

MAYER'S MUCICARMINE

IVD *In vitro* diagnostic medical device



For use with Mucicarmine kit INSTRUCTIONS FOR USE

REF Product code: MMU-OT-100 (100 mL)

Introduction

Mayer's mucicarmine reagent is a component of Mucicarmine kit used for visualizing acid mucopolysaccharides (mucins), which can be very useful when diagnosing the type of humor (according to the tumor mucin secretion). It is also used in microbiology for identifying microorganisms based on cellular membrane coloration, but that is limited to the microorganisms that have complete cellular membrane (or partially) consisting of polysaccharides.

Product description

- **MAYER'S MUCICARMINE** – Alcoholic solution of Carmine dye with aluminum ions.

Example of using Mayer's Mucicarmine as a component of Mucicarmine kit

Other sections and reagents necessary for 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 C, or BioMount Aqua
- 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
- Other reagents that are a part of Mucicarmine kit: Hematoxylin, Weigert A (product code; HEMA-OT-100, HEMA-OT-500, HEMA-OT-1L), Ferri reagent, Weigert B (product code; FR-OT-100, FR-OT-500, FR-1L) and Metanil Yellow, solution (product code; MY-OT-100)

Preparation of additional solutions used in staining

Hematoxylin Weigert working solution

- Mix Hematoxylin, Weigert A and Ferri reagent, Weigert B in 1:1 ratio. Hematoxylin Weigert working solution is stable for approximately 2 weeks. Discard the solution when the nuclei turn brown after staining.

Preparing the 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.

Procedure for staining histology samples by using four 100 mL reagent Mucicarmine kit (MUC-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 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.	Prepare Weigert hematoxylin working solution: mix equal volumes of Hematoxylin, Weigert A and Ferri reagent, Weigert B	
	Note: working solution is stable for approximately 2 weeks. Prepare the working solution of volume adequate for staining test sections	
6.	Immerse into Weigert hematoxylin working solution	2-5 minutes
7.	Rinse under tap water	10 min
8.	Preparation of mucicarmine working solution: mix Mayer's mucicarmine with distilled (Demi) water in 1+9 ratio, for instance 6 ml of Mayer's mucicarmine with 54 ml of distilled (demi) water. Dip and incubate the sections in the prepared working solution	60 min
	Note: discard the used mucicarmine solution	
9.	Rinse in distilled (demi) water	
10.	Immerse into Metanil yellow, solution.	1 min
11.	Rinse in distilled (demi) water	
12.	Dehydrate using 70% alcohol (Histanol 70)	5 dips
13.	Dehydrate using 95% alcohol (Histanol 95)	5 dips
14.	Dehydrate using 100% alcohol (Histanol 100)	2 min
15.	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 VitroGnost cover glass.

Result

Nuclei - black
 Acid mucopolysaccharides (mucins) - various hues of red
 Other structures, neutral mucins - bright yellow

Note

Staining procedures are not standardized and they depend on standard operating procedures of individual laboratories and the experience of the personnel conducting the staining procedure. Intensity of staining depends on the period of immersion in the dye. Depending on personal requests and standard laboratory operating procedures, sample processing and staining can be carried out according to other protocols.

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 Mayer's Mucicarmin in a tightly sealed original packaging at temperature of +15°C and +25°C. Keep in dry places, do not freeze and avoid exposing to direct sunlight. Date of manufacture and expiry date are printed on the product's label.

References

1. Melis, M., Carpino, F., Di Tondo, U. (1989), Tecniche in anatomia patologica, Edi Ermes, Milano.
2. Prophet, E.B., Mills, B., Arrington, J., Sobin, L. (1968), Laboratory methods in histotechnology, McGraw Hill, Washington D.C.
3. Bancroft, J.D., Gamble, M. (2002), Theory and practice of Histological Techniques, Churchill Livingstone, New York.

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	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				

 BIOGNOST Ltd.
 Medjugorska 59
 10040 Zagreb
 CROATIA
www.biognost.com

