

Bone Marrow Specimen Preparation

Specimen	Media / Anticoagulant	Fixative
Peripheral Blood & Most recent complete blood count (CBC)	Green top (sodium heparin) or Lavender (EDTA)	
Liquid BM Aspirate tubes (3)	2 Green top (sodium heparin) and 1 Lavender (EDTA)	
BM aspirate slides/smears (3 or more)	None	Air-Dry
BM trephine biopsy	None	Formalin
BM particle clot(s)	None	Formalin
BM trephine touch preparations	None	Air-Dry

Bone Marrow Specimen Collection:

- Bone marrow aspirate sampling:** Aspirates should be drawn with 10- or 20-ml plastic syringes, to provide adequate negative pressure. Distribute the aspirate between two green top (sodium heparin) tubes and one lavender (EDTA) tube. Save a small amount of aspirate in the syringe to perform the particle clot (see below).
- Bone marrow biopsy sampling:** Place trephine biopsy on glass slide. Perform touch preparations (see below). Place core in formalin container, unless it is a “dry tap” (see below).
- In the event of a “dry tap”:** Trephine biopsy cores of 2–3 cm in aggregate length can be submitted for flow cytometry analysis in tissue culture media, such as RPMI. This is achieved by performing a second biopsy. If a second biopsy is not feasible, cut the biopsy and split into two containers (RPMI and formalin). In the event of a dry tap, it is important to include touch preparations of the biopsy (see below). Refer to VPL SPECIMEN COLLECTION GUIDE FOR DRY TAPS.
- Aspirate smear preparation:** Expel aspirate from the EDTA tube into a small plastic Petri dish or siliconized glass dish. Use a Pasteur pipette to pick out several particles (spicules), while minimizing the amount blood, and place on glass slides near label end. Remove excess blood with pipet suction or by tipping slide. Place another glass slide on top, compress with gentle pressure, and draw the slides in opposite directions. Repeat to make at least 3-5 slides.
- Particle clot preparation:** Allow a small amount of aspirate to clot in the syringe. Transfer the clot to formalin container.
- Touch preparations:** A fresh bone marrow core is gently rolled between two glass slides. These can be left to air dry.
- Include peripheral blood in Green top (sodium heparin) or Lavender (EDTA) and most recent CBC results.

Label all containers and slides with patient's first and last name and date.