



Laboratory

Thomas
Scientific

Simplifying Sample Prep for Research Laboratories

Products for molecular purification and
characterization, media prep, analytical
chemistry and microbiology



Filtration. Separation. Solution.SM

Simplifying Sample Prep

Pall Laboratory develops and produces many different membrane chemistries and devices for a multitude of applications.

This brochure will help you select from molecular purification and characterization, media prep, analytical

chemistry and microbiology products designed to maximize processing accuracy and speed. Many other products are also available. Visit pall.com/lab for more product information.

Sterile Acrodisc® Syringe Filters

Superior flow rate and higher throughput than competitive devices

- ▶ Low extractables/surfactant-free, inherently hydrophilic membrane for reliable performance
- ▶ Low protein binding to minimize sample loss
- ▶ Available with built-in pre-filter for increased throughput of difficult-to-filter liquids (heavy particulate load)
- ▶ Easy to use luer lock fittings
- ▶ Available in a variety of sizes to accommodate volumes from 10 - 150 mL
- ▶ Sterilized by gamma irradiation to eliminate potential contamination by EtO residuals

Applications

- ▶ Filtration of cell and tissue culture media and additives
- ▶ Clarification of biological fluid, protein, enzyme, probe and hybridization buffers, and other aqueous samples
- ▶ Filtration of aqueous solutions
- ▶ Filtration where low protein binding is desired
- ▶ For cell cryopreservation, use DMSO-safe Acrodisc syringe filters
- ▶ Separation of leukocytes from whole blood



Ordering Information

Acrodisc Syringe Filters with Supor® (Polyethersulfone) Membrane

Thomas No.	Mfr. No.	Description	Pkg
21A00A799	4614	0.45 µm, 25 mm	50/pkg
21A00A800	4650	5 µm, 32 mm	50/pkg
21A00A802	4652	0.2 µm, 32 mm	50/pkg
21A00A803	4654	0.45 µm, 32 mm	50/pkg
21A00A793	4187	0.8/0.2 µm, 25 mm	50/pkg
21A00A805	4658	0.8/0.2 µm, 32 mm	50/pkg
21A00A794	4602	0.2 µm, 13 mm	75/pkg
21A00A795	4604	0.45 µm, 13 mm	75/pkg
21A00A798	4612	0.2 µm, 25 mm	50/pkg

Serum Acrodisc Syringe Filter with Supor Membrane

Thomas No.	Mfr. No.	Description	Pkg
21A00A786	4525	Glass fiber/0.2 µm, 37 mm	20/pkg

DMSO-Safe Acrodisc Syringe Filter

Thomas No.	Mfr. No.	Description	Pkg
21A00A770	4433	0.2 µm, Nylon membrane, 25 mm	50/pkg

Acrodisc WBC (White Blood Cell) Syringe Filter

Thomas No.	Mfr. No.	Description	Pkg
21A00C090	AP-4951	Leukosorb, 25 mm	10/pkg
21A00C091	AP-4952	Leukosorb, 25 mm	50/pkg

Contact your Thomas Scientific sales rep for additional part numbers, sizing and pricing.

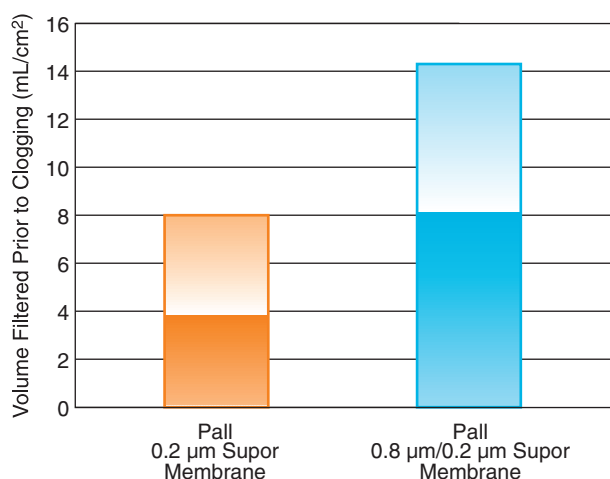
AcroPak™ 20 Filters and AcroPak 200 Capsules with Supor Membrane

Built in pre-filter for fast and efficient processing

- ▶ Low extractables/surfactant-free Supor polyethersulfone membrane has high flow rates, high throughputs and low protein binding
- ▶ Built-in pre-filter layering, 0.8 / 0.2 μm , extends filter life for particulate-laden solutions such as serum-containing media
- ▶ Process up to 2 L with Acropak 20 and up to 20 L with Acropak 200
- ▶ Tapered hose barb inlet to attach easily to pressurized systems or peristaltic pump
- ▶ Upstream vent to prevent vapor lock

Applications

- ▶ Small to medium volume sterile filtration of fluids containing dilute proteins, preservatives, or other critical components
- ▶ Filtration of cell and tissue culture media and additives
- ▶ Ideal for filtration of aqueous buffers and cell culture media
- ▶ Point-of-use filtration of lab water



Membrane Type: 47 mm disc
Throughput determined using 2.5% TSB.



Ordering Information

Acropak 20 Filter with Supor Membrane

Thomas No	Mfr. No.	Description	Pkg
21A00A919	12203	0.8 / 0.2 μm , gamma irradiated, with filling bell	3/pkg

Acropak 200 Filter with Supor Membrane

Thomas No.	Mfr. No.	Description	Pkg
21A00A931	12941	0.8 / 0.2 μm , gamma irradiated, with filling bell	3/pkg

Contact your Thomas Scientific sales rep for additional part numbers, sizing and pricing.

