Canadian General Standards Board

Office des normes générales du Canada

CAN/CGSB-144.1-96

WITHDRAWAL

RETRAIT

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CANADIAN GENERAL STANDARDS BOARD

ANIMAL (MAMMAL) TRAPS - MECHANICALLY POWERED, TRIGGER-ACTIVATED KILLING TRAPS FOR USE ON LAND

This standard is hereby withdrawn. It contains technical information that is incorrect and has exceeded its five-year period for review.

OFFICE DES NORMES GÉNÉRALES DU CANADA

PIÈGES POUR ANIMAUX (MAMMIFÈRES) - PIÈGES MÉCANIQUES MORTELS À DÉTENTE, POUR LA TERRE FERME

Cette norme est retirée par le présent avis. Elle contient des renseignements techniques erronés et sa période de réexamen de cinq ans est expirée.

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CAN/CGSB-144.1-96

Supersedes CAN/CGSB-144.1-M84

Animal (Mammal) Traps — Mechanically Powered, Trigger-Activated Killing Traps for Use on Land

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NATIONAL STANDARD OF CANADA

CAN/CGSB-144.1-96

Supersedes CAN/CGSB-144.1-M84

ANIMAL (MAMMAL) TRAPS — MECHANICALLY POWERED, TRIGGER-ACTIVATED KILLING TRAPS FOR USE ON LAND

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ANIMAL (MAMMAL) TRAPS — MECHANICALLY POWERED, TRIGGER-ACTIVATED KILLING TRAPS FOR USE ON LAND

FOREWORD

In recognition of the fact that animals are captured in Canada for a variety of reasons, the principal task of the CGSB Committee on the Development of Humane Animal Trap Standards is to develop humane trap standards for mammals, bearing in mind the resolution enunciated by The World Conservation Union (IUCN) in 1990. The standard is intended to promote the most humane trapping technology currently feasible for each species.

The standard is based on the state-of-the-art traps in Canada.

"State-of-the-art trap" is defined as ***"Technically best developed, commercially available trap at a given time, based on the relevant consolidated findings of science, technology and experience."***

Therefore this proposed standard is species specific and based on:

a. Availability — The standard incorporates traps in current manufacture that are readily available to trappers.

b. Reliability — The standard incorporates traps that have gained general acceptance for efficiency in the field.

c. Regulation — The standard incorporates traps that are legal for use within current trapping legislation in Canada.

d. Improvement — The standard provides a structured framework for future technological development towards the ideal objective of traps which kill within the shortest time possible. It also strives to further enhance trap selectivity.

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CANADIAN GENERAL STANDARDS BOARD

ANIMAL (MAMMAL) TRAPS — MECHANICALLY POWERED, TRIGGER-ACTIVATED KILLING TRAPS FOR USE ON LAND

1. SCOPE

1.1 This standard applies to mechanically powered, trigger-activated killing traps for use on land to kill mammals. It includes requirements on performance and other characteristics, as well as specifications on terminology, classification and test methods for the killing traps. It is suitable for use in product certification and provides also a framework for future technological developments.

1.2 Gravity-operated traps, non-manufactured traps, set-guns and traps incorporating poison are not covered by this standard.

1.3 Restraining traps on land and submersion traps will be specified in standards C**/CGSB-144.2 and C**/CGSB-144.3, respectively *(both standards are under development as of November 1996).*

1.4 The testing and evaluation of a product against this standard may require the use of materials and/or equipment that could be hazardous. This document does not purport to address all the safety aspects associated with its use. Anyone using this standard has the responsibility to consult the appropriate authorities and to establish appropriate health and safety practices in conjunction with any applicable regulatory requirements prior to its use.

2. DEFINITIONS

For the purposes of this standard, the following definitions apply:

2.1 **Control Trap** — Species- (or species group-) specific state-of-the-art killing trap used within trapping activities at the time of the implementation of this standard that meets the requirements of par. 3.1 and is specified in Appendix C. (A control trap is required for comparison purposes in the field testing [par. 5.2].)

2.2 **Clamping Force** — The steady state force exerted on an animal by the striking component(s) of the trap after the striking force has been delivered.

2.3 **Effective Kill** — A process in which an animal is rendered irreversibly insensible with inevitable subsidence into death within the effective time limits established by this standard (Appendix B).

2.4 **Killing Trap** — A mechanically powered, trigger-activated trapping device for use on land to kill a mammal.

2.5 **Location of Strike** — The point(s) of contact where the striking and/or the clamping force of the trap is applied.

2.6 **Mechanical Performance Criteria** — The lowest acceptable levels of striking and clamping forces for a given species or species group (for a given striking component[s] diameter or width) (par. 3.1 and 5.1).

