
**Biotechnology — Specification on
data management and publication in
microbial resource centers**

*Biotechnologie — Spécifications relatives à la gestion et à
la publication des données au sein des centres de ressources
microbiennes*



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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

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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 (see www.iso.org/directives).

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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 276, *Biotechnology*.

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.

Introduction

The application of varied data forms in different microbial resource centres (MRCs) for in-house data management and publication is a major problem, which severely impedes efficient data exchange globally. It can also hinder depositors/users and potential users of MRCs from accessing their holdings and related information, and therefore impedes exploitation of microbial material and associated data in academia and bio-industries in the long run.

This document provides a set of data fields for data publication, aiming to improve data exchange of online catalogues among MRCs, by applying unique identifiers and a uniform data form. It also helps to facilitate subsequent access and benefit sharing based on microbial material and associated data.

This document also specifies requirements for data management and internal data quality control to improve the overall accuracy and reliability of data and information documented in MRCs, which is the basis of efficient data sharing and exchange.

Biotechnology — Specification on data management and publication in microbial resource centers

1 Scope

This document specifies requirements for data management and publication in microbial resource centres (MRCs) to enable consistent formatting, and a quality control workflow to improve the overall quality of data. It also provides recommendations for MRCs to improve data sharing and integration of microbial material and associated data.

This document is intended to facilitate procedures such as accessioning, acquisition, authentication, preservation, storage, and distribution, and can be used by MRCs, regulatory authorities, organizations, and schemes using peer-assessment to confirm or recognize the competence of MRCs in data management and publication

NOTE International, national and/or regional regulations or requirements can also apply to specific topics covered in this document.

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 20387:2018, *Biotechnology — Biobanking — General requirements for biobanking*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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

accessioning

documenting the addition of a new *microbial material* (3.17) and/or associated data to an *MRC* (3.18)

[SOURCE: ISO 20387:2018, 3.1, modified — Replaced “biological” by “microbial”; “a biobank” was replaced by “an MRC”.]

3.2

acquisition

act of obtaining possession and/or custody of *microbial material* (3.17) and/or associated data

[SOURCE: ISO 20387:2018, 3.2, modified — Replaced “biological” by “microbial”.]