



Automated Cell-Thawing System

The CellSeal Automated Thawing System provides users with thorough control in the thawing of cryogenically frozen cells, a critical step in the delivery of cell and gene therapies. CellSeal addresses a vital and overlooked aspect of cell-based therapy development. The current practice of thawing these potentially fragile, living therapies relies on a manual process using a water bath. The new system works through dry conduction—with no need of water, a potential source of contamination—and provides an effective, reliable, and scalable solution that supports Good Manufacturing Practice requirements. Therapy manufacturers can tune a thaw profile to suit the specific

needs of their cell therapy, and then lock the profile down for one-touch repeatability. The system removes any user subjectivity by detecting the precise thaw end-point—extremely difficult to achieve using the standard water-bath process. The technology offers manufacturers consistent control over the thawing process. Data recording in each CellSeal Automated Thawing System captures a record of that process—with appropriate software, hardware, and connectivity, this data can be viewed anywhere in the world to validate and implement a manufacturer's end-to-end thawing protocol.

Asymptote

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3D Cell Culture System

New applications of Lonza's versatile RAFT 3D Cell Culture System include its use as an advanced model of breast cancer for drug discovery, demonstrating how the system can be used to mimic the complex tumor microenvironment. Lonza's RAFT System allows researchers to culture cancer cells in a high-density collagen matrix and produce physiologically relevant cell culture models that offer a better prediction of the in vivo efficacy of drug candidates. The RAFT Kit, available in 96- or 24-well formats, includes a Collagen Type I solution and RAFT Absorbers, so researchers can control both cell concentration and matrix density. An important advantage of the RAFT System over other 3D platforms and 2D culture methods is its power to enable the development of complex in vitro models, especially those where a multilayer coculture setup has proven difficult to achieve via alternative methods—for example, the development of liver fibrosis and corneal models.

Lonza

For info: 800-638-8174
www.lonza.com

Human Mesenchymal Stem Cells

Human Mesenchymal Stem Cells (MSCs) are collected and purified from adult bone marrow. Using standardized culture methods, isolated MSCs are expanded to generate significant numbers of cells at an early passage. MSCs provide an ideal platform for the study of stem cell biology and immunoregulation, and can be differentiated into adipocytes (fat), osteocytes (bone), and chondrocytes (cartilage) using standard protocols. MSCs are isolated from healthy, young adult donors and cryopreserved at passage 2. MSCs can be expanded in culture (6.5–8 population doublings) and are characterized by their positive expression of CD73 (99%), CD90 (99%), CD105 (99%), and CD166 (99%). In addition, MSCs do not express CD14 ($\leq 1\%$), CD34 ($\leq 1\%$), and CD45 ($\leq 1\%$). MSCs are produced

by Extem and distributed by MatTek throughout North America. All cells are screened and found to be negative for mycoplasma, bacteria, yeast, fungi, HIV1/2, Hepatitis B, and Hepatitis C.

MatTek

For info: 508-881-6771
www.mattek.com

Cell Culture Media for Protein Expression

The BalanCD HEK293 System includes a highly versatile series of chemically defined cell culture media designed to increase productivity in a range of applications, rapidly delivering high yields of viral vectors and recombinant proteins. It is fully scalable and supports small- to industrial-scale batch sizes. Utilizing human embryonic kidney (HEK293) cells, the system supports applications including viral vector production for gene therapy, transient gene expression, and recombinant protein production in suspension-adapted HEK293 cells. Central to the new system's versatility, scalability, and efficiency is BalanCD HEK293, a bifunctional medium that supports both growth and transfection in multiple 293 cell lines, which means there is no need to change media before and after transfection. BalanCD Anti-Clumping Supplement further increases productivity by preventing HEK293's natural tendency to aggregate, thereby improving growth. Both BalanCD HEK293 growth and feed media and the Anti-Clumping Supplement are chemically defined and animal-component free.

Irvine Scientific

For info: 800-577-6097
www.irvinesci.com

96-Well Plate

Designed to eliminate evaporation during extended incubation, the new Thermo Scientific Nunc Edge 2.0 96-Well Plate enables full-plate usage and increased well-to-well consistency, providing improved productivity for cell-based assays. Typically, researchers would avoid using the outer wells of the plate—accounting for 37.5%—to minimize evaporation of the medium during incubation. Commonly known as the “edge effect,” this phenomenon can result in inconsistent volumes and concentrations, which can alter cell viability and lead to biased results. The Nunc Edge 2.0 Plate features a surrounding moat which, when filled with sterile media or buffer, serves as an evaporation barrier during prolonged incubation. This novel design reduces the overall plate evaporation rate to less than 2%, providing researchers with a cost-effective alternative to the standard 96-well plate. The plate is available with both cell culture-treated and non-treated surfaces to suit a range of laboratory applications.

Thermo Fisher Scientific

For info: 800-955-6288
www.thermofisher.com

Cell Incubator

The Avatar system replicates the in vivo microenvironment of cells to deliver reproducible, biologically relevant results. It was designed to create an environment that could be more carefully tailored to any type of cell, and thus increase success rates for maintaining and expanding difficult-to-grow cells. This innovative culturing system improves on current incubators by incorporating important biological traits—hypoxia and pressure—as fully customizable settings. By using adjustable settings for oxygen and pressure levels in addition to the usual temperature and carbon dioxide levels, the Avatar system allows scientists to recreate the native microenvironment of their samples and to generate more physiologically relevant results. The system includes a benchtop and stackable instrument as well as consumables for a number of applications, such as cancer research, biomarker discovery, lead candidate selection and optimization, stem cell research and regenerative medicine, and immunotherapy drug development.

Xcell Biosciences

For info: 415-937-0321
www.xcellbio.com

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