Octaplasma® - Q&A for Transfusion Medicine Laboratory

1) What is Octaplasma®?

A: Octaplasma® is standardized human plasma for intravenous administration. It is a Health Canada regulated medicinal product for human use.

Octaplasma® is made from pooled plasma collected from donors in the United States.[1] The Octaplasma® manufacturing process ensures that each bag of plasma has standardized content of clotting factors and proteins. It is devoid of antibodies implicated in transfusion-related acute lung injury (TRALI) pathogenesis and employs multiple dedicated steps to eliminate transfusion-transmissible infectious agents, allergic and citrate reactions.[2] Octaplasma® is manufactured by Octapharma AB in Stockholm, Sweden.[3]

2) Why is Octaplasma® referred to as S/D plasma?

A: Octaplasma® manufacturing employs a process called Solvent/detergent (S/D) treatment. S/D treatment was pioneered by Octapharma and is an established virus inactivation technology that has been industrially applied for manufacturing plasma derived medicinal products for almost 30 years. It is considered as the gold standard for pathogen inactivation of lipid enveloped viruses. Many clinical studies have confirmed its safety and efficacy in the setting of congenital as well as acquired bleeding disorders.[2]

3) How is pathogen inactivation for Octaplasma® performed? How does this improve the safety profile of Octaplasma®?

A: The manufacturing process ensures pathogen inactivation in three dedicated steps solvent/detergent (S/D) viral inactivation, volume dilution and antibody neutralization, each adding a layer of pathogen safety[4]. In addition, pathological prion proteins are removed by using an affinity ligand chromatography step.[5,6] This significantly reduces the risk of potential pathogen transmission with Octaplasma® as in contrast to single donor controlled, untreated frozen plasma (FP).[7]

4) What are the benefits to a blood system when Octaplasma® fully replaces FP?

A: The transition to Octaplasma® from FP ensures enhanced safety from pathogens including enveloped and non-enveloped viruses and prions,[22] lower rates of transfusion reactions as seen in countries like the UK [24], and lower allergic and citrate reactions.[23]

The transition, as observed in other countries, could additionally result in a decrease in overall plasma utilization with no significant difference being observed in terms of bleed control.[8]

5) What is the volume per bag of Octaplasma®? How does it differ from FP and how does this translate into clinical settings?

A: 1 bag of Octaplasma® contains 200 ml of S/D plasma. The volume of an FP bag varies with the mean ± 1SD volume being 289 ± 16 ML.[10]

The difference in volume between an Octaplasma® and FP bag however does not translate into any difference in efficacy for the approved indications.[3,9] In a study, bleed control was found to be effective for Octaplasma® and FFP despite lower volume infused.[8]

The volume of plasma administered in clinical settings depends on the patients' underlying disorder, with the volume needed being the same as that of FP for large volume exchanges and for other settings, may vary on a case-by-case basis.

6) How should Octaplasma® be stored? What is to be done in the event of a temperature excursion?

A: Octaplasma® should be stored and maintained frozen until use (< -18 °C).[3]

In the event of a temperature excursion, hospitals will need to contact Canadian Blood Services, who will then forward the case to Octapharma Canada for assessment. The assessment will be done by Octapharma QA team and will determine next steps on a case-by-case basis.

7) How should Octaplasma® bags be thawed?

