

LSOP Title	Arabidopsis Growing Procedure
LSOP No.	LSOP02
Version	1.7
Location	UQ Node/Centre-wide
Policy/Procedure Link	UQ- Equipment OGTR
Risk Assessments	
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1.0 Scope

To outline the procedures involved in growing Arabidopsis and to aid in eliminating pests.

This LSOP does not cover transplanting from media plates to soil.

2.0 Definitions

RO – Reverse Osmosis Water (de-ionised water)

Flowfeed – fertiliser

3.0 Materials and Equipment

1. 0.2% agar
2. Pots
3. Trays
4. Domes
5. Tape
6. Pencil/Sharpie
7. Water & RO water
8. Soil

9. Seeds

10. Flowfeed

11. Bleach

12. Ethanol

13. Detergent

14. Washing up gloves



4.0 Prescribed Actions

1. Add 2 ml of water or 0.2% agar to seeds and stratify for 2-4 nights at 4°C (optional)
2. Make sure that the pots or trays are labelled with name, date, GMO stamp and contact details
3. Put soil in rectangle pots (1 bag of soil ~ 80-100 pots)
4. Spray water on to the surface of the soil
5. Pour 600 ml water into tray for initial irrigation
6. Drop or tap seeds onto soil, spray with water again and place in growth cabinet. If you followed the agar option in step 1 use a pipette with a cut tip to sow your seeds.
7. Use a plastic dome with vents closed during germination
8. Remove dome after germination (~10 days after sowing) and water when soil starts to dry (~700 ml per tray)
9. Occasionally supplement your watering with Flowfeed at the rate of ~5 g/L RO water (approximately once a week)

Clean up:

1. Dump used pot/soil into yellow bin (do not load bins past 20 kg and empty them when full)



2. Soak dirty trays and discarded seeds in 0.5% bleach (40 ml/L of 12.5% bleach) for at least 20 min to kill seeds or leave overnight. Do not wash live seeds down the sink!
3. Clean the trays with detergent, rinse with water and stand to dry (don't use bleach on domes as they discolour)
4. Thoroughly clean out the growth cabinets with a brush and wipe down with ethanol.

5.0 Appendix

Soil:

1. If you open a new bag, but don't use the whole bag, write the open date on the bag.
2. Do not use soil after 1 week from an opened bag (discard the soil to prevent fungus).
3. If soil is running low (one bin left), please order a new bin (see LSOP63) or notify a lab member.

Additional considerations:

1. Never bring plants into the lab unless 100% certain they are free of pests and disease.
2. Wherever possible visit plants in the CT room/lab before visiting plants in the glasshouse. If you have to enter the CT room/growth cabinet area after the glasshouse, wear a lab coat and wash hands well before touching plants.
3. Pest control, if required (check if you are unsure):
 - a. Thrips; freeze infected seeds (dry) for 30 min in -80 C (kills eggs), hang blue sticky strips in area, insecticides
 - b. Aphids/spider mites; completely remove plants and clean down cabinets
 - c. Fungus (orange or white): discard contaminated plants and spray with Thiram (1 g/L: **toxic**)



LABORATORY STANDARD OPERATING PROCEDURE (LSOP)

ARC COE for Plant Success in Nature and Agriculture: *Arabidopsis* Growing Procedure