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Faster & Purer & Safer

Copure® Syringe Filters

Copure® syringe filters use high-purity membranes, offering faster flow rates and higher retention rates, effectively removing impurities from samples and ensuring better sample purity. We provide a variety of filters with different pore sizes and materials, including standard syringe filters, double-layer syringe filters with pre-filtration, high-throughput filter plates, sterile syringe filters, and microfiltration membranes, to accommodate various types of samples and experimental conditions.

SYRINGE FILTERS

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Copure® Syringe Filters Introduction

Copure® Syringe Filters Introduction and Applications

Syringe filters are small, single-use filtration device commonly used in laboratory and industrial applications. They consist of a plastic housing and an internal filter membrane and are connected to the sample via a needle or syringe. Syringe filters are highly effective in removing particulates and microorganisms from liquid samples.

Syringe filters have a wide range of applications, mainly including the following aspects:

1. Sample preparation

Syringe filters can remove impurities and particulate matter that interfere with some analytical techniques, such as high-performance liquid chromatography (HPLC), gas chromatography (GC), and mass spectrometry (MS).

2. Solvent filtration

Using the syringe filters in the filtration of reagents, buffers, and media to remove insoluble particles and sediments, ensuring the purity of solutions and the consistency of experimental results.

3. Microbial filtration

In the biotechnology and pharmaceutical industries, syringe filters are used for sterile filtration and removal of bacteria, ensuring product sterility and safety.

4. Environmental Monitoring

In water quality and air quality testing, samples are pre-treated using syringe filters to remove suspended particles for subsequent analysis and testing.

5. Food and Beverage Analysis

In the food and beverage industry, syringe filters are used for sample pretreatment to remove impurities and ensure the accuracy of test results.

6. Cell Culture

In cell culture experiments, syringe filters are used to filter culture media and reagents to prevent contaminants from entering the culture system and protect the healthy growth of cells.

Why Choose Copure® Syringe Filters

01 Various pore sizes and materials

● We provide filter membranes with different pore sizes and materials to meet the needs of various samples and applications, such as nylon, PTFE, PVDF, PES, etc.

02 Stable flow rate

● Ensure a consistent flow rate of the liquid through the filter to avoid variations that could affect filtration efficiency and sample uniformity.

03 High retention rate

● Effectively retain impurities and particles to ensure filtrate purity and the accuracy of experimental results.

04 High-quality materials

● Syringe filters are made with high-quality polypropylene housing to ensure durability and robustness, enabling a longer lifespan and greater reliability during experiments.

05 Strong pressure resistance

● Syringe filters are designed with high-pressure resistance, able to withstand high pressures without deforming or breaking, which maintains their integrity and filtration efficiency even in high-pressure filtration environments.

06 Low dissolution

● High-quality materials and precise manufacturing processes ensure extremely low extractables. It is particularly important to avoid bringing in impurities during the filtration process for sensitive analytical experiments.

07 Double-layer syringe filters with pre-filtration

● Syringe filters incorporate a pre-filtration feature, specifically designed for handling samples with high particle content. This effectively increases filtration efficiency and extends the filter membrane's lifespan, reducing resistance for challenging samples and enabling faster filtration.

08 High-throughput Filter Plates

● Designed for high-throughput sample processing, the High Throughput Filter Plate is available with 24/96 wells to filter 24/96 samples at a time for improved filtration efficiency.

Copure® Syringe Filters Selection Guide

1. Selection of filter membrane material

Membrane Type				
When filtering aqueous solutions, choose aqueous membranes: PES, MCE, CA, etc. PES is recommended for biological samples and tissue culture media.	When filtering pure organic solutions, choose organic-based membranes: NL, PTFE, PVDF, etc.	When filtering a mixture of organic and aqueous solutions, select hydrophilic and organophilic membranes: NL, hydrophilic PTFE, hydrophilic PVDF.	Please consider the pH range at the same time: PES:3-12; CA:4-8; Nylon:3-14; PTFE:1-14; PVDF:2-13.	When the sample has a high particle content, a double-layer membrane with pre-filtration is good option.

2. Selection of filter membrane pore size

Pore size	
The particle size of filters larger than 2 μm, either 0.22 μm or 0.45 μm, can be selected.	The particle size of filters is less than 2 μm, 0.22 μm can be selected.

3. Selection of the diameter size

Diameter size		
4 mm: Suitable for small sample volumes (<1 mL)	13 mm: For medium sample volumes (1-10 mL)	25 mm: Suitable for larger sample volumes (10-100 mL)

4. Selection of chemical compatibility

√ =Compatible ╳ =Limited compatible ● =Not compatible ○ =Not tested

Name	Nylon	PTFE	PVDF	CA	CN	MCE	PES	RC
Acetic , Glacial	●	√	√	╳	╳	●	√	√
Acetic , 25%	●	√	√	●	√	●	○	○
Hydrochloric ,Concentrated	╳	╳	√	╳	╳	╳	√	√
Hydrochloric ,25%	●	√	√	√	√	╳	√	√
Sulfuric, Concentrated	╳	√	●	╳	╳	╳	●	╳
Sulfuric, 25%	╳	√	√	╳	╳	╳	○	○
Nitric, Concentrated	╳	√	●	╳	╳	╳	●	●
Nitric, 25%	╳	√	●	●	●	╳	●	√
Phosphoric,25%	╳	√	√	√	√	╳	○	√
Formic,25%	╳	√	√	●	√	╳	○	○
Trichloroacetic,10%	●	√	√	√	√	√	○	○
Methanol,98%	√	√	√	√	●	●	√	√
Ethanol,98%	√	√	√	√	●	●	√	√
Ethanol,70%	√	√	√	√	●	√	√	√
Isopropanol	√	√	√	√	√	○	√	√
n-Propanol	√	√	√	√	√	√	○	○
Amyl Alcohol	√	√	√	╳	╳	╳	√	√
Butyl Alcohol	√	√	√	√	√	√	√	√
Benzyl Alcohol	√	√	√	●	●	╳	√	√
Ethylene Glycol	√	√	√	√	●	╳	√	√
Propylene Glycol	√	√	√	●	●	○	√	√

