



E E Broth, Mossel

M287D

E E Broth, Mossel is used for selective enrichment of *Enterobacteriaceae* in bacteriological examination of foods.

Composition**

Ingredients	Gms / Litre
Tryptose	10.000
Dextrose	5.000
Disodium phosphate	8.000
Monopotassium phosphate	2.000
Oxgall	20.000
Brilliant green	0.0135
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 45.01 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 (100°C) 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 and is recommended as an enrichment medium for *Enterobacteriaceae* in bacteriological examination of foods (1) and animal feed stuffs (2). EE Broth, Mossel differs from EE Broth, Mossel in the source of carbon. This medium is provided with additional buffering action due to increased concentration of disodium phosphate and Ox bile is replaced with oxgall.

Tryptose and dextrose allow the growth of the most of the members of *Enterobacteriaceae*. Brilliant green and oxgall or 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 lactose is replaced by glucose in the media.

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.

Quality Control

Appearance

Light yellow to greenish yellow coloured homogeneous free flowing powder

Colour and Clarity of prepared medium

Emerald green coloured clear solution without any precipitate

Reaction

Reaction of 4.5% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Cultural Response

M287D: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Acid
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Cultural Response

<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	Positive reaction, yellow colour
<i>Enterobacter aerogenes</i> ATCC 13048	50-100	luxuriant	Positive reaction, yellow colour
<i>Proteus mirabilis</i> ATCC 25933	50-100	luxuriant	Positive reaction, yellow colour
<i>Salmonella Enteritidis</i> ATCC 13076	50-100	luxuriant	Variable reaction
<i>Shigella boydii</i> ATCC 12030	50-100	luxuriant	Negative reaction, no colour change
<i>Staphylococcus aureus</i> ATCC 25923	$\geq 10^3$	inhibited	

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., Visser 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.

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