

IAS Feline blood collection and processing kit



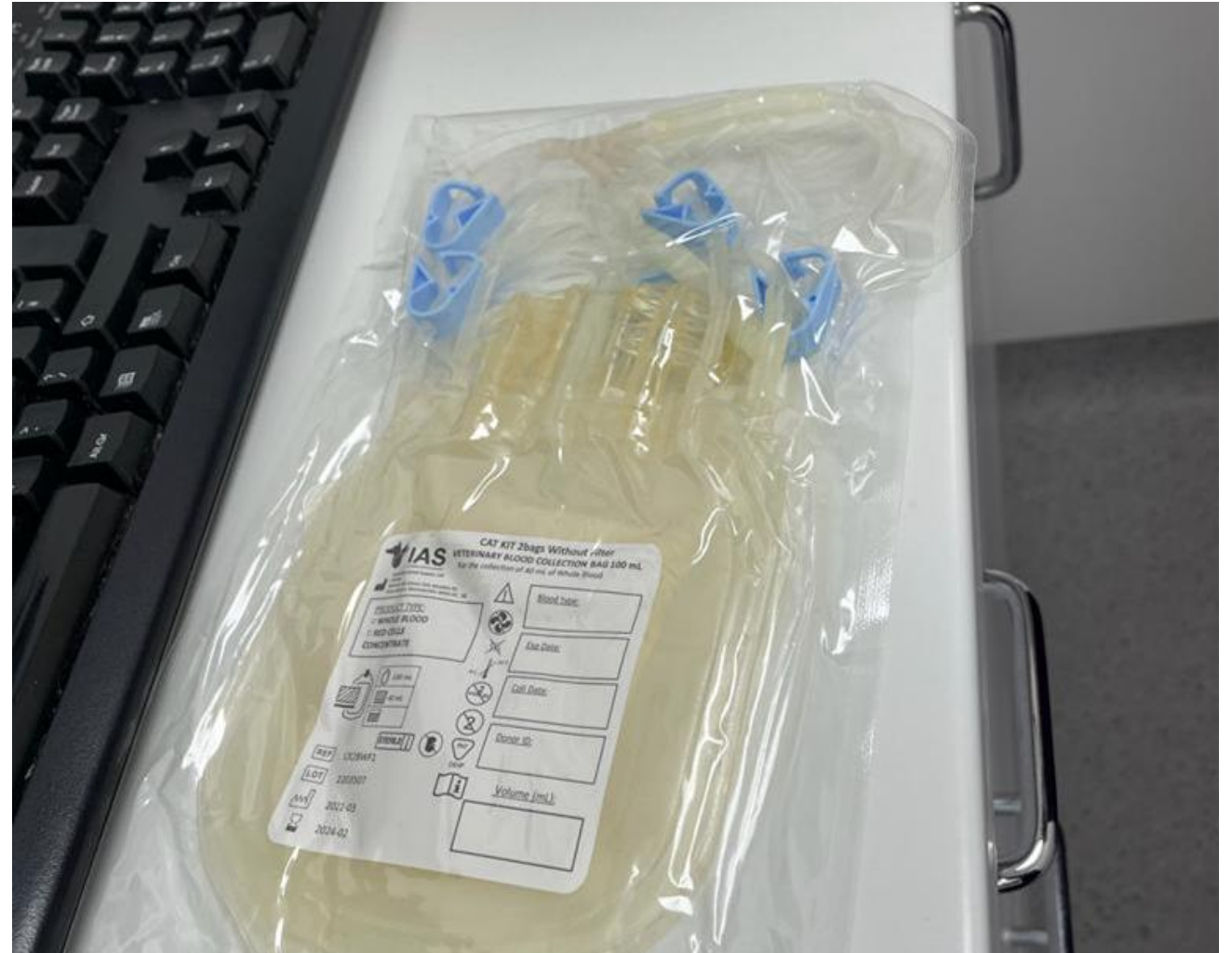
The outer packaging

- The feline kit is supplied foil-wrapped with notches in the packaging to aid opening. This additional foil overwrap is designed to reduce loss of fluids over the storage period and is necessary to achieve the stated expiry of the kit.
- Note that the foil overwrap should not be removed until just before use. In the event that the foil has been removed and the kit has not been used, we recommend that the kit (in its clear plastic overwrap) is used within 10 days.
- Note that the needle is supplied separately and includes a luer fitting for attachment to the kit. This is done to allow choice for the veterinarian in the event that they have a preferred needle.
- Before use please confirm that the kit is not expired.