Name	PTFE	PVDF	CA	CN	MCE	PES	RC	RC
Glycerol	√	√	√	√	√	√	√	√
Hexane	√	√	√	√	√	√	×	○
Toluene	√	√	√	√	√	√	●	√
Benzene	√	√	√	√	√	√	×	√
Gasoline	√	√	√	√	√	√	√	√
Methylene Chloride	●	√	√	×	●	×	●	√
Chlorobenzene(Mono)	√	√	√	√	√	√	○	○
Chloroform	●	√	√	×	√	×	●	√
Acetone	√	√	×	×	×	×	●	√
Cyclohexanone	√	√	×	×	×	×	●	√
Methyl Ethyl Ketone	√	√	●	●	×	×	○	○
Isopropylacetone	√	√	×	√	●	○	○	○
MIBK	√	√	×	√	×	○	○	○
Ethyl Acetate	√	√	√	×	×	×	×	√
Methyl Acetate	●	√	●	×	×	×	●	√
Amyl Acetate	√	√	√	●	×	×	○	√
Butyl Acetate	√	√	√	●	×	×	○	√
Propyl Acetate	●	×	√	×	×	×	○	○
2-Ethoxyethyl Acetate	●	●	●	●	●	×	○	○
Benzyl Benzoate	√	√	○	√	√	√	○	○
Ethyl Ether	√	√	√	●	●	×	√	√
Dioxane	√	√	●	×	×	×	○	×
Tetrahydrofuran(THF)	√	√	●	×	×	×	●	×
DMSO	●	√	√	×	×	×	○	○
Dimethyl Formamide(DMF)	√	√	×	×	×	×	●	×
Diethyl Acetamide	√	√	√	×	×	×	○	○
Triethanolamine	√	√	√	√	√	√	○	○
Aniline	●	√	√	×	●	○	●	√
Pyridine	√	×	●	×	×	×	●	√
Acetonitrile	√	√	√	×	×	×	●	√
Phenol Aqueous,10%	×	√	●	×	●	√	●	√
Formaldehyde Solution,30%	√	√	√	●	√	○	√	×
Hydrogen Peroxide,30%	×	√	√	√	√	√	○	○
Silicone Oil	√	√	√	√	√	√	○	○

Copure® Syringe Filters Operating Steps

01 Pump out air

Before drawing up the sample, draw approximately 1 mL of air into the syringe first. This helps minimize the liquid retention.

02 Absorb the sample

Use the connected syringe to draw up the sample to be filtered. Considering the sample volume and the filter capacity, avoid over-drawing to prevent filter clogging.

03 Filter samples

Exhaust: Gently push the syringe vertically upwards to expel the air in the filter and the syringe until the liquid appears at the outlet of the syringe filter.
Filtration: Align the outlet of the filter with the collection container, then slowly and evenly push the plunger of the syringe to make the sample pass through the filter. Avoid pushing too hard to prevent the filter from being damaged or the sample from leaking.

04 Collect the filtrate

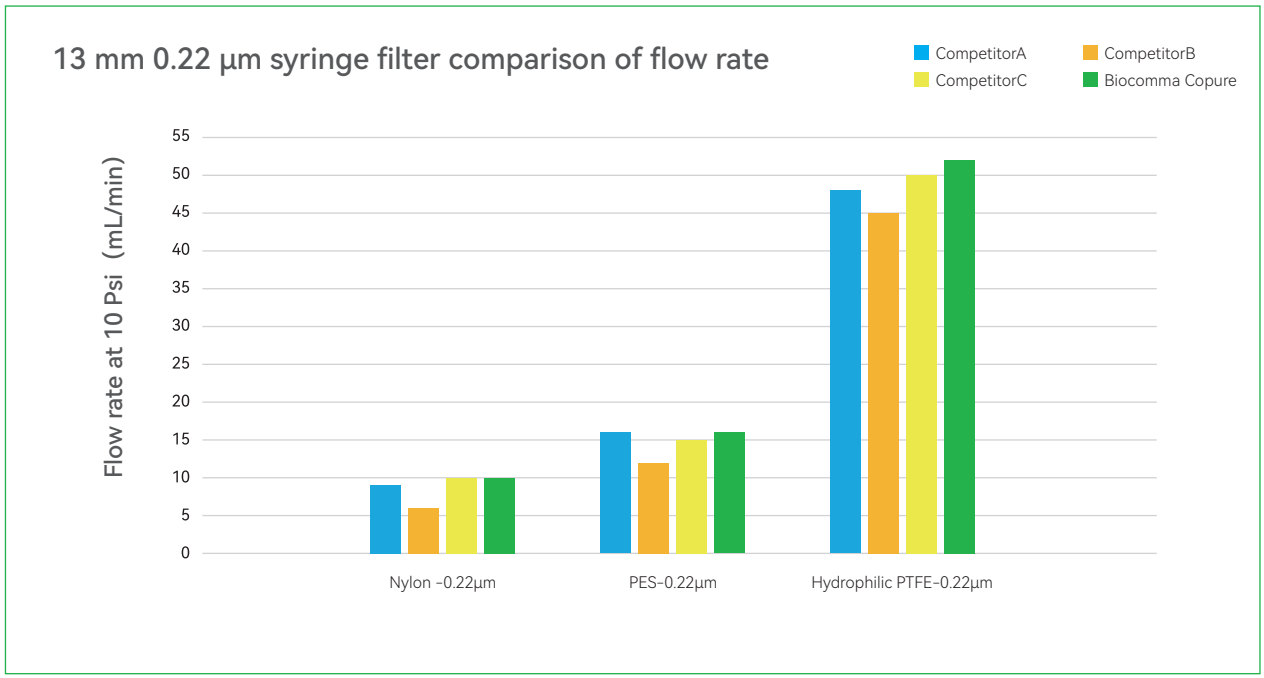
Collect clean filtrate: Collect the filtered sample directly into a clean collection bottle or test tube to avoid secondary contamination.
Confirm the completion of filtration: Make sure that all the samples have flowed out through the filter with no residue left.

Attentions:

Avoid excessive pressure: When pushing the syringe, avoid applying too much pressure to prevent the filter from breaking or the sample from leaking.
Check the conditions of the filter: During the filtering process, if it is found that the filtering speed slows down significantly or stops, check whether the filter is clogged and replace it with a new one if necessary.
Use protective measures: When handling toxic, harmful, or corrosive samples, protective gloves and goggles should be worn to ensure the safety of the operation.
By following the above - mentioned steps, you can ensure the correct use of the syringe filter. The purity of the sample and the accuracy of the experimental results can be guaranteed.

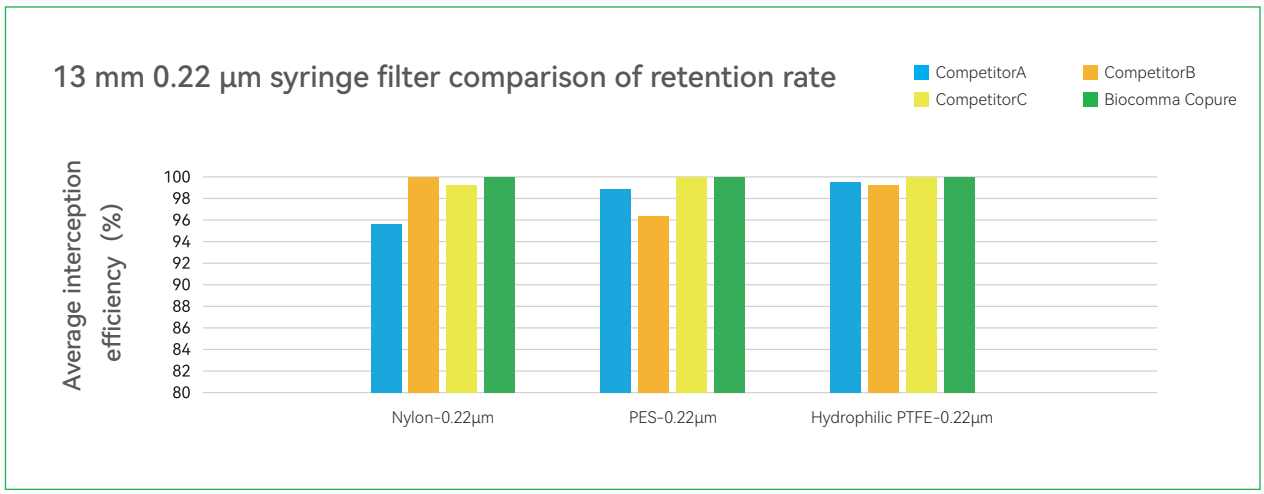
Copure® Syringe Filters Performance Data

Flow rate data performance comparison: Ensure that the liquid maintains a consistent flow rate when passing through the filter, and avoid any influence on the filtering effect and the uniformity of the sample due to changes of the flow rate.



