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

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

Antimicrobials / 10 mL

Polymyxin B	5000 IU
Trimethoprim	10 mg
Rifampin	10 mg
Cycloheximide	100 mg

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 beige.

Prepared Appearance: Prepared medium with 5% lysed horse blood is red, clear to trace hazy.

Expected Cultural Response: Cultural response at 37°C after 18 - 48 hours incubation on 5% horse blood plates in an atmosphere consisting of approximately 5 - 6% oxygen, 3 - 10% carbon dioxide and 84 - 85% nitrogen.

Microorganism	Response
Campylobacter jejuni ATCC® 29428	growth
Campylobacter jejuni ATCC® 33291	growth
Enterococcus faecalis ATCC® 29212	inhibited
Proteus mirabilis ATCC® 12453	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 is 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 by keeping container tightly closed.

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. **U.S. Food and Drug Administration.** 1995. Bacteriological analytical manual, 8th ed., AOAC International, Gaithersburg, MD.
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 (410)780-5120 or fax us at (410)780-5470.