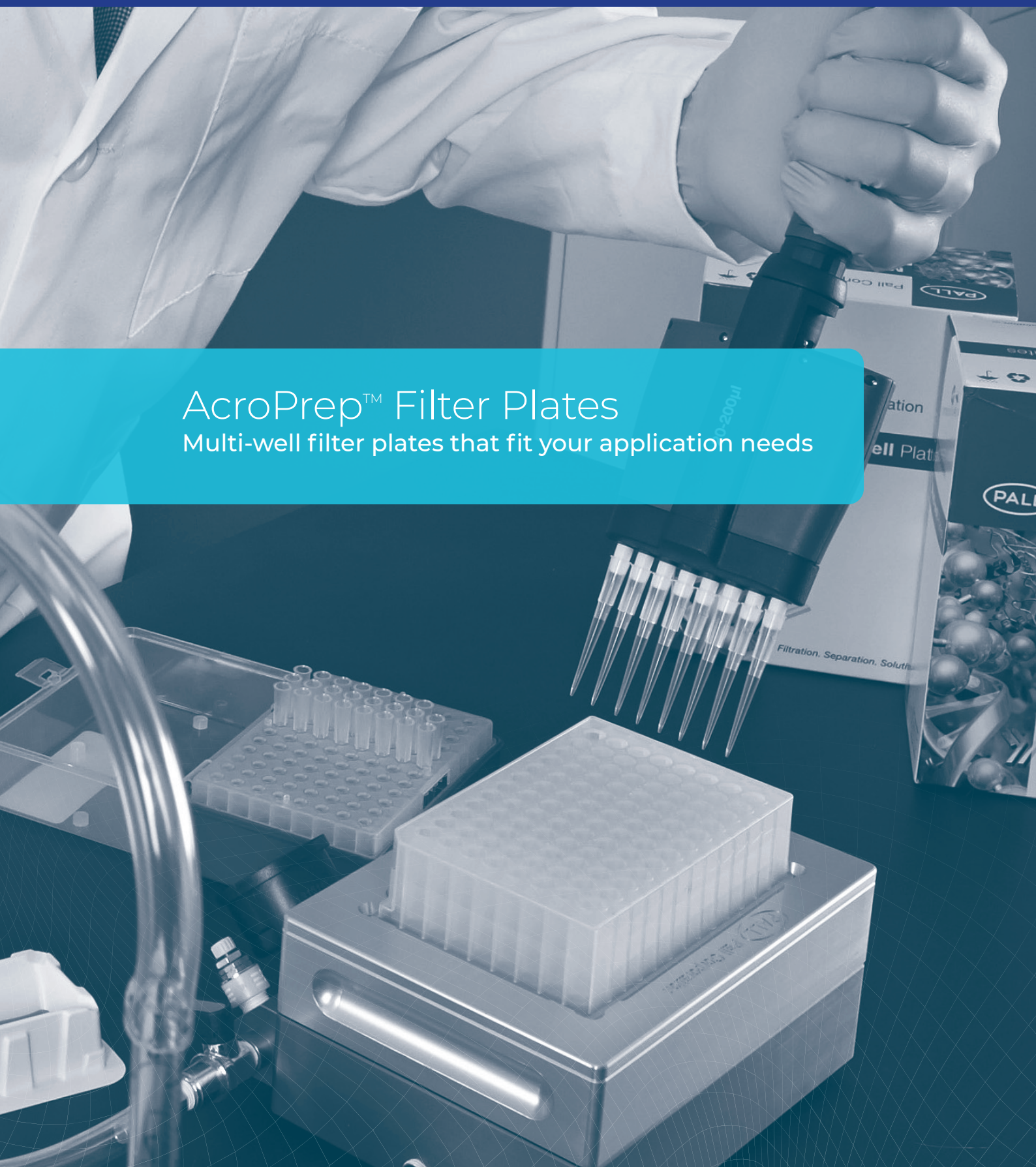


# AcroPrep™ Filter Plates

Multi-well filter plates that fit your application needs



## Pall. For whatever's on your plate

As samples get smaller and more numerous multi-well plates have become a standard tool in many laboratories, allowing scientists to undertake high throughput research, processing numerous samples all in one go, often on an automated robotic platform.

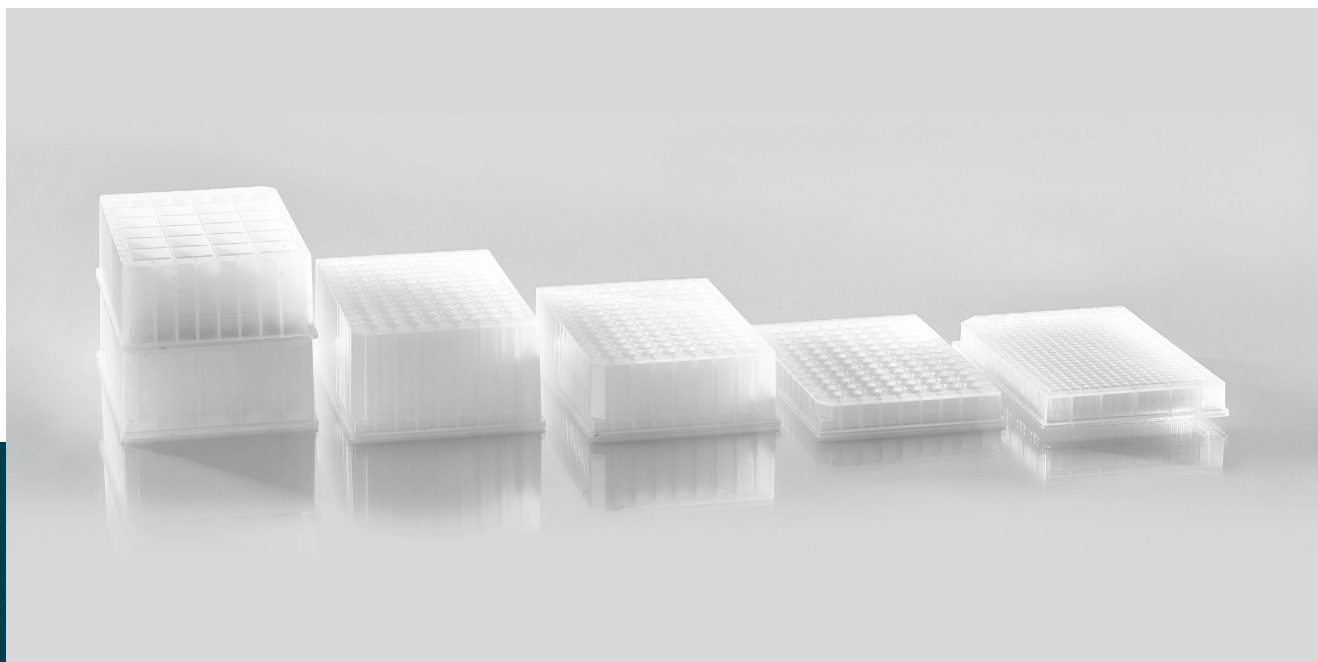
In the 1990s Pall introduced their first multi-well filter plate range enabling scientists to perform purification steps in a high throughput footprint.

Today Pall continues to combine innovative membrane filter technology with optimized multi-well plate designs. The AcroPrep™ filter plate portfolio offers 24, 96, and 384-well high performance filter plates that result in fast sample flow and targeted size separation for efficient filtration, accurate separation, and reliable sample recovery all while minimizing crosstalk and extractables (leachables) that can interfere with downstream analysis.

AcroPrep filter plates are designed to meet the stringent requirements for high throughput applications and comply with ANSI/SLAS standards. A rigid construction prevents plates from flexing or jamming in robotic systems, while barcode labeling allows for easy sample tracking and identification.

A comprehensive selection of membranes, sample well volumes, and tip configurations allows researchers to select the best filter plate that fits their specific application needs.

As your workflow evolves, Pall AcroPrep filter plates can scale with you in both sample volume and/or sample size without wasting time from membrane re-validation or product re-selection.

