



Life Sciences

## AcroPrep™ Advance Filter Plates



### *Advancing sample preparation*

- ▶ **Various filter choices** – Specialized membranes and media accommodates most applications to guarantee success.
- ▶ **Optimized outlet tips** – Minimizes sample leakage during incubation steps and reduces the presence of hanging drops following filtration.
- ▶ **Smooth well design** – Provides consistency in filtration times, as well as efficient sample and bead recovery.
- ▶ **New well geometry** – Results in faster, more uniform filtration rates across the plate, thereby improving well-to-well, plate-to-plate, and lot-to-lot consistency.
- ▶ **Automation compatible** – Manufactured in accordance with SBS guidelines, allowing plates to be run in manual, semi-automated, and automated processes.

### *Applications*

- ▶ Multiplexing assays
- ▶ Lysate clearance
- ▶ DNA purification
- ▶ Protein purification
- ▶ Concentration and desalting
- ▶ Solvent filtration
- ▶ Neonatal screening
- ▶ Bead-based assays
- ▶ Flow cytometry
- ▶ Particulate removal
- ▶ Size exclusion

*Filtration. Separation. Solution.<sup>SM</sup>*

# AcroPrep Advance 96-Well Filter Plates

## Selection Guide

Field	Application	Membrane	Part Number	Page
Diagnostics	Multiplex Assays	Supor®	8019, 8029, 8049	3
Diagnostics	Flow Cytometry Sample Prep	PP/PE Mesh	8027	3
Nucleic Acids	Lysate Clarification	Glass Fiber/Supor	8075, 8040, 8175, 8275	5
Nucleic Acids	Plasmid Prep	DNA Binding	8032, 8132	6
Nucleic Acids	DNA Purification	DNA Binding	8032, 8132	6
Nucleic Acids	PCR Clean-up	Omega™ Ultrafiltration	8034, 8035	7
Nucleic Acids	Labeling Clean-up, DNA/RNA	Omega Ultrafiltration	8033, 8034, 8035, 8036, 8163, 8164, 8165, 8166	7
Proteins	Lysate Clarification	Glass Fiber/Supor	8075, 8040, 8175, 8275	5
Proteins	Chromatography Screening	Supor, GHP	8029, 8039, 8129, 8130, 8082, 8084, 8182, 8184, 8282, 8284	4, 8
Proteins	Size Exclusion	Omega Ultrafiltration	8033, 8034, 8035, 8036, 8163, 8164, 8165, 8166	7
Proteins	Protein Precipitation	PTFE, GHP	8047, 8147, 8247, 8082, 8084, 8182, 8184, 8282, 8284	8
Proteins	Sample Fractionation	Mustang® Q, Mustang S	8071, 8022, 8072, 8171, 8172	4
Proteins	Free vs. Bound Assays	Omega Ultrafiltration	8033, 8034, 8035, 8036	7
General Filtration	Aqueous Filtration	Supor, GHP	8082, 8084, 8182, 8184, 8282, 8284, 8019, 8029, 8039, 8119, 8129, 8130	8, 10
General Filtration	Particulate Removal	Glass Fiber	8031, 8131, 8231	10
General Filtration	Cell Separation	PP/PE Mesh	8027	3
General Filtration	Solvent Filtration	PTFE, GHP	8047, 8048, 8147, 8148, 8247, 8248, 8082, 8084, 8182, 8184, 8282, 8284	8

## Specifications

### Materials of Construction

#### Filter Media:

- Supor (polyethersulfone) membrane
- Glass fiber (borosilicate glass without binder) media
- DNA binding (borosilicate glass without binder) media
- Mustang Q (anion exchange) membrane
- Mustang S (cation exchange) membrane
- Omega (modified polyethersulfone) media
- PP/PE non-woven (polypropylene/polyethylene) media
- PTFE (polytetrafluoroethylene) membrane

Plate Housing: Polypropylene

Lid: Polystyrene

### Dimensions

Length: 12.8 cm (5.0 in.)

Width: 8.6 cm (3.4 in.)

Height (With Lid): 1.8 cm (0.7 in.) (350 µL only)

Height (Without Lid):

350 µL: 1.4 cm (0.6 in.)

1 mL: 3.3 cm (1.3 in.)

2 mL: 4.7 cm (1.9 in.)

### Well-Bottom Area

0.25 cm<sup>2</sup>

### Recommended Working Volume

350 µL: ≤ 300 µL

1 mL: ≤ 900 µL

2 mL: ≤ 1.9 mL

### Recommended Operating Vacuum

≥ 25.4 cm Hg (10 in. Hg)

