Supporting Information

FormalSyntheses of (-)-Platensimycin

Zhi-Wei Jiao[a], Yong-QiangTu[ac]*, Qing Zhang[a], Wen-Xing Liu[a], Shao-Hua Wang[a] and Min Wang*[b]

[a]School of Pharmacy & State Key Laboratory of Applied Organic Chemistry Lanzhou University, Lanzhou 730000, P. R. China; [b]College of Material, Chemistry and Chemical Engineering, Hangzhou Normal University, Hangzhou 310036, P. R. China; [c]Collaborative Innovation Center of Chemical Science and Engineering, Tianjin, China

E-mail: mwang@hznu.edu.cn

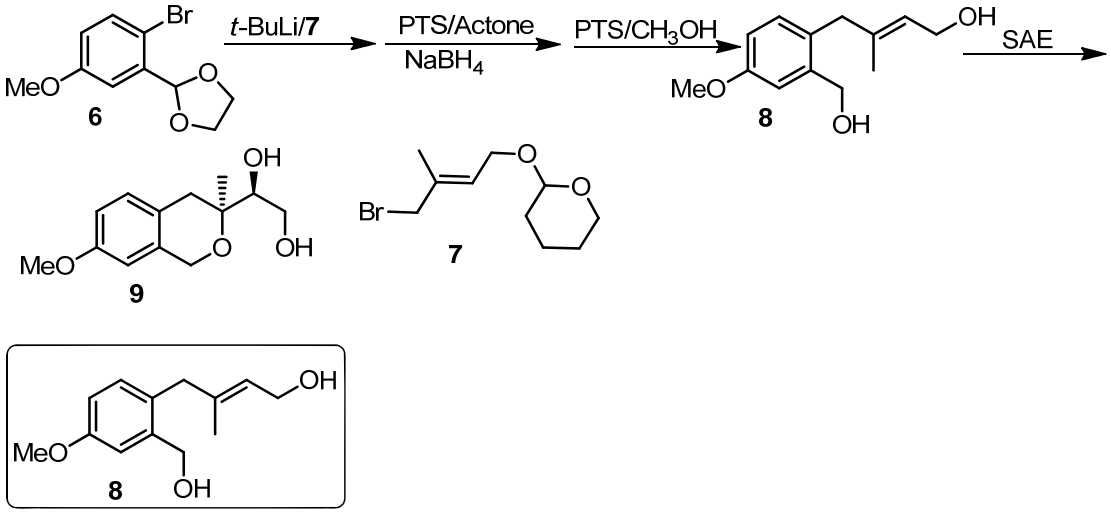
Context

Experimental Details

General Information:

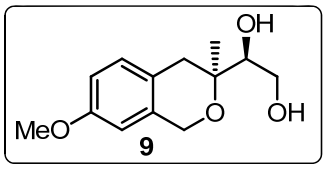
All reactions under standard conditions were monitored by thin-layer chromatography (TLC) on silica gel F254 plates. Column chromatography was performed on silica gel (200-300 meshes). Solvents for reaction were distilled prior to use, and all air- or moisture-sensitive reactions were conducted under an argon atmosphere. The melting points were measured using micro melting point apparatus. The optical rotations were measured using a 0.1-mL cell with a 1-cm path length. ^{1}H NMR and ^{13}C NMR spectra were recorded in $CDCl_3$ solution on instruments (400 MHz for ^{1}H NMR and 100 MHz for ^{13}C NMR) and spectral data were reported in ppm relative to tetramethylsilane (TMS) as internal standard. IR spectra were recorded on a fourier transform infrared spectrometer. EI-MS spectra (MS) were measured on spectrometer by direct inlet at 70 eV and signals were given in m/z with relative intensity (%) in brackets. High-resolution mass spectral analysis (HRMS) data were measured by means of the ESI technique on Fourier transform ion cyclotron resonance mass analyzer.

Studies on the synthesis of (-)-platensimycin



To a solution of **6** (4.6 g, 18 mmol) in Et_2O (100 mL) was added *t*-BuLi (1.6 M, 13 mL, 20.8 mmol) at -78^{o}C under an argon atmosphere. After stirring at -78^{o}C for two hours, the resulting mixture was warmed to -30^{o}C spontaneously, a solution of **7** (5.8 g, 23.4 mmol) in Et_2O (5 mL) was added dropwise. Then the resulting mixture was warmed to room temperature and stirred overnight before it was quenched with saturated aqueous NH_4Cl (10 mL). The organic layer was separated and aqueous layer

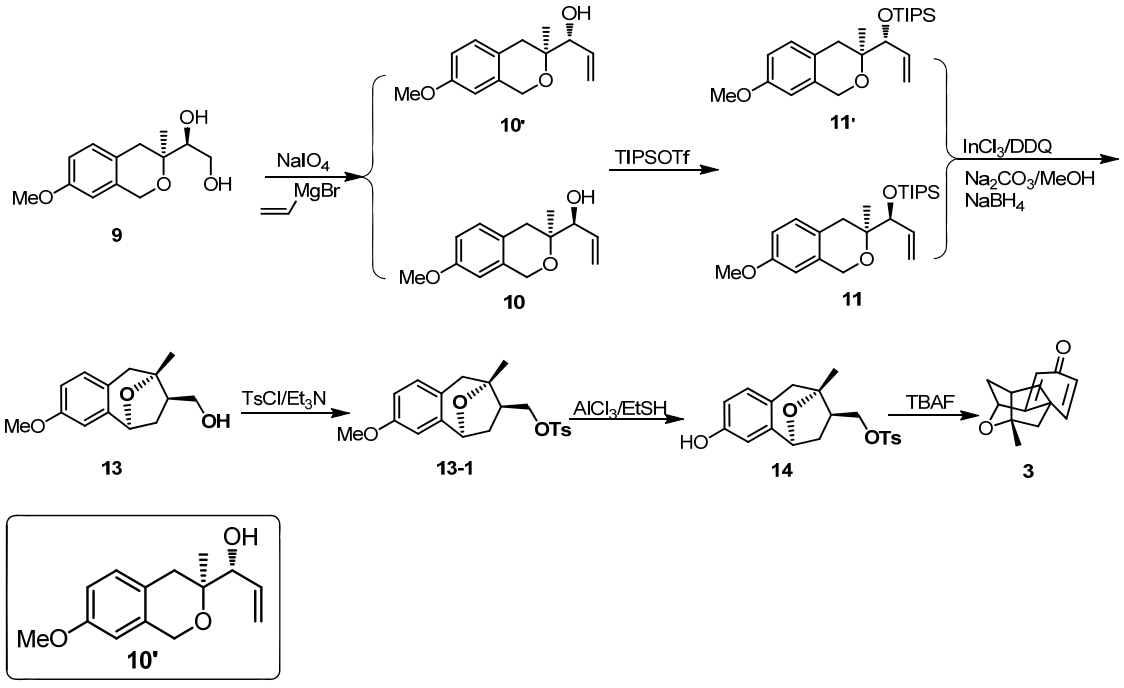
was extracted with EtOAc/Et_2O (1: 1) (3 × 100 mL). The combined organic layer was washed with brine (3 × 30 mL), dried over Na_2SO_4 and concentrated under vacuum. The residue was dissolved in acetone/H_2O (1: 1) (50 mL) and PTS·H_2O (687 mg, 3.6 mmol) was added at room temperature, 1 hour later, saturated aqueous $NaHCO_3$ (10 mL) was added, most of the acetone was removed under vacuum. Aqueous layer was extracted with EtOAc/Et_2O (1: 1) (3 × 100 mL). The combined organic layer was washed with brine (3 × 30 mL), dried over Na_2SO_4 and concentrated under vacuum. Then the residue was dissolved in MeOH (30 mL) and $NaBH_4$ (684 mg, 18 mmol) was added at 0°C, 30 minutes later, saturated aqueous NH_4Cl (20 mL) was added, most of the MeOH was removed under vacuum. Aqueous layer was extracted with EtOAc (3 × 80 mL). The combined organic layer was washed with brine (3 × 20 mL), dried over Na_2SO_4 and concentrated under vacuum. The residue was dissolved in MeOH (30 mL) and PTS·H_2O (687 mg, 3.6 mmol) was added at room temperature, two hour later, saturated aqueous $NaHCO_3$ (20 mL) was added, most of the MeOH was removed under vacuum. The mixture was extracted with CH_2Cl_2 (3 × 50 mL) and EtOAc (2 × 50 mL) respectively. The organic layer was washed with brine (3 × 20 mL). The combined organic layer was dried over Na_2SO_4 and concentrated under vacuum and the residue was purified via column chromatography on silica gel (petroleum ether: ethyl acetate = 1: 1) to give product **8** as a colorless oil (1.28 g, 5.77 mmol, 32 % yield). ^{1}H NMR ($CDCl_3$, 400 MHz) δ 7.01 (d, J = 8.4 Hz, 1H), 6.98 (d, J = 2.4 Hz, 1H), 6.73 (dd, J = 8.4 Hz, 2.4 Hz, 1H), 5.17 (t, J = 6.6 Hz, 1H), 4.54 (s, 2H), 4.04 (d, J = 6.8 Hz, 2H), 3.75 (s, 3H), 3.24 (brsm, 4H), 1.60 (s, 3H); ^{13}C NMR ($CDCl_3$, 100 MHz) δ 16.4, 41.4, 55.1, 58.8, 62.1, 112.6, 113.3, 124.4, 128.4, 131.4, 138.5, 140.7, 158.3. HRMS(ESI) calcd for $C_{13}H_{22}O_3N[M+NH_4]^+$: 240.1594, found 240.1597.



9

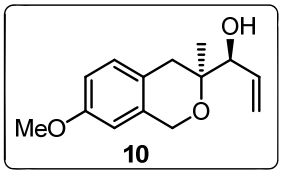
To a 50 mL round bottom flask containing 4Å MS (200 mg) in CH_2Cl_2 (8.0 mL) was added (+) DET (396 μL, 2.32 mmol), Ti(*i*-PrO)$_4$ (588 μL, 1.94 mmol) successively at -25°C under an argon atmosphere, 20 minutes later, *t*-BuO_2H (5.5 M, 700 μL, 3.87 mmol) was added. 40 minutes later, the mixture was cooled to -50°C and a solution of **8** (285 mg, 1.29 mmol) in CH_2Cl_2 (2.0 mL) was added dropwise. 12 hours later, the

mixture was warmed to room temperature and saturated aqueous Roche salt (10 mL) was added. After stirring at room temperature for 6 hours, the mixture was filtered via a short column on silica gel with EtOAc as eluent, the filtrate was concentrated under vacuum. The residue was purified via column chromatography on silica gel (petroleum ether: ethyl acetate = 1: 1) to give product **9** as a white solid (274 mg, 1.15 mmol, 90% yield, 91% ee). Mp: 79-81°C. $[\alpha]^{19}_{D}$ = -40.0 (*c* = 1.0, $CHCl_3$). ^1H NMR ($CDCl_3$, 400 MHz) δ 7.02 (d, *J* = 8.40 Hz, 1H), 6.76 (dd, *J* = 8.4 Hz, 2.2 Hz, 1H), 6.54 (d, *J* = 2.0 Hz, 1H), 4.76 (d, *J* = 15.6 Hz, 1H), 4.72 (d, *J* = 15.6 Hz, 1H), 3.67-3.85 (m, 3H), 3.77 (s, 3H), 3.15 (brs, 2H), 3.01 (d, *J* = 15.6 Hz, 1H), 2.41 (d, *J* = 16.0 Hz, 1H), 1.19 (s, 1H); ^{13}C NMR ($CDCl_3$, 100 MHz) δ 18.3, 33.1, 55.2, 62.6, 62.7, 75.2, 77.1, 108.6, 113.0, 124.0, 130.3, 134.4, 157.7. HRMS(ESI) calcd for $C_{13}H_{19}O_4$ $[M+H]^+$: 239.1278, found 239.1275. Enantiomeric excess is 91% determined by HPLC (Chiralcel AD, Hexane/Isopropanol 90/10, flow rate = 1.0 mL/min, 230 nm): major isomer: t_R= 16.83 min; minor isomer: t_R = 20.37 min.



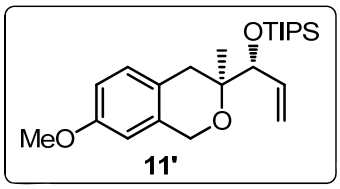
To a solution of **9** (168.5 mg, 0.708 mmol) in CH_2Cl_2 (8.0 mL) was added aqueous $NaHCO_3$ (90 μL) and $NaIO_4$ (302 mg, 1.42 mmol) successively at 0°C. One hour later, the mixture was filtered via a short silica gel column with petroleum ether: ethyl acetate = 4: 1 as elute, and the filtrate was concentrated under vacuum. The residue was dissolved in dry THF (5 mL) and vinylmagnesium bromide solution (0.7 M, 1.1 mL, 0.77 mmol) was added at 0°C dropwise, 10 minutes later, saturated aqueous NH_4Cl (5 mL) was added. The organic layer was separated and aqueous layer was

extracted with EtOAc (3 × 50 mL). The combined organic layer was washed with brine (3 × 10 mL), dried over Na_2SO_4 and concentrated under vacuum. The residue was purified via column chromatography on silica gel (petroleum ether: ethyl acetate = 15: 1) to give product **10′** (47.8 mg, 29% yield) and **10** (97.5 mg, 59% yield). $[\alpha]^{19}_D$ = -41.0 (*c* = 1.0, $CHCl_3$). ^{1}H NMR ($CDCl_3$, 400 MHz) δ 7.04 (d, *J* = 8.4 Hz, 1H), 6.77 (dd, *J* = 8.4 Hz, 2.8 Hz, 1H), 6.56 (d, *J* = 2.4 Hz, 1H), 5.92-6.01 (m, 1H), 5.45 (dt, *J* = 17.2 Hz, 1.4 Hz, 1H), 5.31 (dt, *J* = 10.8 Hz, 1.4 Hz, 1H), 4.80 (s, 2H), 4.12 (d, *J* = 6.4 Hz, 1H), 3.79 (s, 3H), 3.11 (d, *J* = 16.0 Hz, 1H), 2.78 (brs, 1H), 2.31 (d, *J* = 16.0 Hz, 1H), 1.17 (s, 3H); ^{13}C NMR ($CDCl_3$, 100 MHz) δ 18.7, 31.0, 55.2, 63.1, 75.2, 78.7, 108.5, 113.0, 118.0, 124.4, 130.4, 134.5, 135.4, 157.7. HRMS(ESI) calcd for $C_{14}H_{22}O_4N[M+NH_4]^+$: 252.1594, found 252.1591.



10

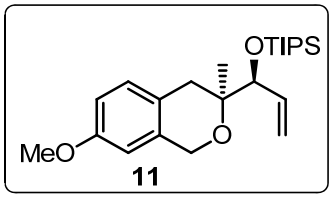
$[\alpha]^{19}_D$ = -40.0 (*c* = 1.0, $CHCl_3$). ^{1}H NMR ($CDCl_3$, 400 MHz) δ 7.02 (d, *J* = 8.4 Hz, 1H), 6.77 (dd, *J* = 8.4 Hz, 2.4 Hz, 1H), 6.57 (d, *J* = 2.4 Hz, 1H), 5.88-5.97 (m, 1H), 5.39 (dt, *J* = 17.2 Hz, 1.4 Hz, 1H), 5.27-5.30 (m, 1H), 4.77 (s, 2H), 4.09 (d, *J* = 6.4 Hz, 1H), 3.78 (s, 3H), 2.86 (d, *J* = 15.6 Hz, 1H), 2.72 (brs, 1H), 2.46 (d, *J* = 15.6 Hz, 1H), 1.16 (s, 3H); ^{13}C NMR ($CDCl_3$, 100 MHz) δ 16.8, 34.3, 55.2, 62.9, 75.5, 78.2, 108.7, 113.0, 117.7, 123.9, 130.2, 134.7, 135.5, 157.8. HRMS(ESI) calcd for $C_{14}H_{22}O_4N[M+NH_4]^+$: 252.1594, found 252.1591.



