LABORATORY FILTRATION PRODUCTS & CONSUMABLES



Version 2.0.2

MIKROLAB FRISENETTE

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WHY CHOOSE US?

Mikrolab - Frisenette A/S is a leading manufacturer and distributor of filters, filtration equipment, and consumables for laboratory use.

We work closely with our suppliers to provide access to the latest advancements in laboratory filtration, reflected in our extensive product range designed for modern laboratories. Our products are widely used in industries such as pharmaceuticals, public health, life science, chemicals, food and beverage and environmental labs.We are committed to offering competitive products and excellent service.

In addition to our own brands - AGF Filter Papers, Q-Max® Syringe filters and MontaMil® Membrane filters - we distribute products from ADVANTEC, Macherey-Nagel, Nerbe Plus, Corning Gosselin, Deltalab, Carl Roth, OHAUS Europe, GVS, Rocker Scientific and Jet Bio-Filtration.

Our catalog includes technical information for each product type. For further details, please contact us.

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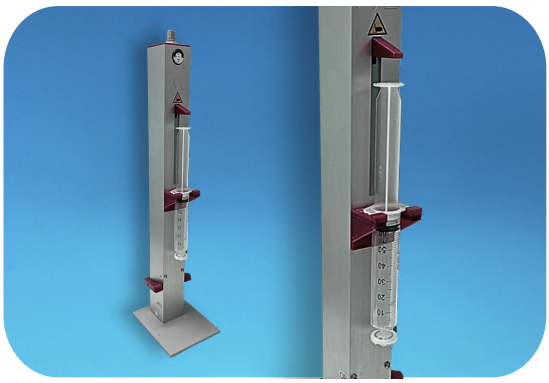
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SYRINGE FILTER PRESS ERGONOMIC TOOL

- The syringe filter press is an ergonomic tool that effectively removes the effort involved in filtration tasks and eliminates the risk of work-related injuries caused by physical RSI (Repetitive Strain Injury)
- The unit can be used both inside and outside fume hoods.
- The press is powered exclusively by compressed air. If compressed air is not available in the laboratory, a low-noise compressor can also be supplied with the press.



Ordering information

Weight [kg]	Dimensions [mm]	Packing [pcs.]	Cat. No.
2.3	550 x 200 x 170	1	ML303810

Q-MAX® RR SYRINGE FILTERS

- This second generation of Q-Max® syringe filters,
- Q-Max® RR, consists of 13 mm and 25 mm filters with a choice of seven different built-in filtration media.
- Choose between six membrane types and two types of glass micro fibers (GF).
- Each filtration media type*, has its own colour code.
- Pore size (nominal retention for GF) is printed on each filter.
- Q-Max® RR syringe filters are supplied in plastic jars with 100 pcs. and in bulk packed boxes with 500 pcs.
- All Q-Max® RR syringe filters undergoes HPLC extractable tests.
- Q-Max® RR syringe filters are manufactured in accordance with ISO 9001.



Specifications	Q-Max® RR 13	Q-Max® RR 25
Housing material	Polypropylene	Polypropylene
Filtration area [cm^2]	0.92	2.98
Hold-up volume [µl]	<10	<30
Max. operating temp [°C]	50	50
Max. operating pressure [bar]	6	6
Recommended sample volume [ml]	<10	<50
Connections [inlet/outlet]	Female luer lock/male luer	Female luer lock/male luer

Q-MAX® RR NY

Nylon – naturally hydrophilic and mechanically strong membrane type with a low level of extractables. Suitable for filtration of aqueous and solvent based samples which makes this type ideal and a good choise for filtration of HPLC samples.



Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
13	0.22	100	13NY022-100
13	0.22	500	13NY022-500
13	0.45	100	13NY045-100
13	0.45	500	13NY045-500

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
25	0.22	100	25NY022-100
25	0.22	500	25NY022-500
25	0.45	100	25NY045-100
25	0.45	500	25NY045-500

Q-MAX® RR CA

Cellulose Acetate membrane – ideal for filtration of aqueous based liquids, most alcohols and liquids containing proteins. CA membranes are considered as being the lowest protein binding membrane type available.



Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
13	0.22	100	13CA022-100
13	0.22	500	13CA022-500
13	0.45	100	13CA045-100
13	0.45	500	13CA045-500

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
25	0.22	100	25CA022-100
25	0.22	500	25CA022-500
25	0.45	100	25CA045-100
25	0.45	500	25CA045-500

Q-MAX® RR PES

PES – Polyethersulphone membrane is a naturally hydrophilic membrane type and is among the most porous types available. Furthermore, this type is asymmetrical, which means that the pores are larger on the inlet side which gives a high throughput.
It is ideal for filtration of aqueous based samples and has a low protein binding. PES is also recommended for ion chromatography.



Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
13	0.22	100	13PE022-100
13	0.22	500	13PE022-500
13	0.45	100	13PE045-100
13	0.45	500	13PE045-500

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
25	0.22	100	25PE022-100
25	0.22	500	25PE022-500
25	0.45	100	25PE045-100
25	0.45	500	25PE045-500

Q-MAX® RR PVDF

Polyvinylidene Difluoride membrane – slightly hydrophobic. Good solvent and acid resistance makes this type suitable for filtration of HPLC samples. Not recommended for filtration of aqueos based samples.



Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
13	0.22	100	13PV022-100
13	0.22	500	13PV022-500
13	0.45	100	13PV045-100
13	0.45	500	13PV045-500

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
25	0.22	100	25PV022-100
25	0.22	500	25PV022-500
25	0.45	100	25PV045-100
25	0.45	500	25PV045-500

Q-MAX® RR GF

Glass micro fibers. The choice for final filtration of samples with a large number of particles or as a pre-filter for syringe filters with built-in membranes.



Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
13	0.7	100	13GF070-100
13	0.7	500	13GF070-500
13	1.0	100	13GF100-100
13	1.0	500	13GF100-500

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
25	0.22	100	25GF070-100
25	0.22	500	25GF070-500
25	0.45	100	25GF100-100
25	0.45	500	25GF100-500



Q-MAX® RR PTFE

Polytetrafluoroethylene membrane – naturally ***hydrophobic*** with excellent resistance against solvents, bases and acids.

