

# SVENSK STANDARD

## SS-EN 15002:2015



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### **Karaktärisering av avfall – Reducering av laboratorieprov för analys**

### **Characterization of waste – Preparation of test portions from the laboratory sample**

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The European Standard EN 15002:2015 has the status of a Swedish Standard. This document contains the official English version of EN 15002:2015.

This standard supersedes the Swedish Standard SS-EN 15002:2006, edition 1.

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EUROPEAN STANDARD

**EN 15002**

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2015

ICS 13.030.01

Supersedes EN 15002:2006

English Version

## Characterization of waste - Preparation of test portions from the laboratory sample

Caractérisation des déchets - Préparation de prises d'essai  
à partir de l'échantillon pour laboratoire

Charakterisierung von Abfällen - Herstellung von  
Prüfmengen aus der Laborprobe

This European Standard was approved by CEN on 7 February 2015.

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<b>Contents</b>		<b>Page</b>
Foreword.....		4
Introduction .....		5
1 Scope .....		6
2 Terms and definitions .....		6
3 Equipment .....		8
4 Interferences and sources of error .....		8
5 Procedure .....		9
5.1 Key concepts.....		9
5.2 Sequence of treatment techniques .....		10
6 Report .....		12
Annex A (normative) Guideline for choosing sample treatment techniques .....		13
A.1 General.....		13
A.2 Homogenization .....		13
A.2.1 General information.....		13
A.2.2 Solid samples.....		13
A.2.3 Liquid samples.....		14
A.2.4 Homogenization in case of volatile compounds .....		15
A.3 Phase/fraction separation .....		15
A.3.1 General information.....		15
A.3.2 Solid – liquid separation .....		15
A.3.3 Liquid – liquid separation .....		17
A.3.4 Solid – solid separation; separation into different fractions .....		18
A.4 Drying.....		19
A.4.1 General information.....		19
A.4.2 Procedures .....		19
A.5 Particle size reduction.....		21
A.5.1 General information.....		21
A.5.2 Procedures .....		22
A.6 Sub-sampling .....		24
A.6.1 General information.....		24
A.6.2 Manual division of solid samples by coning and quartering .....		24
A.6.3 Dry cutting .....		25
A.6.4 Mechanical division of solid samples .....		25
A.6.5 Sub-sampling for volatile compounds .....		26
A.6.6 Sub-sampling for moderately volatile organic compounds.....		26

<b>A.6.7</b>	<b>Sub-sampling of sludge and liquid.....</b>	<b>27</b>
<b>A.6.8</b>	<b>Sub-sampling of monolithic sample.....</b>	<b>27</b>
<b>Annex B (informative)</b>	<b>Relationship between minimum amount of (sub-)sample and particle size.....</b>	<b>28</b>
<b>B.1</b>	<b>Formula for the estimation of the minimum amount of (sub-)sample:.....</b>	<b>28</b>
<b>B.2</b>	<b>Empirical rule.....</b>	<b>29</b>
<b>Annex C (informative)</b>	<b>Sample treatment equipment .....</b>	<b>30</b>
<b>Annex D (informative)</b>	<b>Examples for analytical methods.....</b>	<b>31</b>
<b>Annex E (informative)</b>	<b>Examples for preparation of test samples .....</b>	<b>37</b>
<b>E.1</b>	<b>Example 1.....</b>	<b>37</b>
<b>E.2</b>	<b>Example 2.....</b>	<b>41</b>
<b>Bibliography.....</b>		<b>49</b>

## Foreword

This document (EN 15002:2015) has been prepared by Technical Committee CEN/TC 292 “Characterization of waste”, the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2015, and conflicting national standards shall be withdrawn at the latest by October 2015.

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## **Introduction**

In laboratory practice, very often different analytical procedures are bound to be applied to the laboratory sample that has been taken according to the sampling plan. For this purpose sub-sampling is bound to be applied in a way, that the different test portions are representative for the original laboratory sample with respect to the compounds of interest and the specific analytical procedures. The representativity of the laboratory sample and of the test portions is of major importance to guarantee the quality and accuracy of analytical results. The representativity of the laboratory sample is specified by the sampling plan. This European Standard specifies the correct sequence of operations to ensure the representativity of the test portions.

