

Marmoset Colony Health Management



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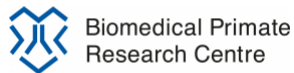
**Central Institute for
Experimental Animals**

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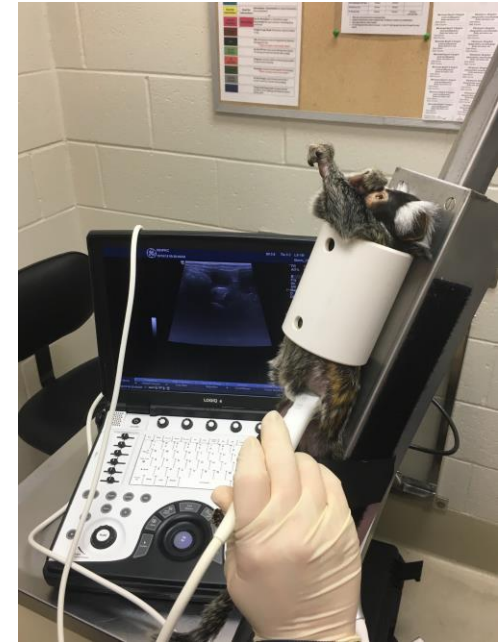
Staffing

Colony manager

- Resource allocation: breeding, research, sale
- Housing and space management
- Supervision of husbandry staff
- Oversight of animal breeding
- Assist with technical tasks, surgery, research procedures

Breeding manager

- Typically the same person as colony manager or sometimes veterinary staff
- Monitors breeding and pregnancies
- Administers birth control
- Ultrasound



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Staffing

Animal Caretaker/Husbandry

- Daily care: cleaning, feeding, enrichment, catching/handling
- Daily health observations and weighing
- Medication administration, treatments
- Training of animals, positive reinforcement
- Infant care

Behaviorist, Behavioral Service Unit

- Role typically filled by another position
 - Veterinarian or Colony manager
- BSU available for consults as needed



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Staffing

Veterinarian

- Staff management and training
- Research project support and facilitation of implementation
- Surgical and anesthesia services
- Animal health oversight and medical care
- Facility and husbandry program oversight

Veterinary technician

- Procedure/surgery prep and support
- Anesthesia monitoring
- Sample collection, triage and case presentation to veterinarian
- Monitor ongoing clinical cases and follow up checks
- Daily health rounds and medication administration



Blood Analysis

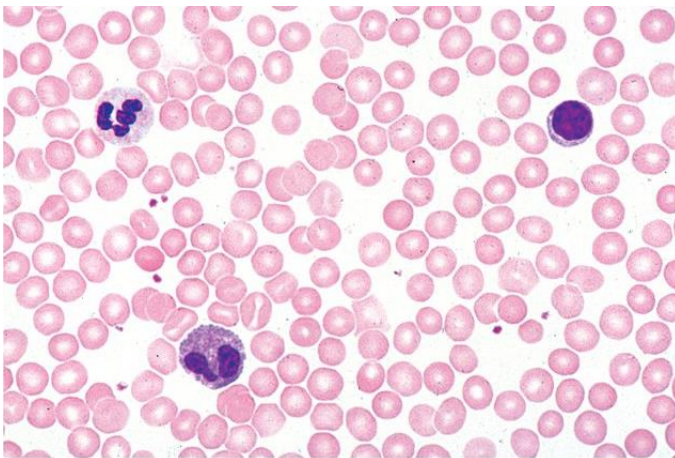
Point of care blood analyzer

- Quick results
- Small blood volume (0.1mL)
- Portable



Microtainer

- CBC (0.3mL)
- Chemistry (0.8mL)



Daily Health Observations

- Staff familiar with animals
- Check all animals for abnormalities
 - Systematic check of each animal
 - abnormal behaviors, trauma, lethargy, dehydration, vaginal bleeding, parturition, inappetence, breeding
 - Examine cages
 - abnormal feces, vomit, blood, uneaten chow
 - Record abnormalities
 - Forms, electronic
- Notify vet tech or veterinarian



Daily Health Observations

Identify the animal (cage number, species, and animal ID) and describe the irregular observation using one of the following colony record codes or give a brief description. If an animal's ID cannot be determined, leave the animal ID blank, but attempt to identify the animal as soon as possible.