2.7 **Non-Target Animal** — An animal of any species other than those for which the trap is designated.

2.8 **Selectivity** — A measure of the capability of the trapping system to minimize the capture of non-target animals, expressed as the number of captured target animals divided by the total number of captured animals (including non-target animals).

Note: The committee recognizes that this ratio could be more dependent on the skills of the trapper and the availability of non-target animals than on the trap design. Therefore, this element will be re-examined at the next review of the standard.

2.9 **Striking Component(s)** — Those parts of the trap which contact the animal and deliver the striking and clamping forces.

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2.10 **Striking Force/Impact Momentum** — The impact momentum delivered to an animal when struck by the closing striking component(s).

2.11 **Target Animal** — An individual of the species for which the trapping system has been set with the intent to capture.

2.12 **Target Animal Position** — A position of the target animal in the trap that results in a dorso-ventral strike.

2.13 **Target Strike Location** — A location of strike in a vital region(s) of the animal. A vital region is: head (from the back of the eyes to the base of the skull at C1 vertebrae), neck, thorax, or any combination thereof.

2.14 **Trap Efficiency** — The rate of capturing target animals in 100 trap nights. Trap efficiency is expressed as the number of captured target animals divided by the number of trap nights set, multiplied by 100 (i.e. captures per 100 trap nights).

2.15 **Trap Opening** — The chordal or straight line distance between striking component(s).

2.16 **Trapping System** — For a specific target animal and target location, the trapping system is the combination of:

— equipment (the trap and the trigger configuration)

— set (including site modification, lures, baits, and location).

2.17 **Trigger Configuration** — The parts and mechanism of the trap that direct the positioning of the target animal to ensure a strike location in a vital region.

2.18 **Trap Window** — The inside dimension of a set trap expressed as the length × width.

3. REQUIREMENTS

3.1 **Mechanical Performance Criteria (Table 1)** — The impact momentum (column 3) divided by the diameter or width of the striking component(s) (column 2) and the clamping force (columns 4, 5, 6, 7, 8 or 9) maintained by the striking component(s) at a specific trap opening divided by the diameter or width of the striking component(s) (column 2) (Note 1) shall meet or exceed the species- (or species group-) specific requirements specified in Table 1 (Note 2), when determined in accordance with par 5.1.

The width or diameter of the striking (killing) components shall be measured perpendicularly to the direction of travel. The effective mass of the striking components shall be determined as specified in par. 5.1 and Appendix A.

(For the labelling declaration of the mechanical values, see par. 6.1 e., f. and g.)

Note 1: The impact momentum shall be measured at the expected trap opening which is:

— *at 1/2 displacement for rotating jaw type traps (i.e. traps where two jaws rotate about an axis and close upon each other);*

— *at 2/3 displacement for planar type traps (a planar type trap is a trap where the striking component closes through a single plane);*

— *at 1/2 displacement for a mouse trap type trap, where the jaw rotates through* 90° *and at 2/3 displacement for a mouse trap type trap, where the jaw rotates through* 180°*(a mouse trap type trap is a trap where one jaw closes on another fixed jaw or on a flat surface).*

Note 2: Example, for a rat, the impact momentum (column 3) divided by the diameter or width of the striking component (column 2) shall meet or exceed 88 kg/s *and the clamping forces divided by the diameter or width of the striking component (column 2) shall meet or exceed* 1.5, 1.5, 1.5, 2.9 *and* 2.9 N/mm *for columns 4 through 8 respectively.*

3.2 **Target Location and Animal Position** — At least 70% of target animals must be struck by the killing trap in target locations and in target animal positions when tested in the field as specified in par. 5.2.

3.3 **Trap Efficiency** — The efficiency of the test trap must be at least 80% of the efficiency of the control trap when tested as specified in par. 5.2.

3.4 **Effective Kill Requirements** — To ensure future technological advancements towards more humane devices, the classification system based on killing effectiveness shall be implemented as specified in Appendix B.

3.5 **Material and Workmanship** — The material, form and arrangement of the parts of the trap shall be such that the trap is practical to transport and/or use. The trap shall be free from imperfections and defects likely to affect its performance.

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The striking components and springs shall have the strength and rigidity that under normal use will prevent permanent deformation, that causes performance to fall below the mechanical performance criteria (par. 3.1 and 5.1).

The trap material as well as welding or bonding shall comply with applicable international and/or national standards.

3.6 **Replacement Parts —** Replacement parts required to maintain a killing trap that has met the requirements of this standard shall meet the same specifications as the original parts being replaced.

3.7 **Operation —** Any limitations for the use of the trap shall be specified on the packaging and on the instructions for use (par. 6.1 and 6.2). The trap shall incorporate a means of securing it at its intended place of use.

