# Applicable Laboratory(s)):

[x]  North Carolina Baptist Hospital (NCBH)

[ ]  Lexington Medical Center (LMC)

[ ]  Davie Medical Center (DMC)

[ ]  Wilkes Medical Center (WMC)

[ ]  High Point Medical Center (HPMC)

[ ]  Westchester

[ ]  Clemmons

# Policy Purpose

The purpose of this policy is to provide guidelines for the storage, transport, transfer, return, reissue and disposition of blood and blood products.

# Scope

This policy applies to Blood Bank Staff and Management

# Definitions

1. Policy: As defined in the Policy on Creating and Amending Policy, a statement of principle that is developed for the purpose of guiding decisions and activities related to governance, administration, or management of care, treatment, services or other activities of WFBH.  A policy may help to ensure compliance with applicable laws and regulations, promote one or more of the missions of WFBH, contain guidelines for governance, and set parameters within which faculty, staff, students, visitors and others are expected to operate.
2. WFBH Lab System: Wake Forest Baptist Lab System is a health system that includes Wake Forest Baptist Medical Center and all affiliated organizations including Wake Forest University Health Sciences (WFUHS), North Carolina Baptist Hospital (NCBH), Lexington Medical Center (LMC), Davie Medical Center (DMC), Wilkes Medical Center (WMC), High Point Medical Center (HPMC), Lab at Westchester and Lab at Clemmons.
3. BF: Biofridge
4. SCC: Soft Computer Consultants—Blood Bank Computer System
5. BB LIS: Blood Bank Lab Information System: Sunquest

# Sections

1. Storage and Transport of Blood Products
2. Return and Reissue of Blood Products
3. Transfer of Patient with Blood Products
4. Transfer of Blood Products
5. Disposition of Blood Products

# Policy Guidelines

1. **Storage and Transport of Blood Products.**
2. Appropriate temperatures must be maintained for all blood products during storage and transport.
	1. Red Cell Components and Plasma must stored at 1-6⁰C. *According to AABB News: July/August 2006, "…blood should be stored at 1-6° C if it is in a temporary location or in a temporary vehicle (i.e., cooler) for the intent or the potential intent of product storage for the life of the dating period. For example, if one is using a cooler to take blood to the operating room because of a lack of refrigeration that is considered an extension of the storage refrigeration with the possible intent of additional storage time."*

a. Red Cell Components and Plasma that are issued in validated coolers fall into this category.

* 1. Red Cell Components and Plasma must be transported at 1-10⁰C. *"In addition, if blood is being transported from storage and is being shipped somewhere, the blood should be maintained at 1-10⁰C." (AABB News)*

a. Red Cell Components and Plasma removed from ED Refrigerators and/or NOT Issued in a validated iced cooler from the Blood Bank fall into this category.

1. Refer to Storage and Transport Table.

|  |  |  |
| --- | --- | --- |
| 1. Component
 | 1. Storage
 | 1. Transport
 |
| 1. Red Blood Cell Components
 | 1. 1-6⁰C
 | 1. 1-10⁰C
 |
| 1. Thawed Plasma/Liquid Plasma
 | 1. 1-6⁰C
 | 1. 1-10⁰C
 |
| 1. Thawed Cryo
 | 1. 20-24⁰C
 | 1. 20-24⁰C
 |
| 1. Platelets
 | 1. 20-24⁰C with agitation
 | 1. 20-24⁰C \*
 |
| 1. Cold Platelets
 | 1. 1-6°C without agitation
 | 1. 1-10°C
 |
| 1. Granulocytes
 | 1. 20-24⁰C
 | 1. 20-24⁰C
 |
| Frozen Plasma | -18⁰C or colder | -18⁰C or colder |
| Frozen Cryo | -18⁰C or colder | -18⁰C or colder |
| Frozen Blood | -65⁰C or colder | -65⁰C or colder |

 \* Maximum time without agitation is 30 hours

1. All blood products are stored at required temperatures in refrigerators/freezers/platelet incubators that are on emergency power and are monitored continuously by the REES audible alarm system and/or Data Loggers and/or chart recorders.

