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Work Instruction

Title:	**TS-Receipt and Storage of Blood Components**	**WI Number** SFOWI-0067 **Revision:** 16
Department: Immunohematology **Area:** 2425 Geary Blvd SFO Hospital Lab	***Document is in the Final Approval Process. 2 - approvals are required***	
Type of Document: Work Instruction		**Review Period -** 340 **Days**

PURPOSE

To eliminate errors in the receipt of blood and blood components, it is necessary to initiate a procedure for the checking and proper storage of all components coming into the Transfusion Service. These procedures are to be followed by all shifts.

PROCEDURE:

A. Blood Product Receipt

1. Make sure that the blood products have been appropriately packed for shipment by the supplier.
   a. Frozen blood products are packed with dry ice.
   b. PRBCs are packed with ice packs. Ice packs should still be frozen upon arrival.
   c. Platelets are packed with room temperature stabilizing gel packs.

2. **LIS Entry**
   a. Enter all the units into the Transfusion Service LIS.
   b. Scan each barcode on the unit face label into its corresponding field in LIS e.g. DIN, ABORh, Ecode and expiration date. **Important:** These 4 fields cannot be manually entered or selected from the drop down menu. If the Ecode is not found in the LIS, return unit to supplier unless unit is special. In this case, select the closest product description from the drop down menu and inform RN that unit cannot be scanned into BPAM.
   c. Enter the special requirements such as CMV-, HgbS-, Irradiated or Antigen confirmed to be negative.
   d. Enter volume if it does not auto populate.

   e. **Visual Inspection**
      Visually inspect each unit as it is being entered for the following:
      i. Each unit is intact and not broken or leaking.
      ii. Red cells units are not dark purple/black in color or have clots (all

evidence of possible bacterial contamination).

iii. Unit is not discolored or hemolyzed.

iv. RAD-SURE 25 Gy indicator must show IRRADIATED on irradiated products.

v. Direct Donated units, HLA and Crossmatched platelets are irradiated.

vi. All labels are intact, complete and legible.

vii. No more than two unique numeric or alphanumeric donor identifications (one being ISBT and the other Codabar).

viii. Unit is not expired. Make note of short dated units which should be used first or return if not needed.

f. **Directed/Autologous Units (also refer to SFOWI-0099 Autologous and Designated Transfusion)**

These units arrive at anytime and they should be entered into the LIS immediately.

i. Make sure the name, MR#, date of birth/Social Security Number on the unit tag matches the information in ***all*** computer systems.

ii. Make sure DD units donated by blood relative are irradiated.

iii. If the intended surgery/transfusion date is today or tomorrow, set up DD or autologous units to replace random units.

iv. Enter units into the LIS and assign to the intended recipient's MR#.

v. Store designated donor units on the 'Designated Donor' shelf after type confirmation.

vi. Place autologous units on the 'Unconfirmed Autologous' shelf which is segregated from the random units.

vii. Print out a new Directed/Autologous inventory report.

viii. Post this list on the AUTO/DD clipboard.

ix. Assign Autologous, DD, Crossmatched or HLA matched platelets to the patient upon receipt.

g. Check the auto-printed Product Receipt Report against the shipping document for agreement of unit information and that the number of blood products received equals to the number of units received in LIS.

h. Initial on the report to indicate acceptable visual inspection and no clerical discrepancy.

B. **Problems/Discrepancy**

1. Notify blood supplier immediately of the following:
   a. Any discrepancy between the units received and the shipping document.
   b. Abnormal appearance, broken bag, no segments and any labeling errors.
   c. DD unit donated by blood relative was not irradiated.
   d. RAD-SURE 25Gy sticker did not turn black.
   e. Products were inappropriately packed for shipment.
2. Return unit to blood supplier after receiving and then final disposing unit in LIS indicating the reason.

C. **Storage**

1. Red cells received are stored on the 'Unconfirmed Units' shelf in the refrigerator.
2. FFP and cryoprecipitates are stored in the appropriate shelves matching their ABO type in the freezer.
3. Platelets are stored in the platelet incubator.

4. Unauthorized personnel are prohibited access to the blood storage refrigerators, freezer and platelet agitator.
5. The shelf life or expiration dates and storage temperature for all blood components comply with 21CFR 610.53 and the manufacturer's recommendations.
   See Table A.
6. Storage temperature of refrigerators, freezers, platelet incubator, and ambient environment is continuously monitored by Checkpoint, a computerized system that records temperature and alerts when temperature is out of range.

Table A.

