



Giemsa Stain: Unlocking Cellular Secrets with Precision (Product Code: KPG-G1/66)

For In Vitro Diagnostic Use

Giemsa stain is a classic Romanowsky-type stain widely used in hematology, histology, cytology, and parasitology. It's your go-to solution for detailed morphological examination of cells and tissues, providing unparalleled clarity and accuracy. This brochure highlights the benefits and simple dilution procedure for optimal staining results. Giemsa stain works by binding to DNA's phosphate groups, with a particular affinity for regions with high adenine-thymine (A-T) content. Methylene blue and azure B (basic dyes) stain acidic components like the nucleus, while eosin (an acidic dye) stains basic components like cytoplasm.

Preparing the Working Solution:

To achieve optimal staining, Giemsa stain requires dilution. Follow these simple steps for a 10-fold dilution:

- 1. Prepare the Dilution:** In a clean graduated cylinder, measure 1 part of Giemsa Stain concentrate.
- 2. Add Diluent:** Add 9 parts of distilled water or a phosphate buffer solution (pH 7.0) to the measured Giemsa Stain concentrate. For example, mix 1 ml of Giemsa stain concentrate with 9 ml of diluent to get a total of 10 ml of diluted stain.
- 3. Mix Thoroughly:** Gently mix the solution to ensure the Giemsa stain is evenly distributed within the diluent.
- 4. Use Immediately:** For best results, use the diluted Giemsa stain solution immediately after preparation.

Staining Procedure (Example: Blood Smears)

- 1. Fixation:** Fix air-dried blood smears in pure methanol for 3-5 minutes.
- 2. Staining:** Immerse the slide in the freshly diluted Giemsa stain solution for 15-40 minutes. (Adjust staining time according to the reaction of the stain. Reduce the time if overstained, increase the time if poorly stained).
- 3. Washing:** Rinse the slide gently with distilled water or buffer solution for 1-3 minutes.
- 4. Drying:** Allow the slide to air dry completely in a vertical position.
- 5. Observation:** Examine the stained slide under a microscope using an oil immersion lens

Expected Results

Nuclei: Purple to violet
Lymphocyte cytoplasm: Light blue
Monocyte cytoplasm: Dove blue
Neutrophil granules: Delicate violet
Eosinophil granules: Orange-red
Erythrocytes: Pink
Malarial Parasites: Clear red chromatin, clear blue cytoplasm

Quality Control

Appearance: Dark blue colored, clear solution.
Microscopic Examination: Verify staining properties with known positive and negative controls.

To ensure optimal staining quality, if you observe any Giemsa stain particles settling on the slide, filter the stain through Whatman filter paper prior to application

Storage and Stability

Store the Giemsa Stain concentrate in a tightly closed container at 15-25°C.

Protect from light.

Use before the expiration date printed on the label. The diluted stain should be used immediately after preparation

Safety Information

For in vitro diagnostic use only.

Refer to the Safety Data Sheet (SDS) for detailed safety information.

Wear appropriate personal protective equipment (gloves, lab coat, eye protection) when handling the stain.

Dispose of used staining solutions according to local regulations

Other products

Retic stain
Gram stain
H&E staion
ELISA kits for cytokine measure
Kits for measuring oxidant and anti-oxidants
Column for DNA and protein purification
Kits for DNA and RNA extractions
Materials for cell cultures (such as FBS and RPMI media)
Methanol detection kit
Recombinant proteins
Microtubes for Real-Time PCR machines (such as ABI, Rotorgene, MIC)
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