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Size designation of clothes —

**Part 5:
Anthropometric measurements for
the head and face**

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 133, *Clothing sizing systems - size designation, size measurement methods and digital fittings*.

A list of all parts in the ISO 8559 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document can be used in conjunction with national, regional or international regulations or agreements to standardize the measuring or control points of head and face for data collection of population groups and to allow comparison of anthropometric data sets.

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Size designation of clothes —

Part 5:

Anthropometric measurements for the head and face

1 Scope

This document provides a description of anthropometric measurements for the head and face that can be used as a basis for creating physical and digital anthropometric databases. The list of measurements specified in this document is intended to help practitioners in the field of clothing who need to apply their knowledge to select population market segments and to create size and shape profiles for the development of all headwear garment types that extend from the torso and shoulder to the neck and head and their equivalent fitness.

The list provides guidance for taking anthropometric measurements and gives information on the principles of measurement and their underlying anatomical and anthropometrical bases relevant to clothing product development teams and head and face wear manufacturers.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 Landmark points and levels

3.1.1

superaurale point

highest point on the helix of the outer ear, while the head is held in the Frankfurt plane

Note 1 to entry: See [Figure 1](#).

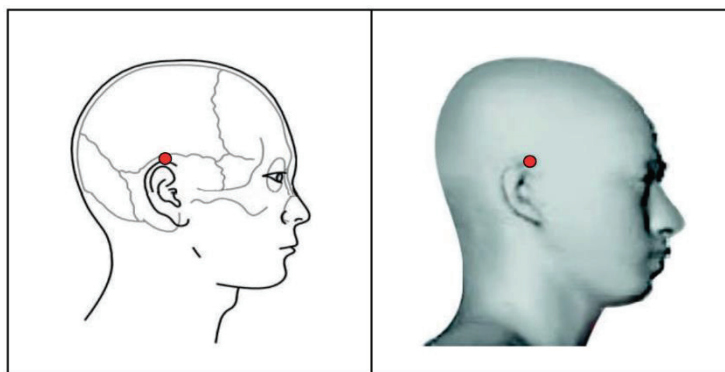


Figure 1 — Superaurale point

3.1.2

sellion

deepest depression point of the nasal bones in the mid-sagittal plane, while the head is held in the Frankfurt plane

Note 1 to entry: See [Figure 2](#).

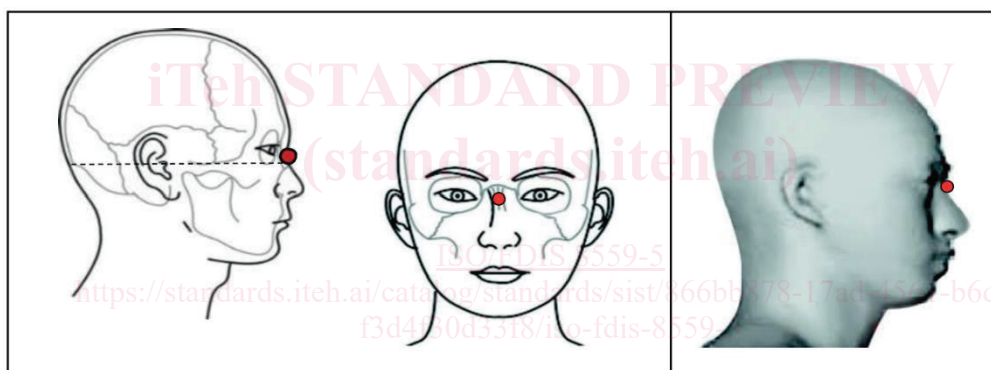


Figure 2 — Sellion

3.1.3

pronasale point

tip of the nose

most anterior point on the nose tip in the mid-sagittal plane, while the head is held in the Frankfurt plane

Note 1 to entry: See [Figure 3](#).

