



Australian Government

Department of Education, Employment and Workplace Relations

ACMATE305A Conduct euthanasia of research animals

Revision Number: 1

ACMATE305A Conduct euthanasia of research animals

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit of competency covers the process of euthanasing research animals under supervision. It has been developed specifically for animal technicians working with and caring for animals used within an animal technology biomedical research or production environment for scientific purposes and teaching purposes.</p> <p>Licensing, legislative, regulatory or certification requirements may apply to this unit. Therefore, it will be necessary to check with the relevant state or territory regulators for current licensing, legislative or regulatory requirements before undertaking this unit.</p>
------------------------	---

Application of the Unit

<p>Application of the unit</p>	<p>This unit is applicable to junior or assistant level animal technicians working under the supervision of a senior or more experienced staff member where it may be necessary to euthanase individual or groups of animals because of a range of reasons approved by the institution's Animal Ethics Committee (AEC). Animal technicians conducting euthanasia operate under and must comply with legislative requirements and the Australian Code of Practice for the Care and Use of Animals for Scientific Purposes as well as protocols, policies and procedures set down by the institution's AEC.</p> <p>In addition to legal and ethical responsibilities, all units of competency in the ACM10 Animal Care and Management Training Package have the requirement for animals to be handled gently and calmly. The individual is required to exhibit appropriate care for animals so that stress and discomfort is minimised.</p> <p><i>Note: Scientific purposes refers to 'all those activities that require approval from an Animal Ethics Committee (AEC) and are performed to acquire, develop or demonstrate knowledge of techniques in any scientific discipline, including activities for the purposes of teaching, field trips, environmental studies, research, diagnosis, product testing and the production of biological products'.</i></p> <p><i>Note: Where euthanasia involves firearms, appropriate licences are required for those involved in training and assessment against this unit of competency.</i></p>
---------------------------------------	---

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	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

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to conduct euthanasia of research animal	<p>1.1. Need for euthanasia is identified, justified and reported to the workplace supervisor in accordance with institutional protocols.</p> <p>1.2. Method selected for the euthanasia is consistent with the research program approval or protocol and is in accordance with the workplace supervisor's instructions.</p> <p>1.3. Equipment and materials required to complete the euthanasia are prepared in accordance with the institution's standard operating procedures and relevant statutory requirements.</p> <p>1.4. Location for the euthanasia is selected.</p> <p>1.5. Hazards associated with the euthanasia are identified in accordance with occupational health and safety (OHS) procedures and guidelines.</p> <p>1.6. Licences and permits required to conduct the euthanasia are reviewed and completed with the supervisor.</p>
2. Carry out the euthanasia of animals	<p>2.1. Personal protective and safety equipment are used in accordance with OHS policies and statutory requirements.</p> <p>2.2. Equipment is handled and transported safely at all times in accordance with statutory requirements and industry practices.</p> <p>2.3. Animals are physically restrained in a way that minimises pain, distress and risk of injury to the animals or personnel and complies with ethical, welfare and legal requirements.</p> <p>2.4. Euthanasia method is applied in accordance with the requirements of the task and in a way that complies with ethical, welfare and legal requirements, including the requirements for any licences, permits or supervisor's instructions.</p> <p>2.5. Euthanasia procedure is monitored to ensure that the animal's death is rapid and without complications or undue suffering.</p>
3. Complete the euthanasia of animals	<p>3.1. Animal deaths are confirmed.</p> <p>3.2. Carcasses that are required for research or post-mortem examination are handled in accordance with the institution's standard operating procedures, experimental requirements and OHS policies.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Animal carcasses are handled and moved in accordance with OHS guidelines and codes of practice.</p> <p>3.4. Biological waste and animal carcasses that are not required for research or other approved purposes are disposed of promptly in accordance with statutory requirements, the institution's standard operating procedures and OHS policies.</p> <p>3.5. Equipment and materials are decontaminated or cleaned and stored or disposed of in accordance with the institution's standard operating procedures.</p> <p>3.6. Records relating to euthanased animals are updated in accordance with the institution's standard operating procedures.</p> <p>3.7. Coping mechanisms are developed to deal with personal distress or grief related to workplace duties.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- acquire firearms licences (as appropriate/required) and comply with relevant regulations if shooting is an approved method of euthanasing animals
- complete relevant work-related documents
- consult with other staff and identify when direction and advice is needed from senior and more experienced staff
- employ safe, humane and environmentally responsible organisational systems and procedures when handling and working with animals
- maintain the highest standards of hygiene and infection control at all times to reduce the risk of infection and cross-infection
- monitor animal health and behaviour
- set up and use carbon dioxide cylinders and regulators
- use and store drugs correctly
- literacy skills to read and follow facility policies and procedures, including OHS, infection control and waste management; develop sequenced written instructions; record accurately and legibly information collected; and select and apply procedures to a range of defined tasks
- oral communication skills/language to fulfil the job role as specified by the institution, including questioning techniques, active listening, asking for clarification and consulting with supervisors
- numeracy skills to calculate solutions, dilutions, percentages, concentrations, proportions, ratios, molarity and weights and measures conversions
- interpersonal skills to work cooperatively with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities
- problem-solving skills to assess appropriate strategies
- use safe manual handling techniques and/or equipment
- use safe waste handling and disposal procedures
- verify precautions in application or administration of substances.

