



FRISENETTE



LABORATORY
FILTRATION PRODUCTS
& CONSUMABLES



Introduction

We are proud to present this third issue of our catalogue with Frisenette products.

Frisenette ApS was founded in 1931 and is a leading manufacturer and distributor of filters, filtration equipment and consumables for laboratory use. Together with our suppliers we strive to assure customer access to the latest developments in laboratory filtration and consumables. This is reflected in our large and diversified product range which meets the requirements in any modern laboratory.

Our products are widely used in the pharmaceutical industry, public health, life science, chemical industry, food and beverage industry, environmental laboratories and the electronics industry. It is our aim to offer our customers highly competitive products and the best service.



Frisenette ApS is located in Knebel, Denmark

Beside our own brands, AGF® Filter papers, Q-Max® Syringe filters and MontaMil® Membrane filters, we are promoting products from ADVANTEC Toyo Kaisha, Ltd., GE Healthcare (Whatman), GVS, Macherey-Nagel GmbH & Co. KG, Ahlstrom, Nerbe Plus, Orange Scientific, Gosselin, Deltalab S.A., Kima s.a.s. and Guangzhou Jet Bio-Filtration.

This catalogue includes our own range of laboratory filtration products: Q-Max® Syringe filters, MontaMil® Membrane filters, Glass- and Quartz fiber filters, Qualitative and Quantitative filter papers, pH papers, filter holders, pH strips and other paper based products.

In the catalogue you will find basic technical information for each product type. If you need any further information please do not hesitate to contact us or your local supplier of our products.



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Q-Max® RR Syringe Filters

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.

** Both types of PTFE, hydrophobic and hydrophilic, have the same colour.*



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 choice 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 Syringe Filters

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 aqueous based samples.

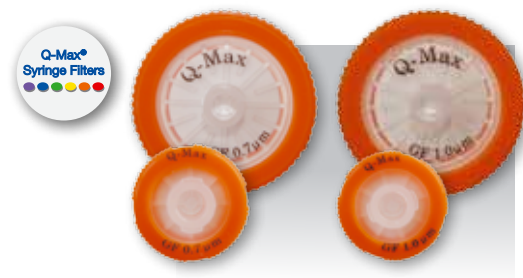


| Size [mm] | Pore Size [µm] | Packing [pcs.] | Cat. No. |
|-----------|----------------|----------------|-------------|
| 13 | 0.22 | 100 | 13PV022-100 |
| 13 | 0.22 | 500 | 13PV022-500 |
| 13 | 0.45 | 100 | 13PV045-100 |
| 13 | 0.45 | 500 | 13PV045-500 |

| 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] | Nominal 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] | Nominal Pore Size [µm] | Packing [pcs.] | Cat. No. |
|-----------|------------------------|----------------|-------------|
| 25 | 0.7 | 100 | 25GF070-100 |
| 25 | 0.7 | 500 | 25GF070-500 |
| 25 | 1.0 | 100 | 25GF100-100 |
| 25 | 1.0 | 500 | 25GF100-500 |

Q-Max® RR Syringe Filters



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 |

SYRINGE FILTERS

Q-Max® GPF Syringe Filters

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 [cm²] | 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® NN Syringe Filters

Q-Max® NN Syringe Filters

- 17 mm and 30 mm diameter
- Available with three membrane types
- Pore sizes 0.20 µm and 0.45 µm
- Available in boxes of 100 pcs.
Most in bulk packs with 1000 pcs.



Q-Max® NN PP

Hydrophilic Polypropylene with broad solvent resistance. Low protein binding. Also ideal for preparation of ion-chromatography samples.

Q-Max® NN PVDF

Hydrophilic PVDF membrane ideal for aqueous samples as well as most common solvents. Also resistant against several acids. PVDF is low protein binding.

Q-Max® RC

Regenerated Cellulose is low protein binding and therefore well suited for biological samples. Hydrophilic with broad solvent resistance.

