CM 22148 - MYP AGAR BASE (PHENOL RED EGG YOLK POLYMYXIN AGAR BASE) (IS : 5887 (Part Vi) 1976, reaffirmed 2005)

INTENDED USE

Forisolationandidentification of pathogenic Staphylococci and Bacillus species.

PRODUCT SUMMARY AND EXPLANATION

Mannitol EggYolk 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 differentiate B.cereus on the basis of its resistance to Polymyxin B. It is recommended by BIS committee under the specifications IS:5887 (Part V)-1976.

COMPOSITION

Ingredients	Gms / Ltr
Agar	15.000
Peptic digest of animal tissue	10.000
Mannitol	10.000
Sodium chloride	10.000
Meat extract	1.000
Phenol red	0.025

PRINCIPLE

Themedium contains Peptic digest of animal tissue 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 ferment 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 46.02 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 45-50°C and aseptically add 2 vials of POLYMYXIN B SELECTIVE SUPPLEMENT (TS 058) and 100ml EGG YOLK EMULSION (TS 002) per 900ml of medium.
Mix well and pour into petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Dehydrated powder	:	Light yellow to light pink, homogeneous free flowing powder
Appearance of Prepared medium		
Basal medium	:	Red colored, clear to slightly opalescent gel
After addition of Egg yolk emulsion (TS 002)	:	Light orange colored, opaque gel
pH (at 25°C)	:	7.2± 0.1

INTERPRETATION

Cultural characteristics observed with added Polymyxin B selective supplement (TS 058) and Egg yolk emulsion (TS 002) after an incubation. Recovery rate is considered 100% for bacteria growth on Soya Agar.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Lecithinase activity	Incubation Temp.	Incubation Period
Bacillus cereus	10876	50-100	Luxuriant	>=50%	Red	Positive, opaque zone around colony	32°C	18-40
Bacillus subtilis	6633	50-100	Luxuriant	>=50%	Yellow	Negative	32°C	18-40
Escherichiacoli	25922	50-100	None-	<= 10%	-	-	32°C	18-40 Hours
Proteus mirabilis	25933	50-100	Poor	>=50%	Red	Negative	32°C	18-40 Hours
Pseudomonas aeruginosa	27853	50-100	Luxuriant	<= 10%	-	-	32°C	18-40 Hours
Staphylococcus aureus	25923	50-100	Luxuriant	>=50%	Yellow	Positive, opaque zone around colony	32°C	18-40 Hours

PACKAGING

In100gmand500 gm packaging size.

STORAGE

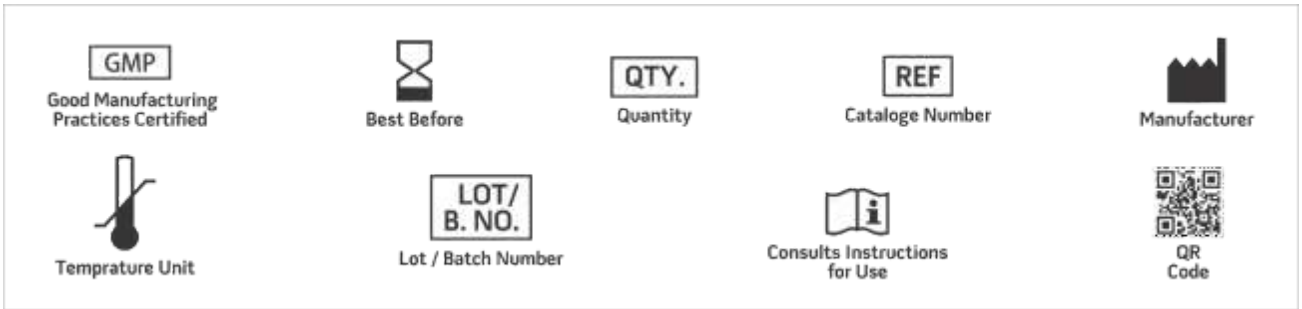
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 10-25°C and protect from direct Sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided 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 powder if they show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

DISPOSAL

Afteruse,prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Bureau of Indian Standards, IS : 5887, (Part IV) 1976.
2. Mossel, D.A.A., Koopman, M.J. and Jongerius, E. (1967): Enumeration of Bacillus cereus in foods. Appl. Microbiol. 15: 650-653.
3. Nygren B., 1962, Acta Path. Microbiol. Scand., 56 : Suppl. 1.
4. Jenson, I. and C. J. Moir (1997) Bacillus cereus and other Bacillus species. In: Foodborne Microorganisms of Public Health Significance. 5th Edition. pp.379-406. A. D. Hocking (Ed.). AIFST (NSW Branch) Food Microbiology Group, Australia.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.