

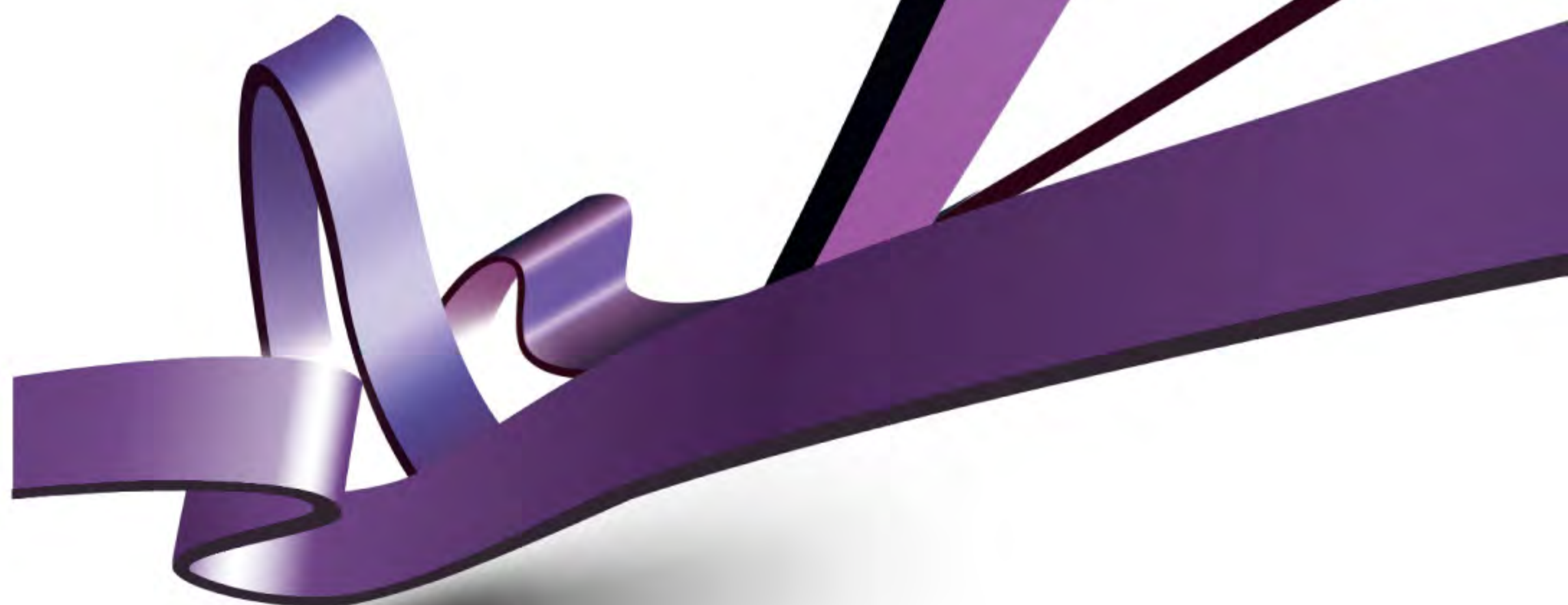


**Membrane Solutions**





# Membrane Solutions, LLC

## Solutions for Life Science

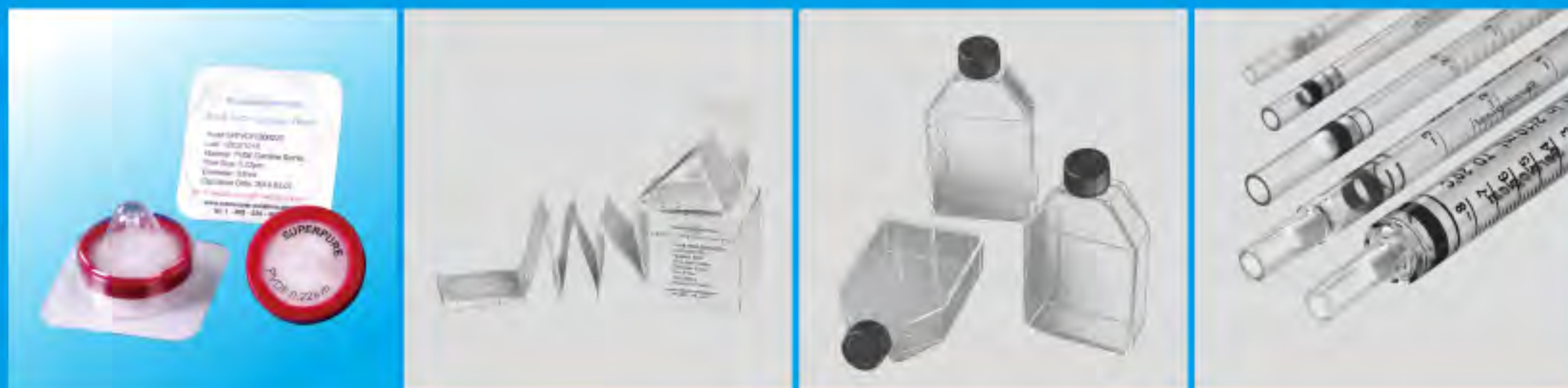
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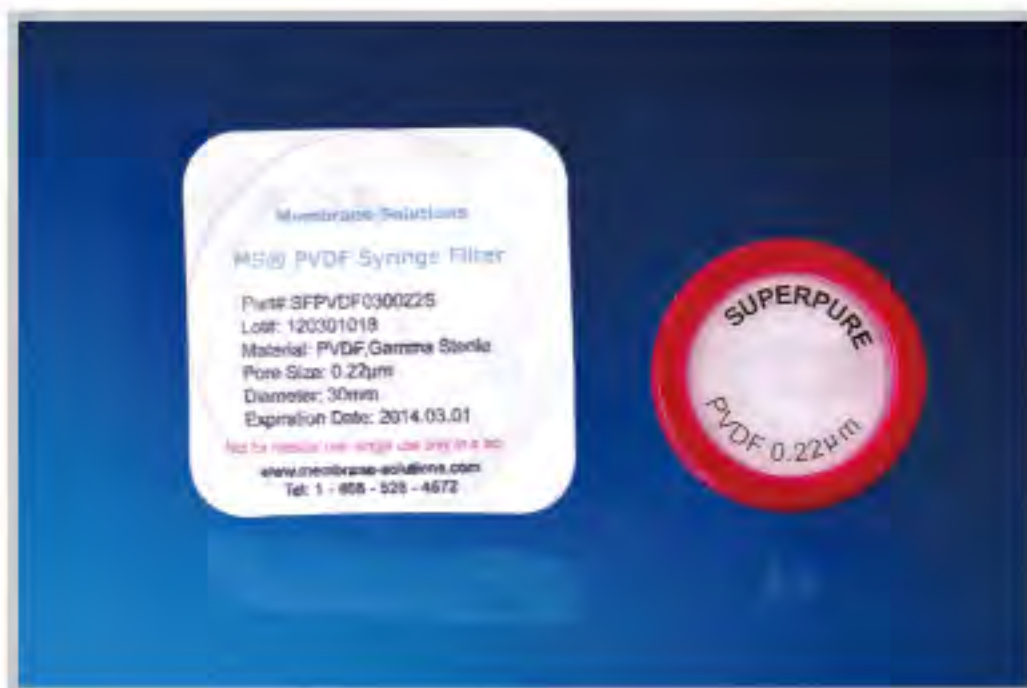
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# Filtration & Purification



## MS<sup>®</sup> Sterile Syringe Filters



## Introduction

MS<sup>®</sup> Syringe filters are purpose-built with features designed to bring the highest levels of performance and purity to your research. We incorporate a variety of membranes to offer separation and purification solutions for the majority of your laboratory needs.

## Feature

MS<sup>®</sup> sterile syringe filters are available with:

- Cellulose Acetate (CA)
- Polyethersulphone (PES)
- Polyesteramide(Nylon)
- Mixed Cellulose Ester(MCE)
- Polyfluortetraethylene(PTFE)
- Polyvinylidene fluoride(PVDF)
- Each filter is individually packed and sterilized by Gamma Radiation. Every Syringe Filter is printed with expiry date for easy QC tracking

## Application

- Tissue culture media preparation
- Sterile filtration and clarification of biological fluids
- Probe solutions
- Protein and enzyme filtrations
- Hybridization buffers
- Other aqueous solutions

## Filtration & Purification

# MS<sup>®</sup> CA Syringe Filter

CA Syringe filters are suitable for the filtration of aqueous solutions. Cellulose Acetate combine high flow rates and thermal stability with very low absorption characteristics. Especially 0.22µm pore size CA Membrane excellently suited for sterilization aqueous solutions, buffers, sera and media.

## Feature

- Naturally hydrophilic membrane filter
- Low protein binding: suitable for aqueous protein solutions
- Nitrate free: suitable for groundwater filtration
- Quiet uniform pore size structure
- Extensive pore size specification
- Cell retention and particle collection

## Application

- Filtration for aqueous sample and some organic solvents
- Cell Retention for liquid
- Light Scattering Measurement
- Sterilization

## Technical Parameter

Parameters	13mm		25mm		33mm	
Membrane material	PES		PES		PES	
Housing material	PP		PP		PP	
Filter diameter (mm)	13mm		25mm		33mm	
Filtration area (cm <sup>2</sup> )	0.65		3.90		4.60	
Pore Size(µm)	0.22	0.45	0.22	0.45	0.22	0.45
Holdup volume (µl)	<10		<30		<55	
Sample volume (ml)	<12		<100		<140	
Maximum Operating Temperature	90°C		90°C		90°C	
Maximum Operating Pressure (psi)	50		95		120	
Applicable pH value	1-14		1-14		1-14	

## Filtration & Purification

# MS<sup>®</sup> PES Sterile Syringe Filters

PES(Polyethersulfone) – low affinity for proteins and extractable with substantially faster flow rates than PVDF; suitable for pre-filtration and filtration of buffers and culture media.

## Feature

- High filtration speed
- Low extractable
- Lowest protein binding
- Designed with a Female Luer-Lok inlet and Male Luer slip outlets
- Some Filters are individually wrapped sterile, certified RNase-free, DNase- free, and DNA –free with Non-pyrogenic

## Application

- Sterile filtering protein solution
- Tissue culture media filtration
- Tissue culture additive filtration

## Technical Parameter

Parameters	13mm	25mm	33mm
Membrane material	PES	PES	PES
Housing material	PP	PP	PP
Filter diameter (mm)	13mm	25mm	33mm
Filtration area (cm <sup>2</sup> )	0.65	3.90	4.60
Pore Size(μm)	0.22    0.45	0.22    0.45	0.22    0.45
Holdup volume (μl)	<10	<30	<55
Sample volume (ml)	<12	<100	<140
Maximum Operating Temperature	90°C	90°C	90°C
Maximum Operating Pressure (psi)	50	95	120
Applicable pH value	1-14	1-14	1-14

## Filtration & Purification

# MS<sup>®</sup> PVDF Sterile Syringe Filters

PVDF (Polyvinylidene fluoride) – extremely low protein-binding; for filtration of non-aggressive aqueous and mild organic solutions, or where maximizing protein recovery is important.

## Feature

- Good heat endurance and chemical stability, strong hydrophobicity
- Designed with a Female Luer-Lok inlet and Male Luer slip outlets
- Some Filters are individually wrapped sterile, certified RNase-free, DNase-free, and DNA-free with Non-pyrogenic

## Application

- Gas filtration
- Vapor filtration
- High-temperature filtration
- Food industry
- Medicine filtration

## Technical Parameter

Parameters	13mm	25mm	33mm
Membrane material	PVDF	PVDF	PVDF
Housing material	PP	PP	PP
Filter diameter (mm)	13mm	25mm	33mm
Filtration area (cm <sup>2</sup> )	0.65	3.90	4.60
Pore Size(μm)	0.22   0.45	0.22   0.45	0.22   0.45
Holdup volume (μl)	<10	<30	<55
Sample volume (ml)	<12	<100	<140
Maximum Operating Temperature	100°C	100°C	100°C
Maximum Operating Pressure (psi)	50	95	110
Applicable pH value	1-14	1-14	1-14

## Filtration & Purification

# MS<sup>®</sup> PTFE Sterile Syringe Filters

We incorporate a variety of membranes to offer separation and purification solutions for the majority of your laboratory needs.

## Feature

- Broad chemical compatibility
- Strong chemical stability and inertia
- Strong hydrophobicity
- Designed with a Female Luer-Lok inlet and Male Luer slip outlets
- Some Filters are individually wrapped sterile, certified RNase-free, Dnase- free, and DNA –free with Non-pyrogenic

## Application

- Organic solvent with strong chemical causticity filtration
- strong acid solvent filtration
- Alkali solvent filtration

## Technical Parameter

Parameters	13mm	25mm	33mm
Membrane material	PTFE	PTFE	PTFE
Housing material	PP	PP	PP
Filter diameter (mm)	13mm	25mm	33mm
Filtration area (cm <sup>2</sup> )	0.65	3.90	4.60
Pore Size(μm)	0.22    0.45	0.22    0.45	0.22    0.45
Holdup volume (μl)	<10	<30	<55
Sample volume (ml)	<12	<100	<140
Maximum Operating Temperature	130°C	130°C	130°C
Maximum Operating Pressure (psi)	130	130	130
Applicable pH value	1-14	1-14	1-14



## Filtration & Purification

# MS<sup>®</sup> MCE Sterile Syringe Filters

MCE (Mixed Cellulose Ester)-filtration of aqueous solutions; effectively binds trace proteins.

## Feature

- Uniform aperture
- No medium dropping
- Thin texture
- Little resistance
- High filtration speed
- Little absorption
- The housing is pressure tested for use with up to 75 psig (5.0 bar) of pressure
- Designed with a Female Luer-Lok inlet and Male Luer slip outlets.
- Some Filters are individually wrapped sterile, certified RNase-free, DNase-free, Non-pyrogenic, and DNA-free.

## Application

- Gas particulate and bacteria filtration and then inspect them
- Oil particulate and bacteria filtration and then inspect them
- Alcohol particulate and bacteria filtration and then inspect them
- Other solvent particulate and bacteria filtration and then inspect them

## Technical Parameter

Parameters	13mm	25mm	33mm
Membrane material	MCE	MCE	MCE
Housing material	PP	PP	PP
Filter diameter (mm)	13mm	25mm	33mm
Filtration area (cm <sup>2</sup> )	0.65	3.90	4.60
Pore Size(μm)	0.22   0.45	0.22   0.45	0.22   0.45
Holdup volume (μl)	<10	<30	<55
Sample volume (ml)	<12	<100	<140
Maximum Operating Temperature	110°C	110°C	110°C
Maximum Operating Pressure (psi)	120	120	120
Applicable pH value	4-8	4-8	4-8

# MS<sup>®</sup> Nylon Sterile Syringe Filters

MS<sup>®</sup> Nylon syringe filters offer universal application for analytical procedures. Hydrophilic Nylon is ideal for aqueous (non-acidic) or organic sample prep and HPLC, GC or dissolution sample analysis. With its excellent flow characteristics, very low extractable levels and mechanical stability. The naturally hydrophilic, high protein binding and high dirt loading capacity of Nylon are natural advantages.

## Feature

- Hydrophilic property
- No need to moist beforehand
- Uniform aperture
- Strong tenacity and absorbability
- Syringe Filters for Cell Culture provide effective filtration for a wide variety of sample types
- Designed with a Female Luer-Lok inlet and Male Luer-Slip outlets
- Sterile Nylon Syringe Filters are individually wrapped sterile certified RNase-free, Dnase- free, and DNA-free with Non-pyrogenic

## Application

- Electric semiconductor industrial water filtration
- Chemicals filtration
- Beverage filtration

## Technical Parameter

Parameters	13mm		25mm		33mm	
Membrane material/Housing Material	Nylon/PP		Nylon/PP		Nylon/PP	
Filter diameter (mm)	13mm		25mm		33mm	
Filtration area (cm <sup>2</sup> )	0.65		3.90		4.60	
Normal Pore Size(μm)	0.22	0.45	0.22	0.45	0.22	0.45
Holdup volume (μl)	<10		<30		<55	
Sample volume (ml)	<12		<100		<140	
Maximum Operating Temperature	100°C		100°C		100°C	
Maximum Operating Pressure (psi)	75		95		110	
Applicable pH value	3-12		3-12		3-12	

