



# MICROBIOLOGIST

(ANZSCO Code: 234517)

Group A



### About this document

- » The following Information Sheet is for your reference only and should be used as a guide to assist with your Skills Assessment application to VETASSESS. This information is subject to change.
- » Please note that a Skills Assessment of the qualification involves assessment of both the qualification level and content. Qualifications are assessed according to the guidelines published by the Australian Government Department of Education, Skills and Employment.
- » The employment assessment involves determining the skill level and relevance of the tasks undertaken.
- » Integrity checks may be conducted to verify the qualification and employment claims made in an application.

### Job description

A Microbiologist studies microscopic forms of life such as bacteria, viruses and protozoa.

### Occupations considered suitable under this ANZSCO code:

- » Bacteriologist (Non-medical)

### Occupations not considered under this ANZSCO code:

- » Clinical Research Scientist

### Closely-related occupations in ANZSCO Unit Group 2345

- » Biotechnologist
- » Life Scientists nec (not elsewhere classified)
- » Life Scientist (General)
- » Biochemist
- » Botanist
- » Marine Biologist
- » Zoologist

### Microbiologist is a VETASSESS Group A occupation




This occupation requires a qualification assessed as comparable to the educational level of an Australian Qualifications Framework (AQF) Bachelor degree or higher, in a field highly relevant to the nominated occupation.

Applicants must also have at least one year of highly relevant, post-qualification employment, at an appropriate skill level completed in the last five years.

A positive assessment of both qualifications and employment is required for a positive Skills Assessment Outcome.



## Qualification and employment criteria

GROUP A	Criteria for a positive Skills Assessment						
	Comparable Bachelor degree AQF level	With highly relevant major field of study	Additional highly relevant qualifications*	Relevant employment duration**			
I		+		+	N/A	+	
Pre-qualification methodology does not apply to Group A occupations							

\* Additional qualifications in a highly relevant field of study include those comparable to the following levels:

AQF Diploma  
 AQF Advanced Diploma  
 AQF Associate Degree or  
 AQF Graduate Diploma

\*\* Highly relevant paid employment duration (20 hours or more per week):

one year of post-qualification paid employment (20 hours or more per week) highly relevant to the nominated occupation, at an appropriate skill level in the last five years before the date of application for a Skills Assessment.

### Qualification

AQF Bachelor degree or higher degree\*

This occupation requires a qualification with a highly relevant field of study in **Microbiology, Microbiology and Immunology, Molecular Genetics, Biomedical Science, Biotechnology, Medical Laboratory Sciences.**

\*This includes qualifications assessed at AQF Bachelor, Master and Doctoral level.

### Qualification continued...

The qualifications in the fields listed below may be accepted on a case-by-case basis if the program consists of specialised Microbiology subjects and precedes at least one year of highly relevant employment in that specific knowledge area.

- » Animal and Veterinary Biosciences
- » Environmental Science
- » Marine Science
- » Forensic Biotechnology
- » Chemistry/Biochemistry
- » Food Science and Technology
- » Engineering Science (Microbiological Research)
- » Life Science



## Employment

Highly relevant tasks include:

- » Studying the growth and characteristics of micro-organisms, such as bacteria, algae and fungi, and the effects they have on plants, animals and humans to develop medical, veterinary, industrial, environmental and other practical applications
- » Designing and conducting experiments, making observations and measurements, researching information, analysing data, preparing or supervising the preparation of laboratory reports and scientific papers, presenting findings at scientific meetings and conferences, and supervising the work of staff

Other highly relevant tasks may include:

- » Conducting research on microscopic organisms such as bacteria, virus, and fungi for their use in basic and applied research; in line with appropriate regulatory restrictions for biological safety, biosecurity and containment of microorganism;
- » Working in the laboratory settings, carrying out and monitoring scientific experiments on a microscopic level, or microbiological diagnostic testing;
- » Communicating the outcomes of research activity by means of peer-reviewed scientific publications, reports and reviews, and giving oral presentations to scientific, client and community audiences where appropriate;
- » Developing procedures to improve quality of microbiological test methods and processes and contribute to assay development in industrial microbiology laboratories;
- » Development, validation and implementation of new methods/technologies into the QC/QA operational departments;
- » Evaluating and researching microbiology laboratory procedures (such as but not limited: methods verification, validation, etc.), recommending improvements for laboratory tests, and providing assistance to the lab management for grant application and reports;
- » Engaging in professional interactions amongst the discipline, including membership of a microbiological society or professional body.

## Employment information

This field of science is closely related to other life sciences such as molecular biology and biochemistry. Microscopic organisms include fungi and Bacteriophage. Microbiologists work in several fields including, but not limited to, medicine, research, and university teaching.

Although their work is also required in industries such as pharmaceuticals, food processing, and biotechnology, employment should involve novel scientific research, experimental and methodology development.

In Australia, Microbiologists are employed in nearly every industry, including food, health, agriculture, pollution control, biotechnology, and pharmaceuticals. This can be in a laboratory or field setting.

### Policy regarding work in Quality Assurance/ Quality Control roles:

Employment focused on Quality Control or Quality Assurance can be assessed positively under this occupation providing that the role involves specialised tasks including:

- » Proven ability to work independently or under minimum supervision and use initiative skills to make decisions;
- » Demonstrated abilities in utilising microbiological research and analytical skills;
- » Supervising and training Technicians/Lab Assistant;
- » Writing laboratory reports and editing or developing procedures.

