

# Fear Conditioning KMPCLA\_FEA\_001

## Purpose

This procedure is used for measuring aversive learning and memory. A neutral conditioned stimulus (CS) such as steady tone is paired with an aversive unconditioned stimulus (US) such as one or more mild foot shocks. After conditioning, the spatial context or the CS (tone) elicits a central state of fear in the absence of the US (shock) that is expressed as reduced locomotor activity or total lack of movement (freezing). Immobility time is used as a measure of learning/memory performances.

## Experimental Design

- **Minimum number of animals :** 7M + 7F
- **Age at test:** Week 55
- **Sex:** We would expect the results of this test to show sexual dimorphism

## Equipment

- Fear conditioning chambers
- Arenas and components for cue and conditioning phases
- Computer with recording software
- Olfactory substance

## Procedure

1. Day 1: Conditioning
  - a. Transport animals to the testing area.
  - b. Set up conditioning arenas in the chambers ensuring that shocker, tone delivery and camera / beam break system are working correctly. If using video tracking equipment, ensure camera lenses are free of dust.
  - c. Remove the animals from their cages and place in the arenas. Animals are conditioned using the training protocol which consists of a baseline period, audible tone, a single foot shock that co-terminates with the tone, and a period with no stimuli at the end.
  - d. Remove animals from arenas and place back in home cage. Clean arenas.
2. Day 2: Context
  - a. To be performed 24 hours after conditioning.
  - b. Transport animals to the testing area.
  - c. Set up conditioning arenas in the chamber as on day 1 except for shocker and tone delivery system which are not used.
  - d. Remove animals from their cages and place in the arena. No CS or US stimuli are presented.

- e. Remove animals from arenas and place back in home cage. Clean arenas.
- 3. Day 2: Cue
  - a. To be performed performed from 2 - 24 hours after the context protocol.
  - b. Set up cue arenas using different floors, walls, olfactory cues and / or lighting from the conditioning context. Ensure that tone delivery and camera / beam break system are working correctly.
  - c. Remove animals from their cages and place in the arena. Animals are exposed to a baseline period without any stimulus followed by the presentation of the tone.
  - d. Remove animals from arenas and place back in home cage. Clean arenas.
- 4. At the end of the cue protocol animals are placed back into their holding room and data is analyzed by collecting the number of freezing episodes and the total freezing /immobility time.

## Parameters and Metadata

### Cue: Mouse arena colour KMPCLA\_FEA\_055\_001 | v1.0

procedureMetadata

Req. Analysis: true

Req. Upload: true

Is Annotated: false

Options: Black and white, Clear, Red, Beige, black and white, Milky white,

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### Cue Baseline Average Motion Index KMPCLA\_FEA\_016\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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### Context: Mouse arena floor KMPCLA\_FEA\_048\_001 | v1.0

procedureMetadata

Req. Analysis: true

Req. Upload: true

Is Annotated: false

**Options:** Steel rods, Metal grill,

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**Conditioning: Start time of each tone stimulus** KMPCLA\_FEA\_0

82\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** false

**Is Annotated:** false

**Unit Measured:** s

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**Cue: Near infra red light arena** KMPCLA\_FEA\_080\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** false

**Is Annotated:** false

**Options:** On,

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**Conditioning: Length of time shock stimulus** KMPCLA\_FEA\_03

8\_001 | v1.0

procedureMetadata

**Req. Analysis:** true

**Req. Upload:** true

**Is Annotated:** false

**Unit Measured:** s

Options: 1, 0.5, 2,

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**Conditioning Tone Average Motion Index** KMPCLA\_FEA\_092\_001  
| v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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**Date equipment last calibrated (shock)** KMPCLA\_FEA\_075\_001 | v1  
.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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**Cue: Length of time no stimulus** KMPCLA\_FEA\_061\_001 | v1.0

procedureMetadata

Req. Analysis: true

Req. Upload: true

Is Annotated: false

Unit Measured: s

Options: 220, 0, 120,

---

**Conditioning: Mouse arena shape** KMPCLA\_FEA\_029\_001 | v1.0

procedureMetadata

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

Options: Square, Rectangle,

---

**Context: Date and time** KMPCLA\_FEA\_041\_001 | v1.0

procedureMetadata

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

Options: Conditioning +24h,

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**Conditioning: Mouse arena dimension** KMPCLA\_FEA\_030\_001 | v1.0

procedureMetadata

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

Unit Measured: cm

Options: 25 L x 21 W x 19 H cm, 30.5 cm L X 24.1 cm W X 21 cm H,  
16.6 L X 17 W X 25 H cm, 25 x 25 x 19 cm, 30.5 L X 24.1 W X 24.5 H cm, 17 x 17 x 25 cm,  
16 x 14 x 12 cm,

