

# Bolton Broth



Selective medium used for the cultivation and isolation of *Campylobacter* spp..

\*Equally use with MFDS (MB-B2129K) and QIA (MB-B2129Q).

## • CONTENTS (Liter)

Meat Peptone	10.0 g
Lactalbumin Hydrolysate	5.0 g
Yeast Extract	5.0 g
Sodium Chloride	5.0 g
Hemin	0.01 g
Sodium Pyruvate	0.5 g
$\alpha$ -Ketoglutaric Acid	1.0 g
Sodium Metabisulphite	0.5 g
Sodium Carbonate	0.6 g

Final pH =  $7.4 \pm 0.2$  at  $25^{\circ}\text{C}$ .

## • PROCEDURE

Suspend 27.61 G in 1 L of distilled water and heat gently to dissolve the medium completely. Sterilize by autoclaving at  $121^{\circ}\text{C}$  for 15 minutes. Cool to  $50^{\circ}\text{C}$ . Aseptically add 50 mL of Horse Blood Lysed (MB-H1885) and the contents of 2 vials of *Campylobacter* Selective supplement, Bolton (MB-C2505). Mix well. Dispense the broth into sterile containers.

### **Campylobacter Selective supplement, Bolton\*\***

1 vial contents (each vial is sufficient for 500 mL of medium)

Vancomycin	10.0 mg
Cefoperazone	10.0 mg
Trimethoprim	10.0 mg
Cycloheximide	25.0 mg

\*\*Equally use with MB-C2505P and MB-C2505Q

## • INTERPRETATION

Bolton Broth is a selective enrichment broth used for the detection of *Campylobacter* spp. Meat peptone, lactalbumin hydrolysate, and yeast extract provide nitrogen, carbon, amino acids, and vitamins. Hemin and horse blood lysed provide essential growth factors. Sodium chloride maintains the osmotic balance of the medium. Sodium pyruvate, sodium metabisulphite, and sodium carbonate increase the aerotolerance of *Campylobacter* spp. by acting as oxygen scavengers. The addition of cefoperazone, cycloheximide, trimethoprim, and vancomycin are selective agents for heavily contaminated samples.

## • TECHNIC

Inoculate the specimen with stab using a sterile needle to the medium. Shake gently for spreading microorganisms. Incubate at  $35 - 37^{\circ}\text{C}$  for 4 - 5 hours microaerophilic condition. And then incubate at  $42 \pm 1^{\circ}\text{C}$  for 24 - 48 hours under microaerophilic condition. Refer appropriate references for recommended test procedure.

## • QUALITY CONTROL FOR USE

### Dehydrated medium

Appearance: free-flowing, homogeneous.

Color: light yellow to brownish yellow.

### Prepared medium

Appearance: slightly opalescent.

Color: yellowish-brown.

Incubation conditions: first,  $35 - 37^{\circ}\text{C}$  / 4 - 5 hours / microaerophilic condition

second,  $42 \pm 1^{\circ}\text{C}$  / 24 - 48 hours / microaerophilic condition

Microorganism	ATCC	Inoculum CFU	Growth
<i>Campylobacter jejuni</i>	33291	50-100	good
<i>Escherichia coli</i>	25922	$\geq 10^3$	inhibited

## • STORE

The powder is very hygroscopic. Store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared medium at 2-8°C.

## • REFERENCES

1. FDA Bacteriological Analytical Manual, 8th edition (1988).
2. Refer to the MFDS and QIA.

## • PACKAGE

Cat. No : MB-B2129 Bolton Broth	500 G
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## • MICROBIAL CULTURE IMAGES



None      *C. jejuni*      *E. coli*  
ATCC 33291      ATCC 25922  
( $\geq 10^8$ CFU)      ( $\geq 10^8$ CFU)

Incubation conditions : 36°C, 24-48h