



Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

ILNAS-EN 17545:2021

**Paper and board - Determination of
composition of paper and board for
recycling by gravimetric analysis**

Papiers et cartons - Détermination de la
composition des papiers et cartons pour
recyclage par analyse gravimétrique

Papier und Pappe - Bestimmung der
Zusammensetzung von Altpapier zum
Recycling durch gravimetrische Analyse

11/2021



National Foreword

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**Paper and board - Determination of composition of paper
and board for recycling by gravimetric analysis**

Papiers et cartons - Détermination de la composition
des papiers et cartons pour recyclage par analyse
gravimétrique

Papier und Pappe - Bestimmung der
Zusammensetzung von Altpapier zum Recycling durch
gravimetrische Analyse

This European Standard was approved by CEN on 24 October 2021.

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European foreword

This document (EN 17545:2021) has been prepared by Technical Committee CEN/TC 172 “Pulp, paper and board”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by May 2022, and conflicting national standards shall be withdrawn at the latest by May 2022.

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Introduction

Paper and board for recycling is a valuable recovered raw material, widely traded in global markets. In Europe, the recognized grades of paper and board for recycling are defined in EN 643, which generally describes paper and board for recycling based on their point of origin or principal components.

For inspection, quality control or compliance purposes, the material should be analysed and the components should be identified and quantified. Results of this analysis determine if that material can be considered as paper and board for recycling as defined in EN 643 or any other agreed standard, including those defined in specific buyer/seller agreements.

The procedures defined in this document do not exclude the use of other methods of measurement if it has been proven that the results are in robust correlation with those obtained using this standard procedure.

This document is not specifically intended for routine monitoring of processes or quality, but the procedures described may be used to form the basis of an agreement between supplier and buyer to define the characteristics of material supplied.

1 Scope

This document describes a procedure to gravimetrically determine the physical composition of paper and board for recycling by manually separating/sorting the individual components (including any unwanted materials) and determining the relative masses.

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.

EN 17085, *Paper and board – Sampling procedures for paper and board for recycling*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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 <https://www.electropedia.org/>

3.1

composition

relative masses of objects of a sample taken from a lot of paper and board for recycling, being paper and board in any shape and products made predominantly from paper and board (including any other cellulose fibre-based packaging materials), unwanted materials and prohibited materials

3.2

gravimetric analysis

quantitative determination of a component based on its mass

Note 1 to entry: The results are typically expressed as the mass of the material being considered as a percentage of the bulk mass.

4 Principle

A sample of paper and board for recycling is manually separated into different fractions, defined by the purpose of the examination. The different fractions are then weighed and the composition is expressed as the relative mass of each fraction.

5 Equipment and auxiliaries

The analysis shall be carried out in a suitable clean, dry, well-illuminated separated and covered area of appropriate size:

- The containers for sampling shall be clean and dry.
- The bins for separating different fractions of material shall be appropriately sized, clean and dry.

Calibrated weighing equipment, with a resolution sufficient enough to weigh to an accuracy of 0,1 % of the component to be weighed, shall be used.