



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **AHCSDT305A Perform a seed moisture test**

**Release 1**

## AHCSDT305A Perform a seed moisture test

### Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

### Unit Descriptor

This Unit covers the determination of the moisture content of seeds by an oven method for routine use.

### Application of the Unit

This Unit applies to seed analysts working independently or under limited supervision, within enterprise guidelines. In general, they prepare samples for testing; conduct specified tests in accordance with enterprise requirements; maintain records and interpret results; and troubleshoot equipment problems.

### Licensing/Regulatory Information

Not applicable.

### Pre-Requisites

Nil.

### Employability Skills Information

This Unit contains employability skills.

### Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

1. Prepare for testing
  - 1.1 Submitted sample is checked to ensure it is in an intact, moisture-proof container with as much air as possible excluded.
  - 1.2 *Appropriate apparatus* are selected for seed moisture testing.
  - 1.3 Temperature of submitted sample in container is equilibrated to that of the testing laboratory.
  - 1.4 Exposure of sample to the atmosphere of the laboratory is reduced to an absolute minimum according to the species and ISTA requirements.
2. Prepare samples for drying
  - 2.1 Submitted sample is thoroughly mixed.
  - 2.2 A minimum three subsamples are taken and combined to form a working sample of the required size.
  - 2.3 Exposure to air during sample reduction is limited to thirty seconds.
  - 2.4 Where cutting or grinding is required, one working sample is prepared so that two replicates can be drawn from the cut/ground material.
  - 2.5 Pre-drying is carried out where moisture content exceeds ISTA requirements.
  - 2.6 Containers and lids are weighed before and after filling.
  - 2.7 Weighing procedures conform with ISTA requirements and weight is expressed in grams to at least three decimal places.
  - 2.8 Lids are kept on containers until samples are placed in oven.
3. Dry and weigh sample
  - 3.1 Working sample is evenly distributed over surface of the container.
  - 3.2 Open containers and their lids are placed rapidly into an oven that is maintained at the required temperature for the species being tested.
  - 3.3 Drying period commences once oven returns to the required temperature after placement of containers.
  - 3.4 At the end of prescribed drying period, containers have their lids replaced before cooling to ambient temperature in desiccators.
  - 3.5 After cooling, the containers with lids and dried contents are weighed.
4. Calculate results
  - 4.1 Moisture content is expressed as a percentage of the weight of the original sample.
  - 4.2 Result of test is reported according to enterprise guidelines.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this Unit.

### Required skills include:

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#### Ability to:

- prepare working samples to ISTA rules
- weigh containers and seed samples
- calculate weights and percentages
- cut and grind seeds
- report results.

### Required knowledge includes:

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#### Knowledge of:

- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- apparatus used in seed moisture testing
- enterprise and/or legal traceability requirements
- enterprise standard operating procedures (SOPs)
- relevant health, safety and environment requirements.

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this Unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• preparing working samples</li> <li>• weighing containers and seed samples</li> <li>• calculating weights and percentages</li> <li>• cutting and grinding seeds</li> <li>• calculating and reporting results.</li> </ul>
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.
Method of assessment	This Unit should be assessed together with core Units and other Units of Competency relevant to the function or work role.
Guidance information for assessment	To ensure consistency of performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

## Range Statement

The range statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<b><i>Appropriate apparatus</i></b> may include:	Grinding mill; electrically heated oven; containers with lids; a dessicator; a balance; sieves; and cutting tools.

## **Unit Sector(s)**

Seed Testing