ILNAS

Institut luxembourgeois de la normalisation
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ILNAS-EN 17218:2019

Water quality - Guidance on sampling of mesozooplankton from marine and brackish water using mesh

Wasserbeschaffenheit - Anleitung zur Probenahme von Mesozooplankton aus marinen und Übergangsgewässern mittels Netzen

Qualité de l'eau - Document d'orientation pour l'échantillonnage du mésozooplancton dans les eaux de mer ou saumâtres à l'aide de filets

05/2019

National Foreword

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EUROPEAN STANDARD
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European foreword

This document (EN 17218:2019) 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of an identical text or by endorsement, at the latest by November 2019, and conflicting national standards shall be withdrawn at the latest by November 2019.

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

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Introduction

The Zooplankton community is an important part of the pelagic food web, since it forms the link between primary producers and higher trophic levels. Changes in phytoplankton biomass and species/size composition change mesozooplankton community structure and productivity. Such changes potentially influence fish stock recruitment and sedimentation (i.e. indirectly affecting oxygen concentration in the bottom water) [1].

Surveys of zooplankton have provided valuable information for the environmental monitoring of marine and brackish waters, because this group includes species which:

— occur in a wide range of marine and brackish waters over a large geographical area and at the same time have specific environmental requirements,

— are relatively well known with regard to their geographical distribution and environmental requirements, and

— have a generally high capacity for dispersal enabling them to respond rapidly to remedial actions,

while sampling requires only a modest expenditure of time and equipment.

A procedure for analysing zooplankton (identification, counting and biomass determination) in marine and brackish waters is given in EN 17204 [2]. This procedure comprises how to identify and enumerate zooplankton collected in nets which is utilized to estimate quantitative information on diversity, abundance and biomass with regard to spatial distribution and long-term temporal trends for a given body of water.

WARNING — Persons using this document should be familiar with normal laboratory practice. This document 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 safety and health practices.

1 Scope

This document specifies procedures for sampling of mesozooplankton using nets and continuous ribbon-sampling devices in marine and brackish waters for the purpose of water quality assessment and determination of ecological status of ecosystems.

Guidance on sampling procedures and the subsequent steps of preservation and storage are given. The sampling procedures allow estimates of species occurrence and their abundance (relative or absolute), including spatial distribution and seasonal and long-term temporal trends, for a given body of water.

The described methods are restricted to the sampling of mesozooplankton that inhabit marine and brackish waters and exclude the shallow littoral zones which require a different type of sampling (e.g. zooplankton in salt marshes).

2 Normative references

There are no normative references in this document.

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:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
pelagic zone
free body of water beyond the bottom

3.2
thermocline
layer in a thermally stratified body of water in which the temperature gradient is at a maximum

[SOURCE: ISO 6107-1:2004, 75]

3.3
habitat
area of the environment in which a particular organism lives, including its characteristic assemblages of plants and animals

Note 1 to entry: It can be either the geographical area over which it extends, or the particular station in which a specimen is found.

[SOURCE: EN ISO 10870:2012, 2.6, modified – Note 1 to entry has been added]

3.4
biomass concentration
total mass of living organic matter, measured as wet weight, dry weight or ash free dry weight

Note 1 to entry: Unit: g l^{-3}, g ml^{-3}, or g m^{-3} of carbon.