



Blood Free Campylobacter Broth Base

M1318

Intende use

Rcommended for the selective isolation and differentiation of *Campylobacter species*.

Composition**

Ingredients	g/ L
Peptone	10.000
HM Peptone B#	10.000
Tryptone	3.000
Sodium chloride	5.000
Sodium deoxycholate	1.000
Ferrous sulphate	0.250
Sodium pyruvate	0.250
Charcoal, bacteriological	4.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Beef extract

Directions

Suspend 16.75 grams in 500 ml purified/distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of CCDA Selective Supplement (FD135). Mix well and dispense into sterile tubes.

Principle And Interpretation

*Campylobacter*¹ s are carried in the intestinal tract of animal and therefore contaminate foods of animal origin (1). *Campylobacter* causes intestinal upset or abortion in animals. It is also one of the most important causes of human gastroenteritis, particularly in children. Initially blood was used in the isolation of *Campylobacter*. But, later it was reported by Bolton et al (2) that charcoal could be effectively used in place of blood. This rules out the variability obtained due to the use of blood.

Blood Free Campylobacter Broth Base is used for selective isolation of *Campylobacter species*. *Campylobacter species* are highly resistant to cefoperazone, an antibiotic which effectively suppresses growth of *Pseudomonas* and *Enterobacteriaceae* (3,4,5). Addition of cefoperazone increases the selectivity of the medium. Due to this addition, the medium is also known as Campylobacter Charcoal Differential Agar (CCDA). Charcoal, sodium pyruvate and ferrous sulphate reduces the aero tolerance of medium by quenching photo chemically generated toxic oxygen derivatives (5). Peptone, tryptone and HM peptone B serve as sources of essential nutrients and amino acids. Casein is added to help grow certain strains of nalidixic acid resistant thermophilic *Campylobacter* from environmental samples (6). Amphotericin B suppresses the growth of yeast and mold contaminants.

Type of specimen

Clinical material : stool; Food samples.

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (7,8).

For food samples follow appropriate techniques for handling specimens as per established guidelines (1).

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use. For professional use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. Some species of *Campylobacter* may show poor growth due to nutritional variations.
2. Further biochemical identification is required for complete identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Grey to black homogeneous free flowing powder

Colour and Clarity of prepared medium

Black coloured opaque solution in tubes

Reaction

Reaction of 3.35% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

Cultural characteristics observed with added 1 vial of CCDA Selective Supplement(FD135) after an incubation at 30°C for 72 hours.

Organism	Inoculum (CFU)	Growth
<i>Campylobacter coli</i> ATCC 33559	50-100	good-luxuriant
<i>Campylobacter jejuni</i> ATCC 29428 (00156*)	50-100	good-luxuriant
<i>Campylobacter laridis</i> ATCC 35222	50-100	good-luxuriant
<i>Escherichia coli</i> ATCC 25922 (00013*)	>=10 ⁴	inhibited

Key : (*) - Corresponding WDCM numbers

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (7,8).

Reference

1. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
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5. Karmali M. A., et al, 1986, J. Clin. Microbiol., 23:456
6. Koneman E. W., Allen S. D., Janda W. M., Schreckenberger P. C., Winn W. C. Jr., 1992, Colour Atlas and Textbook of Diagnostic Microbiology, 4th Ed., J. B. Lippincott Company.
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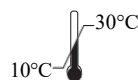
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