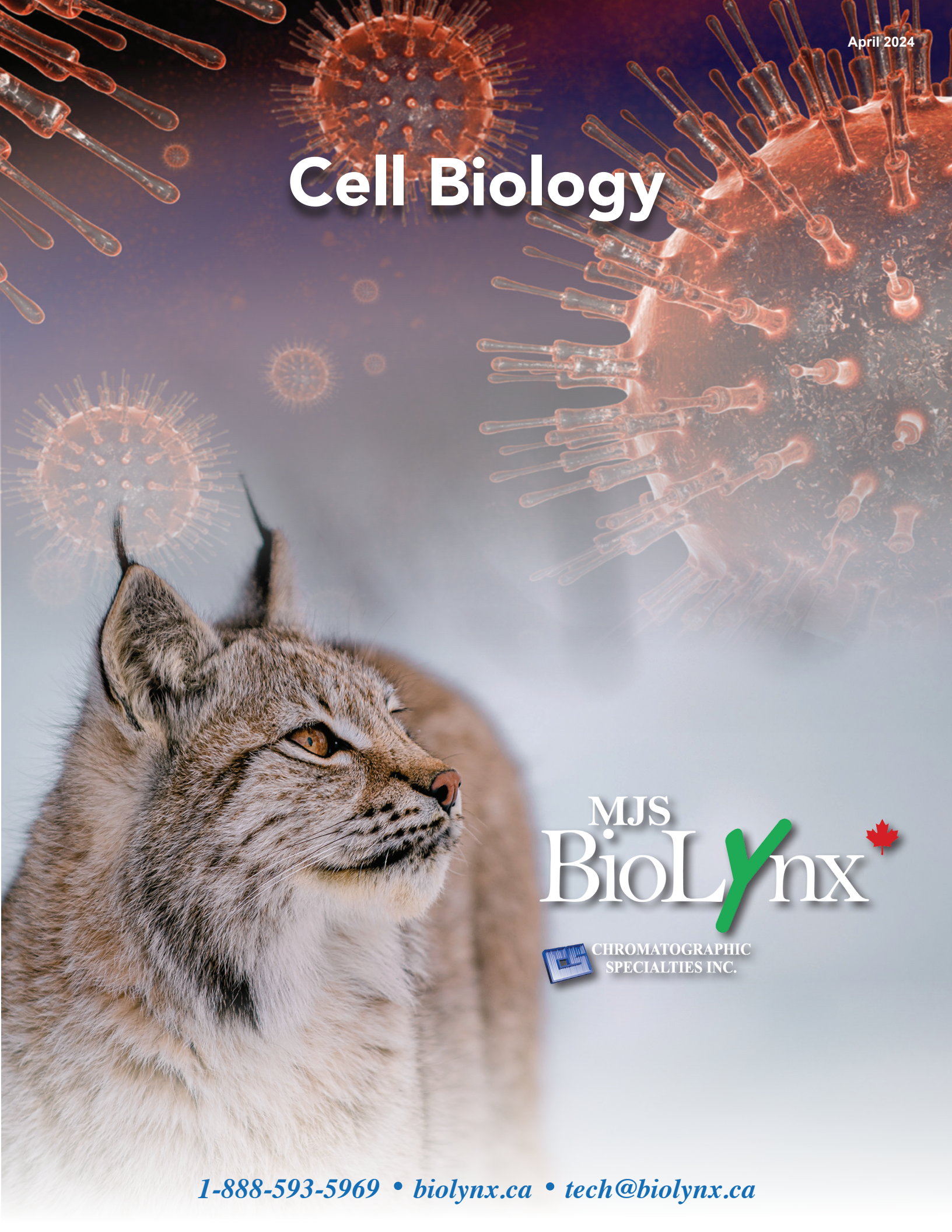


Cell Biology



MJS
BioLynx 



CHROMATOGRAPHIC
SPECIALTIES INC.

1-888-593-5969 • biolynx.ca • tech@biolynx.ca

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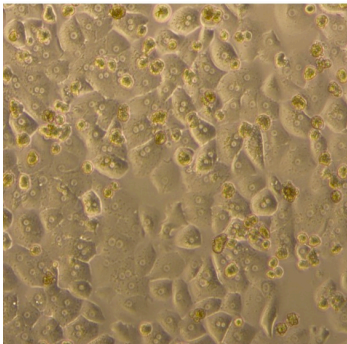


Primary Human Hepatocytes

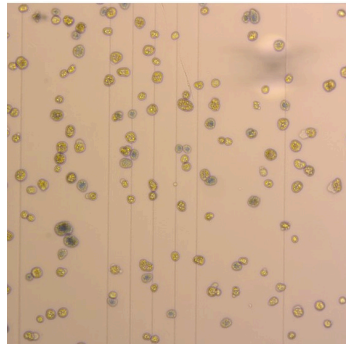


Cell Guidance Systems is pleased to announce the availability of Primary Human Hepatocytes for use in *in-vitro* toxicology assays

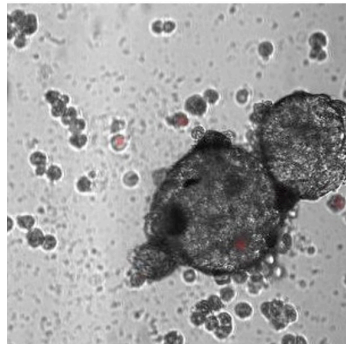
Drug development requires a range of assays to evaluate safety. Many of these tests are focused on the liver as it is the primary site of drug metabolism. Primary human hepatocytes are the gold standard for *in-vitro* assays to predict the *in-vivo* effect of compounds and candidate drugs.



Plateable



Suspension



Spheroid



Scan to learn more
or visit
biolynx.ca/primary_human_hepatocytes

Ethically-sourced primary human hepatocytes are offered in three grades to suit a range of different applications.

- Plateable Grade - ability to form a monolayer
- Suspension Grade - grow in suspension
- Spheroid Grade - form spheroids in culture

Both plateable and suspension-grade hepatocytes are comprehensively characterized for metabolic activity and spheroid-grade cells are quality-controlled for their ability to form spheroids in culture.

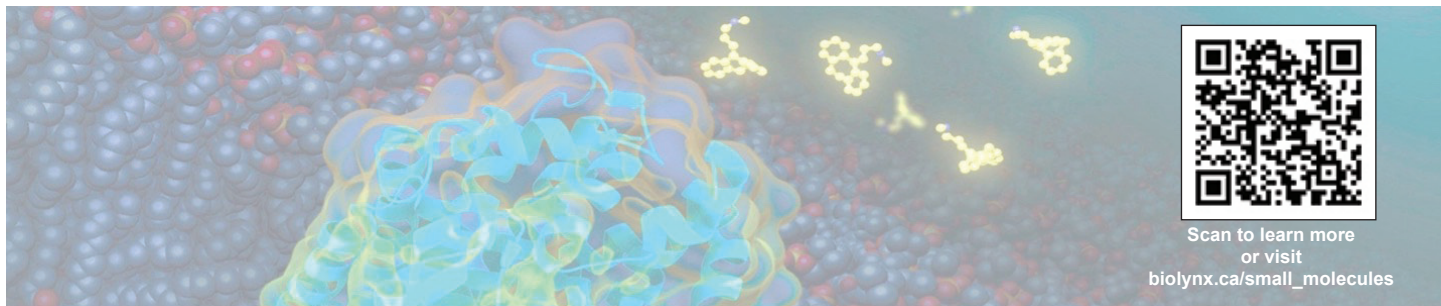
Grade and Utility			
	CGSHH1 - Plateable	CGSHH2 - Suspension	CGSHH3 - Spheroid
Overall quality	Highest	Intermediate	Spheroid grade
Viability	>80%	>80%	>80%
Cells per vial	> 5 million	> 5 million	> 1 million
Culture Method	Monolayer	Suspension	Spheroid
Metabolic characterization	Comprehensive	Comprehensive	None
Assay range	Diverse - see product page	Hepatic clearance assays, short-term metabolic studies	Hepatotoxicity
Donor Pooling	None	> 10 pooled	None

Pooled cells are produced under a license.

Small Molecules



Cell Guidance Systems offers a selected range of bioactive small molecules for stem cell research.



