Exercise VIII: Bacterial Motility

Indirect Methods

a. hanging drop slide

Definitions:

Brownian movement

true motility

b. motility test agar

Recognize non-motile bacteria – growth around stab line
Recognize motile bacteria – growth throughout tube (cloudy)

Exercise IX: Selective, Differential, and Differentially-Selective Media

Definitions and Contents:

Selective media

Differential media

Differentially-selective media
1. **Differential media**

   **Triple Sugar Iron agar (TSI)**
   - What is it used for?
   - What does it indicate?
   - What is the indicator in the media?
   - What color indicates whether it is acid or alkaline?
   - What is fermented based on the reactions in the butt and slant?
   - Identify organisms growing on the media

2. **Differentially-selective media**

   a. **Eosin Methylene Blue agar (EMB)**
      - What is it used for?
      - What are the indicators in the media?
      - What is fermented?
      - What is the inhibitor and what organisms are inhibited?
      - Identify organisms growing on the agar

   b. **MacConkey’s agar**
      - What is it used for?
      - What is the indicator in the media?
      - What are the inhibitors and what organisms are inhibited?
      - What is fermented?
      - Identify organisms growing on the media
c. **Mannitol Salt agar (MSA)**

   What is it used for?
   What is the indicator in the media?
   What does it differentiate between?
   What is fermented and what are the color changes?
   Identify organisms growing on the media

**Exercise X: IMViC Tests**

What are IMViC tests used for?

1. **Indole production**

   What is degraded?
   What is it used for?
   What reagent is used?
   What indicates a positive test?
   Identify what organism(s) produce a positive test
   What indicates a negative test?
   Identify what organism(s) produce a negative test
2. Methyl Red test (acid production)
   
   What is it used for?
   
   What indicates a positive test?
   
   Identify what organism(s) produce a positive test
   
   What indicates a negative test?
   
   Identify what organism(s) produce a negative test

3. Citrate Utilization

   What is citrate used for by organisms?
   
   What does it differentiate between?
   
   What is the indicator in this media?
   
   What indicates a positive test?
   
   Identify what organism(s) produce a positive test
   
   What indicates a negative test?
   
   Identify what organism(s) produce a negative test

Exercise XI: Oxygen Utilization: The Catalase Test

Catalase test

What do organisms produce in the presence of oxygen?

What is the function of catalase?
What indicates a positive test?

What is the catalase test used to determine?

What does it differentiate between?

Identify what organism(s) produce a positive test

What indicates a negative test?

Identify what organism(s) produce a negative test