---

**Context: Room acclimation time** KMPCLA\_FEA\_042\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: min

Options: 30, 60,

---

**Cue: tone response measurement time** KMPCLA\_FEA\_060\_001 | v1.0

procedureMetadata

Req. Analysis: true

Req. Upload: true

Is Annotated: false

Unit Measured: s

Options: 120, 180,

---

**Cue: Start time of each tone stimulus** KMPCLA\_FEA\_086\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: s

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# Context Minimum Motion Index KMPCLA\_FEA\_011\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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# Conditioning Post-shock Minimum Motion Index KMPCLA\_FE

A\_102\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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# Conditioning Tone % Freezing Time KMPCLA\_FEA\_091\_001 | v1.1

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: %

Derivation:  $\text{mul}(\text{div}(\text{'KMPCLA\_FEA\_090\_001'}, \text{'KMPCLA\_FEA\_036\_001'}), 100)$

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# Conditioning Shock Maximum Motion Index KMPCLA\_FEA\_097\_

001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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## Cue: Tone stimulus intensity (conditioned stimulus) KMPCL

A\_FEA\_058\_001 | v1.1

procedureMetadata

Req. Analysis: true

Req. Upload: true

Is Annotated: false

Unit Measured: dB

Options: 85, 75, 70, 77, 80,

---

## Conditioning: Shock stimulus intensity (unconditioned stimulus) KMPCLA\_FEA\_037\_001 | v1.1

procedureMetadata

Req. Analysis: true

Req. Upload: true

Is Annotated: false

Unit Measured: mA

Options: 0.75, 0.4, 0.5,

---

## Cue Baseline Minimum Motion Index KMPCLA\_FEA\_017\_001 | v1.0

simpleParameter



Req. Analysis: false

Req. Upload: false

Is Annotated: false

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**Conditioning: Start time of no stimulus** KMPCLA\_FEA\_084\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: s

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**Cue Tone % Freezing Time** KMPCLA\_FEA\_021\_001 | v1.1

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: %

Derivation:

mul(div(sumOfIncrements('KMPCLA\_FEA\_020\_001',1), 'KMPCLA\_FEA\_060\_001'), 100)

---

**Conditioning: Date and time** KMPCLA\_FEA\_025\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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# Conditioning Post-shock Freezing Time KMPCLA\_FEA\_099\_001 | v1.0

simpleParameter

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

Unit Measured: s

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# Cue: Length of time baseline KMPCLA\_FEA\_057\_001 | v1.0

procedureMetadata

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

Unit Measured: s

Options: 120,

---

# Conditioning Tone Freezing Time KMPCLA\_FEA\_090\_001 | v1.0

simpleParameter

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

Unit Measured: s

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**Conditioning: Mouse arena colour** KMPCLA\_FEA\_031\_001 | v1.0

procedureMetadata

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

Options: Metallic, clear, White, Metallic, White and Clear, Clear,

**Conditioning Tone Minimum Motion Index** KMPCLA\_FEA\_093\_001

| v1.0

simpleParameter

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

**Cue Tone Average Motion Index** KMPCLA\_FEA\_022\_001 | v1.0

seriesParameter

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

Increments: Minimum 1

**Context Freeze Count** KMPCLA\_FEA\_007\_001 | v1.0

simpleParameter

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

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## Conditioning: Near infra red light arena KMPCLA\_FEA\_078\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Options: On,

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## Conditioning Shock Minimum Motion Index KMPCLA\_FEA\_096\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

---

## Cue: arena rotation KMPCLA\_FEA\_088\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Options: 90 degrees, None,

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## Cue: Date and time KMPCLA\_FEA\_050\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Options:** Context + 24h, Context + 2-4h, Context + 4h,

---

## Sound generator manufacturer KMPCLA\_FEA\_069\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Options:** San Diego Instruments, Ugo Basile, Med Associates, O'hara CO Ltd.,

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## Context Freezing Time KMPCLA\_FEA\_008\_001 | v1.0

simpleParameter

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Unit Measured:** s

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## Experimenter ID day 2 cue KMPCLA\_FEA\_074\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** false

