**IACUC Facility Inspection Form [PI Locations] – ILAR *Guide* Reference Document**

**Section 1.b, Emergency, Weekend, and Holiday Contacts/Care *Guide* pgs. 74 – 75**

In the event of an emergency, institutional security personnel and fire or police officials should be able to reach people responsible for the animals. Notification can be enhanced by prominently posting emergency procedures, names, or telephone numbers in animal facilities or by placing them in the security department or telephone center. Emergency procedures for handling special facilities or operations should be prominently posted and personnel trained in emergency procedures for these areas.

**Section 1.c, Allergen Alert Sign *Guide* p. 134**

If needed, measures should be taken to minimize occupational hazards related to exposure to animals both in the research area and during transport to and from the area.

**Section 2.a, Construction Guidelines *Guide* pgs. 136 – 142**

**Doors**

* Both doors and frames should be appropriately sealed to prevent vermin entry or harborage. Doors should be constructed of and, where appropriate, coated with materials that resist corrosion.

**Floors**

* Floors should be moisture resistant, nonabsorbent, impact resistant, and relatively smooth, although textured surfaces may be required in some high-moisture areas and for some species (e.g., farm animals). Floors should be easy to repair and resistant to both the action of urine and other biologic materials and the adverse effects of hot water and cleaning agents. They should be capable of supporting racks, equipment, and stored items without becoming gouged, cracked, or pitted. Depending on their use, floors should be monolithic or have a minimal number of joints.

**Walls and Ceilings**

* Walls and ceilings should be smooth, moisture resistant, nonabsorbent, and resistant to damage from impact. They should be free of cracks, unsealed utility penetrations, and imperfect junctions with doors, ceilings, floors, walls, and corners. Surface materials should be capable of withstanding cleaning with detergents and disinfectants and the impact of water under high pressure.

**Heating, Ventilation, and Air Conditioning (HVAC)**

* A properly designed and functioning HVAC system is essential to provide environmental and space pressurization control.
* Areas for quarantine, housing and use of animals exposed to hazardous materials, and housing of nonhuman primates should be kept under relative negative pressure, whereas areas for surgery or clean equipment storage should be kept under relative positive pressure with clean air.
* Relative humidity should generally be maintained within a range of 30-70% throughout the year.
* …daily fluctuations (recognizing the effects of routine husbandry especially when caring for large animal species) in relative humidity should be minimized…

**Power and Lighting**

* In the event of power failure, an alternative or emergency power supply should be available to maintain critical services… or life support systems for aquatic species) or support functions (e.g., freezers and isolators) in animal rooms, operating suites, and other essential areas.
* Light fixtures, timers, switches, and outlets should be properly sealed to prevent vermin access.
* A time-controlled lighting system should be used to ensure a uniform diurnal lighting cycle.
* Light bulbs or fixtures should be equipped with protective covers to ensure the safety of the animals and personnel. Moisture-resistant switches and outlets and ground-fault interrupters should be used in areas with high water use, such as cage-washing areas and aquarium-maintenance areas.

**Storage Areas**

* Bedding and food should be stored in a separate area free from vermin and protected from the risk of contamination from toxic or hazardous substances. Areas used for food storage should not be subject to elevated temperatures or relative humidity for prolonged periods. Refuse storage areas should be separated from other storage areas. Refrigerated storage, separated from other cold storage, is essential for storage of dead animals and animal tissue waste; this storage area should be kept below 7°C (44.6°F) to reduce putrefaction of wastes and animal carcasses and should be constructed in a manner that facilitates cleaning.

**Section 2.b, Location Duration *Guide* p. 134**

Animals should be housed in facilities dedicated to or assigned for that purpose, not in laboratories merely for convenience. If animals must be maintained in a laboratory to satisfy the scientific aims of a protocol, that space should be appropriate to house and care for the animals and its use limited to the period during which it is required. If needed, measures should be taken to minimize occupational hazards related to exposure to animals both in the research area and during transport to and from the area.

