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 <b>Work Instruction</b>		
<b>Title:</b> TS-Transport and Storage of Blood Products		<b>WI Number</b> SFOWI-0069 <b>Revision:</b> 14
<b>Department:</b> Immunoematology  <b>Area:</b> 2425 Geary Blvd SFO Hospital Lab	<b>Document is in the Final Approval Process. 2 - approvals are required</b>	
<b>Type of Document:</b> Work Instruction		<b>Review Period - 340 Days</b>

**PURPOSE**

To provide instructions to pack blood products for transportation and to monitor the temperature when a cooler is issued to Infusion Center, Pediatric Clinic, Delivery Room, Intensive Care Nursery, Emergency Room, Operating Room and outpatient hemodialysis clinics.

**REAGENTS**

Not Applicable

**EQUIPMENT**

- A. Validated coolers
- B. Frozen icepacks.
- C. Appropriately conditioned temperature panels.
- D. Temperature indicators.
- E. PRBC and thawed plasma.

**SPECIMEN**

Not Applicable

**CONTROLS**

- A. Temperature of 10 °C and higher will be indicated by a change in the temperature indicator affixed to each unit of blood product.
- B. Coolers are validated to maintain temperature of 1° - 6°C prior to use and inspected for wear and tear annually.

## PROCEDURE

### A. At the time of crossmatch/setup,

1. Attach a temperature indicator to each unit of PRBC.
  - a. Refer to **Temperature Indicator** SOP for user instructions.
2. Thawed plasma, thawed cryoprecipitate and platelets do not need temperature indicators.

### B. At the time of issuing,

1. Check the temperature indicator on each PRBC unit to ensure that it is valid and over temperature has not been breached.
2. A technologist visually inspects the blood products for acceptability, checks and initials on the Crossmatch/Component Report.
3. Issue the blood products according to the **Releasing Blood and Blood Components** SOP.
4. **Packing Coolers for PRBC and Thawed plasma (Refer to the diagrams below)**

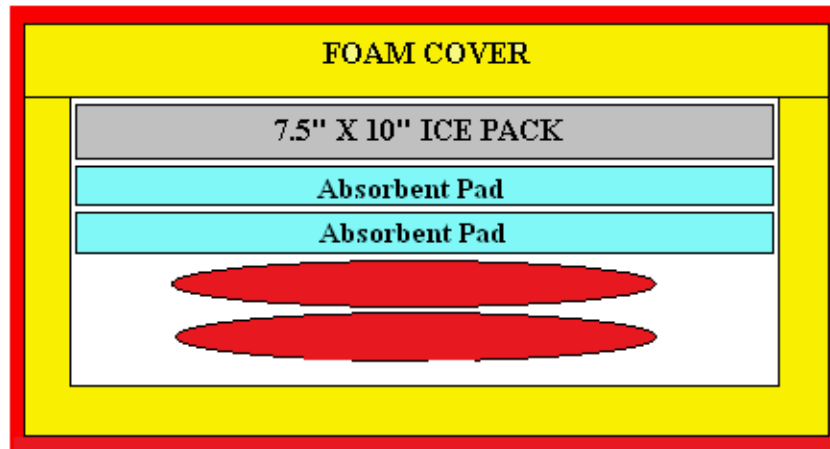
**NOTE:** Make sure that the frozen icepack is not in direct contact with the blood products. Icepacks should be completely frozen and full. Do not use icepacks that are lightweight or show signs of leakage. Refer to **Emergency Preparedness** SOP for packing **Disaster Cooler**.

#### a. True Pack T3 Transport Cooler (Fabric Foam Cooler) expires in 4 hours

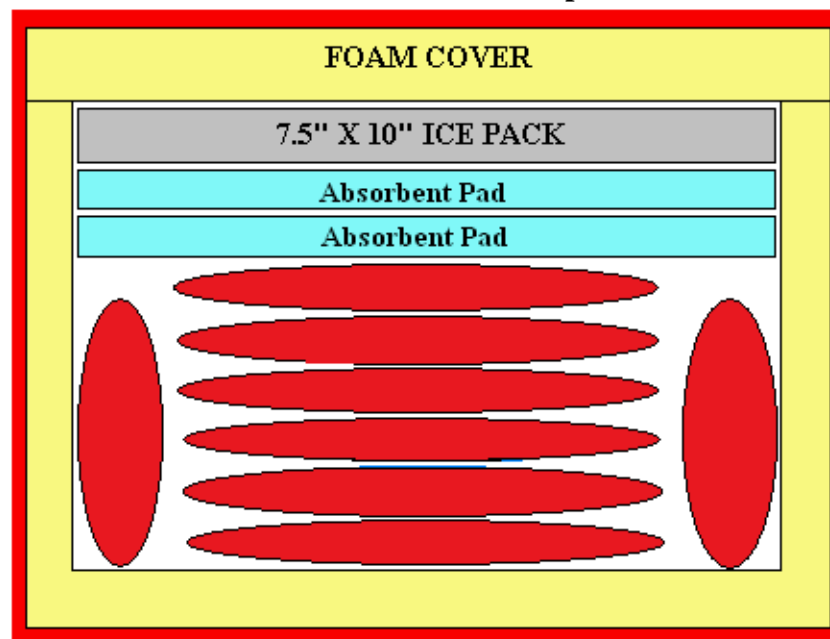
- i) Place 1-2 units of blood products inside the cooler lying down. The cooler can be packed up to a maximum of 8 units of PRBC/plasma. See diagrams below.
- ii) **NOTE:** Use only the 7.5"X10" frozen Ice Brix. Place 2 absorbent/insulation pads on top of the units in between the frozen Ice Brix and the units with the white sides facing the units and icepack.
- iii) Place one Ice Brix on top of the absorbent pads.



