

High Throughput 3D Cell Culture Assays

2010

Two-thirds of surveyed scientists planned to transition their cell culture from 2D to 3D to improve assay relevance and quality.¹

2010-2014

Adoption was slow due to 3D's lack of automation compatibility.

2015

Automation-friendly methods, such as **Corning® Spheroid Microplates**, allowed researchers to unlock the power of high throughput 3D.

2015-2020

3D cultures played an increasingly large role in cancer research, drug screening, and stem cell research.

4X The number of 3D culture publications per year on PubMed quadrupled from 2010 to 2020².

2020-2023

The FDA's advancing alternative methods initiatives aimed to decrease reliance on animal testing through the use of emerging methods, such as 3D cultures.³

2023

Innovative products, like **Corning Elplasia® Plates**, ramped up the flexibility and ease of 3D with uniform, high-volume spheroid production in an imaging-ready format.

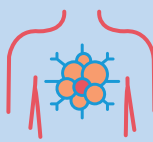
Versatile 3D Culture Products are Enabling Advances in:



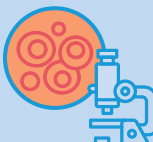
Disease modeling



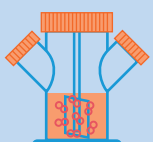
High throughput screening



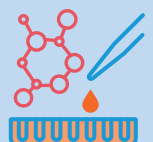
Cancer biology



Stem cell research



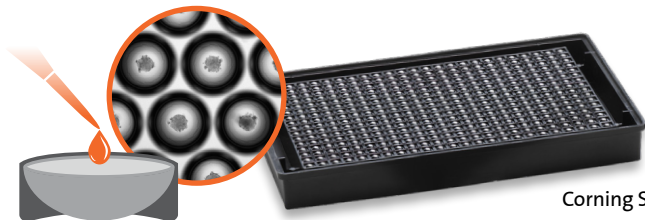
Cell therapy research



Tissue engineering

Remove Barriers to 3D Adoption

Corning's spheroid and Elplasia plates enable labs to generate, assay, and image spheroids in the same automation-compatible microplate without the need for specialized equipment. Or, you can collect spheroids for downstream applications.



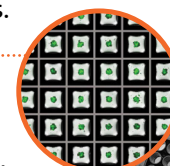
Corning Spheroid Microplates

Corning Spheroid Microplates

- Control the size and composition of spheroids simply by changing the initial seeding density. One uniform spheroid forms in each of the uniquely designed round-bottom wells.
- Protect delicate spheroids by eliminating the need to transfer to another plate. Opaque walls minimize well-to-well cross-talk, while optically clear bottoms facilitate imaging in the same plate.
- Several formats are available to facilitate automated imaging and high throughput applications.

Corning Elplasia Plates

- Produce multiple spheroids per well, increasing signal and the number of imaging data points per well.
- Available in multiple plate formats, making them an ideal choice for harvest and expansion, as well as image analysis.
- Compatible with brightfield and fluorescence microscopy to facilitate imaging directly in the plate.
- The Elplasia 12K open well plate is designed with a gas-permeable polystyrene film-bottom containing 152 microcavities per cm² for the straightforward bulk generation of uniform spheroids in one culture condition.



Corning Elplasia Microplates

Explore Corning 3D Cell Culture Tools

www.corning.com/3D

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1. Comley, J. **3D Cell Culture: Easier said than done.** Drug Discovery World. August 2010.

2. Jensen, C. and Teng, Y. (2020) **Is It Time to Start Transitioning From 2D to 3D Cell Culture?** Frontiers in Molecular Biosciences. March 2020.

3. **Advancing New Alternative Methodologies at FDA.** U.S. Food & Drug Administration. January 2021.

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