

## TECHNICAL SHEET

<b>B534</b>		<b>STAPHYLOCOCCUS AGAR NO.110</b>			
<b>Formula</b>					
<b>Ingredients :</b>			<b>gms/lit.</b>		
Casein enzymic hydrolysate			10.00		
Yeast extract			2.50		
Gelatin			30.00		
Lactose			2.00		
D-Mannitol			10.00		
Sodium chloride			75.00		
Dipotassium phosphate			5.00		
Agar			15.00		
Final pH (at 25°C) : 7.0 ± 0.2					
<b>Directions :</b>					
Suspend 149.5 grams in 1000 ml of purified/distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Resuspend the precipitate by gentle agitation to avoid bubbles and pour the plates while the medium is hot. Alternatively, cool the medium to 45 - 50°C and add blood or egg yolk if desired. This medium may also be used without sterilization; it should be boiled for 5 minutes and used at once.					
<b>Principle :</b>					
Staphylococci are widespread in nature though they are mainly found living on the skin, skin glands and mucous membrane of mammals and birds. These organisms are also associated with staphylococcal food poisoning. Staphylococcus Agar No. 110 also known as Stone Gelatin Agar is used for the selective isolation of pathogenic Staphylococci on the basis of pigment production, mannitol fermentation and gelatin liquefaction. The medium can be used with Egg Yolk Emulsion (BF003) to study the egg yolk reactions. Tryptone and yeast extract serve as sources of carbon, nitrogen and other essential nutrients and growth factors including vitamins. D-Mannitol is the fermentable carbohydrate with lactose being an additional source of carbon. Sodium chloride maintains the osmotic equilibrium while phosphate buffers the medium. Gelatin serves as the substrate for gelatin liquefaction. Mannitol fermentation can be visualized as yellow colouration by addition of a few drops of bromothymol blue to the areas of the plates where colonies have been removed. Gelatin liquefaction can be seen when the plates are flooded with a saturated aqueous solution of ammonium sulphate. On incubation at 35-37°C for 10 minutes, clear zone is observed. Enterococcus faecalis may grow on this medium as small colonies with slight mannitol fermentation.					
<b>QC Tests – (I)Dehydrated Medium</b>					
Colour :			Cream to yellow		
Appearance :			Homogeneous Free Flowing powder		
<b>(II)Rehydrated medium</b>					
pH (post autoclaving/heating) :			7.0 ± 0.2		
Colour (post autoclaving/heating) :			Light amber		
Clarity (post autoclaving/heating) :			Clear to slightly opalescent		
<b>(III)Q.C. Test Microbiological</b>					
Cultural characteristics observed after an incubation at 35-37°C for 48 hours. (Mannitol fermentation - on addition of BTB; Gelatinase production: flooding plate with standard aqueous solution of ammonium sulphate)					
MICROORGANISM (ATCC )		GROWTH	PIGMENT PRODUCTION	GELATINASE PRODUCTION	MANNITOL FERMENTATION
Staphylococcus aureus (25923)		Luxuriant	positive	positive reaction	positive reaction
Staphylococcus epidermidis (12228)		Luxuriant	Negative	positive reaction	variable reaction
Enterococcus faecalis (29212)		None-poor	Negative	variable reaction	Slight reaction
Escherichia coli (25922)		Inhibited			

<b>Precautions :</b>	1. For Laboratory Use.
	2. Follow proper, established laboratory procedures in handling and disposing of infectious materials.
<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.

TECHNICAL SHEET

	2. Ammonium sulfate solution for gelatin liquefaction test should be over-saturated and be warmed up to temperature of medium before use				
<b>Use :</b>	Used as a selective medium for the isolation and testing of pathogenic Staphylococci.				
<b>Storage :</b>	Dehydrated medium- below 30°C Prepared medium- Between 2 to 8°C.				
<b>Packing :</b>	500 gm bottle				
<b>Product profile:</b>	Reconstitution	Quantity on Preparation (500g)	pH (25°C)	Supplement	Sterilization
<b>B534</b>	149.5g/l	3.344L	7.0 ± 0.2	Blood or egg yolk	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.