GENOVIS

SEQblock

Thermoconductive Modules

FOR RESEARCH USE ONLY

Instructions for Use

SEQblock™ MCT 15-well (SQ-MCT-015)

SEQblock™ MCT 24-well (SQ-MCT-024)

SEQblock™ PCR 96-well (SQ-PCR-096)

SEQblock™ PCR 384-well (SQ-PCR-384)

SEQblock™ PCR/MCT 48/12-well (SQ-CMB-001)

DOWNLOAD INSTRUCTIONS FOR USE

www.genovis.com/ifu-SQ-PCR

Thermoconductive Modules

The SEQblock products are passive thermoconductive temperature control modules designed for use with standard laboratory cooling and heating sources, including ice, dry ice, liquid nitrogen, water baths, and other suitable thermal control environments.

SEQblock modules offer high thermal conductivity, enabling efficient and direct interaction with a wide range of temperature sources. They perform seamlessly with ice, dry ice, water baths, liquid nitrogen, refrigerators, –20˚C and –80˚C freezers, heat blocks, ovens, incubators, and many other laboratory thermal control devices. The SEQblock tube modules are engineered to regulate sample temperature by directly interfacing with cooling, freezing, or heating sources. When placed on a thermal source, the modules rapidly equilibrate to the source temperature. Upon removal from these sources, the modules gradually return to ambient room temperature.

CLEANER COOLING

SEQblock modules eliminate the need to insert tubes or plates directly into or onto the thermal source, ensuring uniform temperature distribution, reliable thermal control, improved sample organization, and reduced contamination risk. SEQblock modules also help minimize water and condensation on laboratory plastics, preventing moisture from entering equipment such as PCR machines, a common issue when tubes are placed directly in ice. This reduces the buildup of residual mineral deposits (limescale) from evaporation, which can impair heat transfer efficiency in PCR blocks and other thermal devices.

BUILT FOR A LIFETIME OF USE

SEQblock modules feature a durable, corrosion-resistant coating and are autoclavable. Engineered for long-term use, they are built to last a lifetime of a laboratory. Should surface scratches or minor dents occur from heavy use or accidental drops, they affect only the appearance.

USE WITH ROBOTIC LIQUID HANDLERS

The SEQblock range is designed to fit equipment aligning to the ANSI/SLAS 1-2004 (R2012) standard for footprint dimensions (excluding the midi model) and is suitable for most robotic liquid handling systems. Digital files for robotic integration are made available at www.sequrna.com.

QUALITY CONTROL

Each production batch is tested to verify conformity with specified performance requirements.

YOU MIGHT ALSO BE INTERESTED IN

SEQURNA® Thermostable RNase Inhibitor
Synthetic thermostable RNase inhibitor ideal for single-cell and *In Situ* RNA sequencing

How to Use

Important Information
CAUTION: Direct contact with metal surfaces at cryogenic or elevated temperatures can cause severe burns. Always wear insulated protective gloves when handling SEQblock modules with dry ice, liquid nitrogen, or heat sources. Follow all applicable laboratory safety protocols.

1. Cooling

1.1 Cooling with Ice: Fill an insulated bucket with flake ice from a laboratory ice machine. Place the SEQblock module directly onto the ice. The module will reach a temperature below 4°C within 1–2 minutes and maintain this temperature as long as it remains in contact with solid ice or ice-water. Pre-cooling the module is not necessary. Add ice as needed to maintain cooling over time.

1.2 Ice-Free Cooling: For an ice-free benchtop solution, SEQblock™ thermoconductive modules can be used with most standard cooling-box systems. Pre-cooling is not required. When used together, SEQblock and a cooling box can provide extended cooling or freezing for several hours without ice.

2. Snap Freezing

2.1 Snap Freezing using Dry Ice: Fill an insulated bucket with sufficient dry ice to form a ~5 cm (~2 in.) layer beneath the entire surface of the SEQblock module. Set the module directly onto the dry ice. Allow the module to stabilize at the dry ice temperature (approximately –78.5°C / –109.3°F). Insert your tubes, plates, or strips into the module for snap freezing. Add more dry ice as needed to extend the cooling duration. SEQblock modules offer a stable work surface when placed on dry ice. No thermal tray platform is required for dry ice use, and pre-cooling the SEQblock module is unnecessary. Adding ethanol or other alcohols to the dry ice is not necessary.

2.2 Snap Freezing using Liquid Nitrogen: For cryogenic benchtop handling, SEQblock modules can be used with or without a thermal tray.

2.2.1 Using a Thermal Tray (recommended): Place a thermal tray in an insulated pan. Fill the pan with liquid nitrogen (LN_2) until the level reaches just below the tray's surface. Set the SEQblock module(s) on the tray. Allow the module to stabilize at cryogenic temperature (approximately –150°C; 5-10 minutes). The module(s) will maintain this temperature as long as LN_2 remains in contact with the underside of the tray. Refill as needed.

2.2.2 Without a Thermal Tray: Place the SEQblock module(s) directly in an insulated pan. Add liquid nitrogen until it reaches halfway up the module's height. Allow the module(s) to reach cryogenic temperature (approximately –150°C; 5-10 minutes). Refill LN_2 as necessary to maintain the desired temperature.

3. Heating

3.1 Heating/Thawing in a Water Bath: Place the SEQblock module(s) on a thermal tray or platform within the water bath. Adjust the water level so it is at or just above the surface of the platform but remains below the height of the SEQblock. Allow approximately 10 minutes for the module(s) to equilibrate with the bath temperature. A slight adjustment of the bath temperature (+1°C) may be necessary to ensure the module reaches the desired temperature.

3.2 Other Heating Sources: SEQblock modules are compatible with a variety of heating devices, including hot plates and dry baths. Note that the module's coating may interact with some hot ceramic surfaces – test for compatibility before extended use.

Product Care Instructions

SEQblock thermoconductive modules are anodized for corrosion resistance and are compatible with a wide range of cleaning agents, including solvents, water-based detergents, alcohols, and acid/base viricidal solutions. After cleaning, rinse thoroughly with pure water. Modules may be stored at ambient temperature or within cooled or heated environments. Avoid immersing the modules in high or low pH solutions for more than one hour to preserve the integrity of the anodized surface.

SEQblocks are autoclavable and can be sterilized at temperatures up to 250°C.

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