

Bacillus Cereus Agar Base (PEMBA)

Basal medium for detection of *Bacillus cereus* from food.

TYPICAL FORMULA	(g/l)
Peptone	1.0
Mannitol	10.0
Sodium Chloride	2.0
Magnesium Sulphate	0.1
Disodium Phosphate	2.5
Monopotassium Phosphate	0.25
Sodium Piruvate	10.0
Bromothymol Blue	0.12
Agar	15.0
Final pH 7.2 ± 0.2 at 25°C	

DESCRIPTION

Bacillus Cereus Agar Base (PEMBA) is used with Polymyxin B and Egg Yolk Emulsion for the selective isolation and presumptive identification of *Bacillus cereus* from food. This medium not intended for use in the diagnosis of diseases or other conditions in humans.

PRINCIPLE

The complete medium is formulated to detect small numbers of *B. cereus* in the presence of large number of contaminants. Differentiation of *B. cereus* from other bacteria is based on resistance to polymyxin, lack of mannitol fermentation, and presence of lecithinase.

PREPARATION

Suspend 41.0 g of powder in 1 liter of deionized or distilled water. Bring to boil and shake until completely dissolved. Sterilize in autoclave at 121°C for 15 minutes. Cool up to 45-50°C.

Aseptically add:

1. Rehydrated content of 2 vials of Bacillus cereus Supplement (Ref. 81016), each vial containing 50 000 IU of Polymyxin B.
2. 50 ml of Egg Yolk Emulsion (ref. 80124 / 80219).

Mix well. Pour in Petri dishes.

TECHNIQUE

Refer to appropriate references, e.g. ISO 21871:2006, for the isolation and identification of *Bacillus cereus*.

INTERPRETATION OF RESULTS

Bacteria that ferment mannitol form yellow colonies. Bacteria that produce lecithinase hydrolyze lecithin resulting in a zone of white precipitate around the colonies.

B. cereus is typically mannitol-negative (blue colonies) and lecithinase positive (zone of precipitate around colonies).

STORAGE

The powder is very hygroscopic, store the powder at 10-30°C, in a dry environment, in its original container tightly closed and use it before the expiry date on the label or until signs of deterioration or contamination are evident. Store prepared plates at 2-8°C away from light.

WARNING AND PRECAUTIONS

For professional use only. Operators must be trained and have certain experience in the laboratory methods. Please read the instructions carefully before using this product. Reliability of assay results cannot be guaranteed if there are any deviations from the instructions in this document.

Consult the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

DISPOSAL OF WASTE

Disposal of waste must be carried out according to the national and local regulations in force.

REFERENCES

1. Holbrook and Anderson. 1980. Can. J. Microbiol. 26:753-759.
2. Donovan, K. O. 1958. A selective medium for *Bacillus cereus* in milk. J. Appl. Bacteriol. 21:100-103.
3. Coliner, A. R. 1948. The action of *Bacillus cereus* and related species on the lecithin complex of egg yolk. J. Bacteriol. 55:777-785.
4. Harmon, S. M., J. M. Goepfert, and R. W. Bennett. 2015. *Bacillus cereus*, Vanderzant, and D. F. Splittstoesser (eds.). Compendium of methods for the microbiological examination of foods, 4th ed. American Public Health Association, Washington, D.C.
5. ISO 21871:2006 Microbiology of food and animal feeding stuffs — Horizontal method for the determination of low numbers of presumptive *Bacillus cereus* — Most probable number technique and detection method



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PRODUCT SPECIFICATIONS

NAME

Bacillus Cereus Agar Base (PEMBA)

PRESENTATION

Dehydrated medium

STORAGE

10-30°C

PACKAGING

Ref.	Content	Packaging
610136	500 g	500 g of powder in plastic bottle
620136	100 g	100 g of powder in plastic bottle

pH OF THE MEDIUM

7.2 ± 0.2

USE

Bacillus Cereus Agar Base (PEMBA) is used with supplements for the selective isolation and presumptive identification of *B. cereus*

TECHNIQUE

Refer to technical sheet of the product

APPEARANCE OF THE MEDIUM

Powder medium

Appearance: free-flowing, homogeneous

Colour: beige

Ready-to-use medium

Appearance: slightly opalescent

Colour: greenish

SHELFLIFE

4 years

QUALITY CONTROL

- Control of general characteristics, label and print
- Microbiological control
Inoculum for productivity: 50-100 CFU
Inoculum for selectivity: 10^4 - 10^6 CFU
Inoculum for specificity: 10^3 - 10^4 CFU
Incubation Conditions: 18-48 h at $37 \pm 1^\circ\text{C}$, in aerobiosis

Microorganism		Growth	Characteristics
<i>Bacillus cereus</i>	ATCC® 11778	Good	Blue colonies with lecithin precipitation halo
<i>Bacillus subtilis</i>	ATCC® 6633	Good	White colonies without lecithin precipitation halo
<i>Escherichia coli</i>	ATCC® 25922	Inhibited	---
<i>Escherichia coli</i>	ATCC® 8739	Inhibited	---

TABLE OF SYMBOLS

 LOT	Batch code	 Consult instructions for use	 Manufacturer	 Use by
 REF	Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Keep away from sunlight



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