Product Insert

CRYSTAL VIOLET ERYTHROMYCIN AGAR (CVE)

Products

AS-647 Crystal Violet Erythromycin Agar (CVE) 4 plates / pkg

Intended Use

Crystal Violet Erythromycin Agar (CVE) is an enriched, selective, and differential medium used for the isolation and presumptive identification of *Fusobacterium nucleatum*.

Summary

CVE has been formulated with lower concentrations of pancreatic digest of casein and glucose than most media, to provide less optimal conditions for fastidious microorganisms. Tryptophan, yeast extract, and defibrinated sheep blood was added to increase the recovery of *F. nucleatum* from clinical specimens. This medium contains erythromycin and crystal violet at concentrations that inhibit most other anaerobes, but has no suppressive effects on *F. nucleatum*. When grown on CVE, *F. nucleatum* colonies grow to approximately 2.0 mm and has a blue pigmentation. 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
Yeast Extract	5.00	g
Sodium Chloride	5.00	g
Dextrose	2.00	g
Tryptophan	0.20	g
Crystal Violet	0.005	g
Erythromycin	0.004	g
Sheep Blood	50.00	mL
Agar	15.00	g
DI Water	1.00	L

Final pH: 7.2 ± 0.3 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: CVE should be inoculated directly with 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 into an anaerobic atmosphere, incubating at 35-37ºC for 18-48 hours. Extended periods of incubation may be required to recover some anaerobes. Extended incubation time may also result in a 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.

Interpretations of Results

If used properly, CVE will support good growth of *Fusobacterium nucleatum* found in clinical infections.

Limitations

CVE 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 non-selective 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 assurance performance testing at Anaerobe Systems.

Organism Tested	ATCC #	Results	Time	Special Reaction
Fusobacterium nucleatum	25586	Growth	24 hrs	Blue pigment
Aggregatibacter actinomycetemcomitans	29522	Growth	24 – 48 hrs	
Porphyromonas asaccharolytica	25260	No Growth		
Bacteroides fragilis	25285	Inhibited		
Peptostreptococcus anaerobius	27337	No Growth		
Clostridium perfringens	13124	Inhibited		
Enterococcus faecalis	29212	Inhibited		
Actinomyces viscosus	43146	No Growth		
Fusobacterium necrophorum	25286	Growth	24 hrs	
Propionibacterium acnes	6919	No Growth		
Clostridium difficile	9689	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 Results	Special Reactions
F. nucleatum	25586	24 hrs	Blue pigment
A. actinomycetemcomitans	29522	24- 48 hrs	
A. viscosus	43146	No Growth	
P. asaccharolytica	25260	No Growth	

Physical Appearance: CVE should appear opaque and purple-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. Walker, V. L., Ratliff, D., Muller, D., Mandell, R. and S. Socransky. Medium for Selective Isolation of *Fusobacterium nucleatum* from Human Periodontal Pockets. *Journal of Clinical Microbiology*. Dec., 1979 Vol. 10

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