

STN	Kvalita vody Stanovenie adsorbovateľného organicky viazaného fluóru, chlóru, brómu a jódu (AOF, AOCl, AOBr, AOI) Metóda používajúca spaľovanie a následné meranie iónovou chromatografiou (ISO 18127: 2026)	STN EN ISO 18127 75 7476
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Water quality - Determination of adsorbable organically bound fluorine, chlorine, bromine and iodine (AOF, AOCl, AOBr, AOI) - Method using combustion and subsequent ion chromatographic measurement (ISO 18127:2026)

Táto norma obsahuje anglickú verziu európskej normy.

This standard includes the English version of the European Standard.

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English Version

Water quality - Determination of adsorbable organically bound fluorine, chlorine, bromine and iodine (AOF, AOCl, AOBr, AOI) - Method using combustion and subsequent ion chromatographic measurement (ISO 18127:2026)

Qualité de l'eau - Dosage des composés organiques adsorbables contenant du fluor, du chlore, du brome et de l'iode (AOF, AOCl, AOBr, AOI) - Méthode de combustion suivie d'un mesurage par chromatographie ionique (ISO 18127:2026)

Wasserbeschaffenheit - Bestimmung von adsorbierbarem organisch gebundenem Fluor, Chlor, Brom und Iod (AOF, AOCl, AOBr, AOI) - Verfahrens mittels Verbrennung und nachfolgender Ionenchromatographischer Messung (ISO 18127:2026)

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European foreword

This document (EN ISO 18127:2026) 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of an identical text or by endorsement, at the latest by August 2026, and conflicting national standards shall be withdrawn at the latest by August 2026.

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Endorsement notice

The text of ISO 18127:2026 has been approved by CEN as EN ISO 18127:2026 without any modification.



International Standard

ISO 18127

Water quality — Determination of adsorbable organically bound fluorine, chlorine, bromine and iodine (AOF, AOCl, AOBr, AOI) — Method using combustion and subsequent ion chromatographic measurement

*Qualité de l'eau — Dosage des composés organiques adsorbables
contenant du fluor, du chlore, du brome et de l'iode (AOF, AOCl,
AOBr, AOI) — Méthode de combustion suivie d'un mesurage par
chromatographie ionique*

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ISO 18127:2026(en)



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ISO 18127:2026(en)**Foreword**

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 2, *Physical, chemical and biochemical methods*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 230, *Water analysis*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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Introduction

Adsorbable organically bound fluorine, chlorine, bromine and iodine are analytical convention parameters used to monitor water quality. They represent the sum of organically bound fluorine, chlorine, bromine and iodine that can be adsorbed on activated carbon under specified conditions and, if the sample has not been filtered, can also be attached to or contained in suspended substances.

In contrast to the adsorbable organically bound halogen (AOX) method according to ISO 9562, this method can be applied to determine the sum of organofluorine compounds in addition to the determination of the organically bound chlorine, bromine and iodine and detected halogen-specific separately.

The method is carried out by combustion ion chromatography (CIC).

Procedures for each separate parameter are described in [Annex A](#), [Annex B](#), [Annex C](#) and [Annex D](#).

Alternatively, the adsorption of the organic substances contained in the water sample on activated carbon can also be carried out by the shaking method (see [Annex E](#)).

Samples with a high content of suspended solids can be analysed using the shaking method (see [Annex E](#)).

Samples with a high content of inorganic halides can be analysed using the solid phase extraction (SPE) method (see [Annex F](#)).

Results for samples analysed according to [Annex E](#) (shaking procedure) or [Annex F](#) (SPE procedure) can differ significantly from those of the method specified in the main part.

With some waters, interference can occur that cannot be eliminated. These waters cannot be measured with the method.

The AOCl, AOBr and AOI results according to [Annex B](#), [Annex C](#) and [Annex D](#) can also be reported as adsorbable organically bound halogens determined by combustion ion chromatography (CIC-AOX) (see [Annex J](#)).

Water quality — Determination of adsorbable organically bound fluorine, chlorine, bromine and iodine (AOF, AOCl, AOBr, AOI) — Method using combustion and subsequent ion chromatographic measurement

WARNING — Persons using this document should be familiar with normal laboratory practice. This document 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.

IMPORTANT — It is absolutely essential that tests conducted in accordance with this document be carried out by suitably qualified staff.

1 Scope

This document specifies a method for the determination of organically bound halogens fluorine, chlorine, bromine and iodine which are adsorbable on activated carbon. Adsorption takes place on activated carbon packed in columns.

The method is applicable for the determination of:

- $\geq 2 \mu\text{g/l}$ AOF, expressed as F;
- $\geq 10 \mu\text{g/l}$ AOCl, expressed as Cl;
- $\geq 1 \mu\text{g/l}$ AOBr, expressed as Br;
- $\geq 1 \mu\text{g/l}$ AOI, expressed as I.

The method is applicable for the determination of adsorbable organically bound fluorine, chlorine, bromine and iodine in water, e.g. in groundwater, surface water, bank filtrate, drinking water, aqueous eluates, cooling water and wastewater.

The working range is limited by the capacity of the activated carbon, the process blank and the capacity of the chromatographic separation column. Sample dilution into the working range can be required.

The range of application can be extended to lower concentrations with lower process blanks e.g. using low blank activated carbons.

The method can also be applied for samples containing suspended solids. Halogens adsorbed on the suspended solids (e.g. undissolved halides) are also determined. Filtration of the sample prior to analysis using a membrane filter ($0,45 \mu\text{m}$) allows the separate determination of dissolved adsorbable and particulate bound fractions of organically bound fluorine, chlorine, bromine or iodine.

Results from an international interlaboratory trial are presented in [Annex K](#).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 8466-1, *Water quality — Calibration and evaluation of analytical methods — Part 1: Linear calibration function*

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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*

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