

Supplementary Materials

Photocatalytic Remediation of Harmful *Alexandrium Minutum* Bloom Using Hybrid Chitosan Modified TiO₂ Films in Seawater: A Lab-Based Study

Nur Hanisah Ibrahim ¹, Anwar Iqbal ^{1,*}, Normawaty Mohammad-Noor ^{2,*}, Roziawati Mohd Razali ³, Srimala Sreekantan ⁴, Dede Heri Yuli Yanto ^{5,6}, Abdul Hanif Mahadi ⁷ and Lee D. Wilson ^{8,*}

¹ School of Chemical Sciences, Universiti Sains Malaysia, Minden, Gelugor 11800, Penang, Malaysia; anwariqbal@usm.my; nur_hanisah95@yahoo.com

² Department of Marine Science, Kulliyyah of Science, International Islamic University Malaysia, Jalan Sultan Ahmad Shah, Bandar Indera Mahkota, Kuantan 25200, Pahang, Malaysia

³ Fisheries Research Institute, Batu Maung 11960, Penang, Malaysia; roziawati80@gmail.com

⁴ School of Material and Mineral Resources Engineering, Universiti Sains Malaysia, Nibong Tebal 14300, Penang, Malaysia; srimala@usm.my

⁵ Research Center for Applied Microbiology, National Research and Innovation Agency (BRIN), Cibinong, Bogor 16911, Indonesia; dede.heri.yuli.yanto@brin.go.id

⁶ Research Collaboration Center for Marine Biomaterials, Jatinangor, Indonesia.

⁷ Centre for Advanced Material and Energy Sciences, Universiti Brunei Darussalam, Jalan Tungku Link, Gadong, Bandar Seri Begawan BE1410, Brunei; hanif.mahadi@ubd.edu.bn

⁸ Department of Chemistry, University of Saskatchewan, 110 Science Place, Room 165 Thorvaldson Building, Saskatoon, SK S7N 5C9, Canada; lee.wilson@usask.ca

* Correspondence: anwariqbal@usm.my (A.I.); normahwaty@iium.edu.my (N.M.-N.); lee.wilson@usask.ca (L.D.W.)

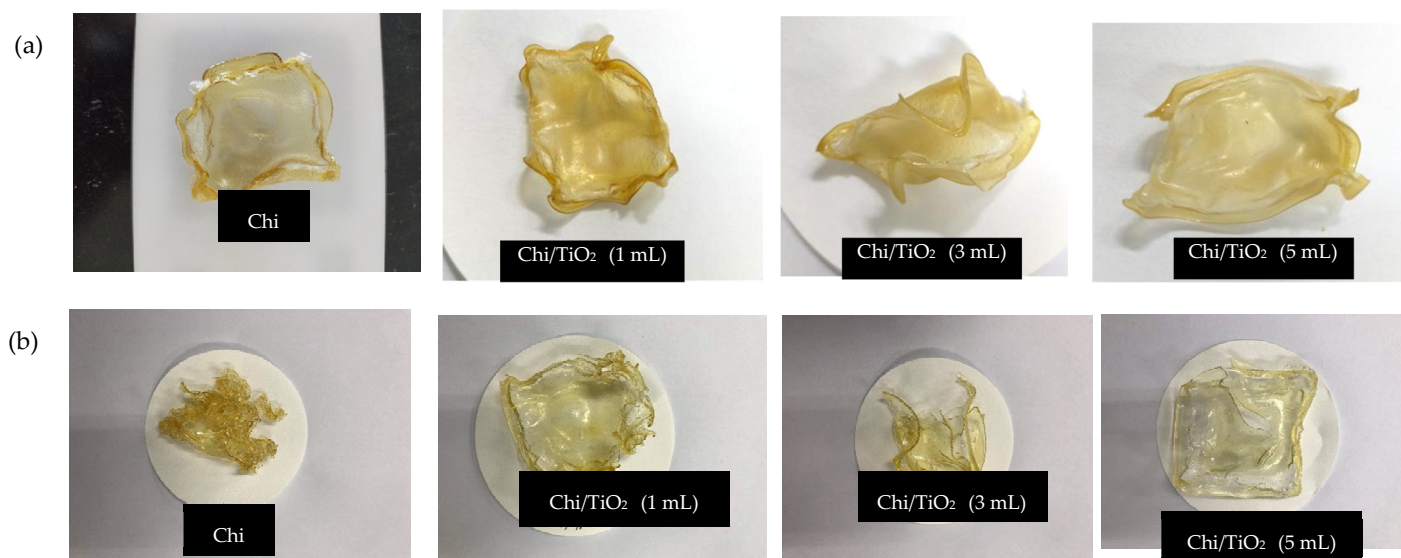


Figure S1. The physical appearance of the films (a) before and (b) after the mitigation process.

Table S1. The weight differences of the films before and after the mitigation process.

Film	Before mitigation	After mitigation
	(g)	(g)
Chi	0.79	0.69
Chi/TiO ₂ (1 mL)	0.77	0.68
Chi/TiO ₂ (3 mL)	0.81	0.69
Chi/TiO ₂ (5 mL)	0.84	0.61