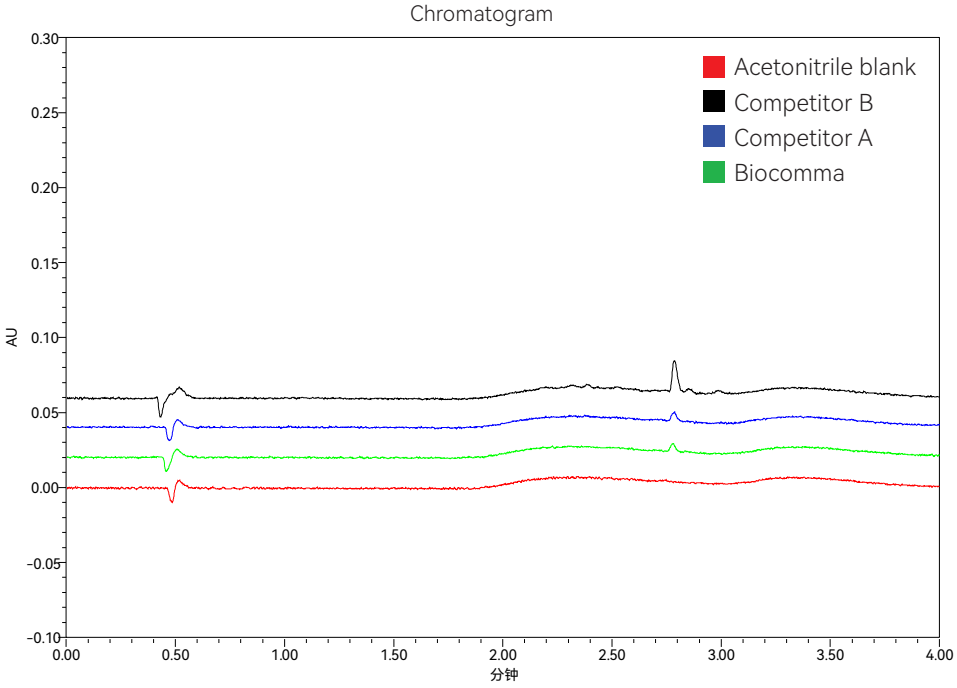
Method for testing the flow rate: Wet the filter with pure water or alcohol (ues pure water when using the NY, PES, Hydrophilic PTFE filters). Measure the volume of the corresponding liquid passing through under 10 psi for one minute.

Retention rate performance comparison: Effectively retain impurities and particles to ensure the purity of the filtrate and the accuracy of experimental results.



Selection of standard particle: 0.22 μm membrane filters are tested with 0.3 μm standard particles, and 0.45 μm membrane filters are tested with 0.46 μm standard particles.

Dissolution performance comparison: By following high-quality materials and precise manufacturing processes, the extractables of the syringe filter are extremely low. It's important for sensitive analytical experiments to ensure that no impurities are introduced during the filtering process to affect the accuracy of the experimental results.



Nylon syringe filters dissolution test comparison chart

Dissolution test method: filter immersed in a acetonitrile/water (70/30) solution; detection wavelength: 254 nm

Test results of the recovery rates of multiple pesticide and veterinary drug residues after passing through the membrane

Pesticide residue (by using the Nylon syringe filters)	Average recovery (%)	RSD(%)	Veterinary drug residue (by using the hydrophilic PTFE syringe filters)	Average recovery (%)	RSD(%)
Propamocarb	101.7	1.98	Acesulfame	101.2	1.79
Aldicarb -sulfoxide	100.2	1.76	Sulfapyridine	97.9	1.63
Aldicarb-sulfone	102.3	2.35	Sulfadiazine	98.5	3.15
Methomyl	100.4	1.34	Sulfamethoxazole	101.6	3.03
Thiamethoxam	102.1	2.65	Sulfathiazole	99.2	3.62
Imidacloprid	101.2	2.15	Sulfamerazine	98.6	2.77
Clothianidin	101.3	1.87	Sulfisoxazole	103.2	1.61
3 -Hydroxycarbofuran	98.6	2.05	Sulfamethizole	100.7	2.53
Acetamiprid	98.5	2.18	Benzoyl sulfanilamide	103.8	1.95
Carbendazim	99.8	1.97	Sulfisomidine	95.4	2.45
Aldicarb	98.6	1.96	Sulfadimidine	97.9	1.84
Thiophanate - methyl	99.4	2.31	Sulfamethoxypyridazine	100.5	2.56

Copure® Dual-Layer Syringe Filters with Prefilter

Copure® Dual-Layer Syringe Filter with Prefilter is the ideal choice for your sample preparation and analysis. This filter integrates a prefilter function, designed specifically for handling samples with high particle content, effectively improving filtration efficiency and extending the lifespan of the filter membrane.

Main Features:

1. Prefilter Design: The built-in prefilter layer removes larger particles from samples, reducing the risk of clogging the main filter membrane. Common prefilter materials include polypropylene (PP) and glass fiber (GF), offering the best options based on different application needs.

- **Polypropylene (PP):** Offers excellent chemical resistance, suitable for most organic solvents and acid-base solutions. It is heat-resistant and has high mechanical strength, making it a widely used material for prefiltration.
- **Glass Fiber (GF):** Provides high flow rates and excellent particle retention, particularly suitable for prefiltering samples with high particle content. It is heat-resistant and less prone to clogging, making it a commonly used high-efficiency prefilter material in laboratories.

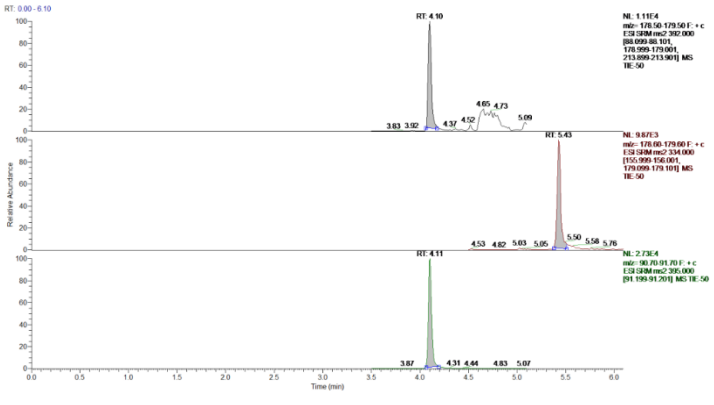
2. Efficient Filtration: High-quality membrane materials ensure efficient filtration, providing reliable sample purity and consistency.

