



Disinfectant Test Broth, AOAC

M354

Intended Use:

Recommended for testing disinfectants in accordance with AOAC.

Composition**

Ingredients	Gms / Litre
Peptone	10.000
HM peptone B #	5.000
Sodium chloride	5.000
Final pH (at 25°C)	6.8±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Beef extract

Directions

Suspend 20 grams in 1000 ml purified / distilled water. Heat if necessary to dissolve the medium completely. Dispense as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C.

Principle And Interpretation

Bacteria in the genus *Staphylococcus* are pathogens of man and other mammals. Traditionally they were divided into two groups on the basis of their ability to clot blood plasma (the coagulase reaction). The coagulase-positive Staphylococci constitute the most pathogenic species *Staphylococcus aureus*. The presence of Staphylococci in a lesion might first be suspected after examination of a direct gram stain. However, small numbers of bacteria in blood preclude microscopic examination and require culturing first (1).

Disinfectant Test Broth, AOAC is prepared according to the formula of AOAC (4,5) and is used for daily transfer of cultures required in testing disinfectants and especially for determining phenol coefficients of disinfectants.

The medium contains the ingredients like HM peptone B and Peptone, which provide necessary nutrients to the growth of test organisms like *Pseudomonas aeruginosa* and *Staphylococcus aureus*. Presence of sodium chloride balances the osmotic equilibrium.

Type of specimen

Isolated Microorganisms and Disinfectant solutions.

Specimen Collection and Handling:

For pure isolate samples follow appropriate techniques for handling specimens as per established guidelines (2,3). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Further biochemical and serological tests must be carried out for further identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Yellow coloured, clear solution without any precipitate

Reaction

Reaction of 2.0% w/v aqueous solution at 25°C. pH : 6.8±0.2

pH

6.60-7.00

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours .

Organism	Inoculum (CFU)	Growth
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	50-100	luxuriant
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 6538 (00032*)	50-100	luxuriant
<i>Escherichia coli</i> ATCC 25922 (00013*)	50-100	good-luxuriant
<i>Pseudomonas aeruginosa</i> ATCC 27853 (00025*)	50-100	good-luxuriant

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

Reference

1. Association of Analytical Chemists (AOAC), 1960, 9th ed., Published by AOAC International.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
4. Journal of AOAC, 1964, 47:176.
5. Methods of Analysis AOAC, 1980, 13th ed.

Revision :02 / 2019

Disclaimer :

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