order (MTO) and may not be available in all markets.

Cat. No.	Description	Approximate Spheroids/Vessel	Microcavity Size (top diameter x depth)	Spheroid Growth Area (diameter x depth)	Qty/Pk	Qty/Cs
9920	Corning Elplasia 48K vessel, ULA surface	48,000	850 x 650 μm	500 x 600 μm	1	8

**How to Purchase:** For specific availability in your region and purchasing options, terms and conditions of sale, customer/product support, and certificates, visit [www.corning.com/how-to-buy](http://www.corning.com/how-to-buy).

**Warranty/Disclaimer:** Unless otherwise specified, all products are for research use or general laboratory use only.\* Not intended for use in diagnostic or therapeutic procedures. Not for use in humans. These products are not intended to mitigate the presence of microorganisms on surfaces or in the environment, where such organisms can be deleterious to humans or the environment. Corning Life Sciences makes no claims regarding the performance of these products for clinical or diagnostic applications. \*For a listing of US medical devices, regulatory classifications or specific information on claims, visit [www.corning.com/resources](http://www.corning.com/resources).

*Corning's products are not specifically designed and tested for diagnostic testing. Many Corning products, though not specific for diagnostic testing, can be used in the workflow and preparation of the test at the customers discretion. Customers may use these products to support their claims. We cannot make any claims or statements that our products are approved for diagnostic testing either directly or indirectly. The customer is responsible for any testing, validation, and/or regulatory submissions that may be required to support the safety and efficacy of their intended application.*

# CORNING

**Corning Incorporated**  
Life Sciences

[www.corning.com/lifesciences](http://www.corning.com/lifesciences)

## **NORTH AMERICA**

t 800.492.1110  
t 978.442.2200

## **ASIA/PACIFIC**

### **Australia/New Zealand**

t 61 427286832

### **Chinese Mainland**

t 86 21 3338 4338

## **India**

t 91 124 4604000

## **Japan**

t 81 3-3586 1996

## **Korea**

t 82 2-796-9500

## **Singapore**

t 65 6572-9740

## **Taiwan**

t 886 2-2716-0338

## **EUROPE**

CSEurope@corning.com

## **France**

t 0800 916 882

## **Germany**

t 0800 101 1153

## **The Netherlands**

t 020 655 79 28

## **United Kingdom**

t 0800 376 8660

## **All Other European Countries**

t +31 (0) 206 59 60 51

## **LATIN AMERICA**

grupoLA@corning.com

## **Brazil**

t 55 (11) 3089-7400

## **Mexico**

t (52-81) 8158-8400

The information contained within is accurate as of the date of publication and subject to change without notice.

For a listing of trademarks, visit [www.corning.com/trademarks](http://www.corning.com/trademarks). All other trademarks are the property of their respective owners.

© 2026 Corning Incorporated. All rights reserved. 2/26 CLS-AC-042