

# ALCIAN BLUE pH 1.0 KIT

CE IVD *In vitro* diagnostic medical device

Classified acc. to Regulation (EU) 2017/746 - Class A device

## Three-reagent kit for staining heavily sulfated mucopolysaccharides

### INSTRUCTIONS FOR USE



<b>BASIGI UDI number</b>	385889212HPC30708STARVF		
<b>EMDN kód</b>	W01030708		
<b>REF</b>	<b>Catalog number</b>	<b>Volume</b>	<b>UDI-DI number</b>
AB10-100T	Za 100 testiranja		03858890008975
AB10-K-100	3x100 mL		03858892124161

#### Intended use and test principle

Histology, cytology and other related scientific disciplines study the microscopic anatomy of tissues and cells. In order to achieve a good tissue and cellular structure, the samples need to be stained in a correct manner. Alcian Blue dye is used to prove glycosaminoglycan in mucins, for staining amyloids, cysteines and for polychromatic staining of mastocytes according to Alcian-Blue Safranin. It is also used to determine bacterial species and detecting bacterial capsules. Alcian Blue pH 1.0 kit enables adequate staining and visualization of heavily sulfated mucopolysaccharides without staining carboxylated acid mucins or neutral mucins. Cellular nuclei are stained red using a counterstain.

#### Product description

**ALCIAN BLUE pH 1.0 KIT** – Three-reagent kit for staining heavily sulfated mucopolysaccharides

The kit contains:	100 tests (AB10-100T)	3 x 100 mL (AB10-K-100)
Alcian Blue solution pH 1,0	30 mL (AB10-OT-30)	100 mL (AB10-OT-100)
HCl reagent, Alcian Blue	30 mL (HCLAB-OT-30)	100 mL (HCLAB-OT-100)
Nuclear Fast Red (Kernechtrot) reagent	30 mL (KR-OT-30)	100 mL (KR-OT-100)

#### Additional reagents and materials that can be used in the method:

- Fixatives such as BioGnost's neutral buffered formaldehyde solutions: Formaldehyde NB 4%, Formaldehyde NB 10%
- Dehydrating/rehydrating agent, such as BioGnost's alcohol solutions: Histanol 70, Histanol 80, Histanol 95 and Histanol 100
- Clearing agent, such as BioClear xylene or its aliphatic hydrocarbon substitutes, such as BioClear New
- Infiltration and fitting agent, such as BioGnost's granulated paraffin BioWax Plus 56/58, BioWax 56/68, BioWax Blue, BioWax Micro
- Covering agents for microscopic sections and mounting cover glass, such as BioGnost's BioMount, BioMount High, BioMount M, BioMount New, BioMount DPX, BioMount DPX High, BioMount DPX Low, BioMount C, BioMount Aqua
- VitroGnost slides and coverslips for use in histopathology and cytology
- BioGnost's immersion oils, such as Immersion oil, Cedarwood oil, Immersion oils types A and C, FF, 37 or Tropical Grade

#### Preparation of histological sections for staining

- Fix (Formaldehyde NB 4%, Formaldehyde NB 10%) and process the tissue sample
- Embed the tissue in a paraffin block (BioWax 52/54, BioWax 56/58, BioWax Plus 56/58, BioWax Blue)
- Cut the paraffin block into 4-6 µm thin slices and mount on a VitroGnost microscope slide

#### NOTE

Apply the reagent so it completely covers the section

#### Sample staining procedure

##### a) using kit for 100 tests (AB10-100T)

1.	Deparaffinize the section in xylene (BioClear) or xylene substitute (BioClear New)	3 exchanges, 2 min each
2.	Rehydrate in 100% alcohol (Histanol 100)	2 exchanges, 5 and 3 min
3.	Rehydrate in 95% alcohol (Histanol 95)	2 min
4.	Rehydrate in distilled/demineralized water	2 min
5.	Stain using Alcian Blue solution pH 2.5 (add ≥5 drops)	30 min
6.	Tilt the section and remove Alcian Blue solution pH 1.0 without rinsing; wipe the remains of the dye using filter paper	
7.	If deemed necessary, add HCl reagent, Alcian Blue to sections (≥5 drops) for a short period of time in order to remove the sufficient Alcian Blue solution. Do not rinse in water because of possible change in pH value and non-specific tissue coloration	
8.	Stain with Nuclear Fast Red (Kernechtrot) reagent (>5 drops)	5 min
9.	Rinse in distilled/demineralized water	2 min
10.	Dehydrate in 70% alcohol (Histanol 70)	5 dips
11.	Dehydrate in 95% alcohol (Histanol 95)	5 dips
12.	Dehydrate in 100% alcohol (Histanol 100)	2 min
13.	Clear the section in xylene (BioClear) or in a xylene substitute (BioClear New)	2 exchanges, 5 min each

Immediately after clearing apply an appropriate BioMount medium for covering/mounting on the section. If BioClear xylene was used, use one of BioGnost's mounting xylene-based media (BioMount, BioMount High, BioMount M, BioMount DPX, BioMount C, or universal BioMount New). If BioClear New xylene substitute was used, the appropriate covering agent is BioMount New. Cover the section with a VitroGnost cover glass.

