

NANOCHITOSAN: SUSTAINABLE SOLUTION AND ITS APPLICATION FIELDS

Gizem Yuksel^{1*}, Alfonz Kedves², Zoltan Kónya², Edit Mikó³

¹Doctoral School of Environmental Science, Department of Applied and Environmental Chemistry,
Faculty of Science and Informatics, University of Szeged, Szeged, HUNGARY

²Department of Applied and Environmental Chemistry, Faculty of Science and Informatics, University of
Szeged, Szeged, HUNGARY

³Institute of Animal Sciences and Wildlife Management, Faculty of Agriculture, University of Szeged,
Hódmezővásárhely, HUNGARY

*corresponding author: yukselgizem08@gmail.com

The rapid spread of technology not only improves the living standards of societies, but also provides a healthier and more sustainable living space by improving the environmental conditions in which society lives. Recently, nanotechnology has become a hot topic in almost every field since environmental pollution, especially caused by global warming and rapid population growth, is progressing rapidly and changing the balance of the entire ecosystem. For these reasons, nanotechnology can help reduce environmental problems through the use of technological approaches and can also contribute to the development of governments' circular economy. Chitosan, obtained by deacetylation of chitin, one of the biopolymers known to degrade in nature without harming the environment, has become a frequent research topic in environmental sciences because it is cheap and easy to obtain, has absorbent properties, and most importantly, has a good antimicrobial character. The aim of the study is to show that chitosan can be an alternative solution to reduce environmental pollution caused by global warming and anthropogenic activity through nanotechnological studies by taking advantage of its environmentally friendly structure, flocculant, and antimicrobial properties.