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HPC SUN CARE Volume: Number: 3 Term: 2011



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FOCUS ON SUN CARE

COVER STORY - Positive solutions for an ever-changing sun care industry

Authors: **HALLSTAR (USA)**

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Indoor tanning - Tanning dependence and other health risks

Authors: **HECKMAN C.J. (Cancer Prevention and Control Program, USA)**

Since industrialization of the Western workforce, tanned skin has been perceived increasingly as attractive and fashionable for naturally light-skinned individuals. In addition to causing tanning, photo-aging, and other health effects, ultraviolet radiation (UV) is a known carcinogen. Despite increased awareness of UV risks, tanning has become increasingly popular in several Western countries including the USA. An additional risk of UV is tanning dependence or addiction. Several studies have provided evidence for the phenomenon of tanning dependence, with plausible biologic underpinnings primarily related to the opioid system. Tanning dependent individuals may tan frequently and put themselves at even great risk for skin cancer. This review will briefly outline the risks of indoor tanning including tanning dependence.

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Solar UV radiation in schools: issues and risks for children and adolescents

Authors: **DOWNS N. (Univ of Southern Queensland, AUSTRALIA)**

Teachers and students attending schools potentially face a harsh environmental solar exposure risk on a daily basis. Solar ultraviolet radiation is a known carcinogen, yet the realities of exposure to the sun are not often detected until years or even decades later, until the development of a skin cancer or cancers are noticed. Each new school year brings with it the potential for summer sunburn. Many individuals, teachers and school children included, would be aware of the need to cover up, use hats, apply sunscreen and seek shade where possible while outdoors, but are these strategies really enough to protect school children from the harmful effects of exposure to sunlight in the long run? The importance of these strategies are presented and the role schools can play in instilling lifelong habits that will minimise the future disease risks related to childhood exposures to sunlight are discussed.

[read complete article](#)**Seasonal variation of facial UV exposures in the shade****Authors: TURNBULL D.J. (Univ of Southern Queensland, AUSTRALIA)**

The personal distribution of solar erythemal UV exposures to the face, head and neck was investigated for a public shade structure in the seasons of winter and summer. Calculated personal erythemal UV exposures in the shade during winter ranged from 0.3 SED per day for the top of the head to 1.8 SED per day for the chin. In comparison, erythemal UV exposures in the shade during summer ranged from 0.3 SED per day for the top of the head to 4.6 SED per day for the chin. Broadband global and diffuse erythemal UV was also measured on a horizontal plane in the open at five minute intervals during the winter and summer period. Cumulative daily global and diffuse erythemal UV exposures for winter were 22 ± 3.8 SED and 14 ± 3.0 SED, respectively. While, cumulative daily exposures for summer were 55 ± 13.6 SED and 42 ± 3.1 SED for global and diffuse erythemal UV respectively. From this research it can be concluded that anyone seeking shade under this common public shade structure for an extended period of time requires additional protection measures against damaging UV radiation

[read complete article](#)**Protection against photoageing using inorganic only systems with enhanced UVA protection****Authors: STANILAND P., CHAHAL S., TOOLEY I., SAYER R. (Croda, UK)**

Global focus within sun care markets has been placed on the importance of protection against UVA radiation. UVA damage is the primary cause of premature skin ageing and pigment darkening, and is recognised by dermatologists as contributing to the development of skin cancers. The article explores the benefits of developing anti-ageing formulations using a range of Titanium Dioxide (TiO₂) based dispersions which offer enhanced UVA protection over existing ultrafine grades of TiO₂. Formulations containing these dispersions as the only active ingredient achieve a UVA Protection Factor which is 1/3 of the labelled Sun Protection Factor value and reduce the number of UV induced free radicals formed on the skin

[read complete article](#)**Accurate, Fast and quite easy way of sunscreen testing. Compliant with in vitro global standard: COLIPA, BOOTS, FDA & ISO****Authors: LUTZ D., CARIOU N. (Helioscreen Labs, FRANCE)**

In this article, the authors describe the main methods used for UV protection, evaluation and the most reliable instrument and substrate for such testing. They focus on the parameters which could affect the results and consequently the correlation with in vivo existing methods

[read complete article](#)**Issues at the margins. Validation of Sunscreen in vitro UVA Test Measurement For FDA, COLIPA and ISO****Authors: STATON J., DENNYSON C. (Dermatest Pty, AUSTRALIA)**

In vitro methods, such as that published by COLIPA in the E.U., designed for the determination of UVA performance of sunscreen products, have now been implemented in most markets where this product category is regulated. ISO 24443, a collaborative development targeted at harmonization, is soon to be published and FDA has recently released a method for the USA. We provide an explanation of the test parameters and compare the validation requirements of these thin film methods

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