

Solutions for cell culture growth and analysis



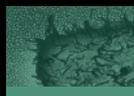
Surfaces & Materials



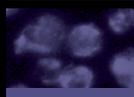
Cell Culture Flasks & Serological Pipettes



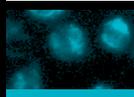
Dishes, Multidishes & Plates



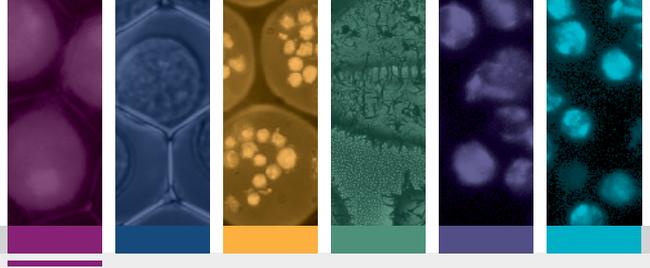
Slide Flasks, Chamber Slides & Inserts



Filter Units



Accessories



Surfaces

Cell Culture treated

- For adherent cell cultures

The Nunclon™ Delta cell culture treated surface is a hydrophilic surface that facilitates cell attachment and growth. Perfect for most applications with adherent cell cultures. A proven cell culture surface for 25 years.

Untreated

- For suspension cell cultures

An untreated polystyrene surface is hydrophobic and thus suited for growth of suspension cultures that can proliferate and grow without attachment. If cells attach on this surface, try our low cell binding surface, Nunc™ HydroCell™.

HydroCell

- Low cell binding

A covalently bound super hydrophobic polymer allows non-adherent cultivation of cells that would adhere to treated and non-treated tissue culture products.

UpCell

- Temperature dependent binding capacity

Retrieve cells without trypsinization or mechanical force. Binding capacity for cell culture of adherent cell lines at 37°C. Release single cells and cell sheets/monolayers by lowering the temperature to 32°C.

Poly-D-Lysine and Collagen coating

- For cells with low adherence or growth

The uniform coating creates a positive charge on the surface that ensures cell attachment, growth and differentiation. Should be used when cell lines are difficult to grow and show low adherence or slowed growth even after optimization of growth conditions.

Nunc CC² surface

- Mimics Poly-D-Lysine without coating

Our CC²™ surface mimics Poly-D-Lysine and can be used for cells that show low adherence or low growth.

Custom coating

- Need something special?

If you have special needs, we can coat surfaces according to a specific custom protocol - both for cell culture and immuno assays. Contact us for more information.

Materials

Polystyrene

Most products are made from polystyrene because of its good optical properties and because polystyrene is amenable to many different surface treatments.

Glass

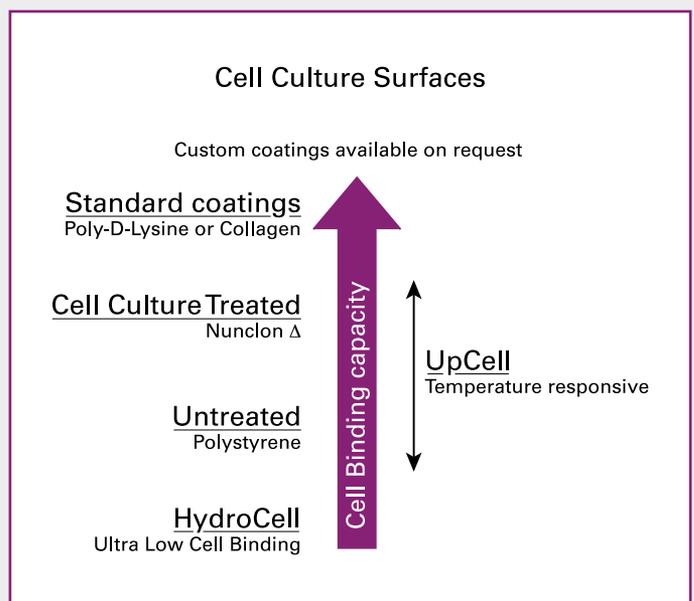
Some of our chamber slides and chambered coverglass are made of glass, which has superior properties for microscopy. Glass is naturally charged and has a good growth surface for adherent cells.

