

# Is the time right for High Throughput 3D Cell Culture Assays?

**2010**

66% of scientists planned to transition their cell culture from 2D to 3D to improve assay results.<sup>1</sup>

**2010-2014**

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

**2015**

Automation-friendly methods, such as the Corning® Spheroid Microplate, are allowing researchers to unlock the power of high throughput 3D.

## Setting up a 3D assay using Corning Spheroid Microplates

### 1 Prepare Cells for Seeding



Starting working volumes can range from **75 to 200  $\mu\text{L}$**  for a 96-well microplate and **25 to 75  $\mu\text{L}$**  for a 384-well microplate.

#### Tips ▼

Wells should be seeded based on cell type, length of growth phase in a spheroidal format, and desired size of the spheroid at assessment.

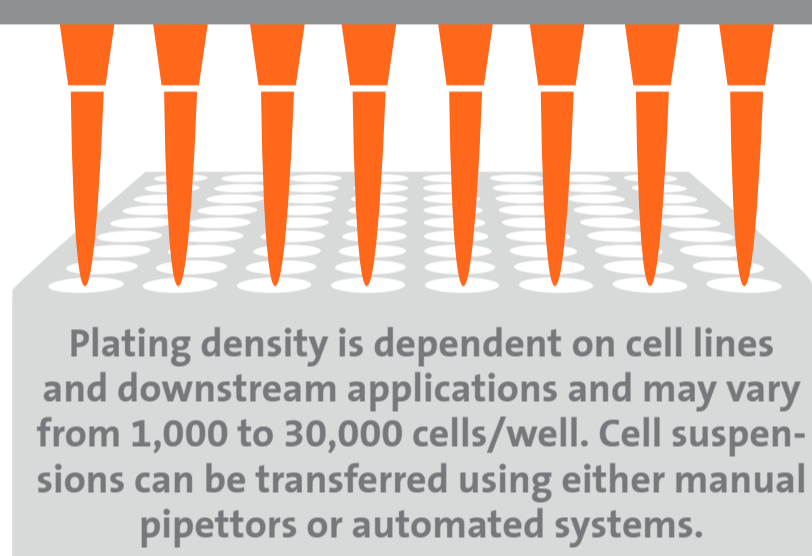
Optimize seeding density for spheroid formation by performing a titration from 5,000 cells/well to 35,000 cells/well and measuring spheroid diameter over time.

### 2 Seed

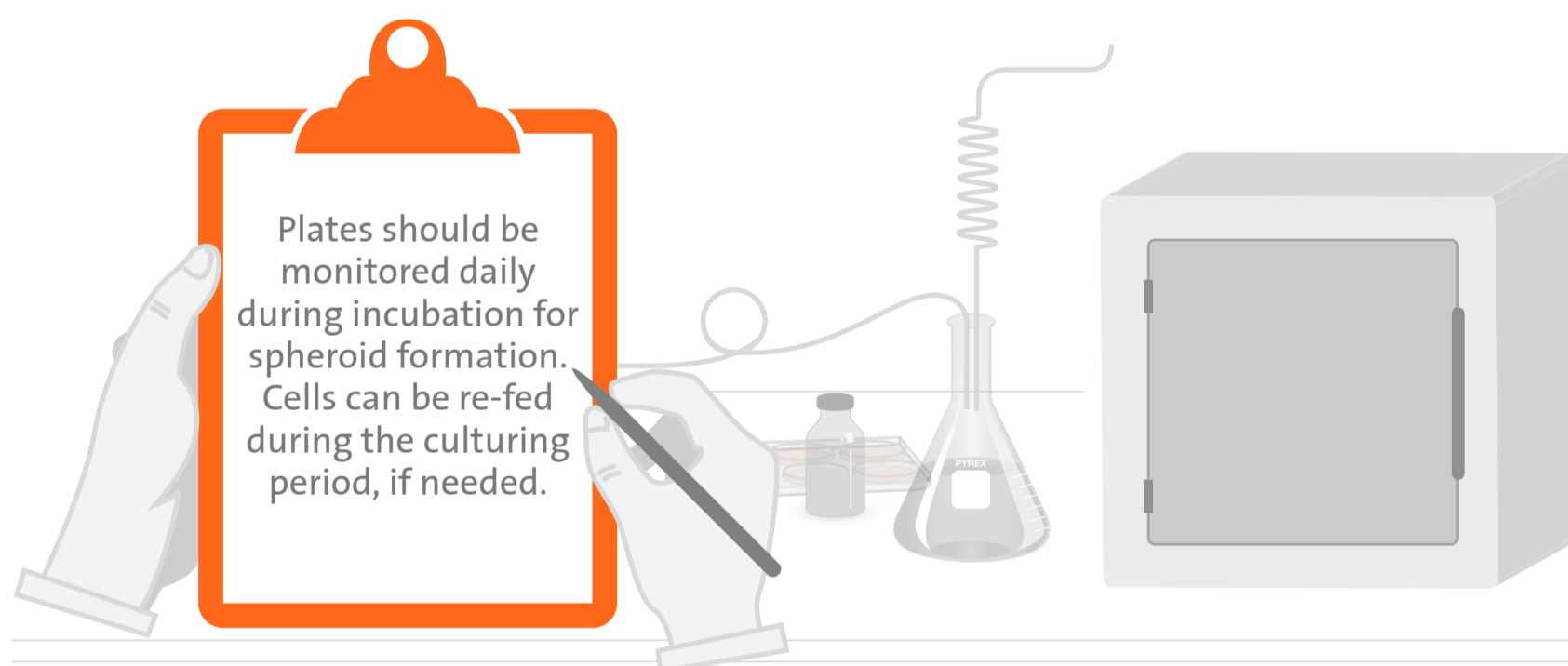
#### Tips ▼

Make sure pipet tips do not touch the bottom or sides of the wells to avoid damaging the attachment coating.

Allowing cells to settle in a cell culture hood for 15 minutes prior to incubation can enhance spheroid production.



### 3 Maintain



### 4 Assay

You can culture and assay spheroids in the same microplate without needing to transfer them to a new plate.

Side walls are black for fluorescence and luminescence assays. Bottom is clear for imaging.



**CORNING**

For more information on Corning Spheroid Microplates, visit [www.corning.com/lifesciences](http://www.corning.com/lifesciences) or [www.cellculturesuccess.com](http://www.cellculturesuccess.com)

All procedures are cell line-dependent and should be tested prior to use.  
<sup>1</sup>Comley, J. "3D Cell Culture: Easier Said Than Done!" Drug Discovery World, Summer, 2010.