MUELLER-HINTON Agar Catalog : HB6232-4-5K

Mueller Hinton Agar is recommended for antimicrobial disc diffusion susceptibility testing of common, rapidly growing bacteria by the Bauer-Kirby method, as standardized by the Clinical and Laboratory Standards Institute (CLSI).

Approximate Formula:

Ingredients	gm./liter
Beef, Infusion solids from 300g	6.0
Soluble starch	1.5
Acid hydrolysis of casein	17.5
Agar	17.0
Final pH 7.3±0.1 at 25 ℃	

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

Directions:

Suspend 42.0g of the medium in one liter of distilled water or deionized water. Mix well and heat with frequent agitation. Boil for one minute and sterilize in an autoclave at 121℃(15 lbs.) for 15 minutes. Cool to 40-45℃ and pour into Petri dishes. Do not over heat the medium.

Principle and Interpretation:

Mueller Hinton Agar is commonly used as a test medium for antimicrobial susceptibility testing. Mueller Hinton Agar is used in the susceptibility testing of rapidly growing aerobic and facultatively anaerobic bacteria from clinical specimens. WHO Committee on Standardization of Susceptibility Testing has accepted Mueller Hinton Agar for determining the susceptibility of microorganisms because of its reproducibility . The medium is designed to give a low thymine and thymidine content and also the calcium and magnesium ion concentration is adjusted as recommended. The medium is not recommended for fastidious organisms. Thymine and thymidine inhibit sulfonamide and trimethoprim activity and calcium and magnesium interferes with the activity of aminoglycoside antibiotics.

Beef heart infusion and Acid hydrolysis of casein 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 gel.

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 5 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Cultural characteristics observed after an incubation at 36±1°C for 18 -24 hours.

Microorganism	Strains Number	Inoculum (CFU)	Growth	Recovery	Remarks
Staphylococcus aureus	ATCC 25923	10-100	luxuriant	≥70%	Yellow colonies
Pseudomonas aeruginosa	ATCC 27853	10-100	luxuriant	≥70%	Green colonies
Escherichia coli	ATCC 25922	10-100	luxuriant	≥70%	Colorless large colonies
Bacillus subtilis	ATCC 6633	10-100	luxuriant	≥70%	White irregular colonies

Reference:

1. Bauer, Kirby, Sherris and Turck. 1966. Am. J. Clin. Pathol. 45:493.
2. Ryan, Schoenknecht and Kirby. 1970. Hospital Practice 5:91.
3. Barry, Garcia and Thrupp. 1970. Am. J. Clin. Pathol. 53:149.
4. National Committee for Clinical Laboratory Standards. 2002. Performance standards for antimicrobial susceptibility testing; twelfth informational supplement, M100-S12(M2). NCCLS, Wayne, Pa.
5. Mueller and Hinton. 1941. Proc. Soc. Exp. Biol. Med. 48:330.

Qingdao Hope Bio-Technology Co ., Ltd ., China Tel:-86+532-66087711 E-mail:qdhbywg@vip.126.com http://www.hopebiol.com