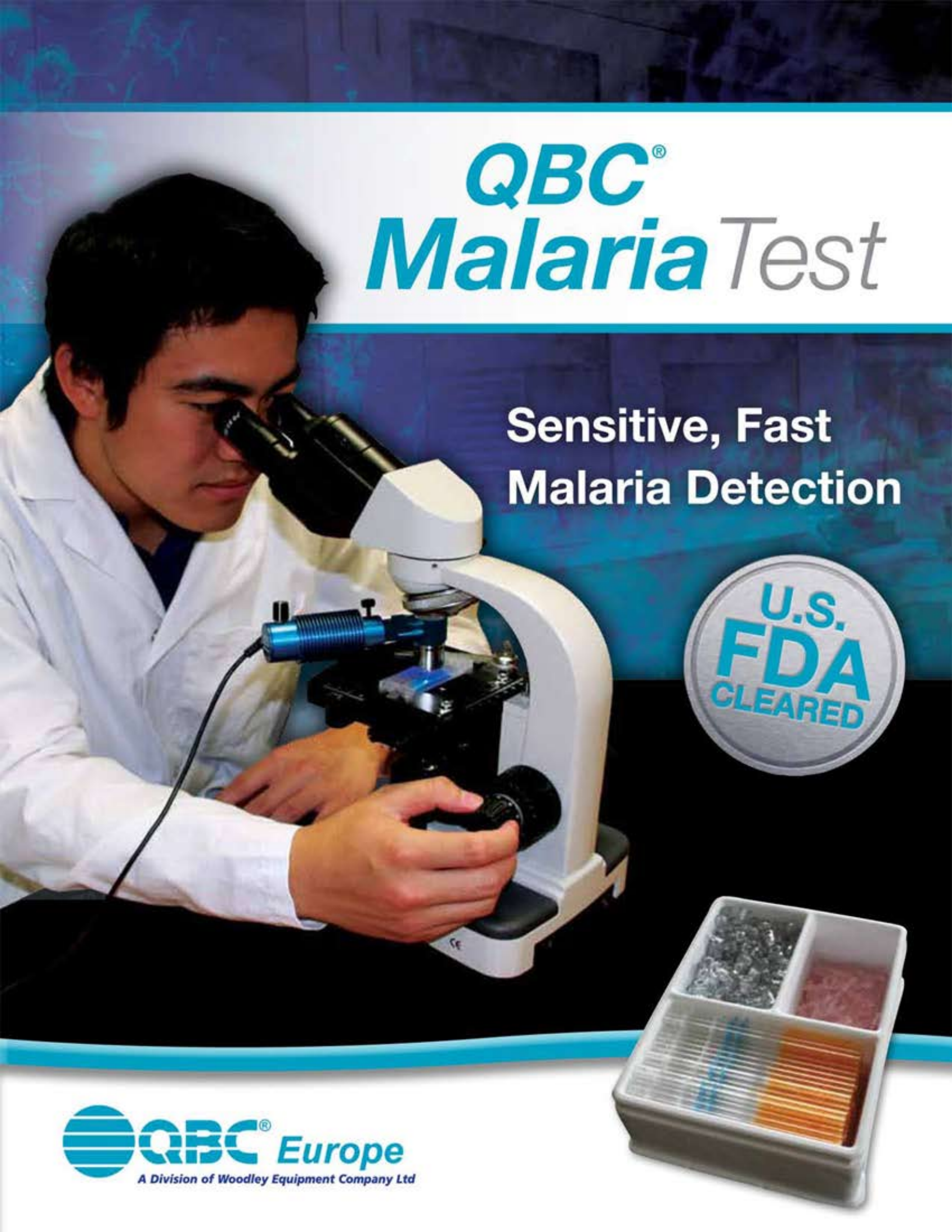
QBC® Malaria Test

Sensitive, Fast Malaria Detection

U.S. FDA CLEARED



QBC® Europe
A Division of Woodley Equipment Company Ltd

A Reason for Hope in the Fight Against Malaria

The QBC Malaria Test is a fluorescence microscopy-based malaria diagnostic test embraced by users around the world. No other malaria test available today offers all of the benefits and features of the QBC Malaria Test:

Increased Sensitivity

The QBC Malaria Test is 5.5 to 7 percent more sensitive than Giemsa thick films.[1] It can detect as little as 1 parasite per µL of blood and establish diagnosis earlier than thick film in 47% of low parasitemia (<10 parasites per µL) cases.[2,3]

Time Savings

Results are possible in just 8 minutes, a fraction of the time of thick film methods.[4] Training time is also reduced, as users with just 5 days of training can produce results comparable to an experienced microscopist using thick film.[2]

Simple Set-Up and Review

Patented QBC technology uses a single capillary tube to collect, stain and process blood samples. Principles of centrifugation and fluorescence improve review by concentrating easily visible parasites in specific areas of the tube.

Respected, Proven Technology

The QBC Malaria Test was the first malaria diagnostic test to receive FDA clearance, and its technology has been proven in dozens of scientific studies.

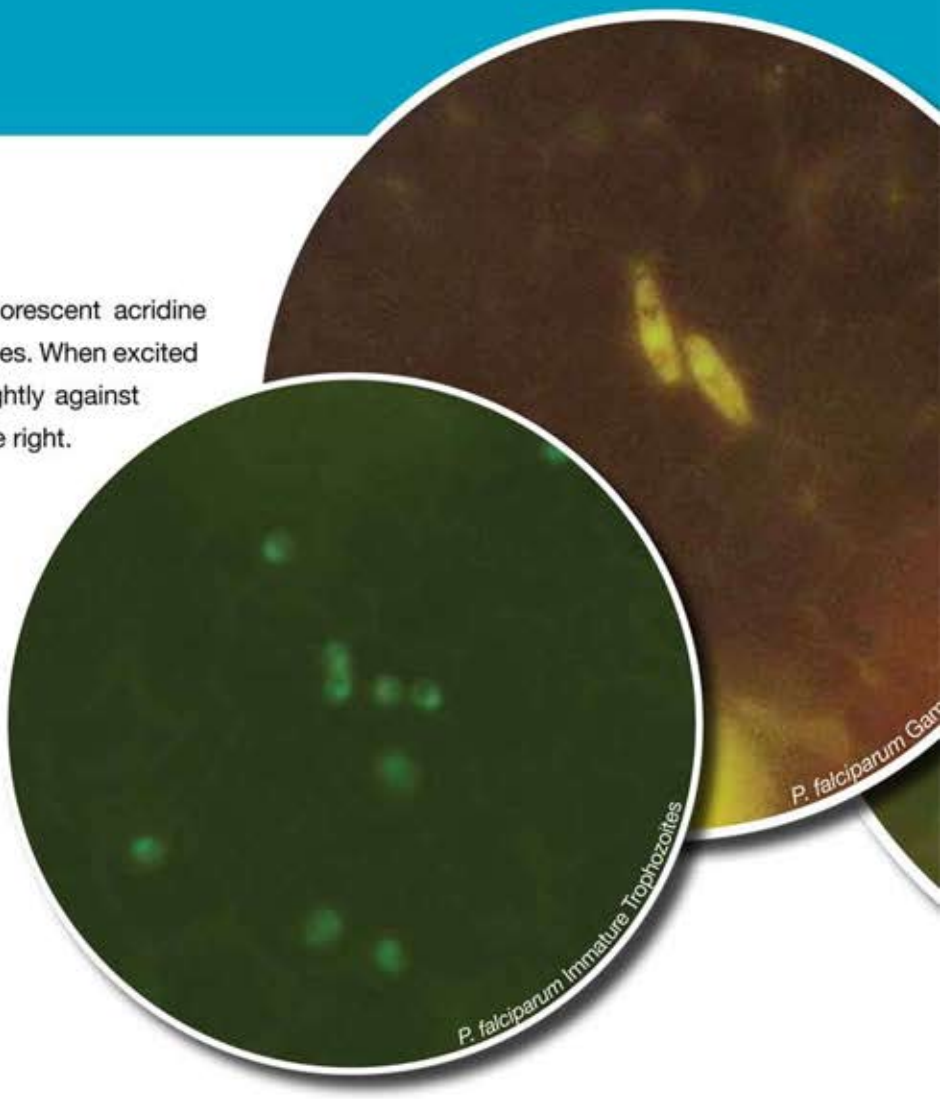
With all of these advantages over competing diagnostic tests, it's no surprise that the QBC Malaria Test is the only choice for thousands of researchers and lab technicians worldwide.


