

Urea Broth

For the differentiation of enterobacteria particularly *Proteus* from *Salmonella* and *Shigella*

Formula in grams per liter:

Urea	20,00	Monopotassium Phosphate	9,10
Sodium Phosphate	9,50	Yeast Extract	0,10
Phenol Red	0,01		

Final pH: 6,8 ± 0,2 at 25 °C

Preparation:

Suspend 38,7 grams of the medium in 100 ml. of distilled water without heating. When the powder is dissolved, sterilize by filtration.

Dispense in small sterile tubes in quantities of 0,5 to 2 ml. Larger volumes can be used but the reactions will be slower.

When there is no filter available the medium can be sterilized in an autoclave at 5 to 8 lbs. of pressure for 15 minutes. If the medium is prepared and inoculated immediately it provides good results without sterilizing.

Uses:

Urea Broth can be used for the determination of the urea activity in enterobacteria as well as microorganisms of the general *Brucella*, *Bacillus*, *Micrococcus*, and *Mycobacterium*.

Developed by Rustigian and Stuart, this highly buffered medium usually reacts only to the gigh outputs of ammonia by *Proteus*, *Morganella* and *Providencia rettgeri* in the first 24 hours of incubation. An alkaline reaction produces a purple color in the presence of the phenol indicator.

Microbiological Tests:

Microorganisms	Urease
<i>Escherichia coli</i> ATCC 25922	-
<i>Klebsiella pneumonia</i> ATCC 13833	+
<i>Salmonella typhimurium</i> ATCC 14028	-
<i>Proteus vulgaris</i> ATCC 13315	+

