



Supporting Information

for

Synthesis and acaricidal activity against *Varroa destructor* of α - and γ -costic acid dimers

Alessandro Santarsiere, Ernesto Santoro, Maria Letizia Ciavatta, Marianna Carbone, Sonia Ganassi, Cosimo Tedino, Antonio De Cristofaro, Antonio Evidente and Stefano Superchi

Beilstein J. Org. Chem. **2026**, 22, 1088–1096. doi:10.3762/bjoc.22.87

NMR and HRESIMS spectra of compounds 4, 6 and 7

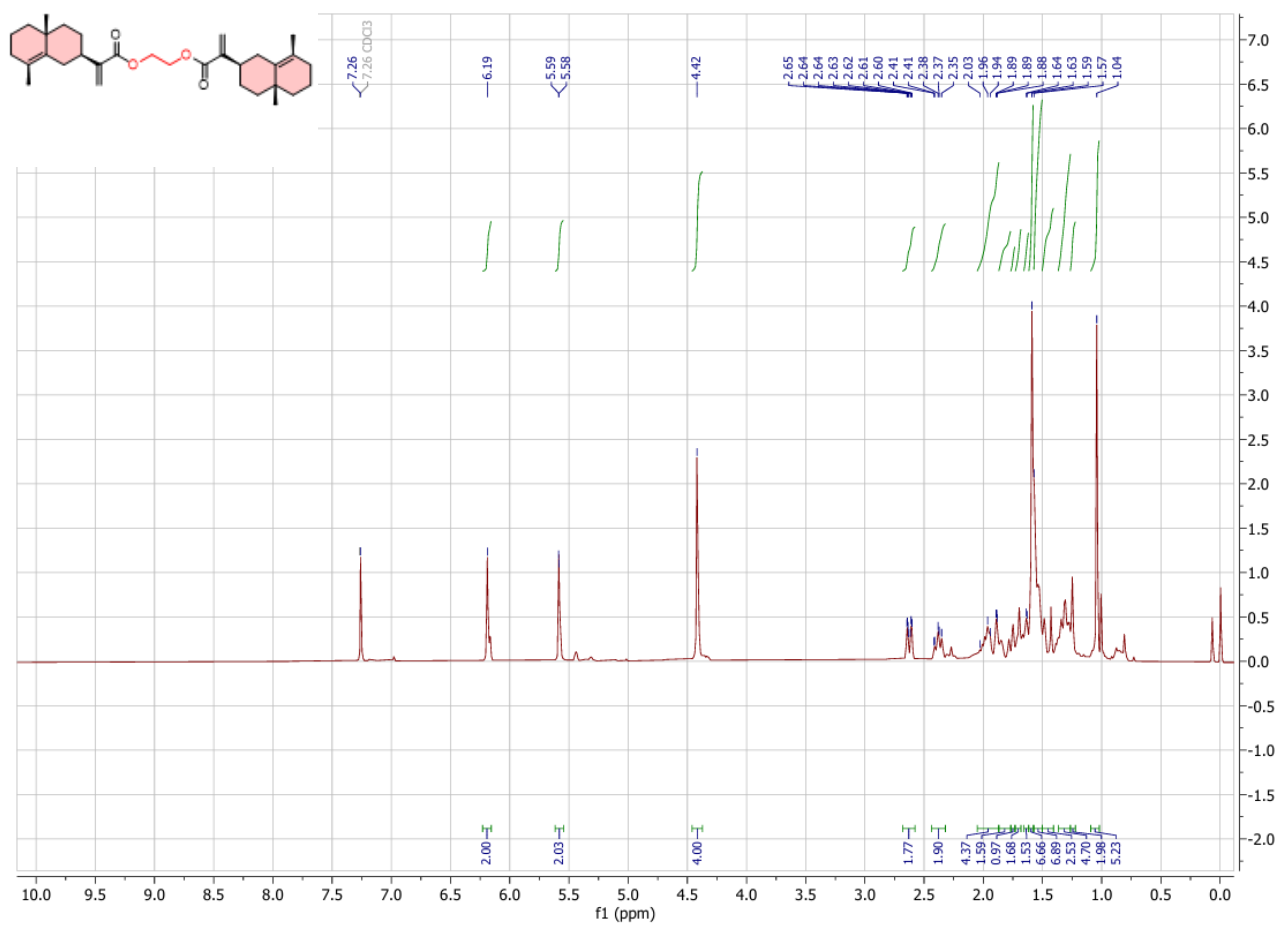


Figure S1. ¹H NMR (400 MHz, CDCl₃) spectrum of compound 4.

