

## Recommended Standard Methods of Blood Collection: *Ferrets*

| Method                                      | Maximum volume (per sample) | Anesthesia Required | Description   | Special Considerations   |
|---|-----------------------------|---------------------|---|--|
| Saphenous Vein                              | up to 0.2 mL                |                     | The ferret is restrained ( <i>state method of restraint</i> ) and the hind leg is immobilized in the extended position by applying gentle downward pressure immediately above the knee joint. The collection site is shaved with an electric clipper and cleaned with three alternating scrubs of 70% alcohol and betadine. Blood is collected using a 23-25 gauge needle from the lateral saphenous vein. Blood flow is stopped by applying pressure with sterile gauze to achieve hemostasis.   | <ul style="list-style-type: none"> <li>• No more than four blood samples should be taken within any 24-hour period. For multiple samples the scab or the blood clot should be removed.</li> </ul>  |
| Carotid Artery and Femoral Vein Cannulation | 0.5 mL                      | YES                 | The ferret is anesthetized and the collection site is shaved with an electric clipper and cleaned with three alternating scrubs of 70% alcohol and betadine. A 19 gauge cannula is inserted and secured to the nape of the neck with a crepe bandage. Sterile saline with anticoagulant should be flushed into the 19 gauge cannula after blood sampling to prevent the blood from clotting. A pin is then inserted into the exteriorized end of the cannula to stop the blood from flowing. The wound site and cannula should be checked and the ferret weighed daily. | <ul style="list-style-type: none"> <li>• Cannulation is recommended if repeated samples are required. Up to 20 samples may be taken in a 24-hour period, depending on the sample volume.</li> <li>• Analgesics should be administered to minimize pain.</li> <li>• Cannulated ferrets should be singly housed.</li> <li>• <b>Restraint:</b> A crepe bandage may be used to restrict movement.</li> </ul> |
| Cardiac Puncture ( <i>Non-Survival</i> )    | 20 mL                       | YES                 | The ferret is anesthetized and blood samples are taken from the heart with a 19 - 21 gauge needle, preferably the ventricle, which can be accessed either via the left side of the chest, through the diaphragm or by performing a thoracotomy. Blood will be withdrawn slowly to prevent the heart from collapsing.  | <ul style="list-style-type: none"> <li>• Ensure euthanasia of the animal post-procedure.</li> </ul>  |

### **NOTES:**

Total blood volume of a ferret is 60 ml/kg or 6.0 % of total body weight (BW).

No more than 1% of the animal's blood volume in one collection or over a 24 hour period.

No more than 7.5% (4.5 ml/kg BW ) of total blood volume can be collected in a single or multiple draws over a week period.

If 10 % ( 6 ml/kg BW ) of total blood vol, must allow 10 days recovery before next draw.

If 15 % ( 9 ml/ kg BW ) of total blood volume is collected, must allow 15 days recovery before next draw.

**\* A Comparative Medicine Veterinarian must be consulted if blood will be drawn from a USDA covered species.**