

Recommended Standard Methods of Blood Collection: *Guinea Pigs*

Method	Maximum volume (<i>per sample</i>)	Anesthesia Required	Description	Special Considerations
Tarsal Vein	0.1 - 0.3 mL		The guinea pig is held and the foot restrained. Gentle pressure is applied by massaging above the point (proximally to the animal) at which the blood sample is taken to dilate the vessel. 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 gauge needle. Blood flow is stopped by applying pressure with sterile gauze for approximately 2 minutes to achieve hemostasis.	<ul style="list-style-type: none"> • A maximum of three samples can be taken from each hind leg and 0.1 - 0.3 mL of blood can be collected per sample. • Samples should be rotated between the hind legs and should be removed first distal to the animal (between the toes) and moved proximally to the animal (towards the ankle). • No more than six samples, using both hind legs, should be taken in any 24-hour period.
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 guinea pig 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 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.
Cardiac Puncture (<i>Non-survival</i>)	1-25 mL	YES	The guinea pig is anesthetized, and blood is collected via the left ventricle using a 20-21 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 Blood will be withdrawn slowly to prevent the heart from collapsing.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 guinea pig is 70 ml/kg or 7.0% of total body weight or 7 ml/100 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% (0.525 ml/ 10 g BW) of total blood volume can be collected in a single or multiple draws over a week period.

If 10 % (0.7 ml/ 100 gm BW) of total blood vol, must allow 10 days recovery before next draw.

If 15 % (1.1 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.**