Applications:

- **Food Safety Testing:** Effectively removes particulate matter from samples, ensuring the accuracy of test results. Especially for tests involving preservatives, when the matrix being processed is relatively complex, a dual-layer syringe filter with prefilter can be used to enhance filtration efficiency and prevent clogging during the filtering process.
- **Environmental Analysis:** Used for filtering water samples and other environmental samples to ensure sample purity.
- **Pharmaceutical Analysis:** Provides high-purity samples during drug development and quality control processes.

Application Examples:

According to the EURL QuPPe-PO standard method (Matrix Scope: Products of Plant Origin and Honey) for determining glyphosate in fruits or vegetables, weigh 10 g of the sample (either fruit or vegetable) and extract it with 10 mL of methanol containing 1% formic acid. After centrifugation at 6000 rpm for 5 minutes, filter the extract using a syringe filter with pre-filtration (Product Code: ASF130-22-PTFE-HL-F) before proceeding with instrumental analysis.



Ordering Information

Cat.#	Description	Qty.
ASF130-22-PTFE-HL-F	Hydrophilic PTFE/Φ13 mm/0.22 μm/ with GF pre-filter	100 Pcs/Box
ASF250-22-PTFE-HL-F	Hydrophilic PTFE/Φ25 mm/0.22 μm/ with GF pre-filter	100 Pcs/Box
ASF130-22-PTFE-HL-Y	Hydrophilic PTFE/Φ13 mm/0.22 μm/ with PP pre-filter	100 Pcs/Box
ASF250-22-PTFE-HL-Y	Hydrophilic PTFE/Φ25 mm/0.22 μm/ with PP pre-filter	100 Pcs/Box

Copure® Syringe Filters

Hydrophilic PTFE Syringe Filters: Compatible with both organic and aqueous solutions.

Hydrophilic PTFE Syringe Filters: An ideal alternative to other filter membrane materials. When adsorption occurs with materials like nylon or PVDF, hydrophilic PTFE syringe filters can be used as a replacement.
Hydrophilic PTFE Syringe Filters combine the chemical resistance of PTFE with the advantages of hydrophilicity, making them widely used for filtering both aqueous and organic solutions.

Features

1. Chemical Resistance: PTFE material offers excellent chemical resistance, withstanding a wide range of strong acids, bases, and organic solvents.

2. Hydrophilicity: Hydrophilically treated PTFE filter membranes are suitable for aqueous solution filtration, providing excellent filtration performance.

3. High Temperature Resistance: PTFE filters can be used at elevated temperatures, making them suitable for filtration in high-temperature environments.

4. Low Adsorption and Low Leachables: PTFE filters' low adsorption characteristics ensure that the sample does not interact significantly with the filter material during filtration, minimizing sample loss. Additionally, the low leachable properties mean that the filter material does not release harmful impurities into the sample, preventing potential interference with experimental data.

Low Adsorption Applications of Hydrophilic PTFE in Food Testing

The choice of filter membrane type in syringe filters plays a crucial role in the recovery rate of target compounds during food testing. As shown in the figure below, when using nylon syringe filter membranes, there is a slight adsorption issue with certain target compounds due to the specific properties of the nylon material. Using hydrophilic PTFE membranes can resolve this adsorption problem.

Types of Filter Membranes	Average Recovery Rate (%)					
Item	Pentachlorophenol	Allura red	Indigo	Erythrosine	Benzylsulfonamide	Phthalylsulfathiazole
Nylon	75.5%	80.4%	70.7%	52.7%	71.8%	50.3%
Hydrophilic PTFE	96.4%	98.3%	98.5%	96.8%	97.2%	96.3%

Specification

Filter Membrane Material	Hydrophilic PTFE	Hydrophilic PTFE	Hydrophilic PTFE	Hydrophilic PTFE
Diameter	13 mm	13 mm	25 mm	25 mm
Pore size	0.22 μm	0.45 μm	0.22 μm	0.45 μm
Pressure Resistance	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa
Filtration Area(cm2)	0.92	0.92	2.8	2.8
Housing Material	PP	PP	PP	PP
Alcohol Bubble Point (Mpa)	≥ 0.1 Mpa	≥ 0.05 Mpa	≥ 0.1 Mpa	≥ 0.05 Mpa
Holdup-Volume(μl)	≤ 10	≤ 10	≤ 50	≤ 50
Hydrophilicity	Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic
pH Range	1-14	1-14	1-14	1-14

Ordering Information

Cat. #	Description	Qty.
ASF130-45-PTFE-HL	Hydrophilic PTFE/Φ13 mm/0.45 μm	100 Pcs/Box
ASF130-22-PTFE-HL	Hydrophilic PTFE/Φ13 mm/0.22 μm	100 Pcs/Box
ASF250-45-PTFE-HL	Hydrophilic PTFE/Φ25 mm/0.45 μm	100 Pcs/Box
ASF250-22-PTFE-HL	Hydrophilic PTFE/Φ25 mm/0.22 μm	100 Pcs/Box

Nylon Syringe Filters

Nylon Syringe Filters are resistant to strong alkalis but not acids. With their natural hydrophilicity, they can effectively filter both organic and aqueous solutions. They don't require pre-wetting before use, and their uniform pore size and good mechanical strength ensure reliable performance.
Main Applications: 1) Water filtration in the electronics and semiconductor industries. 2) Filtration of chemical products. 3) Filtration of beverage products. 4) In food testing, primarily used for filtering pesticides, veterinary drug residues, and similar analytes.

Precautions:
1.Nylon syringe filters are not suitable for filtering synthetic colorants and similar substances, as they may cause adsorption of some synthetic colorants.
2.Due to their strong protein-binding ability, they are not recommended for filtering protein-containing liquids.

Filter Membrane Material	Nylon	Nylon	Nylon	Nylon
Diameter	13 mm	13 mm	25 mm	25 mm
Pore size	0.22 μm	0.45 μm	0.22 μm	0.45 μm
Pressure Resistance	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa
Filtration Area(cm2)	0.92	0.92	2.8	2.8
Housing Material	PP	PP	PP	PP
Alcohol Bubble Point (Mpa)	≥ 0.26 Mpa	≥ 0.16 Mpa	≥ 0.26 Mpa	≥ 0.16 Mpa
Holdup-Volume(μl)	≤ 10	≤ 10	≤ 50	≤ 50
Hydrophilicity	Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic
pH Range	3-14	3-14	3-14	3-14

Ordering Information

Cat. #	Description	Qty.
ASF130-22-NL	Nylon /Φ13 mm / 0.22 μm	100 Pcs/Box
ASF130-45-NL	Nylon / Φ13 mm / 0.45 μm	100 Pcs/Box
ASF250-22-NL	Nylon / Φ25 mm /0.22 μm	100 Pcs/Box
ASF250-45-NL	Nylon / Φ25 mm /0.45 μm	100 Pcs/Box

Polypropylene (PP) Syringe Filters

PP material has high mechanical strength, allowing it to withstand high operating pressures without deforming or breaking during high-pressure filtration processes. PP material exhibits excellent resistance to most chemical reagents, including acids, bases, and organic solvents, making it stable for use under various experimental conditions. It is widely used for pre-filtration to remove large particulate impurities.

