



sartorius stedim  
biotech

## Ultrafiltration Family



turning science into solutions

# Vivaspin Ultrafiltration Family – sample concentration up to 20 ml

Vivaspin centrifugal concentrators offer the optimal solution to any concentration or buffer exchange application with their broad range of volume capacities and MWCOs.

Highest flow rates and recoveries are achieved due to their particular vertical membrane design.

Incomparably safe sample handling and convenience is assured by the patented dead-stop technology allowing direct recovery of the concentrate without further respin.

## Vivaspin applications

- Concentration of biological samples containing antigens, antibodies, enzymes or nucleic acids
- Concentration of diluted protein samples from chromatography eluates
- Desalting or Diafiltration | Buffer exchange
- Sample concentration for crystallization and NMR spectroscopy
- Removal of very small or large contaminants

Feature	Benefit
Vertical, large membrane design	Fast, minimal membrane blocking
Integrated Dead-Stop-Volume	No risk (to concentrate to dryness)
Low-binding materials	High recovery
No Re-spin necessary	Easy handling, fast
Membrane selection	Highest recovery with extremely low-binding Hydrosart® membrane in Vivaspin 2 and Vivaspin 15R
Broad volume range from 0.5 – 100 ml	High volume flexibility
Wide MWCO range from 2 kDa – 0.2 µm	High MWCO flexibility

## Special Devices

Sartorius Stedim Biotech offers an extended range of membranes to cover the different ultrafiltration requirements which will typically yield recoveries of the concentrated sample in excess of 90% when the starting sample contains over 0.1 mg/ml of the solute of interest.

For highest recovery, select a membrane MWCO which is at least half to one third of the molecular weight of the solute to be retained.

### Highest recovery with extremely low binding Hydrosart® membrane

- The membrane of choice for antibody concentration
- MWCO range from 2 kDa – 30 kDa
- Available in Vivaspin 2 and Vivaspin 15R
- Vivaspin 2 offers choice of membranes: PES, Hydrosart® and CTA

## Vivaspin Ultrafiltration Family

Vivaspin 500



500 µl\* – 5 µl\*\*

Vivaspin 2



2 ml – 8 µl

Vivaspin 4



4 ml – 20 µl

Vivaspin 6



6 ml – 30 µl

Vivaspin 15



15 ml – 50 µl

Vivaspin 15R



15 ml – 30 µl

Vivaspin 20



20 ml – 50 µl

\* Volume \*\* Dead stop vol.

