

1.17081.1000

Microscopy

Eosin Y solution 1%, alcoholic

for microscopy

IVD In Vitro Diagnostic Medical Device



This "Eosin Y solution 1%, alcoholic - for microscopy" is used for human-medical cell diagnosis and serves the histological and clinico-cytological investigation of sample material of human origin. It is a staining solution that when used together with other in vitro diagnostic products from our portfolio makes target structures (by fixing, embedding, staining, counterstaining, mounting) in histological and clinico-cytological specimen materials, for example histological sections of e.g. the kidney, muscle tissue, heart, or lung, evaluable for diagnostic purposes.

The hematoxylin and eosin (H&E) staining method is the method most frequently used for the staining of histology material. This Eosin Y solution is a 1% alcoholic staining solution, that can be used e.g. for the histological staining of instantaneous sections.

Principle

The staining mechanism behind the H&E staining is a physico-chemical process. In the first step, the positively charged nuclear dye (hematoxylin) binds to the negatively charged phosphate groups of the nucleic acid of the cell nucleus.

The nuclei will be dyed dark blue to dark violet.

The second step is the counterstaining with negatively charged anionic Eosin Y, an xanthene dye. Eosin binds to the positively charged plasma proteins.

Cytoplasm and intercellular substances are stained pink to red, while erythrocytes will appear with yellow to orange color.

Sample material

Sections of formalin fixed, paraffin embedded tissue (3 - 4 µm thick paraffin sections) or cryo sections, as well as clinico-cytological material like urine sediment, sputum, smears from fine needle aspiration biopsies (FNAB), rinses, imprints, effusions are used as starting material.

Reagents

Cat. No. 1.17081.1000
Eosin Y solution 1%, alcoholic
for microscopy 1 l

Also required:

Cat. No. 109249 Mayer's hemalum solution 500 ml, 1 l, 2.5 l
for microscopy

or

Cat. No. 105174 Hematoxylin solution modified acc. to Gill III 500 ml, 1 l, 2.5 l
for microscopy

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

Cat. No. 100316 Hydrochloric acid 25% for analysis EMSURE® 1 l, 2.5 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.

Reagent preparation

Eosin Y-solution 1 %, alcoholic, working solution

For the intensification of the eosin staining, e.g. 1.0 ml of glacial acetic acid needs to be added to 500 ml Eosin Y-solution.

The acidified working solution is sufficient for approx. 750 specimens; it should, however, be renewed after 14 days at the latest.

Hydrochloric acid 0.1 %, aqueous

For preparation of approx. 100 ml solution mix:

Hydrochloric acid 25%	0.4 ml
Distilled water	100 ml

H&E staining

Procedure of staining paraffin sections

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	
Distilled water	1 min
Mayer's hemalum solution or Hematoxylin solution modified acc. to Gill III	3 min
Hydrochloric acid 0.1 %, aqueous	2 sec
Running tap water	3 - 5 min
Eosin Y-solution 1 %, alcoholic, working solution	3 min
Ethanol 96 %	10 sec
Ethanol 96 %	10 sec
Ethanol 100 %	10 sec
Ethanol 100 %	10 sec
Xylene or Neo-Clear®	5 min
Xylene or Neo-Clear®	5 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 samples can be mounted with water-free mounting agents (e.g. DPX new, Entellan® new, 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

Cell nuclei	dark blue to dark violet
Cytoplasm, intercellular substances	pink to red
Erythrocytes	yellow to orange

Procedure of staining cryo sections

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 cryo section	
Mayer's hemalum solution or Hematoxylin solution modified acc. to Gill III	10 sec
Running tap water	5 sec
Hydrochloric acid 0.1 %, aqueous	10 sec
Running tap water	30 sec
Eosin Y-solution 1 %, alcoholic, working solution	10 sec
Ethanol 70 %	30 sec
Ethanol 96 %	30 sec
Ethanol 100 %	30 sec
Xylene or Neo-Clear®	30 sec
Xylene or Neo-Clear®	30 sec
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 samples can be mounted with water-free mounting agents (e.g. DPX new, Entellan® new, 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

Cell nuclei	dark blue to dark violet
Cytoplasm, intercellular substances	pink to red
Erythrocytes	yellow to orange

Trouble-shooting

Weak staining of cytoplasm and connective tissue structures

For the intensification of the eosin staining, an acidified working solution (using e.g. glacial acetic acid) should be used. The use of a non-acidified solution will result in weakly stained cytoplasm and connective tissue structures, hence it is advisable to follow the specified Reagent preparation protocol to achieve an optimal staining result. The acidified working solution is sufficient for approx. 750 specimens; it should, however, be renewed after 14 days at the latest.