17 mm

| Pore Size [µm] | Packing [pcs.] | Cat. No. |
|----------------|----------------|--------------|
| 0.20 | 100 | 17PP020-100 |
| 0.45 | 100 | 17PP045-100 |
| 0.45 | 1000 | 17PP045-1000 |

17 mm

| Pore Size [µm] | Packing [pcs.] | Cat. No. |
|----------------|----------------|--------------|
| 0.20 | 100 | 17PV020-100 |
| 0.20 | 1000 | 17PV020-1000 |
| 0.45 | 100 | 17PV045-100 |
| 0.45 | 1000 | 17PV045-1000 |

17 mm

| Pore Size [µm] | Packing [pcs.] | Cat. No. |
|----------------|----------------|--------------|
| 0.20 | 100 | 17RC020-100 |
| 0.20 | 1000 | 17RC020-1000 |
| 0.45 | 100 | 17RC045-100 |
| 0.45 | 1000 | 17RC045-1000 |

30 mm

| Pore Size [µm] | Packing [pcs.] | Cat. No. |
|----------------|----------------|--------------|
| 0.20 | 100 | 30PP020-100 |
| 0.45 | 100 | 30PP045-100 |
| 0.45 | 1000 | 30PP045-1000 |

30 mm

| Pore Size [µm] | Packing [pcs.] | Cat. No. |
|----------------|----------------|--------------|
| 0.20 | 100 | 30PV020-100 |
| 0.20 | 1000 | 30PV020-1000 |
| 0.45 | 100 | 30PV045-100 |
| 0.45 | 1000 | 30PV045-1000 |

30 mm

| Pore Size [µm] | Packing [pcs.] | Cat. No. |
|----------------|----------------|--------------|
| 0.20 | 100 | 30RC020-100 |
| 0.20 | 1000 | 30RC020-1000 |
| 0.45 | 100 | 30RC045-100 |
| 0.45 | 1000 | 30RC045-1000 |

Specifications

| Size | 17 mm | 30 mm |
|--------------------------------|----------------------------|----------------------------|
| Housing material | Polypropylene | Polypropylene |
| Filtration area [cm²] | 1.4 | 4.8 |
| Hold-up volume [µl] | 29 | 137 |
| Max. operating temp [°C] | 100 | 100 |
| Max. operating pressure [Psi] | 115 | 90 |
| Recommended sample volume [ml] | <12 | <120 |
| Connections [inlet/outlet] | Female luer lock/male luer | Female luer lock/male luer |

SYRINGE FILTERS

Q-Max® CA-LS & Q-Max® CA-Plus Sterile Syringe Filters

Q-Max® CA-LS

- 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 to ISO 9001.

Q-Max® CA-Plus

- 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 to ISO 9001.



Specifications

| | Q-Max® CA-LS | Q-Max® CA-Plus |
|--------------------------------|----------------------------|----------------------------|
| Housing material | Polypropylene | Polypropylene |
| Filtration area [cm²] | 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-S Sterile Syringe Filters

Q-Max® CA-S

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 0.20 µm (blue) and 0.45 µm (yellow).
- Q-Max® CA-S syringe filters are sterilized by radiation and are manufactured in accordance to ISO 9001.



Specifications

| | Q-Max® CA-S |
|-------------------------------|---------------------------------|
| Housing material | Cyrolite® |
| Filtration area [cm²] | 4.15 |
| Hold-up volume [µl] | 70 |
| Max. operating temp [°C] | 50 |
| Max. operating pressure [bar] | 5 |
| Sample volume [ml] | <50 |
| Connections [inlet/outlet] | Female luer lock/male luer lock |

Ordering information

| Pore Size [µm] | Packing [pcs.] | Cat. No. |
|----------------|----------------|-----------|
| 0.20 | 50 | CA250250S |
| 0.45 | 50 | CA250450S |

SYRINGE FILTERS

Q-Max[®] PES Sterile Syringe Filters

Q-Max[®] PES

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 to ISO 9001.