VacuCap® Vacuum Filtration Devices

Innovative bottle-top filters can fill multiple bottles with one device

- ▶ Ability to process up to 5 L volumes
- ▶ Reduces storage space and waste
- ▶ Environmentally-friendly with minimal plastic waste
- ▶ Draws liquid directly from the mixing reservoir
- ▶ Eliminates possibility of contamination from transfer steps by filtering directly into sterile container
- ▶ Low extractables/surfactant-free Supor membrane provides high flow rates
- ▶ Available with built-in pre-filter to prevent clogging and to increase throughput of high-particulate solutions

Applications

- ▶ Vacuum-driven filtration of cell and tissue culture media, microbiological media, aqueous solutions, protein solutions, and buffers
- ▶ Prefiltration or clarification of aqueous solutions
- ▶ PF version useful for filtration of hard-to-filter solutions or where fast flow rates and maximum filtration volume is required

Instructions



1. Connect the feed tubing to the port marked "INLET" on the VacuCap device. Place the opposite end of the tubing in the unfiltered fluid to be drawn.



2. Connect the vacuum tubing to the port marked "VACUUM" on the VacuCap device. Refer to product insert for safety precautions.



3. While holding the VacuCap device securely on the filtrate container, start the vacuum. The VacuCap device will seal securely to the container top and fluid will be drawn.



4. When filtration is complete, switch off the vacuum pump allowing the vacuum inside the receiving container to dissipate. Refer to the product insert for complete instructions.



Process More per Unit and Reduce Plastics Waste

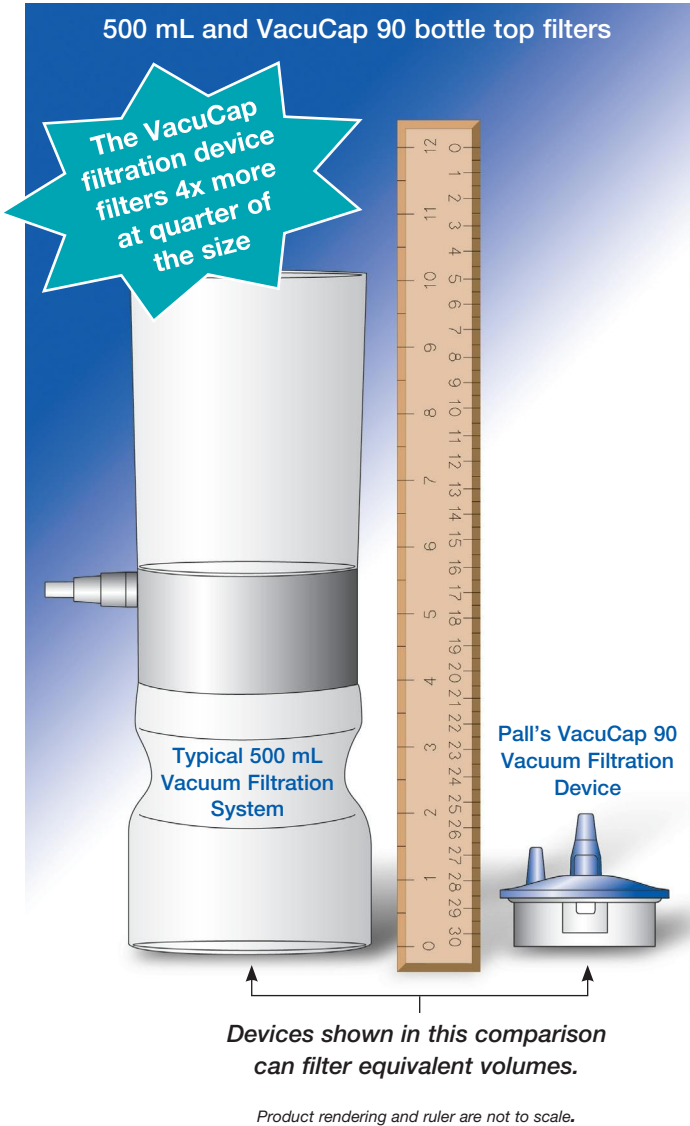
Reduce storage needs while reducing waste cost compared with typical vacuum filtration systems

Ordering Information

VacuCap 90 Devices, Gamma Irradiated (1 L - 5 L)

Thomas No.	Mfr. No.	Description	Pkg
20A00U200	4621	0.1 µm, 90 mm	10/pkg
20A00U201	4622	0.2 µm, 90 mm	10/pkg
20A00U203	4624	0.45 µm, 90 mm	10/pkg
20A00U204	4628	0.8/0.2 µm, 90 mm	10/pkg
20A00U209	TA4622	0.2 µm, 90 mm (with individually attached tubing	10/pkg

Contact your Thomas Scientific sales rep for additional part numbers, sizing and pricing . *Always use bottles designed for use with vacuum.



