

SIM Medium

Used for the identification and differentiation of enterobacteria

Formula in grams per liter:

Casein Peptone	20,00	Meat Peptone	6,10
Ferric Ammonium Sulfate	0,20	Sodium Thiosulfate	0,20
Bacteriological Agar	3,50		

Final pH: 7,3 ± 0,2 at 25 °C

Preparation:

Suspend 30 grams of the medium in one liter of distilled water. Leave to soak for 5 to 10 minutes. Mix well until a uniform suspension is obtained, heat agitating constantly and boil for one minute until completely dissolved. Dispense and sterilize by autoclaving at 121°C (15 lbs sp) for 15 minutes.

Uses:

Inoculate the pure culture by stabbing to a depth of 3/4 of the tube. Incubate at 35° C for 18 to 24 hours and read the results. Darkening indicates the production of H₂S. Growth only along the inoculation line indicates non-motility. The mobility is indicated by a diffuse turbidity away from the line of inoculation. Production of indol by adding Ehrlich or Kovacs reagents gives a purple-red coloration to the reagents. Alternatively, a strip of filter paper impregnated with an oxalic acid solution placed in the top of the tube (above the medium) can be used for the detection of indol (red color).

ORGANISM	H ₂ S	INDOL	MOBILITY
<i>Salmonella typhi</i>	+ or -	-	+
<i>Salmonella</i>	+ or -	-	+
<i>Shigella</i>	-	+ or -	-
<i>E. coli</i>	-	+	+ or -
<i>Klebsiella</i>	-	+ or -	-
<i>Enterobacter</i>	-	-	+
<i>Citrobacter</i>	+	-	+

Microbiological Tests:

Microorganisms	Growth	H ₂ S	Mobility	Indol
<i>Escherichia coli</i> ATCC 25922	Good	-	+	+
<i>Salmonella typhimurium</i> ATCC 14028	Good	+	+	-
<i>Shigella flexneri</i> ATCC 12022	Good	-	-	-

