cell culture

Product selection guide for every step of your cell culture workflow

From culture to discovery

VWR™ part of avantor | order on VWR.COM

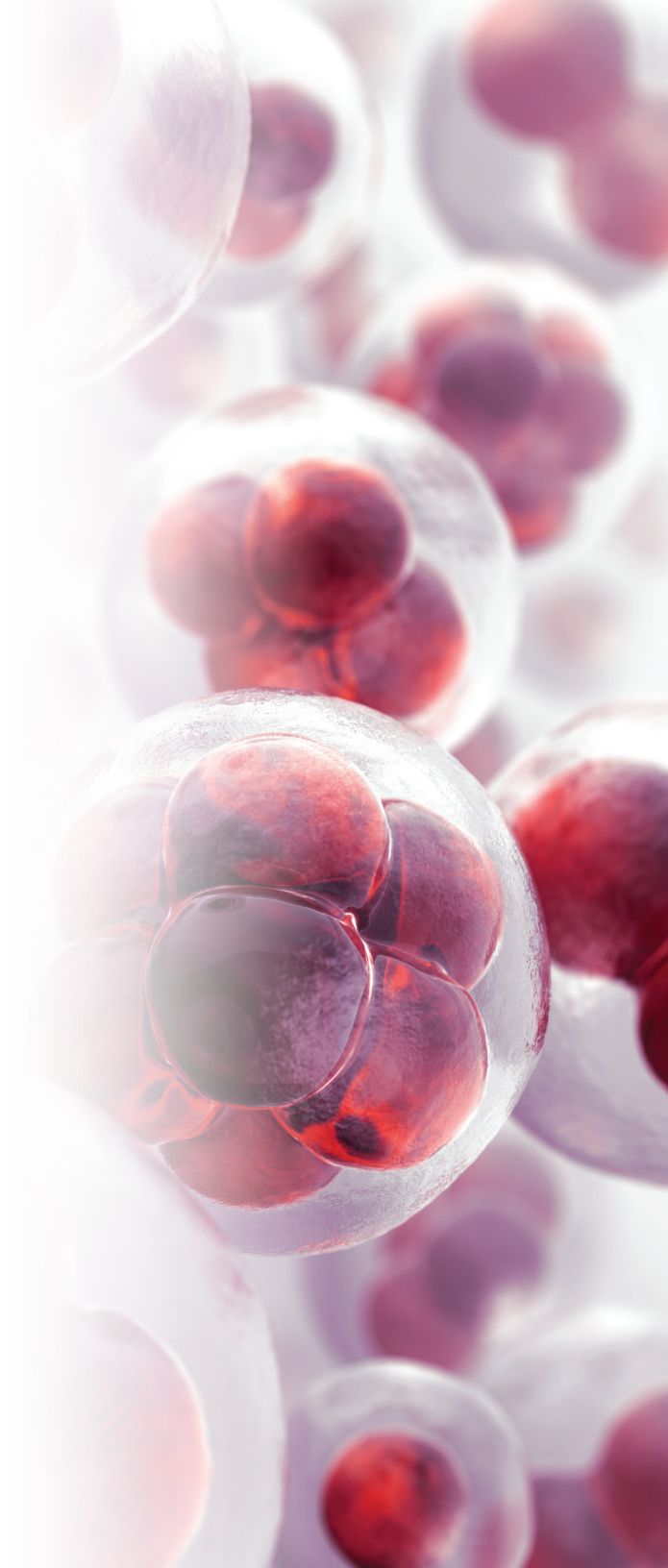
thermo scientific

Culture with confidence

Thermo Scientific™ Nunc™ and Nalgene™ cell culture products have been used by researchers for more than 60 years in labs around the world.

We take pride in supplying products with consistent high quality to help ensure you get the most reproducible and reliable results in your research. Our products are manufactured using only high-quality raw materials that comply with USP Class VI testing. This selection guide will help you find the most relevant cell culture surface and format for every step of your workflow—from culture to discovery.