HOPE

How It **Works**

Fluorescent Stain

The QBC Malaria Test is internally coated with fluorescent acridine orange stain to improve the visibility of malaria parasites. When excited by blue light (~460 nm), parasites will fluoresce brightly against a dark background, as seen in the micrographs to the right.



QBC Capillary Centrifuge

The QBC Capillary Centrifuge is an integral part of the QBC Malaria Test system. This microhematrocrit centrifuge is designed to spin up to 20 tubes at 14,400 x g (12,000 RPM) for 5 minutes.

Centrifugation

Centrifugation makes parasites easier to locate within the tube. When the tube is centrifuged in the QBC Capillary Centrifuge (see left), blood components and malaria parasites separate based on density, and concentrate in distinct layers. The illustration below demonstrates this phenomenon:

Where are the Parasites?

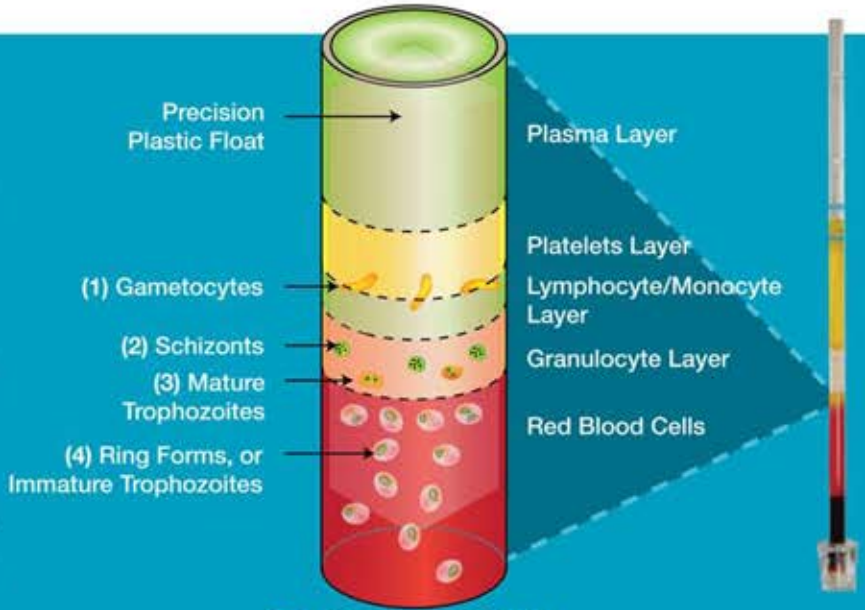
If a sample contains *P. falciparum* malaria parasites:

(1) Crescent shaped **gametocytes** will appear near the interface of the lymphocyte/monocyte and platelet layers.