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
13	0.22	100	13PT022-100
13	0.22	500	13PT022-500
13	0.45	100	13PT045-100
13	0.45	500	13PT045-500

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
25	0.22	100	25PT022-100
25	0.22	500	25PT022-500
25	0.45	100	25PT045-100
25	0.45	500	25PT045-500

Q-MAX® RR PTFE/L

Hydrophilic PTFE membrane with solvent, base and acid resistance like the hydrophobic type, but also suitable for filtration of aqueous samples which makes this type extremely versatile.

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
13	0.22	100	13PL022-100
13	0.22	500	13PL022-500
13	0.45	100	13PL045-100
13	0.45	500	13PL045-500

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
25	0.22	100	25PL022-100
25	0.22	500	25PL022-500
25	0.45	100	25PL045-100
25	0.45	500	25PL045-500

Q-MAX® GPF SYRINGE FILTERS

Q-Max® GPF 25 mm syringe filters with built-in glass fiber pre-filters are specially designed to filter samples with many particles.

- Available with Cellulose Acetate membranes for aqueous based liquids and Nylon membranes for solvents and/or aqueous based liquids.
- Pore sizes 0.22 µm and 0.45 µm.
- Available in boxes of 100 pcs. or bulk packed in boxes of 500 pcs.



Specifications	Q-Max® GPF
Housing material	Polypropylene
Filtration area [cm^2]	2.98
Hold-up volume [µl]	<30
Max. operating temp [°C]	50
Max. operating pressure [bar]	6
Recommended sample volume [ml]	<100
Connections [inlet/outlet]	Female luer lock/male luer

Ordering information

With Cellulose Acetate membranes

Pore Size [µm]	Packing [pcs.]	Cat. No.
0.22	100	25CAGF022-100
0.22	500	25CAGF022-500
0.45	100	25CAGF045-100
0.45	500	25CAGF045-500

With Nylon membranes

Pore Size [µm]	Packing [pcs.]	Cat. No.
0.22	100	25NYGF022-100
0.22	500	25NYGF022-500
0.45	100	25NYGF045-100
0.45	500	25NYGF045-500

Q-MAX® PES STERILE SYRINGE FILTERS

Q-Max® PES sterile 25 mm syringe filters with low protein binding Polyethersulfone (PES) membranes.

- Main application is sterile filtration of aqueous solutions in volumes up to approx. 50 ml.
- Available pore sizes are 0.22 µm and 0.45 µm.
- Q-Max® PES syringe filters are sterilized by radiation and are manufactured in accordance with ISO 9001.

Q-Max®
Syringe Filters



Specifications	Q-Max® PES
Housing material	Polypropylene
Filtration area [cm^2]	2.98
Hold-up volume [µl]	<30
Max. operating temp [°C]	90
Max. operating pressure [bar]	6.5
Recommended sample volume [ml]	<50
Connections [inlet/outlet]	Female luer lock/male luer

Ordering information

Pore Size [µm]	Packing [pcs.]	Cat. No.
0.22	100	PES2502100S
0.45	100	PES2504100S

Q-MAX® CA-LS STERILE SYRINGE FILTERS

Sterile 25 mm syringe filters with low protein binding Cellulose Acetate membranes.

- Main application is sterile filtration of aqueous solutions in volumes up to approx. 50 ml.
- Available pore sizes are 0.22 µm and 0.45 µm.
- Q-Max® CA-LS syringe filters are sterilized by radiation and are manufactured in accordance with ISO 9001.



Q-MAX® CA-PLUS STERILE SYRINGE FILTERS

Sterile 25 mm syringe filters with low protein binding Cellulose Acetate membranes and built-in glass fiber pre-filter.

- Main application is sterile filtration of aqueous solutions in volumes up to approx. 100 ml.
- Available pore sizes are 0.22 µm and 0.45 µm.
- Q-Max® CA-Plus syringe filters are sterilized by radiation and are manufactured in accordance with ISO 9001.

Specifications	Q-Max® CA-LS	Q-Max® CA-Plus
Housing material	Polypropylene	Polypropylene
Filtration area [cm^2]	2.98	2.98
Hold-up volume [µl]	<30	<30
Max. operating temp [°C]	50	50
Max. operating pressure [bar]	6	6
Recommended sample volume [ml]	<50	<100
Connections [inlet/outlet]	Female luer lock/male luer	Female luer lock/male luer

Ordering information

Q-Max® CA-LS

Pore Size [µm]	Packing [pcs.]	Cat. No.
0.22	100	CALS2502100S
0.45	100	CALS2504100S

Q-Max® CA-Plus

Pore Size [µm]	Packing [pcs.]	Cat. No.
0.22	100	CAPS2502100S
0.45	100	CAPS2504100S

Q-MAX® CA & CA-PLUS SYRINGE FILTERS

Q-Max® 30 mm CA syringe filter with a filtration area which is approximately 50% larger than in standard 25 mm Q-Max® syringe filters.
Available with Cellulose Acetate membrane which is ideal for filtration of aqueous based liquids and some alcohols.

Q-Max® 30 mm CA

- Pore size 0.45 µm.
- Available in packs of 100 pcs. and in bulk packs of 500 pcs.

Q-Max® 30 mm CA-Plus

- Built-in glass fiber pre-filters increases the total throughput.
- Pore size 0,22 and 0.45 µm (membrane).
- Available in packs of 100 pcs.



Specifications	Q-Max® 30 mm CA	Q-Max® 30 mm CA-Plus
Housing material	Polypropylene	Polypropylene
Filtration area [cm^2]	4.6	4.9
Hold-up volume [µl]	<100	<150
Max. operating pressure [bar]	5	6
Connections [inlet/outlet]	Female luer lock/male luer	Female luer lock/male luer

Ordering information

Q-Max® 30 mm CA

Packing [pcs.]	Cat. No.
100	CA30045-100
500	CA30045-500

Q-Max® 30 mm CA-Plus

Pore Size [µm]	Packing [pcs.]	Cat. No.
0.22	100	30CAGF022-100
0.45	100	30CAGF045-100

Q-MAX® 4 MM SYRINGE FILTERS

- For volumes <1 ml.
- Low hold up volume.
- Six different membrane materials.
- Pore sizes 0.22 and 0.45 µm.
- Packings of 200 pcs.



