



1B-525

Acid fuchsin

1B-527

Ruby S

In-vitro diagnostic agent

Description

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

The product comes in 5 different pack sizes: 1B-525.00010 (10g bottle), 1B-525.00025 (25g bottle), 1B-525.00100 (100g bottle), 1B-525.01000 (1kg bucket) and 1B-525.20000 (20kg drum)

The product comes in 4 different pack sizes: 1B-527.00010 (10g bottle), 1B-527.00025 (25g bottle), 1B-527.00100 (100g bottle) and 1B-527.01000 (1kg bucket)

Main components

Acid fuchsin (C.I. 42685)

Purpose

Acid fuchsin is used for the examination of histological sample material such as histological sections. It is a dry dye for preparing a staining solution for professional users. It can be used for overview staining of cell and tissue components and is used in trichrome connective tissue staining according to Mallory and van Gieson, among others.

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: Sections of human tissue (3–5 µm thickness) after fixation in Zenker's fixation solution and subsequent embedding in paraffin.

Test principle

Van Gieson staining is used for differentiated visualisation of connective tissue structures. This is a trichrome staining process in which, in addition to the two dyes picric acid and acid fuchsin, iron haematoxylin is also used.

First, the nucleus is stained with iron haematoxylin, which has the necessary acid stability compared to the subsequently applied dyes. This is followed by simultaneous staining with the finely dispersed picric acid and



the coarsely dispersed acid fuchsin. If the dyeing is interrupted in time, the different dispersity and diffusion speed of the two dyes enables the differentiated representation of structures. The finely dispersed picric acid can penetrate all tissue structures, while the coarsely dispersed acid fuchsin can only penetrate sufficiently wide structures.

The Mallory stain is also a trichrome stain. In this staining method, the representation of collagenous connective tissue was modified and improved.

Staining

Before staining, deparaffinise the sections and transfer them to distilled water via a descending ethanol series.

To prepare the dye solution, dissolve 0.25 g acid fuchsin in 100 ml distilled water and then filter.

To remove mercury(II) chloride precipitates, first soak in 0.5% alcoholic iodine solution. After rinsing in tap water, treat samples with sodium thiosulphate solution. After rinsing again, the staining is done with acid fuchsin solution. After pressing it into filter paper, the staining can be done with methyl blue orange G solution. The samples are then transferred to xylene via an ascending ethanol series.

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

Connective tissue collagen, reticular:	dark blue
Acidic mucosal substances:	blue
Muscle tissue:	bright orange
Chromatin:	red, yellowish-brownish
Erythrocytes:	red-orange

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

