
Product Name : Oxidase Test Swabs

Complete kit for determining the oxidase-cytochrome enzyme.

CONTENT OF THE PACKAGES

Oxidase Test Swabs 30 swabs
1 Instruction sheet

DESCRIPTION

Oxidase Test Swabs is a rapid test for determining the oxydase-cytochrome enzyme. The swabs are impregnated with the tetramethyl-p-phenylenediamine hydrochloride reagent, which reacts rapidly by changing color when it comes into contact with the positive oxydase bacteria colonies.

PRINCIPLE OF THE METHOD

The oxydase-cytochrome enzyme is produced from many microorganisms belonging to the *Neisseria spp.* and *Pseudomonas spp.*. The oxydase test is a reaction that is used for presumptive screening and the presumptive identification of bacterial cultures. In the positive reaction, the oxydase-cytochrome enzyme combines with tetramethyl-p-phenylenediamine hydrochloride to form indophenol blue.

COLLECTION OF SAMPLES

The colonies to be subjected to the oxydase-cytochrome test must be taken from a medium such as TSA (Tryptic Soy Agar) (MB-T1052) without added carbohydrates or coloring.

PROTOCOL

1. Take the container from the refrigerator and leave it for a few minutes on the bench until it has reached ambient temperature.
2. Choose a colony that is well isolated in the isolation medium.
3. Take a swab from the container.
4. Touch the colony to be tested with the tip of the swab and press slightly.
5. Observe the immediate development (within 30 seconds) or the absence of a purple-blue color and interpret the results. The absence or appearance of a blue coloring after 30 seconds indicates a negative reaction.

INTERPRETATION OF THE RESULTS

The microorganisms that produce the oxydase-cytochrome enzyme determine the immediate (within 30 seconds) development of a purple-blue color. The microorganisms that do not produce the oxydase-cytochrome enzyme do not determine the immediate (within 30 seconds) development of a purple-blue color. The test is used to distinguish the bacteria that possess the oxydase-cytochrome enzyme from those that do not. The test is particularly useful for distinguishing:

- *Neisserie* (positive oxydase) from other gram-negative diplococci (negative oxydases);
- The strains of *Pseudomonas spp.* (pigmented or not) (positive oxydase) from other gram-negative microorganisms (negative oxydase);
- *Aeromonas hydrophila* (positive oxydase) from *Escherichia coli* (negative oxydase);
- *Plesiomonas shigelloides* (positive oxydase) from *Shigella sonnei* (negative oxydase).

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QUALITY CONTROL

Each batch of Oxidase Test Swabs is submitted to the quality control using the following microorganisms :

Microorganism		Oxidase test
<i>Pseudomonase aeruginosa</i>	ATCC 27853	+
<i>Staphylococcus aureus</i>	ATCC 25923	-

LIMITS

The production of oxydase-cytochrome may be inhibited by the production of acids and falsely negative reactions may be given by bacteria grown on media containing fermentable carbohydrates such as Mac Conkey Agar (MB-M1028), TCBS (Thiosulfate Citrate Bile Salt Sucrose) Agar (MB-T1010) etc.

The colonies taken from media containing nitrates may give unreliable results. Do not use nickel-chrome loops to take colony samples, as such loops may produce falsely positive results due to oxidation because of the iron contained in the loops and of the reagent that impregnates the swabs.

PRECAUTIONS

The Oxidase Test Swabs contain tetramethyl-p-phenylenediamine hydrochloride in a 21% concentration. This concentration is not classified as hazardous by current legislation but a safety datasheet must be drawn up for this specific application. Oxidase Test Swabs is disposable. Oxidase Test Swabs must be used only for diagnostic in vitro use. This is designed for professional use and must be used in a laboratory by suitably trained operators using approved aseptic and safety methods for dealing with pathogenic agents.

STORAGE

Keep Oxidase Test Swabs at 2-6°C in their original packaging protected from sunlight. Keep them away from sources of heat and avoid excessive temperature fluctuations. In these conditions, Oxidase Test Swabs are valid until the expiry date shown on the label. Do not use them beyond that date. Dispose of them if they show signs of deterioration (swab changes color).

DISPOSAL OF USED MATERIAL

After use, Oxidase Test Swabs and the material that has come into contact with the sample must be decontaminated and disposed of in accordance with the laboratory procedures for the decontamination and disposal of potentially infected material.

REFERENCES

- 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.
- Steel K. J. (1962) *J. Appl. Bact.* 25. 445-447.

PACKAGING

Cat. No : MB-88003 Oxidase Test Swabs	30 swabs
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