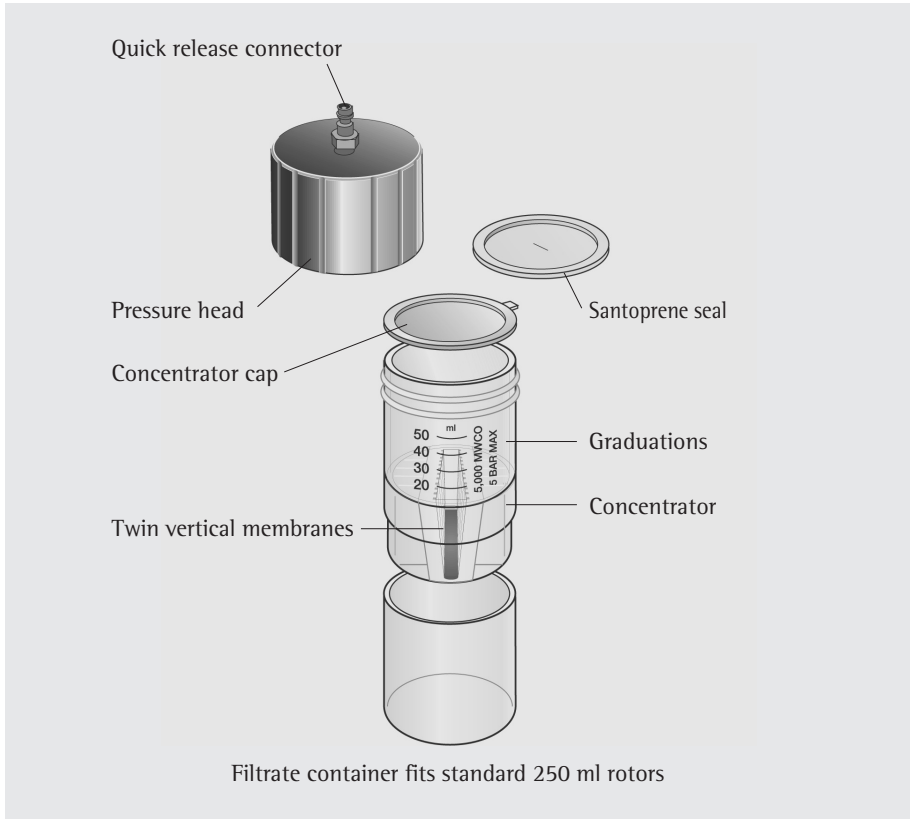


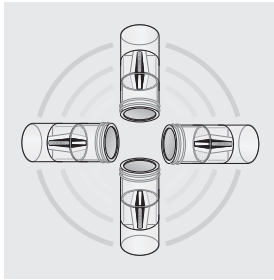
Vivacell 100



Like the smaller Vivacell 70 unit, Vivacell 100, when used as a centrifugal device, fits only into swing bucket rotors accepting 250 ml bottles. The Vivacell 100 can not be used in a fixed angle rotor.

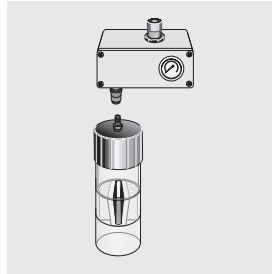
Vivacell 100 units can also be used for single or extremely sensitive samples in the pressurized mode only and left on the bench or placed on a laboratory shaker for faster concentration. It can also be kept in a pressurized mode in the refrigerator. Handling is made easy by use of quick

connectors. In whichever mode Vivacell 100 is used, the vertical membrane design inhibits membrane fouling while the built-in dead stop impedes concentration to dryness and loss of sample.



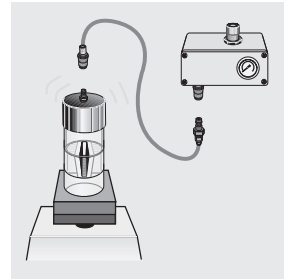
Centrifuge

- Process convenience
- Low shear, no foaming
- Less visual control



Pressure

- Simplicity and highest process control
- Ideal for refrigerated use
- Slower concentrations



Pressure-shake

- Speed and process control
- Ideal for single samples

Vivacell 100 Specifications

Without pressure head (Ø × L)	62 × 123 mm
With pressure head (Ø × L)	71 × 197 mm
Concentrator capacity	20–98 ml
Centrifuge rotor required	62 × 105 mm
Max centrifugal force	2,000 × g
Max pressure	5 bar (75 psi)
Active membrane area	23.5 cm ²
Hold-up vol. memb. & support	< 250 µl
Dead stop volume	350 µl