Antidepressant drug blocking dopamine transporter protein. Credit: RCSB Protein Data Bank. Attribution 4.0 International (CC BY 4.0)

Exact Amount™

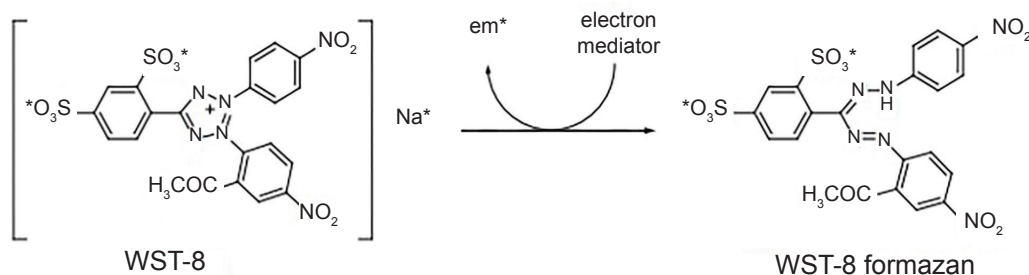
CELLS provides data on the Exact Amount™ of product that is contained within the vial. You can then be assured that the concentration you obtain following resuspension is the concentration you want. The amount of product included in each Exact Amount™ vial is specified on the label to two decimal places.

- 5-Azacytidine
- A769662
- ALK5 Inhibitor II
- BI-D1870
- BIRB796
- BIX01294 Trihydrochloride Hydrate
- CHIR99021
- Cyclosporin A
- CYT387
- DAPT
- Dasatinib
- Decitabine
- Dexamethasone
- Dorsomorphin Dihydrochloride
- Fasudil Hydrochloride
- Forskolin
- Garcinol
- GDC-0449
- GDC-0941
- Geldanamycin
- Go 6983
- GSK429286A
- GX15-070
- ID-8
- Irinotecan Hydrochloride Trihydrate

Cell Counting Solution

Do you know about Orangu™?

The Orangu™ assay utilizes WST-8, a readily water-soluble tetrazolium salt, which, in the presence of an electron mediator, is reduced to an orange coloured formazan dye. Mitochondrial dehydrogenase enzymes within the cell act as an electron mediator such that the amount of the formazan dye generated is directly proportional to the number of viable cells and the length of incubation.



Scan to view products or visit biolynx.ca/products/OR01

Cell Guidance Systems has developed a range of products and services to support your exosome research, from isolation to characterization to assay. Their range of products includes exosome purification kits for all biological fluids and applications, exosome marker antibodies, and exosome detection options, as well as a nanoparticle tracking analysis (NTA) service.

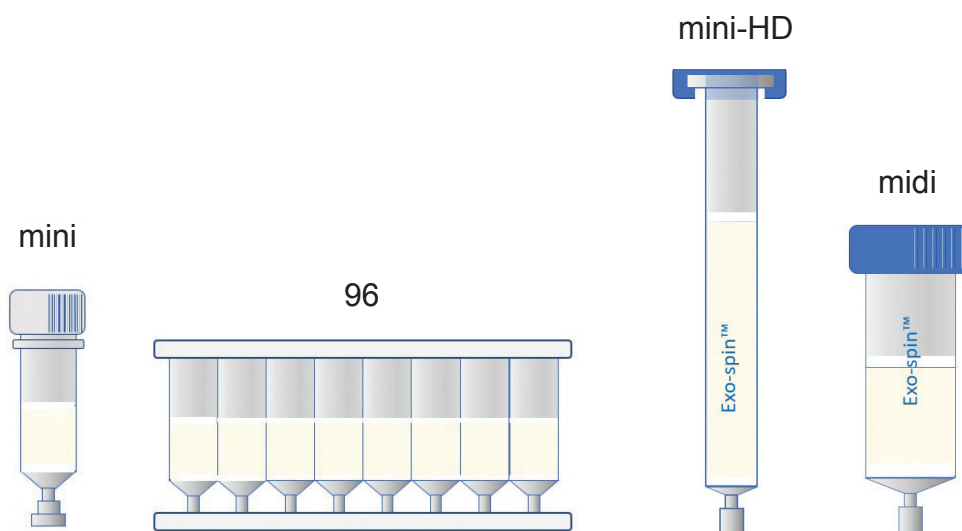
What's included in the Exosome Starter Pack?				
Exosome Starter Pack	Exosome Purification Kit		Exosome Validated Antibodies	NTA Analysis
CGEX111	CGEX018	Exo-spin™ mini, 8 columns, 60 mL buffer	CGEX205 20µg of each of the following antibodies: <ul style="list-style-type: none"> • CD9 Clone CGS12A • CD63 Clone CGS82X • CD81 Clone CGS36K 	4 Samples
CGEX112	CGEX028	Exo-spin™ mini blood, 8 columns, 2 mL buffer		
CGEX113	CGEX038	Exo-spin™ mini, 8 columns only		
CGEX114	CGEX045	Exo-spin™ midi 5 columns		
CGEX115	CGEX055	Exo-spin™ mini-HD 5 columns		

Exo-spin™ Purification

Exo-spin™ is a modular system that adapts to your changing research needs by providing purification of exosomes from a wide variety of sample inputs for a range of downstream applications.

Exo-spin™ uses size exclusion chromatography (SEC) columns. A proprietary precipitant buffer may be used to concentrate exosomes before purification on the column. This precipitation is optional for blood, but for other exosome sources, including urine and cell culture media, the samples need concentrating prior to application. Alternative concentrating technologies, such as filtration, may also be used.

Exo-spin™ columns are available with a variety of resin volumes and bed lengths. The shorter bed lengths provide more rapid protocols and lower costs. For the majority of downstream applications, the 99% purity provided by Exo-spin™ mini, the shortest Exo-spin™ column, provides excellent results.



Scan here to view the Exosome Starter Pack or visit biolynx.ca/products/CGEX111



Scan here to explore the Exo-spin™ Family or visit biolynx.ca/exo-spin

Sustained-Release Growth Factors



100% Protein



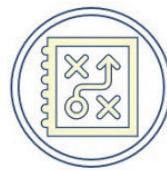
Slow-releasing



Versatile



Enables stable cytokine levels



Achieve complex outcomes



Produce better quality cells

PODS® Growth Factors Technology

Families

- Controls
- EGF family
- FGF family
- Hedgehog family
- Interferon family
- Interleukin family
- Neurotrophin
- PDGF family
- TGF- β superfamily
- TNF family
- TNF superfamily
- VEGF family
- Wnt family
- Other

Species

- Controls
- Human
- Mouse
- Rat

PODS® printable and sustained-release, growth factors address the limitations of conventional growth factors. PODS® are proteins incorporated into sub-micron scale protective protein crystal lattice. This lattice stabilizes cargo proteins, even at high temperatures, and allows the protein, such as growth factors, to be positioned and printed.

Attributes of PODS® growth factors:

- Extensively tested *in-vitro* and *in-vivo*
- Release of bioactive cargo demonstrated up to 8 weeks
- High levels of stability in aqueous storage
- Denaturation or refolding of the protein not required
- Readily attaches to substrates for a desired localized effect
- Minimal batch-to-batch variation
- Produced in insect cells
- Animal-free production

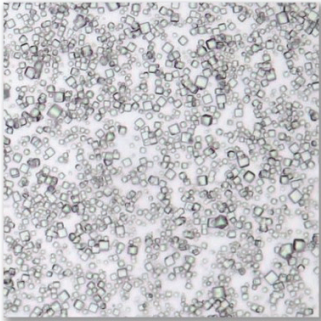
Benefits and applications of PODS® growth factors:

- Spatial and temporal control
- Reduced frequency of cell culture media changes
- Significantly stabilizes growth factor concentrations available in media for more improved cell phenotype
- Ready attachment to substrates allowing localized deposition within a culture system
- Development of physiologically relevant concentration gradients for patterning

Comparison of conventional growth factors and PODS® growth factors

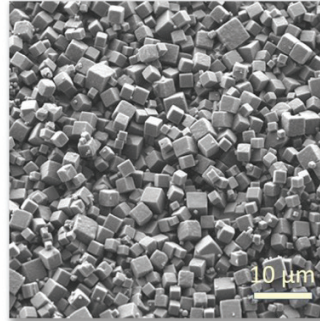
Conventional vs. PODS® growth factors	
Conventional	PODS®
Bioactive	Bioactive
Degrades even in a sterile solution	Stable in sterile solutions
Heat-labile	Heat-stable over long periods
Difficult to localize	Readily localized - can form gradients
Batch-to-batch variability	Highly reproducible
Difficult to incorporate into biomaterials	Easily incorporates into biomaterials
Requires frequent replenishment	Growth factor constantly replenished from store within PODS® crystals
\$\$\$\$ - economical to very expensive	\$ - economical

Sustained-Release Growth Factors



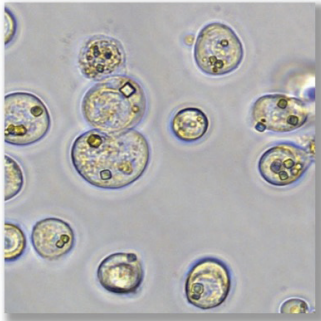
PODS[®] protein crystals viewed under the light microscope

