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STN	**Tuhé biopalivá Zjednodušená metóda odberu vzoriek na maloobjemové použitie (ISO 21945: 2020)**	**STN EN ISO 21945 65 7431**

Solid biofuels - Simplified sampling method for small scale applications (ISO 21945:2020)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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EUROPÄISCHE NORM

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English Version

Solid biofuels - Simplified sampling method for small scale applications (ISO 21945:2020)

Biocombustibles solides - Méthode d'échantillonnage simplifiée pour les applications à petite échelle (ISO 21945:2020)

Biogene Festbrennstoffe - Vereinfachtes Verfahren zur Probenahme an kleinen Anlagen (ISO 21945:2020)

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European foreword

This document (EN ISO 21945:2020) has been prepared by Technical Committee ISO/TC 238 "Solid biofuels" in collaboration with Technical Committee CEN/TC 335 “Solid biofuels” the secretariat of which is held by SIS.

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of an identical text or by endorsement, at the latest by September 2020, and conflicting national standards shall be withdrawn at the latest by September 2020.

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INTERNATIONAL STANDARD

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Solid biofuels — Simplified sampling method for small scale applications

Biocombustibles solides — Méthode d'échantillonnage simplifiée pour les applications à petite échelle

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 238, *Solid biofuels*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The objective of this document is to provide unambiguous and clear principles for sampling of solid biofuels from small scale applications and storages. It is to serve as a tool to enable efficient trading of biofuels and to enable good understanding between seller and buyer. It is also a tool for communication with equipment manufacturers. It will also facilitate the development of sampling plans and reporting.

This document is intended for all stakeholders.

Priority in this document is to take a number of increments which is possible to handle at small applications under practical aspects. In ISO 18135 the priority is to obtain a sample with a defined precision and to calculate the minimum number of increments on basis of the corresponding precision data.

INTERNATIONAL STANDARD **ISO 21945:2020(E)**

Solid biofuels — Simplified sampling method for small scale applications

1 Scope

This document describes simplified methods for taking samples of solid biofuels in small scale applications and storages including preparation of sampling plans and reports. The main focus is on storages with a size of ≤100 t. This document is applicable to the following solid biofuels:

1) fine (up to about 10 mm nominal top size) and regularly-shaped particulate materials that can be sampled using a scoop or pipe, e.g. sawdust, olive stones and wood pellets;

2) coarse or irregularly-shaped particulate materials (up to 200 mm nominal top size) that can be sampled using a fork or shovel, e.g. wood chips, hog fuel and nut shells;

3) large pieces (above 200 mm nominal top size) which are picked manually (e.g. firewood and briquettes).

This document can also be used for other solid biofuels not listed above if the procedures described in this document are applicable. This document specifies methods to be used, for example, when a sample is to be tested for moisture content, ash content, calorific value, bulk density, mechanical durability, particle size distribution, ash melting behaviour and chemical composition.

Additionally, it describes a method for the reduction of sample size and defines requirements on handling and storage of samples.

NOTE 1 If higher precision of analytical results is needed or when in doubt if this document is applicable ISO 18135 can be used. Using the number of increments given in this document the resulting precision for analytical results can be estimated with the formulas given in ISO 18135.

NOTE 2 Pellets can generate CO and CO_2 off gasses by nature. If pellets are sampled, check for CO and CO_2 and O_2 levels prior and during the sample taking process in a confined space like a container, silo or shed and have another person standby at the entrance.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14780, *Solid biofuels — Sample preparation*

ISO 16559, *Solid biofuels — Terminology, definitions and descriptions*

