59751 Blood Free Campylobacter Broth
(Blood-Free Campylobacter Broth; Modified CCDA – Preston Broth; Modified Charcoal Cefoperazone Desoxycholate Broth)

Used for selective isolation and differentiation of *Campylobacter* species.

0B**Composition:**

Ingredients	Grams/Litre
Beef extract	10.0
Peptic digest of animal tissue	10.0
Casein enzymic hydrolysate	3.0
Sodium chloride	5.0
Sodium deoxycholate	1.0
Ferrous sulphate	0.25
Sodium pyruvate	0.25
Charcoal bacteriological	4.0
Final pH (at 25°C) 7.4 ± 0.2	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.
Appearance: Faintly beige coloured, homogeneous, free flowing powder.
Color and Clarity: Light brownish-yellow coloured, clear solution.

Directions :
Suspend 16.75 grams in 500 ml distilled water. Heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs. pressure (121 °C) for 15 minutes. Cool to 45-50°C. Aseptically add 1 vial of CCDA-Selektiv-Supplement (Cat. No. 77093). Mix well before dispensing into sterile tubes.

Principle and Interpretation:
Campylobacters 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 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 (4, 5, 6). 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 aerotolerance of medium by quenching photochemically generated toxic oxygen derivatives (6).
Peptic digest of animal tissue, casein enzymic hydrolysate and beef extract 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 (3). Amphotericin B suppresses the growth of yeast and mold contaminants.

Cultural characteristics after up to 72 hours at 30°C.

Organisms (ATCC)	Inoculum [cfu]	Recovery
Campylobacter coli (ATCC 33559)	*50-100*	+++
Campylobacter jejuni (ATCC 29428)	*50-100*	+++
Campylobacter laridis (ATCC 35222)	*50-100*	+++
E. coli (25922)	≥ 1000	-

References:

1. F.P. Downes, K. Ito, (Eds.), Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., APHA, Washington, D.C. (2001)
2. F.J. Bolton, D.N. Hutchinson, D. Coates, J. Clin. Microbiol., 19, 169 (1984)
3. E.W. Koneman, S.D. Allen, W.M. Janda, P.C. Schreckenberger, W.C. Jr. Winn, Colour Atlas and Textbook of Diagnostic Microbiology, 4th Ed., J.B. Lippinccott Company (1992)
4. V.I. Ahonkai, et al, Antimicrob. Agents. Chemother., 20, 850 (1981)
5. R.N. Jones, et al, Antimicrob. Agents. Chemother., 17, 743 (1980)
6. M.A. Karmali, et al, J. Clin. Microbiol., 23, 456 (1986)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.