TABLE 1

Mechanical Performance Criteria

Species or Group of Species*	Diameter or Width of Striking Component (mm)	Impact Momentum (kg·m/s)	Clamping Force (N) at Trap Opening (mm)					
			5	10	20	30	40	50–70
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Rat	3.4	0.3	5	5	5	10	10	n.a.
Weasel (a)	3.4	0.3	5	5	5	10	10	n.a.
Weasel (b)	3.7	0.2	100	130	110	80	125	n.a.
Squirrel (a)	3.4	0.3	5	5	5	10	10	n.a.
Squirrel (b)	3.7	0.2	100	130	110	80	125	n.a.
Muskrat	4.9	0.5	0	10	200	235	195	n.a.
Mink	4.9	0.5	0	10	200	235	195	n.a.
Marten	4.9	0.5	0	10	200	235	195	n.a.
Skunk	4.9	0.5	0	10	200	235	195	n.a.
Raccoon	5.3	0.9	0	0	135	285	280	205
Arctic Fox	6.4	1.3	0	0	135	290	360	290
Fisher	6.4	1.3	0	0	135	290	360	290
Otter	6.4	1.3	0	0	135	290	360	290
Badger	7.1	2.0	0	0	20	165	360	435
Beaver	7.9	2.7	0	0	0	60	330	515
Lynx-Bobcat	7.9	2.7	0	0	0	60	330	515
Wolverine	7.9	2.7	0	0	0	60	330	515

n.a. = not applicable

(a) and (b), both apply to the species

** As information becomes available, more species will be added to this table.*

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3.8 **Safety Requirements** — The trap shall be safe to the user, when being set in accordance with the manufacturer's/inventor's and/or national distributor's instructions. When appropriate, the instructions for use as well as the packaging shall carry a warning (par. 6.1 h.).

The design safety requirements shall be considered as met, if safety devices (either integral or accessory devices specified by the manufacturer/inventor/ distributor, see par. 6.2) are easily set and unset with one hand, and if the trap meets one of the following requirements, when inspected and tested as specified in par. 5.4:

a. the trap restricts a human limb from access to striking and clamping components;

b. the striking and clamping forces are not in place until the trap is in final set position; or

c. when fired with safety devices applied as specified in par. 5.4.3 c., the striking components exert no clamping force if they move out of the cocked position, or remain in the cocked position.

3.9 **Pelt Integrity** — The traps used for fur trapping shall be designed to minimize damage to the pelt of trapped animals of the target species.

3.10 **Care and Use** — Animals shall only be tested in accordance with the publication specified in par. 7.2.2.

4. SAMPLING

4.1 **Sampling of Killing Traps** — Select the number of traps specified in each test procedure using random sampling procedures.

5. TEST METHODS

5.1 **Mechanical Testing** (par. 3.1)

5.1.1 ***Preparation of Traps*** — Select at least five traps for testing. Prior to testing, fire each trap five times on a substrate that will prevent damage to the striking component(s) to ensure that all trap components are in working order.

5.1.2 ***Determination of Clamping Force at Various Trap Openings*** — Determine the clamping force at trap openings over the displacement of the striking component(s) as in par. 3.1 and Table 1 in order to determine the changes in the clamping force at the different trap openings. Close the jaws of the trap slowly onto a static load cell or equivalent device (Figure 2) located at each 5 mm of the trap opening as per Table 1.

The clamping force can also be determined by firing the springs from their cocked position while the striking component is resting upon the load cell at each 5 mm of the full displacement of the trap opening as per Table 1. (Figure 2)

Perform the test three times on each trap opening. Calculate the mean of the clamping forces at the same openings for each of the five traps. Record the overall mean clamping forces of the sample related to the trap openings as a table.

Any other equivalent method of testing may be used.

5.1.3 ***Determination of Impact Momentum*** — To calculate the impact momentum, determine first the effective mass of the striking component and then determine the impact velocity.

5.1.3.1 *Determination of Effective Mass* — Calculate the effective mass (m_e) of the striking component. For traps with simple U-shaped or rectangular-frame killing bars describing a rotating motion about an axis, the detailed procedures of Appendix A may be followed.

5.1.3.2 *Determination of Impact Velocity* — Determine the velocity of the striking component at the expected trap opening at the target location (in general, this means measuring at 1/2 displacement for rotating jaw type and mouse type traps that rotate through 90°, and at 2/3 displacement for planar type traps that rotate through 180° [Note 1, par. 3.1]). Determine the velocity ten times at the trap opening for each trap either (a) directly at the trap opening; or (b) indirectly, with an accelerometer mounted on the striking component as in Figure 1; or with another equivalent method. Use a substrate similar to animal tissue to prevent damage to the measuring device.

