

Sartobind Convec[®] SC, 8 mm Bed Height

Heparin-Like Pseudo-Affinity
Membrane Chromatography
for High-Quality Purification
of Viruses and Viral Particles



Product Information

The Sartobind Convec[®] SC serves as a specialized pseudo-affinity chromatography solution for the downstream processing of viruses and viral particles, including influenza, rabies, and human herpes simplex. This system facilitates the efficient recovery of purified viral particles by integrating convective mass transfer, pseudo-affinity chemistry, and optimized elution conditions.

Available in both gamma-irradiated and non-gamma-irradiated configurations, the Sartobind Convec[®] SC membrane chromatography devices offer versatility and reliability. The gamma-irradiated option includes gamma-irradiated tubings and connectors, enabling closed and aseptic processing.

Features and Benefits

- Gamma-irradiated products reduce contamination and bioburden risks
- Modified with a ligand of animal-free origin
- Scalable product portfolio suitable from bench to manufacturing scale
- High capacity and selectivity for large viruses
- Reduced cost due to fast processing

Technical Specifications

Relevant Applications

- Purification of viruses and virus-like particles (VLPs)
- Purification of viral | microbial antigens
- Purification of proteins such as lysozyme

Relevant Process Steps

- Chromatography capture



Membrane Materials

Matrix	Stabilized reinforced cellulose
Membrane thickness membrane volume = membrane area	265 μm 1 mL = 38 cm^2
Nominal pore size	1.1 μm
Pseudo-affinity ligand SC	-OSO ₃ (Sulfated cellulose)

Capsule Materials

Outer cage, inner core, end caps, capsule housing, nonwoven, fleece	Polypropylene
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Operation

Depyrogenation	1 N NaOH for 30 minutes at 20 °C
Integrity testing	By the diffusion test method with Sartocheck® 5 & 5 Plus

Typical Dynamic Binding Capacity at 10% Breakthrough**

Sartobind Convec® SC	> 2.47 × 10 ⁶ HAU*/mL for influenza A/ Puerto Rico /8 /1934 (H1N1) > 1.1 × 10 ⁶ HAU*/mL for influenza B/ Phuket /3073/2013 > 1.6 × 10 ⁶ HAU*/mL for influenza A/ Switzerland /9715293/2013 (H3N2) Please note that the dynamic binding capacity highly depends on the target molecules and has to be tested for each application.
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Ligand Density

Sartobind Convec® SC	8 – 15 $\mu\text{mol}/\text{cm}^2$, 270–620 $\mu\text{mol}/\text{mL}$
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pH Stabilities | Short Term | Long Term

Sartobind Convec® SC	3–14 (short term) 4–13 (long term)
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





Gamma-Irradiated Products Gamma Dose

Gamma irradiated Sartobind Convec® SC	≥25 kiloGrays (kGy), maximum dose: 50 kG
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* HAU = hemagglutination units

** A. Fortuna, S. Teeffelen, A. Leyb, L. Fischer, F. Taft, Y. Genzel, L. Villain, M. Wolff, U. Reichl, Use of sulfated cellulose membrane adsorbents for chromatographic purification of cell cultured-derived influenza A and B viruses [www.doi.org/10.1016/j.seppur.2019.05.101](https://doi.org/10.1016/j.seppur.2019.05.101)

Dimensions and Connections

						
Size	Nano	Mini	5"	10"	20"	30"
Membrane volume	3 mL	20 mL	150 mL	400 mL	800 mL	1.2 L
Membrane area	114 cm ²	760 cm ²	5,700 cm ²	15,200 cm ²	30,400 cm ²	45,600 cm ²
Void volume [MV** mL]	1.3 4	1.6 32	1.3 200	1.4 540	1.4 1,080	1.3 1,600
Dimensions in mm	37×31 H×Ø	Luer: 70×55 Sanitary: 100×55 Hose barb: 110×55 H×Ø	Sanitary: 190×77 Hose barb: 204×77 H×Ø	Sanitary: 347×100 Hose barb: 359×100 H×Ø	Sanitary: 579×100 Hose barb: 591×100 H×Ø	Sanitary: 807×100 Hose barb: 819×100 H×Ø
Connectors	Luer female	<ul style="list-style-type: none"> ▪ Luer female ▪ Sanitary ¾", 25 mm outer, 14 mm inner Ø ▪ Hose barb ½", 12.7 mm* 	<ul style="list-style-type: none"> ▪ Sanitary ¾", 25 mm outer, 14 mm inner Ø ▪ Hose barb ½", 12.7 mm* 	<ul style="list-style-type: none"> ▪ Sanitary 1½", 50.5 mm outer, 36 mm inner Ø ▪ Hose barb ½", 12.7 mm* 	<ul style="list-style-type: none"> ▪ Sanitary 1½", 50.5 mm outer, 36 mm inner Ø ▪ Hose barb ½", 12.7 mm* 	<ul style="list-style-type: none"> ▪ Sanitary 1½", 50.5 mm outer, 36 mm inner Ø ▪ Hose barb ½", 12.7 mm*
Gaskets	n/a	¾", inner Ø 16 mm	¾", inner Ø 16 mm	1½", inner Ø 35.8 mm	1½", inner Ø 35.8 mm	1½", inner Ø 35.8 mm
Approximate weight	10 g	65 g	400 g	760 g	1.3 kg	1.9 kg

