

TECHNICAL DATA SHEET 747

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AFB Kinyoun Kit

Cat. #24670

Polysciences, Inc. provides many microbiological stain kits useful for a variety of chemical analyses. Each kit contains the necessary stains and dyes specific for the test. Please refer to our Material Safety Data Sheets (MSDS) for recommendations on personal protective equipment, material handling and waste disposal.

Kit Components

One 8 oz. bottle of the following:

1. Carbol Fuchsin (Kinyoun)
2. Acid Alcohol
3. Methylene Blue

Introduction

Although no definitive evidence has been presented, the high lipid content (especially the mycolic acid component) of mycobacteria is thought to be related to the mechanism of acid fastness. Mycolic acids are long fatty acids found in the cell walls of the mycolata taxon, a group of bacteria which includes *Mycobacterium tuberculosis*, the causative agent of the disease tuberculosis. Carbol fuchsin is used to stain the slide followed by acid alcohol to decolorize the slide. After decolorization, the slide may be counter stained with methylene blue or brilliant green. The acid fast organisms will appear red while non-"acid fast" organisms will stain blue or green.

Specimen Collection

Organisms being stained by an "acid fast" method are usually taken from a solid or liquid medium on (in) which they have been cultured from their original source (e.g. wounds, throat, swabs, sputum, etc.). An aqueous suspension is made, in the case of the solid medium, by taking a small amount of the material and suspending it in a drop of distilled water on a microscope slide. Care should be taken not to make the smear too thick. In the case of a liquid medium, a drop is used directly from the culture container. However, due to the solids from the medium, this method is not always satisfactory. The suspension made by either method is air dried, then "fixed" by passing rapidly through a Bunsen burner flame two or three times. Allow the smear to cool before staining.

Procedure

1. Place the "fixed" smear on a staining rack and flood the slide with Kinyoun stain for 2-3 minutes.
2. Wash off the stain with distilled water.
3. Decolorize with acid alcohol until no more color runs from the smear.
4. Rinse thoroughly with distilled water.

5. Flood slide with methylene blue or brilliant green for 1-2 minutes.
6. Rinse thoroughly with distilled water and air dry.
7. Examine dry under high magnification and verify under oil immersion.

Note: Staining times may vary to suit the individual.

Sources of Error

1. Overheating (burning) during fixation can be avoided by carefully touching the back of the slide to the back of the hand each time the slide has been passed through the flame.
2. Do not stain smears which have only been air dried. Smears must also be "fixed."
3. Smears should not be too thick. After air drying, examine under a microscope. If there are no areas of bacteria separation, more water should be added to dilute the smear.
4. After staining it is essential that the back surface of the slide is wiped clean.
5. If washing with distilled water is not done adequately, crystallization of the stain may appear on the slide.

Ordering Information

Cat #	Description	Size
24670	AFB Kinyoun Kit	1 Kit

To Order:

In The U.S. Call: 1-800-523-2575 or 215-343-6484

In The U.S. Fax: 1-800-343-3291 or 215-343-0214

In Germany Call: (49) 6221-765767

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Order online anytime at www.polysciences.com