



OXIDASE TEST STICK

ENGLISH

Rapid test for determining the oxydase-cytochrome enzyme

DESCRIPTION

OXIDASE TEST STICK is a rapid test for determining the oxydase-cytochrome enzyme. The sticks are impregnated with the tetramethyl-p-phenylenediamine hydrochloride reagent, which reacts rapidly by changing colour when it comes into contact with the positive oxydase bacteria colonies.

CONTENTS OF THE PACKAGES

Each package contains 50 impregnated sticks contained in a heat-sealed packets and an instruction sheet.

METHOD PRINCIPLE

The oxydase-cytochrome enzyme is produced from many microorganisms belonging to the *Neisseria spp.* and *Pseudomonas spp.* genl. 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.

COMPOSITION

Each stick is impregnated with hydrochloride tetramethyl-p phenylenediamine.

GATHERING AND KEEPING SAMPLES

The colonies to be subjected to the oxydase-cytochrome test must be taken from a medium such as Tryptic Soy Agar without added carbohydrates or colouring.

TEST PROCEDURE

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. Use tweezers to take a stick from the container.
4. With a loop of plastic, take the colony to be subjected to the test and smear it meticulously on the end of the stick.
5. Observe the immediate development (within 10 seconds) or the absence of a purple-blue colour and interpret the results. The absence or appearance of a blue colouring after 10 seconds indicates a negative reaction.

EVALUATING THE RESULTS

The microorganisms that produce the oxydase-cytochrome enzyme determine the immediate (within 10 seconds) development of a purple-blue colour. The microorganisms that do not produce the oxydase-cytochrome enzyme do not determine the immediate (within 10 seconds) development of a purple-blue colour. 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).

QUALITY CONTROL

Each batch of **OXIDASE TEST STICK** is subjected to the test for determining the oxydase-cytochrome enzyme using bacterial strains of *Pseudomonas aeruginosa* ATCC 27853 for the positive test and *Staphylococcus aureus* ATCC 25923 for the negative test.

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, TCBS Agar 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 sticks

PRECAUTIONS

The **OXIDASE TEST STICK** contain tetramethyl-p-phenylenediamine hydrochloride in a 6% 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 STICK** is disposable. **OXIDASE TEST STICK** 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 STICK** at 2-8°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 STICK** 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 (sticks changes colour).

ELIMINATING USED MATERIAL

After use, **OXIDASE TEST STICK** 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.

BIBLIOGRAPHY

- Barry A. L. and Bernsohn K. L. (1969) *Appl. Micro.* **17**. 933.
- Carpenter C. M., Suhrland L. G. and Morrison M. (1947)
- Gaby W. L. and Hadley C. (1957) *J. Bact.* **74**. 356-358.
- Gordon J. and McLeod J.W. (1928) *J. Path Bact.* **31**. 185.
- Kovacs W. (1956) *Nature Lond.* **178**. 703
- Rogers K. G. (1963) *Lancet* ii. 686.
- Steel K. J. (1962) *J. Appl. Bact.* **25**. 445-447.

PRESENTATION

	REF	Σ
OXIDASE TEST STICK	88029	50

SYMBOLS TABLE

SYMBOLS	MEANING	SYMBOLS	MEANING
IVD	In Vitro Diagnostic Medical Device	⊗	Do not reuse
	Manufacturer	Σ	Contains sufficient for <n> tests
REF	Catalogue number		Fragile, handle with care
	Use by		Caution, consult accompanying documents
	Temperature limitation	LOT	Batch code



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OXIDASE TEST SWABS

Kodas 88003

30 tamponėlių

TYRIMO EIGA:

- 1) Išimti tamponėlį iš ipokavimo (jeigu tamponėliai išimti iš šaldytuvo, reikia leisti jiems atšilti);
- 2) Tamponėliu paliesti pasirinktą atskirą koloniją;
- 3) 30 sekundžių laikotarpyje stebėti spalvos pasikeitimą.

REZULTATŲ ĮVERTINIMAS:

TESTAS	SPALVA
Teigiamas	Mėlynai-violetinė
Neigiamas	Bespalvė

Saugojimo sąlygos: 5/12°C