Centrifugal Filtration Devices

Ensure rapid processing of samples with typical recoveries greater than 90%

Nanosep®

- ▶ Simple, reliable concentrating and desalting of 50 to 500 µL samples

Microsep™ Advance

- ▶ Confidence in rapid recovery of <100 µL volumes of concentrate from starting volumes up to 5 mL

Macrosep® Advance

- ▶ Quickly concentrates up to 20 mL of biological sample without valuable sample loss

Application

For use with proteins and nucleic acids

- ▶ Concentration
- ▶ Buffer exchange
- ▶ De-salting
- ▶ Fractionation
- ▶ Nucleic Acid Binding



Ordering Information

Nanosep Centrifugal Devices with Omega Membrane

Thomas No.	Mfr. No.	Description	Pkg
20A00U168	OD003C33	3K, gray	24/pkg
20A00U172	OD010C33	10K, blue	24/pkg
20A00U176	OD030C33	30K, red	24/pkg
20A00U180	OD100C33	100K, clear	24/pkg
20A00U184	OD300C33	300K, orange	24/pkg

Nucleic Acid Binding Nanosep Centrifugal Device

Thomas No.	Mfr. No.	Description	Pkg
20A00U194	ODNABC33	Glass Fiber, white	24/pkg
20A00U195	ODNABC34	Glass Fiber, white	100/pkg

Microsep Advance Centrifugal Devices with Omega Membrane

Thomas No.	Mfr. No.	Description	Pkg
20A00U154	MCP001C41	1K, yellow	24/pkg
20A00U156	MCP003C41	3K, gray	24/pkg
20A00U158	MCP010C41	10K, blue	24/pkg
20A00U160	MCP030C41	30K, red	24/pkg
20A00U162	MCP100C41	100K, clear	24/pkg

Macrosep Advance Centrifugal Devices with Omega Membrane

Thomas No.	Mfr. No.	Description	Pkg
20A00U136	MAP001C37	1K, yellow	24/pkg
20A00U139	MAP003C37	3K, gray	24/pkg
20A00U142	MAP010C37	10K, blue	24/pkg
20A00U145	MAP030C37	30K, red	24/pkg
20A00U148	MAP100C37	100K, clear	24/pkg

Contact your Thomas Scientific sales rep for additional part numbers, sizing and pricing.

Concentration Selection Guide

Nanosep and Microsep Advance Centrifugal Devices

The Nanosep and Microsep concentration selection guides are meant to serve as a recommendation for concentrating protein samples. The total volume of liquid in the device determines the final retentate volume. By adding buffer under the device insert, you can set your dead stop volume and thereby select the concentration factor.

Nanosep Centrifugal Device

Concentration selection guide for Nanosep centrifugal devices

Concentration Factor (Fold)	Starting Sample Volume (µL)	Volume Added to Collection Tube (µL)	Final Retentate Volume (µL)
2	200	572	100
3	200	530	67
4	200	508	50
5	200	496	40
6	200	487	33
10	200	470	20
20	200	470	10
25	200	455	8

The above table shows what buffer volume should be added to the collection tube under the insert to achieve desired concentration factors for 200, 300 and 400 µL starting sample volumes in the insert.

For instance, if you would like to concentrate 200 µL of starting material by ten-fold (see highlight in table), the buffer volume to be added to the collection tube would be 470 µL, leaving 20 µL of concentrated material in the retentate. For the complete Concentration Selection Guide visit: www.pall.com/lab.

Microsep Advance Centrifugal Device

Concentration selection guide for Microsep Advance centrifugal devices

Concentration Factor (Fold)	Starting Sample Volume (mL)	Volume Added to Collection Tube (mL)	Final Retentate Volume (mL)
2	3.00	6.69	1.50
3	3.00	5.76	1.00
4	3.00	5.29	0.75
5	3.00	5.02	0.60
6	3.00	4.83	0.50
10	3.00	4.46	0.30
20	3.00	4.18	0.15
25	3.00	4.12	0.12

The above table shows what buffer volume should be added to the collection tube under the insert to achieve desired concentration factors for 3, 4 and 5 mL starting sample volumes in the insert.

MWCO Selection Guide for Ultra-Filtration Devices

MWCO Selection for Protein Applications

MWCO	Biomolecule Molecular Weight
1K, yellow	3K - 10K
3K, gray	10K - 20K
10K, blue	30K - 90K
30K, red	90K - 180K
50K, green	150K - 300K
100K, clear	300K - 900K

MWCO Selection for Virus Applications

MWCO	Membrane Nominal Pore Size	Virus or Particle Diameter
100K	10 nm	30 – 90 nm
300K*	35 nm	> 90 nm

MWCO Selection for Nucleic Acid Applications

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

AcroPrep™ Filter Plates

For high throughput sample prep and detection procedures

96 and 384-well Filter Plates

- ▶ Provide consistency in filtration times, as well as efficient sample and bead recovery
- ▶ Available in a variety of membranes, well volumes, and outlet tip lengths
- ▶ Plates are constructed from chemically-resistant, biologically-inert polypropylene
- ▶ Automation compatible – Manufactured in accordance with SBS guidelines

Applications

- ▶ Concentration, purification, and desalting of proteins and peptides
- ▶ Bead-/resin-based applications
- ▶ Gross fractionation and lysate clarification
- ▶ pDNA, gDNA, and total RNA purification
- ▶ General filtration

Ordering Information

Concentration, Buffer Exchange, Desalting of Proteins and Peptides and Nucleic Acids

Thomas No.	Mfr. No.	Description	Pkg
21A00A409	8033	350 µL, 96-well, Omega 3K MWCO	10/pkg
21A00A410	8034	350 µL, 96-well, Omega 10K MWCO	10/pkg
21A00A411	8035	350 µL, 96-well, Omega 30K MWCO	10/pkg
21A00A412	8036	350 µL, 96-well, Omega 100K MWCO	10/pkg
21A00A413	8163	1 mL, 96-well, Omega 3K MWCO	5/pkg
21A00A414	8164	1 mL, 96-well, Omega 10K MWCO	5/pkg
21A00A415	8165	1 mL, 96-well, Omega 30K MWCO	5/pkg
21A00A416	8166	1 mL, 96-well, Omega 100K MWCO	5/pkg
21A00A393	5076	100 µL, 384-well, Omega 10K MWCO, long tips	10/pkg
21A00A394	5077	100 µL, 384-well, Omega 10K MWCO	10/pkg
21A00A395	5078	100 µL, 384-well, Omega 30K MWCO, long tips	10/pkg
21A00A396	5079	100 µL, 384-well, Omega 30K MWCO	10/pkg
21A00A397	5080	100 µL, 384-well, Omega 100K MWCO, long tips	10/pkg
21A00A398	5081	100 µL, 384-well, Omega 100K MWCO	10/pkg

