

May Grünwald solution

IVD In-vitro diagnostic medical device **CE**
CND Code: W0103010301

Catalog number	Unit size
05-M12002	500 ml
05-12002/L	1 l
05-12002E	2,5 l

Packaging

- 05-12002E

Primary container: white bottle in polyethylene terephthalate (PET). Useful capacity 2.5 liters. HDPE cap. Tamper evident cap.

The polyethyleneterephthalate is a thermoplastic polymer of the polyester family. PET is an optimal oxygen, carbon dioxide and other gasses barrier. This material has an high resistance to ultraviolet radiation and an inertia toward the mainly chemical agents (solvents: xylene, limonene, liquid paraffines, alcohols, acids, bases etc.). It is biologically inert. It constitutes a good water and humidity barrier. It shows a great hardness and mechanical resistance.

The bottle has an optimal grip. The absence of the handles reduces space for storage. The anti-dropping cap permits a precise and clean use.

Secondary container: carton box.

- 05-M12002

Primary container: white bottle in High Density Polyethylene (HDPE). Useful capacity 500 ml. HDPE cap. Tamper evident cap.

- 05-12002/L

Primary container: white bottle in High Density Polyethylene (HDPE). Useful capacity 1 HDPE cap. Tamper evident cap.

Wear, water, alcohol and solvents resistant PVC label. Scratchproof ink resistant to water and alcohol.

Expected aim

Product for the preparation of cyto-histological samples for optical microscopy.

Application

Staining method for different kind of cells in blood and bone marrow smears.

For the execution of the staining method is required the use of Giemsa solution.

Principle

Two dyes are used one after the other:

- May Grünwald solution, consisting of eosin-methylene blue, stains nuclei blue and basophil cytoplasm in pinkish red;

- Giemsa solution, complex consisting of methylene blue chloride, eosin-methylene blue and azure II eosinate, improves the intensity of nuclear staining and the capacity to show selectively cellular structures.

To appreciate results always remember two factors: pH of washing waters and dilution buffer have a strong influence on final colour chart; intensity of stain may vary according to differentiation time.

Method

- | | |
|---------------------------------|-------------|
| 1) Air dry smears | |
| 2) May Grünwald solution | 5 minutes |
| Wash in tap water | 1 minute |
| 3) Giemsa ready to use solution | 15 minutes |
| Wash in tap water | 1-2 minutes |
| 4) Air dry | |

Results

Nuclei	Violet red purple
Lymphocyte cytoplasm	Different blue tonalities
Monocyte cytoplasm	Blue-grey
Eosinophil granulocytes (acidophil granules)	Brick red – orange
Basophil granulocytes (basophil granules)	Dark violet
Neutrophil granulocytes (neutrophil granules)	Pink-brown
Erythrocytes	Pink –grey

Components

Components	CAS	CE	Index
Eosin Methylene blue	-	-	-
Methanol	67-56-1	2006596	603-001-00-X

Warning and precaution

The product must be used exclusively by specialized technical operators.
Carefully read the information on the classification of dangerous substances on the label. Always refer to the safety data sheet where are available the information on the risks presented by the mixture, the precautionary measures during use, the measures first aid and the intervention in the event of accidental release.
Do not use if the primary container is damaged.

Storage

Store the preparation at 15-30°C. Keep the containers tightly closed.

Stability

After the first opening, the product is usable until the expiry date, if correctly stored. Validity: 2 years.

Disposal

Hazardous preparation: observe all state and local environmental regulations regarding waste disposal.

References

- Giemsa G.: Das Wasen der Giemsa-Farbung, Zentralb f Bakt 1922-1923; 89: 99-106.
- May R, Grunwald L. Uber die Farbung von Feutchpreparaten mit meiner Azur-Eosine methode Deutsche med Xschr 1909; 35:1751-1752.
- Lillie RD. Conn's Biological Stains. Williams & Wilkins Company; Baltimore. 9th ed. 1977.

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