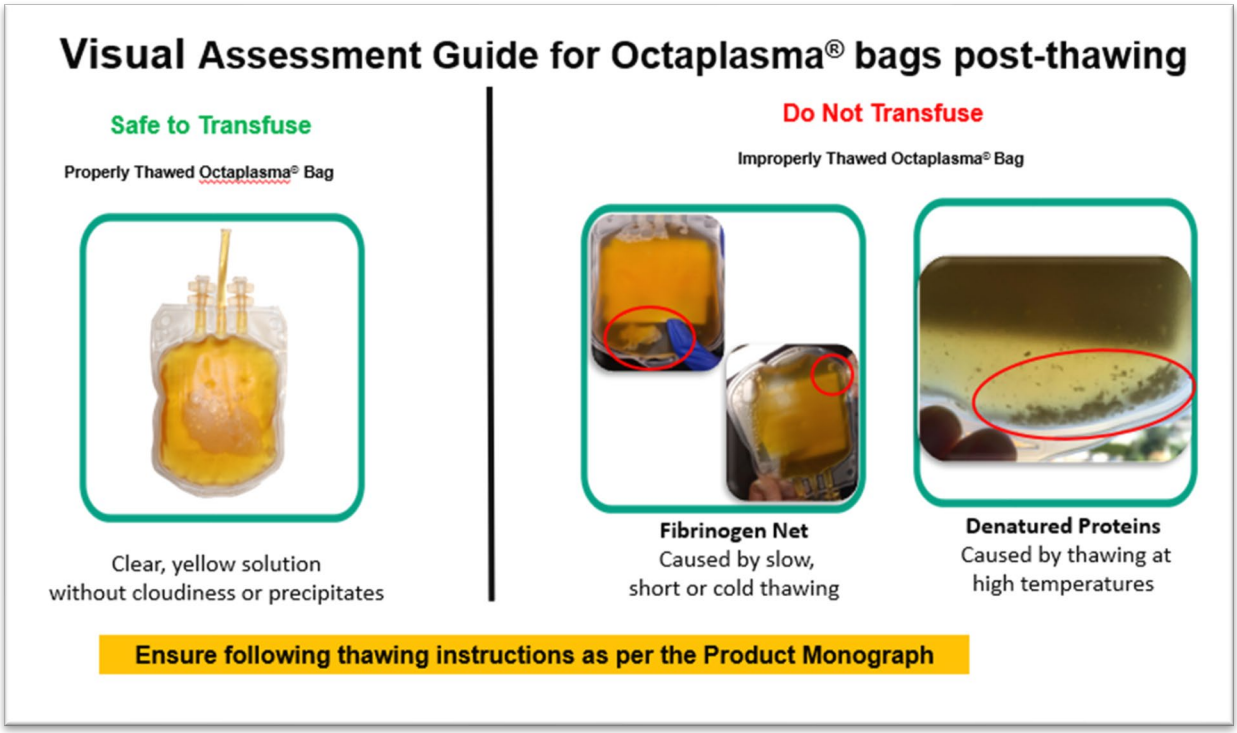
A: Octaplasma® can be thawed using either a water bath or a dry tempering system such as SAHARA-III. [3]

If using a water bath, thaw with the outer wrapper intact for no less than 30 minutes in a circulating water bath at +30 °C to +37 °C. The minimum thawing time is 30 minutes at 37 °C. The thawing time depends on the number of bags in the water bath. If more plasma bags are thawed in parallel, the thawing time can be prolonged, but should not be longer than 60 minutes.

If using a dry tempering system such as the SAHARA-III, place the Octaplasma® bags on the agitation plate according to the manufacturer instructions and thaw plasma using the fast-tempering function. When +37 °C blood component temperature is indicated on the temperature display, terminate the tempering process, and remove the bags. It is recommended to use the protocol printer to record the course of the blood component temperature and, error messages in event of failure.

Other thawing systems for frozen Octaplasma® can be used on the condition that the methods are validated for that purpose.

Below is a guide on the appearance of thawed Octaplasma® bags and when a bag would be considered safe to transfuse:



8) Why is Octaplasma® recommended to be thawed for a minimum of 30 minutes while FP is thawed for 25 minutes?

A: Octaplasma is approved and available in over 30 countries globally. Different countries around the world use different thawing devices, and the thawing time differs significantly based on the device used and the number of bags thawed in parallel. In contrast to FP, Octaplasma® has a secondary overwrap, and thawing is performed in this outer wrapper. This may influence the thawing time.

Octaplasma® product monograph recommends 30 minutes thawing time at 37°C, since this time is valid for all devices.

It is suggested that hospitals use their judgment based on the thawing device used locally and the number of bags being thawed. Transfuse only fully thawed bags of Octaplasma® which is a clear, yellow solution without cloudiness or precipitates.