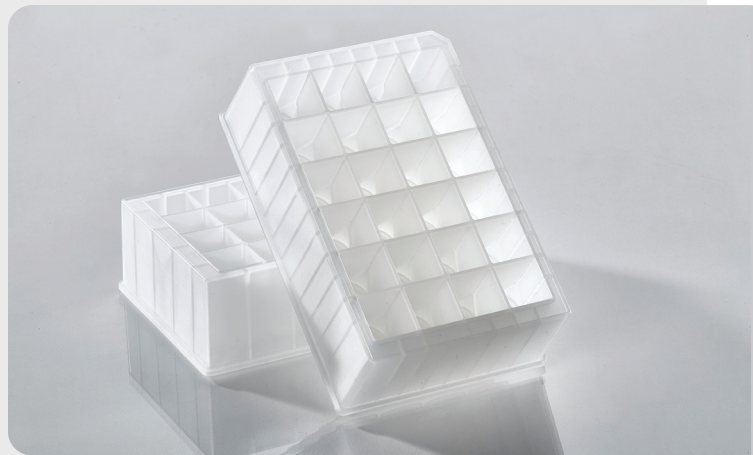




# AcroPrep Filter Plate Family

## AcroPrep 24-well Filter Plates

- A comprehensive range of 24-well filter plates that offer researchers a complete solution for their workflow needs, from cell harvesting to final sample preparation for analysis
- The 24-well format allows for up to 7 mL of sample to be filtered
- Allows for researchers to continue to use a 24-well footprint, reducing the chance of error or the loss of valuable product that can occur when transferring to other formats for processing



## AcroPrep Advance 96-well Filter Plates

- AcroPrep Advance 96-well filter plates can be used across a wide range of laboratory applications including; multiplexing, lysate clearance, protein purification, DNA purification, ultrafiltration and solvent filtration
- Available in well volumes of 350  $\mu$ L, 1 mL and 2 mL deep well formats
- Range includes Pall's AcroPrep Advance 96-well Long Tip Filter Plate for Nucleic Acid Binding. This plate incorporates a silica-based quartz glass fiber media to allow for the efficient binding of DNA and RNA, while providing smooth flow and rapid processing of samples



## AcroPrep Advance 384-well Filter Plates

- Enables laboratories to process hundreds of samples simultaneously and have been designed for high volume, high throughput applications
- Feature a maximum well volume of 100  $\mu$ L and a recommended working volume of 80  $\mu$ L
- Available with two different types of outlet tips, long or short. Both types of outlet tips can be used for filtrate or retentate based applications, however a longer tip version is recommended for critical filtrate studies







**384-well**  
100  $\mu$ L

**96-well**  
350  $\mu$ L, 1 mL and 2 mL

**24-well**  
7 mL

### Choice of Filter Plate

A range of filter plates based on number of samples and volume size



### Labeled Rows

Facilitates easy sample identification

### Rigid Construction

Prevents plates from flexing or jamming in robotic systems

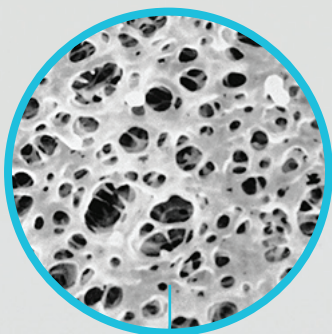
### Smooth Well Design

Provides consistency in filtration times, as well as efficient sample and bead recovery

### Smooth Top Surface and Textured Window

Allows for easy labeling of individual wells or of the complete filter plate





### Various Filter Choices

Specialized membranes and media accommodate a range of applications

### Barcode Labeling

Facilitates easy sample tracking and identification



AcroPrep™ Advance 1 mL  
PN 8132  
DNA Binding  
Lot No. FZ5120



(18) 82542

89633A



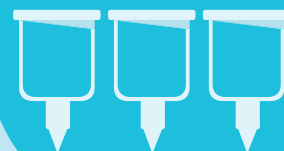
### Optimized Outlet Tips

Minimizes sample leakage during incubation steps and reduces the presence of hanging drops following filtration

AcroPrep filter plates are available with long or short outlet tip configurations

### Short Outlet Tips

Can be used for both filtrate and retentate based applications. Outlet tips are recessed beneath the skirt of the plate



### Long Outlet Tips

Ideal for filtrate based applications. Outlet tips extend beyond the skirt of the plate and pilot into wells of a receiving plate

## Simple and Easy Operation

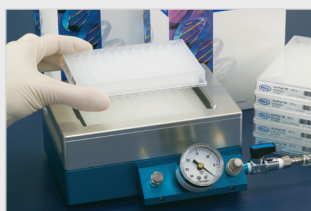
Pall AcroPrep filter plates can be used on vacuum systems, with centrifugation or with positive pressure systems. Manufactured to meet the Microplate Standards ANSI/SLAS 1-2004 through to ANSI/SLAS 4-2004, our filter plates can be used manually or on automated platforms. Featuring a rigid, one-piece construction, our filter plates are designed not to flex or jam in robotic processing units. Each filter plate features a serialized barcode label that allows the use of automated tracking systems and identifies the membrane type.

Plate rows are labeled with numbers and letters and a notch on the plate determines correct plate orientation. Our filter plates feature a smooth top surface and a textured window on the side of each plate, this allows for easy labeling of individual wells or of the complete filter plate.

### Vacuum Manifold

We supply a multi-well plate vacuum manifold that has been specifically designed for vacuum filtration and is a perfect fit for SBS-conforming filter plates, including our complete family of AcroPrep filter plates.

The manifold is constructed from durable anodized aluminum and comes complete with the necessary O-ring and gasket. The control block includes the vacuum pressure gauge, vacuum metering valve, vacuum release valve and the 1/4 inch hose barb for vacuum line attachment. Included with the vacuum manifold unit is a spacer block designed to accommodate standard 350  $\mu$ L receiver plates. A spacer block for use with 1 mL receiver plates is available separately.



1. Place plate on vacuum manifold or hold the plate so the outlets on the bottom of the plate are not touched.



2. Add sample and incubate. Apply vacuum.



3A. Release vacuum from the manifold. Remove filter plate and retained sample for further processing. (OR)



3B. Release vacuum from the manifold. Remove filter plate. Remove collection (receiver) plate and utilize collected filtrate in downstream applications.

### Centrifugation

When using filter plates in a centrifuge it is recommended to use an adapter collar (part number 5225). The collar is placed on top of the receiver plate, followed by the filter plate above. The adapter collar ensures that neither the filter plate or receiver plate will shift during centrifugation and ensures the outlet tips remain centered over the receiver plate wells, reducing alignment issues and preventing unwanted leaks.

Pall also supply an adapter collar (part number 5226) which has been designed specifically for use with PCR plates that typically have smaller outer dimensions compared to standard receiver plates.



Vacuum Manifold



Centrifugation Adapter Collars



# Membranes and Media

Pall is one of the world's largest suppliers of filter media and offer a vast array of different membrane polymer chemistries. Manufactured under precise, highly controlled conditions to ensure product quality, filter media is at the heart of Pall's technology offering.

We manufacture filter media and membranes that can be used to sterilize liquid reagents, remove particulate contamination and clarify solutions prior to further processing. Utilizing our extensive knowledge of membrane technology we offer specialist materials for ultrafiltration, chromatography and binding applications.

Several parameters including pore size, flow rate, binding properties, chemical compatibility and physical morphology need to be considered when selecting the appropriate membrane for use in each filter plate.

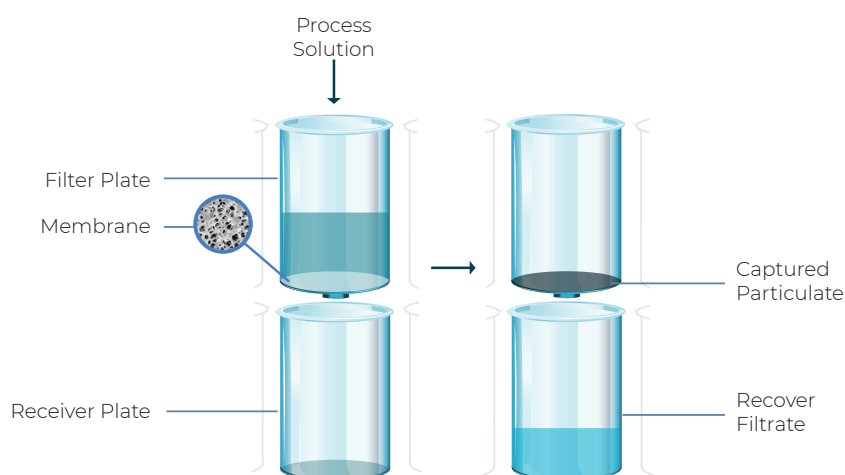
Pall uses a unique mechanism to seal membranes and media into each individual well of a filter plate. The proprietary sealing technology provides us the flexibility in integrally sealing a variety of membranes and media into our products, ensuring that we can provide researchers with the best possible solution for their application.