### Recommended Centrifugal Force

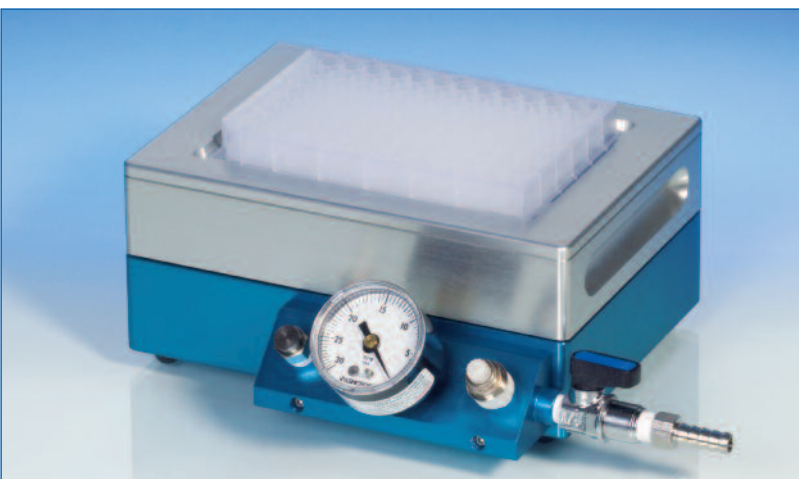
1,500 x g

### Typical Hold-Up Volume

Filter plates were filled with 300 µL of water and filtered at 10 in. Hg, except plates containing PTFE membrane, which were filled with 60% isopropyl alcohol/40% water.

## Multiplexing

Superior bead recovery and low levels of false positives ensure assay reproducibility



### Features

- ▶ Smooth well wall provides efficient bead recovery, ensuring reproducible results lot after lot.
- ▶ High performance membrane does not trap microspheres in the membrane matrix.
- ▶ In serological assays, Supor membrane effectively removes IgG complexes, thus reducing non-specific reactivity of the microspheres and reducing false positives.
- ▶ New well design results in faster, more uniform filtration rates across the plate with reduced hold-up volume.
- ▶ New outlet tip geometry minimizes sample leakage and loss during incubation steps so that acquisition times are not affected.
- ▶ Intrinsic plate and membrane properties minimize target loss from non-specific binding.

### Applications

- ▶ Bead-based multiplexing assays
- ▶ Flow cytometry

### Specifications

#### Materials of Construction

Filter Media: PP/PE non-woven (polypropylene/polyethylene) and Supor (polyethersulfone) membrane

#### Typical Processing Time

Vacuum: 2 seconds (8049, 8029); 9 seconds (8019);  
1 second (8027)  
Centrifuge: < 2 minutes (8049, 8029)

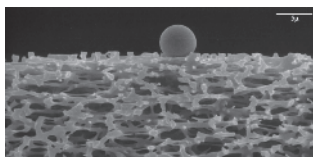
#### Typical Hold-up Volume

Vacuum: 5  $\mu$ L (8049, 8029); 8  $\mu$ L (8019); 4  $\mu$ L (8027)  
Centrifuge: 3  $\mu$ L (8049, 8029)

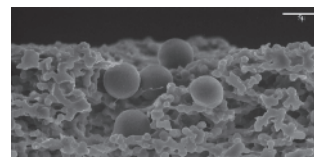
### Performance

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

A: Pall Supor membrane

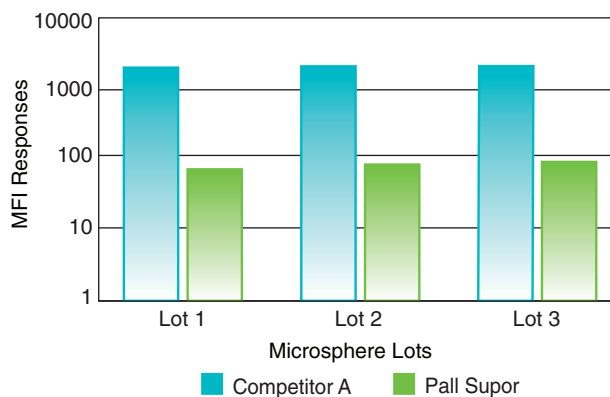


B: Competitor A membrane



The consistent membrane structure and smooth surface morphology of Pall's Supor membrane provides efficient recovery of microspheres. The fibrous surface structure of Competitor A's membrane entraps microspheres, making bead recovery difficult. Luminex<sup>®</sup> xMAP<sup>®</sup> 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.

#### Pall Supor Membrane Reduces the Occurrence of False Positive Results



The serological immunoassays were performed with multiple lots of xMAP microspheres in both the Pall Supor and Competitor A filter plates. The results from these filter plates were read with one Luminex LX100 Instrument. The responses represent the reactivity toward microspheres without proteins coupled to them to maximize the indications of false positive "non-specific" reactivity by the microspheres. In all lots of microspheres tested, the Pall Supor filter plates exhibited a marked reduction in non-specific reactivity than competitive plates. Data generated in conjunction with Luminex Software, Inc.

### Ordering Information

#### AcroPrep Advance 96-Well Filter Plates for Multiplexing

Part Number	Description	Pkg
8049	For multiplex assays	10/pkg
8019	350 $\mu$ L, 0.2 $\mu$ m Supor membrane	10/pkg
8029	350 $\mu$ L, 0.45 $\mu$ m Supor membrane	10/pkg
8027	350 $\mu$ L, 30-40 $\mu$ m PP/PE non-woven media	10/pkg

# Protein Purification

Versatile format for multiple purification strategies



## Features

- ▶ High performance Supor membrane offers optimal support to retain chromatography sorbents while allowing smooth flow of buffers.
- ▶ Ion exchange Mustang membrane is able to withstand high flow rates to render fast purification of biomolecules.
- ▶ New well design results in faster, more uniform filtration rates across the plate with reduced hold-up volume.
- ▶ New outlet tip design minimizes sample leakage and loss during incubation steps.
- ▶ Intrinsic plate properties prevent target molecules from binding to the plate.