# Ordering information

## Vivaspin – PES Membrane

MWCO			3 kDa	5 kDa	10 kDa	30 kDa	50 kDa
Product	Volume	Dead stop vol.					
Vivaspin 500	0.5 ml	5 µl	VS0191 (25)*	VS0111 (25)	VS0101 (25)	VS0121 (25)	VS0131 (25)
			VS0192 (100)	VS0112 (100)	VS0102 (100)	VS0122 (100)	VS0132 (100)
Vivaspin 2	2 ml	8 µl	VS0291 (25)	VS0211 (25)	VS0201 (25)	VS0221 (25)	VS0231 (25)
			VS0292 (100)	VS0212 (100)	VS0202 (100)	VS0222 (100)	VS0232 (100)
Vivaspin 4	4 ml	20 µl		VS0413 (25)	VS0403 (25)	VS0423 (25)	VS0433 (25)
				VS0414 (100)	VS0404 (100)	VS0424 (100)	VS0434 (100)
Vivaspin 6	6 ml	30 µl	VS0691 (25)	VS0611 (25)	VS0601 (25)	VS0621 (25)	VS0631 (25)
			VS0692 (100)	VS0612 (100)	VS0602 (100)	VS0622 (100)	VS0632 (100)
Vivaspin 15	15 ml	50 µl		VS1511 (10)	VS1501 (10)	VS1521 (10)	VS1531 (10)
				VS1512 (40)	VS1502 (40)	VS1522 (40)	VS1532 (40)
Vivaspin 20	20 ml	50 µl	VS2091 (12)	VS2011 (12)	VS2001 (12)	VS2021 (12)	VS2031 (12)
			VS2092 (48)	VS2012 (48)	VS2002 (48)	VS2022 (48)	VS2032 (48)
MWCO			100 kDa	300 kDa	1,000 kDa	0.2 µm	5 of each
Product	Volume	Dead stop vol.					
Vivaspin 500	0.5 ml	5 µl	VS0141 (25)	VS0151 (25)	VS0161 (25)	VS0171 (25)	VS01S1 (25)
			VS0142 (100)	VS0152 (100)	VS0162 (100)	VS0172 (100)	
Vivaspin 2	2 ml	8 µl	VS0241 (25)	VS0251 (25)	VS0261 (25)	VS0271 (25)	VS02S1 (25)
			VS0242 (100)	VS0252 (100)	VS0262 (100)	VS0272 (100)	
Vivaspin 4	4 ml	20 µl	VS0443 (25)			VS0473 (25)	VS04S3 (25)
			VS0444 (100)			VS0474 (100)	
Vivaspin 6	6 ml	30 µl	VS0641 (25)	VS0651 (25)	VS0661 (25)	VS0671 (25)	VS06S1 (25)
			VS0642 (100)	VS0652 (100)	VS0662 (100)	VS0672 (100)	
Vivaspin 15	15 ml	50 µl	VS1541 (10)			VS1571 (10)	VS15S1 (10)
			VS1542 (40)			VS1572 (40)	
Vivaspin 20	20 ml	50 µl	VS2041 (12)	VS2051 (12)	VS2061 (12)	VS2071 (12)	VS20S1 (12)
			VS2042 (48)	VS2052 (48)	VS2062 (48)	VS2072 (40)	

## Vivaspin – Hydrosart® Membrane

MWCO			2 kDa	5 kDa	10 kDa	30 kDa
Product	Volume	Dead stop vol.				
Vivaspin 2	2 ml	8 µl	VS02H91 (25)*	VS02H11 (25)	VS02H01 (25)	VS02H21 (25)
			VS02H92 (100)	VS02H12 (100)	VS02H02 (100)	VS02H22 (100)
Vivaspin 15R	15 ml	30 µl	VS15RH91 (12)	VS15RH11 (12)	VS15RH01 (12)	VS15RH21 (12)
			VS15RH92 (48)	VS15RH12 (48)	VS15RH02 (48)	VS15RH22 (48)

## Vivaspin – CTA Membrane

MWCO			5 kDa	10 kDa	20 kDa
Product	Volume	Dead stop vol.			
Vivaspin 2	2 ml	8 µl	VS02U1 (25)	VS02V1 (25)	VS02X1 (25)
			VS02U2 (100)	VS02V2 (100)	VS02X2 (100)

## Vivaspin Additional Devices

Product Description	Pack size	Order No.
Vivaspin 20 – Diafiltration cups	12	VSA005

\* (pack size in parenthesis)

# Vivacell Pressure Units – sample concentration up to 250 ml

**Vivacell – Put your proteins under pressure! Pressure, Centrifuge, Shaking – the choice is yours.**

Sartorius Stedim Biotech offers the Vivacell product range of gas pressure and centrifugal concentrators for sample volumes from 20 ml to 250 ml.

The patented vertical membrane design guarantees highest performance and unmatched flexibility.

Vivacell is a unique and innovative concentrator, that utilizes pressure, centrifuge, shaking or pressure-shake to rapidly concentrate even samples with high particle loading.

Benefit from patented dead-stop technology, high process speed and direct recovery without reverse spin!