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 |
| 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 and 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 0.45 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 [cm²] | 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

| Packing [pcs.] | Cat. No. |
|----------------|---------------|
| 100 | 30CAGF045-100 |

40 mm

Bacterial and Viral Vent Filter

Applications

- Sterile venting of vessels e.g. carboys, fermenters etc.
- In-line sterilization of and particulate removal from air and gases
- Autoclave venting
- Filtration of gas for incubators



Specifications

| 40 mm Bacterial and Viral Vent Filter | |
|---------------------------------------|---|
| Filter Media | Hydrophobic Glass Fibers |
| Retention - Bacterial | 99.999% filtration efficiency of 0.027 μm phage |
| Retention - Viral | 99.9999% filtration efficiency of 0.027 μm phage |
| Housing | Polypropylene |
| Connections | 6-8 mm stepped hose barb |
| Filter area [cm^2] | 14.6 |
| Air flow rate | 21 L/min. at 3 psi |
| Housing diameter [mm] | 53 |
| Housing length [mm] | 59 |
| Max. pressure | 2.7 bar (approx. 40 psi) |
| Autoclavable | up to 10 times – 121°C for 20 min. |

Ordering information

| | Packing [pcs.] | Cat. No. |
|-------------|----------------|------------|
| Sterile | 10 | 40PHOGFS10 |
| Non-sterile | 50 | 40PHOGFN50 |

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 [cm²] | 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] | | Packing [pcs.] | Cat. No. |
|----------------|-------------|----------------|-------------|
| 0.22 | Sterile | 10 | 50PT022S10 |
| 0.22 | Non-sterile | 100 | 50PT022N100 |
| 0.45 | Sterile | 10 | 50PT045S10 |
| 0.45 | Non-sterile | 100 | 50PT045N100 |

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./cm²] | Air Flow Rate [L/min./cm²] |
|-------------------|-----------------------|----------------------------------|-------------------------------|
| 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. | Pore Size [μm] | Diameter [mm] | Packing [pcs.] | Cat. No. |
|-------------------|------------------|-------------------|-----------|-------------------|------------------|-------------------|-----------|
| 0.22 | 25 | 100 | MCE025022 | 1.2 | 25 | 100 | MCE025120 |
| 0.22 | 47 | 100 | MCE047022 | 1.2 | 47 | 100 | MCE047120 |
| 0.45 | 25 | 100 | MCE025045 | 3 | 25 | 100 | MCE025300 |
| 0.45 | 47 | 100 | MCE047045 | 3 | 47 | 100 | MCE047300 |
| 0.65 | 25 | 100 | MCE025065 | 5 | 25 | 100 | MCE025500 |
| 0.65 | 47 | 100 | MCE047065 | 5 | 47 | 100 | MCE047500 |
| 0.8 | 25 | 100 | MCE025080 | 8 | 25 | 100 | MCE025800 |
| 0.8 | 47 | 100 | MCE047080 | 8 | 47 | 100 | MCE047800 |

MEMBRANE FILTERS

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 available.
- 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./cm ²] | Air Flow Rate [L/min./cm ²] |
|-------------------|-----------------------|---|--|
| 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 Membrane Filters

- This type of MontaMil® PVDF is slightly hydrophobic. This means that the liquid to be filtered must contain min. 30% organic solvent to ensure a proper filtration.
- Resistant to common solvents and several acids.
- It is not recommended to filter aqueous liquids with this type.
- Diameter 47 mm. Two pore sizes available.
- Autoclavable.



Features

- Strong
- Low level of extractables
- Good solvent and acid resistance

Applications

- Filtration and degassing HPLC mobile phases
- General solvent filtration

Specifications

| Pore Size [μm] | Thickness [μm] | Bubble Point [bar] | Air Flow Rate [ml/min/cm²] | Porosity [%] |
|-------------------|-------------------|-----------------------|-------------------------------|-----------------|
| 0.22 | 95 | 0.7 – 1.5 | 0.18 | 75 – 80 |
| 0.45 | 95 | 0.4 – 0.7 | 0.2 | 75 – 80 |

Ordering information

| Pore Size [μm] | Diameter [mm] | Packing [pcs.] | Cat. No. |
|-------------------|------------------|-------------------|----------|
| 0.22 | 47 | 100 | PV047022 |
| 0.45 | 47 | 100 | PV047045 |

MEMBRANE FILTERS

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 [ml/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 | 100 | PVM047022 |
| 0.45 | 47 | 100 | PVM047045 |

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.



