

# Von Frey Test TCP\_VFR\_001

## Purpose

To detect mechanical/tactile sensitivity in the mouse paw

## Experimental Design

Minimum number of mutant animals: 7 males + 7 females

Age at test: 16 weeks

Sexual dimorphism:

## Procedure

### 1. Baseline measurement

1. Move the mice to the testing chambers and leave to acclimate for the specified length of time.
2. Mice should be tested using the simplified up-down method (SUDO) of Bonin et al. (2014).
3. When the mouse is still, apply the filament to the centre of the right hindpaw. Press the filament against the paw for 3 seconds.
4. Mark the response '0' if the mouse does not react, or 'X' if it does react to the filament.
5. Leave the mouse for a minimum of 2 minutes before presentation of the next filament.
6. The next filament to be tested will depend on the response to the previous filament.
  - If the mice did respond to the previous filament, they should be tested with the filament of the next smallest size. Once tested, record the response.
  - If the mice did not respond to the previous filament, they should be tested with the filament of the next largest size. Once tested, record the response.
8. Continue testing the mice until 5 trials have been completed.
9. The procedure is then repeated for a second run.

### 3. Challenge

1. The challenge is administered after the baseline measurement has been completed.

### 5. Test 1

1. 22 hours after the challenge injection, re-test the mouse with the von Frey filaments using the same procedure as described for the baseline measurement.

### 7. Test 2

1. 142 hours after the challenge injection, re-test the mouse with the von Frey filaments using the same procedure as described for the baseline measurement.

## Notes

This procedure is a pilot study from the Pain Phenotyping Pilot

A simplified up-down method (SUDO) for measuring mechanical nociception in rodents using von Frey filaments. Bonin RP, Bories C, De Koninck Y. Mol Pain. 2014 Apr 16;10:26. doi: 10.1186/1744-8069-10-26.PMID:24739328

## Parameters and Metadata

### Baseline: tabulation TCP\_VFR\_001\_001 | v1.0

seriesParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Increments: Minimum 1

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### Baseline: final score TCP\_VFR\_002\_001 | v1.0

seriesParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Increments: Minimum 1

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### Baseline: average final score TCP\_VFR\_003\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Derivation: meanOfIncrements('TCP\_VFR\_002\_001',1)

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## Baseline: PWT force TCP\_VFR\_004\_001 | v1.0

seriesParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: g

Increments: Minimum 1

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## Baseline: average PWT force TCP\_VFR\_005\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: g

Derivation: meanOfIncrements('TCP\_VFR\_004\_001',1)

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## Test 1: tabulation TCP\_VFR\_006\_001 | v1.0

seriesParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Increments: Minimum 1

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## Test 1: final score TCP\_VFR\_007\_001 | v1.0

seriesParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Increments: Minimum 1

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## Test 1: average final score TCP\_VFR\_008\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Derivation: meanOfIncrements('TCP\_VFR\_007\_001',1)

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## Test 1: PWT force TCP\_VFR\_009\_001 | v1.0

seriesParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: g

Increments: Minimum 1

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## Test 1: average PWT force TCP\_VFR\_010\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: g

Derivation: meanOfIncrements('TCP\_VFR\_009\_001',1)

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## Test 2: tabulation TCP\_VFR\_011\_001 | v1.0

seriesParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Increments: Minimum 1

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## Test 2: final score TCP\_VFR\_012\_001 | v1.0

seriesParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Increments: Minimum 1

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## Test 2: average final score TCP\_VFR\_013\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Derivation: meanOfIncrements('TCP\_VFR\_012\_001',1)

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## Test 2: PWT force TCP\_VFR\_014\_001 | v1.0

seriesParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: g

Increments: Minimum 1

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## Test 2: average PWT force TCP\_VFR\_015\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: g

Derivation: meanOfIncrements('TCP\_VFR\_014\_001',1)

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## Challenge TCP\_VFR\_016\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: CFA,

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## Site of challenge injection TCP\_VFR\_017\_001 | v1.0

[procedureMetadata](#)

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: Plantar surface of right hindpaw,

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## General anaesthetic for challenge injection TCP\_VFR\_018\_001 |

v1.0

[procedureMetadata](#)

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: Isoflurane,

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## Number of runs per test TCP\_VFR\_019\_001 | v1.0

[procedureMetadata](#)

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: 2, 1,

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## Number of trials per run TCP\_VFR\_020\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: 5,

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## Minimum interval between filament presentation TCP\_VFR\_021\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: min

Options: 2,

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## Number of repeats with same filament TCP\_VFR\_022\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: Once, 2-3, if response not obvious in first 2 then 3rd performed,



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## Minimum acclimatisation period TCP\_VFR\_023\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: Hours

Options: 1,

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## Paws tested TCP\_VFR\_024\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: Right hindpaw,

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## Time between baseline measurement and challenge TCP\_VFR\_025\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: Hours

Options: 1, 2,

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## Time between challenge and test 1 TCP\_VFR\_026\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: Hours

Options: 22, 24,

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## Time between challenge and test 2 TCP\_VFR\_027\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: Hours

Options: 142, 144,

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## Tetrad manufacturer TCP\_VFR\_028\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: IITC,

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## **Tetrad dimensions** TCP\_VFR\_029\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Unit Measured:** cm

**Options:** 12.5 cm H x 10 cm W x 10 cm L,

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## **Tetrad material** TCP\_VFR\_030\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Options:** Plexiglass,

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## **Tetrad colour/opacity** TCP\_VFR\_031\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Options:** Clear,

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## **Inset material** TCP\_VFR\_032\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Options:** Plexiglass,

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## **Inset colour/opacity** TCP\_VFR\_033\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Options:** Clear, White,

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## **Grid material** TCP\_VFR\_034\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Options:** Black painted metal,

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## **Grid hole size** TCP\_VFR\_035\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Unit Measured:** mm

**Options:** Hexagonal 8 mm corner to corner,

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## **Filament set manufacturer** TCP\_VFR\_036\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Options:** Aesthesio, Stoetling,

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## **Filament set model** TCP\_VFR\_037\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Options:** Aesthesio Precise Tactile Sensory Evaluator 20 piece kit,

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## **Filament material** TCP\_VFR\_038\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Options:** Nylon,

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## Range of filaments used (target force) TCP\_VFR\_039\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: g

Options: 0.02 - 1.4,

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## Starting filament (target force) TCP\_VFR\_040\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: g

Options: 0.16,

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## Starting filament (filament number) TCP\_VFR\_041\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: 5,

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## Date filaments last calibrated TCP\_VFR\_042\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Experimenter ID TCP\_VFR\_043\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Disinfectant TCP\_VFR\_044\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Options: Clidox/Ethanol, Quaternary Ammonia (Coverage Plus),

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## Scaling parameter X TCP\_VFR\_045\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Scaling parameter B TCP\_VFR\_046\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Testing methodology TCP\_VFR\_047\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Options: SUDO,

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