**SIDE VIEW of True Pack T3 COOLER packed with 2 units:**



**SIDE VIEW of True Pack T3 COOLER packed with 8 units:**



5. Fill out a **Cooler Dispense Label** with the patient's name, cooler expiration date and time and the nursing department. Place the Label on the cooler or in the side pocket of the cooler.
  6. Place thawed cryoprecipitate and platelets in plastic bags for transportation at room temperature.
  7. Record the cooler dispense on the **Cooler Dispense Log** to track expiration, ice-pack exchange and return.
- C. **At the time of transfusion,**
1. The transfusionist will examine the temperature indicator to make sure that the unit is  $< 10^{\circ}\text{C}$  before starting transfusion.
  2. If the temperature indicator is breached ( $> 10^{\circ}\text{C}$ ), the unit cannot be transfused, even though it was removed from the cooler prior to cooler expiration time.
- D. **After transfusion,**
1. The nursing department must return the cooler to Blood Bank as soon as possible after the procedure/emergency is over.

2. Blood Bank staff will return the icepacks and temperature panels to the appropriate storage freezer or refrigerator.

**E. Returning units to the Blood Bank,**

1. If a unit is returned in the cooler and the temperature indicator is breached, the blood products cannot be returned to inventory. Document visual inspection, quarantine and destruction in the LIS.
2. Record the return date and time of the cooler on the *Cooler Dispense Log* .

**PROCEDURE NOTE(S)**

- A. Blood and blood components can be issued to more than one patient, using separate coolers for each patient and each cooler labeled appropriately with the patient's name, and transported by a trained runner.
- B. Transfusion of blood products stored in the cooler must be started before the cooler's expiration time. Once started, the maximum allowable transfusion time is 4 hours.
- C. During disaster, transport coolers can be used to store blood products up to the maximum acceptable validated time indicated on the validation sticker (number of hours from start to the time right before temperature exceeds 6°C).

**REFERENCE**

- A. AABB, Standards for Blood Banks and Transfusion Services, current edition, Bethesda, MD.

**Associated Documents:**

External Documents



CoolerDispenseLabels.doc

Associated Documents:

- SFOWI-0047 -- TC Cooler Validation
- SFOWI-0131 -- TQ-Emergency Preparedness
- SFOWI-1266 -- TC Temperature Indicator
- SFOFCD-0441 -- AF0033 COOLER DISPENSE LOG

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**Document Revision History:**

<b>Revision:</b> 14	<b>Date Created:</b> 09/21/2005 <b>Date of Last Revision:</b> 05/01/2018	<b>Last Approval Date:</b> 10/30/2017
<b>Document Author:</b> Cara H Lim/CA/KAIPERM	<b>Document Manager:</b> Richard Chui/CA/KAIPERM	

**Reason for Change:**

Revision:	Sec/Para Changed	Change Made:	Date
	N/A	Initial Issue of Document	
1	Approver	New Lab Director	1/11/07
2	Procedure B, E	Change to RILIS function	4/15/07

3	Approver	New Lab Director	7/1/07
4	Procedure	Place frozen coolant on the side of the cooler. Add configuration.	9/5/09
5	Approver	Change Lab Director	6/1/11
6	Control	B. Validate each cooler annually	11/11/11
7	Title Equipment A. Procedure B.5. Procedure B.8. Procedure Note(s).C. Procedure B.4.a.& b. Procedure B.  Procedure A.2. and B.6.	Added Products. Deleted 7 quart. Added patient's name and expiration times of the different coolers. Deleted computer dispense instructions. Added the maximum allowable transfusion time. Changed packing instructions for coolers. Updated coolers diagrams to include Large Red Plastic cooler and the new Red and Black Fabric cooler. Added instructions for cryoprecipitate and platelets.	8/22/12
8	Approver	New Lab Director.	4/10/13
9	Approver Controls B.	New BB Medical Director. Added maintain temperature of 1C - 6C.	8/27/13
10	Procedure B.  Procedure B.4.  Procedure Notes C. Procedure Notes D.	Deleted Small Blue and White Plastic Cooler & Large Red and White Plastic Cooler as they are no longer in use. Added instructions and diagram for packing 8 units of blood products. Added reference for packing Disaster Cooler. Added information that Transport Coolers can be used during emergency to store blood products up to the maximum validated time.	12/21/15
11	Approver	New CLIA Director.	9/8/16
12	Controls  Equipment and Controls  Procedure A.1.  Procedure B.4. Procedure B.4.b. Whole document	Revised cooler validation frequency to align with SFOWI-0047 Cooler Validation. Deleted references to Safe-T-Vue and replaced with temperature indicator. Added temperature panels which are for Via coolers. Replaced Safe-T-Vue instructions with reference to SFOWI-1266 Temperature Indicator. Moved packing reference for Disaster Cooler from Procedure Notes. Added Sonoco Thermosafe Via Blood Transport Cooler. Deleted references to Safe-T-Vue's red color and replaced with general term 'breached'.	1/30/17
13	Procedure B.5.  Procedure B.7.  Procedure E.1. Procedure E.2.	Specified filling out a Cooler Dispense Label with patient's information, cooler expiration and nursing department. Added instructions to record cooler dispense on the Cooler Dispense Log. Deleted 'or beyond the expiration time of the cooler'. Added instructions to record the return of the cooler on the Cooler Dispense Log.	10/26/17
14	Procedure B.	Deleted Sonoco Thermosafe Via Transport Cooler because no longer in use.	4/24/18

## Notification List:

### Approvals:

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## Document History Section