

Electronic Supplementary Information for

Ocean Biomass-derived Feedstocks for Non-Isocyanate Polyurethane Synthesis

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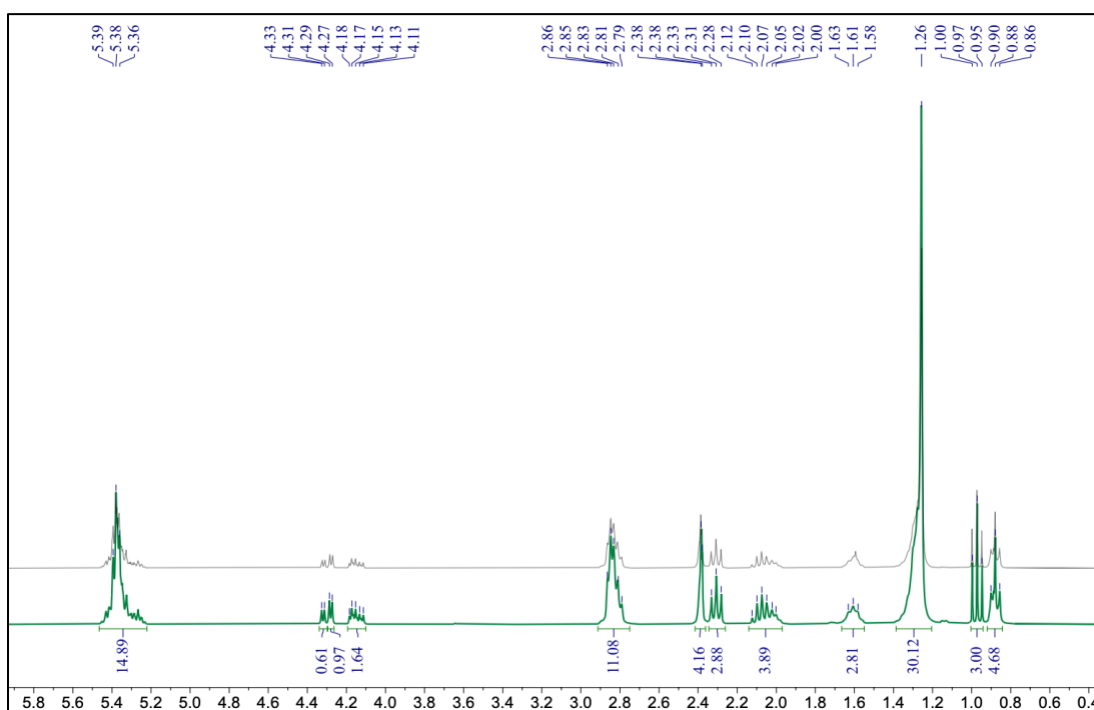


Figure S1: ^1H NMR spectrum of algae oil in CDCl_3 . The stability to decomposition or aerobic oxidation is demonstrated by the bottom spectrum collected 1 year prior to the upper spectrum.

