



Australian Government

Department of Education, Employment and Workplace Relations

ACMATE304A Conduct non-surgical procedures on animals

Revision Number: 1

ACMATE304A Conduct non-surgical procedures on animals

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the process of conducting non-surgical procedures required to administer substances and take tissue and fluid samples for clinical trial project research purposes. 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.
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Application of the Unit

Application of the unit	This unit is applicable to junior or assistant level animal technicians working under supervision of a senior or more experienced staff member. Animal technicians operate under and must comply with legislative requirements as well as protocols, policies and procedures set down by the institution's Animal Ethics Committee (AEC). 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.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for non-surgical procedures	1.1.Procedures and sample requirements are verified in accordance with legislative and ethical requirements. 1.2.Sample methods are confirmed with supervisor. 1.3.Dose rates are calculated. 1.4.Equipment required is prepared and positioned.
2. Prepare animals for procedure	2.1.Animals are selected to meet project requirements. 2.2.Animals are moved to testing area and prepared for procedure using techniques to minimise stress and discomfort . 2.3.Work practices are managed to ensure animals are kept in preparation and procedure areas for minimal time.
3. Administer substances to animals	3.1.Approved substances and dose rates are verified with supervisor. 3.2.Method of administration of substances is verified. 3.3. Risks associated with preparation and administration of substances are evaluated, emergency procedures practised and implemented as required. 3.4.Substances are administered to animals using approved methods and appropriate restraint techniques. 3.5.Animals are monitored during the administration of substances for adverse reactions.
4. Collect samples from animals	4.1.Sampling techniques are verified with supervisor. 4.2.Hazards in collection process are identified and emergency response requirements are practised and implemented when required. 4.3.Body fluid samples are collected, processed, packaged and stored. 4.4.Tissue samples are collected. 4.5.Samples are checked for suitability and prepared according to laboratory and project protocols.
5. Complete post-procedure duties	5.1.Animals are returned to housing, monitored and responded to as required. 5.2. Animal and project records are updated. 5.3.Procedures area is cleaned and waste disposed of according to laboratory protocols.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- apply first aid techniques and provide basic animal care
- complete relevant work-related documents
- comply with project protocols or report problems or concerns to workplace supervisor or project manager in accordance with workplace protocols and procedures
- employ safe, humane and environmental responsible organisation systems and procedures when handling and work with animals
- identify signs of animal distress and discomfort and respond in compliance with animal welfare and workplace or project protocols
- maintain the highest standards of hygiene and infection control at all times to reduce the risk of infection and cross-infection
- prepare and use materials, tools and equipment correctly and in accordance with manufacturers' specifications
- take and record animals temperature, pulse, respiration and hydration indicators where appropriate
- literacy skills to read and follow facility policies and procedures, including occupational health and safety (OHS), infection control and waste management; follow 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 fulfill the job role as specified by the organisation, including questioning, active listening, asking for clarification and consulting with or seeking advice from supervisor
- numeracy skills to estimate, calculate and record routine workplace measures
- interpersonal skills to work 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 use available resources and prioritise daily tasks
- use personal protective clothing and equipment correctly
- 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 relevant to the administration of substances and collection of samples
- basic animal first aid techniques

REQUIRED SKILLS AND KNOWLEDGE

- biohazards in the workplace of significance to animals and humans
- ethical practices, protocols and procedures in relation to the administration of substances and collection of samples of animals in animal technology workplaces
- indicators of stress and wellbeing in animals and methods used to measure, interpret and record objective measures of animal health
- information that should be documented related to the administration of substances, and collection of samples
- methods used to prepare, store and transport samples
- organisational policies and safe work procedures, including OHS and accident requirements
- personal protective clothing and equipment and when and how it should be used
- principles of animal welfare and ethics
- 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 and animal welfare and research
- relevant state or territory legislation covering the use of therapeutic and controlled substances
- safe animal handling techniques, including approved handling methods during the administration of substances and collection of samples
- situations where the administration of substances or collection of samples should be stopped and reported
- tissue and fluid sample types and methods
- workplace hygiene standards, disinfectants, cleaning agents, cleaning techniques and cleaning equipment and materials.