PODS[®] maintain steady state bioavailability over extended periods



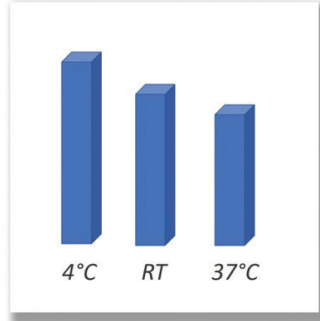
PODS[®] proteins viewed under SEM reveal a perfect cubic structure

PODS[®] proteins self assemble around cargo proteins within the expression cell



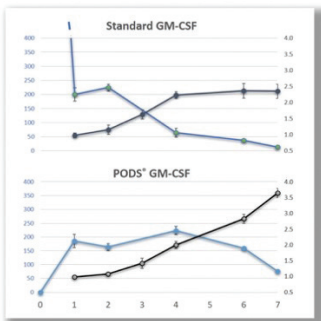
PODS[®] crystals are made in insect cells

The cargo protein is captured correctly folded whilst inside the insect cell



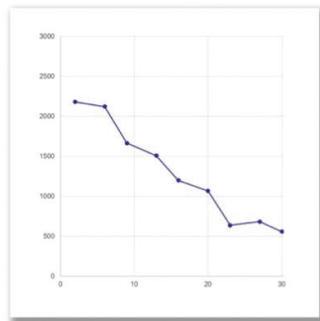
Long term aqueous storage stability

PODS[®] maintain 70% cargo bioactivity after 6 months at 37°C



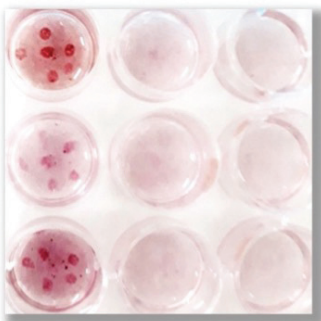
Cytokine concentration (ELISA) vs. cell count over 7 days

PODS[®] maintain optimal cytokine bioavailability



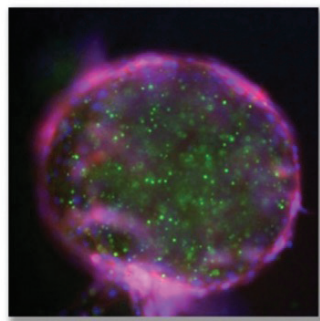
PODS[®] provide sustained release for over 1 month

ELISA-based measurement of released protein (pg/mL) over 30 days



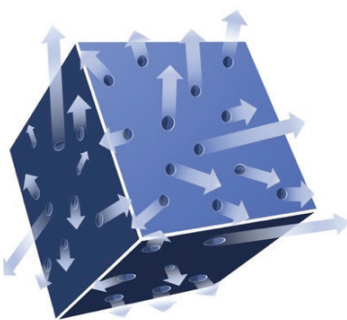
PODS[®] effects are easily localized and gradients can be readily generated

Exposure to cargo protein can be restricted to cells near PODS[®]



PODS[®] are readily incorporated into hydrogels

PODS[®] containing green fluorescent protein glow at the centre of a microcarrier covered in muscle cells.



Pores in PODS[®] crystals slowly release the growth factor cargo



Scan to view products or visit biolynx.ca/Products/c/Cell-Biology/Cell-Culture/Culture-Media/Growth-Factors/Slow-Release



Scan for FAQ's or visit biolynx.ca/pods_faqs

Self-Assembling Peptide Hydrogels



PeptiGel® Technology



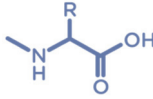
Reproducible



Animal and disease free



Mechanically tuneable



(Bio) chemically functional



Convenient and ready-to-use



Sprayable, injectable and printable



Transparent

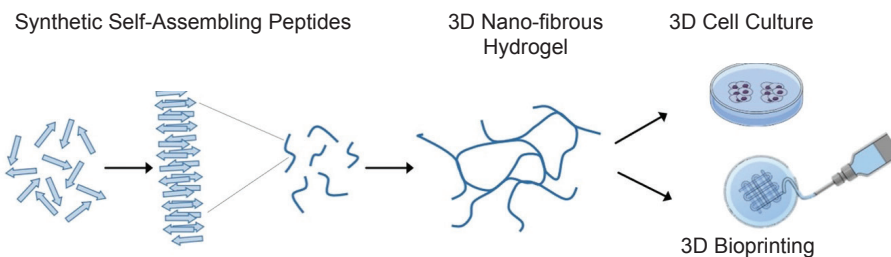


Clinically translatable

Gel type and demonstrated compatible cells

PeptiGel® Type	Charge	Stiffness (kPa)	Biomimetic Functionality	Demonstrated Compatible Primary Cells and Cell Lines
Alpha 1	Neutral	3 - 5	None	Chondrocytes, monocytes, nucleus pulpous cells, Schwann cells, oesophageal, Breast EpH4, Fibroblast 3T3, Kidney HEK293, iPSCs
Alpha 2	+1	6 - 8	None	Adipose-derived stem cells, iPSC-derived cardiomyocytes, Chondrocytes, Dorsal root ganglion neurons, Liver HepG2, Pancreas Suit-2, Prostate PC3, Prostate pNT2
Alpha 2 Plus	+1	6 - 8	RGD & GFOGER	Neuronal
Alpha 4	+2	0.7 - 1.3	None	Mammary epithelial, Bone marrow-derived stem cells, Dermal fibroblasts, Colon organoids, Kidney organoids, Synovial cells, iPSCs, Breast MCF7, Breast MCF10a, Breast, MDAMB231, 3T3 fibroblasts, L929 fibroblasts, Muscle C2C12, Ovary A2780, HUVECS,
Alpha 4 Plus	+2	0.7 - 1.3	RGD & GFOGER	Stromal fibroblasts, Ovary A2780, Colon crypts
Alpha 8	-3	~ 0.25	None	Hepatic Cells
Delta 1	Neutral	3 - 5	None	Mesenchymal Stem Cells
Gamma 2	+1	~ 1.5	None	Dorsal root ganglion neurons, Pancreas Suit-2
Gamma 2 Plus	+1	~ 2.5	RGD & GFOGER	Neuronal
Gamma 4	+2	0.175 - 0.35	None	For cells requiring a softer environment, including primary cells, immortalized cells and stem cells
Gamma 4 Plus	+2	0.175 - 0.35	RGD & GFOGER	Spheroids and organoids

The stiffness values given here are indicative and have been measured by shear rheometry after 24 incubation in DMEM media.



Scan to learn more about PeptiGels® or visit biolynx.ca/peptigel_selection



Scan to see PeptiGel® FAQs or visit biolynx.ca/peptigels_faqs



Humanized Disease Models - Boosting 3D Drug Development Models to the *ex vivo*

In December 2022, the U.S. Congress passed the FDA Modernization Act 2.0, which removes the requirement for animal testing in drug development. The decision paves the way to finally allowing the use of data generated from new alternative methods (NAMs), such as abc biopply's 3D multi-organoid *in chip* assays.

Over the last decade, abc biopply has pioneered a unique portfolio of 3D multi-organoid *in chip* assays that perfectly mimic the physiological microenvironment. The proprietary technology enables the easy and reliable generation of quantitative datasets permitting powerful and predictive statistics. The assays and the related CRO services support pharmaceutical and biotech companies to de-risk their drug development processes. With this development abc biopply has successfully boosted the relevance of purely *in vitro* testing to the *ex vivo* level.

Key Features of 3D CoSeedis™ Chip

- Highly reproducible
- Easy mass production of highly uniform and homogenous organoids
- Wide range of disease models
- HTS/HCS compatibility
- Unique distance co-culture design



Scan to view products
or visit

biolynx.ca/Products/Supplier/abc-biopply

Products

3D CoSeedis™ New standards in 3D Co-Culture 3D CoSeedis™ from abc biopply is a novel scaffold-free 3D cell co-culture system. It consists of a unique agarose-based chip containing an array of conical microwells. The particular and proprietary topography of this arrangement allows the formation of spheroidal and non-spheroidal cell aggregates in a highly-reproducible and consistent manner. The conically shaped microwells within the array allow precise determination of aggregate volume, hence cell growth. Furthermore, the modular composition of the 3D CoSeedis™ system allows co-culturing of feeder cells that are physically separated from the actual test cells (distance co-culture). Consequently, this set-up counts responsible for the standardization of protocols under defined conditions.

Services

abc biopply offers a comprehensive portfolio of validated service packages based on the proprietary 3D CoSeedis *in chip* communication technology™.

Their service packages address compound efficacy as well as the evaluation of toxicological liabilities. Taking advantage of the numerous benefits of abc biopply's technology, they are able to make most accurate dosage, long term efficacy, and off-target toxicology predictions and thereby eliminate animal based alternative models to a large extent and increase successful clinical testing substantially. Moreover, their services deliver statistically highly reliable results in a very short time period.

