

# Institutional Animal Care and Use Committee (IACUC)

Registration Number with NCBE, KSA: HAP-02-J-042.



## Inspection Checklist - Aquatic Facilities

### 1. Location:

- a. animal areas separate from personnel areas (*Guide, p 134*)
- b. separation of species (*Guide, p 111*)
- c. separation by disease status (*Guide, p 111*)
- d. security and access control (*Guide, p 151*)

### 2. Construction:

- a. corridors (*Guide, p 136*)
- b. animal room doors (*Guide, p 137, 150*)
- c. exterior windows (*Guide, p 137*)
- d. floors (*Guide, p 137, 150*)
- e. drainage (*Guide, p 138, 150*)
- f. walls and ceilings (*Guide, p 138, 150*)
- g. heating ventilation and air conditioning (*Guide, p 139, 150-151*)
- h. power and lighting (*Guide, p 141, 150*)
- i. noise control (*Guide, p 142*)
- j. vibration control (*Guide, p 142*)
- k. environmental monitoring (*Guide, p 143*)

### 3. Water Quality:

- a. standards for acceptable quality are established (*Guide, p 78*)
- b. chlorine, chloramines, chemical, and reactive bioproducts are removed or neutralized prior to use in aquatic systems (*Guide, p78, 86*) **[must]**

### 4. Life Support System:

- a. water source is based on appropriate controls and research requirements (*Guide, p 79*)
- b. biofilter is of sufficient size to process bioload (*Guide, p 80*) **[must]**

### 5. Temperature, Humidity and Ventilation/Illumination/Noise and Vibration:

- a. temperature and humidity (*Guide, p 43, 80-81*)
- b. ventilation and air quality (*Guide, p 45, 81*)
- c. illumination (*Guide, p 47, 81*)
- d. noise and vibration (*Guide, p 49, 81*)

### 6. Primary Enclosure:

- a. allows for normal physiological and behavioral needs (*Guide, p 82*)
- b. allows social interaction for social species (*Guide, p 82*)

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- c. provides a balanced, stable environment *(Guide, p 82)*
- d. provides appropriate water quality and monitoring *(Guide, p 82)*
- e. allows access to food and waste removal *(Guide, p 82)*
- f. restricts escape and entrapment *(Guide, p 82)*
- g. allows undisturbed observation *(Guide, p 82)*
- h. constructed of nontoxic materials *(Guide, p 82)*
- i. prevents electrical hazards *(Guide, p 82)*
- j. space needs of species are evaluated by IACUC during program evaluations and facility inspections *(Guide, p 83)*

## 7. Environmental Enrichment, Social Housing, Behavioral and Social Management:

- a. enrichment elicits appropriate behaviors and is safe *(Guide, p 83)*
- b. semi-aquatic reptiles are provided terrestrial areas *(Guide, p 83)*
- c. handling is kept to a minimum and appropriate techniques are in place at facility or protocol level *(Guide, p 84)*
- d. nets are cleaned, disinfected and managed to avoid contamination of systems *(Guide, p 84)*

## 8. Food:

- a. storage to prevent contamination, preserve nutrients and prevent pests *(Guide, p 84)*
- b. delivery ensures access to all , minimizing aggression and nutrient loss *(Guide, p 84)*
- c. storage times are based on manufacturer recommendations or accepted practice *(Guide, p 84)*
- d. a nutritionally complete diet is provided *(Guide, p 84)*

## 9. Substrate:

- a. amount, type and presentation of substrate is appropriate for the system and the species *(Guide, p 85)*

## 10. Sanitation, Cleaning and Disinfection:

- a. frequency of tank/cage cleaning and disinfection is determined by water quality, permits adequate viewing and health monitoring *(Guide, p 86)*
- b. cleaning and disinfection of macroenvironment *(Guide, p 86)*

## 11. Waste Disposal:

- a. procedures for collection *(Guide, p 73-74)*
- b. hazardous wastes are rendered safe before removal from facility *(Guide, p 73-74)* [must]
- c. animal carcasses *(Guide, p 73-74)*

## 12. Pest Control:

- a. regularly scheduled *(Guide, p 74)*
- b. documented program including control of pests and insecticide use *(Guide, p 74)*

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## 13. Emergency, Weekend, and Holiday Animal Care:

- a. care provided by qualified personnel every day (*Guide, p 74, 87*)
- b. provision for accessible contact information (*Guide, p 74, 87*)
- c. emergency response plans in place to address major system failures (*Guide, 87*)
- d. veterinary care available after hours, weekends, and holidays (*Guide, p 74, 114*) **[must]**

## 14. Identification:

- a. cage/tank cards contain required information (*Guide, p 75, 87*)
- b. genotype information included and standardized nomenclature used when applicable (*Guide, p 75, 87*)

