

Microsep Advance centrifugal devices

Precise, quick recovery of microliter volumes of concentrate from starting volumes up to 5.0 mL

- High recovery. Achieve 50X concentration and > 90% recovery in minutes.
- Features deadstop to prevent samples from spinning to dryness.
- Versatile Omega membrane is available in a variety of MWCOs.
- Color-coded and laser etched for easy identification.

Applications

- Concentrate dilute protein samples.
- Exchange buffer and remove salt in samples.
- Remove proteins and particulate from samples for HPLC analysis of drugs, amino acids, and antibodies.
- Isolate low molecular weight compounds from fermentation broths for natural product screening.
- Recover biomolecules from cell culture supernatants or lysates.
- Clarify samples with gross particulate.
- Clean up of biological samples containing up to 20% DMSO (microfiltration only).

Specifications

Materials of construction

Filter media: Omega (modified polyethersulfone) and Supor (polyethersulfone) membranes

Sample reservoir, filtrate receiver, and cap: Polypropylene
Paddle: Polyethylene

Effective filtration area

3.3 cm²

Dimensions

Diameter: 17 mm
Length: 12.0 cm

Operating temperature range

0 – 40 °C

Capacities

Maximum sample volume: 5.0 mL
Final concentrate volume: 65 µL (swinging bucket)
80 µL (45° angle rotor)
100 µL (34° angle rotor)

Filtrate receiver volume: 6.5 mL
Hold-up volume: 40 µL

pH range

2 – 14

Maximum centrifugal force

Ultrafiltration: 7,500 x g
Microfiltration: 14,000 x g

Centrifuge

Fits centrifuges that accept standard 17 x 100 mm tubes and is capable of 3,000 to 14,000 x g

Sanitization

Provided non-sterile. May be sanitized by filtering 70% ethanol through the device prior to use.

DMSO compatibility

MCPM02C67, MCPM02C68, MCPM45C67, and MCPM45C68 are compatible with samples containing up to 20% DMSO.



