BacterLab Division

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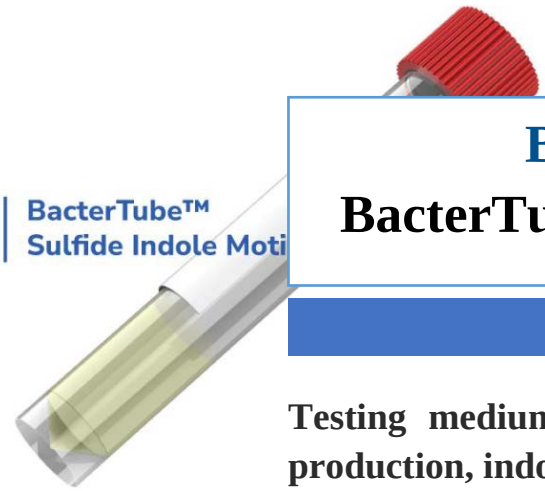

BIOCHEMICAL MEDIUM

BacterTube™ Sulfide Indole Motility (SIM)

Testing medium to differentiate intestinal bacteria based on H_2S production, indole production, and motility.

Code: 08028

1. INTENDED USE

BacterTube™ Sulfide Indole Motility (SIM) is recommended for the differentiation of gram-negative enteric bacilli on the basis of sulfide production, indole formation, and motility.

2. PRINCIPLES

The formulation of **BacterTube™ Sulfide Indole Motility (SIM)** is designed to allow the detection of sulfide production, indole formation and motility. The medium contains ferrous ammonium sulfate and sodium thiosulfate, which together serve as indicators for the production of hydrogen sulfide. Hydrogen sulfide production is detected when ferrous sulfide, a black precipitate, is produced as a result of ferrous ammonium sulfate reacting with H_2S gas. Casein peptone, another component of **BacterTube™ Sulfide Indole Motility (SIM)**, is rich in tryptophan. Organisms possessing the enzyme tryptophanase degrade tryptophan to indole. Indole is detected upon the addition of Kovacs Reagent following incubation of the inoculated medium. Indole combines with p-dimethylaminobenzaldehyde and produces a red band at the top of the medium. A negative indole test produces no color change upon the addition of Kovacs Reagent. The small amount of agar added to the medium provides a semi-solid structure allowing for the detection of bacterial motility. Motile organisms extend from the stab line and produce turbidity or cloudiness throughout the medium. Nonmotile organisms grow only along the stab line and leave the surrounding medium clear.

BacterTube™ Sulfide Indole Motility (SIM) also contains animal tissue which provides amino acids and nutrients necessary for bacterial growth.

3. TYPICAL COMPOSITION

For 1 liter of medium

Tryptone	20,0 g
Peptone	6,1 g
Ferrous ammonium sulphate	0,2 g
Sodium thiosulphate	0,2 g
Agar	3,5 g

pH of the ready-to-use medium at 25°C: 7,3 ± 0,2

4. PREPARATION

The environmental plates are ready-to-use, no preparation required.

5. INSTRUCTIONS FOR USE

- Allow the **BacterTube™ Sulfide Indole Motility (SIM)** warm to room temperature before use.
- Using isolated colonies from an 18 – 24 hour culture on solid media, inoculate the tube medium by stabbing the center
- Incubate the inoculated medium aerobically at 35ºC. for 18 – 24 hours.

- Observe for H_2S production and motility.
- Once H_2S and motility reaction have been read and recorded, apply three drops of Kovacs Reagent to the surface of the medium
- Observe for the development of a pink to red color

NOTE:

- Specimen collection is not applicable since this medium is not intended for primary isolation from clinical specimens.
- As a general rule, infectious material should be submitted directly to the laboratory without delay and protected from excessive heat and cold. If there is to be a delay in processing, the specimen should be inoculated onto an appropriate transport media and refrigerated until inoculation.

6. RESULTS

- A positive H_2S test is denoted by a blackening of the medium along the line of inoculation. A negative H2S test is denoted by the absence of blackening.
- A positive motility test is indicated by a diffuse zone of growth flaring from the line of inoculation.
- A negative motility test is indicated by growth confined to the stab line.
- A positive test for indole is denoted when a pink to red color band is formed at the top of the medium after addition of Kovacs Reagent. A yellow color denotes a negative indole test after addition of Kovacs Reagent.

7. QUALITY CONTROL

BacterLab ensures the quality of each product batch by testing with ATCC reference strains.

Reference Strains	**Incubation Conditions**	**Expected Results**		
		Mobility	**Indole**	**H_2S**
Shigella sonnei ATCC 25931	Incubated at 35 – 37°C for 18 – 24 hrs	-	-	-
Escherichia coli ATCC 25922		+	+	+
Proteus hauseri ATCC 13315		+	-	+

8. STORAGE AND TRANSPORT CONDITIONS

- Storage: 2 – 8°C.
- Transportation: Ambient temperature.

9. PACKAGING

- Packaging: 50 tubes/ box or as per customer request.

10. SHELF LIFE

- Expiration Date: 3 months from the manufacturing date.

11. BIBLIOGRAPHY

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