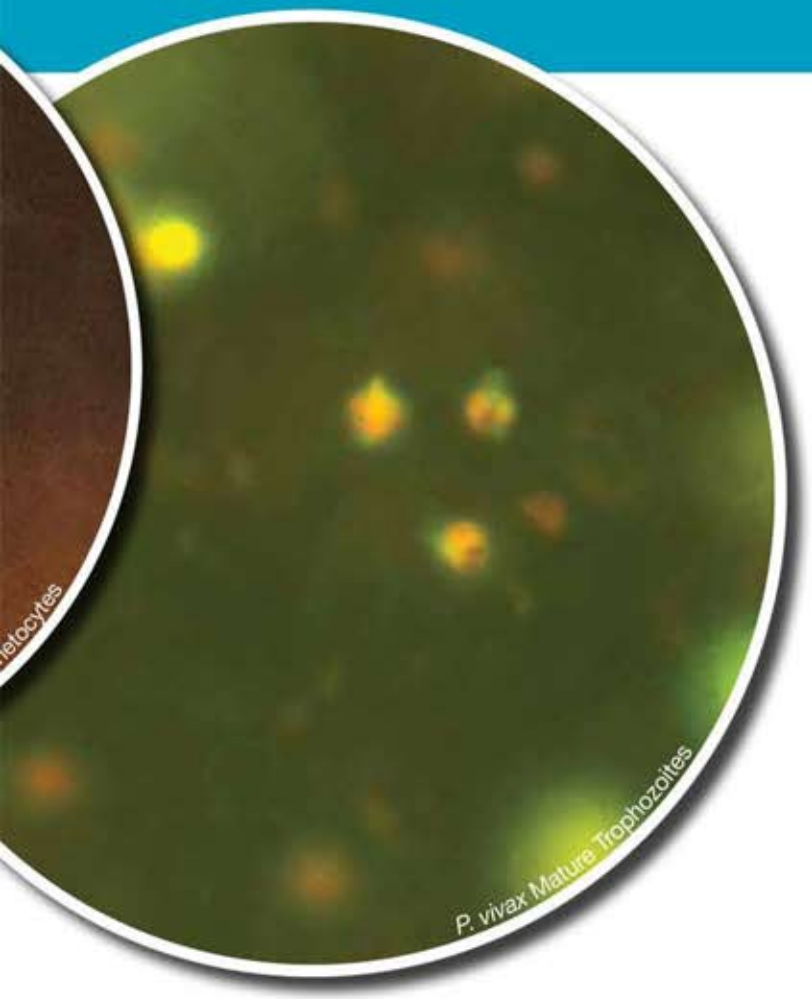
A small number of **(2) schizonts** and **(3) mature trophozoites** may appear in the granulocyte layer.

Ring-shaped **(4) immature trophozoites** will appear throughout the red blood cell layer, with a concentration near the interface with the granulocyte layer.

Other parasites species, including *P. vivax*, will also concentrate during centrifugation, but exhibit different characteristics. For more information, consult our ParaWorld™ training resources at www.qbcdiagnostics.com.



***Falciparum* Malaria**

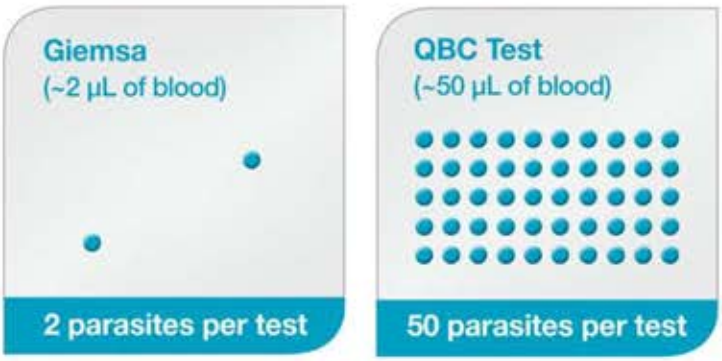


More Parasites

The QBC Malaria Test concentrates 50 µL blood samples, allowing users to quickly and easily see a far greater number of parasites than Giemsa tests, which use just 2 µL of blood. This provides unmatched results in cases of low parasitemia, as demonstrated in the following example:

Example

Patient presents with low level malaria of 1 parasite per µL of blood

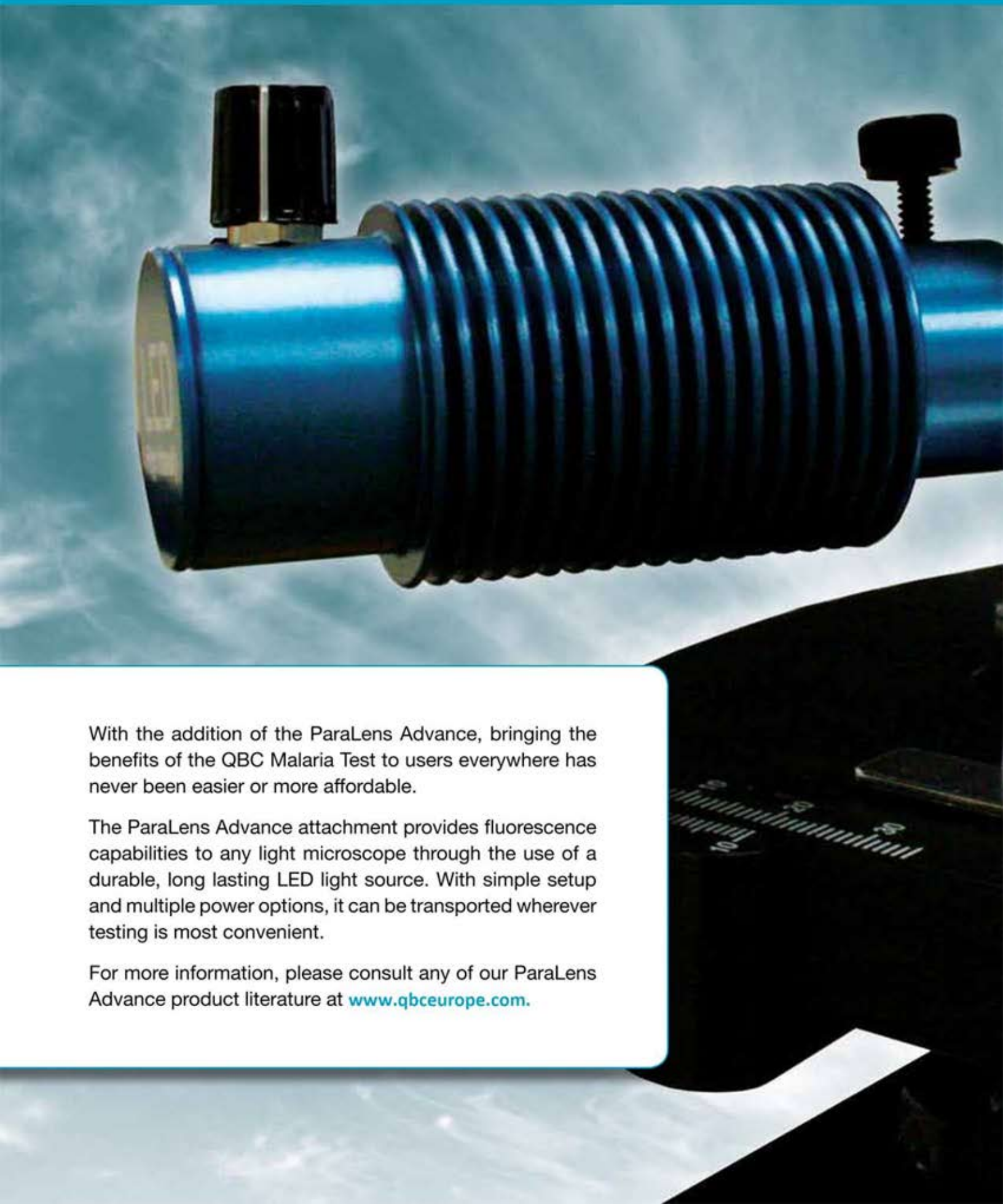


The Rapid Alternative

In addition to its advantages over microscopy based tests, the QBC Malaria Test is also superior to competing malaria Rapid Diagnostic Tests (RDTs) in many ways. The following table compares the tests across several key factors:

	Rapid Diagnostic Tests	QBC Malaria Test
Time Per Test	10-15 minutes per test[3]	8 minutes (for negative samples)[4]
Sensitivity	Only reliable at levels of 100 parasites per µL of blood or greater[3]	Can detect as little as 1 parasite per µL of blood.[2]
Specificity	Frequent false positives[3]	>98%[6]
Ability to Speciate?	Minimal[3]	Yes[7]

