Dysmorphology ESLIM_001_001

Purpose

A simple method to examine mice for morphological abnormalities.

EMPReSS Standard Operating Procedure	Title: Dysmorphology	
	Doc. Number: ESLIM_001_001 Rev No.	Date Issued: 01/06/04

Change Record

Revision	Date	Responsible Person	Description of Change
D1.1	20 Sept 07	Hilary Gates	Click box and observation of locomotion removed

1.0 Purpose:

1.1 A simple method to examine mice for morphological abnormalities.

2.0 Scope:

2.1 Individuals who have been trained and are competent in performing the procedures described herein must follow this procedure.

2.2 Any queries, comments or suggestions, either relating to this SOP in general or to a specific problem encountered during a procedure, should be addressed to the Bone and Cartilage Research Project Leader.

2.3 Any deviances deviation from this protocol must be reported to the Bone and Cartilage Research Project Leader.

3.0 Safety Requirements:

3.1 General laboratory procedures should be followed, which include prohibition of eating, chewing gum, drinking, and applying of cosmetics in the work area. Laboratory coats and gloves must be worn at all times in the work area, unless the protocol specifically describes the appropriate attire for the procedure.

4.0 Associated Documents:

4.1 EMPReSS SOP 10_002 Revision 0: Modified SHIRPA

5.0 Notes:

5.1 The validity of results obtained from behavioural phenotyping is largely dependent on methods of animal husbandry. It is important that individuals following this procedure are experienced and aware of the animal's welfare, and is familiar with the animal being tested, in order to reduce the anxiety levels of the animal prior to testing.

5.2 The majority of mouse behavioural studies are age/sex/strain dependent. It is important to keep these parameters comparable throughout a single experiment.

5.3 Environmental factors may contribute to the levels of anxiety within the mouse. The temperature, humidity, ventilation, noise intensity and light intensity must be maintained at levels appropriate for mice. It is essential that the mice be kept in a uniform environment before and after testing to avoid anomalous results being obtained.

5.4 It is recommended that all phenotyping experimentation is conducted at approximately the same time of day because physiological and biochemical parameters change throughout the day.

6.0 Quality Control:

7.0 Equipment:

7.1 Balance

7.2 Photo and/or video camera

8.0 Supplies:

8.1 Ruler

9.0 Procedure:

9.1 Place a cage containing 5 mice onto an operating table. **Note:** *Morphological irregularities are recorded by video sequences or photos.*

9.2 Initially observe mice carefully without disturbing them and note down the following:

9.2.1 Any obvious dysmorphologies in the physical appearance, tail kinks or coat colour.

9.3 Remove a mouse from its home cage, gripping the tail between the thumb and the forefinger and place on a balance. Determine and record its weight.

9.4 Place the mouse on the table to examine and record the following dorsally:

9.4.1 Irregularities in the shape of ears, eyes, head or limbs.

9.4.2 Number and shape of digits.

9.4.3 Irregularities in coat colour, hair distribution and development. Stroke the coat against the hair growth to note the repositioning of the hairs to their initial position as a measure of hair development.

9.4.4 Subtle kinks in the tail. Stroke the tail along its entire length with 2 fingers.

9.5 Carefully scruff the mouse, holding the tail behind the little finger, to examine and record the following ventrally:

9.5.1 Variations in coat colour.

9.5.2 Irregularities in the genitals.

9.5.3 Malformations on the ventral and lateral sides of head and body.

9.5.4 Shape, number and colour of the teeth.

9.6 Suspend the mouse by the tail for a few seconds. Observe and record the movement and positioning of the limbs.

9.7 Drop the mouse from approximately 25 cm above an empty clean cage to observe and record the position of landing.

10.0 Supporting information:

10.1 Fuchs H, Schughart K, Wolf E, Balling R, Hrabe de Angelis M, Screening for dysmorphological abnormalities--a powerful tool to isolate new mouse mutants. Mamm Genome. 2000 Jul;11(7):528-30. No abstract available.

11.0 History Review:

12.0 Emergency Procedures:

Parameters and Metadata

adult mouse weight ESLIM_001_001_001 | v1.0

simpleParameter

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

Unit Measured: g

Description: adult_mouse_weight

---

adult mouse ESLIM_001_001_002 | v1.0

simpleParameter

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

Description: adult_mouse

Options: as described for wt, abnormal,

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adult mouse abnormality description ESLIM_001_001_003 | v1.0

simpleParameter

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

Description: adult_mouse_abnormality_description

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adult mouse length ESLIM_001_001_004 | v1.0

simpleParameter

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

Description: adult_mouse_length

Options: wt distribution, decreased length, increased length,

---

adult mouse thickness ESLIM_001_001_005 | v1.0

simpleParameter

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

Description: adult_mouse_thickness

Options: wt distribution, decreased thickness, increased thickness,

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fat distribution ESLIM_001_001_006 | v1.0

