



## **Product Data Sheet**

### **BACILLUS CEREUS SELECTIVE AGAR BASE (MYP) (ISO 7932:2004)**

**Product No.** GB-DCM-00066-1A

### **INTENDED USE**

For selective isolation and enumeration of *Bacillus cereus*.

### **PRODUCT SUMMARY**

*Bacillus cereus* Selective Agar Base is used for selective isolation and enumeration of *Bacillus cereus*. It is also recommended by the ISO committee for the enumeration of *Bacillus cereus*. *Bacillus cereus* is ubiquitously present in soil, food stuff, water and dust. It is considered as the most commonly encountered, important species in clinical laboratories, from majority of other *Bacillus* species as under favorable conditions, the organism multiplies and cause gastrointestinal illness. This medium differentiates *B.cereus* from other bacteria on the basis of Lecithinase activity, mannitol fermentation and resistance to polymyxin. Lecithinase activity is the key reaction in differential identification of *B.cereus*.

### **Product Specifications**

<b>Ingredients</b>	<b>Concentration</b>
Agar	15.000
Enzymatic digest of casein	10.000
D-Mannitol	10.000
Sodium chloride	10.000
Beef extract	1.000
Phenol red	0.025

(per vial sufficient for 500 ml medium)

### **INSTRUCTION FOR USE**

- Dissolve 46.03 grams in 1000ml distilled water.
- Gently heat with swirling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi (121oC) for 15 minutes.
- Cool to 45°C - 50°C.
- Aseptically add rehydrated contents of 2 vials of Polymyxin B Selective (TS 058) and add 100ml sterile Egg Yolk Emulsion (TS 002).
- Mix well and pour into sterile Petri plates.

Microorganism	ATC C	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Colour of colony	Incubation Temperature	Incubation Period
Bacillus cereus	1087 6	50-100	Luxuriant	>=50%	Red	Positive, Opaque zone around the colony	30 ± 2°C	18 – 48 Hours
Bacillus subtilis	6633	50-100	Luxuriant	>=50%	Yellow	Negative	30 ± 2°C	18 – 48 Hours
Proteus mirabilis	2593 3	50-100	Luxuriant	>=50%	Red	Negative	30 ± 2°C	18 – 48 Hours
Staphylococcus aureus	2592 3	50-100	Luxuriant	>=50%	Yellow	Positive, Opaque zone around the colony	30 ± 2°C	18 – 48 Hours
Escherichia coli	2592 2	50-100	None-Poor	<=10%	-	-	30 ± 2°C	18 – 48 Hours
Pseudomonas aeruginosa	2785 3	50-100	None-Poor	<=10%	-	-	30 ± 2°C	18 – 48 Hours

## PRINCIPLE

This medium contains enzymatic digest of casein and beef extract, which provide nitrogen source. Mannitol fermentation can be detected by phenol red, which yields yellow colour to the mannitol fermenting colonies due to acid production. Added egg yolk emulsion helps in differentiation of Lecithinase producing colonies, which are surrounded by a zone of white precipitate. Addition of Polymyxin B Sulphate helps to restrict growth of gram-negative bacteria such as Escherichia coli and Pseudomonas aeruginosa. These differentiating media allow differentiation of B.cereus from other Bacillus species by its inability to ferment mannitol and poor sporulation. B.cereus dissimilates egg yolk and gives rise to typical bacilli form colonies with reddish zones and white halos. Acid produced by organisms other than B.cereus often diffuse through the medium, making it difficult to distinguish between mannitol fermenters and non-fermenters. So, it is advised to transfer the suspected colonies to a fresh medium to visualize the true reaction.



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### **STORAGE**

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 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 , if powder show evidence of microbial contamination, discoloration, drying, or 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.**