

TM 1174 – ELLNERS BROTH

INTENDED USE

For induction of spore formation in *Clostridium perfringens*.

PRODUCT SUMMARY AND EXPLANATION

Ellners Broth is recommended for inducing sporulation in *Clostridium perfringens*. Spores are rarely seen in culture (a diagnostic feature) but can be obtained on Ellners Medium. In practice, the routine characterization of clostridia to species level involves morphological examinations, biochemical tests and identification of specific toxins. All clostridia produce spores but they vary markedly in their readiness to do so. Some of which may require prolonged incubation.

C. perfringens are gram-positive rods, often capsulated. In sugar-containing media, the *Clostridium* rods are shorter whereas in protein-containing media, they may become filamentous. Spores formed are usually in small numbers and are not formed in the presence of fermentable carbohydrates. Typically, oval, sub-terminal or central spores are formed and are not bulging. Special media like Ellners Broth are used to produce spores.

COMPOSITION

Ingredients	Gms / Ltr
Proteose peptone	10.000
Yeast extract	3.000
Starch	3.000
Magnesium sulphate	0.100
Monopotassium phosphate	1.500
Disodium phosphate	50.000

PRINCIPLE

The medium consists of proteose peptone and yeast extract, which supply the necessary nutrients for the growth of the Clostridia. Generally, sporulation is stimulated by a carbohydrate source and hence starch is included in the medium. Sulphate and phosphate not only buffer the medium but also help in sporulation. Clostridia are anaerobic organisms and hence anaerobiosis may be ensured by heating the medium at 100°C for 10 minutes and cooling just before inoculation. It is important that the inoculum should be adequate. 0.5 ml of an actively growing 4-12 hours Meat Broth culture should be introduced with a pipette into the bottom of the tubed medium and incubated anaerobically.

INSTRUCTION FOR USE

- Dissolve 67.6 grams in 1000 ml purified / distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense as desired and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.

Appearance of prepared medium : Amber coloured, clear to slightly opalescent solution.

pH (at 25°C) : 7.8 ± 0.2

INTERPRETATION



Cultural characteristics observed under anaerobic condition, after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Sporulation	Incubation Temperature	Incubation Period
<i>Clostridium perfringens</i>	12924	50-100	Luxuriant	Positive	35-37°C	24-76 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

- Collee J. G., Duguid J. P., Fraser A. G., Marmion B. P., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 1989, 13th Edition, Churchill Livingstone.
- Trevor W. A., 1977, Anaerobic Bacteriology, 3rd Ed., Butterworths and Co. Ltd.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedNet GmbH Barkstrasse 10, 49163 Moenster, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 Best Before

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

*For Lab Use Only
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