



Oxidase XeroStrips

Catalog Nos. B7870, 7825

Biorex Labs' Oxidase XeroStrips offer an *in vitro* rapid qualitative test to assist in the identification of microorganisms isolated from clinical specimens.

Intended Use and Application

Oxidase XeroStrips are intended to qualitatively detect the cytochrome oxidase activity (oxidase test) within one minute. Oxidase test is an important differential procedure to assist in the identification of various microorganisms isolated from clinical specimens or in general bacteriology.

Principle

The Oxidase XeroStrips are impregnated with the reagent TMPD (tetra-methyl-*p*-phenylenediamine dihydrochloride). This reagent acts as an artificial electron donor for bacterial cytochrome *c*. Upon oxidation by cytochrome *c*, it changes from colorless to a dark purplish-blue compound called indophenol which is readily visible by the naked eye.

Reagent

The Oxidase XeroStrips are composed of a white color filter paper strip impregnated with TMPD reagent and anchored onto a plastic support for single-use and convenience. The formulation is stabilized against oxidation from atmospheric components and light.

Precautions and warning

Always follow the standard laboratory aseptic technique, safety and infectious waste handling protocols including wearing gloves, goggles and a lab coat etc. Do not use the XeroStrips if the expiration date has lapsed or the filter paper area shows bluish blotches or discoloration.

Storage

Store the Oxidase XeroStrips in the original container between 2-8° C with the provided desiccant. Protect from light and moisture. To minimize condensation, let the container acclimatize to room temperature before opening. Close the lid promptly and securely after each use.

Materials needed but not provided

Disposable/platinum inoculating loop or wooden applicators, glass slide, quality control organisms, distilled water and a pipette are needed.

Procedure

1. Acclimatize the container to room temperature before opening. Remove the desired number of Oxidase XeroStrips and promptly close the container securely. Do not insert wet objects or fingers into the container.
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 (10-15 µl) onto the test area of the XeroStrip. Do not add excessive amount of water which could lead to a

weak reaction. Alternatively, hold the strip and contact the bacterial colonies or the growth directly.

Results

A color change to deep purplish blue, in the reaction area within 45 seconds is considered a positive test light blue discoloration or a color change after 45 seconds reflects a negative test.

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 NCCLS/CLIA regulations as required.

Organism	ATCC	Result	Interpretation
<i>Neisseria gonorrhoeae</i>	19424	Deep Blue	Positive
<i>Pseudomonas aeruginosa</i>	27853	Deep Blue	Positive
<i>Eschericia coli</i>	25922	No blue	Negative

Availability

Catalog No. 7870 (50) Oxidase XeroStrips
7825 (25) Oxidase XeroStrips

Limitations

Cytochrome oxidase is usually one of the initial test to assist in the bacterial identification. Additional test are often required for the definite identification. Do not use a Tungsten/Nichrome loop. Disregard any color changes after one minute of application.

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. Alexander, S. K., and D. Strete. 2001. Microbiology: a photographic atlas for the laboratory. Benjamin Cummings, SanFrancisco,CA.
3. Gaby, W. L., and L. Free. 1958. Differential diagnosis of pseudomonas-like microorganisms in the clinical laboratory. J. Bateriaol. 76:442-444.
4. MacFaddin, J. 1972. Biochemical tests for the identification of medical bacteria. Williams and Wilkins Company, Baltimore, MD.

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