[illegible]

Additional comments:

Colony record codes:

MENSTRUATION	ABNORMAL FECES	MISCELLANEOUS	BEHAVIOR	BREEDING
M: regular menstruation	FS: firm stool	T: trauma* (specify location)	NP: new pair	E: ejaculate visible
LM: light menstruation	SF: soft feces/cow pie	L: lethargic*	OG: over-groomed	NOE: no ejaculate
HM: heavy menstruation	D: diarrhea	V: vomit	P: pacing	
PPM: after birth bleeding	BF: bloody feces	RP: rectal prolapse*	R: rubbing	
BD: bloody diarrhea*	BP: bloody diarrhea*	VP: vaginal prolapse*	F: flipping	
HPPM: heavy after birth bleeding	MU: mucus with feces	NE: not eating	SIB: self-injurious behavior*	
		N: newborn infant (identify # if >1)		

* Contact a member of the veterinary staff immediately if bloody feces/diarrhea, trauma, rectal prolapse, pregnant animal with vaginal bleeding, or lethargy.

Irregular Observation Form

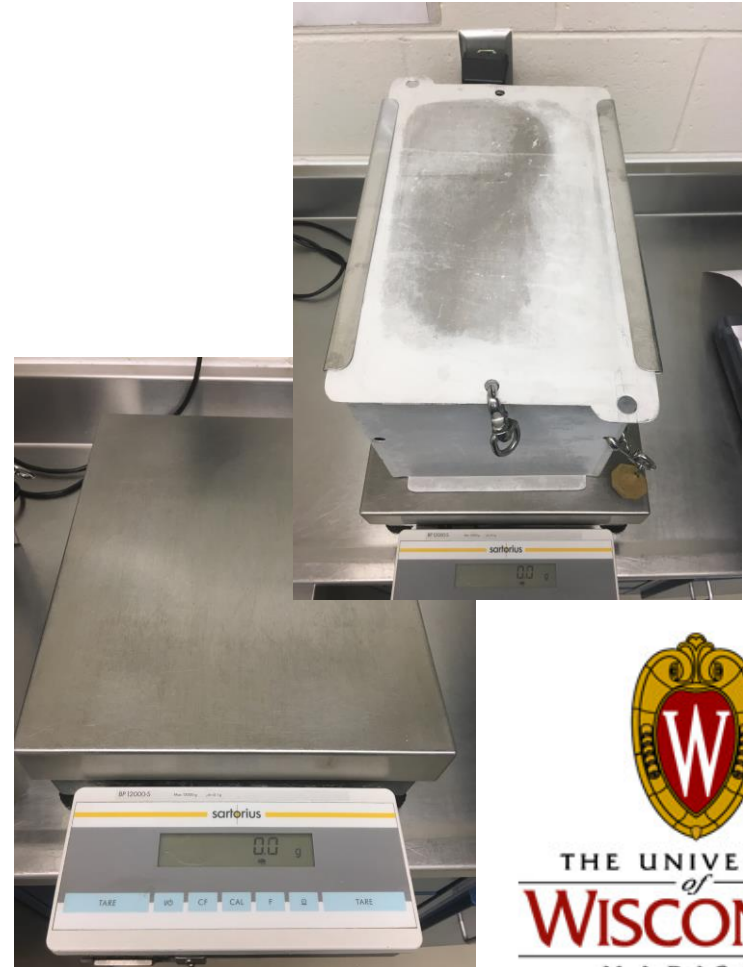
- Post Form on Room Door
- Husbandry staff fills out form each morning
- Vet staff checks all animals reported for abnormalities



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Weights

- Frequency
 - Weekly, Monthly, Quarterly, As needed/indicated
 - Earliest Weights
- Methods
 - Sedated, At any procedure
 - Nest box
 - Scale in cage
- Monitoring trends
 - Indication of disease
 - Decline/Aging
 - Compare to colony averages
- Scales



