

Acrodisc™ syringe filters

Instructions for Use

Introduction

Intended use

Cytiva Lab Filtration products are designed for professional laboratory applications only. These products are not approved for use in medical, clinical, surgical or other patient protection applications. They are also not suitable for use in Biopharmaceutical manufacturing or production.

Important

Employment of the products in applications not specified, or failure to follow all instructions contained in this Instructions for Use, can result in personal injury, damage to property or the product, or improper functioning of the product.

HPLC certification

HPLC certified for low levels of UV-absorbing extractables - Glass Fiber, GF/Nylon, GF/wwPTFE, Nylon, wwPTFE, PVDF, Versapor.

Note: Extractable levels may be reduced by flushing the filter prior to use.

Ordering information

Part number	Description	Pkg Pk/case
4472	Acrodisc CR PTFE, 0.45 µm, 4 mm	250/750
4552	Acrodisc CR PTFE Minispike, 0.2 µm, 13 mm	100/300
4552TC	Acrodisc CR PTFE Minispike, 0.2 µm, 13 mm	100
4423	Acrodisc CR PTFE, 0.2 µm, 13 mm	100/300
4553	Acrodisc CR PTFE Minispike, 0.45 µm, 13 mm	100/300
4553TC	Acrodisc CR PTFE Minispike, 0.45 µm, 13 mm	100
4422	Acrodisc CR PTFE, 0.45 µm, 13 mm	100/300
4225	Acrodisc CR PTFE, 0.2 µm, 25 mm	50/200
4225TC	Acrodisc CR PTFE, 0.2 µm, 25 mm	50
4219-N	Acrodisc CR PTFE, 0.45 µm, 25 mm	50/200
4219TC	Acrodisc CR PTFE, 0.45 µm, 25 mm	50
4226	Acrodisc CR PTFE, 1 µm, 25 mm	50/200
4550	Nylon Acrodisc Minispike, 0.2 µm, 13 mm	100/300
4427	Acrodisc Nylon, 0.2 µm, 13 mm	100/300
4551	Acrodisc Nylon Minispike, 0.45 µm, 13 mm	100/300
4551TC	Acrodisc Nylon Minispike, 0.45 µm, 13 mm	100

Part number	Description	Pkg Pk/case
4426	Acrodisc Nylon, 0.45 µm, 13 mm	100/300
4436	Acrodisc Nylon, 0.2 µm, 25 mm	50/200
4436TC	Acrodisc Nylon, 0.2 µm, 25 mm	50
4438	Acrodisc Nylon, 0.45 µm, 25 mm	50/200
4438TC	Acrodisc Nylon, 0.45 µm, 25 mm	50
4549	Acrodisc Nylon GF, GF/0.45 µm, 25 mm	50/200
4450	Acrodisc LC PVDF Minispike, 0.2 µm, 13 mm	100/300
4450TC	Acrodisc LC PVDF Minispike, 0.2 µm, 13 mm	100
4455	Acrodisc LC PVDF, 0.2 µm, 13 mm	100/300
4455TC	Acrodisc LC PVDF, 0.2 µm, 13 mm	100
4452	Acrodisc LC PVDF Minispike, 0.45 µm, 13 mm	100/300
4452TC	Acrodisc LC PVDF Minispike, 0.45 µm, 13 mm	100
4457	Acrodisc LC PVDF, 0.45 µm, 13 mm	100/300
4457TC	Acrodisc LC PVDF, 0.45 µm, 13 mm	100
4406	Acrodisc LC PVDF, 0.2 µm, 25 mm	50/200
4408	Acrodisc LC PVDF, 0.45 µm, 25 mm	50/200
4408TC	Acrodisc LC PVDF, 0.45 µm, 25 mm	50

Ion Chromatography certification

The syringe filters for ion chromatography applications are certified for low levels of inorganic extractables, with actual background levels of filter extractables for the first 1.5 mL of filtrate that typically are less than 50 ppb for nitrate and less than 20 ppb for chloride, phosphate, and sulfate.

Ordering information

Part number	Description	Pk/Case
4483	IC Acrodisc (PES), 0.2 µm, 13 mm	100/300
4485	IC Acrodisc (PES), 0.45 µm, 13 mm	100/300
4583	IC Acrodisc (PES), 0.2 µm, 25 mm	50/200
4585	IC Acrodisc (PES), 0.45 µm, 25 mm	50/200

Instructions for use

Step	Action
1	Before filling the syringe with sample, draw approximately 1 mL of air into the syringe. This will allow the air to follow the sample out of the syringe. This "air purge" minimizes fluid retention within the filter device.
2	Fill the syringe with the solution to be filtered.



CAUTION

Use of syringes smaller than 10 mL can generate excessive pressure on the filter, which may exceed maximum operating pressure.

- Holding the filter device in one hand and the filled syringe in the other, secure (without excessive force) the filled syringe to the filter device with a twisting motion.
- Apply gentle pressure to begin filtration. A gentle pressure helps assure maximum throughput.



