

# **K<sub>x</sub>** Syringe Filters

- Comprehensive range of membranes
- Colour coded for easy identification
- Solvent resistant housing with minimal extractables
- Leak-free Luer-lok and Luer connections
- User-friendly storage options
- Available with integral pre-filter
- Bulk pack options available

New membranes available:  
*Regenerated Cellulose,  
Hydrophilic PTFE and  
Hydrophilic PVDF*

Kinesis KX Syringe Filters is a comprehensive range of non-sterile disposable syringe filters for reliable sample preparation. Reproducible membrane quality and automated manufacturing processes ensure particulates are removed from each and every sample, extending analytical column lifetime and minimising injection port or valve damage.

Utilising the standard Luer-lok/Luer connections, KX Syringe Filters are available in 0.22 and 0.45µm porosities and 4, 13, 25 and 30mm diameters. KX Syringe Filters are available in a wide selection of membranes, including Nylon, PTFE and PVDF, supporting all common sample preparation applications.

The use of retainer ring seals the polypropylene housing, preventing leaking and sample loss.

All KX Syringe Filters are colour coded, allowing easy identification of an individual filter, ensuring the correct filter is selected for each sample.

KX Syringe Filters are supplied in re-sealable containers allowing easy storage and preventing contamination during multiple opening/closing.

For particulate laden samples, KX Syringe Filters are also available with an integral depth filter.



## Nylon

- Hydrophilic surface, good solvent resistance and medium protein binding
- Filtration of all aqueous samples and most organic solvents
- Strong mechanical stability
- Excellent chemical compatibility (esters, bases, phenol and alcohols)

Without pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-NY-04-022	Nylon 4mm, 0.22µm	100
ESF-NY-04-045	Nylon 4mm, 0.45µm	100
ESF-NY-13-022	Nylon 13mm, 0.22µm	100
ESF-NY-13-045	Nylon 13mm, 0.45µm	100
ESF-NY-25-022	Nylon 25mm, 0.22µm	100
ESF-NY-25-045	Nylon 25mm, 0.45µm	100
ESF-NY-30-022	Nylon 30mm, 0.22µm	100
ESF-NY-30-045	Nylon 30mm, 0.45µm	100

With integral pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-NY-13-022-PF	Nylon 13mm, 0.22µm with pre-filter	100
ESF-NY-13-045 PF	Nylon 13mm, 0.45µm with pre-filter	100
ESF-NY-25-022 PF	Nylon 25mm, 0.22µm with pre-filter	100
ESF-NY-25-045 PF	Nylon 25mm, 0.45µm with pre-filter	100
ESF-NY-30-022 PF	Nylon 30mm, 0.22µm with pre-filter	100
ESF-NY-30-045 PF	Nylon 30mm, 0.45µm with pre-filter	100

## PTFE

- Highest solvent resistance and high protein binding
- Filtration of non-aqueous or solvent based samples
- Condition with methanol or ethanol prior to aqueous samples filtration
- Extremely broad chemical and thermal compatibility
- Recommended for strong acids and bases

Without pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-PT-04-022	PTFE 4mm, 0.22µm	100
ESF-PT-04-045	PTFE 4mm, 0.45µm	100
ESF-PT-13-022	PTFE 13mm, 0.22µm	100
ESF-PT-13-045	PTFE 13mm, 0.45µm	100
ESF-PT-25-022	PTFE 25mm, 0.22µm	100
ESF-PT-25-045	PTFE 25mm, 0.45µm	100
ESF-PT-30-022	PTFE 30mm, 0.22µm	100
ESF-PT-30-045	PTFE 30mm, 0.45µm	100

With integral pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-PT-13-022-PF	PTFE 13mm, 0.22µm with pre-filter	100
ESF-PT-13-045-PF	PTFE 13mm, 0.45µm with pre-filter	100
ESF-PT-25-022-PF	PTFE 25mm, 0.22µm with pre-filter	100
ESF-PT-25-045-PF	PTFE 25mm, 0.45µm with pre-filter	100
ESF-PT-30-022-PF	PTFE 30mm, 0.22µm with pre-filter	100
ESF-PT-30-045-PF	PTFE 30mm, 0.45µm with pre-filter	100

