

## Vivaspin 20

### 5-20 ml samples

The Vivaspin 20ml centrifugal concentrators have been developed to offer increased volume flexibility and performance.

Vivaspin 20 handles up to 20ml in swing bucket centrifuges 14ml in 25° fixed angle rotors accepting 50ml centrifuge tubes. Featuring twin vertical membranes for unparalleled filtration speeds and 100X plus concentrations. Remaining volume is easy to read off the printed scale on the side of the concentrator and the modified dead stop pocket further simplifies direct pipette recovery of the final concentrate.



### Process Flexibility

Vivaspin 20 is available with unique accessories and operating methods that are designed to provide more process flexibility and further time saving.

### One Step Desalting

In this procedure following concentration, a diafiltration cup is filled with buffer and then spun one time to achieve 98% salt removal. This compares to the need for two spins to achieve the same result with the traditional refill and re-spin procedure.

The improved performance is due to the constant washing action of the buffer solution in the accessory cup as it replaces solvent and salts as they pass through the ultrafiltration membrane.

### Gas Pressure Filtration

When an appropriate centrifuge is unavailable, or for single sample processing, Vivaspin 20 can be filled with up to 15ml and then pressurised for bench top concentration. For even faster processing, Gas pressure can be combined with centrifugal force. "Pressure-fugation" is particularly suitable for difficult or viscous samples such as serum, or when using a low process temperature which reduces filtration speed, and generally when minimum process time is essential.

### Rotor Compatibility

Please note:

Vivaspin 20 (30 mm x 116 mm) is designed to fit into rotors that can accommodate Falcon 50 ml conical bottom tubes, e.g. Beckman Allegra 25R with TS-5.1-500 swing-out rotor with BUC 5 buckets and 368327 adaptors; Beckman TA-10.250 25° fixed angle rotor with 356966 adaptors; Heraeus Multifuge 3 S-R with (Heraeus / Sorvall) 75006445 swing out rotor with 75006441 buckets and adaptors for Falcon 50 ml conical bottom tubes.

These devices are not designed to fit into rotors that only accept round bottom 29 mm x 105 mm tubes, e.g. Sorvall SS34 or Beckmann JA 20.

If your rotor accepts only 29 mm x 105 mm round bottom tubes, please use the Vivaspin 15, which can be used in either round bottom or conical centrifuge tubes.

Performance Characteristics									
Mode	Centrifuge		Centrifuge		Benchtop		Pressure Fuge		
Type	Swing Bucket		25° fixed Angle		Pressure		Swing Bucket		
Pressure/Speed	3,000 g		6,000 g		4 bar		3,000 g + 4 bar		
Start Volume	20 ml		14 ml		10 ml		10 ml		
	Min.	Rec.	Min.	Rec.	Min.	Rec.	Min.	Rec.	
	Cytochrome c 0.25 mg/ml (12,400 MW)								

<b>3,000 MWCO PES</b>	110	97%	180	96%	60	96%	-	-
BSA 1.0 mg/ml (66,000 MW)								
<b>5,000 MWCO PES</b>	23	99%	29	99%	50	98%	14	98%
<b>10,000 MWCO PES</b>	16	98%	17	98%	32	97%	8	97%
<b>30,000 MWCO PES</b>	13	98%	15	98%	32	97%	8	97%
IgG 0.25 mg/ml (160,000 MW)								
<b>30,000 MWCO PES</b>	27	97%	20	95%	46	94%	13	97%
<b>50,000 MWCO PES</b>	27	97%	22	95%	46	93%	13	96%
<b>100,000 MWCO PES</b>	25	91%	20	90%	42	88%	12	94%
Latex beads 0.004 % in DMEM +10 % FCS (0.055 µm)								
<b>300,000 MWCO PES</b>	20	99%	35	99%	10	99%	-	-
Latex beads 0.004 % in DMEM +10 % FCS (0.055 µm)								
<b>1,000,000 MWCO PES</b>	4	99%	12	99%	4	99%	-	-
Yeast 1.0 mg/ml ( <i>S. Cerevisiae</i> )								
<b>0.2 µm Pes</b>	15	95%	5	95%	20	95%	2	95%

