

Vivaspin 20

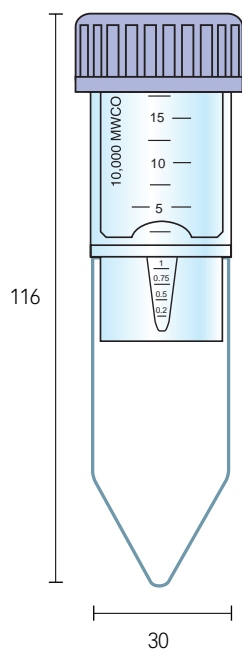
5 - 20 ml samples

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

Vivaspin 20 handles up to 20 ml in swing bucket centrifuges and 14 ml in 25° fixed angle rotors accepting 50 ml centrifuge tubes.

Featuring twin vertical membranes for unparalleled filtration speeds the Vivaspin 20 can achieve 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.



Technical specifications	Vivaspin 20
Concentrator capacity	
Swing bucket rotor	20 ml
Fixed angle rotor	14 ml
With pressure head	15 ml
Dimensions	
Total length	116 mm
	125 mm with pressure head
Width	30 mm
Active membrane area	6.0 cm ²
Hold up volume of membrane	< 20 µl
Dead stop volume	50 µl
Materials of construction	
Body	Polycarbonate
Filtrate vessel	Polycarbonate
Concentrator cap	Polypropylene
Pressure head	Acetal/aluminium
Membrane	Polyethersulfone

