Galileo TMA Frozen Module:
Simplifying Frozen TMA Construction

Overview

The Galileo Frozen Module, an essential accessory compatible with ISENET's Galileo CK3600 and CK4600 systems, provides a temperature-controlled environment critical for constructing high-quality frozen tissue microarrays (TMAs). By maintaining precise temperature control throughout processing and storage, this module ensures the integrity of sensitive biological samples, minimizing thermal degradation and enhancing downstream results.

- Plug-in accessory
- Cooling media: Dry Ice
- Easy to use Frozen Block module to construct Frozen TMAs in a controlled temperature environment.
- High quality of Frozen TMA blocks

Key Features

•Controlled Temperature Environment

- Operates at adjustable sub-zero temperatures (-20°C to -80°C) to meet specific protocol needs.
- Ensures rapid cooling and stable temperature control, preserving sample integrity, especially for temperature-sensitive workflows.

•Sample Compatibility

- Accommodates a variety of biological samples, including tissue, blood, and cell cultures.
- Supports both single and multi-sample processing for flexible application across studies.

•Integration and Automation

- Seamlessly integrates with Galileo CK3600 and CK4600 systems for automated temperature adjustments according to protocol stages, reducing manual intervention.
- Allows for scheduling and automation of freeze-thaw cycles as needed for specific workflows.

•Data Monitoring and Logging

- Real-time monitoring of temperature parameters for compliance with protocols.
- Built-in data logging for traceability, regulatory adherence, and quality control through historical temperature data review.

•Energy Efficiency

- Energy-efficient design reduces power consumption while maintaining precision.
- Operates with low noise and minimal vibration to preserve a stable lab environment.

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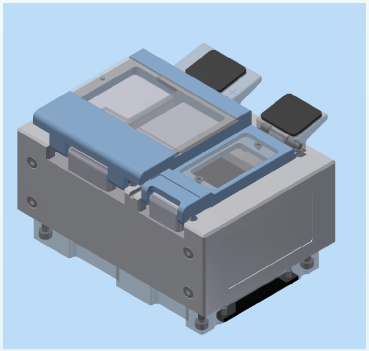

Technical Specifications

1. **Temperature Range**: Adjustable from -20°C to -80°C in 1°C increments
2. **Cooling Rate**: Customizable to sample and protocol
3. **Capacity**: Accommodates up to [one Donor and one recipient block]
4. **Integration**: Compatible with Galileo CK3600 and CK4600
5. **Monitoring**: Real-time display and logging
6. **Power Requirements**: USB port

Safety and Compliance

The Galileo Frozen Module is designed to meet international safety standards, including ISO and CE certifications, ensuring reliable and compliant operation in research and clinical environments.

Applications

Frozen tissue arrays are particularly advantageous for molecular analysis and the preservation of native tissue characteristics. Here are the key benefits:

1. **Molecular Integrity**: Maintains DNA, RNA, and protein structures in their native state, unlike FFPE processing, which can cause nucleic acid fragmentation.
2. **Immunohistochemistry (IHC)**: Superior retention of antigenicity compared to FFPE, ideal for sensitive IHC staining.
3. **Efficient Processing**: Bypasses lengthy fixation steps, saving time for urgent studies and clinical diagnostics.
4. **Enzyme Activity Studies**: Preserves enzymatic activities better than FFPE, facilitating the study of functional proteins.
5. **Minimal Chemical Modifications**: Avoids formaldehyde exposure, resulting in more accurate molecular and biochemical analysis.
6. **Broad Application Scope**: Suitable for advanced assays like FISH and molecular profiling.

Ideal for:

- Biobanking
- Proteomics and genomics sample preservation
- Cryopreservation of biological specimens
- Long-term storage of diagnostic samples

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