Technical Information

Loeffler MiVeg Medium Base

Product Code : VM1537

Application:- Loeffler MiVeg Medium Base with added horse serum is used for the cultivation of *Corynebacterium diphtheriae* from clinical specimens and in pure cultures.

Composition

Ingredients	Gms / Litre
MiVeg special peptone	2.5
MiVeg extract	2.5
Sodium chloride	1.25
Dextrose	2.5
Final pH (at 25°C)	7.3 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Loeffler MiVeg Medium Base is prepared by adding vegetable peptones instead of animal based peptones thereby making the medium free from BSE/TSE risks. Loeffler MiVeg Medium Base is the modification of Loeffler Medium Base which was originally devised by Loeffler (1) and was further modified by Perry and Petran (2) and Buck (3). This medium can be used for primary and secondary isolation and cultivation of fastidious pathogenic microorganisms especially from nose and throat. This medium also restores virulence and other identifying properties (microscopic and colonial) after they have been lost due to prolonged incubation or repeated subculturing. The high serum content helps in determining proteolytic activity of organisms. It is also used for demonstration of pigmentation and ascospores.

MiVeg peptone, Miveg extract provide all the essential growth nutrients. Dextrose act as an energy source. For proteolysis testing, inoculate slant and prior to incubation, flood the slant with Brewer Thioglycollate MiVeg Medium (VM1019). Swab inoculation is done onto the medium surface and incubated. After incubation, smears are prepared from the surface of slope. Incubation should be carried out for 3 -4 days or much longer for appearance of proteolysis. Loeffler MiVeg Medium Base should be used in parallel with Serum Tellurite Agar for selective isolation of *Corynebacteria* (4).

Methodology

Suspend 8.8 grams of powder media in 250 ml distilled water. Mix thoroughly and heat if necessary to boiling to dissolve the medium completely. Sterilize by autoclaving at 10 lbs pressure (115°C) for 20 minutes. Cool to 50-55°C and aseptically add 750 ml of sterile horse serum (BA2239). Mix well and aseptically dispense into sterile test tubes. Sterilize the medium by inspissation at 80-85°C for 2 hours in free flowing steam for at least 3 consecutive days.

Quality Control

Physical Appearance

Yellow coloured, may have slightly greenish tinge,homogeneous, free flowing powder.

Colour and Clarity of prepared medium

Basal medium yields light amber coloured clear solution. With added serum and after coagulation opalescent slants form in tubes.

Reaction

Reaction of 3.52% w/v aqueous solution is pH 7.3 ± 0.2 at 25°C.

pH Range

7.1-7.5

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 3-4 days.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
Corynebacterium diphtheriae (11913)	10^2-10^3	good- luxuriant	>70%
Pseudomonas aeruginosa (10145)	10^2-10^3	good*	>50%
Staphylococcus aureus (25923)	10^2-10^3	good**	>50%

Key : * : green colonies with proteolysis
** : yellow to golden yellow colonies

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 day.

Further Reading

1. Loeffler, 1887, Zentralbl. Bakteriol. Parasitenkd., 2:105.
2. Perry and Petran, 1939, J. Lab. Clin. Med., 25:71.
3. Buck, 1949, J. Lab. Clin. Med., 34:582.
4. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Maintenance of Medi- cal 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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