

Ultrafiltration Plates for Unparalleled Results

MultiScreen® 96-well Ultrafiltration Plates for concentration, purification, and desalting of biological solutions

High Throughput UF Technology

MultiScreen® filter plates with Ultracel®-10 membrane provide a reliable tool for high-throughput sample preparation. The ultrafiltration-based filter plate is designed for automation-compatible sample purification, concentration and desalting of biological solutions, and protein removal from samples prior to instrument analysis. The 96-well MultiScreen® filter plate incorporates Ultracel®-10 10,000 nominal molecular weight limit regenerated cellulose ultrafiltration membrane for low-binding, high recovery results. The plate is designed for use with centrifugation and is compatible with standard microtiter plates, instrumentation, and liquid handling equipment.

Reliable Retention

MultiScreen® filter plate with Ultracel®-10 membrane is designed for low protein binding and high protein retention. The assay-grade plates meet stringent manufacturing release specifications and are lot tested for protein retention for >95% retention of cytochrome c (12,500 Daltons). The plates also offer high well-to-well uniformity on performance.

Versatile Operation

MultiScreen® filter plates with Ultracel®-10 membrane allow for processing and collection of sample volumes from 50-500 µL. The plates are compatible with a range of standard receiver 96-well microtiter plates, including 300 µL, 700 µL deep well and 150 µL conical well. MultiScreen® plates with Ultracel®-10 membrane are ideal for applications including protein concentration and desalting prior to validation or screening assays. Additionally, these plates are suitable for removing large molecular weight proteins prior to instrument analysis.

Dependable Performance

MultiScreen® Ultrafiltration Plates with Ultracel®-10 membrane typical protein recovery are greater than 90% from concentrate.



- **Reliable Retention** and well-to-well uniformity on performance
- **Versatile Operation** with high throughput 96-well processing
- **Dependable Performance** with Ultracel®-10 membrane for greater than 90% recovery
- Automation compatible
- No adhesives, low downstream extractables

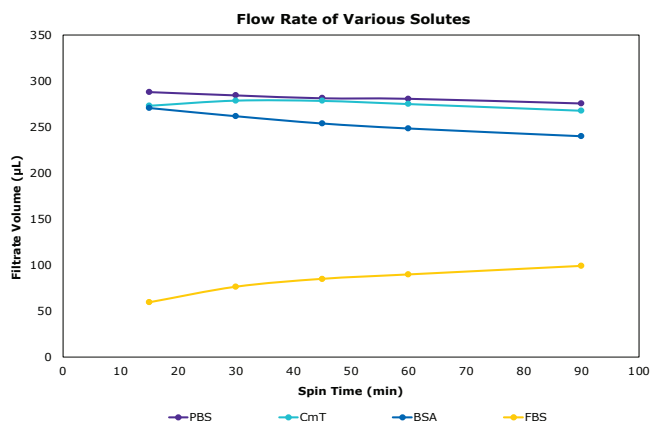


Table 1: Typical protein recovery at 3,000 x g for MultiScreen® Ultrafiltration Plate with Ultracel®-10 K membrane

Solute / Concentration	Molecular Weight	Typical % Recovery from concentrate
Cytochrome C (0.25 mg/mL)	12.4 K	93.3 ± 5.8%
A-Chymotrypsinogen (1 mg/mL)	25 K	97.9 ± 4.2%
Bovine serum albumin (1 mg/mL)	67 K	97.9 ± 4.2%
Bovine IgG Fraction II (1 mg/mL)	156 K	98.4 ± 0.8%

Figure 1: Ultrafiltration volumes for various sample types and times at 25 °C and 3000 x g with 300 µL sample. Ultrafiltrate volumes are lower for samples with higher protein concentration, such as serum. For pure protein solutions, ultrafiltrate volumes decline over time because of evaporation. PBS = Phosphate Buffered Saline, CmT = Chymotrypsinogen (1 mg/mL), BSA = Bovine Serum Albumin (1 mg/mL), FBS = Fetal Bovine Serum

Table 2: Typical Cross talk in MultiScreen® Ultrafiltration Plates

Location	1	2	3	4	5	6	7	8	9	10	11	12
A	0.000%		0.000%		0.000%		0.000%		0.000%		0.000%	
B		0.000%		0.000%		0.000%		0.000%		0.000%		0.000%
C	0.000%		0.000%		0.000%		0.000%		0.000%		0.000%	
D		0.000%		0.000%		0.000%		0.000%		0.000%		0.000%
E	0.000%		0.000%		0.000%		0.000%		0.000%		0.000%	
F		0.000%		0.000%		0.000%		0.000%		0.000%		0.000%
G	0.000%		0.000%		0.000%		0.000%		0.000%		0.000%	
H		0.000%		0.000%		0.000%		0.000%		0.000%		0.000%

Blue boxes indicate 0.05% Fluorescein in water, all additional wells are 100% water.

Ordering Information

Description	Qty / Pk	Cat. No.
MultiScreen® 96-well Ultrafiltration Plate with Ultracel® 10 K membrane	5/Pk	MAUF01005
Accessories		
Corning® 96-well EIA/RIA Clear Flat Bottom Polystyrene Not Treated Microplate	25/pk	CLS9017
Greiner 96-well plates, polypropylene, 300 µL/well, V bottom clear well	100/pk	M8185
Greiner 96-well plates, polypropylene, 0.5 mL/well, clear	80/pk	Z667234
Greiner 96-well plates, polypropylene, with full skirt	100 pk	Z711063
Millipore® 96-well plates, polypropylene, flat bottom, natural	100/pk	MSPNNFX00
Millipore® 96-well plates, polypropylene U-bottom, natural	100/pk	MSPNNUX00
Millipore® 96-well plates, polypropylene, V-bottom, natural	100/pk	MSPNNVX00

Specifications

Filter Plate Well Capacity	500 µL
Maximum centrifugal force	4000 x g
Filter Plate Dimensions	
Length	127.8 ± 0.2 mm
Width	85.5 ± 0.2 mm
Height (Without Lid)	20.1 mm
Membrane Surface Area	32.4 mm²
Material of Construction	
Plate	Polypropylene with Silicone O-ring
Lid	Polystyrene
Membrane	
Ultracel® 10K Membrane	10000 NMWL regenerated cellulose

Please visit: SigmaAldrich.com/mauf

