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	Owner: Elaine Skipworth (Director-Lab Transfusion Medicine)	**Next Review:** 04/23/2027
	Category: Lab Methodist, Lab Riley, Lab University	
	Education: Level 3	
Approval Signatures: Magdalena Czader (Physician) (04/23/2025)		

Procedure: Platelet Preparation for Issue

Reference # 26527

I. PURPOSE

To detail procedure for preparing platelets for issue.

II. SCOPE

This SOP addresses procedure for preparation of platelet aliquots and product labeling. This applies to all trained Medical Laboratory Technicians and Medical Laboratory Scientists.

III. STATEMENTS/REQUIREMENTS

A. Leukocyte Reduced Apheresis Platelets: All platelet products received at IUH Blood Bank are Leukocyte Reduced Apheresis platelets.

B. Bacterial Contamination Risk Reduction - All platelet products are either:

1. Tested for bacterial contamination by the supplier, OR
2. Manufactured using an FDA-approved Pathogen Reduction Technology.
    a. Cold stored platelets and room temperature platelets can be PRT.

C. Universal Irradiation of Platelet Products:

1. PRT products do not require irradiation.
2. All non-PRT platelets received at IUH will be irradiated prior to transfusion.
3. Exceptions must be approved by a Blood Bank Physician.

D. Infants and Children ≤ 40 Kg Platelet Transfusion

1. Should receive ABO compatible and Rh appropriate platelets, when available.
2. Female infant/children who are Rh negative should receive Rh negative platelet products when available.

E. Rh Negative Platelet Usage

1. Female patients greater than 4 months of age and less than or equal to 50 years of age who are Rh negative should receive Rh negative platelet products, when available.

F. Products with visible contamination of donor red cells are not used. These products are to be returned to the respective blood center.

G. Room temperature platelets must be stored on a platelet agitator in a platelet incubator at 20-24°C.

H. Cold stored platelets must be stored at 1-6°C.

I. During MTPs, cold stored platelets will be issued first, if available. If none are available, room temperature platelets should be issued. Refer to SOP Massive Transfusion Protocol.

J. Platelet Expiration dates:

1. Platelet Apheresis (closed system) = original expiration.
2. Platelet Apheresis (open system) = 4 hours.
3. Non-Platelet transfer bag = 24 hours or original expiration whichever is first.
4. Double Bag Platelet Apheresis = 24 hours or original expiration, whichever is first once platelets are combined/pooled in 1 bag.

K. Diagnosis: Neonatal Alloimmune Thrombocytopenia

1. If the infant's mother donates a platelet for the infant, then the platelet will be washed and irradiated before transfusion. See SOP Procedure: Washing of Blood Components: COBE 2991.
2. If maternal platelets are not an option, then platelet antigen matched platelet products (example: PLA1 negative platelets) may be obtained from the donor center.

IV. DEFINITIONS

AABB: Association for the Advancement of Blood & Biotherapies

CMV: Cytomegalovirus

Cold-stored platelets: Platelets stored at 1-6°C

DIN: Donation Identification Number

FDA: Food and Drug Administration

HLA: Human Leukocyte Antigen

ISBT: International Society of Blood Transfusion

MTP: Massive Transfusion Protocol

NAIT: Neonatal Alloimmune Thrombocytopenia

PRT: Pathogen Reduction Technology

Room-temperature platelets: Platelets stored at 20-24°C

SCD: Sterile Connecting Device

SOP: Standard Operating Procedure

TD: Transfusion Document

V. EQUIPMENT/RESOURCES

Apheresis platelet product Quad pack bags/transfer bags

Tubing Sealer

Plasma transfer tubing set

Sterile Connecting Device (SCD)/QC Log

Labels (base label, ABO/RH, product, aliquot tracking, special attributes, expiration, storage temperature)

Balance (scale)

VI. PROCEDURE

A. Review Blood Product Order/Request and Select the Appropriate Platelet Product:

1. Select platelet product based on ABO/Rh compatibility:
    a. ABO group: See Table 1

    Table 1: "Guidelines for selection of appropriate ABO group for transfusion"

