

## Mueller Hinton Broth

### Intended Use

Mueller Hinton Broth is used for Antimicrobial Susceptibility Testing.

### Summary

The Mueller Hinton formulation was originally developed as a simple, transparent agar medium for the cultivation of pathogenic *Neisseria* species. Other media were subsequently developed that replaced the use of Mueller Hinton Agar for the cultivation of pathogenic *Neisseria* species, but it became widely used in the determination of sulfonamide resistance of Gonococci and other organisms. Mueller Hinton Broth is recommended for dilution antimicrobial susceptibility testing of all species of most commonly encountered aerobic and facultatively anaerobic bacteria.

### Principle

Beef extract and casein acid hydrolysate provide nitrogenous compounds, carbon, sulphur and other essential nutrients. Starch acts as a protective colloid against toxic substances present in the medium. Starch hydrolysis yields dextrose, which serves as a source of energy.

### Formula\*

Ingredients	g/L
Casein Acid Hydrolysate	17.5
Beef Extract Powder	2.0
Starch	1.5
Final pH (at 25°C)	7.3 ± 0.2

\*Adjusted to suit performance parameters.

### Directions

1. Bring the Mueller Hinton Broth vial to the room temperature 22°C-30°C.
2. Use Mueller Hinton Broth as per required application.

### Quality Control

**Appearance:** Light amber coloured, clear solution without any precipitate.

**Growth Promotion Test:** Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP and growth is observed after an incubation at 30°C-35°C for 18 to 24 hours.

**Growth Promoting Properties:** The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating 10-100 cfu of appropriate microorganism at 30°C-35°C for 18 hours.

Organism (ATCC)	Growth
<i>Escherichia coli</i> (8739)	Good
<i>Pseudomonas aeruginosa</i> (9027)	Good
<i>Staphylococcus aureus</i> (6538)	Good
<i>Streptococcus faecalis</i> (11420)	Good
<i>Escherichia coli</i> (25922)	Good
<i>Pseudomonas aeruginosa</i> (27853)	Good
<i>Staphylococcus aureus</i> (25923)	Good
<i>Enterococcus faecalis</i> (11420)	Good

### Remarks

1. Do not use media bottles that exhibit any damage, cracks, microbial contamination, discoloration, drying or other sign of deterioration.

2. Good laboratory practices and hazard precautions must be observed at all times.
3. After use media containers, prepared plates, sample, sample containers and other contaminated materials must be sterilized or incinerated before discarding.
4. All autoclaved biohazards should be disposed off in accordance with state and local environmental regulations.
5. Only qualified personnel who have been trained in microbiological procedures should handle all infected specimens and inoculated culture media.
6. User should ensure that any machinery or apparatus used and by chance contaminated must be safely disinfected or sterilized. The environment in which microbiological cultures are handled must also be taken into account.

### Storage and Stability

1. Store the ready to use Mueller Hinton Broth at 15°C-25°C in a cool, dry place away from light.
2. Stability of the kit is as per expiry date mentioned on the label.

### Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

### References

1. Murray P. R., Baron J. H., Pfaller M. A., Tenover J. C. and Tenover F. C., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2. Mueller J. H. and Hinton J., 1941, Proc. Soc. Exp. Biol. Med., 48:330.
3. National Committee for Clinical Laboratory Standards, 2000, Approved Standard:M7-A5. Methods for Dilution Antimicrobial Susceptibility Tests for Bacteria that grow aerobically, 5th Ed., NCCLS, Wayne, Pa.
4. Data on file: Microexpress®, A Division of Tulip Diagnostics (P) Ltd.

### Product Presentation:

Cat. No.	Product Description	Pack Size
203130840010	Ready Prepared Tube	25 x 10 mL

### Disclaimer

Information provided is based on our inhouse technical data on file, it is recommended that user should validate at his end for suitable use of the product.

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