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# Supporting Information

## Relevance of the deletion of the *Tatri4* gene in the secondary metabolome of *Trichoderma arundinaceum* and its relation with the biocontrol of phytopathogen fungi.

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**Table S1. NMR Spectroscopic data of aspinolide H (12) ($^1$H at 500 MHz, $^{13}$C at 125 MHz).**

| Position | Proton | $\delta_H$ (Hz) | $\delta^{13}$C | NOESY | HMBC |
|---|---|---|---|---|---|
| 1 | - | | 169.3 | | |
| 2 | H-2a | 2.62 (1H, m) | 27.6 | | |
| | H-2b | 2.39 (1H, m) | | H2, H3 | |
| 3 | H-3a | 2.34 (1H, m) | 27.3 | | C4 |
| | H-3b | 2.11 (1H, m) | | H4, H2, H2´ | |
| 4 | H-4β | 4.34 (1H, t, $J$ = 5.3 Hz) | 74.0 | H6, H2, H3 | |
| 5 | H-5β | - | 206.6 | | |
| 6 | H-6 | 3.41 (1H, dd, $J$ = 17.5, 10.5 Hz) | 41.5 | H4, H6´, H8 | C5, C7, C8 |
| | H-6´ | 2.41 (1H, dd, $J$ = 17.5, 3.3 Hz) | | H6 | C5, C7 |
| 7 | H-7α | 5.64 (1H, dd, $J$ = 11, 9.3 Hz) | 69.7 | H9 | |
| 8 | H-8β | 5.11 (1H, t, $J$ = 9.8 Hz) | 73.8 | H6, H10 | C7, C9 |
| 9 | H-9α | 4.51 (1H, dq, $J$ = 11.6, 6.1 Hz) | 70.4 | H7, H10 | |
| 10 | H-10 | 1.19 (3H, d, $J$ = 6.1 Hz) | 17.0 | H9, H8 | C8, C9 |
| 1´ | - | - | 172.5 | | |
| 2´ | H-2´ | 2.3 (2H, m) | 36.0 | | |
| 3´ | H-3´ | 1.63 (2H, sext, $J$ = 7.3 Hz) | 18.25 | | C1´, C4´,C2´ |
| 4´ | H-4´ | 0.94 (3H, t, $J$ = 7.3 Hz) | 13.7 | | C2´, C3´ |
| <u>CH<sub>3</sub></u>CO | | 1.98 (3H, s) | 20.9 | | |
| $CH_3$<u>CO</u>O | | | 169.1 | | |

**Table S2. NMR Spectroscopic data of aspinolide I (13) ($^{1}$H at 500 MHz, $^{13}$C at 125 MHz).**

| Position | Proton | $\delta_H$ (Hz) | $\delta^{13}$C | NOESY | HMBC |
|---|---|---|---|---|---|
| 1 | - | | 169.2 | | |
| 2 | H-2 | 2.64 (1H, ddd, J = 17.9, 13.2, 3.3 Hz) | 27.8 | | C1 |
| | H-2´ | 2.38 (1H, m) | | | C1 |
| 3 | H-3 | 2.12 (1H, m) | 27.2 | | C1, C4, C5 |
| | H-3´ | 2.00 (1H, m) | | | C2 |
| 4 | H-4β | 4.36 (1H, d, *J* = 6.2 Hz) | 74.0 | H6, H6´,H2, H3 | C2, C3, C5 |
| 5 | H-5β | - | 206.7 | | |
| 6 | H-6 | 3.43 (1H, dd, *J* = 17.4, 10.5 Hz) | 41.5 | H6´, H8 | C5, C7, C8 |
| | H-6´ | 2.41 (1H, dd, *J* = 17.4, 1.7 Hz) | | | C4, C5, C7, C8 |
| 7 | H-7α | 5.73 (1H, ddd, *J* = 10.5, 9.8, 1.7 Hz) | 69.2 | H9α, H6´ | C5, CO-R, C8 |
| 8 | H-8β | 5.2 (1H, t, *J* = 9.8 Hz) | 73.8 | H6, H10 | C6, C7, C9, C10, C1´ |
| 9 | H-9α | 4.55 (1H, dq, *J* = 10.1, 6.1 Hz) | 70.6 | H7α, H10 | C1, C7, C8, C10 |
| 10 | H-10 | 1.20 (3H, d, *J* = 6.1 Hz) | 17.0 | H8 | C8, C9 |
| 1´ | - | - | 165.0 | | |
| 2´ | H-2´ | 5.82 (1H, dq, *J* = 15.5, 1.7 Hz) | 121.6 | | C1´, C4´ |
| 3´ | H-3´ | 7.02 (1H, dq, *J* = 15.5, 7.0 Hz) | 146.8 | | C1´, C4´ |
| 4´ | H-4´ | 1.90 (3H, dd, *J* = 7, 1.7 Hz) | 18.21 | | C2´, C3´ |
| C<u>H</u>$_3$CH$_2$CH=CH(CH$_2$)nCH$_2$CO | | 0.88 (3H, t, J = 6.5 Hz), | 14.12 | | |
| R-CH=CH<u>-(CH$_2$)</u>nCH$_2$CO- | | 1.54-1.21, | 22.7, 24.8, 27.1, 28.9-30, 31.9 | | |
| R-CH=CH-(CH$_2$)n<u>CH$_2$C</u>O- | | 2.15 (2H, m) | 34.31, 172.29 | | |
| R-<u>CH=CH-(</u>CH$_2$)nCH$_2$CO- | | 5. 33 (2H, m) | 130, 129.6 | | |

**Table S3. NMR Spectroscopic data of aspinolide J (14) ($^1$H at 600 MHz, $^{13}$C at 150 MHz).**

| Position | Proton | $\delta_H$ (Hz) | $\delta^{13}C$ | NOESY | HMBC |
|---|---|---|---|---|---|
| 1 | - | | 176.4 | | |
| 2 | H-2 | 2.05 (1H, dd, J= 15.7, 11.7 Hz) | 32.7 | H2´ | C1, C3, C4 |
| | H-2´ | 2.45 (1H, ddd, J=15.7, 9.6, 1.4 Hz) | | H2 | C1, C3, C4 |
| 3 | H-3 | 1.77 (1H, ddd, J=13.7, 9.6, 3.0 Hz) | 27.4 | H3´, H2 | C1, C2, C5 |
| | H-3´ | 2.27 (1H, m) | | | C1, C2, C4, C5 |
| 4 | H-4β | 3.63 (1H, dt, J= 11.2, 3.0 Hz) | 75.6 | H2 , H3, H5, H6 | |
| 5 | H-5β | 4.51 (1H, s (br)) | 73.4 | H4, H6 | C3, C4, C6 |
| 6 | H-6β | 5.55 (1H, dd, J=15.9, 1.9 Hz) | 130.8 | H4, H5, H8 | C5, C7, C8 |
| 7 | H-7α | 5.65 (1H, ddd, J= 15.9, 8.4, 2.5 Hz) | 131.8 | | C5, C6 |
| 8 | H-8β | 3.88 (1H, t, J=8.8 Hz) | 79.3 | H6, H10 | C6, C9, C10 |
| 9 | H-9α | 4.9 (1H, dq, J=8.8, 6.4 Hz) | 74.7 | H10 | C1, C8 |
| 10 | H-10 | 1.42 (3H, d, J=6.4 Hz) | 16.8 | H8, H9 | C8, C9 |

**Table S4. NMR Spectroscopic data of arundinolide A (15) ($^1$H at 500 MHz, $^{13}$C at 125 MHz).**

| Position | Proton | $\delta_H$ (Hz) | $\delta^{13}$C | NOESY | HMBC |
|---|---|---|---|---|---|
| 1 | - | - | 177.3 | | |
| 2 | H-2α | 2.60 (1H, ddd, *J* = 18, 10.1, 6 Hz) | 28.4 | | C-1, C3, C4 |
| | H-2β | 2.48 (1H, ddd, *J* = 18, 10.1, 7.6 Hz) | | | C1, C3, C4 |
| 3 | H-3α | 2.21 (1H, m) | 21.0 | | C1, C2, C4, C5 |
| | H-3β | 2.12 (1H, m) | | | C1, C4, C5 |
| 4 | H-4α | 4.51 (1H, m) | 81.5 | | |
| 5 | H-5α | 4.54 (1H, m) | 71.7 | | |
| 6 | H-6 | 5.75 (1H, ddd, *J* = 15.7, 5, 1.2 Hz) | 131.2 | H8, H5 | C5, C7, C8 |
| 7 | H-7 | 5.96 (1H, ddd, *J* = 15.7, 7, 1.5 Hz | 127.7 | H8, H5 | C5, C6, C8 |
| 8 | H-8 | 5.24 (1H, ddt, *J* = 7, 3.9, 0.9 Hz) | 77.2 | H6, H7, H9, H10 | C1´, C6, C7, C10 |
| 9 | H-9 | 3.98 (1H, qd, *J* = 6.5, 3.9 Hz) | 69.0 | H8, H10 | C7, C10 |
| 10 | H-10 | 1.18 (3H, d, J = 6.5 Hz) | 18.3 | H8, H9 | C8, C9 |
| 1´ | - | - | 165.6 | | |
| 2´ | H-2´ | 5.88 (1H, dq, J = 15.6, 1.7 Hz | 122.3 | H4´ | C1´ |
| 3´ | H-3´ | 7.02 (1H, dq, J = 15.6, 6.9 Hz) | 145.9 | H2´, H4´ | C1´, C4´ |
| 4´ | H-4´ | 1.90 (3H, dd, J = 6.9, 1.7 Hz) | 18.1 | | C1´, C2´, C3´ |

**Table S5. NMR Spectroscopic data of arundinolide B (16) ($^1H$ at 500 MHz, $^{13}C$ at 125 MHz).**

| Position | Proton | $\delta_H$ (Hz) | $\delta^{13}C$ | NOESY | HMBC |
|---|---|---|---|---|---|
| 1 | - | | 177.2 | | |
| 2 | H-2α | 2.61 (1H, ddd, J = 18.0, 10.1, 6 Hz) | 28.5 | | C-1, C-4 |
| | H-2β | 2.50 (1H, ddd, J = 18.0, 10.1, 7.7 Hz) | | | C-1 |
| 3 | H-3α | 2.22 (1H, m) | 21.0 | | |
| | H-3β | 2.14 (1H, m) | | | |
| 4 | H-4α | 4.52 (1H, m) | 81.6 | | |
| 5 | H-5α | 4.55 (1H, m) | 71.8 | | |
| 6 | H-6 | 5.78 (1H, ddd, *J* = 15.5, 5.1, 1.4 Hz) | 129.0 | | C-5, C-7, C-8 |
| 7 | H-7 | 5.91 (1H, ddd, *J* = 15.5, 5.7, 1.4 Hz) | 131.1 | | C-5, C-6, C-8 |
| 8 | H-8 | 4.28 (1H, m) | 73.9 | | |
| 9 | H-9 | 4.99 (1H, qd, J = 6.5, 3.2 Hz | 73.2 | | |
| 10 | H-10 | 1.21 (3H, d, *J* = 6.5 Hz) | 14.6 | | C-8, C-9 |
| 1′ | - | - | 173.6 | | |
| 2′ | H-2′ | 2.31 (2H, t, *J* = 7.4 Hz) | 36.3 | | C-3′, C-4′ |
| 3′ | H-3′ | 1.66 (2H, sext, *J* = 7.4 Hz) | 18.5 | | C-2′, C-4′ |
| 4′ | H-4′ | 0.96 (3H, t, *J* = 7.4 Hz) | 13.6 | | C-3′, C-2′ |

**Table S6. NMR Spectroscopic data of trichoarundinal A (17) ($^{1}$H at 500 MHz, $^{13}$C at 125 MHz).**

| Position | Proton | $\delta_H$ (Hz) | $\delta^{13}$C | NOESY | HMBC |
|---|---|---|---|---|---|
| 1 | - | | 95.8 | | C1-OH , H-2, H-3, H-5, H-6, H-7, H-9 |
| 2 | H-2α | 1.77 (1H, m (superimposed)) | 36.1 | | C1, C3 |
| | H-2β | 1.64 (1H, m) | | | |
| 3 | H-3α | 1.85 (1H, m (superimposed)) | 26.3 | | C1, C2 |
| | H-3β | 1.78 (1H, m (superimposed)) | | | C1, C2 |
| 4 | H-4β | 3.64 (1H, m) | 70.9 | H2, H3, H5, H6 | |
| 5 | H-5β | 3.74 (1H, dt, *J* = 6.1, 2.9 Hz) | 72.9 | H4, H7β, H6 | C1, C3, C4, C6, C7 |
| 6 | H-6β | 1.76 (1H, ddd, 13.5, 4.6, 2.9 Hz) | 42.2 | | C1 |
| 7 | H-7α | 2.08 (1H, ddd, *J* = 13.5, 12.2, 11.1 Hz) | 27.5 | | C1, C6, C8, C9 |
| | H-7β | 1.92 (1H, m (superimposed)) | | | C1, C6, C8, C9 |
| 8 | H-8β | 4.58 (1H, ddd, *J* = 11.1, 9.8, 4.9 Hz) | 73.3 | H7β, H6, H10 | C1´, C9, C10 |
| 9 | H-9α | 4.12 (1H, dq, *J* = 9.8, 6.2 Hz) | 68.2 | C1-OH, H7α, H10 | C-1, C7, C8 |
| 10 | H-10 | 1,15 (3H, d, *J* = 6.2 Hz) | 17.9 | H9, H8 | C8, C9 |
| 1´ | - | | 165.7 | | |
| 2´ | H-2´ | 5.84 (1H, dq, *J* = 15.5, 1.7 Hz) | 122.5 | H4´ | C4´ |
| 3´ | H-3´ | 6.99 (1H, dq, *J* = 15.5, 7 Hz) | 145.3 | H2´, H4´ | C1´, C4´ |
| 4´ | H-4´ | 1.89 (3H, dd, *J* = 7, 1.7 Hz) | 18.0 | | C2´, C3´ |
| C1-OH | | 3.22 (1H, s) | - | | C-1, C-6 |
| C5-OH | | 3.19 (1H, d, J = 7.0 Hz) | - | | C-5, C-6 |

