

Title	Describe laboratory micro-propagation processes, and exflask and acclimatise plants in a nursery		
Level	3	Credits	5

Purpose	People credited with this unit standard are able to: describe the stages and processes of micro-propagation for plants in a laboratory; exflask and acclimatise plants in a nursery environment; and keep records of micro-propagation.
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Classification	Horticulture > Nursery Production
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Available grade	Achieved
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Guidance Information

- 1 Legislation relevant to this unit standard includes but is not limited to:
 - Health and Safety at Work Act 2015; and any subsequent amendments.
- 2 Definitions

Exflasking also referred to as *deflasking* is the process of removing the propagated materials from their protected environment.

General greenhouse condition refers to weaning and the gradual exposing of the plants to higher light, less humidity and air movement.

Hardening off also called *weaning* refers to a term used in the nursery stages of micro-propagation, when the plants are removed from laboratory conditions and are prepared for a natural growing environment.

Workplace procedures – the policies and procedures on safety and operation set down by the employer or organisation.
- 3 All evidence presented in this unit standard must be in accordance with workplace procedures.

Outcomes and performance criteria

Outcome 1

Describe the stages and processes of micro-propagation for plants in a laboratory.

Performance criteria

- 1.1 Describe the plant selection in terms of obtaining suitable plant material.

- 1.2 Describe successful micro-propagation in terms of the importance of cleaning, cutting and the establishment of plant material into aseptic conditions.
- 1.3 Describe plant requirements in terms of the multiplication stage for multiple shoot development.
- 1.4 Describe the plant requirements in terms of root initiation and development.

Outcome 2

Exflask and acclimatise plants.

Performance criteria

- 2.1 Remove plants from the laboratory container and place into nursery trays.
- 2.2 Handle new plants without causing damage, provide protection and keep moist with water to prevent moisture loss.
- 2.3 Place trays containing plants in an environment that maintains consistent high humidity.
- 2.4 Introduce plants to general greenhouse conditions and maintain environmental conditions.

Outcome 3

Keep records of micro-propagation.

Performance criteria

- 3.1 Describe the range of information required for the micro-propagation processes in a laboratory.
- Range evidence of 10 items of information is required.
- 3.2 Maintain nursery records on the production information for micro-propagated material in the nursery.

Planned review date	31 December 2026
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 April 2012	31 December 2024
Review	2	19 January 2017	31 December 2024
Review	3	28 April 2022	N/A

Consent and Moderation Requirements (CMR) reference	0052
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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 Muka Tangata - People, Food and Fibre Workforce Development Council qualifications@mukatangata.nz if you wish to suggest changes to the content of this unit standard.