

# 2024

SPL Life Sciences  
Products Catalogue



*Breakthroughs for a better life*

*Distributed by:*



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CE ISO 9001 ISO 13485

**SPL**  
SPL LIFE SCIENCES



# 2024 Products Catalogue

**Global standard core-technology of SPL Life Sciences is trusted by experts who have been dedicated to humanity and they are striving for a better life and transforming human life through advanced products of SPL Life Sciences.**

### **Pride**

As a leading manufacturer / exporter of laboratory plasticware in Korea, SPL Life Sciences Co., Ltd. has been dedicated to manufacturing high qualified products compliant with finest standards in the scientific field since established in 1987. The company is so proud that it has since known to be a supplier/manufacturer of products meeting requirements for international regulations completely, and with enthusiastic experts who have been putting their efforts into R&D, quality maintenance consistently.

### **State of The Art Products**

A very rich expertise and experience obtained for over the last 3 decades in the field enable our qualified professionals to deliver finest quality products to the customers at the competitive prices. Not only in Korean domestic market, also in global market such as USA, EU, and most of Asian countries, we've got crowning achievement in global business and have made a name for ourselves globally as the leader who quickly and regularly develops and shows off state of the art products applicable to life sciences.

### **Innovative Solutions**

SPL Life Sciences, a company doing level best to meet the customers' needs for up to dated life sciences technology, is committed to providing the innovative solutions in wide range of its filed through aggressive investment for R&D.

**[spllifesciences.com](http://spllifesciences.com)**

#### **SPL Lifesciences Headquarters**

**R&D Center, A Plant, B Plant, C Plant**

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#### **Naejin-ro Plant II - F Plant, K Plant**

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#### **General Product Inquiries**

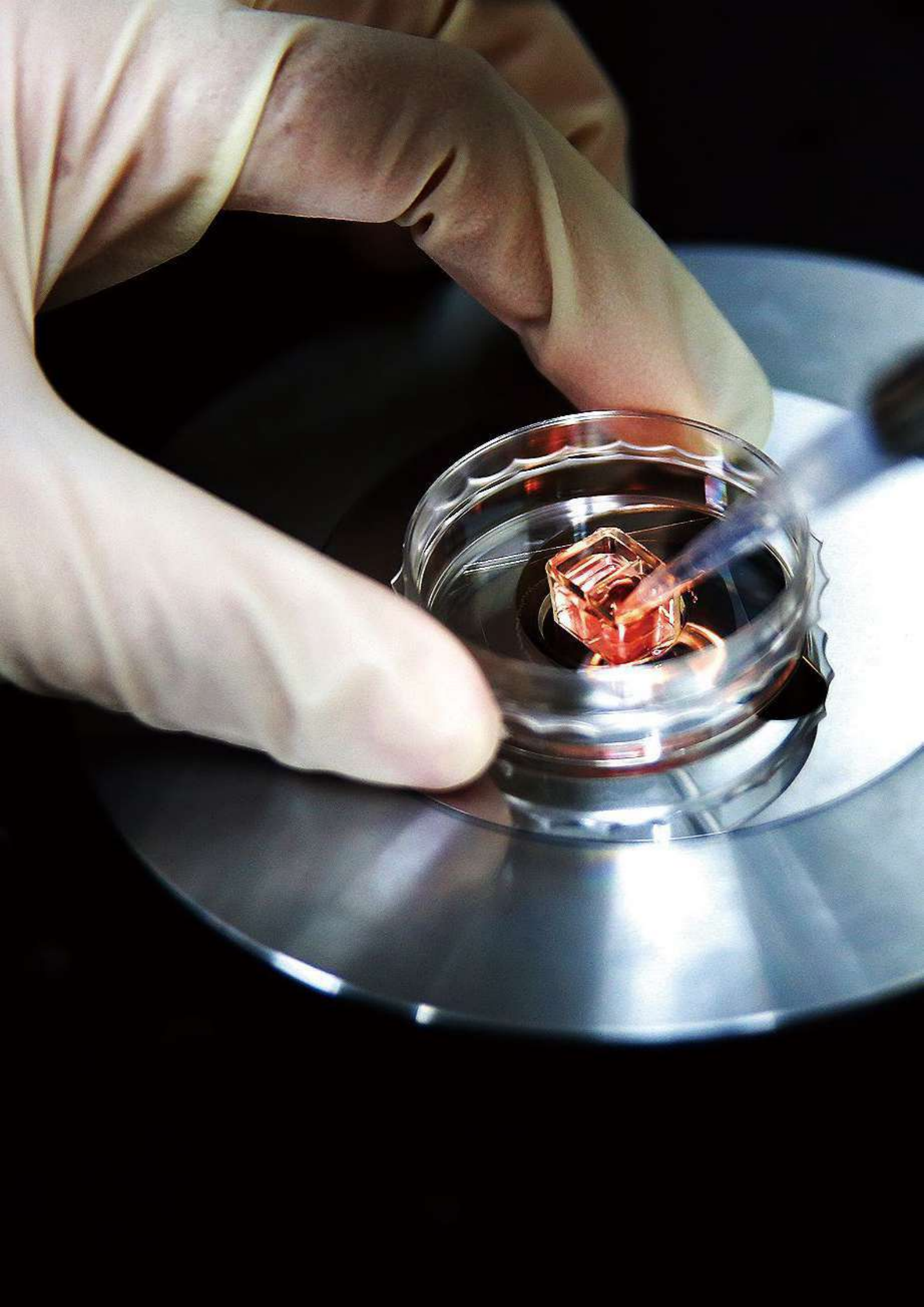
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[business@ispl.co.kr](mailto:business@ispl.co.kr)











#### **Sterility**

The sterility of SPL products is fully validated and qualified to be in compliance with ISO 11137-1 regulatory requirements that includes the routine control of sterilization process. Randomized selection, examination and monitoring ensures the overall process and products, labeled as sterile, are within the predetermined limits with an SAL (Sterility Assurance Level) of  $10^{-6}$ .

#### **Non-cytotoxic**

The cytotoxicity of SPL products is routinely tested according to the principles of the MEM Elution, described by the ISO guidelines.

#### **Non-pyrogenic**

Endotoxin level of SPL products are tested according to the principles of the LAL (Limulus Amoebocyte Lysate) test, described in the FDA guidelines for medical products, and certified to be non-pyrogenic with a documented endotoxin level of less than 0.01 EU / ml.

#### **DNase / RNase-free**

SPL products are routinely tested according to the Standard Operating Procedure of SPL Life Sciences, and certified to be less than  $1 \times 10^{-6}$  Kunitz units for DNase,  $1 \times 10^{-9}$  Kunitz units for RNase.

#### **Human DNA-free**

The human DNA of SPL products are routinely tested according to the Standard Operating Procedure of SPL Life Sciences, and certified to be less than 2 pg for human DNA.

**Want to learn more  
about products of  
SPL Life Sciences used in  
specialized bioprocess?**

**SPL Life Sciences  
provides customized  
bioprocessing services  
to help you get the  
answers you need.**

**We are ready to fulfill  
your unique needs.**

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04 Handling & Storage

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# Cell Culture

For more than a century, cells have provided humanity with deep and fascinating insights into nature. Being a common laboratory technique, cell culture is one of the most critical aspects in biology-related researches and industries.

SPL provides customers with a wide range of high quality cell culture products, including cell culture flasks, cell culture dishes, microplates, cryovials, and other essential accessories.

All SPL products meet the international guidelines including ISO 9001 and USP class VI compliance.

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# Cell Culture

For more than a century, cell culture researches have provided humanity with deep and fascinating insights into nature. Being a common laboratory technique, cell culture is one of the most critical aspects in biology-related researches and industries.

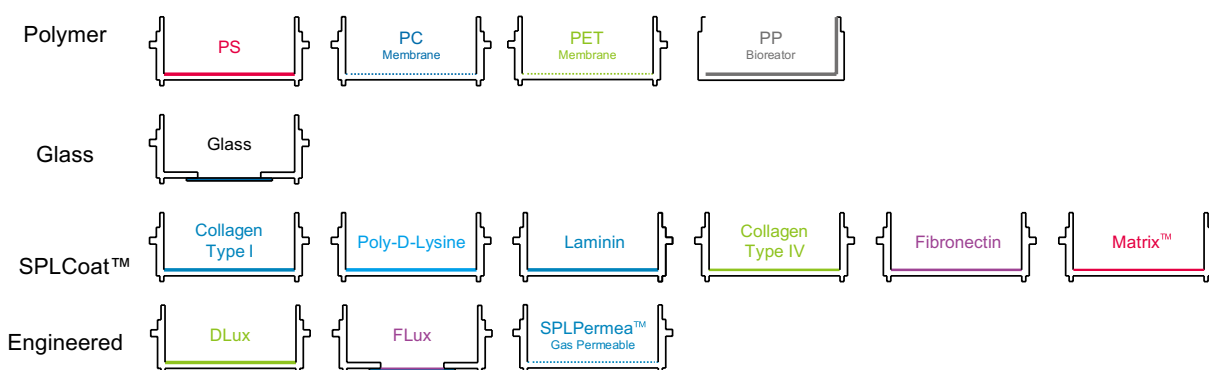
SPL Life Sciences provides customers with a wide range of high quality cell culture products, from basic cell culture vessels to more advanced platforms and accessories.

All SPL cell culture products meet international guidelines and regulations, such as ISO (International Organization for Standardization), ANSI (American National Standard Institute), and USP (United States Pharmacopeia, class VI). Polymer resins used to manufacture all products have followed international guidelines such as CONEG, SARA, Reach EC / 1907 / 2006, RoHS 2015 / 863 / EU. Biological tests (endotoxin, cytotoxicity, DNase / RNase / Human DNA) as well as cell attachment tests are regularly performed for quality control.



	Surface			Materials								
	Cell Culture-Treated	Non-Treated	SPLCoat™	PS	Glass	DLux	FLux	SPLPermea™	PC	PET	PP	Nylon
Cell Culture Ware	•	•	•	•							•	
SPLCoat™			•	•	•							
Cellular Imaging	•	•	•	•	•	•	•					
SPL3D™	•	•										
SPLInsert™	•	•		•					•	•	•	
SPLPermea™		•						•				
SPLScar™						N/A						
<i>in vitro</i> Fertilization	•	•		•				•				
Cryoware						N/A						
SPLFlow™							•					
Accessories						N/A						

## Surfaces & Materials of SPL Life Sciences Cell Culture Products



### Surfaces

SPL Life Sciences offers a great diversity in surface conditions suitable for optimal cell growth. The suitability and efficiency of such treatments are routinely confirmed.

Cell Culture-Treated	Optimal surface that facilitates cell attachment and growth, perfectly got most applications involving adherent cell culture.
Non-Treated	Naturally charged and relatively hydrophobic compared to treated surface, better for suspension cell culture.
SPLCoat™	Uniform coatings of ECM proteins/chemicals that enhance cell attachment, growth and differentiation.

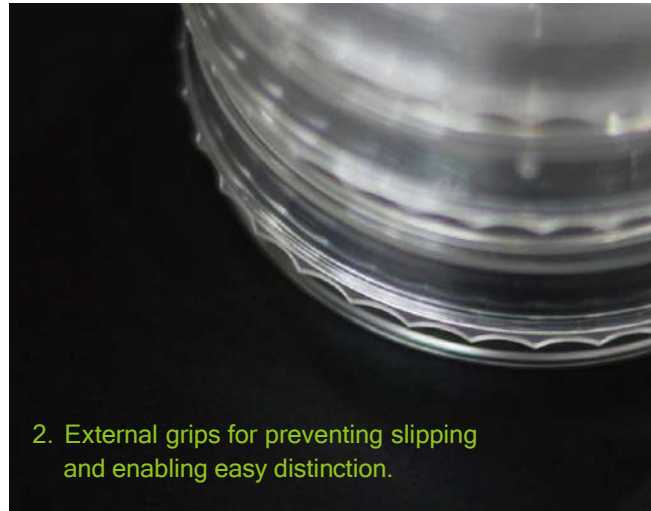
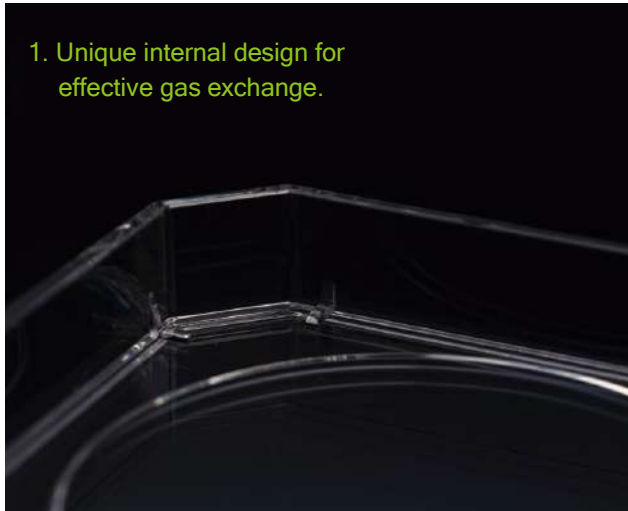
### Materials

Polymer	Polystyrene (PS)	Made of optically clear and transparent polystyrene suitable for observation. Polystyrene is especially useful material option in cell culturewares since it promote cell attachment, and is applicable to all surface treatments.
	Polycarbonate (PC)	Provided in porous membrane that is stain-free, low background interference.
	Polyethylene terephthalate (PET)	Provided in porous membrane that retain high chemical resistance and low protein binding property.
	Polypropylene (PP)	Biocompatible polymer for suspension culture.
Engineered	DLux	Surface modified plastic for enhanced cell attachment, with minimal autofluorescence and high chemical resistance.
	FLux	Surface modified plastic film for enhanced cell attachment, optimal for confocal microscopy.
	SPLPermea™	Engineered gas-permeable film that allows rapid equilibration between partial pressures of oxygen in the atmosphere and the ware.
	Glass	Naturally charged and relatively hydrophobic compared to treated surface.

# Cell Culture

## 1-1. Cell Culturewares

SPL Cell Culturewares are ergonomically designed to maximize safety, efficiency and convenience in cell culture experiments, to meet the demands of all users.



	Surface			Materials				
	Cell Culture-Treated	Non-Treated	SPLCoat™	PS	PP	PC	PET	HDPE
Cell Culture Flask	•	•	•	•				•
Cell Culture Dish	•	•	•	•				
Cell Culture Plate	•	•	•	•				
Square Dish	•			•				
Tray Plate	•			•				
Roller Bottle	•	•		•				•
Erlenmeyer Flask		•			•	•		
Square Bottle		•					•	•
Bioreactor		•			•			•



## Cell Culture Flask

Cell Culture Flasks of SPL Life Sciences are ergonomically designed for easy handling, while achieving minimal contamination during cell culture. Short, wide and angled neck design enables easy access of serological pipettes and cell scrapers. Flasks are divided into 20 types, depending on the culture scale, the cap type and surface treatment cell growth area for T12.5, T25, T75, T175 and T225 are 12.5 cm<sup>2</sup>, 25 cm<sup>2</sup>, 75 cm<sup>2</sup>, 175 cm<sup>2</sup> and 225 cm<sup>2</sup>, respectively. Each flask can be provided with plug or filter caps.

- Ergonomic design to facilitate easy handling and minimize contamination
- Short & wide neck with angled design allows easy access
- Excellent stackability
- Plugs & filter caps are available for all flask models
- Cell growth area ranging from 12.5 cm<sup>2</sup>, 25 cm<sup>2</sup>, 75 cm<sup>2</sup>, 175 cm<sup>2</sup> and 225 cm<sup>2</sup>
- Venting position for 175 cm<sup>2</sup>, 225 cm<sup>2</sup> plug cap model (Cat. No. 72175, 73175, 701225)
- Non-treated models (for suspension culture) are provided with the white caps
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free










































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# Cell Culture



## Cell Culture Flask

Type	Cat. No.	Material (Body / Cap)	Cap Type	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Total Vol. (ml)	Surface Treatment	Sterile	Packaging
<b>Cell Culture Flask 12.5 cm<sup>2</sup></b>									
	 70012	PS / HDPE	Filter	12.50	5.00	25.00	+	+	5 / 200
	 70112	PS / HDPE	Plug	12.50	5.00	25.00	+	+	5 / 200
	 70312	PS / HDPE	Filter	12.50	14.00	25.00	-	+	5 / 200
	 70212	PS / HDPE	Plug	12.50	14.00	25.00	-	+	5 / 200
<b>Cell Culture Flask 25 cm<sup>2</sup></b>									
	 70025	PS / HDPE	Filter	25.00	7.00	60.00	+	+	5 / 200
	 70125	PS / HDPE	Plug	25.00	7.00	60.00	+	+	5 / 200
	 70325	PS / HDPE	Filter	25.00	40.00	60.00	-	+	5 / 200
	 70225	PS / HDPE	Plug	25.00	40.00	60.00	-	+	5 / 200
<b>Cell Culture Flask 75 cm<sup>2</sup></b>									
	 70075	PS / HDPE	Filter	75.00	25.00	250.00	+	+	5 / 100
	 70175	PS / HDPE	Plug	75.00	25.00	250.00	+	+	5 / 100
	 70375	PS / HDPE	Filter	75.00	170.00	250.00	-	+	5 / 100
	 70275	PS / HDPE	Plug	75.00	170.00	250.00	-	+	5 / 100
<b>Cell Culture Flask 175 cm<sup>2</sup></b>									
	 71175	PS / HDPE	Filter	175.00	50.00	650.00	+	+	5 / 40
	 72175	PS / HDPE	Plug	175.00	50.00	650.00	+	+	5 / 40
	 74175	PS / HDPE	Filter	175.00	450.00	650.00	-	+	5 / 40
	 73175	PS / HDPE	Plug	175.00	450.00	650.00	-	+	5 / 40
<b>Cell Culture Flask 225 cm<sup>2</sup></b>									
	 700225	PS / HDPE	Filter	225.00	60.00	850.00	+	+	5 / 25
	 701225	PS / HDPE	Plug	225.00	60.00	850.00	+	+	5 / 25
	 703225	PS / HDPE	Filter	225.00	600.00	850.00	-	+	5 / 25
	 702225	PS / HDPE	Plug	225.00	600.00	850.00	-	+	5 / 25

For surface coated Cell Culture Flasks (SPLCoat™ - Collagen type I & IV, Poly-D-Lysine, Laminin, Fibronectin, Matrix™) see page 30 - 37

## Cell Culture Dish

SPL Life Sciences provides a wide range of Cell Culture Dishes with the highest quality. All of the Cell Culture Dishes are produced with optically clear, high quality polymers for microscopy.

- Unique lid inner design for effective gas exchange
- External grip for better handling (Cat. No. 11035, 11060, 20035, 20060, 20101)
- Excellent stackability
- Compliant with USP guideline (USP class VI tested)
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Cell Culture Dish

Type	Cat. No.	Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	External Grip	Surface Treatment	Sterile	Packaging
	<b>11035</b>	35.00 x 10.00	35.00 x 9.60	9.40	3.00	+	-	+	10 / 500
	<b>11060</b>	60.00 x 15.00	52.80 x 12.80	21.50	5.00	+	-	+	10 / 500
	<b>11090</b>	90.00 x 15.00	85.73 x 12.60	57.50	12.50	-	-	+	10 / 500
	<b>11150</b>	150.00 x 20.00	138.57 x 15.40	148.00	35.00	-	-	+	10 / 120
	<b>11151</b>	150.00 x 25.00	138.57 x 23.30	148.00	35.00	-	-	+	10 / 120
	<b>20035</b>	35.00 x 10.00	35.00 x 9.60	9.40	3.00	+	+	+	10 / 500
	<b>20060</b>	60.00 x 15.00	52.80 x 12.80	21.50	5.00	+	+	+	10 / 500
	<b>20100</b>	90.00 x 20.00	86.26 x 17.70	57.50	12.50	-	+	+	10 / 200
	<b>20101</b>	90.00 x 20.00	87.48 x 16.40	57.50	12.50	+	+	+	10 / 200
	<b>20150</b>	150.00 x 25.00	138.57 x 23.30	148.00	35.00	-	+	+	10 / 120
	<b>20151</b>	150.00 x 20.00	138.57 x 15.40	148.00	35.00	-	+	+	10 / 120

For surface coated Cell Culture Dishes (SPLCoat™ - Collagen type I & IV, Poly-D-Lysine, Laminin, Fibronectin, Matrix™) see page 30 - 37

# Cell Culture

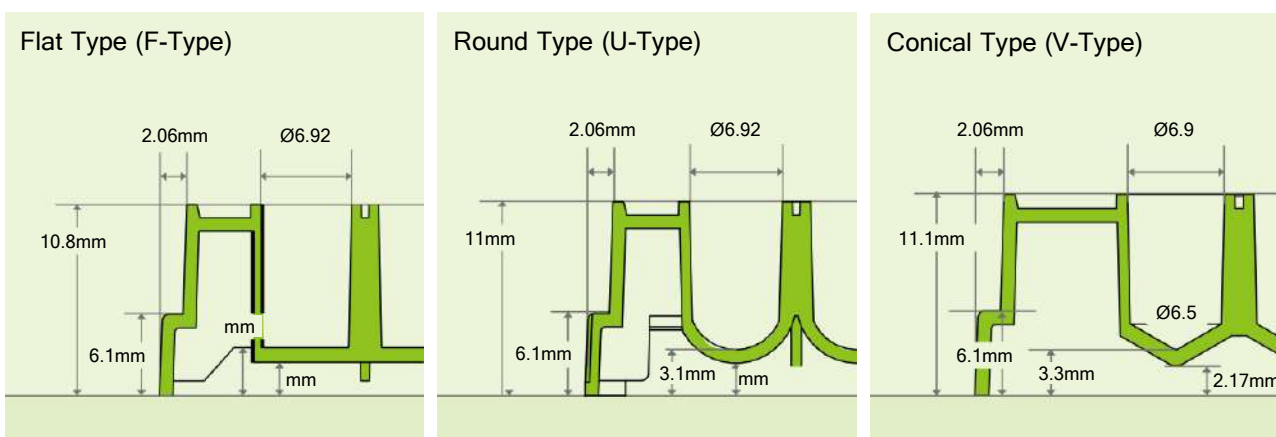
## Cell Culture Plate

Cell Culture Plates are widely used for handling multiple samples in a single experiment during cell culture. SPL Life Sciences provides a wide range of multiwell plates from 6well to 384well plates for cell culture purposes.







- Designed to prevent cross contamination
- Effective gas exchange lid inner design
- Alphanumeric labeling
- Homogeneous cell culture
- 3 bottom types for 96well plates: Flat / Round / Conical
- HTS (High-Throughput Screening) compatible for 96well and 384well plates
- Compliant with USP guideline (USP class VI tested)
- Compliant with ANSI guideline
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



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### Cell Culture Plate

Type	Cat. No.	Material	External Dimensions w x l x h (mm)	Bottom Type	Well Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Surface Treatment	Sterile	Packaging
<b>Cell Culture Plate 6well</b>										
	30006	PS	85.40 x 127.60 x 20.20	Flat	35.00 x 17.50	9.60	3.00	+	+	1 / 50
	31006	PS	85.40 x 127.60 x 20.20	Flat	35.00 x 17.50	9.60	3.00	-	-	1 / 50
	32006	PS	85.40 x 127.60 x 20.20	Flat	35.00 x 17.50	9.60	3.00	-	+	1 / 50
<b>Cell Culture Plate 12well</b>										
	30012	PS	85.40 x 127.60 x 20.20	Flat	21.90 x 17.50	3.80	2.00	+	+	1 / 50
	31012	PS	85.40 x 127.60 x 20.20	Flat	21.90 x 17.50	3.80	2.00	-	-	1 / 50
	32012	PS	85.40 x 127.60 x 20.20	Flat	21.90 x 17.50	3.80	2.00	-	+	1 / 50
<b>Cell Culture Plate 24well</b>										
	30024	PS	85.40 x 127.60 x 20.20	Flat	15.50 x 17.50	1.90	1.00	+	+	1 / 50
	31024	PS	85.40 x 127.60 x 20.20	Flat	15.50 x 17.50	1.90	1.00	-	-	1 / 50
	32024	PS	85.40 x 127.60 x 20.20	Flat	15.50 x 17.50	1.90	1.00	-	+	1 / 50
<b>Cell Culture Plate 48well</b>										
	30048	PS	85.40 x 127.60 x 20.20	Flat	9.75 x 17.50	0.75	0.50	+	+	1 / 50
	31048	PS	85.40 x 127.60 x 20.20	Flat	9.75 x 17.50	0.75	0.50	-	-	1 / 50
	32048	PS	85.40 x 127.60 x 20.20	Flat	9.75 x 17.50	0.75	0.50	-	+	1 / 50
<b>Cell Culture Plate 96well</b>										
	30096	PS	85.40 x 127.60 x 14.40	Flat	6.50 x 10.80	0.33	0.20	+	+	1 / 50
	31096	PS	85.40 x 127.60 x 14.40	Flat	6.50 x 10.80	0.33	0.20	-	-	10 / 100
	32096	PS	85.40 x 127.60 x 14.40	Flat	6.50 x 10.80	0.33	0.20	-	+	1 / 50
	34096	PS	85.40 x 127.60 x 14.40	Round	6.92 x 11.00	0.66	0.20	+	+	1 / 50
	34196	PS	85.40 x 127.60 x 14.40	Round	6.92 x 11.00	0.66	0.20	-	-	10 / 100
	34296	PS	85.40 x 127.60 x 14.40	Round	6.92 x 11.00	0.66	0.20	-	+	1 / 50
	36196	PS	85.40 x 127.60 x 14.40	Conical	6.92 x 11.00	0.38	0.20	-	-	10 / 100
	36296	PS	85.40 x 127.60 x 14.40	Conical	6.92 x 11.00	0.38	0.20	-	+	1 / 50
<b>Cell Culture Plate 384well</b>										
	37384	PS	85.40 x 127.60 x 14.40	Flat	3.00 x 11.50	0.07	0.10	+	+	10 / 40
	38384	PS	85.40 x 127.60 x 14.40	Flat	3.00 x 11.50	0.07	0.10	-	+	10 / 40

For surface coated Cell Culture Plates (SPLCoat™ - Collagen type I & IV, Poly-D-Lysine, Laminin, Fibronectin, Matrix™) see page 30 - 37p



# Cell Culture



## Miniwell Tray

Miniwell Trays are used in a broad spectrum of applications, including cloning experiments, sample incubation, and tissue culture based analytical systems. The crystallization drop is localized centrally as a result of the conical well geometry, and the flat bottom makes for optimal monitoring.

- Terasaki format plate
- Stackable
- Used in serotyping, micro-cytotoxicity and cell cloning studies
- Virgin, high clarity polystyrene (Excellent optical)
- Surface treatment and Sterilized (Cat. No. 30060, 30072)
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Miniwell Tray

Type	Cat. No.	Well Type	Material	External Dimension w x l (mm)	Working vol. (µl)	Surface Treatment	Sterile	Packaging
	<b>30060</b>	60	PS	83.00 x 58.00	10.00	+	+	10 / 100
	<b>31060</b>	60	PS	83.00 x 58.00	10.00	-	-	10 / 100
	<b>30072</b>	72	PS	83.00 x 58.00	10.00	+	+	10 / 100
	<b>31072</b>	72	PS	83.00 x 58.00	10.00	-	-	10 / 100

## Black & White Plate 96well


Black Plates are designed for minimum light scattering and cross-talk during fluorescence assay. White Plates provide maximum reflection and minimum cross-talk for luminescence assay.

- HTS (High-Throughput Screening) compatible
- Suitable for fluorescence and luminescence assay
- Non-treated for suspension culture (Cat. No. 30396, 30496)
- Designed to prevent cross contamination
- Effective gas exchange lid inner design
- Alphanumeric labeling
- Homogeneous cell culture
- Flat bottom
- Compliant with USP guideline (USP class VI tested)
- Compliant with ANSI guideline
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



continued on next page

**Black & White Plate 96well**

Type	Cat. No.	Material	Color	External Dimensions w x l x h (mm)	Well Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Surface Treatment	Sterile	Packaging
	<b>30196</b>	<b>PS</b>	<b>White</b>	<b>85.40 x 127.60 x 14.40</b>	<b>6.50 x 10.80</b>	<b>0.33</b>	<b>0.20</b>	<b>+</b>	<b>+</b>	<b>1 / 50</b>
	<b>30296</b>	<b>PS</b>	<b>Black</b>	<b>85.40 x 127.60 x 14.40</b>	<b>6.50 x 10.80</b>	<b>0.33</b>	<b>0.20</b>	<b>+</b>	<b>+</b>	<b>1 / 50</b>
	<b>30396</b>	<b>PS</b>	<b>White</b>	<b>85.40 x 127.60 x 14.40</b>	<b>6.50 x 10.80</b>	<b>0.33</b>	<b>0.20</b>	<b>-</b>	<b>-</b>	<b>1 / 50</b>
	<b>30496</b>	<b>PS</b>	<b>Black</b>	<b>85.40 x 127.60 x 14.40</b>	<b>6.50 x 10.80</b>	<b>0.33</b>	<b>0.20</b>	<b>-</b>	<b>-</b>	<b>1 / 50</b>

## Square Dish

Square Dishes for cell culture provide gridded surface area for confirming cell location, and are ideal for cell counting.

- Large culture area compared to conventional round cell culture dishes
- Available with grids for counting or confirmation of location
- Optically clear and flat surface for microscopy
- Effective gas exchange lid inner design
- Excellent stackability
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free

**Square Dish**


Type	Cat. No.	Material	External Dimensions w x l x h (mm)	Well Dimensions w x l x h (mm)	Growth Area (cm <sup>2</sup> )	Surface Treatment	Sterile	Packaging
	<b>10125</b>	<b>PS</b>	<b>126.40 x 126.40 x 20.00</b>	<b>118.70 x 118.70 x 11.60</b>	<b>139.00</b>	<b>+</b>	<b>+</b>	<b>5 / 60</b>

## Tray Plate

SPL's Tray Plates provide a larger surface area and easy handling compared to those of conventional round type dishes. The external dimensions of Tray Plates are identical to those of standard SPL Cell Culture Plates for broader applications.

- Optically clear & flat for microscopy
- Effective gas exchange lid inner design
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free

**Tray Plate**

Type	Cat. No.	Material	External Dimensions w x l x h (mm)	Well Dimensions w x l x h (mm)	Growth Area (cm <sup>2</sup> )	Surface Treatment	Sterile	Packaging
	<b>30001</b>	<b>PS</b>	<b>127.94 x 85.50 x 16.25</b>	<b>109.64 x 73.46 x 11.60</b>	<b>80.54</b>	<b>+</b>	<b>+</b>	<b>1 / 50</b>

# Cell Culture

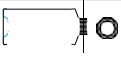
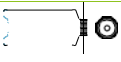
## Roller Bottle

SPL Life Sciences provides Roller Bottles for scale-up culture of cells. Cylindrical vessel structure of the Roller Bottles, combined with constant rotating culture procedure, provides a very economical means for cultivating large numbers of cells with using minimal amount of necessary reagents and labor.

- Prevention of gradient formation through gentle agitation / rotation
- Superior gas exchanging environment for anchorage dependent cells
- Optically clear for microscopy
- Surface treated bottles for anchorage-dependent cell culture (Cat. No. 55085, 55285)
- Non-treated bottles for suspension cell culture (Cat. No. 55185, 55385)
- Non-pyrogenic
- Non-cytotoxic
- Non-Hemolytic
- DNase / RNase-free
- Human DNA-free



### Roller Bottle

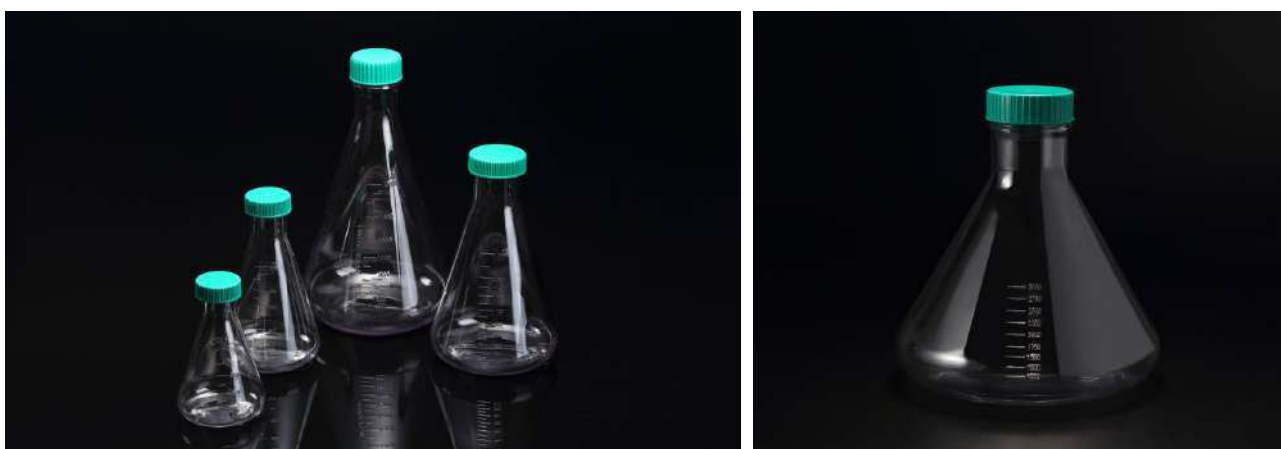
Type	Cat. No.	Material (Body / Cap)	Cap Type	Surface Type	Growth Area (cm <sup>2</sup> )	Surface Treatment	Sterile	Packaging
	<b>55085</b>	PS / HDPE	Plug	Smooth	850.00	+	+	2 / 40
	<b>55185</b>	PS / HDPE	Plug	Smooth	850.00	-	+	2 / 40
	<b>55285</b>	PS / HDPE	Filter	Smooth	850.00	+	+	2 / 40
	<b>55385</b>	PS / HDPE	Filter	Smooth	850.00	-	+	2 / 40












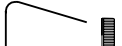


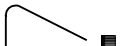


## Erlenmeyer Flask

SPL Life Sciences provides Erlenmeyer Flasks, suitable for animal cell and microbial suspension culture. The flask is designed to allow efficient suspension culture, provided in five different volumes, and are all sterilized before the release.

- Suitable for suspension cultures (animal cells, bacteria, fungi, plant callus, etc.)
- Require shaking apparatus (optimization of cell seeding density and working volume is recommended, depending on the type of cell)
- Plug & filter caps are available for all flask types
- **Non-treated**
- Durable & transparent polycarbonate
- Autoclavable
- Used silicone washer cap for sealing (Cat.No. 73003, 74003)
- **Non-pyrogenic**
- **Non-cytotoxic**
- **DNase / RNase-free**
- **Human DNA-free**



**Erlenmeyer Flask**

Type		Cat. No.	Material (Body / Cap)	Cap Type	Bottom Type	Total Vol. (ml)	Sterile	Packaging
		<b>73250</b>	PC / PP	Plug	Plain	250.00	+	1 / 8
		<b>74250</b>	PC / PP	Filter	Plain	250.00	+	1 / 8
		<b>73500</b>	PC / PP	Plug	Plain	500.00	+	1 / 8
		<b>74500</b>	PC / PP	Filter	Plain	500.00	+	1 / 8
		<b>73000</b>	PC / PP	Plug	Plain	1,000.00	+	1 / 4
		<b>74000</b>	PC / PP	Filter	Plain	1,000.00	+	1 / 4
		<b>73002</b>	PC / PP	Plug	Plain	2,000.00	+	1 / 6
		<b>74002</b>	PC / PP	Filter	Plain	2,000.00	+	1 / 6
		<b>73003</b>	PC / PP	Plug	Plain	3,000.00	+	1 / 4
		<b>74003</b>	PC / PP	Filter	Plain	3,000.00	+	1 / 4

# Cell Culture












## Cell Culture Square Bottle

SPL Life Sciences provides Cell Culture Square Bottles, suitable for animal cell and microbial suspension culture. The shape of the bottle is specially designed to cause turbulent flow of media when physically swirled for more effective solution mixing and oxygen supply. The Square Bottles are provided in four different volumes, which are all sterilized before the release.

- Suitable for suspension cultures (animal cells, bacteria, fungi, plant callus, etc.)
- Require shaking apparatus (optimization of cell seeding density and working volume is recommended, depending on the type of cell)
- The square-shaped bottle is intended to cause turbulent flow like baffled Erlenmeyer Flask
- Plug & filter caps are available for all bottle types
- Non-treated
- Transparent PET
- Non-autoclavable
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



Cell Culture Square Bottle

Type	Cat. No.	Material (Bottle / Cap)	Cap Type	Total Vol.(ml)	Sterile	Packaging
	 <b>51125</b>	PET / HDPE	Plug	125.00	+	1 / 36
	 <b>51126</b>	PET / HDPE	Filter	125.00	+	1 / 36
	 <b>51250</b>	PET / HDPE	Plug	250.00	+	1 / 30
	 <b>51251</b>	PET / HDPE	Filter	250.00	+	1 / 30
	 <b>51500</b>	PET / HDPE	Plug	500.00	+	1 / 15
	 <b>51501</b>	PET / HDPE	Filter	500.00	+	1 / 15
	 <b>51000</b>	PET / HDPE	Plug	1,000.00	+	1 / 8
	 <b>51001</b>	PET / HDPE	Filter	1,000.00	+	1 / 8

## Bioreactor

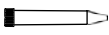
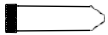
SPL Bioreactors are designed mammalian cells and micro-organism under suspension condition. Tubes are sterilized after complete packaging to eliminate contamination. The air circulation within the reactor can be controlled by the dial on the center of the reactor cap, providing 4 levels of ventilation.