Culture | Modify | Detect | Analyze



Surfaces

Choosing the best growth surface for your cells

To help ensure optimal results for different cell types, we offer a range of Thermo Scientific™ cell culture surfaces. Let us help guide your selection to choose the culture surface for your applications.

Nunclon™ Delta surface for adherent cells
A standard tissue culture (TC) surface modification that makes the polystyrene surface more hydrophilic, thus facilitating maximum adhesion for a broad range of cell types.

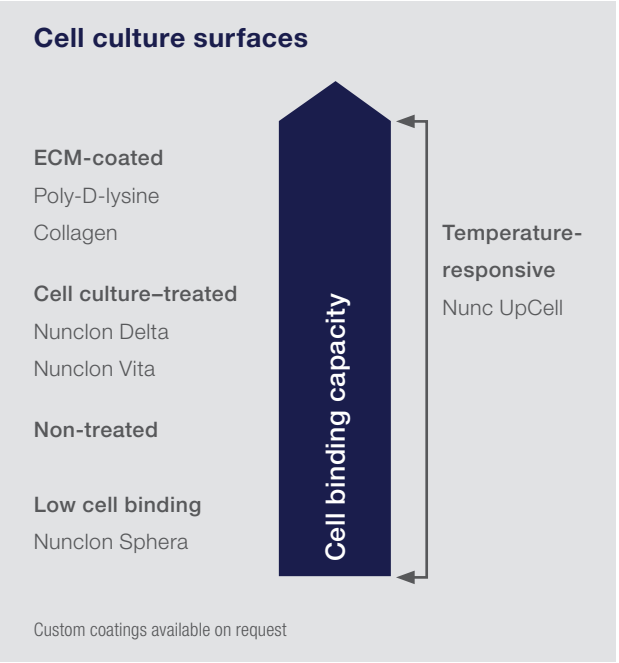
Nunc™ poly-D-lysine or collagen I–coated surface, and Lab-Tek™ II CC²™modified glass surface for primary cells and sensitive cells
The extracellular matrix (ECM)-coated surfaces imitate the growth environment of cells inside a living body—ideal for cells that don't grow well on the regular TC surface. Collagen I is of animal origin, whereas Nunc poly-D-lysine is fully synthetic. The CC² glass surface mimics poly-D-lysine surface properties, but without the coating material.

Nunc™ UpCell™ surface for adherent cultures that require enzyme-free cell detachment
Enables harvesting of cells in single-cell suspensions or as contiguous cell sheets by temperature reduction to preserve cell membranes and membrane molecules, and helps create 3D tissue models without artificial scaffold material.

Nunc™ non-treated surface for suspension culture
High-quality, optically clear virgin polystyrene with a hydrophobic surface is ideal for suspension cell culture, and also useful for a variety of biochemical assays.

Nunclon™ Sphera™ surface for spheroid-organoid culture
Using this surface, cells grow and aggregate with virtually no attachment to the culture vessel; suitable for spheroid culture, organoid culture, and 3D culture.

Custom coating
If you have any specific need in your research, we can coat cell culture surfaces according to a custom protocol. Contact our technical sales specialists for more information.



Flasks

Nunc cell culture flasks—designed for the way you work

Thermo Scientific™ cell culture flasks are designed for culture consistency, cell health, and reproducibility. Select the surface and ancillary options you're looking for in a tissue culture flask from our comprehensive portfolio. Choose from a variety of surfaces and sizes with culture areas ranging from 25 cm^2 to 500 cm^2 to suit your specific applications and cell types.

Nunc EasYFlask flasks

Nunc™ EasYFlask™ flasks

Designed for convenience

- Angled, extra-wide neck provides easier access to growth surface with cell scrapers or pipettes
- Ergonomic design with 1/3-turn cap enables one-handed operation and avoids wris
- Molded and printed graduations help enable easy and quick measurement of grow

Nunc™ standard flasks

Designed with a straight neck and barcoding option for automation cell culture

Nunc standard flasks

Nunc™ T300 flasks

Designed for durability and ease of use

- One-piece design with straight neck and grip notches
- Largest single-layer, cell culture–treated flask on the market
- Prominent stacking feet on upper surface enable reliable stacking of multiple flasks in incubators and culture hoods

Nunc T300 flasks

Nunc™ TripleFlask™ flasks

Designed for cell culture expansion without expanding footprint of the flask

- 3-layer flask providing 3 times the growth surface of a T175 flask for the same footprint, saving space in the incubator
- Barcoding option for automation cell culture

Nunc TripleFlask flasks

Table 1. Nunc flasks.

