

Instructions for Use

REF - BM0554

Brucella Broth

Bottled Media

1. Intended Use

For *in vitro* diagnostic use. BM0554 Brucella Broth was developed to cultivate *Brucella* spp. from a wide variety of clinical samples but is also widely used as a general enrichment broth for both fastidious and non-fastidious organisms.

2. Composition*

<u>Ingredient</u>	<u>g/L</u>
Enzymatic digest of casein	10.0
Enzymatic digest of animal tissue	10.0
Yeast extract	2.0
Sodium chloride	5.0
Glucose	1.0
Sodium hydrogen sulphite	0.1

*Adjusted/supplemented as needed to meet performance requirements

3. Summary and Explanation

Brucella Broth is used for preliminary enrichment and cultivation of *Brucella* species and other fastidious microorganisms. It has been developed from the American Public Health Association (APHA) formulation for Albimi broth ⁽¹⁾.

Brucella species are level 3 pathogens and cause brucellosis, a zoonotic disease. It is usually transmitted through milk, dairy products, meat, and direct contact with infected animals.

4. Principle

The enzymatic digest of casein, enzymatic digest of animal tissues and yeast extract provide the necessary carbon, nitrogen and vitamin sources for this medium. Glucose is a fermentable carbohydrate and sodium chloride maintains the osmotic balance of the medium. Sodium bisulfite is added to enhance growth.

5. Physical Characteristics

	<u>Appearance and Colour</u>	<u>pH</u>
Medium	Straw liquid	7.0 ± 0.2

6. Materials Provided

BM0554 can be provided in 50 x 3ml in Thin Wall Bijous (product code: BM0554-M003-3). Each bottle is ink-jet printed with (abbreviated) product name, product code, lot number and expiry date.

7. Materials Needed but not Provided

Standard microbiological laboratory materials e.g., sterile loops or swabs, collection containers, incubators, media for isolation and quality control organisms.

8. Specimens

BM0554 Brucella Broth is suitable for the testing of the following specimens:

- Food Industry: products for human consumption, particularly dairy products, animal feed and environmental samples
- Clinical: Blood, biopsy material, swabs, and pus from infected sites.

Sampling and transport equipment must be used in accordance with the end user's suppliers' recommendations. Refer to appropriate standard method or local guidance on sample collection and subsequent processing.

9. Test Procedures and Interpretation of results

Inoculate the specimen as soon as possible after it is received in the laboratory.

Food and Environmental Specimens:

For solid samples, prepare a homogenised suspension using a ratio of 1:10 of sample to Maximum Recovery Diluent (E&O BM0760). With homogenised and liquid specimens, media should be inoculated with 1ml of the specimen and incubate aerobically at 37 ± 1°C for 18-24 hours. If attempting to recover *Brucella*, incubate up to 4 weeks in 5-10% CO₂.

Clinical Specimens:

Inoculate specimen, or pre-enriched sample, directly into the medium and incubate aerobically at 37 ± 1°C for 18-24 hours. If attempting to recover *Brucella*, incubate up to 4 weeks in 5-10% CO₂.

Growth is indicated by turbidity in the test isolate bottle when compared to an uninoculated tube of Brucella Broth. If growth appears, Gram stain and subculture to appropriate media for further testing and identification procedures. Biochemical and, if indicated, serological testing using pure cultures are necessary for complete identification.

10. Quality Control

Organism	Incubation	Result (Specificity)
<i>E. coli</i> (NCTC 12241) <i>S. pyogenes</i> (NCTC 12696) <i>S. aureus</i> (NCTC 12981)	37 ± 1°C for 18-24 hours. 37 ± 1°C for 18-24 hours. 37 ± 1°C for 18-24 hours. Subculture onto E&O PP0280 Tryptone Soya Agar and incubate at 37 ± 1°C for 24-48 hours.	Broth: Good turbidity. Subplate: Cream colonies Broth: Good turbidity. Subplate: White colonies Broth: Good turbidity. Subplate: White colonies

It is the responsibility of the user to perform Quality Control testing taking into consideration the intended use of the medium and in agreement with any local relevant guidelines (e.g., frequency, strains used, atmosphere, incubation temperature).

11. Performance

To fully verify BM0554 Brucella Broth performance, samples were tested to assess turbidity as well as colony morphology and recovery level. Samples were inoculated and incubated aerobically at 37 ± 1°C for 24-48 hours. After, 1µl was subcultured onto E&O PP0280 Tryptone Soya Agar and incubated at 37 ± 1°C for 24-48 hours. All samples showed expected recovery and morphology of the required test organisms: *Escherichia coli* (NCTC 12241), *Streptococcus pyogenes* (NCTC 12696) and *Staphylococcus aureus* (NCTC 12981). Therefore, it can be concluded that BM0554 Brucella Broth, meets performance criteria when used according to the instructions outlined above. Trend analysis data available upon request.

12. Limitations of the Media

- Due to natural variation, some strains may grow poorly on this medium.

13. Precautions and Warnings

This product is considered non-hazardous under CLP regulations. Wear such PPE as recommended by laboratory COSSH assessment. During and after use, always handle all materials in a manner conforming to Good Laboratory Practices and consider that material under test should be regarded as a potential biohazard if mishandled.

Refer to Bottled Media Material Safety Data Sheet.

14. Storage conditions and Shelf life

Store BM0554 in the original bottle with the lid tightly closed at between 15 and 30°C. Kept under these conditions it may be used up to date of expiry shown on product label.

Dispose of in accordance with local and national authority requirements. Do not use media if it is contaminated, discoloured or out of date. Additionally, do not use medium if it has been stored inappropriately or the packaging has been damaged.

15. References

1. Hausler, W. (ed.) (1976) Standard methods for the examination of dairy products, 14th ed. Washington DC: APHA.

Version History*

001 30/03/23 - New Document Created

*Note: minor typographical, grammatical, and formatting changes are not included in the revision history.



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IFU/BM0554 REV. 001

TABLE OF APPLICABLE SYMBOLS

REF Catalogue number	LOT Batch code	IVD In vitro Diagnostic Medical Device	Manufacturer	Use by
Temperature limitation	Contents sufficient for <n> tests	Consult Instructions for Use	Keep away from direct light	Store in a dry place