Specifications	Q-Max® 4 mm
Housing material	Polypropylene
Filtration area [cm^2]	0.125
Hold-up volume [µl]	<5
Max. operating pressure [bar]	6
Recommended sample volume [ml]	<1
Connections [inlet/outlet]	Female luer lock/male luer

Membrane types

Cellulose Acetate	Hydrophilic low protein binding membrane. Suitable for aqueous solutions and most alcohols.
Nylon	Hydrophilic and versatile membrane. For aqueous and most solvent based solutions e.g. Methanol and Acetonitrile.
Polyethersulfone	Hydrophilic low protein binding membrane. For aqueous and solvent based solutions. Broad pH resistance.
PVDF	Hydrophobic membrane suitable for filtration of solvents and some acids. Not recommended for filtration of water samples.
PTFE, hydrophobic	Suitable for filtration of strong solvents, acids and bases. Not recommended for filtration of water samples.
PTFE, hydrophilic	Very versatile membrane type. Used for filtration of water, solvents, acids and bases.

Ordering information

Membrane	Pore size [µm]	Cat. No.
Cellulose Acetate	0.22	4CA022-200
Cellulose Acetate	0.45	4CA045-200
Nylon	0.22	4NY022-200
Nylon	0.45	4NY045-200
Polyethersulfone	0.22	4PE022-200
Polyethersulfone	0.45	4PE045-200
PVDF	0.22	4PV022-200
PVDF	0.45	4PV045-200
PTFE hydrophobic	0.22	4PT022-200
PTFE hydrophobic	0.45	4PT045-200
PTFE hydrophilic	0.22	4PL022-200
PTFE hydrophilic	0.45	4PL045-200

50 MM VENT FILTER

Applications

- Sterile venting of vessels e.g. carboys, fermenters etc.
- In-line sterilization of and particulate removal from air and gasses.
- Autoclave venting.
- Water trap.
- Filtration of gas for incubators.
- Filtration of non-aqueous fluids.



Specifications	50 mm Vent Filter
Filter Media	Hydrophobic PTFE reinforced with polypropylene
Pore Size [µm]	0.22 or 0.45
Housing	Polypropylene
Connections	6-12 mm stepped hose barb
Filter area [cm^2]	19.6
Air flow rate 0.20 µm	27 L/min at 1 bar
Air flow rate 0.45 µm	32 L/min at 1 bar
Housing diameter [mm]	63
Housing length [mm]	53
Max. pressure	3.5 bar (approx. 50 psi)
Autoclavable	Up to 10 times – 121°C for 20 min.

Ordering information

Pore Size [µm]	Class	Packing [pcs.]	Cat. No.
0.22	Non-sterile	20	50PT022-20
0.22	Sterile	20	50PT022S-20
0.45	Non-sterile	20	50PT045-20
0.45	Sterile	20	50PT045S-20

MONTAMIL® CA MEMBRANE FILTERS

- MontaMil® Cellulose Acetate (CA) membrane filters are made from pure cellulose acetate modified to be the lowest binding filter available.
- The extremely low binding characteristics provide the highest throughput when filtering solutions containing proteins.
- CA is considered as being the lowest protein binding membrane type available.
- CA membrane filters are relative strong and contain only a small amount of aqueous extractables.
- Diameters 25 mm and 47 mm. Two pore sizes available.
- Autoclavable.



Features

- Lowest binding material available.
- High throughput.
- Strong and dimension stable.
- Uniform pores.

Applications

- Filtration and sterilization of protein and enzyme solutions.
- Tissue culture media sterilization.
- General filtration of aqueous solutions.
- Filtration of most alcohols.

Specifications

Pore Size [µm]	Bubble Point [bar]	Water Flow Rate [ml/min/cm²]	Air Flow Rate [L/min./cm²]
0.22	4.0	18.5	2
0.45	3.1	40	4

Ordering information

Pore Size [µm]	Diameter [mm]	Packing [pcs.]	Cat. No.
0.22	25	100	CA025022
0.22	47	100	CA047022
0.45	25	100	CA025045
0.45	47	100	CA047045

MONTAMIL® MCE MEMBRANE FILTERS

- Mixed Cellulose Ester (MCE) is a mixture of Cellulose Nitrate and Cellulose Acetate.
- By adding Cellulose Acetate the surface of the membrane becomes smoother and more uniform than membranes made of pure Cellulose Nitrate.
- MCE membrane filters are one of the most porous membrane types available.
- Available as plain white.
- Diameters 25 mm and 47 mm. Eight pore sizes available.
- Autoclavable.



Features

- High porosity.
- High purity.
- Biological inert.

Applications

- Clarification and sterilization of aqueous liquids.
- Particle analysis.
- Air analysis.

Specifications

Pore Size [µm]	Bubble Point [bar]	Water Flow Rate [ml/min/cm^2]	Air Flow Rate [L/min./cm^2]
0.22	3.62	19	2
0.45	2.23	60	5
0.65	1.18	135	9
0.8	0.95	180	15
1.2	0.77	270	20
3	0.69	320	28
5	0.56	560	30
8	0.40	600	63

Ordering information

Pore Size [µm]	Diameter [mm]	Packing [pcs.]	Cat. No.
0.22	25	100	MCE025022
0.22	47	100	MCE047022
0.45	25	100	MCE025045
0.45	47	100	MCE047045
0.65	25	100	MCE025065
0.65	47	100	MCE047065
0.8	25	100	MCE025080
0.8	47	100	MCE047080

Pore Size [µm]	Diameter [mm]	Packing [pcs.]	Cat. No.
1.2	25	100	MCE025120
1.2	47	100	MCE047120
3	25	100	MCE025300
3	47	100	MCE047300
5	25	100	MCE025500
5	47	100	MCE047500
8	25	100	MCE025800
8	47	100	MCE047800

MONTAMIL® NYLON MEMBRANE FILTERS

- MontaMil® Nylon membranes are naturally hydrophilic and will only release a negligible amount of extractables.
- Versatile – can be used for filtration of both aqueous liquids and most common solvents.
- MontaMil® Nylon membranes are plain white.
- Diameters 25 mm and 47 mm. Two pore sizes avaliable.
- Autoclavable.



Features

- Naturally hydrophilic.
- Very strong.
- Low level of extractables.

Applications

- HPLC solvent filtration and degassing.
- General filtration of solvents.