11'

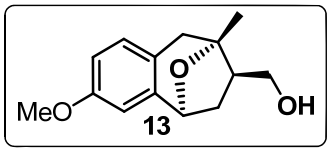
To a solution of **10′**(115 mg, 0.49 mmol) in CH_2Cl_2 (6 mL) was added pyridine (120 μL, 1.5 mmol) and TIPSOTf (180 μL, 97%, 0.64 mmol) successively at 0^{o}C. Three hours later, saturated aqueous $NaHCO_3$ (5 mL) was added. The organic layer was separated and aqueous layer was extracted with Et_2O (3 × 30 mL). The combined organic layer was washed with saturated aqueous $CuSO_4$ (2 × 10 mL), brine (3 × 10 mL), dried over Na_2SO_4 and concentrated under vacuum. The residue was purified by column chromatography on silica gel (petroleum ether: ethyl acetate = 100: 1) to give product **11′** as a colorless oil (173 mg, 0.43 mmol, 88% yield). $[\alpha]^{21}_D$ = -11.0 (*c* = 1.0, $CHCl_3$). ^{1}H NMR ($CDCl_3$, 400 MHz) δ 7.03 (d, *J* = 8.0 Hz, 1H), 6.75 (dd, *J* = 8.4 Hz,

2.4 Hz, 1H), 6.56 (d, *J* = 2.4 Hz, 1H), 5.94-6.03 (m, 1H), 5.24-5.32 (m, 1H), 4.74 (t, *J* = 16.2 Hz, 2H), 4.20 (d, *J* = 7.6 Hz, 1H), 3.79 (s, 3H), 3.03 (d, *J* = 16.0 Hz, 1H), 2.56 (d, *J* = 15.6 Hz, 1H), 1.16 (s, 3H), 1.06-1.09 (m, 21H); ^{13}C NMR ($CDCl_3$, 100 MHz) δ 12.7, 18.2, 18.5, 34.4, 55.3, 63.2, 76.0, 79.4, 108.6, 112.8, 117.3, 125.0, 130.3, 135.3, 138.1, 157.7. HRMS(ESI) calcd for $C_{22}H_{39}O_3Si[M+H]^+$: 391.2663, found 391.2670.



11

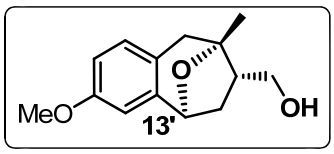
To a solution of **10** (84 mg, 0.36 mmol) in CH_2Cl_2 (5 mL) was added pyridine (87 μL, 1.10 mmol) and TIPSOTf (130 μL, 97%, 0.47 mmol) successively at 0^{o}C. Three hours later, saturated aqueous $NaHCO_3$ (5 mL) was added. The organic layer was separated and aqueous layer was extracted with Et_2O (3 × 30 mL). The combined organic layer was washed with saturated aqueous $CuSO_4$ (2 × 10 mL), brine (3 × 10 mL), dried over Na_2SO_4 and concentrated under vacuum. The residue was purified by column chromatography on silica gel (petroleum ether: ethyl acetate = 100: 1) to give product **11** as a colorless oil (126 mg, 0.31 mmol, 86% yield). $[\alpha]^{21}{}_D$ = -43.0 (*c* = 1.0, $CHCl_3$). ^{1}H NMR ($CDCl_3$, 400 MHz) δ 7.01 (d, *J* = 8.4 Hz, 1H), 6.75 (dd, *J* = 8.4 Hz, 2.4 Hz, 1H), 6.56 (d, *J* = 2.4 Hz, 1H), 5.88-5.97 (m, 1H), 5.20-5.30 (m, 1H), 4.72 (s, 2H), 4.23 (d, *J* = 7.2 Hz, 1H), 3.79 (s, 3H), 2.80 (d, *J* = 16.0 Hz, 1H), 2.40 (d, *J* = 15.6 Hz, 1H), 1.19 (s, 3H), 1.09-1.10 (m, 21H); ^{13}C NMR ($CDCl_3$, 100 MHz) δ 12.7, 18.15, 18.19, 34.1, 55.3, 62.9, 76.1, 80.5, 108.7, 112.7, 117.0, 125.1, 130.2, 135.7, 137.9, 157.7. HRMS(ESI) calcd for $C_{22}H_{39}O_3Si[M+H]^+$: 391.2663, found 391.2661.



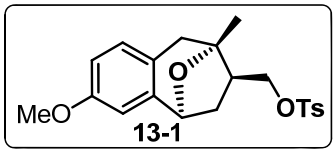
13

To a solution of a mixture of **11** and **11´** (100 mg, 0.256 mmol) in CH_2Cl_2 (5.0 mL) was added 4Å (150 mg), 2, 6-dibromopyridine (243 mg, 1.03 mmol) and $InCl_3$ (6.0 mg, 0.026 mmol.) successively at room temperature under an argon atmosphere, 15 minutes later, DDQ (50 mg, 0.51 mmol) was added in one potion. 6 hours later, the brown mixture was filtered via a short silica gel column with petroleum ether: ethyl acetate = 4:1 as elute to separate the 4Åmolecular sieve and 2, 6-dibromopyridine, the filtrate was concentrated under vacuum. The residue was purified via by column chromatography on silica gel (petroleum ether: ethyl acetate = 10: 1) to give a

colorless oil (31 mg) which was dissolved in absolute MeOH (3.0 mL) and Na_2CO_3 (220 mg, 2.1 mmol) was added, the resulting solution was stirred at 25°C for 12 hours. The yellow mixture was filtered via a short silica gel column with EtOAc as elute, the filtrate was concentrated under vacuum and the residue was dissolved in absolute MeOH (3.0 mL) and $NaBH_4$(5.0 mg, 0.13 mmol) was added at 0°C, 10 minutes later, saturated aqueous NH_4Cl (5 mL) was added. The mixture was extracted with EtOAc (3 × 30 mL). The combined organic layer was washed with brine (3 × 10 mL), dried over Na_2SO_4 and concentrated under vacuum. The residue was purified by column chromatography on silica gel (petroleum ether: ethyl acetate = 20: 1) to give product **13** as a colorless oil and **13´** as a white solid (25.7 mg, **13**: 19.6 mg, **13´**: 6.1 mg, 43% yield). $[\alpha]^{24}_D$ = +31.0 (*c* = 1.0, $CHCl_3$). ^{1}H NMR ($CDCl_3$, 400 MHz) δ 6.96 (d, *J* = 8.4 Hz, 1H), 6.70 (dd, *J* = 8.4 Hz, 2.4 Hz, 1H), 6.51 (d, *J* = 2.4 Hz, 1H), 4.94 (d, *J* = 7.2 Hz, 1H), 3.77 (s, 3H), 3.57 (dd, *J* =10.6 Hz, 7.0 Hz, 1H), 3.44-3.49 (m, 1H), 2.92 (d, *J* = 17.2 Hz, 1H),2.83 (d, *J* = 16.8 Hz, 1H), 2.48-2.56 (m, 1H), 2.26-2.31 (m, 1H), 1.69 (brs, 1H), 1.53 (s, 3H), 1.49 (dd, *J* = 12.2 Hz, 4.2 Hz, 1H); ^{13}C NMR ($CDCl_3$, 100 MHz) δ 28.2, 35.9, 39.7, 49.5, 55.2, 64.6, 77.1, 81.8, 108.9, 112.7, 124.2, 129.2, 142.3, 157.7. HRMS(ESI) calcd for $C_{14}H_{18}O_3NH_4$ $[M+NH_4]^+$: 252.1594, found 252.1597.

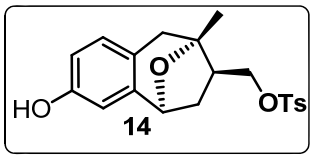


Mp: 90-91°C. $[\alpha]^{24}_D$ = -12.0 (*c* = 1.0, $CHCl_3$). ^{1}H NMR ($CDCl_3$, 400 MHz) δ 6.97 (d, *J* = 8.4 Hz, 1H), 6.73 (dd, *J* = 8.2 Hz, 2.6 Hz, 1H), 6.57 (d, *J* = 2.8 Hz, 1H), 4.97 (d, *J* = 6.8 Hz, 1H), 3.75-3.79 (m, 4H), 3.58 (dd, *J* = 10.4 Hz, 6.6 Hz, 1H), 2.97 (d, *J* = 16.0 Hz, 1H), 2.63 (d, *J* = 16.0 Hz, 1H), 2.22-2.29 (m, 1H), 2.13-2.18 (m, 1H), 1.91-1.97 (m, 1H), 1.49 (s, 4H); ^{13}C NMR ($CDCl_3$, 100 MHz) δ 21.9, 41.7, 43.5, 46.3, 55.3, 64.3, 76.7, 80.6, 109.2, 112.8, 123.9, 129.9, 141.3, 157.7. HRMS(ESI) calcd for $C_{14}H_{19}O_3$ $[M+H]^+$: 235.1329, found 235.1330.



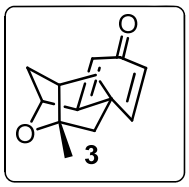
To a solution of **13** (80 mg, 0.342 mmol) in CH_2Cl_2: Et_3N (5: 1) (6.0 mL) was added TsCl (98 mg, 0.51 mmol) and DMAP (2.0 mg, *Cat.*) at room temperature. Three hours later, saturated aqueous $NaHCO_3$ (5 mL) was added. The organic layer was separated

and aqueous layer was extracted with EtOAc/Et_2O (1:1) (3 × 50 mL). The combined organic layer was washed with brine (3 × 10 mL), dried over Na_2SO_4 and concentrated under vacuum. The residue was purified by column chromatography on silica gel (petroleum ether: ethyl acetate = 20: 1) to give product **13-1** as a colorless oil (130 mg, 0.335 mmol, 98% yield). Mp: 84-86°C. $[\alpha]^{25}_D$ = +4.0 (*c* = 1.0, $CHCl_3$). ^{1}H NMR ($CDCl_3$, 400 MHz) δ 7.73 (d, *J* = 8.0 Hz, 1H), 7.33 (d, *J* = 8.4 Hz, 1H), 6.77 (d, *J* = 8.4 Hz, 1H), 6.66 (dd, *J* = 8.4 Hz, 2.8 Hz, 1H), 6.44 (d, *J* = 2.8 Hz, 1H), 4.90 (d, *J* = 6.8 Hz, 1H), 3.97 (dd, *J* = 9.8 Hz, 6.2 Hz, 1H), 3.79 (d, *J* = 10.0 Hz, 1H), 3.75 (s, 3H), 2.87 (d, *J* =17.2 Hz, 1H), 2.56 (d, *J* = 16.8 Hz, 1H), 2.38-2.51 (m, 5H), 1.48 (s, 3H), 1.34 (dd, *J* = 12.0 Hz, 3.6 Hz, 1H); ^{13}C NMR ($CDCl_3$, 100 MHz) δ 21.6, 27.8, 35.8, 39.6, 45.8, 55.2, 71.3, 76.8, 81.6, 108.9, 112.8, 123.3, 127.9, 129.2, 129.9, 132.7, 141.5, 144.9, 157.8. HRMS(ESI) calcd for $C_{21}H_{28}O_5SN[M+NH_4]^+$: 406.1683, found 406.1678.



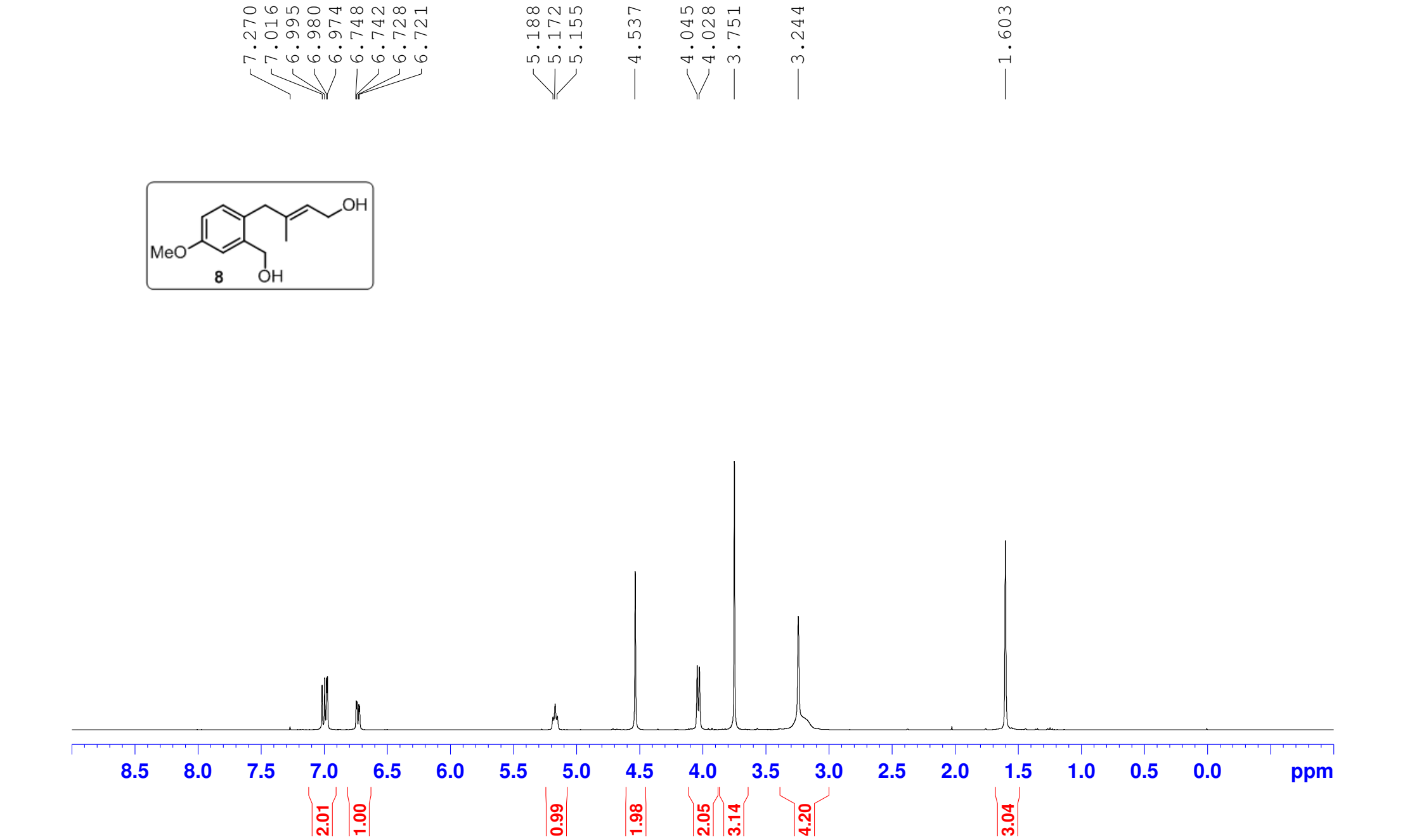
14

To a solution of $AlCl_3$ (121 mg, 0.91 mmol) in EtSH (1.0 mL) was added a solution of **13-1** (118 mg, 0.3 mmol) in CH_2Cl_2 (3.0 mL) at room temperature. One hour later, absolute methanol (1.0 mL) was added. The solution was extracted with EtoAc: CH_2Cl_2 (10: 1) (3 × 30 mL). The combined organic layer was washed with brine (3 × 10 mL), dried over Na_2SO_4 and concentrated under vacuum. The residue was purified by column chromatography on silica gel (petroleum ether: ethyl acetate = 5: 1) to give product **14** as a white solid (90 mg, 0.24 mmol, 80% yield). Mp: 158°C (decomposed). $[\alpha]^{25}_D$ = +12.0 (*c* = 1.0, $CHCl_3$). ^{1}H NMR ($CDCl_3$, 400 MHz) δ 7.73 (d, *J* = 8.4 Hz, 1H), 7.33 (d, *J* = 8.0 Hz, 1H), 6.70 (d, *J* = 8.4 Hz, 1H), 6.57 (dd, *J* = 8.2 Hz, *J* = 2.6 Hz, 1H), 6.33 (d, *J* = 2.4 Hz, 1H), 5.65 (s, 1H), 4.83 (d, *J* = 6.8 Hz, 1H), 3.97 (dd, *J* = 10.0 Hz, *J* = 6.0 Hz, 1H), 3.78 (t, *J* = 9.8 Hz, 1H), 2.86 (d, *J* = 17.2 Hz, 1H), 2.55 (d, *J* = 17.2 Hz, 1H), 2.35-2.49 (m, 5H), 1.48 (s, 3H), 1.32 (dd, *J* = 11.8 Hz, *J* = 3.4 Hz, 1H); ^{13}C NMR ($CDCl_3$, 100 MHz) δ 21.6, 27.8, 35.8, 39.5, 45.8, 71.3, 76.7, 81.9, 110.4, 114.3, 123.0, 127.8, 129.4, 129.9, 132.5, 141.5, 145.0, 154.0. HRMS(ESI) calcd for $C_{20}H_{26}O_5SN[M+NH_4]^+$: 392.1526, found 392.1531.



