

TM 148 – LACTOSE GELATIN MEDIUM

INTENDED USE

For detection of *Clostridium* species from food samples.

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 diarrhoea cases. The use of toxins to damage the host is a method deployed by many bacterial pathogens including *Clostridium*.

Lactose Gelatin Medium is prepared as per APHA for detecting *Clostridium* species from food samples.

COMPOSITION

Ingredients	Gms / Ltr
Lactose	10.000
Disodium hydrogen phosphate	5.000
Gelatin	120.000
Phenol red	0.050

PRINCIPLE

This medium consists of lactose which is fermented by the *Clostridium* species, mainly by *Clostridium perfringens* yielding acid and gas. Phenol red is the pH indicator which turns yellow at acidic pH. Gelatin is usually liquefied by *Clostridium perfringens* within 24-48 hours. Disodium phosphate buffers the medium.

INSTRUCTION FOR USE

- Dissolve 135.0 grams in 1000 ml purified/distilled water.
- Heat if necessary 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 pink coloured homogeneous free flowing slightly coarse powder.
- Appearance of prepared medium** : Red coloured clear to slightly opalescent gel forms in tubes.
- pH (at 25°C)** : 7.5 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Lactose fermentation	Gelatin liquefaction	Incubation Temperature	Incubation Period



<i>Clostridium perfringens</i>	12924	50-100	Luxuriant	Positive reaction, yellow colour	Positive reaction	35-37°C	48-72 Hours
<i>Clostridium sporogenes</i>	11437	50-100	Good	Negative reaction, no colour change or red	Positive reaction	35-37°C	48-72 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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- 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.
- Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Tenover F. C., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
- Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

 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 <small>MedNet GmbH Birkmohrstr. 10 48163 Muenster, Germany</small> Authorized Representative	 CE 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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