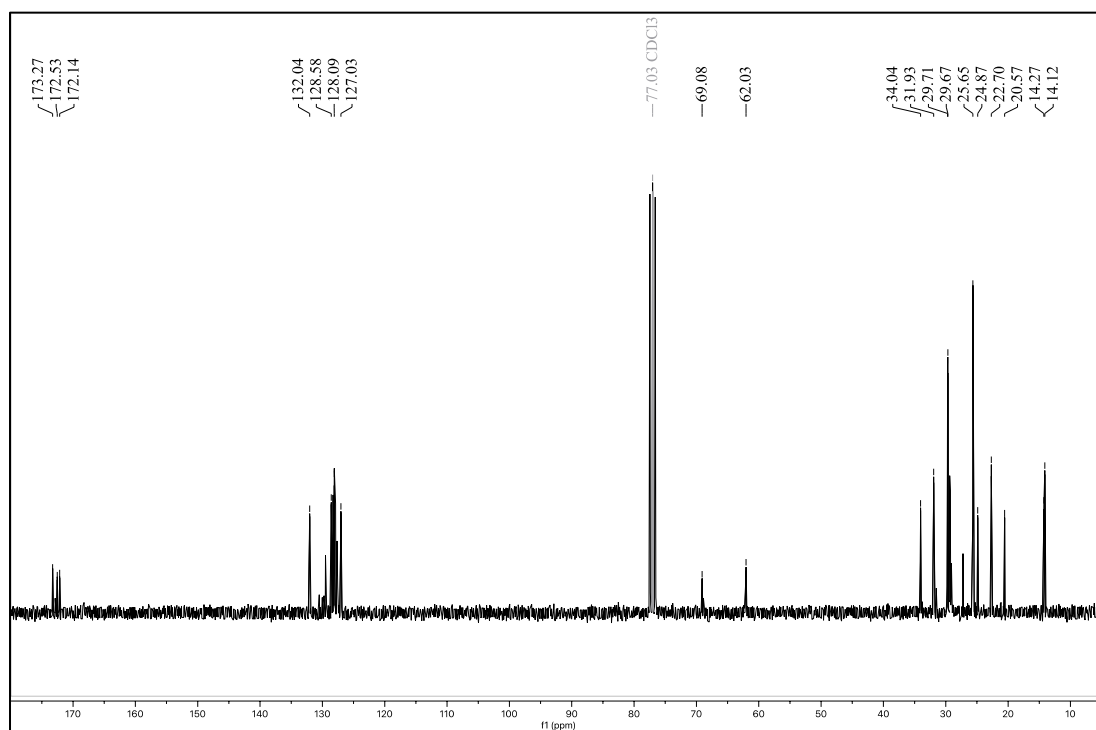


Figure S2: ¹³C NMR spectrum of algae oil in CDCl₃

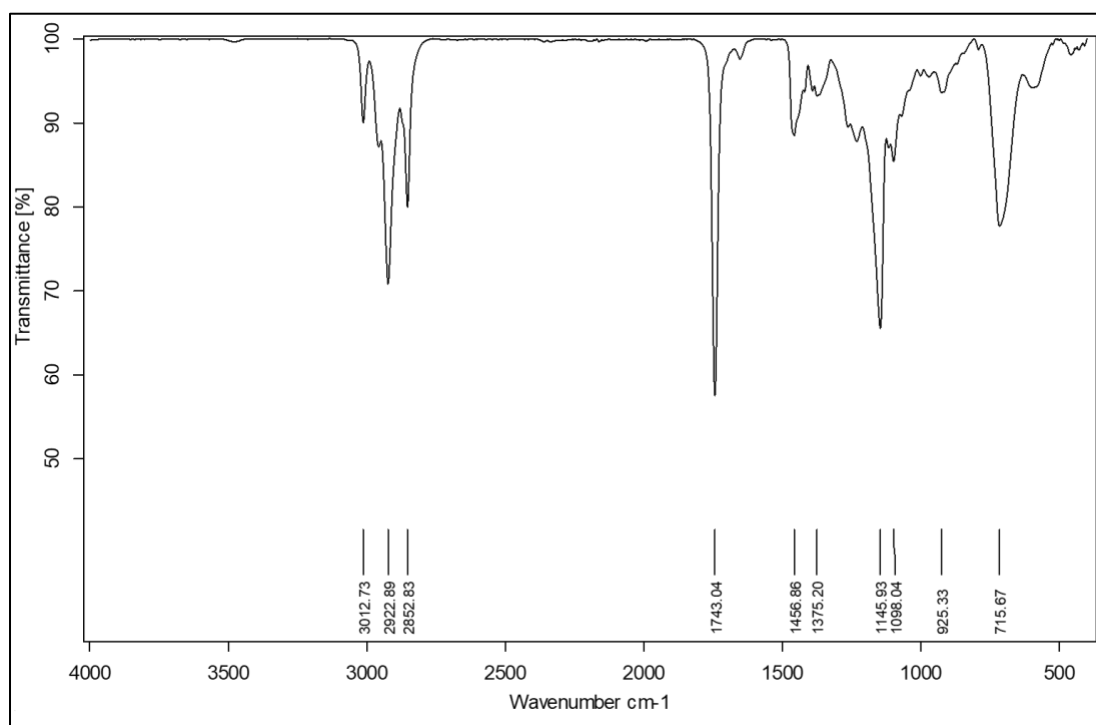


Figure S3: IR spectrum of algae oil

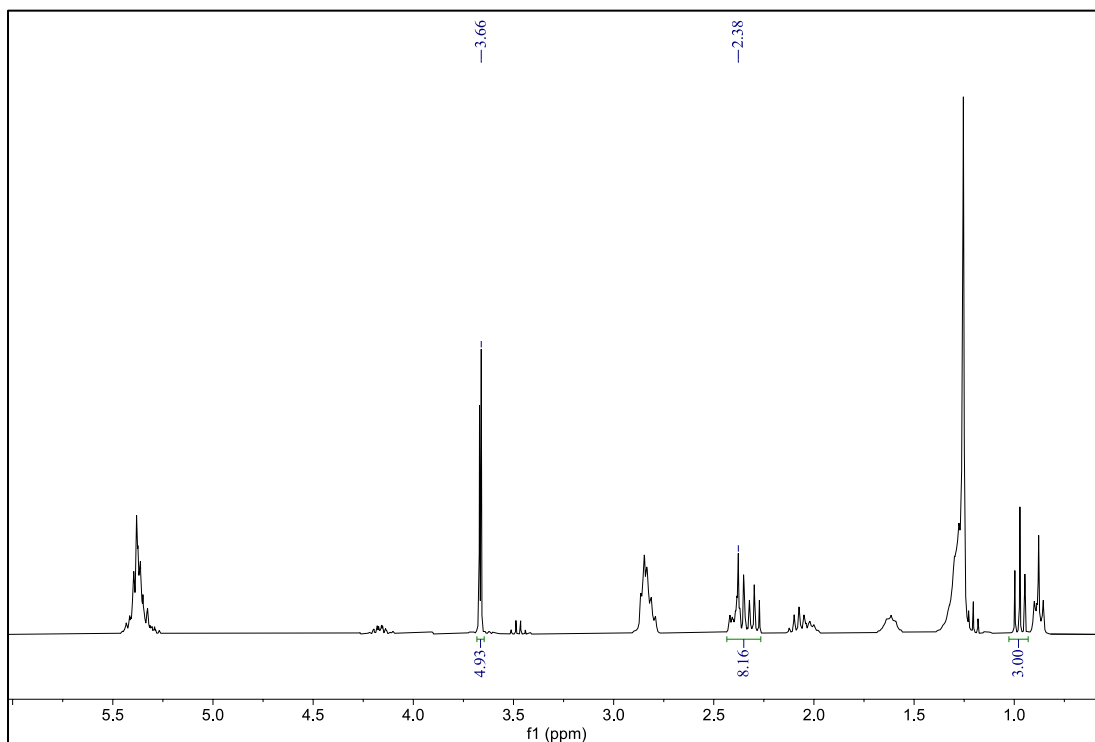


Figure S4: ^1H NMR spectrum of FAMES obtained from algae oil in CDCl_3 .

