

## Giemsa solution

**IVD** In-vitro diagnostic medical device **CE**

**CND Code: W0103010301**

Catalog number	Unit size
05-M12005	500 ml
05-12005/L	1 l
05-12005E	2,5 l

### Packaging

- 05-12005E

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 a 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-M12005

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

- 05-12005/L

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

Reagent used with May Grünwald for the staining of different kind of cells in blood and bone marrow smears. This staining is also used to highlight the Helicobacter pylori in histology.

**For the execution of the staining method is required the use of May Grünwald 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 Gruenwald solution   | 5 minutes   |
| 3) Wash in tap water        | 1 minutes   |
| 4) Giemsa working solution* | 15 minutes  |
| 5) Wash in tap water        | 1-2 minutes |
| 6) Air dry                  |             |

\*Preparation of Giemsa working solution:

Dilute Giemsa solution in distilled water at ratio 1 : 10 (1 part of Giemsa solution + 9 parts of distilled water).

**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 - Azur II	-	-	-
Glycerin	56-81-5	2002895	-
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.

Date of issue: November 2013