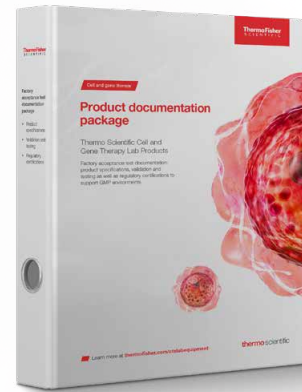




Laboratory equipment

Setting up a cell therapy production facility

LABORATORY EQUIPMENT FOR CELL THERAPY PRODUCTION



Documentation package included with all CTS Series products.

Thermo Scientific lab equipment can help you meet your GMP needs in and out of the clean room

Achieve reproducible, reliable, and fast results with our range of advanced laboratory equipment for cell therapy manufacturing. These products can help support your path from research and development to process development, GMP and clean room needs, and quality control. When you partner with us, you also get expert guidance to help you work with confidence.

Fit-for-purpose products

Thermo Scientific™ CTS™ Series products and laboratory equipment are uniquely designed for GMP and clean room cell therapy manufacturing. They can help you get up and running fast, stay compliant, support regulatory audits, and stay on schedule. When you purchase a CTS Series product, you receive:

- A product with high capacity, enhanced cleanability, contamination control technologies, and documentation functionalities
- A documentation package including Factory Acceptance Test (FAT) documentation and certifications, as well as recommended protocols
- Compliance services including installation qualification (IQ) and operation qualification (OQ); also, cycle testing or temperature mapping (depending on product) can be added to any CTS Series equipment purchase



Biological safety cabinets, CTS Series

The Thermo Scientific™ Herasafe™ 2030i Biological Safety Cabinet, CTS™ Series, is designed to maximize sample protection and user safety, with an emphasis on containment, comfort, and convenience. Equipped with smart self-monitoring safety features, an intuitive touchscreen, and built-in connectivity, the CTS Series BSC is available with a complete documentation package and compliance services.



CO₂ incubators, CTS Series

Thermo Scientific™ Forma™ Steri-Cult™ CO₂ Incubators, CTS™ Series, can provide excellent protection for high-value cultures. With two model sizes, 232 L (8.2 cu ft) and 322 L (11.4 cu ft), the stackable incubators are suited for high-volume culturing. Features include proven 12-log sterilization, in-chamber HEPA filtration, active humidification system, and compatibility with common cGMP facility protocols.



Clean room-compatible CO₂ incubators, CTS Series

Thermo Scientific™ Heracell™ Vios CR and Forma™ SteriCycle™ CO₂ incubators, CTS™ Series, are third party-certified clean room-compatible CO₂ incubators suitable for use in ISO Class 5 and GMP Grade A/B environments. They are available in two model sizes, 165 L (5.8 cu ft) and 255 L (9.0 cu ft), in a compact footprint and readily stackable. Dedicated shelving systems optimize the inner space of the 255 L model for large vessel types such as G-Rex™ bioreactors* by Wilson Wolf and Thermo Scientific™ Nunc™ Cell Factory™ systems, enabling high throughput and exceptional circulation and access.

* Availability depends on region.



Centrifuges, CTS Series

Thermo Scientific™ General Purpose Pro Centrifuges, CTS™ Series, provide optimal spin performance and easy programming with an intuitive touchscreen interface. These 4 L bench and floor models come with a documentation package and compliance services to help ensure fast setup in a GMP environment. Optionally available Thermo Scientific™ SECURE-Spin mode includes advanced user management and electronic data recording, supporting 21 CFR Part 11 compliance. Centralized monitoring and use of the sample tracking kit are enabled when combined with Thermo Scientific™ Centri-Log™ Plus Data Management Software.



Bioprocessing centrifugation system

This next-generation centrifuge container provides a single-use, sterilized, closed system for cell culture separations. The Thermo Scientific™ Sorvall™ BIOS 16 Centrifuge with Thermo Scientific™ CentriPAK™ BPC system can maximize your sample security and minimize process time by helping reduce cross-contamination risks, eliminating post-use cleaning steps, and enabling high-efficiency, high-throughput harvesting while adhering to all bioprocessing quality standards.



CryoMed Controlled-Rate Freezers with OPC UA

Thermo Scientific™ CryoMed™ Controlled-Rate Freezers with OPC™ United Architecture (UA) offer customizable freezing profiles and enable precise, repeatable freezing results to help protect precious samples from intracellular ice formations. Once frozen, samples can be placed into long-term cryogenic storage or shipped with cryo transport solutions. 21 CFR Part 11 compliance and GMP needs are supported by enabling the use of electronic records and signatures during the manufacturing process, which helps improve operational efficiency, enhance system security, and decrease the number of records with defects.



High-performance lab refrigerators and freezers (clean room-compatible)

Selected Thermo Scientific™ TSX High-Performance Pharmacy Refrigerators, TSX High-Performance Manual Defrost -20°C Freezers, and both TSX and TDE Series Ultra-Low Temperature Freezers offer features ideally suited for pharmaceuticals and therapies, including specialized storage options and at least GMP Clean Room Class A/ISO 6 (ISO EN 14644-14) compatibility with appropriate pre-install preparation.

Products for a GMP quality control lab

The final process of ensuring that the cell therapy product has all of the desired attributes, including safety, quality, purity, and efficacy, can be supported with the following Thermo Scientific™ laboratory products:

- ClipTip™ pipette tips
- Barnstead™ GenPure™ Pro Water Purification System
- Environmental chambers
- Heratherm™ IMP400 Refrigerated Incubator
- Heratherm™ advanced protocol security microbiological incubators
- Multidrop™ Combi Reagent Dispenser
- Orion™ Versa Star Pro™ Benchtop pH Meter and Orion™ pH electrodes and solutions
- Orion™ conductivity cells and meter kits
- Solaris™ orbital shakers
- Thermal mixers

Products for storage and transportation

Once production is complete, the journey from lab to patient begins. Thermo Scientific™ laboratory products for short- and long-term storage can help ensure therapies are frozen, stored, and safely thawed at their ideal temperatures until they are ready for use.

- Arctic Express™ dual storage systems
- CryoExtra™ high-efficiency cryogenic storage systems
- CryoMed freezers with OPC UA
- CryoPlus™ storage systems
- Nalgene™ and Nunc™ sample storage equipment and consumables
- Smart-Tracker™ Wireless Datalogging Module
- TSX Series High-Performance –20°C Manual Defrost Freezers
- TSX Series High-Performance Lab Refrigerators
- TSX Series Ultra-Low Temperature Freezers

 Learn more at thermofisher.com/ctlabproducts

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