BRUCELLA BROTH (7121)

Intended Use
Brucella Broth is used for the cultivation of *Brucella* spp. and other fastidious microorganisms.

Product Summary and Explanation
Brucella Broth is prepared according to the APHA formula for Albimi Broth.[1] Brucella Broth is a general purpose medium for the cultivation of *Brucella* spp. and fastidious microorganisms including, *Streptococcus pneumoniae*, *Streptococcus viridans*, and *Neisseria meningitidis*.[2] *Brucella* spp. is the causative agent for brucellosis, a zoonotic disease with a domestic-animal reservoir.[3] Transmission by milk, milk products, meat, and direct contact with infected animals is the usual route of exposure.[3]

Brucella Broth is recommended for the isolation of *Brucella* spp. from blood cultures,[4,5] and specified in standard methods for the examination of food.[6]

Principles of the Procedure
The nitrogen and carbon sources are provided by Enzymatic Digest of Casein and Enzymatic Digest of Animal Tissue in Brucella Broth. Yeast Extract is the vitamin source in this medium. Dextrose is the carbohydrate source, and Sodium Chloride maintains the osmotic environment. Sodium Bisulfite is added to enhance growth.

Formula / Liter
Enzymatic Digest of Casein ..... 10 g
Enzymatic Digest of Animal Tissue..... 10 g
Yeast Extract..... 2 g
Sodium Chloride ..... 5 g
Dextrose..... 1 g
Sodium Bisulfite ..... 0.1 g
Final pH: 7.0 ± 0.2 at 25°C
Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precautions
1. For Laboratory Use.
2. *Brucella* spp. are classified as Biosafety Level 3 pathogens. Procedures with live cultures and antigens must be confined to a Class II biological safety cabinet (BSC).[3]
3. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions
1. Dissolve 28 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.

Quality Control Specifications
Dehydrated Appearance: Powder is homogeneous, free flowing, and beige.

Prepared Appearance: Prepared medium is clear and light amber.

Expected Cultural Response: Cultural response in Brucella Broth at 35°C under 3% CO_2 after 18 - 72 hours incubation.

Microorganism	Response
Brucella abortus ATCC® 4315	growth
Brucella melitensis ATCC® 4309	growth
Brucella suis ATCC® 4314	growth
Escherichia coli ATCC® 25922	growth
Streptococcus pyogenes ATCC® 19615	growth

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

Test Procedure
Refer to appropriate references for a complete discussion on the isolation and identification of *Brucella* spp.[4,5]

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 if 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

Brucella Broth	**Code No.**	**7121A**	**500 g**
		7121B	**2 kg**
		7121C	**10 kg**

References

1. **Hausler, W. J. (ed.).** 1976. Standard methods for the examination of dairy products, 14th ed. American Public Health Association, Washington, D.C.
2. **MacFaddin, J. D.** 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, vol. 1, p. 110-114. Williams & Wilkins, Baltimore, MD.
3. **Moyer, N. P., and L. A. Holcomb.** 1995. *Brucella*, p. 549-555. *In* P. R. Murray, E. J. Baron, M. A. Pfaller, F. C. Tenover, and R. H. Yolken (eds.). Manual of clinical microbiology, 6th ed. American Society for Microbiology, Washington, D.C.
4. **Isenberg, H. D. (ed.).** 1992. Clinical microbiology procedures handbook. American Society for Microbiology, Washington, D.C.
5. **Baron, E. J., L. R. Peterson, and S. M. Finegold.** 1994. Bailey & Scott's diagnostic microbiology, 9th ed. Mosby-Year Book, Inc., St. Louis, MO.
6. **Vanderzant, C., and D. F. Splittstoesser (eds.).** 1992. Compendium of methods for the microbiological examination of food, 3rd ed. American Public Health Association, Washington, D.C.

Technical Information
Contact Acumedia Manufacturers, Inc. for Technical Service or questions involving dehydrated culture media preparation or performance at (410)780-5120 or fax us at (410)780-5470.