

Mueller-Hinton Broth

Catalog : HB6231-2

Mueller-Hinton Broth is used for the cultivation of microorganisms and for sensitivity testing. Mueller Hinton Broth is rich in nutrients, for use in sensitivity of antimicrobials used in conjunction with Mueller Hinton Agar studies.

Approximate Formula:

Ingredients	gm./liter
Beef extract	2.0
Soluble starch	1.5
Acid Hydrolysate of Casein	17.5
Final pH 7.4±0.2 at 25 °C	

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 21.0g of the medium in one liter of distilled water or deionized water. Mix well and heat with frequent agitation to completely dissolve the powder. Sterilize in an autoclave at 121°C (15 lbs) for 15 minutes.

Principle and Interpretation:

Mueller Hinton Broth is formulated to have a low thymine and thymidine content. It may be used for broth dilution antimicrobial susceptibility testing as long as the calcium and magnesium ion concentrations. Mueller Hinton Broth has not been formulated to have a low thymine and thymidine content. It may be used for the general cultivation of bacteria.

Acid Hydrolysate of Casein and Beef extract 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.

Appearance:

Dehydrated medium is a free-flowing yellowish powder. The prepared medium is a kind of yellowish transparent liquid.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

Mueller Hinton Agar must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 3 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 36±1°C for 18-24 h.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Remarks
<i>Escherichia coli</i>	ATCC 25922	10-100	Luxuriant	Turbid
<i>Pseudomonas aeruginosa</i>	ATCC27853	10-100	Luxuriant	Turbid
<i>Staphylococcus Aureus</i>	ATCC25923	10-100	Luxuriant	Turbid
<i>Bacillus subtilis</i>	ATCC6633	10-100	Luxuriant	Turbid

References:

- Mueller and Hinton. 1941. Proc. Soc. Exp. Biol. Med. 48:330.
- Clinical and Laboratory Standards Institute. 2006. Approved Standard: M7-A7. Methods for dilution antimicrobial susceptibility tests for bacteria that grow aerobically, 7th ed. CLSI, Wayne, Pa.
- Murray, Baron, Jorgensen, Landry and Pfaller (ed.). 2007. Manual of clinical microbiology, 9th ed. American Society for Microbiology, Washington, D.C.
- Forbes, Sahm and Weissfeld. 2007. Bailey & Scott's diagnostic microbiology, 12th ed. Mosby, Inc., St. Louis, Mo.
- Isenberg and Garcia (ed.). 2004 (update, 2007). Clinical microbiology procedures handbook, 2nd ed. American Society for Microbiology, Washington, D.C.