3

To a solution of **14** (76 mg, 0.20 mmol) in xylene (5.0 mL) was added TBAF(1.0 M in THF, 1.0 mL, 1.0 mmol) at room temperature under an argon atmosphere. The resulting mixture was heated to 135^{o}C and stirred for 12 hours, then the mixture was cooled to room temperature and 10% citric acid aqueous solution (5.0 mL) was added. The organic layer was separated and aqueous layer was extracted with EtOAc (3 × 30 mL). The combined organic layer was washed with brine (3 × 10 mL), dried over Na_2SO_4 and concentrated under vacuum. The residue was purified via by column chromatography on silica gel (petroleum ether: ethyl acetate = 5: 1) to give product **3** as white solid (34 mg, 0.17 mmol, 85% yield). Mp: 87-89^{o}C. $[\alpha]^{21}{}_{D}$ = +30.0 (*c* = 0.5, $CHCl_3$). ^{1}H NMR ($CDCl_3$, 400 MHz) δ 6.65 (d, *J* = 10.0 Hz, 1H), 6.29 (dd, *J* = 9.8 Hz, 1.4 Hz, 1H), 6.09 (s, 1H), 4.69 (d, *J* = 4.4 Hz, 1H), 2.57 (t, *J* = 6.2 Hz, 1H), 2.13-2.24 (m, 2H), 1.89-1.98 (m, 2H), 1.76 (d, *J* = 11.2 Hz, 1H), 1.52 (d, *J* = 3.2 Hz, 1H), 1.49 (s, 3H); ^{13}C NMR ($CDCl_3$, 100 MHz) δ 22.1, 42.5, 44.3, 48.6, 49.9, 54.8, 79.9, 87.0, 121.7, 129.9, 150.9, 160.5, 187.0. HRMS(ESI) calcd for $C_{13}H_{15}O_2$ $[M+H]^+$: 203.1067, found 203.1069.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5.188
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5.155
4.537
4.045
4.028
3.751
3.244
1.603
MeO
OH
OH
8
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
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0.0
ppm
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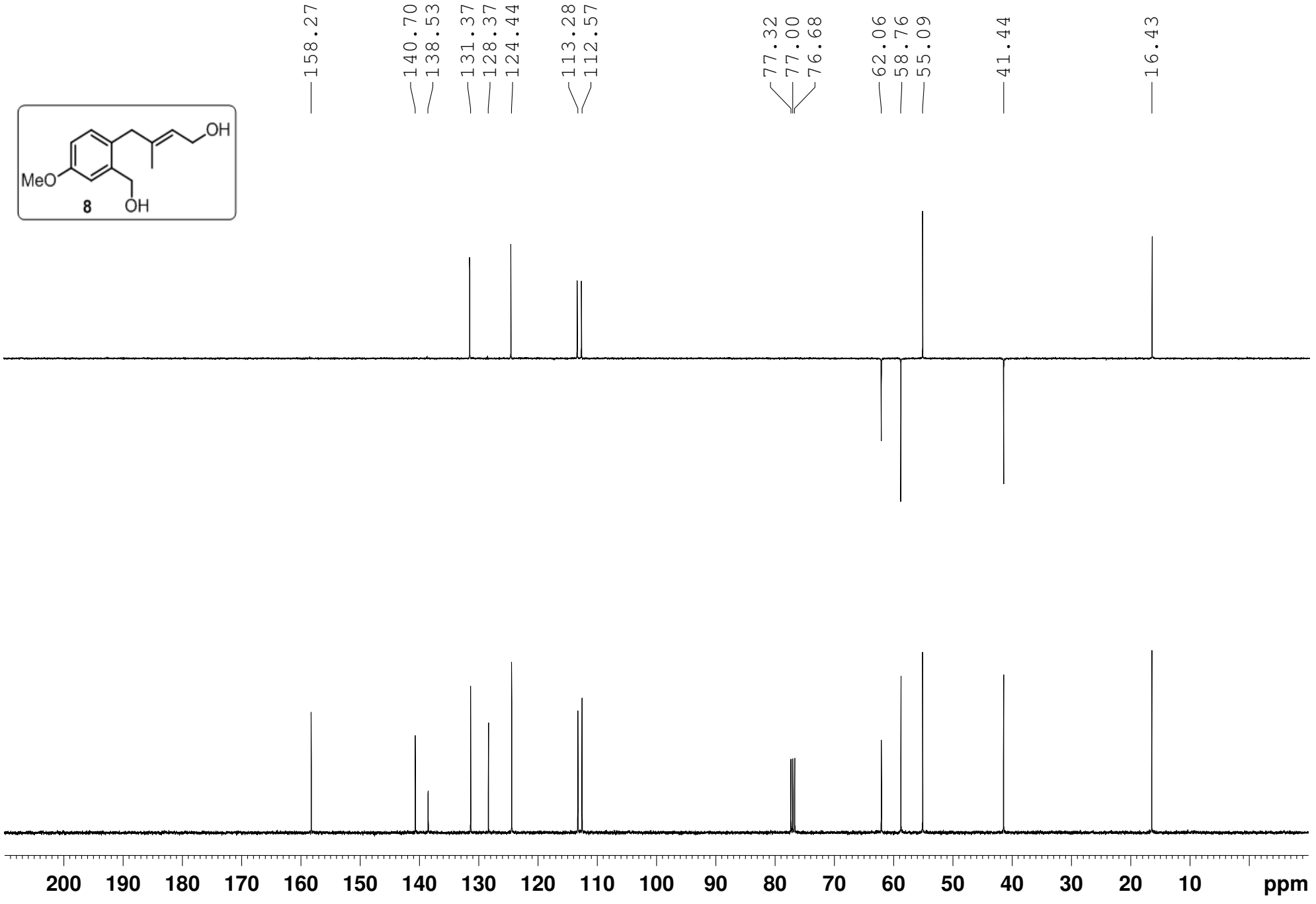
1.00
0.99
1.98
2.05
3.14
4.20
3.04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131.37
128.37
124.44
113.28
112.57
77.32
77.00
76.68
62.06
58.76
55.09
41.44
16.43
MeO
OH
OH
8
200
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180
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150
140
130
120
110
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90
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70
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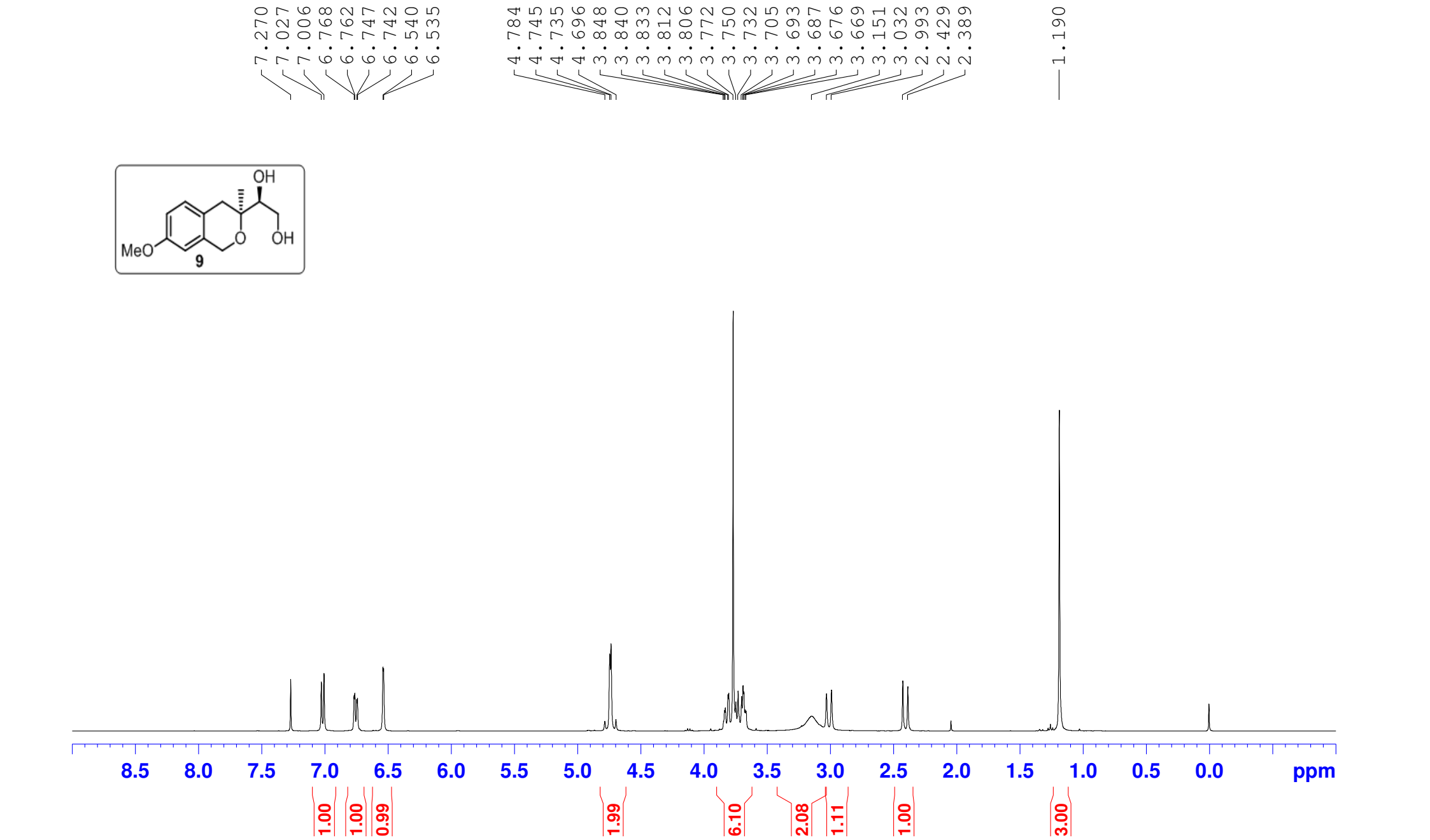
40
30
20
10
ppm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7.006
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6.762
6.747
6.742
6.540
6.535
4.784
4.745
4.735
4.696
3.848
3.840
3.833
3.812
3.806
3.772
3.750
3.732
3.705
3.693
3.687
3.676
3.669
3.151
3.032
2.993
2.429
2.389
1.190
OH
MeO
O
OH
9
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
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ppm
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1.99
6.10
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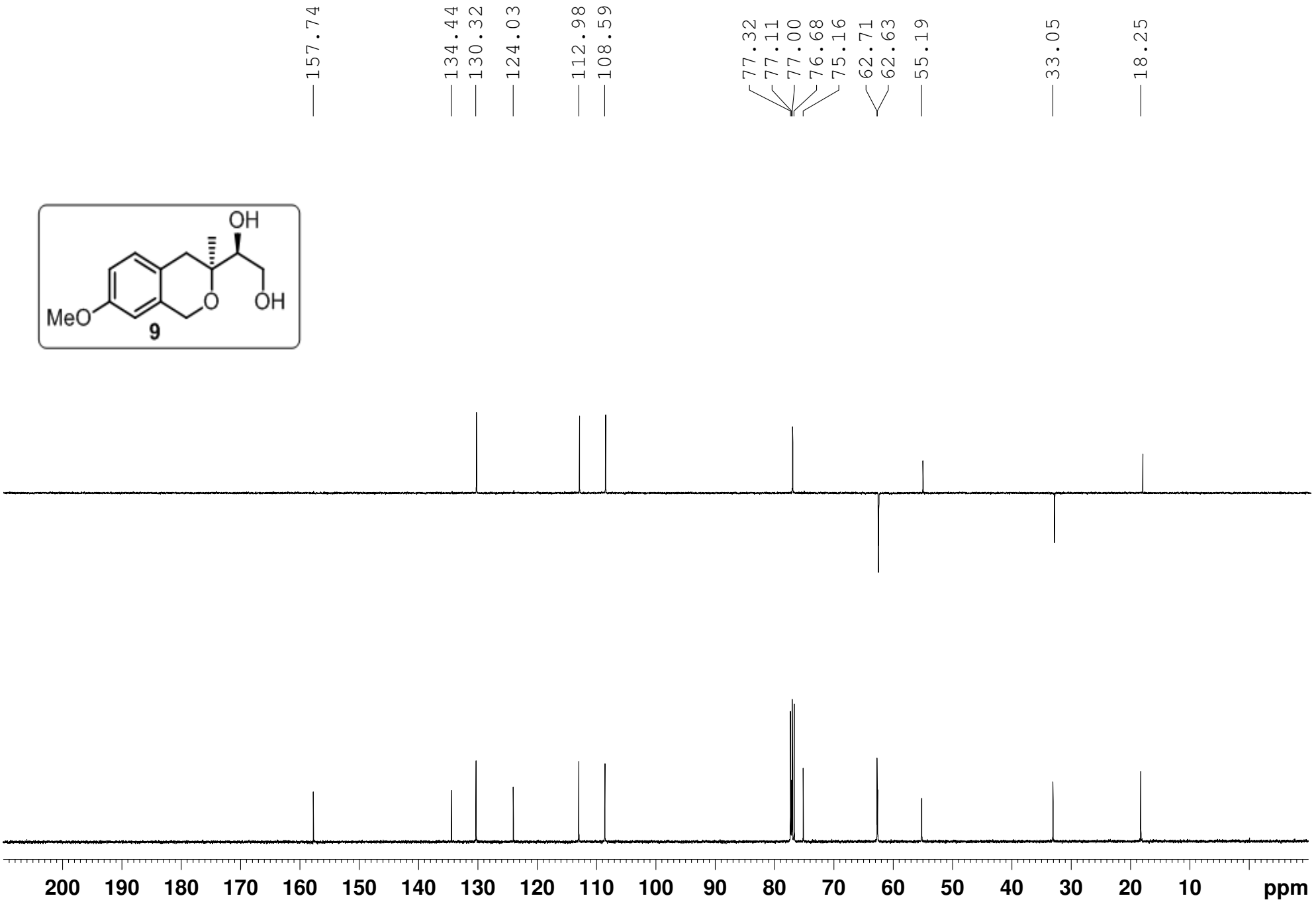
1.11
1.00
3.00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77.11
77.00
76.68
75.16
62.71
62.63
55.19
33.05
18.25
OH
MeO
O
OH
9
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
ppm

