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Technical Data Sheet

Mueller Hinton Broth (MML-MHB-01)

Principle

Mueller Hinton Medium duplicates the formula recommended by Mueller and Hinton (1941) for the primary isolation of *Neisseria species*. Currently its widely used for performing antibiotic susceptibility tests using the tube dilution method. Media is simple and composed of meat infusion form (equivalent of beef infusion form), Casamino acids and starch. Infusion from Meat and Casamino acids provides nitrogen vitamins, amino acids, minerals, carbon and other nutrients to support the growth of microorganisms. While starch absorb any toxic metabolites produced during microbial growth and while autoclaving undergoes hydrolysis and liberate small amount of dextrose, which act as source of energy.

Use: Recommended for antimicrobial susceptibility testing of rapidly growing aerobic and facultative anaerobic microbes by the tube dilution method.

Contents*

Ingredients	**Gram/Litre**
Meat Infusion Form#	300.000
Casamino Acids	17.500
Starch	1.500
pH at 25˚C	7.3 ±0.2

* Formula adjusted for optimum performance and parameters
# Equivalent to Beef infusion form

Directions: Dissolve 21.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 min, cool it to 42-45 °C and inoculate test sample aseptically.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Beige colored free flowing, homogeneous powder
Reaction of 2.1% solution	7.3 ±0.2 at 25 ˚C
pH	7.10- 7.50
Color and clarity of ready medium	Light amber opalescent solution, with no significant precipitation.
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 ºC for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Organism	ATCC	Inoculum	Growth	Incubation Temperature	Incubation period
Escherichia coli	8739	50-100	Luxurious	33-37 ℃	18-48 h
Staphylococcus aureus	25923	50-100	Luxurious	33-37 ℃	18-48 h
Pseudomonas aeruginosa	27853	50-100	Luxurious	33-37 ℃	18-48 h

Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

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3. *Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
4. Mueller, J. H., and J. Hinton (1941). *A protein-free medium for primary isolation of gonococcus and meningococcus.* Proc. Soc. Exp. Biol. Med. 48:330-333.
5. Rand, M. C., Arnold E. Greenberg, and Michael J. Taras, (1976), *Standard methods for the examination of water and wastewater*. Prepared and published jointly by American Public Health Association, American Water Works Association, and Water Pollution Control Federation.
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