## Applications

- ▶ High throughput protein purification
- ▶ Screening of chromatography resins and conditions
- ▶ Protein fractionation
- ▶ Antibody purification

## Specifications

### Materials of Construction

Filter Media: Supor (polyethersulfone), Mustang Q (anion exchange), and Mustang S (cation exchange) membranes

### Typical Processing Time

Vacuum: 2 seconds (8029, 8039, 8129, 8130); 14 seconds (8071, 8072, 8171, 8172)

Centrifuge: < 2 minutes

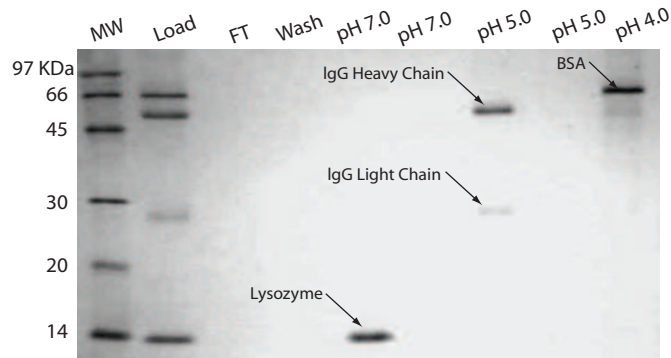
### Typical Hold-Up Volume

Vacuum: 5 µL (8029, 8039, 8129, 8130); 21 µL (8071, 8072, 8171, 8172)

Centrifuge: 3 µL (8029, 8039, 8129, 8130); 12 µL (8071, 8072, 8171, 8172)

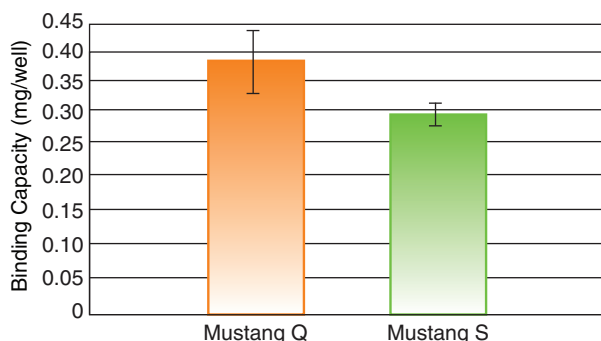
## Performance

### Separation of Multiple Proteins Using AcroPrep Advance Filter Plates



Separation of Lysozyme, Human IgG and Bovine Serum Albumin (BSA) on HEA HyperCel™ sorbent loaded in an AcroPrep Advance filter plate with 1.2 µm Supor membrane. 2-6 mg of total reduced protein loaded onto 12% SDS-PAGE run with glycine buffer. Lanes: MW = molecular weight markers; Load = protein mixture; FT = flow through; pH 7.0, 5.0 and 4.0 = elution buffer pH fraction with two elutions per pH. Coomassie stain used.

### 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.

## Ordering Information

### AcroPrep Advance 96-Well Filter Plates for Protein Purification

Part Number	Description	Pkg
8029	350 µL, 0.45 µm Supor membrane	10/pkg
8039	350 µL, 1.2 µm Supor membrane	10/pkg
8071	350 µL, Mustang Q membrane	10/pkg
8022	350 µL, Mustang Q membrane, white	10/pkg
8072	350 µL, Mustang S membrane	10/pkg
8129	1 mL, 0.45 µm Supor membrane	5/pkg
8130	1 mL, 1.2 µm Supor membrane	5/pkg
8171	1 mL, Mustang Q membrane	5/pkg
8172	1 mL, Mustang S membrane	5/pkg

# Lysate Clearance

Integrated prefilter provides efficient clarification of highly particulated samples



## Features

- ▶ Integrated prefilter yields consistent filtration of samples with high levels of gross particulate.
- ▶ New outlet tip geometry provides direct flow of samples into receiver plate without concerns of cross-contamination.
- ▶ Biologically inert materials allow clarification of most types of lysates without loss of target molecules.

## Applications

- ▶ Removal of bacterial debris prior to plasmid purification
- ▶ Removal of bacterial and cellular debris prior to protein purification
- ▶ Clearance of gross particulates

## Specifications

### Materials of Construction

Filter Media: 3  $\mu\text{m}$  glass fiber/0.2  $\mu\text{m}$  Supor and 3  $\mu\text{m}$  glass fiber/1.2  $\mu\text{m}$  Supor membranes

### Typical Processing Time

Vacuum: 2 seconds (8040); 9 seconds (8075, 8175, 8275)

