cobetter®
filtration

Briscale® RC Ultra Centrifugal Filters

Cobetter Briscale® RC Ultra centrifugal filters are commonly used for separation, concentration and buffer exchange of biological samples such as proteins, nucleic acids, plasmids and viruses. To concentrate with Cobetter Ultra Centrifugal Filters, you will have high and reliable protein recovery.



Features



- Rapid protein concentration--- 25 to 80-fold concentration.
- Quick processing time---The general concentration time is 10-30 minutes.
- High recovery rate--->90%.
- Low protein adsorption---The RC membrane have extremely low protein adsorption.
- A variety of MWCO---3K, 10K, 30K and 100K available.

Application Selection Guide

	Nominal molecular weight limit (NMWL)				
Application	3k	10k	30k	50k	100k
Protein concentration	R	R	R	R	R
Protein purification desalting/buffer exchange	R	R	R	R	R
Column separation component desalination	R	R	R	R	R
Protein isolation from cell lysates		R	R		
Peptide concentration/desalination/buffer exchange	R				
Antibody concentration			R	R	R
Virus concentration or removal				R	R
Nucleic acid concentration/desalination/buffer exchange	R	R	R	R	R
Nucleotide concentration/desalination/buffer exchange	R				
Purification of antibodies from hybridoma cells			R		
Analysis of drug binding in serum/plasma samples (protein removal)		R	R		

*R for Recommended

Chemical Compatibility

The compatibility of Briscale® UF-15 Ultra Centrifugal Filters with some typical solvents is as follows (contact for 2 hours).

Compatible

0.1M Sodium Hydroxide	2% Citric Acid	20% DMSO
0.1M Phosphoric acid	5% Lactic Acid	0.01M SDS
25% Acetic Acid	70 % Ethanol	110mM Mercaptoethanol
70% Isopropyl Alcohol	8M Urea	Saturated Ammonium Sulfate
70% Glycerol	10% Acetonitrile	1M PBS
0.1% TweenX-100	6M Guanidine Hydrochloride	500mM Imidazole

Specifications





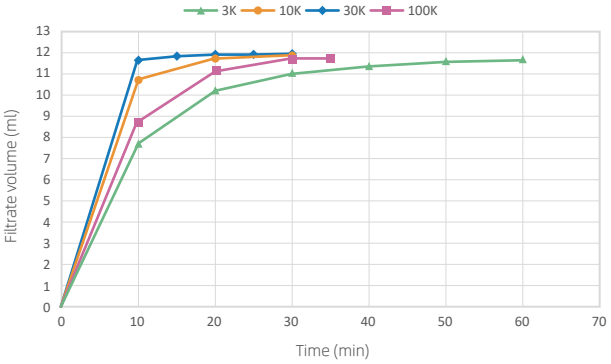

Maximum Sample Volume				
Fixed angle 45° rotor	0.5 mL	2 mL	4 mL	12 mL
Swing bucket rotor	/	2 mL	4 mL	15 mL
Final volume	15-20uL	20-70 µL	80-200 µL	150-300 µL
Max. Centrifuge Force				
Fixed angle 45° rotor	14000xg	5000 xg	5000 xg	5000 xg
Swing bucket rotor	/	4000 xg	4000 xg	4000 xg
Effective Filtration Area	0.6 cm^2	1.4 cm^2	3.4 cm^2	7.4 cm^2
Dimensions				
Length (with cover)	53 mm	120.0 mm	124.5 mm	119.6 mm
Lid diameter			23 mm	33.5 mm
Tube diameter	12.5 mm	16.3 mm	Head 16.9mm Root 15.9 mm	Head 29mm Root 28 mm
Materials				
Membrane	RC	RC		
Lid	/	HDPE		
Ultrafiltration device	PS	GPPS		
Centrifuge tube	PS	PP		
Seals	Silicone	Silicone		

Performances

Factors affecting filtration speed include sample concentration, starting volume, solute and solvent chemistry, relative centrifugal force, centrifuge rotor angle, membrane MWCO and temperature.

