

Prerequisite competency completion		
Not applicable. There are no prerequisite requirements.		
Required reports completion		
Has the candidate successfully completed the required reports ?	Yes/No (Y/N)	Signed (Initialled)
Emergency plant pest diagnostic report		
Mandatory Equipment (as a minimum)		
Has each of the mandatory equipment items been used to gather evidence for assessment?	Yes/No (Y/N)	Signed (Initialled)
computer		
word processing software		
digital camera with macro		
diagnostic tools including sounding hammer, trowel, probe, cordless drill		
soil testing equipment		
digital dissection microscope 10 -100x		
compound microscope		
microtome, staining and slide mounting equipment		
slides and coverslips		
temporary/permanent mountant		
histochemical stains		
laboratory equipment to perform aseptic techniques in a sterile environment		
Knowledge Evidence		
Has the candidate successfully completed the Knowledge Evidence requirements by demonstrating knowledge of each of the line items below?	Yes/No (Y/N)	Signed (Initialled)
the role of fungi in biodiversity, tree nutrition, forest health, environmental biochemistry and pathology		
the role and contribution of wood decay fungi to forest health		
the influence of environmental stresses and physiological tree responses		
taxonomy and evolutionary relationships of corticoid and polypore wood decay fungi		
the role of fungal species on various hosts		

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lifecycles, biology, ecology and effects of pathogenic wood decay fungi species		
lifecycle, biology, ecology and effects of saprophytic wood decay fungi species		
relationships of fungal species with branch and tree failures		
biosecurity implications of known and threat fungal species		
PLANTPLAN biosecurity plans and procedures		
visual evaluation of the signs and symptoms of fungi and decay, including: visual symptoms such as dieback, reduced growth rate and chlorosis, presence of basidiocarps, decayed wounds, hollows and cavities		
field identification of wood decay species of fungi to generic level		
field identification of non-pathogenic fungi species to generic level		
location, size, and condition of wood decay fungi, presence of mycoparasites, and size, condition and extent of hollows and cavities		
environmental characteristics of fungal affected trees: site characteristics, site history, soil conditions, climate and microclimatic variables, proximity of adjacent trees and vegetation, movement of people and vehicles, and potential impacts to assets, property and landscape		
methods of introduction, establishment, spread, and susceptibility of adjacent trees and vegetation		
field sampling techniques of wood decay fungi and mycoparasites		
in-vitro culture of wood decay fungi and mycoparasites		
identification of wood decay fungi and mycoparasites		
methods of decanting and preparing standard laboratory chemicals and materials		
creation of selective culturing media to grow and isolate field samples		
preparation of field samples for culturing on media		
methods of sampling from field samples		
methods of application of samples to growth media		
isolation of clean cultures from primary field cultures		
methods of obtaining clean samples		
preparation of cultured samples		
deoxyribonucleic (DNA) based assay techniques		
documentation of records		
secure storage of digital and physical evidence: field samples, slides, growth media, DNA and cultured samples		
chain of evidence protocols		

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preparation of microscope slides of isolated cultures		
identification of cultured fungal samples		
laboratory identification of wood decay fungi to generic level		
digital imaging of identified fungi		
laboratory assay tests for growth rate, temperature range, pathogenicity, and mycoparasitism to evaluate fungal characteristics		
documentation of experimental assay test results		
development and maintenance of culture collections		
methods of submission to relevant government databases and culture collections		
documentation of diagnostic reports		
emergency plant pest (EPP)		
PLANTPLAN guidelines		
Performance evidence		
Has the candidate successfully demonstrated the Performance Evidence requirements of the unit of competency AHCARB702 Analyse mycology cultures, and as per listed line items below?	Yes/No (Y/N)	Signed (Initialled)
researching the role of fungi in biodiversity, tree nutrition, forest health, environmental biochemistry and pathology		
researching the role and contribution of wood decay fungi to forest health, the influence of environmental stresses and physiological tree responses		
examining the taxonomy and evolutionary relationships of corticoid and polypore wood decay fungi		
investigating the role of fungal species on various hosts		
conducting analysis of lifecycle, biology, ecology and effects of pathogenic wood decay fungi species		
conducting analysis of lifecycle, biology, ecology and effects of saprophytic wood decay fungi species		
examining the relationships of fungal species with branch and tree failures		
analysing biosecurity implications of known and threat fungal species		
reviewing PLANTPLAN biosecurity plans and procedures		
performing visual evaluation of the signs and symptoms of fungi and decay, including: visual symptoms such as dieback, reduced growth rate and chlorosis, presence of basidiocarps, decayed wounds, hollows and cavities		
performing field identification of wood decay species of fungi to generic level		

