Supplemental Materials

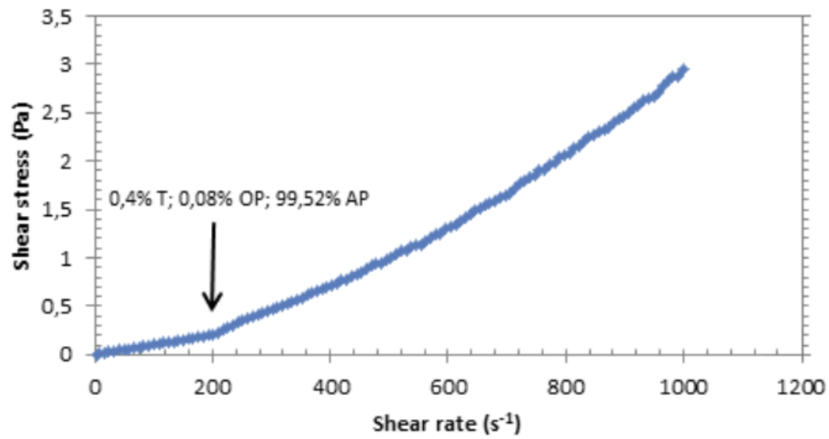

Figure S1: Shear stress versus shear rate for the *L. gracilis* Schauer essential oil microemulsion. The scanning was carried out from 0 to 1000 s^{-1} at 30ºC. The arrow indicates the change in the regime flow from laminar to turbulent.

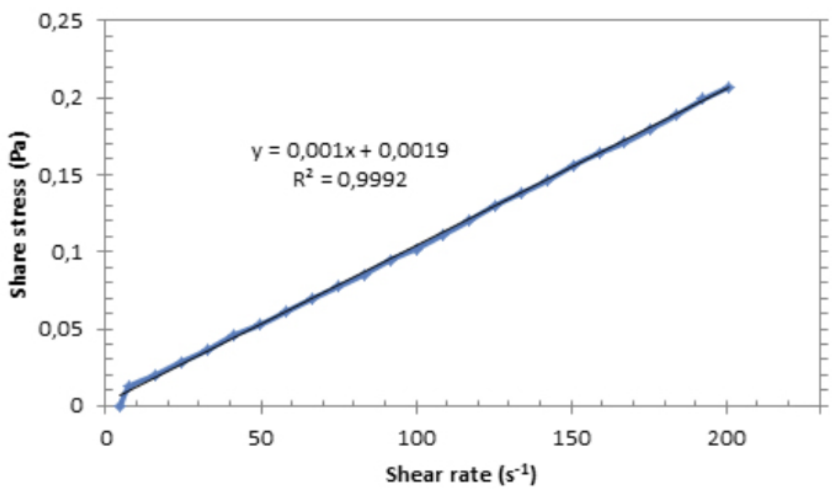

Figure S2: Shear stress versus shear rate for the *L. gracilis* Schauer essential oil microemulsion at laminar regime.

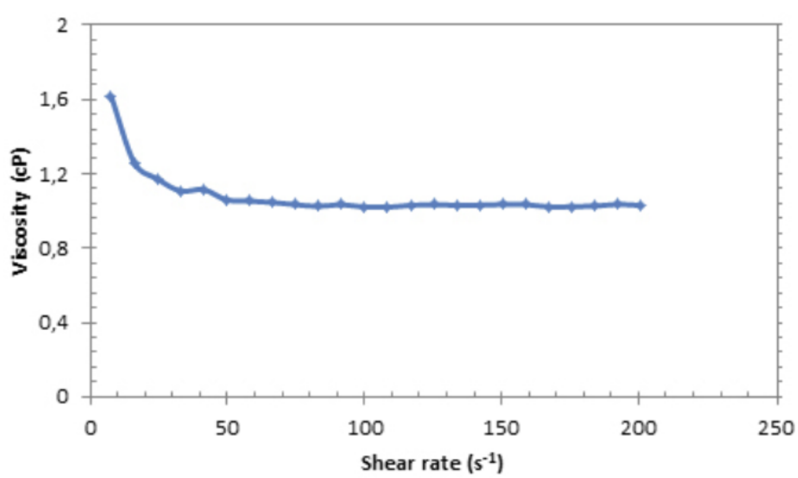

Figure S3: Viscosity versus shear rate for the *L. gracilis* Schauer essential oil microemulsion.

