

# Mueller Hinton Broth

Cat. 1214

For sensitivity testing to antibiotics in liquid media. Cation adjusted according to ISO 16782.

## Practical information

Applications	Categories
Antibiotic Assay	General use

Industry: Clinical / Antimicrobial susceptibility testing

Regulations: ISO 16782



## Principles and uses

Mueller Hinton Broth is used together with Mueller Hinton Agar to carry out the sensitivity testing of a great number of antimicrobial agents, for the determination of MIC (minimal inhibitory concentrations) of bacteria isolated for example from urine.

It was also developed for the cultivation of pathogenic Neisseria and other fastidious microorganisms. It has the same formula as Mueller Hinton Agar (Cat. 1058) but can be used when the fluid medium is preferred.

Mueller Hinton Broth is cation-adjusted for calcium, magnesium, manganese and zinc ions according to ISO 16782.

The medium can be used with complete confidence because it is a rich nutrient medium able to grow fastidious organisms. The use of a medium with suitable growth characteristics is essential to test the susceptibility of microorganisms to antibiotics.

Beef infusion and Acid Casein peptone (H) provide nitrogen, vitamins, minerals and amino acids essential for growth. The starch in the medium acts as a growth factor, probably functioning like a colloid protector, and neutralizes toxic products that form during the development of the organisms.

## Formula in g/L

Acid casein peptone (H)	17,5	Beef infusion	2
Maize starch	1,5		

## Preparation

Suspend 21 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into appropriate containers and sterilize in autoclave at 121 °C for 15 minutes. DO NOT OVERHEAT.

## Instructions for use

For clinical diagnosis, the type of sample is bacteria isolated from urine.

- Inoculate and incubate at 35±2 °C for 18-24 hours.
- Reading and interpretation of results.

## Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Fine powder	Beige	Amber, slightly opalescent	7,2-7,4

## Microbiological test

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Incubation conditions: (35±2 °C / 18-24 h).

### Microorganisms

Listeria monocytogenes ATCC 19112  
Streptococcus pyogenes ATCC 19615  
Escherichia coli ATCC 25922  
Staphylococcus aureus ATCC 25923  
Pseudomonas aeruginosa ATCC 27853  
Enterococcus faecalis ATCC 33186

### Specification

Good growth  
Good growth  
Good growth  
Good growth  
Good growth  
Good growth

## Storage

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Temp. Min.:2 °C  
Temp. Max.:25 °C

## Bibliography

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Mueller, J. H. and Hinton J. Proc. Soc. Exp. Biol. and Med. 48:330-333. 1941.

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Bauer, A.L., W.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.

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