

# Instructions for Use

## BF-BEB, MODIFIED (2X)

Cat. no. U401	BF-BEB, Modified (2X), 125mL Polycarbonate Bottle, 30ml	16 bottles/box
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### INTENDED USE

Hardy Diagnostics BF-BEB, Modified (2X) (Blood-Free Bolton Enrichment Broth, Double Strength) is recommended for the selective enrichment of *Campylobacter* species from food, dairy, and poultry products.

This product is not intended to be used for the diagnosis of human disease.

### SUMMARY

BF-BEB, Modified (2X) (Blood-Free Bolton Enrichment Broth, Double Strength) is formulated in accordance with the USDA Microbiology Laboratory Guidebook reference formulation. The broth is double (2X) strength to accommodate dilution during use; the medium is designed to be combined with an equal volume of poultry rinsate solution such as Buffered Peptone Water ([Cat. no. U143](#)). USDA-FSIS MLG 41.04 outlines use of this medium for enrichment analysis for control cultures, for rinsate, or for sponge analysis. It is believed an enrichment step with BF-BEB may be used to supplement direct plating for increased sensitivity of qualitative detection for low levels of potentially injured cells. After enrichment, the broth is subcultured to Campy Cefex Agar ([Cat. no. A122](#)) for isolation of *Campylobacter* colonies.

Hardy Diagnostics BF-BEB, Modified (2X) (Blood-Free Bolton Enrichment Broth, Double Strength) contains peptones, lactalbumin hydrolysate, yeast extract,  $\alpha$ -Ketoglutamic acid, and hemin which act as sources of essential nutrients, amino acids, vitamins, minerals, and growth factors to support cell growth. Sodium carbonate, sodium pyruvate, and sodium metabisulfite help increase the aerotolerance of *Campylobacter* spp. by scavenging oxygen molecules from the medium. Sodium chloride aids in maintaining osmotic equilibrium. Cycloheximide, Cefoperazone, Vancomycin, and Trimethoprim are selective agents used to prevent growth of competing flora in heavily contaminated samples.

### FORMULA

Ingredients per liter of deionized water:\*

Meat peptone	20.0g
Lactalbumin hydrolysate	10.0g
Yeast extract	10.0g
Sodium chloride	10.0g
$\alpha$ -Ketoglutamic acid	2.0g
Sodium carbonate	1.2g

Sodium pyruvate	1.0g
Sodium metabisulfite	1.0g
Hemin	0.02g
Cycloheximide	50.0mg
Cefoperazone	40.0mg
Vancomycin	40.0mg
Trimethoprim	40.0mg

Final pH 7.4 +/- 0.2 at 25°C.

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

## STORAGE AND SHELF LIFE

Storage: Upon receipt, store away from direct light at 2-8°C. Media should not be used if there are any signs of deterioration, discoloration, contamination, or if the expiration date has passed. Product is light and temperature sensitive; protect from light, excessive heat, moisture, and freezing.

The expiration date on the product label applies to the product in its intact packaging when stored as directed. The product may be used and tested up to the expiration date on the product label and incubated for the recommended incubation times as stated below.

Refer to the document "[Storage](#)" for more information.

## PRECAUTIONS

This product may contain components of animal origin. Certified knowledge of the origin and/or sanitary state of the animals does not guarantee the absence of transmissible pathogenic agents. Therefore, it is recommended that these products be treated as potentially infectious, and handle observing the usual universal blood precautions. Do not ingest, inhale, or allow to come into contact with skin.

This product is for laboratory use only. It is to be used only by adequately trained and qualified laboratory personnel. Observe approved biohazard precautions and aseptic techniques. All laboratory specimens should be considered infectious and handled according to "standard precautions." Refer to the document "[Guidelines for Isolation Precautions](#)" from the Centers for Disease Control and Prevention.

For additional information regarding specific precautions for the prevention of the transmission of all infectious agents from laboratory instruments and materials, and for recommendations for the management of exposure to infectious disease, refer to CLSI document M29: *Protection of Laboratory Workers from Occupationally Acquired Infections*.

Sterilize all biohazard waste before disposal.

Refer to the document "[Precautions When Using Media](#)" for more information.

## PROCEDURE

**Sample Collection:** Consult reference methods for information on sample collection.<sup>(1-2)</sup> Samples should be submitted directly to the laboratory without delay and protected from excessive heat and cold. If there is to be a delay in processing, the sample should be inoculated onto an appropriate transport medium and refrigerated until inoculation.

