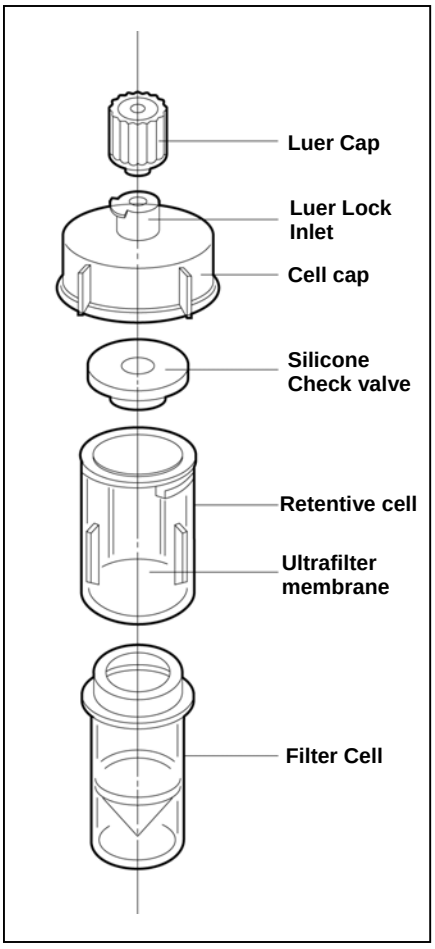
ADVANTEC MFS, Inc.

DISPOSABLE ULTRAFILTRATION UNITS

APPLICATIONS

These disposable ultrafiltration units are designed to easily concentrate, separate or otherwise purify small volumes (<2mL) of liquids, on the basis of molecular weight cut off using positive pressure. Clear filtration chamber allows visual confirmation of filtration progress.

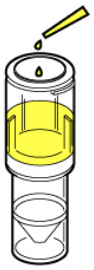


SPECIFICATIONS

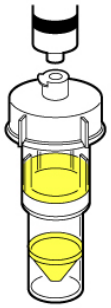
Materials:	
Cell cap, Luer cap:	Polypropylene
Check valve:	Silicone
Retentive cell:	Acrylic
Ultra filter:	Polysulfone
Filtrate cell:	Acrylic
Effective filtration area:	2.0 cm^2
Maximum cell capacity:	2.0mL
Minimum graduated volume:	0.5mL
Minimum recovery volume:	0.5mL
Maximum concentration:	X40
Maximum temperature:	50°C
Sterilization:	25% Ethanol, 5% Formalin
Maximum pressure:	0.29 Mpa (42.6PSI)
Filtrate cell capacity:	2.5 mL

ASSEMBLY & OPERATION

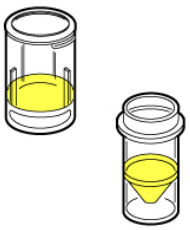
1 Pipet sample (approximately 1-2 mL) into the retentate cell.



2 Place the cell cap onto the retentate cell and gently screw into place. Pressurize the unit by injecting 10 mL of air with a syringe.



3 The concentrated sample can be collected from the retentate cell,while the filtrate can be collected from the filter cell.



SOLUTE REJECTION %*

Catalog No.		USY-1	USY-5	USY-20
Molecular Weight Cut Off of Ultra filter		10,000	50,000	200,000
Solute	Molecular weight			
Lysozyme	14,800	>98	50	-
Myoglobin	16,800	>95	40	-
α-Chymotrypsin	24,500	>98	85	-
β-Lactoglobulin	35,000	>98	85	10
Ovalbumin	44,000	>98	95	60
Albumin(0.01%)	64,000	>98	>98	-
Bovine Albumin	67,000	>98	>90	60
β-Globulin	110,000	>98	>98	>95
γ-Globulin	160,000	>98	>98	>90

* 1ml of sample filtered at 0.2 Mpa

ORDERING INFORMATION

USY-1: 10,000 MWCO
USY-5 : 50,000 MWCO
USY-20: 200,000 MWCO

Packaging :
Retentate cell, Filtrate cell 24pcs/each
Luer cap, Cell cap, Check valve 4pcs/each

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ADVANTEC MFS, Inc.

