

1.05231.0025

Microscopy

Fuchsin acid (C.I. 42685)

for microscopy Certistain®

IVD

In Vitro Diagnostic Medical Device



This staining dye "Fuchsin acid (C.I. 42685) - for microscopy Certistain®" is used for human-medical cell diagnosis and serves the purpose of the histological investigation of sample material of human origin. It is a dry staining dye that is used to prepare a staining solution, that when used together with other in vitro diagnostic products from our portfolio makes target structures in histological specimen materials evaluable for diagnostic purposes (by fixing, embedding where necessary, staining with the above fuchsin acid solution, counterstaining, mounting).

Principle

Fuchsin acid is a triarylmethane dye used, among others, in trichrome connective tissue stainings acc. to Mallory and van Gieson.

Mallory developed a staining procedure for visualization of collagenous connective tissue, which has been modified and improved over the years. It enables a good differentiation of individual tissue components, provided that the tissue has been fixed in Zenker's solution.

Sample material

Sections of Zenker-fixed, paraffin-embedded tissue (3 - 5 µm thick paraffin sections) are used as starting material.

Reagents

Cat. No. 1.05231.0025
Fuchsin acid (C.I. 42685) 25 g
for microscopy Certistain®
Color Index No.: 42685
Color Index Name: Acid violet 19

Also required:

Cat. No. 100063 Acetic acid (glacial) 100% anhydrous 1 l, 2.5 l
for analysis EMSURE®
ACS,ISO,Reag. Ph Eur

Cat. No. 100583 Tungstophosphoric acid hydrate 100 g, 250 g
for analysis EMSURE®

Cat. No. 100974 Ethanol denatured with about 1 l, 2.5 l
1 % methyl ethyl ketone for analysis
EMSURE®

Cat. No. 104419 Mercury(II) chloride 50 g, 250 g,
for analysis EMSURE® 1 kg
Reag. Ph Eur,ACS

Cat. No. 104761 Iodine sublimated 100 g, 500 g
for analysis EMSURE®
ACS,ISO,Reag. Ph Eur

Cat. No. 104864 Potassium dichromate 500 g, 1 kg,
for analysis EMSURE® 5 kg
ACS,ISO,Reag. Ph Eur

Cat. No. 106512 Sodium thiosulfate anhydrous 250 g, 2.5 kg
EMPLURA®

Cat. No. 115925 Orange G (C.I. 16230) 25 g
for microscopy Certistain®

Cat. No. 116136 Methyl blue (C.I. 42780) 50 g
for microscopy

Sample preparation

The sampling must be performed by qualified personnel.

Fixation

Fix histological slides in the conventional manner with Zenker's fixing solution.

For preparation of approx. 100 ml Zenker's fixing solution mix:

Potassium dichromate	2.5 g
Distilled water	100 ml
dissolve	
Mercury(II) chloride	5 g
add and dissolve	
Before use: Acetic acid 100 %	5 ml
add and mix	

All samples must be treated using state-of-the-art technology. All samples must be clearly labeled. Suitable instruments must be used for taking samples and their preparation. Follow the manufacturer's instructions for application / use. Deparaffinize and rehydrate sections in the conventional manner.

Reagent preparation

Alcoholic iodine solution 0.5 % to remove mercury(II) chloride precipitations

For preparation of approx. 100 ml solution mix:

Iodine sublimated	0.5 g
Ethanol 70 %	100 ml
dissolve	

Sodium thiosulfate solution

For preparation of approx. 100 ml solution mix:

Sodium thiosulfate anhydrous	2.5 g
Distilled water	100 ml
dissolve	

Fuchsin acid solution

For preparation of approx. 100 ml solution mix:

Fuchsin acid (C.I. 42685) Certistain®	0.25 g
Distilled water	100 ml
dissolve and filter	

Methyl blue-Orange G solution

For preparation of approx. 100 ml solution mix:

Methyl blue (C.I. 42780)	0.5 g
Orange G (C.I. 16230) Certistain®	2 g
Tungstophosphoric acid hydrate	1 g
Distilled water	100 ml
dissolve and filter	

The freshly prepared staining solutions should be filtered before use.

Procedure

Staining in the staining cell

Deparaffinize histological slides in the conventional manner and rehydrate in a descending alcohol series.

The slides should be allowed to drip off well after the individual staining steps, as a measure to avoid any unnecessary cross-contamination of solutions. The stated times should be adhered to to guarantee an optimal staining result.

Slide with paraffin section	
Alcoholic iodine solution 0.5 % to remove mercury(II) chloride precipitations	3 - 5 min
Tap water	rinse
Sodium thiosulfate solution	0.5 - 2 min
Tap water	rinse
Distilled water	1 min
Fuchsin acid solution	15 min
press in filter paper	
Methyl blue-Orange G solution (56 °C)	1 h
Ethanol 96 %	rinse until no further clouds of dye are produced
Ethanol 96 %	1 min
Ethanol 96 %	1 min
Ethanol 100 %	1 min
Ethanol 100 %	1 min
Xylene or Neo-Clear®	1 min
Xylene or Neo-Clear®	1 min

Mount the Neo-Clear®-wet slides with Neo-Mount® or the xylene-wet slides with e. g. Entellan® new and cover glass.

After dehydration (ascending alcohol series) and clarification with xylene or Neo-Clear®, histological slides can be covered with non-aqueous mounting agents (e.g. Entellan® new or Neo-Mount®) and a cover glass and can then be stored.