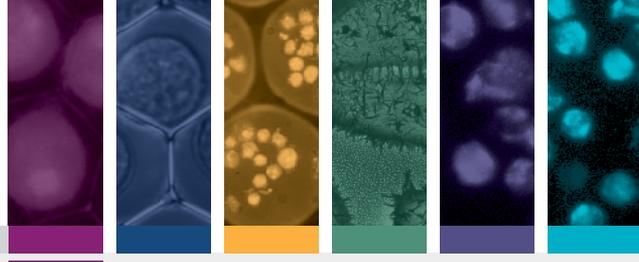
Thermanox

Our coverslips are made from Thermanox™, a proprietary polyester film surface modified to be hydrophilic for cell adherence. Thermanox is highly resistant to solvents, including those used in electron microscopy, and has a very low oxygen content.

Permanox

Some chamber slides and dishes are made from Permanox™, a polyolefin that has minimal autofluorescence and high oxygen permeability. Hepatocytes grow exceptionally well on Permanox.





Quality from start to finish

Reliability • Reproducibility • Scalability • Traceability • Security • Simplicity

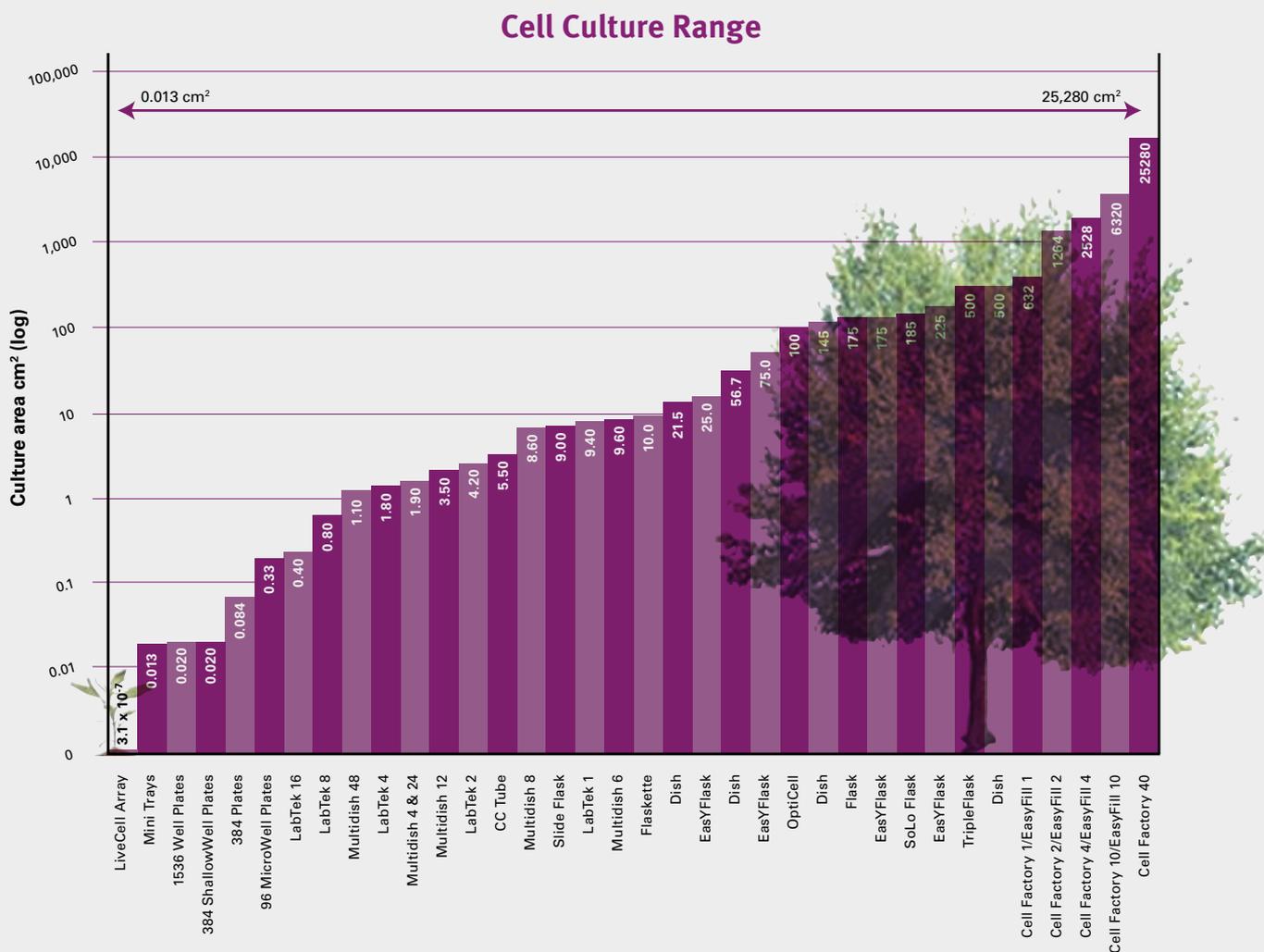
Thermo Scientific Nunc cell culture products have been used by researchers worldwide for the past 55 years.

