

VIASURE Malaria Real Time PCR Detection Kit

- **Malaria is a infectious disease that represents one of the most important threats to public health worldwide, with an annual incidence of 350 to 500 million clinical cases worldwide.**

Malaria is a treatable infectious disease **transmitted by vectors** and caused by the asexual form of eukaryotic parasites of the genus *Plasmodium*. These parasites are transmitted to people by the **bites of infected mosquitoes** of the genus Anopheles.

- It is known that there are five species that are capable of infecting humans: ***Plasmodium falciparum*, *Plasmodium vivax*, *Plasmodium malariae*, *Plasmodium ovale* and *Plasmodium knowlesi***, the latter infected only primates, but has been responsible for cases of infection in humans in Malaysia and Borneo. The two most frequent species are *P. vivax* and *P. falciparum*. *P. falciparum* infection is the most common cause of severe malaria, is responsible for the majority of deaths. The clinical pathological picture of malaria is a triad: fever, chills and sweating, and sometimes with other nonspecific symptoms such as headache and pain in other parts of the body, without associated complications. In a few cases severe malaria is present with neurological complications or life-threatening complications.

- **The genetic diversity gives *Plasmodium* the ability to evade the immune response of the host and produce variants resistant to drugs and vaccines**, being this largely responsible for the successful survival of the parasite in the evolutionary history, as well as the failure of the measures used with the aim of eradicating it. Consequently, understanding the mechanisms involved in the acquisition of immunity to malaria, and for the development of effective control measures in the different regions with malaria transmission, requires, among other things, differentiating which species is causing the infection and what genetic changes it exhibits.

Today the laboriousness that requires the training of a good microscopist and the difficulty of observing low parasitemias has led to the development of new, simpler but **more sensitive and specific** techniques. Diagnosing malaria in time can be vital for the patient, since the appearance of complications is closely related to the delay in the initiation of treatment.



"Ready & Easy-to-use" kits.
Lyophilised product



Transport and storage at **room temperature**.
Shelf-life: 24 months



Validated according to **ISO 13485**
and **CE marked**



VIASURE Malaria Real Time PCR Detection Kit

VIASURE Malaria Real Time PCR Detection Kit is designed for qualitative and quantitative detection of *Plasmodium* species DNA, including the main malaria species that infect humans *Plasmodium falciparum*, *Plasmodium vivax*, *Plasmodium malariae*, *Plasmodium ovale* and *Plasmodium knowlesi*, in whole blood samples from patients with signs and symptoms of malaria infection.

This test is intended for use as an aid in the diagnosis of Malaria in combination with clinical and epidemiological risk factors.

DNA is extracted from specimens, multiplied using Real Time amplification and detected using specific primers and a fluorescent reporter dye probe for *P. falciparum*, *P. vivax*, *P. ovale*, *P. malariae* and *P. knowlesi*.

Analytical sensitivity

▶▶ **VIASURE Malaria Real Time PCR Detection Kit** has a detection limit of ≥ 10 DNA copies per reaction for *P. falciparum*, *P. vivax*, *P. ovale*, *P. malariae* and *P. knowlesi*

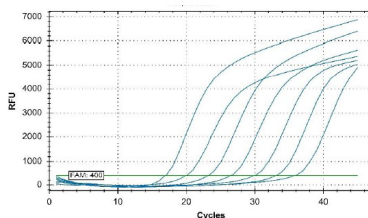


Figure 1. Dilution series of *P. malariae* (107-101 copies/rxn) template run on the Bio-Rad CFX96TM Real-Time PCR Detection System (Multiplex reaction mix *P. malariae*, *P. knowlesi* & *P. ovale*, channel FAM).

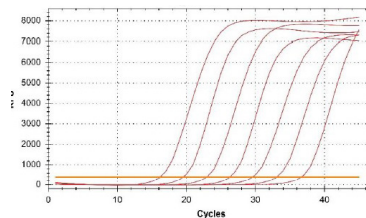


Figure 2. Dilution series of *P. knowlesi* (107-101 copies/rxn) template run on the Bio-Rad CFX96TM Real-Time PCR Detection System (Multiplex reaction mix *P. malariae*, *P. knowlesi* & *P. ovale*, channel ROX).

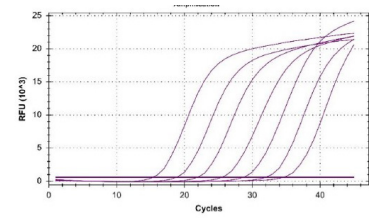


Figure 3. Dilution series of *P. ovale* (107-101 copies/rxn) template run on the Bio-Rad CFX96TM Real-Time PCR Detection System (Multiplex reaction mix *P. malariae*, *P. knowlesi* & *P. ovale*, channel Cy5).

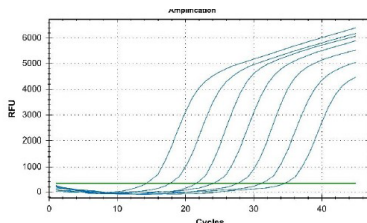


Figure 4. Dilution series of *P. falciparum* (107-101 copies/rxn) template run on the Bio-Rad CFX96TM Real-Time PCR Detection System (Multiplex reaction mix *P. falciparum* + *P. vivax*, channel FAM).

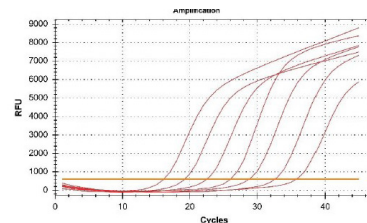


Figure 5. Dilution series of *P. vivax* (107-101 copies/rxn) template run on the Bio-Rad CFX96TM Real-Time PCR Detection System (Multiplex reaction mix *P. falciparum* + *P. vivax*, channel ROX).

References - VIASURE Malaria Real Time PCR Detection Kit -

6 x 8-well strips, low profile _____ VS-MAD106L
12 x 8-well strips, low profile _____ VS-MAD112L
96-well plate, low profile _____ VS-MAD113L
18 x 4-well strips, Rotor-Gene® _____ VS-MAD136

6 x 8-well strips, high profile _____ VS-MAD106H
12 x 8-well strips, high profile _____ VS-MAD112H
96-well plate, high profile _____ VS-MAD113H

CerTest
BIOTEC

For more information and use procedure,
read the instructions for use included in this product.

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