

**Characterization of waste - Sampling of
waste materials - Framework for the
preparation and application of a
Sampling Plan**

Characterization of waste - Sampling of waste
materials - Framework for the preparation and
application of a Sampling Plan

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14899:2006 sisaldab Euroopa standardi EN 14899:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 27.02.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14899:2006 consists of the English text of the European standard EN 14899:2005.</p> <p>This document is endorsed on 27.02.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This European Standard specifies the procedural steps to be taken in the preparation and application of a Sampling Plan. The Sampling Plan describes the method of collection of the laboratory sample necessary for meeting the objective of the testing programme.</p>	<p>Scope: This European Standard specifies the procedural steps to be taken in the preparation and application of a Sampling Plan. The Sampling Plan describes the method of collection of the laboratory sample necessary for meeting the objective of the testing programme.</p>
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Võtmesõnad:

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English Version

Characterization of waste - Sampling of waste materials - Framework for the preparation and application of a Sampling Plan

Caractérisation des déchets - Prélèvement des déchets -
Procédure-cadre pour l'élaboration et la mise en oeuvre
d'un plan d'échantillonnage

Charakterisierung von Abfällen - Probenahme von Abfällen
- Rahmen für die Erstellung und Anwendung eines
Probenahmeplans

This European Standard was approved by CEN on 28 October 2005.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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Foreword

This European Standard (EN 14899:2005) 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 June 2006, and conflicting national standards shall be withdrawn at the latest by June 2006.

This European Standard has been prepared under the mandate M/326 given to CEN by the European Commission and the European Free Trade Association.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

Wastes are materials, which the holder discards, or intends or is required to discard, and which may be sent for final disposal, reuse or recovery. Such materials are generally heterogeneous and it will be necessary therefore to specify in the testing programme the amount of material for which the characteristics of interest need to be defined. The testing of wastes allows informed decisions to be made on the appropriate way in which they should be treated, (or not), and recovered or disposed. In order to undertake valid tests a (number of) representative sample(s) of the waste may be required.

The potential scope of an overall testing programme can be complex, the process flow chart in Figure 1, defines 7 key steps that make up the essential elements of the testing programme. The principles outlined in this European Standard provide a framework that can be used to design and develop a Sampling Plan; being the first of the 7 key steps. This European Standard should be read in conjunction with the other standards developed by TC 292, which provide detailed instructions on how to complete the remaining key steps. All information is provided in accordance with the requirements specified in these European Standards. Further information on the relationship between the production of a Sampling Plan and the overall testing programme objectives can be found in prCEN/TR 15310-5.

At the outset, all appropriate involved parties will discuss and agree the objectives and boundaries of the programme, although in some cases pre-conditions set by national legislation may define these objectives. In turn the objectives will help define the level of testing required e.g. basic characterization, compliance or verification testing, in addition to the desired reliability of the testing / assessment and frequency of testing. In designing the sampling exercise attention will then be given to other factors, which include: the type of material to be sampled, the accessibility of the material and the parameters to be determined. Collectively, these activities allow the scope of the testing programme to emerge.

To reach the objectives of a testing programme, methods of sampling need to be selected or designed that ensure availability of appropriate samples representative for the purpose of the tests to be performed. The overall test programme design often involves iterative discussion between the involved parties.

A Sampling Plan is defined by the specific objectives of the testing programme and how those objectives can be practically achieved with reference specifically to the sampling activities for the situation and material under investigation. Additionally, this European Standard deals with the actual sampling in accordance with the Sampling Plan and the development of the sampling report. More than one Sampling Plan may be required to fulfil all the objectives of the testing programme. A Sampling Plan should detail all the information pertinent to a particular sampling exercise.

The procedural steps that will be considered to complete key step 1 "The preparation and application of a Sampling Plan" are detailed in Figure 2. It is this process map that provides the basic framework for the practitioner developing a Sampling Plan to meet the requirements of any testing programme. This European Standard can be used to:

- produce standardised sampling plans for use in regular or routine circumstances (elaboration of daughter/derived standards dedicated to well defined sampling scenarios);
- incorporate the specific sampling requirements of European and national legislation;
- design and develop a Sampling Plan for use on a case by case basis.

Essential information for the application of this European Standard can be found in the following five Technical Reports:

CEN/TR 15310-1¹: Characterization of waste — Sampling of waste materials — Part 1: Guidance on selection and application of criteria for sampling under various conditions;

CEN/TR 15310-2¹: Characterization of waste — Sampling of waste materials — Part 2: Guidance on sampling techniques;

CEN/TR 15310-3¹: Characterization of waste — Sampling of waste materials — Part 3: Guidance on procedures for sub-sampling in the field;

