OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

Perfringens Agar Base (O.P.S.P.)

Principle

Perfringens Agar (O.P.S.P.) is based on the formula developed by Handford (1974) and media is composed of tryptone, soya peptone, yeast extract, liver extract, ferric ammonium citrate, sodium metabisulphite, tris base and agar. Tryptone, soya peptone, liver extract and yeast extract serve as source of carbon, nitrogen, amino acids and other necessary elements for the growth. Sodium metabisulphite and ferric ammonium citrate is indicator for hydrogen sulphate production or sulphate reduction. The tris provide buffering capacity. The media is fortified with antibiotics like polymyxin B, sulphadiazine and oleandomycin to increase selective of medium and to inhibit sulphite reducing bacteria other than *C. perfringenes*.

Use: Recommended for selective isolation and enumeration of *Clostridium perfringens* from food.

Contents*

Ingredients	Gram/Litre
Tryptone	15.000
Soya peptone	5.000
Yeast extract	5.000
Liver extract	7.000
Ferric ammonium citrate	1.000
Sodium metabisulphite	1.000
Tris	1.500
Agar	15.000
pH at 25˚C	7.3 ±0.2

*** Formula adjusted for optimum performance and parameters**

Directions: Dissolve 50.50 grams in 1000 ml distilled water. Boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121 °C) for 15 min, cool it to 42-45 °C and add 100 mg of sodium sulphadiazine and 10000 IU of polymyxin B sulphate and 0.5 mg of oleandomycin phosphate. Mix well and distribute aseptically desired and inoculate test sample aseptically.

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Specimens types analyzed

Food samples and dairy products.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	**Light beige colored, free-flowing, homogeneous**
Reaction of 5.05% solution	**7.30 ±0.2 at 25 ˚C**
pH	**7.10- 7.50**
Gelling strength	**1.5% agar**
Color and clarity of ready medium	**Light amber colored, clear opalescent gel**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37 ºC for 18-72 h**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h**
Negative control	**Performed using sterile distilled water**

Different Microbial Response

Cultural characteristics observed with added antibiotic after an incubation at 30°C for 24-48 hours

Organism	ATCC	Growth	Recovery	Color of colony
Clostridium perfringens	**12924**	**Luxurious**	**50 – 60 %**	**Black**
Escherichia coli	**8739**	**Inhibited**	**---**	**---**

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Storage and Shelf Life

Hygroscopic; keep container tightly closed. Store in cool dry place.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. **Downes F. P. and Ito K., (Ed.), (2001), *Compendium of Methods for the Microbiological Examination of Foods*, 4th Ed., American Public Health Association, Washington, D.C.**
2. **Handford, P. M. (1974). *A new medium for the detection and enumeration of Clostridium perfringens in foods*. Journal of Applied Bacteriology, 37(4), 559-570.**
3. **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.**
4. **Salfinger Y., and Tortorello M.L., (2015), *Compendium of Methods for the Microbiological Examination of Foods*, 5th Ed., American Public Health Association, Washington, D.C.**

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