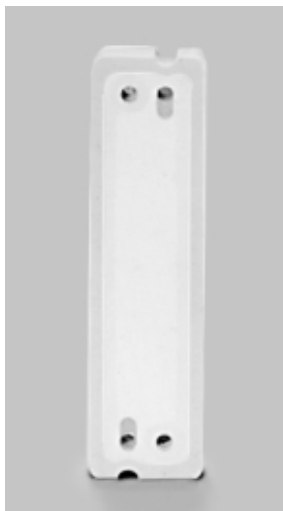




Hydrosart® Microfiltration Cassettes



Sartococon Cassette



Sartococon Slice Cassette

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.

Because of these features, Hydrosart is ideal for biological applications. Hydrosart cassettes are available in a choice of 0.2 µm and 0.45 µm pore sizes.

Product Profile

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.

Quality Control

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

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

Validation

All materials have passed the current USP Biological Test. The filtrate meets or exceeds 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.

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 upon 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 field engineer or our Goettingen-based Applications Department in Germany.

Features	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

Technical Specifications

Membrane material	Hydrosart (stabilized cellulose based membrane)
Pore size	0.2 µm, 0.45 µm
Filter area Sartocoon cassette	0.6 m ²
Filter area Sartocoon Slice cassette	0.1 m ²
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 m ² filter area 15 ml air/min for 0.1 m ² filter area
Sterilization	121° C, 30 min, steaming 121° C, 30 min, autoclaving
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

Examples of Flux for Water

Pore Size	Sartocoon cassettes 0.6 m ² filter area Permeate*	Sartocoon Slice cassettes 0.1 m ² filter area Permeate*
0.2 µm	2,100 l/h/m ²	1,350 l/h/m ²
0.45 µm	2,300 l/h/m ²	1,855 l/h/m ²

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

Retention Coefficient

Marker	Retention
Bacteria	>99%
Mammalian cells	>99%
Lipids	<3%
IgG	<2%
IgM	<2%
Albumin	<1%

Materials of Construction

Membrane	Hydrosart
Gaskets	PVDF
Spacer	Polypropylene
Sealing compound	Silicone

Available Types and Order Numbers

Type	Filter area	Pore size	Order No.
Sartocoon cassettes	0.6 m ²	0.2 µm	302 186 07 06 W--SG
Sartocoon cassettes	0.6 m ²	0.45 µm	302 186 06 06 W--SG
Sartocoon Slice cassettes	0.1 m ²	0.2 µm	305 186 07 01 W--SG
Sartocoon Slice cassettes	0.1 m ²	0.45 µm	305 186 06 01 W--SG

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