Selection of most prominent 3D CoSeedis™ *in chip* assays:

- 3D CoSeedis™ Apoptosis *in chip* Assay
- 3D CoSeedis™ Co-Culture Assay
- 3D CoSeedis™ Cytotoxicity *in chip* Assay
- 3D CoSeedis™ Dose Response Assay
- 3D CoSeedis™ Drug Efficacy Assay
- 3D CoSeedis™ Tumor Relapse Assay
- 3D CoSeedis™ Histology Assay
- 3D CoSeedis™ Standard Assay
- 3D CoSeedis™ Live Cell Detection *in chip* Assay
- 3D CoSeedis™ Antibody Penetration Assay
- 3D CoSeedis™ Late Stage Cancer Relapse Assay
- 3D CoSeedis™ Colony Forming *in chip* Assay
- 3D CoSeedis™ Off-Target Cytotoxicity *in chip* Assay

For further information on abc biopply's contract services, please contact us at tech@biolynx.ca.

Cell Culture Media



Serum Free-Media

Athena provides an array of serum-free media in addition to several supplementary products to aid in the growth and preservation of mammalian cell lines. Their products can be used for a wide range of research purposes including drug discovery, physiological, and gene expression studies.

Athena's proprietary Protein Expression products are world renowned for their reliability and superior performance for the production of recombinant proteins.



AthenaES[®] FNC Coating Mix, both Human and Bovine

Serum-free: contains fibronectin, collagen and albumin; designed to enhance the attachment of adherent cells to any plastic substratum.



AthenaES[®] - HPC-1

Serum-free: contains essential amino acids, vitamins, inorganic salts, trace elements, growth factors and dihydrotestosterone; designed for establishing new cell lines from human prostate tissue.



PET[™]

Cell dissociation reagent: designed for retaining trypsin enzymatic activity under "Cold Trypsin" conditions.



Athena's Freezing Media Pair[™]

Dual-cryopreservation system: designed to safely store suspensions of viable cells detached from monolayer cultures using the "Cold Trypsin" method with Athena's cell dissociation media, PET[™].



BRFF-BMZERO[™], BRFF-EPM2[™], BRFF-P4-8F[™]

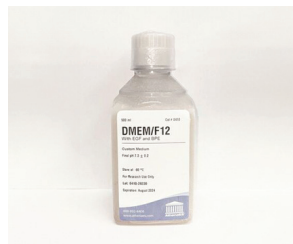
Serum-free: contains essential amino acids, vitamins, inorganic salts, trace elements and growth factors.

Designed respectively: new epithelial cell lines from explants of human breast tissue and to grow immortalized normal breast cell lines; culturing epithelial cells from explant cultures of human skin as well as for culturing a number of human cancer cell lines; culturing immortalized normal prostatic cell lines.



Hepes Buffered Saline (HBS)

Isotonic saline buffered with Hepes: designed for rinsing cell monolayers prior to cell dissociation using PET[™] or washing harvested cells.



DMEM/F12

Serum-free: 1:1 blend of DMEM and Ham's F12 media supplied complete and ready to use; designed for culturing a wide range of cell types.



Iscove's Modified Dulbecco's Medium (IMDM)

Serum-free: supplemented with bovine pituitary extract and epidermal growth factor and contains L-glutamine and Hepes but no antibiotics.



Athena's Bovine Pituitary Extract

Prepared from pituitaries harvested from BSE-free animals free of contagious diseases in United States USDA-inspected facilities.



The SFM Screening Kit[™]

Serum-free, ready-to-use: 100mL sample of BRFF-BMZERO[™], BRFF-EPM2[™], BRFF-P4-8F[™], DMEM/F12, and IMDM. Plus a 25 mL sample of FNC Coating Mix[®] for optimum cell attachment.

Expression Media



LB Broth & Animal-Product-Free LB Broth™

3 variations of the basic nutrient-rich LB Broth media (Miller, Lennox, and Luria) as well as their APF Certified™ equivalents made using Athena's proprietary blended plant protein hydrolysate: Atholate™.



Turbo Broth™, Turbo Prime Broth™, Turbo Prime-Olate™

Proprietary media formulations uses glycerol for a carbon source and has a rich nutrient base of amino acids, vitamins, inorganic minerals and trace minerals are buffered at pH 7.2 ± 0.2 with potassium phosphate.



Power Broth™, Power Prime Broth™, Prime-Olate™

Proprietary rich, complex media formulations composed of amino acids, vitamins, and a carbon source at higher levels than Terrific Broth, buffered at pH 6.8 ± 0.2. Power Prime™ and Power Prime-olate™ are APF Certified™.



Superior Broth™, Superior Prime Broth™, Superior Prime-Olate™

Proprietary complex media formulations supplying a nitrogen source, vitamins, and moderate glucose levels. buffered at pH 7.2 ± 0.2.



Hyper Broth™

Proprietary rich, complex, media formulation which supplies amino acids, vitamins, and glucose at high levels; yields the highest level of biomass of all AthenaES® media. buffered at pH 7.3 ± 0.2.



Glucose M9Y

APF Certified™ minimal media formulation supplemented with yeast extract for the cultivation of E. coli. It is based on M9 salts with a pH of 6.9 ± 0.2 and employs glucose as the carbon source.



Glucose Nutrient Mix

APF Certified™ medium supplement used for enhancing the expression of proteins when using Athena's Hyper Broth™ or Glucose M9Y.



Atholate™

APF Certified™ proprietary blend of plant protein hydrolysates for use in the preparation of microbiological media. Animal-Product-Free alternative to casein hydrolysate.



Expression Media Selection Kit & Expression Media Sample Kit

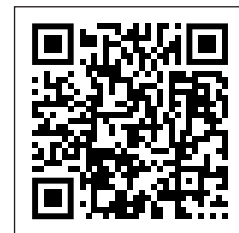
Athena's proprietary blends of Expression Media increase expression of proteins in E. coli up to 20 times more than industry standard LB Broth.

The new Expression Media Selection Kit contains sterile liquid aliquots of 15 media, including 11 proprietary formulations, as well as APF versions of Miller and Lennox. The Expression Media Sample Kit includes 6 of their proprietary formulations.

Silac Media



Prepared specifically for labeling experiments involving the use of stable amino acid isotopes. Athena provides several of the most commonly used media without L-arginine, L-lysine, L-leucine and L-methionine.



Scan to view Athena products
or visit
biolynx.ca/athenaes

Density Gradient Media



Much of modern cell and molecular biology relies on the isolation of pure, functionally intact populations of cells, subcellular organelles, and macromolecules in high yield. Furthermore, both research and clinical applications provide an impetus for the development of improved separation technology.

The most commonly used method of separating suspensions of mixed populations of biological particles is centrifugation in density gradients and the choice of medium used to form the gradients is crucial for the retention of particles' function. Nycomed/Axis-Shield/Alere Technologies have been actively involved over the last 45 years in the research and development of density gradient media.

No other density gradient media conform to such strict clinical criteria

- Lymphoprep
- Lymphoprep Tube
- OptiPrep
- Polymorphprep
- Nycodenz
- Polysucrose 400

Lymphoprep/Lymphoprep Tube - Isolation of human mononuclear cells

A simple and effective method for the isolation of mononuclear cells from human blood that has been used for over 45 years.

Lymphoprep Tube is a sterile tube in which the Lymphoprep is contained below a plastic filter disc. This allows diluted blood to be poured simply and directly into the tube, the disc preventing any mixing with the separation medium.

OptiPrep - The optimum density gradient medium

OptiPrep is a sterile and endotoxin tested solution of 60% iodixanol in water with a density of 1.320 g/mL. It is non-ionic, non-toxic to cells and metabolically inert.

- 51 protocols available for cell isolation.
- 62 protocols available for isolation of subcellular organelles and membranes.
- 38 protocols available for virus purification
- 13 protocols available for macromolecules and lipoproteins purification

Polymorphprep - Isolation of human polymorphonuclear cells

The high osmolality of Polymorphprep causes erythrocytes to lose water and shrink, thus increasing their effective buoyant densities. This allows the dextran aggregated erythrocytes to sediment rapidly through the dense medium.

Each batch of Polymorphprep is checked on the level of endotoxins using a specific LAL test. The goal is to produce batches with an endotoxin level lower or equal to 0.13 IU/mL.

The method is effective only with whole undiluted human blood not with a leukocyterich fraction or blood from animal species.

Nycodenz - A universal density gradient medium

Nycodenz is an off-white powder, freely soluble in water. It is non-ionic, non-toxic to cells and metabolically inert and can be used for the isolation of cells, subcellular organelles and membranes, macromolecules and viruses.

Polysucrose 400 - A universal density gradient medium

Polysucrose 400 is a synthetic high molecular weight polymer made by the copolymerization of sucrose and epichlorohydrin. The molecules have a branched structure with a high content of hydroxyl groups giving a good solubility in aqueous solutions.