CAUTION

As the filter removes particulate, filtration will become more difficult (the syringe plunger will be harder to use) and pressure will rapidly increase on the filter. Change filters when resistance becomes excessive. Failure to change filter may result in housing rupture, which results in particulate contaminating the filtrate.

Note:

These filters are for single use only.

Chemical compatibility

Symbol	Description
R	Resistant. No significant change was observed in flow rate or bubble point.
LR	Limited resistance. Moderate changes in physical properties of the membrane were observed.
NR	Not resistant. The membrane is basically unstable and is not recommended for use.
-	Insufficient data. Information not available. Trial testing is recommended.
*	UV absorbance was set at 254 nm

Solvent	PTFE Acrodisc syringe filters		PVDF Acrodisc syringe filters
	4 mm	13 mm and 25 mm	
Acetone	R*	R*	NR*
Acetonitrile	R	R	R
Acetic acid, glacial	R	R	R
n-Butanol	R	R	R

Solvent	PTFE Acrodisc syringe filters		PVDF Acrodisc syringe filters
	4 mm	13 mm and 25 mm	
Chloroform	LR	R	R
Dioxane	R	R	R
Dimethyl formamide	R*	R*	NR*
Dimethyl sulfoxide	R*	R*	NR*
Ethanol	R	R	R
Ethyl acetate	R*	R*	R*
Ethyl ether	R	R	R
Freon TF	R	R	R
Hydrochloric acid (1N)	R	R	R
Hexane, dry	R	R	R
Methanol	R	R	R
Methylene chloride	LR	R	R
Methyl ethyl ketone	R*	R*	NR*
N-Methyl pyrrolidone	R*	R*	NR*
Isopropanol	R	R	R
Sodium hydroxide (3N)	LR	R	NR
Tetrahydrofuran	LR	R	NR
Tetrahydrofuran/water (50/50)	-	R	-
Toluene	LR*	R*	R*
Water	R	R	R

Solvent	Nylon Acrodisc syringe filters	IC Acrodisc syringe filters	Glass fiber Acrodisc syringe filters
Acetone	R*	NR	R
Acetonitrile	R	R	R
Acetic acid, glacial	NR	R	R
n-Butanol	R	R	R
Chloroform	R	NR	R
Dioxane	-	-	R
Dimethyl formamide	R*	NR	R
Dimethyl sulfoxide	R*	NR	R
Ethanol	R	R	R
Ethyl acetate	R*	NR	R
Ethyl ether	R	R	R
Freon TF	R	LR	R
Hydrochloric acid (1N)	NR	R	R
Hexane, dry	R	LR	R
Methanol	R	R	R
Methylene chloride	R	NR	R
Methyl ethyl ketone	R	NR	R
N-Methyl pyrrolidone	R*	NR	R
Isopropanol	R	R	R
Sodium hydroxide (3N)	LR	R	LR
Tetrahydrofuran	R	NR	R
Tetrahydrofuran/water (50/50)	R	-	R

Solvent	Nylon Acrodisc syringe filters	IC Acrodisc syringe filters	Glass fiber Acrodisc syringe filters
Toluene	R*	R	R
Water	R	R	R

Specifications

Parameter	Specification	
Filter media	PTFE: hydrophobic polytetrafluoroethylene membrane on a polypropylene support Nylon: hydrophilic nylon membrane PVDF: hydrophilic polyvinylidene fluoride membrane PES: hydrophilic polyethersulfone Supor™ membrane Glass: binder-free borosilicate glass fiber wwPTFE: hydrophilic polytetrafluoroethylene (water wettable)	
Housings	Polypropylene	
Pore size	0.2, 0.45, and 1 µm	
Effective filtration area	4 mm: 0.12 cm ² 13 mm: 1.0 cm ² 25 mm: 2.8 cm ²	
Sample volume	4 mm: < 2 mL 13 mm: < 10 mL 25 mm: < 100 mL	
Inlet and outlet connections	Female Luer-Lok inlet, standard male slip luer outlet, or Minispike outlet as noted	
Typical hold-up volume (with air purge)	4 mm: < 10 µL 13 mm Minispike: < 40 µL 13 mm: < 60 µL 25 mm: < 125 µL non-prefilter products 25 mm: < 150 µL pre-filter (GF)	
Maximum operating temperature	55°C (131 °F) at 2.1 bar (210 kPa, 30 psi)	
Maximum operating pressure	13 mm: Nylon, IC (PES), PTFE, Versapor: 6.9 bar (690 kPa, 100 psi) wwPTFE: 6.3 bar (630 kPa, 90 psi) PVDF: 3.5 bar (350 kPa, 50 psi)	25 mm: PTFE: 6.9 bar (690 kPa, 100 psi) GF/Nylon, GF/wwPTFE, Nylon, wwPTFE: 6.2 bar (620 kPa, 90 psi) IC (PES): 4.1 bar (410 kPa, 60 psi) PVDF: 3.5 bar (350 kPa, 50 psi)



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