## A Pall Solution for Every Step of Your Process

Applications	Membrane
Aqueous Filtration	Supor® (polyethersulfone) membrane, wwPTFE (water-wettable polytetrafluoroethylene)
Cell Clarification	Seitz® Depth Media/Supor EKV (hydrophilic polyethersulfone membrane)
Cell Separation	PP/PE non-woven (polypropylene/polyethylene) media
Chromatography Screening	Supor (polyethersulfone) membrane
Concentration, Buffer Exchange and Desalting	Omega™ (modified polyethersulfone) membrane
Flow Cytometry Sample Prep	PP/PE non-woven (polypropylene/polyethylene) media
Free vs. Bound Assays	Omega (modified polyethersulfone) membrane
Genomic Purification	Silica-based quartz glass fiber
Labeling Clean-up	Omega (modified polyethersulfone) membrane
Lysate Clarification	Glass Fiber/Supor (polyethersulfone) membrane
Multiplex Assays	Supor (polyethersulfone) membrane
Particulate Removal	Glass Fiber
PCR Clean-up	Omega (modified polyethersulfone) membrane
Plasmid DNA Purification	Silica-based quartz glass fiber
Protein Precipitation	PTFE, wwPTFE (water-wettable polytetrafluoroethylene)
Recombinant Protein Isolation	Seitz Depth Media/Supor EKV (hydrophilic polyethersulfone membrane)
Sample Fractionation	Mustang® Q, Mustang S
Size Exclusion	Omega (modified polyethersulfone) membrane
Solid Phase ELISA	BioTrace™ NT (nitrocellulose)
Solvent Filtration	PTFE, wwPTFE (water-wettable polytetrafluoroethylene)
Sterile Filtration	Supor EKV (hydrophilic polyethersulfone membrane)
Total RNA Purification	Silica-based quartz glass fiber

# Aqueous and Solvent Filtration Applications

Many techniques in life science research rely on efficient filtration during sample preparation. The use of filter plates allows for the simultaneous filtration of multiple samples by means of centrifugation, vacuum, or positive pressure



Filtration can be used for the fast and efficient removal of particulates from liquid samples, to sterilize solutions and clarify samples prior to downstream applications. AcroPrep filter plates are ideal for the medium and high throughput filtration of numerous samples, helping streamline laboratory workflows and reducing processing time.

Pall filter plates are available in a range of filter materials and pore sizes to facilitate different levels of filtration based on application and sample compatibility requirements. For general aqueous microfiltration applications we recommend the use of the Supor (hydrophilic polyethersulfone) membrane. Supor is a high flow rate membrane optimized for biological, pharmaceutical research, and sterilizing filtration requirements. It features low protein binding properties and extensive chemical compatibility for critical applications.

Supor membrane is available in a range of different pore sizes across our filter plate portfolio.

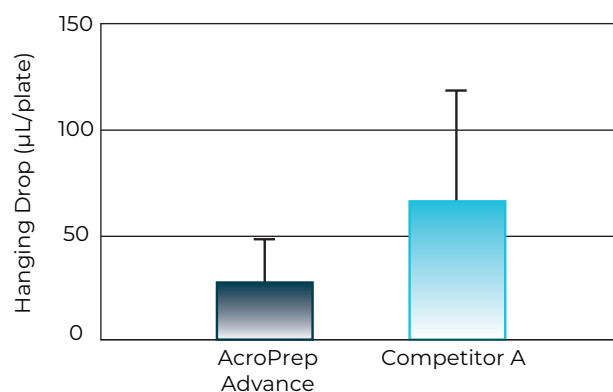
- 0.1  $\mu\text{m}$  - Mycoplasma reduction
- 0.2  $\mu\text{m}$  - Sterile filtration
- 0.45  $\mu\text{m}$  - Clarification, large virus filtration
- 0.8 - 5  $\mu\text{m}$  - Large particulate removal, prefiltration

Our filter plates are designed with optimized outlet tips that provide direct flow of the filtrate into the receiver plate and reduce the possibility of hanging drops after filtration is complete, minimizing the risk of cross contamination when removing the filter plate from the receiver plate.

AcroPrep filter plates are constructed from biologically inert polypropylene material, which means that plates are themselves low in binding to nucleic acids and proteins.

The design of our filter plates result in a uniform filtration across the plate with reduced hold-up volume that maximizes filtrate recovery.

## Reduction of Hanging Drops Reduces Potential Cross-Contamination



Hanging drops were measured by evacuating wells of fluid, weighing the plate, and then blotting and re-weighing the plate. Three plates of each type (350  $\mu\text{L}$  well volume) were tested and the averages calculated error bars indicate standard deviation.



## Depth Media

When performing the clearance of gross particulates, for example in cell clarification or lysate clearance steps, it is recommended to use a filter plate that contains a depth media. Depth media have a high particulate holding capacity and will protect downstream microporous membrane filters from quickly clogging.

AcroPrep filter plates are available with depth media serial layered on top of a membrane filter in one plate. This integrated prefilter produces a highly efficient filtration platform that can eliminate a number of steps that would have previously been needed to be taken - offering time savings, cost savings and workflow streamlining benefits for the laboratory.

### AcroPrep Advance 96-Well Filter Plate for Lysate Clearance

An integrated glass fiber prefilter provides efficient clarification of highly particulated samples



### AcroPrep 24-Well Filter Plates

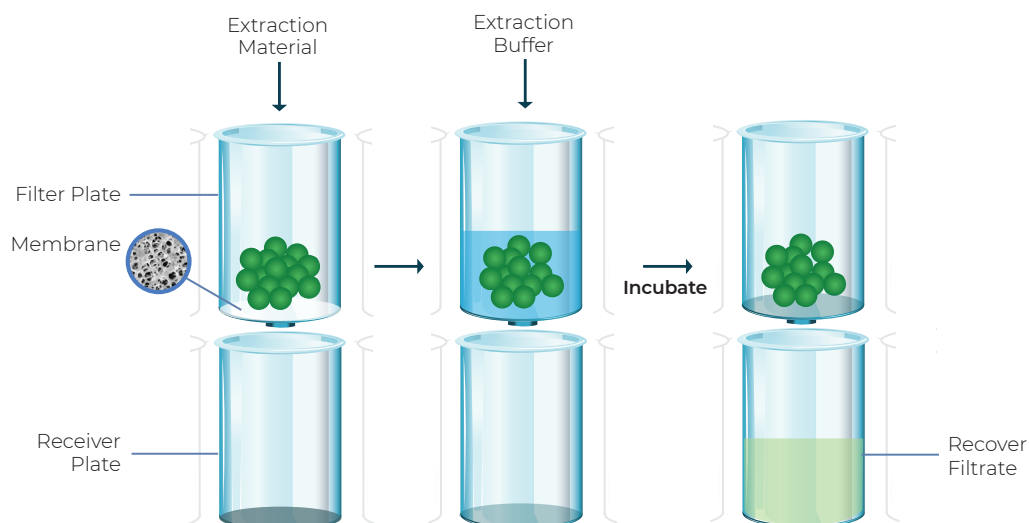
Clarification and sterile filter in a single device. Each well contains Seitz depth media layered over a 0.65/0.2 µm Supor EKV membrane



## Extraction

Filter plates containing depth media such as AcroPrep filter plates with polyethylene/polypropylene (PE/PP) can be used in applications involving an extraction step, for example in plant or cannabis research.

The membrane acts as a support when extracting compounds of interest from solid samples. The proprietary design of our filter plate outlet tips minimizes any extraction buffer leakage that could occur during incubation steps. Finally during filtration the membrane will ensure that large particulate will be removed from the recovered filtrate.