**Is Annotated:** false

---

## Date equipment last calibrated (tone) KMPCLA\_FEA\_076\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

---

## Conditioning Baseline Freeze Count KMPCLA\_FEA\_001\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

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## Conditioning: Length of time no stimulus KMPCLA\_FEA\_039\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: s

Options: 120, 150,

---

## Context: White house light level in arena KMPCLA\_FEA\_043\_001 | v1.2

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Unit Measured:** Lux

**Options:** 200, 40, 100, 26,

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## Context: Olfactory cue KMPCLA\_FEA\_044\_001 | v1.0

procedureMetadata

**Req. Analysis:** true

**Req. Upload:** true

**Is Annotated:** false

**Options:** Alcohol, None,

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## Tracking Method KMPCLA\_FEA\_067\_001 | v1.0

procedureMetadata

**Req. Analysis:** true

**Req. Upload:** true

**Is Annotated:** false

**Options:** Video tracking, Beam break,

---

## Mouse arenaID KMPCLA\_FEA\_063\_001 | v1.0

procedureMetadata

**Req. Analysis:** false

**Req. Upload:** true

**Is Annotated:** false

**Options:** Arena 6, Arena 7, Arena 4, Arena 3, Arena 5, Arena 2, Arena 8, Arena 1,

---

**Context: Mouse arena shape** KMPCLA\_FEA\_045\_001 | v1.0

procedureMetadata

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

**Options:** Rectangle, Square,

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**Cue Baseline Freeze Count** KMPCLA\_FEA\_013\_001 | v1.0

simpleParameter

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

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**Cue: Olfactory cue** KMPCLA\_FEA\_052\_001 | v1.0

procedureMetadata

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

**Options:** 5% acetic acid, Vanillin, Cinnamon, None,

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# Cue Baseline Freezing Time KMPCLA\_FEA\_014\_001 | v1.0

simpleParameter

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

Unit Measured: s

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# Context: Near infra red light arena KMPCLA\_FEA\_079\_001 | v1.0

procedureMetadata

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

Options: On,

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# Conditioning Post-shock Freeze Count KMPCLA\_FEA\_098\_001 | v1.0

simpleParameter

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

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# Software KMPCLA\_FEA\_068\_001 | v1.0

procedureMetadata

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

**Options:** Freeze Monitor, Anymaze, Med Associates Video Freeze, TimeFZ1,

---

**Context: Total time** KMPCLA\_FEA\_049\_001 | v1.0

procedureMetadata

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

**Unit Measured:** s

**Options:** 360, 300,

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**Conditioning Tone Freeze Count** KMPCLA\_FEA\_089\_001 | v1.0

simpleParameter

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

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**Cue: Start time of baseline** KMPCLA\_FEA\_085\_001 | v1.0

procedureMetadata

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

**Unit Measured:** s

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# Cue Tone Freeze Count KMPCLA\_FEA\_019\_001 | v1.0

seriesParameter

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

Increments: Minimum 1

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# Cue: Mouse arena dimension KMPCLA\_FEA\_054\_001 | v1.0

procedureMetadata

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

Unit Measured: cm

Options: 20 cm dia X 30 cm H, 30.5 cm L X 24.1 cm W X 24.5cm H, 17 x 17 x 25 cm, 30.5 cm L X 24.1 cm W X 21 cm H, 25 x 25 x 19 cm, 25 L x 21 W x 19 H cm, 17 x 10 x 10 cm,

---

# Equipment Manufacturer KMPCLA\_FEA\_065\_001 | v1.0

procedureMetadata

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

Options: Ugo Basile, Med Assoicates, San Diego Instruments, O'hara CO Ltd.,

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**Cue Tone Maximum Motion Index** KMPCLA\_FEA\_024\_001 | v1.0

