

Technical Information

Modified V.P. Broth

Product Code: DM 1637

Application: -Modified V.P. Broth is used for performing V.P. test.

Composition**

Ingredients	Gms / Litre
Proteose peptone	7.000
Glucose	5.000
Sodium chloride	5.000

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Bacillus cereus is widely distributed in nature and can be isolated from different type of foods. Consumption of food contaminated with B. cereus cells results in food poisoning. Modified V.P. Broth, as per Smith, Gordon and Clark ⁽¹⁾ is used for doing V.P. test. This medium is also recommended by APHA ⁽²⁾ for the confirmation of B. cereus in foods. Modified V.P. Broth has a different composition from the conventional MR-VP Broth used for methyl red and Voges-Proskauer test for differentiating Escherichia and Enterobacter from Bacillus cereus.

Proteose peptone in the medium provides nitrogenous nutrients. Glucose is the fermentable carbohydrate and carbon source in the medium. Acetyl methyl carbinol is produced from glucose by B. cereus. After inoculation and incubation at 35°C for 48 hours, the presence of acetyl methyl carbinol is determined by adding 0.2 ml of 40% potassium hydroxide and 0.6 ml of 5% alcoholic #-naphthol solution to 1.0 ml of culture tube. This reaction is hastened by the addition of a few crystals of creatine by which the purple colour development takes place within 15 minutes.

Methodology

Suspend 17 grams of powder media in 1000 ml distilled water. Shake well & heat, if necessary, to dissolve the medium completely.

Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and dispense as desired.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powde

Colour and Clarity of prepared medium

Light yellow coloured clear solution without any precipitate

Cultural Response/ characteristics

DM 1637: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organism	Inoculum (CFU)	Growth	VP Test
<i>Bacillus cereus</i> ATCC 10876	50-100	luxuriant	positive reaction, purple colour

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° in sealable plastic bags for 2-5 days.

Further Reading

1. Smith N. R., Gordon R. E. and Clark F. E., 1952, USDA Monograph No. 16, Washington, D.C.
2. 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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