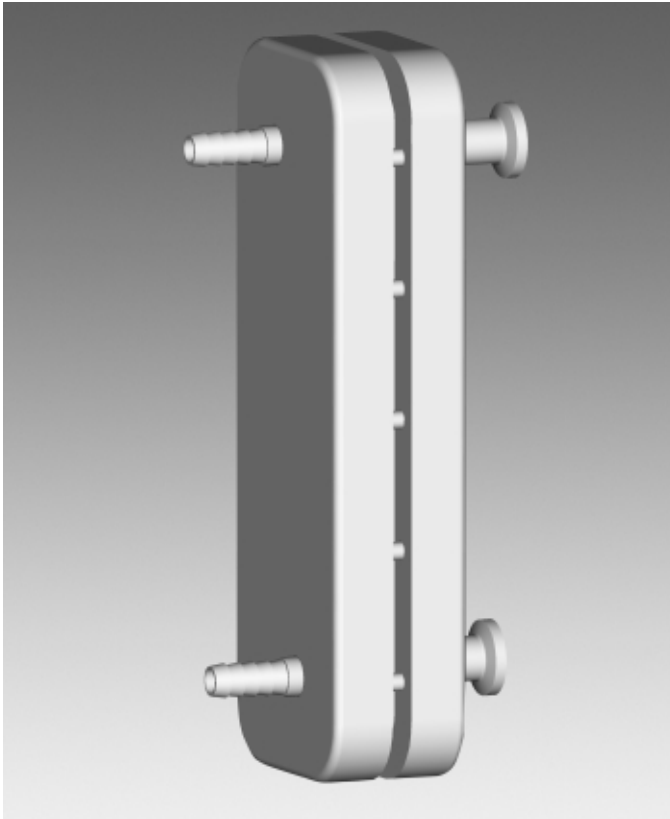




Sartocon Slice Disposable



The Hydrosart® Membrane

Hydrosart is a stabilized cellulose derivative membrane polymer that has been optimized for the biotechnological and pharmaceutical industry. 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, virtually non-fouling, and has extremely high flux. Membrane is pH resistant and can be sanitized in by using NaOH even at elevated temperatures. These features make Hydrosart an ideal membrane for biological applications. Hydrosart ultrafiltration + microfiltration are available in the following nominal molecular weight cut-off:

- 5 k
- 10 k
- 30 k

available pore size:

- 0.2 µm
- 0.45 µm

Applications

Hydrosart ultrafiltration membranes are designed for use in the biotech- and pharmaceutical industries.

They can be used for the following applications:

- Proteins
 - Albumin
 - Hemoglobin
- Coagulation factors
 - Factor VIII
 - Factor III
- Vaccines
 - Tetanus
 - Diphtheria

Product Profile

Hydrosart shows minimal adsorption of proteins, viruses, etc. Membrane retention is unaffected by repeated use. The Hydrosart ultrafiltration membrane can be re-used without any loss of integrity or performance.

The Polyethersulfone Membrane

The polyethersulfone membrane (PESU) is a membrane polymer that is well established in the biotechnological and pharmaceutical industry. The PESU membrane is a stable polymer that features a broad pH and temperature range. Membrane is pH resistant and be sanitized by using in NaOH even at elevated temperatures. Because of these features, the PESU membrane is well suited for biotechnological applications. PESU ultrafiltration cassettes are available in a choice of the following nominal molecular weight cut-off:

- 1 k
- 5 k
- 8 k
- 10 k
- 30 k
- 50 k
- 100 k
- 300 k

available pore size:

- 0.1 µm

Applications

Polyethersulfone membranes are designed for use in the biotechnological and pharmaceutical industries. For example, they can be used for the following applications:

- IgG
 - Factor VIII
 - Factor III
- Enzymes
- Peptides

Features	Benefits
Low adsorption	Minimal loss of proteins
Low protein-binding	High product yield
Wide pH and temperature range	A wide variety of chemicals can be used for the removal of foulants
High flow rates	Economical filtration runs
Self-sealing cassette inside	No gaskets needed
Silicone sealing compound	No extractables from glue
Enlarged inlet and outlet holes	Lower pressure drop
Ready for Use	No mounting etc.

Product Profile

The polyethersulfone membrane has minimal adsorption of proteins, viruses, etc. Membrane retention is unaffected by repeated use.

Quality Assurance

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

Validation

All cassette materials have passed the current USP Class VI Plastics Test and the disposable housing is FDA listed (21 CFR 177.1655). 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.

