

Diagnosis >> In the Laboratory

Malaria is diagnosed by microscopic examination of the blood. Thick and thin blood films are made on clean, grease – free glass slides. Having written the patient's name, time and date, the glass slide can be cleaned by breathing on the surface and wiping with a clean cloth.

Method in detail

- Third finger of the left hand of the patient should be held with left hand between thumb and finger by blood slide collector at the first phalangeal joint.
- Wipe finger tip with swab dipped in spirit or Savlon solution
- Allow the fingertip to dry
- Hold the pricking needle in the right hand and prick the finger
- Allow blood drop to ooze out
- Take a clean slide
- Take three drops of blood (sufficient blood) 1 cm from the edge of the glass slide
- Take another drop of blood 1 cm from the first drop of blood
- Take another slide with smooth edge and use it as spreader
- Make thick and thin smears
- Allow it to dry
- Put the slide identification number/ name on thin smear with lead pencil

Making good thin films requires practice. Anemic blood smears poorly. The thick film should be stirred in a circular motion with the corner of the second slide until clotting takes place. The thick film must be of uneven thickness, but it should be possible to read the hands, but not the figures, of a watch face through the film.

The thin blood smear should be air-dried rapidly, fixed in anhydrous methanol, stained and the red cells in the tail of the film should be examined under oil immersion.

The level of parasitaemia is expressed as number of parasitized erythrocytes among thousand cells and this figure is then converted to the number of parasitized erythrocytes per microliter.

The thin blood smear should be dried thoroughly and stained without fixing. Both parasites and white cells are counted, and the number of parasites per unit volume is calculated from the total leukocyte count.

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