

Health informatics - Expression of results of measurements in health sciences

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12435:2006 sisaldab Euroopa standardi EN 12435:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 29.05.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12435:2006 consists of the English text of the European standard EN 12435:2006.</p> <p>This document is endorsed on 29.05.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This document is intended for use by parties to the design, development, acquisition, use and monitoring of health-care related information and information systems. It provides a list of units of measurement to be used in representing values of measurable quantities in health sciences.</p>	<p>Scope: This document is intended for use by parties to the design, development, acquisition, use and monitoring of health-care related information and information systems. It provides a list of units of measurement to be used in representing values of measurable quantities in health sciences.</p>
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English Version

Health informatics - Expression of results of measurements in health sciences

Informatique de santé - Expression des résultats de mesure dans le domaine de la santé

Medizinische Informatik - Darstellung der Ergebnisse von Messungen in den Gesundheitswissenschaften

This European Standard was approved by CEN on 14 December 2005.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This document (EN 12435:2006) has been prepared by Technical Committee CEN/ TC 251 "Health informatics", the secretariat of which is held by NEN.

This document falls under mandate BC/CEN/03/ 255/97/23 of the European Commission and the European Free Trade Association.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2006, and conflicting national standards shall be withdrawn at the latest by July 2006.

This document supersedes ENV 12435:1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

Results of measurements on the human or animal body, and its environment are essential in the health sciences. The disciplines involved in measurement often use different ways of expressing their results. Conventions within user groups are not universally applicable. The situation is further complicated by differences in the ways they are expressed in national legislation and in local administration. From the many available conventions, a consensus must therefore be reached on how to express the results of measurements on the body and its environment, particularly for exchange between information systems.

Universal principles for the expression of measurements have been laid down by Technical Committee 12 of the International Organization for Standardization in its series of standards ISO 31 and ISO 1000, which implement the International System of Units (SI) defined by the General Conference on Weights and Measures. Those principles have been applied to biological systems and certain units have been added by the International Council on Radiological Protection, International Council on Standardization in Haematology, the International Federation of Clinical Chemistry, the International Union of Biochemistry and Molecular Biology, the International Union of Pure and Applied Chemistry and the World Health Organization. Implementation of this EN will provide wider comprehension and interaction between countries and specialities.

The main normative provisions of this European standard are expressed in Clauses 5, 6 and 7. They include the following aspects of the performance of a device or system related to the result of a measurement:

- the selection of kind-of-quantity and the unit in which to express it in accordance with the provisions of Clause 5
- where reported, the uncertainty of the value in accordance with the provisions of Annex D
- for the purposes of display, printing, transmission and storage, the elements of the results of measurement in accordance with the provisions of Clause 7.

1 Scope

This document is intended for use by parties to the design, development, acquisition, use and monitoring of health-care related information and information systems. It provides a list of units of measurement to be used in representing values of measurable quantities in health sciences.

The International System of Units forms the basis for this EN. Units with their associated kinds-of-quantity are arranged in order of dimension in Tables 1, 2 and 4 (Clause 5), and in Annex A.

Different kinds-of-quantity may apply to a given combination of component(s) and system. Often the different quantities are interconvertible and examples of such interconvertibility are given in Annex C.

Tables of conversion factors (Annex A) are provided from units in current use to SI units or their multiples.

To represent the result of a measurement (Clause 6), this EN addresses requirements for the following:

- relational operator (Clause 4)
- numerical value (Subclause 6.1)
- uncertainty of measurement (Subclause 6.2; Annex D)
- unit of measurement (Clause 5).

This EN covers the requirements for representation of these data elements in displayed and printed form, and provides an approach for support of languages in non-Roman alphabets (Clause 7).

The scope of this standard is limited to textual representation. Support is not provided for the display or printing of images or graphs.

This standard does not cover the requirements for expression of the results of measurements in speech, speech synthesis or handwriting. It does not cover the form and syntax of requests for clinical measurements, nor detailed aspects of data transmission. It refers the user to other CEN standards that address the detailed specification of the interchange format. It does not address the syntax for recording of natural-language statements about quantities, such as those used in recording information about drugs dispensed or about treatment of patients. It does not cover the units of financial quantities, which are covered by ISO 4217.

2 Normative references

The following referenced documents are indispensable for the application 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 31-11:1992, *Quantities and units – Part 11: Mathematical signs and symbols for use in the physical sciences and technology*.