

## **TOMATOES EXPLANT STERILIZATION**

### **A. Tools:**

1. Beaker Glass or used jam bottles
2. Tweezers
3. Knife
4. Scalpel + Blade
5. Sterilized petridish

### **B. Materials:**

1. Healthy seeds tomatoes
2. Clean water (running tap water)
3. Clorox (NaOCl) 15%
4. Distilled water
5. Tissue or gauze

### **C. Procedures:**

1. Select a source of explants from healthy tomatoes that are growing normally.
2. Take the seeds from healthy tomatoes and then dry them or use packaged seeds sold in farm stores.
3. Soak tomato seeds for 12 hours in clean water.
4. Drain the tomato seeds.
5. Soak the seeds in Clorox 15% for 7 minutes (do this activity in LAFC).
6. Then rinse the seeds 3 times with sterile distilled water, each for 5 minutes (do this activity in LAFC).
7. Transfer the explants to a new beaker glass or jam bottle, (do this activity in LAFC).
8. Explant ready to be planted in culture media.
9. Clean the tools that have been used, arrange them neatly in place.

## TOMATOES EXPLANTS INOCULATION

### A. Tools:

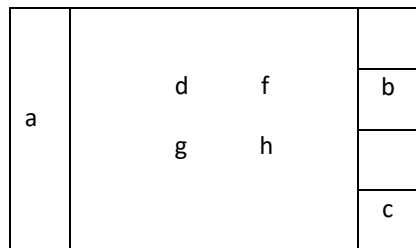
1. LAFC
2. Hand sprayer
3. Scalpel + Blade
4. Bunsen burner
5. Petridish
6. Tweezers
7. Tissue

### B. Materials:

1. Murashige and Skoog (MS) media
2. Alcohol
3. Distilled water
4. Bunsen burner fuel (Methanol/Spiritus)
5. Banana explants

### C. Procedures:

1. Before planting, LAFC must have been sterilized for at least 1 hour by turning on the UV lamp and blower,
2. Spray LAFC with 70% alcohol before adding all the planting materials and tools,
3. Spray materials and tools with 70% alcohol before adding them to LAFC,
4. Arrange the materials and tools properly and neatly (see picture),



**Caption:**

- a. Planting media
- b. Distilled water
- c. Explants
- d. Bunsen burner
- e. Planting tools
- f. Petri dish
- g. Sterilization materials

5. Light the Bunsen burner,
6. Spray petridish with 70% alcohol and burn (sterilized it) over a Bunsen burner
7. Sterilized the scalpel blade and tweezer over the Bunsen Burner
8. Take tomatoes explant from the beaker glass using tweezer,
9. Put it in the petridish,
10. Peel the explants with a scalpel + blade and tweezers to the size of  $\pm \frac{1}{2}$  cm - 1 cm, then split into 2 parts vertically,
11. Put back the scalpel + blade and tweezers into the glass filled with alcohol,
12. Take the culture bottle containing the growing media, open the bottle cap over the Bunsen burner,
13. Sterilized the tweezers over a Bunsen burner,
14. Take the explants from the petridish and put the explants in a culture bottle containing the growing media,

15. Cover the bottle with heat resistant plastic that has been sterilized over a Bunsen burner.
16. Store in the incubation room.
17. Clean and put the tools and materials neatly in place.

## TOMATOES PLANTLET SUB CULTURE

### A. Tools:

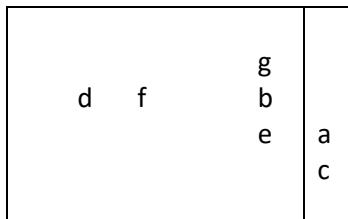
1. LAFC
2. Hand sprayer
3. Scalpel + Blade
4. Bunsen burner
5. Petri dish
6. Tweezers
7. Tissue

### B. Materials:

1. MS Media
2. Alcohol
3. Distilled water
4. Bunsen burner fuel
5. Banana plantlet

### C. Procedures:

1. Before planting, LAFC must have been sterilized for at least 1 hour by turning on the UV lamp and blower,
2. Spray LAFC with 70% alcohol before adding all the planting materials and tools
3. Spray materials and tools with 70% alcohol before adding them to LAFC,
4. Arrange the materials and tools properly and neatly (see picture),



**Caption:**

- a. Planting media
- b. Distilled water
- c. Explants
- d. Bunsen burner
- e. Planting tools
- f. Petri dish
- g. Sterilization materials

5. Light the Bunsen burner,
6. Spray petridish with 70% alcohol and burn (sterilized it) over a Bunsen burner,
7. Sterilized the scalpel blade and tweezer over the Bunsen Burner
8. Take tomatoes plantlet from the beaker glass using tweezer,
9. Put it in the petridish,
10. Separate (cut) plantlets into parts according to shoot growth,
11. Put back the scalpel + blade and tweezers into the glass filled with alcohol,
12. Take the culture bottle containing the growing media, open the bottle cap over the Bunsen burner
13. Sterilized the tweezers over a Bunsen burner,
14. Take the cut plantlets from the petri dish and put them in a culture bottle containing the growing media,

15. Cover the bottle that has been sterilized over a Bunsen burner.
16. Store in the incubation room.
17. Clean and put the tools and materials neatly in place.