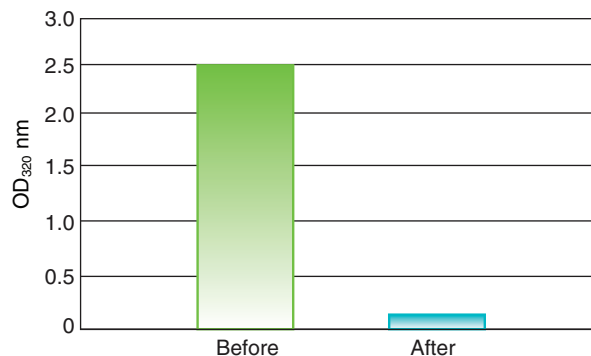
Centrifuge: < 2 minutes

### Typical Hold-Up Volume

Vacuum: 17  $\mu\text{L}$  (8040); 13  $\mu\text{L}$  (8075, 8175, 8275)

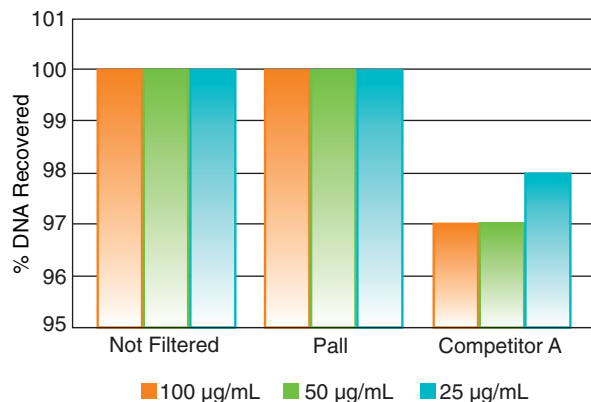
## Performance

### Efficient Clarification of Bacterial Lysates



OD<sub>260</sub> was measured for crude bacterial lysate before and after filtration through Pall's 3  $\mu\text{m}$  glass fiber/0.2  $\mu\text{m}$  Supor membrane filter plates to demonstrate removal of particulate matter. 16 replicates were measured using 800  $\mu\text{L}$ /well of crude bacterial lysate aliquotted from a common stock of prepared lysate.

### Glass Fiber and Supor Membrane Allow Complete Recovery of Plasmid DNA from *E. coli* Lysates



Purified pCAT plasmid DNA was spiked in TE buffer at 25  $\mu\text{g/mL}$ , 50  $\mu\text{g/mL}$  and 100  $\mu\text{g/mL}$  and filtered through Pall and Competitor A's prefilter plates. Percent recovery was calculated by comparing OD<sub>260</sub> post-filtration to a standard curve of unfiltered samples.

## Ordering Information

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

Part Number	Description	Pkg
8075	350 $\mu\text{L}$ , 3 $\mu\text{m}$ glass fiber/0.2 $\mu\text{m}$ Supor membrane	10/pkg
8040	350 $\mu\text{L}$ , 3 $\mu\text{m}$ glass fiber/1.2 $\mu\text{m}$ Supor membrane	10/pkg
8175	1 mL, 3 $\mu\text{m}$ glass fiber/0.2 $\mu\text{m}$ Supor membrane	5/pkg
8275	2 mL, 3 $\mu\text{m}$ glass fiber/0.2 $\mu\text{m}$ Supor membrane	5/pkg

# DNA Purification

Maximum yields of high quality nucleic acid



## Features

- ▶ Optimized for maximum binding and yield of DNA from a variety of sample types.
- ▶ New well geometry results in reduced hold-up volume and higher recovery of DNA.
- ▶ Enhanced media ensures high yields of contaminant-free DNA for downstream applications, such as PCR and sequencing.
- ▶ Manufactured in accordance with SBS guidelines allowing entire DNA purification process to be performed on automated equipment.

## Applications

- ▶ Plasmid DNA purification
- ▶ Genomic DNA purification
- ▶ Plant RNA purification

## Specifications

### Materials of Construction

Filter Media: DNA binding (borosilicate glass without binder) media

### Typical Processing Time

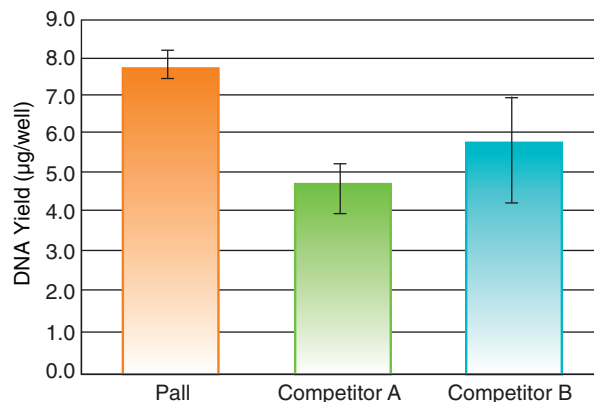
Vacuum: 2 seconds  
Centrifuge: < 2 minutes

### Typical Hold-Up Volume

Vacuum: 19  $\mu$ L

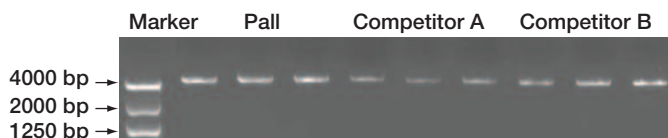
## Performance

### Plasmid DNA Yield Superior to Competitive Plates



*pCAT* plasmid DNA yield ( $OD_{260}$ ) using indicated DNA purification plates starting with 1 mL (Pall and Competitor B) or 1.5 mL (Competitor A) overnight culture *DH5 $\alpha$* . Purification using plate manufacturer's recommended protocol using 350  $\mu$ L plates. Error bars indicate standard error ( $n \geq 6$ ).