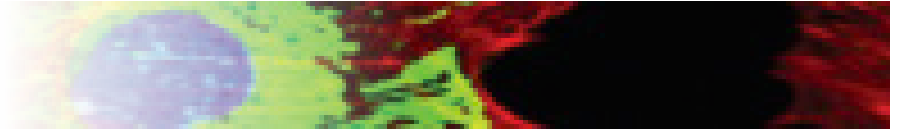


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biolynx.ca/Literature/sw01.pdf



Scan to view products or visit
biolynx.ca/Products/Supplier/Serumwerk-Bernburg

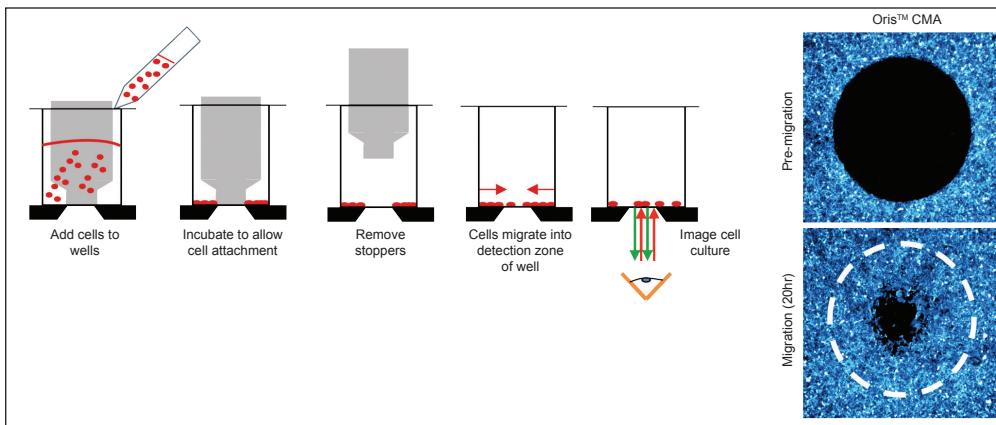
Cell Migration Assays



Cell Migration Assays from Platypus Technologies use exclusion-zone technology to ensure you obtain high-quality results that are ready for publication. The Cell Migration Assays by Platypus Technologies are powerful tools to advance studies in drug discovery, wound healing, or cancer research.

Oris™ Migration Assays use a physical “stopper” barrier to create a cell-free detection zone in the center of each well of a 96-well plate. The stopper assay is ideal for researchers who require greater manual control. For instance, if your cell type requires a lengthy adhesion period.

- Industry-standard 96- or 384-well formats
- Real-time monitoring
- Quantification with plate readers, microscopes or high-content imagers
- No artificial membranes
- Use Oris™ for maximal assay flexibility
- Use Oris™ if your cells require a long adhesion period
- Use Oris™ with the Oris™ Detection Mask for analysis on plate readers that lack virtual masking



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biolynx.ca/Products/s/Oris+cell

Why Choose Oris™ for Your Cell Migration Experiments?

Oris™ Cell Migration Assay Kits deliver unparalleled reproducibility, accuracy, and precision, making them the go-to choice for researchers seeking publication-ready, high-quality data.

Using the Oris™ Cell Migration Assay offers the following features and benefits:

- **Membrane-free Migration** – perform studies without manipulating transmembrane inserts.
- **Reproducible Results** – obtain well-to-well CV's < 12% due to the unique design.
- **Preserves Cell Morphology** – monitor changes in cell structure in real-time.
- **Flexible** – perform kinetic or endpoint cell migration assays without the use of special instrumentation.
- **Versatile** – analyze data using multiple probes in a single well by using a microscope, digital imager, or fluorescence microplate reader.

Quick and Easy Experiments with Oris™ Cell Migration Kits

- Kits are compatible with all adherent cell lines and come with wells coated in various extracellular matrices like Tissue Culture, F1 bronectin, or Collagen I. This ensures compatibility with a wide range of cell types.
- The assays work seamlessly with plate readers and high-content analyzers for quick cell migration quantification.

Transfection

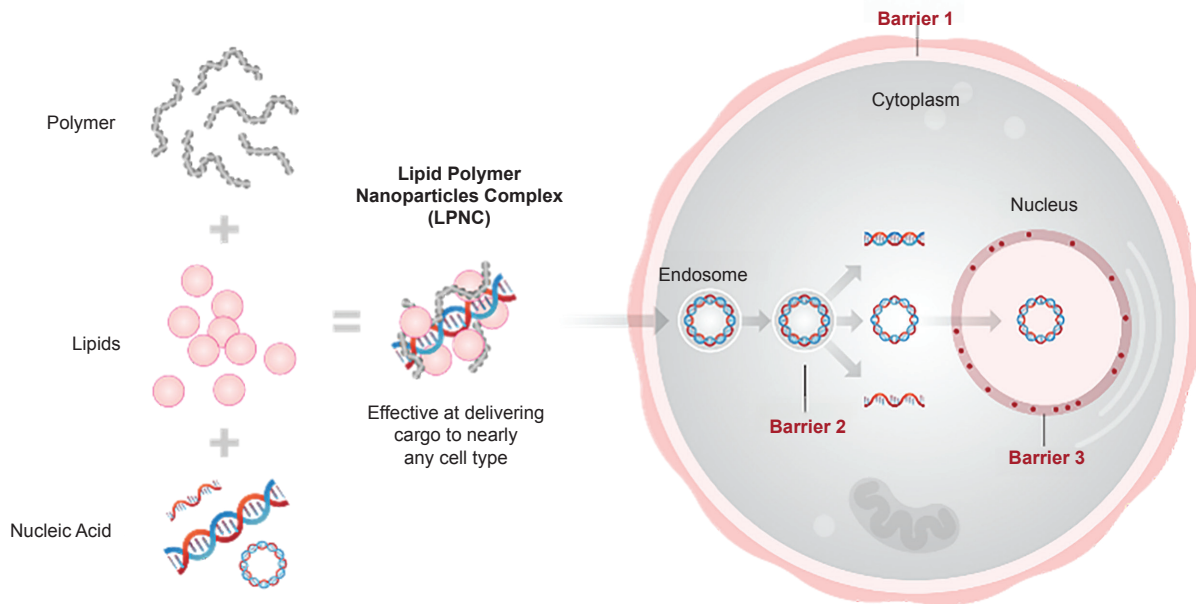


Transfection is a Complex Process

Transfection is the introduction of any nucleic acid molecule by non-viral means into cultured eukaryotic cells. Transfecting cells is a critical step in producing viral vectors for cell and gene therapies, manufacturing recombinant proteins and monoclonal antibodies for immunotherapies, editing genes through CRISPR, and applying a range of other applications such as silencing mRNA translation. Successful transfection requires navigating through several cellular barriers in a sequence of precisely orchestrated steps including:

- DNA complexation
- Cellular binding and uptake
- Endosomal release and cytoplasmic diffusion
- Nuclear transport

It's complex. That's why single component transfection reagents, whether they are polymers or lipids, are not sufficient to maximize efficiency of the process and retain cell viability.



In contrast to transfection reagents that consist of a single component, Mirus Bio transfection technology include both proprietary polymer and lipid elements. This combination enables both high transfection efficiency and low cellular toxicity.

With Mirus's transfection platforms, the polymer, lipid, and your nucleic acid come together to form a lipid polymer nanoparticle complex, which is effective at delivering cargo to nearly any cell type.

Mirus offers a range of effective transfection solutions and tools for a comprehensive set of cell lines. These solutions are intentionally designed to be gentle on cells and maximize cell delivery while using a simplified, straightforward protocol.



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Transfection



Ingenio® EZporator®

The Ingenio® EZporator® Electroporation System is an easy-to-use electroporation systems for mammalian cells.

- Easily optimize electroporation parameters for each cell type.
- Every system comes with a complimentary ingenio® Electroporation Kit



TransIT®-TKO Transfection Reagent

A high efficiency, low toxicity, siRNA and plasmid DNA transfection reagent for mammalian cells.



TransIT®-X2 Dynamic Delivery System

A dynamic transfection system for the delivery of plasmid DNA, siRNA/miRNA and CRISPR/Cas9 components.

A versatile transfection reagent that is the solution for hard-to-transfection and common cell types. Proven and reliable.



TransIT®-siQUEST Transfection Reagent

A high efficiency, low toxicity, siRNA transfection reagent for mammalian cells.



TransIT®-LT1 Transfection Reagent

A broad spectrum, low toxicity, DNA transfection reagent.



TransIT®-Oligo Transfection Reagent

A high efficiency, low toxicity, transfection reagent optimized for oligonucleotide delivery into a wide range of cell types.



TransIT®-2020 Transfection Reagent

A high performance, animal-free, broad spectrum DNA transfection reagent.



