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Water quality - Determination of total cyanide and free cyanide by continuous flow analysis (ISO 14403:2002)

Wasserbeschaffenheit - Bestimmung von Gesamtcyanid und freiem Cyanid mit der kontinuierlichen Fließanalytik (ISO 14403:2002)

Qualité de l'eau - Dosage des cyanures totaux et des cyanures libres par analyse en flux continu (ISO 14403:2002)

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Ta slovenski standard je istoveten z: EN ISO 14403:2002

ICS:

13.060.50 Ú!^ã\ æ,æ[å^Á æ{ ã}^ Examination of water for
•}[çã chemical substances

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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 14403

March 2002

ICS 13.060.01

English version

**Water quality - Determination of total cyanide and free cyanide
by continuous flow analysis (ISO 14403:2002)**

Qualité de l'eau - Dosage des cyanures totaux et des
cyanures libres par analyse en flux continu (ISO
14403:2002)

Wasserbeschaffenheit - Bestimmung von Gesamtcyanid
und freiem Cyanid mit der kontinuierlichen Fließanalytik
(ISO 14403:2002)

This European Standard was approved by CEN on 1 March 2002.

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

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

EN ISO 14403:2002 (E)

CORRECTED 2002-04-17

Foreword

This document (ISO 14403:2002) has been prepared by Technical Committee ISO/TC 147 "Water quality" in collaboration with 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 September 2002, and conflicting national standards shall be withdrawn at the latest by September 2002.

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

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Endorsement notice

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The text of the International Standard ISO 14403:2002 has been approved by CEN as a European Standard without any modifications.

NOTE Normative references to International Standards are listed in annex ZA (normative).

Annex ZA (normative)

Normative references to International Publications with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 3696	1987	Water for analytical laboratory use — Specifications and test methods	EN ISO 3696	1995

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INTERNATIONAL STANDARD

**ISO
14403**

First edition
2002-03-01

Water quality — Determination of total cyanide and free cyanide by continuous flow analysis

*Qualité de l'eau — Dosage des cyanures totaux et des cyanures libres par
analyse en flux continu*

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ISO 14403:2002(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 3.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 14403 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 2, *Physical, chemical, biochemical methods*.

Annex A forms a normative part of this International Standard. Annexes B and C are for information only.

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Introduction

Methods using flow analysis automate wet chemical procedures and are particularly suitable for the processing of many analytes in water in large sample series at a high analysis frequency.

Analysis can be performed by flow injection analysis (FIA) or continuous flow analysis (CFA). In this International Standard the latter is specified. The CFA method shares the feature of an automatic dosage of the sample into a flow system (manifold) where the analytes in the sample react with the reagent solutions on their way through the manifold. The sample preparation may be integrated in the manifold. The reaction product is measured in a flow detector (e.g. flow photometer).

It is absolutely essential that the test described in this International Standard be carried out by suitable qualified staff. It should be investigated whether and to what extent particular problems will require the specification of additional marginal conditions.

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