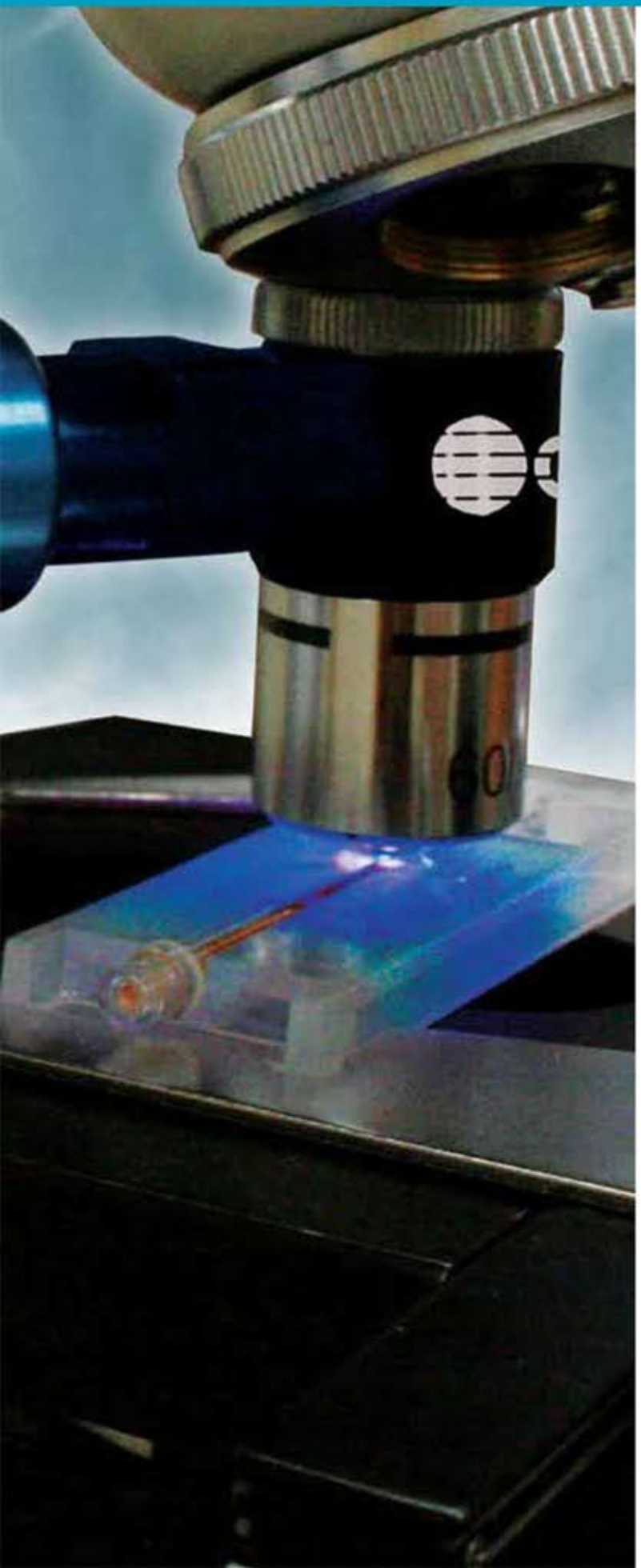
ParaLens **Advance**



With the addition of the ParaLens Advance, bringing the benefits of the QBC Malaria Test to users everywhere has never been easier or more affordable.

The ParaLens Advance attachment provides fluorescence capabilities to any light microscope through the use of a durable, long lasting LED light source. With simple setup and multiple power options, it can be transported wherever testing is most convenient.

For more information, please consult any of our ParaLens Advance product literature at www.qbceurope.com.



Malaria Test Specifications

(Box of 100, In Shipping Material)

Dimensions	W 8" x D 8.3" x H 6.5" (200.3 mm x 209.6 mm x 165.1 mm)
Weight	1.8 lbs (0.82 kg)
Storage	60.8 °F to 98.6 °F (16 °C to 37 °C)
Shelf Life	2 years from date of manufacture

(Box of 2000, In Shipping Material)

Dimensions	W 8.5" x D 11.3" x H 9.5" (215.9 mm x 285.8 mm x 241.3 mm)
Weight	4.6 lbs (2.1 kg)
Storage	60.8 °F to 98.6 °F (16 °C to 37 °C)
Shelf Life	2 years from date of manufacture

Ordering Information

QBC Malaria Test (Box of 100)	253037
QBC Malaria Test (Box of 2000)	253005
QBC Capillary Centrifuge	425740
QBC Malaria Test System with ParaLens Advance, Microscope, and Centrifuge	424350
QBC Malaria Test System with ParaLens Advance and Centrifuge	424450
ParaLens Advance with 60x Objective	424331

References

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7. Damodar, S. (1996): Evaluation of Acridine Orange Staining of Centrifuged Parasites in Malarial Infection. Indian Journal of Medical Sciences. Vol. 50, No. 7.

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