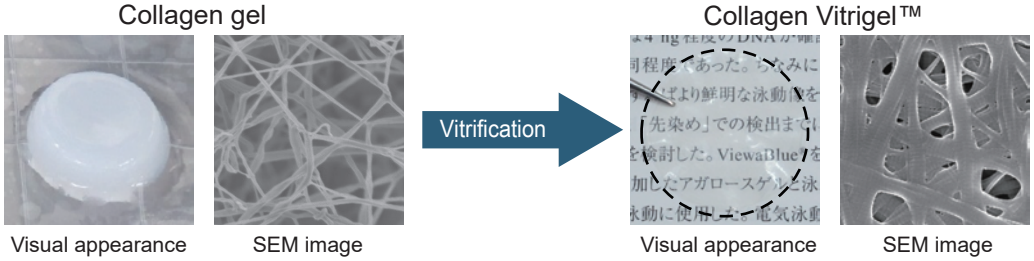
Cell culture insert

ad-MED Vitrigel™ series

ad-MED Vitrigel™ 2 is a cell culture insert using collagen Vitrigel™ membrane that is composed of only bovine collagen. ad-MED Vitrigel™ 2 is suitable for various applicationssuch as permeability assay, construction of tissue model, and co-culture of different type of cells.

Collagen Vitrigel™

Collagen solution forms a gel depending on pH, temperature, and ionic strength conditions.
When the moisture of the collagen gel is removed, the collagen fiber density increases and the collagen gel turns into a film. Because this dehydration process is called “vitrification”, the film produced by this method is called “Vitrigel™”.



Vitrigel is a registered trademark of National Agriculture and Food Research Organization (NARO).
This product is supported by Agri-Health Translational Research Project from the Ministry of Agriculture, Foresty and Fisheries of Japan.

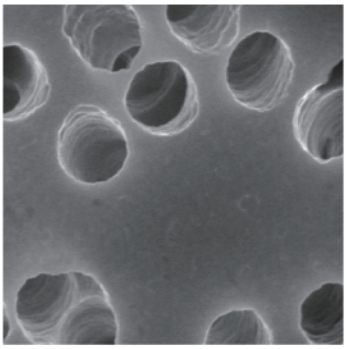
KANTO CHEMICAL CO., INC.

Vitrigel™ membrane

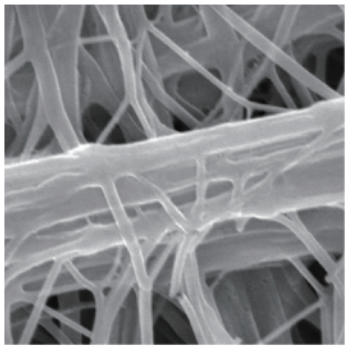
1. Membrane structure

The PET membrane commonly used for a cell culture insert has a pore structure. On the other hand, collagen Vitrigel™ membrane is composed of high density collagen fibers which have a collagen-specific stripe structure.

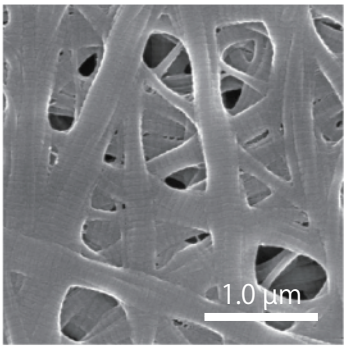
【SEM image】



Other company's product A
(PET, 0.4 μm)



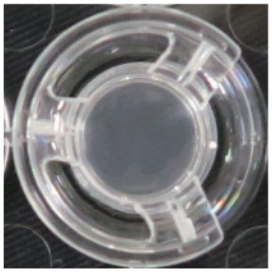
Other company's product B
(PTFE)



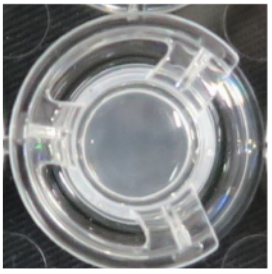
ad-MED Vitrigel™ 2
(Collagen Vitrigel™ membrane)

2. Transparency

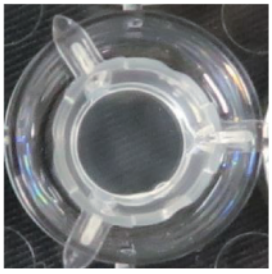
These images indicate transparency of each membranes. Each cell culture inserts were placed on the black cloth after rehydration with PBS. Transparency of collagen Vitrigel™ membrane is higher than that of PET or PTFE membrane.



