

Bacillus cereus Selective Agar Base

For the enumeration and isolation of *Bacillus cereus* in food, according to MOSSEL

Formula in grams per liter:

Meat Peptone	10,00	Sodium Chloride	10,00
D-Mannitol	10,00	Beef Extract	1,00
Phenol Red	0,025	Bacteriological Agar	12,00

Final pH: 7,1 ± 0,2 at 25 °C

Preparation:

Suspend 43 grams of the medium in 900 ml. of distilled water. Heat agitating frequently until complete dissolution. Sterilize in the autoclave at 121°C for 15 minutes. Cool to 45-50°C and add 100 ml. of an sterile egg yolk emulsion and, if desired, 0.01 to 0.1 gr. of Polymixin in sterile dissolution, per litre of medium.

Uses:

This medium was been adapted to meet the needs of *Bacillus cereus*, and was proposed by Mossel et al. (1967) for the enumeration, detection and isolation of *Bacillus cereus* in food.

Bacillus cereus is negative-mannitol. The mannitol content allows the separation of the accompanying mannitolpositive flora, which are characterized by a yellow color. *Bacillus cereus* is resistant to certain concentrations of Polymixin, which inhibits the accompanying flora.

Bacillus cereus forms lecithinase. The indissoluble degradation products of the lecithin of egg yolk accumulate around the cereus colonies, forming a white precipitate. Inoculated plates should be incubated for 18 - 40 hours at 32°C, the colonies of *Bacillus cereus* will appear red and surrounded by a ring of precipitation.

Microbiological Tests:

Microorganisms	Growth	Colony color	Precipitation
<i>Bacillus cereus</i> ATCC 1178	Acceptable	Red	+
<i>Bacillus subtilis</i> ATCC 6051	Acceptable	Yellow	-
<i>Proteus mirabilis</i> ATCC 29906	Inhibited	Colorless	-
<i>Staphylococcus aureus</i> ATCC 6538	Inhibited	Yellow	+

