EESTI STANDARD EVS-EN 13946:2003

Water quality - Guidance standard for the routine sampling and pretreatment of benthic diatoms from rivers

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EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 13946:2003 sisaldab Euroopa standardi EN 13946:2003 ingliskeelset teksti. Käesolev dokument on jõustatud 06.06.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 13946:2003 consists of the English text of the European standard EN 13946:2003. This document is endorsed on 06.06.2003 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This guidance European Standard establishes a method for the sampling and laboratory preparation of benthic diatoms for water quality assessments. Data produced by this method are suitable for production of water quality indices based on the relative abundance of taxa. With appropriate modifications the method can be applied to the study of benthic diatoms in lakes	**Scope:** This guidance European Standard establishes a method for the sampling and laboratory preparation of benthic diatoms for water quality assessments. Data produced by this method are suitable for production of water quality indices based on the relative abundance of taxa. With appropriate modifications the method can be applied to the study of benthic diatoms in lakes

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Water quality - Guidance standard for the routine sampling and pretreatment of benthic diatoms from rivers

Qualité de l'eau - Guide pour l'échantillonnage en routine et le prétraitement des diatomées benthiques de rivières

Wasserbeschaffenheit - Leitfaden zur Probenahme und Probenaufbereitung von benthischen Kieselalgen in Fließgewässern

This European Standard was approved by CEN on 21 February 2003.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 13946:2003) has been prepared by 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 November 2003, and conflicting national standards shall be withdrawn at the latest by November 2003.

Annex A is informative.

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

WARNING — Persons using this European Standard should be familiar with normal laboratory practice. This standard does not purport to address all of the safety problems, if any, 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.

Diatoms are an important component of aquatic ecosystems and constitute a water quality monitoring tool where the primary objective is either a measure of general water quality or of specific components of water quality (e.g. eutrophication, acidification). The requirement for the monitoring of such processes is inherent in the Water Framework Directive (2000/60/EC) and Urban Waste Water Treatment Directive (91/271/EEC) in addition to other EU Directives and international agreements. This European Standard covers aspects of sampling and pre-treatment relevant to assessment of water quality using benthic diatoms. Some aspects may also be relevant to measures of ecological integrity. These sampling instructions will result in samples suitable for quantifying relative numbers of benthic diatom taxa present. If it is necessary to quantify absolute numbers of taxa, or fresh weight per unit area, modifications to the method are required, which are not within the scope of this standard.

The use of diatoms as indicators of river water quality is widely accepted both in Europe and the USA. The methodology is based on the fact that all diatom species have tolerance limits and optima with respect to their preference for environmental conditions such as nutrients, organic pollution and acidity. Polluted waters will tend to support an increased abundance of those species whose optima correspond with the levels of the pollutant in question. Conversely, certain species are intolerant of elevated levels of one or more pollutants, whilst others can occur in a wide range of water qualities.

Methods using diatoms to assess water quality have been developed in several European countries (recent work is summarized in the proceedings of three symposia [1 to 3]. The methodologies for evaluating the diatom data vary but the sampling and pre-treatment processes are similar [4].

According to the precise usage to which this standard is to be put it is essential for specifiers and users to agree on any necessary variations or optional procedural details prior to use.

All numerical values given in this standard are approximate.