## Vivacell Family

### Vivacell 70 – Centrifugation|Pressure



MWCO	Vivacell 70; Volume = 70 ml; Dead stop vol. = 150 µl
5 kDa	VS6011 (2)*, VS6012 (10)
10 kDa	VS6001 (2), VS6002 (10)
30 kDa	VS6021 (2), VS6022 (10)
50 kDa	VS6031 (2), VS6032 (10)
100 kDa	VS6041 (2), VS6042 (10)
0.2 µm	VS6071 (2), VS6072 (10)

### Vivacell 100 – Centrifugation|Pressure



MWCO	Vivacell 100; Volume = 100 ml; Dead stop vol. = 350 µl
5 kDa	VC1011 (2), VC1012 (10)
10 kDa	VC1001 (2), VC1002 (10)
30 kDa	VC1021 (2), VC1022 (10)
50 kDa	VC1031 (2), VC1032 (10)
100 kDa	VC1041 (2), VC1042 (10)
300 kDa	VC1051 (2), VC1052 (10)
1,000 kDa	VC1061 (2), VC1062 (10)
0.2 µm	VC1071 (2), VC1072 (10)

### Vivacell 250 – Pressure



MWCO	Vivacell 250; Volume = 250 ml; Dead stop vol. = 600 µl
5 kDa	VC2511 (5)
10 kDa	VC2501 (5)
30 kDa	VC2521 (5)
50 kDa	VC2531 (5)
100 kDa	VC2541 (5)
0.2 µm	VC2571 (5)

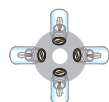
\* (pack size in parenthesis)

# Vivacell – Accessories for different applications

## Air pressure Controller (APC)



## Vivacell 70



Product description	Pack size	Order no.
Include pressure gauge, regulator, over-pressure safety valve, female connector and 1 m extension line (4 mm pneumatic tubing) with connectors and inlet-tubing	1	VCA002

## Centrifugation

Product description	Pack size	Order no.
Vivacell centrifuge bottle-standard caps – swing out rotor	4	VSA003
Modified caps with centrifuge bottle – fixed angle rotor	2	VCA004

## Pressurise & Pressure-shake

Product description	Pack size	Order no.
Female connector	1	VCA010
Male connector	1	VCA011
4 mm pneumatic tubing	1	VCA012
Pressure head with reservoir and filtrate bottle	1	VCA700

## Pressure-fuge

Product description	Pack size	Order no.
Charge valve for pressure-fuge head	1	VCA005
Vivacell replacement seals for pressure-fuge head	10	VCA007
Female connector	1	VCA010
Male connector	1	VCA011
4 mm pneumatic tubing	1	VCA012
Pressure-fuge head	2	VCA701

## Vivacell 100

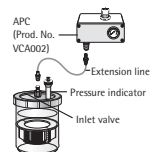


Product description	Pack size	Order no.
Sanoprene replacement seals	10	VCA014
Female connector	1	VCA010
Male connector	1	VCA011
4 mm pneumatic tubing	1	VCA012
Pressure head with replacement seals (5)	1	VCA800

## Pressure & pressure-shake

Product description	Pack size	Order no.
Replacement pressure indicator	1	VCA008
Vivacell maintenance kit (sample reservoir, filtrate container and "O" ring seals)	1	VCA009
Female connector	1	VCA010
Male connector	1	VCA011
4 mm pneumatic tubing	1	VCA012
Replacement pressure head & screw closure	1	VCA015
Vivacell 250 complete with accessories	1	VCA250
Vivacell 250 Starter Kit	5	VC25S1

## Vivacell 250



# Vivaflow Crossflow Cassettes

## Sample concentration up to 5 l

Vivaflow 50



1 l\* – 10 ml\*\*

Vivaflow 200



5 l\* – 20 ml\*\*

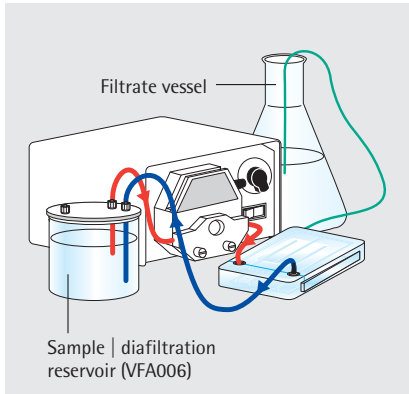
\*Volume \*\* Min. volume

### Applications

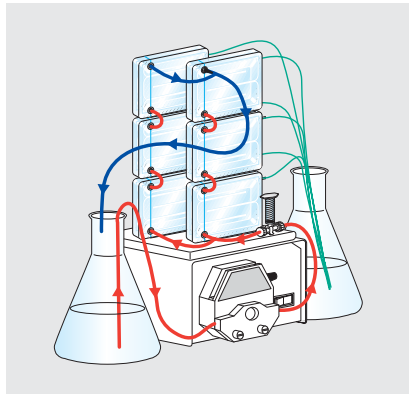
- Concentration of cell culture supernatants
- Concentration of viruses, bacteria, etc
- Concentration of trace metals from seawater

