CAMPYLOBACTER BLOOD AGAR (ACVPT)

- For in vitro use only - Catalogue No. PC23

Our Campylobacter Blood Agar (ACVPT) is a selective medium used for the isolation of *Campylobacter* species from a variety of samples including clinical specimens.

Campylobacter jejuni and *Campylobacter coli* have been recognized as agents of gastrointestinal infection since the late 1970s. In 1978, Blaser et al reported success in the isolation of *C. jejuni* using a selective medium containing four antimicrobials (amphotericin, vancomycin, polymyxin B, and trimethoprim); the addition of cephalothin was reported later, which helped to inhibit more of the natural bacterial flora contained in stool specimens including non-pathogenic *Campylobacter fetus* subsp. *fetus*.

This medium contains a variety of peptones and extracts that supplies all the necessary growth factors for *Campylobacter* species to thrive. The various antimicrobial agents inhibit a variety of microbes including Enterobacteriaceae, staphylococci, and yeasts that may be contained in clinical samples. *Campylobacter jejuni* are thermophiles therefore inoculated plates should be incubated at 42°C to accelerate growth; the higher temperature also helps to inhibit any background flora that may be present.

Formula per Litre of Medium

Pancreatic Digest of Casein	10.0 g
Peptic Digest of Animal Tissue	10.0 g
Dextrose	1.0 g
Yeast Extract	2.0 g
Sodium Chloride	5.0 g
Sodium Bisulfite	0.1 g
Agar	15.0 g
Amphotericin B	2.0 mg
Cephalothin	15.0 mg
Vancomycin	10.0 mg
Trimethoprim	5.0 mg
Polymyxin B	2,500 IU
Defibrinated Sheep Blood	100 mL

pH 7.2 ± 0.2

Recommended Procedure

1. Allow medium to adjust to room temperature prior to inoculation.
2. Using a direct inoculum from the specimen, perform a four-quadrant streak to obtain well-isolated colonies.
3. Incubate at 42°C under microaerophilic conditions (reduced oxygen and increased carbon dioxide).
4. Examine plates after 24 and 48 hours for typical colonies.

Interpretation of Results

Campylobacter jejuni will typically appear as small, gray, flat, non-hemolytic, mucoid colonies at 24 and 48 hours. A full 48-hour incubation is required as some isolates may be barely visible after only 24 hours of incubation. Some colonies may appear as round colonies 1 to 2-mm in diameter that are convex, entire and glistening. Spreading and swarming are common for isolates from fresh clinical specimens.

Additional biochemical and serological test should be performed on isolated colonies from pure culture in order to complete identification.

- *Campylobacter fetus subsp. fetus, C lari, C. hyointestinalis and C. upsaliensis are inhibited on this medium due to the presence of cephalothin*

Quality Control

After checking for correct pH, colour, depth, and sterility, the following organisms are used to determine the growth performance of the completed medium.

Organism	Expected Result
Campylobacter jejuni ATCC 33291	Growth
Proteus mirabilis ATCC 12453	Inhibition
Enterococcus faecalis ATCC 29212	Inhibition
Candida albicans ATCC 10231	Inhibition

Storage and Shelf Life

Campylobacter Blood Agar (ACVPT) should be stored at 4°C to 8°C and protected from light. The medium side should be uppermost to prevent excessive accumulation of moisture on the agar surface. Under these conditions the medium has a shelf life of 8 weeks from the date of manufacture.

References

1. Skirrow MB. *Campylobacter enteritis*: a "new" disease. Br Med J 1977; 2:9-11.
2. Blaser MJ, Cravens J, Powers BW, Wang WL. *Campylobacter enteritis* associated with canine infection. Lancet 1978; 2:979-80.
3. Blaser MJ, Berkowitz IV, LaForce FM, Cravens J, Reller LB, Wang WL. *Campylobacter enteritis*: clinical and epidemiologic features. Ann Intern Med 1978; 91:179-85.
4. MacFaddin JF. Media for isolation-cultivation-identification-maintenance of medical bacteria, Vol I. Baltimore, MD: Williams & Wilkins, 1985.
5. Murray PR, Baron EJ, Pfaller MA, Tenover FC, Yolken RH. Manual of clinical microbiology. 7th ed. Washington D.C.: ASM, 1999.

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