Product Insert

ORAL H_2S ORGANISMS AGAR WITH LEAD ACETATE (OHO-C)

Products

AS-6430 Oral H_2S Organisms Agar with Lead Acetate (OHO-C) 4 plates / pkg

Intended Use

Oral H_2S Organisms Agar with Lead Acetate (OHO-C) is intended for the identification of volatile sulfur compound, primarily hydrogen sulfide, producing bacteria found in clinical specimens.

Summary

OHO-C agar is an enriched differential medium used for the detection of hydrogen sulfide producing bacteria from clinical specimens. The nutritive base, Columbia agar, is supplemented with glutathione and lead acetate. Glutathione is added as a substrate for hydrogen sulfide production by the organism. Lead acetate reacts with hydrogen sulfide to produce a black lead sulfide precipitate, that develops within the colonies or on the agar surrounding them. This medium is prepared, stored, and dispensed under oxygen-free conditions to prevent the formation of oxidized products prior to use.

Formulation*

Pancreatic Digest of Casein	10.00	g
Meat Peptic Digest	5.00	g
Yeast Extract	5.00	g
Heart Pancreatic Digest	3.00	g
Corn Starch	1.00	g
Sodium Chloride	5.00	g
Agar	13.50	g
Lead Acetate	0.20	g
Hemin (0.1% solution)	5.00	mL
Menadione	0.01	g
Glutathione	1.00	g
DI Water	1.00	L

Final pH: 7.1 ± 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: OHO-C 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 35-37°C for 18-48 hours. Extended periods of incubation may be required to recover some anaerobes or for the hydrogen sulfide reaction to develop. 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, OHO-C will support good growth and hydrogen sulfide detection of oral anaerobic bacteria from clinical specimens. Black to grey halos surrounding the colonies, or black color in the center of colonies, usually signifies hydrogen sulfide production.

Limitations

OHO-C 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
Bacteroides fragilis	25285	Growth	24 hrs	
Prevotella melaninogenica	25845	Growth	24 – 48 hrs	
Fusobacterium necrophorum	25286	Growth	24 hrs	+ H_2S*
Fusobacterium nucleatum	25586	Growth	24 – 48 hrs	+ H_2S*
Clostridium perfringens	13124	Growth	24 hrs	+ H_2S*
Peptostreptococcus anaerobius	27337	Growth	24 – 48 hrs	
Peptostreptococcus magnus	29328	Growth	24 hrs	
Propionibacterium acnes or Clostridium difficile	6919 9689	Growth Growth	24 – 48 hrs 24 hrs	
Enterococcus faecalis	29212	Growth	24 hrs	
Campylobacter rectus	33238	Growth	24 – 48 hrs	
Veillonella parvula	10790	Growth	24 hrs	+ H_2S*

*H_2S production may require extended periods of incubation.

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

Organism	ATCC #	Expected Results	Special Reactions
F. nucleatum	25586	24 hrs	+ H_2S
F. necrophorum	25286	24 hrs	+ H_2S
C. perfringens	13124	24 hrs	+ H_2S
V. parvula	10790	24 hrs	+ H_2S
B. fragilis	25285	24 hrs	
P. anaerobius	27337	24 hrs	

Physical Appearance: OHO-C agar should appear slightly opaque and light yellow/green in color.

References

1. Holdeman, L. V., F. P. Cato and W. E. C. Moore. 1977. *Anaerobe Laboratory Manual*. Virginia Polytechnic Institute and State University. Blacksburg, VA 24061.
2. Turng, B-F, Guthmiller, JM, Minhah, GE, Falkler, WA. 1996. Development and Evaluation of a Selective and Differential Medium for the Primary Isolation of *Peptostreptococcus micros*. *Oral Microbiol Immunol* 5: 356 – 361.
3. Turng B-F, Minah GE, Falkler WA. 1997. Development of an Agar Medium for the Detection of Oral H_2S Producing Organisms. *J Dent Res* 76 (Spec Issue): 266, abstract # 1702.
4. El-Halabi M, Minah G, Turng B, Zhang M. 1999. Correlation between Volatile Sulfur Levels and Odorigenic Bacteria in Saliva. *J Dent Res* 78 (Spec Issue): abstract # 1478.
5. Jousimies-Somer, H. R., Summanen, P., Citron, D. M., Baron, E. J., Wexler, H. M. and S. M. Finegold. 2002. *Wadsworth – KTL Anaerobic Bacteriology Manual*. Star Publishing Co., Belmont, CA 94002.
6. Engelkirk, P. G., Duben-Engelkirk, J. and Dowell, V. R. 1992. *Principles and Practices of Clinical Anaerobic Bacteriology*. Star Publishing Co., Belmont, CA 94002.
7. 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.

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