## Filtration & Purification

# MS® Nylon Sterile Syringe Filters

## Order Information

Code	Description	Qty/Pack
SFCA013022S	Sterile CA Syringe Filter, Pore:0.22(µm), Diameter:13(mm)	100
SFCA025022S	Sterile CA Syringe Filter, Pore:0.22(µm), Diameter:25(mm)	100
SFCA013045S	Sterile CA Syringe Filter, Pore:0.45(µm), Diameter:13(mm)	100
SFCA025045S	Sterile CA Syringe Filter, Pore:0.45(µm), Diameter:25(mm)	100
SFCA030045S	Sterile CA Syringe Filter, Pore:0.45(µm), Diameter:30(mm)	100
SFCA030022S	Sterile CA Syringe Filter, Pore:0.22(µm), Diameter:30(mm)	100
SFGF013070S	Sterile GF Syringe Filters, Pore:0.7(µm), Diameter:13(mm)	100
SFGF025070S	Sterile GF Syringe Filters, Pore:0.7(µm), Diameter:25(mm)	100
SFGF013100S	Sterile GF Syringe Filters, Pore:1.0(µm), Diameter:13(mm)	100
SFGF025100S	Sterile GF Syringe Filters, Pore:1.0(µm), Diameter:25(mm)	100
SFMCE013022S	Sterile MCE Syringe Filters, Pore:0.22(µm), Diameter:13(mm)	100
SFMCE025022S	Sterile MCE Syringe Filters, Pore:0.22(µm), Diameter:25(mm)	100
SFMCE013045S	Sterile MCE Syringe Filters, Pore:0.45(µm), Diameter:13(mm)	100
SFMCE025045S	Sterile MCE Syringe Filters, Pore:0.45(µm), Diameter:25(mm)	100
SFNY013010S	Sterile Nylon Syringe Filters, Pore:0.1(µm), Diameter:13(mm)	100
SFNY013022S	Sterile Nylon Syringe Filters, Pore:0.22(µm), Diameter:13(mm)	100
SFNY013045S	Sterile Nylon Syringe Filters, Pore:0.45(µm), Diameter:13(mm)	100
SFNY013080S	Sterile Nylon Syringe Filters, Pore:0.8(µm), Diameter:13(mm)	100
SFNY013100S	Sterile Nylon Syringe Filters, Pore:1.0(µm), Diameter:13(mm)	100
SFNY013300S	Sterile Nylon Syringe Filters, Pore:3.0(µm), Diameter:13(mm)	100
SFNY013500S	Sterile Nylon Syringe Filters, Pore:5.0(µm), Diameter:13(mm)	100
SFNY025010S	Sterile Nylon Syringe Filters, Pore:0.1(µm), Diameter:25(mm)	100
SFNY025022S	Sterile Nylon Syringe Filters, Pore:0.22(µm), Diameter:25(mm)	100
SFNY025045S	Sterile Nylon Syringe Filters, Pore:0.45(µm), Diameter:25(mm)	100
SFNY025080S	Sterile Nylon Syringe Filters, Pore:0.8(µm), Diameter:25(mm)	100
SFNY025100S	Sterile Nylon Syringe Filters, Pore:1.0(µm), Diameter:25(mm)	100
SFNY025200S	Sterile Nylon Syringe Filters, Pore:2.0(µm), Diameter:25(mm)	100
SFNY025300S	Sterile Nylon Syringe Filters, Pore:3.0(µm), Diameter:25(mm)	100
SFNY025500S	Sterile Nylon Syringe Filters, Pore:5.0(µm), Diameter:25(mm)	100
SFNY030045S	Sterile Nylon Syringe Filter, Pore:0.45(µm), Diameter:30(mm)	100
SFPES025010S	Sterile PES Syringe Filters, Pore:0.1(µm), Diameter:25(mm)	100
SFPES004022S	Sterile PES Syringe Filters, Pore:0.22(µm), Diameter:4(mm)	100
SFPES013022S	Sterile PES Syringe Filters, Pore:0.22(µm), Diameter:13(mm)	100
SFPES025022S	Sterile PES Syringe Filters, Pore:0.22(µm), Diameter:25(mm)	100
SFPES050022S	Sterile PES Syringe Filters, Pore:0.22(µm), Diameter:50(mm), Inlet: 1/8 in. MNPT, Outlet: Standard Luer Lock	100

## Filtration & Purification

# MS<sup>®</sup> Nylon Sterile Syringe Filters

Code	Description	Qty/Pack
SFPES013045S	Sterile PES Syringe Filters, Pore:0.45(μm), Diameter:13(mm)	100
SFPES025045S	Sterile PES Syringe Filters, Pore:0.45(μm), Diameter:25(mm)	100
SFPES050045SH	Sterile PES Syringe Filters, Pore:0.45(μm), Diameter:50(mm), Inlet: Stepped Hose Barb; Outlet: Stepped Hose Barb	100
SFPES050045S	Sterile PES Syringe Filters, Pore:0.45(μm), Diameter:50(mm), Inlet: 1/8 in.MNPT; Outlet: Stepped Hose Barb	100
SFPP013022S	Sterile PP Syringe Filters, Pore:0.22(μm), Diameter:13(mm)	100
SFPP025022S	Sterile PP Syringe Filters, Pore:0.22(μm), Diameter:25(mm)	100
SFPP013045S	Sterile PP Syringe Filters, Pore:0.45(μm),Diameter:13(mm)	100
SFPP025045S	Sterile PP Syringe Filters, Pore:0.45(μm),Diameter:25(mm)	100
SFPP050045SH	Sterile PP Syringe Filters, Pore:0.45(μm), Diameter:50(mm), Inlet: Stepped Hose Barb; Outlet: Stepped Hose Barb	100
SFPP050045S	Sterile PP Syringe Filters, Pore:0.45(μm), Diameter:50(mm), Inlet: 1/8 in.MNPT; Outlet: Stepped Hose Barb	100
SFPTFE013022SL	Sterile Hydrophilic PTFE Syringe Filters, Pore:0.22(μm), Diameter: ...	100
SFPTFE013022SB	Sterile Hydrophobic PTFE Syringe Filters, Pore:0.22(μm), Diameter:13(mm)	100
SFPTFE025022SL	Sterile Hydrophilic PTFE Syringe Filters, Pore:0.22(μm)	100
SFPTFE025022SB	Sterile Hydrophobic PTFE Syringe Filters, Pore:0.22(μm),Diameter:25(mm)	100
SFPTFE050022SB	Sterile Hydrophobic PTFE Syringe Filters, Pore:0.22(μm), Diameter:50(mm)	100
SFPTFE013045SL	Sterile Hydrophilic PTFE Syringe Filters, Pore:0.45(μm)	100
SFPTFE013045SB	Sterile Hydrophobic PTFE Syringe Filters, Pore:0.45(μm), Diameter:13(mm)	100
SFPTFE025045SL	Sterile Hydrophilic PTFE Syringe Filters, Pore:0.45(μm)	100
SFPTFE025045SB	Sterile Hydrophobic PTFE Syringe Filters, Pore:0.45(μm), Diameter:25(mm)	100
SFPTFE050045SB	Sterile Hydrophobic PTFE Syringe Filters, Pore:0.45(μm), Housing Diameter:50(mm), Inlet: 1/8 in.MNPT ; Outlet: Stepped Hose Barb	100
SFPTFE050045SBH	Sterile Hydrophobic PTFE Syringe Filters, Pore:0.45(μm),Housing Diameter:50(mm), Inlet: Stepped Hose Barb; Outlet: Stepped Hose Barb	100
SFPVDF013022S	Sterile PVDF Syringe Filter, Pore:0.22(μm),Diameter:13(mm)	100
SFPVDF025022S	Sterile PVDF Syringe Filter, Pore:0.22(μm),Diameter:25(mm)	100
SFPVDF030022S	Sterile PVDF Syringe Filter, Pore:0.22(μm), Diameter:30(mm)	100
SFPVDF050022SH	Sterile PVDF Syringe Filter, Pore:0.22(μm),Diameter:50(mm), Inlet: Stepped Hose Barb; Outlet: Stepped Hose Barb	100
SFPVDF050022S	Sterile PVDF Syringe Filter, Pore:0.22(μm),Diameter:50(mm), Inlet: 1/8 in.MNPT; Outlet: Stepped Hose Barb	100
SFPVDF013045S	Sterile PVDF Syringe Filter, Pore:0.45(μm),Diameter:13(mm)	100
SFPVDF025045S	Sterile PVDF Syringe Filter, Pore:0.45(μm),Diameter:25(mm)	100
SFPVDF030045S	Sterile PVDF Syringe Filter, Pore:0.45(μm), Diameter:30(mm)	100
SFPVDF050045SH	Sterile PVDF Syringe Filter, Pore:0.45(μm),Diameter:50(mm), Inlet: Stepped Hose Barb; Outlet: Stepped Hose Barb	100

## Vacufil™ Disposable Vacuum Filtration Units



### Introduction

Vacufil™ disposable Vacuum Filtration units are very useful in large volume samples separation and purification for tissue culture media, biological fluids and fixation buffers.

The unit includes membrane filter, graduated funnel of clear polystyrene with polyethylene neck adapter and polystyrene reservoir bottle with a separate sterile polyethylene cap. Glass fiber pre-filter is available. Two membranes are available to meet all of your filtration needs: PES and MCE. Available in three styles: complete filter/storage unit and bottle top filters and the reservoir bottle.

### Feature

- Available in 0.22µm and 0.45µm
- Volume sizes: 125, 250 and 500ml
- Filter Diameter: 50mm membrane diameter for 250ml units and 75mm for 500 ml units
- Light weight and heavy wall construction
- Engraved graduation ensure veracity
- Large knurls on the reservoir bottle cap for easy screw
- Certified non-pyrogenic
- Reservoir bottles feature easy grip sides for improved handling, simplify tightening/ loosening and adjustments
- Designed wide and easy access bottle mouth for efficiently and stably pour out
- Designed hose connector can fit multiplication hose diameters
- Detergent-free, tissue culture compatible, and heat-sealed to the support grid to maximize flow rate, reduce foaming and protein denaturation

### Application

- Ideal for filtration of tissue culture media, biological fluids, fixation buffers etc.
- Cell culture media and other aqueous solutions
- Sterile filtration of solutions which can't be autoclaved
- Sterile filtration and clarification of difficult-to-filter aqueous solutions with a glass fiber pre-filter

## Filtration & Purification

# Vacufil™ Disposable Vacuum Filtration Units

## Choosing guide

### PES

Provides fast flow rates and very low protein binding and extractable than cellulosic or nylon membranes, highly recommended for filtering and sterilization cell culture media, biological fluids of aqueous solutions.

### MCE

Especially recommended for applications requiring low protein binding, such as filtering culture media containing sera.

## Technical Parameter

Code	Funnel Capacity	Filter Pour Size(µm)	Membrane Material	Qty per Case
VFPES122250	250ml Capacity	0.22	PES	12 pcs/box
VFPMCE122250	Diameter:50mm		MCE	12 pcs/box
VFPES145250	Both Upper capacity and	0.45	PES	12 pcs/box
VFPMCE145250	Receiver capacity are 250ml		MCE	12 pcs/box

Code	Funnel Capacity	Filter Pour Size(µm)	Membrane Material	Qty per Case
VFPES122500	250ml Capacity	0.22	PES	12 pcs/box
VFPMCE122500	Diameter:50mm		MCE	12 pcs/box
VFPES145500	Upper capacity 250ml and	0.45	PES	12 pcs/box
VFPMCE145500	Receiver capacity is 500ml		MCE	12 pcs/box

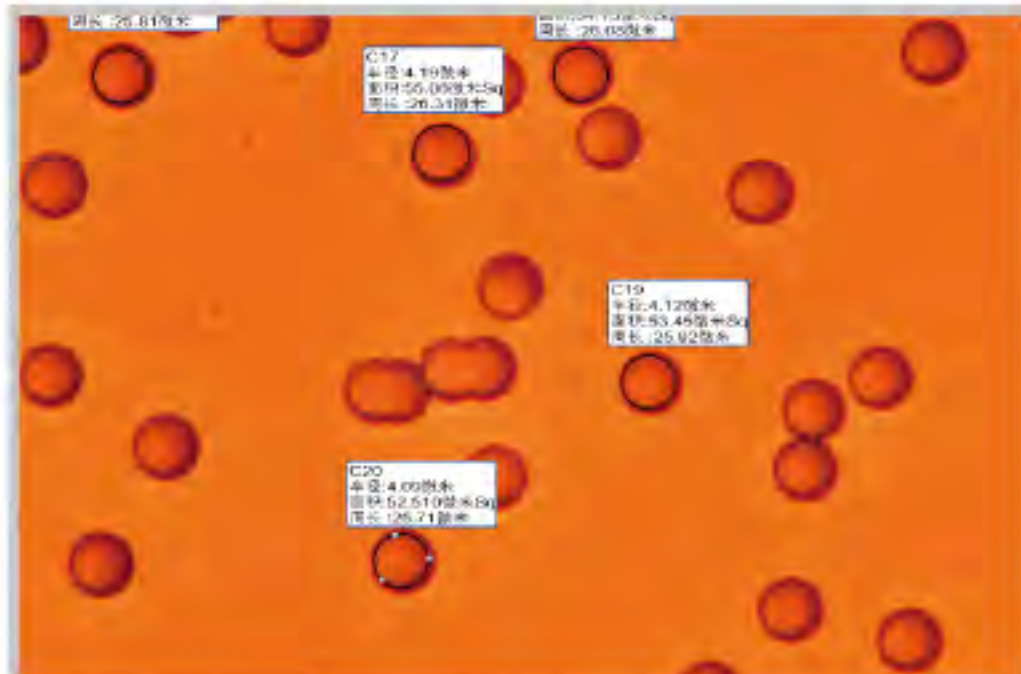
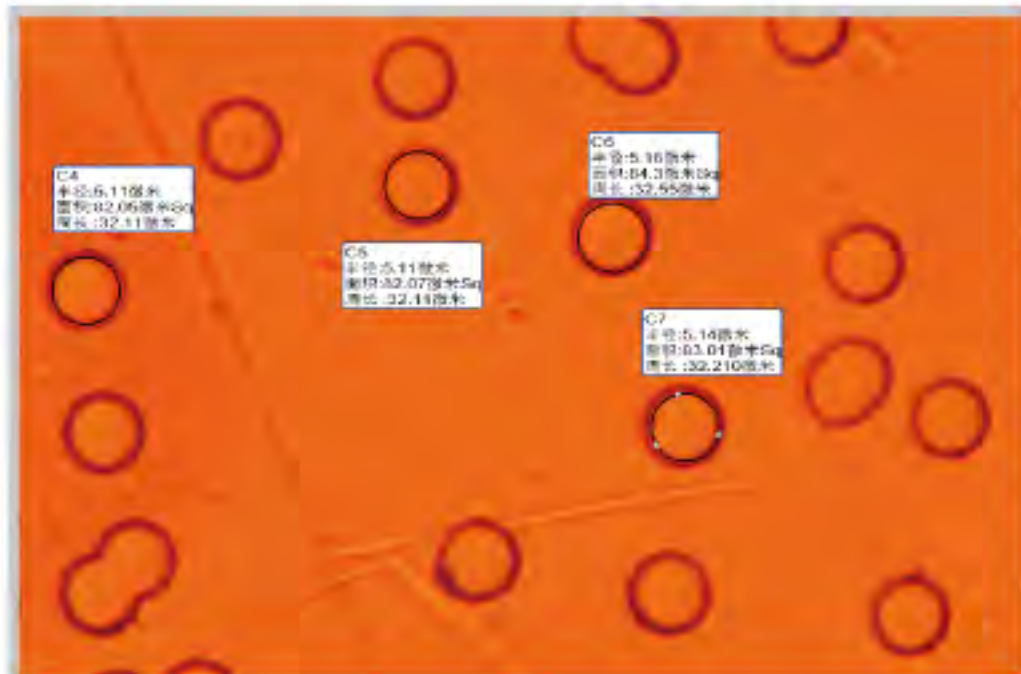
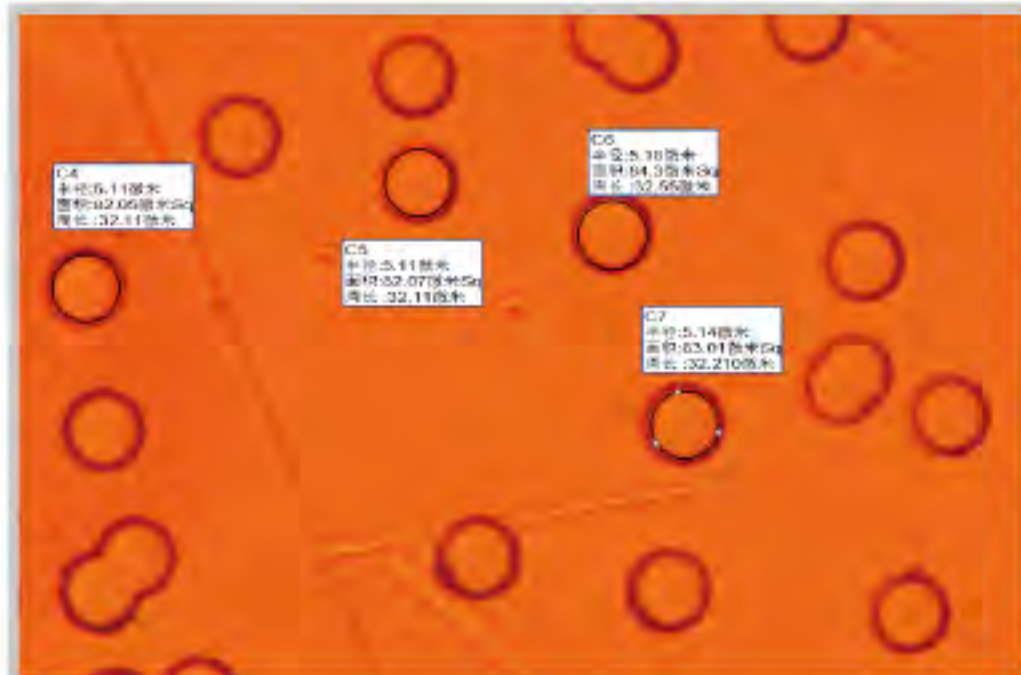
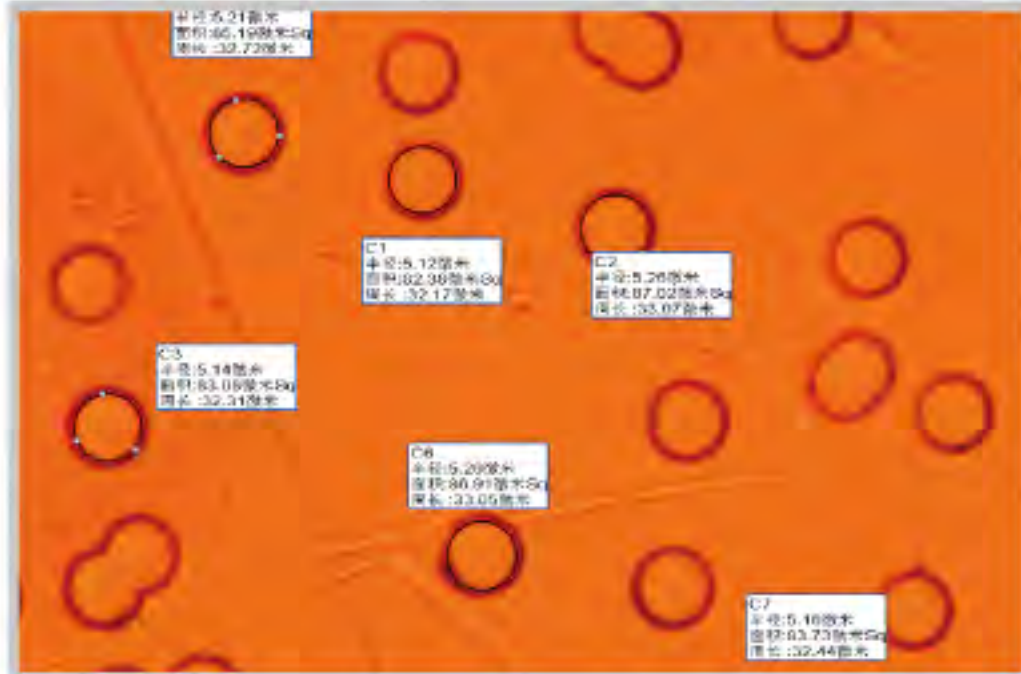
  

Filter Funnel				
VFPES122250F	250mL Capacity Diameter:50mm	0.22	PES	24 pcs/box
VFPMCE122250F			MCE	24 pcs/box
VFPES145250F	Filter top funnel	0.45	PES	24 pcs/box
VFPMCE145250F			MCE	24 pcs/box

Reservoir Bottles				
VFP250B	250mL		PS	24 pcs/box
VFP250B	500mL		PS	24 pcs/box

## MS<sup>®</sup> Polycarbonate Membrane Filter



## Product Description

Track-etched polycarbonate (PC) membranes are manufactured from high-quality polycarbonate film. PC membranes have a smooth flat surface and exhibit very low levels of extractables. They have sharply defined pore sizes, high flow rates, and excellent chemical and thermal resistance. They are suitable for the detection of particles in many corrosive fluids because of this broad chemical compatibility.

