

**Markundersökningar – Format för registrering
av information om mark och markområden**

**Soil quality – Format for recording soil and site
information**

Den internationella standarden ISO 15903:2002 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av ISO 15903:2002.

The International Standard ISO 15903:2002 has the status of a Swedish Standard. This document contains the official English version of ISO 15903:2002.

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Foreword

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

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 15903 was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 1, *Evaluation of criteria, terminology and codification*.

Introduction

In any system where soil data are handled, but particularly in determinations of soil quality and evaluations for soil protection or sustainable uses of soil, it is essential that reliable and compatible information is obtained and recorded. This information must enable the site to be clearly identified and located.

The documentation should include information collected about the nature of the site at the time of the site investigation and the nature of sampling. Details on the sampling include the place, date and mode of sampling, the size of the sample, whether single or composite and the storage and transportation conditions. In addition, details of the sample preparation and of the results of test methods undertaken on the samples should be recorded. Information should also be provided on the test methods used and their precision, as well as details of the laboratory undertaking the test methods together with information about the laboratory's accreditation and involvement in quality assurance schemes.

Soil quality — Format for recording soil and site information

1 Scope

The purpose of this International Standard is to achieve a high degree of harmonization in reporting results of on-site recording, sampling, on-site sample analyses and laboratory analyses of soil samples. To this end, it provides instructions for correctly specifying the quantities and units used to express results of analyses, the methods used and their precision. This International Standard also provides information to allow unique referencing of the sample, in both field and laboratory contexts, in order to ensure the traceability of the results.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 11074-1, *Soil quality — Vocabulary — 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 relating to sampling*

3 Terms and definitions

For the purposes of this International Standard, terms and definitions given in ISO 11074-1 and ISO 11074-2 apply.

4 Preamble

Given the large amount of data which result from site investigation, sampling, analysis of physical, chemical and biological properties of the sample and in the future evaluation of the risks to particular targets or particular land uses, it is essential that these data be recorded systematically. This approach will generate the basis of a codified information system for soil quality investigations. These data are most appropriately stored in a Geographical Information System (GIS).

5 List of parameters

5.1 General

The range of parameters which can be recorded as a result of observations of on-site characteristics, on-site analysis and laboratory analysis of soil samples is large. It may be necessary to produce subsets of parameter listings, depending upon the hypotheses developed about the soils and sites and the questions to be answered by the analyses.

There will be substantial differences in the content of the documentation, depending upon whether the data relate to preliminary or detailed investigations. The broad layout should however be similar, irrespective of the amount of detail reported.

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In addition to the presentation of factual information, there may be an additional interpretative report. In most cases, particularly where any risk assessment will be undertaken, an interpretative report is likely to be required. In some cases the report will also indicate why the selection of parameters for observation has been made.

In broad terms, a codified information system for soil quality investigations will require the information given in 5.2 to 5.11.

5.2 Objectives of the investigation

The reasons for the investigation, including information on the intended use of the site and whether the investigation is a preliminary investigation or a detailed investigation, shall be given. A full discussion and description of the hypotheses which have been formulated, should be included. This information may include, for example, conclusions relating to the presence or absence of (and the type and nature of) any contaminants, if the concern is with a potentially contaminated site.

5.3 General information

The following general information shall be provided:

- a) site reference number or site name;
- b) location:
 - national code (ISO);
 - administrative division;
- c) geographical references:
 - coordinates and other relevant information for locating (map) and describing the area of the site;
 - elevation;
- d) date and time of sampling or site observation;
- e) name and other details:
 - the sampler or site observer as well as responsible person;
 - the organization responsible for sampling or observing the site;
 - the owner of the site.

5.4 Site details

In describing the soil and site, ISO 11259 should be followed where appropriate. The following site details should be provided:

- a) surface relief features of the site;
- b) slope and appearance of the site;
- c) signs of erosion and soil movement;
- d) climate at the site;
- e) weather conditions at the time of recording the site information and sampling;
- f) details about land use, including past and present uses of the site;
- g) current site plan, for example the presence of concrete or tarmac pathways, of buildings and remains of demolished buildings, vegetation, refuse, domestic pipelines and underground tanks and services;
- h) geology of the site;
- i) hydrology of the site, in particular the groundwater regime and fluctuations, soil water conditions, sea water incursions;