



Frozen Plasma / Fresh Frozen Plasma, Leukocyte Reduced

Class: Human Blood Component, Derived from whole blood.

OTHER NAMES: FP / FFP

ROUTES	INTRAVENOUS			OTHER		
	DIRECT IV	Intermittent Infusion	Continuous Infusion	SC	IM	OTHER
Acceptable Routes*	No	Yes	No	No	No	NA

*** Professionals performing these restricted activities have received authorization from their regulatory college and have the knowledge and skill to perform the skill competently.**

DESCRIPTION OF PRODUCT:

Fresh Frozen Plasma, Leukocyte Reduced (FFP) and Frozen Plasma, Leukocyte Reduced (FP) are prepared from anticoagulated blood that is collected from volunteer donors, centrifuged, separated and then leukocyte reduced by filtration.

- Plasma that is frozen within 8hrs of collection it is labeled as FFP
- Plasma that is frozen between 8 and 24hrs after collection is labeled as FP

FFP and FP contain non-labile coagulation factors. FP contains slightly reduced levels of the labile factors V and VIII. The difference is not considered clinically significant. FFP and FP will be issued interchangeably. For the purposes of this document, all references to FFP also apply to FP.

- The approximate volume of a unit of is 200 – 250ml
- An Apheresis FFP is **double** in volume, or approximately 500ml

Donors are screened and blood donations are tested for:

- Hepatitis B Surface Antigen (HBsAg)
- Syphilis
- Antibodies to Hepatitis B core antigen (HBcore), Hepatitis C Virus (HCV), Human T-cell Lymphotropic Virus (HTLV-1 and 2), Human Immune Deficiency Virus (HIV-1 and 2)
- Nucleic Acid Testing (NAT) for presence of HCV RNA, HIV-1 RNA and West Nile Virus (WNV) RNA

Canadian Blood Services also tests blood donations for ABO/Rh and clinically significant antibodies.

AVAILABILITY:

- Not all transfusion services/laboratories stock FFP
- Product is stored frozen, and as a result requires preparation time prior to issuing
- Patient blood type should be determined when possible to allow for ABO specific/compatible plasma transfusion

INDICATIONS FOR USE:

- FFP may be used to correct depletion of coagulation factors in massive bleeding, bleeding associated with disseminated intravascular coagulopathy (DIC) or thrombolytic therapy
- FFP may be used for the elective reversal of oral anticoagulant therapy pre-invasive procedure
- Treatment of congenital deficiencies of coagulation factors (for example, Factor V deficiency) where there is no specific factor concentrate available
- Neonatal exchange
- Massive transfusion
- Thrombotic Thrombocytopenia Purpura (TTP) or adult Hemolytic Uremic Syndrome (HUS)

CONTRAINDICATIONS:

- Do not use for conditions that require von Willebrand Factor supplementation
- Do not use when coagulopathy can be corrected with specific therapy, such as vitamin K, or specific factor replacement
- Do not use for volume replacement
- Do not use to assist wound healing

DOSE:

- The volume transfused will depend on the clinical situation and patient size
- Standard dosing is 10-15 ml/kg

ADMINISTRATION:

Ensure written (signed) patient consent has been obtained prior to requesting blood component from lab/transfusion service where possible.

Perform required pre-transfusion checks.

Administration Set:

- Administer through a standard blood transfusion set (170 – 260 micron filter) and change every 8 hours or per manufacturers recommendation.
- Use intravenous catheter at a minimum of 18 to 20 gauge where possible, taking into account the condition and the size of the vein. Transfusion for neonate/pediatric/elderly populations is usually given using 22 to 24 gauge peripheral venous access device. Smaller gauge catheters may require decreased infusion rates.

Compatible Solutions:

- FFP is only compatible with 0.9% Sodium Chloride

Infusion Rate:

- Rate is specified by authorized prescriber. Adult infusions should be started at a rate of 2 mL/min for the first 15 minutes
- Recommended infusion time 30 – 120 minutes (non-apheresis unit)
- Transfusion of each unit must be completed within 4 hours of removal from a cold storage device approved by the Transfusion Service/laboratory

POTENTIAL HAZARDS WITH PARENTERAL ADMINISTRATION:

- Potential adverse events related to a blood transfusion range in severity from minor with no sequelae to life-threatening.
- All adverse events occurring during a transfusion should be evaluated to determine whether or not the transfusion can be safely continued/restarted.
- All adverse events suspected to be related to a transfusion (whether during or after a transfusion) should be reported to your local Transfusion Service/laboratory.

NURSING IMPLICATIONS:

Patient Monitoring:

	Pre Transfusion Vitals?	Stay At Patient Bedside?			Vital Signs During Transfusion		Post Transfusion Monitoring
		First 5 min	First 10 min	First 15 min	After 15 min	Remainder of transfusion	
ADULTS (in patients)	Yes		NO, but must be immediately available*		Yes	q1h	Set of V/S then monitor prn
ADULTS (out patients)	Yes		NO, but must be immediately available*		Yes	q1h	Set of V/S. Monitor for minimum of 15 min post**
PEDIATRICS & NEONATES	Yes	YES			Yes	1st hour→q15 min 2 nd and 3 rd hours→ q30 min then q1h until complete	For 30-60 minutes following

* Defined as performing non-dedicated tasks with the patient in view.

** If patient has had a previous adverse reaction to component transfusion, or this is the first transfusion patient has had for component, monitor for 30-60 minutes.

Note: Vital signs/patient monitoring may be conducted more frequently as determined by clinical condition of patient.

Patients receiving blood component transfusions must be observed closely for signs of any unexpected or untoward reactions. These reactions may occur during or after the infusion of blood components or blood products. For follow up instructions to a transfusion reaction, see the following link:

<http://www.albertahealthservices.ca/4240.asp>

Documentation:

- Ensure documentation is completed as per the AHS Transfusion of Blood Components and Products procedure.
- **Recipients of blood components are to be notified in writing of the transfusion.**

STORAGE & STABILITY of PRODUCT:

- FFP is stored at -18 °C for up to a maximum of 12 months from the date of collection.
- Thawed plasma is stored at 1-6 °C and has a limited shelf life.

COMMENTS:

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For questions or comments, please contact transfusion.safetyteam@albertahealthservices.ca

REFERENCES:

Canadian Blood Services Circular of Information

CSA Standards

AABB Technical Manual

AABB Clinical Principles and Practice

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