### Quality DNA Prepared from *E. coli* Lysates



1.2% agarose gel electrophoresis of the purified pDNA. Pooled samples from three separate purifications, eluate adjusted to 65  $\mu$ L after purification, diluted 1:10. Loaded 2  $\mu$ L per lane.

### Quality DNA Consistently Purified

Company	Elution Volume ( $\mu$ L)	Recovered Volume ( $\mu$ L)	$OD_{260/280}$	Concentration (ng/ $\mu$ L)	Total Yield ( $\mu$ g/well)
Pall	70	55-65	1.95 $\pm$ 0.01	131	7.7
Competitor A	50	30	1.98 $\pm$ 0.01	155	4.6
Competitor B	70	45-60	2.04 $\pm$ 0.05	108	5.6

$OD_{260/280}$  of pooled purified pDNA ( $n \geq 6$ ). High quality DNA has an  $OD_{260/280}$  value between 1.7-2.0.

## Ordering Information

### AcroPrep Advance 96-Well Filter Plates for DNA Purification

Part Number	Description	Pkg
8032	350 $\mu$ L, DNA binding	10/pkg
8132	1 mL, DNA binding	5/pkg

# Ultrafiltration

Rapid, efficient separation of biomolecules



## Features

- ▶ Omega membrane provides high recovery and typically results in  $\geq 90\%$  recovery of target biomolecules.
- ▶ New well design results in faster, more uniform filtration rates across the plate with reduced hold-up volume for maximum sample recovery.
- ▶ Intrinsic plate and membrane properties prevent target molecules from binding to the plate.

## Applications

- ▶ Size exclusion
- ▶ PCR clean-up
- ▶ Nucleic acid purification
- ▶ Protein separation

## Specifications

### Materials of Construction

Filter Media: Omega (modified polyethersulfone) membrane

### Typical Vacuum Filtration Performance

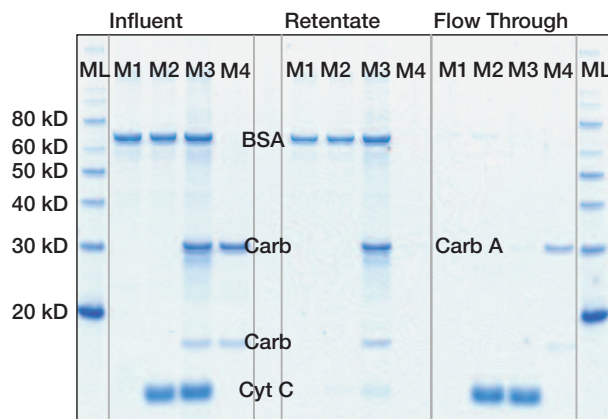
Membrane	Processing Time (min.)	Hold-Up Volume ( $\mu\text{L}$ )
10K Omega	20	5
30K Omega	8	6
100K Omega	4	7

### Typical Centrifugal Filtration Performance

Membrane	Processing Time (min.)	Hold-Up Volume ( $\mu\text{L}$ )
3K Omega	45	2
10K Omega	8	2
30K Omega	8	2
100K Omega	5	2

## Performance

### Separation of Proteins with Omega Membrane Using Vacuum Filtration



SDS-PAGE analysis of reduced samples from 30K Omega membrane plate using vacuum separation method, 5  $\mu\text{L}$ /lane. 75  $\mu\text{L}$  protein mix/well subjected to  $\sim 20$  in. Hg vacuum for  $\sim 8$  minutes. Each protein at 100  $\mu\text{g}/\text{mL}$  in initial mix. ML = Marker Ladder; M1 = BSA; M2 = BSA + Cyt C; M3 = BSA, Carbonic Anhydrase, and Cyto C; M4 = Carbonic Anhydrase. GelCode $\blacklozenge$  Blue stain used.

## Ordering Information

### AcroPrep Advance 96-Well Filter Plates for Ultrafiltration

Part Number	Description	Pkg
8033	350 $\mu\text{L}$ , Omega 3K MWCO	10/pkg
8034	350 $\mu\text{L}$ , Omega 10K MWCO	10/pkg
8035	350 $\mu\text{L}$ , Omega 30K MWCO	10/pkg
8036	350 $\mu\text{L}$ , Omega 100K MWCO	10/pkg
8163	1 mL, Omega 3K MWCO	5/pkg
8164	1 mL, Omega 10K MWCO	5/pkg
8165	1 mL, Omega 30K MWCO	5/pkg
8166	1 mL, Omega 100K MWCO	5/pkg

# Solvent Filtration

Versatile chemical compatibility with harsh organic and/or aqueous solvents



## Features

- ▶ Chemically resistant materials provide a stable platform to process samples in organic solvents.
- ▶ Inert materials of construction ensure complete recovery of samples and low non-specific binding.
- ▶ New well design results in faster, more uniform filtration rates across the plate and reduces hold-up volume.
- ▶ New outlet tip geometry provides direct flow of samples into receiver plate without concerns of cross-contamination.

