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TECHNICAL SHEET

B562		TYROSINE AGAR (ISP MEDIUM NO.7)			
Formula					
Ingredients :		gms/lit.			
L-Asparagine		1.000			
L-Tyrosine		0.500			
Dipotassium phosphate		0.500			
Magnesium sulphate		0.500			
Sodium chloride		0.500			
Trace salt solution (ml)		1.000			
Agar		20.000			
Trace salt solution contains		Mg/litre			
Ferrous sulphate,7H ₂ O		1.360			
Copper chloride, 2H ₂ O		0.027			
Cobalt chloride, 6H ₂ O		0.040			
Sodium molybdate		0.025			
Zinc chloride		0.020			
Boric acid		2.850			
Manganese chloride		1.800			
Sodium tartarate		1.770			
Final pH (at 25°C) : 7.3 ± 0.1					
Directions :					
Suspend 23.74 gms (the equivalent weight of dehydrated medium per litre) of dehydrated medium in 1000 ml distilled water containing 15ml glycerol. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50 °C and pour into sterile petri plates.					
Principle :					
Streptomyces species may be differentiated from Nocardia species based on tyrosine and asparagine utilization. Clear zones in the medium surrounding colony growth indicate hydrolysis of the substrate present. International Streptomyces Project Medium No. 7 (Tyrosine Agar) is recommended for the isolation and enumeration of Streptomyces species. It is used for the differentiation of Sreptomyces species based on tyrosine utilization. The medium contains L-tyrosine, which is utilized by Streptomyces species. Zone of clearance around the colony indicates tyrosine hydrolysis. Trace elements provide essential factors for the growth of Streptomyces species. Inoculate the medium by streaking the isolate to be tested onto the agar surface with a sterile inoculating loop. The medium may need to be incubated for upto 3 weeks to allow positive hydrolytic reactions to develop. Examine plates at regular intervals for growth and hydrolysis.					
QC Tests – (I)Dehydrated Medium					
Colour :		Cream to yellow			
Appearance :		Homogeneous Free Flowing powder			
(II)Rehydrated medium					
pH (post autoclaving/heating) :		7.3 ± 0.1			
Colour (post autoclaving/heating) :		Yellow			
Clarity (post autoclaving/heating) :		Clear to slightly Opalescent gel			
(III)Q.C. Test Microbiological					
Cultural characteristics observed after 48-72 hrs.at 25-30°C. (Tyrosine hydrolysis is observed upto 3 weeks)					
MICROORGANISM (ATCC)		GROWTH	Tyrosine hydrolysis		
Streptomyces achromogenes (12767)		Good - luxuriant	Positive reaction,clear zones around the colonies		
Streptomyces albus (3006)		Good - luxuriant	Positive reaction,clear zones around the colonies		
Streptomyces lavendulae (8664)		Good - luxuriant	Positive reaction,clear zones around the colonies		
Streptomyces lividans (19844)		Good - luxuriant	Positive reaction,clear zones around the colonies		
Nocardia asteroides		good	Negative reaction,No clear zones.		
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.			
Use :		For the isolation characterization of Streptomyces species as per International streptomyces project.			
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
B562		23.74 g/l	21.06 L	7.3 ± 0.1	Glycerol 121°C/15 min.

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.
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