*Refer to Attachment 2: Table of Storage Temperatures and expiration Dates for Blood and Components.*

* 1. Alarms are set to activate at a temperature that will allow proper action to be taken to prevent components reaching undesirable temperatures.
1. Blood products are to be stored in a manner to minimize the inadvertent issuance or release of the wrong unit.
	1. Components are to be stored in an uncrowded manner.
	2. Unprocessed or quarantined products are separated from processed components.
	3. Autologous or directed products are separated from regular inventory.
2. Blood products received from other blood suppliers, local hospitals or by other means need to be checked for appearance. This includes units received via a mail carrier (i.e. Fed Ex), units transported with a patient, non-routine couriers, etc.

*Refer to Attachment 1: Table of Appearance Check*

*Refer to BB-POL-0057: Visual Inspection of Blood and Blood Products*

*Refer to BB-POL-0069: Visual Inspection of Blood and Blood Products Reference Photo Table*

1. Daily Inspection of Blood
	1. Each day blood in all refrigerators and BioFridges is inspected for acceptable appearance and expiration date.

*Refer to Attachment 1: Table of Appearance Check*

*Refer to BB-POL-0057: Visual Inspection of Blood and Blood Products*

*Refer to BB-POL-0069: Visual Inspection of Blood and Blood Products Reference Photo Table*

* 1. Units found unacceptable should be logged on the Unacceptable Unit Disposition log. If unit should be discarded, then complete the log. If any questions of return to supplier or investigation needed, then put the unit on the QC return shelf in Sera #3 and change the status of the unit to quarantine. Explain in detail on the Unacceptable Unit Disposition log and write a QA if needed.
	2. During daily inspection, examine for the following:
1. Uncrowded conditions
2. Storage on appropriate shelf by group/type and status
3. Storage of uncrossmatched blood on shelves in order of expiration date with whole blood (WB) separate from red blood cells (RBC).
4. Units with 5 days or less expiration date, place a short dated sticker.

*Refer to BB-LABEL-0052: Stort Dated, Use First (sticker)*

1. Units with ≤ 24 hours shall have a short dated unit flag hanging on the front of the fridge to signal staff that this unit should be used ASAP.

*Refer to BB-FORMS-0148: Short-Dated Unit Flag*

1. Autologous and Directed units are separate from each other and stock inventory.
2. Biohazard Autologous units are separated from non-biohazard Autologous/Directed inventory.
3. Verify that units have WFBH ABO Group Confirmed sticker.
	* Investigate units without a sticker.
	* Check for results in computer and resolve any discrepancies.
	* Complete a QA Exception form for units that were not labeled/tested properly.

*Refer to BB-FORMS-0120: Quality Assurance Exception Report*

1. **Return and Reissue of Blood Products**

A. Return and Reissue of Blood and Blood Products

1. ALL blood products that have left the control of the transfusion service and

 then returned must **not** be reissued unless the following conditions are met:

* 1. Appearance of unit is acceptable.
* Labels are not defaced. (Consult with management if questions.)

*Refer to Attachment 1: Table of Appearance Check*

*Refer to BB-POL-0057: Visual Inspection of Blood and Blood Products*

*Refer to BB-POL-0069: Visual Inspection of Blood and Blood Products Reference Photo Table*

* 1. The integrity of the product container has not been compromised.
* If a product has been entered, must determine if any of the product has been transfused.
* If any amount transfused, the unit must remain issued to the patient.
* Enter the approximate volume transfused as a free text comment in BPE > Modify > Comment
	1. At least one sealed segment of integral donor tubing remains attached to the container.
	2. Records indicate that the blood has been inspected and that the blood is acceptable for reissue.
	3. If transfusion tag is partially or fully filled out upon return, then a new transfusion tag should be printed and placed on product, IF product is acceptable for reissue.
	4. Blood Product has not expired.
1. Red Cell components and Plasma issued IN validated coolers have been maintained at 1-6⁰ C.
2. Temperature must be taken if cooler out too long or if units feel warm.
3. Any questionable condition should be investigated.
4. Units that are returned >6° should be discarded.
5. Thawed plasma issued immediately after thawing CAN be returned into inventory if >6 ⁰C if returned before cooler expiration. (May not have been <6⁰C at issue.)
6. Return to inventory using Blood Status Update

*Refer to BB-SOP-0160: Blood Status Update*.

f. Red cell components that have been issued in coolers are

 considered as being in storage so the temperature should not

 exceed 6⁰ C if the cooler is returned within the validated 10 hour

 expiration.

