VERSION 1

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Protocol status: In development
We are still developing and optimizing this protocol

Arabidopsis seeds priming V.1

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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

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Keywords: Arabidopsis thaliana, Seed priming, Beneficial microbe, Plant stress, Root structure architecture

SAFETY WARNINGS

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

BEFORE START INSTRUCTIONS

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 in 1.5 µL tubes.

2 10m

100 rpm, 28°C, 00:10:00

3 10s

100 rpm, 28°C, 00:00:10

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

5 The sterile seeds are immersed in distilled water.

6 go to step #3

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: 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 column 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 go to step #11

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