

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

Method	Maximum volume (per sample)	Anesthesia Required	Description	Special Considerations
Cephalic Vein	No more than 1% blood volume		The dog is restrained ( <i>state method of restraint</i> ) and the collection site is shaved with an electric clipper and cleaned with three alternating scrubs of 70% alcohol and betadine. Blood is collected from the forelimb, starting distally (near the paw) and working proximally (away from paw) with a 21 gauge or wider needle. Blood flow is stopped by applying pressure with sterile gauze to the sampling site for approximately 30 seconds to achieve hemostasis.	<ul style="list-style-type: none"> <li>• Where multiple samples are taken, the use of the forelegs should be alternated.</li> <li>• A temporary cannula can be used for multiple samples taken over a short period of time (more than four samples from one vein in a 24-hour period). No more than eight blood samples (four from either leg) should be taken in any 24 hour period. The number of attempts to obtain blood should be minimized to a maximum of three needle sticks for each sample.</li> <li>• <b>Restraint:</b> Dogs can either be restrained manually or using a sling. A non-slip mat can help hold the dog steady. Animals should be acclimatized to restraint and the sound of the clippers before being used in experiments.</li> </ul>
Jugular Vein	No more than 1% blood volume		The dog is restrained ( <i>state method of restraint</i> ) and the collection site is shaved with an electric clipper and cleaned with three alternating scrubs of 70% alcohol and betadine. Sampling sites are alternated between the two jugular veins, starting distally at the base of the neck and moving towards the head along the jugular groove. The vein is raised by compressing it just dorsal to the thoracic inlet, ventral to the venepuncture site. A 21 gauge needle is used to collect blood. Blood flow is stopped by applying pressure with sterile gauze to the sampling site for approximately 30 seconds to achieve hemostasis.	<ul style="list-style-type: none"> <li>• No more than eight blood samples should be taken in any 24 hour period.</li> <li>• The number of attempts to obtain blood should be minimized to a maximum of three needle sticks for each sample.</li> <li>• <b>Restraint:</b> Dogs can either be restrained manually or using a sling. A non-slip mat can help hold the dog steady. Animals should be acclimatized to restraint and the sound of the clippers before being used in experiments.</li> </ul>

**NOTES:**

Total blood volume of a canine is 80 ml/kg or 8% 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% (6 ml/kg BW ) of total blood volume can be collected in a single or multiple draws over a week period.

If 10 % (8 ml/kg BW) of total blood vol, must allow 10 days recovery before next draw.

If 15 % (12 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.**