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TECHNICAL PRODUCT INFORMATION

TRYPTIC SOY AGAR w/5% SHEEP BLOOD

INTENDED USE:

Tryptic Soy Agar w/5% Sheep Blood is a general purpose medium for the isolation and cultivation of fastidious and non-fastidious organisms and for the determination of their hemolytic activity. Media may also be used for environmental monitoring surfaces and air in clean rooms and other environmentally controlled areas.

HISTORY/SUMMARY:

Plated media, prepared from water extracts of fresh meat and containing agar, have been utilized in microbiology since its beginnings. Infusion media for the cultivation of fastidious pathogens have been in use for more than a century¹. The addition of sterile defibrinated 5% sheep, horse or rabbit blood provides an excellent nonselective medium, especially for the differentiation of microorganisms on the basis of hemolysis. Blood agar has been in use since Brown's early work with streptococci². Defibrinated sheep blood is especially useful for hemolytic differentiation due to its inhibiting ability of *Haemophilus haemolyticus*, a non-pathogen, which is indistinguishable from beta hemolytic strep³.

FORMULA:

AnalytiChem USA, Inc. Tryptic Soy Agar w/5% Sheep Blood Plates are prepared from the following based media enriched with defibrinated sheep blood.

TRYPTICASE SOY AGAR

Component (Per liter of purified water)	Amount
Pancreatic Digest of Casein	15.0 g
Papaic Digest of Soy Meal	5.0 g
Sodium Chloride	5.0 g
Agar	15.0 g
Sheep Blood	50 mL

Final pH: 7.3 ± 0.2 at 25°C

PRECAUTIONS:

These products are for In Vitro Diagnostic or some may be for Laboratory Use, such as the contact or blood agar plates. Do not use if discolored, dehydrated or obviously contaminated. Agar should have a homogenous opaque red color. A translucent red color may indicate hemolysis of the red blood cells and product should not be used. Appropriate care in handling pathogenic microorganisms is required. Autoclave all inoculated plates and tubes prior to discarding.

SPECIMEN COLLECTION:

Information on specimen collection may be found in standard reference material such as Manual of Clinical Microbiology⁴ or Diagnostic Microbiology, Scott and Bailey⁵.

The specimen should be transported to the laboratory with a minimum of delay and protected from excessive heat and cold. For a transport delay, the specimen collection swab should be placed in a suitable transport media such as Amies or Stuarts. Cultures should be collected prior to antimicrobial therapy.

PROCEDURE:

Before inoculation is performed, the culture medium should be brought to room temperature. The size of inoculum and the technique should be calculated to produce isolated colonies on incubation. Incubation time and temperature as well as oxygen requirements are dependent on the source of the specimen.

PERFORMANCE TEST:

Approval for manufacture of each lot of Tryptic Soy Agar w/5% Sheep Blood is based on the demonstrated effectiveness in cultivating and/or differentiating the micro-organisms listed below. The growth characteristics and reactions listed are typical observations made on challenged samples:

TEST ORGANISM	RESULTS
ATCC# 19615 <i>Streptococcus pyogenes</i>	Heavy growth, small grey, beta-hemolytic colonies
ATCC# 6305 <i>Streptococcus pneumoniae</i>	Heavy growth. alpha hemolytic colonies
ATCC# 25923 <i>Staphylococcus aureus</i>	Heavy growth, medium, yellow colonies, beta-hemolysis
ATCC# 25922 <i>Escherichia coli</i>	Heavy growth, variable hemolysis
Camp test is not performed on contact plates or tubed media	
CAMP REACTION	RESULTS
ATCC# 33862 <i>Staphylococcus aureus</i>	
ATCC# 12386 <i>Streptococcus agalactiae</i>	Positive (arrowhead)
ATCC# 49399 <i>Streptococcus pyogenes</i>	Negative (no arrowhead)

QUALITY CONTROL:

The performance characteristics, as noted above, may be confirmed by the laboratory through a judicious selection of organisms such as those recorded above.

Incubation temperatures and other environmental conditions must also be controlled to further warrant effective test results. Media is classified as Exempt in CLSI M22-A3.⁵

STORAGE:

Store the media at 2-8°C. Do not use media beyond its expiration date.

LIMITATIONS:

AnalytiChem USA, Inc. Tryptic Soy Agar w/5% Sheep Blood is intended for the use in the primary isolation of fastidious and non-fastidious organisms. Attempts to classify solely on the basis of gross morphology should be avoided. Further testing must be conducted to insure accurate identification of isolates always following the standard procedure.

REFERENCES:

1. Huntoon, J. Infect. Dis 23:169, 1918.
2. Brown, Monograph, Rockefeller Inst. Res No 9, 1919.
3. Blair, J.E. Lennette, E.J. and Truant, J.P. Man of Clinical Microbiology, ASM, Bethesda, MD, 1974.
4. Bailey, W.R., and Scott, E.G. Diagnostic Microbiology, 3rd Ed., the CV. Mosby Co., St. Louis, 1970.
5. Clinical and Laboratory Standards Institute M22-A3 Quality Control for Commercially Prepared Microbiological Media; Approved Standard-Third Edition June 2004
6. BD Tryptic Soy Agar Catalog Number 236930 Technical Specification Sheet