

Recommended Methods of Euthanasia: *Ferrets*

Species	Method	Description
Ferrets	Asphyxiation using CO2 followed by bilateral thoracotomy.	Using a non-precharged chamber, CO2 is dispensed from a commercial cylinder with fixed pressure regulator and inline restrictor controlling gas flow within 30%-70% of the chamber volume per minute to comply with 2020 AVMA Guidelines. CO2 flow will be maintained for > 60 seconds following respiratory arrest (which may take up to 5 minutes), followed by bilateral thoracotomy to assure euthanasia. <i>NOTE : Neonates < 7 days old should be euthanized by a physical method, such as sharp scissors.</i>
	Asphyxiation using CO2 followed by decapitation.	Using a non-precharged chamber, CO2 is dispensed from a commercial cylinder with fixed pressure regulator and inline restrictor controlling gas flow within 30%-70% of the chamber volume per minute to comply with 2020 AVMA Guidelines. CO2 flow will be maintained for > 60 seconds following respiratory arrest (which may take up to 5 minutes), followed by decapitation using (<i>indicate equipment used</i>) to assure euthanasia. <i>NOTE : Neonates < 7 days old should be euthanized by a physical method, such as sharp scissors.</i>
	Asphyxiation using CO2 followed by exsanguination.	Using a non-precharged chamber, CO2 is dispensed from a commercial cylinder with fixed pressure regulator and inline restrictor controlling gas flow within 30%-70% of the chamber volume per minute to comply with 2020 AVMA Guidelines. CO2 flow will be maintained for > 60 seconds following respiratory arrest (which may take up to 5 minutes), followed by rapid exsanguination via (<i>indicate method or vascular incision points</i>) to assure euthanasia. <i>NOTE : Neonates < 7 days old should be euthanized by a physical method, such as sharp scissors.</i>
	Asphyxiation using CO2 followed by major organ harvest.	Using a non-precharged chamber, CO2 is dispensed from a commercial cylinder with fixed pressure regulator and inline restrictor controlling gas flow within 30%-70% of the chamber volume per minute to comply with 2020 AVMA Guidelines. CO2 flow will be maintained for > 60 seconds following respiratory arrest (which may take up to 5 minutes), followed by rapid harvest of (<i>indicate organs / tissues</i>) to assure euthanasia. <i>NOTE : Neonates < 7 days old should be euthanized by a physical method, such as sharp scissors.</i>
	Inhalant anesthetic overdose followed by bilateral thoracotomy.	Using a precision vaporizer with induction chamber and waste gas scavenger, (<i>indicate the gas anesthetic</i>) will be administered slowly up to [<i>indicate: > 4.5 % (for Isoflurane) or > 6.5 % (for Sevoflurane)</i>] in oxygen and continued until respiratory arrest occurs for > 60 seconds. The chamber is flushed with oxygen only, the animal is removed and bilateral thoracotomy is performed to assure euthanasia.
	Inhalant anesthetic overdose followed by decapitation.	Using a precision vaporizer with induction chamber and waste gas scavenger, (<i>indicate the gas anesthetic</i>) will be administered slowly up to [<i>indicate: > 4.5 % (for Isoflurane) or > 6.5 % (for Sevoflurane)</i>] in oxygen and continued until respiratory arrest occurs for > 60 seconds. The chamber is flushed with oxygen only, the animal is removed and decapitated with (<i>indicate equipment used</i>) to assure euthanasia.
	Inhalant anesthetic overdose followed by exsanguination.	Using a precision vaporizer with induction chamber and waste gas scavenger, (<i>indicate the gas anesthetic</i>) will be administered slowly up to [<i>indicate: > 4.5 % (for Isoflurane) or > 6.5 % (for Sevoflurane)</i>] in oxygen and continued until respiratory arrest occurs for > 60 seconds. The chamber is flushed with oxygen only, the animal is removed and rapid exsanguination is performed by (<i>indicate method or vascular incision points</i>) to assure euthanasia.

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	Inhalant anesthetic overdose followed by major organ harvest.	Using a precision vaporizer with induction chamber and waste gas scavenger, (<i>indicate the gas anesthetic</i>) will be administered slowly up to [<i>indicate: > 4.5 % (for Isoflurane) or > 6.5 % (for Sevoflurane)</i>] in oxygen and continued until respiratory arrest occurs for > 60 seconds. The chamber is flushed with oxygen only, the animal is removed and rapid removal of (<i>indicate tissues / organs</i>) is performed to assure euthanasia.
	Decapitation by Guillotine under sedation or anesthesia (Juveniles / Adults)	Post induction of anesthesia or sedation using (<i>indicate drug, dose in mg/kg, route & gauge needle</i>), the animal is placed head first into a decapicone and moved forward in the cone until secured. Holding the cone at the rear, the narrow end of the cone is inserted into a commercial guillotine to the level of the cervical vertebrae and the guillotine is activated.
	Decapitation by Guillotine without sedation or anesthesia (Juveniles / Adults)	Animals are placed head first into a decapicone and moved forward in the cone until secured. Holding the cone at the rear, the narrow end of the cone is inserted into a commercial guillotine to the level of the cervical vertebrae and the guillotine is activated. <i>NOTE: Scientific Justification is REQUIRED for the use of this method without sedation / anesthesia on juvenile or adult animals.</i>
	Vital perfusion under injectable anesthesia	(<i>Indicate drug, dose in mg/kg, route & gauge needle</i>) will be used to induce anesthesia. Surgical depth of anesthesia will be verified by lack of response to (<i>indicate stimulus</i>) stimulus. Vital perfusion will be performed using (<i>indicate name</i>) perfusate injected into the (<i>define point of vascular access or blood egress site</i>). Perfusion will be performed in a chemical fume hood if required by EHS. Perfusate waste will be disposed of by (<i>indicate method of disposal</i>).
	Injectable anesthetic (Pentobarbital) overdose	Administration of ≥ 100 mg/kg of Pentobarbital (<i>state manufacturer</i>) intraperitoneal (IP) using a (<i>insert gauge</i>) gauge or smaller bore needle. Monitor animal until lack of heart beat is noted for > 60 seconds prior to tissue harvest or carcass disposal.