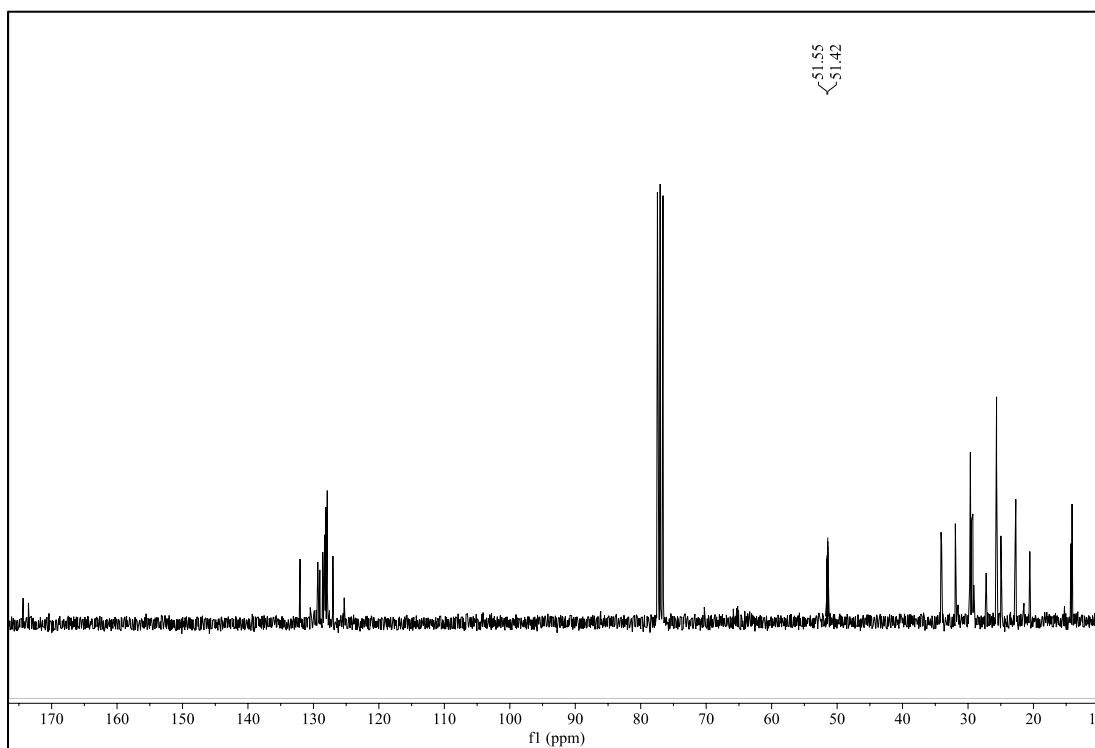


Figure S5: ^{13}C NMR of FAME in CDCl_3

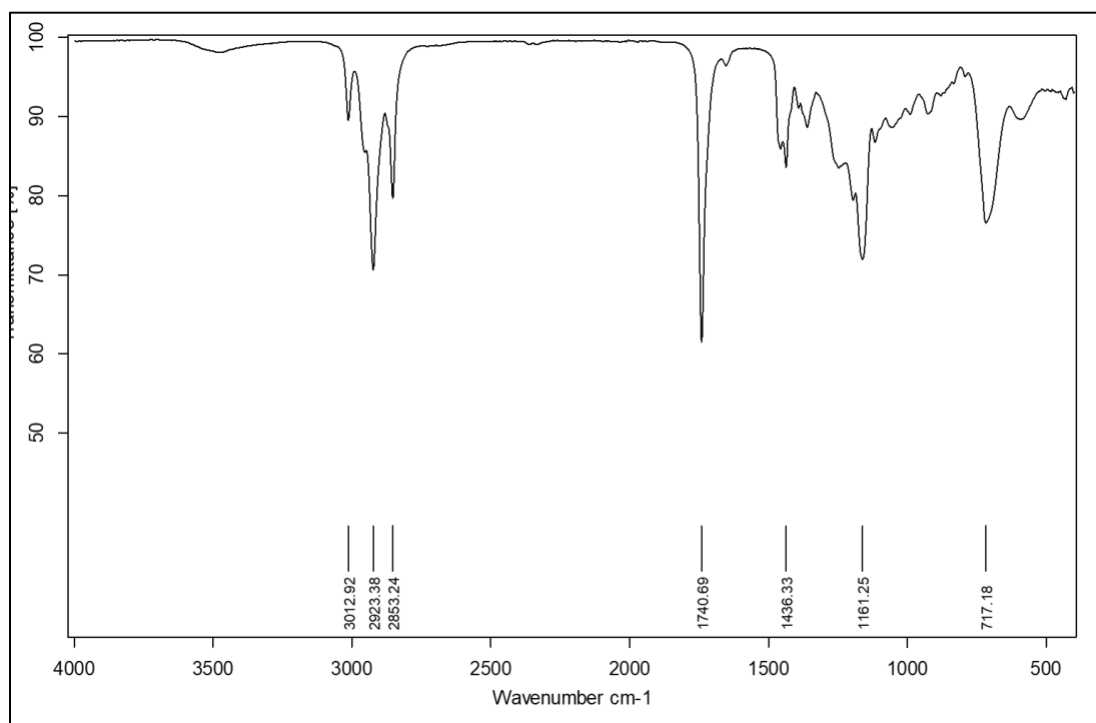


Figure S6: IR spectrum of FAME

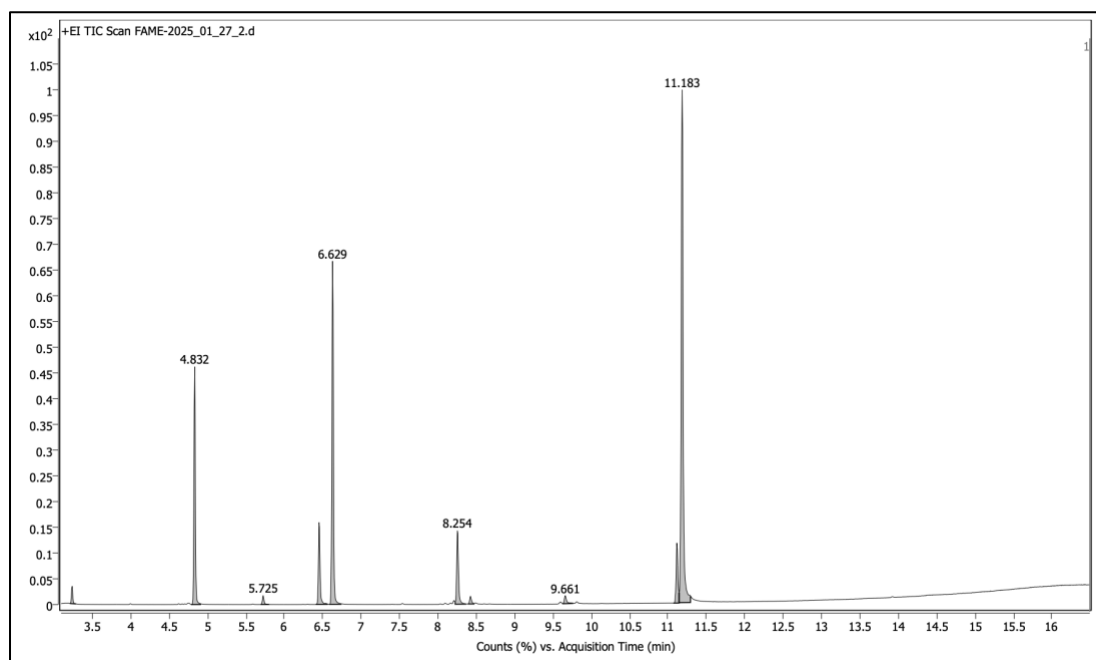