Weights

Raw Data

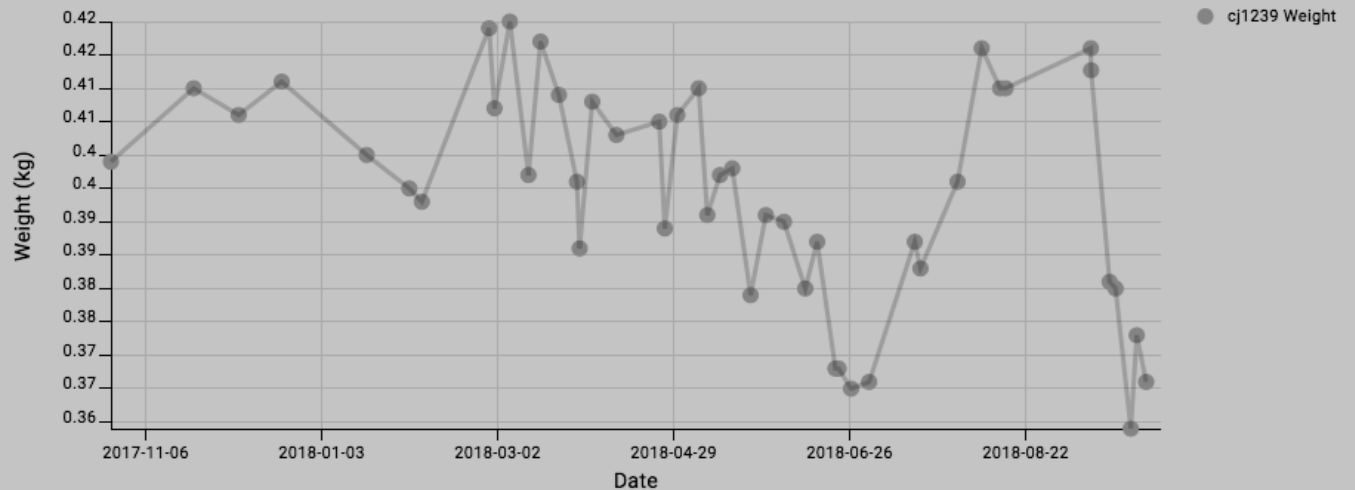
GRID VIEWS ▾ EXPORT ▾ PRINT PAGING ▾ MORE ACTIONS ▾

1 - 100 of 279 Next » Last »

View: Percent Change

<input type="checkbox"/>	<input type="checkbox"/> Id ▴	<input type="checkbox"/> Date ▾	Weight (kg)	Current Weight (kg)	% Change Relative To Current	Interval (Months)	Remark	Status	Task Id
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<input type="checkbox"/>	cj1239	2018-06-11 13:00	0.38						
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<input type="checkbox"/>	cj1239	2018-03-28 12:10	0.396						
<input type="checkbox"/>	cj1239	2018-03-22 14:05	0.400						

Weight : cj1239



Physical Exams

- Frequency
 - Annual or Twice per year
 - Monthly
 - Pre-assignment assessment
 - Exams prior to assignment to research project
- Sedated
 - Ketamine (10-30mg/kg)
 - Alfaxalone (7-12 mg/kg)
 - Release of multidose vial – became available Aug2018
 - 28 day shelf life after open
 - Isoflurane
- Non-sedated
 - Restrained
 - More difficult to be thorough



Physical Exams

- Other procedures performed while sedated
 - CBC + Serum chemistry
 - Radiographs and Ultrasound
 - Dental cleanings/extractions
 - Tattoo placement/repair
 - Tb testing
- Routine Pathogen Testing
 - Fecal testing
 - Rectal swab for culture
 - Parasite exam
 - Giardia and Cryptosporidium EIA
 - Virology



Tuberculosis Testing







- Frequency
 - Annual
 - Twice per year
 - None
 - Prior to shipping
- Tuberculin Skin Test Location
 - Intradermal
 - Eyelid (0.05ml)
 - Abdomen
- Exclusions
 - <3mo, <6mo, <1year
 - Pregnant or lactating
 - Embryo transfer
 - Late gestation



