

Water quality - Determination of epichlorohydrin

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14207:2003 sisaldab Euroopa standardi EN 14207:2003 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 06.06.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14207:2003 consists of the English text of the European standard EN 14207:2003.</p> <p>This document is endorsed on 06.06.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This European Standard specifies a method for the determination of epichlorohydrin in drinking water and water used for drinking water processing. according to the given procedure, the limit of determination in routine analysis is about 0,5 µg/l¹). The limit of determination may be lowered to monitor 0,1 µg/l.</p>	<p>Scope: This European Standard specifies a method for the determination of epichlorohydrin in drinking water and water used for drinking water processing. according to the given procedure, the limit of determination in routine analysis is about 0,5 µg/l¹). The limit of determination may be lowered to monitor 0,1 µg/l.</p>
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ICS 13.060

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ICS 13.060.50

English version

Water quality - Determination of epichlorohydrin

Qualité de l'eau - Dosage de l'épichlorhydrine

Wasserbeschaffenheit - Bestimmung von Epichlorhydrin

This European Standard was approved by CEN on 17 January 2003.

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



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Contents

page

Foreword.....	3
Introduction	3
1 Scope	3
2 Normative references	3
3 Principle	4
4 Interferences / Losses	4
5 Reagents	4
6 Apparatus	6
7 Sampling	7
8 Procedure	7
9 Calibration	8
10 Calculation of the results	10
11 Expression of results	10
12 Test report	10
13 Precision data	11
Annex A (informative) Example of sorbents	12
Annex B (informative) Examples of recommended capillary columns	13
Annex C (informative) Examples of chromatograms and spectra	14

Foreword

This document EN 14207:2003 has been prepared 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 October 2003, and conflicting national standards shall be withdrawn at the latest by October 2003.

Annexes A, B and C are informative.

WARNING — Persons using this standard should be familiar with normal laboratory practice. This standard does not propose 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.

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

Introduction

It is highly recommended that the test described in this standard be carried out by suitably qualified staff.

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

1 Scope

This European Standard specifies a method for the determination of epichlorohydrin in drinking water and water used for drinking water processing. According to the given procedure, the limit of determination in routine analysis is about 0,5 µg/l ¹⁾. The limit of determination can be lowered to monitor 0,1 µg/l.

2 Normative references

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).

EN 25667-1, *Water quality — Sampling — Part 1: Guidance on the design of sampling programmes (ISO 5667-1:1980)*.

EN 25667-2, *Water quality — Sampling — Part 2: Guidance on sampling techniques (ISO 5667-2:1991)*.

1) This value was checked in an interlaboratory trial.

EN ISO 5667-3, *Water quality — Sampling — Part 3: Guidance on the preservation and handling of samples (ISO 5667-3:1994)*.

ISO 5667-5, *Water quality — Sampling — Part 5: Guidance on sampling of drinking water and water used for food and beverage processing*.

ISO 8466-1, *Water quality - Calibration and evaluation of analytical methods and estimation of performance characteristics - Part 1: Statistical evaluation of the linear calibration function*.

3 Principle

Solid phase extraction of epichlorohydrin from the drinking water sample followed by gas chromatography using a mass spectrometer (MS) as detector. Alternatively, an electron capture detector (ECD) can be used.

4 Interferences / Losses

4.1 Interferences during sampling

In order to avoid interferences, withdraw the sample according to clause 7, taking into account the information given in EN 25667-1, EN 25667-2 and EN ISO 5667-3.

In order to avoid losses due to the easy decomposition of epichlorohydrin, avoid unnecessary storage and analyse the sample as soon as possible after sampling. If storage is unavoidable, store between 2 °C and 5 °C until sample pretreatment.

4.2 Interferences during enrichment

The commercially available adsorbance materials are often of varying quality. Considerable batch-to-batch differences in quality and selectivity of these materials are possible. Perform calibration and analysis with one and the same batch of material. Make sure to avoid any losses when removing the residual water in the adsorbance material (8.1.2).

4.3 Interferences in the gas chromatography and mass spectrometry

Set the operational conditions in accordance with the manufacturer's instructions. Check these settings at regular intervals.

General interferences, caused by the injection system can be eliminated with the help of special laboratory experience and the instruments manuals.

The stability of the analytical system should be checked (for example by application of a measuring standard).

5 Reagents

Use reagents of the reagent grade "for residual analysis" or equivalent as far as available. Impurities in the reagents and in the water contributing to the blank shall be negligibly low. Check the blank regularly, especially prior to the use of a new batch.

5.1 Water

Use double-distilled water or water of comparable purity.