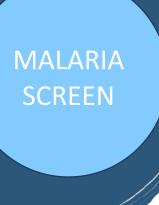




Pathology and Laboratory Medicine



# Orderable - MALS

STAT: 2 hours

#### **Alternate Name(s):**

Malaria Prep Malarial Parasites



### Laboratory:

Core Lab

Complicated or mixed infections will be referred to the Public Health Ontario Laboratory for confirmation at the discretion of the laboratory.



#### Requisition:

GENERAL LABORATORY REQUISITION



#### **Method of Analysis:**

The malaria screening orderable is a panel of tests. Initially a molecular screening test is performed using the illumigene™ DNA Amplification Assay for the Detection of Plasmodium species. The illumigene™ Malaria assay utilizes loopmediated isothermal DNA amplification (LAMP) technology to detect Plasmodium sp. DNA by targeting segments of the Plasmodium genome. Positive molecular screening tests will be reflexively tested with an

#### Specimen:

Adult	Pediatric
4 mL K <sub>2</sub> or K <sub>3</sub> EDTA	0-2 years: 0.5 mL Lavender
Lavender top Vacutainer	Microtainer
tube	2-10 years: 3 mL Lavender top
	tube

#### **Collection Information:**

Orders generated within LHSC (non-referred in samples) must be received in the laboratory as soon as possible as testing must be initiated within 1 hour of sample collection.

Orders for confirmation of malarial screening performed in regional centres (referred-in samples) must be received in a timely manner in order to meet the Ministry standard of a 24-hour turn-around-time following detection of malaria.

Referred in (non LHSC) repeat testing on previous negative samples (within 7 days) will not be tested.

Minimum volume required for testing is 500 uL.

#### **Reference Ranges:**

Negative

Critical Value: Positive molecular screen, parasitemia level > 5.0%



immune-

speciation of P. falciparum or non-P.

blood film will be

(expressed as a

films will be

chromatography-based rapid malaria screening

falciparum and a standard

microscopically examined

and a parasitemia level

percentage of infected

red blood cells) will be reported. Thick and thin

microscopically examined

and a final speciation report will be generated

in consultation with a





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## **Interpretive Comments:**

The initial molecular screening test has a sensitivity of 97.3% with a negative predictive value of 99.8%. The assay is capable of detecting the presence of Plasmodium falciparum, Plasmodium vivax, Plasmodium ovale, Plasmodium malariae and Plasmodium knowlesi but CANNOT distinguish between these species. There is no cross-reactivity with non-Plasmodium species such as Babesia. Because of the extremely high negative predictive value, a negative molecular screening test excludes malaria and will not require any reflexive testing such as the rapid malaria test for presumptive species, parasitemia level or examination of thick and thin films for final speciation. Repeated testing of the patient over the course of multiple days is not required if the initial molecular screen is negative.

# rapid malaria screening method for presumptive **Special Processing:**

Referring centres must include the following with all requests for confirmation:

Requisition with patient demographics (HCN included)

Travel history

CBC results

Wrights-Giemsa (or equivalent) stained blood film

4 unstained "thick" films

4 unstained and methanol fixed "thin" films

The reported results of the rapid malaria screening test

The reported initial level of parasitemia and presumptive speciation

A fax number to which the final report can be sent

Referring centres are to send samples to:

Core Laboratory (VH)

Room D1-218

London Health Sciences Centre

800 Commissioners Rd., London ,ON

N6A 5W9

Referring centres are to notify the laboratory (519-685-8500 ext 52544) prior to sending the sample.

### **Critical Information Required:**

Travel history, transfusion history and recent anti-malarial treatment are required pieces of information to be provided at time of order submission either electronically or by paper requisition.

### **Storage and Shipment:**

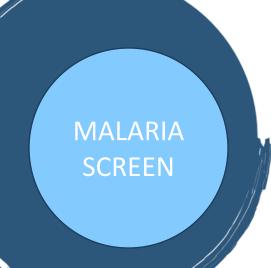
Ship samples at room temperature.



#### **Test Schedule:**

Hematologist.

Available 24 hours a day, 7 days per week







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# **Specimen Stability:**

Samples are stable for 7 days at room temperature and 14 days at 2-8°C. Samples required beyond 14 days should be frozen at -80°C