

1.32657.0001

Microscopy

Alcian blue staining kit, pH 2.5

for the detection of acidic mucosubstances
for microscopy

For professional use only

IVD In Vitro Diagnostic Medical Device



Intended purpose

Alcian blue pH 2.5 is used to stain acidic mucopolysaccharides.

This "Alcian blue staining kit, pH 2.5 - for the detection of acidic mucosubstances - for microscopy" is used for human-medical cell diagnosis and serves the histological investigation of sample material of human origin. It is a ready-to-use staining kit that when used together with other in vitro diagnostic products from our portfolio makes target structures evaluable for diagnostic purposes (by fixing, embedding, staining, counterstaining, mounting) in human-histological specimen materials, for example histological sections of e.g. the intestine or stomach.

The present ready-to-use Alcian blue staining kit, pH 2.5 can be used for this staining in histological tissue.

Unstained structures are relatively low in contrast and are extremely difficult to distinguish under the light microscope. The images created using the staining solutions help the authorized and qualified investigator to better define the form and structure in such cases. Further examinations may be necessary to reach a definitive diagnosis.

Principle

Acidic mucosubstances are selectively stained in the tissue, after which the specimen is counterstained with nuclear fast red.

An Acetic acid-Alcian blue solution is used for the staining, whereby carboxylated and sulfatic proteoglycans are selectively stained when a pH of 2.5 is applied. The differentiation between carboxyl and sulfate groups is only possible at pH 1. Counterstaining takes place with a nuclear fast red/aluminium sulfate solution.

Sample material

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

Reagents

Cat. No. 1.32657.0001
Alcian blue staining kit, pH 2.5
for the detection of acidic mucosubstances
for microscopy

Package components:

The staining kit contains

Reagent 1: Alcian blue solution, pH 2.5 500 ml
Reagent 2: Nuclear fast red-aluminium sulfate solution 0.1% 500 ml

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.

When using the corresponding auxiliary reagents, the corresponding instructions for use must be observed.

Deparaffinize and rehydrate sections in the conventional manner.

Reagent preparation

The Alcian blue staining kit, pH 2.5 - for the detection of acidic mucosubstances - for microscopy used for staining is ready-to-use, dilution of the solutions is not necessary and merely produces a deterioration of the staining result and their stability.

Alcian blue-pH 2.5 staining

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 in order to guarantee an optimal staining result.

Slide with histological specimen	
Distilled water	rinse
Reagent 1 (alcian blue solution, pH 2.5)	5 min
Running tap water	3 min
Distilled water	rinse
Reagent 2 (nuclear fast red-aluminum sulfate solution 0.1%)	10 min
Running tap water	3 min
Distilled water	rinse
Ethanol 70 %	1 min
Ethanol 70 %	1 min
Ethanol 96 %	1 min
Ethanol 96 %	1 min
Ethanol 100 %	1 min
Ethanol 100 %	1 min
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. Neo-Mount®, Entellan®, DPX new or Entellan® new) 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

Nuclei red
Acidic mucosubstances light blue

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. Remove surplus immersion oil before filing.

Diagnostics

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

This method can be supplementarily used in human diagnostics. Further tests must be selected and implemented according to recognized methods.

Suitable controls (e.g. ISOSLIDE® Alcian blue, pH 2.5, Cat. No. 1.00425.0001) should be conducted with each application in order to avoid an incorrect result.

Storage

Store the Alcian blue staining kit, pH 2.5 - for the detection of acidic mucosubstances - for microscopy at +15 °C to +25 °C.

Shelf-life

The Alcian blue staining kit, pH 2.5 - for the detection of acidic mucosubstances - for microscopy can be used up to 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

The package is sufficient for approx. 2500 applications.