Filtration speed

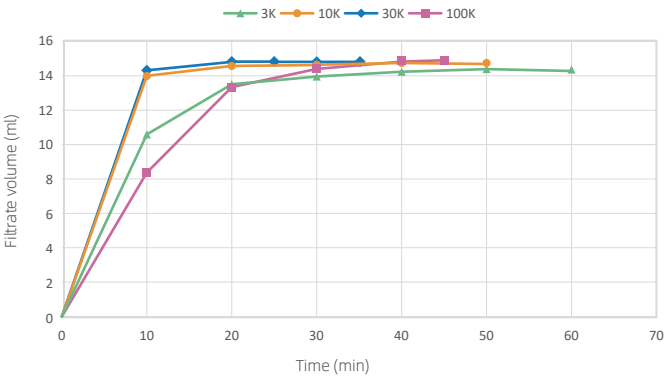
Figure 1. Filtrate volume vs. centrifuge time (fixed angle 45° rotor).





Centrifugation conditions: 5000xg (100kD filters use 3000xg), 10-20°C, starting volume 12mL.
Protein markers used: Lysozyme for 3kD, Ovalbumin for 10kD, BSA for 30kD, IgG for 100kD.

Figure 2. Filtrate volume vs. centrifuge time (swing bucket rotor).





Centrifugation conditions: 4000xg (100kD filters use 3000xg), 10-20°C, starting volume 15mL.
Protein markers used: Lysozyme for 3kD, Ovalbumin for 10kD, BSA for 30kD, IgG for 100kD.

Recovery Rate

For fast and reliable results, choose an ultrafiltration membrane with a MWCO that is 2-3 times smaller than the MW of your macromolecule.

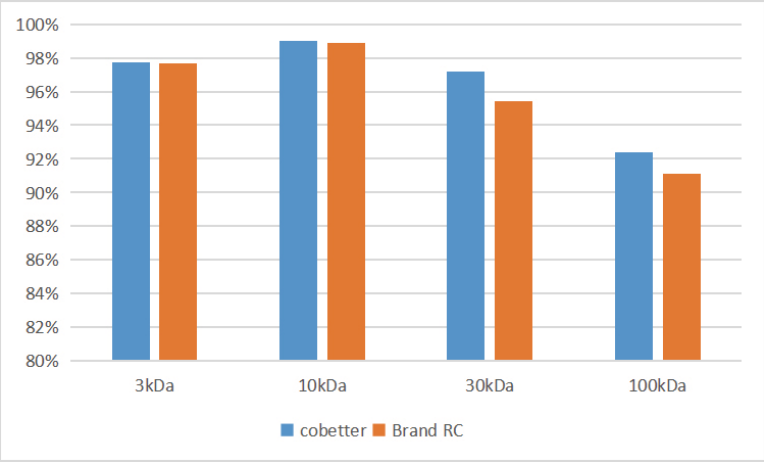
Table 1. Protein marker recovery rate

Protein concentration	Protein molecular weight	MWCO MWCO	Fixed angle 45° rotor recovery rate	Swing bucket rotor recovery rate	Centrifugation time
Lysozyme (0.25mg/mL)	14,400	3K	>95%	>95%	60min
Ovalbumin (1 mg/mL)	45,000	10K	>90%	>90%	30min
BSA (1mg/mL)	67,000	30K	>90%	>90%	20min
IgG (1mg/mL)	156,000	100K	>80%	>80%	30min

Table 2.Selection Guide

MW	0.5mL	2mL	4mL	15mL
6kDa<MW<20kDa	3kDa	3kDa	3kDa	3kDa
20kDa<MW<60kDa	10kDa	10kDa	10kDa	10kDa
60kDa<MW<100kDa	30kDa	30kDa	30kDa	30kDa
100kDa<MW<200kDa	50kDa	50kDa	50kDa	50kDa
200kDa<MW	100kDa	100kDa	100kDa	100kDa