Bead-/Resin-Based Applications

Thomas No.	Mfr. No.	Description	Pkg
21A00A404	8027	350 µL, 96-well, 30-40 µm PP/PE non-woven media	10/pkg
21A00A441	8049	350 µL, 96-well, for multiplex assays	10/pkg

Gross Fractionation and General Filtration

Thomas No.	Mfr. No.	Description	Pkg
21A00A421	8119	1 mL, 96-well, 0.2 µm Supor membrane	5/pkg
21A00A428	8129	1 mL, 96-well, 0.45 µm Supor membrane	5/pkg
21A00A429	8130	1 mL, 96-well, 1.2 µm Supor membrane	5/pkg

Lysate Clarification

Thomas No.	Mfr. No.	Description	Pkg
21A00A418	8075	350 µL, 96-well, 3 µm glass fiber/0.2 µm Supor membrane	10/pkg
21A00A417	8040	350 µL, 96-well, 3 µm glass fiber/1.2 µm Supor membrane	10/pkg
21A00A419	8175	1 mL, 96-well, 3 µm glass fiber/0.2 µm Supor membrane	5/pkg
21A00A420	8275	2 mL, 96-well, 3 µm glass fiber/0.2 µm Supor membrane	5/pkg

Solvent Filtration

Thomas No.	Mfr. No.	Description	Pkg
21A00A876	8582	350 µL, 96-well, 0.2 µm wwPTFE	10/pkg
21A00A877	8584	350 µL, 96-well, 0.45 µm wwPTFE	10/pkg
21A00A434	8682	1 mL, 96-well, 0.2 µm wwPTFE	5/pkg
21A00A435	8684	1 mL, 96-well, 0.45 µm wwPTFE	5/pkg
21A00A436	8782	2 mL, 96-well, 0.2 µm wwPTFE	5/pkg
21A00A437	8784	2 mL, 96-well, 0.45 µm wwPTFE	5/pkg

Nucleic Acid Binding

Thomas No.	Mfr. No.	Description	Pkg
N/A	8151	1 mL, 96-well, 1.0 µm glass fiber, long tips	5/pkg
21A00A440	8133	1 mL, 96-well, for Nucleic Acid Binding, long tips	5/pkg

24-well Filter Plates

- ▶ Comprehensive 24-well filter plate portfolio
- ▶ Available with high performance membranes for specific applications and workflow needs
- ▶ Plates are constructed from chemically-resistant, biologically-inert polypropylene
- ▶ 7 mL volume capacity
- ▶ Automation compatible – Manufactured in accordance with SBS guidelines

Applications

- ▶ Concentration, purification, and desalting of proteins and peptides
- ▶ Cell clarification
- ▶ Clone selection and clone candidate analysis
- ▶ Recombinant protein isolation prior to analysis
- ▶ Sterile filtration
- ▶ General filtration

Ordering Information

Cell Clarification and Sterile Filtration

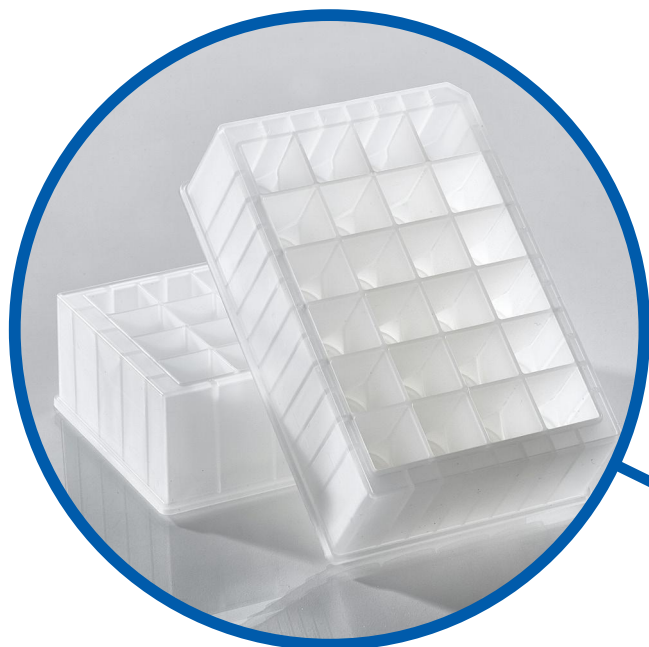
Thomas No.	Mfr. No.	Description	Pkg
21A00A446	97016	7 mL, Seitz Depth Media/0.2 µm Supor EKV	2/pkg
21A00A447	97026	7 mL, Seitz Depth Media/0.2 µm Supor EKV	8/pkg

