

AG-CATALASE REAGENT (3% HYDROGEN PEROXIDE) IFU

PRINCIPLE:

Astragene's Catalase reagent is used for the detection of microorganisms that possess the catalase enzyme and contains a hydrogen peroxide solution of approximately 3% (2.5% to 3.5%). Microorganisms that possess the catalase enzyme can break down hydrogen peroxide into oxygen and water, thus producing gas bubbles. Hydrogen peroxide, an end product of aerobic carbohydrate metabolism, is extremely toxic to bacteria. Bacteria containing the enzyme catalase break down hydrogen peroxide into oxygen and water. Organisms that possess catalase demonstrate the reaction in 3% hydrogen peroxide by the rapid appearance of gas bubbles.

Most aerobic and facultatively anaerobic bacteria possess the catalase enzyme except for Streptococcus and enterococcus spp. The catalase test is most often used to differentiate streptococci from staphylococci. Usually, organisms that lack the cytochrome system also lack the catalase enzyme and, therefore, are unable to break down hydrogen peroxide. It can also be used to separate gram-positive bacilli from mycobacteria.

ACKAGE CONTENTS:							
	Description	Catalogue Number	Quantity				
	Catalase Reagent	AG/Reagent/CS/22/02	200 mL				
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- Store between 15- 25°C. Catalase Reagent is light-sensitive. Protect from light.
- Use before the expiry date on lathe bel. On opening, the product should be properly stored in a dry ventilated area protected from extremes of temperature and sources of ignition.
- Seal the container tightly after use.
- The reagent is ready for use. The expiration date applies to the product in its intact container when stored as directed.
- Do not use a product if it fails to meet specifications for identity and performance.

SPECIMEN COLLECTION AND PREPARATION

Obtain and process specimens or samples using the techniques and procedures established by laboratory policy.

MATERIALS REQUIRED BUT NOT PROVIDED

Sterile containers or sterile swabs, sterile droppers, inoculating loops, needles or applicator sticks, glass slides, plated or tubed media, Bunsen burner or incinerator, and quality control organisms.

DIRECTIONS/PROCEDURE:

- Remove the cap from the Reagent bottle.
 - Using a sterile dropper, dispense one drop of reagent to an isolated colony.
 - a. Slide Test Method: Using an inoculating needle or applicator stick, pick a well-isolated colony and transfer it to a glass slide. b. Agar Method: Add a drop to the surface of an 18-24 h agar plate/tube that does not contain blood.
 - Examine immediately and observe the reaction for the production of the gas bubble or effervescence.

USER QUALITY CONTROL

The activity of the Catalase Reagent may be checked using stock cultures of Staphylococcus aureus and Streptococcus pyogenes and following the procedures outlined above. Quality Control requirements must be performed in accordance with accreditation requirements and laboratory Quality Control standards. It is recommended that the user refers to pertinent CLSI guidance and CLIA regulations for appropriate Quality Control practices.

Organism	АТССтм	Reaction
Staphylococcus aureus	25923	positive
Streptococcus pyogenes	19615	negative

INTERPRETATION OF THE RESULTS:

A positive test is indicated by immediate gas bubble production and sustained effervescence. A negative test produces no gas or bubbles.

LIMITATIONS:

- 1. Catalase reagent may be used as an aid in the identification of microorganisms. Additional biochemical testing using pure cultures is recommended for complete identification.
- 2. 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.
- 3. 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.
- 4. 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 prevented 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

WARNING & PRECAUTIONS:

- For In Vitro diagnostic use by professionals only.
- Directions should be read and followed carefully and Do not use beyond the stated expiration dates.
- Safety precautions should be taken in handling, processing and discarding all clinical specimens and other mmaterilas.

SYMBOLS:

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\bigotimes	A44	LOT		
Do not use if the package is damaged	Manufacturer	Batch Code		
CE mark of Conformity	Refer to the in	ISO ISO	GMP	GMP
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