Microsep Advance centrifugal filters

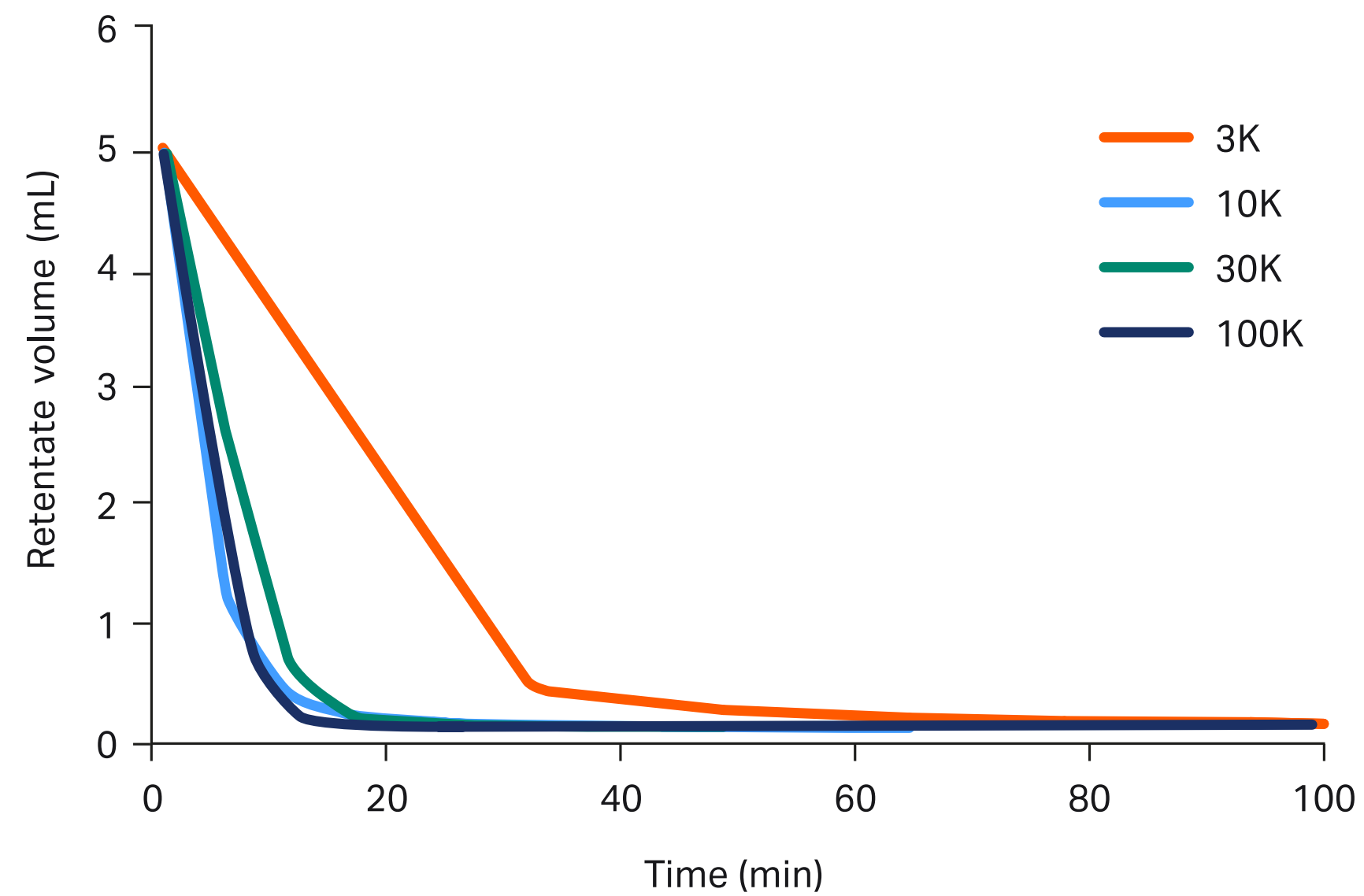
Performance

Rotor selection determines final concentrate volume

Table 4. Rotor selection and final concentrate volume for Microsep Advance devices

