Dialysis or diafiltration?

D-Tube™ dialyzers, Amicon® Ultra, and Amicon® Pro filters give **YOU** the choice.

Each protein preparation is unique. Give it the special treatment it deserves with a perfectly designed device for buffer exchange, desalting, and removing solutes like urea and detergents. Select between fast and gentle dialysis using D-Tube™ dialyzers, diafiltration using the faster Amicon® Ultra centrifugal filters, or maximize protein activity with gentle, single spin diafiltration using the Amicon® Pro filter.

D-Tube™ dialyzers enable you to:

Complete dialysis in just 2–5 hours and prevent precipitation or over-concentration of sensitive samples.

Amicon® Ultra centrifugal filters enable you to:

Rapidly desalt or exchange buffers without diluting your sample—just concentrate the sample, discard filtrate, and reconstitute the concentrate with desired solvent.

Amicon® Pro device offers:

Ground-breaking, gentle, single-spin diafiltration for simultaneous buffer exchange with concentration.

What's the difference?

Dialysis is the traditional method for desalting (removing microsolutes) or buffer/solvent exchange, using **osmotic pressure** to drive solutes across a membrane.

Diafiltration, or ultrafiltration, achieves desalting or buffer exchange through the use of **centrifugal force** or other external pressure to drive small microsolutes through a porous membrane. The membrane does not allow macrosolutes (larger than the pore size) to pass through.

Ask your sample what it needs.

Based on your sample preparation needs, use the chart below to determine whether dialysis or diafiltration is the best solution.

How to choose D-Tube™ dialyzers, Amicon® Ultra filters, and Amicon® Pro filters for dialysis & diafiltration

Need	D-Tube™ Dialyzer	Amicon® Ultra	Amicon® Pro
Faster access to sample		X	X
Sensitive samples or samples which may precipitate at higher concentrations	X		X
Robust samples able to be concentrated		X	X
No concentration needed	X		
Concentration needed		X	X
Limited amounts of exchange solvent		X	X
Sample needs to be kept cold	Cold temperature reduces speed	Minimal effect of cold temperature on speed	Minimal effect of cold temperature on speed

Choose an Amicon® Ultra filter:

Simply use the tables below to first identify the best Molecular Weight Cut-Off (MWCO) for your sample and then select the filter that best suits your application based on starting and ideal final volume.

Proteins	Nanoparticles	Single- and Double-Stranded Nucleic Acids	MWCO
6 < MW < 20 k	1.5 nm < dia < 3 nm		3,000
20 < MW < 60 k	3 nm < dia < 5 nm		10,000
60 < MW < 100 k	5 nm < dia < 7 nm	137–1159 bp	30,000
100 < MW < 200 k	7 nm < dia < 10 nm		50,000
200 k < MW	10 nm < dia		100,000

Amicon® Ultra Centrifugal Filters

Product		Amicon® Ultra-0.5	Amicon® Ultra-2	Amicon® Ultra-4	Amicon® Ultra-15
Maximum initial sample volume (mL)		0.5	2	4	15
Final concentrate (retentate) volume (µL)		15–20	15–70	30–70	150–300
MWCO	**Qty/Pk**				
3,000 MWCO	8	UFC500308		UFC800308	UFC900308
	24	UFC500324	UFC200324	UFC800324	UFC900324
	96	UFC500396		UFC800396	UFC900396
	500	UFC5003BK			
10,000 MWCO	8	UFC501008		UFC801008	UFC901008
	24	UFC501024	UFC201024	UFC801024	UFC901024
	96	UFC501096		UFC801096	UFC901096
	500	UFC5010BK			
30,000 MWCO	8	UFC503008		UFC803008	UFC903008
	24	UFC503024	UFC203024	UFC803024	UFC903024
	96	UFC503096		UFC803096	UFC903096
	500	UFC5030BK			
50,000 MWCO	8	UFC505008		UFC805008	UFC905008
	24	UFC505024	UFC205024	UFC805024	UFC905024
	96	UFC505096		UFC805096	UFC905096
	500	UFC5050BK			
100,000 MWCO	8	UFC510008		UFC810008	UFC910008
	24	UFC510024	UFC210024	UFC810024	UFC910024
	96	UFC510096		UFC810096	UFC910096
	500	UFC5100BK			

Amicon® Ultra filter selector tool

Find the right filter to prepare your sample—search with our online Amicon® Ultra Selector Tool.

Visit: www.merckmillipore.com/FastEasy

Choose a D-Tube™ dialyzer:

What is the starting volume of your solution? What is the molecular weight of your molecule of interest? Answer these questions, and you're ready to choose a D-Tube™ Dialyzer with the right molecular weight cut-off (MWCO)

Product		D-Tube™ Mini	D-Tube™ Midi	D-Tube™ Maxi	D-Tube™ Mega	D-Tube™ Mega	D-Tube™ Mega
Maximum initial sample volume		10 to 250 µL	50 to 800 µL	100 µL to 3 mL	3 to 10 mL	10 to 15 mL	15 to 20 mL
MWCO	**Qty/Pk**						
3,500	10		71506-3	71508-3	71739-3	71742-3	71745-3
	50				71739-4	71742-4	71745-4
6,000–8,000	10	71504-3	71507-3	71509-3	71740-3	71743-3	71746-3
	50				71740-4	71743-4	71746-4
	1 plate of 96	71712-3					
12,000–14,000	10	71505-3		71510-3			
	1 plate of 96	71713-3					
Floating Rack							
	10	71512-3	71513-3	71514-3	71748-3	71748-3	71748-3

Choose an Amicon® Pro device:

To choose the appropriate Amicon® Pro device, determine the molecular weight cut-off (MWCO) of your protein of interest.

	MWCO				
Product	**3,000**	**10,000**	**30,000**	**50,000**	**100,000**
Amicon® Pro Purification System 12/pk	ACS500312	ACS501012	ACS503012	ACS505012	ACS510012
Amicon® Pro Purification System 24/pk	ACS500324	ACS501024	ACS503024	ACS505024	ACS510024

To place an order or receive technical assistance

In Europe, please call Customer Service:

France: 0825 045 645
Germany: 069 86798021
Italy: 848 845 645
Spain: 901 516 645 Option 1
Switzerland: 0848 645 645
United Kingdom: 0870 900 4645

For other countries across Europe, please call: +44 (0) 115 943 0840

Or visit: www.merckmillipore.com/offices

For Technical Service visit: www.merckmillipore.com/techservice

MERCK MILLIPORE

www.merckmillipore.com

Lit No. PR3888ENEU Rev A BS-GEN-15-11648 06/2015