SPS (Sulfite Polymyxin Sulfadiazine) Agar

Medium used for the isolation and identification of *Clostridium perfringens* in food.

• CONTENTS (Liter)

Tryptone	15.0 g
Yeast Extract	10.0 g
Ferric Citrate	0.5 g
Sodium Sulfite	0.5 g
Sulfadiazine	0.12 g
Polymyxin B Sulphate	0.01 g
Agar	14.0 g

Final pH = 7.0 ± 0.2 at 25°C

• PROCEDURE

Suspend 40.13 G of powder in 1 L of distilled or deionized water. Heat to boiling until completely dissolved. Sterilize by autoclave at 121°C for 15 minutes. Cool to 45 - 50°C in water bath. Mix well. Pour into petri dishes.

• INTERPRETATION

SPS (Sulfite Polymyxin Sulfadiazine) Agar is a medium used for the isolation and identification of *Clostiridium perfringens* in food. Tryptone and yeast extract provide carbon, nitrogen, minerals and vitamins. *Clostridium perfringens* reduces sodium sulfite which reacts with ferric citrate to form a black precipitate. Polymyxin and sulfadiazine inhibit most of Gram-positive and Gram-negative bacteria. Agar is the solidifying agent.

• TECHNIC

Inoculate using the pour plate method. Incubate at 35 ± 2°C for 24 - 48 hours under anaerobic condition. Refer appropriate references for recommended test procedure.

• QUALITY CONTROL FOR USE

Dehydrated medium
Appearance: free-flowing, homogeneous
Color: beige
Prepared medium
Appearance : slightly opalescent
Color: light amber
Incubation conditions: 35 ± 2°C / 24 - 48 hours under anaerobic condition

Microorganism	ATCC	Inoculum CFU	Growth	Characteristics
Clostridium perfringens	13124	10^2-10^3	good	black colonies
Clostridium sporogenes	11437	10^2-10^3	poor	black colonies
Staphylococcus aureus	25923	10^2-10^3	none to poor	white colonies
Escherichia coli	25922	10^2-10^3	inhibited	-
Salmonella typhimurium	14028	10^2-10^3	inhibited	-

• STORE

The powder is very hygroscopic. Store the powder at 2 - 8°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label. Store prepared medium at 2 - 8°C.

• REFERENCES

1. Angelotti, R., H.E. Hall, M.J. Foster, and K.M. Lewis (1962). Quantitation of Clostridium perfrigens in foods. Appl. Microbiol. 10: 193.
2. ICMSF (1978). Microorganisms in foods: their significance and methods of enumeration, 2nd edition.

• PACKAGE

Cat. No : MB-S1148 SPS (Sulfite Polymyxin Sulfadiazine) Agar	500 G

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