Technical Information

Purple MiVeg Broth Base

Product Code : VM1284

Application:- Purple MiVeg Broth Base is recommended for the preparation of carbohydrate media used in fermentation studies for the cultural identification of pure cultures of enteric and other microorganisms.

Composition

Ingredients	Gms / Litre
MiVeg special peptone	10.00
Sodium chloride	5.00
Bromo cresol purple	0.02
Final pH (at 25°C)	6.8 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Purple MiVeg Broth Base is prepared by adding MiVeg special peptone and MiVeg extract instead of Special peptone and Beef extract thus making the medium free from BSE/TSE risks. Purple MiVeg Broth Base is the modification of Purple Broth Base which was originally formulated by Vera (1).

MiVeg special peptone provide necessary nutrients needed for the growth of the organisms. Sodium chloride maintains the osmotic balance of the medium. Bromo cresol purple is the pH indicator which turns yellow at acidic pH. Gas production is evident by its collection in Durham's tube. The acid produced during carbohydrate fermentation causes bromo cresol purple, to turn yellow.

Purple MiVeg Broth is inoculated with 18 to 24 hours old pure culture and incubated for 24 to 72 hours (upto 30 days if necessary) at 35±2°C either in an aerobic or anaerobic atmosphere depending on the organism being tested. It is recommended (3) to add carbohydrate in 1% concentration to avoid possible reversion reactions except glucose (dextrose). If the carbohydrate containing medium is being sterilized by autoclaving, precautions should be taken to use less heat required for sterilization to prevent carbohydrate hydrolysis.

Methodology

Suspend 15 grams of powder media in 1000 ml distilled water. Add 5 - 10 grams of the carbohydrate to be tested. Mix thoroughly and heat to boiling to dissolve the medium completely. Dispense in tubes as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Alternatively sterilize the basal medium prepared using 900 ml distilled water and add 100 ml separately sterilized 5 - 10% solution of the desired carbohydrate to it.

Quality Control

Physical Appearance

Greenish yellow coloured, homogeneous, free flowing powder.

Colour and Clarity of prepared medium

Purple coloured, clear solution in tubes.

Reaction

Reaction of 1.5% w/v aqueous solution is pH 6.8 ± 0.2 at 25°C.

pH Range

6.6 - 7.0

Cultural Response/Characteristics

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

Organisms (ATCC)	Inoculum (CFU)	Growth	Without Carbohydrate		With 1% Dextrose	
			Acid	Gas	Acid	Gas
Neisseria meningitidis(13090)	10^2-10^3	good-luxuriant	–	–	+	-
Escherichia coli (25922)	10^2-10^3	luxuriant	–	–	+	+
Staphylococcus aureus(25923)	10^2-10^3	luxuriant	–	–	+	-
*Listeria monocytogenes**(19112)	10^2-10^3	luxuriant	–	–	+	-

Key : Acid += yellow colour
* = fermentative metabolism

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. Vera H.D., 1950, Am. J. Public Health, 40:1267.
2. Finegold and Baron, 1986, Bailey and Scott's Diagnostic Microbiology, 7th ed., The C.V. Mosby Co., St. Louis.
3. MacFaddin J., 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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