

<b>Title</b>	<b>Measure plant physiological processes</b>		
<b>Level</b>	<b>6</b>	<b>Credits</b>	<b>4</b>

<b>Purpose</b>	People credited with this unit standard are able to: select, set up, and maintain equipment; gather measurement data; and report on data for plant physiological processes.
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<b>Classification</b>	Science > Biology
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 All work must be carried out in accordance with the quality management system, documented protocol system or Standard Operating Procedures (SOP) acceptable in a commercial or research laboratory.
- 2 Health and Safety practices must conform to Australian/New Zealand Standard AS/NZS 2243:2010 Set – *Safety in Laboratories*, available at <http://www.standards.co.nz> and <http://infostore.saiglobal.com/store>.
- 3 Legislation applicable to this unit standard includes:  
Health and Safety at Work Act 2015;  
Hazardous Substances and New Organisms Act 1996.
- 4 Glossary  
*Laboratory procedures* refer to documented systems or processes of operation which may be found in a SOP manual, quality management system or protocol system documentation. These procedures are external and/or internal laboratory requirements governing laboratory work.

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### Outcomes and performance criteria

#### Outcome 1

Select, set up, and maintain equipment to measure plant physiological processes.

Range processes – photosynthesis, respiration, transpiration, water uptake.

#### Performance criteria

- 1.1 Equipment selection is determined by the physiological process to be measured.

- 1.2 Equipment is set up in accordance with equipment specification and/or laboratory procedures.
- 1.3 Equipment is calibrated in accordance with manufacturer's specification and/or laboratory procedures.
- 1.4 Equipment is maintained in accordance with manufacturer's specification and/or laboratory procedures.

## Outcome 2

Gather measurement data for plant physiological processes.

### Performance criteria

- 2.1 Sample to be measured is selected in accordance with laboratory procedures.
- 2.2 Data is recorded in accordance with laboratory procedures.
- 2.3 Data is monitored during the measuring process to establish validity.  
Range attributes of validity – repeatability, accuracy, reliability, sufficiency.
- 2.4 Any problems with sample and/or equipment are recognised during measuring process, and actions are taken in accordance with laboratory procedures.

## Outcome 3

Report on data for plant physiological processes.

### Performance criteria

- 3.1 Summary of data is reported in accordance with laboratory procedures.  
Range tables, graphs, means.
- 3.2 Report identifies any problems recognised and the remedial action taken to meet the requirements of the laboratory procedures.
- 3.3 Report is communicated as required by laboratory procedures or documented experimental protocol.

<b>Planned review date</b>	31 December 2020
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	22 December 1996	31 December 2014
Revision	2	19 February 1998	31 December 2014
Revision	3	2 November 1999	31 December 2014
Review	4	21 May 2010	N/A
Rollover	5	27 January 2015	N/A
Rollover and Revision	6	15 June 2017	N/A
Revision	7	26 October 2017	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0113
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact NZQA National Qualifications Services [nqs@nzqa.govt.nz](mailto:nqs@nzqa.govt.nz) if you wish to suggest changes to the content of this unit standard.