Other company's product A
(PET, 0.4 μm)



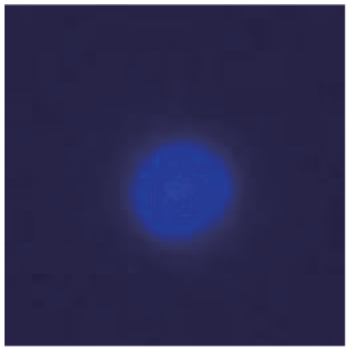
Other company's product B
(PTFE)



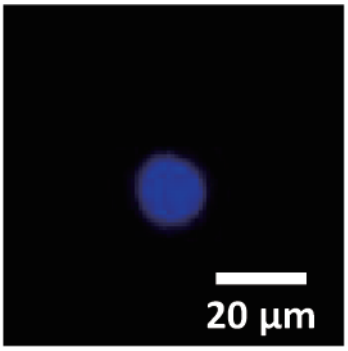
ad-MED Vitrigel™ 2
(Collagen Vitrigel™ membrane)

3. Low fluorecent membrane

Collagen Vitrigel™ membrane is low fluorescent membrane. It makes high-contrast fluorescent observation.



Other company's product A
(PET, 0.4 μm)

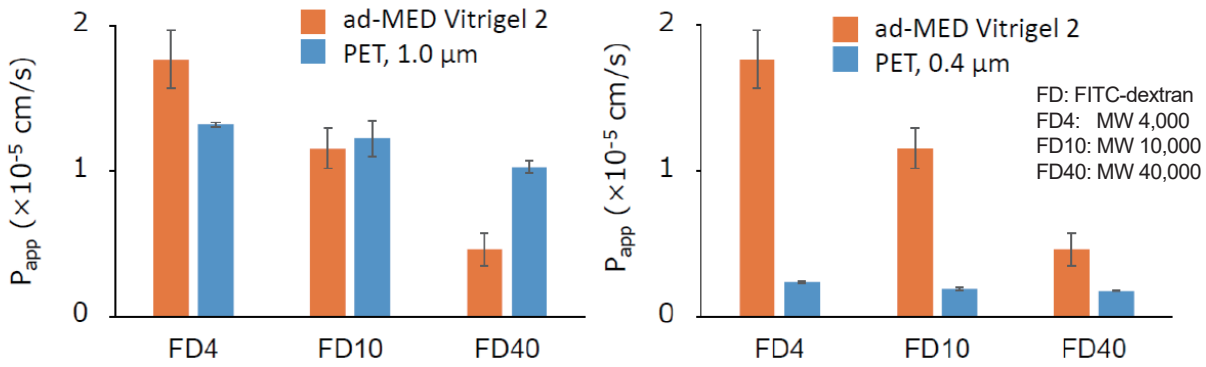


ad-MED Vitrigel™ 2
(Collagen Vitrigel™ membrane)

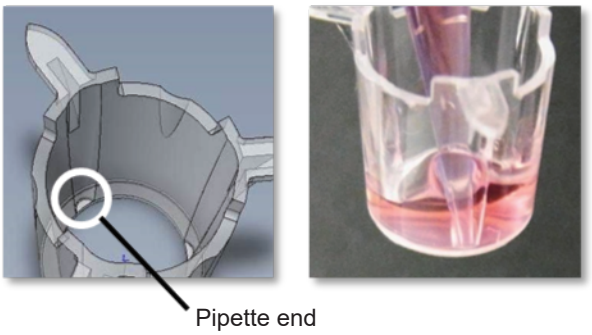
Cell：Caco-2
Blue：Nucleus

4. Permeability

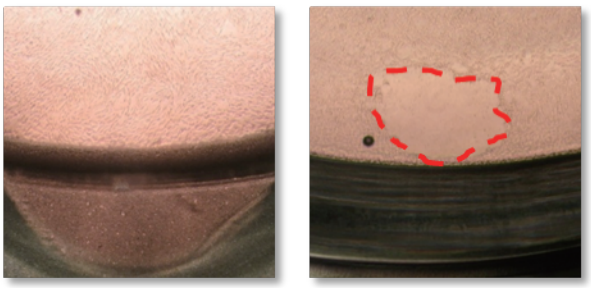
These are results of permeability test of collagen Vitrigel™ membrane and PET（1.0 or 0.4 μm）membrane. FITC-dextran (MW:4,000 or 10,000 or 40,000) was used as a permeable substance.These results suggested that the permeability of collagen Vitrigel™ membrane was higher than that of PET (0.4 μm) membrane and dependent on the molecular weight of a substance unlike the PET membrane.