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performing field identification of non-pathogenic fungi species to generic level		
documenting location, size, and condition of wood decay fungi, presence of mycoparasites, and size, condition and extent of hollows and cavities		
documenting details of environmental characteristics of fungal affected trees: site characteristics, site history, soil conditions, climate and microclimatic variables, proximity of adjacent trees and vegetation, movement of people and vehicles, and potential impacts to assets, property and landscape		
determining methods of introduction, establishment, spread, and susceptibility of adjacent trees and vegetation		
performing field sampling techniques of wood decay fungi and mycoparasites suitable for in-vitro culture and identification		
decanting and preparing standard laboratory chemicals and materials		
creating selective culturing media to grow and isolate field samples		
preparing field samples for culturing on media		
taking samples from field samples and apply to growth media		
isolating clean cultures from primary field cultures, and repeating until clean sample is obtained		
preparing cultured samples for further testing such as deoxyribonucleic (DNA) based assay techniques		
documenting records and storing securely digital and physical evidence: field samples, slides, growth media, DNA and cultured samples, following chain of evidence protocols		
preparing microscope slides of isolated cultures		
examining and identifying cultured fungal samples		
performing laboratory identification of wood decay fungi to generic level		
recording digital images of identified fungi		
performing laboratory assay tests for growth rate, temperature range, pathogenicity, and mycoparasitism to evaluate fungal characteristics		
documenting experimental assay test results		
developing and maintaining a culture collection for identification of fungi and submission to relevant government databases and culture collections		
documenting a diagnostic report on a suspected emergency plant pest (EPP) following PLANTPLAN guidelines		

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Assessment conditions		
<p>It is an industry requirement that competency in this unit requires the:</p> <ul style="list-style-type: none"> • field identification of a minimum of ten (10) wood decay fungi to generic level • field identification of a minimum of ten (10) non-pathogenic fungi to generic level • analysis of the lifecycle, biology, ecology and effects of a minimum of ten (10) saprophytic wood decay fungi species • analysis of the lifecycle, biology, ecology and effects of a minimum of ten (10) pathogenic wood decay fungi species • laboratory identification of a minimum of five (5) wood decay fungi to generic level. 		
Have the assessments incorporated the assessment conditions and met the industry requirements for competency in this unit as per listed line items below?	Yes/No (Y/N)	Signed (Initialled)
Have assessments confirmed the successful field identification of a minimum of ten (10) wood decay fungi to generic level?		
Have assessments confirmed the successful field identification of a minimum of ten (10) non-pathogenic fungi to generic level?		
Have assessments confirmed the successful analysis of the lifecycle, biology, ecology and effects of a minimum of ten (10) saprophytic wood decay fungi species?		
Have assessments confirmed the successful analysis of the lifecycle, biology, ecology and effects of a minimum of ten (10) pathogenic wood decay fungi species?		
Have assessments confirmed the successful laboratory identification of a minimum of five (5) wood decay fungi to generic level?		
Assessment may be conducted in a simulated or real work environment; however, determination of competency requires the application of work practices under work conditions.		
	Yes/No (Y/N)	Signed (Initialled)
Have assessments been demonstrated consistently over time?		
Have assessments been demonstrated in a suitable range of contexts?		
Have assessments been demonstrated with a productivity-based outcome?		
Have assessments been demonstrated with multiple assessment events and reports?		
Assessor Declaration		
Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.	Yes/No (Y/N)	Signed (Initialled)
Has assessment been conducted only by persons who have:		
<ul style="list-style-type: none"> • mycology competencies at least to the level being assessed? 		

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<ul style="list-style-type: none"> current mycology skills directly relevant to the unit of competency being assessed? 			
Assessor name	Assessor qualification	Year	Full Signature
Competency Determination			
This section determines the skills and knowledge required to safely work within a laboratory environment, collect and identify wood decay fungi specimens, prepare in vitro cultures, and carry out primary experiments.			Competent /Not yet competent
The candidate is competent in analysing mycology cultures.			
Competency Assessment Completion			
Assessor name	Date	Full Signature	

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