PRODUCT INFORMATION

Product Type: PETRI DISHES 90mm

Cat No. PD037 - MUELLER HINTON AGAR + DEF. SHEEP BLOOD

Intended Use:
Mueller Hinton Agar with 5% Defibrinated Sheep Blood is a standardized, enriched medium primarily used for antimicrobial susceptibility testing (AST) of fastidious organisms especially *Streptococcus* and *Neisseria* species, by the disk diffusion (Kirby-Bauer) method, as recommended by the Clinical and Laboratory Standards Institute (CLSI).

Principle and Uses:
Muller Hinton Agar contains low levels of Thymine and Thymidine and controlled levels of Calcium and Magnesium. Beef extract and Acid hydrolysate of casein supply amino acids and other substances, minerals, vitamins, Carbon and nutrients. For toxic substances that may be present in the medium, Starch acts as a protective colloid. Hydrolysis of Starch during autoclave procedure provides a small amount of Dextrose. The method for this product uses discs which contain a known concentration of antimicrobial agent. The diameters of the clearing zone around the disc correlate with minimal inhibitory concentrations (MIC). Test includes a standardized suspense of the organism which is then swabbed all over the surface of the plate. Then, paper discs of antibiotic or other antimicrobial agent are placed on the surface of the plate, the plate is incubated and zones of clearing around each disc are measured. The result will be then compared to those determined by the current CLSI document in order to determine if the organism is susceptible, intermediate or resistant to the agent tested.

Expected Results
With Mueller Hinton Agar with 5% Sheep Blood, the zone of growth inhibition should be measured, not the zone of inhibition of hemolysis. The zones are measured from the upper surface of the agar illuminated with reflected light, with the cover removed. Zone diameters for the agents specified under “Intended Use” should be compared with those in the NCCLS Document M100 (M2), which provides interpretive criteria.
Results obtained may then be reported as resistant, intermediate or susceptible.

Composition
Beef extract - 2g/L,
Acid Hydrolysate of Casein - 17.5g/L,
Starch - 1.5g/L,
Agar - 17g/L
Def. Sheep Blood – 5%

Storage: 2-8°C
Appearance: Cherry
pH Range: 7.2 - 7.4

Package contents: 10 plates in a package
Exp. Date: Printed on label and on the item.
Required materials not supplied: Laboratory equipment as required.

Warning and Precautions - For professional use only. Follow good microbiological lab practices while handling specimens and culture. Do not use Petri dishes if they show evidence of microbial contamination, discoloration, drying, cracking, or other signs of deterioration. Avoid freezing and overheating. The Petri Dishes may be used / inoculated up to the expiration date and incubated for the recommended incubation times. After use and prior to discarding, specimen containers and all contaminated material, including the used culture media and contaminated culture containers, must be sterilized or incinerated by validated procedures. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.
If excessive moisture is observed, invert the bottom over an off-set lid and allow to air dry in order to prevent formation of a seal between the top and bottom of the plate during incubation. Storage Instructions: On receipt, store plates in the dark at 2–8 °C. Avoid freezing and overheating. Do not open until ready to use.

Performance Testing Results:
Susceptibility test: disk diffusion method. CLSI specifications: current 100m, 02m editions.
Suspend colonies from fresh culture In 5 ml saline solution (0.5 mf). Antibiotic results diameter are by mm.
*E TEST: EPG MIC BREAKPOINT OF *STREPTOCOCCUS PNEUMONIAE* (MCG/ML): 0.25-1.0.

TEST	ATCC	Incubation Temp. (℃)	Incubation Cond	Reaction 1	Antibiotic 1	Antibiotic 2	Antibiotic 3	Antibiotic 4	Antibiotic 5
Streptococcus pneumoniae	49619	33-37 ℃	5% CO2, 18 hours	Sensitive	PEN	CL	TC	AMP	ER
Streptococcus pneumoniae	49619	33-37 ℃	5% CO2, 18 hours	Sensitive	E-TEST				

Abbreviation	Antibiotic Name
PEN	Penicillin G
CL	Clindamycin
TC	Tetracycline
AMP	Ampicillin
ER	Erythromycin

Always check the latest EUCAST/CLSI tables for the exact breakpoints for your organism and disk content.

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