Figure S7: Gas chromatogram of FAME

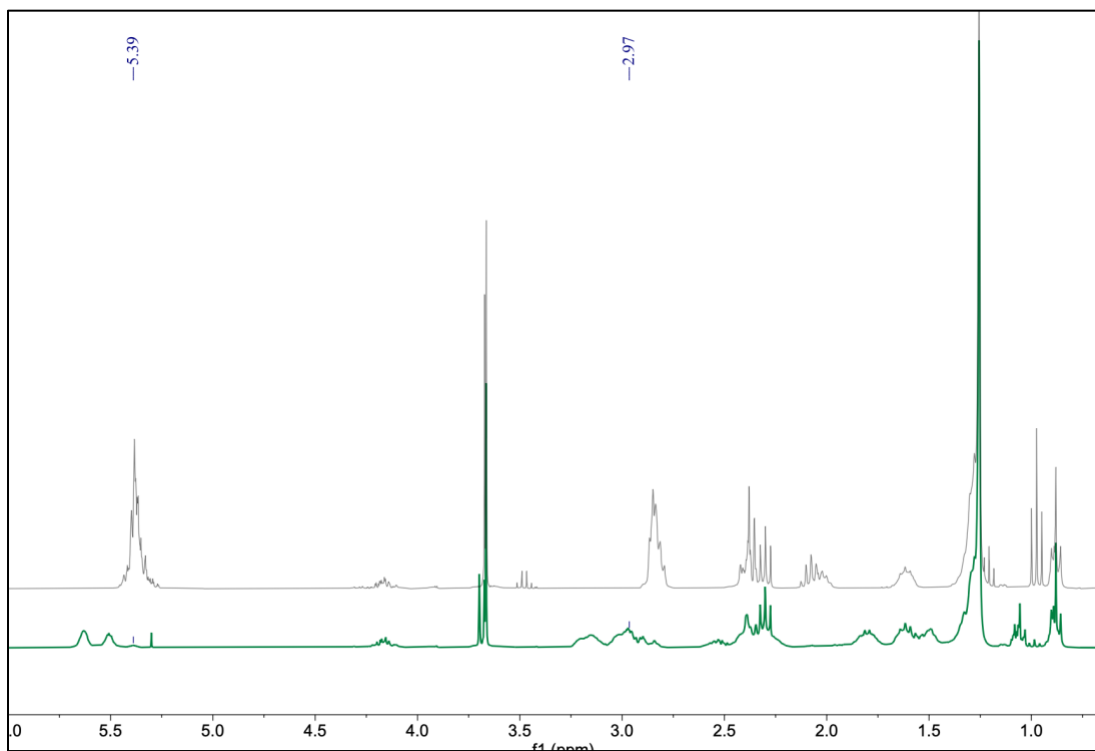


Figure S8: ^1H NMR spectrum showing conversion from FAME (top, black) to epoxidized algae EFAME (bottom, green) in CDCl_3

