

Department Laboratory
 Laboratory Blood Bank
 Section Blood Selection and Component Preparation
 Site(s) UMMC/UMMCH
 Document # D:PC-5900 BB v15

Subject PEDIATRIC (SPLIT) RED CELLS: PREPARATION AND SETUP

Purpose To prepare small volume red cell units in transfer bag. Red cells can be split to any volume, and 20 mL will be added to amount ordered for volume lost in tubing during administration.

- Policy**
 1. All neonates must have a pre-transfusion sample drawn before the first transfusion.
 2. **UNTYPED** neonates receive Group **O NEG** irradiated leukoreduced and <7 days old, AS-3 RBC'S.
 3. All neonates less than 4 months old receive group "O," Rh(D) compatible, leukoreduced, ≤ 7 days old, AS-3 RBC's. **Exception: Neonates undergoing cardiovascular surgery who are ≤ 3 months old receive group "O," Rh(D) compatible, leukoreduced, ≤ 5 day old, AS-3 RBC's during their surgery and until they are discharged.**
 4. All neonates less than 6 months old receive irradiated cellular components.

Specimen EDTA (purple top) tube for Type and Screen if not already ordered.

- Equipment/Supplies**
 1. Transfer bags.
 2. Sterile tubing welder and wafers.
 3. Hemostat.
 4. Scale.
 5. Heat sealer.

- Procedure** **Order Receipt:**
 1. A verbal order may be accepted for red cell orders in emergencies and for OR.
 2. EPIC order or paper order must be generated for all other patients.

Blood Selection:

Follow procedure "Blood Type Selection Policies." (See section on Neonates).

Peds Red Cell Preparation:

Spiking a unit changes outdate to 24 hr from entering unit. Change the outdate on the original bag. NOTE: If sterile welder is used the outdate does not change.

3. Splitting Unit:

- a. Mix unit thoroughly.
- b. Hemostat the tubing on the transfer bag to ensure air contamination does not occur during the sterile weld.

- c. See procedure “Operation of Terumo Sterile Tubing Welder TSCD™” for use of sterile welder to add transfer bag.
- d. Place the transfer bag on the scale and adjust the scale to zero.
- e. Place the unit to be split into the plasma expresser or hang on hook above counter. Release the spring of the plasma expresser to apply pressure to the unit.
- f. Open the hemostat and allow the blood to flow into the transfer bag.
- g. Reapply a hemostat when the desired amount of blood has entered the bag. (One gram of red cells equals 1mL of red cells.)
- h. Seal the tubing so that there are at least two segments on the original unit side of hemostat and two on transfer bag side (and segment numbers are intact).

4. Computer Processing/Labeling:

- a. See Sunquest procedure #D06.00 “Blood Component Prep”-Splitting a Red Cell. Use component prep code RBCS.
- b. Ensure outdate of unit is entered in computer. Outdate is either 2359 on the original outdate if sterile welded or 24 hours from the time the unit was spiked.
- c. The following rules apply whenever component prepping individual units:
 - 1) Resulting components always have the same unit number as the parent.
 - 2) A unit can be prepped into multiple split units.
- d. If a mistake is made in the Blood Component Prep function, UNDO can be used to recreate original component.
- e. A full face ISBT label will generate for each split and a ½ face label will generate for the original bag.
- f. Ensure labels printed correctly and attach to appropriate unit.
- g. Cross out license number on original bag.
- h. Allocate the unit using the Blood Order Process function (See Sunquest procedure D10.12 “Allocating Blood Products”).
 - 1) Add the following comment for neonates not requiring a crossmatch: Use “C” key (comment) and add the comment XMNR to the unit tag.
 - 2) Bag tag prints at allocation.
- i. Check that the information on the bag tag is correct (i.e. correct unit crossmatched, correct patient, etc.). Attach the bag tag to the unit with a fastener.

5. Irradiating Splits:

- a. If an order for an irradiated split is received, prepare the split from a non-irradiated unit and only irradiate the new split unit.
- b. Note: It is not required to re-irradiate the split component transfer bag.

6. Store units in appropriate blood bank at 1-6°C.

Computer Entry See procedure above under computer processing.

Enter weld QC in QCE per procedure “Operation of Terumo Sterile Tubing Welder TSCD™.”

Associated Procedures [Operation of Terumo Sterile Tubing Welder TSCD™](#)
[D06.00 “Blood Component Prep”](#)

Summary of Changes
Removed need to re-irradiate split transfer bag.
Added CV surgery neonate blood requirements.

| Document History | |
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