General Filtration

Thomas No.	Mfr. No.	Description	Pkg
21A00P672	97029	7 mL, 0.1 µm Supor	8/pkg
21A00P673	97030	7 mL, 0.1 µm Supor	2/pkg
21A00A448	97017	7 mL, 0.2 µm Supor EKV	8/pkg
21A00A449	97027	7 mL, 0.2 µm Supor EKV	2/pkg
21A00P674	97031	7 mL, 0.45 µm Supor	8/pkg
21A00P675	97032	7 mL, 0.45 µm Supor	2/pkg
21A00P676	97033	7 mL, 0.8 µm Supor	8/pkg
21A00P677	97034	7 mL, 0.8 µm Supor	2/pkg
21A00P678	97035	7 mL, 1.2 µm Supor	8/pkg
21A00P679	97036	7 mL, 1.2 µm Supor	2/pkg
21A00P680	97047	7 mL, 5 µm Supor	8/pkg
21A00P681	97048	7 mL, 5 µm Supor	2/pkg
21A00P694	97061	7 mL, 30-40 µm, PP/PE	8/pkg
21A00P695	97062	7 mL, 30-40 µm, PP/PE	2/pkg

Concentration, Buffer Exchange, Desalting of Proteins and Peptides and Nucleic Acids

Thomas No.	Mfr. No.	Description	Pkg
21A00P682	97049	7 mL, Omega 1K MWCO	8/pkg
21A00P683	97050	7 mL, Omega 1K MWCO	2/pkg
21A00P684	97051	7 mL, Omega 3K MWCO	8/pkg
21A00P685	97052	7 mL, Omega 3K MWCO	2/pkg
21A00P686	97053	7 mL, Omega 10K MWCO	8/pkg
21A00P687	97054	7 mL, Omega 10K MWCO	2/pkg
21A00P688	97055	7 mL, Omega 30K MWCO	8/pkg
21A00P689	97056	7 mL, Omega 30K MWCO	2/pkg
21A00P690	97057	7 mL, Omega 50K MWCO	8/pkg
21A00P691	97058	7 mL, Omega 50K MWCO	2/pkg
21A00P692	97059	7 mL, Omega 100K MWCO	8/pkg
21A00P693	97060	7 mL, Omega 100K MWCO	2/pkg



Minimate™ EVO Tangential Flow Filtration System

Streamline laboratory-scale concentration, desalting, and buffer exchange processes

Ordering Information

Minimate EVO TFF System

Thomas No.	Mfr. No.	Description	Pkg
20A00U223	OAPMPUNV	Includes peristaltic pump, pump head, 2 pressure gauges, reservoir, stir plate, drip tray, and assorted fittings	1/pkg

Minimate TFF Capsules with Omega™ Membrane

Thomas No.	Mfr. No.	Description (MWC0)	Pkg
20A00U211	OA001C12	1K	1/pkg
20A00U212	OA003C12	3K	1/pkg
20A00U213	OA005C12	5K	1/pkg
20A00U214	OA010C12	10K	1/pkg
20A00U215	OA030C12	30K	1/pkg
20A00U216	OA050C12	50K	1/pkg
20A00U217	OA070C12	70K	1/pkg
20A00U218	OA100C12	100K	1/pkg
20A00U219	OA300C12	300K	1/pkg
20A00U220	OA500C12	500K	1/pkg

Contact your Thomas Scientific sales rep for additional part numbers, sizing and pricing.

- ▶ System's plug-n-play design includes all the hardware, tubing, and fittings needed to get your TFF process up and running quickly
- ▶ Concentration and diafiltration processes can be performed on the same system with minimal user intervention
- ▶ Cost-effective design – easy to clean and reuse

Applications

- ▶ Concentrate and desalt proteins, peptides, or nucleic acids (DNA, RNA, oligonucleotides)
- ▶ Recover antibodies or recombinant proteins from clarified cell culture media
- ▶ Separate (fractionate) large from small biomolecules
- ▶ Concentrate viruses or gene therapy vectors
- ▶ Prepare samples prior to column chromatography



FluoroTrans PVDF, FluoroTrans® W PVDF, BioTrace NT, and Biodyne® Transfer Membranes

Membranes for transfer and immobilization

FluoroTrans PVDF, FluoroTrans W PVDF (Hydrophobic Polyvinylidene Fluoride) Transfer Membranes

- ▶ Optimized for Western blotting applications
- ▶ Sensitive protein detection with low background and very low protein burnthrough
- ▶ High tensile strength

BioTrace NT (Nitrocellulose) Transfer Membranes

- ▶ 100% pure nitrocellulose, no support fabrics to interfere with signal generation
- ▶ High binding capacity for proteins and nucleic acids
- ▶ Very low protein burnthrough in electrophoretic transfers

Biodyne (Nylon) Transfer Membranes

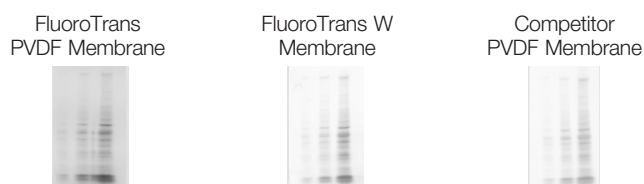
- ▶ Will not crack, shrink, or tear when subjected to multiple cycles of hybridization, stripping, and reprobing
- ▶ Superior performance with radioactive (Biodyne B) and non-radioactive (Biodyne A) detection systems

Applications

- ▶ FluoroTrans W PVDF membrane is ideal for Western transfers, protein dot blots, and protein sequencing
- ▶ Use BioTrace NT membrane for colony/plaque lifts and protein transfers
- ▶ Biodyne membranes are suitable for nucleic acid applications, as well as applications requiring enhanced detection and resolution

Performance

FluoroTrans Membrane Has Excellent Sensitivity, Signal, and Background in Western Transfers



Rabbit reticulocyte lysate (Amersham) was loaded in lanes of polyacrylamide gels at f.s., 1/3 and 1/10 dilutions. After electrophoresis, proteins were transferred to membranes. Membranes were stained with 0.1% Amido Black, 45% methanol, and 2% acetic acid for 4 minutes; then destained for 5 minutes with two changes of 90% methanol and 2% acetic acid. Stained membranes were rinsed in water and air dried.

