

Document History:

Title: Visual Inspection of Blood, Blood Components and Plasma Protein Product **Site(s):** All Shared Health sites

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Section:	Shared Health Transfusion Medicine Manual	Subsection:	INV Module

Approved by: Signature:	Dr. Charles Musuka 	Date:	17-AUG-2020
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Details of Recent Revision

- Updated derivatives to plasma protein product, Trace Line to eTraceLine, DSM to Shared Health throughout
- Added document # to referenced SOPs
- 2.4, new: issuing site to determine outcome of quarantined product
- 4.4.2: updated **Note** into a bullet and added new photos of product
- Table 1, 2 and 3: removed comment “*return unit to CBS*” with “*return unit to BTS*” throughout

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Visual Inspection of Blood, Blood Components and Plasma Protein Product

1.0 Principle

To ensure all blood, blood components and/or plasma protein product (PPP) received, issued for transfusion, returned to inventory or shipped from the facility is visually inspected for abnormalities.

2.0 Scope and Related Policies

2.1 Blood, blood components and PPP shall be visually inspected.

2.2 The visual inspection shall be documented.

2.3 If an abnormality or discrepancy is detected the blood, blood component and/or PPP shall be quarantined until the appropriate disposition is determined.

2.4 Issuing site, BTS/CBS will determine final disposition of blood, blood component and/or PPP in quarantine.

3.0 Materials

Blood, blood component and/or PPP

INV form – *Shared Health Customer Feedback*, F160-INV-23

CBS form – *Hospital Customer Feedback*, F800302

Appropriate blood bank log/eTraceLine

CBS Visual Assessment Guide (www.blood.ca)

4.0 Procedure

4.1 Inspect blood, blood components and/or PPP at the following times:

- Upon receipt from the supplier or another facility
- At time of crossmatch
- Before being issued for transfusion/infusion
- Before being shipped to another facility
- Upon return to inventory

4.2 Determine if the blood, blood component and/or PPP is in-date:

- If the expiry date is day/month/year, the product expires at midnight on that day
- If the expiry date is month/year, the product expires at midnight on the last day of the month

4.3 Visually inspect the blood, blood component and/or PPP:

- Refer to the following tables for inspection criteria:
 - Table 1: Visual Inspection of Red Blood Cells
 - Table 2: Visual Inspection of Platelet and Plasma Components
 - Table 3: Visual Inspection of Plasma Protein Product
- Refer to CBS *Visual Assessment Guide* (www.blood.ca) for most current information

4.4 For all blood, blood components and/or PPP that fail the visual inspection:

4.4.1 Refer to the appropriate table below for action and reporting

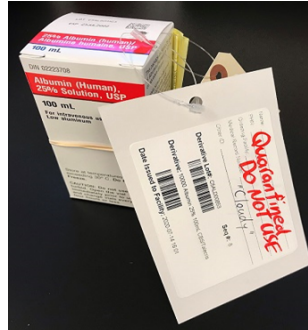
4.4.2 Quarantine the product by placing it in a container labelled **Do Not Use**:

- Affix a tag onto the unit(s) clearly stating “Quarantined: DO NOT USE” (see pictures below)

Non-eTraceLine Site



eTraceLine Site



eTraceLine Site



- Describe the reason for the quarantine; date and initial the tag
 - Place in a separate bag
 - Place the blood, blood component or PPP into the appropriately labelled container ensuring it is away from general inventory and assigned units
 - For eTraceLine sites quarantine the product in eTraceLine as per *Quarantine/Release from Quarantine in eTraceLine: Blood, Blood Components or Plasma Protein Product*, 160-TL-13
- 4.4.2** Notify BTS/CBS to determine if product is to be discarded or returned:
- Haemolysed units are discarded and not returned to CBS
 - For eTraceLine sites the product must be rejected and shipped to destruction in eTraceLine as per *Handling Discarded/Expired/Recalled Blood, Blood Components and Plasma Protein Products in eTraceLine*, 160-TL-14
 - For non-eTraceLine sites, if product is to be discarded refer to *Documenting the Final Disposition of Blood, Blood Components and Plasma Protein Product*, 160-INV-19
- 4.4.3** Complete appropriate customer feedback form
- 4.4.4** If product is to be returned to BTS/CBS:
- Package and ship according to *Inter-facility Shipping of Blood, Blood Components and Plasma Protein Product*, 160-INV-18
 - Ensure a copy of the completed appropriate customer feedback form is included
 - Include supporting documentation, if applicable such as packing slips, issuing forms, test results, etc.
 - For eTraceLine sites include copy of *Shipment Packing Slip*
 - For non-eTraceLine sites ensure completed *Inter-facility Blood, Blood Component or Plasma Protein Product*, F160-INV-18A, form is included

4.5 For non-eTraceLine sites, document the results of the visual inspection and final disposition of the product in the appropriate blood bank log.