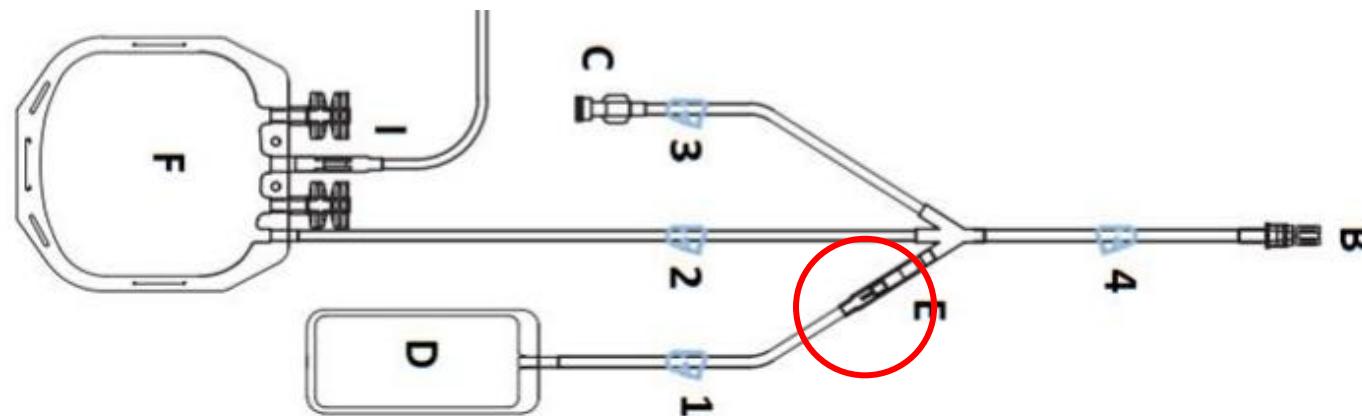
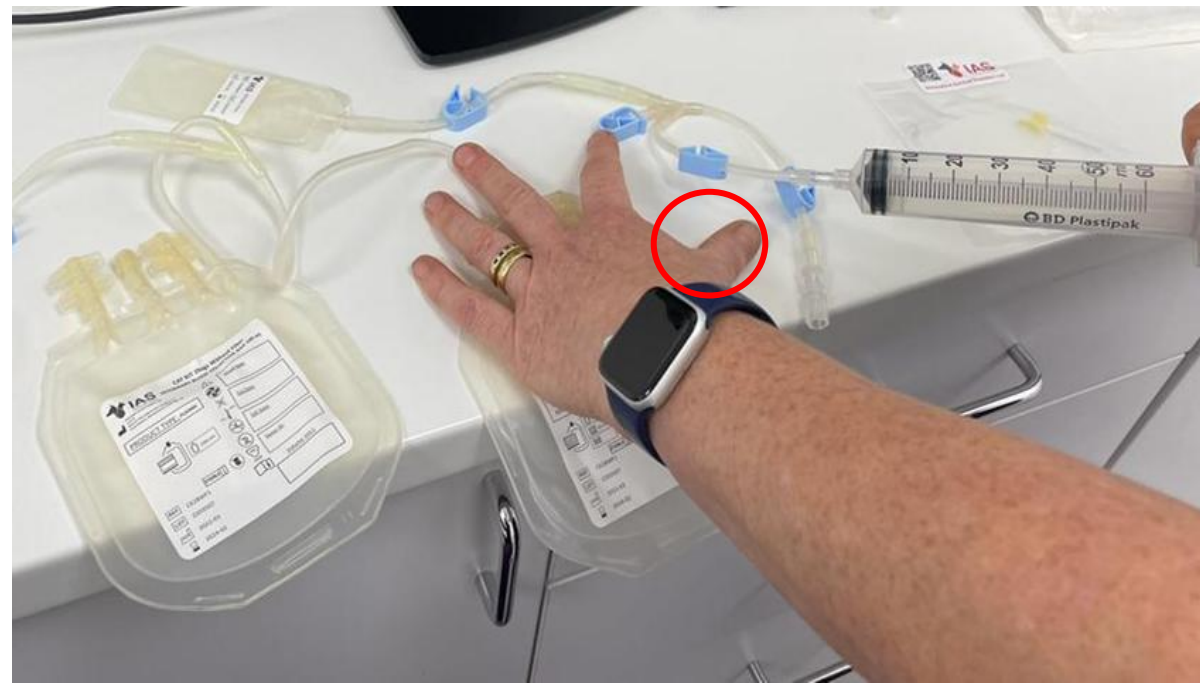
The inner packaging

