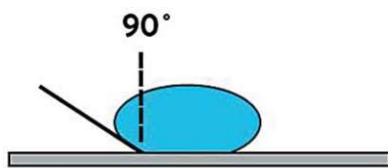


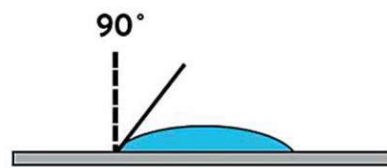


Surface Activation for Adhesive Cells

The hydrophobic surface of untreated plastic is generally unsuitable for adherent cell culture. Surface activation is therefore required to generate a charged, hydrophilic surface that promotes cell attachment and proliferation.



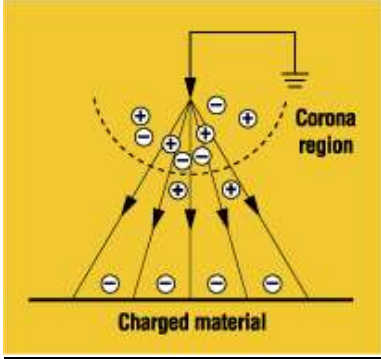
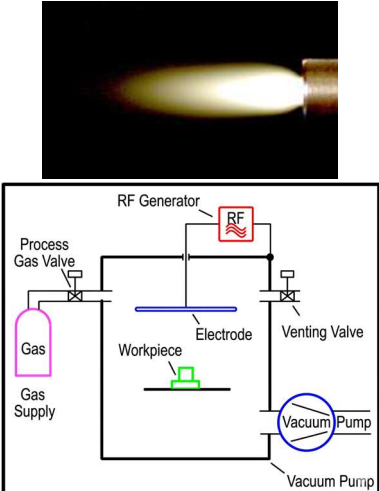
Low surface energy
Contact angle $>90^\circ$



High surface energy
Contact angle $<90^\circ$

➔ The smaller the contact angle, the better the cell adhesion

Two established methods are commonly used to modify the surface of hydrophobic polystyrene, generating a hydrophilic surface with positive and/or negative charges that promote cell attachment and growth:

Electric Discharge	Plasma Treatment
Increased surface energy for optimal adhesion	Activates the growth area for optimal cell adhesion
Important: The growth area is treated/activated and not coated	
	



TPP Surface Treatment

Surface Treatment Highlights

- Established expertise in proven surface treatment methods
- Enhanced cell adhesion and proliferation
- Long-term stability: up to 6 years shelf life

Quality Control

- Tested with L929 mouse fibroblasts (DIN EN ISO 10993-1, USP 27)
- Blind tests comparing different surface treatments

Result: consistent, increased proliferation rates

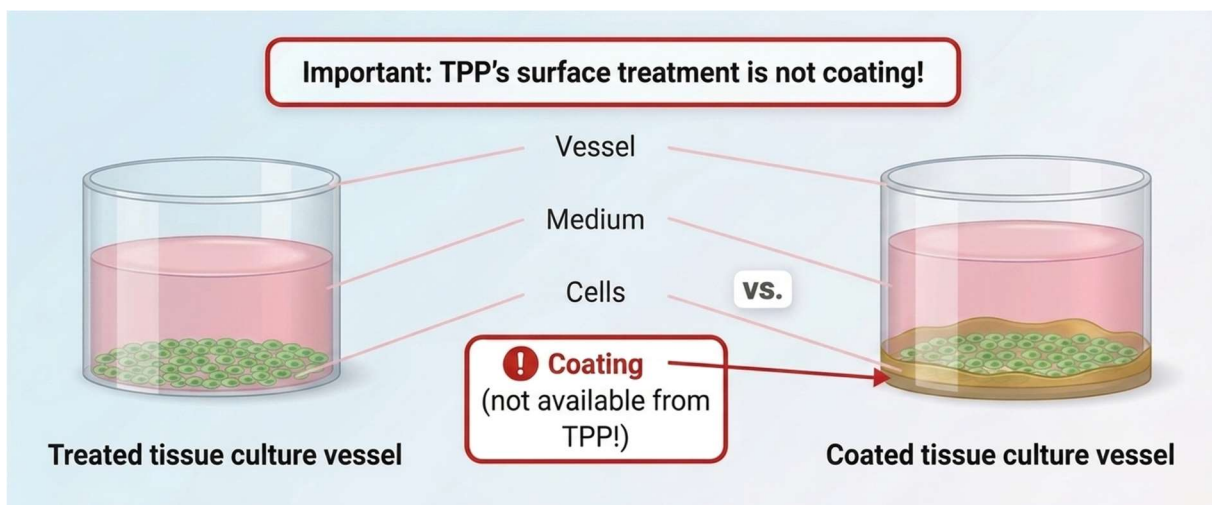
Process Advantages

- Long-term reproducibility since 1991
- Low batch-to-batch variability
- Mirror-polished molds for high optical clarity
- Optimized parameters: material, pressure, time, distance, speed
- Selective treatment possible (e.g., U-bottom 96-well plates)
- In-line production ensures uniform treatment
- No clouding of crystalline surfaces

Handling & Storage Recommendations

- Follow FIFO stock management
- Avoid direct sunlight or UV exposure
- Keep packaging sealed
- Store at 10 – 30 °C, 50–60 % relative humidity
- Avoid rapid temperature changes

Note: Other environmental factors outside TPP's control may affect surface performance





Disclaimer

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