## Vivaflow setup

Vivaflow 50 – Single module



Vivaflow 50 – Multiple modules



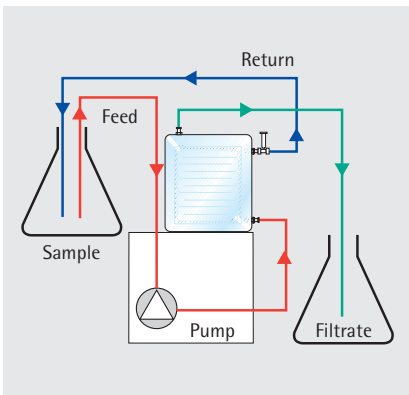
### 100 ml to 5 litres and more

The novel Vivaflow 50 system (patents pending) provides a standard of ease of use, performance, flexibility and economy which is unrivalled by any laboratory filtration system on the market.

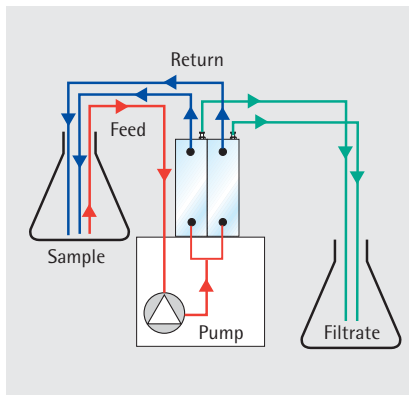
Unique "flip-flow" thin channel flow path results in high turbulence and linear velocity for exceptional flux even at high concentrations.

The Vivaflow 50 is a disposable.

Vivaflow 200 – Single module



Vivaflow 200 – Two modules



### 0.5 to 5 litres and more

Concentrate 250 ml to under 20 ml in just a few minutes or concentrate one litre 50 times in less than 30 minutes. Alternatively, use two Vivaflow 200's in parallel and concentrate 5 litres in under 75 minutes.

Two modules in parallel will concentrate 5 litres in under 75 minutes.

The Vivaflow 200 is easy to clean and can be re-used.

# Ordering information

## Vivaflow – PES Membrane

MWCO			5 kDa	10 kDa	30 kDa	50 kDa
Product	Volume	Min vol.				
Vivaflow 50	1 l	10 ml	VF05P1 (2)*	VF05P0 (2)	VF05P2 (2)	VF05P3 (2)
Vivaflow 200	5 l	20 ml	VF20P1 (1)	VF20P0 (1)	VF20P2 (1)	VF20P3 (1)
MWCO			100 kDa	0.2 µm		
Product	Volume	Min vol.				
Vivaflow 50	1 l	10 ml	VF05P4 (2)	VF05P7 (2)		
Vivaflow 200	5 l	20 ml	VF20P4 (1)	VF20P7 (1)		

## Vivaflow – RC Membrane

MWCO			10 kDa	100 kDa
Product	Volume	Min vol.		
Vivaflow 50	1 l	10 ml	VF05C0 (2)*	VF05C4 (2)
Vivaflow 200	5 l	20 ml	VF20C0 (1)	VF20C4 (1)

## Vivaflow – Hydrosart® Membrane

MWCO			5 kDa	10 kDa	30 kDa
Product	Volume	Min vol.			
Vivaflow 200	5 l	20 ml	VF20H1	VF20H0	VF20H2

## Vivaflow – Complete system (pump, easy load pump head & tubing)

Product Description	Order No.
Vivaflow 50	VFS504
Vivaflow 200	VFS204

\* (pack size in parenthesis)

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