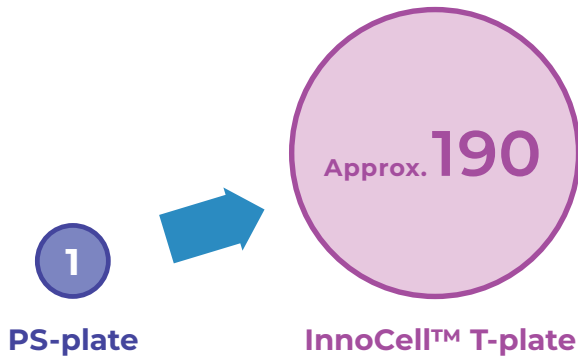


Oxygen Permeability Control

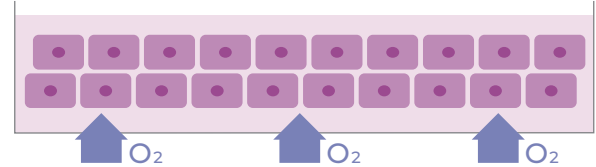
Mitsui Chemicals' original material × Precision processing technology

• Data obtained by Mitsui Chemicals

Relative Comparison of Oxygen Permeability



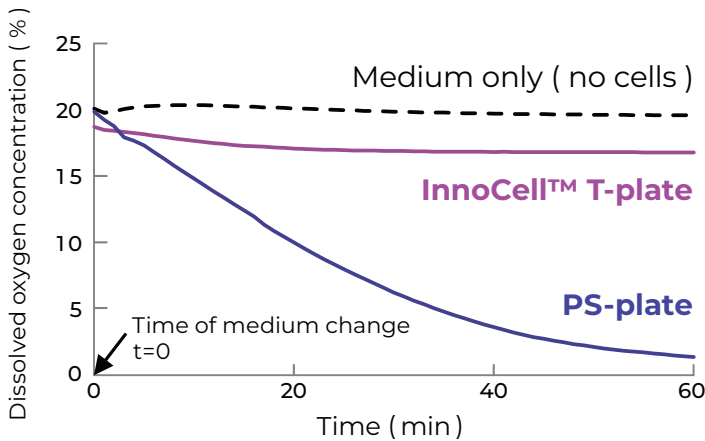
Efficient oxygen supply from the culture bottom



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

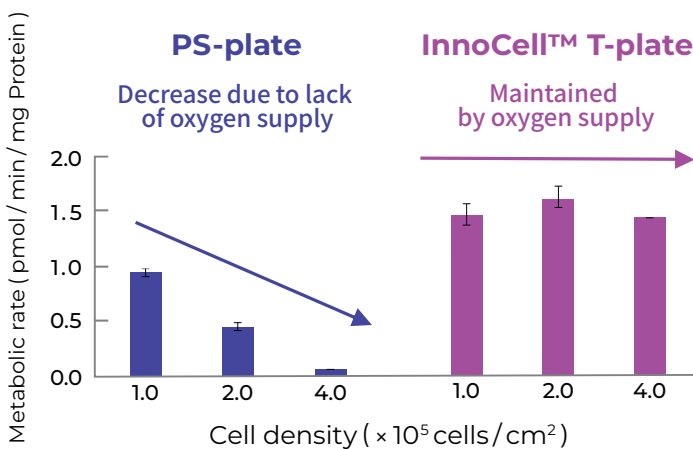
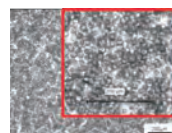
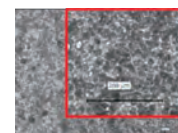


Image (4.0×10^5 cells/ cm^2)



