

## Ultrafiltration Family



# Vivaspin Ultrafiltration Family – Sample Concentration up to 20 ml Initial Volume

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

Due to their particular vertical membrane design they achieve highest flow rates and recoveries.

The patented dead-stop technology allowing direct recovery of the concentrate without further respin assures incomparably safe sample handling and convenience.



Vivaspin 500

500  $\mu$ l\* – 5  $\mu$ l\*\*



Vivaspin 2

2 ml – 8  $\mu$ l



Vivaspin 6

6 ml – 30  $\mu$ l



Vivaspin 15R

15 ml – 30  $\mu$ l

## Vivaspin Applications

- Concentration of biological samples containing antigens, antibodies or enzymes
- 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

## Features

- Vertical, large membrane design
- Integrated Dead-Stop-Volume
- Low-binding materials
- No Re-spin necessary
- Broad volume range from 0.5 – 20 ml
- Wide MWCO range from 2 kDa – 0.2  $\mu$ m

## Benefits

- Fast, minimal membrane blocking
- No risk (to concentrate to dryness)
- High recovery
- Easy handling, fast
- High volume flexibility
- High MWCO flexibility

## Features

- Vivaspin Turbo range for fastest concentration speed and highest recoveries
- Angular dead-stop pocket in Vivaspin Turbo range

## Benefits

- Saving time combined with virtually complete concentrate recovery
- Easy and complete concentrate recovery due to pipette friendly access



Vivaspin 20

20 ml – 50  $\mu$ l



Vivaspin Turbo 4

4 ml – 30  $\mu$ l



Vivaspin Turbo 15

15 ml – 100  $\mu$ l



\* Volume

\*\* Dead stop vol.

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## Ordering Information

### Vivaspin – PES Membrane

MWCO	3 kDa	5 kDa <sup>1)</sup>	10 kDa <sup>1)</sup>	30 kDa <sup>1)</sup>	50 kDa <sup>1)</sup>	100 kDa <sup>1)</sup>	300 kDa	1,000 kDa	0.2 µm	<sup>1)</sup> 5 of each	
Product	Volume	Dead-stop vol.									
Vivaspin 500	0.5 ml	5 µl	V50111 (25)	V50101 (25)	V50121 (25)	V50131 (25)	V50141 (25)	V50151 (25)	V50161 (25)	V50171 (25)	V50151 (25)
			V50192 (100)	V50102 (100)	V50122 (100)	V50132 (100)	V50142 (100)	V50152 (100)	V50162 (100)	V50172 (100)	V50152 (100)
Vivaspin 2	2 ml	8 µl	V50291 (25)	V50201 (25)	V50221 (25)	V50231 (25)	V50241 (25)	V50251 (25)	V50261 (25)	V50271 (25)	V50251 (25)
			V50292 (100)	V50202 (100)	V50222 (100)	V50232 (100)	V50242 (100)	V50252 (100)	V50262 (100)	V50272 (100)	V50252 (100)
Vivaspin Turbo 4	4 ml	30 µl	V504191 (25)	V504101 (25)	V504121 (25)	V504131 (25)	V504141 (25)				
			V504192 (100)	V504102 (100)	V504122 (100)	V504132 (100)	V504142 (100)				
Vivaspin 6	6 ml	30 µl	V50691 (25)	V50601 (25)	V50621 (25)	V50631 (25)	V50641 (25)	V50651 (25)	V50661 (25)	V50671 (25)	V50651 (25)
			V50692 (100)	V50602 (100)	V50622 (100)	V50632 (100)	V50642 (100)	V50652 (100)	V50662 (100)	V50672 (100)	V50652 (100)
Vivaspin Turbo 15	15 ml	100 µl	V515191	V515101 (12)	V515121 (12)	V515131 (12)	V515141 (12)				
			V515191	V515102 (48)	V515122 (48)	V515132 (48)	V515142 (48)				
Vivaspin 20	20 ml	50 µl	V52091 (12)	V52011 (12)	V52021 (12)	V52031 (12)	V52041 (12)	V52051 (12)	V52061 (12)	V52071 (12)	V52051 (12)
			V52092 (48)	V52012 (48)	V52022 (48)	V52032 (48)	V52042 (48)	V52052 (48)	V52062 (48)	V52072 (48)	V52052 (48)

### Vivaspin – Hydrosart® Membrane

MWCO	2 kDa	5 kDa	10 kDa	30 kDa
Product	Volume	Dead-stop vol.		
Vivaspin 2	2 ml	8 µl	V502H91 (25)*	V502H01 (25)
			V502H92 (100)	V502H02 (100)
Vivaspin 15R	15 ml	30 µl	V515RH91 (12)	V515RH01 (12)
			V515RH92 (48)	V515RH02 (48)

### Vivaspin – CTA Membrane

MWCO	5 kDa	10 kDa	20 kDa
Product	Volume	Dead-stop vol.	
Vivaspin 2	2 ml	8 µl	V502U1 (25)
			V502U2 (100)

### Vivaspin Additional Devices

Product Description	Qty per Box	Order No.
Vivaspin 20 – Diafiltration cups	12	V5A005

\* Volume  
\*\* Dead-stop vol.



