Technical Information

Modified CPLM Medium Base (Trichomonas Modified CPLM Medium Base)

Product Code: DM 1460

Application: - Trichomonas Modified CPLM Medium Base with addition of horse serum and antibiotics is used for cultivation of *Trichomonas* species

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	32.000
Liver digest	20.000
Maltose	1.600
L-Cystine hydrochloride	2.400
Ringer's Solution 1/4th strength	1000.0(QS)
Final pH (at 25°C)	6.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Trichomonas is a protozoan, similar to bacteria. *Trichomonas vaginalis* is a causative agent of trichomonalis, the most common protozoan infection in humans. It can infect the vagina and urethra in women, and sometimes the prostate gland in men. The duration of survival of *T. vaginalis* in transport medium is fairly limited. The organisms die rapidly when dried on a swab; an alternative approach is to place the loaded swab promptly into a tube of Trichomonas Culture Medium supplemented with horse serum, penicillin and streptomycin. Media for cultivation of *T. vaginalis* basically provide essential salts, nutrients, reducing agents and antibiotics to inhibit bacterial growth in the absence or in low concentration of oxygen. Johnson and Trussell (1) recommended CPLM (Cystine-Peptone-Liver infusion- Maltose) Medium. This medium was further modified without agar and methylene blue (2). Under strictly anaerobic conditions, this medium supports growth from a single protozoan. Under aerobic conditions, massive inocula are required. *T. vaginalis* is an anaerobe and contains no catalase.

Peptic digest of animal tissue and liver digest in the medium provide nitrogenous compounds and other essential nutrients. L- cystine hydrochloride acts as a reducing agent. Cystine is not essential when cultures are incubated anaerobically but it assists the maintenance of anaerobiosis. The antibiotics inhibit bacterial growth and supports growth from a single protozoon under strictly anaerobic conditions.

Methodology

Suspend 56 grams of dehydrated powder media in 900 ml distilled water. Mix thoroughly & heat if necessary to dissolve the medium completely. Distribute in bottles in 90 ml amounts and sterilize by autoclaving at 10 lbs pressure (115°C) for 10 minutes. Cool to 50°C and aseptically add the following (per 90 ml of medium).

1. Sterile inactivated Horse Serum 10 ml

2. Sterile Penicillin Streptomycin Solution 1 ml

3. Sterile Nystatin Solution 1 ml

Mix thoroughly and distribute in suitable aliquots with sterile precautions. Penicillin Streptomycin solution

Penicillin	1 x 105 units
Streptomycin	0.1 g
Sterile distilled water	10 ml

Nystatin Solution

Nystatin	5 x 10 units
Sterile distilled water	10 ml

The addition of antibiotics is not necessary for routine subcultures but is essential for clinical diagnostic cultures and for isolating axenic cultures

Quality Control

Appearance
Cream to yellow homogeneous free flowing powder

Colour and Clarity
Brownish yellow coloured clear solution without any precipitate

Reaction
Reaction of 5.6% w/v aqueous solution at 25°C. pH : 6.0±0.2

pH Range
5.80-6.20

Cultural Response
DM 1460: Cultural characteristics observed after an incubation at 35-37°C for upto 4 days.

Organism	Growth
Trichomonas vaginalis ATCC 30001	good-luxuriant

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expirydate on the label.
Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Johnson G. and Trussell R. E., 1943, Proc. Soc. Exp. Biol., 54:245.
2. Mackie and McCartneys Practical Medical Microbiology, 1989, 13th Ed. , Vol. 2, Churchill Livingstone, London.

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