University of Washington Medical Center 1959 NE Pacific Street. Seattle, WA, 98195 Transfusion Services Laboratory Policies and Procedures Manual	Original Effective Date: 05-23-2022 Revision Effective Date:	Number: EQ-0017.01
TITLE: Helmer Platelet Incubator Operation and Maintenance		

PURPOSE:
To provide instructions on the operations of the Helmer platelet incubator

PRINCIPLE & CLINICAL SIGNIFICANCE:
Blood components shall be stored at temperatures demonstrated to be optimal for their function and safety. Blood storage devices should be continuously monitored to ensure required temperatures are maintained during product storage. In the absence of continuous monitoring, temperatures should be recorded at least every four hours. In the absence of on-site staff, remote alarms must be used to ensure prompt response when temperatures are approaching unacceptable levels. Alarm testing is performed to ensure the equipment will activate at a temperature that will allow personnel to take the appropriate action prior to blood reaching undesirable temperatures. Proper cleaning and maintenance of equipment is also necessary to reduce equipment failures and prolong the life of the equipment.

Clinical Significance
Blood Components must be stored within strict temperature guidelines to ensure the safety, purity and potency of the product.

POLICIES:
- Monitored 24/7 by TempTrak
- Quarterly and annual maintenance performed by UWMC Montlake Refrigeration shop
- For any maintenance and service issues call Operations and Maintenance
- Daily temperatures are recorded on the ***Blood Component Storage Temperatures Form***
- Platelet incubator is set to alarm at the following temperatures

Alarm	Temperature
○ High Alarm	○ 23.5^0C
○ Low Alarm	○ 20.5^0C

SPECIMEN REQUIREMENTS:
NA

REAGENTS/SUPPLIES/EQUIPMENT:

Reagents:	Supplies:	Equipment:
• Glycerol	• Calibrated Thermometer • Recording Charts • Distilled Water	• Blood Bank Platelet Incubators • Remote Alarms and Pagers

QUALITY CONTROL:
Temperatures are verified daily to ensure the acceptable range 20-24°C for product storage is maintained.

INSTRUCTIONS:

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Periodic Maintenance

<table>
<tr><th>STEP</th><th>ACTION</th></tr>
<tr><td>1</td><td>Perform the following maintenance tasks at the required frequency:
<table>
<tr><th>If performing maintenance</th><th>Then</th></tr>
<tr><td>Quarterly</td><td>• Clean the condenser grill, and:
<table>
<tr><td>Test</td><td>• High and low temperature alarms
• Power failure alarm (as required by UWMC’s protocols)
• Door open alarm
• No battery alarm
• Motion alarm (i.Series platelet incubators with platelet agitators installed)</td></tr>
<tr><td>Check</td><td>• Temperature calibration for the temperature monitor. Change if necessary
• Temperature calibration for the temperature controller. Change if necessary</td></tr>
</table></td></tr>
<tr><td>Annually</td><td>Check the backup battery for the motion alarm system after an extended power failure. Change if necessary</td></tr>
<tr><td>As needed</td><td>• Check backup battery for the chart recorder after an extended power failure. Change if necessary or change the battery if it has been in service for a year. See Temperature Chart Recorder Operation and Service Manual
• Clean the exterior and interior of incubator and the door gaskets
• Replace moving parts if worn or when prompted by an agitation maintenance reminder
• Refill plastic thermometer bottle containing a volume of solution no larger than the smallest unit stored in the device. Platelet incubators: 1:10 solution of ethylene glycol or glycerol and distilled water.</td></tr>
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Installing Temperature Chart Paper

STEP	ACTION
1	Press and hold “C” button.
2	Release button when stylus begins to move to the left. **NOTE**: LED flashes to indicate current temperature range.
3	Remove chart knob when stylus stops moving. Move the knob up and away
4	Place new chart paper on the chart recorder
5	Lift the stylus gently and rotate chart paper so that the current timeline corresponds to the timeline grove
6	Hold the chart paper and reinstall the chart knob, verify timeline after the chart knob is tightened
7	Confirm temperature range is set to the correct value
8	Press and hold “C”, releasing the button when the stylus begins to move right
9	Confirm stylus is marking temperature correctly

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

CALIBRATION:
Calibration of the Circular graph

STEP	ACTION
1	Determine the direction the pen needs to be moved (left or right) to match the internal temperature.
2	Press and hold either the left or right arrow buttons until the stylus begins to move.
3	Release the button when the pen is recording the correct temperature.

NOTES AND LIMITATIONS:

- During a power failure, the monitoring system and power failure alarm will run on the backup battery. If the backup battery is not operating, the power failure alarm will not be activated
- Replace the battery if the backup battery does not provide power to the monitoring system during a power failure alarm test,
- If the batteries have been in service for one year, replace the batteries.

REFERENCES:

- Helmer Scientific Platelet Incubator Operation Manual
- Technical Manual. Bethesda, MD: AABB Press, current edition

RELATED DOCUMENTS:

FORM Blood Component Storage and Temperatures

UWMC SOP Approval:

UWMC CLIA Medical Director	Andrew Bryan, MD	Date	
Transfusion Service Manager	Nina Sen	Date	
QA Manager	Tayler Reeves	Date	
Transfusion Service Medical Director	Monica Pagano, MD	Date	

UWMC Biennial Review:

	Date	
	Date	