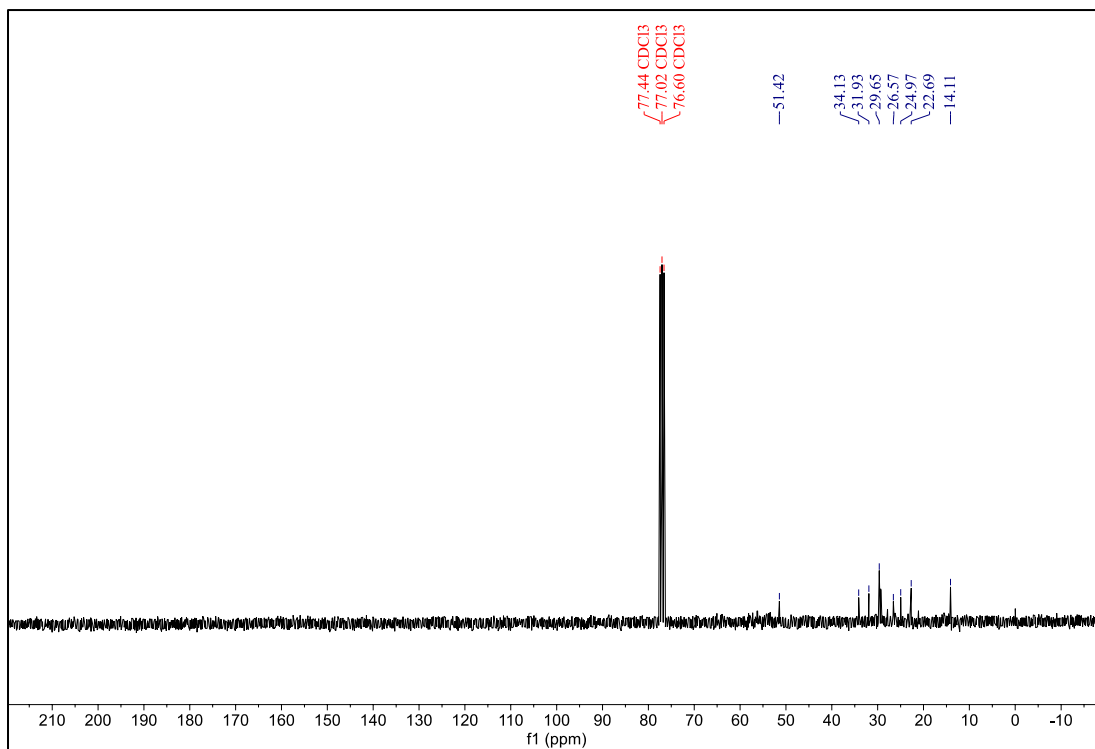


Figure S9: ^{13}C NMR spectrum of EFAME in CDCl_3

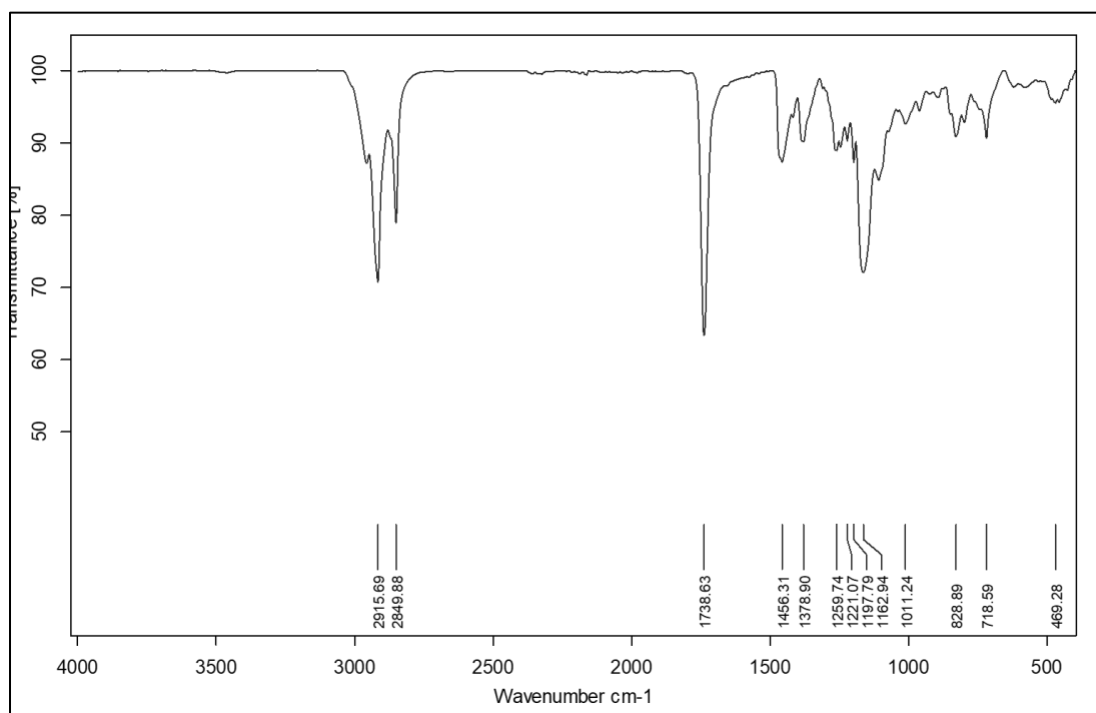


Figure S10: IR spectrum of epoxidized algae FAMES (EFAME)