## Solvent Filtration

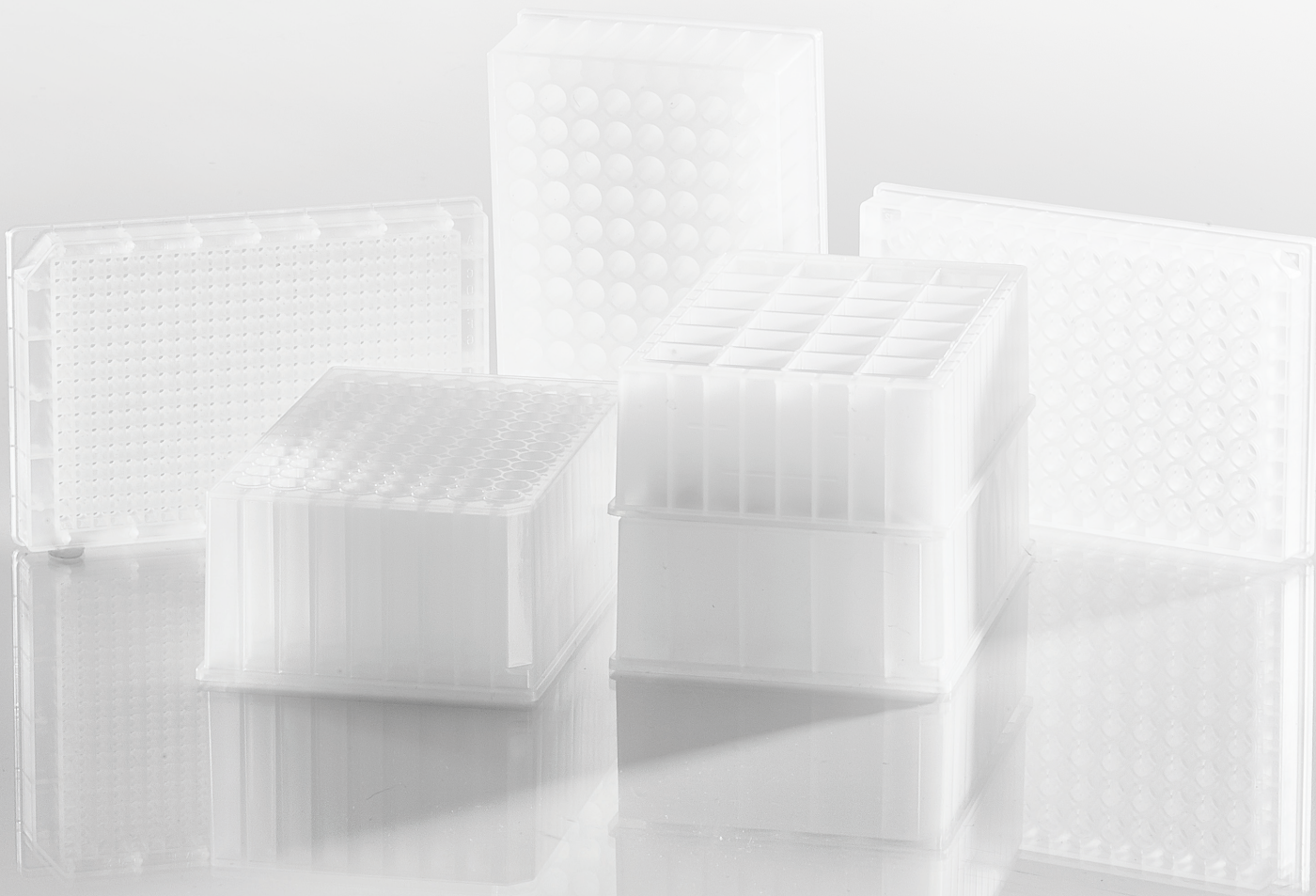
Certain applications require the use of harsh solvents or organics which can be incompatible with some plastics and membranes. Pall provides AcroPrep filtration plates that contain wwPTFE and PTFE membranes. The hydrophilic wwPTFE (water-wettable polytetrafluoroethylene) is a universal chemical compatible membrane that can be used for the filtration of both aqueous and organic solvents. Our AcroPrep filter plates are constructed from polypropylene material which provides durability when using harsh organic solvents, preventing unwanted extractables and leachables.

### AcroPrep Advance 0.2 and 0.45 $\mu\text{m}$ wwPTFE Membrane Filter Plates

Solution	30 min.	2 hrs.	24 hrs. (with- out humid chamber
Ethanol, 100%	R	R	E
Methanol, 100%	R	R	E
ACN, 100%	R	R	E
DMSO, 100%	R	R	R
Hexane, 100%	R	E	E

This solvent retention table shows results reported for 200  $\mu\text{L}$ /well (350  $\mu\text{L}$  plates) and 300  $\mu\text{L}$ /well (1 mL plates) of liquid with 30 min., 2 hr. and 24 hr. incubations at room temperature without a humid chamber. R = fully retained, E = completely evaporated before full incubation period, n = 24 wells/solution.

Note: To help with evaporation during long incubation periods, the use of a humid chamber is recommended.

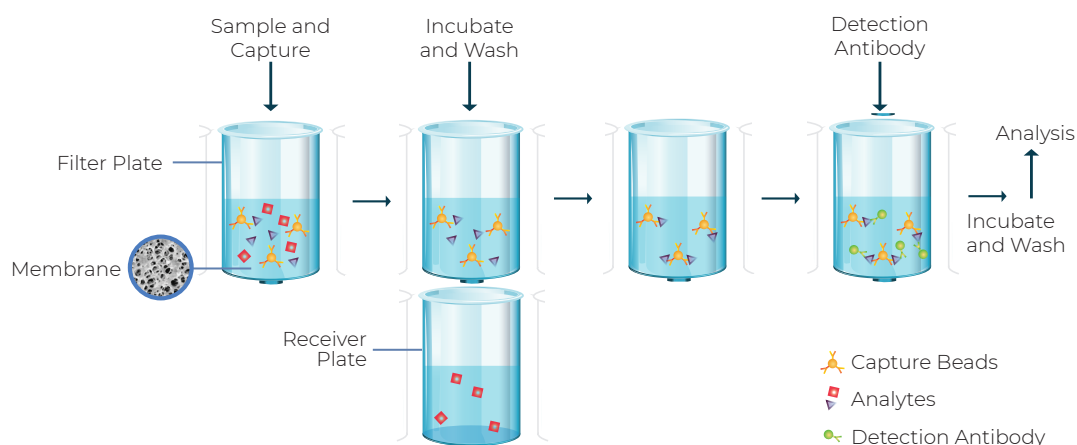




## Multiplex Assays

Filter plates can be used in both filtrate and retentate applications. When using a filter plate to perform a multiplex assay each well of the filter plate acts as an individual reaction vessel in which numerous wash and incubation steps may be performed while the membrane acts to retain the microsphere beads.

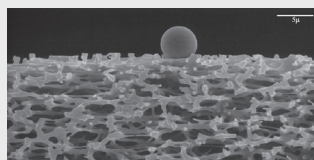
Utilizing our unique filter plate design and our proprietary membrane technology we supply multiplexing filter plates that offer superior bead recovery and low levels of false positives.



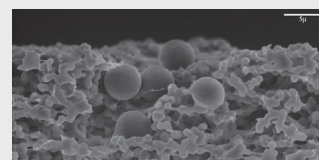
Pall AcroPrep filter plates have an optimized outlet tip design which prevents sample leakage during incubation steps. Our filter plates feature a smooth internal well wall design that provides efficient bead recovery, ensuring reproducible results from well-to-well. The plates are a rigid, single piece construction of 100% polypropylene, which minimizes extractables and non-specific binding of analytes or detection antibodies. The high performance Supor membrane used in our multiplexing filter plates has a consistent physical structure with a smooth surface morphology, this makes it ideal for use in bead based assays as the microspheres do not get trapped in the the membrane, allowing for efficient bead recovery.

### Supor Membrane Does Not Trap Microspheres and Allows Efficient Bead Recovery

A: Pall Supor membrane



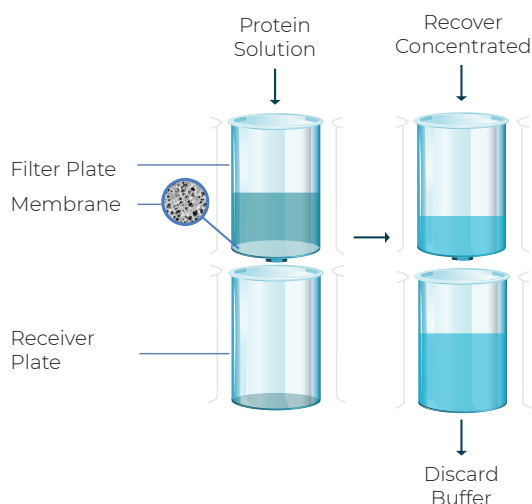
B: Competitor M membrane



The consistent membrane structure and smooth surface morphology of Pall's Supor membrane provides efficient recovery of microspheres. The fibrous surface structure of Competitor M's membrane entraps microspheres, making bead recovery difficult. Luminex® xMAP® microspheres were coated with a BSA solution and then diluted in PBS with 0.1% BSA to 50,000 beads per mL. Images taken following filtration.