REUSABLE ULTRAFILTER HOLDERS
MODEL UHP-13C

APPLICATIONS

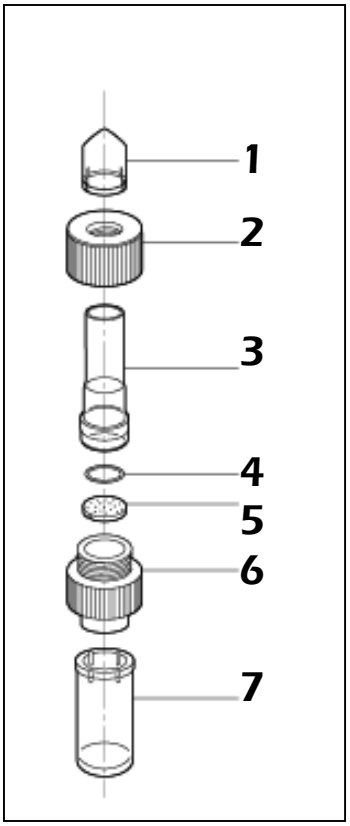
These reusable units can be used to easily concentrate, separate, or purify samples by centrifuge. Collect the concentrated sample solution, the filtrate, or both.

SPECIFICATIONS

Model	UHP-13C
Catalog No.	3135 0000
Filter Diameter	ø13 mm
Effective Filtration Area	0.65 cm^2
Maximum Sample Volume	2.0 mL
Minimum Sample Volume	0.15 mL
Maximum Centrifugal Force	19.6 × 10^3 m/s^2
Total Liquid Volume	0.01 mL

ASSEMBLY

	Part Name	Material	Quantity
1	Cell Cap	Polypropylene	12
2	Locking Nut	Polyacetal	1
3	Filter Cell	Acrylic	1
4	Filter Holder O-ring	Silicon	3
5	Support Screen	Polyacetal	1
6	Base Body	Polyacetal	1
7	Filtrate Cup	Polypropylene	12



Locking nut, filter cell, support screen, and base body are the main reusable parts of this unit. The o-ring, cell cap, and filtrate cup experience the most wear during use and therefore replacements are included. O-rings should be replaced within 1 year of normal usage, or more often as necessary. Cell caps and filtrate cups should be replaced within 3 years, or whenever contaminated, scratched, or otherwise damaged. It is the users' responsibility to clean the units between usage, to use the appropriate ultrafilter (not included), and to inspect the unit regularly for wear.

Optional accessories, such as centrifuge adapters and FPM o-rings, are not included. Please see the ordering information to find out more about these products.

OPERATION INFORMATION

Because every application is different, it is important to select the best filter, centrifuging speed, and centrifuging duration to suit your needs:

- Selecting an ultrafilter

Begin by determining what size particles are to be removed from/concentrated in a solution, and be sure that the filter is chemically compatible with any fluids that it may be exposed to. In addition, consider flow rate and adsorption properties of the filter.

- Selecting centrifuge speed

Determine the flow rate of the filtration process by taking into consideration the pore size of the filter, the viscosity, volume, the particulate load of the sample and other factors. If this speed is above or below the maximum/minimum operating speeds of the filter holder, consider adjusting the duration accordingly.

- Selecting centrifuge duration

The length of time that centrifugation will be necessary will primarily depend on the same factors as the centrifuge speed. (Generally, centrifuge speed and duration are inversely proportional.) Other factors such as refrigeration requirements of the sample may be important as well.

ORDERING INFORMATION

Please refer to the following part names and numbers when ordering.

Part Name		Material	Part No.
UHP-13C	(Full Assembly)	Mixed	UHP-13C
1	Cell Cap	Polypropylene	
2	Locking Nut	Polyacetal	
3	Filter Cell	Acrylic	
4	Filter Holder O-ring	Silicon	UHP-13C-SIL
5	Support Screen	Polyacetal	
6	Base Body	Polyacetal	
7	Filtrate Cup	Polypropylene	

Optional Accessory	Material	Part No.
FPM O-ring	FPM	UHP-13C-FPM

Only the full assembly and replacement o-rings may be ordered individually. One unit (full assembly) includes replacement cell caps and filtrate cups (12 ea.) and silicon o-rings (3 ea.).

The FPM O-ring has increased resistance to a wider range of solvents than the silicon O-ring. Please see the Chemical Compatibility List or contact our technical support for more information.

Please contact us for more information on our centrifuge adapters and other accessories.

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