Flask type	Surface area (cm^2)	Working volume (mL)	Neck style	Cap type	Barcoding	VWR Cat. No. by surface				
						Nunclon Delta for adherent cells	Non-treated for suspension cells	Nunclon Sphera for spheroid-organoid culture	Poly-D-lysine for primary and sensitive cells	Collagen I for primary and sensitive cells
EasYFlask	25	7	Angled	Filtered		15708-130	73521-146	10028-036	89020-032*	89020-038*
				Solid		15708-120				
	75	25		Filtered		15708-134	73521-148	10028-038	89020-034*	89020-040*
				Solid		15708-124				
	175	55		Filtered		12777-960	73521-150		89020-036*	89020-042*
				Solid		12777-958				
	225	70		Filtered		73521-150				
				Solid		73521-358				
Standard flask	25	7	Angled	Filtered		15708-097				
				Solid		15708-096				
	80	30	Straight	Filtered		15708-106				
				Solid		15708-094				
	175	68		Filtered		15708-103				
				Filtered	•	73512-200				
				Solid		15708-101				
T300 flask	300	150	Straight	Filtered		30617-430				
				Solid		30617-428				
TripleFlask	500	200	Straight	Filtered		62407-082	89094-312			
				Filtered	•	73521-336				
				Solid		62407-079				

* Aseptically sterile.

Dishes and multidishes

Nunc cell culture dishes and multidishes—a better way to handle your cells

Thermo Scientific™ Nunc™ cell culture dishes are available in a wide selection of formats, materials, and surface modifications. Each is designed and produced under the highest quality standards to promote healthy cells and reproducible results. Each selection offers excellent optical quality for manual and automated imaging and is compatible with automated equipment and instruments.

Nunc™ EasYDish™ dishes

- Designed to improve handling, stacking, and transporting of cell cultures in the lab
- Beveled grip makes it easier to grasp and manage dish with gloved hand
- Raised outer edge on the lid helps keep stacked dishes stable

Nunc EasYDish dishes

Nunc™ standard dishes

- Available in round, rectangular, and square formats
- Available with or without air vent

Nunc standard dishes

Nunc™ glass bottom dishes

- Combines the convenience of a standard 35 mm dish with the imaging benefits of coverglass to provide optimum optical characteristics required for high-magnification microscopy and confocal imaging
- Cell culture–treated glass to enhance cell attachment and growth

Nunc glass bottom dishes

Nunc™ multidishes

- Designed to prevent evaporation and cross-contamination with one-way lid orientation and rings in lid over each well
- Available with round or rectangular wells

Nunc multidishes

Table 2. Nunc dishes and multidishes.

Dish type	Format (mm)	Surface area (cm^2)	Air vent	VWR Cat. No. by surface				
				Nunclon Delta for adherent cells	Non-treated for suspension cells	Nunclon Sphera for spheroid-organoid culture	UpCell for adherent culture plus trypsin-free cell harvesting	Cell culture–treated glass for high-quality imaging
Round EasYDish	35 x 10	8.8	•	76169-634				
	60 x 15	21.5	•	76169-584				
	100 x 15	56.7	•	76169-586				
	100 x 20	56.7	•	76169-588				
	150 x 20	145	•	76169-590				
Round standard dish	35 x 10	8.8		25382-311				
			•	25382-344	25382-337	10028-030	89089-616	89428-988, 89428-990
	60 x 15	21.5		25382-332				
			•	25382-330		10028-032	89089-614	
	100 x 15	56.7	•	10753-500	73521-370	10028-034	89089-612	
	100 x 20		•	10171-744				
	150 x 20	145	•	25382-335	73521-368			
Rectangular dish	128 x 86	84		62409-590	62409-600			
Square dish	245 x 245	500		25382-327	25384-002			

