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MAST ID™ OXIDASE STRIPS

A rapid strip test for detection of the oxidase reaction

Introduction

The MAST ID™ OXIDASE STRIP test is based on the method of Kovacs¹ but with the addition of ascorbic acid to reduce auto-oxidation of the reagent, as described by Steel in 1962.²

This test gives a positive reaction, in the form of a colour change, in the presence of cytochrome oxidase, an enzyme that is characteristically abundant in *Pseudomonas* and *Neisseria* species.³

It is this abundance of cytochrome oxidase that has led to the oxidase strip test becoming a practical and specific laboratory test as noted by Gaby and Hadley.³

MAST ID™ OXIDASE STRIPS can be used to confirm the identity of organisms growing on MAST ID™ *Pseudomonas* Agar (IDM36), a selective medium for the presumptive identification of *Pseudomonas* spp.

Description

Filter paper strips 5.7cm by 0.6cm which are printed to identify the test, positive control and negative control areas. The strips are impregnated with oxidase reagent, (N,N-Dimethyl-p-Phenylenediamine) and ascorbic acid at appropriate concentrations.

In Use

Place the paper strip on a clean microscope slide and remove a suspect colony from the test culture using either a wooden applicator stick or a platinum loop. False positives may result from the use of loops made from nichrome wire.

Gently rub this colony onto the test area of the strip. Similarly, apply a sample from a known oxidase negative and a known oxidase positive strain to the appropriate areas of the strip to act as controls.

If the organism is positive a deep blue colour develops within 10 seconds. Organisms that produce a colour change after 10 seconds or remain colourless are considered to be negative.

Media with a high proportion of blood may give false positives and so should also be avoided.⁴

Packaging and Ordering Details

25 strips in a screw-top tin with silica gel sachet.

Order Code: ETO4

References

1. Kovacs N. Identification of *Pseudomonas pyocyanea* by the oxidase reaction. *Nature* 1956; **178**: 703.
2. Steel KJ. The oxidase activity of staphylococci. *J Appl Bacteriol.* 1962; **25**: 445-447.
3. Gaby WL, Hadley C. Practical laboratory test for the identification of *Pseudomonas aeruginosa*. *J Bacteriol.* 1957; **74**: 356-358.
4. Lautrop H, Lacey BW. Laboratory diagnosis of whooping cough or *Bordetella* infections. *Bull WHO* 1960; **23**: 15-35.