We take pride in supplying products with consistently high quality to ensure you get the most reproducible and reliable results in your research.

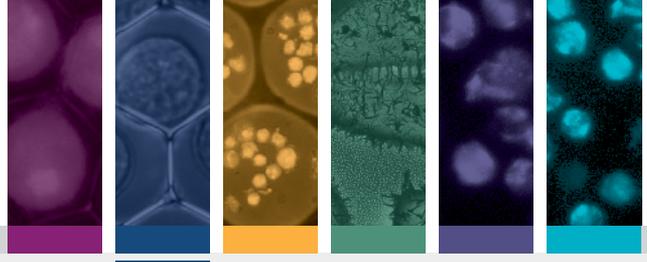
Our cell culture products have surface areas ranging from 0.013 cm² to 25,280 cm², allowing for easy scale up when expanding cultures. Our standard surfaces address most applications. If they do not fit your needs, we can provide custom surfaces for your specific application.

Our products are manufactured using only high quality raw materials that comply with USP Class VI. Most of our cell culture products are tested with 4 different cell lines to ensure monolayer formation and consistent cloning efficiency.

Our products are manufactured in Denmark in ISO 9001:2000 and ISO 13485:2003 registered facilities and in ISO 13485:2003 registered facilities in the United States.



Thermo Scientific Nunc Cell Culture Flasks and EasyFill CF



Reproducibility and reliability – 55 years of quality

- Widest range of **formats, sizes and surfaces** for use in your cell culture lab
- Many **formats and surfaces** (31 different standard products)
- Ideal for **scale-up** (surface area from 25 to 6300 cm²)
- **Double bags** as option for GMP applications
- **Barcoding** as option for all products

The Nunc flask portfolio has been developed with emphasis on continuous and **consistent quality**. Reproducibility and **reliability** are the keys to good scientific results, which is why we only use certified polystyrene. We test our products with not only 1 or 2 cell lines, but with 4 different cell lines to ensure unfailing monolayer formation and consistent cloning efficiency.

Nunclon Delta cell culture surface has been preferred by researchers for many years. Neck and sides of the flasks are not treated to avoid cell attachment on these surfaces.

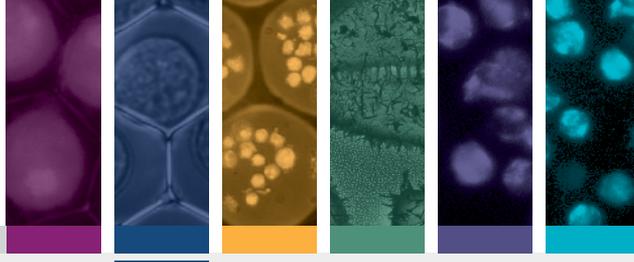
For larger surface areas see our bioproduction portfolio.

Standard Flask	EasYFlask™	SoLo Flask	TripleFlask	EasyFill™ Cell Factory
Straight neck	Angled neck Access to entire surface	Angled neck Access to entire surface Low profile saves space	Triple the surface Ideal for scale-up	Space saving cell culture device

Design	Surfaces				Culture area cm ²	Cap type		Double bagged	Barcoding
	Un-treated	Nunclon Delta	Poly-D-Lysine	Collagen		Vent/Close	Filter		
Standard Flask	○	●			25, 75, 175	●	●	○	○
EasYFlask	●	●	●	●	25, 75, 175, 225	●	●	○	○
SoLo Flask	○	●			185	●	●	○	○
TripleFlask	●	●			500	●	●	○	○
EasyFill CF		●			630 - 6300		●	●	

- Standard product
- Option

Thermo Scientific Nunc OptiCell and Serological Pipettes



Nunc OptiCell: Innovative solution for growth, imaging, transport and storage

- Closed system with sterile fluid path
- Store or transport cells
- Excellent imaging properties
- Freeze and thaw directly in OptiCell™

The Nunc OptiCell cell culture system has very **stable growth conditions**, as O₂ and CO₂ are efficiently diffused through the thin film. OptiCell products have **low space requirements** (compared to tissue culture flasks) and a **low media consumption** because of the large growth area-to-volume ratio. Besides growth, imaging, transport and storage of cell



cultures, OptiCell cell culture system can also be used for biomagnetic cell separation and has proven itself as excellent for hybridoma antibody production and transfection studies.

