

ISO 15176:2019 (E)

Guidance on characterization of excavated soil and other materials intended for re-use

Contents

	Foreword
	Introduction
1	Scope
2	Normative reference
3	Terms and definitions
3.1	Types of soil and other soil materials
3.2	Soil characteristics
3.3	Land and sites
3.4	Utilization, reclamation and treatment
3.5	Assessment
4	Characterization of soil materials and sites
4.1	General
4.2	Investigation strategies
4.3	Sampling strategies
4.3.1	General considerations
4.3.2	Sampling in situ soil materials
4.3.3	Sampling sediments
4.3.4	Sampling stockpiles of untreated or treated soil materials
4.3.5	Sampling materials arising from a process-based remediation method
4.3.6	Sampling manufactured soils
4.3.7	Sampling soil materials after placement at the target site
4.3.8	Sampling the water environment
4.4	Characterization of soil materials
4.4.1	General
4.4.2	Description of source and target sites
4.4.3	Chemical characterization including basic characteristics
4.4.3.1	General
4.4.3.2	Basic characteristics
4.4.3.3	Nutrients
4.4.3.4	Essential trace elements
4.4.3.5	Potentially harmful substances
4.4.3.6	Substances aggressive to construction materials
4.4.4	Physical characteristics
4.4.5	Biological characteristics
5	Data quality, handling and evaluation
6	Using this document
Annex A	(informative) Relevant parameters required for the chemical, physical and biological characterization of materials for re-use
Annex B	(normative) Good practice in the re-use of soil materials
B.1	General
B.2	General guidance for re-use
B.2.1	The principles
B.2.2	Avoidance and/or reduction of excavation of soil or removal from of soil material from site

- B.2.3** Avoidance of damage to soil material during handling, storage and placement
- B.2.4** Usefulness
- B.2.5** Harmlessness
- B.3** Handling and storing excavated soil and other soil materials
- B.4** Placement at the target site
- B.5** After-care of the target site

Annex C (informative) Guidance on determination of the scope of investigation needed before excavation of soil materials

- C.1** General
- C.2** Determining the need for investigation
- C.3** Development of analytical strategies

Annex D (informative) Examples of classification and evaluation of soils and other soil materials

- D.1** General
- D.2** The concept of suitability classes
- D.3** Suitability classes depending on harmful substance content
 - D.3.1** Test criteria and suggested suitability classes
 - D.3.2** Unrestricted re-use
 - D.3.3** Restricted re-use
 - D.3.4** Restricted re-use including technical safety measures
- D.4** Soil unsuitable for re-use
- D.5** Additional suitability classes for soil improvement and reclamation
- D.6** Suitability of soils and soil materials for combining
- D.7** Other classification and evaluation approaches

Annex E (informative) Examples of elements and compounds belonging to different contaminant groups

Page count: 53