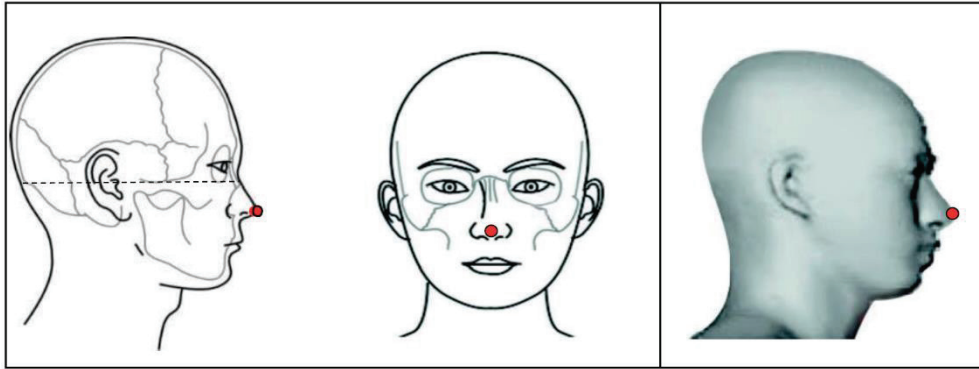


Figure 3 — Pronasale point

3.1.4

subnasale point

point at the juncture between lower surface of the nose and the philtrum in the mid-sagittal plane

Note 1 to entry: See [Figure 4](#).

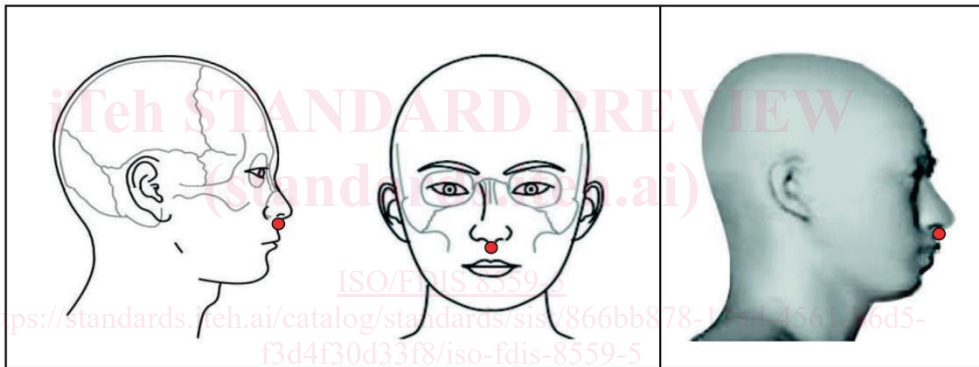


Figure 4 — Subnasale point

3.1.5

mandibular point

most lateral, most inferior, and most posterior point on the angle of the mandible, while the head is held in the Frankfurt plane

Note 1 to entry: See [Figure 5](#).

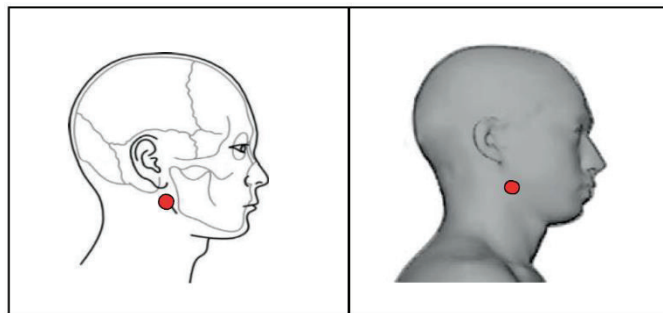


Figure 5 — Mandibular point

3.1.6

rearmost point of the head

most distant point from glabella while the head is held in the Frankfurt plane

Note 1 to entry: See [Figure 6](#).

Note 2 to entry: Identical to Opisthocranion in ISO 7250-1.

