

Application Note

1. Product: Multi Insert Dish

SPL Life Sciences has released the new Multi Insert Dish with five small culture inserts assembled in one single dish. Multi Insert Dish is designed to study intercellular or inter-tissue interactions of more than two different cells or tissue species, successfully applicable to researches in biosystem mimicking in vivo condition. There are three types of dishes available to choose depending on the intended use of the researchers

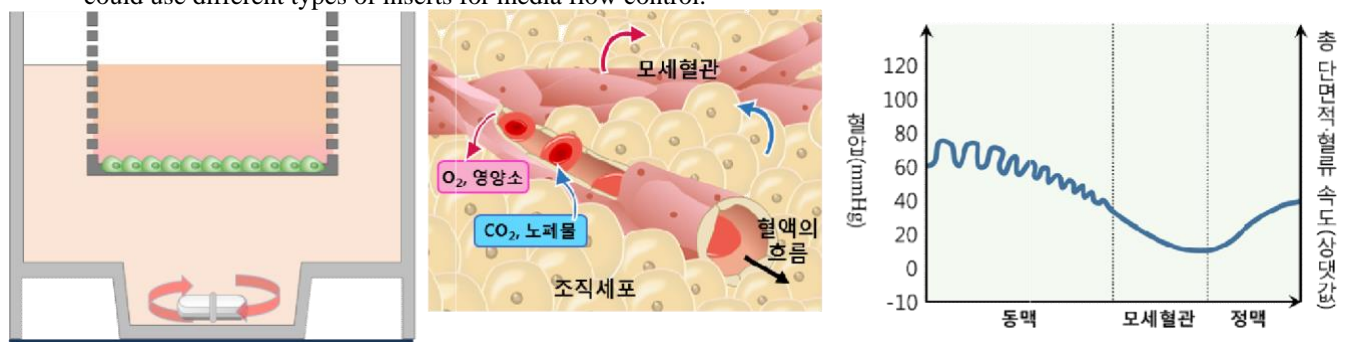


Cat. No.	Insert Material	Dish Style d x h (mm)	Internal Dimension d x h (mm)	Growth Area per insert (cm ²)	Working Volume per dish (ml)	Groove bottom	External Grip	Sterile	Packaging
911605	Nylon	60.00 x 20.00	53.00 x 18.00	1.77	15.00	-	+	+	9/18
911606	PC	60.00 x 20.00	53.00 x 18.00	1.77	15.00	-	+	+	9/18
911607	Nylon	60.00 x 20.00	49.53 x 19.30	1.77	15.00	+	+	+	9/18

2. Application

1) Biomimetic study

: SPL Multi Insert Dish could induce circulation of the medium to provide a similar environment to the body using magnetic stirring in CO₂ incubator. In a dish, the fluidic rate in the insert is adjustable via using different pore size of mesh. SPL Multi Insert Dish is a system that can simulate and analyze mass transfer (oxygen and nutrients) from blood vessel to tissue or mass transfer (carbon dioxide and waste products) from tissue to blood vessel. SPL Multi Insert Dish could use different types of inserts for media flow control.



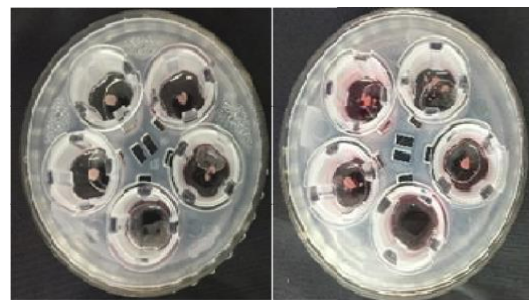
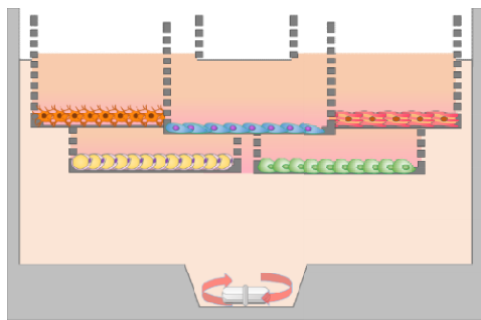
2) Co-culture of several types of cell lines

: Various types of animal cells or spheroids could be cultured in one SPL Multi Insert dish. They could be placed inside or outside of the insert surface and at the bottom of the dish simultaneously. Several kinds of spheroids are cultured in each insert in one SPL Multi Insert dish, so the interaction between animal cells or spheroids could be investigated more compactly. SPL Multi Insert dish is a system that circulates culture medium without mixing cells. Thus, it is easy to analyze cells separately.

