TMV 847 - SIM MEDIUM (VEG.)

INTENDED USE

For determination of hydrogen sulphide production, indole formation and motility of enteric bacilli.

PRODUCT SUMMARY AND EXPLANATION

SIM Veg Medium is prepared by replacing animal peptones like Peptic digest of animal tissue, Beef extract and Peptonized iron with vegetable peptones like Veg peptone, veg extract and Veg peptonized iron respectively. This makes the medium free from BSE/TSE risks. SIM Veg Medium is the modification of animal based SIM medium. SIM Veg Medium is used to differentiate enteric bacilli (*Salmonella* and *Shigella*) on the same principles as in SIM medium i.e. on basis of sulphide production, indole formation and motility. It is known that Salmonella serotype Paratyphi A and Salmonella serotype Paratyphi B can be distinguished on the basis of H2S (hydrogen sulphide) production using lead acetate as reported by Jordan and Victorso. H2S reacts with Veg peptonized iron to form black precipitate of ferrous sulphide. Motile organisms intensify the H2S reaction. Motile organisms grow away from line of inoculation showing diffused growth while non-motile organisms grow along the stab line. Tryptophan present in Veg peptone is degraded by specific bacteria to produce indole. Indole is detected by the addition of chemical reagents following incubation period. Add 0.2 ml of Kovac's reagent to the tube and allow to stand for 10 minutes. A pink to red coloured ring indicates a positive indole reaction.

COMPOSITION

Ingredients	Gms / Ltr
Veg Extract	3.000
Veg Peptone	30.000
Veg Peptonized iron	0.200
Sodium thiosulphate	0.025
Agar	3.000

PRINCIPLE

Veg Peptone and Veg extract provides nitrogenous and carbonaceous compounds, long chain amino acids, vitamins and other essential nutrients. Tryptophan from peptone, is degraded by specific bacteria to produce indole. The indole is detected by the addition of chemical reagents following the incubation period. Veg Peptonized iron and sodium thiosulphate are the indicators of H_2S production. This H_2S reacts with peptonized iron to form black precipitate of ferrous sulphide.

INSTRUCTION FOR USE

- Dissolve 36.23 grams in 1000 ml purified/ distilled water.
- Heat to boiling to dissolve the medium completely.
- Dispense in tubes. Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Allow the tubes to cool in an upright position.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

Appearance of prepared medium : Medium amber coloured slightly opalescent gel forms in tubes as butts.

pH (at 25°C) : 7.3±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Motility	Indole production (on addition of Kovac's)	H_2S	Incubation Temperature	Incubation Period
Escherichia coli	*25922*	50-100	Luxuriant	Positive, growth away from stabline causing turbidity	Positive reaction, red ring at the interface of the medium	Negative reaction	35-37°C	18-24 Hours
Salmonela Typhimurim	*14028*	50-100	Luxuriant	Positive, growth away from stabline causing turbidity	Negative reaction	Positive reaction, blackening of medium	35-37°C	18-24 Hours
Shigella flexneri	*12022*	50-100	Luxuriant	Negative, growth along the stabline, surrounding medium remains clear	Negative reaction	Negative reaction	35-37°C	18-24 Hours
Salmonella Paratyphi A	*9150*	50-100	Luxuriant	Positive, growth away from stabline causing turbidity	Negative reaction	Negative reaction	35-37°C	18-24 Hours
Salmonela Paratyph B	*8739*	50-100	Luxuriant	Positive, growth away from stabline causing turbidity	Negative reaction	Positive reaction, blackening of medium	35-37°C	18-24 Hours
Klebsiella pneumoniae	*13883*	50-100	Luxuriant	Negative, growth along the stabline, surrounding medium remains clear	Negative reaction	Negative reaction	35-37°C	18-24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

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

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. MacFaddin 1985, Media for Isolation-Cultivation-Identification-Maintenance Medical Bacteria Vol, I, Williams, & Wilkins, Baltimore, M.D
2. Ewing, 1986, Edwards and Ewing's Identification of *Enterobacteriaceae*, 4th

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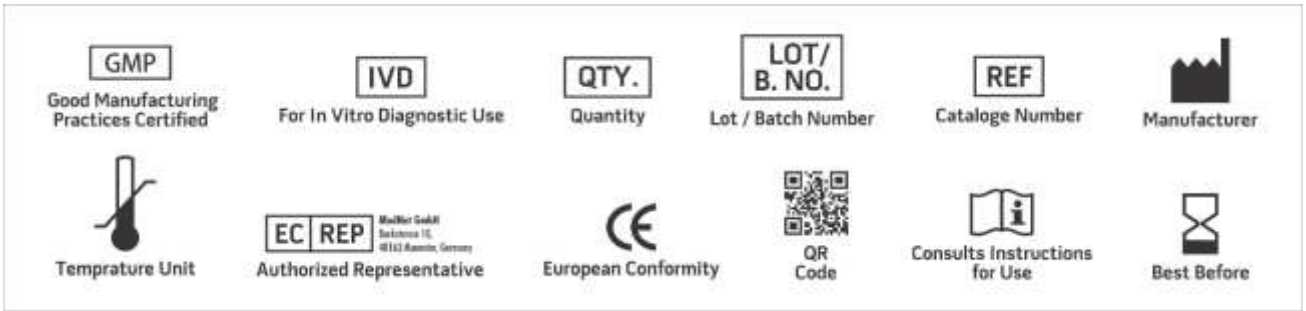
4. Jordan and Victorson, 1917, J. Inf. Dis., 21:554.
5. Sosa, 1943, Rev. Inst. Bact., 11:286



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

***For Lab Use Only**

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