

Title	Measure plant physiological processes		
Level	6	Credits	4

Purpose	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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Classification	Science > Biology
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Available grade	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.

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.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

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	31 December 2022
Rollover	5	27 January 2015	31 December 2022
Rollover and Revision	6	15 June 2017	31 December 2022
Revision	7	26 October 2017	31 December 2022
Review	8	22 October 2020	31 December 2022

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