



2C-047

Field's colour solution A, 2.5%, aqueous
In-vitro diagnostic agent

Description

The product 2C-047 is a ready-to-use solution for professional users in histology and cytology. The product comes in 4 different pack sizes: 2C-047.00100 (100ml bottle), 2C- 047.00250 (250ml bottle), 2C-047.01000 (1000ml bottle), 2C-047.10000 (10l canister).

Main components

Methylene blue (C.I.52015)	1.6g/L
Azure I (C.I.52010)	1.0g/L
Di-sodium hydrogen phosphate*2H ₂ O (CAS 10028-24-7)	10.0g/L
Potassium dihydrogen phosphate (CAS 7778-77-0)	12.5g/l

Purpose

"Field's colour solution A (2.5% aqueous)" is used for cell diagnostics and is used for staining tissue samples. This is colour solution A, which, together with colour solution B, is used for the rapid detection of Plasmodium species in the diagnosis of malaria in prepared blood smears of human origin.

Sample material and sample preparation

Sampling may only be carried out by qualified personnel. All samples must be processed with state-of-the-art technology. All samples must be clearly labelled.

Sample material: Blood smears after air drying

Test principle

After staining, malaria parasites can be easily detected under the microscope in the blood smear or in the thick blood droplet. With thin blood films, the red blood cells are fixed and the infected cells can be identified by their morphology. In thick blood films, the red blood cells are lysed and the diagnosis is based on the appearance of the parasites. In thick blood films, the parasites appear more concentrated than in thin blood films, which is why the examination of a thick blood film is recommended.

Malaria parasites show deep red chromatin and light blue cytoplasm after staining with Field's staining solution A and staining solution B. In leukocytes, the nuclei stain blue and the cytoplasm light blue. Eosinophils appear large and orange. Neutrophils are small and turn light purple. White cells, platelets and malaria pigment can also be seen on a thick film, with the malaria pigment turning brown-black.



Staining

Before staining, smears must be dried in air. They are not fixed in methanol. The slide is dipped in Field's staining solution A and then washed in distilled water. The samples are then immersed in Field's staining solution B, and the excess colour is removed by rinsing them in distilled water. Before examination under the microscope, the samples are air dried.

To ensure the differentiability of the target structures, suitable control specimens should be kept along with the staining.

The usual staining protocols known from literature must be used.

Staining may only be carried out by qualified personnel

Result

Malaria parasites	deep red chromatin, light blue cytoplasm
Malaria pigments on a thick film	brown-black

Precautionary measures

When removing the product, care must be taken to avoid contamination of the storage vessel. Once the solution has been removed, it must not be returned to the canister. If turbidity or solids appear, discard the product. The product is intended for single use and must not be reused.

Storage and shelf life

Store the unopened containers in a dry place at 15 to 25 °C, avoiding direct sunlight.

The shelf life is 2 years. See also the best-before date (BBD) on the label. Once the containers have been opened, the shelf life corresponds to the best-before date, as long as the storage conditions are observed and the solution is handled properly.

Safety notice

If any serious incidents occur in connection with the product, please report them to the manufacturer and the national authority.

Literature

Romeis, Mikroskopische Technik, Editors: Maria Mulisch, Ulrich Welsch, 2010, Springer Spektrum, 18th edition