



SLOVENSKI STANDARD SIST EN ISO 15088:2009

01-maj-2009

Kakovost vode - Določevanje akutne toksičnosti odpadnih voda na jajčeca cebric (Danio rerio) (ISO 15088:2007)

Water quality - Determination of the acute toxicity of waste water to zebrafish eggs (Danio rerio) (ISO 15088:2007)

Wasserbeschaffenheit - Bestimmung der akuten Toxizität von Abwasser auf Zebrafisch-Eier (Danio rerio) (ISO 15088:2007)

Qualité de l'eau - Détermination de la toxicité aiguë des eaux résiduelles vis-à-vis des oeufs de poisson-zèbre (Danio rerio) (ISO 15088:2007)

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Ta slovenski standard je istoveten z: EN ISO 15088:2008

ICS:

13.060.30	Odpadna voda	Sewage water
13.060.70	Preiskava bioloških lastnosti vode	Examination of biological properties of water

SIST EN ISO 15088:2009

en,fr,de

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EUROPEAN STANDARD

EN ISO 15088

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2008

ICS 13.060.70

English Version

Water quality - Determination of the acute toxicity of waste water to zebrafish eggs (*Danio rerio*) (ISO 15088:2007)

Qualité de l'eau - Détermination de la toxicité aiguë des eaux résiduaires vis-à-vis des oeufs de poisson-zèbre (*Danio rerio*) (ISO 15088:2007)

Wasserbeschaffenheit - Bestimmung der akuten Toxizität von Abwasser auf Zebrafisch-Eier (*Danio rerio*) (ISO 15088:2007)

This European Standard was approved by CEN on 29 October 2008.

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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 Management Centre has the same status as the official versions.

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

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

The text of ISO 15088:2007 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 15088:2008 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 May 2009, and conflicting national standards shall be withdrawn at the latest by May 2009.

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.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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INTERNATIONAL STANDARD

ISO
15088

First edition
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Water quality — Determination of the acute toxicity of waste water to zebrafish eggs (*Danio rerio*)

*Qualité de l'eau — Détermination de la toxicité aiguë des eaux
résiduelles vis-à-vis des œufs de poisson-zèbre (Danio rerio)*

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ISO 15088:2007(E)**Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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 15088 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 5, *Biological methods*.

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Introduction

Fish play a major role in the aquatic food web. They are high-order consumers (often final consumers) and have important functions of regulation in aquatic ecosystems. They are a confirmed part within test concepts regarding aquatic organisms from different trophic levels.

The eggs of the zebrafish (*Danio rerio* Hamilton-Buchanan) are used as test material. The zebrafish belongs to the family of Cyprinidae (carp-related fish) within the class of Osteichthyes (teleost fish). Zebrafish are easy to keep and produce transparent, nonadhesive eggs (diameter about 1 mm) throughout the whole year. Their embryonic development is well described. The zebrafish is one of the most important model fish in research on the developmental biology of vertebrates and is recommended as a test fish, i.e. in the OECD Guidelines 203, 204 and 210.

The development of fertilized fish eggs can be affected by water constituents and effluents. Death of embryos and certain defined disturbances of embryonic development, which finally lead to death, are considered effects.

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