Protein concentration - Ultrafiltration



Stirred cells, series 8000





To perform concentration, desalting, recovery or exclusion. Process from <10mL to 400mL of biological solutions using either concentration or diafiltration operating modes.

Concentration mode

Gas pressure is applied directly to the ultrafiltration cell. Solutes above the membrane molecular weight cutoff (MWCO) are retained in the cell, while water and solutes below the (MWCO) pass into the filtrate and out of the cell.

Disfiltration mode

The ultrafiltration cell is connected to an auxiliary reservoir containing a diafiltrate solution with the desired solute concentration. This auxiliary reservoir is then gas pressurised. Fluid volume, as well as the macrosolute concentration, remain constant as filtrate is replaced by diafiltrate solution. This technique provides a simple means for rapid microsolute exchange, and is typically used as a substitute for dialysis.

Sturdy construction

Each unit consists of a clear pressurised vessel with integral magnetic stirring bar, nylon cap and tube fitting assembly, polysulfone body and membrane holder, acetal/polysulfone stirrer, silicone '0'-rings, and black anodised aluminium stand. Magnetic stirrer also required for operation. Has connection for 6.4mm diameter pressure tubing. Maximum operating pressure, 75psi (5.3bar).

Technical Specification - Specific

	FDR-500-010F	FDR-500-030W	FDR-500-050Q	FDR-500-070K	FDR-500-075A
Filter diameter, mm	25	44.5'	63.5 ²	76	25
Concentration ³	0.05g% (initial) 10g% (final)	0.05g% (initial) 10g% (final)	0.05g% (initial) 10g% (final)	0.05g% (initial) 10g% (final)	0.05g%, initial 10g%, final
Volume, mL	1.0 (process min) ⁴ 10 (process max) ⁵	2.5 (process min) ⁴ 50 (process max) ⁵	5 (process min) ^c 200 (process max) ^c	10.0 (process min) ^a 400 (process max) ^s	0.075 (process min) ^c 3 (process max) ^c
Hold up volume, µL°	200	500	1,200	1,500	70
Filtration area, mm ²	4.1	13.4	28.7	4.18	0.9
Dimensions [w x d x h], mm	60 x 60 x 73	70 x 70 x 95	90 x 90 x 110	110 x 110 x 140	60 x 60 x 73

- 43mm nominal diameter
- ² 62mm nominal diameter
- ³ Practical limits; concentration limits can be extended in certain instances
- Operation beyond this volume is not recommended
- ⁵ Practical limits; dependant on additional reservoir capacity and application
- Volume with 50mm of tubing on outlet
- $^{\scriptscriptstyle 7}$ At 1cps, maximum transmembrane pressure and maximum P. Approximate value

Catalogue No	Alt. No	Model No	Volume, mL	
FDR-500-010F	8010	Amicon 8010	1.0 (process min) ⁴ 10 (process max)	
FDR-500-030W	8050	Amicon 8050	2.5 (process min) ^s 50 (process max)	
FDR-500-050Q	8200	Amicon 8200	5 (process min) ⁴ 200 (process max)	
FDR-500-070K	8400	Amicon 8400	10.0 (process min) ⁴ 400 (process max)	
FDR-500-075A	5125	Amicon 8003	0.075 (process min) ⁴ 3 (process max)	