

Recommended Standard Methods of Blood Collection: *Hamsters*

Method	Maximum volume (per sample)	Anesthesia Required	Description	Special Considerations
Saphenous Vein	0.5% of the animal's bodyweight; Alternatively, daily samples corresponding to 0.05% bodyweight may be taken	YES Depending upon restraint method	The hamster 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 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"> No more than four blood samples should be taken within any 24-hour period, depending on sample volume.
Retro-Orbital Plexus	0.1-0.5 mL	YES	Following anesthesia and restraint, the neck is gently scruffed and the eye made to bulge. A capillary tube/pipette is inserted medially, laterally or dorsally. Blood is allowed to flow by capillary action into the capillary tube/pipette. Blood flow is stopped by applying pressure with sterile gauze over the closed eyelid for approximately 30 seconds to achieve hemostasis.	<ul style="list-style-type: none"> Individuals performing retro-orbital blood collection must be adequately trained due to the potential for significant complications. It is recommended that only one sample be taken.
Cardiac Puncture (<i>Non-survival</i>)	Up to 5 mL	YES	The hamster is anesthetized and blood is collected via the left ventricle using a 23 gauge needle. Blood will be withdrawn slowly to prevent the heart from collapsing.	<ul style="list-style-type: none"> Ensure euthanasia of the animal post-procedure.

NOTES:

Total blood volume of a hamster is 75 ml/kg or 7.5% of total body weight or 0.700 ml/10 g body weight (BW).

As a general rule, 20 drops = 1 mL (i.e. 5 drops = 250 uL)

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

No more than 7.5% (0.056 ml/ 10 g BW) of total blood volume can be collected in a single or multiple draws over a week period.

If 10 % (0.075 ml/ 100 gm BW) of total blood vol, must allow 10 days recovery before next draw.

If 15 % (0.11 ml/ 100 g BW) of total blood volume is collected, must allow 15 days recovery before next draw.

If multiple samples are needed in a 24 hr period, alternate collection Alternate legs for saphenous vein, R and L dorsal tail veins.

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