
Zobozdravstvo - Dentalne pincete (ISO/DIS 15098:2019)

Dentistry - Dental tweezers (ISO/DIS 15098:2019)

Zahnheilkunde - Dentalpinzetten (ISO/DIS 15098:2019)

Médecine bucco-dentaire - Précelles dentaires (ISO/DIS 15098:2019)

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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 documents 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/106, *Dentistry*, Subcommittee SC 4, *Dental instruments*.

This first edition of ISO 15098 cancels and replaces the first edition of the three parts of ISO 15098 (ISO 15098-1:1999, ISO 15098-2:2002 and ISO 15098-3:2000).

The main changes compared to the previous editions are as follows:

- combination of ISO 15098-1, ISO 15098-2 and ISO 15098-3 in one document;
- requirement for reprocessing has been added in in [5.7](#);
- requirement for UDI code has been added in [Clause 7](#);
- deletion of Annex A (Measurement of dimensions).

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.

Dentistry — Dental tweezers

1 Scope

This document specifies general requirements and test methods for metallic dental tweezers. In addition it specifies dimensional requirements for specific types of dental tweezers such as Meriam type and for College type.

Excluded are anatomical tweezers and surgical tweezers.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1101, *Geometrical product specifications (GPS) — Geometrical tolerancing — Tolerances of form, orientation, location and run-out*

ISO 1942, *Dentistry — Vocabulary*

ISO 2768-1, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

ISO 6507-1, *Metallic materials — Vickers hardness test — Part 1: Test method*

ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method*

ISO 7000, *Graphical symbols for use on equipment — Registered symbols*

ISO 7153-1, *Surgical instruments — Materials — Part 1: Metals*

ISO 15223-1:2016, *Medical devices — Symbols to be used with medical device labels, labelling and information to be supplied — Part 1: General requirements*

ISO 17664, *Processing of health care products — Information to be provided by the medical device manufacturer for the processing of medical devices*

ISO 21850-1, *Dentistry — Materials for dental instruments — Part 1: Stainless steel*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1942 and the following apply.

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

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

3.1

dental tweezers

hand-guided dental instrument designed to grasp, hold or transfer items and/or material into and out of the oral cavity

Note 1 to entry: Dental tweezers are also known as cotton forceps and pliers and are different from anatomical tweezers.

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3.2

college type dental tweezers

special design of dental tweezers with straight shank and angled or curved working end

3.3

meriam type dental tweezers

special design of dental tweezers with angulated shank and contra-angulated working end

3.4

locking tweezers

dental tweezer with a locking mechanism to secure material on the working end

Note 1 to entry: Locking tweezers are also known as endodontic tweezers.

3.5

guide pin

pin for guiding the tweezers' halves when the tweezers are pressed together

4 Classification

Dental tweezers are classified into the following types according to the shape of the shank and working end:

- Meriam type: With angulated shank and contra-angulated working end (see [Figure 1](#)).
- College type: With straight shank. Subdivided according to the shape of the working end:
 - angled: see [Figure 2](#).
 - curved see [Figure 3](#).

5 Requirements

5.1 General

There are two specific types of dental tweezers described in this document. Other forms of dental tweezers are also possible.

5.2 Design and dimensions

Meriam type dental tweezers shall have the designs shown in [Figure 1](#) and the dimensions given in [Table 1](#). The points of measurement associated with the dimensions are listed in [Table 2](#).

College type dental tweezers shall have the designs shown in [Figure 2](#) and [Figure 3](#) and the dimensions given in [Table 1](#). The points of measurement associated with the dimensions are listed in [Table 2](#).

Table 1 — Dimensions for dental tweezers

Dimensions in millimetres

	b_1	b_2	b_3	h_1	h_2	l	r	α in degree
Meriam type	1,3	1,1	12	6	6	160	—	40
College type, angled	1,3	1,1	10	8	—	150	—	40
College type, curved	1,3	1,1	10	8	—	150	15	—
Tolerance	$\pm 0,2$	$\pm 0,2$	± 1	± 1	± 1	± 5	reference	± 5

Dimensions without tolerances shall be in accordance with ISO 2768-1. Tolerances of form, orientation and location shall be in accordance with ISO 1101, if not specified otherwise in this document.

Test in accordance with 6.1 and 6.2.

5.2.1 Length

5.2.1.1 Location of measurement points

The location of the points of measurement for dental tweezers shall be as shown in Table 3 and in Figure 1 to Figure 3.

