

METHYL BLUE EOSIN SOLUTION

IVD *In vitro* diagnostic medical device



Modified Mann's solution for use in histology

INSTRUCTIONS FOR USE

REF Catalogue number: MBE-OT-100 (100 mL) MBE-OT-500 (500 mL) MBE-OT-1L (1000 mL)

Introduction

Polychromatic solution of Methyl Blue and Eosin Y stains (modified Mann's solution) is mainly used for staining anterior pituitary gland and viral inclusions. It consists of two stains that stain granules of alpha cells red, granules of beta cells dark blue, pituitary cells without granules grey to pink, colloids red, erythrocytes orange-red and collagen fibers blue. It is also used for staining goblet cells, enterocytes, Paneth cells and pancreatic cells. It is also often used for detecting Negri bodies that are stained red, while their nuclei and central granules are stained blue. In 1894 Gustav Mann described two methods of staining using Methyl Blue Eosin solution. Rapid method enables viewing the state of the histological preparation, while the standard method enables visualization of cytoplasmic details, such as secretion granules and viral inclusions. Unlike rapid method that takes 10 minutes to complete, the standard method takes 12-24 hours to complete.

Product description

- **METHYL BLUE EOSIN SOLUTION** – Polychromatic solution for staining in histology

Other sections and reagents that may be used in staining:

- 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 agents, such as BioClear xylene or a substitute, such as BioClear New agent on the aliphatic hydrocarbons basis
- Infiltration and fitting agent, such as BioGnost's granulated paraffin BioWax Plus, BioWax 52/54, 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 New Low, BioMount DPX, BioMount DPX High, BioMount DPX Low, BioMount DPX Low Eco, BioMount C, BioMount Aqua, Canada Balsam
- High-quality glass slides for use in histopathology and cytology, such as VitroGnost SUPER GRADE, VitroGnost COLOR or one of more than 30 models of BioGnost's VitroGnost glass slides
- VitroGnost cover glass, dimensions range from 18x18mm to 24x60mm
- BioGnost's immersion media, such as Immersion oil, Immersion oil, types A, C, FF, 37, or Immersion oil Tropical Grade

Preparing histological sections for staining

- Fix the tissue sample tightly (4% NB Formaldehyde, 10% NB Formaldehyde), rinse with water and dehydrate through series of ascending alcohol solutions (Histanol 70, Histanol 80, Histanol 95 and Histanol 100).
- Clear the sample with intermedium; in xylene (BioClear) or in a xylene substitute (BioClear New).
- Infiltrate and fit the sample in paraffin (BioWax 52/54, BioWax Plus 56/58, BioWax 56/58, BioWax Blue, BioWax Micro).
- Cut the paraffin block to 4-6 μ m slices and place them on a VitroGnost glass slide.

Histological samples staining procedure - "rapid" method

1.	Deparaffinize the section in xylene (BioClear) or in a xylene substitute (BioClear New)	3 exchanges, 2 min each
2.	Rehydrate using 100% alcohol (Histanol 100)	2 exchanges, 5 and 3 min
3.	Rehydrate using 95% alcohol (Histanol 95)	2 min
4.	Rehydrate in distilled (demi) water	2 min
5.	Stain using Methyl Blue Eosin solution	10 min
6.	Rinse under tap water	for a few seconds
	Note: this step removes excessive dye off the preparation	
7.	Dehydrate using 95% alcohol (Histanol 95)	2 exchanges, 30 seconds each
8.	Dehydrate using 100% alcohol (Histanol 100)	2 exchanges, 1 min each
9.	Clear the section in xylene (BioClear) or in a xylene substitute (BioClear New)	2 exchanges, 2 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.

Note

Time periods of staining processes are not entirely standardized and they approximately correspond to clinical and laboratory practical experience. Intensity of staining depends on the period of immersion in the dye. Real staining protocol depends on personal requests and priorities.

Results

Nuclei, collagen, mucus - blue

Erythrocytes, cytoplasm, nucleoli - reddish

Preparing the sample and diagnostics

Use only appropriate instruments for collecting and preparing the samples. Process the samples with modern technology and mark them clearly. Follow the manufacturer's instructions for handling. In order to avoid mistakes, the staining procedure and diagnostics should only be conducted by authorized and qualified personnel. Use only microscope according to standards of the medical diagnostic laboratory.

Safety at work and environmental protection

Handle the product in accordance with safety at work and environmental protection guidelines. Used solutions and out of date solutions should be disposed of as special waste in accordance with national guidelines. Chemicals used in this procedure could pose danger to human health. Tested tissue specimens are potentially infectious. Necessary safety measures for protecting human health should be taken in accordance with good laboratory practice. Act in accordance with signs and warnings notices printed on the product's label, as well as in BioGnost's material safety data sheet.














Storing, stability and expiry date

Keep Methyl Blue Eosin solution in a tightly closed original package at temperature between 15°C and 25°C. Do not freeze and avoid exposing to direct sunlight. Date of manufacture and expiry date are printed on the product's label.

References

1. Cook, H.C.(1974): Manual of histological demonstration techniques, 4th ed. ed. Butterworth, London
2. Glenner, G.G. et. Lillie, R.D. (1957): A rhodocyan technic for staining the anterior pituitary, *Stain Technol*: 32(4): 187-190
3. Kiernan, J.A. (2008): Histological and Histochemical methods: Theory and practice, 4th ed. Bloxham, UK: Scion

MBE-OT-X, V3-EN2, 15 February 2017, AK/VR

	Refer to the supplied documentation		Storage temperature range		Number of tests in package		Product code		European Conformity
	Refer to supplied instructions		Keep away from heat and sunlight		Valid until		Lot number		Manufacturer
	For <i>in vitro</i> diagnostic use only		Keep in dry place		Caution - fragile				



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