



## 2C-225

Sirius red solution (1%), with picric acid

In-vitro diagnostic agent

### Description

The product 2C-225 is a ready-to-use solution for professional users for application in histology. It is an aqueous dye solution mixed with picric acid. The product comes in 1 pack size: 2C-225.01000 (1l bottle).

### Main components

Picric acid ( $C_6H_3N_3O_7$ )	1.2%
Sirius red (CI 35780)	1.0%

### Purpose

Staining by means of "Sirius red solution (1%) with picric acid" is used for imaging for cell diagnostics for the examination of histological samples (e.g. histological sections) of human origin. The dye solution is used together with the Weigert iron haematoxylin A and B solution (haemalaun staining). Staining with Sirius red solution (1%) with picric acid enables visualisation of collagenous fibres in connective and supporting tissue with differentiation into muscle tissue and cytoplasm. The staining in polarised light allows differentiation into collagen type 1 and type 3. It is a ready-to-use dye solution for professional users.

### 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 (3–4  $\mu m$  thickness) after fixation, for instance by means of buffered formol and fixation mixtures with ethanol and formalin and subsequent embedding in paraffin or frozen sections.

### Test principle

The Sirius Red solution (1%) with picric acid enables binding to collagenous structures and the visualisation of collagens due to the hydrophobic property of the dye Sirius Red. Large molecular structures are not stained due to the tissue components. Collagens can be distinguished in polarised light by their ability to birefringence.

### Staining

Before staining, deparaffinise the sections and rehydrate them via a descending ethanol series. After nucleus staining with Weigert's ferrous haematoxylin-use solution, the samples are transferred to distilled aqua and rinsed under running tap water and transferred again to distilled aqua. Subsequently, the samples are stained with Sirius red solution (1%) with picric acid and soaked in acetic acid. Finally, the samples are dehydrated via an ascending ethanol series and transferred to xylene.



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

Cell nuclei	grey-black to brown
Collagen	red
Musculature and cytoplasm	yellow

### In polarised light

Collagen I	red-yellow
Collagen III	green

## 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