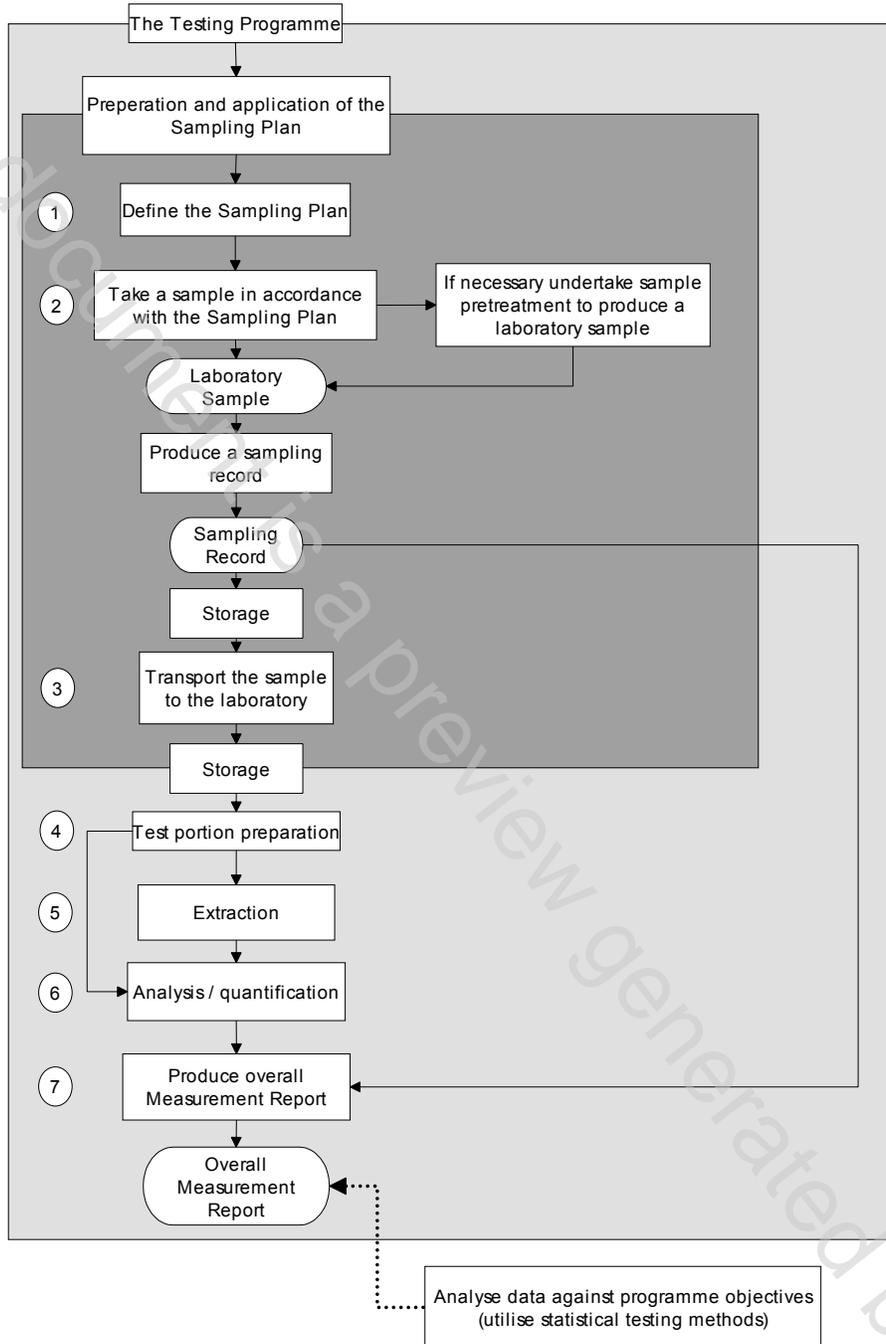
CEN/TR 15310-4¹: Characterization of waste — Sampling of waste materials — Part 4: Guidance on procedures for sample packaging, storage, preservation, transport and delivery;

CEN/TR 15310-5¹: Characterization of waste — Sampling of waste materials — Part 5: Guidance on the process of defining the sampling plan.

The Technical Reports contain procedural options (as detailed in Figure 2) that can be selected to match the sampling requirements of any testing programme.

Although this European Standard refers in most cases to the taking of one sample or increment, or the preparation of one laboratory sample, it should be noted that in many cases this will be more than one. For simplicity this European Standard adopts the use of singular terms, plural terms will however be possible or likely.

¹ To be published.



NOTE Key steps define the 7 overall steps that make-up a testing programme.

Figure 1 — Links between the essential elements of a testing programme

1 Scope

This European Standard specifies the procedural steps to be taken in the preparation and application of a Sampling Plan. The Sampling Plan describes the method of collection of the laboratory sample necessary for meeting the objective of the testing programme. The principles or basic rules outlined in this European Standard, provide a framework that can be used by the project manager to:

- produce standardised Sampling Plans for use in regular or routine circumstances (elaboration of daughter/derived standards dedicated to well defined sampling scenarios);
- incorporate the specific sampling requirements of European and national legislation;
- design and develop a Sampling Plan for use on a case by case basis.

This European Standard has been developed for the characterization of waste.

There may be a need for more than one Sampling Plan to meet all the requirements of the testing programme. Ultimately the Sampling Plan provides the sampler with detailed instructions on how sampling should be carried out.

NOTE Although this European Standard in most cases refers to the taking of one sample or increment or the preparation of one laboratory sample, it should be noted that often this should be more than one. For simplicity reasons this European Standard uses singular terms, while plural terms are also possible or even likely.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 13965-1:2004, *Characterization of waste — Terminology — Part1: Material related terms and definitions*

EN 13965-2:2004, *Characterization of waste — Terminology — Part2: Management related terms and definitions*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 13965-1:2004, EN 13965-2:2004 and the following apply.

NOTE This European Standard avoids the use of the terms 'sampling protocol' and 'sampling strategy' as they are both known to represent conflicting concepts in a number of countries.

3.1

composite sample

two or more increments / sub-samples mixed together in appropriate proportions, either discretely or continuously (blended composite sample), from which the average value of a desired characteristic may be obtained

[ISO 11074-2:1998]

3.2

constituent

property or attribute of a material that is measured, compared or noted