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**NATIONAL STANDARD OF THE
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**Soil quality - Pretreatment of samples for physico-chemical
analysis**

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foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents"

drafting:

This document identically adopts ISO 11464:2006 "Pretreatment of soil physical and chemical analysis samples for soil quality":

A chapter "Terms and Definitions" has been added to this document:

The following minimal editorial changes have been made to this document:

---Since "5:3 and 5:4" mentioned in 5:1 of ISO 11464:2006 should have been "5:3, 5:4 and 5:5", so in 6:1 of this document

Adjust accordingly to "6:3, 6:4 and 6:5";

---Since the "4:6" mentioned in 5:4:2 and 5:5:2 of ISO 11464:2006 should have been "4:5", the relative

Should be adjusted to "5:5";

---Since the "4:9" mentioned in 5:6 of ISO 11464:2006 should have been "4:8", the corresponding adjustment in 6:6 of this document is "see

5:8":

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

This document was proposed by the Ministry of Agriculture and Rural Affairs of the People's Republic of China:

This document is under the jurisdiction of the National Soil Quality Standardization Technical Committee (SAC/TC404):

1 Scope

This document specifies the pretreatment requirements for soil samples for the analysis of stable and non-volatile physical and chemical indicators: The 5 preprocessing described in this document

The processes are drying, crushing, sieving, sampling and grinding:

When the preprocessing process in this document affects the measurement results, it is not applicable: This document also does not apply to the determination of volatile compounds

sample: When other pretreatment methods are required, they are usually explained in the physical and chemical analysis method standards:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document:

ISO 565 Basic dimensions of test sieves of woven wire mesh, perforated plate and electroformed sheet sieves (Testsieves-Metal

Note: The basic dimensions of GB/T 6005-2008 test sieve wire mesh, perforated plate and electroformed sheet sieve (ISO 565:1990, MOD)

ISO 10381-8 Soil quality sampling Part 8: Guidelines for collection of air-dried soil samples (Soilquality-Sampling-Part 8:

3 Terms and Definitions

This document does not have terms and definitions that need to be defined:

4 principles

Air-dry the soil samples directly, or dry in a drying oven at a temperature not exceeding 40°C, or freeze-dry (see 6:3): if necessary

If necessary, crush the soil sample when it is wet and brittle, and repeat the crushing process after drying (see 6:4): The soil was sieved to a particle size smaller than

The 2mm part is divided into several parts by mechanical or manual means, and analyzed as representative sub-samples (see 6:5): For a small amount of sample

(< 2g) is used for analysis, it is necessary to use soil samples with a particle size of less than 2mm (see 6:6), and the processing flow is shown in Figure 1:

Soil samples were dried in a forced air drying oven at 40 °C, since rapid drying can reduce changes caused by microbial activity, so

Therefore, this method is more recommended than air drying at room temperature:

Attention should be paid to the effect of different pretreatment processes on some properties of the soil:

A mesh screen with a mesh size of 2 mm is usually used: However, before pretreatment begins, it should be confirmed whether the subsequent analytical method requires

To use another mesh size:

NOTE: Soil samples stored for long periods of time (including those stored as-is, air-dried at room temperature, refrigerated, or stored away from light) can affect many parameters of the soil, especially

Solubility of inorganic and organic components: See reference [1]:

Special measures should usually be taken for the handling of contaminated soil samples:
Take care to avoid contact with skin and special measures should be taken when drying
(exhaust

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