
Soil quality — Guidance on the determination of background values

*Qualité du sol — Recommandations pour la détermination des
valeurs de fond*

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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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 7, *Impact assessment*.

This second edition cancels and replaces the first edition (ISO 19258:2005), which has been technically revised. The main changes compared to the previous edition are as follows:

- [Clauses 2](#) and [3](#), and subclauses [5.3](#), [5.4](#), [5.4](#) and [Annex B](#) (formerly Annex C) have been completely technically revised;
- 5.2.2 has been revised and the structure of its subclauses has been changed to [5.2.2.1](#), *Basic parameters*, [5.2.2.2](#), *Persistent compounds* (split up into [5.2.2.2.1](#), *Inorganic substances*, and [5.2.2.2.2](#), *Organic substances*), and [5.2.2.3](#) *Non persistent compounds* (added);
- text has been added to [5.2.5](#);
- “typological” has been replaced by “judgemental” throughout the document;
- “scale of sampling” has been deleted from [Annex A](#);
- the Bibliography has been updated.

Soil quality — Guidance on the determination of background values

1 Scope

This document gives guidelines for the principles and main methods for the determination of background values for inorganic and organic substances in soils at a local/regional scale. The site scale is excluded.

It gives guidelines for sampling and data processing strategies. It identifies methods for sampling and analysis.

This document does not apply to the determination of background values for groundwater and sediments.

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 11074, *Soil quality — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 11074 and the following apply.

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

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <http://www.electropedia.org/>

3.1

background concentration

concentration of an element or a substance characteristic of a soil type in an area or region arising from both natural sources and anthropogenic diffuse sources such as atmospheric deposition

[SOURCE: ISO 11074:2015, 3.5.1, modified — In the definition, “an element or” has been introduced before “a substance” and “anthropogenic” has replaced “non-natural”. Note 1 to entry has been removed.]

3.2

background value

statistical characteristics (3.8) of the total (natural pedo-geochemical and anthropogenic) content of a substances in soil

Note 1 to entry: Commonly expressed in terms of average, typical, median, mode, a range of values or a background value.

[SOURCE: ISO 11074:2015, 3.5.2, modified — Note 1 to entry has been added from ISO 11075:2014, 3.5.1.]