

## Lab (6)

## General Mycology Laboratory

**Pathogenicity:** The ability of a microorganism to produce disease in a host.

### Pathogenicity test:

#### ❖ Spore suspension preparation:

#### Method 1:

1. Pour 10 ml of sterilized distilled water (SDW) on the petri dish containing the fungal isolate.
2. Use a brush to harvest the fungal spores.
3. Filter by using gauze.
4. Mix the test tube (eppendorf tube) by vortex.

#### Method 2:

- 1- Cut a disc size of 1 cm from the media containing the fungal isolate.
- 2- Place the disc inside the test tube containing 10 ml of SDW.
- 3- Filter by using gauze.
- 4- Mix the test tube by vortex.

#### ❖ Conducting Pathogenicity test

- 1- Using seeds
  - a) Prepare fungal spore suspension.
  - b) Prepare certified clean seeds.
  - c) Prepare clean soil in pots (soil potting) as follows:
    - Clean seed without inoculation (control seeds/pots)
    - Seed soaked in fungal spore suspension.
    - Soil sprayed with fungal spore suspension.

Results will be recorded on seedling after 7-21 days at 14-28 °C depending on the fungal spp. used.

- 2- Using foliage component (cotyledons/leaves)
  - a) Prepare fungal spore suspension.
  - b) Prepare certified clean seeds.

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- c) Sowing the seeds in clean soil along with watering the pots and conduct the inoculation as follows:
- Clean foliage component without inoculation (control plants/pots)
  - Inoculate foliage component.

Place control and inoculated pots inside boxes and covered with sterile bags, incubate for 3 to 21 days at 14-28° (depending on the fungal spp. used). Record the first appearance of the disease symptoms, measure and compare with controls.

Results will be recorded on seedling after 7-120 days depending on the leaf position.

### 3- Using fruits

- a) Prepare fungal spore suspension.
- b) Prepare sound fruit (healthy fruit).
- c) Make 3 equal holes by needle.
- d) Prepare 2 replicates/fungus and conduct the inoculation as follows:
  - Clean fruits without inoculation (control fruits)
  - Sprayed fruits with fungal spore suspension.

Place control and inoculated fruits inside a sterile bag, incubate for 3 to 21 days at 14-28 °C (depending on the fungal spp. used). Record the first appearance of the disease symptoms, measure and compare with controls.