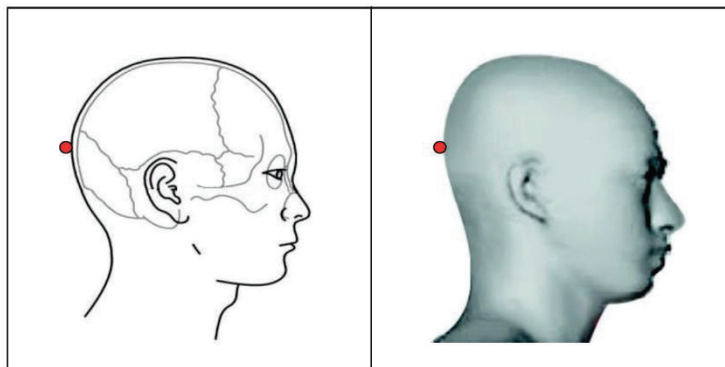


Figure 6 — Rearmost point of the head

3.1.7

side point of the head

most lateral point of the head while the head is held in the Frankfurt plane

Note 1 to entry: See [Figure 7](#).

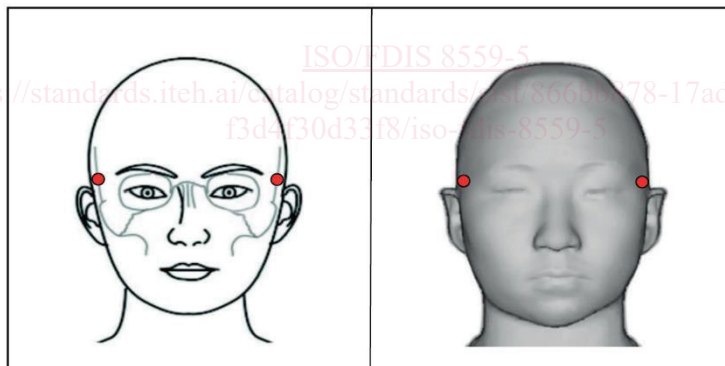


Figure 7 — Side point of the head

3.1.8

side point of the face

zygion

most lateral point on the zygomatic arch while the head is held in the Frankfurt plane

Note 1 to entry: See [Figure 8](#).

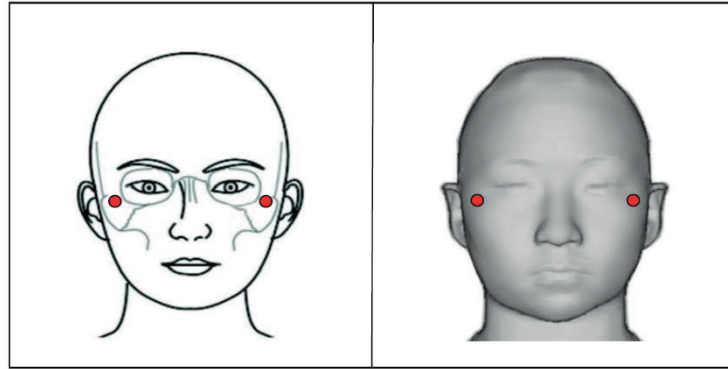


Figure 8 — Side point of the face

3.1.9

forehead level

level midway between the centre point of brow ridge and the level of the top point of the head

Note 1 to entry: See [Figure 9](#).

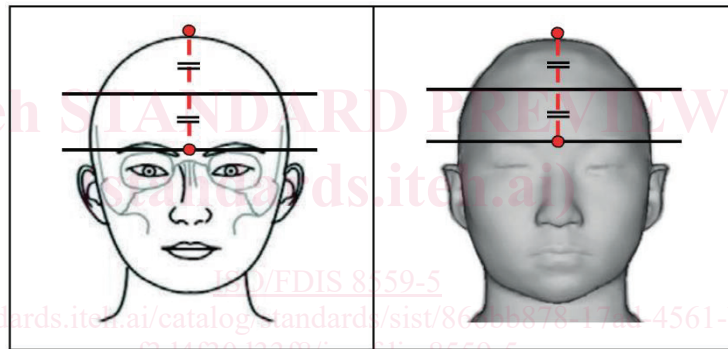


Figure 9 — Forehead level

3.2 Lines and planes

3.2.1

sagittal plane

antoro-posterior (front to back) median plane of the body

Note 1 to entry: See [Figure 10](#).

