Product Insert

FUSOBACTERIUM SELECTIVE AGAR (FSA)

Products

AS-114 Fusobacterium Selective Agar (FSA) 4 plates / pkg

Intended Use

Fusobacterium Selective Agar (FSA) is an enriched selective medium for the isolation and presumptive identification of *Fusobacterium* species.

Summary

FSA agar is an enriched selective media used for the isolation of *Fusobacterium* species. The nutritive base consists of casein, soy peptone, meat peptone, yeast extract, and dextrose. Dithiothreitol facilitates the lowering of the redox potential of the medium. The selective agents include josamycin, vancomycin, and neomycin at concentrations that inhibit most facultative and obligate anaerobes. This medium is prepared, dispensed, and packaged under oxygen-free conditions to prevent the formation of oxidized products prior to use.

Formulation*

Pancreatic Digest of Casein	10.00	g
Soy Peptone	3.00	g
Meat Peptone	10.00	g
Dextrose	1.00	g
Yeast Extract	2.00	g
Sodium Chloride	5.00	g
Sodium Bisulfite	0.10	g
Hemin (0.1% solution)	2.50	mL
Agar	15.00	g
Sodium Phosphate Dibasic	5.00	g
Potassium Phosphate Monobasic	1.00	g
Magnesium Sulfate Heptahydrate	0.20	g
Tween 80	1.00	mL
Dithiothreitol	0.01	g
Josamycin	0.003	g
Vancomycin	0.005	g
Neomycin	0.10	g
Sheep Blood	50.00	mL
DI Water	1.00	L

Final pH: 7.4 ± 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: FSA agar should be inoculated directly with a clinical specimen or from a broth that has been inoculated from a clinical specimen. Streak plates with inoculum to obtain isolated colonies and immediately place in an anaerobic atmosphere, incubating at 35-37°C for 18-48 hours. Extended periods of incubation may be required to recover some anaerobes. Extended incubation time may also result in loss of selectivity of the medium which can result in the overgrowth of organisms that should be inhibited. 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, FSA agar supports the growth of most *Fusobacterium* species found in clinical specimens while inhibiting most facultative and obligate anaerobes.

Limitations

FSA agar will not provide complete information for identification of bacterial isolates. Additional test procedures and media are required for complete identification. Some organisms that would normally grow on FSA medium may be inhibited. It is recommended that a non-selective medium, 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 performance testing at Anaerobe Systems.

Organism Tested	ATCC #	Results	Time
Fusobacterium nucleatum	25586	Growth	24 – 48 hrs
Fusobacterium necrophorum	25286	Growth	24 – 48 hrs
Staphylococcus aureus	25923	No Growth	
Prevotella melaninogenica	25845	No Growth	
Bacteroides fragilis	25285	No Growth	
Peptostreptococcus anaerobius	27337	No Growth	
Clostridium perfringens	13124	No Growth	
Clostridium difficile or Propionibacterium acnes	9689 6919	No Growth	

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

Organism	ATCC#	Expected Growth	Time
F. nucleatum	25586	Growth	48 hrs
F. necrophorum	25286	Growth	48 hrs
B. fragilis	25285	No Growth	
C. perfringens	13124	No Growth	

Physical Appearance: FSA should appear opaque red in color.

References

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

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

3. 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.

4. 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.

5. Morgenstein, A. A., D. M. Citron and S. M. Finegold. 1981. New Medium Selective for *Fusobacterium* Species and Differential for *Fusobacterium necrophorum*. *Journal of Clinical Microbiology*. Apr 1981 Vol. 13, No. 4.

6. Brazier, J. S., Diane M. Citron, and E. J. C. Goldstein. "A selective medium for Fusobacterium spp." *Journal of Applied Microbiology*71.4 (1991): 343-346.

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