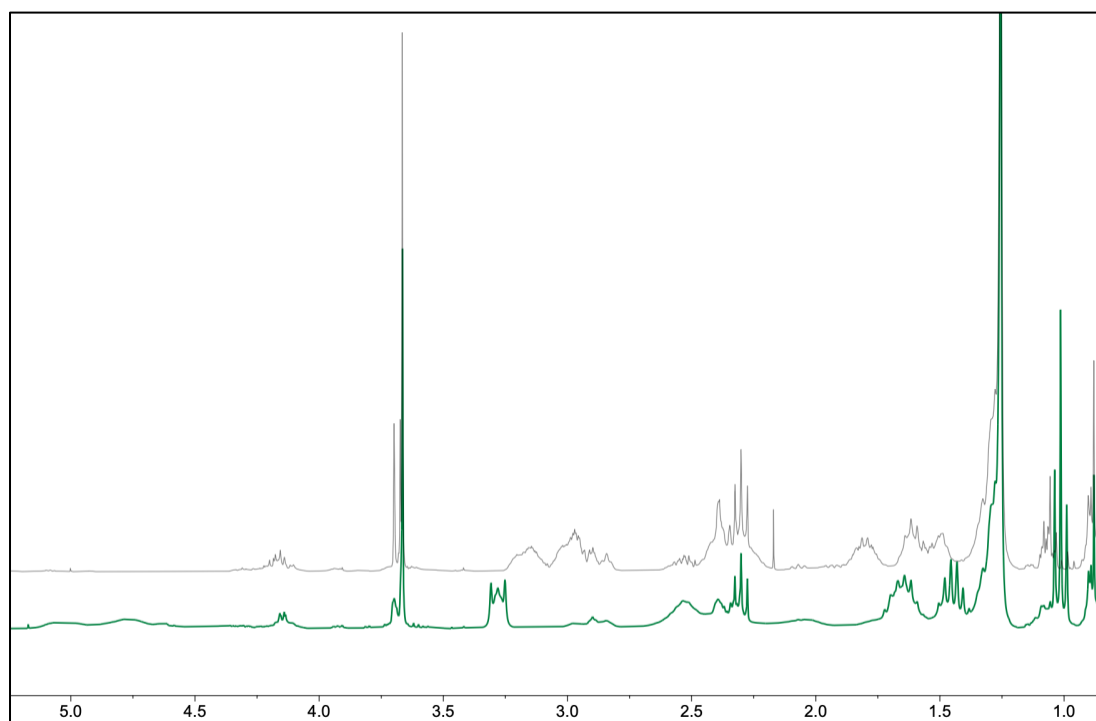


Figure S11: ¹H NMR spectrum showing conversion from EFAME (top, black) to CFAME (bottom, green) in CDCl₃

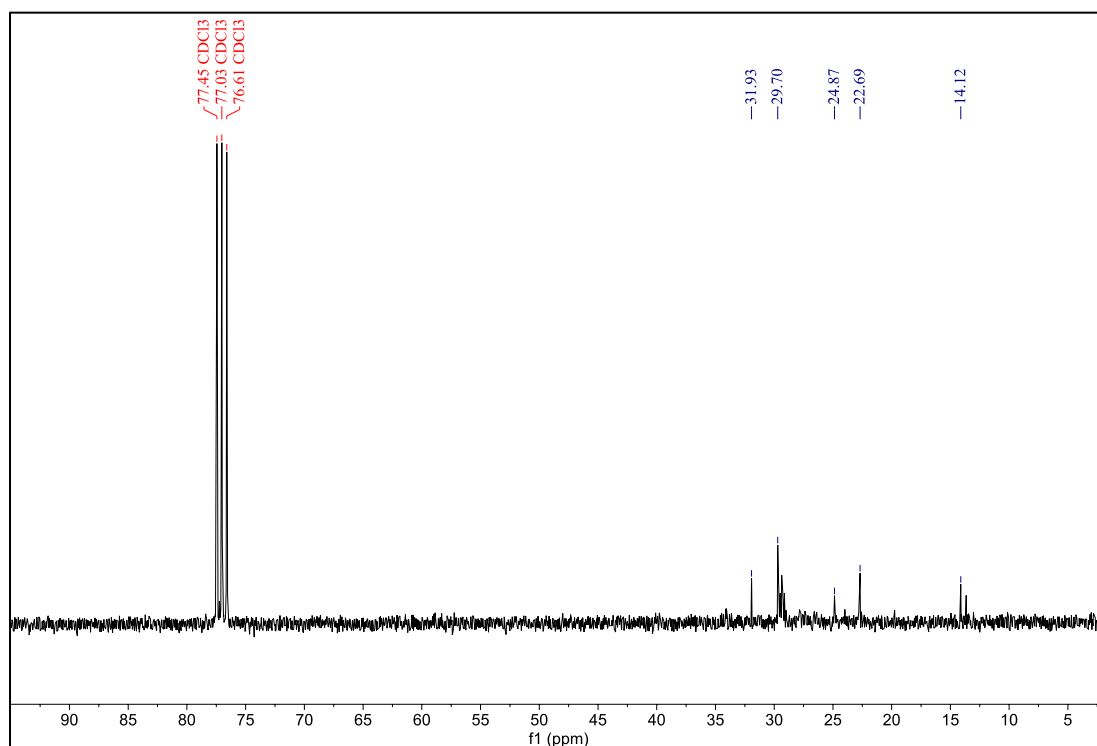


Figure S12: ¹³C NMR spectrum of carbonated FAME (CFAME) in CDCl₃

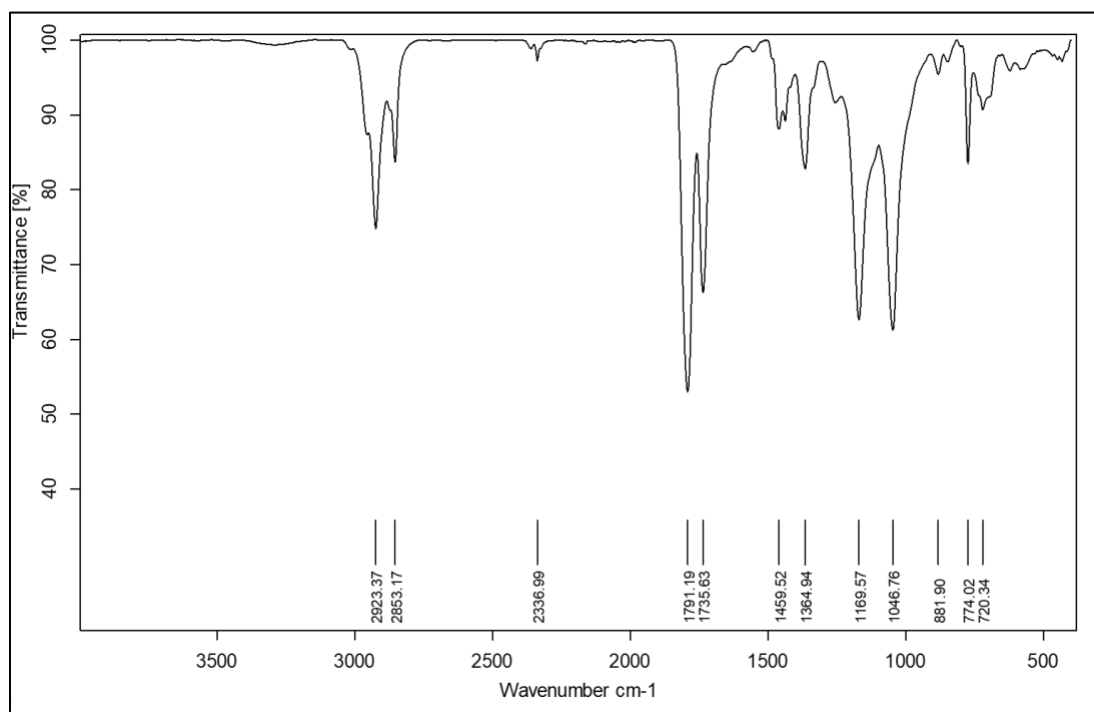


Figure S13: IR spectrum of carbonated FAME (CFAME)

