B348	UREA AGAR BASE (Filter Sterilizable) (w/o Agar)
Formula	
Ingredients :	**gms/lit.**
Peptic digest of animal tissue	1.00
Dextrose	1.00
Sodium chloride	5.00
Monopotassium phosphate	2.00
Phenol red	0.012
Urea	20.00
Final pH (at 25°C) : 6.8 ± 0.2	

Directions :

Suspend 29.01 gms. in 100 ml distilled water. Mix thoroughly to dissolve completely. Sterilise by filtration.DO NOT BOIL OR AUTOCLAVE. Suspend 15 gm of agar in 900 ml of distilled water and dissolve completely by boiling. Sterilize by autoclaving at 15lbs Pressure (121°C) for 15 minutes. Cool to 50-55 °C and mix with 100 ml of filter-sterilized Basal medium. Mix well and aseptically dispense into sterile Tubes to prepare 3 cm slant and 2 cm butt. Do not overheat or reheat the medium as urea Decomposes very easily.

Principle :

Peptic digest of animal tissue provides carbon and nitrogen required for good growth of a wide variety of organisms. Dextrose is included as an energy source. Sodium Chloride maintains the osmotic balance of the medium. Urea provides a source of nitrogen for those organisms producing urease. This is indicated by a colour change of the pH indicator, Phenol red, from yellow (pH 6.8) to red to pink – red (pH 8.1). Agar is the solidifying agent.

QC Tests – (I)Dehydrated Medium					
	Colour :	Light pink			
	Appearance :	Homogeneous Free Flowing powder			
(II)Rehydrated medium					
	pH (post autoclaving/heating) :	6.8 ± 0.2			
	Colour (post autoclaving/heating) :	Orange			
	Clarity (post autoclaving/heating) :	Clear			
(III)Q.C. Test Microbiological					
	Cultural characteristics observed after 18 – 24 hrs. at 35-37°C.				
	MICROORGANISM (ATCC)	GROWTH	UREASE		
	Enterobacter aerogenes (13048)	Good-Luxuriant	-		
	Escherichia coli (25922)	Good-Luxuriant	-		
	Proteus vulgaris (13315)	Good-Luxuriant	+		
	Salmonella typhimurium (14028)	Good-Luxuriant	-		
	Klebsiella pneumoniae (13883)	Good-Luxuriant	Weakly positive		

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

Refer disclaimer Overleaf

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. The alkaline reaction produced in this medium after prolonged incubation may not be caused by urease activity. False positive reactions may occur due to the utilization of peptones (especially in slant agar by Pseudomonas aeruginosa. For example) or other proteins which raise the pH due to protein hydrolysis and the relese of excessive amino acid residues. To eliminate possible protein hydrolysis, perform a control test with the same test medium without urea.				
	3. Do not heat or reheat the medium because urea decomposes very easily.				
	4. Urea Agar detects rapid urease activity of only the urease – positive Proteus species. For results to be valid for the detection of Proteus, the results must be read within the first 2 to 6 hours after incubation. Urease – positive Enterobacter, Citrobacter or Klebsiella, in contrast, hydrolyze urea much more slowly, showing only slight penetration of the alkaline reaction into the butt of the medium in 6 hours and requiring 3 to 5 days to change the reaction of the entire butt.				
Use :	Urea agar base(w/o agar) is used for detection of urease production, particularly of Proteus spp.				
Storage :	Dehydrated medium and prepared medium between 2 to 8°C.				
Packing :	500 gm. Bottle				
Product profile:	Reconstitution	Quantity on Preparation (500g)	pH (25°C)	Supplement	Sterilization
B348	29.01g/l	17.235L	6.8 ± 0.2	NIL	DO NOT BOIL OR AUTOCLAVE

Rev: December 2020