INTERNATIONAL STANDARD

ISO 10710

First edition
2010-06-15

Water quality — Growth inhibition test with the marine and brackish water macroalga *Ceramium tenuicorne*

Qualité de l'eau — Essai d'inhibition de croissance sur la macro algue d'eaux marine et saumâtre Ceramium tenuicorne

Reference number
ISO 10710:2010(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 10710 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 5, *Biological methods*.

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
$\mathbf{E_rC_x}$
concentration of test sample at which an effect of x % is measured, if compared to the control

[ISO 20079:2005[5], 3.9]