* Units that exceed 6⁰ C returned from a 10-hour cooler should be discarded.
1. Red Cell components and Plasma issued IN validated BioFridges (10-hours) have been maintained at 1-6⁰ C and platelets (stored in compartment on top) have been maintained at 20-24⁰ C.
2. Temperature must be taken if BF is out too long or temperature display is black (indicates battery has run down) or if units feel warm.
3. Any questionable condition should be investigated.

Thawed plasma issued immediately after thawing CAN be returned into inventory if >6 ⁰C if returned in Biofridge that has maintained temp at 1-6°C. (May not have been <6⁰C at issue.)

1. Red cell components that have been released in BF are considered as being in storage so the temperature should not exceed 6⁰ C if the BF is returned within the validated 10 hour expiration (or if the BF was plugged in on the floor).
2. Units that exceed 6⁰ C returned in a 10-hour BF should be discarded.
3. The BioFridges are given a 10-hour expiration date and the battery will maintain the refrigerated temperature during that time.
4. When the BF is returned, the voltage meter should be checked to make sure that there is sufficient charge for it to be issued again (>12.6).
5. If the BF has been out of the Blood Bank for >5 hours and the voltage reading is <12.6, then the BF should be plugged into an outlet and not used so that the battery can recharge.
* The voltage meter can be checked to determine when fully charged.
* The voltage should read >13.2.
1. Units that are issued or transfused from the BF and not in BB LIS, should be issued in BB LIS from the downtime form. Units that are returned and deemed acceptable must be issued and returned in BB LIS.
	1. Red cell components and plasma issued IN validated AirCare coolers (4-5 days) have been maintained at 1-6⁰ C.
2. Temperature must be taken if cooler out too long or if units feel warm.
3. Any questionable condition should be investigated.
4. Change location in inventory using Blood Location.
5. Red cell components that have been issued in AirCare coolers are closely monitored and are unique in that the coolers:
* Are used for both storage and transport to/from AirCare since leaves the facility.
* Data logger records temperature during storage/transport.
* Safe-T-Vue is present on units.
* Units that are returned should be evaluated for re-entry into inventory.
* Units that exceed 10⁰ C returned from an Air Care cooler should be discarded.
* Units that are returned with a temperature between 1 and 10⁰ C and meet the criteria below may be accepted back into inventory:
	+ Safe-T-Vue indicates temperature did not go above 10⁰ C
	+ Data logger data is downloaded and reviewed to verify that cooler temperature were maintained between 1 and 6⁰ C during the storage period. (Prior to being transport back to hospital.)
	+ Units are inspected and found acceptable.
	1. Red Cell components and plasma NOT issued in validated cooler must have not been out over 20 minutes.
1. 1-10⁰ C temperatures are maintained for up to and including 20 minutes.
2. However, the time it takes each unit to reach 10⁰C is dependent on ambient room temperature and blood product volume.
3. Each red cell component or plasma NOT issued in validated cooler must be checked with the Infrared thermometer if returned >20 minutes after issue.
4. If temperature is within acceptable range of 1-10⁰ C, the unit may be returned to inventory for reissue.
5. Return to inventory using Blood Status Update.
6. If temperature out of range, the unit must be discarded with the comment indicating it was out too long.

*Refer to BB-SOP-0160: Blood Status Update*

* 1. Room Temperature components (Thawed cryoprecipitate, Platelets pheresis, Granulocytes) must have been maintained at Room Temperature (20-24⁰C) during storage and transport.
	2. Platelets pheresis that are issued and then returned.
* Evaluate appearance carefully.
* Temperature should be taken if product feels cold or warm.
* Maximum time without agitation is 30 hours.

Return to inventory using Blood Status Update.