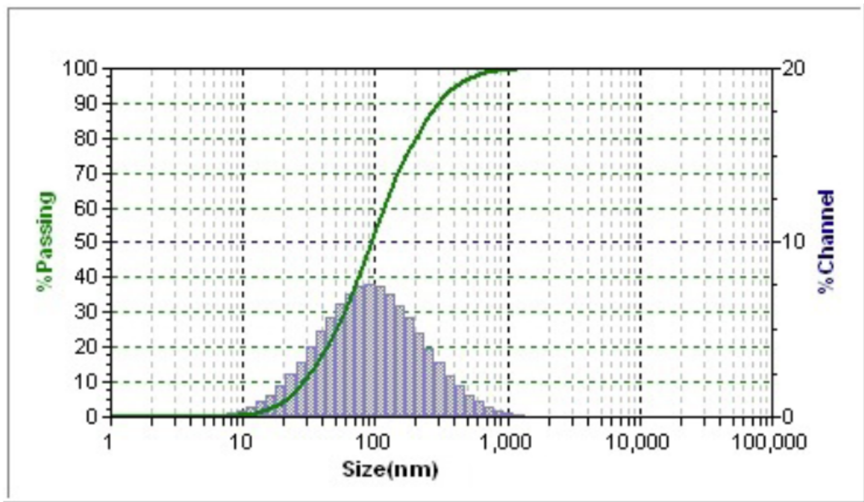

Figure S4: Drop size distribution for the *L. gracilis* Schauer essential oil microemulsion at point OP = 0.08% and AP = 99.52%. The average drop size was 93.2 nm.

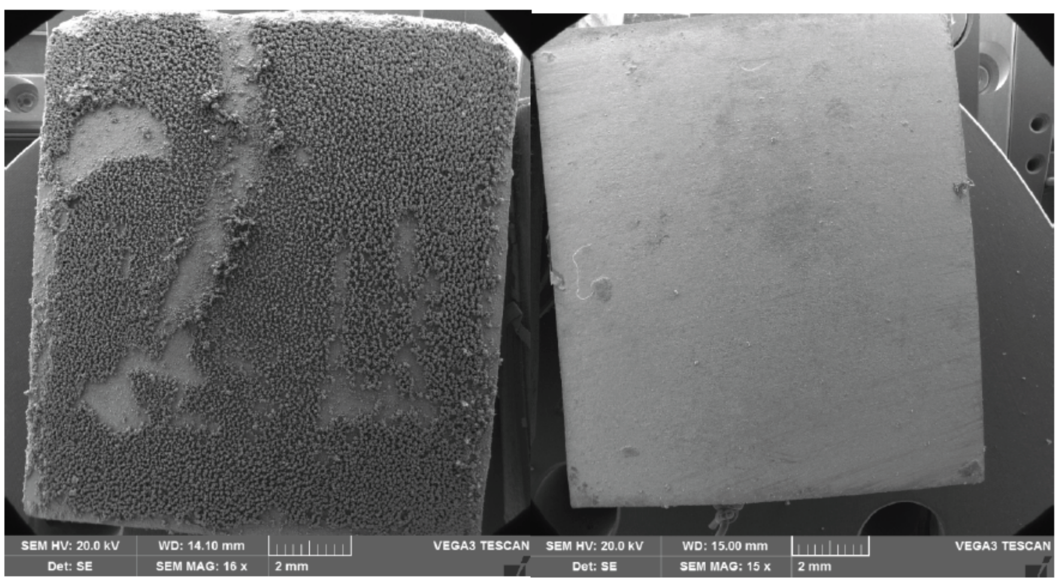

Figure S5: Micrographs showing the effect of the *L. gracilis* Schauer essential oil microemulsion over the biofilms formed on the AISI 1020 carbon steel in dynamic system. Left: Biofilm without addition of microemulsion (2x). Right: Biofilm in presence of microemulsion after 16 days.