- Four different levels of ventilation (dial type) on the cap
- 0.2  $\mu\text{m}$  Acrylic copolymer filter membrane
- Suitable for suspension culture

- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Bioreactor

Type	Cat. No.	Material (Tube / Cap / Filter / Dial)	Cap Type	Total Vol. (ml)	Surface Treatment	Sterile	Packaging
	<b>51315</b>	PP / HDPE / Acrylic copolymer / PS	Filter	15.00	-	+	3 / 90
	<b>50351</b>	PP / HDPE / Acrylic copolymer / PS	Filter	50.00	-	+	3 / 90

## Cell Culture Module Plate



The Cell Culture Module Plate is designed to be assembled into a desired shape through a combination of 6-well and 24-well insert depending on the purpose of the experiment. Inserts can be observed under a microscope in both attached and detached states of the plate and have the same performance as the existing Cell Culture Plate. It is efficient and economical because various types of cells can be cultured simultaneously on a single plate and harvested by time period

- Designed to prevent cross contamination
- Homogeneous cell culture
- Same well size as the existing Cell Culture Plate (Cat.No. 30006, 30024)

- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Cell Culture Module Plate

Type	Cat. No.	Material	Insert Type	Well Dimension d x h(mm)	Area (cm <sup>2</sup> )	Volume (ml)	Treatment	Sterile	Packaging
	<b>300906</b>	PS	6well	35.00 x 17.40	9.60	2.00	+	+	6 Inserts / Plate 25 Plates / Box
	<b>300924</b>	PS	24well (Long)	15.60 x 17.40	1.90	1.00	+	+	12 Inserts / Plate 25 Plates / Box

# Cell Culture

## 1-2. SPLCoat™





Interactions of cells with surrounding extracellular environment actively regulate cellular functions, including adhesion, migration, differentiation, proliferation, invasion and survival. Extracellular matrix (ECM) proteins, such as collagen and laminin are readily used to promote cellular adhesion growth in *in vitro* cell-based applications.

SPL Life Sciences offers a wide range of ECM protein-coated products to meet individual needs. No washing is required before use and all products are optically clear for microscopy.

#### Collagen Type I :

the most abundant protein in human body in the form of collagen fibers, induces stronger cell binding to the surface

See page 32

#### Poly-D-Lysine (PDL) :

a synthetic form of polymeric amino acid, induces stronger cell binding

See page 33

#### Laminin :

a major protein in basal lamina that is frequently used for stem cell cultures playing critical roles in cell differentiation and migration

See page 34

#### Collagen Type IV :

a type of collagen found primarily in the basal lamina that is a layer of extracellular matrix secreted by the epithelial cells

See page 35

#### Fibronectin :

a high molecular glycoprotein found abundantly in blood and connective tissues





See page 36

#### Matrix™ :

a major protein in Englbreth-Holm-Swarm (EHS) mouse tumor cells that is frequently used for stem cell culture playing critical roles in cell differentiation, angiogenesis and tumorigenesis models

See page 37

### SPLCoat™ Materials

	Cell Culture Flask	Cell Culture Dish	Cell Culture Slide	Cell Culture Plate
				
Collagen Type I	•	•		•
PDL	•	•	•	•
Laminin	•	•		•
Collagen Type IV		•	•	•
Fibronectin	•	•	•	•
Matrix™	•	•		•

# Cell Culture

## Collagen Type I Coated Ware

SPL Life Sciences provides a wide range of high-quality Collagen Type I coated products. All Collagen Type I coated products are produced with optically clear and high quality polymers for microscopy.

- Source: Rat Tail Tendon
- No washing required before use
- Shelf life: 6 months at room temperature



### Flask

Type	Cat. No.	Material (Body / Cap)	Cap Type	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>75025</b>	PS / HDPE	Filter	25.00	7.00	5 / 10
	<b>75125</b>	PS / HDPE	Plug	25.00	7.00	5 / 10
	<b>75075</b>	PS / HDPE	Filter	75.00	25.00	5 / 10

### Dish

Type	Cat. No.	Material	Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	External Grip	Packaging
	<b>21035</b>	PS	35.00 x 10.00	35.00 x 9.60	9.40	3.00	+	5 / 20
	<b>21060</b>	PS	60.00 x 15.00	52.80 x 12.80	21.50	5.00	+	5 / 20
	<b>21100</b>	PS	90.00 x 20.00	86.26 x 17.70	57.50	12.50	-	5 / 10

### Plate

Type	Cat. No.	Material	Plate Type	External Dimensions w x l x h (mm)	Well Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>39006</b>	PS	6well	85.40 x 127.60 x 20.20	35.00 x 17.50	9.60	3.00	1 / 5
	<b>39012</b>	PS	12well	85.40 x 127.60 x 20.20	21.90 x 17.50	3.80	2.00	1 / 5
	<b>39024</b>	PS	24well	85.40 x 127.60 x 20.20	15.50 x 17.50	1.90	1.00	1 / 5
	<b>39048</b>	PS	48well	85.40 x 127.60 x 20.20	9.75 x 17.50	0.75	0.50	1 / 5
	<b>39096</b>	PS	96well	85.40 x 127.60 x 14.40	6.50 x 10.80	0.33	0.20	1 / 5


## Poly-D-Lysine Coated Ware

SPL Life Sciences provides a wide range of high-quality Poly-D-Lysine coated products. All Poly-D-Lysine coated products are produced with optically clear and high quality polymers for microscopy.



- Source: Synthetic
- No washing required before use
- Shelf life: 6 months at room temperature







### Flask

Type	Cat. No.	Material (Body / Cap)	Cap Type	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>76075</b>	PS / HDPE	Filter	75.00	25.00	5 / 10


### Dish

Type	Cat. No.	Material	Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	External Grip	Packaging
	<b>22100</b>	PS	90.00 x 20.00	86.26 x 17.70	57.50	12.50	-	5 / 10
	<b>22150</b>	PS	150.00 x 25.00	140.20 x 23.30	148.00	35.00	-	5 / 5

### Plate

Type	Cat. No.	Material	Plate Type	External Dimensions w x l x h (mm)	Well Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>39206</b>	PS	6well	85.40 x 127.60 x 20.20	35.00 x 17.50	9.60	3.00	1 / 5
	<b>39212</b>	PS	12well	85.40 x 127.60 x 20.20	21.90 x 17.50	3.80	2.00	1 / 5
	<b>39224</b>	PS	24well	85.40 x 127.60 x 20.20	15.50 x 17.50	1.90	1.00	1 / 5
	<b>39296</b>	PS	96well	85.40 x 127.60 x 14.40	6.50 x 10.80	0.33	0.20	1 / 5

### Slide

Type	Cat. No.	Material (Chamber / Slide / Holder)	Chamber Color	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>30308</b>	PS / Glass / PP	Clear	0.98	0.20 - 0.60	6 / 12

# Cell Culture


## Laminin Coated Ware

SPL Life Sciences provides a wide range of high-quality Laminin coated products. All Laminin coated products are produced with optically clear and high quality polymers for microscopy.



- Source: Engelbreth-Holm-Swarm (EHS) mouse tumor
- No washing required before use
- Shelf life: 3 months at refrigerated






### Flask

Type	Cat. No.	Material (Body / Cap)	Cap Type	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>77125</b>	PS / HDPE	Plug	25.00	7.00	5 / 10

### Dish

Type	Cat. No.	Material	Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Area (cm <sup>2</sup> )	Working Vol. (ml)	External Grip	Packaging
	<b>23035</b>	PS	35.00 x 10.00	35.00 x 9.60	9.40	3.00	+	5 / 20
	<b>23100</b>	PS	90.00 x 20.00	86.26 x 17.70	57.50	12.50	-	5 / 10

### Plate

Type	Cat. No.	Material	Plate Type	External Dimensions w x l x h (mm)	Well Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>39312</b>	PS	12well	85.40 x 127.60 x 20.20	21.90 x 17.50	3.80	2.00	1 / 5
	<b>39348</b>	PS	48well	85.40 x 127.60 x 20.20	9.75 x 17.50	0.75	0.50	1 / 5
	<b>39396</b>	PS	96well	85.40 x 127.60 x 14.40	6.50 x 10.80	0.33	0.20	1 / 5



## Collagen Type IV Coated Ware

SPL Life Sciences provides a wide range of Collagen Type IV coated products with high quality. All Collagen Type IV coated products are produced with optically clear and high quality polymers for microscopy.


- Source: Engelbreth-Holm-Swarm (EHS) lathrytic mouse tumor
- No washing required before use
- Shelf life: 3 months at refrigerated




### Flask

Type	Cat. No.	Material (Body / Cap)	Cap Type	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>78025</b>	PS / HDPE	Filter	25.00	7.00	5 / 10
	<b>78075</b>	PS / HDPE	Filter	75.00	25.00	5 / 10

### Dish

Type	Cat. No.	Material	Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	External Grip	Packaging
	<b>24100</b>	PS	90.00 x 20.00	86.26 x 17.70	57.50	12.50	-	5 / 10

### Slide

Type	Cat. No.	Material (Chamber / Slide / Holder)	Chamber Color	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>30608</b>	PS / Glass / PP	Clear	0.98	0.20 - 0.60	6 / 12

# Cell Culture

## Fibronectin Coated Ware

SPL Life Sciences provides a wide range of high-quality Fibronectin coated products. All Fibronectin coated products are produced with optically clear and high quality polymers for microscopy.

- Source: Human plasma
- No washing required before use
- Shelf life: 3 months at refrigerated



### Flask

Type	Cat. No.	Material (Body / Cap)	Cap Type	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>79125</b>	PS / HDPE	Plug	25.00	7.00	5 / 10
	<b>79075</b>	PS / HDPE	Filter	75.00	25.00	5 / 10

### Dish

Type	Cat. No.	Material	Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Area (cm <sup>2</sup> )	Working Vol. (ml)	External Grip	Packaging
	<b>25035</b>	PS	35.00 x 10.00	35.00 x 9.60	9.40	3.00	+	5 / 20
	<b>25100</b>	PS	90.00 x 20.00	86.26 x 17.70	57.50	12.50	-	5 / 10
	<b>25150</b>	PS	150.00 x 25.00	140.20 x 23.30	148.00	35.00	-	5 / 5

### Plate

Type	Cat. No.	Material	Plate Type	External Dimensions w x l x h (mm)	Well Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>39524</b>	PS	24well	85.40 x 127.60 x 20.20	15.50 x 17.50	1.90	1.00	1 / 5
	<b>39596</b>	PS	96well	85.40 x 127.60 x 14.40	6.50 x 10.80	0.33	0.20	1 / 5

### Slide

Type	Cat. No.	Material (Chamber / Slide / Holder)	Chamber Color	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>30704</b>	PS / Glass / PP	Clear	2.13	0.50 - 1.30	6 / 12
	<b>30708</b>	PS / Glass / PP	Clear	0.98	0.20 - 0.60	6 / 12


## Matrix™ Coated Ware

SPL Life Sciences provides a wide range of high-quality Matrix™ coated products. All Matrix™ coated products are produced with optically clear and high quality polymers for microscopy.





- Source Engelbreth-Holm-Swarm (EHS) mouse tumor
- No washing required before use
- Shelf life: 3 months at refrigerated






### Flask

Type	Cat. No.	Material (Body / Cap)	Cap Type	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>710025</b>	PS / HDPE	Filter	25.00	7.00	5 / 10

### Dish

Type	Cat. No.	Material	Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	External Grip	Packaging
	<b>27035</b>	PS	35.00 x 10.00	35.00 x 9.60	9.40	3.00	+	5 / 20
	<b>27060</b>	PS	60.00 x 15.00	52.80 x 12.80	21.50	5.00	+	5 / 20
	<b>27100</b>	PS	90.00 x 20.00	86.26 x 17.70	57.50	12.50	-	5 / 10
	<b>27150</b>	PS	150.00 x 25.00	140.20 x 23.30	148.00	35.00	-	5 / 5

### Plate

Type	Cat. No.	Material	Plate Type	External Dimensions d x h (mm)	Well Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>39606</b>	PS	6well	85.40 x 127.60 x 20.20	35.00 x 17.50	9.60	3.00	1 / 5
	<b>39612</b>	PS	12well	85.40 x 127.60 x 20.20	21.90 x 17.50	3.80	2.00	1 / 5
	<b>39624</b>	PS	24well	85.40 x 127.60 x 20.20	15.50 x 17.50	1.90	1.00	1 / 5

# Cell Culture

## 1-3. Cellular Imaging

SPL Cellular Imaging products are designed to maximize convenience for a broad range of applications, including confocal microscopy, fluorescence microscopy, live cell imaging, and fluorescence-based analysis.

- Efficient light transmission and minimal auto-fluorescence to achieve the most accurate results
- Black colored products are designed to prevent well-to-well light interference for reliable results
- Various bottom types are available for a wide range of applications

	Surfaces			Materials			
	Cell Culture Treated	Non-Treated	SPLCoat™	Glass	DLux	FLux	PS
Black Plate	•	•		•		•	•
Cell Culture Slide	•	•	•	•	•	•	
Cell Culture Slide Hybridwell™	•	•		•	•	•	
Confocal Dish & Plate	•	•				•	

### Detailed information on DLux & FLux – Light Transmission, Autofluorescence, Confocal Images

Fig. 1. Auto-fluorescence at 400 nm SPL vs A Brand

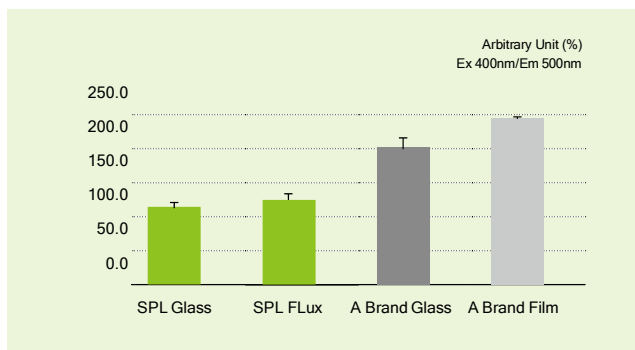


Fig. 2. % Transmittance

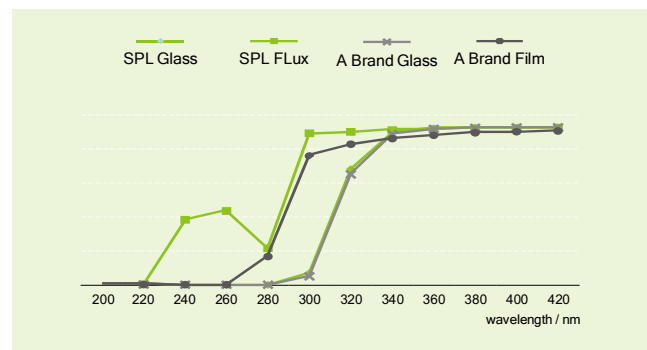


Fig.3. Adhesion of L-929 cells SPL vs A Brand

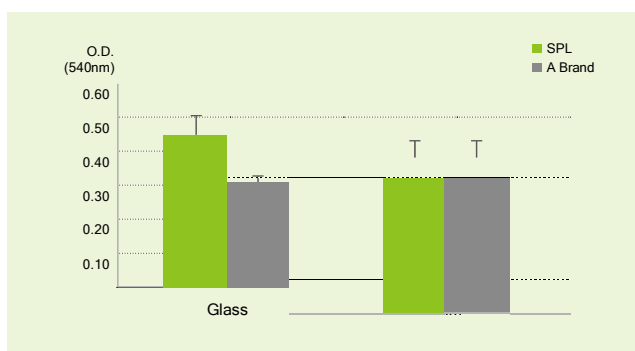
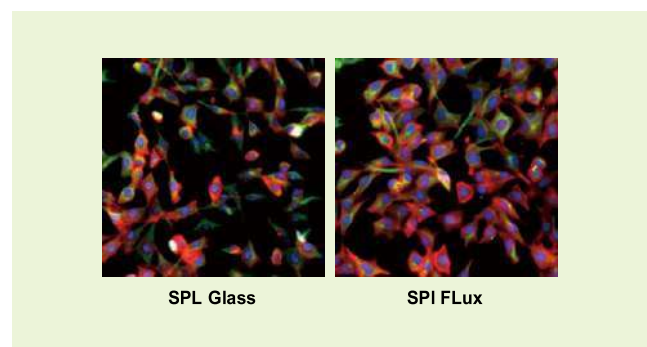


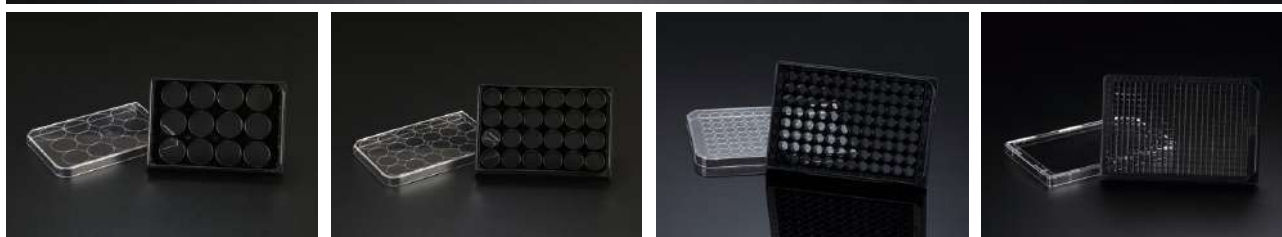
Fig. 4. Fluorescence cellular images on SPL Glass / FLux







## Black Plate

SPL Black Plate has low auto-fluorescence with efficient light blocking ability to obtain the most accurate result in fluorescence experiments. Moreover, microscopic observation can be done simultaneously with fluorescence experiment due to its highly transparent bottom.

- Black wall / Clear bottom
  - Bottom materials: Glass / FLux / PS
  - Designed to prevent cross contamination
  - Effective gas exchange lid inner design
  - Alphanumeric labeling
  - Individual packaging in plastic tray
  - Non-pyrogenic
  - Non-cytotoxic
  - DNase / RNase-free
  - Human DNA-free
- (Cat. No. 33196, 33212, 33224, 33296, 33312, 33324, 332384, 333384)



### Black Plate

Type	Cat. No.	Material (Plate /Bottom)	Bottom Type	External Dimensions w x l x h (mm)	Well Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Total Vol. (ml)	Working Vol. (ml)	Surface Treatment	Sterile	Packaging
<b>12well</b>											
	33212	PS / FLux	Flat	85.40 x 127.60 x 20.20	21.90 x 17.50	3.80	3.00	2.00	+	+	1 / 10
	33312	PS / PS	Flat	85.40 x 127.60 x 20.20	21.90 x 17.50	3.80	3.00	2.00	+	+	1 / 10
<b>24well</b>											
	33224	PS / FLux	Flat	85.40 x 127.60 x 20.20	15.50 x 17.50	1.90	2.00	1.00	+	+	1 / 10
	33324	PS / PS	Flat	85.40 x 127.60 x 20.20	15.50 x 17.50	1.90	2.00	1.00	+	+	1 / 10
<b>96well</b>											
	33196	PS / Glass	Flat	85.40 x 127.60 x 14.40	6.50 x 10.80	0.33	0.30	0.20	-	+	1 / 20
	33296	PS / FLux	Flat	85.40 x 127.60 x 14.40	6.50 x 10.80	0.33	0.30	0.20	+	+	1 / 20
	33396	PS / PS	Flat	85.40 x 127.60 x 14.40	6.50 x 10.80	0.33	0.30	0.20	+	+	5 / 25
<b>384well</b>											
	332384	PS / FLux	Flat	85.40 x 127.60 x 14.40	3.00 x 11.50	0.07	0.20	0.10	+	+	1 / 10
	333384	PS / PS	Flat	85.40 x 127.60 x 14.40	3.00 x 11.50	0.07	0.20	0.10	+	+	1 / 10

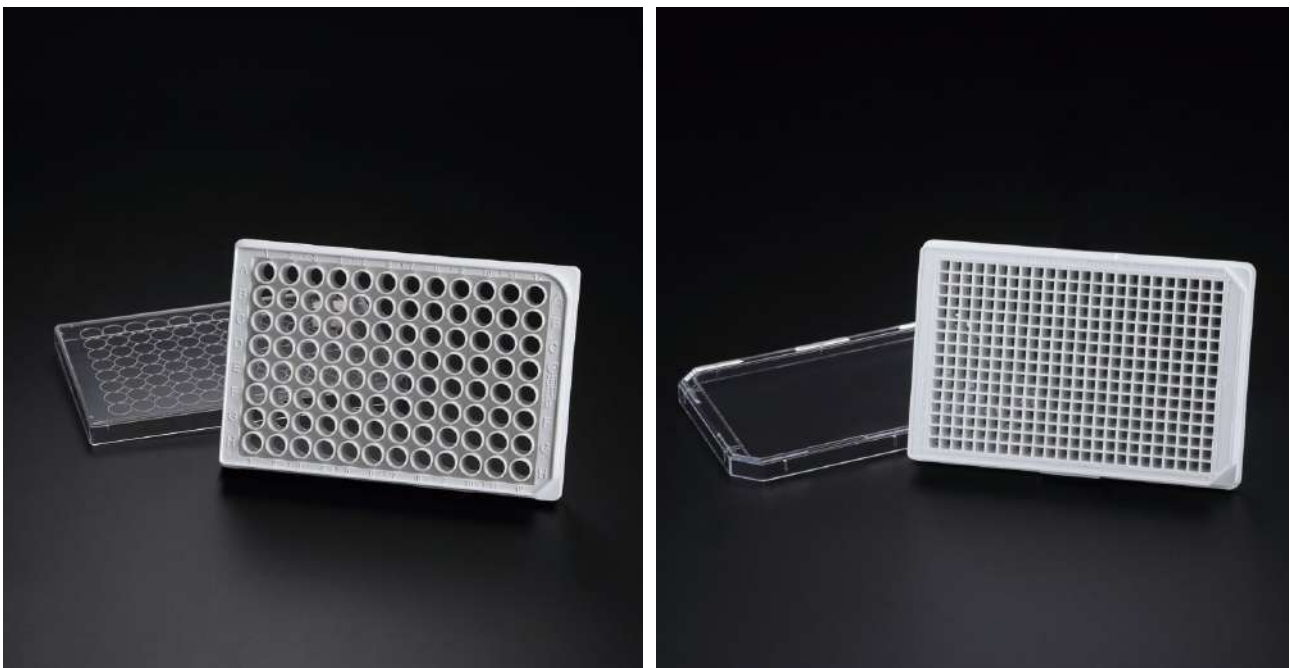


# Cell Culture



## White Plate

SPL White Plate is suitable for obtaining amplified signals in a luminescence assay with high reflection and minimized cross-talk. In addition, the highly transparent bottom provides an optimal environment for microscopic observation at once.

- White wall / Clear bottom
- Bottom materials: Glass / FLux / PS
- Designed to prevent cross contamination
- Effective gas exchange lid inner design
- Effective gas exchange lid inner design
- Alphanumeric labeling
- Individual packaging in plastic tray  
(Cat. No. 33496, 33596, 335384, 336384)
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



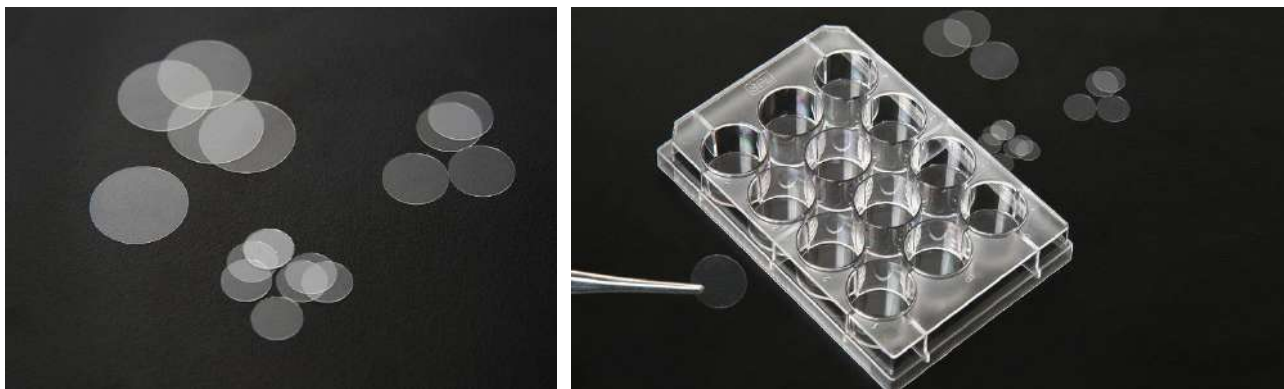
### White Plate

Type	Cat. No.	Material (Plate /Bottom)	Bottom Type	External Dimensions w x l x h (mm)	Well Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Total Vol. (ml)	Working Vol. (ml)	Surface Treatment	Sterile	Packaging
<b>96well</b>											
	33496	PS / Glass	Flat	85.40 x 127.60 x 14.40	6.50 x 10.80	0.33	0.30	0.20	-	+	1 / 10
	33596	PS / FLux	Flat	85.40 x 127.60 x 14.40	6.50 x 10.80	0.33	0.30	0.20	+	+	1 / 10
	33696	PS / PS	Flat	85.40 x 127.60 x 14.40	6.50 x 10.80	0.33	0.30	0.20	+	+	5 / 25
<b>384well</b>											
	335384	PS / FLux	Flat	85.40 x 127.60 x 14.40	3.00 x 11.50	0.07	0.20	0.10	+	+	1 / 10
	336384	PS / PS	Flat	85.40 x 127.60 x 14.40	3.00 x 11.50	0.07	0.20	0.10	+	+	1 / 10

## Coverslip

The material used for SPL Coverslips is FLux film that exhibits superior cell attachment with optimal thickness for high resolution microscopy.

- Resistant to breakage and various solvents
- Suitable for specimen preparation under optical microscopy
- Non-autoclavable
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



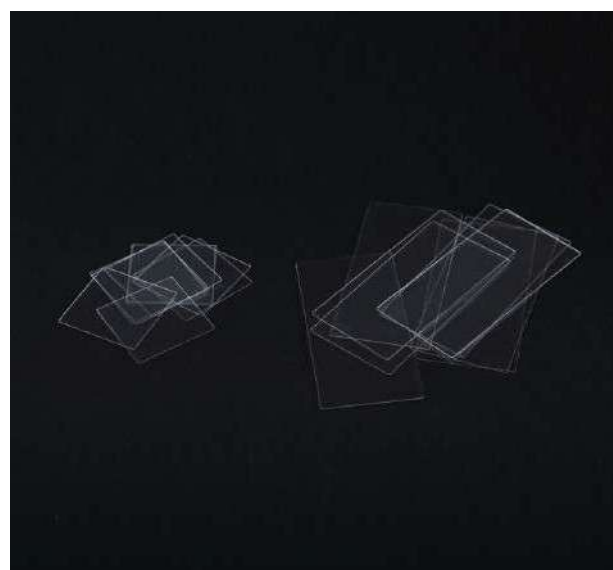
### Coverslip

Type	Cat. No.	Material	Fits into	Dimension (mm)	Sterile	Packaging
○	<b>20009</b>	FLux	48well	9.00	+	100 / 200
○	<b>20012</b>	FLux	24well	12.00	+	100 / 200
○	<b>20018</b>	FLux	12well	18.00	+	100 / 200
○	<b>20025</b>	FLux	6well	25.00	+	50 / 200

## Microscopy Coverslip

Microscopy Coverslip is suitable for microscopic observation, designed as a square or rectangle for convenience in experiments.

- Resistant to breakage and various solvents
- Suitable for cell straining, mounting, embedding
- Non-autoclavable
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Microscopy Coverslip

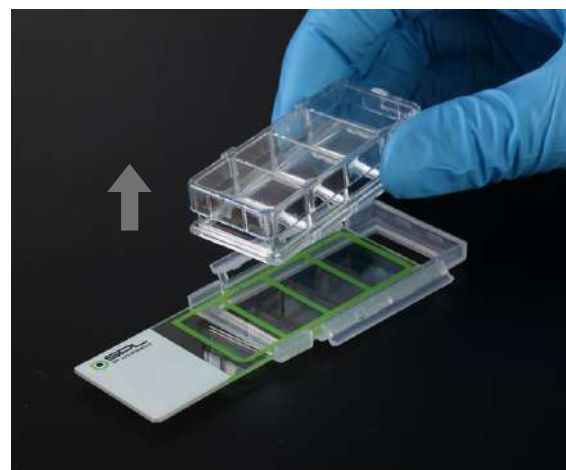
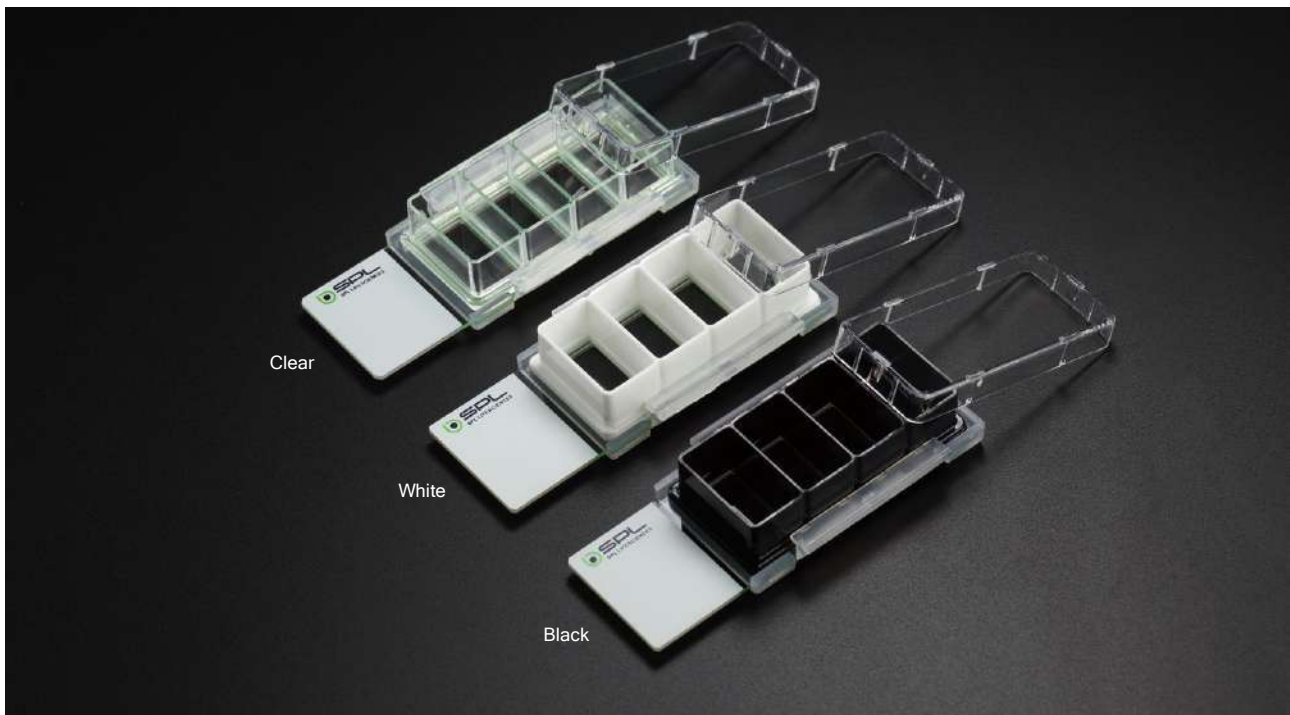
Type	Cat. No.	Material	Dimensions (mm)	Sterile	Packaging
□	<b>20022</b>	FLux	22.00 x 22.00	-	50 / 200
□	<b>20052</b>	FLux	52.00 x 25.00	-	50 / 200

# Cell Culture

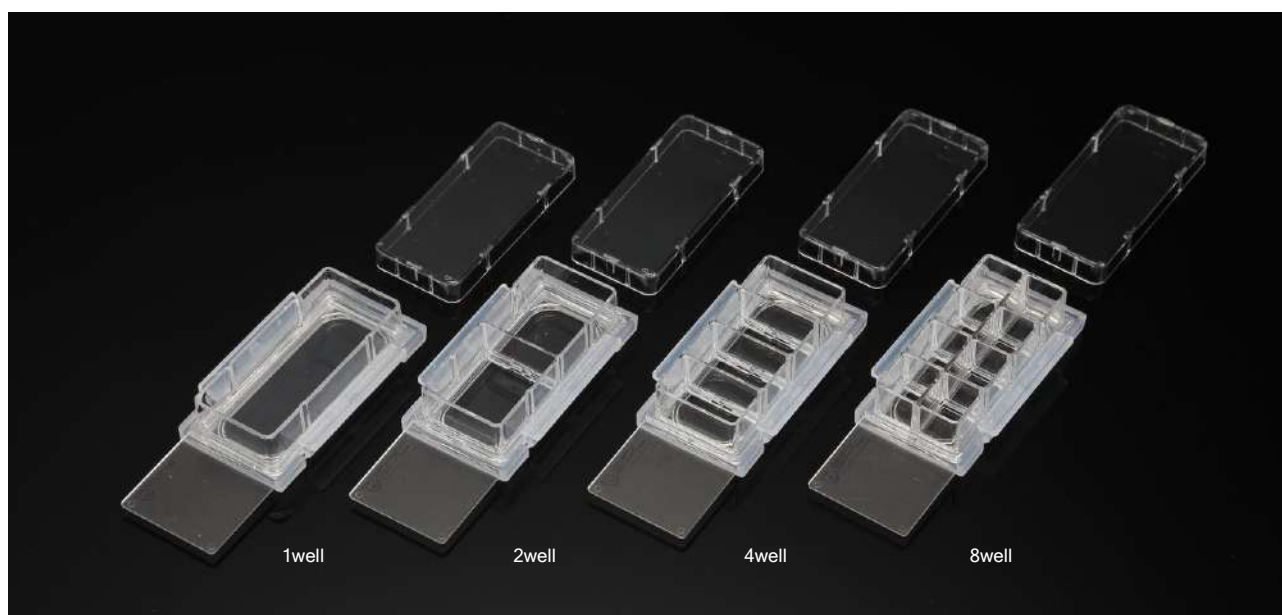
## Cell Culture Slide

SPL's Cell Culture Slides are designed for various cell-based experiments, including but not limited to virus and toxicity tests and immunocytological experiments. Cell Culture Slides provide removable chamber that enables cell growth directly on the microscopic slide, convenient for staining and microscopic examination without cell transfer. Chambers with various well numbers and colors are available for different applications. With new additions of novel culture surfaces (i.e. DLux & FLux), the Cell Culture Slides have been diversified with improved efficacy.

