

HemoTemp® II Activator

HemoTemp® II Activator Single-Temperature Control Multiple Block Heater

Manual No. N2400364

Model No. 112001BIO (120v)

Model No. 112001BIO-2 (230v)

SpotSee | LCR Hallcrest LLC 1911 Pickwick Lane, Glenview, IL 60026

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Section 1 - Introduction

Thank you for selecting SpotSee | LCR Hallcrest LLC for your equipment needs.
For maximum value and ease of start-up:

- Inspect the carton and contents for shipping damage. Notify the carrier immediately if damage is found.
- Unpack and verify that the complete unit has been received. Do not discard packing materials until all is accounted for including the following accessories: 1 pulling handle, 1 sensing plate with liquid crystal indicators attached, 1 instruction for use sheet, a warranty card and a User Manual.
- Read this Operation Manual thoroughly before deciding upon an appropriate location for the unit. You will want to consider the availability of power as well as user convenience.
- Insist that every operator of this unit becomes familiar with the Operation Section of this manual.
- Be sure to fill out the Warranty Registration Card and mail it in to Boekel Scientific within seven (7) days after receiving the unit.

If after reading this manual you should have any difficulties with the installation or operation instructions, please call:

SpotSee | LCR Hallcrest LLC
Customer Service
847-998-8580

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Section 2 - Description

The HemoTemp® II Activator is a block module heater designed by SpotSee | LCR Hallcrest LLC to provide uniform temperature for accurate and reliable activation of the HemoTemp® II Indicator. This heater features:

- A single control thermostat.
- Temperature uniformity maintained to within $\pm 0.5^{\circ}\text{C}$.
- A rocker power switch to be set ON or OFF.
- A separate heater lamp which indicates when power is being supplied through the thermostat to the heating element.
- A steel housing with a baked enamel cabinet.
- An anodized solid aluminum heating block.
- Heat activation for up to 12 HemoTemp® II indicators at one time.
- Temperature uniformity which allows for the storage of the HemoTemp® II indicators in the heating block for 3 to 4 weeks.
- A 3-wire line cord.
- UL approval.
- A 12 month manufacturer's warranty.

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Section 3 - Specifications

Specifications

Operating Temperature	40°C
Temperature Uniformity	±0.5°C
Temperature Stability	±2°C
Heater Block Capacity	Block dimensions are: 3 3/4" W x 2 15/16" D x 2" H (9.5 x 7.5 x 5.1 cm)
Electrical Requirements	112001BIO: 120 Volts AC, 50/60 Hz 112001BIO-2: 230 Volts AC, 50/60Hz
Dimensions (Overall)	8" W x 9 3/4" D x 3 1/2" H (20.3 x 24.8 x 8.9 cm)

Unit's Environmental Operating Conditions

Pollution Degree*	2
Installation Category*	II
Altitude	2000 Meters MSL (Mean Sea Level)
Humidity	80% maximum, non-condensing
Electrical Supply	112001BIO: 120VAC, 112001-2BIO: 230VAC
Voltage Tolerance	±10% of normal rated line
Temperature	15°C to 40°C
Product Usage	This product is intended for use indoors only

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Section 4 - Installation

Location:

Find a convenient, draft-free location near a grounded electrical outlet meeting the power requirements listed on the unit nameplate.

The heater should be level, though operation does not depend on this, and away from edges of the laboratory bench where there is danger of accidental burns or knocking the unit over.

Electrical Connection:

The heater is supplied with a 3-wire line cord. It should be plugged into an outlet wired for 3-prong plugs. If an extension cord is used, it also should be the 3-wire grounded type.

For an outlet wired for 2-prong plugs (ungrounded), have a qualified electrician replace it with a grounded outlet.

If a plug must be installed, use only the 3-prong grounded type, rated for the unit load requirements and matching the power outlet. Make sure that the green ground wire is secured to the plug ground terminal.

NOTE: IT IS BEST TO LEAVE THE UNIT UNPLUGGED WHEN NOT IN USE.