AD hex:ipr=90:10 1.0 ml/min

```
==========================================================================
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Acq. Operator   : jzw
Method          : C:\HPCHEM\1\METHODS\ZHANGQW.M
Last changed    : 2/26/2014 9:51:02 AM by tjm
                  (modified after loading)
==========================================================================
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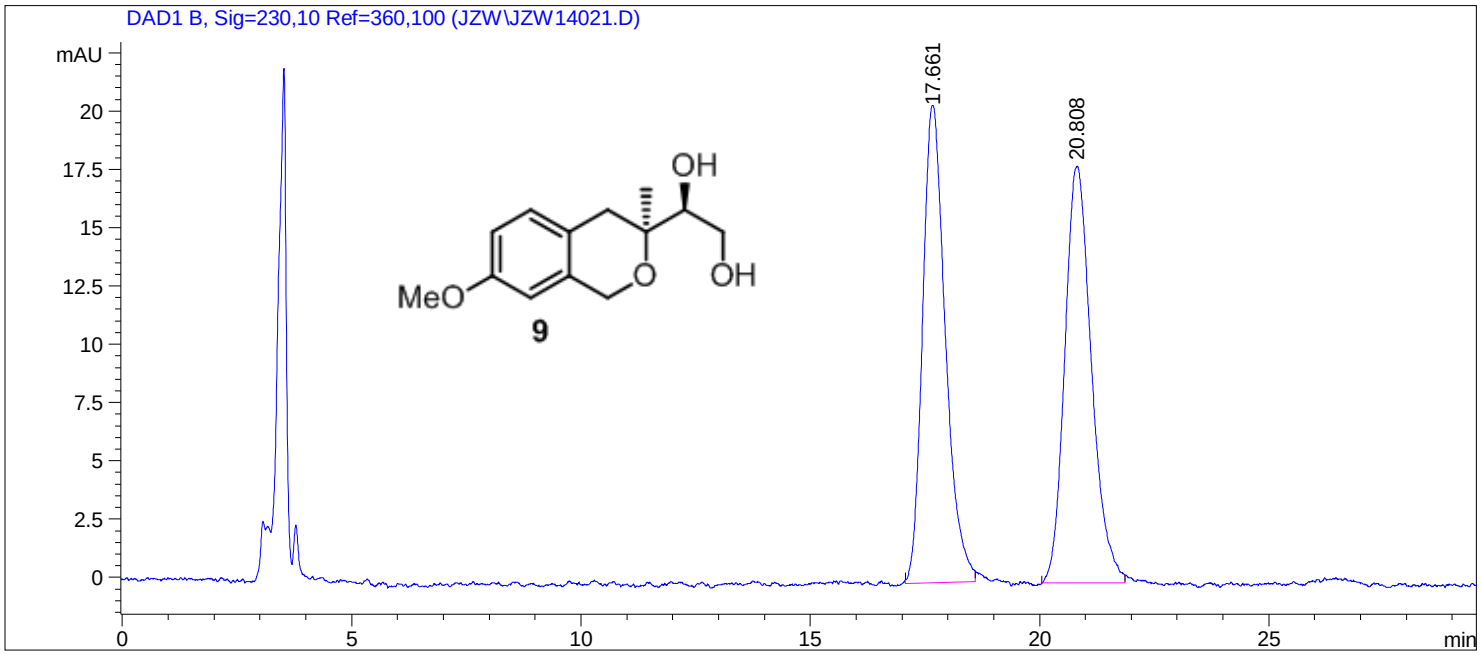


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==========================================================================
                        Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      6.00000  [ng/ul]   (not used in calc.)


Signal 1: DAD1 B, Sig=230,10 Ref=360,100

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  17.661 BB    0.5272  708.37555   20.49508  49.4734
   2  20.808 PB    0.6166  723.45624   17.85745  50.5266

Totals :                  1431.83179   38.35253

 Results obtained with enhanced integrator!
==========================================================================
                        Summed Peaks Report
==========================================================================

Signal 1: DAD1 B, Sig=230,10 Ref=360,100
==========================================================================
                      Final Summed Peaks Report
==========================================================================

Signal 1: DAD1 B, Sig=230,10 Ref=360,100
```

AD hex:ipr=90:10 1.0 ml/min

```
==================================================================
Injection Date  : 3/8/2014 5:06:53 PM
Sample Name     : A195                          Location : Vial 1
Acq. Operator   : jzw
Acq. Method     : C:\HPCHEM\1\METHODS\ZHANGQW.M
Last changed    : 3/8/2014 2:37:32 PM by zsh
                  (modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\ZHANGQW.M
Last changed    : 12/22/2013 8:06:40 PM by tjm
==================================================================
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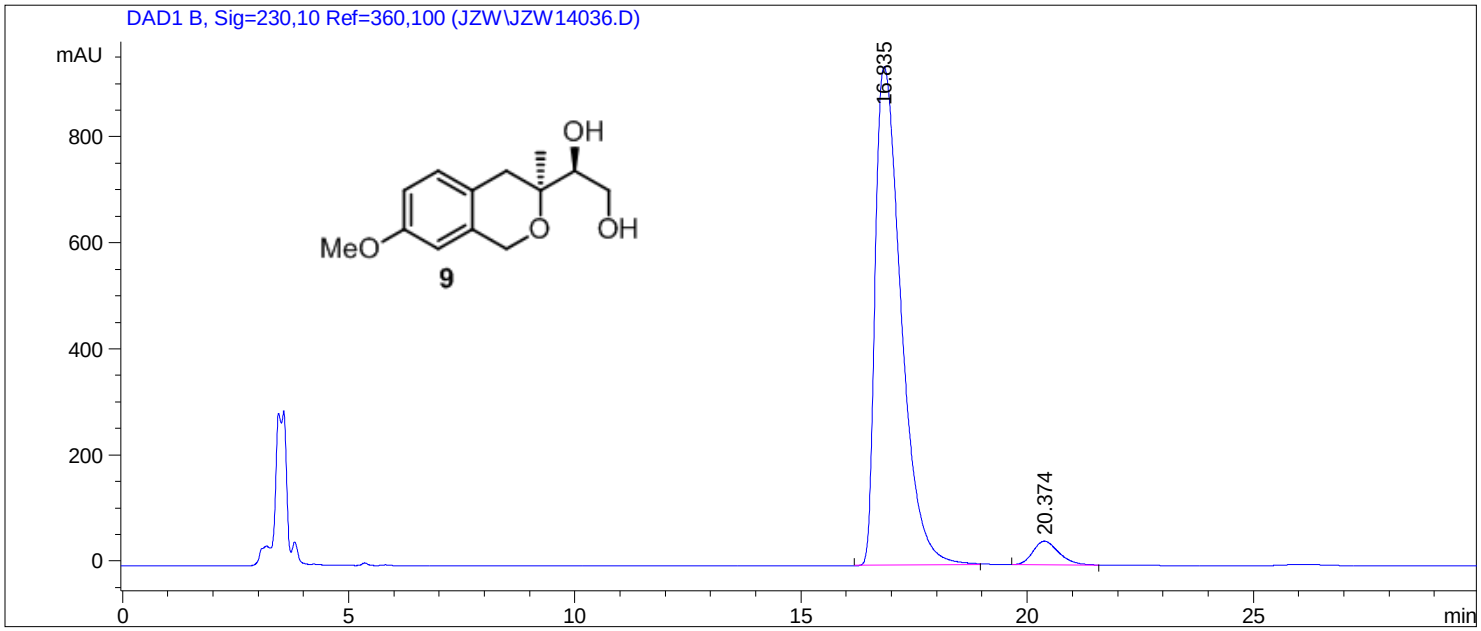


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==================================================================
                        Area Percent Report
==================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)


Signal 1: DAD1 B, Sig=230,10 Ref=360,100

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]   [mAU*s]     [mAU]       %
----|-------|----|-------|----------|----------|--------|
   1  16.835 PB    0.6196 3.73689e4   940.45966  95.4195
   2  20.374 PB    0.6157 1793.84412   44.74361   4.5805

Totals :                  3.91628e4   985.20327

 Results obtained with enhanced integrator!
==================================================================
                        Summed Peaks Report
==================================================================

Signal 1: DAD1 B, Sig=230,10 Ref=360,100
==================================================================
                     Final Summed Peaks Report
==================================================================

Signal 1: DAD1 B, Sig=230,10 Ref=360,100
```

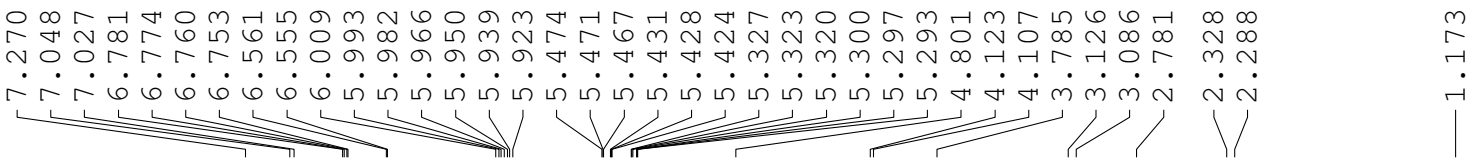
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5.982
5.966
5.950
5.939
5.923
5.474
5.471
5.467
5.431
5.428
5.424
5.327
5.323
5.320
5.300
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5.293
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4.123
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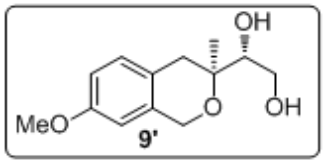
3.126
3.086
2.781
2.328
2.288
1.173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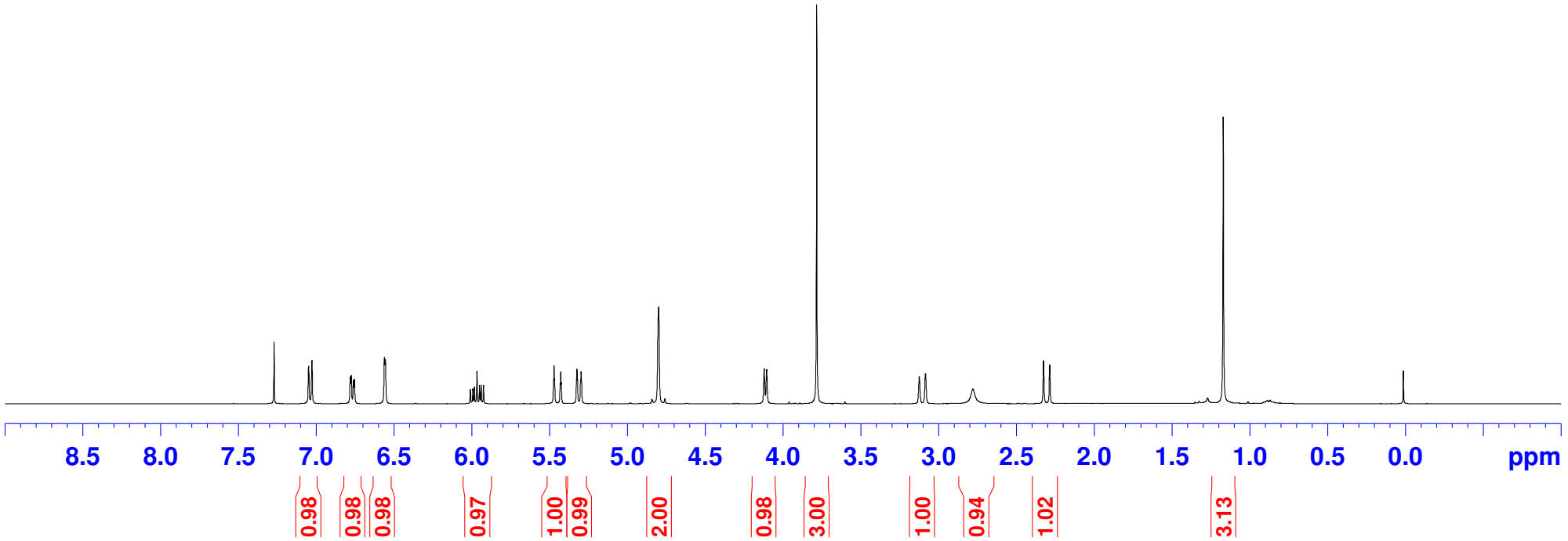
MeO
O
OH
9'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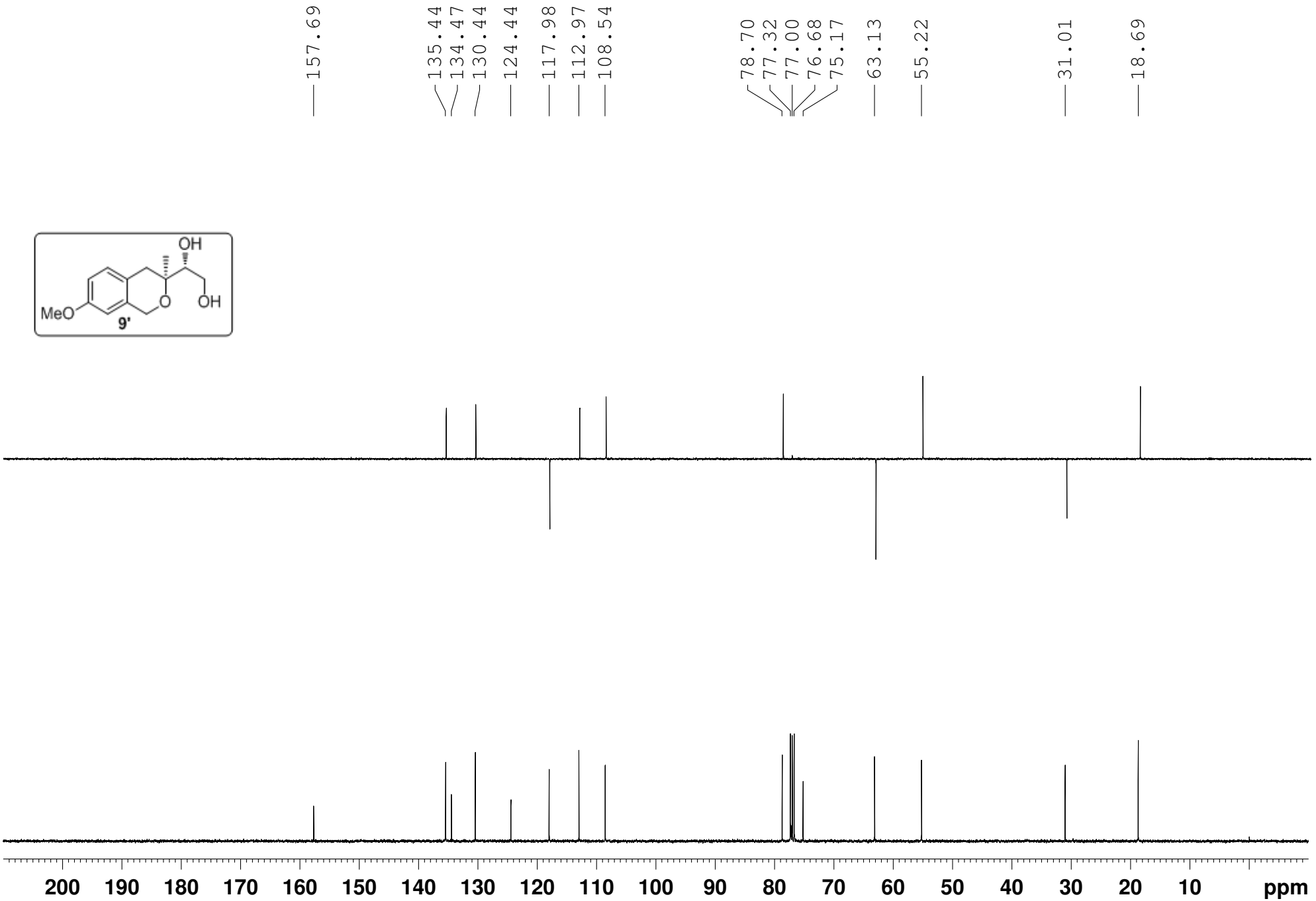
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
ppm
0.98
0.98
0.98
0.97
1.00
0.99
2.00
0.98
3.00
1.00
0.94
1.02
3.13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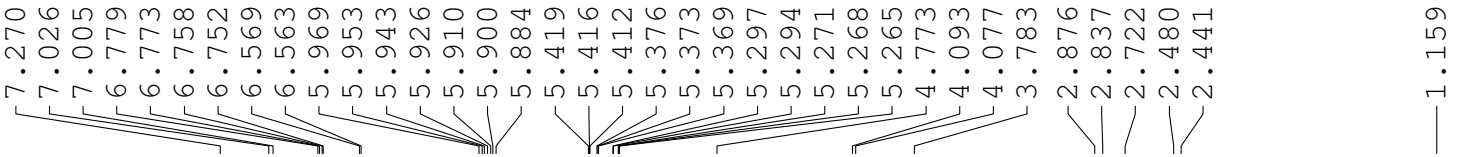
130.44
124.44
117.98
112.97
108.54
78.70
77.32
77.00
76.68
75.17
63.13
55.22
31.01
18.69
OH
MeO
O
OH
9'
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
ppm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5.910
5.900
5.884
5.419
5.416
5.412
5.376
5.373
5.369
5.297
5.294
5.271
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4.093
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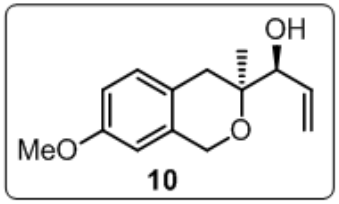
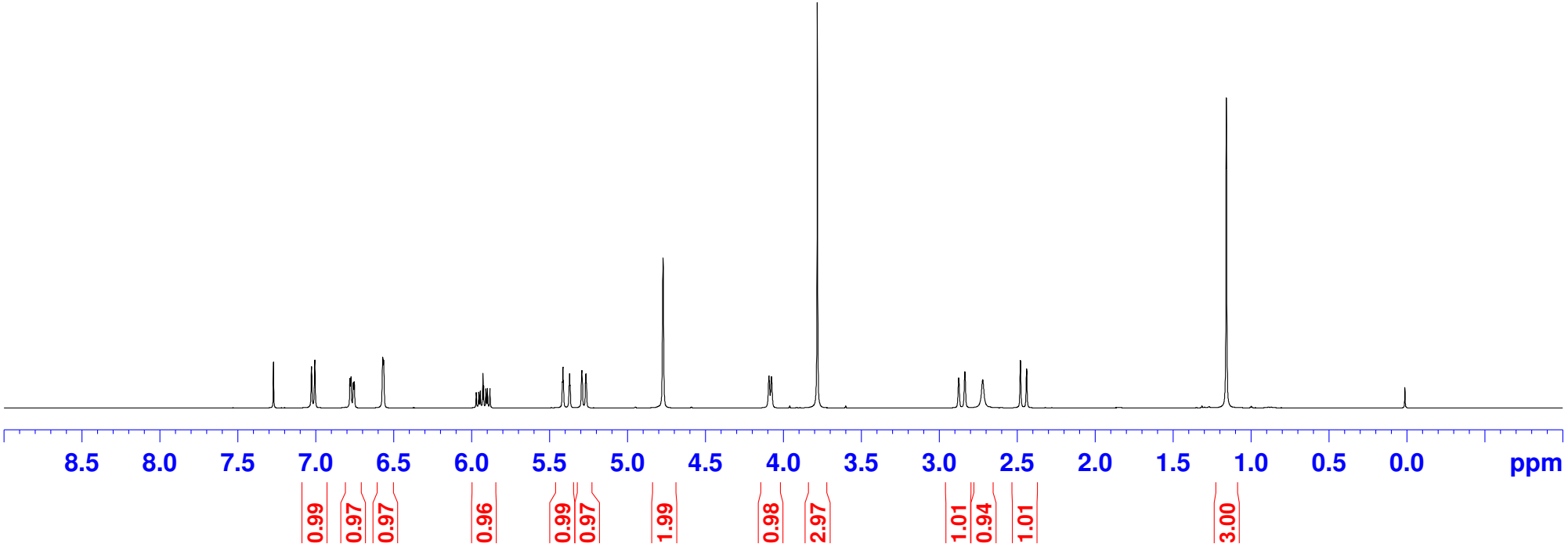
1.159


