



ONE SOURCE. INFINITE SOLUTIONS.®

Vivaspin® Turbo 15

Allows fastest sample concentration with highest recoveries



sartorius stedim

biotech

Centrifugal Concentration



Disposable Ultrafiltration device for sample concentration

- Complete Recoveries
- Fastest Concentrations
- Highest Chemical Resistance

Introduction

Vivaspin® Turbo 15 centrifugal concentrators offer the optimal solution to any concentration or buffer exchange application with their broad range of MWCOs.

Highest flow rates are achieved due to their twin vertical membranes which minimize protein polarization and subsequent fouling of the membrane. Additionally, their sleek internal profile ensures maximum process speeds right down to the last 100 µl.

Working Principle

Centrifugation provides the vector to clear solvent and micro molecules through an ultrafiltration membrane to separate macromolecular species and solvents primarily on the basis of size. It is particularly appropriate for the concentration of macromolecules and can also be used to purify molecular species or for solvent exchange. Ultrafiltration is a non denaturing method that is more efficient, flexible and gentle than alternative processes.

High Performance

In a single spin, 15 ml solutions can be concentrated up to 150x. Samples can be typically concentrated in 10–30 minutes with macromolecular recoveries in excess of 95%.

Optimized Design for Fastest Concentration Results

The Vivaspin® Turbo's optimized design, its sleek internal profile, ensures maximum process speeds right the way down to the last few micro liters. The UV joining technology allows for a smooth joint transition between membrane and plastic housing, allowing all of your valuable sample to be collected into the unique pipette friendly dead stop pocket.

The ultimate in centrifugal ultrafiltration technology:

- Sleek internal design:
 - Ensures maximum process speed for the complete filtration
- Large twin vertical membranes:
 - A fouling of the membrane is avoided due to minimized protein polarization.
- Unique angular dead stop pocket:
 - The 100 µl dead stop pocket is easy to access with standard 200 µl pipette tips due to its patent pending angular design. It eliminates the risk of the sample running to dryness while allowing highest recovery of the concentrate.

Optimized Choice of Materials for High Chemical Compatibility

The combination of Polyethersulfone (PES), Polystyrene and Polypropylene (PP) allows sterilization and depyrogenization of the Vivaspin® Turbo 15 units.

Polyethersulfone membranes are preferred for their low fouling characteristics, exceptional flux and broad pH range compatibility.

Applications

- Sample preparation
 - Sample (protein, lipid, virus, nanoparticle, macromolecule) concentration
 - Desalting/ Dialysis
 - Rebuffering

Your sample is often the result of several months of research. Your sample is valuable, and Vivaspin® Turbo 15 provides highest recovery.

Summary

For scientists and lab technicians who need to quickly and safely concentrate biological samples of 4 ml to 15 ml up to 150 fold, Sartorius offers the Vivaspin® Turbo 15 ultrafilters.

Unlike competitive ultrafiltration units, Vivaspin® Turbo 15 is equipped with an angular dead stop pocket, that enables reproducible and complete recoveries, while being the fastest in the market.

Technical specifications

Materials	Body	Styrene butadiene copolymere
	Filtrate vessel	Polypropylene
	Concentrator cap	Polypropylene
	Membrane	Polyethersulfone (PES)
Dimensions	Total length (concentrator insert)	77 mm
	Total length (in tube with cap)	118 mm
	Diameter (concentrator insert)	27 mm
	Active membrane area	7.2 cm ²
	Hold up volume of membrane	<10 µl
	Dead stop volume in swing out	100 µl
	Dead stop volume in fixed angle	60 µl
Concentrator capacity	Swing bucket rotor	15 ml
	Fixed angle rotor (25°)	11 ml
Maximum speed	4000 x g	4000 x g
Sterilization	ETO or 70% EtOH	
Removal of endotoxins [Depyrogenization]	Flushing with 1N NaOH	

Performance Characteristics

Rotor	Swing out rotor	Fixed angle (25°)
Start vol. and RCF	15 ml at 4,000xg	11 ml at 4,000xg
	Time to 20x Recovery	Time to 20x Recovery
a-chymotrypsin (1.0 mg/ml) 10 kDa	10 min 95%	10 min 95%
BSA (1.0 mg/ml) 10 kDa	10 min 97%	10 min 97%

Order Information

Vivaspin® Turbo 15 centrifugal concentrator, disposable ultrafiltration unit, for sample volumes 4–15 ml, Polyethersulfone U membrane, requires 50 ml centrifuge tubes.

Cut off	Quantity	Order no.
3,000 MWCO	12	VS15T91
3,000 MWCO	48	VS15T92
5,000 MWCO	12	VS15T11
5,000 MWCO	48	VS15T12
10,000 MWCO	12	VS15T01
10,000 MWCO	48	VS15T02
30,000 MWCO	12	VS15T21
30,000 MWCO	48	VS15T22
50,000 MWCO	12	VS15T31
50,000 MWCO	48	VS15T32
100,000 MWCO	12	VS15T41
100,000 MWCO	48	VS15T42
300,000 MWCO	12	VS15T51
300,000 MWCO	48	VS15T52
1000,000 MWCO	12	VS15T61
1000,000 MWCO	48	VS15T62

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