

HYUNDAI MICRO

- BIOSCIENCE
- FILTRATION
- PLASTIC LABWARE
- OTHER PRODUCT



H M

HYUNDAI MICRO

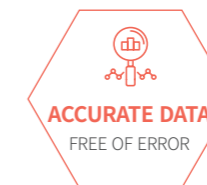
HYUNDAI MICRO :

is expanding field of business based on manufacturing technology, filter to bio-plastic ware business by stable start with steady sales strategy.

products are manufactured with high quality and efficiency in advanced automated production system and environments.

is aiming for the world wide filter and life science market with experienced manufacturing skills and sales networks.

HYUNDAI MICRO provides the diverse types of the best quality syringe filters, developed the first in Korea to domestic and overseas markets.



CONTENTS

HYUNDAI MICRO

- HYUNDAI MICRO Production System

1

BIOSCIENCE

- PCR Tube & Plate
- Screw Cap Micro Tube
- DNA/RNA Purification Column
- 96 Deep Well Plate
- Spin Filter

2

FILTRATION

- Bottle Top Vacuum Filter
- Syringe Filter
- Membrane Filter
- Qualitative Filter Paper
- Quantitative Filter Paper
- Glass Fiber Filter

3

PLASTIC LABWARE

- Petri Dish
- Micro Centrifuge Tube
- Centrifuge Conical Tube
- Serological Pipette
- Micro Pipette Tip & Filter Tip
- Reservoir
- Loop, Needle & Spreader

4

OTHER PRODUCT

- Latex Glove
- Nitrile Glove
- pH Paper



HYUNDAI MICRO Production system

HYUNDAI MICRO manufactures quality products with high technology and efficiency in an advanced production system.

HM operates a head office, the 1st plant, the 2nd plant and the bio-division.

Bio-Division



The 1st Plant



The 2nd Plant



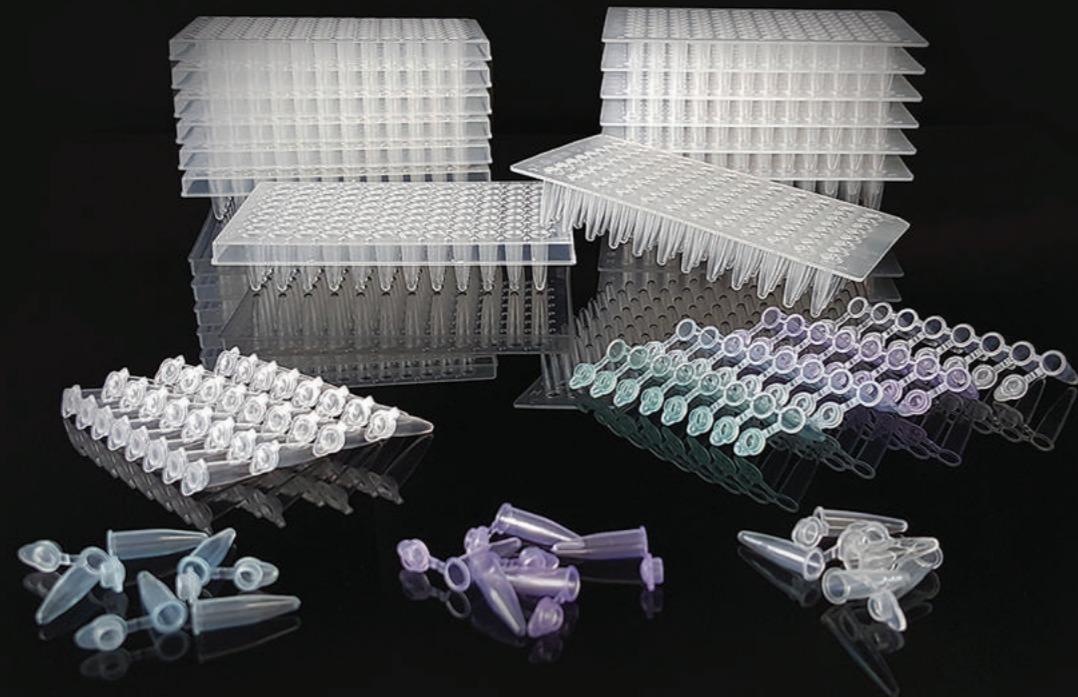


1 BIOSCIENCE

• Contents

- PCR Tube & Plate
- Screw Cap Micro Tube
- DNA/RNA Purification Column
- 96 Deep Well Plate
- Spin Filter

HM
HYUNDAI MICRO



PCR Tube & Plate

HM products are made of the best material for PCR products. The good thermal conductivity makes excellent amplification efficiency. It is very convenient to use due to soft opening and closing. Also perfect sealing ensure the no evaporation of the sample. It is stable at high and low temperatures without any deformation. DNase/ RNase and Pyrogen Free tests have been completed, can use it with confidence.

Our latest automation facilities produce and package in compliance with ISO 9001:2015 International standard for quality management. Therefore, can maintain the stable quality and performance. Also the price is more reasonable than other brands.

HM PCR consumable

Optimized material for PCR (Mixed PP)

The combination of PP materials containing our know-how makes the excellent heat conductivity and high efficiency of amplification. It is also stable at low and high temperatures of -80°C~121°C.

Soft opening and closing / Excellent sealing

HM PCR tube has a very smooth opening and closing sensitivity. Existing PCR tubes with hard lids that frequently caused the fingertip pain. Its improved lids solve this problem and no evaporation with perfect sealing.

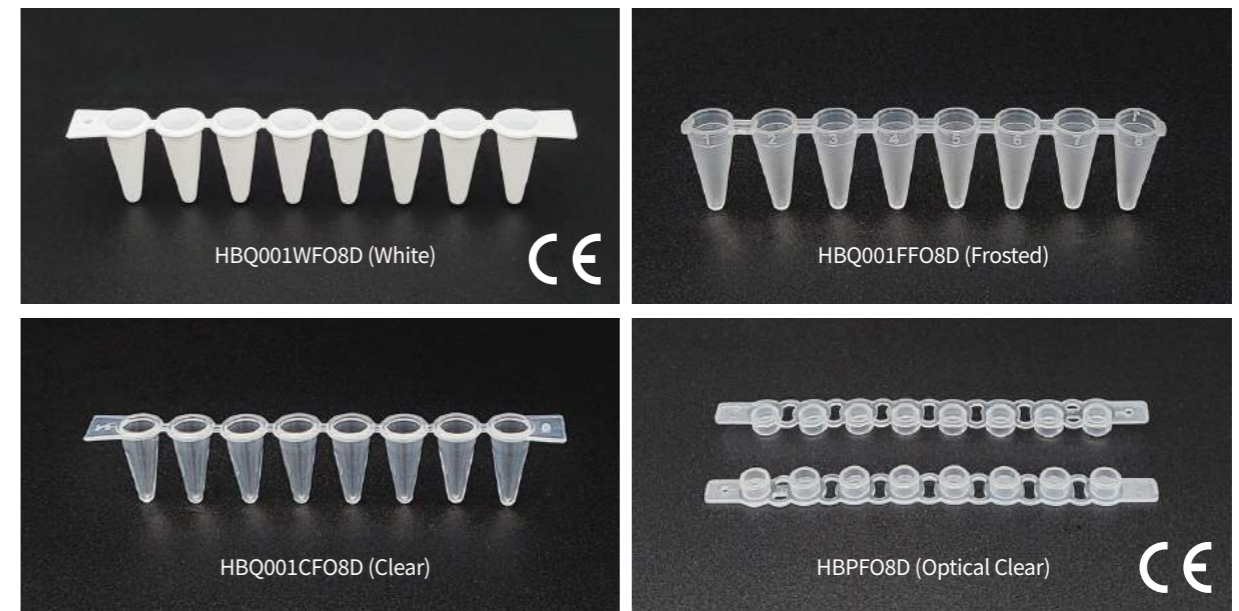
High performance / Reasonable price

Production and packaging at the latest automation facilities ensure stable quality. It is also significantly cheaper and more capable than the products of famous foreign brand.

Sterilization / OEM production

Seterilization and OEM production can be responded upon the request from the customer. OEM manufacturing is progressed in automated facilities under ISO 9001:2015 Quality Assurance System, and is more flexible in responding to quantity and packaging types. High quality electron beam sterilization is provided and certificate is issued.

Real time PCR tube 0.1mℓ



Made of optimized Polypropylene for Real-Time PCR testing and can be obtain the reproducibility and sensitivity of test results. White / Frosted / Clear 3types of tubes are available and are compatible with various PCR equipment, including CFX96, Fast7500.

By completing the RNase and DNase free test, there is no risk of sample contamination.

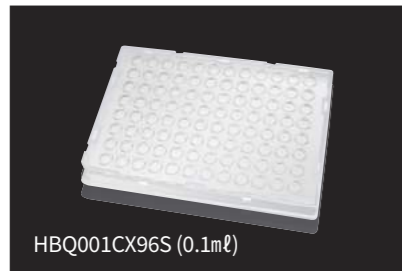
The Flat 8-strip cap make perfect sealing with tubes and prevent evaporation. Optical clear lid improves data accuracy. Compatible with all HM PCR consumables as well as the Real-time PCR Tube.

- CE certified
- RNase/DNase free
- Non-pyrogenic
- Endotoxin free
- Medical grade polypropylene
- No distortion at low and high temperatures. (-80°C~121°C)

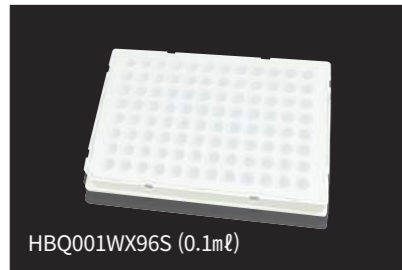
Product	Item code	Model no.	Color	Cap type	Composition	Packing
Real time PCR 8-strip tube, 0.1mℓ with unattached flat strip cap	203001	HBQ001WFO8D	White	Flat	Tube with unattached strip cap	120strips / case
	203002	HBQ001FFO8D	Frosted			
	203003	HBQ001CFO8D	Clear			
Real time PCR 8-strip tube, 0.1mℓ (Tube only)	203004	HBQ001WFX8D	White		Tube only	
	203005	HBQ001FFX8D	Frosted			
	203006	HBQ001CFX8D	Clear			
8-strip flat cap (Cap only)	203065	HBPFO8D	Clear	Cap only		

Real time PCR plate (96well, 384well)

96well plate 0.1mℓ (Clear/White)



HBQ001CX96S (0.1mℓ)



HBQ001WX96S (0.1mℓ)

It is made of optimized Polypropylene for Real-Time PCR testing and can be obtain the reproducibility and sensitivity of test results. Those plates are compatible with various PCR equipment including CFX96, Fast7500. Alphanumeric indexing for each wells are enabling quick and easy sample identification. It is designed to combine non-skirt plate with skirt frames and can be used as both non-skirt and skirt type of plate based on user's need. It is made of Polypropylene for plate and Polycarbonate for frame.

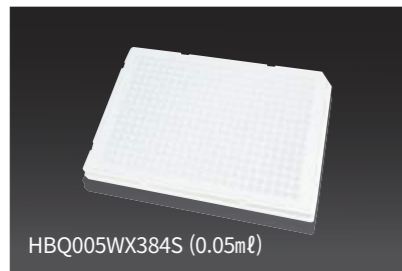
There are white and clear colors are available for each type of plates 96well plate and 384well plate.

- RNase / DNase free
- Non-pyrogenic
- Endotoxin free
- Medical grade polypropylene
- No distortion at low and high temperatures. (-80°C~121°C)

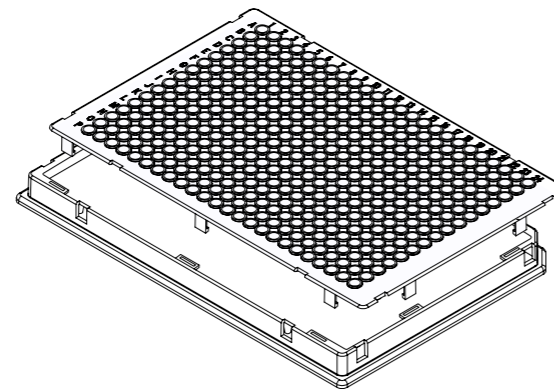
384well plate 0.05mℓ (Clear/White)



HBQ005CX384S (0.05mℓ)

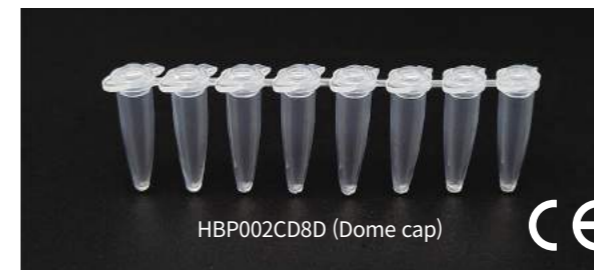


HBQ005WX384S (0.05mℓ)

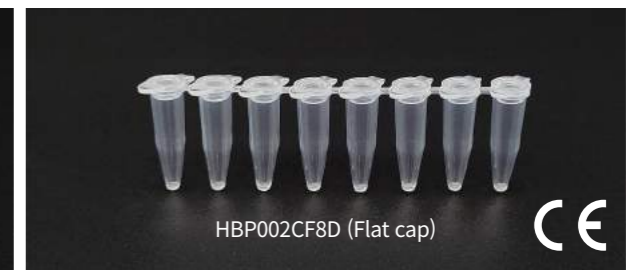


Product	Item code	Model no.	Color	Plate type	Packing
Real time PCR 96well plate, 0.1mℓ Skirted	203073	HBQ001WX96S	White	Skirted	20plate: 5ea / bag, 4bags / case 50plate: 10ea / bag, 5bags / case 100plate: 20ea / bag, 5bags / case
	203076	HBQ001CX96S	Clear		
Real time PCR 384well plate, 0.05mℓ Skirted	203085	HBQ005WX384S	White		
	203088	HBQ005CX384S	Clear		

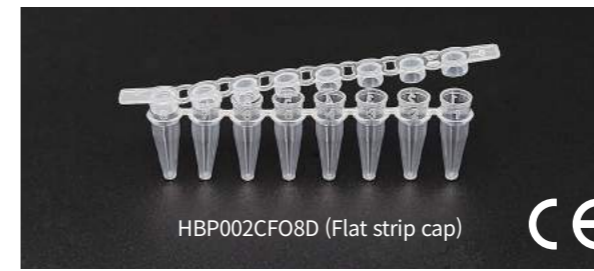
PCR 8-strip tube 0.2mℓ (Dome / Flat cap)



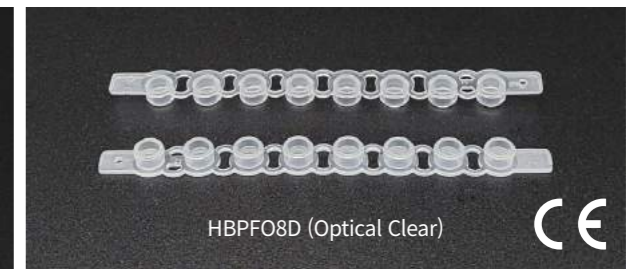
HBP002CD8D (Dome cap)



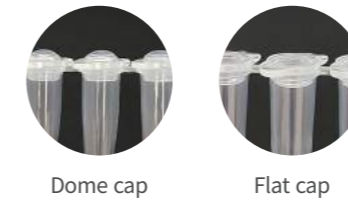
HBP002CF8D (Flat cap)



HBP002CFO8D (Flat strip cap)



HBPF08D (Optical Clear)



Dome cap

Flat cap

The lid opening and closing are smooth. It's tight fitting to secure contents and prevent evaporation. Thin wall thickness and smooth surface ensure efficient and accurate heat transfer to the sample. Compatible with the most of thermal cyclers and various colors are available.

For the tubes, there are 2 types with individual attached cap and unattached cap. The Strip tube is a soft material. So, it can be easily split by hand into smaller section and used according to the experiment.

- CE certified
- RNase/DNase free
- Non-pyrogenic
- Endotoxin free
- Medical grade polypropylene
- No distortion at low and high temperatures. (-80°C~121°C)

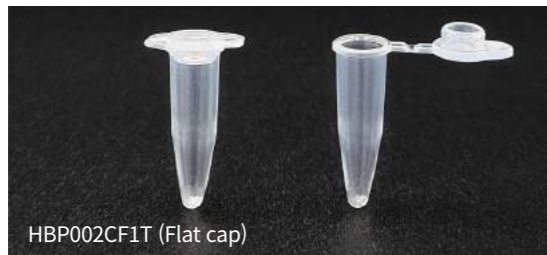
Product	Item code	Model no.	Color	Cap type	Composition	Packing
PCR 8-strip tube, 0.2mℓ with attached dome cap	203013	HBP002CD8D	Clear	Dome	Tube with attached cap	120strips / case
	203014	HBP002GD8D	Green			
	203015	HBP002VD8D	Violet			
	203016	HBP002YD8D	Yellow			
PCR 8-strip tube, 0.2mℓ with attached flat cap	203017	HBP002CF8D	Clear	Flat	Tube with attached cap	120strips / case
	203018	HBP002GF8D	Green			
	203019	HBP002VF8D	Violet			
	203020	HBP002YF8D	Yellow			
PCR 8-strip tube, 0.2mℓ with unattached flat strip cap	203021	HBP002CFO8D	Clear	Flat	Tube with unattached strip cap	120strips / case
	203022	HBP002GFO8D	Green			
	203023	HBP002VFO8D	Violet			
	203024	HBP002YFO8D	Yellow			

PCR Single tube 0.2mℓ (Dome / Flat cap)



HBP002CD1T (Dome cap)

The lid opening and closing are smooth. It's tight fitting to secure contents and prevent evaporation. Thin wall thickness and smooth surface ensure efficient and accurate heat transfer to the sample. Compatible with the most of thermal cyclers and various colors are available. Single-type tubes are suitable for small sample PCR as well as for centrifugation purposes.



HBP002CF1T (Flat cap)

- RNase/DNase free
- Non-pyrogenic
- Endotoxin free
- Medical grade polypropylene
- No distortion at low and high temperatures. (-80°C~121°C)

Product	Item code	Model no.	Color	Cap type	Composition	Packing
PCR Single tube, 0.2mℓ with attached dome cap	203025	HBP002CD1T	Clear	Dome	Tube with attached cap	1000tubes / case
	203026	HBP002GD1T	Green			
	203027	HBP002VD1T	Violet			
	203028	HBP002YD1T	Yellow			
PCR Single tube, 0.2mℓ with attached flat cap	203029	HBP002CF1T	Clear	Flat	Tube with attached cap	1000tubes / case
	203030	HBP002GF1T	Green			
	203031	HBP002VF1T	Violet			
	203032	HBP002YF1T	Yellow			

PCR Tube Rack

The lid allows to store your samples safely, and two colors of rack are available. There are 96 wells and they are indexed with alphabets and numbers on the surface. It is easy to recognize the correct sample position.

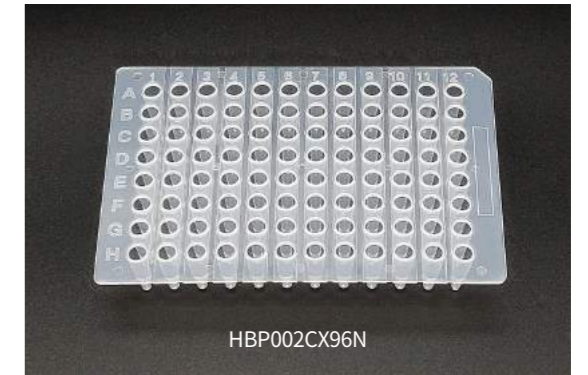
- Autoclavable
- Alphanumeric indexing
- Virgin Polypropylene



Product	Item code	Model no.	Color	Cap type	Composition	Packing
Rack for PCR tube	203067	HBP80096	Blue	Clear Lid	Rack + Lid	100racks / case
	203068		Brown			

96-well PCR plate 0.2mℓ (Non-skirted)

Compatible with a variety of thermal cycler and optically clear tubes ensure high visibility. Easy to recognize the correct sample position with alphanumeric indexing on the surface. Well ridges prevent sample evaporation after sealing with film. Non-Skirted type for most equipment.