Specifications

Pore Size [µm]	Bubble Point [bar]	Water Flow Rate [ml/min/cm²]	Air Flow Rate [L/min./cm²]
0.22	3.4	9.9	1.7
0.45	2.0	26.9	3.2

Ordering information

Pore Size [µm]	Diameter [mm]	Packing [pcs.]	Cat. No.
0.22	25	100	NY025022
0.22	47	100	NY047022
0.45	25	100	NY025045
0.45	47	100	NY047045

MONTAMIL® PVDF-M MEMBRANE FILTERS

- Hydrophilic PVDF membrane type.
- MontaMil® PVDF-M is a low protein binding membrane.
- Versatile – can be used for filtration of aqueous liquids and most organic solvents. Also resistant to several acids.
- Diameter 47 mm. Two pore sizes available.
- Autoclavable.



Features

- Low protein binding.
- Broad chemical resistance.
- Strong.

Applications

- Filtration and degassing HPLC mobile phases.
- Filtration of liquids containing proteins.
- General filtration of solvents.

Specifications

Pore Size [µm]	Thickness [µm]	Bubble Point [bar]	Water Flow Rate [ml/min/cm²]	Air Flow Rate [L/min./cm²]
0.22	125	≥3.45	6.7	2
0.45	125	≥1.55	29	4

Ordering information

Pore Size [µm]	Diameter [mm]	Packing [pcs.]	Cat. No.
0.22	47	200	PVDF047022
0.45	47	200	PVDF047045

MONTAMIL® POLYCARBONATE MEMBRANE FILTERS

- Absolute pore size.
- Smooth, thin glass-like surface.
- Superior strength.
- Low extractables.
- Negligble absorption/adsorption.
- Available as white (translucent) and black (dark grey).



Features

- Surface retention.
- Precise pore sizes.
- Biologically inert.
- Non-staining.
- Non-hygroscopic.

Applications

- Microbiology.
- Microscopy.
- Air analysis.

Specifications

Pore Size (a) [µm]	Pore Density (b) [pores/cm^2]	Nominal Thickness (c) [µm]	Min. BubblePoint (d) [psi]	Typical Flow Rate Water (e) [ml/min/cm^2]	Air [L/min./cm^2]
20	4×10^4	3	1	1000	11 (g)
14	5×10^4	6	0.2	1400	63.5 (g)
12	1×10^5	8	0.4	1250	83.5 (g)
10	1×10^5	10	0.5	1150	34.5 (g)
8	1×10^5	7	0.7	1000	30 (g)
5	4×10^5	10	1.2	700	30 (g)
3	2×10^6	9	2	440	37.5 (g)
2	2×10^6	10	3	300	16.5 (f)
1	2×10^7	11	6	130	20 (f)
0.8	3×10^7	9	7	90	18 (f)
0.6	3×10^7	9	9	60	7.5 (f)
0.4	1×10^8	10	12	33	7.5 (f)
0.2	3×10^8	10	20	10	3 (f)
0.1	4×10^8	6	30	2.2	1.5 (f)
0.08	4×10^8	6	38	0.6	0.75 (f)
0.05	6×10^8	6	50	0.4	0.37 (f)
0.03	6×10^8	6	NA	0.2	0.075 (f)
0.01	6×10^8	6	NA	0.1	0.0075 (f)

Notes:

(a) Tolerance +0% - 20%
(b) Tolerance +/- 15%
(c) Tolerance +/- 10%
(d) Measured using Isopropanol

(e) Initial flow rates using prefiltered water at 10 psid (0.7 kg/cm2)
(f) initial flow rates using prefiltered air at 10 psid (0.7 kg/cm2)
(g) initial flow rates using prefiltered air at 5 psid (0.35 kg/cm2)

Ordering information

Pore Size [µm]	Diameter [mm]	Colour	Packing [pcs.]	Cat. No.
20	25	White	100	K22CP02500
20	47	White	100	K22CP04700
14	25	White	100	K14CP02500
14	47	White	100	K14CP04700
12	25	White	100	K12CP02500
12	47	White	100	K12CP04700
10	25	White	100	K99CP02500
10	47	White	100	K99CP04700
8	25	White	100	K80CP02500
8	25	Black	100	K80BP02500
8	47	White	100	K80CP04700
5	25	White	100	K50CP02500
5	25	Black	100	K50BP02500
5	47	White	100	K50CP04700
5	47	Black	100	K50BP04700
3	25	White	100	K30CP02500
3	25	Black	100	K30BP02500
3	47	White	100	K30CP04700
3	47	Black	100	K30BP04700
2	25	White	100	K20CP02500
2	25	Black	100	K20BP02500
2	47	White	100	K20CP04700
1	25	White	100	K10CP02500
1	25	Black	100	K10BP02500
1	47	White	100	K10CP04700
1	47	Black	100	K10BP04700
0.8	25	White	100	K08CP02500
0.8	25	Black	100	K08BP02500
0.8	47	White	100	K08CP04700
0.8	47	Black	100	K08BP04700
0.6	25	White	100	K06CP02500
0.6	25	Black	100	K06BP02500
0.6	47	White	100	K06CP04700
0.6	47	Black	100	K06BP04700
0.4	25	White	100	K04CP02500
0.4	25	Black	100	K04BP02500
0.4	47	White	100	K04CP04700
0.4	47	Black	100	K04BP04700
0.2	25	White	100	K02CP02500
0.2	25	Black	100	K02BP02500
0.2	47	White	100	K02CP04700
0.2	47	Black	100	K02BP04700
0.1	25	White	100	K01CP02500
0.1	25	Black	100	K01BP02500
0.1	47	White	100	K01CP04700
0.1	47	Black	100	K01BP04700
0.08	25	White	100	KN8CP02500
0.08	47	White	100	KN8CP04700
0.05	25	White	100	KN5CP02500
0.05	47	White	100	KN5CP04700
0.03	25	White	100	KN3CP02500
0.03	47	White	100	KN3CP04700
0.01	25	White	100	KN1CP02500
0.01	47	White	100	KN1CP04700

MONTAMIL® PLUS POLYCARBONATE MEMBRANE FILTERS

- Made from a thin film with precise cylindrical pores.
- Higher pore density compared with traditional polycarbonate membrane filters.
- Narrow pore size distribution.
- Very smooth – all particles will be retained on the surface.
- Ideal for microscopy applications.
- Autoclavable.
- Available as translucent and black*.

*) Black membranes do not resist all types of immersion oils. It is advised to test before use. E.g. Cargille immersion oil TYPE-A will work.

Precise cylindrical pores



Features

- Surface retention.
- Precise pore sizes.
- Biologically inert.
- Non-staining.
- Non-hygroscopic.

Applications

- Microbiology.
- Microscopy.
- Air analysis.