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Section 5 - Operation

DANGER: DO NOT USE IN THE PRESENCE OF FLAMMABLE OR COMBUSTIBLE MATERIALS OR EXPLOSIVE GASES. DO NOT USE IN THE PRESENCE OF PRESSURIZED OR SEALED CONTAINERS. FIRE OR EXPLOSION MAY RESULT, CAUSING DEATH OR SERIOUS INJURY.

WARNING: DO NOT HEAT ANY SUBSTANCE ABOVE A TEMPERATURE WHICH WILL CAUSE IT TO EMIT TOXIC FUMES-DEATH OR SERIOUS INJURY MAY RESULT.

WARNING: DO NOT ADD WATER TO THE HEATING BLOCK OR THE EMPTY WELL OF A UNIT CONNECTED TO ELECTRICAL POWER-THIS CAN RESULT IN AN EXPLOSION WITH POSSIBILITY OF SERIOUS INJURY OR DEATH.

WARNING: TO AVOID DANGER OF FIRE AND/OR EXPLOSION, DO NOT HEAT MATERIALS ABOVE THEIR AUTO-IGNITION TEMPERATURE.

CAUTION: TURN THE POWER SWITCH OFF (o) WHEN NOT IN USE. THIS EXTENDS THE LIFE OF THE HEATING ELEMENT AND REDUCES THE HAZARDS OF ACCIDENTAL BURNS.

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Section 5 - Operation (continued)

Control Panel:



- Insert the plug into its outlet and move the Power Switch from the OFF position to the ON position.
- Set the Temperature Adjust Control by rotating the adjustment knob.
- Insert the sensing plate or a calibrated thermometer to establish desired temperature. When the temperature has stabilized, make adjustments to raise or lower the temperature as required by turning the Temperature Adjust Control clockwise to raise, counterclockwise to lower temperature.
- Insert the HemoTemp® II Indicators into the heated block once the temperature has stabilized at the desired level. To avoid accidental burns, do not touch the surface of the heating block when placing vessels in the block.

NOTE: TO ACHIEVE THE DESIRED REACTION OR RESULT, DO NOT PLACE HEMOTEMP II INDICATORS IN BLOCK UNTIL REQUIRED TEMPERATURE HAS BEEN REACHED.

CAUTION: TURN THE POWER SWITCH TO OFF AND UNPLUG UNIT WHEN NOT IN USE - THIS EXTENDS THE LIFE OF THE HEATING ELEMENT AND ELIMINATES THE POSSIBILITY OF ACCIDENTAL BURNS.

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Section 5 - Operation (continued)

Instruction for Use of the HemoTemp® II Activator:

Background:

Activation is a process of heating the HemoTemp® II liquid crystal formulation to a METASTABLE ORDERED GLASS phase at the color-play temperature range and then quenching.

Steps for Use:

1. Turn Activator ON using POWER switch-when the switch is set to ON, you will see the switch light up. The ON light will be red until the temperature set point has been reached. The Activator takes approximately 20 to 30 minutes to reach its temperature set point. Check the liquid crystal indicator or calibrated thermometer, it should read 40°C +/- 2°C.
2. Place the HemoTemp® II Irreversible Indicator into the slotted Activator heating block. Make sure the “flower” portion is facing down into the heating block.

NOTE: HEMOTEMP® II INDICATORS CAN ONLY REMAIN IN THE HEATING BLOCK FOR AS LONG AS 3 TO 4 WEEKS-DO NOT EXCEED THIS TIME PERIOD.

3. Remove the HemoTemp® II Indicator from the Activator. When the irreversible “flower” portion begins to turn a dark royal-blue color, remove the backing on the indicator and press indicator onto the center of the blood bag being sure not to cover any labeling already on the blood unit. The indicator has now been activated.

NOTE: THE INDICATOR MUST BE HEATED IN THE ACTIVATOR AND PLACED ON A REFRIGERATED BLOOD BAG BETWEEN 1°C-3°C FOR PROPER ACTIVATION.

4. Place blood bag, with face of the indicator down, on a flat surface (not heated) and rotate bag to ensure proper adhesion on the indicator.
5. Check the color of the “flower” on the Indicator-if it appears green or tan the Indicator has not been properly activated, or the blood was warmer than 4°C and the performance of the Irreversible Indicator has been altered. Remove the indicator and repeat the above procedure using a new indicator.