Design	Surfaces		Culture area cm ²	Volume ml	Cryostorage	Transport	Barcoding	Magnetic Cell Separator
	Un-treated	Cell culture						
OptiCell	○	●	100	10	●	●	●	●
OptiCell MAX	○	●	100	30	●	▲	●	▲

- Standard product
- Option
- ▲ OptiCell MAX can also be used for transport and biomagnetic cell separation, but commercial kits are not available

Serological Pipettes

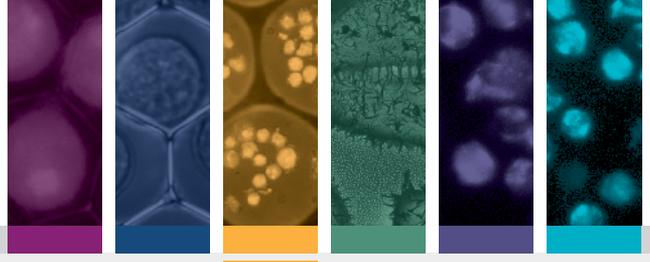
- **Accurate, disposable** polystyrene pipette plugged and sterilized
- Sterility assurance level (SAL) of 10⁻⁶; **non-pyrogenic**
- Bold, clear graduations; **easy-to-read** scale markings
- **Individually wrapped** in paper-peelable bags



Pipettes	Total Volume, ml	Packaging	Extra Graduations	Color Coding
		Paper/Plastic		
All Pipettes	1,2,5,10,25,50	●	●	●

- Standard product
- Option

Thermo Scientific Nunc Dishes & Multidishes



What would you like?

- More than **100 combinations** of format and surface
- **Widest range of surfaces**
 - Untreated
 - Cell culture treated (Nunclon Delta)
 - Low cell binding capacity (HydroCell)
 - Temperature-dependent binding capacity (UpCell)
 - Poly-D-Lysine, collagen and custom coatings
- **Excellent optical quality** for manual or automated imaging
- Compatible with **automated equipment**

Nunc multidishes offer a wide range of features for any application.

Choose from surfaces with low to high cell binding characteristics.

Dishes



Multidishes



Round Dishes

Product	Wells	Culture area/well	Surfaces					
			Un-treated	Nunclon Delta	HydroCell	UpCell	Poly-D-Lysine	Collagen
Petri dish*	1 (7 sizes)	cm ² 8.8 - 150.0	○	●	●	●	○	○
4-well dish*	4	1.9	●	●	○	○	○	○
6-well dish	6	9.6	●	●	●	●	●	●
12-well dish	12	3.5	●	●	●	●	○	○
24-well dish	24	1.9	●	●	●	●	○	○
48-well dish	48	1.1	●	●	○	●	○	○

● Standard product

○ Option

* Also available certified for use in ART/IVF

Square Dishes

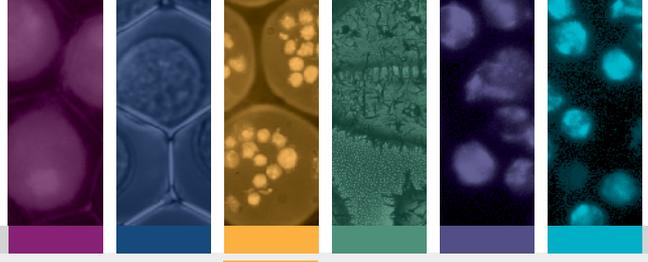
Product	Wells	Culture area/well	Surfaces					
			Un-treated	Nunclon Delta	HydroCell	UpCell	Poly-D-Lysine	Collagen
Omnitray	1 (2 sizes)	cm ² 84.0 - 500.0	○	●	○	○	○	○
4-well dish	4	21.8	○	●	○	○	○	○
8-well dish	8	10.5	○	●	○	○	○	○

● Standard product

○ Option

For detailed descriptions of all products and product Nos., see our web site or consult our catalog

Thermo Scientific Nunc Plates



We probably have the plate you need

- Plates for most any application (many formats and surfaces)
- Different well shapes
- Optical Bottom Plates (OBP) for superior imaging properties

For an overview of all our plates, visit: www.plateguide.com

Based on decades of experience, we offer a wide range of plates. We provide 96, 384 and 1536 well formats with different well shapes.

