LED-BASED DEVICE WITH AUTOMATED DOSE CONTROL FOR PHOTODIAGNOSIS OF SKIN DISEASES

Description:

The present invention describes a lighting device with automated light emission dose control and which is made up of light emitting diodes. Said automated dose control will allow it to be used to carry out the protocols required for the diagnosis of skin diseases related to sun exposure. The basis of the device is to use a series of LED diodes, placed at a certain distance and with independent control of the light power and the illumination time, and therefore of the dose of light emitted by each LED. The use of said device with automated control of light dose emission allows the performance of photodiagnostic protocols to evaluate the minimum radiation dose to generate a photodermatosis. In the case of selecting UVB LEDs, the Minimum Erythematic Dose will be analyzed, in the case of UVA LEDs it will be used to carry out the Minimum Dose protocol for Abnormal Photosensitive Reaction to UVA and in case of selecting visible LEDs, the device for the realization of Minimum Dose of Urticaria Generation, for the diagnosis of the spectrum of generation of anomalous response in patients who have to be diagnosed with solar urticaria.
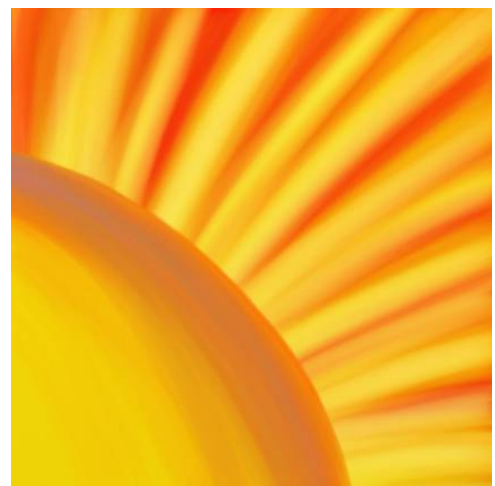
Keywords:

Led, Photodiagnosis, Photodermatosis, Photobiology, Medical Equipment, Skin Diseases

Sectors:

Health

Areas:

Health Sciences, Equipment, Diagnosis, Instrumentation

Advantages:

-There is no device on the market for the diagnosis of skin diseases related to solar or artificial exposure based on LEDs. -Equipment versatile, small and easy to use, cheap technology, easily controllable in intensity and with the possibility of selecting LEDs of specific colors compared to other devices with less technical versatility, large and difficult to calibrate as this one. - Possibility of spectral selection in specific spectral bands compared to those that exist with polychromatic light sources, where the results are difficult to evaluate. -There are specific UVB, UVA, white and different colored LEDs, and even type I IR that can be used to refine the diagnosis of the determined pathology. -With high intensity LEDs, diagnostics are achieved in short periods of time.

Uses and Applications:

-Use in the Health Sciences sector. Medical equipment for photodiagnosis of skin diseases. -Use in other types of sectors where it is necessary to carry out controlled light exposure series in a small exposure area.

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