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Arabidopsis-Microbe interaction seed treatment V.2

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Tao-Ho Chang[1]

[1]Plant Health Care Program, Academy of Circular Economy, National Chung Hsing University, Taichung

PSR Lab Protocols

Tao-Ho Chang
Program in Plant Health Care, Academy of Circular Economy, N...

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We use this protocol and it's working

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Abstract

The treated seeds can grow in medium or bulk soil to determine the impact of novel materials on plants.

Guidelines

Seed treatment of arabidopsis seeds is a suitable, simple method for many plant-microbe interactions.

Materials

Arabidopsis thaliana seeds (Col-0)
50% Bleach
Distilled water
1/2 MS medium (pH = 5.7)

Safety warnings

The only harmful chemical is 50% bleach (2% sodium hypochlorite). Please make sure ware gloves when in the seed sterile steps.

Before start

Seed priming is an important method that increases the health of the plant.

Seeds sterilisation

15m

1 The arabidopsis seeds are immersed with 50% bleach (2% Sodium hypochlorite) in 1.5 µL tubes.

2 100 rpm, 28°C, 00:10:00

10m

3 100 rpm, 28°C, 00:00:10

10s

4 Gently remove the supernatant and leave the seeds in the tube.

5 The sterile seeds are immersed in distilled water.

6 Repeat the process of step #3 to #5 for 10 times

Seeds treatment

1d

7 The seeds were immersed in the specific concentration of treatment
1. Bacteria treatment: OD value to 0.1 and diluted 10 times.
2. Fungus treatment: The final concentration of spore suspension is 100 spores mL^{-1}.

8 100 rpm, 28°C, 01:00:00

1h

9 150 rpm, 4°C, 23:00:00

23h

Wash seeds

10s

10 The treated seeds are moved in a filter mesh (Favorgen) with a collection tube.

11 100 rpm, 28°C, 00:00:10 10s

12 Remove the filter through in collection tube

13 Add 500 µL of distilled water to the filter column and resuspend the seeds.

14 Repeat the process of step #11 to #13 for 10 times