

B2426 Blood Free Campylobacter Selectivity Agar Base (Campylobacter Blood-Free Medium)

Used for selective isolation and differentiation of Campylobacter species. It is recommended by the ISO Committee under the specification ISO 10272:1995.

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
Agar	12.0

Final pH 7.4 +/- 0.2 at 25°C

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. Prepared plates appears opaque black colored.

Directions:

Suspend 22.75 g of Blood Free Campylobacter Selectivity Agar Base in 500 ml of distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs. pressure (121 °C) for 15 minutes. Cool to 50°C and aseptically add 1 vial Blood Free Campylobacter Medium Selective Supplement (Fluka 74807) in 2.0 ml of distilled water, filtered through a sterile 0.4 µm filter to sterilize. Mix well and pour into sterile petri plates.

Principle and Interpretation:

This medium is formulated as per the American Public Health Association (APHA) and was developed to replace blood with charcoal, ferrous sulphate and sodium pyruvate. The peptic digest of animal tissue, beef extract and casein enzymic hydrolysate provide organic nitrogen to the organisms. Sodium chloride maintains the osmotic balance. Sodium deoxycholate inhibits the growth of most gram-positive microorganisms. Improved selectivity was achieved when cephazolin in the original formulation was replaced by cefoperazone as the selective agent. It was shown that an increased isolation rate can be achieved if the plates are incubated at 37°C rather than 42°C. Amphotericin B (10 mg/l) can be added to suppress the growth of yeast and fungus that may grow at 37°C.

Blood Free Campylobacter Selectivity Agar has been confirmed as suitable for isolation of Campylobacter spp. from non-clinical samples after enrichment in Exeter broth (11). Blood Free Campylobacter Selectivity Agar is also recommended for isolation of Campylobacter from foods by the U.K. Ministry of Agriculture, Fisheries and Food (MAFF) (7).

Cultural characteristics after 24-48 hours at 42°C.

Organisms (ATCC)	Growth	Color of colony
<i>Campylobacter jejuni</i> (29428)	+++	Gray
<i>Campylobacter coli</i> (33559)	+++	Creamy gray
<i>Campylobacter laridis</i>	+++	Varying type
<i>Escherichia coli</i> (25922)	-	-



References:

1. Jones, L.M., et al., Bull. World Health Organ. 19, 200 (1958)
2. American Type Culture Collection, Manassas, Va., U.S.A.
3. F.J. Bolton, D.N. Hutchinson, D. Coates, *J. Clin. Microbiol.* 19, 169-171 (1984)
4. D.N. Hutchinson, F.J. Bolton, *J. Clin. Path.* 34, 956-957 (1984)
5. F.J. Bolton, D.N. Hutchinson, G. Parker, *Eur. J. Clin. Microbiol. Infect. Dis.* 7, 155-160 (1988)
6. Compendium of Methods for Microbiological Examination of Food, Vandersant, C. et al., eds. 3rd Edition. APHA. Washington, D. C. (1992)
7. MAFF Validated Methods for the Analysis of Foodstuffs: Method for the detection of thermotolerant *Campylobacter* in Foods (v30) *J. Assoc. Publ. Analysts* 29, 253-262 (1993)
8. International Organization for Standardization (ISO), (1995). Draft ISO//dIS 10272.
9. B.E. Rice, Chinta Lamichhane, S.W. Joseph, D.M. Rollins, *Clin. Diag. Lab. Immunol.* 3, 669-677 (1996)
10. B. Hald, M. Madsen, *J. Clin. Microbiol.* 35, 3351-3352 (1997)
11. T.J. Humphrey, K.W. Martin, M.J. Mason, *PHLS Microbiology Digest* 13 (2), 86-88 (1997)

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.

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