

Making Blood Films

Blood specimens arriving in the laboratory for the diagnosis of malaria parasites are in EDTA which prevents blood clotting by removing calcium from the blood. One of its features is that it does not distort red blood cells but high quality blood films must be made within 2-3 hours of the specimen arriving in the laboratory or the blood parasites become distorted and artefacts start to appear. Bone marrow specimens are also collected in EDTA to prevent clotting

1. Thick Blood Films

- Place 3 - 3.5 μ l of blood, depending on the consistency and haemoglobin of the blood, onto the centre of a microscope.
- With practice and experience, one can apply blood to up to 20 slides at a time without the blood spot drying out.
- Spread in a circular motion with an orange stick to make an area of approximately 1 cm². It should just be possible to read small print through a thick film.
- Allow the slide to air dry horizontally.
- It is important to air dry the thick film until it is completely dry. Do not put films in an incubator or use the hair drier to dry the film, or any other heating implement as this may result in the film cracking and ultimately the blood being washed off the slide.

2. Thin blood films

- Using the automatic step pipette, place 3 - 3.5 μ l of blood, depending on the consistency and haemoglobin of the blood, onto the middle of a microscope slide about 3mm above the frosted end.
- With practice and experience, one can apply blood to up to 20 slides at a time.
- Place another slide at an angle of 30° and bring it towards the drop of blood.
- As soon as it touches, the blood will disperse along the width of the slide.
- Before it reaches the edges, push the drop along the length of the slide.



- If the correct amount of blood is applied, it should form a good tail towards the end of the film.
- Air dry the slides.

- h) Put the dried slides into metal slide racks (cupboard 7) and fix in methanol for 2 minutes using the glass rack holders.
- i) Remove racks from methanol and air dry.

