



Product Data Sheet

MANNITOL EGG YOLK POLYMYXIN AGAR (ISO 7932:2004, ISO 21871:2006)

Product No. GB-DCM-00407-1A

INTENDED USE

For the enumeration of *B. cereus* in foodstuffs and other samples.

PRODUCT SUMMARY

Mannitol Egg Yolk Polymyxin Agar is a selective and differential medium developed by Mossel et al. The diagnostic features of the medium rely upon the failure of *Bacillus cereus* to utilize mannitol and the ability of its most strains to show lecithinase activity. This medium also differentiates *B. cereus* on the basis of its resistance to Polymyxin B. This culture medium complies with the specifications given by EN ISO 7932, EN ISO 21871, FDA-BAM and APHA,

Product Specifications

Ingredients	Gms / Ltr
Agar 12.000	6.000
Peptone 10.000	1.800
Mannitol	6.000
Sodium chloride	1.200
Meat extract	1.000
Phenol red	0.025

PRINCIPLE

The medium contains Peptone and meat extract which supply nitrogen and carbon. Sodium chloride provides the essential electrolytes in the medium. Agar is a solidifying agent. The medium is made selective by the addition of Polymyxin B which will inhibit Gram-negative bacteria. Mannitol and phenol red acts as an indicator system along with egg yolk. Bacteria which ferment mannitol to produce acids produce a yellow staining of the medium with phenol red as a pH indicator. *Bacillus cereus* does not attack mannitol so the medium around the colonies remains unchanged or is discolored by light alkalization by forming pink colonies. The lecithin present in egg yolk is cleaved by the *Bacillus cereus* lecithinase, which leads to the formation of an opalescent white precipitation zone surrounding the pink colonies.

INSTRUCTION FOR USE

- Dissolve 43.02 grams in 900ml distilled water.
- Gently heat to boiling with swirling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi (121°C) for 15 minutes
- Cool to 45-55°C.
- Aseptically add 2 vials of Polymyxin B Selective Supplement (TS 058) and 100ml Egg Yolk Emulsion (TS 002) per 1000 ml of medium.
- Mix well and pour into petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder

Appearance of prepared medium :

Basal medium : Red colored, clear to slightly opalescent gel

After addition of Egg yolk emulsion : Light orange colored, opaque ge

pH (at 25°C) : 7.2± 0.2

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Lecithinase activity	Incubation Temperature	Incubation Period
Bacillus cereus	10876	50-100	Luxuriant	>=50%	Red	Positive Reaction (opaque zone around colony)	30-32°C	18-48 Hours
Bacillus subtilis	6633	50-100	Luxuriant	>=50%	Yellow	Negative	30-32°C	18-48 Hours
Staphylococcus aureus	25923	50-100	Luxuriant	>=50%	Yellow	Positive Reaction (opaque zone around colony)	30-32°C	18-48 Hours
Proteus mirabilis	25933	50-100	Luxuriant	>=50%	Red	Negative	30-32°C	18-48 Hours
Pseudomonas aeruginosa	27853	50-100	None-Poor	<= 10%	-	-	30-32°C	18-48 Hours
Escherichia coli	25922	50-100	None-Poor	<= 10%	-	-	30-32°C	18-48 Hours



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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.

This product is for research use only.