Campy Cefex Agar
SKU: 700003247, 700003248, 700003249, 700003250
NCM0099
(U.S. Patent 5,891,709)

Intended Use
Campy Cefex Agar is used for the selective isolation of *Campylobacter* spp in a laboratory setting. Campy Cefex Agar is not intended for use in the diagnosis of disease or other conditions in humans.

Description
Poultry is a primary reservoir of *Campylobacter* spp. and may cause contamination of more than 80% of chicken carcasses. Campy Cefex Agar is described by Stern *et al*. This medium was formulated to provide selective isolation of cephalothin-resistant *Campylobacter* species such as *C. jejuni* and *C. coli*.

Typical Formulation

Enzymatic Digest of Casein	10.0 g/L
Enzymatic Digest of Animal Tissue	10.0 g/L
Sodium Chloride	5.0 g/L
Yeast Extract	2.0 g/L
Dextrose	1.0 g/L
Sodium Pyruvate	0.5 g/L
Ferrous Sulfate	0.5 g/L
Sodium Bisulfite	0.3 g/L
Cycloheximide	0.2 g/L
Agar	15.0 g/L

Final pH: 7.0 ± 0.2 at 25°C
Formula is adjusted and/or supplemented as required to meet performance specifications.

Supplement
NCM4069 Campylobacter Blood Free (CFP)
Sterile laked horse blood, 5%

Precaution
Refer to SDS

Preparation
1. Suspend 44.4 g of the medium in one liter of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.
4. Cool medium to 45-50°C and aseptically add 2 vials of reconstituted NCM4069-0.5* supplement, each reconstituted using 5mL of sterile deionized/RO water, and 5% of sterile laked horse blood.
5. Mix well and pour into petri dishes.

*Larger vials may be available. Please see appropriate supplement data sheet for availability and preparation instructions.

Quality Control Specifications
Dehydrated Appearance: Powder is homogeneous, free flowing, and light to medium beige.

Prepared Appearance: Trace to slightly hazy, red-brown to maroon, with trace precipitate.

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Expected Cultural Response: The cultural response of *Campylobacter* spp test strains on Campy Cefex Agar at 35 ± 2°C in a microaerophilic atmosphere and examined for recovery after 24 - 96 hours incubation. All other test strains were incubated at 35 ± 2°C in an aerobic atmosphere and read for inhibition over 24 - 96 hours.

Microorganism	Approx. Inoculum (CFU)	Response
Escherichia coli ATCC® 25922	≈ 1000	Complete Inhibition
Enterococcus faecalis ATCC® 29212	≈ 1000	Complete Inhibition
Proteus mirabilis ATCC® 12453	≈ 1000	Complete Inhibition
Campylobacter coli ATCC® 33559	10 - 300	Growth
Campylobacter fetus ATCC® 33246	10 - 300	Growth
Campylobacter jejuni ATCC® 29428	10 - 300	Growth
Campylobacter jejuni ATCC® 33291	10 - 300	Growth

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

1. Inoculate the specimen directly onto the surface of the prepared Campy Cefex Agar using the four-quadrant streak for isolation. If an enrichment broth is required, refer to the appropriate references.
2. Incubate inoculated plates at 42°C in a microaerophilic atmosphere composed of 5 - 6% oxygen, 3 - 10% carbon dioxide and 84 - 85% nitrogen for 48 hours.

Results

Campylobacter colonies may appear as small, mucoid, grayish, flat colonies with irregular edges and no hemolytic patterns at 24 – 48 hours. Colonies may also appear pink or yellow-grey. Depending on the species, colonies may also appear as round, convex, entire, glistening colonies 1 –2 mm in diameter. Typically, *Campylobacter* spp. are oxidase and catalase positive.

Expiration

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. Cephalothin sensitive *Campylobacter* spp. such as *C. fetus* and *C. upsaliensis* may not be recovered on Campy Cefex Agar because it contains Cefoperazone.
2. Due to the presence of dextrose in the medium, some weak oxidase reactions may occur.
3. For complete identification, refer to the appropriate procedures for biochemical reactions.

Storage

Store dehydrated culture media at 2-30°C away from direct sunlight. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

References

1. www.fda.gov/Food/ScienceResearch/LaboratoryMethods/BacteriologicalAnalytical manualBAM/ default.htm.
2. Stern, N. J., B. Wojton and K. Kwiatek. 1992. A differential selective medium and dry ice generated atmosphere for recovery of *Campylobacter jejuni*. J. Food Prot. 55:514-517.
3. Vanderzant, C., and D. F. Splittstoesser (eds.). 2015. Compendium of methods for the microbiological examination of food 4th ed. American Public Health Association, Washington, D.C.
4. Murray, P. R., E. J. Baron, M. A. Pfaller, F. C. Tenover, and R. H. Yolken (eds.). 1995. Manual of clinical microbiology, 6th ed. American Society for Microbiology, Washington, D.C.

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