CAMPY BLOOD-FREE SELECTIVE AGAR

- For in vitro use only - Catalogue No. PC20

Our Campy Blood-Free Agar is a selective medium used in the isolation of *Campylobacter* species.

This medium was based on the work of Bolton et al. whom developed a blood free medium capable of supporting the growth of *Campylobacter* species. Their medium contained charcoal, ferrous sulfate and sodium pyruvate; three ingredients that are thought to improve the aerotolerance of *Campylobacter*. The selective agents are cefoperazone and amphotericin B. Cefoperazone is a cephalosporin that suppresses the growth of gram-negative enteric bacilli and some gram-positive species as well. Its addition has resulted in improved selectivity and better isolation of *Campylobacter* species in various formulations with a variety of samples. The addition of amphotericin is used to suppress the growth of yeasts and molds commonly found in samples with mixed flora.

The medium itself is very nutritious and contains several peptones and extracts, which provides all the essential elements required for sustained bacterial growth. Species within the genera *Campylobacter* have different optimal growth temperatures. Most laboratories use 42°C as the primary incubation temperature for *Campylobacter*; this temperature allows for the growth of *C. jejuni* and *C. coli* and also has a general inhibitory effect on other organisms.

Formula per Litre of Medium

Lab-Lemco powder	10.0 g
Peptone	10.0 g
Sodium chloride	5.0 g
Activated charcoal	4.0 g
Casein hydrolysate	3.0 g
Sodium desoxycholate	1.0 g
Ferrous sulfate	0.25 g
Sodium pyruvate	0.25 g
Agar	12.0 g
Cefoperazone	32 mg
Amphotericin B	10 mg

pH 7.4 ± 0.2

Recommended Procedure

1. Allow medium to reach room temperature prior to inoculation.
2. Using a direct inoculum from the specimen, perform a four-quadrant streak to obtain well-isolated colonies. If the specimen is contained on a swab, roll the swab several times near the edge of the plate and streak for isolation.
3. Incubate plates under micro-aerophilic conditions at 37 or 42°C.
4. Examine after 48 hours.

Interpretation of Results

Campylobacter jejuni produces grey, moist, flat spreading colonies. Some strains may have a green hue or a dry appearance. *C. coli* typically appears as creamy-grey, moist, slightly raised colonies.

In some instances swarming may occur; this is common for isolates from fresh clinical specimens or moist media.

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

- *At 42℃ incubation selectivity is increased and growth is faster except for C. fetus subsp. fetus*
- *If plates are examined after 24 hours, read plates quickly and return them to a micro-aerophilic atmosphere to ensure organism viability*

Quality Control

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

Organism	Expected Result
Campylobacter jejuni ATCC 29428	Growth
Escherichia coli ATCC 25922	Inhibition

Storage and Shelf Life

Our Campy Blood-Free Selective Agar should be protected from light and stored at 4°C to 8°C. The medium side should be uppermost to prevent excessive accumulation of moisture on the agar surface. Under these conditions the medium has a 10 week shelf life from the date of manufacture.

References

1. Bolton FJ, Robertson L. A selective medium for isolating *Campylobacter jejuni/coli*. J Clin Pathol 1982; 35:462-7.
2. Hutchinson DN, Bolton FJ. Improved blood free selective medium for the isolation of *Campylobacter jejuni* from faecal specimens. J Clin Pathol 1984; 37:956-7.
3. Merino FJ et al. Comparative efficacy of seven selective media for isolating *Campylobacter jejuni*. J Clin Microbiol 1986; 24:451-2.
4. Murray PR, Baron E, Pfaller M, Tenover F, Yolken R. Manual of Clinical Microbiology. 7th ed. Washington: ASM, 1999.

Original: July 2005
Revised / Reviewed: October 2014