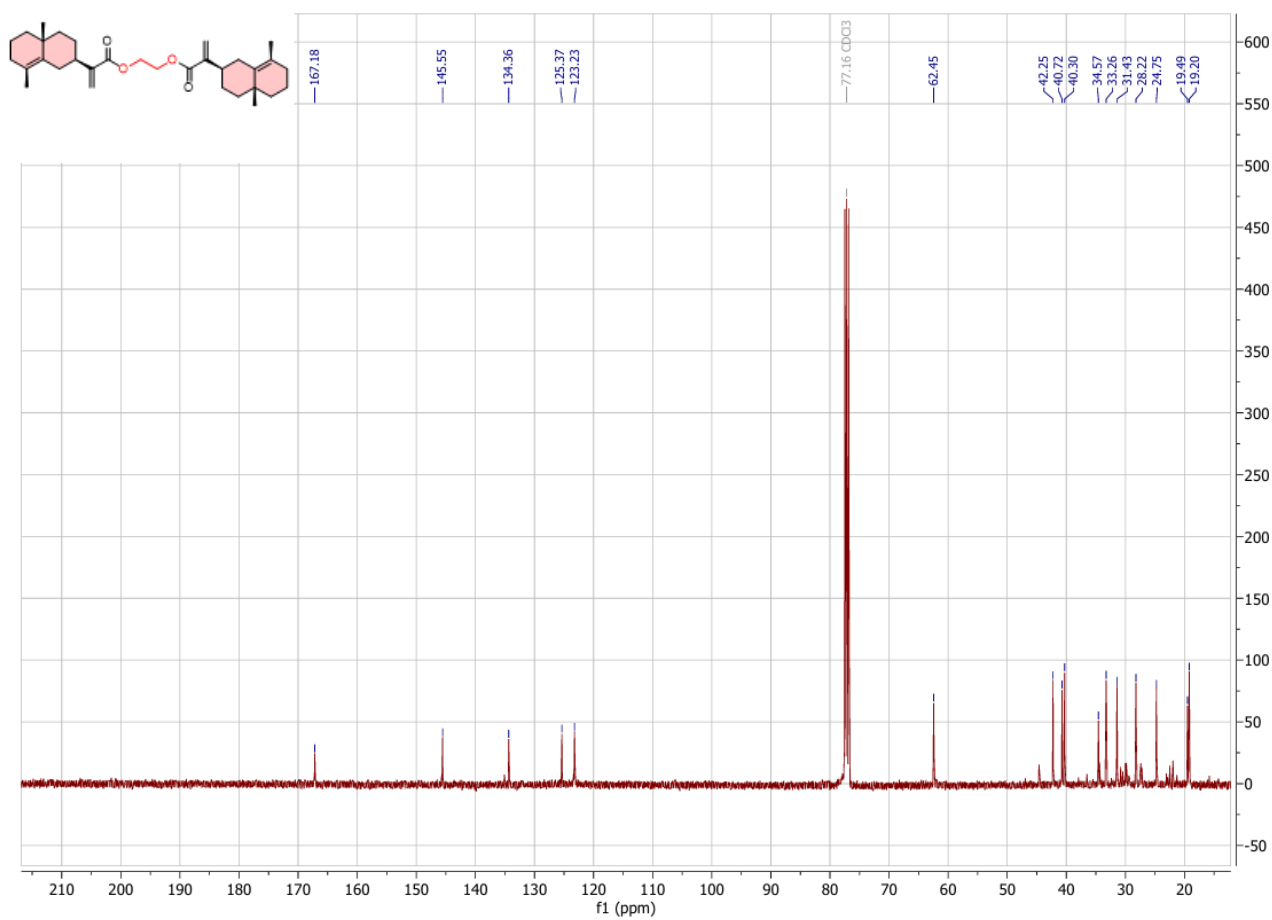


Figure S2. ¹³C NMR (100 MHz, CDCl₃) spectrum of compound 4.

