FASTIDIOUS ANAEROBE AGAR (7531)

Intended Use
Fastidious Anaerobe Agar is used for the cultivation of anaerobic microorganisms.

Product Summary and Explanation
Fastidious Anaerobe Agar is a custom formulation used for the cultivation of various fastidious anaerobes from clinical and nonclinical specimens. Anaerobic bacteria are the most common organisms colonizing humans, and a frequent cause of serious infections.[1] Typically, anaerobic infections are characterized by polymicrobic mixtures of aerobic and anaerobic microbial flora, creating a challenge for anaerobic isolation.[1]

Principles of the Procedure
Peptone provides nitrogen and vitamin sources in Fastidious Anaerobe Agar. Sodium Chloride maintains the osmotic balance of the medium. Soluble Starch is present to absorb any toxic metabolites. Sodium Bicarbonate increases the aerotolerance by acting as an oxygen scavenger. Sodium Pyrophosphate is a buffering agent. Glucose is the carbon source. Sodium Pyruvate is added as an energy source and as an oxygen scavenger for asaccharolytic cocci, including *Veillonella* spp. L-Cysteine HCl•H_20 is a reducing agent and growth stimulant for anaerobes. L-Arginine is added to ensure the growth of *Eubacterium lentum*,[2] and Hemin and Vitamin K are growth factors required by several *Bacteroides* spp.[3] Sodium Succinate improves the growth of *Prevotella melaninogenica* and *Bacteroides* spp.[4] Agar is the solidifying agent.

Formula / Liter
Peptone	23 g
Sodium Chloride	5 g
Soluble Starch	1 g
Sodium Bicarbonate	0.4 g
Glucose	1 g
Sodium Pyruvate	1 g
L-Cysteine HCl•H_20	0.5 g
Sodium Pyrophosphate	0.25 g
L-Arginine	1 g
Sodium Succinate	0.5 g
Hemin	0.01 g
Vitamin K	0.001 g
Agar	12 g

Final pH: 7.2 ± 0.2 at 25°C
Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precautions
1. For Laboratory Use.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions
1. Suspend 45.7 g of the medium in one liter of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.
4. Prepare 5 to 10% blood agar by aseptically adding the appropriate volume of sterile defibrinated blood to melted sterile agar medium, cooled to 45 - 50°C.

Quality Control Specifications
Dehydrated Appearance: Powder is homogeneous, free flowing, and light beige to grey-green beige.

Prepared Appearance: Prepared medium supplemented with 5 - 10% blood is opaque and red.

Expected Cultural Response: Cultural response on Fastidious Anaerobe Agar supplemented with blood at 35°C after 48 - 72 hours of incubation under anaerobic conditions.

Microorganism	Response
Bacteroides fragilis ATCC® 25285	growth
Clostridium perfringens ATCC® 13124	growth
Peptostreptococcus anaerobius ATCC® 27337	growth

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure
Consult appropriate references for the isolation and identification of anaerobic bacteria.

Results
Refer to appropriate references for results.

Storage
Store sealed bottle containing the dehydrated medium at 2 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

Expiration
Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing or appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitation of the Procedure
Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

Packaging

Fastidious Anaerobe Agar	**Code No.**	**7531A**	**500 g**
		7531B	**2 kg**
		7531C	**10 kg**

References

1. **Murray, P. R., E. J. Baron, M. A. Pfaller, F. C. Tenover, and R. H. Yolken (eds.).** 1995. Manual of clinical microbiology, 6th ed. American Society for Microbiology, Washington, D.C.
2. **Sperry, J. F. and T. D. Wilkins.** 1976. Arginine, a growth-limiting factor for *Eubacterium lentum*. J. Bacteriol. **127**:780-784.
3. **Gibbons, R. J. and J. B. MacDonnald.** 1960. Haemin and vitamin K compounds as required factors for the cultivation of certain strains of *Bacteroides melaninogenicus*. J. Bacteriol. **80**:164-170.
4. **Keudell, K. C. and A. F. Milford.** 1971. Succinate as a growth factor for *Bacteroides melaninogenicus*. J. Bact. **108**:175-178.

Technical Information
Contact Acumedia Manufacturers, Inc. for Technical Service or questions involving dehydrated culture media preparation or performance at (517)372-9200 or fax us at (517)372-2006.

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