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FAA MEDIA (FASTIDIOUS ANAEROBES AGAR)

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SoWa RI Anaerobic and Molecular Microbiology (public)
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ABSTRACT

For the growing and maintance of Clostridium sp.

Fastidious Anaerobe Agar is used for the cultivation of anaerobic microorganisms and is not intended for use in the diagnosis of disease or other conditions in humans. A primary isolation medium capable of growing most clinically significant anaerobes. Developed by Lab M (Neogen® Corporation), comparisons have shown this medium to be superior to other formulations as a primary isolation medium for fastidious organisms. The peptones included have been chosen for maximum growth stimulation. Starch and sodium bicarbonate act as detoxification agents while hemin encourages pigment production in Porphyromonas melaninogenicus. Specific growth promoting agents are Cysteine for Fusobacterium necrophorum, Propionibacterium acne and Bacteriodes fragilis, arginine for Eubacterium spp. soluble pyrophosphate for Porph. gingivalis and Porph. asaccharolyticus. Pyruvate helps neutralize hydrogen peroxide and is also utilized by Veillionella spp. as an energy source. Vitamin K and sodium succinate provide essential growth factors for some anaerobes as does the 0.1% glucose. The low level of glucose prevents the production of high levels of acids and alcohols which would inhibit colonial development.

EXTERNAL LINK

https://foodsafety.neogen.com/pdf/acumedia_pi/7531_pi.pdf

PROTOCOL CITATION

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GUIDELINES

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Medium final pH: 7.2 ± 0.2 at 25°C

BEFORE STARTING

Make the stock solutions for Hemin, L-Cysteine HClxH2O and vitamin K1.
VITAMIN K1 SOLUTION NEEDS TO BE DONE AT LEAST 3 DAYS IN ADVANCE!!!

1 Prepare stock solutions:

L-cystein hydrochloride solution (50 g/l):
Dissolve **0.5 g** of Cysteine HCl Monohydrate in a **10 mL** distilled water and filter sterilize. Store refrigerated.

HEMIN solution (10 g/l) :
Dissolve **0.1 g Hemin** in **100 µl** [M] **1 Molarity (M) NaOH** ; make up to **10 mL** with distilled water and filter sterilize. Store refrigerated.

VITAMIN K1 solution (10 g/l):
Dissolve **0.1 g** of vitamin K1 in **10 mL** [M] **95 % volume Ethanol** and filter sterilize. Store refrigerated in a brown bottle.

2 For the preparation of 1L of media (50 to 66 petri dishes depending of depth) dilute in 1000 ml of distilled water:

- **23 g Peptone**
- **5 g Sodium Chloride**
- **1 g Soluble Starch**
- **0.4 g Sodium Bicarbonate**
- **1 g Glucose**
- **1 g Sodium Pyruvate**
- **0.25 g Sodium Pyrophosphate**

1 g L-Arginine

0.5 g Sodium Succinate

12 g Agar

Final pH: 7.2 ± 0.2 at 25°C

3 Heat to boiling to dissolve the medium completely.

4 Sterilize by autoclaving at 15 lbs pressure **121 °C** for **00:15:00** minutes.

5 Cool down to **50 °C** - **55 °C** and aseptically add the Cysteine HCl Monohydrate, Hemin and the Vitamin K .

1 mL Hemin stock solution

1 mL L-Cysteine HClxH20 stock solution

100 µl Vitamin K1 stock solution

6 Refrigerate the sterile medium until use (no more than 2 weeks).