Technical notes

The microscope used should meet the requirements of a medical diagnostic laboratory. When using histoprocessor systems or automatic staining systems, please follow the instructions for use supplied by the supplier of the system and software. 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 (e.g. ISOSLIDE® H&E, Cat. No. 1.02755.0001) should be conducted with each application in order to avoid an incorrect result.

Storage

Store the Eosin Y solution 1%, alcoholic - for microscopy at +15 °C to +25 °C.

Shelf-life

The Eosin Y solution 1%, alcoholic - for microscopy 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 +15 °C to +25 °C.

The bottles must be kept tightly closed at all times.

Capacity

750 stainings / 500 ml

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.	100316	Hydrochloric acid 25% for analysis EMSURE®	1 l, 2.5 l
Cat. No.	100496	Formaldehyde solution 4%, buffered, pH 6.9 (approx. 10% Formalin solution) for histology	350 ml and 700 ml (in wide neck bottle), 5 l, 10 l, 10 l Tritripac®
Cat. No.	100579	DPX new non-aqueous mounting medium for microscopy	500 ml
Cat. No.	100869	Entellan® new for cover slipper for microscopy	500 ml
Cat. No.	100974	Ethanol denatured with about 1 % methyl ethyl ketone for analysis EMSURE®	1 l, 2.5 l
Cat. No.	102755	ISOSLIDE® H&E control slides with reference tissue for the overview staining in histology	25 tests
Cat. No.	104699	Immersion oil for microscopy	100-ml dropping bottle, 100ml, 500 ml
Cat. No.	105174	Hematoxylin solution modified acc. to Gill III for microscopy	500 ml, 1 l, 2.5 l

Cat. No.	107961	Entellan® new rapid mounting medium for microscopy	100 ml, 500 ml, 1 l
Cat. No.	108297	Xylene (isomeric mixture) for analysis EMSURE® ACS, ISO, Reag. Ph Eur	2.5 l, 4 l
Cat. No.	109016	Neo-Mount® anhydrous mounting medium for microscopy	100-ml dropping bottle, 500 ml
Cat. No.	109249	Mayer's hemalum solution for microscopy	500 ml, 1 l, 2.5 l
Cat. No.	109843	Neo-Clear® (xylene substitute) for microscopy	5 l
Cat. No.	111609	Histosec® pastilles solidification point 56-58°C embedding agent for histology	1 kg, 10 kg (4 x 2.5 kg), 25 kg
Cat. No.	115161	Histosec® pastilles (without DMSO) solidification point 56-58°C embedding agent for histology	10 kg (4 x 2.5 kg), 25 kg
Cat. No.	115935	Certistain® Eosin Y (yellowish) (C.I.45380) for microscopy	25 g, 100 g

Hazard classification

Cat. No. 1.17081.1000

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. 1.17081.1000

C.I. 45380 10.0 g/l

Other IVD products

Cat. No.	101646	PAS staining kit for detection of aldehyde and muco-substances	2x 500 ml
Cat. No.	101728	OSTEOSOFT® mild decalcifier-solution for histology	1 l, 10 l Tritripac®
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.	102480	Eosin-Phloxine solution, alcoholic for microscopy	500 ml, 1 l
Cat. No.	105175	Hematoxylin solution modified acc. to Gill II for microscopy	500 ml, 2.5 l
Cat. No.	109033	Schiff's reagent for microscopy	500 ml, 2.5 l
Cat. No.	109844	Eosin Y-solution 0.5% aqueous for microscopy	1 l, 2.5 l



Consult instructions for use



Manufacturer



Catalog number



Batch code



Caution, consult accompanying documents



Use by YYYY-MM-DD



Temperature limitation

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

EMD Millipore Corporation, 290 Concord Road, Billerica, MA 01821, USA, Tel. +1-978-715-4321