Sartocon Slice Disposable is a self contained crossflow unit ready to use. Validated for single use only!

Technical Specifications

Membrane Material	
• Cut-off:	Polyethersulfone Ultrafiltration: 1 k, 5 k, 8 k, 10 k, 30 k, 50 k, 100 k, 300 k Hydrosart Ultrafiltration: 5 k, 10 k, 30 k
• Pore size:	Hydrosart Microfiltration: 0.2 µm, 0.45 µm Polyethersulfone Microfiltration: 0.1 µm
Filter area	Sartocon Slice Disposable 0.1m ² filter area
Feed pressure, Pin	43 psi (3 bar) maximum
Operating temperature	50°C maximum
pH stability	1–14
Air diffusion rates at Pin = 15 psi (1 bar)	15 ml air/min (only Hydrosart UF 5 10 30 K 5 ml air/min) for 0.1m ² filter area 15 ml air/min: MF 0.2 0.45 µm and PESU UF 5 10 30 k and PESU UF 1 5 k

Typical Water Flux Release Data * (Water flux for one cassette at room temperature)

Cut-off	Hydrosart 0.1m ² filter area Permeate* P _{in} = 1.5 bar (22 psi), p _{out} = closed, p _{filtrate} = open	Polyethersulfone 0.1m ² filter area Permeate* P _{in} = 1.5 bar (22 psi), p _{out} = closed, p _{filtrate} = open
1 k		2 l/h
5 k	3 l/h	5 l/h
8 k		25 l/h
10 k	8 l/h	38 l/h
30 k	25 l/h	70 l/h
50 k		90 l/h
100 k PESU PSU		100 l/h
300 k		120 l/h
0.1 µm		130 l/h
0.2 µm	160 l/h	
0.45 µm	175 l/h	

* Membrane material Polysulfone

Protein Markers (Ultrafilter) [NMWCO] – = not measured

Substance	Approx. Mol. wt	1k	5 k	8 k	10 k	30 k	50 k	100 k	300 k
Vitamin B12	1.200	>70%	>50%	<45%	–	–	–	–	–
Inulin	5.000	>85%	>70%	–	–	–	–	–	–
Cytochrome C	12.400	–	>99%	>99%	>95%	>60%	–	–	–
Myoglobin	17.000	–	–	–	>95%	–	–	–	–
Albumin	67.000	–	–	–	>99%	>98%	>95%	<80%	<60%* –
g-Globulin	169.000	–	–	–	–	–	>99%	>98%	>99%* <70%
Dextran	2,000.000	–	–	–	–	–	–	–	>95%

Hydrosart® (Ultrafilter) [NMWCO]

Substance	Approx. Mol.wt	5 k	10 k	30 k
Albumin	67.000	–	–	97,5%
Cytochrome C	12.400	–	97,5%	–
Inulin	5.000	97%	–	–

Retention Coefficient (Microfilter)

Marker	Retention:
Bacteria	>99%
Mammilian Cells	>99%
Mycoplasmen	LRV 7

Materials of Construction

Membrane	Hydrosart	Polyether-sulfone
Gaskets	PVDF	PVDF
Spacer	Polypropylene	Polypropylene
Sealing	Silicone	Silicone

Available Types and Order Numbers

Cutoff	Hydrosart 0.1 m ² filter area	Polyethersulfone Sartocon Slice cassette, 0.1 m ² filter area
1 k		3061460901E--SG
5 k	3061442901E--SG	3061462901E--SG
8 k		3061463401E--SG
10 k	3061443901E--SG	3061463901E--SG
30 k	3061445901E--SG	3061465901E--SG
50 k		3061465001E--SG
100 k*		3061466901E--SG
100 k		3061466801E--SG
300 k		3061467901E--SG
0.1 µm		3061545801W--SG
0.2 µm	3061860701W--SG	
0.45 µm	3061860601W--SG	

* Membrane material Polysulfone

Sartorius AG
Weender Landstrasse 94-108
37075 Goettingen, Germany

Phone +49.551.308.0
Fax +49.551.308.3289

www.sartorius.com

USA +1.631.2544274
UK +44.1372.737100
France +33.1.69192100
Italy +39.055.634041
Spain +34.91.3586100
Japan +81.3.33293366

Specifications subject to change without notice.
Printed in Germany on paper that has been bleached
without any use of chlorine.
W/sart-000 · G
Publication No.: SPC-2030-e01093
Order No.: 85030-512-05