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STRIP FOR STAINING BACTERIA

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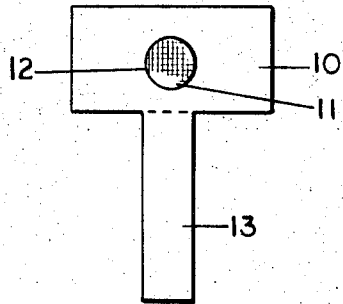


FIG. 1

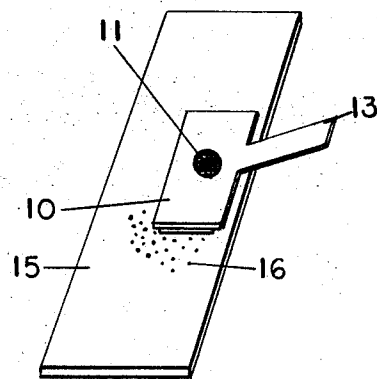


FIG. 2

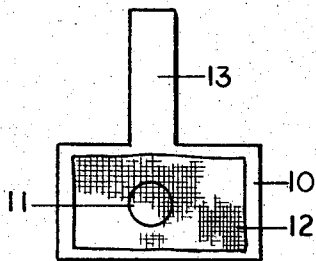


FIG. 3

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**STRIP FOR STAINING BACTERIA**

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Continuation-in-part of application Ser. No. 534,786, Mar. 16, 1966. This application May 16, 1969, Ser. No. 825,379

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1 Claim

**ABSTRACT OF THE DISCLOSURE**

A process of staining bacteria fixed on a slide and device for carrying out the process. The device is made out of a non-absorbent material supporting an absorbent material which has been treated with stain and then dried. To stain the bacteria, either a drop of solvent is placed on the slide or solvent is dropped through a hole or holes in the non-absorbent material. The solvent redissolves the stain which is then carried down onto the bacteria. The stain is kept on the bacteria for as long as is necessary to complete staining. The structure does not dry out during staining because of the presence of the water-imperious material.

**CROSS-REFERENCE TO RELATED APPLICATION**

This application is a continuation-in-part of patent application, Ser. No. 534,786, filed Mar. 16, 1966, and now abandoned.

**STATEMENT OF INVENTION**

This invention relates to materials for biological laboratory procedures and, more particularly, to strips for staining bacteria in microscopic work and the like.

One of the messiest procedures in biological laboratories is the staining of bacteria on glass slides. This procedure usually results in stained hands, clothes, counters, and floors. Infrequent use of stain bottles and stock dye solution leads to evaporation of solvents, such as water, and results in settling of the stain. This leads to an improper staining solution.

The present invention provides a paper strip containing the proper amount of dried stain for use in slide staining.

The device disclosed herein provides a means whereby stain for staining is applied to a water absorbent type of material and dried, leaving material impregnated with stain and attached to one side of a non-water absorbent holding device. A hole or holes are formed in the non-absorbent holding device on the opposite side of the holding device to which the stained material is attached. Thus, the absorbent material is exposed and a drop of solvent which may be water is allowed to pass through the hole or holes and thus applied to the surface of the holding device. When the absorbent material with dried stain therein comes in contact with the solvent, the solvent will be uniformly distributed throughout the material. The stain will dissolve in water and upon reaching the saturation

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point, a liquid containing the stain will be released to the surface or slide upon which the stained material resting.

**REFERENCE TO PRIOR ART**

Previous typical staining procedures in common use are described in the Manual of Microbiological Methods, McGraw-Hill Book Co. Inc., New York, N.Y. (1957).

**OBJECTS OF THE INVENTION**

It is, accordingly, an object of the invention to provide an improved device for staining bacteria.

Another object of the invention is to provide an improved method of staining bacteria on slides.

Yet another object of the invention is to provide an absorbent sheet of material having dried stain impregnated therein supported on a holding sheet of non-water absorbent material.

**GENERAL DESCRIPTION OF DRAWINGS**

FIG. 1 is a top view of the device according to the invention.

FIG. 2 is an isometric view of the device shown in combination with the slide.

FIG. 3 is a bottom view of the device according to the invention.

**DETAILED DESCRIPTION OF THE DRAWINGS**

Now with more particular reference to the drawing, stain device 10 is shown which may be made of a material impervious to water or non-water absorbent and, for example, approximately one-sixteenth inch thick. The holding material 10 is made of a sheet of non-water absorbent material that has a hole 11 therein. The water absorbent material 12 is attached to the holding material and the stained material is exposed through the hole and indicated at 11. Stained material may be supported on an absorbent paper. A handle 13 may be made integral with the holding material 10, and the material 12 may be, for example, of the order of 0.2 inch thick. The device 10 is shown disposed on a slide 15 with bacteria 16 on it. The slide may be prepared in a conventional way disclosed in the publication referred to in the statement of prior art herein.

In carrying out the invention, the strip may be made as follows:

**Example I**

Placing a drop of stain containing the proper concentration of dye on a strip of paper and evaporating the water. A deposit of dye is left on the paper. To use, a drop of water is placed on a slide containing the "fixed" bacteria and the paper strip containing the dye spot is placed face down on the drop of water. The dye dissolves and stains the bacteria.

**Example II**

A small amount of glue is added to the end surface of a paper strip. A staining dye (powdered form) is sprinkled on the glued surface. (Same procedure used for staining bacteria on glass as in Example I).

**Example III**

The stain powder is mixed with a water soluble vehicle, with the viscosity of petroleum jelly and capable of hard-

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ening when air dried. This is then applied to a paper like surface by squeegeeing followed by air drying to harden. (Same procedure used for staining bacteria on glass as in Example I.)

The foregoing methods will eliminate the messy problems in providing stain strips.

Examples of stains which are in common usage are as follows: Methylene Blue, Carbofuchsin, Malachite Green, Methyl Red, Crystal Violet, Gentian Violet, Aniline Blue and Safranin.

Examples of common solvents are: water, alcohol, acetone, xylene, phenol and formaldehyde.

The embodiments of the invention in which an exclusive property or privilege is claimed is defined as follows:

1. A device for staining bacteria fixed on a microscope slide comprising a dry water absorbent strip having a dried bacterial stain impregnated therein and a layer of water impervious material with a hole therein attached to and

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covering one surface of said strip, said impervious material having a laterally extending portion defining a handle.

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ALVIN E. TANENHOLTZ, Primary Examiner

U.S. Cl. X.R.

195—103.5