Vivacell 100 Materials of construction

Pressure head	Acetal
Quick release connector	Acetal
Concentrator cap (centrifugal)	Polypropylene
Concentrator filtrate container	Polycarbonate
Pressure head seal	Santoprene

Performance Characteristics

Typical performance 90 ml Start volume	Time to concentrate 30x min. at 20°C			Solute recovery %
	In centrifuge 2,000 g	As pressure cell 4 bar (58 psi) pressure		
	Swing out rotor	No agitation	Orbital shake	
BSA 1.0 mg/ml (66,000 MW)				
5,000 MWCO PES	22	75	25	96%
10,000 MWCO PES	16	60	20	96%
30,000 MWCO PES	16	60	20	94%
IgG 0.25 mg/ml (160,000 MW)				
50,000 MWCO PES	20	70	30	94%
100,000 MWCO PES	20	85	30	90%
Latex beads 0.004% in DMEM + 10% FCS (0.055 µm)				
300,000 MWCO PES	35	–	120	99%
Latex beads 0.004% in DMEM + 10% FCS (0.24 µm)				
1,000,000 MWCO [†] PES	4	5	4	99%

[†]2,000 g in centrifuge, 2 bar (29 psi) pressure

Usage Tips

1. Flow Rate

Filtration rate is affected by several parameters, including membrane cut-off, sample concentration, viscosity, centrifugal force, pressure and temperature. Expect significantly longer spin times for starting solutions with over 5% solids. When operating at 4°C. flow rates are approximately 1.5 times slower than at 25°C. Viscous solutions such as 50% glycerine will take up to 5 times longer to concentrate than samples in a predominantly buffer solution.

2. Prerinsing

Membranes fitted to Vivacell concentrators contain trace amounts of Glycerine. Should this interfere with analysis this can be removed by rinsing approximately 50 ml of buffer solution or deionised water through the concentrator. Decant filtrate and concentrate before processing sample solution.

3. Sterilisation

Vivacell concentrators are not autoclaveable. To sterilise, use a 70% ethanol solution or sterilising gas mixture.

4. Desalting or Solvent exchange

The sample is first concentrated to desired level. Filtrate is discarded, then the device is refilled with an appropriate solvent. The sample is concentrated again and the process repeated until the concentration of the contaminating microsoluble is sufficiently reduced. Typically three wash cycles will remove 99% of initial salt content.

5. Cleaning and sanitising

Vivacell concentrators may be used several times if recommended cleaning and storage instructions are adhered to, and the membrane is not allowed to dry.

- I. Rinse out the device several times with deionized water.
- II. Fill the concentrator with a solution of 60% Ethanol and 40% 1M HCl. Alternatively fill concentrator with a dilute non ionic surfactant. Place the device in filtrate bottle and allow to soak for 1–2 hours. For best results, agitate on a laboratory shaker for approximately 30 minutes.

⚠ Warning: Strong alkaline solutions should not be used.

- III. Rinse thoroughly with clean water before re-use or storage.

6. Storage

Following cleaning Vivacell devices may be stored for several weeks in a 20% Ethanol solution. For best results, fill filtrate bottle with approximately 100 ml of solution, place concentrator in the bottle and then add a further 50 ml to the concentrator. This procedure will ensure that the membrane remains wetted throughout storage. Close with cap provided and preferably keep refrigerated.

Ordering information

Vivacell 100 Polyethersulfone with Polypropylene concentrator cap	Pack size	Prod. no.
5,000 MWCO	2	VC1011
5,000 MWCO	10	VC1012
10,000 MWCO	2	VC1001
10,000 MWCO	10	VC1002
30,000 MWCO	2	VC1021
30,000 MWCO	10	VC1022
50,000 MWCO	2	VC1031
50,000 MWCO	10	VC1032
100,000 MWCO	2	VC1041
100,000 MWCO	10	VC1042
300,000 MWCO	2	VC1051
300,000 MWCO	10	VC1052
1,000,000 MWCO	2	VC1061
1,000,000 MWCO	10	VC1062
0.2 µm	2	VC1071
0.2 µm	10	VC1072

Accessories

Air pressure controller (APC) complete with pressure gauge, regulator, over-pressure safety valve, female connector, 1 m extension line (4 mm pressure tubing) with male and female connectors and 1 m of 6 mm inlet tubing	1	VCA002
Plastic pipettes	100	VPA005
Female connector	1	VCA010
Male connector	1	VCA011
4 mm pressure tubing (3 m)	1	VCA012
Santoprene replacement seals	10	VCA014
Vivacell 100 pressure head with replacement seals (5)	1	VCA800