

LSOP Title	Harvesting Plant Tissue
LSOP No.	LSOP73
Version	1.1
Location	UQ Node/Centre-wide
Policy/Procedure Link	UQ- Equipment OGTR
Risk Assessments	
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1.0 Scope

To outline the procedures for harvesting plant tissue. This includes specific plants: Arabidopsis, garden pea and tomato and specific plant tissue for protoplasts, axillary buds, single nodes, whole rosettes, rosette cores, genotyping, general tissue collection.

This LSOP does not cover growing of plants for harvesting.

2.0 Definitions

PPE – personal protective equipment

mL – milli litre

3.0 Materials and Equipment

1. Scissors
2. Scalpel
3. Pipette and Pipette Tips
4. Centrifuge
5. Liquid Nitrogen
6. Beaker
7. Water
8. White Top Vials



9. Eppendorf Tubes
10. Marker
11. Forceps
12. PPE – including gloves

4.0 Prescribed Actions

Arabidopsis

Protoplasts

- Spin down protoplasts (can be done just in benchtop centrifuge if using a 2 mL collection tube).
- Using a pipette, carefully remove as much liquid as possible.
- Immediately place at -80, or snap-freeze in liquid nitrogen then transfer to -80.



Axillary rosette buds

- For this procedure, plants need to be grown in short day and then moved to long day to coordinate growth
- Plant age
- Remove all leaves.
- Scrape off buds with a scalpel
- Immediately place at -80, or snap-freeze in liquid nitrogen then transfer to -80.



Rosette cores

- Plant age 1-2 days after bolting
- Using forceps, remove all leaves carefully.
- Using scissors, cut the rosette away from the roots by cutting the hypocotyl underneath the rosette.



- Place in labelled tube and snap-freeze then store at -80

Genotyping

- Using a p1000 pipette tip, carefully stab a rosette leaf of a young plant with a gloved finger underneath the leaf to excise a small leaf disc which can be directly immersed in DNA extraction buffer.
- Make sure to use a fresh tip and a different glove/finger between individual samples to avoid cross-contamination.
- General tissue collection
- Dissect desired tissue into labelled collection tubes and snap-freeze?

Pea/Tomato

Axillary buds

- Using a fresh scalpel blade, individual axillary buds can be excised by slicing the bud from the axil.
- Hold blade vertically in line with the stem with the blade facing down and cut downwards.
- Hold tube underneath in case the bud falls straight off, but often it will stick to the blade so you can then transfer it to the tube.
- You can also cut off the corresponding leaf prior to excising the bud if that helps, particularly useful if the bud is very small.
- Remember to change blades when needed, particularly between genotypes/treatments etc.
- Snap-freeze tubes and store at -80.