# Ultrafiltration Applications

Ultrafiltration is a membrane separation technique used to separate extremely small particles and dissolved molecules in fluids. The primary basis for separation is molecular size, although other factors such as molecular shape and charge can also play a role. Molecules larger than the membrane pores will be retained at the surface of the membrane and concentrated during the ultrafiltration process.

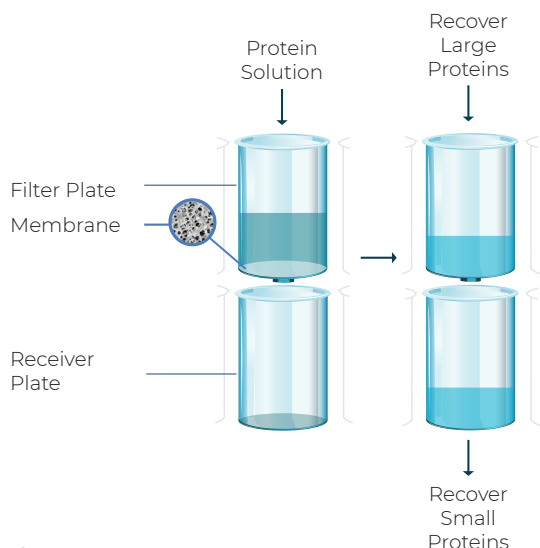
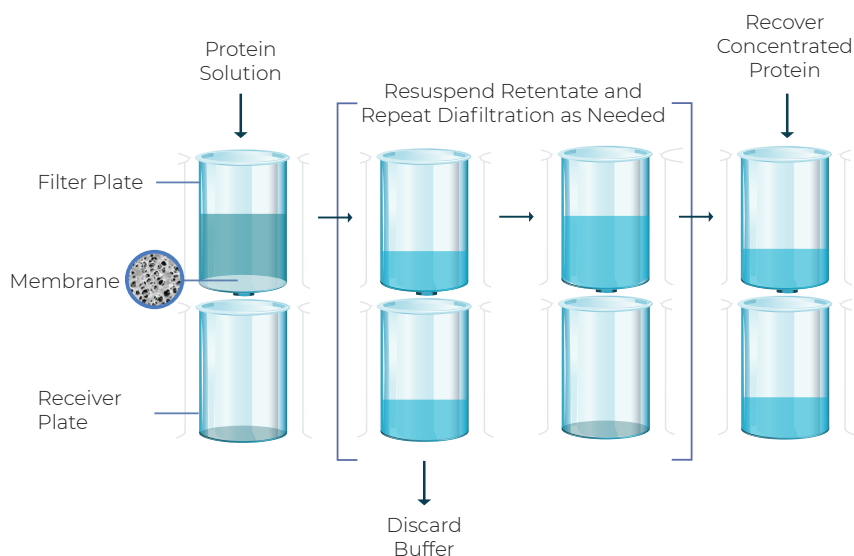


## Concentration

Ultrafiltration is a very convenient method for the concentration of dilute protein or DNA/RNA samples. It is gentle (does not shear DNA as large as 100 Kb or cause loss of enzymatic activity in proteins) and very efficient (typically > 90% recovery).

## Desalting and Buffer Exchange

Ultrafiltration provides a convenient and efficient way to perform diafiltration, remove or exchange salts, remove detergents, separate free from bound molecules, remove low molecular weight materials, or rapidly change the ionic or pH environment.



## Fractionation

Fractionation is the process to separate different size molecules. The molecules to be separated should differ by at least one order of magnitude (10X) in size to ensure an effective separation.

Fractionation using ultrafiltration is effective in applications, such as the preparation of protein-free filtrates, the separation of unbound or unincorporated label from DNA and protein samples, and the purification of PCR products from synthesis reactions.



## Choosing the Correct MWCO

The retention properties of ultrafiltration membranes are expressed as molecular weight cut-off (MWCO). This value refers to the approximate molecular weight of a dilute globular solute (i.e., a typical protein) which is 90% retained by the membrane. However, a molecule's shape can have a direct effect on its retention by a membrane. For example, linear molecules like DNA may find their way through pores that will retain a globular species of the same molecular weight.

MWCOs are nominal ratings based on the ability to retain > 90% of a solute of a known molecular weight (in Kilodaltons). The table below provides retention characteristics of different MWCO membranes for some solutes.

**For proteins, it is recommended that an MWCO be selected that is three to six times smaller than the molecular weight of the solute being retained. If flow rate is a consideration, choose a membrane with an MWCO at the lower end of this range (3X); if the main concern is retention, choose a tighter membrane (6X).**

Our Omega ultrafiltration membrane is available in AcroPrep 24, 96 and 384-well filter plates and in a number of MWCOs from 1K to 100K. The Omega membrane is a polyethersulfone membrane specifically modified to minimize protein and nucleic acid binding. The low binding nature of the membrane offers numerous benefits, including high recoveries of low concentrations of biomolecules and less surface fouling, which can cause retention performance to decay.



### MWCO Selection for Protein Applications

MWCO	Biomolecule Molecular Weight
1K	3K-10K
3K	10K-20K
10K	30K-90K
30K	90K-180K
50K	150K-300K
100K	300K-900K

### MWCO Selection for Nucleic Acid Applications

MWCO	Base Pairs (DS)	Bases (SS)
1K	5-16 Bp	9-32 Bs
3K	16-32 Bp	32-65 Bs
10K	50-145 Bp	95-285 Bs
30K	145-285 Bp	285-570 Bs
50K	240-475 Bp	475-950 Bs
100K	475-1,450 Bp	950-2,900 Bs

### MWCO Selection for Virus Applications

MWCO	Membrane Nominal Pore Size*	Virus or Particle Diameter
100K	10 nm	30-90 nm

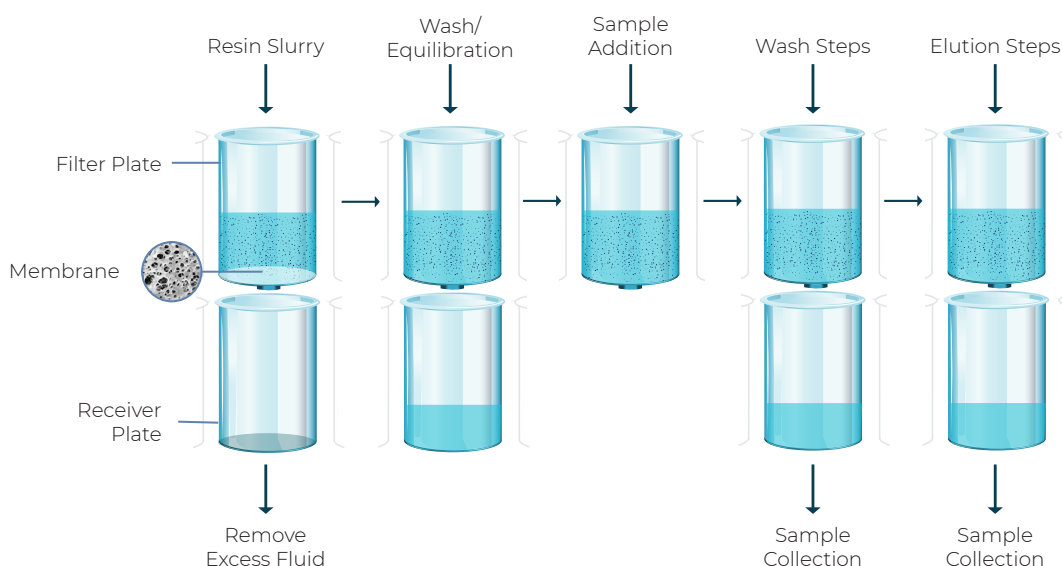
\*Nominal pore size as measured by electron microscopy.

# Chromatography Applications

When developing a purification process each step requires optimization in order to maximize yield and purity of the final product. Small-scale purification experiments can be performed during the development phase that preserves precious sample while providing crucial optimization information.

## Chromatography Screening

AcroPrep filter plates can be combined with resins to form high-throughput screening, small scale batch, chromatography platforms. Chromatography resin slurry can be introduced to the individual wells of an AcroPrep filter plate allowing for the screening of multiple resin types and the analysis of different binding, washing and elution characteristics.



For the best results when performing chromatography screening we recommend using an AcroPrep filter plate that contains the Supor membrane. Supor membrane is a low protein binding polyethersulfone (PES) membrane that has been optimized for biological filtration requirements and offers optimal support to retain chromatography resins while allowing for the smooth flow of buffers.