* 1. Thawed cryoprecipitate that is issued and returned.
* Temperature should be taken and appearance closely evaluated due to the short expiration period.
* Return to inventory using Blood Status Update.
	1. Granulocytes that are issued and returned.
* Temperature should be taken and appearance closely evaluated due to short expiration period.
* Return to inventory using Blood Status Update.

*Refer to Attachment 1: Table of Appearance Check*

*Refer to BB-POL-0057: Visual Inspection of Blood and Blood Products*

*Refer to BB-POL-0069: Visual Inspection of Blood and Blood Products Reference Photo Table*

* 1. Rare units not meeting the returned/reissued criteria, notify Medical Director/Management BEFORE discard.

B. Reicing of Coolers

 *Refer to BB-POL-0027: Blood Cooler Protocol*

C. Unacceptable for Reissue

1. If the appearance check is unacceptable, the unit cannot be reissued.

 Unit should be quarantined.

1. Rare units (Antigen negative for multiple antigens, etc.) should be brought to management's attention to determine if unit can be salvaged.
2. Red Cell components and Plasma returned outside of acceptable range. (>6⁰C for storage and >10⁰ for transport), the temperature may be taken with the Infrared Thermometer.
3. Units below 1⁰C are also unacceptable for return.
4. Integrity of the container has not been compromised.
5. If product has been entered, must determine if any of the product has been transfused. If any amount transfused, the unit must remain issued to the patient.
6. Unacceptable Components are logged on the Unacceptable Unit Disposition log and should be taken care of by the person logging the product if at all possible. Components should be discarded or quarantined to remove from available status.

*Refer to BB-SOP-0160: Blood Status Update*

1. Document the information related to the unit on a QA form and enter into RL6.

*Refer to BB-FORMS-0120: Quality Assurance Exception Report*

1. Return of Red Cell Components to ED Refrigerators
	* + 1. The ED Refrigerators are monitored by the Rees Monitoring system in the Blood Bank.
			2. The ED Refrigerators will be locked by the Haemonetics software program.
2. Nursing staff will need to badge to unlock the refrigerators and then scan each unit as it is removed.
3. The software will track the time the unit is out of the refrigerator.
4. Units that are transported to patients in the ED but then not transfused are transported back to the refrigerator ; then scanned back into the refrigerator and placed on the "Return Shelf."
5. Blood Bank will inspect the units on the "Return Shelf" and also all other shelves daily.
6. Some units are packed between 2 gel packs, validated to maintain temperature at 1-6°C for 1 hour after removal from the fridge. These units have a safe-t-view on them. If these units are returned within 1 hour and the safe-t-view is acceptable, they may be returned to inventory.
7. Units that are not packed between gel packs and returned within 20 minutes will be considered acceptable for issue based on criteria in Section II, 1.0 and 3.0.

*Refer to Attachment 1: Table of Appearance Check*

*Refer to BB-POL-0057: Visual Inspection of Blood and Blood Products*

*Refer to BB-POL-0069: Visual Inspection of Blood and Blood Products Reference Photo Table*

 E. Return of Red Cell Components from AirCare and EMS Surry County

* 1. Special coolers/refrigerators have been purchased and validated to meet the space and weight requirements of the AirCare helicopters.
	2. The AirCare coolers have been validated to maintain the temperature of red cells for 5 days.
	3. The validated refrigerators will maintain the temperature of units indefinitely.
	4. Units issued in AirCare and EMS coolers/refrigerators will have a Safe-T-Vue10 attached to each unit to ensure temperature does not exceed 10⁰C if removed from coolers.
	5. Blood Bank will inspect the units upon return to the Blood Bank.
1. The SafeTVue10 will be used to determine that the temperature did not exceed 10⁰C at any point the units were out of the cooler.
* Acceptable Safe-T-Vue: White center or White with Red Specks
* Unacceptable Safe-T-Vue: Full Red Color

