

# Hydrogel Floating, SOLVED!



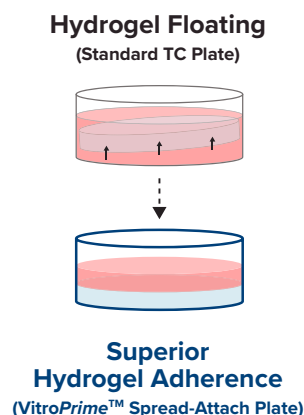
## VitroPrime™ Spread-Attach Plates

Unique surface treated for superior hydrogel spreading, adherence, and uniform surface

- Prevent Hydrogel Floating
- Eliminate Edge Effect
- More Even Hydrogel Surface

Offering unparalleled advantages for hydrogel-based 3D and 2D cell culture applications, the VitroPrime™ Spread-Attach Plates, with a unique surface treatment, for superior hydrogel spreading, adherence, and uniform surface to eliminate the edge effect, solve the floating issue and uneven cell attachment to help promote rapid cell growth and improve cell yields.

When used with the VitroGel® hydrogel system, achieve more reproducible, consistent data even for challenging cell types requiring more uniform cell adherence and “unlock” for full automation potential.



## Prevent Hydrogel Floating

### Comparison of Hydrogel Adherence - VitroPrime™ Spread-Attach v. Others

We investigated the effectiveness of VitroPrime™ Spread-Attach and three other cell culture plates in mitigating the hydrogel floating issue using VitroGel® ORGANOID-3 hydrogel (Catalog # VHM04-3).

The method involves combining hydrogel and basal medium in a 2:1 ratio, followed by adding 300 µL of VitroGel® ORGANOID-3 hydrogel mixture to each well of the 24-well plates. The hydrogel is incubated for 20 minutes, after which 300 µL of cover medium is added on top. The plates are then incubated at 37°C to assess the ability of VitroPrime™ Spread-Attach Plate to prevent hydrogel floating.

VitroPrime™ Spread-Attach Plates promote hydrogel attachment to address floating issues which results to even imaging and ensure consistency.

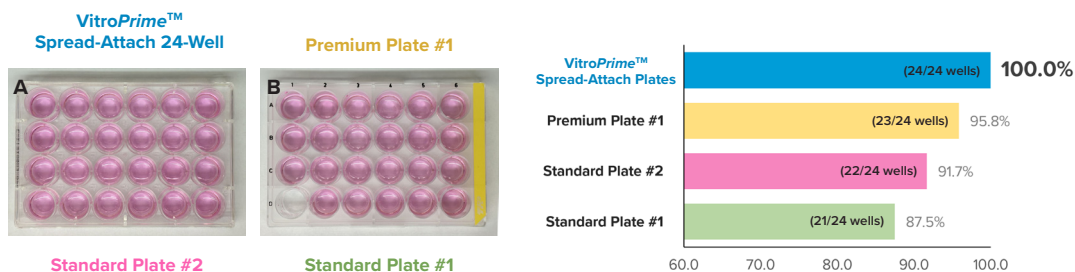
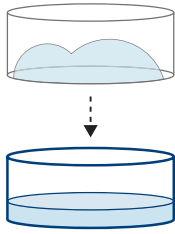


Figure 1. Comparison of hydrogel adherence on four different quality 24-well plates in 48 hours. A. VitroPrime™ Spread-Attach 24-Well plate exhibits perfect hydrogel adherence in all 24 wells. B. Premium Plate #1 showcases hydrogel adherence in 23 out of 24 wells. C. Standard Plate #2 exhibits hydrogel adherence in 22 out of 24 wells. D. Standard Plate #1 demonstrates hydrogel adherence in 21 out of 24 wells.

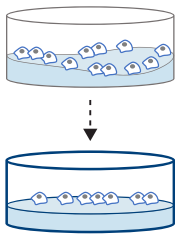
### Ineffective Gel Spreading (Standard TC Plate)



### Homogeneous Hydrogel Spreading (VibroPrime™ Spread-Attach Plate)

Achieve consistent surface coating and prevent edge effects for high reproducibility.

### Uneven Hydrogel Surface (Standard TC Plate)



### Uniform Hydrogel Surface (VibroPrime™ Spread-Attach Plate)

Ensure even cell attachment through the surface with VibroPrime™ Spread-Attach Plates and obtain consistent data.