OH
MeO
O
10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4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
ppm
0.99
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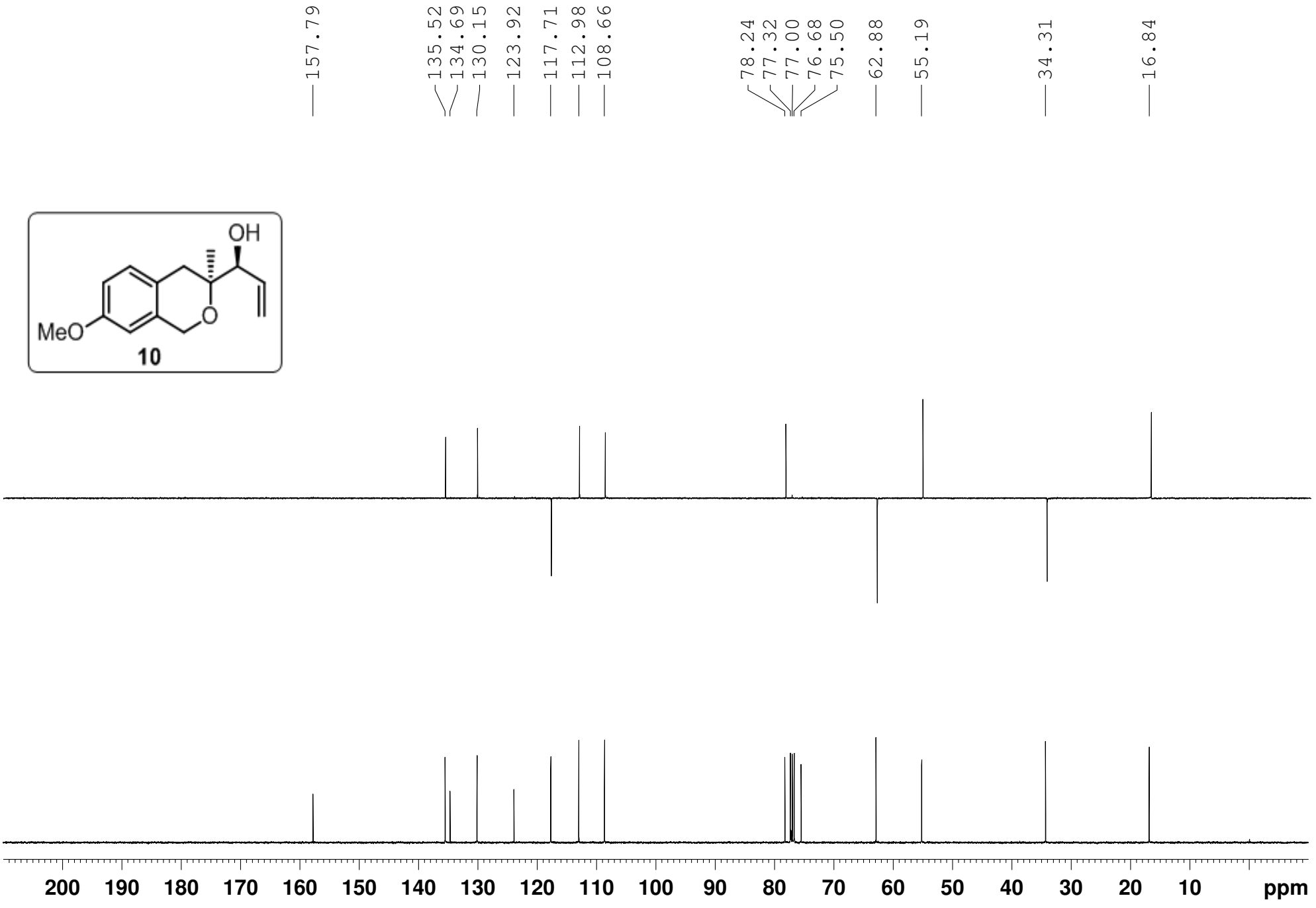
0.96
0.99
0.97
1.99
0.98
2.97
1.01
0.94
1.01
3.00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77.00
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75.50
62.88
55.19
34.31
16.84
OH
MeO
O
10
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180
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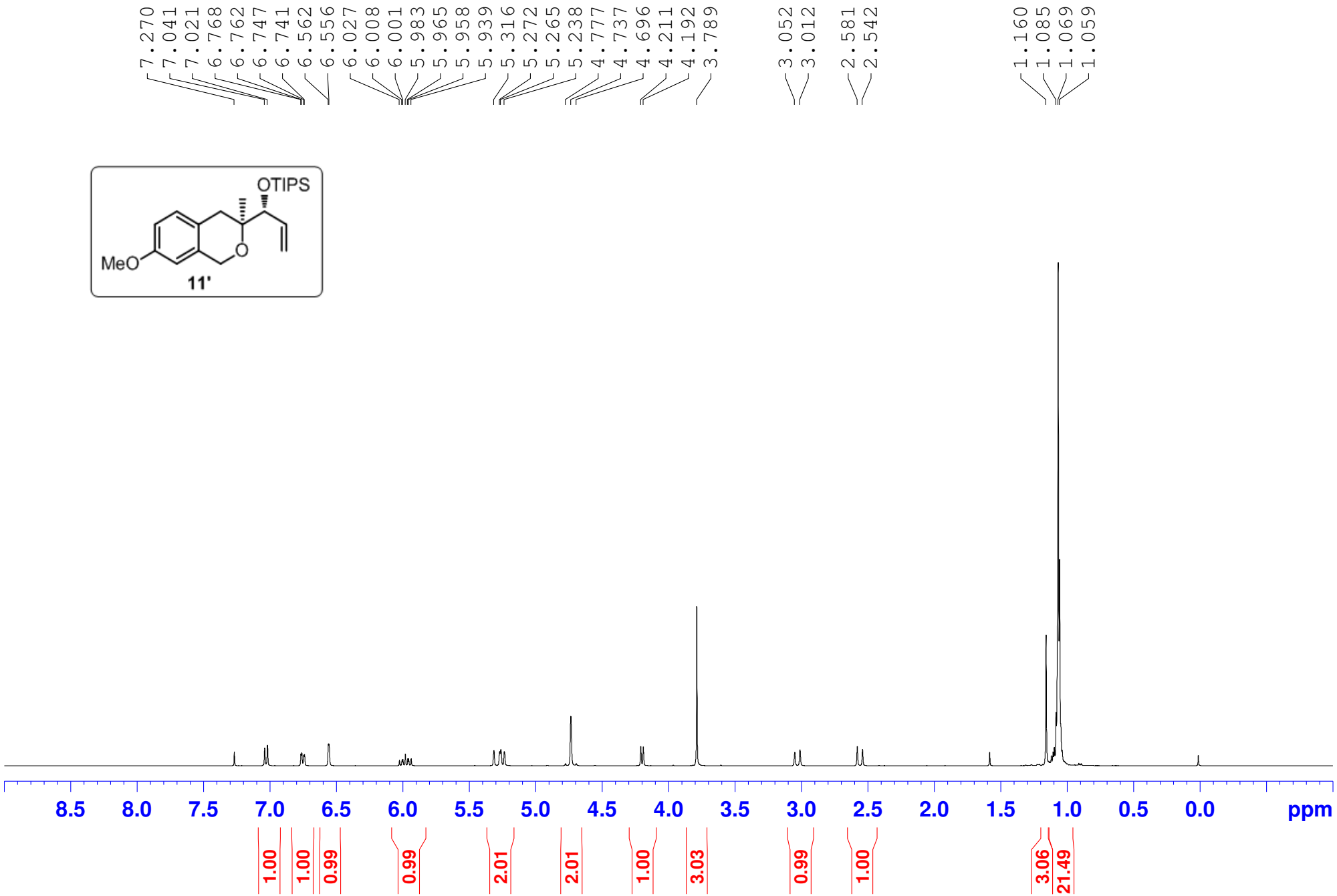
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
ppm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6.001
5.983
5.965
5.958
5.939
5.316
5.272
5.265
5.238
4.777
4.737
4.696
4.211
4.192
3.789
3.052
3.012
2.581
2.542
1.160
1.085
1.069
1.059
OTIPS
MeO
O
11'
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
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2.01
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3.03
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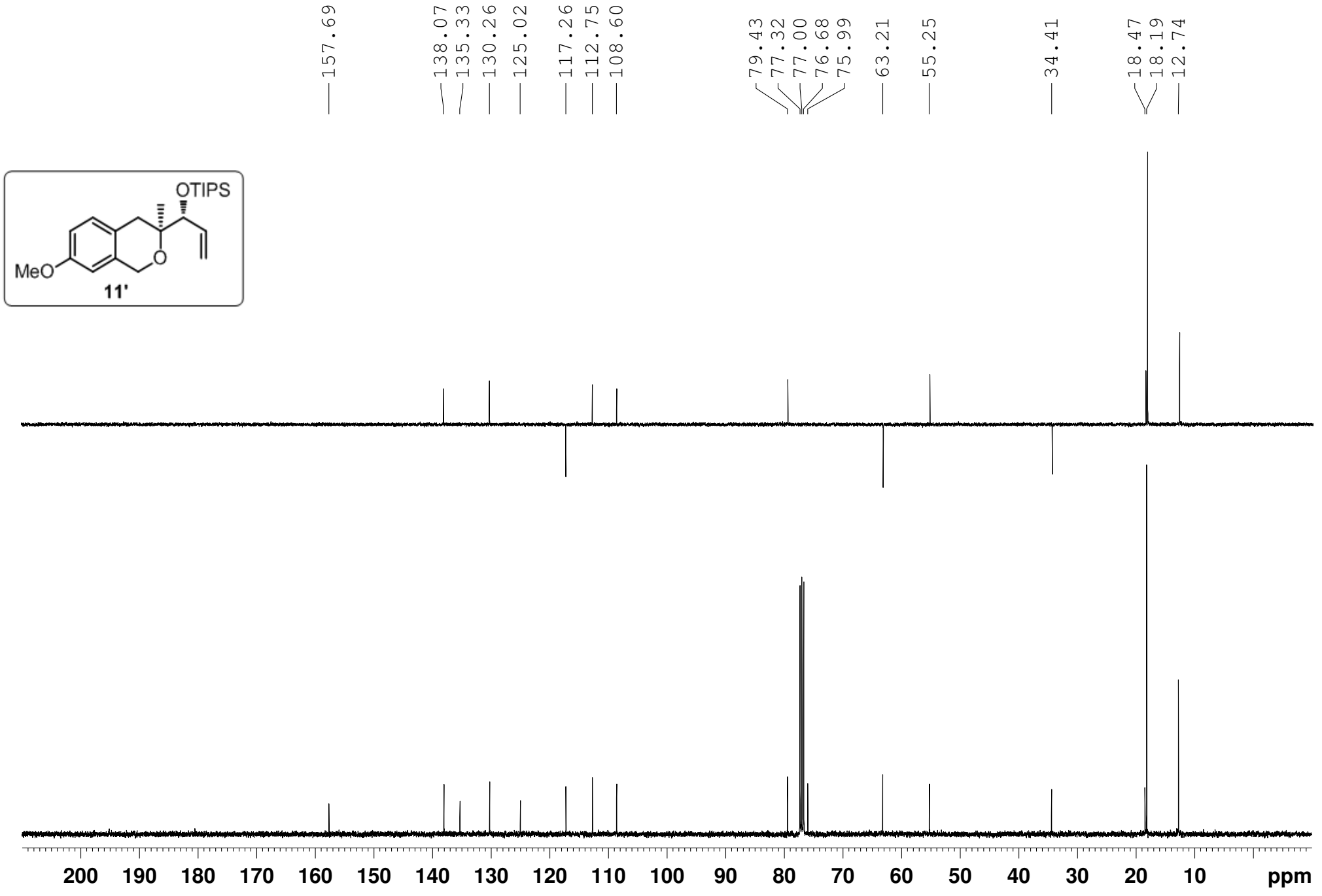
1.00
3.06
21.49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125.02
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108.60
79.43
77.32
77.00
76.68
75.99
63.21
55.25
34.41
18.47
18.19
12.74
OTIPS
MeO
O
11'
200
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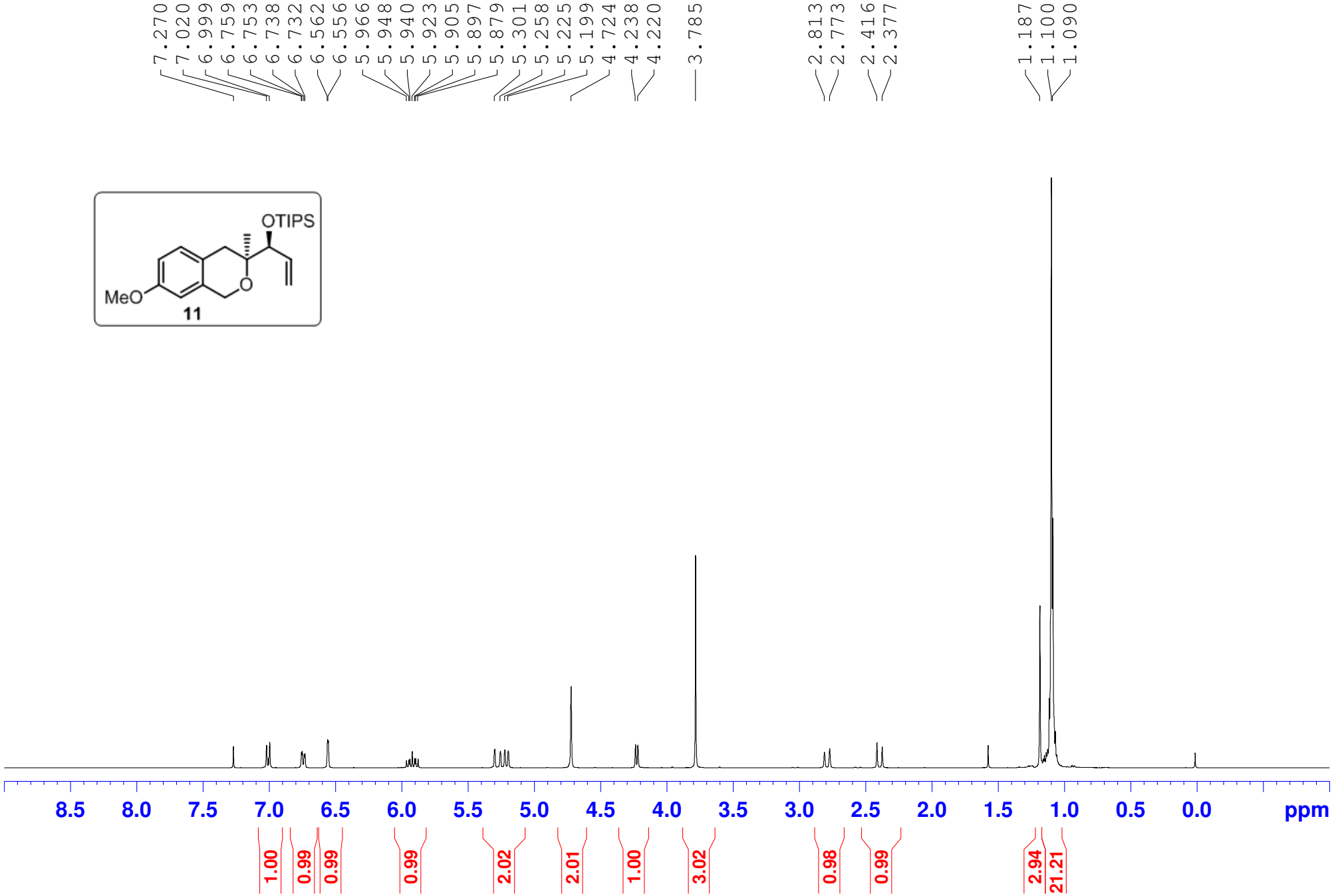
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
ppm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5.940
5.923
5.905
5.897
5.879
5.301
5.258
5.225
5.199
4.724
4.238
4.220
3.785
2.813
2.773
2.416
2.377
1.187
1.100
1.090
OTIPS
MeO
O
11
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
ppm
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0.99
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3.02
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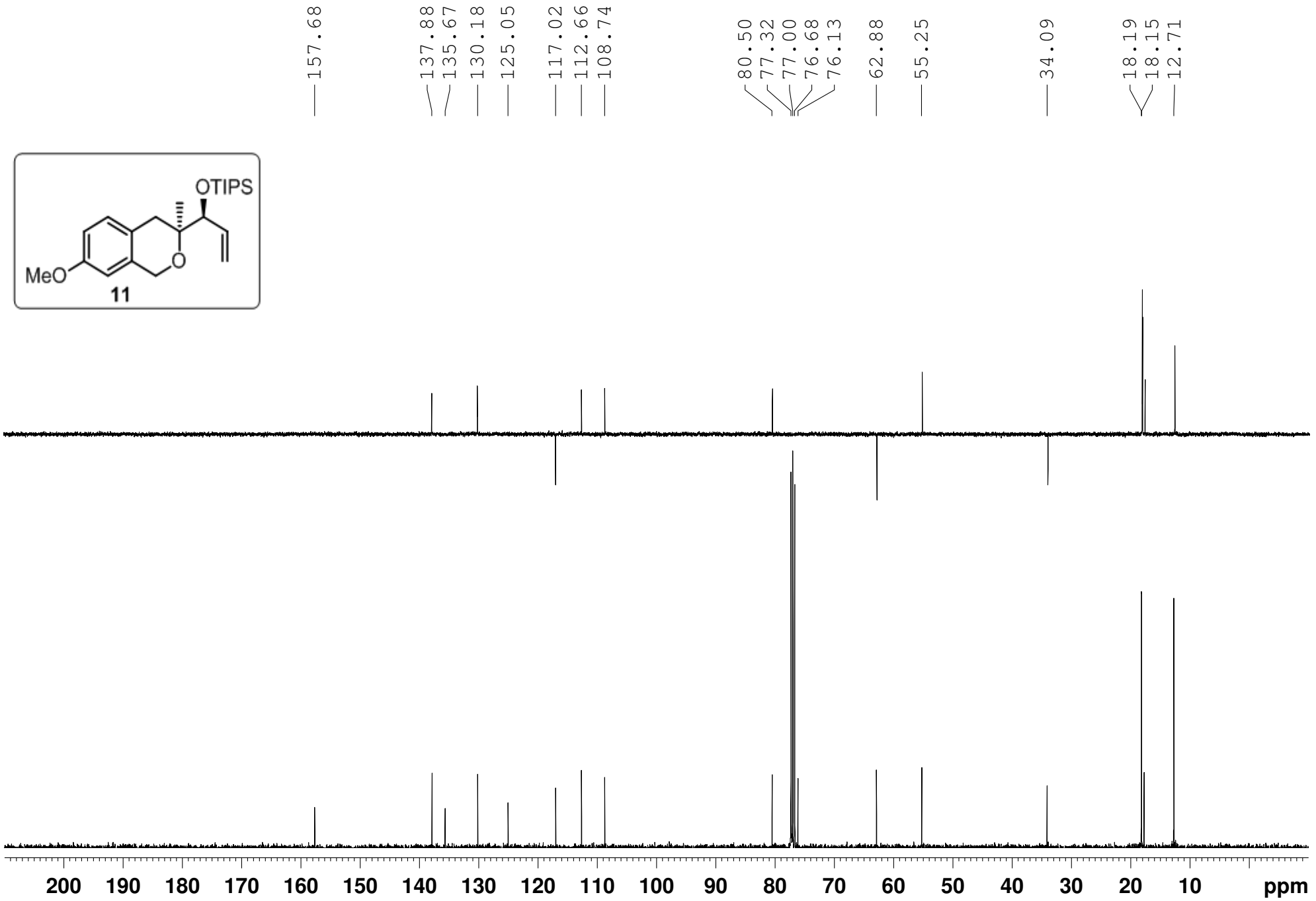
0.99
2.94
21.21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108.74
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77.32
77.00
76.68
76.13
62.88
55.25
34.09
18.19
18.15
12.71
OTIPS
MeO
O
11
200
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180
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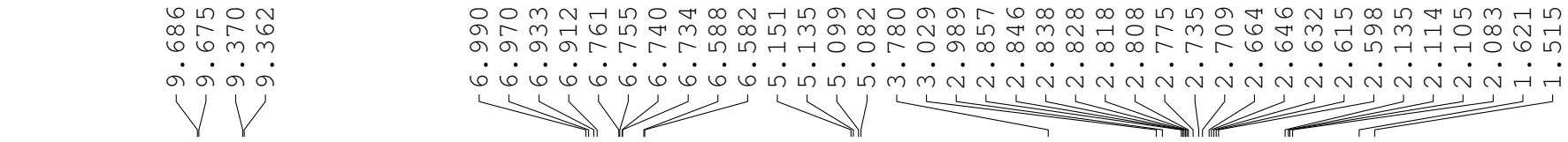
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
ppm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6.912
6.761
6.755
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6.588
6.582
5.151
5.135
5.099
5.082
3.780
3.029
2.989
2.857
2.846
2.838
2.828
2.818
2.808
2.775
2.735
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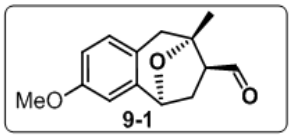
1.515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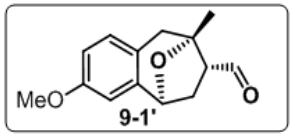
9-1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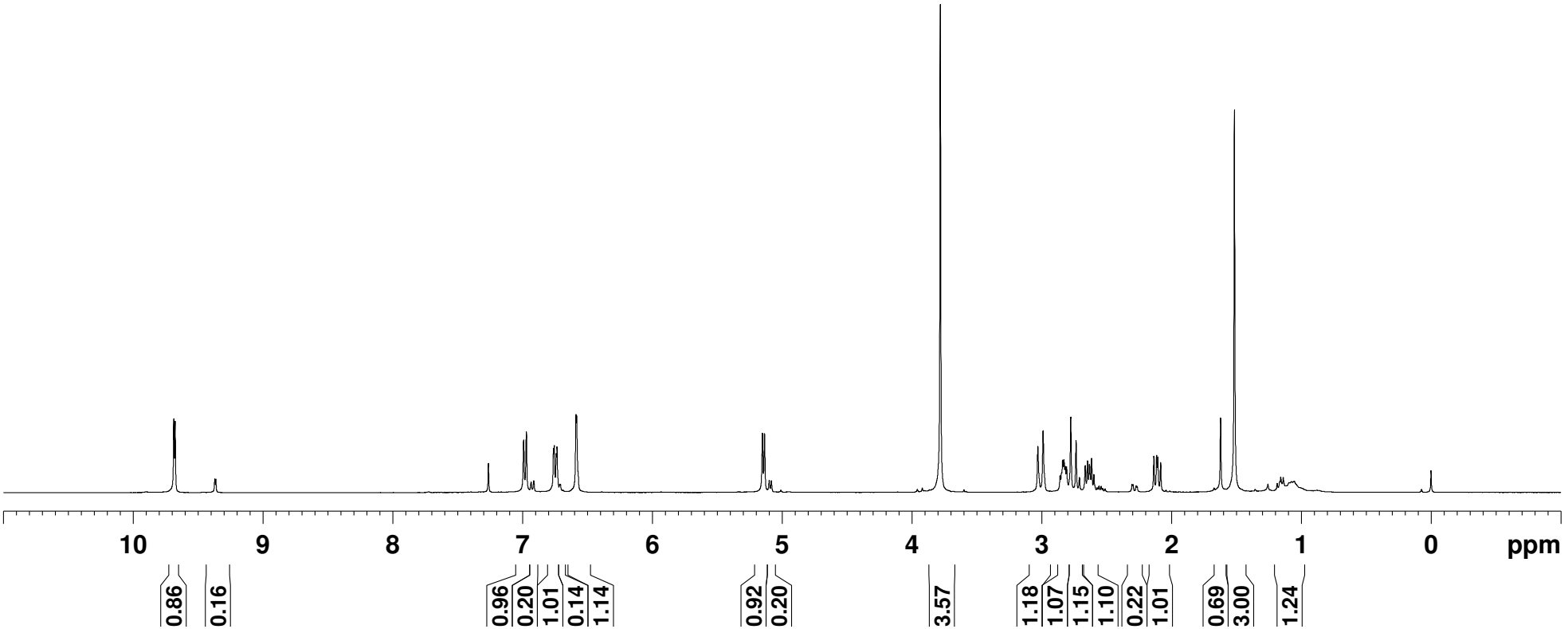
O
O
9-1'

