Water quality - Guidelines for the selection of sampling methods and devices for benthic macroinvertebrates in fresh waters (ISO 10870:2012)

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NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 10870:2012 sisaldab Euroopa standardi EN ISO 10870:2012 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 10870:2012 consists of the English text of the European standard EN ISO 10870:2012.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 01.07.2012.	Date of Availability of the European standard is 01.07.2012.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

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EN ISO 10870

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English Version

Water quality - Guidelines for the selection of sampling methods and devices for benthic macroinvertebrates in fresh waters (ISO 10870:2012)

Qualité de l'eau - Lignes directrices pour la sélection des méthodes et des dispositifs d'échantillonnage des macro-invertébrés benthiques dans les eaux douces (ISO 10870:2012)

Wasserbeschaffenheit - Anleitung zur Auswahl von Probenahmeverfahren und -geräten für benthische Makro-Invertebraten in Binnengewässern (ISO 10870:2012)

This European Standard was approved by CEN on 30 June 2012.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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

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Foreword

This document (EN ISO 10870:2012) 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 January 2013, and conflicting national standards shall be withdrawn at the latest by January 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 27828:1994, EN 28265:1994, EN ISO 9391:1995.

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Endorsement notice

The text of ISO 10870:2012 has been approved by CEN as a EN ISO 10870:2012 without any modification.

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Introduction

Macroinvertebrates are an important component of fresh-water ecosystems and are the most widely used biological group to monitor aquatic ecological status (Reference [6]). A wide range of sampling and survey methodologies has been developed for a variety of specific applications as well as ecological assessment including: conservation status, biodiversity assessment, pollution control, and habitat enhancement (Reference [7]).

This International Standard gives guidelines on the selection, design, operation, and performance characteristics of sampling devices for the evaluation of benthic macroinvertebrate taxonomic composition, abundance, and diversity in fresh waters, which can all be components of the applications given in the first parargraph.

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WARNING — Working in or around water is inherently dangerous. This International Standard does not purport to address the safety problems associated with its use. It is the responsibility of the user to establish appropriate health and safety practices and to ensure compliance with any national regulatory conditions.

1 Scope

This International Standard specifies criteria for the selection of sampling methods and devices (operation and performance characteristics) used to evaluate benthic macroinvertebrate populations in fresh waters (rivers, canals, lakes, and reservoirs). The methods and devices considered in this International Standard are suitable for sampling all major components of the benthic assemblage. They are not suitable for sampling meiofauna.

2 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

2.1
abundance
total number of individuals in a taxon, per sampling unit or estimated per unit area

2.2
benthic
dwelling at the bottom of an aquatic environment

2.3
canal
artificial watercourse constructed, usually, to join rivers, lakes or seas, and often of a size suitable for navigation

[SOURCE: ISO 6107-2:2006,[2] 15]

2.4
deep water
water from 1 m below the water surface to the limiting depth for efficient sampling

2.5
diversity
species richness of a community and the distribution of individuals across those species

2.6
habitat
area of the environment in which a particular organism or population lives, including its characteristic assemblages of plants and animals

2.7
lake
inland body of water of considerable area

[SOURCE: ISO 6107-2:2006,[2] 57]

2.8
macroinvertebrate
invertebrate that is easily visible without magnification (>0,5 mm)