Łukasiewicz
Łódź Institute of Technology

NEW CHITOSAN DERIVATIVES

INNOVATIVE SOLUTIONS WITH ANTIFUNGAL, ANTIBACTERIAL, AND ANTIALGAL PROPERTIES



ONE TECHNOLOGY

multiple opportunities for surface protection and the development of advanced materials

ABOUT THE TECHNOLOGY

Novel chitosan derivatives have been developed with properties that enable the inhibition of fungal, bacterial, and algal growth. Through structural modification of chitosan, materials with tailored biological and functional characteristics can be obtained. The technology offers significant potential for applications in surface protection, paints, protective coatings, and specialized functional formulations.

KEY ADVANTAGES

- Broad-spectrum biological activity against fungi, bacteria, and algae.
- Adjustable properties tailored to specific application requirements
- Potential use as an ingredient in paints, coatings, and protective formulations
- Flexibility for further technological development across various market sectors.

POTENTIAL APPLICATION AREAS CONSTRUCTION AND SURFACE PROTECTION

- Formulations limiting the growth of algae and microorganisms on building facades.
- Protective coatings for surfaces exposed to moisture and environmental factors.

PAINTS AND PROTECTIVE COATINGS



- Additives enhancing the biological functionality of formulations.
- Solutions supporting the protection of surfaces against biodeterioration.

SPECIALIZED PROTECTIVE FORMULATIONS



Products designed to protect external and technical surfaces against microbial growth.

TECHNOLOGY READINESS LEVEL

TRL 4 - The technology has been validated under laboratory conditions and is ready for further development activities, including synthesis optimization, formulation development, and application testing under conditions relevant to real-world use.



WE ARE LOOKING FOR PARTNERS

We are seeking partners interested in transforming the potential of these novel chitosan derivatives into innovative solutions for the construction and surface protection industries.

POSSIBLE AREAS OF COLLABORATION:

- Tailoring compound properties to specific application requirements.
- Development of prototype paints, coatings, and protective formulations.
- Conducting application trials and efficacy testing.
- Advancing the technology toward implementation and commercialization.

A solution developed in collaboration with

THE FACULTY OF BIOTECHNOLOGY AND FOOD SCIENCES LODZ UNIVERSITY OF TECHNOLOGY

CONTACT US

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