Technical Information

B.C.G. - Dextrose MiVeg Agar

Product Code : VM1106

Application:- B.C.G. Dextrose MiVeg Agar (Snyder Test MiVeg Agar) is recommended for the estimation of *Lactobacilli* counts as an indication of caries activity.

Composition

Ingredients	Gms / Litre
MiVeg peptone	20.0
Dextrose	20.0
Sodium chloride	5.0
Bromo cresol green	0.02
Agar	20.0
Final pH (at 25°C)	4.8±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

B.C.G. Dextrose MiVeg Agar is prepared with MiVeg peptone instead of Peptic digest of animal tissue, thereby the medium becomes BSE/TSE risks free. This medium is the modification of Snyder Test Agar, which was formulated by Snyder (1) to estimate relative numbers of *Lactobacilli* in saliva and for diagnosis of caries activity (2). Dental carries is a localized, progressive demineralization of the hard tissues of the crown and root surfaces of the teeth. Snyder described a test procedure for determining the rate of amount of acid produced by microorganisms in saliva. The rate of acid production in a medium containing dextrose, by oral microorganisms from buccal cavity is evident by a change in colour of the indicator - bromo cresol green from blue-green to yellow (3). The rate and degree of colour change is significant. Test Procedure: Collect specimens of saliva before breakfast, before brushing the teeth or just before lunch or dinner. Collect specimen of saliva in a sterile tube or bottle after patient chews paraffin for 3 minutes. Shake the specimen thoroughly and transfer 0.2 ml of this to a sterile Snyder Test MiVeg Agar tube melted and cooled to 45°C. Rotate the inoculated tubes to mix the inoculum and incubate at 37°C for 72 hours. The rate of acid production is graded as, marked for 24 hours, moderate and slight if colour changes within 48 and 72 hours respectively (3).

Incubation hours	Colour	Caries activity
24	yellow	marked
48	greenish yellow	moderate
72	yellowish green	slight

Methodology

Suspend 65 grams of powder media in 1000 ml distilled water. Mix throughly. Heat to boiling to dissolve the medium completely. Dispense in 10 ml amounts into test tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Allow the tubes to cool in an upright position. DO NOT OVERHEAT the medium.

Quality Control

Physical Appearance

Greenish yellow coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 2.0% Agar gel.

Colour and Clarity of prepared medium

Emerald green coloured, clear to slightly opalescent gel forms as butt in test tube.

Reaction

Reaction of 6.5% w/v aqueous solution is pH 4.8 ± 0.2 at 25°C.

pH range

4.6-5.0

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 24-72 hours

Organisms (ATCC)	Inoculums(CFU)	Growth	Recovery	Acid production
Lactobacillus acidophilus (314)	10^2-10^3	luxuriant	>70%	+
Lactobacillus casei (9595)	10^2-10^3	luxuriant	>70%	+
Lactobacillus fermentum	10^2-10^3	luxuriant	>70%	+
Staphylococcus aureus (25923)	10^2-10^3	None to poor	>20%	-

Key : + = Acid production, yellow colour
- = No acid production, no colour change

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. Snyder M L, 1940, J. Am. Dent. Res., 19:349.
2. Snyder M L, 1941, J. Am. Dent. Assoc., 28:44.
3. MacFaddin J.F., 1985 Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol I Williams and Wilkins, Baltimore.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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