



QUALITY CONTROL PROCEDURES

I INTRODUCTION

Brucella Broth is used for the cultivation of a variety of fastidious and nonfastidious microorganisms.

II PERFORMANCE TEST PROCEDURE

1. Inoculate representative samples with the cultures listed below.
 - a. Inoculate using standardized cultures (frozen working, or 18 – 24 h **Trypticase™** Soy Broth cultures) adjusted to deliver 100 – 300 CFUs per 1.0 mL.
 - b. Incubate all tubes at 35 ± 2 °C with 3 – 5% CO₂ with caps loosened (all tubes/caps must be wrapped with parafilm before incubation).
2. Read at regular intervals for 7 days.
3. Expected Results

Organisms	ATCC™	Recovery
* <i>Brucella abortus</i>	RB51	Growth
* <i>Brucella canis</i>	23365	Growth
* <i>Streptococcus pyogenes</i>	19615	Growth

*Recommended organism strain for User Quality Control.

III ADDITIONAL QUALITY CONTROL

1. Examine the medium for signs of deterioration as described under "Product Deterioration."
2. Visually examine representative tubes to assure that any existing physical defects will not interfere with use.
3. Determine the pH potentiometrically at room temperature for adherence to the specification of 7.0 ± 0.2 °C.
4. Incubate uninoculated representative tubes at 20 – 25 °C and 30 – 35 °C for 72 h and examine for microbial contamination.

PRODUCT INFORMATION

IV INTENDED USE

A general purpose medium used in qualitative procedures for the cultivation of a variety of fastidious and nonfastidious microorganisms.

V SUMMARY AND EXPLANATION

Brucella Broth is a general purpose medium capable of supporting the growth of a wide variety of microorganisms, including the more nutritionally fastidious species.¹

VI PRINCIPLES OF THE PROCEDURE

Enzymatic digests of casein and animal tissue provide amino acids and other complex nitrogenous substances. Sodium chloride provides osmotic equilibrium. Dextrose provides an energy source. A reducing agent, sodium bisulfite, lowers the redox potential of the medium.

VII REAGENTS

Brucella Broth

Approximate Formula* Per Liter Purified Water

Pancreatic Digest of Casein.....	10.0 g	Sodium Chloride	5.0 g
Peptic Digest of Animal Tissue	10.0 g	Sodium Bisulfite	0.1 g
Yeast Extract.....	2.0 g	Dextrose	1.0 g

*Adjusted and/or supplemented as required to meet performance criteria.

Warnings and Precautions: For *in vitro* Diagnostic Use.

Tubes with tight caps should be opened carefully to avoid injury due to breakage of glass.

Storage Instructions: On receipt, store tubes in the dark at 2 – 25 °C. Avoid freezing and overheating. Do not open until ready to use. Minimize exposure to light. Tubed media stored as labeled until just prior to use may be inoculated up to the expiration date and incubated for recommended incubation times. Allow the medium to warm to room temperature before inoculation.

Product Deterioration: Do not use tubes if they show evidence of contamination, discoloration, precipitation, evaporation, or other signs of deterioration.

VIII SPECIMEN COLLECTION AND HANDLING

This medium is not intended for use directly with specimens, except as a "back-up" enrichment medium in addition to the primary plating medium. Refer to appropriate texts for details of specimen collection and handling procedures.²⁻⁵

Observe established precautions against microbiological hazards throughout all procedures. All specimens should be handled according to CDC-NIH recommendations for any potentially infectious human serum, blood or other body fluids. Prior to discarding, sterilize specimen containers and other contaminated materials by autoclaving.

IX PROCEDURE

Material Provided: Brucella Broth

Materials Required But Not Provided: Ancillary culture media, reagents, quality control organisms and laboratory equipment as required.

Test Procedure: Observe aseptic techniques.

For subcultures and inoculum standardization, organisms to be cultured must first be isolated in pure culture on an appropriate solid medium. Using a sterile inoculating loop or needle, transfer fresh growth from the isolation plate to the tubed medium. Incubate the tubes at 35 °C in an appropriate atmosphere for the organism to be cultured. Examine for growth after 18 – 24 h of incubation.

User Quality Control: See “Quality Control Procedures.”

Quality control requirements must be performed in accordance with applicable local, state and/or federal regulations or accreditation requirements and your laboratory’s standard Quality Control procedures. It is recommended that the user refer to pertinent CLSI guidance and CLIA regulations for appropriate Quality Control practices.

X RESULTS

Growth in broth media is indicated by the presence of turbidity compared to an uninoculated control. Broth cultures should be held for at least a week before discarding as negative.

XI LIMITATIONS OF THE PROCEDURE

For identification, the organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification. Consult references for detailed information and recommended procedures.^{3,6-8}

XII AVAILABILITY

Cat. No.	Description
296185	BD BBL™ Brucella Broth, Ctn. of 100 size K tubes, 5.0 mL

XIII REFERENCES

1. MacFaddin, J.F. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, vol 1. Williams & Wilkins, Baltimore.
2. Isenberg, H.D., F.D. Schoenknecht, and A. von Graevenitz. 1979. Cumitech 9, Collection and processing of bacteriological specimens. Coordinating ed., S.J. Rubin. American Society for Microbiology, Washington, D.C.
3. Forbes, B.A., D.F. Sahm and A.S. Weissfeld (ed.). 1998. Bailey & Scott’s diagnostic microbiology, 10th ed. Mosby, Inc. St. Louis.
4. Miller, J.M., and H.T. Holmes. 1999. Specimen collection, transport, and storage, p. 33-63. In M.A. Pfaller, F.C. Tenover, and R.H. Tenover (ed.), Manual of clinical microbiology, 7th ed. American Society for Microbiology, Washington, D.C.
5. Shapiro, D.S. and J.D. Wong. 1999. *Brucella*, p. 625-631. In M.A. Pfaller, F.C. Tenover, and R.H. Tenover (ed.), Manual of clinical microbiology, 7th ed. American Society for Microbiology, Washington, D.C.
6. M.A. Pfaller, F.C. Tenover, and R.H. Tenover (ed.). 1999. Manual of clinical microbiology, 7th ed. American Society for Microbiology, Washington, D.C.
7. Krieg, N.R., and J.G. Holt (ed.). 1984. Bergey’s manual of systematic bacteriology, vol. 1. Williams & Wilkins, Baltimore.
8. Sneath, P.H.A., and J.G. Holt (ed.). 1986. Bergey’s manual of systematic bacteriology, vol. 2. Williams & Wilkins, Baltimore.

Technical Information: In the United States, contact BD Technical Service and Support at 800-638-8663 or www.bd.com/ds.

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