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ACTION SPECTRUM FOR THE PRODUCTION OF PREVITAMIN D₃ IN HUMAN SKIN

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Ultraviolet radiation has been shown to have the beneficial effect of contributing to the production of vitamin D₃ (hereafter referred to as "vitamin D") in humans. This was first observed in the 1800's, when sunlight exposure was correlated to the prevention of rickets. These effects were duplicated with artificial sources, and subsequent studies isolated the spectral region that was responsible for this effect. The purpose of this report is to discuss these studies of the effectiveness of optical radiation on the production of vitamin D in human skin, and to develop a standardized action spectrum for vitamin D synthesis in human skin. Implications for determining exposures that would be needed for an individual to meet the recommended daily intake for vitamin D are also discussed.

The report is written in English, with a short summary in French and German. It consists of 16 pages with 5 figures and 1 table, and is readily available at the CIE National Committees and via the website of the Central Bureau of the CIE (www.cie.co.at).

The price of this publication is EUR 38,-- (Members of the CIE National Committees get 50% discount).