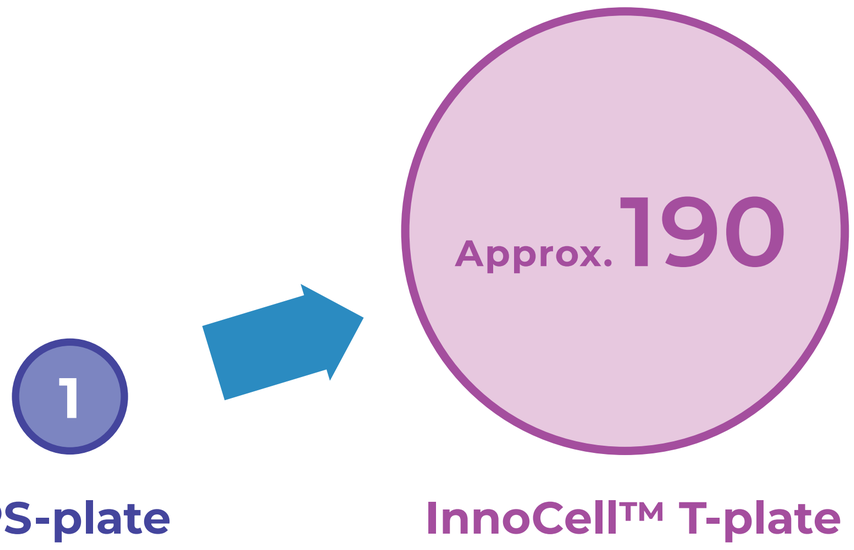
Oxygen Permeability Control

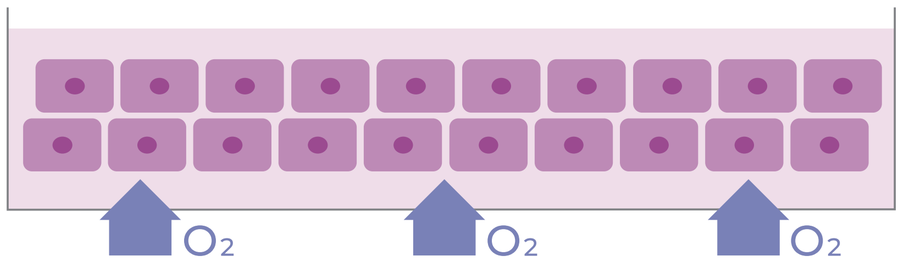
Mitsui Chemicals' original material × Precision processing technology

• Data obtained by Mitsui Chemicals

Relative Comparison of Oxygen Permeability



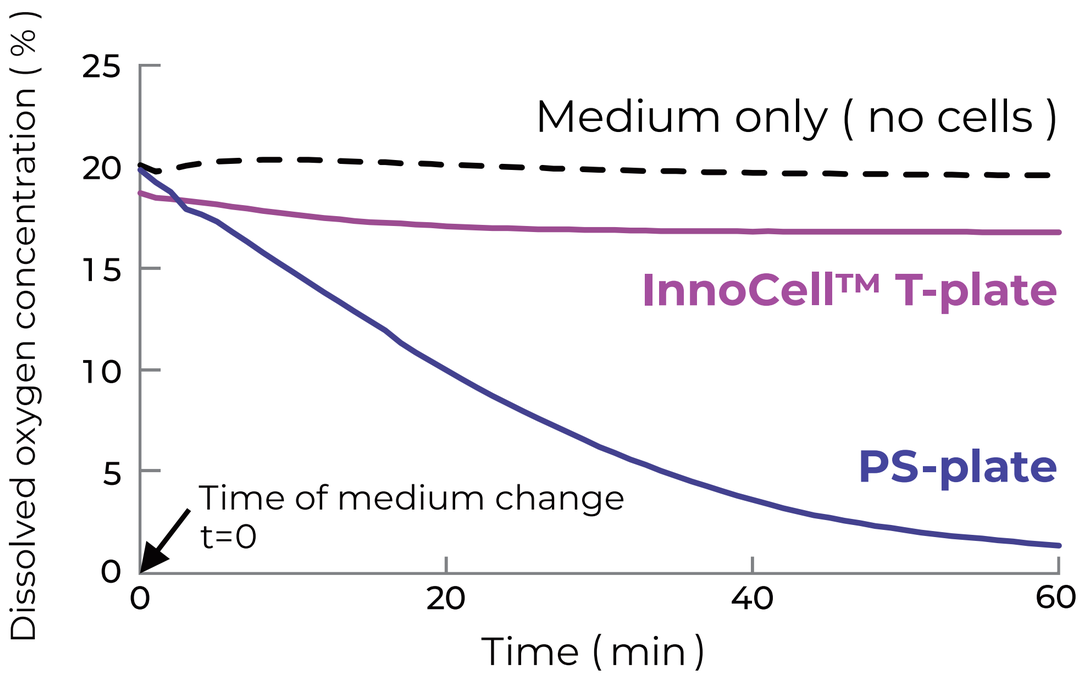
Efficient oxygen supply from the culture bottom



