



SLOVENSKI STANDARD
SIST EN ISO 176:2000
01-maj-2000

Določena metoda za določitev izgube plastifikatorjev v plastiki s pomočjo aktivnega oglja (ISO 176:1976)

Plastics - Determination of loss of plasticizers - Activated carbon method (ISO 176:1976)

Kunststoffe - Bestimmung der Weichmacherabgabe - Aktivkohleverfahren (ISO 176:1976)

Matières plastiques - Détermination des pertes en plastifiants - Méthodes au charbon actif (ISO 176:1976)

iTeh STANDARD PREVIEW
(standards.itih.ai)

SIST EN ISO 176:2000

Ta slovenski standard je istoveten z: **EN ISO 176:1999**

<https://standards.itih.ai/catalog/standards/sist/306bfe92-cad2-4178-8f5d-0b2ca00de28/sist-en-iso-176-2000>

ICS:

| | | |
|-----------|--------------------------------|---------------------|
| 83.080.01 | Polimerni materiali na splošno | Plastics in general |
|-----------|--------------------------------|---------------------|

SIST EN ISO 176:2000

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 176:2000

<https://standards.iteh.ai/catalog/standards/sist/306bfe92-cad2-4178-8f5d-0f926ad6de28/sist-en-iso-176-2000>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 176

June 1999

ICS 83.080.00

English version

Plastics - Determination of loss of plasticizers - Activated carbon
method (ISO 176:1976)

Matières plastiques - Détermination des pertes en
plastifiants - Méthodes au charbon actif (ISO 176:1976)

Kunststoffe - Bestimmung der Weichmacherabgabe -
Aktivkohleverfahren (ISO 176:1976)

This European Standard was approved by CEN on 6 May 1999.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

[SIST EN ISO 176:2000](https://standards.iteh.ai/catalog/standards/sist/306bfe92-cad2-4178-8f5d-0f926ad6de28/sist-en-iso-176-2000)

<https://standards.iteh.ai/catalog/standards/sist/306bfe92-cad2-4178-8f5d-0f926ad6de28/sist-en-iso-176-2000>



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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of the International Standard from Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

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 1999, and conflicting national standards shall be withdrawn at the latest by december 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

iTeh STANDARD PREVIEW (standards.iteh.ai)

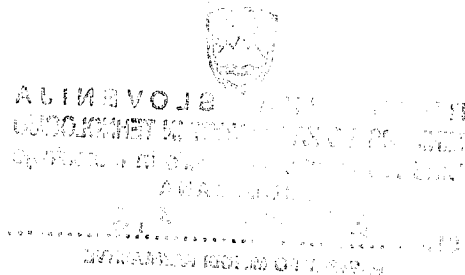
Endorsement notice

The text of the International Standard ISO 176:1976 has been approved by CEN as a European Standard without any modification.

[SIST EN ISO 176:2000](https://standards.iteh.ai/catalog/standards/sist/306bfe92-cad2-4178-8f5d-100000000000)

<https://standards.iteh.ai/catalog/standards/sist/306bfe92-cad2-4178-8f5d-100000000000>

NOTE: Normative references to International Standards are listed in annex ZA (normative).



Annex ZA (normative)**Normative references to international publications
with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

| <u>Publication</u> | <u>Year</u> | <u>Title</u> | <u>EN</u> | <u>Year</u> |
|--------------------|-------------|--|------------|-------------|
| ISO 291 | 1997 | Plastics - Standard atmospheres for conditioning and testing | EN ISO 291 | 1997 |

(standards.iteh.ai)

SIST EN ISO 176:2000

<https://standards.iteh.ai/catalog/standards/sist/306bfe92-cad2-4178-8f5d-0f926ad6de28/sist-en-iso-176-2000>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 176:2000

<https://standards.iteh.ai/catalog/standards/sist/306bfe92-cad2-4178-8f5d-0f926ad6de28/sist-en-iso-176-2000>

INTERNATIONAL STANDARD**176**

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Plastics — Determination of loss of plasticizers — Activated carbon method

Matières plastiques — Détermination des pertes en plastifiants — Méthode au charbon actif

First edition — 1976-07-15

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 176:2000

<https://standards.iteh.ai/catalog/standards/sist/306bfe92-cad2-4178-8f5d-0f926ad6de28/sist-en-iso-176-2000>

UDC 678.5/.8 : 543.813

Ref. No. ISO 176-1976 (E)

Descriptors : plastics, tests, measurement, losses, plasticizers.