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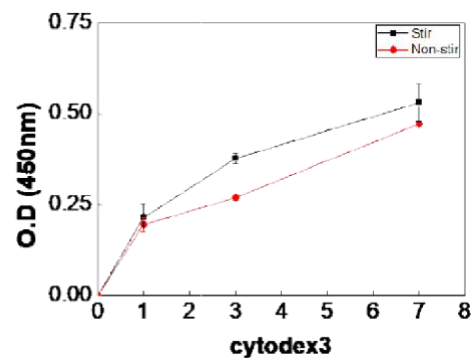
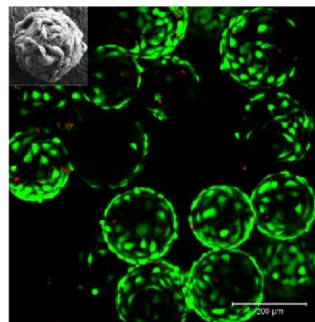
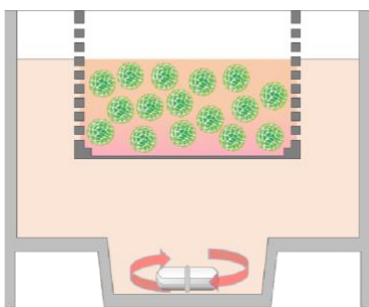


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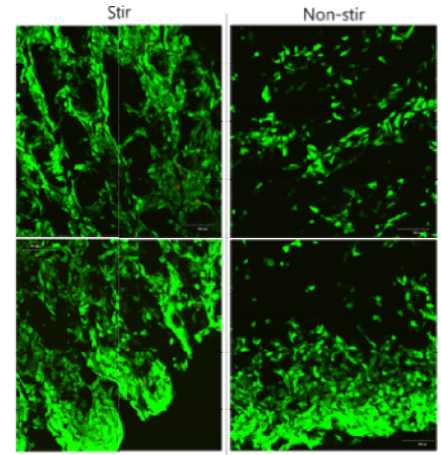
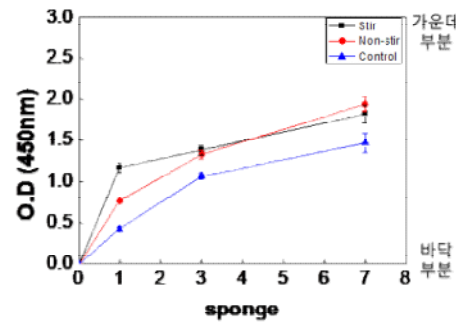
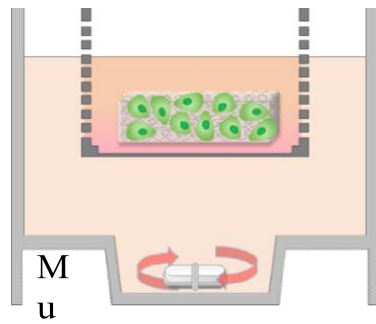


3) 2D or 3D cell culture and cell culture using microcarrier

: SPL Multi Insert Dish could provide a variety of cultivating environments. 2D culture, microcarrier culture, and various forms of 3D culture are possible. Animal cells adhered to the microcarrier were effectively proliferated in SPL Multi Insert Dish (911607). Using SPL Multi Insert Dish, the proliferation could be done more compactly than other traditional culture technique or products. In addition, SPL Multi Insert Dish could produce a 3D structure with a uniform cell distribution when cultured in 3D using porous scaffolds. SPL Multi Insert Dish can be used more homogeneously and biomimetically for 3D tissue culture.



Animal cells adhered to the microcarrier were effectively proliferated in SPL Multi Insert Dish (911607). Using SPL Multi Insert Dish, the culturing is more compactly than other traditional culture technique or products.



SPL Multi Insert Dish could generate three dimensional animal tissue more homogeneously and biomimetically.

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