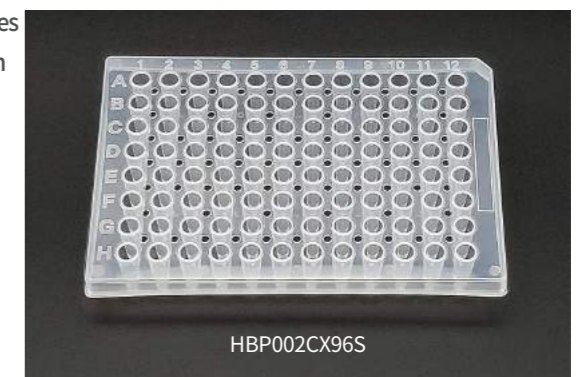
HBP002CX96N

- RNase/DNase free
- Non-pyrogenic
- Endotoxin free
- Medical grade polypropylene
- No distortion at low and high temperatures. (-80°C~121°C)

Product	Item code	Model no.	Color	Plate type	Packing
PCR 96well 0.2mℓ plate, Non-skirted	203036	HBP002CX96N	Clear	Non-Skirted	20plate: 5ea / bag, 4bags / case 50plate: 10ea / bag, 5bags / case 100plate: 20ea / bag, 5bags / case

96-well PCR plate 0.2mℓ (Semi-skirted)

Compatible with a variety of thermal cycler and optically clear tubes ensure high visibility. Easy to recognize the correct sample position with alphanumeric indexing on the surface. Well ridges prevent sample evaporation after sealing with film. Semi-skirted type for easy labeling and available for automated equipment.



HBP002CX96S

- RNase/DNase free
- Non-pyrogenic
- Endotoxin free
- Medical grade polypropylene
- No distortion at low and high temperatures. (-80°C~121°C)

Product	Item code	Model no.	Color	Plate type	Packing
PCR 96well 0.2ml plate, Semi-skirted	203033	HBP002CX96S	Clear	Semi-Skirted	20plate: 5ea / bag, 4bags / case 50plate: 10ea / bag, 5bags / case 100plate: 20ea / bag, 5bags / case



Screw cap Micro Tube (0.5ml, 1.5ml, 2.0ml)

Soft opening and perfect sealing with O-ring. There is no risk of leakage or contamination of the sample contained. RoHS certified high quality EPDM O-rings are used to prevent the risk of debris contamination and hazardous substance detection in tubes that can be caused by O-ring. O-ring has been tested strictly by SGS and the quality has been verified. The tubes are made of Virgin Polypropylene. So, it is stable and excellent resistant to various chemicals. It has no harmful effect on the stored samples. There are two types of lid loop-type and normal-type. Various colors can be used for sampling according to user convenience.

- RNase-/DNase free
- Non-pyrogenic
- Endotoxin free
- E-Beam Sterile
- Virgin polypropylene
- Perfect sealing with O-ring

Screw Cap Micro Tube

HM Microtube is developed based on the know-how and experience for producing the conical tubes. The lids are easy to open and close, so it's very comfortable to use. Also Microtube provides perfect sealing by O-ring for long-term storage without the risk of contamination and leakage of samples. Produced and packaged under the ISO 9001:2015 quality assurance system for maintain the stable quality.



HM Screw Cap Microtube

Perfect sealing / O-ring
Microtube provides perfect sealing by O-ring to prevent contamination and leakage of samples.

Knurled tubes
Knurled shape of the tube is convenient for single hand operation.

Various colors for lid
Available two types of lid, Loop type and Normal type. It can be used for sorting samples according to user convenience in various colors.

Product	Item code	Model no.	Volume	Tube type	Composition	Color	Packing
Clear Microtube with Screw cap	204001	HBS005CS1SF	0.5ml	Skirted	Tube+ Screw cap	Blue, Green Red,Violet Yellow, White	500ea / case
	204017	HBS015CS1CF	1.5ml	Conical			
	204153	HBS015CS1SF	1.5ml	Skirted			
	204033	HBS020CS1SF	2.0ml	Skirted			
Amber Microtube with Screw cap	204015	HBS005AS1SF	0.5ml	Skirted	Tube+ Screw cap	Amber	500ea / case
	204031	HBS015AS1CF	1.5ml	Conical			
	204167	HBS015AS1SF	1.5ml	Skirted			
Clear Microtube with Loop cap	204008	HBS005CL1SF	0.5ml	Skirted	Tube+ Loop cap	Blue, Green Red,Violet Yellow, White	500ea / case
	204024	HBS015CL1CF	1.5ml	Conical			
	204040	HBS020CL1SF	2.0ml	Skirted			
Amber Microtube with Loop cap	204016	HBS005AL1SF	0.5ml	Skirted	Tube+ Loop cap	Amber	500ea / case
	204032	HBS015AL1CF	1.5ml	Conical			
	204168	HBS015AL1SF	1.5ml	Skirted			
	204048	HBS020AL1SF	2.0ml	Skirted			

Homogenization Bead Tube (2.0mℓ)



HBS020D0S1SS

HBS020D1S1SS

HBS020D2S1SS

Hyundai Micro's Homogenization Bead Tube uses a hard resin specialized for bead beating, and its bottom structure is reinforced to further increase its durability.

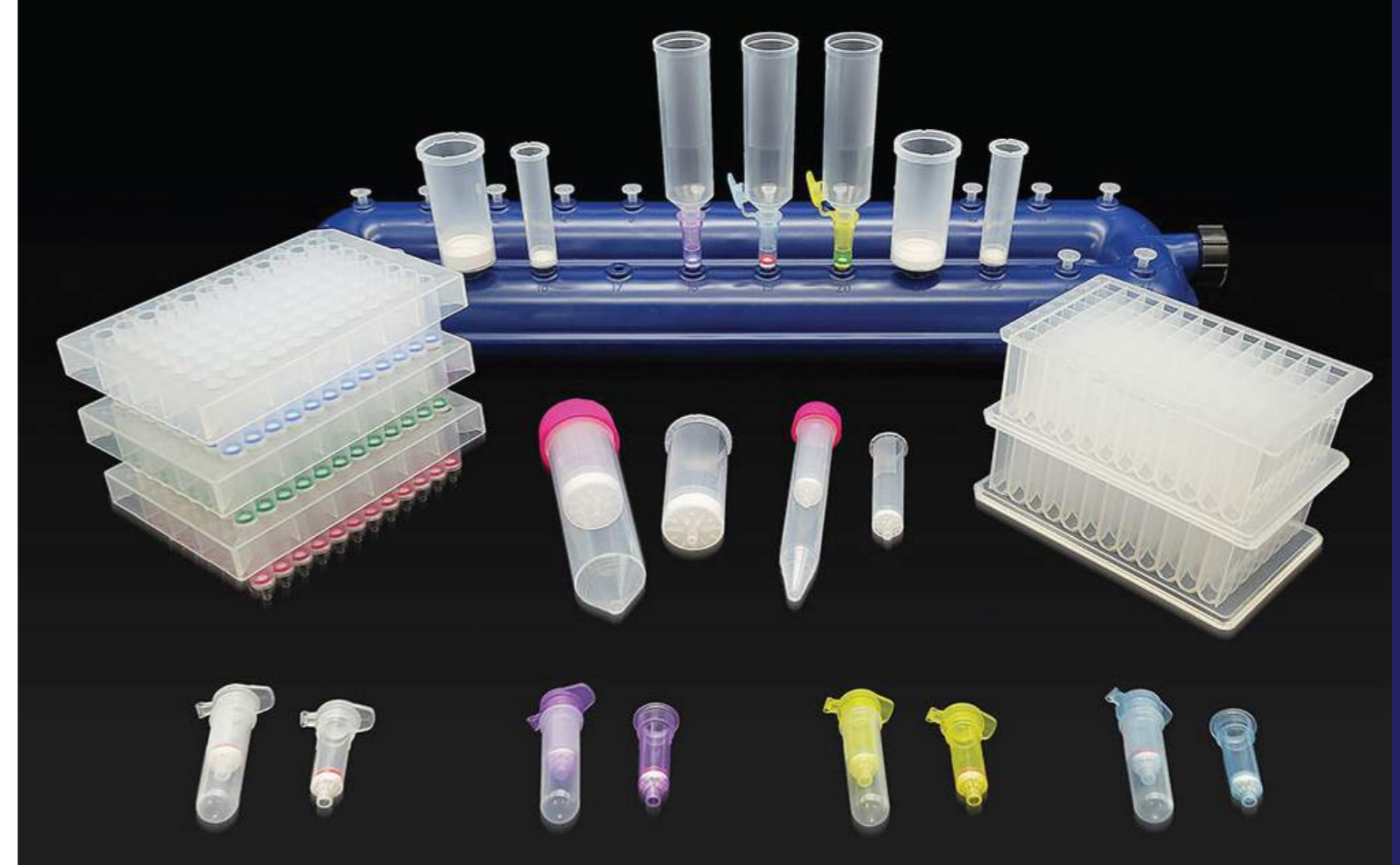
It can handle all kinds of samples: human tissue, animal tissue, plant, seed, bone, microorganism, soil, etc.

The O-ring screw cap ensures perfect sealing, and the clear tube makes it easy to visually check the homogenization of the sample.

2mℓ tube and two types of beads (2.0mm, 3.0mm zirconia beads) are available.

- RNase/DNase free
- E-Beam Sterile
- Virgin polypropylene
- Perfect sealing with O-ring

Product	Item code	Model no.	Volume	Tube type	Composition	Packing
Homogenization Bead Tube	204141	HBS020D0S1SS	2.0mℓ	Skirted	Tube + Screw cap	50ea / case
	204142	HBS020D1S1SS	2.0mℓ	Skirted	Tube + Screw cap + 2.0mm beads	
	204143	HBS020D2S1SS	2.0mℓ	Skirted	Tube + Screw cap + 3.0mm beads	
	204144	HBS020D0S1SF	2.0mℓ	Skirted	Tube +Screw cap	500ea / case
	204145	HBS020D1S1SF	2.0mℓ	Skirted	Tube + Screw cap + 2.0mm beads	
	204146	HBS020D2S1SF	2.0mℓ	Skirted	Tube + Screw cap + 3.0mm beads	



DNA/RNA Purification Column

HYUNDAI MICRO supplies spin columns to numerous domestic and overseas manufacturers of nucleic acid isolation and purification kit. Depending on the characteristics of the kits, there are various types of columns that can obtain high-yield and high-purity nucleic acid. HM proposes optimal samples to achieve maximum extraction efficiency based on each manufacturer's reagent composition. And can choose the best matching product through the testing. HM Spin column adopts the high quality silica membrane from a famous filter manufacturer and HM directly manages the production of the filter material to ensure the best efficiency. In addition, use the high-quality plastic materials and produces them in automated facilities under the ISO 9001:2015 Quality Assurance System to maintain the stability of quality.

HM Spin Column

Various composition of filter media

Depending on the reagents of the kit manufacturer, HM suggests the best composition of filter layers to achieve maximum extraction efficiency. HM Spin column adopts the high quality silica membrane from a famous manufacturer and directly manages the production of the filter material to ensure the stability of quality.

Customized spin column

HM has various options for customized column, from the color of the tube to the shape of the O-ring and they are choosable. Clear, Blue, Yellow, Purple in tube color options and Flat pattern, Sawtooth pattern in O-ring types. (Sawtooth O-ring is excellent at removing ethanol in the washing.)

Compatible with remaining buffers / Saving money

Through the testing of provided free samples, you can find and select the column that is compatible with the remaining buffers in your current kit. There are no buffers that are thrown away, saving money.

Sterilization / OEM production

Seterilization and OEM production can be responded upon the request from the customer. OEM manufacturing is progressed in automated facilities under ISO 9001:2015 Quality Assurance System, and is more flexible in responding to quantity and packaging types. High quality electron beam sterilization is provided and certificate is issued.

Mini Spin Column



HM mini-spin column is compatible with a wide range of buffers from famous brands. HYUNDAI MICRO has various composition of filter media for obtain high purity of nucleic acid and purpose the best matching columns to customer. Available two types of tubes, with lid and without lid. Clear, blue, yellow, and purple are in four colors. Two types of O-ring, Flat and Sawtooth pattern are choosable depending on characteristics of reagent. Suitable for both Centrifuge and Vacuum method. Supplied with a 2mℓ collection tube, and the columns for RNA extraction are individually packed and sterilized.

- RNase/DNase free
- Non-pyrogenic
- Endotoxin free
- Silica membrane

Pre-Filtration Column

When extracting the Total RNA, use before the Capsule type column(sterile). During the Lysis process, removes the cell debris to prevent column blockage for improving the final RNA extraction efficiency. Only used for pre-filtration purposes, it doesn't have DNA /RNA binding capacity.

- RNase/DNase free
- Non-pyrogenic
- Endotoxin free
- PE filter



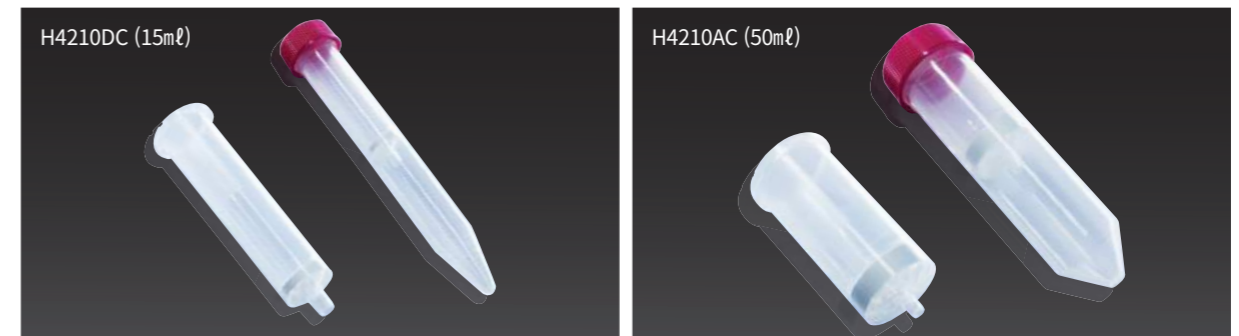
Product	Model no.	Color	Filter	Composition	Packing
Spin column	H4211GC	Clear	Silica	Spin column + Collection tube	50ea / pk
Spin column (without cap)	H4201GC	Clear	Silica	Spin column + Collection tube	50ea / pk
Spin column (Bulk)	H4211GCK	Clear	Silica	Spin column + Collection tube	500ea / pk
Spin column (Sterilized)	H5111GC	Clear	Silica	Spin column + Collection tube	10ea / pk
Spin column (Pre-Filtration)	H6211GC	Clear	PE	Spin column + Collection tube	50ea / pk
Collection tube	H4200T	Clear	-	Collection tube	50ea / pk
Spin column adaptor	H4002A	Clear	-	Spin column adaptor (for 2mℓ)	5ea / pk, 4pk / box

Midi Column

Easy to isolate / purificate high-yield Plasmid DNA into a midi scale, ideal for both Centrifuge and Vacuum method. Supplied 15mℓ conical tube with midi column and conical tubes are available for most centrifuges. Use only column, it is compatible with most Vacuum Manifolds.

Maxi Column

Easy to isolate / purificate high-yield Plasmid DNA into a maxi scale, ideal for both Centrifuge and Vacuum method. Supplied 50mℓ conical tube with midi column and conical tubes are available for most centrifuges. Use only column, it is compatible with most Vacuum Manifolds.



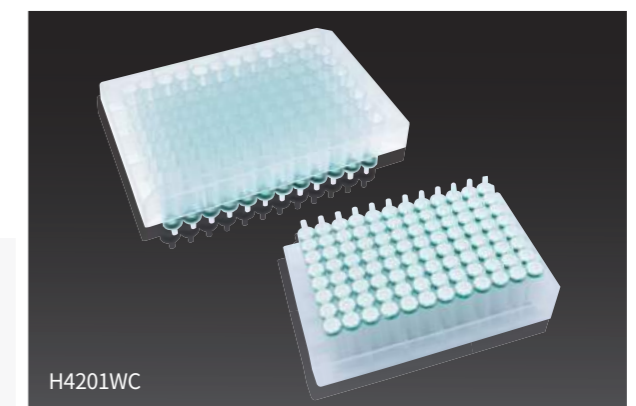
- RNase/DNase free
- Non-pyrogenic
- Endotoxin free
- Silica membrane

Product	Model no.	Color	Filter	Composition	Packing
Midi column	H4210DC	Clear	Silica	15mℓ tube + Midi column	5ea / pk, 4pk / box
Maxi column	H4210AC	Clear	Silica	50mℓ tube + Maxi column	4ea / pk, 5pk / box

96-well binding plate

Up to 96 samples can be easily isolated and purified at the same time. Use high-quality Silica membrane, ensure the high-yield and stability. (Collection plate is not included.)

- RNase/DNase free
- Non-pyrogenic
- Endotoxin free
- Silica membrane
- Alphanumeric indexing



Product	Model no.	Volume	Filter	Composition	Packing
96-well binding plate	H4201WC	1.5mℓ/well	Silica	96-well binding plate	1ea / pk, 6pk / box

Selection Guide

HM offers a wide range of options for nucleic acid purification kit manufacturers. Optimal column for your reagent can be selected by the following list.

Step 1

Column Types

Product type	Size	Color
column with cap	2mℓ (0.8mℓ)	Natural Violet
column with out cap	2mℓ (0.8mℓ)	
Midi Column	15mℓ	Blue
Maxi Column	50mℓ	Yellow
96-well plate	1.5mℓ/well	

※ You can choose the color.

Step 2

O-Ring

O-Ring type	Color
Sawtooth-pattern	Natural / Green Blue / Red / Violet
Flat-pattern	

※ You can choose the color.

Step 4

Package

Select options
Package material
Package design
Standard packing unit (Individual, Bulk, Small quantity packing)
Sterilization
⇓
Final decision

※ The choice can be limited under few conditions.