### **Safety remarks:**

Anyone dealing with waste and sludge analysis is bound to be aware of the typical risks of that kind of material irrespective of the parameter to be determined. Waste and sludge samples may contain hazardous (e.g. toxic, reactive, flammable and infectious) substances, which can be liable to biological and/or chemical reaction. Consequently it is recommended that these samples should be handled with special care. The gases that may be produced by microbiological or chemical activity are potentially flammable and will pressurize sealed bottles. Bursting bottles are likely to result in hazardous shrapnel, dust and/or aerosol. National regulations should be followed with respect to all hazards associated with this method.

## 1 Scope

This European Standard is applicable for the preparation of representative test portions from the laboratory sample that has been taken according to the sampling plan (EN 14899), prior to physical and/or chemical analysis (e.g. preparation of eluates, extractions, digestion and/or analytical determinations) of solid (including monolithic material) and liquid samples and sludge. It is also applicable for the preparation of test portions from digests and eluates for the subsequent analyses.

This European Standard is intended to find the correct sequence of operations and treatments to be applied to the laboratory sample in order to obtain suitable test portions in compliance with the specific requirements defined in the corresponding analytical procedures.

## 2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 2.1

#### **drying**

process of removing water from a sample

Note 1 to entry: For the purpose of test portion preparation, it may be useful to remove just the amount of water that could interfere with other processes involved (e.g. during crushing or milling). In order to minimize the alteration of the sample during test portion preparation, removing the total amount of water present in the sample is not necessarily needed.

### 2.2

#### **fraction**

sample obtained by procedures from the laboratory sample where the properties of interest may be unequally distributed

Note 1 to entry: A fraction may consist of metal pieces, stones, etc.

### 2.3

#### **granular waste**

waste that is neither monolithic, liquid, gas nor sludge

[SOURCE: EN 12457-1:2002, 3.10]

### 2.4

#### **homogenisation**

process of combining of components, particles, layers or phases into a more homogeneous state of the original sample or pre-treated fractions of the sample in order to ensure equal distribution of substances in and properties of the sample

### 2.5

#### **laboratory sample**

sample or sub-samples sent to or received by the laboratory

Note 1 to entry: When the laboratory sample is further prepared (reduced) by subdividing, mixing, grinding, or by combinations of these operations, the result is the test sample. When no preparation of the laboratory sample is required, the laboratory sample is the test sample. A test portion is removed from the test sample for the performance of the test or for analysis.

Note 2 to entry: The laboratory sample is the final sample from the point of view of sample collection but it is the initial sample from the point of view of the laboratory.

Note 3 to entry: Several laboratory samples may be prepared and sent to different laboratories or to the same laboratory for different purposes. When sent to the same laboratory, the set is generally considered as a single laboratory sample and is documented as a single sample.

## 2.6

### **moderately volatile compounds**

sum of semi-volatile organic compounds and moderately volatile inorganic compounds that can be lost during sample preparation

Note 1 to entry: Volatile inorganic compounds of e.g. mercury, arsenic cadmium, thallium can be lost during sample preparation, e.g. heating.

## 2.7

### **moderately volatile organic compound; semi volatile organic compound**

organic compound having a boiling point above 180 °C (at a pressure of 101 kPa)

Note 1 to entry: This definition includes:

- a) mineral oil;
- b) most polycyclic aromatic hydrocarbons (PAH) (see ISO 13877);
- c) polychlorobiphenyls (PCB) (see ISO 10382);
- d) organochlorine pesticides (see ISO 10382).

## 2.8

### **monolithic waste**

waste which has certain minimum dimensions and physical and mechanical properties that ensure its integrity over a certain period of time in the considered scenario

## 2.9

### **particle size reduction**

mechanical friction of the sample by milling, grinding, crushing or cutting

## 2.10

### **phase separation; fraction separation**

process of dividing components, particles or phases if homogenization of the sample is practically not applicable and/or the analysis of different fractions or phases are appropriate

## 2.11

### **sample**

portion of material selected from a larger quantity of material

## 2.12

### **sub-sample**

sample obtained after sample size reduction of a larger sample

Note 1 to entry: A sub-sample may be:

- a) portion of the sample obtained by selection or division;
- b) the final sample of multistage sample-preparation;
- c) in case of monolithic sample, the sample obtained after cutting or coring.