

STN	Kozmetické výrobky Skúšobné metódy na stanovenie ochrany pred slniečným žiarením Stanovenie ochranného faktora (SPF) in vivo (ISO 24444: 2019)	STN EN ISO 24444 68 1801
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Cosmetics - Sun protection test methods - In vivo determination of the sun protection factor (SPF) (ISO 24444:2019)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

**Cosmetics - Sun protection test methods - In vivo
determination of the sun protection factor (SPF) (ISO
24444:2019)**

Cosmétiques - Méthodes d'essai de protection solaire -
Détermination in vivo du facteur de protection solaire
(FPS) (ISO 24444:2019)

Kosmetik - Untersuchungsverfahren für
Sonnenschutzmittel - In-vivo-Bestimmung des
Sonnenschutzfaktors (SSF) (ISO 24444:2019)

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EN ISO 24444:2020 (E)

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European foreword

This document (EN ISO 24444:2020) has been prepared by Technical Committee ISO/TC 217 "Cosmetics" in collaboration with Technical Committee CEN/TC 392 "Cosmetics" the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by July 2020, and conflicting national standards shall be withdrawn at the latest by July 2020.

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STANDARD**

**ISO
24444**

Second edition
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**Cosmetics — Sun protection test
methods — In vivo determination of
the sun protection factor (SPF)**

*Cosmétiques — Méthodes d'essai de protection solaire —
Détermination in vivo du facteur de protection solaire (FPS)*



Reference number
ISO 24444:2019(E)

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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 217, *Cosmetics*.

This second edition cancels and replaces the first edition (ISO 24444:2010), which has been technically revised.

The main changes compared to the previous edition are as follows.

- The definition of the minimal erythema response (MED) criteria has been revised.
- The choice of eligible test subjects is now based solely on individual typology angle (ITA°) with a requirement for the average ITA° for the test panel to be within the range 41° to 55°, with a minimum of three subjects within two of the three ITA° ranges.
- The ITA° is used to define the range of unprotected MED doses for the provisional or the test day unprotected MED determination (if no provisional MEDu determination is made).
- Three new reference standard sunscreens have been validated and added to the method to validate SPF test panels for products with SPF equal to 25 or higher (P5, P6 and P8).
- New test methods are provided to determine the uniformity of the beam of both large and small beam size solar simulators. A requirement for uniformity greater than or equal to 90 % has been added.
- Sunscreen application procedures have been described in greater detail.
- An informative [Annex F](#) has been added with photographic examples of erythema responses with guidelines for grading.
- The reporting tables in [Annex G](#) and the requirements in [Clause 11](#) have modified to provide more complete information on the results of the testing.
- The bibliography has been updated.

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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

The level of sun protection provided by sunscreen products has traditionally been estimated using the sun protection factor or SPF test, which uses the erythral response of the skin to ultraviolet (UV) radiation. The SPF is a ratio calculated from the energies required to induce a minimum erythral response with and without sunscreen product applied to the skin of human test subjects. It uses ultraviolet radiation usually from an artificial source.

Different standard methods are available and described in ISO/TR 26369^{[1]-[3]}.

Since the publication of the first version of this document, harmonization has been achieved in many member countries. The objective of this updated version is to further improve reproducibility between test sites, so as to obtain the same SPF value.

Cosmetics — Sun protection test methods — In vivo determination of the sun protection factor (SPF)

1 Scope

This document specifies a method for the in vivo determination of the sun protection factor (SPF) of sunscreen products. It is applicable to products that contain any component able to absorb, reflect or scatter ultraviolet (UV) rays and which are intended to be placed in contact with human skin.

This document provides a basis for the evaluation of sunscreen products for the protection of human skin against erythema induced by solar ultraviolet rays.

2 Normative references

There are no normative references in this document.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN