

**Tail Nick Blood Collection in Mice**  
**IACUC Standard Procedure**  
**Effective Date: November 2020**

**Description of procedure:**

Tail vein sampling is suitable for a small volume of blood (less than 0.2 ml) by puncture (with a needle or lance) of the tail vein. It is suitable for all strains but is more difficult in black or pigmented mice. Multiple samples can be taken daily by alternating sides. This technique may be performed with or without anesthesia. This technique is best performed after animals have been warmed in order to dilate the blood vessel.

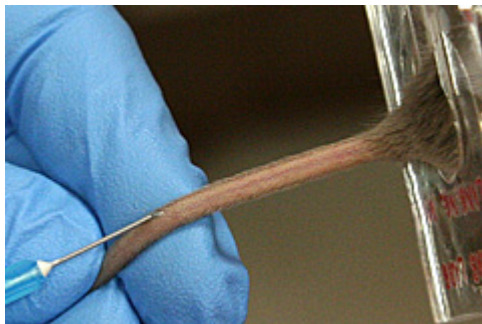
For information regarding maximum blood collection volume please refer to the [UCSF Blood Collection Guidelines](#). Please contact the IACUC office for training or any assistance with this technique.

**Supplies necessary:**

- 4mm lancet or 22 gauge needles
- Gauze sponges
- Light source
- Heating source (75 watt bulb, water blanket, reusable warming pads, etc.)
- Warm water
- Blood collection tubes(capillary) or Microtainer
- Restraint device

**Procedure:**

1. Place mouse in restraint device exposing entire tail.
2. Dilate tail vessel with warm water or by exposure to heat source, taking care not to overheat.
3. Immobilize tail with non-dominant hand and visualize lateral tail vein.
4. Puncture vessel with needle bevel up or 4mm lancet tip, entering vein at a shallow angle beginning at the distal end of the tail.
5. Collect sample with a pipette or other collection tube, until the target volume is reached. Repeat samples may be performed via puncturing with a new needle, proximal to the previous site. (Do not reuse needle or lancet for subsequent attempts.)
6. Apply manual pressure to stop bleeding.



**Adverse effects to be considered:** hematoma formation, dermal burns