



Frey Mycoplasma Broth Base

M1050

Frey Mycoplasma Broth with horse serum is used for cultivation of *avian Mycoplasma* .

Composition**

| Ingredients | Gms / Litre |
|--------------------------------|-------------|
| Casein enzymic hydrolysate | 7.500 |
| Papaic digest of soyabean meal | 2.500 |
| Yeast extract | 5.000 |
| Sodium chloride | 5.000 |
| Potassium chloride | 0.400 |
| Magnesium sulphate | 0.200 |
| Disodium phosphate | 1.600 |
| Monopotassium phosphate | 0.100 |
| Final pH (at 25°C) | 7.7±0.2 |

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 22.3 grams in 900 ml distilled water. Heat, if necessary, to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C and add 100 ml of sterile inactivated (at 56°C for 30 minutes) Horse Serum (RM1239). Mix well before dispensing.

Principle And Interpretation

Poultry flocks are susceptible to respiratory infections from a variety of agents, including *Mycoplasmas* . The common types of infections from *Mycoplasma* are chronic respiratory diseases, air sacculitis, sinusitis and synovitis. In many cases, however the infection may be identified only through serological and culture methods (1). *Mycoplasmas* require very complex media that complicates identification procedures in laboratory diagnosis (2, 3). Frey et al (4) formulated Mycoplasma Broth with horse serum for the cultivation of *avian Mycoplasma*. *Mycoplasma gallisepticum*, *Mycoplasma synoviae*, *Mycoplasma meleagridis* are few of the Mycoplasma species which cause infections in birds.

Casein enzymic hydrolysate, papaic digest of soyabean meal and yeast extract are the sources of organic nitrogen, carbon, sulphur, Vitamin B and trace elements. Potassium chloride, magnesium chloride and magnesium sulphate provide essential ions. Addition of inactivated horse serum serves as a source of growth factors including lipid compounds and cholesterol, a stimulant of growth (5).

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light yellow coloured, clear to slightly opalescent solution

Reaction

Reaction of 2.23% w/v aqueous solution at 25°C. pH : 7.7±0.2

pH

7.50-7.90

Cultural Response

M1050: Cultural characteristics observed in moist aerobic or anaerobic atmosphere with 5-10% carbon dioxide with added sterile inactivated Horse Serum (RM1239) after an incubation at 35-37°C for 36-72 hours .

Organism

Growth

Cultural Response

Escherichia coli ATCC 25922 good - luxuriant

Mycoplasma gallisepticum luxuriant
ATCC 19610
Mycoplasma synoviae ATCC luxuriant
25204

Storage and Shelf Life

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

Reference

1. Jordan F. T. W., Pattison M., Alexander D. J., Faragher T., (Eds.), 2001, Poultry diseases, 5th Edi., Philadelphia, Pa: WB Saunders.
2. Hayflick and Chanock, 1965, Bacteriol. Rev., 29:185.
3. Hayflick and Stanbridge, 1967, Ann. N.Y. Acad. Sci., 143:608.
4. Frey, Hanson and Anderson, 1968, Am. J. Vet. Res., 29:2163.
5. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Tenover F. C., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.

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