

INSTRUCTIONS

P5000 Micro-Incubator Heat-Treatment System for B3 Film Dosimeters

Product Description

The P5000 is a top loading micro-incubator system with 18 slots to heat treat individually pouched B3 dosimeters.

Determining Heat-Treatment Process Parameters

The Micro-Incubator is delivered with a Set Point of 58.5°C which is the most widely used treatment temperature for this device. Different time and temperature settings for heat treatment of GEX B3 dosimeters can and have been successfully implemented. Some users are qualified and use slightly different settings than others. It is up to the end user to validate their own unique process.

Instructions

Set up the Hybex Micro-Incubator for use

- Step 1:** Set the device on a stable, flat surface with at least 3 inches of airflow around all sides of the incubator and ensure that the lid can open completely without interference.
- Step 2:** Open the lid and insert the heat block. The block will fit in either direction (180° rotation).
- Step 3:** Plug the unit into an appropriate power source. The two types offered are 115V and 230V models and the power source must match the voltage. Refer to the SciGene User Manual delivered with the product for more details.
- Step 4:** After powering on the unit, the set temperature can be adjusted by pressing and holding either the 'UP ARROW' or 'DOWN ARROW' buttons along with the 'SET' button. Then increase or decrease the temperature as needed using the arrow buttons.

Verify the heat block temperature

- Step 5:** Power on the incubator and allow it to operate for a minimum of 15 minutes for the block temperature to stabilize.
- Step 6:** Insert the included K-type thermocouple probe connector into the digital thermometer and power on the device. The thermometer display should read approximate ambient air temperature.
- Step 7:** Insert the thermocouple probe tip into one of the central slots in the block (either at the front or rear). The probe uses the dedicated hole at the end of the slot. See Figure 2.
- Step 8:** Verify that the handheld thermometer temperature is within $\pm 0.2^{\circ}\text{C}$ from the incubator display temperature.

Routine Use: Heat-treat B3 dosimeters

- Step 9:** After verifying the heat block is the proper temperature for processing, insert pouched B3 dosimeters film-end first into the heat block slots, making sure the pouches are fully seated against the bottom of the block. **NOTE: Only 1 pouch should be inserted into each slot in the heat block at a time.**
- Step 10:** After loading the heat block with up to 18 pouched dosimeters, close the incubator lid and input the approved heat treatment time into the Digital Timer using the UP and DOWN arrow buttons. Press "START" to begin the heat treatment process.
- Step 11:** Open the incubator lid and remove all dosimeter pouches from the heat block when the timer completes and sounds an alarm.

Related Documents

View/download product-related documents and qualification procedures the document library <https://library.gexcorp.com> and GEX knowledgebase <https://gex-help-center.scroll.site>. Search by product name, document title, or keyword.

Heat-Treatment Incubator Qualification	Heat-Treatment Incubator Qualification Procedure and Form. Use with Incubator Calibration and Temperature Mapping Form.
Post-Irradiation Heat Treatment of B3 Dosimeter Products – Technical Report	In-depth discussion of the post-irradiation heat treatment of B3 film dosimeters.

Figure 1



Figure 2



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