Nunc solid plates are fully molded plates in either clear polystyrene for a variety of applications, or in white or black for use in fluorescence or luminescence studies.

Our clear plates have excellent imaging properties. For increased performance or magnification at 40X, try our Optical Bottom Plates, which are composite products with an attached polystyrene or coverglass base.

The plates are also available with passive and active surfaces for immuno assays, or with custom coatings.



Number of wells	Type	Color	Bottom type*	Surface**							Barcoding
				Un-treated	NuncIon Delta	HydroCell	UpCell	CC ² /CC ³	Poly-D-Lysine	Collagen	
96 wells	Solid	Clear	F	●	●	●	●	●	●	●	○
			U	●	●	●					○
			V	●							○
	OBP	White	F	●	●				○	○	○
			Black	F	●	●			○	○	○
			Black	F	●	●		●	●	●	○
384 wells	Solid	Clear	F	●	●			●	○	○	○
			F, S	●	●						○
			F	●	●				○	○	○
	OBP	White	F, S	●	●						○
			Black	F	●	●			○	○	○
			Black	F, S	●	●					
1536 wells	Solid	Clear	F	●	●						○
			White	F	●	●					○
			Black	F	●	●					○

● Standard product

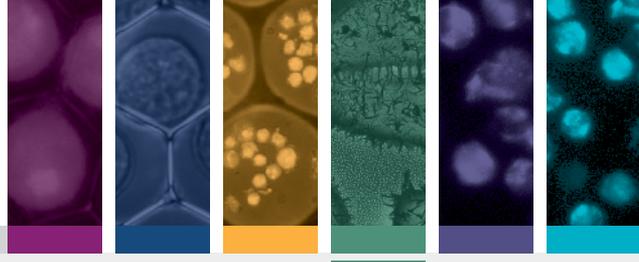
○ Option

* Bottom type: F=Flat, U=Round, V=Conical, S=ShallowWell (small volume)

** Surface: See p.1. Surfaces are also available for Immunology (PolySorp™, MaxiSorp™, MediSorp™, MultiSorp™ and activated surfaces)

For a FULL VIEW of all our plates visit our website or consult our catalog.

Thermo Scientific Nunc Slide Flasks & Chamber Slides



Grow and monitor cells directly on a slide

- Eliminate labor-intensive transfer of cells
- Reduce usage of costly reagents (small area per well)
- Remove media chamber for staining conservation (chamber slides)
- Broad range of products to fit **all applications**
- **Many surfaces** for different applications

The Nunc slide-based flask and microwell chamber portfolio has proven its top quality for many years. We **guarantee** superior reproducibility and reliability through our quality testing (with BHK-21 and Hep-2 cells). The variety of surfaces gives you a choice of binding capacity through differences in hydrophobicity and choice of no or minimal autofluorescence.



Slide Flasks

Product	Wells	Culture area per well	Volume	Surface	
				Glass	Polystyrene
		cm ²	ml		
Slide Flask	1	9.0	5.0		●
Flaskette*	1	10.0	5.0	●	

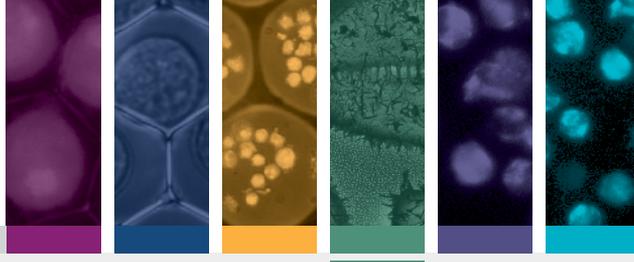
* CE marked

Chamber Slides

Product	Wells	Culture area Per well	Medium Chamber		Slide Material		
			Material	Removable	Glass	Permanox	CC ²
		cm ²					
Lab-Tek™	1	9.4	Polystyrene	Yes	●	●	
	2	4.2			●	●	
	4	1.8			●	●	
	8	0.8			●	●	
	16	0.4			●		
Lab-Tek II	1	8.6	Polystyrene	Yes	●		●
	2	4.0			●		●
	4	1.7			●		●
	8	0.7			●		●

