**TITLE: Pathogen Reduced Platelet Pheresis and LVDS Platelet Pheresis**

**PRINCIPLE:**

A platelet pheresis consists of platelets collected from a single donor using a pheresis machine. The unit contains at least 3.0 x 1011 platelets. These products are leukocyte reduced. Pathogen Reduced Platelets are platelets that have been treated with psoralen. LVDS (Large Volume Delayed Sampling) platelets are platelets that are similar to traditional platelet pheresis in appearance, volume and testing. The difference comes in when a larger volume is removed for culture and delayed by 48 hours instead of 24 hours. LVDS platelet pheresis will have a 7 day outdate from collection. Both PR (pathogen reduced) and LVDS are non-returnable to the blood supplier.

The INTERCEPT system for creating pathogen reduced platelets uses amotosalen- a photoactive compound (psoralen-derivative) that blocks the replication of viruses, bacteria and parasites, rendering them inactive.

**NOTE:** Pathogen reduced platelets meet requirements for CMV and Irradiation as defined by the AABB Standards for Blood Banks and Transfusion Medicine. Psoralen-treated platelets are pathogen reduced platelet components intended to reduce the risk or transfusion transmitted infection, including sepsis, and as an alternative to gamma irradiation for the prevention of transfusion-associated graft versus host disease.

Platelet pheresis are stored at 20-24C with appropriate agitation and have an expiration date of 5-7 days after collection.

**CLINICAL SIGNIFICANCE**

Platelet Pheresis is indicated for the treatment of hemorrhage due to a decrease in the number of circulating platelets. Platelet Pheresis may be given if there is overt bleeding such as epistaxis, hematuria, intracutaneous hemorrhage, suspected or proven intracranial bleeding and a platelet count of less than 50,000 per cu mm. Platelet Pheresis is indicated for the prevention of hemorrhage in patients whose platelet count falls below 10,000 per cu mm since the risk of hemorrhage is great.

**PERSONNEL**

Medical Technologists

**SPECIMEN**

Necessary only if the Blood Bank has no previous ABORH record for the patient. In that case no special preparation of the patient is required prior to specimen collection. Blood collected in a pink top EDTA tube is recommended. The blood sample should be tested as soon as possible after collection. If delay occurs, store sample at 2 C to 8 C. Sample can only be used for 3 days from collection time

**EQUIPMENT**

1. Platelet Rocker and Incubator
2. Product Order

**QUALITY CONTROL**

Patient identification is assured by the use of Soft ID by which all samples, requisitions, and the patient involved in the transfusion are identified.

**STEPWISE PROCEDURE**

1. When an order is received for platelet pheresis, check the Blood Bank records for the patient’s ABO type and Rh.
2. If no record is found have the patient’s blood collected as explained in the procedure

“Ordering Blood and Other Components” No. 4840-BB-100.

1. Request an ABO and Rh typing to be added to the current platelet order.
2. Type the patient for ABO and Rh.

If no platelet pheresis are available in the Blood Bank, Call Versiti Blood Center (630- 892-7091) and give them the platelet order.

1. Platelets are transfused to adults without ABO type consideration unless otherwise specified by the ordering physician.

Type specific platelets or type AB are given to all patients under the age of 12 years.

Rh-negative recipients (males and female patients over the age of 55) should be given Rh-negative platelets as far as possible; however, these recipients can safely receive Rh-positive components.

Rh negative females of childbearing age or younger (under the age of 55) must be transfused with Rh-negative platelets. If Rh negative platelets not available, contact the physician for instructions.

1. All platelets pheresis products will be bacterial tested at Versiti Blood Center.
2. If a product should test positive for the presence of bacteria, Versiti Blood Center will recall all products.

If a product tests positive and was already transfused, the hospital will be immediately notified by Versiti Blood Center so that the patient’s physician is notified and the product will be further tested to identify the bacteria. Sensitivities will be performed as determined by Versiti’s Medical Director.

1. Platelets are to be dispensed just like blood. See procedure “Signing Out Blood from the Blood Bank” No. 4840-BB-400 for further information.

**NOTE: Units with grossly visible platelet aggregates should not be issued for transfusion. If this occurs contact Versiti to replace these platelets.**

NOTE: If platelet bag is entered for any reason, expiration time must be changed to four hours after entry.

STANDARD PLATELET PATHOGEN REDUCED PLATELET



EXAMPLE OF NEW PRODUCT LABEL:



**REFERENCES**

1. Circular of Information for the use of human blood and blood components
2. AABB Technical Manual, 18th Edition, 2014.
3. Standards for Blood Banks & Transfusion Service, 30th Edition, 2015
4. INTERCEPT Blood System for Platelets –Dual Storage (DS) Processing Set Package Insert, July 17, 2018.