## Hydrophilic PTFE

- Low protein binding
- Particulate removal from aqueous and organic solutions
- High flow rates with minimal aqueous extractables
- Wide range of working temperature
- Recommended for filtering HPLC samples and mobile phases
- Compatible with organic solvents and strong alkaline solutions

Without pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-PTH-13-022	Hydrophilic PTFE 13mm, 0.22µm	100
ESF-PTH-13-045	Hydrophilic PTFE 13mm, 0.45µm	100
ESF-PTH-25-022	Hydrophilic PTFE 25mm, 0.22µm	100
ESF-PTH-25-045	Hydrophilic PTFE 25mm, 0.45µm	100
ESF-PTH-30-022	Hydrophilic PTFE 30mm, 0.22µm	100
ESF-PTH-30-045	Hydrophilic PTFE 30mm, 0.45µm	100

With integral pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-PTH-13-022-PF	Hydrophilic PTFE 13mm, 0.22µm with pre-filter	100
ESF-PTH-13-045-PF	Hydrophilic PTFE 13mm, 0.45µm with pre-filter	100
ESF-PTH-25-022-PF	Hydrophilic PTFE 25mm, 0.22µm with pre-filter	100
ESF-PTH-25-045-PF	Hydrophilic PTFE 25mm, 0.45µm with pre-filter	100
ESF-PTH-30-022-PF	Hydrophilic PTFE 30mm, 0.22µm with pre-filter	100
ESF-PTH-30-045-PF	Hydrophilic PTFE 30mm, 0.45µm with pre-filter	100

## Polypropylene

- Hydrophobic
- High solvent resistance
- Lower protein binding
- General filtration of biological samples, solvents, deionised water and reducing biological load
- Filtration of all aqueous and most solvent based samples

Without pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-PP-04-022	Polypropylene 4mm, 0.22µm	100
ESF-PP-04-045	Polypropylene 4mm, 0.45µm	100
ESF-PP-13-022	Polypropylene 13mm, 0.22µm	100
ESF-PP-13-045	Polypropylene 13mm, 0.45µm	100
ESF-PP-25-022	Polypropylene 25mm, 0.22µm	100
ESF-PP-25-045	Polypropylene 25mm, 0.45µm	100
ESF-PP-30-022	Polypropylene 30mm, 0.22µm	100
ESF-PP-30-045	Polypropylene 30mm, 0.45µm	100



## PES

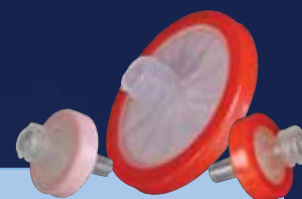
- Naturally hydrophilic and low protein binding
- Ideal for aqueous based samples
- Fast flow rate and high throughput
- General filtration of biological samples

Without pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-PES-04-022	PES 4mm, 0.22µm	100
ESF-PES-04-045	PES 4mm, 0.45µm	100
ESF-PES-13-022	PES 13mm, 0.22µm	100
ESF-PES-13-045	PES 13mm, 0.45µm	100
ESF-PES-25-022	PES 25mm, 0.22µm	100
ESF-PES-25-045	PES 25mm, 0.45µm	100
ESF-PES-30-022	PES 30mm, 0.22µm	100
ESF-PES-30-045	PES 30mm, 0.45µm	100

With integral pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-PES-13-022-PF	PES 13mm, 0.22µm with pre-filter	100
ESF-PES-13-045-PF	PES 13mm, 0.45µm with pre-filter	100
ESF-PES-25-022-PF	PES 25mm, 0.22µm with pre-filter	100
ESF-PES-25-045-PF	PES 25mm, 0.45µm with pre-filter	100
ESF-PES-30-022-PF	PES 30mm, 0.22µm with pre-filter	100
ESF-PES-30-045-PF	PES 30mm, 0.45µm with pre-filter	100