## Applications

- ▶ Metabolic studies
- ▶ Molecular or drug synthesis reactions
- ▶ Sample prep using solvents
- ▶ Aggressive filtration applications

## Specifications

### Materials of Construction

Filter Media: PTFE (polytetrafluoroethylene) and GHP (hydrophilic polypropylene) membranes

### Typical Vacuum Filtration Performance for 350 $\mu$ L Filter Plates

Membrane	Processing Time (sec.)	Hold-Up Volume ( $\mu$ L)
0.2 $\mu$ m GHP	9	12
0.45 $\mu$ m GHP	6	12
0.2 $\mu$ m PTFE	52	14
0.45 $\mu$ m PTFE	19	15

### Typical Centrifugal Filtration Performance for 350 $\mu$ L Filter Plates

Membrane	Processing Time (min.)	Hold-Up Volume ( $\mu$ L)
0.2 $\mu$ m GHP	< 2	3
0.45 $\mu$ m GHP	< 2	3
0.2 $\mu$ m PTFE	< 2	2
0.45 $\mu$ m PTFE	< 2	1

## Performance

### Plates Maintain Solvents for Extended Incubations

#### AcroPrep Advance 0.2 and 0.45 $\mu$ m PTFE Membrane Filter Plates

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

This solvent retention table shows results reported for 200  $\mu$ L of liquid with 30 min., 2 hr. and 24 hr. incubations at room temperature in a humid chamber. R = fully retained, E = fully retained, completely evaporated before 24 hr. mark, n = 24 (repeated 3 times).

#### AcroPrep Advance 0.2 and 0.45 $\mu$ m GHP Membrane Filter Plates

Solution	30 min.	2 hrs.	24 hrs. (without 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  $\mu$ L/well (350  $\mu$ L plates) and 300  $\mu$ 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 24 hr. mark, n = 24 wells/solution.

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

## Ordering Information

### AcroPrep Advance 96-Well Filter Plates for Solvent Filtration

Part Number	Description	Pkg
8082	350 $\mu$ L, 0.2 $\mu$ m GHP membrane	10/pkg
8084	350 $\mu$ L, 0.45 $\mu$ m GHP membrane	10/pkg
8182	1 mL, 0.2 $\mu$ m GHP membrane	5/pkg
8184	1 mL, 0.45 $\mu$ m GHP membrane	5/pkg
8282	2 mL, 0.2 $\mu$ m GHP membrane	5/pkg
8284	2 mL, 0.45 $\mu$ m GHP membrane	5/pkg
8047	350 $\mu$ L, 0.2 $\mu$ m PTFE membrane	10/pkg
8048	350 $\mu$ L, 0.45 $\mu$ m PTFE membrane	10/pkg
8147	1 mL, 0.2 $\mu$ m PTFE membrane	5/pkg
8148	1 mL, 0.45 $\mu$ m PTFE membrane	5/pkg
8247	2 mL, 0.2 $\mu$ m PTFE membrane	5/pkg
8248	2 mL, 0.45 $\mu$ m PTFE membrane	5/pkg



# Aqueous Filtration

Fast processing with efficient removal of particulates



## Features

- ▶ New well geometry results in faster, more uniform filtration rates across the plate with reduced hold-up volume.
- ▶ Optimized outlet tip provides direct flow of samples into receiver plate without concerns of cross-contamination.
- ▶ Varied membrane and pore size selection offers efficient particulate removal.
- ▶ Manufactured in accordance with SBS guidelines, allowing plates to be run in manual, semi-automated, and automated processes.
- ▶ Smooth top surface and textured window allow for easy labeling on the plates.

## Applications

- ▶ General sample prep
- ▶ Gross fractionation
- ▶ Cell harvesting
- ▶ Cell-based assays

## Specifications

### Materials of Construction

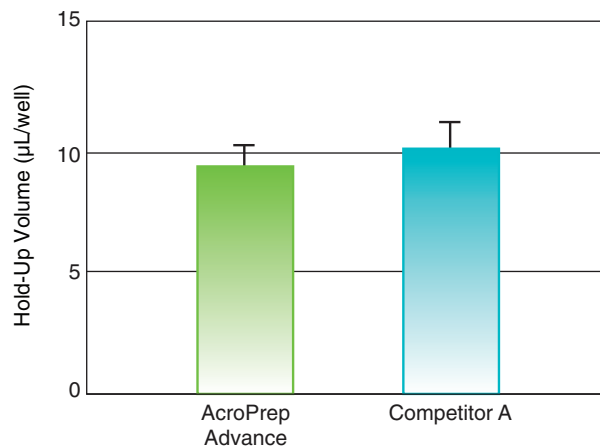
Filter Media: Supor (polyethersulfone), glass fiber (borosilicate glass without binder), and PP/PE non-woven (polypropylene/polyethylene) media

### Typical Vacuum Filtration Performance

Membrane	Processing Time (sec.)	Hold-Up Volume (µL)
0.2 µm Supor	9	8
0.45 µm Supor	5	6
1.2 µm Supor	2	5
1.0 µm glass fiber	2	19
30-40 µm PP/PE	1	4