#### Technical Specifications

Swing Bucket Rotor	20 ml
25° Fixed Angle Rotor	14 ml
With Pressure Cap	15 ml

#### Dimensions

Total Length	116 mm
Width	30 mm
Active Membrane Area	6.0 cm <sup>2</sup>

#### Carrier Required

Insert Diameter	29 mm
Conical Bottom Tube	50 ml
Maximum Centrifugal Force	8,000 x g
Maximum Pressure	5 bar
Hold up Volume Memb.	<20 µl
Dead Stop Volume	50 µl

#### Materials of Construction

Sartorius Croatia - Libra elektronik d.o.o.  
 Savska 45A, 10 290 Zaprešić  
 Ovlašteno zastupstvo i servis Sartorius RH  
[Sartorius.Croatia@email.t-com.hr](mailto:Sartorius.Croatia@email.t-com.hr), [service@sartorius.hr](mailto:service@sartorius.hr)  
[www.Sartorius.hr](http://www.Sartorius.hr)  
 Tel: 01 3340-290/291/293/295/296, fax: 01 3340-299  
 P.J. Solin, Zgon 80, 21210 Solin, 091 563 2266



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Body and Filtrate Vessel	Polycarbonate
Concentrator Cap	Polypropylene
Membranes	Polyethersulfone

Ordering Information				
Vivaspin 20 (5 - 20 ml samples) Polyethersulfone Membrane	Pack Size	Prod. No.	Pack Size	Prod. No.
<b>3,000 MWCO</b>	12	VS2091	48	VS2092
<b>5,000 MWCO</b>	12	VS2011	48	VS2012
<b>10,000 MWCO</b>	12	VS2001	48	VS2002
<b>30,000 MWCO</b>	12	VS2021	48	VS2022
<b>50,000 MWCO</b>	12	VS2031	48	VS2032
<b>100,000 MWCO</b>	12	VS2041	48	VS2042
<b>300,000 MWCO</b>	12	VS2051	48	VS2052
<b>1,000,000 MWCO</b>	12	VS2061	48	VS2062
<b>0,2 µm</b>	12	VS2071	48	VS2072
<b>Start pack (2 of each 5K, 10K, 30K, 50K, 100K, 0,2 µm)</b>	12	VS20S1		

Equipment Required	
Centrifuge (Swing Bucket or Fixed Angel)	
<b>Rotor size (Based on conical bottom centrifuge tubes)</b>	50 ml (29 mm)
<b>Fixed angle rotor (Minimum Angle)</b>	25°
<b>Minimum Effectiv Speed</b>	1,500 g
<b>Preferred Speed</b>	2,000 - 6,000 x g
Optional Pressure Accesories for Vivaspin 20	
	<b>Prod. No.</b>
<b>Pressure Head with Check Valve</b>	VCA200
<b>Charge Valve for Pressure Head (Use with Air Pressure Controller)</b>	VCA005
<b>Air Pressure Controller (APC) (Includes over pressure saftey, female coupling, 4 mm pressure tubing with male and female couplings and 6 mm pressure tubing)</b>	VCA002
Concentrate recovery	

**Fixed or variable volume pipette**Thin gel loader type  
preferred**Accessories**

<b>Vivaspin 20</b>	<b>Pack Size</b>	<b>Prod. No.</b>
Diafiltration Cups	12	VSA005
Vivaspin 20 Pressure Head	1	VCA200
Air pressure Controller (APC)	1	VCA002
Charge Valve for Pressure	1	VCA005
Female Coupling	1	VCA010
Male Tube Coupling	1	VCA011
4 mm OD Pressure Tube (3m)	1	VCA012