Table 1: Visual Inspection of Red Blood Cells

Abnormality	Description	Action	Reporting
Expired	Product must be in-date	- Notify BTS / CBS, if applicable - Discard the unit	- Document in the appropriate blood bank log/eTraceLine - Complete appropriate customer feedback form
Open ports	Port covers should be intact unless the product has been modified. If modified then must have at least one original port with cover intact*		
Leakage	Ensure the segments, ports, bag are not cracked and/or leaking		
No segments	Ensure at least one donor segment is attached to the unit		
Front label missing/obscured/defaced (written on)	Ensure unit label is not missing, defaced or obscured		
Purple or black red cell mass; bright red plasma colour. Note: check unit and segments	Suspect haemolysis due to physical destruction of red cells or by bacterial contamination Note: Some degree of haemolysis is acceptable	- Quarantine the unit - Let unit settle for a couple days so the supernatant of the unit can be assessed - Notify BTS / CBS, if applicable - Return unit to BTS or discard as appropriate	- Document in the appropriate blood bank log/eTraceLine - Complete appropriate customer feedback form
Red cell colour in the segment(s) is significantly different than in the unit	The red cell colour of the segment(s) is significantly lighter than in the unit		
Lipemia	Whitish to lighter shade of red with increased opacity (like a strawberry milkshake)	Acceptable to transfuse/ release	
Air bubbles	Excessive and unusual air bubbles; may indicate bacterial contamination.	- Quarantine the unit - Notify BTS / CBS, if applicable - Return unit to BTS or discard as appropriate	- Document in the appropriate blood bank log/eTraceLine - Complete customer feedback form
Clots / fibrin strands	Small to large red or purple masses which do not dissipate with mixing; may indicate bacterial contamination		
Cold agglutinins	Large red blood masses which do not dissipate with mixing		
Cellular aggregates	White and opaque masses which do not dissipate with mixing		
White particulate matter	Non-cellular lipid-rich material appearing white in colour and variable in shape from flattened specks to a greasy film; may dissipate with a change in temperature and is a normal constituent of blood	Acceptable to transfuse/ release	

* Modified product is product which has been manipulated in an open system

Table 2: Visual Inspection of Platelets

Abnormality	Description	Action	Reporting
Expired	Product must be in-date	- Notify BTS / CBS, if applicable - Discard the unit	- Document in the appropriate blood bank log/eTraceLine - Complete appropriate customer feedback form
Open ports	Port covers should be intact unless the product has been modified. If modified then must have at least one original port with cover intact*		
Leakage/ signs of breakage	Ensure the segments, ports, bag are not cracked and/or leaking		
Front label missing/obscured/defaced (written on)	Ensure unit label is not missing, defaced or obscured		
Red cell contamination in platelets	Only applicable to Rh negative females less than or equal to 45 years of age if transfusing Rh positive platelets to an Rh negative female	BTS Medical Director approval is needed	- Document consult in appropriate blood bank log/eTraceLine - Complete appropriate customer feedback form
Plasma colour is bright red	Indicates significant haemolysis Note: Some degree of haemolysis is acceptable	- Quarantine the unit - Notify BTS / CBS, if applicable - Return unit to BTS or discard as appropriate	- Document in the appropriate blood bank log/eTraceLine - Complete appropriate customer feedback form
Discoloured plasma	Greyish murky colour, purple or brown; may indicate bacteria contamination Note: Colour variations may occur due to icterus (yellow), oral contraceptives (green), Vitamin A or consumptions of carrots (orange). These are acceptable.		
Lipemia	Milky white appearance	Acceptable to transfuse/ release	
Air bubbles	Excessive and unusual air bubbles; may indicate bacterial contamination	- Quarantine the unit - Notify BTS/CBS, if applicable - Return unit to BTS or discard as appropriate	- Document in the appropriate blood bank log/eTraceLine - Complete appropriate customer feedback form
Clots / fibrin strands	Small to large red or purple masses which do not dissipate with mixing; may indicate bacterial contamination		
Cellular aggregates	White and opaque masses which do not dissipate with mixing		
White particulate matter	Non-cellular lipid-rich material appearing white in colour and variable in shape from flattened specks to a greasy film; may dissipate with a change in temperature and is a normal constituent of blood	Acceptable to transfuse/ release	

*Modified product is product which has been manipulated in an open system.

Table 3: Visual Inspection of Plasma Protein Product

Abnormality	Description	Action	Reporting
Expired	Product must be in-date	• Notify BTS / CBS, if applicable • Discard the unit	• Document in the appropriate blood bank log/eTraceLine • Complete appropriate customer feedback form
Sterile cap covers not intact	Cap cover must be intact		
Leakage / signs of breakage	Check for cracks or leaking in vial or bottle		
Product appears cloudy	Cloudiness may indicate bacterial contamination or presence of particulate matter	• Quarantine the unit • Notify BTS / CBS, if applicable • Return unit to BTS or discard as appropriate	
Air bubbles	Excessive and unusual air bubbles; may indicate bacterial contamination		

5.0 Reporting

See **Tables 1, 2 and 3.**

6.0 Procedural Notes

N/A