Mueller Hinton Agar

Intended Use
Mueller Hinton Agar is used for antimicrobial susceptibility testing of common, rapidly growing microorganisms by the Kirby- Bauer method.

Summary
Mueller Hinton Agar was originally developed for the cultivation of *Neisseria*. These organisms are now isolated on selective media. Since clinical laboratories were using a wide variety of procedures for determining the susceptibility of bacteria to antibiotic and chemotherapeutic agents, Bauer, Kirby and others developed a standardized procedure in which Mueller Hinton Agar was selected as the test medium. Subsequently, international collaborative study confirmed the value of Mueller Hinton Agar for this purpose due to its relatively good reproducibility, the simplicity of its formula, and the wealth of experimental data that had been accumulated using this medium. Mueller Hinton Agar complies with the requirements of World Health Organization and is specified in the FDA's Bacteriological Analytical Manual for food testing.

Principle
Casein acid hydrolysate and beef extract supply amino acids and other nitrogenous substances, minerals, vitamins, carbon and other nutrients to support the growth of microorganisms. Starch acts as a protective colloid against toxic substances that may be present in the medium. Hydrolysis of starch during autoclaving provides a small amount of dextrose, which is a source of energy.

Formula*

Ingredients	**g/L**
Casein Acid Hydrolysate	17.5
Beef Extract Powder	2.0
Starch	1.5
Agar	17.0
Final pH (at 25°C)	7.3 ± 0.1

*Adjusted to suit performance parameters.

Directions
1. Loosen the cap.
2. Melt the medium completely in a water bath at 100°C. Do not remove the cap of the bottle while melting.
3. Cool to 45°C-50°C, mix well and pour into presterile petriplates.

Quality Control
Appearance: Light amber coloured, slightly opalescent gel.
Cultural Response: Cultural characteristics observed after an incubation of 18-24 hours at 30°C-35°C.

Organism (ATCC)	**Growth**
Escherichia coli (25922)	Good
Pseudomonas aeruginosa Strain Boston 41501 (27853)	Good
Staphylococcus aureus subsp. *aureus* (25923)	Good
Enterococcus faecalis (29212)	Good

Note: For good growth - Growth obtained on the test media should not differ by a factor greater than 2 from calculated value for a standardized inoculum.
Inoculum cfu for good growth is 10-100.

Remarks
1. Do not use media bottles that exhibit any damage, cracks, microbial contamination, discoloration, drying or other sign of deterioration.
2. Ensure that the temperature of water bath is at 100°C so that the medium melts completely. Cooler water baths give rise to lumpy, uneven medium.

3. Before pouring into sterile petriplates, gently swirl the bottle to check whether the entire contents are properly mixed and melted.
4. Good laboratory practices and hazard precautions must be observed at all times.
5. After use media containers, prepared plates, sample, sample containers and other contaminated materials must be sterilized or incinerated before discarding.

Storage and Stability

1. Store the ready to use Mueller Hinton Agar 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. Mueller and Hinton, 1941, Proc. Soc. Exp. Bio. And Med; 48:330.
2. Bauer *et al.,* 1966, Am. J. Clin. Patho., 45:493.
3. US Food and Drug Adm; 1998, Bacteriological Analytical Manual, 8th Ed; Rev. A, AOAC, International, Gaithersburg, Md.
4. National Committee for Clinical Laboratory Standards. 2000. Approved Standard: M2-A7. Performance Standards for Antimicrobial Disk Susceptibility Tests, 7th edition. NCCLS, Wayne, P.A.
5. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat. No.	Product Description	Pack Size
203130830100	Bottle Media	100 mL
203130830250	Bottle Media	6 x 250 mL