n/a = not available | Ø = diameter | * Recommended inner diameter of flexible tube: ½", 12.7 mm | ** MV = membrane volume (including the porosity of the membrane which is 80%)






Ordering Information


Order Number	Description	Quantity	Bed Height [mm]	Recommended Flow Rate [L/min]	Maximum Pressure [MPa] [bar psig]
97SC--04E-C11	Sartobind Convec® SC Nano 3 mL, 8 mm, Luer female connectors, 2 PEEK adapters Luer male to UNF 10-32 female, manual, certificate	1	3	0.009	0.4 (4 58)
97SC--04E-C11--A	Sartobind Convec® SC Nano 3 mL, 8 mm, Luer female connectors, 2 PEEK adapters Luer male to UNF 10-32 female, manual, certificate	4	3	0.009	0.4 (4 58)
97SC--04E4J11	Sartobind Convec® SC Mini 20 mL, 8 mm, Luer female connectors, 8 PEEK adapters Luer male to UNF 10-32 female, manual, certificate	1	20	0.06	0.4 (4 58)
97SC--04E4J11--A	Sartobind Convec® SC Mini 20 mL, 8 mm, Luer female connectors, 8 PEEK adapters Luer male to UNF 10-32 female, manual, certificate	4	20	0.06	0.4 (4 58)
97SC--04E4JFF	Sartobind Convec® SC Mini 20 mL, 8 mm, ¼" sanitary clamp, manual, certificate	1	20	0.06	0.4 (4 58)
97SC--04E4JFF--A	Sartobind Convec® SC Mini 20 mL, 8 mm, ¼" sanitary clamp, manual, certificate	4	20	0.06	0.4 (4 58)
97SC--04E4JOO	Sartobind Convec® SC Mini 20 mL, 8 mm, hose barb connectors, manual, certificate	1	20	0.06	0.4 (4 58)
97SC--04E4JOO--A	Sartobind Convec® SC Mini 20 mL, 8 mm, hose barb connectors, manual, certificate	4	20	0.06	0.4 (4 58)
97SC--04E9BFF	Sartobind Convec® SC 150 mL, 8 mm, ¼" sanitary clamp, manual, certificate	1	150	0.45	0.4 (4 58)
97SC--04E9BOO	Sartobind Convec® SC 150 mL, 8 mm, hose barb connectors, manual, certificate	1	150	0.45	0.4 (4 58)
97SC--04E1HSS	Sartobind Convec® SC 400 mL, 8 mm, ½" sanitary clamp, manual, certificate	1	400	1.2	0.4 (4 58)
97SC--04E1HOO	Sartobind Convec® SC 400 mL, 8 mm, hose barb connectors, manual, certificate	1	400	1.2	0.4 (4 58)
97SC--04E2LSS	Sartobind Convec® SC 800 mL, 8 mm, ½" sanitary clamp, manual, certificate	1	800	2.4	0.4 (4 58)

Order Number	Description	Quantity	Bed Height [mm]	Recommended Flow Rate [L/min]	Maximum Pressure [MPa] [bar psig]
97SC--04E2LOO	Sartobind Convec® SC 800 mL, 8 mm, hose barb connectors, manual, certificate	1	800	2.4	0.4 (4 58)
97SC--04E3FSS	Sartobind Convec® SC 1.2 L, 8 mm, 1½" sanitary clamp, manual, certificate	1	1,200	3.6	0.4 (4 58)
97SC--04E3FOO	Sartobind Convec® SC 1.2 L, 8 mm, hose barb connectors, manual, certificate	1	1,200	3.6	0.4 (4 58)

For gamma irradiated capsules and assembly please contact your local Sartorius sales representative.

Peripherals and Accessories

Order Number	Description	Quantity
1ZA---0004	 Adapter Luer male to UNF 10-32 female, PEEK	1
1ZAOGV0003	 Adapter UNF 10-32 female to sanitary ¾", 25 mm, polyoxymethylene	2
26787---FT---P	 Sartocheck® 5 Plus Filter Integrity Tester	1

 To learn more about our chromatography membranes, visit [State-Of-The-Art Membrane Chromatography Solutions](#)

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