

**Modification history**

Release	Comments
Release 1	This version released with ACM Animal Care and Management Training Package Version 3.0.

<b>ACMATE5X7</b>	<b>Perform caesarean rederivation of mice or rats</b>
<b>Application</b>	<p>This unit of competency describes the skills and knowledge required to manage the process of stages of natural and caesarean births and management of transgenic mice or rat pups.</p> <p>The unit applies to individuals who work as animal technicians in research and teaching facilities that require transgenic laboratory animals for scientific purposes where it is necessary to monitor natural birth or perform caesarean sections and rear offspring for transgenic programs.</p> <p>No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
<b>Prerequisite Unit</b>	Nil
<b>Unit Sector</b>	Animal Technology (ATE)

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for procedures and maintain documentation	1.1 Comply with organisation protocols, policies and procedures as set down by the Animal Ethics Committee (AEC), Australian Codes and legislative requirements, including health and safety, at all times 1.2 Identify regulatory and project documentation requirements 1.3 Verify project reproductive and breeding program objectives 1.4 Revise, review, maintain and update records according to organisation policies and procedures
2. Monitor natural birth of transgenic offspring	2.1 Identify signs of parturition 2.2 Monitor birth and make decision to foster pups or leave with birth mother 2.3 House and monitor mother and offspring to minimise stress to animals
3. Perform caesarean procedures	3.1 Justify need for caesarean section and confirm AEC approval 3.2 Prepare equipment, including personal protective equipment and medications according to organisational procedures 3.3 Euthanase female by cervical dislocation or sedate and euthanase 3.4 Conduct caesarean procedure 3.5 Collect, identify, check and monitor pups 3.6 Euthanase birth mother (if not previously) and dispose of carcass according to legislative requirements
4. Foster pups onto clean mother	4.1 Verify clean or dirty status of the mother and separate handling and treatment areas of each group according to biosecurity requirements 4.2 Select and prepare foster mother prior to caesarean surgery of birth mother 4.3 Select and prepare area for fostering to ensure minimal stress to foster mother and pups 4.4 Allocate pups to foster mother and monitor bonding

<b>Foundation Skills</b>	
<i>This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.</i>	
<b>Skill</b>	<b>Description</b>
Numeracy	<ul style="list-style-type: none"> <li>Keep accurate records of animal birth weight and other measurements</li> </ul>
Get the work done	<ul style="list-style-type: none"> <li>Make decisions and solve problems as they arise during the stages of natural and caesarean births</li> </ul>

<b>Unit Mapping Information</b>			
<b>Code and title current version</b>	<b>Code and title previous version</b>	<b>Comments</b>	<b>Equivalence status</b>
ACMATE5X7 Perform caesarean rederivation of mice or rats (Release 2)	ACMATE507 Manage the parturition of transgenic mice or rats (Release 1)	Title of unit changed to reflect intent of unit. Minor changes to performance criteria for clarity	Equivalent unit

<b>Links</b>
Companion Volumes, including Implementation Guides, are available at VETNet: <a href="https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103">https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103</a>

<b>TITLE</b>	<b>Assessment requirements for ACMATE5X7 Perform caesarean rederivation of transgenic mice or rats</b>
<b>Performance Evidence</b>	
<p>An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.</p> <p>There must be evidence that the individual has managed the parturition of transgenic mice or rats, including:</p> <ul style="list-style-type: none"> <li>• managed a natural birth on at least two occasions</li> <li>• planned and carried out a caesarean section on at least two full-term pregnant mice or rats.</li> </ul>	
<b>Knowledge Evidence</b>	
<p>An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:</p> <ul style="list-style-type: none"> <li>• principles and practices of caesarean rederivation and parturition management of transgenic mice and rats, including: <ul style="list-style-type: none"> <li>• methods used to perform caesarean procedures in mice and rats</li> <li>• mouse and rat breeding procedures and their species-specific requirements</li> <li>• anatomical and physiological terminology and glossary of terms</li> <li>• anatomical structures and physiological features of mice and rats related to the reproductive system and parturition</li> <li>• reproductive cycles</li> <li>• techniques used to start the breathing process in pups</li> <li>• techniques used to foster pups onto foster mothers</li> </ul> </li> <li>• comprehensive understanding of genetics, including principles, common terminology and nomenclature</li> <li>• equipment and drugs commonly used for euthanasia</li> <li>• aseptic techniques</li> <li>• biosecurity requirements for clean and dirty status handling and treatment areas</li> <li>• common diseases, ailments, injuries and other impacts on animal health and wellbeing and characteristics of healthy, sick or distressed animals</li> <li>• relevant, current codes, including the Australian Code for the Care and Use of Animals for Scientific Purposes</li> <li>• animal welfare and ethics including the 3 Rs and 5 freedoms</li> <li>• relevant state or territory legislation and regulations relating to <ul style="list-style-type: none"> <li>• practice of veterinary science, workplace health and safety</li> <li>• animal welfare and research, including the Office of the Gene Technology Regulator</li> <li>• use of therapeutic and controlled substances</li> </ul> </li> <li>• organisation policies and safe work procedures, including: <ul style="list-style-type: none"> <li>• emergency procedures</li> <li>• workplace hygiene standards, disinfectants and cleaning agents, techniques, equipment and materials.</li> <li>• communication procedures and systems, and technology relevant to the institution and the individual's work responsibilities.</li> </ul> </li> </ul>	
<b>Assessment Conditions</b>	
<p>Assessment of skills must take place under the following conditions:</p> <ul style="list-style-type: none"> <li>• physical conditions: <ul style="list-style-type: none"> <li>• an animal research or production facility or an environment that reflects work conditions that has a scientific establishment licence and access to an approved Animal Ethics Committee and in which the parturition of transgenic mice or rats can take place.</li> </ul> </li> </ul> <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
<b>Links</b>	Companion Volumes, including Implementation Guides, are available at VETNet:

	<a href="https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103">https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=b75f4b23-54c9-4cc9-a5db-d3502d154103</a>
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