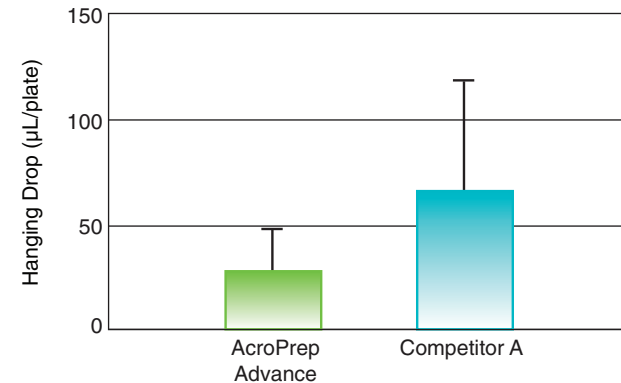
## Performance

### Lower Hold-Up Volume Improves Sample Recovery



Multiple plates of each type were evaluated for hold-up volume using a solution of Vitamin B12. After all wells were evacuated, wash fraction was collected into a solid bottom plate and read at OD<sub>550</sub> for concentration of Vitamin B12. All testing was completed in a 350 µL plate and used 96 wells/plate.

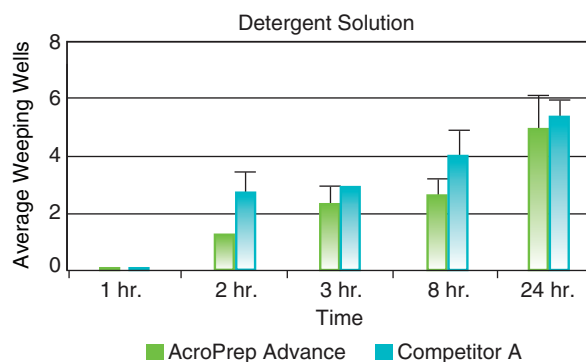
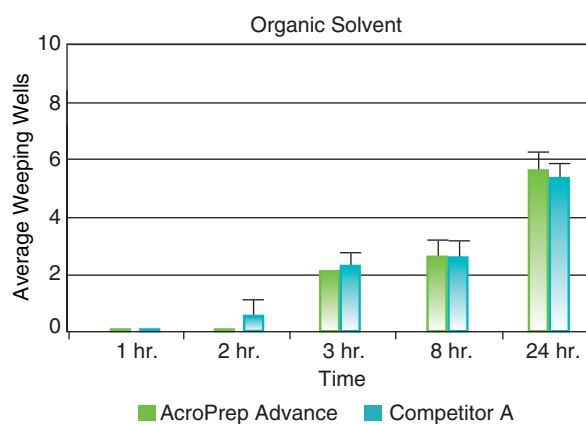
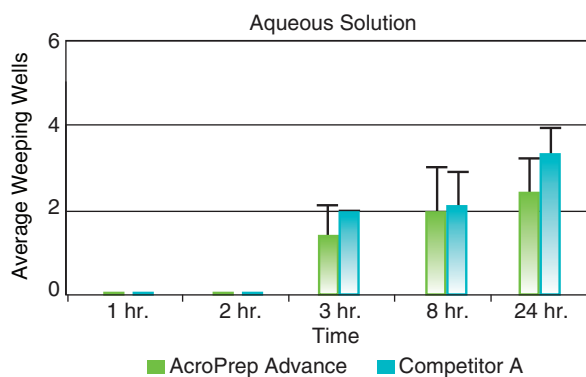
### Reduction of Hanging Drops Reduces Potential Cross-Contamination



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 µL well volume) were tested and the averages calculated.

## Performance *(continued)*

### Reduced Weeping Minimizes Sample Loss and Provides Extended Incubations



350  $\mu$ L filter plates were filled with 200  $\mu$ L of the indicated solutions and incubated over receiver plates for 24 hours. Receiver plates were checked for the presence of fluid at 1, 2, 3, 8, and 24 hour intervals. Three plates of each variety were evaluated and the averages calculated. Aqueous solution consisted of PBS, 0.8% BSA, 0.4% Vitamin B12. Organic solution consisted of PBS, 0.8% BSA, 0.4% Vitamin B12, and 20% Ethanol. Detergent solution consisted of PBS, 0.8% BSA, 0.4% Vitamin B12, and 0.5% NP40. Vitamin B12 was used as a coloring agent to identify weeping wells.

## Ordering Information

### AcroPrep Advance 96-Well Filter Plates for Aqueous Filtration

Part Number	Description	Pkg
8019	350 $\mu$ L, 0.2 $\mu$ m Supor membrane	10/pkg
8029	350 $\mu$ L, 0.45 $\mu$ m Supor membrane	10/pkg
8039	350 $\mu$ L, 1.2 $\mu$ m Supor membrane	10/pkg
8027	350 $\mu$ L, 30-40 $\mu$ m PP/PE non-woven media	10/pkg
8031	350 $\mu$ L, 1 $\mu$ m glass fiber	10/pkg
8119	1 mL, 0.2 $\mu$ m Supor membrane	5/pkg
8129	1 mL, 0.45 $\mu$ m Supor membrane	5/pkg
8130	1 mL, 1.2 $\mu$ m Supor membrane	5/pkg
8131	1 mL, 1 $\mu$ m glass fiber	5/pkg
8127	1 mL, 30-40 $\mu$ m PP/PE non-woven media	5/pkg
8231	2 mL, 1 $\mu$ m glass fiber	5/pkg
8227	2 mL, 30-40 $\mu$ m PP/PE non-woven media	5/pkg

