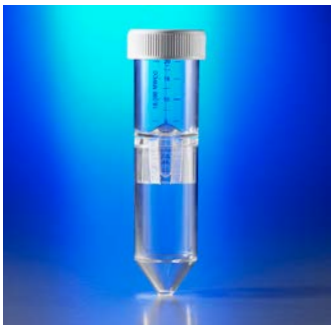
Spin-X® UF Concentrators

Frequently Asked Questions

CORNING



1. **Can I re-use a Spin-X UF concentrator?**
   No. The device is developed for one-time use only.
2. **Can I use the Spin-X UF devices with a swinging-bucket rotor?**
   All Spin-X UF (except Spin-X UF 500) can be used in swinging-bucket rotors. The vertical membrane gives fast flow rates, and the sample cannot be centrifuged to dryness, due to the integrated dead stop volume.
3. **Can I use the molecular weight cut-off (MWCO) of Spin-X UF devices as a guide for concentrating DNA?**
   No. Concentrating DNA, which has a linear structure, requires that Spin-X UF membranes be characterized in terms of a base pair cut-off as indicated in the following table.

Membrane (MWCO)	Ds DNA Base Pairs
5,000	15
10,000	30
30,000	70
50,000	150
100,000	200

4. **Can the Spin-X UF concentrators be spun to dryness?**
   No. All Spin-X UF concentrators have an integrated dead stop volume, and there is no risk to spin the sample to dryness.
5. **Do I need to pre-rinse the Spin-X UF concentrators before I add my sample?**
   Membranes in the Spin-X UF concentrators contain trace amounts of glycerine and sodium azide. These compounds can be removed by rinsing the device with buffer solution or deionised water. Decant filtrate and concentrate before processing sample solution. If a device is to be prepared for later use, make sure the membrane does not dry out by storing the device at 4°C with deionized water or buffer.
6. **How can I increase my recovery with the Spin-X UF concentrators?**
   If you have a low concentration protein sample, we recommend passivating (blocking) the membrane surface. The intention of the passivation procedure is to improve recovery of protein samples by pretreating the device. For this purpose a range of solutions are suggested in the following table. For more detailed information, refer to the *Treatment of Corning Spin-X UF Concentrators for Improved Recovery of Low-concentrated Protein Samples* (Corning Protocol CLS-AN-120).

Type	Solution
Powdered milk	1% in high purity water
BSA	1% in PBS
Tween® 20	5% in high purity water
SDS	5% in high purity water
Triton™ X-100	0.5% in high purity water
PEG 3000	5% in high purity water

7. **How can I tell what the MWCO of my Spin-X® UF concentrator is?**
   This information is printed on the device.
8. **How long does it take to concentrate a sample using Spin-X UF concentrators?**
   It depends on the starting conditions, but for example to concentrate 1 mg BSA 30X at 20°C in a swing-bucket rotor with a 30,000 MWCO device:

