**MD.125.**

**Title** **(UV) radiation detector**

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**Description EN**

The UV region of the optical spectrum is composed of the subdomains UV-A 400-320 nm, UV-B 320-280 nm, UV-C 280-200 nm, including the bactericidal domains of major importance in the detection and dosimetry of optical radiation in antibacterial treatment, especially in animal husbandry. Thus, the selective radiation photoreceptor (UV) is known based on the structure of Ag-$Zn_{0.35}Mg_{0.65}O/Zn_{0.65}Mg_{0.35}O$/p-Si-Al, which consists of an absorption film on which a transparent $Zn_{1-x}Mg_xO$ film with x value from 0-0.8, which ensures an energy band at least 0.1 eV higher than that of the absorption film. The compound $Zn_{1-x}Mg_xO$ is a semiconductor with a wide band gap of 3.37 eV - 7.8 eV which corresponds to the absorption of UV radiation in the range of 365 nm - 160 nm. The maximum sensitivity of the photodiode is 460 mA/W at a wavelength of 250 nm. The disadvantage of this type of photoreceptor is the modification of the crystal lattice of the absorption layer from the wurtzite structure to the cubic structure with the increase of the Mg concentration. The novelty of the proposed invention consists in the deposition of chemical solutions by spraying on Si supports of an absorption film ITO: Ga, which allows to obtain a crystallographic structure of a single phase, also moving the spectral range of sensitivity to shorter wavelengths by modifying the content of Ga.