## Feature

- Smooth glass-like surface with cylindrical pores for maximum particulate capture
- Suitable for air monitoring
- Lowest, non-specific binding membrane
- Precise pore sizes and pore distribution for absolute filtration and separation
- Non-staining, providing an exceptional background for sample observations
- Very low extractables
- Biologically inert
- Optically transparent in most pore sizes
- Excellent chemical resistance and thermal stability
- Capture of samples on a flat, smooth, glass-like surface, with even distribution in one plane
- Exceptionally low tare weights, non-hygroscopic, and low trace element level
- Superior strength

## Application

- Epifluorescence microscopy
- Environmental analysis
- Cell biology
- Fuel testing
- Bioassays
- Parasitology
- Air analysis
- Water microbiology

## Filtration & Purification

# MS<sup>®</sup> Polycarbonate Membrane Filter

## Technical Parameter

Nominal Pore Size ( $\mu\text{m}$ )	Pore density (Pores/ $\text{cm}^2$ )	Thickness ( $\mu\text{m}$ )	Flow Rate	
			Water ( $\text{mL}/\text{min}/\text{cm}^2$ )	Air ( $\text{mL}/\text{min}/\text{cm}^2$ )
12	$1 \times 10^5$	13	1250	37
10	$1 \times 10^5$	15	1150	34.5
8	$1 \times 10^5$	17	1000	30
5	$4 \times 10^5$	20	700	30
3	$4 \times 10^6$	22	440	37.5
1	$2.2 \times 10^7$	24	130	20
0.8	$4 \times 10^7$	24	90	7.8
0.6	$4 \times 10^7$	24	60	7.5
0.4	$1.5 \times 10^8$	25	33	7.5
0.2	$5 \times 10^8$	25	10	3
0.1	$6 \times 10^8$	25	2.5	1.5
0.05	$6 \times 10^8$	25	/	0.011

## Order Information

MFPC013005	PC membrane filter, Diameter:13mm, Pore Size:0.05 $\mu\text{m}$
MFPC025005	PC membrane filter, Diameter:25mm, Pore Size:0.05 $\mu\text{m}$
MFPC047005	PC membrane filter, Diameter:47mm, Pore Size:0.05 $\mu\text{m}$
MFPC013010	PC membrane filter, Diameter:13mm, Pore Size:0.1 $\mu\text{m}$
MFPC025010	PC membrane filter, Diameter:25mm, Pore Size:0.1 $\mu\text{m}$
MFPC047010	PC membrane filter, Diameter:47mm, Pore Size:0.1 $\mu\text{m}$
MFPC142010	PC membrane filter, Diameter:142mm, Pore Size:0.1 $\mu\text{m}$
MFPC013020	PC membrane filter, Diameter:13mm, Pore Size:0.2 $\mu\text{m}$
MFPC025020	PC membrane filter, Diameter:25mm, Pore Size:0.2 $\mu\text{m}$
MFPC037020	PC membrane filter, Diameter:37mm, Pore Size:0.2 $\mu\text{m}$
MFPC047020	PC membrane filter, Diameter:47mm, Pore Size:0.2 $\mu\text{m}$
MFPC090020	PC membrane filter, Diameter:47mm, Pore Size:0.2 $\mu\text{m}$
MFPC142020	PC membrane filter, Diameter:142mm, Pore Size:0.2 $\mu\text{m}$
MFPC013040	PC membrane filter, Diameter:13mm, Pore Size:0.4 $\mu\text{m}$
MFPC025040	PC membrane filter, Diameter:25mm, Pore Size:0.4 $\mu\text{m}$



# MS<sup>®</sup> Polycarbonate Membrane Filter

## Order Information

MFPC037040	PC membrane filter, Diameter:37mm, Pore Size:0.4µm
MFPC047040	PC membrane filter, Diameter:47mm, Pore Size:0.4µm
MFPC090040	PC membrane filter, Diameter:90mm, Pore Size:0.4µm
MFPC142040	PC membrane filter, Diameter:142mm, Pore Size:0.4µm
MFPC013060	PC membrane filter, Diameter:13mm, Pore Size:0.6µm
MFPC025060	PC membrane filter, Diameter:25mm, Pore Size:0.6µm
MFPC037060	PC membrane filter, Diameter:37mm, Pore Size:0.6µm
MFPC047060	PC membrane filter, Diameter:47mm, Pore Size:0.6µm
MFPC013080	PC membrane filter, Diameter:13mm, Pore Size:0.8µm
MFPC025080	PC membrane filter, Diameter:25mm, Pore Size:0.8µm
MFPC037080	PC membrane filter, Diameter:37mm, Pore Size:0.8µm
MFPC047080	PC membrane filter, Diameter:47mm, Pore Size:0.8µm
MFPC142080	PC membrane filter, Diameter:142mm, Pore Size:0.8µm
MFPC013100	PC membrane filter, Diameter:13mm, Pore Size:1.0µm
MFPC025100	PC membrane filter, Diameter:25mm, Pore Size:1.0µm
MFPC037100	PC membrane filter, Diameter:37mm, Pore Size:1.0µm
MFPC047100	PC membrane filter, Diameter:47mm, Pore Size:1.0µm
MFPC142100	PC membrane filter, Diameter:142mm, Pore Size:1.0µm
MFPC013200	PC membrane filter, Diameter:13mm, Pore Size:2.0µm
MFPC025200	PC membrane filter, Diameter:25mm, Pore Size:2.0µm
MFPC037200	PC membrane filter, Diameter:37mm, Pore Size:2.0µm
MFPC047200	PC membrane filter, Diameter:47mm, Pore Size:2.0µm
MFPC013300	PC membrane filter, Diameter:13mm, Pore Size:3.0µm
MFPC025300	PC membrane filter, Diameter:25mm, Pore Size:3.0µm
MFPC037300	PC membrane filter, Diameter:37mm, Pore Size:3.0µm
MFPC047300	PC membrane filter, Diameter:47mm, Pore Size:3.0µm
MFPC142300	PC membrane filter, Diameter:142mm, Pore Size:3.0µm
MFPC013500	PC membrane filter, Diameter:13mm, Pore Size:5.0µm
MFPC025500	PC membrane filter, Diameter:25mm, Pore Size:5.0µm
MFPC037500	PC membrane filter, Diameter:37mm, Pore Size:5.0µm
MFPC047500	PC membrane filter, Diameter:47mm, Pore Size:5.0µm
MFPC090500	PC membrane filter, Diameter:90mm, Pore Size:5.0µm
MFPC142500	PC membrane filter, Diameter:142mm, Pore Size:5.0µm
MFPC013800	PC membrane filter, Diameter:13mm, Pore Size:8.0µm
MFPC025800	PC membrane filter, Diameter:25mm, Pore Size:8.0µm
MFPC037800	PC membrane filter, Diameter:37mm, Pore Size:8.0µm
MFPC047800	PC membrane filter, Diameter:47mm, Pore Size:8.0µm
MFPC090800	PC membrane filter, Diameter:90mm, Pore Size:8.0µm
MFPC142800	PC membrane filter, Diameter:142mm, Pore Size:8.0µm

## Nitrocellulose Membrane



### Description

The major features of the Nitrocellulose membrane available from Membrane Solutions are:

- High Protein binding capacity

MS<sup>®</sup> NC membranes have a high protein binding capacity making your test devices more sensitive and accurate

- Consistent Capillary Rate and Thickness

MS<sup>®</sup> NC membranes are treated with surfactant through a proprietary process. Consistent capillary rate and membrane thickness will render more optimal results in your test devices

- Excellent surface quality

MS<sup>®</sup> NC membranes are manufactured by phase inversion process controlled by

sophisticated equipment. The membranes have no virtually unincorporated dust or powder resulting in an excellent surface quality increases the clarity of the test results.

- Strong tensile strength

MS<sup>®</sup> NC membranes are flexible and have sufficient tensile strength. The strong tensile strength enables membranes to stand repeated handling during the manufacture of the test devices.

### Order Information

Nitrocellulose membrane without substrate							
Type	MS100LF	MS120LF	MS140LF	MS180LF	MS240LF	MS065WB	MS045WB
Capillary rates(Seconds/4cm)	100±40	120±40	140±40	180±40	240±40	N/A	N/A
Pore Size	10µm	8µm		5µm	3µm	0.65µm	0.45µm
Applications	Drug of Abuse, HCG, LH			Infectious Disease		For western blotting flow through test devices	
	For lateral flow test device						
Thickness	145µm±20						

Nitrocellulose membrane without substrate					
Type	MS100SLF	MS120SLF	MS140SLF	MS180SLF	MS240SLF
Capillary rates(Seconds/4cm)	100±40	120±40	140±40	180±40	240±40
Pore Size	10µm	8µm		5µm	3µm
Applications	Drug of Abuse, HCG, LH			Infectious Disease	
	For lateral flow test device				
Thickness	145µm±20				
Substrate thickness	100µm, 50µm				

## MS<sup>®</sup> Glass Fiber Filter



MS<sup>®</sup> Glass fiber filters are manufactured from 100% borosilicate glass. These depth filters combine fast flow rate with high loading capacity and retention of fine particulates. The small diameter fibers give glass fiber filter media superior efficiency and dirt holding as compared to cellulose and synthetic media.

### Features

- Made of borosilicate glass fiber without binders or with binder
- Stability at high temperatures: It keeps its properties up to 500 °C and 180 °C for Grade GF10
- Usable as Pre-filter for membranes to prevent the membranes from silting up
- Large surface area provides an outstanding retention capacity.
- High flow speed and high permeability to air
- Reduce filtration costs and premature clogging when filtering difficult-to-filter or highly contaminated solutions.
- Excellent wet strength for easy handling and filter integrity.

### Two types of glass fiber filters are available

Binder free glass fiber: Grade GF A, Grade GF B, Grade GF C, Grade GF D, Grade GF F

Binder glass fiber: Grade 6, Grade 8, Grade 9, Grade 10

#### Grade GF A

- Highly efficient for general laboratory filtration,
- Clarification of buffer and reagent solutions
- Corresponds to many international standards for air and water pollution monitoring

#### Grade GF B

- Thicker than GF A with higher wet strength and significantly increased loading capacity, Suitable for filtration of large volumes
- Pre-filter for membranes
- Filtration of suspended solids in water/waste water analysis

## MS® Glass Fiber Filter

### Grade GF C

- The standard filter in many parts of the world for the collection of suspended solids in potable water and natural and industrial wastes
- Widely used for cell harvesting, liquid scintillation counting and binding assays where more loading capacity is required

### Grade GF D

- Universal membrane pre-filter material
- Filtration in food industry

### Grade GF F

- GF F is the material upon which the EPA Method TCLP 1311 for Toxicity
- Use for filtering extremely fine precipitates such as protein, nucleic acids, or serum precipitates

### Grade GF H

- Suitable for suspended solid analysis,
- Cell harvesting
- Air pollution control

### Grade GF 6

- Suitable for very fine particles
- Removing protein from difficult-to-filter beers
- Determination of filterable substances and the residue on ignition (dry weight)
- Analysis of aggressive media

### Grade GF 8 and Grade GF 9

- Used in the filtration of coarse particles
- Determination of PCB, DDE, DDT, furans and dioxins in the air
- Environmental analysis
- Membrane pre-filter

### Grade GF 10

- Used in the filtration of coarse particles
- Weighing aid for infrared weighing
- A roll filter in automatic air filtration units

## Specifications

Grade	Weight (g/m <sup>2</sup> )	Thickness (mm)	Nominal Rating (µm)	Maximum Temperature (°C)	Binder
GF A	56	0.29	1.6	500	Free
GF B	140	1.00	1.0	500	Free
GF C	54	0.28	1.2	500	Free
GF D	120	0.53	2.7	500	Free
GF F	75	0.40	0.7	500	Free
GF H	65	0.30	1.5	500	Free
GF 6	80	0.35	--	500	Inorganic
GF 8	75	0.35	--	500	Inorganic
GF 9	70	0.35	--	500	Inorganic
GF 10	70	0.35	--	180	Organic

## Filtration & Purification

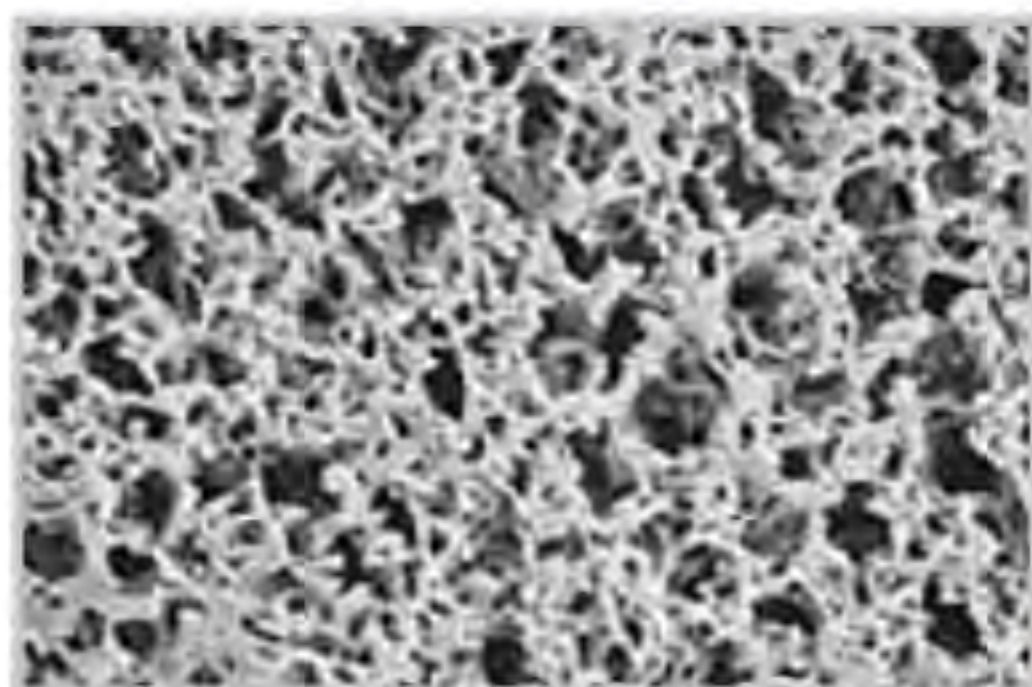
# MS<sup>®</sup> Glass Fiber Filter

## Cross Reference

Membrane Solutions	GF A	GF B	GF C	GF D	GF F	GF H	GF 6	GF 8	GF 9	GF 10
Whatman	GF/A	GF/B	GF/C	GF/D	GF/F	934-AH	GF 6	GF 8	GF 9	GF 10

## Filtration & Purification

# Bio-lott™ Nylon Neutral Transfer Membranes



## Feature

- Hydrophilic supported membrane
- High tensile strength and Chemical compatibility
- High binding capacity

## Application

- Northern Blotting
- Southern Blotting
- Protein & immunoblotting

## Technical Specification

Pore Size	0.22µm	0.45µm
Bubble Point	50psi(3.51kg/cm <sup>2</sup> )	30psi(2.11kg/cm <sup>2</sup> )
Flow Rate	9.9mls/min/cm <sup>2</sup> (0.70kg/cm <sup>2</sup> )@10psi	27mls/min/cm <sup>2</sup> (1.89kg/cm <sup>2</sup> )@10psi
Thickness	65-125µm	
Extractable	< 0.2%(<0.0015mg/ cm <sup>2</sup> )	
BSA Binding Capacity	350µg/cm <sup>2</sup>	
Maximum Operating Temperature	180°C	

# Bio-lott™ Blotting Membrane



Blotting membranes are used widely in biotechnology such as protein transfers, western transfers, protein dot or slot blots, traditional DNA and RNA transfers, nucleic acid detection, northern and southern blotting. Membrane Solutions affords all kinds of blotting membrane including PVDF transfer membrane, nitrocellulose membrane and nylon membrane. We can custom blotting membrane, like the shape, the size, the contents, the package and different use as per your requirements.

- Blotting PVDF Membranes
- Blotting Nitrocellulose membrane
- Blotting Unsupported Nitrocellulose membrane
- Blotting Nylon Membrane
- Blotting Nylon membrane

## Blotting membrane selection guide

MS® Life Science offers membranes for use in transfer and immobilization procedures. Selecting the appropriate membrane is critical to the success of a nucleic acid or protein transfer procedure. The several types of immobile transfer membranes exhibit different performance characteristics which can directly affect the outcome of a specific technique.