**Section 2.d,Safety Features *Guide* pgs. 19, 74**

***Guide* p. 19**

* Facilities, equipment, and procedures should also be designed, selected, and developed to reduce the possibility of physical injury or health risk to personnel (NIOSH 1997a,b).

***Guide* p. 74**

* …Sharps and glass should be disposed of in a manner that will prevent injury to waste handlers.

**Section 3.a, Animal Transport *Guide* pgs. 107 – 109**

* Careful planning for all types of transportation should occur to ensure animal safety and well-being. The process of transportation should provide an appropriate level of animal biosecurity (see definition on page 109) while minimizing zoonotic risks, protecting against environmental extremes, avoiding overcrowding, providing for the animals’ physical, physiologic, or behavioral needs and comfort, and protecting the animals and personnel from physical trauma (Maher and Schub 2004).
* For wildlife, transportation may occur between the capture site and field holding facilities. Careful planning for all types of transportation should occur to ensure animal safety and well-being. The process of transportation should provide an appropriate level of animal biosecurity (see definition on page 109) while minimizing zoonotic risks, protecting against environmental extremes, avoiding overcrowding, providing for the animals’ physical, physiologic, or behavioral needs and comfort, and protecting the animals and personnel from physical trauma (Maher and Schub 2004).
* Although ensuring animal biosecurity during transportation is always important, it is of particular importance for immunocompromised, genetically modified, and specific pathogen-free rodents (Jacoby and Lindsey 1998).
* For aquatic species and amphibians, special considerations are required for transportation in an aqueous or sufficiently moist environment, and special attention should be given to avoiding temperature extremes for poikilotherms.

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**Section 3.b, Identification *Guide* pgs. 75 – 76**

Animal records are useful and variable, ranging from limited information on identification cards to detailed computerized records for individual animals (Field et al. 2007). Means of animal identification include room, rack, pen, stall, and cage cards with written, bar-coded, or radio frequency identification (RFID) information.

In addition, the animals may wear collars, bands, plates, or tabs or be marked by colored stains, ear notches/punches and tags, tattoos, subcutaneous transponders, and freeze brands.

**Section 4.a Drug Storage, Labeling, Identification, and Records *Guide* pgs. 115, 122**

***Guide* p. 115**

* Drug records and storage procedures should be reviewed during facility inspections.

***Guide* p. 122**

* Agents that provide anesthesia and analgesia must be used before their expiration dates and should be acquired, stored, their use recorded, and disposed of legally and safely.

**Section 4.b, Medical Material Storage *Guide* p. 145**

The surgical support area should be designed for washing and sterilizing instruments and for storing instruments and supplies.

**Section 4.c, Analgesia Records *Guide* pgs. 75 - 76**

Medical records for individual animals can also be valuable, especially for dogs, cats, nonhuman primates, and agricultural animals (Suckow and Doerning 2007). They should include pertinent clinical and diagnostic information,Bottom of Form date of inoculations, history of surgical procedures and postoperative care, information on experimental use, and necropsy findings where applicable.

**Form section 5.b, Waste Gas Scavenging *Guide* p. 21**

Waste anesthetic gases should be scavenged to limit exposure.

**Form section 6.a, Noise/Vibrations During Behavioral Testing *Guide* p. 149**

* The facility site, as well as the engineering and construction methods used, should be carefully selected to minimize airborne transmission of noise and groundborne transmission of vibration.
* Double-door vestibule entries to the behavioral facility, testing suites, or individual testing rooms may be useful as they can prevent noise, odors, and light from entering the behavioral testing area. Floor coverings that reduce sound transmission should be selected. Testing rooms may require floor drains, water sources, and increased floor loading to support specific behavioral testing apparatus.

**Form section 6.b & 6.c, Behavioral Equipment Sanitation *Guide* p. 150**

**6.b:**

* When possible, testing equipment should be designed in such a way as to allow surface disinfection between studies.

**6.c:**

* Components that cannot be cleaned or disinfected, such as computers and recording equipment, should be located in areas where contact with animals is unlikely and should be covered when not in use (the use of computer keyboard covers may also be beneficial).

