

**Water quality - Determination of dissolved bromate -
Method using ion chromatography (IC) and post column
reaction (PCR) (ISO 11206:2011)**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 11206:2013 sisaldab Euroopa standardi EN ISO 11206:2013 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 11206:2013 consists of the English text of the European standard EN ISO 11206:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 13.03.2013.	Date of Availability of the European standard is 13.03.2013.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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English Version

Water quality - Determination of dissolved bromate - Method
using ion chromatography (IC) and post column reaction (PCR)
(ISO 11206:2011)

Qualité de l'eau - Détermination du bromate dissous -
Méthode utilisant la chromatographie ionique (IC) et la
réaction post-colonne (PCR) (ISO 11206:2011)

Wasserbeschaffenheit - Bestimmung von gelöstem Bromat
- Verfahren mittels Ionenchromatographie (IC) und
Nachsäulenreaktion (PCR) (ISO 11206:2011)

This European Standard was approved by CEN on 10 February 2013.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

The text of ISO 11206:2011 has been prepared by Technical Committee ISO/TC 147 "Water quality" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 11206:2013 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of an identical text or by endorsement, at the latest by September 2013, and conflicting national standards shall be withdrawn at the latest by September 2013.

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Endorsement notice

The text of ISO 11206:2011 has been approved by CEN as EN ISO 11206:2013 without any modification.

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WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This 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 trained staff.

1 Scope

This International Standard specifies a method for the determination of dissolved bromate in water (e.g. drinking water, mineral water, raw water, surface water, partially treated water or swimming pool water).

Appropriate pretreatment of the sample (e.g. dilution) allows determination of bromate at concentrations $\geq 0,5 \mu\text{g/l}$.

The working range is restricted by the ion-exchange capacity of the separator column. Dilution of the sample to the bromate working range can be necessary.

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 3696, *Water for analytical laboratory use — Specification and test methods*

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*

ISO 8466-2, *Water quality — Calibration and evaluation of analytical methods and estimation of performance characteristics — Part 2: Calibration strategy for non-linear second order calibration functions*

3 Interferences

Metals present in samples and eluents bind to the resin material of the separator column, resulting in a loss of performance. Metal ions can be eliminated with the aid of special cation exchangers (see 6.2 and Clause 8, Note 1).

Solid particles and organic compounds (e.g. mineral oils, detergents, and humic acids) shorten the lifetime of the precolumn and the separator column (see Clause 8, Notes 2 and 3).

Chlorite can interfere with the determination of bromate. Remove chlorite in accordance with the procedure specified in 9.4, if necessary.

NOTE Any substance that has a retention time coinciding with bromate and that produces a detector response can interfere. A high concentration of ions can have an impact on the resolution and on the analyte's retention time. Sample dilution and/or gradient elution overcomes much interference.

4 Principle

The sample is pretreated in order to remove ozone, chlorine dioxide, chlorite, metals and solids, if necessary (see Clause 8). Bromate is separated by ion chromatography (IC). An anion exchange resin is used as the stationary phase and either acids (e.g. sulfuric acid) or aqueous solutions of salts of weak monobasic acids