TM 906 - UREA BROTH (FILTER STERILIZABLE)

INTENDED USE

For identification of bacteria on the basis of urea utilization, especially for the differentiation of *Proteus* species from *Salmonella* and *Shigella* species.

PRODUCT SUMMARY AND EXPLANATION

Urea Broth (Filter Sterilizable) was developed by Rustigian and Stuart. This medium is especially recommended for the differentiation of *Proteus* species from *Salmonella* and *Shigella* species in the enteric infection diagnosis, based on urea utilization.

COMPOSITION

Ingredients	Gms / Ltr
Monopotassium phosphate	9.100
Yeast extract	0.100
Dipotassium phosphate	9.500
Urea	20.000
Phenol red	0.010
Monopotassium phosphate	9.100

PRINCIPLE

Yeast extract provides trace elements, vitamins and amino acids. Gram-negative enteric bacilli are unable to utilize urea because of less nutrients and high buffering capacity of the medium. Urea Broth becomes alkaline as the utilization of urea by the organisms liberate ammonia during the incubation, indicated by pink red colour. All urea test media rely on the alkalinity formation and so they are not specific for urease testing. The utilization of proteins may raise the pH to alkalinity due to protein hydrolysis and excess of amino acids results in false-positive reaction.

INSTRUCTION FOR USE

- Dissolve 38.7 grams in 1000 ml distilled water.
- Mix well and sterilize by filtration, do not autoclave or heat the medium.
- Dispense in sterile tubes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to light pink coloured homogeneous free flowing powder.
Appearance of prepared medium : Yellow to orange coloured clear solution without any precipitate.
pH (at 25°C) : 6.8±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Urease	Incubation Temperature	Incubation Period

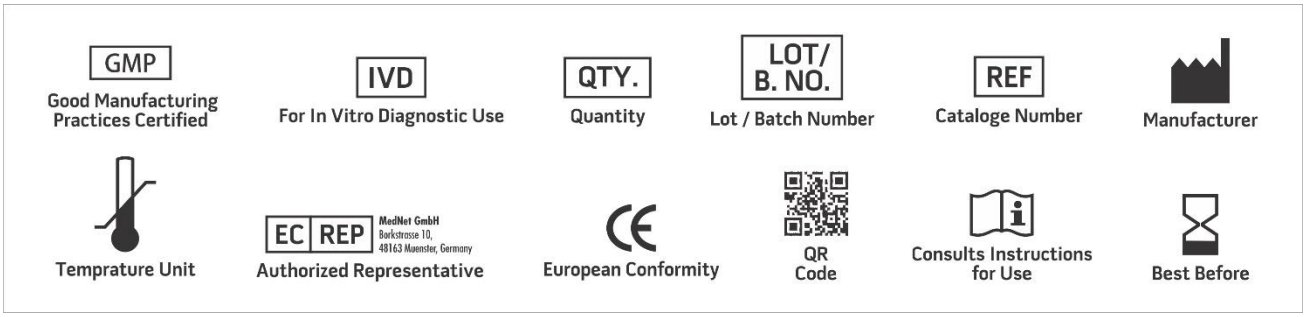
Enterobacter aerogenes	13048	50-100	Luxuriant	Negative reaction, no change	35 - 37°C	18-24 Hours
Escherichia coli	25922	50-100	Luxuriant	Negative reaction, no change	35 - 37°C	18-24 Hours
Klebsiella pneumoniae	13883	50-100	Luxuriant	Positive reaction, cerise colour	35 - 37°C	18-24 Hours
Proteus mirabilis	12453	50-100	Luxuriant	Positive reaction, cerise colour	35 - 37°C	18-24 Hours
Proteus vulgaris	13315	50-100	Luxuriant	Positive reaction, cerise colour	35 - 37°C	18-24 Hours
Salmonella Typhimurium	14028	50-100	Luxuriant	Negative reaction, no change	35 - 37°C	18-24 Hours

PACKAGING:
In pack size of 500 gm bottles.

STORAGE
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL
After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES
1. Rustigian and Stuart, 1941, Proc. Soc. Exp. Biol. Med., 47:108.
2. Finegold and Baron, 1986, Bailey and Scotts Diagnostic Microbiology, 7th ed., The C.V. Mosby Co., St. Louis.
3. Christensen, 1946, J. Bact., 52:461.
4. MacFaddin J., 1980, Biochemical Tests for Identification of Medical Bacteria, 2nd ed., Williams and Wilkins, Baltimore.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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