SLOVENSKI STANDARD
SIST ISO 2144:2016

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Nadomešča:
SIST ISO 2144:2000

Papir, karton, lepenka in vlaknine - Določevanje ostanka (pepela) pri sežigu pri 900 °C

Paper, board and pulps - Determination of residue (ash) on ignition at 900 degrees C

Papiers, cartons et pâtes -- Détermination du résidu (cendres) après incinération à 900 degrés C

Ta slovenski standard je istoveten z: ISO 2144:2015

ICS:

85.040	Vlaknine	Pulps
85.060	Papir, karton in lepenka	Paper and board

SIST ISO 2144:2016 **en**

INTERNATIONAL STANDARD

ISO 2144

Fifth edition
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Paper, board and pulps — Determination of residue (ash) on ignition at 900 °C

Papiers, cartons et pâtes — Détermination du résidu (cendres) après incinération à 900 °C

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 6, *Paper, board and pulps*.

This fifth edition cancels and replaces the fourth edition (ISO 2144:1997), which has been technically revised.

Introduction

The magnitude of the residue on ignition is related to, but not equal to the content of mineral constituents in the sample. For coated and filled products, the amount of added mineral constituents can only be calculated from the result if the loss on ignition of the particular pigment used is known. This value varies from one pigment to another and also between different batches of the same pigment. For China clay, the residue on ignition at 900 °C varies from 89 % to 86 % and for calcium carbonate, it is about 56 %. If lower ignition temperatures are used, the corresponding figures will increase, but there is no guarantee that they will become exactly 100 % at any temperature.

For pulps and other materials without any added minerals, the residue on ignition is a measure of the amount of unwanted mineral constituents such as silica, silicates, particles of minerals, etc. Some soluble inorganic constituents such as sodium chloride will escape the determination, whereas sulfates will normally be retained.

The determination is mainly used as a screening test for checking the overall quality of a product, in many cases against, specifications. The ignition procedure described can be used as a preliminary step when determining particular mineral constituents.

NOTE Determination of residue on ignition at 525 °C of pulps is described in ISO 1762[1].

Paper, board and pulps — Determination of residue (ash) on ignition at 900 °C

1 Scope

This International Standard describes the determination of the residue on ignition of pulps, papers, and boards. The International Standard is applicable to all types of pulp, paper, and board. The lower limit of the determination is about 0,2 %.

NOTE The procedure (Clause 7) requires that at least 10 mg of residue is weighed. The limit stated above corresponds to a 5 g sample. If the sample size is increased, this limit can be lowered.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 186, *Paper and board — Sampling to determine average quality*

ISO 287, *Paper and board — Determination of moisture content of a lot — Oven-drying method*

ISO 638, *Paper, board and pulps — Determination of dry matter content — Oven-drying method*

ISO 7213, *Pulps — Sampling for testing*

3 Terms and definitions

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

3.1
residue on ignition
mass of the residue left after incineration of a test specimen of pulp, paper, and board in a furnace at 900 °C ± 25 °C by the procedure specified in this International Standard

Note 1 to entry: This property has been referred to as “ash content”, for example, in earlier editions of this International Standard.

4 Principle

The test specimen is weighed in a heat-resistant dish and incinerated at 900 °C ± 25 °C in a muffle furnace. The mass of the residue is determined by weighing the dish after the incineration of the test specimen.

5 Apparatus

Ordinary laboratory equipment, including the following:

5.1 Dishes of platinum, ceramics, or silica, of capacity to accommodate about 10 g of sample (normally a capacity of 50 ml is sufficient).

The dishes shall not lose or gain mass on ignition or react chemically with the sample or its ignition residue.