Transepidermal water loss HMGULA_TEW_001

Purpose

Indicator of the skin's barrier function. Transepidermal Water Loss is defined as the measurement of the quantity of water that passes from inside a body through the epidermal layer (skin) to the surrounding atmosphere via diffusion and evaporation processes. Measurements of TEWL are useful for identifying skin damage caused by pathological conditions such as eczema, certain chemicals, or physical insult, as rates of TEWL increase in proportion to the level of damage.

Experimental Design

- **Minimum number of animals :** 7M +7F
- **Age at test:** Week 56
- **Sex:** We do not expect the results of this test to show sexual dimorphism.

Procedure

1. The respective mouse is identified via the ear tag.
2. Mouse skin is analyzed in a non-invasive manner with a special Tewameter (AquaFluxAF200) that is placed on the skin. During a short time of 60 to 90 seconds, TEWL [g/(m2h)] is recorded.

Notes

The measurement should be performed in the abdominal region until the measurement curve remains stable (max. 90 seconds).

Parameters and Metadata

Transepidermal water loss HMGULA_TEW_001_001 | v1.0

simpleParameter

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

Coefficient of variation of transepidermal water loss HMGULA_TEW_002_001 | v1.0

simpleParameter

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

Unit Measured: %

Skin surface water loss HMGULA_TEW_003_001 | v1.0

simpleParameter

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

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Flux HMGULA_TEW_004_001 | v1.0

seriesParameter

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

Increments: Minimum 1

Datetime of procedure start HMGULA_TEW_005_001 | v1.0

procedureMetadata

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

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Ambient temperature TEWL HMGULA_TEW_006_001 | v1.0

procedureMetadata

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

Unit Measured: C

Ambient relative humidity TEWL HMGULA_TEW_007_001 | v1.0

procedureMetadata

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

Unit Measured: %

Ice HMGULA_TEW_008_001 | v1.0

procedureMetadata

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

Unit Measured: mg

Tewl cap HMGULA_TEW_009_001 | v1.0

procedureMetadata

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

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Measurement points before steady state TEWL HMGULA_TEW_010_001 | v1.0

procedureMetadata

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

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Time per pt HMGULA_TEW_011_001 | v1.0

procedureMetadata

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

Unit Measured: seconds

Comments TEWL HMGULA_TEW_012_001 | v1.0

simpleParameter

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

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Experimenter ID HMGULA_TEW_013_001 | v1.0

procedureMetadata

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

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Coat condition HMGULA_TEW_014_001 | v1.0

procedureMetadata

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

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Status HMGULA_TEW_015_001 | v1.0

procedureMetadata

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

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Termination HMGULA_TEW_016_001 | v1.0

procedureMetadata

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

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Serial Number HMGULA_TEW_017_001 | v1.0

procedureMetadata

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

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FluxCal HMGULA_TEW_018_001 | v1.0

procedureMetadata

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

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BaseCal HMGULA_TEW_019_001 | v1.0

procedureMetadata

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

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Sensor HMGULA_TEW_020_001 | v1.0

procedureMetadata

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

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Equipment model TEWL HMGULA_TEW_021_001 | v1.0

procedureMetadata

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

Options: AquaFlux AF200963, AquaFlux AF201724,

Equipment manufacturer TEWL HMGULA_TEW_022_001 | v1.0

procedureMetadata

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

Options: Delfin Technologies,

FD Calibration HMGULA_TEW_023_001 | v1.0

procedureMetadata

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

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Software version HMGULA_TEW_024_001 | v1.0

procedureMetadata

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

Options: 7, 8,