Step 3

Filter Material

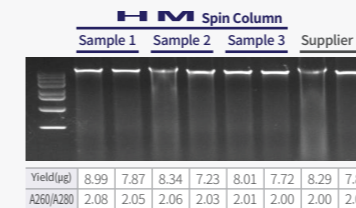
Filter layer	Applicaton
Samples will be provided for the testing for each application.	Plasmid prep Kit
	Genomic prep Kit
HM will provide the different filter layered spin columns for the maximum efficiency of manufacturer's reagent composition.	PCR Purification Kit
	Gel Purification Kit
	Total RNA prep Kit
	Plant DNA prep Kit
	Blood RNA prep Kit
	Bacteria DNA prep Kit
	Viral Nucleic acid prep Kit

Compatible test_supplier 'Q' and HM column

1. Genomic DNA Extraction

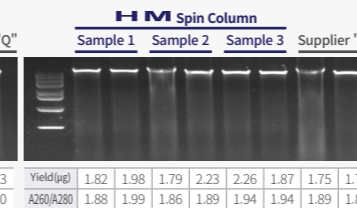
1-1. Mammalian cell culture

<Sample : HeLa cell (1 x 10⁶ cell)>



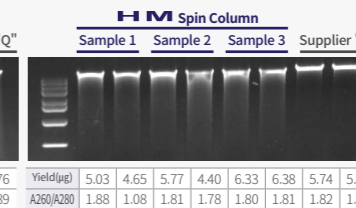
1-2. Blood

<Sample : Human blood (100μℓ)>



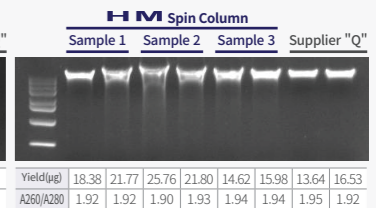
1-3. Plant

<Sample : Brassica oleracea(100mg)>



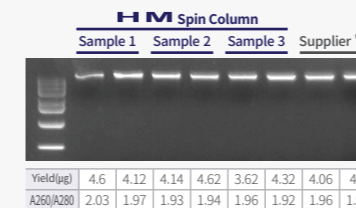
1-4. Animal Tissue

<Sample : Mouse Kidney (20mg)>



1-5. Bacterium

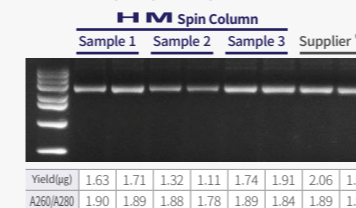
<Sample : E.coli (5 x 10⁸ cell)>



2. Plasmid DNA Extraction & Fragment DNA Purification

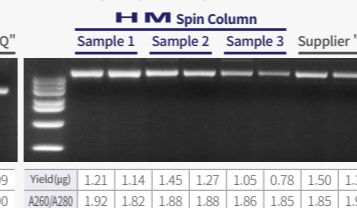
2-1. High-copy plasmid

<Sample : pUC19 plasmid, 2mℓ culture>



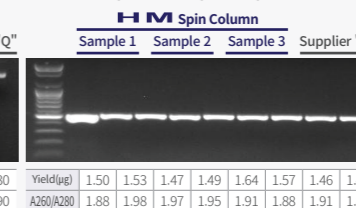
2-2. Low-copy plasmid

<Sample : pET28b plasmid, 2mℓ culture>



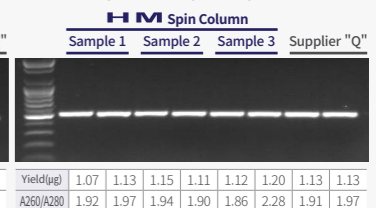
2-3. PCR product

<Sample : 500bp PCR product>



2-4. Gel purification

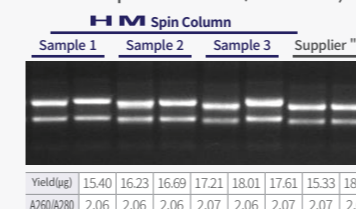
<Sample : 500bp PCR product>



3. RNA Extraction

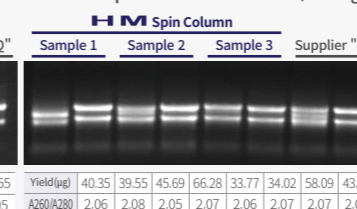
3-1. Mammalian cell culture

<Sample : HeLa cell (1 x 10⁶ cell)>



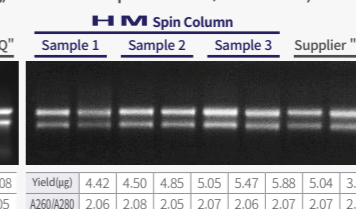
3-2. Plant

<Sample : Brassica oleracea(100mg)>



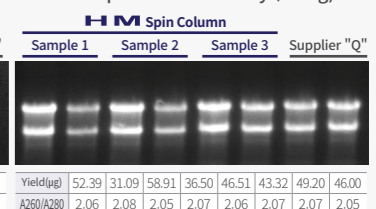
3-3. Bacterium

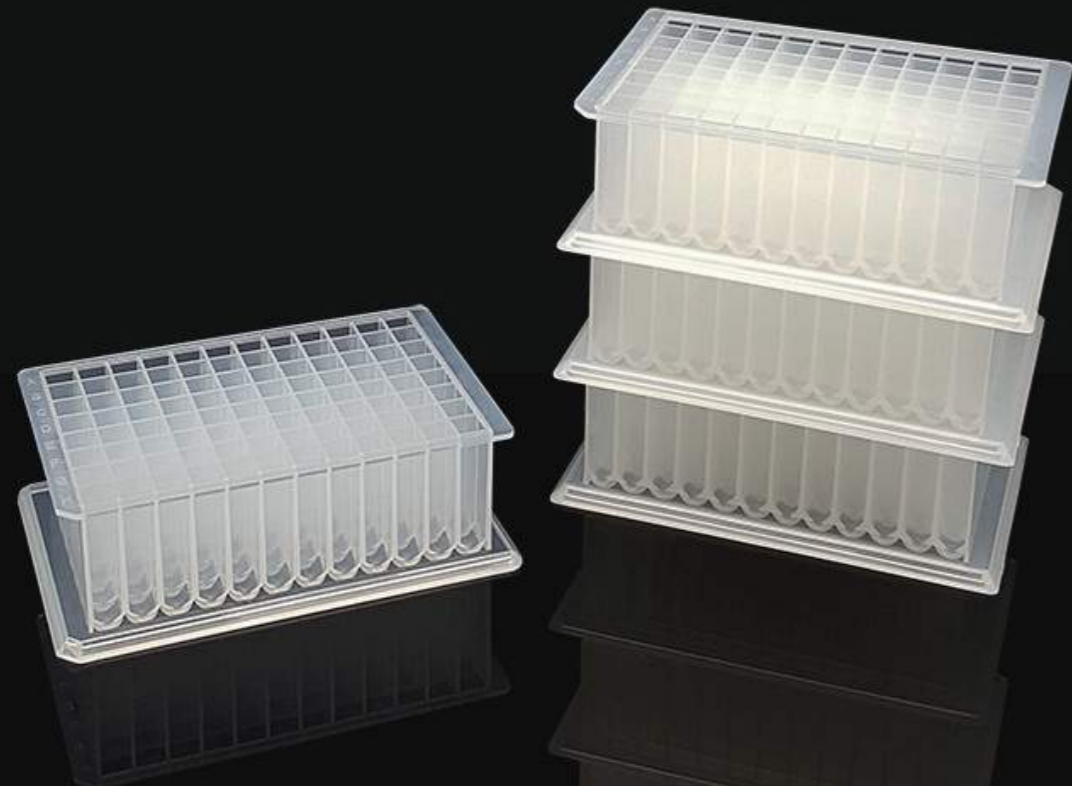
<Sample : E.coli (1 x 10⁸ cell)>



3-4. Animal Tissue

<Sample : Mouse Kidney (20mg)>





96 Deep Well Plate

HM Deep-Well plates are ideal for sample storage, High Throughput Screening (HTS), cell and tissue culture, and other applications. The well is indexed with alphabets and numbers for easy identifying samples. The bottom part of the plate is designed to be easily stacked and stored. Produced with high quality virgin polypropylene, it is stable and resistant to various chemicals. so, has no harmful effect on the stored samples.

HM 96 Deep Well Plate

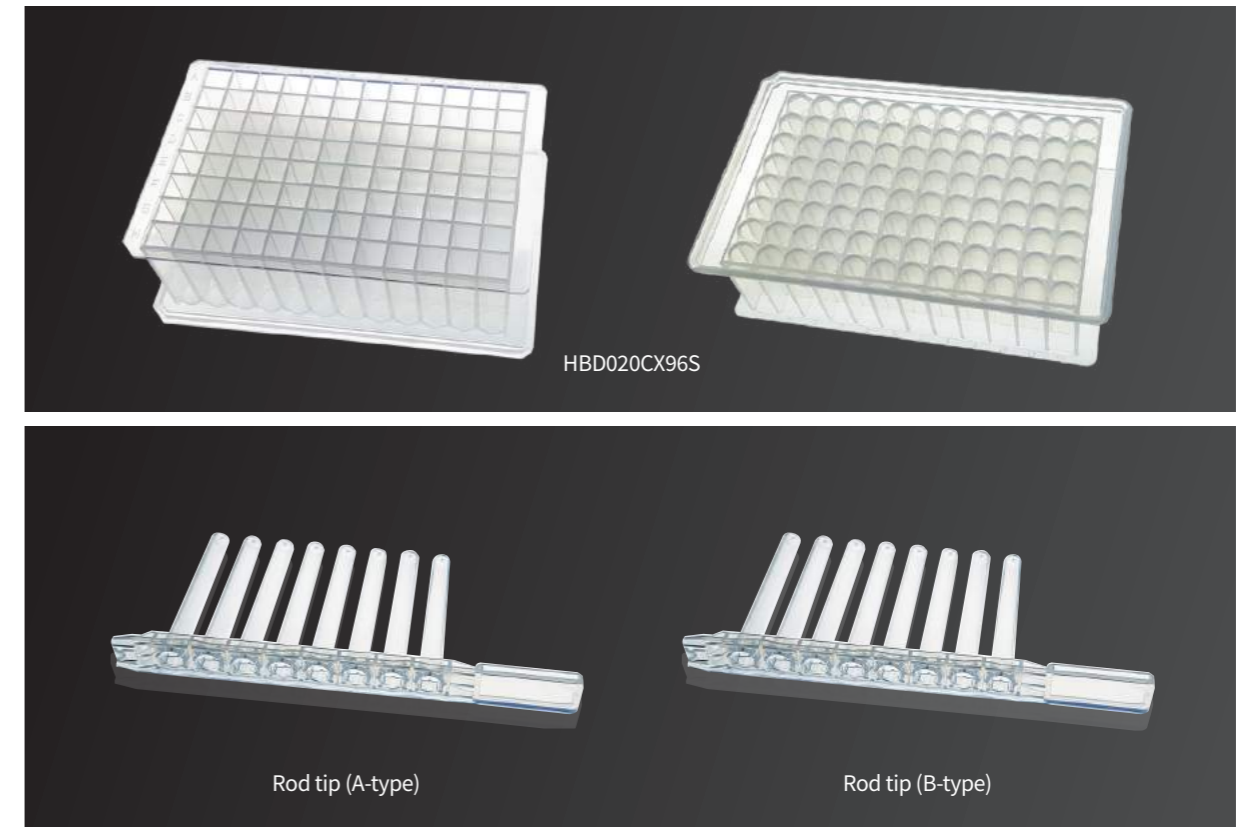
Indexing
The well is indexed with alphabets and numbers for easy identifying samples.

High quality virgin PP
Produced with high quality virgin polypropylene, It has no harmful effect on the stored samples.

U-shaped bottom design
The U-shaped bottom design makes to permit easy access for remaining reagent and pipetting.

Suitable for automation equipment
Designed to meet SBS standards, it is suitable for use in automated sample processors.

96 Deep Well Plate



Made of Virgin Polypropylene, it has excellent chemical resistance and is ideal for collection plates. It is also suitable for storage plates for compounds, specimens, or molecular biology. And the round well floor reduces liquid residual. Alphanumeric indexing for each wells are enabling quick and easy sample identification. Each well has a protruding shape, allowing safe sealing with film and sealing mats, and prevents contamination between the wells. Suitable for use with large quantity and automatic sample processor equipment in accordance with SBS standards. HTS(High Throughput Screening) friendly and compatible with various liquid processing equipments. There are two types of Rod tips, 'A' and 'B'. There is a difference in the type of Rod tip depending on the automation equipment what you use. Please contact us before purchasing.

- Alphanumeric indexing
- RNase-/DNase free
- Endotoxin free
- Suitable for automation equipment
- Non-pyrogenic
- Virgin polypropylene

Product	Item code	Model no.	Volume	Material	Composition	Packing
96 deep well plate	205001	HBD020CX96S	2ml / well	Virgin PP	Plate only	100plates / box



Spin Filter

HM Spin filter have developed with extensive experience and technology gained in Filter and Plastic Labware which are existing business area of HYUNDAI MICRO. HM has a various sourcing channels of filter materials and has technical know-how in filtration field. Also we have excellent technical skills in plastic injection/molding with long-standing achievements in the plastic labware field. Due to these strengths, we successfully developed and mass-produced the syringe filter first in Korea and proved our technical skills. We are constantly working on developing products that incorporate filters and plastics.

HM Spin Filter

Various filter material

Hyundai Micro has a variety of filter material sourcing channels and technical know-how based on long-term experience more than 30 years in the filter field. Depending on the experimental conditions, can be applied various filtration materials.

Customization

Various membrane materials are prepared such as CA, Nylon, PES. And you can make it by choosing the specific materials and pore size. The 2mℓ mini tube can be selected between the 2 types with cap and without cap. For the mass production, also can choose the colors of cap.

High performance / Reasonable price

Production and packaging at the latest automation facilities ensure stable quality. It is also significantly cheaper and more capable than the products of famous foreign brand.

Sterilization / OEM production

Sterilization and OEM production can be responded upon the request from the customer. OEM manufacturing is progressed in automated facilities under ISO 9001:2015 Quality Assurance System, and is more flexible in responding to quantity and packaging types. High quality electron beam sterilization is provided and certificate is issued.

Spin Filter

HM Spin Filter can filter various samples using a centrifuge. Therefore, it is advantageous to filter various kinds of small samples.

It can remove bacteria, cells and small particles (0.2~0.45μm) from liquids and can also be used for pre-filtration to remove large particles(20~70μm).

It can be applied the various type of membrane filters depending on the experimental conditions.

The transparent tube body is suitable for observing the color of the sample and the membrane allows collection of filter cake.

For the CA membrane, can filter with fast flow rate and low protein adsorption.

If you filter a mixture containing surfactants, There is very little sample loss because no bubble.

There are 3 types: Mini(2mℓ), Midi(15mℓ), Maxi(50mℓ) and for the Mini tube, user can choose between the type without snap cap or with snap cap depending on their convenience.

* This product cannot be used for protein concentration.

RCF rating

- Mini tube(2mℓ) : 10,000xg
- Midi tube(15mℓ) : 3,000xg
- Maxi tube(50mℓ) : 3,000xg

Working volume

- Mini tube(2mℓ) : ≤ 0.8mℓ
- Midi tube(15mℓ) : ≤ 4mℓ
- Maxi tube(50mℓ) : ≤ 15mℓ



Product	Model no.	Volume	Filter	Pore size	Composition	Packing
Mini spin filter	HSF002	2mℓ	CA, Nylon, PES, MCE, PVDF, PTFE	0.2 μm 0.45 μm	2mℓ tube + Mini spin filter	50ea / pk
Midi spin filter	HSF015	15mℓ			15mℓ tube + Midi spin filter	5ea / pk, 4pk / box
Maxi spin filter	HSF050	50mℓ			50mℓ tube + Maxi spin filter	4ea / pk, 5pk / box



2 FILTRATION

• Contents

- Bottle Top Vacuum Filter
- Syringe Filter
- Membrane Filter
- Qualitative Filter Paper
- Quantitative Filter Paper
- Glass Fiber Filter





Bottle Top Vacuum Filter

HM Bottle Top Vacuum filter have developed with extensive experience and technology gain in Filter and Plastic Labware which are existing business area of HYUNDAI MICRO. HM has a various sourcing channels of filter materials and has technical know-how in filtration field. Also we have excellent technical skills in plastic injection/molding with long-standing achievements in the plastic labware field. Due to these strengths, we successfully developed and mass-produced the syringe filter first in Korea and proved our technical skills. We are constantly working on developing products that incorporate filters and plastics.

HM Bottle Top Vacuum



Bottle Top Vacuum Filter

HYUNDAI MICRO's Bottle Top Vacuum Filtration System is designed for:

- Sterilization of tissue and cell culture media
- Filtration of biological aqueous solutions
- Filtration of general aqueous solutions and organic solvents
- HPLC sample preparation

Products of various materials can be selected and used according to the purpose.

- Membrane filter: MCE, CA, NYLON, PVDF, PVDF-D, PTFE-D, PTFE-H
- Volume Types: 250ml and 500ml
- Universal Neck Holder: 45mm
- Bottle Cap: Individual Packaging, E-beam Sterilization
- Receiver Bottle: Convenient to check the capacity with the marked scale

- E-Beam Sterile
- Non-pyrogenic
- Non-cytotoxic
- RNase-/DNase free



Bottle Top Vacuum Filtration System



Bottle Top Vacuum Filter



Receiver Bottle

※ PVDF, CA, NYLON, MCE, PVDF-D, PTFE-H, PTFE-D membrane filter is also possible on request.

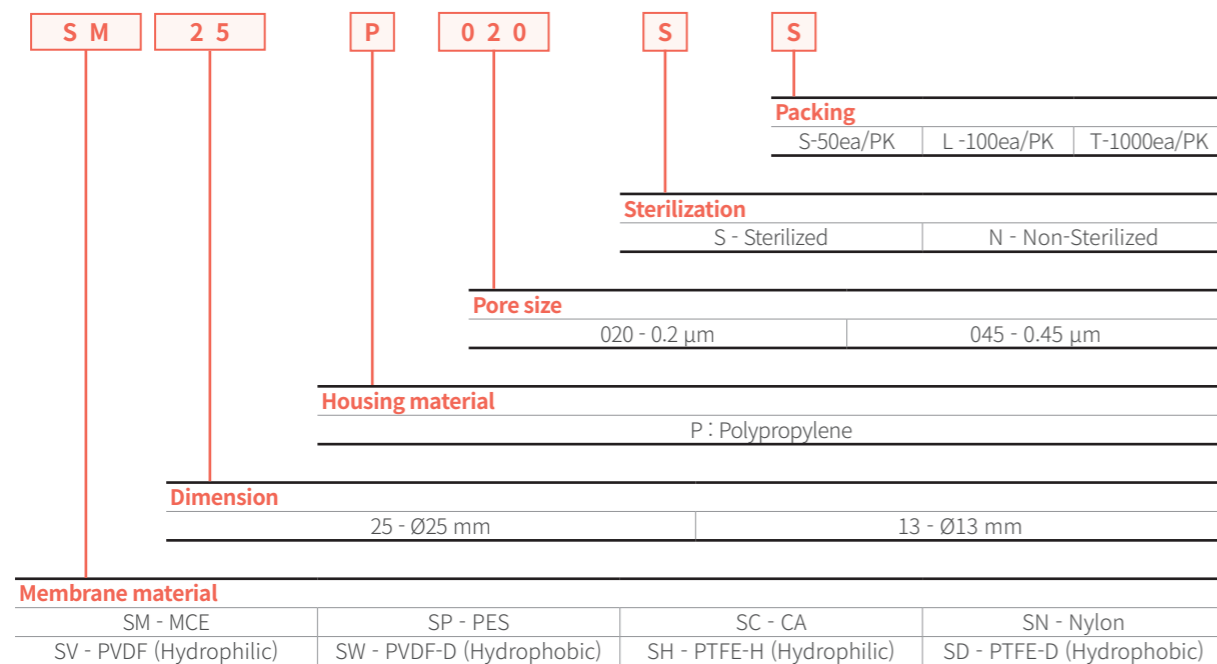
Product	Item code	Model no.	Filter	Pore size	Volume	Packing
Bottle Top Vacuum Filtration System	105031	BPS0250D020A	PES	0.22μm	250ml	12ea / pk
	105032	BPS0250D045A		0.45μm		12ea / pk
	105033	BPS0500D020A		0.22μm	500ml	12ea / pk
	105034	BPS0500D045A		0.45μm		12ea / pk
Bottle Top Vacuum Filter	105019	BPU0250D020A	PES	0.22μm	250ml	12ea / pk or 24ea / pk
	105021	BPU0250D045A		0.45μm		12ea / pk or 24ea / pk
	105023	BPU0500D020A		0.22μm	500ml	12ea / pk or 24ea / pk
	105025	BPU0500D045A		0.45μm		12ea / pk or 24ea / pk
Receiver Bottle	105154	BT0250A	-	-	250ml	12ea / pk or 24ea / pk
	105156	BT0500A	-	-	500ml	12ea / pk or 24ea / pk



Syringe Filter

HYUNDAI MICRO's syringe filters are excellent in rapid purification and particle removal with little loss of samples. They also avoid contaminations from machinery solid impurities. With stability, HM syringe filters are used for filtering liquid samples and suspended materials in gas. HM produces various types of syringe filter in both sterile and non-sterile types. All filter housings are sealed with ultrasonic waves and possible to implement under any filtration methods of pressurization

Model Code



Typical Application

MCE (Mixed Cellulose Ester)	PES (Polyethersulfone)	CA (Cellulose Acetate)
<ul style="list-style-type: none"> Hydrophilic Filtration of general aqueous type liquid Filtration of fine particle 	<ul style="list-style-type: none"> Hydrophilic Rapid filtration of aqueous solutions such as culture medium of tissues and additives Low protein absorption, optimal for biological experiments Mild organic solvents 	<ul style="list-style-type: none"> Hydrophilic Low protein absorption Filtration of biological macromolecules

Nylon (Polyamide)	PVDF (Hydrophilic Polyvinylidene Fluoride)	PVDF-D (Hydrophobic Polyvinylidene Fluoride)
<ul style="list-style-type: none"> Hydrophilic Mid-polarity solution Excellent chemical compatibility and used for mixed solvents High protein binding 	<ul style="list-style-type: none"> Hydrophilic Polarity or non-polarity Filtration of water soluble sample Mild organic solvents Low protein binding 	<ul style="list-style-type: none"> Hydrophobic Mild organic solvents Gas filtration

PTFE-H (Hydrophilic Polytetrafluoroethylene)	PTFE-D (Hydrophobic Polytetrafluoroethylene)
<ul style="list-style-type: none"> Hydrophilic Aqueous type liquid and mixed liquid of organic solvents Optimal for HPLC 	<ul style="list-style-type: none"> Hydrophobic For organic solvents Used for purification of organic solvents Air and gas filtration

MCE (Mixed Cellulose Ester)



