Analytical colorimetry - Part 2: Saunderson correction, solutions of the Kubelka-Munk equation, tinting strength, hiding power (ISO 18314-2:2015)

EESTI STANDARDI EESSÕNA   NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 18314-2:2018 sisaldab Euroopa standardi EN ISO 18314-2:2018 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 18314-2:2018 consists of the English text of the European standard EN ISO 18314-2:2018.
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.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 03.10.2018.	Date of Availability of the European standard is 03.10.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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

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EUROPEAN STANDARD

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English Version

Analytical colorimetry - Part 2: Saunderson correction, solutions of the Kubelka-Munk equation, tinting strength, hiding power (ISO 18314-2:2015)

Analyse colorimétrique - Partie 2: Correction de
Saunderson, solutions de l'équation de Kubelka-Munk,
force colorante, pouvoir couvrant (ISO 18314-2:2015)

Analytische Farbmessung - Teil 2: Saunderson-
Korrektur, Lösungen der Kubelka-Munk-Gleichung,
Farbstärke, Deckvermögen (ISO 18314-2:2015)

This European Standard was approved by CEN on 19 February 2018.

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

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European foreword

The text of ISO 18314-2:2015 has been prepared by Technical Committee 256 "Pigments, dyestuffs and extenders"of the International Organization for Standardization (ISO) and has been taken over as EN ISO 18314-2:2018 by 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of an identical text or by endorsement, at the latest by April 2019, and conflicting national standards shall be withdrawn at the latest by April 2019.

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.

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Endorsement notice

The text of ISO 18314-2:2015 has been approved by CEN as EN ISO 18314-2:2018 without any modification.

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Foreword

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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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 256, *Pigments, dyestuffs and fillers*.

ISO 18314 consists of the following parts, under the general title *Analytical colorimetry*:

— *Part 1: Practical colour measurement*

— *Part 2: Saunderson correction, solutions of the Kubelka-Munk equation, tinting strength, hiding power*

— *Part 3: Special indices*

Analytical colorimetry —

Part 2:
Saunderson correction, solutions of the Kubelka-Munk equation, tinting strength, hiding power

1 Scope

This part of ISO 18314 specifies the Saunderson correction for different measurement geometries and the solutions of the Kubelka-Munk equation for hiding and transparent layers. It also specifies methods for the calculations of the tinting strength including the residual colour difference with different criteria and of the hiding power.

The procedures for preparing the samples for these measurements are not part of this part of ISO 18314. They are agreed between the contracting parties or are described in other national or International Standards.

2 Terms, definitions, symbols, and abbreviated terms

2.1 Terms and definitions

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

2.1.1
tinting strength
measure of the ability of a colorant, based on its absorption, to impart colour to other materials

2.1.2
relative tinting strength
C_{rel}
percentage ratio of those mass fractions of the coloured pigment reference and test samples (m_r and m_t, respectively) that cause the particular tinting strength criterion used to have identical values for the reference and test samples

2.1.3
tinting strength criterion
parameter that describes the colouring effect of a colorant, based on its absorption

Note 1 to entry: The tinting strength criteria used in this part of ISO 18314 are the following:

— value of the Kubelka-Munk function at the absorption maximum;

— weighted sum of the Kubelka-Munk function values;

— tristimulus value Y;

— the smallest of the tristimulus values X, Y, Z;

— shade depth parameter B.

Examples of other tinting strength parameters not used in this part of ISO 18314 are the following:

— unweighted sum of the Kubelka-Munk function values;

— chromaticity given by the three colour coordinates (L*, a*, b*);