- Convenient for microscopic observation
- Bottom materials: Glass / DLux / FLux (no surface treatment for glass bottom)
- Chamber color: Clear / White / Black
- Easy open flip for chamber & slide disassembly
- No chemical adhesives used
- Designed to prevent cross contamination
- Alphanumeric labeling
- Packing trays can be used as incubation racks in CO<sub>2</sub> incubators
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



continued on next page



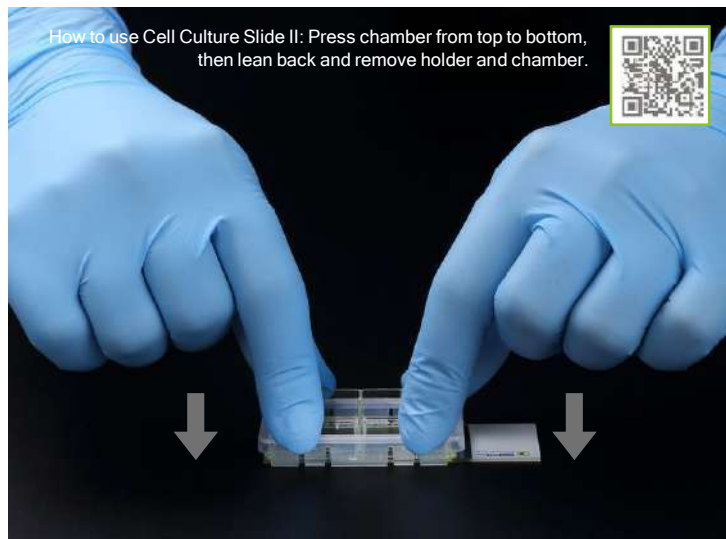
### Cell Culture Slide I

Type	Cat. No.	Material (Chamber / Slide / Holder)	Chamber Color	Growth Area / Well (cm <sup>2</sup> )	Working Vol. / Well (ml)	Surface Treatment	Sterile	Packaging
<b>1well</b>								
	30101	PS / Glass / PP	Clear	9.40	2.50 - 5.50	-	+	6 / 12
	30111	PS / Glass / PP	Black	9.40	2.50 - 5.50	-	+	6 / 12
	30121	PS / Glass / PP	White	9.40	2.50 - 5.50	-	+	6 / 12
	30401	PS / DLux / PP	Clear	9.40	2.50 - 5.50	+	+	6 / 12
	30501	PS / FLux / PP	Clear	9.40	2.50 - 5.50	+	+	6 / 12
<b>2well</b>								
	30102	PS / Glass / PP	Clear	4.55	1.20 - 2.50	-	+	6 / 12
	30112	PS / Glass / PP	Black	4.55	1.20 - 2.50	-	+	6 / 12
	30122	PS / Glass / PP	White	4.55	1.20 - 2.50	-	+	6 / 12
	30402	PS / DLux / PP	Clear	4.55	1.20 - 2.50	+	+	6 / 12
	30502	PS / FLux / PP	Clear	4.55	1.20 - 2.50	+	+	6 / 12
<b>4well</b>								
	30104	PS / Glass / PP	Clear	2.13	0.50 - 1.30	-	+	6 / 12
	30114	PS / Glass / PP	Black	2.13	0.50 - 1.30	-	+	6 / 12
	30124	PS / Glass / PP	White	2.13	0.50 - 1.30	-	+	6 / 12
	30404	PS / DLux / PP	Clear	2.13	0.50 - 1.30	+	+	6 / 12
	30504	PS / FLux / PP	Clear	2.13	0.50 - 1.30	+	+	6 / 12
<b>8well</b>								
	30108	PS / Glass / PP	Clear	0.98	0.20 - 0.60	-	+	6 / 12
	30118	PS / Glass / PP	Black	0.98	0.20 - 0.60	-	+	6 / 12
	30128	PS / Glass / PP	White	0.98	0.20 - 0.60	-	+	6 / 12
	30408	PS / DLux / PP	Clear	0.98	0.20 - 0.60	+	+	6 / 12
	30508	PS / FLux / PP	Clear	0.98	0.20 - 0.60	+	+	6 / 12

For surface coated Cell Culture Slide (SPLCoat™ - Collagen type IV, Poly-D-Lysine, Fibronectin) see page 30 - 37

# Cell Culture

## Cell Culture Slide II



### Cell Culture Slide II

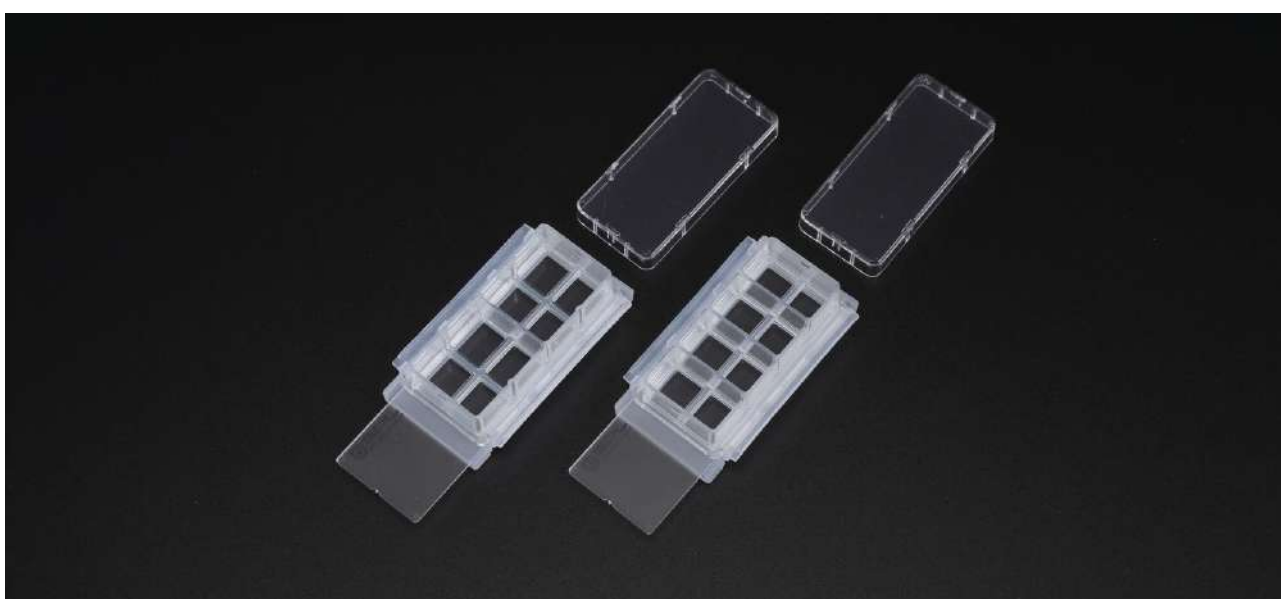
Type	Cat. No.	Material (Chamber / Slide / Holder)	Chamber Color	Growth Area / Well (cm <sup>2</sup> )	Working Vol. / Well (ml)	Surface Treatment	Sterile	Packaging
<b>1well</b>								
	31101	PS / Glass / PP	Clear	9.40	2.50 - 5.50	-	+	6 / 12
	31111	PS / Glass / PP	Black	9.40	2.50 - 5.50	-	+	6 / 12
	31121	PS / Glass / PP	White	9.40	2.50 - 5.50	-	+	6 / 12
	31401	PS / DLux / PP	Clear	9.40	2.50 - 5.50	+	+	6 / 12
	31501	PS / FLux / PP	Clear	9.40	2.50 - 5.50	+	+	6 / 12
<b>2well</b>								
	31102	PS / Glass / PP	Clear	4.55	1.20 - 2.50	-	+	6 / 12
	31112	PS / Glass / PP	Black	4.55	1.20 - 2.50	-	+	6 / 12
	31122	PS / Glass / PP	White	4.55	1.20 - 2.50	-	+	6 / 12
	31402	PS / DLux / PP	Clear	4.55	1.20 - 2.50	+	+	6 / 12
	31502	PS / FLux / PP	Clear	4.55	1.20 - 2.50	+	+	6 / 12
<b>4well</b>								
	31104	PS / Glass / PP	Clear	2.13	0.50 - 1.30	-	+	6 / 12
	31114	PS / Glass / PP	Black	2.13	0.50 - 1.30	-	+	6 / 12
	31124	PS / Glass / PP	White	2.13	0.50 - 1.30	-	+	6 / 12
	31404	PS / DLux / PP	Clear	2.13	0.50 - 1.30	+	+	6 / 12
	31504	PS / FLux / PP	Clear	2.13	0.50 - 1.30	+	+	6 / 12
<b>8well</b>								
	31108	PS / Glass / PP	Clear	0.98	0.20 - 0.60	-	+	6 / 12
	31118	PS / Glass / PP	Black	0.98	0.20 - 0.60	-	+	6 / 12
	31128	PS / Glass / PP	White	0.98	0.20 - 0.60	-	+	6 / 12
	31408	PS / DLux / PP	Clear	0.98	0.20 - 0.60	+	+	6 / 12
	31508	PS / FLux / PP	Clear	0.98	0.20 - 0.60	+	+	6 / 12



## Co Culture Slide

Co Culture Slide is an imaging product that is designed to simplify proceed with the co-culture. Different cell lines are cultivated separately, but the control of the medium volume allows the substances in the medium can be shared with each other. Through co-culture, you can intended for checking signal exchange, chemotaxis, and molecular transport between cell lines.

- Convenient for microscopic observation
- Bottom materials: DLux / FLux
- Easy open flip for chamber & slide disassembly
- No chemical adhesives used
- Packing trays can be used as incubation racks in CO<sub>2</sub> incubators
- Domestic sales only
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Co Culture Slide

Type	Cat. No.	Major well	Minor well (each Major well)	Material (Chamber/Slide/ Holder)	Growth Area (cm <sup>2</sup> )	Major well Working Vol. (ml)	Minor well Working Vol. (ml)	Surface Treatment	Sterile	Packaging
	<b>32402</b>	2	4	PS / DLux / PP	0.98	1.20 - 2.50	0.15	+	+	6 / 12
	<b>32502</b>	2	4	PS / FLux / PP	0.98	1.20 - 2.50	0.15	+	+	6 / 12
	<b>32404</b>	4	2	PS / DLux / PP	0.98	0.50 - 1.30	0.15	+	+	6 / 12
	<b>32504</b>	4	2	PS / FLux / PP	0.98	0.50 - 1.30	0.15	+	+	6 / 12

# Cell Culture

## Cell Culture Slide Hybridwell™

Cell Culture Slide Hybridwell™ is a combination of conventional cell culture flask and single well slide, providing better and safer handling of samples.

- Convenient for microscopic observation
  - Bottom materials: Glass / DLux / FLux (no surface treatment for glass bottom)
  - Chamber color: Clear
  - Easy opening for chamber & slide disassembly
  - No chemical adhesives used
  - Packing trays can be used as incubation racks in CO<sub>2</sub> incubators
- Non-pyrogenic
  - Non-cytotoxic

### Cell Culture Slide Hybridwell™

Type	Cat. No.	Material (Chamber / Slide / Holder)	Chamber Color	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Surface Treatment	Sterile	Packaging
	<b>33101</b>	PS / Glass / PP	Clear	9.00	2.50 - 5.50	-	+	6 / 12
	<b>33201</b>	PS / DLux / PP	Clear	9.00	2.50 - 5.50	+	+	6 / 12
	<b>33301</b>	PS / FLux / PP	Clear	9.00	2.50 - 5.50	+	+	6 / 12

## Confocal Dish & Plate

SPL confocal products allow researchers to acquire high resolution microscopic images of cells in 35 mm culture dishes or 6well plates. Low auto-fluorescence Glass and FLux, ideal for confocal microscopy, phase contrast microscopy, live cell imaging, and micromanipulations, are used.

- Bottom materials: Glass / FLux
  - Dish color: Clear / Black
  - Dish size: 35 Ø
  - 4well Dish: (Cat. No. 104350, 214350)
  - Plate size: 6well Plate (Cat. No. 30106, 30206, 230106, 230206)
  - Hole size: 13 Ø / 20 Ø / 25 Ø
  - Insert Type: Cat. No. 100351
- Non-pyrogenic
  - Non-cytotoxic
  - DNase / RNase-free
  - Human DNA-free



continued on next page



### Confocal Dish & Plate

Type	Cat. No.	Material	Color	External Dimensions (mm)	Internal Dimensions (mm)	Hole	Confocal Region (cm <sup>2</sup> )	Working Vol. (ml)	Surface Treatment	Sterile	Packaging
<b>Confocal Dish</b>											
	<b>100350</b>	PS / Glass	Clear	35.00 x 10.00	34.30 x 9.30	13 Ø	1.33	3.00	-	+	5 / 100
	<b>100351</b>	PS / Glass	Clear	35.00 x 10.00	34.30 x 9.30	-	-	3.00	-	+	10 / 500
	<b>101350</b>	PS / Glass	Clear	35.00 x 10.00	34.30 x 9.30	20 Ø	3.14	3.00	-	+	5 / 100
	<b>102350</b>	PS / Glass	Black	35.00 x 10.00	34.30 x 9.30	13 Ø	1.33	3.00	-	+	5 / 100
	<b>103350</b>	PS / Glass	Black	35.00 x 10.00	34.30 x 9.30	20 Ø	3.14	3.00	-	+	5 / 100
	<b>104350</b>	PS / Glass	Clear	35.00 x 10.00	34.30 x 9.30	25 Ø	0.98	0.6	-	+	5 / 50
	<b>200350</b>	PS / Glass	Clear	35.00 x 10.00	34.30 x 9.30	13 Ø	1.33	3.00	+	+	5 / 50
	<b>210350</b>	PS / FLux	Clear	35.00 x 10.00	34.30 x 9.30	13 Ø	1.33	3.00	+	+	5 / 50
	<b>211350</b>	PS / FLux	Clear	35.00 x 10.00	34.30 x 9.30	20 Ø	3.14	3.00	+	+	5 / 50
	<b>212350</b>	PS / FLux	Black	35.00 x 10.00	34.30 x 9.30	13 Ø	1.33	3.00	+	+	5 / 50
	<b>213350</b>	PS / FLux	Black	35.00 x 10.00	34.30 x 9.30	20 Ø	3.14	3.00	+	+	5 / 50
	<b>214350</b>	PS / Flux	Clear	35.00 x 10.00	34.30 x 9.30	25 Ø	0.98	0.6	+	+	5 / 50
<b>Confocal Plate</b>											
	<b>30106</b>	PS / Glass	Clear	85.40 x 127.60	35.00 / well	13 Ø	1.33	3.00	-	+	1 / 4
	<b>30206</b>	PS / Glass	Clear	85.40 x 127.60	35.00 / well	20 Ø	3.14	3.00	-	+	1 / 4
	<b>230106</b>	PS / FLux	Clear	85.40 x 127.60	35.00 / well	13 Ø	1.33	3.00	+	+	1 / 4
	<b>230206</b>	PS / FLux	Clear	85.40 x 127.60	35.00 / well	20 Ø	3.14	3.00	+	+	1 / 4

# Cell Culture

## 1-4. SPL3D™

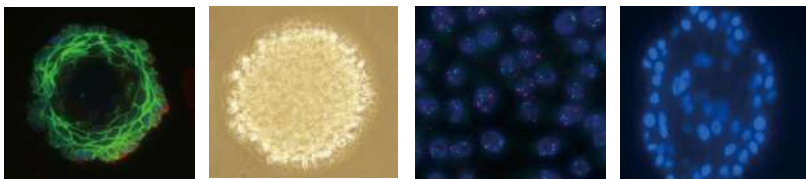


Cells, cultured *in vitro* such as cell culture dish and flask, tend to show significantly different behaviors and reactions, compared to the *in vivo* culture. Therefore, *in vitro* studies most often do not fully correspond to the circumstances occurring around cells in a living organism, limiting deeper perception of cell biology. *In vivo* studies can be actualized through 3D cell culture, which is expected to resemble a closer biological environment.

- Spheroids improve the relevance of *in vitro* results.
- Spheroids serve as biological models of native tissues or engineered solutions.
- Spheroids are used as building blocks to form tissues.
- Spheroids in concert with other aggregated cell shapes allow for complex tissue architecture studies.

	Surfaces			Materials						
	Cell Culture Treated	Non-Treated	Low Binding Treatment	PS	PP	PET	HDPE	PTFE	PC	Nylon
Cell Floater		•	•	•						
Spheroid Forming Unit		•			•	•	•	•		
Spheroid Dish			•	•						
96well Hanging Drop Plate			•	•						
Multi Insert Dish			•	•					•	•

### Cells in 3D culture

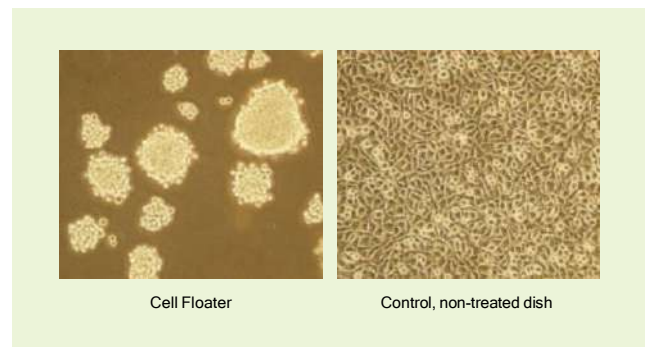
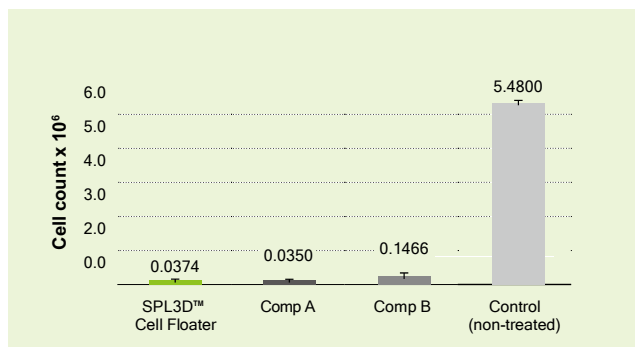


## Cell Floater



SPL3D™ Cell Floater is a culture vessel that provides an optimized environment for 3D cell culture. The culture vessel, which is effective for the formation of spheroids of animal cells, does not require any special incubation techniques, and thus 3D cell culture can easily be implemented in the same way as conventional 2D culture.

### Minimized cell attachment of SPL3D™ Cell Floater






SPL3D™ Cell Floater showed a minimized cell attachment performance similar to that of the competitors.





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**Cell Floater Dish**

Type	Cat. No.	Material	Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	External Grip	Packaging
	<b>26035</b>	PS	35.00 x 10.00	35.00 x 9.60	9.40	3.00	+	10 / 20
	<b>26060</b>	PS	60.00 x 15.00	52.80 x 12.80	21.50	5.00	+	10 / 20
	<b>26100</b>	PS	90.00 x 20.00	86.26 x 17.70	57.50	12.50	-	10 / 10

**Cell Floater Plate**

Type	Cat. No.	Material	Plate Type	External Dimensions w x l x h (mm)	Well Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Packaging
	<b>39706</b>	PS	6well	85.40 x 127.60 x 20.20	35.00 x 17.50	9.60	3.00	1 / 5
	<b>39724</b>	PS	24well	85.40 x 127.60 x 20.20	15.50 x 17.50	1.90	1.00	1 / 5
	<b>39796</b>	PS	96well Flat	85.40 x 127.60 x 14.40	6.50 x 10.80	0.33	0.20	1 / 5
	<b>34896</b>	PS	96well Round	85.40 x 127.60 x 14.40	6.50 x 11.00	0.66	0.20	1 / 5

**Cell Floater Flask**

Type	Cat. No.	Material	Cap Type	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Total Vol. (ml)	Packaging
	<b>711025</b>	PS	Filter	25.00	7.00	60.00	5 / 10
	<b>711075</b>	PS	Filter	75.00	25.00	250.00	1 / 3



# Cell Culture


## Spheroid Forming Unit

Spheroid Forming Unit is designed to allow stationary culture and rotary incubation of cell sheets or aggregates to assist generation of cell spheroids along with hanging drop method.

- Material (Frame): Polypropylene (PP)
- Material (Mesh): Polyethylene terephthalate (PET)
- Nominal membrane thickness: 68  $\mu\text{m}$
- Pore size: 65  $\mu\text{m}$
- Rotary incubation possible



### Spheroid Forming Unit

Type	Cat. No.	Material (Tube / Cap / Filter / Dial / Mesh)	External Dimension d x h (mm)	Total Vol. (ml)	Pore Size ( $\mu\text{m}$ )	Sterile	Packaging
	<b>911604</b>	PC / HDPE / Acrylic copolymer / PP / PET	17.00 x 120.00	15.00	65.00	+	3 / 90

## Spheroid Dish



SPL Spheroid Dish is designed for easy culture and counting the spheroid. Meshes inside the well facilitate identifying and counting the spheroids. After experiment, the spheroids can be easily collected.

- Mesh thickness: 137  $\mu\text{m}$
- Mesh pore size: 200  $\mu\text{m}$
- Non-treated for counting of spheroids (Cat. No. 110350)
- Low Binding treatment for spheroid culture (Cat. No. 111350)



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**Spheroid Dish**


		Material (Dish / Mesh)	Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Working Vol (ml)	Low Binding Treatment		
	<b>110350</b>	PS / PE	35.00 x 10.00	13.00 x 1.00	0.20	-	+	3 / 15
	<b>111350</b>	PS / PE	35.00 x 10.00	25.00 x 1.00	0.80	+	+	3 / 15

## Spheroid Forming Gel

Spheroid Forming Gel effectively helps the development of spheroid and it is suitable for 3D culture. Spheroid Forming Gel has advantages, it is easy to use and collect the cells, and the cells are uniform in size.

- Material: Hyaluronic acid
- Swelling size: 280 µm
- Total weight: 1 g (0.2 g / tube)

**Spheroid Forming Gel**

Type	Cat. No.	Material	Swelling size (µm)	Sterile	Packaging
	<b>99005</b>	Hyaluronic acid	280	+	5 tube / box

# Cell Culture




## 96well Hanging Drop Plate

SPL Life Sciences provides 96well Hanging Drop Plate, suitable for spheroid culture. The shape of the holes is designed to position droplets safely. This shape keeps the droplets of the hanging drop consistent and stable culturing conditions. The reservoir prevents evaporation of the media, allowing for long-term culture. The tube extending into the well plate facilitates collect of spheroids.

- Physiological and non-expensive spheroid culture system
- Suitable for high-throughput screening (HTS)
- Suitable for long-term culture
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



96well Hanging Drop Plate

Type	Cat. No.	Material	External Dimensions w x l (mm)	Hole Depth (mm)	Droplet Vol. (μl)	Plate Type	Sterile	Packaging
	<b>331096</b>	PS	123.60 x 81.40	9.00	30.00	w/o Plate	+	1 / 10
	<b>331196</b>	PS	123.60 x 81.40	9.00	30.00	96well Cell Culture	+	1 / 5
	<b>331296</b>	PS	123.60 x 81.40	9.00	30.00	96well Cell Floater (Flat)	+	1 / 5

## Multi Insert Dish

Multi Insert Dish is designed to study the interactions between different cell populations in a single dish, provided with 3 or 5 small inserts to allow multi-directional signal exchange but not transmigration.



















- Material (Frame / Mesh): Polystyrene (PS) / Nylon
- Nominal membrane thickness: 10 ~ 23 μm
- Pore size: 23 μm
- 5 Inserts (24well size) (Cat. No. 911605, 911606, 911607, 911615, 911617, 911625, 911627)
- 3 Inserts (6well size) (Cat. No. 911107, 911117)
- Non-treated (Cat. No. 911605, 911606, 911607, 911107)
- Surface treated for attachment of cells (Cat. No. 911615, 911617, 911117)
- Low binding treated for spheroid culturing (Cat. No. 911625, 911627)
- Side mesh (Cat. No. 911605, 911615, 911625, 911607, 911617, 911627, 911107, 911117) available for signal exchanges between inserts
- Bottom mesh (Cat. No. 911606) available for signal exchange between inserts and bottom
- Groove bottom for magnetic stirrer positioning (Cat. No. 911607, 911617, 911627, 911107, 911117)



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## Multi Insert Dish

Type	Cat. No.	Insert Material	Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Growth Area Per Insert (cm <sup>2</sup> )	Working Vol. Per Dish (ml)	Groove Bottom	External Grip	Surface Treatment	Low binding Treatment	Sterile	Packaging
	 <b>911605</b>	Nylon	60.00 x 20.00	52.80 x 18.00	1.77	15.00	-	+	-	-	+	9 / 18
	 <b>911606</b>	PC	60.00 x 20.00	52.80 x 18.00	1.77	15.00	-	+	-	-	+	9 / 18
	 <b>911607</b>	Nylon	60.00 x 20.00	49.53 x 19.30	1.77	15.00	+	+	-	-	+	9 / 18
	 <b>911615</b>	Nylon	60.00 x 20.00	52.80 x 18.00	1.77	15.00	-	+	+	-	+	9 / 18
	 <b>911617</b>	Nylon	60.00 x 20.00	49.53 x 19.30	1.77	15.00	+	+	+	-	+	9 / 18
	 <b>911625</b>	Nylon	60.00 x 20.00	52.80 x 18.00	1.77	15.00	-	+	-	+	+	9 / 18
	 <b>911627</b>	Nylon	60.00 x 20.00	49.53 x 19.30	1.77	15.00	+	+	-	+	+	9 / 18
	 <b>911107</b>	Nylon	104.40 x 37.05	100.00 x 34.80	4.52	20.00	+	+	-	-	+	5 / 10
	 <b>911117</b>	Nylon	104.40 x 37.05	100.00 x 34.80	4.52	20.00	+	+	+	-	+	5 / 10

# Cell Culture

## 1-5. SPLInsert™

SPLInsert™ products closely mimic *in vivo* environment, providing improved attachment, growth, and differentiation of various cell types. With their permeable property, inserts are convenient and effective tools for diverse research areas, such as transportation and invasion studies. Specially selected track-etched membranes of three different pore sizes (0.4, 3.0 and 8.0 µm) are used for SPLInsert™ products. Track-etched membranes ensure precise pore size distribution and consistent pore density, providing well-controlled experimental parameters.

	Surfaces		Materials			
	Cell Culture Treated	Non-Treated	PS	PC	PET	Nylon
SPLInsert™ Hanging	•			•	•	
SPLInsert™ Standing	•			•	•	
Co-culture Disk (JLK)	•		•			•



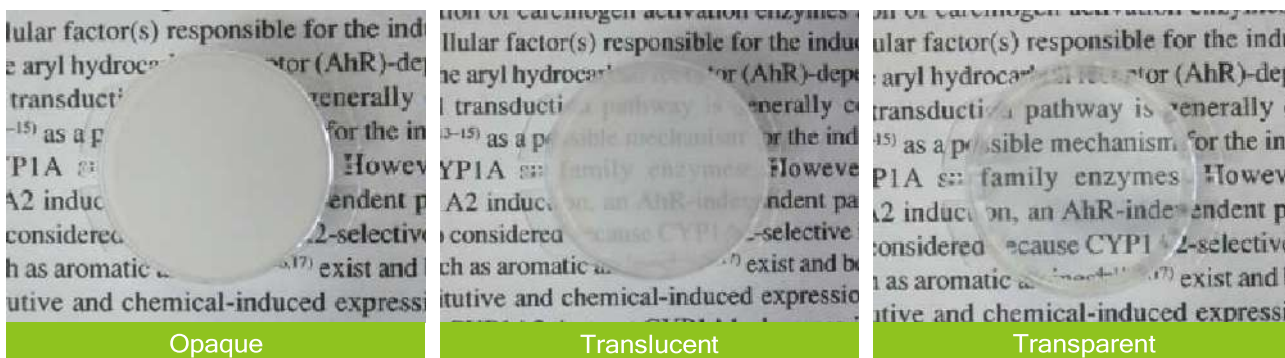
Polycarbonate (PC): stain-free, low background interference

Polyethylene terephthalate (PET): retention of high chemical resistance and low protein binding property

Applicable experiments: invasion, migration, transportation, drug uptake, epithelial polarization, chemotaxis, co-culture, toxicity study, and *in vivo* barrier modeling



## Optical Properties of Membranes



Opaque

Translucent

Transparent


## Co-culture Dish (JLK)

Co-culture Dish (JLK) is designed to study the interactions between two different cell populations in a single dish, provided with an insert mesh to allow bi-directional signal exchange, achieving more *in vivo*-like environment.

- Material (Frame / Mesh): Polystyrene (PS) / Nylon
- Nominal membrane thickness: 10 - 23  $\mu\text{m}$
- Pore size: 23  $\mu\text{m}$
- Packed in cell culture-treated cell culture dishes (Cat. No. 20060, 20100)



Co-culture Dish (JLK)

		Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)		Surface Treatment		
	<b>209260</b>	60.00 x 15.00	52.80 x 12.80	21.50	5.00	+	+	+	10 / 20
	<b>209200</b>	100.00 x 20.00	90.00 x 17.70	57.50	12.50	-	+	+	10 / 20

# Cell Culture

## SPLInsert™ Hanging










SPLInsert™ Hanging keeps a certain distance between the membrane and the well bottom to prevent potential damages during handling, suitable for co-culture and permeability assays.

- Distance from membrane to the bottom of the well:  
6well Insert 1.2 mm, 12well Insert 1.2 mm, 24well Insert 1.3 mm
- Nominal membrane thickness: 10 - 23  $\mu\text{m}$
- Frame material: Polystyrene (Cat. No. 35xxx, 36xxx)  
Polyethylene terephthalate (Cat. No. 37xxx)
- Packed in cell culture-treated cell culture plates
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



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## SPLInsert™ Hanging

Type	Cat. No.	Multiwell Plate Type	Membrane Material	Membrane Pore Size (µm)	Membrane Diameter (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Optical Properties	Sterile	Packaging
	<b>35006</b>	6well	PC	0.40	24.00	4.52	1.50 - 2.50	Opaque	+	6 Inserts / Plate 4 Plates / Box
	<b>35106</b>	6well	PC	3.00	24.00	4.52	1.50 - 2.50	Translucent	+	6 Inserts / Plate 4 Plates / Box
	<b>35206</b>	6well	PC	8.00	24.00	4.52	1.50 - 2.50	Translucent	+	6 Inserts / Plate 4 Plates / Box
	<b>35012</b>	12well	PC	0.40	10.50	0.90	0.40 - 1.00	Opaque	+	12 Inserts / Plate 4 Plates / Box
	<b>35112</b>	12well	PC	3.00	10.50	0.90	0.40 - 1.00	Translucent	+	12 Inserts / Plate 4 Plates / Box
	<b>35212</b>	12well	PC	8.00	10.50	0.90	0.40 - 1.00	Translucent	+	12 Inserts / Plate 4 Plates / Box
	<b>35024</b>	24well	PC	0.40	6.50	0.33	0.20 - 0.35	Opaque	+	12 Inserts / Plate 4 Plates / Box
	<b>35124</b>	24well	PC	3.00	6.50	0.33	0.20 - 0.35	Translucent	+	12 Inserts / Plate 4 Plates / Box
	<b>35224</b>	24well	PC	8.00	6.50	0.33	0.20 - 0.35	Translucent	+	12 Inserts/Plate 4 Plates/Box
	<b>36006</b>	6well	PET	0.40	24.00	4.52	1.50 - 2.50	Opaque	+	6 Inserts / Plate 4 Plates / Box
	<b>36106</b>	6well	PET	3.00	24.00	4.52	1.50 - 2.50	Translucent	+	6 Inserts / Plate 4 Plates / Box
	<b>36206</b>	6well	PET	8.00	24.00	4.52	1.50 - 2.50	Translucent	+	6 Inserts / Plate 4 Plates / Box
	<b>36012</b>	12well	PET	0.40	10.50	0.90	0.40 - 1.00	Opaque	+	12 Inserts / Plate 4 Plates / Box
	<b>36112</b>	12well	PET	3.00	10.50	0.90	0.40 - 1.00	Translucent	+	12 Inserts / Plate 4 Plates / Box
	<b>36212</b>	12well	PET	8.00	10.50	0.90	0.40 - 1.00	Translucent	+	12 Inserts / Plate 4 Plates / Box
	<b>36024</b>	24well	PET	0.40	6.50	0.33	0.20 - 0.35	Opaque	+	12 Inserts / Plate 4 Plates / Box
	<b>36124</b>	24well	PET	3.00	6.50	0.33	0.20 - 0.35	Translucent	+	12 Inserts / Plate 4 Plates / Box
	<b>36224</b>	24well	PET	8.00	6.50	0.33	0.20 - 0.35	Translucent	+	12 Inserts / Plate 4 Plates / Box
	<b>37006</b>	6well	PET	0.40	24.00	4.52	1.50 - 2.50	Transparent	+	6 Inserts / Plate 4 Plates / Box
	<b>37106</b>	6well	PET	3.00	24.00	4.52	1.50 - 2.50	Transparent	+	6 Inserts / Plate 4 Plates / Box
	<b>37206</b>	6well	PET	8.00	24.00	4.52	1.50 - 2.50	Transparent	+	6 Inserts / Plate 4 Plates / Box
	<b>37012</b>	12well	PET	0.40	10.50	0.90	0.40 - 1.00	Transparent	+	12 Inserts / Plate 4 Plates / Box
	<b>37112</b>	12well	PET	3.00	10.50	0.90	0.40 - 1.00	Transparent	+	12 Inserts / Plate 4 Plates / Box
	<b>37212</b>	12well	PET	8.00	10.50	0.90	0.40 - 1.00	Transparent	+	12 Inserts / Plate 4 Plates / Box
	<b>37024</b>	24well	PET	0.40	6.50	0.33	0.20 - 0.35	Transparent	+	12 Inserts / Plate 4 Plates / Box
	<b>37124</b>	24well	PET	3.00	6.50	0.33	0.20 - 0.35	Transparent	+	12 Inserts / Plate 4 Plates / Box
	<b>37224</b>	24well	PET	8.00	6.50	0.33	0.20 - 0.35	Transparent	+	12 Inserts / Plate 4 Plates / Box

# Cell Culture

## SPLInsert™ Standing

SPLInsert™ Standing is widely used for cell culture, for instance skin layer culture. The insert can be removed and transferred to other place for additional cell culture.

- Distance from membrane to the bottom of the well: 6well Insert 0.91 mm, 24well Insert 0.85 mm
- Nominal membrane thickness: 10 - 23  $\mu\text{m}$
- Frame material: Polystyrene (Cat. No. 35xxx, 36xxx)  
Polyethylene terephthalate (Cat. No. 37xxx)
- Packed in cell culture-treated cell culture plates
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



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**SPLInsert™ Standing**

Type	Cat. No.	Multiwell Plate Type	Membrane Material	Membrane Pore Size (µm)	Membrane Diameter (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	Optical Properties	Sterile	Packaging
	<b>35306</b>	6well	PC	0.40	22.74	4.06	2.00 - 6.00	Opaque	+	6 Inserts / Plate 4 Plates / Box
	<b>35406</b>	6well	PC	3.00	22.74	4.06	2.00 - 6.00	Translucent	+	6 Inserts / Plate 4 Plates / Box
	<b>35506</b>	6well	PC	8.00	22.74	4.06	2.00 - 6.00	Translucent	+	6 Inserts / Plate 4 Plates / Box
	<b>35324</b>	24well	PC	0.40	8.75	0.60	0.20 - 0.60	Opaque	+	12 Inserts / Plate 4 Plates / Box
	<b>35424</b>	24well	PC	3.00	8.75	0.60	0.20 - 0.60	Translucent	+	12 Inserts/Plate 4 Plates/Box
	<b>35524</b>	24well	PC	8.00	8.75	0.60	0.20 - 0.60	Translucent	+	12 Inserts / Plate 4 Plates / Box
	<b>36306</b>	6well	PET	0.40	22.74	4.06	2.00 - 6.00	Opaque	+	6 Inserts / Plate 4 Plates / Box
	<b>36406</b>	6well	PET	3.00	22.74	4.06	2.00 - 6.00	Translucent	+	6 Inserts / Plate 4 Plates / Box
	<b>36506</b>	6well	PET	8.00	22.74	4.06	2.00 - 6.00	Translucent	+	6 Inserts / Plate 4 Plates / Box
	<b>36324</b>	24well	PET	0.40	8.75	0.60	0.20 - 0.60	Opaque	+	12 Inserts / Plate 4 Plates / Box
	<b>36424</b>	24well	PET	3.00	8.75	0.60	0.20 - 0.60	Translucent	+	12 Inserts / Plate 4 Plates / Box
	<b>36524</b>	24well	PET	8.00	8.75	0.60	0.20 - 0.60	Translucent	+	12 Inserts / Plate 4 Plates / Box
	<b>37306</b>	6well	PET	0.40	22.74	4.06	2.00 - 6.00	Transparent	+	6 Inserts / Plate 4 Plates / Box
	<b>37406</b>	6well	PET	3.00	22.74	4.06	2.00 - 6.00	Transparent	+	6 Inserts / Plate 4 Plates / Box
	<b>37506</b>	6well	PET	8.00	22.74	4.06	2.00 - 6.00	Transparent	+	6 Inserts / Plate 4 Plates / Box
	<b>37324</b>	24well	PET	0.40	8.75	0.60	0.20 - 0.60	Transparent	+	12 Inserts / Plate 4 Plates / Box
	<b>37424</b>	24well	PET	3.00	8.75	0.60	0.20 - 0.60	Transparent	+	12 Inserts / Plate 4 Plates / Box
	<b>37524</b>	24well	PET	8.00	8.75	0.60	0.20 - 0.60	Transparent	+	12 Inserts / Plate 4 Plates / Box



# Cell Culture

## 1-6. SPLPermea™

SPL Life Sciences offers a next generation of culture ware made of high gas permeable material to meet the customer's needs.

In cell / tissue engineering research, flat plastic culturewares are commonly used for two-dimensional cell cultures. However, cell cultures on non-gas-permeable plastic culture wares and absence of medium flow may cause rapid exhaustion of dissolved oxygen and accumulation of carbon dioxide, giving extremely harmful stress to the cells. To overcome these issues, special containers utilizing gas permeable membrane were developed.

Gas-permeable membrane of culture ware allows rapid equilibration between partial pressures of oxygen in the atmosphere and those at the pericellular level. Because the diffusion gradients across gas permeable membranes are not steep, dissolved oxygen in culture wares is slightly less than atmospheric oxygen, while respired carbon dioxide rapidly diffuses away from the cells, preventing a drop in pH.


## SPLPermea™ Dish

SPLPermea™ Dish, made of gas-permeable film with superior strength and clarity, ensures optimal gas exchange for effective cell culture. Due to its low water permeability, the culture medium is maintained for a long time without leakage or evaporation, while its conventional dish-type structure prevents ambient contamination. The SPLPermea™ Dish has low auto-fluorescence with high light transmission to enable applications in imaging and micro-reading.

