



Concentration to a defined final volume with Vivaspin® Turbo 15



Application
Note

#01

#02

#03

#04

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Background info

It is sometimes desirable to be able to preselect a defined final volume for a concentration step, especially when parallel concentrations are being performed. While Vivaspin centrifugal concentrators have a built in deadstop feature, this is intended to prevent overconcentration to dryness, which – given the fast concentration rates possible with the patented vertical membrane design in the Vivaspin® – would otherwise be a possibility. This note describes a method for achieving reproducible defined final volumes using Vivaspin® Turbo 15 centrifugal concentrators.

Equipment

- Vivaspin® Turbo 15 10K MWCO
- Biohit mLINe 5 ml pipette and tips
- Biohit mLINe 200 µl ml pipette and tips
- arium® pro ultrapure water system
- Sartorius Precision Lab Balance
- Sigma Universal Centrifuge with swing out rotor for 50 ml falcon tubes

Reagents

1 mg/ml Bovine Serum Albumin labelled with Bromophenol blue

Method

1. Add water to the filtrate tube.
2. Put the concentrator insert into the filtrate tube and add sample solution.
3. Close the concentrator screw cap and place in the centrifuge.
4. Concentrate the sample.
5. Remove the concentrator insert and recover the concentrate with a pipette.

Results

Volume of water added to the filtrate tube	Volume of sample solution added to the concentrator insert	Spin conditions	Final concentrate volume (average of 8 devices)
11.5 ml	15 ml	20 min @ 4,000 xg	1.50 ± 0.02 ml
9.5 ml	15 ml	20 min @ 4,000 xg	0.96 ± 0.01 ml
7.5 ml	15 ml	20 min @ 4,000 xg	0.53 ± 0.02 ml

Conclusion

Reproducible defined final concentrate volumes can be quickly and easily achieved with Vivaspin® Turbo 15.



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