**Form sections 7.a & 7.b, Imaging/Whole Body Irradiation *Guide* p. 147**

**7.a:**

* Most MR scanners are superconducting and require the use of cryogens. Because cryogen boil-off can lead to asphyxiation of both personnel and animals, rooms with MR scanners or in which cryogen gases are stored must be equipped with oxygen sensors and a method for increasing room ventilation to exhaust inert gases during cryogen filling (Klaunberg and Davis 2008).

**7.b:**

* Devices are usu­ally self-shielded and, because of the weight of the shielding material, may require special site considerations. Devices with gamma-emitting sources are subject to regulations that require adherence to specific security, moni­toring, and personnel clearance requirements (Nuclear Regulatory Commis­sion 2008).

**Form section 7.c. Imaging/Whole Body IrradiationSanitation *Guide* p. 150**

When possible, testing equipment should be designed in such a way as to allow surface disinfection between studies. Components that cannot be cleaned or disinfected, such as computers and recording equipment, should be located in areas where contact with animals is unlikely and should be covered when not in use (the use of computer keyboard covers may also be beneficial).

**Form section 8.a, Approved Method of Euthanasia *Guide* p. 124**

All methods of euthanasia should be reviewed and approved by the veterinarian and IACUC.

**Form section 8.c, Euthanasia Confirmation of Death/Adequate Training *Guide* p. 124**

* It is essential that euthanasia be performed by personnel skilled in methods for the species in question and in a professional and compassionate manner. Special attention is required to ensure proficiency when a physical method of euthanasia is used.
* Death must be confirmed by personnel trained to recognize cessation of vital signs in the species being euthanized.

**Form section 8.d, Carcass Disposal *Guide* pgs. 73 – 74**

* Conventional, biologic, and hazardous waste should be removed and disposed of regularly and safely (Hill 1999).
* There should be a dedicated waste storage area that can be kept free of insects and other vermin. If cold storage is used to hold material before disposal, a properly labeled, dedicated refrigerator, freezer, or cold room should be used that is readily sanitized.

**Form sections 9.a & 9.b, Surgical Area Location *Guide* p. 144**

**9.a:**

* For most survival surgery performed on rodents and other small species such as aquatics and birds, an animal procedure laboratory is recommended; the space should be dedicated to surgery and related activities when used for this purpose, and managed to minimize contamination from other activities conducted in the room at other times.
* For most surgical programs, functional components of aseptic surgery include surgical support, animal preparation, surgeon’s scrub, operating room, and postoperative recovery. The areas that support those functions should be designed to minimize traffic flow and separate the related non-surgical activities from the surgical procedure in the operating room. The separation is best achieved by physical barriers (AORN 1993) but may also be achieved by distance between areas or by the timing of appropriate cleaning and disinfection between activities.

**9.b:**

* Surgical facilities should be sufficiently separate from other areas to minimize unnecessary traffic and decrease the potential for contamination (Humphreys 1993).

**Form sections 9.c & 9.d, Autoclave Monitoring Procedures *Guide* p. 119**

**…** sterilization indicators should be used to validate that materials have been properly sterilized (Berg 1993).

**Form sections 9.e & 9.g, Survival Surgery - Aseptic Procedures *Guide* p. 118**

* Regardless of the species, aseptic technique includes preparation of the patient, such as hair or feather removal and disinfection of the operative site (Hofmann 1979); preparation of the surgeon, such as the provision of appropriate surgical attire, face masks, and sterile surgical gloves (Chamberlain and Houang 1984; Pereira et al. 1990; Schonholtz 1976); sterilization of instru­ments, supplies, and implanted materials (Bernal et al. 2009; Kagan 1992b); and the use of operative techniques to reduce the likelihood of infection (Ayliffe 1991; Kagan 1992a; Lovaglio and Lawson 1995; Ritter and Marmion 1987; Schofield 1994; Whyte 1988).
* General principles of aseptic technique should be followed for all survival surgical procedures (ACLAM 2001).