Direct Procedure (a) — Measure the velocity at the trap opening specified in par. 3.1.

Indirect Procedure (b) — Record the acceleration of the striking component from the time of tripping to the time of reaching the trap openings specified in par. 3.1. Integrate the time-acceleration curve to provide a time-velocity

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curve. Read the velocity at impact from the time-velocity curve. Take into account the mass of the accelerometer in the determination of the impact velocity.

Report the mean and standard deviation values of the ten determinations at the opening as the impact velocity of the specimen at that opening in metres per second (m/s).

5.1.3.3 *Calculation of the Striking Force/Impact Momentum* — Calculate the impact momentum (p) of the trap over the full displacement of the striking component(s) using the formula indicated below:

$p = m_e v$ (kg·m/s)

where:

m_e = effective mass (kg) (par. 5.1.3.1)

v = *impact velocity of the sample (m/s) (par. 5.1.3.2)*

Record the mean and standard deviation impact momentum of the sample related to the trap opening. (For declaration of the impact momentum/striking force, see par. 6.1 e.)

5.2 Field Testing

5.2.1 ***Principle*** — The ability of the killing trap to strike the target animals at the target location(s) and target animal position is evaluated. Furthermore, efficiency, safety, material, workmanship and operation are evaluated under field conditions. Pathological evaluations should be conducted whenever possible on the captured target animals.

5.2.2 ***Test Personnel*** — The test personnel shall be experienced and capable of trapping the target animals. They shall also be familiar with the equipment and the testing procedures.

5.2.3 ***Equipment***

Killing Traps — An equal number (not less than ten) of test and control (par. 2.1 and Appendix C) killing traps, assigned with identification numbers, shall be used. When no other killing trap is commonly used in a similar trapping system for the target animal, the control trap requirement is waived. The traps shall be prepared and set in the manner recommended by the manufacturer/inventor and/or national distributor. The preparation might include boiling, dying or waxing.

Camera — To photograph the sets and entrapped animals (par. 5.2.4).

5.2.4 ***Test Procedure*** — Establish the trapline through a diversity of suitable habitats, record the location and set the traps (control and test traps) along the trapline using random assignments. Place the traps in accordance with the manufacturer's/inventor's and/or national distributor's instructions. Take pictures of each trap and its set and of the general environment. Make the trap identification number a part of the photographic record.

Check the traps daily (once within 24 hour period). If an animal is found alive in a trap and it is seriously injured, euthanise it immediately, and report the method of euthanasia. Acceptable methods of euthanasia under field conditions are detailed in the publication specified in par 7.2.2.

Record the following information regarding each visit to the traps:

— date and time
— temperature
— trap type
— site location of the trap
— status of the trap (i.e. fired, not fired)
— species captured (if any)
— strike location
— position of the animal in the trap (dorso-ventral, lateral, other)
— condition of the animal (age, sex, lactating, dead, alive, unconscious)
— observations related to the operation and safety of the killing trap
— file number for each animal
— when applicable, pelt integrity.

Take photographs of each entrapped animal with a label that shows the file number of the animal. Report the number of all target and non-target animals captured by the test traps and by the control traps, the efficiency of the test and the control traps (par. 3.3), and the selectivity of the test trap (par. 2.8). Observe and report all points related

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to the material and workmanship, operation and safety of the trap and when applicable, the integrity of the pelt(s) of the target animal(s) (par. 3.5, 3.7, 3.8 and 3.9).

Make sure that the number of target animals captured by the test traps is at least 20. However, this may not be feasible for wolverine and badger, in which case the testing authority may opt for a lower number of target animals, but not less than 10. Include all captured target animals in the test and report.

Report the percentage of target animals captured in the test traps that were struck in the target location and in the target position (par. 3.2).

5.2.5 ***Pathological Evaluation*** — Pathological evaluations shall be conducted on the captured target animals. Label all the target animals in the test traps with the following information:

— date of capture
— file number of each animal
— method of killing/euthanasia.

Place the labelled traps with the carcasses in plastic bags and freeze them. Make sure that the carcasses are not damaged during handling and transport. Keep the carcasses frozen until pathological and/or radiological examination is performed.

All the carcasses in the test traps shall be examined by a veterinary pathologist (preferably experienced with the examination of wildlife species) in accordance with accepted post mortem veterinary examination practices. The pathologist shall determine and record the trap related injuries and compare them to the target locations.

5.3 **Retesting** — A killing trap design, that has failed the field test, may be retested only if the trigger configuration has been materially changed and/or it is used in a different trapping system.

