Analytical colorimetry - Part 3: Special indices (ISO 18314-3:2022)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 18314-3:2022 sisaldab Euroopa standardi EN ISO 18314-3:2022 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 18314-3:2022 consists of the English text of the European standard EN ISO 18314-3:2022.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 30.11.2022.	Date of Availability of the European standard is 30.11.2022.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 87.060.10

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 18314-3

November 2022

ICS 87.060.10

Supersedes EN ISO 18314-3:2018

English Version

Analytical colorimetry - Part 3: Special indices (ISO 18314-3:2022)

Analyse colorimétrique - Partie 3: Indices spéciaux (ISO 18314-3:2022)

Analytische Farbmessung - Teil 3: Spezielle Indices (ISO 18314-3:2022)

This European Standard was approved by CEN on 22 November 2022.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN ISO 18314-3:2022 E

European foreword

This document (EN ISO 18314-3:2022) has been prepared by Technical Committee ISO/TC 256 "Pigments, dyestuffs and extenders" in collaboration with Technical Committee CEN/TC 298 “Pigments and extenders” the secretariat of which is held by DIN.

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 May 2023, and conflicting national standards shall be withdrawn at the latest by May 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 18314-3:2018.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 18314-3:2022 has been approved by CEN as EN ISO 18314-3:2022 without any modification.

Contents

Page

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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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 256, *Pigments, dyestuffs and extenders*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 298, *Pigments and extenders,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 18314-3:2015), which has been technically revised.

The main changes are as follows:

— former subclause 5.4, Relative black value, M_{yr} and former subclause 6.4, Relative grey value, G_{yr} have been deleted;

— former Clause 2, Symbols and abbreviated terms, has been updated and renumbered as Clause 4;

— Clause 2, Normative references, has been added;

— Clause 3, Terms and definitions, has been added;

— in Clause 5, values for *x* and *y* have been added;

— the text has been editorially revised and the normative references have been updated.

A list of all parts in the ISO 18314 series can be found on the ISO website.

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.

Analytical colorimetry —

Part 3:
Special indices

1 Scope

This document specifies different methods of calculating special indices, which are generally used to describe lightness respectively jetness of samples including chroma or hue within one colour-coordinate.

This document is applicable to tristimulus values and chromaticity coordinates calculated using colour-matching functions of the standard colorimetric system of the CIE 1931 (2°) or CIE 1964 (10°). It is used for the specification of colour stimuli perceived as belonging to a reflecting or transmitting object where a one-dimensional value is required.

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 18451-1, *Pigments, dyestuffs and extenders — Terminology — Part 1: General terms*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 18451-1 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/

4 Symbols and abbreviated terms

a, b	absolute parameters
CIE	International Commission on Illumination
FI	flop-index
G_C	hue dependent greyness value
G_Y	hue independent greyness value
$L^*(\varepsilon)$	CIELAB 1976 lightness value at the aspecular angle ε
M_C	hue dependent blackness value
M_Y	hue independent blackness value