



Catalase Reagent

Reagent for rapid detection of catalase enzyme, in dropper bottles.

DESCRIPTION

Catalase Reagent is a solution of hydrogen peroxide used for differentiation and microbial identification on the basis of the presence of catalase enzyme.

KIT CONTENTS

Each package contains 20 dropper bottles of 1 ml and 1 instruction sheet.

METHOD PRINCIPLE

Hydrogen peroxide, a end product of aerobic metabolism of carbohydrates, is extremely toxic for bacteria. Catalase-positive microorganisms, containing the enzyme catalase, break down hydrogen peroxide into water and oxygen. Catalase reagent shows the presence of enzyme catalase with gas bubbles production.

COMPOSITION

Aqueous solution of hydrogen peroxide (3% approximatively).

TEST PROCEDURE AND RESULTS INTERPRETATION

Prior to proceed with one of the following methods bring the dropper bottle to a suitable temperature.

Slide Test Method

Obtain a pure culture of the organism to be tested. Using an inoculating needle or applicator stick, pick a well-isolated colony and transfer to a glass slide. Add 1 or 2 drops of the Catalase Reagent to the smear. Examine immediately for the rapid production of gas bubbles.

Tube or Agar Plate Method

Add a few drops of Catalase Reagent to the surface of an 18 – 24 h agar plate or slant that does not contain blood. Examine immediately and after 5 min for the evolution of bubbles.

Broth Method

Express the contents of a Catalase Reagent Dropper into a 24 – 48 h broth culture. Examine immediately and after 5 min for the evolution of bubbles.

QUALITY CONTROL FOR THE USER

1. Appearance control: limpid and clear solution.
2. Microbiological control.

Control strains

Control strains	ATCC®	Catalase test	
<i>Staphylococcus aureus</i>	ATCC® 25923	Gas bubbles evolution	Positive
<i>Streptococcus pyogenes</i>	ATCC® 19615	No gas bubbles production	Negative

LIMITATIONS

Catalase Reagent may be used as an aid in the identification of microorganisms. Additional biochemical testing using pure cultures is recommended for complete identification. Culture media that contain blood are unacceptable for this test due to the presence of catalase in erythrocytes. When picking colonies from blood media, avoid carryover when performing the slide test. If a blood medium is used, a control slide catalase test should be performed where a small loopful of the blood-containing agar is tested with the reagent on the same slide as the organism. If the catalase reaction from the colony is much stronger than that from the agar alone, the test can be considered positive.

Dirty glassware can cause false-positive results. Use properly cleaned tubes and slides.

Inoculating needles or loops containing iron may produce false-positive results. Avoid contact of the catalase reagent with iron-containing needles and loops.

Bacteria (e.g., lactobacilli) grown on media with low levels or no glucose may yield confusing reactions from pseudocatalase, a non-iron enzyme. The pseudocatalase reaction can be pre-vented by the addition of 1% glucose to the medium.

Anaerobic cultures grown on a blood-free medium must be exposed to air for a minimum of 30 min before testing

PRECAUTIONS

The product Catalase Reagent is classifiable as hazardous under current legislation; it is recommended to consult the Safety Data Sheet for its use. Catalase Reagent must be used only for in vitro diagnostic use. It is intended for use in a professional environment and must be used in the laboratory by properly trained personnel, using approved asepsis and safety methods for handling pathogenic agents.

STORAGE AND TRANSPORT CONDITIONS

Store Catalase Reagent at 2-8°C away from light in its original package, until the expiry date shown on the label. However, our stability studies have shown that the storage or transport at 18-25°C for 4 days, or at 35-39°C for 48 hours, do not alter in any way the performance of the product. Eliminate if signs of deterioration or contamination are evident.

ELIMINATING USED MATERIAL

After use, used Catalase Reagent 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

1. MacFaddin, J.F. 1980. Biochemical tests for identification of medical bacteria, 2nd ed. Williams & Wilkins, Baltimore MD.
2. Baron, E.J., L.R. Peterson, and S.M. Finegold. 1994. Bailey & Scott's diagnostic microbiology, 9th ed. Mosby-Year Book, Inc., St. Louis.
3. Isenberg, H.D. (ed.). 1994. Clinical microbiology procedures handbook, vol. 1. American Society for Microbiology, Washington, D.C.

PRESENTATION

Product	REF	Σ
Catalase Reagent	87003	20 x 1 ml

TABLE OF SYMBOLS

LOT Batch code	IVD In vitro Diagnostic Medical Device	Manufacturer	Use by	Fragile, handle with care
REF Catalogue number	Temperature limitation	Contains Sufficient for <n> tests	Caution, consult accompanying documents	



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