5.4 **Inspection and Testing of Killing Trap Safety**

5.4.1 ***Principle*** — The efficacy of the trap design to provide safety to the users while handling and setting the trap is inspected and tested.

5.4.2 ***Test Personnel*** — The test personnel shall be experienced in setting traps for the target animals under normal trapping conditions.

5.4.3 ***Inspection and Testing Procedure***

a. Inspect five traps of the same design to assess, whether a human limb is restricted from access to striking and clamping components of the trap.

b. Inspect whether the striking and clamping forces are set before or after the trap is in the final set position.

c. Apply any integral or accessory safety devices provided with the trap or specified by the manufacturer/inventor and/or national distributor (par. 6.2) and fire the trap.

d. Note whether the safety devices can be easily set and unset with one hand.

e. Note also whether the striking components remain in the cocked position regardless of the trap position. Alternatively, if the striking components move out of the cocked position, note whether they exert any clamping force.

6. MARKING, PACKAGING AND INSTRUCTIONS

6.1 **Marking and Packaging** — Traps for sale shall be marked legibly and permanently with the manufacturer's and/or national distributor's name, symbol or trademark, and a symbol indicating temperature limitations, if any (par. 3.7).

The trap packaging shall include the following information:

a. That the killing trap is intended for trapping (the name of the specified species or group of species) for which the trap specifications were successfully tested and found to meet the requirements of this standard.

b. That the killing trap shall be used in the specified trapping system in which the trap design was tested.

c. When available, the effective kill category for which the trap was successfully tested or its mechanical properties were rated against (Appendix B).

d. The instructions for use, including any limitations on the operation of the trap (par. 6.2).

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e. The impact momentum at the expected trap opening (par. 3.1).

f. The table of clamping force delivered by the killing trap at various trap openings as determined in par. 5.1.2.

g. The effective mass and width or diameter of the striking component of the killing trap (par. 3.1 and 5.1.3).

h. The safety instructions, including warnings of potential hazards (par. 3.8).

6.2 **Instructions for Use —** Instructions for use shall be provided by the manufacturer and/or national distributor at the point of sale and they shall also be available directly from them.

The instructions for use shall include instructions for setting the trap in a manner most likely to achieve the effective kill and also instructions for maintenance, service, safe operation of the trap mechanism, and any limitations on the operation of the trap.

The instructions and/or trap literature provided shall clearly indicate the target species and the target strike location(s) verified in the field testing (par. 5.2).

7. NOTES

7.1 Technological Advancement

This standard is designed to provide motivation for future technological advancement by:

a. providing a mechanism whereby state-of-the-art killing traps that do not meet the effective kill criteria of category AA, A or B will be targeted to undergo further research and development in order to meet those requirements;

b. providing a category system that can be used for trap certification. Once the system is in place, traps for sale must be marked legibly with the effective kill category for which the trap was successfully tested or rated against;

c. providing Canadian jurisdictions a uniform basis for regulations on use of traps;

d. assisting the trapper education programs in all Canadian jurisdictions to promote traps that meet the performance requirements of this standard;

e. providing a system of effective kill categories that clearly identifies levels of humaneness;

f. including a sunset clause on traps that do not meet category AA, A or B;

g. providing, through the existence of effective kill categories for traps, a goal for trap manufacturers, researchers and developers to strive for;

h. providing, through the standard process itself, incentive for additional species, other than furbearers, to be treated equitably and devices for these species to be tested and assigned an effective kill category to indicate its level of humaneness.

7.2 Referenced Publications

7.2.1 Canadian General Standards Board (CGSB)

C**/CGSB-144.2 — Restraining Traps on Land *(under development as of November 1996)*

C**/CGSB-144.3 — Submersion Traps *(under development as of November 1996)*.

7.2.2 Olfert, E.D., Cross, B.M. and McWilliam, A.A. 1993. Guide to the care and use of experimental animals. Canadian Council on Animal Care, Volume 1, 2nd Edition. 211 pp.

7.3 Sources of Referenced Publications

7.3.1 The publications referred to in par. 7.2.1 will be available, when published, from the Canadian General Standards Board, Ottawa, Canada K1A 1G6. Telephone (613) 941-8703 or 1-800-665-CGSB (Canada only). Fax (613) 941-8705.

7.3.2 The publication referred to in par. 7.2.2 may be obtained from the Canadian Council on Animal Care, Constitution Square II, 350 Albert Street, Suite 315, Ottawa, Ontario K1R 1B1. Telephone (613) 238-4031. Fax (613) 238-2837.