**Table S7. NMR Spectroscopic data of trichoarundinal B (18) ($^{1}H$ at 500 MHz, $^{13}C$ at 125 MHz).**

| Position | Proton | $\delta_H$ (Hz) | $\delta^{13}C$ | NOE | HMBC |
|---|---|---|---|---|---|
| 1 | - | | 96.6 | | |
| 2 | H-2 | 2.09 (1H, tt, $J$ = 14.2, 3.8 Hz) | 22.9 | | |
| | H-2 | 1.77 (1H, m) | | | |
| 3 | H-3 | 3.67 (1H, t, $J$ = 2.9 Hz) | 72.0 | H-2, H2´, H-5 | C1, C4 |
| 4 | H-4 | 1.64 (1H, m) | 27.4 | | |
| | H-4 | 1.96 (1H, m) | | | |
| 5 | H-5β | 3.91 (1H, s(br)) | 70.5 | H-3, H4, H6β, H7β | C1, C6 |
| 6 | H-6β | 2.19 (1H, ddd, 13.5, 3.8, 2.5 Hz) | 37.6 | | |
| 7 | H-7α | 2.01 (1H, ddd, $J$ = 13.5, 12, 11 Hz) | 27.2 | | C1 |
| | H-7β | 1.93 (1H, m (superimposed)) | | | C1 |
| 8 | H-8β | 4.59 (1H, ddd, $J$ = 11, 9.8, 5 Hz) | 73.4 | H-6, H7β, H10 | C1´, C10, C9 |
| 9 | H-9α | 4.13 (1H, dq, $J$ = 9.8, 6.2 Hz) | 68.4 | H7α, H10, <u>H</u>O-C1 | C8 |
| 10 | H-10 | 1,17 (3H, d, $J$ = 6.2 Hz) | 17.9 | | |
| 1´ | - | | 165.7 | | |
| 2´ | H-2´ | 5.84 (1H, dq, $J$ = 15.5, 1.7 Hz) | 122.5 | | C1´, C4´ |
| 3´ | H-3´ | 6.99 (1H, dq, $J$ = 15.5, 7 Hz) | 145.3 | | C1´, C4´ |
| 4´ | H-4´ | 1.89 (3H, dd, $J$ = 7, 1.7 Hz) | 18.0 | H3´,H2´ | |
| C1-O<u>H</u> | | 3.91 (1H, s) | - | | |
| C3-O<u>H</u> | | 2.27 (1H, s(br)) | | | |
| C5-O<u>H</u> | | 2.31(1H, s(br)) | - | | |

**Table S8. NMR Spectroscopic data of compound (19) ($^1H$ at 500 MHz, $^{13}C$ at 125 MHz).**

| Position | Proton | $\delta_H$ (Hz) | $\delta^{13}C$ | NOESY | HMBC |
|---|---|---|---|---|---|
| 1 | - | | | | |
| 2 | H-2 | 5.90 (1H, dq, *J* = 15.5, 1.7 Hz) | | | |
| 3 | H-3 | 7.04 (1H, dq, *J* = 15.5, 7.0 Hz) | | | |
| 4 | H-4 | 1.89 (3H, dd, *J* = 7.0, 1.7 Hz) | | H2, H3 | |
| 1′ | H-1′a | 3.91 (1H, dd, *J* = 12.2, 5.0 Hz) | | H2′, H4′ | |
| | H-1′b | 3.83 (1H, dd, *J* = 12.2, 3.8 Hz) | | | |
| 2′ | H-2′β | 4.8 (1H, td, *J* = 5.0, 3.8 Hz) | | H4′ | |
| 3′ | H-3′ | 4.1 (1H, qd, *J* = 6.5, 5.0 Hz) | | H4′ | |
| 4′ | H-4′ | 1.24 (3H, d, *J* = 6.5 Hz) | | H2′, H3′ | |

**Table S9. NMR Spectroscopic data of compound (20) ($^1H$ at 500 MHz, $^{13}C$ at 125 MHz).**

| Position | Proton | $\delta_H$ (Hz) | $\delta^{13}C$ | NOE | HMBC |
|---|---|---|---|---|---|
| 1 | - | | 165.4 | | |
| 2 | H-2 | 5.86 (1H, dq, *J* = 15.5, 1.7 Hz) | 122.1 | | C1, C4 |
| 3 | H-3 | 7.01 (1H, dq, *J* = 15.5, 7.0 Hz) | 145.9 | | C1, C4 |
| 4 | H-4 | 1.90 (3H, dd, J = 7.0, 1.7 Hz) | 18.1 | H2, H3 | C2, C3 |
| 1′ | H-1′a | 4.28 (1H, dd, *J* = 12.0, 3.5 Hz) | 62.1 | H2′ | C2′, C3′, <u>C</u>OCH$_3$ |
| | H-1′b | 4.20 (1H, dd, *J* = 12.0, 6.7 Hz) | | H2′ | C2′, C3′, <u>C</u>OCH$_3$ |
| 2′ | H-2′β | 5.21 (1H, ddd, *J* = 6.7, 5.0, 3.5 Hz) | 72.0 | H1′, H4′ | C1, C1′, C3′, C4′ |
| 3′ | H-3′ | 5.11 (1H, qd, *J* = 6.5, 5.0 Hz) | 68.7 | H4′ | C1′, C2′, C4′, <u>C</u>OCH$_3$ |
| 4′ | H-4′ | 1.27 (3H, d, *J* = 6.5 Hz) | 15.8 | H3′ | C2′, C3′ |
| <u>CH$_3$</u>CO | C<u>H</u>$_3$ | 2.04 (6H, s) | 21.1, 20.7 | | |
| CH$_3$<u>CO</u> | - | | 170.7, 170.0 | | |

**Table S10. NMR Spectroscopic data of compound (21) ($^1$H at 500 MHz, $^{13}$C at 125 MHz).**

| Position | Proton | $\delta_H$ (Hz) | $\delta^{13}$C | NOE | HMBC |
|---|---|---|---|---|---|
| 1 | - | | 167.1 | | |
| 2 | H-2 | 5.90 (1H, dq, $J$ = 15.5, 1.7 Hz) | 145.3 | | C1, C4 |
| 3 | H-3 | 7.03 (1H, dq, $J$ = 15.5, 7.0 Hz) | 146.1 | | C1, C2, C4 |
| 4 | H-4 | 1.89 (3H, dd, $J$ = 7.0, 1.7 Hz) | 18.06 | H2, H3 | C2, C3 |
| 1´ | H-1´a<br>H-1´b | 4.28 (2H, d(br), $J$ = 5.0 Hz) | 65.2 | H2´, H3´, H4´ | C1, C2´, C3´ |
| 2´ | H-2´β | 3.75 (1H, q, $J$ = 5.0 Hz) | 73.8 | H4´, H1´ | C1´, C3´, C4´ |
| 3´ | H-3´ | 3.84 (1H, dq, $J$ = 6.4, 5.0 Hz) | 68.4 | H4´ | C1´, C2´, C4´ |
| 4´ | H-4´ | 1.23 (3H, d, $J$ = 6.4 Hz) | 18.1 | H1´,H2´, H3´ | C2´, C3´ |

**Table S11. NMR Spectroscopic data of compound (22) ($^1$H at 500 MHz, $^{13}$C at 125 MHz).**

| Position | Proton | $\delta_H$ (Hz) | $\delta^{13}$C | NOE | HMBC |
|---|---|---|---|---|---|
| 1 | - | | 174.2 | | |
| 2 | H-2 | 2.35 (1H, t, $J$ = 7.4 Hz) | 36.0 | | |
| 3 | H-3 | 1.67 (1H, sext, $J$ = 7.4 Hz) | 18.4 | | |
| 4 | H-4 | 0.96 (3H, t, $J$ = 7.4 Hz) | 13.6 | | C2, C3 |
| 1´ | H-1´a<br>H-1´b | 4.25 (1H, dd, $J$ = 11.6, 4.0 Hz)<br>4.21 (1H, dd, $J$ = 11.6, 6 Hz) | 65.3 | H2´, H4´ | C1, C2´, C3´ |
| 2´ | H-2´β | 3.75 (1H, q, $J$ = 5.0 Hz) | 73.7 | H1´, H4´ | C1´, C3´, C4´ |
| 3´ | H-3´ | 3.85 (1H, q, $J$ = 5.0 Hz) | 68.2 | H4´ | C1´, C2´, C4´ |
| 4´ | H-4´ | 1.24 (3H, d, $J$ = 6.5 Hz) | 18.12 | H2´, H3´ | C2´, C3´ |

