PRODUCT INFORMATION

Product Type: Impregnated paper strips

For research use only

Cat No. IS002 Hy – Oxidase Test

Intended Use:

For the identification of the cytochrome oxidase producing bacteria such as *Pseudomonas, Neisseria* and *Campylobacter.* Detection of cytochrome oxidase in bacterial colonies; fundamental in differentiating key genera such as *Neisseria, Moraxella, Campylobacter, Pasteurella*, and for confirmation of *Pseudomonas spp*. in water, meat, and milk as per ISO methods.

Principle and Uses:

in vitro diagnostic devices designed for the detection of cytochrome oxidase enzyme activity in bacteria isolated from solid culture media. The test relies on the reagent N,N,N',N'-tetramethyl-p-phenylenediamine dihydrochloride (TMPD), which serves as an artificial electron acceptor: when oxidized by cytochrome c oxidase, it changes from colorless to blue or grey-blue, indicating a positive reaction.

Bacteria convert the active ingredient – NNN'N' – Tetra-methyl-p-phenylenediamine 2HCl in indophenol blue (deep purple) in seconds.

Ascorbic acid acts as a reducing agent to prevent auto-oxidation.

Procedure

Specimens: Only colonies grown on solid media; not suitable for direct clinical specimens or cultures from glucose/tellurite/dye-containing media.

Aseptically, remove a suspect colony from the Petri dish with a sterile loop and crush gently and firmly on the paper surface to allow the microorganism to penetrate the strip.

Test procedure:

- Moisten a strip with 2 drops of distilled water.
- Pick a well-isolated, fresh colony (18–24 hours old).
- Rub it onto the moistened strip with a sterile platinum or plastic loop.
- Read results within 15 seconds.

Interpretation:

- Oxidase-positive: blue or grey-blue color within 15 seconds.
- Oxidase-negative: no color change within 15 seconds.

Precautions and Limitations
Do not use metal loops (other than platinum) to avoid false positives.
False negatives may result from old cultures, insufficient growth, or inappropriate media.
Professional use only; proper biosafety and single-use guidelines apply.
Protect hands with disposable vinyl gloves.
The product is stable under the recommended storage and handling conditions.

Composition
Paper strips saturated with NNN'N' – Tetra-methyl-p-phenylene-diamine - 2HCl – and ascorbic acid

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Storage: 15-25°C. Protected from light.
Pkg.: 10 units in a black tube
Expiry Date: Printed on label
Required materials not supplied: Laboratory equipment as required.

Disposal
Used contaminated test material should be handled by standard decontamination methods such as autoclaving or incineration.

Warning and Precautions - For professional use only. Follow good microbiological lab practices while handling specimens and culture. Do not use Petri dishes if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration. Avoid freezing and overheating. The Petri Dishes may be used / inoculated up to the expiration date and incubated for the recommended incubation times. After use and prior to discarding, specimen containers and all contaminated material, including the used culture media and contaminated culture containers, must be sterilized or incinerated by validated procedures. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.
If excessive moisture is observed, invert the bottom over an off-set lid and allow to air dry in order to prevent formation of a seal between the top and bottom of the plate during incubation. Storage Instructions: On receipt, store plates in the dark at 2–8 °C. Avoid freezing and overheating. Do not open until ready to use.

Performance Testing Results:
Smear from fresh colony culture on the strip, check result after 15 seconds.

Neisseria gonorrhoeae	19424	Blue color	Oxidase reaction positive
Neisseria meningitidis	13090	Blue color	Oxidase reaction positive
Pseudomonas aeruginosa	27853	Blue color	Oxidase reaction positive
Proteus mirabilis	4630	Color w/o change	Oxidase reaction negative
Escherichia coli	25922	Color w/o change	Oxidase reaction negative

INCUB-FOR OXIDASE
Time: 15 sec. at room temperature.

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