

Supplementary Information

Development and Validation of a Rapid and Reliable RP-HPLC-PDA Method for the Quantification of Six Diterpenes in *Copaifera duckei*, *Copaifera reticulata* and *Copaifera multijuga* Oleoresins

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SpinWorks 2.5: PROTON CDCl3 (C:\Bruker\TOPSPIN) jkb 6

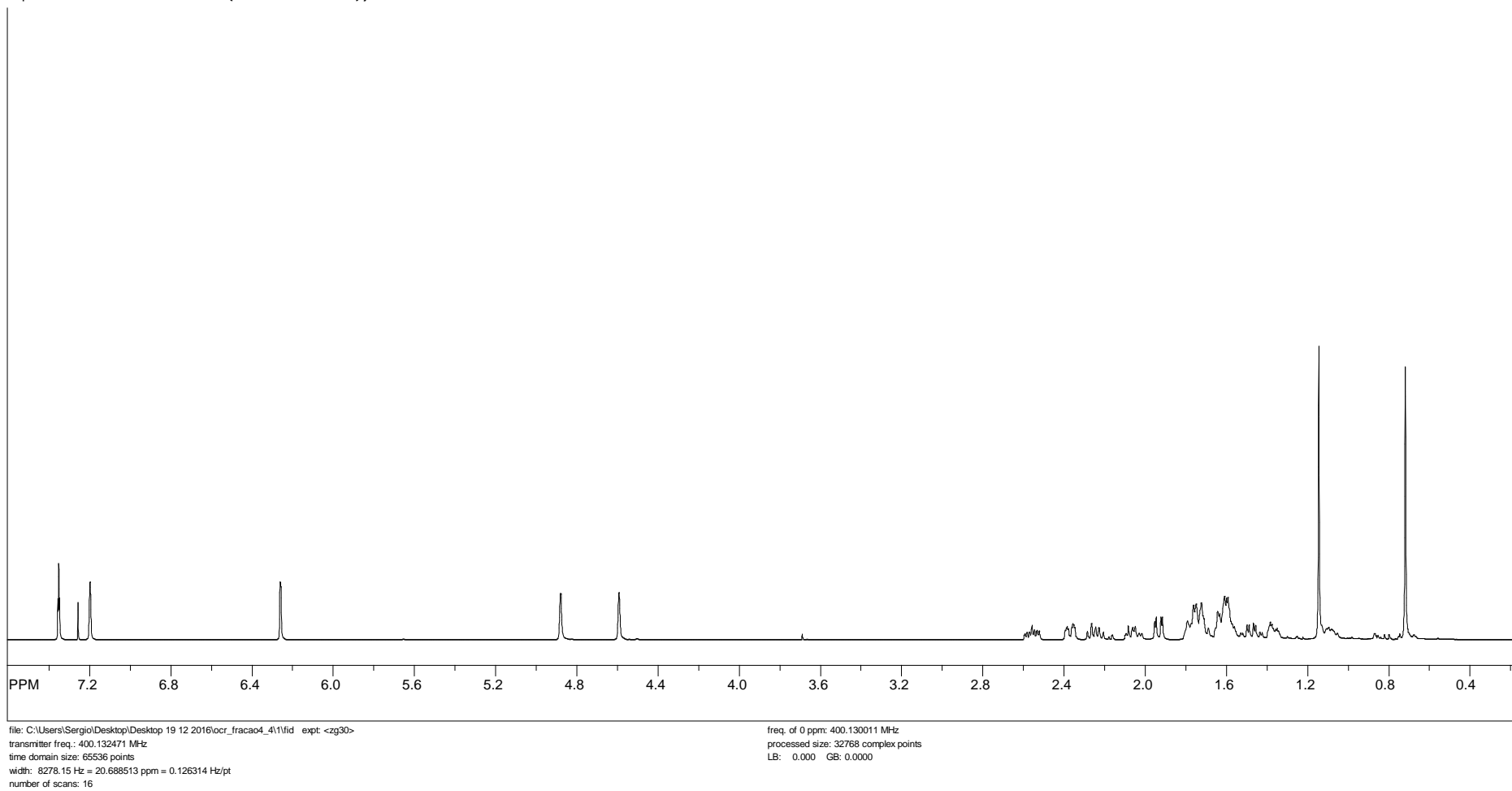


Figure S1. ^1H NMR (400 MHz, CDCl_3) spectroscopic data of (-)-polyalthic acid (compound **1**).

