Product Name : Motility Indole Urea Agar

Medium used for differentiating Enterobacteriaceae based on motility, indole production and urease activity.

FORMULA (G/L)

Tryptone 30.0
Sodium Chloride 5.0
Potassium Dihydrogen Phosphate 5.0
Phenol Red 0.004
Agar 3.0
Final pH = 6.9 ± 0.2 at 25°C.

DIRECTIONS

Suspend 43.0 G in 1 L of distilled water. Heat until completely dissolved. Autoclave at 121 °C for 15 minutes. Cool to 50 °C. Aseptically add 10 vials of Urea 40% supplement (MB-U1866). Dispense into final containers.

Urea 40% supplement
1 Vial contents (Each vial is sufficient for 100mL of medium)
Urea.....2 G

DESCRIPTION

Motility Indole Urea Agar is a semisolid medium designed for detection in *Enterobacteriaceae* of urease activity, motility, and indole production. It was also used in combination with KLIGLER Iron Agar (KIA) (MB-K1023) for the recognition and differentiation of *Salmonella* and *Shigella* species from colonies picked from plating media in fecal cultures.

TECHNIQUE

Inoculate tubes with a pure culture by stabbing the center of the column of medium to greater than half the depth. Incubate tubes for 18-48 hours at 35 ± 2 °C in aerobic atmosphere. Motility was observed by growth extending from the line of inoculum or diffuse turbidity of the medium. Nonmotile organisms grow only along the line of inoculation. Urease activity was observed by a change of color to red. Indole production is indicated by the formation of a pink to red color after the addition of three or four drops of Kovac's-Reagent (MB-KV-30) to the surface of the medium. A negative reaction is indicated by the development of a yellow color. The red color of phenol red in alkaline pH did not interfere because of the acidity of Kovac's-Reagent (MB-KV-30). The efficacy of Motility Indole Urea Agar and KLIGLER Iron Agar (KIA) (MB-K1023) for presumptive recognition of *Salmonella* and *Shigella* is shown in the work of Rosa Fraile et al.

QUALITY CONTROL

Dehydrated medium
Appearance: free-flowing, homogeneous.
Color: light beige.
Prepared medium
Appearance: clear semisolid.
Color: light amber.
Incubation conditions: 35 ± 2°C / 18-48 hours.

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Product Name : Motility Indole Urea Agar

Microorganism	ATCC	Motility	Indole Production	Urease Reaction
Escherichia coli	25922	+	+	-
Shigella flexneri	9199	-	-	-
Salmonella typhimurium	14028	+	-	-
Proteus mirabilis	25933	+	-	+
Enterobacter aerogenes	13048	+	-	-

STORAGE

The powder is very hygroscopic: store the powder at room temperature, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared tubes at 2-6°C.

REFERENCES

1. Rosa Fraile, Vega and Gutierrez. (1980). Evaluation of Urea-Motility-Indole Medium for Recognition and Differentiation of *Salmonella* and *Shigella* Species in Stool Cultures.
2. Eder and Clark. (1970). Appl. Microbiol. 2:849.
3. Oberhofer and Hajkowski. 81970). Am. J. Clin. Pathol. 54:720
4. MacFaddin. (2000). Biochemical tests for identification of medical bacteria, 3rd ed. Lippincott Williams & Wilkins, Baltimore, Md.
5. Journal of Clinical Microbiology, Sept. (1980), p. 310-313

PACKAGING

Cat. No : MB-M1236 Motility Indole Urea Agar	500 G

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