Specifications

Pore Size [µm]	Thickness [µm]	Pore Density [mio./cm²]	Water Flow Rate* [ml/min/cm²]	Air Flow Rate* [L/min./cm²]
0.2	25	500	10	3.5
0.4	25	150	45	8.5
0.8	24	40	90	16.0

*) At 10 PSI

Ordering information

Pore Size [µm]	Diameter [mm]	Colour	Packing [pcs.]	Cat. No.
0.2	25	Black	100	PCB025020
0.2	47	Black	100	PCB047020
0.2	25	White/Translucent	100	PCC025020
0.2	47	White/Translucent	100	PCC047020
0.4	25	White/Translucent	100	PCC025040
0.4	47	White/Translucent	100	PCC047040
0.8	25	White/Translucent	100	PCC025080
0.8	47	White/Translucent	100	PCC047080

MONTAMIL® MCE MEMBRANE FILTERS STERILE

- Mixed Cellulose Ester (MCE) is a mixture of Cellulose Nitrate and Cellulose Acetate. By adding Cellulose Acetate the surface of the membrane becomes smoother and more uniform than pure Cellulose Nitrate.
- White membranes with black grids.
- Diameter 47 mm.
- Pore sizes 0.22 µm and 0.45 µm.
- Membranes are manufactured in accordance with ISO 9001 and comply with ISO 7704.



Features

- High porosity.
- High purity – Triton-free.
- Biological inert.

Applications

- Microbiological control of water, beverages, pharmaceuticals.

Ordering information
Sterile MCE white gridded

Pore Size [µm]	Diameter [mm]	Packing [pcs.]	Cat. No.
0.22	47	100	MCEWGS047022
0.45	47	100	MCEWGS047045

ALLIGATOR 200 VACUUM PUMP

- Alligator 200 is a unique pump capable of delivering sufficient power to perform filtration from manifolds with either 3 filter holders or 6 filter holders.
- Alligator 200 filters directly to waste. Compared to a traditional setup with a manifold, collection vessel, and vacuum pump, Alligator 200 requires approximately 40% less space in a setup.
- Areas of application include microbiology, suspended solids, and all other types of filtration where the material collected on the filter is of interest.



Ordering information

Packing [pcs.]	Cat. No.
1	181200-02

MULTIVAC 300-MS FILTRATION MANIFOLD

- 3-port manifold all parts that come into contact with liquid are made of stainless steel. Handles and valve knobs are made of aluminum.
- All filter holders with no. 8 stopper can be used with this manifold.
- The hose connection for vacuum can be positioned on the side that is most convenient based on the location of the vacuum source.

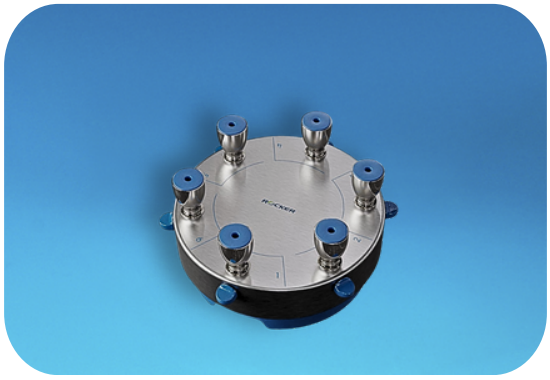


Ordering information

Material	Packing [pcs.]	Cat. No.
Stainless steel/aluminum	1	180300-01

SOLARVAC 600-MS FILTRATION MANIFOLD

- Round, space-saving manifold with capacity for 6 filter holders with stem and no. 8 stopper.
- The top plate can rotate, allowing the filter holders to be positioned in the most convenient working position.
- Parts that come into contact with liquid are made of SS316 stainless steel and silicone.



Ordering information

Packing [pcs.]	Cat. No.
1	186600-01

STAINLESS STEEL FUNNELS FOR WATERVAC, MULTIVAC & SOLARVAC

- Together with MultiVac 300 manifolds, various filter holders and funnels can be used by means of adapters.
- For MultiVac 300 manifolds, adapters are available for stainless steel funnels and for Pall Corporation disposable funnels.



Ordering information

Volume [ml]	Packing [pcs.]	Cat. No.
100	1	180100-01
300	1	180100-03
500	1	180100-05

GLASS FIBER FILTERS

- Glass fiber filters are made of 100% borosilicate glass without binder.
- Resist temperatures up to 500°C, have a good chemical resistance and are biological inert.
- Compared with filter papers glass fiber filters offer a high loading capacity, faster filtration speed and a more efficient filtration.
- Glass fiber filters should be used flat.



Specifications and application examples

Grade	Retention[1] [µm]	Weight [g/m²]	Thickness [mm]	Filtration speed[2] [sec.]	Application examples
GA	1.6	52	0.26	60	Air analysis. Suspended solids in waste water according to EN872:2005
GB	1.0	143	0.70	200	Thick filter with good retention of difficult-to-filter suspensions
GC	1.2	52	0.26	100	Suspended solids in waste water according to EN872:2005. Cell harvesting
GD	2.7	120	0.53	30	Ideal as pre-filter for membranes
GF	0.7	75	0.45	310	Collection of fine proteins and algae
GH	1.5	65	0.28	60	Suspended solids in waste water

1) Approx. 98% of particles with the stated size will be retained by the filter
2) According to Herzberg

Ordering information

Diameter/ [mm]	GA		GB		GC		GD		GF		GH	
	Packing	Cat. No.	Packing	Cat. No.	Packing	Cat. No.	Packing	Cat. No.	Packing	Cat. No.	Packing	Cat. No.
25	100	GA.025	50	GB.025	100	GC.025	50	GD.025	100	GF.025	100	GH.025
37	100	GA.037	50	GB.037	100	GC.037	50	GD.037	100	GF.037	100	GH.037
47	100	GA.047	50	GB.047	100	GC.047	50	GD.047	100	GF.047	100	GH.047
55	100	GA.055	50	GB.055	100	GC.055	50	GD.055	100	GF.055	100	GH.055
70	100	GA.070	50	GB.070	100	GC.070	50	GD.070	100	GF.070	100	GH.070
90	100	GA.090	50	GB.090	100	GC.090	50	GD.090	50	GF.090	100	GH.090
110	100	GA.110	25	GB.110	100	GC.110	25	GD.110	50	GF.110	100	GH.110
125	100	GA.125	25	GB.125	100	GC.125	25	GD.125	50	GF.125	100	GH.125
150	100	GA.150	25	GB.150	100	GC.150	25	GD.150	50	GF.150	100	GH.150

WATERVAC 100-MS MEMBRANE PUMP

- Membrane pump with adapter for filter holders with stem and stopper.
- Compact and space-saving, only 12 cm wide, this membrane pump filters directly to waste.
- This model is compatible with all filter holders fitted with a No. 8 stopper.
- Applications include microbiology, suspended solids, etc.