## 15. Recordkeeping:

- a. water quality parameters and frequency of testing recorded (*Guide, p 88*)
- b. records kept on feeding, nonexpired food supplies, live cultures (*Guide, p 88*)

## 16. Storage:

- a. adequate space for equipment, supplies, food, substrate and refuse (*Guide, p 141*)
- b. substrate protected from contamination (*Guide, p 141*)
- c. food in vermin-free, temperature and humidity controlled area and protected from contamination (*Guide, p 141*)
- d. refuse storage is separate (*Guide, p 141*)
- e. carcass and animal tissue storage is separate, refrigerated below 7°C and cleanable (*Guide, p 141*)

## 17. Personnel:

- a. adequate space for locker rooms, administration and training (*Guide, p 135*)

## Aseptic Surgery

### 1. General Considerations:

- a. location minimizes traffic/contamination (*Guide, p 144*)
- b. functional components (surgical support, animal preparation, surgeon scrub, operating room, postoperative recovery) are designed and separated (physically or otherwise) (*Guide, p 144*)
- c. appropriate drug storage, control, expiration date monitoring (*Guide, p 115, 122*)
- d. safe sharps disposal system (*Guide, p 74*)
- e. adequate records of anesthesia and perioperative care (*Guide, p 122*)
- f. aseptic procedures in use for all survival surgery (*Guide, p 118-119*)

### 2. Operating Room:

- a. effective contamination control procedures (*Guide, p 144*)
- b. effective cleaning procedures/dedicated tools (*Guide, p 145*)
- c. interior surfaces smooth and impervious to moisture (*Guide, p 145*)
- d. HVAC system meets Guide requirements (*Guide, p 145*)

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- e. lighting safe and appropriate (*Guide, p 145*)
- f. outlets safe and appropriate (*Guide, p 145*)
- g. scavenging of anesthetic gases implemented (*Guide, p 145*)

### 3. Surgical Support:

- a. facility for washing, sterilizing, storing instruments and supplies (*Guide, p 145*)
- b. autoclave monitoring procedures are implemented (*Guide, p 119, 145*)
- c. storage of autoclaved materials maintains sterility (*Guide, p 145*)
- d. cold sterilization procedures are appropriate (*Guide, p 119*)

4. **Animal Preparation:** contains large sink to facilitate cleaning of animal and operative site (*Guide, p 145*)

5. **Surgeon Scrub:** outside operating room, non-hand-operated sink (*Guide, p 145*)

6. **Postoperative Recovery:** allows adequate observation, easily cleaned, supports physiologic functions, minimizes risk of injury (*Guide, p 145*)

7. **Dressing Area:** place for personnel to change (*Guide, p 145*)

## Procedure Areas, Non-survival Surgeries, Laboratories, Rodent Surgeries, Imaging, Whole Body Irradiation, Hazardous Agent Containment, Behavioral Studies

### 1. General Considerations:

- a. labs used to house animals only when scientifically required and limited to minimum period necessary (*Guide, p 134*)
- b. drug storage, control, and expiration dates (*Guide, p 115, 122*)
- c. sharps disposal (*Guide, p 74*)
- d. anesthetic monitoring (*Guide, p 120*)
- e. scavenging of anesthetic gases (*Guide, p 21*)
- f. safety features (e.g., SOPs, safety signs, eyewash stations, secure gas cylinders) are in place (*Guide, p 19*)
- g. carcass disposal (*Guide, p 73-74*)

### 2. Additional Concerns for Survival Surgery: (minor procedures only)

- 1. records of peri-operative care (*Guide, p 120*)
- 2. aseptic procedures (*Guide, p 118-119*)
- 3. autoclave monitoring procedures (*Guide, p 119, 145*)
- 4. storage of autoclaved materials (*Guide, p 145*)
- 5. cold sterilization procedures are appropriate (*Guide, p 119*)

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## 3. Imaging/Whole Body Irradiation:

- a. location of resource limits contamination risk (*Guide, p 147*)
- b. appropriate transportation methods are in place (*Guide, p 147*)
- c. gas anesthesia provision, scavenging and monitoring are appropriate (*Guide, p 147*)
- d. appropriate sensors and ventilation are provided for cryogen gases (*Guide, p 147*) **[must]**
- e. imaging console is located away from radiation source (*Guide, p 147*)

## 4. Hazardous Agent Containment:

- a. facility adheres to National Regulations and local rules (*Guide, p 148*) **[must]**

## 5. Behavioral Studies:

- a. facility minimizes airborne transmission of noise and ground-borne transmission of vibration (*Guide, p 149*)
- b. floor coverings reduce sound transmission (*Guide, p 149*)
- c. testing equipment allows for surface disinfection (*Guide, p 150*)
- d. components that cannot be cleaned are not in ready contact with animals and kept covered when not in use (*Guide, p 150*)
- e. housing areas are contiguous with testing areas when appropriate (*Guide, p 150*)