9) What are the post-thaw recommendations for the storage of Octaplasma®?

A: After thawing Octaplasma®, it can be stored for up to 5 days at +2 to 8 °C or for up to 8 hours at room temperature (+20 to 25°C) before use.[3] Thawed Octaplasma® must not be refrozen.[3]

Studies have demonstrated comparable clotting factor activities within thawed and stored Octaplasma® in the refrigerator for up to 5 days.[11,12,13]

10) What ABO groups of Octaplasma® are available? What is the recommended course of action if a specific blood group type is not available?

A: Four blood type groups of Octaplasma® are available through Canadian Blood Services, which include A, B, AB, and O. Administration of Octaplasma® must be based on ABO-blood group specificity, otherwise incompatibility reactions between antibodies contained in Octaplasma® and antigens on the recipient's red blood cells can result in immediate or delayed type hemolytic transfusion reactions.[3]

In emergency cases, where a specific blood group type is not available, Octaplasma® blood group AB can be regarded as universal plasma since it can be given to all patients.[3]

11) When can I start ordering Octaplasma®?

A: You can order Octaplasma® just as you would order FP, from March 27th, 2023 by using the standard blood products order form

12) How much Octaplasma® can I order?

A: Our primary goal is to ensure there are 'zero' supply interruptions. Therefore, a high level of blood group specific inventory is being maintained in Canada. Octapharma is working closely with Canadian Blood Services to distribute Octaplasma® to all locations that order FP from Canadian Blood Services. You may

order your typical inventory requirements for FP in the form of Octaplasma® and there are no restrictions on the volume of order placed.

All blood groups are available in inventory, including Octaplasma® AB. If your institution intends to transition fully to Octaplasma® for all plasma transfusion needs, you may do so on March 27th, 2023. Ensure adequate storage space is available in your blood bank by reducing or using up your FP inventory by the end of March 2023.

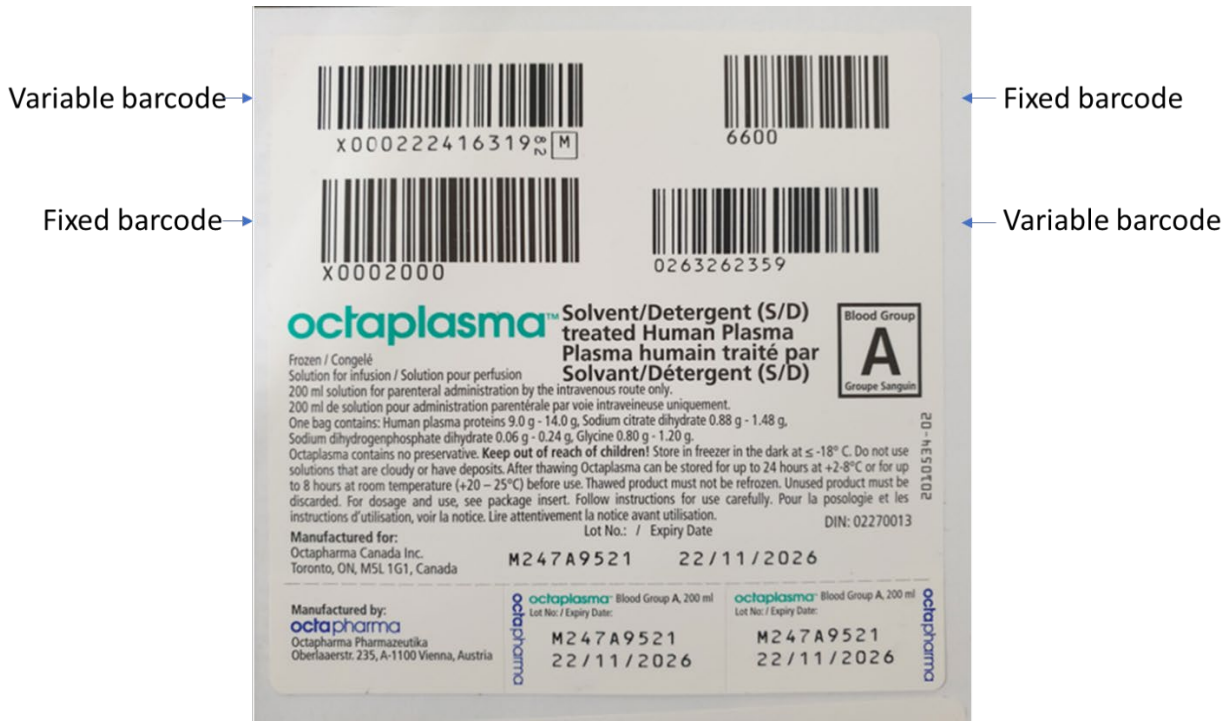
Hospitals can be fully confident in Octapharma to meet 100% of their plasma needs.

