

TECHNICAL SHEET

B1012	DOUBLE SUGAR AGAR, RUSSELL (RUSSELL DOUBLE SUGAR AGAR)					
Formula						
Ingredients :		gms/lit.				
Peptic digest of animal tissue		2.50				
Casein enzymichydrolysate		7.50				
Meat extract B #		3.00				
Lactose		10.00				
Dextrose(Glucose)		1.00				
Sodium chloride		5.00				
Phenol red		0.025				
Agar		15.00				
# Equivalent to Beef extract						
Final pH (at 25°C) : 7.3 ± 0.2						
Directions :						
Suspend 44.02 gms.in 1000 ml. distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. Dispense in tubes or as desired and sterilize by autoclaving at 118-121°C (Correspond to 12-15 lbs pressure respectively) for 15 minutes. Cool to 45-50°C. Allow the tubes to solidify in slanting position to form generous butt.						
Principle :						
The medium is used for differentiating from gram- negative enteric bacilli especially the colon-typhoid – salmonellae- dysentery groups base on the fermentation of dextrose and lactose. After the incubation, the acid production in aerobic condition (on the slant) and under anaerobic condition (in the butt) can be detected by the change in colour of the indicator. Phenol red is the pH indicator in the medium. Gaseous fermentation is indicated by the splitting of the agar or by the bubble formation in the butt. Organism like Salmonella typhi capable of fermenting dextrose but not lactose, will show an initial acid slant in short incubation period. As the dextrose is consumed the reaction under aerobic condition reverts and becomes alkaline. Under anaerobic condition in the butt, the same organisms fail to revert the reaction and remain acidic.						
QC Tests – (I)Dehydrated Medium						
Colour :		Light yellow to Pink				
Appearance :		Homogeneous Free Flowing powder				
(II)Rehydrated medium						
pH (post autoclaving/heating) :		7.3 ± 0.2				
Colour (post autoclaving/heating) :		Red				
Clarity (post autoclaving/heating) :		Clear to slightly opalescent				
(III)Q.C. Test Microbiological						
Cultural characteristics observed after 18 –40 hrs.at 35-37°C.						
MICROORGANISM (ATCC)		GROWTH	SLANT	BUTT	GAS	
Escherichia coli (25922)		Luxuriant	A	A	+	
Proteus vulgaris (13315)		Luxuriant	K	A	+	
Pseudomonas aeruginosa (27853)		Luxuriant	K	K	-	
Salmonella typhimurium (14028)		Luxuriant	K	A	+	
Shigelladysenteriae (13313)		Luxuriant	K	A	-	
Key: A = acidic reaction, yellowing of the medium. K = alkaline reaction, red colour of the medium.						
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 differentiation of gram-negative enteric bacilli on the basis of their ability to ferment dextrose and lactose with or without gas formation.				
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
B1012		44.02g/l	11.36L	7.3 ± 0.2	NIL	118-121°C / 15 minutes

Disclaimer:

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