- Gas-permeability tested (CO<sub>2</sub>, O<sub>2</sub>)
  - Leakage and evaporation tested
  - Transparent for microscopic observation and imaging
  - Low auto-fluorescence
  - High light transmission
  - Ergonomic design for easy handling and minimal contamination
- Non-pyrogenic
  - Non-cytotoxic
  - DNase / RNase-free
  - Human DNA-free



### SPLPermea™ Dish

Type	Cat.No.	Material	Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (ml)	External Grip	Surface Treatment	Sterile	Packaging
	200235	PS / Permea™ Film	44.88 x 12.65	35.12 x 11.20	9.40	3.00	+	-	+	5 / 50

## SPLPermea™ Bag

The SPLPermea™ Bag made of the highest quality USP Class VI materials is a simple-to-use and single use device for cell culture. The unique design allows access to the culture in a closed system environment which reduces the possibility of contamination when compared to that of standard culturewares. The superior permeability to oxygen and carbon dioxide helps to maintain cell viability for a long time and improve cell expansion without the need for changing culture vessel. Additionally, water permeability is very low, so water loss is minimal. This next generation of cell culture bags can be used with greater fill volumes than classical standard cell culture devices, having minimal storage and disposal space in CO<sub>2</sub> incubator.

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- Transparent for microscopic observation
- Compliant with USP guideline (USP class VI tested)
- Gas-permeability tested (CO<sub>2</sub>, O<sub>2</sub>)
- Leakage tested
- Manufactured from gas permeable polyethylene
- Individually packed
- Cap and needle-free valve with silicon septum

- Ergonomic design to facilitate easy handling and minimize contamination
- Cell growth area ranging from 110.5 ~ 325 cm<sup>2</sup>
- Available in 3 different culture volumes
- Culture bag racks are available (for 250 ml size of bag)

• Non-pyrogenic

• Non-cytotoxic

• DNase / RNase-free

• Human DNA-free



#### SPLPermea™ Bag

Type	Cat. No.	Material	Dimensions w x l (mm)	Working Vol. (ml)	Sterile	Packaging
	<b>200110</b>	Permea™ Film	162.00 x 115.00	100.00	+	15
	<b>200125</b>	Permea™ Film	223.00 x 146.00	250.00	+	10
	<b>200150</b>	Permea™ Film	254.00 x 154.00	500.00	+	5

## SPLPermea™ Rack

SPLPermea™ Racks are useful for handling and storing of 250 ml SPLPermea™ bag.

- For handling and storing of SPLPermea™ Bag
- Colors: Natural



#### SPLPermea™ Rack

Type	Cat.No.	Material	Dimensions w x l (mm)	Sterile	Packaging
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# Cell Culture



200425

PP

234.99 x 155.84

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## 1-7. SPLScar™

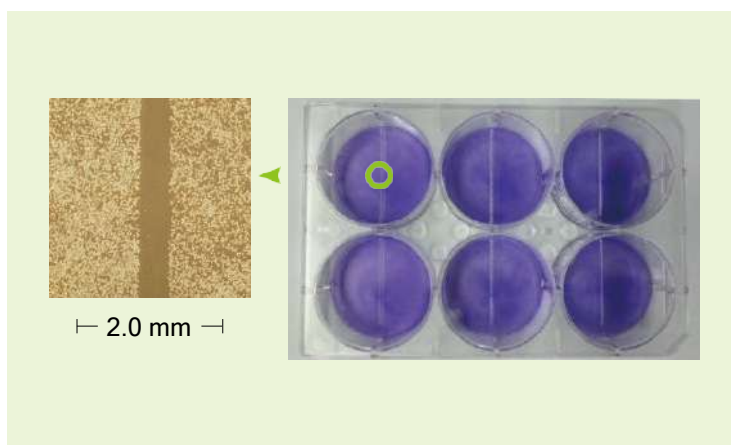
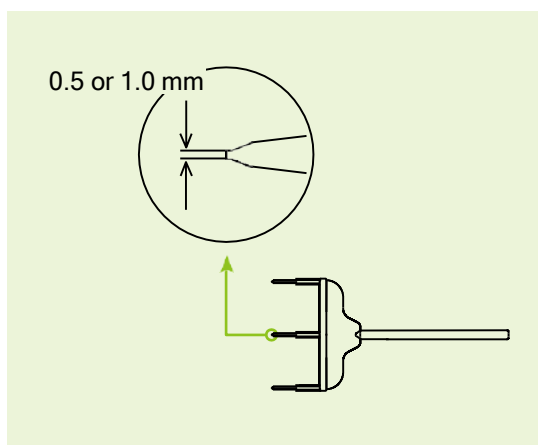
SPLScar™ Products are designed for a wide range of cell studies, including cell migration, wound healing, and cancer metastasis, providing highly uniform and reproducible conditions to enhance the quality of your experiment.











### SPLScar™ Scratcher

SPLScar™ Scratcher ensures the uniformity and reproducibility of the possible products used in cancer metastasis, wound healing, and cell migration research. SPLScar™ Scratcher consists of a lid with identical holes and a scratcher, suitable for use in 6well or 24well configurations

- Scratcher tip width: 0.5 mm or 1.0 mm → allowing a full view of the wound width in a single frame under high-magnifications
- 1 scratcher tip & 1 line lid / pack
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



#### SPLScar™ Scratcher

Type	Cat. No.	Lid Type	Material (Scratcher / Lid)	Tip Width (mm)	Sterile	Packaging
 	<b>201906</b>	6well	HDPE / PS	0.50	+	1 / 20
 	<b>201924</b>	24well	HDPE / PS	0.50	+	1 / 20
 	<b>201907</b>	6well	HDPE / PS	1.00	+	1 / 20
 	<b>201925</b>	24well	HDPE / PS	1.00	+	1 / 20

# Cell Culture




## SPLScar™ Block

SPLScar™ Block is easily attachable to surface, and thus is applicable to a variety of products for studying cell migration, wound healing, and metastasis of cancer cell. Block is composed of 500 µm-thick-wall to artificially generate cell free gap(s), ensuring higher uniformity and reproducibility.

- Cell Culture Dish (Cat. No. 201935, 201938)
  - Confocal Dish (Cat. No. 201936, 201939 - Glass / Cat.No. 201937, 201930 - FLux)
  - Confocal Plate (Cat. No. 201916)
  - Cell Culture Slide (Cat. No. 201904 - Glass / Cat. No. 201914 - DLux / Cat. No. 201934 - FLux)
  - Individual packaged (Cat. No. 201902 - 2well / Cat. No. 201903 - 3well)
- Non-pyrogenic
  - Non-cytotoxic
  - DNase / RNase-free
  - Human DNA-free



### SPLScar™ Block

Type	Cat. No.	Product Type	Bottom Type	Size	Block Well Type	Surface Treatment	Sterile	Packaging
	<b>201935</b>	Cell Culture Dish	PS	35 Ø	2	+	+	1 / dish, total 30
	<b>201938</b>	Cell Culture Dish	PS	35 Ø	3	+	+	1 / dish, total 30
	<b>201936</b>	Confocal Dish	Glass	35 Ø	2	+	+	1 / dish, total 30
	<b>201937</b>	Confocal Dish	FLux	35 Ø	2	+	+	1 / dish, total 30
	<b>201939</b>	Confocal Dish	Glass	35 Ø	3	+	+	1 / dish, total 30
	<b>201930</b>	Confocal Dish	FLux	35 Ø	3	+	+	1 / dish, total 30
	<b>201916</b>	Confocal Plate	Glass	6well	2	-	+	6 / plate, total 18
	<b>201904</b>	Cell Culture Slide	Glass	4well	3	-	+	4 / slide, total 24
	<b>201914</b>	Cell Culture Slide	DLux	4well	3	+	+	4 / slide, total 24
	<b>201934</b>	Cell Culture Slide	FLux	4well	3	+	+	4 / slide, total 24
	<b>201902</b>	Individual	-	-	2	-	+	total 25



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<b>201903</b>	Individual	-	-	3	-	+	total 25
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# Cell Culture

## 1-8. *In vitro* Fertilization

SPL IVF Products are designed for application for treatment in obstetrics / gynecology and specific cell culture research, such as human embryonic cell culture.

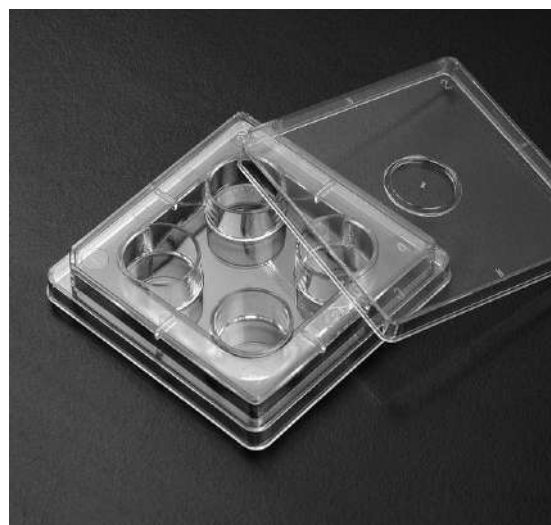
SPL IVF Products provide optimized surface for culturing embryonic cells and maintaining their morphology and specific functions.

It is recommended that cells cultured in SPL Life Sciences IVF Products are maintained in appropriate culture medium and culture grade chemicals.


	Surfaces		Materials
	Cell Culture Treated	Non-Treated	PS
Cell Culture Plate 4well	•	•	•
IVF Culture Dish	•	•	•

## Cell Culture Plate 4well

- Designed to prevent cross contamination
  - Effective gas exchange lid inner design
  - Alphanumeric labeling
  - Compliant with USP guideline (USP class VI tested)
  - Compliant with ANSI guideline
  - Mouse Embryo Assay (MEA) test passed
- Non-pyrogenic
  - Non-cytotoxic
  - Non-genotoxic
  - Non-mutagenic
  - DNase / RNase-free
  - Human DNA-free



### Cell Culture Plate 4well

Type	Cat. No.	Material	External Dimensions	Well Dimension	Growth Area	Working Vol.	Surface	Sterile	Packaging
			d x h (mm)	(mm)	(cm <sup>2</sup> )	(ml)	Treatment		
	<b>30004</b>	PS	66.00 x 66.00	15.80	2.00	1.00	+	+	4 / 120
	<b>32004</b>	PS	66.00 x 66.00	15.80	2.00	1.00	-	+	4 / 120



## IVF Dish

SPL Life Sciences provides IVF Culture Dishes for *in vitro* fertilization researches.

- Center well type (Cat. No. 20260, 20261)
  - External grip for handling
  - Compliant with USP guideline (USP class VI tested)
  - Compliant with ANSI guideline
  - Mouse Embryo Assay (MEA) Test passed
- Non-pyrogenic
  - Non-cytotoxic
  - Non-genotoxic
  - Non-mutagenic
  - DNase / RNase-free
  - Human DNA-free



### IVF Culture Dish

Type	Cat. No.	Material	External Dimensions d x h (mm)	Internal Dimension (mm)	Surface Treatment	Sterile	Packaging
	<b>20260</b>	PS	60.00 x 15.00	20.00	+	+	10 / 500
	<b>20261</b>	PS	60.00 x 15.00	20.00	-	+	10 / 500
	<b>20262</b>	PS	60.00 x 15.00	-	+	+	10 / 500
	<b>20263</b>	PS	60.00 x 15.00	-	-	+	10 / 500

# Cell Culture

## 1-9. Cryopreservation

### Cryovial

SPL Cryopreservation products are store cells, tissues, specimens, microbiological samples, nucleic acid, and protein samples in extreme temperatures ranging from  $-196^{\circ}\text{C}$  to  $60^{\circ}\text{C}$

- Use only in vapor-phased liquid nitrogen
- Distinctive external & Internal cap design
- External cap: External thread of the body fits perfectly into internal thread of the cap in helical form
- Internal cap: Internal thread of the body fits perfectly into the external thread of the cap in helical form
- Self-standing bottom
- Packed in re-closeable zip-lock pack
- Without Silicone washer (Cat. No. 43012)
- Vial Cap Insert: Available in 5 colors (Cat. No. 43032)
- Recommended volume for cryopreservation (Cat. No. 43113, 43023): 4.50 ml
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



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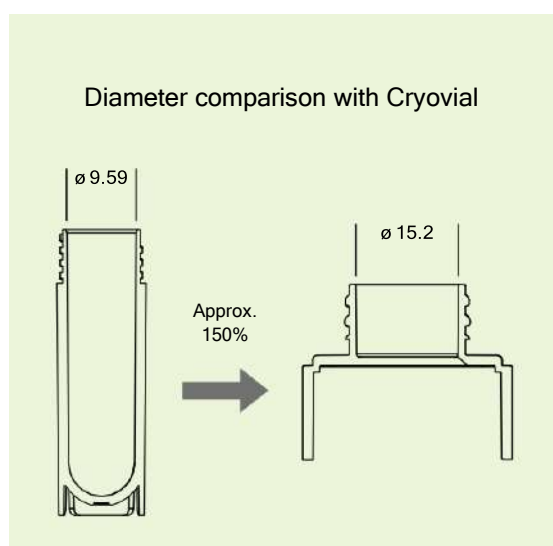
**Cryovial**


Type	Cat. No.	Material (Tube / Cap)	Cap Type	Bottom Type	Color	Total Vol. (ml)	External Dimensions d x h (mm)	Washer	Sterile	Packaging
	<b>43111</b>	PP / HDPE	External	Conical	Clear	1.20	13.10 x 42.50	+	+	50 / 500
	<b>43021</b>	PP / PP	Internal	Conical	Clear	1.20	13.10 x 42.50	+	+	50 / 500
	<b>43012</b>	PP / HDPE	External	Round	Clear	1.80	13.10 x 45.50	-	+	50 / 500
	<b>43112</b>	PP / HDPE	External	Round	Clear	1.80	13.10 x 47.80	+	+	50 / 500
	<b>43022</b>	PP / PP	Internal	Round	Clear	1.80	13.10 x 49.70	+	+	50 / 500
	<b>43113</b>	PP / HDPE	External	Round	Clear	5.00	13.10 x 92.00	+	+	50 / 500
	<b>43023</b>	PP / PP	Internal	Round	Clear	5.00	13.10 x 92.00	+	+	50 / 500
	<b>44112</b>	PP / HDPE	External	Round	Amber	1.80	13.10 x 47.80	+	+	50 / 500
	<b>44022</b>	PP / PP	Internal	Round	Amber	1.80	13.10 x 49.70	+	+	50 / 500
	<b>43032</b>	PP	Cap Insert	-	5 color	-	10.40	-	-	100 / 500

## Cryo Tissue Container

SPL Life Sciences provides vessels for cryogenic storage of tissue samples. Cryo Tissue Container is suitable for use in  $-80^{\circ}\text{C}$  deep freezer or in the vapor-phased liquid nitrogen up to  $-178^{\circ}\text{C}$ . The stackable block-shaped structure is convenient for storing and transporting samples.

- Use only in vapor-phased liquid nitrogen
- Stackable feature
- Two marking area on outside

**Cryo Tissue Container**

Type	Cat. No.	Material (Cap / Body)	External Dimensions w x l x h (mm)	Internal Dimensions d x h (mm)	Total Vol. (ml)	Sterile	Packaging
	<b>43014</b>	HDPE / PP	30.00 x 30.00 x 27.20	15.20 x 10.70	1.50	+	50 / 100



# Cell Culture




## Cryo Box

Cryo Boxes are useful for storing vials in ultra low temperature environments.

- For storing of microcentrifuge tubes or cryovials
- Designed for enhanced drainage of liquid nitrogen
- Alphanumeric indications for sample location
- Temperature range: -196°C to 121°C (Cat. No. 80025, 80081, 80281)
- 3 colors: Blue, Pink, Green (Cat. No. 80025, 80081, 80281)
- Cardboard Box: Moisture repellent coating (Cat. No. 80181)
- 1.2 ml / 1.8 ml Cryovials are available (Cat. No. 80025, 80081, 80181)
- 5 ml Cryovial use only (Cat. No. 80281)



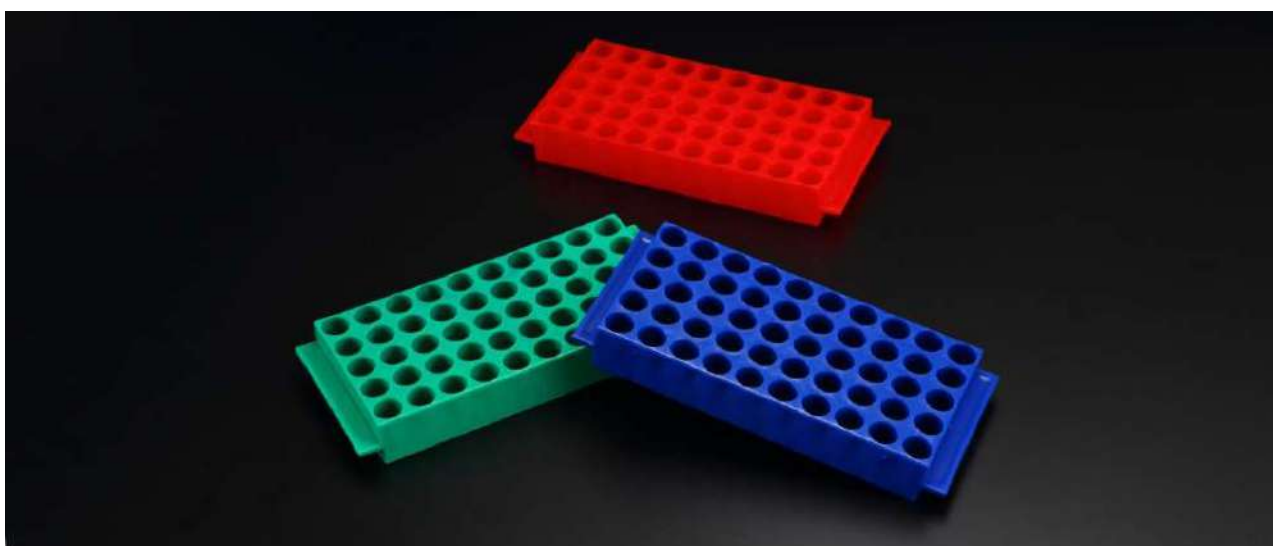
### Cryo Box

Type	Cat. No.	Material	Feature	Description	Packaging
	<b>80025</b>	PC	3 Colors	5 x 5 (25 Holes)	1 / 20
	<b>80081</b>	PC	3 Colors	9 x 9 (81 Holes)	1 / 10
	<b>80281</b>	PC	3 Colors	9 x 9 (81 Holes)	1 / 6
	<b>80181</b>	Cardboard	-	9 x 9 (81 Holes)	40

## Cryovial Rack

SPL Cryovial Racks are designed for handling and storage of Cryovials.

- Numeric labeling
- 3 colors: Blue, Green, Red
- Autoclavable



### Cryovial Rack

Type	Cat. No.	Material	Feature	Description	Packaging
	61050	PP	3 Colors	5 x 10 (50 Holes)	10

# Cell Culture

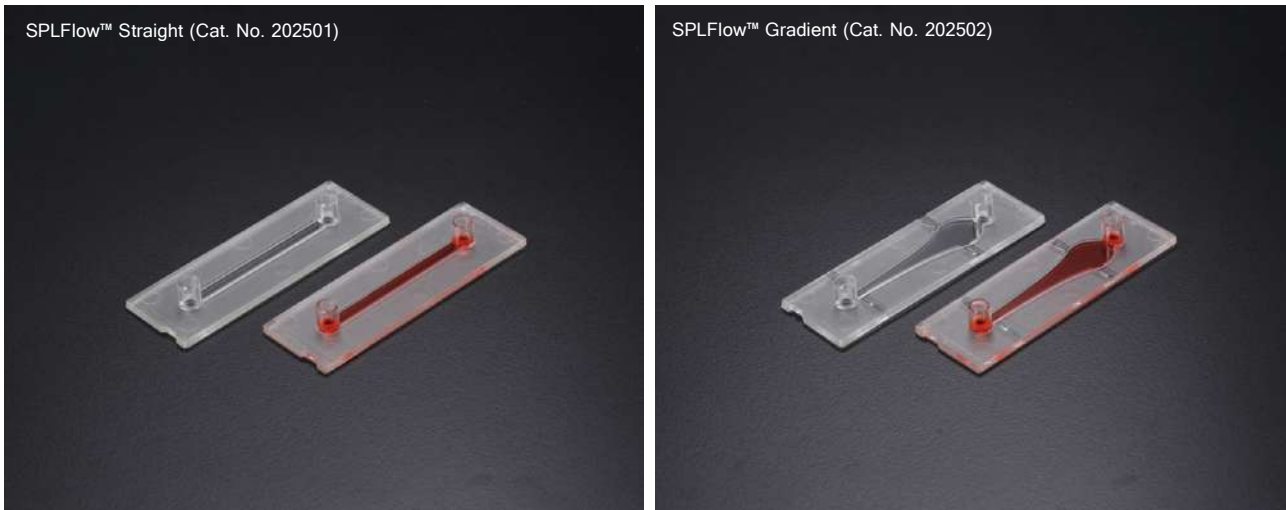
## 1-10. SPLFlow™

### SPLFlow™

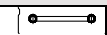

SPLFlow™ is designed for adherent cell culture under flow conditions. SPLFlow™ enables shear stress analysis by controlling the flow rate and exhibits high-resolution real-time microscopy of living cells and fixed cells.

SPL Life Sciences provides two types: SPLFlow™ Straight (Cat. No. 202501) and Gradient (Cat. No. 202502). Straight type is suitable for large area of uniform shear stress analysis. Gradient type is a special channel design intended to observe linear shear stress in a flow field.

- Channel thickness: 500 µm
- Working volume: 150 µl
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



#### SPLFlow™

Type	Cat. No.	Material (Outer / Bottom)	Dimensions w x l (mm)	Growth Area (cm <sup>2</sup> )	Working Vol. (µl)	Sterile	Packaging
	<b>202501</b>	DLux / FLux	25.00 x 75.00	2.09	150.00	+	1 / 10
	<b>202502</b>	DLux / FLux	25.00 x 75.00	3.15	150.00	+	1 / 10



Cell Scraper : See page 74



# Cell Culture

## 1-11. Accessories

SPL Life Sciences provides various accessories for cell culture.

### Cell Strainer

Cell Strainers of SPL Life Sciences are ideal for obtaining uniform single cell suspension from various sources. Cell Strainers are made of nylon with 3 different pore size meshes, showing optimal performances in a variety of applications such as stem cell and primary cell preparation.






- Ideal for stem cell and tissue-derived primary cell preparation
- Fits into SPL 50 ml Conical Tubes (Please inquire for other conical tubes)
- 3 different pore size: 40, 70 or 100  $\mu\text{m}$
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



Conical Tube : See page 116

#### Cell Strainer

Type	Cat. No.	Material (Frame / Mesh)	Color	Pore Size ( $\mu\text{m}$ )	Sterile	Packaging
	<b>93040</b>	PP / Nylon	Blue	40.00	+	1 / 50
	<b>93070</b>	PP / Nylon	Clear	70.00	+	1 / 50
	<b>93100</b>	PP / Nylon	Yellow	100.00	+	1 / 50



## Multi C-Strainer

Multi Cell Strainer (C-Strainer) is used for rapid cell separation from the primary tissue or cell mass. The Multi C-Strainer is the most flexible small cell strainer fitting on a wide range of tubes, e.g. 1.5 ml Microcentrifuge Tubes (Cat. No. 60015), Test Tubes (Cat. No. 40005), 5 ml Tubes (Cat. No. 50005, 51005), 15 ml Conical Tubes (Cat. No. 50015). Its unique design allows avoiding overflow and helps speedy filtration.



### Multi C-Strainer

Type	Cat. No.	Material (Frame / Mesh)	Color	Pore Size (µm)	Sterile	Packaging
	<b>94020</b>	PP / Nylon	Green	20.00	+	1 / 50
	<b>94030</b>	PP / Nylon	Orange	30.00	+	1 / 50
	<b>94040</b>	PP / Nylon	Blue	40.00	+	1 / 50
	<b>94070</b>	PP / Nylon	Clear	70.00	+	1 / 50
	<b>94100</b>	PP / Nylon	Yellow	100.00	+	1 / 50

# Cell Culture


## Cell Lifter

Cell Lifters are specially designed for easy scraping of attached cells on culture dish & plate surfaces. Individual packing eliminates possible chances of contamination during cell culture.

- Ideal for the manual harvesting of cells
- Two blade types on a single handle
- Wide blade types are ideal for dish and 6well plates
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Cell Lifter

Type	Cat. No.	Material	Length (mm)	Blade Width (mm)	Sterile	Packaging
	90040	PP	218.00	23.00 / 12.00	+	1 / 100

## Cell Scraper






Cell Scrapers are designed to facilitate the collection of attached cells on culture dishes, flasks, or plates. Sterilization and individual packing eliminate possible chances of contamination during cell culture and scraper handling.

- Ideal for the manual harvesting of cells
- Soft blade, made of LDPE, for gentle collection of cells without damages
- Available in 3 different width types: 13 mm / 20 mm / 30 mm

- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Cell Scraper

Type	Cat. No.	Material (Handle / Blade)	Length (mm)	Blade Width (mm)	Sterile	Packaging
	90020	PS / LDPE	237.00	13.00	+	1 / 100
	90021	PS / LDPE	237.00	13.00	+	1 / 100
	90030	PS / LDPE	290.00	20.00	+	1 / 100
	90031	PS / LDPE	290.00	20.00	+	1 / 100
	90032	PS / LDPE	399.10	30.00	+	1 / 100


## Strainer Tube

The Strainer Tube consists of a 35 µm Nylon Mesh Cap, which makes it easy to separate cells from tissue. It is easy to prepare samples for FACS analysis.

- Internal graduations
- Dual-position snap cap for easy handling
- Sterile
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Strainer Tube

Type	Cat. No.	Material (Tube / Cap)	Pore Size (µm)	Dimensions d x h (mm)	Total Vol. (ml)	RCF Rating	Sterile	Packaging
 ●	<b>40405</b>	PS / LDPE	35.00	12.00 x 75.00	5.00	1,400 x g	+	25 / 100

## Cloning Cylinder




Cloning Cylinder facilitates the separation of cell clones generated from single cells, making it easy to obtain uniform cells.



- Sterile
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Cloning Cylinder

Type	Cat. No.	Material	Size	Dimensions (mm)	Sterile	Packaging
 ●	<b>90070</b>	PS	Small	7.70 x 8.00	+	10 / 50
 ●	<b>90071</b>	PS	Medium	9.20 x 8.00	+	10 / 50
 ●	<b>90072</b>	PS	Large	13.00 x 11.00	+	10 / 50

# Molecular Analysis

SPL provides reliable and high-quality products to make molecular analyses more convenient and efficient. With the advancement of technology, more studies were conducted to explain the phenomena of life through molecular analysis.

SPL Life Sciences provides reliable and high-quality products to make molecular analyses more convenient and efficient and ultimately enable scientists to understand the fundamentals of molecular biology.

One of the most common molecular analysis methods is immunoassay; SPL microplates are available with a wide range of options that includes surface, color, bottom and well types, and PCR tubes for applications in polymerase chain reaction (PCR).

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# Molecular Analysis

## 2-1. Immunoassay

Immunoassay is a standardized technique for detecting biomolecules with high specificity and sensitivity based on the antigen-antibody binding. SPL provides four different surface hydrophobicities to respond to different biomolecules. SPL's immunoassay microplates are manufactured from optically clear virgin polystyrene, ideal for all immunosorbent assays.

**SPL Life Sciences manufactures microplates for diagnostics and immunological researches.**

**SPL provides researchers with a variety of microplates specifically designed for immunoassay:**

### Homogeneity

SPL provides immunoplates in standardized form, applicable to almost all laboratory ELISA equipment, to produce consistent results between wells or plates, regardless of the date of manufacture.

### Color types

Three different colored plates are available with specific functions. While transparent clear plates are suitable for colorimetric assays, white and black plates are ideal for fluorescence and luminescence assays.

White plates ensure maximum reflection and minimum cross-talk, appropriate for luminescence assay. Black plates ensure minimum light scattering and cross-talk during fluorescence assay.

### Bottom types

Flat well bottom has excellent optical transmission and low background absorbance. Round well bottom allows easy mixing and washing

## Hydrophobic



### Unibinding

Suitable for adsorption of hydrophobic molecules. (Antigen ELISA)

### Medibinding

Surface adsorbs proteins and molecules that consist of intermediate hydrophobic and hydrophilic properties. (Antigen / Antibody ELISA; More hydrophobic compared to Maxibinding plates)

### Maxibinding

Modified polystyrene surface provides higher binding capacity for proteins and other molecules with both hydrophilic and hydrophobic regions. (Recommended for most ELISA experiments)



### Multibinding

Especially suitable for adsorbing hydrophilic molecules. (Antigen ELISA)

## Hydrophilic

## Immunoplate

- Plate type (96well plate)
- Lid not included
- 2 types bottom: Flat or Round
- Developed for immunoassay (ELISA) and general binding assay
- Uniform surface homogeneity
- Raised rims on the wells
- Alphanumeric labeling
- Designed for easy handling and automation



### Immunoplate

Type	Cat. No.	Material	Bottom Type	Surface Type	External Dimensions w x l x h (mm)	Bottom Surface Area (cm <sup>2</sup> )	Total Vol. (μl)	Working Vol. (μl)	Packaging
	<b>32296</b>	PS	Flat	Maxibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>32396</b>	PS	Flat	Medibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>32496</b>	PS	Flat	Unibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>32596</b>	PS	Flat	Multibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>32696</b>	PS	Round	Maxibinding	85.40 x 127.60 x 14.40	0.66	300.00	200.00	10 / 100
	<b>32796</b>	PS	Round	Unibinding	85.40 x 127.60 x 14.40	0.66	300.00	200.00	10 / 100

## Immunoplate Strip

- 8well strip type
- Lid not included
- Developed for immunoassay (ELISA) and general binding assay
- Flat bottom
- Uniform surface homogeneity
- Raised rims on the wells
- Alphanumeric labeling
- Designed for easy handling and automation



### Immunoplate Strip

Type	Cat. No.	Material	Surface Type	External Dimensions w x l x h (mm)	Bottom Surface Area (cm <sup>2</sup> )	Total Vol. (μl)	Working Vol. (μl)	Packaging
	<b>38096</b>	PS	Maxibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>38196</b>	PS	Medibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>38496</b>	PS	Unibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>38596</b>	PS	Multibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100


# Molecular Analysis

## Immunoplate Strip Single Well

- Strip single well type (8well / strip, breakable well)
- Lid not included
- Developed for immunoassay (ELISA) and general binding assay
- Uniform surface homogeneity
- Flat bottom
- Raised rims on the wells
- Alphanumeric labeling
- Designed for easy handling and automation



### Immunoplate Strip Single Well

Type	Cat. No.	Material	Surface Type	External Dimensions w x l x h (mm)	Bottom Surface Area (cm <sup>2</sup> )	Total Vol. (μl)	Working Vol. (μl)	Packaging
	<b>38296</b>	PS	Maxibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>38396</b>	PS	Medibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>38696</b>	PS	Unibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>38796</b>	PS	Multibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100





## Black & White Immunoplate

SPL provides high-quality 96well plates suitable for various high throughput assays. Fluorescence and luminescence assays have been successfully tested with SPL 96well microplates by many high throughput laboratories. SPL 96well microplates have a characteristic feature of high signal with low background.

- White plates provide maximum reflection and minimum cross-talk for luminescence assay.
- Black plates are designed for minimum light scattering and cross-talk during fluorescence assay.
- Suitable for fluorescence assay, luminescence assay
- 2 surface types
- Individual lids provided for each plate (Black plate with black lid, White plate with transparent lid)
- Plate type (96well plate)
- HTS (High-Throughput Screening) compatible
- Flat bottom
- Raised rims on the wells
- Alphanumeric labeling
- Designed for easy handling and automation



### Black & White Immunoplate

Type	Cat. No.	Material	Plate Color	Surface Type	External Dimensions w x l x h (mm)	Bottom Surface Area (cm <sup>2</sup> )	Total Vol. (μl)	Working Vol. (μl)	Packaging
	<b>31396</b>	PS	White	Maxibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>31496</b>	PS	Black	Maxibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>31196</b>	PS	White	Unibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>31296</b>	PS	Black	Unibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100





## B & W Immunoplate Strip

SPL Life Sciences provides high-quality luminescence assays. Successful testing of SPL products have been performed in many research laboratories, with results featuring high signal with low background.

- White plates provide maximum reflection and minimum cross-talk for luminescence assay.
- Black plates are designed for minimum light scattering and cross-talk during fluorescence assay.
- Suitable for fluorescence and luminescence assays
- 2 surface types
- 8well strip type
- Lid not included
- Flat bottom
- Raised rims on the wells
- Alphanumeric labeling
- Designed for easy handling and automation



### B & W Immunoplate Strip

Type	Cat. No.	Material	Well Color	Surface Type	External Dimensions w x l x h (mm)	Bottom Surface Area (cm <sup>2</sup> )	Total Vol. (μl)	Working Vol. (μl)	Packaging
	<b>31796</b>	PS	White	Maxibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>31896</b>	PS	Black	Maxibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>31596</b>	PS	White	Unibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100
	<b>31696</b>	PS	Black	Unibinding	85.40 x 127.60 x 14.40	0.33	300.00	200.00	10 / 100

# Molecular Analysis







## 384 HT Plate

SPL Life Sciences provides high-quality 384 HT Plates for high throughput research laboratories. Fluorescent and luminescent assays have been successfully tested with SPL 384 HT Plates, with results featuring high signal with low background.

- White plates provide maximum reflection and minimum cross-talk for luminescence assay.
- Black plates are designed for minimum light scattering and cross-talk during fluorescence assay.
- Suitable for colorimetry, fluorescence and luminescence assays
- HTS (High-Throughput Screening) compatible
- Transparent lid provided with each well plate
- Flat bottom
- Alphanumeric labeling
- 2 surface types



### 384 HT Plate

Type	Cat. No.	Material	Plate Color	Surface Type	External Dimensions w x l x h (mm)	Bottom Surface Area (cm <sup>2</sup> )	Total Vol. (μl)	Working Vol. (μl)	Packaging
	<b>34384</b>	PS	Clear	Maxibinding	85.40 x 127.60 x 14.40	0.07	120.00	100.00	10 / 40
	<b>35384</b>	PS	White	Maxibinding	85.40 x 127.60 x 14.40	0.07	120.00	100.00	10 / 40
	<b>36384</b>	PS	Black	Maxibinding	85.40 x 127.60 x 14.40	0.07	120.00	100.00	10 / 40
	<b>31384</b>	PS	Clear	Unibinding	85.40 x 127.60 x 14.40	0.07	120.00	100.00	10 / 40
	<b>32384</b>	PS	White	Unibinding	85.40 x 127.60 x 14.40	0.07	120.00	100.00	10 / 40
	<b>33384</b>	PS	Black	Unibinding	85.40 x 127.60 x 14.40	0.07	120.00	100.00	10 / 40

## Miniwell Tray

Miniwell Trays are used in a broad spectrum of applications, including cloning experiments, sample incubations, and in tissue culture based analytical systems. The crystallisation drop is localized centrally as a result of the conical well geometry, and the flat bottom makes for optimal monitoring.





continued on next page



- Terasaki format plate
- Stackable
- Virgin, high clarity polystyrene (Excellent optical)
- Surface treatment and Sterilized (Cat. No. 30060, 30072)
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free

### Miniwell Tray

Type	Cat. No.	Well Type	Material	External Dimension w x l (mm)	Working vol. (μl)	Surface Treatment	Sterile	Packaging
	<b>30060</b>	60	PS	83.00 x 58.00	10.00	+	+	10 / 100
	<b>31060</b>	60	PS	83.00 x 58.00	10.00	-	-	10 / 100
	<b>30072</b>	72	PS	83.00 x 58.00	10.00	+	+	10 / 100
	<b>31072</b>	72	PS	83.00 x 58.00	10.00	-	-	10 / 100

## Immunotube

SPL Life Sciences provides Immunotubes for diagnostic and immunological purposes.

- 2 surface types
- For immunoassay (ELISA, RIA)
- High optical quality

### Hydrophobic



#### Unibinding

Suitable for adsorption of hydrophobic molecules. (Antigen ELISA)

#### Maxibinding

Modified polystyrene surface for higher binding capacity for proteins and other molecules with both hydrophilic and hydrophobic regions. (Recommended for most ELISA experiments)



### Hydrophilic

**PP** : With high chemical resistance, it withstands acids and bases at room temperature and is hardness



**PS** : Commonly used and transparent. Withstands weak acids and bases.



### Immunotube

Type	Cat. No.	Material	Surface Type	External Dimensions d x h (mm)	Total Vol. (ml)	Packaging
)	<b>43005</b>	PS	Unibinding	12.00 x 75.00	5.00	250 / 2,000
	<b>43015</b>	PS	Maxibinding	12.00 x 75.00	5.00	250 / 2,000
	<b>43055</b>	PP	Unibinding	12.00 x 75.00	5.00	50 / 500

# Molecular Analysis

## 2-2. Molecular Biology

### PCR Tube

SPL provides 0.2 ml PCR Tube in a standardized form, applicable to almost all laboratory PCR equipment. The wall of the PCR Tube is designed relatively thin to optimally conduct heat to the reaction solution. The tight sealing between the tube body and its cap ensures minimal evaporation and prevents sample leakages. The cap is provided in 2 different forms, flat and dome. Flat type is useful when labeling is required, while dome type prevents the reaction solution from binding to the cap surface. SPL provides single PCR Tube with a cap attached, and strip tubes, composed of 8 bodies and 8 caps connected horizontally. SPL provides single PCR Tube and strip PCR Tube with the attached cap.

