Fear Conditioning IMPC_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 10
- **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

Conditioning: Near infra red light arena IMPC_FEA_078_001 | v1.0

procedureMetadata

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

Options: On,

Conditioning Post-shock Maximum Motion Index IMPC_FEA_103_001 | v1.0

simpleParameter

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

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Conditioning Post-shock Freezing Time IMPC_FEA_099_001 | v1.0

simpleParameter

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

Unit Measured: s

Experimenter ID IMPC_FEA_072_001 | v1.0

procedureMetadata

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

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Cue Tone % Freezing Time IMPC_FEA_021_001 | v1.1

simpleParameter

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

Unit Measured: %

Derivation:
mul(div(sumOfIncrements('IMPC_FEA_020_001',1), 'IMPC_FEA_060_001'), 100)

Cue: Start time of baseline IMPC_FEA_085_001 | v1.0

procedureMetadata

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

Unit Measured: s

Conditioning: Tone stimulus frequency (Hz; conditioned stimulus) IMPC_FEA_035_001 | v1.0

procedureMetadata

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

Unit Measured: kHz

Options: 2.8, 2, 10, 4,

Conditioning Post-shock Freeze Count IMPC_FEA_098_001 | v1.0

simpleParameter

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

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Conditioning Shock Minimum Motion Index IMPC_FEA_096_001 | v1.0

simpleParameter

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

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Context: Mouse arena shape IMPC_FEA_045_001 | v1.0

procedureMetadata

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

Options: Square, Rectangle,

Conditioning Baseline Average Motion Index IMPC_FEA_004_001 | v1.0

simpleParameter

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

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Freeze definition IMPC_FEA_077_001 | v1.1

procedureMetadata

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

Unit Measured: s

Options: 2, 0.25, 1,

Context: Total time IMPC_FEA_049_001 | v1.0

procedureMetadata

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

Unit Measured: s

Options: 360, 300,

Cue Tone Average Motion Index IMPC_FEA_022_001 | v1.0

seriesParameter

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

Increments: Minimum 1

Conditioning: Tone stimulus intensity (dB; conditioned stimulus) IMPC_FEA_034_001 | v1.0

procedureMetadata

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

Unit Measured: dB

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

Cue: arena rotation IMPC_FEA_088_001 | v1.0

procedureMetadata

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

Options: 90 degrees,

Conditioning: Mouse arena colour IMPC_FEA_031_001 | v1.0

procedureMetadata

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

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

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Conditioning Tone % Freezing Time IMPC_FEA_091_001 | v1.1

simpleParameter

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

Unit Measured: %

Derivation: mul(div('IMPC_FEA_090_001', 'IMPC_FEA_036_001'), 100)

Context Freezing Time IMPC_FEA_008_001 | v1.0

simpleParameter

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

Unit Measured: s

Conditioning: Mouse arena shape IMPC_FEA_029_001 | v1.0

procedureMetadata

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

Options: Rectangle, Square,

Cue: Mouse arena shape IMPC_FEA_053_001 | v1.0

procedureMetadata

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

Options: Cylinder, Rectangle, A frame ceiling,

Cue Tone Minimum Motion Index IMPC_FEA_023_001 | v1.0

seriesParameter

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

Increments: Minimum 1

Conditioning Baseline Minimum Motion Index IMPC_FEA_005_001 | v1.0

simpleParameter

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

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Cue Baseline Minimum Motion Index IMPC_FEA_017_001 | v1.0

simpleParameter

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

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Cue: Near infra red light arena IMPC_FEA_080_001 | v1.0

procedureMetadata

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

Options: On,

Context: Room acclimation time IMPC_FEA_042_001 | v1.0

procedureMetadata

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

Unit Measured: min

Options: 60, 30,

Sound-proof box dimension IMPC_FEA_071_001 | v1.0

procedureMetadata

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

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

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Cue: Mouse arena colour IMPC_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,

