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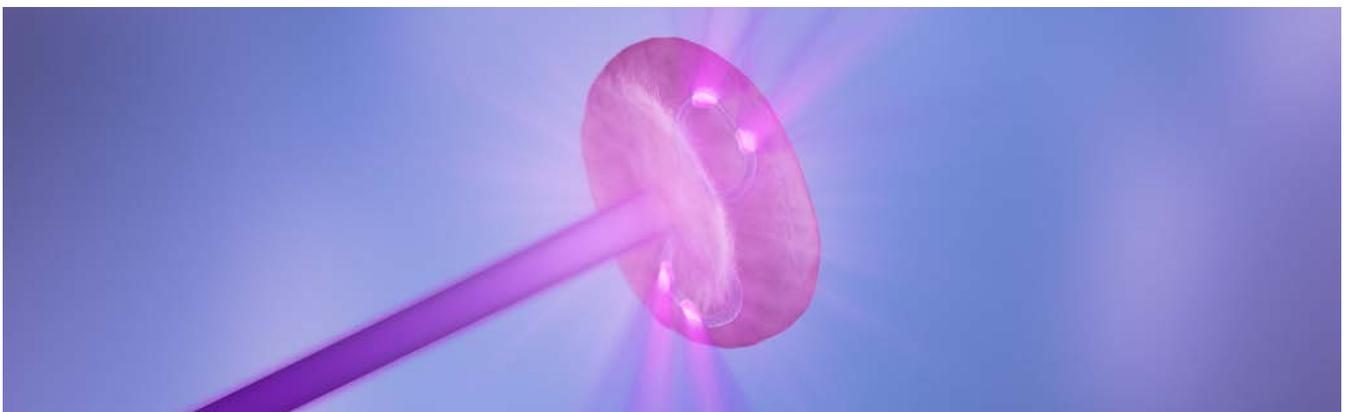
XN-31 – The fight against malaria starts with diagnostics

Malaria remains a global health burden with an estimated 249 million cases in 2022 according to the World Health Organization (WHO) [1].

Fast and accurate detection is crucial, so that timely treatment can be initiated. Malaria diagnosis largely relies on two main methods: Rapid diagnostic tests (RDT) and microscopy. RDTs are affordable and fast but can only be used for screening. Microscopy is the gold standard method but relies on the expertise of the available personnel.

Since its launch, the Sysmex XN-31 analyser has proven to be an important tool in malaria diagnostics. The XN-31 reports parasitaemia not only as an absolute number (MI-RBC#) but also as a ratio of the infected RBC to the total RBC (MI-RBC%), and the resulting scattergram provides a visual image of the parasitised red blood cells clusters. Every measurement generates a concurrent complete blood count (CBC), which provides clinicians with important information, since anaemia is a major contributor to mortality in malaria, and the degree of thrombocytopenia provides an indication of the severity of malaria [2].

The XN-31 identifies infected RBC irrespective of the *Plasmodium* species with a consistent LoQ of 20 parasites/ μ L, delivering standardised results after only a short staff training time. Several studies have shown that the XN-31 delivers results with excellent sensitivity and specificity.



List of references

Publications



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[4] **Kayange M et al. (2022)**: Automated measurement of malaria parasitaemia among asymptomatic blood donors in Malawi using the Sysmex XN-31 analyser: could such data be used to complement national malaria surveillance in real time? [Malaria J; 21: 299](#).



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[6] **Picot S et al. (2022)**: Diagnostic accuracy of fluorescence flow-cytometry technology using Sysmex XN-31 for imported malaria in a non-endemic setting. [Parasite; 29: 31](#).



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[8] **M'Baya B et al. (2021)**: Evaluation of the Sysmex XN-31 automated analyser for blood donor malaria screening at Malawi Blood Transfusion Services. [Vox Sang; 117\(3\): 346](#).



[9] **Zuluaga-Idárraga L et al. (2021)**: Performance of the hematology analyzer XN-31 prototype in the detection of Plasmodium infections in an endemic region of Colombia. [Malaria Sci Rep; 11\(1\): 5268](#).



[10] **Pillay E et al. (2019)**: Evaluation of automated malaria diagnosis using the Sysmex XN-30 analyser in a clinical setting. [Malaria J; 18\(1\): 15](#).



[11] **Post A et al. (2019)**: The XN-30 hematology analyzer for rapid sensitive detection of malaria: a diagnostic accuracy study. [BMC Medicine; 17\(1\): 103](#).