

Technical Information

E E Broth, Modified

Product Code: DM 1287A

Application: Recommended as an enrichment medium for Enterobacteriaceae in the bacteriological examination of foods and animal feed stuffs.

Composition**

Ingredients	Gms / Litre
Pancreatic digest of gelatin	10.000
Glucose monohydrate	5.000
Disodium hydrogen phosphate, dihydrate	8.000
Potassium dihydrogen phosphate	2.000
Ox bile, dried	20.000
Brilliant green	0.015
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

EE Broth, Modified is recommended as an enrichment medium for detection of members of family Enterobacteriaceae in bacteriological examination of foods and animal feed stuffs. Pancreatic digest of gelatin, dextrose allow the growth of most of the members of family Enterobacteriaceae. Addition of brilliant green and ox bile makes the medium, inhibitory to non-Enterobacteriaceae. Lactose non fermenters, anaerogenic lactose fermenters or late lactose fermenters may be missed by the standard 'Coli-aerogenes' test. To overcome this problem, lactose is replaced by glucose in the media.

The cells damaged due to drying or exposures to low pH are resuscitated in well-aerated Tryptone Soya Broth (DM1011) for 2 hours at 25°C prior to enrichment. The resuscitation procedure is recommended for dried foods ⁽¹⁾, animal feeds ⁽²⁾ and semi-preserved foods ⁽³⁾. This medium should be used in conjunction with Violet Red Bile Glucose Agar without Lactose (DM1581). Subcultures must be made onto lactose differential media as MacConkey Agar w/ 0.15% Bile salts, CV and NaCl (DM1081) and Deoxycholate Citrate Agar (DM1065)

Methodology

Suspend 42.90 grams of dehydrated medium in 1000 ml distilled water. Shake well distribute in 100 ml quantities in 250 ml flasks and heat to 100°C for 30 minutes. Cool rapidly in cold running water. DO NOT AUTOCLAVE.

Quality Control

Physical 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 4.3% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH range 7.00-7.40

Cultural Response/Characteristics

DM 1287A: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.



Dehydrated Culture Media
Bases / Media Supplements

Organism	Inoculum (CFU)	Growth	Acid
<i>Enterobacter aerogenes</i> ATCC 13048	50-100	luxuriant	Positive reaction, yellow colour
<i>Escherichia coli</i> ATCC 25922	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

Dried media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8⁰ in sealable plastic bags for 2-5 days.

Further Reading

1. Mossel D.A.A. and Ratto M.A., 1970, Appl. Microbiol., 20:273.
2. Mossel D.A.A. and Shennan J.L. and Clare V., 1973, J. Sci. Fd. Agric., 24 : 499.
3. Mossel D.A.A., Ratto M.A., 1973, J. Fd. Technol., 8 : 97.

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