Giemsa Stain, buffered

Catalogue Number: CD006B

Product Description: Giemsa's stain is a member of the Romanowski group of stains, which are defined as being the black precipitate formed from the addition of aqueous solutions of methylene blue and eosin, dissolved in methanol. The variants of the Romanowski group differ in the degree of oxidation (polychroming) of the methylene blue stain prior to the precipitation. The stain class was originally designed to incorporate cytoplasmic (pink) staining with nuclear (blue) staining and fixation as a single step for smears and thin films of tissue (spread preparations of omentum). Minor modifications of working stain concentration and staining time have been made over the years for fixed tissue sections. The Romanowski stains are extremely tedious to prepare, and are best purchased as the commercially available pre-made stock stain. Giemsa stain is used to differentiate nuclear and/or cytoplasmic morphology of a variety of cells including blood cells, platelets, RBCs, WBCs, and parasites. The stain must be diluted for use with water buffered to pH 6.8 to 7.2, depending on the specific procedure used. Either should be tested for proper staining reaction before use. The stock is stable for years in a dry environment and the aqueous working dilution of stain is good only for 1 day.

Reagents:

Component	Cat#	Volume
A	CD006.1	10 mL
B	CD045	90 mL

Note:

1. *Calculate how much you need and mix component A and B (1:9) freshly before use.*
2. *Reagents may be needed, but not provided.*
   - ✧ Distilled water
   - ✧ Acetic acid
   - ✧ Ethyl alcohol
   - ✧ Methanol
   - ✧ Wright-Giemsa Buffer Solution (Cat#: CD044)

Supplies:

- ✧ Glass slides
- ✧ Coplin jar
- ✧ Microscope

Experimental Procedures:

For tissue staining:

- Bring tissue sections to distilled water
- Stain with Giemsa's stain, buffered solution for 6 hrs to overnight
- Quickly Rinse tissue sections with distilled water
- Differentiate with 0.5% aqueous acetic acid
- Dip in 95% ethyl alcohol to clear plastic for 2-3 quick dips
- Dehydrate sections rapidly in air-flow cabinet
- Mount if desired.

For blood film staining:

- Preparation of blood films: Using any of the conventional techniques, smear a small drop of blood on a clean microscope slide. Allow to air dry.
- Fix by immersing in absolute methanol for 5 min.
- Apply Giemsa's stain, buffered solution for 30-60 min (depending on thickness of blood film) on a horizontally positioned slide.
- Rinse in Wright-Giemsa Buffer Solution (Cat#: CD044) with three changes, 10 dips each.
- Dry the slide in a tilted position; DO NOT blot-dry.
- Mount a coverglass if desired.

Reference:

1. Horobin RW, Walters K, (1987) The Romanowsky-Giemsa effect in blood smears. Histochemistry 86:331.
2. Wittekind DH, Gehring T, (1985) On the nature of the Romanowsky-Giemsa staining and the Romanowsky-Giemsa effect. Histochemical Journal 17:263.

M&C Gene Technology • Phone: (010)8205-7786 • (010)8693-7385 • Fax: (010)8205-9875
E-mail: order@macgene.com • Tech Support: support@macgene.com • URL: http://www.macgene.com