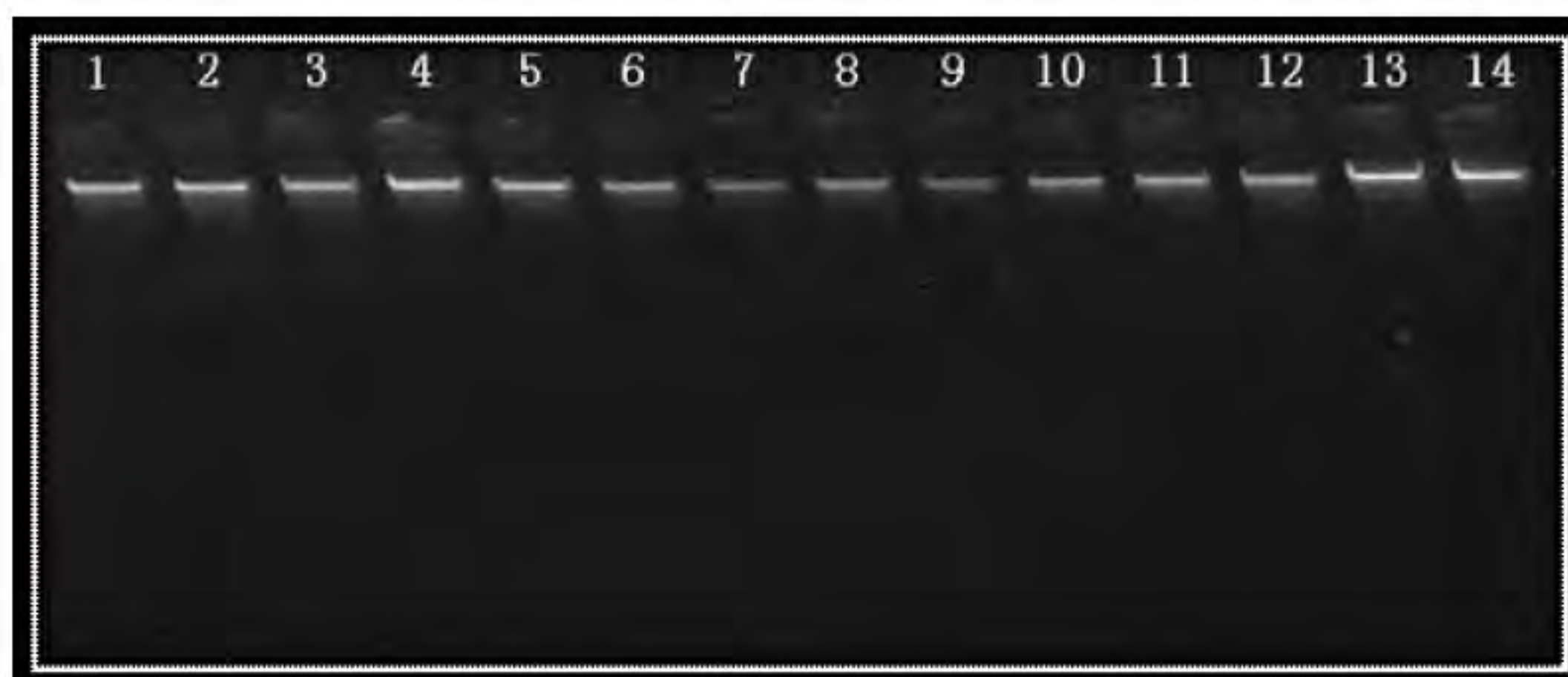
	<b>Bio-lott NC membrane</b>	<b>Bio-lott PVDF membrane</b>	<b>Bio-lott Nylon</b>
<b>Composition</b>	100% Pure Nitrocellulose	Polyvinylidene Fluoride	Nylon-6
<b>Detection Methods</b>	Chromogenic, Radioactive, Fluorescent	Direct Stain, Enzyme-antibody Conjugates, Chromogenic, Chemiluminescent	Chromogenic, Radioactive, Fluorescent
<b>Compatible stains</b>	Amido black, India ink, Ponceau-S red, Colloidal gold, CPTS	Coomassie brilliant blue, Amido black, India ink, Ponceau-S red, Colloidal gold, CPTS, Toluidine blue, Transillumination, Sypro® ruby	Amido black, India ink, Ponceau-S red, Colloidal gold, CPTS

## Filtration & Purification

# MS<sup>®</sup> Glass Fiber Filter

	Bio-lott NC membrane	Bio-lott PVDF membrane	Bio-lott Nylon
<b>Works best for: Also suited for:</b>	Colony/Plaque Lifts Nucleic Acid and Protein	Protein Transfers Nucleic Acid	Protein Transfers Nucleic Acid
<b>Advantages</b>	Excellent strength No support fabric No detergents added 100% pure nitrocellulose	Chemical resistance No discoloration Nonflammable High strength	High strength High sensitivity Versatile adsorption properties Chemical resistance
<b>Binding Interaction</b>	Hydrophobic & Electrostatic	Hydrophobic	Hydrophobic
<b>Method of Immobilization</b>	UV Crosslink Baking (Vacuum Oven)	Electroblott	UV Crosslink Baking

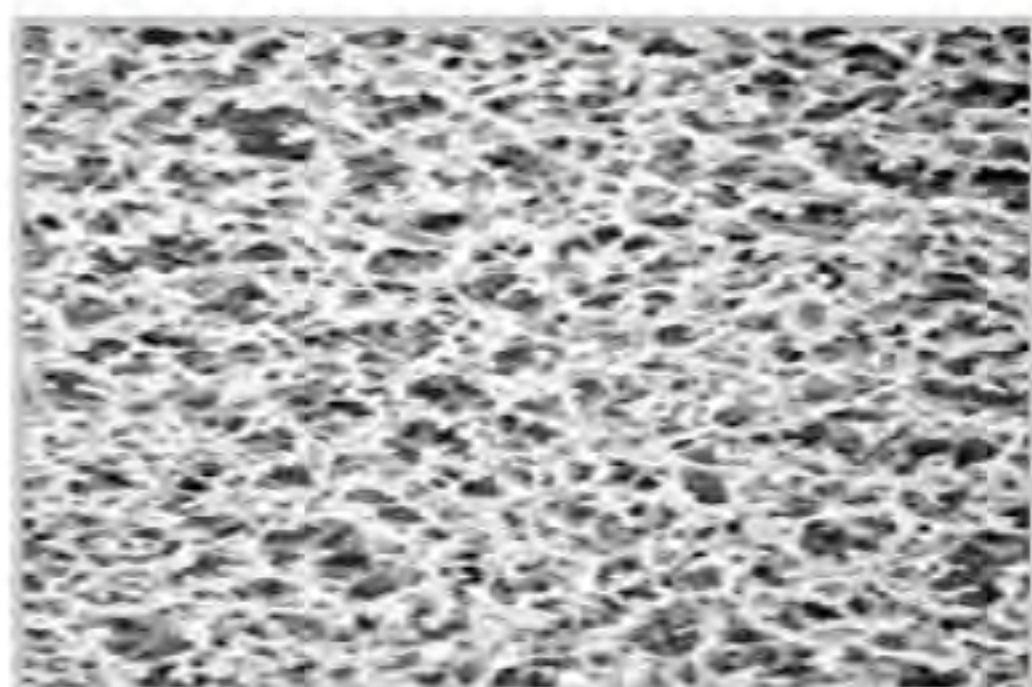
## The electrophoresis results of Bio-lott™ and the other brand



The volume of the reagent is 4ul

- a) 1 and 2 stand for 250µl column of the other brand.
- b) 3 and 4 stand for 0.7µm column 500µl
- c) 5 and 6 stand for 1.0µm column
- d) 7 and 8 stand for 1.2µm column
- e) 9 and 10 stand for 1.6µm column
- f) 11 and 12 stand for 2.7µm column
- g) 13 and 14 stand for four level columns

# Bio-Iott™ Nitrocellulose Membranes



## Feature

- 100% pure nitrocellulose
- High Protein binding capacity
- Consistent Capillary Rate and Thickness
- Low background

## Application

- Western Blotting
- Northern Blotting
- Southern Blotting
- Protein & immunoblotting

## Technical Specification

Pore Size	0.22µm	0.45µm
Bubble Point	50psi(3.65kg/cm <sup>2</sup> )	30psi(2.11kg/cm <sup>2</sup> )
Flow Rate	19mls/min/cm <sup>2</sup> (1.34kg/cm <sup>2</sup> )@10psi	51mls/min/cm <sup>2</sup> (3.59kg/cm <sup>2</sup> )@10psi
Thickness	150µm±10µm	
Extractable	<4%	
BSA Binding Capacity	160µg/ cm <sup>2</sup>	
Maximum Operating Temperature	356°C	

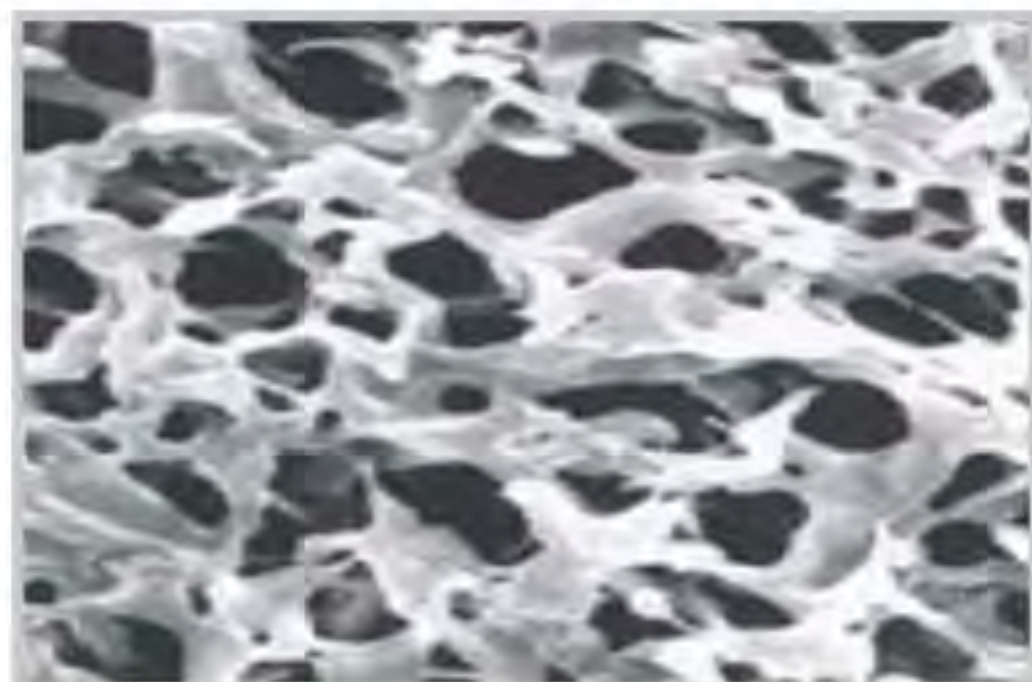
## Order Information

Code	Description	Filter Size
MSNC02030301	0.22µm Nitrocellulose Membranes	300mm×3000mm
MSNC04530301	0.45µm Nitrocellulose Membranes	300mm×3000mm
MSNCE02030301	0.22µm Nitrocellulose membrane supported	300mm×3000mm
MSNCE04530301	0.45µm Nitrocellulose membrane Supported	300mm×3000mm



## Filtration & Purification

### Bio-Iott™ PVDF (Polyvinylidene Fluoride) Transfer Membranes



### Feature

- Hydrophobic unsupported membrane
- High tensile strength and Chemical compatibility
- Low backgrounds, high sensitivity
- High binding capacity

### Application

- Western Blotting
- Protein sequencing

## Order Information

Pore Size	0.22µm	0.45µm
Thickness	40µm-250µm	
IG Binding Capacity	125µg/ cm2	

## Order Information

Code	Description	Filter Size
MSPVDF200210B	1.0µm Hydrophobic PVDF Laminated	200x200(mm)
MSPVDF200222B	0.22µm Hydrophobic PVDF Laminated	200x200(mm)
MSPVDF200245B	0.45µm Hydrophobic PVDF Laminated	200x200(mm)
MSPVDF250310B	1.0µm Hydrophobic PVDF Laminated	254x300(mm)
MSPVDF250322B	0.22µm Hydrophobic PVDF Laminated	254x300(mm)
MSPVDF250345B	0.45µm Hydrophobic PVDF Laminated	254x300(mm)
MSPVDF254022B	0.22µm Hydrophobic PVDF Membrane	Width:254mm
MSPVDF254045B	0.45µm Hydrophobic PVDF Membrane	Width:254mm
MSPVDF260010B	0.1µm Hydrophobic PVDF membrane	Width: 260mm
MSPVDF02030301	0.20µm Transfer membrane PVDF	Roll 300x3000mm
MSPVDF04530301	0.45µm Transfer membrane PVDF	Roll 300x3000mm

## Filtration & Purification

# Bio-Iott™ Nylon Highly Positively Charged Membrane

## Feature

- Inherently charged nylon membrane
- High tensile strength and Chemical compatibility
- High binding capacity

## Application

- Northern Blotting
- Southern Blotting
- DNA fingerprinting

## Technical Specification

Pore Size	0.22µm	0.45µm
Bubble Point	50psi(3.51kg/cm <sup>2</sup> )	30psi(2.11kg/cm <sup>2</sup> )
Flow Rate	10mls/min/cm <sup>2</sup> (0.70kg/cm <sup>2</sup> )@10psi	27mls/min/cm <sup>2</sup> (1.89kg/cm <sup>2</sup> )@10psi
Thickness	65-125µm	
Extractable	< 0.2%(<0.0015mg/ cm <sup>2</sup> )	
BSA Binding Capacity	450µg/ cm <sup>2</sup>	
Maximum Operating Temperature	180°C	

## Order Information

Code	Description	Filter Size
MSNY200210L	1.0µm Hydrophilic Nylon66 Laminated	200x200(mm)
MSNY200222L	0.22µm Hydrophilic Nylon66 Laminated	200x200(mm)
MSNY200245L	0.45µm Hydrophilic Nylon66 Laminated	200x200(mm)
MSNY250310L	0.45µm Hydrophilic Nylon66 Laminated	254x300(mm)
MSNY250322L	0.22µm Hydrophilic Nylon66 Laminated	254x300(mm)
MSNY250345L	0.45µm Hydrophilic Nylon66 Laminated	254x300(mm)
MSNY253010L	1.0µm Hydrophilic Nylon66 Laminated	254x3000(mm)
MSNY253045L	0.45µm Hydrophilic Nylon66 Laminated	254x3000(mm)
MSNY2541000	10.0µm Hydrophilic Nylon66 Laminated	254mm(width)
MSNY280022L	0.22µm Hydrophilic Nylon66 Laminated	280mm(width)
MSNY280045L	0.45µm Hydrophilic Nylon66 Laminated	280mm(width)
MSNY280500L	5.0µm Hydrophilic Nylon66 Laminated	280mm(width)
MSNYP04530301	0.45µm Nylon positively charged	Roll300x3000mm
MSNY02030301	0.20µm Nylon Membrane	Roll300x3000mm
MSNY04530301	0.45µm Nylon Membrane	Roll300x3000mm
MSNY310010L	0.1µm Hydrophilic Nylon66 Laminated	310mm(width)
MSNY310100L	1.0µm Hydrophilic Nylon66 Laminated	310mm(width)
MSNY310300L	3.0µm Hydrophilic Nylon66 Laminated	310mm(width)
MSNY310022L	0.22µm Hydrophilic Nylon66 Laminated	310mm(width)
MSNY310045L	0.45µm Hydrophilic Nylon66 Laminated	310mm(width)

# MS<sup>®</sup> Filtration tube



## Introduction

Filtration tubes are designed for in vitro diagnostic use and intended for concentrating serum, urine, cerebrospinal fluid and other body fluids prior to analysis.

Filter device is made from copolymer styrene/butadiene, and the membrane is made from low binding regenerated cellulose, and the filtrate tube is made from polypropylene

## Feature

- High recovery regenerated cellulose membrane in a range of molecular weight cut-offs
- Available with 2 volumes of 15 and 50 ml
- High retentate recovery of >90%
- Maximum initial sample volume and relative centrifugal force when spun in a swinging bucket are 15.0ml and 4,000×g
- Maximum initial sample volume and relative centrifugal force when fixed angle rotor are 12.0ml and 5,000×g
- Typical final concentrate volume is 200µl
- Vertical membrane reduces concentration polarization for ultra-fast spin times (as fast as 10–15 minutes)
- 100% integrity tested for reliable performance
- Convenient sample monitoring with translucent housing and volume gradations
- Direct pipettor sample access eliminates processing step to recover concentrate
- High concentration factors of 80–100X

## Order Information

Cat.No.	Capacity(ml)	Speciality	Qty.per bag/case
LBFT022150	15	Conical,Molecular weight cut-offs 5KD, DNase/RNase	12/24
LBFT022500	50		8/24
LBFT122150	15	Conical,Molecular weight cut-offs 10KD, DNase/RNase	12/24
LBFT122500	50		8/24
LBFT222150	15	Conical,Molecular weight cut-offs 100KD, DNase/RNase	12/24
LBFT222500	50		8/24

# MS<sup>®</sup> Spin Column



## Introduction

MS<sup>®</sup> spin columns provide materials for the fast and convenient purification of a protein or protein complex using affinity media. Immunoprecipitation or affinity pull-down methods are a common way to perform small-scale purification of target molecules. Each spin column fits securely in the supplied 2 mL collection tubes for use in a microcentrifuge. This product allowing for collection of the unbound, wash, and elution fractions per column. The researcher needs only to supply the affinity media of choice. The addition of the end caps with this product provides a convenient storage method for the used column and can also be used for incubation without loss of sample.