5. Designs for easier handling



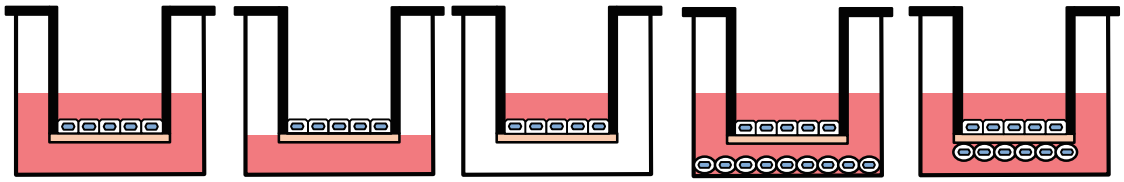
Channel-like structure that assist pipette handling

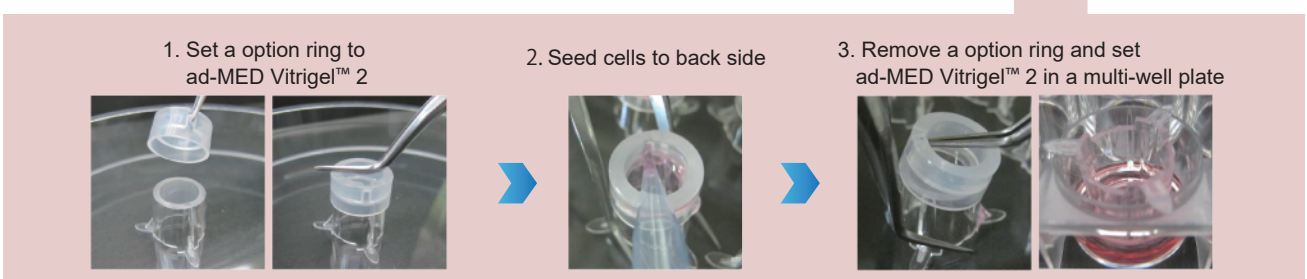


Phase contrast microscopic observation of NIH3T3 cells after medium change. Cell layer is completely maintained in ad-MED Vitrigel™ (left). On the other hands, cells are unstuck in a insert without channel-like structure (right) .

6. Constructing co-culture system

ad-MED Vitrigel™ 2 allows for co-culturing different cell types on both inner and outer side of collagen Vitrigel™ membrane by using option ring.

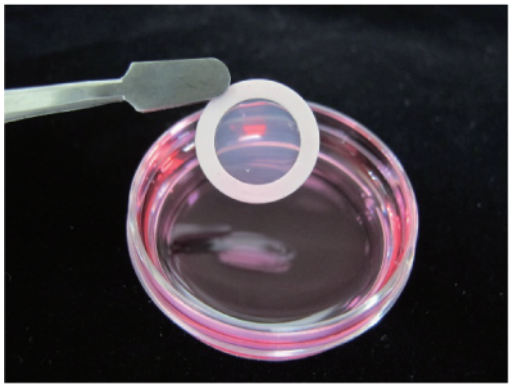




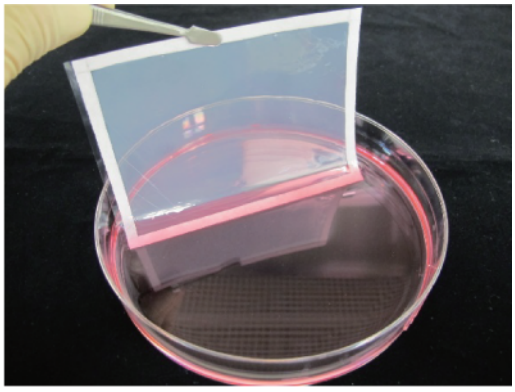
Vitrigel™ membrane

We have the technology to process Vitrigel™ membrane into various form.
If you nedd more infromation about Vitrigel™ membrane, please contact us.

ex. 1) Circular membrane (φ15 ㎜、φ21 ㎜)
φ15 ㎜ is equivalent to the bottom of ad-MED Vitrigel™ 2 (24 well), φ21 ㎜ is ad-MED Vitrigel™ 2 (12 well) too.



ex. 2) Square membrane (104 ㎜×74 ㎜)
examples of custom-made products.



＊This product is research use only.
Do not use for medical or diagnostic purposes.

Product information

Product Name	Package	Product No.
Cell culture insert ad-MED Vitrigel™ Series		
ad-MED Vitrigel™ 2 (12 well)	12 wells / plate	08363-96
ad-MED Vitrigel™ 2 (24 well)	24 wells / plate	08364-96
ad-MED Vitrigel™ 2 (96 well)	96 wells / plate	08368-96
Option ring for ad-MED Vitrigel™ (12 well)	24 pieces / pack	08369-96
Option ring for ad-MED Vitrigel™ (24 well)	24 pieces / pack	08373-96
Reservoir plate set for ad-MED Vitrigel™ 2 (96 well)	1 Set*1	32448-67

*1 Reservoir plate set includes single well plate, 96-well plate, insert guide, rid.

Product Name	Package	Product No.
Membrane		
Vitrigel 2 membrane (φ21 ㎜), sterile	24 pieces	44126-67
Vitrigel 2 membrane (φ15 ㎜), sterile	24 pieces	44125-67

- Please use the products listed in the catalog as reagents (chemicals used for testing or research purpose).
- Product information is subject to change without notice. For the latest information, please have a look at our website "Cica-Web".

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