seriesParameter

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

Increments: Minimum 1

**Experimenter ID** KMPCLA\_FEA\_072\_001 | v1.0

procedureMetadata

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

**Context Maximum Motion Index** KMPCLA\_FEA\_012\_001 | v1.0

simpleParameter

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

**Conditioning: Start time of baseline** KMPCLA\_FEA\_081\_001 | v1.0

procedureMetadata

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

Unit Measured: s

**Cue: Mouse arena shape** KMPCLA\_FEA\_053\_001 | v1.0

procedureMetadata

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

Options: A frame ceiling, Cylinder, Rectangle,

---

**Cue: Mouse arena floor** KMPCLA\_FEA\_056\_001 | v1.0

procedureMetadata

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

Options: Plexi glass, Polyethylene, PVC, Perspex,

---

**Cue: Tone stimulus frequency (Hz; conditioned stimulus)**

KMPCLA\_FEA\_059\_001 | v1.0

procedureMetadata

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

Unit Measured: kHz

Options: 2.8, 10, 2, 4,

---

# Conditioning: Tone stimulus intensity ( dB; conditioned stimulus) KMPCLA\_FEA\_034\_001 | v1.0

procedureMetadata

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

Unit Measured: dB

Options: 70, 80, 77, 75, 85,

---

## Equipment Model KMPCLA\_FEA\_066\_001 | v1.0

procedureMetadata

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

Options: MED-FVC-SCT-M, MED-VFC2-SCT-M, 46000, FearCS Mouse-46152, Freeze monitor, TimeFZ1,

---

## Conditioning Baseline % Freezing Time KMPCLA\_FEA\_003\_001 | v1.1

simpleParameter

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

Unit Measured: %

Derivation: mul(div('KMPCLA\_FEA\_002\_001', 'KMPCLA\_FEA\_033\_001'), 100)

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**Conditioning: White house light level in arena** KMPCLA\_FEA\_027\_001 | v1.0

procedureMetadata

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

Unit Measured: Lux

Options: 200, 40, 100, 26,

---

**Conditioning: Total time** KMPCLA\_FEA\_040\_001 | v1.0

procedureMetadata

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

Unit Measured: s

Options: 300, 380,

---

**Conditioning: Length of time baseline** KMPCLA\_FEA\_033\_001 | v1.0

procedureMetadata

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

Unit Measured: s

Options: 150, 120, 240,

---

## Cue Baseline % Freezing Time KMPCLA\_FEA\_015\_001 | v1.1

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: true

Unit Measured: %

Derivation:  $\text{mul}(\text{div}(\text{'KMPCLA\_FEA\_014\_001'}, \text{'KMPCLA\_FEA\_057\_001'}), 100)$

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## Conditioning Post-shock Maximum Motion Index KMPCLA\_FEA\_103\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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## Conditioning Shock Average Motion Index KMPCLA\_FEA\_095\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

---



**Context: Mouse arena colour** KMPCLA\_FEA\_047\_001 | v1.0

procedureMetadata

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

**Options:** Metallic, White and Clear, Metallic, clear, Clear, White,

---

**Conditioning: Room acclimation time** KMPCLA\_FEA\_026\_001 | v1.

0

procedureMetadata

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

**Unit Measured:** min

**Options:** 30, 60,

---

**Cue Tone Freezing Time** KMPCLA\_FEA\_020\_001 | v1.0

seriesParameter

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

**Unit Measured:** s

**Increments:** Minimum 1

---

**Cue Baseline Maximum Motion Index** KMPCLA\_FEA\_018\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

**Freeze definition (minimum motion index)** KMPCLA\_FEA\_104\_001

| v1.0

procedureMetadata

Req. Analysis: true

Req. Upload: false

Is Annotated: false

Options: 30, 18, 20,

**Context: Mouse arena dimension** KMPCLA\_FEA\_046\_001 | v1.0

procedureMetadata

Req. Analysis: true

Req. Upload: true

Is Annotated: false

Unit Measured: cm

Options: 17 x 17 x 25 cm, 30.5 cm L X 24.1 cm W X 24.5 cm H, 25 L x 21 W x 19 H cm, 30.5 cm L X 24.1 cm W X 21 cm H, 16.6 cm L X 17 cm W X 25 cm H, 25 x 25 x 19 cm, 16 x 14 x 12 cm,

**Cue Tone Minimum Motion Index** KMPCLA\_FEA\_023\_001 | v1.0

seriesParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Increments: Minimum 1

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## Conditioning Baseline Freezing Time KMPCLA\_FEA\_002\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: s

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## Conditioning Baseline Average Motion Index KMPCLA\_FEA\_00

4\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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## Conditioning Tone Maximum Motion Index KMPCLA\_FEA\_094\_0

01 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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**Conditioning: Start time of each shock stimulus** KMPCLA\_FEA\_083\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: s

**Conditioning Baseline Maximum Motion Index** KMPCLA\_FEA\_006\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

**Context % Freezing Time** KMPCLA\_FEA\_009\_001 | v1.1

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

Unit Measured: %

Derivation: mul(div('KMPCLA\_FEA\_008\_001', 'KMPCLA\_FEA\_049\_001'), 100)

