

# Giemsa

Cat. 0210

For the staining of blood cells and bone marrow.

## Practical information

Applications	Categories
Stain reagents	Blood cells
Stain reagents	Bone marrow cells

Industry: Dyes and stains

## Principles and uses

The Romanowsky-type stains are composed of Methylene blue and Methylene Blue oxidative derivatives, basic dyes, and the Eosin acid dye. The basic dyes bind to the acid components of the cells, nucleic acids, granules in basophils and acid proteins that stain a more or less intense purple red color.

Eosin binds to hemoglobin, to the basic cellular components and to the eosinophil granules.

Giemsa is used for the staining of blood cells and bone marrow. The dye can be used alone or combined with the May-Grünwald dye. Some authors use the Giemsa dye or the May Grünwald-Giemsa combination for blood parasite staining.

## Formula in g/L

Methylene blue oxidative derivatives	3,2	Eosine CI n° 45 380	3
Methylene blue CI n° 52 015	1,8	Methanol (%)	50
Glycerin (%)	50		

## Instructions for use

- 1- Dilute dye to 1/10 with buffered water (pH 7,0-7,2) before use.
- 2- Fix the air-dried extension with methyl alcohol for 3 min.
- 3- Once the methanol is decanted and without washing, cover the preparation with the diluted dye, and leave it to act for 8 to 20 min, depending on the coloring intensity that is desired
- 4- Wash abundantly with buffered water (pH 7,0-7,2) and allow to air dry.

## Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Liquid	N/A	N/A	N/A

## Microbiological test

Note: Any interference is not known. Acid, basic or high levels of Chloride or salts in wash water could alter the results.

Microrganisms	Characteristic reaction
Erythrocytes	Salmon pink
Platelet	Purple
Eosinophils	Blue nuclei. Blue cytoplasm with bright red granules
Neutrophils	Dark blue nuclei. Pink cytoplasm with red purple granules
Basophils	Dark blue nuclei. Black-Purple granules
Lymphocytes	Purple nuclei. Sky blue cytoplasm
Monocytes	Relaxed purple nuclei. Sky blue cytoplasm

## Storage

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Temp. Min.:15 °C  
Temp. Max.:30 °C

## Bibliography

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Clark, G. (1981) "Staining Procedures", 4th ed, Williams&Willkins.  
Bartholomew J.M., Mitwer, T. (1952), Bacteriol. Rev., 16, 1-29.