Multidish type	Well shape	Surface area/well (cm^2)	Large packaging	VWR Cat. No. by surface					
				Nunclon Delta for adherent cells	Non-treated for suspension cells	Nunclon Sphera for spheroid-organoid culture	UpCell for adherent culture plus trypsin-free cell harvesting	Poly-D-lysine–coated for sensitive cells	Collagen I–coated for sensitive cells
4-well	Round	1.9		62407-068	73521-356				
	Rectangle	21.8		73521-422	73521-424				
6-well	Round	9.6		73520-906	73521-138	174932	10028-028	73521-010**	73521-024**
			•	73520-836					
8-well	Rectangle	10.5		73521-426					
12-well	Round	3.5		62407-332	73521-140	174931	89089-608		
24-well	Round	1.9		73521-004	73521-142	174930	89089-606		
			•	73521-006					
48-well	Round	1.1		62407-338	73521-144		89089-604		
			•	73521-008					

** Aseptically sterile.

Microplates

Nunc microplates—designed for your specific application needs

Whether you're culturing individual cell lines or scaling up for high-throughput screening, or anything in between, there is a Thermo Scientific™ Nunc™ microplate for your needs. Advances in manufacturing for surface technology, well geometry, and optical flatness mean we have a plate tailored for your specific application.

Nunc Edge 2.0 plate

Nunc™ Edge 2.0 plates

- Designed to eliminate evaporation and improve cell growth consistency across the 96 wells with a built-in reservoir surrounding the wells that can be filled with medium or gel

Nunc standard plates

Nunc™ standard plates

- Available in clear, black, and white to suit different detection technologies used by plate readers
- Available with 96, 384, and 1,536 wells for high-throughput screening (HTS) applications

Nunc optical bottom plates

Nunc™ optical bottom plates

- With superior imaging quality, and minimal background noise and crosstalk between wells, these plates are optimized for fluorescence and luminescence imaging applications

Table 3. Nunc microplates.

Microplate type	Bottom	Well shape	Color	Lid	Large packaging	VWR Cat. No. by surface						
						Nunclon Delta for adherent cells	Non-treated for suspension cells	Nunclon Sphera for spheroid-organoid culture	UpCell for adherent culture plus trypsin-free cell harvesting	Poly-D-lysine for primary and sensitive cells	Collagen I for primary and sensitive cells	CC² glass for primary and sensitive cells
96-well	Solid	Flat (F)	Clear			25382-341						
				•		25382-342		10028-022	89089-602	73521-026†	73521-012†	
					•	21993-953						
				•	•	21993-954	62407-174					
	Solid with reservoirs (Edge plate)	Flat (F)	Clear	•		75800-388	75800-396					
				•	•	75800-390	75800-398					
	Solid	Flat (F)	White	•		43300-430	43300-434					
				•	•	46000-328						
			Black	•		43300-444	43300-448					
				•	•	43300-446	43300-450					
		Round (U)	Clear			25382-340	62409-116					
				•		25382-329		10028-020				
				•	•	73521-214	62407-184					
		Conical (V)	Clear				62409-112					
					•		89027-038					
				•								
				•	•		73520-134					
	Optical coverglass	Flat (F)	White	•		73520-178						
			Black	•		73520-174	73520-168‡					73520-750
	Optical polymer film	Flat (F)	White	•		37000-562				73521-016†	73521-030†	
							37000-544‡					
			Black	•		37000-558				73521-014†	73521-028†	
							37000-550‡					
384-well	Solid	Flat (F)	Clear	•		62409-074	82030-992					
							82030-994					
			White	•		62409-072						
						73521-434						
			Black	•		62409-070						
							73521-438‡					
	Solid shallow-well	Flat (F)	Clear	•								
							89014-064‡					
			White	•								
			Black	•								
							89014-066‡					
	Optical coverglass	Flat (F)	Black	•		73520-170						
	Optical polymer film	Flat (F)	White	•		62409-630						
			Black	•		62409-632				152029†	152041†	
							62409-634‡					
1,536-well	Solid	Flat (F)	Clear									
			White				37001-002†					
			Black									

† Aseptically sterile.
‡ Non-sterile.