Ordering information

Packing [pcs.]	Cat. No.
1	190110-02

WATERVAC 100-MS MEMBRANE PUMP

- Plastic filter holders with magnetic closure for volumes of 300 ml and 500 ml. Traditional types with stem and stopper for vacuum flask and manifold, with adapter for bottles with GL45 thread, collection containers, as well as WaterVac 100 and WaterVac 200 pumps.
- Filter holders for any bottles without hose connection. All plastic filter holders are supplied with a lid kit for aseptic filtrations or for tubing from another container, avoiding the need for pouring.

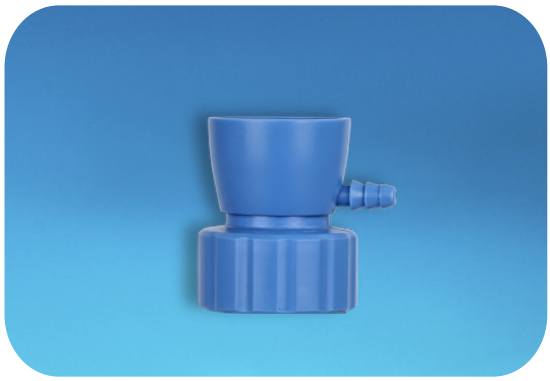


Ordering information

Volume [ml]	Packing [pcs.]	Cat. No.
300	1	200300-01
500	1	200500-01

ADAPTER FOR GL45 BOTTLES & FILTER HOLDERS

- Avoid transferring from a suction flask: Filter directly into the container.
- Mounts on bottles with a GL45 thread. All filter holders with a stem and No. 8 stopper fit the adapter.

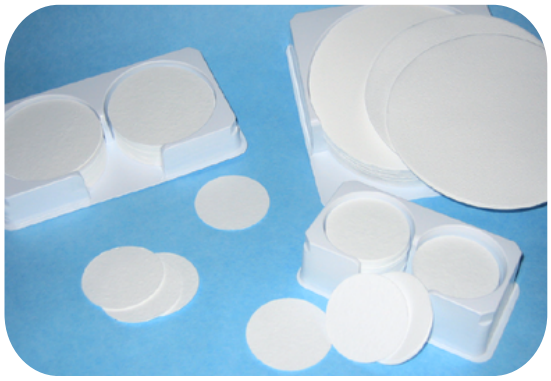


Ordering information

Packing [pcs.]	Cat. No.
1	197000-65

QUARTZ FIBER FILTERS

- Quartz Fiber Filters are made of 100% pure quartz and are binder-free.
- Quartz has an excellent temperature resistance, up to 900°C, and has low content of trace elements.



Applications

- Emission control.
- Exhaust gas control.
- Air pollution analysis.

Specifications

Type	Weight [g/m²]	Retention efficiency [%] 0,3 µm DOP
QF	85	99.998

Trace Elements, typical values [ppm]

Al	As	Cd	Co	Cr	Cu	Fe	Hg	Mg	Mn	Na	Ni	Pb	Sb	Sn	Ti	V	Zn
50	0.75	1.5	1	5	1.25	30	<0.05	25	1.25	40	2	0.75	1.25	0.5	2.5	0.5	5

Ordering information

Diameter / size [mm]	Packing [pcs.]	Cat. No.
25	50	QF.025
37	50	QF.037
45	50	QF.045
47	50	QF.047
55	50	QF.055
70	50	QF.070
80	50	QF.080
85	50	QF.085
90	50	QF.090
110	50	QF.110
118	50	QF.118
150	50	QF.150
203 x 254	25	QF.203254

MICRO-, MIDI- AND MAXI-SPIN

- Made of polypropylene.
- Maxi-Spin with screw cap made of high density polyethylene.
- Volumes are max. volumes.
- Working volumes should be less than stated.
- All types are available with eight types of micro-filtration membranes with two pore sizes.









Micro-Spin	Midi-Spin	Maxi-Spin
Hold-up volume: <5 µl	Hold-up volume: <10 µl	Hold-up volume: <20 µl
Max. centrifugation: 10,000 G	Max. centrifugation: 5,000 G	Max. centrifugation: 2,500 G
900 µl filter insert and 2 ml tube	5 ml filter insert and 7 ml tube	25 ml filter insert and 50 ml tube
With hinged cap	With hinged cap	With screw cap

Membrane types

Nylon	Naturally hydrophilic type with broad solvent resistance. Can also be used for filtration of aqueous samples (pH 3-10) and for commonly used chemicals e.g. Methanol and Acetonitrile.
Polyethersulfone (PES)	Hydrophilic and low protein binding type. Resists pH 1-14.
PVDF	Hydrophilic and low protein binding membrane type. Suitable for both solvent and aqueous liquids. Acid resistant.
Regenerated Cellulose (RC)	Hydrophilic and low protein binding membrane type. Suitable for both solvent and aqueous liquids.
PTFE	Hydrophobic membrane. Resists strong solvents, acids and bases. Not suitable for aqueous samples.
Polypropylene (PP)	Hydrophobic and solvent resistant membrane. Ideal for filtration of samples prior to ion-chromatography.
Cellulose Acetate (CA)	Hydrophilic and low protein binding. For aqueous samples. Also resistant to some alcohols.
Nitro Cellulose (NC)	Hydrophilic (wetting agent added) membrane type. For aqueous samples. Binds proteins.