simpleParameter

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

Description: fat_distribution

Options: wt distribution, abnormal distribution,

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coat hair ESLIM_001_001_007 | v1.0

simpleParameter

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

Description: coat_hair

Options: as described for wt, abnormal,

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coat hair abnormality description ESLIM_001_001_008 | v1.0

simpleParameter

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

Description: coat_hair_abnormality_description

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coat hair color ESLIM_001_001_009 | v1.0

simpleParameter

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

Description: coat_hair_color

Options: as described for wt, abnormal color,

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coat hair color pattern ESLIM_001_001_010 | v1.0

simpleParameter

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

Description: coat_hair_color_pattern

Options: as described for wt, multi-colored, spotted,

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coat hair presence ESLIM_001_001_011 | v1.0

simpleParameter

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

Description: coat_hair_presence

Options: present, absent,

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coat hair placement ESLIM_001_001_012 | v1.0

simpleParameter

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

Description: coat_hair_placement

Options: as described for wt, erect,

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coat hair spatial pattern ESLIM_001_001_013 | v1.0

simpleParameter

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

Description: coat_hair_spatial_pattern

Options: as described for wt, patchy,

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coat hair distribution ESLIM_001_001_014 | v1.0

simpleParameter

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

Description: coat_hair_distribution

Options: as described for wt, sparse,

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coat hair texture ESLIM_001_001_015 | v1.0

simpleParameter

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

Description: coat_hair_texture

Options: as described for wt, flaky, greasy,

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coat hair structure ESLIM_001_001_016 | v1.0

simpleParameter

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

Description: coat_hair_structure

Options: as described for wt, matted,

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head + coat hair color ESLIM_001_001_017 | v1.0

simpleParameter

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

Description: head__coat_hair_color

Options: as described for wt, abnormal color,

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head + coat hair color pattern ESLIM_001_001_018 | v1.0

simpleParameter

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

Description: head__coat_hair_color_pattern

Options: as described for wt, mono-colored, multi-colored, spotted,

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head + coat hair presence ESLIM_001_001_019 | v1.0

simpleParameter

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

Description: head__coat_hair_presence

Options: present, absent,

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head + coat hair placement ESLIM_001_001_020 | v1.0

simpleParameter

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

Description: head__coat_hair_placement

Options: as described for wt, erect,

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head + coat hair spatial pattern ESLIM_001_001_021 | v1.0

simpleParameter

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

Description: head__coat_hair_spatial_pattern

Options: as described for wt, patchy,

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head + coat hair distribution ESLIM_001_001_022 | v1.0

simpleParameter

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

Description: head__coat_hair_distribution

Options: as described for wt, sparse,

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head + coat hair texture ESLIM_001_001_023 | v1.0

simpleParameter

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

Description: head__coat_hair_texture

Options: as described for wt, flaky, greasy,

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head + coat hair structure ESLIM_001_001_024 | v1.0

simpleParameter

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

Description: head__coat_hair_structure

Options: as described for wt, matted,

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back + coat hair color ESLIM_001_001_025 | v1.0

simpleParameter

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

Description: back__coat_hair_color

Options: as described for wt, abnormal color,

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back + coat hair color pattern ESLIM_001_001_026 | v1.0

simpleParameter

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

Description: back__coat_hair_color_pattern

Options: as described for wt, mono-colored, multi-colored, spotted,

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back + coat hair presence ESLIM_001_001_027 | v1.0

simpleParameter

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

Description: back__coat_hair_presence

Options: present, absent,

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back + coat hair placement ESLIM_001_001_028 | v1.0

simpleParameter

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

Description: back__coat_hair_placement

Options: as described for wt, erect,

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back + coat hair spatial pattern ESLIM_001_001_029 | v1.0

simpleParameter

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

Description: back__coat_hair_spatial_pattern

Options: as described for wt, patchy,

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back + coat hair distribution ESLIM_001_001_030 | v1.0

simpleParameter

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

Description: back__coat_hair_distribution

Options: as described for wt, sparse,

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back + coat hair texture ESLIM_001_001_031 | v1.0

simpleParameter

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

Description: back__coat_hair_texture

Options: as described for wt, flaky, greasy,

---

back + coat hair structure ESLIM_001_001_032 | v1.0

simpleParameter

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

Description: back__coat_hair_structure

Options: as described for wt, matted,

---

stomach + coat hair color ESLIM_001_001_033 | v1.0

simpleParameter

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

Description: stomach__coat_hair_color

Options: as described for wt, abnormal color,

---

stomach + coat hair color pattern ESLIM_001_001_034 | v1.0

simpleParameter

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

Description: stomach__coat_hair_color_pattern

Options: as described for wt, mono-colored, multi-colored, spotted,

---

stomach + coat hair presence ESLIM_001_001_035 | v1.0

simpleParameter

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

Description: stomach__coat_hair_presence

Options: present, absent,

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stomach + coat hair placement ESLIM_001_001_036 | v1.0

