

Water quality - Growth inhibition test with the marine and brackish water macroalga *Ceramium tenuicorne* (ISO 10710:2010)

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NATIONAL FOREWORD

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English Version

Water quality - Growth inhibition test with the marine and brackish water macroalga *Ceramium tenuicorne* (ISO 10710:2010)

Qualité de l'eau - Essai d'inhibition de croissance sur la macro algue d'eaux marine et saumâtre *Ceramium tenuicorne* (ISO 10710:2010)

Wasserbeschaffenheit - Bestimmung der Wachstumshemmung auf die marine und ästuarine Makroalge *Ceramium tenuicorne* (ISO 10710:2010)

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Foreword

The text of ISO 10710:2010 has been prepared by Technical Committee ISO/TC 147 "Water quality" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 10710:2013 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of an identical text or by endorsement, at the latest by October 2013, and conflicting national standards shall be withdrawn at the latest by October 2013.

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Endorsement notice

The text of ISO 10710:2010 has been approved by CEN as EN ISO 10710:2013 without any modification.

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Introduction

The red macroalga *Ceramium tenuicorne* belongs to Ceramiaceae, Rhodophyta. The species can be used as a model organism for the near coastal ecosystem. This species is found in temperate marine waters in both the northern and southern hemispheres and is thus relevant for large areas. As primary producers, they are a food source for many invertebrates and serve as living habitat for bacteria, invertebrates, and juvenile fish. They also serve as substrate for many oviparous fish species.

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WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This International 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 safety and health practices and to ensure compliance with any national regulatory conditions.

IMPORTANT — It is absolutely essential that tests conducted according to this International Standard be carried out by suitably trained staff.

1 Scope

This International Standard specifies a method for the determination of the inhibition of growth of the macroalga *Ceramium tenuicorne* by substances and mixtures contained in seawater or by waste water with salinities between 4S and 32S. This method is applicable to substances that are easily soluble in water.

NOTE With modifications as described in ISO 14442^[4] and ISO 5667-16^[2], the inhibitory effects of poorly soluble organic and inorganic materials, volatile compounds, metals, waste water, marine water samples, and elutriates of sediments can be tested.

2 Terms and definitions

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

2.1

algal length

length from the first division to the most distant tip of the plant

NOTE The algal length is expressed in millimetres.

See Figure 1.

2.2

control medium

combination of dilution water and/or nutrient medium used in the test

[ISO 20079:2005^[5], 3.6]

2.3

control batch

control medium including organisms used for testing

[ISO 20079:2005^[5], 3.5]

2.4

effective concentration

$E_x C_x$

concentration of test sample at which an effect of x % is measured, if compared to the control

[ISO 20079:2005^[5], 3.9]