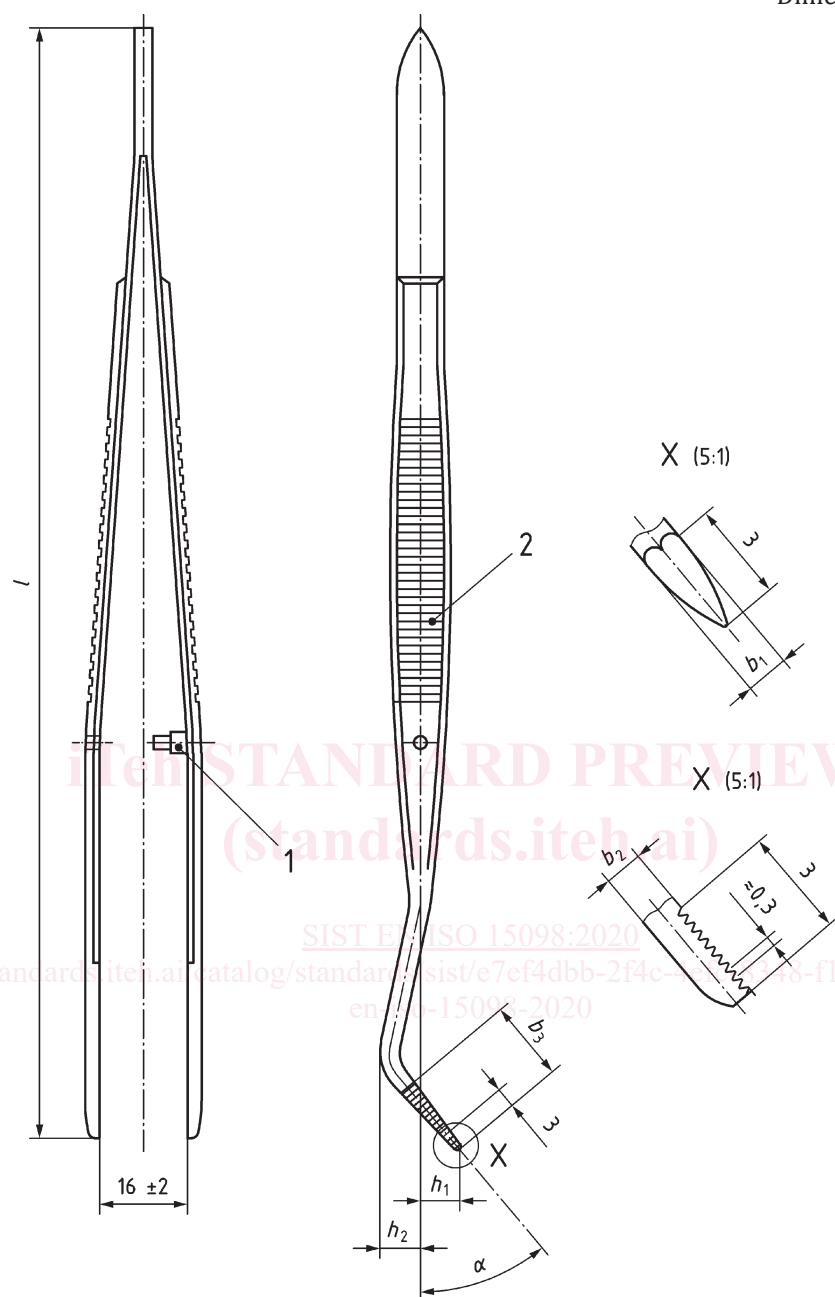
Table 2 — Measurement points for dental tweezers

	Dimension	Measurement point
b_1	Blade width	Measured at a distance of 3 mm from the tip of the working end.
b_2	Blade thickness	Measured at a distance of 3 mm from the tip of the working end.
b_3	Blade length	Distance measured from the extreme tip of the blade, parallel to the centreline of the blade, to the blade/shank interface.
h_1	Blade height	Distance measured from the centreline of the instrument, at right angles to the centreline of the instrument, to the farthest extremity of the blade.
h_2	Shank height	Distance measured from the centreline of the instrument, at right angles to the centreline of the instrument, to the farthest external surface of the first bend of the shank.
l	Length	Distance measured with closed tweezers from the farthest extremity of the blade, parallel to the centreline of the instrument, to the end of the instrument.
r	Radius of blade	Radius of curvature of the inside of the blade.
α	Blade angle	Angle from the centreline of the blade to the centreline of the instrument.

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Dimensions in millimetres

**Key**

- 1 Guide pin
- 2 Handle serrations

Figure 1 — Meriam type dental tweezers