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Conditioning: Start time of baseline IMPC_FEA_081_001 | v1.0

procedureMetadata

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

Unit Measured: s

Conditioning Tone Maximum Motion Index IMPC_FEA_094_001 | v1.0

simpleParameter

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

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Conditioning Tone Freezing Time IMPC_FEA_090_001 | v1.0

simpleParameter

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

Unit Measured: s

Cue: Mouse arena floor IMPC_FEA_056_001 | v1.0

procedureMetadata

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

Options: Plexi glass, PVC, Polyethylene, Perspex,

Conditioning: Mouse arena floor IMPC_FEA_032_001 | v1.0

procedureMetadata

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

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

Conditioning: Total time IMPC_FEA_040_001 | v1.0

procedureMetadata

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

Unit Measured: s

Options: 380, 300,

Freeze definition (minimum motion index) IMPC_FEA_104_001 | v1.0

procedureMetadata

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

Options: 18, 30,

Conditioning Tone Freeze Count IMPC_FEA_089_001 | v1.0

simpleParameter

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

Conditioning Post-shock Minimum Motion Index IMPC_FEA_102_001 | v1.0

simpleParameter

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

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Conditioning Baseline Freeze Count IMPC_FEA_001_001 | v1.0

simpleParameter

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

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Conditioning: Start time of each tone stimulus IMPC_FEA_082_001 | v1.0

procedureMetadata

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

Unit Measured: s

Conditioning Baseline Maximum Motion Index IMPC_FEA_006_001 | v1.0

simpleParameter

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

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Context: White house light level in arena IMPC_FEA_043_001 | v1.2

procedureMetadata

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

Unit Measured: Lux

Options: 40, 26, 100, 200,

Conditioning: Length of time tone stimulus IMPC_FEA_036_001 | v1.0

procedureMetadata

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

Unit Measured: s

Options: 20, 30,

Conditioning Tone Average Motion Index IMPC_FEA_092_001 | v1.0

simpleParameter

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

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Mouse arenaID IMPC_FEA_063_001 | v1.0

procedureMetadata

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

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

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Date equipment last calibrated (shock) IMPC_FEA_075_001 | v1.0

procedureMetadata

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

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Context % Freezing Time IMPC_FEA_009_001 | v1.1

simpleParameter

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

Unit Measured: %

Derivation: mul(div('IMPC_FEA_008_001', 'IMPC_FEA_049_001'), 100)

Date equipment last calibrated (tone) IMPC_FEA_076_001 | v1.0

procedureMetadata

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

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Tracking Method IMPC_FEA_067_001 | v1.0

procedureMetadata

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

Options: Beam break, Video tracking,

Conditioning Post-shock % Freezing Time IMPC_FEA_100_001 | v1.1

simpleParameter

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

Unit Measured: %

Derivation: mul(div('IMPC_FEA_099_001', 'IMPC_FEA_039_001'), 100)

Conditioning: Date and time IMPC_FEA_025_001 | v1.0

procedureMetadata

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

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Conditioning: Length of time no stimulus IMPC_FEA_039_001 | v1.0

procedureMetadata

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

Unit Measured: s

Options: 120, 150,

Context Average Motion Index IMPC_FEA_010_001 | v1.0

simpleParameter

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

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Cue: Start time of no stimulus IMPC_FEA_087_001 | v1.0

procedureMetadata

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

Unit Measured: s

Context: Mouse arena dimension IMPC_FEA_046_001 | v1.0

procedureMetadata

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

Unit Measured: cm

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

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Context Freeze Count IMPC_FEA_007_001 | v1.0

simpleParameter

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

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Cue Tone Freezing Time IMPC_FEA_020_001 | v1.0

seriesParameter

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

Unit Measured: s

Increments: Minimum 1

Cue: Total time IMPC_FEA_062_001 | v1.0

procedureMetadata

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

Unit Measured: s

Options: 300, 480, 420, 240,

Conditioning: Shock stimulus intensity (unconditioned stimulus) IMPC_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,