Vivaspin 20  
20 ml – 50 µl



# Vivacell Pressure Units – Sample Concentration up to 250 ml Initial Volume

Vivacell – Put your proteins under pressure! Pressurization, centrifugation or both – the choice is yours. Sartorius offers the Vivacell product range of pressurizable and centrifugal concentrators for sample volumes from 20 ml to 250 ml. The patented vertical membrane design guarantees highest performance and unmatched flexibility.

Vivacell products are unique and innovative concentrators that can be pressurized and centrifuged, or a combination of both for fast and safe sample concentration.

Benefit from our patented dead-stop technology, high process speeds and direct concentrate recovery without the need for reverse spinning!

## 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)



\* (Qty per box in parenthesis)

## Vivacell – Accessories for Different Applications

### APC

Description	Qty per Box	Order No.
<b>Air Pressure Controller</b>		
Includes 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



### Vivacell 70

Description	Qty per Box	Order No.
<b>Centrifugation</b>		
Vivacell centrifuge bottle-standard caps – swing out rotor	4	VSA003
Modified caps with centrifuge bottle – fixed angle rotor	2	VCA004
<b>Pressurize &amp; Pressure-shake</b>		
Female connector	1	VCA010
Male connector	1	VCA011
4 mm pneumatic tubing	1	VCA012
Pressure head with reservoir and filtrate bottle	1	VCA700
<b>Pressure-fugea</b>		
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
4mm pneumatic tubing	1	VCA012
Pressure-fuge head	2	VCA701



### Vivacell 100

Description	Qty per Box	Order No.
<b>Pressurize &amp; Pressure-shake</b>		
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



### Vivacell 250

Description	Qty per Box	Order No.
<b>Pressurize &amp; Pressure-shake</b>		
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



# Vivaflow Crossflow Cassettes – Sample Concentration up to 5 l

Plug and Play Convenience – Vivaflow units are ease to use, and provide an optimal performance, flexibility and economy which is unrivalled by any crossflow system on the market for laboratory needs. The devices are easy to set up and need only a standard peristaltic pump to operate.

## Vivaflow Setup

### 100 ml to 3 Liters

**Vivaflow 50** is a disposable, modular crossflow device, which can be easily scaled up to 6 units that run both in parallel and in series. Vivaflow 50 saves regeneration time and is the economical choice for concentration and buffer exchange of 0.1 ml to 3 l samples containing proteins, viruses and nanoparticles.



Vivaflow 50  
Single module



Vivaflow 50  
Multiple modules

### 100 ml to 1 Liter

**Vivaflow 50R** is a reusable crossflow device featuring a unique, low-binding modified regenerated cellulose membrane, Hydrosart<sup>®</sup>. Therefore, it is the ideal choice for concentrating expensive samples like viruses and antibodies. Vivaflow 50R can be scaled up with one additional unit to increase the flow speed for concentrating initial sample volumes of up to 1 l.



Vivaflow 50R  
Single module



Vivaflow 50R  
Two modules

### 0.5 to 5 Liters

**Vivaflow 200**, like Vivaflow 50R, is a reusable crossflow device, but is available in a choice of membranes: modified regenerated cellulose, Hydrosart<sup>®</sup> and PES. This device is perfect for concentrating expensive samples like viruses and antibodies. Vivaflow 200 can be scaled up with one additional unit to increase the flow speed for concentrating initial sample volumes of up to 5 l.



Vivaflow 200  
Single module



Vivaflow 200  
Two modules



## Vivaflow Applications

- Antibody | recombinant protein concentration | diafiltration in biopharma research
- Concentration of small production lots of proteins for diagnostic purposes
- Concentration of viruses from cell culture supernatants or of environmental samples
- Nanoparticle concentration



## Ordering Information

### Vivaflow – PES Membrane

MWCO			3 kDa	5 kDa	10 kDa	30 kDa	50 kDa	100 kDa	1000 kDa	0.2 µm
Product	Volume**	Min vol.								
Vivaflow 50	3 l	10 ml	VF05P9 (2)*	VF05P1 (2)*	VF05P0 (2)	VF05P2 (2)	VF05P3 (2)	VF05P4 (2)	VF05P6 (2)	VF05P7 (2)
Vivaflow 200	5 l	20 ml	VF20P9 (1)	VF20P1 (1)	VF20P0 (1)	VF20P2 (1)	VF20P3 (1)	VF20P4 (1)		VF20P7 (1)

### Vivaflow – RC Membrane

MWCO			100 kDa
Product	Volume**	Min vol.	
Vivaflow 50	3 l	10 ml	VF05C4 (2)*

### Vivaflow – Hydrosart® Membrane

MWCO			2 kDa	5 kDa	10 kDa	30 kDa	100 kDa
Product	Volume**	Min vol.					
Vivaflow 50R	1 l	10 ml		VF05H1	VF05H0	VF05H2	VF05H4
Vivaflow 200	5 l	20 ml	VF 20H9	VF20H1	VF20H0	VF20H2	VF20H4

### Vivaflow – Complete System (Pump, Easy Load Pump Head & Tubing)

Product Description	Order No.
Vivaflow 50	VFS504
Vivaflow 50R   200	VFS204

\* (Qty per box in parenthesis)

\*\* Volume refers to maximal recommended volume with multiple units

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