Ordering Information

FluoroTrans PVDF Transfer Membrane

Thomas No.	Mfr. No.	Description	Pkg
21A00C133	PVM020C-160	7 x 8.4 cm sheets	10/pkg
21A00C134	PVM020C-195	8.5 x 9 cm sheets	20/pkg
21A00C135	PVM020C-196	13 x 14 cm sheets	10/pkg
21A00C132	PVM020C-099	26 cm x 3.3 m roll	1/pkg

FluoroTrans W PVDF Transfer Membrane

Thomas No.	Mfr. No.	Description	Pkg
21A00C093	BSP0158	7 x 9 cm sheets	10/pkg
21A00C092	BSP0157	10 x 15 cm sheets	10/pkg
21A00C094	BSP0159	20 x 20 cm sheets	10/pkg
21A00C095	BSP0161	26 cm x 3.3 m roll	1/pkg

BioTrace NT Nitrocellulose Transfer Membrane

Thomas No.	Mfr. No.	Description	Pkg
21A00B077	66489	20 x 20 cm sheets	10/pkg
21A00B076	66485	30 cm x 3 m roll	1/pkg

Biodyne A (Nylon) Membrane, 0.45 µm

Thomas No.	Mfr. No.	Description	Pkg
21A00A954	60106	30 cm x 3 m roll	1/pkg

Biodyne B (Nylon) Membrane, 0.45 µm

Thomas No.	Mfr. No.	Description	Pkg
21A00A971	60200	20 x 20 cm sheets	10/pkg
21A00A974	60207	30 cm x 3 m roll	1/pkg

Biodyne C (Nylon) Membrane, 0.45 µm

Thomas No.	Mfr. No.	Description	Pkg
21A00A984	60314	20 x 20 cm sheets	10/pkg

Biodyne Plus (Nylon) Membrane, 0.45 µm

Thomas No.	Mfr. No.	Description	Pkg
21A00A988	60400	20 x 20 cm sheets	10/pkg
21A00A990	60406	30 cm x 3 m roll	1/pkg

Contact your Thomas Scientific sales rep for additional part numbers, sizing and pricing.

Vent Air Filters

Protect your cell culture and lab environment

- ▶ Designed to protect bioreactors, fermentation tanks, culture vessels, and carboy contents from external contamination and to protect the environment from contaminants within the vessel
- ▶ Self-contained, compact air filters provide high efficiency removal of airborne bacteria and particulate under dry or moist conditions
- ▶ Vacushield™ vent air filters should be used between pump and receiving vessels to protect the valves and pump components from damage by aqueous solutions and to prolong the life of the pump
- ▶ Always select a filter with a sufficient air flow rate to accommodate the air flow required by each application

Applications

- ▶ Bioreactors
- ▶ Fermentation tanks
- ▶ Isolation or environmental chambers
- ▶ Receiving vessels
- ▶ Carboys
- ▶ Other small containers



Ordering Information

Acro® 37 TF Vent Air Filters

Thomas No.	Mfr. No.	Description	Pkg
21A00A772	4464	0.2 µm PTFE membrane, 37 mm	24/pkg
21A00A773	4465	0.2 µm PTFE membrane, 37 mm	200/pkg

Bacterial Air Vents

Thomas No.	Mfr. No.	Description	Pkg
21A00A674	4210	1 µm (nominal) glass, 37 mm	24/pkg
21A00A738	4308	1 µm (nominal) glass, 37 mm, gamma-irradiated	10/pkg

Acro 50 Vent Devices with Emflon® II Membrane

Thomas No.	Mfr. No.	Description	Pkg
21A00C077	A50V002P2	0.2 µm hydrophobic PVDF membrane, 50 mm	3/pkg

Acro 50 Vent Devices with PTFE Membrane

Thomas No.	Mfr. No.	Description	Pkg
21A00A708	4250	0.2 µm hydrophobic PTFE membrane, 50 mm	72/pkg
21A00A709	4251	0.2 µm hydrophobic PTFE membrane, 50 mm	18/pkg

Vacushield Vent Air Filters

Thomas No.	Mfr. No.	Description	Pkg
21A00A746	4402	50 mm, hose barb	3/pkg

Contact your Thomas Scientific sales rep for additional part numbers, sizing and pricing.

Acrodisc One™ Syringe Filters with wwPTFE Membrane

Universal filter for both organic and aqueous solutions in HPLC and UHPLC sample prep

- ▶ Versatile wwPTFE (water wettable polytetrafluoroethylene) membrane for aqueous and aggressive organic solvent-based solutions
- ▶ Eliminates the membrane selection process with universal membrane
- ▶ Reduces time for method validation with higher analyte recoveries and lower extractables
- ▶ Acrodisc One syringe filters with wwPTFE membrane extend HPLC column life up to 52 times
- ▶ Certified low levels of UV-absorbing extractables for accurate analysis for HPLC/UHPLC
- ▶ Easy filtration of particulate-laden samples with available GxF multilayer pre-filter
- ▶ 13 mm Acrodisc syringe filter with minispike configuration offers low hold-up and easy filtration into autosampler vials

Applications

- ▶ Highly recommended for filtering HPLC/UHPLC samples and mobile phases
- ▶ The Acrodisc One GxF syringe filter provides two to four times the throughput of standard pre-filter devices for extremely viscous samples

Ordering Information

Acrodisc Syringe Filters with wwPTFE Membrane, 13 mm

Thomas No.	Mfr. No.	Description	Pkg
21A00A747	2400	0.2 µm, minispike outlet	100/pkg, 300/cs
21A00A749	2402	0.45 µm, minispike outlet	100/pkg, 300/cs

Acrodisc One Syringe Filters with wwPTFE Membrane, 25 mm

Thomas No.	Mfr. No.	Description	Pkg
21A00B154	AP-4910	0.2 µm	50/pkg, 200/cs
21A00B160	AP-4916	0.45 µm	50/pkg, 200/cs
21A00B157	AP-4913	GxF/0.2 µm	50/pkg, 200/cs
21A00B163	AP-4919	GxF/0.45 µm	50/pkg, 200/cs

Contact your Thomas Scientific sales rep for additional part numbers, sizing and pricing.



