

# Tail Artery Bleed

## Rat Recommended



The artery on the ventral aspect of the rat's tail can be used for the collection of small to moderate amounts of blood. Application of heat to the whole animal or locally to the tail can be used to cause vasodilatation and ease vascular access. Dilate the tail artery by placing the tail in warm water (37°C), never exceeding 40 - 44°C range, or under a heat lamp (25-30 cm away from a 60W bulb). The rat's body temperature should never exceed 104°F (40°C) for over 5 minutes. **Animals must be constantly monitored for signs of distress during heat exposure.** The animal should be restrained so that its tail is accessible. Commercial restrainers are available for this purpose. A 25-28G needle is used. The needle, with its bevel facing away from the artery, is inserted into the artery at an angle of approximately 20 degrees from the skin. It is often helpful to bend the tail so that the needle can be inserted parallel to the tail, just under the skin. The needle is inserted slowly. Visualize the needle as it enters the artery. Once the artery's wall has been penetrated, decrease the needle's angle and direct the needle cranially approximately 2 mm. A small volume of blood can be gently aspirated into the syringe. The use of a needle without a syringe, allowing the hub to fill with blood, and subsequently collecting blood into a microhematocrit tube is useful when very small quantities of blood are needed. *This technique can be performed with the mouse but is considerable more difficult and blood volumes are very small.*