Chambered Coverglass (CE Marked)

Product	Wells	Culture area per well	Medium Chamber		Coverglass Material	Coverglass Thickness
			Material	Removable		
		cm ²			Glass	
Lab-Tek	1	9.4	Polystyrene	No	●	No. 1 0.13 - 0.16 mm
	2	4.2			●	
	4	1.8			●	
	8	0.8			●	
Lab-Tek II	1	8.6	Polystyrene	No	●	No. 1.5 0.16 - 0.19 mm
	2	4.0			●	
	4	1.7			●	
	8	0.7			●	



Need a membrane surface?

- Culturing **without matrix** coating
- **Versatility** (pore sizes from 0.02 to 8.0 μm)
- **Reliable** cell growth for most cell lines (cell culture treated)
- **Easy** handling (prepacked in multidishes)

Our insert portfolio could be the most tested on the market

We tested more than 100 combinations of membranes and coatings to select the most versatile polycarbonate membrane for most cell lines and applications. The result is a multi-purpose portfolio offering proven Nunc quality. All inserts are manually, visually inspected to ensure you get a product with superior reproducibility.

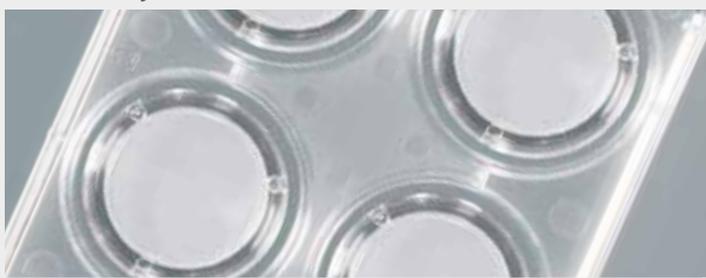
The **polycarbonate membrane** has large pores and is ideal for sectioning for transmission electron microscopy.

The **Carrier Plate System** enables easy handling of multiple inserts, and facilitates handling of individual inserts. You can

change vertical position of the inserts, shift media or move to other dishes easier than ever. The carrier plate system works with Multidishes. If you prefer to use same batch media for all your inserts, you can work with OmniTrays or Bio-Assay Dishes.

Our inserts are used for a variety of applications from tissue engineering and in-vitro toxicology to chemotaxis studies and transport studies.

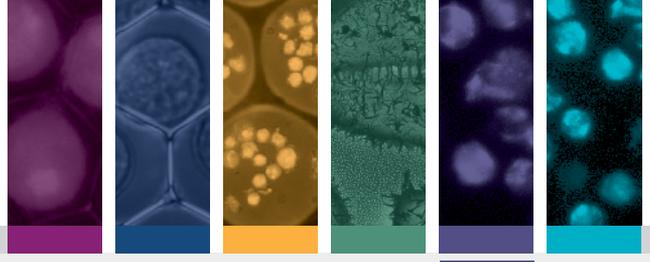
Polycarbonate Inserts



Insert Carrier



Membrane type	For Multidish	Size	Culture area/ well	Cell culture treated	Membrane pore size (μm)					Carrier Plate
					0.02	0.2	0.4	3.0	8.0	
Polycarbonate	MD 6	20	3.1	Yes			●	●	●	
	MD 6	23	4.1				●	●	●	
	MD 12	12	1.1				●	●	●	●
	MD 24	8	0.5				●	●	●	●



MF75 Filters with PES membrane

- **Low protein binding** and **low extractables** make PES the ideal membrane for your critical media sterilization
- Offered with 0.1µm pore size for **mycoplasma retention**, 0.2µm for **media sterilization**, 0.45µm for **biological and pharmaceutical sterilization**
- Nalgene® MF75™ 0.2µm filters with fast-flowing Supor® machV **asymmetric PES membrane** can make your lab more productive
- The conical tube filter unit **comes assembled** with a 50ml conical tube with separate closure

Only Nalgene MF75 filter units and bottle-top filters are available with the exclusive 0.2µm Supor machV membrane technology from Pall. Supor machV is an extremely clean, fast-flowing, asymmetric PES membrane that provides outstanding throughput and low protein binding of media and other solutions. The PES product line is also offered with

a 0.1µm PES membrane for ultra media sterilization and the removal of mycoplasma and a 0.45µm PES for additional sterilization requirements. Now available in a centrifuge tube configuration for small volume work.