Utilizing Mitsui Chemicals' original material × precision processing technology, InnoCell™ T-plate can supply approximately 190 times more oxygen to cells compared to conventional polystyrene plates.

Changes in oxygen concentration near cells

• Data obtained by Mitsui Chemicals



Conditions

[Cell] Frozen rat hepatocytes
[Number of seedings] 1.0 × 10^5 cells / cm^2
[Culture period] 1 day
[Plate type] InnoCell™ T-plate FP series (flat bottom)
Collagen-coated (C type)

InnoCell™ T-plate can stably supply oxygen to cells from the bottom.

High-density culture of frozen rat hepatocytes

• Data obtained by Mitsui Chemicals

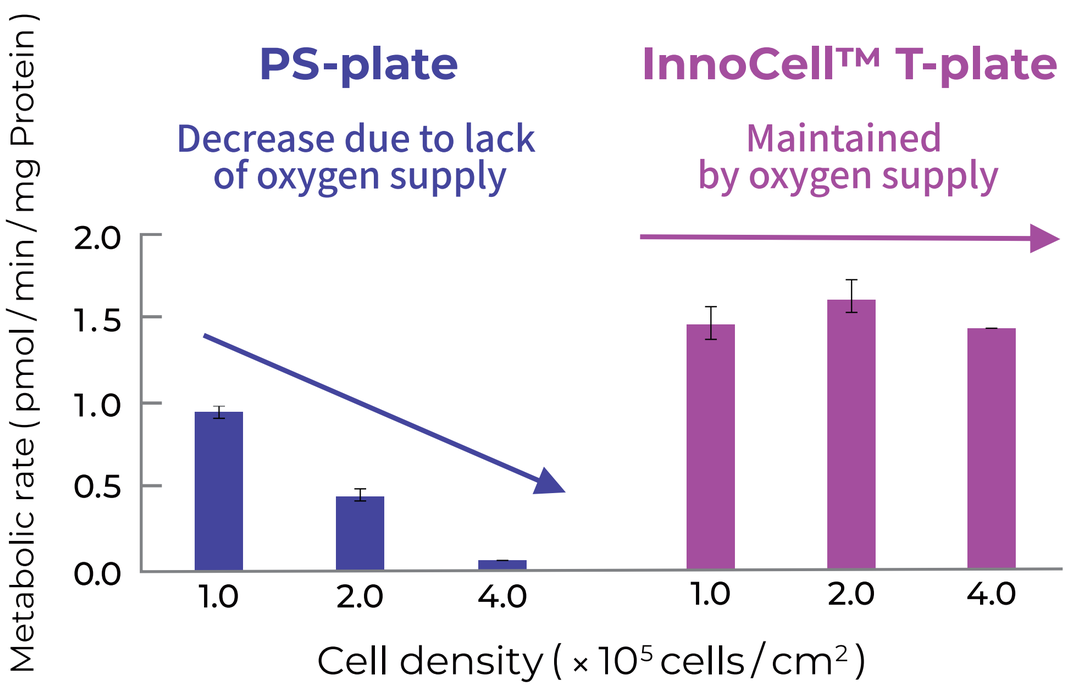


Image (4.0 × 10^5 cells / cm^2)

Conditions

[Cell] Frozen rat hepatocytes
[Culture period] 1 day
[Plate type] InnoCell™ T-plate FP series (flat bottom)
Collagen-coated (C type)

Using InnoCell™ T-plate, hepatocytes which require a high oxygen environment, could be cultured at high density while maintaining metabolic activity.

[Abbreviation] ・PS : Polystyrene ・PDMS : Poly (dimethylsiloxane) ・FEP : Fluorinated ethylene-propylene