Alberta Health Services

This document applies to all Covenant and AHS sites.

# Solvent Detergent (SD) Plasma

***Class:*** *Human Blood Component, Derived from whole blood.*

**OTHER NAMES:** *Octaplasma™*

| | INTRAVENOUS | | | OTHER | | |
|---|---|---|---|---|---|---|
| **ROUTES** | **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:**

- Standardized plasma units manufactured from pools of human plasma.
- Pooling dilutes antibodies to white blood cells.
- Resulting coagulation activity similar to single-donor fresh frozen plasma. Contains a minimum 0.5 IU/mL for all clotting factors.
- Solvent Detergent (S/D) treated to destroy enveloped viruses. Solvent detergent treatment is not effective against non-enveloped viruses
- Filtered to remove all cells and cellular debris
- Each unit has a standardized volume of 200 mL

**AVAILABILITY:**

- SD Plasma is not routinely stocked in Alberta hospitals. Patient-specific requests must be approved. Consult your transfusion service/laboratory for requesting information.
- Not all transfusion services/laboratories stock Octaplasma
- Product is stored frozen and takes longer to thaw than single-donor plasma (minimum 30 minutes).
- Patient blood type should be determined when possible to allow for ABO specific/compatible transfusion

**INDICATIONS FOR USE:**

- Patients will be considered for approval for S/D Plasma if:
  - The patient requires a high volume of annual plasma transfusions due to
    - Thrombotic thrombocytopenic purpura (TTP)
    - Hemolytic uremic syndrome (HUS) with associated factor H deficiency
    - Clotting factor deficiencies for which specific licensed concentrates are not readily available (eg. Factor V, XI, XIII)
  - And the patient:
    - Has experience an allergic reaction to frozen plasma, or
    - Has a pre-existing lung disorder, or
    - Needs FP but ABO compatible product is not available (group AB patients)

**CONTRAINDICATIONS:**

- Do not use for patients with IgA deficiency with documented antibodies against IgA, or for patients with severe deficiency of protein S
- Not recommended for patients with IgA deficiency, plasma protein allergies, previous reaction to plasma, pulmonary edema, or cardiac decompensation

**DOSE:**

- Dosage depends on the clinical situation and underlying disorder
- 12-15 mL per kg of body weight is a generally accepted starting dose; this should increase the patient's coagulation factor levels by about 25%
- The volume and frequency of plasma exchanges varies dependent on patient condition and the preferred treatment regimen

**ADMINISTRATION:**

***Confirm written (signed) consent has been obtained and documented prior to requesting blood component from lab/transfusion service where possible.***

**Pre-Infusion:** Ensure pertinent labs are available. Perform the appropriate pre-transfusion checks per nursing protocol

**Administration Set:**

- Administer through a standard blood transfusion set (170 – 260 micron filter) and change every 8 hours or as per manufacturer's 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:**

- SD Plasma is only compatible with 0.9% Sodium Chloride

**Infusion Rate:**

- Rate is specified by the most responsible health practitioner (MHRP)
- Adult infusions should be started at a rate of 1-2 mL/min for the first 15 minutes
- Do not exceed 1mL/kg/min due to risk of citrate toxicity

***Transfusion of each unit must be completed within 4 hours of removal from a cold storage device approved by the Transfusion Service***

**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<br>**2nd and 3rd 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 a blood component transfusion, or this is patient's first transfusion of a blood component, patient should be monitored for 30-60 minutes post.*

**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:**

- SD plasma is stored at ≤ -18° C for up to maximum of 48 months from the date of manufacture.
- Frozen product must not be outside the controlled blood storage freezer for longer than 30 minutes
- Thawed Octaplasma is stored at for up to 24 hours at 2-8°C or up to 8 hours at 20 - 25°C

**COMMENTS:**

Date Effective: 5 Sept 2019
Version 1.0
Approved By: APL Transfusion Medicine Discipline Council
Document Number: PTMGNR00061
*For questions or comments, please contact Transfusion.SafetyTeam@albertahealthservices.ca*

**REFERENCES:**

Octapharma Octaplasma Product Monograph
CBS Clinical Guide to Transfusion
National Advisory Committee on Blood and Blood Products Framework for Appropriate Use and Distribution of Solvent Detergent Treated Plasma
CSA Standards
ORBCoN Bloody Easy