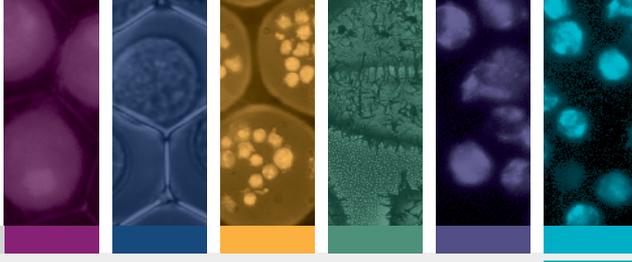
Filter units and bottle tops available with other membrane types as well.



Filter Units

Product	Capacity	Pore Size			Membrane Diameter	Neck Size	
		0.1µm	0.2µm	0.45µm		mm	mm
Filter Units	mL				mm	33mm	45mm
	50		●		50		
	150	●	●	●	50		
	250	●	●	●	50		
	500	●	●	●	75		
	500		●	●	90		
Bottle Top	1000		●	●	90		
	150		●	●	50	●	●
	500		●	●	75	●	●
	1000		●	●	90	●	●

Thermo Scientific Nalgene and Nunc Accessories



The other products you might need...



Cell culture tubes

Flat and round bottom tubes with screw- or push-on cap.



Cell scrapers

With Nunc EasyFlask, you can access the whole growth surface using a Nunc cell scraper.



Cryopreservation Vials

Nalgene and Nunc cryogenic storage systems are the best on the market. Together they give you everything you need - a single source for all your cryogenic needs.



Slides and coverslips

Microscope slides in Permanox and polystyrene with cell culture treatment. Cell culture-treated Thermanox coverslips ensure cell growth.



Media bottles

Heavy-walled, durable, square PETG Media Bottles. Non-cytotoxic, non-pyrogenic and radiation-sterilized.



EZFlip™ Tubes

Conical centrifuge tubes with ergonomic hinged-cap design for one-handed opening and closing.



Centrifuge tubes and bottles

Made in a variety of materials and formats for greater flexibility to meet all needs.



Sterile disposable flasks

Sterile disposable PETG flasks designed for shaker and suspension culture. Non-pyrogenic, non-cytotoxic and radiation sterilized.



Clearboys

Tough, glass-clear, polycarbonate carboys. Ideal for large-volume media and culture preparation especially where visual inspection of the contents is required.

Cell Culture Excellence™

Essential products for the cell culture laboratory

Our comprehensive portfolio includes advanced tools designed to help you achieve excellence at every stage of your cell culture process – from growth and passage to experimentation through characterization, analysis and storage.

To learn about our full array of cell culture products and services, go to:
www.thermo.com/cellgrowth



© 2010 Thermo Fisher Scientific Inc. All Rights Reserved. Supor is a trademark of Pall Corporation.
All other trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries.

Asia: China Toll-free: 800-810-5118, 400-650-5118, India toll-free: 1 800 22 8374, India: +91 22 6716 2200,
Japan: +81 3 3816 3355

Europe: Austria +43 1 801 40 0, Belgium:+32 53 73 42 41, Denmark +45 4631 2000
France +33 2 2803 2180, Germany national toll free 08001-536 376, Germany international +49 6184 90 6940,
Italy +39 02 02 95059 434-254-375, Netherlands +31 76 571 4440, Nordic/Baltic countries +358 9 329 100,
Russia/CIS +7 (812) 703 42 15, Spain/Portugal +34 93 223 09 18, Switzerland +41 44 454 12 12,
UK/Ireland +44 870 609 9203

North America: USA/Canada +1 585 586 8800, USA Toll-free: 800 625 4327

South America: USA sales support: +1 585 899 7298

Other Asian countries 65 68729717

Countries not listed: +49 6184 90 6940 or +33 2 2803 2180

www.thermoscientific.com/cellgrowth

BRLSPCC77007 0311



Thermo
SCIENTIFIC