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Institut luxembourgeois de la normalisation
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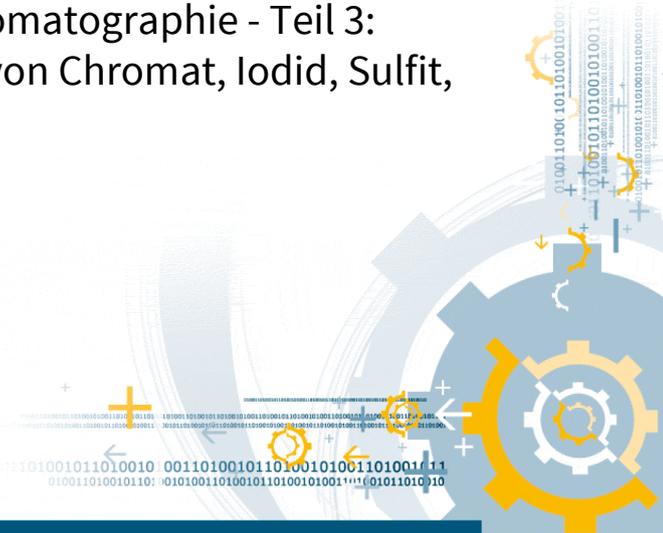
ILNAS-EN ISO 10304-3:1997

Water quality - Determination of dissolved anions by liquid chromatography of ions - Part 3: Determination of chromate, iodide,

Qualité de l'eau - Dosage des anions
dissous par chromatographie des ions en
phase liquide - Partie 3: Dosage des ions
chromate, iodure, sulfite, thiocyanate et

Wasserbeschaffenheit - Bestimmung der
gelösten Anionen mittels
Ionenchromatographie - Teil 3:
Bestimmung von Chromat, Iodid, Sulfit,

08/1997



National Foreword

This European Standard EN ISO 10304-3:1997 was adopted as Luxembourgish Standard ILNAS-EN ISO 10304-3:1997.

Every interested party, which is member of an organization based in Luxembourg, can participate for FREE in the development of Luxembourgish (ILNAS), European (CEN, CENELEC) and International (ISO, IEC) standards:

- Participate in the design of standards
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- Participate in technical committee meetings

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Descriptors: see ISO document

English version

**Water quality - Determination of dissolved anions
by liquid chromatography of ions - Part 3:
Determination of chromate, iodide, sulfite,
thiocyanate and thiosulfate (ISO 10304-3:1997)**

Qualité de l'eau - Dosage des anions dissous
par chromatographie des ions en phase liquide
- Partie 3: Dosage des ions chromate, iodure,
sulfite, thiocyanate et thiosulfate
(ISO 10304-3:1997)

This European Standard was approved by CEN on 1997-07-18. 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.

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CEN

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Ref. No. EN ISO 10304-3:1997 E

Foreword

The text of the International Standard ISO 10304-3:1997 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 February 1998, and conflicting national standards shall be withdrawn at the latest by February 1998.

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, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 10304-3:1997 was approved by CEN as a European Standard without any modification.

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 5667-1	1980	Water quality - Sampling - Part 1: Guidance on the design of sampling programmes	EN 25667-1	1993
ISO 5667-2	1991	Water quality - Sampling - Part 2: Guidance on sampling techniques	EN 25667-2	1993
ISO 5667-3	1994	Water quality - Sampling - Part 3: Guidance on the preservation and handling of samples	EN ISO 5667-3	1995
ISO 10304-1	1994	Water quality - Determination of dissolved fluoride, chloride, nitrite, orthophosphate, bromide, nitrate and sulfate ions, using liquid chromatography of ions - Part 1: Method for water with low contamination	EN ISO 10304-1	1995
ISO 10304-2	1995	Water quality - Determination of dissolved anions by liquid chromatography of ions - Part 2: Determination of bromide, chloride, nitrate, nitrite, orthophosphate and sulfate in waste water	EN ISO 10304-2	1996

ILNAS-EN ISO 10304-3:1997
**INTERNATIONAL
STANDARD**

**ISO
10304-3**

First edition
1997-08-15

**Water quality — Determination of dissolved
anions by liquid chromatography of ions —**

Part 3:

**Determination of chromate, iodide, sulfite,
thiocyanate and thiosulfate**

*Qualité de l'eau — Dosage des anions dissous par chromatographie des ions
en phase liquide —*

Partie 3: Dosage des ions chromate, iodure, sulfite, thiocyanate et thiosulfate



Reference number
ISO 10304-3:1997(E)

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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.

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.

International Standard ISO 10304-3 was prepared by Technical Committee ISO/TC 147, *Water quality*, SC 2, *Physical, chemical and biochemical methods*.

ISO 10304 consists of the following parts, under the general title *Water quality — Determination of dissolved anions by liquid chromatography of ions*:

- *Part 1: Determination of fluoride, chloride, bromide, nitrate, nitrite, orthophosphate and sulfate in water with low contamination*
- *Part 2: Determination of bromide, chloride, nitrate, nitrite, orthophosphate and sulfate in waste water*
- *Part 3: Determination of chromate, iodide, sulfite, thiocyanate and thiosulfate*
- *Part 4: Determination of chlorate, chloride and chlorite in water with low contamination*

Annexes A and B of this part of ISO 10304 are for information only.

Introduction

The essential minimum requirements of an ion chromatographic system applied within the scope of this part of ISO 10304 are the following:

- | | |
|--------------------------------------|--|
| a) Resolution of the column: | For the anion to be determined it is essential that the peak resolution does not fall below $R = 1,3$ (4.2.2, figure 3) |
| b) Method of detection: | 1) measurement of the electrical conductivity with or without suppressor device
2) spectrometric measurement (UV/VIS), directly or indirectly
3) amperometric direct detection |
| c) Applicability of the method: | Working ranges according to table 1 |
| d) Calibration (4.5.1): | Calibration and determination of the linear working range (see ISO 8466-1) |
| Guaranteeing the analytical quality: | Validity check of the calibration function. Replicate determinations if necessary. |

The diversity of the appropriate and suitable assemblies and the procedural steps depending on them permit a general description only.

For further information on the analytical technique, see reference [1].