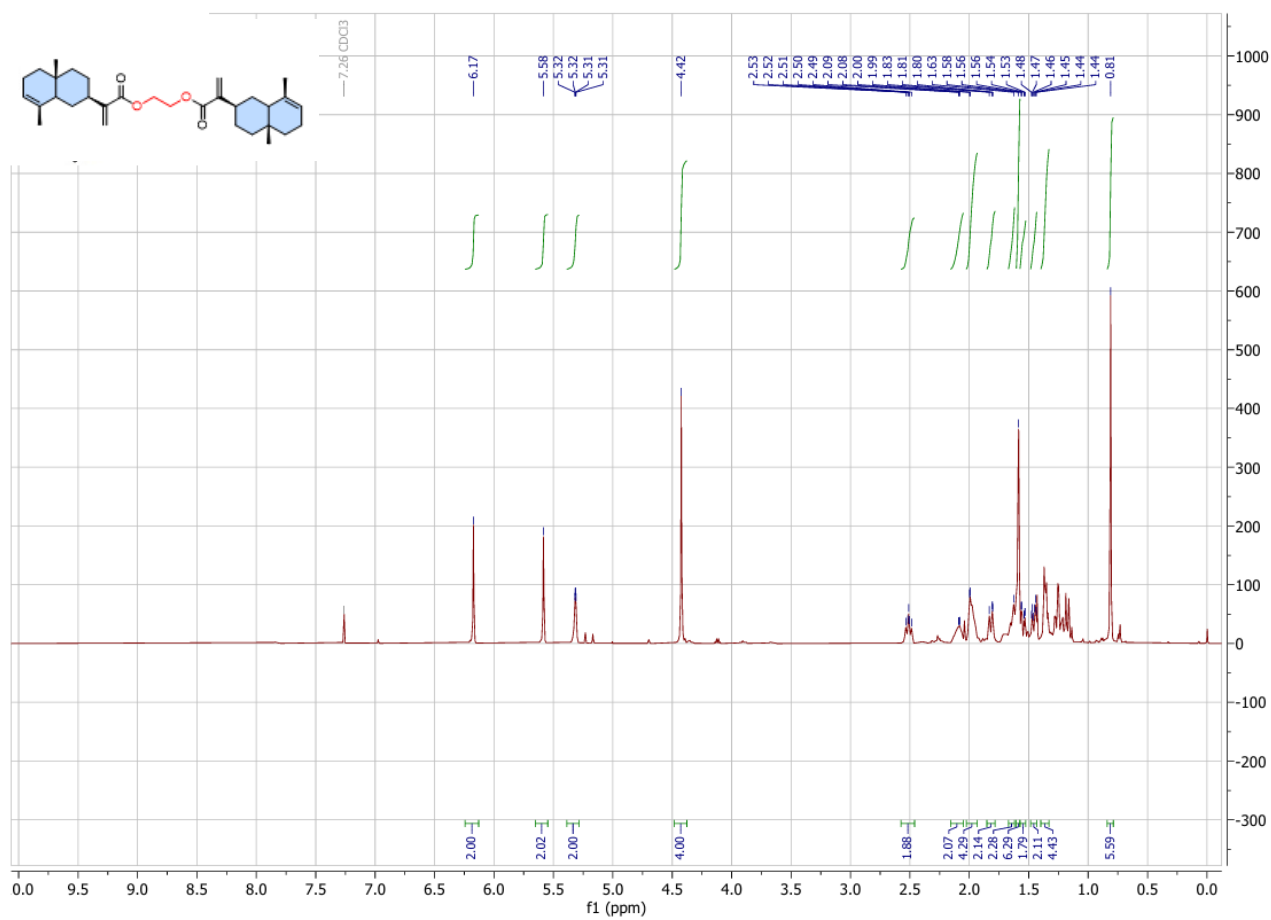


Figure S3. ¹H NMR (500 MHz, CDCl₃) spectrum of compound 6.