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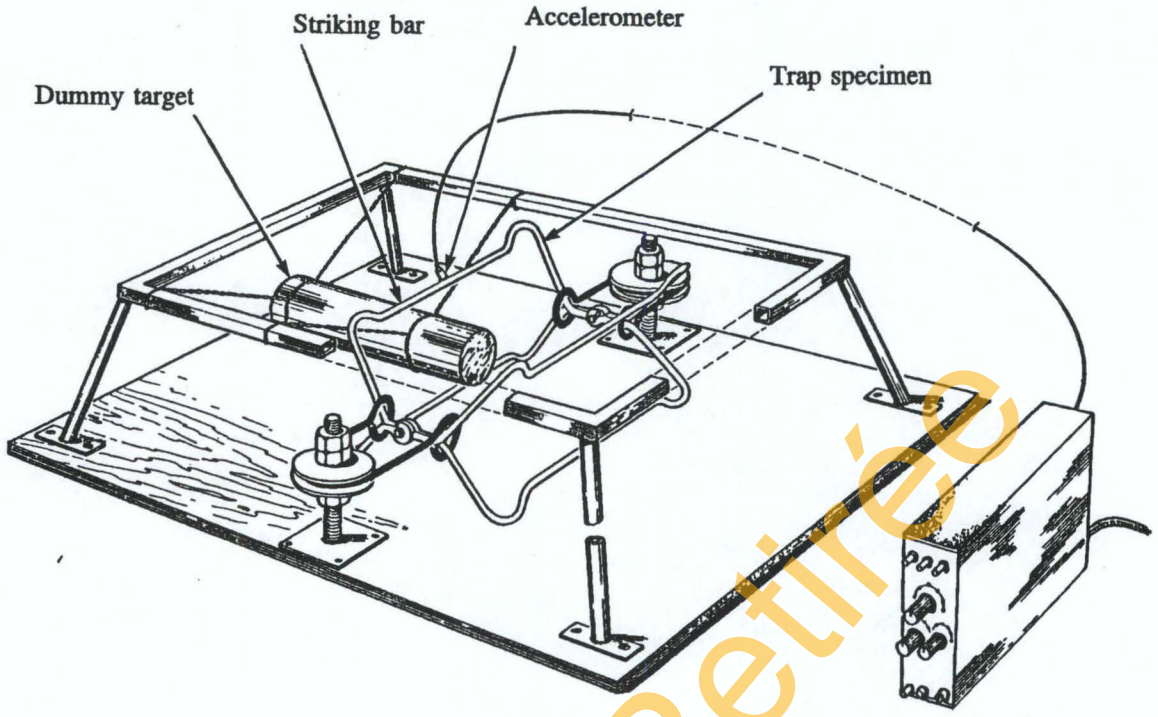


FIGURE 1

Typical Apparatus for Determination of Impact Velocity

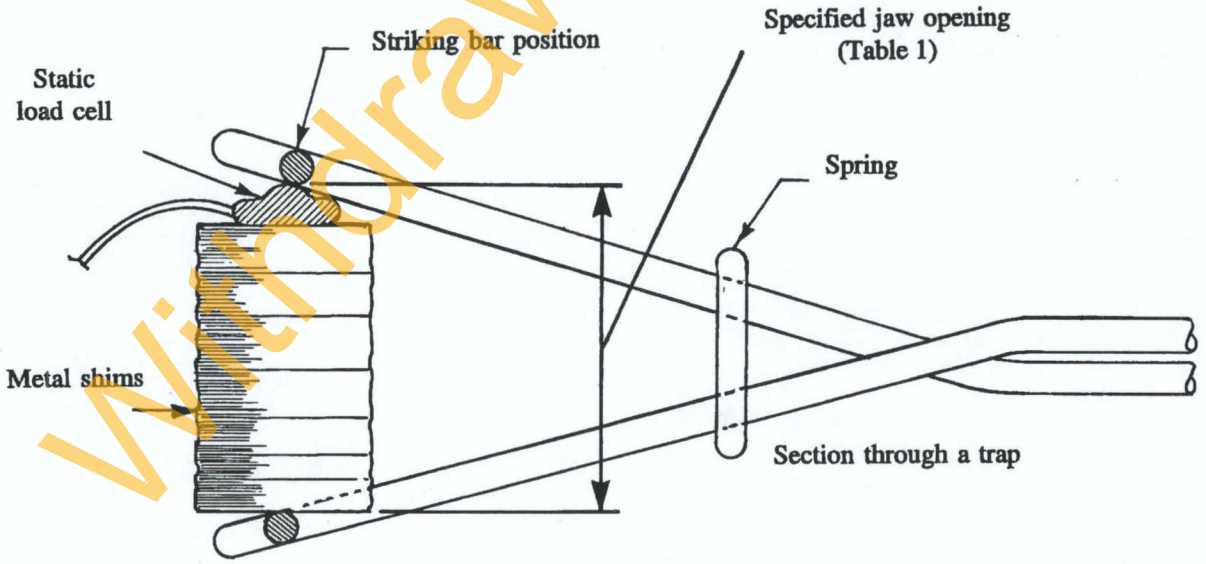


FIGURE 2

Typical Apparatus for Determination of Clamping Force

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(This appendix does not form a part of the standard.)