Required knowledge

- anatomical terminology
- anatomical structures and physiological features of animals in research facilities
- anatomy and physiology of animals commonly held in the institution, especially the neck and head, and respiration and heart rates
- biohazards in the workplace of significance to animals and humans
- equipment and drugs commonly used for euthanasia
- firearm legislation, regulations and techniques related to the humane destruction of

REQUIRED SKILLS AND KNOWLEDGE

animals if required

- institution's standard operating procedures relating to the restraint, handling, euthanasing and disposal of animals
- methods and administration routes of euthanasia and their suitability for a range of species
- methods used to cope with distress and grief due to workplace duties
- organisational policies and safe work procedures, including OHS and accident requirements
- physical conditions, vital signs of animals as well as signs of pain and distress in commonly held species
- principles of animal welfare and ethics
- protocols, legal and ethical considerations in the euthanasing of animals
- relevant state or territory legislation covering the use of therapeutic and controlled substances
- relevant codes of practice, including the Australian Code of Practice for the Care and Use of Animals for Scientific Purposes
- relevant state or territory legislation and regulations relating to the practice of veterinary science, OHS, animal welfare and research
- safe animal handling techniques and procedures
- workplace hygiene standards, disinfectants, cleaning agents, cleaning techniques and cleaning equipment and materials.

Evidence Guide

EVIDENCE GUIDE	
<p>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.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit. Assessors should ensure that candidates can:</p> <ul style="list-style-type: none"> • prepare and maintain required materials and equipment • select and apply appropriate methods of euthanasia to kill a range of research animals in a humane, rapid and appropriate manner for the approved endpoint in accordance with supervisor's instructions, relevant codes of practice, legislation and codes of practice • dispose of animal carcasses and biological waste not required for research or post-mortem purposes in accordance with statutory requirements • decontaminate, clean and store equipment and materials or dispose of them accordingly • use appropriate coping mechanisms to deal with personal distress or grief • maintain accurate records. <p>The skills and knowledge required to conduct euthanasia of research animals must be transferable to a range of work environments and contexts and include the ability to deal with unplanned events.</p>
Context of and specific resources for assessment	<p>All activities and procedures must be performed in accordance with animal welfare legislation, ethical and approved project protocols under supervision of a senior or more experienced staff member.</p> <p>Assessment of this unit is to be practical in nature and will be most appropriately assessed in an animal technology research facility.</p>