9-1:9-1'=5:1


10
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8
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6
5
4
3
2
1
0
ppm
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0.96
0.20
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0.14
1.14
0.92
0.20
3.57
1.18
1.07
1.15
1.10
0.22
1.01
0.69
3.00
1.24

7.270
6.974
6.953
6.714
6.708
6.693
6.687
6.511
6.505

4.951
4.933
3.767
3.591
3.573
3.564
3.547
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3.466
3.440
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2.543
2.531
2.514
2.501
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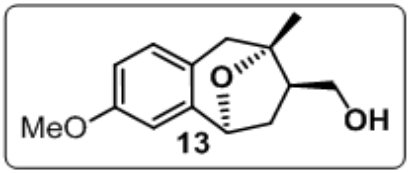
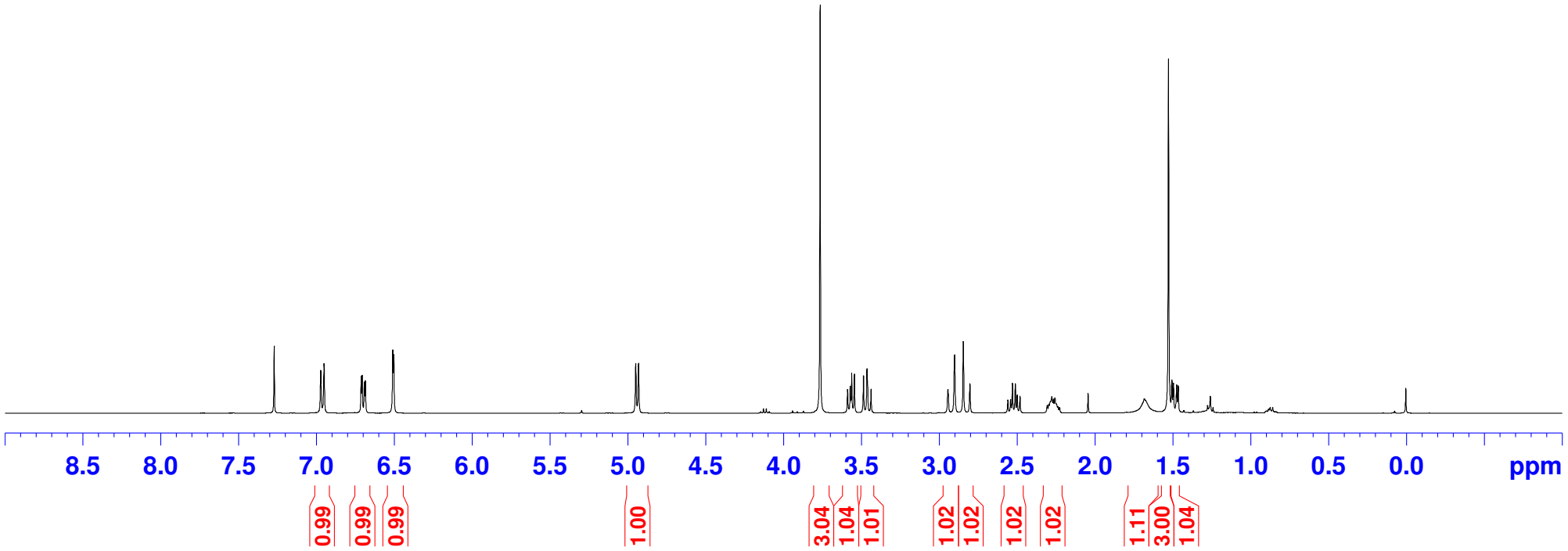
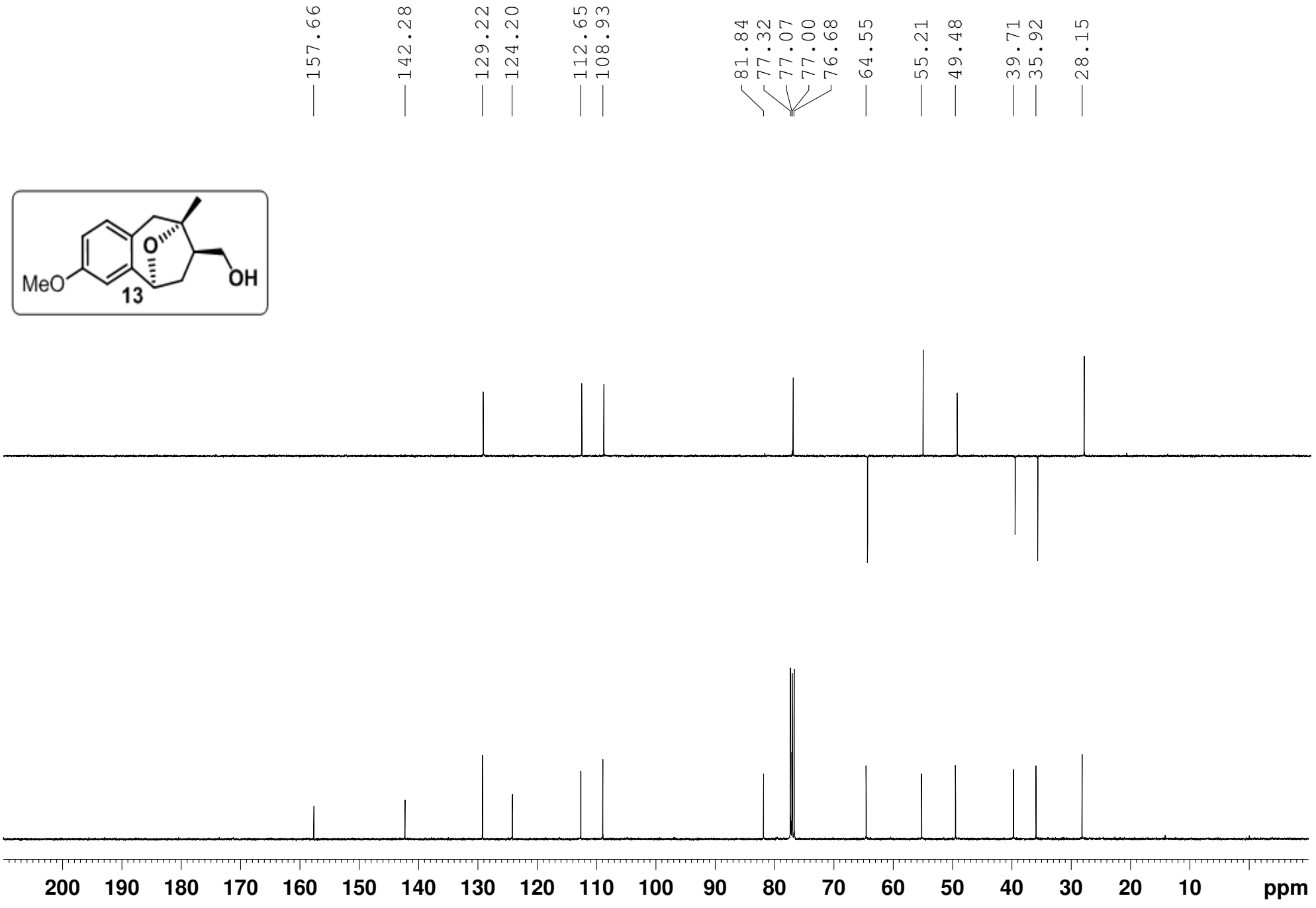
1.467



