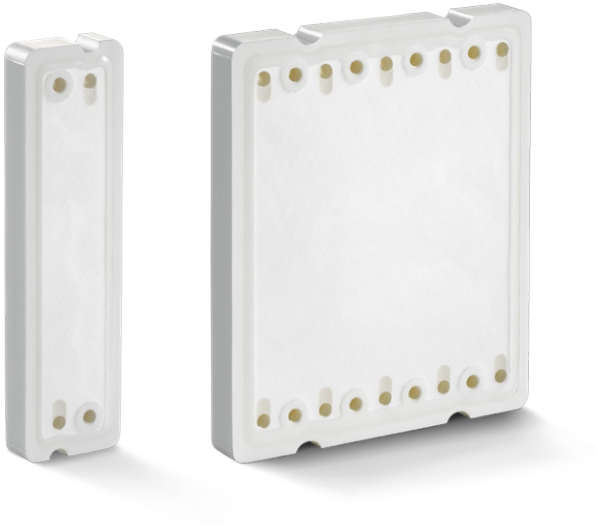
SARTORIUS

Product Datasheet

Hydrosart® Microfiltration Cassettes

Cell harvest and bacteria concentration



grey silicone

Description

The Hydrosart® Membrane
Hydrosart® is a stabilized cellulose derivative membrane polymer that has been optimized for the biotechnological and pharmaceutical industries. The Hydrosart® membrane is a stable polymer that features a broad pH and temperature range. Hydrosart® is also extremely hydrophilic, making it non-protein-binding and virtually non-fouling. As a result, it has extremely high flux. Hydrosart®'s wide temperature range makes it possible to sterilize the membrane by either steam or autoclaving. Membrane regeneration, storage and depyrogenation can be accomplished by using NaOH even at elevated temperatures.

Product Information

Hydrosart® has minimal adsorption of proteins, viruses, etc. Membrane retention is unaffected by repeated re-use. Hydrosart® has been validated to withstand in-line steam sterilization without any loss of integrity or changes in membrane retention.

Applications

Hydrosart® membranes are designed for use in the biotechnological and pharmaceutical industries.
They can be used to remove the following from liquids:

- Mammalian cells
  CHO
  BHK
- Bacteria
  E. coli
  Pasteurella
  C. diphtheria
- Yeasts
- Cell lysates

Feature	Benefits
Non-adsorptive	No loss of proteins, easy to clean, sustained flux
Non-protein-binding	High product yield
Wide pH and temperature range	More choices in sanitizing agents
High flow rates	Economical filtration runs
Steam-resistant polymer	Withstands repeated steam-sterilization cycles
Self-sealing cassette	No gaskets needed
Silicone sealing compound	No glue
Enlarged inlet and outlet holes	Lower pressure drop

Because of these features, Hydrosart® is ideal for biological applications.

Technical Data

Specifications

Materials of Construction	
Membrane	Hydrosart® (stabilized cellulose-based membrane)
Gaskets	PVDF
Spacer	Polypropylene
Sealing compound	Silicone grey

Pore Size | Retention Rate

Hydrosart® microfilter cassettes are available in a choice of 0.2 µm and 0.45 µm pore sizes.

Available Sizes

Sartorius crossflow cassettes are available in standard cassette size for pilot | production scale and in Sartocon® Slice format for reduced volume handling.

Available Filter Holder

Sartorius crossflow cassettes are designed for Sartorius filter holders like Sartocon® Slice (0.1 m² cassettes only), Sartocon®, Sartocon® 2 Plus, and different Sartoflow® holders.

Filtration Area

Filter area Sartocon® Cassette	0.6 m²
Filter area Sartocon® Slice Cassette	0.1 m²

Operating Parameters	
Feed pressure, P_{in}	58 psi | 4 bar maximum
Operating temperature	50 °C maximum
pH stability	2–14
Air diffusion rates at P_{in} = 15 psi [1 bar]	50 ml air/min for 0.6 m² filter area 15 ml air/min for 0.1 m² filter area
Cleaning	Sodium hydroxide, 1 M; 40 °C, 60 min
Disinfection	NaOH, 1 M, max. 50 °C, 30 min
Storage	NaOH, 0.1 M

Sterilization

Sterilization 121 °C, 30 min, steaming
121 °C, 30 min, auloclaving

Regulatory Compliance

All materials have passed the current USP Biological Test. The filtrate meets or exeeds USP and EP requirements for sterile water for injection with respect to total solids, oxidizable substances, particulate matter, ammonia, chloride, nitrate, sulfate and heavy metals.

Quality Control

Each filter cassette is individually assigned a serial number, integrity tested and certified.

It complies with cGMP requirements for non-fiber-releasing filters and is filed under the Drug Master File Number DMF 5967 by the Food and Drug Administration, Washington, DC. Validation information is available on request.

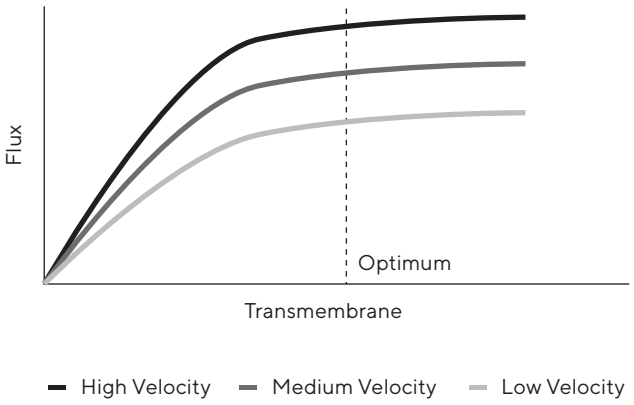
If you use holding devices from other suppliers, please contact our Applications Department. A different torque might be needed due to specific variations in design.

For further assistance, please contact your local Sartorius Stedim Biotech field engineer or our Goettingen-based Applications Department in Germany.

Technical References

Validation Guide
Publication No.: SPC5701-e

Directions for Use (Sartocon® cassettes and Sartocon® Slice cassettes)
Publication No.: SPC6001-a



Effect of Transmembrane Pressure (TMP) and crossflow velocity on flux rates.

Average Dynamic Water Flux

Pore Size	Sartocon® Cassettes Permeate*
0.2 µm	2,100 l/h/m²
0.45 µm	2,300 l/h/m²

* (Feed pressure, P_{in} = 29 psi | 2.0 bar; retentate pressure, P_{out} = 7 psi | 0.5 bar)

Order Information

Available types and order numbers

Type	Filter area	Pore size	Order No.
Sartocon® Cassettes	0.6 m²	0.2 µm	302 186 07 06 W--SG
Sartocon® Cassettes	0.6 m²	0.45 µm	302 186 06 06 W--SG
Sartocon® Slice Cassettes	0.1 m²	0.2 µm	305 186 07 01 W--SG
Sartocon® Slice Cassettes	0.1 m²	0.45 µm	305 186 06 01 W--SG

Retention Coefficient

Marker	Retention (static conditions)
Bacteria	>99%
Mammalian cells	>99%

Germany
Sartorius Stedim Biotech GmbH
August-Spindler-Strasse 11
37079 Goettingen
Phone +49 551 308 0

USA
Sartorius Stedim North America Inc.
565 Johnson Avenue
Bohemia, NY 11716
Toll-Free +1 800 368 7178

For further contacts, visit
www.sartorius.com

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