

საქართველოს სტანდარტი

წყლის ხარისხი-მერკურისგანსაზღვრა- ატომურ აბსორბაციის სპექტრომეტრის
განსაზღვრა (AAS)გამდიდრების გამოყენებით და მის გარეშე

საქართველოს სტანდარტებისა და მეტროლოგიის
ეროვნული სააგენტო
თბილისი

საინფორმაციო მონაცემები

1 შემუშავებულია საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს სტანდარტების დეპარტამენტის მიერ

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4 პირველად

5 რეგისტრირებულია საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2013 წლის 9 სექტემბერი №268-1.3-5543

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**Water quality — Determination of
mercury — Method using atomic
absorption spectrometry (AAS) with and
without enrichment**

*Qualité de l'eau — Dosage du mercure — Méthode par spectrométrie
d'absorption atomique (SAA) avec et sans enrichissement*





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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 12846 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 2, *Physical, chemical and biochemical methods*.

This first edition of ISO 12846 cancels and replaces the editions (ISO 5666:1999, ISO 16590:2000), which have been technically revised.

Introduction

In natural water sources, mercury compounds generally occur in very low concentrations of less than 0,1 µg/l. Higher concentrations may be found, for example, in industrial waste water. Both inorganic and organic compounds of mercury may be present. Mercury can also accumulate in sediments and sludges.

In order to fully decompose all of the mercury compounds in the presence of particles in the sample, an additional digestion procedure is necessary. This additional digestion can be omitted only if significant amounts of previous comparison data clearly demonstrate this.

For reliable measurements in the low-concentration range, the highest purity reagents, clean vessels, mercury-free air in the laboratory and a very stable measurement system are essential.

This International Standard is a state-of-the-art revision of existing standards for the determination of mercury by AAS with and without a pre-enrichment step combining the advantages of the existing methods with new developments and technique. The following methods are considered:

A) Methods without enrichment:

- ISO 5666:1999, *Water quality — Determination of mercury*;
- EN 1483:2007, *Water quality — Determination of mercury — Method using atomic absorption spectrometry*.

B) Methods with enrichment:

- ISO 16590:2000, *Water quality — Determination of mercury — Methods involving enrichment by amalgamation*;
- EN 12338:1998, *Water quality — Determination of mercury — Enrichment methods by amalgamation*.