

**SULPHITE POLYMYXIN
SULPHADIAZINE AGAR (SPS)**
For the isolation and enumeration
of *Clostridium perfringens* in foodstuffs

TYPICAL FORMULA (g/l)

Tryptic Digest of Casein	15.00
Yeast Extract	10.00
Sodium Sulphite	0.50
Ferric Citrate	0.50
Polymyxin B Sulphate	0.01
Sulphadiazine	0.12
Agar	13.50

DIRECTIONS FOR DEHYDRATED MEDIUM

Suspend 39.6g in 1000ml of cold distilled water, heat to boiling with frequent agitation and sterilise by autoclaving at 118°C for 15 minutes. Do not overheat at any time.

Final pH 7.0 ± 0.2

DIRECTIONS FOR READY TO USE MEDIUM IN FLASKS

Dissolve the contents of the bottle in a temperature controlled water batch (100°C). Cool to 45-50°C, mix well and distribute into sterile Petri dishes

Final pH 7.0 ± 0.2

DESCRIPTION

Sulphite Polymyxin Sulphadiazine (SPS) Agar is a selective medium for the isolation and enumeration of *Clostridium perfringens* in foodstuffs. The medium is prepared according to a modification of the formula proposed by Mossel.

TECHNIQUE

For the identification and enumeration of *C. perfringens* the following work scheme is recommended:

1. Pipette 1ml of decimal dilutions of the homogenised foodstuff into sterile plates and add 15-20ml of SPS Agar. Tilt the plate to mix the inoculum with the agar and allow to solidify.
2. Incubate the plates at 35-37°C for 24 hours in an anaerobic atmosphere.
3. Observe for growth and the formation of black colonies due to the production of hydrogen sulphide (*C. perfringens*).
4. Perform a count on plates with a number of colonies between 30 and 300.
5. For a complete identification of *C. perfringens* choose a representative number of colonies, subculture in a test-tubes of Thioglycollate Medium and incubate at 46°C for 3-4 hours.
6. Check whether the growth in the test-tubes is a pure culture by Gram-staining, and test for motility, nitrate reduction and spore formation.

USER QUALITY ASSURANCE (37°C - 24hrs - Anaerobic)

Productivity control

C. perfringens ATCC 13124: growth, black colonies

C. sporogenes ATCC 19404: growth, black colonies

Selectivity control

E. coli ATCC 25922 : inhibited

STORAGE

Dehydrated medium: 2-8°C

User prepared medium in flasks: 7 days at 2-8°C

REFERENCES

- Angelotti, R., Hall, H.E., Foter, M.I. & Lewis, K.H (1962) - App. Microbiol. **10**, 193.
- ICMSF (1968) - Microorganisms in Foods; their Significance and Methods of Enumeration.

PACKAGING

4020942	SPS Agar	500g (12.6 l)
5120943	SPS Agar	6 x 200mL ready to use flasks

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