

TM 1078 - SPS AGAR, MODIFIED

INTENDED USE

For selective isolation and enumeration of *Clostridium perfringens* from foodstuffs.

PRODUCT SUMMARY AND EXPLANATION

SPS (Sulphite Polymyxin Sulphadiazine) Agar was developed by Angelotti et al based on the Wilson and Blair medium and the medium described by Mossel et al for selective isolation and enumeration of *Clostridium perfringens* from foods. The medium of Mossel et al included the use of Miller-Prickett tubes. The modified SPS Agar however obviates the inclusion of Miller-Prickett tubes.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	15.000
Yeast extract	10.000
Ferric citrate	0.500
Sodium sulphite	0.500
Sodium thioglycollate	0.100
Polysorbate 80 (Tween 80)	0.050
Sulphadiazine	0.120
Polymyxin B sulphate	0.010
Agar	15.000

PRINCIPLE

Tryptone and yeast extract supplies nitrogenous compounds, vitamin B complex and other essential growth nutrients to the growing *Clostridium perfringens*. This organism reduces sulphite to sulphide which reacts with iron of ferric citrate to form a black precipitate of iron sulphide and hence the colonies are black. Polysorbate 80 monooleate supplies fatty acids for the organisms. Polymyxin and Sulphadiazine inhibit a wide variety of gram-positive and gram-negative bacteria. Few organisms found in food other than *Clostridium perfringens* also form black colonies on this medium. Some strains of *Clostridium perfringens* fail to grow on this medium.

INSTRUCTION FOR USE

- Dissolve 41.28 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 50°C and pour in sterile Petri plates containing inoculum.
- Allow to solidify and if desired, pour the cover layer using about 5 ml sterile medium. Incubate anaerobically.

QUALITY CONTROL SPECIFICATIONS

- Appearance of Powder** : Cream to beige homogeneous free flowing powder.
Appearance of prepared medium : Medium amber coloured slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after an incubation under anaerobic conditions.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Color of the colony	Incubation Temperature	Incubation Period
<i>Clostridium perfringens</i>	13124	50-100	Good-luxuriant	>=50%	Black	35-37°C	18-48 Hours
<i>Clostridium sporogenes</i>	11437	50-100	Fair-good	30-40%	Black	35-37°C	18-48 Hours
Staphylococcus aureus subsp. aureus	25923	50-100	None-poor	0-10%	White	35-37°C	18-48 Hours
<i>Escherichia coli</i>	25922	>=10 ³	Inhibited	0%	-	35-37°C	18-48 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 2-8°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. American Public Health Association, Standard Methods for the Examination of Dairy Products, 1978, 14th Ed., Washington D.C.
2. Angelotti R., Han H. E., Foter M. J. and Lewis K. H., 1962, Appl. Microbiol., 10:19
3. C. M. A. and Zoutewelle G., 1956, J. Appl. Microbiol., 19:14
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook Second Edition.
5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
6. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.



 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Buckenhof 10 48143 Aachen, Germany</small>	 European Conformity	 QR Code	 Consults instructions for Use	 Best Before

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

***For Lab Use Only**
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