

SLOVENSKI STANDARD

SIST EN ISO 14403-1:2013

01-januar-2013

Nadomešča:
SIST EN ISO 14403:2003

Kakovost vode - Določevanje celotnega in prostega cianida s pretočno analizo (FIA in CFA) - 1. del: Metoda s pretočno analizo z vbrizgavanjem (FIA) (ISO 14403-1:2012)

Water quality - Determination of total cyanide and free cyanide using flow analysis (FIA and CFA) - Part 1: Method using flow injection analysis (FIA) (ISO 14403-1:2012)

iTeh STANDARD PREVIEW

Wasserbeschaffenheit - Bestimmung von Gesamtcyanid und freiem Cyanid mittels Fließanalytik (FIA und CFA) - Teil 1: Verfahren mittels Fließinjektionsanalyse (FIA) (ISO 14403-1:2012)

[SIST EN ISO 14403-1:2013](https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-9eb2de514300/iso-14403-1-2013)

[https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-](https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-9eb2de514300/iso-14403-1-2013)

Qualité de l'eau - Dosage des cyanures totaux et des cyanures libres par analyse en flux (FIA et CFA) - Partie 1: Méthode par analyse avec injection de flux (FIA) (ISO 14403-1:2012)

Ta slovenski standard je istoveten z: EN ISO 14403-1:2012

ICS:

13.060.50	Preiskava vode na kemične snovi	Examination of water for chemical substances
-----------	---------------------------------	--

SIST EN ISO 14403-1:2013

en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 14403-1:2013](#)

<https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-aab2de514200/sist-en-iso-14403-1-2013>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 14403-1

July 2012

ICS 13.060.50

Supersedes EN ISO 14403:2002

English Version

**Water quality - Determination of total cyanide and free cyanide
using flow analysis (FIA and CFA) - Part 1: Method using flow
injection analysis (FIA) (ISO 14403-1:2012)**

Qualité de l'eau - Dosage des cyanures totaux et des
cyanures libres par analyse en flux continu (FIA et CFA) -
Partie 1: Méthode par analyse avec injection de flux (FIA)
(ISO 14403-1:2012)

Wasserbeschaffenheit - Bestimmung von Gesamtcyanid
und freiem Cyanid mittels Fließanalytik (FIA und CFA) - Teil
1: Verfahren mittels Fließinjektionsanalyse (FIA) (ISO
14403-1:2012)

This European Standard was approved by CEN on 13 July 2012.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

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



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....3

**iTeh STANDARD PREVIEW
(standards.iteh.ai)**

[SIST EN ISO 14403-1:2013](https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-aab2de514200/sist-en-iso-14403-1-2013)

<https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-aab2de514200/sist-en-iso-14403-1-2013>

Foreword

This document (EN ISO 14403-1:2012) 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 January 2013, and conflicting national standards shall be withdrawn at the latest by January 2013.

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.

This document supersedes EN ISO 14403:2002.

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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Endorsement notice

The text of ISO 14403-1:2012 has been approved by CEN as a EN ISO 14403-1:2012 without any modification.

[SIST EN ISO 14403-1:2013](https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-aab2de514200/sist-en-iso-14403-1-2013)

<https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-aab2de514200/sist-en-iso-14403-1-2013>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 14403-1:2013](#)

<https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-aab2de514200/sist-en-iso-14403-1-2013>

INTERNATIONAL
STANDARDISO
14403-1First edition
2012-07-15

Water quality — Determination of total cyanide and free cyanide using flow analysis (FIA and CFA) —**Part 1:
Method using flow injection analysis (FIA)**

Qualité de l'eau — Dosage des cyanures totaux et des cyanures libres par analyse en flux (FIA et CFA) —
Partie 1 Méthode par analyse avec injection de flux (FIA)

SIST EN ISO 14403-1:2013

<https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-aab2de514200/sist-en-iso-14403-1-2013>

Reference number
ISO 14403-1:2012(E)

© ISO 2012

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 14403-1:2013](https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-aab2de514200/sist-en-iso-14403-1-2013)

<https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-aab2de514200/sist-en-iso-14403-1-2013>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2012

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

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

Contents	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Interferences	2
4.1 Interferences by oxidizing agents	2
4.2 Interferences by sulfide, sulfite, nitrite, and carbonyl compounds	2
4.3 Other interferences	2
5 Principle	2
5.1 Determination of total cyanide	2
5.2 Determination of free cyanide	3
6 Reagents	3
7 Apparatus	5
8 Sampling and sample preparation	6
9 Procedure	7
9.1 Flow system set-up	7
9.2 Reagent blank measurement	7
9.3 Checking the suitability of the flow system	7
9.4 Calibration	8
9.5 Sample measurement	8
10 Calculation	9
11 Expression of results	9
12 Test report	9
Annex A (informative) Examples of flow systems	10
Annex B (normative) Determination of the real cyanide concentration in the potassium cyanide solution (6.18.1)	11
Annex C (informative) Performance data	12
Bibliography	14

ISO 14403-1:2012(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 14403-1 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 2, *Physical, chemical and biochemical methods*.

ISO 14403 consists of the following parts, under the general title *Water quality — Determination of total cyanide and free cyanide using flow analysis (FIA and CFA)*:

- *Part 1: Method using flow injection analysis (FIA)*
- *Part 2: Method using continuous flow analysis (CFA)*

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 14403-1:2013](https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-aab2de514200/sist-en-iso-14403-1-2013)

<https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-aab2de514200/sist-en-iso-14403-1-2013>

Introduction

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

Analysis can be performed by flow injection analysis (FIA) or continuous flow analysis (CFA). Both methods share the feature of an automatic introduction of the sample into a flow system (manifold) in which analytes in the sample react with reagent solutions on their way through the manifold. Sample preparation may be integrated in the manifold. The reaction product is measured in a flow detector (e.g. flow photometer).

See the foreword for a list of parts of this International Standard.

It should be investigated whether and to what extent particular problems require the specification of additional marginal conditions.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 14403-1:2013](https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-aab2de514200/sist-en-iso-14403-1-2013)

<https://standards.iteh.ai/catalog/standards/sist/99487597-a670-4f66-a546-aab2de514200/sist-en-iso-14403-1-2013>