- Designed to prevent contamination
- Designed for effective thermal conductivity
- Smooth opening and tight sealing
- 2 tube types: Single / Strip
- 4 cap types: Attached Flat / Attached Dome / Strip Flat / Strip Dome
- Separately packaged bodies and caps (Cat. No. 60008, 60018, 60028)
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



#### PCR Tube



Type	Cat. No.	Material	Color	Cap Type	Tube Type	Total Vol. (ml)	Sterile	Packaging
	<b>60001</b>	PP	Clear	Flat	Single	0.20	-	500 / 1,000
	<b>60008</b>	PP	Clear	Flat (Strip)	Strip	0.20	-	120 / 120
	<b>60028</b>	PP	White	Flat (Strip)	Strip	0.20	-	120 / 120
	<b>60048</b>	PP	Clear	Flat (Attached)	Strip	0.20	-	120 / 120
	<b>60011</b>	PP	Clear	Dome	Single	0.20	-	500 / 1,000
	<b>60018</b>	PP	Clear	Dome (Strip)	Strip	0.20	-	120 / 120

## PCR Plate

SPL Life Sciences released a PCR Plate that can be used for Thermal cycler or real-time PCR equipment. Amplification is faster and more accurate through effective heat transfer with very thin walls. The clear well applies to PCR (thermal cycler). The white wells increase the fluorescence signal of qPCR by about 10 times that of transparent wells, so it is economical because it allows experiments with fewer reagents. The raised rims around each well allow tight sealing using a variety of procedures, including pressure-, adhesive-, and heat-sealing methods.

- Thin wall for fast PCR
- Medical-grade virgin polypropylene
- ANSI / SBS standard dimensions
- Raised well rims, optimized for heat-sealing tapes or adhesive sealing tape (SPLSEAL™ Pressure-sensitive Tape, Cat. No. 96004)
- Grouped by manufacturing mold cavity number to ensure the lowest variation
- DNase / RNase-free
- Human DNA-free



PCR Plate									
Type	Cat. No.	Material	Well	Color	Profile	Skirt	Max. Volume (ml)	Cut corner	Packaging
	<b>60096</b>	PP	96	White	Low-profile	Full-skirt	0.20	A12, H12	10 / 50
	<b>60396</b>	PP	96	Clear	High-profile	Semi-skirt	0.30	A12	10 / 50

# Molecular Analysis

## Filter Tube

SPL Life Science provides a microcentrifuge tube filter based on the filter membrane for sample preparation of experiment. High-speed centrifugation through Filter Tube enables fast sample preparation and reduces contamination risk.

- 2 pore size: 0.22, 0.45  $\mu\text{m}$
- Standard Microcentrifuge Tube capacity: 1.5 ml (Cat. No. 60015)
- SPL 2.0 ml Microcentrifuge Tube compatible (Cat. No. 61020)
- Without Microcentrifuge Tube (Cat. No. 65115, 65215, 66115, 66215)



### Filter Tube


Type	Cat. No.	Material	Membrane Material	Membrane Pore Size ( $\mu\text{m}$ )	Working Vol. (ml)	RCF Rating	Microcentrifuge Tube	Sterile	Packaging
□	<b>65105</b>	PP	Cellulose Acetate	0.22	0.50	15,000 x g	+	+	25 / 100
	<b>65115</b>	PP	Cellulose Acetate	0.22	0.50	15,000 x g	-	+	25 / 100
	<b>65205</b>	PP	Cellulose Acetate	0.45	0.50	15,000 x g	+	+	25 / 100
	<b>65215</b>	PP	Cellulose Acetate	0.45	0.50	15,000 x g	-	+	25 / 100
	<b>66105</b>	PP	Cellulose Acetate	0.22	0.50	15,000 x g	+	-	25 / 100
	<b>66115</b>	PP	Cellulose Acetate	0.22	0.50	15,000 x g	-	-	25 / 100
	<b>66205</b>	PP	Cellulose Acetate	0.45	0.50	15,000 x g	+	-	25 / 100
	<b>66215</b>	PP	Cellulose Acetate	0.45	0.50	15,000 x g	-	-	25 / 100

## Vacuum Filter Tube

Hydrophilic PES membrane filter adopted to the product has less adsorption of protein or miscellaneous substances, and excellent durability. This provides a convenience for direct collection of samples by combining with 50 ml Conical Tube, which requires no secondary step to transfer them to after filtration. This is very useful for sterile-filtration of media or reagent at a small volume, and for separation of cells.

- Individual Packing
- 2 pore size: 0.22, 0.45  $\mu\text{m}$
- Non-pyrogenic
- Non-cytotoxic



Vacuum Filter Tube						
Type	Cat. No.	Material (Funnel / Cap / Tube / Membrane)	Pore size ( $\mu\text{m}$ )	Volume (ml) (Funnel / Tube)	Sterile	Packaging
	<b>50850</b>	PS / HDPE / PP / PES	0.22	150.00 / 50.00	+	1 / 12
	<b>50851</b>	PS / HDPE / PP / PES	0.45	150.00 / 50.00	+	1 / 12



# Molecular Analysis

## Dialysis Chamber

Dialysis Chamber is used for various dialysis applications such as desalting, buffer exchange, labeling, reagent removal, drug binding experiment, cell growth and supply, virus purifications, blood transformation, etc. It is configured to rapidly and effectively dialysis a wide range of 3 ml ~ 15 ml volume, and guarantees 95 ~ 98% higher recovery rate than Dialysis tubing type.

- Excellent pH and chemical stability (pH 5 ~ 9)
- Membrane composition: Regenerated Cellulose (RC)
- Membrane Weight Cut-Off (MWCO): 3.5 K, 7 K, 14 K
- 3 ml Dialysis Chamber (Cat. No. 97003, 97007, 97014)
- 15 ml Dialysis Chamber (Cat. No. 97103, 97107, 97114)
- Float buoys for floating 3 ml dialysis Chamber (Cat. No. 97099)



Dialysis Chamber

Type	Cat. No.	Material (Body / Membrane)	Color	MWCO	Working Vol. (ml)	Packaging
	<b>97003</b>	PC / RC	Green	3.5 K	3.00 - 5.00	1 / 10
	<b>97007</b>	PC / RC	Blue	7 K	3.00 - 5.00	1 / 10
	<b>97014</b>	PC / RC	White	14 K	3.00 - 5.00	1 / 10
	<b>97099</b>	Sponge	White	-	-	10
	<b>97103</b>	PC / RC	Green	3.5 K	13.00 - 15.00	1 / 8
	<b>97107</b>	PC / RC	Blue	7 K	13.00 - 15.00	1 / 8
	<b>97114</b>	PC / RC	White	14 K	13.00 - 15.00	1 / 8


## Gel Extractor

Gel Extractor is an easy-to-use and quick alternative to extract DNA and RNA bands from agarose gels after gel electrophoresis. Gel Extractor allows a precise excision of targeted gel material without sharps and blades. For one-handed, safe and easy gel cutting, the gel extractor is the cost effective solution.

- One-Handed gel easy cutting
- Disposable: no risk of cross contamination
- Cut DNA and RNA bands from agarose gels
- High yield recovery
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Gel Extractor

Type	Cat. No.	Material	Cutter Dimensions w x l x h (mm)	Total Length (mm)	Packaging
	<b>410511</b>	PE	6.50 x 3.00 x 20.00	60.00	100





## Blood Separation Tube

Blood Separation Tube is a product that facilitates the separation of peripheral blood mononuclear cell (PBMC) from the blood. The filter inside the tube prevents mixing of the PBMC, lymphocyte, and pellets

- Simplify injection of Separation media or blood samples
- Fast separation (15 min)
- Prevent the pellets from mixing after removal
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Blood Separation Tube

Type	Cat. No.	Material	Bottom Type	External Dimension d x h (mm)	Total Vol. (ml)	Sample Vol. (ml)	Sterile	Packaging
	<b>50915</b>	PP	Conical	17.00 x 120.70	15.00	3.00 ~ 8.00	+	25 in rack / 500
	<b>50916</b>	PP	Conical	17.00 x 120.70	15.00	3.00 ~ 8.00	-	25 in rack / 500
	<b>50950</b>	PP	Conical	30.00 x 115.00	50.00	15.00 - 30.00	+	25 in rack / 300
	<b>50951</b>	PP	Conical	30.00 x 115.00	50.00	15.00 - 30.00	-	25 in rack / 300

# Molecular Analysis





## Cuvette

SPL spectrophotometer cuvettes use high-grade virgin resin and can be used for most spectrophotometer applications in the visible or UV range. Developed for single use to maintain accurate and consistent samples, it is compatible with most spectrophotometers and photometers. Replaces quartz cuvettes for DNA, RNA, protein purity and quantification, and other UV/VIS applications at 280 - 800 nm while avoiding scratching, washing and sample replacement contamination.

- Disposable 10 mm pathlength cuvettes designed for visible and UV/Vis assays.
- Standard 1.5 and 4.5 ml sample capacity.
- Clear two-sided cuvettes are ideal for fluorimetry and nephelometry, as well as spectrophotometry.
- Standard deviation is  $< \pm 0.005$  extinction units between cuvettes.



### Cuvette

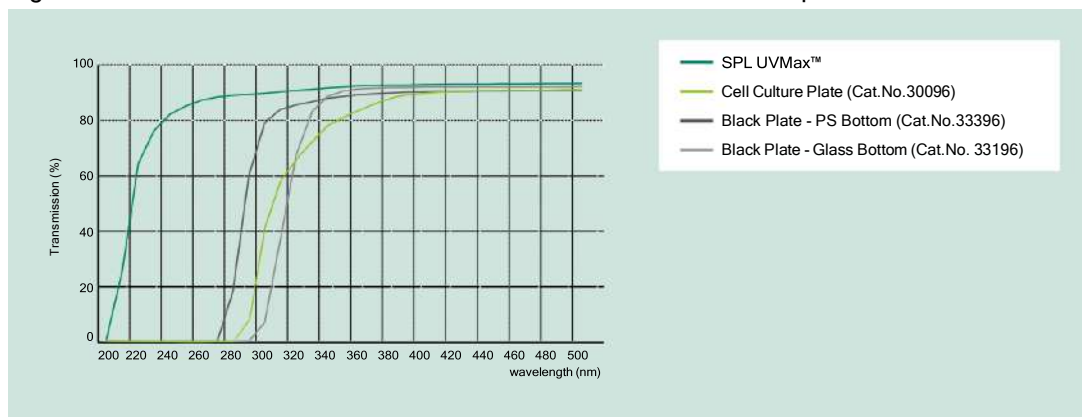
Type	Cat. No.	Material	Type	External Dimension (mm)	Wavelength Range (nm)	Volume (ml)	Sterile	Packaging
	<b>46015</b>	PS	Standard	12.80 x 12.80 x 44.80	340 - 800	1.50	-	100
	<b>46045</b>	PS	Standard	12.60 x 12.60 x 44.80	340 - 800	4.50	-	100
	<b>46115</b>	PMMA	UV	12.80 x 12.80 x 44.80	280 - 800	1.50	-	100
	<b>46145</b>	PMMA	UV	12.60 x 12.60 x 44.80	280 - 800	4.50	-	100

## UVMax™



SPL UVMax™ is a specialized plate intended for use in lower wavelength. The maximal transmittance is achieved between 260 and 280 nm, ideal for DNA and protein quantification. The plate with low background enables users to acquire more accurate experimental data. Unlike conventional laboratory cuvettes, SPL UVMax™ Plate allows for High-Throughput Screening (HTS) process and eliminates the need for expensive and fragile quartz / glass-type plates.

- 96well and 384well plate type
- Developed for determining concentrations of protein and / or nucleic acid
- Certified for low background and consistent performance at 260 and 280 nm
- Flat bottom
- Uniform surface homogeneity
- Lid not included
- Alphanumeric labelling

Fig. 1. % Transmittance of bottom materias: UVMax™ / SPL standard plates.



### UVMax™

Type	Cat. No.	Material (Plate / Bottom)	Well Type	Bottom Type	External Dimensions w x l x h (mm)	Bottom Surface Area (cm <sup>2</sup> )	Total Vol. (ml)	Packaging
	<b>33096</b>	PS / Film	96well	Flat	85.40 x 127.60 x 14.40	0.33	0.30	10 / 40
	<b>330384</b>	PS / Film	384well	Flat	85.40 x 127.60 x 14.40	0.07	0.20	1 / 20

# Molecular Analysis

## Bottle Top Filter



The hydrophilic PES membrane filter applied to the Bottle Top Filter is less adsorbing and durable. Bottle Top Filter is manufactured in accordance with the GL45 standard and can be used in various bottles. It can be used for sterilization of media or reagents, and for separation of cells, etc.

- Individual Packing
- 2 pore size: 0.22, 0.45  $\mu\text{m}$

- Non-pyrogenic
- Non-cytotoxic



### Bottle Top Filter

Type	Cat. No.	Material (Funnel/Cap/Membrane)	Pore size ( $\mu\text{m}$ )	Funnel Vol. (ml)	Sterile	Packaging
	<b>508150</b>	PS / PP / PES	0.22	150.00	+	1 / 12
	<b>508151</b>	PS / PP / PES	0.45	150.00	+	1 / 12
	<b>508500</b>	PS / PP / PES	0.22	500.00	+	1 / 12
	<b>508501</b>	PS / PP / PES	0.45	500.00	+	1 / 12




## Bottle Top Filter Unit

The hydrophilic PES membrane filter applied to the Bottle Top Filter is less adsorbing and durable. Bottle Top Filter Unit can be used conveniently that provided with a receiver bottle. It can be used for sterilization of media or reagents, and for separation of cells, etc.

- Individual Packing
- 2 pore size: 0.22, 0.45  $\mu\text{m}$
- Non-pyrogenic
- Non-cytotoxic



### Bottle Top Filter Unit

Type	Cat. No.	Material (Funnel/Bottle/Cap/Membrane)	Pore size ( $\mu\text{m}$ )	Funnel Vol. (ml)	Bottle Vol. (ml)	Sterile	Packaging
	<b>508502</b>	PS / PS / PP / PES	0.22	500.00	500.00	+	1 / 12
	<b>508503</b>	PS / PS / PP / PES	0.45	500.00	500.00	+	1 / 12


## Spin Column

Spin columns are supplied with column tubes and collection tubes. The columns provide fast and reliable extraction of high-quality DNA from a variety of samples including tissues, cells, plants, and blood.

- Large fragment size and high purity
- High quality and reproducible yields
- Suitable for many kinds of samples
- DNase / RNase-free
- Human DNA-free



### Spin Column

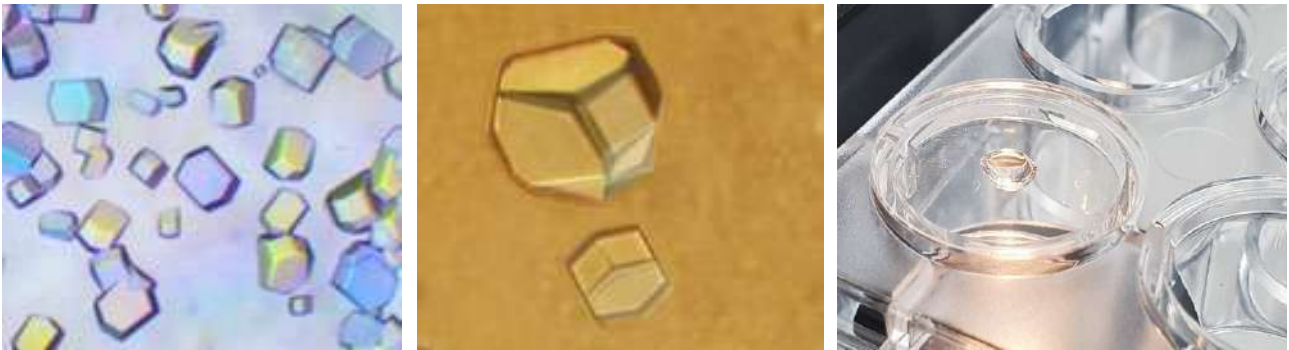
Type	Cat. No.	Materials	Application	Collection Tube Vol. (ml)	Spin Column Vol. (ml)	Sterile	Packaging
	<b>66900</b>	PP	DNA Extract	2.00	0.80	-	50 / 100
	<b>66901</b>	PP	RNA Extract	2.00	0.80	-	50 / 100
	<b>66902</b>	PP	Plasmid DNA Extract	2.00	0.80	-	50 / 100

# Molecular Analysis

## 2-3. SPLPro-Crystal™

X-ray crystallography is a technique that uses X-ray diffraction patterns to determine high-resolution, three-dimensional structures of molecules such as proteins, small organic molecules, and materials. The substance of interest must be in crystalline form, which typically requires testing various crystallization conditions. The vapor diffusion method is a common technique used to crystallize proteins.

SPLPro-Crystal™ Plate are two different types of techniques within this category: hanging drop and sitting drop methods. Both of them consist of having a drop with protein solution situated either on top (hanging drop) or next to (sitting drop) a reservoir containing precipitant (e.g. a concentrated salt solution). As the water from the protein solution vaporizes, it transfers to the reservoir and crystallization occurs.



\* Lysozyme crystals grown in the presence of 10 % v/v sodium chloride and 100 mM sodium acetate pH 4.6

## Pro-Crystal™ Plate

The SPLPro-Crystal™ Plate is a 24well hanging drop type that improves sealing and convenience to easily make many crystals. In addition, it is produced in SBS format to be used in automation equipment.



- 24well format (Cat.No. 334624, 334724)
- 96well format (Cat.No. 334696)
- Individually packaged
- Stackable
- Optically clear
- Lid provided with each well plate
- SBS standard format
- With sealant (Cat. No. 334724)



continued on next page



### SPLPro-Crystal™ Plate

Type	Cat. No.	Type	Material	Dimensions w x l x h (mm)	Well Size (mm)	Reservoir well vol. (μl)	Drop well vol. (μl)	Sealant	Packaging
	<b>334624</b>	Hanging	PS	127.60 x 85.40 x 15.30	18.00	2,000.00	-	-	1 / 10
	<b>334724</b>	Hanging	PS	127.60 x 85.40 x 15.30	18.00	2,000.00	-	+	1 / 10
	<b>334696</b>	Sitting	PS	127.50 x 85.30 x 14.40	7.55 x 6.65	100.00	0.10 - 5.00	-	1 / 10


## SPLPro-Crystal™ Coverslip

The material used for the SPLPro-Crystal™ Coverslip is a UV film developed by SPL Life Sciences and has the conditions suitable for protein crystals and high magnification microscopy.

- Diameter: 18.00 mm
- Flexible
- Thickness 0.19 mm
- Certified for low background and consistent performance at UV



### SPLPro-Crystal™ Coverslip

Type	Cat. No.	Material	External Dimensions (mm)	Thickness (mm)	Packaging
	<b>20118</b>	UVMax™ Film	18.00	0.19	50 / 200

# Molecular Analysis

## 2-4. Accessories


### SPL SEAL™

SPL SEAL™ provides a highly effective seal, preventing evaporation, and eliminating contamination and it is intended for use in general assays, genomics, compound, library, storage, bio-analytical assays, High-Throughput Screening (HTS) and drug discovery applications.

- Good optical property (low auto-fluorescence, high transparency)
- Prevent evaporation and cross-contamination between wells
- Working temperature range: 24 ~ 100 °C
- Pre-cut, plate-sized sheets
- Non-sterile
- Thickness: 65 µm
- DNase / RNase-free



#### SPL SEAL™

Type	Cat. No.	Material	External Dimensions w x l (mm)	Color	Sterile	Packaging
	<b>96000</b>	PET / acrylate	143.00 x 79.00	Clear	-	100


### SPL SEAL™ Pressure sensitive Tape

SPL SEAL™ Pressure-sensitive Tape is separated on both sides for convenient use. It is not sticky to the touch with a special adhesive, but it bonds strongly to the plate when pressure is applied, and can be used even with a raised rim. It does not fall even in environments with severe temperature changes such as PCR and minimizes sample evaporation. In addition, as it has excellent optical properties, it is suitable for related experiments such as ELISA, PCR, qPCR, and guarantees DNase/RNase-free quality level.

- Prevent evaporation and cross-contamination between wells
- Pre-cut, plate-sized sheets
- Non-sterile
- DNase / RNase-free
- Working temperature range: -80 ~ 100 °C
- Thickness: 140 µm
- Good optical property (low auto-fluorescence, high transparency)
- Tight seals even with raised rims
- Short- and long term storage
- DNase / RNase-free



#### SPL SEAL™ Pressure-sensitive Tape

Type	Cat. No.	Material	Dimensions	Color	Sterile	Packaging
	<b>96004</b>	PET / silicone	143.00 x 79.00	Clear	-	100


## SPL SEAL™ Aluminum Tape

SPL SEAL™ Aluminum Tape is easy to attach and remove and can be stored samples for the short and long term. Aluminum tape can reduce cross-contamination of samples due to its high adhesion and can be used at -80 to 100 °C. It is ideal for using light-sensitive samples and can be recovered of samples using a pipette without removing films. In addition, it is resistant to organic solvents such as DMSO.

- DMSO-resistant
- Non-sterile
- Working temperature range: -80 ~ 100 °C



### SPL SEAL™ Aluminum Tape

Type	Cat. No.	Material	External Dimensions w x l (mm)	Color	Sterile	Packaging
	<b>96005</b>	Aluminum/silicone	143.00 x 79.00	Silver	-	100



## SPL Lid

SPL Lid universally applicable to all SPL plates, including Cell Culture Plates and Immunoplates. The Lid, made of rigid polystyrene, prevents vaporization and contamination during assay processing, incubation or storage with SPL plates.

- Effective gas exchange lid inner design
- Prevent vaporization and contamination
- All plate type (Cat. No. 35001, 35101)
- 96well plate type (Cat. No. 35096, 35196)



### SPL Lid

Type	Cat. No.	Material	External Dimensions w x l x h (mm)	Plate Type	Sterile	Packaging
	<b>35001</b>	PS	84.50 x 126.50 x 9.00	All	-	25 / 100
	<b>35101</b>	PS	84.50 x 126.50 x 9.00	All	+	25 / 100
	<b>35096</b>	PS	84.90 x 127.10 x 9.00	96	-	25 / 100
	<b>35196</b>	PS	84.90 x 127.10 x 9.00	96	+	25 / 100



# Microbiology

SPL Life Sciences provides products that are feasible to all applications in microbiology, including dishes/plates for solid culture, and flasks for suspension culture. We offer a wide range of culture vessels, i.e., growth area and volume. Some of our products contain grids on the bottom to indicate the precise location of microbiological samples within the device. Also, accessories are available to assist culturing of microorganisms while preventing possible sources of contamination.

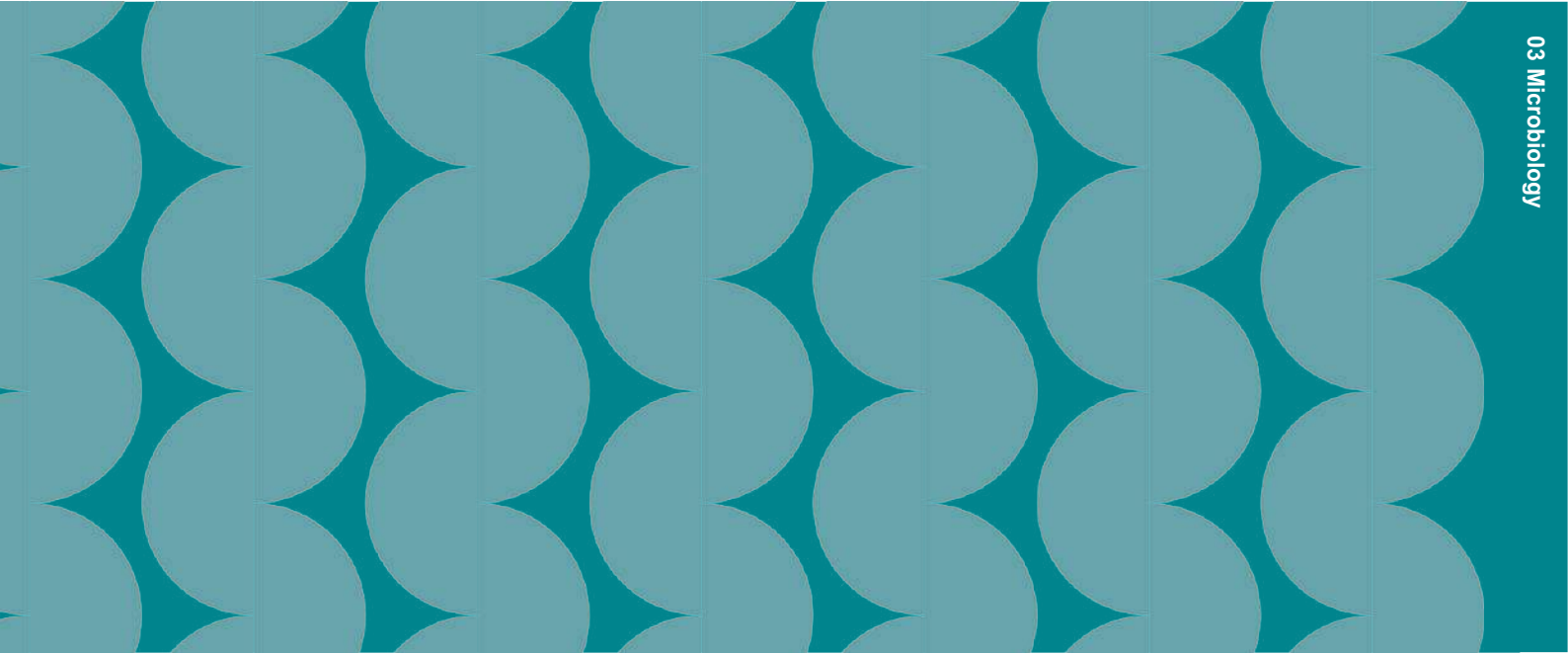
Our products are made of optically clear Polystyrene (PS) and Polycarbonate (PC) to allow precise observation of samples. PC especially has higher physical and chemical resistance. SPL Life Sciences products undergo strict sterilization process to completely remove potential presence of any unwanted microorganisms, and in turn increase the reliability of your experimental results.

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# Microbiology

## 3-1. Dishes & Vessels

### Petri Dish

SPL Life Sciences provides a large range (35 mm to 150 mm) of Petri Dishes for various laboratory purposes. All Petri Dishes are made with high quality polystyrene.

- Crystal grade Polystyrene
- Double packaging with 10090 (Cat. No. 10093)
- External grip for handling (Cat. No. 10035, 10050, 10060, 10101)
- Gridded bottom for counting (Cat. No. 10095, 10096)



#### Petri Dish






Type	Cat. No.	Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	External Grip	Sterile	Packaging
○	<b>10035</b>	35.00 x 10.00	35.00 x 9.60	9.40	+	+	20 / 500
○	<b>10050</b>	50.00 x 15.00 (Non-Air vent)	48.76 x 11.80	19.60	+	+	20 / 500
○	<b>10060</b>	60.00 x 15.00	52.80 x 12.80	21.50	+	+	20 / 500
○	<b>10090</b>	90.00 x 15.00	85.90 x 12.60	57.50	-	+	10 / 500
○	<b>10091</b>	90.00 x 20.00	86.20 x 17.70	58.00	-	+	10 / 200
○	<b>10093</b>	90.00 x 15.00	85.90 x 12.60	57.50	-	+	10 / 500
⊗	<b>10095</b>	90.00 x 15.00 (Grid)	85.72 x 12.64	57.50	-	+	10 / 200
⊕	<b>10096</b>	90.00 x 15.00 (Quadrant Grid)	85.72 x 12.64	57.50	-	+	10 / 500
○	<b>10100</b>	100.00 x 15.00	96.40 x 13.75	72.30	-	+	10 / 500
○	<b>10101</b>	90.00 x 20.00	87.48 x 16.40	60.80	+	+	10 / 200
○	<b>10150</b>	150.00 x 20.00	138.50 x 15.40	148.00	-	+	10 / 120
○	<b>10151</b>	150.00 x 25.00	138.57 x 23.30	148.00	-	+	5 / 120

## Partition Petri Dish

Partition Petri Dishes are designed for experiments that require multiple cells or medium types in a single dish. SPL Life Sciences provides 2-zoned Bi-Petri Dishes, 3-zoned Tri-Petri Dishes, and 4-zoned Quad-Petri Dishes to meet various needs. All products are sterilized and ready to use.



Partition Petri Dish

Type	Cat. No.	Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Partition Height (mm)	Growth Area (cm <sup>2</sup> )	External Grip	Sterile	Packaging
	<b>10092</b>	90.00 x 15.00	85.90 x 12.60	2.70	28.84	-	+	20 / 500
	<b>10192</b>	90.00 x 15.00	85.90 x 12.60	5.00	28.84	-	+	20 / 500
	<b>10292</b>	90.00 x 15.00	85.90 x 12.60	7.00	28.84	-	+	20 / 500
	<b>10094</b>	90.00 x 15.00	85.90 x 12.60	8.00	19.16	-	+	20 / 500
	<b>10097</b>	90.00 x 15.00	85.90 x 12.60	8.00	14.37	-	+	10 / 500

# Microbiology

## RODAC Plate

SPL Life Sciences provides RODAC (Replicate Organism Detection and Counting) Plates for monitoring surface contamination for various purposes. Plates are made with high-quality polystyrene.

- Gridded and convex bottom ensures direct contact occurs between medium surface and the test surface while sampling (Cat. No. 10061)
- Gridded and flat bottom (Cat. No. 10063)



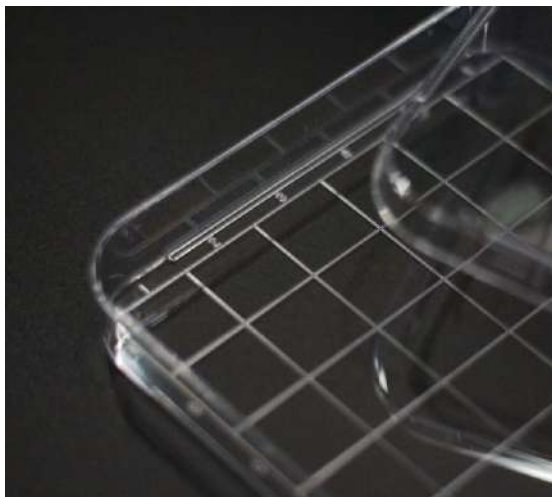
### RODAC Plate

Type	Cat. No.	Bottom Type	Dish Style d x h (mm)	Internal Dimensions d x h (mm)	Growth Area (cm <sup>2</sup> )	External Grip	Sterile	Packaging
	<b>10061</b>	Convex	60.00 x 16.70	57.40 x 9.50	21.50	-	+	20 / 500
	<b>10063</b>	Flat	59.50 x 15.80	54.90 x 8.50	21.50	-	+	20 / 500

## Square Dish

Square Dishes have been widely used for microbiology applications, such as colony tracing and picking. Our Square Dishes with large surface areas and gridded bottoms are useful for tracing the location of individual colony.

- Ideal for colony formation and enhancing plating efficiency
- Useful for colony counting or picking



### Square Dish

Type	Cat. No.	Material	External Dimensions w x l x h (mm)	Internal Dimensions w x l x h (mm)	Growth Area (cm <sup>2</sup> )	Sterile	Packaging
	<b>11125</b>	PS	126.40 x 126.40 x 20.00	118.70 x 118.70 x 11.60	139.00	+	10 / 240
	<b>10245</b>	PS	243.00 x 243.00 x 19.30	227.50 x 227.50 x 13.20	500.00	+	5 / 20
	<b>11245</b>	PS	243.00 x 243.00 x 27.30	227.50 x 227.50 x 21.20	500.00	+	5 / 20




## Tray Plate

The rectangular tray dishes provide larger surface area to ensure easy handling compared to round dishes for microbiological applications. The external dimensions of Tray Plates are identical to those of standard cell culture plates for broader application.



### Tray Plate

Type	Cat. No.	Material	External Dimensions w x l x h (mm)	Well Dimensions w x l x h (mm)	Growth Area (cm <sup>2</sup> )	Sterile	Packaging
	<b>31001</b>	PS	127.94 x 85.50 x 16.25	109.64 x 73.46 x 11.60	80.54	+	10 / 100



## Bacteria Culture Tube

Bacteria Culture Tubes are designed to incubate pathogenic microbial cells. During cultivation of pathogenic microorganisms, researchers can handle the tube while protecting the sample from infectious contamination. Bacteria Culture tubes are sterilized after complete packaging to eliminate contamination. The air through the culture tube can be filtered by 0.22 µm syringe filter on the center of the tube cap.

- Sampling of the culture supernatant can be performed without infection during the incubation of pathogenic microbial cells such as *mycobacterium tuberculosis*, etc.
- Syringe filter is mounted on the cap to minimize contamination from pathogenic microorganisms.
- 15 / 50 ml conical tube size
- Suitable for shaking incubation



### Bacteria Culture Tube

		Material (Tube / Cap / Filter)	Filter	External Dimensions d x h (mm)	Total Vol (ml)	Sterile	Packaging
	<b>59015</b>	PP / HDPE / PVDF	Filter	17.00 x 140.50	15.00	+	5 / 50
	<b>59050</b>	PP / HDPE / MCE	Filter	30.00 x 137.90	50.00	+	5 / 50

# Microbiology

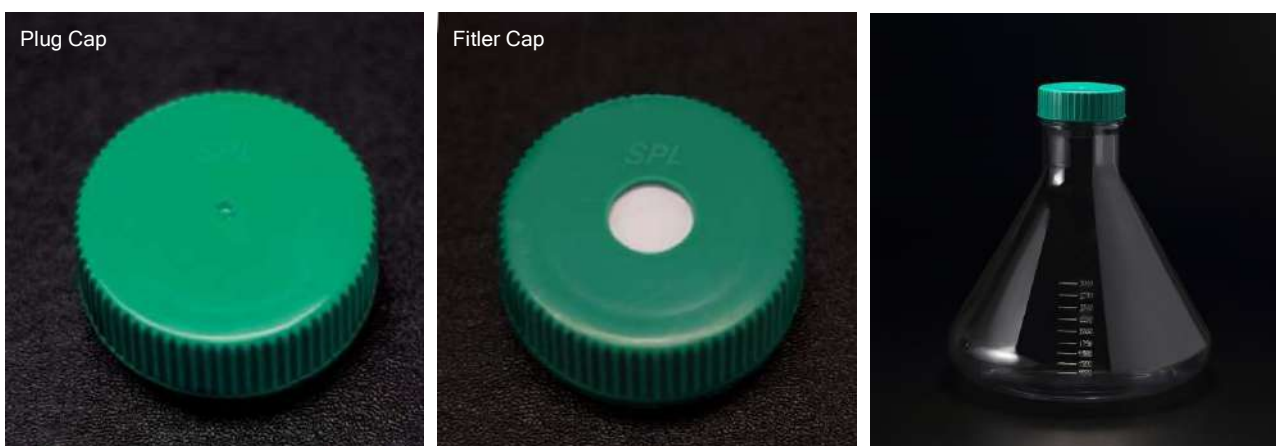
## Erlenmeyer Flask

Erlenmeyer Flasks are most widely used in microbiology for the preparation of microbial suspension culture. The shape of the flask allows stable swirling for effective mixing of solutions. SPL Life Sciences provides Erlenmeyer flask in five different volumes.












- Suitable for suspension cultures (animal cells, bacteria, fungi, plant callus, etc.)
- Require shaking apparatus (optimization of cell seeding density and working volume is recommended, depending on the type of cell)
- Plug & Filter caps are available for all flask types
- Non-treated
- Durable & transparent polycarbonate
- Autoclavable
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



continued on next page



## Erlenmeyer Flask

Type	Cat. No.	Material (Body / Cap)	Cap Type	Bottom Type	Total Vol. (ml)	Sterile	Packaging
	 <b>73250</b>	PC/PP	Plug	Plain	250.00	+	1 / 8
	 <b>74250</b>	PC/PP	Filter	Plain	250.00	+	1 / 8
	 <b>75250</b>	PC/PP	Plug	Plain	250.00	-	1 / 8
	 <b>76250</b>	PC/PP	Filter	Plain	250.00	-	1 / 8
	 <b>73500</b>	PC/PP	Plug	Plain	500.00	+	1 / 8
	 <b>74500</b>	PC/PP	Filter	Plain	500.00	+	1 / 8
	 <b>75500</b>	PC/PP	Plug	Plain	500.00	-	1 / 8
	 <b>76500</b>	PC/PP	Filter	Plain	500.00	-	1 / 8
	 <b>73000</b>	PC/PP	Plug	Plain	1,000.00	+	1 / 4
	 <b>74000</b>	PC/PP	Filter	Plain	1,000.00	+	1 / 4
	 <b>75000</b>	PC/PP	Plug	Plain	1,000.00	-	1 / 4
	 <b>76000</b>	PC/PP	Filter	Plain	1,000.00	-	1 / 4
	 <b>73002</b>	PC/PP	Plug	Plain	2,000.00	+	1 / 6
	 <b>74002</b>	PC/PP	Filter	Plain	2,000.00	+	1 / 6
	 <b>75002</b>	PC/PP	Plug	Plain	2,000.00	-	1 / 6
	 <b>76002</b>	PC/PP	Filter	Plain	2,000.00	-	1 / 6
	 <b>73003</b>	PC/PP	Plug	Plain	3,000.00	+	1 / 4
	 <b>74003</b>	PC/PP	Filter	Plain	3,000.00	+	1 / 4
	 <b>75003</b>	PC/PP	Plug	Plain	3,000.00	-	1 / 4
	 <b>76003</b>	PC/PP	Filter	Plain	3,000.00	-	1 / 4

# Microbiology

## 3-2. Accessories



### Loop & Needle

Disposable Loop and Needle consists of a loop on one side and a needle on the other, used for the inoculation of microorganisms. Two different sizes are available.