Solvac® Filter Holder

Simplifies clean-up and degassing of mobile phase solvents and other solutions

Applications

- ▶ Remove contaminating particulate from mobile phase or other solutions
- ▶ De-gas mobile phase solvents and solutions
- ▶ Eliminate pour-and-wait filtration

Benefits

- ▶ Versatile design fits most HPLC bottles, flasks, and containers, and eliminates the added steps of washing flasks and transferring mobile phase solvent from flask to reservoir
- ▶ Draws directly from HPLC solvent bottle. Less likely to spill aggressive solvents than glass funnels or disposable cups.



Ordering Information

Solvac Filter Holder

Thomas No.	Mfr. No.	Description	Pkg
21A00A661	4020	SolVac holder with 61 cm (2 ft.) feedline tubing, thumb clamp, sinker, vacuum port adapter, 2 membrane seal gaskets, and 2 seal gaskets	1/pkg

HPLC Mobile Phase Filtration Membranes

Membranes designed for the stringent requirements of mobile phase filtration

Applications

- ▶ Remove contaminating particulate from mobile phase or other solutions
- ▶ De-gas mobile phase solvents and solutions
- ▶ Eliminate pour-and-wait filtration

Benefits

- ▶ Membranes are identical in composition and quality to those used in Pall's HPLC-certified Acrodisc syringe filters
- ▶ HPLC certification assures that the filters will not add artifacts to your analysis
- ▶ wwPTFE membrane is the best choice for filtering mobile phases

Ordering Information

HPLC Mobile Phase Filtration Membranes, 47 mm

Thomas No.	Mfr. No.	Description	Pkg
21A00A992	60539	0.2 µm, wwPTFE membrane	50/pkg
21A00A995	60548	0.45 µm, wwPTFE membrane	50/pkg
21A00B028	66143	0.2 µm, TF (PTFE) membrane	100/pkg
21A00B033	66149	0.45 µm, TF (PTFE) membrane	100/pkg
21A00B094	66602	0.2 µm, Nylaflo (Nylon) membrane	100/pkg
21A00B099	66608	0.45 µm, Nylaflo (Nylon) membrane	100/pkg

Acrodisc® MS Syringe Filter

Certified Syringe Filters for LCMS

- ▶ **LCMS (Liquid Chromatography Mass Spectrometry) certified** – Minimize interference in your LCMS results with the Acrodisc MS syringe filter. The first LCMS certified filter with extremely low levels of extractables.
- ▶ **Low ion suppression/enhancement** – Reduce the need for retesting. The Acrodisc MS syringe filters will not contribute extractables that will interfere with the ionization process, which is the heart of the LCMS technique.
- ▶ **Protective packaging design** – Save money and prevent downtime due to accidental contamination. Acrodisc MS syringe filters are packaged into separate tubes to protect them from external sources of extractables. While one tube is in use, the others are kept sealed.
- ▶ **Excellent chemical resistance** – Use this universal filter for all your LCMS samples. The WWPTFE (water wetttable polytetrafluoroethylene) membrane can be used with both organic and aqueous solvents. When coupled with a polyethylene housing, the membrane offers excellent chemical resistance.
- ▶ **Low protein binding** – Get accurate and confident quantitative results. There is minimal protein adsorption with the Acrodisc MS syringe filters.
- ▶ **Particulate retention** – Using Acrodisc MS syringe filters will protect your columns and instrument from particulate build-up, making your columns last longer and your LCMS perform more consistently.

Applications

The Acrodiscs MS syringe filter has been developed specifically for LCMS sample prep applications, such as:

- ▶ Molecular identification
- ▶ Structural determination
- ▶ Pharmacokinetics
- ▶ Drug discovery and development
- ▶ Drug testing
- ▶ Environmental monitoring
- ▶ Food safety monitoring
- ▶ Oil composition determination

Ordering Information

Acrodisc MS Syringe Filter Part

Thomas No.	Mfr. No.	Description	Pkg
21A00B903	MS-3301	0.2 µm, 13 mm, WWPTFE membrane	60/pkg



Sentino® Microbiology System

Maximize workspace and minimize contamination risk

The Sentino Microbiology System offers a mix-and-match selection of products to best suit the economic, ergonomic and workflow needs in a busy microbiology laboratory. The collection of complimentary products are targeted for evaluating microbial contamination in aqueous samples using Membrane Filtration (MF) technique. Select the items that best fit the needs in your laboratory. Choose disposable filter funnels and our Sentino Pump or pair the pump with our Sentino Filter Dispenser with individual membrane filters aseptically dispensed at the press of a button. The compact design of the Sentino Microbiology System frees valuable bench top space and provides flexibility in arranging workspace for optimal efficiency and workflow.