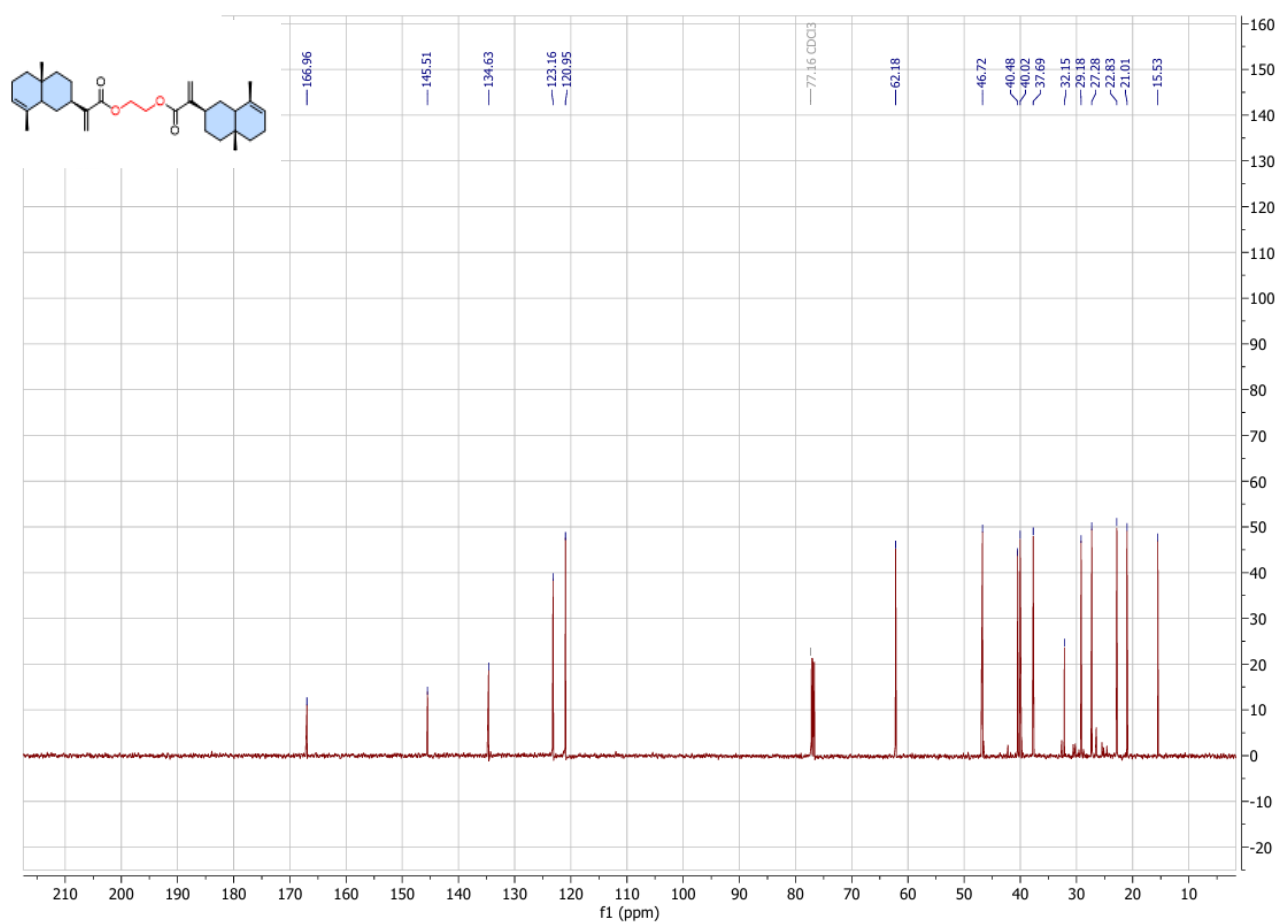


Figure S4. ^{13}C NMR (125 MHz, CDCl_3) spectrum of compound 6.