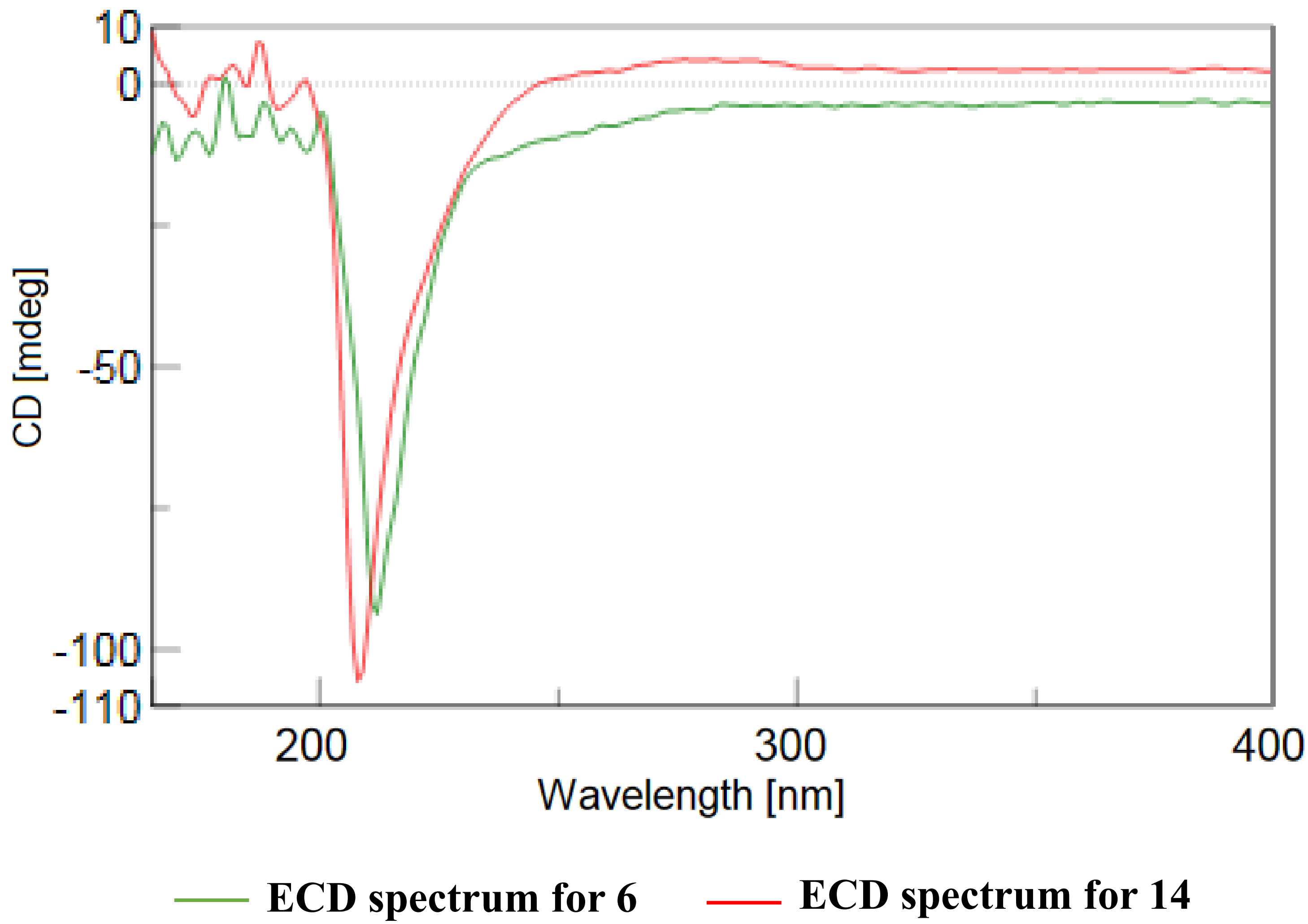


**Figure S1.** *Electronic Circular Dichroism spectra for compounds **6** and **14** in MeOH*

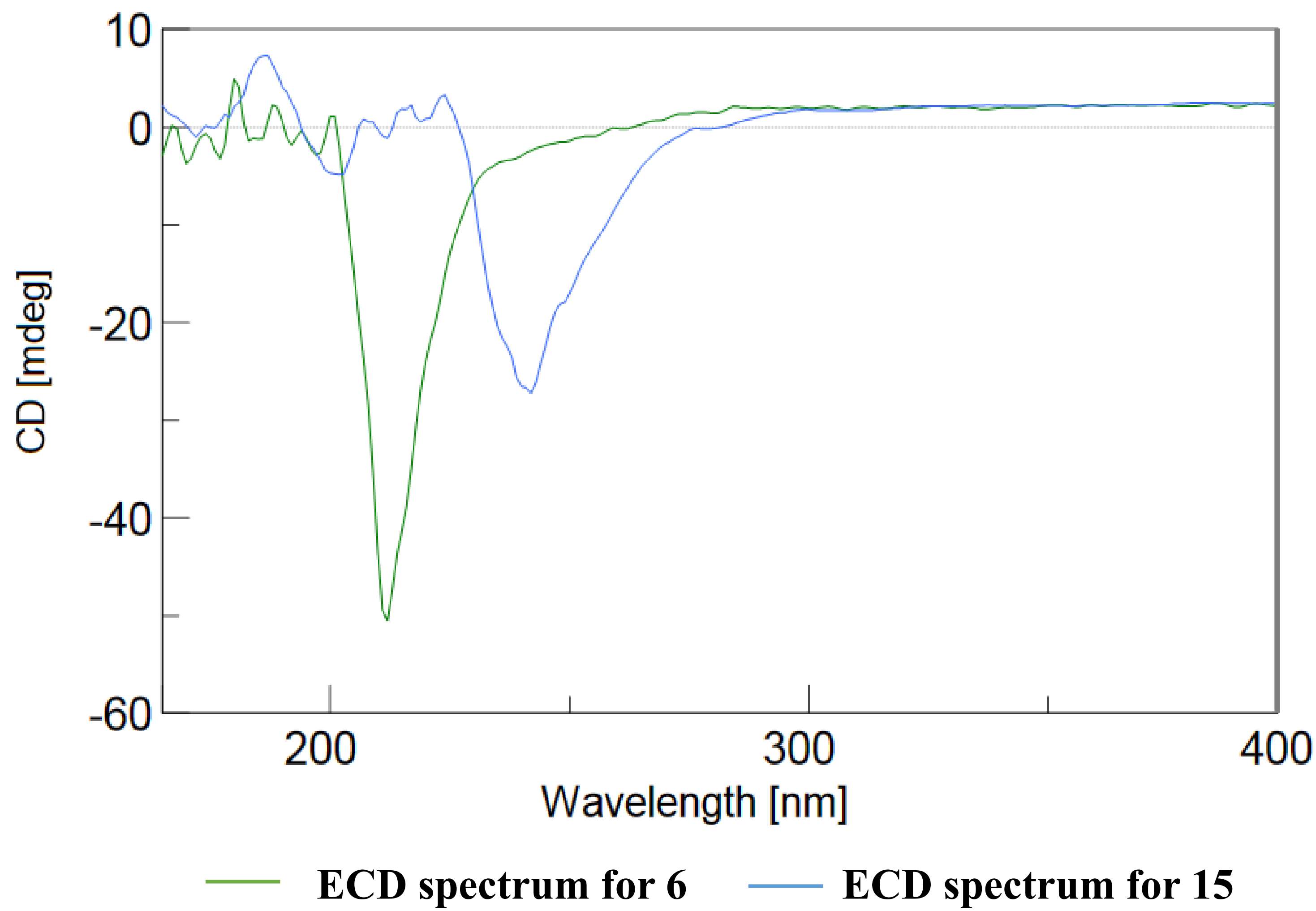


**Figure S2.** *Electronic Circular Dichroism spectra for compounds* ***6*** *and* ***15*** *in MeOH*

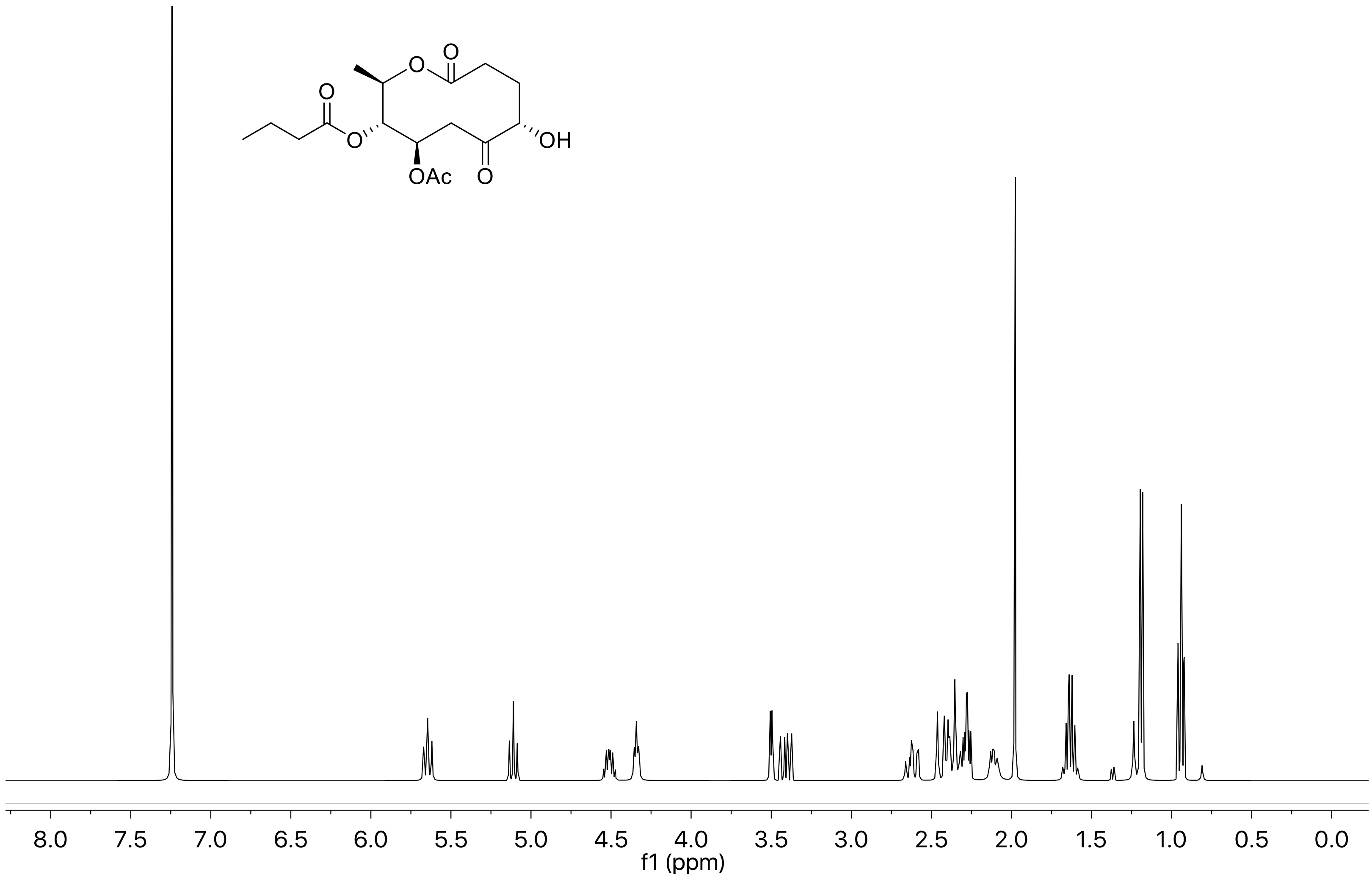


**Figure S3.** *[1]H NMR Spectrum of aspinolide H (**12**) ($CDCl_3$ at 500 MHz)*

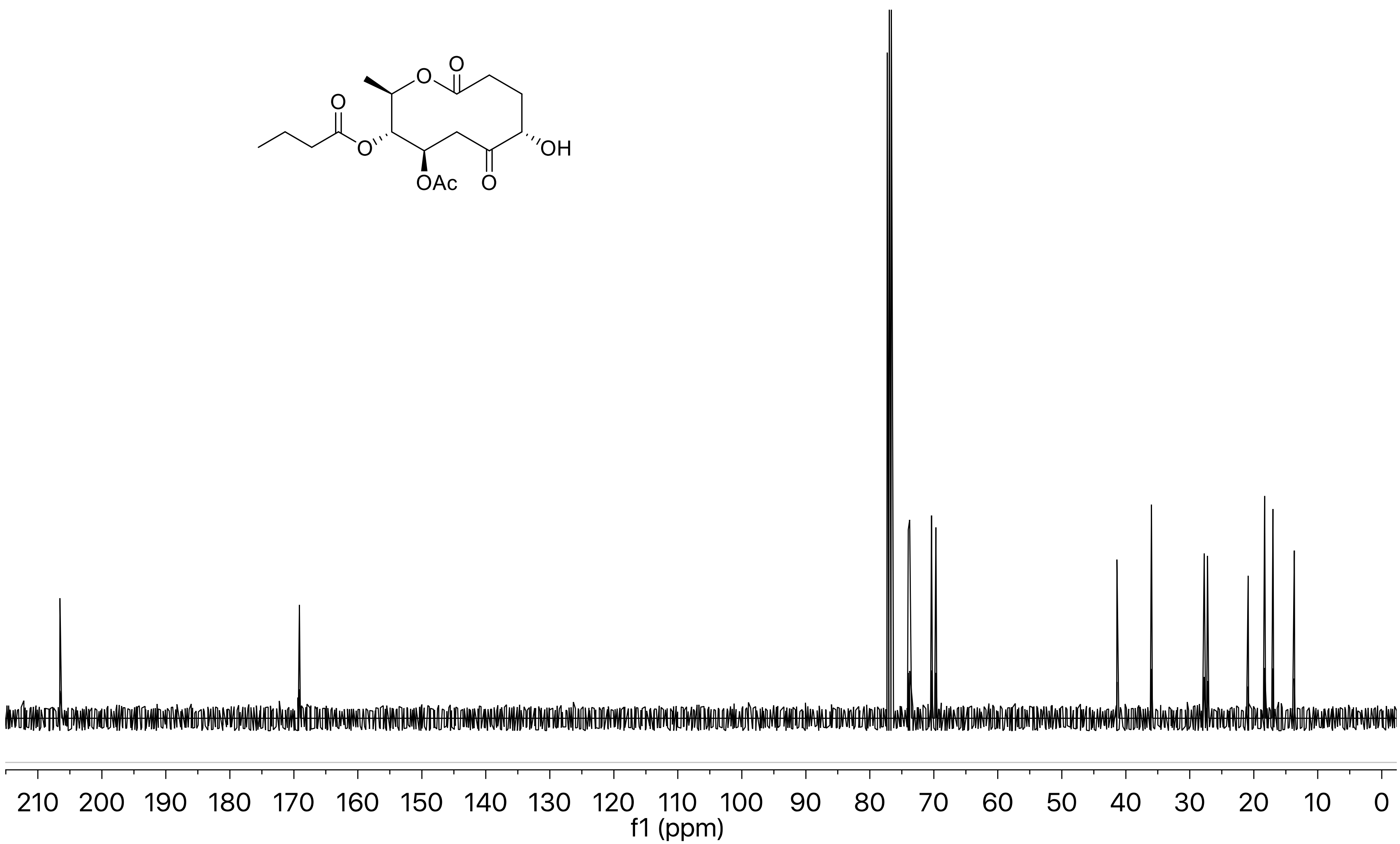


**Figure S4.** *$^{1}$H NMR Spectrum of aspinolide H (**12**) (CDCl$_3$ at 500 MHz)*

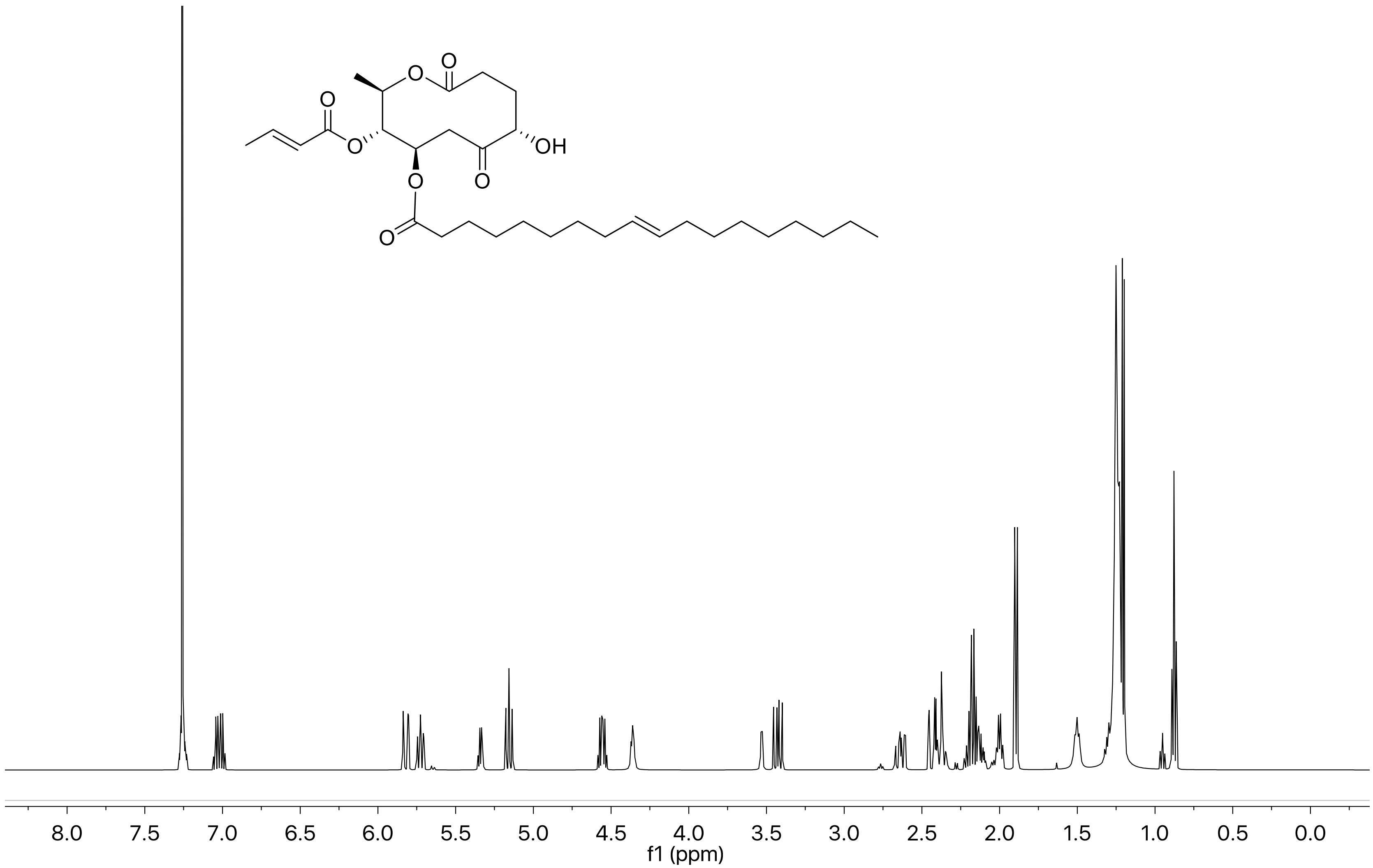