SpinWorks 2.5: C13CPD CDCl3 (C:\Bruker\TOPSPIN) jkb 4

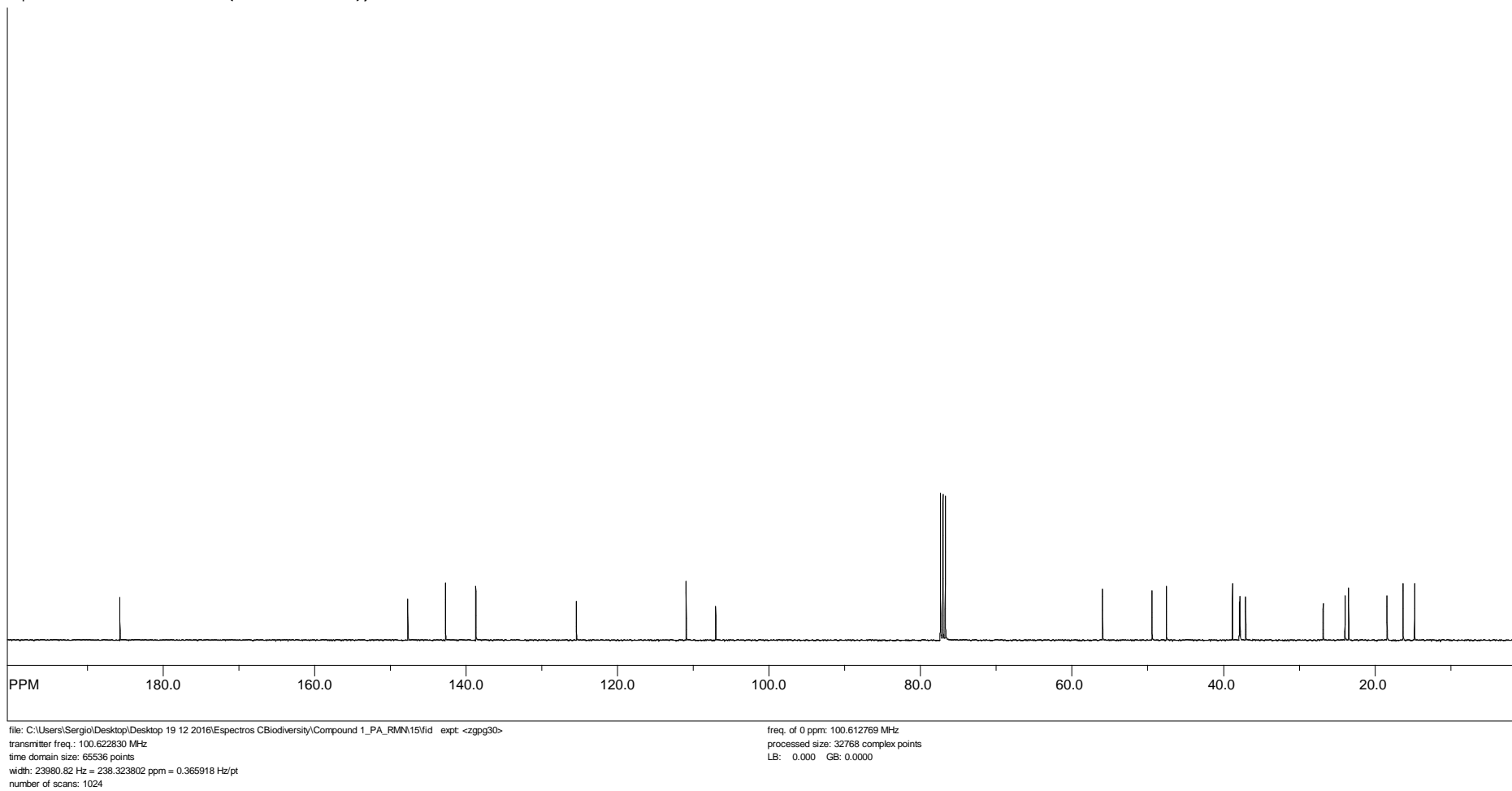
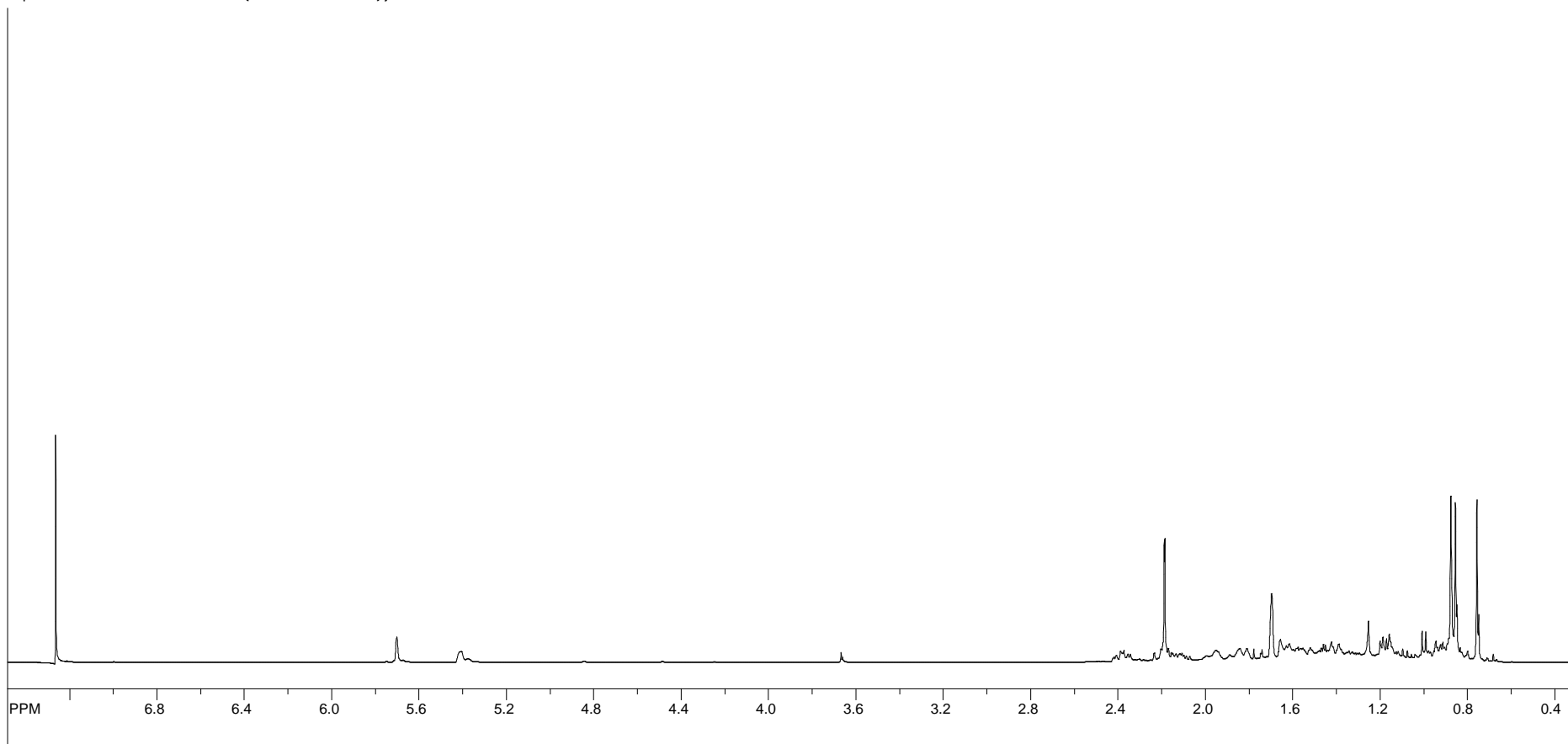


Figure S2. ^{13}C NMR (100 MHz, CDCl_3) spectroscopic data of (-)-polyalthic acid (compound **1**).

SpinWorks 2.5: PROTON CDCl3 {C:\Bruker\TOPSPIN} jkb 4



file: C:\Users\Sergio\Desktop\Desktop 19 12 2016\Espectros CBiodiversiy\Compound 2_RMN\1\fid exp: <zg30>
transmitter freq.: 400.132471 MHz
time domain size: 65536 points
width: 8278.15 Hz = 20.688513 ppm = 0.126314 Hz/pt
number of scans: 16

freq. of 0 ppm: 400.130008 MHz
processed size: 32768 complex points
LB: 0.000 GB: 0.0000

Figure S3. ^1H NMR (400 MHz, CDCl_3) spectroscopic data of (13*E*)-*ent*-labda-7,13-dien-15-oic acid (compound **2**).