## PVDF

- Broad chemical compatibility and low UV absorbing extractables
- Highly resistant to most solvents and low protein binding
- General filtration of biological samples
- Filtration of all aqueous and most solvent based samples
- Filtration of proteins and tissue cultures



Without pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-PV-04-022	PVDF 4mm, 0.22µm	100
ESF-PV-04-045	PVDF 4mm, 0.45µm	100
ESF-PV-13-022	PVDF 13mm, 0.22µm	100
ESF-PV-13-045	PVDF 13mm, 0.45µm	100
ESF-PV-25-022	PVDF 25mm, 0.22µm	100
ESF-PV-25-045	PVDF 25mm, 0.45µm	100
ESF-PV-30-022	PVDF 30mm, 0.22µm	100
ESF-PV-30-045	PVDF 30mm, 0.45µm	100

With integral pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-PV-13-022-PF	PVDF 13mm, 0.22µm with pre-filter	100
ESF-PV-13-045-PF	PVDF 13mm, 0.45µm with pre-filter	100
ESF-PV-25-022-PF	PVDF 25mm, 0.22µm with pre-filter	100
ESF-PV-25-045-PF	PVDF 25mm, 0.45µm with pre-filter	100
ESF-PV-30-022-PF	PVDF 30mm, 0.22µm with pre-filter	100
ESF-PV-30-045-PF	PVDF 30mm, 0.45µm with pre-filter	100

## Hydrophilic PVDF

- Modified PVDF membrane for inherent water wettability
- Extremely low protein and preservative binding
- Compatible with a wide range of solvents, acids and chemicals
- Extremely low extractables
- Filtration of antibiotics, vaccines, diagnostics, serum, tissue culture media and media additives
- Clarification and purification of deionised water, aqueous solvents, acids, bases and plating solutions

Without pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-PVH-13-022	Hydrophilic PVDF 13mm, 0.22µm	100
ESF-PVH-13-045	Hydrophilic PVDF 13mm, 0.45µm	100
ESF-PVH-25-022	Hydrophilic PVDF 25mm, 0.22µm	100
ESF-PVH-25-045	Hydrophilic PVDF 25mm, 0.45µm	100
ESF-PVH-30-022	Hydrophilic PVDF 30mm, 0.22µm	100
ESF-PVH-30-045	Hydrophilic PVDF 30mm, 0.45µm	100

With integral pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-PVH-13-022-PF	Hydrophilic PVDF 13mm, 0.22µm with pre-filter	100
ESF-PVH-13-045-PF	Hydrophilic PVDF 13mm, 0.45µm with pre-filter	100
ESF-PVH-25-022-PF	Hydrophilic PVDF 25mm, 0.22µm with pre-filter	100
ESF-PVH-25-045-PF	Hydrophilic PVDF 25mm, 0.45µm with pre-filter	100
ESF-PVH-30-022-PF	Hydrophilic PVDF 30mm, 0.22µm with pre-filter	100
ESF-PVH-30-045-PF	Hydrophilic PVDF 30mm, 0.45µm with pre-filter	100

## Mixed Cellulose Esters (MCE)

- Improved hydrophilic character and very low protein binding
- Improved aqueous sample flow and molecular weight cut off
- Ideal for aqueous based samples, tissue culture and sensitive biological samples
- Lower chemical resistance

Without pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-MC-04-022	Mixed Cellulose Esters 4mm, 0.22µm	100
ESF-MC-04-045	Mixed Cellulose Esters 4mm, 0.45µm	100
ESF-MC-13-022	Mixed Cellulose Esters 13mm, 0.22µm	100
ESF-MC-13-045	Mixed Cellulose Esters 13mm, 0.45µm	100
ESF-MC-25-022	Mixed Cellulose Esters 25mm, 0.22µm	100
ESF-MC-25-045	Mixed Cellulose Esters 25mm, 0.45µm	100
ESF-MC-30-022	Mixed Cellulose Esters 30mm, 0.22µm	100
ESF-MC-30-045	Mixed Cellulose Esters 30mm, 0.45µm	100

