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Fourth edition
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Plastics — Determination of the degree of disintegration of plastic materials under defined composting conditions in a pilot-scale test

Plastiques — Détermination du degré de désintégration des matériaux plastiques dans des conditions de compostage définies lors d'un essai à échelle pilote



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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).

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This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 14, *Environmental aspects*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 249, *Plastics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 16929:2019), which has been technically revised.

The main changes compared to the previous edition are as follows:

- in [6.1.1](#), the minimum amount of biowaste has been changed to 15 kg from 30 kg due to the smaller size of composting bins;
- in [6.2.2.3](#), a separate temperature profile has been added to cover tests including also production of compost for ecotoxicity tests.

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.

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Introduction

The biological treatment of biodegradable plastic materials includes aerobic composting in well-operated, municipal or industrial biological waste treatment facilities. Determining the degree of disintegration of plastic materials in a pilot-scale plant is an important step within a test scheme to evaluate the industrial compostability of such materials.

To claim industrial compostability, a material not only has to disintegrate in a composting system, it also has to biodegrade in a composting system (as can be shown by standard test methods) and has to complete its biodegradation during the end-use of the compost. Furthermore, the compost has to meet the relevant quality criteria, including low content of regulated metals, no ecotoxicity, and no obviously distinguishable residues.