simpleParameter

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

Description: stomach__coat_hair_placement

Options: as described for wt, erect,

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stomach + coat hair spatial pattern ESLIM_001_001_037 | v1.0

simpleParameter

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

Description: stomach__coat_hair_spatial_pattern

Options: as described for wt, patchy,

---

stomach + coat hair distribution ESLIM_001_001_038 | v1.0

simpleParameter

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

Description: stomach__coat_hair_distribution

Options: as described for wt, sparse,

---

stomach + coat hair texture ESLIM_001_001_039 | v1.0

simpleParameter

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

Description: stomach__coat_hair_texture

Options: as described for wt, flaky, greasy,

---

stomach + coat hair structure ESLIM_001_001_040 | v1.0

simpleParameter

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

Description: stomach__coat_hair_structure

Options: as described for wt, matted,

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skin ESLIM_001_001_041 | v1.0

simpleParameter

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

Description: skin

Options: as described for wt, abnormal,

skin abnormality description ESLIM_001_001_042 | v1.0

simpleParameter

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

Description: skin_abnormality_description

---

skin spatial pattern ESLIM_001_001_043 | v1.0

simpleParameter

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

Description: skin_spatial_pattern

Options: as described for wt, patchy,

---

skin texture ESLIM_001_001_044 | v1.0

simpleParameter

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

Description: skin_texture

Options: as described for wt, scaly,

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skin wetness ESLIM_001_001_045 | v1.0

simpleParameter

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

Description: skin_wetness

Options: as described for wt, dry, wet,

---

skin color brightness ESLIM_001_001_046 | v1.0

simpleParameter

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

Description: skin_color_brightness

Options: as described for wt, dark, light,

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skin relative color ESLIM_001_001_047 | v1.0

simpleParameter

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

Description: skin_relative_color

Options: as described for wt, colorless, variable color,

---

skin shape ESLIM_001_001_048 | v1.0

simpleParameter

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

Description: skin_shape

Options: as described for wt, loose,

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skin color ESLIM_001_001_049 | v1.0

simpleParameter

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

Description: skin_color

Options: as described for wt, abnormal color,

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nose skin spatial pattern ESLIM_001_001_050 | v1.0

simpleParameter

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

Description: nose_skin_spatial_pattern

Options: as described for wt, patchy,

---

nose skin texture ESLIM_001_001_051 | v1.0

simpleParameter

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

Description: nose_skin_texture

Options: as described for wt, scaly,

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nose skin wetness ESLIM_001_001_052 | v1.0

simpleParameter

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

Description: nose_skin_wetness

Options: as described for wt, dry, wet,

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nose skin color brightness ESLIM_001_001_053 | v1.0

simpleParameter

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

Description: nose_skin_color_brightness

Options: as described for wt, dark, light,

nose skin relative color ESLIM_001_001_054 | v1.0

simpleParameter

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

Description: nose_skin_relative_color

Options: as described for wt, colorless, variable color,

---

nose skin shape ESLIM_001_001_055 | v1.0

simpleParameter

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

Description: nose_skin_shape

Options: as described for wt, loose,

---

nose skin color ESLIM_001_001_056 | v1.0

simpleParameter

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

Description: nose_skin_color

Options: as described for wt, abnormal color,

ear skin spatial pattern ESLIM_001_001_057 | v1.0

simpleParameter

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

Description: ear_skin_spatial_pattern

Options: as described for wt, left ear skin patchy, right ear skin patchy, bilaterally patchy,

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ear skin texture ESLIM_001_001_058 | v1.0

simpleParameter

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

Description: ear_skin_texture

Options: as described for wt, left ear skin scaly, right ear skin scaly, bilaterally scaly,

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ear skin wetness ESLIM_001_001_059 | v1.0

simpleParameter

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

Description: ear_skin_wetness

Options: as described for wt, left ear skin dry, right ear skin dry, bilaterally dry, left ear skin wet, right ear skin wet, bilaterally wet,

ear skin color brightness ESLIM_001_001_060 | v1.0

simpleParameter

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

Description: ear_skin_color_brightness

Options: as described for wt, left ear skin dark, right ear skin dark, bilaterally dark, left ear skin light, right ear skin light, bilaterally light,

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ear skin relative color ESLIM_001_001_061 | v1.0

simpleParameter

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

Description: ear_skin_relative_color

Options: as described for wt, left ear skin colorless, right ear skin colorless, bilaterally colorless, left ear skin variable color, right ear skin variable color, bilaterally variable color,

