TM 149 – LACTOSE GELATIN MEDIUM, MODIFIED (AOAC)

INTENDED USE

For detection and presumptive identification of *Clostridium perfringens* from foods in accordance with AOAC.

PRODUCT SUMMARY AND EXPLANATION

Members of the genus *Clostridium* are distributed widely in nature and are found in soil as well as in fresh water and marine water sediments throughout the world. Clostridial species are one of the major causes of food poisoning / 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 diarrhea cases. The use of toxins to damage the host is a method deployed by many bacterial pathogens including *Clostridium*.

Lactose Gelatin Medium, Modified is prepared in accordance with AOAC and a slight modification of this medium is recommended by APHA for detection of *Clostridium perfringens* in foods.

COMPOSITION

Ingredients	Gms / Ltr
Tryptose	15.000
Yeast extract	10.000
Lactose	10.000
Disodium phosphate	5.000
Gelatin	120.000
Phenol red	0.050

PRINCIPLE

This medium consists of Tryptose and yeast extract which provide essential growth nutrients. Lactose is the fermentable sugar and phenol red acts as fermentation indicator, which changes from red to yellow due to acid production. Following incubation, the medium tube is chilled for 1 hour at 5°C, if medium gels; it should be incubated for an additional 24 hours to examine gelatin liquefaction. The medium is stab inoculated with pure Fluid Thioglycollate Medium culture or isolates from Tryptose Sulphite Cycloserine (TSC) Agar plate.

INSTRUCTION FOR USE

- Dissolve 16.0 grams in 100 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely and dispense 10 ml amounts in 15x150 mm screw capped tubes.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Just before use, heat to boiling to remove dissolved oxygen and cool rapidly to incubation temperature.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to light pink coarse free flowing powder.

Appearance of prepared medium : Red coloured, clear to slightly opalescent gel forms in tubes as butts.

pH (at 25°C) : 7.5 ± 0.1

INTERPRETATION

Cultural characteristics observed under anaerobic conditions, after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Lactose fermentation	Gelatin liquefaction	Incubation Temperature	Incubation Period
Clostridium perfringens	12924	50-100	Luxuriant	Acid and gas production	Positive reaction	35-37°C	24-48 Hours
Clostridium paraperfringens	27639	50-100	Good	Acid production	Positive reaction	35-37°C	24-48 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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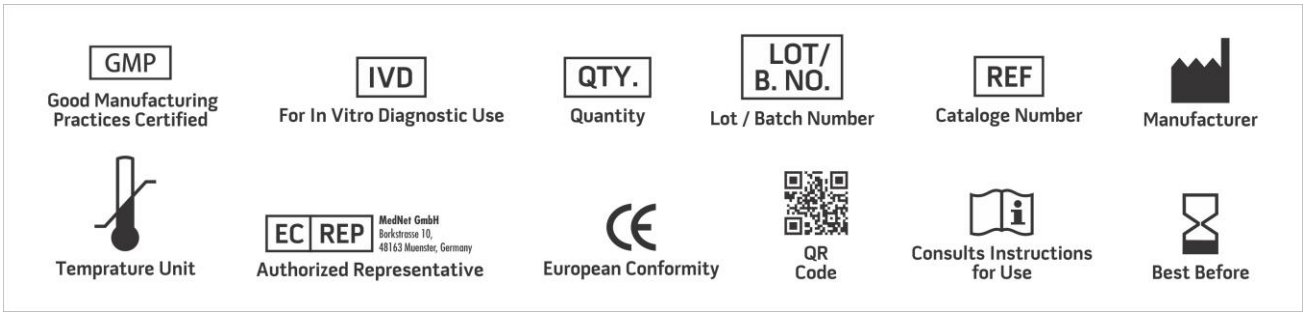

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
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