

## CM 20735 – FRIIS LIQUID MEDIUM BASE

### INTENDED USE

For the detection of non-avian Mycoplasmas in pharmaceutical products in accordance with European pharmacopoeia.

### PRODUCT SUMMARY AND EXPLANATION

Mycoplasmas(mollicutes) are the smallest free-living microorganisms. Earlier Mycoplasmataceae were given the general title of pleuropneumonia like organism (PPLO), because of similarities to Mycoplasma mycoides (subsp. mycoides), the causative agent of bovine pleuropneumonia. Although some species are normal human respiratory tract flora, Mycoplasma pneumonia is an important cause of pneumoniae and a major cause of respiratory disease. Mycoplasma hominis, Mycoplasma genitalium and Ureaplasma urealyticum are important colonizers (and possible pathogens) of the human genital tract.

This medium is recommended by European pharmacopoeia for the detection of non-avian mycoplasma. The optimum growth conditions are 35-38°C under microaerophilic conditions. For the cultivation of Mycoplasma the medium ingredients and all the supplements should be free of any toxic substances even in small amounts.

### COMPOSITION

| Ingredients                             | Gms / Ltr |
|---|-----------|
| Proteose peptone                        | 0.821     |
| Peptone                                 | 1.508     |
| Yeast extract                           | 6.200     |
| Calf brain infusion                     | 16.42     |
| Beef heart infusion                     | 28.063    |
| Sodium chloride                         | 5.054     |
| Magnesium sulphate, heptahydrate        | 0.049     |
| Potassium chloride                      | 0.194     |
| Calcium chloride, anhydrous             | 0.068     |
| Magnesium chloride, hexahydrate         | 0.049     |
| Disodium hydrogen phosphate, dihydrate  | 0.036     |
| Disodium hydrogen phosphate             | 0.205     |
| Potassium hydrogen phosphate, anhydrous | 0.029     |
| Glucose monohydrate                     | 0.164     |
| Phenol red                              | 0.014     |

### PRINCIPLE

This medium contains Proteose peptone, peptone, yeast extract, Calf brain infusion and Beef heart infusion which provide nitrogen, vitamins, amino acids and carbon sources. Sodium chloride maintains the osmotic balance. Many Mycoplasma require serum which is supplemented by horse serum and swine serum in the medium for their good growth. The presence of antibiotic is necessary to prevent the growth of contaminating organisms. Mostly the Mycoplasma species



are aerobic or facultatively anaerobic but some are microaerophilic. Sodium chloride maintains the osmotic balance. Phosphates buffer the medium. Other inorganic salts supply the necessary ions.

#### INSTRUCTION FOR USE

- Dissolve 16.04 grams in 800 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C. Aseptically add 100 ml of Horse serum, 100 ml of Pig(Swine) serum and rehydrated contents of one vials of Friis supplement.
- Mix well and dispense as desired.

#### QUALITY CONTROL SPECIFICATIONS

- Appearance of Powder : Light yellow to pink homogeneous free flowing powder.
- Appearance of prepared medium : Light pink coloured clear to slightly opalescent gel forms in tubes.
- pH (at 25°C) : 7.40 ± 7.45

#### INTERPRETATION

Cultural characteristics observed with addition of 100 ml of Horse serum, 100 ml of Swine serum and rehydrated contents of one vial of Friss Supplement after incubation under microaerophilic condition.

| Microorganism          | ATCC  | Inoculum (CFU/ml) | Growth         | Incubation Temperature | Incubation Period |
|------------------------|-------|-------------------|----------------|------------------------|-------------------|
| Acholeplasma laidlawii | 23206 | 50-100            | Good-luxuriant | 35-38°C                | 48 Hours- 1 week  |
| Mycoplasma orale       | 23714 | 50-100            | Good-luxuriant | 35-38°C                | 48 Hours- 1 week  |
| Mycoplasma pneumoniae  | 15531 | 50-100            | Good-luxuriant | 35-38°C                | 48 Hours- 1 week  |

#### PACKAGING:

In pack size of 500 gm bottles.

#### STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.













#### DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.



**REFERENCES**

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2. European Pharmacopoeia, 2016, European Dept. for the quality of Medicines.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. Murray P.R., Baron E. J., Pfaller M.A., Tenover F.C., Tenover R.H.(Eds.),1995, Manual of Clinical Microbiology, 6th Ed., ASM Press.
6. Tauraso, Nicola M., 1967: Effect of diethylaminoethyl dextran on the growth of Mycoplasma in agar. J Bacteriol: 1559-1564.

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|--|---|--|---|--|---|
| <br>GMP<br>Good Manufacturing Practices Certified | <br>IVD<br>For In Vitro Diagnostic Use   | <br>QTY.<br>Quantity    | <br>LOT/<br>B. NO.<br>Lot / Batch Number | <br>REF<br>Catalogue Number       | <br>Manufacturer |
| <br>Temperature Unit                              | <br>EC REP<br>Authorized Representative<br><small>MedMet GmbH<br/>Buckstrasse 10,<br/>48163 Moers, Germany</small> | <br>European Conformity | <br>QR Code                              | <br>Consults Instructions for Use | <br>Best Before  |

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

\*For LabUse Only