Components	Shelf Life	Storage Temp
Red blood Cells ACD/CPD/CP2D	21 days	1-6 °C
Red blood Cells CPDA-1	35 days	1-6 °C
Red blood Cells Additive Solution	42 days	1-6 °C
Red blood Cells Open System	24 hours	1-6 °C
RBC Leukoreduced ACD/CPD/CP2D	21 days	1-6 °C
RBC Leukoreduced CPDA-1	35 days	1-6 °C
RBC Leukoreduced Additive Solution	42 days	1-6 °C
RBC Leukoreduced Open System	24 hours	1-6 °C
Whole Blood ACD/CPD/CP2D	21 days	1-6 °C
Whole Blood CPDA-1	35 days	1-6 °C
Whole Blood Open System	24 hours	1-6 °C
RBC Irradiated	Original expiration or 28 days from irradiation	1-6 °C
RBC Deglycerolized	24 hours	1-6 °C
RBC Rejuvenated	24 hours	1-6 °C
RBC Washed	24 hours	1-6 °C
Platelets Pheresis Leukoreduced	5 days	20-24 °C with agitation
Platelets Pheresis Leukoreduced Irradiated	5 days	20-24 °C with agitation
Washed platelets	4 hours	20-24 °C with agitation
Volume reduced/Dry platelets	4 hours	20-24 °C with agitation
Platelet Pheresis Open System	4 hours after opening	20-24 °C with agitation
Fresh Frozen Plasma	1 year	-18 °C or lower
Plasma Frozen 24 hours of collection	1 year	-18 °C or lower
Thawed FFP	24 hours	1-6 °C
Thawed Plasma	5 days after thawing	1-6 °C
Thawed Pedi FFP & Thawed Plasma of open system	24 hours after thawing	1-6 °C
Cryoprecipitate Reduced Frozen Plasma	1 year from collection	-18 °C or lower
Cryoprecipitate Reduced Thawed Plasma Open System	24 hours after thawing	1-6 °C
Cryoprecipitate Reduced Thawed Plasma	5 days (closed system)	1-6 °C
Cryoprecipitate AHF Frozen	1 year from collection	-18 °C or lower
Cryoprecipitate AHF Thawed	6 hours	20-24 °C w/ no agitation
Cryoprecipitate AHF Pooled Thawed (open system)	4 hours	20-24 °C w/ no agitation

Cryoprecipitate AHF Pooled Thawed (closed system)	6 hours	20-24 °C w/ no agitation
Granulocytes	24 hours from collection	20-24 °C w/ no agitation

D. **Quarantine**

1. Any unit discovered during storage to be abnormal in appearance such as clotted, hemolyzed or has missing/illegible labels that requires supervisory review.
   a. Quarantine the unit in LIS.
   b. Place on quarantine shelf.

E. Return to Blood Supplier

1. Per blood supplier request.
   a. Fill out the appropriate blood supplier return form and indicate reason for return.
   b. Set the unit(s) aside on the shelf labeled 'Return to Blood Supplier'.
   c. Return to Supplier in LIS when the unit is picked up.
2. Return short dated platelet pheresis using the appropriate blood supplier return form.
   a. Final dispose unit in LIS using Reason: 'Return to Supplier' and Method: 'Return to Supplier'.
   b. Pack appropriately in a platelet cooler/box.
   c. Prepare voucher and call a taxi to transport the cooler to blood supplier.
3. Save a copy of the return form and attached it to the LIS printout.

PROCEDURE NOTES

A. Frozen blood components are thawed at 30 - 37 °C.
B. Maximum time without agitation allowed for platelets is 30 hours.

REFERENCE

AABB, Standards for Blood Banks and Transfusion Service, current edition, Bethesda, MD.

Associated Documents:

External Documents

Associated Quality System Documents - None

Documents Generated:

Document Revision History:

Revision: 16	**Date Created:** 09/21/2005 **Date of Last Revision:** 05/13/2019	**Last Approval Date:** 04/22/2019

Document Author: Cara H Lim/CA/KAIPERM	**Document Manager:** Richard Chui/CA/KAIPERM

Reason for Change:

Revision:	Sec/Para Changed	Change Made:	Date
1	N/A	Initial Issue of Document	9/21/05
2	Approver	New Lab Director	01/01/07
3	Procedure E	Clarify return to BCP procedure	4/15/07

4	Approver	New Lab Director	7/1/07
5	Procedure	Delete 7 day and pooled platelets	11/15/08
6	Procedure	Delete RILIS function. Added 5-day plasma. Updated Lab Director	6/1/11
7	Procedure	Storage shelf life(Expiration date) complies with FDA requirements.	1/1/12
8	Approver	New Lab Director.	5/8/13
9	Approver Procedure A.1.a. to c. Procedure A.2.h. Procedure C.6. Procedure A.2.f.	New BB Medical Director. Added to check for appropriate shipment packing. Added visual inspection. New. Added Checkpoint continuous temperature monitoring. Added reference to SFOWI-0067.	8/1/13
10	Procedure C. Table A. Procedure Notes B.	Added Platelet Pheresis Open System expiration as 24 hours. Revised Thawed Plasma expiration to 5 days and Thawed FFP to 24 hours. New. Added 24 hours as maximum time acceptable for platelets without agitation.	8/12/15
11	Procedure E.	Updated BCP forms.	5/2/16
12	Approver	New CLIA Director.	9/8/16
13	Procedure A.2.	Revised due to BPAM implementation scheduled 3/20/18. Added NOTE that the 4 major barcodes i.e.DIN, ABORh, Ecode and Exp date on unit face label must be scanned and not manually entered.	3/6/18
14	Procedure Notes B.	Change from 24 to 30 hours for maximum time without agitation allowed for platelets per the 31st edition of AABB Std for BBTS.	9/4/18
15	Approver	New Lab Director and Blood Bank Medical Director	4/8/19
16	Table A.	Added Cryoprecipitate Pooled Thawed (closed system) which has 6 hours expiration time.	5/8/19

Notification List:

Approvals:

First Approver's Signature

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Second Approver's Signature

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Document History Section