SpinWorks 2.5: C13CPD CDCl3 (C:\Bruker\TOPSPIN) jkb 41

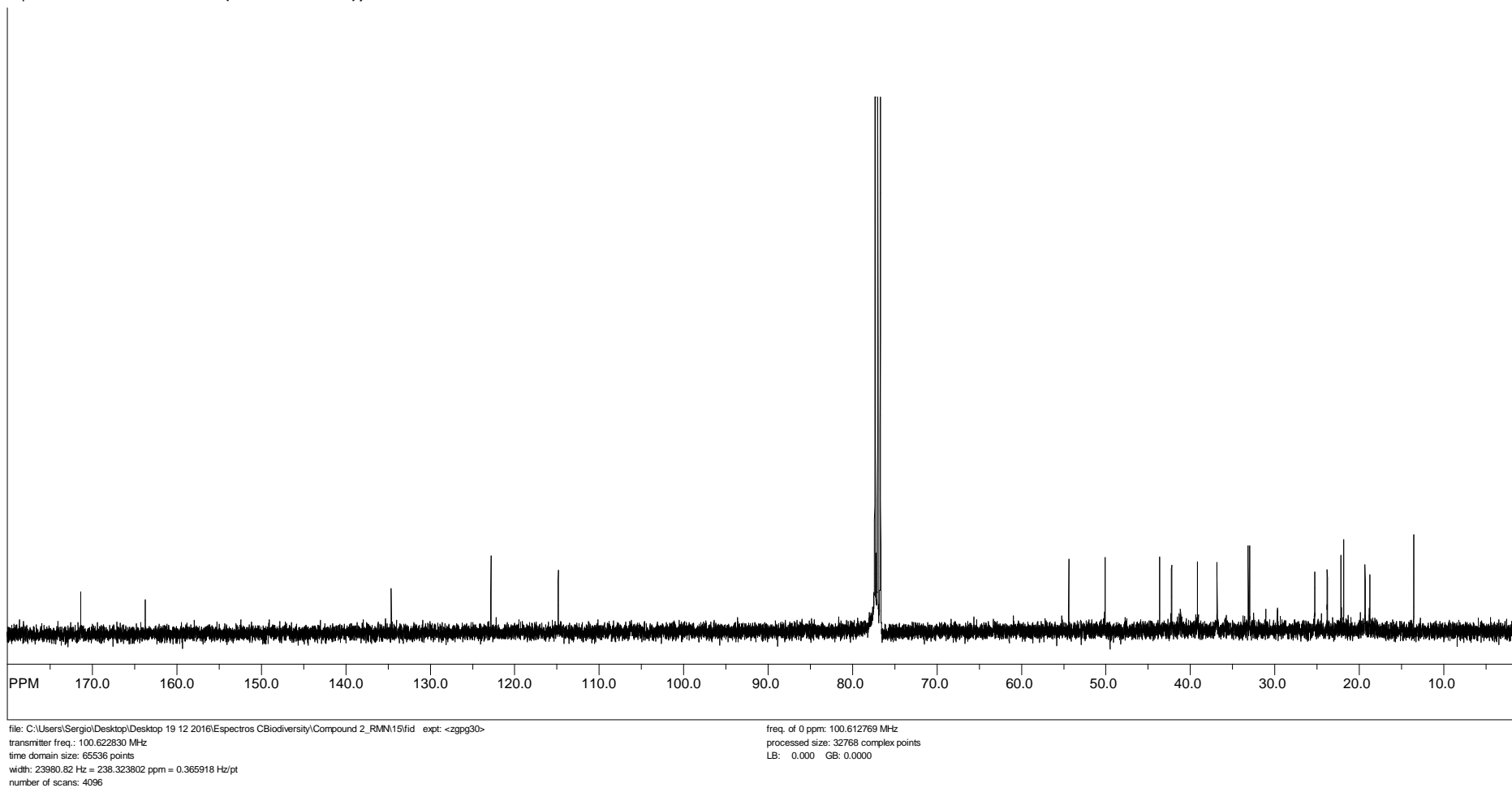


Figure S4. ^{13}C NMR (100 MHz, CDCl_3) spectroscopic data of (13*E*)-*ent*-labda-7,13-dien-15-oic acid (compound **2**).

SpinWorks 2.5: PROTON CDCl3 (C:\Bruker\TOPSPIN) sergio 33

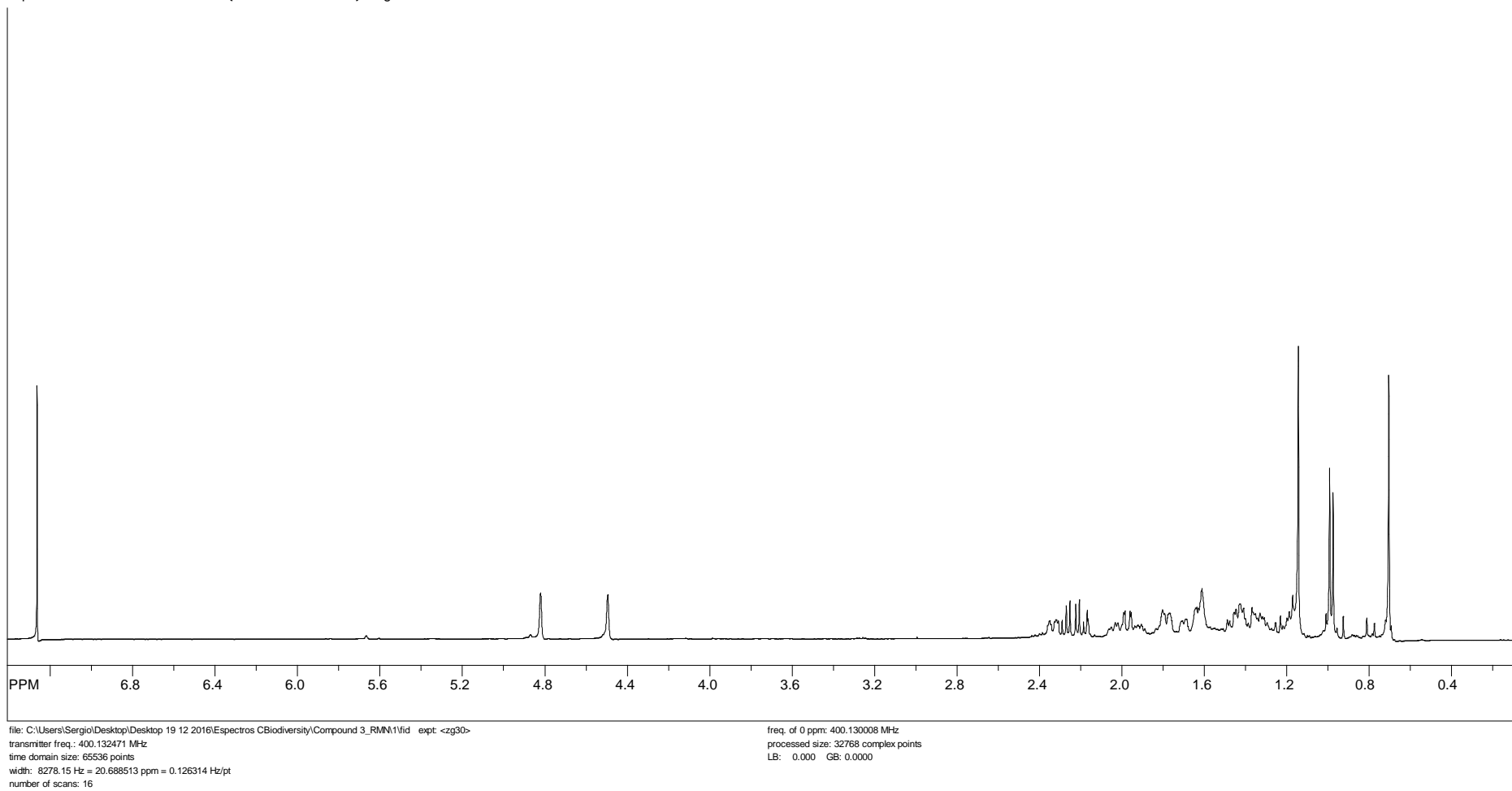


Figure S5. ^1H NMR (400 MHz, CDCl_3) spectroscopic data of *ent*-8(17)-labden-15,18-dioic acid (compound **3**).