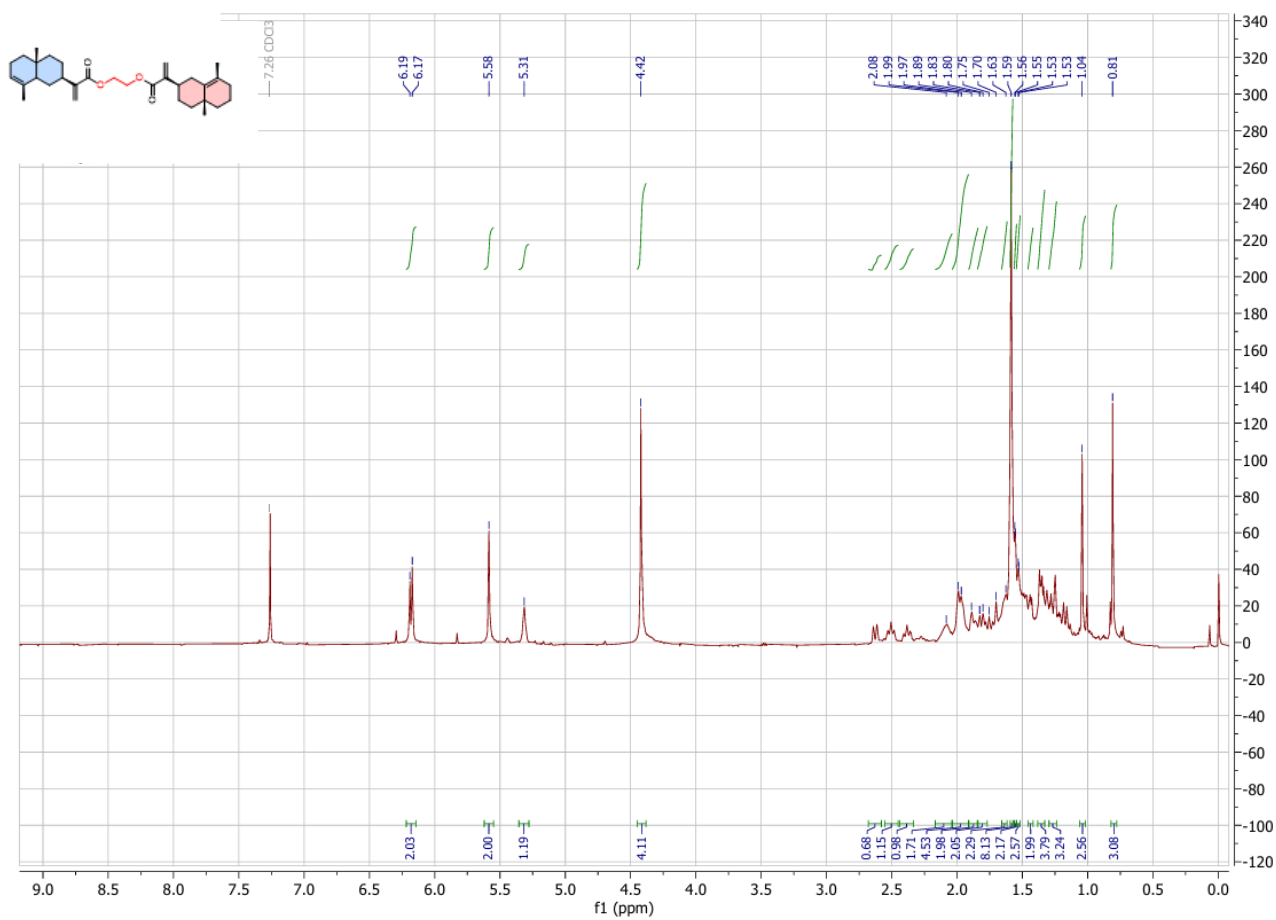


Figure S5. ¹H NMR (500 MHz, CDCl₃) spectrum of compound 7.