Patients ABO Group	Donor ABO Group			
	1st Choice	2nd Choice	3rd Choice	4th Choice
A	A	AB	(B)	(O)
B	B	AB	(A)	(O)
AB	AB	(B)	(A)	(O)
O	O	A	B	AB

    Blood groups in parentheses represent choices with incompatible plasma.

    b. Rh Type:
        i. If patient is Rh positive, an Rh negative male, or an Rh negative female greater than 50 years of age, then Rh positive platelets may be given.
        ii. If the patient is Rh negative and a female less than 50 years of age, then Rh negative platelets should be issued when available.
            1. If Rh negative platelets are not available, then these patients may receive Rh positive platelets.

2. Special Transfusion Requirements: Cerner Computer Flags and/or Clinician request.
    a. CMV Negative - PRT platelets may be issued without the CMV-barcode.
    b. Irradiated - PRT platelets do not require irradiation.
    c. Washed; May only be given with a Blood Bank Physician Consultation/Approval.
3. Volume Requested
    a. If an aliquot is requested, use platelet products reserved for aliquoting.
    b. If a partial product is required (half unit), use product that has at least 24-hour expiration to maximize transfusion of remaining product.
4. Expiration Date/Time
    a. To maximize the available product inventory, preference for product selection is given to transfusing the oldest available product that meets the patient's transfusion requirements.
    b. Product expiration date/ time:
        i. Single bags: original expiration
        ii. Double bags (combined): 24 hours (closed system) or original expiration (whichever is first)
        iii. Open system: 4 hours
5. Special Platelet Requests for HLA-matched Products
    a. If there is a unit available in inventory for the patient, release it to the floor.

b. If there is NO unit available in inventory for the patient, contact on-call Blood Bank physician for further instructions.

c. Do NOT order HLA-matched platelets from the donor center without Blood Bank MD or management approval.

d. Cerner PPI entries when HLA-matched platelets are ordered from the donor center:

i. Add Transfusion Requirement “HLA-matched Plt”.

ii. Add PPI comment “HLA-matched platelets approved by <BB MD name who gave approval>.

B. Component Modification of Platelet Product

1. Pooling/combining Double Bag Platelet Apheresis:

a. Open integral clamps between platelet bags, transfer contents from one bag to the other.

b. Double seal tubing adjacent to bag containing platelets and detach empty bag.

c. Correct the expiration date/time to 24 hours after bags have been combined when closed system is maintained or original expiration (whichever is first).

d. Perform Cerner computer entries. See section C.

e. Label and Assign products. See sections D and E.

2. Aliquoting Platelet Apheresis:

a. All aliquots should be:

i. CMV negative.

ii. Irradiated.

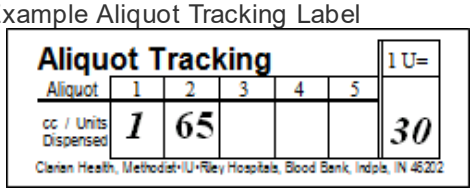
iii. **OR** manufactured using PRT in lieu of CMV negative and irradiated.

b. Follow steps in section A.

c. Apply green aliquot tracking label on original apheresis bag.

i. Enter volume of platelet on aliquot tracking label in space provided.

ii. Example Aliquot Tracking Label



d. Aliquot:

i. Affix a DIN to the transfer bag.

ii. Record required information on Form: Sterile Tubing Welder Worksheet.

iii. Using SCD - Attach transfer bag to original platelet apheresis bag.

iv. Allow desired volume of platelets to flow into transfer bag and record in next box of aliquot tracking label platelet equivalent associated with that volume.

v. Seal tubing to transfer bag, leaving a segment for future testing.

vi. Perform Cerner computer entries. See section C.

vii. Label and Assign products. See sections D and E.

viii. Have 2nd technologist review labeling and initial Form: Sterile Tubing Welder Worksheet.

