



Sartocon[®] Slice 50

Small scale process development disposable ultrafilters for biopharmaceutical applications

Product Information

Sartocon[®] Slice 50 is available with Hydrosart[®] and Polyethersulfone membrane. It can easily be interfaced with the SARTOFLOW[®] Smart system.



Sartocon[®] Slice 50

The Sartocon[®] Slice 50 is a ready to use 50 cm² fully disposable crossflow module that is ideally suited for membrane screening and process development, available in a wide variety of MWCO's and polymers. The Sartocon[®] Slice 50 can easily be interfaced with the SARTOFLOW[®] Smart system as well as many other laboratory scale crossflow systems.

Flow Channel Geometry

Sartocon[®] Slice 50 is available in two flow channel geometry versions. E-Screen filters are dominantly used for protein concentrations up to above 20% as well as viscosity conditions greater than 3 cp. ECO-Screen devices mainly used for water based protein solutions of below 20% protein concentration as well as lower than 3 cp viscosity.

The Hydrosart[®] Membrane

Hydrosart[®] is a stabilized cellulose based membrane that has been optimized for the biotechnological and pharmaceutical industry. The Hydrosart[®] membrane is a stable polymer that can operate in a broad pH range. Hydrosart[®] is also extremely hydrophilic, making it non-protein binding, virtually non-fouling, and has extremely high flux. Membrane depyrogenation can be accomplished by using NaOH even at elevated temperatures. These features make Hydrosart[®] an ideal membrane for biological applications.

Feature	Benefits
Available in all membrane materials and cut offs	Flexibility in membrane screening
Identical flow dynamics with larger modules	True linear scale up
Self contained unit	Ready to use, no compression holder needed
Low adsorption	Minimal product loss
Low protein-binding	High flux and product yield
DataMatrix code	Fast access to order code and shelf life data.
Luerlock Female ports	Quick connection to existing equipment ready to use on SARTOFLOW [®] Smart system
Low hold up volume	High concentration factor

The Polyethersulfone Membrane

The polyethersulfone membrane (PESU) is a membrane polymer that is well established in the biotechnological and pharmaceutical industries. The PESU membrane is a stable polymer that can operate in a broad pH and temperature range. Polyethersulfone membranes are designed for use in the biotechnological and pharmaceutical industries.

Technical Data

Specifications Materials of Construction

Membrane	Hydrosart® Polyethersulfone
Sealing and Gaskets	Silicone, Epoxide, Polypropylene
Spacer	Polypropylene, PVDF
Encapsulation	Reinforced ABS
Connector	ABS

Available Filterholder

No special filter holder is required to operate a Sartocan® Slice 50. For ease of handling in vertical orientation a matching holder (order number 3ZG---0108) can be used.

Rejection Coefficient (Characterization of Membrane)

Retention rates Hydrosart®

Substance	Approx. Mol. Wt.	2 kD [%]	5 kD [%]	10 kD [%]	30 kD [%]
Vitamin B12	1,200	≥ 88	-	-	-
Inulin	5,000	-	≥ 96	-	-
Cytochrome C	12,400	-	-	≥ 97,5	-
Albumin	67,000	-	-	-	≥ 97,5
γ-Globulin	169,000	-	-	-	-

Retention rates Polyethersulfone (PESU)

Substance	Approx. Mol. Wt.	1 kD [%]	5 kD [%]	8 kD [%]	10 kD [%]	30 kD [%]	50 kD [%]	100 kD [%]	300 kD [%]
Vitamin B12	1,200	> 70	50 – 80	-	-	-	-	-	-
Cytochrome C	12,400	-	-	≥ 99	> 95	60 – 90	-	-	-
Albumin	67,000	-	-	-	-	-	> 95	< 80	-
γ-Globulin	169,000	-	-	-	-	-	> 99	≥ 98	< 70
Dextran	2,000,000	-	-	-	-	-	-	-	> 95

Operating Parameters

Feed pressure P_{in} 3.5 bar maximum

Operating temperature range 2 – 40°C,

Air diffusion rates ≤ 3.0 mL/min at 2.5 bar

pH stability Hydrosart 2 – 14 | PESU 1 – 14

Hold up volume 1 – 2 ml

Recommended cross flow rate E Screen 50 – 120 ml/min

Recommended cross flow rate ECO Screen 20 – 60 ml/min

Cleaning NaOH, 1 M, 40°C

Disinfection NaOH, 1 M, 40°C, 30 min

Storage NaOH, 0.1 M

Sterilization

No thermal sterilization possible.

Regulatory Compliance

All product contact materials have passed the current USP Biological Test and Cytotoxicity Test. All materials are BSE and TSE free. The filtrate meets or exceeds the currently valid USP and EP for sterile Water for Injection, with respect to extractable substances, oxidizable substances and Bacteria Endotoxins.

Quality Control

Each Sartoco[®] Slice 50 is individually assigned a serial number, integrity tested and certified. It complies with cGMP requirements 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. For further assistance, please contact your local Sartorius Stedim Biotech Application Department.

Technical References

Directions for Use	SPC6068
Validation Guide	SPC6067

Ordering Information

Sartoco[®] Slice 50 available as "E"-Screen and "ECO"-Screen Filter

Membrane Polymer [™]	Cut-Off	Material Number "E"-Screen Filter	Material Number "ECO"-Screen Filter
Hydrosart [®]	2 kD	3D91441950ELLPU	3D91441950MLLPU
Hydrosart [®]	5 kD	3D91442950ELLPU	3D91442950MLLPU
Hydrosart [®]	10 kD	3D91443950ELLPU	3D91443950MLLPU
Hydrosart [®]	30 kD	3D91445950ELLPU	3D91445950MLLPU
PESU	1 kD	3D91460950ELLPU	3D91460950MLLPU
PESU	5 kD	3D91462950ELLPU	3D91462950MLLPU
PESU	8 kD	3D91463450ELLPU	3D91463450MLLPU
PESU	10 kD	3D91463950ELLPU	3D91463950MLLPU
PESU	30 kD	3D91465950ELLPU	3D91465950MLLPU
PESU	50 kD	3D91465050ELLPU	3D91465050MLLPU
PESU	100 kD	3D91466850ELLPU	3D91466850MLLPU
PESU	300 kD	3D91467950ELLPU	3D91467950MLLPU

Available Crossflow System

The SARTOFLOW[®] Smart is a modular small scale benchtop crossflow system optimized for concentration and diafiltration applications used in many downstream processes, such as purification of vaccines, monoclonal antibodies and recombinant proteins. The system is suitable for flexible use in laboratory environments for process development and clinical trials as well as for cGMP environments.



SARTOFLOW[®] Smart including options

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