

GIEMSA powder dye

IVD *In vitro* diagnostic medical device



Giemsa, BSC certified stain Romanowsky stain acc. to Pappenheim

INSTRUCTIONS FOR USE

REF Catalogue number: G-P-25 (25 g)

G-P-50 (50 g)

Introduction

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. Giemsa dye is a blend of several different dyes - Azure, Eosin, and Methylene Blue dyes. Ratios of those dyes and even their subtypes may differentiate in different Giemsa stain formulations. BioGnost's BSC certified Giemsa powder dye is an optimal blend of mentioned dyes and it is ready for use in its original form. It is recommended for various uses. Romanowsky ("neutral" dyes), combine basic Methylene Blue and acid Eosin dyes, enabling a wide range of stains during differentiating staining of hematopoietic cells. Giemsa dye is used for routine staining of blood smears and blood marrow samples. It is also used for identifying microorganisms, chromosomal aberrations, visualization of chromosomes and mastocytes.

Product description

GIEMSA - Biological Stain Commission (BSC) certified powder dye for preparing the solution for microscopy

Other preparations and reagents used in preparing the dye solution:

1. Glycerol (C₃H₅(OH)₃), such as BioGnost's Histanol G
2. Methanol (CH₃OH), such as BioGnost's Histanol M

Preparing the solutions for staining

Giemsa dye solution:

- Dilute 0.76 g of Giemsa powder dye in 50 mL of glycerol and heat for 3 hours at 60°C on a water bath
- Add 50 mL of ethanol, let it set for 5 days, then filter it.

Result

Type of cell	Staining (Giemsa)	Staining (Pappenheim)
Nucleus	Red to purple	Crimson to purple
Lymphocytes	Plasma: blue	Plasma: blue
Monocytes	Plasma: grey-blue	Plasma: grey-blue
Neutrophil granulocytes	Granules: light purple	Granules: light purple
Eosinophil granulocytes	Granules: red to dark blue	Granules: red to dark purple
Basophil granulocytes	Granules: dark purple	Granules: dark purple to black
Thrombocytes	Purple	Purple
Erythrocytes	Reddish	Reddish
Blood parasites	Nuclei: bright red	-

Note

The mentioned formulation is only one of the ways of preparing the dye solution. Giemsa dye is most commonly used for preparing the staining solutions acc. to Pappenheim. Depending on personal requests and standard laboratory operating procedures, the dye solution can be prepared 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. In order to avoid an erroneous result, a positive and negative check is advised before application.

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 Giemsa powder dye in a tightly sealed original packaging at temperature between 15°C and 25°C. Keep in dry places, do not freeze and avoid exposure to direct sunlight. Expiry date is stated on the product's label.

References

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

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



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