Features

- Hydrophilic
- Membrane filter mixed with Cellulose Acetate and Nitro Cellulose
- Filtration of HPLC sample
- For filtration of general aqueous type liquid
- Used for sterile filtration of a small amount liquid and fine particle filtration
- Excellent strength and adsorption
- Stable for pH 3.5 - 8
- Sterilized and non-sterilized

Specification

Filter material	Mixed Cellulose Ester
Housing material	Polypropylene
Pore size	0.20 µm, 0.45 µm
Effective filtration area	13 mm – 0.8 cm ² , 25 mm – 4.0 cm ²
Process volume	13 mm ≤ 10 ml, 25 mm ≤ 100 ml
Maximum inlet pressure	5.1bar (5.3 kg / cm ²)

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack	Sterilization
101001	SM13P020SL	13mm	0.2µm	100/PK	Sterilized
101002	SM13P045SL		0.45µm	100/PK	Sterilized
101003	SM13P020NL		0.2µm	100/PK	None
101004	SM13P045NL		0.45µm	100/PK	None
101005	SM13P020NT		0.2µm	1000/PK	None
101006	SM13P045NT		0.45µm	1000/PK	None
101007	SM25P020SS	25mm	0.2µm	50/PK	Sterilized
101008	SM25P045SS		0.45µm	50/PK	Sterilized
101009	SM25P020NS		0.2µm	50/PK	None
101010	SM25P045NS		0.45µm	50/PK	None
101011	SM25P020NL		0.2µm	100/PK	None
101012	SM25P045NL		0.45µm	100/PK	None
101013	SM25P020NT		0.2µm	1000/PK	None
101014	SM25P045NT		0.45µm	1000/PK	None

PES (Polyethersulfone)



Features

- Hydrophilic
- Rapid filtration of aqueous solutions such as culture medium of tissues, additives and buffers
- Excellent thermal resistance and chemical resistance
- Mild organic solvents
- For filtration of general aqueous type liquid
- Used for purification of solutions containing protein and aqueous solutions
- Stable for pH 1-14
- Sterilized and non-sterilized

Specification

Filter material	Polyethersulfone
Housing material	Polypropylene
Pore size	0.20 µm, 0.45 µm
Effective filtration area	13 mm – 0.8 cm ² , 25 mm – 4.0 cm ²
Process volume	13 mm ≤ 10 ml, 25 mm ≤ 100 ml
Maximum inlet pressure	5.1bar (5.3 kg / cm ²)

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack	Sterilization
101015	SP13P020SL	13mm	0.2µm	100/PK	Sterilized
101016	SP13P045SL		0.45µm	100/PK	Sterilized
101017	SP13P020NL		0.2µm	100/PK	None
101018	SP13P045NL		0.45µm	100/PK	None
101019	SP13P020NT		0.2µm	1000/PK	None
101020	SP13P045NT		0.45µm	1000/PK	None
101021	SP25P020SS	25mm	0.2µm	50/PK	Sterilized
101022	SP25P045SS		0.45µm	50/PK	Sterilized
101023	SP25P020NS		0.2µm	50/PK	None
101024	SP25P045NS		0.45µm	50/PK	None
101025	SP25P020NL		0.2µm	100/PK	None
101026	SP25P045NL		0.45µm	100/PK	None
101027	SP25P020NT		0.2µm	1000/PK	None
101028	SP25P045NT		0.45µm	1000/PK	None

CA (Cellulose Acetate)



Features

- Hydrophilic
- For filtration of biological macromolecules
- Low binding capacity for proteins
- Stable for pH 1-14
- Sterilized and non-sterilized

Specification

Filter material	Cellulose Acetate
Housing material	Polypropylene
Pore size	0.20 µm, 0.45 µm
Effective filtration area	13 mm – 0.8 cm ² , 25 mm – 4.0 cm ²
Process volume	13 mm ≤ 10 ml, 25 mm ≤ 100 ml
Maximum inlet pressure	5.1bar (5.3 kg / cm ²)

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack	Sterilization
101029	SC13P020SL	13mm	0.2µm	100/PK	Sterilized
101030	SC13P045SL		0.45µm	100/PK	Sterilized
101031	SC13P020NL		0.2µm	100/PK	None
101032	SC13P045NL		0.45µm	100/PK	None
101033	SC13P020NT		0.2µm	1000/PK	None
101034	SC13P045NT		0.45µm	1000/PK	None
101035	SC25P020SS	25mm	0.2µm	50/PK	Sterilized
101036	SC25P045SS		0.45µm	50/PK	Sterilized
101037	SC25P020NS		0.2µm	50/PK	None
101038	SC25P045NS		0.45µm	50/PK	None
101039	SC25P020NL		0.2µm	100/PK	None
101040	SC25P045NL		0.45µm	100/PK	None
101041	SC25P020NT		0.2µm	1000/PK	None
101042	SC25P045NT		0.45µm	1000/PK	None

Nylon (Polyamide)



Features

- Hydrophilic
- Excellent mechanical strength and high adsorption
- Used for most organic solvents
- Available for mid-polar liquids
- Stable for pH 6 - 13

Specification

Filter material	Nylon
Housing material	Polypropylene
Pore size	0.20 µm, 0.45 µm
Effective filtration area	13 mm – 0.8 cm ² , 25 mm – 4.0 cm ²
Process volume	13 mm ≤ 10 ml, 25 mm ≤ 100 ml
Maximum inlet pressure	5.1bar (5.3 kg / cm ²)

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack	Sterilization
101043	SN13P020NL	13mm	0.2µm	100/PK	None
101044	SN13P045NL		0.45µm	100/PK	None
101045	SN13P020NT		0.2µm	1000/PK	None
101046	SN13P045NT		0.45µm	1000/PK	None
101047	SN25P020NS	25mm	0.2µm	50/PK	None
101048	SN25P045NS		0.45µm	50/PK	None
101049	SN25P020NL		0.2µm	100/PK	None
101050	SN25P045NL		0.45µm	100/PK	None
101051	SN25P020NT		0.2µm	1000/PK	None
101052	SN25P045NT		0.45µm	1000/PK	None

PVDF (Polyvinylidene Fluoride)



Features

- Hydrophilic
- Extremely low protein binding
- Available for both organic solvents and aqueous solvents
- Removal of fine particle
- Filtration of biological solutions

Specification

Filter material	Hydrophilic Polyvinylidene Fluoride
Housing material	Polypropylene
Pore size	0.20 μm, 0.45 μm
Effective filtration area	13 mm – 0.8 cm ² , 25 mm – 4.0 cm ²
Process volume	13 mm ≤ 10 ml, 25 mm ≤ 100 ml
Maximum inlet pressure	5.1bar (5.3 kg / cm ²)

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack	Sterilization
101053	SV13P020NL	13mm	0.2μm	100/PK	None
101054	SV13P045NL		0.45μm	100/PK	None
101055	SV13P020NT		0.2μm	1000/PK	None
101056	SV13P045NT		0.45μm	1000/PK	None
101057	SV25P020NS	25mm	0.2μm	50/PK	None
101058	SV25P045NS		0.45μm	50/PK	None
101059	SV25P020NL		0.2μm	100/PK	None
101060	SV25P045NL		0.45μm	100/PK	None
101061	SV25P020NT		0.2μm	1000/PK	None
101062	SC25P045NT		0.45μm	1000/PK	None

PVDF-D (Polyvinylidene Fluoride)



Features

- Hydrophobic
- Excellent thermal resistance and chemical resistance
- Gas filtration
- Corrosive solutions filtration
- Stable for pH 1-13

Specification

Filter material	Hydrophobic Polyvinylidene Fluoride
Housing material	Polypropylene
Pore size	0.20 μm, 0.45 μm
Effective filtration area	13 mm – 0.8 cm ² , 25 mm – 4.0 cm ²
Process volume	13 mm ≤ 10 ml, 25 mm ≤ 100 ml
Maximum inlet pressure	5.1bar (5.3 kg / cm ²)

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack	Sterilization
101063	SW13P020NL	13mm	0.2μm	100/PK	None
101064	SW13P045NL		0.45μm	100/PK	None
101065	SW13P020NT		0.2μm	1000/PK	None
101066	SW13P045NT		0.45μm	1000/PK	None
101067	SW25P020NS	25mm	0.2μm	50/PK	None
101068	SW25P045NS		0.45μm	50/PK	None
101069	SW25P020NL		0.2μm	100/PK	None
101070	SW25P045NL		0.45μm	100/PK	None
101071	SW25P020NT		0.2μm	1000/PK	None
101072	SW25P045NT		0.45μm	1000/PK	None

PTFE-H (Polytetrafluoroethylene)



Features

- Hydrophilic
- Polypropylene Supported Membrane Filter
- Excellent resistance to organic, acid and alkali solvents
- Suitable for pre-filtration of mixed solvents used in HPLC
- Suitable for mixed solvents of aqueous type and organic solvents

Specification

Filter material	Hydrophilic Polytetrafluoroethylene
Housing material	Polypropylene
Pore size	0.20 μm, 0.45 μm
Effective filtration area	13 mm – 0.8 cm ² , 25 mm – 4.0 cm ²
Process volume	13 mm ≤ 10 ml, 25 mm ≤ 100 ml
Maximum inlet pressure	5.1bar (5.3 kg / cm ²)

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack	Sterilization
101073	SH13P020NL	13mm	0.2μm	100/PK	None
101074	SH13P045NL		0.45μm	100/PK	None
101075	SH13P020NT		0.2μm	1000/PK	None
101076	SH13P045NT		0.45μm	1000/PK	None
101077	SH25P020NS	25mm	0.2μm	50/PK	None
101078	SH25P045NS		0.45μm	50/PK	None
101079	SH25P020NL		0.2μm	100/PK	None
101080	SH25P045NL		0.45μm	100/PK	None
101081	SH25P020NT		0.2μm	1000/PK	None
101082	SH25P045NT		0.45μm	1000/PK	None

PTFE-D (Polytetrafluoroethylene)



Features

- Hydrophobic
- Polypropylene Supported Membrane Filter
- Air and gas filtration
- Available for air Vent
- Suitable for HPLC and organic solvents
- Excellent chemical resistance, unaffected by ultraviolet rays

Specification

Filter material	Hydrophobic Polytetrafluoroethylene
Housing material	Polypropylene
Pore size	0.20 μm, 0.45 μm
Effective filtration area	13 mm – 0.8 cm ² , 25 mm – 4.0 cm ²
Process volume	13 mm ≤ 10 ml, 25 mm ≤ 100 ml
Maximum inlet pressure	5.1bar (5.3 kg / cm ²)

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack	Sterilization
101083	SD13P020NL	13mm	0.2μm	100/PK	None
101084	SD13P045NL		0.45μm	100/PK	None
101085	SD13P020NT		0.2μm	1000/PK	None
101086	SD13P045NT		0.45μm	1000/PK	None
101087	SD25P020NS	25mm	0.2μm	50/PK	None
101088	SD25P045NS		0.45μm	50/PK	None
101089	SD25P020NL		0.2μm	100/PK	None
101090	SD25P045NL		0.45μm	100/PK	None
101091	SD25P020NT		0.2μm	1000/PK	None
101092	SD25P045NT		0.45μm	1000/PK	None

Combi Syringe Filter

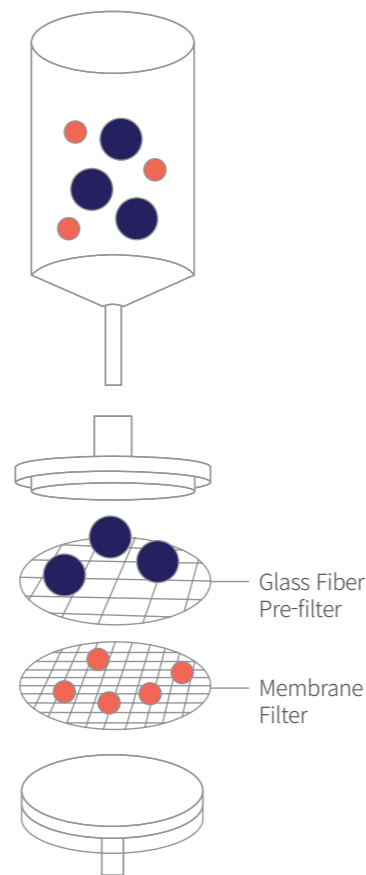


Features

- Combi syringe filter with a coarse glass fiber prefilter and a small pore membrane as main filter
- Filtration for solutions with a high load of particulate matter
- Two to four times greater throughput than syringe filters without prefilters
- Glass fiber prefilter(1.6µm) to remove larger particles and membrane filters for fine filtration
- For highly contaminated samples
- Two to five times greater filtration efficiency depending on solvents

Specification

Filter material	Glass Filter + Membrane Filter
Housing material	Polypropylene
Pore size	1.6µm + 0.20µm, 1.6µm + 0.45µm
Effective filtration area	25 mm – 4.0 cm ²
Process volume	25 mm ≤ 100 ml
Maximum inlet pressure	5.1bar (5.3 kg / cm ²)



Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack	Sterilization
101093	SM13P020GL	13mm	1.6 / 0.20µm	100/PK	None
101094	SM13P045GL	13mm	1.6 / 0.45µm	100/PK	None
101097	SM25P020GL	25mm	1.6 / 0.20µm	100/PK	None
101098	SM25P045GL	25mm	1.6 / 0.45µm	100/PK	None
101101	SP13P020GL	13mm	1.6 / 0.20µm	100/PK	None
101102	SP13P045GL	13mm	1.6 / 0.45µm	100/PK	None
101105	SP25P020GL	25mm	1.6 / 0.20µm	100/PK	None
101106	SP25P045GL	25mm	1.6 / 0.45µm	100/PK	None
101109	SC13P020GL	13mm	1.6 / 0.20µm	100/PK	None
101110	SC13P045GL	13mm	1.6 / 0.45µm	100/PK	None
101113	SC25P020GL	25mm	1.6 / 0.20µm	100/PK	None
101114	SC25P045GL	25mm	1.6 / 0.45µm	100/PK	None
101117	SN13P020GL	13mm	1.6 / 0.20µm	100/PK	None
101118	SN13P045GL	13mm	1.6 / 0.45µm	100/PK	None
101121	SN25P020GL	25mm	1.6 / 0.20µm	100/PK	None
101122	SN25P045GL	25mm	1.6 / 0.45µm	100/PK	None
101125	SV13P020GL	13mm	1.6 / 0.20µm	100/PK	None
101126	SV13P045GL	13mm	1.6 / 0.45µm	100/PK	None
101129	SV25P020GL	25mm	1.6 / 0.20µm	100/PK	None
101130	SV25P045GL	25mm	1.6 / 0.45µm	100/PK	None
101133	SW13P020GL	13mm	1.6 / 0.20µm	100/PK	None
101134	SW13P045GL	13mm	1.6 / 0.45µm	100/PK	None
101137	SW25P020GL	25mm	1.6 / 0.20µm	100/PK	None
101138	SW25P045GL	25mm	1.6 / 0.45µm	100/PK	None
101141	SH13P020GL	13mm	1.6 / 0.20µm	100/PK	None
101142	SH13P045GL	13mm	1.6 / 0.45µm	100/PK	None
101145	SH25P020GL	25mm	1.6 / 0.20µm	100/PK	None
101146	SH25P045GL	25mm	1.6 / 0.45µm	100/PK	None
101149	SD13P020GL	13mm	1.6 / 0.20µm	100/PK	None
101150	SD13P045GL	13mm	1.6 / 0.45µm	100/PK	None
101153	SD25P020GL	25mm	1.6 / 0.20µm	100/PK	None
101154	SD25P045GL	25mm	1.6 / 0.45µm	100/PK	None

Chemical Compatibility

SUBSTANCES	MCE	PES	CA	Nylon	Hydrophilic PVDF	Hydrophobic PVDF	Hydrophilic PTFE	Hydrophobic PTFE
Acids								
Acetic acid	●	×	●	×	●	●	●	●
Hydrochloric acid	●	●	×	×	●	●	●	●
Hydrochloric acid (6N)	×	●	×	×	-	●	●	●
Nitric acid	●	-	×	×	●	●	●	●
Nitric acid (6N)	×	-	×	×	●	●	●	●
Phosphoric acid	●	-	●	×	-	●	●	●
Sulfuric acid	●	×	●	×	-	●	●	●
Hydrofluoric acid	×	-	-	×	×	●	●	●
Bases								
Ammonium hydroxide (1N)	●	●	●	●	▲	▲	-	-
Ammonium hydroxide (3N)	×	●	-	●	-	×	-	-
Potassium hydroxide (3N)	×	●	×	●	●	▲	●	●
Sodium hydroxide (3N)	×	●	×	●	×	▲	●	●
Sodium hydroxide (6N)	×	●	×	●	×	×	●	●
Alcohols								
Amyl alcohol	▲	●	●	●	●	●	●	●
Benzyl alcohol (100%)	×	●	▲	●	●	●	●	●
Butyl alcohol	▲	●	●	●	●	●	●	●
Isopropyl alcohol	▲	●	▲	●	●	●	●	●
Methanol	▲	●	●	▲	-	●	●	●
Aromatic Hydrocarbons								
Benzene	●	-	●	▲	●	▲	●	●
Toluene	●	×	-	×	●	▲	▲	●
Xylene	●	×	-	▲	●	▲	▲	●
Ethers								
Ethyl ether	●	●	●	×	●	●	●	●
Isopropyl ether	●	-	●	-	-	●	▲	●
Dioxane	×	-	×	●	●	●	▲	●
Tetrahydrofuran	×	×	×	×	▲	▲	▲	●
Esters								
Amyl acetate	×	-	×	▲	●	●	▲	●
Butyl acetate	×	-	×	▲	-	●	▲	●
Cellosolve Acetate	×	●	-	-	-	●	-	-
Ethyl acetate	×	▲	-	▲	●	●	▲	●
Methyl acetate	×	×	-	▲	×	●	▲	●
Isopropyl Acetate	×	●	-	-	●	●	-	-

SUBSTANCES	MCE	PES	CA	Nylon	Hydrophilic PVDF	Hydrophobic PVDF	Hydrophilic PTFE	Hydrophobic PTFE
Halogenated Hydrocarbons								
Carbon tetrachloride	×	▲	▲	▲	●	▲	●	●
Chloroform	●	×	×	▲	●	▲	▲	●
Ethylene dichloride	●	×	-	▲	-	▲	-	-
Freon TF	●	●	●	●	●	●	▲	●
Freon TMC	●	×	-	▲	-	▲	▲	●
Methylene Dichloride	×	×	×	×	-	▲	-	-
Perchloroethylene	●	▲	-	-	-	▲	-	-
Trichloroethylene	●	▲	●	▲	●	×	▲	●
Glycols								
Ethylene glycol	-	▲	●	●	●	●	●	●
Glycerol	●	▲	●	●	●	●	●	●
Propylene glycol	-	▲	▲	●	-	●	●	●
Ketones								
Acetone	×	×	×	●	×	▲	●	●
Cyclohexanone	×	×	×	-	×	▲	●	●
Methylethylketone	-	-	▲	▲	×	▲	▲	●
Methyl isobutyl ketone	-	×	-	▲	×	▲	▲	●
Miscellaneous								
Aniline	-	×	×	▲	-	●	●	●
Dimethylformamide	-	×	×	●	×	×	●	●
Formaldehyde (37%)	-	●	●	●	●	●	●	●
Gasoline	●	●	●	▲	●	▲	▲	●
Hexane	●	▲	●	-	●	▲	●	●
Kerosene	-	●	●	-	●	●	▲	●
Phenol	●	×	×	●	●	●	●	●
Pyridine	×	×	×	▲	×	●	▲	●
Turpentine oil	-	●	-	-	-	●	-	-
Water	●	●	●	●	●	×	●	×
Acetonitrile	×	●	×	▲	▲	●	●	●
Nickel sulfate solution	-	-	-	●	-	●	-	-

● Recommended ▲ Limited recommendation × Not recommended - No data available

MCE = Mixed Cellulose Ester, PES = Polyethersulfone, CA = Cellulose Acetate, Nylon = Polyamide, PVDF = Polyvinylidene Fluoride, PTFE = Polytetrafluoroethylene

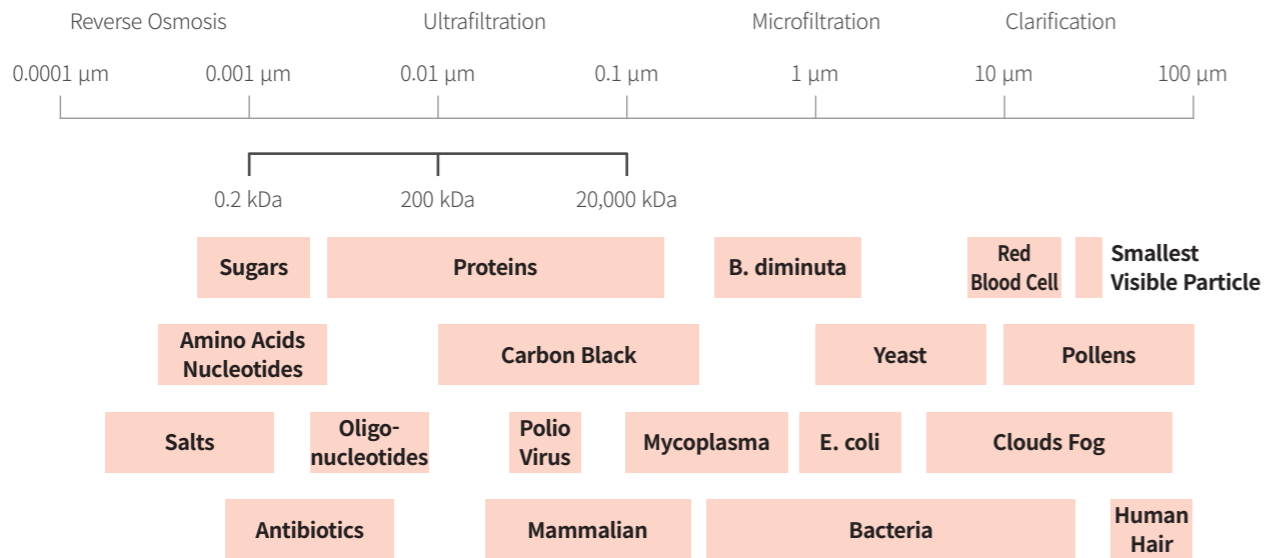
※ This table is intended to serve as a guide only. Chemical compatibility is affected by many variables including temperature, pressure, concentration and chemical purity.