A1. Determination of Effective Mass of Striking Bars — The following calculation is typical of the method to be used to determine the effective mass (m_e). The example pertains only to traps having a striking bar that executes a rotating motion on being triggered.

Figure A1 shows the dimensions and geometry of the rotating mass of a trap's striking bar. The moment of inertia of this U-shaped frame about the axis of rotation equals the sum of the moments of inertia, about this same axis, of the three bars that make up the frame. Assuming the masses m_1, m_2, and m_3 to be uniformly distributed, the total moment of inertia is

$$I = m_2 l_1^2 + \tfrac{1}{3} m_1 l_1^2 + \tfrac{1}{3} m_3 l_1^2$$

In terms of the effective mass m_e located entirely l_1 from the axis of rotation, the moment of inertia is

$$I = m_e l_1^2$$

Equating the moments of inertia yields

$$m_e = m_2 + \tfrac{1}{3} (m_1 + m_3)$$

Since moments of inertia are additive if they are about a common axis, the effective mass of rectangular frames symmetric about the axis of rotation may be obtained by doubling the effective mass of one half the frame. The latter would then have a geometry similar to that shown in Figure A1.

A2. Future Traps

***Note:** Trap testing agencies are encouraged to determine the impact momentum over the displacement of the striking components (Table 1) to accomadate enhancements to a trapping system which result in changes to the trap opening at the target location.*

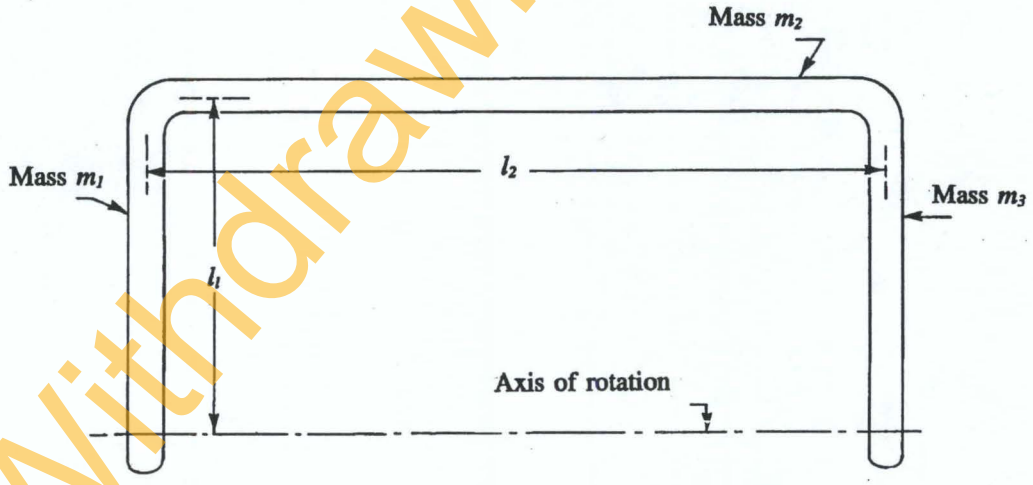


FIGURE A1

Typical Striking Bar for Determination of Effective Mass

Withdrawn/Retirée

(This appendix is a mandatory part of the standard.)

CLASSIFICATION SYSTEM BASED ON KILLING EFFECTIVENESS

B1. **Effective Kill Requirements —** The mechanical performance criteria specified in par. 3.1 and the requirements of par. 3.2, 3.3, 3.5 to 3.9 establish the minimum requirements for traps that meet this standard for a species.

Following the implementation of this standard, traps that meet or exceed the requirements specified above shall also be tested as specified in Section B2., to determine their effective kill category for that species as follows:

Category AA: At least 80% of the target animals lost their sensibility within 60 seconds (i.e. lost their palpebral and corneal reflexes)

Category A: At least 75% of the target animals lost their sensibility within 180 seconds (i.e. lost their palpebral and corneal reflexes)

Category B: At least 70% of the target animals lost their sensibility within 300 seconds (i.e. lost their palpebral and corneal reflexes).

Mechanical performance thresholds shall be determined for effective kill categories by species based on the test results obtained by the effective kill tests (Section B2.) and shall be inserted in this standard at each five year review.

If after 5 years following the 5 year review a category AA, A or B trap becomes available, traps that have met all other criteria of this standard, but not the effective kill category AA, A or B shall no longer be regarded as meeting this standard for that species.

