



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Lactose Gelatin Medium, Modified

Product Code: DM 1987I

Application: - Lactose Gelatin Medium, Modified is recommended for detection and enumeration of *Clostridium perfringens* from food samples.

Composition**

Ingredients	Gms / Litre
Tryptose	15.000
Yeast extract	10.000
Lactose	10.000
Gelatin	120.000
Phenol red	0.050
Final pH (at 25°C)	7.5±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

The Lactose Gelatin Medium, Modified was prepared according to APHA and is also recommended by F.D.A for detection and colony count of *Clostridium perfringens* in foods. This formulations is also recommended by ISO committee for enumeration of *Clostridium perfringens* ⁽³⁾.

Tryptose and yeast extract 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.

The 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.

Methodology

Suspend 15.5 grams of powder media in 100 ml warm distilled water. Shake well & heat to dissolve the medium completely and dispense 10 ml amounts in 15X150 mm screwcapped tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Just before use, heat to boiling to remove dissolved oxygen and cool rapidly to incubation temperature. Colony counting may be carried out by pouring sterile medium in Petri plates.

Quality Control

Physical Appearance

Beige to reddish pink homogeneous coarse powder.

Gelling

Semisolid, comparable with 12% Gelatin gel.

Colour and Clarity of prepared medium

Red coloured clear to slightly opalescent gel forms in tubes

Reaction: Reaction of 15.5% w/v aqueous solution at 25°C. pH : 7.5±0.2

pH Range 7.30-7.70

Cultural Response/ characteristics

DM 1987I: Cultural characteristics observed after an incubation at 30 - 35°C for 24 - 48 hours.





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Organism	Growth	Gelatin liquefaction
<i>Clostridium perfringens</i> ATCC 13124	Good	Positive reaction
<i>Clostridium perfringens</i> ATCC 12924	Luxuriant with acid and gas production.	Positive reaction

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

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

Further Reading

1. Vanderzant, C. and Splittstoesser D.F (ed.). 1992, Compendium of Methods for Microbiological Examination of Foods, 3rd ed., APHA, Washington, D.C
2. Bacteriological analytical manual, 1995, 8th ed., Food and Drug Administration, AOAC International, U.S.A.
3. International Organization for Standardization (ISO), 1985, enumeration of *Clostridium perfringens* Draft ISO/DIS 7937.

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