Evidence Guide

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 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:

- prepare animals for substance administration and sample collection in accordance with legislative, ethical and approved workplace project protocols
- calculate dose rates, prepare and administer substances as directed by supervisor and in accordance with legislative, ethical and approved workplace project protocols
- collect samples of body tissue and fluids from animals in accordance with legislative, ethical and approved workplace project protocols
- prepare samples in accordance with workplace protocols and project requirements
- document procedures used in the administration of substances and collection of samples and any events that occur.

The skills and knowledge required to conduct non-surgical procedures on animals must be transferable to a range of work environments and contexts and include the ability to deal with unplanned events.

Context of and specific resources for assessment

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.

Assessment of this unit is to be practical in nature and will be most appropriately assessed in an animal technology research facility or in a situation that reproduces normal work conditions.

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	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. The assessment strategies must include practical skills assessment. Suggested strategies for this unit are: • 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 • third-party evidence • workplace documentation. This unit may be assessed in a holistic way with other units of competency relevant to the industry sector, workplace and job role.
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

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.

Sample requirements may include:

- a range of samples:
 - blood
 - faeces
 - muscle biopsy
 - nasal discharge
 - saliva
 - semen specimens
 - skin scrapings
 - urine and semen specimens
- monitoring heart rate, blood pressure, respiration rate and temperature
- injecting substances subcutaneously, intramuscularly or intravenously
- administering substances via ingestion, topical application or inhalation
- preparing samples for chemical, visual assessment.

Techniques to minimise stress and discomfort may include:

- moving animal to collection area in own housing
- sedating animals
- restraining animals
- numbing collection area
- collecting specimens away from distractions from other animals, sounds, smells or other stimuli.

Risks associated with preparation and administration of substances may include:

- allergic reaction of animal to substances
- animal bites, kicks, scratches and crush injuries
- biological hazardous waste and sharps disposal
- contamination of samples
- cross contamination between project classified clean and dirty animals
- escape of animals and subsequent threat to safety of humans and other animals

RANGE STATEMENT	
	• haemorrhage, oedema and other tissue damage • handling of chemicals and medicines • inhalation of aerosol particles • intraocular contamination • manual handling, including carrying, lifting and shifting • maintaining body temperature and other vitals for life • needle pricks and cuts from other sharps • not being able to reach target tissue • potential injuries to humans during capture, handling and transport processes • release of infective agents (animal and human) • reaction to collection leading to shock • slippery or uneven work surfaces • transmission of zoonotic diseases.
Monitoring of animals during administration of substances or during recovery may include:	• measurement of temperature, pulse and respiration manually or via monitors attached to animals • observations of behaviour: • allergic reaction • bleeding • loss of nervous system control • loss/regaining consciousness depending on procedures used • symptoms of shock • observation of behaviour during recovery, and return to normal routines for rest, exercise, eating and social interaction.
Emergency response requirements may include:	• animal or human first aid procedures for: • allergic reaction • bites, kicks and scratches • haemorrhage • needle or sharps accidents • shock • capture and isolation of escaped animals • decontamination of technician or animal.
Animal and project records may include:	• animal: • identification • substances administered, including amounts

RANGE STATEMENT

	and method of administration • response to administration of substance • tissue and body fluid samples taken • any problems with animal health that arise during administration of substances, collection of samples and during recovery • project: • project ethics approval details • project substance administration and sampling instructions • number of animals used and their identification details • officer who administered substances and collected samples • substances and amounts administered • methods used to administer substances • samples taken and methods used to collect samples • incidents or issues that arose during project procedures.
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Unit Sector(s)

Unit sector	Animal technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

Co-requisite units		