



**International
Standard**

ISO 17223

**Plastics — Determination of
yellowness index and change in
yellowness index**

*Plastiques — Détermination de l'indice de jaunissement et du
changement de l'indice de jaunissement*

**Second edition
2026-04**

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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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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

This second edition cancels and replaces the first edition (ISO 17223:2014), which has been technically revised.

The main changes are as follows:

- new terms ([3.3](#) and [3.4](#)) have been added;
- measurement environment conditions have been adapted (see [4.3](#)), and conditioning of test specimens (see [4.2](#)) has been added.

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.

Plastics — Determination of yellowness index and change in yellowness index

1 Scope

This document specifies an instrumental method for determining the yellowness index and change in yellowness index on clear, translucent, or opaque plastics.

NOTE Change in yellowness index is often used to evaluate the effect of environment, e.g. heat, UV exposure, etc., on colour stability.

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.

ISO 291, *Plastics — Standard atmospheres for conditioning and testing*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology 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 yellowness index

Y_I
deviation in chroma from colourless or whiteness toward yellow

3.2 change of yellowness index

ΔY_I
difference between yellowness index of specimen before additional test and yellowness index of specimen after additional test

Note 1 to entry: For example, before and after exposure to specified conditions.

3.3 integrating sphere

optical component consisting of a hollow spherical cavity with an inner surface that is covered with a diffuse white reflective coating

3.4 optical geometry

method and angle of incidence of light on the test piece, the method and angle of incidence of light on the light receiver, and combinations of these.

Note 1 to entry: There are two methods of incidence: parallel light incidence and diffuse light incidence.