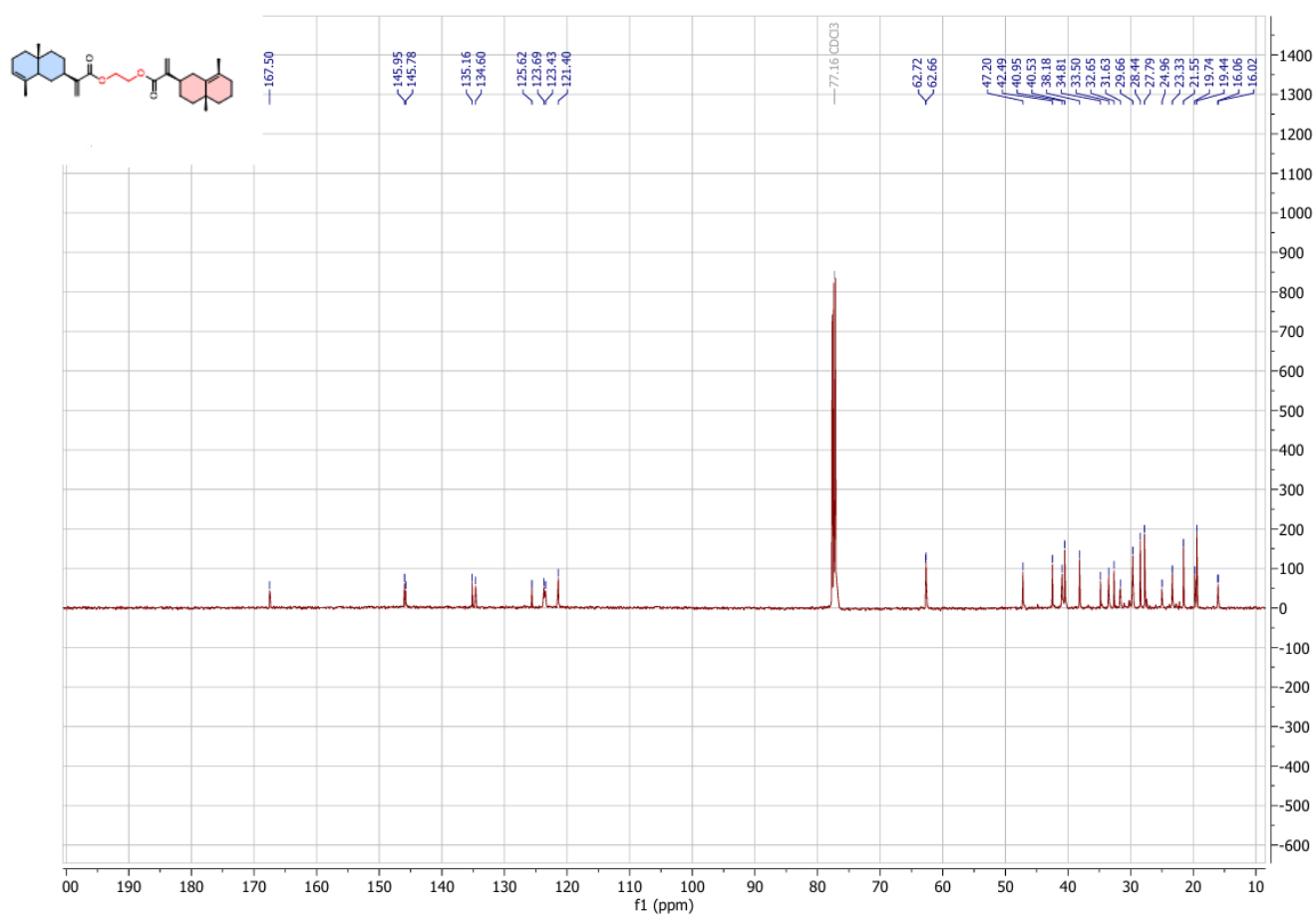


Figure S6. ¹³C NMR (125 MHz, CDCl₃) spectrum of compound 7.

MG-EV-ALES819-FR6-7 (1) #62-70 RT: 0.28-0.31 AV: 9 NL: 2.72E7
T: FTMS + p ESI Full ms [100.0000-1200.0000]

