Technical Information

B.C. Motility Test Medium

Product Code: DM 1906

Application: - 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

Principle & Interpretation

Bacillu cerus is widely distributed in nature and can be isolated from different types of foods. It is *responsible for* food poisoning after consuming contaminated rice [1, 3], other clinical menifestation like eye infections [2] abscess formation, meningitis, septicemia and wound infection. *The organism* is known to cause disease like 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 makes the medium semisolid in which motile bacteria produce diffused turbidity due to growth, while non-motile bacteria shows 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.

Methodology

Suspend 23 grams of powder media in 1000 ml distilled water. Shake well & heat 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.

Quality Control

Physical 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 range

7.20-7.60

Cultural Response/Characteristics

DM 1906: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Motility
Bacillus anthracis ATCC14578	50-100	good-luxuriant	Negative reaction,growth along the stabline
Bacillus cereus ATCC 10876	50-100	good-luxuriant	Positive reaction, growth away the stabline
Bacillus thuringiensis ATCC10792	50-100	good-luxuriant	Positive reaction, growth away the stabline
Bacillus cereus var mycoides10792	50-100	good-luxuriant	Positive reaction, growth away the from stabline

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

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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