MUELLER HINTON BROTH TM 325

For testing the susceptibility of microorganisms to sulphonamides by tube dilution method

Composition

Ingredients	Gms/Ltr.
Casein acid hydrolysate	17.50
Beef, infusion from	2.00
Starch	1.50

* Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°C and protect from direct Sunlight.

Instructions for Use

Dissolve 21.0gms in 1000ml distilled water. Gently heat to boiling with gentle swirling and dissolve the medium completely. Sterilize by autoclaving at 15 psi (121ºC) for 15 minutes. Cool to 45-50ºC and dispense into sterile test tubes.

Appearance: Light amber colour, clear solution
pH (at 25°C): 7.3 ± 0.2

Principle

MUELLER HINTON BROTH is used for testing the susceptibility of microorganisms to sulphonamides by tube dilution method. Mueller Hinton Broth is recommended for broth dilution MIC studies. Medium contains Beef infusion and Casein acid hydrolysate provide nitrogenous compounds, carbon, sulphur and other essential compounds to support the growth of organisms. Starch acts as a detoxifying agent against the toxic substances that may be present in the medium. This medium is not cation adjusted and is formulated to have a low Thymine and Thymidine content. Its low level of p-aminobenzoic acid, was used for sensitivity tests on sulphonamides.

Interpretation

Cultural characteristics observed after inoculating (10^3CFU / ml), on incubation at 35°C for 18 - 24 hours.

Microorganisms	ATCC	Inoculum (CFU/ml)	Growth
Escherichia coli	25922	10^3	Luxuriant
Pseudomonas aeruginosa	27853	10^3	Luxuriant
Staphylococcus aureus	25923	10^3	Luxuriant

Reference

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