**THE UNIVERSITY OF ADELAIDE ANIMAL ETHICS COMMITTEE**

**MONITORING SHEET FOR ASSESSING LITTERS OF NEONATAL MICE & RATS**

This monitoring sheet is to be completed for each **cage** where mice/rats are bred or maintained. It is to be held in the animal breeding facility whilst the animals are held there, for inspection by the AEC. Subsequently it is to be held as part of your research data and may be requested to be reported to the AEC. **N.B. Animal deaths or abnormalities must be reported promptly to the AEC.** Cages are not changed or disturbed +/- 2 days of expected Date of Birth\*

|  |  |  |
| --- | --- | --- |
| AEC Approval #:  | OGTR/IBC #:  | Chief Investigator:  |
| Box ID #  | Strain name: |
| Litter ID: | Dams ID: | Sire ID: |

**LITTER OBSERVATIONS** KEY: # = Number; N = Normal; A = Abnormal. Record as appropriate.

The severity of abnormalities should be assessed and details recorded in the comments column. Criteria to determine health of animals include:- skin colour and the presence of: ruffled fur, altered mobility, breathing, abnormal size, reduced growth rate, overt signs of disease or weight loss and general condition). When used for a cage group, observations can be collated and recorded in the one cell

e.g Skin Colour Score N-(4/5), A-(1/5). Further details on the observations can be recorded in the comments section.

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| **Date** | **Age** (days) | # Pups **L**ive/**D**ead | **SKIN COLOUR:**#N #A | **MILK BAND:**#N #A | **ACTIVITY:**#N #A | **\*\*OF THOSE STILL:** | **Dam’s Behaviour**N A | Comments |
| Skin Temp.#N #A | Righting Reflex #N #A |
| pink | blue / grey | Large band | Small /absent | Wriggling/Wa-king Activity | **fairly still\*\*** | warm | Cool / cold | able to right | unable to right | Good Nest / retrieves pups | Poor Nest/rejects pups |  |
|  | \*Birth |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | \*1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  | 19 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**OBSERVATIONS CONTINUE ON THIS SHEET UNTIL LITTER WEANED. RECORD WEANING DATE ON SHEET.**

**N.B AEC APPROVAL REQUIRED FOR LATE WEANING (>3 WKS) PTO**

**LITTER OBSERVATIONS (CONT.)** KEY: # = Number; N = Normal; A = Abnormal. Record as appropriate.

The severity of abnormalities should be assessed and details recorded in the comments column. Criteria to determine health of animals include:- skin colour and the presence of: ruffled fur, altered mobility, breathing, abnormal size, reduced growth rate, overt signs of disease or weight loss and general condition). When used for a cage group, observations can be collated and recorded in the one cell

e.g Skin Colour Score N-(4/5), A-(1/5). Further details on the observations can be recorded in the comments section.

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| **Date** | **Age** (days) | # Pups **L**ive/**D**ead | **SKIN COLOUR:**#N #A | **GROWTH:**#N #A | **ACTIVITY:**#N #A | **\*\*OF THOSE STILL:** | **Dam’s Behaviour**N A | Comments |
| Skin Temp.#N #A | Righting Reflex #N #A |
| pink | Blue / grey | Achieved development milestone | Small / slow development | Wriggling/Wa-king Activity | **fairly still\*\*** | warm | Cool / cold | able to right | unable to right | Grooms pups | Poor /rejects pups |  |
|  | 19 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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**(N.B. WEANER ANIMAL observations CONTINUE & ARE recorded on ADULT MOUSE/RAT clinical record sheets)**

WEANED: DATE:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ #MALES WEANED : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to Cage ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#FEMALES WEANED : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to Cage ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ADDITIONAL COMMENTS:

**MONITORING PROTOCOL**

1. Numbers of Live pups and any deaths (or missing pups) should be recorded. If numbers of deaths observed are more than normal, the line should be monitored more closely (in consultation with animal care staff and AWO/veterinarian where appropriate) to determine the cause of death and whether this can be prevented. The AEC should also be notified.
2. Where abnormalities of any kind are continually observed, the cause of this should be immediately investigated and the AWO/veterinarian and ethics committee notified.
3. Pregnant Dams are given extra tissues for nest making and monitored daily when birth expected until pups born. Cages are not changed or disturbed +/- 2 days from expected Date Of Birth.
4. At Postnatal Day 10 any unwanted pups (if this can be determined by coat colour) are humanely killed
5. At Postnatal Day 14-21 all pups are sexed. Healthy pups of normal size are weaned and samples are removed for genotyping (small piece of tail or ear punch according to approved protocol). Details on any abnormalities observed or special husbandry requirements are provided to the animal carers.
6. Postnatal Day 21- pups are weaned, unless the phenotype of the GM strain requires delayed weaning to Day 28. **Late weaning requires AEC approval.**

**OBSERVATIONS CONTINUE ON THIS SHEET UNTIL LITTER WEANED. RECORD WEANING DATE ON SHEET**

FOR REFERENCE:

**Typical Developmental Milestones (Mouse)**

|  |  |
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| **Age (Days)** | **Observation** |
| 1 | Eyes and Ears closed. Hairless, but some skin pigment present (unless albino). Milk Band present, skin pink, pup warm, pup active if stimulated. Dam retrieves pups outside the nest. |
| 3 | Ears open. |
| 4 | Ear flaps erect. Milk band no longer visible in stomach |
| 5 | Fur fuzz on back (dorsum) |
| 7 | Fur covers back, shoulders & head |
| 9 | Fur developing on belly. Nipples show, particularly in females. |
| 11 | Fur growth complete, teeth begin to erupt, eyes start to open. Pups more active. |
| 12-14 | Eyes open, begin to eat solid food. Large enough for tail tissue collection for genotyping. |
| 21 | Pups very active (like “popcorn”). Usually able to be sexed & weaned. Weight approx. 10g |