SpinWorks 2.5: C13CPD CDCl3 (C:\Bruker\TOPSPIN) sergio 33

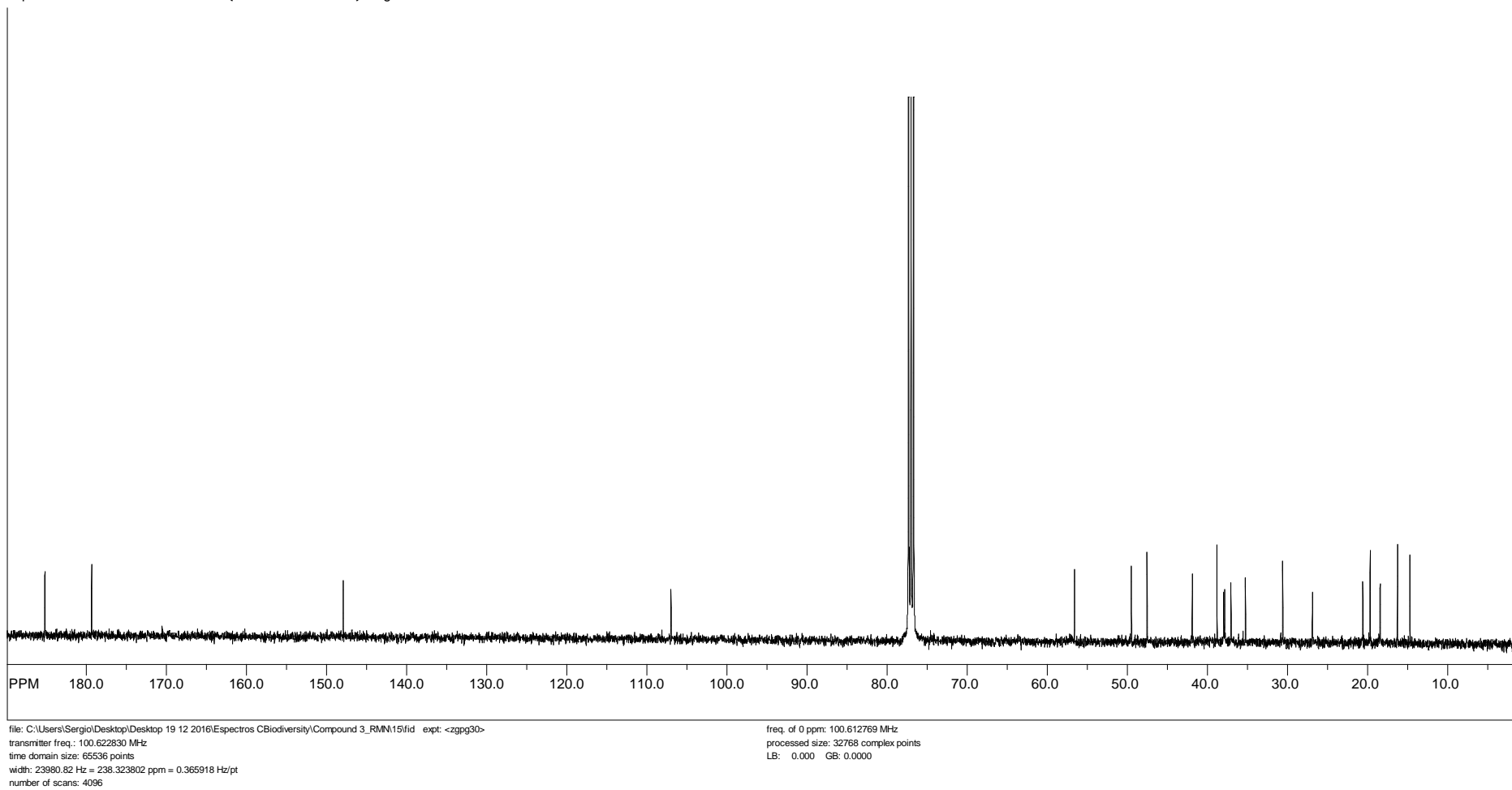


Figure S6. ^{13}C NMR (100 MHz, CDCl_3) spectroscopic data of *ent*-8(17)-labden-15,18-dioic acid (compound **3**).