Membrane Filter

- With uniformed and minute pores, suitable for sample microorganism and particles.
- Porous film shaped membrane filters, has a structure of circular holes linked.
- Unlike filter paper where fibers are interlocked, the holes are close to the circular shape.

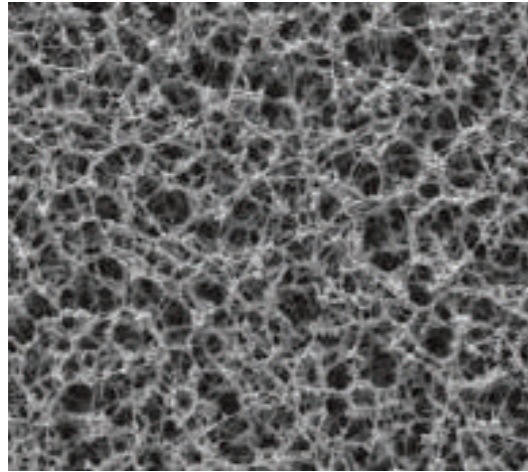
Membrane pore size affects type of particles retained



Type	MCE (Mixed Cellulose Ester)	PES (Polyethersulfone)	CA (Cellulose Acetate)	Nylon (Polyamide)	PVDF (Hydrophilic Poly-vinylidene Fluoride)
Application	Hydrophilic, Filtration of general aqueous type liquid and board experiments, filtration of fine particle	Hydrophilic, Filtration of alcohol media solvents and biochemical sample solution, sterilization filtration	Hydrophilic, Filtration of biochemical experiments and alcohol media, filtration of fine particle	Hydrophilic, Excellent chemical compatibility and used for mixed solvents, available for refining of organic solvents	Hydrophilic, For aqueous solutions and mild organic solvents
Protein Binding	High	Low	Low	Medium	Very low
SEM Image					

Type	PVDF-D (Hydrophobic Poly-vinylidene Fluoride)	PTFE-H (Hydrophilic Poly-tetrafluoroethylene)	PTFE-D (Hydrophobic Poly-tetrafluoroethylene)
Application	Hydrophobic, Mild organic solvents, Gas filtration	Hydrophilic, Filtration of water or mixed solvent in HPLC samples, Filtration of acid or alkali fine particle	Hydrophobic, For mild organic solvents, Available for air vent
Protein Binding	Low	Low	Low
SEM Image			

MCE (Mixed Cellulose Ester)



Features

- Hydrophilic
- Mixed with Cellulose Acetate and Nitro Cellulose
- Filtration of HPLC sample
- For filtration of general aqueous type liquid
- Excellent strength and adsorption
- Sterilization filtration
- Microorganism / fine particle experiments

Specification

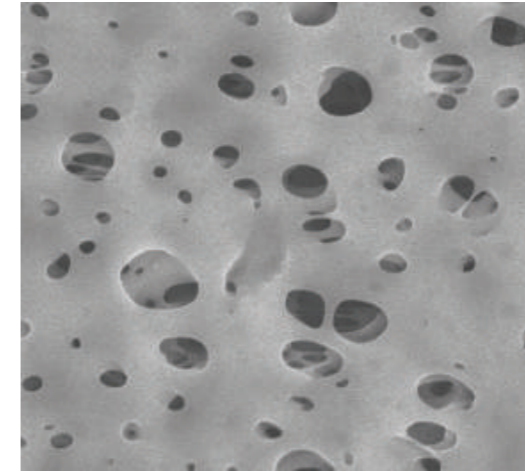
Membrane material	Mixed Cellulose Ester
Color	White
Thickness	90 ± 10 μm
Pore Size	0.20 μm, 0.45 μm
Surface	Plain
Bubble Point (Water)	0.20 μm : ≥ 280 kPa 0.45 μm : ≥ 180 kPa
Flow Rate (Water)	0.20 μm : ≥ 23mℓ / min / cm ² at 1bar 0.45 μm : ≥ 46mℓ / min / cm ² at 1bar
pH range	3.5 - 8
Sterilization	Autoclave at 121°C

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack
102001	MCE02025A	25mm	0.2μm	100/PK
102002	MCE04525A		0.45μm	100/PK
102003	MCE50025A		5.0μm	100/PK
102004	MCE02047A	47mm	0.2μm	100/PK
102005	MCE04547A		0.45μm	100/PK
102006	MCE50047A		5.0μm	100/PK

※ HYUNDAI MICRO provides customized sizing service.

PES (Polyethersulfone)



Features

- Hydrophilic
- Excellent heat resistance and chemical resistance
- Flushed with ultrapure water
- Low protein binding and stable for alkali
- Mainly used for aqueous solutions
- Used for biological experiments and alcohol media solution
- Rapid filtration of aqueous solutions such as tissues culture medium, additive and buffer, etc

Specification

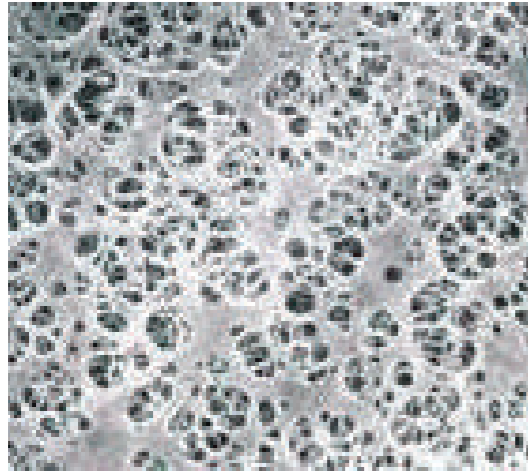
Membrane material	Polyethersulfone
Color	White
Thickness	120 ± 10 μm
Pore Size	0.20 μm, 0.45 μm
Surface	Plain
Bubble Point (Water)	0.20 μm : ≥ 350 kPa 0.45 μm : ≥ 230kPa
Flow Rate (Water)	0.20 μm : ≥ 15mℓ / min / cm ² at 1bar 0.45 μm : ≥ 35mℓ / min / cm ² at 1bar
pH range	1 - 14
Sterilization	Autoclave at 121°C

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack
102007	PES02025A	25mm	0.2μm	100/PK
102008	PES04525A		0.45μm	100/PK
102009	PES02047A	47mm	0.2μm	100/PK
102010	PES04547A		0.45μm	100/PK

※ HYUNDAI MICRO provides customized sizing service.

CA (Cellulose Acetate)



Features

- Hydrophilic
- Improved high strength compared to MCE membrane
- Suitable for filtration of aqueous and alcoholic solution
- Removal microorganism, sterilization filtration
- Diagnostic cytology and filtration of enzyme solutions
- Filtration for alcoholic media
- Low protein binding

Specification

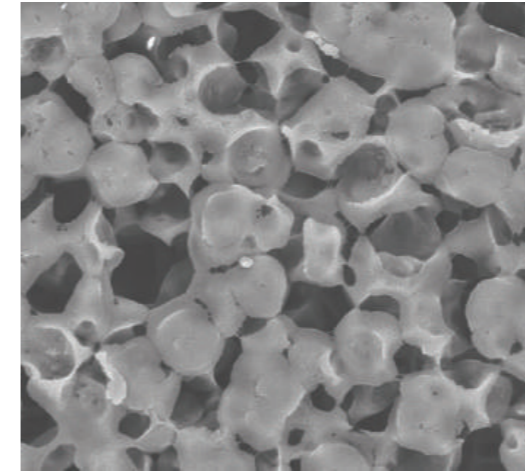
Membrane material	Cellulose Acetate
Color	White
Thickness	125 ± 15 μm
Pore Size	0.20 μm, 0.45 μm
Surface	Plain
Bubble Point (Water)	0.20 μm : ≥ 350 kPa 0.45 μm : ≥ 250 kPa
Flow Rate (Water)	0.20 μm : ≥ 15mℓ / min / cm ² at 1bar 0.45 μm : ≥ 35mℓ / min / cm ² at 1bar
pH range	1 - 14
Sterilization	Autoclave at 123°C

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack
102011	CA02025A	25mm	0.2μm	100/PK
102012	CA04525A		0.45μm	100/PK
102013	CA08025A		0.8μm	100/PK
102014	CA02047A	47mm	0.2μm	100/PK
102015	CA04547A		0.45μm	100/PK
102016	CA08047A		0.8μm	100/PK

※ HYUNDAI MICRO provides customized sizing service.

Nylon (Polyamide)



Features

- Hydrophilic
- Excellent mechanical strength and high adsorption
- Used for refining of organic solvents
- Strong resistance alkali liquids
- Broad chemical compatibility
- Not recommended for filtration of bacteria culture, protein solution, and other biological samples

Specification

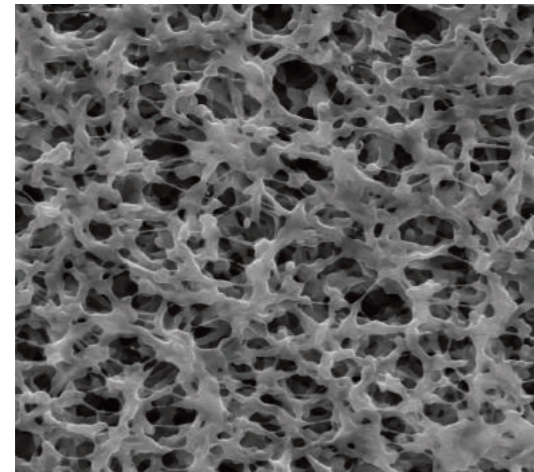
Membrane material	Polyamide
Color	White
Thickness	115 ± 25 μm
Pore Size	0.20 μm, 0.45 μm
Surface	Plain
Bubble Point (Water)	0.20 μm : ≥ 280 kPa 0.45 μm : ≥ 180 kPa
Flow Rate (Water)	0.20 μm : ≥ 4mℓ / min / cm ² at 1bar 0.45 μm : ≥ 16mℓ / min / cm ² at 1bar
pH range	6 - 13
Sterilization	Autoclave at 121°C

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack
102017	NY020025A	25mm	0.2μm	100/PK
102018	NY045025A		0.45μm	100/PK
102019	NY020047A	47mm	0.2μm	100/PK
102020	NY045047A		0.45μm	100/PK

※ HYUNDAI MICRO provides customized sizing service.

PVDF (Polyvinylidene Fluoride)



Features

- Hydrophilic
- High flow rate and throughput
- Broad chemical compatibility
- Very low protein binding
- Available for filtration of aqueous solutions and organic solvents
- Filtration of biological solution

Specification

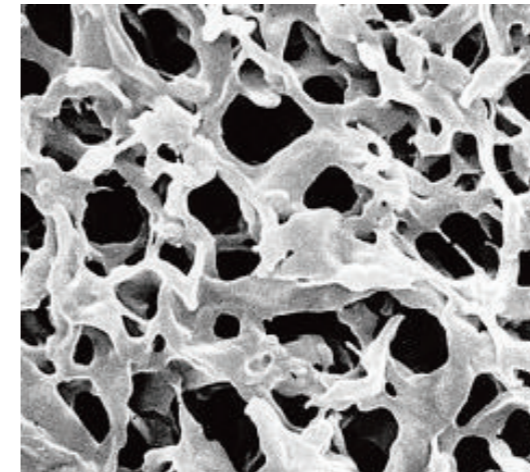
Membrane material	Hydrophilic Polyvinylidene Fluoride
Color	White
Thickness	0.20 μm : 110 ± 15 μm, 0.45 μm : 125 ± 15 μm
Pore Size	0.20 μm, 0.45 μm
Surface	Plain
Bubble Point (Water)	0.20 μm : ≥ 350 kPa 0.45 μm : ≥ 210 kPa
Flow Rate (Water)	0.20 μm - 22 sec / 50 cc water at 30 kPa 0.45 μm - 7 sec / 50 cc water at 30 kPa
Sterilization	Autoclave at 121°C

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack
102021	PVDF2025A	25mm	0.2μm	100/PK
102022	PVDF4525A		0.45μm	100/PK
102023	PVDF2047A	47mm	0.2μm	100/PK
102024	PVDF4547A		0.45μm	100/PK

※ HYUNDAI MICRO provides customized sizing service.

PVDF-D (Polyvinylidene Fluoride)



Features

- Hydrophobic
- Gas filtration
- Used for biological experiments
- Very low protein binding
- Excellent heat resistance and chemical resistance
- Filtration of organic solvents

Specification

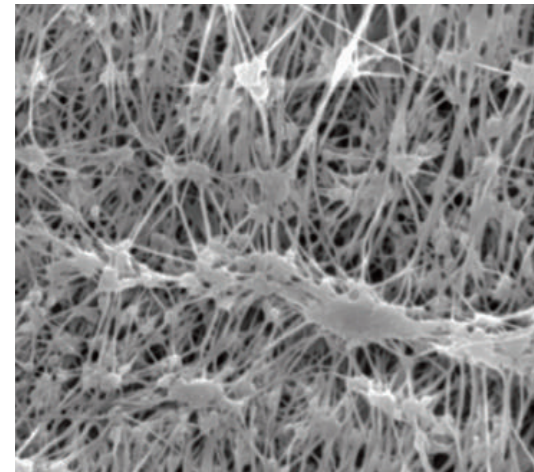
Membrane material	Hydrophobic Polyvinylidene Fluoride
Color	White
Thickness	95 ± 5 μm
Pore Size	0.20 μm, 0.45 μm
Surface	Plain
Flow Rate (Water)	0.20 μm : ≥3mℓ / min / cm ² at 1bar 0.45 μm : ≥7mℓ / min / cm ² at 1bar
pH range	1 - 13
Maximum operation pressure	4.2 bar at 23 °C ; 1.5 bar at 85 °C
Sterilization	Autoclave at 121°C

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack
102025	PVDF2025D	25mm	0.2μm	100/PK
102026	PVDF4525D		0.45μm	100/PK
102027	PVDF2047D	47mm	0.2μm	100/PK
102028	PVDF4547D		0.45μm	100/PK

※ HYUNDAI MICRO provides customized sizing service.

PTFE-H (Polytetrafluoroethylene)



Features

- Hydrophilic
- Polypropylene Supported
- Used for filtration of aqueous solutions and organic solvents
- Filtration of acid and alkali fine particles
- Filtration of water and mixed solvents widely used in HPLC
- Excellent chemical compatibility

Specification

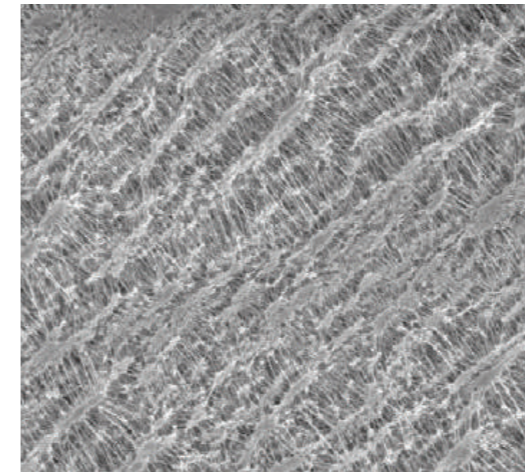
Membrane material	Hydrophilic Polytetrafluoroethylene
Color	White
Thickness	254 μm
Pore Size	0.20 μm, 0.45 μm
Surface	Plain
Bubble Point (Water)	0.20 μm : ≥ 120 kPa 0.45 μm : ≥ 70 kPa
IPA Flow Rate	0.20 μm ≥ 1.5 m ³ / hr.m ² at 20 kPa 0.45 μm ≥ 3.0 m ³ / hr.m ² at 20 kPa
Sterilization	Autoclave at 121°C

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack
102029	HP020025D	25mm	0.2μm	100/PK
102030	HP045025D		0.45μm	100/PK
102031	HP020047D	47mm	0.2μm	100/PK
102032	HP045047D		0.45μm	100/PK

※ HYUNDAI MICRO provides customized sizing service.

PTFE-D (Polytetrafluoroethylene)



Features

- Hydrophobic
- Available for most solvents
- Thermally stable up to 145°C
- Available for air vent
- Excellent chemical compatibility

Specification

Membrane material	Hydrophobic Polytetrafluoroethylene
Color	White
Thickness	254 ± 10 μm
Pore Size	0.20 μm, 0.45 μm
Surface	Plain
Bubble Point (Water)	0.20 μm : 144.8 kPa 0.45 μm : 82.7 kPa
IPA Flow Rate	0.20 μm : 11 ml / min / cm ² at 69 kPa 0.45 μm : 25 ml / min / cm ² at 69 kPa
Gurley Airflow Rate	0.20 μm : 17 sec / 100 cc at 4.88" water 0.45 μm : 9 sec / 100 cc at 4.88" water
Sterilization	Autoclave at 121°C

Ordering Information

Item code	Model no.	Dimension	Pore size	Qty/Pack
102033	PTFE2025D	25mm	0.2μm	100/PK
102034	PTFE4525D		0.45μm	100/PK
102035	PTFE1025D		1.0μm	100/PK
102036	PTFE2047D	47mm	0.2μm	100/PK
102037	PTFE4547D		0.45μm	100/PK
102038	PTFE1047D		1.0μm	100/PK

※ HYUNDAI MICRO provides customized sizing service.