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. 100425	ISOSLIDE® Alcian blue, pH 2.5 Control Slides with reference tissue for the detection of acid mucosubstances in histological tissue	25 tests
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. 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 denaturated with about 1 % methyl ethyl ketone for analysis EMSURE®	1 l, 2.5 l
Cat. No. 101646	PAS staining kit for detection of aldehyde and mucosubstances	2x 500 ml
Cat. No. 103699	Immersion oil Type N acc. to ISO 8036 for microscopy	100-ml dropping bottle
Cat. No. 103999	Formaldehyde solution min. 37% free from acid stabilized with about 10% methanol and calcium carbonate for histology	1 l, 2.5 l, 25 l
Cat. No. 104699	Immersion oil for microscopy	100-ml dropping bottle, 100 ml, 500 ml
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. 111609	Histosec® pastilles solidification point 56-58°C embedding agent for histology	1 kg, 10 kg (4x 2.5 kg), 25 kg
Cat. No. 115161	Histosec® pastilles (without DMSO) solidification point 56-58°C embedding agent for histology	10 kg (4x 2.5 kg), 25 kg
Cat. No. 132647	Alcian blue staining kit, pH 1.0 for the detection of strongly sulfated acidic mucins for microscopy	2x 500 ml

Hazard classification

Cat. No. 1.32657.0001

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 products

Cat. No. 1.32657.0001

Solution 1

C.I. 74240 10 g/l
pH approx. 2.5

Solution 2

C.I. 60760 1.00 g/l
Al₂(SO₄)₃ 92 g/l

Other IVD products

Cat. No. 100121	Nuclear fast red-aluminium sulfate solution 0.1% for microscopy	500 ml
Cat. No. 100408	ISOSLIDE® PAS Control Slides with reference tissue for the detection of polysaccharides in histological tissue	25 tests
Cat. No. 100524	Periodic acid for analysis EMSURE®	25 g, 100 g
Cat. No. 100820	Methenamine silver plating kit acc. to Gomori for the detection of argent-affine structures in histological tissue	1 set
Cat. No. 101647	Alcian blue solution, pH 2.5 for microscopy	500 ml
Cat. No. 102439	Eosin Y-solution 0.5%, alcoholic for microscopy	500 ml, 2.5 l
Cat. No. 109033	Schiff's reagent for microscopy	500 ml, 2.5 l
Cat. No. 109149	Mayer's hemalum solution for microscopy	500 ml, 1 l, 2.5 l
Cat. No. 109204	Giemsa's azur eosin methylene blue solution for microscopy	100 ml, 500 ml, 1 l, 2.5 l
Cat. No. 109844	Eosin Y-solution 0.5% aqueous for microscopy	1 l, 2.5 l
Cat. No. 117081	Eosin Y solution 1%, alcoholic for microscopy	1 l

General remark

If during the use of this device or as a result of its use, a serious incident has occurred, please report it to the manufacturer and/or its authorised representative and to your national authority.

Literature

1. Romeis - Mikroskopische Technik, Editors: Maria Mulisch, Ulrich Welsch, 2015, Springer Spektrum, 19. Auflage
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3. Histotechnik, Gudrun Lang, 2013 Springer Verlag, 2. Auflage
4. Theory and Practice of Histological Techniques, John D Bancroft, Marilyn Gamble, 2008, Churchill Livingstone ELSEVIER, 6th Edition
5. Laboratory Manual of Histochemistry, Linda L. Vacca, 1985, Raven Press
6. Histological & Histochemical Methods: Theory & Practice, J. A. Kiernan, 1990, Pergamon Press, 2nd Edition
7. Histological and Histochemical Methods, Theory and practice, J. A. Kiernan, 2015, Scion Publishing Ltd, 5th Edition
8. Conn's Biological Stains, R.W. Horobin, J.A. Kiernan, 2002, Biological Stain Commission Publication, 10th Edition



Consult instructions for use



Manufacturer



Catalog number



Batch code



Caution, consult accompanying documents



Use by YYYY-MM-DD



Temperature limitation

Status: 2021-Feb-03

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

