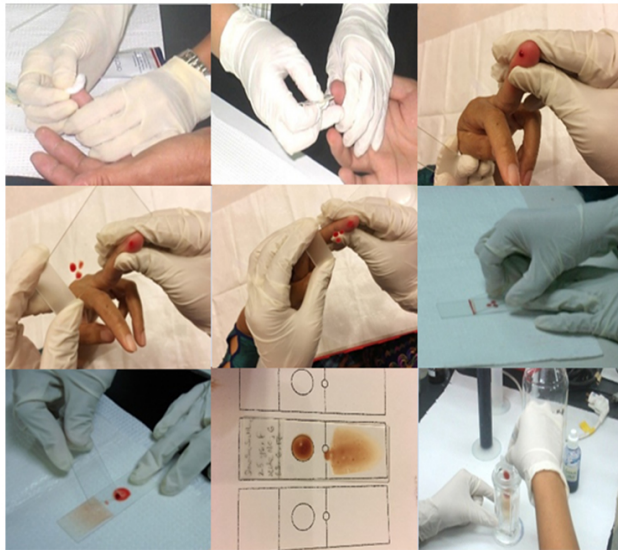


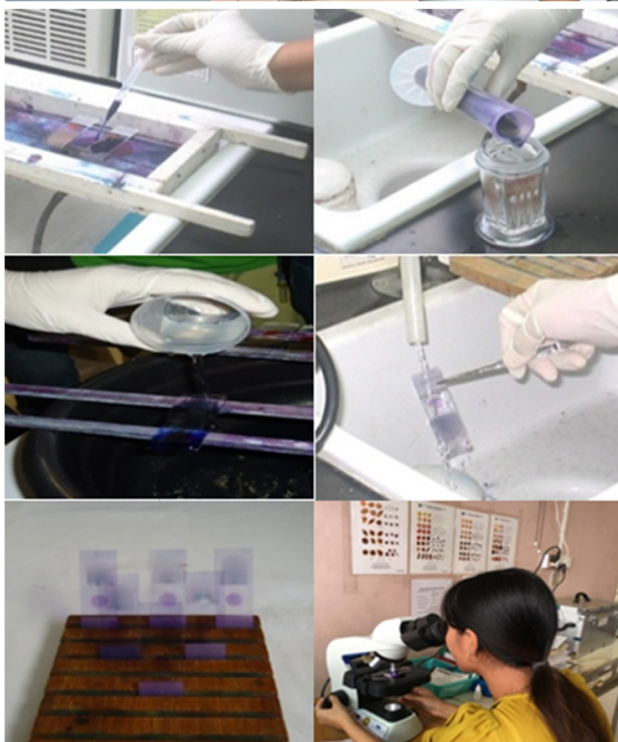
Algorithm for Malaria Microscopy

1. Preparation of Blood Smear for Malaria



1. Disinfect finger using 70% Alcohol and let air dry
2. Puncture the finger using sterile lancet
3. Collect the blood as 3 drops for thick film and 1 drop for thin film
4. Spread the thin film first by using a clean spreader slide
5. Make the thick film, by quickly join 3 blood drops in circular motion from outside to inside and air dry away from dust
6. Label the slide at the frosted end or thicker end of thin film (date, name, age, sex, etc.)
7. Fix the thin smear by dipping in methanol
Do not fix the thick smear.

2. Staining of Blood film for Malaria



Stain preparation Method	10 % (Rapid Method)		3% (Slow Method)		
	Individual (flooding)	Mass (Immersion / Coplin Jar)		(Immersion / Coplin Jar)	
		For 50 mL	For 100 mL	For 50 mL	For 100 mL
Giemsa STOCK	9 drops	5 mL	10 mL	1.5 mL	3 mL
Buffered H ₂ O	3 mL	45 mL	90 mL	48.5 mL	97 mL
Staining Time	10-15 minutes	10-15 mins.		30-45 mins.	

8. Prepare 10% working Giemsa stain using with PH7.2 water
9. Gently pour the stain on the slide & wait for 10-15 Minutes
10. Gently wash the stain on the slide by adding drops of clean water
11. Allow to drain and then air dry

4. Malaria Microscopy Reporting System

- v *Plasmodium falciparum* -ring only ----- P F
- ring form and gametocyte --- P F+g
- gametocytes only --- PFg
- v *Plasmodium vivax* -all stages at once ----- PV
- v *Plasmodium malariae* - all stages at once ----- PM
- v *Plasmodium ovale* -all stages at once ----- PO
- v Mix infection -Two or more malaria parasite species seen in one blood film.
 Eg; - F+V, F+M, V+M ets: (MIX).

3. Examination of Blood film for Malaria

- Air dry the smear in the vertical position
- And examine under oil immersion by using microscope
- Read a minimum of 100 fields, but the whole thick film should be scanned.
- If parasites are observed, identify all species present

No Malaria Parasites Seen after 100 thick blood film fields – NMPS (but if time permits, whole thick film should be scanned)

Parasite Count Thick film
 Number of parasite × 8000
 = ----- / UL of blood

Number of WBCs

Parasite Count Thin film
 Note – If ≥ 100 parasites are present in each field of a thick film under the 100x Objective, calculate the parasite count on the thin film

Number of infected RBC × 5,000,000
 = ----- / UL of blood

Number of fields × 250 RBCs