



ANIMAL WELFARE JUDGING AND ASSESSMENT CONTEST 2016



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GUINEA PIG SCENARIO

Animal Welfare Judging and Assessment Competition, 2016

OVERVIEW



Environment 1

- ⊙ University research facility in southwestern Ontario
 - ⊙ Guinea pigs live in floor pens in groups
- ⊙ Guinea pigs are used in an Animal Care Committee-approved protocol for regulatory testing by the provincial diagnostic laboratory
- ⊙ Facility is CCAC-accredited and licensed under the Animals for Research Act of Ontario

Environment 2

- ⊙ Two-story house in suburb of southwestern Ontario
 - ⊙ Guinea pigs live separately in cages
- ⊙ Couple in their early 40's with two children, 10 and 14
 - ⊙ Wife had cats and dogs as a child, but has significant allergies to cats
- ⊙ 8 year-old budgie also lives in the house
- ⊙ Recently acquired 2 standard poodles

THE GUINEA PIGS: ENVIRONMENT 1



- ⊙ 4 female Dunkin Hartley, white guinea pigs
 - ⊙ ~4-6 months old
- ⊙ 3 other floor pens in same animal housing room, each with 4-6 female guinea pigs
 - ⊙ Received as separate shipments from same vendor
- ⊙ Purchased from an AAALAC-accredited commercial laboratory animal vendor in U.S.A.
 - ⊙ May be from different litters, but were shipped as a group of 4

THE GUINEA PIGS: ENVIRONMENT 2



- ⊙ 2 female guinea pigs
 - ⊙ Butterscotch is a 2-year old Abyssinian
 - ⊙ Sara is a 4-year old English short-hair
- ⊙ Guinea pigs purchased individually from the same pet store 2 years apart



HOUSING: ENVIRONMENT 1



- ⊙ Housed in a laboratory animal facility
 - ⊙ Room located on a busy corridor with lots of human foot traffic
- ⊙ Room has sealed concrete block walls, epoxy-paint sealed floors
- ⊙ Irregularly-shaped pen = 3.5 ft wide x 4 ft long (1.07 m x 1.22 m)
- ⊙ Pen walls formed from folding flat stainless steel mesh panels,
 - ⊙ Each panel = 2.5 ft high (0.76 m)
 - ⊙ Mesh openings = 0.5 in x 0.5 in (1.3 cm x 1.3 cm)
- ⊙ 12h:12h light:dark cycle
 - ⊙ Artificial light from fluorescent bulbs
- ⊙ 12 air changes per hour
 - ⊙ All other environmental parameters as per CCAC Guide

HOUSING: ENVIRONMENT 2

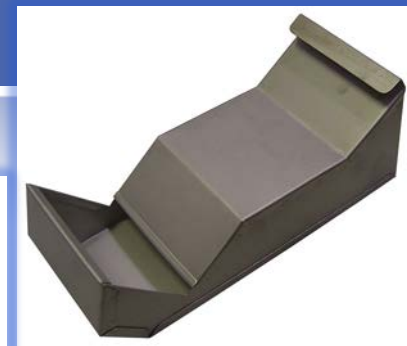


- ⦿ Guinea pigs housed individually in cages
 - ⦿ Cages are side by side table in hallway outside family room and kitchen area
- ⦿ 22 in long x 15 in wide x 18 in high (56 cm x 38 cm x 46 cm)
 - ⦿ Cage bottoms are plastic
 - ⦿ Wire tops are plasticized
 - ⦿ Top hatch for removing animals
- ⦿ Plastic hut in each cage
- ⦿ Ambient lighting, house has central heating and air conditioning



FOOD & WATER: ENVIRONMENT 1

- ◎ 2 water bottles on pen front
- ◎ J-style stainless steel hopper
 - ◎ New food and water 1x/week or refilled, as needed between
 - ◎ Food and water checked daily
- ◎ Pelleted guinea pig feed from laboratory animal supplier, used within 3 months of milling
- ◎ Free choice autoclaved hay daily
- ◎ One fresh fruit/vegetable item daily
 - ◎ Parsley, dark leafy greens, carrot pieces, apples offered on a rotating basis



FOOD & WATER: ENVIRONMENT 2



- ⦿ Water bottle is suspended on the cage front and crock in cage used for pelleted feed
 - ⦿ New food and water 1x/day
- ⦿ Guinea pig pelleted food purchased from pet store, used within 1 year of milling
- ⦿ Timothy hay fed 3x/week in hay rack inside cage
- ⦿ Fresh, leafy greens 2x/week
- ⦿ Multivitamin drops in water 2x/week



CLEANING



Environment 1

- ⦿ Food hopper replaced every 1 wk
 - ⦿ Sanitized in a cagewasher
- ⦿ Water bottles replaced every 1 wk
 - ⦿ Cleaned in automated bottlewasher
- ⦿ Pen is spot-cleaned daily with new shavings added as needed
 - ⦿ Completely cleaned and sanitized every 1 wk
- ⦿ Huts and chew items sanitized every 1 wk in cagewasher
- ⦿ Any fresh food items left at the end of each day are removed

Environment 2

- ⦿ Dishes and water bottles cleaned every 2 wk
 - ⦿ By hand with soap and hot water
- ⦿ Bedding changed over every 1 wk
 - ⦿ Cage bottom cleaned every 2 wk with soap and hot water
- ⦿ Huts and chew toys are cleaned sporadically

HUSBANDRY



Environment 1

- ⊙ Animals checked 2x/day by animal care personnel
- ⊙ Guinea pigs are picked up and examined 1x/week by animal care personnel
- ⊙ Teeth and nails checked 1x/week by animal health technician
 - ⊙ No issues with teeth
 - ⊙ Nails rarely need clipping

