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**Sterilization of health care  
products — Moist heat —**

**Part 3:  
Guidance on the designation of a  
medical device to a product family  
and processing category for steam  
sterilization**

*Stérilisation des produits de santé — Chaleur humide —*

*Partie 3: Directives concernant la désignation d'un dispositif médical  
pour une famille de produits et catégorie de traitement pour la  
stérilisation à la vapeur*



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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. [www.iso.org/directives](http://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. [www.iso.org/patents](http://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.

The committee responsible for this document is ISO/TC 198, *Sterilization of health care products*.

ISO 17665 consists of the following parts, under the general title *Sterilization of health care products — Moist heat*:

- *Part 1: Requirements for the development, validation and routine control of a sterilization process for medical devices*
- *Part 2: Guidance on the application of ISO 17665 Part 1: 2006 [Technical Specification]*
- *Part 3: Guidance on the designation of a medical device to a product family and processing category for steam sterilization [Technical Specification]*

## Introduction

The type of moist heat sterilization process used to successfully process a medical device is identified from the physical, design, material and functional characteristics of the medical device and any sterile barrier system and/or packaging system used to present the medical device for sterilization.

Manufacturers of moist heat sterilizers may supply sterilizers with a number of pre-set sterilization processes. These pre-set sterilization processes may be suitable for sterilizing a wide range of medical devices or combinations of medical devices; however, there may be a need to develop customized sterilization processes to sterilize medical devices or combinations of medical devices that pose a particular challenge to the pre-set sterilization processes.

The designs and nature of materials used to construct medical devices are increasing in complexity. Materials used in the manufacture of sterile barrier systems and/or packaging systems and the combinations of different medical devices in procedure sets can adversely affect conductivity, air removal and moist heat penetration, causing a failure to obtain the required sterility assurance level.

The classification of a medical device into a product family can assist with the development of moist heat sterilization process conditions for this medical device. Assigning a medical device to a particular product family is the first stage of performance qualification at the point of use as specified in ISO 17665-1 and ISO/TS 17665-2. The efficacy of sterilization for a medical device using the sterilization process for that product family should be assessed and documented together with any pre-treatments, such as cleaning, disinfection to reduce bioburden followed by lubrication and humidification of some materials e.g. those containing cellulose.

In this part of ISO 17665 the attributes which relate to efficient sterilization and which are used to identify a product family have been selected from operational experience, engineering considerations and experimental data relating to the efficacy of the different types of moist heat sterilizers and their sterilization processes, and the types and design of differing medical devices and sterile barrier systems and/or packaging systems. Medical devices that are labelled by the manufacturer as being capable of being sterilized via moist heat may be categorized into product families by a user. However, not all medical devices will fit into one of the product families described in this part of ISO 17665. In these cases, new product families will need to be identified based on the consideration of the products attributes and require additional performance qualification.

Medical devices that have been classified into different product families are often processed in the same sterilization load when assembled into a randomly selected load configuration. This approach is common and acceptable in health care facilities where it is generally not feasible to qualify each sterilization load, provided that the sterilization process and sterilizer have been shown to be capable of sterilizing the range of product families constituting the sterilization load. Care should be taken to ensure that the combination of product families does not create a greater sterilization challenge than that set by the individual product families. In addition, consideration should be given to possible adverse interactions between medical devices such as the contamination of instruments with textile fibres. The examples shown in [Annex B](#) and [D](#) are illustrations of how the coding system is intended to be used in developing a sterilizer load.

This part of ISO 17665 should be read in conjunction with ISO 17665-1 and ISO/TS 17665-2.



# Sterilization of health care products — Moist heat —

## Part 3:

## Guidance on the designation of a medical device to a product family and processing category for steam sterilization

### 1 Scope

This part of ISO 17665 provides guidance about the attributes of a medical device to be considered by the user when assigning a medical device to a product family for the purpose of identifying and aligning it to a processing category for a specific moist heat sterilization process.

**NOTE** While this part of ISO 17665 is applicable to health care facilities, it may be used by a manufacturer of a sterile medical device and/or whenever information on reprocessing is required (see ISO 17664).

### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 17665-1:2006, *Sterilization of health care products — Moist heat — Part 1: Requirements for the development, validation and routine control of a sterilization process for medical devices*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 17665-1 and the following apply.

#### 3.1

##### **master product**

medical device or procedure set used to represent the most difficult to sterilize item in a product family or processing category

#### 3.2

##### **processing category**

collection of different products or product families that can be sterilized together

#### 3.3

##### **steam penetration resistance**

challenge to a sterilization process from a medical device, including any sterile barrier/packaging system that may delay attainment of the process parameters for moist heat sterilization on all parts of the medical device

#### 3.4

##### **user**

responsible body, which can be an individual or group, accountable for ensuring products are sterilized and suitable for intended use