

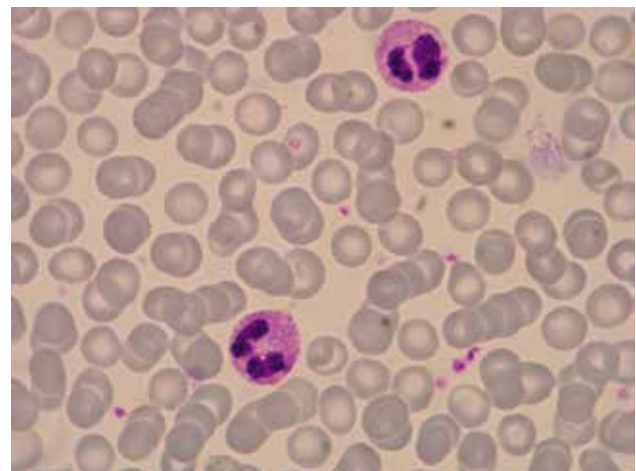


Giemsa stain, modified

solution for clinical diagnosis

Application

Giemsa staining is a common method used for examining blood smears, histological sections and other types of biological samples. Used in haematology, Giemsa staining allows differentiating between the different types of blood cells. The Giemsa solution colours and reveals erythrocytes, basophils, eosinophils, neutrophils, monocytes, lymphocytes, platelets and the chromatin of the nuclei.



Principle

The Giemsa technique is comprised of several colouring agents: the neutral dyes used combine methylene blue and the azure as basic dyes and eosin as an acidic dye, which provides a wide range of colours. Methylene blue is a metachromatic dye and therefore many structures are dyed purple and not blue. The pH of the colouring solution is critical and must be adjusted with buffer solution.

Main advantages

Improved formula:

- **Improved contrast**
- **More vivid colouring** of the white blood-cell granules.
- **Do not require changing** the staining protocol since the technique used is the same as in the traditional Giemsa.

Giemsa stain, modified solution has been specially designed by PanReac AppliChem with a clear objective: to enhance the contrast and the intensity of the staining, while maintaining the properties of the original solution.

Giemsa stain, modified solution for clinical diagnosis

Procedure

1. Prepare a thin blood smear on a clean slide; let it dry (approximately 1-2 hours).
2. Fix the slide in methanol for 3 minutes.
3. Let it drain and air dry.
4. When beginning the second phase of the staining, take 5 ml of Azur-Eosin-Methylene Blue according to Giemsa, modified solution and dilute in 50 ml of a pH 7.2 buffer solution. Homogenise.
5. Cover the preparation with this diluted solution for 25 minutes.
6. Wash for 1 minute with pH 7.2 buffer solution.
7. Wash again for 1 minute with pH 7.2 buffer solution.
8. Let the preparation air dry in a vertical position.
9. Observe the preparation using an immersion lens.

Results

Erythrocytes: pinkish grey to bluish

Platelets: pinkish violet

Type of leukocyte	Nucleus	Cytoplasm	Granules
Neutrophil	violet to reddish	–	violet
Eosinophil	violet to reddish	–	red-brown
Basophil	violet to reddish	–	dark violet to black
Monocyte	violet to reddish	greyish blue	–
Lymphocyte	violet	blue	–

Reagents

Description	Code	Package
Azur-Eosin-Methylene Blue according to Giemsa, modified solution for clinical diagnosis	257156.1610	500 mL
	257156.1611	1000 mL
Methanol (USP-NF, BP, Ph. Eur.) pure, pharma grade	141091.1211	1000 mL
	141091.1212	2.5 L
	141091.1214	5 L
Buffer Solution pH 7,2 for clinical diagnosis	252164.1211	1000 mL
Immersion Oil for clinical diagnosis	251002.1207	50 mL
	251002.1208	100 mL
	251002.1209	250 mL

A wide range of histology reagents are available. Please feel free to request further information.

IP-014

AppliChem GmbH
Ottoweg 4
DE-64291 Darmstadt
Germany
Phone +49 6151 9357-0
Fax +49 6151 93 57-11
service@aplichem.com
www.aplichem.com

Nova Chimica Srl
Via G. Galilei, 47
I-20092 Cinisello Balsamo
(Milano) Italy
Phone +39 02 66045392
Fax +39 02 66045394
info@novachimica.com
www.novachimica.com

PanReac Química SLU
Garraf, 2
Polígono Pla de la Bruguera
E-08211 Castellar del Vallès
Barcelona (Spain)
Phone +34 937 489 400
Fax +34 937 489 401
central@panreac.com
www.panreac.com