Chamber slides and coverglasses

Nunc chamber slides and chambered coverglasses—superior cell imaging performance simplified

Efficiency is everything. The Thermo Scientific™ Nunc™ Lab-Tek™ and Lab-Tek™ II chamber slide system and chambered coverglasses simplify your cell imaging workflow by allowing you to culture, modify, stain, and analyze—all in a single device.

Nunc chamber slides

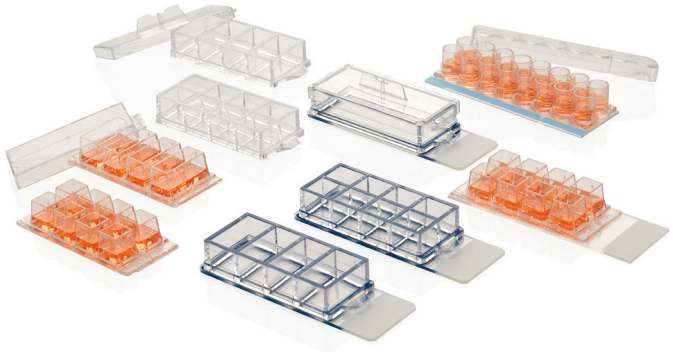
- Chamber slides are designed for growth, fixation, staining, and microscopic examination of cultured cells on a single surface with removable medium chambers

Nunc chambered coverglasses

- Chambered coverglasses with lids are intended for high-magnification live imaging of cells using an inverted microscope

Nunc™ Lab-Tek™ flasks on slides

- Ideal for cell karyotyping using single-cell autoradiography or single-cell immunofluorescence



Nunc chamber slides

Nunc chambered coverglasses

Nunc Lab-Tek flasks on slides

Table 4. Nunc chamber slides and chambered coverglasses.

Chamber slide type	Number of wells	Surface area/well (cm²)	Chamber—removable	Sealant	VWR Cat. No. by slide material		
					Glass	Permanox™ slides	CC² glass
Lab-Tek	1	9.4	Yes, no tool needed	Silicone, medical grade	62407-300	62407-320	
	2	4.2			62407-305	62407-325	
	4	1.8			62407-310	62407-330	
	8	0.8			62407-315	62407-335	
	16	0.4			62407-350		
Lab-Tek II	1	8.6	Yes, tool provided	Biocompatible acrylic adhesive	62407-290		62407-019
	2	4.0			62407-292		62407-022
	4	1.7			62407-294		62407-023
	8	0.7			62407-296		62407-026

Chambered coverglass type	Number of wells	Surface area/well (cm²)	Chamber—removable	Borosilicate coverglass thickness (mm)	VWR Cat. No. by coverglass thickness
Lab-Tek	1	9.4	No	0.13–0.17	43300-771
	2	4.2			43300-772
	4	1.8			43300-776
	8	0.8			43300-774
Lab-Tek II	1	8.6	No	0.16–0.19	62407-050
	2	4.0			62407-052
	4	1.7			62407-054
	8	0.7			62407-056

Flask on slide type	Number of wells	Surface area/well (cm²)	Suggested working volume (mL)	VWR Cat. No. by slide material	
				Glass	TC-treated polystyrene
SlideFlask	1	9.0	2.5–5		62407-355
Flaskette	1	10.0	2.5–5		

Cell culture inserts

Nunc cell culture inserts and carrier plate systems—versatility and convenience for your permeable cell culture applications

When your cell-based research calls for more than the standard culture vessel, the porous membrane-based Thermo Scientific™ Nunc™ cell culture inserts enable the versatility you need by allowing the attached cells to be exposed to different conditions on the apical and basal sides, as well as allowing molecules and cells to migrate, diffuse, or be actively transported across the growth surface. The unique Thermo Scientific™ Nunc™ carrier plate systems simplify procedures that require an air–liquid interface and change of medium by allowing the inserts to be hung in three precise positions in the wells.

