

Technical Data

Feeley Gorman Agar (F.G.Agar)

Feeley Gorman Agar is recommended for the isolation and presumptive identification of Legionella species.

Composition**	
Ingredients	Gms / Litre
Casein acid hydrolysate	17.500
Beef extract	3.000
Starch	1.500
L-Cysteine hydrochloride	0.400
Ferric pyrophosphate, soluble	0.250
Agar	17.000
Final pH (at 25°C)	6.9±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 39.65 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure(121°C) for 15 minutes. Cool to 45 - 50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Feeley et al formulated (1,2) Feeley Gorman Agar, which is used as nonselective enrichment medium for isolation of *Legionella* species. *Legionella* is a gram-negative bacterium, including species that cause legionellosis or Legionnaires' disease, most notably *L. pneumophilia* (3). *Legionella* species are the causative agent of the human Legionnaires' disease and the lesser form, Pontiac fever. *Legionella* transmission occurs via aerosols- inhalation of mist droplets containing the bacteria. Person-to-person transmission of *Legionella* has not been demonstrated (4).

Legionella are nutritionally fastidious and require L-cysteine and iron salts for their growth, which are provided in the medium. *Legionella* species are highly pathogenic microorganisms. Certain safety precautions must be taken when handling *Legionella* cultures.

Casein acid hydrolysate, beef extract, L-cysteine hydrochloride and ferric pyrophosphate act as sources of nutrients. Incubation should be carried out in the presence of 2.5% carbon dioxide but if it exceeds the limit, *Legionella* growth is inhibited due to formation of acidic condition. It is recommended to inoculate F.G. Agar and Legionella Agar (M809) with supplements simultaneously, as *Legionella* usually do not grow initially on F.G. agar. *Legionella* species can be identified by their characteristic fluorescence in presence of UV light (5, 6).

Safety Precautions for handling specimens and cultures.

Use bacteriological safety hood (Biosafety cabinet).

Wear gown, mask and gloves.

Decontaminate work surface with either 5% hypochlorite or 5% phenol.

Autoclave all materials before discarding or cleaning.

Since Legionella disease is primarily a pulmonary infection, prevention and containment of aerosols is essential (7).

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder Gelling Firm, comparable with 1.7% agar gel. Colour and Clarity of prepared medium

M811

Yellow coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 4.0% w/v aqueous solution at 25°C. pH : 6.9±0.2

pН

6.70-7.10

Cultural Response

M811: Cultural characteristics observed in presence of 2.5% Carbon dioxide (CO₂) after an incubation at $35-37^{\circ}C$ for 4 days .

OrganismGrowthFluorescence
under 366 nmLegionella bozemanni ATCC good-luxuriantblue-white33217good-luxuriantnone33218good-luxuriantbright yellowLegionella pneumophilagood-luxuriantbright yellow

Storage and Shelf Life

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

Reference

- 1. Feeley J. C. et al, 1978, J. Clin. Microbiol., 8(3): 320.
- 2. Feeley J. C. et al, 1979, J. Clin. Microbiol., 10(4):437.
- 3. Ryan K. J., Ray C. G. (Eds.), 2004, Sherris Medical Microbiology, 4th Edition, McGraw Hill.
- 4. Winn, W. C. Jr. ,1996, Legionella (In: Baron's Medical Microbiology, Barron, S. et al, (Eds.), 4th Edition, University of Texas Medical Branch
- 5. Herbert G. A. et al, 1959, Ann. Intern, Med., 92(1):45.
- 6. Herbert G. A. et al, 1980, Ann. Intern. Med., 92(1):53.
- 7. MacFaddin J. F., Vol. I, 1985, Media for Isolation Cultivation-Identification-Maintenance of Medical Bacteria, Williams and Wilkins, Baltimore/ London, pg.307-308.

Revision : 1 / 2011

Disclaimer :

User must ensure suitability of the product(s) in their application prior to use. Products conform solely to the information contained in this and other related HiMedia[™] publications. The information contained in this publication is based on our research and development work and is to the best of our knowledge true and accurate. HiMedia[™] Laboratories Pvt Ltd reserves the right to make changes to specifications and information related to the products at any time. Products are not intended for human or animal or therapeutic use but for laboratory, diagnostic, research or further manufacturing use only, unless otherwise specified. Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.

HiMedia Laboratories Pvt. Ltd. A-516, Swastik Disha Business Park, Via Vadhani Ind. Est., LBS Marg, Mumbai-400086, India. Customer care No.: 022-6147 1919 Email: techhelp@himedialabs.com

Œ