

MEASUREMENT OF ACTION SPECTRA IN CASE OF NON-LINEARITY BETWEEN RADIANT EXPOSURE AND PHOTOCHEMICAL REACTION

EXAMPLE: PRODUCTION OF FREE RADICALS IN HUMAN SKIN WHEN EXPOSED TO UV AND VIS RADIATION

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Abstract

As with the determination and application of action spectra for photochemical reactions in organic materials, it is assumed in most cases that there is a linear relationship between the radiant exposure/dose and the photochemical reaction. This is not true in many cases. The contribution describes on the example of the production of free radicals in the human skin following UV and VIS radiation how, at non-linear dose-reaction-relation, action spectra are determined and used in practice.