Product Insert

LAKED BRUCELLA BLOOD AGAR (LBA)

Products

AS-115	Laked Brucella Blood Agar (LBA)	1 plate / pkg

Intended Use

Laked Brucella Blood Agar (LBA) is intended for the isolation, quantitation, and partial identification of obligately anaerobic bacteria from clinical specimens. This medium will also support the growth of aerobic and microaerophilic bacteria if incubated in the proper conditions.

Summary

LBA agar is an enriched, nonselective, and differential medium for the cultivation of obligate anaerobic bacteria. The nutritive base consists of casein, soy peptone, meat peptone, yeast extract, and dextrose. The medium is supplemented with hemin, vitamin K_1, and laked sheep blood to enhance the recovery and pigment production of *Prevotella* and *Porphyromonas* spp. 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
Hemin (0.1% solution)	5.00	mL
Vitamin K_1 (1.0% solution)	1.00	mL
Yeast Extract	2.00	g
Sodium Chloride	5.00	g
Sodium Bisulfite	0.10	g
L-Cystine	0.40	g
Sodium Hydroxide (4.0% solution)	4.00	mL
L-Tryptophan	0.20	g
Agar	15.00	g
Laked Sheep Blood	45.50	mL
DI Water	1.00	L

Final pH: 7.1 ± 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: LBA agar 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. 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, LBA agar will support good growth of most obligate anaerobes found in clinical infections. This medium will support typical pigment production by *Prevotella melaninogenica* and *Porphyromonas asaccharolytica*.

Limitations

LBA agar will not provide complete information for identification of bacterial isolates. Additional test procedures and media are required for complete identification. In some cases, LBA agar may be overgrown with swarming *Proteus* spp. or *Clostridium* spp. It is recommended that selective media such as Brucella Laked Blood Agar with Kanamycin and Vancomycin (LKV, catalog #: AS-112) and/or Brucella Blood Agar with Phenylethyl Alcohol (PEA, catalog #: AS-113) also be inoculated from clinical specimens to prevent such overgrowth and thus provide isolated colonies. 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	Pigment[t]
Porphyromonas asaccharolytica	25260	Growth	24 – 48 hrs	Pigment[t]
Fusobacterium necrophorum	25286	Growth	24 hrs	
Fusobacterium nucleatum*	25586	Growth	24 – 48 hrs	
Clostridium perfringens*	13124	Growth	24 hrs	
Peptostreptococcus anaerobius*	27337	Growth	24 hrs	
Staphylococcus aureus	25923	Growth	24 hrs	

* Organisms specified by CLSI for quality control testing of anaerobic blood agars

[t] Pigment production may require longer than 48 hours incubation time

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 Results	Special Reactions
B. fragilis	25285	24 hrs	
P. melaninogenica	25845	24 – 48 hrs	Pigment
F. necrophorum	25286	24 hrs	
P. assacharolytica	25260	24 – 48 hrs	Pigment

Physical Appearance: LBA agar should appear opaque to translucent burgundy red in color.

References

1. Dowell, V. R., Jr. and T. M. Hawkins. 1974. *Laboratory Methods in Anaerobic Bacteriology. CDC Laboratory Manual*. USDHEW C. D. C. Atlanta, GA 30333.
2. Dowell, V. R., Jr. and G. L. Lombard. 1977. *Presumptive Identification of Anaerobic Non-sporeforming Gram-negative Bacilli*. USDHEW, CDC. Atlanta, GA 30333.
3. Dowell, V. R., Jr., G. L. Lombard, F. S. Thompson and A. Y. Armfiedl. 1977. *Media for the Isolation, Characterization, and Identification of Obligately Anaerobic Bacteria*. USDHEW, CDC, Atlanta, GA 30333.
4. Holdeman, L. V., F. P. Cato and W. E. C. Moore. 1977. *Anaerobe Laboratory Manual*. Virginia Polytechnic Institute and State University. Blacksburg, VA 24061.
5. Somer-Jousimies, 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. 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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