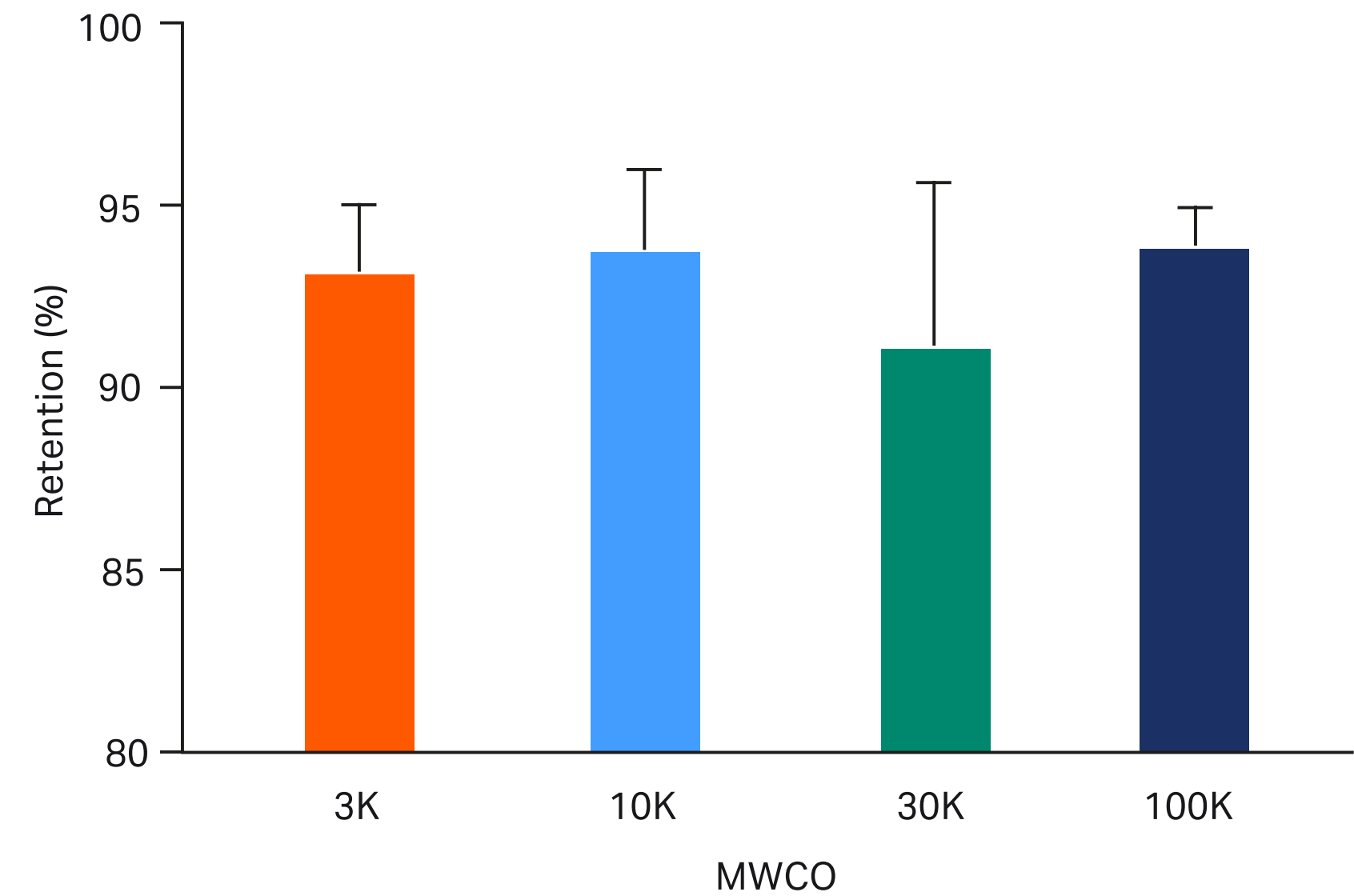
Rotor angle	Swinging bucket	45° Fixed angle	34° Fixed angle
Deadstop volume	65 µL	80 µL	100 µL

Microsep Advance centrifugal devices: Reduced spin time



Protein solutions were processed in each of the Microsep Advance devices. Average time is plotted against mL of remaining product to be filtered using a 34° fixed angle rotor at 5,000 g. Solutions are 3K: Cytochrome C, 250 µg/mL; 10K: BSA, 1 mg/mL; 30K: IgG, 1 mg/mL; and 100K: Thyroglobulin, 1 mg/mL.

Microsep Advance centrifugal devices: Retention efficiency



Protein solutions were processed in each of the Microsep Advance devices. Average percent retention using 34° fixed angle rotor at 5,000 g is displayed for each MWCO. Solutions were 3K: Cytochrome C, 250 µg/mL; 10K: BSA, 1 mg/mL; 30K: IgG, 1 mg/mL; and 100K: thyroglobulin, 1 mg/mL.

Ordering information

Microsep Advance centrifugal devices with Omega membrane

Description	Pkg	Part number
1K, yellow	24/pkg	MCP001C41
1K, yellow	100/pkg	MCP001C46
3K, gray	24/pkg	MCP003C41
3K, gray	100/pkg	MCP003C46
10K, blue	24/pkg	MCP010C41
10K, blue	100/pkg	MCP010C46
30K, red	24/pkg	MCP030C41
30K, red 1	00/pkg	MCP030C46
100K, clear	24/pkg	MCP100C41
100K, clear	100/pkg	MCP100C46

Microsep Advance centrifugal devices with Supor membrane

0.2 µm, aqua	24/pkg	MCPM02C67
0.2 µm, aqua	100/pkg	MCPM02C68
0.45 µm, wildberry	24/pkg	MCPM45C67
0.45 µm, wildberry	100/pkg	MCPM45C68