C. Cerner Applications

1. Modify LAPL to **(new product)** Refer to SOP BBCE-006 Procedure: Modify Products for additional instructions:
    a. Platelet Aliquot
    b. Note: Perform "**DIV PLT**" in "**Modify Products**" when preparing the 1st aliquot.
    c. Select: "**Modify Product**" icon
        i. Option "**ALIQ PLT Ped**" (ISBT units)
        ii. Option "**ALIQ DD PLT Ped**" (Directed Donor ISBT units)
    d. Original Products: Barcode or manually type DIN and Product Code. If product was previously aliquoted, select the original container from "**Selected Product(s)**" menu.
    e. New Product: Sub ID/Aliquot ID will generate
    f. Change volume **"0"** to desired volume.
    g. <**SAVE** >
    h. ISBT Products will generate a new product label
        i. Apply product label to aliquot. Follow steps in Section D.
        ii. Verify label using "**Label Verify**" icon. See SOP Procedure: Label Verify.
2. Pooling/Combining Double Bag Platelet Apheresis
    a. Select in "**Correct Inventory**" icon the "**Demographics**" tab
    b. Original Products: Barcode or manually type DIN
    c. Modify old Expiration Date/Time to the new Expiration Date/Time
        i. Closed system: 24 hours from combining or original expiration, whichever comes first.
        ii. Open System: 4 hours from combining or original expiration, whichever comes first.
    d. Re-label product with the new Expiration Date/Time.
3. Attaching/ Removing CMV Attribute. Refer to SOP Procedure: Modify Products for additional instructions:

D. Labeling of Modified Platelet Products.

1. A Product Label, with the minimum information required, is attached to all splits or aliquots from the Primary Container. Minimum information attached:
    a. **Base label**. A product label will be generated by the system at the time of product modification. Extra labels may be required to be applied to make a complete product label.
    b. Donor Number
    c. **Donor ABO/Rh**
    d. **Component name**
    e. **Applicable special attribute sticker** (i.e., CMV Neg, Irradiated, Leukoreduced)
    f. Expiration date/time
    g. **Product volume**
    h. **Anticoagulant volume**
    i. "**DO NOT REFRIGERATE**" or **"STORE AT ROOM TEMP"** label may be added to the platelet product as a precaution.
2. ISBT product labels with modified Date/Times may be reprinted in Cerner. See SOP Procedure: Generate Tags and Labels.

3. **"Label Verify"** all ISBT modified products in Cerner. Refer to SOP Procedure: Label Verify.
4. Assign modified product to patient, generate Transfusion Document (Example, Attachment 1), and attach to the modified product. Follow steps section E.
5. Second Tech Check of all labeled aliquots/splits is made prior to dispensing of the product.
    a. The Second tech will review the original product label against the modified product label to ensure that they match.
    b. The Second tech will review the modified product label to ensure that any additional modifications/attributes made to product is also reflected on the product label (e.g., Expiration Date/Time).
    c. The Transfusion Document will be compared to the modified product label and Product Order to ensure it also accurately reflects the necessary modifications/attributes that are stated.
    d. The tech will initial the correct column on the SCD log to document the second check was made on this product.

E. Assigning Platelet Products:

1. Products may be assigned to the patient using "**Modify Products**" icon. Refer to SOP Procedure: Modify Products. Additional instructions on assigning products can be found in SOP Procedure: Dispense and Assign Products.
2. Use the "**Dispense and Assign Products**" icon to assign products to the patient.
    a. Select the proper platelet product ensuring that the product meets all special patient requirements and meets the stated needs of the Product Order.
    b. Select "**Dispense and Assign Products**" icon:
    c. Select the "**Assign**" task button
    d. Type in the patient's MRN.
    e. Press "**ENTER**" key.
    f. Select the correct current encounter, which is noted under "Fin#:" on Product Order.
    g. "Preadmit" encounter may be used for patients admitted for surgery or other procedures.
    h. Barcode or manually type DIN/Product Code for selected product.
    i. <**SAVE**>
    j. Select correct Medical Indication for transfusion under "**Reason**" box.
    k. Select: <**OK**>
    l. TD will print.
3. Attach TD to product
    a. Confirm product DIN matches DIN on TD.
    b. Confirm Product Code matches Product Code on TD.
    c. Confirm TD Patient Information matches that on patient Product Order.
    d. Affix the TD label to a manila tag and then attach the manila tag to the product.
4. Store Assigned products.
    a. Room Temperature Platelets: Place modified products and original products on platelet rotator.
    b. Cold Stored Platelets: Dispense and place in MTP cooler.

