

LSOP Title	How to make GR24 treatment solutions for direct pea bud applications
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Version	1.1
Location	UQ Node/Centre-wide
Policy/Procedure Link	UQ- Equipment UQ -waste OGTR
Risk Assessments	
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1.0 Scope

This procedure covers the protocol on how to make GR24 treatment solutions for direct pea bud applications which can be used in phenotypic or gene expression studies.

This LSOP does not cover how to make other hormone treatment solutions.

2.0 Definitions



EtOH - Ethanol

PEG - polyethylene glycol

GR24 – synthetic strigolactone analog

3.0 Materials and Equipment

1. Pipette and Pipette Tips
2. Tubes
3. PEG1450
4. GR24
5. EtOH





6. Acetone

7. Plants

LABORATORY STANDARD OPERATING PROCEDURE (LSOP)

ARC COE for Plant Success in Nature and Agriculture: *How to make GR24 treatment solutions for direct pea bud applications*



1. If using bud treatments for phenotypic experiments, make solution to give the following final concentrations: 50% EtOH, 2% PEG 1450, 0.1% acetone

Solution	100% EtOH	MilliQ Water	8% PEG 1450 (in 50% EtOH)	1mM GR24 (in acetone)	Acetone				Total Volume
Control	375 μ L	374 μ L	250 μ L	-	1 μ L				1000 μ L
1 μ M GR24	375 μ L	374 μ L	250 μ L	1 μ L	-				1000 μ L

4.0 Prescribed Actions

Working solution preparation



1. Have ready – 8% PEG1450 and GR24 stock solutions (see appendix) plus 100% EtOH (analytical grade), MilliQ water, acetone.



2. Prepare bud treatment solutions on ice, preferably on the day of the experiment.





NB: If making solutions in advance (e.g. day or morning before), store treatments solutions in freezer at -20°C (50% EtOH will not freeze).

3. Take to glasshouse on ice
4. Make enough solution to treat all buds, plus some spare.

NB: Usually, 10 µL solution is applied to each bud.

5.0 Appendix

Making Stock Solutions:

   	8% PEG 1450 stock:	Dissolve 4 g PEG 1450 in 50 mL 50% EtOH (made with MilliQ water)
	1mM GR24:	(in acetone) dilute a stock solution down to 1mM