INTERNATIONAL STANDARD

ISO 5961

Second edition
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Water quality — Determination of cadmium by atomic absorption spectrometry

Qualité de l'eau — Dosage du cadmium par spectrométrie d'absorption atomique

Reference number
ISO 5961:1994(E)

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 5961 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 2, *Physical, chemical, biochemical methods*.

This second edition cancels and replaces the first edition (ISO 5961:1985), of which it constitutes a technical revision.

Annex A of this International Standard is for information only.

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Water quality — Determination of cadmium by atomic absorption spectrometry

Section 1: General

1.1 Scope

This International Standard specifies two methods for the determination of cadmium: flame atomic absorption spectrometry (AAS) (Section 2) and electrothermal atomization (AAS) (Section 3).

1.1.1 Determination of cadmium using AAS in an air-acetylene flame

The method is applicable to the analysis of water and waste water when the concentration of cadmium is between 0,05 mg/l and 1 mg/l. Higher concentrations can be determined after dilution of the sample. The range of application of the method can be extended to lower concentrations by carefully evaporating the water sample, previously acidified with nitric acid. Cadmium can be determined in sludges and sediments after an appropriate digestion procedure avoiding the formation of a precipitate.

1.1.2 Determination of cadmium by electrothermal atomization AAS

The method is suitable for the determination of cadmium in water when, with a dosing volume of 10 µl, the concentration range is 0,3 µg/l to 3 µg/l. The range of application of the method can be extended to higher concentrations by diluting the water sample or by the use of smaller dosing volumes. Cadmium can be determined in sludges and sediments after an appropriate digestion procedure.

1.2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 5667-3:—[1], *Water quality — Sampling — Part 3: Guidance on the preservation and handling of samples.*

1) To be published. (Revision of ISO 5667-3:1985)