


Name of Policy: Storage Units for Blood and Blood Components Policy Number: 3364-108-201 Approving Officer: Senior Hospital Administrator Director, Blood Transfusion Service Responsible Agent: Blood Transfusion Service Supervisor Administrative Director, Lab Scope: University of Toledo Medical Center Pathology/Laboratory – Blood Bank		 Effective date: 03/2025 Original effective date: 07/2004	
Key words: Blood Storage, Temperature, Monitoring, alarm, Blood, Platelet			
<input type="checkbox"/>	New policy proposal	<input checked="" type="checkbox"/>	Minor/technical revision of existing policy
<input type="checkbox"/>	Major revision of existing policy	<input 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

(1) Blood Component Storage

- (a) 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 an audible alarm when the temperature falls out of range. Storage of blood and blood components under appropriate conditions is imperative to maintain cell and factor function and viability and to reduce risks for the recipient.

- (b) 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.
 - (c) Quarterly check of alarm function is performed by BTS personnel according to procedure.
 - (d) Temperature alarms are sounded locally and at remote locations in the hospital operating engineer's office and Facility Control. Blood Transfusion Service personnel will be notified whenever remote alarms are received.
 - (e) 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 a reminder to recheck temperatures.
 - (i) ED personnel must notify BTS when alarm is sounded locally in ED.
 - (f) 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.
 - (g) If the problem is not corrected within 30 minutes, notify the 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.
 - (h) Do not resume storage of blood in storage unit until temperature is within acceptable limits.
 - (i) 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.
 - (j) Notify Facility Control to reset alarm when temperature is within acceptable range. Reset local alarm by turning key or pressing the "reset" button.
- (2) Coolers
- (a) Coolers are validated upon receipt to verify the ability to maintain ice and acceptable temperature. Coolers must maintain ice condition and temperature for 12 hours to be placed in service.
 - (b) All blood issued in coolers must have temperature indicators attached. The condition of the indicator must be noted for acceptance of blood returned in a cooler.
- (3) Acceptable Temperature Limits
- (a) Zone 1 - Blood Bank Refrigerator for specimens and reagents - (1-6° C)
 - (b) Zone 2 - Blood Bank Freezer - (below -18° C)
 - (c) Zone 3 - Blood Bank Refrigerator for reserved units* - (1-6° C)
 - (d) Zone 5 - ED Blood Bank Refrigerator - (1-6° C)
 - (e) Zone 6 - Blood Bank Refrigerator for available units* - (1-6° C)
 - (f) Plc Incubator - Platelet Storage - (20-24° C)

NOTE: Remote alarms for Zones 3 and 6 sound simultaneously. Local alarms sound individually.

(D) References

- (1) Current Edition, Standards for Blood Banks and Transfusion Services, AABB.

<p>Approved by:</p> <p>/s/</p> <hr/> <p>Lauren Stanoszek, M.D. Assistant Professor Director, Blood Transfusion Service</p> <p>3/1/2025</p> <hr/> <p>Date</p> <p>/s/</p> <hr/> <p>Russell Smith Pharm D, MBA, BCPS, CPEL, FACHE Senior Hospital Administrator</p> <p>3/7/2025</p> <hr/> <p>Date</p> <p><i>Review/Revision Completed by:</i> Danielle Weilnau MLS(ASCP)^{CM}</p>	<p>Policies Superseded by This Policy:</p> <ul style="list-style-type: none"> • <i>None</i> <p>Initial effective date: 07/2004</p> <p>All Review/Revision Dates:</p> <p>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 03/2025</p> <p>Next review date: 03/2027</p>
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