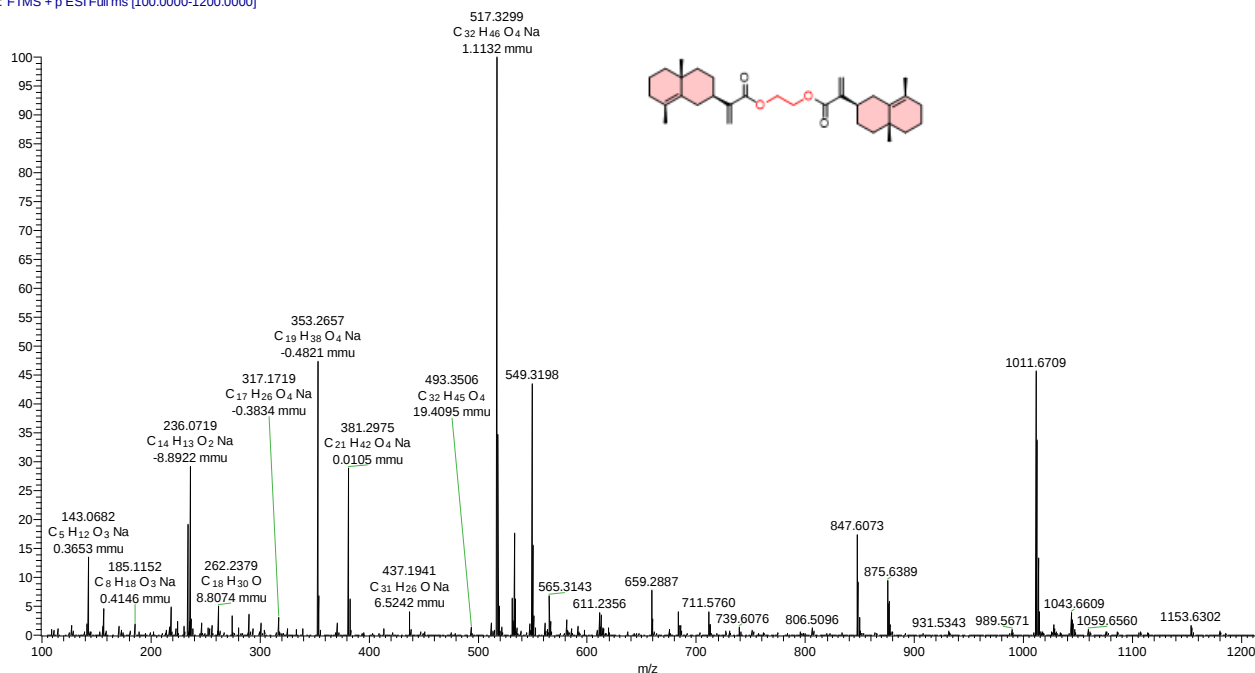


Figure S7. HR-ESIMS spectrum of compound 4.

MG-EV-ALES-842-FR3-4 (3) #129-146 RT: 0.59-0.66 AV: 18 NL: 1.13E8
T: FTMS + p ESI Full ms [100.0000-1500.0000]

