

PHOTODYNAMIC INACTIVATION OF HARMFUL AND PATHOGENIC MICROORGANISMS

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Summary. Photodynamic treatment is based on the interaction of two absolutely non-toxic agents – photosensitizer, accumulated in the microorganism and visible light. This interaction is named photosensitization and in the presence of oxygen induces radical-based cytotoxic reactions. The described phenomenon is widely used to eradicate tumors in oncology, to cure arthritis and atherosclerosis. This work has been carried out to define the possibility to use photosensitization for inactivation of pathogenic and harmful microorganisms. First data obtained show that pathogenic yeasts *Saccharomyces cerevisiae* and fungi *Ulocladium oudemansii* might be effectively inactivated by this new treatment.

Keywords: photodynamic treatment, inactivation of microorganisms, food processing and safety.