1.15946.0025
1.15946.1000

Microscopy

Nile blue (hydrogen sulfate) (C.I. 51180)

for microscopy Certistain®

IVD In Vitro Diagnostic Medical Device CE

for staining of melanin and lipofuscin in histological sections

This staining dye "Nile blue (hydrogen sulfate) (C.I. 51180) - for microscopy Certistain®" is used for human-medical cell diagnosis and serves 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 evaluable for diagnostic purposes (by fixing, embedding, staining with the above nile blue solution, counterstaining, mounting) in histological specimen materials.

Principle

Nile blue (hydrogen sulfate) belongs to the group of oxazine dyes.

Nile blue (hydrogen sulfate) is used as a single dye to differentiate neutral fats and cholesterol esters from free fatty acids and phospholipids.

Sample material

Sections of formalin fixed, paraffin embedded tissue (3 - 5 µm thick paraffin sections) or cryo sections (fatty liver, adrenal gland) are used as starting material.

Reagents

Art. 115946

Nile blue (hydrogen sulfate) (C.I. 51180) for microscopy Certistain® — 25 g, 1 kg

Color Index No.: 51180
Color Index Name: Basic blue 12

Also required:

Cat. No. 100713 — Sulfuric acid 95-98% suitable for use as excipient EMPROVE® exp Ph Eur,BP,JPE,NF — 1 l, 2.5 l, 25 l

Sample preparation

The sampling must be performed by qualified personnel.

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.
Cryo sections can be used directly.

Reagent preparation

Sulfuric acid 1 %

For preparation of approx. 100 ml solution mix:

Distilled water	99 ml
Sulfuric acid 95-98%	1 ml
mix	

Nile blue working solution

For preparation of approx. 100 ml solution mix:

Nile blue (hydrogen sulfate) (C.I. 51180) Certistain®	0.05 g
Sulfuric acid 1 %	100 ml
dissolve and filter	

The freshly prepared staining solution should be filtered before use.

Procedure

Melanin and lipofuscin stain

Staining in the staining cell

Deparaffinize histological slides in the conventional manner and rehydrate in a descending alcohol series.
Cryo sections can be used directly.

The slides must be immersed and moved briefly in the solutions, simple immersion alone yields inadequate staining results.

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 histological tissue	
Nile blue working solution	20 min
Running tap water	rinse for 10 - 20 min
Mount with Kaiser's glycerol gelatine.	

Histological slides can be covered with aqueous mounting agents (e.g. Kaiser's glycerol gelatine) 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

Lipids	blue to blue green
Melanin	green
Cytoplasm	pale green
Erythrocytes	greenish to greenish blue

Technical notes

The microscope used should meet the requirements of a medical diagnostic laboratory.
When using automatic staining systems, please follow the instructions for use supplied by the supplier of the system and software.
The freshly prepared staining solution 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 Nile blue (hydrogen sulfate) (C.I. 51180) - for microscopy Certistain® at +5 °C to +30 °C.

Shelf-life

Nile blue (hydrogen sulfate) (C.I. 51180) - 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.
If necessary use a standard centrifuge suitable for medical diagnostic laboratory.

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.	100713	Sulfuric acid 95-98% suitable for use as excipient EMPROVE® exp Ph Eur,BP,JPE,NF	1 l, 2.5 l, 25 l
Cat. No.	103693	Cryoembedding media for microscopy M-FREEZE™	100 ml
Cat. No.	103699	Immersion oil acc. to ISO 8036 for microscopy	100-ml dropping bottle
Cat. No.	104699	Immersion oil for microscopy	100-ml dropping bottle, 100 ml, 500 ml
Cat. No.	108635	Kaiser's glycerol gelatine, phenol-free for microscopy	100-g dropping bottle
Cat. No.	109242	Kaiser's glycerol gelatine for microscopy	100 g

Hazard classification

Cat. No. 115946

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. 115946

C.I. 51180

$C_{20}H_{21}N_3O_5S$

M = 415.47 g/mol

Other IVD products

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.	102419	Oil red O color solution for the detection of neutral lipids in cryo sections for microscopy	250 ml
Cat. No.	102439	Eosin Y-solution 0.5%, alcoholic for microscopy	500 ml, 2.5 l
Cat. No.	105175	Hematoxylin solution modified acc. to Gill II for microscopy	500 ml, 2.5 l
Cat. No.	115161	Histosec® pastilles (without DMSO) solidification point 56-58°C embedding agent for histology	10 kg (4x 2.5 kg), 25 kg

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: 2019-09-20

Merck KGaA, 64271 Darmstadt, Germany,
Tel. +49(0)6151 72-2440
www.microscopy-products.com

EMD Millipore Corporation, 400 Summit Drive
Burlington MA 01803, USA, Tel. +1-978-715-4321

Sigma-Aldrich Canada Co. or Millipore (Canada) Ltd.
2149 Winston Park, Dr. Oakville, Ontario, L6H 6J8
Phone: +1 800-565-1400