Nunc cell culture inserts

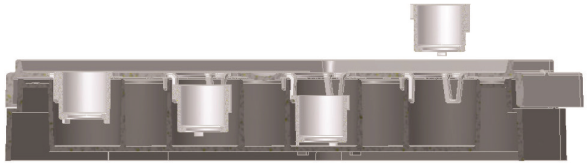
Nunc cell culture inserts

- Polycarbonate (PC) inserts have high pore density to allow more exchange of growth medium through the membrane for transport studies and co-culture
- PC porous membrane material is optimized for cell growth and are well suited for barrier assays, and tumor migration and invasion studies

Nunc carrier plate systems

- Ability to adjust the hanging height of inserts in the multiwell plate—optimized for culture at the air–liquid interface with precise position control
- Extends cell feeding interval of air–liquid interface culture by putting more medium in each well with the insert at the highest hanging position
- Ability to lift all the inserts from the multiwell plate at once, saving time when changing medium

Nunc carrier plate system



Cross-section view of a Nunc carrier plate system

Table 5. Choose insert pore size by application.

Cell culture applications		Insert pore size		
		0.4 µm	3 µm	8 µm
Transport studies	Molecules including hormones and growth factors	•	•	
	Drug transport across epithelial (e.g., Caco-2) and endothelial barriers			
	Drug transport across brain microvascular endothelial cells			
Co-culture studies	Cell–cell interactions	•	•	
	Cell–substrate interactions			
Tissue engineering	Angiogenesis	•	•	
	Dermal or epidermal and epithelial tissue models			
Chemotaxis studies	Migration of cells including eosinophils and macrophages		•	•
Invasion studies	Tumor invasion and metastasis models		•	•
	Invasion inhibitors			
	Extracellular matrix effects			

Table 6. Nunc cell culture inserts and carrier plate systems.

Membrane	Plate	Inserts/plate	Surface area/insert (cm^2)	Carrier plate	VWR Cat. No. by membrane pore size		
					0.4 µm	3 µm	8 µm
Polycarbonate	24-well	12	0.5		89177-132	89096-058	89177-134
				•	89177-082	89177-084	89177-086
	12-well	12	1.1		11006-424	89177-136	89177-138
				•	89177-074	89177-076	89177-078
	6-well	6	3.1		89094-366	89094-368	89094-370
			4.1		89177-140	89177-142	89177-144

Shaker flasks

Nalgene shaker flasks—your choice for optimal scale-up

Save preparation time and avoid contamination risk with sterile Thermo Scientific™ Nalgene™ single-use PETG Erlenmeyer flasks—ideal for suspension cell culture, medium preparation, mixing, and storage.

Key features

- Made with crystal clear, break-resistant, bisphenol A (BPA)-free PETG
- Sterile with 10^{-6} sterility assurance level (SAL)
- Made for single use to reduce cross-contamination and eliminate need for cleaning
- Collapse when autoclaved—reducing biohazardous waste volume
- Graduated for quick volume assessment
- Validation binder available upon request to help jump-start your validation process
- Options of solid or filtered cap for adequate gas exchange
- Plain or baffled bottom to suit needs for reducing shear stress or improving aeration

Table 7. Nalgene single-use PETG Erlenmeyer flasks.

Bottom style	Volume (mL)	Cap type	VWR Cat. No.
Plain	125	Filtered	74910-008
		Solid	73520-462
	250	Filtered	74910-010
		Solid	73520-396
	500	Filtered	74910-012
		Solid	73520-398
	1,000	Filtered	74910-014
		Solid	73520-464
	2,000	Filtered	74910-016
		Solid	73520-400
	2,800	Filtered	82031-376
		Solid	82031-372
Baffled	125	Filtered	74910-018
		Solid	73520-466
	250	Filtered	74910-020
		Solid	73520-402
	500	Filtered	74910-022
		Solid	73520-404
	1,000	Filtered	74910-024
		Solid	73520-468
	2,000	Filtered	74910-026
		Solid	73520-406
	2,800	Filtered	82031-378
		Solid	82031-374

Accessories

Nunc cell culture accessories—aid your research with simplicity

Complementing the essential cell culture devices, Thermo Scientific™ cell culture accessories bring convenience and compatibility to every step of your cell culture workflow.