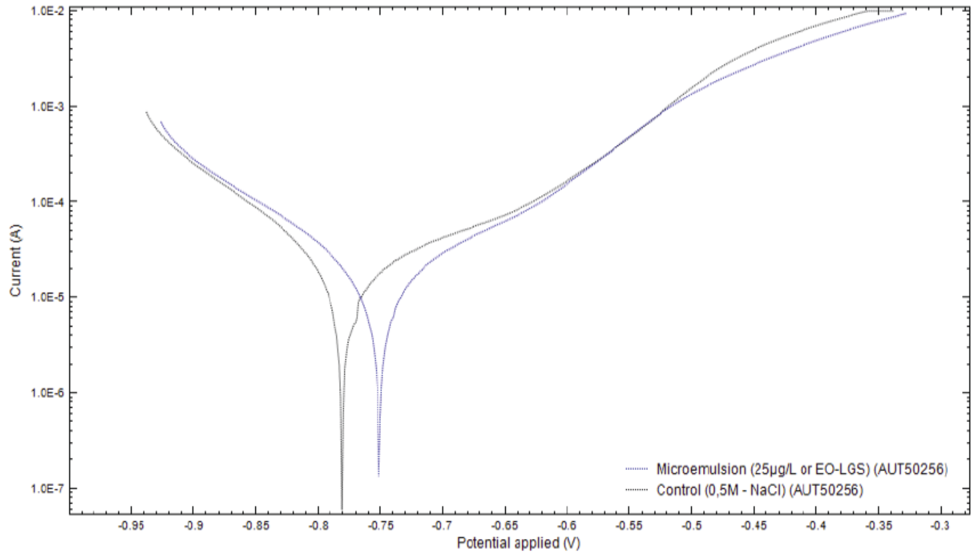

Figure S6: Polarization curves for AISI 1020 carbon steel biocoupons with the biofilms in salt solution (0.5 M NaCl) in presence and absence of *L*. *gracilis* Schauer essential oil.

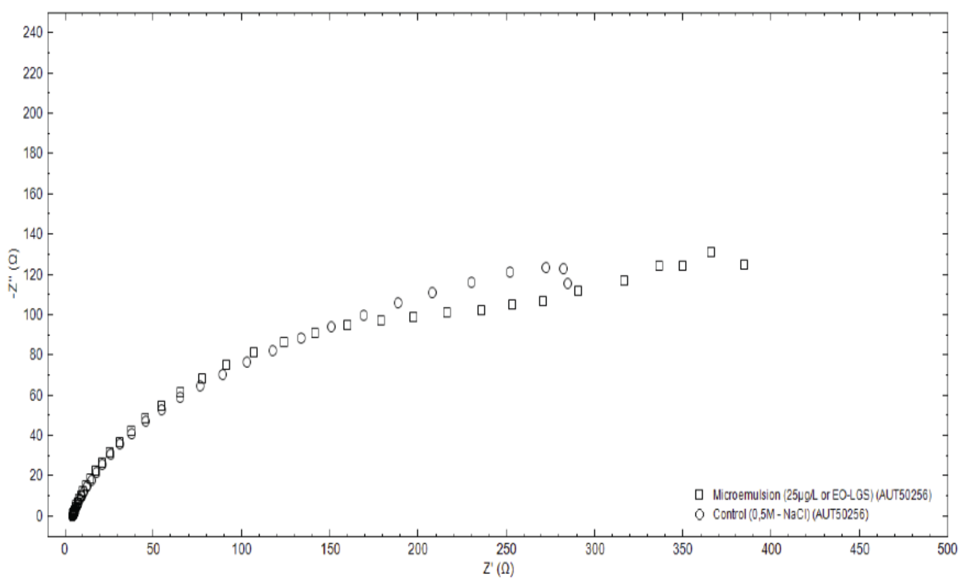

Figure S7: Electrochemical impedance diagrams for the AISI 1020 carbon steel in salt solution (0.5M NaCl) in presence *L*. *gracilis* Schauer essential oil emulsion.

