Hunt Broth Complete
Irradiated Foil Packs
SKU: 700003737
NCM3315

Intended Use
Hunt Broth Complete is used with laked or lysed horse blood for the selective enrichment of *Campylobacter* spp according to ISO 10272-1:2017 and USDA-MLG 41, in a laboratory setting. Hunt Broth Complete is not intended for use in the diagnosis of disease or other conditions in humans.

Description
Campylobacter spp. are microaerophilic, very small, curved, thin, Gram-negative rods. Microaerophilic organisms have a tendency to be more sensitive to toxic forms of oxygen. Hunt Broth Complete along with nutritional ingredients, contains compounds which enhance the aerotolerance of microaerophilic bacteria by suppressing the toxic form of oxygen. Hunt Broth is recommended in food testing and is described by the USDA.

Beef Extract, Peptone and Yeast Extract provide nitrogen, carbon, amino acids, and vitamins in Hunt Broth Complete. Laked or lysed Horse Blood provides essential growth factors. Sodium Chloride maintains the osmotic balance of the medium. Growth Supplement increases the aerotolerance of *Campylobacter* spp. by acting as oxygen scavengers. The addition of Antibiotic Mix are selective agents for heavily contaminated samples.

Typical Formulation

Beef Extract	10.0 g/L
Peptone	10.0 g/L
Yeast Extract	6.0 g/L
Sodium Chloride	5.0 g/L
Growth Supplement	0.75 g/L
Antibiotic Mix	0.0725 g/L

Final pH: 7.5 ± 0.2 at 25°C
Formula is adjusted and/or supplemented as required to meet performance specifications.

Supplements
Laked or lysed Horse Blood

Precaution
Refer to SDS

Preparation (Foil Packs (NCM3315 or 700003737)
1. Dissolve contents of the pack by aseptically adding to 475ml of sterile purified water.
2. Agitate vigorously to hydrate the powder and distribute the powder solution evenly throughout the liquid. Note: the solution will have a moderate suspendible precipitate
3. DO NOT HEAT.
4. Aseptically add 25 mL of laked/lysed horse blood and mix thoroughly.
5. If desired, dispense into aliquots, mixing thoroughly and constantly throughout the dispensing process.

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Test Procedure

Refer to the appropriate references for the material being tested regarding the isolation of *Campylobacter* spp. If using the ISO method, refer to ISO 10272-1:2017.

Quality Control Specifications

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

Prepared Appearance (Un-supplemented): Prepared medium is moderately hazy, amber and has a noticeable precipitate which must be re-suspended frequently.

Prepared Appearance (Supplemented): Prepared medium is moderately hazy. maroon in color with 5% laked/lysed horse blood and has a noticeable precipitate which must be re-suspended frequently.

Expected Cultural Response: Cultural response of organisms incubated for 22-26 hours in a microaerophilic atmosphere at 41.5 ± 0.5ºC in the Hunt Broth Complete, and then, following the USDA FSIS method, 10ul of the medium was streaked onto a Campy Cefex plate. Campy Cefex plates were incubated for 40-48 hours at 41.5 ± 0.5ºC and examined for recovery typical of *Campylobacter spp.*

Microorganism	Approx. Inoculum (CFU)	Response on Campy Cefex
Campylobacter jejuni ATCC® 29428	100-300	Growth
Campylobacter jejuni ATCC® 33291	100-300	Growth
Campylobacter coli ATCC® 43478	100-300	Growth
Campylobacter lari ATCC® 35221	100-300	Growth
Aspergillus brasiliensis ATCC® 16404	≤ 100	Inhibited
Candida albicans ATCC® 10231	≤ 100	Inhibited
Enterococcus faecalis ATCC® 29212	500-1000	Inhibited
Escherichia coli ATCC® 8739	500-1000	Inhibited
Proteus mirabilis ATCC® 29906	500-1000	Inhibited

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

Results

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.

Expiration

Refer to expiration date stamped on the label. 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

1. Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.
2. The appearance of the medium is because Amphoteracin B is insoluble in water in the range of pH 2.0-11.0. A moderate suspendible precipitate is normal for this formula provided as the complete medium.

Storage

Store dehydrated culture media pouches at 2-8°C away from direct sunlight. Foil packs, once rehydrated, should be used the same day as prepared. Protect from moisture and light.

References

1. Hunt, J.M., D.W. Francis, J.T. Peeler, J. Lovett Appl. And Envir. Micro. 1985 p. 335-336 *Comparison of Methods for Isolating Campylobacter jejuni from Raw Milk*
2. United States of Agriculture Food Safety and Inspection Service. 2011. Microbiology Laboratory Guidebook, Appendices 1.10 and 2.03. Athens, Georgia.
3. United States Department of Agriculture, Food Safety and Inspection Service, 2010. Isolation, identification, and enumeration of *Campylobacter jejuni/coli/lari* from poultry rinse and sponge samples. MLG 41.07, USDA/FSIS, Microbiology Laboratory Guidebook, Washington D.C.
4. Murray, P. R., E. J. Baron, M. A. Pfaller, J. A. Jorgensen, M. L. Landry (eds.). 2007. Manual of clinical microbiology, 9th ed. American Society for Microbiology, Washington, D.C.
5. ISO 10272-1:2017 Microbiology of the food chain – Horizontal method for detection and enumeration of Campylobacter spp. – Part 1: Detection method