**Form section 9.f, Device Sanitation *Guide* pgs. 118 - 119**

* Regardless of the species, aseptic technique **includes**… sterilization of instru­ments, supplies, and implanted materials (Bernal et al. 2009; Kagan 1992b)…
* Specific sterilization methods should be selected on the basis of the physical characteristics of the materials to be sterilized (Callahan et al. 1995; Schofield 1994)…
* Liquid chemical sterilants should be used with appropriate contact times and instruments should be rinsed with sterile water or saline before use.

**Form section 9.h, Instrument Intra-operative Sterilization & Storage *Guide* pgs. 118-119, 145**

***Guide* p. 118-119**

* Regardless of the species, aseptic technique **includes**… sterilization of instru­ments…
* Bead or dry heat sterilizers are an effective and convenient means of rapidly sterilizing the working surfaces of surgical instruments but care should be taken to ensure that the instrument surfaces have cooled sufficiently before touching animal tissues to minimize the risk of burns.

***Guide* p. 145**

* The surgical support area should be designed for washing and sterilizing instruments and for storing instruments and supplies.

**Form section 9.i, Thermoregulatory Support *Guide* pgs. 119 – 120**

***Intraoperative Monitoring:***

* Monitoring includes routine evaluation of… physiologic functions and conditions, such as body temperature… and should be appropriately documented.
* Maintenance of normal body temperature minimizes cardiovascular and respiratory disturbances caused by anesthetic agents (Dardai and Heavner 1987; Flegal et al. 2009; Fox et al. 2008), and is of particular importance in small animals where the high ratio of surface area to body weight may easily lead to hypothermia.

***Postoperative Care:***

* Particular attention should be given to thermoregulation…

**Form section 9.j, Anesthetic Monitoring *Guide* p. 119**

Monitoring includes routine evaluation of anesthetic depth… and should be appropriately documented.

**Form section 9.k, Surgical Records *Guide* pgs. 119, 122**

***Intraoperative Monitoring, Guide* p. 119**

* Monitoring includes routine evaluation of anesthetic depth and physiologic functions and conditions, such as body temperature, cardiac and respiratory rates and pattern (Flegal et al. 2009), and blood pressure (Kuhlman 2008), and should be appropriately documented.

***Postoperative Care, Guide* p. 120**

* Appropriate medical records should also be maintained.

***Anesthesia and Analgesia, Guide* p. 122**

* Agents that provide anesthesia and analgesia must be used before their expiration dates and should be acquired, stored, their use recorded, and disposed of legally and safely.

**Form section 10.a, Security/Access Control *Guide* p. 151**

* Most animals maintained for research are vulnerable to infection with adventitious agents and therefore access to them should be strictly controlled and made available only to personnel who have received appropriate training and have a legitimate need for access. Animals used in studies with hazardous materials require special precautions for personnel before access, and staff entering the animal facility should have completed the institution’s occupational health and safety training.

**Form section 10.b, SOPs for Husbandry/Care *Guide* p. 52**

Whenever possible, routine procedures for maintaining animals should be documented to ensure consistency of management and care.

**Form section 10.c, Separation of Animals by Species and Disease State *Guide* p. 111**

Physical separation of animals by species is recommended to prevent interspecies disease transmission and to eliminate the potential for anxiety and physiologic and behavioral changes due to interspecies conflict (Arndt et al. 2010). Such separation is usually accomplished by housing different species in separate rooms, but in some instances it may be possible with cubicles, laminar flow units, cages that have filtered air or separate ventilation, or isolators. It may also be acceptable to house different species in the same room—for example, two species that have a similar pathogen status and are behaviorally compatible (Pritchett-Corning et al. 2009), or aquatic species, as long as nets and other animal handling devices remain separate between systems.

