



Australian Government

Department of Education, Employment and Workplace Relations

AHCSDT304A Perform a seed purity analysis

Release 1

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Modification History

Release	TP Version	Comments
1	AHC10v4	Initial release

Unit Descriptor

This Unit covers testing the analytical purity of seed in a working sample to infer the composition of a seed lot. It also involves recognition of different species of seeds and inert particles that make up the sample.

Application of the Unit

This Unit applies to seed analysts working independently 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 a purity test
 - 1.1 Samples, test methods and equipment to perform the test are identified.
 - 1.2 **Equipment** and working spaces are cleaned and calibrated to enterprise standards.
 - 1.3 A working sample is prepared using mixing and dividing processes according to enterprise guidelines.
 - 1.4 Sample details are checked and correctly recorded on worksheets and sample packets according to enterprise requirements.
2. Assess working sample/s
 - 2.1 The working sample is separated into its component parts using appropriate equipment.
 - 2.2 Pure **Seed** is separated using visual characteristics, mechanical or pressure aids appropriate to the type of seed and enterprise guidelines.
 - 2.3 Seeds are handled carefully so as not impair their capacity for germination.
 - 2.4 Separated component parts and matter are weighed to the number of decimal places as required by enterprise guidelines.
 - 2.5 Contaminant seeds are identified.
3. Process and interpret data
 - 3.1 Weights of all components parts are added and compared with original weight of the working sample.
 - 3.2 A retest is carried out if required.
 - 3.3 Seeds of species that cannot be identified are referred to a supervisor.
 - 3.4 The percentage weight of various component parts is calculated to one decimal place.
 - 3.5 Percentages of all fractions are added together and rounded to 100% as required by enterprise guidelines.
 - 3.6 Results of test are reported according to enterprise guidelines.

Required Skills and Knowledge

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

Required skills include:

Ability to:

- prepare working samples
- use mixing and dividing equipment
- separate component parts of a working sample using visual, mechanical or pressure techniques
- assess pure seed from damaged seed
- identify pure seed, other seed species and inert materials
- weigh and calculate percentages of component parts
- carryout rounding procedure with calculations
- record and communicate results in accordance with enterprise procedures
- maintain security, integrity, traceability of samples, sub-samples, test data, results and documentation.

Required knowledge includes:

Knowledge of:

- the role of the International Seed Testing Association (ISTA) and the ISTA Rules for Seed Testing
- seed biology
- seed identification
- materials and apparatus used in seed purity tests
- enterprise standard operating procedures (SOPs)
- enterprise and/or legal traceability requirements
- 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	The evidence required to demonstrate competency in this Unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following: • preparation of a working sample • separation of a working sample into component parts • reporting of percentages of component parts • rounding of calculations to enterprise requirements.
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.

<i>Equipment</i> for separating a working sample may include:	• magnifiers; reflected light; sieves; blowers; and diaphanoscopes.
<i>Seed</i> may include:	• bare seed; treated seed; and coated seed that has been prepared as required.
Inert matter may include:	• seed units where no true seed is present; broken or damaged seed 50% or less of their original size; other matter as prescribed in the International Rules for Seed Testing.

Unit Sector(s)

Seed Testing