---

ear skin shape ESLIM_001_001_062 | v1.0

simpleParameter

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

Description: ear_skin_shape

Options: as described for wt, left ear skin loose, right ear skin loose, bilaterally loose,

---

ear skin color ESLIM_001_001_063 | v1.0

simpleParameter

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

Description: ear_skin_color

Options: as described for wt, left ear skin abnormal color, right ear skin abnormal color, bilaterally abnormal color,

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hand skin spatial pattern ESLIM_001_001_064 | v1.0

simpleParameter

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

Description: hand_skin_spatial_pattern

Options: as described for wt, left hand skin patchy, right hand skin patchy, bilaterally patchy,

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hand skin texture ESLIM_001_001_065 | v1.0

simpleParameter

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

Description: hand_skin_texture

Options: as described for wt, left hand skin scaly, right hand skin scaly, bilaterally scaly,

---

hand skin wetness ESLIM_001_001_066 | v1.0

simpleParameter

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

Description: hand_skin_wetness

Options: as described for wt, left hand skin dry, right hand skin dry, bilaterally dry, left hand skin wet, right hand skin wet, bilaterally wet,

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hand skin color brightness ESLIM_001_001_067 | v1.0

simpleParameter

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

Description: hand_skin_color_brightness

Options: as described for wt, left hand skin dark, right hand skin dark, bilaterally dark, left hand skin light, right hand skin light, bilaterally light,

---

hand skin relative color ESLIM_001_001_068 | v1.0

simpleParameter

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

Description: hand_skin_relative_color

Options: as described for wt, left hand skin colorless, right hand skin colorless, bilaterally colorless, left hand skin variable color, right hand skin variable color, bilaterally variable color,

---

hand skin shape ESLIM_001_001_069 | v1.0

simpleParameter

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

Description: hand_skin_shape

Options: as described for wt, left hand skin loose, right hand skin loose, bilaterally loose,

---

hand skin color ESLIM_001_001_070 | v1.0

simpleParameter

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

Description: hand_skin_color

Options: as described for wt, left hand skin abnormal color, right hand skin abnormal color, bilaterally abnormal color,

---

foot skin spatial pattern ESLIM_001_001_071 | v1.0

simpleParameter

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

Description: foot_skin_spatial_pattern

Options: as described for wt, left foot skin patchy, right foot skin patchy, bilaterally patchy,

---

foot skin texture ESLIM_001_001_072 | v1.0

simpleParameter

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

Description: foot_skin_texture

Options: as described for wt, left foot skin scaly, right foot skin scaly, bilaterally scaly,

---

foot skin wetness ESLIM_001_001_073 | v1.0

simpleParameter

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

Description: foot_skin_wetness

Options: as described for wt, left foot skin dry, right foot skin dry, bilaterally dry, left foot skin wet, right foot skin wet, bilaterally wet,

foot skin color brightness ESLIM_001_001_074 | v1.0

simpleParameter

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

Description: foot_skin_color_brightness

Options: as described for wt, left foot skin dark, right foot skin dark, bilaterally dark, left foot skin light, right foot skin light, bilaterally light,

---

foot skin relative color ESLIM_001_001_075 | v1.0

simpleParameter

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

Description: foot_skin_relative_color

Options: as described for wt, left foot skin colorless, right foot skin colorless, bilaterally colorless, left foot skin variable color, right foot skin variable color, bilaterally variable color,

---

foot skin shape ESLIM_001_001_076 | v1.0

simpleParameter

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

Description: foot_skin_shape

Options: as described for wt, left foot skin loose, right foot skin loose, bilaterally loose,

---

foot skin color ESLIM_001_001_077 | v1.0

simpleParameter

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

Description: foot_skin_color

Options: as described for wt, left foot skin abnormal color, right foot skin abnormal color, bilaterally abnormal color,

---

tail skin spatial pattern ESLIM_001_001_078 | v1.0

simpleParameter

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

Description: tail_skin_spatial_pattern

Options: as described for wt, patchy,

---

tail skin texture ESLIM_001_001_079 | v1.0

simpleParameter

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

Description: tail_skin_texture

Options: as described for wt, scaly,

---

tail skin wetness ESLIM_001_001_080 | v1.0

simpleParameter

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

Description: tail_skin_wetness

Options: as described for wt, dry, wet,

---

tail skin color brightness ESLIM_001_001_081 | v1.0

simpleParameter

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

Description: tail_skin_color_brightness

Options: as described for wt, dark, light,

---

tail skin relative color ESLIM_001_001_082 | v1.0

simpleParameter

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

Description: tail_skin_relative_color

Options: as described for wt, colorless, variable color,

---

tail skin shape ESLIM_001_001_083 | v1.0

simpleParameter

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

Description: tail_skin_shape

Options: as described for wt, loose,

---

tail skin color ESLIM_001_001_084 | v1.0

simpleParameter

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

Description: tail_skin_color

Options: as described for wt, abnormal color,

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head ESLIM_001_001_085 | v1.0

