INTERNATIONAL STANDARD

ISO 20888

First edition
2020-10

Dentistry — Vocabulary and designation system for forensic oro-dental data

Médecine bucco-dentaire — Vocabulaire et code de désignation des données bucco-dentaires médico-légales

Reference number
ISO 20888:2020(E)

© ISO 2020



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
Annex A (normative) **Drift/malposition** **23**
Annex B (normative) **Impaction angulation** **24**
Annex C (normative) **Indirect restoration type** **25**
Annex D (normative) **Surface** **26**
Annex E (normative) **Restorative dental material** **27**
Annex F (normative) **Restorative dental material colour** **28**
Annex G (normative) **Endodontic obturation material** **29**
Annex H (normative) **Root restoration material** **30**
Annex I (normative) **Prosthesis abutment type** **31**
Annex J (normative) **Prosthesis retainer type** **32**
Annex K (normative) **Congenital tooth anomalies** **33**
Annex L (normative) **Non-restorative acquired tooth anomalies** **34**
Annex M (normative) **Implant type** **35**
Annex N (normative) **Dental prosthesis fixation** **36**
Annex O (normative) **Location of anomaly** **37**
Annex P (normative) **Dominant colour** **38**
Annex Q (normative) **Surface anomaly** **39**
Annex R (normative) **Prosthesis design components** **40**
Annex S (normative) **Other oral appliances** **41**
Bibliography **42**
Alphabetical index of terms **43**

© ISO 2020 – All rights reserved

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 3, *Terminology,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 55, *Dentistry,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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.

© ISO 2020 – All rights reserved

Introduction

0.1 Background

The establishment of a positive identification of an unidentified individual by the comparative dental analysis of a forensic odontologist requires submission of supporting documentation from the dental professionals who treated the patient. This information includes dental treatment records, radiographs, photographs, and dental casts; this information is then submitted to the appropriate authority and referred to as antemortem dental data (AM). Currently, the vast majority of antemortem dental data and associated attachments are submitted on paper and by radiographic film, however, the goal is to create a standardized electronic format for the transfer of this data. Due to varying methods of documentation and recording systems, an organized list of standardized dental terminology would be useful. Submission of ambiguous information due to a lack of harmonization can increase the time required to establish the identification through dental means.

The disaster victim identification (DVI) community, due to the number of victims and the number of countries of origin of the victims, will benefit from this internationally standardized forensic oro-dental data, by using standardized terminology of useful concepts.

Current odontological comparison software is based on the concept of restoration comparison. Utilizing each tooth as a field, comparison and/or elimination queries and advance sorting algorithms creates a ranking of possible matches to aid the forensic odontologist in the initial records comparison. Biometric, familial, radiographic, and visual information support the likelihood of a match. By standardizing the descriptors used to describe this information, the likelihood of identifying an individual based on the forensic odontologist's data increases.

0.2 Principle

Many descriptors of a tooth are determined from radiographic interpretation; specific “similar” radiographic attributes are grouped together into single unified descriptors. This should allow for the unambiguous interpretation of a tooth attribute and ensure that a radiographic attribute can be described by a single unified attribute. Generally, consistency of assigning a unique attribute to a radiographic feature is utilized in this document in order to create unambiguous descriptors even at the expense of combining similar, but not identical, attributes.

The permanent dentition takes priority when both the primary and permanent teeth are present if both are concurrently visible in the mouth; however, the presence of the primary tooth should also be noted.

The pertinence of these descriptors should be weighted with the time differences between the date of the records and the presumptive date of recording of the current data.

If a descriptor involves multiple teeth, then that descriptor shall be utilized for all the teeth involved.

0.3 Rationale

A significant volume of information is gathered during dental evaluation and treatment. Forensic odontologists charged with the task of identifying individuals need comprehensive information in order to prove or disprove identification. While much of the information gathered by the dentist might not aid in claims adjudication, it is not possible to predict in advance what item or items in the dental record might be conclusive in identification. This document is designed to fill a void by establishing documentation requirements for the submission of antemortem dental information for identification.

Terms and definitions describing teeth, pathology or anomaly of teeth or tooth restorations are limited to ISO 3950 oro-dental codes that map to individual teeth.

Terms and definitions describing multiple teeth, jaw or mouth conditions, pathologies, relationships, or prostheses are limited to ISO 3950 oro-dental codes that map those entities.

Terms and definitions which are limited to other specific ISO 3950 oro-dental locations are annotated accordingly in the notes to entry and related annexes.

© ISO 2020 – All rights reserved

Terms and definitions describing dental devices, pathologies, or entities that do not have a specific location are limited to ISO 3950 code 00, 01, 02 and the notes to entry and related annexes.

An entry with a “(by report)” notation indicates that optional free-form text can be included with the term to further characterize the entity being described. See Figure 1.

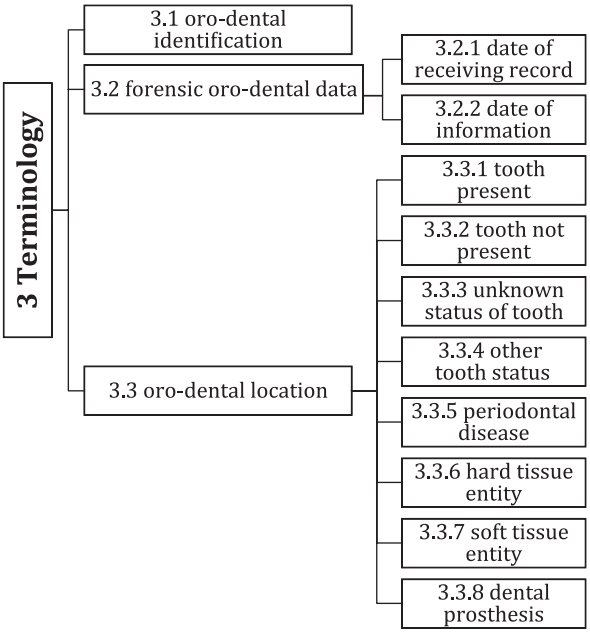


Figure 1 — Overview of the main elements of Clause 3

© ISO 2020 – All rights reserved

Dentistry — Vocabulary and designation system for forensic oro-dental data

1 Scope

This document defines the terms used to describe the distinctive characteristics of an individual's mouth by dentists and forensic dental experts. These terms are organized by concepts based on a forensic approach to the characteristics of a mouth, with many concepts specific to the identification domain that are not defined elsewhere in ISO dentistry vocabularies (e.g. "*present tooth*").

The hierarchical structure of this document is designed to describe attributes of a tooth, the mouth and a prosthesis/orthosis with increasing levels of discriminative characteristics (e.g. material characteristics, *restored tooth* surface) and the possibility to connect any level of description of an attribute with the most comprehensive concept.

This document is intended to be used for data exchange between antemortem and postmortem files and remove ambiguity on the terms used to describe an individual's mouth.

This document is intended to be used in conjunction with ISO 1942 and ISO 3950.

2 Normative references

The following documents are referred to in the text in such a way that some or all 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 1942, *Dentistry — Vocabulary*

ISO 3950, *Dentistry — Designation system for teeth and areas of the oral cavity*

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:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
oro-dental identification
science and art of comparing *antemortem dental data* (3.2.2.1) with *postmortem dental data* (3.2.2.2) to help determine the identity of an individual

3.2
forensic oro-dental data
recorded information describing the oral cavity and surrounding tissues for legal purposes

3.2.1
date of receiving record
date when the forensic information is recorded in the forensic record

Note 1 to entry: The date of receiving record is determined using ISO 8601-1.

© ISO 2020 – All rights reserved