# Vacuum Manifold and Accessories

Designed to perfectly fit SBS-conforming filter plates



## Features

- ▶ Comes complete with the necessary O-ring and gasket. The control block includes the vacuum pressure gauge, vacuum metering valve, vacuum release valve, and 1/4 in. hose barb for vacuum line attachment.
- ▶ Includes a Delrin spacer block designed for standard 350 µL receiver plates. The spacer block has been optimized to reduce the space between the receiver plate and the filter plate during vacuum filtration.
- ▶ Optional spacer block available for use with 1 mL receiver plates.
- ▶ Optional waste drain adapter kit available to capture waste in larger vessel.

## Applications

- ▶ For vacuum filtration specifically using AcroPrep Advance and AcroPrep multi-well filter plates.

## Specifications

### Materials of Construction

Vacuum Manifold: Anodized aluminum

Gasket: EDPM (ethylene propylene)

O-Ring: Silicone

Spacer Block: Delrin plastic

Adapter Collar: Stainless steel

### Dimensions

Length: 17.48 cm (6.88 in.)

Width: 12.37 cm (4.87 in.)

Height: 8.05 cm (3.17 in.)

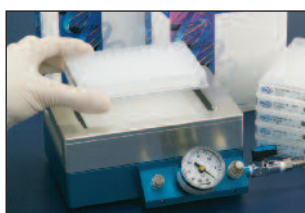
Weight: 2.85 kg (6.27 lb.)

### Maximum Operating Vacuum

71.12 cm Hg (28 in. Hg)

**Note:** Pall's vacuum manifold can be used with multi-well filter plates that meet the specifications set forth by the ANSI/SBS X-2004.

## Methodology



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.

## Ordering Information

### Vacuum Manifold and Accessories

Part Number	Description	Pkg
5017	Multi-well plate vacuum manifold	1/pkg
5014	1 mL receiver plate spacer block	1/pkg
5015	350 µL receiver plate spacer block	1/pkg
5016	Replacement accessory kit (includes O-ring, gasket and allen wrench)	1/pkg
5028	Waste drain adapter	1/pkg
5225	Adapter collar for centrifugation	2/pkg
5230	Cap mat for incubation	5/pkg
8001	AcroPrep Advance multi-well plate lid	10/pkg
13157	Vacuum/pressure pump, 115 V, 60 Hz, single phase	1/pkg
13158	Vacuum/pressure pump, 230 V, 50/60 Hz, single phase (interchangeable powercords accommodate European 2 round-pin sockets and UK 3 flat-blade sockets) <b>CE</b>	1/pkg

## Related Literature

- ▶ Application Note: Efficient Multi-well Protein Purification Strategies, PN33576
- ▶ Application Note: Streamlined Purification of Plasmid DNA from Prokaryotic Cultures (online)

## Related Products

- ▶ **AcroPrep 384-well Filter Plates** for superior performance in high throughput sample preparation applications.
- ▶ **Centrifugal Devices** concentrate and purify samples of < 50 µL to 60 mL with efficient recovery and low non-specific binding.
- ▶ **Chromatography Sorbents** simplify protein purification and fractionation for biomarker discovery, proteomics research, and drug development.



Life Sciences

### Pall Life Sciences

600 South Wagner Road  
Ann Arbor, MI 48103-9019 USA

1.800.521.1520 USA and Canada  
(+800.PALL.LIFE Outside USA and Canada  
1.734.665.0651 phone  
1.734.913.6114 fax



ENABLING A  
GREENER  
FUTURE™

To see how Pall is helping enable a greener, safer and more sustainable future, visit [www.pall.com/green](http://www.pall.com/green).

---

Visit us on the Web at [www.pall.com/lab](http://www.pall.com/lab)


E-mail us at [LabSupport@pall.com](mailto:LabSupport@pall.com)

---

### International Offices

Pall Corporation has offices and plants throughout the world in: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, France, Germany, India, Indonesia, Ireland, Italy, Japan, Korea, Malaysia, New Zealand, Norway, Philippines, Poland, Russia, Singapore, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, United Kingdom, and Vietnam. Distributors in all major industrial areas of the world. To locate the Pall office or distributor nearest you, visit [www.pall.com/contact](http://www.pall.com/contact).

The information provided in this literature was reviewed for accuracy at the time of publication. Product data may be subject to change without notice. For current information consult your local Pall distributor or contact Pall directly.

© 2013, Pall Corporation. Pall, , AcroPrep, HyperCel, Mustang, Omega, and Supor are trademarks of Pall Corporation. ® indicates a trademark registered in the USA. ENABLING A GREENER FUTURE and **Filtration. Separation. Solution.** are service marks of Pall Corporation. ♦Coomassie is a trademark of Imperial Chemical Industries, Ltd. xMAP and Luminex are trademarks of Luminex Software, Inc. GelCode is a trademark of Pierce Biotechnology, Inc. Delrin is a trademark of E.I. DuPont De Nemours & Co.

*Filtration. Separation. Solution.*