If after 10 years following the implementation of this standard no trap that meets the requirements of category AA, A or B has been developed for a species, traps for that species shall be targeted for development for the following 5 years. If after the 5 year development period no trap has been developed that meets any of the effective kill categories, then no trap meets the standard for that species.

The committee will review the standard at the 5 year review period when the data for the species warrants such action, by raising the threshold requirement(s) within a category or categories, by eliminating lower categories when traps are available in higher categories or by any other appropriate action. **(Sunset Clause)**

B2. **Effective Kill Test**

B2.1 **Principle —** The ability of the trap to kill the target animals effectively is evaluated by allowing mobile animals to freely approach the test traps in simulated natural conditions. This test may also be performed under actual field conditions instead of in simulated natural conditions, if time to loss of sensibility or a suitable substitute parameter can be monitored remotely. Pathological evaluations should be conducted whenever possible on the animals used in the test.

(The mechanical properties of the tested traps are intended to be used to develop improved mechanical performance criteria [par. 3.1] according to the categories specified in Section B1.)

B2.2 **Apparatus and Test Room or Compound**

***Test Room or Compound* —** The test room or compound shall be of adequate size to allow the target (test) animals to move freely. The room/compound shall be equipped with a barrier to separate the animal from the trap and with a nest box or equivalent area where the animal is able to rest. Remote observation of the animal activity shall be possible. (Alternatively, the test may be performed under actual field conditions instead of simulated natural conditions, provided that the time to loss of sensibility or a suitable substitute parameter can be monitored remotely.)

***Traps* —** The killing traps to be tested shall be boiled, dyed or painted and waxed, when appropriate, and fired five times prior to animal testing. The number of traps shall be equal to the number of target animals tested (par. B2.3) and a different trap of the same design shall be used for each test animal.

***Video Recorder* —** To monitor and record the test.

***Tester for Eye Reflexes* —** A lens cleaner or equivalent apparatus using a burst of air shall be used to test the eye corneal reflexes.

Withdrawn/Retirée

B2.3 **Test Animals —** The test animals shall be the target animals and where possible represent both sexes equally. The number of animals shall be at least twelve.

B2.4 **Conditioning of Animals —** Transfer the target animals and their nest boxes to the simulated natural conditions and allow a minimum of 24 hours for acclimation.

B2.5 **Test Procedure —** Set the traps in accordance with the manufacturer's/inventor's and/or national distributor's instructions. Monitor the animals using a video recorder equipped with a time generator as they freely approach and enter the traps.

If the strike location is not in a vital region (head, neck, thorax or any combination thereof) and/or in the target animal position (dorso-ventral) that leads to loss of sensibility in 300 seconds, euthanise the animal immediately with an appropriate euthanasic agent. If the strike is in a vital region and in the target animal position, monitor the loss of sensibility through the time to loss of corneal and palpebral reflexes and heart rate of the animals, or by using other physiological indicators.

Record the time to loss of sensibility, the precise strike location(s), the position of the animal in the trap, the distance between the trap striking component(s), and the distance between the tip of the nose and the striking component(s) (following the contours of the animal). Whenever possible, subject the animals to a pathological evaluation.

Note: Loss of corneal reflexes is measured by loss of blinking reflexes when the eye is subjected to a burst of air. Loss of palpebral reflexes is measured by loss of blinking reflexes when the eye is subjected to touch by an object. As technology evolves other technologies may be used to determine loss of sensibility.

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(This appendix is a mandatory part of the standard.)

CONTROL TRAP

The control trap to be used in the field testing for the target species (or group of species) shall be of the type having a trap window dimension as specified in the table below. The control trap mechanical performance shall be as specified in Table 1.

Species of Group of Species	Trap Window (cm)	Trap Identification
Rat	8 × 5	Victor Rat Trap
Weasel (a)	8 × 5	Victor Rat Trap
Weasel (b)	10 × 11	Woodstream 1-1/2 LS
Squirrel (a)	8 × 5	Victor Rat Trap
Squirrel (b)	10 × 11	Woodstream 1-1/2 LS
Muskrat	11 × 11	Conibear 120
Mink	11 × 11	Conibear 120
Marten	11 × 11	Conibear 120
Skunk	11 × 11	Conibear 120
Raccoon	15 × 15	Conibear 160
Arctic Fox	18 × 18	Conibear 220
Fisher	18 × 18	Conibear 220
Otter	18 × 18	Conibear 220
Badger	20 × 20	Conibear 280
Beaver	25 × 25	Conibear 330
Lynx-Bobcat	25 × 25	Conibear 330
Wolverine	25 × 25	Conibear 330

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