

MAST® Culture Media and Supplements

Technical Information Sheet

Product Code DM 470



C.E.M.O. MEDIUM

A medium for the cultivation of *Taylorella equigenitalis*, the contagious equine metritis organism (C.E.M.O.).

1. Description

In 1977 an outbreak of acute metritis developed among mares, which appeared to be venereally transmitted. The causative organism of this metritis was investigated and subsequently isolated in work done by Platt and his colleagues,¹ the name *Haemophilus equigenitalis* was first given to this new species². However, after further extensive studies the organism was transferred to a new genus *Taylorella*³.

When culturing genital swabs from mares and stallions on non selective media. inhibition and overgrowth of the contagious equine metritis organism (C.E.M.O.) by contaminating organisms poses a considerable problem. Inhibition by glucose fermenting organisms can be avoided by the use of a glucose free medium⁴, however, colonies of the C.E.M. organism may be

obscured due to overgrowth by *Bacillus sp.*, *Proteus sp.*, and other organisms. Most strains of the organism are streptomycin resistant and can be cultured on media supplemented with amphotericin B and streptomycin to suppress growth of commensal organisms. A number of strains of the C.E.M. organism do however appear to be sensitive to streptomycin, therefore media supplemented with amphotericin B alone should be run in parallel.

MAST C.E.M.O. Agar (DM470) is based on the formulation by Atherton⁵ for the isolation of *Taylorella equigenitalis* and is recommended for use with C.E.M.O. Selectatabs MS31 containing amphotericin B and Streptomycin and MS32 containing amphotericin B only.

2. Technical Formula*

Formula	grams per litre
Soy Peptone	5.0
Casein Hydrolysate, enzymic	15.0
Sodium chloride	5.0
L-cystine	0.3
Sodium sulphite	0.2
Agar	12.0
pH approx. 7.3	

3. Directions

1. Prepare two bottles of medium by suspending 37.5g of powder in 1 litre.
2. Autoclave at 121°C (15 p.s.i.) for 15 minutes.
3. Cool to 50°C. Add, aseptically, 5% sterile horse blood and mix thoroughly.
4. Hold the medium at 80°C mixing occasionally mixing until it becomes a chocolate brown colour.
5. Cool the medium to 50°C. To the first bottle, add one MAST C.E.M.O. 1 Selectatab (MS31) per 100ml of medium. Mix well until the tablets dissolve and pour plates. For optimum growth deep plates should be poured (approx 25ml per plate). To the second bottle, add one MAST C.E.M.O. 2 Selectatab (MS32) per 100ml of medium, mix and pour plates as above.

MS31 C.E.M.O. Selectatab	Content	Concentration in 100ml medium
Amphotericin B	0.5mg	5mg/litre
Streptomycin	20mg	200mg/litre
MS32 C.E.M.O. Selectatab	Content	Concentration in 100ml medium
Amphotericin B	0.5mg	5mg/litre

4. In Use

Inoculate one streptomycin and one streptomycin free plate with the specimen swab. Incubate the plates at 37°C with 5-10% CO₂ for two days before examining. *Taylorella equigenitalis* appear as small greyish colonies.

The identity of colonies should be confirmed by positive oxidase and catalase activity, Gram stain (negative) and by comparison with control colonies.²

5. Order code and presentation

DM470D C.E.M.O	Agar 500gm
MS31 C.E.M.O. 1 Selectatab 1 tablet per 100ml	25 tablets
MS32 C.E.M.O. 2 Selectatab 1 tablet per 100ml	25 tablets

5. References

1. Platt H, Atherton JG, Simpson D, Taylor CED,
2. Rosenthal RO, Brown DFJ, Wreghitt TG. *Veterinary Record* 1977; 101: 20. Atherton JIG. *Veterinary Record* 1978; 103:432.
3. Sugimoto Q Isayama Y, Sakazaki R, Kuramochi S. *Current Microbiology* 1983; 9: 155-162.
4. Mackintosh ME. *Veterinary Record* 1981; 108: 52-55.
5. Atherton JG. *Veterinary Record* 1978; 103: 432



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