



LabTIE *Arabidopsis* Seed Dispenser

Simple. Fast. Reliable.

Mesh & Push plate Instruction manual

Version 22.001^a

This manual explains how to assemble and use the LabTIE Arabidopsis Seed Dispenser (96-well and 50-well PDR mesh plate formats) for fast, accurate single-seed dispensing of *Arabidopsis thaliana* and other small oilseeds into microplates and petri dishes, including the dedicated metal Push Plate for oily or static-prone seed batches.





96-well Arabidopsis Seed Dispenser Protocol

Protocol: How to use

1. Place your Arabidopsis Seed Dispenser with converter on your 96-well plate before starting
2. Divide the seeds on the Mesh plate.
Hold the Dispenser with your fingers and shake horizontally back and forth. Only use the wrists while shaking and keep the arms still.
After a few seconds, tilt the Dispenser with the bucket down and keep shaking gently. As a result, all holes in the Mesh plate will be filled and the surplus of seeds will fall into the bucket.
TIP: Holding the dispenser slightly in an angle will reveal empty spots during the shaking motion.
3. Gently place the Dispenser and the 96-well plate back on the table/bench top. Do not place it too hard or the small seeds will jump out the holes.
4. Pull the slider a bit backwards until the holes open up and the seeds drop in your plate.
5. Sometimes seeds get stuck; loosen them by tapping with your finger or the back of the brush on the side of the dispenser. Tapping will drop the seeds into the well. Tapping too hard can result in seeds jumping back out on the mesh plate.

Note:

If the last step results in 2 or 3 seeds not falling through, there can be 2 reasons why.

- a. the black metal mesh plate shows static: wash the plate with soap water and let dry to air. Do not rinse with normal water, the soap water will leave an antistatic coating.
- b. Seeds get stuck due to oily Arabidopsis seeds we designed and produced a push plate. This high-end tool with very fine pins needs to be placed on top of the mesh plate to push the seeds through.

Push plate

The metal Push plate is used to push Arabidopsis Seeds through the black/anodized Mesh plate on to your plate.

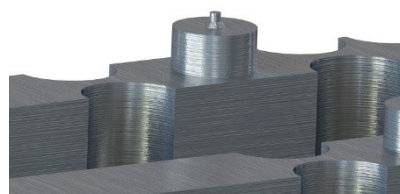
Important note!



DO NOT tap or hit the fragile 96/50 metal pins on the push plate. This may damage or break them.
DO NOT Autoclave or place it in a dishwasher. This will damage the material.

Dispensing Protocol

The Dispenser should be connected to the Converter; this will reduce the chance of seeds that are already sitting in the mesh plate holes, popping back out of the holes on to the surface mesh plate.





50-well Arabidopsis Seed Dispenser Protocol

Protocol: How to use

1. Assemble your Arabidopsis Seed Dispenser with converter.
2. Divide the seeds on the Mesh plate.
Hold the Dispenser with your fingers and shake horizontally back and forth. Only use the wrists while shaking and keep the arms still.
After a few seconds, tilt the Dispenser with the bucket down and keep shaking gently. As a result, all holes in the Mesh plate will be filled and the surplus of seeds will fall into the bucket.
TIP: Holding the dispenser slightly in an angle will reveal empty spots during the shaking motion.
3. Gently place the Dispenser on the Petri Dish. Do not place it too hard or the small seeds will jump out the holes.
4. Pull the slider a bit backwards until the holes open up and the seeds drop in your plate.
5. Sometimes seeds get stuck; loosen them by tapping with your finger or the back of the brush on the side of the dispenser. Tapping will drop the seeds into the well. Tapping too hard can result in seeds jumping back out on the mesh plate.

Note:

If the last step results in 2 or 3 seeds not falling through, there can be 2 reasons why.

- a. the black metal mesh plate shows static: wash the plate with soap water and let dry to air. Do not rinse with normal water, the soap water will leave an antistatic coating.
- b. Seeds get stuck due to oily Arabidopsis seeds we designed and produced a push plate. This high-end tool with very fine pins needs to be placed on top of the mesh plate to push the seeds through.

Push plate

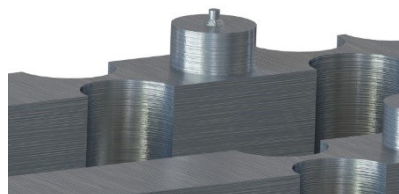
The metal Push plate is used to push Arabidopsis Seeds through the black/anodized Mesh plate on to your plate.

Important note!



DO NOT tap or hit the fragile 96/50 metal pins on the push plate. This may damage or break them.

DO NOT Autoclave or place it in a dishwasher. This will damage the material.





CLEANING AND STERILIZATION PROTOCOL DISPENSER

- 1) Wash all Dispenser components with **soap** and **water** for cleaning and to remove the antistatic charge.
- 2) Sterilize components by cleaning them with 70% EtOH, let the components dry to the air in a laminar/cross flow cabinet.



Important note!

DO NOT clean or sterilize the Dispenser and Converter with chemicals other than soap or Ethanol.
DO NOT Autoclave or place it in a dishwasher. This will damage the material.

PRODUCT WARRANTY

This warranty limits our liability to replacement of this product when product sustained incidental damage arising out of the use, the result of use, or inability to use this product. LabTIE will not take responsibility for damage on the product obtained through shipment and transport.

“The Arabidopsis Seed dispenser is a very useful tool, to quickly spread Arabidopsis seeds. You produce less trash and you save a lot of time. After a few trials to get used to the handling, the seed dispenser is really convenient and a great time saver”

Enjoy your Arabidopsis Dispenser and good luck with your research!

ORDERING, SHIPPING ADDRESS AND TECHNICAL SERVICE

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Parts and Article Numbers

The table below lists the Arabidopsis-specific Mesh and Push Plates and their article numbers. For the LabTIE Dispenser main unit, bucket, slider and converter article numbers, see the LabTIE Dispenser Instruction Manual.

Component	Article Number
Mesh Plate Arabidopsis, 96-well	MGLT540961
Mesh Plate Arabidopsis, 50-well PDR	MGLT540501
Push Plate Arabidopsis, 96-well	MGLT540962
Push Plate Arabidopsis, 50-well PDR	MGLT540502
Arabidopsis Dispenser User Manual	MGLT990032

Contact LabTIE International at info@labtie.com or +31 (0)611132028 to order.

References

The LabTIE Seed Dispenser platform (on which the Arabidopsis Mesh & Push Plate system is based) is used in published, peer-reviewed high-throughput seed germination screens.

Lacey HJ et al. Nanangenines: drimane sesquiterpenoids as the dominant metabolite cohort of a novel Australian fungus, *Aspergillus nanangensis*. *Beilstein J Org Chem*. 2019;15:2631-2643. [View publication](#)

A full literature review is available as a separate LabTIE reference document on request from info@labtie.com.