TMV 394 - UREA AGAR BASE (CHRISTENSEN) (AUTOCLAVABLE) (VEG.)

INTENDED USE

For detection of urease producing bacteria.

PRODUCT SUMMARY AND EXPLANATION

Urea Veg Agar Base is prepared by completely replacing animal based peptones with vegetable peptones which makes the medium free of BSE/TSE risks. Urea Veg Agar Base is the modification of Urea Agar Base formulated in accordance with Christensen formulation who modified the original medium formulated by Rustigian and Stuart. This medium differentiates between rapid urease positive *Proteus* species, other urease positive organisms like *Citrobacter, Enterobacter, Klebsiella* and bacteria other than *Enterobacteriaceae*.

Heavy inoculum of growth is inoculated on the surface of the slants. When urea is utilized, ammonia formed during incubation makes the medium alkaline, showing a pink- red colour due to the phenol red indicator. Prolonged incubation may cause alkaline reaction in the medium. Check using medium without urea as the negative control.

COMPOSITION

Ingredients	Gms / Ltr
Veg peptone	1. 0
Dextrose	1. 0
Sodium chloride	5. 0
Disodium phosphate	1. 2
Monopotassium phosphate	0. 8
Phenol red	0.012
Agar	15.0

PRINCIPLE

Addition of Veg peptone, dextrose and reduced content of buffer helps to support an early luxuriant growth. Veg Peptone is the source of essential nutrients. Dextrose is the energy source. Sodium chloride maintains the osmotic equilibrium of the medium whereas phosphates serve to buffer the medium. Urea is hydrolyzed to liberate ammonia. Phenol red indicator detects the alkalinity generated by visible colour change from orange to pink.

INSTRUCTION FOR USE

- Dissolve 24.0 grams in 950 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 10 psi pressure (115°C) for 20 minutes.
- Cool to 45-50°C and aseptically add 50 ml of sterile 40% Urea Solution and mix well.
- Dispense into sterile tubes and allow to set in the slanting position, do not overheat or reheat the medium as urea decomposes very easily.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light orange coloured, homogeneous, free flowing powder.
Appearance of prepared medium : Yellowish orange coloured clear gel forms in tubes as slants.
pH (at 25°C) : 6.8±0.2

INTERPRETATION

Cultural characteristics observed on addition of sterile 40% Urea Solution after an incubation.

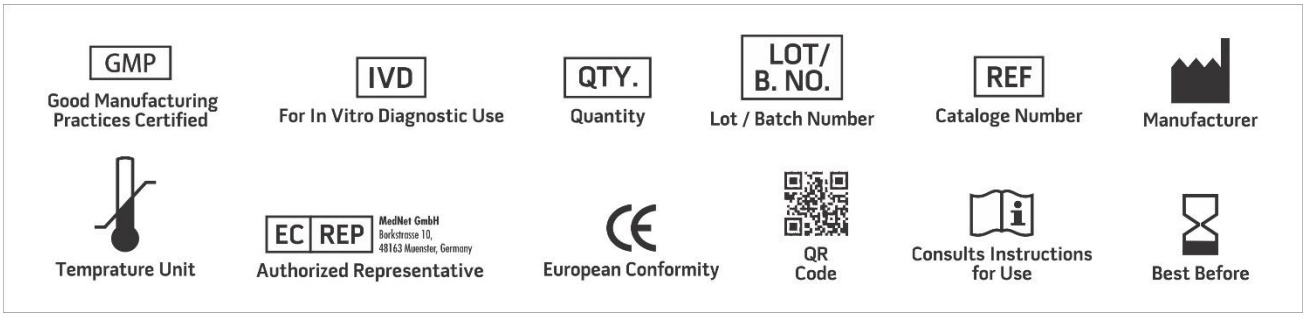
Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Urease	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Luxuriant	Negative reaction, no change	35 - 37°C	18-24 Hours
Klebsiella aerogenes	13048	50-100	Luxuriant	Negative reaction, no change	35 - 37°C	18-24 Hours
Klebsiella pneumoniae	13883	50-100	Luxuriant	Positive reaction, cerise colour	35 - 37°C	18-24 Hours
Proteus mirabilis	25933	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 100 gm and 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. Christensen, W.B., 1946, J. Bact., 52:461.
2. MacFaddin J.F., 2000(ed), Biochemical Tests for Identification of Medical Bacteria, 3rd edition, Lippinicott Williams and Wilkins, New York
3. Rustiian and Stuart, 1941, Proc.Soc.Exp.Biol. Med., 47 :108.



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

***For Lab Use Only**

Revision: 08 Nov., 2019