



Dehydrated Culture Media  
Bases / Media Supplements

## Technical Information

### C.perfringens Sporulation Broth

**Product Code: DM 1947**

**Application:** - C. perfringens Sporulation Broth is recommended for promoting sporulation in *Clostridium perfringens*.

#### Composition\*\*

Ingredients	Gms / Litre
Tryptose	15.000
Yeast extract	3.000
Starch, soluble	3.000
Magnesium sulphate	0.100
Sodium thioglycollate	1.000
Disodium phosphate	11.000
Final pH ( at 25°C)	7.8±0.2

\*\*Formula adjusted, standardized to suit performance parameters

#### Principle & Interpretation

*Clostridium perfringens* is ubiquitous in nature and can be found as a normal component of decaying vegetation, marine sediment, intestinal tract of humans and other vertebrates, insects, and soil. *C. perfringens* is commonly encountered in infections as a benign component of the normal flora (1). *C. perfringens* food poisoning is one of the most common types of human foodborne illnesses. A heat-labile enterotoxin produced only by sporulating cells (2) induces the major symptoms of diarrhea in perfringens infections.

C. perfringens Sporulation Broth is formulated as per APHA (3) for preventing sporulation in *C.perfringens*.

The medium contains ingredients like tryptose, yeast extract and starch, which not only support the growth of *C.perfringens* but also stimulate spore formation in presence of magnesium sulphate. Sodium thioglycollate helps to maintain anaerobic conditions in the medium. Magnesium sulphate and disodium phosphate supply ions to the organism and helps to maintain the buffering conditions in the medium.

#### Methodology

Suspend 33.1 grams of dehydrated powder media in 1000 ml distilled water. Mix thoroughly & heat if necessary to ensure complete solution. Dispense 20 ml amounts in 20 x 150 mm screw capped test tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Just before use, heat the medium in flowing steam for 20 minutes.

#### Quality Control

##### Appearance

Cream to yellow homogeneous free flowing powder

##### Colour and Clarity

Medium amber coloured, clear to slightly opalescent solution with a slight precipitate in tubes

##### Reaction

Reaction of 3.31% w/v aqueous solution at 25°C. pH : 7.8±0.2

##### pH Range

7.60-8.00

##### Cultural Response

DM 1947: Cultural characteristics observed under anaerobic condition after an incubation at 35-37°C for 24-48 hours.





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Organism	Inoculum (CFU)	Growth	Sporulation
<i>Clostridium perfringens</i> ATCC 12924	50-100	good-luxuriant	positive
<i>Clostridium sporogenes</i> ATCC 11437	50-100	good-luxuriant	negative

## Storage and Shelf Life

**Dried Media:** Store below 30°C in tightly closed container and prepared medium below 2-8°C. Use before expiry period on the label.

**Prepared Media:** 2-8° in sealable plastic bags for 2-5 days.

## Further Reading

1. Wells C. L., Wilkins T. D., 1996, Barrons Medical Microbiology (Barron S. et al, Eds.), 4th Ed., Univ. of Texas Medical Branch.
2. Duncan C. L., 1973, J. Bacteriol., 113:932-936.
3. Speck M. L., (Eds.), 1984, Compendium of Methods for the Microbiological Examination of Foods, 2nd Ed., APHA, Washington, D.C

## Disclaimer :

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