Nunc™ conical tubes—a clear advantage in sample processing and tracking

- Nunc™ EZFlip™ conical tubes with proprietary hinged-cap design can be opened and closed with one hand
- Nunc standard conical tubes are available with environment-friendly and recyclable plastic rack

Table 8. Nunc conical tubes.

Tube type	Volume (mL)	Max RCF§ (x *g*)	VWR Cat. No. by packaging	
			Loose	Racked
Standard conical	15	10,500	89174-468	89174-470
	50	17,000	89174-472	89174-474
EZFlip conical	15	8,500	52000-000	73521-464
	50	9,500	52000-004	73521-466

§Relative centrifugal force (RCF) is determined by centrifuge model, rotor–adapter combination, and centrifugation conditions (e.g., temperature, time, acceleration, deceleration, sample volume, etc.)

Nunc™ serological pipettes—accuracy at every stage

- Nunc™ Shortie pipettes with ergonomically friendly design are suitable for use in laminar hood
- Nunc™ regular pipettes are the only pipettes compatible with Sartorius SelecT ™ automated cell culture systems
- Wide range of packaging options to suit your recycling needs and reduce impact on the environment

Table 9. Nunc serological pipettes.

Volume (mL)	Color code	Shortie	VWR Cat. No. by packaging		
			Individual (paper and plastic)	Individual (plastic)	Bulk
1			89408-562	89408-574	89408-586
2			89408-564	89408-576	89408-588
5			89408-566	89408-578	89408-590
5		•	10030-044		
10			89408-568	89408-580	89408-592
10		•	10030-046		
25			89408-570	89408-582	89408-594
50			89408-572	89408-584	89408-596

Nunc™ cell scrapers—ultimate flexibility

- Individually wrapped, with flexible blade for optimal removal of cells
- Provide an alternative solution to cell dissociation enzymes

Table 10. Nunc cell scrapers.

Length (cm)	VWR Cat. No. by packaging	
	50/case	250/case
23	62407-140	62407-140
32	62407-141	62407-141

Table 11. Nunc key products.

Category	Description	Type or packaging	VWR Cat. No.
Nunc EasYDish Cell Culture Dishes	Nunc EasYDish Dish, Nunclon Delta certified	35 mm diameter x 13 mm high, 8.8 cm^2 culture area	150460
		60 mm diameter x 16 mm high, 21.5 cm^2 culture area	150462
		100 mm diameter x 17 mm high, 56.7 cm^2 culture area	150464
		100 mm diameter x 21 mm high, 56.7 cm^2 culture area	150466
		150 mm diameter x 21 mm high, 145 cm^2 culture area	150468
Nunc EasYFlasks Cell Culture Flasks	Nunc EasYFlask, Nunclon Delta certified	25 cm^2 culture area	156367
		75 cm^2 culture area	156499
		175 cm^2 culture area	159910
		225 cm^2 culture area	159934
Nunc Cell Culture Plates	Nunc cell culture multidishes, Nunclon Delta certified	4-well	176740
		6-well	140675
		12-well	150628
		24-well	142475
		48-well	150687
	Nunc Edge 2.0 F96-well cell culture microplate	Nunclon Delta certified	167425
		Non-treated	267427
	Nunc F96-well microplate, Nunclon Delta certified	Black	137101
		White	136101
Nunc Conical Tubes	Nunc 15 mL Conical Centrifuge Tubes	Bulk pack	339650
		Racked	339651
	Nunc 50 mL Conical Centrifuge Tubes	Bulk pack	339652
		Racked	339653
Nunc Serological Pipettes	Nunc Serological Pipettes, individually wrapped, paper/plastic peel	1 mL	170353
		2 mL	170354
		5 mL	170355
		10 mL	170356
		25 mL	170357
		50 mL	170358

Notes

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