## **HOT PEPPERS EXPLANT STERILIZATION**

### **A. Tools:**

1. Beaker Glass or used jam bottles
2. Tweezers
3. Knife
4. Scalpel + Blade
5. Sterilized petridish

### **B. Materials:**

1. Healthy seeds hot peppers
2. Clean water (running tap water)
3. Clorox (NaOCl) 10%
4. Clorox (NaOCl) 20%
5. Tissue or gauze

### **C. Procedures:**

1. Select a source of explants from healthy hot peppers that are growing normally.
2. Take the seeds from healthy hot peppers and then dry them or use packaged seeds sold in farm stores.
3. Soak tomato seeds for 12 hours in clean water.
4. Drain the hot peppers seeds.
5. Soak the seeds in Clorox 20% for 10 minutes (do this activity in LAFC).
6. Then rinse the seeds 3 times with sterile distilled water, each for 5 minutes (do this activity in LAFC).
7. Soak the seeds in Clorox 20% for 10 minutes (do this activity in LAFC).
8. Then rinse the seeds 3 times with sterile distilled water, each for 5 minutes (do this activity in LAFC).
9. Transfer the explants to a new beaker glass or jam bottle, (do this activity in LAFC).
10. Explant ready to be planted in culture media.
11. Clean the tools that have been used, arrange them neatly in place.

## HOT PEPPERS EXPLANTS INOCULATION

### A. Tools:

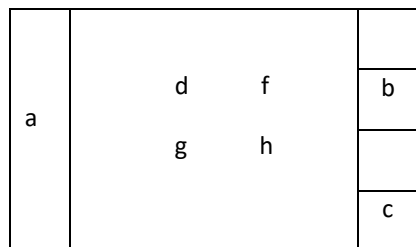
1. LAFC
2. Hand sprayer
3. Scalpel + Blade
4. Bunsen burner
5. Petridish
6. Tweezers
7. Tissue

### B. Materials:

1. Murashige and Skoog (MS) media
2. Alcohol
3. Distilled water
4. Bunsen burner fuel (Methanol/Spiritus)
5. Banana explants

### C. Procedures:

1. Before planting, LAFC must have been sterilized for at least 1 hour by turning on the UV lamp and blower,
2. Spray LAFC with 70% alcohol before adding all the planting materials and tools,
3. Spray materials and tools with 70% alcohol before adding them to LAFC,
4. Arrange the materials and tools properly and neatly (see picture),



**Caption:**

- a. Planting media
- b. Distilled water
- c. Explants
- d. Bunsen burner
- e. Planting tools
- f. Petri dish
- g. Sterilization materials

5. Light the Bunsen burner,
6. Spray petridish with 70% alcohol and burn (sterilized it) over a Bunsen burner
7. Sterilized the scalpel blade and tweezer over the Bunsen Burner
8. Take hot peppers explant from the beaker glass using tweezer,
9. Put it in the petridish,
10. Peel the explants with a scalpel + blade and tweezers to the size of  $\pm \frac{1}{2}$  cm - 1 cm, then split into 2 parts vertically,
11. Put back the scalpel + blade and tweezers into the glass filled with alcohol,
12. Take the culture bottle containing the growing media, open the bottle cap over the Bunsen burner,
13. Sterilized the tweezers over a Bunsen burner,
14. Take the explants from the petridish and put the explants in a culture bottle containing the growing media,
15. Cover the bottle with heat resistant plastic that has been sterilized over a Bunsen burner.

16. Store in the incubation room.
17. Clean and put the tools and materials neatly in place.



## HOT PEPPERS PLANTLET SUB CULTURE

### A. Tools:

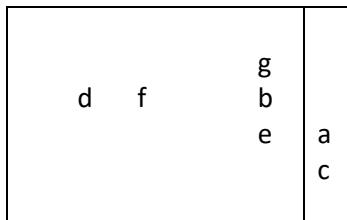
1. LAFC
2. Hand sprayer
3. Scalpel + Blade
4. Bunsen burner
5. Petri dish
6. Tweezers
7. Tissue

### B. Materials:

1. MS Media
2. Alcohol
3. Distilled water
4. Bunsen burner fuel
5. Banana plantlet

### C. Procedures:

1. Before planting, LAFC must have been sterilized for at least 1 hour by turning on the UV lamp and blower,
2. Spray LAFC with 70% alcohol before adding all the planting materials and tools
3. Spray materials and tools with 70% alcohol before adding them to LAFC,
4. Arrange the materials and tools properly and neatly (see picture),



**Caption:**

- a. Planting media
  - b. Distilled water
  - c. Explants
  - d. Bunsen burner
  - e. Planting tools
  - f. Petri dish
  - g. Sterilization materials
5. Light the Bunsen burner,
  6. Spray petridish with 70% alcohol and burn (sterilized it) over a Bunsen burner
  7. Sterilized the scalpel blade and tweezer over the Bunsen Burner
  8. Take hot peppers plantlet from the beaker glass using tweezer,
  9. Put it in the petridish,
  10. Separate (cut) plantlets into parts according to shoot growth,
  11. Put back the scalpel + blade and tweezers into the glass filled with alcohol,
  12. Take the culture bottle containing the growing media, open the bottle cap over the Bunsen burner
  13. Sterilized the tweezers over a Bunsen burner,
  14. Take the cut plantlets from the petri dish and put them in a culture bottle containing the growing media,
  15. Cover the bottle that has been sterilized over a Bunsen burner.
  16. Store in the incubation room.
  17. Clean and put the tools and materials neatly in place.