Pall AcroPrep filter plates feature a smooth internal well design that allows for uniform resin packing and flow rates across the plate. The outlet tip design of the filter plates minimizes sample leakage and loss that could occur during incubation steps.



# Mustang® Membrane Chromatography

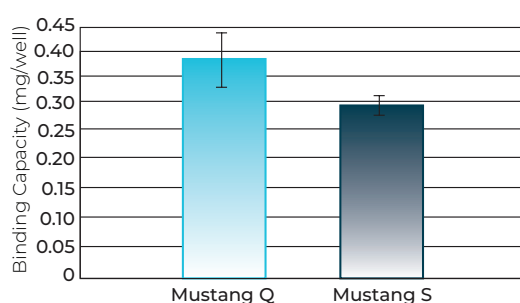
When performing chromatography conventional resins can suffer from mass transfer limitations, to overcome this challenge Pall has developed Mustang chromatography membranes.

We offer two ion exchange (IEX) membranes, both manufactured from polyethersulfone (PES) material. The Mustang Q membrane features strong IEX quaternary amine ligands, and the Mustang S (strong cation) features strong IEX sulfonic functional groups.

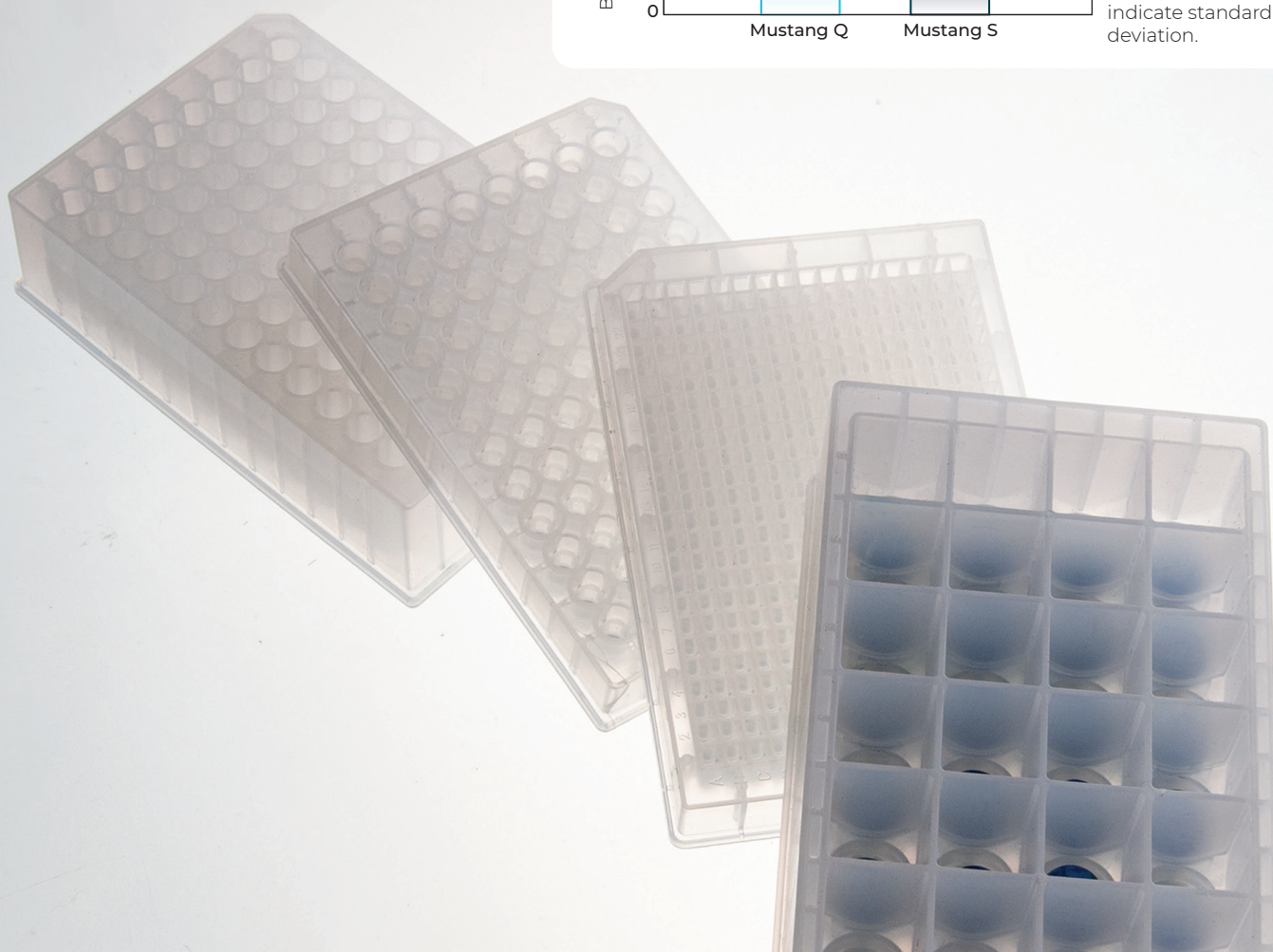
Mustang IEX membranes deliver efficient and rapid flow rates with a convective pore structure that results in processing times that are much shorter and more efficient than conventional resin-based technologies. Mustang membrane devices have throughputs of up to 100 times that of traditional bead-based media with no associated loss of capacity.

Both the Mustang Q and S membranes are available in the AcroPrep Advance 96-well filter plates. This multi-well format can be used to carry out parallel, high throughput ion exchange pre-fractionation of complex samples, such as serum or plasma. This convenient method development format can be directly scaled up to syringe-based Acrodisc® syringe filters and larger capsules with Mustang membranes for large-volume bioprocess applications.

## Mustang Q and S Membrane Provide a High Protein Binding Capacity



Binding capacity of Mustang Q membrane, 0.38 mg/well (n=5), was determined with BSA in 50 mM Tris, pH 8.5. Mustang S membrane binding capacity, 0.29 mg/well (n=6), was determined using Lysozyme in 10 mM MES, pH 5.5. Error bars indicate standard deviation.



# DNA/RNA Binding Applications

The AcroPrep Advance 96-well Long Tip Filter Plate for Nucleic Acid Binding (NAB) incorporates a silica based quartz glass fiber media to allow for efficient binding of DNA and RNA, while providing smooth flow and rapid processing of samples. This media offers researchers the flexibility to purify plasmid DNA from bacteria, and genomic DNA or total RNA from cell culture samples; a single plate for multiple applications.

## Plasmid DNA purification

- Restriction digestion
- Cloning
- Sanger sequencing

## Genomic purification

- PCR
- Real-time PCR
- Next Generation Sequencing (NGS)

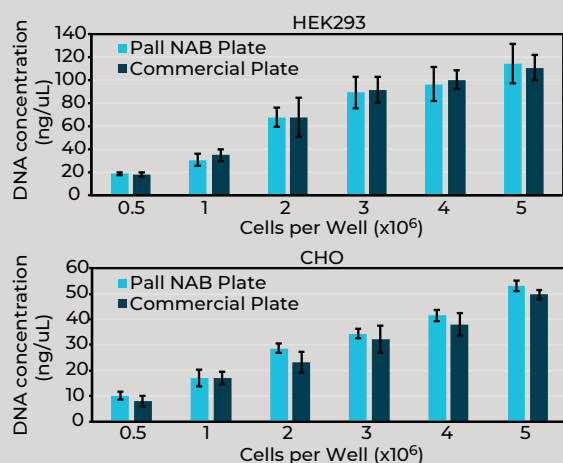
## Total RNA purification

- Real-time quantitative PCR
- Microarrays
- cDNA library construction
- Northern blot analysis

The filter plates feature long outlet tips which minimizes hanging drop formation, thus reducing the possibility of cross contamination when removing the filter plate from the receiver plate post filtration.

To save cost, Pall NAB plates can be used with commercially available reagents from different manufacturers to deliver genomic DNA or RNA preparations with quality and yields similar to, or better than obtained with the corresponding commercially available kits.

## Genomic DNA Isolation from freshly harvested HEK293 and CHO cells compared to competitive commercial product



Efficiency and reproducibility of genomic DNA isolation from freshly harvested HEK293 and CHO cells (Top panels) are very similar for the Pall NAB plate (blue bars) and for the commercial plate (red bars). Bars indicate an average of 8 samples. Error bars indicate standard deviation.



