



## TechDoc for Water Drop Test on TPP® Tissue Culture Vessels

TPP tissue culture vessels are for the cultivation and growth of cells, as well as for photometric measurements and cell-based assays. The growth areas, but not the sidewalls of the vessels, are opto-mechanically activated for optimal cell adhesion and growth.

The simple water drop test allows to quickly determine if the surface treatment is intact. This can be an exclusion criterion or an indication of poor cell growth in a particular well or wells.

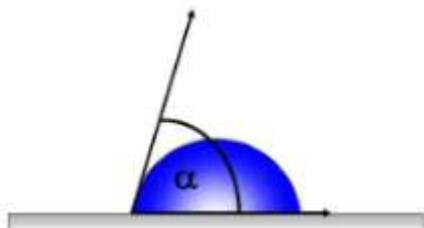
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### Technical Data:

**Material** Polystyrene (PS)

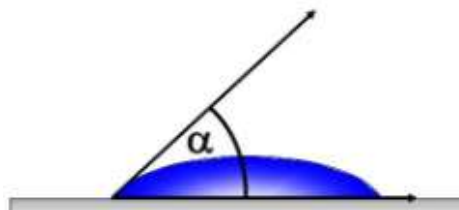
Untreated growth area is:

- hydrophobic
- repels the water droplet
- contact angle ( $\alpha$ ) is large
- low to poor adhesiveness for cells



Treated growth surface is:

- hydrophilic
- water droplet sprawls
- contact angle ( $\alpha$ ) is small
- excellent adhesiveness for cells





### Water Drop Test on Tissue Culture Test Plates

Example: comparison “treated” versus “non-treated” test plates

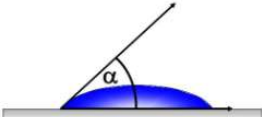
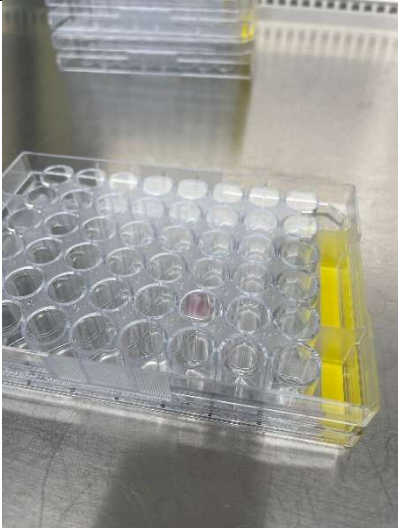



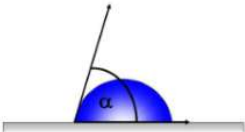
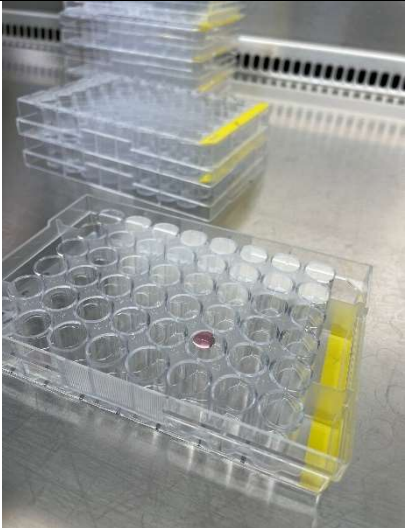

You can test the well treatment in the well or at the bottom of a plate



Place a drop of water on the growth area



<b>Treated Cell Culture Vessel</b> Example: test plate		
On treated growth area: water spreads out, small contact angle ( $\alpha$ )		
		
Contact angle ( $\alpha$ )	Bottom side	Inside well

<b>Non-Treated Cell Culture Vessel</b> Example: test plate		
On untreated growth area: water spreads out, large contact angle ( $\alpha$ )		
		
Contact angle ( $\alpha$ )	Bottom side	Inside well

**Conclusion:** A simple and quick test to check for the presence of surface treatment in a vessel.

1. Perfect surface treatment: water drop spreads out, small contact angle.
2. Poor to untreated: water forms drops, large contact angle.



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