SLOVENSKI STANDARD
SIST EN ISO 14855-2:2009

01-oktober-2009

Doloļ anje konļ ne aerobne biorazgradljivosti in razkroja polimernih materialov pod nadzorovanimi pogoji kompostiranja - Metoda z analizo sproģļ enega ogljikovega dioksida - 2. del: Gravimetriļ ne metode za doloļ evanje sproģļ enega ogljikovega dioksida v laboratorijskem merilu (ISO 14855-2:2007)

Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions - Method by analysis of evolved carbon dioxide - Part 2: Gravimetric measurement of carbon dioxide evolved in a laboratory-scale test (ISO 14855-2:2007)

Bestimmung der vollständigen aeroben Bioabbaubarkeit von Kunststoff-Materialien unter den Bedingungen kontrollierter Kompostierung - Verfahren mittels Analyse des freigesetzten Kohlenstoffdioxides - Teil 2: Gravimetrische Messung des freigesetzten Kohlenstoffdioxides im Labormaßstab (ISO 14855-2:2007)

Détermination de la biodégradabilité aérobique ultime des matériaux plastiques dans des conditions contrôlées de compostage - Méthode par analyse du dioxyde de carbone libéré - Partie 2: Mesurage gravimétrique du dioxyde de carbone libéré lors d'un essai de laboratoire (ISO 14855-2:2007)

Ta slovenski standard je istoveten z: EN ISO 14855-2:2009

ICS:

13.030.99	Drugi standardi v zvezi z odpadki	Other standards related to wastes
83.080.01	Polimerni materiali na splošno	Plastics in general

SIST EN ISO 14855-2:2009 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 14855-2

June 2009

ICS 83.080.01

English Version

Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions - Method by analysis of evolved carbon dioxide - Part 2: Gravimetric measurement of carbon dioxide evolved in a laboratory-scale test (ISO 14855-2:2007, including Cor 1:2009)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

The text of ISO 14855-2:2007, including Cor 1:2009 has been prepared by Technical Committee ISO/TC 61 “Plastics” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 14855-2:2009 by Technical Committee CEN/TC 249 “Plastics” the secretariat of which is held by NBN.

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 December 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

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Endorsement notice

The text of ISO 14855-2:2007, including Cor 1:2009 has been approved by CEN as a EN ISO 14855-2:2009 without any modification.

INTERNATIONAL STANDARD

ISO 14855-2

First edition
2007-08-15

Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions — Method by analysis of evolved carbon dioxide —

Part 2: Gravimetric measurement of carbon dioxide evolved in a laboratory-scale test

Détermination de la biodégradabilité aérobique ultime des matériaux plastiques dans des conditions contrôlées de compostage — Méthode par analyse du dioxyde de carbone libéré —

Partie 2: Mesurage gravimétrique du dioxyde de carbone libéré lors d'un essai de laboratoire

Reference number
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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.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 14855-2 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 5, *Physical-chemical properties*.

ISO 14855 consists of the following parts, under the general title *Determination of the ultimate aerobic biodegradability of plastic materials under controlled composting conditions — Method by analysis of evolved carbon dioxide*:

— *Part 1: General method*

— *Part 2: Gravimetric measurement of carbon dioxide evolved in a laboratory-scale test*

Introduction

Management of plastics waste is a serious problem in the world. Plastics recovery technologies include material recovery (mechanical recycling, chemical or feedstock recycling, and biological or organic recycling) and energy recovery (heat, steam or electricity as a substitute for fossil fuels or other fuel resources). The use of biodegradable plastics is one valuable recovery option (biological or organic recycling).

Several ISO standards for determining the ultimate aerobic/anaerobic biodegradability of plastic materials have been published. In particular, ISO 14855-1 is a common test method that measures the amount of carbon dioxide evolved using methods such as continuous infrared analysis, gas chromatography or titration. Compared with ISO 14855-1, the amounts of compost inoculum and test sample used in this part of ISO 14855 are one-tenth the size. In order to ensure the activity of the compost inoculum, inert material that gives the mixture the same texture as soil is mixed into the inoculum. The carbon dioxide evolved from the test vessel is determined by absorbing it in a carbon dioxide trap and carrying out gravimetric analysis of the absorbent. The method described in this part of ISO 14855, which uses a closed system to capture the carbon dioxide evolved, can also be used to obtain valuable information, by means of isotopic-labelling studies, on the way in which the molecular structure of co-polymers degrades.