Applications

MF Technique for analyzing aqueous samples for microbial contamination:

- ▶ Municipal and environmental water analysis
- ▶ Water system monitoring
- ▶ Beverage monitoring
- ▶ Pharmaceutical and personal care products quality control

Accessories

Sentino Microbiology Pump

Maximize workspace and minimize contamination risk



Sentino Filter Dispenser

Offers a simple design with a reliable dispense



MicroFunnel™ Filter Funnels

Widest selection of easy to use, disposable filter funnels for microbiological analysis.



Microcheck® Beverage Monitors

Easy-to-use disposable filter funnel to meet microbial analysis needs for beverages



Sentino Magnetic Filter Funnels

Unique magnetic seal allows easy, one-handed vacuum filtration of liquids



Pall Laboratory Manifold

Most convenient way to filter multiple samples



Ordering Information

Sentino Microbiology Pump

Thomas No.	Mfr. No.	Description	Pkg
21A00A729	13186	(1) power transformer (1) power cord with NEMA 5-15P plug (1) European power cord with CEE 7/7 plug (1) UK power cord with BS1363 plug	1/pkg

Sentino Filter Dispenser

Thomas No.	Mfr. No.	Description	Pkg
21A00A728	13184	1) power transformer, (1) power cord with NEMA 5-15P plug, (1) European power cord with CEE 7/7 plug, (1) UK power cord with BS1363 plug	1/pkg

MicroFunnel™ Filter Funnels, 100 mL

Thomas No.	Mfr. No.	Description	Pkg
20A00U094	4800	MicroFunnel unit with 0.45 µm GN-6 Metrical® membrane, white, gridded, individually bagged	50/pkg
20A00U096	4803	MicroFunnel unit with 0.2 µm Supor® membrane, white, gridded, individually bagged	50/pkg
20A00U115	4852	MicroFunnel unit with 0.45 µm Supor membrane, white, gridded, individually bagged	50/pkg
20A00U098	4805	MicroFunnel unit with 0.45 µm Metrical Black membrane, black, gridded, individually bagged	50/pkg

MicroFunnel Filter Funnels, 300 mL

Thomas No.	Mfr. No.	Description	Pkg
20A00U107	4815	MicroFunnel 300 unit with 0.45 µm GN-6 Metrical membrane, white, gridded, individually bagged	20/pkg
20A00U109	4818	MicroFunnel 300 unit with 0.2 µm Supor membrane, white, gridded, individually bagged	20/pkg
20A00U112	4828	MicroFunnel 300 unit with 0.45 µm Supor membrane, white, gridded, individually bagged	20/pkg

MicroFunnel Plus Filter Funnels, 100 mL, Gamma Irradiated

Thomas No.	Mfr. No.	Description	Pkg
20A00U102	4809	0.2 µm Supor membrane, white, gridded, individually bagged	50/pkg
20A00U111	4823	0.45 µm Supor membrane, white, gridded, individually bagged	50/pkg

Microcheck Beverage Monitors

Thomas No.	Mfr. No.	Description	Pkg
21A00A830	4761	GN-6 Metrical membrane, 0.45 µm, white with grid lines, 100 mL capacity	50/box
21A00A831	4762	GN-4 Metrical membrane, 0.8 µm, white with grid lines, 100 mL capacity	50/box
21A00A832	4763	Metrical Black membrane, 0.45 µm, black with grid lines, 100 mL capacity	50/box
21A00A833	4764	Metrical Black membrane, 0.8 µm, black with grid lines, 100 mL capacity	50/box

Sentino Microbiology System *(continued)*

Ordering Information *(continued)*

Sentino Magnetic Filter Funnel

Thomas No.	Mfr. No.	Description	Pkg
21A00A718	4271	Filter Funnel Assembly 47mm	150 mL
21A00A719	4273	Filter Funnel Assembly 47mm	300 mL

Sentino Filter Funnels

Thomas No.	Mfr. No.	Description	Pkg
21A00A725	4870	Sentino Filter Funnels 100 mL	80/case
21A00A726	4871	Sentino Filter Funnels 250 mL	100/case

Pall Laboratory Manifold

Thomas No.	Mfr. No.	Description	Pkg
20A00U122	4889	Manifold Base, 3 place, 3 Manifold Valves, 1 End Cap, 1 Hose Barb Cap	1/pkg
20A00U122	4890	MicroFunnel Adapter	3/pkg
20A00U124	4891	Sentino Funnel Adapter	3/pkg
20A00U125	4892	Standard Adapter	3/pkg
20A00U126	4893	Coupling Device for Manifold	1/pkg
20A00U128	4959	Elongated Standard Adapter	3/pkg

Accessories and Replacement Parts

Thomas No.	Mfr. No.	Description	Pkg
20A00U121	4878	Spare O-ring Kit	1/pkg
20A00U127	4894	Manifold Valves	1/pkg

Stainless Steel Forceps

		Description	Pkg
21A00A949	51147	Black grips	1/pkg
21A00A825	4690	Multi-colored grips	3/pkg

47 mm Magnetic Filter Funnels

Thomas No.	Mfr. No.	Description	Pkg
21A00A705	4247	150 mL capacity	1/pkg
21A00A701	4242	300 mL capacity	1/pkg
21A00A700	4241	300 mL capacity with lid	1/pkg

Dispenser Pack Refills

Thomas No.	Mfr. No.	Description	Pkg
21A00A731	68123	0.2 µm, Supor membrane	1000/pkg
21A00A730	68121	0.45 µm, GN-6 Metricel membrane	1000/pkg
21A00A732	68124	0.45 µm, Metricel Black membrane	1000/pkg
21A00A733	68125	0.8 µm, Metricel Black membrane	1000/pkg



Notes

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