[SOURCE: ISO 8559-1: 2017, 3.2.4, modified — Replaced term with "sagittal plane".]

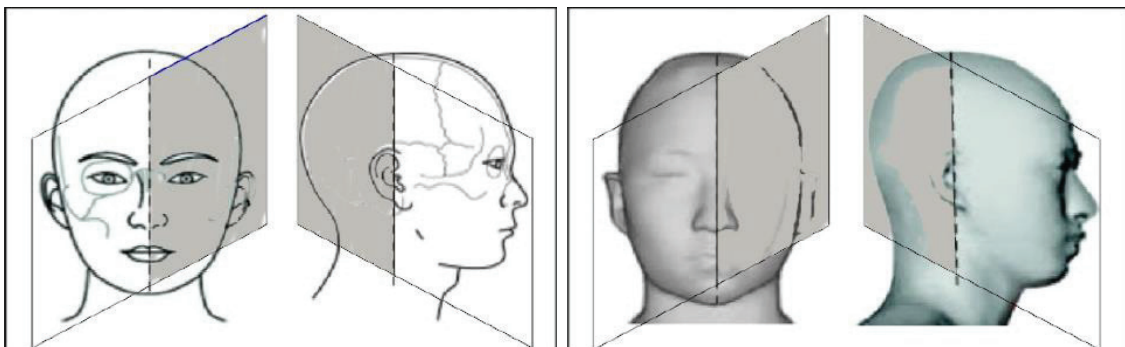


Figure 10 — Sagittal plane

3.2.2

Frankfurt plane

standard horizontal plane at the level of the left tragus, upper border of the cartilaginous flap in front of the ear hole (tragus), and the left orbitale, the lower border of the orbital margin, when the mid-sagittal plane of the head is held vertically

Note 1 to entry: See [Figure 11](#).

[SOURCE: ISO 8559-1: 2017, 3.2.5]

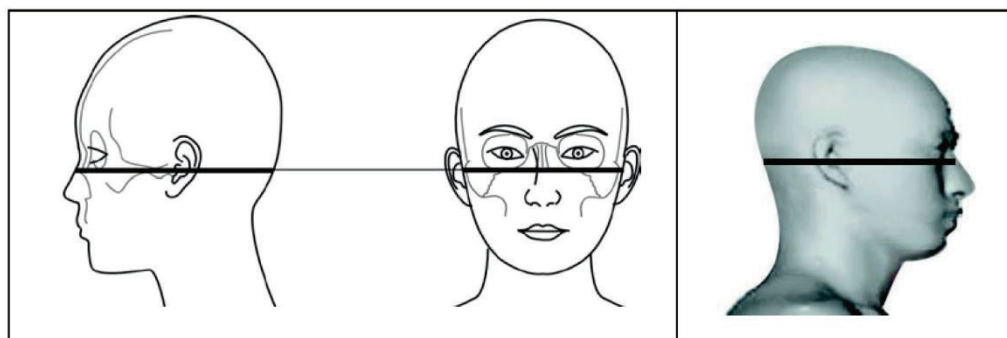


Figure 11 — Frankfurt plane

4 Measuring conditions and equipment

4.1 Conditions and apparatus

4.1.1 Body symmetry

As measurements can be taken on either side of the body, it shall be indicated on which side the measurement was taken.

4.1.2 Posture

The subject shall sit looking straight and with their teeth together. The head shall be held in the Frankfurt plane.

4.1.3 Other requirements

Measurements shall be taken with the subject breathing normally and shall be recorded accurately to the nearest millimetre.

4.2 Equipment

4.2.1 General

All equipment shall be calibrated and verified for accuracy both before and during use.

4.2.2 Tape measure

Tape measure shall be accurately graduated in millimetres, and the width shall be between 5 mm and 10 mm. Tape measure shall be used to measure girth and surface distance measurements.