**Figure S5.** *[1]H NMR Spectrum of aspinolide I (**13**) ($CDCl_3$ at 500 MHz)*

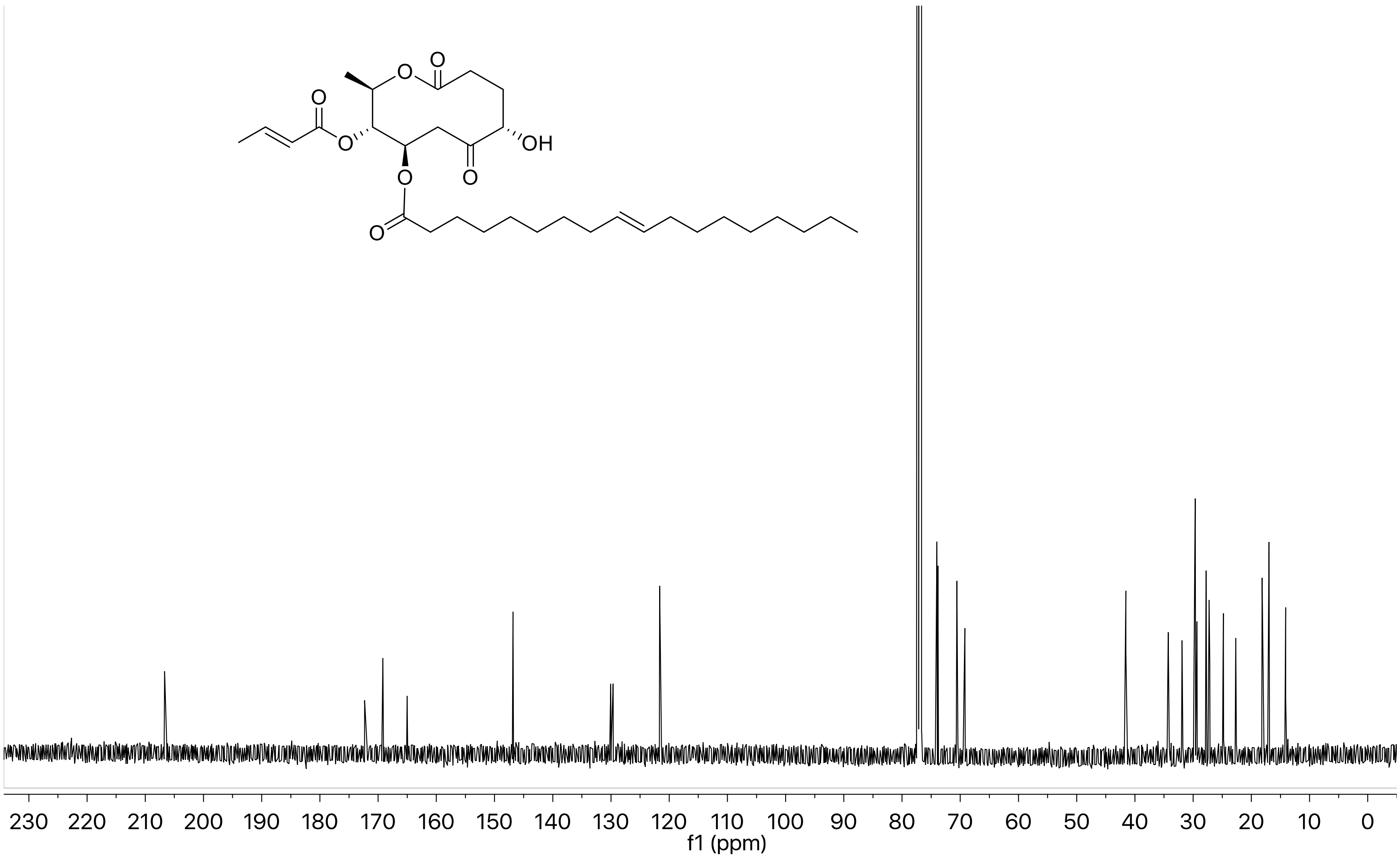


**Figure S6**. *[13]C NMR Spectrum of aspinolide I (**13**) ($CDCl_3$ at 500 MHz)*

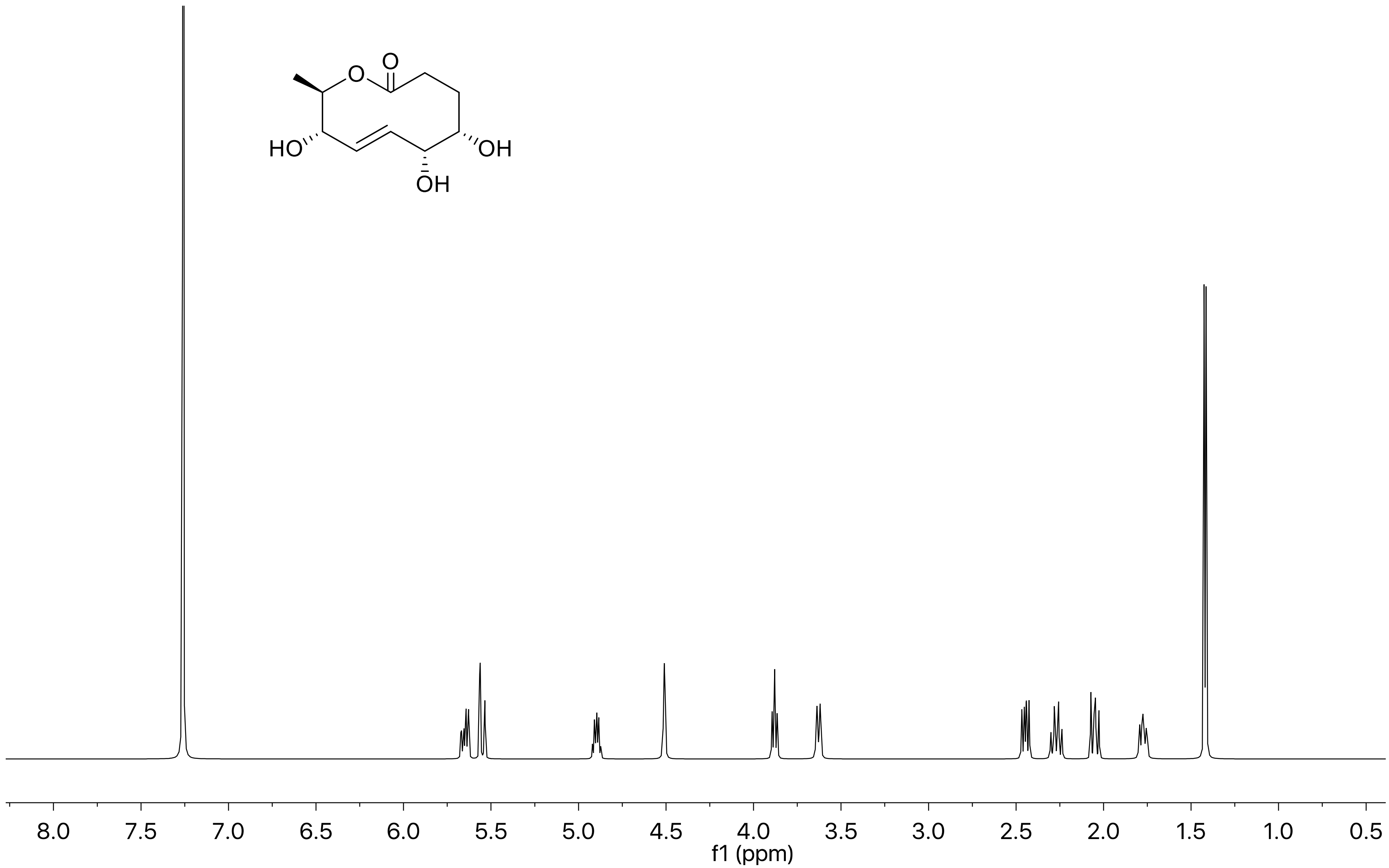


**Figure S7.** *[1]H NMR Spectrum of aspinolide J (**14**) ($CDCl_3$ at 500 MHz)*

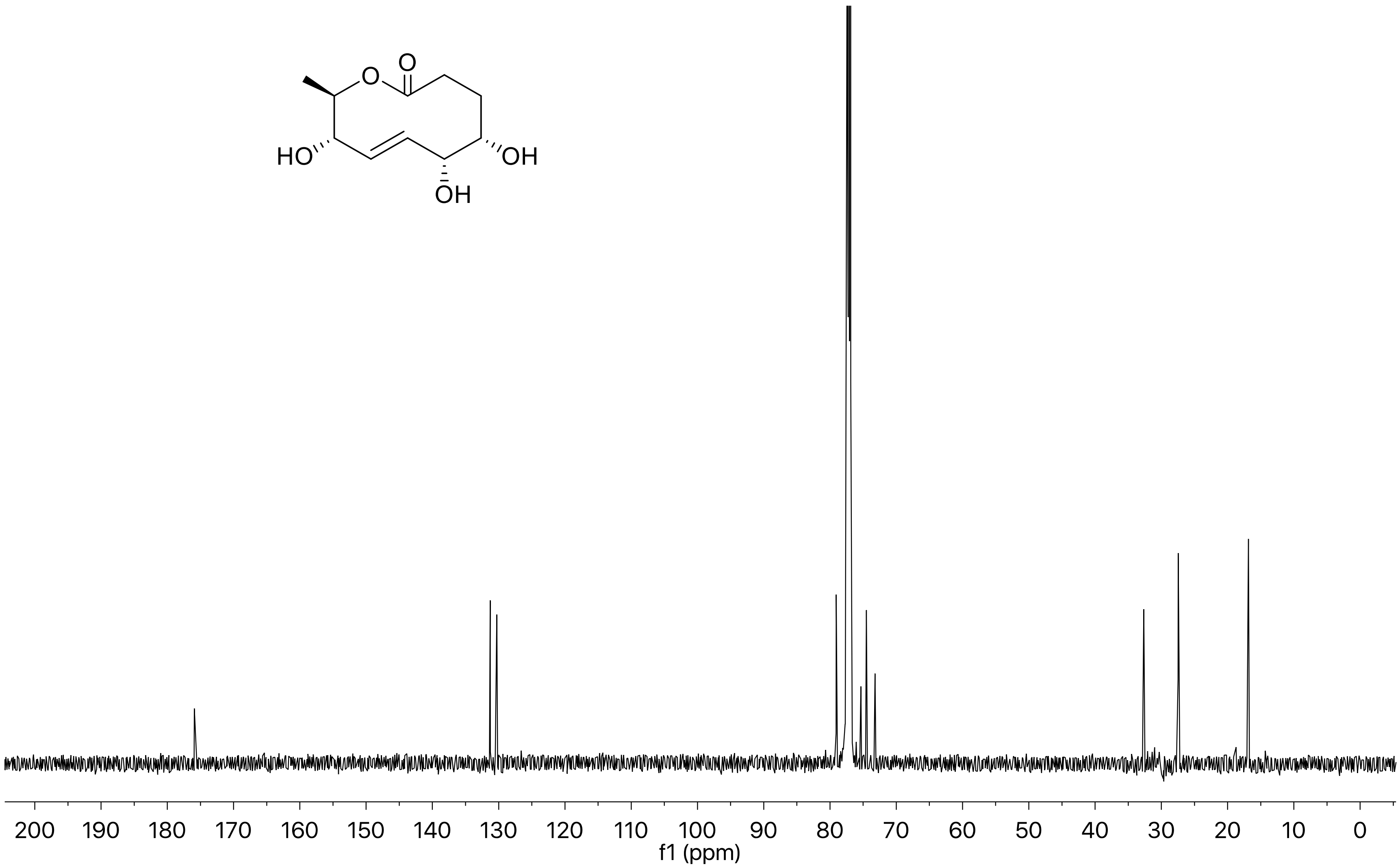


**Figure S8.** *[13]C NMR Spectrum of aspinolide J (**14**) ($CDCl_3$ at 500 MHz)*

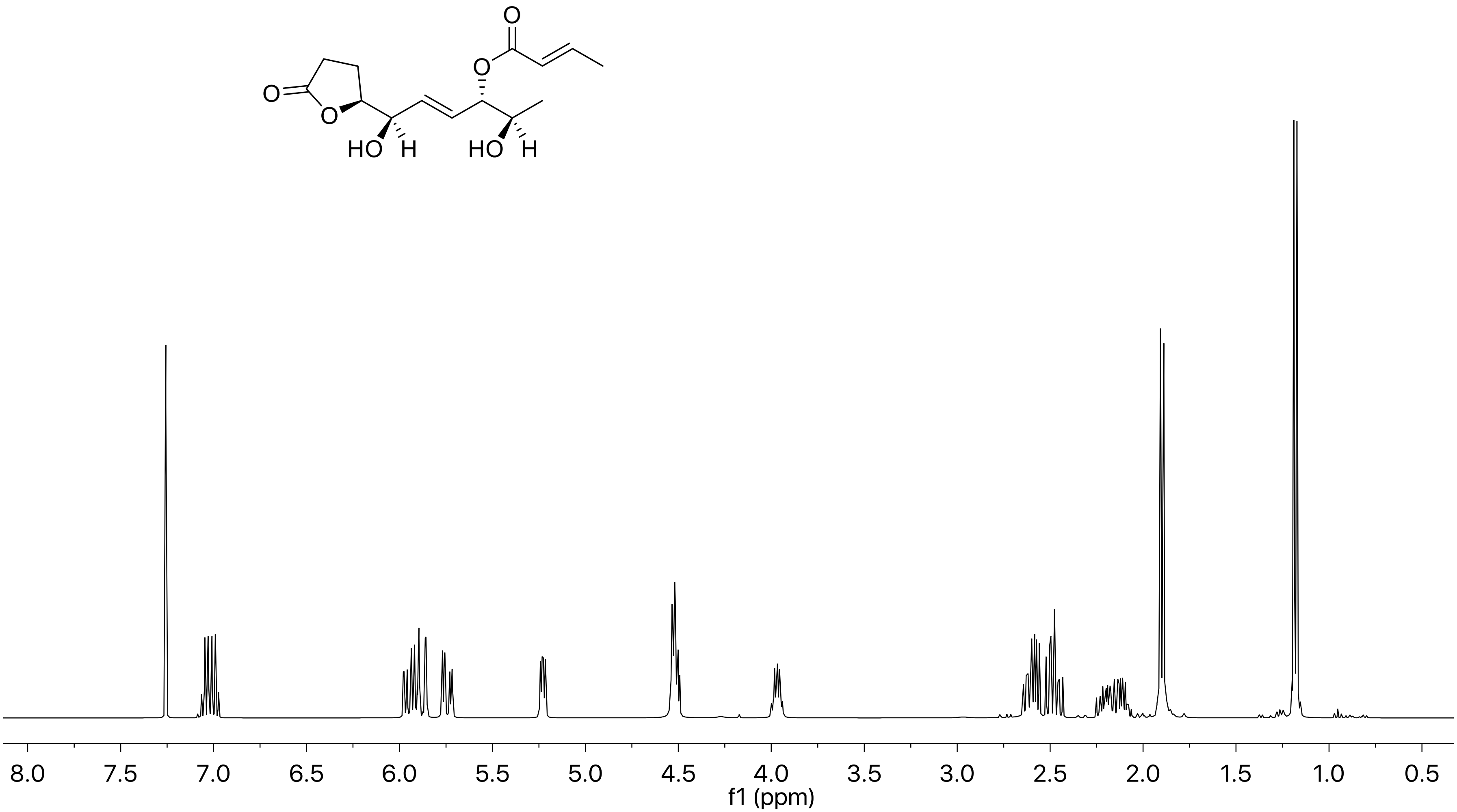