Price based on 2 pages

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 61 has reviewed ISO Recommendation R 176 and found it technically suitable for transformation. International Standard ISO 176 therefore replaces ISO Recommendation R 176-1961 to which it is technically identical.

ISO Recommendation R 176 was approved by the Member Bodies of the following countries :

| | | |
|----------------|-------------|----------------|
| Australia | Israel | Sweden |
| Austria | Italy | Switzerland |
| Belgium | Japan | Turkey |
| Bulgaria | Netherlands | United Kingdom |
| Czechoslovakia | Poland | U.S.A. |
| Germany | Portugal | U.S.S.R. |
| Hungary | Romania | |
| India | Spain | |

The Member Body of the following country expressed disapproval of the Recommendation on technical grounds :

France

The Member Bodies of the following countries disapproved the transformation of ISO/R 176 into an International Standard :

France
Netherlands

Plastics – Determination of loss of plasticizers – Activated carbon method

1 SCOPE AND FIELD OF APPLICATION

1.1 This International Standard specifies two empirical methods for the quantitative determination of the loss of mass from a plastic material under defined conditions of time and temperature, in the presence of activated carbon.

1.2 These methods are used, in particular, for the quantitative determination of the loss on heating of plasticizers from plasticized plastic materials in which case it is generally assumed that no significant amounts of other volatile materials are present.

1.3 These are empirical test methods, only suitable for a rather rapid comparison of the losses of plasticizers or, in general, of volatile compounds, from different plastics.

1.4 They may also be employed for the comparison of different types of plasticizers; in this case standard compounds should be prepared, on the basis of a well characterized resin, with known ratios of resin to plasticizer.

NOTE – These comparisons are possible only if the test specimens are of the same thickness. If it can be assumed that, after reconditioning, the moisture content of the exposed specimens is equal to that obtaining after the original conditioning, the effect of moisture may be ignored.

1.5 Two methods are specified :

Method A : the test specimens are in direct contact with the carbon; this method is particularly useful for materials which have to be tested at relatively low temperatures because they flow at higher temperatures.

Method B : the test specimens are placed in wire cages which prevent direct contact between the test specimens and the carbon.

2 REFERENCES

ISO 291, *Plastics – Standard atmospheres for conditioning and testing.*

ISO 293, *Plastics – Compression moulding test specimens of thermoplastic materials.*

3 APPARATUS AND MATERIALS

3.1 **Analytical balance** accurate to 0,001 g.

3.2 **Micrometer** accurate to 0,01 mm.

3.3 **Thermostatical bath or oven** capable of maintaining the temperature to within ± 1 °C of the test temperature, in the range of 50 to 150 °C.

3.4 **Containers** : Metal cans, of cylindrical form, about 100 mm in diameter and 120 mm in height provided with non-air-tight cover; a lid with a small vent hole of 3 mm diameter may be suitable.

3.5 **Cylindrical metal cages**, constructed from bronze gauze having apertures of approximately 500 μ m, with a diameter of 60 mm and a height of 6 mm, formed by soldering a strip of the gauze at right angles to the periphery of a disk of the gauze; a similar but slightly larger cylinder acts as a lid.

3.6 **Activated carbon** with a grain size of about 4 to 6 mm, free from powder. The carbon shall be of a well determined type and grade, in order to obtain concordant results.¹⁾

Before use, the carbon should be sieved and dried to constant mass at 70 °C, preferably under vacuum, and then stored in an air-tight container. Use fresh material for each test.

4 TEST SPECIMENS

4.1 The test specimens shall be in the form of disks 50 \pm 1 mm in diameter and 1 \pm 0,1 mm in thickness cut from compression moulded sheet of the appropriate thickness. Attention is drawn to the provisions of ISO 293.

4.2 If the test is carried out for the determination of the characteristics of specific plasticizers, standard compounds of a given composition, as agreed between vendor and purchaser, shall be used.

1) Suitable brands of activated carbon are available commercially. Detailed information may be obtained from the Secretariat of ISO/TC 61 or from the ISO Central Secretariat.