Product Insert

TRYPTIC SOY AGAR WITH N-ACETYLMURAMIC ACID (TSA-NAM)

Products

AS-6421 Tryptic Soy Agar with N-acetylmuramic Acid 4 plates / pkg

Intended Use

Tryptic Soy Agar with N-acetylmuramic acid (TSA-NAM) is an enriched medium used for the isolation and presumptive identification of periodontal pathogens, including *Tannerella forsythia*.

Summary

TSA-NAM is an enriched medium for the isolation and cultivation of *Tannerella forsythia*. The nutritive base consists of casein and soy peptone. Hemin and vitamin K_1 are added for the recovery of some fastidious anaerobes. This media is supplement with sheep blood and N-acetylmuramic acid, which are necessary growth factors for *Tannerella forsythia*. This media is prepared, dispensed, and packaged under oxygen-free conditions to prevent the formation of oxidized products prior to use.

Formulation*

Pancreatic Digest of Casein	15.00	g
Soy Peptone	5.00	g
Sodium Chloride	5.00	g
Agar	15.00	g
Hemin (0.1% solution)	5.00	mL
Vitamin K1 (1.0% solution)	1.00	mL
Sheep Blood	50.00	mL
N-acetylmuramic Acid	0.01	g
DI Water	1.00	L

Final pH: 7.2 ± 0.2 at 25° C
Final weight: 16.0 g ± 1.6 g

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

Precautions

For *IN VITRO DIAGNOSTIC USE* only. Utilize approved biohazard precautions and aseptic technique when using this product. This product is for use only by properly-trained and qualified personnel. Sterilize all biohazard waste prior to disposal.

Storage and Shelf Life

Storage: Upon receipt, store at room temperature in original package until used. Avoid overheating or freezing. Do not use media if there are signs of deterioration (shrinking, cracking, or discoloration due to oxidation of media) or contamination. The expiration date applies to the product in its original packaging and stored as directed. Do not use product past the expiration date shown on the label.

Shelf Life: 90 days from date of manufacture.

Procedure

Specimen Collection: Protect specimens for anaerobic culture from oxygen during collection, transportation, and processing. Consult appropriate references for detailed instructions concerning collection and transportation of anaerobes.

Methods for Use: TSA-NAM should be inoculated directly with clinical specimen or from a broth that has been inoculated with a clinical specimen. Streak plates with inoculum to obtain isolated colonies and immediately place into an anaerobic atmosphere, incubating at 35-37°C for 18-48 hours. Extended periods of incubation may be required to recover some anaerobes. Detailed instructions for processing anaerobic cultures can be found in the listed references.

Materials Required, But Not Provided

Standard microbiological supplies and equipment such as loops, saline blanks, slides, staining supplies, microscope, incinerator / autoclave, incubators, anaerobic chamber / anaerobic jars, disinfectant, other culture media, and serological / biochemical reagents.

Interpretation of Results

If used properly, TSA-NAM will support good growth of *Tannerella forsythia* found in clinical specimens.

Limitations

TSA-NAM will not provide complete information for identification of bacterial isolates. Additional test procedures and media are required for complete identification. It is recommended that a enriched media, such as Brucella Blood Agar (BRU, catalog #: AS-111) also be inoculated from the same clinical specimen to assure recovery of all species present. Consult reference materials for additional information.

Quality Control

The following organisms are routinely used for quality control testing at Anaerobe Systems.

Organism Tested	ATCC #	Results	Time
Bacteroides fragilis	25285	Growth	24 hrs
Prevotella melaninogenica	25845	Growth	24 – 48 hrs
Fusobacterium nucleatum	25586	Growth	24 – 48 hrs
Clostridium perfringens	13124	Growth	24 hrs
Peptostreptococcus anaerobius	27337	Growth	24 hrs
Tannerella forsythia	43037	Growth	48 – 72 hrs
Escherichia coli	25922	Growth	24 hrs

User Quality Control: The final determination to the extent and quantity of user laboratory quality control must be determined by the end user.

If sterility testing is to be performed on this product, a representative sample of the lot(s) should be incubated anaerobically and aerobically for 48 – 96 hours.

If the nutritive capacity of this media is to be tested for performance, it is recommended that the following ATCC organisms be evaluated for growth.

Organism	ATCC #	Expected Growth
B. fragilis	25285	24 hrs
P. melaninogenica	25845	24 – 48 hrs
F. nucleatum	25586	24 hrs
C. perfringens	13124	24 hrs
P. anaerobius	27337	24 hrs
T. forsythia	43037	24 hrs

Physical Appearance: TSA-NAM should appear opaque bright red in color.

References

1. Dowell, V. R., Jr., G. L. Lombard, F. S. Thompson and A. Y. Armfield. 1977. *Media for the Isolation, Characterization and Identification of Obligately Anaerobic Bacteria.* USDHHS, CDC. Atlanta, GA 30333.

2. Engelkirk, P. G., Duben-Engelkirk, J. and Dowell, V. R. 1992. *Principles and Practices of Clinical Anaerobic Bacteriology*. Star Publishing Co., Belmont, CA 94002.

3. Holdeman, L. V., F. P. Cato and W. E. C. Moore. 1987. *Anaerobe Laboratory Manual*. Virginia Polytechnic Institute and State University. Blacksburg, VA 24061

4. Jousimeis-Somer, H. R., Summanen, P., Citron, D. M., Baron, E. J., Wexler, H. M. and S. M. Finegold. 2002. *Wadsworth – KYL Anaerobic Bacteriology Manual*. Star Publishing Co., Belmont, CA 94002.

5. CLSI. *Quality Control for Commercially Prepared Microbiological Culture Media; Approved Standard- Third Edition.* (2004). CLSI document M22-A3. CLSI, 940 West Valley Road, Suite 1400, Wayne, PA 19087-1898.

6. Pamela H. Braham and Bernard J. Moncla. 1992. Rapid Presumptive Identification and Further Characterization of Bacteroides forsythus. *Journal of Clinical Microbiology* 30: 649-654.

7. Wyss, C. "Dependence of proliferation of Bacteroides forsythus on exogenous N-acetylmuramic acid." *Infection and immunity* 57.6 (1989): 1757-1759.

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