

Hucker's Crystal Violet

Learn how to make Hucker's crystal violet solution and use it to stain bacteria.

Materials

Crystal Violet Powder (item #856150)
Ethyl Alcohol, 95% (item #861282)
Ammonium Oxalate (item #844166)
Distilled Water (item #858621)
Stir Bar
Amber Bottle
Magnetic Stir Plate (item #701023)
Erlenmeyer Flask, 500-mL (item #731030)
Label

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Item Number
867485

Procedure

1. Mix 4 g of crystal violet in 20 mL of 95% ethyl alcohol (ethanol).
2. In a separate container, mix 1 g of ammonium oxalate with 100 mL of distilled water.
3. Mix the 2 separate solutions together thoroughly.

Staining procedure:

1. Spread a loop of culture onto the center of a clean slide and air dry.
2. Pass the bottom of the slide across the flame (3 to 4 times) to fix the bacteria to the slide.
3. One drop at a time, cover the slide (the side with the bacteria) with crystal violet stain.
4. After 30 seconds rinse the slide with tap water, blot, and air dry.
5. Examine the slide for arrangement of cells and other identifiable patterns.

Notes

- The Hucker's modification is similar to normal preparation except dilute ammonium oxalate is used instead of distilled water.

Label Information

Hucker's Crystal Violet

Flammable

Date Prepared: _____

Initials of Preparer: _____

Health Risk: 2

Flammability: 3

Reactivity: 0

Applications

Crystal violet stain is commonly used as a bacterial stain. Additionally, it is known to have antibacterial, antifungal, and anthelmintic properties.

Reference

Brandwein, P. F., and E. Morholt. 1986. *A sourcebook for the biological sciences*, 3rd ed. Orlando, FL: Harcourt Brace Jovanovich, 1986, p. 146.

Docampo, R., and S. N. Moreno. 1990. The metabolism and mode of action of gentian violet. *Drug Metabolism Reviews* 22 (2-3):161-78.