



E E Broth, Mossel

M287I

E E Broth, Mossel is used for selective enrichment of *Enterobacteriaceae* in bacteriological examination of foods. The composition and performance criteria of this medium are as per the specifications laid down in BS ISO 21528-1:2004.

Composition**

Ingredients	Gms / Litre
Peptone	10.000
Dextrose	5.000
Ox-bile, purified	20.000
Disodium phosphate	6.450
Monopotassium phosphate	2.000
Brilliant green	0.0135
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 43.46 grams in 1000 ml distilled water. Dispense 120 ml amounts in 250 ml flasks or 9 ml amounts in tubes. Stopper with cotton plugs or loose fitting caps. Heat in free flowing steam or boiling water for 30 minutes. Avoid overheating of the medium. DO NOT AUTOCLAVE.

Principle And Interpretation

EE Broth, Mossel was formulated by Mossel et al (1) and is recommended as an enrichment medium for *Enterobacteriaceae* in bacteriological examination of foods (1) and animal feed stuffs (2). This medium composition is recommended by ISO for selective enrichment of *Enterobacteriaceae* (6).

Peptone and dextrose allow the growth of most of the members of *Enterobacteriaceae*. Brilliant green and ox-bile, purified are the selective agents for gram-positive bacteria. Lactose negative, anaerogenic lactose-positive or late lactose fermenting *Enterobacteriaceae* are often missed by the standard Coli-aerogenes test. To overcome this problem, lactose is replaced by dextrose in the media. Phosphates form the buffering system of the medium.

Cells damaged while drying or by low pH are resuscitated in well-aerated Tryptone Soya Broth (M011) for 2 hours at 25°C prior to enrichment in EE Broth, Mossel. The resuscitation procedure is recommended for dried foods (3), animal feeds (4) and semi-preserved foods (5). EE Broth, Mossel is an enrichment broth and should be used in conjunction with Violet Red Bile Glucose Agar (M581). Subcultures must be made onto lactose differential media as MacConkey Agar (M081), Deoxycholate Citrate Agar (M065) or Brilliant Green Agar (M016) for the detection of lactose negative or delayed lactose fermenters. This is used to inoculate MPN tubes prepared using EE Broth. Inoculate a loopful from these tubes onto Violet Red Bile Glucose Agar (M581) after an initial incubation at 35-37°C for 24 hours. Typical pink colonies from M581 are subcultured for biochemical confirmation by oxidase and fermentation reactions. Decimal dilutions of the food homogenate are used if the expected counts are high or else initial suspension is used.

Quality Control

Appearance

Light yellow to greenish yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Emerald green coloured, clear solution without any precipitate

Reaction

Reaction of 4.35% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

Cultural characteristics observed after an incubation at 35 - 37°C for 20 - 24 hours.

Cultural Response

Organism	Growth	Inoculum (CFU)	Acid
Cultural Response <i>Proteus mirabilis</i> ATCC 25933	luxuriant	50-100	positive reaction, yellow colour
<i>Salmonella Enteritidis</i> ATCC 13076	luxuriant	50-100	variable reaction
<i>Shigella boydii</i> ATCC 12030	luxuriant	50-100	negative reaction, no colour change
<i>Staphylococcus aureus</i> ATCC 25923	inhibited	$\geq 10^3$	
<i>Escherichia coli</i> ATCC 25922	luxuriant	50-100	positive reaction, yellow colour
<i>Enterobacter aerogenes</i> ATCC 13048	luxuriant	50-100	positive reaction, yellow colour

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Mossel D.A.A., Vissar M. and Cornellisen A.M.R., 1963, J. Appl. Bact., 26(3):444.
2. Van Schothurst M., et al, 1966, Vet Med., 13(3):273.
3. Mossel D.A.A. and Ratto M.A., 1970, Appl. Microbiol., 20:273.
4. Mossel D.A.A. and Shennan J.L. and Clare V., 1973, J. Sci. Fd. Agric., 24 : 499.
5. Mossel D.A.A., Ratto M.A., 1973, J. Fd. Technol., 8 : 97.
6. International Organization for Standardization (ISO), 2004. Microbiology of food and animal feeding stuffs - Horizontal methods for the detection and enumeration of Enterobacteriaceae. BS ISO 21528-1:2004.

Revision : 2 / 2015

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia™ publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia™ Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.