**Form section 10.d, Primary Enclosures Meet Animal Needs and are Safe *Guide* pgs. 51-52, 82**

**Terrestrial Housing - Microenvironment, *Guide* p. 51-52**

* Social animals should be housed in stable pairs or groups of compatible individuals unless they must be housed alone for experimental reasons or because of social incompatibility…
* Structural adjustments are frequently required for social housing (e.g., perches, visual barriers, refuges), and important resources (e.g., food, water, and shelter) should be provided in such a way that they cannot be monopolized by dominant animals…
* The primary enclosure should provide a secure environment that does not permit animal escape and should be made of durable, nontoxic materi­als that resist corrosion, withstand the rigors of cleaning and regular han­dling, and are not detrimental to the health and research use of the animals.
* The enclosure should be designed and manufactured to prevent accidental entrapment of animals or their appendages and should be free of sharp edges or projections that could cause injury to the animals or personnel. It should have smooth, impervious surfaces with minimal ledges, angles, corners, and overlapping surfaces so that accumulation of dirt, debris, and moisture is minimized and cleaning and disinfecting are not impaired.
* All enclosures should be kept in good repair to prevent escape of or injury to animals, promote physical comfort, and facilitate sanitation and servic­ing. Rusting or oxidized equipment, which threatens the health or safety of animals, needs to be repaired or replaced. Less durable materials, such as wood, may be appropriate in select situations, such as outdoor corrals, perches, climbing structures, resting areas, and perimeter fences for primary enclosures. Wooden items may need to be replaced periodically because of damage or difficulties with sanitation. Painting or sealing wood surfaces with nontoxic materials may improve durability in many instances.
* Flooring should be solid, perforated, or slatted with a slip-resistant sur­face. In the case of perforated or slatted floors, the holes and slats should have smooth edges. Their size and spacing need to be commensurate with the size of the housed animal to minimize injury and the development of foot lesions. If wire-mesh flooring is used, a solid resting area may be beneficial, as this floor type can induce foot lesions in rodents and rabbits…
* Appropriate housing strategies for a particular species should be developed and implemented by the animal care management, in consultation with the animal user and veterinarian, and reviewed by the IACUC. Housing should provide for the animals’ health and well-being while being consistent with the intended objectives of animal use.

**Aquatic Environment, *Guide* p. 82**

* allow for the normal physiological and behavioral needs of the animals, including excretory function, control and maintenance of body temperature, normal movement and postural adjustments, and, where indicated, reproduction. In some poikilothermic reptiles and amphibians, microenvironmental temperature gradients may be needed for certain physiologic functions such as feeding and digestion.
* allow conspecific social interactions (e.g., schooling in fish species).
* provide a balanced, stable environment that supports the animal’s physiologic needs.
* restrict escape or accidental entrapment of animals or their appendages.
* are free of sharp edges and/or projections that could cause injury.
* allow for observation of the animals with minimal disturbance.
* are constructed of nontoxic materials that do not leach toxicants or chemicals into the aquatic environment.
* do not present electrical hazards directly or indirectly.

**Form section 10.e, Humidity/Temperature/Ventilation *Guide* pgs. 43 – 44, 46**

**Temperature – Terrestrial Housing, *Guide* p. 43**

* Animals should be housed within temperature and humidity ranges appropriate for the species, to which they can adapt with minimal stress and physiologic alteration.



**Humidity – Terrestrial Housing, *Guide* p. 44**

* Relative humidity should also be controlled, but not nearly as narrowly as temperature for many mammals; the acceptable range of relative humid­ity is considered to be 30% to 70% for most mammalian species.

**Ventilation – Terrestrial Housing, *Guide* p. 46**

* Provision of 10 to 15 fresh air changes per hour in animal housing rooms is an acceptable guideline to maintain macroenvironmental air qual­ity by constant volume systems and may also ensure microenvironmental air quality.

**Temperature – Aquatic Housing, *Guide* p. 80**

* Temperature requirements are based on the natural history of the species and can vary depending on life stage (Green 2002; Pough 1991; Schultz and Dawson 2003). Water temperature may be controlled at its source, within the life support system, or by controlling the macroen­vironment.