TransIT-VirusGEN® Transfection Reagent

Proven Nucleic Acid Delivery for Large-Scale Virus Production.



TransIT®-mRNA Transfection Kit

A high efficiency, low toxicity transfection reagent for large RNA and CRISPR guide RNA

Each Kit is supplied with the TransIT®-mRNA Transfection Reagent and the mRNA Boost Reagent.



RevIT™ AAV Enhancer

Paired with any transfection reagent, the RevIT™ AAV Enhancer delivers higher titers for recombinant adeno-associated virus production

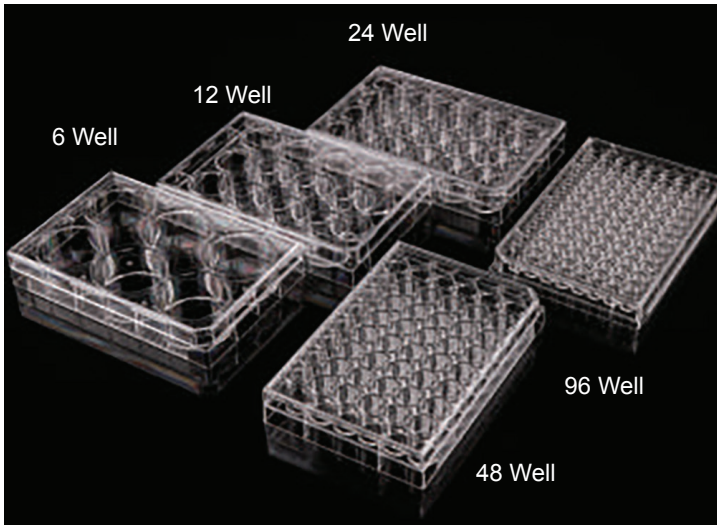
Produce more patient doses at a lower cost and in less time.

SAMPLES AVAILABLE

Cell Culture Labware



Cell Culture Plates

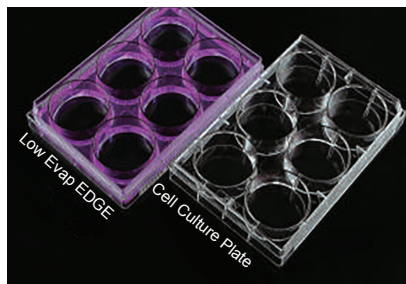
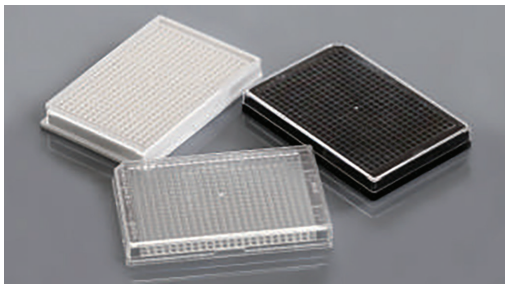


- Sterilized by E-beam, SAL=10⁻⁶.
- High clarity, 100% virgin polystyrene.
- "TC" refers to vacuum plasma tissue culture treatment.
- Clear lot number for batch traceability.
- Markings of well coordinates available for 6, 12, 24, 48 and 384 well plates.
- Non-Pyrogenic, DNase/Rnase free.

* TC-treated plates are intended for adherent cell culture, while the non-treated ones are suitable for suspension cell culture.

Well Number	Cell Growth Area (cm ²)	Recommended Medium Volume (mL)	Bottom Type	Colour
6 Well	9.5	1.9-2.9	U	Clear
6 Well Low Evap EDGE Plate				
12 Well	3.6	0.76-1.14		
24 Well	1.9	0.38-0.57		
48 Well	0.88	0.19-0.285	U	Clear
96 Well	0.32	0.1-0.2		
	0.66			
	0.41			
96 Well	0.32	0.1-0.2	U	White
				Black
				White, transparent bottom
				Black, transparent bottom
96 Well Low Evap EDGE Plate	0.32	0.1-0.2	U	Clear
384 Well	0.11	0.025-0.05	U	Clear
				Black
				White
				White, transparent bottom
				Black, transparent bottom

See pg. 8 of the NEST Catalogue

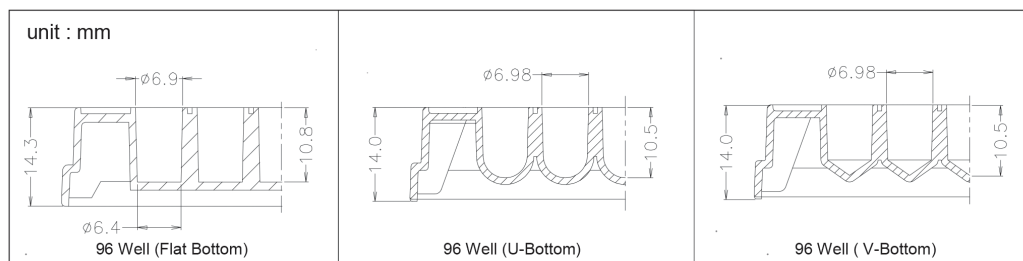


Low Evap EDGE Cell Culture Plates

- Grooves are designed at the edge of the culture plate to avoid the edge effect to the greatest extent and to ensure that the cells maintain their optimal state during cell culture.

384 Well Cell Culture Plates

- NEST microplates have been designed for high content screening (HCS) assays in drug development and related areas. It is also suitable for homogeneous assays employing fluorescence intensity, FRET and TR-FRET where measurements are bottom-read.
- Black microplates, which can reduce mutual influence, are suitable for fluorescent assays involving either top or bottom detection microplate readers.
- White microplates suit luminescent assays involving either top or bottom detection microplate readers.



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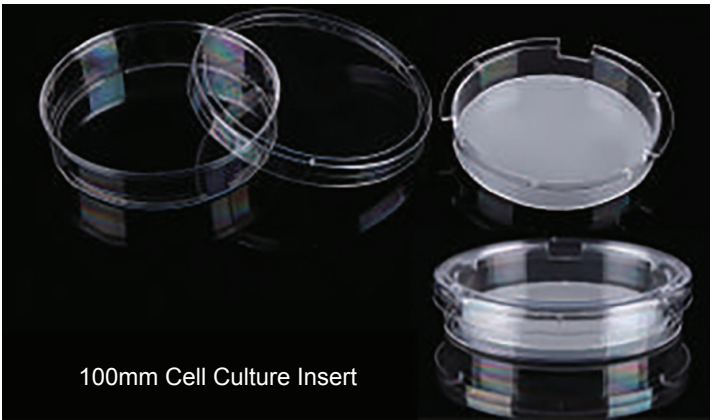
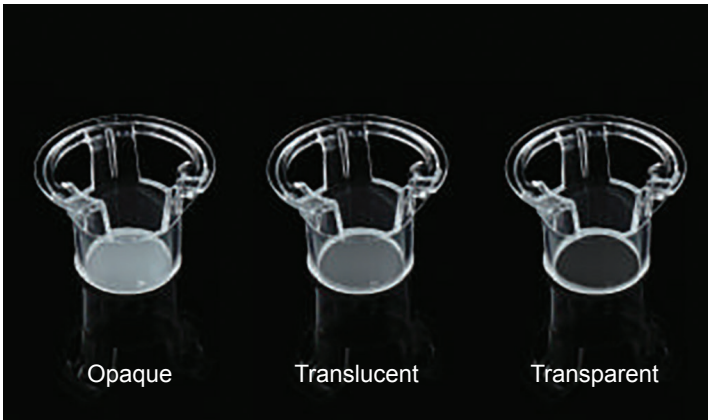
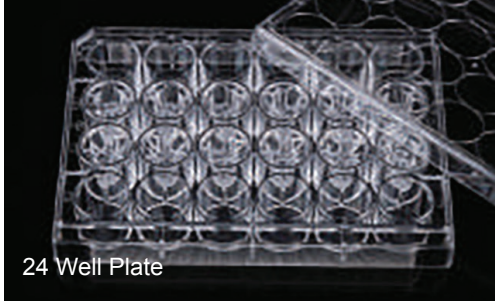
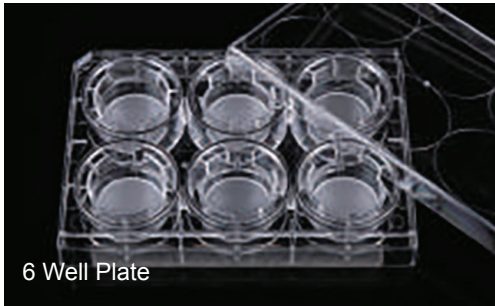
Cell Culture Labware

Cell Culture Inserts

Cell and tissue culture technologies have an increasing importance in the fields of basic and applied life science. New culture vessels and new surfaces for cell adsorption are continuously emerging, in order to simulate the internal environment as much as possible for culture of some special cell lines. Logically, using permeable supports with a microporous membrane becomes the basic method for culturing these cells. Permeable supports may effectively improve the culture of polar cells, because these supports allow cells to secrete on and absorb molecules from their basal and apical surfaces to metabolize in a more natural way, as well as to stimulate the in vivo environment to the maximum extent for culturing of some special cell lines.

