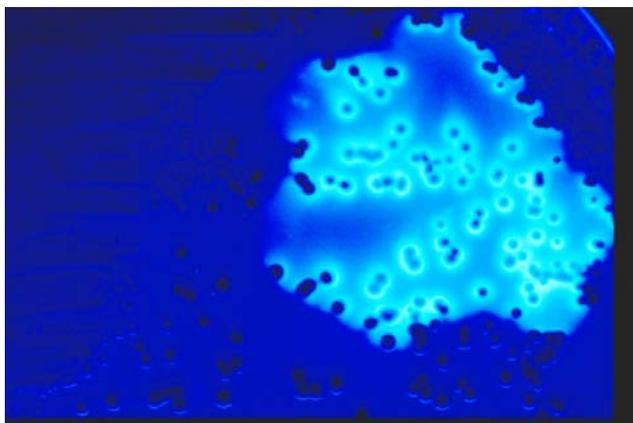


MUCAP TEST[®]

For the immediate identification of *Salmonella* spp. on plating media



INTRODUCTION AND PRINCIPLE OF THE METHOD

MUCAP Test is an easy and rapid method that allows the presumptive detection of *Salmonella* spp. on plating media. It contains a substrate conjugated with methylumbelliferone, cleaved by C₈ esterase enzyme of *Salmonella* spp. releasing a strongly fluorescent compound. Several authors have studied the performance of the MUCAP Test in order to evaluate its sensitivity and specificity.

BOTTLE CONTENTS

4- methylumbelliferil caprilate dissolved in an organic solvent (heptane) : 8 ml

MATERIALS REQUIRED BUT NOT SUPPLIED

Wood's Lamp with emission at 366 nm.

SPECIMENS

The sample consists of colonies isolated on an agar medium.

TECHNIQUE , READING AND INTERPRETATION

The test is carried-out on a primary isolation medium by flooding with one drop of MUCAP reagent of all the suspect colonies (H₂S positive and/or lactose negative colonies).

The following scheme should be used:

1. Observe the colonies under a Wood's lamp (366nm) before adding the reagent to ensure that no spontaneous fluorescence occurs.
2. Add a drop of reagent to each isolated colony or to a group of colonies
3. After 3-5minutes observe the plates under the Wood's lamp (wavelength 366nm) in semi-darkness.

Positive result: appearance of a blue fluorescence over the whole colony or on the edge of black centred colonies.

Negative result: no development of fluorescence

The fluorescent colonies can be identified presumptively as *Salmonella* spp. and subjected to a complete identification with biochemical and serological tests.

The fluorescent negative colonies can be considered not belonging to the *Salmonella* genus and so plates are rejected.

QUALITY CONTROL

If the quality control is performed by the user, the following strains are recommended: positive control: *S.typhimurium* ATCC 14028, negative control: *P.mirabilis* ATCC 25933

LIMITATIONS

- As *P. aeruginosa* is often responsible for false positive results, the H₂S negative and fluorescent positive colonies can be tested for the oxidase test. The H₂S negative MUCAP positive and oxidase

negative colonies can be identified as *Salmonella* spp. without waiting for the final result in case where an immediate diagnosis is needed.

- The reagent does not affect the viability of the flooded colonies.
- Do not take any reading after 5 minutes because the reagent is susceptible to autolysis due to the watery nature of the medium and so false positive results might occur.
- The MUCAP Test can be carried-out on most culture media normally used i.e. MacConkey, BGA, SS, HEA, DC, XLD, etc. - Exceptions: Bismuth Sulphite Agar.

PERFORMANCES

The data published show that the sensitivity of *Salmonella* detection with MUCAP test is always near to 100% and the specificity is more variable depending on the isolation media and/or the combination of enrichment and isolation media and ranges from 80% to 100%.

PRECAUTIONS

The bottle contains an organic solvent and MUCAP Test is classified as F (Inflammable) according to existing laws. Consult the Material Safety Data Sheet before the use and do not expose close to heat sources.

For in vitro diagnostic use only. MUCAP Test is for professional use only and it should be used by adequately trained personnel with knowledge of microbiological techniques in the laboratory. Observe approved biohazard precautions and aseptic techniques. Sterilize all biohazard waste before disposal.

STORAGE

MUCAP Test should be stored at 2-8°C with the cap tightly closed. When stored as directed the reagents remain stable until the expiry date shown on the label. MUCAP Test should not be used if there are any signs of deterioration.

REFERENCES

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PACKAGING

191500 MUCAP Test 8 ml (160 tests)