EVIDENCE GUIDE	
	There must be access to a range of research animals as well as relevant information, equipment and/or resources to enable one to demonstrate competence.
Method of assessment	<p>To ensure consistency in one's performance, competency should be demonstrated, to industry defined standards, on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and over a number of assessment activities.</p> <p>The assessment strategies must include practical skills assessment. Suggested strategies for this unit are:</p> <ul style="list-style-type: none"> • written and/or oral assessment of candidate's required knowledge • observed, documented and first-hand testimonial evidence of candidate's application of practical tasks • simulation exercises that reproduce normal work conditions • case study analysis • third-party evidence • workplace documentation. <p>This unit may be assessed in a holistic way with other units of competency relevant to the industry sector, workplace and job role.</p>
Guidance information for assessment	Assessment methods should reflect workplace demands (e.g. literacy and numeracy demands) and the needs of particular target groups (e.g. people with disabilities, Aboriginal and Torres Strait Islander people, women, people with a language background other than English, youth and people from low socioeconomic backgrounds).

Range Statement

RANGE STATEMENT	
<p>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.</p>	
<p><i>Need for euthanasia</i> may include:</p>	<ul style="list-style-type: none"> • accidents • cull of production • environmental failure; fire or other trauma • excessive aggression • meeting the requirements of product quality assurance • outbreak of disease • reaching the end point of research • the need to alleviate uncontrollable pain and distress.
<p><i>Methods</i> of euthanasia may include:</p>	<ul style="list-style-type: none"> • chemical or physical methods of euthanasia: <ul style="list-style-type: none"> • barbiturate overdose through an acceptable injection route • captive bolt • cervical dislocation • decapitation by guillotine • gas • gunshot • microwave.
<p><i>Equipment and materials</i> that may be required to conduct euthanasia include:</p>	<ul style="list-style-type: none"> • carbon dioxide gas cylinders and regulators • captive bolts • chemicals • drugs • needles • sealed and approved containment cages • scales • syringes • restraining devices and drugs.
<p><i>Location</i> should be selected to ensure:</p>	<ul style="list-style-type: none"> • animals are euthanised in a quiet, clean environment and normally away from other animals.
<p><i>OHS</i> risks associated with</p>	<ul style="list-style-type: none"> • animal bites, kicks, scratches and crush injuries

RANGE STATEMENT	
<p> euthanasing animals may include:</p>	<ul style="list-style-type: none"> • biological hazardous waste and sharps disposal • cross-contamination between project classified clean and dirty animals • escape of animals and subsequent threat to safety of humans and other animals • gas leakage • handling of chemicals and medicines • inhalation of aerosol particles • intraocular contamination • manual handling, including carrying, lifting and shifting • needle pricks and cuts from other sharps • potential injuries to humans during capture, handling and transport processes • release of infective agents (animal and human) • slippery or uneven work surfaces • transmission of zoonotic diseases.
<p><i>Statutory requirements</i> that impact on the euthanasia of animals include:</p>	<ul style="list-style-type: none"> • approval from the institution's AEC • relevant codes of practice, including the Australian Code of Practice for the Care and Use of Animals for Scientific Purposes • local government regulations covering the transport and disposal of hazardous wastes • relevant state or territory legislation and regulations such as those relating to: <ul style="list-style-type: none"> • firearms usage • fisheries • prevention of cruelty to animals • quarantine • the practice of veterinary surgery • the administration and storage of therapeutic and controlled substances • wildlife.
<p><i>Grief and stress coping</i> mechanisms may include:</p>	<ul style="list-style-type: none"> • advising workplace supervisor of the situation • seeking and accepting support from colleagues • seeking and accepting assistance from professional counsellors • practising stress management techniques • requesting and participating in formal or informal debriefing sessions.

Unit Sector(s)

Unit sector	Animal technology
--------------------	-------------------

Competency field

Competency field	
-------------------------	--

Co-requisite units

Co-requisite units		