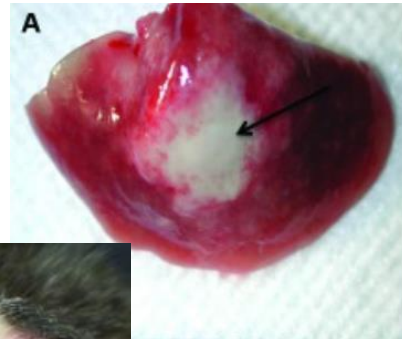
Tuberculosis Testing

- Never had a positive
- Steps following positive test:
 - Quarantine room/area
 - Sedate animal(s) for follow up testing
 - Retest animal or colony
 - Thoracic radiographs
 - Gastric aspirate – culture and acid fast smear
 - Bronchoalveolar lavage – culture and acid fast smear
 - Inform local veterinary authorities
 - Gamma interferon assay
 - Mycobacterium PCR
- Treatment options:
 - Antibiotic treatment
 - Euthanasia

APPENDIX A: TB TEST SCORING

	GRADE 0 = NEGATIVE <ul style="list-style-type: none"> • NO swelling • NO redness
	GRADE 1 = NEGATIVE <ul style="list-style-type: none"> • NO swelling • Mild redness or bruising at test site
	GRADE 2 = NEGATIVE <ul style="list-style-type: none"> • NO swelling • Redness of eyelid extending beyond the margin of the eyelid
	GRADE 3 = INDETERMINATE *CALL VET <ul style="list-style-type: none"> • MILD swelling of the eyelid (Less than 50% of pupil covered) • Possible redness
	GRADE 4 = POSITIVE *CALL VET <ul style="list-style-type: none"> • MODERATE swelling of the eyelid (More than 50% of pupil covered) • Possible redness
	GRADE 5 = POSITIVE *CALL VET <ul style="list-style-type: none"> • SEVERE swelling (Eye is swollen closed) • Possible redness • Possible discharge • Possible eyelid necrosis

Updated Mar 2018



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Quarantine of Acquired Animals

- Where did the animals come from?
- Tuberculosis
 - 30 day or 90 day
 - 3x or 7x
 - Thoracic radiographs
- Measles
- Klebsiella, Pasteurella, Bordatella
- Intestinal parasites
- Other tests
 - Blood work, fecal testing



Domestic Quarantine



BIOSAFETY LEVEL 2

Biohazardous Agent(s)	Herpes B Virus and other zoonotic pathogens				
Special Procedures or Precautions for Entry	<p>REQUIRED: standard protective clothing plus water resistant lab coat and pants or jumpsuit and N-95 respirator or PAPR to be removed when exiting.</p> <p>RECOMMENDED: safety glasses.</p> <p>PERSONS WITH IMPAIRED IMMUNOCOMPETENCE should not enter.</p> <p>SPECIAL VISITORS and ALL MAINTENANCE PERSONNEL should see people below for entry.</p>				
Notice	Call or See	Building	Room	UW Phone	Cell Phone
Entry/Advice/Emergency	Buddy Capasso	WNPFC-2	211-B	265-5571	209-4866
Entry/Advice/Emergency	Bonnie Fracino	WNPFC-2	B104	890-1142	209-4523
Entry/Advice/Emergency	Michelle Hanks	WNPFC-2	211-A	265-3240	209-6085
Entry/Advice/Emergency	Shireya Larson	WNPFC-2	211-A	265-5622	209-2180
Entry/Advice/Emergency	Henry Coenen	WAGE	1413	890-5893	209-4813
Entry/Advice/Emergency	Casey Fitz	WNPFC-2	211-A	261-1463	209-7580
Entry/Advice/Emergency	Kevin Brunner	WNPFC-2	207-A	265-2069	209-5851

Revised September 2014



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Identification

- Codes, id numbers (1801, 1802 or 18A, 18B)
- Tattoos
- Microchips
- Neck tags
- Dye
- Shaving



