

Vivacon® 500 and Vivacon® 2

DNA concentration and rebuffing



Vivacon® centrifugal concentrators offer the optimal solution for DNA concentration and buffer exchange applications using Sartorius high recovery Hydrosart® membranes. The Vivacon® 500 can process sample volumes up to 500 µl while the Vivacon® 2 can hold up to 2 ml. Both the Vivacons are also available as PCR Grade devices. These have been treated with a validated, dual-cycle ethylene oxide (ETO) gas process. PCR Grade Vivacons are sterile to an assurance level of 10⁶ and free from detectable human genomic DNA.

Vivacon® Applications

- DNA rebuffing of organic extraction samples before sequencing reaction
- Dye removal after sequencing reaction.
- Primer removal
- Plasmid concentration
- Protein concentration
- Protein rebuffing

Features

Low binding material

Re-spin possibility

Benefits

High recoveries of low sample concentrations

Complete and highly reproducible sample recovery

Technical Specifications

Concentrator Capacity	Vivacon® 500	Vivacon® 2
Fixed angle rotor	0.5 ml	2 ml
Dimensions		
Total length (Concentration)	45 mm	125 mm
Total length (Back-spin)	47.5 mm	115 mm
Width	12.4 mm	16 mm
Active membrane area	0.32 cm ²	0.95 cm ²
Hold-up volume membrane and support	< 5 µl	10 µl
Dead stop volume	5 µl (40° rotor)	55 µl (25° rotor)

Materials of Construction

Body	Polycarb.	Polycarb.
Filtrate vessel	Polyprop.	Polyprop.
Back spin vial	Polyprop.	Polyprop.
Concentrator cap	N/A	Polyprop.
Membrane*	HY, CTA	HY, CTA
O-ring	Silicone	Silicone
Polycarb. = Polycarbonate, Polyprop. = Polypropylene		
* HY = Hydrosart®, CTA = Cellulose Triacetate (125,000 MWCO)		

Equipment Required

Centrifuge

Rotor type	Fixed Angle	Fixed Angle
Minimum rotor angle	40°	25°
Rotor cavity	To fit 1.5 l 2.2 ml (11 mm) conical bottom tubes	To fit 15 ml (17 mm) conical bottom tubes 95 mm depth
Maximum speed	5,000 g*	2,500 g*

* Please note: Vivacon® devices with membrane MWCO ≤ 10kDa may be processed at higher g forces. DNA recovery is generally improved at lower g forces. See manual for details.

Performance Characteristics

Volume of 0.5 ml for Vivacon® 500 and 2 ml for Vivacon® 2.

Data shows time to concentrate 30x at 20 °C and % Recovery (Rec.).

Vivacon® for DNA (50 ng/ml)

	Sample size (bp)	Vivacon® 500			Vivacon® 2		
		Time	Rec.	g-force (xg)	Time	Rec.	g-force (xg)
2,000 MWCO	10	60 min.	93%	7,500	120 min.	92%	7,500
10,000 MWCO	30	25 min.	94%	7,500	60 min.	94%	5,000
30,000 MWCO	50	18 min.	88%	5,000	60 min.	95%	2,500
50,000 MWCO	300	18 min.	91%	5,000	45 min.	96%	2,500
100,000 MWCO	600	10 min.	87%	3,000	30 min.	93%	2,500
125,000 MWCO	650	12 min.	85%	2,000	30 min.	88%	2,000
125,000 MWCO	900	9 min.	94%	3,000	30 min.	89%	2,000

Vivacon® for Proteins

	Sample	Vivacon® 500			Vivacon® 2		
		Time	Rec.	g-force (xg)	Time	Rec.	g-force (xg)
2,000 MWCO	0.25 mg/ml cytochrome c	30 min.	95%	14,000	120 min.	95%	7,500
10,000 MWCO	0.25 mg/ml cytochrome c	15 min.	92%	14,000	90 min.	96%	5,000
30,000 MWCO	1.0 mg/ml BSA	10 min.	95%	14,000	40 min.	96%	5,000
50,000 MWCO	1.0 mg/ml BSA	10 min.	92%	14,000	30 min.	94%	5,000
100,000 MWCO	1.0 mg/ml bovine IgG	11 min.	90%	8,000	30 min.	92%	5,000
100,000 MWCO	0.02 mg/ml porcine hematin	10 min. *	88%	2,500			
125,000 MWCO	1.0 mg/ml bovine IgG	10 min.	81%	8,000	27 min.	81%	5,000
125,000 MWCO	0.02 mg/ml porcine hematin	10 min. *	11%	2,500			

* Note that the 10 minute spin for the hematin samples gave a concentration factor of 6x for the 100,000 MWCO Vivacon® 500 and 75x for the 125,000 MWCO Vivacon® 500.

Ordering Information

Molecular Weight Cutoff (MWCO)	Pack Size	Vivacon® 500	Vivacon® 500 PCR Grade	Vivacon® 2	Vivacon® 2 PCR Grade
2,000 MWCO	25	VN01H91		VN02H91	
2,000 MWCO	100	VN01H92		VN02H92	
10,000 MWCO	25	VN01H01		VN02H01	
10,000 MWCO	100	VN01H02		VN02H02	
30,000 MWCO	25	VN01H21	VN01H21ETO	VN02H21	
30,000 MWCO	100	VN01H22	VN01H22ETO	VN02H22	
30,000 MWCO	500	VN01H23	VN01H23ETO	VN02H23	
50,000 MWCO	25	VN01H31		VN02H31	
50,000 MWCO	100	VN01H32		VN02H32	
50,000 MWCO	500	VN01H33		VN02H33	
100,000 MWCO	25	VN01H41	VN01H41ETO	VN02H41	VN02H41ETO
100,000 MWCO	100	VN01H42	VN01H42ETO	VN02H42	VN02H42ETO
100,000 MWCO	500	VN01H43	VN01H43ETO	VN02H43	VN02H43ETO
125,000 MWCO	25	VN01H81		VN02H81	
125,000 MWCO	100	VN01H82		VN02H82	
125,000 MWCO	500	VN01H83		VN02H83	

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