



# Vivacon® 500

For DNA and protein concentration and rebuffering up to 500 µl

DNA Concentration



Vivacon® 500 centrifugal concentrators have been designed for concentration of DNA or proteins and buffer exchange applications with samples up to 500 µl. For optimal performance with very dilute samples, e.g. forensic specimens, Vivacon® 500 is equipped with the patented Hydrosart® regenerated cellulose membrane that guarantees extremely low binding properties and high flux. High recoveries and excellent reproducibility are paired with convenience offered by the molecular weight cut-off printed on individual devices. Vivacon® 500, in comparison to the classical Vivaspin units, features a horizontal membrane design that is preferred by some users for reasons of consistency with previously used procedures and reproducibility. The option of a back-spin step after sample processing assures complete concentrate recovery which is especially important when working with low sample concentrations.

For larger volumes up to 2 ml, Vivacon® 2 centrifugal concentrators with otherwise identical features are available. See Datasheet SLL2001-e.

## Vivacon® 500 Applications

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

Feature	Benefit
Low binding materials	High recoveries even from diluted samples
Re-spin possibility	Complete and highly reproducible sample recovery

## Technical Specifications

### Concentrator capacity

Fixed angle rotor	0.5 ml
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### Dimensions

Total length (Concentration)	45 mm
Total length (Back-spin)	47.5 mm
Width	12.4 mm
Active membrane area	0.32 cm <sup>2</sup>
Hold-up volume (membrane and support)	< 5 µl
Dead stop volume	5 µl (40° rotor)

## Equipment required

### Centrifuge

Rotor type	Fixed angle
Minimum rotor angle	40°
Rotor cavity	To fit 1.5   2.2 ml (11 mm) conical bottom tubes
Maximum speed	14,000 g*

### Materials of construction

Body	Polycarbonate
Filtrate vessel	Polypropylene
Membrane	Hydrosart®

\* Please note that Vivacon® 500 devices with membrane MWCO > 100 kDa need to be processed at lower g forces. See Operating Instructions for details.

## Performance Characteristics

### DNA concentration with Vivacon® 500

Start volume 0.5 ml, sample concentration 50 ng/ml DNA

	Sample size (bp)	Time to concentrate up to 30x [min.] at 20°C	Concentrate recovery %	RCF (× g)
2,000 MWCO	10	60 min	93%	7,500
10,000 MWCO	30	25 min	94%	7,500
30,000 MWCO	50	18 min	88%	5,000
50,000 MWCO	300	18 min	91%	5,000
100,000 MWCO	600	10 min	87%	3,000

### Protein concentration with Vivacon® 500

Start volume 0.5 ml, sample and concentration of proteins as specified in table

	Sample	Time to concentrate up to 30x [min.] at 20°C	Concentrate recovery %	RCF (× g)
2,000 MWCO	0.25 mg/ml cytochrome c	30 min	95%	14,000
10,000 MWCO	0.25 mg/ml cytochrome c	15 min	92%	14,000
30,000 MWCO	1.0 mg/ml BSA	10 min	95%	14,000
50,000 MWCO	1.0 mg/ml BSA	10 min	92%	14,000
100,000 MWCO	1.0 mg/ml bovine IgG	11 min	90%	8,000

### Conversion Table for Hydrosart® MWCO to Nucleotide Cut-off

Membrane Nucleotide Cut-off (bp)	MWCO	Double-Stranded
Hydrosart®	2 kDa	> 10
Hydrosart®	10 kDa	> 30
Hydrosart®	30 kDa	> 50
Hydrosart®	50 kDa	> 300
Hydrosart®	100 kDa	> 600

### Ordering Information

Vivacon® 500	Pack size	Prod. No.
2,000 MWCO	25	VN01H91
2,000 MWCO	100	VN01H92
10,000 MWCO	25	VN01H01
10,000 MWCO	100	VN01H02
30,000 MWCO	25	VN01H21
30,000 MWCO	100	VN01H22
50,000 MWCO	25	VN01H31
50,000 MWCO	100	VN01H32
100,000 MWCO	25	VN01H41
100,000 MWCO	100	VN01H42

Sample Kits	Pack size	Prod. No.
Sample Kit L (4 units each of 2, 10, 30 K)	12	VN01HL12
Sample Kit H (4 units each of 30, 50, 100 K)	12	VN01HH12

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