## Feature

- Convenient format for both use and storage
- Available with 3, 4 or 5 layers of GF/F glass fiber membrane
- Flat and frosted caps surface together with smooth and frosted body surface provide easy and legible mark.

## Order information

Code	Description	Qty/Pack
LBSC00203	Spin column, 3 layers of GF/F glass fiber membrane	
LBSC00204	Spin column, 4 layers of GF/F glass fiber membrane	
LBSC00205	Spin column, 5 layers of GF/F glass fiber membrane	

## Direct-Pure UP UltraPure & RO Water System



Direct-Pure UP UltraPure&RO Water System produce Type I and Type III water directly from tap water in a single compact system. It is the ideal system for customers without pretreated water available.

### Introduction Specifications

Feed Water:

Tap Water with TDS<200 ppm,5-45°C,1.0~3.5Kg/cm<sup>2</sup>

Flow Rate:

typically 15L/h for RO water

1.5L/min for Type I water

Product Water Quality:

- Resistivity: 18.2 MΩ•cm @ 25°C
- TOC Level(Typical Values): < 10 ppb\*
- Particles: (>0.22µm) < 1 /mL
- Microorganism Bio-pure: < 1 cfu/ml
- Pyrogen: < 0.001Eu/ml ( with Millipore BioPak Point-of-use ultrafilter )
- Water outlet: Ultrapure water+ RO pure water

Dimensions: Length×Depth×Height(cm): 30 X 49 X 48

\* Depends on feed water quality

### Features

- Assembly Kit treats feed water and protects RO membranes from surface scale build-up, eliminates the need for softening and extends RO membrane life.
- Advanced reverse osmosis technology removes more than 99% contaminations and 95% ions from feed water.
- The patented RephiDuo U Pack ultrapurification cartridge ensures minimal dead water volume and ion-free and organic-free product water that meets or exceeds, CLSI and CAP Type I water standards.
- Final purification is carried out by a 0.2µm sterile filter to remove bacteria and particles above 0.2µm size.
- High-precision resistivity meter with temperature compensation guarantees accurate resistivity of product water measurement.
- Advanced control system monitors unit performance and displays RO membrane performance, ultrapure water resistivity, reservoir level, cartridge status.

We can provide support documents to meet GMP, GLP, FDA and other validation protocols.

## Filtration & Purification

# Direct-Pure UP UltraPure & RO Water System

## Applications

Ultrapure Water	RO Pure Water
<p><b>Applications</b></p> <p>HPLC (High Performance Liquid Chromatography) flowing preparation;                      Reagent blank solution preparation;                      Dilution for GC, HPLC, AA, ICP-BIO-PURE and other analytic technique samples;                      The buffer solution using for mammal cell culture and culture medium preparation;                      Molecular biology reagent preparation etc.</p>	<p><b>Applications</b></p> <p>Cleaner for rinsing glassware;                      Water baths;                      Autoclave;                      Laboratory animal raising etc.</p>

## Ordering Information

Code	Description
<b>Direct-Pure System</b>	
RD0P01500	Direct-Pure UP 15 Ultrapure Water&RO System
RD0P03000	Direct-Pure UP 30 Ultrapure Water&RO System
RD0P015UV	Direct-Pure UP UV 15 Ultrapure Water&RO System
RD0P030UV	Direct-Pure UP UV 30 Ultrapure Water&RO System
<b>Consumables</b>	
Code	Description
RR300Q201	RephiDuo H Pack Cartridge
RR600Q201	RephiDuo H Pack Cartridge
RRQ2F6SKT	RephiDuo U Pack Cartridge with 0.2µm Sterile Filter
RAR010001	RO membrane for Direct-Pure 10 System, 1/PK
LABPA0112	Polypropylene Depth Filter, 10 Inches, 1 µm, 12/Pk
LABPA1012	Polypropylene Depth Filter, 10 Inches, 10 µm, 12/Pk
LABAC1012	Activated Carbon cartridge, 10 Inches, 12/Pk
LABAT1012	Softening cartridge, 10 Inches, 12/Pk
RATANK030	30-liter PE tank
RATANK060	60-liter PE tank
CDUFBI01R	Millipore BioPak point-of-use Ultrafilter

# Molecular Biology & Microbiology



# BioSet™ Monitor



## Introduction

MS® disposable sterile BioSet™ Monitor are for contaminants monitoring, microbiological testing and sterility testing in liquid samples like food/beverages from raw materials to finished products.

The easy system of low-cost disposable, ready to use sterile filter sets bring significant convenience to your daily activities in the laboratory and enable you to optimize the analysis time for routine testing.

Each unit consisting of a measured filter funnel, base, pad, membrane, removable lid and plug.

## Feature

- MCE gridded membrane with pad with choice of pore size (0.2, 0.45, 0.8, or 1.2 µm)
- Black or white gridded membrane choice for better contrast
- Ready to use: testing time can be reduced by up to 70%
- All-in-one system: filtration unit easily converts to a Petri dish, which can be labeled and incubated for culturing
- Heavy-duty polystyrene (PS), translucent, lightweight, and have reinforced rims and inside fluting
- Heat-resistant, chemically inert hydrophobically non stick
- Removable 100ml graduated plastic funnel
- No risk of phthalate contamination
- Easy handling

## Order Information

Item#	Description	Pcs per box
BM047022W	BioSet Microbiological monitor, 100ml, 47mm, 0.22µm, White	50
BM047045W	BioSet Microbiological monitor, 100ml, 47mm, 0.45µm, White	50
BM047080W	BioSet Microbiological monitor, 100ml, 47mm, 0.8µm, White	50
BM047080B	BioSet Microbiological monitor, 100ml, 47mm, 0.8µm, Black	50
BM047022B	BioSet Microbiological monitor, 100ml, 47mm, 0.22µm, Black	50
BM047045B	BioSet Microbiological monitor, 100ml, 47mm, 0.45µm, Black	50



# MS<sup>®</sup> Sterile MCE Gridded Membrane Filter



MS<sup>®</sup> Sterile mixed cellulose ester (MCE) Gridded Membrane Filter are composed of cellulose acetate and cellulose nitrate. Because MCE membrane is biologically inert, it's one of the most widely used membranes in analytical and research applications. MCE membrane filter is characterized by a smoother and more uniform surface than pure nitrocellulose filter. Also, the color contrast provided by the filter surface facilitates particle detection and minimizes eye fatigue.

Many microbiological techniques include colony counting after incubation as the standard method of quantification. Gridded filters have clearly defined grid lines spaced at 3.1 mm intervals. The special ink used is nontoxic and completely free from bacterial growth inhibitors. White gridded disks are designed for the recovery and retention of *E. Coli* bacteria in water/wastewater analysis as well as other microbiological tests. Black mixed cellulose esters (MCE) are available plain for automatic colony counting applications, as well as gridded to assist in manual counting procedures. Black MCE membranes provide contrast between residue or cell colors and the filter without having to counter-stain the membrane.

## Features

- The color contrast provided by the filter surface facilitates particle detection and minimizes eye fatigue.
- Gridded filters have clearly defined grid lines spaced at 3.1 mm intervals.
- The special ink used is nontoxic and completely free from bacterial growth inhibitors.
- White, gridded membrane filters are designed for the recovery and retention of *E. Coli* bacteria in water/wastewater analysis as well as other microbiological tests.
- Black mixed cellulose esters(MCE) are available plain for automatic colony counting applications, as well as gridded to assist in manual counting procedures.
- Black MCE membranes provide contrast between residue or cell colors and the filter without having to counter-stain the membrane.
- Individual Pack

# MS<sup>®</sup> Sterile MCE Gridded Membrane Filter

## Application

Application	Color	Pore Size(µm)
Micro dialysis of DNA and proteins	White	0.1
Sterilizing filtration, bioassays	White	0.22
Sterilizing filtration, air monitoring, particle monitoring, particle removal, bioassays	White	0.3
Clarification of aqueous solutions, particle removal and analysis, microbiology analysis	White	0.45
Fluorescent bacteriological assays, particle monitoring, bioassays	Black	0.45
Particle monitoring, particle removal, dairy microbiology, retention of yeasts, molds and algae	White	0.65
Air monitoring, particle monitoring, particle removal, bioassays	White	0.8
Fluorescent assays, particle monitoring, air monitoring	Black	0.8
Clarification of aqueous solutions	White	1
QC of fluid holding tanks, fluid monitoring, air monitoring, particle collection and analysis	White	3
QC of fluid holding tanks, fluid monitoring, particle collection and analysis	White	5
QC of fluid holding tanks, fluid monitoring, air monitoring, particle collection and analysis	White	8

## Specifications

Pore Size (µm)	Color	Bubble Point (Bar)	Water Flow Rate (mL/min/cm <sup>2</sup> )	Air Flow Rate (L/min/cm <sup>2</sup> )	Porosity
8.0	White	0.40	600	63	84
5.0	White	0.56	560	30	84
3.0	White	0.69	320	28	83
1.0	White	0.77	270	20	82

**MS<sup>®</sup> Sterile MCE Gridded Membrane Filter**

Pore Size (µm)	Color	Bubble Point (Bar)	Water Flow Rate (mL/min/cm <sup>2</sup> )	Air Flow Rate (L/min/cm <sup>2</sup> )	Porosity
0.8	Black	1.15	180	15	82
0.8	White	0.95	180	15	82
0.65	White	1.18	135	9	81
0.45	Black	2.35	60	5	79
0.45	White	2.23	60	5	79
0.22	White	3.62	19	2	75
0.1	White	14.1	1.6	0.5	74

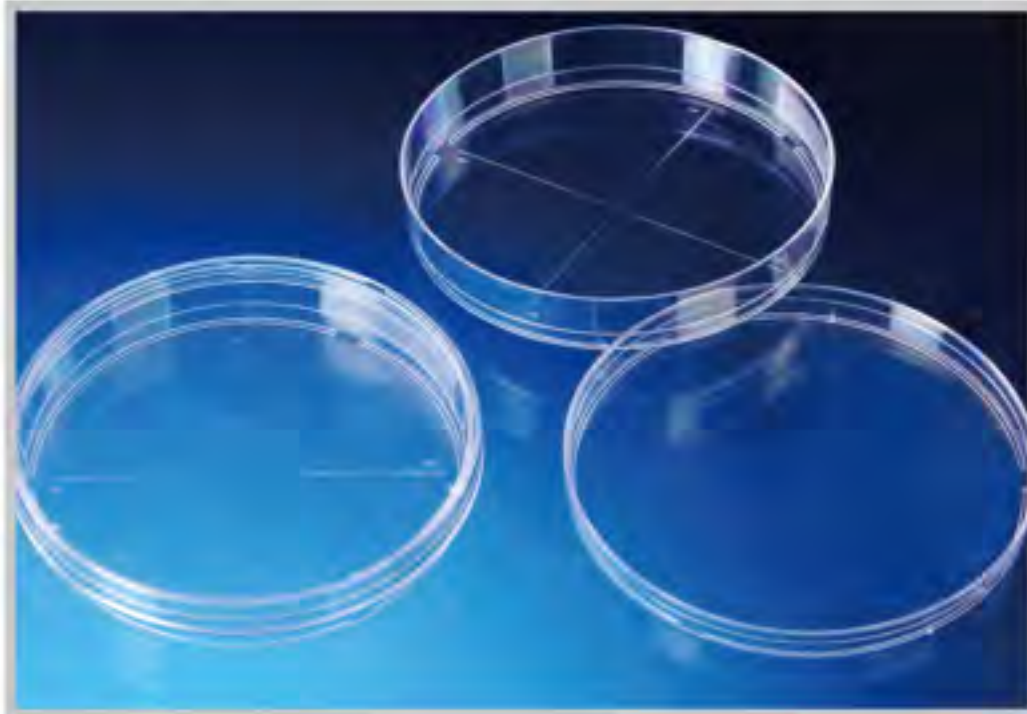
**Order Information**

Code	Description	Packing
<b>Sterile MCE membrane filter, gridded, Continuous package</b>		
MFMCCE047022CW	MCE Gridded Membrane Filter, White, Continuous Package, Sterile, 0.22(µm), 47(mm), suitable for membrane dispenser	150
MFMCCE047045CW	MCE Gridded Membrane Filter, White, Continuous Package, Sterile, 0.45(µm), 47(mm), suitable for membrane dispenser	150
MFMCCE047080CW	MCE Gridded Membrane Filter, White, Continuous Package, Sterile, 0.8(µm), 47(mm), suitable for membrane dispenser	150
MFMCCE050022CW	MCE Gridded Membrane Filter, White, Continuous Package, Sterile, 0.22(µm), 50(mm), suitable for membrane dispenser	150
MFMCCE050045CW	MCE Gridded Membrane Filter, White, Continuous Package, Sterile, 0.45(µm), 50(mm), suitable for membrane dispenser	150
MFMCCE050080CW	MCE Gridded Membrane Filter, White, Continuous Package, Sterile, 0.8(µm), 50(mm), suitable for membrane dispenser	150
MFMCCE047045CB	MCE Gridded Membrane Filter, Black, Continuous Package, Sterile, 0.45(µm), 47(mm), suitable for membrane dispenser	150
MFMCCE047080CB	MCE Gridded Membrane Filter, Black, Continuous Package, Sterile, 0.8(µm), 47(mm), suitable for membrane dispenser	150
MFMCCE050045CB	MCE Gridded Membrane Filter, Black, Continuous Package, Sterile, 0.45(µm), 50(mm), suitable for membrane dispenser	150
MFMCCE050080CB	MCE Gridded Membrane Filter, Black, Continuous Package, Sterile, 0.8(µm), 50(mm), suitable for membrane dispenser	150

**MS<sup>®</sup> Sterile MCE Gridded Membrane Filter**

Code	Description	Packing
<b>Sterile MCE membrane filter, gridded, individually package</b>		
MFMC047022GWS	MCE Gridded Membrane Filter, White, Individually package, Sterile, 0.22(µm), 47(mm)	200
MFMC047045GWS	MCE Gridded Membrane Filter, White, Individually package, Sterile, 0.45(µm), 47(mm)	200
MFMC047080GWS	MCE Gridded Membrane Filter, White, Individually package, Sterile, 0.8(µm), 47(mm)	200
MFMC050022GWS	MCE Gridded Membrane Filter, White, Individually package, Sterile, 0.22(µm), 50(mm)	200
MFMC050045GWS	MCE Gridded Membrane Filter, White, Individually package, Sterile, 0.45(µm), 50(mm)	200
MFMC050080GWS	MCE Gridded Membrane Filter, White, Individually package, Sterile, 0.8(µm), 50(mm)	200
MFMC047022GWSP	MCE Gridded Membrane Filter, Individually package, White, Sterile, 0.22(µm), 47(mm),With Pad	100
MFMC047045GWSP	MCE Gridded Membrane Filter, Individually package, White, Sterile, 0.45(µm), 47(mm),With Pad	100
MFMC047080GWSP	MCE Gridded Membrane Filter, Individually package, White, Sterile, 0.80(µm), 47(mm),With Pad	100
<b>MCE Membrane Filter, Black, Gridded, Sterile, Individually Packed</b>		
MFMC047022GBS	MCE Gridded Membrane Filter, Individually package, Black, Sterile,0.22(µm), 47(mm)	200
MFMC047045GBS	MCE Gridded Membrane Filter, Individually package, Black, Sterile,0.45(µm), 47(mm)	200
MFMC047080GBS	MCE Gridded Membrane Filter, Individually package, Black, Sterile,0.80(µm), 47(mm)	200
MFMC050022GBS	MCE Gridded Membrane Filter, Individually package, Black, Sterile,0.22(µm), 50(mm)	200
MFMC050045GBS	MCE Gridded Membrane Filter, Individually package, Black, Sterile,0.45(µm), 50(mm)	200
MFMC050080GBS	MCE Gridded Membrane Filter, Individually package, Black, Sterile,0.80(µm), 50(mm)	200

## MS<sup>®</sup> Petri Dish



## Introduction

MS<sup>®</sup> Petri dishes are available in a variety of shapes and sizes for use in routine procedures and with automated equipment.

## Feature

- Made of molded polystyrene in 35mm, 50mm, 70mm, 90mm and customized diameter
- Designed easily to open with one hand
- Available with or without absorbent pads
- Gamma irradiated for sterilization
- Packaged in heavy-wall polyethylene sleeves

## Application

- Bacterial culture
- Ideal for microbiological analysis
- Petri dishes with absorbent pads can be used for culturing micro-organismsBio-pure on either agar or broth based media

## Specialized Dishes

### 50×15mm sterile Petri dishes

MS<sup>®</sup> 50×15mm sterile Petri dishes with absorbent pads are designed to accommodate 47mm diameter membrane filters. These dishes are stackable and have squared off edges on both the top and bottom which provide convenient grips for one handed opening.

## Molecular Biology & Microbiology

# MS<sup>®</sup> Petri Dish

## Specifications

Material of Petri dish	Dimension	Filter size	Sterilization
Polystyrene	Height: 15.0mm Diameter: 50.0mm	Accept 47mm absorbent pad and membrane filter	Gamma irradiation

## Ordering information

Code	Description	Qty/Pack
LBPD035S	PS Petri Dishes, 35x15mm, standard round, sterile	10/2000
LBPD055S	PS Petri Dishes, 55x15mm, standard round, sterile	10/1000
LBPD070S	PS Petri Dishes, 70x15mm, standard round, sterile	10/1000
LBPD090S	PS Petri Dishes, 90x15mm, standard round, sterile	10/500
LBPD190S	PS Petri Dishes, 90x15mm, standard round, sterile, Two Layer	10/500
LBPD290S	PS Petri Dishes, 90x15mm, standard round, sterile, Three Layer	10/500
LBPD150S	PS Petri Dishes, 150x15mm, standard round, sterile	10/200

# MS<sup>®</sup> PCR Tube



## Introduction

MS<sup>®</sup> PCR Tubes are made of specially formulated high quality polypropylene. These tubes are ideal for use in thermal transfer applications. The unique cap design guarantees perfect fit which prevents sample evaporation during thermal cycling. The smooth tubes feature eliminates the risk of snagging gloves or irritating fingers. Our PCR tubes, plates and strip tubes are specifically designed for use in thermal transfer applications.

