

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.

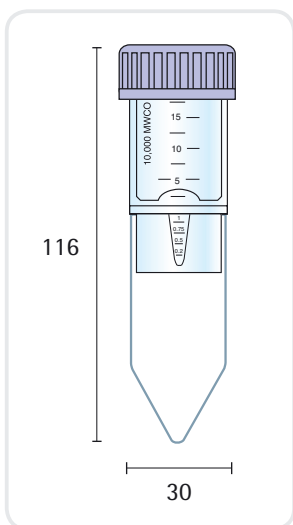
Remaining volume is easy to read off the printed scale on the side of the concentrator and the modified dead stop pocket further simplifies direct pipette recovery of the final concentrate.

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.

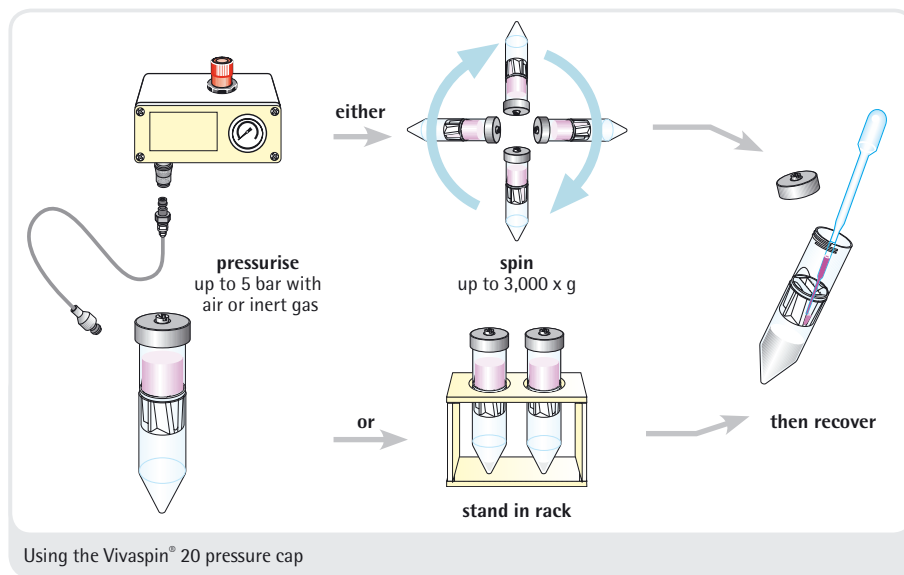
Gas pressure filtration

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.



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

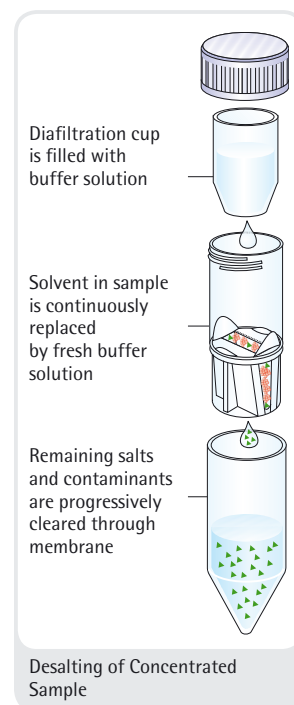


Using the Vivaspin® 20 pressure cap

Desalting with Vivaspin® 20

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 Sartorius Stedim Biotech pressure products and 1 m 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 kDa need to be processed at lower g forces.
See data sheets for details.

Performance characteristics

Mode	Time to concentrate up to 30x [min.] at 20°C and solute recovery %							
	Centrifuge		Centrifuge		Bench top		Press-fuge	
Rotor	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



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Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