Conditioning: Start time of each shock stimulus IMPC_FEA_083_001 | v1.0

procedureMetadata

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

Unit Measured: s

Conditioning: Length of time baseline IMPC_FEA_033_001 | v1.0

procedureMetadata

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

Unit Measured: s

Options: 150, 240, 120,

Sound generator model IMPC_FEA_070_001 | v1.0

procedureMetadata

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

Options: 46000-165, VFC-100, other,

Cue Baseline % Freezing Time IMPC_FEA_015_001 | v1.1

simpleParameter

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

Unit Measured: %

Derivation: mul(div('IMPC_FEA_014_001', 'IMPC_FEA_057_001'), 100)

Cue: Mouse arena dimension IMPC_FEA_054_001 | v1.0

procedureMetadata

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

Unit Measured: cm

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

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Conditioning Shock Maximum Motion Index IMPC_FEA_097_001 | v1.0

simpleParameter

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

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Cue: tone response measurement time IMPC_FEA_060_001 | v1.0

procedureMetadata

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

Unit Measured: s

Options: 180, 120,

Conditioning: Room acclimation time IMPC_FEA_026_001 | v1.0

procedureMetadata

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

Unit Measured: min

Options: 60, 30,

Equipment Manufacturer IMPC_FEA_065_001 | v1.0

procedureMetadata

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

Options: Ugo Basile, San Diego Instruments, Med Assoicates,

Context: Near infra red light arena IMPC_FEA_079_001 | v1.0

procedureMetadata

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

Options: On,

Cue: White house light level in arena IMPC_FEA_051_001 | v1.1

procedureMetadata

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

Unit Measured: Lux

Options: 0, 14-18, 16,

Cue Baseline Average Motion Index IMPC_FEA_016_001 | v1.0

simpleParameter

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

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Conditioning: Start time of no stimulus IMPC_FEA_084_001 | v1.0

procedureMetadata

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

Unit Measured: s

Conditioning Baseline % Freezing Time IMPC_FEA_003_001 | v1.1

simpleParameter

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

Unit Measured: %

Derivation: mul(div('IMPC_FEA_002_001', 'IMPC_FEA_033_001'), 100)

Conditioning Shock Average Motion Index IMPC_FEA_095_001 | v1.0

simpleParameter

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

Cue Baseline Maximum Motion Index IMPC_FEA_018_001 | v1.0

simpleParameter

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

Cue Tone Maximum Motion Index IMPC_FEA_024_001 | v1.0

seriesParameter

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

Increments: Minimum 1

Software IMPC_FEA_068_001 | v1.0

procedureMetadata

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

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

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Context: Date and time IMPC_FEA_041_001 | v1.0

procedureMetadata

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

Options: Conditioning +24h,

Conditioning Post-shock Average Motion Index IMPC_FEA_101_001 | v1.0

simpleParameter

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

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Equipment Model IMPC_FEA_066_001 | v1.0

procedureMetadata

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

Options: Freeze monitor, FearCS Mouse-46152, 46000, MED-FVC-SCT-M, MED-VFC2-SCT-M, MED-VFC-NIR-M SOP #1, MED-VFC-NIR-M SOP #2, MED-VFC-NIR-M SOP #3,

Cue Baseline Freezing Time IMPC_FEA_014_001 | v1.0

simpleParameter

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

Unit Measured: s

Context Minimum Motion Index IMPC_FEA_011_001 | v1.0

simpleParameter

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

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

MPC_FEA_059_001 | v1.0

procedureMetadata

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

Unit Measured: kHz

Options: 4, 10, 2.8, 2,

Cue: Date and time IMPC_FEA_050_001 | v1.0

procedureMetadata

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

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

Cue Baseline Freeze Count IMPC_FEA_013_001 | v1.0

simpleParameter

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

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Conditioning: Mouse arena dimension IMPC_FEA_030_001 | v1.0

