TMP 058 – SALMONELLA SHIGELLA AGAR PLATE (SS AGAR PLATE)

INTENDED USE

For differentiation and selective isolation of *Salmonella* and *Shigella* species from pathological specimens, suspected foodstuff etc.

PRODUCT SUMMARY AND EXPLANATION

SS Agar was originally developed as a selective medium for the isolation of *Salmonella* and *Shigella* species. It was also developed to aid in the differentiation of lactose and non-lactose-fermenters from clinical specimens, suspected foods, and other such samples. SS Agar medium is recommended as differential and selective medium for the isolation of *Salmonella* and *Shigella* species from pathological specimens and suspected foodstuffs and for microbial limit test. Salmonella Shigella Agar is a modification of the Deoxycholate-Citrate Agar described by Leifson. It is designated as a moderately selective medium based upon the degree of inhibition of gram-positive microorganisms and Enterobacteriaceae other than *Salmonella* and *Shigella* spp.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	5.000
Beef extract	5.000
Lactose	10.000
Bile salts mixture	8.500
Sodium citrate	10.000
Sodium thiosulphate	8.500
Ferric citrate	1.000
Brilliant green	0.00033
Neutral red	0.025
Agar	15.000

PRINCIPLE

This medium consists of Beef extract and Peptic digest of animal tissue which provide nitrogen, vitamins, minerals and amino acids that are required for the growth. Lactose is the fermentable carbohydrate providing carbon and energy. Bile salts and Sodium citrate inhibits Gram-positive bacteria, most coliform bacteria and swarming of P*roteus* spp., while allowing *Salmonella* spp to grow. Brilliant green, high concentrations of Sodium thiosulphate and sodium citrate largely inhibits the accompanying microbial flora. Sulphide production is detected by using thiosulphate and iron ions which leads to the colonies turning black. The presence of coliform bacteria is established by detecting degradation of lactose to acid with the pH indicator neutral red. Non-lactose fermenting bacteria (supposed pathogens) produce clear colonies, transparent or colorless, while coliforms are sufficiently inhibited, and form small colonies that vary from pink to red in color. This formulation, highly selective, is not recommended for the primary isolation of Shigella. Some *Shigella* spp. may be inhibited.

INSTRUCTION FOR USE

Either streak, inoculate or surface spread the test inoculum aseptically on the plate.

QUALITY CONTROL SPECIFICATIONS

Appearance	:	Reddish orange colored medium
Quantity of Medium	:	25ml of medium in 90mm plates.
pH (at 25°C)	:	7.0 ± 0.2
Sterility Check	:	Passes release criteria

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Appearance of the colony	Incubation Temperature	Incubation Period
Salmonella typhimurium	14028	50-100	Luxuriant	>= 50%	Colourless with black centers	35-37°C	18-24 Hours
Salmonella typhi	6539	50-100	Luxuriant	>= 50%	Colourless with black centers	35-37°C	18-24 Hours
Shigella flexneri	12022	50-100	Good	40 - 50%	Colourless colonies	35-37°C	18-24 Hours
Proteus mirabilis	25933	50-100	Fair-Good	30 – 40%	Colourless colonies, may have black centers	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	Fair	20-30 %	Pink colonies with bile ppt.	35-37°C	18-24 Hours
**Klebsiella aerogenes*	13048	50-100	Fair	20-30%	Cream-Pink colonies	35-37°C	18-24 Hours
Enterococcus faecalis	29212	50-100	Poor	<=10%	Colourless colonies	35-37°C	18-24 Hours

PACKAGING:

Doubled layered packing containing 5 No. of plates with one silica gel desiccant bag packed inside it.

STORAGE

On receipt, store the plates at 15–30 °C. Avoid freezing and overheating. Do not open until ready to use. Prepared plates stored in their original sleeve wrapping until just prior to use may be inoculated up to the expiration date and incubated for recommended incubation times. Allow the medium to warm to room temperature before inoculation.

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

DISPOSAL

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

REFERENCES

1. Lennette and others (Eds.), 1985, Manual of Clinical Microbiology, 4th ed., ASM, Washington, D.C.
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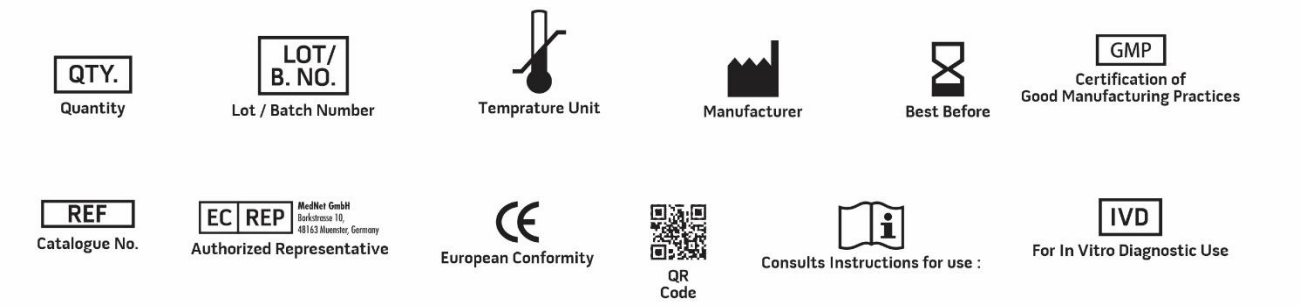
3. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.
4. Eaton A. D., Clesceri L. S., Rice E. W., and Greenberg A. W., (Eds.),2005, Standard Methods for the Examination of Water and Wastewater, 21st Ed., APHA, Washington, D.C.
5. Williams S., (Ed.), 2005, Official Methods of Analysis of the Association of Official Analytical Chemists, 19th Ed., AOAC, Washington, D.C.
6. The United States Pharmacopoeia, 2006, USP29/NF24, The United States Pharmacopoeial Convention. Rockville, MD.
7. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.



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

***For Lab Use Only**

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