

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, 50k and 100K available.



Application Selection Guide

Application	Nominal molecular weight limit (NMWL)				
	3k	10k	30k	50k	100k
Concentration/buffer exchange of antibodies			R	R	
Concentration/buffer exchange of nucleic acid		R	R	R	R
Concentration/buffer exchange of oligonucleotides	R				
Concentration/buffer exchange of polypeptide	R				
Virus concentration/removal				R	R
Protein separation from cell lysate	R	R	R	R	R
PCR product purification				R	R

Chemical Compatibility

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

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

When *-marked reagents come into contact with the product, confirmation with the technicians is required.

Specifications



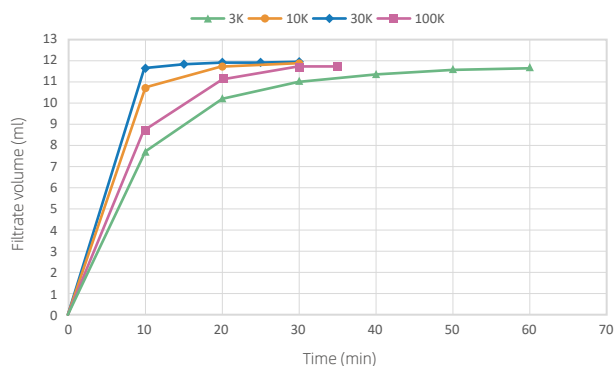
Maximum Sample Volume				
Fixed angle 45° rotor	0.5 mL	2 mL	4 mL	12 mL
Swing bucket rotor	/	2 mL	4 mL	15 mL
Final volume	15-20uL	20-70 µL	80-200 µL	150-300 µL
Max. Centrifuge Force				
Fixed angle 45° rotor	14000xg	7500 xg	5000 xg	5000 xg
Swing bucket rotor	/	4000 xg	4000 xg	4000 xg
Effective Filtration 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

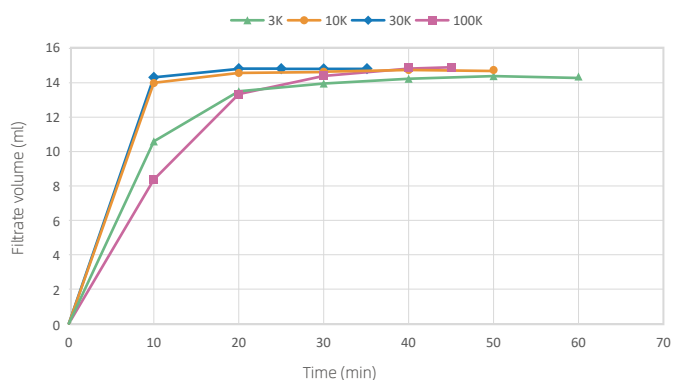
Figure 1. Filtrate volume vs. centrifuge time (fixed angle 45° rotor).



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.

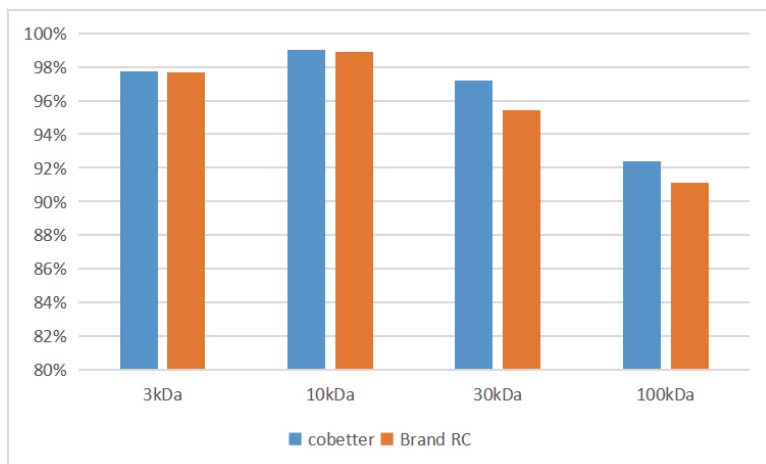
Table 1. Protein marker recovery rate

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

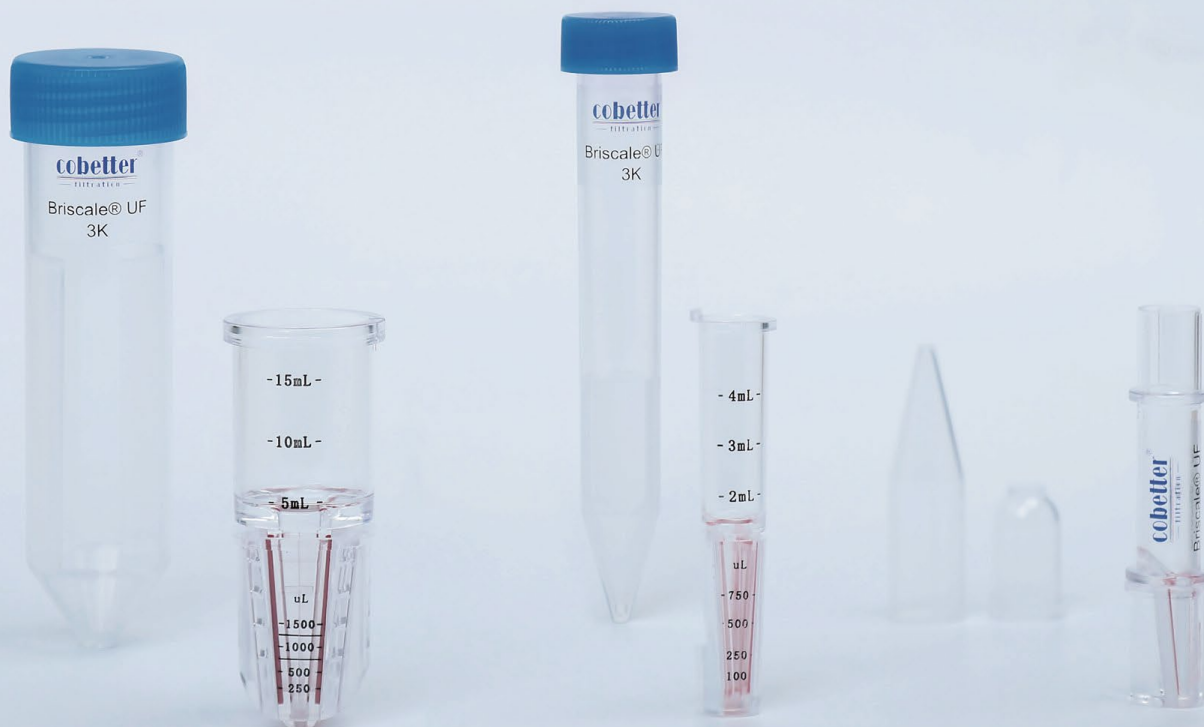
	0.5mL	2mL	4mL	15mL
MW				
6kDa<MW<30kDa	3kDa	3kDa	3kDa	3kDa
30kDa<MW<100kDa	10kDa	10kDa	10kDa	10kDa
100kDa<MW<200kDa	30kDa	30kDa	30kDa	30kDa
200kDa<MW<500kDa	50kDa	50kDa	50kDa	50kDa
MW>500kDa	100kDa	100kDa	100kDa	100kDa

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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