

## TMS 10 - MIU MEDIUM (10 Butts)

### INTENDED USE

For detection of motility, urease and indole production

### PRODUCT SUMMARY AND EXPLANATION

MIU Medium Base is formulated to detect motility, urease and indole production in single tube.

Motility and urease reactions are read before testing Indole production. Motile organisms show either diffused growth or turbidity extending away from stab inoculation line while non-motile organisms grow along the stabline. Organisms that utilize urea, produce ammonia which makes the medium alkaline, showing pink-red colour by change in the phenol red indicator. Indole is produced from tryptophan present in casein enzymic hydrolysate. The indole produced combines with the aldehyde present in the Kovac's reagent to form a red complex.

### COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	10.000
Sodium chloride	5.000
Agar	2.000
Dextrose	1.000
Phenol red	0.010

### PRINCIPLE

Casein enzymic hydrolysate provide amino acids and other nitrogenous substances. Sodium chloride maintains osmotic equilibrium. Dextrose is fermentable carbohydrate. Phenol red is the pH indicator which turns pink- red in alkaline conditions. The test cultures are stab-inoculated.

### INSTRUCTION FOR USE

Inoculate the bacterial culture with an inoculating needle by streaking the slants.

### QUALITY CONTROL SPECIFICATIONS

<b>Appearance</b>	:	Orange coloured opalescent butts.
<b>Quantity of Medium</b>	:	8 ml of medium in glass tube.
<b>pH ( at 25°C)</b>	:	6.8 ±0.2

### INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Growth	Motility	Indole	Urease	Incubation Temperature	Incubation Time
<i>Escherichia coli</i>	25922	Luxuriant	Positive	Positive	Negative	35-37°C	18-24 hours
<i>Klebsiella pneumoniae</i>	13883	Luxuriant	Negative	Negative	Weakly positive	35-37°C	18-24 hours
<i>Proteus vulgaris</i>	13315	Luxuriant	Positive	Positive	Positive	35-37°C	18-24 hours
<i>Proteus mirabilis</i>	25933	Luxuriant	Positive	Negative	Positive	35-37°C	18-24 hours
<i>S. serotype typhimurium</i>	14028	Luxuriant	Positive	Negative	Negative	35-37°C	18-24 hours



### PACKAGING

Kit of 10 Ready-To-Use Butts containing 8 ml medium in each glass tube.

### STORAGE

On receipt, store tubes in the dark at 2 – 8°C. Avoid freezing and overheating. Do not open until ready to use. Minimize exposure to light. Tubed media stored as labeled until just prior to use may be inoculated up to the expiration date and incubated for the recommended incubation times. Allow the medium to warm to room temperature before inoculation.

**Product Deterioration:** Do not use tubes if they show evidence of microbial contamination, discoloration, drying or other signs of deterioration.

### DISPOSAL

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques.

### REFERENCES

1. Rustigian and Stuart (1941) Proc. Soc. Exp. Biol. Med., 47:108.
2. McFaddin J.F. (1985) Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore
3. Ewing (1986) Edwards and Ewings 'Identification of Enterobacteriaceae', 4th ed. Elsevier Science Publishing Co., Inc., New York.



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

**\*For Lab Use Only**

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