
Lab Dept: Hematology

Test Name: MALARIA PREP

General Information

Lab Order Codes: MALP
Note: MALAR orders both the rapid test and smear. [See Malaria, Rapid Test](#) for specific information on the rapid test.

Synonyms: Blood Parasite Smears; Microfilariae Smears; Malaria Smears; Babesia Smears; Leishmania Smears;

CPT Codes: 87207 – Smear; special stain for inclusion bodies or intracellular parasites
87015 – Concentration (any type), for infectious agents
85027 – complete (CBC) automated (Hgb, Hct, RBC, WBC, and PLT count)
85025 – complete (CBC) automated (Hgb, Hct, RBC, WBC, and PLT count) and differential
85045 – Reticulocyte count, flow cytometry, if appropriate
85044 – Reticulocyte count, manual, if appropriate

Test Includes: Preparation and review of thin and thick smears.

Logistics

Test Indications: Diagnosis of malaria, babesia, trypanosomiasis or microfilariasis, parasitic infestation of blood or evaluation of febrile disease of unknown origin.

Lab Testing Sections: Hematology

Phone Numbers: MIN Lab: 612-813-6280
STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 2 - 4 days

Special Instructions: If patient's fever course is predictable, smears should be collected immediately before time of expected fever.
If fever is unpredictable, collect at the beginning of temperature rise.

NOTE: If the patient has traveled to a malaria endemic area, the date and destination of travel should be noted on the request form.

Specimen

Specimen Type:	Whole blood or Smears
Container:	EDTA Lavender top tube or EDTA Lavender Microtainer®, Slides
Draw Volume:	<p>Lavender (EDTA) 2 mL Vacutainer tube: Minimum fill volume of 1 mL is required. Allow the tube to fill until the vacuum is exhausted, and blood flow ceases.</p> <p>Lavender (EDTA) Microtainer® tube: Minimum of 0.5 mL is required. To be used for neonates, collected volumes <1.0 mL, or when a capillary (skin puncture) collection is required.</p>
Processed Volume:	Same as Draw Volume
Collection:	Venipuncture, Capillary collection and smears prepared directly from capillary collection.
Special Processing:	<p>Lab Staff: Four thin peripheral blood smears (routine) and four thick blood preparations prepared by Hematology.</p> <p>The thick preps are made by placing one drop of blood on a glass slide and then spreading the blood over the slide in a circle to the size of a nickel, then air drying well.</p>
Patient Preparation:	See Special Instructions
Sample Rejection:	Improper tube; clotted sample; underfilled tube; mislabeled or unlabeled specimens

Interpretive

Reference Range:	No parasites present
Critical Values:	Presence of parasites
Limitations:	One negative result does not rule out the possibility of parasitic infestation. If parasitic infection is strongly suspected, test should be performed at least three times with samples collected at different times in the fever cycle.
Methodology:	Light Microscopy of Wright-Giemsa Stained Smears
References:	Brenan, JG, MS Alilio and A Mills (2004). Conquering the Intolerable Burden of Malaria: What's New, What's Needed: A Summary, American Journal of Tropical Medicine and Hygiene, 2004;71 (Suppl 2); 1-5

Centers for Disease Control (CDC) (2004). Treatment of Malaria (Guidelines for Physicians), 2004, June 28

Manual of Clinical Microbiology (2003), 8th edition. Plasmodium and Babesia, pp 1944-59

Titjtra, Emiliana, S Suprianto, J McBoon, BJ Currie and NM Antsey (2001). Persistent ICT Malaria P.f/P. v. Panmalarial and HRP2 Antigen Reactivity after treatment of Plasmodium falciparum. Malaria is Associated with Gametocytemia and Results in False-Positive Diagnoses of Plasmodium vivax in Convalescence, J of Clinical Microbiology, March 2001; 39: 1025-1031

Moody, Anthony (2002). Rapid Diagnostic Tests for Malaria Parasites, Clinical Microbiology Reviews, January 2002;15:66-78

Iqbal, J, A Sher and A Rab (2000). Plasmodium falciparum Histidine-Rich Protein 2- Based Immunocapture Diagnostic Assay for Malaria: Cross Reactivity with Rheumatoid Factors, J of Clinical Microbiology, March 2000: 38:1184-1186

Various [CDC Web Pages for Other Blood Parasites](#)

Updates:

9/18/2013: A CBC and Reticulocyte count will now be done with Malaria screens. MALAR will order both the Rapid Test and the Malaria Prep. Added additional references.

8/26/2014: Updated lab order code

4/2/2025: updated volume requirements, removed reference of CBC to be included with MALP order.