EE BROTH, MOSSEL (7603)

Intended Use

EE Broth, Mossel is used for the cultivation and enrichment of *Enterobacteriaceae* in food. EE Broth Mossel, conforms to Harmonized USP/EP/JP Requirements.[1,2,3]

Product Summary and Explanation

EE Broth, Mossel was developed by Mossel, Visser, and Cornelissen to facilitate the growth of *Enterobacteriaceae*.[4] This medium contains dextrose to enhance the growth of *E. coli* and *Salmonella* spp., particularly in food samples. Nuisance organisms are suppressed by the addition of Ox Bile and Brilliant Green.

EE Broth, Mossel is used as an enrichment broth, providing a rich environment for the recovery of damaged or injured cells. *Enterobacteriaceae* organisms can be injured in food-processing procedures, including exposure to low temperature, sub-marginal heat, drying, radiation, preservatives, or sanitizers.[5] The enumeration of *Enterobacteriaceae* is an important measure of the sanitary condition of food. Although injured cells may not form colonies on selective media, they can cause infection if ingested.[6]

EE Broth, Mossel complies with the specifications of the Eiprodukte-Verodnung (German Egg Product Regulations)[7] and conforms to Harmonized United States Pharmacopoeia (USP), European Pharmacopoeia (EU), and Japanese Pharmacopoeia (JP).[1,2,3]

Principles of the Procedure

Enzymatic Digest of Gelatin provides nitrogen, vitamins, and amino acids in EE Broth, Mossel. Dextrose is the carbon source to enhance organism growth. Desiccated Ox Bile and Brilliant Green are the selective agents against Gram-positive bacteria, particularly bacilli and fecal streptococci. Sodium Phosphate and Potassium Phosphate are strong buffering agents.

Formula / Liter

Desiccated Ox Bile..... 20 g
Enzymatic Digest of Gelatin..... 10 g
Sodium Phosphate, Dibasic..... 8 g
Dextrose..... 5 g
Potassium Phosphate, Monobasic ..... 2 g
Brilliant Green ..... 0.015 g
Final pH: 7.2 ± 0.2 at 25°C
Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precautions

1. For Laboratory Use.
2. IRRITANT. Irritating to eyes, respiratory system, and skin. May be harmful if swallowed.

Directions

1. Suspend 45 g of the medium in one liter of purified water.
2. Heat at 100°C for 30 minutes to completely dissolve the medium.
3. Cool rapidly in cold water.
4. DO NOT AUTOCLAVE.

Quality Control Specifications

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

Prepared Appearance: Prepared medium is clear to slightly hazy with no to trace precipitate and green to dark green in color.

Expected Cultural Response and USP/EP/JP Growth Promotion: Cultural response in EE Broth, Mossel at 30 - 35°C after 18 – 48 hours of incubation.

Microorganism	Approx. Inoculum (CFU)	Expected Results Growth
Escherichia coli ATCC® 8739	10 - 100	Growth
Escherichia coli ATCC® 25922	10 - 100	Growth
Pseudomonas aeruginosa ATCC® 9027	10 - 100	Growth
Salmonella typhimurium ATCC® 14028	10 - 100	Growth
Staphylococcus aureus ATCC® 6538	300 - 1000	Inhibited
Staphylococcus aureus ATCC® 25923	300 - 1000	Inhibited

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

Test Procedure

1. Inoculate prepared EE Broth, Mossel with approximately 10 g of homogenized food or other material to be tested.
2. Shake the inoculated medium thoroughly for a few seconds to mix well.
3. Incubate for a total of 18 - 48 hours at 30 - 35°C. Shake tubes or flasks after the first 3 hours of incubation.
4. Streak a loopful of the incubated enrichment culture of EE Broth, Mossel onto a prepared selective medium.
5. Incubate the plates for 18 - 24 hours at 30 - 35°C. Examine the incubated medium for the presence of the target organism.

Results

Examine EE Broth, Mossel for growth, indicated by turbidity.

Storage

Store sealed bottle containing the dehydrated medium at 2 - 30°C. Once opened and recapped, place 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.

Limitation of the Procedure

Some strains may be encountered that grow poorly or fail to grow on this medium.

Packaging

EE Broth, Mossel	**Code No.**	**7603A**	**500 g**
		7603B	**2 kg**
		7603C	**10 kg**

References

1. **United States Pharmacopeial Convention.** 2007. The United States pharmacopeia, 31st ed., Amended Chapters 61, 62, 111. The United States Pharmacopeial Convention, Rockville, MD.
2. **Directorate for the Quality of Medicines of the Council of Europe (EDQM).** 2007. The European Pharmacopoeia, Amended Chapters 2.6.12, 2.6.13, 5.1.4, Council of Europe, 67075 Strasbourg Cedex, France.
3. **Japanese Pharmacopoeia.** 2007. Society of Japanese Pharmacopoeia. Amended Chapters 35.1, 35.2, 7. The Minister of Health, Labor, and Welfare.
4. **Mossel, Vissar, and Cornellisen.** 1963. J. Appl. Bacteriol. **26:**444.
5. **Hartman, P. A., and S. A. Minnich.** 1981. Automation for rapid identification of salmonellae in foods. J. Food Prot. **44:**385-386.

6. **Sorrells, K. M., M. L. Speck, and J. A. Warren.** 1970. Pathogenicity of *Salmonella gallinarum* after metabolic injury by freezing. Appl. Microbiol. **19:**39-43.
7. **Bundesminister fur Jugend, Familie und Gesundheit:** 1975. Verordnung uber die gesundheitlichen Anforderungen an Eiprodukte **und** deren Kennzeichnung (Eiprodukte-Verordnung).

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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