

H.M.S. Beagle

Technique #040605-02

“General Slide Staining & Preparation”

For nonbacterial staining use either Methylene Blue or Malachite Green Oxalate stains. When staining with Malachite Green the stained smear or objects can be mordanted with Gram's Iodine just like in the Gram Staining Technique where Crystal Violet is used. Fixing a specimen to the slide can be done in a manner similar to that of a bacterial smear. Larger specimens such as algae strands may need to be fixed to the slide by gently flaming the slide dry it. Be careful to not heat the slide of the specimen too much. This can then be followed by placing a drop or two of methanol on the specimen and allowing the alcohol to burn off. This burn-off does not create much heat, but causes the specimen to strongly adhere to the slide.

1. Flood the slide with Methylene Blue or Malachite Green Oxalate solution for up to one minute. Experience will determine exactly how long to stain the specimen. Wash off briefly with tap water (not over 5 seconds) and drain.

2. If mordanting with Gram's Iodine is desired flood the slide for about one minute then wash off with tap water and drain.

3. The stained specimen can now be observed under the microscope. If the staining job is satisfactory the slide can be prepared for mounting by gently flaming to dry it.

4. After drying place a drop or two of Canada Balsam on the stained specimen and gently press a cover slip into place over it. Use only enough Canada Balsam to allow the stained specimen to be covered and for a small amount of the Canada Balsam to be squeezed to the outer edges of the cover slip. Do not press so hard that the slip cracks. Use enough Canada Balsam so that when the slight pressure on the cover slip is relaxed no air bubbles will be sucked back into the mounting medium.

5. Allow at least 48 hours for the Canada Balsam mounting medium to dry before storing the prepared slide in a vertical position.