Specification

Housing Material	PP	PP	PP	PP
Bubble Point (Mpa)	≥ 0.3 Mpa	≥ 0.2 Mpa	≥ 0.3 Mpa	≥ 0.2 Mpa
Holdup-Volume(μl)	≤ 10	≤ 10	≤ 50	≤ 50
Hydrophilicity	Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic
pH Range	4-8	4-8	4-8	4-8

Ordering Information

Cat. #	Description	Qty.
ASF130-22-PP	PP / Φ13 mm / 0.22 μm	100 Pcs/Box

Hydrophobic Polytetrafluoroethylene (PTFE) Syringe Filters

With excellent chemical resistance, high-temperature tolerance, and strong hydrophobicity, PTFE-syringe filters are ideal for both liquid and gas filtration.

Precautions: When using hydrophobic PTFE syringe filters, avoid filtering aqueous solutions, as they may cause the filtration process to fail entirely or result in extremely slow filtration.

Specification

Filter Membrane Material	Hydrophobic PTFE	Hydrophobic PTFE	Hydrophobic PTFE	Hydrophobic PTFE
Diameter	13 mm	13 mm	25 mm	25 mm
Pore size	0.22 μm	0.45 μm	0.22 μm	0.45 μm
Pressure Resistance	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa
Filtration Area(cm2)	0.92	0.92	2.8	2.8
Housing Material	PP	PP	PP	PP
Alcohol Bubble Point (Mpa)	≥ 0.1 Mpa	≥ 0.05 Mpa	≥ 0.1 Mpa	≥ 0.05 Mpa
Holdup-Volume(μl)	≤ 10	≤ 10	≤ 50	≤ 50
Hydrophilicity	Hydrophobic	Hydrophobic	Hydrophobic	Hydrophobic
pH Range	1-14	1-14	1-14	1-14

Ordering Information

Cat. #	Description	Qty.
ASF130-45-PTFE	Hydrophobic PTFE / Φ13 mm / 0.45 μm	100 Pcs/Box
ASF130-22-PTFE	Hydrophobic PTFE / Φ13 mm / 0.22 μm	100 Pcs/Box
ASF250-45-PTFE	Hydrophobic PTFE / Φ25 mm / 0.45 μm	100 Pcs/Box
ASF250-22-PTFE	Hydrophobic PTFE / Φ25 mm / 0.22 μm	100 Pcs/Box

Hydrophobic Polyvinylidene Fluoride (PVDF) Syringe Filters

PVDF membranes have high hydrophobicity, mechanical strength, and heat resistance, maintaining stability under high-pressure and high-temperature conditions. They are less prone to cracking or deformation, ensuring the safety and reliability of the filtration process. With low protein adsorption, they are not suitable for filtering DMSO.

Specification

Filter Membrane Material	Hydrophobic PVDF	Hydrophobic PVDF	Hydrophobic PVDF	Hydrophobic PVDF
Diameter	13 mm	13 mm	25 mm	25 mm
Pore size	0.22 μm	0.45 μm	0.22 μm	0.45 μm
Pressure Resistance	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa
Filtration Area(cm2)	0.92	0.92	2.8	2.8
Housing Material	PP	PP	PP	PP
Alcohol Bubble Point (Mpa)	≥ 0.1 Mpa	≥ 0.05 Mpa	≥ 0.1 Mpa	≥ 0.05 Mpa
Holdup-Volume(μl)	≤ 10	≤ 10	≤ 50	≤ 50
Hydrophilicity	Hydrophobic	Hydrophobic	Hydrophobic	Hydrophobic
pH Range	2-13	2-13	2-13	2-13

Ordering Information

Cat. #	Description	Qty.
ASF130-22-PVDF	Hydrophobic PVDF / Φ13 mm / 0.22 μm	100 Pcs/Box
ASF130-45-PVDF	Hydrophobic PVDF / Φ13 mm / 0.45 μm	100 Pcs/Box
ASF250-22-PVDF	Hydrophobic PVDF / Φ25 mm / 0.22 μm	100 Pcs/Box
ASF250-45-PVDF	Hydrophobic PVDF / Φ25 mm / 0.45 μm	100 Pcs/Box

Polyethersulfone (PES) Syringe Filters

PES syringe filters are commonly used in biological and chemical experiments, offering advantages such as high throughput and low protein binding. They are suitable for filtering biological media, such as culture media or serum, with fast filtration speeds.

Specification

Filter Membrane Material	PES	PES	PES	PES
Diameter	13 mm	13 mm	25 mm	25 mm
Pore size	0.22 μm	0.45 μm	0.22 μm	0.45 μm
Pressure Resistance	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa
Filtration Area(cm2)	0.92	0.92	2.8	2.8
Housing Material	PP	PP	PP	PP
Bubble Point (Mpa)	≥ 0.35 Mpa	≥ 0.22 Mpa	≥ 0.35 Mpa	≥ 0.22 Mpa
Holdup-Volume(μl)	≤ 10	≤ 10	≤ 50	≤ 50
Hydrophilicity	Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic
pH Range	3-12	3-12	3-12	3-12

Ordering Information

Cat. #	Description	Qty.
ASF130-22-PES	PES / Φ13 mm / 0.22 μm	100 Pcs/Box
ASF130-45-PES	PES / Φ13 mm / 0.45 μm	100 Pcs/Box
ASF250-22-PES	PES / Φ25 mm / 0.22 μm	100 Pcs/Box
ASF250-45-PES	PES / Φ25 mm / 0.45 μm	100 Pcs/Box

Mixed Cellulose Ester (MCE) Syringe Filters

MCE syringe filters are commonly used filtration devices in laboratories, widely applied in biological and chemical experiments due to their high flow rate and retention efficiency. They feature a high porosity and effective filtration capability; however, they are not resistant to strong acids, strong bases, and most organic solvents.

Specification

Filter Membrane Material	MCE	MCE	MCE	MCE
Diameter	13 mm	13 mm	25 mm	25 mm
Pore size	0.22 μm	0.45 μm	0.22 μm	0.45 μm
Pressure Resistance	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa
Filtration Area(cm2)	0.92	0.92	2.8	2.8
Housing Material	PP	PP	PP	PP
Bubble Point (Mpa)	≥ 0.3 Mpa	≥ 0.2 Mpa	≥ 0.3 Mpa	≥ 0.2 Mpa
Holdup-Volume(μl)	≤ 10	≤ 10	≤ 50	≤ 50
Hydrophilicity	Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic
pH Range	4-8	4-8	4-8	4-8

Odering Information

Cat. #	Description	Qty.
ASF130-22-MCE	MCE / Φ13 mm / 0.22 μm	100 Pcs/Box
ASF130-45-MCE	MCE / Φ13 mm / 0.45 μm	100 Pcs/Box
ASF250-22-MCE	MCE / Φ25 mm / 0.22 μm	100 Pcs/Box
ASF250-45-MCE	MCE / Φ25 mm / 0.45 μm	100 Pcs/Box

Cellulose Acetate (CA) Syringe Filters

CA microporous filter membranes have excellent hydrophilicity, low protein adsorption, and are nitrate-free. They are primarily used for:1) Groundwater filtration 2) Filtration of biological and clinical fluids.