# MS<sup>®</sup> PCR Tube



## Feature

- Easy open and close using one hand
- External graduations and frosted writing surface aid in sample identification
- Certified Dnase/Rnase free
- Autoclavable under normal autoclaving guidelines



## Order Information

Code	Description	Qty/Pack
LBPCR02T01	PCR Tubes, dome cap, thin wall, 0.2ml	1000
LBPCT02	PCR Tubes, flat cap, thin wall, 0.2ml	1000
LBPCT05	PCR Tubes, flat cap, thin wall, 0.5ml	1000
LBPCR08T01	PCR coadunate tube, 8-strip, dome cover	200
LBPCR08T02	PCR coadunate tube, 8-strip, flat cover	200
LBPCR12T01	PCR coadunate tube, 12-strip, flat cover	150

# MS<sup>®</sup> PCR Plate



## Introduction

MS<sup>®</sup> PCR Plates are made of specially formulated high quality polypropylene. Nature-color PCR plates are compatible with most thermal cyclers and are ideal for high throughput screening thermo cycler applications. Smooth, thin, uniform well walls ensure accurate thermal transform. Ultrathin walls accelerate heat transfer provided shorter cycles. The PCR Plates have an alphanumeric coding system for easy identification and do fit to all common thermal cyclers. Low-Profile-Plates are recommended in case of small sample volumes, as the dead-room will be reduced between sample and heated lid. Alphanumeric coding in black letters, which are good to view, when loading the plates.

## Feature

- The plate has a working volume of 0.2mL per well.
- These 0.2mL multiwell plates are specifically designed for PCR applications.
- Certified Rnase/Dnase, and pyrogen free to ensure purity

## Application

- The Plate has a working volume of 0.2mL per well
- These 0.2mL multiwell plates are specifically designed for PCR application
- Certified Rnase/Dnase, and hydrogen free to ensure purity

## Order Information

Code	Description	Qty/Pack
LBPCR096N	PCR Plate, 96 wells, 0.2ml, chimney-top, Non-sterilized	200
LBPCR096S	PCR Plate, 96 wells, 0.2ml, chimney-top, sterile	200
LBPCR196N	PCR plate, 96 wells, 0.2ml, with skitr, Non-sterilized	200
LBPCR196S	PCR Plate, 96 wells, 0.2ml, with skitr, sterile	200



# MS<sup>®</sup> Micro Centrifuge Tubes



## Introduction

MS<sup>®</sup> Centrifuge Tubes are available in polypropylene with flat, pierceable, frosted caps that won't open when the tubes are boiled or autoclaved. Cylindrical plastic containers with conical bottoms, typically with an integral snap cap. They are used in molecular biology and biochemistry to store and centrifuge small amounts of liquid. As they are inexpensive and considered disposable, they are used by many chemists and biologists as convenient sample vials in lieu of glass vials. Made of polypropylene, they can be used in very low temperature (-80 °C to liquid nitrogen temperatures) or with organic solvents such as chloroform. They come in many different sizes, generally ranging from 250 µL to 2.0 mL. The most common size is 1.5 mL. Disinfection is possible (1 atm, 120 °C, 20 minutes), but due to their low cost and the difficulty in cleaning the plastic surface, they are usually discarded after each use.

## Feature

- Available with three volume of 0.5, 1.5 and 2.0mL.
- Engraved graduation ensure accuracy.
- Autoclavable at 121°C and freezable to -80°C.
- Gamma radiation sterilized.
- Flat and frosted caps surface together with smooth and frosted body surface provide easy and legible mark.

## Order Information

Art.No.	Description	Pack (Pcs/Bag)	Pack (Pcs/Case)
LBCT002N	Micro Centrifuge Tubes, 0.2ml, Conical, Graduated, Non-sterilized	1000	80000
LBCT005N	Micro Centrifuge Tubes, 0.5ml, Conical, Graduated, Non-sterilized	1000	30000
LBCT015N	Micro Centrifuge Tubes, 1.5ml, Conical, Graduated, Non-sterilized	500	10000
LBCT015S	Micro Centrifuge Tubes, 1.5ml, Conical, Graduated, Sterile	500	12000
LBCT020N	Micro Centrifuge Tubes, 2.0ml, Conical, Graduated, Non-sterilized	500	10000
LBCT020S	Micro Centrifuge Tubes, 2.0ml, Conical, Graduated, Sterile	500	10000

# MS<sup>®</sup> Centrifuge Tubes



## Introduction

MS<sup>®</sup> Centrifuge Tubes are made of high-clarity polypropylene with feature black printed graduations and a large white marking spot. Smooth, flat surface polyethylene caps for conical bottom tubes and plug seal caps for self-standing tubes are included. Special selected high-clarity polypropylene assures the manufacture good transparency, chemical resistibility and obdurability. And the dual quality security system of ISO 9001:2000 quality management and 100,000 grade clean-room cleanness system insures the manufacture good quality. Furthermore, the universal design make the tubes are suitable for most brand of centrifuge. Additionally, either gamma irradiation sterilized or non-sterilized products are available in order to satisfy the different research requirements and enhance the practicability. All the features allow them be widely used in chemical and life science research.

## Feature

- Available with two volume of 15 and 50mL.
- Conical bottom and self-standing bottom.
- Longer length screw caps with sealing ring prevent any leak and offer one-hand convenience
- Easy-to-read black graduations are accurate to  $\pm 2\%$ , 1mL increments (15mL) or 2.5mL increments (50mL)
- Max.RCF:9,400 for conical bottom tubes; 6,000 for self-standing tubes.
- With a large unerasable frosting white printed writing area provide easy and legible mark
- Both the graduations and writing areas are chloroform-resistant
- Autoclavable at 121 °C and freezable to -80 °C.
- Gamma radiation sterilized.
- Leak-proof

## Order Information

Art.No.	Description	Pack (Pcs/Bag)	Pack (Pcs/Case)
LBCT050T01	Centrifuge Tubes, 5.0ml, Round bottom with cover, Non-sterilized	300	4500
LBCT050T02	Centrifuge Tubes, 5.0ml, Round bottom with cover, Sterile	300	4500
LBCT070T01	Centrifuge Tubes, 7.0ml, Round bottom with cover, Non-sterilized	300	4500
LBCT070T02	Centrifuge Tubes, 7.0ml, Round bottom with cover, Sterile	300	4500

Art.No.	Description	Pack (Pcs/Bag)	Pack (Pcs/Case)
LBCT100T01	Centrifuge Tubes, 10.0ml, Round bottom with cover, Non-sterilized	200	4000
LBCT100T02	Centrifuge Tubes, 10.0ml, Round bottom with cover, Sterile	200	4000
LBCT100T03	Screw Mouth Centrifuge Tubes, 10.0ml, Conical, Graduated, Sterile	100	2000
LBCT100T04	Screw Mouth Centrifuge Tubes, 10.0ml, Round bottom, Sterile	100	2000
LBCT150S	Centrifuge Tubes, 15.0ml, Conical, Graduated, Sterile	100	2000
LBCT150N	Centrifuge Tubes, 15.0ml, Conical, Graduated, Non-sterilized	100	1500
LBCT500N	Centrifuge Tubes, 50.0ml, Conical, Graduated, Non-sterilized	50	1000
LBCT500S	Centrifuge Tubes, 50.0ml, Conical, Graduated, Sterile	50	600
LBCT501N	Centrifuge Tubes, 50.0ml, Self-standing, Graduated, Non-sterile	50	1000
LBCT501S	Centrifuge Tubes, 50.0ml, Self-standing, Graduated, Sterile	50	800

## Molecular Biology & Microbiology

### BIO-PURE® Freeze tube



### Introduction

BIO-PURE® Freeze Tubes are manufactured from polypropylene to withstand temperatures to -80 °C. Tubes can be color-coded with inserts. All self-standing vials have a special base design allowing them to be locked into the cryogenic rack and tray, for single-handed manipulation.

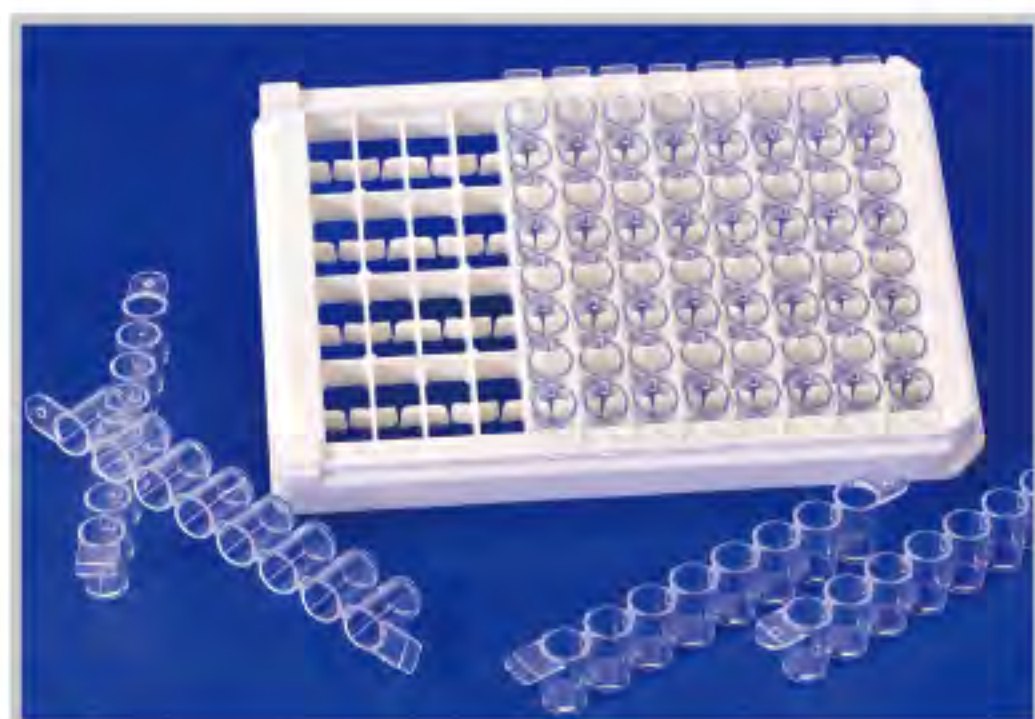
### Feature

- Available with 9 volume of 0.5, 1.5, 1.8, 2, 4, 5, 7, 10 and 12m L
- Screw cap with plug seal for one-handed operation
- Self standing
- Easy-to-read graduations are accurate to ±2%
- Gamma irradiation sterilized

### Order Information

Art.No.	Description	Pack (Pcs/Bag)	Pack (Pcs/Case)
LBFT15S	Freeze Tube, 1.5ml, Self standing, Sterile	500	12000
LBFT18S	Freeze Tube, 1.8ml, Self standing, Sterile	500	11000
LBFT50S	Freeze Tube, 5.0ml, Self standing, Sterile	200	4400
LBFT70T01	Freeze Tube, 7ml, Silicon ring, Ungraduated, Sterile	150	3000
LBFT100T01	Freeze Tube, 10ml, Silicon ring, Self standing, Sterile	150	3000
LBFT15S	Freeze Tube, 1.5ml, Self standing, Sterile	500	12000
LBFT18S	Freeze Tube, 1.8ml, Self standing, Sterile	500	11000

# MS<sup>®</sup> ELISA Plate



## Introduction

ELISA Plates are optimal products for ELISA and provide reliable performance in binding assays when consistent coating of wells is required. ELISA Plates with 3 protein binding capability well surface are available. The absolutely flat floor area, free from inclusions, guarantees the highest level of transparency. The advantages of the ELISA are similar to other antibody-labeled reactions which include specificity, sensitivity, inexpensiveness, and safety. Since the enzyme label is the critical portion of ELISA, its selection is very important. The enzyme selected should be stable under the conditions used for storage, cross-linking, and the assay. The most effective enzymes will have a high specific activity and will be inexpensive.

## Feature

- Two different bottom styles, fixed flat bottom and detachable flat bottom
- 8 or 12 wells strip and 48 or 96 well detachable frames are supplied in order to satisfy different sample quantity and economize cost
- Well surface is uniform, smooth and free from striation to eliminate error
- 100% virgin high quality crystal-grade polystyrene for optical clarity and consistency
- CV of transmittance is less than 5.00%
- Provides reliable performance in binding assays when consistent coating of wells is required
- Sterilized by gamma irradiation

## Order Information

Art.No.	Description	Qty/Pack
LBEP248	ELISA Plate, 48 Wells, Detachable, aminated binding	20/400
LBEP048	ELISA Plate, 48 Wells, Detachable, high binding	20/400
LBEP148	ELISA Plate, 48 Wells, Detachable, medium binding	20/400
LBEP096	ELISA Plate, 96 Wells, fixed flat bottom, high binding	10/200
LBEP196	ELISA Plate, 96 Wells, Detachable, high binding	10/200
LBEP296	ELISA Plate, 96 Wells, fixed flat bottom, medium binding	10/200
LBEP396	ELISA Plate, 96 Wells, Detachable, medium binding	10/200
LBEP496	ELISA Plate, 96 Wells, fixed flat bottom, aminated binding	10/200
LBEP596	ELISA Plate, 96 Wells, Detachable, aminated binding	10/200

# MS<sup>®</sup> Luminescence Plate



## Introduction

MS<sup>®</sup> Luminescence test measurements are conducted using an assay module having integrated electrodes with a reader apparatus adapted to receive assay modules, induce luminescence, preferably electrode induced luminescence, in the wells or assay regions of the assay modules and measure the induced luminescence. MS<sup>®</sup> offers the luminescence test plate allows the user very easily to check his microplate luminometer in terms of reproducibility, changes of sensitivity and linearity as well as the dynamic range. In general, the Test Plate can be used to study short and long term stability of the detection system.

## Feature

- Minimal well-to-well cross talk and low background
- Ideal for a wide range of fluorescent/luminescent assays
- Fluorescent ELISA's (superior sensitivity)
- Total DNA & total protein assays
- Cytochrome P-450 assays
- DNA hybridization assays
- Protease/peptidase assays, and more

## Order Information

Code	Description	Qty/Pack
LBLTP048W	Luminescence Test Plate, 48 wells, 12 wells strip, white	20/400
LBLTP048B	Luminescence Test Plate, 48 wells, 12 wells strip, black	20/400
LBLTP096B	Luminescence Test Plate, 96 wells, 12 wells strip, black	10/200
LBLTP196B	Luminescence Test Plate, 96 wells, 8 wells strip, black	10/200
LBLTP096W	Luminescence Test Plate, 96 wells, 12 wells strip, white	10/200
LBLTP196W	Luminescence Test Plate, 96 wells, 8 wells strip, white	10/200

# MS<sup>®</sup> Deep-well Multiwell Plate



## Introduction

Deep-well Multiwell Plates are made of specially formulated high quality polypropylene. These square-well plates work as plates or reservoir. Deep well plates with round wells provided 1.6mL nominal capacity per well. Sealing film well plates provided 2.2mL normal capacity per well and are ideal for large volume applications such as receptor binding assays. The cap mats are engineered to tightly seal a deep well plate and minimize moisture exchange. They are alphanumerically labeled to make sample identification easy.

## Feature

- Available with 1.6 and 2.2mL well volumes
- Resistant to a wide variety of chemicals
- Compatible with most robotic samplers and automated liquid handling systems
- Wells are labeled in a standard alpha-numeric pattern to simplify sample identification
- Designed notched corners to facilitate orientation
- Be stackable for easy storage
- Can be used with flexible mat covers or to reduce sample evaporation and contamination
- Adhesive sealing films are also available

## Order Information

Code	Description	Qty/Pack
LBDMP096N	Deep-well Multiwell Plates, 96wells, 1.6ml, U type, Non-sterilized	10/200
LBDMP096S	Deep-well Multiwell Plates, 96wells, 1.6ml, U type, sterile	1/200
LBDMP196N	Deep-well Multiwell Plates, 96wells, 2.2ml, U type, Non-sterilized	10/160
LBDMP196S	Deep-well Multiwell Plates, 96wells, 2.2ml, U type, sterile	1/160

# Cell/Tissue Culture



## Cell/Tissue Culture

# MS<sup>®</sup> Tissue/Cell Culture Dish



## Introduction

MS<sup>®</sup> Cell Culture Dishes are manufactured from (USP class VI) virgin polystyrene to eliminate all materials and to ensure cell integrity. These dishes are ideal for cell culture and cell harvesting; available in four dish sizes with or without plasma treated surfaces. Plasma treating causes the otherwise very hydrophobic polystyrene surface, to become negatively charged and hydrophilic; allowing cells to attach and multiply.

Growth surface areas are flat and free from striation to maximize usable growth area and transparency. The rim on upper side of the lid mates with the bottom of dishes for easy and secure stacking; spacers on the underside allow aerobic gas exchange while providing sample protection. Dishes are sterilized by gamma irradiation and are certified non-Pyrogenic.

