

# INTERNATIONAL STANDARD

**ISO  
7494**

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## **Dental unit**

*Unit dentaire*



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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 7494 was prepared by Technical Committee ISO/TC 106, *Dentistry*.

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## **Introduction**

This International Standard takes priority over IEC 601-1 as specified in the individual clauses of this International Standard.

Only the specifications laid down in this International Standard are applicable.

This International Standard refers to IEC 601-1:1977, the basic standard on safety of medical electrical equipment, wherever relevant, by stating the respective clause numbers of IEC 601-1.

## Document Title

This document is a template for a report. It contains several sections that can be filled out with specific information. The sections are: Introduction, Methodology, Results, Discussion, and Conclusion. Each section has a set of questions or prompts that guide the user in writing the report. The document is designed to be easy to use and to provide a clear structure for the report.

# Dental unit

## 1 Scope

This International Standard applies to all dental units whether they are electrically equipped or not.

It specifies requirements, test methods and marking details for items of equipment used for delivering and storing dynamic and static instruments such as handpieces, syringes, saliva ejectors, cuspidors, high volume evacuators, but specifically excludes Class III equipment.

Specifications for instruments will be the subject of future, separate International Standards.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1942-4:1989, *Dental vocabulary — Part 4: Dental equipment*.

ISO 4211:1979, *Furniture — Assessment of surface resistance to cold liquids*.

ISO 9687:—<sup>1)</sup>, *Dental equipment — Graphical symbols*.

IEC 601-1:1977, *Safety of medical electrical equipment — Part 1: General requirements*.

1) To be published.

## 3 Definitions

For the purposes of this International Standard, the following definition and, where relevant, definitions given in clause 2 of IEC 601-1:1977 apply.

**dental unit:** Item of dental equipment through which electrical power and/or various fluids or gases are supplied to a number of dental instruments and devices. It is usually fitted with conveniently orientated instrument holders and controls, and consists of interconnected sub-units of dental equipment and instruments providing a functional unit for dental use.

## 4 Classification

### 4.1 According to type of protection against electric shock

Dental units may be classified as follows:

#### a) Class I equipment

Equipment in which protection against electric shock does not rely on basic insulation only, but which includes an additional safety precaution in such a way that means are provided for the connection of accessible conductive parts to the protective (earth) conductor in the fixed wiring of the installation in such a way that accessible conductive parts cannot become live in the event of a failure of the basic insulation.

#### b) Class II equipment

Equipment in which protection against electric shock does not rely on basic insulation only, but in which additional safety precautions such as double insulation or reinforced insulation are provided, there being no provision for protective earthing or reliance upon installation conditions.