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

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

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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 6, *Paper, board and pulps*.

This sixth edition cancels and replaces the fifth edition (ISO 2144:2015), which has been technically revised. The main changes compared to the previous edition are as follows:

— The scope has been changed to cover also cellulose nanomaterials instead of only paper, board and pulps;

— A definition of cellulose nanomaterial, along with additional instructions for sampling, sample preparation, and incineration for cellulose nanomaterials have been incorporated;

— Additional instructions are given on how to express results when a sample has low ash content.

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 magnitude of the residue (ash content) on ignition at a given temperature 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. For China clay, the residue on ignition at 900 °C varies from 89 % to 86 % and for calcium carbonate it is about 56 %.

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.

Determination of residue (ash content) on ignition at 525 °C of paper, board, pulps and cellulose nanomaterials is described in ISO 1762[1].