



**International
Standard**

ISO 11265

**Environmental solid matrices —
Determination of the specific
electrical conductivity**

*Matrices solides environnementales — Détermination de la
conductivité électrique spécifique*

**Second edition
2025-08**

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Published in Switzerland

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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.

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 documents 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 190, *Soil quality*, Subcommittee SC 3, *Chemical and physical characterization*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 444, *Environmental characterization of solid matrices*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 11265:1994), which has been technically revised. It also incorporates the Technical Corrigendum ISO 11265:1994/Cor 1:1996.

The main changes are as follows:

- change of temperature criteria during extraction;
- the distinction between solid and sludge-like matrices is added.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Environmental solid matrices — Determination of the specific electrical conductivity

1 Scope

This document specifies an instrumental method for the routine determination of the specific electrical conductivity in an aqueous extract of soil, sludge, biowaste or waste. The determination is carried out to obtain an indication of the content of water-soluble electrolytes in a sample.

This document is applicable to all types of air-dried samples of soil, sludge, biowaste and waste.

2 Normative references

The following documents are referred to in the text in such a way that some or all 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 11464, *Soil quality — Pretreatment of samples for physico-chemical analysis*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

4 Principle

Air-dried solids are extracted with water at (22 ± 3) °C at an extraction ratio of 1:5 (m/V), to dissolve the electrolytes. The specific electrical conductivity of the extract or fresh liquid sludge is measured, and the result is corrected to a temperature of 25 °C.

NOTE For definitions of the concepts used, see ISO 7888.

5 Reagents

Use only reagents of recognized analytical grade.

5.1 Water, demineralized, with a specific electrical conductivity not higher than 0,2 mS/m at 25 °C.

5.2 Potassium chloride solution, $c(\text{KCl}) = 0,1$ mol/l.

Dissolve 7,456 g of potassium chloride, previously dried for 2 h at (105 ± 5) °C in water (5.1), and dilute to 1 000 ml at 20 °C. The specific electrical conductivity of this solution is 1 288 mS/m at 25 °C.