



University of Washington Medical Center 1959 NE Pacific Street. Seattle, WA 98195 Transfusion Services Laboratory Policies and Procedures Manual	Original Effective Date: 02-11-16	Number: EQ-0004.02
	Revision Effective Date:	
TITLE: Heat Block Operation and Maintenance		

PURPOSE:

To describe the procedure for the operation and maintenance of the Thermo Scientific Digital Dry Bath/Block Heater commonly referred to as a heat block

PRINCIPLE & CLINICAL SIGNIFICANCE:

Incubation temperature is a critical element in the binding of antibody antigen reactions and is generally selected based on optimal reactive temperature for the test being performed

POLICIES:

- The temperature of the heat block is maintained between 36-38 °C. When temperature is outside of this range, the heat block is not acceptable for use.
- Temperature verification (QC) is required each day of use and after weekly cleaning.

SPECIMEN REQUIREMENTS:

N/A

REAGENTS/SUPPLIES/EQUIPMENT:

Reagents:	Supplies:	Equipment:
Blood Bank Saline	<ul style="list-style-type: none"> • 12 x 75 mm test tubes • Disinfectant Wipes 	Calibrated Thermometer

QUALITY CONTROL:

Daily (refer to section 'Daily Quality Control' below)

INSTRUCTIONS:

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Daily Quality Control

STEP	ACTION	
1	Verify the Heat Indicator Light is on (not flashing) and the thermometer bulb is covered with saline prior to reading the thermometer	
	If Heat Indicator Light	Then
	And saline level is acceptable	Go to next step
	And/or saline level is NOT acceptable	<ul style="list-style-type: none"> • Add saline to cover bulb • Allow saline to equilibrate before reading thermometer • Allow Dry bath to come to temperature and the Heat Indicator Light to stop flashing • Go to next step
2	If thermometer temp is	Then
	Between 36-38 °C	<ul style="list-style-type: none"> • Dry bath is acceptable for use • Document thermometer temperature and tech ID on the Thaw Bath & Heat Block QC form
	Not between 36-38 °C	<ul style="list-style-type: none"> • Remove unit from service and troubleshoot the problem per manufacturer operations manual • Go to section 'Calibration' if the liquid thermometer and digital display are more than $\pm 1.0^{\circ}\text{C}$ different

Use of the Heat Block

STEP	ACTION
1	Verify that the Dry bath is on by verifying: <ul style="list-style-type: none"> • Digital display is on • HEAT indicator light is illuminated green
2	Ensure that the liquid thermometer bulb is cover by saline and reads 36-38 °C, adjusting for correction factor on thermometer, if necessary

Monthly and as Needed Maintenance

STEP	ACTION
1	Turn off and unplug the Dry bath
2	Remove the heating blocks
3	Clean all surfaces of the Dry bath with a Disinfectant Wipe
4	Clean the heating blocks including the block holes
5	Reinstall the heating blocks
6	Plug the dry bath back into the electrical outlet
7	Turn on the dry bath and let it heat up

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STEP	ACTION	
8	Verify temperature is acceptable	
	If thermometer temp is	Then
	Between 36-38 °C	<ul style="list-style-type: none"> Heatblock is acceptable for use Record the following on the <i>Bench Equipment Maintenance</i> form <ul style="list-style-type: none"> Date Temperature Tech ID
Not between 36-38 °C	<ul style="list-style-type: none"> Remove unit from service and troubleshoot the problem per manufacturer operations manual Go to section 'Calibration' if the liquid thermometer and digital display are more than $\pm 1.0^{\circ}\text{C}$ different 	

CALCULATIONS/INTERPRETATIONS/RESULTS REPORTING/NORMAL VALUES/CRITICAL VALUES

CALIBRATION:

Perform a calibration if the thermometer in saline and the digital display are more than $\pm 1.0^{\circ}\text{C}$ different

STEP	ACTION
1	Press and hold the <SET/CAL> button until the first number of the digital display begins to flash
2	Change the digital display to match the thermometer in saline temperature <ul style="list-style-type: none"> Press <SHIFT> to move the flashing digit to the number that needs adjusting Press the Up and Down arrows to adjust the number Press the <SET/CAL> button when the desired temperature is displayed

PROCEDURE NOTES AND LIMITATIONS:

NA

REFERENCES:

- Thermo Scientific Digital Dry Bath Manual Number 0000848
- Technical Manual. Bethesda, MD: AABB Press, current edition
- Standards for Blood Banks and Transfusion Services. Bethesda, MD: AABB Press, current edition

RELATED DOCUMENTS:

FORM *Thaw Bath & Heat Block QC*
FORM *Bench Equipment Maintenance*

APPENDIX:

NA

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UWMC SOP Approval:	
UWMC CLIA Medical Director	_____ Date _____
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Transfusion Service Manager	_____ Date _____
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Compliance Analyst	_____ Date _____
	Christine Clark
Transfusion Service Medical Director	_____ Date _____
	Monica B. Pagano, MD
UWMC Biennial Review:	
	_____ Date _____
	_____ Date _____

REVISION:
07/14/2021: Added instructions for verifying and documenting the temperature of the dry bath after cleaning. Change title from Dry Bath Operation and Maintenance to Heat Block Operation and Maintenance to standardize language across documents.