
**Soil quality — Determination of
exchangeable acidity using barium
chloride solution as extractant**

*Qualité du sol — Détermination de l'acidité échangeable dans des
extraits au chlorure de baryum*





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Foreword

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The committee responsible for this document is ISO/TC 190, *Soil quality*, Subcommittee SC 3, *Chemical methods and soil characteristics*.

This second edition cancels and replaces the first edition (ISO 14254:2001), which has been technically revised.

Soil quality — Determination of exchangeable acidity using barium chloride solution as extractant

WARNING — Persons using this document should be familiar with normal laboratory practice. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

IMPORTANT — It is absolutely essential that tests, conducted in accordance with this document, be carried out by suitably qualified staff.

1 Scope

This document specifies a method for the determination of exchangeable acidity in barium chloride extracts of soil samples obtained according to ISO 11260.

The procedure described herein mainly concerns the determination of total exchangeable acidity by means of a fixed pH end point titration.

Two additional and optional procedures are given, describing respectively, determinations of free H⁺ acidity and aluminium in the extracts.

This document is applicable to all types of air dry soil samples.

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 11260, *Soil quality — Determination of effective cation exchange capacity and base saturation level using barium chloride solution*

ISO 11464, *Soil quality — Pretreatment of samples for physico-chemical analysis*

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

ISO 22036, *Soil quality — Determination of trace elements in extracts of soil by inductively coupled plasma — Atomic emission spectrometry (ICP-AES)*

3 Terms and definitions

No terms and definitions are listed in this document.

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 <https://www.electropedia.org/>