BIOMARK Laboratories-INDIA

www.biomarklabs.com

TECHNICAL SHEET

BH819	**XLD AGAR**
Formula	
Ingredients:	**gms/lit.**
Yeast extract	3.00
L-Lysine	5.00
Lactose monohydrate	7.50
Sucrose	7.50
Xylose	3.50
Sodium chloride	5.00
Sodium deoxycholate	2.50
Sodium thiosulphate	6.80
Ferric ammonium citrate	0.80
Phenol red	0.08
Agar	13.50

Final pH (at 25°C) : 7.4 ± 0.2

Directions :

Suspend 54.8 grams (the equivalent weight of dehydrated medium per litre) in 1000 ml purified/ distilled water. Heat with frequent agitation until the medium boils. DO NOT HEAT IN AN AUTOCLAVE. Transfer immediately to a water bath at 50°C. After cooling, pour into sterile Petri plates. It is advisable not to prepare large volumes, which will require prolonged heating and may produce precipitate.

Note: Slight precipitation in the medium may occur, which is inheriting property of the medium, and does not affect theperformance of the medium.

Principle:

Deoxycholate, ferric ammonium citrate and sodium thiosulphate are selective agents that inhibit gram-positive microorganisms. Essential nutrients, growth factors for growth of microorganism are provided by yeast extract. Xylose, sucrose and lactose are the fermentable sugars in this medium. Xylose is fermented by almost all the enteric bacteria except Shigella, which enable the differentiation of Shigella from Salmonellae. Salmonellae metabolize the xylose and decarboxylate lysine and thus change the pH to alkaline and mimic Shigella reaction. However, to prevent this reaction by lysine positive coliforms, lactose and sucrose are added in excess to produce acid and hence nonpathogenic H2S producers do not decarboxylate lysine. Sodium thiosulphate helps in reactivation of sulphur containing compounds and prevents the desiccation of these compounds during storage. It also forms the substrate for enzyme thiosulphate reductase, which breaks it to form H2S. Thiosulphate and ferric ammonium citrate are the H2S indicators in the medium. Sodium chloride maintains the osmotic equilibrium in this medium. Phenol red is the pH indicator.

QC Tests – (I)Dehydrated Medium			
	Colour :	Light yellow to pink	
	Appearance :	Homogeneous Free Flowing powder	
(II)Rehydrated medium			
	pH (post autoclaving/heating) :	7.4 ± 0.2	
	Colour (post autoclaving/heating) :	Red	
	Clarity (post autoclaving/heating) :	Clear to very slightly opalescent	
(III)Q.C. Test Microbiological			
	Cultural characteristics observed after incubation at 30-35 °C for 18-48 hours.		
	MICROORGANISM (ATCC)	GROWTH	COLOUR OF COLONY
	Proteus vulgaris (13315)	Good –luxuriant	Grey with black centres
	Salmonella enteritidis (13076)	Good –luxuriant	Red with black centers
	Salmonella paratyphi A (9150)	Good –luxuriant	Red
	Salmonella paratyphi B(8759)	Good –luxuriant	Red with black centers
	Salmonella typhi (6539)	Good –luxuriant	Red with black centers
	Salmonella typhimurium (14028)	Good –luxuriant	Red with black centers

	Shigella sonnei (25931)	fair-good	Red
	Shigella dysenteriae (13313)	Good –luxuriant	Red
	Shigella flexneri (12022)	fair-good	Red
	Enterobacter aerogenes (13048)	Fair	Yellow
	Enterobacter cloacae (13047)	Fair	Yellow
	Escherichia coli (25922)	Fair	Yellow
	Escherichia coli (8739)	Fair	Yellow
	Escherichia coli (NCTC9002)	Fair	Yellow
	Staphylococcus aureus (25923)	Inhibited	-
	Staphylococcus aureus (6538)	Inhibited	-
	Enterococcus faecalis (29212)	Inhibited	-

Precautions :	1. For Laboratory Use.
	2. Follow proper, established laboratory procedures in handling and disposing of infectious materials.
Limitations :	1. Since the nutritional requirements of organisms vary, some strains may be encountered that fail to grow or grow poorly on this medium.
	2. Red. false – positive colonies may occur with some Proteus and Pseudomonas species.
	3. Incubation in excess of 48 hours may lead to false – positive results.
	4. S. paratyphi A, S. choleraesuis, S. pullorum and S. gallinarum may form red colonies without black centers, thus resembling Shigella species.
	5. Some Proteus strains may give red to yellow colouration with most colonies developing black centers, giving rise to false positive reactions. Non-enterics like Pseudomonas and Providencia may exhibit red colonies
	6. Slight precipitation in the medium may occur, which is inheritant property of the medium, and does not affect the performance of the medium
	7. This medium is general purpose medium and may not support the growth of fastidious organisms
Use :	Recommended as a selective medium for the isolation and enumeration of Salmonella Typhi and other Salmonella species from pharmaceutical products in accordance with the microbial limit testing by harmonized methodology of USP/EP/BP/JP/ IP.
Storage :	Dehydrated medium- below 30°C Prepared medium– Between 2 to 8°C.
Packing :	500 gm. bottle

Product profile:	Reconstitution	Quantity on Preparation (500g)	pH (25°C)	Supplement	Sterilization
BH819	54.8 g/l	9.12 L	7.4 ± 0.2	Nil	Heat to boil with agitation. DONOT AUTOCLAVE OR OVERHEAT.