Water quality Determination of adsorbable organically bound halogens (AOX)

Water quality - Determination of adsorbable OCOROLO DE COROLO DE COROL organically bound halogens (AOX)



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 9562:2004 sisaldab Euroopa standardi EN ISO 9562:2004 ingliskeelset teksti.

This Estonian standard EVS-EN ISO 9562:2004 consists of the English text of the European standard EN ISO 9562:2004.

Käesolev dokument on jõustatud 21.12.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

This document is endorsed on 21.12.2004 with the notification being published in the official publication of the Estonian national standardisation organisation.

Standard on kättesaadav Eesti standardiorganisatsioonist.

The standard is available from Estonian standardisation organisation.

Käsitlusala:

This International Standard specifies a method for the direct determination of an amount of usually 10 μ g/l in water of organically bound chlorine, bromine and iodine (expressed as chloride) adsorbable on activated carbon. This method is applicable to test samples (see 9.2) with concentrations of inorganic chloride ions of less than 1 g/l. Samples with higher concentrations are diluted prior to analysis.

Scope:

This International Standard specifies a method for the direct determination of an amount of usually 10 µg/l in water of organically bound chlorine, bromine and iodine (expressed as chloride) adsorbable on activated carbon. This method is applicable to test samples (see 9.2) with concentrations of inorganic chloride ions of less than 1 g/l. Samples with higher concentrations are diluted prior to analysis. 300

ICS 13.060.50

Võtmesõnad:

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN ISO 9562

September 2004

ICS 13.060.50 Supersedes EN 1485 : 1996.

English version

Water quanty
Determination of adsorbable organically bound halogens (AOX)

Qualité de l'eau - Dosage des composés organiques halogénés adsorbables (AOX) (ISO 9562: 2004)

Wasserbeschaffenheit - Bestimmung adsorbierbarer organisch gebundener Halogene (AOX) (ISO 9562: 2004)

This European Standard was approved by CEN on 2004-09-02.

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.

The European Standards exist 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, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom.

European Committee for Standardization Comité Européen de Normalisation Europäisches Komitee für Normung

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

EN ISO 9562: 2004

Foreword

International Standard

ISO 9562: 2004 Water quality - Determination of adsorbable organically bound halogens (AOX),

which was prepared by ISO/TC 147 'Water quality' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 230 'Water analysis', the Secretariat of which is held by DIN, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by March 2005 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

Contents

The text of the International Standard ISO 9562 : 2004 was approved by CEN as a European Standard without arc (O) any modification.

Cont	ents	Page
Forewe	ord	
Introdu	uction	3
1	Scope	3
2	Normative references	3
3	Terms and definitions	3
4	Normative references Terms and definitions Interferences	4
5	Principle	4
6	Reagents	4
7	Apparatus	6
8	Sampling and sample pro-treatment	8
9	Procedure	9
10	Calculation	13
11	Precision	13
12	Test report	14
Annex	A (informative) Determination of dissolved adsorbable organically bound halogens after solid phase extraction (SPE-AOX) in waters with high salt content	15
Annex	B (informative) Handling of activated carbon	
Annex	C (informative) Statistical performance characteristics	20
	graphy	22

Page 3 EN ISO 9562 : 2004

Introduction

Adsorbable organically bound halogens (AOX) is an analytical convention. The result is a parameter used for water quality control purposes. It represents the sum of organically bound chlorine, bromine and iodine (but not fluorine) that can be adsorbed on activated carbon under specified conditions and, if the sample is not filtered, includes that associated with suspended matter.

The user should be aware that particular problems could require the specification of additional marginal conditions.

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 qualified staff.

1 Scope

This International Standard specifies a method for the direct determination of an amount of usually $10 \mu g/l$ in water of organically bound chlorine, bromine and iodine (expressed as chloride) adsorbable on activated carbon.

This method is applicable to test samples (see 9.2) with concentrations of inorganic chloride ions of less than 1 g/l. Samples with higher concentrations are diffuted prior to analysis.

This method is also applicable to samples containing suspended solids where halogens are adsorbed onto the solid matter (e.g. insoluble halides). Filtration of the sample before analysis allows the separate determination of dissolved and particulate adsorbable organically bound halogens (AOX).

Filtered samples with high inorganic chloride content can be analysed by a modified method [dissolved adsorbable organically bound halogens after solid phase extraction in waters with high salt content (SPE-AOX)] (see Annex A). However, results obtained by this modified method can differ significantly from those of the required method.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1773:1997, Laboratory glassware — Narrow-necked boiling flasks

ISO 3696:1987, Water for analytical laboratory use — Specification and test methods

3 Terms and definitions

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

3.1

adsorbable organically bound halogens AOX

equivalent amount of chlorine, bromine, and iodine contained in organic compounds, expressed as chloride when determined according to this International Standard