

AZURE II powder dye

IVD In vitro diagnostic medical device



Azure II

For the preparation of Romanowsky-Giemsa stain

INSTRUCTIONS FOR USE

REF Product code: A2-P-25 (25 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. Azure II powder dye is a mixture of Azure B (Azure I) and Methylene Blue dye in equal ratios. It is used for hematologic staining with added Eosin Y stain. The usual color of nuclei (purple) is achieved as a result of molecular interactions between Eosin Y stain and Azure B-DNA complex. Staining intensity depends on the amount of Azure II and Azure B/Eosin Y ratio. Several factors may contribute to results of staining, such as pH solution and buffer solutions, buffer substances, fixation and duration of staining procedure.

Product description

- AZURE II** - Powder dye for creating solution used for preparation of Romanowsky-Giemsa stain for blood and bone marrow smears

Other preparations and reagents used in preparing the dye solution:

- Methyl alcohol (CH₃OH), such as BioGnost's Histanol M (product code HM-500, HM-1L)
- Microscopy powder dyes, such as BioGnost's Eosin Y stain (product code EOY-P-25, EOY-P-100, EOY-P-500)

Preparing the solutions for staining

Azure II solution:

- Dissolve 0.06 g of Azure II powder dye and 0.06 g of Eosin Y powder stain in 100 ml of methanol and stir for 60 min. using magnetic stirrer
- Let it set for 5 days, then filter

Result

Nucleus - purple

Lymphocytes (plasma) - blue

Monocytes (plasma) - gray-blue

Neutrofil granulocytes (granules) - light purple

Eosinophil granulocytes (granules) - red

Basophil granulocytes (granules) - dark purple

Note

The mentioned formulation is only one of the ways of preparing the dye solution. Azure II dye is most commonly used for preparing Romanowsky-Giemsa stain. 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 Azure II 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

- Conn, J. (1977): Biological Stains, 9th ed., Baltimore: Williams and Wilkins Co.
- Gurr, E. (1971): Synthetic dyes in biology, medicine and chemistry, London: Academic Press

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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 | | | | |

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