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Kakovost tal - Vzorčenje - 106. del: Kontrola in zagotavljanje kakovosti

Soil quality - Sampling - Part 106: Quality control and quality assurance

Qualité du sol - Échantillonnage - Partie 106: Contrôle de la qualité et assurance de la qualité

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Soil quality — Sampling —

Part 106: Quality control and quality assurance

Qualité du sol — Échantillonnage —

Partie 106: Contrôle de la qualité et assurance de la qualité

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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).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 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 2, *Sampling*.

A list of all parts in the ISO 18400 series can be found on the ISO website.

Introduction

Quality assurance (QA) comprises all those measures taken to ensure that results of the investigation are “fit for purpose”, including documentation, procedures to be followed, the setting of data quality objectives (i.e. for type, quality, and quantity) and reporting.

The overall quality of soil and site investigations and assessments depends on the quality of each separate step of the overall process, i.e. planning, sampling, pretreatment, analysis and evaluation, and interpretation of all results. This document only applies to sampling. Sampling is a very critical step in the whole procedure because errors made can usually not be recognized nor corrected in the laboratory or in the office afterwards.

A prerequisite for fit for purpose and reproducible analytical and test results is QA for sampling, including assuring:

— representativeness of samples;

— avoiding cross-contamination and unwanted changes or alterations of the sample during sampling, on-site pretreatment, transport, and delivery;

— making, recording, and reporting appropriate field observations;

— fit for purpose field measurements;

— a defined chain of custody process.

In Figure 1, the different steps of an investigation programme are given. This document describes the QA in the first three steps.

This document is part of a series on sampling standards for soil. The role/position of the International Standards within the total investigation programme is also shown in Figure 1.

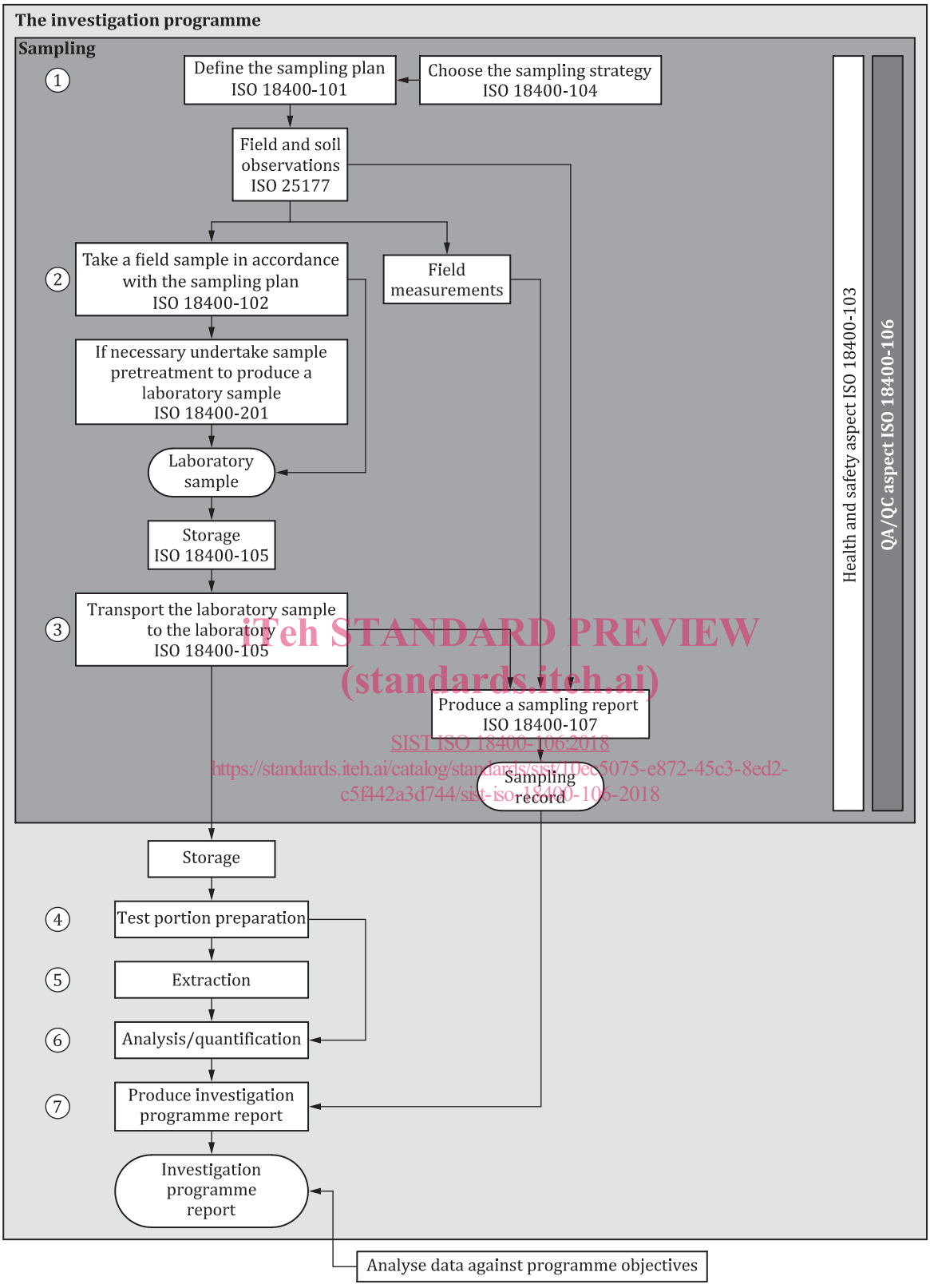

Figure 1 — Links between the essential elements of an investigation programme

NOTE 1 The numbers in circles in Figure 1 define the key elements (1 to 7) of the investigation programme.

NOTE 2 Figure 1 displays a generic process which can be amended when necessary.

Soil quality — Sampling —

Part 106:
Quality control and quality assurance

1 Scope

This document provides guidelines for quality assurance and quality control (QA/QC) for soil sampling. It identifies the steps which are subject to QA and QC in situations where QA and QC are required. It addresses aspects of QA and QC of the International Standards under the ISO 18400-100 umbrella (level 1, level 2) and gives guidance to methods on level 3.

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*

ISO 18400-105, *Soil quality — Sampling — Part 105: Packaging, transport, storage and preservation of samples*

ISO 28258, *Soil quality — Digital exchange of soil-related data*

3 Terms and definitions

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

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

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

— ISO Online browsing platform: available at http://www.iso.org/obp

4 Quality assurance

4.1 General

QA is applied in two situations:

— in an accredited quality system or certified quality system;

— on a voluntary base in the absence of an accredited quality system or certified quality system.

Because of the various reasons for and objectives of sampling, there can be no single set of QA procedures to be followed by all organizations offering sampling services under all circumstances. It is, consequently, more difficult to set out principles for field activities (e.g. taking samples) than it is for soil analysis procedures. However, it is strongly recommended that, as far as practicable, the guidelines