**Figure S9.** *[1]H NMR Spectrum of arundinolide A (**15**) ($CDCl_3$ at 500 MHz)*

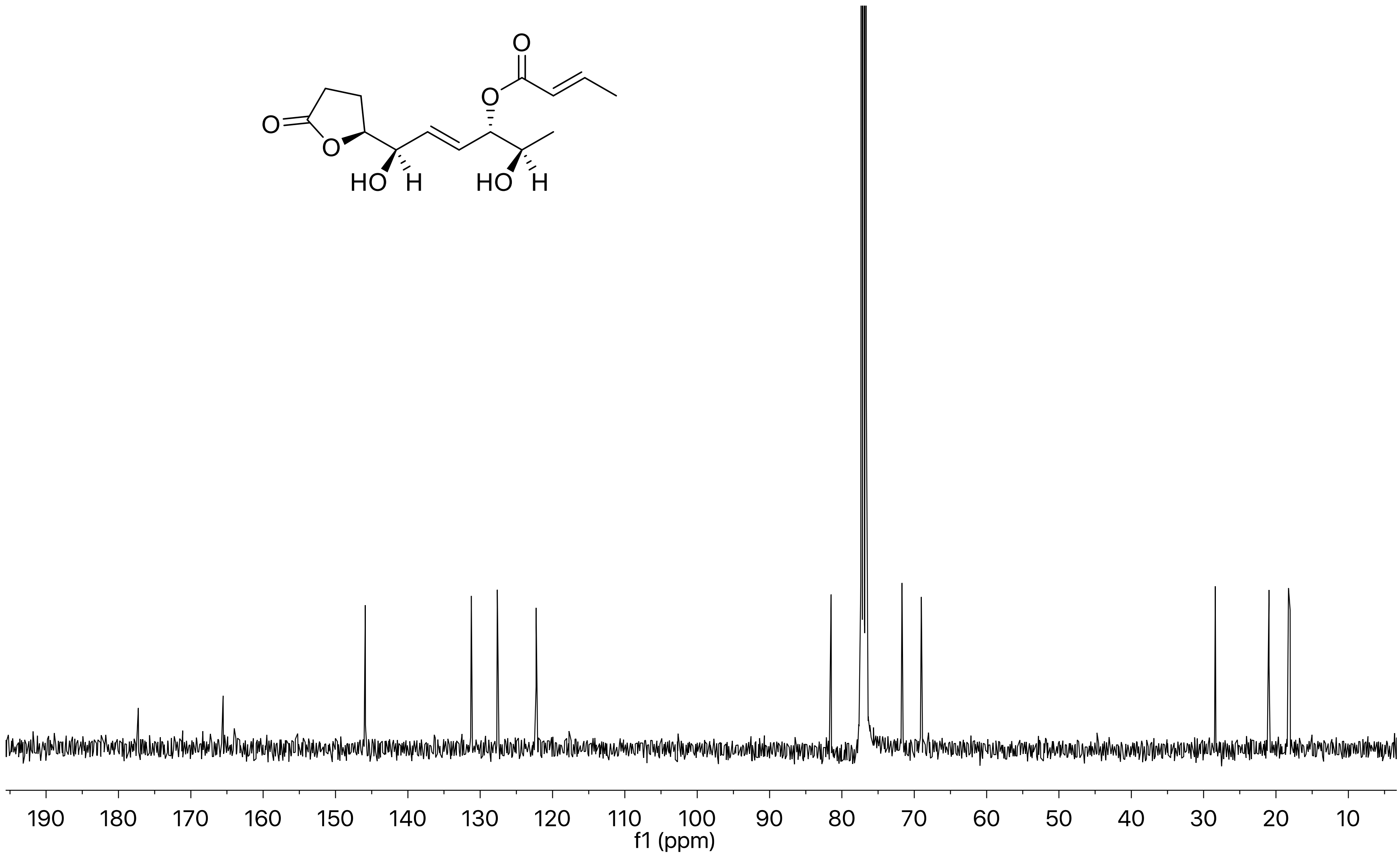


**Figure S10.** *[13]C NMR Spectrum of arundinolide A (**15**) ($CDCl_3$ at 500 MHz)*

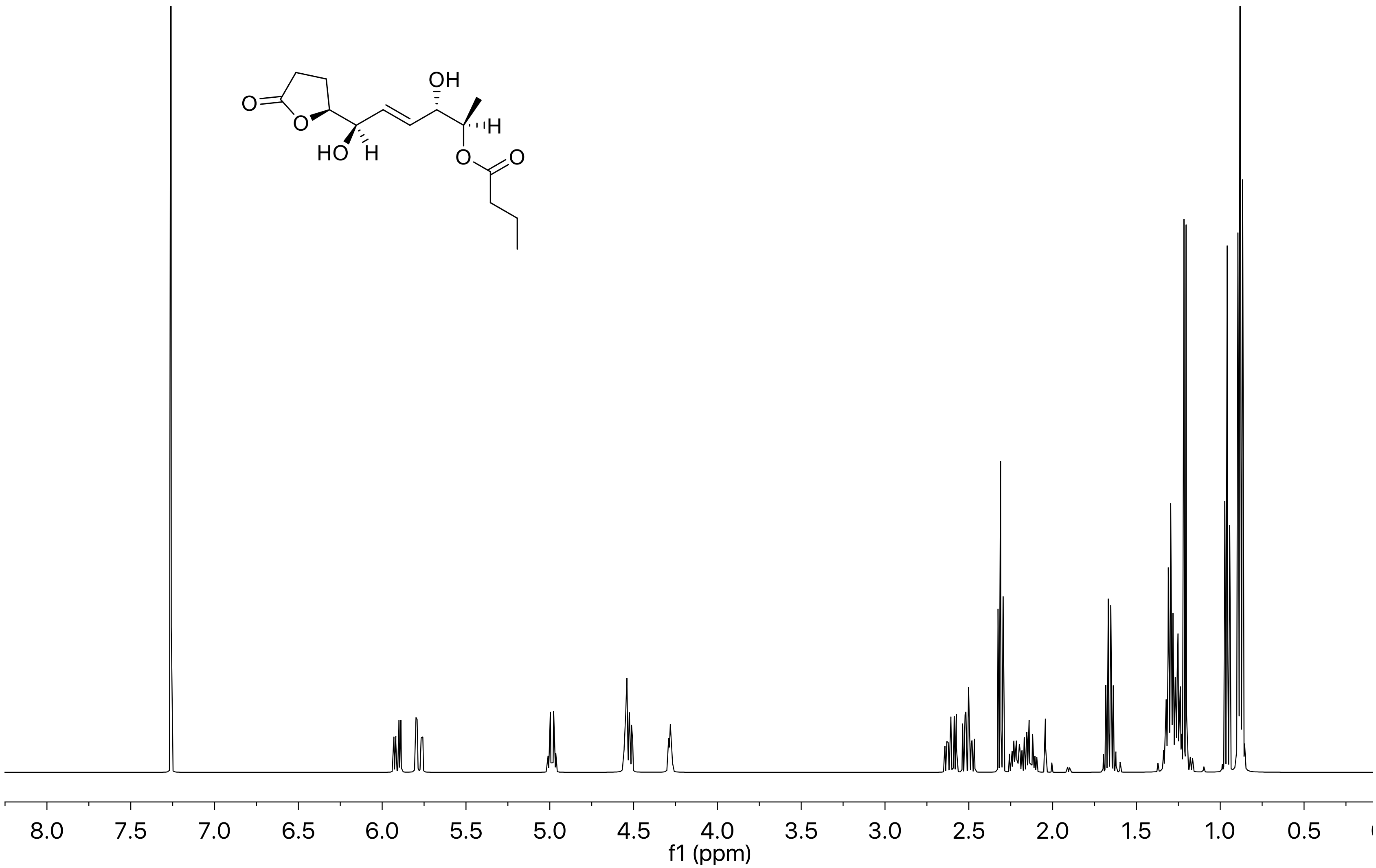


**Figure S11.** *[1]H NMR Spectrum of arundinolide B (**16**) ($CDCl_3$ at 500 MHz)*

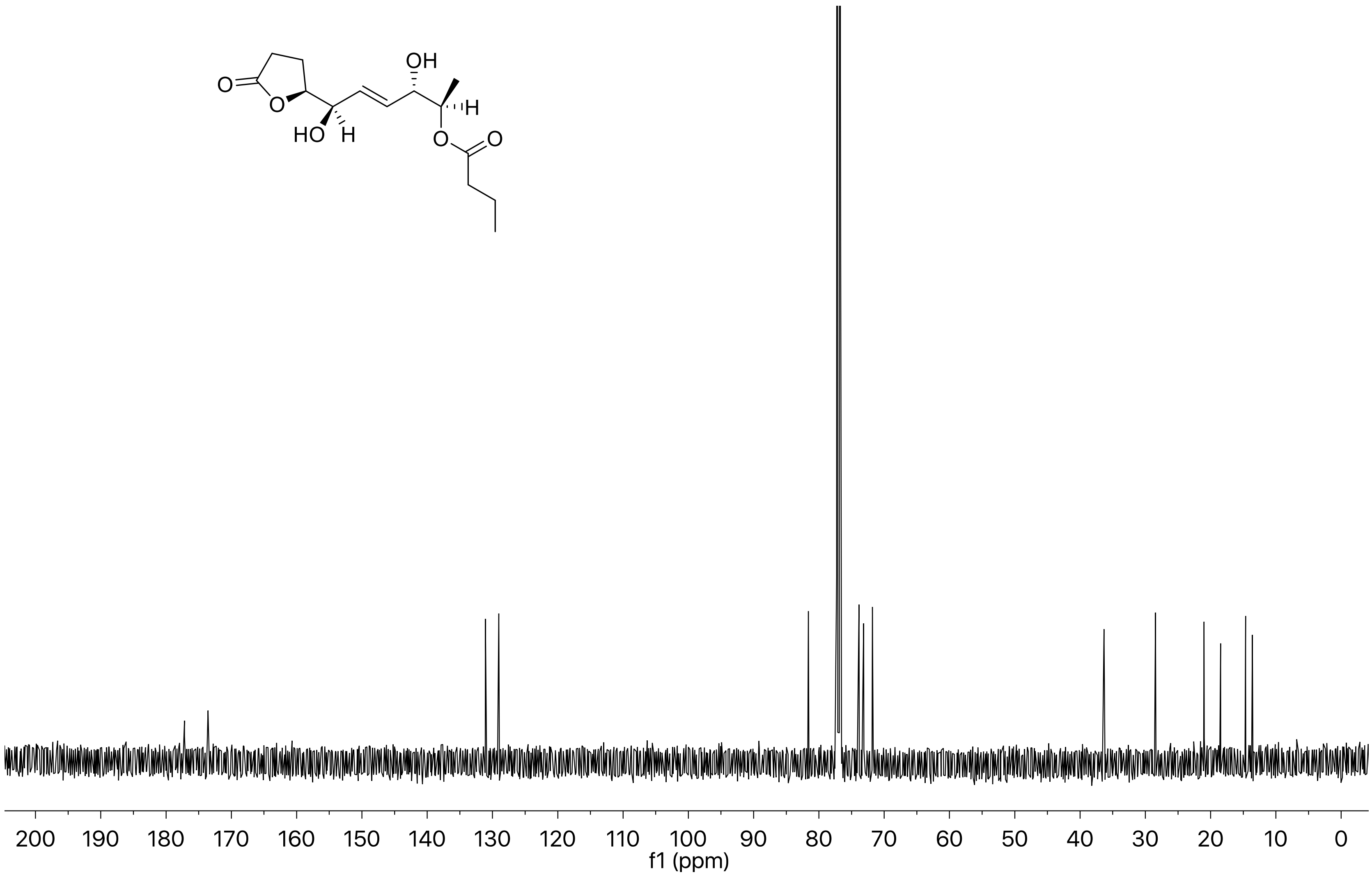


**Figure S12.** *$^{13}$C NMR Spectrum of arundinolide B (**16**) ($CDCl_3$ at 500 MHz)*

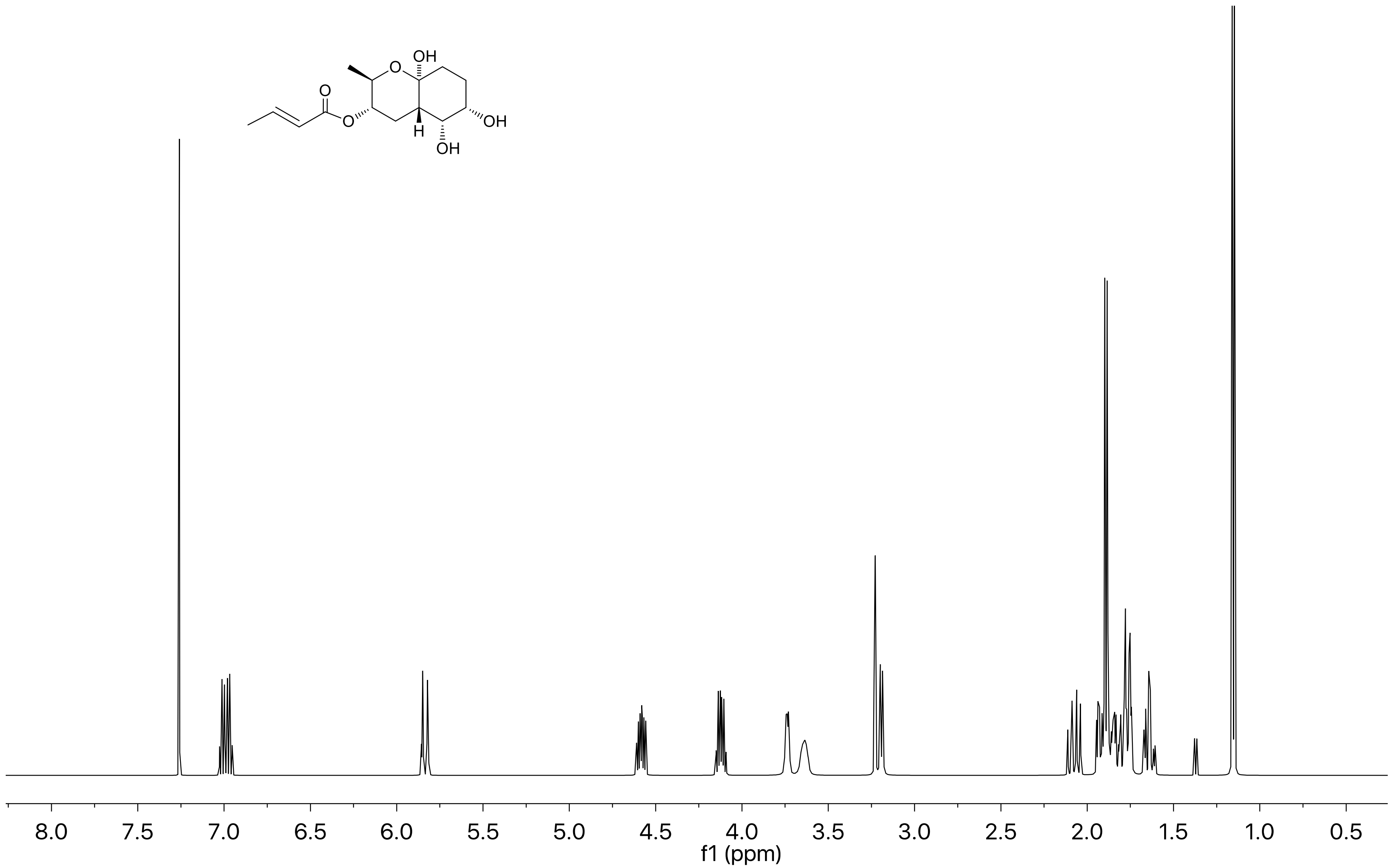