 *Refer to Attachment 1: Table of Appearance Check.*

1. If there is a question about temperature of storage, the global Datalogics will be downloaded and reviewed. (Remote temperature logs for refrigerators will be pulled and reviewed.)
2. Blood Bank will determine acceptability for reissue based on criteria in Section II, 1.0 and 3.0 and the appearance of the Safe-T-Vue.
3. Units can be “returned” to Blood Bank Inventory by modifying the location in Blood Location.
4. Return of blood products to supplier.
	* 1. Blood products received with an unacceptable appearance (leaking, inadequate segments, defaced labels) may need to be returned to supplier for credit.
		2. Blood products that develop an unacceptable appearance during monitored controlled storage may need to be returned to supplier for credit.
		3. Supplier may request return of a blood product due to donor and/or product processing concerns.
5. Products that are in inventory, must be Quarantined immediately, physically and in the computer. This is done in Blood Status Update. Document the information for the QC tech to take appropriate action (return or discard product as instructed by the supplier).
6. Make certain there is not another product with the same unit number and notify management.
7. If the product is to be returned, check with supplier to see if an authorization number is required. Document the reason for the return as directed by supplier.

*Refer to BB-POL-0070: Recall and Market Withdrawals*

1. Transfer of Patient with Blood Products
2. Patients may occasionally be transferred to another facility with a request for blood products.
	1. If the patient HAS a current crossmatch, then crossmatch any additional units requested.
		* 1. The units are handled in BB LIS as follows:

Inside Atrium Network: Ship Out to sister the facility using Blood Status Update

Outside the WFBH system – issue the units to the patient

Pack the units for transport in a Red Cross box.

*Refer to BB-POL-0073: Shipping Regulations for Blood and Blood Products*

* + - 1. Complete transfer paperwork for Blood Supplier facility or transfer in Blood Hub for Red Cross.
			2. Keep our copy of the Transfer Paperwork and send the other copies in the box with the units.
			3. The facility that the patient is being transferred should be called to notify them that units are coming with the patient and request a return call to notify us if units are not transfused.
* If units are transfused in route, then the transaction is complete.
* If units are not transfused, then return the units in the computer and ensure the transfer was completed in Blood Status Update: Ship Out
* If the patient is transferred to a facility that does not accept Red Cross transferred blood, notify management.
	1. If the patient, DOES NOT have a current crossmatch, then order a Emergency Red Blood Cell order in Beaker and Emergency issue Group O units to the patient in the computer.
	2. Pack the units for transport in a Red Cross box.

*Refer to BB-POL-0073: Shipping Regulations for Blood and Blood Products*

* 1. Complete transfer paperwork for Blood Supplier facility or transfer in Blood Hub for Red Cross.
	2. Keep our copy of the Transfer Paperwork and send the other copies in the box with the units.
	3. The facility that the patient is being transferred should be called to notify them that units are coming with the patient and request a return call to notify us if units are not transfused.
* If units are transfused in route, then the transaction is complete.

If units are not transfused, then return the units in the computer and transfer them in BB LIS to the facility in Blood Status Update: Ship Out.

e. ARC units should be transferred in ARC system (connect) to transfer the cost of the unit to the receiving hospital.

 *Refer to BB-SOP-0015: American Red Cross Connect Online Blood Ordering System*

* If the patient is transferred to a facility that does not accept Red Cross transferred blood, notify management.
* If the units are from a supplier other than ARC and the receiving hospital accepts units from this supplier, contact the supplier for information on how to transfer the units. Notify management.
1. Transfer of Blood Products
	* + 1. Blood Products may be transferred to other facilities, blood supplier, or research when requested.

*Refer to BB-FORMS-0057: Request for Expired Blood Products*

* + - 1. Blood Products that have not been modified by Wake Forest Baptist Health and are being transferred to other facilities or to a blood supplier should have the appropriate paperwork completed.
			2. For transfer of Red Cross collected units, transfer the units in Blood Hub
			3. Keep a copy of the transfer paperwork at WFBH
			4. A copy should be sent with the units being transferred
			5. The units are Transferred in Blood Status Update: Ship Out to the facility the units are being transferred to.
			6. Blood that has been modified by WFBH or received from OneBlood, The Blood Connections, or others and being transferred to other facilities cannot be transferred via the Red Cross transfer process
			7. Check with the receiving facility to see if they accept products from non-Red Cross suppliers.
			8. Contact management before transferring units.
1. Disposition of Blood Products
	* + - 1. All units that have expired and/or are unacceptable for transfusion must be removed from inventory.
				2. The procedure is applicable to all units received in the BB including:
* Autologous and Directed Blood
* Units returned after issue as partially transfused, not transfused or out too long
* Broken bags
* Units that are shipped out for transfer to other hospitals
* Units that are returned to shipper for freezing
* Any unit deemed unacceptable for transfusion.
	+ - * 1. Any product that is discarded or returned to supplier must have the status and disposition recorded in the computer.
				2. Products that are discarded or returned for credit because they are unacceptable for use should be recorded on the Unacceptable Unit Disposition log.

