



Modified CPLM Medium Base (Trichomonas Modified CPLM Medium Base) M460

Trichomonas Modified CPLM Medium Base with addition of horse serum and antibiotics is recommended 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

Directions

Suspend 56 grams in 900 ml distilled water. 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 10 ⁵ units
Streptomycin	0.1 g
Sterile distilled water	10 ml

Nystatin Solution

Nystatin	5 x 10 ⁴ 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

Principle And Interpretation

Trichomonas is a protozoan, similar to bacteria. *Trichomonas vaginalis* is a causative agent of trichomoniasis, 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.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

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

5.80-6.20

Cultural Response

M460: Cultural characteristics observed after an incubation at 35-37°C for upto 4 days.

Organism

Trichomonas vaginalis
ATCC 30001

Growth

good-luxuriant

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expirydate on the label.

Reference

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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