Chemical Compatibility

SUBSTANCES	MCE	PES	CA	Nylon	Hydrophilic PVDF	Hydrophobic PVDF	Hydrophilic PTFE	Hydrophobic PTFE
Acids								
Acetic acid	●	×	●	×	●	●	●	●
Hydrochloric acid	●	●	×	×	●	●	●	●
Hydrochloric acid (6N)	×	●	×	×	-	●	●	●
Nitric acid	●	-	×	×	●	●	●	●
Nitric acid (6N)	×	-	×	×	●	●	●	●
Phosphoric acid	●	-	●	×	-	●	●	●
Sulfuric acid	●	×	●	×	-	●	●	●
Hydrofluoric acid	×	-	-	×	×	●	●	●
Bases								
Ammonium hydroxide (1N)	●	●	●	●	▲	▲	-	-
Ammonium hydroxide (3N)	×	●	-	●	-	×	-	-
Potassium hydroxide (3N)	×	●	×	●	●	▲	●	●
Sodium hydroxide (3N)	×	●	×	●	×	▲	●	●
Sodium hydroxide (6N)	×	●	×	●	×	×	●	●
Alcohols								
Amyl alcohol	▲	●	●	●	●	●	●	●
Benzyl alcohol (100%)	×	●	▲	●	●	●	●	●
Butyl alcohol	▲	●	●	●	●	●	●	●
Isopropyl alcohol	▲	●	▲	●	●	●	●	●
Methanol	▲	●	●	▲	-	●	●	●
Aromatic Hydrocarbons								
Benzene	●	-	●	▲	●	▲	●	●
Toluene	●	×	-	×	●	▲	▲	●
Xylene	●	×	-	▲	●	▲	▲	●
Ethers								
Ethyl ether	●	●	●	×	●	●	●	●
Isopropyl ether	●	-	●	-	-	●	▲	●
Dioxane	×	-	×	●	●	●	▲	●
Tetrahydrofuran	×	×	×	×	▲	▲	▲	●
Esters								
Amyl acetate	×	-	×	▲	●	●	▲	●
Butyl acetate	×	-	×	▲	-	●	▲	●
Cellosolve Acetate	×	●	-	-	-	●	-	-
Ethyl acetate	×	▲	-	▲	●	●	▲	●
Methyl acetate	×	×	-	▲	×	●	▲	●
Isopropyl Acetate	×	●	-	-	●	●	-	-

SUBSTANCES	MCE	PES	CA	Nylon	Hydrophilic PVDF	Hydrophobic PVDF	Hydrophilic PTFE	Hydrophobic PTFE
Halogenated Hydrocarbons								
Carbon tetrachloride	×	▲	▲	▲	●	▲	●	●
Chloroform	●	×	×	▲	●	▲	▲	●
Ethylene dichloride	●	×	-	▲	-	▲	-	-
Freon TF	●	●	●	●	●	●	▲	●
Freon TMC	●	×	-	▲	-	▲	▲	●
Methylene Dichloride	×	×	×	×	-	▲	-	-
Perchloroethylene	●	▲	-	-	-	▲	-	-
Trichloroethylene	●	▲	●	▲	●	×	▲	●
Glycols								
Ethylene glycol	-	▲	●	●	●	●	●	●
Glycerol	●	▲	●	●	●	●	●	●
Propylene glycol	-	▲	▲	●	-	●	●	●
Ketones								
Acetone	×	×	×	●	×	▲	●	●
Cyclohexanone	×	×	×	-	×	▲	●	●
Methylethylketone	-	-	▲	▲	×	▲	▲	●
Methyl isobutyl ketone	-	×	-	▲	×	▲	▲	●
Miscellaneous								
Aniline	-	×	×	▲	-	●	●	●
Dimethylformamide	-	×	×	●	×	×	●	●
Formaldehyde (37%)	-	●	●	●	●	●	●	●
Gasoline	●	●	●	▲	●	▲	▲	●
Hexane	●	▲	●	-	●	▲	●	●
Kerosene	-	●	●	-	●	●	▲	●
Phenol	●	×	×	●	●	●	●	●
Pyridine	×	×	×	▲	×	●	▲	●
Turpentine oil	-	●	-	-	-	●	-	-
Water	●	●	●	●	●	×	●	×
Acetonitrile	×	●	×	▲	▲	●	●	●
Nickel sulfate solution	-	-	-	●	-	●	-	-

● Recommended ▲ Limited recommendation × Not recommended - No data available

MCE = Mixed Cellulose Ester, PES = Polyethersulfone, CA = Cellulose Acetate, Nylon = Polyamide, PVDF = Polyvinylidene Fluoride, PTFE = Polytetrafluoroethylene

※ This table is intended to serve as a guide only. Chemical compatibility is affected by many variables including temperature, pressure, concentration and chemical purity.

Qualitative Filter Paper



Qualitative Filter paper is originally used to detect materials exist in analysis samples. However, with the low price and different sizes, laboratories and production sites uses this filter in various purposes.

Merits

Qualitative filter paper consists of almost 100% alpha-cellulose and has less than 0.1% ash contents. Characterized by its slim and enhanced wet burst strength, available in most sizes. HM maintains the highest quality in accordance with ISO 9001:2008.

Applications

- Liquid purification in qualitative analysis
- Filtration of precipitates such as calcium hydroxide, lead sulfide and calcium carbonate
- Seed testing and soil analysis
- Detection and measurement of dust and gas
- Filtration of buffer solutions and dye

α-cellulose

Alpha-cellulose is the main ingredient of pulp which is raw material for paper. There are 3 types: α, β and γ. α-cellulose is not soluble in solutions with 17 – 18% sodium hydroxide, pure and has a high degree of polymerization.



No.10 (6 ~ 10μm)

- Relatively fast filtration speed
- Used in diverse purpose such as filtering viscous solutions and bacterial culture medium
- Used in clarifying filtration and analysis

Applications

- Dyeing test, filtration for oil, juice, viscous solutions and scientific experiments

No.20 (5 ~ 8μm)

- Medium filtration speed
- Used in precise qualitative analysis Sediments filtering

Applications

- General qualitative analysis and physico-chemical experiments
- Filtration of nickel, sulfide and lead dioxide
- Sulfur analysis (coal, cork, charcoal and etc.)

No.2 (5 ~ 8μm)

- The Thickest qualitative filter paper
- Strong hold for pressure

Applications

- General qualitative analysis and physico-chemical experiments
- Medicinal analysis, liquid culture medium, antibiotic field
- Ink, food coloring, plating solution

No.200 (2 ~ 3μm)

- Slowest filtration speed
- Surface hardened filter paper
- Used in analyzing fine particles mixed in a large amount of liquid

Applications

- Filtration of fine particles
Barium sulfate, metastannic acid, cuprous oxide and etc.

No.100 (3 ~ 5μm)

- Surface hardened filter paper
- Slow filtration speed
- Available for pressure filtration

Applications

- Filtration of fine particles: Nickel sulfide, lead dioxide, calcium fluoride, zinc sulfide and etc.

No.21 (8 ~ 12μm)

- Filtration of rough precipitates

Applications

- Alkali carbonate measurement
- Beer and malt analysis
- Lead sulfide, iron sulfide, silver sulfide and etc.

No.22 (12 ~ 15μm)

- The fastest filtration speed
- Filtration of rough precipitates
- Silicon in steel and pig iron analysis

Applications

- Filtration of iron hydroxide, aluminum hydroxide and chromium hydroxide plating solutions and food coloring

Ordering Information

(Unit : 100 sheets / pack)

Grade	Ø 55	Ø 70	Ø 90	Ø 110	Ø 125	Ø 150	Ø 185	Ø 200	Ø 240	Ø 250
No.10	HM.01006055	HM.01006070	HM.01006090	HM.01006110	HM.01006125	HM.01006150	HM.01006185	HM.01006200	HM.01006240	HM.01006250
No.20	HM.02005055	HM.02005070	HM.02005090	HM.02005110	HM.02005125	HM.02005150	HM.02005185	HM.02005200	HM.02005240	HM.02005250
No.2	HM.00205055	HM.00205070	HM.00205090	HM.00205110	HM.00205125	HM.00205150	HM.00205185	HM.00205200	HM.00205240	HM.00205250
No.200	HM.20002055	HM.20002070	HM.20002090	HM.20002110	HM.20002125	HM.20002150	HM.20002185	HM.20002200	HM.20002240	HM.20002250
No.100	HM.10003055	HM.10003070	HM.10003090	HM.10003110	HM.10003125	HM.10003150	HM.10003185	HM.10003200	HM.10003240	HM.10003250
No.21	HM.02110055	HM.02110070	HM.02110090	HM.02110110	HM.02110125	HM.02110150	HM.02110185	HM.02110200	HM.02110240	HM.02110250
No.22	HM.02212055	HM.02212070	HM.02212090	HM.02212110	HM.02212125	HM.02212150	HM.02212185	HM.02212200	HM.02212240	HM.02212250

Ordering Information

(Unit : 100 sheets / pack)

Grade	Ø 285	Ø 300	Ø 350	Ø 380	Ø 400	Ø 450	Ø 500	Ø 550	Ø 600	600 × 600mm
No.10	HM.01006285	HM.01006300	HM.01006350	HM.01006380	HM.01006400	HM.01006450	HM.01006500	HM.01006550	HM.01006600	HM.01006600A
No.20	HM.02005285	HM.02005300	HM.02005350	HM.02005380	HM.02005400	HM.02005450	HM.02005500	HM.02005550	HM.02005600	HM.02005600A
No.2	HM.00205285	HM.00205300	HM.00205350	HM.00205380	HM.00205400	HM.00205450	HM.00205500	HM.00205550	HM.00205600	HM.00205600A
No.200	HM.20002285	HM.20002300	HM.20002350	HM.20002380	HM.20002400	HM.20002450	HM.20002500	HM.20002550	HM.20002600	HM.20002600A
No.100	HM.10003285	HM.10003300	HM.10003350	HM.10003380	HM.10003400	HM.10003450	HM.10003500	HM.10003550	HM.10003600	HM.10003600A
No.21	HM.02110285	HM.02110300	HM.02110350	HM.02110380	HM.02110400	HM.02110450	HM.02110500	HM.02110550	HM.02110600	HM.02110600A
No.22	HM.02212285	HM.02212300	HM.02212350	HM.02212380	HM.02212400	HM.02212450	HM.02212500	HM.02212550	HM.02212600	HM.02212600A

- Qualitative filter paper is available in a roll type as well as a sheet type.
- HYUNDAI MICRO provides customized sizing service.
- The pore sizes are indicated in accordance with the test methods selected by each filter paper manufacturer. Thus, filtration performance may be the same, even though pore sizes are different with those of others manufacturers.

Properties

Grade	Basic Weight (g / m ²)	Thickness (mm)	Herzberg (s / 100mℓ)	Retention Rate (µm)	Ash Contents (%)
No.10	70	0.17	150	6 ~ 10	0.1
No.20	85	0.2	160	5 ~ 8	0.1
No.2	130	0.26	170	5 ~ 8	0.1
No.200	84	0.16	1200	2 ~ 3	0.1
No.100	84	0.16	800	3 ~ 5	0.1
No.21	84	0.2	90	8 ~ 12	0.1
No.22	84	0.21	40	12 ~ 15	0.1

- Basic Weight (g / m²) : In accordance with DIN EN ISO 536, The test is performed with filter papers from 500cm² to 1,000cm²
- Thickness (mm) : In accordance with DIN EN ISO 534, the value measured with a thickness measurer under pressure of 10N / cm²
- Herzberg (s / 100mℓ) : Fold a filter paper with a diameter of 110mm in quarter and soak it. Then, hang it and filter 10mL of distilled water at 20°C. Time that it takes for filtration is measured.
- Retention rate (µm) : Retention rate is calculated by test methods of filter paper manufactures. As each manufacturer has a different test method, use these data for reference only.
- Ash Contents (%) : Weight of residues after 10g of filter paper is ignited in platinum crucible at 800°C.

Comparison table

HYUNDAI MICRO	Whatman	ADVANTEC
No.10	No.1	No.1
No.2 / No.20	No.2	No.2 / No.232
No.200	n / a	n / a
No.100	No.6	No.3
No.21	n / a	n / a
No.22	No.4	n / a
No.50	No.54	n / a
No.51	No.41	No.5A
No.52	No.40	No.5B
No.53	No.42	No.5C
No.30	No.43	No.3
No.60	No.44	No.6 / No.4A

- The table is for suggestion only. Filter specification can be vary on its performances depending on the manufacturers.

Quantitative Filter Paper

Quantitative Filter paper is used for precise quantitative analysis to detect types and amount of materials in analysis samples.

Merits

Quantitative filter paper is made of refined pulp with almost 100% alpha-cellulose and has less than 0.1% ash contents. To meet high purity for quantitative analysis, it is washed with acid. Available in most sizes. HM maintains the highest quality in accordance with ISO 9001:2008.

α -cellulose

Alpha-cellulose is the main ingredient of pulp which is raw material for paper. There are 3 types: α , β and γ . α -cellulose is not soluble in solutions with 17 – 18% sodium hydroxide, pure and has a high degree of polymerization.



No.50 (12 ~ 15 μ m)

- The fastest filtration speed
- Filtration of rough precipitates

Applications

- Filtration of iron hydroxide, aluminum hydroxide and chromium hydroxide
- Silicon in steel and pig iron analysis

No.51 (8 ~ 12 μ m)

- Fast filtration speed
- Filtration of rough precipitates

Applications

- Lead sulfide, iron sulfide, silver sulfide and etc.
- Alkali carbonate measurement
- Beer and malt analysis
- Filtration of solutions for electrolytic analysis, colorimetric analysis and optical instrument test
- Filtration of pharmaceutical, zoological and botanical experiment
- Analysis of food and soil

No.52 (3 ~ 5 μ m)

- Filtration of precipitate for a wide range of quantitative analysis
- Fast filtration of fine precipitate

Applications

- Filtration of fine particles:
Nickel sulfide, lead dioxide, calcium fluoride, zinc sulfide and etc.

No.53 (1 ~ 2 μ m)

- The finest quantitative filter paper
- Extremely fine precipitate filtration

Applications

- Filtration of fine particles:
Strontium sulfate, barium sulfate, mercury chromate and etc.
- Filtration of pharmaceutical, zoological, botanical experiment and bacterial experiment

No.60 (2 ~ 3 μ m)

- Thin filter with fast filtration speed

Applications

- Filtration of fine particles:
Barium sulfate, metastannic acid, cuprous oxide and etc.
- Analysis of a very small amount of precious metal
- Beverage analysis
- Chemical and medical experiment

No.30 (5 ~ 8 μ m)

- Medium filtration speed and precision

Applications

- Medium precipitate filtration:
Calcium oxalate, magnesium, ammonium phosphate, potassium, carbonate, zinc sulfide, stannic oxide and etc.
- Filtration of pharmaceutical, zoological and botanical experiment

Ordering Information

(Unit : 100 sheets / pack)

Grade	Ø 55	Ø 70	Ø 90	Ø 110	Ø 125	Ø 150	Ø 185	Ø 200	Ø 240	Ø 250
No.50	HM.5012055	HM.5012070	HM.5012090	HM.5012110	HM.5012125	HM.5012150	HM.5012185	HM.5012200	HM.5012240	HM.5012250
No.51	HM.5108055	HM.5108070	HM.5108090	HM.5108110	HM.5108125	HM.5108150	HM.5108185	HM.5108200	HM.5108240	HM.5108250
No.52	HM.5203055	HM.5203070	HM.5203090	HM.5203110	HM.5203125	HM.5203150	HM.5203185	HM.5203200	HM.5203240	HM.5203250
No.53	HM.5301055	HM.5301070	HM.5301090	HM.5301110	HM.5301125	HM.5301150	HM.5301185	HM.5301200	HM.5301240	HM.5301250
No.60	HM.6002055	HM.6002070	HM.6002090	HM.6002110	HM.6002125	HM.6002150	HM.6002185	HM.6002200	HM.6002240	HM.6002250
No.30	HM.3005055	HM.3005070	HM.3005090	HM.3005110	HM.3005125	HM.3005150	HM.3005185	HM.3005200	HM.3005240	HM.3005250

Ordering Information

(Unit : 100 sheets / pack)

Grade	Ø 285	Ø 300	Ø 350	Ø 380	Ø 400	Ø 450	Ø 500	Ø 550	600 × 600mm
No.50	HM.5012285	HM.5012300	HM.5012350	HM.5012380	HM.5012400	HM.5012450	HM.5012500	HM.5012550	HM.5012600A
No.51	HM.5108285	HM.5108300	HM.5108350	HM.5108380	HM.5108400	HM.5108450	HM.5108500	HM.5108550	HM.5108600A
No.52	HM.5203285	HM.5203300	HM.5203350	HM.5203380	HM.5203400	HM.5203450	HM.5203500	HM.5203550	HM.5203600A
No.53	HM.5301285	HM.5301300	HM.5301350	HM.5301380	HM.5301400	HM.5301450	HM.5301500	HM.5301550	HM.5301600A
No.60	HM.6002285	HM.6002300	HM.6002350	HM.6002380	HM.6002400	HM.6002450	HM.6002500	HM.6002550	HM.6002600A
No.30	HM.3005285	HM.3005300	HM.3005350	HM.3005380	HM.3005400	HM.3005450	HM.3005500	HM.3005550	HM.3005600A

• HYUNDAI MICRO provides customized sizing service.

• The pore sizes are indicated in accordance with the test methods selected by each filter paper manufacturer. Thus, filtration performance may be the same, even though pore sizes are different with those of others manufacturers.

Properties

Grade	Basic Weight (g / m ²)	Thickness (mm)	Herzberg (s / 100mℓ)	Retention Rate (μm)	Ash Contents (%)
No.50	84	0.2	40	12 ~ 15	< 0.01
No.51	84	0.19	90	8 ~ 12	< 0.01
No.52	84	0.16	800	3 ~ 5	< 0.01
No.53	100	0.2	2500	1 ~ 2	< 0.01
No.60	84	0.15	1200	2 ~ 3	< 0.01
No.30	84	0.17	300	5 ~ 8	< 0.01

• Basic Weight (g / m²) : In accordance with DIN EN ISO 536, The test is performed with filter papers from 500cm² to 1,000cm²

• Thickness (mm) : In accordance with DIN EN ISO 534, the value measured with a thickness measurer under pressure of 10N / cm²

• Herzberg (s / 100mℓ) : Fold a filter paper with a diameter of 110mm in quarter and soak it. Then, hang it and filter 10mℓ of distilled water at 20°C. Time that it takes for filtration is measured.

• Retention rate (μm) : Retention rate is calculated by test methods of filter paper manufactures. As each manufacturer has a different test method, use these data for reference only.

• Ash Contents (%) : Weight of residues after 10g of filter paper is ignited in platinum crucible at 800°C.

Comparison table

HYUNDAI MICRO	Whatman	ADVANTEC
No.10	No.1	No.1
No.2 / No.20	No.2	No.2 / No.232
No.200	n / a	n / a
No.100	No.6	No.3
No.21	n / a	n / a
No.22	No.4	n / a
No.50	No.54	n / a
No.51	No.41	No.5A
No.52	No.40	No.5B
No.53	No.42	No.5C
No.30	No.43	No.3
No.60	No.44	No.6 / No.4A

• The table is for suggestion only. Filter specification can be vary on its performances depending on the manufacturers.

Qualitative/Quantitative filter paper by purpose

Qualitative filter paper	Filtration characteristics	Applications
No.10 / No.20 / No.2	Medium filtration rate, Medium pore size	Suitable for fast filtration of fine precipitate such as barium, calcium, oxalate, magnesium phosphate and phosphate, widely used for clarifying filtration and analysis
No.200	Very slow filtration rate, Fine pore size	Suitable for filtration of fine precipitate such as barium and sulfate
No.100	Slow filtration rate, Narrow pore size	Suitable for filtration of fine precipitate such as nickel sulfide and lead dioxide
No.21	Fast filtration rate, Medium pore size	Generally used for coarse particle and qualitative work. Suitable for analysis of lead, iron and beer / malt
No.22	Very fast filtration rate, Wide pore size	Suitable for filtration of large and coarse precipitate such as iron, aluminum and iron hydroxide (analysis of cost iron)

Quantitative filter paper	Filtration characteristics	Applications
No.50	Fast filtration rate	Suitable for filtration of large and coarse particle such as iron, aluminum and iron hydroxide (analysis of cast iron)
No.51	Medium to fast filtration rate, Medium pore size	Generally used for coarse particle and qualitative work. Suitable for analysis of lead, iron, food and soil.
No.52	Slow filtration rate Narrow pore size	Suitable for filtration of fine precipitate such as lead dioxide, fluoride calcium and nickel sulfide.
No.53	Very slow filtration rate, Very fine pore size	Suitable for filtration of very fine precipitate particularly under difficult filtration conditions.
No.30	Medium to slow filtration rate, Medium to fine pore size	Suitable for filtration of fine precipitate of coarse form such as barium, oxalate, magnesium phosphate and phosphate.
No.60	Very slow filtration rate, Fine pore size	Suitable for filtration of fine particle precipitate such as barium, sulfate and precious metals.

