12-30-2021

Practical guide to tinted sunscreens

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Recommended Citation
Torres AE, Awosika O, Maghfour J, Taylor S, and Lim HW. Practical Guide to Tinted Sunscreens. J Am Acad Dermatol 2021.

Research letter

Practical guide to tinted sunscreens

To the Editor: Visible light (VL) is known to induce erythema and pigmentation, which has prompted investigations into effective photoprotection against this waveband.[1] In addition to UV filters, tinted sunscreens contain iron oxides, and in some, pigmentary titanium dioxide.[2] It should be noted that while pigmentary titanium dioxide is listed under "active ingredients" on the label, iron oxides are considered "inactive ingredients" and are listed as such. These ingredients have the ability to scatter and reflect VL photons, imparting VL photoprotection.[2,3] By using different combinations of red, yellow, and black iron oxides, together with pigmentary (white) titanium dioxide, a color blend can be achieved that matches the constitutive skin tone of the user. This property is important because products need to be opaque upon topical application in order to protect against VL.[2] Given the relative novelty of tinted sunscreens, it is important for clinicians to be aware of how to advise patients regarding their selection and use. Here, we outline a practical guide for recommending these sunscreens (Table I).

To confer sufficient protection against UV and VL, consumers should use broad-spectrum tinted sunscreen with a sun protection factor of at least 30 with iron oxides as ingredients.[2] Unlike "sun protection factor" and "broad spectrum" labeling, there are no specific guidelines on tinted sunscreens. Hence, having this information on hand can help consumers navigate the tinted sunscreen selection process. A comprehensive list of tinted sunscreens is shown in Supplementary Table I, available via Mendeley at https://doi.org/10.17632/dtb4y9b684.3.

An important step is to select the correct shade, which will depend on the skin tone and undertone of the user. Skin tone refers to an individual's skin surface color, which ranges from fair, light, medium, to deep. Undertone is the hue underneath the surface of the skin that affects the overall skin appearance. Undertones range from warm (yellow or golden hints), cool (pink or blue hints), or neutral (same as the constitutive skin color). Unlike skin tones, undertones do not change with exposure to the sun. Skin tone and undertone determine one's overall hue, and both must be considered to find a perfect color match. While some tinted sunscreens might be marketed as a "universal" shade, they might not be ideal for users with very fair or deep skin tones. Additionally, synthetic mica is used to enhance the appearance of radiance and provide an optical blurring effect to diminish color mismatch. Ultimately, reference to brands offering various shades and acceptance by users across skin tones is helpful in making recommendations for the perfect color match for sunscreen users. While tinted sunscreens can stain material (clothing, towels, facial masks), the stain can be removed with regular laundry detergents.

Lastly, the application of sunscreens should be reviewed by clinicians. For optimal photoprotection, sunscreen should be applied 15 to 30 minutes before sun exposure with reapplication every 2 hours when outdoors. After washing the face, medications (if appropriate) should be applied, followed by moisturizer and/or sunscreen; make-up should be applied, if desired, as the last step.[4] Sunscreen should be dotted to the cheeks, nose, forehead, and chin, followed by massaging it gently into the skin for even coverage, masking skin discoloration, and proper blending with the skin's hue.

Table I. Summary of key points for recommending tinted sunscreens

Key points for recommending tinted sunscreen
Consumers should choose a tinted sunscreen that contains iron oxides, is labeled as broad spectrum, and has SPF of at least 30.
Look for iron oxides under "inactive ingredients."
The ability of a tinted sunscreen to protect against visible light relies on the presence of iron oxides, and in some products, pigmentary titanium dioxide.
Consider one's skin tone and undertone when choosing the correct shade of tinted sunscreen.
For optimal protection, sunscreen should be applied 15 to 30 minutes before sun exposure.
Sunscreen should be applied as the last step in skin care, before make-up (if desired).

SPF, Sun protection factor.

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Funding sources: None.

IRB approval status: Exempt.

Key words: guidelines; iron oxides; photoprotection; sunscreen; tinted sunscreen; visible light.

Reprints not available from the authors.

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Conflicts of interest

Dr Maghfour is a subinvestigator for Incyte, Recell, and Immune Tolerance Network. He is an editorial board member of the Journal of Dermatology Nurses Association (JDNA) and Journal of Medical Internet Research Dermatology. Dr Taylor is an investigator for Biorez Inc, Concert Pharmaceuticals, Croma-Pharma GmbH Austria, Eli Lilly, Immune Tolerance Network, and Pfizer, is a consultant for Arcutis, Beiersdorf, and Evolus, a member of the advisory board for AbbVie, CannTec, Galderma, GloGetter, L'Oreal, LuminDX, Medscape/WebMD, Neostrata, and Scientis US, a member of the editorial board for Practical Dermatology, Cutis, and Archives in Dermatologic Research, and has participated as a speaker in general educational sessions for Beiersdorf, LivDerm, L'Oreal, and Medscape/WebMD. Dr Lim is an investigator for Incyte, L'Oreal, Pfizer, and PCORI, has served as consultant for Pierre Fabre, ISDIN, Ferndale, La Roche-Posay, Cantabria, and Beiersdorf, and has participated as a speaker in general educational sessions for La Roche-Posay and Cantabria Labs. Drs Torres and Awosika have no conflicts of interest to declare.

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