

Oxidase Test Strips

Cat. 7075

Strips prepared by impregnating high quality absorbent paper with accurately determined amounts of N,N-dimethyl-1,4-phenylene-diammonium dichloride and a-naphthol to determine presence of oxidase-cytochrome enzyme.

Practical information

Industry: Clinical



Principles and uses

Each strip/disc is impregnated with N,N-dimethyl-1,4-phenylene-diammonium dichloride 0,1 µmol and a-naphthol 1,0 µmol.

In presence of the enzyme cytochrome oxidase (Gram-negative bacteria) the N,N-dimethyl-p-phenylenediamine oxalate and a-naphthol react to indophenol blue. The microorganisms that do not produce the Oxidase–cytochrome enzyme do not determine the immediate (within 30 seconds) development of light violet color. The test indicates the bacteria that have the Oxidase–cytochrome enzyme.

Oxidase test is mainly used to differentiate:

- 1) Oxidase positive *Neisseria* from other Gram-negative diplococci.
- 2) Oxidase positive *Aeromonas hydrophila* from *Escherichia coli* (Gram-negative).
- 3) Oxidase positive *Plesiomonas shigelloides* from *Shigella sonnei* (Gram-negative).

PRECAUTIONS:

- 1) The Oxidase Test includes N,N-dimethyl-1,4-phenylene-diammonium dichloride and a-naphthol.
- 2) The Oxidase Test is disposable and used only for in vitro diagnostic use.
- 3) Test is designed for professional use and should be used in a laboratory by trained personnel using aseptic and safety methods.
- 4) Oxidase-cytochrome production might be inhibited by the generation of acids and falsely negative reactions can be obtained by bacteria cultured on media containing fermentable carbohydrates such as MacConkey, TCBS Agar etc.
- 5) The colonies taken from media containing nitrates may give unreliable results.
- 6) Use of nickel-chrome loops may produce false positive results from oxidation because of the iron contained in the loops.
- 7) Sterilize all hazardous waste before disposition.

Instructions for use

» For clinical diagnosis, the type of samples are pure cultures.

The colonies for the oxidase test must be taken from a medium such as Trypticasein Soy Agar or Blood Agar.

1. Take the container from the refrigerator and leave it bench until it has reached room temperature.
2. Take a strip from the container.
3. With a loop, take the colony to be subjected to the test and smear it meticulously on the strip.
4. The absence of light violet coloring after 30 seconds indicates a negative (-) reaction. The appearance of light violet coloring after 30 seconds indicates a positive (+) reaction.

Microbiological test

It is recommended that every batch of Oxidase Test is tested with known control organisms which are reproduced by using blood agar medium.

Strains of *Pseudomonas aeruginosa* ATCC 27853 for the positive test and *Staphylococcus aureus* ATCC 25923 or *Escherichia coli* ATCC 25922 for the negative test.

Storage

Temp. Min.: 2 °C
Temp. Max.: 8 °C

Bibliography

Barry A. L. and Bernsohn K.L. (1969) *Appl. Micro.* 17. 933-934.

Gaby W.L. and Hadley C. (1957) *J. Bact.* 74. 356-358.

K.J. Steel, *J. Appl. Bact.*, 25, 445 (1962).