Celsius® FFT: Safeguarding Your Drug Substances in Conventional Freeze & Thaw Manufacturing

- Maximum Product Security
- Simple, Easy-to-Use
- Improves Process Efficiency
- Creates Process Flexibility

turning science into solutions
Celsius® FFT

Celsius® FFT (Flexible Freeze and Thaw) are sterile, pre-assembled, single-use containers for freezing & thawing biopharmaceutical solutions in commercially available equipment.

Celsius® FFT is a unique bag-in-shell system that replaces traditional freezing and thawing methods.

Celsius® FFT provides exceptional robustness and confidence when handling the frozen container. Purpose-designed Shippers further maximize mechanical and thermal protection during transportation.

**Maximum Product Security**

**Safeguards BDS Throughout Lifecycle**

Same quality but thicker Flexboy® S71 film plus unique thermo-formed shell protects your bulk drug substances at low temps; proven in real & extreme process conditions

**Confident Handling**

Contoured shell protects tubing, connectors and bag ports, and ensures confident handling when frozen

**Pre-Qualified Shippers**

Purpose-designed single-use shippers pass rigorous robustness test program and provide excellent thermal performance of > 96 hours at below -40°C

**Implements Process Efficiency**

**Stackable**

Ribbed shell corners provide stable stacking; stack FFT up to 5-high for efficient use of freezer space

**One-Way Logistics**

Purpose-designed shipper is constructed of recyclable materials and uses dry ice to allow efficient disposal after use

**One Supplier**

Bag, shell and shipper all provided by Sartorius for single-point accountability and process expertise

**Simple, Easy-to-Use**

**Closed System Processing**

100% bag chamber leak test, pre-assembled shell and connectors, and gamma-sterilized ensure successful aseptic processing, every time

**Easy-to-Use**

Container design and tubing configurations promote easy, confident operations for operator

**Consistent**

Shell design provides spacing and vents between stacked FFT for consistent heat transfer to each unit and ensures batch-to-batch consistency

**Creates Process Flexibility**

**Easy Implementation**

Drop-in replacement to bottles | carboys and uses existing freezers and thawing methods

**Configurable**

FFT can be configured to fit to process needs and can be designed into manifolds

**Scalable**

Product range up to 12L fill volumes; common film to Celsius®-Paks for efficient process development and samples in 30mL Celsius®-Paks

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