TM 808 – PERFRINGENS AGAR BASE (O.P.S.P)

INTENDED USE

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

PRODUCT SUMMARY AND EXPLANATION

Perfringens Agar (O.P.S.P.) is based on the formula developed by Handford and is used as a selective medium for isolation and enumeration of *C. perfringens* in foods. Clostridial species are one of the major causes of food poisoning/ gastrointestinal illnesses. They are gram-positive sporeforming rods that occur naturally in the soil. Foods commonly contaminated with *Clostridium perfringens* include meat, meat pies, poultry, stews and gravy.

Among the family are: *Clostridium botulinum* which produces one of the most potent toxins in existence; *Clostridium tetani*, causative agent of tetanus; and *C. perfringens* commonly found in wound infections and diarrhoea cases. The use of toxins to damage the host is a method deployed by many bacterial pathogens. The major virulence factor of *C. perfringens* is the CPE enterotoxin, which is secreted upon invasion of the host gut, and contributes to food poisoning and other gastrointestinal illnesses.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	15.000
Soya peptone	5.000
Yeast extract	5.000
Ferric ammonium citrate	1.000
Liver extract	7.000
Sodium metabisulphite	1.000
Tris buffer	1.500
Agar	15.000

PRINCIPLE

The medium consists of Tryptone, yeast extract, Soya peptone and Liver extract supply most of the essential nitrogenous nutrients, vitamin B complex and trace ingredients for the growth of *C.perfringens*. Sodium metabisulphite and ferric ammonium citrate are used as indicators of sulphate reduction by *C. perfringens*, which produces black colonies. Tris buffer helps in maintaining buffering action. The antibiotics sulphadiazine, oleandomycin and polymyxin B make the medium highly selective inhibiting sulphite-reducing bacteria other than *C. perfringens* such as *Salmonella, Bacillus* species, *Proteus* species, Staphylococci etc.

INSTRUCTION FOR USE

- Dissolve 25.25 grams in 500 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 45-50°C.
- Aseptically add rehydrated contents of 1 vial of Perfringens Supplement-A and Perfringens Supplement-B each.
- Mix well before pouring into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to brownish yellow homogeneous free flowing powder.
Appearance of prepared medium : Amber coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.3 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation with added Perfringens Supplement A and Perfringens Supplement B.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Staphylococcus aureus subsp. aureus	25923	>=10^3	Inhibited	0%	-	35-37°C	18-48 Hours
Salmonella Typhi	6539	>=10^3	Inhibited	0%	-	35-37°C	18-48 Hours
Proteus vulgaris	13315	>=10^3	Inhibited	0%	-	35-37°C	18-48 Hours
Enterococcus faecalis	29212	50-100	None-poor	0-10%	White, if any	35-37°C	18-48 Hours
Clostridium perfringens	12924	50-100	Luxuriant	>=70%	Black	35-37°C	18-48 Hours
Bacillus subtilis subsp. spizizenii	6633	>=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 25-30°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

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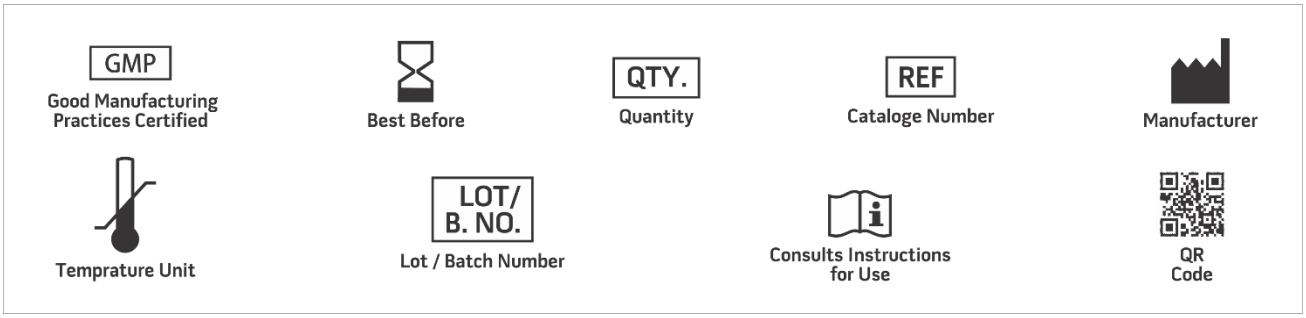
5. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.



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

***For Lab Use Only**

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