simpleParameter

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

Description: head

Options: as described for wt, abnormal,

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head abnormality description ESLIM_001_001_086 | v1.0

simpleParameter

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

Description: head_abnormality_description

---

head length ESLIM_001_001_087 | v1.0

simpleParameter

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

Description: head_length

Options: wt distribution, decreased length, increased length,

---

head width ESLIM_001_001_088 | v1.0

simpleParameter

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

Description: head_width

Options: wt distribution, decreased width, increased width,

---

head bone curvature ESLIM_001_001_089 | v1.0

simpleParameter

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

Description: head_bone_curvature

Options: wt distribution, domed,

---

head bone symmetry ESLIM_001_001_090 | v1.0

simpleParameter

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

Description: head_bone_symmetry

Options: as described for wt, asymmetrical,

---

muzzle/snout ESLIM_001_001_091 | v1.0

simpleParameter

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

Description: muzzlesnout

Options: normal, abnormal,

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muzzle/snout length ESLIM_001_001_092 | v1.0

simpleParameter

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

Description: muzzlesnout_length

Options: wt distribution, decreased length, increased length,

---

muzzle/snout width ESLIM_001_001_093 | v1.0

simpleParameter

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

Description: muzzlesnout_width

Options: wt distribution, decreased width, increased width,

---

vibrissa hair ESLIM_001_001_094 | v1.0

simpleParameter

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

Description: vibrissa_hair

Options: normal, abnormal,

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vibrissa hair presence ESLIM_001_001_095 | v1.0

simpleParameter

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

Description: vibrissa_hair_presence

Options: present, absent,

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vibrissa hair curvature ESLIM_001_001_096 | v1.0

simpleParameter

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

Description: vibrissa_hair_curvature

Options: wt distribution, increased curvature, decreased curvature,

---

vibrissa hair length ESLIM_001_001_097 | v1.0

simpleParameter

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

Description: vibrissa_hair_length

Options: wt distribution, decreased length, increased length,

---

vibrissa hair orientation ESLIM_001_001_098 | v1.0

simpleParameter

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

Description: vibrissa_hair_orientation

Options: as described for wt, disoriented/random,

---

upper lip shape ESLIM_001_001_099 | v1.0

simpleParameter

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

Description: upper_lip_shape

Options: as described for wt, cleft,

---

lower lip shape ESLIM_001_001_100 | v1.0

simpleParameter

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

Description: lower_lip_shape

Options: as described for wt, cleft,

---

mouth ESLIM_001_001_101 | v1.0

simpleParameter

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

Description: mouth

Options: as described for wt, abnormal,

---

tooth ESLIM_001_001_102 | v1.0

simpleParameter

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

Description: tooth

Options: as described for wt, abnormal,

---

tooth morphology ESLIM_001_001_103 | v1.0

simpleParameter

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

Description: tooth_morphology

Options: as described for wt, deformed,

---

tooth presence ESLIM_001_001_104 | v1.0

simpleParameter

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

Description: tooth_presence

Options: present, absent,

---

tooth relative color ESLIM_001_001_105 | v1.0

simpleParameter

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

Description: tooth_relative_color

Options: as described for wt, discolored,

---

tooth size ESLIM_001_001_106 | v1.0

simpleParameter

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

Description: tooth_size

Options: wt distribution, decreased size, increased size,

---

upper jaw tooth + misaligned with + lower jaw tooth presence ESLIM_001_001_107 | v1.0

simpleParameter

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

Description: upper_jaw_tooth__misaligned_with__lower_jaw_tooth_presence

Options: absent, present,

---

ear ESLIM_001_001_108 | v1.0

simpleParameter

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

Description: ear

Options: as described for wt, left ear abormal, right ear abnormal, bilaterally abnormal,

ear position ESLIM_001_001_109 | v1.0

simpleParameter

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

Description: ear_position

Options: as described for wt, right ear decreased position, left ear decreased position, bilaterally decreased position,

---

ear presence ESLIM_001_001_110 | v1.0

simpleParameter

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

Description: ear_presence

Options: present, left ear absent, right ear absent, bilaterally absent,

---

ear shape ESLIM_001_001_111 | v1.0

simpleParameter

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

Description: ear_shape

Options: as described for wt, left ear folded, right ear folded, bilaterally folded, left ear pointed, right ear pointed, bilaterally pointed,

---

ear size ESLIM_001_001_112 | v1.0

simpleParameter

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

Description: ear_size

Options: wt distribution, left ear decreased size, right ear decreased size, bilaterally decreased size, left ear increased size, right ear increased size, bilaterally increased size,