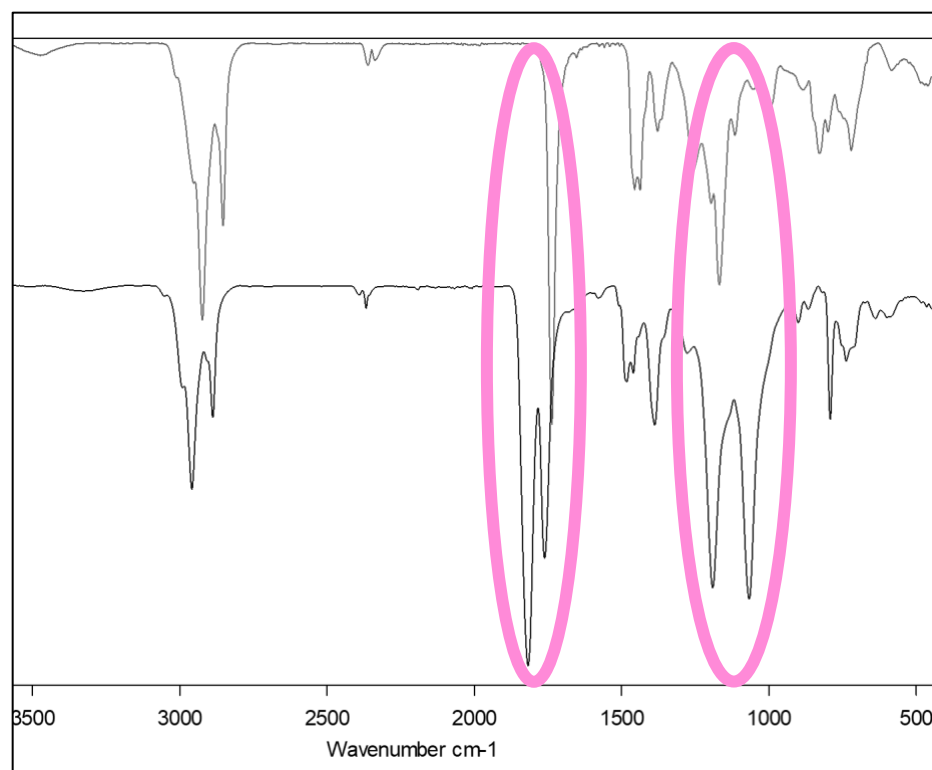


Figure S14: Comparison of IR spectra of EFAME (top) and CFAME (bottom)