**Method of Use:** Allow the medium to warm to room temperature prior to inoculation. Consult references for information concerning inoculation procedures.<sup>(1-2)</sup>

## INTERPRETATION OF RESULTS

Consult listed references for appropriate interpretation of results.<sup>(1-2)</sup>

## LIMITATIONS

It is recommended that biochemical, immunological, molecular, or mass spectrometry testing be performed on colonies from pure culture for complete identification of bacteria and/or fungi.

BF-BEB, Modified (2X) is a double strength formulation designed to be diluted with an equal volume of poultry rinse in Buffered Peptone Water ([Cat. no. U143](#)) or similar rinsate solution to result in a single strength enrichment broth.

Refer to the document "[Limitations of Procedures and Warranty](#)" for more information.

## MATERIALS REQUIRED BUT NOT PROVIDED

Standard microbiological supplies and equipment such as loops, swabs, applicator sticks, other culture media such as Buffered Peptone Water ([Cat. no. U143](#)) and Campy Cefex Agar ([Cat. no. A122](#)), incinerators, incubators, etc., as well as serological and biochemical reagents, are not provided.

## QUALITY CONTROL

Hardy Diagnostics tests each lot of commercially manufactured media using appropriate quality control microorganisms and quality specifications as outlined on the Certificate of Analysis (CofA) and the CLSI document M22-A3 *Quality Assurance for Commercially Prepared Microbiological Culture Media*. The following microorganisms are routinely used for testing at Hardy Diagnostics:

Test Organisms	Inoculation Method*	Incubation			Results
		Time	Temperature	Atmosphere	
<i>Campylobacter jejuni</i> ATCC® 33291	A	24-48hr	35°C	Microaerophilic**	Growth upon subculture***
<i>Escherichia coli</i> ATCC® 25922	B	24-48hr	35°C	Aerobic	Partial to complete inhibition upon subculture***

\* Refer to the document "[Inoculation Procedures for Media QC](#)" for more information.

\*\* Atmosphere of incubation is enriched with 5% O<sub>2</sub>, 10% CO<sub>2</sub>, and 85% N<sub>2</sub>.

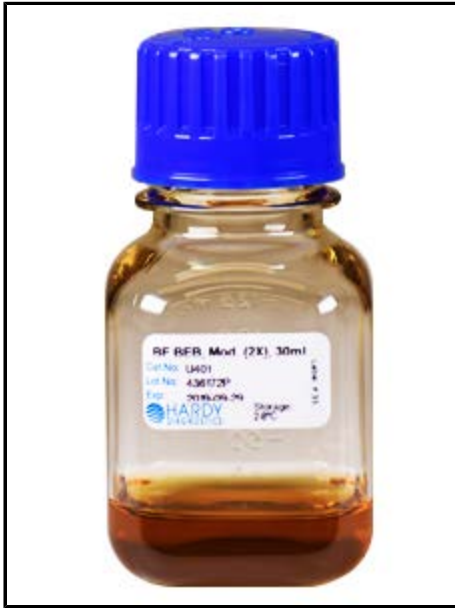
\*\*\* Broth diluted with equal volume of BPW just prior to inoculation and subcultured to Chocolate Agar to confirm performance.

## USER QUALITY CONTROL

End users of commercially prepared culture media should perform QC testing in accordance with applicable government regulatory agencies, and in compliance with accreditation requirements. Hardy Diagnostics recommends end users check for signs of contamination and deterioration and, if dictated by laboratory quality control procedures or regulation, perform quality control testing to demonstrate growth or a positive reaction and to demonstrate inhibition or a negative reaction, if applicable. Hardy Diagnostics quality control testing is documented on the certificate of analysis (CofA) available from Hardy Diagnostics [Certificate of Analysis](#) website. Also refer to the document "[Finished Product Quality Control Procedures](#)," and the CLSI document M22-A3 *Quality Assurance for Commercially Prepared Microbiological Culture Media* for more information on the appropriate QC procedures. See the references below.

## PHYSICAL APPEARANCE

BF-BEB, Modified (2X) should appear clear to hazy, and light amber in color.



Uninoculated bottle of BF-BEB, Modified (2X) (Cat. no. U401).

## REFERENCES

1. United States Department of Agriculture-Food Safety Inspection Service (USDA-FSIS). Microbiology Laboratory Guidebook (MLG) [41.04 Isolation and Identification of Campylobacter jejuni/coli/lari from Poultry Rinse, Sponge, and Raw Product Samples](#). 2016. USDA/FSIS/OPHS Athens, GA.
2. USDA/FSIS/OPHS. [Detection and enumeration method for Campylobacter jejuni/coli from poultry rinses and sponge samples](#). USDA/FSIS/OPHS Athens, GA.

ATCC is a registered trademark of the American Type Culture Collection.

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[Ordering Information](#)

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