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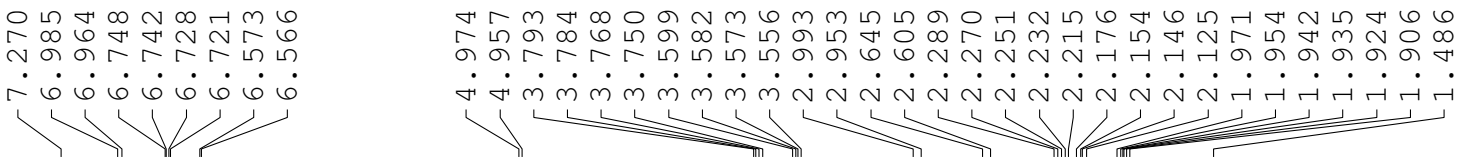
129.22
124.20
112.65
108.93
81.84
77.32
77.07
77.00
76.68
64.55
55.21
49.48
39.71
35.92
28.15
MeO
O
OH
13
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
ppm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6.964
6.748
6.742
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6.721
6.573
6.566
4.974
4.957
3.793
3.784
3.768
3.750
3.599
3.582
3.573
3.556
2.993
2.953
2.645
2.605
2.289
2.270
2.251
2.232
2.215
2.176
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2.146
2.125
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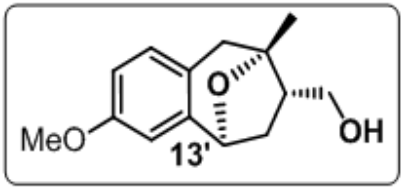
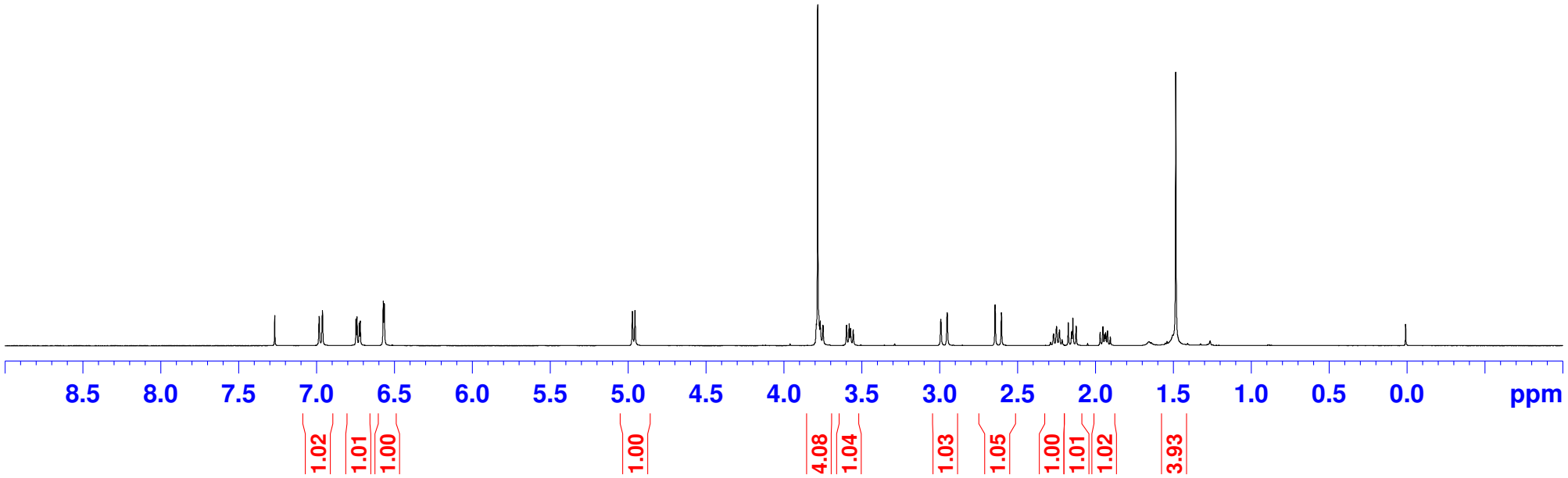
1.954
1.942
1.935
1.924
1.906
1.486


MeO
O
OH
13'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5.0
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3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
ppm
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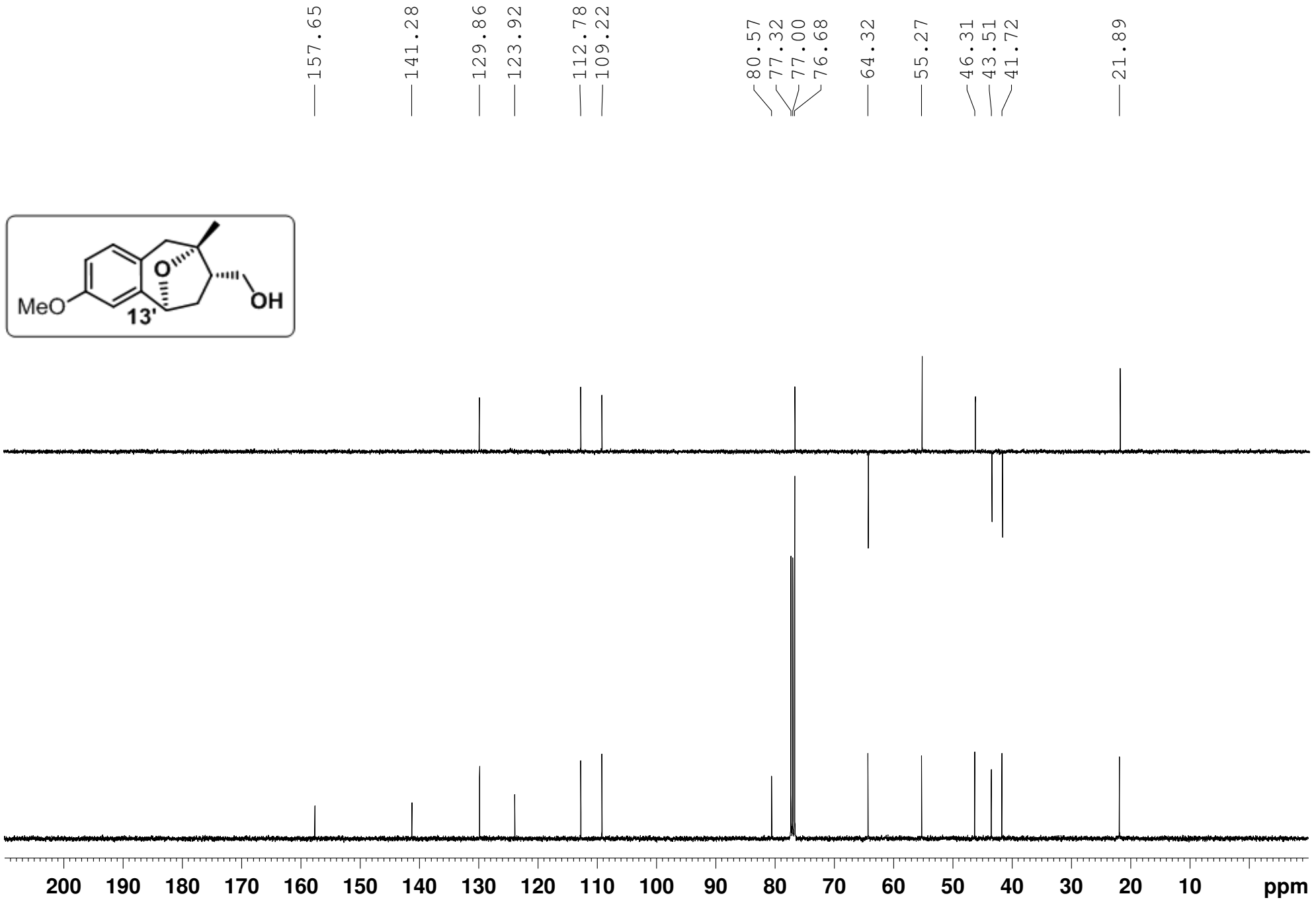
1.01
1.00
1.00
4.08
1.04
1.03
1.05
1.00
1.01
1.02
3.93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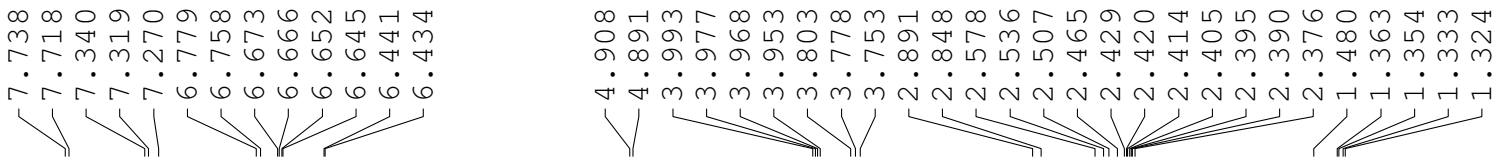
141.28
129.86
123.92
112.78
109.22
80.57
77.32
77.00
76.68
64.32
55.27
46.31
43.51
41.72
21.89
MeO
O
OH
13'
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
ppm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7.340
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7.270
6.779
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6.673
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6.652
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6.441
6.434
4.908
4.891
3.993
3.977
3.968
3.953
3.803
3.778
3.753
2.891
2.848
2.578
2.536
2.507
2.465
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2.414
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2.395
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2.376
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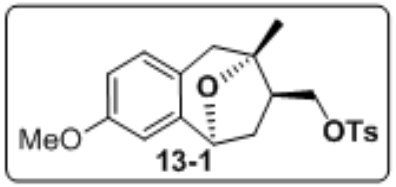
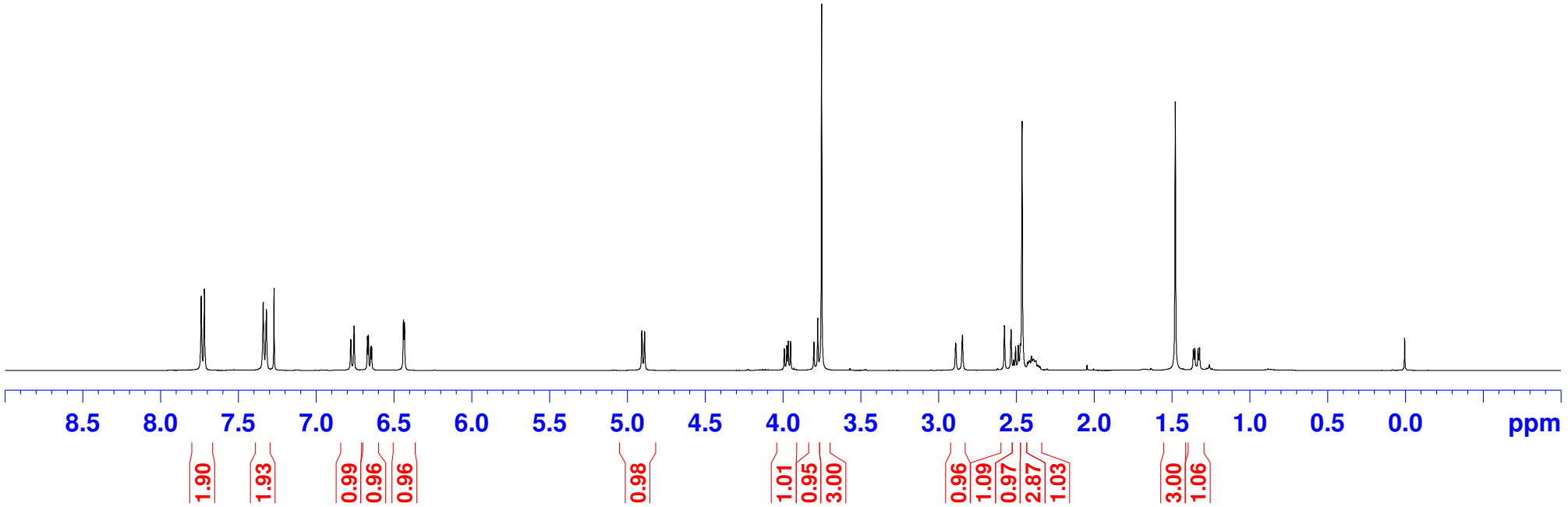
1.354
1.333
1.324