Specification

Filter Membrane Material	CA	CA	CA	CA
Diameter	13 mm	13 mm	25 mm	25 mm
Pore size	0.22 μm	0.45 μm	0.22 μm	0.45 μm
Pressure Resistance	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa
Filtration Area(cm2)	0.92	0.92	2.8	2.8
Housing Material	PP	PP	PP	PP
Bubble Point (Mpa)	≥ 0.3 Mpa	≥ 0.2 Mpa	≥ 0.3 Mpa	≥ 0.2 Mpa
Holdup-Volume(μl)	≤ 10	≤ 10	≤ 50	≤ 50
Hydrophilicity	Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic
pH Range	4-8	4-8	4-8	4-8

Ordering Information

Cat. #	Description	Qty.
ASF130-22-CA	CA / Φ13 mm / 0.22 μm	100 Pcs/Box
ASF130-45-CA	CA / Φ13 mm / 0.45 μm	100 Pcs/Box
ASF250-22-CA	CA / Φ25 mm / 0.22 μm	100 Pcs/Box
ASF250-45-CA	CA / Φ25 mm / 0.45 μm	100 Pcs/Box

Hydrophilic Polyvinylidene Fluoride (PVDF) Syringe Filters (It is suitable for filtering both aqueous and organic solutions simultaneously)

This hydrophilic PVDF syringe filter is commonly used in biological and chemical experiments. It offers excellent chemical resistance and low protein adsorption. The PVDF membrane provides high mechanical strength and thermal stability, maintaining its integrity under high pressure and temperature conditions, ensuring safety and reliability in filtration.It has low protein adsorption and is not suitable for filtering DMSO.

Specification

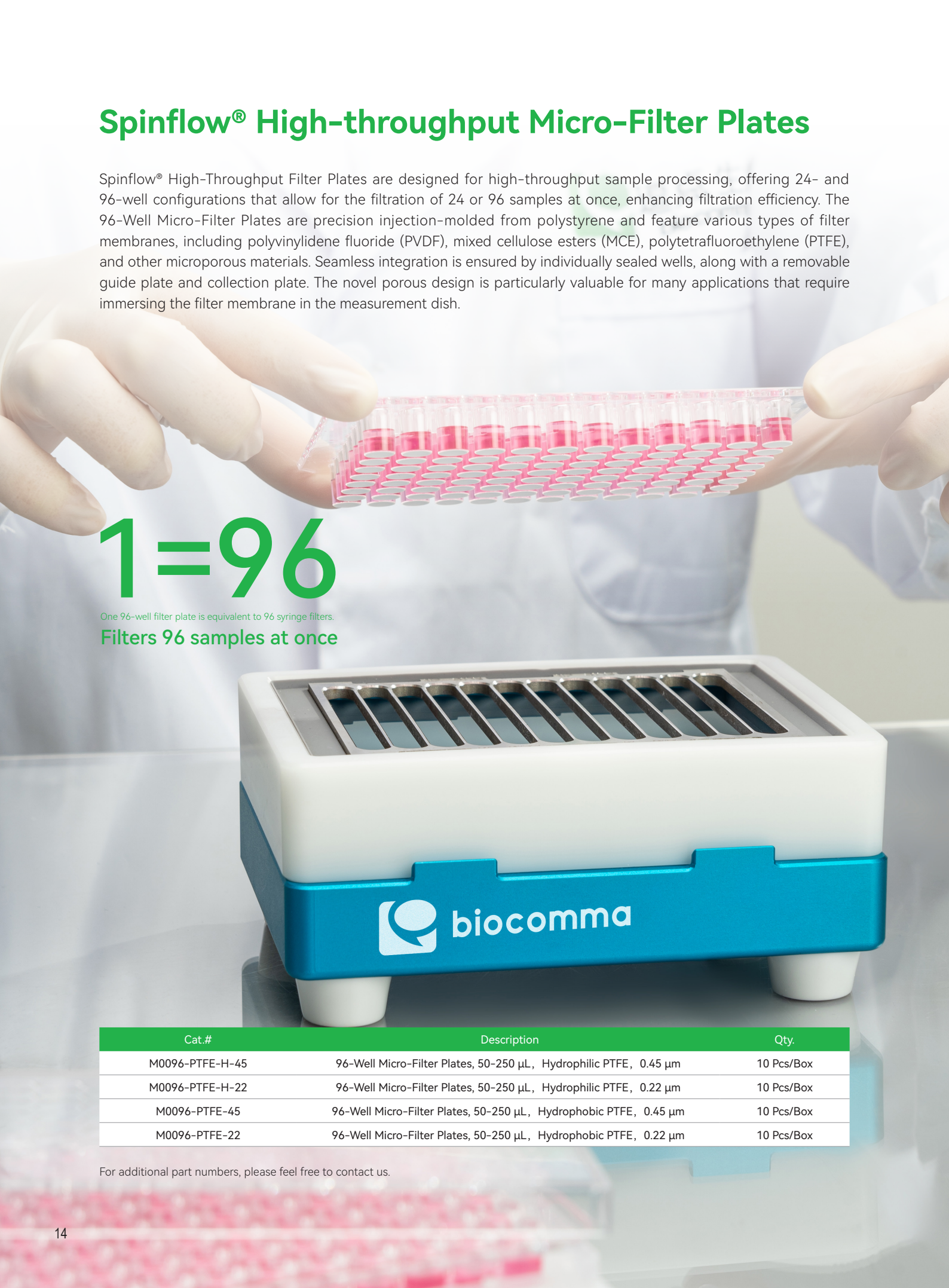
Filter Membrane Material	Hydrophilic PVDF	Hydrophilic PVDF	Hydrophilic PVDF	Hydrophilic PVDF
Diameter	13 mm	13 mm	25 mm	25 mm
Pore size	0.22 μm	0.45 μm	0.22 μm	0.45 μm
Pressure Resistance	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa	≥ 0.6 Mpa
Filtration Area(cm2)	0.92	0.92	2.8	2.8
Housing Material	PP	PP	PP	PP
Alcohol Bubble Point (Mpa)	≥ 0.1 Mpa	≥ 0.05 Mpa	≥ 0.1 Mpa	≥ 0.05 Mpa
Holdup-Volume(μl)	≤ 10	≤ 10	≤ 50	≤ 50
Hydrophilicity	Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic
pH Range	2-13	2-13	2-13	2-13

Ordering Information

Cat. #	Description	Qty.
ASF130-22-PVDF-HL	Hydrophilic PVDF / Φ13 mm / 0.22 μm	100 Pcs/Box
ASF130-45-PVDF-HL	Hydrophilic PVDF / Φ13 mm / 0.45 μm	100 Pcs/Box
ASF250-22-PVDF-HL	Hydrophilic PVDF / Φ25 mm / 0.22 μm	100 Pcs/Box
ASF250-45-PVDF-HL	Hydrophilic PVDF / Φ25 mm / 0.45 μm	100 Pcs/Box

Spinflow® High-throughput Micro-Filter Plates

Spinflow® High-Throughput Filter Plates are designed for high-throughput sample processing, offering 24- and 96-well configurations that allow for the filtration of 24 or 96 samples at once, enhancing filtration efficiency. The 96-Well Micro-Filter Plates are precision injection-molded from polystyrene and feature various types of filter membranes, including polyvinylidene fluoride (PVDF), mixed cellulose esters (MCE), polytetrafluoroethylene (PTFE), and other microporous materials. Seamless integration is ensured by individually sealed wells, along with a removable guide plate and collection plate. The novel porous design is particularly valuable for many applications that require immersing the filter membrane in the measurement dish.