---

ear rotation ESLIM_001_001_113 | v1.0

simpleParameter

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

Description: ear_rotation

Options: as described for wt, left ear anteriorly rotated, right ear anteriorly rotated, bilaterally anteriorly rotated, left ear posteriorly rotated, right ear posteriorly rotated, bilaterally posteriorly rotated,

---

eye ESLIM_001_001_114 | v1.0

simpleParameter

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

Description: eye

Options: as described for wt, left eye abnormal, right eye abnormal, bilaterally abnormal,

---

eye opacity ESLIM_001_001_115 | v1.0

simpleParameter

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

Description: eye_opacity

Options: as described for wt, left eye opaque, right eye opaque, bilaterally opaque, left eye transparent, right eye transparent, bilaterally transparent,

---

eye presence ESLIM_001_001_116 | v1.0

simpleParameter

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

Description: eye_presence

Options: present, left eye absent, right eye absent, bilaterally absent,

---

eye size ESLIM_001_001_117 | v1.0

simpleParameter

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

Description: eye_size

Options: wt distribution, left eye decreased size, right eye decreased size, bilaterally decreased size, left eye increased size, right eye increased size, bilaterally increased size,

---

eye wetness ESLIM_001_001_118 | v1.0

simpleParameter

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

Description: eye_wetness

Options: as described for wt, left eye wet, right eye wet, bilaterally wet,

---

eye color ESLIM_001_001_119 | v1.0

simpleParameter

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

Description: eye_color

Options: as described for wt, left eye abnormal color, right eye abnormal color, bilaterally abnormal color,

---

eyelid closure ESLIM_001_001_120 | v1.0

simpleParameter

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

Description: eyelid_closure

Options: as described for wt, left eyelid closed, right eyelid closed, bilaterally closed, left eyelid closure incomplete, right eyelid closure incomplete, bilateral closure incomplete,

---

eyelid presence ESLIM_001_001_121 | v1.0

simpleParameter

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

Description: eyelid_presence

Options: bilaterally present, left eyelid absent, right eyelid absent, bilaterally absent,

---

vagina ESLIM_001_001_122 | v1.0

simpleParameter

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

Description: vagina

Options: as described for wt, abnormal,

---

vagina abnormality description ESLIM_001_001_123 | v1.0

simpleParameter

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

Description: vagina_abnormality_description

---

vagina size ESLIM_001_001_124 | v1.0

simpleParameter

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

Description: vagina_size

Options: wt distribution, increased size, decreased size,

---

vagina presence ESLIM_001_001_125 | v1.0

simpleParameter

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

Description: vagina_presence

Options: present, absent,

---

vagina structure ESLIM_001_001_126 | v1.0

simpleParameter

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

Description: vagina_structure

Options: as described for wt, swollen,

---

testis ESLIM_001_001_127 | v1.0

simpleParameter

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

Description: testis

Options: as described for wt, abnormal,

---

testis abnormality description ESLIM_001_001_128 | v1.0

simpleParameter

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

Description: testis_abnormality_description

---

testis size ESLIM_001_001_129 | v1.0

simpleParameter

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

Description: testis_size

Options: wt distribution, increased size, decreased size,

---

testis presence ESLIM_001_001_130 | v1.0

simpleParameter

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

Description: testis_presence

Options: present, absent,

---

testis structure ESLIM_001_001_131 | v1.0

simpleParameter

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

Description: testis_structure

Options: as described for wt, underdeveloped,

---

forelimb ESLIM_001_001_132 | v1.0

simpleParameter

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

Description: forelimb

Options: as described for wt, left forelimb abnormal, right forelimb abnormal, bilaterally abnormal,

---

forelimb abnormality description ESLIM_001_001_133 | v1.0

simpleParameter

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

Description: forelimb_abnormality_description

---

forelimb size ESLIM_001_001_134 | v1.0

simpleParameter

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

Description: forelimb_size

Options: wt distribution, left forelimb increased size, right forelimb increased size, bilaterally increased size, left forelimb decreased size, right forelimb decreased size, bilaterally decreased size,

---

forelimb angle ESLIM_001_001_135 | v1.0

simpleParameter

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

Description: forelimb_angle

Options: as described for wt, left forelimb abnormal, right forelimb abnormal, bilaterally abnormal,

---

forelimb flexibility ESLIM_001_001_136 | v1.0

simpleParameter

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

Description: forelimb_flexibility

Options: as described for wt, left forelimb inflexible, right forelimb inflexible, bilaterally inflexible,

---

forelimb length ESLIM_001_001_137 | v1.0

simpleParameter

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

Description: forelimb_length

Options: wt distribution, left forelimb increased length, right forelimb increased length, bilaterally increased length, left forelimb decreased length, right forelimb decreased length, bilaterally decreased length,