*Refer to BB-FORMS-0166: Unacceptable Unit Disposition Log*

* + - * 1. Products that are discarded in BB LIS in error, must have the status changed in Blood Status Correction. Blood Status Correction. Units that have a finalized status (Transfused, Issued Final, Discarded, Expired, Wrong Number) cannot be corrected in Blood Status Update.
				2. Products that expire will print on the Expired Product List report (BBR #4) and are automatically given a discard status in.
1. Units that expire at midnight are routinely pulled from the shelf by third shift, checked off the expired product list and discarded physically.
2. Units that expire at any other time must be moved to the quarantine shelf. Third shift will pull these units and physically discard them.
3. The Expired products report should be initiated by the tech reconciling units.
4. The units should be physically taken out of inventory:
* Place in the large regulated waste biohazard bin if not needed for QC
* If needed for QC, then place on the QC shelf.
	+ - * 1. Blood Centers usually do not want the return of damaged units
1. ARC has instructions for credit in Blood Hub.
2. Notify all other blood centers to provide credit for damaged units and report on a QA

*Refer to BB-FORMS-0120: Quality Assurance Exception Report.*

* + - * 1. Partially transfused units returned to Blood Bank must remain in Issued status so they become Issued Final to the patient in the BB LIS.
			1. The unit volume should be modified to amount infused.
			2. The remainder of unit needs to be discarded.

# Literature References:

# Related Policies/Procedures in Navex:

# Attachments/Linked Documents in Title 21:

Attachment 1: Table of Appearance Check

Attachment 2: Table of Storage Temperatures and expiration Dates for Blood and Components.

BB-FORMS-0120: Quality Assurance Exception Report

BB-LABEL-0052: Stort Dated, Use First (sticker)

BB-SOP-0018: Biofridge Operation

BB-SOP-0160: Blood Status Update

BB-POL-0027: Blood Cooler Protocol

BB-POL-0057: Visual Inspection of Blood and Blood Products

BB-POL-0069: Visual Inspection of Blood and Blood Products Reference Photo Table

BB-POL-0070: Recall and Market Withdrawals

BB-POL-0073: Shipping Regulations for Blood and Blood Products

# Revision Dates: Review Change Summary as Represented in Title 21.

**Attachment 1 Table of Appearance Check**

**Appearance Check: Cryo, Platelets, Granulocytes**

***Acceptable:*** *Return to Inventory* ***Reject:*** *Discard*

|  |  |  |
| --- | --- | --- |
| ***UNIT*** | ***ACCEPTABLE*** | ***UNACCEPTABLE*** |
| Platelets pheresis | * Light to medium yellow, clear
 | * Purple, brown, red plasma or other colors not listed
* Icteric discolored, hemolyzed, milky, white floating colonies of bacteria
* Effervescent gas bubbles at rest
* Platelets clumping
 |
| Granulocytes | * Normal red color
* No visible clots/fibrin strands hanging in plasma/buffy layer
* No evidence of gas bubbles at rest or white floating puffs (bacteria)
* Buffy layer white in appearance\*

(\*Normal granulocytes-dark, opaque, whitish in color) | * Hemolyzed, brown, purple, black, or other color
* Fibrin strands or clots hanging in plasma/buffy layer
* Effervescent gas bubbles at rest, whitish-floating colonies of bacteria appearing as puffs of white clouds
* Buffy layer yellow in appearance
 |
| All Units | * Adequate seals
* Labels secure and not defaced
* Expiration date in dated and revised expiration date in dated.
 | * Inadequate sealing of unit bag including segments
* Labels loosely attached/or fallen off/defaced
* Revised expiration date out of date
 |