**Humidity – Aquatic Housing, *Guide* p. 81**

* Macroenvironmental relative humidity levels are generally defined by safety issues and staff comfort, since room humidity is not critical for aquatic species; however, excessive moisture may result in condensation on walls, ceilings, and tank lids, which may support microbial growth and serve as a source of contamination or create a conducive environment for metal corrosion. In a dry environment (e.g., indoor heating during cold weather or outdoor housing in some climates/seasons), evaporation rates may be higher, potentially requiring the addition of large quantities of water to the system and monitoring for increases in salinity/conductivity, contaminants, or other water quality aberrations. Some amphibians and reptiles may need elevated microenvironmental humidity (in excess of 50-70% relative humidity), which may require maintaining elevated macroenvironmental humidity levels (Pough 1991; St. Claire et al. 2005).

**Ventilation – Aquatic Housing, *Guide* p. 81**

* Room air exchange rates are typically governed by thermal and moisture loads.

**Form section 10.g, Food and Water Access *Guide* p. 56**

At a minimum, animals must have… ready access to food and water.

**Form Section 10.h, Enrichment *Guide* pgs. 52 – 53, 83**

**Terrestrial Housing, *Guide* pgs. 52 – 53**

* The primary aim of environmental enrichment is to enhance animal well-being by providing animals with sensory and motor stimulation, through structures and resources that facilitate the expression of species-typical behaviors and promote psychological well-being through physical Bottom of Form

exercise, manipulative activities, and cognitive challenges according to species-specific characteristics (NRC 1998a; Young 2003). Examples of enrichment include structural additions such as perches and visual barriers for nonhuman primates (Novak et al. 2007); elevated shelves for cats (Overall and Dyer 2005; van den Bos and de Cock Buning 1994) and rabbits (Stauffacher 1992); and shelters for guinea pigs (Baumans 2005), as well as manipulable resources such as novel objects and foraging devices for nonhuman primates; manipulable toys for nonhuman primates, dogs, cats, and swine; wooden chew sticks for some rodent species; and nesting material for mice (Gaskill et al. 2009; Hess et al. 2008; Hubrecht 1993; Lutz and Novak 2005; Olsson and Dahlborn 2002). Novelty of enrichment through rotation or replacement of items should be a consideration; however, changing animals’ environment too frequently may be stressful.

***Aquatic Housing, Guide* p. 83**

* When used, enrichment should elicit species-appropriate behaviors and be evaluated for safety and utility.

**Form section 10.i, Primary Enclosure Sanitation/Bedding Changed *Guide* pgs. 69 - 70, 86**

**Terrestrial Housing, *Guide* pgs. 69 - 70**

* The maintenance of environmental conditions conducive to health and well-being—involves bedding change (as appropriate), cleaning, and disinfection.
* The frequency and intensity of cleaning and disinfection should depend on what is necessary to provide a healthy environment for an animal.
* Soiled bedding should be removed and replaced with fresh materials as often as necessary to keep the animals clean and dry and to keep pollutants, such as ammonia, at a concentration below levels irritating to mucous membranes. The frequency of bedding change depends on multiple factors, such as species, number, and size of the animals in the primary enclosure; type and size of the enclosure; macro- and microenvironmental temperature, relative humidity, and direct ventilation of the enclosure; urinary and fecal output and the appearance and wetness of bedding; and experimental conditions, such as those of surgery or debilitation, that might limit an animal’s movement or access to clean bedding. There is no absolute minimal frequency of bedding changes; the choice is a matter of professional judgment and consultation between the investigator and animal care personnel. It typically varies from daily to weekly.
* In general, enclosures and accessories, such as tops, should be sanitized at least once every 2 weeks. Solid-bottom caging, bottles, and sipper tubes usually require sanitation at least once a week. Some types of cages and housing systems may require less frequent cleaning or disinfection; such housing may include large cages with very low animal density and frequent bedding changes, cages containing animals in gnotobiotic conditions with frequent bedding changes, individually ventilated cages, and cages used for special situations. Other circumstances, such as filter-topped cages without forced-air ventilation, animals that urinate excessively (e.g., diabetic or renal patients), or densely populated enclosures, may require more frequent sanitation.

