

Catalase 15%

REF CK9810

Intended Use

This test detects the catalase enzyme present in most cytochrome-containing aerobic and facultative anaerobic bacteria.

Background

A Catalase test is useful for the identification of many different bacteria. The Wadsworth manual of anaerobic microbiology notes that using Hydrogen Peroxide at 15% concentration (rather than 3%) increases the sensitivity of the test method.

Precautions

This product is for in-vitro diagnostic use and should be used by properly trained laboratory professionals. Universal precautions should be taken in the handling, processing and discarding of all materials used to perform the test. Do not use reagents after the expiration date shown on the product label has expired.

Methods

Use a fresh 18-24 hour culture as the enzyme, catalase is only present in viable cultures. Older cultures may lose their catalase activity and give false negative reactions. False positive results may also be produced by dirty glassware. Cultures of anaerobic bacteria should be exposed to air for 30 minutes prior to testing.

Slide:

Touch the centre of a single colony with a plastic loop or sterile wooden stick and transfer on to the surface of a clean glass slide or Petri dish.

Add one drop of 15% Hydrogen peroxide onto the smear.

Observe for immediate bubbling

Tube or bottle:

Place 4 or 5 drops of hydrogen peroxide in a test tube or bijou.

Touch the centre of a single colony with a plastic loop or sterile wooden stick and smear on the inside wall of the tube just above the surface of the hydrogen peroxide. Cap the tube or bottle and tilt so that the smear is covered by the hydrogen peroxide.

Observe for immediate bubbling.

Agar slant:

Add 1.0ml of hydrogen peroxide directly onto an 18 to 24 hour heavily inoculated pure culture on a nutrient agar slope and replace the cap.

Observe for immediate bubbling.

Results

Positive Reaction - immediate and sustained bubbling.

Negative Reaction – No bubbling, the formation of occasional bubbles after 20-30 seconds is considered negative.

Limitations

This test should not be performed on colonies taken from media containing whole blood cells as they contain catalase and may

give a false result. Colonies from chocolate agar may be tested as the blood cells have been destroyed.

Carbohydrate containing media may suppress catalase activity.

Metal loops and wires (nichrome) are to be avoided as they may give false positive reaction.

Quality Control

Hydrogen peroxide is unstable and should undergo a quality control check daily or immediately prior to use.

Bacteria

Positive control-

Staphylococcus aureus ATCC 25923

Negative control-

Streptococcus mitis NCTC 10712

Shelf Life & Storage

The expiry date, storage temperature (2-8°C) and storage conditions are indicated on the outer package label.

Materials provided

Each pack contains 5 dropper bottles, each dropper bottle contains 3ml of 15% hydrogen peroxide.

Materials required but not provided

Media and other equipment for subculture.

Sterile loops or needles.









Glass slide, petri dish, test tube, bijou or nutrient agar slope depending on test method.

References

Standards Unit, National Infection Service, PHE. UK SMI, TP8-Catalase Test, Issue 4, 02.04.19.

Barrow, G.I. & Feltham, R.K.A. Cowan and Steel's Manual for the Identification of Medical Bacteria. Third edition.

Wadsworth-KTL Anaerobic Bacteriology Manual, Sixth Edition. Jousimies-Somer, H., et al. Star Publishing Company

	Catalogue number
	Batch number
	Use by date
	In-Vitro Diagnostic device
	Contains sufficient for <n> tests
	Temperature storage limitations
	Consult instructions for use
	Manufacturer

Issue	Date	Comments
4	20/07/2020	IFU format revision. Slide, tube, bottle and agar slant methods updated