VII. CLINICAL SIGNIFICANCE/SPECIAL CONSIDERATIONS

None

VIII. REFERENCES

AABB Technical Manual, current edition

AABB Standards, current edition

Quality System, IU Health.

IX. FORMS/ APPENDICES

Attachment 1: Transfusion Document

X. APPROVAL BODY

None

PROCEDURE #:

BBCP – 004

Practice Alert

New Blood Product: Cold Stored Platelets

Audience: Nursing, Providers, Clinical Staff **Level of Education**: Level II YELLOW **Date**: March 3, 2025

Blood Bank will be utilizing a new product, cold-stored platelets. These platelets are approved for use in actively bleeding patients. Blood Bank will be primarily using this product in Massive Transfusion Protocols (MTPs), however, they make also be used for other actively bleeding patients during platelet shortages. This decision will be made by the Blood Bank Physician only. These products are not orderable in Cerner.

WHAT TO KNOW…

- Blood Bank will issue cold-stored platelets with MTP coolers. Like red blood cells and thawed plasma, these platelets will come inside in the cooler and should remain there until time of transfusion.
- The cold-stored platelets will be labeled with "REFRIGERATE" sticker. The product will otherwise look similar to room-temperature platelets.
- If Blood Bank runs out of cold-stored platelets, they will provide conventional, room-temperature platelets.
- Both cold-stored and room-temperature platelets are leukoreduced and pathogen-reduced.
- Transfusion documentation will not change.
- There are no changes to Cerner orders for MTPs. This product is not orderable in Cerner.

WHAT TO DO…

If you receive a cold-stored platelet with a "REFRIGERATE" label on it during an MTP, keep it in the cooler until time of transfusion. If it is not transfused, return it to Blood Bank **in the cooler**.

This change will take effect immediately upon implementation.

MTPs will still have a turn around time of 15 minutes per cooler.

Cold-stored platelets with MTPs will be implemented April 1, 2025.

Blood Bank Practice Alert

Practice Updates: Massive Transfusion Protocol

Audience: All Blood Bank Team Members **Level of Education**: Level III **Date**: April 14, 2025

Blood Bank has made changes to the Massive Transfusion Protocol (MTP). We will automatically provide cryo at set doses at the beginning of the MTP. The intent of this is to provide cryo more consistently and earlier to, hopefully, stop bleeding sooner. We will also provide cold stored platelets during MTPs, when available. Cold stored platelets are activated and work faster once transfused. They will also help alleviate platelet inventory issues.

WHAT TO KNOW…

- When MTP is initiated, cryoprecipitate will be sent automatically with every even dose starting with Dose 2.
    - Maximum of 3 doses of Cryo will be provided up to Dose 6.
    - If additional doses are required past Dose 6, the treating provider will need to order
- Cryo should be thawed when an MTP is activated. Returned cryo will be discarded.
- Cold stored platelets should be provided first, when available. If not available, room temperature platelets should be used.
- Cold stored platelets should have a "refrigerate" sticker applied to distinguish them from room temperature platelets.
- No changes will be made to orders or process of activating MTP.
- Cold stored platelets have an outdate of 14 days.
- Cold stored platelets will be stored in Blood Bank on a designated refrigerator shelf at each location (MH, UH, and Riley).

Dosing
≥40kg = 2 pools (10 units)
<40 kg = 1 pool (5 units)

REFRIGERATE

WHAT TO DO…

Thaw cryo when an MTP is activated and automatically provide with doses 2, 4, and 6. Provide cold stored platelets for MTPs, when available.