procedureMetadata

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

Unit Measured: cm

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

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Cue: Length of time no stimulus IMPC_FEA_061_001 | v1.0

procedureMetadata

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

Unit Measured: s

Options: 0, 220, 120,

Conditioning: White house light level in arena IMPC_FEA_027_001 | v1.0

procedureMetadata

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

Unit Measured: Lux

Options: 40, 200, 100, 26,

Experimenter ID day 2 cue IMPC_FEA_074_001 | v1.0

procedureMetadata

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

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Experimenter ID day 2 IMPC_FEA_073_001 | v1.0

procedureMetadata

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

Equipment ID IMPC_FEA_064_001 | v1.0

procedureMetadata

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

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

Conditioning Tone Minimum Motion Index IMPC_FEA_093_001 | v1.0

simpleParameter

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

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Conditioning: Olfactory cue IMPC_FEA_028_001 | v1.0

procedureMetadata

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

Options: Alcohol, None,

Context Maximum Motion Index IMPC_FEA_012_001 | v1.0

simpleParameter

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

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Context: Mouse arena colour IMPC_FEA_047_001 | v1.0

procedureMetadata

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

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

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Sound generator manufacturer IMPC_FEA_069_001 | v1.0

procedureMetadata

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

Options: Ugo Basile, San Diego Instruments, Med Associates,

Cue Tone Freeze Count IMPC_FEA_019_001 | v1.0

seriesParameter

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

Increments: Minimum 1

Context: Olfactory cue IMPC_FEA_044_001 | v1.0

procedureMetadata

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

Options: Alcohol, None,

Cue: Start time of each tone stimulus IMPC_FEA_086_001 | v1.0

procedureMetadata

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

Unit Measured: s

Cue: Length of time baseline IMPC_FEA_057_001 | v1.0

procedureMetadata

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

Unit Measured: s

Options: 120,

Conditioning: Length of time shock stimulus IMPC_FEA_038_001 | v1.0

procedureMetadata

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

Unit Measured: s

Options: 0.5, 2, 1,

Conditioning Baseline Freezing Time IMPC_FEA_002_001 | v1.0

simpleParameter

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

Unit Measured: s

Context: Mouse arena floor IMPC_FEA_048_001 | v1.0

procedureMetadata

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

Options: Metal grill, Steel rods,

Cue: Olfactory cue IMPC_FEA_052_001 | v1.0

procedureMetadata

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

Options: Cinnamon, 5% acetic acid, Vanillin,

Cue: Tone stimulus intensity (conditioned stimulus) IMPC_FEA_058_001 | v1.1

procedureMetadata

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

Unit Measured: dB

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

Difference in Context and Conditioning Baseline % Freezing IMPC_FEA_105_001 | v1.0

simpleParameter

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

Derivation:
sub(mul(div('IMPC_FEA_008_001', 'IMPC_FEA_049_001'), 100), mul(div('IMPC_FEA_002_001', 'IMPC_FEA_033_001'), 100))

Difference in Cue Tone and Cue Baseline % Freezing IMPC_FEA_106_001 | v1.0

simpleParameter

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

Derivation:
sub(mul(div('IMPC_FEA_020_001', 'IMPC_FEA_060_001'), 100), mul(div('IMPC_FEA_014_001', 'IMPC_FEA_057_001'), 100))

Difference in Conditioning Post-shock and Conditioning Baseline % Freezing IMPC_FEA_107_001 | v1.0

simpleParameter

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

Derivation:
sub(mul(div('IMPC_FEA_099_001', 'IMPC_FEA_039_001'), 100), mul(div('IMPC_FEA_002_001', 'IMPC_FEA_033_001'), 100))

Cue: Length of time tone stimulus IMPC_FEA_108_001 | v1.0

procedureMetadata

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

Unit Measured: s

Options: 20, 120,