## Eliminate Edge Effect

### Effective Hydrogel Surface Coating with VibroPrime™ Spread-Attach Plate

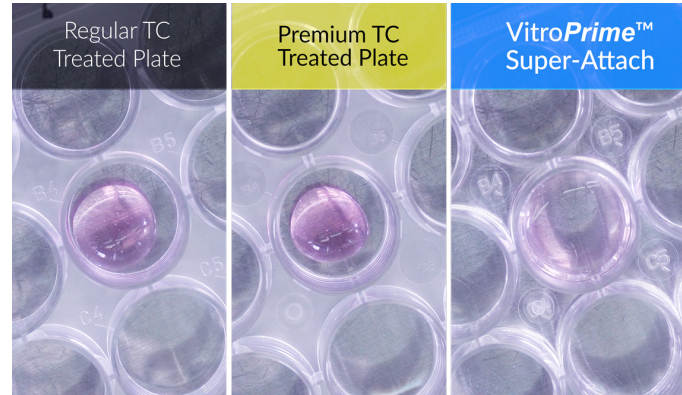


Figure 2. An overhead view captures the hydrogel mixture distribution across three distinct tissue culture-treated plates (Regular TC, Premium TC, VibroPrime™ Spread-Attach).

The hydrogels did not distribute homogeneously throughout the surface in the regular and premium tissue culture-treated plates. In contrast, VibroPrime™ Spread-Attach Plate ensures even hydrogel spreading.

## More Even Hydrogel Surface

### Evaluating Gel Spreading and Cell Attachment VibroPrime™ Spread-Attach 12-Well Plate v. Standard 12-Well Plate

We compared two 25-stitched z-planes capturing OP9 cells in the VibroGel® Hydrogel Matrix within 12-well plates— VibroPrime™ Spread-Attach 12-Well Plate and a standard 12-well plate. The images were compiled by selecting the z-plane with the 2D projection on each plate and stitched to evaluate cell attachment and the flatness of the hydrogel surface. Notably, VibroPrime™ Spread-Attach 12-Well Plate demonstrated superior performance, ensuring flat hydrogel surface for even gel spreading and cell attachment.

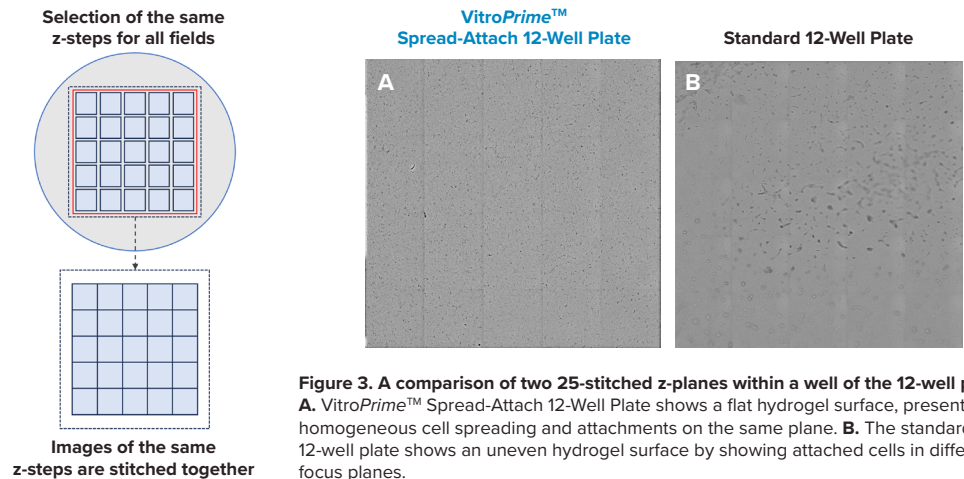


Figure 3. A comparison of two 25-stitched z-planes within a well of the 12-well plates. **A.** VibroPrime™ Spread-Attach 12-Well Plate shows a flat hydrogel surface, presenting homogeneous cell spreading and attachments on the same plane. **B.** The standard 12-well plate shows an uneven hydrogel surface by showing attached cells in different focus planes.

Product	Well No.	Well Size	Packaging Size	Thomas No.
VibroPrime™ Spread-Attach Plates	6-well	9.5 cm <sup>2</sup>	50 packs/case (VP-SA6W) 5 packs/case (VP-SA6W5)	50 packs/case - 24A00H834 5 packs/case - 24A00H835
	12-well	3.85 cm <sup>2</sup>	50 packs/case (VP-SA12W) 5 packs/case (VP-SA12W5)	50 packs/case - 24A00H836 5 packs/case - 24A00H837
	24-well	1.9 cm <sup>2</sup>	50 packs/case (VP-SA24W) 5 packs/case (VP-SA24W5)	50 packs/case - 24A00H838 5 packs/case - 24A00H839
	48-well	0.7 cm <sup>2</sup>	50 packs/case (VP-SA48W) 5 packs/case (VP-SA48W5)	50 packs/case - 24A00H840 5 packs/case - 24A00H841
	96-well	0.3 cm <sup>2</sup>	50 packs/case (VP-SA96W) 5 packs/case (VP-SA96W5)	50 packs/case - 24A00H842 5 packs/case - 24A00H843

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