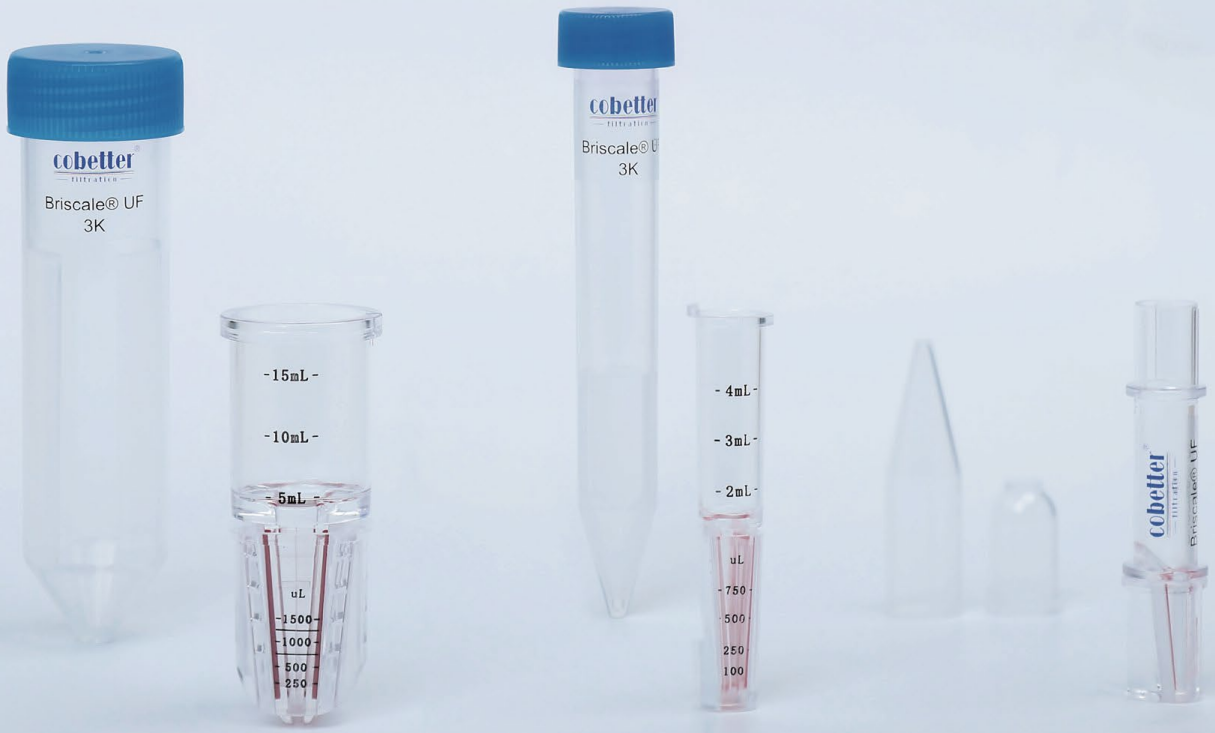
Table 3. Protein Recovery Comparison Chart



Order Information

Part No.	MWCO	Specification	Color	Qty/pk (pcs)
ULRT0030150P	3kDa, RC Membrane	15mL	Blue	24
ULRC0100150P	10kDa, RC Membrane	15mL	Red	24
ULRC0300150P	30kDa, RC Membrane	15mL	Yellow	24
ULRC0500150P	50kDa, RC Membrane	15mL	Orange	24
ULRC1000150P	100kDa, RC Membrane	15mL	Green	24
ULRT0030040P	3kDa, RC Membrane	4mL	Blue	15
ULRC0100040P	10kDa, RC Membrane	4mL	Red	15
ULRC0300040P	30kDa, RC Membrane	4mL	Yellow	15
ULRC0500040P	50kDa, RC Membrane	4mL	Orange	15
ULRC1000040P	100kDa, RC Membrane	4mL	Green	15
ULRT0030020P	3kDa, RC Membrane	2mL		15
ULRC0100020P	10kDa, RC Membrane	2mL		15
ULRC0300020P	30kDa, RC Membrane	2mL		15
ULRC0500020P	50kDa, RC Membrane	2mL		15
ULRC1000020P	100kDa, RC RC Membrane	2mL		15
ULRT0030005P	3kDa, RC Membrane	0.5mL		24
ULRC0100005P	10kDa, RC Membrane	0.5mL		24
ULRC0300005P	30kDa, RC Membrane	0.5mL		24
ULRC0500005P	50kDa, RC Membrane	0.5mL		24
ULRC1000005P	100kDa, RC Membrane	0.5mL		24

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Hangzhou Cobetter Filtration Equipment Co.,Ltd.

Sales Add 13-18 F, Building 1, Zicheng International Innovation Center, No.39 Jincheng Road, Xiaoshan District, Hangzhou 311215, China

Factory Cobetter Park, Heshang New Material Industrial Park, Xiaoshan District, Hangzhou 311265, China

Tel +86 571 87704359

Fax +86 571-87704256

eShop www.cobetter.com