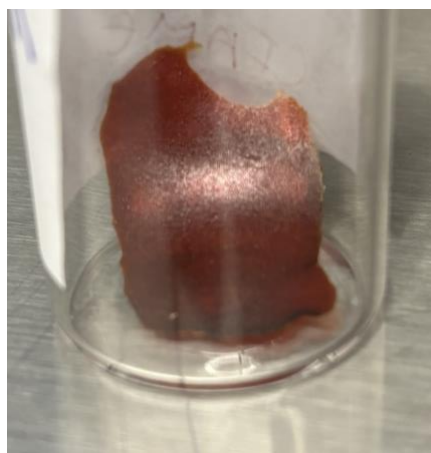


Figure S15: NIPU obtained from carbonated fatty acid methyl ester and NC-540

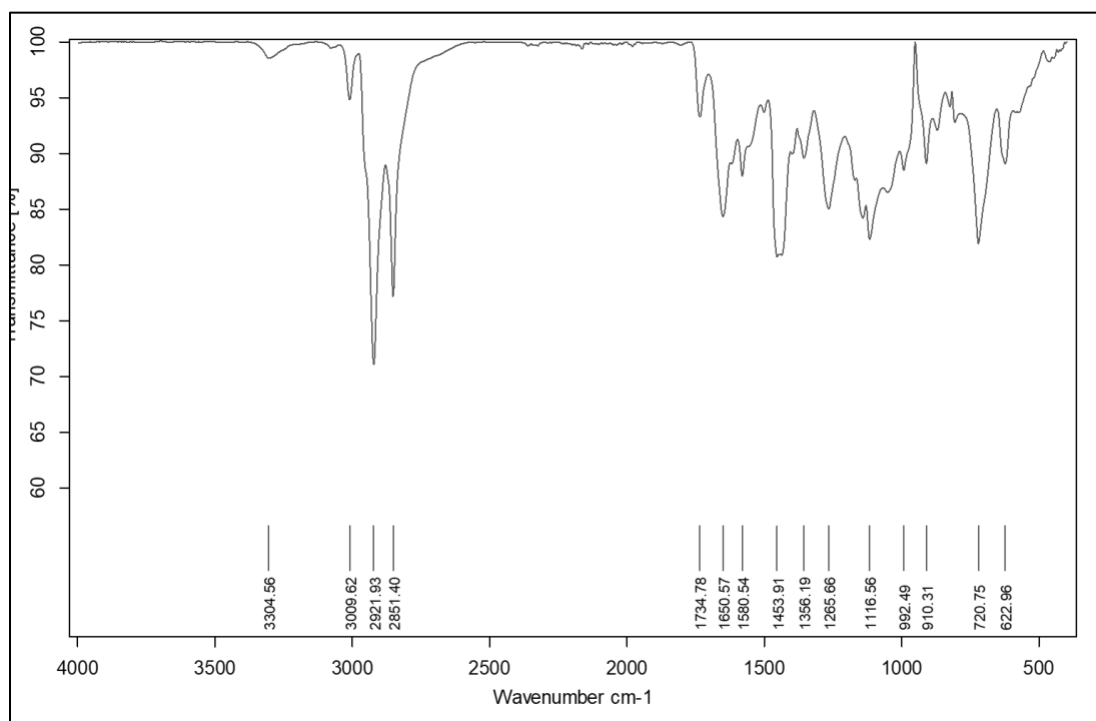


Figure S16: IR spectrum of NIPU obtained from carbonated fatty acid methyl ester and NC-540

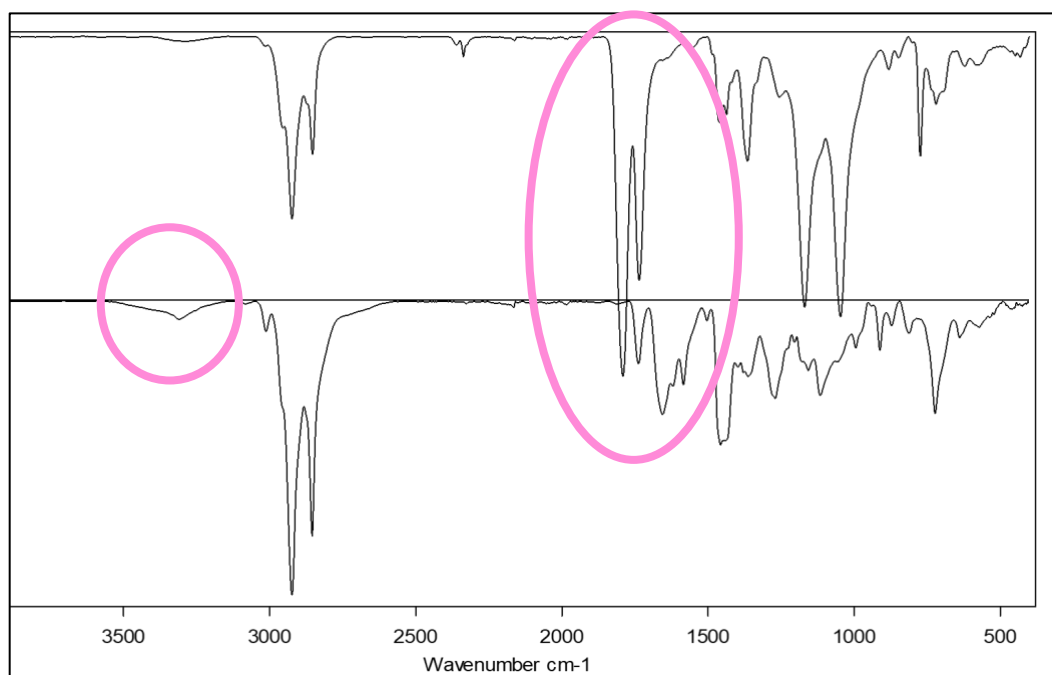


Figure S17: Comparison of IR spectra of CFAME (top) and NIPU obtained after curing with NC-540 (bottom).

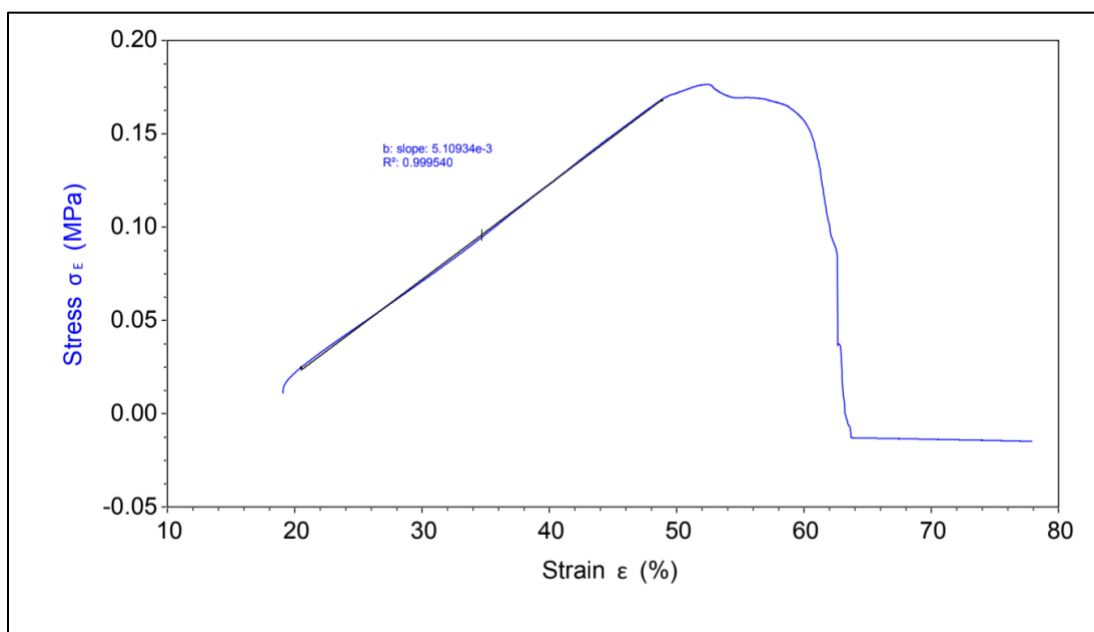


Figure S18: Stress vs. strain plot of NIPU obtained from carbonated fatty acid methyl ester and NC-540