This change will impact all MTP activations and take effect immediately upon implementation.

Changes will start on May 1, 2025.

Indiana University Health	**Original Creation Date:** 11/12/2004	**Publication Date:** Not Set
	Owner: Elaine Skipworth (Director-Lab Transfusion Medicine)	**Next Review:** Not Set
	Category: Lab Methodist, Lab Riley, Lab University	
	Education: Level 2	
Approval Signatures: No Users		

Procedure: Components Received from Blood Suppliers and Other Institutions

Reference # 25379

I. PURPOSE

This procedure describes the process to receive blood and blood components from blood suppliers or other institutions.

II. SCOPE

This procedure covers the receipt of all blood and blood components received in the AHC Blood Banks. All trained team members will comply with this procedure.

III. STATEMENTS/REQUIREMENTS

A. Products should be stored at appropriate temperatures as soon as possible once removed from the shipping container.

B. When there is a delay in product receiving, place products in appropriate storage temperature until task can be resumed and completed.

C. Ensure all products are received in the computer system correctly to prevent issues with product disposition.

D. To minimize errors, all blood products should be entered in computer system using the bar code scanner.

IV. DEFINITIONS

AABB: Association for the Advancement of Blood & Biotherapies

DIN: Donation Identification Number

SOP: Standard Operating Procedure

V. EQUIPMENT/RESOURCES

Computer and Bar Code Scanner
"Whole Blood" Label
"Refrigerate" Label
Green Dot Sticker

VI. PROCEDURE

A. Inspection of Shipping Conditions

1. Inspect shipping containers and blood components to ensure that the following are met:
    a. Cold stored blood and blood components stored at 1 to 6°C are shipped in wet ice.
    b. Frozen components are shipped in dry ice.
    c. Room temperature platelets and Granulocytes are shipped at 20 to 24 ℃.
    d. Containers are intact.
    e. Labels are complete, affixed, legible.
2. Indicate on the packing list or invoice date, time received, team member initials, and interpretation **"OK"** to indicate shipping conditions have been met.
3. When shipping conditions have not been met as outlined above, notify supervisor or designee and Shipping Facility of the situation as soon as possible for proper disposition of products.
    a. Quarantine product until resolution has been determined.
    b. Indicate on packing list or invoice the reason conditions have not been met.
    c. Document your initials, date, and time with any notes written.
    d. When indicated, follow procedure outlined by the individual supplier involved when returning blood products. Refer to Procedure: Packaging Blood/Components for Shipping.

B. Inspection of Blood and Blood Components

1. Remove blood components from shipping containers and inspect each blood component to ensure the following are met:
    a. Blood container labels are legible, affixed and contains:
        i. DIN
        ii. ABO and Rh Label
        iii. Expiration Date
        iv. Product Code and Description
        v. Supplier Identification
    b. Components are not expired.
    c. Blood container closure has not been disturbed.
    d. Blood container is intact (e.g. no sign of leaks).
    e. At least one sealed segment of integral donor tubing has remained attached to the container.
    f. Red cell products, including granulocytes are not hemolyzed.
    g. Frozen components do not show sign of thawing.
    h. Platelets do not show visible aggregates.

C. When conditions **have not been met as outlined above**, notify supervisor or designee and Shipping Facility of the situation as soon as possible for proper disposition of products.

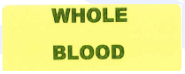
1. Physically quarantine product until resolution has been determined.
2. Indicate on packing list or invoice the reason conditions have not been met.

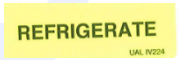
3. If indicated, follow the procedure outlined by the individual supplier involved when returning blood products. Refer to Procedure: Packaging Blood/Components for Shipping.

D. Verification of Shipment and Storage

1. Compare Unit number on each component against packing list or invoice.
2. Place a mark, such as a check (✓) on the packing list by the unit number to indicate the product has been received.
3. Note any discrepancies on the packing list and notify the supervisor or designee of any discrepancies.
4. When not entered in the computer system immediately, store blood components in the designated quarantine location at the appropriate temperature.