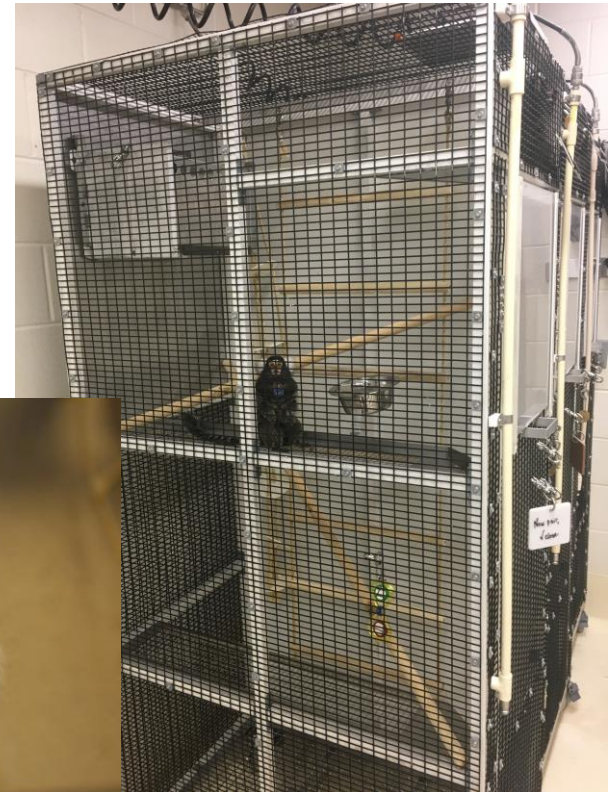
Restraint

- Hand catching
 - gloves
- Nest box
- Tube
 - Blood collection
 - Ultrasound
 - Medication administration
- Chemical



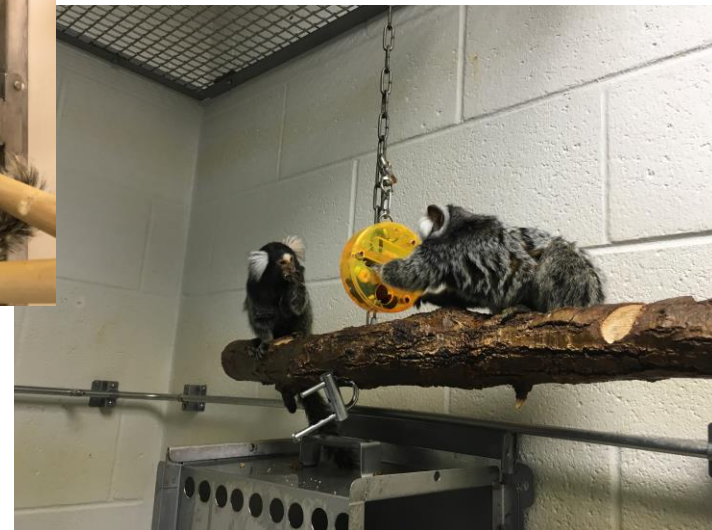
Caging

- Vertical space
 - Arboreal
- Perches and Ladders
 - Wood
- Nest box
- Hammock



Enrichment

- Establish enrichment program
 - Novel Foods
 - Pocket treats
- Species specific behaviors
 - Social housing
 - Foraging opportunities
- Sharing ideas



