SARTORIUS

Product Datasheet

Hydrosart® Open Channel Microfiltration Cassettes

Cell harvest and bacteria concentration

grey silicone

Description

The Hydrosart® Membrane Applications
Hydrosart®: The open channel cassette with Hydrosart® microfiltration membrane is designed for use in the biotechnological and pharmaceutical industries.
The open channel cassette can be used for the separation and concentration of highly concentrated bacteria, yeasts, mammalian cells, cells debris and highly particle- or cell-laden media.

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-proteinbinding 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.

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
Open Channel Spacer	Polypropylene
Sealing compound	Silicone grey

Pore Size | Retention Rate

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

Available Sizes

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 m^2 cassettes only), Sartocon®, Sartocon® 2 Plus, and different Sartoflow® holders.

Filtration Area

Filter area Sartocon® Cassette	0.4 m^2
Filter area Sartocon® Slice Cassette	0.1 m^2

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 0.4 m^2 filter area 15 ml air/min for 0.1 m^2 filter area
Cleaning	P3 Ultrasil 11, 1%, pH 13, max. 50°C, 30 min P3 Ultrasil 53, 1.5%, pH8, 50°C, 60 min P3 Ultrasil 62/60a, 1%, pH 6.5; max. 50 °C, 30 min 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, 110 min, autoclaving

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.

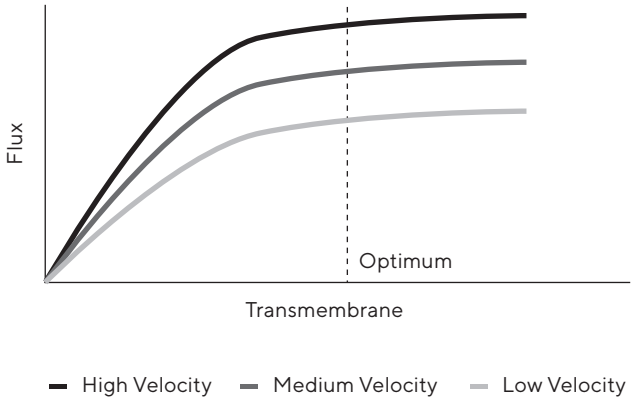
If you use holding devices from other suppliers, please contact our Applications Department. A different torque might be needed due to specific variations in design.

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	2,000 l/h/m²
0.45 µm	2,100 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

Cut Off	Sartocon® Cassettes 0.4 m² Filter Area	Sartocon® Slice Cassettes 0.1 m² Filter Area
0.2 µm	302 186 07 04 O–SG	305 186 07 01 O–SG
0.45 µm	302 186 06 04 O–SG	305 186 06 01 O–SG

Retention Coefficient

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

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