SpinWorks 2.5: PROTON CDCl3 (C:\Bruker\TOPSPIN) jkb 16

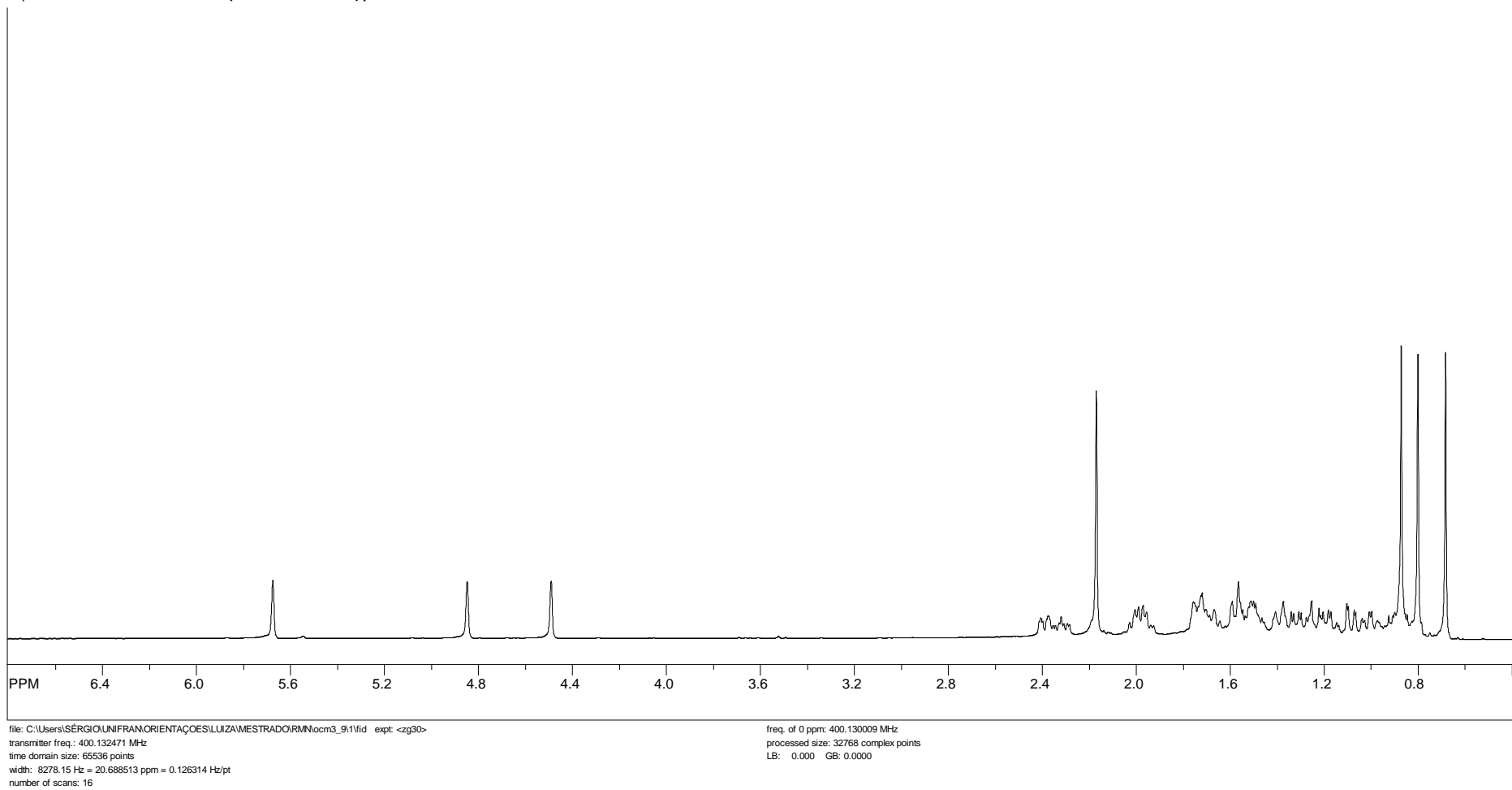


Figure S7. ^1H NMR (400 MHz, CDCl_3) spectroscopic data of (-)-copalic acid (compound **4**).

SpinWorks 2.5: C13CPD CDCl3 (C:\Bruker\TOPSPIN) jkb 16

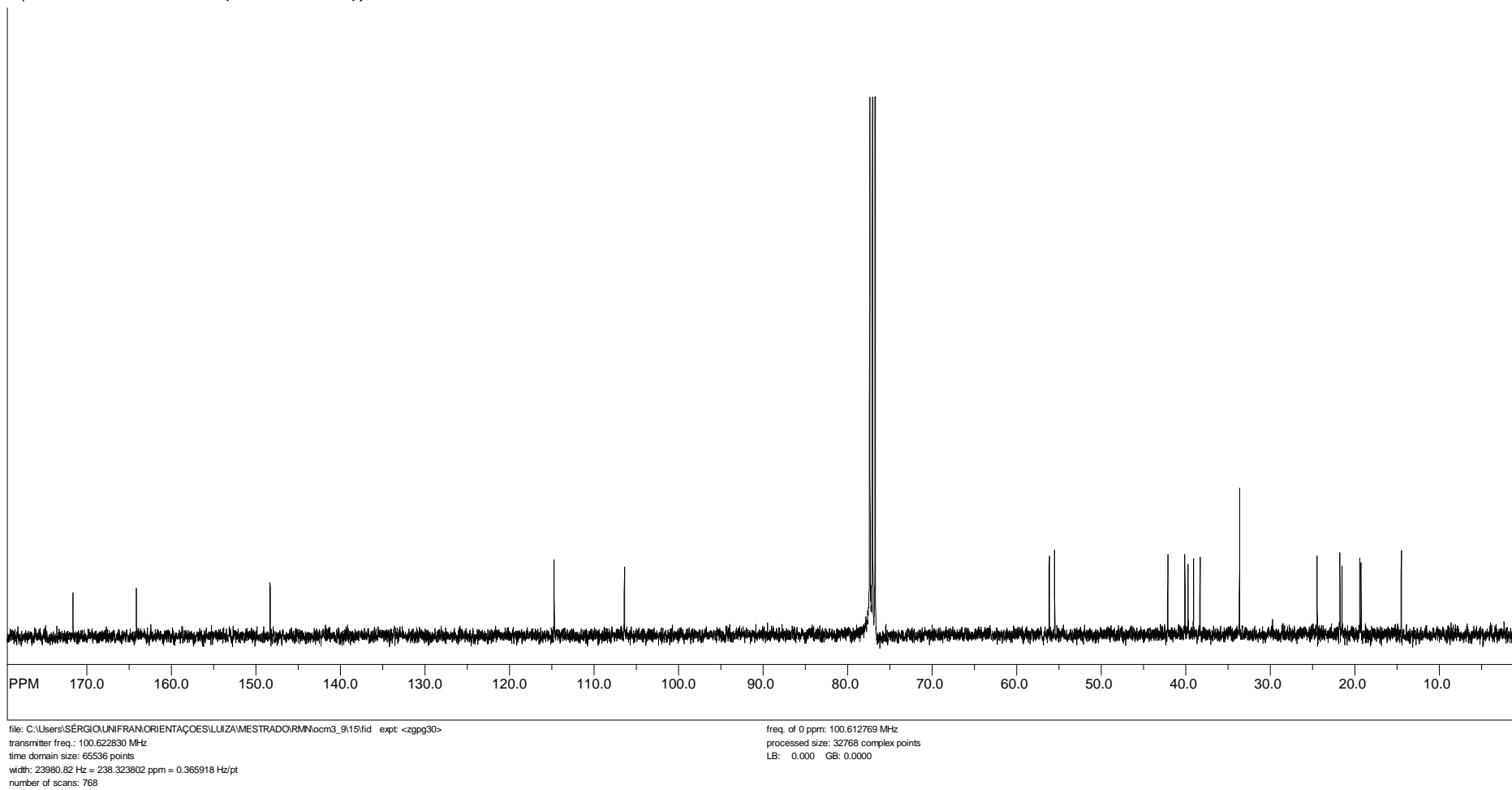


Figure S8. ^{13}C NMR (100 MHz, CDCl_3) spectroscopic data of (-)-copalic acid (compound **4**).

