

TM 2411 – UREA INDOLE BROTH, MODIFIED (ISO 10273:2003)

INTENDED USE

For the detection of urease production, particularly by members of the genus *Proteus*.

PRODUCT SUMMARY AND EXPLANATION

Strains of *Enterobacteria* are associated with abscesses, pneumonia, meningitis, septicemia and infections of wounds, the urinary tract and the intestine. They are a major component of the normal intestinal flora of humans but are relatively uncommon at other body sites. Of clinically significant isolates, Enterobacteriaceae may account for 80% of gram-negative bacilli and 50% of all clinically significant isolates in clinical microbiology laboratories. This medium formulation is as per ISO and is recommended for the confirmation of *Yersinia* on the basis on urease reaction and indole reaction. *Yersinia* gives a positive urease reaction. Some biovars of *Yersinia* are indole positive while some give negative reaction. Urea Indole Medium is also used for the identification of *Enterobacteria* on the basis of urease and indole production and the trans-deamination of tryptophan. The results for urease production should be noted prior to indole reaction, as addition of Kovacs reagent, decolourizes the medium, due to drop in pH.

COMPOSITION

Ingredients	Gms / Ltr
L-Tryptophan	3.000
Potassium dihydrogen phosphate	1.000
Dipotassium hydrogen phosphate	1.000
Sodium chloride	5.000
Urea	20.000
Phenol red	0.025

PRINCIPLE

The medium consists of L- Tryptophan which is an essential amino acid and is converted to skatole and indole, which is detected by the addition of Kovacs Reagent. Sodium chloride maintains the osmotic balance. The phosphates help in the buffering of the medium. Microorganisms that possess the enzyme urease hydrolyse urea, releasing ammonia, which is detected by the pH indicator phenol red. The alkalinity so developed imparts pink colour to the medium.

INSTRUCTION FOR USE

- Dissolve 30.03 grams in 1000 ml distilled water.
- Dissolve the medium completely and sterilize by filtration. DO NOT AUTOCLAVE.
- Aseptically, dispense into sterile tubes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Light yellow to light pink homogeneous free flowing powder.
Appearance of prepared medium	: Yellow to light orange coloured clear solution.
pH (at 25°C)	: 6.9±0.2

INTERPRETATION

Cultural characteristics observed after incubation.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Indole	Urease	Incubation temperature	Incubation Period
<i>Escherichia coli</i>	25922	50-100	Luxuriant	Positive reaction, red colour at the interface of the medium after addition of Kovacs reagent	Negative reaction, no change	35-37°C	18-24 Hours
<i>Proteus mirabilis</i>	12453	50-100	Luxuriant	Negative reaction, no change	Positive reaction, pink colour	35-37°C	18-24 Hours
<i>Salmonella Typhimurium</i>	14028	50-100	Luxuriant	Negative reaction, no change	Negative reaction, no change	35-37°C	18-24 Hours
<i>Yersinia enterocolitica</i>	27729	50-100	Luxuriant	Negative reaction, no change	Positive reaction, pink colour	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. Patrick R. Murray et al, Manual of Clinical Microbiology, Sixth Edition, 444 - 445.
2. Roland F. Bourbon D, Sztrum S. Ann. Inst. Pasteur, 73. 914-916.
3. Microbiology of food and animal feeding stuffs -- Horizontal method for the detection of presumptive pathogenic *Yersinia enterocolitica*.



 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Buckenhof 10 48143 Aachen, Germany</small>	 European Conformity	 QR Code	 Consults instructions for Use	 Best Before

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

***For Lab Use Only**
Revision: 08 Nov., 2019