Features

- Sterilized by E-beam, SAL=10⁻⁶.
- Vacuum Plasma tissue culture treatment.
- Non-Pyrogenic, DNase/Rnase free.
- A rich selection of matching plates: 6-well, 12-well, 24-well.
- Passed the USP VI toxicity test.
- Cell culture plates are made of high clarity, 100% virgin polystyrene.
- Clear lot number for batch traceability.
- Innovative edge design for convenient sample loading.
- Low protein binding to ensure accurate results.
- Compatible with most solvents used for fixing and staining.



Cell Culture Labware

Glass Bottom Cell Culture Plates & Dishes

NEST glass bottom series for microscope cell observation.

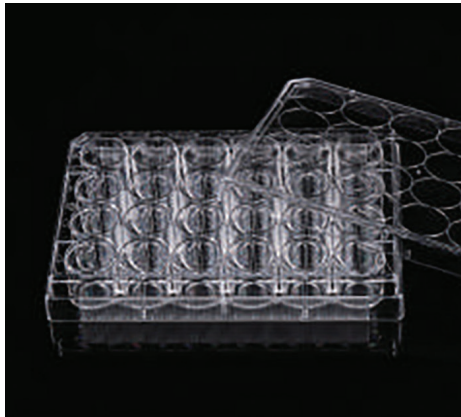
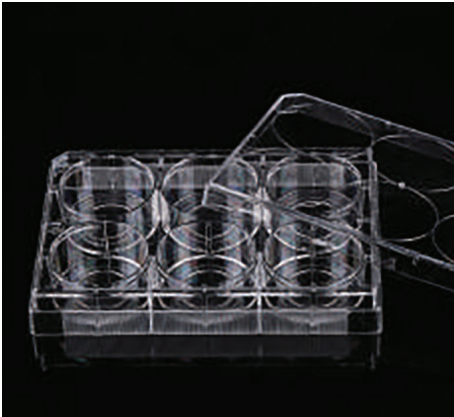
Features

- Can be used for live cell observation.
- Special bottom design for easy grip.
- Round cover glass inserts for good appearance.
- Medical adhesive glue to guarantee non-cytotoxicity.
- Sterilized by E-beam, SAL=10⁻⁶.
- Made of high clarity, 100% virgin polystyrene and high clarity glass as bottoms.
- High quality cover glass of standard thickness.

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Cell Culture Dishes

NEST cell culture dishes are ideal for all types of culturing where microscopic examination is required. Numeric indicators on the bottom of each plate allow users to identify the location of cells.

Features

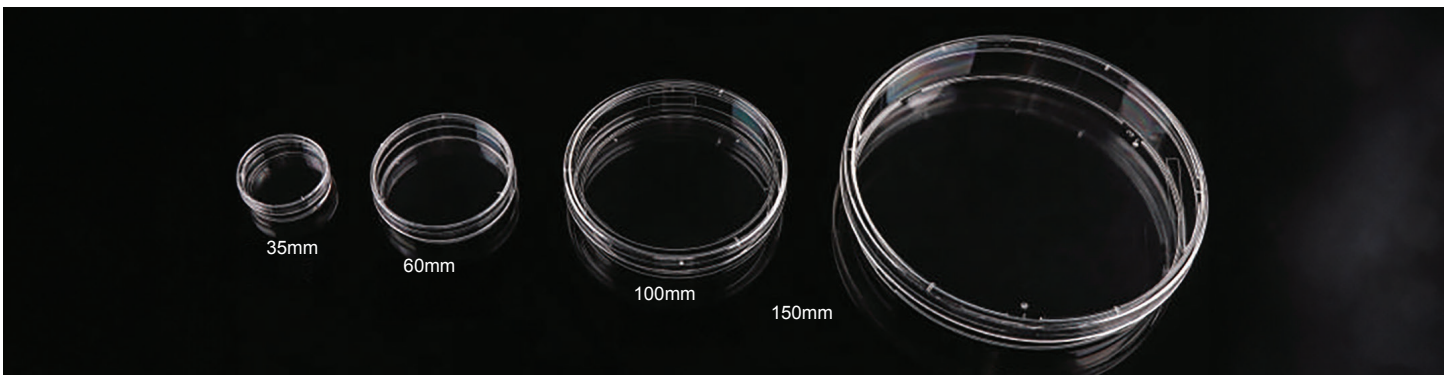
- High clarity, 100% virgin polystyrene.
- Flat transparent surface for distortion-free observation.
- Vacuum plasma TC treatment, excellent cell adsorption.
- Stackable for easy storage and handling.
- Sterilized by E-beam, SAL=10⁻⁶.
- Non-Pyrogenic, DNase/Rnase free.



Sterilized Packing



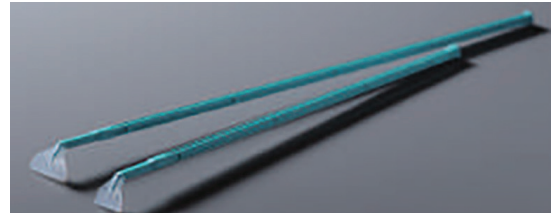
Vent points for Gas Exchange



Cell Culture Labware

Cell Scraper

- Free rotating blade.
- Easy-tear sterile packing.
- Sterilized by E-beam, SAL=10⁻⁶.
- Non-Pyrogenic, DNase/Rnase free.
- Individually packaged.



Cell Strainer

- Ideal for stem cell and tissue-derived primary cell preparation.
- Fits nearly all 50 mL conical tubes.
- Tab molded within upper ring enables easy sterile handling.
- Sterilized by Gamma ray.
- Non-Pyrogenic, DNase/Rnase free.
- Individually packaged.



Reagent Reservoir

- Made of USP Class VI Polypropylene.
- The V shape bottom.
- A large capacity of 60 mL; injection-moulded with scale lines.
- Individually labeled with the product number.
- Non-Pyrogenic, DNase/Rnase free.



Reservoirs

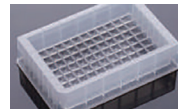
- Made of USP Class VI.
- Freezable down to -80°C.
- Conforms to ANSI (American National Standards Institute) SBS standards.
- Individually labeled with the batch number.
- Non-Pyrogenic, DNase/Rnase free. Low heavy metal content.
- Sterilized by E-beam, SAL=10⁻⁶.



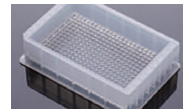
8 Channel



12 Channel

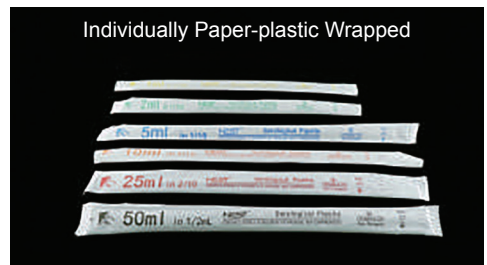


96 Channel



384 Channel

Serological Pipettes



NEST serological pipettes can be used in biological research such as tissue culture and bacterial culture. Pipettes of different specifications are distinguished by different colours.

Features

- Edged colour-coded band for identification.
- Made of high clarity, 100% virgin polystyrene.
- Negative graduations for extra volume.
- Polyolefin fiber filter to reduce contamination.
- Labeled with the batch number for easy quality tracking and traceability.
- Non-Pyrogenic, DNase/Rnase free.
- Sterilized by E-beam, SAL=10⁻⁶.

Cell Culture Labware

Cell Culture Flasks

NEST's Cell Culture Flasks cell growth areas range from 25 cm² to 225 cm². These flasks are available treated or non-treated as well as with a vent cap or plug seal cap to meet your requirements.