- Suitable for microbe inoculation
- Dual purpose: a loop on one end and a needle on the other
- Color coded for sizes (White for 1  $\mu$ l, Blue for 10  $\mu$ l)
- DNase / RNase-free
- Human DNA-free



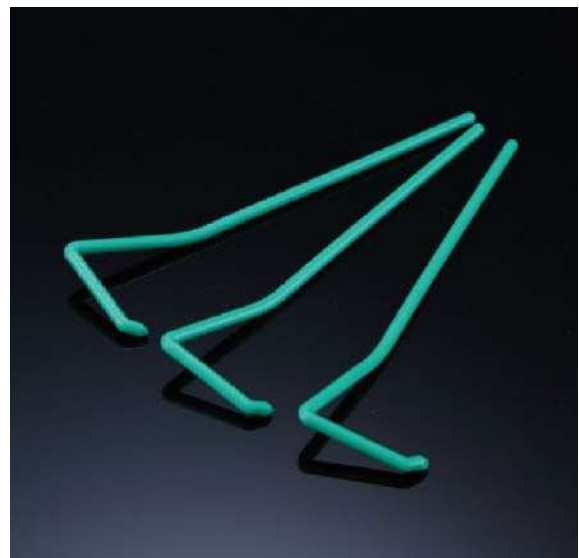
#### Loop & Needle

Type	Cat. No.	Material	Size ( $\mu$ l)	Length (mm)	Sterile	Packaging
	<b>90001</b>	PP	1.00	195.00	+	10 / 500
	<b>90010</b>	PP	10.00	195.00	+	10 / 500

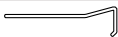
### Spreader

Disposable Spreader is used for spreading microorganisms, which is sterilized before the release.

- Suitable for spreading of microbe samples
- Autoclavable



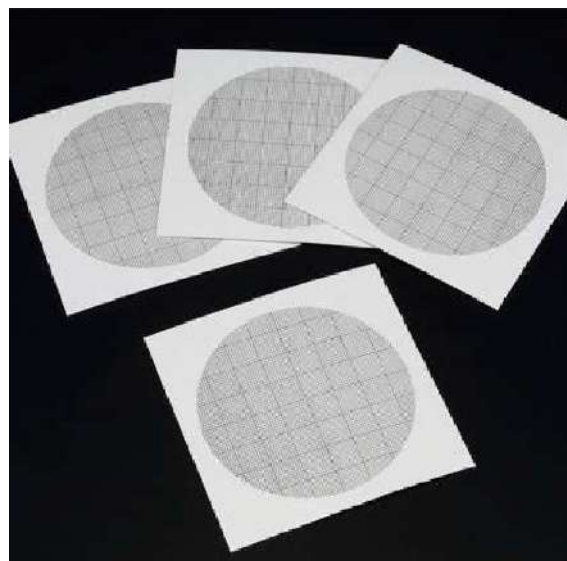
#### Spreader

Type	Cat. No.	Material	Dimensions w x l (mm)	Sterile	Packaging
	<b>90050</b>	PP	37.00 x 143.00	+	10 / 500


## Grid Sticker

SPL Life Sciences has released Grid Stickers as an exclusive accessory for use with petri dish. The sticker is made of transparent label and can be attached swiftly and neatly to the bottom of petri dish. It is designed as 1 mm- and 10 mm- interval grid pattern, and can be applied to various experiments, including colony counting, plant growth measurement, and clear zone measurement for fungal test.

- For 90 - 100 mm Petri dish
- Thickness: 70  $\mu$ m
- Labels remain firmly attached at temp. from 4 to 40 °C



### Grid Sticker

Type	Cat. No.	Material	Dimension (mm)	Major Grid (mm)	Minor Grid (mm)	Packaging
	<b>90100</b>	Tetron	76.25	10.00	1.00	100 / 200

## Antibiotic Disc

Antibiotic Disc is used to determine the susceptibility of bacteria to different antibiotics by paper disc assay. Antibiotic Discs made of cellulose paper have excellent liquid absorption.

- Non-cytotoxic



### Antibiotic Disc

Type	Cat No.	Material	Dimension (mm)	Thickness (mm)	Packaging
	<b>99000</b>	Cellulose	6.00	0.70 ~ 0.80	1,000



# Handling & Storage

Most biological samples and reagents should be stored and maintained in the proper condition. SPL provides handling and storage tools that are durable in all possible conditions.

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# Handling & Storage

## 4-1. Liquid Handling

A small difference in liquid quantity may result in experimental values that are significantly different, and thus precise handling of liquids is crucial to obtaining reliable and reproducible results. SPL Life Sciences is confident in providing high precision, world-leading quality serological pipettes and tips in various configurations.

### Serological Pipette

SPL Serological Pipettes are classified by sample volume. Ascending & descending graduations facilitate the reading of both dispensing and remaining volume.

- Six different volumes
- Color-coded for easy identification
- Various packaging methods
- Cuttingtop Pipette for viscous liquid handling (Cat. No. 91110)
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free









Packaging - Plastic / Plastic



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**Serological Pipette**

Type	Cat. No.	Material	Color Code	Working Vol. (ml)	Sterile	Packaging
<b>Individual Packaging(Paper/Plastic) - Inbox</b>						
	<b>91001</b>	PS	Yellow	1.00	+	1 / 200 / 800
	<b>91002</b>	PS	Green	2.00	+	1 / 150 / 600
	<b>91005</b>	PS	Blue	5.00	+	1 / 100 / 400
	<b>91010</b>	PS	Orange	10.00	+	1 / 100 / 400
	<b>91025</b>	PS	Red	25.00	+	1 / 50 / 200
	<b>91050</b>	PS	Purple	50.00	+	1 / 40 / 160
<b>Bulk Packaging(Paper/Plastic)</b>						
	<b>93001</b>	PS	Yellow	1.00	+	50 / 1,000
	<b>93002</b>	PS	Green	2.00	+	50 / 1,000
	<b>93005</b>	PS	Blue	5.00	+	50 / 500
	<b>93010</b>	PS	Orange	10.00	+	50 / 500

# Handling & Storage

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93025 PS Red 25.00 + 25 / 200



93050 PS Purple 50.00 + 25 / 200

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





Individual Packaging(Paper/Plastic) - Bulk

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# Handling & Storage

	95001	PS	Yellow	1.00	+	1 / 200 / 800
	95002	PS	Green	2.00	+	1 / 150 / 600
	95005	PS	Blue	5.00	+	1 / 100 / 400
	95010	PS	Orange	10.00	+	1 / 100 / 400
	95025	PS	Red	25.00	+	1 / 50 / 200
	95050	PS	Purple	50.00	+	1 / 40 / 160
<b>Bulk Packaging(Plastic/Plastic)</b>						
	95205	PS	Blue	5.00	+	1 / 100 / 400
	95210	PS	Orange	10.00	+	1 / 100 / 400
	95225	PS	Red	25.00	+	1 / 50 / 200
	95250	PS	Purple	50.00	+	1 / 40 / 160
<b>Cuttingtop Pipette</b>						
	91110	PS	Orange	10.00	+	1 / 100 / 400





## Aspiration Pipette

SPL Aspiration Pipettes are useful for rapidly collecting and releasing liquid samples.

- No graduations
- No plugs
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Aspiration Pipette

Type	Cat. No.	Material	Working Vol. (ml)	Sterile	Packaging
	<b>94001</b>	PS	1.00	+	1 / 200 / 800
	<b>94002</b>	PS	2.00	+	1 / 150 / 600
	<b>94005</b>	PS	5.00	+	1 / 100 / 400
	<b>94010</b>	PS	10.00	+	1 / 100 / 400

## Micropipette Tip

SPL Micropipette Tips are classified by sample volume and types. They are designed to fit in wide range of single and multi-channel pipettes.

- Diverse product range
- Excellent compatibility
- Easily distinguished by color
- Reduces chances of making errors
- Extra-long design  
(Cat. No. 92020, 92023, 92021, 92022, 92024)
- Autoclavable
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free























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# Handling & Storage



## Micropipette Tip

Type	Cat. No.	Type	Color	Vol. (µl)	Sterile	Packaging
	<b>92010</b>	Bulk Tip	Clear	0.50 - 10.00	-	1,000 / bag, 40 bags / box
	<b>92200</b>	Bulk Tip	Yellow	20.00 - 200.00	-	1,000 / bag, 20 bags / box
	<b>92000</b>	Bulk Tip	Blue	100.00 - 1,000.00	-	1,000 / bag, 10 bags / box
	<b>92020</b>	Bulk Tip	Clear	100.00 - 1,000.00	-	500 / bag, 20 bags / box
	<b>92013</b>	Tip in Rack	Clear	0.50 - 10.00	+	96 tips / rack, 100 racks / box
	<b>92203</b>	Tip in Rack	Yellow	20.00 - 200.00	+	96 tips / rack, 100 racks / box
	<b>92003</b>	Tip in Rack	Blue	100.00 - 1,000.00	+	96 tips / rack, 60 racks / box
	<b>92023</b>	Tip in Rack	Clear	100.00 - 1,000.00	+	96 tips / rack, 60 racks / box
	<b>92011</b>	Filter Tip in Rack	Clear	0.50 - 10.00	+	96 filter tips / rack, 100 racks / box
	<b>92201</b>	Filter Tip in Rack	Clear	20.00 - 200.00	+	96 filter tips / rack, 100 racks / box
	<b>92001</b>	Filter Tip in Rack	Clear	100.00 - 1,000.00	+	96 filter tips / rack, 60 racks / box
	<b>92021</b>	Filter Tip in Rack	Clear	100.00 - 1,000.00	+	96 filter tips / rack, 60 racks / box
	<b>92012</b>	Refill Tip	Clear	0.50 - 10.00	+	960 tips / pack, 10 packs / box
	<b>92202</b>	Refill Tip	Yellow	20.00 - 200.00	+	960 tips / pack, 10 packs / box
	<b>92002</b>	Refill Tip	Blue	100.00 - 1,000.00	+	480 tips / pack, 10 packs / box
	<b>92022</b>	Refill Tip	Clear	100.00 - 1,000.00	+	576 tips / pack, 10 packs / box
	<b>92014</b>	Rack		0.50 - 10.00	-	100 racks / box
	<b>92204</b>	Rack		20.00 - 200.00	-	100 racks / box
	<b>92004</b>	Rack		100.00 - 1,000.00	-	60 racks / box
	<b>92024</b>	Rack		100.00 - 1,000.00	-	60 racks / box

## Q-Suction 8-Tip


Vacuum suction pumps are generally used to aspirate liquids such as media from cell cultures or supernatant. The Q-Suction 8-Tip fits on the vacuum pump tubing so that it can be used to remove media and solutions from 8 wells simultaneously on the 96 or 384 well plates for ELISA, HLA, Tissue Typing, and other applications.

- Disposable
- Sterile (Cat. No. 92108, 92208)
- Individually packaged (Cat. No. 92108, 92208)

- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Q-Suction 8-Tip

Type	Cat. No.	Material	Dimensions w x l x h (mm)	Sterile	Packaging
	<b>92108</b>	PP	72.90 x 13.70 x 56.10	+	1 / 25
	<b>92208</b>	PP	72.90 x 13.70 x 56.10	+	1 / 50
	<b>92308</b>	PP	72.90 x 13.70 x 56.10	-	50



## Dropper

SPL Droppers are designed for handling of liquid samples and reagents for general research.

- Suitable for rapidly dividing and transporting liquid samples



### Dropper

Type	Cat. No.	Material	Total Length (mm)	Working Vol. (ml)	Total Vol. (ml)	Sterile	Packaging
	<b>410501</b>	PE	136.30	0.30	0.5	-	200 / 12,000
	<b>410502</b>	PE	138.17	1.00	1	-	500 / 9,000



# Handling & Storage

## Blender Bag




SPL Blender Bag is laboratory plasticware designed for use in industrial microbiology labs such as food & beverage, environmental / water testing, etc. A complete range of bags, sterile certified, can be used to the safe and quick preparation of solid samples before biological and chemical analysis.

They fit to all conventional 400 ml lab blenders and are adapted to all samples.

- Flexible and transparent bag compatible with any lab blender
- Non-woven filter for stronger filtration power ( $< 250 \mu\text{m}$ )
- Wire tie for convenient experiments (Cat.No. 97002)
- Disposable
- Non-pyrogenic
- Non-cytotoxic
- DNase/RNase-free
- Human DNA-free



### Blender Bag

Type	Cat. No.	Material	Type	Dimensions (mm)	Working Vol. (ml)	Sterile	Packaging
	<b>97000</b>	PE	Standard	300.00 x 190.00	80.00 - 400.00	+	50 / 500
	<b>97001</b>	PE	Lateral	300.00 x 190.00	80.00 - 400.00	+	50 / 500
	<b>97002</b>	PE	Lateral, Wire	300.00 x 190.00	80.00 - 400.00	+	50 / 500

## 4-2. Tubes

Most biological samples and reagents should be stored and maintained in appropriate conditions depending on the purpose of your experiments. Our products are not solely designed to store your liquid samples, but to provide extra features useful in experiments, such as centrifugation-feasibility and light shielding function. Therefore, choosing appropriate tubes or bottles will allow you to store your liquid samples and conduct experiments accordingly.

### Conical Tube

Conical Tubes are widely used in laboratories for various purposes, including but not limited to storing samples and conducting high-speed centrifugation. SPL Life Sciences provides high-strength, non-toxic conical tubes to meet the demands of customers.

Amber Conical Tubes are suitable for handling and storing light-sensitive samples. Materials used for Amber Conical Tubes significantly decrease light transmission over the visible wavelength spectrum compared to those of clear polypropylene tubes

- Tight sealing screw cap
- External graduations with marking area
- Packed in zipper bags
- Polystyrene (transparent), conical tubes (Cat. No. 51015, 51115, 51150)
- Skirted, self-standing type (Cat. No. 50250)
- For high speed centrifugation (Cat. No. 50040)
- Provided in rack (Cat. No. 50115, 50150, 51150)
- Amber type (Cat. No. 54015, 54115, 54050, 54150)
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free












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# Handling & Storage



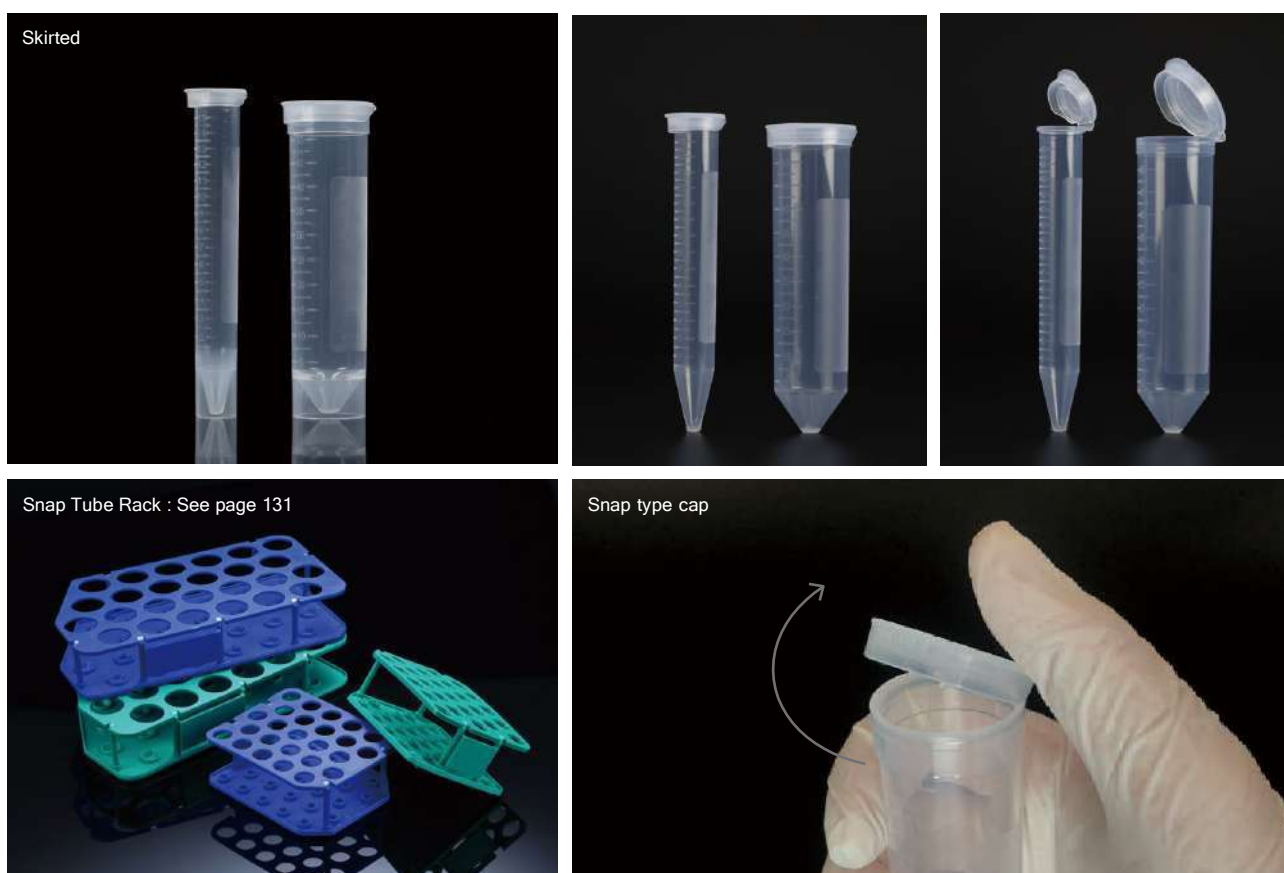
## Conical Tube

Type	Cat. No.	Bottom Type	Material (Tube / Cap)	External Dimensions d x h (mm)	Total Vol. (ml)	RCF Rating	Sterile	Packaging
<b>Conical Tube - In sleeves</b>								
	<b>50015</b>	Conical	PP / HDPE	17.00 x 120.70	15.00	13,000 x g	+	50 in sleeve / 500
	<b>51015</b>	Conical	PS / HDPE	17.00 x 120.70	15.00	3,000 x g	+	50 in sleeve / 500
	<b>50050</b>	Conical	PP / HDPE	30.00 x 116.70	50.00	14,000 x g	+	25 in sleeve / 250
	<b>50515</b>	Skirted	PP / HDPE	17.00 x 120.00	15.00	-	+	50 in sleeve / 500
	<b>50250</b>	Skirted	PP / HDPE	30.00 x 116.00	50.00	-	+	25 in sleeve / 250
	<b>50040</b>	Conical	PP / HDPE	30.00 x 115.00	40.00	35,000 x g	+	10 in sleeve / 100
<b>Conical Tube - In racks</b>								
	<b>50115</b>	Conical	PP / HDPE	17.00 x 120.70	15.00	13,000 x g	+	25 in rack / 500
	<b>51115</b>	Conical	PS / HDPE	17.00 x 120.70	15.00	3,000 x g	+	25 in rack / 500
	<b>50150</b>	Conical	PP / HDPE	30.00 x 115.00	50.00	14,000 x g	+	25 in rack / 250
	<b>51150</b>	Conical	PS / HDPE	30.00 x 115.00	50.00	3,000 x g	+	25 in rack / 250
<b>Amber Conical Tube</b>								
	<b>54015</b>	Conical	PP / HDPE	17.00 x 120.70	15.00	13,000 x g	+	50 in sleeve / 500
	<b>54115</b>	Conical	PP / HDPE	17.00 x 120.70	15.00	13,000 x g	+	50 in sleeve / 200
	<b>54050</b>	Conical	PP / HDPE	30.00 x 115.00	50.00	14,000 x g	+	25 in sleeve / 500
	<b>54150</b>	Conical	PP / HDPE	30.00 x 115.00	50.00	14,000 x g	+	25 in sleeve / 200







## Snap Tube

Snap Tubes are widely used in laboratories for various reasons, from simply storing samples to conducting high-speed centrifugation. Snap Tubes are especially helpful because one can open and close the tube with just one hand.

- Snap cap with tight sealing
- 80% of the nominal volume
- External graduations with marking area
- Skirted, self-standing type (Cat. No. 50415, 50560)
- Provided in snap tube racks (Cat. No. 50315, 50550)
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Snap Tube

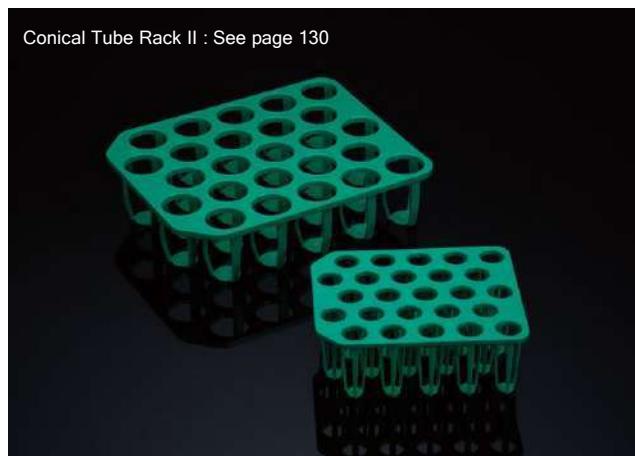
Type	Cat. No.	Bottom Type	Material	External Dimensions d x h (mm)	Total Vol. (ml)	RCF Rating	Sterile	Packaging
<b>Snap Tube - In sleeves</b>								
	50215	Conical	PP	16.00 x 120.00	15.00	5,500 x g	+	50 in sleeve / 500
	50415	Skirted	PP	16.00 x 120.00	15.00	-	+	50 in sleeve / 500
	50450	Conical	PP	28.00 x 116.00	50.00	9,000 x g	+	25 in sleeve / 500
	50650	Skirted	PP	28.00 x 117.00	50.00	-	+	25 in sleeve / 500
<b>Snap Tube - In racks</b>								
	50315	Conical	PP	16.00 x 120.00	15.00	5,500 x g	+	25 in rack / 500
	50550	Conical	PP	28.00 x 116.00	50.00	9,000 x g	+	25 in rack / 300

# Handling & Storage



## 25 ml Conical Tube

25 ml Conical Tube is optimized for storage of samples with a volume of 25 ml or less. The shorter tube compared to the 50 ml tube is easy to use and minimizes sample contamination. It can be used with a 50 ml centrifuge rotor using the dedicated adapter.


- Tight sealing screw cap
- Imprinted external graduations with marking area
- Packed in zipper bags
- 25 ml Tube Adapter for 50 ml rotor (Cat. No. 52025)
- Compatible with Conical Tube Rack II (Cat. No. 52150)
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### 25 ml Conical Tube

Type	Cat. No.	Bottom Type	Material (Tube / Cap)	External Dimensions d x h (mm)	Total Vol. (ml)	RCF Rating	Sterile	Packaging
	<b>50025</b>	Conical	PP / HDPE	30.00 x 77.20	25.00	18,000 x g	+	25 / 200
	<b>50225</b>	Skirted	PP / HDPE	30.00 x 77.20	25.00	-	+	25 / 200

### 25 ml Tube Adapter

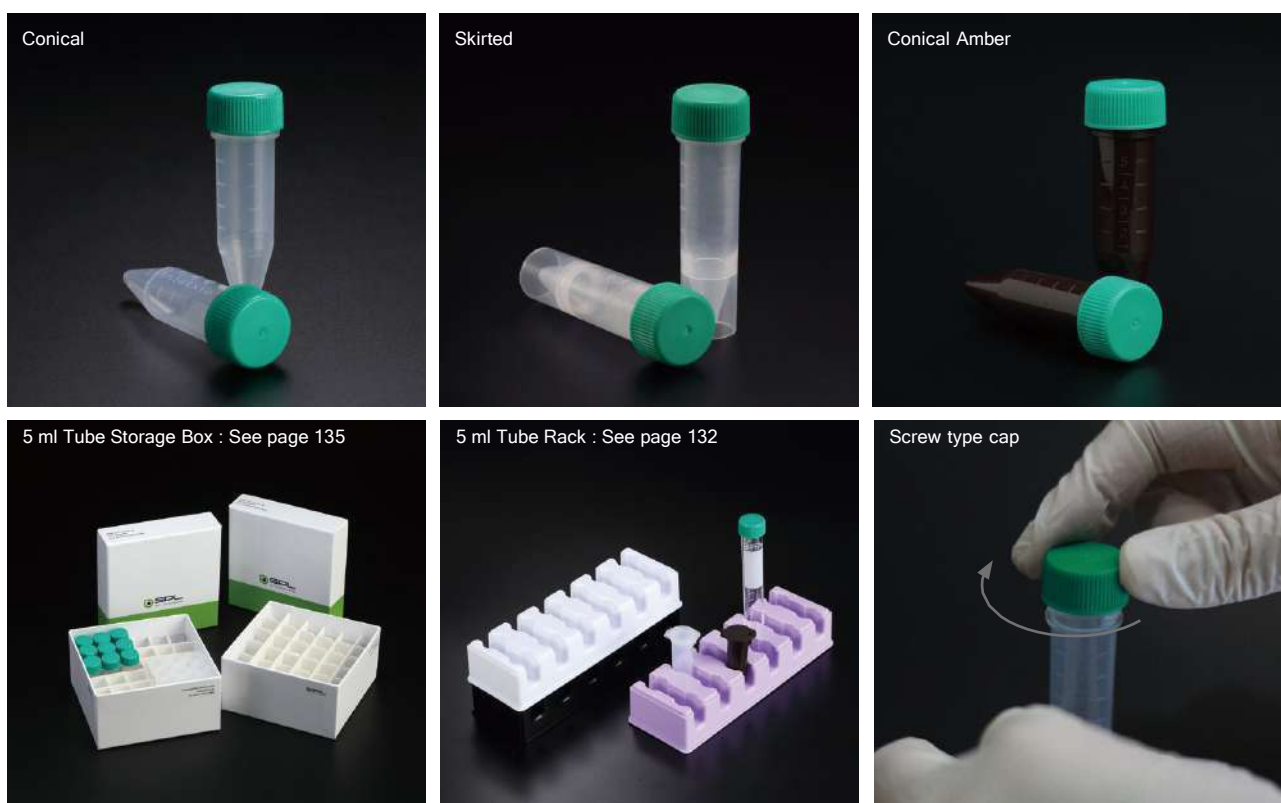
Type	Cat. No.	Material	External Dimensions d x h (mm)	RCF rating	Packaging
	<b>52025</b>	Acetal	28.50 x 52.00	18,000 x g	6






## 5 ml Screw Tube

5 ml Screw Tube is ideal for experiments requiring larger sample volumes, between 1.5 ml and 5 ml. Screw type cap is sophisticatedly designed to prevent possible contamination, and to allow safe handling. 5 ml Screw Tube is applicable to centrifuge independently, and can also be inserted into its adapter for 15 ml rotor.


- Screw cap with tight sealing
- Imprinted external graduations with marking area
- Sterile (Cat. No. 51105, 53105, 56105)
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### 5 ml Screw Tube

Type	Cat. No.	Type	Material (Tube / Cap)	External Dimensions d x h (mm)	Total Vol. (ml)	RCF Rating	Sterile	Packaging
<b>Clear Type</b>								
	<b>51005</b>	Conical	PP / HDPE	16.00 x 66.00	5.00	25,000 x g	-	100 in sleeve / 200
	<b>51105</b>	Conical	PP / HDPE	16.00 x 66.00	5.00	25,000 x g	+	100 in sleeve / 200
	<b>53005</b>	Skirted	PP / HDPE	16.00 x 69.10	5.00	-	-	100 in sleeve / 200
	<b>53105</b>	Skirted	PP / HDPE	16.00 x 69.10	5.00	-	+	100 in sleeve / 200
<b>Amber Type</b>								
	<b>56005</b>	Conical	PP / HDPE	16.00 x 66.00	5.00	25,000 x g	-	100 in sleeve / 200
	<b>56105</b>	Conical	PP / HDPE	16.00 x 66.00	5.00	25,000 x g	+	100 in sleeve / 200

### 5 ml Snap Tube Adapter

Type	Cat. No.	Material	External Dimensions d x h (mm)	RCF rating	Packaging
	<b>52005</b>	Acetal	16.60 x 78.24	25,000 x g	10

# Handling & Storage

## 5 ml Snap Tube

5 ml Snap Tubes are widely used in laboratories for multiple purposes, from storage of samples to high speed centrifugation. Snap Tubes can assist users during experiments by enabling easy one-hand opening and closing of the tubes by providing snap type cap.

Amber 5 ml Snap Tubes are suitable for handling and storing light-sensitive samples. Materials used for Amber 5 ml Snap Tubes significantly decrease light transmission over the visible wavelength spectrum compared to those of clear polypropylene tubes

- Snap cap with tight sealing
- External graduations with marking area
- Sterile (Cat. No. 50105, 55105, 54105)
- Skirted (Cat. No. 55005, 55105)
- Amber type (Cat. No. 54005, 54105)
- 5 ml Snap Tube Adapter for 15 ml rotor (Cat. No. 52005)
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free






5 ml Snap Tube Adapter : See page 151




5 ml Tube Rack : See page 132

### 5 ml Snap Tube

Type	Cat. No.	Bottom Type	Material	External Dimensions d x h (mm)	Total Vol. (ml)	RCF Rating	Sterile	Packaging
<b>Clear Type</b>								
	<b>50005</b>	Conical	PP	20.00 x 62.00	5.00	25,000 x g	-	100 in sleeve / 200
	<b>50105</b>	Conical	PP	20.00 x 62.00	5.00	25,000 x g	+	100 in sleeve / 200
	<b>55005</b>	Skirted	PP	20.00 x 63.30	5.00	-	-	100 in sleeve / 200
	<b>55105</b>	Skirted	PP	20.00 x 63.30	5.00	-	+	100 in sleeve / 200
<b>Amber Type</b>								
	<b>54005</b>	Conical	PP	20.00 x 62.00	5.00	25,000 x g	-	100 in sleeve / 200
	<b>54105</b>	Conical	PP	20.00 x 62.00	5.00	25,000 x g	+	100 in sleeve / 200

### 5 ml Snap Tube Adapter

Type	Cat. No.	Material	External Dimensions d x h (mm)	RCF rating	Packaging
	<b>52005</b>	Acetal	16.60 x 78.24	25,000 x g	10



## Septum Tube

SPL Life Sciences provides a new type of Conical Tube including highly resilient silicone septum in the center of the cap. Septum Tube is effective in completely blocking external contaminants because it is not necessary to open the cap to handle the sample. Silicone septum with PTFE coating is highly resistant to various solvents and fully recovers even repeated use of syringes.

- Tight sealing screw cap
- Silicone septum with PTFE coating
- External graduations with marking area
- Provided in rack
- Packed in zipper bags
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Septum Tube

Type	Cat. No.	Material (Tube / Cap)	Septum Material	External Dimensions d x h (mm)	Total Vol. (ml)	RCF Rating	Sterile	Packaging
	<b>50715</b>	PP / HDPE	Silicone / PTFE	17.00 x 120.00	15.00	13,000 x g	+	25 in rack
	<b>50750</b>	PP / HDPE	Silicone / PTFE	30.00 x 115.00	50.00	14,000 x g	+	25 in rack

# Handling & Storage




## Test Tube

SPL Life Sciences provides a wide range of Test Tubes to meet various demands. Tubes are differentiated by volume, material, and sterilization method.

- Internal graduations
- Dual-position snap cap for easy handling
- No cap, non-sterile, for flow cytometry (Cat. No. 40205)
- Sterilized by E.O. gas (Cat. No. 40005, 40014, 41005, 41014)
- Irradiated by E-beam (Cat. No. 40105, 42105, 40114, 42114)
- Individually wrapped (Cat. No. 42105, 42114)
- Translucent polypropylene tubes with high chemical and thermal stability (Cat. No. 41005, 41014)
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



Test Tube

Type	Cat. No.	Material (Tube / Cap)	Total Vol. (ml)	External Dimensions d x h (mm)	RCF Rating	Sterile	Packaging
	40005	PS / LDPE	5.00	12.00 x 75.00	1,400 x g	E.O.	25 / 500
	40105	PS / LDPE	5.00	12.00 x 75.00	1,400 x g	E-Beam	25 / 500
	42105	PS / LDPE	5.00	12.00 x 75.00	1,400 x g	E-Beam	1 / 500
	41005	PP / LDPE	5.00	12.00 x 75.00	3,000 x g	E.O.	25 / 500
	40205	PS	5.00	12.00 x 75.00	1,400 x g	-	100 / 1,000
	40014	PS / LDPE	14.00	17.00 x 95.40	1,400 x g	E.O.	25 / 500
	40114	PS / LDPE	14.00	17.00 x 95.40	1,400 x g	E-Beam	25 / 500
	42114	PS / LDPE	14.00	17.00 x 95.40	1,400 x g	E-Beam	1 / 500
	41014	PP / LDPE	14.00	17.00 x 95.40	3,000 x g	E.O.	25 / 500





## Micro Vial

Micro Vial is designed for the storage and transportation of biological material. Every screw cap has silicone O-ring seal to ensure leak proof, providing a smooth and uniform inner surface, thus reducing the risk of contamination.

- With attached cap (Cat. No. 45115)
- With unattached cap (Cat. No. 45015, 45002)
- Without O-ring (Cat. No. 45402)



### Micro Vial

Type	Cat. No.	Total Vol. (ml)	Material (Tube / Cap)	Cap Color	Bottom Type	Attached Cap	O-ring	Packaging
	<b>45015</b>	1.50	PP / HDPE	Green	Skirted	-	+	500 / 2,000
	<b>45115</b>	1.50	PP / HDPE	Green	Skirted	+	+	500 / 2,000
	<b>45002</b>	2.00	PP / HDPE	Green	Skirted	-	+	500 / 2,000
	<b>45402</b>	2.00	PP / PP	Clear	Skirted	-	-	500 / 2,000



# Handling & Storage





## Reinforced Tube

Reinforced Tubes are designed for Beads Beater Homogenizer as well as the storage and transportation of biological material. They are produced with high quality Polypropylene to meet the demands of high durability. In addition, Silicone O-rings are inserted into caps to prevent leakage. Reinforced Tube has two bottom types, skirted and non-skirted, and can be selected depending on the purpose.

- Autoclavable
- Non - pyrogenic
- Non - cytotoxic
- DNase / RNase - free
- Human DNA - free



Reinforced Tube

Type	Cat. No.	Total Vol. (ml)	Material (Tube / Cap)	Bottom Type	RCF rating	Sterile	Packaging
	<b>47020</b>	2.00	PP / HDPE	Skirted	-	+	250 / 500
	<b>47120</b>	2.00	PP / HDPE	Skirted	-	-	250 / 500
	<b>47220</b>	2.00	PP / HDPE	Non-Skirted	22,000 x g	+	250 / 500
	<b>47320</b>	2.00	PP / HDPE	Non-Skirted	22,000 x g	-	250 / 500


## 250 ml Conical Tube

250 ml Conical tube can be used in storage of samples and centrifugation of large volume samples, between 50 ml to 250 ml. The product is provided with a dedicated Styrofoam rack for user convenience.

- Tight sealing screw cap
- External graduations with marking area
- Packed in sleeves
- Polypropylene conical tubes
- Provided with a Styrofoam rack
- Sterile
- Non pyrogenic
- Non-cytotoxic
- DNase/RNase - free
- Human DNA - free



### 250 ml Conical Tube

Type	Cat. No.	Material (Tube / Cap)	External Dimension (mm)	Total Volume (ml)	RCF Rating	Sterile	Packaging
	<b>558250</b>	PP / PP	60.00 x 148.00	250.00	5,000 x g	+	6 / 54

# Handling & Storage

## 1.5 ml Strip Tube


1.5 ml Strip Tube, available as six microcentrifuge tubes per strip, is ideal for any large-scale experiments. The strips can be cut into individual tubes, and are universally applicable to centrifugation\*.

- Snap cap with tight sealing
- External graduations with marking area
- Central part in cap enough to be penetrated by syringe needle
- Autoclavable

- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### 1.5 ml Strip Tube

Type	Cat. No.	Material	Color	Total Vol. (ml)	RCF Rating	Sterile	Packaging
	<b>60615</b>	PP	Clear	1.50	30,000 x g	-	80 / 800
	<b>60715</b>	PP	Clear	1.50	30,000 x g	+	40 / 800

\* 1.5 ml Strip Tube may be restrictedly compatible with rotors, depending on the types of rotor being used for centrifugation. Compatibility test is highly recommended. (Compatible with most 24-, 30-hole rotors, and few 18-hole rotors)

## Protein Safe



The surface of common plastic tubes can occur protein adsorption, resulting in fatal losses, which can affect experimental results. Protein Safe, made from a special polymer, prevents loss of protein in solution by minimizing adsorption on inner surface of tubes. Thus, it shows excellent recovery even with extremely low concentration protein samples.