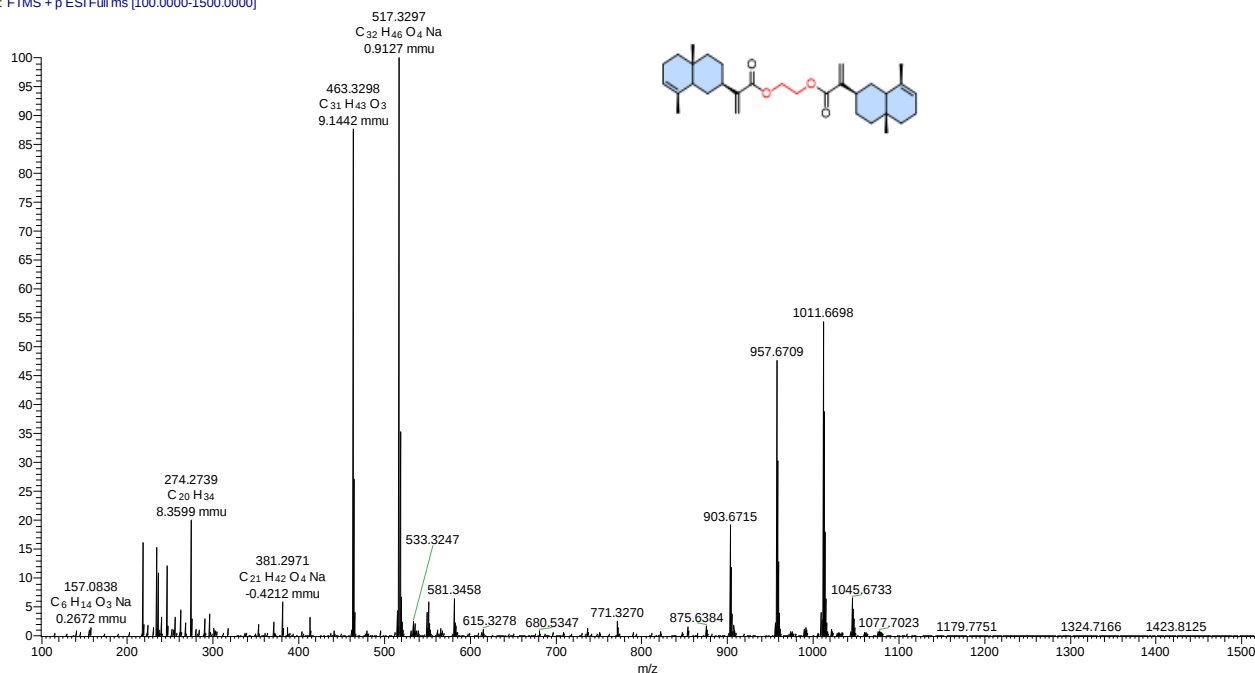


Figure S8. HR-ESIMS spectrum of compound 6.

MG-EV-ALES-844-FR4-8 (3) #1 RT: 0.00 AV: 1 NL: 2.56E7
T: FTMS + p ES/Full ms [100.0000-1200.0000]

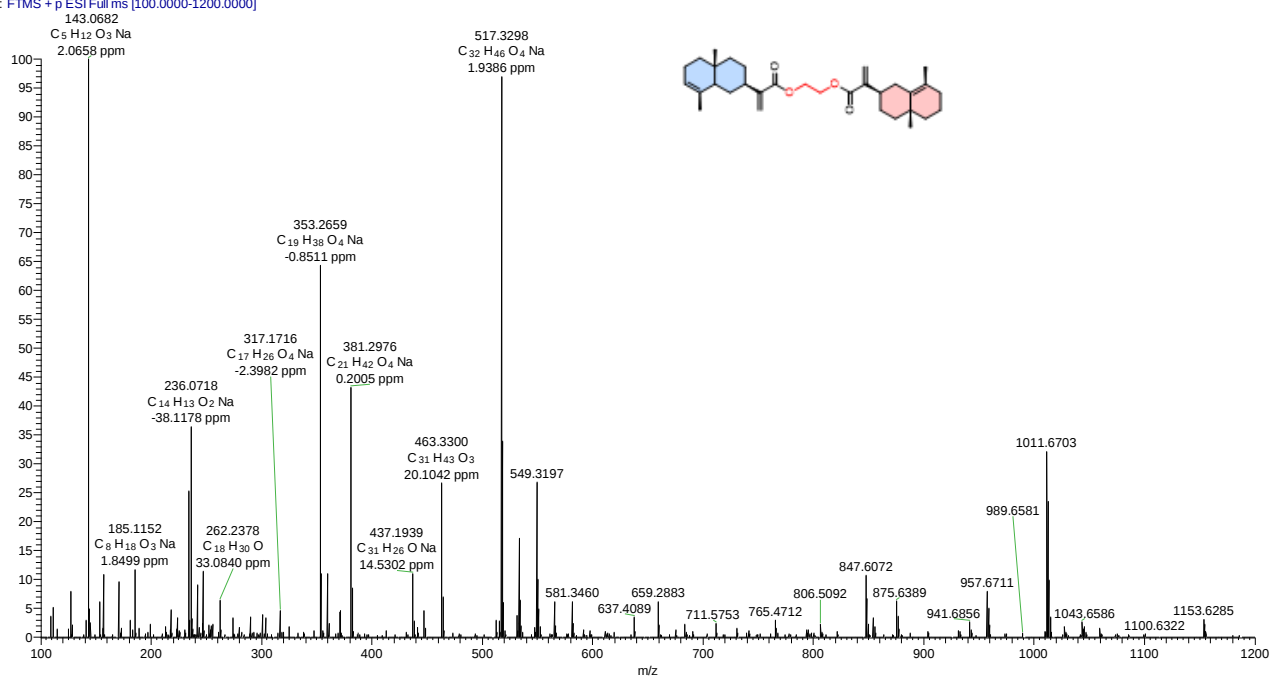


Figure S9. HR-ESIMS spectrum of compound 7.