



SLOVENSKI STANDARD SIST EN ISO 10693:2014

01-maj-2014

Kakovost tal - Določevanje karbonatov - Volumetrijska metoda (ISO 10693:1995)

Soil quality - Determination of carbonate content - Volumetric method (ISO 10693:1995)

Bodenbeschaffenheit - Bestimmung des Carbonatgehaltes - Volumetrisches Verfahren (ISO 10693:1995)

Qualité du sol - Détermination de la teneur en carbonate - Méthode volumétrique (ISO 10693:1995)

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Ta slovenski standard je istoveten z: **EN ISO 10693:2014**

SIST EN ISO 10693:2014
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ICS:

13.080.10	Kemijske značilnosti tal	Chemical characteristics of soils
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SIST EN ISO 10693:2014

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EUROPEAN STANDARD

EN ISO 10693

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2014

ICS 13.080.10

English Version

Soil quality - Determination of carbonate content - Volumetric method (ISO 10693:1995)

Qualité du sol - Détermination de la teneur en carbonate -
Méthode volumétrique (ISO 10693:1995)

Bodenbeschaffenheit - Bestimmung des Carbonatgehaltes -
Volumetrisches Verfahren (ISO 10693:1995)

This European Standard was approved by CEN on 13 March 2014.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

The text of ISO 10693:1995 has been prepared by Technical Committee ISO/TC 190 "Soil quality" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 10693:2014 by Technical Committee CEN/TC 345 "Characterization of soils" the secretariat of which is held by NEN.

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 2014, and conflicting national standards shall be withdrawn at the latest by September 2014.

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

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 10693:1995 has been approved by CEN as EN ISO 10693:2014 without any modification.

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INTERNATIONAL
STANDARD

ISO
10693

First edition
1995-03-15

**Soil quality — Determination of carbonate
content — Volumetric method**

iTeh STANDARD PREVIEW
*Qualité du sol — Détermination de la teneur en carbonate — Méthode
volumétrique*
(standards.iteh.ai)

[SIST EN ISO 10693:2014](https://standards.iteh.ai/catalog/standards/sist/99b348a4-b022-4d66-be02-a6d916e6dfba/sist-en-iso-10693-2014)

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Reference number
ISO 10693:1995(E)

ISO 10693:1995(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 10693 was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 3, *Chemical methods and soil characteristics*.

Annexes A and B of this International Standard are for information only.

<https://standards.iteh.ai/catalog/standards/sist/99b348a4-b022-4d66-be02-2014>

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Soil quality — Determination of carbonate content — Volumetric method

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1 Scope

This International Standard specifies a method for the determination of carbonate content in soil samples.

It is applicable to all types of air-dried soil samples.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were 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 editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

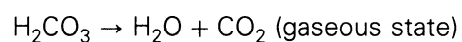
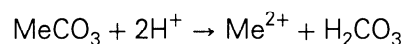
ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*.

ISO 11464:1994, *Soil quality — Pretreatment of samples for physico-chemical analyses*.

ISO 11465:1993, *Soil quality — Determination of dry matter and water content on a mass basis — Gravimetric method*.

3 Principle

Hydrochloric acid is added to a soil sample to decompose any carbonates present. The reaction in simplified form reads as follows (Me means metal):



The volume of the carbon dioxide produced is measured by using a Scheibler apparatus (5.1), and is compared with the volume of carbon dioxide produced by pure calcium carbonate. To avoid making corrections for differences in temperature and pressure, all determinations are carried out under the same conditions. The determination should be carried out in a temperature-controlled room.

NOTES

1 The carbonate content is expressed as an equivalent concentration of calcium carbonate (CaCO_3). In fact all carbonates and bicarbonates present in the sample are measured. Many carbonates appear in the form of calcite and aragonite (CaCO_3), dolomite [$\text{CaMg}(\text{CO}_3)_2$], siderite (FeCO_3) and rhodochrosite (MnCO_3). In soils in dry (arid) regions, soda ($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$) may be present. When it is known that a certain form of carbonate, other than calcium carbonate, is mainly present in the soil under study, the final concentration of this form can be used.