## Feature

- Uniform wall thickness ensures distortion-free well bottoms
- Either surface-treated or non-treated
- Flat bottom Uniform wall thickness ensures distortion-free bottom
- Dish surface is smooth and free from striation to maximize usable area for growth
- The rim on upper side of the lid mates with the dish brim for easy and secure stack
- Lids with several little chimbs to shape vents are available for very effective gas exchange
- Certified non-pyrogenic
- Gamma radiation sterilization

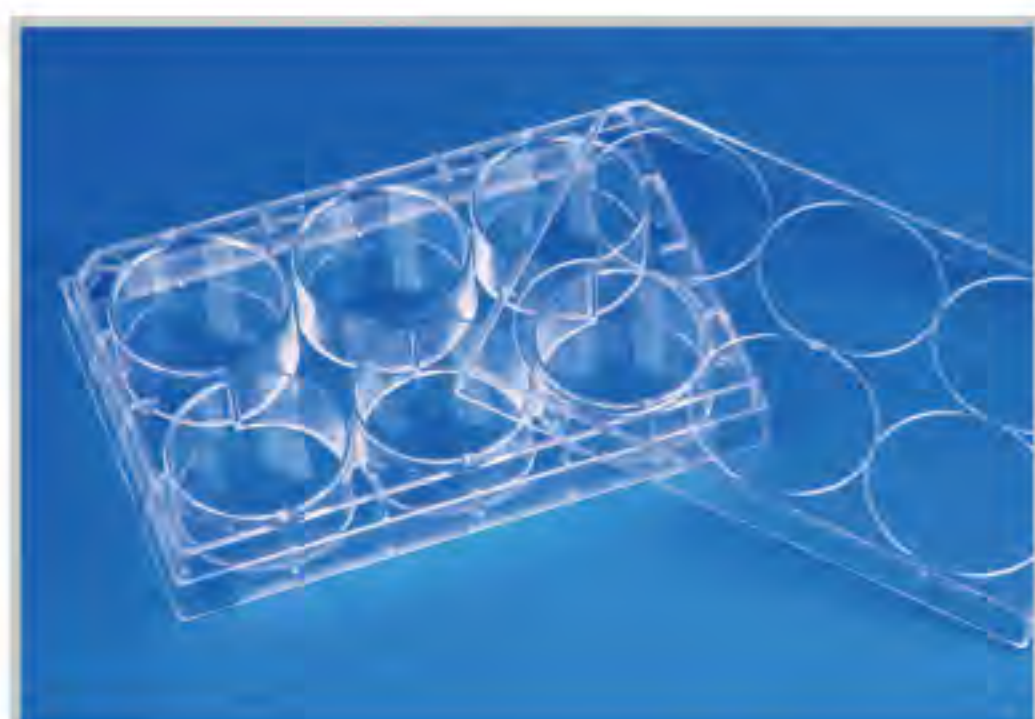
## Order information

Code	Description	Qty/Pack
LBCD035N	Tissue Culture Dish, 3.5cm, Non Treated, sterile; $\gamma$ -irradiated	20/500
LBCD070N	Tissue Culture Dish, 7.0cm, Non Treated, sterile; $\gamma$ -irradiated	20/500
LBCD090N	Tissue Culture Dish, 9.0cm, Non Treated, sterile; $\gamma$ -irradiated	20/300
LBCD150N	Tissue Culture Dish, 15.0cm, Non Treated, sterile; $\gamma$ -irradiated	5/100
LBCD035S	Tissue Culture Dish, 3.5cm, Surface Treated, sterile; $\gamma$ -irradiated	20/500
LBCD070S	Tissue Culture Dish, 7.0cm, Surface Treated, sterile; $\gamma$ -irradiated	20/500
LBCD090S	Tissue Culture Dish, 9.0cm, Surface Treated, sterile; $\gamma$ -irradiated	20/300
LBCD150S	Tissue Culture Dish, 15.0cm, Surface Treated, sterile; $\gamma$ -irradiated	5/100



## Cell/Tissue Culture

# MS<sup>®</sup> Tissue/Cell Culture plate



## Introduction

MS<sup>®</sup> Culture Plates are ideal for cell culture and cell harvesting; available with five different growth surface areas either surface-treated or non-treated. Growth surface areas are flat and free from striation to maximize usable growth area and transparency. Manufactured of (USP class VI) virgin polystyrene to eliminate all extraneous materials and ensure the integrity of your cells. The surface of treated plates is modified with plasma causing the otherwise very hydrophobic polystyrene surface, to become negatively charged and hydrophilic, allowing cells to attach and multiply. Raised rims on wells reduce the risks of cross-contamination and nestle into rings on the lid to reduce evaporation. One direction lid has venting system that assists in controlling gaseous exchange. A rim on the top of the lid is designed for secure stacking. All plates are sterilized by gamma irradiation and individually packaged in paper/plastic peel pouches; non-pyrogenic.

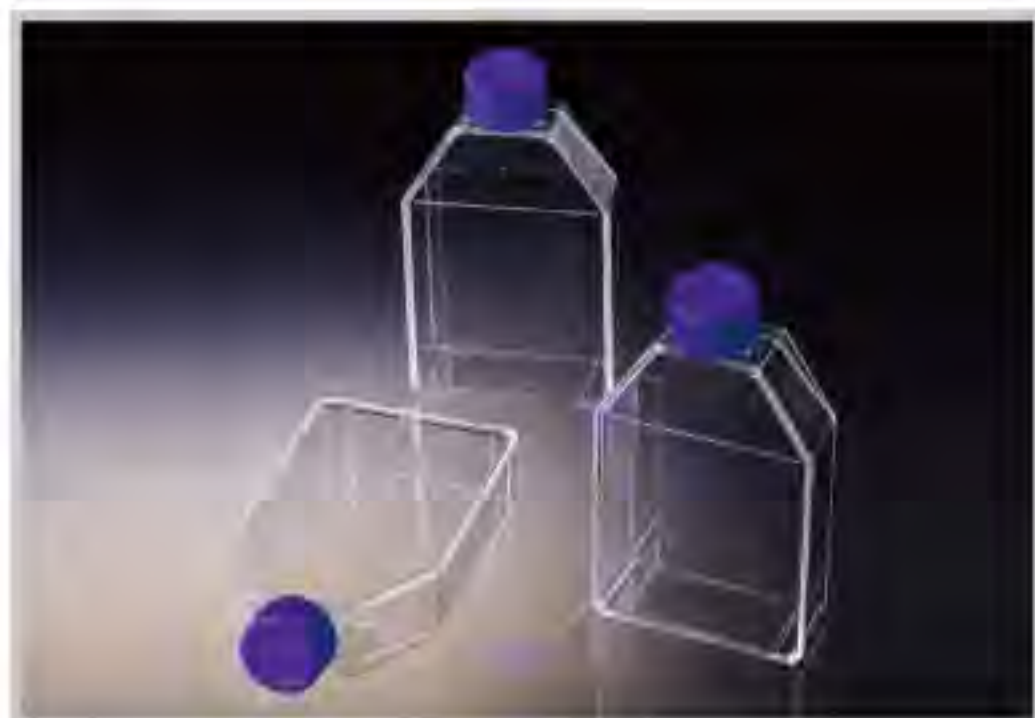
## Feature

- Uniform wall thickness ensures distortion-free well bottom.
- Each well is labeled with alphanumeric marking.
- Available DNase/RNase free.
- Non-toxic.
- Gamma radiation sterilization.

## Ordering information

Item#	Description	Pcs per box
LBCP06N	Tissue Culture Plate, 6 Wells, Non Treated, sterile; γ-irradiated	1/50
LBCP12N	Tissue Culture Plate, 12 Wells, Non Treated, sterile; γ-irradiated	1/50
LBCP24N	Tissue Culture Plate, 24 Wells, Non Treated, sterile; γ-irradiated	1/50
LBCP48N	Tissue Culture Plate, 48 Wells, Non Treated, sterile; γ-irradiated	1/50
LBCP96N	Tissue Culture Plate, 96 Wells, Non Treated, sterile; γ-irradiated	1/100
LBCP06S	Tissue Culture Plate, 6 Wells, Surface Treated, sterile, Individually packed in plastic blister pack	1/50
LBCP12S	Tissue Culture Plate, 12 Wells, Surface Treated, sterile, Individually packed in plastic blister pack	1/50
LBCP24S	Tissue Culture Plate, 24 Wells, Surface Treated, sterile, Individually packed in plastic blister pack	1/50
LBCP48S	Tissue Culture Plate, 48 Wells, Surface Treated, sterile; γ-irradiated	1/50
LBCP96S	Tissue Culture Plate. 96 Wells. Surface Treated. sterile. Individually packed in plastic blister pack	1/100

# MS<sup>®</sup> Tissue/Cell Culture Flask



## Introduction

MS<sup>®</sup> Culture Flasks are perfect manufacture for cell growth and cell yields aim on little and medium input volume. MS<sup>®</sup> offers the selection of 4 different growth areas of 25, 75 and 150 cm<sup>2</sup> which are easy to open packaging, variety of flasks and assortment of caps.

Two different cap styles can be used in both open and closed systems, Plug Sealing Caps: Standard polyethylene caps can be used in closed systems, providing a liquid and gas sheer seal. But if you simply unscrew the cap one quarter of a turn, this cap can also be used in open system; Vent Caps: Vented polyethylene caps contain a 0.22µm hydrophobic filter to allow gas exchange and minimize risk of cross-contamination.

## Features

- Certified non-phylogenetic, being DNA and RNA free
- Sterilized by gamma irradiation
- Full neck support provides horizontal stability-reducing contamination risk
- Design permits access to the entire growth surface-improving cell recovery
- Pull-strip packaging enables easy opening
- Engraved graduation and marking area on both sides
- TC surface treated increases surface wettability for more even and consistent cell attachment.

Plug seal caps are designed for use in closed systems, providing a liquid-and gas-tight seal. When loosened, this cap can also be used in open systems.

Vent caps contain a 0.22 µm pore, hydrophobic PTFE membrane sealed to the cap. This offers protection - as with her hydrophobic characteristics it repels any fluid - with optimal gas exchange at the same time.

## Order Information

Code	Description	Pcs/ Bag	Bag/ Case	Qty
LBCF0025N	Tissue Culture Flask, 25cm <sup>2</sup> , Non Treated, Plug seal cap, sterile; γ-irradiated	10	20	200
LBCF1025N	Tissue Culture Flask, 25cm <sup>2</sup> , Non Treated, Vented, sterile; γ-irradiated	10	20	200
LBCF0075N	Tissue Culture Flask, 75cm <sup>2</sup> , Non Treated, Plug seal cap, sterile; γ-irradiated	10	10	100
LBCF1075N	Tissue Culture Flask, 75cm <sup>2</sup> , Non Treated, Vented, sterile; γ-irradiated	10	10	100

## Cell/Tissue Culture

# MS<sup>®</sup> Tissue/Cell Culture Flask

Code	Description	Pcs/ Bag	Bag/ Case	Qty
LBCF0150N	Tissue Culture Flask, 150cm <sup>2</sup> , Non Treated, Plug seal cap, sterile; γ-irradiated	5	8	40
LBCF1150N	Tissue Culture Flask, 150cm <sup>2</sup> , Non Treated, Vented, sterile; γ-irradiated	5	8	40
LBCF0025S	Tissue Culture Flask, 25cm <sup>2</sup> , TC Treated, Plug seal cap, sterile; γ-irradiated	10	20	200
LBCF1025S	Tissue Culture Flask, 25cm <sup>2</sup> TC Treated, Vent cap, sterile; γ-irradiated	10	20	200
LBCF0075S	Tissue Culture Flask, 75cm <sup>2</sup> , TC Treated, Plug seal cap, sterile; γ-irradiated	10	10	100
LBCF1075S	Tissue Culture Flask, 75cm <sup>2</sup> , TC Treated, Vent cap, sterile; γ-irradiated	10	10	100
LBCF0150S	Tissue Culture Flask, 150cm <sup>2</sup> , TC Treated, Plug seal cap, sterile; γ-irradiated	5	8	40
LBCF1150S	Tissue Culture Flask, 150cm <sup>2</sup> , TC Treated, Vent cap, sterile; γ-irradiated	5	8	40

## Treated Surface

MS<sup>®</sup> polystyrene cell culture vessels are surface modified using either corona discharge (flasks, dishes and plates) or gas-plasma (roller bottles and culture tubes). These processes generate highly energetic oxygen ions which graft onto the surface polystyrene chains (Figure 1.) so that the surface becomes hydrophilic and negatively charged when medium is added. The more oxygen that is incorporated on to the surface the more hydrophilic it becomes and the better it is for cell attachment and spreading.

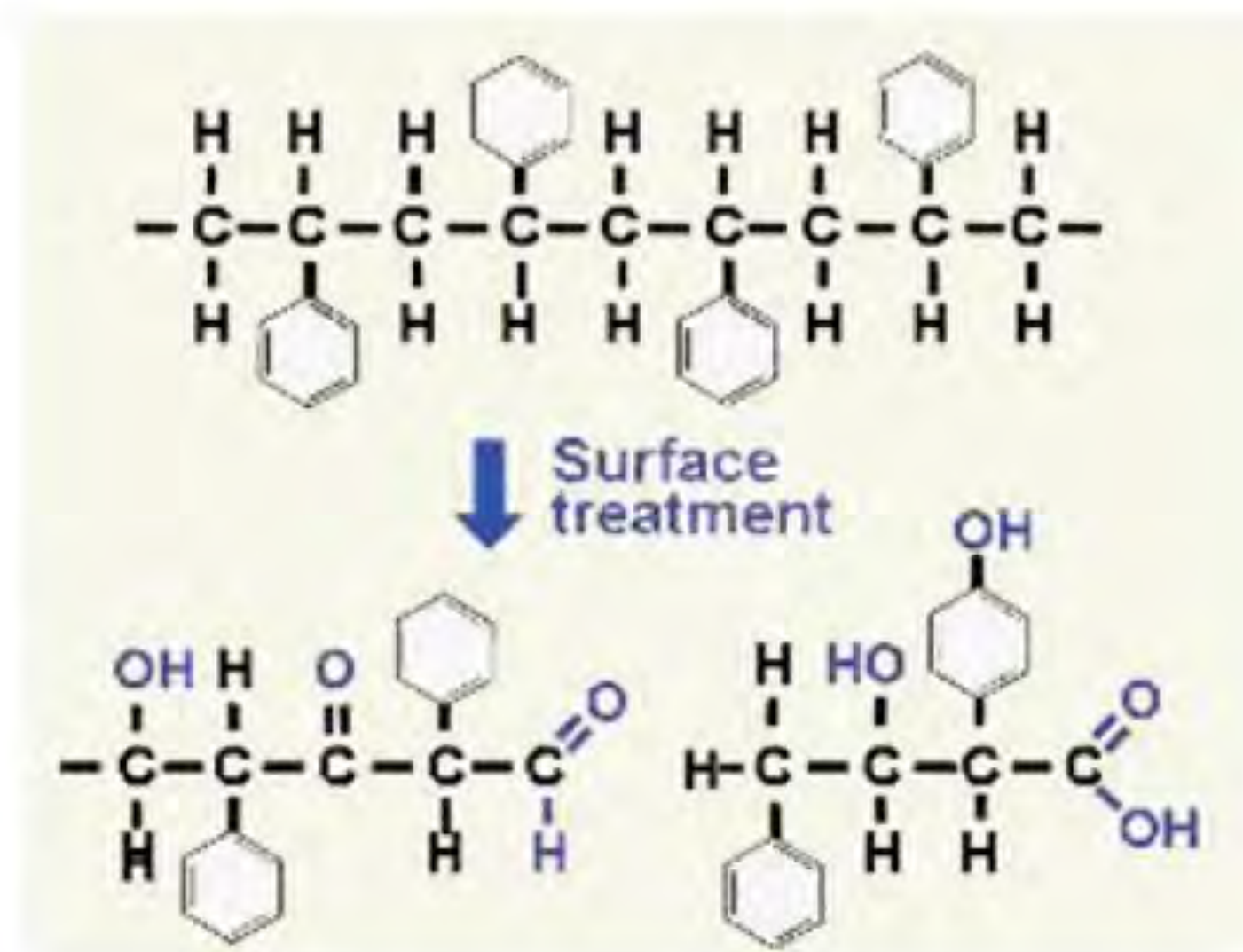


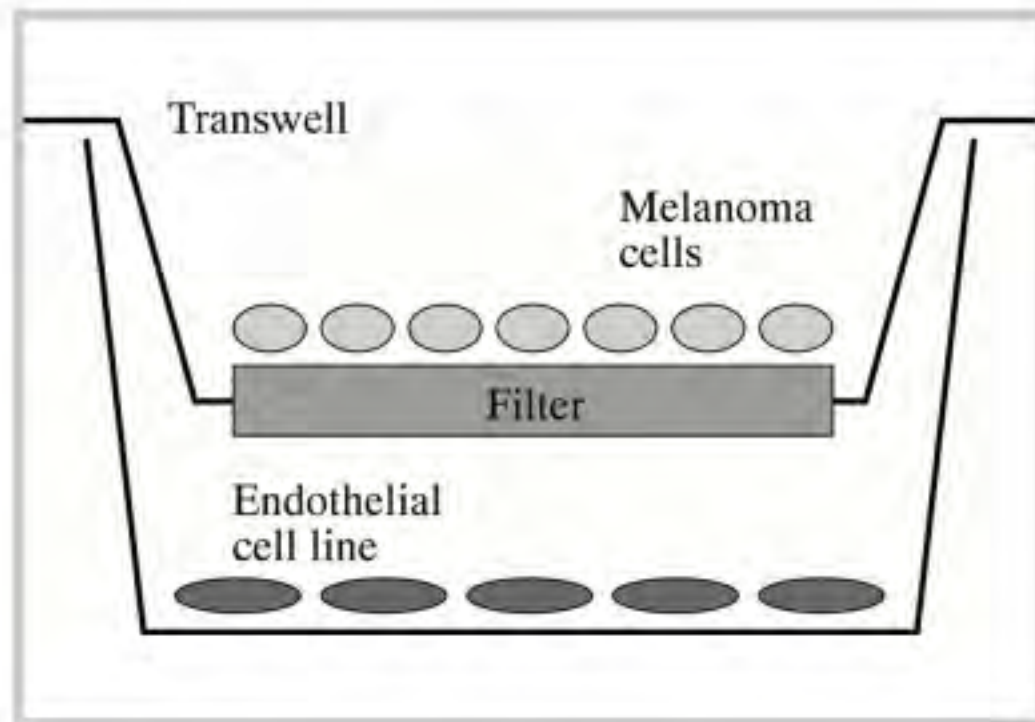
Figure 1. MS's treatment modifies the surface by adding oxygen containing chemical groups or opening the benzene ring (not shown).