1=96

One 96-well filter plate is equivalent to 96 syringe filters.

Filters 96 samples at once

Cat.#	Description	Qty.
M0096-PTFE-H-45	96-Well Micro-Filter Plates, 50-250 µL, Hydrophilic PTFE, 0.45 µm	10 Pcs/Box
M0096-PTFE-H-22	96-Well Micro-Filter Plates, 50-250 µL, Hydrophilic PTFE, 0.22 µm	10 Pcs/Box
M0096-PTFE-45	96-Well Micro-Filter Plates, 50-250 µL, Hydrophobic PTFE, 0.45 µm	10 Pcs/Box
M0096-PTFE-22	96-Well Micro-Filter Plates, 50-250 µL, Hydrophobic PTFE, 0.22 µm	10 Pcs/Box

For additional part numbers, please feel free to contact us.

Copure® Sterile Syringe Filters

Sterile syringe filters are used for liquid clarification and sterilization filtration. biocomma® Sterile Syringe Filters remove bacteria efficiently and minimize the impact on active ingredients in liquid during sterilization process. Generally, 0.1 μm syringe filter filters mycoplasma, 0.22 μm filters bacteria, and 0.45um filters solid particles. Sterile syringe filters are widely applied to various fields of life science to sterilize small-volume biological liquids, such as proteins, culture media, additives, buffers, reagents, pharmaceuticals.

Features

- The easy-tear packaging is made of medical-grade polypropylene for secure sealing, injection-molded in a single piece, and pressure-resistant.
- Individually packaged with easy-tear design, for single use only.
- Sterilized by gamma radiation.
- Sterile, pyrogen-free, DNase-free, RNase-free reagent.
- Low protein adsorption rate.
- High-throughput, enabling faster and more efficient liquid filtration.

Ordering Information

Sterile Mixed Cellulose Ester (MCE) Syringe Filters

Cat.#	Description	Qty.
SSF130-22-MCE	MCE/Φ13 mm/0.22 μm	100 Pcs/Box
SSF130-45-MCE	MCE/Φ13 mm/0.45 μm	100 Pcs/Box
SSF250-22-MCE	MCE/Φ25 mm/0.22 μm	100 Pcs/Box
SSF250-45-MCE	MCE/Φ25 mm/0.45 μm	100 Pcs/Box

Sterile Cellulose Acetate (CA) Syringe Filters

Cat.#	Description	Qty.
SSF130-22-CA	CA/Φ13 mm/0.22 μm	100 Pcs/Box
SSF130-45-CA	CA/Φ13 mm/0.45 μm	100 Pcs/Box
SSF250-22-CA	CA/Φ25 mm/0.22 μm	100 Pcs/Box
SSF250-45-CA	CA/Φ25 mm/0.45 μm	100 Pcs/Box

Sterile Polyethersulfone (PES) Syringe Filters

Cat.#	Description	Qty.
SSF130-22-PES	PES/Φ13 mm/0.22 μm	100 Pcs/Box
SSF130-45-PES	PES/Φ13 mm/0.45 μm	100 Pcs/Box
SSF250-22-PES	PES/Φ25 mm/0.22 μm	100 Pcs/Box
SSF250-45-PES	PES/Φ25 mm/0.45 μm	100 Pcs/Box

Sterile Hydrophilic Polyvinylidene Fluoride (PVDF) Syringe Filters

Cat.#	Description	Qty.
SSF130-22-PVDF-HL	Hydrophilic PVDF/Φ13 mm/0.22 μm	100 Pcs/Box
SSF130-45-PVDF-HL	Hydrophilic PVDF/Φ13 mm/0.45 μm	100 Pcs/Box
SSF250-22-PVDF-HL	Hydrophilic PVDF/Φ25 mm/0.22 μm	100 Pcs/Box
SSF250-45-PVDF-HL	Hydrophilic PVDF/Φ25 mm/0.45 μm	100 Pcs/Box

Sterile Hydrophobic Polyvinylidene Fluoride (PVDF) Syringe Filters

Cat.#	Description	Qty.
SSF130-22-PVDF	Hydrophobic PVDF/Φ13 mm/0.22 μm	100 Pcs/Box
SSF130-45-PVDF	Hydrophobic PVDF/Φ13 mm/0.45 μm	100 Pcs/Box
SSF250-22-PVDF	Hydrophobic PVDF/Φ25 mm/0.22 μm	100 Pcs/Box
SSF250-45-PVDF	Hydrophobic PVDF/Φ25 mm/0.45 μm	100 Pcs/Box

Sterile Hydrophobic Polytetrafluoroethylene (PTFE) Syringe Filters

Cat.#	Description	Qty.
SSF130-45-PTFE	Hydrophobic PTFE/Φ13 mm/0.45 μm	100 Pcs/Box
SSF130-22-PTFE	Hydrophobic PTFE/Φ13 mm/0.22 μm	100 Pcs/Box
SSF250-45-PTFE	Hydrophobic PTFE/Φ25 mm/0.45 μm	100 Pcs/Box
SSF250-22-PTFE	Hydrophobic PTFE/Φ25 mm/0.22 μm	100 Pcs/Box

Sterile Nylon Syringe Filters

Cat.#	Description	Qty.
SSF130-22-NL	Nylon /Φ13 mm/0.22 μm	100 Pcs/Box
SSF130-45-NL	Nylon /Φ13 mm/0.45 μm	100 Pcs/Box
SSF250-22-NL	Nylon /Φ25 mm/0.22 μm	100 Pcs/Box
SSF250-45-NL	Nylon /Φ25 mm/0.45 μm	100 Pcs/Box

Sterile Hydrophilic Polytetrafluoroethylene (PTFE) Syringe Filters

Cat.#	Description	Qty.
SSF130-45-PTFE-HL	Hydrophilic PTFE/Φ13 mm/0.45 μm	100 Pcs/Box
SSF130-22-PTFE-HL	Hydrophilic PTFE/Φ13 mm/0.22 μm	100 Pcs/Box
SSF250-45-PTFE-HL	Hydrophilic PTFE/Φ25 mm/0.45 μm	100 Pcs/Box
SSF250-22-PTFE-HL	Hydrophilic PTFE/Φ25 mm/0.22 μm	100 Pcs/Box

Copure® Microfiltration Membranes

Features

1. Offers a range of pore sizes from 0.1 microns to 10 microns to meet the filtration needs of different particle sizes.
2. Provides filter membranes in diameters such as 13 mm, 25 mm, 47 mm, 90 mm, etc., suitable for various filtration devices and application needs.
3. Available in a variety materials, including MCE, PES, NY, PTFE, PVDF, RC, GF, and more.

