

Bacillus Cereus Selective Agar Base

Catalog:HB0280-500

Bacillus Cereus Selective Agar Base is used with 50% Egg Yolk Emulsion and Polymyxin B for enumerating Bacillus cereus from foods.

Approximate Formula:

Ingredients	gm/liter
Pancreatic Digest of Casein	10.0
Beef Extract	1.0
D- Mannitol	10.0
Sodium Chloride	10.0
Phenol Red	0.025
Agar	15.0
Final pH 7.2±0.2 at 25 °C	

*Adjusted and/or supplemented as required to meet performance criteria.

Directions:

Suspend 46.0g of the medium in one liter of distilled or deionized water. Mix well and heat with frequent agitation. Boil for 1 minute to completely dissolve the powder. Dispense into 100ml /bottle. Sterilize in an autoclave at 121 °C (15 lbs.) for 15 minutes. When cooling to 50 °C, add 10ml of 50% yolk emulsion and 10000IU of polymyxin B to each bottle and shake well. Pour into sterile petri dishes.

Principle and Interpretation:

Bacillus Cereus Selective Agar Base contains beef extract and pancreatic digest of casein as sources of carbon, nitrogen, vitamins and minerals. D-Mannitol is the carbohydrate source. Phenol red is the pH indicator. Agar is the solidifying agent. 50% egg yolk emulsion provides lecithin. Polymyxin B inhibits the growth of most other bacteria.

Bacteria that ferment mannitol produce acid products and form colonies that are yellow. Bacteria that produce lecithinase hydrolyze the lecithin and halos forms around the colonies. *B.cereus* is typically mannitol-negative (pink-red colonies) and lecithinase-positive (halos around the colonies).

Appearance:

Dehydrated medium is a yellowish-light red powder. The prepared medium is a kind of orange-red opaque gel.

Precautions:

This medium is for laboratory use only. Dried medium which is past shelf life, caking or color variation cannot be used.

Storage conditions and Shelf life:

Bacillus Cereus Selective Agar Base must be stored tightly capped in the original container at 5-30°C. The dehydrated medium has a shelf life of 3 years from date of manufacturing. Prepared medium may be stored, out of direct light at 2-8°C.

Quality control:

Prepare the culture medium as per label directions. Inoculate and incubate at 30±1°C for 24-48 hours.

Microorganism	Strains Number	Inoculum(CFU)	Growth	Colony colour	Lecithinase reaction(Halos)
<i>Bacillus cereus</i>	ATCC 11778	20-200	Luxuriant	Pink	+
<i>Escherichia coli</i>	ATCC 25922	> 10 ³	Inhibited	/	/
<i>Bacillus cereus</i>	CMCC 63303	20-200	Luxuriant	Pink	+
<i>Bacillus subtilis</i>	ATCC 6633	> 10 ³	Poor	Yellow	-

References:

- GB4789.14-2014 People's Republic of China food safety national standard food microbiology test medium and reagent quality requirements.
- Donovan. 1958. J. Appl. Bacteriol. 21:100.
- Coliner. 1948. J. Bacteriol. 55:777.
- U.S. Food and Drug Administration. 2001. Bacteriological analytical manual, online. AOAC International, Gaithersburg, Md.