

Blood Collection Procedures

Submandibular Vein or Artery Blood Collection

For hematology or chemistry services

Procedure

1. The confluence of the submandibular vein, orbital vein, and other facial veins is accessible at the cheek
2. Mice are kept awake but must be restrained effectively
3. The mouse is lifted into the air by the scruff, allowed to hang into its most relaxed position, then the vascular bed is punctured at the back of the jaw with a lancet or 20-gauge needle
 - a. For HEMATOLOGY: Blood drops are collected into a Microtainer EDTA Tube (Lavender, P/N: BD 365974) and immediately mixed by tapping and inverting the tube five times to ensure anticoagulation
 - b. For CHEMISTRY: Blood drops are collected into Microtainer Serum Separator Tube(s) (SST, Gold, P/N: BD 365967). Refer to "**Processing Samples for Chemistry**" for next steps.
4. Light pressure is applied to the cheek with a Kimwipe tissue to close the puncture and stop bleeding
5. Mice are returned to their cage
6. CBC samples are kept at room temperature and must be tested within 4 h of collection

Cardiac Puncture Blood Collection

For chemistry or coagulation studies

Materials

For serum chemistry	For citrated plasma coagulation studies
1. Inhalant anesthetic	1. Inhalant anesthetic
2. 1-mL plastic syringe with 20-gauge needle	2. 1-mL plastic syringe with 20-gauge needle loaded with 30 μ L of buffered citrate (0.6 M sodium citrate, 0.04 M citric acid, pH 7.4)
3. Microtainer serum separator tube(s)	3. Microtubes containing sufficient additional citrate to achieve a final 9:1 ratio of nine parts whole blood to one part citrate

Procedure

1. Mice are kept under general (inhalant) anesthesia and one of two methods may be used
 - a. Open: body cavity is opened to expose the heart
 - b. Closed: a needle is inserted through the intact skin, between the ribs, to reach the heart
2. Needle is inserted to the heart and up to 1 mL of blood is withdrawn. Note the volume.
3. Blood is emptied into the microtube
 - a. For CHEMISTRY: Allow blood to stand and clot at room temperature up to 4 h
 - b. For COAGULATION STUDIES: Blood is immediately mixed well by tapping and inverting the tube five times to ensure proper anticoagulation (note: if the sample is not mixed well, blood will clot and cannot be analyzed).
4. Mice are euthanized by cervical dislocation