**Equipment ID** KMPCLA\_FEA\_064\_001 | v1.0

procedureMetadata

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

Options: Machine B, Machine A, Machine 1, Machine 2,

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**Conditioning: Mouse arena floor** KMPCLA\_FEA\_032\_001 | v1.0

procedureMetadata

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

Options: Clean saw dust, Steel rods, Metal grill,

---

**Cue: Start time of no stimulus** KMPCLA\_FEA\_087\_001 | v1.0

procedureMetadata

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

Unit Measured: s

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**Context Average Motion Index** KMPCLA\_FEA\_010\_001 | v1.0

simpleParameter

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

---

## Cue: White house light level in arena KMPCLA\_FEA\_051\_001 | v1.1

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: Lux

Options: 0, 16, 14-18,

---

## Conditioning: Tone stimulus frequency (Hz; conditioned stimulus) KMPCLA\_FEA\_035\_001 | v1.0

procedureMetadata

Req. Analysis: true

Req. Upload: true

Is Annotated: false

Unit Measured: kHz

Options: 10, 4, 2.8, 2,

---

## Cue: Total time KMPCLA\_FEA\_062\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: true

Is Annotated: false

Unit Measured: s

Options: 480, 300, 240,

---

**Conditioning Post-shock Average Motion Index** KMPCLA\_FEA\_101\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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**Conditioning: Olfactory cue** KMPCLA\_FEA\_028\_001 | v1.0

procedureMetadata

Req. Analysis: true

Req. Upload: true

Is Annotated: false

Options: Alcohol, None,

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**Experimenter ID day 2** KMPCLA\_FEA\_073\_001 | v1.0

procedureMetadata

Req. Analysis: false

Req. Upload: false

Is Annotated: false

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**Conditioning: Length of time tone stimulus** KMPCLA\_FEA\_036\_001 | v1.0  
procedureMetadata

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

Unit Measured: s

Options: 30, 20,

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**Conditioning Baseline Minimum Motion Index** KMPCLA\_FEA\_005\_001 | v1.0  
simpleParameter

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

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**Freeze definition** KMPCLA\_FEA\_077\_001 | v1.1  
procedureMetadata

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

Unit Measured: s

Options: 2, 1, 0.25,

-----

**Sound-proof box dimension** KMPCLA\_FEA\_071\_001 | v1.0



procedureMetadata

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

Options: other, 71 cm L X 63.5 cm W X 35.5 cm H, 71 cm L X 59.7 cm W X 31.7 cm H, 47 cm L X 35 cm W X 49 cm H, 40 cm L X 53 cm W X 58 cm H,

-----

**Sound generator model** KMPCLA\_FEA\_070\_001 | v1.0

procedureMetadata

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

Options: 46000-165, other, VFC-100, CL-1010B,

-----

**Conditioning Post-shock % Freezing Time** KMPCLA\_FEA\_100\_001 | v1.1

simpleParameter

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

Unit Measured: %

Derivation: mul(div('KMPCLA\_FEA\_099\_001', 'KMPCLA\_FEA\_039\_001'), 100)

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## Difference in Context and Conditioning Baseline % Freezing

KMPCLA\_FEA\_105\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: true

### Derivation:

```
sub(mul(div('KMPCLA_FEA_008_001', 'KMPCLA_FEA_049_001'), 100), mul(div('KMPCLA_FEA_002_001', 'KMPCLA_FEA_033_001'), 100))
```

---

## Difference in Cue Tone and Cue Baseline % Freezing

KMPCLA\_FEA\_106\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: true

### Derivation:

```
sub(mul(div('KMPCLA_FEA_020_001', 'KMPCLA_FEA_060_001'), 100), mul(div('KMPCLA_FEA_014_001', 'KMPCLA_FEA_057_001'), 100))
```

---

## Difference in Conditioning Post-shock and Conditioning Baseline % Freezing

KMPCLA\_FEA\_107\_001 | v1.0

simpleParameter

Req. Analysis: false

Req. Upload: false

Is Annotated: true

### Derivation:

```
sub(mul(div('KMPCLA_FEA_099_001', 'KMPCLA_FEA_039_001'), 100), mul(div('KMPCLA_FEA_002_001', 'KMPCLA_FEA_033_001'), 100))
```

---

## Cue: Length of time tone stimulus KMPCLA\_FEA\_108\_001 | v1.0

procedureMetadata

Req. Analysis: true

Req. Upload: false

Is Annotated: false

Unit Measured: s

Options: 20, 120,

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