- The inner packaging consists of a bag which has a tear-down section in the top corner.
- Carefully tear open the plastic bag and remove the collection kit.
- Close all of the blue Roberts clamps



Kit preparation

- Carefully separate the packs and inspect for any signs of damage or discolouration of the fluids contained within the pouches
- Attach a sterile 60mL syringe to the luer on the tubing from the 3-way connector (see photograph).
- Snap the break canula (E) in line fluid seal to allow cpd flow into the system. You can open the fluid pathway by snapping the break cannula by bending it firmly through 90° with a firm side-to-side motion. It is usual to hear/feel a click during each sideways bend. The cpd should then be able to be drawn into the system Note: If there is a flow restriction: Ensure that the break cannula is properly broken. Check that the tubing is not kinked.
- Open the blue Roberts clamp on the line leading to the syringe.



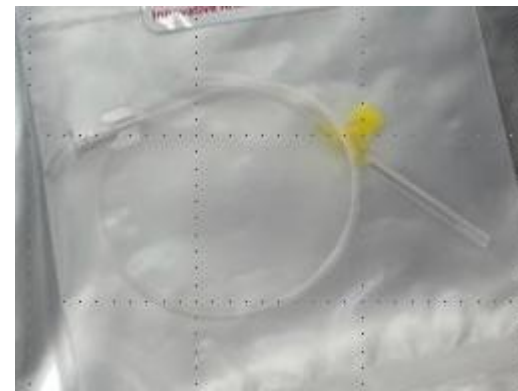
Kit preparation

- Open the blue Roberts clamp on the line leading to the CPD (anticoagulant) pouch and draw up the requisite amount of CPD into the syringe.
- For a 50mL whole blood collection this will typically be 6.5mL of CPD with the IAS feline kit
- Close the blue Roberts clamp on the line to the CPD pouch