---

forelimb thickness ESLIM_001_001_138 | v1.0

simpleParameter

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

Description: forelimb_thickness

Options: as described for wt, left forelimb increased thickness, right forelimb increased thickness, bilaterally increased thickness, left forelimb decreased thickness, right forelimb decreased thickness, bilaterally decreased thickness,

---

forelimb shape ESLIM_001_001_139 | v1.0

simpleParameter

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

Description: forelimb_shape

Options: as described for wt, left forelimb abnormal, right forelimb abnormal,

bilaterally abnormal,

---

forelimb joint structure ESLIM_001_001_140 | v1.0

simpleParameter

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

Description: forelimb_joint_structure

Options: as described for wt, left forelimb joint swollen, right forelimb joint swollen, bilaterally swollen,

---

hand shape ESLIM_001_001_141 | v1.0

simpleParameter

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

Description: hand_shape

Options: as described for wt, left hand abnormal, right hand abnormal, bilaterally abnormal,

---

hand size ESLIM_001_001_142 | v1.0

simpleParameter

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

Description: hand_size

Options: wt distribution, left hand decreased size, right hand decreased size, bilaterally decreased size, left hand increased size, right hand increased size, bilaterally increased size,

---

hand length ESLIM_001_001_143 | v1.0

simpleParameter

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

Description: hand_length

Options: wt distribution, left hand decreased length, right hand decreased length, bilaterally decreased length, left hand increased length, right hand increased length, bilaterally increased length,

---

hand structure ESLIM_001_001_144 | v1.0

simpleParameter

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

Description: hand_structure

Options: as described for wt, left hand swollen, right hand swollen, bilaterally swollen,

---

hand footpad structure ESLIM_001_001_145 | v1.0

simpleParameter

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

Description: hand_footpad_structure

Options: as described for wt, left hand footpad swollen, right hand footpad swollen, bilaterally swollen,

---

hand digit count ESLIM_001_001_146 | v1.0

simpleParameter

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

Description: hand_digit_count

Options: as described for wt, left hand digit decreased number, right hand digit decreased number, bilaterally decreased number, left hand digit increased number, right hand digit increased number, bilaterally increased number,

---

hand digit thickness ESLIM_001_001_147 | v1.0

simpleParameter

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

Description: hand_digit_thickness

Options: as described for wt, left hand digit decreased thickness,
right hand digit decreased thickness, bilaterally decreased thickness,
left hand digit increased thickness, right hand digit increased thickness,
bilaterally increased thickness,

---

hand digit presence ESLIM_001_001_148 | v1.0

simpleParameter

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

Description: hand_digit_presence

Options: present, left hand digit absent, right hand digit absent, bilaterally absent,

---

hand digit structure ESLIM_001_001_149 | v1.0

simpleParameter

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

Description: hand_digit_structure

Options: as described for wt, left hand digit swollen, right hand digit swollen,
bilaterally swollen,

---

hand digit length ESLIM_001_001_150 | v1.0

simpleParameter

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

Description: hand_digit_length

Options: wt distribution, left hand digit length increased, right hand digit length increased, bilaterally length increased, left hand digit length decreased,
right hand digit length decreased, bilaterally length decreased,

---

hindlimb ESLIM_001_001_151 | v1.0

simpleParameter

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

Description: hindlimb

Options: as described for wt, left hindlimb abnormal, right hindlimb abnormal, bilaterally abnormal,

---

hindlimb abnormality description ESLIM_001_001_152 | v1.0

simpleParameter

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

Description: hindlimb_abnormality_description

---

hindlimb size ESLIM_001_001_153 | v1.0

simpleParameter

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

Description: hindlimb_size

Options: wt distribution, left hindlimb increased size, right hindlimb increased size, bilaterally increased size, left hindlimb decreased size, right hindlimb decreased size, bilaterally decreased size,

---

hindlimb angle ESLIM_001_001_154 | v1.0

simpleParameter

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

Description: hindlimb_angle

Options: as described for wt, left hindlimb abnormal, right hindlimb abnormal, bilaterally abnormal,

---

hindlimb flexibility ESLIM_001_001_155 | v1.0

simpleParameter

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

Description: hindlimb_flexibility

Options: as described for wt, left hindlimb inflexible, right hindlimb inflexible, bilaterally inflexible,

---

hindlimb length ESLIM_001_001_156 | v1.0

simpleParameter

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

Description: hindlimb_length

Options: wt distribution, left hindlimb increased length, right hindlimb increased length, bilaterally increased length, left hindlimb decreased length, right hindlimb decreased length, bilaterally decreased length,

---

hindlimb thickness ESLIM_001_001_157 | v1.0

simpleParameter

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

Description: hindlimb_thickness

Options: as described for wt, left hindlimb increased thickness, right hindlimb increased thickness, bilaterally increased thickness, left hindlimb decreased thickness, right hindlimb decreased thickness, bilaterally decreased thickness,