**Figure S13.** *[1]H NMR Spectrum of trichoarundinal A (**17**) (CDCl₃ at 500 MHz)*

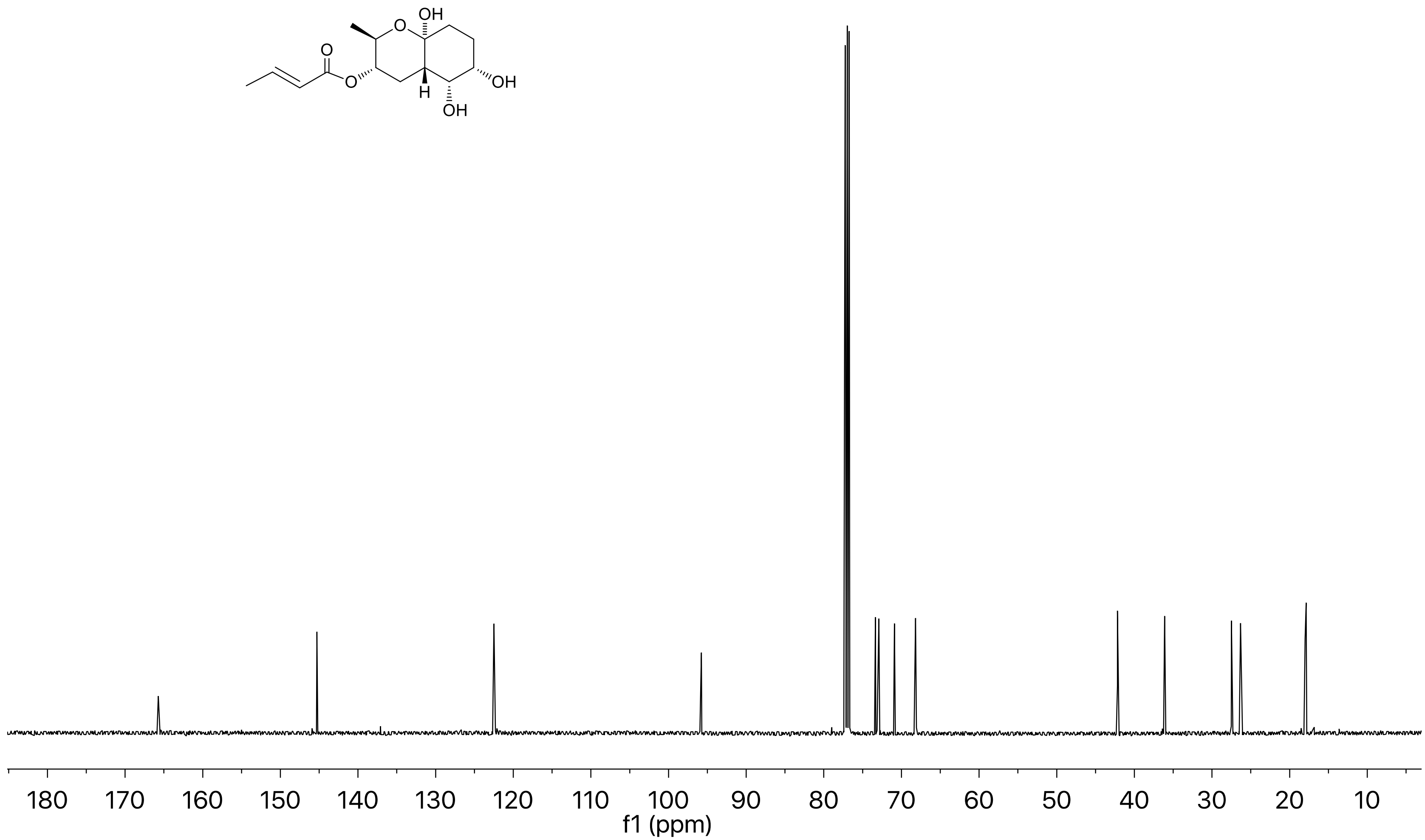


**Figure S14.** *[13]C NMR Spectrum of trichoarundinal A* (**17**) *(CDCl$_3$ at 500 MHz)*

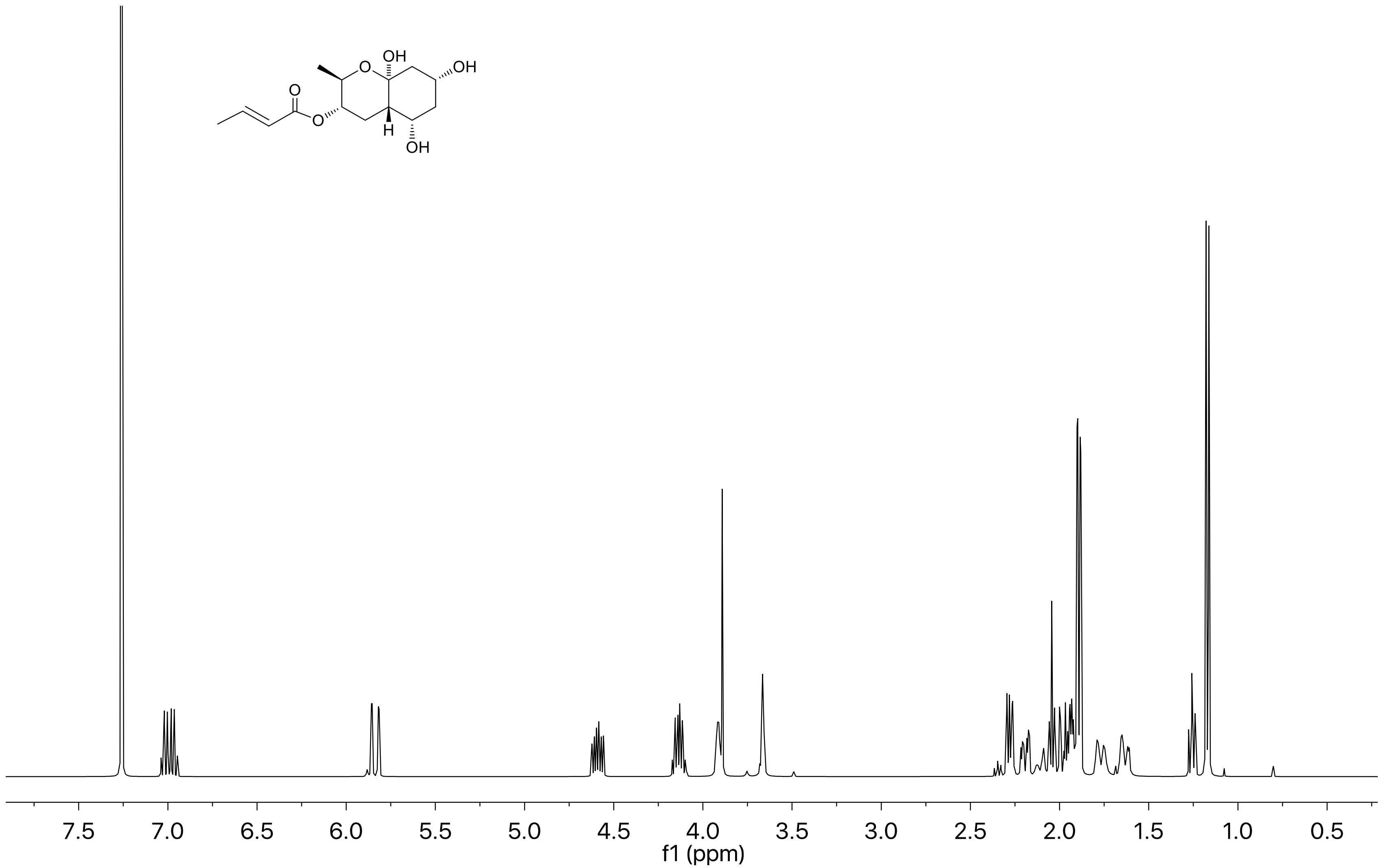


**Figure S15.** *$^{1}$H NMR Spectrum of trichoarundinal B (**18**) ($CDCl_3$ at 500 MHz)*

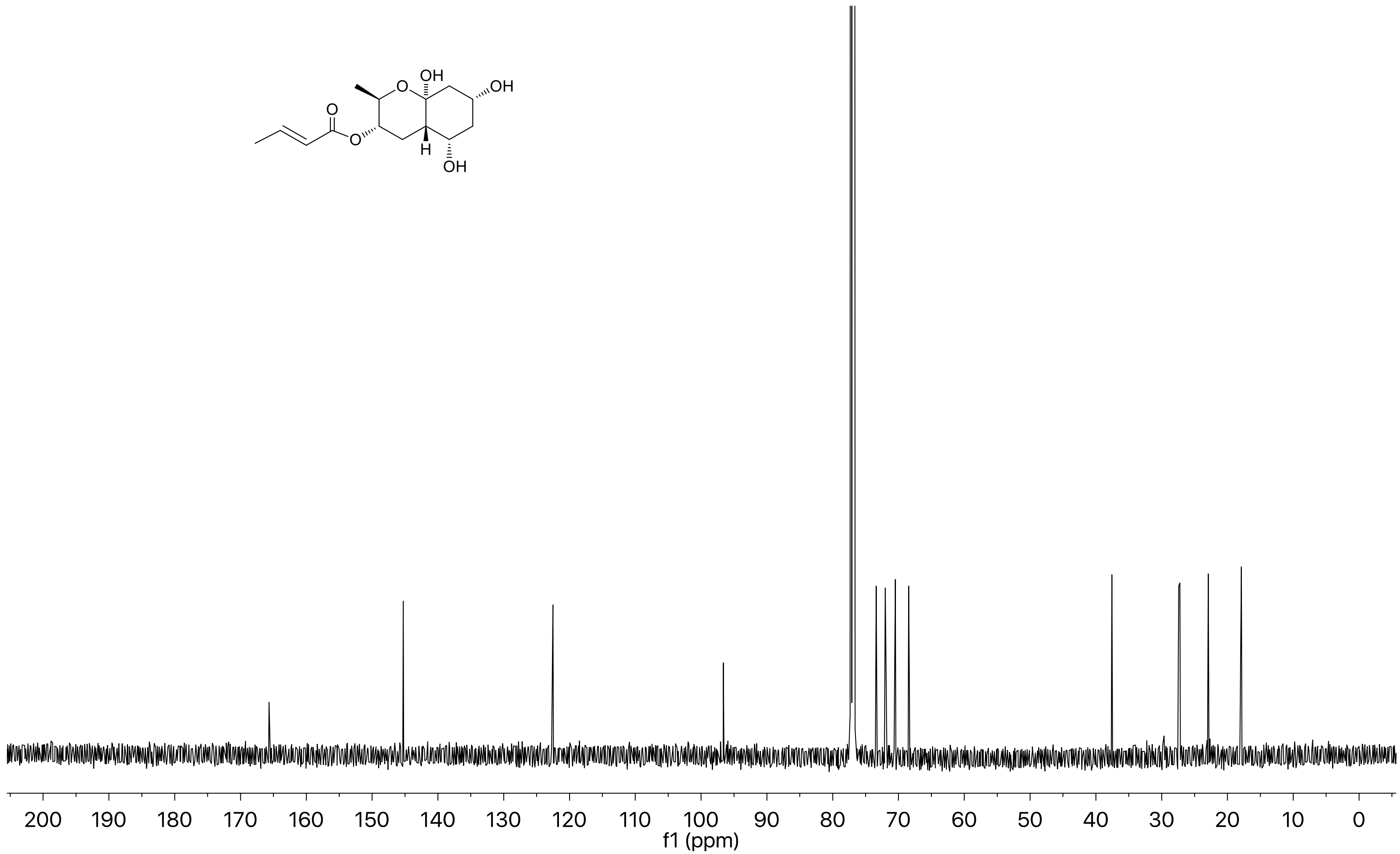


**Figure S16.** *$^{13}$C NMR Spectrum of trichoarundinal B (**18**) ($CDCl_3$ at 500 MHz)*

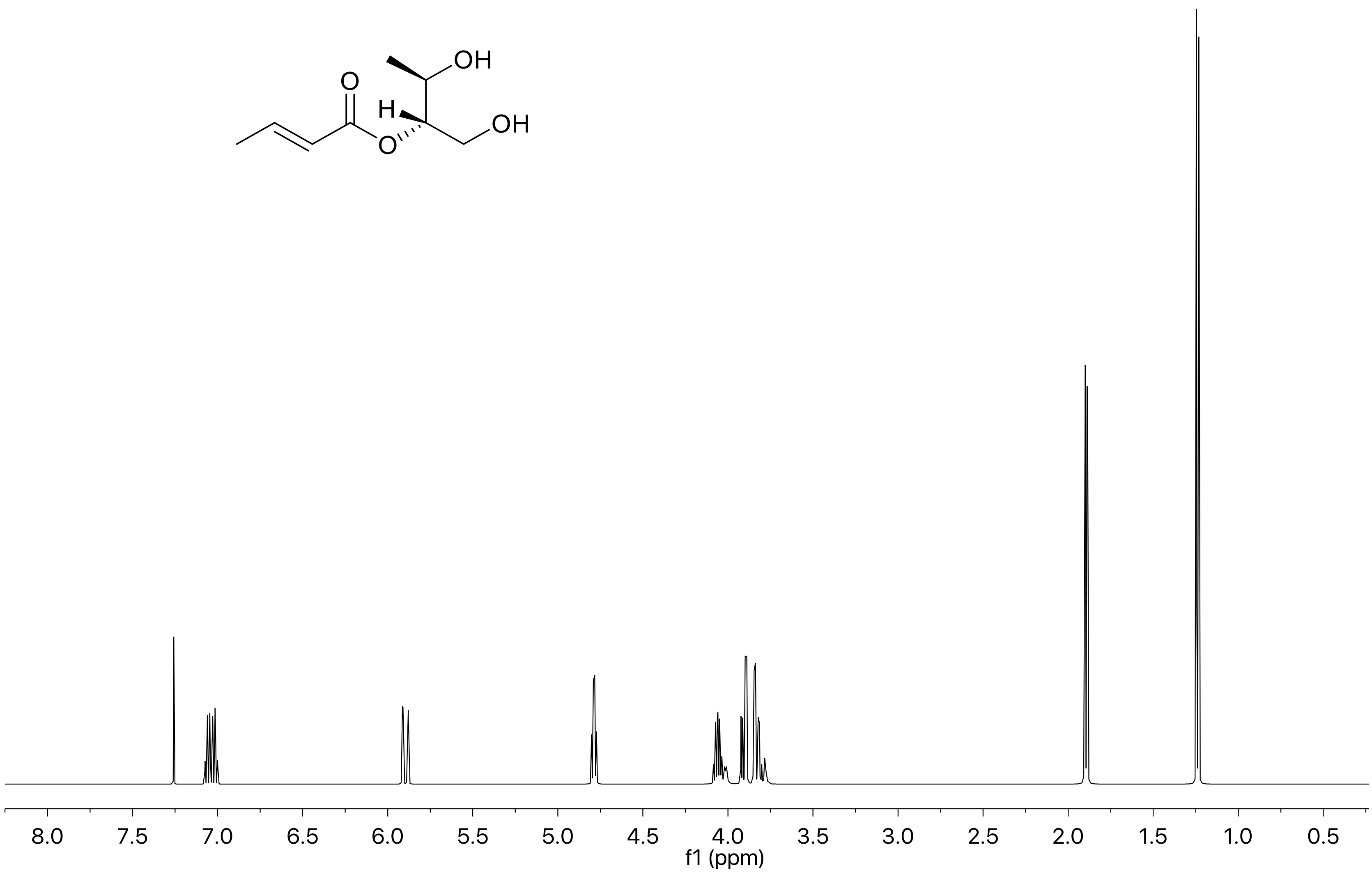


