CAMPY SELECTIVE AGAR BASE (PRESTON) (7443)

Intended Use

Campy Selective Agar Base (Preston) is used with antimicrobics for the selective isolation of *Campylobacter jejuni* and *Campylobacter coli*.

Product Summary and Explanation

Many experts consider *Campylobacter* to be the leading cause of enteric illness in the US.[1] *Campylobacter* spp. can cause mild to severe diarrhea, with loose, watery stools often followed by bloody diarrhea.[1] These pathogens are highly infective and transmitted by contaminated food or water.

Campy Selective Agar Base (Preston) is based on the formulation described by Bolton and Robertson.[2] This formula, with the addition of the Preston Supplement, was developed to isolate *Campylobacter* spp. from human, animal, and environmental specimens. The Preston formulation demonstrated improved recovery and selectivity of *Campylobacter* spp. in comparative studies with other selective media (Skirrow, Butzler, Blaser and Campy-Blood Agar). [3]

Principles of the Procedure

Enzymatic Digest of Animal Tissue and Enzymatic Digest of Casein are the nitrogen and vitamin source in this medium. Sodium Chloride provides the osmotic environment, Agar is the solidifying agent. Antimicrobics are added to suppress normal enteric flora, and enhance the growth of *Campylobacter* spp. The addition of 5% lysed horse blood provides essential growth factors.

Formula / Liter	
Enzymatic Digest of Animal Tissue	10 g
Enzymatic Digest of Casein	10 g
Sodium Chloride	5 g
Agar	12 g
Final pH: 7.5 ± 0.2 at 25°C	

Supplements	
Polymyxin B	5000 IU
Trimethoprim	10 mg
Rifampin	10 mg
Cycloheximide	100 mg
5% Lysed Horse Blood	10 mL

Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precautions

1. For Laboratory Use.
2. Follow standard laboratory policies when handling and disposing of contaminated material.
3. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions

1. Suspend 37 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 5% lysed horse blood and 10 mL of a filtered sterilized aqueous solution containing 5000 IU polymyxin B, 10 mg trimethoprim, 10 mg rifampin, and 100 mg cycloheximide.

Quality Control Specifications

Dehydrated Appearance: Powder is homogeneous, free flowing, and light beige.

Prepared Appearance: Prepared medium with 5% lysed horse blood is red-brown to maroon, and trace to slightly hazy.

Expected Cultural Response: Cultural response for *Campylobacter* species test strains are incubated at 42 ±1°C in a microaerophilic atmosphere. All other test strains were incubated at 42 ±1°C in an aerobic atmosphere.

Microorganism	Approx. Inoculum (CFU)	Expected Results
Campylobacter jejuni ATCC® 29428	10 - 300	growth
Campylobacter jejuni ATCC® 33291	10 - 300	growth
Campylobacter coli ATCC® 33559	10 - 300	growth
Enterococcus faecalis ATCC® 29212	~ 1000	inhibited
Candida albicans ATCC® 10231	~ 1000	Markedly suppressed
Proteus mirabilis ATCC® 12453	~ 1000	inhibited

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 Selective Agar Base (Preston).
2. Streak for isolation.
3. Incubate inoculated plates at 37°C or 42°C in an atmosphere composed of 5 - 6% oxygen, 3 - 10% carbon dioxide and 84 - 85% nitrogen for 24 - 48 hours. Selective temperatures are required for certain strains of *Campylobacter* spp. Refer to appropriate references on the proper temperature and microaerophilic environment of *Campylobacter* spp.[1]

Results[1]

Campylobacter colonies are round to irregular with smooth edges. They may have translucent, white colonies to spreading, flat, transparent growth. Some strains appear tan or slightly pink. Normal enteric flora are completely to markedly inhibited.

Typically, *Campylobacter* spp. are oxidase positive and catalase positive. For complete identification of species and biotype, refer to the appropriate procedures for biochemical reactions.[1,4]

Storage

Store dehydrated medium at 2 - 30ºC. Once opened and recapped, place the container in a low humidity environment at the same storage temperature. Protect from moisture and light.

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.

Limitation of the Procedure

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

Packaging

Campy Selective Agar Base (Preston)	**Code No.**	**7443A**	**500 g**
		7443B	**2 kg**
		7443C	**10 kg**

References

1. **www.fda.gov/FoodScienceResearch/Laboratorymethods/BacteriologicalAnalyticalManualBAM/default.htm**
2. **Bolton, F. J., and L. Robertson.** 1982. J. Clin. Microbiol. **35:**462-467.
3. **Bolton, F. J., D. Coates, P. M. Hinchliffe, and L. Robertson.** 1983. J. Clin. Pathol. **36:**78-83.
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.

Technical Information

Contact Acumedia Manufacturers, Inc. for Technical Service or questions involving dehydrated culture media preparation or performance at (517)372-9200 or fax us at (517)372-2006.

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