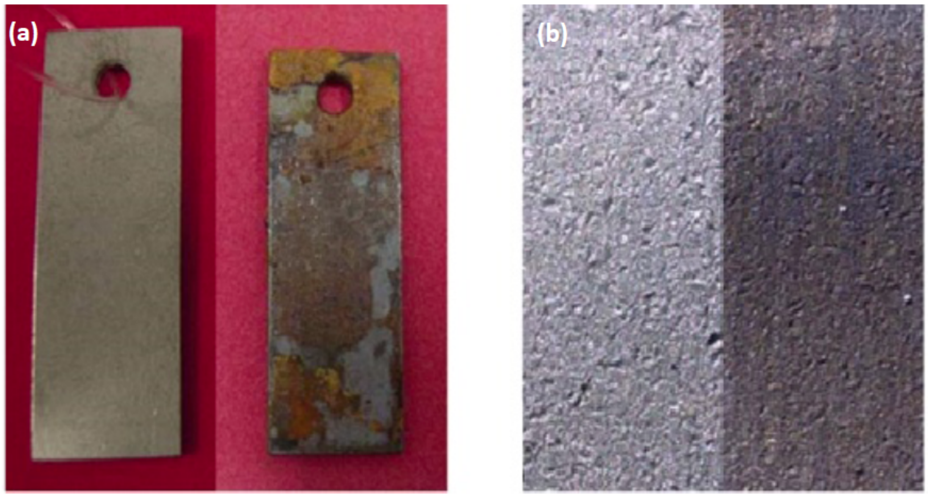

Figure S8: Surface of the AISI 1020 carbon steel biocoupons: (**a**) sanded biocupons before (left) and after 16 days in the dynamic system. (**b**) Micrographs (10x) of AISI 1020 carbon steel biocoupons surface before (control, left) and after 16 days of contact to the *L. gracilis* Schauer essential oil microemulsion after biofilm pickling (right).

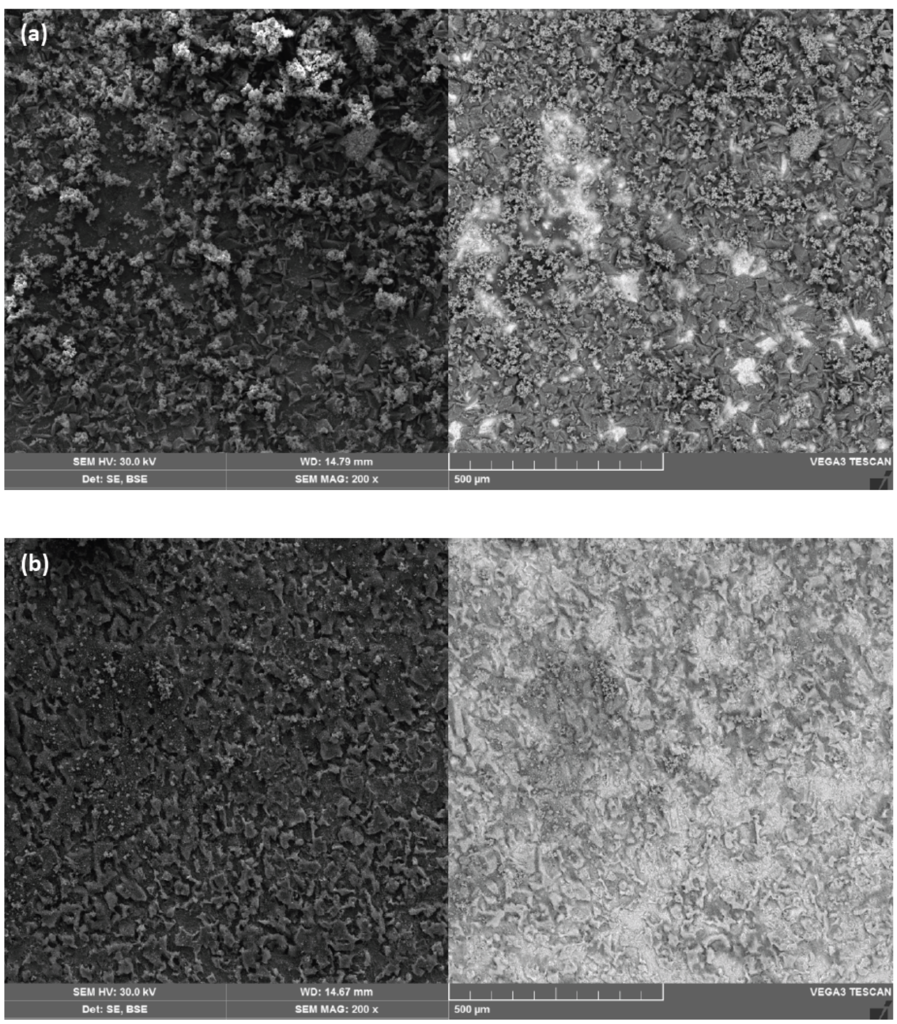

Figure S9: Biocupons surface analysis: (**a**) micrographs showing the surface (left) and the corosion product density (right) before (control) and (**b**) after 16 days contact to the *L. gracilis* Schauer essential oil microemulsion (200x).