PS-plate



InnoCell™ T-plate

Conditions

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

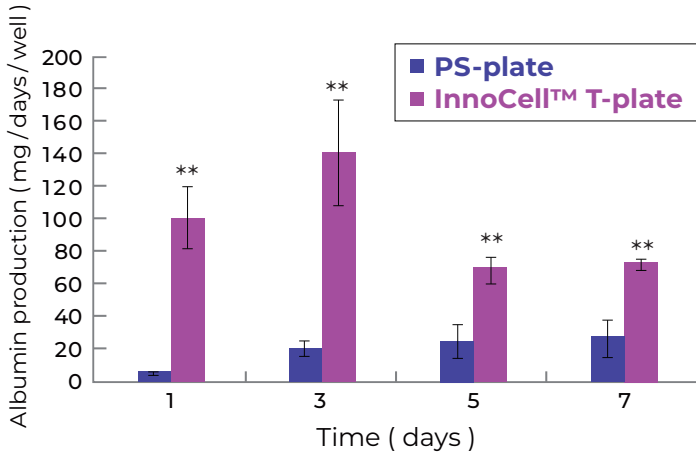
Using InnoCell™ T-plate, hepatocytes which require a high oxygen environment, could be cultured at high density while maintaining metabolic activity.

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

Oxygen Permeability Control 2

Culture of primary rat hepatocytes

• Data provided by Dr. Sakai, Dr. Nishikawa, The University of Tokyo
 • Reference: Accurate Evaluation of Hepatocyte Metabolisms on a Noble Oxygen-Permeable Material With Low Sorption Characteristics. *Front. Toxicol.*, 4: 810478, (2022).



Conditions

[Cell] Primary rat hepatocytes
 [Seeding density] 1.0×10^5 cells / cm^2
 [Plate type] InnoCell™ T-plate FP series (flat bottom)
 Collagen-coated (C type)
 [Incubator oxygen concentration]
 InnoCell™ T-plate : 10% PS-plate : 20%

InnoCell™ T-plate enabled primary rat hepatocytes to maintain a high albumin production capacity for an extended period of time.

Culture of PXB-mouse liver slices

• Data provided by PhoenixBio Co., Ltd.

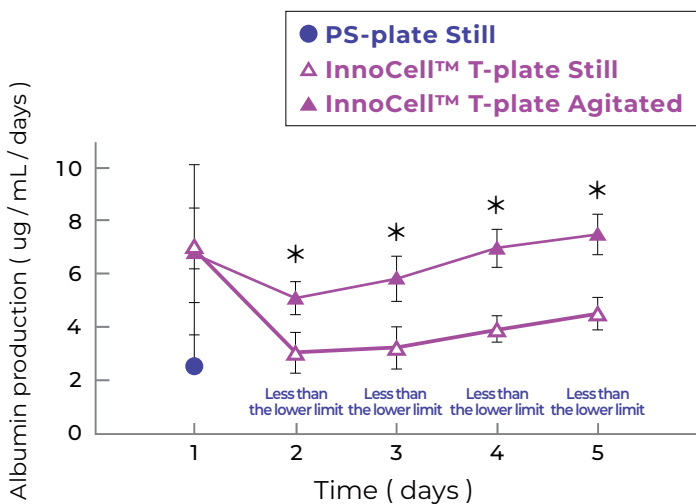
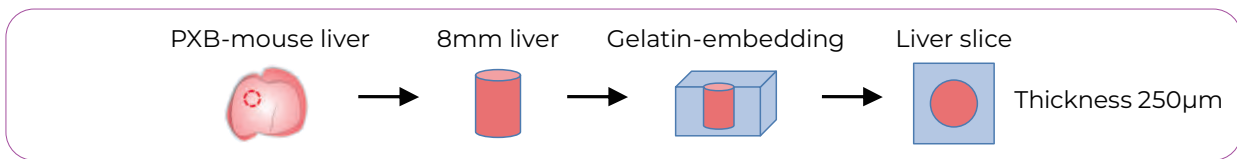
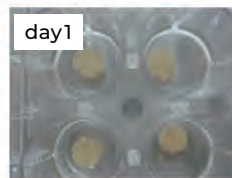


Image of liver slice in the plate



Conditions

[Slice] PXB-mouse liver
 [Plate type] InnoCell™ T-plate FP series (flat bottom)
 Non-treated (N type)

InnoCell™ T-plate even enabled liver slices to maintain a high albumin production capacity for an extended period of time.

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