

**OXIDASE** is a rapid test material to determine presence of Oxidase-cytochrome enzyme. Strips are impregnated with the N,N-dimethyl-1,4-phenylene-diammonium dichloride and  $\alpha$ -naphthol, which reacts very fast by changing color with oxidase positive bacteria.

## PRESENTATION

Cat. 7146 Oxidase in Discs

Cat.7075 Oxidase Strips (50 Strips/package)

## PRINCIPLE

Each strip/disc is impregnated with N,N-dimethyl-1,4-phenylene-diammonium dichloride 0.1  $\mu$ mol and  $\alpha$ -naphthol 1.0  $\mu$ mol.

In presence of the enzyme cytochrome oxidase (gram-negative bacteria) the N,N-dimethyl-p-phenylenediamine oxalate and  $\alpha$ -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 shigelloids* from *Shigella sonnei* (gram-negative)

## METHOD OF USE

The colonies for the oxidase test must be taken from a medium such as tryptic soy agar or blood agar.

1. Take the container of kit from the refrigerator and leave it bench until it has reaches to 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.

## QUALITY CONTROL

It is recommended that every batch of OXIDASE TEST STRIPS 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 *Esherichia coli* ATCC 25922 for the negative test.

## PRECAUTIONS

- 1) The OXIDASE TEST STRIP includes N,N-dimethyl-1,4-phenylene-diammonium dichloride and  $\alpha$ -naphthol.
- 2) OXIDASE TEST STRIP 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 Mac Conkey, 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.

## STORAGE

Keep OXIDASE TEST STRIPS between +2 o C to +8 o C and protect from direct sunlight. Avoid excessive temperatures. In the conditions mentioned above, OXIDASE TEST STRIPS are usable until the expiry date shown on the label, as long as their packs are not opened.

## 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.

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



Exclusive distributor in Philippines:



ASIAGEL CORPORATION

Blk.1 Lot 2, Villa Lourdes Townhomes, Congressional Avenue  
Brgy. Bahay Toro, Quezon City, Philippines  
Phone: +632 9201603  
Telefax: +632 9203667  
info@asiagel.com / www.asiagel.com