The use of immersion oil is recommended for the analysis of stained slides with a microscopic magnification >40x.

Result

Connective tissue, collagenous, reticular	dark blue
Acid mucosubstances	blue
Muscle tissue	bright orange
Chromatin	red, yellowish-brownish
Erythrocytes	red-orange

Technical notes

The microscope used should meet the requirements of a medical diagnostic laboratory.

When using histoprocessors and automatic staining systems, please follow the instructions for use supplied by the supplier of the system and software. The freshly prepared staining solutions should be filtered before use.

Remove surplus immersion oil before filing.

Diagnostics

Diagnoses are to be made only by authorized and trained personnel. Valid nomenclatures must be used.

Further tests must be selected and implemented according to recognized methods.

Suitable controls should be conducted with each application in order to avoid an incorrect result.

Storage

Store Fuchsin acid (C.I. 42685) - for microscopy Certistain® at +5 °C to +30 °C.

Shelf-life

Fuchsin acid (C.I. 42685) - for microscopy Certistain® can be used until the stated expiry date.

After first opening of the bottle, the contents can be used up to the stated expiry date when stored at +5 °C to +30 °C.

The bottles must be kept tightly closed at all times.

Additional instructions

For professional use only.

In order to avoid errors, the application must be carried out by qualified personnel only.

National guidelines for work safety and quality assurance must be followed. Microscopes equipped according to the standard must be used.

Protection against infection

Effective measures must be taken to protect against infection in line with laboratory guidelines.

Instructions for disposal

The package must be disposed of in accordance with the current disposal guidelines.

Used solutions and solutions that are past their shelf-life must be disposed of as special waste in accordance with local guidelines. Information on disposal can be obtained under the Quick Link "Hints for Disposal of Microscopy Products" at www.microscopy-products.com. Within the EU the currently applicable REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 applies.

Auxiliary reagents

Cat. No. 100063	Acetic acid (glacial) 100% anhydrous for analysis EMSURE® ACS,ISO,Reag. Ph Eur	1 l, 2.5 l
Cat. No. 100583	Tungstophosphoric acid hydrate for analysis EMSURE®	100 g, 250 g
Cat. No. 100974	Ethanol denatured with about 1 % methyl ethyl ketone for analysis EMSURE®	1 l, 2.5 l
Cat. No. 103699	Immersion oil acc. to ISO 8036 for microscopy	100-ml dropping bottle
Cat. No. 104419	Mercury(II) chloride for analysis EMSURE® Reag. Ph Eur,ACS	50 g, 250 g, 1 kg
Cat. No. 104699	Immersion oil for microscopy	100-ml dropping bottle, 100 ml, 500 ml
Cat. No. 104761	Iodine sublimated for analysis EMSURE® ACS,ISO,Reag. Ph Eur	100 g, 500 g
Cat. No. 104864	Potassium dichromate for analysis EMSURE® ACS,ISO,Reag. Ph Eur	500 g, 1 kg, 5 kg
Cat. No. 106512	Sodium thiosulfate anhydrous EMPLURA®	250 g, 2.5 kg
Cat. No. 107961	Entellan® new rapid mounting medium for microscopy	100 ml, 500 ml, 1 l

Cat. No. 108298	Xylene (isomeric mixture) for histology	4 l
Cat. No. 109016	Neo-Mount® anhydrous mounting medium for microscopy	100-ml dropping bottle, 500 ml
Cat. No. 109843	Neo-Clear® (xylene substitute) for microscopy	5 l
Cat. No. 115925	Orange G (C.I. 16230) for microscopy Certistain®	25 g
Cat. No. 116136	Methyl blue (C.I. 42780) for microscopy	50 g

Hazard classification

Cat. No. 1.05231.0025

Please observe the hazard classification printed on the label and the information given in the safety data sheet.

The safety data sheet is available on the website and on request.

Main components of the product

Cat. No. 1.05231.0025

C.I. 42685

C₂₀H₁₇N₃Na₂O₉S₃

M = 585.53 g/mol

Other IVD products

Cat. No. 100199	Picrofuchsin solution acc. to van Gieson for microscopy	500 ml
Cat. No. 100485	Masson-Goldner staining kit for the visualization of connective tissue with trichromic staining	1 unit
Cat. No. 100496	Formaldehyde solution 4%, buffered, pH 6.9 (approx. 10% Formalin solution) for histology	350 ml and 700 ml (in bottle with wide neck), 5 l, 10 l, 10 l Titripac®
Cat. No. 101646	PAS staining kit for detection of aldehyde and mucosubstances	2x 500 ml
Cat. No. 115974	Elastica van Gieson staining kit for connective tissue	4x 500 ml

Literature

1. Romeis - Mikroskopische Technik, Editors: Mulisch, Maria, Welsch, Ulrich, 2015, Springer-Verlag Berlin Heidelberg
2. Theory and Practice of Histological Techniques, John D Bancroft and Marilyn Gamble, 6th Edition
3. Conn's Biological Stains: A Handbook of Dyes, Stains and Fluorochromes for Use in Biology and Medicine, 10th Edition, (ed. Horobin, R.W. and Kiernan, J.A). Bios, 2002



Consult instructions for use



Manufacturer



Catalog number



Batch code



Caution, consult accompanying documents



Use by YYYY-MM-DD



Temperature limitation

Status: 2019-09-26

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