All fish are anaesthetized prior to blood sampling.

Blood may be sampled following four separate procedures: dorsal aorta, cardiac puncture, caudal vein, and caudal severance. Of the three sampling methods the caudal vein is the preferred method for salmonids.

**Caudal vein:** The sample is taken midline just posterior of the anal fin. Insert the needle into the musculature perpendicular to the ventral surface of the fish until the spine is reached or blood enters the syringe. If contact with the spine is made withdraw the needle slightly. The vein is ventral to the overlying spine. This blood vessel can also be sampled laterally.

**Dorsal Aorta:** Insert needle on a 30-40° angle into the dorsal midline in the roof of the mouth at about the 3rd to 4th gill arch. Depending upon size and species of fish insertion between the 1st and 2nd arch may be more suitable. Recovering fish tend to bleed at the mouth. This site may be used for indwelling catheterization.

**Cardiac Puncture:** Blood is collected from the heart ventricle. Insert needle perpendicular to the ventral surface of the fish in the centre of an imaginary line between the anterior most part of the base of the pectoral fins.

**Caudal Severance:** Dry the caudal peduncle. Completely sever the tail posterior to the anal fin. The first few drops are discarded, the rest is collected in microhematocrit tubules. After the sample is collected return the fish to a separate container of anaesthetic for euthanasia.
Blood Sampling in Salmonid Fish
Taken from 73-410 Diseases of Aquatic Animals Lab Manual

- Caudal Vein Puncture
  - Lateral Insertion

- Dorsal Aorta Puncture

- Cardiac Puncture

- Caudal Vein Puncture
  - Ventral Insertion