Device	Minutes
Spin-X UF 500	5
Spin-X UF 6	12
Spin-X UF 20	22

9. **How much of the protein in my sample can I expect to recover with the Spin-X UF concentrators?**
   If you choose the correct MWCO, >90% recovery.
10. **Is it possible to concentrate and desalt my protein sample using the Spin-X UF concentrators?**
    Yes. First you concentrate your protein; then you refill the device with the buffer containing a lower salt concentration, and spin again. After this step, you have desalted and concentrated your protein. For more information please refer to *Desalting and Buffer Exchange with Corning's Spin-X UF Concentrators* (Corning Application Note CLS-AN-118).
11. **What rotor sizes are compatible with the Spin-X UF concentrators?**
    - Spin-X UF 500 can be processed in all fixed angle rotors accepting 2.2 mL tubes.
    - Spin-X UF 6 can be processed in all rotors accepting 15 mL conical bottom tubes.
    - Spin-X UF 20 can be processed in all rotors accepting 50 mL conical bottom tubes.
12. **What is the housing material of the Spin-X UF concentrators?**
    The housing material is PC (Polycarbonate).
13. **Do you have any recommendations in which direction the Spin-X UF device should be placed in the centrifuge rotor?**
    - If you use a fixed-angle rotor, the Spin-X UF concentrator must be placed so that the graduation faces outwards/upwards.
    - If you use a swing bucket rotor, you do not need to place the Spin-X UF concentrator into the rotor in any specific way.
14. **What membranes are available in the Spin-X UF concentrators?**
    All Spin-X UF concentrators have a PES (Polyethersulfone) membrane.
15. **What pipet or pipet tips to you recommend for recovering the concentrate from the Spin-X UF concentrator?**
    For optimal recovery, we recommend an adjustable pipettor with a yellow tip or gel loader tips.
16. **Can Spin-X UF concentrators be sterilized with ethanol?**
    Yes. Use a 70% ethanol solution or sterilizing gas mixture.
17. **Can I autoclave the Spin-X UF concentrators?**
    No. The Spin-X UF concentrators cannot be autoclaved.
18. **What is the purpose of the small hole centered in the Spin-X UF 6 and Spin-X UF 20 cap?**
    The small hole in the UF 6 and UF 20 caps serves to equalize pressure differentials during centrifugation.
19. **What is the maximum sample volume for the different Spin-X UF concentrators?**

Device	Max. Volume
Spin-X UF 500	500 µL
Spin-X UF 6	6 mL
Spin-X UF 20	20 mL

20. What is the maximum speed to spin the different Spin-X® UF concentrators?

	Maximum Recommended Centrifugal Force		
Concentrator	**Spin-X UF 500**	**Spin-X UF 6**	**Spin-X UF 20**
Maximum Spin Force – Swing Bucket			
5,000 to 50,000 MWCO PES	Do not use	4,000 x g	5,000 x g
>100,000 MWCO PES	Do not use	4,000 x g	3,000 x g
Maximum Spin Force – Fixed Angle			
5,000 to 50,000 MWCO PES	15,000 x g	10,000 x g	8,000 x g
>100,000 MWCO PES	15,000 x g	6,000 x g	6,000 x g

21. What is the membrane surface area in the different Spin-X UF concentrators?

Device	Active membrane surface area (cm^2)
Spin-X UF 500	0.5
Spin-X UF 6	2.5
Spin-X UF 20	6.0

22. Can Spin-X UF concentrators be used for fractionation?
Ultrafiltration cannot be used for fractionation. The ultrafiltration membranes do not allow separation of proteins from a protein mixture, as proteins smaller than the cut-off will not necessarily pass the membrane completely.

Ordering Information

Spin-X UF Concentrator

Cat. No.	Description	Capacity	Membrane (MWCO)	Pack Size
431477	Spin-X UF 500	500 µL	5,000	25
431478	Spin-X UF 500	500 µL	10,000	25
431479	Spin-X UF 500	500 µL	30,000	25
431480	Spin-X UF 500	500 µL	50,000	25
431481	Spin-X UF 500	500 µL	100,000	25
431482	Spin-X UF 6	6 µL	5,000	25
431483	Spin-X UF 6	6 µL	10,000	25
431484	Spin-X UF 6	6 µL	30,000	25
431485	Spin-X UF 6	6 µL	50,000	25
431486	Spin-X UF 6	56 µL	100,000	25
431487	Spin-X UF 20	20 µL	5,000	12
431488	Spin-X UF 20	20 µL	10,000	12
431489	Spin-X UF 20	20 µL	30,000	12
431490	Spin-X UF 20	20 µL	50,000	12
431491	Spin-X UF 20	20 µL	100,000	12

For more specific information on claims, visit **www.corning.com/certificates**.

For additional product or technical information, visit **www.corning.com/lifesciences** or call 800.492.1110. Outside the United States, call +1.978.442.2200 or contact your local Corning sales office.

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