## Specifications

Specifications	AcroPrep 24-well Filter Plates	96-well AcroPrep Advance and AcroPrep Filter Plates	384-well AcroPrep Filter Plates
Plate Housing	Polypropylene	Polypropylene	Polypropylene
Lid	Polystyrene	Polystyrene	Polystyrene
Well-Bottom Area	1.6 cm <sup>2</sup>	0.25 cm <sup>2</sup>	0.05 cm <sup>2</sup>
Recommended Working Volume (Max)	7 mL for vacuum 6 mL for centrifugation	350 µL: ≤ 300 µL 1 mL: ≤ 900 µL 2 mL: ≤ 1.9 mL	≤ 80 µL
Dimensions:			
Length	12.75 cm (5.02 in)	12.78 cm (5.03 in)	12.78 cm (5.03 in)
Width	8.52 cm (3.36 in)	8.55 cm (3.37 in)	8.55 cm (3.37 in)
Height	<p>Without receiver plate: With depth media: 3.88 cm (1.53 in) Without depth media: 3.74 cm (1.74 in)</p> <p>Stacked with receiver plate: With depth media: 7.54 cm (2.97 in) Without depth media: 7.39 cm (2.91 in)</p>	<p>350 µL without lid: 1.44 cm (0.57 in)</p> <p>350 µL with lid: 1.75 cm (0.69 in) 1 mL: 3.29 cm (1.30 in) 2 mL: 4.70 cm (1.85 in)</p>	<p>Short tip without lid: 1.44 cm (0.57 in)</p> <p>Short tip with lid: 1.66 cm (0.66 in)</p> <p>Long tip without lid: 1.85 cm (0.73 in)</p> <p>Long tip with lid: 2.07 cm (0.82 in)</p>



## Frequently Asked Questions

### **What is the best way to process filter plates? Centrifuge? Vacuum?**

One big advantage of the AcroPrep filter plate family is that they can be processed in a variety of ways, allowing the plates to easily fit into any workflow. A centrifuge is recommended for applications that require collection of the filtrate, otherwise, the vacuum manifold is the best way to process filter plates. The AcroPrep filter plates are also compatible with positive pressure devices, which many labs use for high throughput applications.

### **Do I have to use the whole plate at once?**

No. While that is ideal because otherwise extra care needs to be taken with the unused wells, you can use just the wells you need. It is best practice to use a sealing film to cover the wells you are not using.

### **I have never seen a 24-well filter plate. How would I fit it into my workflow?**

The key to 24-well filter plates is the volume you can process with them. If you are growing in a 24-well culture plate, you can transfer your sample directly into the 24-well filter plates for sample processing. If you are growing in other vessels, such as shake flasks, and need to process multiple samples in the 2-7 mL range these plates are an ideal solution versus using individual spin devices. You can save time, improve recovery, and reduce contamination risk.

### **Is the 24-well filter plate different from a deep well plate?**

Deep well plates typically have a solid bottom. Whereas, the AcroPrep filter plates have filters and are used with a solid bottom plate. Our 24-well filter plates come with a solid bottom receiver plate but our 96 and 384-well plates do not. Because all of our plates conform to the ANSI/SLAS microplate standard, you can use any standard solid bottom plate with these.

### **Which plate has better binding capacity in 96-well and 384-well plate for DNA and RNA?**

Pall has several filter plates that contain glass fibre membranes. Which plate to use depends on your application and starting material. We have several application notes that can walk you through performance based on sample type and nucleic acid desired.

### **Do you have to buy special equipment for the 24-well filter plates?**

No. These plates were designed to meet ANSI /SLAS microplate standards so you can use any of the equipment you already have in your lab that works with standard sized multi-well plates. While the footprint of the plates is standard, the heights do vary so always best to confirm the height compatibility with your centrifuge or liquid handling system.

### **Are processing parameters the same for all plates? (ie. will it take the same time, require the same speed, etc)**

The typical time to process samples will vary with membrane type used, membrane pore size, application and sample characteristics. Below is a guide on typical times to process for various filter plates:

Product	Plate Type	Typical Processing Time	
		VacuumManifold	CentrifugeDevice
AcroPrep™ 24-well Filter Plates	0.1 µm Supor® membrane	2 minutes	12 minutes
	0.45 µm Supor membrane	< 1 minute	< 10 minutes
	0.8 µm Supor membrane	< 1 minute	< 10 minutes
	1.2 µm Supor membrane	< 1 minute	< 10 minutes
	5 µm Supor membrane	< 1 minute	< 10 minutes
	1K Omega™ membrane	165 minutes	170 minutes
	3K Omega membrane	135 minutes	135 minutes
	10K Omega membrane	85 minutes	70 minutes
	30K Omega membrane	1 hour	1 hour
	50K Omega membrane	1 hour	1 hour
	100K Omega membrane	30 minutes	100 minutes
AcroPrep Advance 96-Well Filter Plates for Multiplexing	PN 8049, 8019, 8029, 8027	2 seconds	2 minutes
AcroPrep Advance 96-Well Filter Plates for Protein Purification Width	PN 8029, 8039, 8129, 8130	2 seconds	2 minutes
	PN 8071, 8072, 8171, 8172	14 seconds	2 minutes
	PN 8040	< 2 seconds	< 2 minutes
AcroPrep Advance 96-Well Filter Plates for Lysate Clearance	PN 8075	< 9 seconds	< 2 minutes
	PN 8175	< 35 seconds	< 2 seconds
	PN 8275	< 60 seconds	< 2 seconds
AcroPrep Advance 96-Well Filter Plates for DNA Purification	PN 8032, 8132	2 seconds	< 2 minutes
AcroPrep Advance 96-Well Filter Plates for Ultrafiltration	3K Omega membrane		45 minutes
	10K Omega membrane	20 minutes	8 minutes
	30K Omega membrane	8 minutes	8 minutes
	100K Omega membrane	4 minutes	5 minutes
AcroPrep Advance 96-Well Filter Plates for Solvent Filtration	0.2 µm PTFE	52 seconds	< 2 minutes
	0.45 µm PTFE	19 seconds	< 2 minutes
AcroPrep Advance 96-Well Filter Plates for Aqueous Filtration	0.2 µm Supor	9 seconds	
	0.45 µm Supor	5 seconds	
	1.2 µm Supor	2 seconds	
	1.0 µm Glass Fiber	2 seconds	
	30-40 µm PP/PE	1 second	

## Ordering Information

### AcroPrep 24-Well Filter Plates with Supor EKV Membrane

US Cat. no	EU Cat. no	Description	Pkg
76360-450	738-0221	7 mL, 0.2 µm Supor EKV membrane	8/pkg
76360-452	738-0222	7 mL, 0.2 µm Supor EKV membrane	2/pkg
76360-446	738-0219	7 mL, Seitz depth media/0.2 µm Supor EKV membrane	8/pkg
76360-448	738-0220	7 mL, Seitz depth media/0.2 µm Supor EKV membrane	2/pkg

### AcroPrep 24-Well Filter Plates with Supor Membrane

US Cat. no	EU Cat. no	Description	Pkg
76457-240	738-0246	7 mL, 0.1 µm Supor membrane	8/pkg
76457-242	738-0245	7 mL, 0.1 µm Supor membrane	2/pkg
76457-244	738-0244	7 mL, 0.45 µm Supor membrane	8/pkg
76457-246	738-0243	7 mL, 0.45 µm Supor membrane	2/pkg
76457-248	738-0242	7 mL, 0.8 µm Supor membrane	8/pkg
76457-250	738-0241	7 mL, 0.8 µm Supor membrane	2/pkg
76457-252	738-0240	7 mL, 1.2 µm Supor membrane	8/pkg
76457-254	738-0239	7 mL, 1.2 µm Supor membrane	2/pkg
76457-256	2 738-0238	7 mL, 5 µm Supor membrane	8/pkg
76457-258	738-0237	7 mL, 5 µm Supor membrane	2/pkg

### AcroPrep Advance 96-Well Filter Plates with Supor Membrane

US Cat. no	EU Cat. no	Description	Pkg
97052-096	518-0022	350 µL, 0.2 µm Supor membrane	10/pkg
97052-098	518-0023	350 µL, 0.45 µm Supor membrane	10/pkg
97052-100	518-0024	350 µL, 1.2 µm Supor membrane	10/pkg
97052-124	738-0116	1 mL, 0.2 µm Supor membrane	5/pkg
97052-126	738-0117	1 mL, 0.45 µm Supor membrane	5/pkg
97052-128	738-0118	1 mL, 1.2 µm Supor membrane	5/pkg