**Aquatic Housing, *Guide* p. 86**

* …all components of the animal facility, including animal rooms and support spaces (e.g., storage areas, cage-washing facilities, corridors, and procedure rooms), should be regularly cleaned and disinfected as appropriate to the circumstances and at a frequency determined by the use of the area and the nature of likely contamination.

**Form sections 10.j & 10.k, Food Prep, Labelling & Storage Areas *Guide* p. 66**

Areas in which diets and diet ingredients are processed or stored should be kept clean and enclosed to prevent the entry of pests. Food stocks should be stored off the floor on pallets, racks, or carts in a manner that facilitates sanitation. Opened bags of food should be stored in vermin-proof contain­ers to minimize contamination and to avoid the potential spread of patho­gens. Exposure to elevated storage room temperatures, extremes in relative humidity, unsanitary conditions, and insects and other vermin hastens food deterioration. Storage of natural-ingredient diets at less than 21°C (70°F) and below 50% relative humidity is recommended. Precautions should be taken if perishable items—such as meats, fruits, and vegetables and some specialty diets (e.g., select medicated or high-fat diets)—are fed, because storage conditions may lead to variation in food quality.

Most natural-ingredient, dry laboratory animal diets stored properly can be used up to 6 months after manufacture. Nonstabilized vitamin C in manufactured feeds generally has a shelf life of only 3 months, but com­monly used stabilized forms can extend the shelf life of feed. Refrigeration preserves nutritional quality and lengthens shelf life, but food storage time should be reduced to the lowest practical period and the manufacturers’ recommendations considered. Purified and chemically defined diets are often less stable than natural-ingredient diets and their shelf life is usually less than 6 months (Fullerton et al. 1982); they should be stored at 4°C (39°F) or lower.

**Form section 10.l, Storage Space of Equipment, Supplies, Etc. *Guide* p. 141**

* Adequate space should be available for storage of equipment, supplies, food, bedding, and refuse. Corridors are not appropriate storage areas.
* Bedding and food should be stored in a separate area free from vermin and protected from the risk of contamination from toxic or hazardous substances. Areas used for food storage should not be subject to elevated temperatures or relative humidity for prolonged periods.

**Form section 10.m, Bedding Labeling & Storage *Guide* pgs. 69, 141**

**Bedding and Nesting Materials, *Guide* p. 69**

* It [bedding] should be transported and stored off the floor on pallets, racks, or carts in a fashion consistent with maintenance of quality and avoidance of contamination. Bags should be stored sufficiently away from walls to facilitate cleaning.

**Storage Areas, *Guide* p. 141**

* Bedding and food should be stored in a separate area free from vermin and protected from the risk of contamination from toxic or hazardous substances.

**Form sections 10.n, Daily Care *Guide* p. 74**

Animals should be cared for by qualified personnel every day, including weekends and holidays, both to safeguard their well-being and to satisfy research requirements.

**Form sections 10.o, Veterinary Care *Guide* pgs. 74, 114**

***Emergency, Weekend, and holiday Care, Guide*** **p. 74**

* Emergency veterinary care must be available after work hours, on weekends, and on holidays.

***Emergency Veterinary Care,* *Guide* p. 114**

* Procedures must be in place to provide for emergency veterinary care both during and outside of regularly scheduled hours. Such procedures must enable animal care and research staff to make timely reports of animal injury, illness, or death. A veterinarian or the veterinarian’s designee must be available to expeditiously assess the animal’s condition, treat the animal, investigate an unexpected death, or advise on euthanasia. In the case of a pressing health problem, if the responsible person (e.g., investigator) is not available or if the investigator and veterinary staff cannot reach consensus on treatment, the veterinarian must have the authority, delegated by senior administration (see [Chapter 2](https://www.nap.edu/read/12910/chapter/3#p2001c67a9970011001), Institutional Official and Attending Veterinarian) and the IACUC, to treat the animal, remove it from the experiment, institute appropriate measures to relieve severe pain or distress, or perform euthanasia if necessary.