Micro-Spin

100 pcs. per pack



Membrane	Pore size [µm]	Cat. No.
Nylon	0.2 0.45	CINY02 CINY45
PES	0.2 0.45	CIPE02 CIPE45
PVDF	0.2 0.45	CIPV02 CIPV45
RC	0.2 0.45	CIRC02 CIRC45
PTFE	0.2 0.45	CIPT02 CIPT45
PP	0.2 0.45	CIPP02 CIPP45
CA	0.2 0.45	CICA02 CICA45
NC	0.2 0.45	CINC02 CINC45

Midi-Spin

25 pcs. per pack



Membrane	Pore size [µm]	Cat. No.
Nylon	0.2 0.45	BNY02 BNY45
PES	0.2 0.45	BPE02 BPE45
PVDF	0.2 0.45	BPV02 BPV45
RC	0.2 0.45	BRC02 BRC45
PTFE	0.2 0.45	BPT02 BPT45
PP	0.2 0.45	BPP02 BPP45
CA	0.2 0.45	BCA02 BCA45
NC	0.2 0.45	BNC02 BNC45

Maxi-Spin

50 pcs. per pack



Membrane	Pore size [µm]	Cat. No.
Nylon	0.2 0.45	XNY02 XNY45
PES	0.2 0.45	XPE02 XPE45
PVDF	0.2 0.45	XPV02 XPV45
RC	0.2 0.45	XRC02 XRC45
PTFE	0.2 0.45	XPT02 XPT45
PP	0.2 0.45	XPP02 XPP45
CA	0.2 0.45	XCA02 XCA45
NC	0.2 0.45	XNC02 XNC45

QUALITATIVE FILTER PAPERS

- Extremely pure filter paper made from almost 100% alpha cotton cellulose.
- Ash content approx. 0.06%.
- Four types with different filtration speed and retention characteristics available.
- Available as plain circles and pre-pleated ready to use.
- Boxes are clearly labeled with colour code, type, grade, filtration characteristics and retention efficiency.



Applications

- Clarify and remove precipitates.
- Preparation for qualitative analysis.

Specifications

Grade	Retention [µm]	Weight [g/m^2]	Thickness [mm]	Filtration speed [sec.]*
204	12-15	80	0.16	10 (fast)
201	8-12	80	0.16	20 (medium/fast)
202	5-8	87	0.16	50 (medium)
205	2-3	80	0.14	180 (slow)

*) According to DIN 53137

Plain circles

Grade 204		Grade 201		Grade 202		Grade 205	
Diam. [mm]	Cat. No.	Diam. [mm]	Cat. No.	Diam. [mm]	Cat. No.	Diam. [mm]	Cat. No.
55	204.055	55	201.055	55	202.055	55	205.055
70	204.070	70	201.070	70	202.070	70	205.070
90	204.090	90	201.090	90	202.090	90	205.090
110	204.110	110	201.110	110	202.110	110	205.110
125	204.125	125	201.125	125	202.125	125	205.125
150	204.150	150	201.150	150	202.150	150	205.150
185	204.185	185	201.185	185	202.185	185	205.185
240	204.240	240	201.240	240	202.240	240	205.240
270	204.270	270	201.270	270	202.270	270	205.270

Packing: 100 pcs. pr. box

Pleated

Grade 204F		Grade 201F		Grade 202F		Grade 205F	
Diam. [mm]	Cat. No.	Diam. [mm]	Cat. No.	Diam. [mm]	Cat. No.	Diam. [mm]	Cat. No.
110	204F.110	110	201F.110	110	202F.110	110	205F.110
125	204F.125	125	201F.125	125	202F.125	125	205F.125
150	204F.150	150	201F.150	150	202F.150	150	205F.150
185	204F.185	185	201F.185	185	202F.185	185	205F.185
240	204F.240	240	201F.240	240	202F.240	240	205F.240
320	204F.320	320	201F.320	320	202F.320	320	205F.320

Packing: 100 pcs. pr. box

QUANTITATIVE FILTER PAPERS

- Quantitative (ashless) filter papers are made from 100% cotton linters and are free from impurities since the paper is acid washed and cleaned with ultra pure water.
- The ash content is 0.007%.
- Four types with different filtration speed and retention characteristics.
- Available as plain circles and pre-pleated ready to use.
- Boxes are clearly labeled with colour code, type, grade, filtration characteristics and retention efficiency.



Applications

- Environmental analysis.
- Gravimetric analysis.

Specifications

Grade	Retention [µm]	Weight [g/m^2]	Thickness [mm]	Filtration speed [sec.]*
441	12-15	84	0.18	10 (fast)
442	8-12	84	0.17	20 (medium/fast)
440	5-8	84	0.16	50 (medium)
444	2-3	84	0.14	180 (slow)

*) According to DIN 53137

Plain circles

Grade 441		Grade 442		Grade 440		Grade 444	
Diam. [mm]	Cat. No.	Diam. [mm]	Cat. No.	Diam. [mm]	Cat. No.	Diam. [mm]	Cat. No.
55	441.055	55	442.055	55	440.055	55	444.055
70	441.070	70	442.070	70	440.070	70	444.070
90	441.090	90	442.090	90	440.090	90	444.090
110	441.110	110	442.110	110	440.110	110	444.110
125	441.125	125	442.125	125	440.125	125	444.125
150	441.150	150	442.150	150	440.150	150	444.150
185	441.185	185	442.185	185	440.185	185	444.185
240	441.240	240	442.240	240	440.240	240	444.240
270	441.270	270	442.270	270	440.270	270	444.270

Packing: 100 pcs. pr. box

Pleated

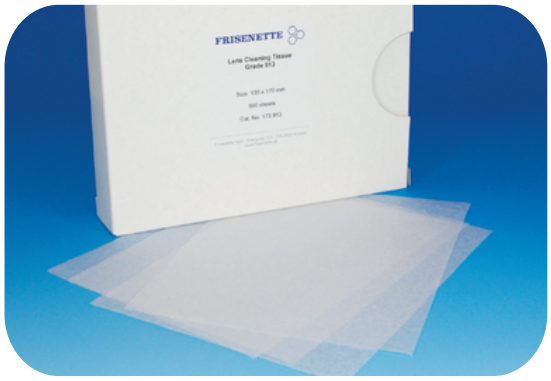
Grade 441F		Grade 442F		Grade 440F		Grade 444F	
Diam. [mm]	Cat. No.	Diam. [mm]	Cat. No.	Diam. [mm]	Cat. No.	Diam. [mm]	Cat. No.
110	441F.110	110	442F.110	110	440F.110	110	444F.110
125	441F.125	125	442F.125	125	440F.125	125	444F.125
150	441F.150	150	442F.150	150	440F.150	150	444F.150
185	441F.185	185	442F.185	185	440F.185	185	444F.185
240	441F.240	240	442F.240	240	440F.240	240	444F.240
320	441F.320	320	442F.320	320	440F.320	320	444F.320

Packing: 100 pcs. pr. box

Mikrolab - Frisenette A/S Jens Juuls Vej 20, 8260 Viby J ml@mikrolab.dk +45 86 29 61 11 www.mikrolab.dk

LENS CLEANING TISSUE

- Very soft paper made of 100% Manilla fibers.
- No fluffy and do not scratch.
- Packed in cardboard boxes.
- Sheets size 135 x 170 mm.

