
Kakovost vode - Biološko razvrščanje vodotokov - 1. del: Navodilo za razlago podatkov o biološki kakovosti na podlagi preiskav bentoških nevretenčarjev (ISO 8689 -1:2000)

Water quality - Biological classification of rivers - Part 1: Guidance on the interpretation of biological quality data from surveys of benthic macroinvertebrates (ISO 8689-1:2000)

Wasserbeschaffenheit - Biologische Klassifizierung von Fließgewässern - Teil 1: Richtlinie zur Interpretation von Beschaffenheitsdaten zur Untersuchung von benthischen Makroinvertebraten in Fließgewässern (ISO 8689-1:2000)

Qualité de l'eau - Classification biologique des rivières - Partie 1: Lignes directrices concernant l'interprétation des données relatives à la qualité biologique à partir d'études des macro-invertébrés benthiques (ISO 8689-1:2000)

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ICS:

13.060.10	Voda iz naravnih virov	Water of natural resources
13.060.70	Preiskava bioloških lastnosti vode	Examination of biological properties of water

SIST EN ISO 8689-1:2000

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
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EN ISO 8689-1

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English version

Water quality - Biological classification of rivers - Part 1:
Guidance on the interpretation of biological quality data from
surveys of benthic macroinvertebrates (ISO 8689-1:2000)

Qualité de l'eau - Classification biologique des rivières -
Partie 1: Lignes directrices concernant l'interprétation des
données relatives à la qualité biologique à partir d'études
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Wasserbeschaffenheit - Biologische Klassifizierung von
Fließgewässern - Teil 1: Richtlinie zur Interpretation von
Beschaffenhitsdaten zur Untersuchung von benthischen
Makroinvertebraten in Fließgewässern (ISO 8689-1:2000)

This European Standard was approved by CEN on 15 March 2000.

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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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of the International Standard ISO 8689-1:2000 has been prepared by Technical Committee ISO/TC 147 "Water quality" in collaboration with Technical Committee CEN/TC 230 "Water analysis", the secretariat of which is held by DIN.

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 September 2000, and conflicting national standards shall be withdrawn at the latest by September 2000.

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

NOTE FROM CEN/CS: The foreword is susceptible to be amended on reception of the German language version. The confirmed or amended foreword, and when appropriate, the normative annex ZA for the references to international publications with their relevant European publications will be circulated with the German version.

Endorsement notice

The text of the International Standard ISO 8689-1:2000 was approved by CEN as a European Standard without any modification.

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INTERNATIONAL STANDARD

ISO
8689-1

First edition
2000-03-15

Water quality — Biological classification of rivers —

Part 1:

Guidance on the interpretation of biological quality data from surveys of benthic macroinvertebrates

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Qualité de l'eau — Classification biologique des rivières —

*Partie 1: Lignes directrices pour l'interprétation des données relatives à
la qualité biologique à partir d'études des macro-invertébrés benthiques*

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this part of ISO 8689 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 8689-1 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 5, *Biological methods*.

ISO 8689 consists of the following parts, under the general title *Water quality — Biological classification of rivers*:

- *Part 1: Guidance on the interpretation of biological quality data from surveys of benthic macroinvertebrates*
- *Part 2: Guidance on the presentation of biological quality data from surveys of benthic macroinvertebrates*

Annex A of this part of ISO 8689 is for information only.

Introduction

Many countries use benthic macroinvertebrates in surveillance and monitoring programmes to produce biological classifications of running waters that evaluate a variety of man-made stresses [1,2,3,4,5,6,7]. The list of benthic macroinvertebrate taxa found during a survey is normally used to calculate a biological index or score which is related to a particular stress [2,3,4,5,6,7]. A classification can be produced by comparison between a reference community, which represents unstressed conditions, and the observed community [6,8]. This type of classification takes into account the natural variability of biological communities.

As yet there is no single classification or index scheme that covers all geographical regions [1,2,3,5]. For rivers which cross national boundaries there is especially a need to have classifications which are the same or are at least comparable [9,10]. A comparison exercise allows conversion to be made between the differing classification schemes, without the need to sample and analyse data using the different methods each time a comparison is required.

According to the precise use to which this part of ISO 8689 is to be put, it is essential for specifiers and users mutually to agree any necessary variation or optional procedural details prior to use.

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Water quality — Biological classification of rivers —

Part 1:

Guidance on the interpretation of biological quality data from surveys of benthic macroinvertebrates

1 Scope

This part of ISO 8689 gives guidance on the interpretation of biological quality data relating to running waters from surveys of benthic macroinvertebrates. It is recognized that for a complete assessment of ecological status, other elements of biological quality should be assessed.

NOTE Annex A gives guidance on how the comparison of the various classification systems can be made where classifications of the biological quality of running waters using benthic macroinvertebrates already exist.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 8689. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 8689 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 5667-3, *Water quality — Sampling — Part 3: Guidance on the preservation and handling of samples*.

ISO 7828, *Water quality — Methods of biological sampling — Guidance on handnet sampling of aquatic benthic macro-invertebrates*.

ISO 8265, *Water quality — Design and use of quantitative samplers for benthic macro-invertebrates on stony substrata in shallow freshwaters*.

ISO 9391, *Water quality — Sampling in deep waters for macro-invertebrates — Guidance on the use of colonization, qualitative and quantitative samplers*.

3 Terms and definitions

For the purposes of this part of ISO 8689, the terms and definitions given in ISO 5667, ISO 7828, ISO 8265 and ISO 9391 and the following apply.

3.1

watercourse

body of surface water that has running water perennially or at some time during the annual hydrologic cycle