



Australian Government

AHCARB603 Interpret diagnostic test results

Release: 1

AHCARB603 Interpret diagnostic test results

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to interpret diagnostic test results and evaluate and critique the testing methods and results.

This unit applies to individuals with broad theoretical and technical knowledge of a specific area or a broad field of work and learning and cognitive, technical and communication skills to demonstrate autonomy, judgement and defined responsibility in undertaking complex work within broad parameters to provide specialist advice and functions.

The role involves the self-directed application of specialised knowledge in tree anatomy, physiology, pathology, tree dynamics and the edaphic environment with substantial depth in areas such as diagnostic tool application methods and analysis of diagnostic test results.

No occupational licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Arboriculture (ARB)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Compile diagnostic tool knowledge requirements	1.1 Compile a portfolio of sample reports of diagnostic test results 1.2 Compile peer reviewed papers on the use of each diagnostic tool 1.3 Review the diagnostic tool specifications and user manuals 1.4 Research output ranges for each diagnostic tool

Element	Performance criteria
	1.5 Identify key thresholds and benchmarks 1.6 Determine suitability of tool selection for purpose of test
2. Analyse the data and testing methods	2.1 Identify and evaluate testing methods used 2.2 Assess relevance, benefits and limitations of methodology used 2.3 Determine assumptions used 2.4 Determine currency of the equipment, software or system used 2.5 Access raw data and testing evidence where available 2.6 Verify data relevance and accuracy 2.7 Review references cited in the report 2.8 Record non-conforming practices and treatments 2.9 Identify instances of incorrect application of diagnostic tools 2.10 Highlight unsupported statements and factual errors 2.11 Detail significant omissions, errors and ambiguities 2.12 Detail inconsistencies and errors of logic 2.13 Identify variances to specifications 2.14 Detail incorrect use of arboricultural terminology
3. Evaluate and critique test results	3.1 Assess the suitability of the testing process as fit for purpose 3.2 Analyse the test results 3.3 Compare evaluation with original interpretation 3.4 Consider and account for anomalies 3.5 Determine the validity of outcomes of original report 3.6 Develop substantiated positions to inform critical analysis of test results 3.7 Determine further testing required to verify or falsify results 3.8 Document feedback on original results
4. Prepare critique document the report	4.1 Compile the analysis 4.2 Review the completeness and accuracy of the analysis 4.3 Record analysis outcomes and rationale 4.4 Document the analytical processes 4.5 Provide alternative analysis and conclusion 4.6 Document critique in a report 4.7 Present report in agreed format and within agreed timelines

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

New unit - no equivalent.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCARB603 Interpret diagnostic test results

Modification History

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Performance Evidence

It is an industry requirement that competency in this unit requires the analysis and critique of a minimum of five different diagnostic tool test results. The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence for and demonstrate:

- compiling a portfolio of sample reports of diagnostic test results including: dynamic and static loading, drill resistance measurement device, sap flow measurements, electronic impedance, chlorophyll fluorescence, increment core, sonic tomography, radar imaging system, bulk density, laboratory, soil test and pH tests
- compiling peer reviewed papers on the use of each diagnostic tool
- reviewing the diagnostic tool specifications and user manuals
- researching output ranges for each diagnostic tool
- identifying key thresholds and benchmarks
- determining suitability of tool selection for purpose of test
- identifying and evaluating testing methods used
- assessing relevance, benefits and limitations of methodology used
- determine assumptions used
- determining currency of the equipment, software or system used
- accessing raw data and testing evidence where available
- verifying data relevance and accuracy
- reviewing references cited in the report
- recording non-conforming practices and treatments
- identifying instances of incorrect application of diagnostic tools
- highlighting unsupported statements and factual errors
- detailing significant omissions, errors and ambiguities
- detailing inconsistencies and errors of logic
- identifying variances to specifications
- detailing incorrect use of arboricultural terminology

- assessing the suitability of the testing process as fit for purpose
- analysing the results
- comparing evaluation with original interpretation
- considering and account for anomalies
- determining the validity of outcomes of original report
- develop substantiated positions to inform critical analysis of test results
- determining further testing required to verify or falsify results
- documenting feedback on original results
- compiling the analysis
- reviewing the completeness and accuracy of the analysis
- recording analysis outcomes and rationale
- documenting the analytical processes
- providing alternative analysis and conclusion
- documenting critique in a report
- presenting report in agreed format and within agreed timelines
- use of industry standard terminology to describe diagnostic tools and tests.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- portfolio of sample reports of diagnostic test results
- peer reviewed papers on the use of each diagnostic tool
- diagnostic tool specifications
- user manuals
- output ranges
- key thresholds
- benchmarks
- suitability of tool selection
- purpose of test
- testing methods
- methodology
- raw data
- testing evidence
- cited references
- data relevance
- data accuracy
- non-conforming practices
- non-conforming treatments
- unsupported statements
- factual errors
- significant omissions, errors and ambiguities
- variances to specifications

- incorrect use of arboricultural terminology
- suitability of the testing process
- fit for purpose
- analysis of results
- anomalies
- validity of outcomes
- verification and falsification of results
- alternative analysis
- critiquing.

Assessment Conditions

It is an industry requirement that competency in this unit requires the analysis and critique of a minimum of five different diagnostic tool test results.

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit.

Assessment may be conducted in a simulated or real work environment, however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
 - computer
 - word processing software
 - statistical software
 - internet connection
- materials:
 - critique of test results
 - portfolio of sample reports of diagnostic test results

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed

Links

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