

SANGER INSTITUTE STANDARD OPERATING PROCEDURE

SUBJECT: Dysmorphology – V1

SOP Number: SOP0039	To be reviewed:	
Author(s):	Signed:	Date:
Editor:	Signed:	Date:
Date modified:		

INTRODUCTION:

The purpose of this procedure is to assess any morphological abnormalities in wild-type and genetically altered mice.

HEALTH & SAFETY:

- **RA003** – Hazardous Substances; *Section RA003.2*
- **RA004** – Physical Hazards; *Section RA004.2, RA004.6*
- **RA007** – Musculoskeletal; *Section RA007.4*

RESPONSIBILITIES:

All staff performing this procedure are responsible for ensuring that this SOP has been read, understood and where applicable is followed in accordance with the relevant PPL. All staff should be trained and competent to perform the procedure, where applicable they should also be licensed to perform the procedure.

RESOURCES:

Equipment:

1. Weight scale
2. 70% Ethanol and tissues
3. Techniplast mobile IVC rack
4. Mobile transport rack
5. One clean cage and nestlet per cage of mice tested
6. Diet (as defined by pipeline)

Associated Documents & SOPs:

- **SOP0045** – Weigh Mice
- **SOP0058** – Hot Plate
- **SOP0064** – Use of Change Station

Staff Required: This test can be completed by two phenotypers.

NOTE:

This test should be performed in a cage change station, with good lighting to be able to properly assess morphological abnormalities.

If this assay is performed in conjunction with the Hot Plate test (pipeline dependent), then it is to be performed no sooner than one hour after the start of the Hot Plate procedure.

PROCEDURE:

Before performing the procedure, verify that this is the correct procedure at this point in the pipeline by consulting the cage card(s) and confirming that the procedure has not already been performed on the mice.

1. Prepare change station for use (see SOP Use of the Techniplast Interactive Cage Change Station).
2. Identify mouse to be tested by ear mark.
3. Place the mouse on the cage grid to examine. Initially, observe for the following:
 - Any obvious dysmorphologies in the physical appearance
 - Irregularities in the shape of body, ears, eyes or head
 - Irregularities in coat colour, skin pigmentation, hair distribution and development. (Stroke the coat against the hair growth to note the repositioning of the hairs to their initial position as a measure of hair development.)
 - Subtle kinks in the tail. (Stroke the tail along its entire length with 2 fingers.)
4. Holding mouse in scruff, observe for the following:
 - Whiskers present or absent
 - Irregularities in the genitals
 - Malformations on the ventral and lateral sides of head and body
 - Shape, number and colour of the incisors
 - Number and shape of digits; number, size and colour of paw pads; paw size and limb size; irregularities in skin pigmentation on limbs
5. Record results according to current DCF.
6. Repeat (steps 2-5) for all mice to be tested and perform a cage clean as defined by pipeline.
7. Repeat steps 2-6 for subsequent cages.
8. Clean equipment and surfaces. Transfer all waste to a yellow offensive waste bag or clearly labelled waste container.
9. Ensure all cages display updated cage cards and return mice to animal room.