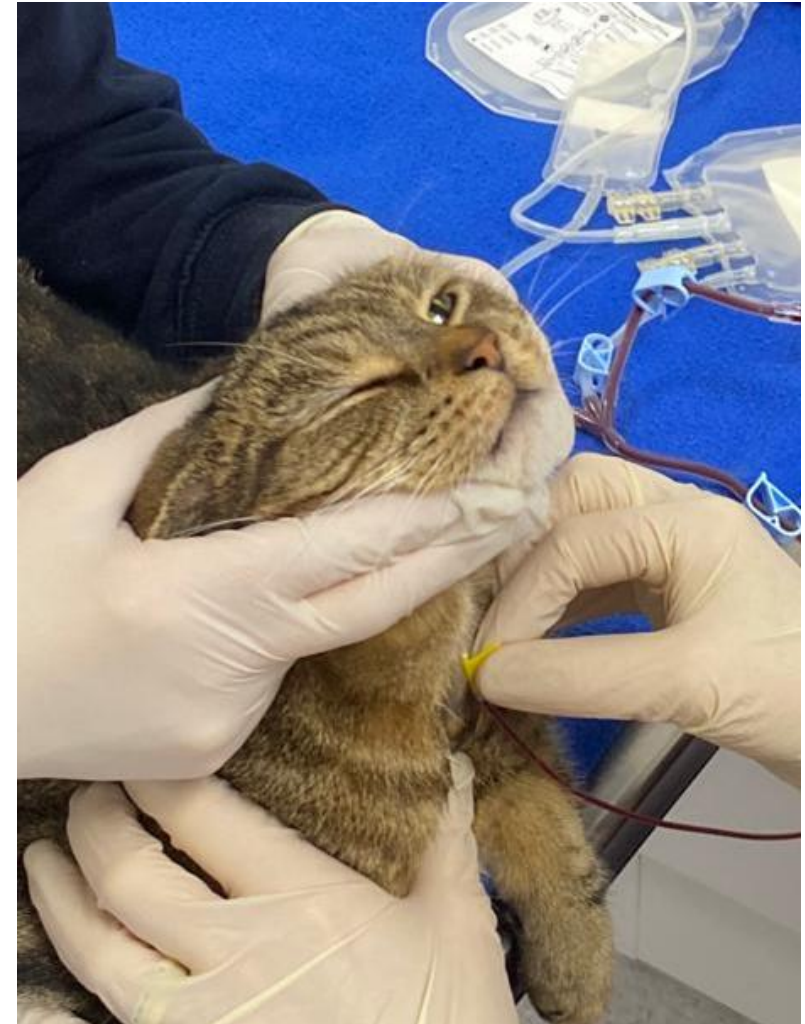
Kit preparation

- Attach a sterile needle (as supplied with the kit) to the luer connector on the bleed line.
- Open the clamp on the bleed line and gently push through CPD until it just reaches the tip of the needle.
- We recommend to close the Robert's line clamp after the CPD reached the tip of the needle to keep the system "closed" to room air



Venupuncture

- Perform the venepuncture according to your local procedures, release the Roberts clamp on the bleed line and withdraw a small amount of blood to ensure a good siting of the needle and an adequate flow of blood.
- We recommend to have 3 people to perform the collection: a cat restrainer, a phlebotomist and a syringe operator.



Blood Collection

- Gently pull back on the syringe to start the collection process.
- Ensure that the contents of the syringe are mixed using gentle clockwise & anticlockwise rotation at frequent intervals to prevent clotting of the collected blood. Care must be made however to not rotate too far and twist the collection line causing a narrowing of the collection tubing.



Blood Collection

- Continue collecting blood at a steady rate according to local protocol until the requisite amount has been obtained. (standard US blood draws 50ml + 6.5ml anticoagulant)



Blood Collection

- At the end of the collection process, close the blue Roberts clamp on the bleed line and remove the needle from the vein.
- Apply dressings to the venupuncture site according to your local protocol



Transfer the blood to the collection bag

- Open the Roberts clamps between the syringe and the primary collection bag and gently begin to push the collected blood into the bag. Ensure that the Roberts clamp to the cpd bag as well as the clamp to the needle remain closed.