Features

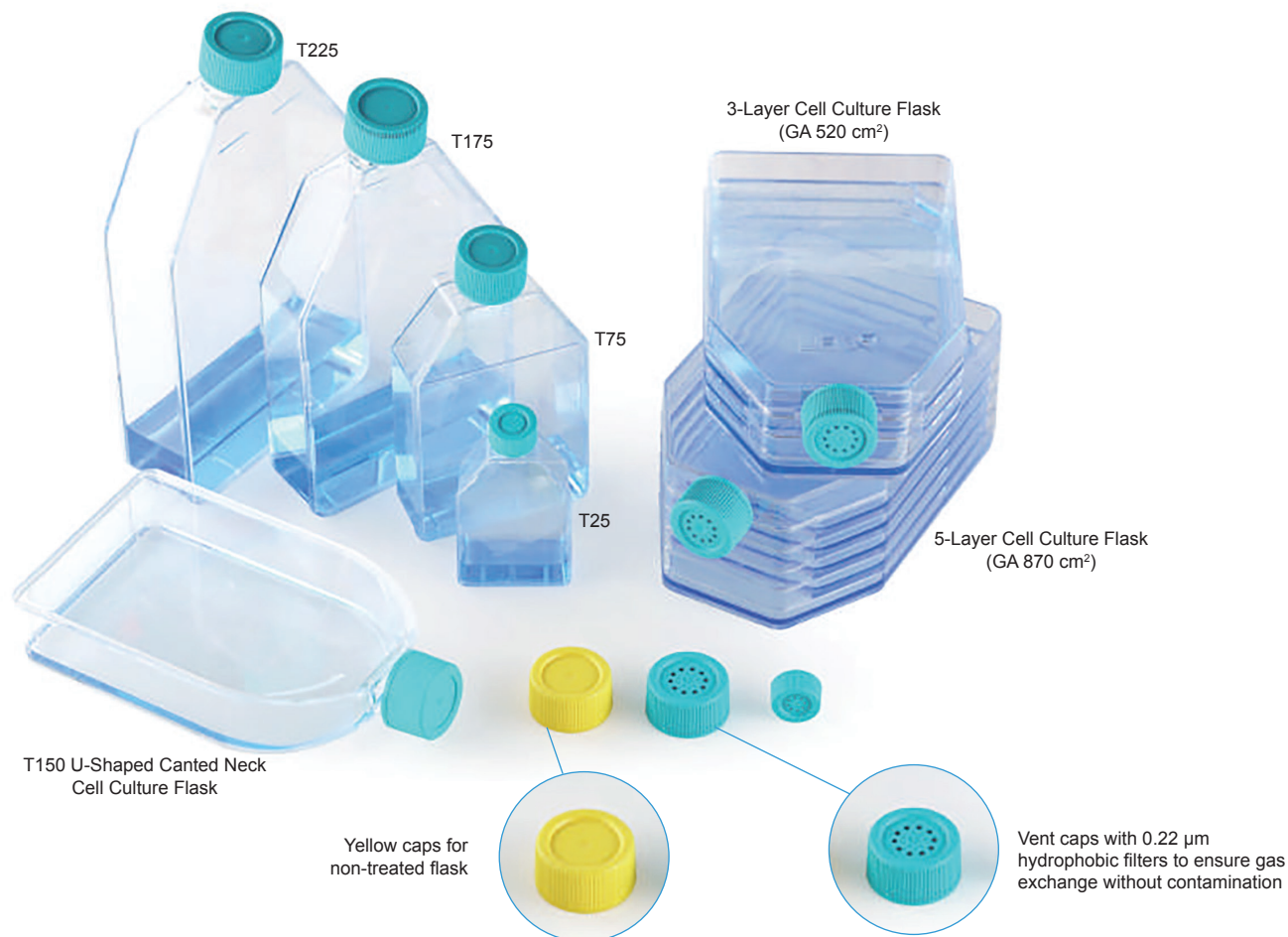
- Made of high clarity, 100% virgin polystyrene.
- Sterilized by E-beam, SAL=10⁻⁶.
- Non-Pyrogenic, DNase/Rnase free.
- Frosted writing and clear graduations.
- Notched bottom for slip free stacking.
- Clear lot number for batch traceability.
- Packaged in sterile, zip-sealable bags.

3 / 5 - Layer Cell Culture Flask

- 3-Layer Cell Culture Flask Growth area: 520 cm².
- 5-Layer Cell Culture Flask Growth area: 870 cm².
- Individually packaged in sterile bag.

Tech Tip:

It is important to handle multi-layer Cell Culture Flasks with caution to avoid the formation of bubbles. The presence of bubbles can lead to the creation of siphon bridge at the baffle, resulting in the upper layer of culture medium flowing down to the bottom.



50 mL Min Bioreactor

Features

- Made of USP Class VI Polypropylene.
- High transparency.
- Vent caps with 0.22 μm hydrophobic filters.
- Sterilized by E-beam, SAL=10⁻⁶.
- Non-Pyrogenic, DNase/Rnase free.
- Suitable for centrifugation.



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Cell Culture Labware

Sample Vials and Sample Caps



Available in 6 Colours

- 6 colour Caps (blue, red, yellow, green, purple and natural) personalize the identification of different reagents in a fast and convenient way.
- Cap colour is encoded in the product code.
- Products are made of transparent polypropylene which meets USP Class VI standards and is free of heavy metal ions. Products can be used in proteomics, drug development, genomics and other fields.
- Special knurling design on the vial body enables the vial to be stuck in the special base and to be tightened with a single hand.
- Silicone O-ring inside the screw caps ensures secure sealing. ADR & IATA compliant, no liquid leakage in negative pressure test under a pressure of -0.95 bar.
- Withstands a maximum centrifugal force up to 20,000 xg.

Microcentrifuge Tubes



Rounded bottom without tip



Special safe-lock cap



Clear graduations



Frosted marking area



- USP VI grade polypropylene material, free from heavy metal.
- RCF: 30,000 xg.
- Sterilized by E-beam, SAL=10⁻⁶.
- Autoclavable at 121°C/15psi
- RNase free, endotoxin level less than 0.1EU.
- Each package is individually labeled with a product number for easy quality tracking and traceability.
- Brown colour provides protection from light for light-sensitive substances.



Microwtube® Selection Tool

With their unique models and incredible selection, Simport has developed the Microwtube® Selection Tool to help you select the optimal product based on your needs.



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Cell Culture Labware

Cryogenic Tubes

- Soft rubber sealing surface design, passing vacuum test, ensuring sample safely.
- New polymer material, improved cryogenic and anti-aging performance, high-temperature and high pressure sterilization.
- Suitable for automation.
- Multi-colour coded caps.



Cap Type	External thread cap				Internal thread cap			
Capacity (mL)	1.5	2.0	4.0	5.0	1.5	1.8	4.0	5.0
Overall height (mm)	40.7	45.5	76.3	93.3	40.7	45.5	76.3	93.3
Size parameters (mm)	10				8.3			
Outer diameter Φ (mm)	12.85				12.10			
Temperature Range	-196 to 121°C				-196 to 121°C			

SBS Format Cryogenic Tubes

- Medical Grade.
- DNase/RNase.
- DataMatrix Code, Barcode, and readable code, laser-etched on the bottom and side of the tube.



Cap Type	External thread cap						Internal thread cap		External thread cap		
Capacity (mL)	0.5	0.75	1.0	2.0	4.0	6.0	8.0	0.5	1.0	4.0	1.9
Overall height (mm)	27.6	37.3	45.6	45.5	76.3	57.5	71.7	33.5	51.4	76.76	42.96
Size parameters (mm)	5.3		10			10.3		6.55			
Outer diameter Φ (mm)	8.85		12.85			17.8		8.7		12.8	
Temperature Range	-196 to 121°C						-196 to 121°C				

Note:

1. The thread of the external thread cap is not directly exposed to the outside, which minimizes the possibility of cross-contamination.
2. The internal thread cap has the same diameter as the cryogenic tube, which has an advantage in intensive storage applications.
3. The maximum volume of the external thread cap is closer to the nominal volume than the internal thread cap. Since the content volume usually increases during liquid freezing, the recommended usage volume of both external and internal thread cap cryogenic tubes is 80% of the maximum volume.
4. Both storage methods are aimed at ensuring the safety of cryogenic storage and can be freely selected according to the actual user needs.

Cell Culture Labware

Ice Free Cool Boxes



- When handling low-temperature samples, it plays the role of a portable refrigerator, quickly cool and temporarily stabilizing the temperature, maximizing the preservation of cell, nucleic acid, protein, and other sample activities.
- Suitable for tissue culture incubators, biosafety cabinets, and other limited space situations.

Cell Freezing Boxes



- Used for freezing various cell types, including stem cells, primary cells, cell lines, and yeast, etc.
- “Slow freezing” to protect cell activity; just place in a -80°C freezer and the sample will cool down at 1°C per minute.

Defrosting Device



The NEST defrosting device is a tool used to quickly remove frost from the bottom of boxed cryogenic vials.

Features

- Wide compatibility: Can be used for 24, 48, 96, and 384 formats of different brands of cryogenic boxes.
- Sample integrity: Achieves bottom defrosting without heating, and the sample can still maintain a frozen state.
- Practicality: Sponge roller is easy to assemble. The first roll requires the addition of a special reagent, and the second roll dries it, making it easy to use.

Vertical Freezer Racks



- Made of 304 ultra-thick stainless steel.
- Anti-corrosive and oxidation resistant.

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- Cell Migration Assays
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- ELISAs
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- Semi Automated Pipettors
- Freezer Racks
- Tubes
- Histology Labware
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- Sample Storage
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- SPR
- Tube Labeling and Thawing
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