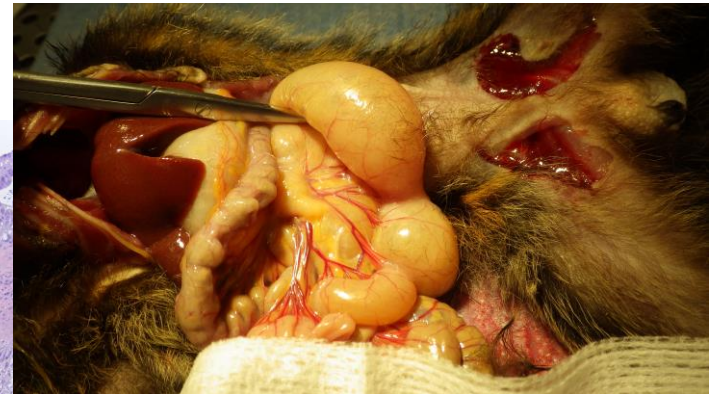
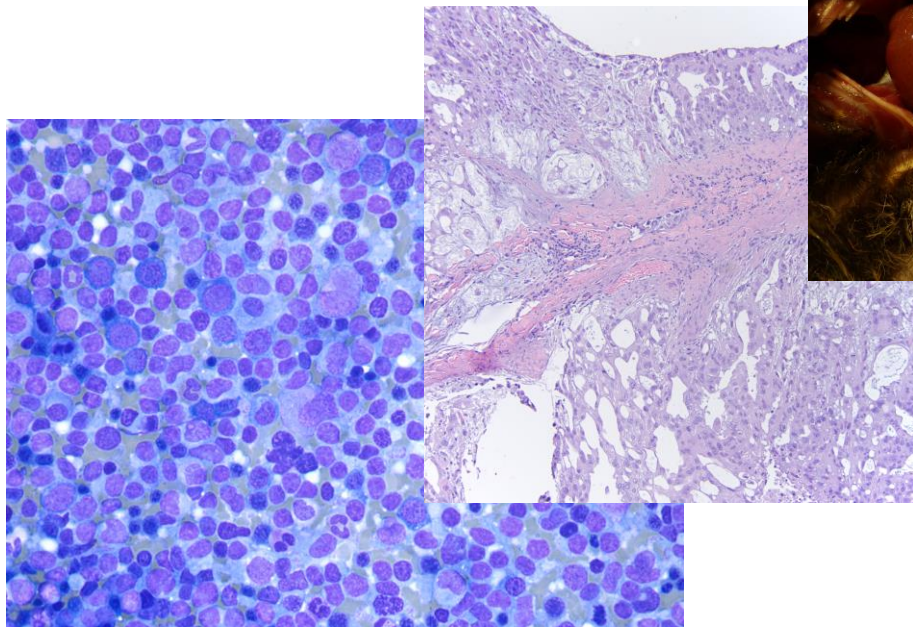
Questions ?



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Pathology and Clinical Pathology Services

- Necropsy services
- Histology
- Blood, fecal, urine storage, processing and testing
- Tissue collection and storage
- Microbiology



Veterinary Rounds

- Perform/help with daily health observations
- Brief exams, Triage
 - Palpation
 - Skin tent test
 - Traumas
 - Weight
- Blood collection, ultrasound, istat
- Medication administration and dispensing
- Rechecks of ongoing problems
- Medical record entry
 - SOAP
 - Problem List



Daily Health Observations

Observations Per Animal

[ADD RECORD](#) | [ADD BATCH](#) | [DELETE SELECTED](#) | [SELECT ALL](#) | [DUPLICATE SELECTED](#) | [BULK EDIT](#) | [REMOVE BLANK](#)

Id:

Date:

Feces:

- ☐ Bloody diarrhea
- ☐ Bloody feces
- ☐ Diarrhea
- ☐ Firm stool
- ☐ Mucus
- ☐ Soft feces
- ☐ Watery diarrhea

Menses:

- ☒ [none]
- ☐ Heavy after birth bleeding
- ☐ Heavy Mens
- ☐ Light after birth bleeding
- ☐ Light Mens
- ☐ Regular after birth bleeding
- ☐ Regular Mens

Other:

- ☐ Lethargic
- ☐ Newborn Infant(s)
- ☐ Not Eating
- ☐ Rectal Prolapse
- ☐ Trauma
- ☐ Vaginal Prolapse
- ☐ Vomit

Trauma Location:

Behavior:

- ☐ Flipping
- ☐ New pair of animals
- ☐ Over-groomed animal
- ☐ Pacing
- ☐ Saluting
- ☐ Self-injurious behavior

Other Behavior:

Breeding:

- ☐ N/A
- ☐ No visible ejaculate
- ☐ Visible ejaculate

Remark:

Records

Location	Id	Date	Feces	Menses	Other
		2018-10-12 13:57	[none]	[none]	[none]

Irregular Observations - Multiple rooms selected

[VIEWS](#) | [EXPORT](#) | [PRINT](#) | [PAGE SIZE](#) | [MORE ACTIONS](#)

Filter: (DATE(date) = 2018-10-18)

View: default

<input type="checkbox"/>	Room	Cage	Id	Date	Userid	Description	Remark
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<input type="checkbox"/>	a140a	0004	cj1854	2018-10-18 07:23	2731	Cage Observation, Feces: D	Sm amt D dry
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