SpinWorks 2.5: PROTON CDCl3 (C:\Bruker\TOPSPIN) nf 30

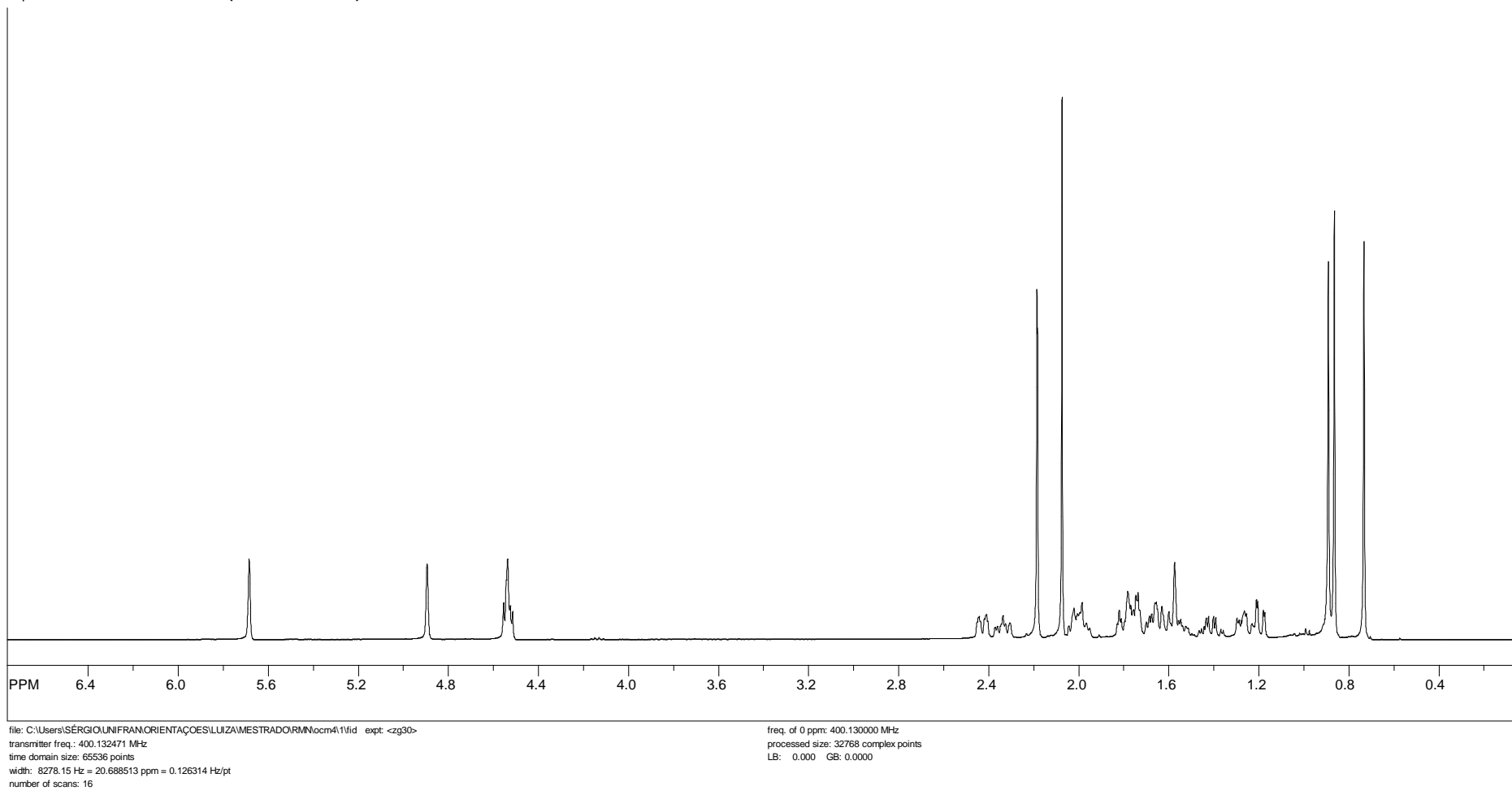


Figure S9. ^1H NMR (400 MHz, CDCl_3) spectroscopic data of $(-)$ -3 β -acetoxycopallic acid (compound **5**).

