

ICS 13.080.01

CCS B 10



**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB/T 36197-2018**

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**Soil quality -- Guidance on sampling techniques**

**Issued on: May 14, 2018**

**Implemented on: December 1, 2018**

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**Issued by: State Administration for Market Regulation, China National  
Standardization Administration**

## Table of Contents

|                                                            |  |
|------------------------------------------------------------|--|
| Foreword                                                   |  |
| 1 Scope                                                    |  |
| 2 Normative references                                     |  |
| 3 Terms and definitions                                    |  |
| 4 principles                                               |  |
| 4.1 Soil sampling                                          |  |
| 4.2 Water sample sampling                                  |  |
| 4.3 Soil gas sampling                                      |  |
| 5 selection of sampling technology                         |  |
| 5.1 Preliminary information                                |  |
| 5.2 Sample type                                            |  |
| 5.3 Sampling technique selection rules                     |  |
| 5.4 Cross contamination                                    |  |
| 6 Safety and environmental protection in the investigation |  |
| 6.1 Personal protection                                    |  |
| 6.2 Building and equipment protection                      |  |
| 6.3 Environmental Protection                               |  |
| 6.4 Backfill                                               |  |
| 7 sampling technology                                      |  |
| 7.1 General                                                |  |

### Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the translation method equivalent to ISO 10381-2:2002 Soil Quality Sampling Part 2. Soil Sampling Technical Guide.

For ease of use, this standard makes the following editorial changes.

--- Change the standard name to the Soil Quality Soil Sampling Technical Guide.

This standard was proposed by the Ministry of Agriculture and Rural Affairs of the People's Republic

This standard is under the jurisdiction of the National Soil Quality Standardization Technical

Committee (SAC/TC404).

This standard was drafted. Jiangsu Provincial Agricultural Committee, Jiangsu Academy of Agricultural Sciences, Jiangsu Institute of Quality and Standardization, Chinese Academy of Sciences

Nanjing Soil Research Institute.

## 1 Scope

This standard provides technical guidelines for the collection and storage of soil samples that are used for subsequent testing to provide soil quality information.

This standard provides information on typical equipment used in a particular sampling situation to perform the correct sampling procedure and

Collect representative samples. This standard also provides for the selection of equipment and techniques for the correct collection of disturbed and undisturbed samples at different depths.

guide.

The guidelines provided in this standard are intended to assist in the collection of soil quality samples for agricultural purposes, as well as for soils that require different technologies and skills.

Dyeing survey sampling provides guidance.

This standard can be used as a reference for soil sampling procedures for certain aspects of groundwater and soil gas sample collection.

Although there may be scenarios for site redevelopment and soil quality surveys and geotechnical surveys can be beneficially combined, this standard

The contents of geotechnical investigations are not covered.

This standard does not apply to the sampling of hard formations such as bedrock.

This standard does not include techniques for collecting soil quality information (such as geophysical methods) without sampling.

## 2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

ISO 11074-1 Soil quality vocabulary Part 1. Terms for soil protection and pollution

(Soil quality-Vocabulary-

ry-Part 1. Terms and definitions relating to the protection and pollution of the soil)

ISO 11074-2 Soil quality vocabulary Part 2. Terms and definitions for sample collection

(Soil quality-Vocabulary-

ry-Part 2. Terms and definitions relating to sampling)

ISO 11074-4 Soil quality vocabulary Part 4. Terms and definitions for soil and site restoration (Soil quality-Vocabulary-

Part 4. Terms and definitions related to rehabilitation of soil and sites)

### 3 Terms and definitions

The following terms and definitions defined by ISO 11074-1, ISO 11074-2, ISO 11074-4 apply to this document.

#### 3.1

Point pattern spot sample; single sample

Samples taken from a single point.

Note. This sample is a perturbed sample or a non-disturbed sample.

#### 3.2

Slot pattern slot sample

A sample taken from a vertical trough in a homogeneous formation or some underlying soil.

Note. This sample is a perturbed sample.

#### 3.3

Stratified sample

A sample that is combined after collecting each point pattern from a surface layer or a lower layer that is considered uniform.

Note. This sample is a perturbed sample.

#### 3.4

Cluster-like cluster sample

Samples of smaller points that are close to each other are collected for mixing.

Note. This sample is a perturbed sample.

#### 3.5

#### Spatial mix sample

A small point sample is collected point by point in an area (such as a piece of land) and mixed to obtain a sample.

Note. This sample is a perturbed sample.

### 4.1 Soil sampling

The samples are collected and tested primarily to determine the relevant physical, chemical, biological, and radiological parameters. This chapter outlines the selection and use of mining

The overall factors to consider when using equipment. See the subsequent sections for details.

Whenever a piece of soil is described, it is generally impossible to test the entire piece of soil, so sampling is necessary. The sample collected should be as much as possible

A comprehensive representative to describe the whole. At the same time, precautions should be taken to ensure that the soil does not change as much as possible during the sampling and inspection intervals.

The sample that is usually sampled is called a disturbed sample, that is, the soil particles become loose and separated during the sampling process. If you need to collect undisturbed samples,

For example, for microbiology or geotechnical engineering, the collection of samples must ensure that the soil particles and pore structure remain in their original state. Multiphase system

Sampling, such as soils containing water and gases from unnatural sources (such as from waste), may face special problems.

The selected sampling technique should be able to collect soil material samples, and the obtained samples can be submitted to the laboratory for inspection and analysis.

Establishing sampling points for the soil science/distribution of natural or man-made soils and their chemical, mineralogical, biological composition and physical properties

Basic information on quality.

In addition, the choice of sampling method also depends on the accuracy requirements of the survey results. In turn, the accuracy depends on the concentration range of the soil components,

Sampling procedures and methods of analysis.

When selecting sampling equipment, it is advisable to consider the types of substances that