



B.C. Motility Test Medium

M906

B. C. Motility Test Medium is used for cultivation and examination of motility of *Bacillus cereus* strains.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	10.000
Yeast extract	2.500
Dextrose	5.000
Disodium phosphate	2.500
Agar	3.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 23 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense in 2-3 ml amounts in screw-capped tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Allow the tubes to cool in an upright position.

Principle And Interpretation

Bacillus cereus is widely distributed in nature and can be isolated from a variety of foods.

B. cereus causes food poisoning due to the consumption of contaminated rice (1, 3), eye infections (2) and a wide range of other clinical conditions like abscess formation, meningitis, septicemia and wound infection. *Bacillus cereus* is a known cause of disease mastitis, especially in ewes and heifers among the veterinarians. BC Motility Test Medium is formulated as per APHA (1) for the cultivation and examination of motility of *B. cereus* strains.

The medium contains casein enzymic hydrolysate, yeast extract and dextrose that provide nutrients while phosphate helps in maintaining the pH. Agar content of the medium is crucial for determining motility. 0.3% agar renders the medium semisolid in which motile bacteria produce diffused turbidity due to growth, while non-motile bacteria exhibit a line of growth only along the line of inoculation. This medium is inoculated by stabbing down the center with 3 mm loopful of culture and incubated at 18-24 hours at 30°C. Rhizoid strains of *B. cereus var mycoides* produce characteristic fuzzy growth in semisolid media due to expansion of the filamentous growth but they are not motile by means of flagella.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Semisolid, comparable with 0.3% Agar gel.

Colour and Clarity of prepared medium

Yellow coloured, clear to very slightly opalescent gel forms in tubes as butts

Reaction

Reaction of 2.3% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

M906: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Motility
<i>Bacillus anthracis</i> ATCC 14578	50-100	good-luxuriant	negative reaction, growth

<i>Bacillus cereus</i> ATCC 10876 50-100	good-luxuriant	along the stabline positive reaction, growth away the stabline
<i>Bacillus cereus var mycoides</i> 50-100	good-luxuriant	negative reaction,growth along the stabline
<i>Bacillus thuringiensis</i> ATCC 50-100 10792	good-luxuriant	positive reaction, growth away from stabline

Storage and Shelf Life

Store below 30°C in tightly closed container and prepared medium at 2-8°C. Use before expiry period on the label.

Reference

1. Mortimer P.R. and McCann.G, 1974, Lancet, 104:3.
2. Bouza E., Grant S., Jordan C., et al, 1979, Arch.Ophthalmol., 97:498
3. Wohlgemuth K., Kirkbride, C.A., Bicknell, E. J. and Ellis, R.P., 1972, J. Am. Vet. Med. Ass. 161:1691.
4. Downes F. P. and Ito K. (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.

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