

TRM 339 –MUELLER HINTON AGAR

INTENDED USE

For cultivation of *Neisseria* and for determination of susceptibility of microorganisms

PRODUCT SUMMARY AND EXPLANATION

Mueller Hinton agar is used for cultivation of *Neisseria* & for determination of susceptibility of microorganisms to antibiotics. It is formulated by Mueller and Hinton for the primary isolation of *Neisseria* species. Bauer and Kirby recommended this medium for performing antibiotic susceptibility tests using a single disc of high concentration. It has become the standard medium for antimicrobial susceptibility testing and its performance is in accordance to Clinical and Laboratory Standard Institute (CLSI), formerly NCCLS and complies with requirements of the WHO, FDA and EUCAST. Mueller Hinton Agar has been selected by the CLSI for several reasons: (i) It demonstrates good batch-to-batch reproducibility for susceptible testing, (ii) It is low in sulfonamide, trimethoprim and tetracycline inhibitors, (iii) It supports the growth of most non-fastidious bacterial pathogens and (iv) Many data and much experience regarding its performance have been recorded. WHO Committee on Standardization of Susceptibility Testing has accepted Mueller Hinton Agar for determining the susceptibility of microorganisms because of its reproducibility.

COMPOSITION

Ingredients	Gms / Ltr
Agar	17.000
Casein acid hydrolysate	17.500
Beef, infusion	2.000
Starch	1.500

PRINCIPLE

The medium consist of Beef extract and Casein acid hydrolysate which provides nitrogen, vitamins, carbon, and amino acids. Starch is added to absorb any toxic metabolites produced. Agar is the solidifying agent. The thymine/thymidine content of this medium is minimized (determined by disc diffusion procedure with *Enterococcus faecalis* ATCC 29212 and sulfamethoxazole-trimethoprim antibiotic) and levels of calcium and magnesium are adjusted (determined by *Pseudomonas aeruginosa* ATCC 27853 and aminoglycoside antibiotics) to give consistent zones of inhibition as per specified diameters in the CLSI standards.

INSTRUCTION FOR USE

1. Mueller Hinton Agar is a ready to use solid media in glass bottle. The medium is pre-sterilized, hence sterilization is not required.
2. Prior to use, medium in the bottle can be melted either by using a pre-heated water bath or any other method.
3. Slightly loosen the cap before melting.
4. Pour liquefied agar into each plate as desired and allow them to solidify at room temperature. Plates are now ready to inoculate or refrigerate for later use

QUALITY CONTROL SPECIFICATIONS

Appearance	:	Light amber color, clear to slightly opalescent gel.
Quantity of Medium	:	100 ml of the medium in glass bottle
pH (at 25°C)	:	7.3± 0.2
Sterility Check	:	Passes release criteria



INTERPRETATION

Cultural characteristics observed after inoculation of 50-100 CFU, on incubation for bacteria. Recovery rate is considered 100% for bacteria growth on Soya Agar.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
<i>Staphylococcus aureus</i>	25923	50-100	Luxuriant	>=70%	30-35 °C	18-24 Hours
<i>Escherichia coli</i>	25922	50-100	Luxuriant	>=70%	30-35 °C	18-24 Hours
<i>Pseudomonas aeruginosa</i>	27853	50-100	Luxuriant	>=70%	30-35 °C	18-24 Hours
<i>Enterococcus faecalis</i>	29212	50-100	Luxuriant	>=70%	30-35 °C	18-24 Hours

PACKAGING

100 ml glass bottle.

STORAGE

On receipt, store bottles in the dark at 10 to 25° C. Avoid freezing and overheating. The medium may be used up to the expiration date and incubated for the recommended incubation times. Bottles from unopened packages can be used up to the expiration date. Opened bottles must be used immediately. To prepare plates or tubes from the bottled medium, it must first be liquefied. Do not liquefy any leftovers for a second time

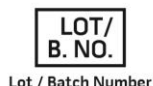
Product Deterioration: Do not use bottles if they show evidence of microbial contamination, discoloration, or any other signs of deterioration

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

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NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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