Environment 2

- ⊙ Animals are looked at several times per day by at least 2 people
 - ⊙ Primary caregiver is the wife
 - ⊙ Youngest child has lost interest in them
- ⊙ Nails clipped as needed
 - ⊙ ~ 1x per 2 months
 - ⊙ Younger pig has been quicked* 2x in last year

*Clipping that exposed the nail bed, guinea pig withdrew paw, nail bled



Environment 1

- ⊙ Guinea pigs used for skin sensitivity assays mandated by regulatory authority
 - ⊙ ~6-10x tests per year at random times
 - ⊙ Guinea pigs < 1 year old must be 'on call' at facility
- ⊙ When needed, guinea pigs transferred to lab for a 72 h skin exposure test
 - ⊙ Singly-housed in stainless steel cages in accredited short term holding facility
- ⊙ Test severity rated as mild to moderate discomfort
 - ⊙ Hair shaved and substance applied 1x
 - ⊙ Euthanized by intraperitoneal pentobarbital injection at study end
- ⊙ Guinea pigs not used for assay can be adopted out
 - ⊙ ~35% adopted as pets per year

Environment 2

- ⊙ Attempted to introduce guinea pigs when second one was acquired
 - ⊙ Vocalizations and 'scuffling' occurred
 - ⊙ Opted to individually house side by side instead
- ⊙ When dogs were first brought home, guinea pigs hid nearly constantly and gave frequent alarm calls
 - ⊙ After 2 weeks, guinea pigs stopped responding this way

VETERINARY CARE



Environment 1

- ⊙ Guinea pigs evaluated by veterinary technician on arrival
- ⊙ Clinical exam once weekly at pen change when health technician checks teeth/nails
- ⊙ Guinea pigs are seen by a lab animal veterinarian only when problems arise
 - ⊙ < 1 issue per pen during time at facility

Environment 2

- ⊙ Guinea pigs not evaluated by veterinarian after purchase
- ⊙ No regular vet care provided; however, they would be taken to the regular companion animal clinic if attention was needed

HEALTH ISSUES



Environment 1

- ⊙ Some squealing and scuffling noted within first week after arrival
 - ⊙ Closely monitored during this time
 - ⊙ Minor wounding tolerated (observed on 2/4 animals)
- ⊙ Guinea pigs do not feel bony when picked up

Environment 2

- ⊙ Cage of older guinea pig is becoming wetter by cleaning at end of week
 - ⊙ Water bottle has been checked and is not leaking
- ⊙ Guinea pigs feel plump when picked up, but no rolls of fat

EXERCISE

Environment 1

- ⦿ No additional exercise given when housed in floor pens
- ⦿ No exercise provided when housed singly for 72 h during assay test

Environment 2

- ⦿ Guinea pigs taken out of cage and exercised individually on family room carpet with supervision 1x/week for 30 min each
- ⦿ Dogs can watch, but are not permitted to sniff guinea pigs
- ⦿ Older guinea pig used to go outside for 10-15 min/day in good weather
 - ⦿ Stopped after dogs acquired



HUMAN-ANIMAL INTERACTIONS: ENVIRONMENT 1



Interactions

- ⊙ 10 min interaction with guinea pigs when feeding and watering each morning
- ⊙ Same 2 animal caregivers assigned to room each week/weekend - talk to animals when in room
- ⊙ Student volunteers sit in pens for 1 h 3x/week
 - ⊙ Talk to, pet and pick up guinea pigs

Guinea pigs' responses

- ⊙ Animals don't respond when door opens
 - ⊙ Squeal in anticipation as feed bins filled and when hay, fruits/vegetables distributed
 - ⊙ Approach new food and water before caretaker withdraws
- ⊙ Approach, sniff feet and legs of volunteer < 30 sec
 - ⊙ Allow petting, do not struggle when picked up

HUMAN-ANIMAL INTERACTIONS: ENVIRONMENT 2



Interactions

- ⊙ 10 min interaction with guinea pigs when feeding and watering each morning
- ⊙ 'Chats' with all animals when preparing dinner
- ⊙ Occasional chats when walking by cages
- ⊙ Sporadically removed from cages and held for short periods during week (< 5 min)

Guinea pigs' responses

- ⊙ During feeding guinea pigs squeal expectantly and stand at cage side when fridge door, hay or pellet packages are opened
- ⊙ Older guinea pig stands on hind legs at side of cage when spoken to
- ⊙ Initially retreat into hut when human approaches cage
 - ⊙ Come out of hut after 1 min, then approach human's hand, but try to avoid petting or being picked up

TIME BUDGETS*

**Between 07:00-19:00 (i.e., when lights on)*



	Environment 1	Environment 2
Feeding/Foraging	12%	10%
Drinking	1%	3% (most by older g.p.)
Social behavior	7%	0%
Grooming	4%	6%
Moving about	8%	2%
Interact w/environment	9%	3%
Awake/inactive in open	13%	9%
Sleeping/resting in open	15%	13%
In hut/shelter	31%	54%

BEHAVIOR NOTES: ENVIRONMENT 1



- ◎ Guinea pigs retreat quickly into shelters when strangers enter room
 - ◎ Animals generally retreat together into same shelter and one female watches out from the entrance
- ◎ Minor fighting occurs with patchy alopecia* on subordinate animal(s)
- ◎ Guinea pigs often forage and rest near one another



*Alopecia = hair loss

BEHAVIOR NOTES: ENVIRONMENT 2



- ⊙ Both guinea pigs hide when dogs sniff at cage sides, come out after 2 min
- ⊙ Older guinea pig regularly chews cage bars
- ⊙ Guinea pigs sometimes sniff at each other through cage bars and vocalize

