



ISO TC217 working group 7, "Sun Protection Test Methods"





What's new?

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Introduction:

ISO is an independent, non-governmental international organization with a membership of 167 national standards bodies.

With more than 24000 International standards, ISO covering today almost all aspects of technology and manufacturing. Across its 167 members representing ISO in their country, it brings together experts to share knowledge and develop voluntary, consensus-based, market-relevant International Standards that support innovation and provide solutions to global challenges.

The ISO TC217 working group 7, "Sun Protection Test Methods", is one of the 802 technical committees and subcommittees. It was set up in 2006 and since then a lot of standardisation work has been done,

What is the current situation?

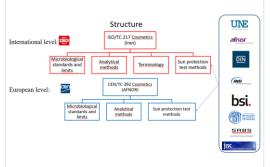
Discussion:

41 countries in blue have an active role and therefore can vote during the standards alidation process, the 31 countries in yellow are observers, i.e. they receive information but cannot vote.

PARTICIPATION



To participate in the standardization process, it is generally necessary to be an active mber of the national standardization agency.



Working group 7 has done remarkable work over the past 15 years by producing 5 standards for repeatable and reproducible testing of sun protection products.

First, the 2 historical methods, in vivo SPF and UVA were published by ISO in 2010 and 2011 respectively, followed one year later by the in vitro UVA methods In 2016, a systematic review of the *in vivo* SPF was launched, followed in 2017 by the *in vivo* and *in vitro* UVA methods.

At the same time (2016), the validation process of in vivo water resistance began. Today, all these methods are up to date and published.



However, there is still the in vitro SPF method to be published as recommended by the European Commission.

Thanks to great efforts, in particular from Cosmetics Europe for the SPF in vitro double plate method and from a group of researchers who have developed another method based on diffuse reflection this might be overcome. ISO is currently studying these 2 alternative methods to 24444 in order to publish them probably in 2025-

Only the in vitro water resistance method remains to be able to offer a complete alternative to the currently validated in vivo measurements.

Conclusions:

It seems obvious nowadays that test methods must be harmonized, repeatable and reproducible, cosmetics cannot be an exception. The enormous work initiated in 2006 by ISO TC217 now allows players in the cosmetics industry to be able to use standardized in vivo methods for all commonly used protection factors and for most in vitro methods.

There is still work to be done in order to standardize the in vitro SPF method, but the future looks promising and it is hoped that the two methods currently in progress in the ISO process will be published in 2025-2026.

Acknowledgements:

All the WG7 experts

References:

- 1. https://www.iso.org/fr/committee/54974.html.
- 2. https://www.iso.org/fr/standard/72250.html. 3. https://www.iso.org/fr/standard/46522.html.
- 4.https://www.iso.org/fr/standard/46521.html
- 5.https://www.iso.org/fr/standard/61437.html 6.https://www.iso.org/fr/standard/63659.html
- 2006/647/FC 7 European Commission Recommendation Available http://eur-lex.e uropa.eu/legal-content/EN/TXT/?uri=CELEX %3A32006H0647
- 8.M. Pissavini, C. Tricaud and Al. "Validation of an In Vitro Sun Protection Eactor (SPF) method in blinded ring-testing." Int. Journal of Cosm. Sci., Vol 40, Issue 3, 2018
- 9.Pissavini and Al."Validation of a new in vitro Sun Protection Factor method to include a wide range of sunscreen product emulsion types" Int. Journal of Cosm. Sci., Vol 42, Issue 5,2020
- 10.Eduardo Ruvolo, and Al."Multi-laboratory study of hybrid diffuse reflectance spectroscopy to assess sunscreen SPF and UVA-PFs" Photoderm Photoimmun Photomed, June 2021