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 |
| * at 10 PSI 0.8 | 24 | 40 | 90 | 16.0 |

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 |

MEMBRANE FILTERS

MontaMil® Polycarbonate Membrane Filters

- Absolute pore size
- Smooth, thin glass-like surface
- Superior strength
- Low extractables
- Negligible 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 x 10 ⁴ | 3 | 1 | 1000 | 11 (g) |
| 14 | 5 x 10 ⁴ | 6 | 0.2 | 1400 | 63.5 (g) |
| 12 | 1 x 10 ⁵ | 8 | 0.4 | 1250 | 83.5 (g) |
| 10 | 1 x 10 ⁵ | 10 | 0.5 | 1150 | 34.5 (g) |
| 8 | 1 x 10 ⁵ | 7 | 0.7 | 1000 | 30 (g) |
| 5 | 4 x 10 ⁵ | 10 | 1.2 | 700 | 30 (g) |
| 3 | 2 x 10 ⁶ | 9 | 2 | 440 | 37.5 (g) |
| 2 | 2 x 10 ⁶ | 10 | 3 | 300 | 16.5 (f) |
| 1 | 2 x 10 ⁷ | 11 | 6 | 130 | 20 (f) |
| 0.8 | 3 x 10 ⁷ | 9 | 7 | 90 | 18 (f) |
| 0.6 | 3 x 10 ⁷ | 9 | 9 | 60 | 7.5 (f) |
| 0.4 | 1 x 10 ⁸ | 10 | 12 | 33 | 7.5 (f) |
| 0.2 | 3 x 10 ⁸ | 10 | 20 | 10 | 3 (f) |
| 0.1 | 4 x 10 ⁸ | 6 | 30 | 2.2 | 1.5 (f) |
| 0.08 | 4 x 10 ⁸ | 6 | 38 | 0.6 | 0.75 (f) |
| 0.05 | 6 x 10 ⁸ | 6 | 50 | 0.4 | 0.37 (f) |
| 0.03 | 6 x 10 ⁸ | 6 | NA | 0.2 | 0.075 (f) |
| 0.01 | 6 x 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)

MontaMil® Polycarbonate Membrane Filters

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 |

MEMBRANE FILTERS

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 to ISO 9001 and comply with ISO 7704.



Features

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

Applications

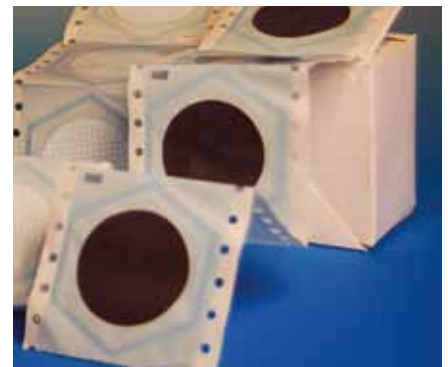
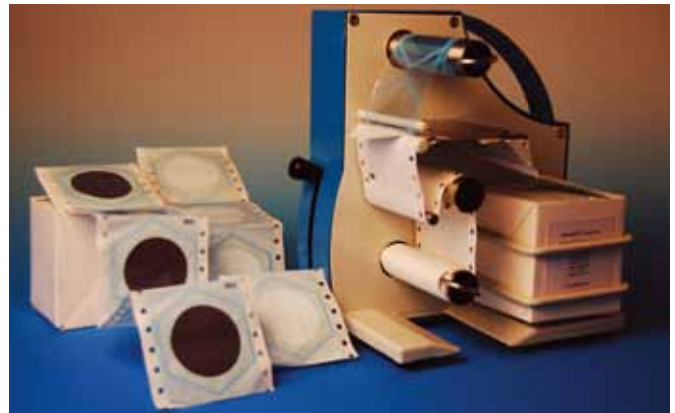
- Microbiological control of water, beverages, pharmaceuticals

Sterile MCE white gridded

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

MontaMil® EasyPick Sterile Membrane Filters & Dispenser

- 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.
- White and black gridded membrane filters
- Diameter 47 mm.
- Pore size 0.45 µm
- Membranes are manufactured in accordance to ISO 9001 and comply with ISO 7704.
- Mechanical dispenser. MontaMil® EasyPick membranes can also be used with other dispensers.



Ordering information

| Colour | Pore Size [µm] | Diameter [mm] | Packing [pcs.] | Cat. No. |
|------------------|----------------|---------------|----------------|---------------|
| White with grids | 0.45 | 47 | 150 | MCEWGSZ047045 |
| Black with grids | 0.45 | 47 | 150 | MCEBGZ047045 |

Dispenser

Ordering information

| Cat. No. |
|--------------------|
| Membrane dispenser |
| MM-DISP |



GLASS FIBER FILTERS

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/m ²] | 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

| Dia- meter/ [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 |

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/m ²] | 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 |

QUALITATIVE FILTER PAPERS

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/m²] | 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

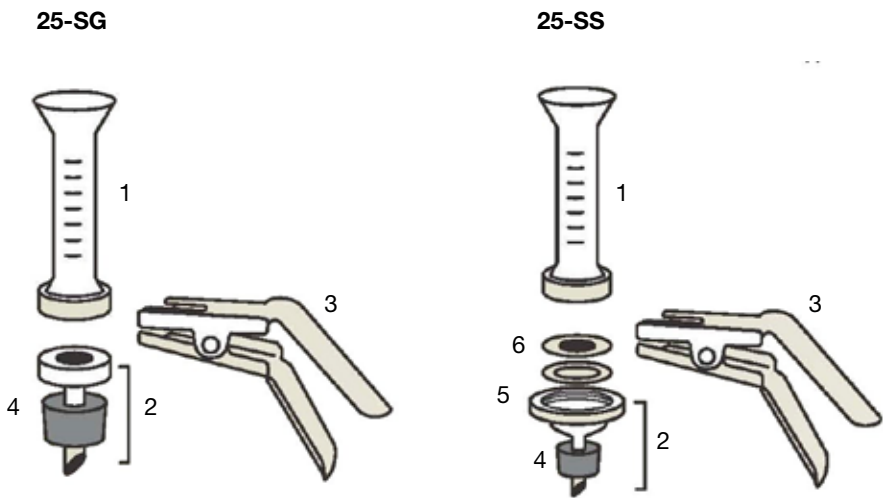
| Grade 441F | | Grade 442F | | Grade 440F | | Grade 444F | |
|-------------------|----------|-------------------|----------|-------------------|----------|-------------------|----------|
| Diam. [mm] | Cat. No. | Diam. [mm] | Cat. No. | Diam. [mm] | Cat. No. | Diam. [mm] | Cat. No. |
| 110 | 441F.110 | 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

FILTER HOLDERS

Glass Filter Holders – 25 mm

- For 25 mm filters. Made of borosilicate glass.
- Choose between sintered glass support and stainless steel support.
- **Sintered glass support** for microbiological and particle analysis. Model 25-SG.
- **Stainless steel support** for producing a clean filtrate and for filtration of solutions containing proteins. Model 25-SS.
- Funnel capacity is 22 ml. Graduated to 15 ml.
- Holders are supplied complete with funnel, base, clamp and silicone stopper.



Ordering information

| Model | 25-SG | 25-SS |
|----------|--------|--------|
| Cat. No. | 258100 | 259100 |

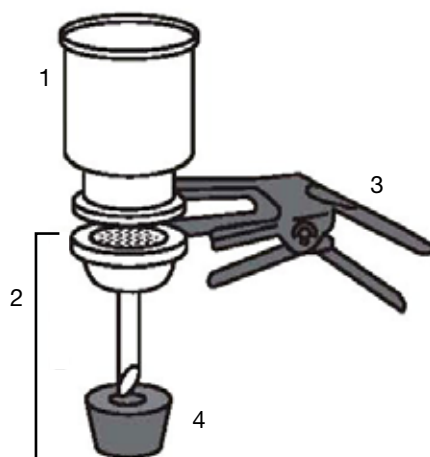
| Spare Parts | 25-SG | 25-SS |
|--------------------------|--------|--------|
| 1 Funnel | 257101 | 257101 |
| 2 Base incl. stopper | 257102 | 257103 |
| 3 Clamp | 257104 | 257104 |
| 4 Stopper No. 5 | 257105 | 257105 |
| 5 PTFE gasket | - | 257106 |
| 6 Stainless steel screen | - | 257107 |