**Figure 17.** *[1]H NMR Spectrum of (E)-(2S,3R)-1,3-dihydroxybutan-2-yl but-2-enoate (**19**) ($CDCl_3$ at 500 MHz)*

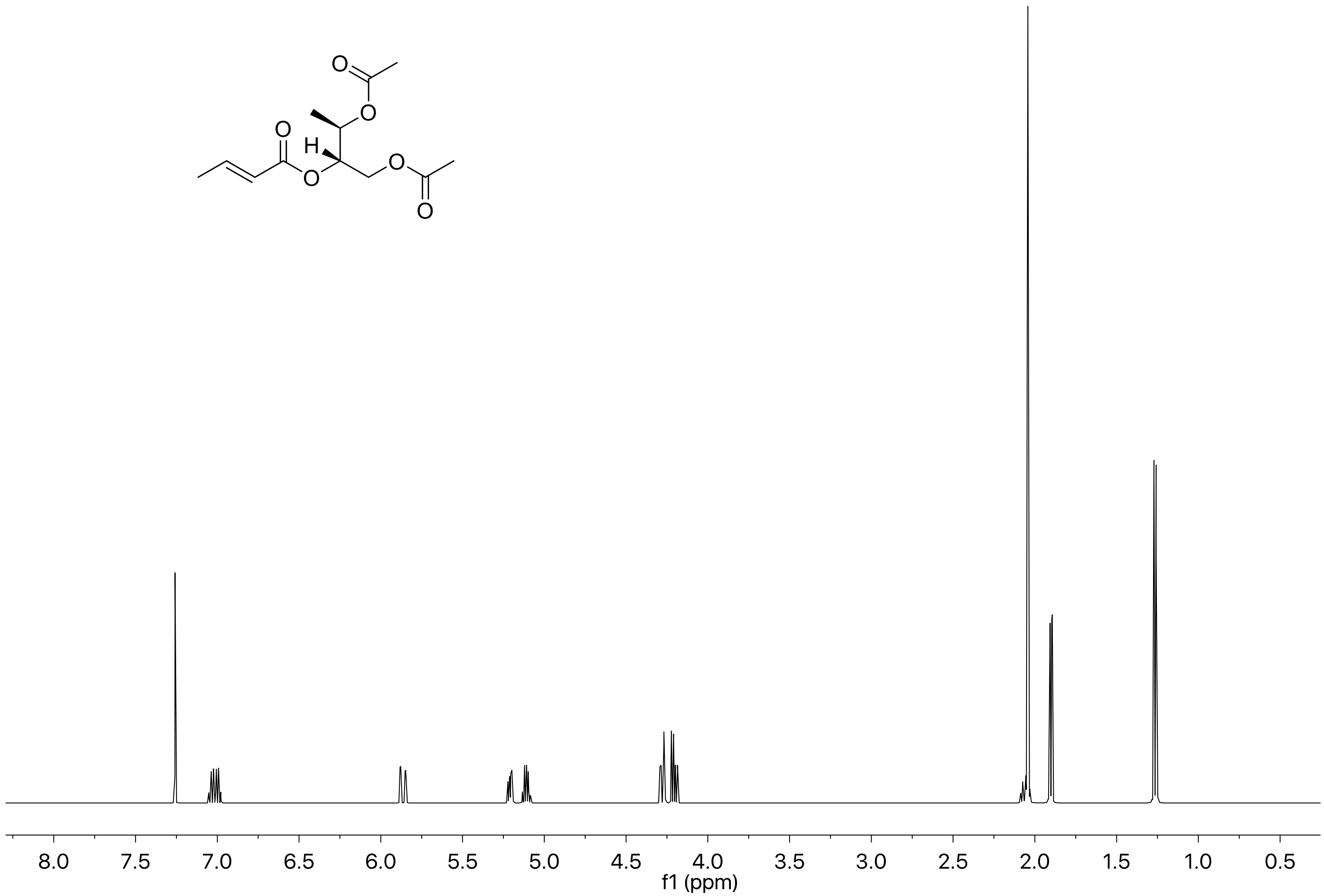


**Figure 18.** *[1]H NMR Spectrum of diacetyl derivative (**20**) ) ($CDCl_3$ at 500 MHz)*

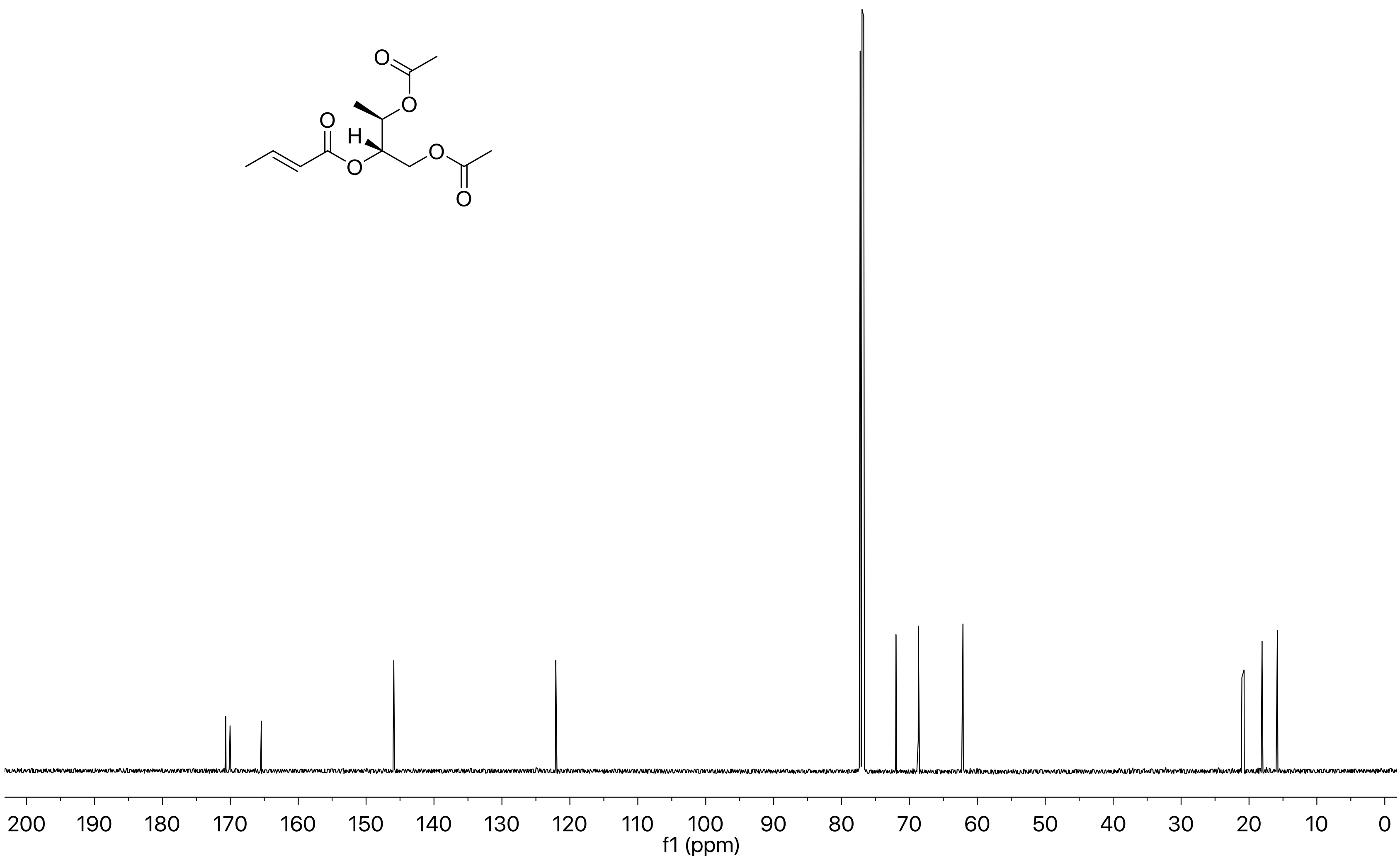


**Figure 19.** *$^{13}$C NMR Spectrum of diacetyl derivative (**20**) ) ($CDCl_3$ at 500 MHz)*

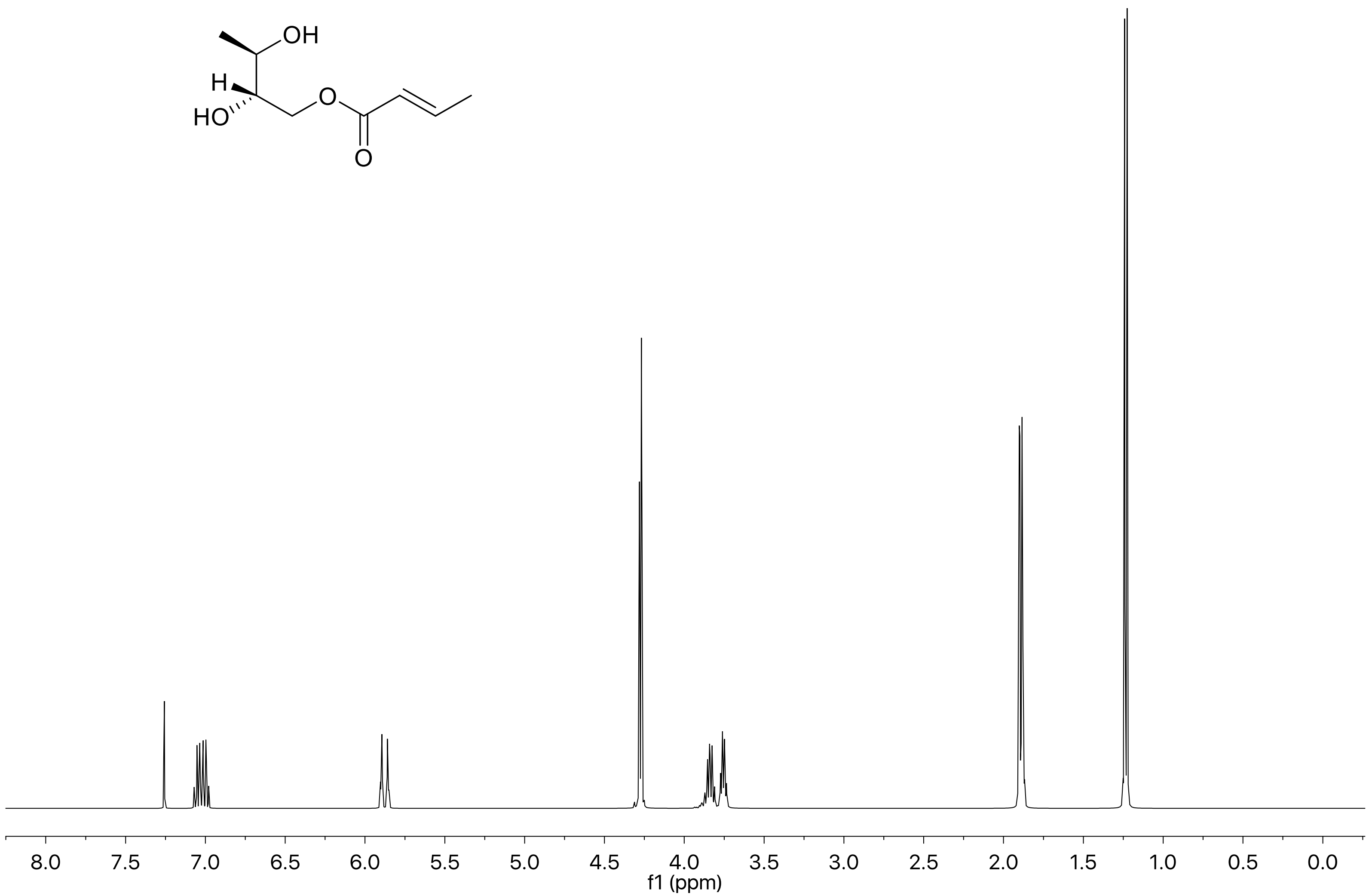