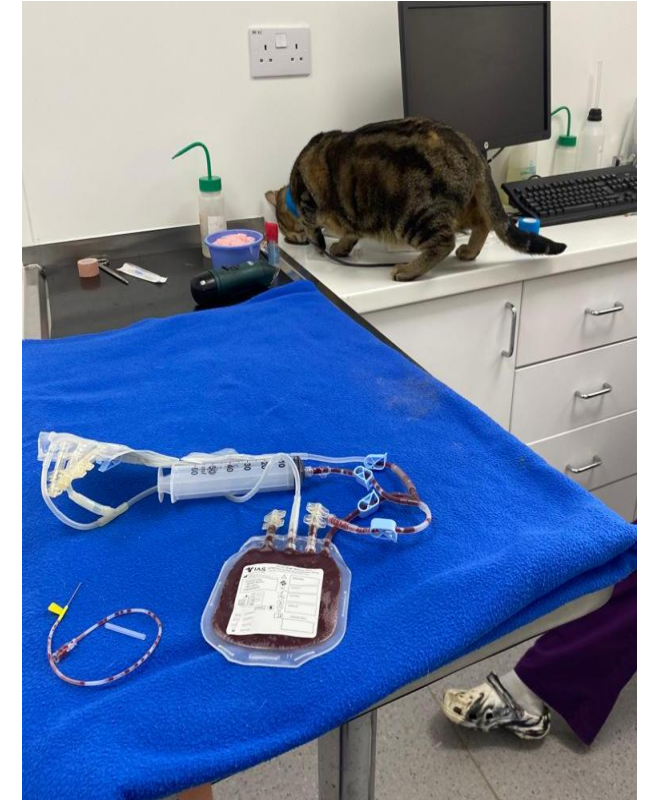
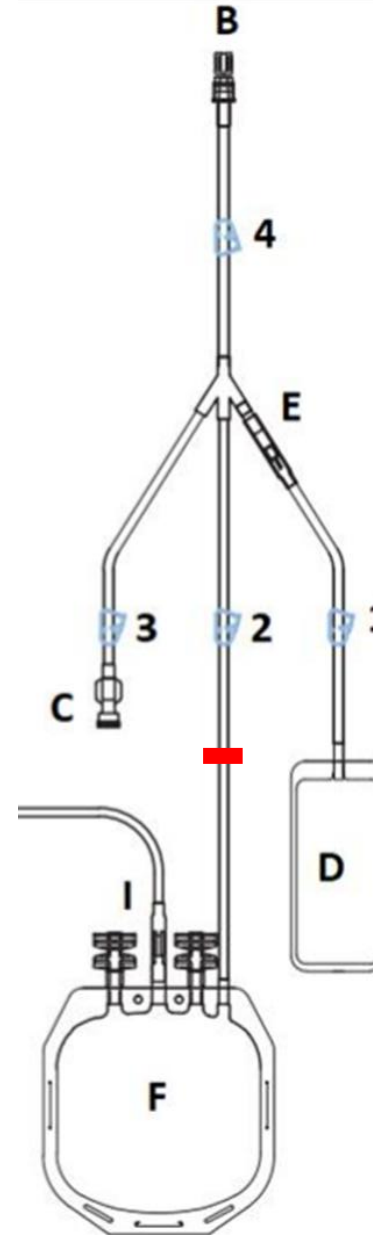
Transfer the blood to the collection bag

- Push all the whole blood collection into the whole blood bag



Detach the collection line

- When all of the blood has been transferred in the bag, ensure that all Roberts clamps (1 – 2 – 3 – 4) are closed.
- Detach the needle (B) and re-sheath or place directly into a 'sharps' bin
- Remove the syringe (C) and dispose of into clinical waste
- Heat seal (red line) and detach the tubing from the bag to the 3-way connector which will allow you to dispose of the lines leading to the syringe, the CPD pouch and the collection line
- At this point you should now be left with the bag of whole blood which is connected to an empty transfer pack and a pouch of SAGM additive solution
- The whole blood may now be sent for separation into plasma and red cells in additive solution or used directly as whole blood for transfusion. If the latter, then the empty transfer pack may be heat sealed and removed



Storage of whole blood

If you want to keep your whole blood bag:

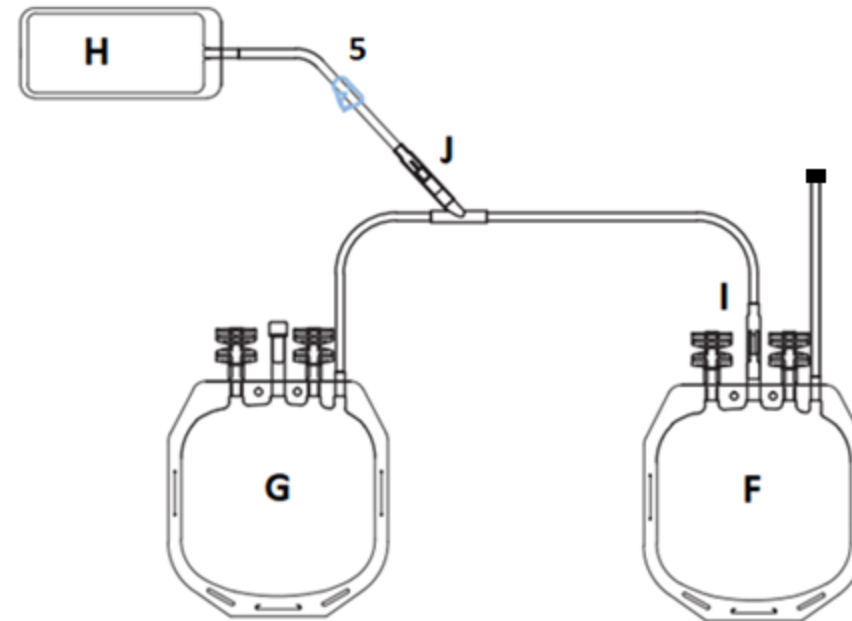
- Store whole blood according to validated conditions.
- For Fresh whole blood containing viable white cells, platelets and all coagulation factors, use within 4-6 hours after keeping the bag at room temperature ($22^{\circ}\text{C} \pm 2^{\circ}\text{C}$).
- For Stored whole blood (which will be depleted in viable white cells, platelets and some labile coagulation factors) allow the blood to equilibrate to room temperature in a clean environment (transport bag, designated storage box etc.) after collection for a maximum of 24 hours and then store at 4°C .



Processing into plasma and red cell concentrate

Packing and centrifugation:

- Pack the system for centrifugation as per your standard operation procedure (SOP).
- Centrifuge the whole blood collection bag (F), satellite bag (G), and additive solution bag (H) together under conditions designed to produce a separation of plasma and packed red cells



Processing into plasma and red cell concentrate

Blood extractor loading:

Note: The following instructions are for the separation of plasma from red cells using a manual plasma extractor. For automated plasma extractors please refer to your manufacturer's instructions.

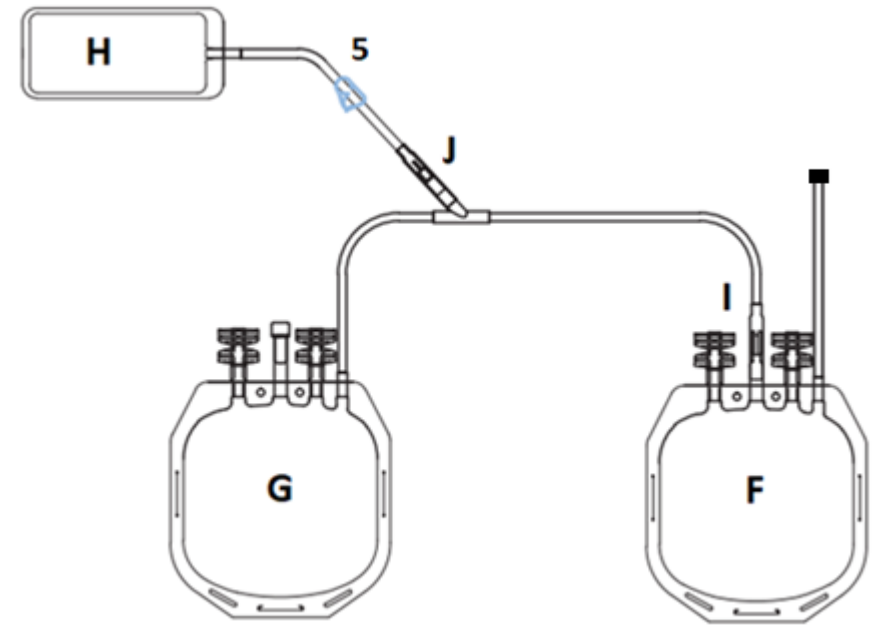
- After centrifugation remove the unit carefully to avoid disturbing the red cell/plasma interface. Place the whole blood bag (F) into the plasma extractor and carefully release the front plate so that the bag is held in the extractor under pressure.