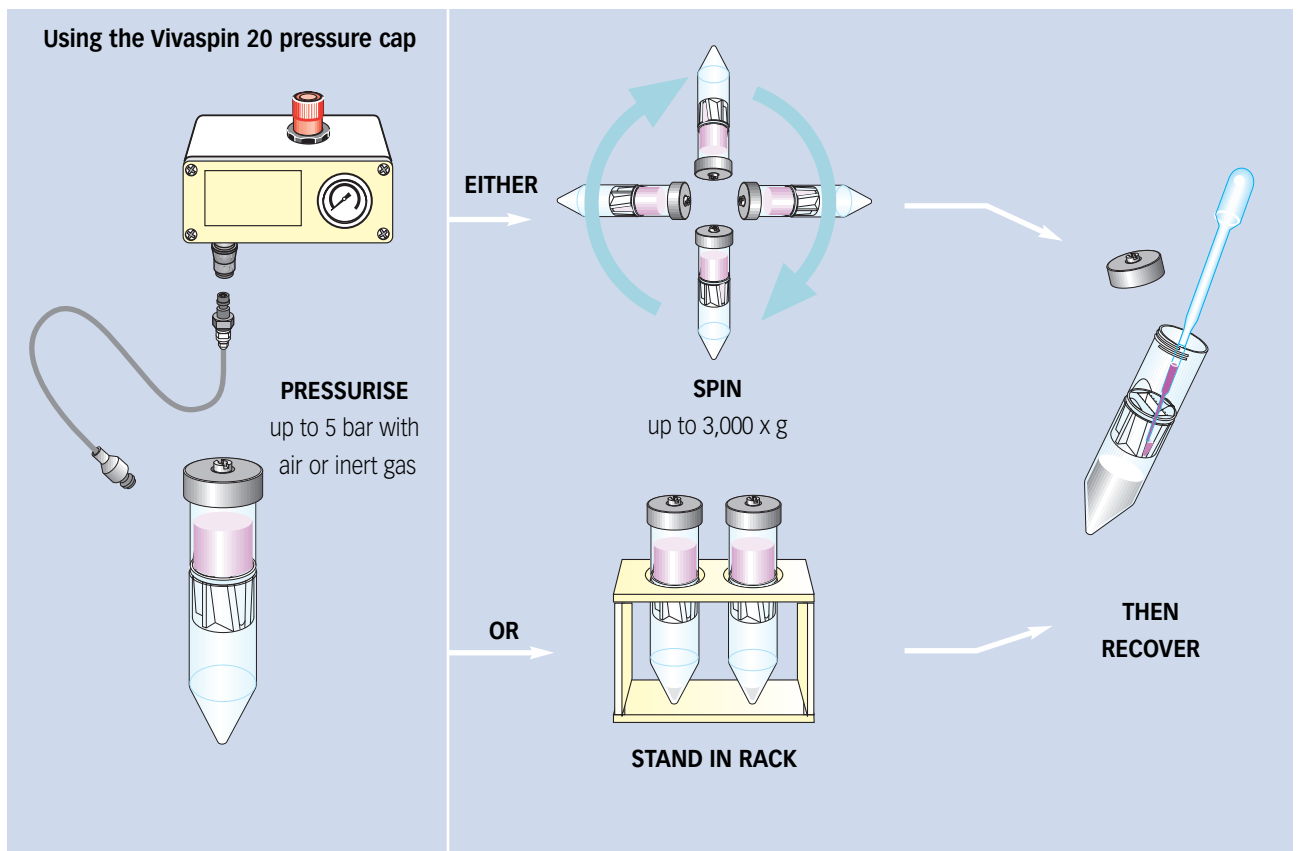
Vivaspin 20

More process flexibility

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

Gas pressure filtration

When an appropriate centrifuge is unavailable, or for single sample processing, Vivaspin 20 can be filled with up to 15 ml 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.

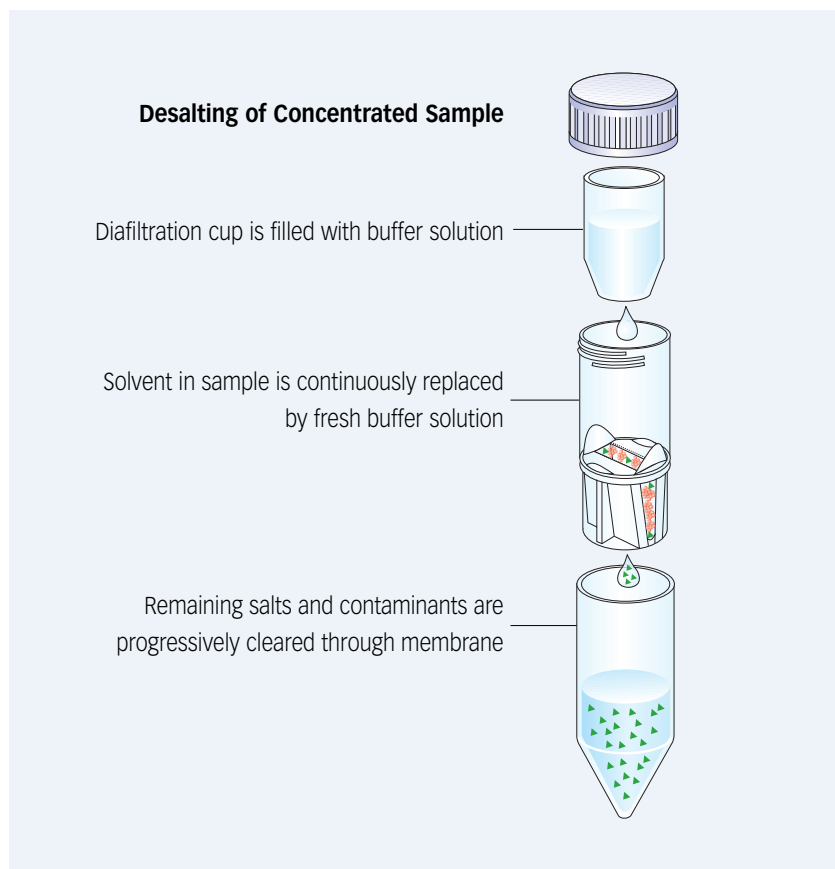


Vivaspin 20

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 diafiltration cup as it replaces solvent and salts as they pass through the ultrafiltration membrane.



