









1B-457

Cotton red

1B-461

Indulin scarlet

1B-463

Safranin O, water soluble

In-vitro diagnostic agent

Description

The product is a dye for use in bacteriology. It is a dry dye for preparing a staining solution for professional users.

The product comes in 3 different pack sizes: 1B-457.00010 (10g bottle), 1B-457.00025 (25g bottle) and 1B-457.00100 (100g bottle)

The product comes in 3 different pack sizes: 1B-461.00010 (10g bottle), 1B-461.00025 (25g bottle) and 1B-461.00100 (100g bottle)

The product comes in 9 different pack sizes: 1B-463.00010 (10g bottle), 1B-463.00025 (25g bottle), 1B-463.00100 (100g bottle), 1B-463.00250 (250g bottle), 1B-463.00500 (500g bottle,) 1B-463.01000 (1kg bucket) 1B-463.05000 (5kg drum), 1B-463.10000 (10kg drum), 1B-463.25000 (25kg drum) and 1B-463.30000 (30kg drum)

Main components

Safranin O (C.I. 50240)

Purpose

Safranin O is used for the examination of bacteriological sample material such as microbiological smears. It is a dry dye for preparing a staining solution for professional users. It can be used for counterstaining gram-negative bacteria.

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: air-dried, heat-fixed smears of bacteriological material such as sputum, fine needle aspiration biopsy (FNAB) smears, irrigation fluids, imprints, effusions, pus, exudates, liquid and solid cultures.











Test principle

The gram stain is used for differential staining of bacteria. During staining with crystal purple and post-treatment with iodine solution, a dye-iodine complex is formed. Bacteria whose cell walls have a multilayered murein framework are resistant to subsequent decolourisation and are therefore referred to as gram-positive. Bacteria whose cell wall only has a single-layered mural scaffold release the dye again. To visualise such gram-negative bacteria, a counterstain with Safranin O is subsequently carried out.

Staining

To prepare the Safranin O solution, dissolve 2.5 g Safranin O in 100 ml ethanol 96% and filter.

To prepare the dye solution, mix 10 ml Safranin-O solution and 90 ml distilled water. The freshly prepared staining solution should be filtered before use.

First, staining with Gram's crystal purple solution and Lugol's (iodine) solution is performed. After decolourising and rinsing in tap water, counter-dye with Safranin O and air-dry after rinsing again with tap water.

The samples can be covered with a synthetic covering medium for subsequent microscopy.

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

Gram-positive microorganisms: blue-purple Gram-negative microorganisms: pink to red

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