**Appearance Check: Blood and Plasma**

***Acceptable:*** *Return to Inventory* ***Reject:*** *Discard*

|  |  |  |
| --- | --- | --- |
| **UNIT** | **ACCEPTABLE** | **UNACCEPTABLE** |
| Plasma | * Light to medium yellow, clear
 | * Purple, brown, red plasma or other colors not listed
* Icteric discolored, hemolyzed, milky, white floating colonies of bacteria
* Effervescent gas bubbles at rest
 |
| Blood | * Normal red color
* No visible clots/fibrin strands hanging in plasma/buffy layer
* No evidence of gas bubbles at rest or white floating puffs (bacteria)
* Buffy layer white in appearance\*

(\*Normal granulocytes-dark, opaque, whitish in color) | * Hemolyzed, brown, purple, black, or other color
* Fibrin strands or clots hanging in plasma/buffy layer
* Effervescent gas bubbles at rest, whitish-floating colonies of bacteria appearing as puffs of white clouds
* Buffy layer thick, heavy white/yellow in appearance
 |
| Safe-T-Vue 10Units | * White Center in Safe-T-Vue
* White with Red Specks in Safe-T-vue
 | * Full Red Color in Safe-T-Vue
 |
| All Units | * Adequate seals
* Labels secure and not defaced
* Expiration date in dated and revised expiration date in dated.
 | * Inadequate sealing of unit bag including segments
* Labels loosely attached/or fallen off/defaced
* Revised expiration date out of date
 |

Attachment 2: Table of Storage Temperatures and expiration Dates for Blood and Components

|  |  |  |
| --- | --- | --- |
| ***COMPONENT*** | ***STORAGE TEMPERATURE*** | ***EXPIRATION DATE*** |
| CPDA-1 Whole Blood/Red Blood Cells  | 1-6⁰C | 35 days |
| CPD Whole Blood/Red Blood Cells  | 1-6⁰C | 21 days |
| CP2D Whole Blood/Red Blood Cells | 1-6⁰C | 21 days |
| AS-1 Red Blood Cells  | 1-6⁰C | 42 days |
| AS-3 Red Blood Cells  | 1-6⁰C | 42 days |
| AS-5 Red Blood Cells | 1-6⁰C | 42 days |
| Any Red Blood Cells, open system | 1-6⁰C | 24 hours |
| Washed Red Blood cells | 1-6⁰C | 24 hours |
| Frozen Red Blood Cells | -65⁰C or below | 10 years (may be extended by MD) |
| Deglycerolized Red Blood Cells | 1-6⁰C | 24 hours |
| Fresh Frozen Plasma | -18⁰C or below | 1 year |
| Fresh Frozen Plasma, Thawed | 1-6⁰C | 5 days |
| Plasma Frozen within 24 hours of collection  | -18⁰C or below | 1 year |
| F24 Plasma, Thawed  | 1-6⁰C | 5 days |
| Liquid Plasma | 1-6⁰C | CPD: 26 daysCPDA-1: 40 days |
| Cryo-reduced Frozen Plasma | -18⁰C or below | 1 year |
| Cryo-reduced Plasma, Thawed | 1-6⁰C | 5 days |
| Cryoprecipitate, Frozen Pooled or Single | -18⁰C or below | 1 year |
| Cryoprecipitate, Thawed | 20-24⁰C | 6 hours |
| Cryoprecipitate, thawed and pooled at WFBH | 20-24⁰C | 4 hours |
| Cryoprecipitate pooled and frozen, thawed | 20-24⁰C | 6 hours |
| Plateletpheresis including PAS and Pathogen Reduced | 20-24⁰C | 5 days |
| Plateletpheresis (open system) | 20-24⁰C | 4 hours |
| Granulocytes | 20-24⁰C | 24 hours |
| Irradiated Red Cell Products | 1-6⁰C | 28 days or original expiration date whichever is less |
| Irradiated Platelets pheresis | 20-24⁰C | Original expiration date |
| Split RBC Components for Neonates | 1-6⁰C | 24 hours |
| Split Plasma for Neonates | 1-6⁰C | 24 hours |
| Split Platelets for Neonates | 20-24⁰C |  4 hours |