---

hindlimb shape ESLIM_001_001_158 | v1.0

simpleParameter

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

Description: hindlimb_shape

Options: as described for wt, left hindlimb abnormal, right hindlimb abnormal, bilaterally abnormal,

---

hindlimb joint structure ESLIM_001_001_159 | v1.0

simpleParameter

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

Description: hindlimb_joint_structure

Options: as described for wt, left hindlimb joint swollen, right hindlimb joint swollen, bilaterally swollen,

---

foot shape ESLIM_001_001_160 | v1.0

simpleParameter

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

Description: foot_shape

Options: as described for wt, left foot abnormal, right foot abnormal, bilaterally abnormal,

---

foot size ESLIM_001_001_161 | v1.0

simpleParameter

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

Description: foot_size

Options: wt distribution, left foot decreased size, right foot decreased size, bilaterally decreased size, left foot increased size, right foot increased size, bilaterally increased size,

---

foot length ESLIM_001_001_162 | v1.0

simpleParameter

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

Description: foot_length

Options: wt distribution, left foot decreased length, right foot decreased length, bilaterally decreased length, left foot increased length, right foot increased length, bilaterally increased length,

---

foot structure ESLIM_001_001_163 | v1.0

simpleParameter

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

Description: foot_structure

Options: as described for wt, left foot swollen, right foot swollen, bilaterally swollen,

---

foot footpad structure ESLIM_001_001_164 | v1.0

simpleParameter

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

Description: foot_footpad_structure

Options: as described for wt, left foot footpad swollen, right foot footpad swollen, bilaterally swollen,

---

foot digit count ESLIM_001_001_165 | v1.0

simpleParameter

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

Description: foot_digit_count

Options: as described for wt, left foot digit decreased number, right foot digit decreased number, bilaterally decreased number, left foot digit increased number, right foot digit increased number, bilaterally increased number,

---

foot digit thickness ESLIM_001_001_166 | v1.0

simpleParameter

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

Description: foot_digit_thickness

Options: as described for wt, left foot digit decreased thickness, right foot digit decreased thickness, bilaterally decreased thickness, left foot digit increased thickness, right foot digit increased thickness, bilaterally increased thickness,

---

foot digit presence ESLIM_001_001_167 | v1.0

simpleParameter

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

Description: foot_digit_presence

Options: present, left foot digit absent, right foot digit absent, bilaterally absent,

---

foot digit structure ESLIM_001_001_168 | v1.0

simpleParameter

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

Description: foot_digit_structure

Options: as described for wt, left foot digit swollen, right foot digit swollen, bilaterally swollen,

---

foot digit length ESLIM_001_001_169 | v1.0

simpleParameter

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

Description: foot_digit_length

Options: wt distribution, left foot digit length increased, right foot digit length increased, bilaterally length increased, left foot digit length decreased, right foot digit length decreased, bilaterally length decreased,

---

nail presence ESLIM_001_001_170 | v1.0

simpleParameter

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

Description: nail_presence

Options: present, left nail absent, right nail absent, bilaterally absent,

---

nail length ESLIM_001_001_171 | v1.0

simpleParameter

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

Description: nail_length

Options: wt distribution, left nail increased length, right nail increased length, bilaterally increased length,

---

nail angle ESLIM_001_001_172 | v1.0

simpleParameter

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

Description: nail_angle

Options: as described for wt, left nail straight angle, right nail straight angle, bilaterally straight angle,

---

nail curvature ESLIM_001_001_173 | v1.0

simpleParameter

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

Description: nail_curvature

Options: as described for wt, left nail curved, right nail curved, bilaterally curved,

---

nail color brightness ESLIM_001_001_174 | v1.0

simpleParameter

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

Description: nail_color_brightness

Options: as described for wt, left nail dark, right nail dark, bilaterally dark, left nail light, right nail light, bilaterally light,

---

tail ESLIM_001_001_175 | v1.0

simpleParameter

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

Description: tail

Options: as described for wt, abnormal,

---

tail abnormality description ESLIM_001_001_176 | v1.0

simpleParameter

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

Description: tail_abnormality_description

---

tail presence ESLIM_001_001_177 | v1.0

simpleParameter

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

Description: tail_presence

Options: present, absent,

---

tail length ESLIM_001_001_178 | v1.0

simpleParameter

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

Description: tail_length

Options: wt distribution, decreased length, increased length,

---

tail width ESLIM_001_001_179 | v1.0

simpleParameter

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

Description: tail_width

Options: wt distribution, decreased width, increased width,

---

tail shape ESLIM_001_001_180 | v1.0

simpleParameter

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

Description: tail_shape

Options: as described for wt, kinked,

---

tail curvature ESLIM_001_001_181 | v1.0

simpleParameter

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

Description: tail_curvature

Options: as described for wt, curved,
