## Other Names

Buffy Coat platelets, CPD Pooled platelets, Platelets LR, Apheresis platelets LR

## Consent Required

Yes

## Pre-Transfusion Samples

- Not Required
- Blood Group
- Group & Screen
- Crossmatch

Not required if patient blood group is on file in Transfusion Medicine.

## Approval Requirements

Hematopathologist approval required in the following circumstances:

- ICU patient with platelet count $\geq 100 \times 10^9 /L$
- All other patients with platelet count $\geq 50 \times 10^9 /L$
- TTP and HUS patients (if diagnosis known) – all requests
- Plasma reduced
- Transport Team

## Product Description

### CPD Platelets, Pooled

Contains $> 240 \times 10^9$ platelets. Volume approximately 300 - 400 milliliters. Produced from whole blood from which the buffy coat layer is separated. Four ABO matched units are pooled in the residual plasma from one of the four donations and leukocyte reduced by filtration. Equivalent to one adult dose.

### Apheresis Platelets

Contains $> 300 \times 10^9$ platelets. Volume 200 – 300 mL. Collected from a single donor using apheresis technique which includes leukocyte reduction. Equivalent to one adult dose.

### Plasma Reduced Platelets (PRP)

Centrifuged to remove the majority of plasma, and saline may added to resuspend the platelets. For patients with documented reactions to plasma, under 3 years of age and receiving ABO incompatible platelets, or on volume restrictions.

⚠️ PRPs expire within 4 hours of TML preparation start time.

### HLA Matched Platelets

For patients who have become refractory to random donor platelets due to platelet alloimmunization and have demonstrable anti-HLA antibodies.

First time requests for HLA matched apheresis platelets are to be approved by the hematopathologist. Requests will then be made to CBS upon hematopathologist recommendation/approval.

### Platelet Antigen (HPA-1a) Negative Platelets

For patients with specific platelet antibodies against HPA-1a or negative phenotype for a HPA-1a or for treatment of a fetus / neonate with NAIT (neonatal alloimmune thrombocytopenia).

## Notes:

- Irradiated platelets may be required in certain circumstances.
- If Rh positive platelets are given to an Rh negative patient, administration of Rh Immune Globulin should be considered.

## Clinical Indications

- Prevention and treatment of bleeding due to thrombocytopenia.
- Prevention and treatment of bleeding due to abnormal platelet function. Cause of thrombocytopenia should be established.
BLOOD PRODUCT FACT SHEET
PLATELETS

Contraindications
- Immune thrombocytopenia purpura (ITP), unless there is severe acute bleeding
- Thrombotic thrombocytopenia purpura (TTP) and hemolytic uremic syndrome (HUS), unless there is severe acute bleeding
- Heparin-induced thrombocytopenia (HIT).
- Plasma coagulation defects.

Risks
Febrile Non-Hemolytic transfusion reaction, allergic reactions, transfusion associated circulatory overload (TACO), transfusion related acute lung injury (TRALI), bacterial contamination, hemolytic reactions, anaphylaxis, graft vs. host disease, hyperkalemia, iron overload, post transfusion purpura and transmission of infection.

Dosage
**Neonate/Infant/Pediatric:**
- Recommended dose 10 to 15 mL/kg. Maximum dose 20 mL/kg.
- 10-20 mL/kg to a maximum of a full adult dose.
- For children greater than 25 kg use adult dosing
**Adult:** The usual dose for an adult is one unit of CPD pooled platelets. This dose should increase the platelet count by at least 15x10^9/L.
   △ If the patient is actively bleeding these guidelines may need to be exceeded.

Administration
Refer to blood administration procedures for details.
Administer pre medications as ordered.
**Volumetric Method:** Blood infusion set with 170-200 micron filter.
**Syringe Method:** Platelets issued in a syringe are pre-filtered and do not require an in-line filter at the time of administration.

Note:
If ordered a post-transfusion platelet count should be done within 15 min to 1 h post platelet transfusion to measure the response to the platelet transfusion.
If the platelet transfusion was given because the patient was bleeding, the clinical response is the most important indication of the effectiveness of the transfusion.

Warming Permitted
No

Compatible Solution
0.9% Normal Saline and Plasma Lyte only.

Infusion Rates
- **Infuse** each unit of red cells at 1mL/kg/h, up to a maximum of 50 mL/h (when product reaches the patient), for the first 15 minutes.
- **Adjust** the flow to the prescribed infusion rate listed below, if there are no signs or symptoms of a transfusion reaction during the first 15 minutes.
- **Infuse** at 10 to 20 mL/kg/h for remainder of transfusion
   △ These rates may be exceeded in emergency situations

Patient Monitoring
Refer to Administration of Blood Products procedure.

Storage Conditions
20-24°C with continuous gentle agitation for up to 5 days after collection.
20-24°C with continuous gentle agitation for 4 hours after the original bag is entered (e.g. aliquoted, plasma reduced or washed).
Return platelet unit and Transfusion Record to Transfusion Medicine within 20 minutes from time of issue if there are any delays in administration.
Do NOT refrigerate or store on nursing unit.
# References

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<thead>
<tr>
<th>Reference</th>
<th>Location/Date</th>
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<tbody>
<tr>
<td>Circular of Information for the Use of Human Blood Components (2011)</td>
<td>Ottawa ON.</td>
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<td>Standards for Hospital Transfusion Services (Ver. 3.0) (2011). Ottawa, ON.</td>
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<tr>
<td>Canadian Society for Transfusion Medicine.</td>
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