Interactive Co-Culture Plate

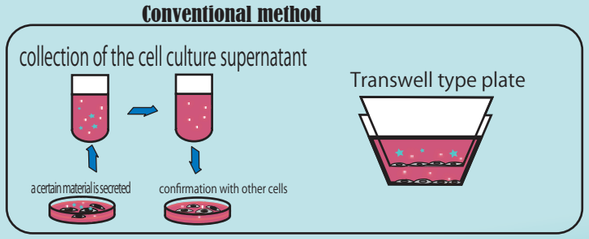
is an innovative new product which enables diffusion of soluble factors between wells/chambers, simultaneous visualization of co-cultured cells.

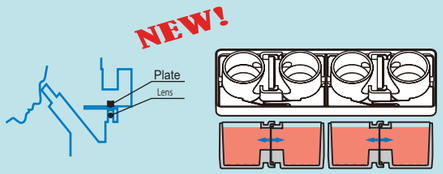
Background of development

Study of intercellular transmitters currently attracts considerable attention among researchers. For example, the material secreted by cancer cells acts on various cells and has been thought to result in immunosuppressive reaction. For this study, we used a pipette to collect the supernatant, including secreted material, and developed a method to add in different types of cells.
However, as cells communicat with each other and exchange intercellular transmitters, it has not been possible to observe the effect of a single transmitter using conventional methods. Thus, the phenomena occurring between individual cells could not be determined.
This problem reflected a need for a culture container that would allow observation of the spontaneous response of cells in an environment isolated from other cells.

Advantage of this product

Two culture vessels can be used independently or be connected with membrane in between to allow inter-well exchange of soluble factors amendable for co-culture experiment aimed as cell to cell "communication." Each parts were received in sealed tissue culture ready package. Once assembled either the stand alone or co-culture device were put into slide adaptor and incubated. Sample loading and handing is easy.

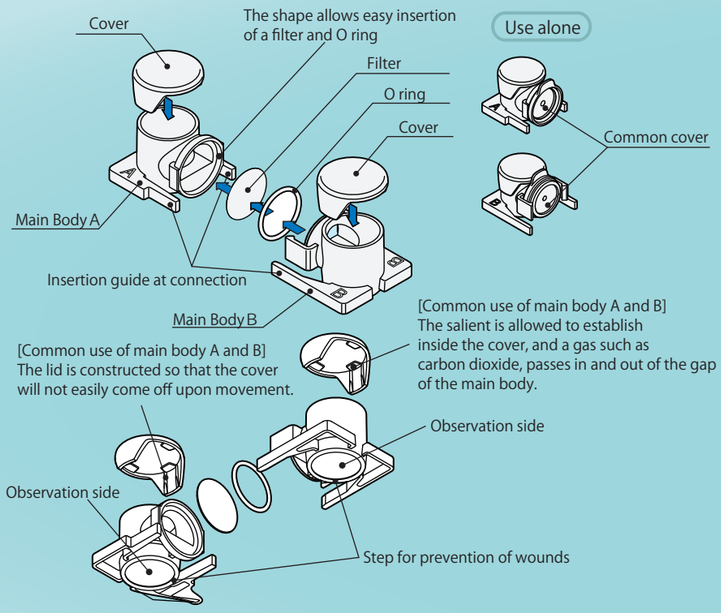




Visualization from both wells/chambers is possible.

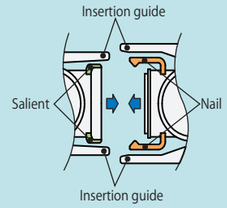
Point of the design

Patent pending

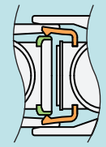


- The main body comprises two parts, A and B, and can use the main body cover with the common cover. The common cover prevents the culture medium from spilling on the simple vessel used outside.
- The observation side assumes a highly precise mirror plane finish so that microscopic observation is not hampered by reflections.
- A convexity of 0.1 mm is provided around the observation side to prevent damage to that side.
- A commercial filter of diameter 13 mm is available.
- Hydrophilic treatment of the in inside base of the main body permits cells to easily adhere.

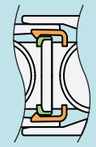
Explanation of the fit structure



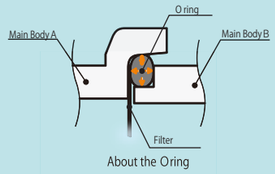
1. The two main body parts are placed onto a flat surface, and the two parts are slid together in the direction of the arrow.



2. When the two parts reach the desired position, steadied by an insertion guide, two orange nails lock in over the green salient.



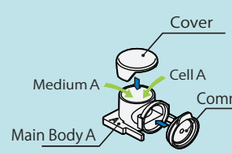
3. The main body stops at the position of the figure. Green salients are always drawn by not making an original shape completely restore two nails. As a result, the clamping between the main bodies is maintained

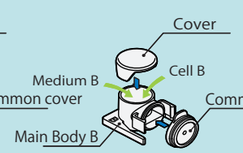


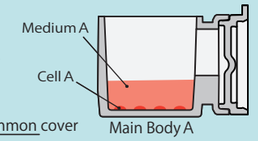
4. Because a depression in the main body A and B maintains adherence of the O ring in all four directions, NICO-1 performs well and prevents a leakage.

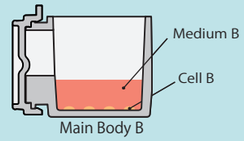
Explanation of the usage

Using as a stand alone device



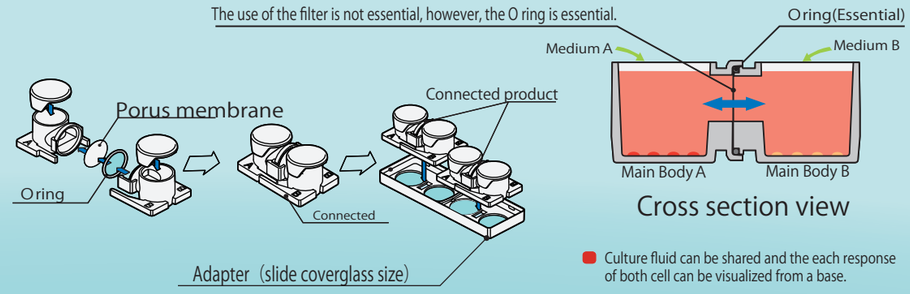






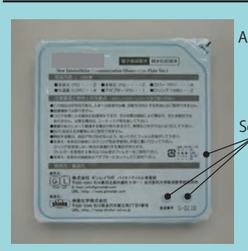
- A cell culture is possible using separate culture conditions and different cells, respectively.

Use for co-culture experiment

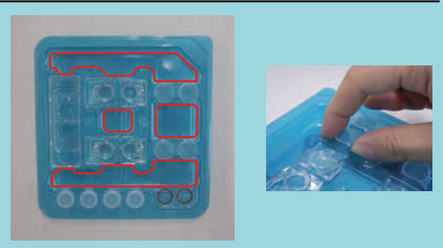


- Culture fluid can be shared and the each response of both cell can be visualized from a base.
- As for the adapter, an existing observation instrument is available for object glass size

Explanation of the package



- A device is provided to partially seal the superior facet film to prevent movement during transportation. Also, the case is shaped to facilitate picking up the O ring.



- Red framing outlines spaces where a finger can be easily inserted to remove each part from the case.

Sales agency

Ginrei Lab Inc.
http://www.ginreilab.com/

Manufacturer

Shinko Chemical Co.,Ltd.
http://www.shinko-ccl.co.jp/