- Smooth opening and tight sealing
- Imprinted external graduations with marking area
- Central part in cap enough to be penetrated by syringe needle

- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Protein Safe

Type	Cat. No.	Material	Total Vol. (ml)	RCF Rating	Sterile	Packaging
	<b>65015</b>	PP	1.50	30,000 x g	-	50 / 100
	<b>65020</b>	PP	2.00	20,000 x g	-	50 / 100

## Microcentrifuge Tube

Smooth opening and tight sealing are unique features of SPL's Microcentrifuge Tubes. Microcentrifuge Tubes are produced with high-quality, high-chemical resistance, and high-strength polypropylene to fulfill various needs of applications in molecular biology.

SPL microcentrifuge tubes come in three sizes: 1.5 ml, 1.7 ml, and 2.0 ml. These tubes not only differ in size but each tube also serves a distinct purpose. Please refer to the specific descriptions below to select the most appropriate microcentrifuge tubes for your use.

- External graduations with marking area
- Autoclavable
- Snap cap opens smoothly but seals tight
- High chemical resistance
- Piercing port in the center of the cap is penetrable by syringe needles (1.5 ml, 2.0 ml)
- Has excellent visibility (1.7 ml)
- 5 colors : Blue, Green, Orange, Pink, Yellow (Cat. No. 61015, 61017)
- Amber Max offers more powerful light shielding. (Cat. No. 64015, 64020)
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



continued on next page

# Handling & Storage



## Microcentrifuge Tube

Type	Cat. No.	Material	Color	Total Vol. (ml)	RCF Rating	Sterile	Packaging
	60015	PP	Clear	1.50	30,000 x g	-	500 / 1,000 / 5,000
	60115	PP	Clear	1.50	30,000 x g	+	250 / 1,000 / 5,000
	61015	PP	5 colors	1.50	30,000 x g	-	200 / 1,000 / 5,000
	62015	PP	Amber	1.50	30,000 x g	-	200 / 1,000 / 5,000
	64015	PP	Amber Max	1.50	30,000 x g	-	200 / 1,000
	60017	PP	Clear	1.70	25,000 x g	-	500 / 1,000 / 5,000
	60117	PP	Clear	1.70	25,000 x g	+	250 / 1,000 / 5,000
	61017	PP	5 colors	1.70	25,000 x g	-	200 / 1,000 / 5,000
	62017	PP	Amber	1.70	25,000 x g	-	500 / 1,000 / 5,000
	61020	PP	Clear	2.00	20,000 x g	-	500 / 1,000 / 5,000
	61120	PP	Clear	2.00	20,000 x g	+	250 / 1,000 / 5,000
	64020	PP	Amber Max	2.00	20,000 x g	-	200 / 1,000



## 4-3. Racks & Boxes

SPL is also dedicated to developing and manufacturing various products for sample storage.



### Conical Tube Rack I

SPL Conical Tube Rack I is economical and alternative solution for stainless wire racks or other plastic racks. Racks are uniquely designed for handling and storing 25 conical tubes (i.e., 15 ml or 50 ml).

- Excellent stackability
- Numeric labeling



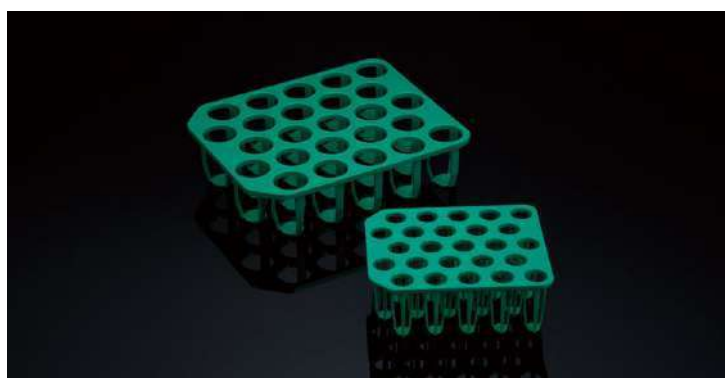
#### Conical Tube Rack I

Type	Cat. No.	Material	Description	Packaging
	52015	PP	25 Holes for 15 ml tubes	20
	52050	PP	25 Holes for 50 ml tubes	20



### Conical Tube Rack II

SPL Conical Tube Rack II is economical and alternative solution for stainless wire racks or other plastic racks. Racks are ergonomically designed for easier handling and storing 25 conical tubes (i.e., 15 or 50 ml).

- Numeric labeling



#### Conical Tube Rack II

Type	Cat. No.	Material	Description	Packaging
	52115	PP	25 Holes for 15 ml tubes	20
	52150	PP	25 Holes for 50 ml tubes	20





## Snap Tube Rack

SPL Snap Tube Racks are designed identical to SPL Conical Tube Racks, with the exception of inner dimensions and enhanced structural integrity. The racks are uniquely designed for handling and storage of 25 snap tubes (i.e., 15 ml or 50 ml).

- Excellent stackability
- Numeric labeling
- 1 colors: Blue



### Snap Tube Rack

Type	Cat. No.	Material	Description	Packaging
	<b>53015</b>	PP	25 Holes for 5 & 15 ml tubes	50
	<b>53050</b>	PP	25 Holes for 50 ml tubes	20


## 2well Conical Tube Rack

2well Conical Tube Racks maximize space with the flexibility to hold two type tubes (15 / 50 ml) in one configurable rack and they are also suitable for simple handling such as weighing.

- Hold 1 x 50 ml and 1 x 15 ml Conical Tubes
- Easy to grip by hand
- Slides smoothly across the bench top
- Assorted colors: Black, White, Lime, and Green



### 2well Conical Tube Rack

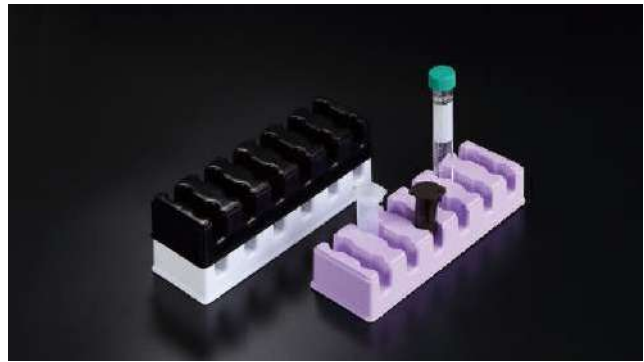
Type	Cat. No.	Material	Color	Description	Packaging
	<b>52202</b>	PP	4 colors	2 Holes for 15 & 50 ml tubes	20

# Handling & Storage


## 5 ml Tube Rack

SPL 5 ml Tube Rack, which is designed for 5 ml centrifuge tubes, is specialized for easy viewing of tube contents. 5 ml Tube Rack is made of Polypropylene (PP) and provides high level of chemical and heat resistance. This rack will be also suitable to accommodate other size tubes with 15 ml Conical Tubes. SPL 5 ml Tube Rack stores up to 12 tubes for bench-top use, storage or transport of samples.

- Stores tubes in compact arrangement (2 x 6 array)
- Numeric positions for easy sample identification
- Assorted colors (White, Black, Purple)
- Autoclavable
- Stackable
- 5 ml Tube Rack is only available for conical type tubes (not for skirted)



### 5 ml Tube Rack

Type	Cat. No.	Material	Description	Packaging
	61012	PP	2 x 6 (12 Holes)	12

## Stacker Microtube Rack

SPL Stacker Microtube Racks are uniquely designed for handling and storage of Microcentrifuge Tubes.

- Stackable feature for space saving
- 5 colors: Pink, Yellow, Green, Orange, Blue
- Non-autoclavable



### Stacker Microtube Rack

Type	Cat. No.	Material	Description	Packaging
	61048	ABS	6 x 8 (48 Holes)	10

## Microtube Rack

SPL Microtube Racks are designed for handling and storage of Microcentrifuge Tubes.

- Numeric labeling
- 5 colors: White, Blue, Green, Red, Purple
- Autoclavable



### Microtube Rack

Type	Cat. No.	Material	Description	Packaging
	61080	PP	5 x 16 (80 Holes)	25

## Standing Microtube Rack

1.5 ml arch-shaped Strip Tube Rack not only facilitates efficient storage and handling but also ensures test samples are easily observable and directly vortexing on the rack.

- Stackable feature for space saving
- Colors: Green
- Non-autoclavable



### Standing Microtube Rack

Type	Cat. No.	Material	Description	Packaging
	61024	PS	6 x 4 (24 Holes)	10

## PCR Tube Rack

SPL PCR Tube Racks are specially designed to handle and store PCR Tubes or Strips.

- 5 colors: White, Blue, Green, Orange, Purple
- Autoclavable



### PCR Tube Rack

Type	Cat. No.	Material	Description	Packaging
	80096	PP	8 x 12 (96 Holes)	10



# Handling & Storage





## Storage Box

SPL Storage Boxes are designed to hold microtubes and vials in a wide temperature ranges. Two different sizes are available for various purposes.

- Temperature range: -70 ~ 140 °C
- 5 colors: Blue, Green, Orange, Pink, Purple (Cat. No. 81100)
- Hinged lid type (Cat. No. 80100, 81100, 84100)
- Autoclavable
- Amber type (Cat. No. 84100)



### Storage Box

Type	Cat. No.	Material	Description	Feature	Packaging
	<b>80100</b>	PP	Natural Color	10 x 10 (100 Holes)	30
	<b>81100</b>	PP	5 Colors	10 x 10 (100 Holes)	30
	<b>84100</b>	PP	Amber	10 x 10 (100 Holes)	6
	<b>81081</b>	PP	Natural Color	9 x 9 (81 Holes)	40

## Conical Tube Storage Box



Conical Tube Storage Box can save the space when using refrigerators and deep freezers.

- Temperature range: -80 °C
- Moisture repellent coating Cardboard Box
- 50 ml Conical Tubes, Snap Tubes are available (Cat. No. 80116)
- 15 ml Conical Tubes, Snap Tubes are available (Cat. No. 80136)



continued on next page

**Conical Tube Storage Box**


Type	Cat. No.	Material	Feature	Description	Packaging
	<b>80116</b>	Cardboard	50 ml Tubes	4 x 4 (16 Holes)	12
	<b>80136</b>	Cardboard	15 ml Tubes	6 x 6 (36 Holes)	12

**25 ml Tube Storage Box**

25 ml Tube Storage Box can save the space when using refrigerators and deep freezers.

- Temperature range: -80 °C RT
- Moisture repellent coating Cardboard Box

**25 ml Tube Storage Box**


Type	Cat. No.	Material	Feature	Description	Packaging
	<b>80216</b>	Cardboard	25 ml Tubes	4 x 4 (16 Holes)	8

**5 ml Tube Storage Box**

5 ml Tube Storage Box can save the space when using refrigerators and deep freezers.

- Temperature range: -80 °C RT
- Moisture repellent coating Cardboard Box

**5 ml Tube Storage Box**

Type	Cat. No.	Material	Feature	Description	Packaging
	<b>80236</b>	Cardboard	5 ml Tubes	6 x 6 (36 Holes)	8

# Handling & Storage

## 4-4. Bottles

Most biological samples and reagents should be stored and maintained in appropriate conditions depending on the purpose of your experiments. Our products are not solely designed to store your liquid samples, but to provide extra features useful in experiments, such as centrifugation-feasibility and light shielding function. Therefore, choosing appropriate tubes or bottles will allow you store your liquid samples and conduct experiments accordingly.



## Wide-Mouth Bottle (HDPE)

SPL Bottles are durable bottles for storing and handling liquid / solid forms of samples and chemicals. Various sizes are available.

- Volumes range from 20 to 1,000 ml
- 250 ml bottles are applicable for centrifugation (RCF 4,000 x g)
- Caution: Not designed for use under full vacuum or high pressure (Pressure limit: -12.5 cmHg at room temp.)



### Wide-Mouth Bottle (HDPE)

Type	Cat. No.	Material (Bottle / Cap)	Total Vol. (ml)	Closure Size (mm)	Packaging
	<b>59020</b>	HDPE / PP	20.00	32.00	1,000
	<b>59030</b>	HDPE / PP	30.00	32.00	1,000
	<b>59031</b>	HDPE / PP	30.00	32.00	12 / 72
	<b>59060</b>	HDPE / PP	60.00	32.00	1,000
	<b>59125</b>	HDPE / PP	125.00	42.50	500
	<b>59250</b>	HDPE / PP	250.00	46.20	72
	<b>59500</b>	HDPE / PP	500.00	57.20	48
	<b>59000</b>	HDPE / PP	1,000.00	66.00	6 / 24

# Handling & Storage








## Wide-Mouth Bottle (Amber)

SPL Bottles are durable bottles for storing and handling liquid / solid forms of samples and chemicals. Various sizes are available.

- Useful for light-sensitive materials
- Volumes range from 20 to 1,000 ml
- 250 ml bottles are applicable for centrifugation (RCF 4,000 x g)
- Caution: Not designed for use under full vacuum or high pressure (Pressure limit: -12.5 cmHg at room temp.)



### Wide-Mouth Bottle (Amber)

Type	Cat. No.	Material (Bottle / Cap)	Total Vol. (ml)	Closure Size (mm)	Packaging
	<b>57020</b>	HDPE / PP	20.00	32.00	1,000
	<b>57030</b>	HDPE / PP	30.00	32.00	1,000
	<b>57060</b>	HDPE / PP	60.00	32.00	1,000
	<b>57125</b>	HDPE / PP	125.00	42.50	500
	<b>57250</b>	HDPE / PP	250.00	46.20	72
	<b>57500</b>	HDPE / PP	500.00	57.20	48
	<b>57000</b>	HDPE / PP	1,000.00	66.00	6 / 24

## Wide-Mouth Bottle (PP)

SPL Bottles are durable bottles for storing and handling liquid / solid forms of samples and chemicals. Various sizes are available.

- Volumes range from 5 to 1,000 ml
- 250 ml bottles are applicable for centrifugation (RCF 4,000 x g)
- Colored caps available for 5 ml bottles: Blue, Green, Red, Yellow (Cat. No. 58005)
- Autoclavable
- Caution: Not designed for use under full vacuum or high pressure (Pressure limit: -12.5 cmHg at room temp.)



### Wide-Mouth Bottle (PP)

Type	Cat. No.	Material (Bottle / Cap)	Total Vol. (ml)	Closure Size (mm)	Packaging
	<b>58005</b>	PP / PP	5.00	18.00	1,000
	<b>58020</b>	PP / PP	20.00	32.00	1,000
	<b>58030</b>	PP / PP	30.00	32.00	1,000
	<b>58031</b>	PP / PP	30.00	32.00	12 / 72
	<b>58060</b>	PP / PP	60.00	32.00	1,000
	<b>58125</b>	PP / PP	125.00	42.50	500
	<b>58250</b>	PP / PP	250.00	46.20	72
	<b>58500</b>	PP / PP	500.00	57.20	48
	<b>58000</b>	PP / PP	1,000.00	66.00	6 / 24



# Handling & Storage

## Media Bottle

SPL Life Sciences media bottles, composed of high-strength plastic material, are intended for storing and transporting general reagents and cell culture reagents. The square-shaped bottles are designed to maximize space saving, durability, strength, and clarity.







The bottles are available as follow: 60 ml, 125 ml, 250 ml, 500 ml, and 1,000 ml.

They are shrink-wrapped in a double-walled corrugated paper boxes and thoroughly sterilized for best quality.

- Molded-in graduation scales
- Shrink-wrap tray modules
- Non-pyrogenic
- Non-cytotoxic
- Non-hemolytic
- DNase / RNase-free
- Human DNA-free



### Media Bottle

Type	Cat. No.	Material (Bottle / Cap)	Total Vol. (ml)	Sterile	Packaging
	<b>56060</b>	PET / HDPE	60.00	+	25 / 200
	<b>56061</b>	PETG / HDPE	60.00	+	25 / 200
	<b>56125</b>	PET / HDPE	125.00	+	24 / 96
	<b>56250</b>	PET / HDPE	250.00	+	30 / 60
	<b>56500</b>	PET / HDPE	500.00	+	24 / 48
	<b>56000</b>	PET / HDPE	1,000.00	+	12 / 24







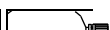

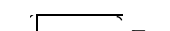
## Narrow-Mouth Bottle (HDPE)

SPL Narrow-Mouth Bottles are durable bottles for storing and handling liquid / solid forms of samples and chemicals. Various sizes are available.

- Volumes range from 4 to 1,000 ml
- Caution: Not designed for use under full vacuum or high pressure (Pressure limit: -12.5 cmHg at room temp.)



### Narrow-Mouth Bottle (HDPE)

Type	Cat. No.	Material (Bottle / Cap)	Total Vol. (ml)	Packaging
	<b>516001</b>	HDPE / PP	4.00	12 / 72
	<b>516002</b>	HDPE / PP	8.00	12 / 72
	<b>516003</b>	HDPE / PP	15.00	12 / 72
	<b>516004</b>	HDPE / PP	30.00	12 / 72
	<b>516005</b>	HDPE / PP	60.00	12 / 72
	<b>516006</b>	HDPE / PP	125.00	12 / 72
	<b>516007</b>	HDPE / PP	250.00	12 / 72
	<b>516008</b>	HDPE / PP	500.00	12 / 48
	<b>516009</b>	HDPE / PP	1,000.00	6 / 24

# Handling & Storage










## Narrow-Mouth Bottle (Amber)

SPL Narrow-Mouth Bottles are durable bottles for storing and handling liquid / solid forms of samples and chemicals. Various sizes are available.

- Useful for light-sensitive materials
- Volumes range from 4 to 1,000 ml
- Caution: Not designed for use under full vacuum or high pressure (Pressure limit: -12.5 cmHg at room temp.)



### Narrow-Mouth Bottle (Amber)

Type	Cat. No.	Material (Bottle / Cap)	Total Vol. (ml)	Packaging
	<b>516010</b>	HDPE / PP	4.00	12 / 72
	<b>516011</b>	HDPE / PP	8.00	12 / 72
	<b>516012</b>	HDPE / PP	15.00	12 / 72
	<b>516013</b>	HDPE / PP	30.00	12 / 72
	<b>516014</b>	HDPE / PP	60.00	12 / 72
	<b>516015</b>	HDPE / PP	125.00	12 / 72
	<b>516016</b>	HDPE / PP	250.00	12 / 72
	<b>516017</b>	HDPE / PP	500.00	12 / 48
	<b>516018</b>	HDPE / PP	1,000.00	6 / 24







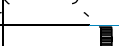



# Narrow-Mouth Bottle (PP)

SPL Narrow-Mouth Bottles are durable bottles for storing and handling liquid / solid forms of samples and chemicals. Various sizes are available.

- Volumes range from 4 to 2,000 ml
- Autoclavable



## Narrow-Mouth Bottle (PP)

Type	Material (Bottle / Cap)	Total Vol. (ml)	Packaging
	PP / PP	4.00	12 / 72
	PP / PP	8.00	12 / 72
	PP / PP	15.00	12 / 72
	PP / PP	30.00	12 / 72
	PP / PP	60.00	12 / 72
	PP / PP	125.00	12 / 72
	PP / PP	250.00	12 / 72
	PP / PP	500.00	12 / 48
	PP / PP	1,000.00	6 / 24
	PP / PP	2,000.00	1 / 6

# Handling & Storage



## Biotainer

The Biotainer is manufactured using transparent Polycarbonate and can store large volumes of samples. Various samples can be stored due to the high durability of the Biotainer and can be used at  $-80 \sim 100^{\circ}\text{C}$ . And silicon pad is inserted inside of the cap to effectively prevent leakage.

- Autoclavable
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free
- Human DNA-free



### Biotainer

Type	Cat. No.	Material (Bottle / Cap)	Diameter x Height (mm)	Color	Total Vol. (ml)	Sterile	Packaging
	<b>562000</b>	PC / PP	110.00 x 268.00	Clear	2,000.00	+	4 / 20
	<b>565000</b>	PC / PP	166.00 x 299.00	Clear	5,000.00	+	1 / 6




## Storage Bottle

Storage Bottle can be stored various types of aqueous solutions, such as media, buffer and etc. Ergonomically designed bottle is easy to hold with one hand that making handling easier.

- 250 ml, 500 ml Storage Bottle can be used with Bottle Top Filter (Cat. No. 508150/508151/508500/508501)
- 1,000 ml Storage Bottle (Cat. No. 551000): For storage use only
- Non-pyrogenic
- Non-cytotoxic
- Non-Hemolytic
- DNase / RNase-free
- Human DNA-free



### Storage Bottle

Type	Cat. No.	Material (Bottle / Cap)	Total Vol. (ml)	Sterile	Packaging
	<b>550250</b>	PS / PP	250.00	+	2 / 24
	<b>550500</b>	PS / PP	500.00	+	2 / 24
	<b>551000</b>	PS / PP	1,000.00	+	2 / 24


## Port Cap

The product is individually packaged and can be ready to use in an aseptic environment. By connecting a silicone tube to the port, liquid can be transported in a closed system. The inside of the cap is designed to be GL45, so it is applicable to Glass Bottles or SPL Storage Bottles.

- Easy Silicone Tube insertion
- Available Silicone Tube internal diameter (I.D): 6.0 ~ 9.0 mm
- Simplified transfer of liquids within closed and sterile systems
- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase - free
- Human DNA - free



### Port Cap

Type	Cat. No.	Material	Port	Closure Size	Sterile	Packaging
	99001	PP	2	GL45	+	1 / 10



# Handling & Storage

## 4-5. Storage & Accessories

SPL is also dedicated to developing and manufacturing various products for sample storage.

### Deep Well Plate




SPL Deep Well Plates are suitable for various experiments in the field of biology such as HTS applicable assay, sample storage, cell culture, and more. Deep Well Plates which are made of high quality polypropylene display high chemical resistance to most polar organic solvents, acid and weak bases. Deep Well Plates are designed with numbers and alphabets on the top to allow for easy sampling.

- Easy to transport and storage, layered (stacking)
- For multi-channel pipette and automatic equipment
- Numeric labeling
- Available storage at -80 °C to 121 °C
- 8well Plate (Cat. No. 34008, 34108)

- Non-pyrogenic
- DNase / RNase-free
- Human DNA-free



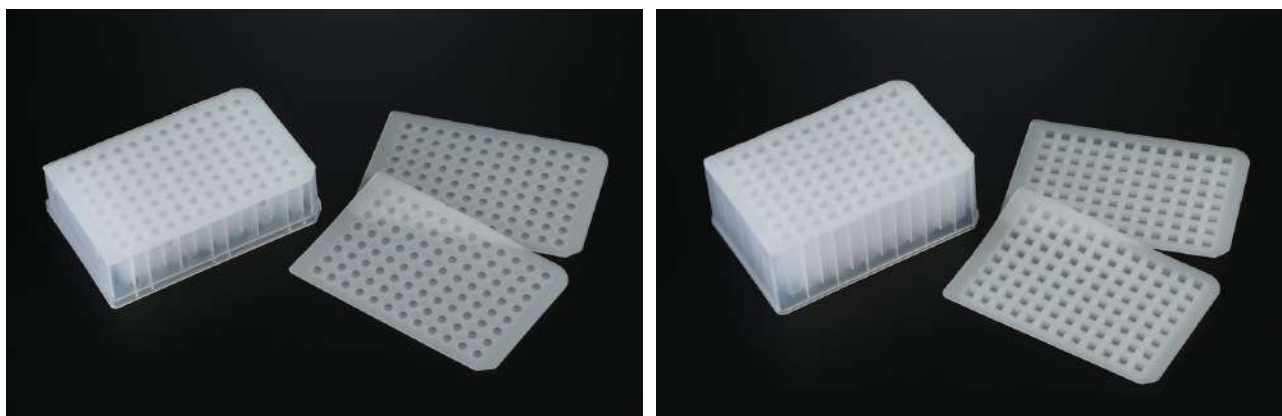
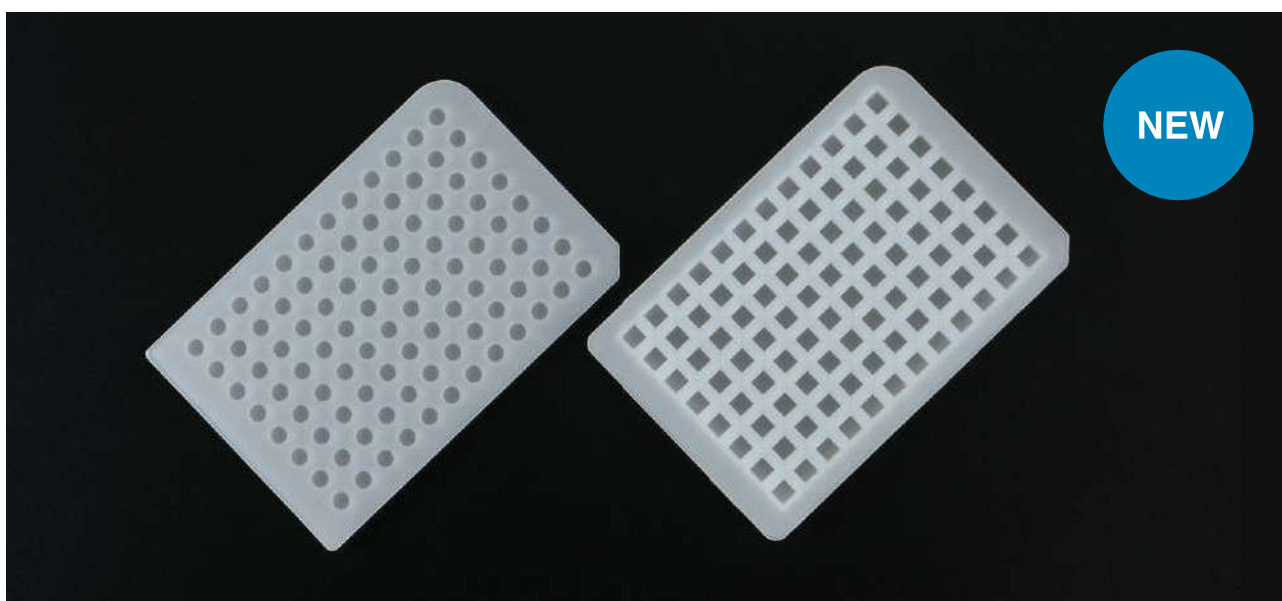
#### Deep Well Plate

Type	Cat. No.	Material	Configuration	External Dimensions w x l x h (mm)	Bottom Type	Total Vol. (ml)	Sterile	Packaging
	<b>34008</b>	PP	8well	127.60 x 85.40 x 44.00	V	25.00	+	5 / 25
	<b>34108</b>	PP	8well	127.60 x 85.40 x 44.00	V	25.00	-	5 / 25
	<b>34496</b>	PP	96well	127.60 x 85.40 x 30.00	V	0.80	+	5 / 25
	<b>34596</b>	PP	96well	127.60 x 85.40 x 30.00	V	0.80	-	5 / 25
	<b>34696</b>	PP	96well	127.60 x 85.40 x 44.00	U	2.00	+	5 / 25
	<b>34796</b>	PP	96well	127.60 x 85.40 x 44.00	U	2.00	-	5 / 25



## Sealing Mat

Sealing Mat is compatible with most 96well plate and can be used for sample storage. Sealing Mat is easy and convenient to attach and detach and can be used in conditions of -80 to 121 °C. In addition, it has excellent resistance to solvent such as DMSO and can be reused.

- Autoclavable
- Working temperature range: -80 ~ 121 °C
- Solvent resistant
- Reusable



### Sealing Mat

Type	Cat. No.	Material	Configuration	External Dimensions w x l x h (mm)	Sterile	Packaging
	<b>96006</b>	Silicone	Round well	123.9 x 81.9	-	10 / 30
	<b>96007</b>	Silicone	Square Well	123.9 x 81.9	-	10 / 30

# Handling & Storage

## Deep Well Reservoir


SPL Deep Well Reservoir can hold large volume solutions and is easy to handle. Deep Well Reservoir is a 2well reservoir made of high quality polypropylene (PP), that can store a total of 300 ml (150 ml / well) in one product.

The scales are molded at 50 ml intervals. Applicable to automation equipment, the advantages of holding large volumes of solutions can increase automatic processing time. It can be selected according to sterilized or non-sterilized.

- Large volume of solution can be contained and layered (stacking)
- Design for all types of multi-pipettes
- Applicable to automation equipment



### Deep Well Reservoir

Type	Cat. No.	Material	External Dimension w X l X h (mm)	Bottom Type	Vol.(ml)	Sterile	Packaging
	<b>34002</b>	PP	127.60 x 85.40 x 40.00	Flat	150	+	5 / 25
	<b>34102</b>	PP	127.60 x 85.40 x 40.00	Flat	150	-	5 / 25






## Reservoir

Sloped bottoms of SPL Reservoirs are useful for filling multichannel-pipette during both cell culture and immunoassay experiments.

- Supplied non-sterile in packs of 20 (Cat. No. 23001)
- Notched volume label (Cat. No.22050, 23050, 22001, 23001)



### Reservoir

Type	Cat. No.	Material	Color	Design	Channel	Working Vol. (ml)	Sterile	Packaging
	<b>22001</b>	PS	White	Sloped Bottom	1	100.00	+	1 / 50
	<b>23001</b>	PS	White	Sloped Bottom	1	100.00	-	20 / 100
	<b>22050</b>	PS	White	Sloped Bottom	1	50.00	+	1 / 50
	<b>23050</b>	PS	White	Sloped Bottom	1	50.00	+	5 / 100
	<b>21002</b>	PS	White	Sloped Bottom	2	25.00	+	1 / 50
	<b>21102</b>	PS	White	Sloped Bottom	2	25.00	+	5 / 100
	<b>21008</b>	PS	White	Sloped Bottom	8	7.00	+	1 / 100
	<b>21012</b>	PS	White	Sloped Bottom	12	4.00	+	1 / 100


## Storage Plate 96well

SPL Storage Plates are designed for storage of biological samples and chemicals.

- Storage of biological sample and chemicals in small quantity
- Temperature range: -70 ~ 121°C (Cat. No. 34396, 36396, 336396)
- Chemically resistant to organic solvents, such as weak acids and weak bases. (Cat. No. 34396, 36396, 336396)
- With Lid (Cat. No. 34396, 36396)
- Without Lid (Cat. No. 336396, 336196)



**Storage Plate 96well**

Type	Cat. No.	Material	External Dimensions w x l x h (mm)	Bottom Type	Color	Total Vol. (ml)	Lid	Sterile	Packaging
	<b>34396</b>	PP	85.40 x 127.60 x 14.40	Round	Clear	0.30	+	-	10 / 100
	<b>36396</b>	PP	85.40 x 127.60 x 14.40	Conical	Clear	0.32	+	-	10 / 100
	<b>336396</b>	PP	85.40 x 127.60 x 14.40	Conical	Clear	0.32	-	-	10 / 100
	<b>336196</b>	PS	85.40 x 127.60 x 14.40	Conical	Clear	0.32	-	-	10 / 100

# Handling & Storage

## Omni Box

Omni Boxes of SPL enable simple and convenient storage of small experimental equipment in a single container.

- For storing magnetic bars, tubing and etc



### Omni Box

Type	Cat. No.	Material	Dimensions w x l x h (mm)	Packaging
	80010	PS	97.00 x 183.00 x 33.00	1

## Autoclaving Jar

Autoclaving Jars are containers suitable for autoclaving small plastic-wares that require sterilization.

- Autoclavable



### Autoclaving Jar

Type	Cat. No.	Material	Container Style (mm)	Internal Dimensions d x h (mm)	Packaging
	310123	PP	120.00 x 80.00	103.00 x 78.60	20

## MOUZIP®

MOUZIP® is a unique device that serves as a complete testing bench for a variety of mouse experiments, composed of an experimental mat that absorbs spilled liquids and a paper disposal case that wraps the mouse cadaver for ethical handling, storing, and disposing.

- The top side of the mat efficiently absorbs any excess liquids during the experiment, while the waterproof bottom maintains hygienic conditions.
- The paper case connected to the mat is folded up in a triangular coffin-like structure to enable ethical storage and hygienic disposal of cadaver after experiments.



### MOUZIP®

Type	Cat. No.	Material (Outer / Inner)	Cover Dimensions (cm)	Mat Dimensions (cm)	Packaging
	82101	Kraft / Fiber mat	13.00 x 24.00	103.00 x 78.60	20




## 25 ml Tube Adapter

25 ml Tube Adapter for 50 ml centrifuge rotors.

- Excellent durability
- 25 ml Tube Adapter is only available for conical type tubes (not for skirted)



### 25 ml Tube Adapter

Type	Cat. No.	Material	External Dimensions d x h (mm)	RCF rating	Packaging
	<b>52025</b>	Acetal	28.50 x 52.00	18,000 x g	6


## 5 ml Snap Tube Adapter

SPL 5 ml Snap Tube Adapter is designed for 15 ml centrifuge rotors.

- Excellent durability
- 5 ml Snap Tube Adapter is only available for conical type tubes (not for skirted)



### 5 ml Snap Tube Adapter

Type	Cat. No.	Material	External Dimensions d x h (mm)	RCF rating	Packaging
	<b>52005</b>	Acetal	16.60 x 78.24	25,000 x g	10



# Handling & Storage




## Label Protection Tape

Label Protection Tape protects labels in harsh or outdoor environments, against water, UV, chemicals, and abrasion. It is available for all products and you can easily distinguish samples in three colors on the border.

- Prevent evaporation
- 3 colors: Red, Green, Blue
- Working temperature range:  $-20^{\circ}\text{C}$   $100^{\circ}\text{C}$
- Thickness: 0.5 mm
- Non-sterile



### Label Protection Tape

Type	Cat. No.	Material	Dimensions w x l (mm)	Color	Packaging
	<b>96001</b>	PET	25.00 x 85.00	Red	3,000 ea / roll
	<b>96002</b>	PET	25.00 x 85.00	Green	3,000 ea / roll
	<b>96003</b>	PET	25.00 x 85.00	Blue	3,000 ea / roll

## Glove (Safe Guard)

SPL Safe Guard protects against various harmful sources such as chemicals, solvents, microorganism, and physical abrasion etc. and reduces the risk of contamination. SPL Safe Guard, made of latex or nitrile, offers strong durability and comfortable wearing.

- Comfortably fit and increased flexibility
- Excellent durability
- Powder Free
- Meet or exceed ASTM D 3578 (Cat. No. G9100, G9110, G9120, G9130)
- Meet or exceed ASTM D 6319 (Cat. No. G9200, G9210, G9220, G9230)



### Glove (Safe Guard)

Type	Cat. No.	Material	Size	Color	Packaging
	<b>G9100</b>	Latex	Extra Small	Natural	100
	<b>G9110</b>	Latex	Small	Natural	100
	<b>G9120</b>	Latex	Medium	Natural	100
	<b>G9130</b>	Latex	Large	Natural	100
	<b>G9200</b>	Nitrile	Extra Small	Blue	100
	<b>G9210</b>	Nitrile	Small	Blue	100
	<b>G9220</b>	Nitrile	Medium	Blue	100
	<b>G9230</b>	Nitrile	Large	Blue	100

# Handling & Storage



## Disposable Tweezers

Disposable Tweezers are made of clean and durable polystyrene material, and it is four times lighter than conventional metal tweezers, reducing the strain on the wrist during the experiment. It also minimizes cross-contamination of the sample. The sharp type is suitable for handling fine samples, and the broad type is optimized for handling cover glass or plastic coverslip.

- Sharp type: For fine sample handling (Cat. No. 90060)
- Broad type: For cover glasses / coverslips (Cat. No. 90061)
- Individual packaging



### Disposable Tweezers

Image	Cat. No.	Material	Type	Length (mm)	Sterile	Packaging
	<b>90060</b>	PS	Sharp	123.00	+	1 / 50
	<b>90061</b>	PS	Broad	123.00	+	1 / 50




## Water Sample Bottle

SPL Water Sample Bottles are suitable for environmental hygiene analysis.