MeO
O
OTs
13-1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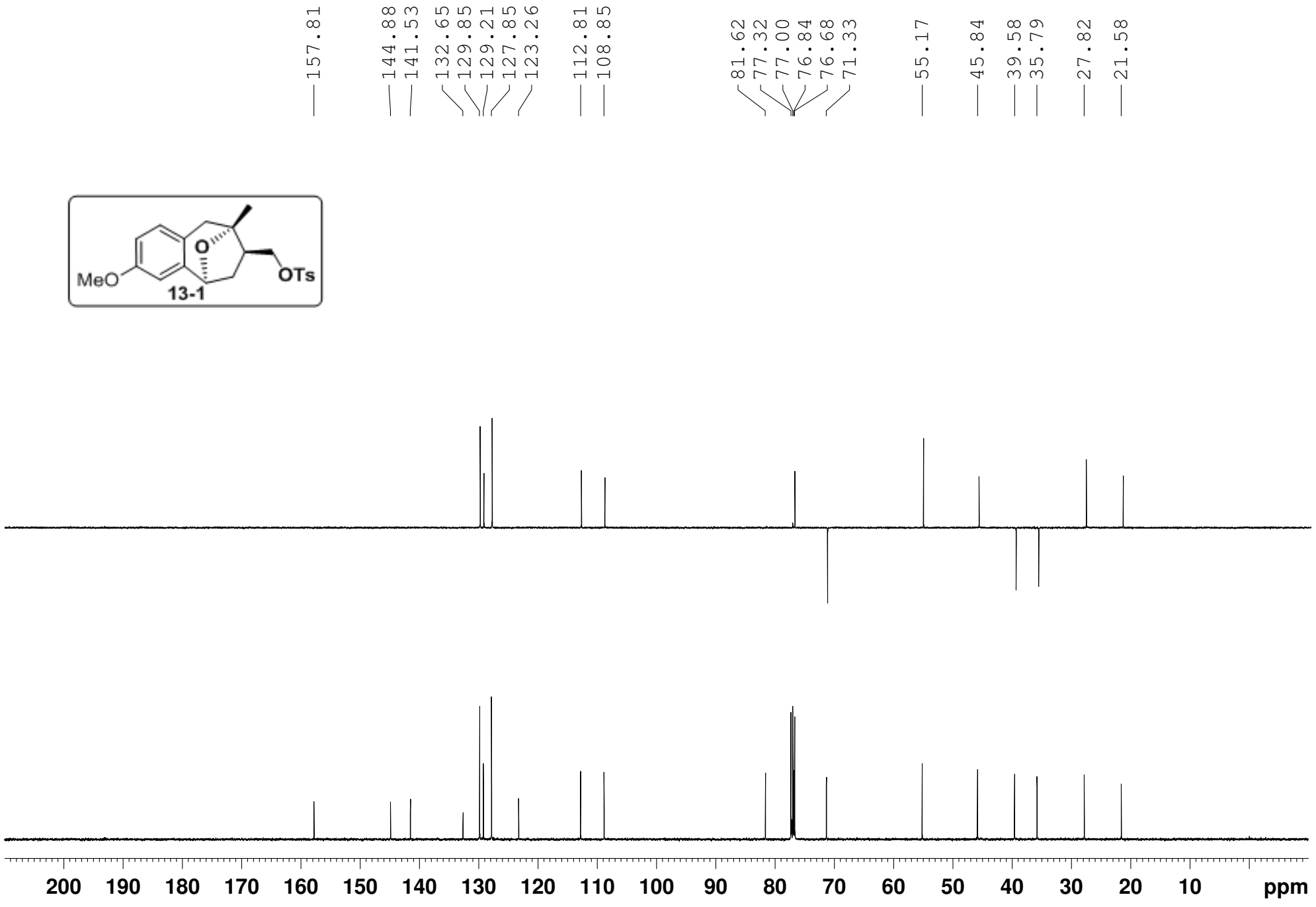
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
ppm
1.90
1.93
0.99
0.96
0.96
0.98
1.01
0.95
3.00
0.96
1.09
0.97
2.87
1.03
3.00
1.06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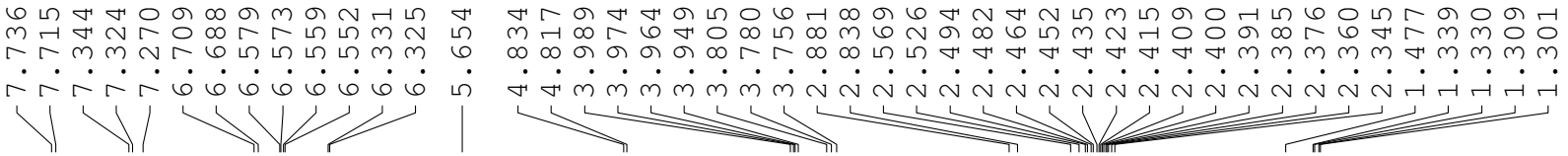
129.21
127.85
123.26
112.81
108.85
81.62
77.32
77.00
76.84
76.68
71.33
55.17
45.84
39.58
35.79
27.82
21.58
MeO
O
OTs
13-1
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
ppm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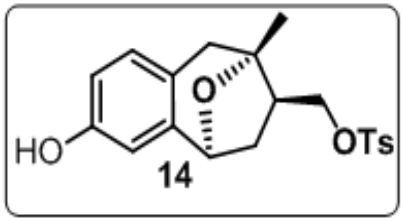
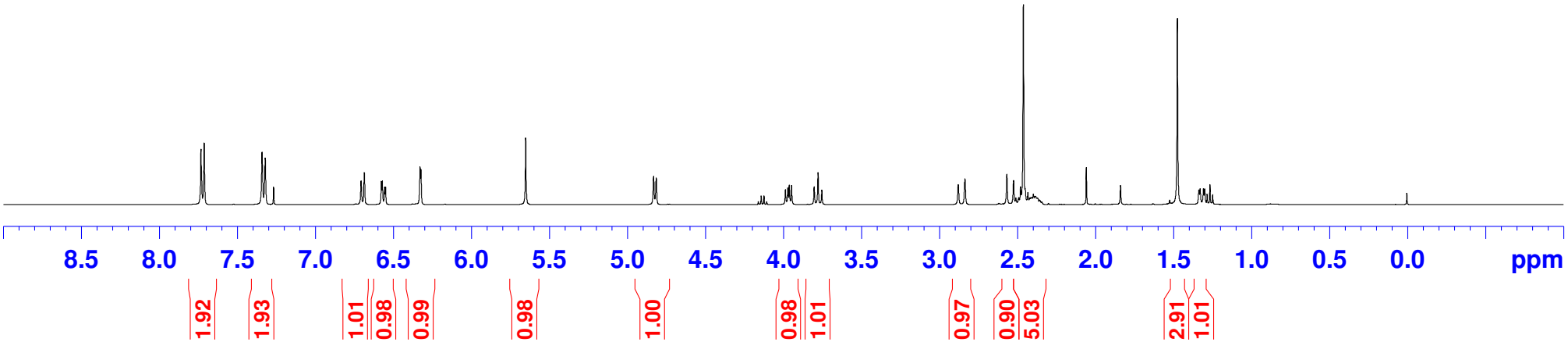
6.688
6.579
6.573
6.559
6.552
6.331
6.325
5.654
4.834
4.817
3.989
3.974
3.964
3.949
3.805
3.780
3.756
2.881
2.838
2.569
2.526
2.494
2.482
2.464
2.452
2.435
2.423
2.415
2.409
2.400
2.391
2.385
2.376
2.360
2.345
1.477
1.339
1.330
1.309
1.301


HO
O
OTs
14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8.0
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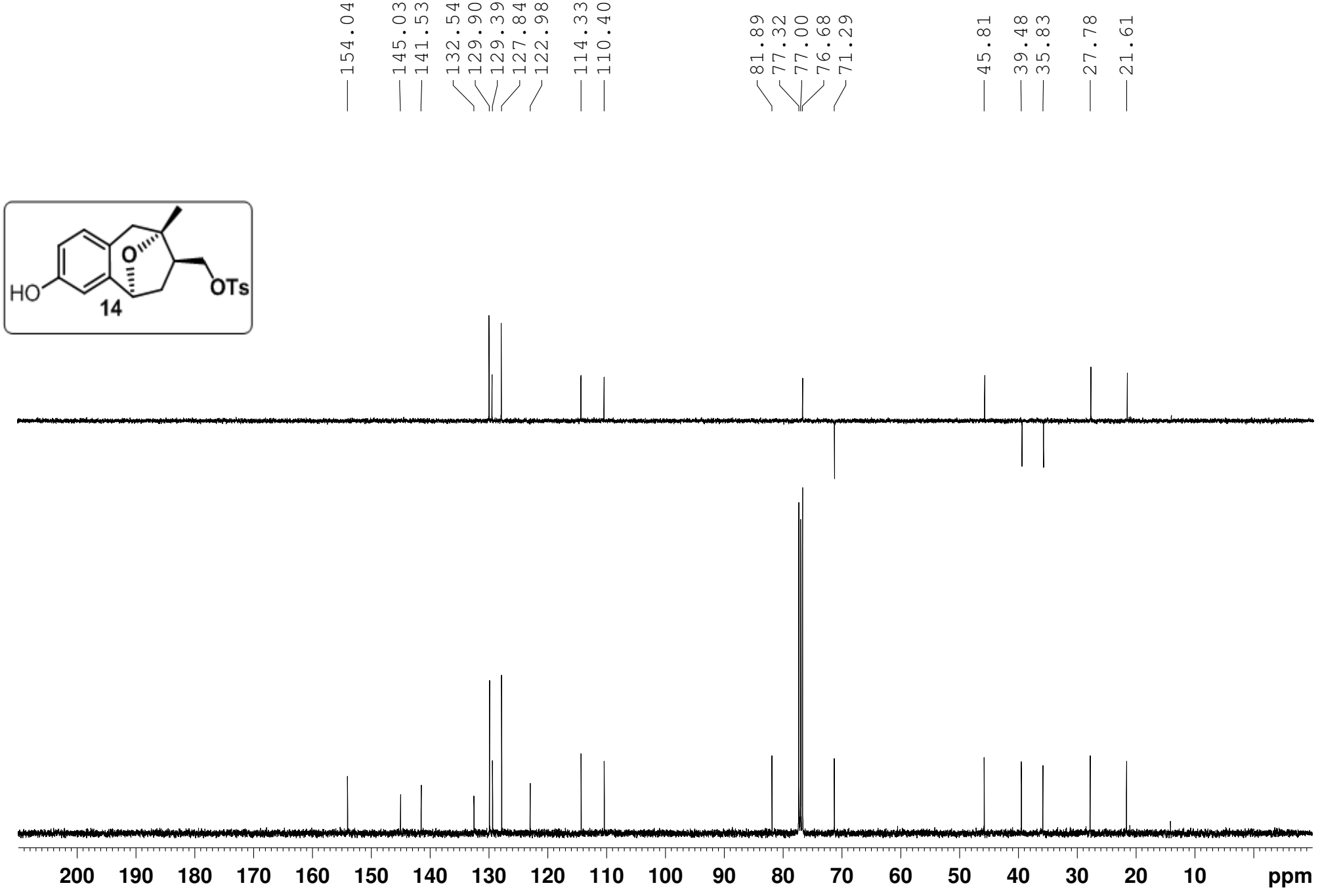
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
ppm
1.92
1.93
1.01
0.98
0.99
0.98
1.00
0.98
1.01
0.97
0.90
5.03
2.91
1.01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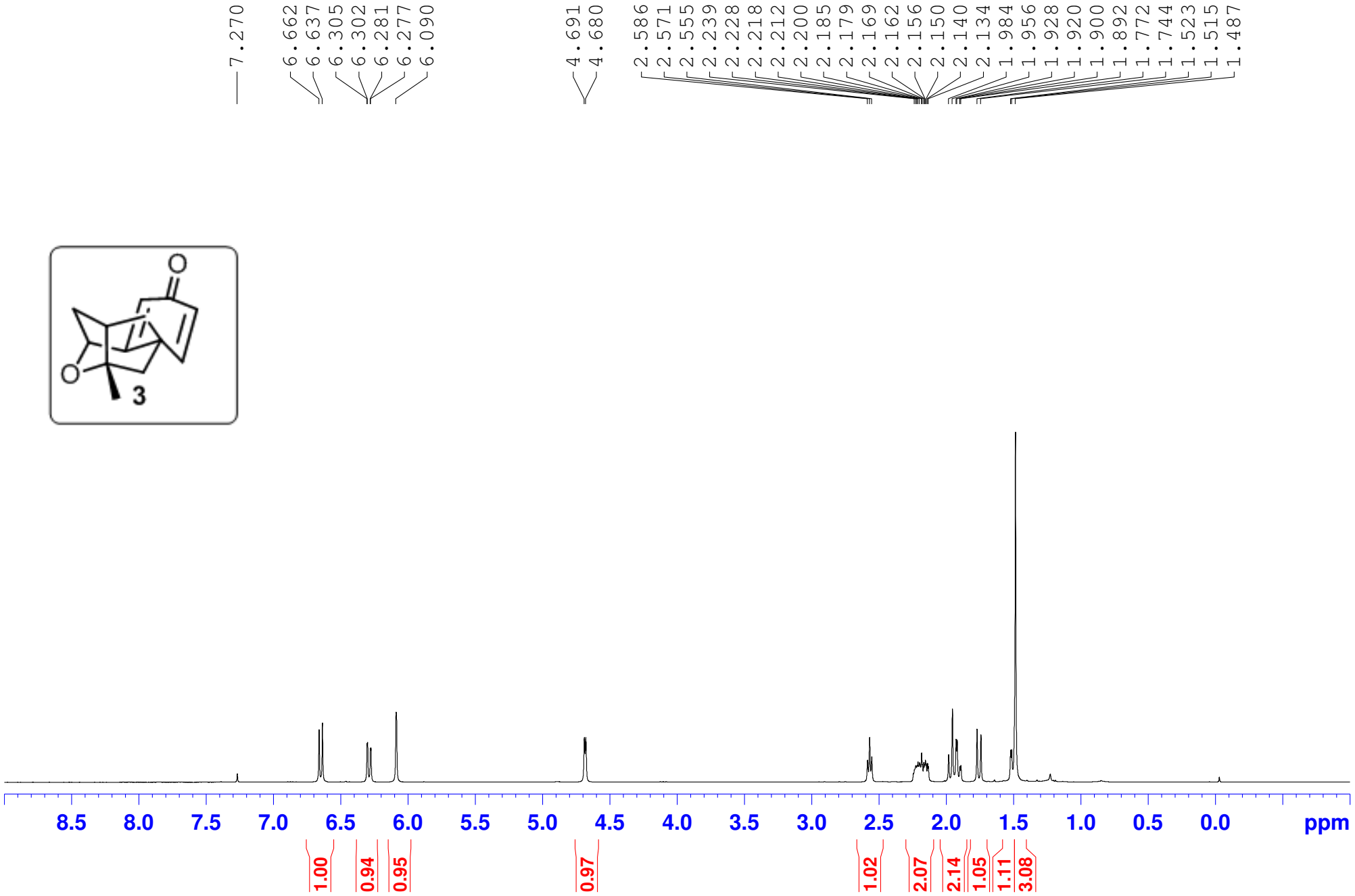
145.03
141.53
132.54
129.90
129.39
127.84
122.98
114.33
110.40
81.89
77.32
77.00
76.68
71.29
45.81
39.48
35.83
27.78
21.61
HO
O
OTs
14
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
ppm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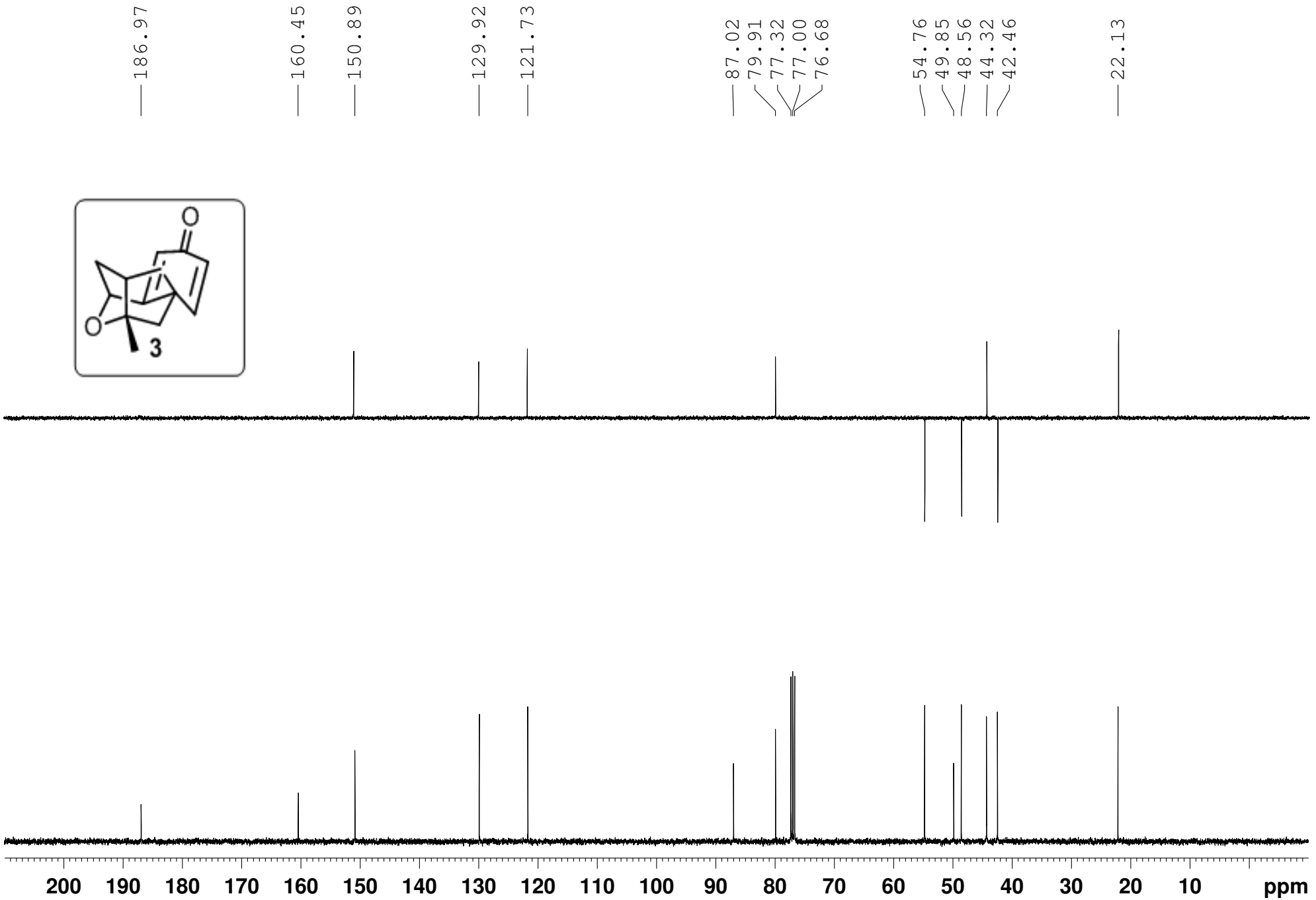
6.090
4.691
4.680
2.586
2.571
2.555
2.239
2.228
2.218
2.212
2.200
2.185
2.179
2.169
2.162
2.156
2.150
2.140
2.134
1.984
1.956
1.928
1.920
1.900
1.892
1.772
1.744
1.523
1.515
1.487
O
O
3
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
ppm
1.00
0.94
0.95
0.97
1.02
2.07
2.14
1.05
1.11
3.08


186.97
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150.89
129.92
121.73
87.02
79.91
77.32
77.00
76.68
54.76
49.85
48.56
44.32
42.46
22.13
O
O
3
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
ppm