Equipment required	Vivaspin 20	
Centrifuge		
Rotor type	Swing bucket	Fixed angle
Minimum rotor angle	-	25°
Rotor cavity	To fit 50 ml (30 mm) conical bottom tubes	To fit 50 ml (30 mm) conical bottom tubes
Maximum speed	5,000 g*	8,000 g*
Optional pressure accessories		
Air pressure controller (APC) complete with pressure gauge, regulator, over-pressure safety valve, female connector to Vivascience pressure products and 1m extension line (4 mm pneumatic tubing) with male and female connectors and 1 m of 6 mm inlet tubing		Prod no. VCA002
Charge valve		Prod no. VCA005
VS20 pressure head		Prod. no.VCA200
Concentrate recovery		
Pipette type	Fixed or variable volume	Fixed or variable volume
Recommended tip	Thin gel loader type	Thin gel loader type

* Please note, devices with membrane MWCO >100,000 kDa need to be processed at lower g forces. See data sheets for details.

Vivaspin 20

Typical performance	Time to concentrate 30x min. at 20°C and solute recovery %							
	Centrifuge		Centrifuge		Bench top		Press-fuge	
Mode	Swing bucket		25° Fixed angle		Pressure		Swing bucket	
Centrifugal speed/pressure	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)								
3,000 MWCO PES	110	97 %	180	96 %	60	96 %	-	-
BSA 1.0 mg/ml (66,000 MW)								
5,000 MWCO PES	23	99 %	29	99 %	50	98 %	14	98 %
10,000 MWCO PES	16	98 %	17	98 %	32	97 %	8	97 %
30,000 MWCO PES	13	98 %	15	98 %	32	97 %	8	97 %
IgG 0.25 mg/ml (160,000 MW)								
30,000 MWCO PES	27	97 %	20	95 %	46	94 %	13	97 %
50,000 MWCO PES	27	96 %	22	95 %	46	93 %	13	96 %
100,000 MWCO PES	25	91 %	20	90 %	42	88 %	12	94 %
Latex beads 0.004 % in DMEM +10 % FCS (0.055 µm)								
300,000 MWCO PES	20	99 %	35	99 %	10	99 %	-	-
Latex beads 0.004 % in DMEM +10 % FCS (0.24 µm)								
1,000,000 MWCO PES	4	99 %	12	99 %	4	99 %	-	-
Yeast 1.0 mg/ml (S. Cerevisiae)								
0.2 µm PES	15	95 %	5	95 %	20	95 %	2	95 %

Ordering information		
Vivaspin 20 Polyethersulfone	Pack size	Prod. no.
3,000 MWCO	12	VS2091
3,000 MWCO	48	VS2092
5,000 MWCO	12	VS2011
5,000 MWCO	48	VS2012
10,000 MWCO	12	VS2001
10,000 MWCO	48	VS2002
30,000 MWCO	12	VS2021
30,000 MWCO	48	VS2022
50,000 MWCO	12	VS2031
50,000 MWCO	48	VS2032
100,000 MWCO	12	VS2041
100,000 MWCO	48	VS2042
300,000 MWCO	12	VS2051
300,000 MWCO	48	VS2052
1,000,000 MWCO	12	VS2061
1,000,000 MWCO	48	VS2062
0.2 µm	12	VS2071
0.2 µm	48	VS2072
Starter pack (2 of each 5 k, 10 k, 30 k, 50 k, 100 k, 0.2 µm)	12	VS20S1
Vivaspin 20 accessories		
Air pressure controller (APC)	1	VCA002
Charge valve for pressure head	1	VCA005
Diafiltration cups	12	VSA005
Female connector	1	VCA010
Male connector	1	VCA011
4 mm OD pneumatic tube (3 m)	1	VCA012
Vivaspin 20 pressure head	1	VCA200