Glass Filter Holders – 47 mm

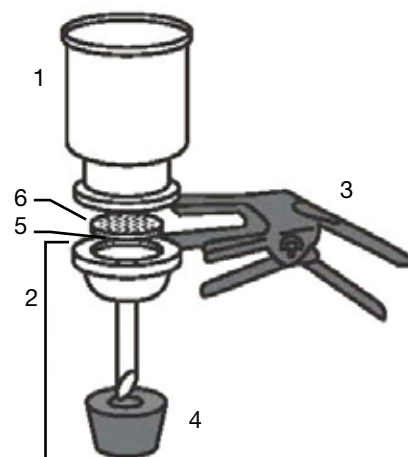
- For 47 mm filters. Made of borosilicate glass.
- Choose between sintered glass support and stainless steel support.
- **Sintered glass support** for microbiological and particle analysis. Model 47-SG.
- **Stainless steel support** for producing a clean filtrate and for filtration of solutions containing proteins. Model 47-SS.
- Funnel capacity is 300 ml. Graduated to 250 ml.
- Holders are supplied complete with funnel, base, clamp and silicone stopper.



47-SG



47-SS



Ordering information

| Model | 47-SG | 47-SS |
|----------|--------|--------|
| Cat. No. | 478100 | 479100 |

| Spare Parts | 47-SG | 47-SS |
|--------------------------|--------|--------|
| 1 Funnel | 477101 | 477101 |
| 2 Base incl. stopper | 477102 | 477103 |
| 3 Clamp | 477104 | 477104 |
| 4 Stopper No. 8 | 477105 | 477105 |
| 5 PTFE gasket | - | 477106 |
| 6 Stainless steel screen | - | 477107 |

FILTER HOLDERS

Adapter for bottles with GL 45 thread

- Filter directly to receiver bottle.
- No need to transfer the filtrate from a suction flask.
- Ideal for use with Filter Holder 47-SS (see page 33) for filtration and degassing of HPLC mobile phases.
- Solid polypropylene construction with silicone stopper and o-ring.

Note: only use with pressure tested glass bottles.



Description and ordering information

| | Cat. No. |
|--|----------|
| Complete adapter with stopper and o-ring | 445.709 |
| Spare stopper | 445.711 |
| Spare o-ring | 445.715 |

Example of set-up

- Pressure tested glass bottle (not available from Frisenette)
- Adapter
- Model 47-SS filter holder with stainless steel filter support



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.



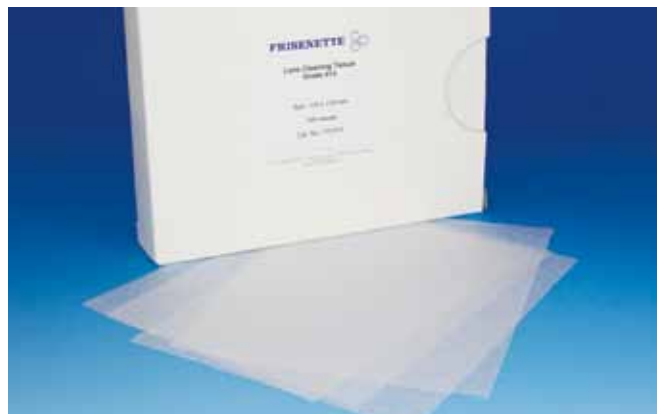
- Soxhlet extractions
- Dust sampling

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 |

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/m² 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. 0.30 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 | 5.000 | 127.075 |
| 85 | 5.000 | 127.085 |

