UVM Broth
SKU: 400000741
NCM0012

Intended Use
UVM Broth is used for the selective enrichment of *Listeria* spp and is not intended for use in the diagnosis of disease or other conditions in humans.

Directions
UVM Broth is a modification of the formula described by Donnelly and Baigent. This formula is used for the selective enrichment of *Listeria* spp. from food samples. *Listeria spp.* grow over a pH range of 5.0 - 9.6 and survive in food products with pH levels outside these parameters. *Listeria* spp. are microaerophilic, Gram-positive, asporogenous, non-encapsulated, non-branching, short, motile rods. Motility is pronounced at 20°C. Identification of *Listeria* is based on successful isolation of the organism, biochemical characterization, and serological confirmation.

Enzymatic Digest of Casein, Enzymatic Digest of Animal Tissue, Beef Extract, and Yeast Extract provide nitrogen, vitamins, and minerals in UVM Broth. The Phosphates are the buffering agents, Sodium Chloride maintains osmotic balance. Nalidixic Acid inhibits growth of Gram-negative organisms. Acriflavin inhibits Gram-positive bacteria. Esculin is hydrolyzed by *Listeria* spp. The high salt tolerance of *Listeria* is used as a means to inhibit growth of enterococci.

Typical Formualtion

Enzymatic Digest of Casein	5.0 g/L
Enzymatic Digest of Animal Tissue	5.0 g/L
Beef Extract	5.0 g/L
Yeast Extract	5.0 g/L
Sodium Chloride	20.0 g/L
Disodium Hydrogen Phosphate*	9.6 g/L
Potassium Dihydrogen Phosphate	1.35 g/L
Esculin	1.0 g/L
Acriflavin	0.012 g/L
Nalidixic Acid	0.02 g/L

*9.6 g/L anhydrous is equivalent to 12.0 g/L of dihydrate

Final pH: 7.2 ± 0.2 at 25°C
Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precaution
Refer to SDS

Preparation
1. Dissolve 52 g of the medium in one liter of purified water.
2. Mix thoroughly.
3. Autoclave at 121°C for 15 minutes.

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Test Procedure
The USDA/FSIS method states to add 25 mL liquid or 25 g sample to 225 mL UVM Broth. For environmental sponges, add 225 mL of UVM Broth to each bagged sponge sample. After incubation, a portion of the enrichment mixture is added to an enrichment broth or plated onto the final isolation agar. Refer to appropriate references for further information on testing food samples or clinical specimens.

Quality Control Specifications
Dehydrated Appearance: Powder is homogeneous, free flowing and light tan.

Prepared Appearance: Prepared medium is clear to trace hazy, green-yellow to amber with opalescent greenish top.

Expected Cultural Response: Cultures were incubated at aerobically at 25-30ºC at 18-48 hours.

Microorganism	Approx. inoculum (CFU)	Expected Results
Escherichia coli ATCC® 25922	~10^4	Completely Inhibited
Listeria monocytogenes ATCC® 7644	10-100	Growth
Listeria monocytogenes ATCC® 15313	10-100	Growth
Staphylococcus aureus ATCC® 25923	10-100	Suppressed at 18-24 hours

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

Results
Refer to appropriate references and procedures for results.

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

Limitations of the Procedure
1. Due to nutritional variation, some strains may grow poorly or fail to grow on this medium.
2. *Listeria* spp., other than *Listeria monocytogenes*, can grow on isolation media. An identification of *Listeria monocytogenes* must be confirmed through biochemical and serological testing.

Storage
Store dehydrated culture media at 2 – 30°C away from direct sunlight. 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.

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