**Figure 20.** *[1]H NMR Spectrum of (E)-(2S,3R)-2′,3′-dihydroxybutyl but-2-enoate (**21**) ($CDCl_3$ at 500 MHz)*

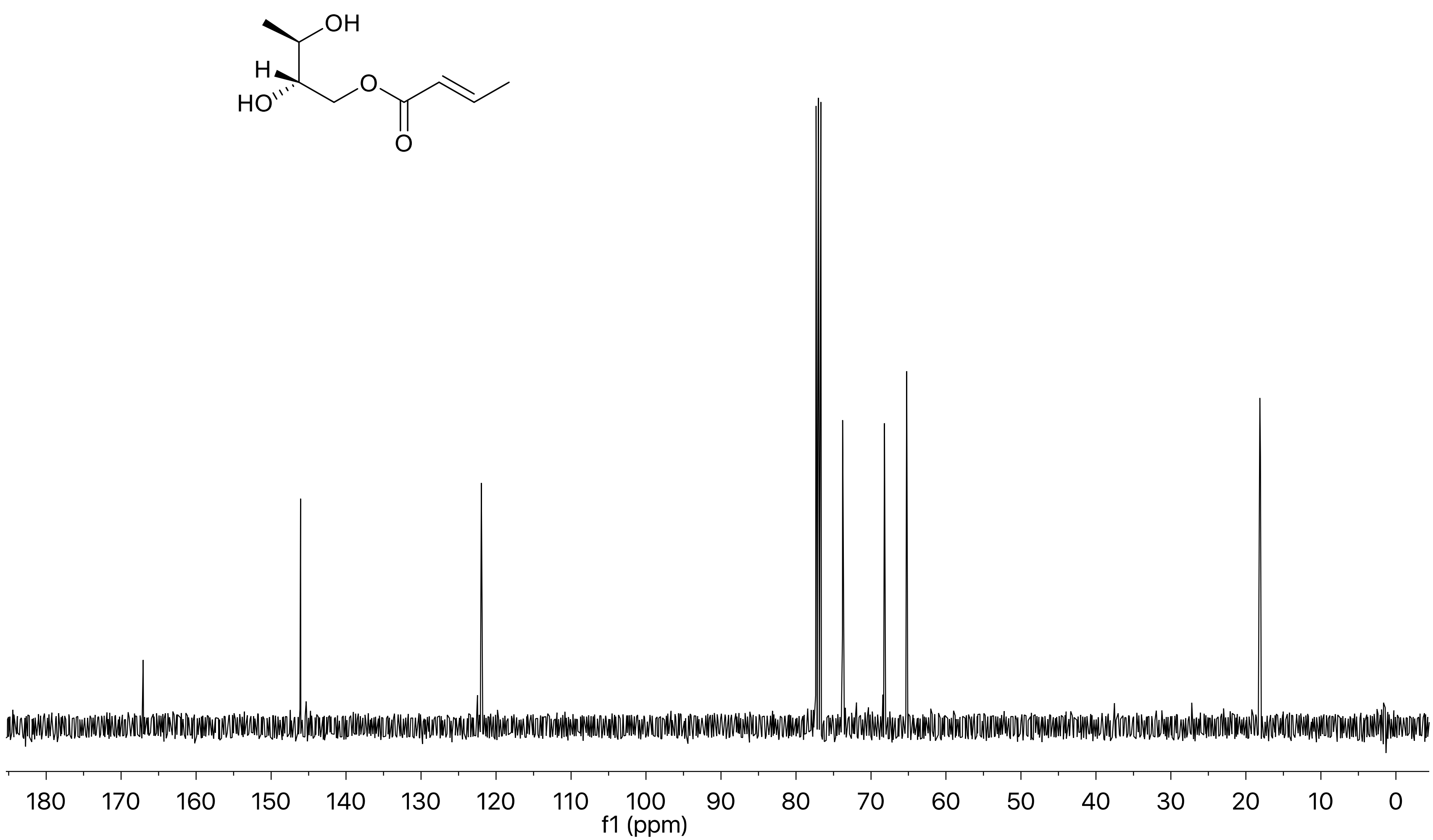


**Figure 21.** *[13]C NMR Spectrum of (E)-(2S,3R)-2′,3′-dihydroxybutyl but-2-enoate (**21**) ($CDCl_3$ at 500 MHz)*

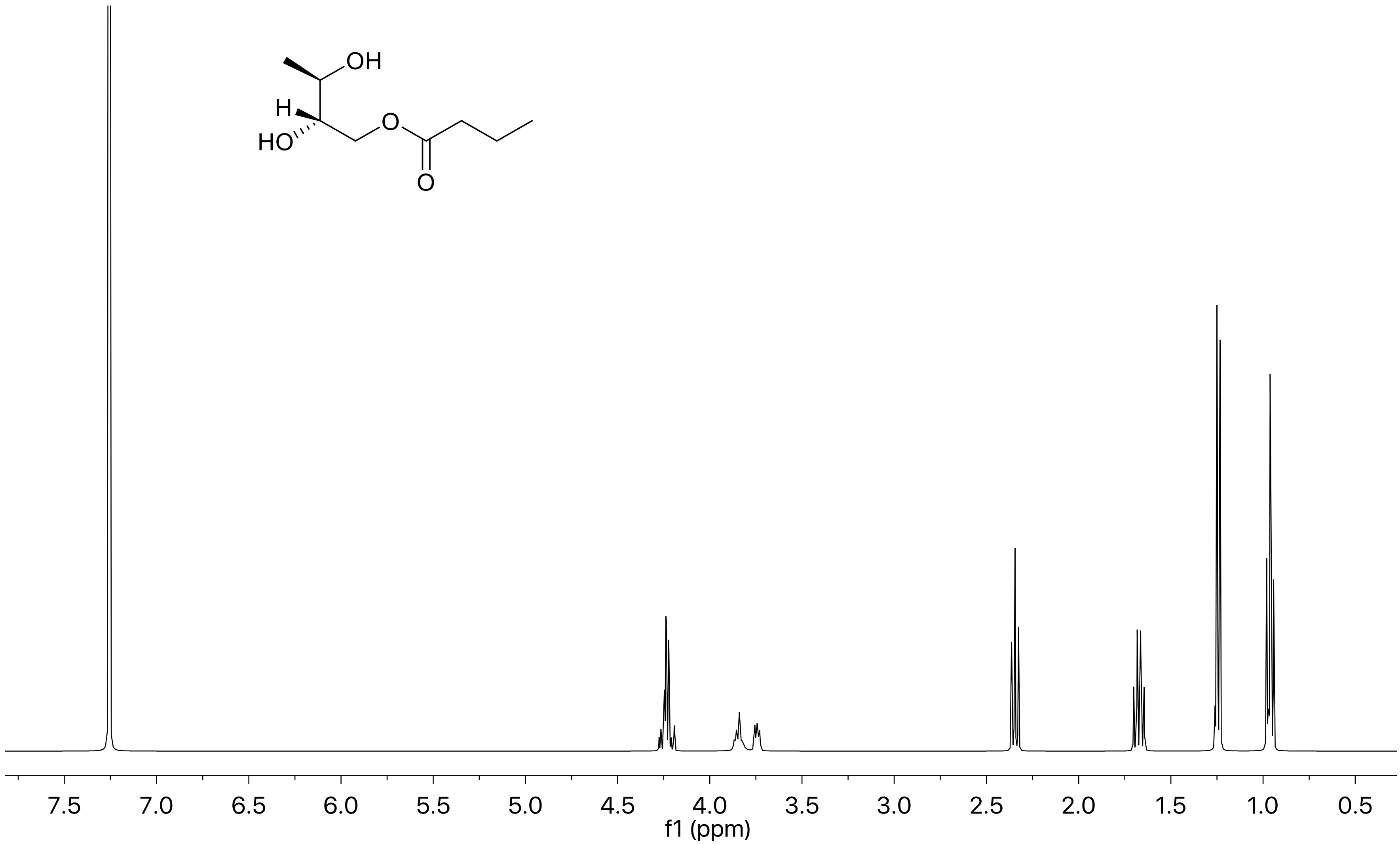


**Figure 22.** *[1]H NMR Spectrum of (2S,3R)-2′,3′-dihydroxybutyl butyrate (**22**) ($CDCl_3$ at 500 MHz)*

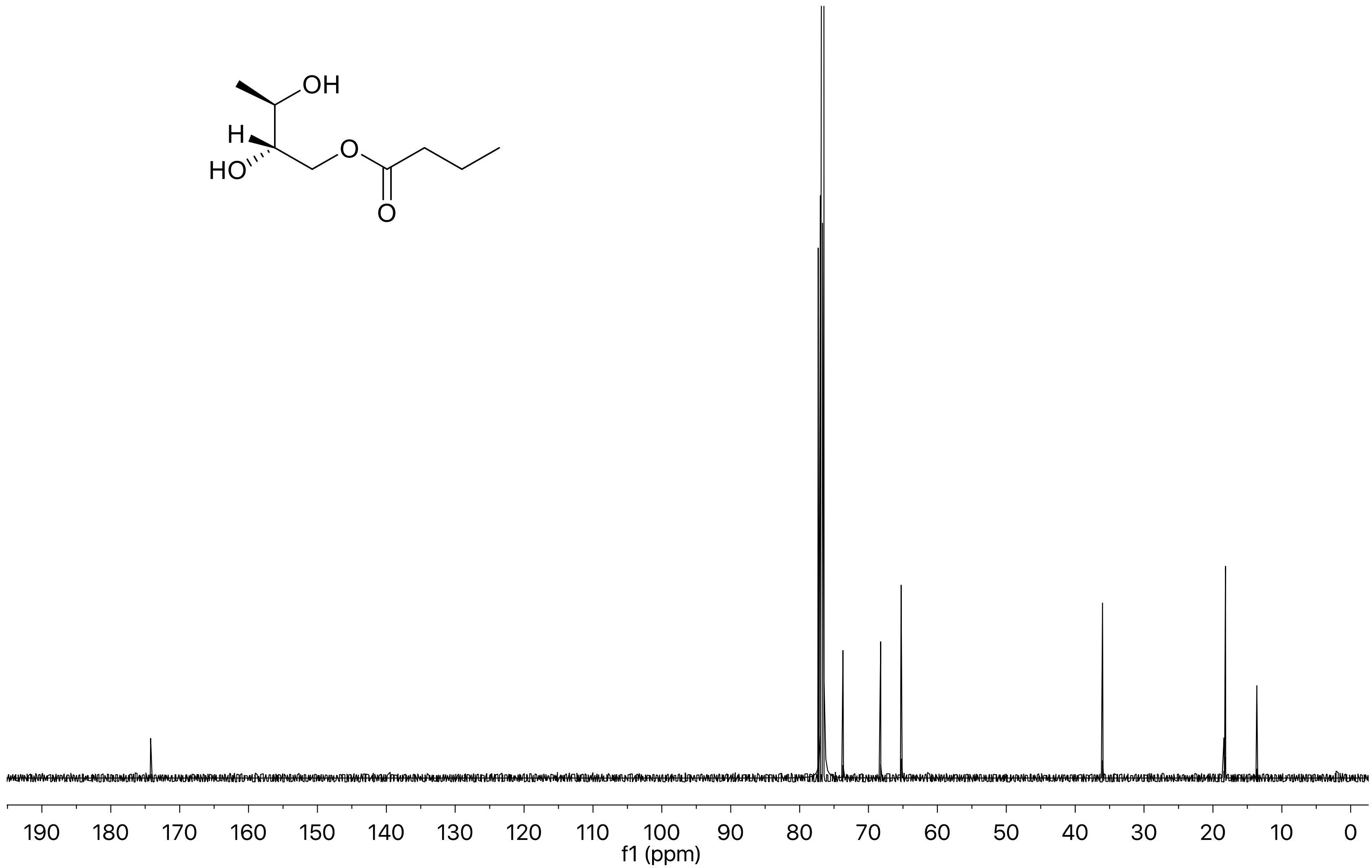


**Figure 23.** *[13]C NMR Spectrum of (2S,3R)-2′,3′-dihydroxybutyl butyrate (**22**) (CDCl₃ at 500 MHz)*