Circles – with slit for wick

| Diameter [mm] | Packing [pcs.] | Cat. No. |
|---------------|----------------|----------|
| 75 | 5.000 | 127.175 |
| 85 | 5.000 | 127.185 |

Wicks

| Diameter [mm] | Packing [pcs.] | Cat. No. |
|---------------|----------------|------------|
| 18 x 310 | 2.500 | 127.018310 |

Sheets

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

TABLE PROTECTION PAPER

LAB-SORB Plus™

- Absorbent filter paper with a non permeable plastic backing for laboratory bench protection.
- Absorption capacity approx. 200 ml/m².
- Available as sheets and rolls.



Sheets

| Size | Packing [pcs.] | Cat. No. |
|------------|----------------|------------|
| 46 x 57 cm | 100 | KM20P.4657 |

Rolls

| Size | Packing [pcs.] | Cat. No. |
|--------------|----------------|------------|
| 50 cm x 50 m | 1 | KM20P.5050 |
| 60 cm x 50 m | 1 | KM20P.6050 |

Creped Paper, AGF 132

- Strong paper for protection of tables, shelves, drawers etc.
- Available as sheets.



Sheets

| Size | Packing [pcs.] | Cat. No. |
|------------|----------------|----------|
| 48 x 59 cm | 500 | 150.959 |

pH Test Paper and Test Strips

pH Test Paper

- Fast and easy measurements of pH value in liquids.
- Available as universal types which cover a large area of the pH range and types which give a more precise measurement of the pH value.
- Dip a piece of suitable length of the indicator paper in the liquid for a few seconds and compare with the colour scale.
- pH Test Papers are available as rolls with a length of 5 m in a plastic dispenser. Colour scale included.



Specifications

| pH range | pH graduations | | | | | | | | | | | | Cat. No. |
|-----------|----------------|-----|-----|------|-----|------|-----|------|-----|-----|----|----|----------|
| 1 – 14 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 14 | 91135 |
| 0 – 10 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | 91134 |
| 1 – 11 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | | 91124 |
| 0.5 – 5 | 0.5 | 1 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 | | | 91130 |
| 5 – 9 | 5 | 5.5 | 6 | 6.5 | 7 | 7.5 | 8 | 8.5 | 9 | | | | 91131 |
| 6.5 – 10 | 6.5 | 7 | 7.5 | 8 | 8.5 | 9 | 9.5 | 10 | | | | | 91132 |
| 9 – 13 | 9 | 9.5 | 10 | 10.5 | 11 | 11.5 | 12 | 12.5 | 13 | | | | 91133 |
| 4 – 7 | 4 | 4.3 | 4.6 | 4.9 | 5.2 | 5.5 | 5.8 | 6.1 | 6.4 | 6.7 | 7 | | 91138 |
| 6.4 – 8 | 6.4 | 6.7 | 7 | 7.2 | 7.4 | 7.7 | 8 | | | | | | 91140 |
| 7.2 – 9.7 | 7.2 | 7.5 | 8 | 8.5 | 8.8 | 9.2 | 9.7 | | | | | | 91139 |

pH Test Strips

- Fast and easy measurements of pH value in liquids.
- Available as a universal type which covers the full pH range and types which give a more precise measurement of the pH value.
- Dip the indicator strip in the liquid for a few seconds and compare with the colour scale.
- Plastic box with 100 strips and colour scale.



Specifications

| pH range | pH graduations | | | | | | | | | | | | | | | Cat. No. |
|----------|----------------|----|------|----|------|----|------|----|-----|---|----|----|----|----|----|----------|
| 0 – 14 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 101021 |
| 0.5 – 5 | 0.5 | 1 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 | | | | | | 101023 |
| 5.5 – 9 | 5.5 | 6 | 6.5 | 7 | 7.5 | 8 | 8.5 | 9 | | | | | | | | 101024 |
| 9.5 – 13 | 9.5 | 10 | 10.5 | 11 | 11.5 | 12 | 12.5 | 13 | | | | | | | | 101025 |

Notes

[illegible]

Notes

[illegible]



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