Micro-Glass Fiber Filter



Features

- Made of 100% pure borosilicate glass fiber
- High efficiency from high permeability
- Biologically inert, available for most solvents and reagents except hydrofluoric acid and high alkali solutions
- Binder-free, up to 500°C resistant
- Higher chemical resistance than cellulose filters

Applications

- Used in air and water monitoring
- Pre-filter for membrane

GF-A

- High efficiency in general laboratory filtration
- Purification of buffer and reagent solution
- International standard for air and water pollution monitoring
- Food analysis, bacterial culture, filtering protein and algae

GF-B

- Filtering suspended solids
- Waste water analysis
- Pre-filter for membrane
- Suitable for large volume filtration

GF-C

- Standard filter for purifying and monitoring waste and water, scintillation counting on the filter, cell harvesting
- Hydrocarbon analysis

GF-D

- Universal membrane pre-filter material

GF-F

- High efficiency in particleretention for smaller particles
- Purification of protein solutions
- Pre filtration for HPLC

Comparison table

HYUNDAI MICRO	Whatman	ADVANTEC
GF -A	GF /A	GA - 55
GF -B	GF /B	GB -140
GF -C	GF /C	GC - 50
GF -D	GF /D	GD -120
GF -F	GF /F	GF -75

Properties

Grade	Basic Weight (g / m ²)	Thickness (mm)	Retention Rate (µm)	Pressure Drop (mbar)	Binder
GF - A	52	0.23	1.6	38	without
GF - B	143	0.70	1.0	95	without
GF - C	52	0.24	1.2	55	without
GF - D	120	0.53	2.7	140	without
GF - F	75	0.45	0.7	120	without

Ordering Information

Grade	Ø 25	Ø 47	Ø 55	Ø 70	Ø 90	Ø 110	Ø 142	Ø 150	Ø 185	203x254mm
GF - A	HMGF025A	HMGF047A	HMGF055A	HMGF070A	HMGF090A	HMGF110A	HMGF142A	HMGF150A	HMGF185A	HMGF254A
GF - B	HMGF025B	HMGF047B	HMGF055B	HMGF070B	HMGF090B	HMGF110B	HMGF142B	HMGF150B	HMGF185B	HMGF254B
GF - C	HMGF025C	HMGF047C	HMGF055C	HMGF070C	HMGF090C	HMGF110C	HMGF142C	HMGF150C	HMGF185C	HMGF254C
GF - D	HMGF025D	HMGF047D	HMGF055D	HMGF070D	HMGF090D	HMGF110D	HMGF142D	HMGF150D	HMGF185D	HMGF254D
GF - F	HMGF025F	HMGF047F	HMGF055F	HMGF070F	HMGF090F	HMGF110F	HMGF142F	HMGF150F	HMGF185F	HMGF254F

※HYUNDAI MICRO provides customized sizing service. (Unit : 100 sheets / pack)

Analytics and Diagnostics

Item	GF - A	GF - B	GF - C	GF - D	GF - F
Staining of dyed papers			●		
Clarification filtration (biochemical)					●
Ligand binding test			●		
Solvent filtration	●				●
Membrane pre-filters		●		●	
Specimen filtration (HPLC)					●
Protein filtration					●
Radio-immuno test		●	●		
Scintillation counting	●	●			
Cell harvesters			●		●
Carbohydrate analysis			●		



3

PLASTIC LABWARE

- **Contents**

- Petri Dish
- Micro Centrifuge Tube
- Centrifuge Conical Tube
- Serological Pipette
- Micro Pipette Tip & Filter Tip
- Reservoir
- Loop, Needle & Spreader

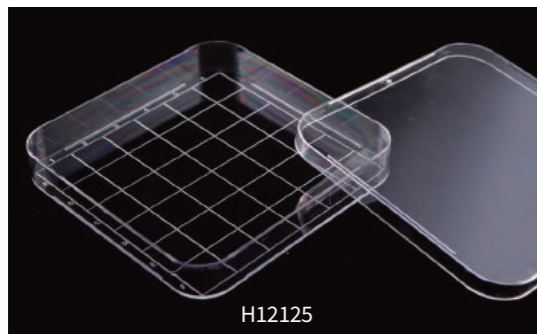


Petri Dish



Features

- Suitable for all types of culture
- Nonskid bumps where dishes can be stacked
- Produced with transparent polystyrene to be suitable for microscopy
- Uniform bottom surface provides excellent horizontality
- Available for suspension culture due to non-treated surface
- Designed and fabricated in a very robust structure for stability of experiments
- Unmanned and automated production systems minimize contamination may occur during manual operation
- Excellent E-Beam sterilization

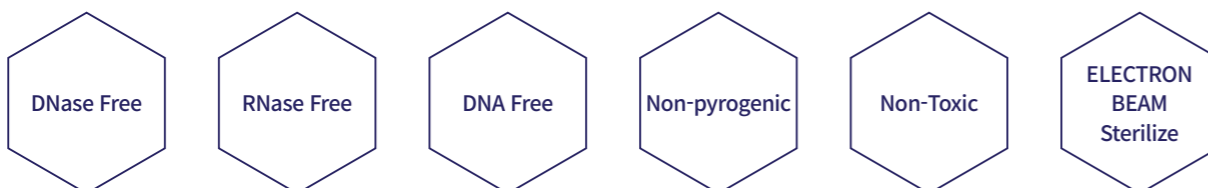


Features

- Used for microbial research such as colony picking
- Excellent surface treatment provides a large culture area
- Produced with transparent polystyrene to be suitable for microscopy
- Scales make it possible to form colonies, to count cells in colony formation and to measure plating efficiency
- Easy to identify the location of a colony
- Unmanned and automated production systems minimize contamination which may occur during manual operation
- Excellent E-beam sterilization

Ordering Information

Product	Item Code	Model No.	Dimension (mm)	Growth (cm ²)	Recommended Medium Volume	Packing
Petri Dish	104001	H10060	Ø60 x H15	21	4.2 - 63mℓ	10ea / pk, 500ea / Case
	104002	H10090	Ø90 x H15	47	9.3 - 14mℓ	10ea / pk, 500ea / Case
	104003	H10150	Ø150 x H20	118	24 - 36mℓ	10ea / pk, 120ea / Case
Square Dish	104014	H12125	125 x 125 x H17.8	139	4.2 - 63mℓ	10ea / pk, 240ea / Case



Micro Centrifuge Tube (1.5mℓ)



Features

- RCF Rating 16,000G(Max)
- Made of clear virgin polypropylene
- Flat lid that open smoothly and close tightly
- Molded-in graduation in 0.5mℓ increments
- Available in autoclave
- Unmanned and automated production systems minimize contamination may occur during manual operation



Ordering Information

Item code	Model No.	Color	Capacity	Material	Sterilization	Packing
104004	H23015	Clear	1.5mℓ	PolyPropylene	None	500ea / pk, 5000ea / Case
104005	HB20001	Clear	1.5mℓ	Virgin PP	Sterilized	300ea / bottle
104006	HB20101	Blue	1.5mℓ	Virgin PP	Sterilized	300ea / bottle
104007	HB20201	Green	1.5mℓ	Virgin PP	Sterilized	300ea / bottle
104008	HB20301	Violet	1.5mℓ	Virgin PP	Sterilized	300ea / bottle

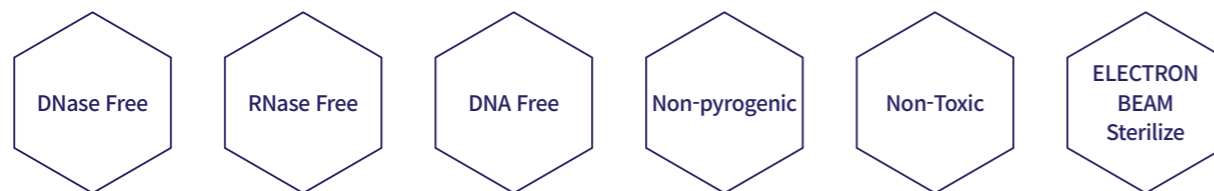
Centrifuge Conical Tube

Features

- RCF rating : 12,000 x g (15mℓ : H20015)
16,000 x g (50mℓ : H20050)
RCF indicates the relative centrifugal force, and it measures the centrifugal force applied to 15mℓ/50mℓ of water (specific gravity 0.999) for 5 minutes at room temperature using a suitable adapter and a suitable rotor in a stabilizer.
If adequate support is not provided, the RCF value will be low.
In some cases, the RCF value of tubes using liquids other than water and temperatures below 0°C or using organic solvents may decrease.
- Sterile polypropylene has excellent durability for a variety of solvents
- Leakage-proof caps prevent flow of liquid samples
- Zipper bag-type packaging which can be resealed prevents contamination
- Since the text box is coated on the surface, it is easy to leave a note
- Sterilized and non-pyrogenic
- Unmanned and automated production systems minimize contamination which may occur during manual operation
- Excellent E-beam sterilization

Ordering Information

Item code	Model No.	Capacity	Material	Packing
104009	H20015	15mℓ	PolyPropylene (Tube) / PolyEthylene (Cap)	50ea / pk, 500ea / Case
104010	H20050	50mℓ	PolyPropylene (Tube) / PolyEthylene (Cap)	25ea / pk, 500ea / Case
104011	H20051 (Skirted)	50mℓ	PolyPropylene (Tube) / PolyEthylene (Cap)	25ea / pk, 500ea / Case
104012	H28015	15mℓ Rack set	PolyPropylene (Tube) / PolyEthylene (Cap) Rack (4 × 8) 32 holes for 15mℓ	32ea / pk, 320ea / Case
104013	H28050	50mℓ Rack set	PolyPropylene (Tube) / PolyEthylene (Cap) Rack (3 × 7) 21 holes for 50mℓ	21ea / pk, 210ea / Case



Conical Tube 15mℓ (H20015)



Conical Tube 50mℓ (H20050)



Conical Tube 50mℓ (Self-Standing) (H20051)



50mℓ Rack Set (H28050)



15mℓ Rack Set (H28015)

Conical Tube Rack 15mℓ



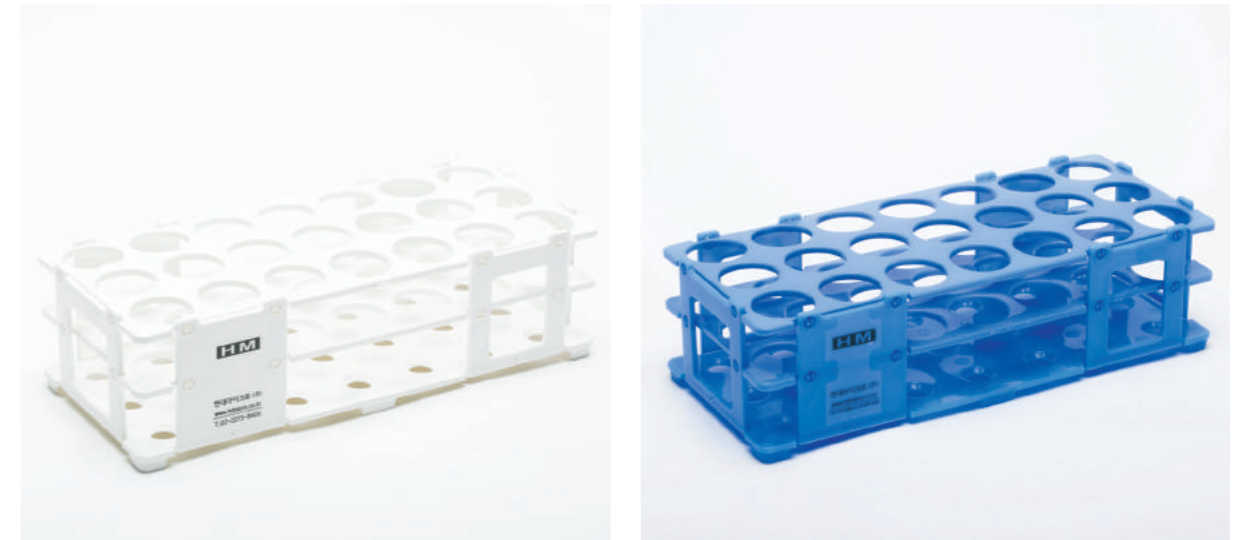
Features

- For 15mℓ centrifuge tubes
- Available steam sterilization and easy to clean since made of polypropylene
- No mutual interference with a 3-layered structure and stability for use as the bottom is fixed with a wide hole
- Easy to identify samples as the product indicates from A to D lengthwise and from 1 to 8 widthwise
- Convenient to store and use these self-assembly
- Unmanned and automated production systems minimize contamination which may occur during manual operation

Ordering Information

Item code	Model No.	Color	Material	Description	Packing
104018	H82015	□ White	PolyPropylene	(4 × 8) 32 holes for 15mℓ D : 200mm / W : 100mm / H : 70mm	1 Unit per Pack
104018B	H82015B	■ Blue	PolyPropylene		1 Unit per Pack

Conical Tube Rack 50mℓ



Features

- For 50mℓ centrifuge tubes
- Available steam sterilization and easy to clean since made of polypropylene
- No mutual interference with a 3-layered structure and stability for use as the bottom is fixed with a wide hole
- Easy to identify samples as the product indicates from A to C lengthwise and from 1 to 7 widthwise
- Convenient to store and use these self-assembly
- Unmanned and automated production systems minimize contamination which may occur during manual operation

Ordering Information

Item code	Model No.	Color	Material	Description	Packing
104019	H82050	□ White	PolyPropylene	(3 × 7) 21 holes for 50mℓ D : 260mm / W : 112mm / H : 74mm	1 Unit per Pack
104019B	H82050B	■ Blue	PolyPropylene		1 Unit per Pack

Serological Pipette

HYUNDAI MICRO Serological pipettes are made of polystyrene material and designed with various specifications for using pipette pumps in laboratories.

A highly transparent body and clearly graded scales make users easily read.

The scale of the pipette on the surface is within $\pm 2\%$ accuracy.



Features

- Polystyrene
- 1mℓ, 2mℓ, 5mℓ, 10mℓ, 25mℓ, 50mℓ
- RNase, DNase Free
- Non-pyrogenic
- Gamma sterilization

Ordering Information

Item code	Model no.	Capacity	Subdivisions	Sterilization	Packaging
301001	H7201Y	1mℓ	0.01mℓ	Gamma	100ea / pk, 1000ea / case
301002	H7202G	2mℓ	0.01mℓ	Gamma	100ea / pk, 800ea / case
301003	H7205B	5mℓ	0.1mℓ	Gamma	50ea / pk, 300ea / case
301004	H7210R	10mℓ	0.1mℓ	Gamma	50ea / pk, 200ea / case
301005	H7225P	25mℓ	0.2mℓ	Gamma	50ea / pk, 200ea / case
301006	H7250B	50mℓ	1mℓ	Gamma	25ea / pk, 100ea / case

Product picture



Model no.: H7201Y / Color: Yellow / Capacity: 1mℓ



Model no.: H7202G / Color: Green / Capacity: 2mℓ



Model no.: H7205B / Color: Blue / Capacity: 5mℓ



Model no.: H7210R / Color: Red / Capacity: 10mℓ



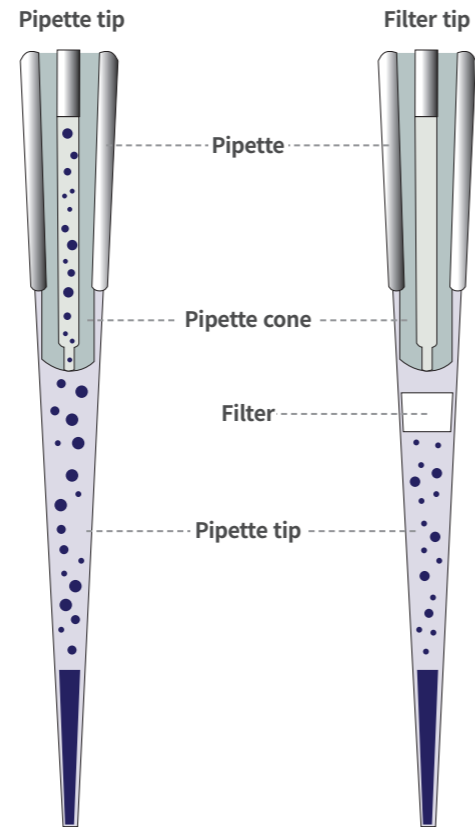
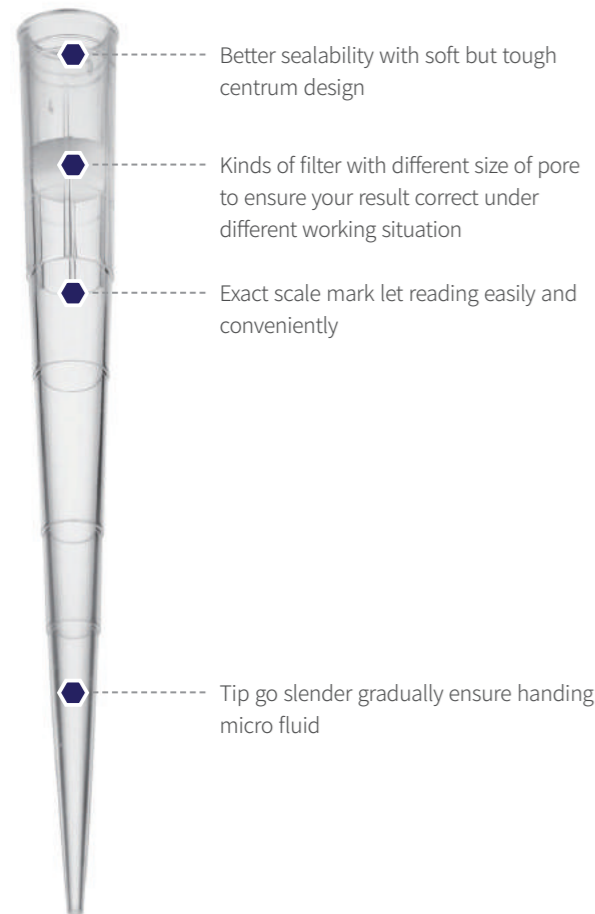
Model no.: H7225P / Color: Purple / Capacity: 25mℓ



Model no.: H7250B / Color: Black / Capacity: 50mℓ

Micro Pipette Tip & Filter Tip

Features



Features

Accuracy

Special technic let mold be a high degree of accuracy.

Cleanse

Standard clear workshop, no one touches from raw material to products.

Universality

Fit for many brands of pipettors, such as EPPENDORF, GILSON, COSTAR and so on.

Popular

The special shape let fluid less remaining.

