Von Frey Test HRWL_VFR_001

Purpose

To assess mechanical sensitivity using calibrated von Frey filaments.

Experimental Design

Minimum number of mutant animals: 7 males + 7 females

Age at test: 10 weeks

Sexual dimorphism:

Procedure

1. Habituation
    1. Place mice in the testing chambers on the elevated wire grid.
    2. Leave each mouse for an hour to acclimatise.
    3. The left hind paw is tested first using the following method.
        1. The 0.6g von Frey filament should be used as the starting filament.
        2. Apply the filament to the plantar surface of the hind paw. The filament should be applied with enough force to cause the filament to bend, and remain in contact for a total of 1-2 seconds.
        3. The size of the next filament to be applied will depend on the response to the previous filament.
            - If no withdrawal response was observed then the next highest filament is tested.
            - If there was a withdrawal response then the next lowest filament is tested.
        5. Continue applying filaments until the paw has been tested 5 times, with at least 2 minutes between each stimulus presentation.
    5. Repeat the testing process with the right hind paw.
3. Test 1
    1. 24 hours after habituation, re-test the mouse with the von Frey filaments using the same procedure as described for the habituation period.
5. Test 2
    1. 48 hours after habituation, re-test the mouse with the von Frey filaments using the same procedure as described for the habituation period.

Notes

This procedure is a pilot study from the Pain Phenotyping Pilot

Parameters and Metadata

Habituation: tabulation HRWL_VFR_001_001 | v1.0

seriesParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Increments: Left, Right,

Habituation: final filament (target force) HRWL_VFR_002_001 | v1.0

seriesParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Unit Measured: g

Increments: Left, Right,

Habituation: 50% threshold (grams) HRWL_VFR_003_001 | v1.0

seriesParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Unit Measured: g

Increments: Left, Right,

Habituation: 50% threshold (log scaled) HRWL_VFR_004_001 | v1.0

seriesParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Increments: Left, Right,

Habituation: average 50% threshold (grams) HRWL_VFR_005_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

Unit Measured: g

Derivation: meanOfIncrements('HRWL_VFR_003_001',1)

Habituation: average 50% threshold (log scaled) HRWL_VFR_006_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

Derivation: meanOfIncrements('HRWL_VFR_004_001',1)

Test 1: tabulation HRWL_VFR_007_001 | v1.0

seriesParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Increments: Left, Right,

Test 1: final filament (target force) HRWL_VFR_008_001 | v1.0

seriesParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Unit Measured: g

Increments: Left, Right,

Test 1: 50% threshold (grams) HRWL_VFR_009_001 | v1.0

seriesParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Unit Measured: g

Increments: Left, Right,

Test 1: 50% threshold (log scaled) HRWL_VFR_010_001 | v1.0

seriesParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Increments: Left, Right,

Test 1: average 50% threshold (grams) HRWL_VFR_011_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

Unit Measured: g

Derivation: meanOfIncrements('HRWL_VFR_009_001',1)

Test 1: average 50% threshold (log scaled) HRWL_VFR_012_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

Derivation: meanOfIncrements('HRWL_VFR_010_001',1)

Test 2: tabulation HRWL_VFR_013_001 | v1.0

seriesParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Increments: Left, Right,

Test 2: final filament (target force) HRWL_VFR_014_001 | v1.0

seriesParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Unit Measured: g

Increments: Left, Right,

Test 2: 50% threshold (grams) HRWL_VFR_015_001 | v1.0

seriesParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Unit Measured: g

Increments: Left, Right,

Test 2: 50% threshold (log scaled) HRWL_VFR_016_001 | v1.0

seriesParameter

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Increments: Left, Right,

Test 2: average 50% threshold (grams) HRWL_VFR_017_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

Unit Measured: g

Derivation: meanOfIncrements('HRWL_VFR_015_001',1)

Test 2: average 50% threshold (log scaled) HRWL_VFR_018_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

Derivation: meanOfIncrements('HRWL_VFR_016_001',1)

Number of runs per test HRWL_VFR_019_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Options: 2 (left paw first, right paw second),

Number of trials per run HRWL_VFR_020_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Options: 5,

Minimum interval between filament presentation HRWL_VFR_021_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Unit Measured: min

Options: 2,

Number of repeats with same filament HRWL_VFR_022_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Options: Once, if response unclear repeat up to 3 times,

Minimum acclimatisation period HRWL_VFR_023_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Unit Measured: Hours

Options: 1,

Paws tested HRWL_VFR_024_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Options: Left and right hind paws,

Time between habituation and test 1 HRWL_VFR_025_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Unit Measured: Hours

Options: 24,

Time between habituation and test 2 HRWL_VFR_026_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Unit Measured: Hours

Options: 48,

Tetrad manufacturer HRWL_VFR_027_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Options: Built in-house,

Tetrad dimensions HRWL_VFR_028_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Unit Measured: cm

Options: 10 cm H x 6 cm W x 8 cm L,

Tetrad material HRWL_VFR_029_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Options: Perspex,

Tetrad colour/opacity HRWL_VFR_030_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Options: Clear,

Inset material HRWL_VFR_031_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Options: Plastic,

Inset colour/opacity HRWL_VFR_032_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Options: Opaque,

Grid material HRWL_VFR_033_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Options: Stainless steel,

Grid hole size HRWL_VFR_034_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Unit Measured: mm

Options: 5 mm x 5 mm,

Filament set manufacturer HRWL_VFR_035_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Options: Stoetling,

Filament set model HRWL_VFR_036_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Options: Touch test sensory probes,

Filament material HRWL_VFR_037_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Options: Nylon,

Range of filaments used (target force) HRWL_VFR_038_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Unit Measured: g

Options: 0.04 - 4,

Starting filament (target force) HRWL_VFR_039_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

Unit Measured: g

Options: 0.6,

Date filaments last calibrated HRWL_VFR_040_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

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Experimenter ID HRWL_VFR_041_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** true **Is Annotated:** false

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Disinfectant HRWL_VFR_042_001 | v1.0

procedureMetadata

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

Options: Distel 2%,

Delta2: difference in log10 threshold (g) HRWL_VFR_043_001 | v1.0

simpleParameter

Req. Analysis: false **Req. Upload:** false **Is Annotated:** false

Unit Measured: g

Derivation:
sub(meanOfIncrements('HRWL_VFR_004_001',1), meanOfIncrements ('HRWL_VFR_016_001',1))
