

TECHNICAL DATA SHEET

Mueller Hinton Agar

Principle

Mueller Hinton agar duplicates the formula recommended by Mueller and Hinton (1941) for the primary isolation of *Neisseria* species. Commonly it is used for performing antibiotic susceptibility tests using a disc diffusion assay and due to its susceptibility for microorganism and high reproducibility; WHO Committee recommended it for standardization of susceptibility testing. Media is simple and composed of meat infusion form (equivalent of beef infusion form), Casamino acids, starch and agar. Meat Infusion from 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. Agar is the solidifying agent.

Use: For determination of susceptibility of microorganisms to antimicrobial agents & for cultivation of *Neisseria* spp

Contents*

Ingredients	Gram/Litre
Meat Infusion# (From 300g)	2.000
Casamino Acids	17.500
Starch	1.500
Agar	17.000
pH at 25°C	7.3 ±0.1

* Formula adjusted for optimum performance and parameters

Equivalent to Beef infusion form

Directions: Dissolve 38.00 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 distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

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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 3.8% solution	7.3 $\pm$ 0.1 at 25 °C
pH	7.20- 7.40
Gelling	Firm comparable with 1.7% agar gel
Color and clarity of ready medium	Light amber opalescent gel
Growth Promotion properties	Best at $\leq$ 100 CFU at 30-37 °C for 18-72 h
Indicative properties	Optimum at $\leq$ 100 CFU at 30-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

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Different Microbial Response: Recovery is compared with Soybean Casein Digest Agar

Organism	ATCC	Inoculum (CFU)	Growth	Recovery	Incubation Temperature	Incubation period
<i>Escherichia coli</i>	8739	50-100	Luxuriant	≥ 80%	30-37°C	18-24 h
<i>Staphylococcus aureus</i>	25923	50-100	Luxuriant	≥ 80%	30-37°C	18-24 h
<i>Pseudomonas aeruginosa</i>	27853	50-100	Luxuriant	≥ 80%	30-37°C	18-24 h

Antibiotic Sensitivity test: Zone of inhibition measured after an incubation 30-37°C for 18-24 hours.

Organisms	ATCC	Antibiotic	Standard zone of inhibition	Observed zone of inhibition
<i>Escherichia coli</i>	8739	Chloramphenicol (30 mcg)	21-27 mm	21-27 mm
		Ampicillin (10 mcg)	15-22 mm	15-22 mm
		Cephalothin (30 mcg)	15-21 mm	15-21 mm
<i>Staphylococcus aureus</i>	25923	Tetracycline (30mcg)	24-30 mm	24-30 mm
<i>Pseudomonas aeruginosa</i>	27853	Ciprofloxacin (5 mcg)	25-33 mm	25-33 mm
<i>Haemophilus influenzae</i>	49766	Cefixime (5 mcg)	29-35 mm	29-35 mm

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

Note: Sterilize media immediately after reconstitution.

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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

1. Atlas, R. M. (2005). Handbook of media for environmental microbiology. CRC press.
2. Bauer, A. L., W. M. M. Kirby, J. C. Sherris, and M. Turck. (1966). Antibiotic susceptibility testing by a standardized single disc method. Am. J. Clin. Pathol. 45:493-496.
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. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Tenover F. C., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
6. 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.
7. World Health Organization. (1961) Standardization of methods for conducting microbial sensitivity tests. Technical report series No 210, Geneva.

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