

**TECHNICAL SHEET**

<b>B022</b>	<b>EMB AGAR</b>	
<b>Formula</b>		
<b>Ingredients :</b>	<b>gms/lit.</b>	
Peptic digest of animal tissue	10.00	
Dipotassium phosphate	2.00	
Lactose	5.00	
Sucrose	5.00	
Eosin-Y	0.40	
Methylene blue	0.065	
Agar	13.50	
Final pH (at 25°C) : 7.2 ± 0.2		
<b>Directions :</b>		
Suspend 35.96 grams in 1000 ml distilled water. Mix until suspension is uniform. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. AVOID OVERHEATING. Cool to 45-50°C and shake the medium in order to oxidize the methylene blue (i.e. to restore its blue colour) and to suspend the flocculent precipitate. (If EMB Agar is inoculated on the same day, it may be used without autoclave sterilization).		
<b>Principle :</b>		
Peptic digest of animal tissue serves as source of carbon, nitrogen, and other essential growth nutrients. Lactose and sucrose are the sources of energy by being fermentable carbohydrates. Eosin-Y and methylene blue serve as differential indicators. Phosphate buffers the medium. Methylene blue and Eosin-Y inhibit gram-positive bacteria to a limited degree.		
<b>QC Tests – (I) Dehydrated Medium</b>		
Colour :	Light pink to purple	
Appearance :	Homogeneous Free Flowing powder	
<b>(II) Rehydrated medium</b>		
PH (post autoclaving/heating) :	7.2 ± 0.2	
Colour (post autoclaving/heating) :	Reddish purple with greenish cast	
Clarity (post autoclaving/heating) :	Opalescent	
<b>(III) Q.C. Test Microbiological</b>		
Cultural characteristics observed after 18-24 hrs. at 35-37°C.		
MICROORGANISM (ATCC )	GROWTH	COLOUR OF COLONY
Escherichia coli (25922)	Luxuriant	Purple with black centre with green metallic sheen
Proteus mirabilis (25933)	Luxuriant	Colourless
Salmonella typhimurium (14028)	Luxuriant	Colourless
Enterobacter aerogenes (13048)	Good	Pink, without sheen
Klebsiella pneumoniae (13883 )	Good	Pink, mucoid
Staphylococcus aureus (25923)	Inhibited	---
<b>Precautions :</b>	<ol style="list-style-type: none"> <li>1. For Laboratory Use.</li> <li>2. Follow proper, established laboratory procedures in handling and disposing of infectious materials.</li> <li>3. Store the medium away from light to avoid photooxidation.</li> </ol>	

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<b>Limitations :</b>	1. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.				
	2. EMB Agar is only moderately inhibitory. Some staphylococci, streptococci and yeast may grow. They will appear as small, pinpoint colonies. Gram – negative nonfermenting bacilli may grow and appear as non – lactose fermenters. Biochemical tests are necessary for further identification to genus or species.				
	3. Some strains of Salmonella and Shigella may not grow on EMB Agar. It is recommended that a nonselective, differential medium (MacConkey Agar or Hekton Enteric Agar) and a selective medium (Bismuth Sulfite Agar, SS Agar or Deoxycholate Citrate Agar) be run in parallel with EMB Agar.				
	4. Sterilization reduces the methylene blue, leaving the medium orange in colour. The normal purple colour of the medium may be restored by gentle mixing. If the reduced medium is not shaken to oxidize the methylene blue, a dark zone beginning at the top and extending downward through the medium will gradually appear. The sterilized medium normally contains a flocculent precipitate which should not be removed. By cooling to 50°C and gently mixing the medium before pouring it into plates, the flocculation will be finely dispersed.				
	5. Greenish metallic sheen is not always present. The presence of the greenish metallic sheen is not diagnostic for E. coli.				
	6. Store and incubate EMB Agar plates in the dark. Visible light can alter the ability of the medium to support microbial growth, especially of Proteus spp.				
<b>Use :</b>	For differential isolation of gram-negative enteric bacilli from clinical and nonclinical specimens.				
<b>Storage :</b>	Dehydrated medium- below 30°C Prepared medium – Between 2 to 8°C Store the medium away from light to avoid photooxidation.				
<b>Packing :</b>	500 gm bottle				
<b>Product profile:</b>	Reconstitution	Quantity on Preparation (500g)	pH (25°C)	Supplement	Sterilization
<b>B022</b>	35.96 g/l	13.904L	7.2 ± 0.2	Nil	121°C / 15 minutes

**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 BIOMARKLABORATORIES publications. The information contained in this publication is based on our in-house studies and market performance and is to the best of our knowledge true and accurate. BIOMARK LABORATORIES 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.