SpinWorks 2.5: C13CPD CDCI3 (C:\Bruker\TOPSPIN) nf 3

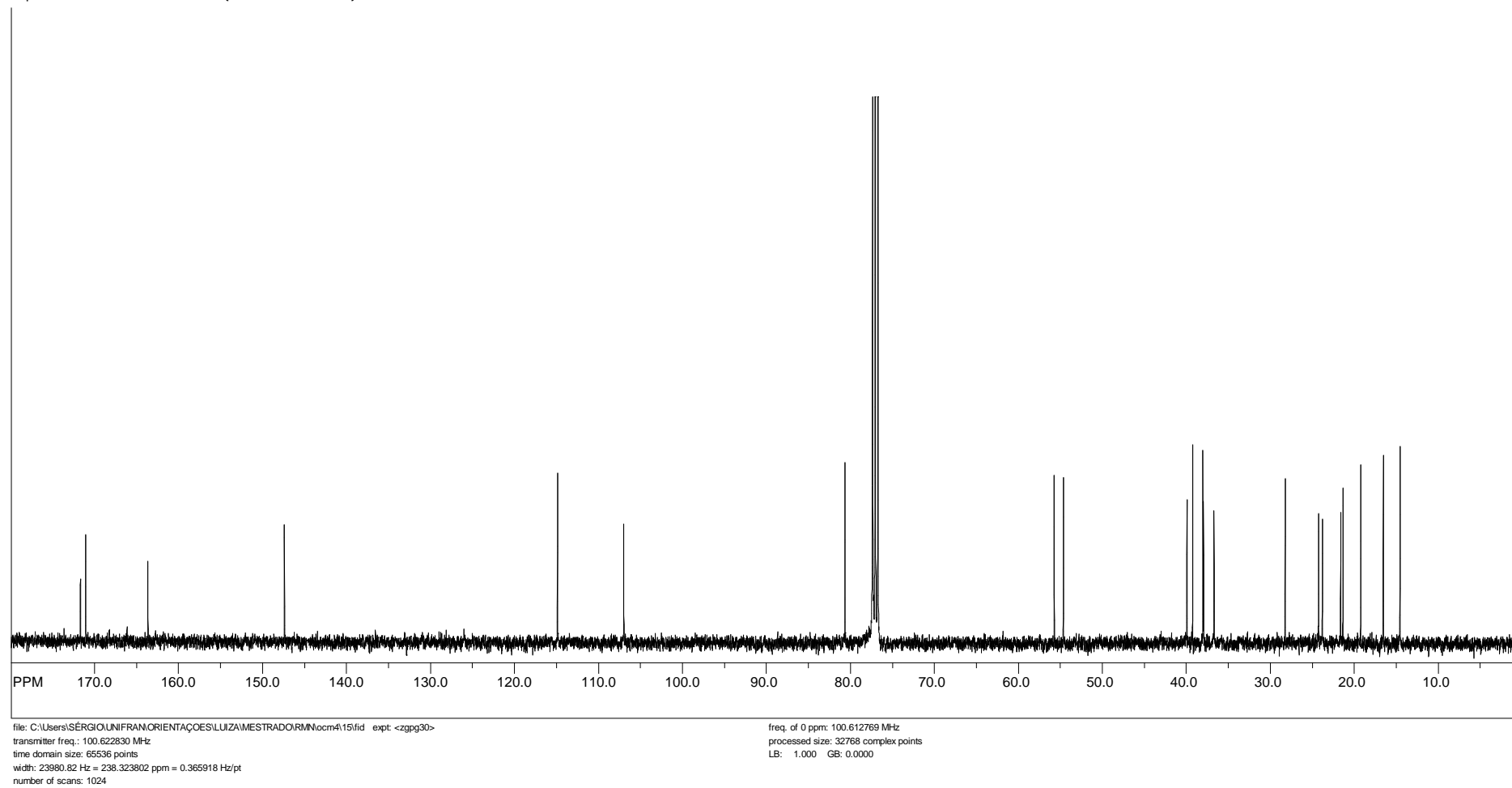


Figure S10. ^{13}C NMR (100 MHz, CDCl_3) spectroscopic data of $(-)$ -3 β -acetoxycopallic acid (compound **5**).

SpinWorks 2.5:

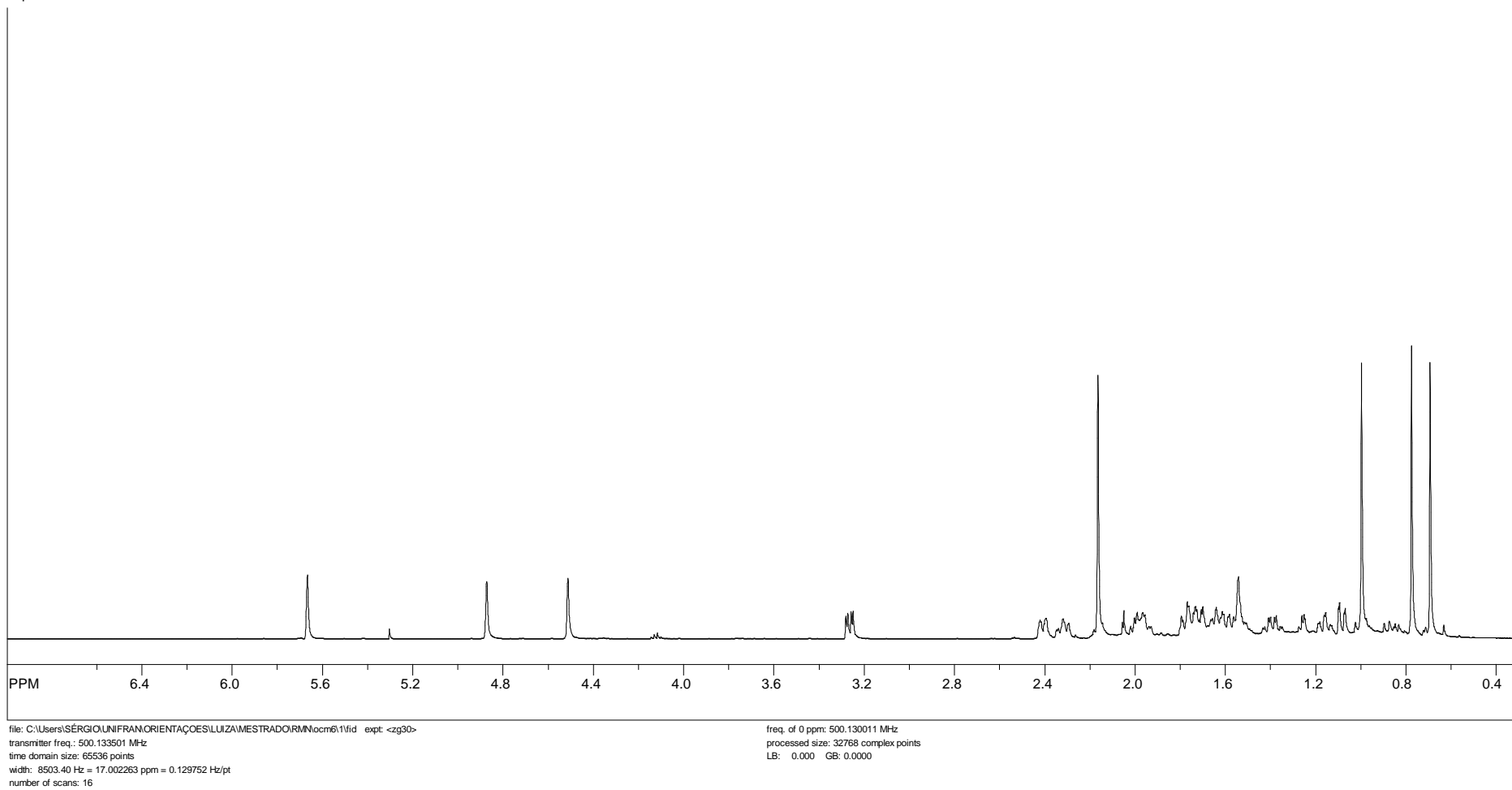


Figure S11. ^1H NMR (500 MHz, CDCl_3) spectroscopic data of $(-)$ -3 β -hydroxycopallic acid (compound **6**).

SpinWorks 2.5:

