



Indole XeroStrips

DMABA, Cat. No. B7890, 7895

Intended Use.

Biorex Labs Indole XeroStrips are used to qualitatively test the bacterial Indole production to assist in bacterial identification.

Summary Explanation and Principle

The production of Indole, from tryptophan, by some bacteria is helpful in their phenotypic characterization. These microorganisms are able to cleave tryptophan in the growth medium to give pyruvic acid, ammonia and indole. Bacterial Tryptophanase catalyzes this deamination reaction, during which the amine (-NH₂) group of the tryptophan molecule is removed. Resulting Indole molecule, under acidic conditions, reacts with dimethylaminobenzaldehyde (DMABA) to form a dark pinkish- red dye, rosindole.

Reagents

Biorex Labs Indole XeroStrips is a convenient, single use format, for a rapid Indole test. Single use format precludes contamination of unused reagent strips in the container and eliminates waste. DMABA reagent is impregnated onto a filter paper which is supported by a plastic strip for convenient handling.

Storage

Store Indole XeroStrips in the original container, with the provided desiccant, between 2-8° C and protect from light. Always acclimatize the container to room temperature before opening to prevent condensation. Replace the cap securely and promptly.

Precautions and Warnings

Always follow the standard laboratory aseptic technique and safety protocols for handling and disposal of infectious materials, which includes wearing gloves, safety goggles, and a lab coat. Do not touch the reagent area (filter paper) of the XeroStrips.

Materials needed but not provided

Disposable 0.01 ml plastic or platinum loop or wooden applicator sticks, a Petri dish or a glass slide, distilled water and appropriate disposal container to handle infectious waste is needed.

Procedure

The organism needed for the test should be in pure culture and sufficient in quantity to carry out the test. An 18-24 hour culture is recommended for optimal results. The culture should be grown on Tryptic Soy Blood agar, Chocolate agar or other suitable medium containing peptones.. Media containing indicators and selective agents should not be used.

Procedure

1. Acclimatize the container to room temperature before opening. Remove the desired number of Indole XeroStrips and promptly close the container securely.
2. Take a sweep of pure culture or isolated colonies, with a loop, and apply directly to the XeroStrip test area (filter paper) surface. If the growth is not moist enough, add a small drop of distilled water (10 μl) onto the test area of the XeroStrip. Do not add excessive amount of water which could lead to a weak reaction.
3. Wait 45 seconds for results. After reading discard in a designated infectious waste container.

Results

A color change from dull-yellow to reddish pink within 30-45 seconds indicates a positive test. The reaction area remains a dull-yellow for Indole negative organisms. Weaker or doubtful reactions should be confirmed with DMACA based reagent (**Biorex Labs Cat. No. B7902 or 7903**)

User quality control:

Quality control is required with at least one organism to demonstrate a positive reaction and at least another to demonstrate a negative reaction. Do not use the product if the reactions with the control organisms are not verifiable. Follow CLSI/CLIA recommendation and regulations as required.

Organism	ATCC	Result	Interpretation
<i>Escherichia coli</i>	25922	Pink	Positive
<i>Proteus vulgaris</i>	13315	Pink	Positive
<i>Klebsiella pneumonia</i>	33495	Dull-yellow	Negative
<i>Bacteroides fragilis</i>	25285	Dull-yellow	Negative

Availability

Catalog No. B7890 Indole XeroStrips (50)
B7895 Indole XeroStrips(25)

Limitations

Indole is a frequently performed test to determine bacterial identity. Additional tests are often required for the definite identification. Do not use if the container is left open for an extended period. Do not use if the test area is blotched or discolored other than dull-yellow. Disregard any color changes after one minute of application. DMACA based reagent (Cat. No. B7902 or 7903) is suggested for more sensitive Indole determinations.

References

1. Patrick R. Murray, Ellen Jo Baron, James H. Jorgensen, Marie Louise Landry, Michael A. Pfaller, Manual of Clinical Microbiology, 9th ed.: American Society for Microbiology, 2007.
2. Henry D. Isenberg and Lila H. Sundheim, Indole Reactions In Bacteria; J Bacteriol. 1958 June; 75(6): 682-690
3. Lowrance BL; Reich P; Traub, WH; Evaluation of Two Spot-Indole Reagents; Applied Microbiology, June 1969, p. 923-924
4. Vracko, R., and J.C. Sherris. 1963. Indole spot-test in bacteriology. Am. J. Clin. Pathol. 39: 429-432.
5. Miller, J.M., and J.W. Wright. 1982. Spot indole test: evaluation of four reagents. J. Clin. Microbiol. 15: 589-592.

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