Enterobacteria Enrichment Broth, Mossel (Harmonized)

Intended Use
Enterobacteria Enrichment Broth, Mossel is used for isolation and cultivation of *Enterobacteriaceae* from pharmaceutical products in accordance with microbial limit testing by harmonized methodology of USP/EP/BP/JP/IP.

Summary
The enumeration of Enterobacteriaceae is of great concern in monitoring the sanitary quality of foods. Most *Enterobacteriaceae* are easily injured during food-processing procedures, especially by exposure to low temperatures, sub marginal heat, drying, radiation, preservatives or sanitizers. The ability to successfully recover these organisms depends upon the proper resuscitation of damaged or sub-lethally injured cells. EE Broth, Mossel is made according to the formula developed by Mossel, Visser and Cornelissen. The formula contains dextrose to facilitate the growth of most *Enterobacteriaceae*, thus promoting the detection of *Salmonella* and other non-lactose fermenting bacteria. EE Broth, Mossel should be used as an enrichment broth, followed by plating to a selective medium such as Violet Red Bile Agar or Violet Red Bile Agar with Glucose. In addition, the medium conforms to the harmonized USP/EP/BP/JP/IP requirements for the detection of bile-tolerant, Gram-negative microorganisms.

Principle
Pancreatic digest of gelatin provides nutrients, nitrogen compounds and amino acids. Ox bile supports the growth of enteric bacteria and inhibits other bacteria, which do not normally live in the intestine. Brilliant-green specifically inhibits the Gram-positive accompanying flora. Disodium hydrogen phosphate dihydrate and potassium dihydrogen phosphate are buffering agents.

Formula*

Ingredients	**g/L**
Pancreatic Digest of Gelatin	10.0
Glucose Monohydrate	5.0
Dehydrated Ox Bile	20.0
Disodium Hydrogen Phosphate, dihydrate	8.0
Potassium Dihydrogen Phosphate	2.0
Brilliant Green	0.015
Final pH (at 25°C)	7.2 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of specimen
Pharmaceutical samples.

Specimen Collection and Handling
Ensure that all samples are properly labelled. Follow appropriate techniques for handling samples as per established guidelines. Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure. The samples must be stored and tested within the permissible time duration. After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 42.93 g of the powder in 1000 mL purified water.
2. Mix thoroughly.
3. Heat in free-flowing steam water for 30 minutes avoid overheating of the medium.
4. DO NOT AUTOCLAVE OR REHEAT.
5. Pour into adequate container.

Quality Control

Dehydrated Appearance: Light yellow to greenish-yellow coloured, homogeneous, free flowing powder
Prepared Appearance: Green to dark green colour, clear to slightly hazy with or without trace precipitate.
Growth Promotion Test: Growth promotion is carried out in accordance with the harmonized method of USP/EP/JP/IP/BP and growth is observed after incubation at 30°C-35°C for 24-48 hours. Subculturing is carried out using Violet Red Bile Glucose Agar (Harmonized) after enrichment in Enterobacteria Enrichment Broth, Mossel (Harmonized) at 30°C-35°C for 18-24 hours.
Growth Promoting Properties: The test results observed are within the specified temperature and shortest period of time specified in the test, inoculating ≤100 cfu of appropriate microorganism at 30°C -35°C for 24 hours.
Inhibitory Properties: No growth of the test microorganism occurs for the specified temperature and not less than the longest period of the time specified, inoculating > 100 cfu of the appropriate microorganism at 30°C-35°C for 48 hours.

Growth Promoting Organism (ATCC)	**Growth**	**Acid**
Escherichia coli (8739)	Good	+
Pseudomonas aeruginosa (9027)	Good	-
Inhibitory		
Staphylococcus aureus subsp. *aureus* (6538)	Inhibited	-

Note: For inhibition no growth of test microorganism should occur.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Hartman and Minnich. 1981. Automation for Rapid Detection of Salmonellae in Foods. J. Food Prot. 44:385.
2. Mossel, D.A.A., M. Visser and A.M.R. Cornelissen. 1963. The Examination of Foods for Enterobacteriaceae using a Test of the Type Generally Adopted for the Detection of Salmonellae. J. Appl. Bacteriol.; 26:444.
3. Mossel D. A. A., and Harrewijn G. A., 1972, Alimenta II, 29-30
4. U.S. Food and Drug Administration. 1995. Bacteriological Analytical Manual, 8th ed. AOAC International, Gaithersburg, MD.
5. United States Pharmacopeia. 2023. The Official Compendia of Standards. USP General Chapter Microbiological Examination of Nonsterile Products: Microbial Enumeration Tests. USP31-NF26. United States Pharmacopeial Convention Inc., Rockville, MD.
6. British Pharmacopoeia, 2023, The Stationery Office British Pharmacopoeia.
7. European Pharmacopoeia, 2011, European Dept. for the quality of Medicines.
8. Japanese Pharmacopoeia, 2008.
9. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201050040500	Dehydrated Culture Media	500 g
201050042500	Dehydrated Culture Media	2.5 k
201050045000	Dehydrated Culture Media	5 k
203050250010	Ready Prepared Tube	25 X10 mL
203050250250	Bottle Media	6 x 250 mL
203050250100	Bottle Media	100 mL