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Soil quality — Extraction of trace elements using dilute nitric acid

Qualité du sol — Extraction d'éléments traces à l'aide d'acide nitrique dilué

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Foreword

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword — Supplementary information.

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

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Soil quality — Extraction of trace elements using dilute nitric acid

WARNING — Users of this International Standard should be familiar with usual laboratory practice. This International Standard does not 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 according to this International Standard be carried out by suitably trained staff.

1 Scope

This International Standard specifies a method of extracting trace elements from soil at approximately pH 0,5 using a dilute nitric acid solution. Using this method the potential environmental available trace elements as defined in ISO 17402 is extracted.

The method is applicable for all soils and soil like materials.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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*

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

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
test portion
analytical portion
quantity of material, of proper size, for measurement of the concentration or other property of interest, removed from the test sample

Note 1 to entry: The test portion may be taken from the field sample or from the laboratory sample directly if no preparation of the sample is required (e.g. with liquids), but usually it is taken from the prepared test sample.

Note 2 to entry: A unit or increment of proper homogeneity, size, and fineness, needing no further preparation, may be a test portion.

[SOURCE: ISO 11074:2005, 4.3.13]

4 Principle

The soil sample with particle size of <2 mm is extracted with (0,43 ± 0,02) mol/l nitric acid solution at a soil:solution ratio of 1:10 (m/V) for four hours at (20 ± 2) °C. After centrifugation of the suspension,

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