### AcroPrep Advance 384-Well Filter Plates with Supor Membrane

US Cat. no	EU Cat. no	Description	Pkg
16003-826	516-0176	100 µL, 1.2 µm Supor membrane, long tips	10/pkg
16003-828	736-4006	100 µL, 1.2 µm Supor membrane, short tips	10/pkg

### AcroPrep Advance 96-Well Filter Plates for Lysate Clearance

US Cat. no	EU Cat. no	Description	Pkg
97052-116	518-0031	350 µL, 3 µm glass fibre/0.2 µm Supor membrane	10/pkg
97052-114	518-0030	350 µL, 3 µm glass fibre/1.2 µm Supor membrane	10/pkg
97052-130	738-0129	1 mL, 3 µm glass fibre/0.2 µm Supor membrane	5/pkg
97052-132	738-0133	2 mL, 3 µm glass fibre/0.2 µm Supor membrane	5/pkg



## Ordering Information

### AcroPrep 24-Well Filter Plates with PP/PE (polypropylene/polyethylene)

US Cat. no	EU Cat. no	Description	Pkg
76457-284	738-0224	7 mL, 30-40 µm PP/PE	8/pkg
76457-286	738-0223	7 mL, 30-40 µm PP/PE	2/pkg

### AcroPrep Advance 96-Well Filter Plates with PP/PE (polypropylene/polyethylene)

US Cat. no	EU Cat. no	Description	Pkg
97052-102	518-0025	350 µL, 30-40 µm PP/PE	10/pkg
30621-080	738-0198	1 mL, 30-40 µm PP/PE	5/pkg
30621-082	738-0199	2 mL, 30-40 µm PP/PE	5/pkg

### AcroPrep Advance 96-Well Filter Plates with wwPTFE Membrane

US Cat. no	EU Cat. no	Description	Pkg
76308-642	513-0163	350 µL, 0.2 µm wwPTFE membrane	10/pkg
76423-864	513-0166	350 µL, 0.2 µm wwPTFE membrane, long tip	10/pkg
76308-644	513-0164	350 µL, 0.45 µm wwPTFE membrane	10/pkg
76423-868	513-0168	350 µL, 0.45 µm wwPTFE membrane, long tip	10/pkg
76308-646	514-1096	1 mL, 0.2 µm wwPTFE membrane	5/pkg
76423-866	513-0167	1 mL, 0.2 µm wwPTFE membrane, long tip	5/pkg
76308-648	514-1097	1 mL, 0.45 µm wwPTFE membrane	5/pkg
76423-870	513-0169	1 mL, 0.45 µm wwPTFE membrane, long tip	5/pkg
76308-650	514-1098	2 mL, 0.2 µm wwPTFE membrane	5/pkg
76308-652	514-1099	2 mL, 0.45 µm wwPTFE membrane	5/pkg

### AcroPrep Advance 96-Well Filter Plates with PTFE Membrane

US Cat. no	EU Cat. no	Description	Pkg
89137-184	738-0109	350 µL, 0.2 µm PTFE membrane	10/pkg
738-0109	738-0110	350 µL, 0.45 µm PTFE membrane	10/pkg
89135-692	738-0121	1 mL, 0.2 µm PTFE membrane	5/pkg
89135-694	738-0122	1 mL, 0.45 µm PTFE membrane	5/pkg
89135-710	738-0131	2 mL, 0.2 µm PTFE membrane	5/pkg
89135-712	738-0132	2 mL, 0.45 µm PTFE membrane	5/pkg

## Ordering Information

### AcroPrep 24-Well Filter Plates with Omega Membrane

US Cat. no	EU Cat. no	Description	Pkg
76457-260	738-0236	7 mL, Omega membrane 1K MWCO	8/pkg
76457-262	738-0235	7 mL, Omega membrane 1K MWCO	2/pkg
76457-264	738-0234	7 mL, Omega membrane 3K MWCO	8/pkg
76457-266	738-0233	7 mL, Omega membrane 3K MWCO	2/pkg
76457-268	738-0232	7 mL, Omega membrane 10K MWCO	8/pkg
76457-270	738-0231	7 mL, Omega membrane 10K MWCO	2/pkg
76457-272	738-0230	7 mL, Omega membrane 30K MWCO	8/pkg
76457-274	738-0229	7 mL, Omega membrane 30K MWCO	2/pkg
76457-276	738-0228	7 mL, Omega membrane 50K MWCO	8/pkg
76457-278	738-0227	7 mL, Omega membrane 50K MWCO	2/pkg
76457-280	738-0226	7 mL, Omega membrane 100K MWCO	8/pkg
76457-282	738-0225	7 mL, Omega membrane 100K MWCO	2/pkg

### AcroPrep Advance 96-Well Filter Plates with Omega Membrane

US Cat. no	EU Cat. no	Description	Pkg
97052-106	518-0027	350 µL, Omega membrane 3K MWCO	10/pkg
97052-108	518-0032	350 µL, Omega membrane 10K MWCO	10/pkg
97052-110	518-0028	350 µL, Omega membrane 30K MWCO	10/pkg
97052-112	518-0029	350 µL, Omega membrane 100K MWCO	10/pkg
89135-696	738-0123	1 mL, Omega membrane 3K MWCO	5/pkg
89135-698	738-0124	1 mL, Omega membrane 10K MWCO	5/pkg
89135-700	738-0125	1 mL, Omega membrane 30K MWCO	5/pkg
89135-702	738-0126	1 mL, Omega membrane 100K MWCO	5/pkg

### AcroPrep Advance 384-Well Filter Plates with Omega Membrane

US Cat. no	EU Cat. no	Description	Pkg
16003-814	516-0172	100 µL, Omega membrane 10K MWCO, long tips	10/pkg
16003-816	516-0173	100 µL, Omega membrane 10K MWCO, short tips	10/pkg
16003-818	516-0174	100 µL, Omega membrane 30K MWCO, long tips	10/pkg
16003-820	516-0175	100 µL, Omega membrane 30K MWCO, short tips	10/pkg
16003-822	736-4004	100 µL, Omega membrane 100K MWCO, long tips	10/pkg
16003-824	736-4005	100 µL, Omega membrane 100K MWCO, short tips	10/pkg

### AcroPrep Advance 96-Well Filter Plates with Mustang Membrane

US Cat. no	EU Cat. no	Description	Pkg
89135-684	738-0113	350 µL, Mustang Q membrane	10/pkg
97065-368	738-0197	350 µL, Mustang Q membrane, white	10/pkg
89135-686	738-0114	350 µL, Mustang S membrane	10/pkg
89135-704	738-0127	1 mL, Mustang Q membrane	5/pkg
89135-706	738-0128	1 mL, Mustang S membrane	5/pkg

## Ordering Information

### AcroPrep Advance 96-Well Filter Plates for Nucleic Acid Purification

US Cat. no	EU Cat. no	Description	Pkg
89137-182	738-0108	350 µL, DNA binding	10/pkg
89135-690	738-0120	1 mL, DNA binding	5/pkg
10158-728	738-0209	NAB Plate - 1 mL, DNA binding, long tips	5/pkg

### AcroPrep Advance 96-Well Filter Plates with Glass Fiber

US Cat. no	EU Cat. no	Description	Pkg
97052-104	518-0026	350 µL, 1.0 µm glass fiber	10/pkg
89135-688	738-0119	1 mL, 1.0 µm glass fiber	5/pkg
89135-708	738-0130	2 mL, 1.0 µm glass fiber	5/pkg

### AcroPrep Advance 384-Well Filter Plates with Glass Fiber

US Cat. no	EU Cat. no	Description	Pkg
16003-810	516-0170	100 µL, 1.0 µm glass fiber, long tips	10/pkg
89030-428	516-0207	100 µL, 1.0 µm glass fiber, short tips, white	10/pkg

### Vacuum Manifold and Accessories

US Cat. no	EU Cat. no	Description	Pkg
16003-836	514-0589	Multi-well plate vacuum manifold	1/pkg
16003-830	516-0246	1 mL receiver plate spacer block	1/pkg
16003-832	516-0247	350 µL receiver plate spacer block	1/pkg
16003-834	PALL5016	Replacement accessory kit (includes O-ring, gasket and allen wrench)	1/pkg
89030-420	PALL5225	Adapter collar for centrifugation	2/pkg
89030-422	738-1005	Cap mat for incubation	5/pkg
89137-188	PALL8001	AcroPrep Advance multi-well plate lid	10/pkg
89030-424	PALL5231	Multi-well plate lid	10/pkg





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