B155	**CYSTINE TRYPTONE AGAR**
Formula	
Ingredients :	**gms/lit.**
Casein enzymic hydrolysate	20.00
L-Cystine	0.50
Sodium chloride	5.00
Sodium sulphite	0.50
Phenol red	0.017
Agar	2.50
Final pH (at 25°C) : 7.3 ± 0.2	

Directions :

Suspend 28.51 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense in tubes in 8-10 ml amounts. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 50°C and add appropriate carbohydrate (0.5 to 1.0% if desired). Mix well and allow the tubed medium to cool in an upright position.

Principle :

Casein enzymic hydrolysate, L-cystine supplies the nutrients necessary to support the growth of fastidious microorganism. Carbohydrate fermentation is detected by a visible colour change of the medium due to the incorporation of the pH indicator dye, phenol red. When the organism metabolizes the carbohydrate present, organic acids are produced and the medium becomes acidified. However, the peptones present in the medium are also degraded by the bacteria present and yield substances that are alkaline in pH. The phenol red indicator changes from reddish-orange to yellow when the amount of acid produced by carbohydrate fermentation is greater than the alkaline end products of the peptone degradation. The colour change with phenol red occurs around pH 6.8, near the original pH of the medium.

QC Tests – (I)Dehydrated Medium		
	Colour :	Light yellow to light pink
	Appearance :	Homogeneous Free Flowing powder
(II)Rehydrated medium		
	pH (post autoclaving/heating) :	7.3 ± 0.2
	Colour (post autoclaving/heating) :	Orange to red
	Clarity (post autoclaving/heating) :	Clear to slightly opalescent
(III)Q.C. Test Microbiological		
	Cultural characteristics observed after an incubation at 35-37°C for 4-18 hours or longer if necessary.	

	MICROORGANISM (ATCC)	GROWTH	MOTILITY	ACID IN PRESENCE OF DEXTROSE
	Escherichia coli (25922)	Good –luxuriant	+	Positive reaction, yellow colour
	Neisseria meningitidis (13090)	Good	-	Positive reaction, yellow colour
	Neisseria gonorrhoeae (19424)	Good	-	Positive reaction, yellow colour
	Streptococcus pneumoniae (6303)	Good	-	Positive reaction, yellow colour

Key: For motility
+ =positive, growth away from stabline causing turbidity for motility
- = negative, growth along the stabline, surrounding medium remains clear

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. CTA requires a heavy inoculum.				
	3. Prolonged incubation may lead to changes in pH indicator or abnormal lactose / sucrose reactions with Neisseria pathogens.				
	4. Neisseria species usually produce acid only in the area of stabs (upper third). If there is a strong acid (yellow color) throughout the medium, a contaminating organism may be present. If in doubt about a tube containing a Neisseria species, a Gram stain and oxidase test should be performed on the growth.				
Use :	For maintenance, subculturing, detection of motility etc. With added carbohydrates, it can be also used for fermentation reactions of fastidious organisms.				
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
B155	28.51g/l	17.537 L	7.3 $\pm$ 0.2	nil	121^0C / 15 minutes