- Easy to carry
- Reduced volume for storage



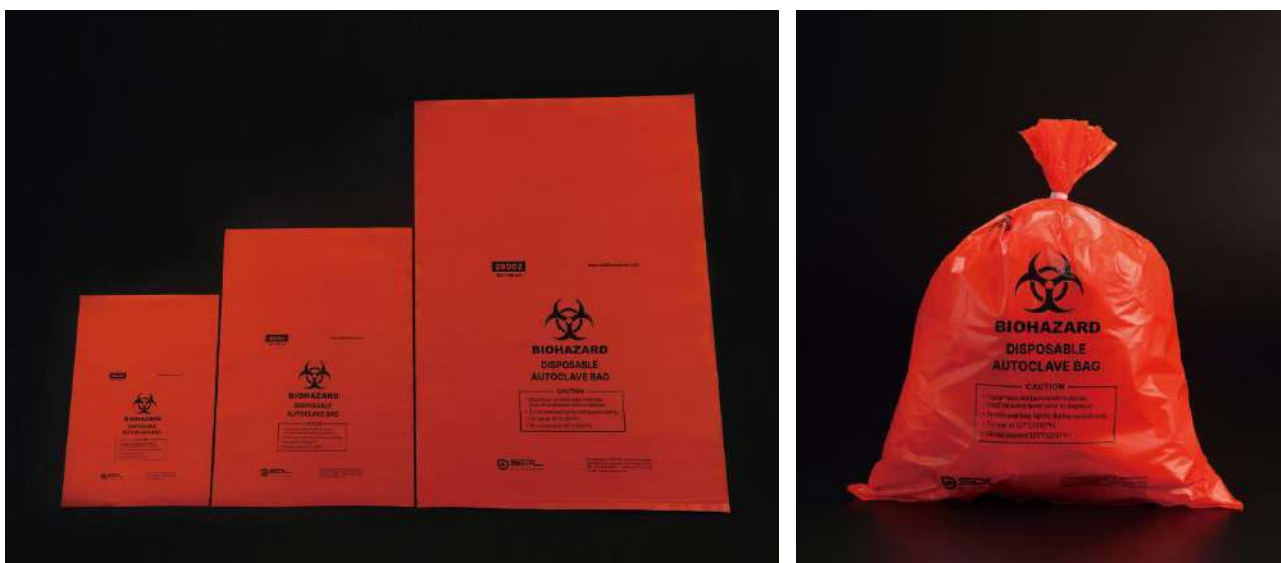
### Water Sample Bottle

Type	Cat. No.	Material	External Dimensions w x l x h (mm)	Total Vol. (L)	Sterile	Packaging
	<b>410011</b>	PE	79.70 x 130.80 x 160.90	1.00	+	1 / 150
	<b>410012</b>	PE	97.90 x 162.70 x 207.10	2.00	+	1 / 100
	<b>410014</b>	PE	127.00 x 204.20 x 260.40	4.00	+	1 / 65




## Biohazard Bag

Biohazard Bag is designed for the safe storage, transportation, and disposal of biohazardous waste. The biohazard Bag is made of High Density Polyethylene and autoclave is possible, which ensure safely dispose of waste.

- Thickness: 0.05 mm
- 3 different sizes
- Autoclavable
- Disposable



### Biohazard Bag

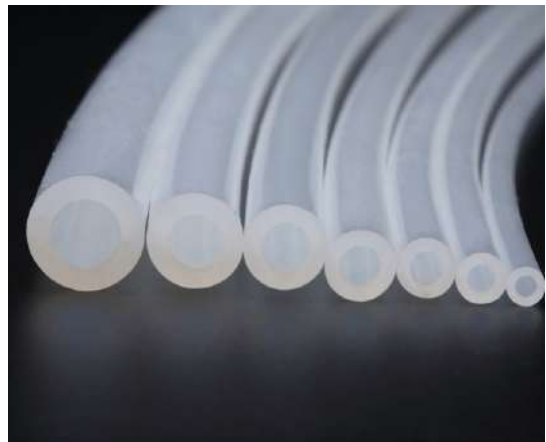
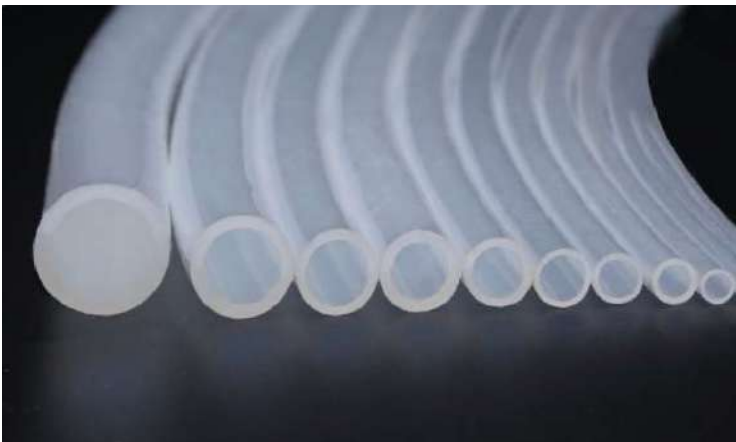
Type	Cat. No.	Material	Dimension (cm)	Packaging
	<b>98000</b>	HDPE	30.00 x 45.00	100
	<b>98001</b>	HDPE	40.00 x 65.00	100
	<b>98002</b>	HDPE	60.00 x 90.00	100

# Handling & Storage

## Silicone Tubing
































Silicone tubes are manufactured by General, Laboratory, and Vacuum. General silicone tubing is characterized by translucency and high heat resistance, so it can be universally used in extreme environments. Laboratory silicone tubing is platinum-cured and recommended for use in pharmaceutical and biotechnology applications. Vacuum silicone tubing is thick, so it is not adsorbed by pressure and can be used in extreme environments. If there is a desired size or cut length other than the item, please contact us with a custom product and we will respond.

- Temperature range: - 60 ~ 230 °C
- Autoclavable
- Platinum-cured silicone (Laboratory)
- Low volatility, abrasion resistance, yellowing resistance (Laboratory)
- FDA 21 CFR 177.2600



continued on next page

**Silicone Tubing**

Type	Cat. No.	Materials	Type	Dimensions I.D x O.D (mm)	Sterile	Packaging
	<b>98101</b>	Pure silicone rubber	General	1.50 x 2.50	-	10 m
	<b>98102</b>	Pure silicone rubber	General	2.00 x 3.00	-	10 m
	<b>98103</b>	Pure silicone rubber	General	3.00 x 4.50	-	10 m
	<b>98104</b>	Pure silicone rubber	General	4.00 x 5.50	-	10 m
	<b>98105</b>	Pure silicone rubber	General	5.00 x 7.00	-	10 m
	<b>98106</b>	Pure silicone rubber	General	6.00 x 8.00	-	10 m
	<b>98107</b>	Pure silicone rubber	General	7.00 x 9.00	-	10 m
	<b>98108</b>	Pure silicone rubber	General	8.00 x 11.00	-	10 m
	<b>98109</b>	Pure silicone rubber	General	9.00 x 12.00	-	10 m
	<b>98110</b>	Pure silicone rubber	General	10.00 x 13.00	-	10 m
	<b>98112</b>	Pure silicone rubber	General	12.00 x 16.00	-	10 m
	<b>98115</b>	Pure silicone rubber	General	15.00 x 20.00	-	10 m
	<b>98201</b>	Platinum-Cured silicone rubber	Laboratory	1.50 x 2.50	-	10 m
	<b>98202</b>	Platinum-Cured silicone rubber	Laboratory	2.00 x 3.00	-	10 m
	<b>98203</b>	Platinum-Cured silicone rubber	Laboratory	3.00 x 4.50	-	10 m
	<b>98204</b>	Platinum-Cured silicone rubber	Laboratory	4.00 x 5.50	-	10 m
	<b>98205</b>	Platinum-Cured silicone rubber	Laboratory	5.00 x 7.00	-	10 m
	<b>98206</b>	Platinum-Cured silicone rubber	Laboratory	6.00 x 8.00	-	10 m
	<b>98207</b>	Platinum-Cured silicone rubber	Laboratory	7.00 x 9.00	-	10 m
	<b>98208</b>	Platinum-Cured silicone rubber	Laboratory	8.00 x 11.00	-	10 m
	<b>98209</b>	Platinum-Cured silicone rubber	Laboratory	9.00 x 12.00	-	10 m
	<b>98210</b>	Platinum-Cured silicone rubber	Laboratory	10.00 x 13.00	-	10 m
	<b>98212</b>	Platinum-Cured silicone rubber	Laboratory	12.00 x 16.00	-	10 m
	<b>98215</b>	Platinum-Cured silicone rubber	Laboratory	15.00 x 20.00	-	10 m
	<b>98303</b>	Pure silicone rubber	Vacuum	3.00 x 6.00	-	10 m
	<b>98304</b>	Pure silicone rubber	Vacuum	4.00 x 8.00	-	10 m
	<b>98305</b>	Pure silicone rubber	Vacuum	5.00 x 9.00	-	10 m
	<b>98306</b>	Pure silicone rubber	Vacuum	6.00 x 11.00	-	10 m
	<b>98307</b>	Pure silicone rubber	Vacuum	7.00 x 13.00	-	10 m
	<b>98308</b>	Pure silicone rubber	Vacuum	8.00 x 15.00	-	10 m
	<b>98310</b>	Pure silicone rubber	Vacuum	10.00 x 18.00	-	10 m



# Plant & Insect Culture

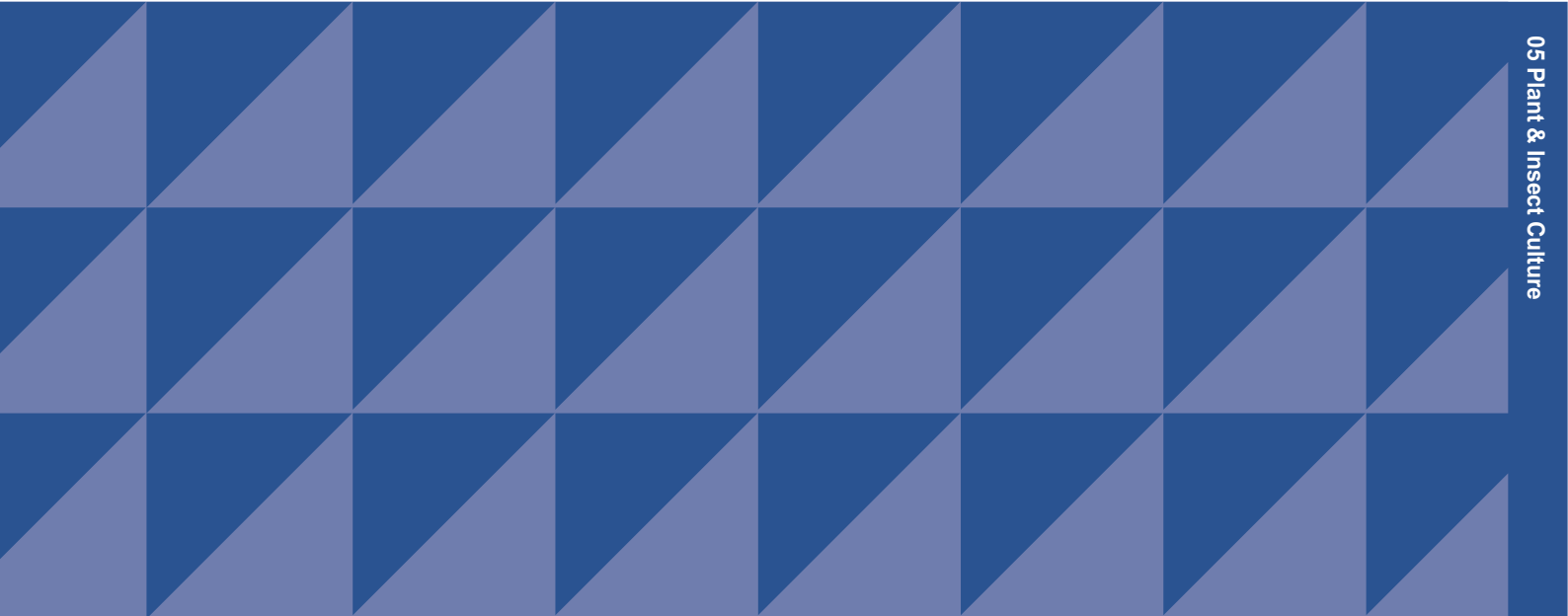
SPL Life Sciences provides a wide range of plant culture products. Our products are manufactured under strict quality control system to comply with customer demands. Also we provide a unique range of insect breeding containers to enable researchers to select the right products for better breeding solutions.

## **5-1. Plant Culture ..... 160**

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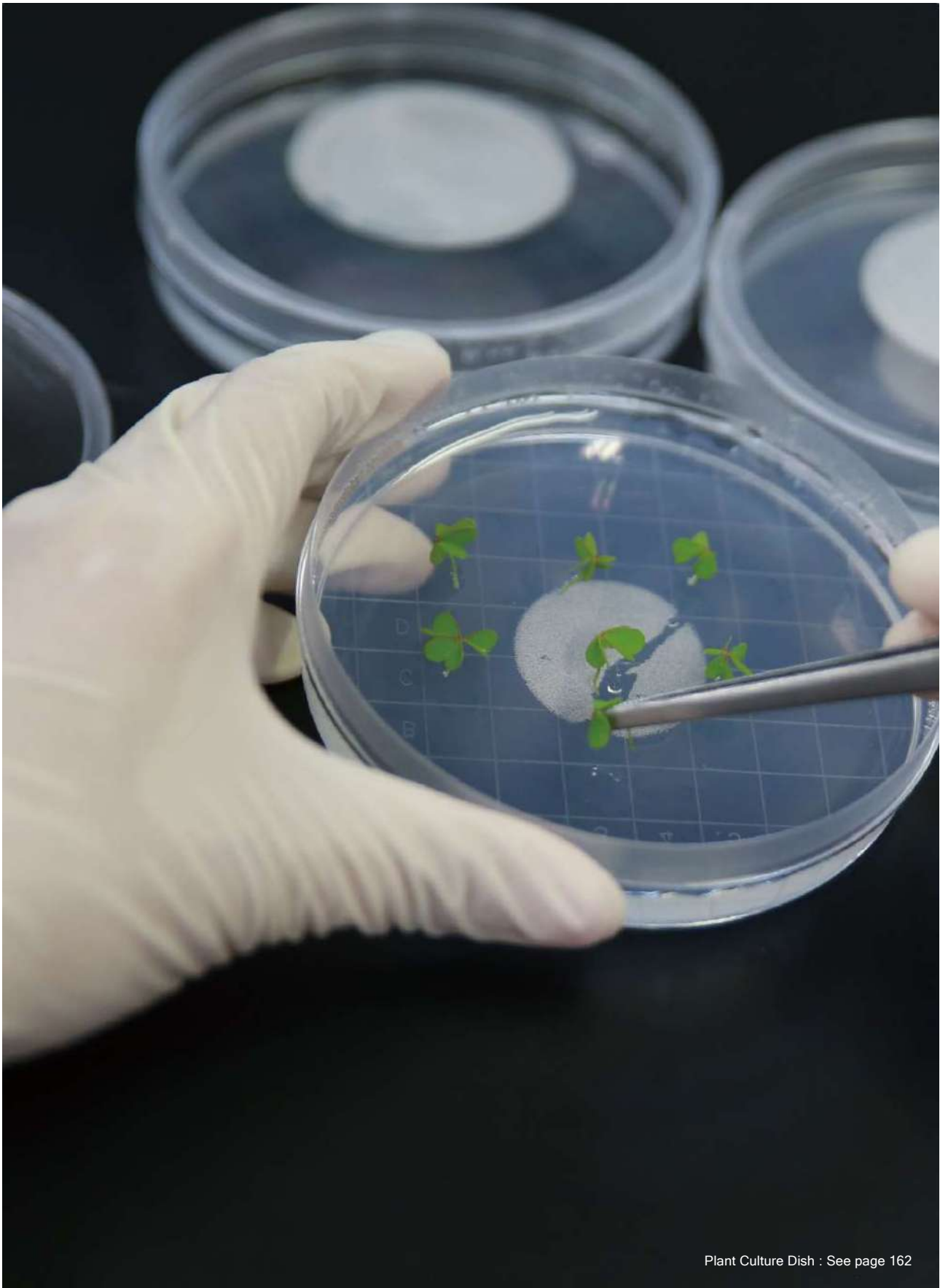
## **5-2. Insect Culture..... 165**

Insect Breeding Dish & Jar .....	165
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# Plant & Insect Culture

## 5-1. Plant Culture



Plant Culture Dish : See page 162





## Incu Tissue

Incu Tissues are ideal for plant tissue cultures. As the sprout grows, another Incu Tissue can be connected to the top as an optional frame.

- Embossing on the closing edge of cover and jar
- Optional frame (Cat. No. 310074) is only available for 310070 and 310071
- Cat. No. 310070 can be assembled with Insect Breeding Box (Cat. No. 310075, 310076, 310077)



### Incu Tissue

Type	Cat. No.	Material	Style	External Dimensions w x l x h (mm)	Internal Dimensions w x l x h (mm)	Sterile	Packaging
	<b>310070</b>	PS	Square	72.00 x 72.00 x 100.00	65.40 x 65.40 x 98.20	+	4 / 120
	<b>310071</b>	PC	Square	72.00 x 72.00 x 100.00	65.40 x 65.40 x 98.20	-	4 / 120
	<b>310072</b>	PP	Square	72.00 x 72.00 x 100.00	65.40 x 65.40 x 98.20	-	4 / 120
	<b>310074</b>	PP	Frame	80.80 x 80.80 x 21.00	63.80 x 63.80 x 21.00	-	30 / 60

# Plant & Insect Culture








## Plant Culture Dish

Plant Culture Dishes are used for sprout culture. Pre-sterilized, flat dishes provide excellent culture results.

- Excellent air circulation design
- Excellent flatness
- Stable stacking
- Designed for reduced contamination
- Autoclavable (Cat. No. 310103, 310101)
- Gridded bottom (Cat. No. 310200)



### Plant Culture Dish

Type	Cat. No.	Material	External Dimensions d x h (mm)	Internal Dimensions d x h (mm)	Autoclavable	Sterile	Packaging
	<b>310103</b>	PP	100.00 x 50.00	91.40 x 48.50	+	-	5 / 200
	<b>310100</b>	PS	100.00 x 40.00	91.30 x 38.20	-	+	5 / 200
	<b>310101</b>	PP	100.00 x 40.00	91.30 x 38.20	+	-	5 / 200
	<b>310200</b>	PS	100.00 x 20.00	94.60 x 18.60	-	+	10 / 200
	<b>10090</b>	PS	90.00 x 15.00	85.90 x 12.60	-	+	10 / 500
	<b>10091</b>	PS	90.00 x 20.00	86.20 x 17.70	-	+	10 / 200
	<b>10100</b>	PS	100.00 x 15.00	96.40 x 13.75	-	+	10 / 500


## Plant Culture Bottle I

Plant Culture Bottles I are used for sprout or sapling culture.

- Stackable feature for space saving
- Designed for reduced contamination
- Screw cap



### Plant Culture Bottle I

Type	Cat. No.	Material (Bottle / Cap)	Dimensions w x l x h (mm)	Total Vol. (ml)	Sterile	Packaging
	<b>310500</b>	PP / PP	100.00 x 100.00 x 110.00	500.00	-	1

## Plant Culture Bottle II

Plant Culture Bottles II are used for culturing sapling or callus.

- Durable plastic bottle
- Designed for reduced contamination
- Screw cap
- Autoclavable



### Plant Culture Bottle II

Type	Cat. No.	Material (Bottle / Cap)	Dimensions w x l x h (mm)	Total Vol. (ml)	Sterile	Packaging
	<b>310501</b>	PC / PP	115.00 x 115.00 x 140.00	500.00	-	1



## Phytohealth

Phytohealth is useful for the culture of individual plantlet.

- Stackable feature for space saving
- Embossing on the closing edge of cover and the jar
- Phytohealth bodies and caps are packaged separately
- Autoclavable



### Phytohealth

Type	Cat. No.	Material	External Dimensions d x h (mm)	Internal Dimensions-Body d x h (mm)	Internal Dimensions-Cap d x h (mm)	Sterile	Packaging
	<b>310120</b>	PP	120.00 x 80.00	103.00 x 78.60	101.00 x 10.20	-	400
	<b>310121</b>	PP	120.00 x 110.00	103.00 x 78.60	101.00 x 32.50	-	400



# Plant & Insect Culture

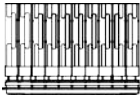





## AraHarvest

AraHarvest is a convenient system for culturing and harvesting seeds from individual sapling.

- AraHarvest set: Tube, Base, Basket, Top Tray, Bottom Tray (Cat. No. 310060)
- Aracon Tube (Cat. No. 310061)
- Aracon Base (Cat. No. 310062)
- Aracon Basket (Cat. No. 310063)
- Aracon Top Tray (Cat. No. 310064), space saving 50 hole tray
- Aracon Bottom Tray (Cat. No. 310065)



### AraHarvest

Type	Cat. No.	Material	Tube	Base	Basket	Top Tray	Bottom Tray	Packaging
	<b>310060</b>	PS / PP	200 ea	200 ea	200 ea	4 ea	4 ea	
	<b>310061</b>	PS	100 ea					100
	<b>310062</b>	PS		100 ea				100
	<b>310063</b>	PP			100 ea			100
	<b>310064</b>	PP				4 ea		4
	<b>310065</b>	PP					4 ea	4

## 5-2. Insect Culture

### Insect Breeding Dish & Jar

Insect Breeding Dishes and Jars are ideal containers for breeding and observing micro-insects. Ventilation hole on the cover enables excellent air circulation and easy humidity control.

- Easy to breed and observe micro-insects and their natural enemies
- Effective air circulation and humidity control
- Useful for room tests i.e., room breeding and drug screening
- Mesh located on the cap for ventilation and prevention of insect escape
- Stainless mesh type (Cat. No. 310202)
- External grip (Cat.No. 310050)
- Gridded bottom (Cat. No. 310201)



#### Insect Breeding Dish & Jar

Type	Cat. No.	Material	External Dimensions d x h (mm)	Internal Dimensions d x h (mm)	Ventilation Hole Size (mm)	Mesh Pore Size (µm)	Hole Position	Sterile	Packaging
	310050	PS	50.00 x 15.00	48.75 x 11.80	13.20	53.00	Cap	-	20 / 200
	310102	PS	100.00 x 40.00	91.35 x 38.50	40.00	53.00	Cap	-	5 / 200
	310122	PP	120.00 x 80.00	91.00 x 70.00	40.00	53.00	Cap	-	400
	310201	PS	100.00 x 20.00	94.62 x 18.60	40.00	53.00	Cap	-	10 / 200
	310202	PS	100.00 x 40.00	91.35 x 38.50	40.00	53.00	Cap	-	5 / 200

# Plant & Insect Culture

## Insect Breeding Box

Insect Breeding Boxes are ideal for breeding and observing micro-insects.

Ventilation hole on the cover enables excellent air circulation and easy humidity control.

- Easy to breed and observe micro-insects and natural enemies
- Effective air circulation and humidity control
- Useful for room tests i.e., room breeding and drug screening
- Mesh type: stainless or nylon (please inquire)
- All products can be assembled with Incu Tissue (Cat. No. 310070)
- Optimal Frame (Cat. No. 310074)



Insect Breeding Dish & Jar :  
See page 165

### Insect Breeding Box

Type	Cat. No.	Material	External Dimensions w x l x h (mm)	Internal Dimensions w x l x h (mm)	Ventilation Hole Size (mm)	Mesh Pore Size (µm)	Hole Position	Sterile	Packaging
	<b>310075</b>	PS	72.00 x 72.00 x 100.00	65.40 x 65.40 x 98.20	40.00	53.00	Cap	-	4 / 120
	<b>310076</b>	PS	72.00 x 72.00 x 100.00	65.40 x 65.40 x 98.20	40.00	53.00	Bottom	-	4 / 120
	<b>310077</b>	PS	72.00 x 72.00 x 100.00	65.40 x 65.40 x 98.20	40.00	53.00	Side & Bottom (3 Holes)	-	4 / 120
	<b>310074</b>	PP	80.80 x 80.80 x 21.00	63.80 x 63.80 x 21.00	-	-	-	-	30 / 60


## Drosophila Vials

Drosophila Vials have excellent transparency and easy to observe the contents. Precision molded plastic Drosophila Vials are a safe and cost effective alternative to glass vials.

- For drosophila study and research
- 100 vials (10 x 10) per tray



### Drosophila Vials

Type	Cat. No.	Material	External Dimensions d x h (mm)	Sterile	Packaging
	310301	PS	25.00 x 95.00	-	100 / 500


## Drosophila Vial Plugs

Fit SPL Drosophila Vials and easy to use. SPL Drosophila Vial Plugs reduce evaporation.

- Fit SPL Drosophila Vials
- Reduces evaporation



### Drosophila Vial Plugs

Type	Cat. No.	Material	External Dimensions d x h (mm)	Sterile	Packaging
	310300	Cotton	25.00 x 25.00	-	500

# Clinical Labware

SPL Life Sciences provides labwares for storing clinical samples in different shapes and materials to be utilized for multiple purposes. All products are manufactured under strict quality protocols.

## 6-1. Clinical Labware ..... 170

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Transport Bottle.....	176





Specimen Cup & Bottle : See page 170



# Clinical Labware

## 6-1. Clinical Labware









### Specimen Cup & Bottle

SPL Life Sciences provides high quality Specimen Cups & Bottles for medical sampling.

- Tight sealing screw cap
- External graduations with marking area
- Urine Cup: No Cap, pouring region (Cat. No. 400121)
- Female Urine Cup (Cat. No. 410200)
- Separate packaging of caps and bodies (Cat. No. 401120)
- Compatible with the pneumatic tube systems for hospitals (Cat. No. 410120)
- Suitable for an automation equipment (#400730: Hitachi / #400720 : Toshiba)



#### Specimen Cup & Bottle

Type	Cat. No.	Material (Tube / Cap)	Total Vol. (ml)	Sterile	Packaging
	<b>400120</b>	PP / PE	120.00	+	5 / 250
	<b>401120</b>	PP / PE	120.00	-	Cap: 250 / 500, Body: 10 / 500
	<b>400121</b>	PP	120.00	-	10 / 500
	<b>BA410120</b>	PP / PE	120.00	+	5 / 250
	<b>410200</b>	PP	200.00	+	20 / 160
	<b>400050</b>	PP / PE	50.00	+	1 / 100
	<b>400060</b>	PP / PE	60.00	+	5 / 100
	<b>401060</b>	PP / PE	60.00	-	100

## Medical Container

SPL Medical Containers are useful for storing and handling of medical samples.

- Ideal sampling containers for sputum or stool examination
- Tight sealing screw cap
- External graduation
- Self-standing conical bottom
- Spoons are provided for easy sampling: stool container (Cat. No. 400500)
- Container rack (Cat. No. 410025)
- Excellent stackability (Cat. No. 400025, 400125)



### Medical Container

Type	Cat. No.	Material (Tube / Cap)	Color	Total Vol. (ml)	Sterile	Packaging
	<b>400025</b>	PP / PE	Clear	25.00	+	100 / 500
	<b>400125</b>	PP / PE	Clear	25.00	-	100 / 500
	<b>401125</b>	PS / PE	Clear	125.00	-	300 / 300
	<b>400500</b>	PP / PE	Black	25.00	-	100 / 500
	<b>400501</b>	PP / PE	Black	25.00	-	100 / 500
	<b>410025</b>	PS	White	-	-	1 / 20

## Sample Tube

SPL Sample Tubes are designed for storing various clinical samples. SPL Life Sciences provides durable, easy-to-use bottles to meet various demands of customers.

- Tight sealing screw cap
- External graduations
- Self-standing conical bottom



### Sample Tube

Type	Cat. No.	Material (Tube / Cap)	Total Vol. (ml)	External Dimensions d x h (mm)	Sterile	Packaging
	<b>50221</b>	PP / PE	20.00	25.00 x 73.00	-	25 / 500

# Clinical Labware





## Embedding Cassette

SPL Embedding Cassettes are suitable for holding and identifying tissue sample.

- Disposable plastic tissue cassettes are made from acetal polymer
- Wider unobstructed writing surface sloped at 40° angle
- Bases and separate lids packaging
- Integral lid type (Cat. No. 400600, 40060B, 40060G, 40060P, 40060Y)



### Embedding Cassette

Type	Cat. No.	Material	Color	Type of Packaging	Packaging
	<b>400600</b>	Acetal	White	Bulk	2,000
	<b>40060B</b>	Acetal	Blue	Bulk	2,000
	<b>40060G</b>	Acetal	Green	Bulk	2,000
	<b>40060P</b>	Acetal	Pink	Bulk	2,000
	<b>40060Y</b>	Acetal	Yellow	Bulk	2,000
	<b>400610</b>	Acetal	White	Bulk	2,000
	<b>40061B</b>	Acetal	Blue	Bulk	2,000
	<b>40061G</b>	Acetal	Green	Bulk	2,000
	<b>40061P</b>	Acetal	Pink	Bulk	2,000
	<b>40061Y</b>	Acetal	Yellow	Bulk	2,000

## Super Mega Cassette

SPL Super Mega Cassettes are specially designed to hold large specimens during embedding processes.

- Disposable plastic tissue cassettes are made from acetal polymer
- Supplied with PET base



### Super Mega Cassette

Type	Cat. No.	Color	Material (Cassette / Base)	External Dimensions w x l x h (mm)	Packaging
	400800	Gray	Acetal / PET	57.60 x 80.80 x 16.50	100

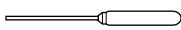
## Serum Separating Tube

SPL Serum Separating Tubes are designed to facilitate separation of serum and blood cells.

- Suitable for separating serum and blood cells
- Suitable for collection and storage of clinical specimen



### Serum Separating Tube

Type	Cat. No.	Material	Total Length (mm)	Total Vol. (mm)	Sterile	Packaging
	410514	PE	210.00	10.00	-	250 / 2,000

# Clinical Labware








## Medical Tube

SPL Medical Tubes are widely used and referenced in various laboratory protocols.

- Medical packaging
- Round type bottom & Internal graduations (Cat. No. 400510, 400511, 400520, 400521)
- Round type bottom (Cat. No. 400530, 400531)
- Conical bottom & Internal graduations (Cat. No. 401015)
- Caps are provided for tight sealing (Cat. No. 400530)



### Medical Tube

Type	Cat. No.	Material (Tube / Cap)	Total Vol. (ml)	External Dimensions d x h (mm)	Sterile	Packaging
	<b>400510</b>	PS	5.00	12.00 x 75.00	-	250 / 2,000
	<b>400511</b>	PP	5.00	12.00 x 75.00	-	250 / 2,000
	<b>400520</b>	PS	14.00	17.00 x 95.40	-	25 / 2,000
	<b>400521</b>	PP	14.00	17.00 x 95.40	-	25 / 2,000
	<b>400530</b>	PS / PE	10.00	15.56 x 99.92	-	100 / 1,000
	<b>400531</b>	PS	10.00	15.56 x 99.92	-	100 / 1,000
	<b>401015</b>	PS	12.00	16.88 x 107.70	-	200 / 2,000




## Vacuum Needle Holder

SPL Vacuum Needle Holders are designed for blood collection. The holders provide fixed retention of the needle and tube during blood collection.

- Suitable for Vacuum Blood Collection
- Non-slip handle
- Disposable



### Vacuum Needle Holder

Type	Cat. No.	Material	Total Length (mm)	Sterile	Packaging
	<b>BA400900</b>	PP	47.50	-	250 / 1,000

## Sample Cup

SPL Sample Cups are designed for clinical pathology testing of blood.

- Suitable for an automation equipment (#400730: Hitachi / #400720 : Toshiba)
- Useful for clinical pathology test
- Self standing conical bottom



### Sample Cup

Type	Cat. No.	Material	Working Vol. (ml)	Packaging
	<b>400720</b>	PS	2.00	1,000 / 10,000
	<b>400730</b>	PS	3.00	1,000 / 6,000



# Clinical Labware


## Transport Tube

SPL Transport Tubes for safe transport of pathogenic organisms and clinical specimens; they are tightly sealed to prevent possible leakage.

- Non-pyrogenic
- Non-cytotoxic
- DNase / RNase-free



### Transport Tube

Type	Cat. No.	Material (Tube / Cap)	Total Vol. (ml)	Sterile	Packaging
	<b>BA50212</b>	PP / PE	12.00	+	50 / 1,000



## Transport Bottle

SPL Transport Bottles are specially designed for safe transport of pathogenic organisms and clinical specimens; they are tightly sealed to prevent possible leakage.

- For category A, UN2814 (Cat.No 401000)
- For category B, UN3373 (Cat.No 411000)
- 1,000 ml secondary container including absorbent, cushioning material, and labels
- Category A: An infectious substance which is transported in a form that, when exposure to it occurs, is capable of causing permanent disability, life-threatening or fatal disease in otherwise healthy humans or animals.
- Category B: An infectious substance which does not meet the criteria for inclusion in Category A.



### Transport Tube

Type	Cat. No.	Color (Cap / Body)	Material (Cap / Body)	External Dimensions d x h x l (mm)	Internal Dimensions d x h (mm)	Total Vol. (ml)	Empty Weight (g)	Packaging
	<b>401000</b>	Red / Natural	PP / PP	164.00 x 164.00 x 168.00	132.00 x 155.00	1,000.00	260.00	1 / 10
	<b>411000</b>	Red / Natural	PP / PP	112.00 x 110.00 x 190.00	107.50 x 176.30	1,000.00	147.00	1 / 10

# Appendix

- Product Raw Material Chemical Resistance Chart
- Alphabetical Index
- Numerical Index



## Product Raw material Chemical Resistance Chart

Chemical	LDPE		HDPE		PP		PS		PET	
	RT	50-60°C	RT	50-60°C	RT	50-60°C	RT	50-60°C	RT	50-60°C
Acetaldehyde, pure	B	D	B	C	A	A	D	D	-	-
Acetic acid 5%	A	A	A	A	A	A	A	B	B	-
Acetic acid 50%	B	C	A	B	A	A	B	B	C	D
Acetone, pure	D	D	D	D	A	A	D	D	D	D
Acetonitrile, pure	A	A	A	A	A	B	D	D	-	-
Ammonium acetate, saturated	A	A	A	A	A	A	A	A	-	-
Ammonium Hydroxide, 5%	A	A	A	A	A	A	A	C	C	D
Ammonium Hydroxide, 30%	A	B	A	A	A	B	B	C	D	D
Butyric Acid, pure	D	D	C	D	B	B	D	D	D	D
Chloroform, pure	C	D	C	D	B	C	D	D	-	-
Chromic acid, 50%	A	A	A	A	B	C	C	D	-	-
Cyclohexane, pure	C	D	C	D	B	C	D	D	-	-
Dimethylsulfoxide, pure	A	A	A	A	A	A	A	B	D	D
Ether, pure	D	D	C	D	D	D	D	D	A	-
Ethyl alcohol, 40%	A	B	A	A	A	A	A	B	B	-
Ethyl alcohol, pure	A	B	A	A	A	A	A	B	B	-
Ethyl glycol, pure	A	A	A	A	A	A	A	A	A	-
Formaldehyde, 10%	A	A	A	A	A	A	B	B	-	-
Formaldehyde, 40%	A	B	A	B	A	A	B	B	-	-
Formic Acid, 3%	A	B	A	A	A	A	A	A	-	-
Formic Acid, 50%	B	B	A	A	A	B	B	C	-	-
Glutaraldehyde, pure	A	B	A	A	A	A	A	C	-	-
Glutaraldehyde Disinfectant	A	B	A	A	A	A	A	C	-	-
Glycerine, pure	A	A	A	A	A	A	A	A	A	-
Glycerol, pure	A	A	A	A	A	A	A	A	A	-
Hexane	D	D	D	D	A	C	D	D	-	-
Hydrochloric acid, 5%	A	A	A	A	A	A	A	A	A	-
Hydrochloric acid, 35%	A	A	A	A	A	B	A	A	C	D
Hydrogen peroxide, 3%	A	A	A	A	A	B	A	B	A	-
Hydrogen peroxide, 30%	A	B	A	A	A	C	A	B	A	-
Isobutyl alcohol, pure	A	A	A	A	A	A	B	B	-	-
Isopropanol, pure	A	A	A	A	A	A	A	B	-	-
Methyl Alcohol, pure	A	B	A	A	A	A	B	C	B	-
Methyl Ethyl ketone, pure	D	D	D	D	A	B	D	D	B	-
Nitric acid 10%	A	A	A	A	A	A	B	D	B	-
Nitric acid 70%	C	D	C	D	C	C	D	D	D	D
Phenol, liquid	D	D	D	D	D	D	D	D	D	D
Phosphoric acid, 5%	A	A	A	A	A	A	A	A	-	-
Phosphoric acid, 85%	A	D	A	A	A	B	A	B	-	-
Picric acid, pure	D	D	D	D	D	D	B	C	-	-
Potassium hydroxide 1%	A	A	C	C	A	A	A	B	-	-
Potassium hydroxide, concentrated	A	A	A	A	A	A	B	B	-	-
Sulfuric acid, 6%	A	A	A	A	A	A	A	A	A	-
Sulfuric acid, 98%	B	B	C	D	A	C	C	C	D	D
Trichloroacetic acids	C	D	C	D	B	C	C	D	-	-

A - Resistance, B - Limited resistance, C - Some effect after 7 days of constant exposure, D - Immediate damage

- The above chemical resistance chart is for general guidelines only.
- Since multiple factors may affect the chemical resistance of a given product, you should test under your own conditions.

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# Manufacturing Facilities



Naejin-ro Plant I



R&D Center



**A Plant :**  
Dedicated To Cell Culture Products



**B Plant :**  
Dedicated To Injection Blow Bottles



**C Plant :**  
Dedicated To Conical Tubes



**E Plant :**  
E-Beam Irradiation Facility



**P Plant :**  
Dedicated To Serological Pipettes



**F Plant :**  
Dedicated To Cell Culture Flasks



**K Plant :**  
For Key-Products in Life Science





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