


<b>Name of Policy:</b> <u>Storage Units for Blood and Blood Components</u> <b>Policy Number:</b> 3364-108-201 <b>Department:</b> Pathology/Laboratory – Blood Bank <b>Approving Officer:</b> Chief Operating Officer - UTMC Director, Blood Transfusion Service <b>Responsible Agent:</b> Blood Transfusion Service Supervisor Administrative Director, Lab <b>Scope:</b> Pathology/Laboratory – Blood Bank	  <b>Effective Date:</b> 03/20/2023 Initial Effective Date: 7/2004
<input type="checkbox"/> New policy proposal <input type="checkbox"/> Major revision of existing policy	
<input type="checkbox"/> Minor/technical revision of existing policy <input checked="" type="checkbox"/> Reaffirmation of existing policy	

**(A) Policy Statement**

The Blood Transfusion Service will monitor and maintain incubators, refrigerators, freezers and coolers for the storage of blood and blood components according to AABB standards.

**(B) Purpose of Policy**

To provide a continuously monitored temperature environment for the storage of blood and blood components and a plan of action in the event of temperature failure.

**(C) Procedure**

Blood and blood components are stored only in temperature monitored incubators, refrigerators and freezers under conditions described in Policy # 3364-108-202. Access to Blood Storage units for the purpose of storing and removing contents is limited to BTS Technologists and designated ED personnel. All refrigerators, freezers and incubators for the storage of blood, components, specimens and reagents have NIST-calibrated thermometers in place for temperature monitoring. Refrigerators have a continuous temperature recording system and an audible alarm adjusted to activate before temperature falls below 1° C or rises above 6° C. Freezers have a continuous temperature recording system and an audible alarm adjusted to activate before the temperature rises to -18°C. The incubator for platelet storage maintains a range of 20-24°C with audible alarm when the temperature falls out of range. Storage of blood and blood components under appropriate conditions at all times is imperative to maintain cell and factor function and viability and to reduce risks for the recipient.

1. Blood Transfusion Service or designated personnel checks and records temperatures of all blood storage units daily. Chart recorders on all storage units are checked for recorded temperature markings and proper function and changed as needed.
2. Quarterly check of alarm function is performed by BTS personnel according to procedure.
3. Temperature alarms are sounded locally and at remote locations in the hospital operating engineers office and Facility Control. Blood Transfusion Service personnel will be notified whenever remote alarms are received.
4. Alarms may be inactivated temporarily by pressing "Audio Silence" button or switching reset button to "off" and/or turning key to "off". For platelet incubator alarm inactivation, turn key to "Standby" and turn power OFF. Set a timer for 30 minutes as reminder to recheck temperatures.  
ED personnel must notify BTS when alarm is sounded locally in ED.
5. Check for obvious mechanical problems such as door ajar, unit unplugged, etc. Record time and reason for alarm and recording tech initials on the daily temperature record and on the temperature recording chart.
6. If problem is not corrected within 30 minutes, notify operating engineers office (383-4298) or work control office (383-5353). Notify BTS supervisor or Medical Director. All blood stored in the malfunctioning storage unit must be moved to another monitored storage device of the appropriate temperature range.

7. Do not resume storage of blood in storage unit until temperature is within acceptable limits.
9. If the temporary storage unit has no chart recorder or remote alarm, a NIST-calibrated thermometer of the appropriate temperature range must be placed inside the storage unit and the inside temperature must be recorded every four hours on a Back-up Temperature Log.
10. Notify Facility Control to reset alarm when temperature is within acceptable range. Reset local alarm by turning key or pressing "reset" button.

**Coolers**

1. Coolers are validated upon receipt to verify ability to maintain ice and acceptable temperature. Coolers must maintain ice condition and temperature for 12 hours in order to be placed in service.
2. All blood issued in coolers must have temperature indicators attached. Condition of indicator must be noted for acceptance of blood returned in a cooler.

- Zone 1 - Blood Bank Refrigerator for specimens and reagents - (1-6° C)
- Zone 2 - Blood Bank Freezer - ( below -18° C)
- Zone 3 - Blood Bank Refrigerator for reserved units\* - (1-6° C)
- Zone 5 - ED Blood Bank Refrigerator - (1-6° C)
- Zone 6 - Blood Bank Refrigerator for available units\* - (1-6° C)
- Plc Incubator - Platelet Storage - (20-24° C)
- "Micro" Freezer - Blood Bank Freezer - ( below -18° C)

\* Remote alarms for Zone 3 and 6 sound simultaneously. Local alarms sound individually.

<p><b>Approved by:</b></p> <p><u>/s/</u> _____ <u>03/21/2023</u>          Lauren Stanoszek, M.D.          Assistant Professor          Director, Blood Transfusion Service          Date</p> <p><u>/s/</u> _____ <u>03/21/2023</u>          Christine Stesney-Ridenour          Chief Operating Officer - UTMC          Date</p> <p>Review/Revision Completed By:          Danielle Weillnau, MLS(ASCP)<sup>CM</sup></p>	<p><b>Review/Revision Date:</b></p> <p>6/96          1/98          2/99          1/05          6/9/2008          3/22/2011          3/01/2013          3/2/2015          3/1/2017          3/1/2019          3/1/2021          3/20/2023</p> <hr/> <p><b>Next Review Date:</b> 3/1/2025</p>
<p><b>Policies Superseded by This Policy:</b></p>	

Reference: Current Edition, Standards for Blood Banks and Transfusion Services, AABB.