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ELECTRICAL HOUSEHOLD AND SIMILAR COOLING AND FREEZING APPLIANCES – FOOD PRESERVATION

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IEC 63169 edition 1.1 contains the first edition (2020-06) [documents 59M/123/FDIS and 59M/125/RVD] and its amendment 1 (2024-12) [documents 59M/174/FDIS and 59M/176/RVD].

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 63169 has been prepared by subcommittee 59M: Performance of electrical household and similar cooling and freezing appliances, of IEC technical committee 59: Performance of household and similar electrical appliances.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

In this document, the following print types are used:

- terms defined in Clause 3 of this document, and in Clause 3 of IEC 62552-1:2015: **Arial bold**.

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- withdrawn, or
- revised.

NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 12 months or later than 36 months from the date of publication.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

The **weight loss** test assesses some of the food care aspects of various **compartments**, **sub-compartments** and **convenience features** within a refrigerator. The test can be performed with real or artificial foods. Real foods have seasonal and regional variations, making them difficult for global use for repeatable and reproducible testing.

Research was carried out on materials, which proved that a particular non-woven material was suitable to use to replicate real food. This non-woven material is used to replicate **weight loss** from food in the **weight loss** test. Consequently, this document contains an artificial material weight loss test.

As much as possible, alignment has been made with the performance test standards IEC 62552-1 and IEC 62552-3.

This document contains a link to the SC 59M Supporting Documents that are available on the IEC website. The SC 59M Supporting Documents include the 3D printing files, referred to in Annex B. These files are intended to be used as a complement, and do not form an integral part of the document.

ELECTRICAL HOUSEHOLD AND SIMILAR COOLING AND FREEZING APPLIANCES – FOOD PRESERVATION

1 Scope

~~This document deals with a test to simulate the **weight loss** of leafy produce, given certain conditions of temperature, humidity and air movement in one or more **test zones**. The test can only be applied to spaces larger than 200 mm × 150 mm ×100 mm (L × W × H).~~

~~The aim of the test is to measure the **weight loss rate** by measuring the weight of a **test tray** prior to the test and after a given duration.~~

~~NOTE **Weight loss** is one of the considerations for shelf life of produce. Other considerations such as condensation will be addressed in future amendments.~~

This document deals with two food preservation tests. A **weight loss** test and a **condensation** test.

The **weight loss** test simulates the **weight loss** of leafy produce, given certain conditions of temperature, humidity and air movement in one or more test zones. The aim of the test is to measure the **weight loss rate** by measuring the weight of a **test tray** prior to the test and again after a given duration.

The **condensation** test simulates **condensation** produced by real food on surfaces of the **test zone**, given certain conditions of temperature, humidity and air movement in one or more **test zones**. This test assesses the **condensation** in refrigerator **test zones** by using **test trays** filled with non-woven fabric to generate **condensation**, and then evaluates the **condensation** extent and distribution.

The **weight loss** test and **condensation** test apply to **test zones** that have an average operating temperature greater than 0 °C.

Both the **weight loss** test and **condensation** test are performed in series and not in parallel on the same refrigerator.

Both the **weight loss** test and the **condensation** test can only be applied to **test zones** having all dimensions exceeding 200 mm × 150 mm × 100 mm (L × W × H).

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.

IEC 62552-1:2015, *Household refrigerating appliances – Characteristics and test methods – Part 1: General requirements*
IEC 62552-1:2015/AMD1:2020

IEC 62552-3:2015, *Household refrigerating appliances – Characteristics and test methods – Part 3: Energy consumption and volumes*

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