##### b) using three-reagent 100 mL kit (AB10-K-100)

Pour the reagents into glass staining jars (Coplin, Hellendahl or Schifferdecker), return to original bottles after staining. Close tightly. Filter the reagents if necessary.

1.	Deparaffinize the section in xylene (BioClear) or xylene substitute (BioClear New)	3 exchanges, 2 min each
2.	Rehydrate in 100% alcohol (Histanol 100)	2 exchanges, 5 and 3 min
3.	Rehydrate in 95% alcohol (Histanol 95)	2 min
4.	Rehydrate in distilled/demineralized water	2 min
5.	Immerse in Alcian Blue solution pH 1.0	30 min
6.	Remove the section from Alcian Blue solution pH 1.0 without rinsing; wipe the remains of the dye using filter paper	
7.	If deemed necessary, immerse the sections into HCl reagent, Alcian Blue for a short period of time in order to remove the sufficient Alcian Blue solution. Do not rinse in water because of possible change in pH value and non-specific tissue coloration.	
8.	Immerse in Nuclear Fast Red (Kernechtrot) reagent	5 min
9.	Rinse in distilled/demineralized water	2 min
10.	Dehydrate in 70% alcohol (Histanol 70)	5 dips
11.	Dehydrate in 95% alcohol (Histanol 95)	5 dips
12.	Dehydrate in 100% alcohol (Histanol 100)	2 min
13.	Clear in xylene (BioClear) or xylene substitute (BioClear New)	2 exchanges, 5 min each

Immediately after clearing apply an appropriate BioMount medium for covering/mounting on the section. If BioClear xylene was used, use one of BioGnost's mounting xylene-based media (BioMount, BioMount High, BioMount M, BioMount DPX, BioMount C, or universal BioMount New). If BioClear New xylene substitute was used, the appropriate covering agent is BioMount New. Cover the section with a VitroGnost cover glass.

## Result

Nuclei – red

Heavily sulfated acid mucopolysaccharides – blue

## Limitations

This product is intended for professional laboratory use for diagnostic purposes only. Deviations from the staining procedure described in this Instruction for use may cause differences in staining results.

## Sample preparation and diagnostics

Use only appropriate instruments for collecting and preparing the samples. Process the samples using modern technology and mark them clearly. Be sure to follow the manufacturer's handling instructions. To avoid errors, staining, mounting of the slides, and diagnosis can only be carried out by qualified personnel. Use a microscope equipped according to medical diagnostic laboratory standards. To avoid an incorrect staining result, it is advised to use a positive and negative control.

If a serious incident occurs during use of this product or as a result of its use, please report it to the manufacturer or authorized representative and competent authority.

## Safety at work and environmental protection

Handle the product in accordance with occupational health and environmental protection guidelines. Used and expired solutions must be disposed of as special waste following national guidelines. Reagents used in this procedure can pose a danger to human health. The examined tissue samples are potentially infectious, and it is necessary to take the measures needed to protect human health in accordance with the guidelines of good laboratory practice. It is mandatory to read and act according to the information and warning signs printed on the product label and in the Safety Data Sheet, which is available on request.

## Storage, stability, and shelf life

Upon receipt, store the product in a dry place and well-closed original packaging at a temperature of +15 °C to +25 °C. Do not freeze or expose to direct sunlight. After first opening, the product can be used until the specified expiry date, if stored properly. The expiration date is printed on the product label.

## Reference

1. Conn, J. (1977): Biological Stains, 9th ed., Baltimore: Williams and Wilkins Co.
2. Mowry, R.W. (1956): Alcian blue techniques for the histochemical study of acidic carbohydrates, Journal of Histochemistry and Cytochemistry, 4, 407.
3. Scott, J.E., Dorling, J. (1965): Differential staining of acid glycosaminoglycans (mucopolysaccharides) by Alcian blue in salt solutions, Histochemie, 5, 221-233.

## Warnings and precautions regarding the materials contained in the product:

Not a hazardous substance or mixture acc. to Regulation (EZ) no. 1272/2008.

AB10-IFU\_EN2, 18.02.2026., IŠP

 Manufacturer	 Batch code	 Temperature limit	 In vitro diagnostic medical device	 Unique device identifier
 Date of manufacture	 Catalogue number	 Consult instructions for use	 Contains sufficient for <n> tests	
 Use-by date	 Fragile, handle with care	 Caution	 European conformity	

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Version	Description / reason for change	Date
2	Revised in acc. to Regulation (EU) 2017/746 - IVDR	18.02.2026.