PPLO AGAR (7678)

Intended Use
PPLO Agar is used with enrichments for the isolation and cultivation of *Mycoplasma* spp.

Product Summary and Explanation
PPLO Agar was described by Morton, Smith, and Leberman in 1951.[1] *Mycoplasma* was discovered in a case of pleuropneumonia in a cow, and referred to as "pleuropneumonia-like organism" or PPLO.[2] *Mycoplasmas* belong to the class of *Mollicutes* "soft skin", which are the smallest free-living organisms.[3] They are pleomorphic, varying in size from 0.2 to 0.3 micromillimeters.[3]

Mycoplasma pneumoniae is a common cause of mild pneumonia and usually affects people younger than 40.[4] Studies suggest that it causes 15 – 50% of all pneumonia in adults and an even higher percentage of pneumoniae in school-aged children.[4] The symptoms include headache, fever, cough, chest pain, and sore throat.[4]

Principles of the Procedure
Heart Infusion and Yeast Enriched Peptone are the nitrogen, carbon, vitamin, and mineral sources in PPLO Agar. Sodium Chloride maintains the osmotic balance. Agar is the solidifying agent, and used in a slightly reduced concentration because the organisms grow into the agar with only slight surface growth.[3] Sterile serum is used as a growth supplement. Selective agents can be used to reduce commensal growth of respiratory flora.

Formula / Liter

Heart Infusion	6 g
Yeast Enriched Peptone	10 g
Sodium Chloride	5 g
Agar	14 g

Final pH: 7.8 ± 0.2 at 25°C

Formula may be adjusted and/or supplemented as required to meet performance specifications.

Supplement

Sterile Serum, 300 mL

Precautions
1. For Laboratory Use.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions
1. Dissolve 35 g of the medium in 700 mL of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.
4. Cool to 50 - 60°C.
5. Aseptically add 300 mL of sterile serum.
6. Selective agents may be added as desired. Mix well.

Quality Control Specifications
Dehydrated Appearance: Powder is homogeneous, free flowing, and light yellow beige.

Prepared Appearance: Prepared medium is trace to slightly hazy and light beige.

Expected Cultural Response: Cultures were incubated at 35 ± 2°C under 5 – 10% CO_2 and examined for the presence of *Mycoplasma* colonies for up to 7 days.

Microorganism	Expected Results
Mycoplasma bovis ATCC® 25025	good growth
Mycoplasma gallinarum ATCC®19708	good growth

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

Refer to appropriate references for specific procedures on the isolation and identification of *Mycoplasma* spp.

Results

Examine PPLO Agar after 4 to 7 days of incubation. *Mycoplasma* colonies are round, 0.01 to 0.5 mm in diameter with a dense center and a less dense periphery producing a “fried egg” appearance.

Storage

Store sealed bottle containing the dehydrated medium at 2 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

Expiration

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitation of the Procedure

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

Packaging

PPLO Agar	**Code No.**	**7678A**	**500 g**
		7678B	**2 kg**
		7678C	**10 kg**

References

1. **Morton, H. E., P.F. Smith, and P. R. Leberman.** 1951. Venereal diseases. Am. J. Syphilis Gonorrh. **35**:361.
2. **Baron, E. J., L. R. Peterson, and S. M. Finegold.** 1994. Bailey & Scott’s diagnostic microbiology, 9th ed. Mosby-Year Book, Inc. St. Louis, MO.
3. **Kenny, G. E.** 1985. *Mycoplasmas*. *In* E. H. Lennette, A. Balows, W. J. Hausler, Jr., and H. J. Shadomy (eds). Manual of clinical microbiology, 4th ed. American Society for Microbiology, Washington, D.C.
4. **Parsons, C.** 2002. Medline Plus, *Mycoplasma pneumonia*. Department of Internal Medicine, Division of Infectious Diseases, University of Virginia, Charlottesville, VA.

Technical Information

Contact Acumedia Manufacturers, Inc. for Technical Service or questions involving dehydrated culture media preparation or performance at (410)780-5120 or fax us at (410)780-5470.