Note: If the plasma is to be used clinically after separation, ensure that there are no red cells trapped in the port to the fluid transfer tubing as this might affect the final quality of the plasma product. If necessary, re-centrifuge the bag taking care to ensure that the bag is held upright in the centrifuge cup.

- Make sure there are no kinks between the whole blood bag (F) and the plasma storage bag (G).
- Snap the break cannula (I) on the whole blood bag (F) by bending it firmly through 90° with a firm side-to-side motion. It is usual to hear/feel a click during each sideways bend. The plasma will start to flow into the pre-attached plasma bag (G).

Note: If there is a flow restriction: Ensure that the break cannula is properly broken. Check that the tubing is not kinked.

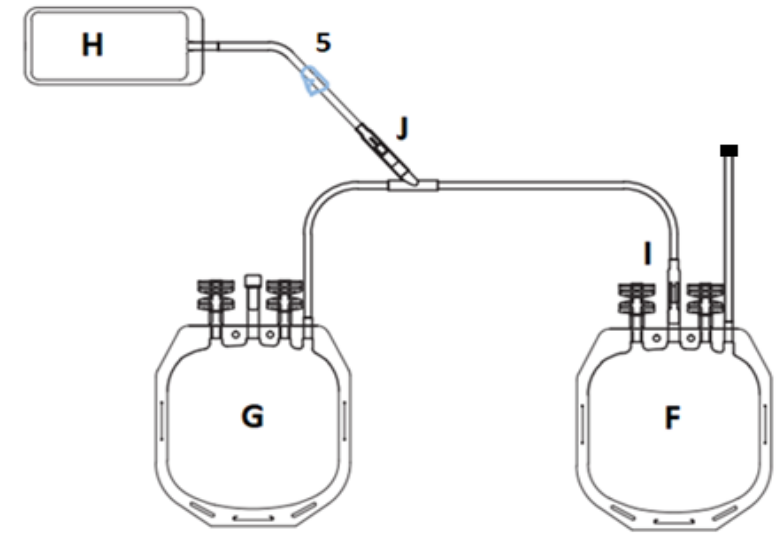
- When the red cells are nearing the top of the whole blood bag (F) in the extractor, stop the separation by releasing the pressure and placing a clamp between the whole blood bag (F) and plasma bag (G). Ensure that the flow is stopped before the red cells spill over into the plasma bag.
- Seal the tubing close to plasma bag (G) to ensure that you do not compromise the fluid pathway between the whole blood bag (F) and the red cell nutrient solution bag (H).
- Detach the plasma component.



Processing into plasma and red cell concentrate

Additive solution transfer:

- Suspend the RBCs additive solution bag (H) above the packed red cell bag (F)
- If 50ml of whole blood was the collected volume, snap the break cannula (J) and allow the additive solution to flow completely by gravity into the packed red cells (F).
- When the additive solution bag is empty, seal the tubing between the RBC additive solution bag (H) and the red cell concentrate bag (F). If a sample line is required (e.g. for compatibility testing) then leave an appropriate amount of tubing attached to the red cell bag.
- Thoroughly mix the additive solution and packed red cells by gentle end-over-end mixing of the unit as described previously. Create quality control line aliquots as required per individual blood bank SOP.



Plasma & Red Cell Concentrate Storage

- For the Red Cell Concentrate, keep the bag at refrigerated ($4^{\circ}\text{C} \pm 2^{\circ}\text{C}$) and use within 42 days

Note: Shelf-life is a recommended maximum based on human standards and limited veterinary studies. We recommend a pre transfusion sample from the unit is taken and analysed to ensure that bags are only used if supernatant haemolysis is $<1\%$.

- For the Plasma, keep the bag below -18°C and use within 1 year as fresh frozen plasma and 5 years as frozen plasma.