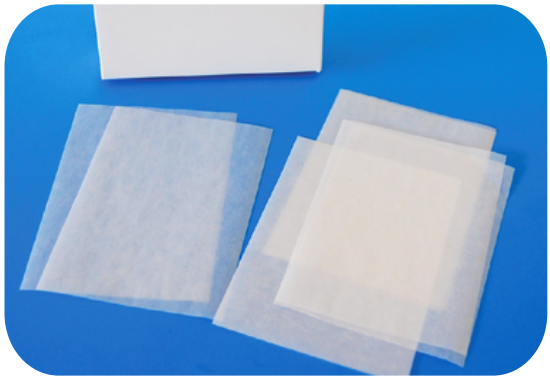


Ordering information

Packing [pcs.]	Cat. No.
500	173.913

WEIGHING PAPER

- Very smooth 40 g/m^2 paper. The smooth surface ensures excellent dispensing of powders.
- Packed in cardboard boxes.
- Available in two sizes.



Ordering information

Size [mm]	Packing [pcs.]	Cat. No.
100 x 100	500	171.100100
90 x 125	500	171.925

MILK SEDIMENT FILTERS

- Used for checking for impurities in raw milk.



Ordering information

Diameter [mm]	Packing [pcs.]	Cat. No.
32	500	133.032

SEED TESTING PAPERS

- For germination tests.
- Available as circles, circles with a slit for wick and sheets.
- The paper has a thickness of approx. 0.3 mm. and a weight of approx. 140 g/m2.
- Standard sizes for circles are 75 mm and 85 mm.
- Standard size for wicks is 18 x 310 mm.
- Standard sizes for sheets are 48 x 48 cm and 62 x 62 cm.
- Special cuts available on request.



Circles

Diameter [mm]	Packing [pcs.]	Cat. No.
75	5000	127.075
85	5000	127.085

Circles – with slit for wick

Diameter [mm]	Packing [pcs.]	Cat. No.
75	5000	127.175
85	5000	127.185

Wicks

Size [mm]	Packing [pcs.]	Cat. No.
18 x 310	2500	127.018310

Sheets

Size [mm]	Packing [pcs.]	Cat. No.
480 x 480	500	124.948
620 x 620	500	124.962

FILTER CASSETTES

- For transport and storage of filters.
- Made of antistatic material.
- Tight lid which prevent contamination.
- Filters are kept in place along the edge of the filters.
- Three sizes – for 25 mm, 37 mm and 47 mm filters.

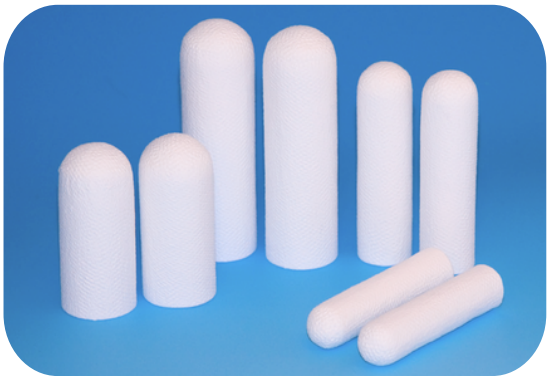


Ordering information

For filter diameter [mm]	Packing [pcs.]	Cat. No.
25	25	L90025
37	25	L90037
47	25	L90047

EXTRACTION THIMBLES

- Cellulose extraction thimbles made of pure cotton linters completely free from impurities and are fat free.
- Thimbles hold solid material from which certain substances are eluted e.g. fat from foodstuffs.
- Dimensions are inside diameter x length.
- Standard wall thickness is approx. 1.5 mm.



Applications

- Soxhlet extractions.
- Dust sampling.

Ordering information

Size [mm]	Packing [pcs.]	Cat. No.
19 x 90	25	610.199
22 x 80	25	610.228
25 x 80	25	610.258
25 x 100	25	610.250
26 x 60	25	610.266
28 x 80	25	610.288
28 x 100	25	610.280
30 x 80	25	610.308
30 x 100	25	610.300
33 x 80	25	610.338
33 x 94	25	610.339
33 x 100	25	610.331
33 x 118	25	610.318
35 x 150	25	610.351
41 x 123	25	610.412

FILTERMAX™ BT

- FilterMax™ BT are sterile bottletop filters for vacuum filtration and are identical to the upper part of the FilterMax FU.
- The built-in membrane filters are made of polyethersulfone (PES), a low-protein-binding membrane type with fast flow and high capacity.
- The products are gamma-sterilized, individually packaged, and pyrogen-free.
- They can be used for filtration of aqueous-based liquids, such as buffers and culture media.



Ordering information

Pore Size [µm]	Volume [ml]	Class	Material	Packing [pcs.]	Cat. No.
0.22	150	Sterile R	PES	24	FPE214150
0.22	250	Sterile R	PES	24	FPE214250
0.22	500	Sterile R	PES	24	FPE214500
0.22	1000	Sterile R	PES	24	FPE214000

FILTERMAX™ FU

- FilterMax™ FU are complete sterile filter units for vacuum filtration. They consist of a reservoir (top part) and a collection bottle with graduations. A screw cap is included for the collection bottle.
- The built-in membrane filters are made of polyethersulfone (PES), a low-protein-binding membrane type with fast flow and high capacity.
- They can be used for filtration of aqueous-based liquids, such as buffers and culture media.
- FilterMax™ FU are gamma-sterilized, individually packaged, and pyrogen-free.



Ordering information

Pore Size [µm]	Volume [ml]	Class	Material	Packing [pcs.]	Cat. No.
0.22	150	Sterile R	PES	12	FPE204150
0.22	250	Sterile R	PES	12	FPE204250
0.22	500	Sterile R	PES	12	FPE204500
0.22	1000	Sterile R	PES	12	FPE204000

NOTES



@Mikrolab - Frisenette A/S

@Mikrolab - Frisenette A/S

MIKROLAB FRISENETTE

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We reserve the right for typographical errors. The assortment may change without prior notice.