

Soil quality — Sampling —

Part 3: Guidance on safety

ICS 13.080.05

National foreword

This British Standard reproduces verbatim ISO 10381-3:2001 and implements it as the UK national standard.

The UK participation in its preparation was entrusted by Technical Committee EH/4, Soil quality, to Subcommittee EH/4/2, Sampling, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 10381 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 10381-3 was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 2, *Sampling*.

ISO 10381 consists of the following parts, under the general title *Soil quality — Sampling*:

- *Part 3: Guidance on safety*
- *Part 6: Guidance on the collection, handling and storage of soil for the assessment of aerobic microbial processes in the laboratory*

Additional parts are in preparation.

Introduction

This part of ISO 10381 is one of a group of International Standards intended to be used in conjunction with each other where necessary. ISO 10381-3 deals with safety for various purposes of soil investigation.

Soil quality — Sampling —

Part 3: Guidance on safety

1 Scope

This part of ISO 10381 provides guidance on the hazards that may exist during a site investigation and when collecting samples of soil and other ground material, including hazards that are intrinsic in the sampling operation in addition to the hazards that may arise from contamination and other physical hazards. Precautions are given so that the risks involved in any sampling or site investigation can be controlled and minimized.

This part of ISO 10381 gives guidance on hazards which may be encountered in a site investigation

- in general,
- on agricultural areas,
- on contaminated areas,
- in geological investigations,

and an indication of the activities which may give rise to risks. It then describes procedures which may be adopted to control risks.

This part of ISO 10381 is designed specifically to deal with the problems of safety during sampling and site investigation, and is not intended to provide guidance for other situations such as construction.

NOTE 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 part of ISO 10381 will be of assistance in these situations, but additional guidance on the precautionary measures to be taken should be obtained from the specialists responsible for the former operation of these sites.

2 Preliminary procedures

In all daily activities there is an element of risk and this risk is increased when the environment is unfamiliar. Even sampling an agricultural area involves an increased risk to the sampler, because the nature of the ground and possible hazards are not necessarily known to the sampler.

When examining a site for contamination, the risks are increased, due to the presence of chemicals, compounds and agents which present a hazard to human health. When examining a former industrial site, the risk of physical injury can be increased because of the possibility of voids and cavities (physical hazards) beneath ground level which may not have been properly filled in. Cavities may also be present where there has been underground combustion (for example in refuse sites and colliery waste disposal sites).

Physical injury is also possible in any sampling situation where machinery is being used; this applies to agricultural sampling as much as to contaminated-site investigations. Possibly the injuries could be more serious in a contaminated-site investigation because bigger and more powerful machines are involved, and even minor injuries may provide a pathway for toxic substances and pathogens to enter the body.

Care should also be taken to ensure the safety of the investigator when a preliminary site visit (site reconnaissance) is carried out prior to commencing the full site investigation, particularly as all potential hazards may not have been identified at that time.