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Soil quality — Sampling —

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Qualité du sol — Échantillonnage —

Partie 103: Sécurité

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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*.

This first edition of ISO 18400-103 cancels and replaces ISO 10381-3:2001, which has been technically and structurally revised. The ISO 18400 series is based on a modular structure and cannot be compared to ISO 10381-3 clause by clause.

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

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Introduction

This document is one of a group of International Standards intended to be used in conjunction with each other where necessary (the role/position of the International Standards within the total Investigation programme is shown in Figure 1).

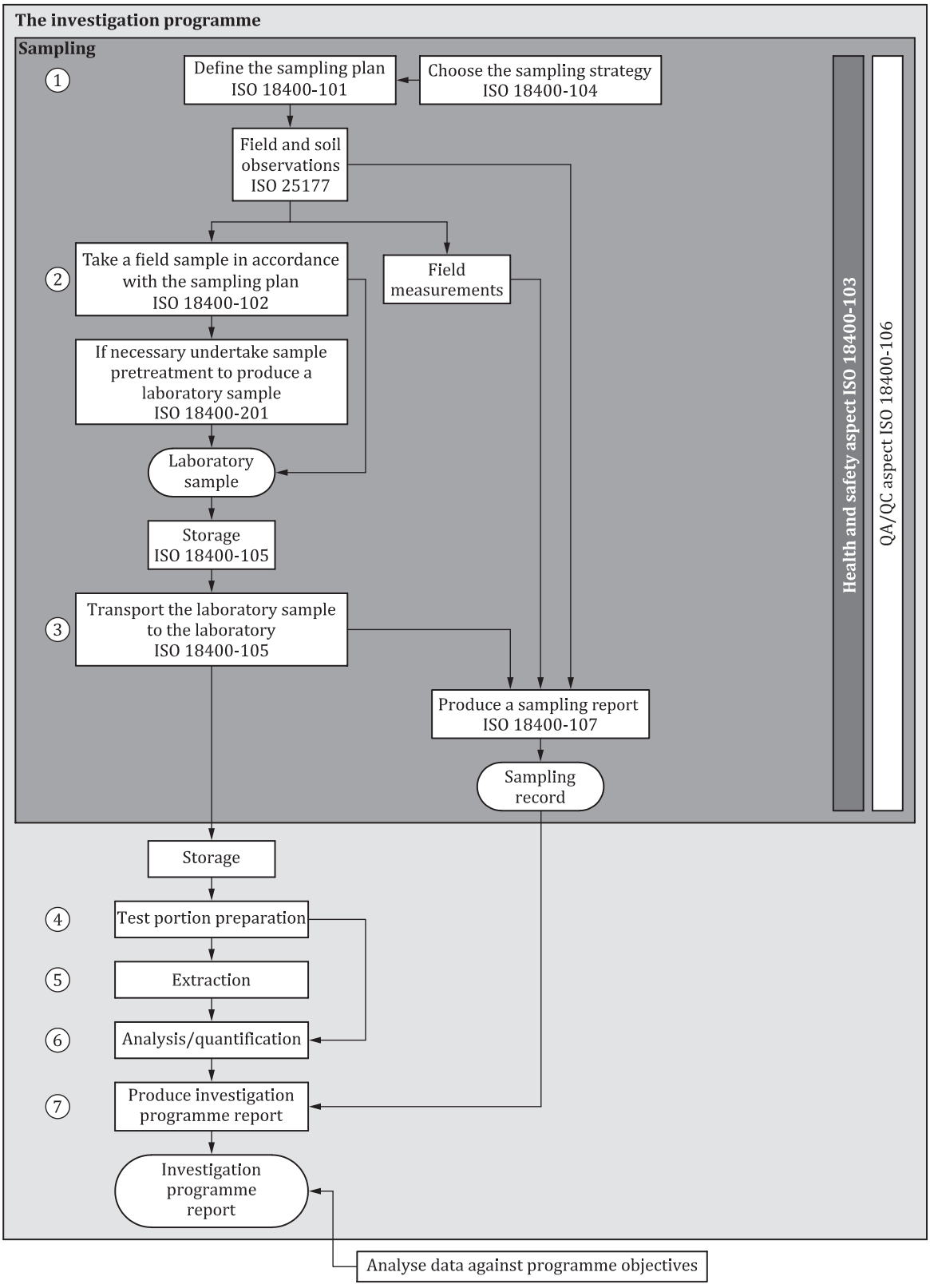
It deals with safety during sampling and other soil investigation activities. International and national regulations regarding health and safety at work and associated guidance produced by statutory bodies and trade associations could exist and may need to be taken into account.

It does not seek to address everyday hazards that could arise from the use of such items as sharp instruments, digging/drilling equipment, nor the hazards of driving to a site location. It is assumed that such hazards are satisfactorily dealt with by the personnel carrying out the investigation and the sampling.

Former production sites for munitions and other warfare agents present special problems to investigators and others involved in handling samples collected at such locations. The guidance given in this document will be of assistance in these situations, but additional guidance about the precautions to be taken should be obtained from specialists, such as those responsible for the former operation of these sites.

Geological and geotechnical investigations are outside of the scope of this document and for detailed guidance, reference is to be made to other relevant International Standards. However, soil quality investigations may sometimes be combined with geotechnical investigations for practical reasons and for economy and thus specific hazards and risks associated with geotechnical investigations might need to be addressed in the overall risk assessment.

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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.

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

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Soil quality — Sampling —

Part 103: Safety

1 Scope

This document gives guidelines for:

— identification of hazards that could be encountered during a site investigation and when collecting samples of soil and other ground material, including hazards that are intrinsic in the sampling operation (e.g. physical hazards) in addition to the hazards that might arise, e.g. from contamination with chemicals or biological agents;

— measures to be adopted to control risks once an appropriate risk assessment has been carried out.

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*

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 Preliminary considerations

The main objectives of this guidance on safety are to:

a) identify the hazards that could exist when carrying out site investigations and soil sampling programmes,

b) indicate management procedures to provide a framework for safe working,

c) indicate what working procedures can be adopted to minimize risks from contaminants, physical and other hazards associated with the collection of samples and the use of machinery, and

d) indicate what precautions can be taken in terms of personal protection and cleaning facilities to minimize any risks.

It is not possible, in a guidance document such as this, to identify all the hazards that could be encountered during site work, or to provide guidance on how the associated risks can be dealt with in all situations. Safety depends ultimately on the adoption of an attitude and approach to any particular

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