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Health informatics — Conceptual data model for Chinese medicinal herbs

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Foreword

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This document was prepared by Technical Committee ISO/TC 215, *Health informatics*, in collaboration with Technical Committee ISO/TC 249, *Traditional Chinese medicine*.

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Introduction

Chinese medicinal herbs have been used systematically for over 4,000 years because of their efficacy and cost-effectiveness in preventing and curing illness. According to the WHO, around 21 000 plant species have the potential for being used as medicinal plants, therefore many health authorities and administrators took traditional forms of medicine more seriously and have explored the possibility of utilizing them in primary health care.

However, the species of commonly used medicinal plants are decreasing and many plants face extinction. In China, for example, liquorice stocks fell sharply by more than 40% from the 1950s to the 2010s. The main reasons include an emerging growth in demand, deforestation, environmental deterioration, ecological imbalance and lack of awareness of environmental protection.

It would be beneficial to establish unified information systems including databases. There are a range of regional and other databases on the uses of medicinal plants. The development of a common design for databases on the conservation and sustainable use of Chinese medicinal herbs should also be done at the international level. It is beneficial to exchange information both within and between countries permitting a constant process of refining and updating.

By collecting information of individual Chinese medicinal herb, such as plant attributes, growth geographic attributes, medicinal attributes and identification methods, etc., it is possible to set up centralized databases to explore further on scarce species, alternative varieties and authentic Chinese medicinal herbs. This would also facilitate artificial cultivation, sustainable development and application of Chinese herbal medicine resources.

This document aims at protecting scarce species of Chinese medicinal herbs, promoting their cultivation, seeking proper substitutes and breeding new varieties in high quality. Moreover, it can assist the standardization and information process of the general surveys on Chinese medicinal herbs.

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Health informatics — Conceptual data model for Chinese medicinal herbs

1 Scope

This document specifies a conceptual data model for Chinese medicinal herbs (CMH). The organization of the data model for each CMH consists of its medicinal attributes, plant attributes, geographic attributes and identifications.

This document is applicable to the establishment and maintenance of CMH databases.

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 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country code*

ISO 3166-2, *Codes for the representation of names of countries and their subdivisions — Part 2: Country subdivision code*

ISO 3166-3, *Codes for the representation of names of countries and their subdivisions — Part 3: Code for formerly used names of countries*

ISO 18668-1, *Traditional Chinese medicine — Coding system for Chinese medicines — Part 1: Coding rules for Chinese medicines*

ISO 18668-3, *Traditional Chinese medicine — Coding system for Chinese medicines — Part 3: Codes for Chinese Materia Medica*

ISO 6709, *Standard representation of geographic point location by coordinates*

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
conceptual data model
data model that represents an abstract view of the real world

Note 1 to entry: A conceptual model represents the human understanding of a system, which can be anywhere from a paper-based system to a complex database in an IT system.

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