Giemsa Stain Kit

Intended use.

Giemsa is a Romanowsky stain that is widely used in parasitology to stain malaria and other blood parasites. In microbiology, the Giemsa technique can be Used to stain Chlamydia trachomatis inclusion bodies, Borrelli's Species, and when Wayson's Stain is not available, to stain Yersinia pestis . It is also used to stain Histoplasma Species, the internal bodies of Pneumocystis Jarocki cysts, Klebsiella granulomatous, Penicillium manifer , and occasionally bacterial capsules.
Note: For staining chlamydia, a weaker solution of Giemsa and a longer staining time are used.

Required

-Ultracare Giemsa Stain
-Buffered water , PH 7.0 - 7.2

Method

Fix the dried smear by covering it with methanol (methyl alcohol) for 2-3 minutes. Allow the smear to air-dry.
Dilute the Giemsa stain in the buffered water as follows:

C. trachomatis, dilute the stain 1 in 40:
Fill a small cylinder to the 19.5 ml mark with the buffered water.
Add 0.5 ml of Giemsa stain, i.e. to the 20 ml mark.

Other organisms, dilute the stain 1 in 20:-
Fill a small cylinder to the 19 ml mark with the buffered water.
Add 1 ml of Giemsa stain, i.e. to the 20 ml mark.
Place the slide, smear downwards, in a petri dish or other small container, supported on each side by a thin piece of stick.
Pour the diluted stain into the dish and cover with a lid.

Note: This inverted method of staining avoids stain being deposited on the smear.
Leave the smear to stain as follows:

C. trachomatis, stain 1 -2 hours.
Other organisms, stain 25-30 minutes.
Wash the stain from the dish and rinse the smear with buffered water.
Wipe the back of the slide clean, and place it in a draining rack for the smear to air-dry.
Examine the smear microscopically, first with the 40_ objective to see the distribution of material and to select a suitable part of the smear to examine with the oil immersion lens.

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Results

C. Trachomatis

Inclusion…….. Blue-mauve to dark purple, bodies depending on stage of development
Nuclei of host cells …….. Dark purple .
Cytoplasm of host cells…….Pale blue
Eosinophil granules……Red
Melanin granules…….. Black-green
Bacteria……Pale or dark blue

Borrelia species

Borrelia spirochaetes……Mauve-blue
Red cells……Mauve-blue
Nuclei of white cells……Dark purple
Cytoplasm of white cells…… Pale blue or grey-blue

Y. Pestis

Coccobacilli……Blue with dark stained ends (bipolar stanning)

Reference

Data on file: UltraCare Diagnostics .

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