# Co-Culture Plate(Insert well)



## Description

Both membrane types are transparent when wet and are suitable for phase contrast and Optic Systems, Insert well is polystyrene fitted with a PC membrane bottom for use in 6 and 24-well plates. Available in two mesh sizes and two diameters, provide ultimate flexibility in retaining fragile tissues during processing and staining. 6well insertwell of 24mm diameter and 24well of 12mm diameter.



## Applications

- Cell culture including transport studies, toxicity tests
- Chemotaxis studies and electron microscopy

Code	Description	Unit	Qty/Cs
LBCCP00406S	6well Plate with 24mm diameter, PC membrane,Pore size:0.4µm	plate	1/5
LBCCP30006S	6well Plate with 24mm diameter, PC membrane,Pore size:3.0µm	plate	1/5
LBCCP00412S	24well Plate with 12mm diameter, PC membrane,Pore size:0.4µm	plate	1/5
LBCCP30012S	24well Plate with 12mm diameter, PC membrane,Pore size:3.0µm	plate	1/5
LBCIW00424S	24mm Insert well, PC membrane, Pore size:0.4µm	well	1/30
LBCIW30024S	24mm Insert well, PC membrane, Pore size:3.0µm	well	1/30
LBCIW00412S	12mm Insert well, PC membrane, Pore size:0.4µm	well	1/60
LBCIW30012S	12mm Insert well, PC membrane, Pore size:3.0µm	well	1/60

# MS<sup>®</sup> Nylon Mesh Filter



MS offers a broad range of macro filtration mesh that consist of individual strands woven into a mesh screen, characterized by precise mesh openings, percent open area and mesh thickness.

Nylon Mesh Filters with mesh openings ranging from 10 to 500  $\mu\text{m}$  are available.

MS Mesh can be in accordance with the specifications cut into any shape you need, there are many cutting ways such as laser cutting, cold stamping, ultrasonic stamping. MS develop many sophisticated manufacturing equipment, can be customized out various components, fully meet the most stringent requirements of our customers.

## Features

- Hydrophilic
- Compatible with a broad range of solvents, pH resistance: pH 3 - 10
- High strength/durability, strong filtering ability
- Accurate nets pore size and filter geometry size
- Size and thickness of the smoothness are stable
- Stable filter performance
- Sterilization: Gamma, EO compatible or 75% ethanol
- Operating temperature: 75 °C max.
- Customized diameter or size

## Applications

- Drinking Water Purification
- Suspended Soils
- Coal Dust Analysis
- Serum Clarification
- Immunological & Diagnostic Assays
- Collection of algae and cells
- Particle analysis and large particulate filtration
- Pre-filtration for FACS
- Colony Transfer
- Cellular & Bacterial Analysis

Cell/Tissue Culture

## MS<sup>®</sup> Nylon Mesh Filter

### Specifications

Material	Pore Size (µm)	Thickness (µm)	Open Area (%)	Millipore's Filter Code
Nylon Mesh	10	45	4	NY10
Nylon Mesh	11	65	6	NY11
Nylon Mesh	20	55	14	NY20
Nylon Mesh	30	65	17	NY30
Nylon Mesh	41	50	31	NY41
Nylon Mesh	60	50	41	NY60
Nylon Mesh	80	75	41	NY80
Nylon Mesh	100	80	44	NY1H
Nylon Mesh	120	80	49	NY2H
Nylon Mesh	140	120	43	NY4H
Nylon Mesh	160	100	53	NY6H
Nylon Mesh	180	135	47	NY8H

### Order Information

Diameter	25mm	47mm	90mm	30cm×3m
<b>Pore Size</b>				
10µm	MENY025010	MENY047010	MENY090010	MENY303010
11µm	MENY025011	MENY047011	MENY090011	MENY303011
20µm	MENY025020	MENY047020	MENY090020	MENY303020
30µm	MENY025030	MENY047030	MENY090030	MENY303030
41µm	MENY025041	MENY047041	MENY090041	MENY303041
60µm	MENY025060	MENY047060	MENY090060	MENY303060
80µm	MENY025080	MENY047080	MENY090080	MENY303080
100µm	MENY025100	MENY047100	MENY090100	MENY303100
120µm	MENY025120	MENY047120	MENY090120	MENY303120
140µm	MENY025140	MENY047140	MENY090140	MENY303140
160µm	MENY025160	MENY047160	MENY090160	MENY303160
180µm	MENY025180	MENY047180	MENY090180	MENY303180

\*Customized/OEM diameter and size are available.

## Tissue Culture Tube



### Culture Tubes

- Manufactured from optically clear polystyrene
- Threaded plug seal caps prevent leakage
- Cell culture treated tubes supplied racked
- Untreated tubes provided bulk packed
- Sterilized by gamma radiation
- Certified nonpyrogenic

Code	Treated	Volume (ml)	max.Centri-fugation (g)	Size(mm)	Qty / Pk	Qty / Cs
LBTCT005N	No	5	1200	16 x 125	25	500
LBTCT005S	Yes	5	1200	16 x 125	50	500

## MS® Roller Bottle



The cultivation of cells as mass cultures has become increasingly important over the past few decades and has led to further developments of high-quality products. This includes items such as roller bottles which are used for the production of virus vaccines or recombinant proteins used for therapeutic approaches. MS® roller bottles are made from polystyrene (PS) and feature one-piece seamless construction. The caps are made from high-density polyethylene (HDPE) and are free of heavy metals. Both plastics meet the USP Class VI requirements for plastic containers and closures.

## Features

- Available with 1 bottle volume of 2000 mL
- Smooth surface with a 750 cm<sup>2</sup> growth area for adhesions and huge growth volume for suspension
- Either TC treated or non-treated
- Large knurls on the cap for easy grip, more comfortable manual handling
- 2 different cap styles can be used in both open and closed systems
- Vented caps feature a 0.2µm PTFE hydrophobic membrane for sterile gas exchange
- Each with clear graduate and lot number
- Non-pyrogenic(tolerance limit < 0.06EU/ml)
- Sterile, SAL 10-3
- All bottles are manufactured in FDA compliant and ISO 9002 registered manufacturing facilities

## Applications

MS<sup>®</sup> roller bottles are optimal for large yield of cell growth and multiplication, that can be used in both research and manufacturing, including the growing of mammalian cells for purposes of virus vaccines and recombinant proteins used for therapeutic approaches and other biological products which made with cell products.

## Order Information

Code	Surface Type	Volume(ml)	Growth area(cm <sup>2</sup> )	Cap style	Sterile	Package
LBRB2000N1	General, Non-treated	2000	750	Standard	Y	1/12
LBRB2000N2				Vent		
LBRB2000T1	Standard					
LBRB2000T2	Vent					



# Liquid Handling



## Liquid Handling

# MS<sup>®</sup> Serological Pipettes



MS<sup>®</sup> Serological pipettes are manufactured with exclusively high-grade polystyrene (GPPS) or polyethylene (PE) which are excellent for clear observation and reducing liquid attachment on the pipette surface to assure accurate delivery. The manufacture environment is mastered by both ISO 9001:2000 quality management and 100,000 grade clean-room cleanliness systems. Furthermore, the universal design make the pipettes are suitable for most brand of pipette-aid. Additionally, either gamma irradiation sterilized or non-sterilized products are available in order to meet the different research needs and enhance the practicability. All the features guarantee them can be safely used in cell and tissue culture, bacteriological, and clinical research.

## Feature

- Serological Pipettes are ideal for accurate liquid transfer or mix
- Available with 5 capacity of 1.0, 2.0, 5.0, 10.0 and 25.0mL
- Available in sterilized or non-sterilized
- 1.0, 2.0 and 5.0mL are stretched, while 10.0 and 25.0mL are ultrasonically welded at tip and mouth-piece
- Graduations are calibrated for accurate dispensing to within  $\pm 2\%$
- Color-coded ring for easy identification
- Bidirectional graduations on the pipettes provide added applicability
- Negative graduation allows additional working volume
- All Serological pipettes are supplied with a filter plug
- Strict leakage tested
- Non-pyrogenic

## Application

- Tissue culture
- Bacteriology
- Clinical research

## Liquid Handling

# MS<sup>®</sup> Serological Pipettes

## Specifications

Volume (mL)	1mL	2mL	5mL	10mL	25mL	50mL
Color	Yellow	Green	Blue	Orange	Red	Purple
Material	PS	PS	PS	PS	PS	PS
Volume Graduations(mL)	1/100mL	1/100mL	1/10mL	1/10mL	2/10mL	1/2mL
Length (mm)	277±2.0	277±2.0	341.5±2.0	343±2.0	343±2.0	343±2.0

## Order Information

Code	Description	Qty/Pack
LBSP01S	Serological Pipettes, 1.0ml, Yellow, Graduated, Sterile, single-packed	1/1000/4000
LBSP01N	Serological Pipettes, 1.0ml, Yellow, Graduated, Non-sterilized	1/50/6000
LBSP02S	Serological Pipettes, 2.0ml, Green, Graduated, Sterile, single-packed	1/800/3200
LBSP02N	Serological Pipettes, 2.0ml, 1/100ml, Green, Non-sterilized	1/50/4200
LBSP05S	Serological Pipettes, 5.0ml, Blue, Graduated, Sterile, single-packed	1/300/1800
LBSP05N	Serological Pipettes, 5.0ml, Blue, Graduated, Non-sterilized	1/50/3000
LBSP10S	Serological Pipettes, 10.0ml, Orange, Graduated, Sterile, single-packed	1/200/1200
LBSP10N	Serological Pipettes, 10.0ml, Orange, Graduated, Non-sterilized	1/25/2100
LBSP25S	Serological Pipettes, 25.0ml, Red, Graduated, Sterile, single-packed	1/200/800
LBSP25N	Serological Pipettes, 25.0ml, 2/10ml, Red, Non-sterilized	1/25/1400
LBSP50S	Serological Pipettes, 50.0ml, Black, Graduated, Sterile, single-packed	1/100/600
LBSP50N	Serological Pipettes, 50.0ml, Black, Graduated, Non-Sterile	1/25/1000

## Cross Reference

MS	TPP	HTL	Nunc	Corning	Corning	Greiner	Greiner	Greiner	BD	BD	BD
LBSP01S	94001	41011	159609	4485	4011/4012	604 107	604 181	604 160	357521	357506	356521
LBSP02S	94002	41021	159617	4486	4021	710 107	710 180	710 160	357508	357507	356507
LBSP05S	94005	41031	159625	4487	4051	606 107	606 180	606 160	357543	356543	357529
LBSP10S	94010	41041	159633	4488	4101	607 107	607 180	607 160	357530	357551	356551
LBSP25S	94024	41051	159641	4489	4251	760 107	760 180	760 160	356525	357525	357515
LBSP50S	None	41061	159668	4490	4501	None	768 180	768 160	None	357550	356550

## BIO-PURE® Aspirating Pipettes



### Introduction

Disposable Polystyrene Aspirating Pipettes are suitable for most brand of pipette-aid. It can be used for all vacuum-aspirating procedures, Besides, Individually packaged in thermoformed paper/plastic wrap to ensure contamination-resistant presentation.

### Feature

- No graduated pipettes
- Can be used for all vacuum-aspirating procedures
- No pyrogenic
- Colorless, transparent
- Gamma radiation sterilization

### Application

- Tissue culture
- Bacteriology
- Tissue culture additive filtration

## Order Information

Code	Description	Qty/Pack
LBAP01N	Aspirating Pipettes, 1.0ml, Ungraduated, non-sterile	800
LBAP01S	Aspirating Pipettes, 1.0ml, Ungraduated, sterile	800
LBAP02N	Aspirating Pipettes, 2.0ml, Ungraduated, non-sterile	600
LBAP02S	Aspirating Pipettes, 2.0ml, Ungraduated, sterile	600
LBAP05N	Aspirating Pipettes, 5.0ml, Ungraduated, non-sterile	400
LBAP05S	Aspirating Pipettes, 5.0ml, Ungraduated, sterile	400
LBAP10N	Aspirating Pipettes, 10.0ml, Ungraduated, non-sterile	400
LBAP10S	Aspirating Pipettes, 10.0ml, Ungraduated, sterile	400
LBAP25N	Aspirating Pipettes, 25.0ml, Ungraduated, non-sterile	200
LBAP25S	Aspirating Pipettes, 25.0ml, Ungraduated, sterile	200

## BIO-PURE® Pipette Tips



### Introduction

Disposable Pipette Tips are preferred accessories for most brand micropipettor. And are ideal for applications where avoidance of cross contamination is critical, such as DNA amplification and radioisotope handling.

### Feature

- Available with 4 transfer volume of 0.1-10, 10-100, 10-200 and 100-1000µL.
- Reduces loss of cells and proteins that bind to glass
- Gamma radiation sterilization

### Order Information

Art.No.	Description	Pack (Pcs/Bag)	Pack (Pcs/Case)
LBMT1001S	Pipette Micro Tips, 0.1~10µL,sterile, put in Pipette Micro Tip Box	96	9600
LBMT1020S	Pipette Micro Tips, 10~200µL,sterile, Pipette Micro Tip Box	96	9600
LBMT1100S	Pipette Micro Tips, 100~1000µL,Sterile, Pipette Micro Tip Box	60	6000
LBMT0001S	Pipette Micro Tips, 0.1~10µL, with filter, sterile, put in Pipette Micro Tip Box	96	9600
LBMT0020S	Pipette Micro Tips, 10~200µL,with filter, sterile, Pipette Micro Tip Box	96	9600
LBMT0100S	Pipette Micro Tips, 100~1000µL, with filter, Sterile, Pipette Micro Tip Box	60	6000
LBMT001N	Pipette Micro Tips, 0.1~10µL, Natural color, non-sterile	1000	100000
LBMT020N	Pipette Micro Tips, 10~200µL, yellow, non-sterile	1000	50000
LBMT100N	Pipette Micro Tips, 100~1000µL, Blue, Non-sterilized	500	15000
LBMT101N	Pipette Micro Tips, 0.1~10µL, Natural with filter, non-sterile	1000	10000
LBMT110N	Pipette Micro Tips, 10~200µL, yellow with filter, non-sterile	1000	5000
LBMT1000N	Pipette Micro Tips, 100~1000µL, blue with filter, non-sterile	500	2500
LBMT01	Pipette Micro Tips box, 0.1~10µL, 96 vents	1	100
LBMT02	Pipette Micro Tips, 10~100µL, 96 vents	1	100
LBMT03	Pipette Micro Tips, 20~200µL, 96 vents	1	100
LBMT04	Pipette Micro Tips, 100~1000µL, 60 vents	1	100

## BIO-PURE® LBPP Pipette Pasteur/Transfer pipettes



### Introduction

BIO-PURE® Disposable Pipette Pasteur are manufactured with exclusively high-grade polystyrene (GPPS) or polyethylene (PE) which are excellent for clear observation and reducing liquid attachment on the pipet surface to assure accurate delivery. The manufacture environment is mastered by ISO 9000 quality management.

### Feature

- Ideal for sampling and for decanting infectious or toxic liquids.
- Available with 3 capacity of 0.2, 1.0 and 3.0mL
- Safe, convenient use and disposal
- Reduces loss of cells and proteins that bind to glass
- Gamma radiation sterilization
- Long flexible stem can be bent to draw liquid from narrow or small volume tubes into the bulb
- Available with gamma irradiation sterilized or non-sterilized

### Application

- Tissue culture
- Bacteriology

## Order Information

Art.No.	Description	Pack (Pcs/Bag)	Pack (Pcs/Case)
LBPP05N	Pipette Pasteur/Transfer pipettes, 0.5ml, Non-sterilized	2000	20000
LBPP10N	Pipette Pasteur/Transfer pipettes, 1.0ml, Non-sterilized	500	5000
LBPP20N	Pipette Pasteur/Transfer pipettes, 2.0ml, Non-sterilized	500	5000
LBPP30N	Pipette Pasteur/Transfer pipettes, 3.0ml, Non-sterilized	500	5000
LBPP60N	Pipette Pasteur/Transfer pipettes, 6.0ml, Non-sterilized	500	5000
LBPP05S	Pipette Pasteur/Transfer pipettes, 0.5ml, sterile, individually packed	500	10000
LBPP10S	Pipette Pasteur/Transfer pipettes, 1.0ml, sterile, individually packed	250	5000
LBPP20S	Pipette Pasteur/Transfer pipettes, 2.0ml, sterile, individually packed	250	5000
LBPP30S	Pipette Pasteur/Transfer pipettes, 3.0ml, sterile, individually packed	250	5000
LBPP60S	Pipette Pasteur/Transfer pipettes, 6.0ml, sterile, individually packed	200	5000

# MS® Storage Bottles



## Introduction

MS's disposable polystyrene and polycarbonate storage bottles are designed for storing sterile tissue culture media and sera, buffers, biological fluids and other aqueous solutions in convenient, disposable bottles. All plastic storage bottles offer:

- Convenience – sterile, ready to use with no clean up after
- 45mm diameter caps for an air tight seal and help minimize contamination and leaks

## Feature

- Disposable polystyrene bottles for storage of media, buffers and other aqueous solutions
- Two styles:
  - . Low profile, easy grip style has sides that facilitate handling
  - . Traditional style has smooth sides
- Plug seal caps (45 mm) provide an airtight seal and help minimize the risk of contamination.
- Bottles can be used with MS® Vacuum Filter Systems
- Sterile, certified nonpyrogenic

## Order Information

Code	Description	Qty/Pack
LBRB150N	Roller Bottle for Tissue Culture, GPPS, 150ml, Non-sterilized	24
LBRB250N	Roller Bottle for Tissue Culture, GPPS, 250ml, Non-sterilized	24
LBRB500N	Roller Bottle for Tissue Culture, GPPS, 500ml, Non-sterilized	24
LBRB150S	Roller Bottle for Tissue Culture, GPPS, 150ml, Sterile	24
LBRB250S	Roller Bottle for Tissue Culture, GPPS, 250ml, sterile	24
LBRB500S	Roller Bottle for Tissue Culture, GPPS, 500ml, sterile	24