Technical Data Sheet

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SIM MEDIUM (5 ML)

INTENDED USE:
SIM (Sulfide Indole Motility) Medium is used for the determination of sulfide production, indole formation and motility of enteric microorganisms..

PRINCIPLE AND INTERPRETATION:
The ingredients in SIM Medium enable the determination of three activities by which enteric bacteria can be differentiated. Sodium thiosulfate and ferrous ammonium sulfate are indicators of hydrogen sulfide production. The ferrous ammonium sulfate reacts with H2S gas to produce ferrous sulfide, a black precipitate.[1] The casein peptone is rich in tryptophan, which is attacked by certain microorganisms resulting in the production of indole. The indole is detected by the addition of chemical reagents following the incubation period. Motility detection is possible due to the semisolid nature of the medium. Growth radiating out from the central stab line indicates that the test organism is motile.

COMPOSITION:

Ingredients	Gr/Liter
Tryptone	20 gr
Peptone	6,1 gr
Ferrous ammonium sulphate	0,2 gr
Sodium thiosulphat	0,2 gr
Agar	3,5 gr

***Formula adjusted, standardized to suit performance parameters
pH: 7,3 ± 0,2

PRECAUTIONS:
For professional use only. Do not use tubes if they show evidence of microbial contamination, discoloration, drying, cracking or other signs of deterioration.

TEST PROCEDURE:
1. Inoculate representative samples with the cultures listed below.
 a. Loosen caps, boil and cool before use.
 b. Inoculate the tubes by stabbing a straight needle down the center of the medium to approximately one-half its depth using 10-1 dilutions of 18- to 24-h Trypticase Soy Broth cultures.
 c. Incubate with loosened caps at 35 ± 2 °C in an aerobic atmosphere.
2. Examine tubes after 18 – 24 and 42 – 48 h for growth, motility and sulfide.
3. After 48 h, test for indole production. Add 0.2 mL of Kovacs' Reagent down the inside of the tubes. Observe for the production of a pink to red color (positive reaction).

QUALITY CONTROL:
1.Sterility Control:
Incubation 48 hours at 30-35ºC and 72 hours at 20-25ºC: NO GROWTH

2.Phsical/Chemical Control
pH: 7,3 ± 0,2
Apperance: Light amber

3.Microbiological Control: Incubation at a temperature of 35±2ºC and observed after 18-24 hours.

Microorganism	Inoculum (CFU)	Results				
		Growth	Reaction			
Salmonella typhimurium ATCC 14028	10-100	Good	H2S(+)	Indole(-)	Motility(+)	Recovery(+)
E. coli ATCC 25922	10-100	Good	H2S(-)	Indole(+)	Motility(+)	Recovery(+)
Pseudomonas aeruginosa ATCC 27853	10-100	Good	H2S(-)	Indole(-)	Motility(+)	Recovery(+)

STORAGE CONDITIONS AND SHELF LIFE:
Store the prepared medium at 2- 12°C. Use before expiry date on the label. Do not use beyond stated expiry date.

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DISPOSAL:

Incubated medium may contain active bacteria and micro-organisms. Do not open infected medium. Infected tube should be autoclaved, incinerated or opened and soaked in a chlorine-based disinfectant (liquid bleach) for 20 minutes prior to disposal.

PACKAGING:

Katalog Number: 01014
Content/Packaging:50 Tubes/Box

REFERENCES:

1. MacFaddin, J.F. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, vol. I. Williams & Wilkins, Baltimore.
2. Murray, P.R., E.J. Baron, J.H. Jorgensen, M.L. Landry and M.A. Pfaller (ed.) 2007. Manual of clinical microbiology, 9th ed. American Society for
Microbiology, Washington, D.C.
3. Forbes, B.A., D.F. Sahm, and A.S. Weissfeld. 2002. Bailey & Scott's diagnostic microbiology, 11th ed. Mosby, Inc., St. Louis.
4. Ewing, W.H. 1986. Edwards and Ewing's identification of Enterobacteriaceae, 4th ed. Elsevier Science Publishing Co., Inc., New York.
5. Holt, J.G., N.R. Krieg, P.H.A. Sneath, J.T. Staley, and S.T. Williams (ed.). 1994. Bergey's Manual™ of determinative bacteriology, 9th ed. Williams &Wilkins, Baltimore

STERILE A	Aseptic Sterile	Use by		Look at user manual	
LOT	Batch Code	Temperature Limitation		Manufacturer	
REF	Catalogue Number	Do not reuse			
CONTROL –	Negative Controls	Contains sufficient for <n> tests			
CONTROL +	Positive Controls				