

CANADIAN ANIMAL BLOOD BANK

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Red Cell Concentrate

Red cell concentrate is made from 400-450 ml of whole blood collected in the anticoagulant Citrate Phosphate Dextrose (CPD). Plasma is removed, and 110mL of SAGM Red Cell Preservation Solution (2.42 g Dextrose, 990 mg Sodium Chloride, 825 mg Mannitol and 30 mg Adenine) are added leaving a red cell concentrate with a hematocrit of 0.61 ± 0.07 L/L. The red cells are viable for 35 days from collection when stored at 2-6° C. Red cell concentrate may remain at room temperature for up to 6 hours.

Product Numbers

RC01	(Full size)	Minimum volume of 275 ml
RC02	(Half size)	Prepared from 300-399 ml whole blood

Indications for use

- To increase oxygen carrying capacity in symptomatic individuals.

Dosage / Rate of Infusion Guideline

6-10 ml/kg body weight at a rate of 4-6 ml/minute over no longer than a 4 hour period. Infuse as quickly as the patient can tolerate.

Preparation

- Check expiration date and Examine the segments for gross hemolysis
- Examine the unit for very large clots and bacteria colonies
- Unit may be pre-warmed by enclosing in a zipper-style plastic bag and placing in a water bath at 37° C for 10-15 minutes.
- Open one port and insert spike from filter set. If the unit is viscous, 0.9% saline may be added. (usually not needed as this product has 110 mL of RC preservation solution). 80 µm filter recommended for neonates and animals with small vasculature.

Precautions

- **Do not use the unit if it is past the expiration date, contains large clots, bacterial colonies, or appears to be hemolyzed.**
- Always use a filter set.
- Use the unit within 4 hours. Discard the unused portion to biohazardous waste.
- Never run or mix IV medications, colloids, Ringer's lactate with the red cells even if the lines are in different limbs. These products are not compatible with blood products and will cause hemolysis and/or clotting. Physiological saline is the only compatible solution. The IV line must be flushed with saline before and after the infusion of a blood product.

Reactions

- *Acute Hemolytic Reaction:* Characterized by intravascular hemolysis, shock, acute renal failure, uncontrolled bleeding, convulsions, hypotension, pyrexia, tachycardia, tremors. Will occur within minutes of the start of the transfusion.
- *Delayed Hemolytic Reaction:* Characterized by fever, anorexia, jaundice, occurring several days to several weeks after the transfusion. May be sub-clinical to mild.
- *Febrile Reaction:* Characterized by an increase in temperature of at least 1° C and no other cause of fever can be identified, vomiting, tremors, occurring within 30 minutes of the start of the transfusion.