PRODUCT SPECIFICATION SHEET

DM510:LACTOSE GELATINE MIDIUM

Intended Use
Lactose Gelatin Medium is used for detection of Clostridium species from food samples

Product Summary and Principle
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 (1). Clostridial species are one of the major causes of food poisoning / gastro-intestinal illnesses. They are gram-positive, spore-forming rods that occur naturally in soil (2). 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 (3) for detecting Clostridium species from food samples. The medium contains 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 (4). Disodium phosphate buffers the medium.

Formula / Liter

Ingredients	Gms / Liter
Tryptose	15.000
Yeast extract	10.000
Lactose	10.000
Disodium phosphate	5.000
Gelatin	120.000
Phenol red	0.050
Final pH	7.5±0.1
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions
1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions
Suspend 160 grams in 1000 ml warm 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 lbs 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

Dehydrated Appearance	Light yellow to light pink coarse free flowing powder Gelling Semisolid, comparable with 12% Gelatin.
Prepared Medium	Red coloured, clear to slightly opalescent gel forms in tubes as butts
Reaction of 7.53% solution	pH 5.5 ± 0.2 at 25°C
Gel Strength	NA

Expected Cultural Response: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Sr. No.	Organisms	Results to be achieved		
		Inoculum (CFU)	Growth	Recovery
1.	*Clostridium perfringens ATCC 12924*	50-100	good-luxuriant	>=50%
2.	*Clostridium paraperfringens ATCC 27639*	50-100	good-luxuriant	>=50%

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure
Refer to appropriate references for standard test procedures.

Results
Refer to appropriate references and standard test procedures for interpretation of results.

Storage
Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration
Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure
1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging
Product Name : Lactose Gelatine Medium
Product Code : DM510
Available Pack sizes : 500gm

References
1. Green, S.R. and Gray, P.P. 1950, Wallerstein Lab. Communication 13,357.

Further Information
For further information please contact your local MICROMASTER Representative.

MICROMASTER LABORATORIES PRIVATE LIMITED
Unit 38/39, Kalpataru Industrial Estate,
Off G.B. Road, Near 'R-Mall' , Thane (W) – 400607. M.S. INDIA.
Ph: +91-9320126789/9833630009/9819991103
Email: sales@micromasterlab.com

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