With integral pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-MC-13-022-PF	Mixed Cellulose Esters 13mm, 0.22µm with pre-filter	100
ESF-MC-13-045-PF	Mixed Cellulose Esters 13mm, 0.45µm with pre-filter	100
ESF-MC-25-022-PF	Mixed Cellulose Esters 25mm, 0.22µm with pre-filter	100
ESF-MC-25-045-PF	Mixed Cellulose Esters 25mm, 0.45µm with pre-filter	100
ESF-MC-30-022-PF	Mixed Cellulose Esters 30mm, 0.22µm with pre-filter	100
ESF-MC-30-045-PF	Mixed Cellulose Esters 30mm, 0.45µm with pre-filter	100

## Regenerated Cellulose

- Hydrophilic
- Easily wettable
- Resistant to most solvents and aqueous solutions (pH range 3-12)
- Low non-specific adsorption
- Particle removal from solvents
- Mobile phase filtration for HPLC

Without pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-RC-13-022	Regenerated Cellulose 13mm, 0.22µm	100
ESF-RC-13-045	Regenerated Cellulose 13mm, 0.45µm	100
ESF-RC-25-022	Regenerated Cellulose 25mm, 0.22µm	100
ESF-RC-25-045	Regenerated Cellulose 25mm, 0.45µm	100
ESF-RC-30-022	Regenerated Cellulose 30mm, 0.22µm	100
ESF-RC-30-045	Regenerated Cellulose 30mm, 0.45µm	100

With integral pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-RC-13-022-PF	Regenerated Cellulose 13mm, 0.22µm with pre-filter	100
ESF-RC-13-045-PF	Regenerated Cellulose 13mm, 0.45µm with pre-filter	100
ESF-RC-25-022-PF	Regenerated Cellulose 25mm, 0.22µm with pre-filter	100
ESF-RC-25-045-PF	Regenerated Cellulose 25mm, 0.45µm with pre-filter	100
ESF-RC-30-022-PF	Regenerated Cellulose 30mm, 0.22µm with pre-filter	100
ESF-RC-30-045-PF	Regenerated Cellulose 30mm, 0.45µm with pre-filter	100

## Glass Fibre

- Borosilicate glass fibre
- Broad chemical compatibility
- Suitable for high throughput pre-filtration of viscous and particulate-laden samples
- Use alone or in series with another KX Syringe Filters
- Removes particulates that interfere with UV/VIS spectrophotometric analysis

Without pre-filter		
PART NUMBER	DESCRIPTION	PACK SIZE
ESF-GF-13-022	Glass Fibre, 13mm, 0.22µm	100
ESF-GF-13-045	Glass Fibre, 13mm, 0.45µm	100
ESF-GF-13-100	Glass Fibre, 13mm, 1µm	100
ESF-GF-25-022	Glass Fibre, 25mm, 0.22µm	100
ESF-GF-25-045	Glass Fibre, 25mm, 0.45µm	100
ESF-GF-25-100	Glass Fibre, 25mm, 1µm	100
ESF-GF-30-022	Glass Fibre, 30mm, 0.22µm	100
ESF-GF-30-045	Glass Fibre, 30mm, 0.45µm	100
ESF-GF-30-100	Glass Fibre, 30mm, 1µm	100

## Specifications

Property	Diameter (mm)			
	4	13	25	30
Filter Area (cm <sup>2</sup> )	0.1	0.65	3.9	4.5
Burst Pressure (psi)	75	100	100	100
Retain Volume (μl)	8	30	120	140
Sample Volume (ml)	2	6	70	90
Housing Material	Polypropylene			
Connector (inlet/outlet)	Female Luer-Lok/Male Luer			

Bulk pack sizes available upon request.





# WolfLabs

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The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.