* DNA enzymes, RNA enzymes, proteins, DNA, heat and metal Free

Packaging



Bulk type



Single Rack type



Refill type

PIPETTE TIP ORDER INFORMATION

10µl Tip Short

Item code	Model no.	Description	Package	Unit
301015	HMTBS10-10	10µl Bulked Tip, Nature	1000pcs/bag, 10bags/ctn	1000pcs/bag
301023	HMTRS10-96	10µl Racked Tip, Nature	96pcs/rack, 10racks/box, 5boxes/ctn	96tips/rack
301030	HMR10S	10µl Refilled Tip, Nature	96pcs/tray, 10trays/box, 10boxes/ctn	10trays/box

10µl Tip

Item code	Model no.	Description	Package	Unit
301016	HMTB10-10	10µl Bulked Tip, Nature	1000pcs/bag, 10bags/ctn	1000pcs/bag
301024	HMTR10-96	10µl Racked Tip, Nature	96pcs/rack, 10racks/box, 5boxes/ctn	96tips/rack
301031	HMR10	10µl Refilled Tip, Nature	96pcs/tray, 10trays/box, 10boxes/ctn	10trays/box

200µl Tip

Item code	Model no.	Description	Package	Unit
301017	HMTB200-10	10µl Bulked Tip, Nature	1000pcs/bag, 10bags/ctn	1000pcs/bag
301025	HMTR200-96	10µl Racked Tip, Nature	96pcs/rack, 10racks/box, 5boxes/ctn	96tips/rack
301032	HMR200	10µl Refilled Tip, Nature	96pcs/tray, 10trays/box, 10boxes/ctn	10trays/box

300µl Tip

Item code	Model no.	Description	Package	Unit
301018	HMTB300-10	300µl Bulked Tip, Nature	1000pcs/bag, 10bags/ctn	1000pcs/bag
301026	HMTR300-96	300µl Racked Tip, Nature	96pcs/rack, 10racks/box, 5boxes/ctn	96tips/rack
301033	HMR300	300µl Refilled Tip, Nature	96pcs/tray, 10trays/box, 10boxes/ctn	10trays/box

1000µl Tip

Item code	Model no.	Description	Package	Unit
301019	HMTB1000-10	1000µl Bulked Tip, Nature	1000pcs/bag, 10bags/ctn	1000pcs/bag
301027	HMTR1000-96	1000µl Racked Tip, Nature	96pcs/rack, 10racks/box, 5boxes/ctn	96tips/rack
301034	HMR1000	1000µl Refilled Tip, Nature	96pcs/tray, 8trays/box, 5boxes/ctn	8trays/box

1250µl Tip

Item code	Model no.	Description	Package	Unit
301020	HMTB1250-10	1250µl Bulked Tip, Nature	1000pcs/bag, 10bags/ctn	1000pcs/bag
301028	HMTR1250-96	1250µl Racked Tip, Nature	96pcs/rack, 8racks/box, 5boxes/ctn	96tips/rack
301035	HMR1250	1250µl Refilled Tip, Nature	96pcs/tray, 8trays/box, 5boxes/ctn	8trays/box

5ml Tip

Item code	Model no.	Description	Package	Unit
301021	HMTB5000-10	5ml Bulked Tip, Nature	100pcs/bag, 10bags/ctn	100pcs/bag
301029	HMTR5000-24	5ml Racked Tip, Nature	24pcs/rack, 8racks/box, 5boxes/ctn	24tips/rack

10ml Tip

Item code	Model no.	Description	Package	Unit
301022	HMTB10000-10	10ml Bulked Tip, Nature	50pcs/bag, 10bags/ctn	50pcs/bag

FILTER TIP ORDER INFORMATION

10µl Filter Tip Short

Item code	Model no.	Description	Package	Unit
301036	HMFTBS10-10	10µl Bulked Filter Tip, Nature	1000pcs/bag, 10bags/ctn	1000pcs/bag
301045	HMFTRS10-96	10µl Racked Filter Tip, Nature	96pcs/rack, 10racks/box, 5boxes/ctn	96tips/rack

10µl Filter Tip

Item code	Model no.	Description	Package	Unit
301037	HMFTB10-10	10µl Bulked Filter Tip, Nature	1000pcs/bag, 10bags/ctn	1000pcs/bag
301046	HMFTR10-96	10µl Racked Filter Tip, Nature	96pcs/rack, 10racks/box, 5boxes/ctn	96tips/rack

20µl Filter Tip

Item code	Model no.	Description	Package	Unit
301038	HMFTB20-10	20µl Bulked Filter Tip, Nature	1000pcs/bag, 10bags/ctn	1000pcs/bag
301047	HMFTR20-96	20µl Racked Filter Tip, Nature	96pcs/rack, 10racks/box, 5boxes/ctn	96tips/rack

50µl Filter Tip

Item code	Model no.	Description	Package	Unit
301039	HMFTB50-10	50µl Bulked Filter Tip, Nature	1000pcs/bag, 10bags/ctn	1000pcs/bag
301048	HMFTR50-96	50µl Racked Filter Tip, Nature	96pcs/rack, 10racks/box, 5boxes/ctn	96tips/rack

100µl Filter Tip

Item code	Model no.	Description	Package	Unit
301040	HMFTB100-10	100µl Bulked Filter Tip, Nature	1000pcs/bag, 10bags/ctn	1000pcs/bag
301049	HMFTR100-96	100µl Racked Filter Tip, Nature	96pcs/rack, 10racks/box, 5boxes/ctn	96tips/rack

200µl Filter Tip

Item code	Model no.	Description	Package	Unit
301041	HMFTB200-10	200µl Bulked Filter Tip, Nature	1000pcs/bag, 10bags/ctn	1000pcs/bag
301050	HMFTR200-96	200µl Racked Filter Tip, Nature	96pcs/rack, 10racks/box, 5boxes/ctn	96tips/rack

1000µl Filter Tip

Item code	Model no.	Description	Package	Unit
301042	HMFTB1000-10	1000µl Bulked Filter Tip, Nature	1000pcs/bag, 10bags/ctn	1000pcs/bag
301051	HMFTR1000-96	1000µl Racked Filter Tip, Nature	96pcs/rack, 10racks/box, 5boxes/ctn	96tips/rack

1250µl Filter Tip

Item code	Model no.	Description	Package	Unit
301043	HMFTB1250-10	1250µl Bulked Filter Tip, Nature	1000pcs/bag, 10bags/ctn	1000pcs/bag
301052	HMFTR1250-96	1250µl Racked Filter Tip, Nature	96pcs/rack, 8racks/box, 5boxes/ctn	96tips/rack

5ml Filter Tip

Item code	Model no.	Description	Package	Unit
301044	HMFTB5000-10	5000µl Bulked Filter Tip, Nature	100pcs/bag, 10bags/ctn	100pcs/bag
301053	HMFTR5000-24	5000µl Racked Filter Tip, Nature	24pcs/rack, 8racks/box, 5boxes/ctn	24tips/rack



Reservoir

HM Reagent Reservoir is suitable for typical multi channel pipetting. Made of white polystyrene, it is easy to identify reagents. The Slope and V-shaped bottom design makes to permit easy access for remaining reagents. There are 3 types: 50mℓ (single), 25mℓ (dual), 25mℓ (single) and the volume is engraved on the surface for making it easy to use.

- RNase/DNase free
- Endotoxin free
- White Polystyrene
- Non-pyrogenic
- E-Beam Sterile



Product	Item code	Model no.	Volume	Bottom Type	Channel	Material	Packing
Reagent reservoir 25mℓ single channel	104022	H25VSS	25mℓ	V shape	Single	Polystyrene	1ea/pk, 50pk/box
	104023	H25VSL	25mℓ	V shape	Single	Polystyrene	5ea/pk, 20pk/box
Reagent reservoir 25mℓ dual channel	104024	H25SDS	25mℓ	Slope	Dual	Polystyrene	1ea/pk, 50pk/box
	104025	H25SDL	25mℓ	Slope	Dual	Polystyrene	5ea/pk, 20pk/box
Reagent reservoir 50mℓ single channel	104026	H50SSS	50mℓ	Slope	Single	Polystyrene	1ea/pk, 50pk/box
	104027	H50SSL	50mℓ	Slope	Single	Polystyrene	5ea/pk, 20pk/box

Loop & Needle



Loop 10 μL



Loop 1 μL

Features

- Dual purpose : Loop and Needle
- Autoclavable
- Very thin tip for colony counting
- Size : 1μℓ, 10μℓ
- Excellent E-beam sterilization

DNase Free

RNase Free

DNA Free

Non-pyrogenic

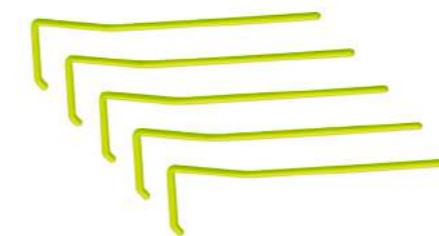
Non-Toxic

ELECTRON
BEAM
Sterilize

Ordering Information

Item code	Model No.	Specification	Material	Packing
104017	H91010	Loop Volume 10 μL	PolyPropylene	10ea / pk, 500ea / Case
104016	H91001	Loop Volume 1 μL	PolyPropylene	10ea / pk, 500ea / Case

Spreader



Features

- Bar Wide : 37mm x Length : 150mm
- Autoclavable
- Non-pyrogenic
- Non-cytotoxic
- Excellent E-beam sterilization

DNase Free

RNase Free

DNA Free

Non-pyrogenic

Non-Toxic

ELECTRON
BEAM
Sterilize

Ordering Information

Item code	Model No.	Specification	Material	Packing
104015	H91000	Spreader	PolyPropylene	10ea / pk, 500ea / Case



4 OTHER PRODUCT

•
Contents

- Latex Glove
- Nitrile Glove
- pH Paper



Micro Glove



INCOMING RAW MATERIALS

ALL incoming raw materials such as latex and chemicals are inspected by Quality Assurance(QA) department before it is approved for use.
Credibility of suppliers are evaluated according to ISO requirements annually.



PREPARATION

ALL prepared chemicals are inspected by the laboratory before it is released for production.



GLOVE STRIPPING

Our fully automated glove stripping machine minimize glove defect and human contamination.



PRODUCTION SYSTEM MONITORING

Critical production process programmed (e.g. temperature, production speed, etc.) are closely monitored the-art system 24 hours a day. This ensures that gloves produced are of consistent quality.



PRE-QUALITY INSPECTION(QAI)

QAI for each watertight test and visual test is conducted every hour for each production line to ensure the gloves meet the Acceptable Quality Level(AQL).



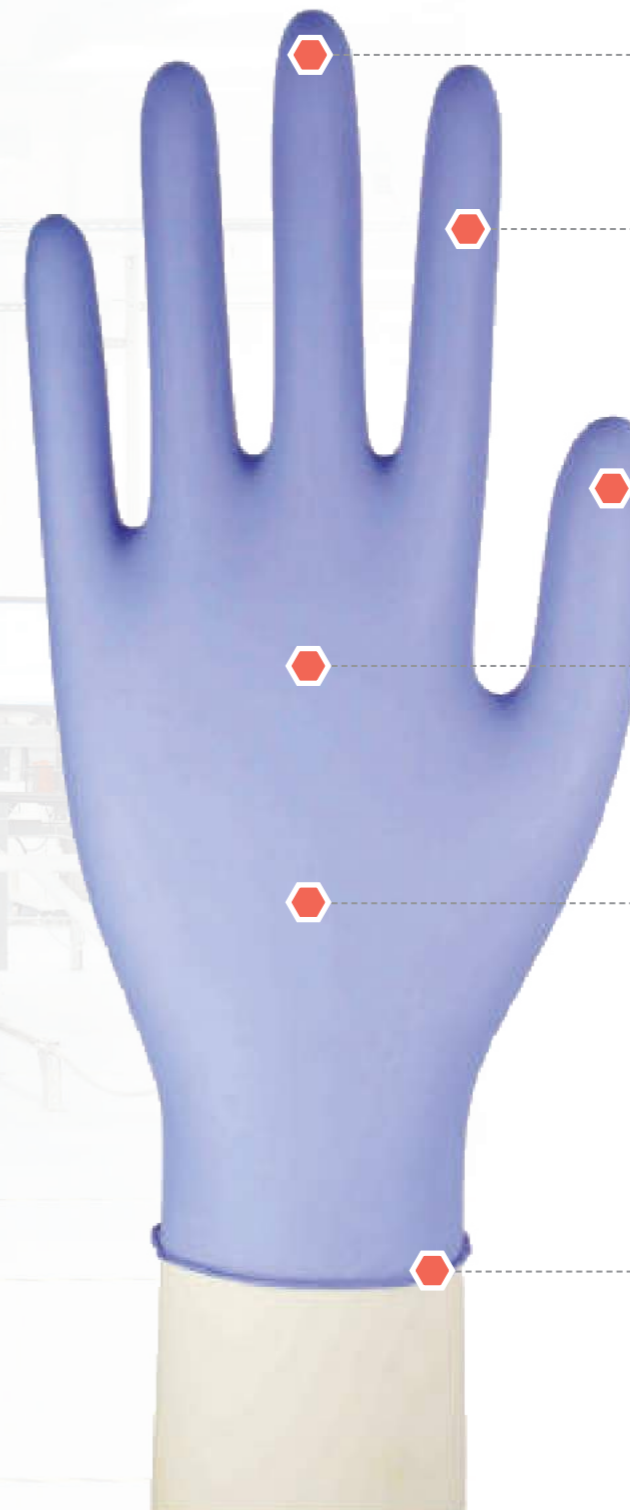
PACKING

Our patented glove stacking machine prepares gloves ready for immediate packing.
 This not only improves efficiency, gloves also look better with minimal crease lines.



FINAL INSPECTION

These include Watertight Test, Visual Test, Dimension Test, Quantity per Packing Unit, Particulate Test, etc.



Finger Tip Textured

Textured finger tips are suitable for delicate handling.

4 Sizes

- Extra small / Small / Medium / Large
- Extra small : 76mm ± 2
 - Small : 86mm ± 2
 - Medium : 98mm ± 2
 - Large : 107mm ± 2

Excellent durability

They are not easily ripped, and especially nitrile gloves are more resistant to chemicals.

Comfortable wearing, Excellent tensile force

Sanitary production process

Minimize contamination by automation system for the entire production process.

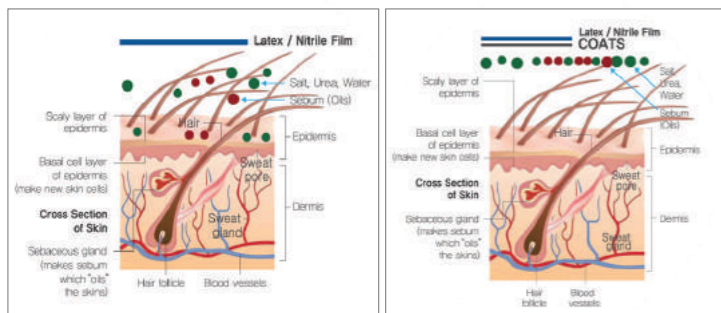
Band-type sleeve

Comfortable to wear

Latex Glove

What is COATS?

As a Colloidal Oatmeal System, it is a product which is applied β -glucan (beta-glucan), the core of oats. β -glucan (beta glucan) is used to treat skin diseases and has proven its ability to relieve irritation on dry and itchy skin. COATS products are a good alternative for users with sensitive skin. Its ability to relieve skin irritation and retain moisture is also excellent.



Advantages of COATS Glove

- It forms a barrier between the glove and the skin.
- Absorbs moisture and discharge urea and salts.
- Reduces skin irritation and minimizes troubles.
- Natural moisturizing effect.



Ordering Information

Item code	Model no.	Size	Weight	Color	Qty/Pack
301007	25LX	XS	5.5g	Lemon green	100pcs / pk
301008	25LS	S	5.5g	Lemon green	100pcs / pk
301009	25LM	M	5.5g	Lemon green	100pcs / pk
301010	25LL	L	5.5g	Lemon green	100pcs / pk

Certification test list

Regulatory Compliance	Class	Certified Body	Standard	Test	Compliance
MDD 93/42/EEC	Class 1	N/A	EN 455-1:2000	Watertight Test	✓
			EN 455-2:2015	Physical Properties • FAB	✓
			EN 455-3:2015	Dimension Test Powder Residue Test Protein Content Test	✓ ✓ ✓
US FDA	Class 1	FDA (510k submission)	ASTM D3578 - 05 (2015)	Watertight Test	✓
				Physical Property Test • Tensile Strength • Elongation at Break	✓
				Dimension Test	✓
				Powder Residue Test	✓
				Protein Content Test	✓
ASTM D7160 - 05 (2010)	Accelerated Stability Test	✓			
ASTM D7161 - 16	Real Time Stability Study	✓			
Biocompatibility	N/A	N/A	ISO 10993-10:2010	Dermal Sensitization Assay	✓
				Primary Skin Irritation	✓
PPE 89/686/EEC	Cat II	Satra	EN 420:2003 + A1:2009	pH Value	✓
				Size and gloves measurement	✓
	Cat III	Satra	EN 374-2:2003	Dexterity	✓
EN 374-3:2003				Penetration Test	✓
Food Contact	N/A	ISEGA (German)	Foodstuffs and Consumer Act	Chemical Permeation Test	✓
				EN 1186	✓
				EN 13130	✓
				CEN/TS 14234	✓
				Standard No. 80-30, 1-3 (EC)	✓
				1935/2004 of European Parliament	✓
				Directive 80/590/EEC	✓
				Directive 89/109/EEC	✓
				EU 10/2011	✓
				Decree on Consumer Goods	✓
German Recommendation XXI	✓				

Nitrile Glove

What is Nitrile?

Nitrile is a synthetic rubber made from acrylonitrile and butadiene. It has excellent resistance to oil, acid, heat and chemicals. Due to its excellent durability, it is suitable for use in a wide range of fields such as healthcare, laboratory, industrial, and food. Nitrile gloves do not contain protein, they can be a good alternative for users who are sensitive to allergic reactions while using latex gloves.



Ordering Information

Item code	Model no.	Size	Weight	Color	Qty/Pack
301011	55AX	XS	5.5g	Aqua blue	100pcs / pk
301012	55AS	S	5.5g	Aqua blue	100pcs / pk
301013	55AM	M	5.5g	Aqua blue	100pcs / pk
301014	55AL	L	5.5g	Aqua blue	100pcs / pk

Certification test list

Regulatory Compliance	Class	Certified Body	Standard	Test	Compliance	
MDD 93/42/EEC	Class 1	N/A	EN 455-1:2000	Watertight Test	✓	
			EN 455-2:2015	Physical Properties Test • FAB	✓	
				Dimension Test	✓	
			EN 455-3:2015	Powder Residue Test	✓	
EN 455-4:2009	Shelf Life Study	✓				
US FDA	Class 1	FDA (510k submission)	ASTM D6319 - 10 (2015)	Watertight Test	✓	
				Physical Property Test • Tensile Strength • Elongation at Break	✓	
				Dimension Test	✓	
			ASTM D7160-05 (2010)	Accelerated Stability Test	✓	
ASTM D7161 - 16	Real Time Stability Study	✓				
ASTM D6978-05 (2013)	Chemical Permeation Test (Chemotherapy Drugs)	✓				
Biocompatibility	N/A	N/A	ISO 10993-10:2010	Dermal Sensitization Assay	✓	
				Primary Skin Irritation	✓	
PPE 89/686/EEC	Cat III	Satra	EN 420:2003 + A1:2009	pH Value	✓	
				Size and glove measurement	✓	
				Dexterity	✓	
			EN 374-2:2003	Penetration Test	✓	
EN 374-3:2003	Chemical Permeation Test	✓				
Food Contact	N/A	ISEGA (German)	Foodstuffs and Consumer Act	Migration Behaviour	EN 1186	✓
					EN 13130	✓
					CEN/TS 14234	✓
					Standard No. 80-30, 1-3 (EC)	✓
					1935/2004 of European Parliament	✓
					Directive 80/590/EEC	✓
					Directive 89/109/EEC	✓
					EU 10/2011	✓
Decree on Consumer Goods	✓					
German Recommendation XXI	✓					

pH Indicator Paper

- HYUNDAI MICRO's pH indicator papers are easy to handle/measure pH ranges.
- The color scales are on the case to compare the result. Plastic reel ensures long-term stability and product against external influences.
- Prevent waste of pH paper with usual dose control.
- Use for schools, drainage tests, process controls and etc.



What is pH?

pH is a measure of the acidity or basicity of aqueous solutions. Acidity and Alkaline is decided with H⁺ and OH⁻ rates, High H⁺ is close to Alkaline.

pH measurement error by pH indicators

1 Buffering

Buffering is weak acid or base used to maintain the acidity (pH) of a solution near a chosen value after the addition of another acid or base. The Function of a buffering is to prevent a rapid change in pH when acid or base are added to the solution. Buffering has variable properties; some are more soluble than others, some are acidic while others are basic. It is important in many chemical applications, including agriculture, food processing, biochemistry and medicine.

2 Protein error

- Some proteins have absorption against pH indicator.
- The color result after the protein absorption is different.

3 Alkaloid error

- Some alkaloids have absorption against pH indicator.
- The color result after the alkaloid absorption is different.

4 Other error

- Below cases cause errors :
- High salinity concentration.
 - Alcohol with organic solvent.
 - High temperature liquid.
 - High oxidation and de-oxidation.



UNIVERSAL Indicator Paper [pH 1-11]

- Measuring Range : pH 1-11
- pH unit : 1 unit
- Measure pH of unknown liquid
- Easy to measure by clear color in a range of measurement



UNIVERSAL Indicator Paper [pH 1-14]

- Measuring Range : pH 1-14
- pH unit : pH 1-10 / 1 unit
- pH unit : pH 10-14 / 2 unit
- Suitable for distinguish neutral colors
- Measure pH of unknown liquid

Ordering Information

Item code	Model no.	Grade	Range measurement of pH
301054	HM001011	UNIVERSAL	1 - 11
301055	HM001014	UNIVERSAL	1 - 14

MEMO

Dotted lines for writing on the left side of the page.

Dotted lines for writing on the right side of the page.

HM HYUNDAI MICRO

Head office : Room 802, SK V1 Center 1, Ahasan-ro 17-gil 48, Seongdong-gu, Seoul, Korea

TEL : +82 2 2273 8490~2 | **FAX** : +82 2 2273 8493

Bio division : Sinnaeyeok-ro 111, Jungnang-gu, Seoul, Korea

Plant : 263 Geolmi-ro, Juksan-myeon, Anseong-si, Gyeonggi-do, Korea

www.hdmicro.co.kr | customer@hdmicro.co.kr