

Eco-Friendly Detergent Based on Exhausted Edible Vegetable Oils: Impact on Marine and Freshwater Environments, a Case Study Focusing on SARS-CoV-2

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Supplementary Materials

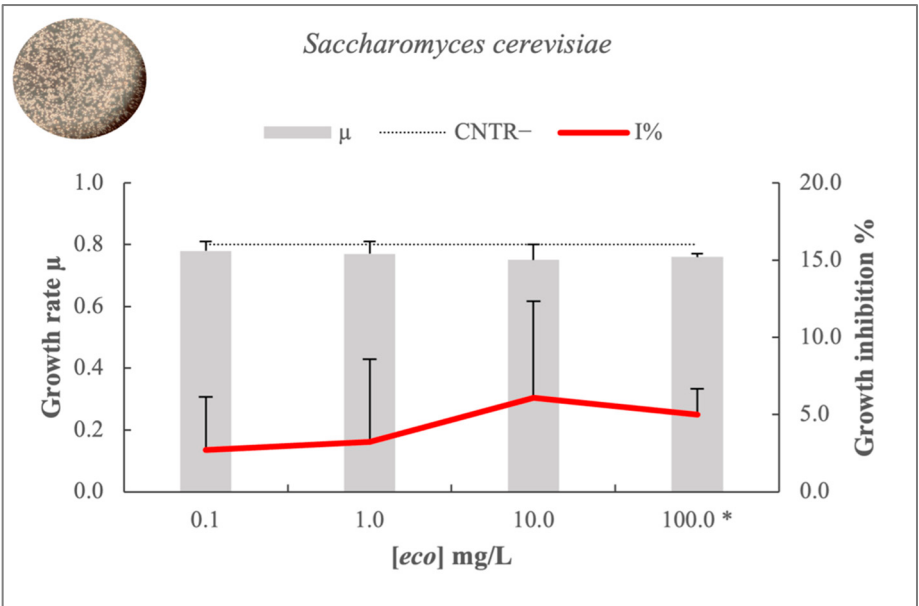


Figure S1. Growth rate (μ) and inhibition ($I\%$) measured as a function of the concentrations tested ([*eco*] 0.1, 1.0, 10.0, 100.0 mg/L); the dotted line indicates the growth rate of the negative control (CNTR-); there is a statistically significant difference between the control and samples at 100.0 mg/L.

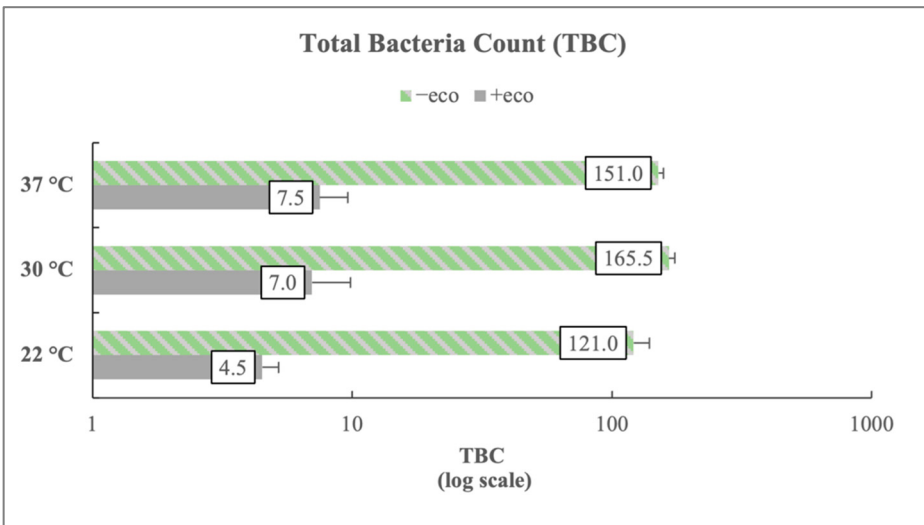


Figure S2. Total bacteria count (N./mL) on log scale, measured before (-eco) and after addition of *eco*-product (+eco) in growth medium at 22 °C, 30 °C and 37 °C.

System	Species	CNTR–	CNTR+	mg/L	eco		eco BOD ₅		EC ₅₀	EC ₅₀ BOD ₅	EC ₂₀	EC ₂₀ BOD ₅	EC ₁₀	EC ₁₀ BOD ₅	EC ₅	EC ₅ BOD ₅
					Response	± SD	Response	± SD								
MS	<i>P. tricornutum</i>	Algal culture medium	K ₂ Cr ₂ O ₇	100.0	22.1	1.6	25.4	7.4	-	-	78.17	72.29	38.37	35.33	5.51	2.99
				50.0	21.2	2.1	20.5	1.3								
				25.0	9.2	1.3	11.3	2.8								
				12.5	5.4	0.8	5.8	0.9								
				6.25	2.1	0.3	-1.9	0.3								
	<i>P. lividus</i>	FSW	Cu(NO ₃) ₂ * 3H ₂ O	100.0	23.0	2.7	23.7	1.5	-	-	76.34	-	6.56	-	-	-
				50.0	16.7	2.1	22.3	2.1								
				25.0	15.3	1.2	19.3	2.1								
				12.5	11.0	1.0	18.7	1.2								
FWS	<i>A. fischeri</i>	ASW	3,5-dichlorophenol	90.0	16.1	1.7	14.9	0.03	-	-	-	-	54.05	-	16.84	-
				9.0	5.8	1.8	16.5	0.01								
				0.9	6.0	2.8	18.4	0.53								
	<i>P. subcapitata</i>	Algal culture medium		100.0	30.9	5.3	36.1	8.1	-	-	66.42	67.76	38.15	44.42	14.81	25.15
				50.0	26.5	2.4	20.9	4.0								
				25.0	4.7	0.4	3.8	1.4								
				6.25	3.1	2.9	1.9	1.0								
	<i>D. magna</i>		K ₂ Cr ₂ O ₇	100.0					-	-	-	-	-	-	-	-
				50.0	100	0.0	100	0.0								
				25.0												
	<i>D. magna</i> _{AFW}	AFW		100.0	25.0	10.0	30.0	10.0	-	-	92.22	81.21	-	56.48	-	36.05
				50.0	30.0	10.0	5.0	10.0								
				25.0	30.0	10.0	5.0	10.0								

Table S1. Summary table (standardized tests): species studied (MS: marine system, FWS: freshwater system), controls (CNTR–/CNTR+), concentration (mg/L), biological response detected (Response, %) and standard deviation (± SD), ECx (mg/L) estimated, are reported for each treatment (*eco/eco* BOD₅).