Other Names | Plasma, FFP
---|---
Consent Required | Yes
Pre-Transfusion Sample | ☐ Not Required ☑ Blood Group ☐ Group & Screen ☐ Crossmatch
ABO / Rh group required. Specimen expires every 3 days, i.e. at 23:59 on third day following date of collection.
Approval Requirements | Hematopathologist approval required for transport team requests.
Product Description | Clear portion of whole blood that is separated by centrifugation and stored frozen. **Frozen Plasma (FP)**
- FP is prepared from whole blood collected in approximately 70 mL of CPD anticoagulant, centrifuged and then separated from red blood cells and Buffy coat.
- The plasma is frozen within 24 hours of collection. Volume is 283 ± 15 mL.
- FP contains all coagulation factors at levels similar to the levels in apheresis fresh frozen plasma with the exception of the labile factors, V and VIII, which may be slightly reduced in FP.
- FP is not labelled as leukoreduced as some units may contain ≤ 5x10^6 leukocytes/unit.
**Apheresis Fresh Frozen Plasma (AFFP)**
- Collected by apheresis using a ratio of 1 part sodium citrate anticoagulation to 16 parts whole blood (294 ± 31 mL) or 1 part ACD-A anticoagulation to 11 parts whole blood (249 ± 18 mL) and frozen within 8 hours of collection.
- Volume is. AFFP contains both labile clotting factors V and VIII, plus all non-labile coagulation factors.
**Cryosupernatant Plasma**
- Is prepared from slowly thawed frozen plasma that is centrifuged to separate the insoluble cryoprecipitate from the plasma. The insoluble cryoprecipitate is refrozen.
- Volume is 273 ± 15 mL
Clinical Indications | • Deficiency of multiple coagulation factors, **AND**
  - PT > 16 (INR > 1.5), **AND**
  - Actively bleeding, **OR**
  - Surgical procedure with moderate to high risk of bleeding
- Deficiency of single coagulation factor or plasma protein, when specific factor/protein replacement is not available.
- Therapeutic plasma exchange, where plasma is indicated.
- Massive Transfusion as dictated by clinical assessment and guided by laboratory results when feasible.
**Neonates**
In neonates, treatment of active bleeding in combination with the following:
- Coagulopathy due to DIC or liver failure, **OR**
- Inherited coagulation factor deficiency when specific factor replacement is not available, **OR**
- Vitamin K deficiency

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| Contraindications | Not indicated for:  
<table>
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<tbody>
<tr>
<td>volume replacement</td>
<td>correction of a coagulopathy in a non-bleeding patient</td>
</tr>
<tr>
<td>coagulopathy, in a bleeding patient, that can be corrected more effectively with specific therapy such as vitamin K, or specific factor replacement</td>
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<td>Risks</td>
<td>Allergic reactions, transfusion associated circulatory overload, transfusion related acute lung injury, bacterial contamination, hemolytic reactions, and transmission of infection. Patients receiving plasma must have careful hemodynamic monitoring to prevent cardiac overload. Acute transfusion reactions may be more common with faster administration rates</td>
</tr>
</tbody>
</table>
| Dosage | Recommended dose 15 mL/kg. Maximum dose is 20 mL/kg  
| 1 unit = 285 mL; usual dose for small adult is 3 units; usual dose for large adult is 4 units |
| ▼ If the patient is actively bleeding these guidelines may need to be exceeded. |
| Administration | Refer to blood administration procedures for details. |
| **Volumetric Method:** |  
| for volumes greater than 50 mL  
| a blood administration set, with 170-200 micron filter, is required |
| **Syringe Method:** |  
| for volumes less than 50 mL  
| the product is pre-filtered, no filter required |
| Compatible Solution | 0.9% Normal Saline and Plasma-Lyte only. |
| Warming permitted | Yes. Refer to manufacturer manual at all times. |
| Infusion Rates (for all age groups) |  
| **Infuse** each unit of plasma at 1mL/kg/h, **up to a maximum of 50 mL**, for the first 15 minutes.  
| If there are no signs or symptoms of a reaction during the first 15 minutes, **infuse** remaining volume at 5 to10 mLs/kg/h |
| **These rates may be exceeded in emergency situations.**  
| Acute transfusion reactions may be more common with faster administration rates |
| Monitoring | Refer to Administration of Blood Products procedure.  
| ▼ Patients receiving plasma must have careful hemodynamic monitoring to prevent cardiac overload. |
| Storage Conditions |  
| **Stored** in a monitored blood product storage freezer at -18C or colder.  
| Once thawed, it is stored at 1 – 6 C. Product expires 24 hours after thawing.  
| **Return** plasma and Transfusion Record to Transfusion Medicine within 20 minutes from time of issue if there are any delays in administration  
| **DO NOT** refrigerate in medication refrigerators. |
References


Norfolk, D. (2014) Handbook of Transfusion Medicine, 5th edn, TSO, UK,


Standards for Hospital Transfusion Services (Ver. 4.0). (2017). Ottawa, ON. Canadian Society for Transfusion Medicine.

Developed By
Transfusion Medicine – Transfusion Safety Nurse Clinician

Version History

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<td>25-Nov-2019</td>
<td>C-0506-14-60429 Blood Component Fact Sheet: Frozen Plasma</td>
<td>Approved at: Transfusion Committee</td>
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