13) Will Octaplasma® be available in all locations?

A: Yes. Octaplasma® will be available at all locations in Canada where FP, manufactured by Canadian Blood Services was previously available. Octapharma is working closely with Canadian Blood Services to distribute Octaplasma® to all locations that order FP from Canadian Blood Services.

14) What do the barcodes on an Octaplasma® bag denote?

A: Each bag of Octaplasma® has fixed and variable barcodes as seen in the picture below. *This is a copy of an actual Octaplasma® label (Octaplasma® A) currently in Canada – please use this label for your information and/or LIS testing only.*



The fixed barcodes (indicated in the picture) do not change from lot to lot and are based on product code and blood group. They help Octapharma for internal tracing of the lot. Please see the table below:

blood group	product code	blood group code
0	X0001000	5500
A	X0002000	6600
B	X0003000	7700
AB	X0004000	8800

The variable barcodes (indicated in the image) enable tracing of the bag via ISBT 128 standards. The upper variable barcode denotes bag number, and the lower variable barcode denotes expiry date and donor name with collection time, which may be helpful especially for safety reporting and quality issues.

Ensure Octaplasma® ISBT128 product code and facility identification number have been added to hospital LIS prior to your launch date

15) What can I do prior to March 27th in preparation for the transition?

A: In preparation for the transition, we recommend some of the following actions below:

- Ensure Octaplasma® ISBT 128 product code and facility identification number have been added to hospital LIS. Having it added to the LIS and tested well before March 27th, will allow you to order and dispatch Octaplasma® as per the demand in your hospital. While this change is not time consuming, scheduling and working with your IT team may be. Please give yourself adequate time to do this before the arrival of the product.

- Canadian Blood Services recommend the hospitals' implementation strategy be aimed at ordering Octaplasma® at least 80% of their plasma orders and that plasma volume equivalent to that of FP must be transfused. Referring to Canadian Blood services Implementation Checklist that was distributed as an attachment to customer letter 2023-01 :
  - You will need to plan quantity of Octaplasma® based on the typical need for plasma in your hospital
  - Plan freezer storage – Octaplasma® unit volume is 200 ml. You will need space in the freezer to hold as many bags of Octaplasma® as you would for FP, if not more because of the difference in unit volume.
  - Prepare a plan to draw down inventory levels of FP in your freezer and transition to Octaplasma®. If you are holding both FP and Octaplasma®, you might have up to 8 different SKUs of plasma (i.e., 4 blood groups each of FP and Octaplasma®). Transitioning to Octaplasma® will bring down the number of types of SKUs you will hold in the freezer and reduce the complexity for your lab, including reducing the work for the blood bank staff
- Train Transfusion Medicine Laboratory technical staff on storage, thawing and handling of Octaplasma®
- Engage your local field based Octapharma healthcare partner to get support with training of team members, answer questions about the product and transition.
- Receive regular updates on the transition to Octaplasma® by filling out the form here. Your email will be used specifically for this purpose, including notifying you when a dedicated website with additional resources is launched in February.

16) Where do I direct product-related queries?

A: To support healthcare providers, Octapharma Canada is developing a series of educational materials including a product website, a how-to-administer Octaplasma® video, and downloadable product information decks. If you have queries that are not addressed in the above-mentioned resources, you can contact Octapharma medical information service at medinfo.canada@octapharma.com

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