Applications

Biological and Pharmaceutical Industry: Used for the filtration and sterile processing of cell culture media, serum, and drug solutions.
Environmental Monitoring: Used for particulate filtration in water quality analysis and air sample testing.
Chemical Analysis: Used for sample preparation, solvent filtration, and pre-treatment before laboratory analysis.
Food and Beverage: Used for purification and filtration of beverages, drinking water, and food samples.

Glass Fiber Filter Paper

Glass fiber filter paper has an extremely high filtration efficiency, effectively trapping fine particles, sediments, and suspended matter. It is suitable for filtering high-load particle samples. Glass fiber filter paper also exhibits good resistance to most acids, bases, organic solvents, and other chemicals, making it stable for use in various chemical environments.
When used for the detection of mycotoxins in food, it can be used for filtration after sample extraction, effectively trapping small particles, sediments, and suspended matter from the extraction process, thereby preventing blockages during the mycotoxin immunoaffinity column procedure.

Ordering Information

Cat. #	Description	Qty.
MF110-15-GFA	Glass fiber filter membrane /Φ110 mm /1.5 μm	25 Pcs/Box

Mixed Cellulous Ester (MCE) Microfiltration Membrane

Ordering Information

Cat. #	Description	Qty.
MF047-22-MCE	MCE/Φ47 mm/0.22 μm	200 Pcs/Box
MF047-45-MCE	MCE/Φ47 mm/0.45 μm	200 Pcs/Box

Cellulose Acetate (CA) Microfiltration Membrane

Ordering Information

Cat. #	Description	Qty.
MF047-22-CA	CA/Φ47 mm/0.22 μm	200 Pcs/Box
MF047-45-CA	CA/Φ47 mm/0.45 μm	200 Pcs/Box

Polyethersulfone (PES) Microfiltration Membrane

Ordering Information

Cat. #	Description	Qty.
MF047-22-PES	PES/Φ47 mm/0.22 μm	200 Pcs/Box
MF047-45-PES	PES/Φ47 mm/0.45 μm	200 Pcs/Box

Hydrophilic Polytetrafluoroethylene (PTFE) Microfiltration Membrane

Ordering Information

Cat. #	Description	Qty.
MF047-22-PTFE-HL	Hydrophilic PTFE/Φ47 mm/0.22 μm	200 Pcs/Box
MF047-45-PTFE-HL	Hydrophilic PTFE/Φ47 mm/0.45 μm	200 Pcs/Box

Hydrophilic Polyvinylidene Fluoride (PVDF) Microfiltration Membrane

Ordering Information

Cat. #	Description	Qty.
MF047-22-PVDF-HL	Hydrophilic PVDF/Φ47 mm/0.22 μm	200 Pcs/Box
MF047-45-PVDF-HL	Hydrophilic PVDF/Φ47 mm/0.45 μm	200 Pcs/Box

Hydrophobic Polyvinylidene Fluoride (PVDF) Microfiltration Membrane

Ordering Information

Cat. #	Description	Qty.
MF047-22-PVDF	Hydrophobic PVDF/Φ47 mm/0.22 μm	200 Pcs/Box
MF047-45-PVDF	Hydrophobic PVDF/Φ47 mm/0.45 μm	200 Pcs/Box

Hydrophobic Polytetrafluoroethylene (PTFE) Microfiltration Membrane

Ordering Information

Cat. #	Description	Qty.
MF047-22-PTFE	Hydrophobic PTFE/Φ47 mm/0.22 μm	200 Pcs/Box
MF047-45-PTFE	Hydrophobic PTFE/Φ47 mm/0.45 μm	200 Pcs/Box

Nylon Microfiltration Membrane

Ordering Information

Cat. #	Description	Qty.
MF047-22-NL	Nylon /Φ47 mm/0.22 μm	200 Pcs/Box
MF047-45-NL	Nylon /Φ47 mm/0.45 μm	200 Pcs/Box

Note: The above-mentioned microfiltration membranes can be customized to other diameter specifications.

Common Issues and Solutions in the Use of Syringe Filters

Common Issues	Potential Causes	Solutions
Slow filtration rate	Filter membrane clogging or excessive particle load	Replace with a new membrane or pre-filter the sample to reduce particle load
Leakage during filtration	Syringe filter not properly installed or poor sealing at the interface	Check and reinstall the filter to ensure a tight seal at the connection.
Filter membrane rupture or damage	Excessive filtration pressure or filter membrane quality issues	Reduce filtration pressure or switch to a higher-quality membrane
Low sample recovery rate	Sample adsorption to the membrane or high sample viscosity	Choose a low-adsorption membrane or dilute the sample as needed
Sample contamination after filtration	Incomplete cleaning of the filter membrane or equipment	Use a high-purity membrane and ensure the filtration equipment is clean
Low sample throughput	Sample particles too large or high viscosity	Opt for a larger pore size membrane or dilute the sample
Particle shedding from the filter membrane into the sample	Poor membrane quality or excessive filtration pressure	Select a high-quality membrane and control the filtration pressure
Sample exhibits turbidity after filtration	Oversized membrane pores or incomplete filtration	Choose a membrane with an appropriate pore size and ensure complete filtration
Chemical adsorption by the filter membrane	Chemical reaction or adsorption between the membrane and the sample	Select a membrane with better chemical compatibility
Filter membrane discoloration or degradation	Chemical incompatibility between the membrane and the sample	Use a membrane suitable for the sample's chemical properties
Bubbles appearing in the sample	Gas in the sample or air entering during filtration	Degas the sample beforehand and expel air from the syringe before filtration
Filter membrane leaching residues	Impure membrane material or production process issues	Choose a high-quality membrane with low extractables
Short filter lifespan	High particle load in the sample or improper use	Re-filter to reduce load and follow proper usage guidelines
Sample loss	Strong membrane adsorption or sample adhering inside the filter	Choose a low-adsorption membrane and rinse the filter with a suitable solvent
Excessive differential pressure across the filter	Membrane blockage or high particle load	Replace the membrane or add a pre-filtration step to reduce particle load

BRAND PROFILE

ISO 9001:2015 ISO 13485:2016 ISO 14001:2016

Copure® is a brand of Biocomma, specializing in the field of food safety. It is committed to providing comprehensive process solutions for chromatographic sample preparation, ensuring more reliable food safety testing results.

Copure® Brand Definition

Copure——comma+consistent

“Co”represents the first two letters of "comma," symbolizing the use of biocomma's technology to achieve consistent recovery rates and reproducibility for each target substance.

Copure——pure

Pure represents purity, meaning the effective removal of interfering components from samples using biocomma's technology, helping users obtain 'pure' chromatograms.

Co-pure combined forms Copure, which sounds like 'kao pu' in Chinese, meaning 'reliable.' Food safety is crucial to people's lives, and reliability is the front line. We provide reliable product technology and dependable after-sales support, empowering technology to protect the safety of what's on your plate.

Made in Shenzhen·Sevice for Global Business ·Customization Supported

HH-GL-01-001EN

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