
Analizna kolorimetrija - 4. del: Metamerični indeks parov vzorcev pri spremembi vrste svetila (ISO 18314-4:2020)

Analytical colorimetry - Part 4: Metamerism index for pairs of samples for change of illuminant (ISO 18314-4:2020)

Analytische Farbmessung - Teil 4: Metamerie-Index von Probenpaaren bei Lichtartwechsel (ISO 18314-4:2020)

Analyse colorimétrique - Partie 4: Indice de métamérisme de paires d'échantillon pour changement d'illuminant (ISO 18314-4:2020)

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Analytical colorimetry - Part 4: Metamerism index for pairs of samples for change of illuminant (ISO 18314-4:2020)

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European foreword

The text of ISO 18314-4:2020 has been prepared by Technical Committee ISO/TC 256 "Pigments, dyestuffs and extenders" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 18314-4:2021 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of an identical text or by endorsement, at the latest by December 2021, and conflicting national standards shall be withdrawn at the latest by December 2021.

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Analytical colorimetry —

Part 4:

**Metamerism index for pairs of
samples for change of illuminant**

Analyse colorimétrique —

*Partie 4: Indice de métamérisme de paires d'échantillon pour
changement d'illuminant*
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Foreword

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This document was prepared by Technical Committee ISO/TC 256, *Pigments, dyestuff and extenders*.

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.

Introduction

For the phenomenon of metamerism of pairs of samples, three different kinds are distinguished:

- a) Illuminant metamerism occurs if both of the object colours of a pair of samples are perceived as being the same only under a specific illuminant (e.g. under illuminant D65), while they differ under a different illuminant (e.g. illuminant A).
- b) Observer metamerism occurs if the object colours of a pair of samples are perceived as being the same by one observer, while a different observer perceives a colour difference under the same illuminant and the same reference conditions.

NOTE 1 The observer metamerism is caused by differences between the distributions of spectral colour matching functions of different observers.

- c) Field-size metamerism occurs if both of the object colours of a pair of samples are perceived as being the same on the retina for a size of an observation field (e.g. defined by the 2° standard observer), while they differ for a different observation field on the retina (e.g. 10°).

NOTE 2 The reason for field-size metamerism is based on the existent colour matching functions of an observer during an observation situation. The colour matching functions change with the size of the observation field on the retina. Such change of the observation field can also occur if, for example, the pair of samples is examined from different distances.

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