
**Solid recovered fuels — Methods
for the determination of carbon (C),
hydrogen (H), nitrogen (N) and sulphur
(S) by the instrumental method**

*Combustibles solides de récupération — Méthodes de détermination
de la teneur en carbone (C), hydrogène (H), azote (N) et soufre (S) par
la méthode instrumentale*



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Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Safety remarks	3
5 Principle	3
6 Reagents and calibration standards	3
7 Apparatus	4
8 Procedure	5
8.1 Sample conservation and pre-treatment.....	5
8.2 Sample preparation.....	5
8.3 Preparation of the test portion.....	5
8.4 Calibration.....	5
8.5 Analysis of samples.....	6
9 Performance characteristics	6
10 Test report	7
Annex A (normative) Guidelines - Characteristics of the laboratory sample for chemical analysis of SRF	8
Annex B (informative) Data on performance characteristics	9
Annex C (informative) Major results of robustness testing	11
Bibliography	12

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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 300 *Solid recovered fuels*.

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 determination of total content of carbon, hydrogen, nitrogen and sulfur is usually performed using instrumental methods. Depending on the amount of test portion used two different types of instrumental methods can be used: micro methods require few milligrams of sample; macro methods use grams of sample. Micro methods require a very careful preparation of the test sample for Solid Recovered Fuel (SRF) analysis.

Solid recovered fuels — Methods for the determination of carbon (C), hydrogen (H), nitrogen (N) and sulphur (S) by the instrumental method

1 Scope

This document specifies the determination of total content of carbon, hydrogen, nitrogen and sulfur in solid recovered fuels by instrumental method. Depending on the amount of test portion, micro or macro instrumental apparatus are used.

This method is applicable for concentrations on dry matter basis of C > 0,1 %, N > 0,1 %, H > 0,1 % and S > 0,05 %.

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 21637, *Solid recovered fuels — Terminology, definitions and descriptions*

ISO 21660-3¹⁾, *Solid recovered fuels — Determination of moisture content using the oven dry method — Part 3: Moisture in general analysis sample*

ISO 21646²⁾, *Solid recovered fuels — Sample preparation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 21637 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <http://www.electropedia.org/>

3.1

coefficient of variation

estimate of the standard deviation of a population from a *sample* (3.10) of *n* results divided by the mean of that sample

Note 1 to entry: Frequently stated as a percentage.

Note 2 to entry: Adapted from Eurachem/Citac Guide CG 4.

3.2

dry basis

calculation basis in which the material is considered free from *moisture* (3.6)

[SOURCE: ISO 21637, 3.20]

1) Under preparation. Stage at the time of publication ISO/FDIS 21660-3.

2) Under preparation. Stage at the time of publication ISO/DIS 21646.