E. Entry of Blood Products into the Computer system

1. All products will be entered in Cerner according to Procedure: Receive Products.
   a. Ensure Cerner "INVENTORY AREA" and "SUPPLIER" fields are correct for appropriate Cerner site.
2. All products will be stored appropriately. Refer to section F (Storage of Blood Products).
3. Enter red cells and whole blood products, including autologous and directed donor products.
   a. After entry, components must stay in "Quarantine" refrigerator until donor retyping has been completed.
   b. Special labeling should be added to Whole Blood Units.
      i. Attach "Whole Blood" sticker to units when received. 

4. Enter cold stored platelets and liquid plasma products.
   a. After entry, cold storage platelets and liquid plasma products are stored in designated refrigerators.
      i. Attach a "Refrigerate" sticker to units when received. 

      ii. A green dot should be added to Liquid plasma products when products are received. This will distinguish liquid plasma from thawed plasma.
5. Enter frozen plasma products-cryoprecipitate, frozen plasma, and plasma-cryoprecipitate reduced (cryo-poor plasma).
6. Enter room temperature platelets.
7. Enter Granulocytes.

F. Storage of Blood Products

1. Once products have been entered in Cerner and processing complete, they may be stored and made available for general inventory as follows:
   a. Frozen plasma products (-18°C or colder).
   b. Room Temperature Platelets (20 to 24°C) with constant agitation.
   c. Granulocytes (20 to 24°C) on shelf in platelet chamber **without** agitation. "Red Tagged" (emergency or special release) blood\blood components: place in appropriate designated quarantine storage area.
   d. Liquid Plasma (1-6°C)
   e. Cold Storage Platelets (1-6°C).
   f. Red cells and whole blood products, including autologous and directed donor products (1 to 6°C). See step G.

G. Confirmation of ABO and Rh Group

1. Follow SOP Procedure: Donor Confirmation Testing to complete donor confirmation for red cell products (including granulocytes) and the storage of segments.

2. A red cells products remain in quarantine until testing is completed and blood type confirmation verified in computer.

VII. CLINICAL SIGNIFICANCE / SPECIAL CONSIDERATIONS

None

VIII. REFERENCES

AABB Technical Manual, current edition.

AABB Standards, current edition.

Quality System, AABB/IU Health.

IX. FORMS / APPENDICES

None

X. APPROVAL BODY

None

PROCEDURE #: BBCP – 010

Payment Events	Status	Timestamps

docusign

Certificate Of Completion

Envelope Id: 79219CD8-DF3E-41D1-85E1-74B4DAD04D4F
Status: Completed
Subject: Complete with Docusign: Cold Storage Platelet 01.pdf, Cold Storage Platelets Practice Alert.pdf...
Source Envelope:
Document Pages: 13
Signatures: 0
Certificate Pages: 1
Initials: 0
AutoNav: Enabled
EnvelopeId Stamping: Disabled
Time Zone: (UTC-05:00) Eastern Time (US & Canada)

Envelope Originator:
Jayanna Slayten
950 N Meridian St
Indianapolis, IN 46204
jslayten@iuhealth.org
IP Address: 10.103.81.73

Record Tracking

Status: Original
4/24/2025 12:32:33 PM
Holder: Jayanna Slayten
jslayten@iuhealth.org
Location: DocuSign

Signer Events	Signature	Timestamp

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp
Jayanna Slayten jslayten@iuhealth.org Coordinator-Quality Reporting IU Health Security Level: Email, Account Authentication (None)	VIEWED Using IP Address: 162.1.160.12	Sent: 4/24/2025 12:44:12 PM Viewed: 4/24/2025 12:44:20 PM

Electronic Record and Signature Disclosure:
Not Offered via Docusign

Carbon Copy Events	Status	Timestamp

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	4/24/2025 12:44:12 PM
Certified Delivered	Security Checked	4/24/2025 12:44:20 PM
Completed	Security Checked	4/24/2025 12:44:20 PM

Payment Events	Status	Timestamps