

# Formalin Test IMPC\_FOR\_001

## Purpose

To assess nocifensive behaviours triggered by the inflammatory response following a formalin injection.

## Experimental Design

Minimum number of mutant animals: 5 males + 5 females

Age at test: 16 weeks

## Procedure

1. Acclimatise mice in the testing room for at least 30 minutes before testing.
2. Anaesthetize mouse and administer formalin with a subcutaneous injection into the plantar surface of the chosen paw.
3. Place the mouse into the testing arena and start the recording. Run the recording for up to 90 minutes.
4. Remove the mouse from the arena and clean the arena.
5. Score the behaviour of the animals for nocifensive behaviors between 10 and 60 minutes post formalin administration.

## Notes

This procedure can be performed as a terminal or non-terminal procedure. If terminal, euthanize the mouse humanely after the recording.

This procedure is a pilot study from the Pain Phenotyping Pilot

## Parameters and Metadata

**Total duration of lick/bite behaviour** IMPC\_FOR\_001\_001 | v1.0

simpleParameter

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Unit Measured:** s

**Derivation:** sumOfIncrements('IMPC\_FOR\_020\_001', 1)

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## Total number of lick/bite events IMPC\_FOR\_002\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Total duration of drag/limp behaviour IMPC\_FOR\_003\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: s

Derivation: sumOfIncrements('IMPC\_FOR\_021\_001', 1)

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## Total number of drag/limp events IMPC\_FOR\_004\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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## Total duration of flinch behaviour IMPC\_FOR\_005\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: s

Derivation: sumOfIncrements('IMPC\_FOR\_022\_001', 1)

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## Total number of flinch events IMPC\_FOR\_006\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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## Anaesthetic IMPC\_FOR\_007\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: Sevoflurane, Isoflurane,

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## Formalin Concentration IMPC\_FOR\_008\_001 | v1.0

procedureMetadata

Req. Analysis: true

Req. Upload: true

Is Annotated: false

Options: 5%, 2.5%,

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## Amount of formalin injected IMPC\_FOR\_009\_001 | v1.0

procedureMetadata

Req. Analysis: true

Req. Upload: true

Is Annotated: false

**Unit Measured:** ul

**Options:** 20, 30,

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## **Syringe Gauge** IMPC\_FOR\_010\_001 | v1.0

procedureMetadata

**Req. Analysis:** true

**Req. Upload:** true

**Is Annotated:** false

**Options:** 29, 30,

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## **Site of formalin injection** IMPC\_FOR\_011\_001 | v1.0

procedureMetadata

**Req. Analysis:** true

**Req. Upload:** true

**Is Annotated:** false

**Options:** Plantar surface of left hind paw, Plantar surface of right hind paw,

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## **Arena Manufacturer** IMPC\_FOR\_012\_001 | v1.0

procedureMetadata

**Req. Analysis:** true

**Req. Upload:** true

**Is Annotated:** false

**Options:** In-house, IITC Life Science,

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## Size of testing arena IMPC\_FOR\_013\_001 | v1.0

procedureMetadata

**Req. Analysis:** true

**Req. Upload:** true

**Is Annotated:** false

**Options:** 13cm (H) x 36cm (W) x 40 cm(L), 12.7 cm (H) x 21.9 cm (W) x 21.59 cm (L), 36cm (L) X 40cm (W) X 13cm (H),

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## Recording Software IMPC\_FOR\_014\_001 | v1.0

procedureMetadata

**Req. Analysis:** true

**Req. Upload:** true

**Is Annotated:** false

**Options:** Home Cage Analyzer, Actual Analytics, Noldus Media Recorder v4,

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## Data scoring method IMPC\_FOR\_015\_001 | v1.0

procedureMetadata

**Req. Analysis:** true

**Req. Upload:** true

**Is Annotated:** false

**Options:** Human scorer, from video, Neural network, from video,

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## Annotation Software IMPC\_FOR\_016\_001 | v1.0

procedureMetadata

**Req. Analysis:** true

**Req. Upload:** true

**Is Annotated:** false

**Options:** Simple Video Coder ,

Behavioral Observation Research Interactive Software (BORIS),

In-house developed system,

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## **Duration of observation period** IMPC\_FOR\_017\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Options:** 60 minutes, 90 minutes,

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## **Camera Position** IMPC\_FOR\_018\_001 | v1.0

procedureMetadata

**Req. Analysis:** true

**Req. Upload:** true

**Is Annotated:** false

**Options:** On the side, Below the arena,

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## **Disinfectant** IMPC\_FOR\_019\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Options:** 35% Isopropanol, Virkon 1% & 70% Ethanol, 2% Distel,

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## Duration of lick/bite behaviour IMPC\_FOR\_020\_001 | v1.0

seriesParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: s

Increments: Minimum 1

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## Duration of drag/limp behaviour IMPC\_FOR\_021\_001 | v1.0

seriesParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: s

Increments: Minimum 1

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## Duration of flinch behaviour IMPC\_FOR\_022\_001 | v1.0

seriesParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: s

Increments: Minimum 1

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## Duration of licking/biting behavior (10-60 minutes) IMPC\_F

OR\_023\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: s

### Derivation:

```
sum(incrementValue('IMPC_FOR_020_001', '10'),incrementValue('IMPC_FOR_020_001', '15'),incrementValue('IMPC_FOR_020_001', '20'),incrementValue('IMPC_FOR_020_001', '25'),incrementValue('IMPC_FOR_020_001', '30'),incrementValue('IMPC_FOR_020_001', '35'),incrementValue('IMPC_FOR_020_001', '40'),incrementValue('IMPC_FOR_020_001', '45'),incrementValue('IMPC_FOR_020_001', '50'),incrementValue('IMPC_FOR_020_001', '55'))
```

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## Time per bin/increment IMPC\_FOR\_024\_001 | v1.0

procedureMetadata

Req. Analysis: true

Req. Upload: true

Is Annotated: false

Options: 5 minutes,

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## Time bins excluded IMPC\_FOR\_025\_001 | v1.0

procedureMetadata

Req. Analysis: true

Req. Upload: true

Is Annotated: false

Options: Bin/increment 0 (anaesthesia effect), None,

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# Experimenter ID IMPC\_FOR\_026\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** false

**Is Annotated:** false