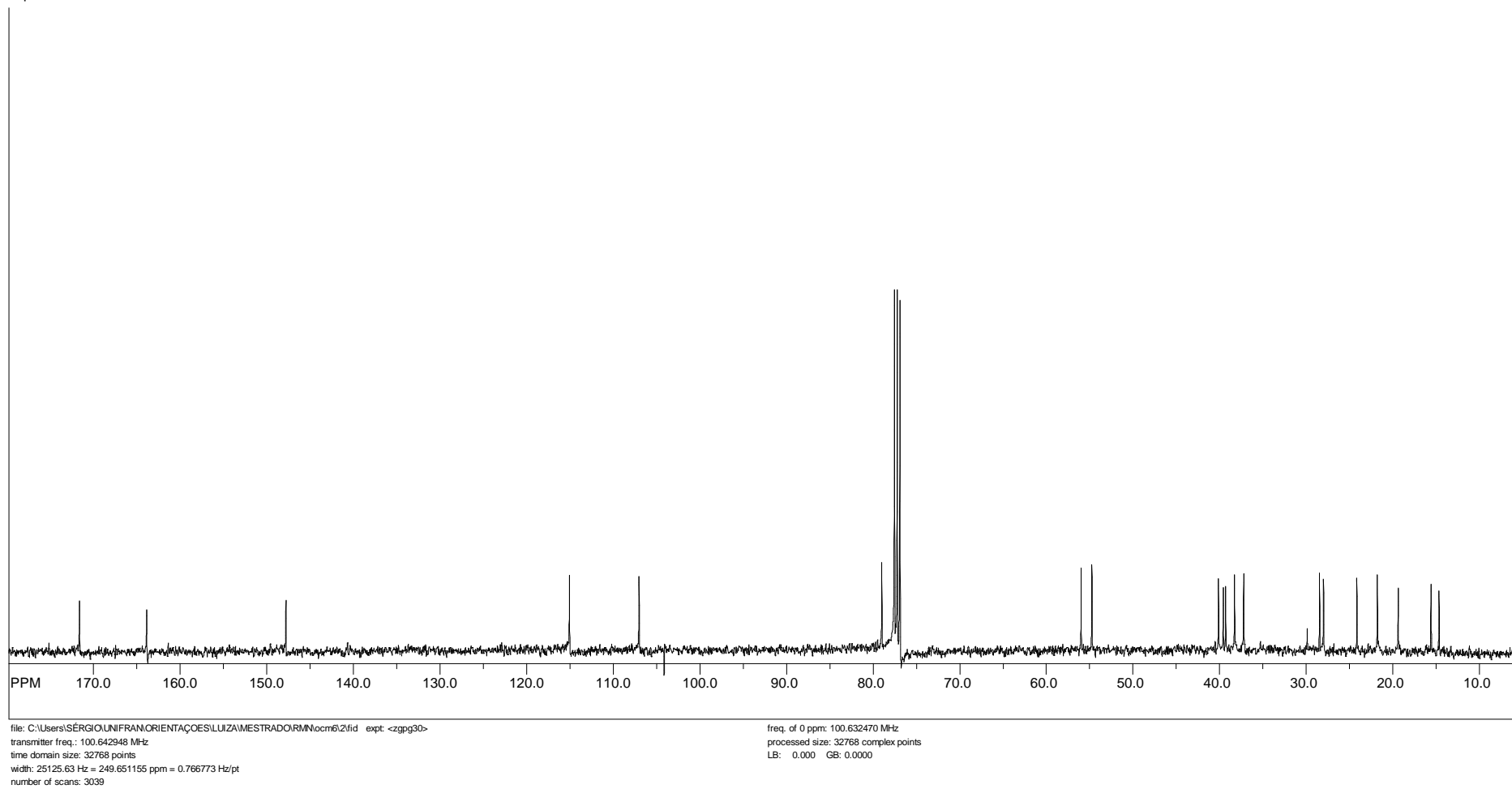


Figure S12. ^{13}C NMR (100 MHz, CDCl_3) spectroscopic data of $(-)$ -3 β -hydroxycopalic acid (compound **6**).

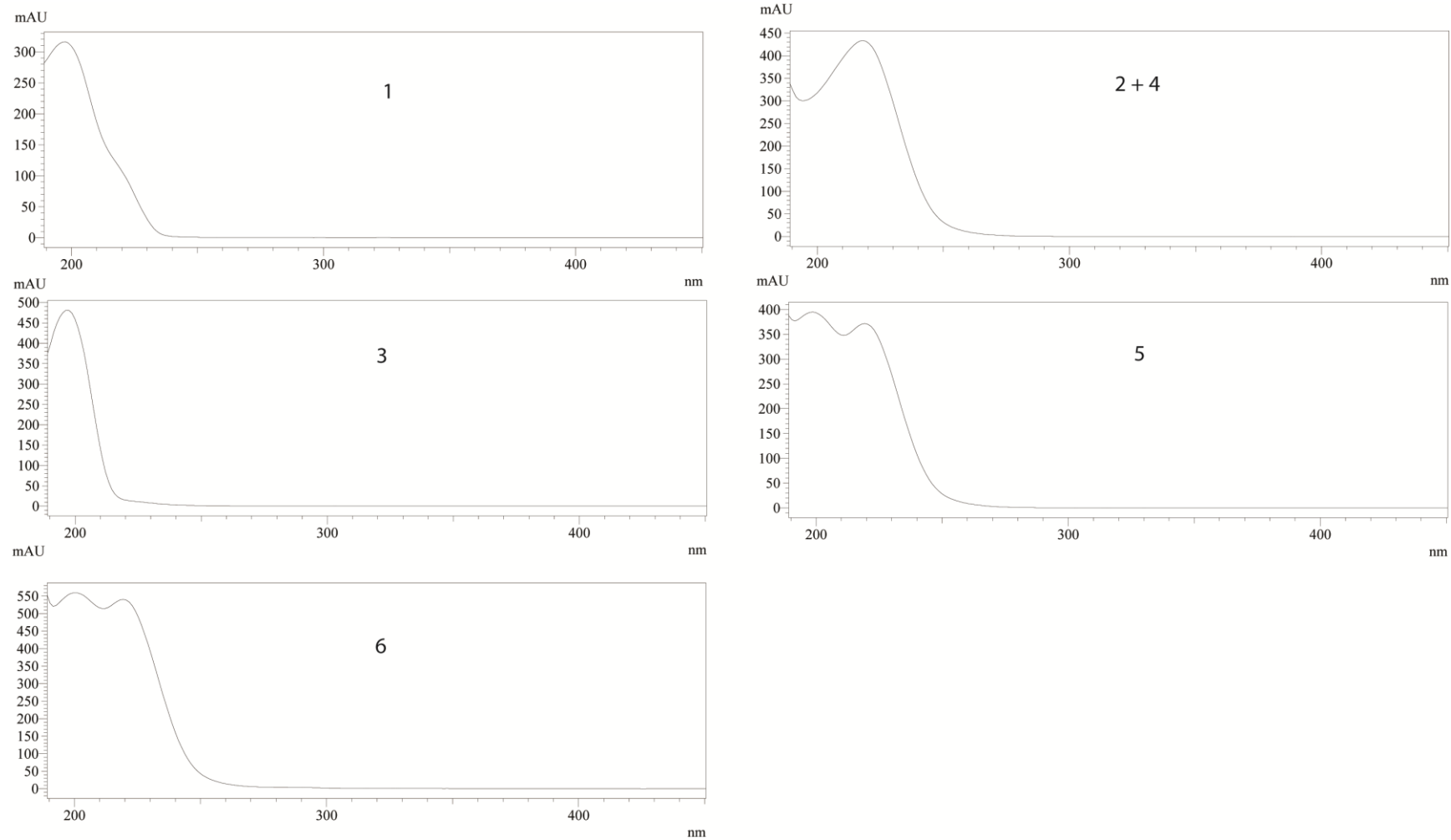


Figure S13. UV spectra of the standards: **(1)** (-)-polyalthic acid; **(2 + 4)** (13E)-ent-labda-7,13-dien-15-oic acid + (-)-copalic acid; **(3)** ent-8(17)-labden-15,18-dioic acid; **(5)** (-)-3β-acetoxycopalic acid and **(6)** (-)-3β-hydroxycopalic acid.