TM 2038 – CHOPPED LIVER BROTH (CL BROTH)

INTENDED USE

For the cultivation and enrichment of anaerobic bacteria from food specimen.

PRODUCT SUMMARY AND EXPLANATION

Clostridium species are one of the major causes of food poisoning and gastrointestinal illnesses. They are gram-positive, spore-forming rods that occur naturally in soil. Among the family are: *Clostridium botulinum*, which produces one of the most potent toxins in existence; *Clostridium tetani*, causative agent of tetanus; and *Clostridium perfringens*, commonly found in wound infections and diarrhoea cases. The use of toxins to damage host cells is a method deployed by many bacterial pathogens. The major virulence factor of *C. perfringens* is the CPE enterotoxin, which is secreted Recommended for the cultivation and enrichment of anaerobic bacteria from food specimen. Chopped Liver Broth is formulated in accordance with APHA and is recommended by FDA for cultivation and enrichment of *Clostridium* species from foods.
Liquid foods are directly inoculated whereas solid foods are grinded first and then inoculated into this enrichment medium. 1 to 2 grams of solid or 1 to 2 ml of liquid food is added per 15 ml of enrichment broth and incubation is carried out at 26 to 28°C for upto 7 days. If no growth is observed after 7 days the culture medium is further incubated for 10 days to allow delayed germination of spores.

COMPOSITION

Ingredients	Gms / Ltr
Fresh lean, beef liver	500.000
Peptone	10.000
Dipotassium hydrogen phosphate	1.000
Starch, soluble	1.000

PRINCIPLE

Fresh lean, beef liver solids and peptone provide nitrogen and other nutrients necessary to support bacterial growth. Dipotassium phosphate provides buffering to the medium. Starch acts as a source of carbon.

INSTRUCTION FOR USE

- Dissolve 11.2 grams in 100 ml purified / distilled water.
- Mix thoroughly to wet and allow the mixture to soak for 15 minutes.
- Dispense in tubes or flasks as desired.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 20 minutes.
- Exhaust for 20 minutes in free flowing steam before use.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to light brown homogeneous free flowing powder.
Appearance of prepared medium : Dark amber coloured, opalescent solution with slight precipitate.
pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

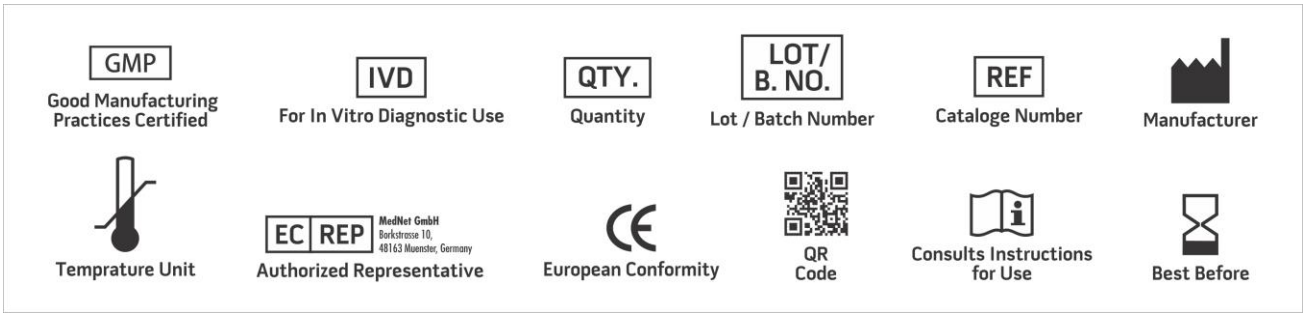
Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Clostridium botulinum	25763	50-100	Good	35-37°C	18-48 Hours
Clostridium perfringens	12924	50-100	Good	35-37°C	18-48 Hours

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
1. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
2. FDA Bacteriological Analytical Manual, 2005, 18th Ed., AOAC, Washington, D.C.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. 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.
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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