NOTE: PLEASE REFER TO THE HEMOTEMP® II USERS’ GUIDE.

CAUTION: TURN THE POWER SWITCH TO OFF AND UNPLUG THE UNIT WHEN NOT IN USE. THIS EXTENDS THE LIFE OF THE HEATING ELEMENT AND ELIMINATES THE POSSIBILITY OF ACCIDENTAL BURNS.

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Section 6 - Maintenance

CAUTION: MAKE NO ATTEMPT TO SERVICE OR REPAIR A SPOTSEE | LCR HALLCREST LLC PRODUCT UNDER WARRANTY BEFORE CONSULTING WITH SPOTSEE | LCR HALLCREST LLC. AFTER THE WARRANTY PERIOD, SUCH CONSULTATION IS STILL ADVISED, ESPECIALLY WHEN THE REPAIR MAY BE TECHNICALLY SOPHISTICATED OR DIFFICULT.

IF ASSISTANCE IS NEEDED, PLEASE CALL **SPOTSEE | LCR HALLCREST LLC CUSTOMER SERVICE AT 847-998-8580**. NO MERCHANDISE, HOWEVER, SHOULD BE RETURNED DIRECTLY TO SPOTSEE | LCR HALLCREST LLC WITHOUT WRITTEN PRIOR APPROVAL FROM SPOTSEE | LCR HALLCREST LLC.

CAUTION: DISCONNECT UNIT FROM POWER SOURCE BEFORE PERFORMING ANY SERVICE OR REPAIR.

Since the block module heaters have no mechanical moving parts, they require very little maintenance beyond normal cleanup with a mild detergent or soap and water.

- Turn the power switch to OFF and unplug the unit from its power source before attempting to clean up any spills or to perform maintenance, repairs or service. Allow unit to cool to near room temperature before removing the heating block(s).
- Remove the liquid crystal indicator plate from the heating block and wipe clean.
- Heating blocks can be submerged in hot water, but **UNDER NO CIRCUMSTANCES SHOULD THE CABINET BE IMMERSED**. Wipe the exterior and well with a wet cloth, taking care not to get water in cabinet.
- Allow the cabinet to dry completely before installing blocks and reconnecting the power source. Follow instructions in **INSTALLATION** and **OPERATION** sections of this manual.

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Section 7 - Trouble Shooting

The following is intended as a guide to help in servicing this unit, if problems should occur.

NOTE: BEFORE ATTEMPTING ANY REPAIR, DISCONNECT POWER CORD FROM OUTLET.

Symptom	Possible Causes of Problem
The heater lamp will not light and the unit will not heat:	<p>The unit is not plugged in or it is not plugged into a proper, working outlet (check the outlet)</p> <p>The power switch is OFF</p> <p>The Fuse is blown (replace)</p> <p>Thermal cutoff is blown (replace)</p>
The heater lamp is on or flickering but the unit will not heat to the desired level:	<p>The temperature control adjustment is set too low (turn clockwise)</p> <p>Faulty thermostat (replace)</p>
The heater lamp is lit but not flickering; the unit is not hot:	<p>Allow more time to heat up</p> <p>Faulty heater (replace)</p>
Temperature is too high or too low and will not change when temperature control knob is turned:	<p>Faulty thermostat (replace)</p>
The heater lamp flashes intermittently every few seconds:	<p>No problem; the unit is turning itself on and off to maintain a constant temperature</p>

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Section 8 - Replacement Parts

Description	Part Number
Cord Set 112001BIO	606-0007
Cord Set 112001BIO-2	606-0008
Heater 112001BIO	B1905813
Heater 112001BIO-2	B1905814
Pilot Light	920-0158
Power Switch	919-0031
Thermostat	926-0019
Thermal Cutoff	926-0052
Fuse Holder	902-0401
Fuse 112001BIO	902-0108
Fuse 112001BIO-2	902-0204
Rubber Feet	901-0033
Sensing Plate	A1906402
Pulling Handle	928-0471

*To order replacement parts, contact:

SpotSee | LCR Hallcrest LLC at 847-998-8580