

Recommended Methods of Euthanasia: *Fish*

| Species | Method | Description |
|---------|---|---|
| Fish | Anesthetic overdose (Benzocaine Hydrochloride) followed by decapitation | Fish are placed and left in a > 250 mg/L buffered Benzocaine solution for a minimum of 10 minutes after cessation of opercular movement (anesthesia to respiratory arrest) prior to removal and decapitation (<i>indicate equipment used</i>) to assure euthanasia. |
| | Anesthetic overdose (Benzocaine Hydrochloride) followed by pithing | Fish are placed and left in a > 250 mg/L buffered Benzocaine solution for a minimum of 10 minutes after cessation of opercular movement (anesthesia to respiratory arrest) prior to removal and pithing to assure euthanasia. |
| | Anesthetic overdose (MS-222: Tricaine Methane Sulfonate) and decapitation | Fish are placed and left in a 250 - 500mg/mL buffered MS-222 solution for a minimum of 10 minutes after cessation of opercular movement (anesthesia to respiratory arrest) prior to removal and decapitation (<i>indicate equipment used</i>) to ensure euthanasia. |
| | Anesthetic overdose (MS-222: Tricaine Methane Sulfonate) and pithing | Fish are placed and left in a 250 - 500mg/mL buffered MS-222 solution for a minimum of 10 minutes after cessation of opercular movement (anesthesia to respiratory arrest) prior to removal and pithing to assure euthanasia. |
| | Anesthesia by progressive chilling to 2°- 4°C followed by decapitation | Fish are transferred (<i>indicate method of transfer</i>) from the home tank to the chilled waterbath (2°- 4°C). The water temperature will be measured and verified with (<i>indicate equipment used</i>). Fish will not be in contact with any ice that may be present in the chilled waterbath by use of (<i>indicate method of prevention of contact with ice</i>). Fish will remain in the chilled waterbath for a minimum of 10 minutes after the loss of orientation and opercular movement prior to removal and decapitation (<i>indicate equipment used</i>) to ensure euthanasia. |
| | Anesthesia by progressive chilling to 2°- 4°C followed by pithing | Fish are transferred (<i>indicate method of transfer</i>) from the home tank to the chilled waterbath (2°- 4°C). The water temperature will be measured and verified with (<i>indicate equipment used</i>). Fish will not be in contact with any ice that may be present in the chilled waterbath by use of (<i>indicate method of prevention of contact with ice</i>). Fish will remain in the chilled waterbath for a minimum of 10 minutes after the loss of orientation and opercular movement prior to removal and pithing to assure euthanasia. |
| | Injectable anesthetic (Pentobarbital) overdose | Administration of ≥100mg/kg Pentobarbital (<i>state manufacturer</i>) intra-abdominally using a (<i>insert gauge</i>) gauge or smaller bore needle. Monitor animal until lack of heart beat for a minimum of 2 minutes prior to tissue harvest or carcass disposal. <i>NOTE: It may take 30 minutes or more after barbituate administration until heart stops beating.</i> |